

Large Truck Crash Causation Study

Analytical User's Manual



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TABLE OF CONTENTS

Introduction	3
Programmers' Introduction to the LTCCS User's Manual and Data	4
LTCCS Data Sets.....	12
LTCCS Variable List.....	17
Variable Definitions and Codes.....	37
Airbags Data Set.....	38
Brakes Data Set.....	46
CargoShiftAssessments Data Set.....	51
CDCCrush Data Set.....	61
Crash Data Set.....	71
CrashAssessment Data Set.....	78
CrashDiscussion Data Set.....	89
DMVViolation Data Set.....	90
DriverAssessment Data Set.....	92
DriverDecisionAggression Data Set.....	115
DriverDrugs Data Set.....	127
DriverHealth Data Set.....	129
DriverRecognitionDistraction Data Set.....	140
DriverSleep Data Set.....	149
Environment Data Set.....	158
Events Data Set.....	174
FactorAssessment Data Set.....	180
GeneralVehicle Data Set.....	204
HazMat Data Set.....	253
HazMatInsp Data Set.....	255
Injuries Data Set.....	257
JackknifeAssessments Data Set.....	301
MCMISdriverData Data Set.....	307
MCMISviolation Data Set.....	310
NonMotorists Data Set.....	325
Occupants Data Set.....	334
Overview Data Set.....	358
PARViolations Data Set.....	404
SaferAuthorityStatus Data Set.....	407
SaferCarrier Data Set.....	408
SaferCrashSummary Data Set.....	414
SaferDriverCrashReport Data Set.....	416
SaferDriverInspection Data Set.....	424
SaferDriverViolation Data Set.....	426
SaferInspectionsSummary Data Set.....	428
SaferInsurance Data Set.....	432
SaferReview Data Set.....	435
SafeStat Data Set.....	437
TruckExterior Data Set.....	440
TruckInspection Data Set.....	451
TruckUnits Data Set.....	466
VehicleEvents Data Set.....	478

VehicleExterior Data Set.....	486
Index.....	500
Appendix A: LTCCS Sampling and Analytical Issues.....	509

Introduction

The Motor Carrier Safety Improvement Act of 1999 (MCSIA), P.L. 106-159, mandated a study to determine the causes of, and contributing factors to, commercial motor vehicle crashes. The U.S. Department of Transportation's (DOT) Federal Motor Carrier Safety Administration (FMCSA) and National Highway Traffic Safety Administration (NHTSA) conducted a multiyear, nationwide study of factors that contribute to truck crashes. The Large Truck Crash Causation Study's (LTCCS) goal is to identify effective crash countermeasures.

The LTCCS was conducted at 24 data collection sites in 17 States by researchers from NHTSA's National Automotive Sampling System (NASS) and State truck inspectors. Crash data were coded in two NASS quality control Zone Centers and reviewed by FMCSA and NHTSA personnel and national truck crash experts.

The LTCCS collected data on crashes from 2001 through 2003. An attempt was made to ensure that each crash involved at least one large truck with a gross vehicle weight rating of more than 10,000 pounds, and resulted in at least one fatality or at least one incapacitating or non-incapacitating but evident injury. Data were collected on up to 1,000 elements in each crash. To get the highest quality data possible, the onsite investigations began as soon as possible after the crash occurred. Data collection was performed at each crash site by a two-person team consisting of a trained researcher and a State truck inspector. Researchers collected data at crash scenes through driver, passenger, and witness interviews.

Subsequent to the crash, each truck and truck driver were subjected to a thorough inspection. After leaving the crash scene, researchers collected additional interview data by telephone from motor carriers responsible for the trucks and surrogate drivers of trucks and other vehicles when the actual drivers could not be interviewed as a result of a fatal or serious injury. Researchers also reviewed police crash reports, hospitals records, and coroners' reports. In addition, researchers often revisited the crash scene to make more accurate scene diagrams and search for additional data.

Together the teams collected data on approximately 1,000 variables on each crash. Crash case data were provided to NHTSA crash experts for coding, difficult cases were reviewed by NHTSA and FMCSA headquarters staff, and finalized cases were sent to DOT's Volpe National Transportation Systems Center for inclusion in the study's electronic database.

Table Design

There are 1070 crashes documented in the Large Truck Crash Causation Study (LTCCS) database. Each of these is assigned a unique `CaseID`. There were 2284 vehicles involved in the study crashes, each of which is assigned a `VehicleNumber` (from 1 to 30). Any vehicle in the database can be uniquely identified by `CaseID` and `VehicleNumber`. There are 3014 vehicle occupants and 53 non-motorists in the study. Each occupant is assigned an `OccupantNumber` (from 1 to 11). Each non-motorist is assigned a `NonMotoristNumber` (from 1 to 7). Occupants can be uniquely identified by `CaseID`, `VehicleNumber`, and `OccupantNumber`, and non-motorists by `CaseID` and `NonMotoristNumber`. The database further identifies 2777 distinct events, each of which is one in a sequence of events which occur in the course of a crash. Each of these events can be uniquely identified by `CaseID` and `EventSequence`.

When joining (i.e. merging) tables one must match those elements which uniquely identify records in the table, e.g. joining the `VehicleEvents` table with the `GeneralVehicle` table requires matching by common `CaseID` and `VehicleNumber`.

There is one crash-level table, `Crash` and each row in this table corresponds to a single crash. This is the single most general, or "top-level" table. All other tables give finer levels of detail, with multiple rows per crash. The level of detail of the rows of a particular table can be determined by the introduction to the table given in the User's Manual. A description of the variables which must be taken together to uniquely identify each record are also given there.

Variable Reference

The LTCCS database (LTCCS DB) is released in three formats, SAS, MS-Excel, and plain text. Many of the values in the LTCCS DB are numeric codes corresponding to some meaningful value description. These values are captured by the SAS version of the LTCCS DB, but not the MS-Excel or text versions. To assist users of the study data, a LTCCS DB Variable Reference table has been created for the Excel and text versions, which lists the LTCCS tables and variables with their code values and descriptions. By using this Variable Reference one may determine the meaning of a particular variable code value. This reference is automatically included in both the MS-Excel and text format download packages.

Avoiding Difficulties

It is recommended that the User's Manual be consulted carefully, rather than relying on intuitive interpretations of variable names. Most variables have integer values. In some cases these are literal values, e.g. counts. In others, these values are codes representing some other value which can be found in the variable reference. For example, the variable `OCCFatality` in dataset `Crash` does not represent the number of fatalities in the crash, but rather, whether there were any fatalities, as well as whether any fatalities were ruled due to disease rather than injury.

Vehicle body type is identified by `GVEBodyType` in the `GeneralVehicle` dataset. By the methodology of the LTCCS large trucks are those with values for `GVEBodyType` = {60, 61, 62, 63, 64, 66, 67, 68, 69, 70, 74, 78}.

Examples

All Trucks, Simple Count

This algorithm obtains a simple, un-weighted count of the large trucks involved in the LTCCS. It demonstrates how to use the `GVEBodyType` variable to identify a particular vehicle as a large truck, and how to use the `RATWeight` variable to filter out invalid cases. Only cases with a positive `RATWeight` are valid for the purpose of the study. Invalid cases were included for purposes of qualitative analysis.

- 1) Access `GeneralVehicle` table.
- 2) Select only cases with values for `GVEBodyType` = {60, 61, 62, 63, 64, 66, 67, 68, 70, 74, 78}. Depending on the programming environment used this may be more easily implemented by selecting cases where (`GVEBodyType` >= 60 & `GVEBodyType` <= 78 & `GVEBodyType` <> 65).
- 3) Select only cases with values for `RATWeight` > 0.
- 4) Count all remaining cases. This gives the unweighted number of large trucks in the LTCCS.
- 5) Sum all values for `RATWeight`. This gives the weighted number of large trucks involved in serious crashes nation-wide.

There are 1123 large trucks in the LTCCS. There are an estimated 141,200 large trucks involved in serious crashes nation-wide over the 33 month study period.

Trucks by Vehicle Configuration

The purpose of this table is to categorize large trucks involved in the LTCCS by vehicle configuration type, e.g. single-unit or tractor-trailer, and to give unweighted counts of the number of large trucks in each category. Single-unit vehicles are classified by their number of axles. Combination vehicles by the number of trailers being towed.

- 1) Access `TruckUnits` table.
- 2) Mark all vehicles with at least one value of `AxlesUsed` = {7, 8, 9}.
- 3) Select only cases with values for `RATWeight` > 0.
- 4) Create variable `AxleCt`. If `AxlesNotUsed` <= 3 then set `AxleCt` = `AxlesUsed` + `AxlesNotUsed`, else set `AxleCt` = `AxlesUsed`. Please note: values greater than three for `AxlesNotUsed` are not valid counts of axles. They indicate that the axles were not inspected, that this variable is not applicable, or that the count of axles not used is unknown.
- 5) Count number of axles for each vehicle by summing the number of axles for each unit constituting that vehicle.
- 6) Perform inner join (i.e. merge) of results with `Overview` table.
- 7) Classify vehicles as follows:
 - a. Vehicles with a single unit, a value of `OVEConfiguration` = 'R', and `AxleCt` = 2 are classified as "Single Unit - Two Axles",
 - b. Vehicles with a single unit, a value of `OVEConfiguration` = 'R', and `AxleCt` > 2 are classified as "Single Unit - Three or More Axles",
 - c. Vehicles with a single unit, a value of `OVEConfiguration` = 'R', and the number of axles is unknown (results from Step 2) are classified as "Single Unit - Axles Unknown",
 - d. Vehicles with a value of `OVEConfiguration` = 'Not Insp' are classified as "Other/Unknown/Missing",
 - e. Vehicles with a value of `OVEConfiguration` = 'T' are classified as "Combo Truck - Truck Tractor (bobtail)",

- f. Vehicles with a value of `OVEConfiguration = {'RF', 'RO'}` are classified as "Combo Truck - Truck Pulling Trailer(s)",
- g. Vehicles with a value of `OVEConfiguration = {'TO', 'TS', 'TSA'}` are classified as "Combo Truck - Tractor pulling Trailer",
- h. Vehicles with a value of `OVEConfiguration = {'TSAS', 'TSCS', 'TSF', 'TSXS'}` are classified as "Combo Truck - Tractor pulling Two Trailers",
- i. Vehicles with a value of `OVEConfiguration = {'ISS', 'ROO'}` are classified as "Other/Unknown/Missing" (please note that the two cases included here, one instance of ISS and one instance of ROO may appear to fall under specific categories, but a review of the case discussion, `CrashDiscussion.Discussion`, shows them both to be unique and unusual cases and therefore valid instances of 'Other').

8) Sum vehicle counts in each classification and calculate percentage for each classification by dividing its count by the total number of large trucks (1123).

Results are given in table 1 below.

Table 1. Trucks by Vehicle Configuration

Vehicle Configuration	Unit Count	Percentage
Single Unit - Two Axles	124	11.0%
Single Unit - Three Axles or more	157	14.0%
Single Unit - Axles Unknown	2	0.2%
Combo Truck - Truck Tractor – Bobtail	29	2.6%
Combo Truck - Truck Tractor(s)	40	3.6%
Combo Truck - Tractor pulling Trailer	697	62.1%
Combo Truck - Tractor pulling Two Trailers	54	4.8%
Other/Unknown/Missing	20	1.8%
Total	1123	100.0%

Trucks in Single-Vehicle Crashes by Critical Reason

These crashes involved only a single vehicle. In every case that vehicle was a large truck; no passenger vehicles were involved in any of these crashes. The critical reason (`ACRReason` in table `CrashAssessment`, and `OVERReason` in table `Overview`) is the immediate reason for the critical event, which is the event that made the crash inevitable.

The numbers in the second column represent the rounded estimates of how often these factors would be coded for all 141,200 estimated trucks involved in fatal and injury crashes that occurred during the 33-month period of the study. When the program is run, it will provide unrounded estimates. The numbers in this table have been rounded to the nearest 1,000 because they are National estimates and subject to sampling and nonsampling errors. The percentages in the last column are based on the unrounded estimates divided by 141,200 which is the unrounded estimate of trucks involved in fatal and injury crashes during the 33 months.

- 1) Perform join (i.e. merge) of two tables, `CrashAssessment` and `Crash` using the `CaseID` variable.
- 2) Select only cases with `VehicleCount = 1`.
- 3) Select only cases with values for `RATWeight > 0`. Please note: this step is optional. Including this step will filter out large trucks which have zero weighting. There were 107 such cases, which were surveyed as part of the study but given a weight of zero because they did not meet the study criteria for one reason or another. These cases were still included in the study dataset, however, as additional qualitative data.

4) For each value of ACRReason compute the sum of the values for RATWeight, i.e. group cases by values of ACRReason and take the weighted counts. Calculate percentage by dividing the weighted count by total weighted count.

Results for step 4 are rounded and given in Table 2 below.

5) Take results of 3) and take weighted counts of cases for each value of ReasonCat. Calculate percentage for reason category by dividing its count by the total number of large trucks.

Results for step 5 are given in Table 3 below.

Table 2. Trucks in Single-Vehicle Crashes by Critical Reason

Critical Reason	Number	Percentage
Too fast for curve/turn	9,000	22.3%
Sleep, that is, actually asleep	5,000	12.8%
Cargo shifted	3,000	6.6%
Too fast for conditions to be able to respond...	2,000	6.4%
Inattention (i.e., daydreaming)	2,000	5.9%
Heart attack or other physical impairment of the ability...	2,000	5.9%
Overcompensation	2,000	4.2%
Poor directional control e.g., failing to control vehicle...	2,000	4.0%
Critical event not coded to this vehicle	1,000	3.8%
Inadequate surveillance (e.g., failed to look, looked but...	1,000	3.6%
Type of driver error unknown	1,000	3.5%
Internal distraction	1,000	3.4%
Unknown recognition error	1,000	2.8%
Aggressive driving behavior	1,000	2.1%
Suspension failed	1,000	2.1%
Degraded braking capability	1,000	2.0%
Unknown critical non-performance	*	1.3%
Other decision error	*	1.3%
Tires/wheels failed	*	1.0%
Road design – other	*	0.9%
External distraction	*	0.9%
Brakes failed	*	0.8%
Slick roads (low friction road surface due to ice...	*	0.6%
Illegal maneuver	*	0.4%
Following too closely to respond to unexpected actions	*	0.4%
Other critical non-performance	*	0.4%
Wind gust	*	0.3%
Steering failed	*	0.2%
Misjudgment of gap or other's speed	*	0.2%
Unknown reason for critical event	*	0.1%
Road design - roadway geometry (e.g., ramp curvature)	0	0.0%
Total	38,000	100.0%

* Weighted numbers lower than 500 are rounded to zero.

Table 3. Trucks in Single-Vehicle Crashes by Critical Reason Summary Category

Reason Category	Number	Percentage
Driver Decision Factor	13,000	33.1%
Physical Driver Factor	8,000	20.3%
Driver Recognition Factor	6,000	16.5%
Vehicle Related Factor	5,000	12.7%
Driver Performance Factor	4,000	11.6%
No Driver Error	1,000	3.8%
Environment - Highway	1,000	1.6%
Environment - Weather	*	0.3%
Unknown Reason	*	0.1%
Total	38,000	100.0%

* Weighted numbers lower than 500 are rounded to zero.

One Truck/One Passenger Vehicle Crashes, Associated Factors

One type of crash of particular interest to many investigators is the one truck/one passenger vehicle (PV) crash. These include any crash in which the first two vehicles to collide were a large truck and a passenger vehicle. This algorithm ignores vehicles involved in follow-on collisions. Only the first two vehicles to collide are of interest here.

This algorithm describes compilation of a table showing the number of large trucks and passenger vehicles in one truck/one PV crashes by five associated crash factors, 1) prescription drug use, 2) traveling too fast for conditions, 3) braking system problem, 4) driver fatigue, and 5) weather.

Two-vehicle crashes are included in this example only if one vehicle was a large truck, and the other a passenger vehicle. One example of a two-vehicle crash not included in this example is a two-vehicle crash involving two large trucks. Another example of a two-vehicle crash not included in this particular example would be a two-vehicle crash involving a large truck and a motorcycle. Additionally, multi-vehicle crashes are included in this example if and only if the first two vehicles to collide are a large truck and a passenger vehicle. In such a crash, only those two vehicles are included. Other vehicles involved in the pile-up are excluded from this particular example. The complexities of this example require that the vehicles to be used in the example be selected in two groups. The first group of vehicles are those involved in two-vehicle crashes. They are identified in steps 1 - 5. The second group of vehicles are those involved in multi-vehicle crashes. They are identified in steps 6 - 32. Step 33 merges these two groups of vehicles.

The primary tasks involved in compiling this table are, 1) Classification of the vehicles involved in each event, 2) Identification of the two vehicles involved in the first collision, 3) Identification of one truck/one passenger vehicle crashes, and 4) Identification and summation of the associated factors relevant to all vehicles by vehicle type (i.e. truck versus passenger vehicle).

- 1) Join (i.e. merge) the `GeneralVehicle` and `Crash` data sets.
- 2) Select only cases for which `VehicleCount = 2`, `TruckCount = 1`, and `CarCount = 1`.
- 3) Classify vehicles as follows:
 - a. If $1 \leq \text{GVEBodyType} \leq 22$, or $28 \leq \text{GVEBodyType} \leq 48$, the vehicle is a Passenger Vehicle (PV),
 - b. If $60 \leq \text{GVEBodyType} \leq 78$ and $\text{GVEBodyType} \neq 65$, the vehicle is a Truck,
 - c. All other vehicles are classified as Other.
- 4) Assign classifications to new variable called `VehicleClass`.
- 5) Save results keeping only `CaseID` `VehicleNumber` `VehicleClass` and `RATWeight`.
- 6) Join (i.e. merge) tables `Events` and `GeneralVehicle` by `CaseID` and `VehicleNumber`.

- 7) Classify vehicles as follows:
 - a. If $1 \leq \text{GVEBodyType} \leq 22$, or $28 \leq \text{GVEBodyType} \leq 48$, the vehicle is a Passenger Vehicle (PV),
 - b. If $60 \leq \text{GVEBodyType} \leq 78$ and $\text{GVEBodyType} \neq 65$, the vehicle is a Truck,
 - c. All other vehicles are classified as Other.
- 8) Assign classifications to new variable called `FirstVehicleClass`.
- 9) Rename `VehicleNumber` to `FirstVehicleNumber`.
- 10) Save results.
- 11) Access table `Events`.
- 12) Select only cases for which `EVEObjectContacted <> 0` and `EVEObjectContacted <= 30`.
- 13) Delete variable `VehicleNumber`.
- 14) Rename `EVEObjectContacted` to `VehicleNumber`.
- 15) Join (i.e. merge) results with table `GeneralVehicle` by `CaseID` and `VehicleNumber`.
- 16) Classify vehicles as follows:
 - a. If $1 \leq \text{GVEBodyType} \leq 22$, or $28 \leq \text{GVEBodyType} \leq 48$, the vehicle is a Passenger Vehicle (PV),
 - b. If $60 \leq \text{GVEBodyType} \leq 78$ and $\text{GVEBodyType} \neq 65$, the vehicle is a Truck,
 - c. All other vehicles are classified as Other.
- 17) Assign classifications to new variable called `SecondVehicleClass`.
- 18) Rename `VehicleNumber` to `SecondVehicleNumber`.
- 19) Save results.
- 20) Join (i.e. merge) results of step 10) and step 19) by `CaseID` and `EventSequence`.
- 21) Select only cases with positive values for both `FirstVehicleNumber` and `SecondVehicleNumber`.
- 22) Filter cases by selecting only the minimum value of `EventSequence` for each value of `CaseID`.
- 23) Join (i.e. merge) results with `Crash` table.
- 24) Select only cases with values for `RATWeight > 0`. Please note: this step is optional. Including this step will filter out large trucks which have zero weighting. There were 107 such cases, which were surveyed as part of the study but given a weight of zero because they did not meet the study criteria for one reason or another. These cases were still included in the study data set, however, as additional qualitative data.
- 25) Select only cases for which `VehicleCount > 2`.
- 26) Select only cases in which one vehicle is of type Truck and the other vehicle is of type Passenger Vehicle.
- 27) Save results.
- 28) Rename variable `FirstVehicleClass` to `VehicleClass` and rename `FirstVehicleNumber` to `VehicleNumber`.
- 29) Save results keeping only `CaseID` `VehicleNumber` `VehicleClass` and `RATWeight`.
- 30) Access results from step 27).
- 31) Rename variable `SecondVehicleNumber` to `VehicleNumber` and rename variable `SecondVehicleClass` to `VehicleClass`.

- 32) Save results keeping only CaseID VehicleNumber VehicleClass and RATWeight.
- 33) Concatenate results from steps 5), 29) and 32).
- 34) Join (i.e. merge) results with DriverDecisionAggression table by CaseID and VehicleNumber.
- 35) Create variable TooFast. If Speeding = 1 or Speeding = 2 or Speeding = 3, then set TooFast = RATWeight, else set TooFast = 0.
- 36) Save Results.
- 37) Access DriverDrugs table. Select only cases with DrugType = 1. This table consists of one row per drug used by the driver prior to the crash. For some cases there are multiple instances of prescription drug use by a driver. Eliminate repeat rows, i.e. there must be at most one row with value of DrugType = 1 per driver.
- 38) Join (i.e. merge) results with results from step 36) by CaseID and VehicleNumber.
- 39) Create variable PrescripDrug. If DrugType = 1, then set PrescripDrug = RATWeight, else set PrescripDrug = 0.
- 40) Perform join (i.e. merge) of results with FactorAssessment table by CaseID and VehicleNumber.
- 41) Create variable BrakeFactor. If BrakeFailure = 1 or BrakesOutOfAdjustment = 1 or BrakesInoperative = 1 or BrakesSystemDeficiency = 1, then set BrakeFactor = RATWeight, else set BrakeFactor = 0.
- 42) Create variable WeatherFactor. If WeatherCount >= 1 and WeatherCount <= 6, then set WeatherFactor = RATWeight, else set WeatherFactor = 0.
- 43) Join (i.e. merge) results with DriverAssessment table by CaseID and VehicleNumber.
- 44) Create variable DriverFatigue. If Fatigue = 1, then set DriverFatigue = RATWeight, else set DriverFatigue = 0.
- 45) Group cases by VehicleClass. The weighted number of large trucks or passenger vehicles in one truck/one passenger vehicle crashes that were speeding - or more specifically, traveling too fast for conditions - is the sum of the variable TooFast. Similarly, summing PrescripDrug yields the number of drivers taking prescription drugs. Summing BrakeFactor yields the number of vehicles with faulty brakes. Summing WeatherFactor yields the number of vehicles for which inclement weather was a factor (and as expected the number is the same for large trucks and passenger vehicles). Summing DriverFatigue yields the number of vehicles driven by fatigued drivers. Results are given below.
- 46) Note that results are rounded to nearest 1000. Percentages are calculated by dividing the weighted count of vehicles per factor, by the total number of each type of vehicle involved in one truck/one PV crashes (i.e. 65460.17).

Table 4. Vehicles Involved in One Truck/One Passenger Vehicle Crashes by Associated Factor.

Factor	Truck		PV	
	Number	Percentage	Number	Percentage
TooFast	10,000	15.3%	7,000	10.5%
PrescripDrug	19,000	28.9%	23,000	34.8%
BrakeFactor	18,000	27.0%	1,000	1.6%
WeatherFactor	9,000	13.5%	9,000	13.5%
DriverFatigue	5,000	7.4%	10,000	14.8%

LTCCS Data Sets

LTCCS data are available to the public in the form of 43 data sets. The data sets are available in SAS, Microsoft Excel, or delimited text versions. Ten of them are imported from SAFER (FMCSA's Safety and Fitness Electronic Records) and two are imported from MCMIS (Motor Carrier Management Information System) data. The rest contain researcher-collected data.

- The *Airbags* data set contains all the airbag-related information for each of the vehicles involved in the crash. This material is provided as one record per airbag.
- The *Brakes* data set contains information about the brake equipment on the vehicles. It is broken out by axle, which becomes part of the unique key of this data set. This material is provided as one record per axle for each truck involved in the crash for which brakes have been coded.
- The *CargoshiftAssessments* data set contains detailed information on cargo shift events for all vehicles in the crash. Cargo shift is a pre-crash event. One record of this information is stored for each vehicle.
- The *CDCCrush* data set contains detailed information about the crush profile for each impact, coded to a vehicle damaged in the crash. This material is provided as one record per unit/event/deformation location for any vehicle involved in the crash.
- The *Crash* data set contains all details that are related to the crash itself, and not individual vehicles involved in the crash. There is one record per crash. The fields contained in this data set cover all the higher-level aspects of each case, such as highest injury severities.
- The *CrashAssessment* data set contains assessment information for each vehicle and driver involved in the crash. One record of this information exists for each vehicle.
- The *CrashDiscussion* data set contains the assessment summary for each vehicle and driver in the crash. This material is provided as one record per vehicle.
- The *DMVViolation* data set contains information on the driver's prior record of motor vehicle violations. One record is provided for each violation and is stored for each vehicle/driver where this information is available.
- The *DriverAssessment* data set contains assessment information on the driver regarding level of attention, behavior, mental or emotional state prior to the crash. One record of this information exists for each vehicle/driver.
- The *DriverDecisionAggression* data set contains a variety of data supporting the analyst's assessment. It focuses particularly on the driver's decisions and aggressive behavior. One record of this information exists for each vehicle/driver.
- The *DriverDrugs* data set contains information supporting the analyst's assessment on the driver's use of any drug prior to the crash. One record of this information exists for each drug.
- The *DriverHealth* data set contains a variety of data supporting the analyst's assessment. It focuses particularly on the area of driver health. One record of this information exists for each vehicle/driver.
- The *DriverRecognitionDistraction* data set contains a variety of data supporting the analyst's assessment. It focuses particularly on the driver's recognition and distraction. One record of this information exists for each vehicle/driver.

- The *DriverSleep* data set contains a variety of data supporting the analyst's assessment. It focuses particularly on the area of driver sleep patterns and fatigue. One record of this information exists for each vehicle/driver.
- The *Environment* data set contains information on the physical parameters of the roadway in the vicinity of the crash, any adverse weather conditions, how the driver was operating the vehicle and any distraction information if applicable. One record of this information is stored for each vehicle.
- The *Events* data set contains all details that describe the events occurring during the crash. A record exists for each crash event.
- The *FactorAssessment* data set contains a variety of data supporting the analyst's assessment. It focuses particularly on roadway, environment, and vehicle-related factors. One record of this information exists for each vehicle.
- The *GeneralVehicle* data set contains general information about the vehicle. This material is provided as one record per vehicle.
- The *HazMat* data set contains information on hazardous material cargo for trucks carrying such material at the time of the crash. There is a record for each hazardous material.
- The *HazMatInsp* data set contains information about hazardous material inspections for trucks carrying such material at the time of the crash. There is a record for each hazardous material inspection.
- The *Injuries* data set contains all the injury information for occupants of vehicles involved in the crash. Each occupant injury is assigned a sequential injury number. This material is provided as one record per injury.
- The *IntvwCarrier* data set contains information from the carrier on the carrier's business operation and the truck driver. One record exists for each truck in the crash.
- The *IntvwDrAggressiveDriving* data set contains information about driver behavior prior to the crash, based on the interviews. There may be multiple interviews per vehicle, which is reflected in InterviewType. One record is stored for each interview.
- The *IntvwDrAttention* data set contains information about driver attention and any distractions prior to the crash, based on interviews. There may be multiple interviews per vehicle, which is reflected in InterviewType. One record is stored for each interview.
- The *IntvwDrCargoshift* data set contains information about cargo shifting as a potential contributor to the crash, based on interviews. There may be multiple interviews per vehicle, which is reflected in InterviewType. One record is stored for each interview.
- The *IntvwDrCondition* data set contains information about the condition of the vehicle involved in the crash, based on interviews. There may be multiple interviews per vehicle, which is reflected in InterviewType. One record is stored for each interview.
- The *IntvwDrDriver* data set contains collected information from all the Interview documents focusing particularly on driver license status (CDL). There may be multiple interviews per vehicle, which is reflected in InterviewType. One record is stored for each interview.
- The *IntvwDrFatigue* data set contains information about the driver and extent of fatigue, based on the interviews. There may be multiple interviews per vehicle, which is reflected in InterviewType. One record is stored for each interview.
- The *IntvwDrFire* data set contains information from the driver regarding smoke or fire as a potential contributor to the crash, based on the interviews. There may be multiple

interviews per vehicle, which is reflected in InterviewType. One record is stored for each interview.

- The *IntvwDrHealth* data set contains information on the general physical health of the driver prior to the crash, based on the interviews. There may be multiple interviews per vehicle, which is reflected in InterviewType. One record is stored for each interview.
- The *IntvwDrJackknife* data set contains detailed information about the jackknife event that took place prior to the crash, based on the interviews. There may be multiple interviews per vehicle, which is reflected in InterviewType. One record is stored for each interview.
- The *IntvwDrPerception* data set contains detailed information about the driver's perception of events that took place prior to the crash, based on the interviews. There may be multiple interviews per vehicle, which is reflected in InterviewType. One record is stored for each interview.
- The *IntvwDrRollover* data set contains information on the rollover event, based on the interviews. There may be multiple interviews per vehicle, which is reflected in InterviewType. One record is stored for each interview.
- The *IntvwDrSleep* data set contains information on the driver regarding the extent of sleep obtained before the crash, based on the interviews. There may be multiple interviews per vehicle, which is reflected in InterviewType. One record is stored for each interview.
- The *IntvwDrTrip* data set contains information regarding the trip underway prior to the crash, based on the interviews. There may be multiple interviews per vehicle, which is reflected in InterviewType. One record is stored for each interview.
- The *IntvwDrViolations* data set contains information on any driving or equipment violations in effect prior to, or issued after, the crash, based on the interviews. There may be multiple interviews per vehicle, which is reflected in InterviewType. One record is stored for each interview.
- The *JackknifeAssessments* data set contains jackknife information on all vehicles. This material is provided as one record per vehicle.
- The *MCMISdriverData* data set contains the number of prior crashes, vehicle inspections and inspection violations associated with this driver as reported by the Motor Carrier Management Information System. One record is stored for each vehicle/driver where this information is available.
- The *MCMISviolation* data set contains information on the specific inspection violations issued to a driver for previous inspections as reported by the Motor Carrier Management Information System. One record of this information exists for each violation.
- The *NonMotorists* data set contains information on nonmotorists who were involved in the crash. One record is stored for each nonmotorist.
- The *Occupants* data set contains all the information related to each of the occupants in the vehicles involved in the crash. Not all occupants in the vehicle are researched in detail, so for many occupant records these values are "Unknown." This material is provided as one record per occupant.
- The *Overview* data set contains a summary of factors coded to each vehicle involved in the crash. Data from select assessment variables in other data sets are provided here. This facilitates analysis of factors that may have contributed to the crash. However, it is important to note that the presence of a particular factor does not necessarily indicate causation. There is one record in the data set for each vehicle.

- The *PARViolations* data set contains violations filed against the driver as a result of the crash and reported on the Police Accident Report. One record of this information is stored for each violation charged.
- The *SaferAuthorityStatus* data set includes information on the insurance licensing authority for the driver's carrier. This material is imported from the FMCSA Safety and Fitness Electronic Records (SAFER) database and is provided as one record per vehicle/driver for which this carrier information is available.
- The *SaferCarrier* data set contains information on the operations of the driver's carrier from the FMCSA SAFER database. This material is provided as one record per vehicle/driver for which this carrier information is available.
- The *SaferCrashSummary* data set contains summary crash information for the driver's carrier reported to the FMCSA for a period of 4 years. Each record represents one year of data and four records are stored for each vehicle/driver for which this carrier information is available.
- The *SaferDriverCrashReport* data set contains historical information for previous crashes involving the driver from the FMCSA SAFER database. One record of this information is stored for each previous crash listed on inspection reports for the driver. This information is provided for each vehicle/driver where available.
- The *SaferDriverInspection* data set contains inspection information for the driver while employed by this carrier from the FMCSA SAFER database. One record of this information is stored for each inspection report and is provided for each vehicle/driver where available.
- The *SaferDriverViolation* data set includes information on any violation issued to the driver while employed by this carrier from the FMCSA SAFER database. One record of this information is stored for each violation listed on inspection reports for the driver. This information is provided for each vehicle/driver where available.
- The *SaferInspectionsSummary* data set contains a summary of vehicle, driver, and hazardous material inspection information for the driver's carrier reported to the FMCSA for the period of 2 years prior to the date of inquiry. This material is provided as one record per vehicle/driver for which this carrier information is available.
- The *SaferInsurance* data set includes information on the type and status of insurance that the driver's carrier holds from the FMCSA SAFER database. This material is provided as one record per vehicle/driver for which this carrier information is available.
- The *SaferReview* data set contains the safety ratings of the driver's carrier based on their compliance with FMCSA regulations from the FMCSA SAFER database. One record of this information is provided for each carrier review and reviews are stored for each vehicle/driver where this information is available.
- The *SafeStat* data set contains safety statistics for the driver's carrier from the FMCSA SAFER database. Scores are compiled for driver, vehicle, accident, and the safety management areas. One record of this information is provided for each SafeStat score assigned to a carrier. These scores are stored for each vehicle/driver where this information is available.
- The *TruckExterior* data set contains information on each truck in the crash. Passenger vehicles involved in the crash are not included in this data set but instead are covered under *VehicleExterior*. This material is provided as one record per truck involved in the crash.
- The *TruckInspection* data set combines information on Federal inspection violations. There may be more than one record per truck. Each record represents a violation.

- The *TruckUnits* data set contains detailed information about each unit involved in the crash. This includes both power units and trailers, where applicable, as indicated by the position field, which is part of the key of this data set. This material is provided as one record per truck unit.
- The *VehicleEvents* data set contains information about events, such as safety equipment deployment and fires that occurred during and immediately after the crash. One record exists for each vehicle.
- The *VehicleExterior* data set contains information on each passenger vehicle in the crash. Trucks are not included in this data set but instead are covered under *TruckExterior*. This material is provided as one record for each passenger vehicle involved in the crash.

LTCCS Variable List

The following variables are contained in all of the data sets:

CaseID

The *CaseID* number is the identifier for the case. This variable is a unique number assigned to each crash. It appears on each data set and is used to merge the various information from the data sets together.

PSU

The *PSU* number refers to the geographic location of the Primary Sampling Unit investigating the case. There are 25 possible values ranging from 2 to 82. A PSU is either a large central city, a county surrounding a city, or a group of counties. This variable appears on each data set.

PSUStrata

PSUStrata refers to the number assigned to a crash during the first stage of sample selection. Analysts use the *PSUStrata* number and the SUDAAN statistical system to calculate variance. This variable appears on each data set.

RATWeight

The *RATWeight* is the multiplier used to produce national estimates from the data. This variable appears on each data set.

The following variable is found in all vehicle-level the data sets:

VehicleNumber

The *VehicleNumber* is the number assigned to each vehicle in the case. This variable appears on each vehicle level data set and is used in conjunction with the *CaseID* variable to merge information from vehicle level data sets together.

The following pages contain a list of all the variables in the LTCCS data sets. The list is organized alphabetically by data set. Within each data set, the variables are listed in the order they appear in the data set. The list displays the variable's title, the variable's name, and the page number where the variable can be found in the manual.

VARIABLE LIST

Airbags Data Set

Variable Title	Variable Name	Page
Air Bag Occupant Number	AIROccupantNumber	38
Seat Row 1	SeatRow1	38
Seat Location 1	SeatLocation1	38
Seat Row 2	SeatRow2	39
Seat Location 2	SeatLocation2	39
Deployment Location Of Air Bag	AirbagLocation	39
Air Bag Status	AirbagStatus	40
Type Of Air Bag	AirbagType	40
Redesigned Air Bag	Depowered	40
Air Bag Deployment	Deployment	41
Indications Of Air Bag Failure?	AirbagFailure	41
Type Of Cutoff Switch	SwitchType	41
Cutoff Switch Position Status	SwitchStatus	42
Did Air Bag Module Cover Flaps Open At Designated Tear Points?	FlapsOpen	42
Were The Cover Flaps Damaged?	FlapsDamaged	43
Was There Damage To The Air Bag?	AirbagDamage	43
Source Of Air Bag Damage	DamageSource	44
Had The Vehicle Been In Previous Crashes?	PriorCrashes	44
Had Any Prior Maintenance/Service Been Performed On Air Bag System?	PriorMaintenance	44
CDC For Air Bag Deployment Impact	CDC	45
Was The Air Bag In This Occupant's Position Contacted By Another Occupant?	ContactOther	45

Brakes Data Set

Variable Title	Variable Name	Page
Axle	Axle	46
Brake Type	BrakeType	46
Brake Axle Position	BRAPosition	46
ABS Installed?	ABSInstalled	47
ABS Functional?	ABSFunctional	47
Adjustor Type	AdjustorType	47
Chamber Size	ChamberSize	48
Chamber Type	ChamberType	48
Stroke Type	StrokeType	49
Left Length	LeftLength	49
Right Length	RightLength	49

CargoShiftAssessments Data Set

Variable Title	Variable Name	Page
Type Of Cargo Shift Event	ACSType	51
Vehicle Location At Start Of Cargo Shift	ACSLocation	51
Movement Count	MovementCount	52

Cause Count	CauseCount	52
Precrash Cargo Spillage?	ACSSpillage	52
Driving At Constant Velocity	ACSConstant	53
Traversing A Curve	ACSCurve	53
Completing Turn	ACSTurn	53
Light Braking	ACSLightBraking	54
Accelerating	ACSAccelerating	54
Completing Avoidance Maneuver	ACSAvoidance	54
Other Event Circumstance	OtherMovement	55
Throttle Input Only	ACSDecelerating	55
Moderate Braking	ACSModerateBraking	55
Heavy Braking	ACSHeavyBraking	56
Traversing A Straight Section	ACSStraight	56
Improper Loading (General Freight)	ImproperGeneralLoading	56
Improper Loading (Bulk Freight)	ImproperBulkLoading	57
Inadequate Securement (Number Of Tie Downs)	SparseTieDowns	57
Inadequate Securement (Strength Of Tie Downs)	WeakTieDowns	57
Other Source Of Solids Shift	OtherSolids	58
Less Than Full Load (Slosh)	Sloshing	58
Baffle Failure	BaffleFailure	58
Compartment Partition Failure	CompartmentFailure	58
Tank Failure	TankFailure	59
Other Source Of Liquid Shift	OtherLiquids	59
Other Cargo Shift Types	OtherCargos	59
Unknown Cause Of Cargo Shift	UnknownCause	60

CDCCrush Data Set

Variable Title	Variable Name	Page
Position Number	PositionNumber	61
Deformation Classification Type	DCType	61
Object Contacted Category	ObjectContactClass	62
CDC Object Contacted	CDCObjectContact	62
Force Direction	ForceDirection	64
Clock Force	ClockForce	64
Override/Underride	OverrideDesc	64
Deformation Location	DeformLocation	65
Deformation – Longitudinal Or Lateral	DeformLong	65
Deformation – Vertical Or Lateral	DeformVertical	66
Deformation Distribution	DeformDistribution	67
Deformation Extent	DeformExtent	67
Deform Code	DeformCode	68
Impact Number	ImpactNumber	68
Direct Damage Location	DamageLocation	68
Field L Location	FieldLocation	69
Max Crush Location	MaxCrushLocation	69
CDC Category	CDCCategory	69
CDC Width	CDCWidth	69

Crash Data Set

Variable Title	Variable Name	Page
Crash Date	CrashDate	71
Time Of Crash	CrashTime	71
Total Number Of Vehicles In Crash	VehicleCount	71
Truck Count	TruckCount	72
Car Count	CARCount	72
Nonmotorist Count	NonMotoristCount	72
Crash Summary	CrashType	72
Injury Crash Severity Code – Police	CrashPARSevCode	73
Injury Crash Severity Code – Researched	CrashRESSevCode	73
Case Summary	Summary	74
Collision Type	CollisionType	75
Medical Treatment	Treatment	76
Occupant Fatality	OCCFatality	77
Alcohol Involvement?	CRAAlcohol	77
Drug Involvement?	AnyDrugsCrash	77

CrashAssessment Data Set

Variable Title	Variable Name	Page
Pre-Event Movement	PreEventMovement	78
Critical Precrash Event	ACRCriticalEvent	79
Critical Precrash Event Categories	CriticalEventCat	80
Critical Reason For The Critical Event	ACRReason	81
Critical Reason Categories	ReasonCat	82
Attempted Avoidance Maneuver	ACRAvoidance	83
Pre-Impact Stability	ACRStability	84
Pre-Impact Location	ACRLocation	84
Right-Of-Way?	ACRRightOfWay	84
Crash Type	CrashCode	85
Crash Configuration	AccidentCat	87
Jackknife	ACRJackknife	88
Cargo Shift	ACRCargoshift	88

CrashDiscussion Data Set

Variable Title	Variable Name	Page
Case Summary	Discussion	89

DMVViolation Data Set

Variable Title	Variable Name	Page
License State	LicState	90
Citation Date	CitDate	90
Conviction Date	ConvDate	90
ACD Code	ACDcode	91
ACD Detail	ACDdetail	91
Violation Description	ViolDescription	91

DriverAssessment Data Set

Variable Title	Variable Name	Page
Was This Driver's Sight Line To The Other Vehicle Clear?	SightLine	92
Was This Driver's View Of The Other Vehicle Obscured?	Obscured	92
Was This Driver Required To Stop Prior To Crash Occurrence?	StopRequired	93
Period Of Time Stopped Prior To Entering Intersection And/Or Initiating Turn	TimeStopped	93
After Checking For Traffic, Did This Driver Focus On Intended Turn Destination Or Other Location?	Focused	94
Sleep Related To Work Schedule	ADRWorkSchedule	94
Sleep Related To Social Schedule	SocialSchedule	95
Sleep Related To Personal Problems	PersonalProblems	95
Sleep Related To Family Problems	FamilyProblems	96
Sleep Related To Illness	Illness	96
No Driver Present	NoDriverPresent	96
Sleep Related To Other Factor	ADROtherFactor	97
Sleep Related To Unknown Factor	UnknownFactor	97
Alcohol Use	AlcoholUse	97
Alcohol Test	AlcoholTest	98
Source Of BAC Test Result	TestSource	98
Time Delay (Between Crash And BAC Test)	TestDelay	99
Illegal Drug Use	DrugTest	99
Driver Fatigue	Fatigue	100
Was The Driver Upset Prior To The Crash?	Upset	100
Was The Driver In A Hurry Prior To Crash?	Hurrying	101
Other Emotional Factors	Emotional	101
Vehicle Familiarity	KnewVehicle	102
Roadway Familiarity	KnewRoad	102
Work Pressure Factors Count	WorkPressureCount	103
Learning New Position	NewPosition	103
Production/Shipping Deadlines	ShippingDeadline	104
Work Schedule Pressure	EXPWorkSchedule	104
Additional Production/Sales Requirements	Quotas	104
Forced To Accept Loads With Little Or No Advance Notice	ExtraLoads	105
Demoted	Demoted	105
Self Induced Work Pressure - Illegal	SelfInducedIllegal	105
Self Induced Work Pressure - Other	SelfInducedOther	106
Other Work Pressure	OtherPressure	106
Comfort Count	ComfortCount	107
Uncomfortable With Surrounding Traffic Densities	TrafficDensity	107
Uncomfortable With General Traffic Speeds	TrafficSpeed	107
Uncomfortable with General Traffic Flow	ADRTrafficFlow	108
Uncomfortable With Some Aspect Of Vehicle/Load	VehicleLoad	108
Other Comfort Factor	OtherComfortFactor	108
Under Pressure To Accept Loads	LoadPressure	109
Work Fatigue Factors Count	WorkFatigueCount	109
Scheduled Loads Require Extended Hours	ScheduledExtensions	110
Scheduled Trips Require Rotating Shift	RotatingShift	110

Unscheduled Loads Require Extended Hours Not Applicable – Under Pressure To Operate Even If Fatigued	UnscheduledExtensions	110
Other Fatigue-Related Factors	NoApplicableFatigue	111
Other Pressure Count	OtherFatigue	111
Required To Accept Short Notice Trips	OtherPressureCount	112
Required To Fill In For Other Drivers	ShortNoticeTrips	112
Required To Complete Unpaid Loading	FillInTrips	112
Variable Compensation Package	UnpaidLoading	113
Not Applicable – Other Relation Factor Types	VariableCompensation	113
Other Carrier Relation Factors	NoApplicableRelations	113
	OtherRelations	114

DriverDecisionAggression Data Set

Variable Title	Variable Name	Page
Traveling Too Fast For Conditions	Speeding	115
Following Too Closely	Tailgating	115
Misjudgment Of Gap Distance Or Velocity Of Other Vehicle	Misjudgment	116
Other Vehicle Approaching From This Driver's	Approach	116
Police Reported Travel Speed	ADATravelSpeed	117
Posted Speed Limit	ADAPostedSpeed	117
False Assumption Of Other Road User's Actions	Assumption	118
Inadequate Evasive Action	Evasion	118
Other Decision Factors	ADAOtherFactor	119
Illegal Maneuver Count	ManeuverCount	119
Crossed Full Barrier Lines While Passing	CrossedLine	120
Passed On Right (Drive Off Pavement To Pass)	Undertaking	120
Turned From Wrong Lane	WrongTurnLane	120
Initiated Illegal U-Turn	IllegalUTurn	120
Failed To Stop For TCD	RanLights	121
Drove Wrong Way On One-Way Road	WrongWay	121
Other Illegal Maneuver	OtherManeuver	122
Aggression Count	AggressionCount	122
Speeding	SpeedingBehavior	122
Tailgating	TailgatingBehavior	123
Weaving In And Out Of Traffic	Weaving	123
Intentional Violation Of Traffic Control Devices	LightViolations	124
Accelerated Rapidly/Stopped Suddenly	RapidAcceleration	124
Honking Horn	Honking	124
Flashing Lights	Flashing	125
Obscene Gestures	ObsceneGestures	125
Obstructing The Path Of Others	BlockingOthers	125
Other Aggressive Behavior	OtherAggression	126
Reasons For Aggressive Driving Behavior	AggressionReason	126

DriverDrugs Data Set

Variable Title	Variable Name	Page
Drug Name	DrugName	127
Drug Type	DrugType	127
Driver Reported	DriverReported	127
Drug Test Results	TestResult	128

DriverHealth Data Set

Variable Title	Variable Name	Page
Corrected Vision Level	ADHCorrectedVision	129
Number Of Illness Factors	IllnessFactorCount	129
Heart Attack	HeartAttack	130
Seizure (Epilepsy Related)	EpilepticSeizure	130
Seizure (Other Source)	OtherSeizure	130
Blackout (Diabetes Related)	DiabeticBlackout	131
Blackout (Other Source)	OtherBlackout	131
Severe Cold/Flu Symptoms	ColdFlu	131
Other Illness	OtherIllness	132
Normal Vision	NormalVision	132
Legal Blindness	LegallyBlind	132
Myopic (Near-sighted) Condition	Myopic	133
Hyperopic (Far-sighted) Condition	Hyperopic	133
Glaucoma	Glaucoma	134
Color Blind	ColorBlind	134
Astigmatism	Astigmatic	135
Other Vision Problem	OtherVision	135
Unknown Vision Problem	UnknownVision	135
Number Of Other Physical Factors	OtherFactorCount	136
No Other Physical Factors	NoFactors	136
Hearing Impairment	HearingImpairment	137
Prosthesis	Prosthesis	137
Paraplegia	Paraplegia	137
Strenuous Recreation Activities	StrenuousRecreation	138
Strenuous Non-Work Activities	StrenuousNonWork	138
Sleep Apnea	SleepApnea	139
Other Physical Factor	OtherFactorPhysical	139

DriverRecognitionDistraction Data Set

Variable Title	Variable Name	Page
Inattention	Inattention	140
Conversation	Conversation	140
Nature Of Discussion	Subject	141
Nature Of Relationship Between Driver And Person Conversing With	Conversant	141
Location Of Exterior Factor	OutsideLocation	142
Inadequate Surveillance	ADDSurveillance	142
Tracking Of Rear Exterior Factor	Tracking	143
Other Recognition Factors	ADDRecognition	143
Interior Distraction Count	InteriorDistractionCount	143
Looking At Movement/Actions Of Other Occupants	OccupantMovement	144
Dialing/Hanging Up Phone	ADDialingPhone	144
Adjusting Radio/CD Player	ADDadjustingRadio	144
Adjusting Other Vehicle Controls	OtherControls	145
Retrieving Object From Floor And/Or Seat	FloorRetrieval	145
Retrieving Object From Other Location	OtherRetrieval	145
Other Internal Distraction	OtherInternal	146
Exterior Distraction Count	ExteriorDistractionCount	146
Looking At Previous Crash	ADDPreviousCrash	146
Looking At ApproachingTraffic	ApproachingTraffic	147

Looking For Street Address	StreetAddress	147
Looking At Outside Person	ExternalPerson	147
Looking At Building	Building	148
Unspecified Outside Focus	UnspecifiedExternal	148
Other External Distraction	OtherExternal	148

DriverSleep Data Set

Variable Title	Variable Name	Page
Hours Of Last Sleep	LastSleepHours	149
Start Time Of Last Sleep Interval	LastSleepStart	149
End Of Last Sleep Interval	LastSleepEnd	150
Hours Since Last Sleep	HoursSinceSleep	150
If Hours Of Sleep Were Less Than 4 Hours, Hours Of Last Main Sleep	MainSleepHours	151
Start Of Main Sleep Interval	MainSleepStart	151
End Of Main Sleep Interval	MainSleepEnd	151
Hours Driving Since Last 8-Hour Break	HoursDriving	152
Hours On Duty Since Last 8-Hour Break	HoursOnDuty	152
Longest Work Day In Preceding 7-Day Interval	WeekLongest	153
Shortest Work Day In Preceding 7-Day Interval	WeekShortest	153
Average Work Day In Preceding 7-Day Interval	WeekAverage	153
Did The Time At Which The Driver Began To Sleep Rotate/Shift In Last 7 Days?	Rotation	154
Hours Worked On Day Of Crash	HoursWorked	154
Longest Length Of Daily Sleep In Preceding 7-Day Interval	ADSLongestDay	155
Shortest Length Of Daily Sleep In Preceding 7-Day Interval	ADSShortestDay	155
Average Length Of Daily Sleep In Preceding 7-Day Interval	AverageDay	156
Total Hours Worked On Primary Job During Preceding 7-Day Interval	LastWeekHours	156
Hours Worked On Second Job During Preceding 7-Day Interval	LastWeekMoonlight	156

Environment Data Set

Variable Title	Variable Name	Page
Relation To Roadway	RoadRelation	158
Relation To Junction	Junction	158
Interchange	Interchange	159
Trafficway Flow	ENVTrafficFlow	159
Trafficway Flow Restrictions	FlowRestriction	160
Intersection Type	IntersectionType	160
Number Of Travel Lanes	Travellanes	161
Access Control	AccessControl	161
Route Signing	Signage	162
Trafficway Functional Class	FunctionalClass	162
Light Conditions	Daylight	163
Traffic Control Device	TrafficControl	163
Railroad Grade Crossing?	Railroad	164
Traffic Control Device Functioning	Functioning	164

Roadway Class	RoadwayClass	165
Roadway Alignment	RoadAlignment	165
Roadway Profile	RoadProfile	166
Roadway Surface Type	RoadSurface	166
Roadway Surface Condition	SurfaceCondition	166
Roadway Surface Defect	SurfaceDefect	167
Roadway Design Deficiencies	DesignDefect	167
Shoulder Surface Type	ShoulderType	168
Shoulder Width	ShoulderWidth	168
Rumble Strip Type/Involvement	RumbleStrip	169
Sight Line Restrictions?	SightLineRestriction	169
Sight Line Distance	SightLineDistance	169
AASHTO Sight Distance	AASHToDistance	170
No Adverse Conditions	ENVNoConditions	170
Rain	ENVRain	170
Snow	ENVSnow	171
Fog	ENVFog	171
Wind Gusts	ENVWindGusts	171
Hail	ENVHail	172
Sleet	ENVSleet	172
Dust	ENVDust	172
Other Atmospheric Conditions	ENVOtherConditions	173

Events Data Set

Variable Title	Variable Name	Page
Stratum	Stratum	174
Class Of Vehicle (First Listing)	ClassVehicle	174
General Area Of Damage (First Vehicle Listed)	DamageArea	175
Object Contacted	EVEObjectContact	176
Class Of Vehicle (Second Listing)	ClassVehicle2	178
General Area Of Damage (Second Vehicle Listed)	DamageArea2	179

FactorAssessment Data Set

Variable Title	Variable Name	Page
No Traffic Flow Factors	NoTraffic	180
Previous Crash Nearby	AFTPPreviousCrash	180
Construction Work Zone	ConstructionZone	181
Emergency Vehicle Approaching	EmergencyVehicle	181
Rush Hour Congestion	RushHour	181
Other Traffic Flow Interruption	OtherTraffic	182
Other Traffic Flow Interruption – Specify	OtherTrafficSpecify	182
Vehicle Defect Count	VehicleDefectCount	183
View Obstruction – Related To Load	LoadObstructedView	183
View Obstruction – Related To Vehicle Design	DesignedObstructedView	183
View Obstruction - Other	OtherViewObstruction	184
Tire Malfunction	TireFailure	184
Braking System Malfunction	BrakeFailure	184
Transmission Malfunction	TransmissionFailure	185
Engine Problem	EngineProblem	185
Other Vehicle Condition	OtherDefect	186

Other Vehicle Condition – Specify	OtherDefectSpecify	186
Tire Deficiency	TireDeficiency	186
Brakes Out-Of-Adjustment	BrakesOutOfAdjustment	186
Brakes Inoperative	BrakesInoperative	187
Brake System Deficiency	BrakesSystemDeficiency	187
Vehicle Overweight	VehicleOverweight	188
Vehicle Lighting Deficiency	VehicleLightingDeficiency	188
Cargo/Load Securement Related Problem	CargoLoadSecurement	188
Suspension/Frame Deficiency	SuspensionFrameDeficiency	189
Towing Unit Problem	TowingUnitProblem	189
Reflective Tape Missing/Obscured	ReflectiveTapeMissingObscured	189
Fuel System Problem	FuelSystemProblem	190
Exhaust Leak	ExhaustLeak	190
Steering Wheel Problem	SteeringWheelProblem	191
Median Width	MedianWidth	191
Radius Of Curvature	AFTCurveRadius	191
Sight Distance	SightDistance	192
AASHTO Recommended Sight Distance	AASHTORecommended	192
Roadway Factor Count	RoadwayFactorCount	192
Traffic Signs/Signals Missing	SignsMissing	193
Roadway View Obstruction	ObjectObscured	193
View Obstructed By Other Vehicle	VehicleObscured	194
Road Geometry	RoadGeometry	194
Road Sight Distance Insufficient	InsufficientSight	194
Lane Delineation Problem	BadLaneMarkings	195
Narrow Shoulders	NarrowShoulders	195
Narrow Road	NarrowRoad	195
Ramp Speed	RampSpeed	196
Roadway Condition	PoorCondition	196
Slick Surface	SlickSurface	197
Road Under Water	UnderWater	197
Road Washed Out	WashedOut	197
Other Roadway Related Factor	OtherProblem	198
Other Roadway Related Factor – Specify	OtherProblemSpecify	198
Weather Factors Count	WeatherCount	198
Rain	AFTRain	199
Snow	AFTSnow	199
Fog	AFTFog	200
Wind Gust	WindGust	200
Hail	AFTHail	200
Sleet	AFTSleet	201
Other Weather Related Factor	OtherWeather	201
Other Weather Related Factor – Specify	OtherWeatherSpecify	201
Environmental Factor Count	EnvironmentCount	202
Glare	Glare	202
Blowing Debris	BlowingDebris	202
Smoke	Smoke	203
No Driver Present	AFTNoDriver	203
Other Sudden Change In Ambience	OtherChangeSpecify	203

GeneralVehicle Data Set

Variable Title	Variable Name	Page
Vehicle Make	GVEMake	204
Vehicle Model (listed with Vehicle Make)	GVEModel (with GVEMake)	206

Vehicle Model Year	GVEYear	232
Body Type	GVEBodyType	232
Class Of Vehicle	GVEVehicleClass	234
Curb Weight	GVECurbWeight	235
Source Of Curb Weight	GVEWeightSource	235
Cargo Weight	GVECargoWeight	236
Source Of Cargo Weight Information	GVECargoSource	236
Vehicle Identification Number (VIN)	GVEVIN	237
Vehicle Special Use	GVESpecialUse	237
Inspection Type	GVEInspection	237
Date Of Inspection	GVEInspectionDate	238
Injury Severity Code – Police	GVEPARSevCode	238
Injury Severity Code – Researched	GVERESSevCode	239
VIN Make	VINMake	239
VIN Model	VINModel	240
VIN Year	VINYear	240
Series	Series	240
VIN Body Type	VINBodyType	241
Roof1	Roof1	241
Roof2	Roof2	241
Roof3	Roof3	241
Front Wheel Drive	FrontWheelDrive	242
Four Wheel Drive	FourWheelDrive	242
Restraint Type	GVERestraintType	242
Carburetion	Carburetion	242
Fuel Type	FuelType	243
VIN Weight	VINWeight	243
Vehicle Type	VehicleType	243
Wheel Configuration	WheelConfig	244
Daytime Running Lights	DayRunningLights	244
Base Weight	BaseWeight	244
Motorcycle Displacement	GVEMotorcycleDisplacement	244
Police Reported Travel Speed	GVETravelSpeed	245
Posted Speed	GVEPostedSpeed	245
Is The Driver Present?	DriverPresent	245
Police Reported Alcohol Present?	PARAlcoholPresent	246
Alcohol Test For Driver	PARAlcoholTest	246
Alcohol Test Result	PARAlcoholTestResult	246
Time Between Crash And Alcohol Test	PARTestDelay	247
Source Of Alcohol Test Results	PARTestSource	247
Police Reported Other Drug Presence?	PARDrugsPresent	248
Driver's Zip Code	ZipCode	248
Race/Ethnic Origin Of Driver	EthnicOrigin	248
Commercial Motor Vehicle Crashes	CMVCrashes	249
Commercial Motor Vehicle Violations	CMVViolations	249
Non-Commercial Motor Vehicle Crashes	NonCMVCrashes	250
Non-Commercial Motor Vehicle Violations	NonCMVViolations	250
Total Crashes	TotalCrashes	250
Total Violations	TotalViolations	251
Previous Violations	PrevViolations	251
Unknown Type Crashes	UnkTypeCrashes	251
MCMIS Crashes	MCMISCrashes	252
MCMIS Commercial Motor Vehicle Violations	MCMIScmvViolations	252
MCMIS Commercial Motor Vehicle Non-Violations	MCMIScmvNonViolations	252

HazMat Data Set

Variable Title	Variable Name	Page
Hazardous Material Reportable?	Material	253
Hazardous Material Waiver?	Reportable	254
	Waiver	254

HazMatInsp Data Set

Variable Title	Variable Name	Page
Hazardous Material Inspection	HMIInspection	255
Inspection Exists?	InspectionExists	255
Violation?	HMIViolation	256
Out-Of-Service?	HMIOutOfService	256
Disposition	HMIDisposition	256

Injuries Data Set

Variable Title	Variable Name	Page
Occupant Injury Description	OINDescription	257
AIS Code	AISCode	257
Aspect	Aspect	289
Injury Source Category	InjurySourceCat	291
Injury Source	InjurySource	292
Intrusion Row	IntrusionRow	297
Intrusion Location	IntrusionLocation	298
Crush Direction	CrushDirection	298
Crush Magnitude	CrushMagnitude	298
Component Intrusion	Component	299
Information Source	InformationSource	300

JackknifeAssessments Data Set

Variable Title	Variable Name	Page
Type Of Jackknife Event	AJKType	301
Source Of Jackknife Impetus	AJKSource	301
Vehicle Location At Start Of Jackknife	AJKLocation	302
Direction Of Rotation	AJKDirection	302
Jackknifed While Count	WhileCount	302
Driving At Constant Velocity	AJKConstant	303
Traversing A Curve	AJKCurve	303
Completing A Turn	AJKTurn	303
Light Braking	AJKLightBraking	304
Accelerating	AJKAccelerating	304
Completing Avoidance Maneuver	AJKAvoidance	304
Other Jackknife Circumstance	AJKOther	305
Throttle Input Only	AJKDecelerating	305
Moderate Braking	AJKModerateBraking	305
Heavy Braking	AJKHeavyBraking	306
Traversing A Straight Section	AJKStraight	306

MCMISdriverData Data Set

Variable Title	Variable Name	Page
Number Of Crashes	Crashes	307
Number Of Inspections	Inspections	307
Driver Out-Of-Service Violations	InspDriverOOS	308
Vehicle Out-Of-Service Violations	InspVehOOS	308
Total Types Of Local Violations	LocalViols	308
Total Types Of Inspection Violations	InspViols	309

MCMISviolation Data Set

Variable Title	Variable Name	Page
Violation Code	Code	310
Violation Description	ViolDesc	323
Total Number Of Violations	NumViols	323
Number Of Out-Of-Service Violations	NumOOSviols	324

NonMotorists Data Set

Variable Title	Variable Name	Page
Nonmotorist's Age	ANMAge	325
Nonmotorist's Height	ANMHeight	325
Nonmotorist's Weight	ANMWeight	325
Nonmotorist's Gender	ANMGender	326
Nonmotorist Type	ANMType	326
Nonmotorist Attitude	ANMPosition	326
Nonmotorist's Motion	Motion	327
Nonmotorist's Action Relative To Vehicle	Action	328
Nonmotorist's Body (Chest) Orientation Relative To Striking Vehicle...	Orientation	328
Nonmotorist Sight Impairments	SightImpaired	329
Nonmotorist Sight Restrictions	SightRestricted	329
Nonmotorist Hearing Impairments	HearingImpaired	329
Nonmotorist Hearing Restrictions	HearingRestricted	330
Nonmotorist Distractions	Distraction	330
Nonmotorist Decision Errors	ANMDecision	331
Nonmotorist Risk-Taking Behavior	RiskTaking	331
Nonmotorist First Avoidance Action	ANMAvoidance	332
Nonmotorist Hand Use In Avoidance Action	HandsUsed	332
Injury Severity Code – Police	ANMPARSevCode	332
Injury Severity Code – Researched	ANMRESSevCode	333

Occupants Data Set

Variable Title	Variable Name	Page
Occupant's Age	OCCAge	334
Occupant's Height	OCCHeight	334

Occupant's Weight	OCCWeight	334
Occupant's Sex	OCCGender	335
Occupant's Role	Role	335
Race/Ethnic Origin Of Occupant	Race	335
Occupant's Eyewear	Eyewear	336
Police Reported Air Bag Availability/Function	AirbagAvail	336
Police Reported Belt Use	BeltUsed	337
Ejection Type	EjectionType	337
Ejection Area	EjectionArea	337
Ejection Medium	Medium	338
Medium Status	MediumStatus	338
Multi-Ejection?	MultiEjection	339
Entrapment	Entrapment	339
Occupant Mobility	Mobility	339
Number Of Intrusions	Intrusions	340
Occupant Location	OCCLocation	340
Occupant's Posture	Posture	341
Head Restraint Type At This Occupant's Position	OCCRestraintType	341
Head Restraint Damage By Occupant At This Occupant Position	RestraintDamage	342
Seat Type	SeatType	342
Seat Orientation	SeatOrientation	342
Seat Track Position	TrackPosition	343
Seat Performance	SeatPerformance	343
Does The Seat Have Integrated Passenger Belts?	IntegratedRestraints	343
Seat Back Incline Prior To Impact	PriorInclination	344
Seat Back Incline Position Post Impact	PostInclination	344
Child Safety Seat Used?	ChildSeatAvailable	345
Manual (Active) Belt System Availability	ManualBeltAvailable	345
Manual (Active) Belt System Used In This Crash?	ManualBeltUsed	346
Proper Use Of Manual (Active) Belts	ManualBeltProper	346
Manual (Active) Belt Failure Modes During Crash	ManualBeltFailure	347
Manual Shoulder Belt Upper Anchorage Adjustment	AnchorAdjustment	347
Seat Belt Pretensioners Present	PreTensionerAvailable	348
Pretensioners Actuate?	PreTensionerActuated	348
Pretensioner Travel	PreTensionerTravel	348
Retractor Type	Retractor	349
Source Of Researcher's Determination Of Manual Belt Use	ManualBeltSource	349
Automatic (Passive) Belt System Availability/Function	AutoBeltAvailable	349
Automatic (Passive) Belt System Use	AutoBeltUsed	350
Automatic (Passive) Belt System Type	BeltMotorized	350
Proper Use Of Automatic (Passive) Belt System	AutoBeltProper	351
Automatic (Passive) Belt Failure Modes During Crash	AutoBeltFailure	351
Source Of Researcher's Determination Of Automatic Belt Use	AutoBeltSource	352
Injury Severity Code – Police	OCCInjSeverityCode	352
Mortality	Mortality	352
Medical Treatment	InitialTreatment	353

Type Of Medical Facility (Initial Treatment)	InitialFacility	353
Hospital Stay	HospitalDays	354
Working Days Lost	WorkDaysLost	354
Death Date	DateOfDeath	354
Death Time	TimeOfDeath	355
Number Of Injuries For This Occupant	InjuryCount	355
Glasgow Coma Scale (GCS) Score (At Medical Facility)	GCSScore	355
Was The Occupant Given Blood?	UnitsTransfused	356
Arterial Blood Gases – ABG (HCO3)	ABGTest	356

Overview Data Set

Variable Title	Variable Name	Page
Vehicle Make	OVEMake	358
Vehicle Model (with Vehicle Make)	OVEModel (with OVEMake)	360
Vehicle Model Year	OVEYear	386
Truck Configuration	OVEConfiguration	386
Pre-Event Movement	Movement	387
Critical Precrash Event	OVECriticalEvent	388
Critical Reason For The Critical Precrash Event	OVEReason	390
Attempted Avoidance Maneuver	OVEAvoidance	391
Pre-Impact Stability	OVEStability	392
Pre-Impact Location	OVELocation	392
Right-Of-Way?	OVERightOfWay	393
Crash Configuration	OVEAccidentType	393
Crash Type	OVECrashCode	394
Jackknife Occurrence	OVEJackKnife	396
Cargo Shift	OVECargoShift	397
Alcohol Involvement	OVEAlcohol	397
Drug Involvement	AnyDrugsVeh	397
Driver Physical Factors	DriverPhysical	398
Driver Fatigue	DriverFatigue	398
Recognition Factors	OVERecognition	399
Decision Factors	OVEDecision	399
Aggression Factors	Aggression	399
Surveillance Factors	OVESurveillance	400
Emotion/Experience Factors	EmotionExperience	400
Carrier/Employer Factors	CarrierEmployer	401
Traffic Factors	Traffic	401
Vehicle Factors	VehicleState	401
Roadway Factors	Roadway	402
Weather Factors	Weather	402
Environmental Factors	OVEEnvironment	402
Speed/Distance Factors	OVESpeed	403
Nonmotorist Involvement	NonMotorist	403

PARViolations Data Set

Variable Title	Variable Name	Page
Violations Charged As A Result Of This Crash	PARViolationCode	404
Police Description Of Violation	PARDescription	406

SaferAuthorityStatus Data Set

Variable Title	Variable Name	Page
Common Status	CommonStatus	407
Contract Status	ContractStatus	407
Broker Status	BrokerStatus	407

SaferCarrier Data Set

Variable Title	Variable Name	Page
Carrier Status	Status	408
Authorized For-Hire	AuthorizedForHire	408
Exempt For-Hire	ExemptForHire	408
Private Property	PrivateProperty	409
Private Passengers (Business)	PrivatePassengersBusiness	409
Private Passengers (Non-Business)	PrivatePassengersNonBusiness	409
Migrant	Migrant	410
U.S. Mail	USMAIL	410
Federal Government	FederalGovernment	410
State Government	StateGovernment	411
Local Government	LocalGovernment	411
Indian Tribe	IndianTribe	411
Other	Other	411
Unknown	Unknown	412
Carrier Operation Description	CarrierOperationDescription	412
Cargo Carried	CargoCarried	412
Number Of Drivers	CountDrivers	412
Number Of Power Units	CountPowerUnits	413
Mileage Year	MileageYear	413
Carrier-Reported Mileage	Mileage	413

SaferCrashSummary Data Set

Variable Title	Variable Name	Page
Crash Year	SCSYear	414
Number Of Fatalities	SCSFatalities	414
Number Of Injuries	SCSInjuries	414
Number Of Towaways	SCSTowaway	415

SaferDriverCrashReport Data Set

Variable Title	Variable Name	Page
Date Of Crash	SCDDate	416
Crash State	SCDState	416
Driver's Date Of Birth	SCDDateOfBirth	416
Number Of Fatalities	SCDFatalities	416
Number Of Injuries	SCDInjuries	417
Towaway?	SCDTowaway	417
Hazardous Material?	HazardousMaterial	417

SaferDriverInspection Data Set

Variable Title	Variable Name	Page
Level Code	LevelCode	424
Inspection Date	SDIDate	424
Inspection State	SDIState	424
Driver Date Of Birth	SDIDriverDOB	424
Total Number Of Violations	TotalViolations	425
Total Number Of Out-Of-Service Violations	TotalOOS	425
HazMat?	HazMat	425

SaferDriverViolation Data Set

Variable Title	Variable Name	Page
Violation Type	SDVViolation	426
Unit Number	UnitNumber	426
Unit Type	SDVUnitType	427
Number Of Out-Of-Service Violations	SDVOutOfService	427

SaferInspectionsSummary Data Set

Variable Title	Variable Name	Page
Number Of Driver Inspections	DriverInspections	428
Number Of Driver Out-Of-Service Inspections	DriverOutOfService	428
Driver Out-Of-Service Percentage	DriverOutOfServicePerc	428
Average Number Of Driver Out-Of-Service Violations	DriverViolationsAverage	428
Number Of Vehicle Inspections	VehicleInspections	429
Number Of Vehicle Out-Of-Service Inspections	VehicleOutOfService	429
Vehicle Out-Of-Service Percentage	VehicleOutOfServicePerc	429
Average Number Of Vehicle Out-Of-Service Violations	VehicleViolationsAverage	429
Number Of HazMat Inspections	HazMatInspections	430
Number Of HazMat Out-Of-Service Inspections	HazMatOutOfService	430
HazMat Out-Of-Service Percentage	HazMatOutOfServicePerc	430
Average Number Of HazMat Out-Of-Service Violations	HazMatViolationsAverage	430
Total Number Of Inspections	SISTotal	431

SaferInsurance Data Set

Variable Title	Variable Name	Page
Bodily Injury & Property Damage Insurance Required?	BIPDRequired	432
Bodily Injury & Property Damage Insurance Status	BIPDOK	432
Cargo Insurance Required	CargoRequired	432
Cargo Insurance Status	CargoOK	433
Bond Required	BondRequired	433
Bond Status	BondOK	433
Minimum Coverage Amount	MinCoverageAmount	433
Liability Insurance Amount	LiabilityInsurance	434

SaferReview Data Set

Variable Title	Variable Name	Page
Rating Date	RatingDate	435
Safety Rating	Rating	435
Review Date	ReviewDate	435
Review Type	ReviewType	435

SafeStat Data Set

Variable Title	Variable Name	Page
SafeStat Score Date	STADate	437
Overall SafeStat Score	Score	437
Accident Safety Evaluation Area (SEA)	AccidentSEA	437
Driver Safety Evaluation Area (SEA)	DriverSEA	438
Vehicle Safety Evaluation Area (SEA)	VehicleSEA	438
Safety Management Safety Evaluation Area (SEA)	SafetySEA	438
SafeStat Category	STACategory	438
Category Description	CategoryDescription	439

TruckExterior Data Set

Variable Title	Variable Name	Page
Power Unit Type	PowerUnitType	440
Cab Style	CabStyle	440
Dromedary Box?	DromedaryBox	441
Sleeper Berth?	SleeperBerth	441
Were Blind Spots Related To Crash?	BlindSpot	441
Data Recorder Installed?	DataRecorder	442
Vehicle Speed	TEXSpeed	442
Gear Position	GearPosition	443
Total Number Of Trailers	TrailerCount	443
Total Empty Weight	TEXEmptyWeight	444
Total Cargo Weight	CMDBCargoWeight	444
Total GVWR	TOTALGVWR	444
Truck Configuration	TEXConfiguration	445
Total Length	TEXTotalLength	445
Placard Required?	PlacardRequired	446
Mirror Count	MirrorCount	446
Right Door Mirror	RightDoorMirror	446
Left Door Mirror	LeftDoorMirror	447
Right Fender Mirror	RightFenderMirror	447
Left Fender Mirror	LeftFenderMirror	447
Other Location Mirror	OtherLocationMirror	448
ITS Equipment Count	ITSCount	448
Headway Detection Unit	ITSHeadway	448
Side/Object Detection Unit	ITSSideObject	449
Rollover Warning Unit	ITSRollover	449
Other ITS Equipment	ITSOther	450

TruckInspection Data Set

Variable Title	Variable Name	Page
Unit Position	TINPosition	451
Violation Code	TINViolationCode	451
Violation Type	ViolationType	464
Out Of Service Violation?	TINOutOfService	465
Disposition Of Truck	TINDisposition	465

TruckUnits Data Set

Variable Title	Variable Name	Page
Unit Position In Vehicle Configuration	TUNPosition	466
Unit Type In Vehicle Configuration	TUNUnitType	466
Trailer Body Type	TUNBodyType	467
Cargo Type	CargoType	467
Unit VIN	TUNVIN	468
Manufacture Date	ManufactureDate	468
Empty Weight Of Unit	TUNEmptyWeight	469
Cargo Weight Of Unit	TUNCargoWeight	469
GVWR	GVWR	470
Total Length Of Unit	TUNTotalLength	470
Percent Of Cargo Capacity	CapacityPercent	471
Tank Capacity	TankCapacity	471
Tank Load	TankLoad	471
Hazardous Cargo?	Hazard	472
Cargo Spillage	TUNSpillage	472
Number Of Axles In Use	AxlesUsed	473
Number Of Lift Axles (Not In Use)	AxlesNotUsed	473
Number Of Steer Axles	SteerableAxles	473
Retroflective Tape Condition On Rear	RearTapeCond	474
Retroflective Tape Condition On Sides	SideTapeCond	474
Retroflective Tape Used?	ReflectTapeType	474
Retroflective Tape Pattern	ReflectTapePattern	475
Retroflective Tape Color	ReflectTapeColor	475
Retroflective Tape Peeling/Damaged On Rear Underride Guard	UnderrideTapePeel	476
Retroflective Tape Peeling/Damaged On Other Rear Area	RearTapePeel	476
Retroflective Tape Peeling/Damaged On Sides	SideTapePeel	476

VehicleEvents Data Set

Variable Title	Variable Name	Page
Origin Of Fire	FireOrigin	478
Fire Occurrence	FireSeverity	478
Rollover Type	RolloverType	479
Quarter Turns	QuarterTurns	479
Rollover Initiation Type	RollInitType	479
Rollover Initiation Location	RollInitLocation	480
Rollover Initiation – Object Contacted	RollObject	480
Location On Vehicle Where Initial Principal Tripping Force Is Applied	RollTrip	482

Direction Of Initial Roll	RollDirect	483
Manner Of Collision	CollisionManner	483
First Harmful Event	FirstHarmfulEvent	484

VehicleExterior Data Set

Variable Title	Variable Name	Page
Body Category	BodyCategory	486
Is The Vehicle In Transport?	InTransport	491
Inspection Type	InspectionType	491
Type Of Transmission	Transmission	492
Drive Wheels	DriveWheels	492
Left Front Tire Restricted?	LFRestricted	493
Left Rear Tire Restricted?	LRRestricted	493
Right Rear Tire Restricted?	RRRestricted	493
Right Front Tire Restricted?	RFRestricted	493
Left Front Tire Deflated?	LFDeflated	494
Left Rear Tire Deflated?	LRDeflated	494
Right Rear Tire Deflated?	RRDeflated	494
Right Front Tire Deflated?	RFRDeflated	495
Wheelbase	Wheelbase	495
Overall Length	OverallLength	495
Maximum Width	MaxWidth	496
Average Track Width	AverageTrack	497
Front Overhang	FrontOverhang	497
Rear Overhang	RearOverhang	497
Undeformed End Width	EndWidth	498
Researcher's Assessment Of Vehicle Disposition	VehicleDisposition	498
Justification For Researcher's Assessment Of Vehicle Disposition	Justification	498
Multi-Stage Or Altered Vehicle?	MultiStage	498

Variable Definitions and Codes

Variable definitions and attributes for all of the LTCCS data sets, including SAFER and MCMIS data sets, are provided here. This section is organized alphabetically by data set. Within each data set, the variables are ordered as they appear in the data sets. For each variable the following information is included (where applicable):

(Sample variable listing)

Object Contacted Category

Definition: This variable describes the category of object involved in a particular impact to a vehicle.

(Source of the data to provide context and further background)

Source: Researcher determined — primary sources are the scene and vehicle inspections; secondary sources include the police report and interviewees.

(Cross Reference information provides insight and possible alternatives)*

Cross Reference: Derived from CDCCrush.CDCObjectContact.

Variable Name: ObjectContactClass

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Vehicle
2	Noncollision
3	Collision with Fixed Object
5	Collision with Nonfixed Object
6	Unknown event or object
7	Other event (specify)

*Explanation of terms used in Cross Reference entries:

Identical – The variable is exactly the same as another variable.

Related to – The variable depicts the same type of information.

Congruent – The variable has what appears to be identical information, yet the source is different.

Derived from – The variable depicts the same information as another variable, but this variable is not as detailed.

Elaborates on – The variable depicts the same information as another variable, but this variable is more detailed.

Computed from – The variable provides a count of attributes given by the following variables.

When applicable – This is used when the number of records in the 2 data sets are not the same.

All cross references are expressed in <TABLE>.<FIELD> format.

Variable Definitions and Codes - Airbags Data Set

Airbags Data Set

The Airbags data set contains the variables CaseID, PSU, PSUStrat, RATWeight, VehicleNumber and AirbagNumber. AirbagNumber is assigned to each airbag in the vehicle. Each record is uniquely identified by CaseID, VehicleNumber and AirbagNumber. CaseID and VehicleNumber should be used to merge the Airbag data set with vehicle level data sets. CaseID, VehicleNumber and AIROccupantNumber should be used to merge the Airbag data set with the Occupant data set. This data set also contains the following variables:

Cross Reference: This table is related to Occupants.AirbagAvail.

Air Bag Occupant Number

Definition: This variable represents the occupant associated with this air bag, identified by their occupant number.

Source: Researcher determined — primary source is the vehicle inspection; secondary sources include the interview, repair facilities, tow facility, and medical records.

Cross Reference: Related to Occupants.AirbagAvail, values will differ in part due to Police Report vs. Researcher determined values.

Variable Name: AIROccupantNumber

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value
99	Unknown

Seat Row 1

Definition: This variable is used to identify an air bag deployment that occurred in the first row of seats in the vehicle.

Variable Name: SeatRow1

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-5	Seat row value
9	Unknown

Seat Location 1

Definition: This variable is used to identify the seat location in the first row of the vehicle where an air bag deployment occurred.

Variable Name: SeatLocation1

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-4	Seat row value
9	Unknown

Variable Definitions and Codes - Airbags Data Set

Seat Row 2

Definition: This variable is used to identify an air bag deployment that occurred in the second row of seats in the vehicle.

Variable Name: SeatRow2

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-5	Seat Row value
9	Unknown

Seat Location 2

Definition: This variable is used to identify the seat location in the second row of the vehicle where an air bag deployment occurred.

Variable Name: SeatLocation2

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-4	Seat Row value
9	Unknown

Deployment Location Of Air Bag

Definition: This variable identifies the location of a particular air bag.

Variable Name: AirbagLocation

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Steering Wheel Hub
2	Top Instrument Panel
3	Mid Instrument Panel
4	Bottom Instrument Panel
5	Seat Back
6	Door
7	Roof Side Rail
98	Other
99	Unknown

Air Bag Status

Definition: This variable documents the availability of the air bag.

Source: Researcher determined — primary source is the vehicle inspection; secondary sources include the interview, police report, and medical records. NOTE: The use of the police report is limited. If there is no vehicle inspection and the only secondary source is the PAR, then the PAR

Variable Definitions and Codes - Airbags Data Set

must clearly indicate that the vehicle is airbag equipped and/or deployed either in the "narrative" or "restraint system" block.

Variable Name: AirbagStatus

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Airbag Available
2	Airbag disconnected (specify)
3	Airbag not reinstalled
9	Unknown if airbag available for this crash

Type Of Air Bag

Definition: This variable describes the type of air bag present.

Source: Researcher determined — primary source is the interview, secondary sources may include the repair facility and/or documents found in the vehicle.

Variable Name: AirbagType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Orig. man. installed sys.
2	Retrofitted Air Bag
3	Replacement Air Bag
4	Unknown Type
8	Not applicable
9	Unknown

Redesigned Air Bag

Definition: This variable indicates whether or not the vehicle was equipped with a redesigned air bag for this location. Redesigned air bags include second-generation air bags, next-generation air bags, Air Bag II, advanced air bags, and other innovative systems that have been developed to make use of air bag protection technology.

Source: Researcher determined — primary source is the vehicle inspection; secondary sources include VIN and interview.

Variable Name: Depowered

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not Redesigned
1	Redesigned
2	Advanced (specify)
70	No air bag available for this crash
99	Unknown

Variable Definitions and Codes - Airbags Data Set

Air Bag Deployment

Definition: This variable describes when in the crash sequence the air bag deployed.

Source: Researcher determined — primary source is the vehicle inspection; secondary sources include the interview, repair facilities, tow facility, police report, and medical records. NOTE: The use of the police report is limited. If there is no vehicle inspection and the only secondary source is the PAR, then the PAR must clearly indicate that an air bag deployed either in the "narrative" or in a "restraint system" block.

Variable Name: Deployment

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Deployed during crash (as a result of impact)
2	Deployed, inadvertently just prior to crash
3	Deployed, details unknown
4	Deployed as a result of a non-collision event during accident sequence (e.g. fire, explosion, electrical)
7	Not deployed
70	No airbag functional for this crash
99	Unknown if deployed

Indications Of Air Bag Failure?

Definition: This variable documents whether or not something abnormal has occurred to the air bag system. It may not necessarily mean that the air bag system was defective.

Source: Researcher determined — primary source is the vehicle inspection; secondary sources include the interview, repair facilities, tow facility, police report, and medical records. NOTE: The use of all secondary sources is limited. If there is no vehicle inspection, then the secondary sources are limited to the reporting of "no failure". If the only secondary source is the PAR and no failure is alleged, then the PAR must clearly indicate that an air bag deployed either in the "narrative" or in a "restraint system" block.

Variable Name: AirbagFailure

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes (specify)
70	Airbag not available
79	Unknown if available
99	Unknown

Type Of Cutoff Switch

Definition: This variable describes the type of air bag cutoff switch present in the vehicle.

Source: Researcher determined — primary source is the vehicle inspection; secondary sources may include the police report, repair facilities, and tow facility.

Variable Name: SwitchType

Variable Definitions and Codes - Airbags Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	None present
1	Originally equipped
2	Retro fit
3	Switch present, type unknown
9	Unknown if switch present

Cutoff Switch Position Status

Definition: This variable describes the status of the airbag cutoff switch at the time of the crash.

Source: Researcher determined — primary source is the vehicle inspection; secondary sources may include the police report, repair facilities, and tow facility.

Variable Name: SwitchStatus

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Switch On/Automatic
1	Switch off
7	None present
8	Unknown if switch present
9	Switch status unknown

Did Air Bag Module Cover Flaps Open At Designated Tear Points?

Definition: This variable documents whether or not the air bag properly opened at its tear points. A designated tear point is a weakened area of the flap material designed to allow the air bag easy escape from its storage area during deployment. Some air bags in the seat cushion and seat back may not have cover flaps, but will deploy through a seam that separates during the air bag deployment.

Source: Researcher determined — primary source is the vehicle inspection, secondary source is the interview

Variable Name: FlapsOpen

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes
60	Not deployed
69	Unknown if deployed
70	No airbag available for this crash
79	Unknown
99	Unknown if flaps/seams opened at tear points

Variable Definitions and Codes - Airbags Data Set

Were The Cover Flaps Damaged?

Definition: This variable indicates whether or not the air bag cover flaps sustained damage during deployment. Normal separation/tearing at the designated tear points does not constitute damage.

Source: Researcher determined — primary source is vehicle inspection; secondary source is the interview.

Variable Name: FlapsDamaged

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes (specify)
60	Not deployed
69	Unknown if deployed
70	No airbag available for this crash
99	Unknown if airbag module cover flaps opened at tear points

Was There Damage To The Air Bag?

Definition: This variable documents any damage to the air bag during the crash sequence.

Source: Researcher determined — primary source is the vehicle inspection; secondary source may include the interview.

Variable Name: AirbagDamage

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not Damaged
1	Ruptured
2	Cut
3	Torn
4	Punctured
5	Burned
6	Abraded
60	Not deployed
69	Unknown if deployed
70	No airbag available for this crash
88	Other damage (specify)
95	Damaged, details unknown
99	Deployed, unknown if damaged

Source Of Air Bag Damage

Definition: This variable documents the source of damage to the air bag during the crash sequence. This variable is related to the variable “Was There Damage To The Air Bag?”

Source: Researcher determined — primary source is the vehicle inspection; secondary source includes the interview.

Variable Definitions and Codes - Airbags Data Set

Variable Name: DamageSource

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Object worn by occupant (specify)
2	Object carried by occupant (specify)
3	Adaptive/assistive controls (specify)
4	Cover flaps
5	Fire in vehicle
6	Thermal burns
7	Windshield
8	Rescue or emergency efforts
50	Not Damaged
59	Deployed, unknown if damaged
60	Not deployed
69	Unknown if deployed
70	No airbag available for this crash
88	Other damage source (specify)
99	Damaged, unknown source

Had The Vehicle Been In Previous Crashes?

Definition: This variable documents whether the vehicle had been in any previous crashes (that may or may not have involved air bag deployment).

Source: Researcher determined — primary source is the interview, secondary source may include a repair facility.

Variable Name: PriorCrashes

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	No previous crashes
2	Previous crash(es) without deployment(s)
3	One previous crash with deployment
4	More than one previous crash with at least one deployment
8	Previous crashes, unknown deployment status
9	Unknown

Had Any Prior Maintenance/Service Been Performed On Air Bag System?

Definition: This variable indicates whether or not the air bag had received any maintenance or service work prior to the crash.

Source: Researcher determined — primary source is the interview, secondary sources may include repair facilities and or documents found in the vehicle.

Variable Name: PriorMaintenance

Variable Definitions and Codes - Airbags Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes (specify)
9	Unknown

CDC For Air Bag Deployment Impact

Definition: This variable indicates the CDC's delta V rating for the impact associated with this air bag's deployment.

Source: Researcher determined — primary sources are the scene and vehicle inspection; secondary sources are the police report and the interviewee.

Variable Name: CDC

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Highest Delta V
2	Second Highest Delta V
3	Other delta V (specify)
9	Unknown
60	Not deployed
69	Unknown if deployed
70	No airbag available for this crash
99	Deployed, unknown event

Was The Air Bag In This Occupant's Position Contacted By Another Occupant?

Definition: This variable documents whether another occupant (besides the intended occupant) contacted this particular air bag.

Variable Name: ContactOther

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes (specify)
60	Not deployed
69	Unknown if deployed
70	Airbag not functional (disconnected or not reinstalled)
79	Unknown
99	Deployed, unknown if other occupant contact to airbag

Variable Definitions and Codes - Brakes Data Set

Brakes Data Set

The Brakes data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID, VehicleNumber, and Axle uniquely identify each record in this data set. CaseID and VehicleNumber should be used to merge the Brakes data set with vehicle level data sets. This data set also contains the following variables:

Axle

Definition: This variable identifies the axle to which the brake information is related.

Source: Researcher determined — primary source is vehicle inspection, secondary sources include FMCSA Truck Inspector and/or Level 1 inspection report.

Variable Name: Axle

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1-15	Value
99	Unknown

Brake Type

Definition: This variable documents the type of brake system present at a particular axle.

Source: Researcher determined — primary source is vehicle inspection, secondary sources include FMCSA Truck Inspector and/or Level 1 inspection report.

Variable Name: BrakeType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Air
2	Hydraulic
3	Electric
9	Unknown

Brake Axle Position

Definition: This variable identifies on which unit of the truck configuration a particular axle is located.

Source: Researcher determined — primary source is vehicle inspection, secondary sources include FMCSA Truck Inspector and/or Level 1 inspection report.

Variable Name: BRAPosition

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1-4	Number of Unit where axle is located
9	Unknown

Variable Definitions and Codes - Brakes Data Set

ABS Installed?

Definition: This variable indicates whether or not ABS is available at a particular axle.

Source: Researcher determined — primary source is vehicle inspection, secondary sources include FMCSA Truck Inspector and/or Level 1 inspection report.

Variable Name: ABSInstalled

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes
99	Unknown

ABS Functional?

Definition: This variable indicates whether or not the ABS is functioning properly at a particular axle.

Source: Researcher determined — primary source is vehicle inspection, secondary sources include FMCSA Truck Inspector and/or Level 1 inspection report.

Variable Name: ABSFunctional

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes
99	Unknown

Adjustor Type

Definition: This variable indicates the type of brake adjustment system that is present at a particular axle.

Source: Researcher determined — primary source is vehicle inspection, secondary sources include FMCSA Truck Inspector and/or Level 1 inspection report.

Variable Name: AdjustorType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Man
2	Auto
99	Unknown

Chamber Size

Definition: This variable documents the size of the brake chamber for the braking system at a particular axle.

Variable Definitions and Codes - Brakes Data Set

Source: Researcher determined — primary source is vehicle inspection, secondary sources include FMCSA Truck Inspector and/or Level 1 inspection report.

Variable Name: ChamberSize

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0.00-1000.00	Size in cm
8887	Not applicable
9994	Not Examined
9999	Unknown

Chamber Type

Definition: This variable documents the type of chamber for a braking system at a particular axle.

Source: Researcher determined — primary source is vehicle inspection, secondary sources include FMCSA Truck Inspector and/or Level 1 inspection report.

Variable Name: ChamberType

Attribute Codes

<u>Code</u>	<u>Meaning</u>		
1	A	6-15/16	1-3/8
2	B	9-3/16	1-3/4
3	C	8-1/16	1-3/4
4	D	5-1/4	1-1/4
5	E	6-3/16	1-3/8
6	F	11	2-1/4
7	G	9-7/8	2
8	C-6	4-1/2	1-1/4
9	C-9	5-1/4	1-3/8
10	C-12	5-11/16	1-3/8
11	C-16	6-3/8	1-3/4
12	C-20	6-25/32	1-3/4
13	C-24	7-7/32	1-3/4
14	C-30	8-3/32	2
15	C-36	9	2-1/4
16	D-30	8-1/8	2-1/4
17	DISC	NA	
18	ELEC	NA	
19	HYDR	NA	
20	L-16	6-3/8	2.0
21	L-20	6-25/32	2.0
22	L-24	7-7/32	2.0
23	L-24*	7-7/32	2.5
24	L-30	8-3/32	2.5
25	MM	8-1/8	2-1/4
26	R-9	4-9/32	1-1/2
27	R-12	4-13/16	1-1/2

Variable Definitions and Codes - Brakes Data Set

28	R-16	5-13/32	2
29	R-20	5-15/16	2
30	R-24	6-13/32	2
31	R-30	7-1/16	2-1/4
32	R-36	7-5/8	2-3/4
33	R-50	8-7/8	3
34	WEDG	5/16	5/16
88	Not applicable		
99	Unknown		

Stroke Type

Definition: This variable indicates whether a particular chamber type is categorized as long or short.

Source: Researcher determined — primary source is vehicle inspection, secondary sources include FMCSA Truck Inspector and/or Level 1 inspection report.

Variable Name: StrokeType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Long
2	Short
3	Not Examined
9	Unknown

Left Length

Definition: This variable documents the length of the left brake chamber at a particular axle. This value is measured and provided by the FMCSA Truck Inspector.

Source: Researcher determined — primary source is the Level 1 inspection report.

Variable Name: LeftLength

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0.00-100.00	Size in cm
8887	Not applicable
9992	Inoperable
9994	Not examined
9999	Unknown

Right Length

Definition: This variable documents the length of the right brake chamber at a particular axle. This value is measured and provided by the FMCSA Truck Inspector.

Source: Researcher determined — primary source is the Level 1 inspection report.

Variable Name: RightLength

Variable Definitions and Codes - Brakes Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0.00 - 100.00	Size in cm
8887	Not applicable
9992	Inoperable
9994	Not examined
9999	Unknown

Variable Definitions and Codes - CargoShiftAssessments Data Set

CargoShiftAssessments Data Set

The CargoShiftAssessments data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID and VehicleNumber uniquely identify each record in this data set and should be used to merge the CargoShiftAssessments data set with other vehicle level data sets. This data set also contains the following variables:

Source: All variables in this table are determined by Case Reviewer using all available information inputs. Primary sources include the scaled schematic, police report, driver interviews, witness interviews, and vehicle inspection results. Input from the truck inspection staff can also be utilized to code this variable.

Type Of Cargo Shift Event

Definition: This variable documents the occurrence of a precrash cargo shift and the type of freight that shifted. The cargo shift must occur prior to any impact event.

Cross Reference: Elaborates on CrashAssessment.ACRCargoShift. Elaborates on Overview.OVECargoShift.

Variable Name: ACSType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No pre-crash cargo shift
1	Boxed general freight (solids)
2	Bulk freight (containerized)
3	Bulk freight (not containerized)
4	Large objects (solids)
5	Tank – solids
6	Tank – liquids
77	Not applicable
88	Other (specify)
99	Unknown

Vehicle Location At Start Of Cargo Shift

Definition: This variable establishes the vehicle location at the start of the cargo shift sequence.

Cross Reference: Congruent with IntvwDrCargoShift.IDGLocation, values will differ due to Interview vs. Researcher determined values.

Variable Name: ACSLocation

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No pre-crash event
1	On roadway
2	On shoulder
3	On roadside
4	On median
7	Not applicable
9	Unknown

Variable Definitions and Codes - CargoShiftAssessments Data Set

Movement Count

Definition: This variable documents the number of circumstances that were identified in which the cargo shift event occurred. This variable refers to the movements of the vehicle prior to the cargo shift.

Cross Reference: Computed from the following variables in the CargoShiftAssessments data set: ACSConstant, ACSCurve, ACSTurn, ACSLightBraking, ACSAccelerating, ACSAvoidance, OtherMovement, ACSDecelerating, ACSModerateBraking, ACSHeavyBraking, ACSStraight.

Variable Name: MovementCount

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-13	Value counter
88	No Driver
99	Unknown

Cause Count

Definition: This variable documents the number of circumstances associated with a cargo shift that were coded for this vehicle. This variable refers to the possible causes of the cargo shift.

Cross Reference: Computed from the following variables in the CargoShiftAssessments data set: ImproperGeneralLoading, ImproperBulkLoading, SparseTieDowns, WeakTieDowns, OtherSolids, Sloshing, BaffleFailure, CompartmentFailure, TankFailure, OtherLiquids, OtherCargos, UnknownCause.

Variable Name: CauseCount

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-13	Value counter
88	No Driver
99	Unknown

Pre-crash Cargo Spillage?

Definition: This variable establishes the occurrence of cargo spillage during the pre-crash phase.

Cross Reference: Congruent with IntvwDrCargoShift.IDGSpillage, values will differ due to Interview vs. Researcher determined values.

Variable Name: ACSSpillage

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No pre-crash cargo shift
1	Yes (specify)
2	No
7	Not applicable
9	Unknown

Variable Definitions and Codes - CargoShiftAssessments Data Set

Driving At Constant Velocity

Definition: This variable establishes whether or not the driver is attempting to maintain a constant velocity at the time that the cargo begins to shift. (This variable was originally an attribute choice under the variable "Circumstances In Which Event Occurred.")

Cross Reference: Congruent with IntvwDrCargoShift.IDGDrivingConstantVelocity, values will differ due to Interview vs. Researcher determined values.

Variable Name: ACSConstant

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Traversing A Curve

Definition: This variable establishes whether or not the driver is traversing a curve at the time that the cargo begins to shift. (This variable was originally an attribute choice under the variable "Circumstances In Which Event Occurred.")

Cross Reference: Congruent with IntvwDrCargoShift.IDGTraversingCurve, values will differ due to Interview vs. Researcher determined values.

Variable Name: ACSCurve

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Completing Turn

Definition: This variable establishes whether or not the driver is attempting to turn at the time that the cargo begins to shift. (This variable was originally an attribute choice under the variable "Circumstances In Which Event Occurred.")

Cross Reference: Congruent with IntvwDrCargoShift.IDGCompletingTurn, values will differ due to Interview vs. Researcher determined values.

Variable Name: ACSTurn

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Light Braking

Definition: This variable establishes whether or not the driver is decelerating using light braking effort at the time that the cargo begins to shift. While the term "light braking" is a subjective evaluation, it generally implies that the level of braking is less than the level typically associated

Variable Definitions and Codes - CargoShiftAssessments Data Set

with a normal traffic stop. (This variable was originally an attribute choice under the variable "Circumstances In Which Event Occurred.")

Cross Reference: Congruent with IntvwDrCargoShift.IDGLightBraking, values will differ due to Interview vs. Researcher determined values.

Variable Name: ACSLightBraking

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Accelerating

Definition: This variable establishes whether or not the driver is accelerating at the time that the cargo begins to shift. (This variable was originally an attribute choice under the variable "Circumstances In Which Event Occurred.")

Cross Reference: Congruent with IntvwDrCargoShift.IDGAccelerating, values will differ due to Interview vs. Researcher determined values.

Variable Name: ACSAccelerating

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Completing Avoidance Maneuver

Definition: This variable establishes whether or not the driver initiates a precrash avoidance maneuver at or prior to the time that the cargo begins to shift. (This variable was originally an attribute choice under the variable "Circumstances In Which Event Occurred.")

Cross Reference: Congruent with IntvwDrCargoShift.IDGCompletingAvoidance, values will differ due to Interview vs. Researcher determined values.

Variable Name: ACSAvoidance

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Other Event Circumstance

Definition: This variable establishes whether or not the driver/vehicle action or velocity is not described by the other cargo shift occurrence variables. (This variable was originally an attribute choice under the variable "Circumstances In Which Event Occurred" and was the "Other (specify):" attribute choice.)

Variable Definitions and Codes - CargoShiftAssessments Data Set

Cross Reference: Congruent with IntvwDrCargoShift.IDGOtherSpecify, values will differ due to Interview vs. Researcher determined values.

Variable Name: OtherMovement

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Throttle Input Only

Definition: This variable establishes whether or not the driver is decelerating and decelerates solely by reducing throttle input at the time that the cargo begins to shift. (This variable was originally an attribute choice under the variable "Circumstances In Which Event Occurred.")

Cross Reference: Congruent with IntvwDrCargoShift.IDGDecelerating, values will differ due to Interview vs. Researcher determined values.

Variable Name: ACSDecelerating

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Moderate Braking

Definition: This variable establishes whether or not the driver is decelerating using a moderate level of braking effort at the time that the cargo begins to shift. A moderate level of braking effort generally implies that the level of braking effort is similar to the level typically associated with a normal traffic stop. (This variable was originally an attribute choice under the variable "Circumstances In Which Event Occurred.")

Cross Reference: Congruent with IntvwDrCargoShift.IDGModerateBraking, values will differ due to Interview vs. Researcher determined values.

Variable Name: ACSModerateBraking

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Heavy Braking

Definition: This variable establishes whether or not the driver is decelerating using a heavy level of braking effort (e.g. panic stop) at the time that the cargo begins to shift. The vehicle will typically experience wheel "lock-up" in this circumstance; however, wheel lock is not a requirement for using this designation. (This variable was originally an attribute choice under the variable "Circumstances In Which Event Occurred.")

Variable Definitions and Codes - CargoShiftAssessments Data Set

Cross Reference: Congruent with IntvwDrCargoShift.IDGHeavyBraking, values will differ due to Interview vs. Researcher determined values.

Variable Name: ACSHeavyBraking

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Traversing A Straight Section

Definition: This variable establishes whether or not the driver is traversing a straight roadway segment at the time that the cargo begins to shift. (This variable was originally an attribute choice under the variable "Circumstances In Which Event Occurred.")

Cross Reference: Congruent with IntvwDrCargoShift.IDGTraversingStraightSection, values will differ due to Interview vs. Researcher determined values.

Variable Name: ACSStraight

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Improper Loading (General Freight)

Definition: This variable establishes whether or not the cargo shift is associated with improper loading of general freight cargo. Usually, the cargo is not properly balanced during the loading process (e.g. large boxes on top of small boxes, inappropriate gaps between cargo units, etc.). This element is also used when the freight is not properly distributed over the length of the cargo area. (This variable was originally an attribute choice under the variable "Cargo Shift Associated With.")

Cross Reference: Congruent with IntvwDrCargoShift.SolidImproperLoadGeneral, values will differ due to Interview vs. Researcher determined values.

Variable Name: ImproperGeneralLoading

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Improper Loading (Bulk Freight)

Definition: This variable establishes whether or not the cargo shift is associated with improper loading of bulk freight cargo. Usually, the cargo consists of one or several large items that are not properly balanced. (This variable was originally an attribute choice under the variable "Cargo Shift Associated With.")

Variable Definitions and Codes - CargoShiftAssessments Data Set

Cross Reference: Congruent with IntvwDrCargoShift.SolidImproperLoadBulk, values will differ due to Interview vs. Researcher determined values.

Variable Name: ImproperBulkLoading

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Inadequate Securement (Number Of Tie Downs)

Definition: This variable establishes whether or not the cargo shift is associated with an inadequate number of tie downs used. This circumstance is most typically associated with bulk freight items. (This variable was originally an attribute choice under the variable "Cargo Shift Associated With.")

Cross Reference: Congruent with IntvwDrCargoShift.SolidInadeqSecureNumber, values will differ due to Interview vs. Researcher determined values.

Variable Name: SparseTieDowns

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Inadequate Securement (Strength Of Tie Downs)

Definition: This variable establishes whether or not the cargo shift is associated with inadequate strength of the tie downs that are used. This circumstance is most typically associated with bulk freight items. (This variable was originally an attribute choice under the variable "Cargo Shift Associated With.")

Cross Reference: Congruent with IntvwDrCargoShift.SolidInadeqSecureStrength, values will differ due to Interview vs. Researcher determined values.

Variable Name: WeakTieDowns

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Other Source Of Solids Shift

Definition: This variable establishes whether or not the cargo shift (solid freight) is associated with a specific factor that is not covered under the loading or securement variables. (This variable was originally an attribute choice under the variable "Cargo Shift Associated With.")

Cross Reference: Congruent with IntvwDrCargoShift.SolidOther, values will differ due to Interview vs. Researcher determined values.

Variable Definitions and Codes - CargoShiftAssessments Data Set

Variable Name: OtherSolids

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Less Than Full Load (Slosh)

Definition: This variable establishes whether or not the cargo shift (liquids) is associated with liquid slosh due to the truck carrying less than a full load. This affects vehicle stability. (This variable was originally an attribute choice under the variable "Cargo Shift Associated With.")

Cross Reference: Congruent with IntvwDrCargoShift.LiquidLessLoad, values will differ due to Interview vs. Researcher determined values.

Variable Name: Sloshing

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Baffle Failure

Definition: This variable establishes whether or not the cargo shift (liquids) is associated with a baffle failure that affects vehicle stability. (This variable was originally an attribute choice under the variable "Cargo Shift Associated With.")

Cross Reference: Congruent with IntvwDrCargoShift.LiquidBaffleFailure, values will differ due to Interview vs. Researcher determined values.

Variable Name: BaffleFailure

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Compartment Partition Failure

Definition: This variable establishes whether or not the cargo shift (liquids) is associated with a failure of a partition for at least one of the vehicle's compartments. This failure subsequently affects vehicle stability. (This variable was originally an attribute choice under the variable "Cargo Shift Associated With.")

Cross Reference: Congruent with IntvwDrCargoShift.LiquidCompartmentFailure, values will differ due to Interview vs. Researcher determined values.

Variable Name: CompartmentFailure

Variable Definitions and Codes - CargoShiftAssessments Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Tank Failure

Definition: This variable establishes whether or not the cargo shift (liquids) is associated with a tank failure (e.g. seam failure). The failure may or may not affect vehicle stability. (This variable was originally an attribute choice under the variable “Cargo Shift Associated With.”)

Cross Reference: Congruent with IntvwDrCargoShift.LiquidTankFailure, values will differ due to Interview vs. Researcher determined values.

Variable Name: TankFailure

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Other Source Of Liquid Shift

Definition: This variable establishes whether or not the cargo shift (liquid freight) is associated with a specific factor that is not covered under the other liquid cargo shift variables. (This variable was originally an attribute choice under the variable “Cargo Shift Associated With.”)

Cross Reference: Congruent with IntvwDrCargoShift.LiquidOther, values will differ due to Interview vs. Researcher determined values.

Variable Name: OtherLiquids

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Other Cargo Shift Types

Definition: This variable establishes whether or not the cargo type is neither solid nor liquid (e.g. grains, bulk powders, etc.) and the vehicle experiences a cargo shift. (This variable was originally an attribute choice under the variable “Cargo Shift Associated With.”)

Cross Reference: Congruent with IntvwDrCargoShift.OtherCargoType, values will differ due to Interview vs. Researcher determined values.

Variable Name: OtherCargos

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Definitions and Codes - CargoShiftAssessments Data Set

Unknown Cause Of Cargo Shift

Definition: This variable establishes whether or not there is insufficient information to determine if a cargo shift occurred. (This variable was originally an attribute choice under the variable "Cargo Shift Associated With.")

Cross Reference: Congruent with IntvwDrCargoShift.UnknownAssoc, values will differ due to Interview vs. Researcher determined values.

Variable Name: UnknownCause

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

CDCCrush Data Set

The CDCCrush data set contains the variables CaseID, PSU, PSUStrat, RATWeight, VehicleNumber, EventNumber and ImpactNumber. EventNumber identifies a particular event in a sequence in the accident. ImpactNumber identifies each particular impact in the crush profile for a vehicle. CaseID, VehicleNumber, EventNumber and ImpactNumber uniquely identify each record in this data set. (Each record can also be uniquely identified by CaseID, VehicleNumber, EventNumber and PositionNumber.) CaseID and EventNumber should be used to merge the CDCCrush data set with the Events data set. CaseID and VehicleNumber should be used to merge the CDCCrush data set with vehicle level data sets. CaseID, VehicleNumber and PositionNumber should be used to merge the CDCCrush data set with the TruckUnits data set. This data set also contains the following variables:

Position Number

Definition: This variable identifies the unit number on the vehicle associated with a CDC/TDC. For example, a truck-trailer's power unit would be Position Number "1," and the first trailer would be Position Number "2." A passenger vehicle would be assigned Position Number "1."

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include on-scene vehicle photographs.

Variable Name: PositionNumber

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value

Deformation Classification Type

Definition: This variable indicates whether the deformation classification is related to a car or a truck.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include on-scene vehicle photographs.

Variable Name: DCType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
C	Car
T	Truck

Object Contacted Category

Definition: This variable describes the category of object involved in a particular impact to a vehicle.

Source: Researcher determined — primary sources are the scene and vehicle inspections; secondary sources include the police report and interviewees.

Cross Reference: Derived from CDCCrush.CDCObjectContact.

Variable Definitions and Codes - CDCCrush Data Set

Variable Name: ObjectContactClass

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Vehicle
2	Noncollision
3	Collision with Fixed Object
5	Collision with Nonfixed Object
6	Unknown event or object
7	Other event (specify)

CDC Object Contacted

Definition: This variable identifies the object that was contacted for this event/impact.

Source: Researcher determined.

Cross Reference: Related to VehicleEvents.FirstHarmfulEvent, if CDCCrush.EventNumber = 1.

Variable Name: CDCObjectContact

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Vehicle#1
2	Vehicle#2
3	Vehicle#3
4	Vehicle#4
5	Vehicle#5
6	Vehicle#6
7	Vehicle#7
8	Vehicle#8
9	Vehicle#9
10	Vehicle#10
11	Vehicle#11
12	Vehicle#12
13	Vehicle#13
14	Vehicle#14
15	Vehicle#15
16	Vehicle#16
17	Vehicle#17
18	Vehicle#18
19	Vehicle#19
20	Vehicle#20
21	Vehicle#21
22	Vehicle#22
23	Vehicle#23
24	Vehicle#24
25	Vehicle#25
26	Vehicle#26
27	Vehicle#27

Variable Definitions and Codes - CDCCrush Data Set

28	Vehicle#28
29	Vehicle#29
30	Vehicle#30
31	Overturn->rollover (excludes end-over-end)
32	Rollover->end-over-end
33	Fire or explosion
34	Jackknife
35	Other intraunit damage (specify)
36	Noncollision injury
38	Other noncollision (specify)
39	Noncollision->details unknown
41	Tree (<= 10 cm in diameter)
42	Tree (> 10 cm in diameter)
43	Shrubbery or bush
44	Embankment
45	Breakaway pole or post (any diameter)
50	Nonbreakaway pole or post (<=10cm in diameter)
51	Nonbreakaway pole or post (>10 cm but <= 30 cm in diameter)
52	Nonbreakaway pole or post (>30 cm in diameter)
53	Nonbreakaway pole or post (diameter unknown)
54	Concrete traffic barrier
55	Impact attenuator
56	Other traffic barrier (includes guardrail) (specify)
57	Fence
58	Wall
59	Building
60	Ditch or culvert
61	Ground
62	Fire hydrant
63	Curb
64	Bridge
68	Other fixed object (specify)
69	Unknown fixed object
70	Pass. car, light truck, van, or other vehicle not in-transport
71	Medium/heavy truck or bus not in-transport
72	Pedestrian
73	Cyclist or cycle
74	Other nonmotorist or conveyance (specify)
75	Vehicle occupant
76	Animal
77	Train
78	Trailer, disconnected in transport
79	Object fell from vehicle in-transport
88	Other nonfixed object (specify)
89	Unknown nonfixed object
98	Other event (specify)
99	Unknown event or object

Variable Definitions and Codes - CDCCrush Data Set

Force Direction

Definition: This variable indicates the direction of force exerted upon the vehicle by an object. If the force is applied directly upon the center of the front bumper, the force of direction is said to be "0." The direction of force rotates to the right around the vehicle in increments of 10 degrees, circling around the vehicle until it returns to the front (360 degrees). This value is used to create the variable "Clock Force."

Source: Restricted to vehicle inspection or photographs.

Variable Name: ForceDirection

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-360	Value (degrees)
888	Not applicable
999	Unknown

Clock Force

Definition: This variable identifies the direction from which the principal force is applied for a particular impact. The direction of force is based on the face of a clock (e.g. an impact to the front bumper is classified as "12") and is the first two columns of each impact's CDC/TDC.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include on-scene vehicle photographs.

Variable Name: ClockForce

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-98	Value
99	Unknown

Override/Underride

Definition: This variable indicates that this vehicle overrode or underrode another vehicle. "Override" is coded when this vehicle overrides (i.e. goes on top of) the bumper of another vehicle, and "underride" is coded when this vehicle underrides (i.e. goes below) the bumper of another vehicle. For override/underride in combination cases (CDS/Truck cases), the attribute "Medium/heavy truck or bus override" is used.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include driver interviews.

Variable Name: OverrideDesc

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	None
2	Override
3	Underride
4	Medium/heavy truck or bus over

Variable Definitions and Codes - CDCCrush Data Set

11	Underride, compartment intrusion
12	Underride, no compartment intrusion
13	Underride, compartment intrusion unknown
14	Override, motor vehicle in transport
15	Override, motor vehicle not in transport
16	Unknown

Deformation Location

Definition: This variable documents the initial plane of contact to the vehicle and represents the general area of the vehicle. This is the third column in a coded CDC/TDC.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include on-scene vehicle photographs.

Cross Reference: Related to Events.DamageArea or Events.DamageArea2.

Variable Name: DeformLocation

Attribute Codes

<u>Code</u>	<u>Meaning</u>
9	9 Unknown
B	B Back of unit w/ cargo area
C	C Rear of cab
D	D Back - rear of tractor
F	F Front
L	L Left Side
R	R Right Side
T	T Top
U	U Undercarriage
V	V Front of cargo area

Deformation – Longitudinal Or Lateral

Definition: This variable documents the lateral or longitudinal area of the vehicle that contains the contact deformation. This is the fourth column in a coded CDC/TDC.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include on-scene vehicle photographs.

Variable Name: DeformLong

Attribute Codes

<u>Code</u>	<u>CDCPlane</u>	<u>Meaning</u>
9	1	9 Unknown
9	2	9 Unknown
B	1	B Side rear of cab to rear of trailer/cargo area
B	2	B Rear Section
C	1	C Center - front or rear
D	1	D Distributed - side or end
D	2	D Distributed - (F+P+B)
F	1	F Side Front - front of windshield

Variable Definitions and Codes - CDCCrush Data Set

F	2	F Front Section
K	1	K Side(P + W)
L	1	L Left - front or rear
P	1	P Side cab
P	2	P Center Section
R	1	R Right - front or rear
S	1	S Side(F + P + W)
T	1	T Trailer
T	2	T Trailer
W	1	W Side rear of cab to rear of tractor
Y	1	Y Side (F + P) OR End (L + C)
Y	2	Y Side Front/Center Section (F+P)
Z	1	Z Side (P + B) OR End (C + R)
Z	2	Z Side Center/Rear Section(P+B)

Deformation – Vertical Or Lateral

Definition: This variable documents either the vertical or lateral area of the vehicle that contains the contact deformation. The vertical location is used for vertical planes (F, B, L, R) and the lateral location is used for horizontal planes (T, U). This is the fifth column in a coded CDC/TDC.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include on-scene vehicle photographs.

Variable Name: DeformVertical

Attribute Codes

<u>Code</u>	<u>CDCPlane</u>	<u>Meaning</u>
9	1	9 Unknown
9	2	9 Unknown
A	1	A Top to Bottom of vehicle / no wheels
B	1	B Belt Line and above
C	2	C Center
D	2	D Distributed
E	1	E belt line and below
F	1	F Belt line/below on trailer
G	1	G Belt line and above
H	1	H Top of frame to top of vehicle
L	1	L Low - top of frame, frame, and bottom of frame
L	2	L Left
M	1	M Middle -- top of frame to belt line or hood
R	2	R Right
T	1	T Everything above cab
T	2	T Trailer
W	1	W Below undercarriage level (wheels and tires only)
Y	2	Y Left and Center (L+C)
Z	2	Z Right and Center(R+C)

Variable Definitions and Codes - CDCCrush Data Set

Deformation Distribution

Definition: This variable documents the general type of damage distribution for the impact. This classification provides a qualitative description of the type of damage sustained by the vehicle. This is the sixth column of a coded CDC/TDC.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include on-scene vehicle photographs.

Variable Name: DeformDistribution

Attribute Codes

<u>Code</u>	<u>Meaning</u>
9	9 Unknown
A	A Overhanging Structure
E	E Corner
K	K Conversion in impact type
N	N Narrow Impact Area
O	O Rollover (include side)
R	R Override
S	S Sideswipe
U	U No residual deformation
W	W Wide Impact Area

Deformation Extent

Definition: This variable documents the extent of damage for the impact. The extent of residual deformation is classified using a nine-zone extent system. Extent is a mathematical determination of which zone the crush extends into, beginning with Zone “1.” This is the seventh column of a coded CDC/TDC.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include on-scene vehicle photographs.

Variable Name: DeformExtent

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0A	0A
0B	0B
0C	0C
0D	0D
0X	0X
Ei	Eight
Fi	Five
Fo	Four
Ni	Nine
On	One
Se	Seven
Si	Six
Th	Three

Variable Definitions and Codes - CDCCrush Data Set

Tw	Two
Un	Unknown

Deform Code

Definition: This variable identifies the direction from which the principal force is applied for a particular impact. The direction of force is based on the face of a clock (e.g. an impact to the front bumper is classified as “12”) and is the first two columns of each impact’s CDC/TDC.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include on-scene vehicle photographs.

Variable Name: DeformCode

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-98	Value
99	Unknown

Impact Number

Definition: This variable identifies the CDC/TDC that is linked to a particular crush profile.

Variable Name: ImpactNumber

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value
9	Unknown CDC

Direct Damage Location

Definition: This variable describes the location of the direct damage on the vehicle for each impact. This information is used to determine the CDC/TDC for the impact.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include on-scene vehicle photographs.

Cross Reference: Related to Events.DamageArea and Events.DamageArea2.

Variable Name: DamageLocation

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Text description of the location of direct damage on the vehicle

Field L Location

Definition: This variable describes the location of the Field L on the vehicle. Field L represents direct and induced deformation. This information is used to determine the CDC/TDC for the impact.

Variable Definitions and Codes - CDCCrush Data Set

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include on-scene vehicle photographs.

Variable Name: FieldLocation

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Text description of the location of the Field L on the vehicle

Max Crush Location

Definition: This variable describes the location in the crush profile of the maximum crush of this impact to the vehicle. This information is used to determine the CDC/TDC for the impact.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include on-scene vehicle photographs.

Variable Name: MaxCrushLocation

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Text description of the location in the crush profile of the maximum crush of this impact to the vehicle

CDC Category

Definition: This variable describes the information provided by columns 3-7 in a coded CDC/TDC.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include on-scene vehicle photographs.

Variable Name: CDCCategory

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Deformation location
2	Long/Lateral location
3	Vert/Lateral location
4	Damage distribution
5	Damage extent
97	Not applicable
99	Unknown

CDC Width

Definition: This variable indicates the direct damage width. This is a measured value on the vehicle that is used in determining the CDC/TDC for this impact/event.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include on-scene vehicle photographs.

Variable Name: CDCWidth

Variable Definitions and Codes - CDCCrush Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value (cm)
9997	Not Collected
9999	Unknown

Variable Definitions and Codes - Crash Data Set

Crash Data Set

The Crash data set contains the variables CaseID, PSU, PSUStrat and RATWeight. CaseID uniquely identifies each record in this data set and should be used to merge the Crash data set with other data sets. This data set also contains the following variables:

Crash Date

Definition: This variable identifies the date of the crash.

Source: Researcher determined — substantiated by police report and medical records.

Variable Name: CrashDate

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Date (in YYYY-MM-DD format)

Time Of Crash

Definition: This variable identifies the time of day of the crash.

Source: Police report.

Variable Name: CrashTime

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Time (in HH:MM format)

Total Number Of Vehicles In Crash

Definition: This variable documents the total number of vehicles that were involved in the crash. This includes all CDS, non-CDS, in-transport, and not in-transport vehicles.

Source: Researcher determined — substantiated by police report.

Cross Reference: Can be derived from any vehicle specific data sets including: CargoShiftAssessments, CrashAssessment, CrashDiscussion, Environment, FactorAssessment, GeneralVehicle, JackknifeAssessments, Overview, VehicleEvents.

Variable Name: VehicleCount

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value

Truck Count

Definition: This variable represents the total number of heavy trucks involved in the crash.

Source: Researcher determined — substantiated by police report.

Variable Definitions and Codes - Crash Data Set

Cross Reference: Can be derived from GeneralVehicle.GVEBodyType (60, 61, 62, 63, 64, 66, 67, 68, 69, 70, 74, 78). Can be derived from the truck specific data sets including: TruckExterior and TruckUnits.

Variable Name: TruckCount

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value

Car Count

Definition: This variable represents the total number of passenger vehicles involved in the crash.

Source: Researcher determined — substantiated by police report.

Cross Reference: Can be derived from GeneralVehicle.GVEBodyType (1-22 and 28-48).

Variable Name: CARCount

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value

Nonmotorist Count

Definition: This variable identifies the number of nonmotorists involved in the crash.

Source: Researcher determined — substantiated by police report.

Cross Reference: Can be derived from the NonMotorist data set. Related to Overview.NonMotorist.

Variable Name: NonMotoristCount

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value

Crash Summary

Definition: This variable is a combination of two variables separated by “+-”. The first is a description of the overall crash scenario. The second is a general description of the crash configuration.

Source: Derived variable.

Variable Name: CrashType

Variable Definitions and Codes - Crash Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Text that combines two variables to describe the overall crash scenario

Injury Crash Severity Code – Police

Definition: This variable represents the highest injury severity rating in the case, as determined by police on the Police Accident Report (PAR).

Source: Police report

Cross Reference: Can be derived from the combination of GeneralVehicle.GVEPARSevCode and NonMotorist.ANMPARSevCode.

Variable Name: CrashPARSevCode

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	O - No injury
1	C - Possible injury
2	B - Non-incapacitating injury
3	A - Incapacitating injury
4	K - Killed
5	U - Injury, severity unknown
6	Died prior to crash
9	Unknown

Injury Crash Severity Code – Researched

Definition: This variable represents the highest injury severity rating in the case, as determined by injury coding and case narratives. This code is based on occupant medical records and/or case narratives and may differ from the police-reported injury severity code.

Source: Zone Center determined – based on occupant medical records and case narratives, including the police report.

Cross Reference: Can be derived from the combination of GeneralVehicle.GVERESsevCode and NonMotorist.ANMRResSevCode.

Variable Name: CrashRESsevCode

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	O - No injury
1	C - Possible injury
2	B - Non-incapacitating injury
3	A - Incapacitating injury
4	K - Killed
5	U - Injury, severity unknown
6	Died prior to crash
9	Unknown

Variable Definitions and Codes - Crash Data Set

Case Summary

Definition: This variable is the researcher's description of the crash events/sequence.

Source: Written by researcher using all available case evidence.

Cross Reference: Related to CrashDiscussion.Discussion, values are not identical in all cases due to Crash.Summary being crash specific and CrashDiscussion.Discussion is vehicle specific.

Variable Name: Summary

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Detailed description of the crash events

Day Of Week Of Crash

Definition: This variable identifies the day of the week that the crash occurred.

Source: Derived variable.

Variable Name: Day

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Sunday
2	Monday
3	Tuesday
4	Wednesday
5	Thursday
6	Friday
7	Saturday

Collision Type

Definition: This variable describes the type of vehicles involved in the crash using the following vehicle classifications. These classifications are "strung together" to indicate the number and type of each vehicle involved in the crash.

CAR	Automobile or automobile type	Bodytypeid within (1..9, 17)
OLV	Other light vehicle	Bodytypeid within (10..16, 19)
VAN	Minivan to full size Van	Bodytypeid within (20..28)
PICKUP	Light vehicle pick ups	Bodytypeid within (30..39)
LIGHT TRUCK	Other light trucks	Bodytypeid within (40..49)
BUS	Buses	Bodytypeid within (50..59)
TRUCK	Trucks	Bodytypeid within (60..64,66..78)
MHOME	Large motorhome	Bodytypeid within (65)
MCYCLE	Motorcycle and mopeds	Bodytypeid within (80..89)
OTHER		Bodytypeid within (90..97)
MULTI VEHICLE	More than 5 vehicles in the crash	

Source: Derived variable.

Variable Definitions and Codes - Crash Data Set

Variable Name: CollisionType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	BUS-TRUCK
2	CAR-BUS-TRUCK
3	CAR-CAR-CAR-CAR-TRUCK
4	CAR-CAR-CAR-OLV-TRUCK
5	CAR-CAR-CAR-PICKUP-TRUCK
6	CAR-CAR-CAR-TRUCK
7	CAR-CAR-CAR-TRUCK-TRUCK
8	CAR-CAR-LIGHT TRUCK-TRUCK
9	CAR-CAR-LIGHT TRUCK-TRUCK-TRUCK
10	CAR-CAR-OLV-TRUCK
11	CAR-CAR-PICKUP-TRUCK
12	CAR-CAR-TRUCK
13	CAR-CAR-TRUCK-TRUCK
14	CAR-CAR-TRUCK-TRUCK-TRUCK
15	CAR-CAR-VAN-PICKUP-TRUCK
16	CAR-CAR-VAN-TRUCK
17	CAR-CAR-VAN-TRUCK-TRUCK
18	CAR-LIGHT TRUCK-TRUCK
19	CAR-OLV-OLV-TRUCK
20	CAR-OLV-PICKUP-TRUCK
21	CAR-OLV-PICKUP-TRUCK-TRUCK
22	CAR-OLV-TRUCK
23	CAR-OLV-TRUCK-MCYCLE
24	CAR-OLV-TRUCK-TRUCK
25	CAR-OLV-VAN-TRUCK
26	CAR-OLV-VAN-TRUCK-TRUCK
27	CAR-PICKUP-PICKUP-TRUCK
28	CAR-PICKUP-TRUCK
29	CAR-PICKUP-TRUCK-TRUCK
30	CAR-TRUCK
31	CAR-TRUCK-MCYCLE
32	CAR-TRUCK-TRUCK
33	CAR-TRUCK-TRUCK-MCYCLE
34	CAR-TRUCK-TRUCK-TRUCK
35	CAR-TRUCK-TRUCK-TRUCK-TRUCK
36	CAR-VAN-PICKUP-TRUCK
37	CAR-VAN-PICKUP-TRUCK-TRUCK
38	CAR-VAN-TRUCK
39	CAR-VAN-TRUCK-TRUCK
40	CAR-VAN-VAN-VAN-TRUCK
41	LIGHT TRUCK-TRUCK
42	LIGHT TRUCK-TRUCK-TRUCK
43	MULTI VEHICLE
44	OLV-OLV-TRUCK
45	OLV-PICKUP-PICKUP-TRUCK-TRUCK

Variable Definitions and Codes - Crash Data Set

46	OLV-PICKUP-TRUCK
47	OLV-TRUCK
48	OLV-TRUCK-TRUCK
49	OLV-TRUCK-TRUCK-TRUCK
50	OLV-VAN-PICKUP-TRUCK
51	OLV-VAN-TRUCK
52	PICKUP-PICKUP-PICKUP-TRUCK
53	PICKUP-PICKUP-TRUCK
54	PICKUP-TRUCK
55	PICKUP-TRUCK-TRUCK
56	PICKUP-TRUCK-TRUCK-TRUCK-TRUCK
57	TRUCK
58	TRUCK-MCYCLE
59	TRUCK-OTHER
60	TRUCK-TRUCK
61	TRUCK-TRUCK-MHOME
62	TRUCK-TRUCK-TRUCK
63	TRUCK-TRUCK-TRUCK-TRUCK
64	TRUCK-TRUCK-TRUCK-TRUCK-TRUCK
65	VAN-PICKUP-TRUCK
66	VAN-TRUCK
67	VAN-TRUCK-MCYCLE
68	VAN-TRUCK-TRUCK
69	VAN-VAN-TRUCK
70	VAN-VAN-TRUCK-TRUCK
71	CAR-CAR-PICKUP-PICKUP-TRUCK

Medical Treatment

Definition: This variable represents the highest level of treatment of any occupant in the case.

Source: Researcher determined — inputs include interviewee, police report, and medical records.

Cross Reference: Related to Occupants.InitialTreatment.

Variable Name: Treatment

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No treatment
1	Dead on Arrival (DOA) at hospital
2	Dead prior to Admission
3	Hospitalization
4	Transported and released
5	Treatment at scene - non-transported
6	Treatment later
7	Transported to a medical facility-unknown if treated
8	Treatment - other (specify)
9	Unknown

Variable Definitions and Codes - Crash Data Set

Occupant Fatality

Definition: This variable documents if there were any occupant fatalities in the case.

Source: Researcher determined — primary source is medical records; secondary source is police report.

Variable Name: OCCFatality

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not Fatal
1	Fatal
2	Fatal - ruled disease (specify)
9	Unknown

Alcohol Involvement?

Definition: This variable documents whether or not alcohol was involved in the crash.

Source: Zone Center determined – based on occupant medical records, police report, and interviews.

Cross Reference: Congruent with GeneralVehicle.PARAlcoholPresent, values will differ due to Police Report vs. Researcher determined values.

Variable Name: CRAAlcohol

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Yes
2	No
9	Unknown

Drug Involvement?

Definition: This variable documents whether or not any drugs (legal or illegal) were present or involved in the crash.

Source: Zone Center determined – based on occupant medical records, police report, and interviews.

Cross Reference: Can be derived from the DriverDrugs data set.

Variable Name: AnyDrugsCrash

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Yes
2	No
9	Unknown

CrashAssessment Data Set

The CrashAssessment data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID and VehicleNumber uniquely identify each record in this data set and should be used to merge the CrashAssessment data set with other vehicle level data sets. This data set also contains the following variables:

Pre-Event Movement

Definition: This variable establishes the subject vehicle's pre-critical event movement pattern. The pre-event movement pattern is usually described as the point which both precedes the critical precrash envelope and which precedes vehicle motions that place the involved vehicle(s) on an imminent collision path.

Source: Determined by Case Reviewer using all available information inputs. Primary sources include the scaled schematic, police report, driver interviews, and witness interviews. It should be noted, however, that this may be a subjective decision based on the preponderance of available evidence.

Cross Reference: Identical to Overview.Movement.

Variable Name: PreEventMovement

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No driver present
1	Going Straight
2	Decelerating in traffic lane
3	Accelerating in traffic lane
4	Starting in traffic lane
5	Stopped in traffic lane
6	Passing or overtaking another vehicle
7	Disabled or parked in travel lane
8	Leaving a parking position
9	Entering a parking position
10	Turning right
11	Turning left
12	Making a U-turn
13	Backing up (other than for parking position)
14	Negotiating a curve
15	Changing lanes
16	Merging
17	Successful avoidance maneuver to a previous critical event
98	Other (specify)
99	Unknown

Critical Precrash Event

Definition: This variable identifies the event which made the crash imminent (i.e. something occurred which made the collision inevitable). A precrash critical event is coded for each vehicle in the crash and documents the circumstances leading to this vehicle's first impact in the crash sequence.

Variable Definitions and Codes - CrashAssessment Data Set

Source: Determined by Case Reviewer using all available information inputs. Primary sources include the scaled schematic; police report, driver interviews, witness interviews, and vehicle inspection results. It should be noted, however, that this may be a subjective decision based on the preponderance of available evidence.

Cross Reference: Elaborates on CrashAssessment.CriticalEventCat. Identical to Overview.OVECriticalEvent.

Variable Name: ACRCriticalEvent

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Blow out/flat tire, (specify blow out/flat, location/make)
2	Stalled engine
3	Disabling vehicle failure (e.g. wheel fell off) Specify:
4	Non-disabling vehicle problem (e.g., hood flew up) Specify:
5	Poor road conditions (Puddle, pothole, ice, etc.) Specify:
6	Traveling too fast for conditions
7	Jackknife Event
8	Other cause of control loss (specify)
9	Unknown cause of control loss
10	Over the lane line on left side of travel lane
11	Over the lane line on right side of travel lane
12	Off the edge of the road on the left side
13	Off the edge of the road on the right side
14	End departure
15	Turning left at intersection
16	Turning right at intersection
17	Crossing over (passing through) intersection
18	This vehicle decelerating
19	Unknown travel direction
50	Other vehicle stopped
51	Traveling in same direction with low steady speed
52	Traveling in same direction while decelerating
53	Traveling in same direction with higher speed
54	Traveling in opposite direction
55	In crossover
56	Backing
59	Unknown travel direction of other motor vehicle in lane
60	From adjacent lane (same direction) - over left lane line
61	From adjacent lane (same direction -over right lane line
62	From opposite direction-over left lane line
63	From opposite direction -over right lane line
64	From parking lane
65	From crossing street, turning into same direction
66	From crossing street, across path
67	From crossing street, turning into opposite direction
68	From crossing street, intended path not known
70	From driveway, turning into same direction
71	From driveway, across path
72	From driveway, turning into opposite direction

Variable Definitions and Codes - CrashAssessment Data Set

73	From driveway, intended path not known
74	From entrance to limited access highway
78	Encroachment by other vehicle-details unknown
80	Pedestrian in roadway
81	Pedestrian approaching roadway
82	Pedestrian-unknown location
83	Pedal cyclist or other non-motorist in roadway (specify):
84	Pedal cyclist or other non-motorist approaching roadway (specify)
85	Pedal cyclist or other non-motorist-unknown location (specify)
87	Animal in roadway
88	Animal approaching roadway
89	Animal - unknown location
90	Object in roadway
91	Object approaching roadway
92	Object - unknown location
98	Other (specify)
99	Unknown
100	Cargo Shift
125	Not involved first harmful event

Critical Precrash Event Categories

Definition: This variable groups the individual attributes of the Critical Precrash Event into categories. These categories are helpful in deciding the critical precrash event.

Source: Determined by Case Reviewer using all available information inputs. Primary sources include the scaled schematic; police report, driver interviews, witness interviews, and vehicle inspection results. It should be noted, however, that this may be a subjective decision based on the preponderance of available evidence.

Cross Reference: Derived from CrashAssessment.ACRCriticalEvent. Derived from Overview.OVECriticalEvent.

Variable Name: CriticalEventCat

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	This vehicle loss of control
2	This vehicle traveling
3	Other motor vehicle in lane
4	Other motor vehicle encroaching into lane
5	Pedestrian, pedacyclist, or other nonmotorist
6	Object or animal
7	Other (specify)
8	Unknown
9	This vehicle not involved in first harmful event

Critical Reason For The Critical Event

Definition: This variable establishes the critical reason for the occurrence of the critical event. The critical reason is the immediate reason for this event and is often the last failure in the causal

Variable Definitions and Codes - CrashAssessment Data Set

chain (i.e. closest in time to the critical precrash event). Although the critical reason is an important part of the description of crash events, it is not the cause of the crash nor does it imply the assignment of fault.

Source: Determined by Case Reviewer using all available information inputs. Primary sources include the scaled schematic, police report, driver interviews, witness interviews, and vehicle inspection results. It should be noted, however, that this may be a subjective decision based on the preponderance of available evidence.

Cross Reference: Elaborates on CrashAssessment.ReasonCat. Identical to Overview.OVEReason.

Variable Name: ACRReason

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Critical event not coded to this vehicle
100	Sleep, that is, actually asleep
101	Heart attack or other physical impairment of the ability to act
108	Other critical non-performance (specify)
109	Unknown critical non-performance
110	Inattention (i.e., daydreaming)
111	Internal distraction
112	External distraction
113	Inadequate surveillance (e.g., failed to look, looked but did not see)
118	Other recognition error (specify)
119	Unknown recognition error
120	Too fast for conditions to be able to respond to unexpected actions of other road users (specify)
121	Too slow for traffic stream
122	Misjudgment of gap or other's speed
123	Following too closely to respond to unexpected actions
124	False assumption of other road user's actions
125	Illegal maneuver
126	Failure to turn on headlamps
127	Inadequate evasive action, e.g. braking only, not braking and steering
128	Aggressive driving behavior
138	Other decision error (specify)
139	Unknown decision error
140	Too fast for curve/turn
141	Panic/Freezing
142	Overcompensation
143	Poor directional control e.g., failing to control vehicle with skill ordinarily expected
148	Other performance error (specify)
149	Unknown performance error
199	Type of driver error unknown
200	Tires/wheels failed
201	Brakes failed
202	Steering failed
203	Cargo shifted
204	Trailer attachment failed

Variable Definitions and Codes - CrashAssessment Data Set

205	Suspension failed
206	Lights failed
207	Vehicle related vision obstructions
208	Body, doors, hood failed
209	Jackknifed
298	Other vehicle failure (specify)
299	Unknown vehicle failures
500	Signs/signals missing
501	Signs/signals erroneous/defective
502	Signs/signals inadequate
503	View obstructions by roadway design/furniture
504	View obstructed by other vehicles
505	Road design - roadway geometry (e.g., ramp curvature)
506	Road design - sight distance
507	Road design - other
508	Maintenance problems (potholes, deteriorated road edges, etc.)
509	Slick roads (low friction road surface due to ice, loose debris, any other cause)
518	Other highway-related condition (specify)
521	Rain, snow
522	Fog
523	Wind gust
528	Other weather-related condition (specify)
530	Glare
531	Blowing debris
538	Other sudden change in ambience (specify)
540	Degraded braking capability
541	Transmission/engine failure
999	Unknown reason for critical event

Critical Reason Categories

Definition: This variable groups the attributes for the variable Critical Reason for the Critical Event variable into categories.

Source: Determined by Case Reviewer using all available information inputs. Primary sources include the scaled schematic; police report, driver interviews, witness interviews, and vehicle inspection results. It should be noted, however, that this may be a subjective decision based on the preponderance of available evidence.

Cross Reference: Derived from CrashAssessment.ACRReason. Derived from Overview.OVERReason.

Variable Name: ReasonCat

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No Driver Error
1	Physical Driver Factor
2	Driver Recognition Factor
3	Driver Decision Factor

Variable Definitions and Codes - CrashAssessment Data Set

4	Driver Performance Factor
5	Vehicle Related Factor
6	Environment - Highway
7	Environment - Weather
99	Unknown Reason

Attempted Avoidance Maneuver

Definition: This variable documents the driver's actions initiated in response to the realization of impending danger. Attempted avoidance maneuvers are movements/actions initiated by the subject driver, within the crucial crash envelope, in response to a critical precrash event. Attempted avoidance maneuvers occur after the driver has realization of an impending danger.

Source: Determined by Case Reviewer using all available information inputs. Primary sources include the scaled schematic, police report, driver interviews, witness interviews and vehicle inspection results.

Cross Reference: Identical to Overview.OVEAvoidance.

Variable Name: ACRAvoidance

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No driver present
1	No avoidance maneuver
2	Braking (no lockup)
3	Braking (lockup)
4	Braking (lockup unknown)
5	Releasing brakes
6	Steering left
7	Steering right
8	Braking and steering left
9	Braking and steering right
10	Accelerating
11	Accelerating and steering left
12	Accelerating and steering right
98	Other action (specify)
99	Unknown

Pre-Impact Stability

Definition: This variable focuses upon this vehicle's dynamics after the critical event. The purpose of this variable is to assess the stability of the vehicle after the critical event. The stability of the vehicle prior to an avoidance action is not considered except in the following situation: A vehicle that is out of control (e.g. yawing clockwise) prior to an avoidance maneuver is coded "Other vehicle loss of control" only if an avoidance action was taken in response to an impending danger.

Source: Determined by Case Reviewer using all available information inputs. Primary sources include the scaled schematic, police report, driver interviews, witness interviews and vehicle inspection results.

Cross Reference: Identical to Overview.OVEStability.

Variable Definitions and Codes - CrashAssessment Data Set

Variable Name: ACRStability

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No driver present
1	Tracking
2	Skidding longitudinally->rotation less than 30 degrees
3	Skidding laterally->clockwise rotation
4	Skidding laterally->counterclockwise rotation
8	Other vehicle loss-of-control (specify)
9	Pre-crash stability unknown

Pre-Impact Location

Definition: This variable reports the location of the subject vehicle at the point where its pre-impact stability is determined.

Source: Determined by Case Reviewer using all available information inputs. Primary sources include the scaled schematic, police report, driver interviews, witness interviews and vehicle inspection results.

Cross Reference: Identical to Overview.OVELocation.

Variable Name: ACRLocation

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No driver present
1	Stayed in original travel lane
2	Stayed on roadway but left original travel lane
3	Stayed on roadway, not known if left original travel lane
4	Departed roadway
5	Remained off roadway
6	Returned to roadway
7	Entered roadway
9	Unknown

Right-Of-Way?

Definition: This variable establishes vehicle right-of-way characteristics, from a legal perspective, for the subject vehicle. Specifically, did this vehicle have the right-of-way?

Source: Determined by Case Reviewer using all available information inputs. Primary sources include the scaled schematic, police report, driver interviews, witness interviews and vehicle inspection results.

Cross Reference: Identical to Overview.OVERightOfWay.

Variable Name: ACRRightOfWay

Variable Definitions and Codes - CrashAssessment Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Yes
2	No
88	Not applicable
99	Unknown

Crash Type

Definition: This variable is used in categorizing the collisions of drivers involved in crashes. A collision is defined here as the first harmful event in a crash between a vehicle and some object, accompanied by property damage or human injury. The object may be another vehicle, a person, an animal, a fixed object, the road surface, or the ground. If the first collision is a rollover, the impact is with the ground or road surface. The collision may also involve plowing into soft ground, if severe deceleration results in damage or injury. A road departure without damage or injury is not defined as a collision. This variable encompasses the "Configuration" variable, which is a component of this variable. Cases where the crash type is "No Impact" include fire and immersion.

Source: Determined by Case Reviewer using all available information inputs. Primary sources include the scaled schematic, police report, driver interviews, witness interviews and vehicle inspection results.

Cross Reference: Elaborates on CrashAssessment.AccidentCat. Identical to Overview.OVECrashCode. Elaborates on Overview.OVEAccidentType.

Variable Name: CrashCode

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No Impact
1	Right roadside departure, drive off road
2	Right roadside departure, control/traction loss
3	Right roadside departure; avoid collision with vehicle, pedestrian, animal
4	Right roadside departure, specific other
5	Specifics Unknown
6	Left roadside departure, drive off road
7	Left roadside departure, control/traction loss
8	Left roadside departure; avoid collision with vehicle, pedestrian, animal
9	Left roadside departure, specifics other
10	Specifics Unknown
11	Forward Impact, parked vehicle
12	Forward impact, stationary object
13	Forward Impact, pedestrian/animal
14	End Departure
15	Forward Impact, Specifics Other
16	Specifics Unknown
20	Rear-end: Stopped
21	Rear-end: Stopped, Straight
22	Rear-end: Stopped, Left
23	Rear-end: Stopped, Right

Variable Definitions and Codes - CrashAssessment Data Set

24	Rear-end: Slower
25	Slower, Going Straight
26	Rear-end: Slower, Going Left
27	Rear-end: Slower, Going Right
28	Rear-end: Decelerating (Slowing)
29	Rear-end: Decelerating (Slowing), Going Straight
30	Rear-end: Decelerating (Slowing), Going Left
31	Rear-end: Decelerating (Slowing), Going Right
32	Rear-end: Specifics Other
33	Rear-end: Specifics Unknown
34	Forward Impact: Control/Traction Loss
35	Forward Impact: Control/Traction Loss
36	Forward Impact: Control/Traction Loss
37	Forward Impact: Control/Traction Loss
38	Forward Impact: Avoid Collision with Vehicle.
39	Forward Impact: Avoid Collision with Vehicle
40	Forward Impact: Avoid Collision with Object
41	Forward Impact: Avoid Collision with Object
42	Forward Impact: Specifics Other
43	Forward Impact: Specifics Unknown
44	Sideswipe/Angle: Straight Ahead on Left
45	Sideswipe/Angle: Straight Ahead on Left/Right
46	Sideswipe/Angle: Changing Lanes to the Right
47	Sideswipe/Angle: Changing Lanes to the Left
48	Sideswipe/Angle: Specifics Other
49	Sideswipe/Angle: Specifics Unknown
50	Head-On: Lateral Move (Left/Right)
51	Head-On: Lateral Move (Going Straight)
52	Head-On: Specifics Other
53	Head-On: Specifics Unknown
54	Forward Impact: Control/Traction Loss
55	Forward Impact: Control/Traction Loss
56	Forward Impact: Control/Traction Loss
57	Forward Impact: Control/Traction Loss
58	Forward Impact: Avoid Collision with Vehicle
59	Forward Impact: Avoid Collision with Vehicle
60	Forward Impact: Avoid Collision with Object
61	Forward Impact: Avoid Collision with Object
62	Forward Impact: Specifics Other
63	Forward Impact: Specifics Unknown
64	Sideswipe/Angle: Lateral Move (Left/Right)
65	Sideswipe/Angle: Lateral Move (Going Straight)
66	Sideswipe/Angle: Specifics Other
67	Sideswipe/Angle: Specifics Unknown
68	Turn Across Path: Initial Opposite Directions (Left/Right)
69	Turn Across Path: Initial Opposite Directions (Going Straight)
70	Turn Across Path: Initial Same Directions (Turning Right)
71	Turn Across Path: Initial Same Directions (Going Straight)
72	Turn Across Path: Initial Same Directions (Turning Left)

Variable Definitions and Codes - CrashAssessment Data Set

73	Turn Across Path: Initial Same Directions (Going Straight)
74	Turn Across Path: Specifics Other
75	Turn Across Path: Specifics Unknown
76	Turn Into Same Direction (Turning Left)
77	Turn Into Same Direction (Going Straight)
78	Turn Into Same Direction (Turning Right)
79	Turn Into Same Direction (Going Straight)
80	Turn Into Opposite Directions (Turning Right)
81	Turn Into Opposite Directions (Going Straight)
82	Turn Into Opposite Directions (Turning Left)
83	Turn Into Opposite Directions (Going Straight)
84	Turn Into Path: Specifics Other
85	Turn Into Path: Specifics Unknown
86	Straight Paths: Striking from the Right
87	Straight Paths: Struck on the Right
88	Straight Paths: Striking from the Left
89	Straight Paths: Struck on the Left
90	Straight Paths: Specifics Other
91	Straight Paths: Specifics Unknown
92	Backing, Etc.: Backing Vehicle
93	Backing, Etc.: Other Vehicle or Object
98	Backing, Etc.: Other Crash Type
99	Backing, Etc.: Unknown Crash Type

Crash Configuration

Definition: This variable is used in categorizing the collisions of drivers involved in crashes. A collision is defined here as the first harmful event in a crash between a vehicle and some object, accompanied by property damage or human injury. The object may be another vehicle, a person, an animal, a fixed object, the road surface, or the ground. If the first collision is a rollover, the impact is with the ground or road surface. The collision may also involve plowing into soft ground, if severe deceleration results in damage or injury. A road departure without damage or injury is not defined as a collision. This variable is part of the larger variable “Crash Type.” The “Crash Type” variable is actually broken down into three components: the crash category, the crash configuration, and the accident type. This variable only deals with the configuration of the crash.

Source: Determined by Case Reviewer using all available information inputs. Primary sources include the scaled schematic, police report, driver interviews, witness interviews and vehicle inspection results.

Cross Reference: Derived from CrashAssessment.CrashCode. Identical to Overview.OVEAccidentType. Derived from Overview.OVECrashCode.

Variable Name: AccidentCat

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Right Roadside Departure
2	Rear-End
3	Head-On
4	Turn Across Path
5	Straight Paths

Variable Definitions and Codes - CrashAssessment Data Set

6	Same Trafficway Opposite Directions - Sideswipe/Angle
7	Left Roadside Departure
8	Same Trafficway Same Direction - Forward Impact
9	Same Trafficway Opposite Directions - Forward Impact
10	Turn Into Path
11	Single Driver - Forward Impact
12	Same Trafficway Same Direction - Sideswipe/Angle
13	Miscellaneous
99	Backing, Etc.: Unknown Crash Type

Jackknife

Definition: This variable documents the presence/absence of a jackknife for this vehicle.

Source: Determined by Case Reviewer using all available information inputs. Primary sources include the scaled schematic, police report, driver interviews, witness interviews and vehicle inspection results.

Cross Reference: Identical to Overview.OVEJackKnife. Derived from JackknifeAssessments.AJKType.

Variable Name: ACRJackknife

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Cargo Shift

Definition: This variable documents the presence/absence of a cargo shift for this vehicle.

Source: Determined by Case Reviewer using all available information inputs. Primary sources include the scaled schematic, police report, driver interviews, witness interviews and vehicle inspection results. Input from the truck inspection staff can also be utilized to code this variable.

Cross Reference: Identical to Overview.OVECargoShift. Derived from CargoShiftAssessments.ACSType.

Variable Name: ACRCargoShift

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

CrashDiscussion Data Set

The CrashDiscussion data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID and VehicleNumber uniquely identify each record in this data set and should be used to merge the CrashDiscussion data set with other vehicle level data sets. This data set also contains the following variables:

Case Summary

Definition: The Case Summary is intended to provide a detailed description of the crash sequence including precrash vehicle movement patterns and driver precrash actions. In addition to describing crash events for each vehicle/driver, the summary is intended to provide a detailed accounting of all causal-related information for this vehicle/driver. This includes describing the critical precrash event, the critical reason for the critical event, and all critical event associated factors.

Source: Written by Case Reviewer utilizing all available case information.

Cross Reference: Related to Crash.Summary, values are not identical in all cases due to Crash.Summary being crash specific and CrashDiscussion.Discussion is vehicle specific.

Variable Name: Discussion

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Detailed description of the crash

Variable Definitions and Codes - DMVViolation Data Set

DMVViolation Data Set

The DMVViolation data set contains the variables CaseID, PSU, PSUStrat, RATWeight, VehicleNumber and DriverNumber. CaseID and VehicleNumber should be used to merge the DMVViolation data set with vehicle level data sets. DriverNumber is used to uniquely identify each driver, however, since a driver can have more than one violation and be involved in more than one crash, this variable does not uniquely identify each record. This data set also contains the following variables:

Source: The source for all variables in this table is the Commercial Driver's License Information System (CDLIS). CDLIS maintains identification data for each commercial driver registered in the fifty states and the District of Columbia. It acts as the central point of access for driver information maintained by a driver's state of record. For more information go to http://www.aamva.org/drivers/drv_automatedsystemscdlis.asp.

Cross Reference: This table is related to the following variables in the GeneralVehicle data set: CMVViolations, NonCMVViolations, TotalViolations, PrevViolations.

License State

Definition: This variable identifies the State in which the driver's (driving) license was issued.

Cross Reference: Congruent with IntwvDrDriver.IDRLicenseState, values will differ due to Interview vs. Researcher determined values. Related to GeneralVehicle.ZipCode.

Variable Name: LicState

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Two-letter state abbreviation

Citation Date

Definition: This variable identifies the date that the driver received a citation for a particular violation.

Variable Name: CitDate

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Date (in YYYY-MM-DD format)

Conviction Date

Definition: This variable identifies the date that the driver was convicted of a particular violation.

Variable Name: ConvDate

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Date (in YYYY-MM-DD format)

Variable Definitions and Codes - DMVViolation Data Set

ACD Code

Definition: This variable represents Department Of Motor Vehicle (DMV) violation codes.

Variable Name: ACDcode

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	DMV code

ACD Detail

Definition: This variable is a 5-digit code that provides further detail of the ACD code.

Variable Name: ACDdetail

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	DMV code

Violation Description

Definition: This variable is a description of each violation and corresponds to the ACD Code.

Variable Name: ViolDescription

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Text description of each violation

DriverAssessment Data Set

The DriverAssessment data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID and VehicleNumber uniquely identify each record in this data set and should be used to merge the DriverAssessment data set with other vehicle level data sets. This data set also contains the following variables:

Was This Driver's Sight Line To The Other Vehicle Clear?

Definition: This variable establishes the driver's sight line to the other vehicle in terms of being clear or being obstructed in some manner.

Source: Determined by the Case Reviewer using all available information inputs. The primary data source is the driver interview; secondary sources include scaled scene schematic, scene measurement log, interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Cross Reference: Congruent with IntvwDrPerception.LineClear, values will differ due to Interview vs. Researcher determined values. In conjunction with DriverAssessment.Obscured, DriverAssessment.Focused, and DriverRecognitionDistraction.ADDSurveillance matches Overview.OVESurveillance.

Variable Name: SightLine

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Yes
2	No, view obstructed by roadway curvature or grade
3	No, view obstructed by roadside appurtenance
4	No, view obstructed by intervening vehicle
7	Not applicable
8	Other (specify)
9	Unknown

Was This Driver's View Of The Other Vehicle Obscured?

Definition: This variable establishes the driver's view of the other vehicle in terms of having a clear view or having a view that is obscured in some manner.

Source: Determined by the Case Reviewer using all available information inputs. The primary data source is the driver interview; secondary sources include scaled scene schematic, scene measurement log, interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Cross Reference: Congruent with IntvwDrPerception.ViewObscured, values will differ due to Interview vs. Researcher determined values. In conjunction with DriverAssessment.SightLine, DriverAssessment.Focused, and DriverRecognitionDistraction.ADDSurveillance matches Overview.OVESurveillance.

Variable Name: Obscured

Variable Definitions and Codes - DriverAssessment Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Yes, obscured by solar glare
2	Yes, obscured by headlight glare
3	Yes, obscured by other glare (specify)
4	Yes, obscured by dark (nighttime) viewing conditions
5	No
7	Not applicable
8	Yes, obscured by other condition (specify)
9	Unknown

Was This Driver Required To Stop Prior To Crash Occurrence?

Definition: This variable establishes if this driver is required to stop prior to entering an intersection, initiating a turn, or prior to the crash.

Source: Determined by the Case Reviewer using all available information inputs. The primary data source is the driver interview; secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Cross Reference: Related to IntvwDrPerception.Stopped, values will differ in part due to Interview vs. Researcher determined values. Related to DriverDecisionAggression.RanLights.

Variable Name: StopRequired

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Yes, traffic control device (TCD)
2	Yes, other reason (specify)
3	Yes, yield right of way requirement
5	No
7	No driver present
9	Unknown

Period Of Time Stopped Prior To Entering Intersection And/Or Initiating Turn

Definition: This variable establishes the period of time the driver was stopped prior to entering an intersection, initiating a turn, or prior to the crash.

Source: Determined by the Case Reviewer using all available information inputs. The primary data source is the driver interview; secondary data sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Cross Reference: Related to IntvwDrPerception.Stopped, values will differ in part due to Interview vs. Researcher determined values.

Variable Name: TimeStopped

Variable Definitions and Codes - DriverAssessment Data Set

Attribute Codes--*

<u>Code</u>	<u>Meaning</u>
0	Traveling at constant velocity
1	Decelerated, did not stop
2	Rolling stop prior to proceeding
3	Stopped < 1 second prior to proceeding
4	Stopped 1-2 seconds prior to proceeding
5	Stopped 3-5 seconds prior to proceeding
6	Stopped more then 5 seconds prior to proceeding
7	No driver present
8	Not required to stop
9	Unknown

After Checking For Traffic, Did This Driver Focus On Intended Turn Destination Or Other Location?

Definition: This variable documents the circumstance where the driver focuses on an extraneous location after initially checking for approaching traffic.

Source: Determined by the Case Reviewer using all available information inputs. The primary data source is the driver interview; secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Cross Reference: Congruent with IntvwDrPerception.FocusTurnIntended, values will differ due to Interview vs. Researcher determined values. In conjunction with DriverAssessment.SightLine, DriverAssessment.Obscured, and DriverRecognitionDistraction.ADDSurveillance matches Overview.OVESurveillance.

Variable Name: Focused

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Yes
2	No
7	Not applicable
9	Unknown

Sleep Related To Work Schedule

Definition: This variable establishes whether or not the driver's sleep pattern is primarily related to his/her work schedule. (This variable was originally an attribute choice under the variable "Driver's Hours of Main Sleep Related To.")

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include surrogate interviews, interviews with other occupants, and interviews with friends of the driver.

Cross Reference: Congruent with IntvwDrSleep.RelateTo (1 "Work Schedule"), values will differ due to Interview vs. Researcher determined values.

Variable Name: ADRWorkSchedule

Variable Definitions and Codes - DriverAssessment Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Sleep Related To Social Schedule

Definition: This variable establishes whether or not the driver's sleep pattern is related to a social schedule. (This variable was originally an attribute choice under the variable "Driver's Hours Of Main Sleep Related To.")

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include surrogate interviews, interviews with other occupants, and interviews with friends of the driver.

Cross Reference: Congruent with IntvwDrSleep.RelateTo (2 "Social Schedule"), values will differ due to Interview vs. Researcher determined values.

Variable Name: SocialSchedule

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Sleep Related To Personal Problems

Definition: This variable establishes whether or not the driver's sleep pattern is primarily related to a set of personal problems. (This variable was originally an attribute choice under the variable "Driver's Hours Of Main Sleep Related To.")

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include surrogate interviews, interviews with other occupants, and interviews with friends of the driver.

Cross Reference: Congruent with IntvwDrSleep.RelateTo (3 "Personal Problems"), values will differ due to Interview vs. Researcher determined values.

Variable Name: PersonalProblems

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Sleep Related To Family Problems

Definition: This variable establishes whether or not the driver's sleep pattern is related to problems of other family members or to interpersonal relationships between the driver and other family members. (This variable was originally an attribute choice under the variable "Driver's Hours Of Main Sleep Related To.")

Variable Definitions and Codes - DriverAssessment Data Set

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include surrogate interviews, interviews with other occupants, and interviews with friends of the driver.

Cross Reference: Congruent with IntvwDrSleep.RelateTo (4 “Family Problems”), values will differ due to Interview vs. Researcher determined values.

Variable Name: FamilyProblems

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Sleep Related To Illness

Definition: This variable establishes whether or not the driver’s sleep pattern is related to illness. The illness may involve either the driver or other family members. (This variable was originally an attribute choice under the variable “Driver’s Hours Of Main Sleep Related To.”)

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include surrogate interviews, interviews with other occupants, and interviews with friends of the driver.

Cross Reference: Congruent with IntvwDrSleep.RelateTo (5 “Illness”), values will differ due to Interview vs. Researcher determined values.

Variable Name: Illness

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

No Driver Present

Definition: This variable establishes whether or not there was a driver present in the driver’s seated position at the time of the crash. (This variable was originally an attribute choice under the variable “Driver’s Hours Of Main Sleep Related To.”)

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include surrogate interviews, interviews with other occupants, and interviews with friends of the driver.

Variable Name: NoDriverPresent

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Definitions and Codes - DriverAssessment Data Set

Sleep Related To Other Factor

Definition: This variable establishes whether or not the driver's sleep pattern is related to a factor not described by the other sleep pattern variables. (This variable was originally an attribute choice under the variable "Driver's Hours Of Main Sleep Related To" and was the "Other (specify):" attribute choice.)

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include surrogate interviews, interviews with other occupants, and interviews with friends of the driver.

Cross Reference: Congruent with IntvwDrSleep.RelateTo (6 "Other (specify)"), values will differ due to Interview vs. Researcher determined values.

Variable Name: ADROtherFactor

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Sleep Related To Unknown Factor

Definition: This variable establishes whether or not the driver's sleep pattern was related to an unknown factor. (This variable was originally an attribute choice under the variable "Driver's Hours Of Main Sleep Related To" and was the "Unknown" attribute choice.)

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include surrogate interviews, interviews with other occupants, and interviews with friends of the driver.

Cross Reference: Congruent with IntvwDrSleep.RelateTo (99 "Unknown"), values will differ due to Interview vs. Researcher determined values.

Variable Name: UnknownFactor

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Alcohol Use

Definition: This variable establishes the presence of alcohol for this driver.

Source: Police report, medical report, other official records, OR the field observation of the NASS Researcher.

Cross Reference: Congruent with GeneralVehicle.PARAlcoholPresent, values differ due to Police Report vs. Researcher determined values. Elaborates on Overview.OVEAlcohol.

Variable Name: AlcoholUse

Variable Definitions and Codes - DriverAssessment Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
00	No alcohol use
90	Test performed
91	AC test performed, results positive
92	Field observation of NASS researcher
93	AC test performed, results negative
95	Test refused
96	None given
97	AC test performed, results unknown
98	No driver present
99	Unknown

Alcohol Test

Definition: This variable records the results of an alcohol test (either blood alcohol test or Breathalyzer test).

Source: Police report, medical report, other official records, OR the field observation of the NASS Researcher.

Cross Reference: Congruent with GeneralVehicle.PARAlcoholTestResult, values differ due to Police Report vs. Researcher determined values.

Variable Name: AlcoholTest

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-500	Test result value [percent (times 100)]
8887	No driver present
9998	None
9999	Unknown

Source Of BAC Test Result

Definition: This variable documents the source of the BAC test results.

Source: Police report, medical report, carrier records, or other official records.

Cross Reference: Congruent with GeneralVehicle.PARTestSource, values differ due to Police Report vs. Researcher determined values.

Variable Name: TestSource

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No BAC test/Not applicable
1	Police reported
2	Company reported
5	Lay Coroner
6	No driver present

Variable Definitions and Codes - DriverAssessment Data Set

8	Other (specify)
9	Unknown

Time Delay (Between Crash And BAC Test)

Definition: This variable documents the time delay between the crash and the time the BAC test is administered.

Source: Police report, medical report, carrier records, or other official records.

Cross Reference: Congruent with GeneralVehicle.PARTestDelay, values differ due to Police Report vs. Researcher determined values.

Variable Name: TestDelay

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0000-9999	Time delayed (in HHMM format)
9797	Not applicable
9889	No Test
9898	No BAC test
9999	Unknown

Illegal Drug Use

Definition: This variable documents the administration of a drug test for this driver.

Source: Police report, medical report, carrier records, or other official records.

Cross Reference: Congruent with GeneralVehicle.PARDrugsPresent, values differ due to Police Report vs. Researcher determined values.

Variable Name: DrugTest

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No drug use
5	Test performed, results negative
7	Not applicable
91	Test performed, results positive
95	Test refused
96	None given
97	Test performed, results unknown
98	No driver present
99	Unknown

Driver Fatigue

Definition: This variable assesses driver fatigue at the time of the crash. The assessment is based on an evaluation of the driver's current and preceding sleep schedules, current and preceding work schedules, and a variety of other fatigue-related factors including recreational and non-work activities.

Variable Definitions and Codes - DriverAssessment Data Set

Source: Determined by the Case Reviewer using all available information inputs. The primary data source here is the driver interview, however, due to the inaccuracies inherent in these data, the Case Reviewer should compare driver responses with other data sources including log book entries, time stamped fuel and toll receipts, carrier records, and other interview sources to determine the veracity of the driver responses. The final assessment of fatigue involvement is made from all of these sources and may include the on-site assessments of the NASS Researcher.

Cross Reference: Elaborates on Overview.DriverFatigue. Related to the IntvwDrFatigue data set, values will differ in part due to Interview vs. Researcher determined values.

Variable Name: Fatigue

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Driver not fatigued
1	Driver fatigued
8	No driver present
9	Unknown

Was The Driver Upset Prior To The Crash?

Definition: This variable establishes whether or not the driver was upset prior to the crash and the specific reason for this emotional state.

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Cross Reference: Related to DriverRecognitionDistraction.Inattention. Related to IntvwDrAttention.Concerns, values will differ in part due to Interview vs. Researcher determined values. In conjunction with DriverAssessment.Hurrying, DriverAssessment.Emotional, DriverAssessment.KnewVehicle, DriverAssessment.KnewRoad, DriverAssessment.WorkPressureCount, and DriverAssessment.ComfortCount matches Overview.EmotionExperience.

Variable Name: Upset

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not upset
1	Preceding argument with spouse
2	Preceding argument with other family member
3	Preceding argument with other individual (specify)
4	Related to financial problems
5	Related to family problems
7	No driver present
8	Other source (specify)
9	Unknown

Variable Definitions and Codes - DriverAssessment Data Set

Was The Driver In A Hurry Prior To Crash?

Definition: This variable establishes if the driver was in a hurry prior to crash occurrence. Assessments of this type are reflected in the driver's precrash driving behavior (e.g. speeding, sudden starts/stops, weaving in and out of traffic, etc.)

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Cross Reference: Congruent with IntvwDrPerception.HurryPrior, values will differ due to Interview vs. Researcher determined values. Related to DriverDecisionAggression data set. In conjunction with DriverAssessment.Upset, DriverAssessment.Emotional, DriverAssessment.KnewVehicle, DriverAssessment.KnewRoad, DriverAssessment.WorkPressureCount, and DriverAssessment.ComfortCount matches Overview.EmotionExperience.

Variable Name: Hurrying

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not in a hurry
1	Due to work-related schedule
2	Late for business appointment
3	Late for social appointment
4	Late for start of work shift/start of school classes
5	Normal driving pattern
7	No driver present
8	Other reason (specify)
9	Unknown

Other Emotional Factors

Definition: This variable establishes if there were other emotional factors relevant to this driver's precrash behavior.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Cross Reference: In conjunction with DriverAssessment.Upset, DriverAssessment.Hurrying, DriverAssessment.KnewVehicle, DriverAssessment.KnewRoad, DriverAssessment.WorkPressureCount, and DriverAssessment.ComfortCount matches Overview.EmotionExperience.

Variable Name: Emotional

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No other emotional factors
1	Driver clinically depressed
2	Driver has a diagnosed psychosis (specify)

Variable Definitions and Codes - DriverAssessment Data Set

7	No driver present
8	Other factors (specify)
9	Unknown

Vehicle Familiarity

Definition: This variable establishes driver familiarity with the vehicle being operated at the time of the crash.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Cross Reference: Congruent with IntvwDrCondition.Familiarity, values will differ due to Interview vs. Researcher determined values. In conjunction with DriverAssessment.Upset, DriverAssessment.Hurrying, DriverAssessment.Emotional, DriverAssessment.KnewRoad, DriverAssessment.WorkPressureCount, and DriverAssessment.ComfortCount matches Overview.EmotionExperience.

Variable Name: KnewVehicle

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	First time driving this vehicle
2	Had driven this vehicle 2-5 times in the past six months
3	Had driven this vehicle 6-10 times in the past six months
4	Had driven this vehicle more than 10 times in the past six months
7	No driver present
9	Unknown

Roadway Familiarity

Definition: This variable establishes the driver's familiarity with the approach to the crash site.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Cross Reference: Related to IntvwDrTrip.FrequentRoute, values will differ due to road vs. route as well as Interview vs. Researcher determined values. In conjunction with DriverAssessment.Upset, DriverAssessment.Hurrying, DriverAssessment.Emotional, DriverAssessment.KnewVehicle, DriverAssessment.WorkPressureCount, and DriverAssessment.ComfortCount matches Overview.EmotionExperience.

Variable Name: KnewRoad

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	First time driving on this roadway
2	Rarely drives on this roadway
3	Drives on this roadway once per month

Variable Definitions and Codes - DriverAssessment Data Set

4	Drives on this roadway several times per month
5	Drives on this roadway weekly
6	Drives on this roadway daily
7	No driver present
8	Other frequency (specify)
9	Unknown

Work Pressure Factors Count

Definition: This variable is a count of the number of work pressure variables. This includes attributes from the original variable "Driver Under Work-Related Pressure," which were broken out into individual variables.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/ friends, and the police report.

Cross Reference: Computed from the following variables in the DriverAssessment data set: NewPosition, ShippingDeadlines, EXPWorkSchedule, Quotas, ExtraLoads, Demoted, SelfInducedIllegal, SelfInducedOther, OtherPressure. In conjunction with DriverAssessment.Upset, DriverAssessment.Hurrying, DriverAssessment.Emotional, DriverAssessment.KnewVehicle, DriverAssessment.KnewRoad, and DriverAssessment.ComfortCount matches Overview.EmotionExperience.

Variable Name: WorkPressureCount

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-6	Count of work pressure attributes
7	No driver present
99	Unknown

Learning New Position

Definition: This variable establishes whether or not the driver was under pressure from his/her employer as a result of learning a new position in his/her primary work place. (This variable was originally an attribute choice under the variable "Driver Under Work-Related Pressure.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/ friends, and the police report.

Variable Name: NewPosition

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Definitions and Codes - DriverAssessment Data Set

Production/Shipping Deadlines

Definition: This variable establishes whether or not the driver experienced work pressure as a result of being under time-related pressures associated with production/shipping deadlines. (This variable was originally an attribute under the variable "Driver Under Work-Related Pressure.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/ friends, and the police report.

Variable Name: ShippingDeadline

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Work Schedule Pressure

Definition: This variable establishes whether or not the driver was experiencing any pressure on the job as it relates to his/her work schedule. (This variable was originally an attribute choice under the variable "Driver Under Work-Related Pressure.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/ friends, and the police report.

Variable Name: EXPWorkSchedule

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Additional Production/Sales Requirements

Definition: This variable establishes whether or not the driver experienced any work pressure with regard to additional production or sales requirements. (This variable was originally an attribute choice under the variable "Driver Under Work-Related Pressure.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/ friends, and the police report.

Variable Name: Quotas

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Definitions and Codes - DriverAssessment Data Set

Forced To Accept Loads With Little Or No Advance Notice

Definition: This variable establishes whether or not the driver was under pressure from his/her employer to accept loads with little or no advance notice. (This variable was originally an attribute choice under the variable "Driver Under Work-Related Pressure.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/ friends, and the police report.

Variable Name: ExtraLoads

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Demoted

Definition: This variable establishes whether or not the driver had recently been forced to accept a demotion and/or pay decrease. (This variable was originally an attribute choice under the variable "Driver Under Work-Related Pressure.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/ friends, and the police report.

Variable Name: Demoted

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Self Induced Work Pressure - Illegal

Definition: This variable establishes whether or not the driver experienced self-induced work pressure, as opposed to employer-induced pressure. The driver was pressuring himself to do things that are considered illegal (e.g. a truck driver continuing to drive even though he knows he is over his allowed driving hours). (This variable was originally an attribute choice under the variable "Work-Related Pressure" in the electronic data system, but was not found on the paper version of the Crash Event Assessment Form.)

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/ friends, and the police report.

Variable Name: SelfInducedIllegal

Variable Definitions and Codes - DriverAssessment Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Self Induced Work Pressure - Other

Definition: This variable establishes whether or not the driver experienced self-induced work pressure, as opposed to employer-induced pressure. (This variable was originally an attribute choice under the variable “Work-Related Pressure” in the electronic data system, but was not found on the paper version of the Crash Event Assessment Form.)

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/ friends, and the police report.

Variable Name: SelfInducedOther

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Other Work Pressure

Definition: This variable establishes whether or not the driver experienced any work-related pressure that was not captured under other work-pressure variables. (This variable was originally an attribute choice under the variable “Driver Under Work-Related Pressure” and was the “Other (specify)” attribute choice).

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/ friends, and the police report.

Variable Name: OtherPressure

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Comfort Count

Definition: This variable establishes the total number of attributes coded for the variable “Other Factor Types,” which had to do with a driver’s comfort with traffic conditions and the vehicle.

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Variable Definitions and Codes - DriverAssessment Data Set

Cross Reference: Computed from the following variables in the DriverAssessment data set: TrafficDensity, TrafficSpeed, ADRTrafficFlow, VehicleLoad, OtherComfortFactor. In conjunction with DriverAssessment.Upset, DriverAssessment.Hurrying, DriverAssessment.Emotional, DriverAssessment.KnewVehicle, DriverAssessment.KnewRoad, and DriverAssessment.WorkPressureCount matches Overview.EmotionExperience.

Variable Name: ComfortCount

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-6	Count of comforts coded
7	No driver present
9	Unknown

Uncomfortable With Surrounding Traffic Densities

Definition: This variable establishes whether or not the driver was uncomfortable with the surrounding traffic densities. The densities are usually very high as might be associated with rush hour traffic. (This variable was originally an attribute choice under the variable “Other Factor Types,” which had to do with driver experience.)

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Variable Name: TrafficDensity

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Uncomfortable With General Traffic Speeds

Definition: This variable establishes whether or not the driver was uncomfortable with the general speed of surrounding traffic. The discomfort is typically associated with the driver feeling that surrounding traffic is moving too fast. (This variable was originally an attribute choice under the variable “Other Factor Types,” which had to do with driver experience.)

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Variable Name: TrafficSpeed

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Definitions and Codes - DriverAssessment Data Set

Uncomfortable with General Traffic Flow

Definition: This variable establishes whether or not the driver was uncomfortable with the general flow of surrounding traffic. (This variable was originally an attribute choice under the variable “Other Factor Types,” which had to do with driver experience.)

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Variable Name: ADRTrafficFlow

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Uncomfortable With Some Aspect Of Vehicle/Load

Definition: This variable establishes whether or not the driver was uncomfortable with either the vehicle or the load. (This variable was originally an attribute choice under the variable “Other Factor Types,” which had to do with driver experience.)

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Cross Reference: Congruent with the following variables from IntvwDrCondition: Vehicle, Load, Both. These values will differ due to Interview vs. Researcher determined values.

Variable Name: VehicleLoad

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Other Comfort Factor

Definition: This variable establishes whether or not the driver had an “other” experience/exposure factor that was relevant to the crash that was not described by the other comfort variables. (This variable was originally an attribute choice under the variable “Other Factor Types,” was the “Other (specify)” attribute choice.)

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Variable Name: OtherComfortFactor

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Definitions and Codes - DriverAssessment Data Set

Under Pressure To Accept Loads

Definition: This variable documents the circumstance where the driver is under some pressure from the carrier to accept additional loads.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Cross Reference: In conjunction with DriverAssessment.WorkFatigueCount and DriverAssessment.OtherPressureCount matches Overview.CarrierEmployer.

Variable Name: LoadPressure

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not under pressure to accept loads
1	Accept unscheduled loads on scheduled trip
2	Accept additional loads on unscheduled trip
3	Accept unscheduled loads on short notice scheduled trip
4	Accept additional loads when over allowable driving hours
7	Not applicable
8	Other load factors (specify)
9	Unknown

Work Fatigue Factors Count

Definition: This variable is a count of the number of work fatigue-related variables. This includes attributes from the original variable "Under Pressure to Operate Even if Fatigued," which were broken out into individual variables.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interviews. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Cross Reference: Computed from the following variables in the DriverAssessment data set: ScheduledExtensions, RotatingShift, UnscheduledExtensions, NoApplicableFatigue, OtherFatigue. Related to IntvwDrFatigue data set, values will differ in part due to Interview vs. Researcher determined values. In conjunction with DriverAssessment.LoadPressure and DriverAssessment.OtherPressureCount matches Overview.CarrierEmployer.

Variable Name: WorkFatigueCount

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-6	Count of other fatigue attributes
7	Not applicable
9	Unknown

Variable Definitions and Codes - DriverAssessment Data Set

Scheduled Loads Require Extended Hours

Definition: This variable establishes whether or not the driver experienced work pressure due to his/her carrier scheduling trips in a manner that requires extended work shifts to complete. (This variable was originally an attribute under the variable "Under Pressure to Operate Even if Fatigued.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interviews. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Variable Name: ScheduledExtensions

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Scheduled Trips Require Rotating Shift

Definition: This variable establishes whether or not the driver experienced work pressure due to his/her carrier scheduling trips in a manner that requires the driver to work rotating shift schedules with an associated rotating sleep pattern. (This variable was originally an attribute choice under the variable "Under Pressure to Operate Even if Fatigued.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interviews. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Variable Name: RotatingShift

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Unscheduled Loads Require Extended Hours

Definition: This variable establishes whether or not the driver experienced work pressure due to his/her carrier pressing the driver to accept unscheduled loads/trips that require the driver to operate while fatigued. (This variable was originally an attribute under the variable "Under Pressure to Operate Even if Fatigued.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interviews. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Variable Name: UnscheduledExtensions

Variable Definitions and Codes - DriverAssessment Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Not Applicable – Under Pressure To Operate Even If Fatigued

Definition: This variable was originally an attribute choice under the variable “Under Pressure to Operate Even if Fatigued” (a carrier-related variable).

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interviews. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Variable Name: NoApplicableFatigue

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Other Fatigue-Related Factors

Definition: This variable establishes whether or not the driver experienced any pressure by the carrier to operate even if fatigued when that pressure did not fit under other fatigue variables. (This variable was originally an attribute choice under the variable “Under Pressure to Operate Even If Fatigued” and was the “Other (specify)” attribute choice.)

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interviews. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Variable Name: OtherFatigue

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Other Pressure Count

Definition: This variable establishes the number of “other” pressures specified in the “Other Work Pressure” variable.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/ friends, and the police report.

Cross Reference: Computed from the following variables in the DriverAssessment data set: ShortNoticeTrips, FillInTrips, UnpaidLoading, VariableCompensation, NoApplicableRelations,

Variable Definitions and Codes - DriverAssessment Data Set

OtherRelations. In conjunction with DriverAssessment.LoadPressure and DriverAssessment.WorkFatigueCount matches Overview.CarrierEmployer.

Variable Name: OtherPressureCount

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-6	Count of other pressure attributes
7	Not applicable
9	Unknown

Required To Accept Short Notice Trips

Definition: This variable establishes whether or not the driver was required by his/her carrier to accept short notice trips. (This variable was originally an attribute choice under variable "Other Relation Factor Types.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/ friends, and the police report.

Cross Reference: Related to IntvwCarrier.AdvanceNotice, values will differ in part due to Interview vs. Researcher determined values. Related to IntvwDrFatigue.ADVNotice, values will differ in part due to Interview vs. Researcher determined values.

Variable Name: ShortNoticeTrips

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Required To Fill In For Other Drivers

Definition: This variable establishes whether or not the driver was under pressure by his/her carrier to fill in for other drivers (i.e. perform extra work) when other drivers are absent.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/ friends, and the police report.

Variable Name: FillInTrips

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Definitions and Codes - DriverAssessment Data Set

Required To Complete Unpaid Loading

Definition: This variable establishes whether or not the driver was required by his/her carrier to complete uncompensated loading/unloading activities. (This variable was originally an attribute choice under variable "Other Relation Factor Types.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/ friends, and the police report.

Cross Reference: Congruent with IntvwDrFatigue.Compensated, values will differ due to Interview vs. Researcher determined values. Congruent with IntvwCarrier.LoadUnloadComp (0 "Not compensated"), values will differ due to Interview vs. Researcher determined values.

Variable Name: UnpaidLoading

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Compensation Package

Definition: This variable establishes whether or not the driver is compensated in accordance with a variable compensation package such that the driver is not paid on a consistent basis. (This variable was originally an attribute choice under variable "Other Relation Factor Types.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/ friends, and the police report.

Variable Name: VariableCompensation

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Not Applicable – Other Relation Factor Types

Definition: This variable was originally an attribute choice under the variable "Other Relation Factor Types" (a carrier-related variable).

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/ friends, and the police report.

Variable Name: NoApplicableRelations

Variable Definitions and Codes - DriverAssessment Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Other Carrier Relation Factors

Definition: This variable establishes whether or not there were other carrier relation factors not captured in other carrier relation variables that may have had a bearing on crash occurrence. (This variable was originally an attribute choice under the variable "Other Relation Factor Types," and was the "Other (specify)" attribute choice).

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/ friends, and the police report.

Variable Name: OtherRelations

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Definitions and Codes - DriverDecisionAggression Data Set

DriverDecisionAggression Data Set

The DriverDecisionAggression data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID and VehicleNumber uniquely identify each record in this data set and should be used to merge the DriverDecisionAggression data set with other vehicle level data sets. This data set also contains the following variables:

Cross Reference: This table is related to DriverAssessment.Hurrying.

Traveling Too Fast For Conditions

Definition: This variable documents reasons given by the driver for traveling at his/her pre-crash travel speed. This variable is only relevant in the circumstance where the driver had been assessed as traveling too fast for conditions.

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Cross Reference: Related to IntvwDrAggression data set, values will differ in part due to Interview vs. Researcher determined values. In conjunction with DriverDecisionAggression.Tailgating and DriverDecisionAggression.Misjudgment matches Overview.OVESpeed.

Variable Name: Speeding

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not traveling too fast factors
1	Keeping up with traffic
2	Did not realize caution required
3	Other reason (specify)
7	No driver present
9	Unknown

Following Too Closely

Definition: This variable documents reasons given by the driver for traveling with less than the recommended gap interval to traffic forward of the driver's position.

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Cross Reference: Related to IntvwDrAggression data set, values will differ in part due to Interview vs. Researcher determined values. Related to IntvwDrPerception.GapDistance, values will differ in part due to Interview vs. Researcher determined values. In conjunction with DriverDecisionAggression.Speeding and DriverDecisionAggression.Misjudgment matches Overview.OVESpeed.

Variable Name: Tailgating

Variable Definitions and Codes - DriverDecisionAggression Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not following too closely factors
1	Rush hour, heavy traffic
2	Keeping up with traffic
3	Did not realize too close
4	Always drive at this gap distance
7	No driver present
8	Other (specify)
9	Unknown

Misjudgment Of Gap Distance Or Velocity Of Other Vehicle

Definition: This variable documents the involvement of a decision error in which the subject driver either misjudges the gap distance to the other vehicle or misjudges the velocity of the other vehicle.

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Cross Reference: In conjunction with DriverDecisionAggression.Speeding and DriverDecisionAggression.Tailgating matches Overview.OVESpeed.

Variable Name: Misjudgment

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No misjudgment factors
1	Misjudgment of gap distance
2	Misjudgment of velocity of other vehicle
3	Misjudgment of both factors
7	No driver present
9	Unknown

Other Vehicle Approaching From This Driver's

Definition: This variable establishes the direction from which the misjudged vehicle was approaching this driver's position.

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Variable Name: Approach

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No misjudgment factors
1	Left
2	Right

Variable Definitions and Codes - DriverDecisionAggression Data Set

3	Forward direction (i.e. 170-190 degrees opposed)
4	Left forward direction (i.e. 120-169 degrees opposed)
5	Right forward direction (i.e. 191-240 degrees opposed)
6	Rear
7	No driver present
9	Unknown

Police Reported Travel Speed

Definition: This variable documents the travel speed of this driver as reported on the police report.

Source: Police report only.

Cross Reference: Identical to GeneralVehicle.GVETravelSpeed. Congruent with TruckExterior.TEXSpeed when applicable, values will differ due to Police Report vs. Vehicle's data recorder.

Variable Name: ADATravelSpeed

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-900	Travel speed (km/hr)
9999	Unknown

Posted Speed Limit

Definition: This variable establishes the pre-crash roadway's posted speed limit.

Source: Primary sources are scene inspection or statutory law; a secondary source is the police report.

Cross Reference: Identical to GeneralVehicle.GVEPostedSpeed.

Variable Name: ADAPostedSpeed

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-900	Posted speed limit (km/hr)
9999	Unknown

False Assumption Of Other Road User's Actions

Definition: This variable identifies false assumptions on the part of this driver with respect to other driver's actions or intended actions.

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Cross Reference: In conjunction with DriverDecisionAggression.Evasion, DriverDecisionAggression.ADAOtherFactor, DriverDecisionAggression.ManeuverCount matches Overview.OVEDecision.

Variable Definitions and Codes - DriverDecisionAggression Data Set

Variable Name: Assumption

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No false assumption factors
1	Assumed that other driver would merge without stopping
2	Assumed that other driver would turn without stopping
3	Assumed that other driver would continue to proceed
4	Assumed that other driver would yield right-of-way
7	No driver present
8	Other false assumption (specify)
9	Unknown

Inadequate Evasive Action

Definition: This variable establishes inadequate evasive actions on the part of this driver. This variable does not deal with legal requirements and the final assessment may be subjective.

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Cross Reference: In conjunction with DriverDecisionAggression.Assumption, DriverDecisionAggression.ADAOtherFactor, DriverDecisionAggression.ManeuverCount matches Overview.OVEDecision.

Variable Name: Evasion

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No inadequate evasive action factors
1	Insufficient steering inputs
2	Insufficient braking inputs
3	Combination of insufficient steering and braking inputs
4	No driver present
8	Other inadequate evasive action (specify)
9	Unknown

Other Decision Factors

Definition: This variable establishes decision factors relevant to this crash that are not described in the other decision variables.

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the police report, the driver interview, interviews with witnesses, other vehicle occupants, and other drivers. Secondary sources include surrogate interviews with family members/friends.

Cross Reference: In conjunction with DriverDecisionAggression.Assumption, DriverDecisionAggression.Evasion, DriverDecisionAggression.ManeuverCount matches Overview.OVEDecision.

Variable Definitions and Codes - DriverDecisionAggression Data Set

Variable Name: ADAOtherFactor

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No other decision factors
1	Crossed with obstructed view
2	Turned with obstructed view
3	Stopped when not required
4	Proceeded with insufficient clearance
5	Turned without signaling
7	No driver present
8	Other decision error (specify)
9	Unknown

Illegal Maneuver Count

Definition: This variable establishes the total number of illegal maneuvers conducted by this driver.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the police report and the driver interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, and surrogate interviews with family members/friends.

Cross Reference: Computed from the following variables in the DriverDecisionAggression data set: CrossedLine, Undertaking, WrongTurnLane, IllegalUTurn, RanLights, WrongWay, OtherManeuver. In conjunction with DriverDecisionAggression.Assumption, DriverDecisionAggression.Evasion, DriverDecisionAggression.ADAOtherFactor matches Overview.OVEDecision.

Variable Name: ManeuverCount

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-6	Count of maneuver aspects present
7	No driver present
9	Unknown

Crossed Full Barrier Lines While Passing

Definition: This variable documents whether or not the driver crosses full barrier lines to execute, or while executing, a passing maneuver. (This variable was originally an attribute choice under the variable "Illegal Maneuver.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the police report and the driver interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, and surrogate interviews with family members/friends.

Variable Name: CrossedLine

Variable Definitions and Codes - DriverDecisionAggression Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Passed On Right (Drive Off Pavement To Pass)

Definition: This variable documents whether or not the driver drives off the travel lane(s) to pass on the right (i.e. driver moves on to shoulder area to execute the passing maneuver). (This variable was originally an attribute choice under the variable "Illegal Maneuver.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the police report and the driver interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, and surrogate interviews with family members/friends.

Variable Name: Undertaking

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Turned From Wrong Lane

Definition: This variable documents whether or not the driver executes a turn from the wrong lane (i.e. driver turns left from the right lane or turns right from the left lane of a multi-lane roadway). (This variable was originally an attribute choice under the variable "Illegal Maneuver.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the police report and the driver interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, and surrogate interviews with family members/friends.

Variable Name: WrongTurnLane

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Initiated Illegal U-Turn

Definition: This variable documents whether or not the driver initiates a U-turn in an area where these turns are not permitted. (This variable was originally an attribute choice under the variable "Illegal Maneuver.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the police report and the driver interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, and surrogate interviews with family members/friends.

Variable Name: IllegalUTurn

Variable Definitions and Codes - DriverDecisionAggression Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Failed To Stop For TCD

Definition: This variable documents whether or not the driver does not stop for a displayed red traffic signal phase or does not stop for a stop sign. (This variable was originally an attribute choice under the variable “Illegal Maneuver.”)

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the police report and the driver interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, and surrogate interviews with family members/friends.

Cross Reference: Related to DriverAssessment.StopRequired. Related to IntvwDrPerception.Stopped, values will differ in part due to Interview vs. Researcher determined values.

Variable Name: RanLights

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Drove Wrong Way On One-Way Road

Definition: This variable documents whether or not the driver travels the wrong way on a one-way roadway. (This variable was originally an attribute choice under the variable “Illegal Maneuver.”)

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the police report and the driver interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, and surrogate interviews with family members/friends.

Variable Name: WrongWay

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Other Illegal Maneuver

Definition: This variable documents whether or not the driver initiates an illegal maneuver that is not described in the other illegal maneuver variables. (This variable was originally an attribute choice under the variable “Illegal Maneuver” and was the “Other Illegal Maneuver (specify):” attribute.)

Variable Definitions and Codes - DriverDecisionAggression Data Set

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the police report and the driver interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, and surrogate interviews with family members/friends.

Variable Name: OtherManeuver

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Aggression Count

Definition: This variable establishes the total number of aggressive behaviors exhibited by this driver.

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the police report, the driver interview, interviews with witnesses, other vehicle occupants, and other drivers. Secondary sources include surrogate interviews with family members/friends.

Cross Reference: Computed from the following variables in the DriverDecisionAggression data set: SpeedingBehavior, TailgatingBehavior, Weaving, LightViolation, RapidAcceleration, Honking, Flashing, ObsceneGestures, BlockingOthers, OtherAggression. Elaborates on Overview.Aggression. Related to IntvwDrAggressiveDriving data set, values will differ due to Interview vs. Researcher determined values.

Variable Name: AggressionCount

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-10	Count of aggression attributes present
77	No driver present
99	Unknown

Speeding

Definition: This variable documents whether or not the driver exhibited aggressive behavior in terms of exceeding the speed limit by a minimum of 5 MPH (8.05 kmph) and the vehicle's speed has a bearing on subsequent crash events. A degree of caution is required when assigning this element. Specifically, to be considered as a valid aggressive driving element, the act of speeding should pose some risk to surrounding traffic. If, for example, the driver is speeding in a stream of traffic, this act poses a risk to surrounding traffic. On the other hand, a driver who is speeding late at night, on a rural highway with no surrounding traffic, does not pose a risk to others and should not be considered as driving aggressively. (This variable was originally an attribute choice under the variable "Aggressive Driving Behavior.")

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the police report, the driver interview, interviews with witnesses, other vehicle occupants, and other drivers. Secondary sources include surrogate interviews with family members/friends.

Variable Name: SpeedingBehavior

Variable Definitions and Codes - DriverDecisionAggression Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Tailgating

Definition: This variable documents whether or not the driver exhibited aggressive behavior in terms of traveling in close proximity to a vehicle forward of his/her position. While the exact gap interval that qualifies for this assignment will vary with the velocity of the traffic stream, the interval should be sufficiently small/short to preclude the following vehicle/driver from executing a safe stop in an emergency stop circumstance. (This variable was originally an attribute choice under the variable "Aggressive Driving Behavior.")

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the police report, the driver interview, interviews with witnesses, other vehicle occupants, and other drivers. Secondary sources include surrogate interviews with family members/friends.

Variable Name: TailgatingBehavior

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Weaving In And Out Of Traffic

Definition: This variable documents whether or not the driver exhibited aggressive behavior in terms of weaving in and out of traffic to pass slower-moving vehicles. While drivers engaging in this activity typically exceed the speed limit, speeding is not required for valid use of this element. (This variable was originally an attribute choice under the variable "Aggressive Driving Behavior.")

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the police report, the driver interview, interviews with witnesses, other vehicle occupants, and other drivers. Secondary sources include surrogate interviews with family members/friends.

Variable Name: Weaving

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Intentional Violation Of Traffic Control Devices

Definition: This variable documents whether or not the driver exhibited aggressive behavior in terms of violating a displayed red signal phase or stop sign. Deliberate violation of a yield sign is captured under the "Other Aggressive Behavior" variable. (This variable was originally an attribute choice under the variable "Aggressive Driving Behavior.")

Variable Definitions and Codes - DriverDecisionAggression Data Set

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the police report, the driver interview, interviews with witnesses, other vehicle occupants, and other drivers. Secondary sources include surrogate interviews with family members/friends.

Variable Name: LightViolations

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Accelerated Rapidly/Stopped Suddenly

Definition: This variable documents whether or not the driver exhibited aggressive behavior in terms of engaging in these activities in a repeating fashion (i.e. braking late for a TCD and then accelerating rapidly away from that location and repeating this behavior at the next TCD). This behavior pattern is often associated with being in a hurry or being late for some engagement. (This variable was originally an attribute choice under the variable "Aggressive Driving Behavior.")

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the police report, the driver interview, interviews with witnesses, other vehicle occupants, and other drivers. Secondary sources include surrogate interviews with family members/friends.

Variable Name: RapidAcceleration

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Honking Horn

Definition: This variable documents whether or not the driver exhibited aggressive behavior in terms of repeatedly honking the vehicle's horn at surrounding traffic to gain a time/space advantage. (This variable was originally an attribute choice under the variable "Aggressive Driving Behavior.")

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the police report, the driver interview, interviews with witnesses, other vehicle occupants, and other drivers. Secondary sources include surrogate interviews with family members/friends.

Variable Name: Honking

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Definitions and Codes - DriverDecisionAggression Data Set

Flashing Lights

Definition: This variable documents whether or not the driver exhibited aggressive behavior in terms of repeatedly flashing the vehicle's lights in an attempt to have traffic forward of this vehicle's position move either to the right or left so that this vehicle can "get by." (This variable was originally an attribute choice under the variable "Aggressive Driving Behavior.")

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the police report, the driver interview, interviews with witnesses, other vehicle occupants, and other drivers. Secondary sources include surrogate interviews with family members/friends.

Variable Name: Flashing

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Obscene Gestures

Definition: This variable documents whether or not the driver exhibited aggressive behavior in terms of making obscene gestures at other drivers. (This variable was originally an attribute choice under the variable "Aggressive Driving Behavior.")

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the police report, the driver interview, interviews with witnesses, other vehicle occupants, and other drivers. Secondary sources include surrogate interviews with family members/friends.

Variable Name: ObsceneGestures

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Obstructing The Path Of Others

Definition: This variable documents whether or not the driver exhibited aggressive behavior in terms of using his/her vehicle to physically obstruct the path of another vehicle by pulling in front of that vehicle. In addition to physically blocking the path, the subject driver typically slows to force the other driver to take evasive action (e.g. steering, and/or braking actions). (This variable was originally an attribute choice under the variable "Aggressive Driving Behavior.")

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the police report, the driver interview, interviews with witnesses, other vehicle occupants, and other drivers. Secondary sources include surrogate interviews with family members/friends.

Variable Name: BlockingOthers

Variable Definitions and Codes - DriverDecisionAggression Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Other Aggressive Behavior

Definition: This variable documents whether or not the driver exhibited aggressive behavior that is not described by the other aggressive driving behavior variables. (This variable was originally an attribute choice under the variable “Aggressive Driving Behavior” and was the “Other (specify)” attribute choice.)

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the police report, the driver interview, interviews with witnesses, other vehicle occupants, and other drivers. Secondary sources include surrogate interviews with family members/friends.

Variable Name: OtherAggression

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Reasons For Aggressive Driving Behavior

Definition: This variable establishes the reason for the aggressive driving behaviors reported in the corresponding variables.

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the police report, the driver interview, interviews with witnesses, other vehicle occupants, and other drivers. Secondary sources include surrogate interviews with family members/friends.

Variable Name: AggressionReason

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No aggressive driving behaviors
1	Anger
2	Frustration
3	Always drive this way
77	No driver present
88	Other (specify)
99	Unknown

Variable Definitions and Codes - DriverDrugs Data Set

DriverDrugs Data Set

The DriverDrugs data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID, VehicleNumber and DrugName uniquely identify each record in this data set. CaseID and VehicleNumber should be used to merge the DriverDrugs data set with vehicle level data sets. This data set also contains the following variables:

Cross Reference: This table elaborates on Crash.AnyDrugsCrash.

Drug Name

Definition: Name of drug(s) used – includes illegal drugs, over-the-counter drugs, and prescription drugs.

Source: For illegal drugs: Police report, medical report, carrier reports, or other official records. For over-the-counter and prescription drugs: The primary source for this information is the driver interviews. The information, however, may also be obtained from other occupants in the vehicle and from surrogate interviews. When appropriate, official records including police reports and medical reports may also be used.

Variable Name: DrugName

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual drug name

Drug Type

Definition: This variable establishes the type of drug specified in the Drug Name variable.

Source: For illegal drugs: Police report, medical report, carrier reports, or other official records. For over-the-counter and prescription drugs: The primary source for this information is the driver interviews. The information, however, may also be obtained from other occupants in the vehicle and from surrogate interviews. When appropriate, official records including police reports and medical reports may also be used.

Cross Reference: Congruent with IntvwDrHealth.OverCounter and IntvwDrHealth.Prescribed, values will differ due to Interview vs. Researcher determined values.

Variable Name: DrugType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Prescription
2	Over the counter
3	Illegal

Driver Reported

Definition: This variable establishes whether or not the drug usage was reported by the driver.

Source: Driver interview.

Variable Name: DriverReported

Variable Definitions and Codes - DriverDrugs Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Yes
2	No

Drug Test Results

Definition: This variable documents the results of drug tests performed on the driver.

Source: Police report, medical report, carrier records, or other official records.

Variable Name: TestResult

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0.00-1000.00	Test result (usually nanograms/ml)
99995	None given
99996	Legal drug, test results not collected
99997	Drug test positive, measured value unknown
99998	Trace
99999	Unknown

Variable Definitions and Codes - DriverHealth Data Set

DriverHealth Data Set

The DriverHealth data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID and VehicleNumber uniquely identify each record in this data set and should be used to merge the DriverHealth data set with other vehicle level data sets. This data set also contains the following variables:

Corrected Vision Level

Definition: This variable documents the driver's corrected vision level.

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include driver and surrogate interviews.

Cross Reference: Congruent with IntvwDrHealth.CorrectedVision, values will differ due to Interview vs. Researcher determined values.

Variable Name: ADHCorrectedVision

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-9000	Corrected vision
9797	No test given
9898	Not applicable
9999	Unknown

Number Of Illness Factors

Definition: This variable documents the number of illness factors coded for this driver.

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the police report, medical report, driver interviews, other occupant interviews, and witness interviews. Secondary sources include surrogate interviews with family members/friends.

Cross Reference: Computed from the following variables in the DriverHealth data set: HeartAttack, EpilepticSeizure, OtherSeizure, DiabeticBlackout, OtherBlackout, ColdFlu, OtherIllness. In conjunction with DriverHealth.LegallyBlind, DriverHealth.Myopic, DriverHealth.Hyperopic, DriverHealth.Glaucoma, DriverHealth.ColorBlind, DriverHealth.Astigmatic, DriverHealth.OtherVision, and DriverHealth.OtherFactorCount matches Overview.DriverPhysical.

Variable Name: IllnessFactorCount

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-6	Count of illness factors present
7	No driver present
9	Unknown

Heart Attack

Definition: This variable establishes whether or not the driver experienced a heart attack prior to the crash event. (This variable was originally an attribute choice under the variable "Illness.")

Variable Definitions and Codes - DriverHealth Data Set

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the police report, medical report, driver interviews, other occupant interviews, and witness interviews. Secondary sources include surrogate interviews with family members/friends.

Variable Name: HeartAttack

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Seizure (Epilepsy Related)

Definition: This variable establishes whether or not the driver experienced an epileptic seizure prior to the crash event. (This variable was originally an attribute choice under the variable "Illness.")

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the police report, medical report, driver interviews, other occupant interviews, and witness interviews. Secondary sources include surrogate interviews with family members/friends.

Variable Name: EpilepticSeizure

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Seizure (Other Source)

Definition: This variable establishes whether or not the driver experienced a seizure prior to the crash event that was not related to epilepsy. (This variable was originally an attribute choice under the variable "Illness.")

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the police report, medical report, driver interviews, other occupant interviews, and witness interviews. Secondary sources include surrogate interviews with family members/friends.

Variable Name: OtherSeizure

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Blackout (Diabetes Related)

Definition: This variable establishes whether or not the driver experienced a blackout prior to the crash event and that this event can be traced to a medically diagnosed diabetic condition (e.g. driver blacks out as a result of insulin shock). (This variable was originally an attribute choice under the variable "Illness.")

Variable Definitions and Codes - DriverHealth Data Set

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the police report, medical report, driver interviews, other occupant interviews, and witness interviews. Secondary sources include surrogate interviews with family members/friends.

Variable Name: DiabeticBlackout

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Blackout (Other Source)

Definition: This variable establishes whether or not the driver experienced a blackout prior to the crash event and that this event is not related to a diabetic condition. (This variable was originally an attribute choice under the variable "Illness.")

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the police report, medical report, driver interviews, other occupant interviews, and witness interviews. Secondary sources include surrogate interviews with family members/friends.

Variable Name: OtherBlackout

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Severe Cold/Flu Symptoms

Definition: This variable establishes whether or not the driver is operating the vehicle while experiencing severe cold/flu symptoms which influence his/her driving performance. (This variable was originally an attribute choice under the variable "Illness.")

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the police report, medical report, driver interviews, other occupant interviews, and witness interviews. Secondary sources include surrogate interviews with family members/friends.

Variable Name: ColdFlu

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Other Illness

Definition: This variable establishes whether or not the driver experiences an illness or physical symptoms that are not described under the other illness variables. (This variable was originally an attribute choice under the variable "Illness" and was the "Other (specify)" attribute.)

Variable Definitions and Codes - DriverHealth Data Set

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the police report, medical report, driver interviews, other occupant interviews, and witness interviews. Secondary sources include surrogate interviews with family members/friends.

Variable Name: OtherIllness

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Normal Vision

Definition: This variable establishes whether or not the driver wears corrective lenses to improve vision levels. (This variable was originally an attribute choice under the variable "Vision.")

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the driver interview, carrier records, medical records, and the police report. Secondary sources include other occupant interviews and surrogate interviews with family members/friends.

Cross Reference: Congruent with IntvwDrHealth.VisionCondition (9 "Not Applicable"), values will differ due to Interview vs. Researcher determined values.

Variable Name: NormalVision

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Legal Blindness

Definition: This variable establishes whether or not the driver has been diagnosed with an uncorrected vision level that exceeds 20/2800. (This variable was originally an attribute choice under the variable "Vision.")

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the driver interview, carrier records, medical records, and the police report. Secondary sources include other occupant interviews and surrogate interviews with family members/friends.

Cross Reference: Congruent with IntvwDrHealth.VisionCondition (part of 9 "Other"), values will differ due to Interview vs. Researcher determined values. In conjunction with DriverHealth.IllnessFactorCount, DriverHealth.Myopic, DriverHealth.Hyperopic, DriverHealth.Glaucoma, DriverHealth.ColorBlind, DriverHealth.Astigmatic, DriverHealth.OtherVision, and DriverHealth.OtherFactorCount matches Overview.DriverPhysical.

Variable Name: LegallyBlind

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Definitions and Codes - DriverHealth Data Set

Myopic (Near-sighted) Condition

Definition: This variable establishes whether or not the driver wears corrective lenses (including contact lenses) to compensate for a near-sighted condition. (This variable was originally an attribute choice under the variable "Vision.")

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the driver interview, carrier records, medical records, and the police report. Secondary sources include other occupant interviews and surrogate interviews with family members/friends.

Cross Reference: Congruent with IntvwDrHealth.VisionCondition (1 "Myopic (near sighted)"), values will differ due to Interview vs. Researcher determined values. In conjunction with DriverHealth.IllnessFactorCount, DriverHealth.LegallyBlind, DriverHealth.Hyperopic, DriverHealth.Glaucoma, DriverHealth.ColorBlind, DriverHealth.Astigmatic, DriverHealth.OtherVision, and DriverHealth.OtherFactorCount matches Overview.DriverPhysical.

Variable Name: Myopic

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Hyperopic (Far-sighted) Condition

Definition: This variable establishes whether or not the driver wears corrective lenses (including contact lenses) to compensate for a far-sighted condition. (This variable was originally an attribute choice under the variable "Vision.")

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the driver interview, carrier records, medical records, and the police report. Secondary sources include other occupant interviews and surrogate interviews with family members/friends.

Cross Reference: Congruent with IntvwDrHealth.VisionCondition (2 "Hyperopic (far sighted)"), values will differ due to Interview vs. Researcher determined values. In conjunction with DriverHealth.IllnessFactorCount, DriverHealth.LegallyBlind, DriverHealth.Myopic, DriverHealth.Glaucoma, DriverHealth.ColorBlind, DriverHealth.Astigmatic, DriverHealth.OtherVision, and DriverHealth.OtherFactorCount matches Overview.DriverPhysical.

Variable Name: Hyperopic

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Glaucoma

Definition: This variable establishes whether or not the driver has been diagnosed as having glaucoma. (This variable was originally an attribute choice under the variable "Vision.")

Variable Definitions and Codes - DriverHealth Data Set

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the driver interview, carrier records, medical records, and the police report. Secondary sources include other occupant interviews and surrogate interviews with family members/friends.

Cross Reference: Congruent with IntvwDrHealth.VisionCondition (part of 9 “Other”), values will differ due to Interview vs. Researcher determined values. In conjunction with DriverHealth.IllnessFactorCount, DriverHealth.LegallyBlind, DriverHealth.Myopic, DriverHealth.Hyperopic, DriverHealth.ColorBlind, DriverHealth.Astigmatic, DriverHealth.OtherVision, and DriverHealth.OtherFactorCount matches Overview.DriverPhysical.

Variable Name: Glaucoma

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Color Blind

Definition: This variable establishes whether or not the driver has been diagnosed as being color blind. (This variable was originally an attribute choice under the variable “Vision.”)

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the driver interview, carrier records, medical records, and the police report. Secondary sources include other occupant interviews and surrogate interviews with family members/friends.

Cross Reference: Congruent with IntvwDrHealth.VisionCondition (part of 9 “Other”), values will differ due to Interview vs. Researcher determined values. In conjunction with DriverHealth.IllnessFactorCount, DriverHealth.LegallyBlind, DriverHealth.Myopic, DriverHealth.Hyperopic, DriverHealth.Glaucoma, DriverHealth.Astigmatic, DriverHealth.OtherVision, and DriverHealth.OtherFactorCount matches Overview.DriverPhysical.

Variable Name: ColorBlind

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Astigmatism

Definition: This variable establishes whether or not the driver has been diagnosed as having astigmatism. (This variable was originally an attribute choice under the variable “Vision.”)

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the driver interview, carrier records, medical records, and the police report. Secondary sources include other occupant interviews and surrogate interviews with family members/friends.

Cross Reference: Congruent with IntvwDrHealth.VisionCondition (part of 9 “Other”), values will differ due to Interview vs. Researcher determined values. In conjunction with DriverHealth.IllnessFactorCount, DriverHealth.LegallyBlind, DriverHealth.Myopic,

Variable Definitions and Codes - DriverHealth Data Set

DriverHealth.Hyperopic, DriverHealth.Glaucoma, DriverHealth.ColorBlind, DriverHealth.OtherVision, and DriverHealth.OtherFactorCount matches Overview.DriverPhysical.

Variable Name: Astigmatic

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Other Vision Problem

Definition: This variable establishes whether or not the driver has a vision problem that is not described by the other vision variables. (This variable was originally an attribute choice under the variable "Vision" and was the "Other (specify)" attribute.)

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the driver interview, carrier records, medical records, and the police report. Secondary sources include other occupant interviews and surrogate interviews with family members/friends.

Cross Reference: Congruent with IntvwDrHealth.VisionCondition (part of 9 "Other"), values will differ due to Interview vs. Researcher determined values. In conjunction with DriverHealth.IllnessFactorCount, DriverHealth.LegallyBlind, DriverHealth.Myopic, DriverHealth.Hyperopic, DriverHealth.Glaucoma, DriverHealth.ColorBlind, DriverHealth.Astigmatic, and DriverHealth.OtherFactorCount matches Overview.DriverPhysical.

Variable Name: OtherVision

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Unknown Vision Problem

Definition: This variable establishes whether or not the driver was coded as "Vision problem unknown." This code is used when there is insufficient information to determine if the driver has a vision related problem/deficiency. (This variable was originally an attribute choice under the variable "Vision" and was the "Unknown" attribute.)

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the driver interview, carrier records, medical records, and the police report. Secondary sources include other occupant interviews and surrogate interviews with family members/friends.

Cross Reference: Congruent with IntvwDrHealth.VisionCondition (9 "Unknown"), values will differ due to Interview vs. Researcher determined values.

Variable Name: UnknownVision

Variable Definitions and Codes - DriverHealth Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Number Of Other Physical Factors

Definition: This variable documents the number of other physical factors coded to this driver.

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the driver interview, carrier records, medical records, and the police report. Secondary sources include other occupant interviews and surrogate interviews with family members/friends.

Cross Reference: Computed from the following variables in the DriverHealth data set: NoFactors, HearingImpairment, Prosthesis, Paraplegia, StrenuousRecreation, OtherStrenuous, SleepApnea, OtherFactorPhysical. In conjunction with DriverHealth.IllnessFactorCount, DriverHealth.LegallyBlind, DriverHealth.Myopic, DriverHealth.Hyperopic, DriverHealth.Glaucoma, DriverHealth.ColorBlind, DriverHealth.Astigmatic, and DriverHealth.OtherVision matches Overview.DriverPhysical.

Variable Name: OtherFactorCount

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-6	Count of other factors present
7	No driver present
9	Unknown

No Other Physical Factors

Definition: This variable documents whether or not there were no other physical factors coded to this driver.

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the driver interview, carrier records, medical records, and the police report. Secondary sources include other occupant interviews and surrogate interviews with family members/friends.

Variable Name: NoFactors

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Hearing Impairment

Definition: This variable establishes whether or not the driver has a diagnosed hearing impairment. (This variable was originally an attribute choice under the variable "Other Physical Factors.")

Variable Definitions and Codes - DriverHealth Data Set

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the driver interview, carrier records, medical records, and the police report. Secondary sources include other occupant interviews and surrogate interviews with family members/friends.

Cross Reference: Congruent with IntvwDrHealth.Hearing, values will differ due to Interview vs. Researcher determined values.

Variable Name: HearingImpairment

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Prosthesis

Definition: This variable establishes whether or not the driver is wearing a prosthesis. (This variable was originally an attribute choice under the variable "Other Physical Factors.")

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the driver interview, carrier records, medical records, and the police report. Secondary sources include other occupant interviews and surrogate interviews with family members/friends.

Cross Reference: Related to IntvwCarrier.ConditionCovered (2 "Prosthesis"), values will differ in part due to Interview vs. Researcher determined values.

Variable Name: Prosthesis

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Paraplegia

Definition: This variable establishes whether or not the driver has paralysis of the lower limbs. (This variable was originally an attribute choice under the variable "Other Physical Factors.")

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the driver interview, carrier records, medical records, and the police report. Secondary sources include other occupant interviews and surrogate interviews with family members/friends.

Variable Name: Paraplegia

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Definitions and Codes - DriverHealth Data Set

Strenuous Recreation Activities

Definition: This variable establishes whether or not the driver participates in strenuous recreational activities during the seven day interval preceding the crash. (This variable was originally an attribute choice under the variable "Other Physical Factors.")

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the driver interview, carrier records, medical records, and the police report. Secondary sources include other occupant interviews and surrogate interviews with family members/friends.

Cross Reference: Congruent with IntvwDrFatigue.RecreationalStrenuous, values will differ due to Interview vs. Researcher determined values.

Variable Name: StrenuousRecreation

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Strenuous Non-Work Activities

Definition: This variable establishes whether or not the driver participates/engages in strenuous non-work activities (e.g. household chores) during the seven day interval preceding the crash. (This variable was originally an attribute choice under the variable "Other Physical Factors.")

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the driver interview, carrier records, medical records, and the police report. Secondary sources include other occupant interviews and surrogate interviews with family members/friends.

Cross Reference: Congruent with IntvwDrFatigue.OtherStrenuous, values will differ due to Interview vs. Researcher determined values.

Variable Name: StrenuousNonWork

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Sleep Apnea

Definition: This variable establishes whether or not the driver has an obstructive sleep apnea disorder. (This variable was originally an attribute choice under the variable "Other Physical Factors.")

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the driver interview, carrier records, medical records, and the police report. Secondary sources include other occupant interviews and surrogate interviews with family members/friends.

Variable Definitions and Codes - DriverHealth Data Set

Cross Reference: Congruent with IntvwDrHealth.ApneaHas and IntvwDrHealth.ApneaBeingTreated, values will differ due to Interview vs. Researcher determined values.

Variable Name: SleepApnea

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Other Physical Factor

Definition: This variable establishes whether or not the driver has a relevant physical factor that is not described in the other physical factor variables. (This variable was originally an attribute choice under the variable “Other Physical Factors” and was the “Other (specify)” attribute choice.)

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the driver interview, carrier records, medical records, and the police report. Secondary sources include other occupant interviews and surrogate interviews with family members/friends.

Variable Name: OtherFactorPhysical

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Definitions and Codes - DriverRecognitionDistraction Data Set

DriverRecognitionDistraction Data Set

The DriverRecognitionDistraction data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID and VehicleNumber uniquely identify each record in this data set and should be used to merge the DriverRecognitionDistraction data set with other vehicle level data sets. This data set also contains the following variables:

Source: All variables in this table are determined by Case Reviewer using all available information inputs. The primary data source is the driver interview; secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Inattention

Definition: This variable documents driver inattention (i.e. focusing on internal thought processes) and the nature of the involved thought processes.

Cross Reference: Related to DriverAssessment.Upset. Related to IntvwDrAttention.Concerns, values will differ in part due to Interview vs. Researcher determined values. In conjunction with DriverRecognitionDistraction.Conversation, DriverRecognitionDistraction.ADDRecognition, DriverRecognitionDistraction.InteriorDistractionCount, and ExteriorDistractionCount matches Overview.OVERecognition.

Variable Name: Inattention

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No Inattention Factors
1	Personal problem
2	Family problem
3	Financial problem
4	Preceding argument
5	Future event (vacation, wedding, etc.)
7	No driver present
8	Other (specify)
9	Unknown

Conversation

Definition: This variable documents driver participation in conversation. The conversation can be associated with a variety of sources including conversing with passengers, talking on a cell phone, or talking on a CB radio.

Cross Reference: Related to IntvwDrAttention.OnPhone, values will differ in part due to Interview vs. Researcher determined values. Related to IntvwDrAttention.TalkingOnPhone and IntvwDrAttention.TalkingOnCB, values will differ in part due to Interview vs. Researcher determined values. In conjunction with DriverRecognitionDistraction.Inattention, DriverRecognitionDistraction.ADDRecognition, DriverRecognitionDistraction.InteriorDistractionCount, and ExteriorDistractionCount matches Overview.OVERecognition.

Variable Name: Conversation

Variable Definitions and Codes - DriverRecognitionDistraction Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not conversing
1	Conversing with passenger
2	Talking on phone
3	Talking on CB radio
7	No driver present
8	Other (specify)
9	Unknown

Nature Of Discussion

Definition: This variable documents the nature of the conversation the driver is involved in during the pre-crash phase.

Cross Reference: Congruent with IntvwDrAttention.DiscussionNature, values will differ due to Interview vs. Researcher determined values.

Variable Name: Subject

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not conversing
1	Business
2	Social
3	Family matter
4	Argument
5	Disciplinary
7	No driver present
8	Other (specify)
9	Unknown

Nature Of Relationship Between Driver And Person Conversing With

Definition: This variable documents the relationship between the driver and the person the driver was conversing with during the immediate pre-crash phase.

Cross Reference: Congruent with IntvwDrAttention.OnPhone, values will differ due to Interview vs. Researcher determined values.

Variable Name: Conversant

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not conversing
1	No relation/stranger
2	Business
3	Social (friend)
4	Boyfriend/girlfriend
5	Husband/wife
6	Driver/co-driver

Variable Definitions and Codes - DriverRecognitionDistraction Data Set

7	Parent/child
77	No driver present
88	Other (specify)
99	Unknown

Location Of Exterior Factor

Definition: This variable documents the location of the exterior factor with respect to the driver's location at the time the distraction first occurred.

Variable Name: OutsideLocation

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No exterior factors
1	Forward
2	Forward, left
3	Forward, right
4	Left
5	Right
6	Rearward
7	No driver present
8	Other (specify)
9	Unknown

Inadequate Surveillance

Definition: This variable establishes inadequate surveillance behavior on the part of the driver of this vehicle.

Cross Reference: Related to IntvwDrAttention.LookedDidNotSee, values will differ in part due to Interview vs. Researcher determined values. In conjunction with DriverAssessment.SightLine, DriverAssessment.Obscured, and DriverAssessment.Focused matches Overview.OVESurveillance.

Variable Name: ADDSurveillance

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No additional surveillance factors
1	Failed to look far enough ahead
2	Failed to look to either side ahead
3	Failed to look to side
4	Failed to look to rear (mirrors)
5	Failed to look other (specify)
6	Looked, but did not see
9	Unknown
77	No driver present
88	Other (specify)

Variable Definitions and Codes - DriverRecognitionDistraction Data Set

Tracking Of Rear Exterior Factor

Definition: This variable establishes how the driver tracked the exterior factor when this factor is located behind the vehicle.

Variable Name: Tracking

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No exterior factors
1	Turned head
2	Used rearview mirror
3	Used side mirror
7	No driver present
8	Other (specify)
9	Unknown

Other Recognition Factors

Definition: This variable establishes the occurrence of other recognition factors related to this driver.

Cross Reference: In conjunction with DriverRecognitionDistraction.Inattention, DriverRecognitionDistraction.Conversation, DriverRecognitionDistraction.InteriorDistractionCount, and ExteriorDistractionCount matches Overview.OVERecognition.

Variable Name: ADDRecognition

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No other recognition factors
1	Impending problem masked by traffic flow pattern
2	Driver focused on extraneous vehicle
3	Other recognition error (specify)
7	No driver present
9	Unknown

Interior Distraction Count

Definition: This variable documents the number of interior distractions that were coded for this driver.

Cross Reference: Computed from the following variables in the DriverRecognitionDistraction data set: OccupantMovement, ADDDialingPhone, ADDAdjustingRadio, OtherControls, FloorRetrieval, OtherRetrieval, OtherInternal. In conjunction with DriverRecognitionDistraction.Inattention, DriverRecognitionDistraction.Conversation, DriverRecognitionDistraction.ADDRecognition, and ExteriorDistractionCount matches Overview.OVERecognition.

Variable Name: InteriorDistractionCount

Variable Definitions and Codes - DriverRecognitionDistraction Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-6	Count of interior distractions present
7	No driver present
9	Unknown

Looking At Movement/Actions Of Other Occupants

Definition: This variable documents whether or not the driver is distracted by other occupants in the vehicle. (This variable was originally an attribute choice under the variable "Other Non-Driving Activities," which had to do with distractions internal to the vehicle.)

Cross Reference: Congruent with IntvwDrAttention.OtherOccupant, values will differ due to Interview vs. Researcher determined values.

Variable Name: OccupantMovement

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Dialing/Hanging Up Phone

Definition: This variable documents whether or not the driver is distracted as a result of either dialing or hanging up a phone during the pre-crash phase. (This variable was originally an attribute choice under the variable "Other Non-Driving Activities," which had to do with distractions internal to the vehicle.)

Cross Reference: Congruent with IntvwDrAttention.IDADialingPhone, values will differ due to Interview vs. Researcher determined values.

Variable Name: ADDDialingPhone

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Adjusting Radio/CD Player

Definition: This variable documents whether or not the driver is distracted as a result of attempting to adjust the sound system controls during the pre-crash phase. (This variable was originally an attribute choice under the variable "Other Non-Driving Activities," which had to do with distractions internal to the vehicle.)

Cross Reference: Congruent with IntvwDrAttention.IDAAdjustingRadio, values will differ due to Interview vs. Researcher determined values.

Variable Name: ADDAdjustingRadio

Variable Definitions and Codes - DriverRecognitionDistraction Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Adjusting Other Vehicle Controls

Definition: This variable documents whether or not the driver is distracted as a result of attempting to adjust the heat, vent or air conditioning controls during the pre-crash phase. This category also includes attempted adjustments to other OEM and after-market controls. (This variable was originally an attribute choice under the variable “Other Non-Driving Activities,” which had to do with distractions internal to the vehicle.)

Cross Reference: Congruent with IntvwDrAttention.AdjustingClimate and/or IntvwDrAttention.OtherDevice, values will differ due to Interview vs. Researcher determined values.

Variable Name: OtherControls

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Retrieving Object From Floor And/Or Seat

Definition: This variable documents whether or not the driver is distracted as a result of trying to retrieve an object from either the floor or seat while driving. The objects in this category include everything with the exception of items related to smoking or eating, which are addressed in the “Other” category. (This variable was originally an attribute choice under the variable “Other Non-Driving Activities,” which had to do with distractions internal to the vehicle.)

Cross Reference: Congruent with IntvwDrAttention.RetrievingFallen, values will differ due to Interview vs. Researcher determined values.

Variable Name: FloorRetrieval

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Retrieving Object From Other Location

Definition: This variable documents whether or not the driver is distracted as a result of trying to retrieve an object from a location other than the floor or seat while driving. Again, the objects in this category include everything with the exception of items related to smoking or eating, which are addressed in the “Other” category. (This variable was originally an attribute choice under the variable “Other Non-Driving Activities,” which had to do with distractions internal to the vehicle.)

Variable Name: OtherRetrieval

Variable Definitions and Codes - DriverRecognitionDistraction Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Other Internal Distraction

Definition: This variable documents whether or not the driver is distracted by internal factors not described in the other variables. Examples include smoking, eating, drinking, and reading-related activities. (This variable was originally an attribute choice under the variable "Other Non-Driving Activities," and was the "Other (specify)" attribute choice.)

Cross Reference: Related to a combination of the following variables from the IntvwDrAttention data set: Reading, Eating, Smoking, etc. Values will differ in part due to Interview vs. Researcher determined values.

Variable Name: OtherInternal

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Exterior Distraction Count

Definition: This variable documents the number of exterior distractions that were coded for this driver.

Cross Reference: Computed from the following variables in the DriverRecognitionDistraction data set: ADDPreviousCrash, ApproachingTraffic, StreetAddress, ExternalPerson, Building, UnspecifiedExternal, OtherExternal. Congruent with IntvwDrAttention.OusideObject, values will differ due to Interview vs. Researcher determined values. In conjunction with DriverRecognitionDistraction.Inattention, DriverRecognitionDistraction.Conversation, DriverRecognitionDistraction.ADDRecognition, and InteriorDistractionCount matches Overview.OVERecognition.

Variable Name: ExteriorDistractionCount

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-6	Count of exterior distractions present
7	No driver present
9	Unknown

Looking At Previous Crash

Definition: This variable documents whether or not the driver removes his/her focus from the driving task to look at a previous crash (i.e. rubbernecking). (This variable was originally an attribute choice under the variable "Exterior Factors" and had to do with the driver focusing on factors that were exterior to the vehicle.)

Variable Name: ADDPreviousCrash

Variable Definitions and Codes - DriverRecognitionDistraction Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Looking At ApproachingTraffic

Definition: This variable documents whether or not the driver removes his/her focus from the driving task to look at approaching traffic either in an adjoining lane or across a median area. (This variable was originally an attribute choice under the variable "Exterior Factors" and had to do with the driver focusing on factors that were exterior to the vehicle.)

Variable Name: ApproachingTraffic

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Looking For Street Address

Definition: This variable documents whether or not the driver removes his/her focus from the driving task to search for a street address (usually searching for a specific building number). (This variable was originally an attribute choice under the variable "Exterior Factors" and had to do with the driver focusing on factors that were exterior to the vehicle.)

Variable Name: StreetAddress

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Looking At Outside Person

Definition: This variable documents whether or not the driver removes his/her focus from the driving task to look at a person who is exterior to this vehicle. The person can be a pedestrian, bicyclist, skater, and an occupant of another vehicle or even a person in a building. (This variable was originally an attribute choice under the variable "Exterior Factors" and had to do with the driver focusing on factors that were exterior to the vehicle.)

Variable Name: ExternalPerson

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Definitions and Codes - DriverRecognitionDistraction Data Set

Looking At Building

Definition: This variable documents whether or not the driver removes his/her focus from the driving task to look at a building (usually as a result of seeing a feature of interest). (This variable was originally an attribute choice under the variable "Exterior Factors" and had to do with the driver focusing on factors that were exterior to the vehicle.)

Variable Name: Building

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Unspecified Outside Focus

Definition: This variable documents whether or not the driver removes his/her focus from the driving task to focus on something exterior to the vehicle, but there is insufficient information to determine the direction or the specific object that is being examined. (This variable was originally an attribute choice under the variable "Exterior Factors" and had to do with the driver focusing on factors that were exterior to the vehicle.)

Variable Name: UnspecifiedExternal

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Other External Distraction

Definition: This variable documents whether or not the driver was distracted by something that is exterior to the vehicle and that is not adequately described by the other variables. (This variable was originally an attribute choice under the variable "Exterior Factors" and was the "Other (specify)" attribute choice.)

Variable Name: OtherExternal

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Definitions and Codes - DriverSleep Data Set

DriverSleep Data Set

The DriverSleep data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID and VehicleNumber uniquely identify each record in this data set and should be used to merge the DriverSleep data set with other vehicle level data sets. This data set also contains the following variables:

Hours Of Last Sleep

Definition: This represents the number of hours the driver slept (most recent sleep interval).

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include surrogate interviews, other occupant interviews, log book entries, time stamped fuel and toll receipts, and carrier records.

Cross Reference: Congruent with IntvwDrSleep.LastLenght, values will differ due to Interview vs. Researcher determined values.

Variable Name: LastSleepHours

Attribute Codes

<u>Code</u>	<u>Meaning</u>
00:00	No sleep
00:01-24:00	Time (in HH:MM format)
97:97	No driver present
98:98	Not applicable
99:99	Unknown

Start Time Of Last Sleep Interval

Definition: The time of day (military time) that the driver began his/her last sleep interval.

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include surrogate interviews, other occupant interviews, log book entries, time stamped fuel and toll receipts, and carrier records.

Cross Reference: Congruent with IntvwDrSleep.LastStart, values will differ due to Interview vs. Researcher determined values.

Variable Name: LastSleepStart

Attribute Codes

<u>Code</u>	<u>Meaning</u>
00:00	No sleep
00:01-24:00	Time (in HH:MM format)
97:97	No driver present
98:98	Not applicable
99:99	Unknown

Variable Definitions and Codes - DriverSleep Data Set

End Of Last Sleep Interval

Definition: This is the time of day (military time) that the driver awoke from his/her last sleep interval.

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include surrogate interviews, other occupant interviews, log book entries, time stamped fuel and toll receipts, and carrier records.

Cross Reference: Congruent with IntvwDrSleep.LastEnd, values will differ due to Interview vs. Researcher determined values.

Variable Name: LastSleepEnd

Attribute Codes

<u>Code</u>	<u>Meaning</u>
00:00	No sleep
00:01-24:00	Time (in HH:MM format)
97:97	No driver present
98:98	Not applicable
99:99	Unknown

Hours Since Last Sleep

Definition: This represents the number of hours that have passed since the driver has awoken from his/her last sleep interval.

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include surrogate interviews, other occupant interviews, log book entries, time stamped fuel and toll receipts, and carrier records.

Cross Reference: Congruent with IntvwDrSleep.LastSince, values will differ due to Interview vs. Researcher determined values.

Variable Name: HoursSinceSleep

Attribute Codes

<u>Code</u>	<u>Meaning</u>
00:00	No sleep
00:01-24:00	Time (in HH:MM format)
97:97	No driver present
98:98	Not applicable
99:99	Unknown

If Hours Of Sleep Were Less Than 4 Hours, Hours Of Last Main Sleep

Definition: If the driver's last sleep interval was less than 4 hours, this is the number of hours that the driver slept in his/her previous sleep interval where that interval was greater than 4 hours (i.e. "main" sleep interval).

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include surrogate interviews, other occupant interviews, log book entries, time stamped fuel and toll receipts, and carrier records.

Variable Definitions and Codes - DriverSleep Data Set

Cross Reference: Congruent with IntvwDrSleep.Less4Lenght, values will differ due to Interview vs. Researcher determined values.

Variable Name: MainSleepHours

Attribute Codes

<u>Code</u>	<u>Meaning</u>
00:00	No sleep
00:01-24:00	Time (in HH:MM format)
97:97	No driver present
98:98	Not applicable
99:99	Unknown

Start Of Main Sleep Interval

Definition: This is the time of day (military time) that the driver's main sleep interval began. This variable should be coded when the driver's last sleep interval was less than 4 hours.

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include surrogate interviews, other occupant interviews, log book entries, time stamped fuel and toll receipts, and carrier records.

Cross Reference: Congruent with IntvwDrSleep.Less4Start, values will differ due to Interview vs. Researcher determined values.

Variable Name: MainSleepStart

Attribute Codes

<u>Code</u>	<u>Meaning</u>
00:00	No sleep
00:01-24:00	Time (in HH:MM format)
97:97	No driver present
98:98	Not applicable
99:99	Unknown

End Of Main Sleep Interval

Definition: This is the time of day (military time) that the driver's main sleep interval ended. This variable should be coded when the driver's last sleep interval was less than 4 hours.

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include surrogate interviews, other occupant interviews, log book entries, time stamped fuel and toll receipts, and carrier records.

Cross Reference: Congruent with IntvwDrSleep.Less4End, values will differ due to Interview vs. Researcher determined values.

Variable Name: MainSleepEnd

Attribute Codes

<u>Code</u>	<u>Meaning</u>
00:00	No sleep
00:01-24:00	Time (in HH:MM format)

Variable Definitions and Codes - DriverSleep Data Set

97:97	No driver present
98:98	Not applicable
99:99	Unknown

Hours Driving Since Last 8-Hour Break

Definition: This represents the number of hours the driver has been driving since he/she last had a break of at least 8 hours.

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include surrogate interviews, other occupant interviews, log book entries, time stamped fuel and toll receipts, and carrier records.

Cross Reference: Congruent with IntvwDrSleep.Since8Driving, values will differ due to Interview vs. Researcher determined values.

Variable Name: HoursDriving

Attribute Codes

<u>Code</u>	<u>Meaning</u>
00:00	No hours driving
00:01-24:00	Time (in HH:MM format)
97:97	No driver present
98:98	Not applicable
99:99	Unknown

Hours On Duty Since Last 8-Hour Break

Definition: This represents the number of hours the driver has been on duty since he/she last had a break of at least 8 hours.

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include surrogate interviews, other occupant interviews, log book entries, time stamped fuel and toll receipts, and carrier records.

Cross Reference: Congruent with IntvwDrSleep.Since8OnDuty, values will differ due to Interview vs. Researcher determined values.

Variable Name: HoursOnDuty

Attribute Codes

<u>Code</u>	<u>Meaning</u>
00:00	No hours on duty
00:01-24:00	Time (in HH:MM format)
97:97	No driver present
98:98	Not applicable
99:99	Unknown

Longest Work Day In Preceding 7-Day Interval

Definition: This number represents the number of hours the driver worked on his/her longest workday in the 7-day interval preceding the crash.

Variable Definitions and Codes - DriverSleep Data Set

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include carrier records, log book entries and surrogate interviews with the driver's family members/friends.

Cross Reference: Congruent with IntwvDrSleep.Longest, values will differ due to Interview vs. Researcher determined values.

Variable Name: WeekLongest

Attribute Codes

<u>Code</u>	<u>Meaning</u>
00:00	No work hours
00:01-24:00	Time (in HH:MM format)
97:97	No driver present
99:99	Unknown

Shortest Work Day In Preceding 7-Day Interval

Definition: This number represents the number of hours the driver worked on his/her shortest workday in the 7-day interval preceding the crash.

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include carrier records, log book entries and surrogate interviews with the driver's family members/friends.

Cross Reference: Congruent with IntwvDrSleep.Shortest, values will differ due to Interview vs. Researcher determined values.

Variable Name: WeekShortest

Attribute Codes

<u>Code</u>	<u>Meaning</u>
00:00	No work hours
00:01-24:00	Time (in HH:MM format)
97:97	No driver present
99:99	Unknown

Average Work Day In Preceding 7-Day Interval

Definition: This number represents the average number of hours the driver worked per day in the 7-day interval preceding the crash.

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include carrier records, log book entries and surrogate interviews with the driver's family members/friends.

Cross Reference: Congruent with IntwvDrSleep.Average, values will differ due to Interview vs. Researcher determined values.

Variable Name: WeekAverage

Variable Definitions and Codes - DriverSleep Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
00:00	No work hours
00:01-24:00	Time (in HH:MM format)
97:97	No driver present
99:99	Unknown

Did The Time At Which The Driver Began To Sleep Rotate/Shift In Last 7 Days?

Definition: This variable establishes the occurrence of a rotating sleep period (i.e. beginning of sleep interval changes during the period).

Source: Determined by the Case Reviewer using all available information inputs. The primary data source here is the driver interview; secondary sources include surrogate interviews, other occupant interviews, log book entries, time stamped fuel and toll receipts, and carrier records.

Cross Reference: Congruent with IntvwDrSleep.ShiftRotate, values will differ due to Interview vs. Researcher determined values.

Variable Name: Rotation

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Yes (specify)
2	No
7	No driver present
9	Unknown

Hours Worked On Day Of Crash

Definition: This represents the number of hours the driver worked on the day of the crash.

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include carrier records, log book entries and surrogate interviews with the driver's family members/friends.

Cross Reference: Congruent with IntvwDrSleep.Last24Worked, values will differ due to Interview vs. Researcher determined values. Congruent with IntvwCarrier.CAIHoursOnDuty, values will differ due to Interview vs. Researcher determined values.

Variable Name: HoursWorked

Attribute Codes

<u>Code</u>	<u>Meaning</u>
00:00-24:00	Time (in HH:MM format)
97:97	No driver present
98:98	Not applicable
99:99	Unknown

Variable Definitions and Codes - DriverSleep Data Set

Longest Length Of Daily Sleep In Preceding 7-Day Interval

Definition: This is the number of hours the driver slept in the 7-day interval preceding the crash that represents his/her longest interval of daily sleep.

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include surrogate interviews, other occupant interviews, log book entries, time stamped fuel and toll receipts, and carrier records.

Cross Reference: Congruent with IntvwDrSleep.IDSLongestDay, values will differ due to Interview vs. Researcher determined values. Congruent with IntvwCarrier.LongestDay, values will differ due to Interview vs. Researcher determined values.

Variable Name: ADSLongestDay

Attribute Codes

<u>Code</u>	<u>Meaning</u>
00:00-24:00	Time (in HH:MM format)
97:97	No driver present
98:98	Not applicable
99:99	Unknown

Shortest Length Of Daily Sleep In Preceding 7-Day Interval

Definition: This is the number of hours the driver slept in the 7-day interval preceding the crash that represents his/her shortest interval of daily sleep.

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include surrogate interviews, other occupant interviews, log book entries, time stamped fuel and toll receipts, and carrier records.

Cross Reference: Congruent with IntvwDrSleep.IDSShortestDay, values will differ due to Interview vs. Researcher determined values. Congruent with IntvwCarrier.ShortestDay, values will differ due to Interview vs. Researcher determined values.

Variable Name: ADSShortestDay

Attribute Codes

<u>Code</u>	<u>Meaning</u>
00:00-24:00	Time (in HH:MM format)
97:97	No driver present
98:98	Not applicable
99:99	Unknown

Average Length Of Daily Sleep In Preceding 7-Day Interval

Definition: This represents the average number of hours the driver slept per day in the 7-day interval preceding the crash.

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include surrogate interviews, other occupant interviews, log book entries, time stamped fuel and toll receipts, and carrier records.

Variable Definitions and Codes - DriverSleep Data Set

Cross Reference: Congruent with IntvwDrSleep.AverageWorkDay, values will differ due to Interview vs. Researcher determined values. Congruent with IntvwCarrier.CAIAverageDay, values will differ due to Interview vs. Researcher determined values.

Variable Name: AverageDay

Attribute Codes

<u>Code</u>	<u>Meaning</u>
00:00-24:00	Time (in HH:MM format)
97:97	No driver present
98:98	Not applicable
99:99	Unknown

Total Hours Worked On Primary Job During Preceding 7-Day Interval

Definition: This represents the total number of hours that the driver worked on his primary job during the 7-day interval preceding the crash.

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include carrier records, log book entries and surrogate interviews with the driver's family members/friends.

Cross Reference: In conjunction with DriverSleep.LastWeekMoonlight congruent with IntvwDrSleep.TotalHours, values will differ due to Interview vs. Researcher determined values. In conjunction with DriverSleep.LastWeekMoonlight congruent with IntvwCarrier.CAITotalHours, values will differ due to Interview vs. Researcher determined values.

Variable Name: LastWeekHours

Attribute Codes

<u>Code</u>	<u>Meaning</u>
00:00:130:00	Time (in HH:MM format)
97:97	No driver
98:98	Not applicable
99:99	Unknown

Hours Worked On Second Job During Preceding 7-Day Interval

Definition: This number represents the number of hours the driver worked on his/her second job during the 7-day interval preceding the crash.

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include carrier records, log book entries and surrogate interviews with the driver's family members/friends.

Cross Reference: Congruent with IntvwCarrier.HoursWorked7Days, values will differ due to Interview vs. Researcher determined values. In conjunction with DriverSleep.LastWeekHours congruent with IntvwDrSleep.TotalHours, values will differ due to Interview vs. Researcher determined values. In conjunction with DriverSleep.LastWeekHours congruent with IntvwCarrier.CAITotalHours, values will differ due to Interview vs. Researcher determined values.

Variable Name: LastWeekMoonlight

Variable Definitions and Codes - DriverSleep Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
00:00-130:00	Time (in HH:MM format)
97:97	No driver present
98:98	Not applicable
99:99	Unknown

Variable Definitions and Codes - Environment Data Set

Environment Data Set

The Environment data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID and VehicleNumber uniquely identify each record in this data set and should be used to merge the Environment data set with other vehicle level data sets. This data set also contains the following variables:

Relation To Roadway

Definition: This variable describes the characteristics of this vehicle's roadway environment just prior to the critical precrash event.

Source: Researcher determined – primary source is the scene inspection, secondary sources include the police report and interviews.

Variable Name: RoadRelation

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	On roadway
2	Shoulder
3	Median
4	Roadside
5	Outside right-of-way
6	Off roadway - location unknown
7	In parking lane
8	Gore
9	Unknown

Relation To Junction

Definition: This variable describes this vehicle's roadway as it relates to a junction. A junction is, in general, the area formed by the connection of two roadways. It includes (1) all at-grade intersections, (2) connections between a driveway access or alley access and a roadway that is not a driveway access or an alley access, (3) connections between two alley accesses or driveway accesses, or (4) a connection between a driveway and an alley access. An interchange is an area around a grade separation that involves at least two trafficways. Included within its boundaries are: (1) all ramps that connect the roadways, and (2) each roadway entering or leaving the interchange to a point 30 meters (100 feet) beyond the gore or curb return at the outermost ramp connection for the roadway. Included within an interchange area are intersections, driveway accesses, and roadway sections that are non-junction.

Source: Researcher determined – primary source is the scene inspection, secondary sources include the police report and interviews.

Variable Name: Junction

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Non-junction
2	Intersection
3	Intersection related

Variable Definitions and Codes - Environment Data Set

4	Driveway, alley access, etc.
5	Entrance/exit ramp related
6	Rail grade crossing
7	In crossover
9	Unknown, non interchange
15	Other location in interchange
19	Unknown, interchange area
99	Unknown

Interchange

Definition: This variable determines whether or not the crash involved an interchange. An interchange is an area around a grade separation that involves at least two trafficways. Included within its boundaries are: (1) all ramps that connect the roadways, and (2) each roadway entering or leaving the interchange to a point 30 meters (100 feet) beyond the gore or curb return at the outermost ramp connection for the roadway. Included within an interchange area are intersections, driveway accesses, and roadway sections that are non-junction.

Source: Researcher determined – primary source is the scene inspection, secondary sources include the police report and interviews.

Variable Name: Interchange

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes
9	Unknown
15	Unknown Interchange Area - this when it was selected as an interchange
-9999	Unknown - this is when it was not selected as an interchange

Trafficway Flow

Definition: This variable describes the flow of traffic as specified by the design of the roadway just prior to the critical precrash event.

Source: Researcher determined – primary source is the scene inspection, secondary sources include the police report and interviews.

Variable Name: ENVTrafficFlow

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Divided trafficway-median strip without positive barrier
2	Divided trafficway-median strip with positive barrier
3	One way traffic
4	Not physically divided (two way traffic)
5	Not physically divided with two-way left turn lane
9	Unknown

Variable Definitions and Codes - Environment Data Set

Trafficway Flow Restrictions

Definition: This variable identifies preexisting trafficway flow restrictions that hindered the general flow of traffic in some way. Selection of specific attributes does not imply that the restriction contributed to crash causation.

Source: Researcher determined – primary source is the scene inspection; secondary sources include the police report and interviews.

Cross Reference: Related to the following variables from FactorAssessment: NoTraffic, ConstructionZone, RushHour, Underwater, AFTPPreviousCrash.

Variable Name: FlowRestriction

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No restrictions
1	Work zone
2	Roadway immersed
3	Prior crash
4	Congestion
5	Dust storm
8	Other (specify)
9	Unknown

Intersection Type

Definition: This variable defines the intersection type for those crashes that occur in an intersection or are intersection-related. For example, if there is a stream of traffic stopped on the approach to an intersection and a vehicle at the rear of this traffic stream is struck in the rear by a second vehicle, the crash is considered intersection-related and intersection type is coded for this crash.

Source: Research determined – primary source is the scene inspection, secondary sources include the police report and local maps/site plans.

Variable Name: IntersectionType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Non-intersection (and not intersection related)
1	Signalized cross intersection
2	Cross intersection with right turn lane(s) and stop control on minor street
3	Cross intersection with left turn lane(s) and stop control on minor street
4	Cross intersection with left/right turn lane(s) and stop control on minor street
5	Cross intersection with no turning lanes and stop control on minor street
6	Signalized Tee intersection
7	Tee intersection with turn lanes and stop control on minor street
8	Tee intersection with no turn lanes and stop control on minor street
88	Other (specify)
99	Unknown

Variable Definitions and Codes - Environment Data Set

Number Of Travel Lanes

Definition: This variable establishes the number of travel lanes that existed for this vehicle prior to the critical precrash event. The attribute related to this variable is determined from the same roadway that was used to determine the variable "Trafficway Flow." If traffic flows in both directions and is undivided, the number of lanes in both directions is indicated. If the trafficway is divided into two or more roadways, only the number of lanes for the roadway on which this vehicle was traveling is indicated. If turn bays, acceleration, deceleration, or center two-way left turn lanes exist and are physically located within the cross section of the roadway and these lanes are the most representative of the driver's environment just prior to the critical precrash event, then they are included in the number of lanes.

Source: Researcher determined – primary source is the scene inspection; secondary sources include the police report and interviews.

Variable Name: TravelLanes

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	One
2	Two
3	Three
4	Four
5	Five
6	Six
7	Seven or more
9	Unknown

Access Control

Definition: This variable describes the level of control maintained for vehicles attempting to enter/exit the roadway. The attribute is determined for the same roadway as described in the variable "Number Of Travel Lanes."

Source: Researcher determined – primary source is the scene inspection; secondary sources include the police report and interviews.

Variable Name: AccessControl

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Full control
2	No control
3	Other (specify)
9	Unknown

Route Signing

Definition: This variable describes the general class of roadway by noting the type of route signing. The attribute is determined for the same roadway described in the variable "Number Of Travel Lanes."

Source: Researcher determined – primary source is the scene inspection; secondary sources

Variable Definitions and Codes - Environment Data Set

include the police report and state maps.

Variable Name: Signage

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Interstate
2	U.S. highway
3	State highway
4	County road
5	Township
6	Municipality
7	Frontage road
8	Other (specify)
9	Unknown

Trafficway Functional Class

Definition: This variable is based upon the Federal Highway Administration's classification system for identifying a roadway functional system. The basic functional systems are: (1) rural areas, (2) urbanized areas, and (3) small urban areas (under 50,000 in population). Each system is comprised of various functional categories.

Source: Researcher determined – primary data source include state maps and the scene inspection (not the police report).

Variable Name: FunctionalClass

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Rural principal arterial - Interstate
2	Rural principal arterial - other
3	Rural minor arterial
4	Rural major collector
5	Rural minor collector
6	Rural local
7	Rural unknown
8	Urban principal arterial - Interstate
9	Urban principal arterial - Freeways and Expressways
10	Urban principal arterial - other
11	Urban minor arterial
12	Urban collector
13	Urban local
14	Urban unknown
99	Unknown

Light Conditions

Definition: This variable establishes the light conditions of the roadway at the time of the crash and represents both ambient and artificial sources of light.

Variable Definitions and Codes - Environment Data Set

Source: Researcher determined – primary source is the police report; secondary sources include interviews and scene inspection.

Variable Name: Daylight

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Daylight
2	Dark
3	Dark, but lighted
4	Dawn
5	Dusk
9	Unknown

Traffic Control Device

Definition: This variable documents the above-ground traffic control(s) that regulate vehicular traffic in the vehicle's environment just prior to this vehicle's critical precrash event. The attribute is determined for the same roadway that is used to define the variable "Trafficway Flow."

Source: Researcher determined – primary source is the scene inspection; secondary sources include the police report and interviews.

Variable Name: TrafficControl

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No Control Devices
1	Control signal (on colors) w/pedestrian signal
2	Control signal (on colors) w/o pedestrian signal
3	Control signal (on colors) unknown pedestrian signal
4	Flashing control signal
5	Flashing beacon
6	Flashing highway signal, unknown or other
7	Lane use control signal
8	Other highway signal
9	Unknown highway signal
20	Stop sign
21	Yield sign
22	Other regulatory sign
29	Unknown type of regulatory sign
30	School speed limit sign
31	School advance or crossing sign
38	Other school related sign
40	Warning sign
50	Office, crossing guard, flagman, etc
60	Gates (active)
61	Flashing lights (active)
62	Traffic control signal (active)
63	Wigwags (active)
64	Bells (active)

Variable Definitions and Codes - Environment Data Set

68	Other train activated device
69	Active device, type unknown
70	Cross-bucks (passive)
71	Stop Sign (passive)
72	Other railroad crossing sign (passive)
73	Special warning device (passive)
78	Other passive device
79	Passive device, type unknown
80	Grade crossing controlled, type unknown
98	Other (specify)
99	Unknown

Railroad Grade Crossing?

Definition: This variable establishes whether or not a railroad-crossing device was present at the time of the crash.

Source: Researcher determined – primary source is the scene inspection; secondary sources include the police report and interviews.

Variable Name: Railroad

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes
2	Unknown
70	Active Device, Type Unknown
-9999	Unknown for non railroad devices

Traffic Control Device Functioning

Definition: This variable establishes whether or not the traffic control device that was identified in the variable “Traffic Control Device” was functioning properly (as it was designed to function).

Source: Researcher determined – inputs include scene inspection, interviews, and police report.

Variable Name: Functioning

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No traffic control device
1	Traffic control device not functioning (specify)
2	Traffic control device functioning properly
9	Unknown

Roadway Class

Definition: This variable designates the class of roadway within rural and urban categories. The “urban” designation includes urbanized and small urban areas (under 50,000 in population). In

Variable Definitions and Codes - Environment Data Set

general, the “freeways” designation includes freeways, expressways, thruways, and other controlled-access roadway segments.

Source: Researcher determined – primary data sources include state maps and the scene inspection (not the police report.)

Variable Name: RoadwayClass

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Rural Freeway (> 4 lanes)
2	Rural Freeway (<= 4 lanes)
3	Rural multi-lane divided, non-Freeway
4	Rural multi-lane undivided, non-Freeway
5	Rural two-lane road
6	Rural unknown
7	Urban Freeway (> 4 lanes)
8	Urban Freeway (<= 4 lanes)
9	Urban multi-lane divided, non-Freeway
10	Urban multi-lane undivided, non-Freeway
11	Urban two-lane road
12	Urban unknown
99	Unknown

Roadway Alignment

Definition: This variable describes the alignment of the roadway just prior to the vehicle’s critical precrash event. This element is determined from the same roadway that was used to determine the variable “Trafficway Flow.”

Source: Researcher determined – primary source is scene inspection; secondary sources include the police report and interviews.

Cross Reference: Related to FactorAssessment.RoadGeometry.

Variable Name: RoadAlignment

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Straight
2	Curve right
3	Curve left
9	Unknown

Roadway Profile

Definition: This variable establishes the grade of the roadway just prior to the vehicle’s critical precrash event. To determine the grade, the vertical measurement is divided by the horizontal value; the result is a percentage value of the grade. This element is determined from the same roadway that was used to determine the variable “Trafficway Flow.”

Variable Definitions and Codes - Environment Data Set

Source: Researcher determined – primary source is scene inspection; secondary sources include police report and interviews.

Variable Name: RoadProfile

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Level
2	Uphill grade (>2%)
3	Hill crest
4	Downhill grade (>2%)
5	Sag
9	Unknown

Roadway Surface Type

Definition: This variable describes the surface type of the roadway just prior to the vehicle's critical precrash event. This element is determined from the same roadway that was used to determine the variable "Trafficway Flow."

Source: Researcher determined – primary source is scene inspection; secondary sources include police report and interviews.

Variable Name: RoadSurface

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Concrete
2	Bituminous (asphalt)
3	Brick or block
4	Slag, gravel, or stone
5	Dirt
8	Other (specify)
9	Unknown

Roadway Surface Condition

Definition: This variable describes the condition of the surface of the roadway just prior to the vehicle's critical precrash event. This element is determined from the same roadway that was used to determine the variable "Trafficway Flow."

Source: Researcher determined – primary source is the police report; secondary sources include interviews, and scene inspection.

Cross Reference: Related to FactorAssessment.SlickSurface and FactorAssessment.Underwater.

Variable Name: SurfaceCondition

Variable Definitions and Codes - Environment Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Dry
2	Wet
3	Snow or slush
4	Ice
5	Sand, dirt, or oil
8	Other (specify)
9	Unknown

Roadway Surface Defect

Definition: This variable describes the presence of any surface defects of the roadway just prior to the vehicle's critical precrash event, regardless of the relative contribution of the defect(s) to crash causation. This element is determined from the same roadway that was used to determine the variable "Number Of Travel Lanes."

Source: Researcher determined – primary source is the scene inspection; secondary sources include the police report and interviews.

Cross Reference: Related to FactorAssessment.PoorCondition.

Variable Name: SurfaceDefect

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No defects noted
1	Defect noted (specify)
9	Unknown

Roadway Design Deficiencies

Definition: This variable identifies design deficiencies of the roadway as they relate to established AASHTO standards.

Source: Researcher determined – primary source is the scene inspection; secondary sources include the police report and interviews.

Variable Name: DesignDefect

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No deficiencies notes
1	Inappropriate signage speeds
2	Insufficient crown
3	Excessive crown
4	Insufficient super-elevation
5	Excessive super-elevation
6	Excessive curvature
7	No shoulder/ Breakdown lane

Variable Definitions and Codes - Environment Data Set

8	Other (specify)
9	Unknown

Shoulder Surface Type

Definition: This variable establishes stabilized shoulder presence at the crash site and the type of available shoulder surface. A shoulder is defined as that part of a trafficway that is (1) contiguous with the roadway for emergency use, (2) for accommodation of stopped road vehicles, and (3) for lateral support of the roadway structure.

Source: Researcher determined – primary source is the scene inspection; secondary sources include on-scene photographs.

Variable Name: ShoulderType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No stabilized shoulder
1	Concrete
2	Bituminous (asphalt)
3	Brick or block
4	Slag, gravel, or stone
5	Dirt
8	Other (specify)
9	Unknown

Shoulder Width

Definition: This variable establishes the width of the stabilized shoulder available to this vehicle. To qualify as a stabilized shoulder, the measured shoulder width must exceed two feet (0.61 meters).

Source: Researcher determined – primary source is the scene inspection; secondary sources include on-scene photographs.

Variable Name: ShoulderWidth

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No stabilized shoulder
1	< 1 meter
2	> 1 <= 2 meters
3	> 2 <= 3 meters
4	> 3 meters
9	Unknown

Rumble Strip Type/Involvement

Definition: This variable establishes the presence of a rumble strip, the type of rumble strip, and whether or not the rumble strip was involved in the pre-crash circumstances in terms of this vehicle either departing or not departing the roadway.

Variable Definitions and Codes - Environment Data Set

Source: Researcher determined – primary source is the scene inspection; secondary sources include on-scene photographs.

Variable Name: RumbleStrip

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No rumble strip present
1	Raised rumble strip/no pre-crash departure
2	Raised rumble strip/partial pre-crash departure
3	Raised rumble strip/full pre-crash departure
4	Depressed rumble strip/no pre-crash departure
5	Depressed rumble strip/partial pre-crash departure
6	Depressed rumble strip/full pre-crash departure
8	Other (specify)
9	Unknown

Sight Line Restrictions?

Definition: This variable establishes sight line restrictions for the driver of this vehicle after measuring the sight distance and comparing it to AASHTO standards. This determination is based on recommended sight distances as established by AASHTO. For safety on a highway, the roadway designer must provide sight distance of sufficient length that drivers can control the operation of their vehicle to avoid striking an unexpected object on the travel way.

Source: Researcher determined – primary source is the scene inspection.

Cross Reference: Related to the difference between FactorAssessment.SightDistance and FactorAssessment.AASHTORecommended.

Variable Name: SightLineRestriction

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	No
2	Yes (specify)
9	Unknown

Sight Line Distance

Definition: This variable is the measured sight line distance and represents the distance along the roadway that an object of specified height is continuously visible to the driver. This distance is dependent on the height of the driver's eye above the road surface, the specified object height above the road surface, and the height of sight obstructions within the line of sight.

Source: Researcher determined – primary source is the scene inspection.

Variable Name: SightLineDistance

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Distance value (m)
8887	No sight line restriction, this vehicle

Variable Definitions and Codes - Environment Data Set

9997	Unknown if sight line restricted, this vehicle
9999	Sight line restriction, this vehicle, actual distance not measured

AASHTO Sight Distance

Definition: This variable identifies the AASHTO-recommended sight distance for the roadway on which the crash occurred. This variable will have a value attached to it when a sight line restriction is suspected and the actual sight distance is measured. The sight distance as measured is then compared to the recommended sight distance for that situation.

Source: Researcher determined utilizing the AASHTO (American Association of State Highway and Transportation Officials) document "A Policy on Geometric Design of Highways and Streets (4th edition)."

Variable Name: AASHToDistance

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Distance value (m)
8887	No sight line restriction, this vehicle
9997	Unknown if sight line restricted, this vehicle
9999	Sight line restriction, this vehicle, recommended distance unknown

No Adverse Conditions

Definition: This variable documents whether or not there were no adverse atmospheric-related driving conditions just prior to the critical event. (This variable was originally an attribute choice under the variable "Atmospheric Conditions.")

Source: Researcher determined – primary data sources include the police report and local weather information obtained by the NASS Researcher. Secondary data sources include interviews and scene inspection.

Variable Name: ENVNoConditions

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Rain

Definition: This variable documents whether or not it was raining just prior to the critical event. (This variable was originally an attribute choice under the variable "Atmospheric Conditions.")

Source: Researcher determined – primary data sources include the police report and local weather information obtained by the NASS Researcher. Secondary data sources include interviews and scene inspection

Variable Name: ENVRain

Variable Definitions and Codes - Environment Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Snow

Definition: This variable documents whether or not it was snowing just prior to the critical event. (This variable was originally an attribute choice under the variable "Atmospheric Conditions.")

Source: Researcher determined – primary data sources include the police report and local weather information obtained by the NASS Researcher. Secondary data sources include interviews and scene inspection.

Variable Name: ENVSnow

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Fog

Definition: This variable documents whether or not fog was present just prior to the critical event. (This variable was originally an attribute choice under the variable "Atmospheric Conditions.")

Source: Researcher determined – primary data sources include the police report and local weather information obtained by the NASS Researcher. Secondary data sources include interviews and scene inspection.

Variable Name: ENVFog

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Wind Gusts

Definition: This variable documents whether or not heavy wind gusts were present just prior to the critical event. (This variable was originally an attribute choice under the variable "Atmospheric Conditions.")

Source: Researcher determined – primary data sources include the police report and local weather information obtained by the NASS Researcher. Secondary data sources include interviews and scene inspection.

Variable Name: ENVWindGusts

Variable Definitions and Codes - Environment Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Hail

Definition: This variable documents whether or not hail was falling just prior to the critical event. (This variable was originally an attribute choice under the variable "Atmospheric Conditions.")

Source: Researcher determined – primary data sources include the police report and local weather information obtained by the NASS Researcher. Secondary data sources include interviews and scene inspection.

Cross Reference: Identical to FactorAssessment.AFTHail.

Variable Name: ENVHail

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Sleet

Definition: This variable documents whether or not sleet (frozen or partially frozen raindrops) was falling just prior to the critical event. (This variable was originally an attribute choice under the variable "Atmospheric Conditions.")

Source: Researcher determined – primary data sources include the police report and local weather information obtained by the NASS Researcher. Secondary data sources include interviews and scene inspection.

Variable Name: ENVSleet

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Dust

Definition: This variable documents whether or not heavy dust (with corresponding limited visibility) was present just prior to the critical event. (This variable was originally an attribute choice under the variable "Atmospheric Conditions.")

Source: Researcher determined – primary data sources include the police report and local weather information obtained by the NASS Researcher. Secondary data sources include interviews and scene inspection.

Cross Reference: Related to Environment.FlowRestriction (5 "Dust Storm").

Variable Name: ENVDust

Variable Definitions and Codes - Environment Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Other Atmospheric Conditions

Definition: This variable documents whether or not there were other adverse atmospheric-related driving conditions present just prior to the critical event that were not identified in the other atmospheric condition variables. (This variable was originally an attribute choice under the variable "Atmospheric Conditions.")

Source: Researcher determined – primary data sources include the police report and local weather information obtained by the NASS Researcher. Secondary data sources include interviews and scene inspection.

Variable Name: ENVOtherConditions

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Events Data Set

The Events data set contains the variables CaseID, PSU, PSUStrat, RATWeight, VehicleNumber and EventSequence. EventSequence identifies a particular event in a sequence in the accident. CaseID and EventSequence uniquely identify each record in this data set. CaseID and EventSequence should be used to merge the Events data set with the CDCCrush data set. CaseID and VehicleNumber should be used to merge the Events data set with vehicle level data sets. This data set also contains the following variables:

Stratum

Definition: The Stratum is the letter identifying the CDS sampling classification to which the case is assigned.

Source: Researcher determined.

Variable Name: Stratum

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Text

Class Of Vehicle (First Listing)

Definition: This variable describes the class of vehicle for the first vehicle listed on the Case Form Events tab. This represents the same attribute as that found in the General Vehicle Data Set ("Class Of Vehicle" variable) and that found in the Vehicle Exterior Data Set ("Class Of Vehicle" variable). This classification is based on the size of the vehicle.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include police and other vehicle photographs. Partially determined by VIN information (size-based information).

Cross Reference: Identical to GeneralVehicle.GVEVehicleClass when applicable. Identical to VehicleExterior.VEXVehicleClass when applicable.

Variable Name: ClassVehicle

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not a motor vehicle
1	Subcompact/mini (wheelbase < 254 cm)
2	Compact (wheelbase >= 254 but < 265 cm)
3	Intermediate (wheelbase >= 265 but < 278 cm)
4	Full Size (wheelbase >= 278 but < 291 cm)
5	Largest (wheelbase >= 291 cm)
9	Unknown passenger car size
14	Compact utility vehicle
15	Large utility vehicle (<= 4,536 kg GVWR)
16	Utility station wagon (<= 4,536 kg GVWR)
19	Unknown utility type
20	Minivan (<= 4,536 kg GVWR)

Variable Definitions and Codes - Events Data Set

21	Large van (<= 4,536 kg GVWR)
24	Van Based school bus (<= 4,536 kg GVWR)
28	Other van type (<= 4,536 kg GVWR)
29	Unknown van type (<= 4,536 kg GVWR)
30	Compact pickup truck (<= 4,536 kg GVWR)
31	Large pickup truck (<= 4,536 kg GVWR)
38	Other pickup truck type (<= 4,536 kg GVWR)
39	Unknown pick up truck (<=4,536 kg GVWR)
45	Other light truck (<= 4,536 kg GVWR)
48	Unknown light truck type (<= 4,536 kg GVWR)
49	Unknown light vehicle type
50	School bus (excludes van based)(>4,536 kg GVWR)
58	Other bus (>4,536 kg GVWR)
59	Unknown bus type
60	Truck (>4,536 kg GVWR)
67	Tractor without trailer
68	Tractor-trailer(s)
78	Unknown medium/heavy truck type
79	Unknown light/medium/heavy truck type
80	Motored cycle
90	Other vehicle
99	Unknown

General Area Of Damage (First Vehicle Listed)

Definition: This variable describes the general area of damage on the first vehicle.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include on-scene vehicle photographs.

Cross Reference: Related to CDCCrush.DeformLocation and CDCCrush.DamageLocation.

Variable Name: DamageArea

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not a motor vehicle
9	Unknown
B	Back/Bk of unit with cargo area-rear of trailer or straight truck*
C	Rear of cab
D	Back (rear of tractor)
F	Front
L	Left Side
N	Noncollision
R	Right Side
T	Top
U	Undercarriage
V	Front of cargo area

*'B' represents 'Back' for a CDS vehicle, 'Bk of unit with cargo area-rear of trailer or straight truck' for a truck.

Variable Definitions and Codes - Events Data Set

Object Contacted

Definition: This variable describes the object or vehicle that was contacted by each vehicle in the case.

Source: Researcher determined – primary sources are the scene and vehicle inspections; secondary sources include the police report and interviewees.

Cross Reference: Related to VehicleEvents.FirstHarmfulEvent, if Events.EventSequence = 1 when applicable.

Variable Name: EVEObjectContact

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Vehicle#1
2	Vehicle#2
3	Vehicle#3
4	Vehicle#4
5	Vehicle#5
6	Vehicle#6
7	Vehicle#7
8	Vehicle#8
9	Vehicle#9
10	Vehicle#10
11	Vehicle#11
12	Vehicle#12
13	Vehicle#13
14	Vehicle#14
15	Vehicle#15
16	Vehicle#16
17	Vehicle#17
18	Vehicle#18
19	Vehicle#19
20	Vehicle#20
21	Vehicle#21
22	Vehicle#22
23	Vehicle#23
24	Vehicle#24
25	Vehicle#25
26	Vehicle#26
27	Vehicle#27
28	Vehicle#28
29	Vehicle#29
30	Vehicle#30
31	Overturn->rollover(excludes end-over-end)
32	Rollover->end-over-end
33	Fire or explosion
34	Jackknife
35	Other intraunit damage (specify)
36	Noncollision injury

Variable Definitions and Codes - Events Data Set

38	Other noncollision (specify)
39	Noncollision->details unknown
41	Tree (<= 10 cm in diameter)
42	Tree (> 10 cm in diameter)
43	Shrubbery or bush
44	Embankment
45	Breakaway pole or post (any diameter)
50	Nonbreakaway pole or post (<=10cm in diameter)
51	Nonbreakaway pole or post (>10 cm but <= 30 cm in diameter)
52	Nonbreakaway pole or post (>30 cm in diameter)
53	Nonbreakaway pole or post (diameter unknown)
54	Concrete traffic barrier
55	Impact attenuator
56	Other traffic barrier (includes guardrail) (specify)
57	Fence
58	Wall
59	Building
60	Ditch or culvert
61	Ground
62	Fire hydrant
63	Curb
64	Bridge
68	Other fixed object (specify)
69	Unknown fixed object
70	Pass. car, light truck, van, or other vehicle not in-transport
71	Medium/heavy truck or bus not in-transport
72	Pedestrian
73	Cyclist or cycle
74	Other nonmotorist or conveyance (specify)
75	Vehicle occupant
76	Animal
77	Train
78	Trailer, disconnected in transport
79	Object fell from vehicle in-transport
88	Other nonfixed object (specify)
89	Unknown nonfixed object
98	Other event (specify)
99	Unknown event or object

Class Of Vehicle (Second Listing)

Definition: This variable describes the class of vehicle for the second vehicle listed on the Case Form Events tab (if the collision was between two vehicles). This represents the same attribute as that found in the General Vehicle Data Set ("Class Of Vehicle" variable) and that found in the Vehicle Exterior Data Set ("Class Of Vehicle" variable). This classification is based on the size of the vehicle.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include police and other vehicle photographs. Partially determined by VIN information (size-based information).

Variable Definitions and Codes - Events Data Set

Cross Reference: Identical to GeneralVehicle.GVEVehicleClass, if Events.EVEObjectContact<31 when applicable. Identical to VehicleExterior.VEXVehicleClass if Events.EVEObjectContact<31 when applicable.

Variable Name: ClassVehicle2

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not a motor vehicle
1	Subcompact/mini (wheelbase < 254 cm)
2	Compact (wheelbase >= 254 but < 265 cm)
3	Intermediate (wheelbase >= 265 but < 278 cm)
4	Full Size (wheelbase >= 278 but < 291 cm)
5	Largest (wheelbase >= 291 cm)
9	Unknown passenger car size
14	Compact utility vehicle
15	Large utility vehicle (<= 4,536 kg GVWR)
16	Utility station wagon (<= 4,536 kg GVWR)
19	Unknown utility type
20	Minivan (<= 4,536 kg GVWR)
21	Large van (<= 4,536 kg GVWR)
24	Van Based school bus (<= 4,536 kg GVWR)
28	Other van type (<= 4,536 kg GVWR)
29	Unknown van type (<= 4,536 kg GVWR)
30	Compact pickup truck (<= 4,536 kg GVWR)
31	Large pickup truck (<= 4,536 kg GVWR)
38	Other pickup truck type (<= 4,536 kg GVWR)
39	Unknown pick up truck (<=4,536 kg GVWR)
45	Other light truck (<= 4,536 kg GVWR)
48	Unknown light truck type (<= 4,536 kg GVWR)
49	Unknown light vehicle type
50	School bus (excludes van based)(>4,536 kg GVWR)
58	Other bus (>4,536 kg GVWR)
59	Unknown bus type
60	Truck (>4,536 kg GVWR)
67	Tractor without trailer
68	Tractor-trailer(s)
78	Unknown medium/heavy truck type
79	Unknown light/medium/heavy truck type
80	Motored cycle
90	Other vehicle
99	Unknown

General Area Of Damage (Second Vehicle Listed)

Definition: This variable describes the general area of damage on the second vehicle (if the collision was between two vehicles).

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include on-scene vehicle photographs.

Variable Definitions and Codes - Events Data Set

Cross Reference: Related to CDCCrush.DeformLocation and CDCCrush.DamageLocation.

Variable Name: DamageArea2

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not a motor vehicle
9	Unknown
B	Back/Bk of unit with cargo area-rear of trailer or straight truck*
C	Rear of cab
D	Back (rear of tractor)
F	Front
L	Left Side
N	Noncollision
R	Right Side
T	Top
U	Undercarriage
V	Front of cargo area

*'B' represents 'Back' for a CDS vehicle, 'Bk of unit with cargo area-rear of trailer or straight truck' for a truck.

Variable Definitions and Codes - FactorAssessment Data Set

FactorAssessment Data Set

The FactorAssessment data set contains the variables CaselD, PSU, PSUStrat, RATWeight, and VehicleNumber. CaselD and VehicleNumber uniquely identify each record in this data set and should be used to merge the FactorAssessment data set with other vehicle level data sets. This data set also contains the following variables:

No Traffic Flow Factors

Definition: This variable establishes whether or not there are no traffic flow interruption factors relevant to the crash. (This variable was originally an attribute choice under the variable "Traffic Flow Interruption Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview, the police report, and researcher on-scene investigation. Secondary data sources include interviews with other vehicle occupants, witnesses, other drivers, and surrogate interviews with family members/friends.

Cross Reference: Identical to the opposite of Overview.Traffic. Related to Environment.FlowRestrictions (0 "No restrictions").

Variable Name: NoTraffic

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Previous Crash Nearby

Definition: This variable establishes whether or not traffic flow at the crash site is interrupted by a previous crash located near this site. (This variable was originally an attribute choice under the variable "Traffic Flow Interruption Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview, the police report, and researcher on-scene investigation. Secondary data sources include interviews with other vehicle occupants, witnesses, other drivers, and surrogate interviews with family members/friends.

Cross Reference: Related to DriverRecognitionDistraction.ADDPreviousCrash. Related to Environment.FlowRestrictions (3 "Prior crash").

Variable Name: AFTPPreviousCrash

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Definitions and Codes - FactorAssessment Data Set

Construction Work Zone

Definition: This variable establishes whether or not traffic flow at the crash site is interrupted as a result of the crash site being located in a construction work zone. (This variable was originally an attribute choice under the variable “Traffic Flow Interruption Factors.”)

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview, the police report, and researcher on-scene investigation. Secondary data sources include interviews with other vehicle occupants, witnesses, other drivers, and surrogate interviews with family members/friends.

Cross Reference: Related to Environment.FlowRestrictions (1 “Work zone”).

Variable Name: ConstructionZone

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Emergency Vehicle Approaching

Definition: This variable establishes whether or not traffic flow at the crash site is interrupted as a result of an emergency vehicle approaching from either direction. (This variable was originally an attribute choice under the variable “Traffic Flow Interruption Factors.”)

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the police report. Secondary data sources include interviews with other vehicle occupants, witnesses, other drivers, and surrogate interviews with family members/friends.

Variable Name: EmergencyVehicle

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Rush Hour Congestion

Definition: This variable establishes whether or not traffic flow at the crash site is interrupted as a result of rush hour traffic congestion. (This variable was originally an attribute choice under the variable “Traffic Flow Interruption Factors.”)

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview, the police report, and researcher on-scene investigation. Secondary data sources include interviews with other vehicle occupants, witnesses, other drivers, and surrogate interviews with family members/friends.

Cross Reference: Related to Environment.FlowRestriction (4 “Congestion”).

Variable Name: RushHour

Variable Definitions and Codes - FactorAssessment Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Other Traffic Flow Interruption

Definition: This variable establishes whether or not traffic flow at the crash site is interrupted as a result of a factor not described in the other traffic flow variables. (This variable was originally an attribute choice under the variable “Traffic Flow Interruption Factors” and was the “Other (specify):” attribute choice.)

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview, the police report, and researcher on-scene investigation. Secondary data sources include interviews with other vehicle occupants, witnesses, other drivers, and surrogate interviews with family members/friends.

Variable Name: OtherTraffic

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Other Traffic Flow Interruption – Specify

Definition: This variable documents the “specify” text that was included where the “Other Traffic Flow Interruption” variable (above) was coded as being present for this driver.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview, the police report, and researcher on-scene investigation. Secondary data sources include interviews with other vehicle occupants, witnesses, other drivers, and surrogate interviews with family members/friends.

Variable Name: OtherTrafficSpecify

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Text

Vehicle Defect Count

Definition: This variable documents the total number of vehicle condition-related factors coded to this vehicle.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher vehicle inspection, the Level 1 vehicle inspection results, the police report, and the driver interview. Secondary data sources include the carrier interview, interviews with other vehicle occupants, witnesses, and other vehicle drivers.

Cross Reference: Computed from the following variables from the FactorAssessment data set: LoadObstructedView, DesignedObstructedView, OtherViewObstruction, TireFailure, BrakeFailure, TransmissionFailure, EngineProblem, OtherDefect, TireDeficiency,

Variable Definitions and Codes - FactorAssessment Data Set

BrakesOutOfAdjustment, BrakesInoperative, BrakesSystemDeficiency, VehicleOverweight, VehicleLightingDeficiency, CargoLoadSecurement, SuspensionFrameDeficiency, TowingUnitProblem, ReflectiveTapeMissingObscured, FuelSystemProblem, ExhaustLeak, SteeringWheelProblem. Elaborates on Overview.VehicleState.

Variable Name: VehicleDefectCount

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-6	Count of vehicle defects present
7	No driver present
99	Unknown

View Obstruction – Related To Load

Definition: This variable establishes whether or not the driver experiences a view obstruction that is related to the vehicle's load. Typically in this circumstance, the obstruction is related to oversize cargo. Less frequently occurring however, is the circumstance where the obstruction is related to improper loading of the cargo. Both of these situations are included in this designation. (This variable was originally an attribute choice under the variable "Vehicle Condition Related Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher vehicle inspection, the Level 1 vehicle inspection results, the police report, and the driver interview. Secondary data sources include the carrier interview, interviews with other vehicle occupants, witnesses, and other vehicle drivers.

Variable Name: LoadObstructedView

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

View Obstruction – Related To Vehicle Design

Definition: This variable establishes whether or not the driver experiences a view obstruction that is related to vehicle design (e.g. view blocked by upper A-pillar). (This variable was originally an attribute choice under the variable "Vehicle Condition Related Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher vehicle inspection, the Level 1 vehicle inspection results, the police report, and the driver interview. Secondary data sources include the carrier interview, interviews with other vehicle occupants, witnesses, and other vehicle drivers.

Variable Name: DesignedObstructedView

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Definitions and Codes - FactorAssessment Data Set

View Obstruction - Other

Definition: This variable establishes whether or not the driver experiences a view obstruction that is related to a factor not described in the other view obstruction variables. (This variable was originally an attribute choice under the variable "Vehicle Condition Related Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher vehicle inspection, the Level 1 vehicle inspection results, the police report, and the driver interview. Secondary data sources include the carrier interview, interviews with other vehicle occupants, witnesses, and other vehicle drivers.

Variable Name: OtherViewObstruction

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Tire Malfunction

Definition: This variable establishes whether or not the vehicle experiences a tire malfunction (e.g. blowout, airout, etc.) during the precrash phase. (This variable was originally an attribute choice under the variable "Vehicle Condition Related Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher vehicle inspection, the Level 1 vehicle inspection results, the police report, and the driver interview. Secondary data sources include the carrier interview, interviews with other vehicle occupants, witnesses, and other vehicle drivers.

Variable Name: TireFailure

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Braking System Malfunction

Definition: This variable establishes whether or not the vehicle experiences a braking system malfunction during the precrash phase. NOTE: Degraded braking performance (i.e. out-of-adjustment) is coded under the "Brakes Out-Of-Adjustment" variable. (This variable was originally an attribute choice under the variable "Vehicle Condition Related Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher vehicle inspection, the Level 1 vehicle inspection results, the police report, and the driver interview. Secondary data sources include the carrier interview, interviews with other vehicle occupants, witnesses, and other vehicle drivers.

Variable Name: BrakeFailure

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Definitions and Codes - FactorAssessment Data Set

Transmission Malfunction

Definition: This variable establishes whether or not the vehicle experiences a transmission malfunction during the precrash phase. (This variable was originally an attribute choice under the variable “Vehicle Condition Related Factors.”)

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher vehicle inspection, the Level 1 vehicle inspection results, the police report, and the driver interview. Secondary data sources include the carrier interview, interviews with other vehicle occupants, witnesses, and other vehicle drivers.

Variable Name: TransmissionFailure

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Engine Problem

Definition: This variable establishes whether or not the vehicle experiences an engine-related problem during the precrash phase. Examples of engine-related problems include stalling, missing, and throttle problems. (This variable was originally an attribute choice under the variable “Vehicle Condition Related Factors.”)

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher vehicle inspection, the Level 1 vehicle inspection results, the police report, and the driver interview. Secondary data sources include the carrier interview, interviews with other vehicle occupants, witnesses, and other vehicle drivers.

Variable Name: EngineProblem

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Other Vehicle Condition

Definition: This variable establishes whether or not the vehicle experiences a problem/exhibits a condition during the precrash phase that is relevant to crash occurrence, but is not described by other vehicle condition variables. (This variable was originally an attribute choice under the variable “Vehicle Condition Related Factors” and was the “Other (specify):” attribute choice.)

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher vehicle inspection, the Level 1 vehicle inspection results, the police report, and the driver interview. Secondary data sources include the carrier interview, interviews with other vehicle occupants, witnesses, and other vehicle drivers.

Variable Definitions and Codes - FactorAssessment Data Set

Variable Name: OtherDefect

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Other Vehicle Condition – Specify

Definition: This variable documents the “specify” text that was included where the “Other Vehicle Condition” variable (above) was coded as being present for this driver.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher vehicle inspection, the Level 1 vehicle inspection results, the police report, and the driver interview. Secondary data sources include the carrier interview, interviews with other vehicle occupants, witnesses, and other vehicle drivers.

Variable Name: OtherDefectSpecify

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Text

Tire Deficiency

Definition: This variable establishes whether or not the vehicle had a tire deficiency prior to the crash event (e.g. low tread depth on one or more tires).

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher vehicle inspection, the Level 1 vehicle inspection results, the police report, and the driver interview. Secondary data sources include the carrier interview, interviews with other vehicle occupants, witnesses, and other vehicle drivers.

Cross Reference: Related to IntvwDrCondition.Tires, values will differ in part due to Interview vs. Researcher determined values.

Variable Name: TireDeficiency

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Brakes Out-Of-Adjustment

Definition: This variable establishes whether or not any of the vehicle’s brakes were out-of-adjustment during the precrash phase. This variable applies only to heavy trucks.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the Level 1 vehicle inspection results, the police report, and the driver interview.

Variable Name: BrakesOutOfAdjustment

Variable Definitions and Codes - FactorAssessment Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Brakes Inoperative

Definition: This variable establishes whether or not any of the vehicle's brakes were inoperative during the precrash phase. This variable applies only to heavy trucks.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher vehicle inspection, the Level 1 vehicle inspection results, the police report, and the driver interview. Secondary data sources include the carrier interview, interviews with other vehicle occupants, witnesses, and other vehicle drivers.

Variable Name: BrakesInoperative

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Brake System Deficiency

Definition: This variable establishes whether or not there were any braking system deficiencies prior to the crash that are not described in the other braking variables.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher vehicle inspection, the Level 1 vehicle inspection results, the police report, and the driver interview. Secondary data sources include the carrier interview, interviews with other vehicle occupants, witnesses, and other vehicle drivers.

Cross Reference: Related to IntwDrCondition.Brakes, values will differ in part due to Interview vs. Researcher determined values.

Variable Name: BrakesSystemDeficiency

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Vehicle Overweight

Definition: This variable establishes whether or not the vehicle was overweight prior to the precrash phase. This variable applies to heavy trucks only, and has to do with local ordinances as they relate to a truck's GVWR (gross vehicle weight rating).

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher vehicle inspection, the Level 1 vehicle inspection results, the police report, and the driver interview.

Variable Definitions and Codes - FactorAssessment Data Set

Cross Reference: Related to the sum of TruckExterior.CMDBCargoWeight and TruckExterior.TEXEmptyWeight being greater than TruckExterior.TotalGVWR. Related to sum of TruckUnits.TUNEmptyWeight and TruckUnits.TUNCargoWeight being greater than TruckUnits.GVWR. The TruckUnits data set looks at each unit individually whereas TruckExterior looks at the truck as a whole.

Variable Name: VehicleOverweight

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Vehicle Lighting Deficiency

Definition: This variable establishes whether or not the vehicle had a lighting system deficiency during the precrash phase (e.g. a turn signal or headlight out).

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher vehicle inspection, the Level 1 vehicle inspection results, the police report, and the driver interview. Secondary data sources include the carrier interview, interviews with other vehicle occupants, witnesses, and other vehicle drivers.

Cross Reference: Related to IntvwDrCondition.Lights, values will differ in part due to Interview vs. Researcher determined values.

Variable Name: VehicleLightingDeficiency

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Cargo/Load Securement Related Problem

Definition: This variable establishes whether or not there were any vehicle problems related to load securement or to the cargo itself prior to the crash event.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher vehicle inspection, the Level 1 vehicle inspection results, the police report, and the driver interview. Secondary data sources include the carrier interview, interviews with other vehicle occupants, witnesses, and other vehicle drivers.

Variable Name: CargoLoadSecurement

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Definitions and Codes - FactorAssessment Data Set

Suspension/Frame Deficiency

Definition: This variable establishes whether or not the vehicle had a suspension or frame deficiency prior to the crash event.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher vehicle inspection, the Level 1 vehicle inspection results, the police report, and the driver interview. Secondary data sources include the carrier interview, interviews with other vehicle occupants, witnesses, and other vehicle drivers.

Cross Reference: Related to IntvwDrCondition.Suspension, values will differ in part due to Interview vs. Researcher determined values.

Variable Name: SuspensionFrameDeficiency

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Towing Unit Problem

Definition: This variable establishes whether or not there was a problem with the towing unit of an articulated vehicle (this variable usually applies only to trucks).

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher vehicle inspection, the Level 1 vehicle inspection results, the police report, and the driver interview. Secondary data sources include the carrier interview, interviews with other vehicle occupants, witnesses, and other vehicle drivers.

Variable Name: TowingUnitProblem

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Reflective Tape Missing/Obscured

Definition: This variable establishes whether or not the vehicle's reflective tape was missing or obscured in some manner. This variable only applies to heavy trucks and has to do with FMCSA reflective tape requirements.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher vehicle inspection, the Level 1 vehicle inspection results, and the police report.

Cross Reference: Related to a combination of the following variables in the TruckUnits data set: RearTapeCondition, SideTapeCondition, ReflectTapeType, UnderrideTapePeel, RearTapePeel, SideTapePeel.

Variable Name: ReflectiveTapeMissingObscured

Variable Definitions and Codes - FactorAssessment Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Fuel System Problem

Definition: This variable establishes whether or not the vehicle experienced a problem that is related to its fuel system during the precrash phase.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher vehicle inspection, the Level 1 vehicle inspection results, the police report, and the driver interview. Secondary data sources include the carrier interview, interviews with other vehicle occupants, witnesses, and other vehicle drivers.

Variable Name: FuelSystemProblem

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Exhaust Leak

Definition: This variable establishes whether or not the vehicle experienced an exhaust leak during the precrash phase.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher vehicle inspection, the Level 1 vehicle inspection results, the police report, and the driver interview. Secondary data sources include the carrier interview, interviews with other vehicle occupants, witnesses, and other vehicle drivers.

Variable Name: ExhaustLeak

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Steering Wheel Problem

Definition: This variable establishes whether or not the vehicle experienced a steering-related problem during the precrash phase.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher vehicle inspection, the Level 1 vehicle inspection results, the police report, and the driver interview. Secondary data sources include the carrier interview and interviews with other vehicle occupants.

Cross Reference: Related to IntvwDrCondition.Steering, values will differ in part due to Interview vs. Researcher determined values.

Variable Definitions and Codes - FactorAssessment Data Set

Variable Name: SteeringWheelProblem

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Median Width

Definition: This variable documents the measured median width when a roadway geometry factor has been identified involving a crossover. This value is provided when the "Roadway Geometry" variable is coded as being present.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the scaled schematic, scene measurement log, scene photographs, General Vehicle Form, and the police report. Secondary sources include the driver interviews and interviews with other vehicle occupants and witnesses.

Variable Name: MedianWidth

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value (m)
8887.0	Not applicable
9999999999.0	Unknown

Radius Of Curvature

Definition: This variable documents the measured radius of curvature for the roadway on which the crash occurred. This value is specified when the "Roadway Geometry (Curve)" variable is coded as being present.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the scaled schematic, scene measurement log, scene photographs, General Vehicle Form, and the police report. Secondary sources include the driver interviews and interviews with other vehicle occupants and witnesses.

Variable Name: AFTCurveRadius

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value (m)
8887.0	Not applicable
9999	Unknown

Sight Distance

Definition: This variable documents the measured sight distance when the "Road Sight Distance Insufficient" variable is coded as being present.

Variable Definitions and Codes - FactorAssessment Data Set

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the scaled schematic, scene measurement log, scene photographs, General Vehicle Form, and the police report. Secondary sources include the driver interviews and interviews with other vehicle occupants and witnesses.

Variable Name: SightDistance

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value (m)
8887.0	Not applicable
9999	Unknown

AASHTO Recommended Sight Distance

Definition: This variable documents the AASHTO recommended sight distance for this vehicle in the precrash phase. This value is specified when the "Road Sight Distance Insufficient" variable is coded as being present.

Source: Determined by the Case Reviewer using all available information inputs. The primary data source is the AASHTO (American Association of State Highway and Transportation Officials) document "A Policy on Geometric Design of Highways and Streets (4th edition)," used in conjunction with the scaled schematic, scene measurement log, scene photographs, General Vehicle Form, and the police report. Secondary sources include the driver interviews and interviews with other vehicle occupants and witnesses.

Variable Name: AASHTORecommended

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value (m)
8887.0	Not applicable
9999	Unknown

Roadway Factor Count

Definition: This variable documents the number of roadway-related factors that were coded for this vehicle.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the scaled schematic, scene measurement log, scene photographs, General Vehicle Form, and the police report. Secondary sources include the driver interviews and interviews with other vehicle occupants and witnesses.

Cross Reference: Computed from the following variables in the FactorAssessment data set: SignsMissing, ObjectObscured, VehicleObscured, RoadGeometry, InsufficientSight, BadLaneMarkings, NarrowShoulders, NarrowRoad, RampSpeed, PoorCondition, SlickSurface, UnderWater, WashedOut, OtherProblem. Elaborates on Overview.Roadway.

Variable Name: RoadwayFactorCount

Variable Definitions and Codes - FactorAssessment Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-6	Count of roadway factors present
77	No driver present
99	Unknown

Traffic Signs/Signals Missing

Definition: This variable documents whether or not traffic signs/signals have been removed from the designated location and are not physically present. The removal can be associated with either a repair function or vandalism. (This variable was originally an attribute choice under the variable "Roadway Related Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the scaled schematic, scene measurement log, scene photographs, General Vehicle Form, and the police report. Secondary sources include the driver interviews and interviews with other vehicle occupants and witnesses.

Variable Name: SignsMissing

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Roadway View Obstruction

Definition: This variable documents whether or not there is a view obstruction associated with roadway design including such added devices as signal boxes, signal light support poles, guardrails, and crash cushions. (This variable was originally an attribute choice under the variable "Roadway Related Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the scaled schematic, scene measurement log, scene photographs, General Vehicle Form, and the police report. Secondary sources include the driver interviews and interviews with other vehicle occupants and witnesses.

Variable Name: ObjectObscured

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

View Obstructed By Other Vehicle

Definition: This variable documents whether or not the driver's view is obstructed by an intervening vehicle. (This variable was originally an attribute choice under the variable "Roadway Related Factors.")

Variable Definitions and Codes - FactorAssessment Data Set

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the scaled schematic, scene measurement log, scene photographs, General Vehicle Form, and the police report. Secondary sources include the driver interviews and interviews with other vehicle occupants and witnesses.

Variable Name: VehicleObscured

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Road Geometry

Definition: This variable documents whether or not roadway geometry, usually in the form of a curve, is relevant to the crash. (This variable was originally an attribute choice under the variable "Roadway Related Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the scaled schematic, scene measurement log, scene photographs, General Vehicle Form, and the police report. Secondary sources include the driver interviews and interviews with other vehicle occupants and witnesses.

Variable Name: RoadGeometry

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Road Sight Distance Insufficient

Definition: This variable documents whether or not the measured sight distance on this roadway does not meet the standard as specified in AASHTO. (This variable was originally an attribute choice under the variable "Roadway Related Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the scaled schematic, scene measurement log, scene photographs, General Vehicle Form, and the police report. Secondary sources include the driver interviews and interviews with other vehicle occupants and witnesses.

Variable Name: InsufficientSight

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Definitions and Codes - FactorAssessment Data Set

Lane Delineation Problem

Definition: This variable documents whether or not the driver encounters difficulty as a result of lane delineation. The delineation markings in this circumstance may not be present, may be worn (i.e. reduced visibility), or may be covered in some manner (e.g. gravel, debris, etc.). (This variable was originally an attribute choice under the variable "Roadway Related Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the scaled schematic, scene measurement log, scene photographs, General Vehicle Form, and the police report. Secondary sources include the driver interviews and interviews with other vehicle occupants and witnesses.

Variable Name: BadLaneMarkings

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Narrow Shoulders

Definition: This variable documents whether or not the driver experiences a problem as a result of the shoulder, which is not sufficiently wide. While circumstances will vary depending on location, shoulder width should be less than 1.5 meters to qualify for this designation. (This variable was originally an attribute choice under the variable "Roadway Related Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the scaled schematic, scene measurement log, scene photographs, General Vehicle Form, and the police report. Secondary sources include the driver interviews and interviews with other vehicle occupants and witnesses.

Variable Name: NarrowShoulders

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Narrow Road

Definition: This variable documents whether or not the driver experiences a problem as a result of insufficient roadway width. While circumstances will vary depending on the type of roadway, two-lane roadways should be less than 20 feet (6.1 meters) in width to qualify for this designation. (This variable was originally an attribute choice under the variable "Roadway Related Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the scaled schematic, scene measurement log, scene photographs, General Vehicle Form, and the police report. Secondary sources include the driver interviews and interviews with other vehicle occupants and witnesses.

Variable Name: NarrowRoad

Variable Definitions and Codes - FactorAssessment Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Ramp Speed

Definition: This variable documents whether or not the posted ramp entrance/exit speed is inappropriate. This includes circumstances where the posted speed is adequate for one class of vehicle, but is too high for another class of vehicle (e.g. adequate for automobiles, but too high for large trucks). (This variable was originally an attribute choice under the variable "Roadway Related Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the scaled schematic, scene measurement log, scene photographs, General Vehicle Form, and the police report. Secondary sources include the driver interviews and interviews with other vehicle occupants and witnesses.

Variable Name: RampSpeed

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Roadway Condition

Definition: This variable documents whether or not the driver encounters a problem as a result of a roadway maintenance condition. Specific areas of concern include potholes, deteriorated/broken road edges, washboard areas, and depressions where a localized area of the surface has sunk several inches or more. (This variable was originally an attribute choice under the variable "Roadway Related Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the scaled schematic, scene measurement log, scene photographs, General Vehicle Form, and the police report. Secondary sources include the driver interviews and interviews with other vehicle occupants and witnesses.

Variable Name: PoorCondition

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Slick Surface

Definition: This variable documents whether or not the driver encounters a low friction surface most commonly associated with an icy condition. There are several other circumstances that can be associated with a pronounced reduction of friction values. These include loose gravel/sand spread over a paved surface and oil build-ups. Typically, wet surfaces are not included in this

Variable Definitions and Codes - FactorAssessment Data Set

designation unless moisture adds to an existing condition such as an oil build-up. (This variable was originally an attribute choice under the variable "Roadway Related Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the scaled schematic, scene measurement log, scene photographs, General Vehicle Form, and the police report. Secondary sources include the driver interviews and interviews with other vehicle occupants and witnesses.

Variable Name: SlickSurface

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Road Under Water

Definition: This variable documents whether or not one or more travel lane is completely covered with water. (This variable was originally an attribute choice under the variable "Roadway Related Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the scaled schematic, scene measurement log, scene photographs, General Vehicle Form, and the police report. Secondary sources include the driver interviews and interviews with other vehicle occupants and witnesses.

Cross Reference: Related to Environment.FlowRestrictions (2 "Roadway Immersed").

Variable Name: UnderWater

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Road Washed Out

Definition: This variable documents whether or not a portion of the roadway collapses/washes away as a result of exposure to running water. (This variable was originally an attribute choice under the variable "Roadway Related Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the scaled schematic, scene measurement log, scene photographs, General Vehicle Form, and the police report. Secondary sources include the driver interviews and interviews with other vehicle occupants and witnesses.

Variable Name: WashedOut

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Definitions and Codes - FactorAssessment Data Set

Other Roadway Related Factor

Definition: This variable documents whether or not the driver encounters a roadway problem that is not described by the other roadway-related variables. (This variable was originally an attribute choice under the variable “Roadway Related Factors” and was the “Other (specify):” attribute choice.)

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the scaled schematic, scene measurement log, scene photographs, General Vehicle Form, and the police report. Secondary sources include the driver interviews and interviews with other vehicle occupants and witnesses.

Variable Name: OtherProblem

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Other Roadway Related Factor – Specify

Definition: This variable documents the “specify” text that was included where the “Other Roadway Related Factor” variable (above) was coded as being present for this driver.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the scaled schematic, scene measurement log, scene photographs, General Vehicle Form, and the police report. Secondary sources include the driver interviews and interviews with other vehicle occupants and witnesses.

Variable Name: OtherProblemSpecify

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Text

Weather Factors Count

Definition: This variable documents the number of weather related factors that were coded for this vehicle.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the police report and local weather information provided by the NASS Researcher. Secondary data sources include driver interviews and interviews with other vehicle occupants, witnesses, and other drivers.

Cross Reference: Computed from the following variables from the FactorAssessment data set: AFTRain, AFTSnow, AFTFog, WindGust, AFTHail, AFTSleet, OtherWeather. Elaborates on Overview.Weather.

Variable Name: WeatherCount

Variable Definitions and Codes - FactorAssessment Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-6	Count of weather factors present
7	No driver present
9	Unknown

Rain

Definition: This variable establishes whether or not it was raining at the time of the crash. (This variable was originally an attribute choice under the variable "Weather Related Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the police report and local weather information provided by the NASS Researcher. Secondary data sources include driver interviews and interviews with other vehicle occupants, witnesses, and other drivers.

Variable Name: AFTRain

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Snow

Definition: This variable establishes whether or not it was snowing at the time of the crash. (This variable was originally an attribute choice under the variable "Weather Related Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the police report and local weather information provided by the NASS Researcher. Secondary data sources include driver interviews and interviews with other vehicle occupants, witnesses, and other drivers.

Variable Name: AFTSnow

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Fog

Definition: This variable establishes whether or not the driver was operating in fog at the time of the crash. (This variable was originally an attribute choice under the variable "Weather Related Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the police report and local weather information provided by the NASS Researcher. Secondary data sources include driver interviews and interviews with other vehicle occupants, witnesses, and other drivers.

Variable Definitions and Codes - FactorAssessment Data Set

Variable Name: AFTFog

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Wind Gust

Definition: This variable establishes whether or not a wind gust occurs prior to the crash and has some relevance to the crash. (This variable was originally an attribute choice under the variable "Weather Related Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the police report and local weather information provided by the NASS Researcher. Secondary data sources include driver interviews and interviews with other vehicle occupants, witnesses, and other drivers.

Variable Name: WindGust

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Hail

Definition: This variable establishes whether or not the driver was operating in hail at the time of the crash. (This variable was originally an attribute choice under the variable "Weather Related Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the police report and local weather information provided by the NASS Researcher. Secondary data sources include driver interviews and interviews with other vehicle occupants, witnesses, and other drivers.

Cross Reference: Identical to Environment.ENVHail.

Variable Name: AFTHail

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Sleet

Definition: This variable establishes whether or not the driver was operating in sleet at the time of the crash. (This variable was originally an attribute choice under the variable "Weather Related Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the police report and local weather information provided by the NASS

Variable Definitions and Codes - FactorAssessment Data Set

Researcher. Secondary data sources include driver interviews and interviews with other vehicle occupants, witnesses, and other drivers.

Variable Name: AFTSleet

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Other Weather Related Factor

Definition: This variable establishes whether or not there is a relevant weather related factor that is not described in the other weather variables. (This variable was originally an attribute choice under the variable “Weather Related Factors” and was the “Other (specify):” attribute choice.)

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the police report and local weather information provided by the NASS Researcher. Secondary data sources include driver interviews and interviews with other vehicle occupants, witnesses, and other drivers.

Variable Name: OtherWeather

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Other Weather Related Factor – Specify

Definition: This variable documents the “specify” text that was included where the “Other Weather Related Factor” variable (above) was coded as being present for this driver.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the police report and local weather information provided by the NASS Researcher. Secondary data sources include driver interviews and interviews with other vehicle occupants, witnesses, and other drivers.

Variable Name: OtherWeatherSpecify

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Text

Environmental Factor Count

Definition: This variable documents the number of environmental factors that were coded for this vehicle.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the police report and local weather information provided by the NASS

Variable Definitions and Codes - FactorAssessment Data Set

Researcher. Secondary data sources include driver interviews and interviews with other vehicle occupants, witnesses, and other drivers. (A derived variable)

Cross Reference: Computed from the following variables in the FactorAssessment data set: Glare, BlowingDebris, Smoke, OtherChangeSpecify. Elaborates on Overview.OVEEnvironment.

Variable Name: EnvironmentCount

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-6	Count of environment attributes present
7	No driver present
9	Unknown

Glare

Definition: This variable establishes whether or not glare in some form is relevant to the crash for this driver. Examples include headlight glare, sun glare, and reflected glare (i.e. sun reflecting off a windshield or other metal component). (This variable was originally an attribute choice under the variable "Other Environmental Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher on-scene investigation, the police report, and local weather information provided by the NASS Researcher. Secondary data sources include driver interviews and interviews with other vehicle occupants, witnesses, and other drivers.

Variable Name: Glare

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Blowing Debris

Definition: This variable establishes whether or not this driver is exposed to some form of blowing debris. Examples include paper, cardboard boxes, and tree limbs. (This variable was originally an attribute choice under the variable "Other Environmental Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher on-scene investigation, the police report, and local weather information provided by the NASS Researcher. Secondary data sources include driver interviews and interviews with other vehicle occupants, witnesses, and other drivers.

Variable Name: BlowingDebris

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Definitions and Codes - FactorAssessment Data Set

Smoke

Definition: This variable establishes whether or not the driver's view is obscured by the presence of smoke (e.g. smoke from a grass fire, house fire, or forest fire). (This variable was originally an attribute choice under the variable "Other Environmental Factors.")

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher on-scene investigation, the police report, and local weather information provided by the NASS Researcher. Secondary data sources include driver interviews and interviews with other vehicle occupants, witnesses, and other drivers.

Variable Name: Smoke

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

No Driver Present

Definition: This variable establishes whether or not there was no driver in the driver's seated position at the time of the crash. (This variable was originally an attribute choice under the variable "Weather Related Factors.")

Source: Determined by Case Reviewer using all available inputs.

Variable Name: AFTNoDriver

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Other Sudden Change In Ambience

Definition: This variable establishes whether or not the driver experiences a problem as a result of a sudden change in ambience. (This variable was originally an attribute choice under the variable "Other Environmental Factors" and was the "Other Sudden Change In Ambience (specify):" attribute choice.)

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher on-scene investigation, the police report, and local weather information provided by the NASS Researcher. Secondary data sources include driver interviews and interviews with other vehicle occupants, witnesses, and other drivers.

Variable Name: OtherChangeSpecify

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Definitions and Codes - GeneralVehicle Data Set

GeneralVehicle Data Set

The GeneralVehicle data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID and VehicleNumber uniquely identify each record in this data set and should be used to merge the GeneralVehicle data set with other vehicle level data sets. This data set also contains the following variables:

Vehicle Make

Definition: This vehicle identifies the vehicle make for this vehicle.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include police report, interview, and other vehicle photographs.

Cross Reference: Identical to Overview.OVEMake. Congruent with GeneralVehicle.VINMake, values will differ due to VIN vs. Researcher determined values.

Variable Name: GVEMake

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	AMC
2	JEEP / KAISER-JEEP
3	AM GENERAL
6	CHRYSLER
7	DODGE
8	IMPERIAL
9	PLYMOUTH
10	EAGLE
12	FORD
13	LINCOLN
14	MERCURY
18	BUICK
19	CADILLAC
20	CHEVROLET
21	OLDSMOBILE
22	PONTIAC
23	GMC
24	SATURN
25	GRUMMAN
29	OTHER DOMESTIC MANUFACTURER (light vehicles)
30	VOLKSWAGEN
31	ALFA ROMEO
32	AUDI
33	AUSTIN / AUSTIN HEALEY
34	BMW
35	NISSAN / DATSUN
36	FIAT
37	HONDA
38	ISUZU
39	JAGUAR

Variable Definitions and Codes - GeneralVehicle Data Set

40	LANCIA
41	MAZDA
42	MERCEDES BENZ
43	MG
44	PEUGEOT
45	PORSCHE
46	RENAULT/AMC
47	SAAB
48	SUBARU
49	TOYOTA
50	TRIUMPH
51	VOLVO
52	MINI
53	SUZUKI
54	ACURA
55	HYUNDAI
56	MERKUR
57	YUGO
58	INFINITI
59	LEXUS
60	DAIHATSU
61	STERLING
62	LAND ROVER
63	KIA
64	DAEWOO
65	MINI
69	OTHER FOREIGN MANUFACTURER (light vehicles)
70	BSA
71	DUCATI
72	HARLEY-DAVIDSON
73	KAWASAKI
74	MOTO-GUZZI
75	NORTON
76	YAMAHA
78	OTHER MAKE MOPED
79	OTHER MAKE MOTORED CYCLE
80	BROCKWAY
81	DIAMOND REO/REO
82	FREIGHTLINER/WHITE
83	FWD
84	INTERNATIONAL HARVESTER/NAVISTAR
85	KENWORTH
86	MACK
87	PETERBILT
88	IVECO/MAGIRUS
98	OTHER MAKE (med/heavy truck/bus or "other")
99	UNKNOWN MANUFACTURER

Variable Definitions and Codes - GeneralVehicle Data Set

Vehicle Model (listed with Vehicle Make)

Definition: This variable identifies the vehicle model for this vehicle.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include police report, interview, and other vehicle photographs.

Cross Reference: Identical to Overview.OVEModel. Congruent with GeneralVehicle.VINModel, values will differ due to VIN vs. Researcher determined values.

Variable Name: GVEModel (with GVEMake)

Attribute Codes

<u>MAKE</u>		<u>MODEL</u>	
<u>Code</u>	<u>Meaning</u>	<u>Code</u>	<u>Meaning</u>
1	AMC	1	RAMBLER/AMERICAN
1	AMC	2	REBEL/MATADOR
1	AMC	3	AMBASSADOR
1	AMC	4	PACER
1	AMC	5	AMX
1	AMC	6	JAVELIN
1	AMC	7	HORNET/CONCORD
1	AMC	8	SPIRIT/GREMLIN
1	AMC	9	EAGLE
1	AMC	10	EAGLE SX-4
1	AMC	398	OTHER AUTOMOBILE
1	AMC	399	UNKNOWN AUTOMOBILE
1	AMC	999	UNKNOWN VEHICLE
2	JEEP / KAISER-JEEP	401	CJ-2/CJ-3/CJ-4
2	JEEP / KAISER-JEEP	402	CJ-5/CJ-6/CH-7/CH-8
2	JEEP / KAISER-JEEP	403	YJ-SERIES
2	JEEP / KAISER-JEEP	404	CHEROKEE (1984 ON)
2	JEEP / KAISER-JEEP	405	LIBERTY
2	JEEP / KAISER-JEEP	421	CHEROKEE (1963 - 1983)
2	JEEP / KAISER-JEEP	431	GRAND WAGONEER
2	JEEP / KAISER-JEEP	481	PICKUP
2	JEEP / KAISER-JEEP	482	COMANCHE
2	JEEP / KAISER-JEEP	498	OTHER LIGHT TRUCK
2	JEEP / KAISER-JEEP	499	UNKNOWN LIGHT TRUCK
2	JEEP / KAISER-JEEP	999	UNKNOWN VEHICLE
3	AM GENERAL	401	DISPATCHER
3	AM GENERAL	421	HUMMER
3	AM GENERAL	466	DISPATCHER
3	AM GENERAL	498	OTHER LIGHT TRUCK
3	AM GENERAL	499	UNKNOWN LIGHT TRUCK
3	AM GENERAL	884	MEDIUM/HEAVY TRUCK
3	AM GENERAL	898	OTHER MEDIUM/HEAVY TRUCK
3	AM GENERAL	899	UNKNOWN MEDIUM/HEAVY TRUCK
3	AM GENERAL	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
3	AM GENERAL	983	BUS - REAR ENGINE/FLAT FRONT
3	AM GENERAL	988	OTHER BUS
3	AM GENERAL	989	UNKNOWN BUS TYPE
3	AM GENERAL	999	UNKNOWN VEHICLE
6	CHRYSLER	9	CORDOBA
6	CHRYSLER	10	NEW YORKER FIFTH AVENUE ('89)
6	CHRYSLER	10	NEWPORT
6	CHRYSLER	13	RAMPAGE 2.2 (CAR BASED PICKUP)
6	CHRYSLER	14	RWD ONLY-NEW YORKER/NEWPORT/5TH AVENUE/IMPERIAL

Variable Definitions and Codes - GeneralVehicle Data Set

6	CHRYSLER	14	NEW YORKER ('83-'90)
6	CHRYSLER	14	NEW YORKER SALON
6	CHRYSLER	14	NEW YORKER/E CLASS/IMPERIAL/5TH AVENUE
6	CHRYSLER	15	LASER
6	CHRYSLER	16	LEBARON
6	CHRYSLER	17	LEBARON GTS/GTC
6	CHRYSLER	18	INTREPID (CANADIAN)
6	CHRYSLER	19	NEON (EXPORT)
6	CHRYSLER	31	TC (MASERATI SPORT)
6	CHRYSLER	35	CONQUEST
6	CHRYSLER	41	CONCORDE
6	CHRYSLER	42	LHS
6	CHRYSLER	43	SEBRING
6	CHRYSLER	44	CIRRUS
6	CHRYSLER	51	300M
6	CHRYSLER	52	PT CRUISER
6	CHRYSLER	53	PROWLER
6	CHRYSLER	54	PACIFICA
6	CHRYSLER	55	CROSSFIRE
6	CHRYSLER	398	OTHER AUTOMOBILE
6	CHRYSLER	399	UNKNOWN AUTOMOBILE
6	CHRYSLER	441	TOWN AND COUNTRY
6	CHRYSLER	442	VOYAGER
6	CHRYSLER	498	OTHER LIGHT TRUCK
6	CHRYSLER	499	UNKNOWN LIGHT TRUCK
6	CHRYSLER	999	UNKNOWN VEHICLE
7	DODGE	1	DART
7	DODGE	2	CORONET/CHARGER/MAGNUM
7	DODGE	3	POLARA/MONACO/ROYAL MONACO
7	DODGE	4	VIPER
7	DODGE	5	CHALLENGER
7	DODGE	6	ASPEN
7	DODGE	7	DIPLOMAT
7	DODGE	8	OMNI/CHARGER
7	DODGE	9	MIRADA
7	DODGE	10	ST REGIS
7	DODGE	11	ARIES (K)
7	DODGE	12	400
7	DODGE	13	RAMPAGE 2.2, GT, SPORT
7	DODGE	14	600
7	DODGE	15	DAYTONA
7	DODGE	16	LANCER
7	DODGE	17	SHADOW
7	DODGE	18	DYNASTY
7	DODGE	19	SPIRIT
7	DODGE	20	NEON
7	DODGE	33	CHALLENGER (ALL IMPORTED)
7	DODGE	34	COLT (EXCLUDES VISTA)
7	DODGE	35	CONQUEST
7	DODGE	39	STEALTH
7	DODGE	40	MONACO
7	DODGE	41	INTREPID
7	DODGE	42	AVENGER
7	DODGE	43	STRATUS
7	DODGE	398	OTHER AUTOMOBILE
7	DODGE	399	UNKNOWN AUTOMOBILE
7	DODGE	401	RAIDER
7	DODGE	421	RAMCHARGER
7	DODGE	422	DURANGO

Variable Definitions and Codes - GeneralVehicle Data Set

7	DODGE	441	VISTA
7	DODGE	442	CARAVAN
7	DODGE	461	B-SERIES VANS
7	DODGE	462	SPRINTER
7	DODGE	470	VAN DERIVATIVE
7	DODGE	471	D50, COLT P/U, RAM 50/RAM 100
7	DODGE	472	DAKOTA
7	DODGE	481	D, W-SERIES PICKUP, W100-W350
7	DODGE	482	RAM
7	DODGE	498	OTHER LIGHT TRUCK
7	DODGE	499	UNKNOWN LIGHT TRUCK
7	DODGE	881	MEDIUM/HEAVY: CBE
7	DODGE	882	MEDIUM/HEAVY: COE LOW ENGRY
7	DODGE	883	MEDIUM/HEAVY: COE HIGH ENTRY
7	DODGE	884	MEDIUM/HEAVY: UNKNOWN ENGINE LOCATION
7	DODGE	890	MEDIUM/HEAVY: COE ENTRY POSITION UNKNOWN
7	DODGE	898	OTHER MEDIUM/HEAVY TRUCK
7	DODGE	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
7	DODGE	899	UNKNOWN MEDIUM/HEAVY TRUCK
7	DODGE	981	MEDIUM BUS
7	DODGE	988	OTHER BUS
7	DODGE	989	UNKNOWN BUS TYPE
7	DODGE	998	OTHER VEHICLE
7	DODGE	999	UNKNOWN VEHICLE
8	IMPERIAL	10	IMPERIAL
8	IMPERIAL	398	OTHER AUTOMOBILE
8	IMPERIAL	399	UNKNOWN AUTOMOBILE
8	IMPERIAL	999	UNKNOWN VEHICLE
9	PLYMOUTH	1	VALIANT/DUSTER/SCAMP
9	PLYMOUTH	2	SATELLITE/BELVEDERE
9	PLYMOUTH	3	FURY
9	PLYMOUTH	4	GRAN FURY
9	PLYMOUTH	5	BARRACUDA
9	PLYMOUTH	6	VOLARE
9	PLYMOUTH	7	CARAVELLE
9	PLYMOUTH	8	HORIZON
9	PLYMOUTH	11	RELIANT (K)
9	PLYMOUTH	13	SCAMP (CAR BASED PICKUP)
9	PLYMOUTH	17	SUNDANCE
9	PLYMOUTH	19	ACCLAIM
9	PLYMOUTH	20	NEON
9	PLYMOUTH	31	CRICKET
9	PLYMOUTH	32	ARROW
9	PLYMOUTH	33	SAPPORO
9	PLYMOUTH	34	CHAMP/COLT (EXCLUDES VISTA)
9	PLYMOUTH	35	CONQUEST
9	PLYMOUTH	37	LASER
9	PLYMOUTH	38	BREEZE
9	PLYMOUTH	39	PROWLER
9	PLYMOUTH	398	OTHER AUTOMOBILE
9	PLYMOUTH	399	UNKNOWN AUTOMOBILE
9	PLYMOUTH	421	TRAILDUSTER
9	PLYMOUTH	441	COLT VISTA
9	PLYMOUTH	442	VOYAGER (MINIVAN)
9	PLYMOUTH	461	VAN-FULLSIZE (B-SERIES)
9	PLYMOUTH	471	ARROW PICKUP (FOREIGN)
9	PLYMOUTH	498	OTHER LIGHT TRUCK
9	PLYMOUTH	499	UNKNOWN LIGHT TRUCK

Variable Definitions and Codes - GeneralVehicle Data Set

9	PLYMOUTH	999	UNKNOWN VEHICLE
10	EAGLE	34	SUMMIT
10	EAGLE	37	TALON
10	EAGLE	40	PREMIER
10	EAGLE	41	VISION
10	EAGLE	44	MEDALLION
10	EAGLE	398	OTHER AUTOMOBILE
10	EAGLE	399	UNKNOWN AUTOMOBILE
10	EAGLE	441	SUMMIT WAGON
10	EAGLE	498	OTHER LIGHT TRUCK
10	EAGLE	499	UNKNOWN LIGHT TRUCK
10	EAGLE	999	UNKNOWN VEHICLE
12	FORD	1	FALCON
12	FORD	2	FAIRLANE
12	FORD	3	MUSTANG/MUSTANG II
12	FORD	4	THUNDERBIRD (ALL SIZES)
12	FORD	5	LTD II
12	FORD	6	LTD/CUSTOM/GALAXIE (ALL SIZES)
12	FORD	7	RANCHERO
12	FORD	8	MAVERICK
12	FORD	9	PINTO
12	FORD	10	TORINO/GRAN TORINO/ELITE
12	FORD	11	GRANADA
12	FORD	12	FAIRMONT
12	FORD	13	ESCORT/EXP
12	FORD	15	TEMPO
12	FORD	16	CROWN VICTORIA
12	FORD	17	TAURUS
12	FORD	18	PROBE
12	FORD	31	ENGLISH FORD
12	FORD	32	FIESTA
12	FORD	33	FESTIVA
12	FORD	34	LASER
12	FORD	35	CONTOUR
12	FORD	36	ASPIRE
12	FORD	37	FOCUS
12	FORD	38	GT
12	FORD	398	OTHER AUTOMOBILE
12	FORD	399	UNKNOWN AUTOMOBILE
12	FORD	401	EXPLORER/BRONCO ii/BRONCO (-77)
12	FORD	402	ESCAPE
12	FORD	421	BRONCO-FULLSIZE
12	FORD	422	EXPEDITION
12	FORD	431	EXCURSION
12	FORD	441	AEROSTAR
12	FORD	442	WINDSTAR
12	FORD	443	FREESTAR
12	FORD	461	E-SERIES VANS
12	FORD	470	VAN DERIVATIVE
12	FORD	471	RANGER
12	FORD	472	COURIER
12	FORD	473	SPORT TRAC
12	FORD	481	F-SERIES PICKUP
12	FORD	498	OTHER LIGHT TRUCK
12	FORD	499	UNKNOWN LIGHT TRUCK
12	FORD	880	F450/550 PICKUP >4536 GVWR
12	FORD	881	MEDIUM/HEAVY CBE
12	FORD	882	MEDIUM/HEAVY COE LOW ENGRY
12	FORD	883	MEDIUM/HEAVY COE HIGH ENTRY

Variable Definitions and Codes - GeneralVehicle Data Set

12	FORD	884	MEDIUM/HEAVY: UNKNOWN ENGINE LOCATION
12	FORD	890	MEDIUM/HEAVY: COE ENTRY POSITION UNKNOWN
12	FORD	898	OTHER MEDIUM/HEAVY TRUCK
12	FORD	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
12	FORD	899	UNKNOWN MEDIUM/HEAVY TRUCK
12	FORD	981	MEDIUM BUS
12	FORD	988	OTHER BUS
12	FORD	989	UNKNOWN BUS TYPE
12	FORD	998	OTHER VEHICLE
12	FORD	999	UNKNOWN VEHICLE
13	LINCOLN	1	CONTINENTAL/TOWN CAR
13	LINCOLN	2	MARK
13	LINCOLN	5	CONTINENTAL (82-ON)
13	LINCOLN	11	VERSAILLES
13	LINCOLN	12	LS
13	LINCOLN	398	OTHER AUTOMOBILE
13	LINCOLN	399	UNKNOWN AUTOMOBILE
13	LINCOLN	401	AVIATOR
13	LINCOLN	421	NAVIGATOR
13	LINCOLN	481	BLACKWOOD
13	LINCOLN	498	OTHER LIGHT TRUCK
13	LINCOLN	499	UNKNOWN LIGHT TRUCK
13	LINCOLN	999	UNKNOWN VEHICLE
14	MERCURY	2	CYCLONE
14	MERCURY	3	CAPRI-DOMESTIC
14	MERCURY	4	COUGAR/XR7
14	MERCURY	6	MARQUIS/MONTEREY
14	MERCURY	8	COMET
14	MERCURY	9	BOBCAT
14	MERCURY	10	MONTEGO
14	MERCURY	11	MONARCH
14	MERCURY	12	ZEPHYR
14	MERCURY	13	LYNX/LN-7 (82-83)
14	MERCURY	15	TOPAZ
14	MERCURY	17	SABLE
14	MERCURY	31	CAPRI-FOREIGN
14	MERCURY	33	PANTERA
14	MERCURY	36	TRACER
14	MERCURY	37	MYSTIQUE
14	MERCURY	38	COUGAR
14	MERCURY	39	MARAUDER
14	MERCURY	398	OTHER AUTOMOBILE
14	MERCURY	399	UNKNOWN AUTOMOBILE
14	MERCURY	401	MOUNTAINEER
14	MERCURY	443	VILLAGER
14	MERCURY	444	MONTEREY (2004+)
14	MERCURY	498	OTHER LIGHT TRUCK
14	MERCURY	499	UNKNOWN LIGHT TRUCK
14	MERCURY	999	UNKNOWN VEHICLE
18	BUICK	1	SPECIAL/SKYLARK (thru 1972)
18	BUICK	2	LESABRE/CENTURION/WILDCAT
18	BUICK	3	ELECTRA/ELECTRA 225/PARK AVENUE (91-ON)
18	BUICK	4	ROADMASTER
18	BUICK	5	RIVIERA
18	BUICK	7	CENTURY
18	BUICK	8	APOLLO/SKYLARK (73-76)
18	BUICK	10	REGAL
18	BUICK	12	SKYHAWK

Variable Definitions and Codes - GeneralVehicle Data Set

18	BUICK	15	SKYLARK (76-85)
18	BUICK	18	SOMERSET(85-87)/SKYLARK(86-ON)
18	BUICK	20	REGAL (FWD)
18	BUICK	21	REATA
18	BUICK	31	OPEL KADETT
18	BUICK	32	OPEL MANTA
18	BUICK	33	OPEL GT
18	BUICK	34	OPEL ISUZU
18	BUICK	398	OTHER AUTOMOBILE
18	BUICK	399	UNKNOWN AUTOMOBILE
18	BUICK	401	RENDEZVOUS
18	BUICK	402	RAINIER
18	BUICK	498	OTHER LIGHT TRUCK
18	BUICK	499	UNKNOWN LIGHT TRUCK
18	BUICK	999	UNKNOWN VEHICLE
19	CADILLAC	3	DEVILLE/FLEETWOOD
19	CADILLAC	4	LIMOUSINE
19	CADILLAC	5	ELDORADO
19	CADILLAC	6	COMMERCIAL SERIES
19	CADILLAC	9	ALLANTE
19	CADILLAC	14	SEVILLE
19	CADILLAC	16	CIMARRON
19	CADILLAC	17	CATERA
19	CADILLAC	18	CTS
19	CADILLAC	19	XLR
19	CADILLAC	20	SRX
19	CADILLAC	398	OTHER AUTOMOBILE
19	CADILLAC	399	UNKNOWN AUTOMOBILE
19	CADILLAC	421	ESCALADE
19	CADILLAC	431	ESCALADE ESV
19	CADILLAC	480	ESCALADE EXT
19	CADILLAC	498	OTHER LIGHT TRUCK
19	CADILLAC	498	UNKNOWN LIGHT TRUCK
19	CADILLAC	999	UNKNOWN VEHICLE
20	CHEVROLET	1	CHEVELLE/MALIBU (83-)
20	CHEVROLET	2	IMPALA/CAPRICE
20	CHEVROLET	4	CORVETTE
20	CHEVROLET	6	CORVAIR
20	CHEVROLET	7	EL CAMINO
20	CHEVROLET	8	NOVA (-79)
20	CHEVROLET	9	CAMARO
20	CHEVROLET	10	MONTE CARLO ('70-'88) (RWD ONLY)
20	CHEVROLET	11	VEGA
20	CHEVROLET	12	MONZA
20	CHEVROLET	13	CHEVETTE
20	CHEVROLET	15	CITATION
20	CHEVROLET	16	CAVALIER
20	CHEVROLET	17	CELEBRITY
20	CHEVROLET	19	BERETTA/CORSICA
20	CHEVROLET	20	LUMINA
20	CHEVROLET	31	SPECTRUM
20	CHEVROLET	32	NOVA/GEO PRIZM
20	CHEVROLET	33	SPRINT/GEO SPRINT
20	CHEVROLET	34	GEO METRO
20	CHEVROLET	35	GEO STORM
20	CHEVROLET	36	MONTE CARLO (1995+) (FWD ONLY)
20	CHEVROLET	37	MALIBU (1997+)
20	CHEVROLET	38	SSR
20	CHEVROLET	39	AVEO
20	CHEVROLET	398	OTHER AUTOMOBILE

Variable Definitions and Codes - GeneralVehicle Data Set

20	CHEVROLET	399	UNKNOWN AUTOMOBILE
20	CHEVROLET	401	S-10 BLAZER, BLAZER
20	CHEVROLET	402	GEO TRACKER
20	CHEVROLET	403	TRAILBLAZER (2002 and later)
20	CHEVROLET	404	EQUINOX
20	CHEVROLET	421	FULLSIZE BLAZER (K, Tahoe)
20	CHEVROLET	431	SUBURBAN
20	CHEVROLET	441	ASTRO VAN
20	CHEVROLET	442	LUMINA APV/VENTURE
20	CHEVROLET	461	G-SERIES VAN
20	CHEVROLET	466	P-SERIES VAN
20	CHEVROLET	470	VAN DERIVATIVE
20	CHEVROLET	471	S-10/T-10
20	CHEVROLET	472	LUV
20	CHEVROLET	473	COLORADO
20	CHEVROLET	481	C, K, R, V-SERIES PICKUP
20	CHEVROLET	482	AVALANCHE
20	CHEVROLET	498	OTHER LIGHT TRUCK
20	CHEVROLET	499	UNKNOWN LIGHT TRUCK
20	CHEVROLET	881	MEDIUM/HEAVY CBE
20	CHEVROLET	882	MEDIUM/HEAVY COE LOW ENTRY
20	CHEVROLET	883	MEDIUM/HEAVY COE HIGH ENTRY
20	CHEVROLET	884	MEDIUM/HEAVY; UNKNOWN ENGINE LOCATION
20	CHEVROLET	890	MEDIUM/HEAVY; UNKNOWN ENGINE LOCALTON
20	CHEVROLET	898	OTHER MEDIUM/HEAVY TRUCK
20	CHEVROLET	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
20	CHEVROLET	899	UNKNOWN MEDIUM/HEAVY TRUCK
20	CHEVROLET	981	BUS
20	CHEVROLET	988	OTHER BUS
20	CHEVROLET	989	UNKNOWN BUS TYPE
20	CHEVROLET	998	OTHER VEHICLE
20	CHEVROLET	999	UNKNOWN VEHICLE
21	OLDSMOBILE	1	CUTLASS (RWD-ONLY)
21	OLDSMOBILE	2	DELTA 88
21	OLDSMOBILE	3	NINETY-EIGHT
21	OLDSMOBILE	5	TORONADO-TROFEO
21	OLDSMOBILE	6	COMMERCIAL SERIES
21	OLDSMOBILE	12	STARFIRE
21	OLDSMOBILE	15	OMEGA
21	OLDSMOBILE	16	FIRENZA
21	OLDSMOBILE	17	CIERA
21	OLDSMOBILE	18	CALAIS
21	OLDSMOBILE	20	CUTLASS (FWD)
21	OLDSMOBILE	21	ACHIEVA
21	OLDSMOBILE	22	AURORA
21	OLDSMOBILE	23	INTRIGUE
21	OLDSMOBILE	24	ALERO
21	OLDSMOBILE	398	OTHER AUTOMOBILE
21	OLDSMOBILE	399	UNKNOWN AUTOMOBILE
21	OLDSMOBILE	401	BRAVADA
21	OLDSMOBILE	441	SILHOUETTE
21	OLDSMOBILE	498	OTHER LIGHT TRUCK
21	OLDSMOBILE	499	UNKNOWN LIGHT TRUCK
21	OLDSMOBILE	998	OTHER VEHICLE
21	OLDSMOBILE	999	UNKNOWN VEHICLE
22	PONTIAC	1	LEMANS/TEMPEST (THRU 79)
22	PONTIAC	2	BONNEVILLE/CATALINA/PARISIENNE
22	PONTIAC	5	FIERO

Variable Definitions and Codes - GeneralVehicle Data Set

22	PONTIAC	8	VENTURA
22	PONTIAC	9	FIREBIRD/TRANS AM
22	PONTIAC	10	GRAND PRIX (RWD)
22	PONTIAC	11	ASTRE
22	PONTIAC	12	SUNBIRD (THRU 80)
22	PONTIAC	13	T1000/1000
22	PONTIAC	15	PHOENIX
22	PONTIAC	16	J2000/SUNBIRD/SUNFIRE
22	PONTIAC	17	6000
22	PONTIAC	18	GRAND AM
22	PONTIAC	20	GRAND PRIX (FWD)
22	PONTIAC	31	LEMANS (88-on)
22	PONTIAC	398	OTHER AUTOMOBILE
22	PONTIAC	399	UNKNOWN AUTOMOBILE
22	PONTIAC	401	AZTEK
22	PONTIAC	402	VIBE
22	PONTIAC	441	TRANS SPORT/MONTANA
22	PONTIAC	498	OTHER LIGHT TRUCK
22	PONTIAC	499	UNKNOWN LIGHT TRUCK
22	PONTIAC	999	UNKNOWN VEHICLE
22	PONTIAC		OTHER LIGHT
23	GMC	7	CABALLERO/SPRINT
23	GMC	398	OTHER AUTOMOBILE
23	GMC	399	UNKNOWN AUTOMOBILE
23	GMC	401	JIMMY/TYPHOON/ENVOY
23	GMC	421	FULLSIZE JIMMY/YUKON
23	GMC	431	SUBURBAN
23	GMC	441	SAFARI (MINIVAN)
23	GMC	461	G-SERIES VAN
23	GMC	466	P-SERIES VAN
23	GMC	470	VAN DERIVATIVE
23	GMC	471	S15/T15/SONOMA
23	GMC	472	CANYON
23	GMC	481	C, K, R, V-SERIES PICKUP
23	GMC	498	OTHER LIGHT TRUCK
23	GMC	499	UNKNOWN LIGHT TRUCK
23	GMC	881	MEDIUM/HEAVY CBE
23	GMC	882	MEDIUM/HDAVY COE LOW ENTRY
23	GMC	883	MEDIUM/HEAVY COE HIGH ENTRY
23	GMC	884	MEDIUM/HEAVY: UNKNOWN ENGINE LOCATION
23	GMC	890	MEDIUM/HEAVY: COE ENTRY POSITION UNKNOWN
23	GMC	898	OTHER MEDIUM/HEAVY TRUCK
23	GMC	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
23	GMC	899	UNKNOWN MEDIUM/HEAVY TRUCK
23	GMC	981	MEDIUM BUS
23	GMC	988	OTHER BUS
23	GMC	989	UNKNOWN BUS TYPE
23	GMC	999	UNKNOWN VEHICLE
24	SATURN	1	SL
24	SATURN	2	SC
24	SATURN	3	SW
24	SATURN	4	EV
24	SATURN	5	LS/ LS1/ LS2/L100/L200/L300
24	SATURN	6	LW/LW1/ LW2/ LW200/300
24	SATURN	7	ION
24	SATURN	398	OTHER AUTOMOBILE
24	SATURN	399	UNKNOWN AUTOMOBILE
24	SATURN	401	VUE

Variable Definitions and Codes - GeneralVehicle Data Set

24	SATURN	498	OTHER LIGHT TRUCK
24	SATURN	499	UNKNOWN LIGHT TRUCK
24	SATURN	999	UNKNOWN VEHICLE
25	GRUMMAN	441	LLV
25	GRUMMAN	442	STEP-IN VAN
25	GRUMMAN	498	OTHER LIGHT TRUCK
25	GRUMMAN	499	UNKNOWN LIGHT TRUCK
25	GRUMMAN	881	MEDIUM/HEAVY TRUCK - CBE
25	GRUMMAN	882	MEDIUM/HEAVY TRUCK - COE LOW ENTRY
25	GRUMMAN	883	MEDIUM/HEAVY TRUCK - COE HIGH ENTRY
25	GRUMMAN	884	MEDIUM/HEAVY TRUCK UNKNOWN ENGINE LOCATION
25	GRUMMAN	890	MEDIUM/HEAVY TRUCK ENTRY POSITION UNKNOWN
25	GRUMMAN	898	OTHER MEDIUM/HEAVY TRUCK
25	GRUMMAN	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
25	GRUMMAN	899	UNKNOWN MEDIUM/HEAVY TRUCK
25	GRUMMAN	983	BUS-FLAT FRONT, REAR ENGINE
25	GRUMMAN	988	OTHER BUS
25	GRUMMAN	989	UNKNOWN BUS TYPE
25	GRUMMAN	999	UNKNOWN VEHICLE
29	STUDEBAKER	1	LARK
29	STUDEBAKER	1	GRAN TURISMO
29	STUDEBAKER	1	CRUISER
29	STUDEBAKER	1	HAWK
29	STUDEBAKER	1	OTHER AUTOMOBILE
29	AVANTI	1	OTHER AUTOMOBILE
29	AVANTI	1	UNKNOWN AUTOMOBILE
29	STUDEBAKER	1	UNKNOWN AUTOMOBILE
29	CHECKER	2	MARATHON
29	CHECKER	2	TAXI
29	CHECKER	2	AEROBUS
29	CHECKER	2	SUPERBA
29	CHECKER	2	UNKNOWN AUTOMOBILE
29	CHECKER	2	OTHER AUTOMOBILE
29	EXCALIBER	398	OTHER AUTOMOBILE
29	CONSULIER	398	OTHER AUTOMOBILE
29	CONSULIER	398	UNKNOWN AUTOMOBILE
29	OTHER DOMESTIC MANUFACTURER (light vehicles)	398	OTHER MAKE
29	EXCALIBER	398	UNKNOWN AUTOMOBILE
29	HUDSON	398	UNKNOWN AUTOMOBILE
29	DESOTO	398	UNKNOWN AUTOMOBILE
29	STUTZ	398	OTHER AUTOMOBILE
29	HUDSON	398	OTHER AUTOMOBILE
29	STUTZ	398	UNKNOWN AUTOMOBILE
29	DESOTO	398	OTHER AUTOMOBILE
29	OTHER DOMESTIC MANUFACTURER (light vehicles)	399	UNKNOWN MAKE
29	OTHER DOMESTIC MANUFACTURER (light vehicles)	498	OTHER LIGHT TRUCK
29	INDIAN	701	MOTORCYCLE (000-050CC)
29	BUELL	701	MOTORCYCLE (000-051CC)
29	INDIAN	702	MOTORCYCLE (051-124CC)
29	BUELL	702	MOTORCYCLE (051-124CC)
29	INDIAN	703	MOTORCYCLE (125-349CC)
29	BUELL	703	MOTORCYCLE (125-349CC)
29	INDIAN	704	MOTORCYCLE (350-449CC)
29	BUELL	704	MOTORCYCLE (350-449CC)
29	INDIAN	705	MOTORCYCLE (450-749CC)

Variable Definitions and Codes - GeneralVehicle Data Set

29	BUELL	705	MOTORCYCLE (450-749CC)
29	INDIAN	706	MOTORCYCLE (750CC OR GREATER)
29	BUELL	706	MOTORCYCLE (750CC OR GREATER)
29	INDIAN	709	MOTORCYCLE (UNKNOWN CC)
29	BUELL	709	MOTORCYCLE (UNKNOWN CC)
29	INDIAN	798	OTHER MOTORED CYCLE
29	BUELL	798	OTHER MOTORED CYCLE
29	INDIAN	799	UNKNOWN MOTORED CYCLE
29	BUELL	799	UNKNOWN MOTORED CYCLE
29	OTHER DOMESTIC MANUFACTURER (light vehicles)	898	OTHER MEDIUM/HEAVY TRUCK
29	OTHER DOMESTIC MANUFACTURER (light vehicles)	988	OTHER BUS
29	OTHER DOMESTIC MANUFACTURER (light vehicles)	998	OTHER VEHICLE
30	VOLKSWAGEN	31	KARMANN GHIA
30	VOLKSWAGEN	32	BEETLE 1300/1500
30	VOLKSWAGEN	33	SUPER BEETLE
30	VOLKSWAGEN	34	411/412
30	VOLKSWAGEN	35	SQUAREBACK/FASTBACK
30	VOLKSWAGEN	36	RABBIT
30	VOLKSWAGEN	37	DASHER
30	VOLKSWAGEN	38	SCIROCCO
30	VOLKSWAGEN	40	JETTA
30	VOLKSWAGEN	41	QUANTUM
30	VOLKSWAGEN	42	GOLF/CABRIOLET/GTI
30	VOLKSWAGEN	43	RABBIT PICKUP
30	VOLKSWAGEN	44	FOX
30	VOLKSWAGEN	45	CORRADO
30	VOLKSWAGEN	46	PASSAT
30	VOLKSWAGEN	47	JETTA III
30	VOLKSWAGEN	48	GOLF III
30	VOLKSWAGEN	49	NEW BEETLE
30	VOLKSWAGEN	50	PHAETON
30	VOLKSWAGEN	398	OTHER AUTOMOBILE
30	VOLKSWAGEN	399	UNKNOWN AUTOMOBILE
30	VOLKSWAGEN	401	THE THING (181)
30	VOLKSWAGEN	421	TOUAREG
30	VOLKSWAGEN	441	VANAGON/CAMPER
30	VOLKSWAGEN	442	EUROVAN
30	VOLKSWAGEN	498	OTHER LIGHT TRUCK
30	VOLKSWAGEN	499	UNKNOWN LIGHT TRUCK
30	VOLKSWAGEN	998	OTHER VEHICLE
30	VOLKSWAGEN	999	UNKNOWN VEHICLE
31	ALFA ROMEO	31	SPIDER
31	ALFA ROMEO	32	SPORTS SEDAN
31	ALFA ROMEO	33	SPRINT SPECIAL
31	ALFA ROMEO	34	GTV-6
31	ALFA ROMEO	35	164
31	ALFA ROMEO	398	OTHER AUTOMOBILE
31	ALFA ROMEO	399	UNKNOWN AUTOMOBILE
31	ALFA ROMEO	999	UNKNOWN VEHICLE
32	AUDI	31	SUPER 90
32	AUDI	32	100/A6
32	AUDI	33	FOX
32	AUDI	34	4000
32	AUDI	35	5000
32	AUDI	36	80/90
32	AUDI	37	200
32	AUDI	38	V8 QUATTRO

Variable Definitions and Codes - GeneralVehicle Data Set

32	AUDI	39	COUPE QUATTRO
32	AUDI	40	S4/S6
32	AUDI	41	CABRIOLET
32	AUDI	42	A4
32	AUDI	43	A3
32	AUDI	44	A8
32	AUDI	45	TT
32	AUDI	46	S8
32	AUDI	47	ALLROAD
32	AUDI	398	OTHER AUTOMOBILE
32	AUDI	399	UNKNOWN AUTOMOBILE
32	AUDI	999	UNKNOWN VEHICLE
33	AUSTIN / AUSTIN HEALEY	31	MARINA
33	AUSTIN / AUSTIN HEALEY	32	AMERICA
33	AUSTIN / AUSTIN HEALEY	33	HEALEY SPRITE
33	AUSTIN / AUSTIN HEALEY	34	HEALY 3000
33	AUSTIN / AUSTIN HEALEY	35	MINI
33	AUSTIN / AUSTIN HEALEY	398	OTHER AUTOMOBILE
33	AUSTIN / AUSTIN HEALEY	399	UNKNOWN AUTOMOBILE
33	AUSTIN / AUSTIN HEALEY	999	UNKNOWN VEHICLE
34	BMW	31	1600, 2002
34	BMW	32	COUPE
34	BMW	33	BAVARIA SEDAN
34	BMW	34	3 SERIES
34	BMW	35	5 SERIES
34	BMW	36	6 SERIES
34	BMW	37	7 SERIES
34	BMW	38	8 SERIES
34	BMW	39	Z3
34	BMW	40	Z8
34	BMW	42	Z4
34	BMW	398	OTHER AUTOMOBILE
34	BMW	399	UNKNOWN AUTOMOBILE
34	BMW	401	X5
34	BMW	402	X3
34	BMW	498	OTHER LIGHT TRUCK
34	BMW	499	UNKNOWN LIGHT TRUCK
34	BMW	701	MOTORCYCLE (000-050CC)
34	BMW	702	MOTORCYCLE (051-124CC)
34	BMW	703	MOTORCYCLE (125-349CC)
34	BMW	704	MOTORCYCLE (350-449CC)
34	BMW	705	MOTORCYCLE (450-749CC)
34	BMW	706	MOTORCYCLE (750CC-OVER)
34	BMW	709	MOTORCYCLE (UNKNOWN CC)
34	BMW	799	UNKNOWN MOTORED CYCLE
34	BMW	999	UNKNOWN VEHICLE
35	NISSAN / DATSUN	31	F10
35	NISSAN / DATSUN	32	200/240 SX
35	NISSAN / DATSUN	33	1200/210/B210
35	NISSAN / DATSUN	34	Z-CAR, ZX
35	NISSAN / DATSUN	35	310
35	NISSAN / DATSUN	36	510
35	NISSAN / DATSUN	37	610
35	NISSAN / DATSUN	38	710
35	NISSAN / DATSUN	39	810/MAXIMA
35	NISSAN / DATSUN	40	ROADSTER
35	NISSAN / DATSUN	41	PL411, RL411
35	NISSAN / DATSUN	42	STANZA
35	NISSAN / DATSUN	43	SENTRA
35	NISSAN / DATSUN	44	PULSAR

Variable Definitions and Codes - GeneralVehicle Data Set

35	NISSAN / DATSUN	45	MICRA
35	NISSAN / DATSUN	46	NX 1600/2000
35	NISSAN / DATSUN	47	ALTIMA
35	NISSAN / DATSUN	48	350Z
35	NISSAN / DATSUN	49	MURANO
35	NISSAN / DATSUN	398	OTHER AUTOMOBILE
35	NISSAN / DATSUN	399	UNKNOWN AUTOMOBILE
35	NISSAN / DATSUN	401	PATHFINDER
35	NISSAN / DATSUN	402	XTERRA
35	NISSAN / DATSUN	421	PATHFINDER ARMADA
35	NISSAN / DATSUN	441	VAN
35	NISSAN / DATSUN	442	AXXESS
35	NISSAN / DATSUN	443	QUEST
35	NISSAN / DATSUN	471	DATSUN/NISSAN PU/FRONTIER
35	NISSAN / DATSUN	473	TITAN
35	NISSAN / DATSUN	498	OTHER LIGHT TRUCK
35	NISSAN / DATSUN	499	UNKNOWN LIGHT TRUCK
35	NISSAN / DATSUN	883	MEDIUM/HEAVY COE HIGH ENTRY
35	NISSAN / DATSUN	898	OTHER MEDIUM/HEAVY TRUCK
35	NISSAN / DATSUN	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
35	NISSAN / DATSUN	899	UNKNOWN MEDIUM/HEAVY TRUCK
35	NISSAN / DATSUN	999	UNKNOWN VEHICLE
36	FIAT	31	124 (COUPE/SEDAN)
36	FIAT	32	124 SPIDER/RACER
36	FIAT	33	BRAVA - 131
36	FIAT	34	850 (COUPE/SPYDER)
36	FIAT	35	128
36	FIAT	36	X-1/9
36	FIAT	37	STRADA
36	FIAT	398	OTHER AUTOMOBILE
36	FIAT	399	UNKNOWN AUTOMOBILE
36	FIAT	882	MEDIUM/HEAVY COE LOW ENTRY
36	FIAT	883	MEDIUM/HEAVY COE HIGH ENTRY
36	FIAT	890	MEDIUM/HEAVY COE ENTRY POSITION UNKNOWN
36	FIAT	898	OTHER MEDIUM/HEAVY TRUCK
36	FIAT	899	UNKNOWN MEDIUM/HEAVY TRUCK
36	FIAT	999	UNKNOWN VEHICLE
37	HONDA	31	CIVIC/CRX/DEL SOL
37	HONDA	32	ACCORD
37	HONDA	33	PRELUDE
37	HONDA	34	600
37	HONDA	35	S2000
37	HONDA	37	INSIGHT
37	HONDA	38	FCX
37	HONDA	398	OTHER AUTOMOBILE
37	HONDA	399	UNKNOWN AUTOMOBILE
37	HONDA	401	PASSPORT
37	HONDA	402	CR-V
37	HONDA	403	ELEMENT
37	HONDA	421	PILOT
37	HONDA	441	ODYSSEY
37	HONDA	498	OTHER LIGHT TRUCK
37	HONDA	499	UNKNOWN LIGHT TRUCK
37	HONDA	701	MOTORCYCLE (000-050CC)
37	HONDA	702	MOTORCYCLE (051-124CC)
37	HONDA	703	MOTORCYCLE (125-349CC)
37	HONDA	704	MOTORCYCLE (350-449CC)
37	HONDA	705	MOTORCYCLE (450-749CC)
37	HONDA	706	MOTORCYCLE (750CC-OVER)

Variable Definitions and Codes - GeneralVehicle Data Set

37	HONDA	709	MOTORCYCLE (UNKNOWN CC)
37	HONDA	731	ATC/ATV (000-050CC)
37	HONDA	732	ATC/ATV (051-124CC)
37	HONDA	733	ATC/ATV (125-349CC)
37	HONDA	734	ATC/ATV (350CC-OVER)
37	HONDA	739	ATC/ATV (UNKNOWN CC)
37	HONDA	798	OTHER MOTORED CYCLE
37	HONDA	999	UNKNOWN VEHICLE
38	ISUZU	31	I-MARK
38	ISUZU	32	IMPULSE
38	ISUZU	33	STYLUS
38	ISUZU	398	OTHER AUTOMOBILE
38	ISUZU	399	UNKNOWN AUTOMOBILE
38	ISUZU	401	TROOPER/TROOPER II
38	ISUZU	402	RODEO
38	ISUZU	403	AMIGO
38	ISUZU	404	VEHICROSS
38	ISUZU	405	AXIOM
38	ISUZU	421	ASCENDER
38	ISUZU	441	OASIS
38	ISUZU	471	P'UP (PICKUP) HOMBRE
38	ISUZU	498	OTHER LIGHT TRUCK
38	ISUZU	499	UNKNOWN LIGHT TRUCK
38	ISUZU	881	MEDIUM/HEAVY - CBE
38	ISUZU	882	MEDIUM/HEAVY COE LOW ENTRY
38	ISUZU	883	MEDIUM/HEAVY COE HIGH ENTRY
38	ISUZU	884	MEDIUM/HEAVY UNKNOWN ENGINE LOCATION
38	ISUZU	890	MEDIUM/HEAVY COE ENTRY POSITION UNKNOWN
38	ISUZU	898	OTHER MEDIUM/HEAVY TRUCK
38	ISUZU	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
38	ISUZU	899	UNKNOWN MEDIUM/HEAVY TRUCK
38	ISUZU	981	CONVENTIONAL FRONT ENGINE
38	ISUZU	982	FRONT ENGINE/FLAT FRONT
38	ISUZU	983	REAR ENGINE/FLAT FRONT
38	ISUZU	988	OTHER BUS
38	ISUZU	989	UNKNOWN BUS TYPE
38	ISUZU	999	UNKNOWN VEHICLE
39	JAGUAR	31	XJ-S COUPE
39	JAGUAR	32	VANDEN PLAS
39	JAGUAR	32	XJ6/12 SEDAN/COUPE/XJ8/
39	JAGUAR	33	XKE
39	JAGUAR	34	S-TYPE
39	JAGUAR	34	X100
39	JAGUAR	35	X-TYPE
39	JAGUAR	398	OTHER AUTOMOBILE
39	JAGUAR	399	UNKNOWN AUTOMOBILE
39	JAGUAR	999	UNKNOWN VEHICLE
40	LANCIA	31	BETA SEDAN-HPE
40	LANCIA	32	BETA COUPE - ZAGATO
40	LANCIA	33	SCORPION
40	LANCIA	398	OTHER AUTOMOBILE
40	LANCIA	399	UNKNOWN AUTOMOBILE
40	LANCIA	999	UNKNOWN VEHICLE
41	MAZDA	31	RX2
41	MAZDA	32	RX3
41	MAZDA	33	RX4
41	MAZDA	34	RX7
41	MAZDA	35	GLC/PROTEGE/323

Variable Definitions and Codes - GeneralVehicle Data Set

41	MAZDA	36	COSMO
41	MAZDA	37	626
41	MAZDA	38	808
41	MAZDA	39	MIZER
41	MAZDA	40	R-100
41	MAZDA	41	616/618
41	MAZDA	42	1800
41	MAZDA	43	929
41	MAZDA	44	MX-6
41	MAZDA	45	MIATA
41	MAZDA	46	MX-3
41	MAZDA	47	MILLENIA
41	MAZDA	48	MP3
41	MAZDA	49	RX-8
41	MAZDA	50	MAZDA 6
41	MAZDA	51	MAZDA3
41	MAZDA	398	OTHER AUTOMOBILE
41	MAZDA	399	UNKNOWN AUTOMOBILE
41	MAZDA	401	NAVAJO
41	MAZDA	402	TRIBUTE
41	MAZDA	441	MPV
41	MAZDA	471	MAZDA PICKUP
41	MAZDA	498	OTHER LIGHT TRUCK
41	MAZDA	499	UNKNOWN LIGHT TRUCK
41	MAZDA	999	UNKNOWN VEHICLE
42	MERCEDES BENZ	31	200/220/230/240/250/260/280/300/320 SE,CD,D,SD,ETC
42	MERCEDES BENZ	32	230/280 SL
42	MERCEDES BENZ	33	300/350/380/450/500SL/560SL
42	MERCEDES BENZ	34	350/380/420/450/560/ SLC
42	MERCEDES BENZ	35	280/300SEL
42	MERCEDES BENZ	36	380/420/450/500/560SEL/500SEC/ 560SEC/350SDL/300SDL
42	MERCEDES BENZ	37	300 SE/380/450 SE
42	MERCEDES BENZ	38	600, 6.9 SEDAB
42	MERCEDES BENZ	39	190
42	MERCEDES BENZ	40	300
42	MERCEDES BENZ	41	400/500 E
42	MERCEDES BENZ	42	220/280 C
42	MERCEDES BENZ	43	S CLASS
42	MERCEDES BENZ	44	SL CLASS
42	MERCEDES BENZ	45	SLK
42	MERCEDES BENZ	46	CL
42	MERCEDES BENZ	47	CLK
42	MERCEDES BENZ	48	E
42	MERCEDES BENZ	398	OTHER AUTOMOBILE
42	MERCEDES BENZ	399	UNKNOWN AUTOMOBILE
42	MERCEDES BENZ	401	M
42	MERCEDES BENZ	402	G CLASS
42	MERCEDES BENZ	470	VAN DERIVATIVE
42	MERCEDES BENZ	498	OTHER LIGHT TRUCK
42	MERCEDES BENZ	499	UNKNOWN LIGHT TRUCK
42	MERCEDES BENZ	881	MEDIUM/HEAVE - CBE
42	MERCEDES BENZ	882	MEDIUM/HEAVY - COE LOW ENTRY
42	MERCEDES BENZ	883	MEDIUM/HEAVY - COE HIGH ENTRY
42	MERCEDES BENZ	884	MEDIUM/HEAVY; UNKNOWN ENGINE LOCATION
42	MERCEDES BENZ	890	MEDIUM/HEAVY: COE ENTRY POSITION UNKNOWN
42	MERCEDES BENZ	898	OTHER MEDIUM/HEAVY TRUCK
42	MERCEDES BENZ	899	UNKNOWN MEDIUM/HEAVY TRUCK

Variable Definitions and Codes - GeneralVehicle Data Set

42	MERCEDES BENZ	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
42	MERCEDES BENZ	981	MEDIUM BUS
42	MERCEDES BENZ	988	OTHER BUS
42	MERCEDES BENZ	989	UNKNOWN BUS TYPE
42	MERCEDES BENZ	999	UNKNOWN VEHICLE
43	MG	31	MIDGET
43	MG	32	MGB ('76-'79)
43	MG	33	MGB ('67-'75)
43	MG	34	MGA
43	MG	35	TA/TC/TD/TF
43	MG	36	MGC
43	MG	398	OTHER AUTOMOBILE
43	MG	399	UNKNOWN AUTOMOBILE
43	MG	999	UNKNOWN VEHICLE
44	PEUGEOT	31	304
44	PEUGEOT	32	403
44	PEUGEOT	33	404
44	PEUGEOT	34	504/505
44	PEUGEOT	35	604
44	PEUGEOT	36	405
44	PEUGEOT	398	OTHER AUTOMOBILE
44	PEUGEOT	399	UNKNOWN AUTOMOBILE
44	PEUGEOT	701	MOTORCYCLE (000-050CC)
44	PEUGEOT	702	MOTORCYCLE (051-124CC)
44	PEUGEOT	709	MOTORCYCLE (UNKNOWN CC)
44	PEUGEOT	799	UNKNOWN MOTORED CYCLE
44	PEUGEOT	999	UNKNOWN VEHICLE
45	PORSCHE	31	911
45	PORSCHE	32	912
45	PORSCHE	33	914
45	PORSCHE	34	924
45	PORSCHE	35	928
45	PORSCHE	36	930
45	PORSCHE	37	944
45	PORSCHE	38	959
45	PORSCHE	39	968
45	PORSCHE	40	986 BOXSTER
45	PORSCHE	398	OTHER AUTOMOBILE
45	PORSCHE	399	UNKNOWN AUTOMOBILE
45	PORSCHE	421	CAYENNE
45	PORSCHE	999	UNKNOWN VEHICLE
46	RENAULT/AMC	31	LECAR
46	RENAULT/AMC	32	DAUPHINE/10/R-8/CARAVELLE
46	RENAULT/AMC	33	12
46	RENAULT/AMC	34	15
46	RENAULT/AMC	35	16
46	RENAULT/AMC	36	17
46	RENAULT/AMC	37	R18I
46	RENAULT/AMC	38	FUEGO
46	RENAULT/AMC	39	ALLIANCE/ENCORE/GTA, CONVERTIBLE
46	RENAULT/AMC	41	ALPINE
46	RENAULT/AMC	44	MEDALLION
46	RENAULT/AMC	45	PREMIER
46	RENAULT/AMC	398	OTHER AUTOMOBILE
46	RENAULT/AMC	399	UNKNOWN AUTOMOBILE
46	RENAULT/AMC	999	UNKNOWN VEHICLE
47	SAAB	31	99/99E/900
47	SAAB	32	SONNETT
47	SAAB	33	95/96/97
47	SAAB	34	9000, CS

Variable Definitions and Codes - GeneralVehicle Data Set

47	SAAB	35	9 - 3
47	SAAB	36	9 - 5
47	SAAB	398	OTHER AUTOMOBILE
47	SAAB	399	UNKNOWN AUTOMOBILE
47	SAAB	999	UNKNOWN VEHICLE
48	SUBARU	31	DL/FE/G/GF/GL/GLF/STD/LOYALE
48	SUBARU	32	STAR
48	SUBARU	33	360
48	SUBARU	34	LEGACY
48	SUBARU	35	XT/XT6
48	SUBARU	36	JUSTY
48	SUBARU	37	SVX
48	SUBARU	38	IMPREZA
48	SUBARU	43	BRAT DL, GL
48	SUBARU	44	BAJA
48	SUBARU	45	OUTBACK
48	SUBARU	398	OTHER AUTOMOBILE
48	SUBARU	399	UNKNOWN AUTOMOBILE
48	SUBARU	401	FORESTER
48	SUBARU	498	OTHER LIGHT TRUCK
48	SUBARU	499	UNKNOWN LIGHT TRUCK
48	SUBARU	999	UNKNOWN VEHICLE
49	TOYOTA	31	CORONA
49	TOYOTA	32	COROLLA
49	TOYOTA	33	CELICA
49	TOYOTA	34	SUPRA
49	TOYOTA	35	CRESSIDA
49	TOYOTA	36	CROWN
49	TOYOTA	37	CARINA
49	TOYOTA	38	TERCEL
49	TOYOTA	39	STARLET
49	TOYOTA	40	CAMRY
49	TOYOTA	41	MR-2
49	TOYOTA	42	PASEO
49	TOYOTA	43	AVALON
49	TOYOTA	44	SOLARA
49	TOYOTA	45	ECHO
49	TOYOTA	46	PRIUS
49	TOYOTA	48	SCION XA
49	TOYOTA	49	SCION XB
49	TOYOTA	398	OTHER AUTOMOBILE
49	TOYOTA	399	UNKNOWN AUTOMOBILE
49	TOYOTA	401	4-RUNNER
49	TOYOTA	402	RAV-4
49	TOYOTA	403	HIGHLANDER
49	TOYOTA	403	HIGHLANDER
49	TOYOTA	404	MATRIX
49	TOYOTA	421	LANDCRUISER
49	TOYOTA	422	SEQUOIA
49	TOYOTA	441	MINVAN/PREVIEW
49	TOYOTA	442	SIENNA
49	TOYOTA	471	PICKUP
49	TOYOTA	472	TACOMA
49	TOYOTA	481	T-100
49	TOYOTA	482	TUNDRA
49	TOYOTA	498	OTHER LIGHT TRUCK
49	TOYOTA	499	UNKNOWN LIGHT TRUCK
49	TOYOTA	999	UNKNOWN VEHICLE
50	TRIUMPH	31	SPITFIRE
50	TRIUMPH	32	GT-6

Variable Definitions and Codes - GeneralVehicle Data Set

50	TRIUMPH	33	TR4
50	TRIUMPH	34	TR6
50	TRIUMPH	35	TR7/8
50	TRIUMPH	36	HERALD
50	TRIUMPH	37	STAG
50	TRIUMPH	398	OTHER AUTOMOBILE
50	TRIUMPH	399	UNKNOWN AUTOMOBILE
50	TRIUMPH	701	MOTORCYCLE (000-050CC)
50	TRIUMPH	702	MOTORCYCLE (051-124CC)
50	TRIUMPH	703	MOTORCYCLE (125-349CC)
50	TRIUMPH	704	MOTORCYCLE (350-449CC)
50	TRIUMPH	705	MOTORCYCLE (450-749CC)
50	TRIUMPH	706	MOTORCYCLE (750CC-OVER)
50	TRIUMPH	709	MOTORCYCLE (UNKNOWN CC)
50	TRIUMPH	799	UNKNOWN MOTORED CYCLE
50	TRIUMPH	999	UNKNOWN VEHICLE
51	VOLVO	31	122
51	VOLVO	32	142/144/145
51	VOLVO	33	164
51	VOLVO	34	240/242/244/245
51	VOLVO	35	262/264/265
51	VOLVO	36	1800
51	VOLVO	38	760/780
51	VOLVO	39	740
51	VOLVO	40	940
51	VOLVO	41	960
51	VOLVO	42	850
51	VOLVO	43	70 SERIES
51	VOLVO	44	90 SERIES
51	VOLVO	45	80 SERIES
51	VOLVO	46	40 SERIES
51	VOLVO	47	60 SERIES
51	VOLVO	398	OTHER AUTOMOBILE
51	VOLVO	399	UNKNOWN AUTOMOBILE
51	VOLVO	401	XC90
51	VOLVO	881	MEDIUM/HEAVY CBE
51	VOLVO	882	MEDIUM/HEAVY COE LOW ENTRY
51	VOLVO	883	MEDIUM/HEAVY COE HIGH ENTRY
51	VOLVO	884	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
51	VOLVO	890	MEDIUM/HEAVY: COE ENTRY POSITION UNKNOWN
51	VOLVO	898	OTHER MEDIUM/HEAVY TRUCK
51	VOLVO	899	UNKNOWN MEDIUM/HEAVY TRUCK
51	VOLVO	981	MEDIUM BUS
51	VOLVO	988	OTHER BUS
51	VOLVO	989	UNKNOWN TYPE BUS
51	VOLVO	999	UNKNOWN VEHICLE
52	MITSUBISHI	31	STARION
52	MITSUBISHI	32	TREDIA
52	MITSUBISHI	33	CORDIA
52	MITSUBISHI	34	GALANT
52	MITSUBISHI	35	MIRAGE
52	MITSUBISHI	36	PRECIS
52	MITSUBISHI	37	ECLIPSE
52	MITSUBISHI	38	SIGMA
52	MITSUBISHI	39	3000GT
52	MITSUBISHI	40	DIAMANTE
52	MITSUBISHI	46	LANCER
52	MITSUBISHI	398	OTHER AUTOMOBILE

Variable Definitions and Codes - GeneralVehicle Data Set

52	mitsubishi	399	UNKNOWN AUTOMOBILE
52	mitsubishi	401	MONTERO
52	mitsubishi	402	OUTLANDER
52	mitsubishi	403	ENDEAVOR
52	mitsubishi	441	MINIVAN
52	mitsubishi	442	EXPO WAGON
52	mitsubishi	471	PICKUP
52	mitsubishi	498	OTHER LIGHT TRUCK
52	mitsubishi	499	UNKNOWN LIGHT TRUCK
52	mitsubishi	882	MEDIUM/HEAVY - COE LOW ENTRY
52	mitsubishi	898	OTHER MEDIUM/HEAVY TRUCK
52	mitsubishi	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
52	mitsubishi	899	UNKNOWN MEDIUM/HEAVY TRUCK
52	mitsubishi	981	CONVENTIONAL FRONT ENGINE
52	mitsubishi	982	FRONT ENGINE/FLAT FRONT
52	mitsubishi	983	REAR ENGINE/FLAT FRONT
52	mitsubishi	988	OTHER BUS
52	mitsubishi	989	UNKNOWN TYPE BUS
52	mitsubishi	999	UNKNOWN VEHICLE
53	SUZUKI	31	SA310
53	SUZUKI	34	SWIFT
53	SUZUKI	35	ESTEEM
53	SUZUKI	36	AERIO
53	SUZUKI	37	FORENZA
53	SUZUKI	38	VERONA
53	SUZUKI	398	OTHER AUTOMOBILE
53	SUZUKI	399	UNKNOWN AUTOMOBILE
53	SUZUKI	401	SAMURAI
53	SUZUKI	402	SIDEKICK/GRAND VITARA
53	SUZUKI	403	X-90/VITARA
53	SUZUKI	404	GRAND VITARA
53	SUZUKI	405	XL7
53	SUZUKI	498	OTHER LIGHT TRUCK
53	SUZUKI	499	UNKNOWN LIGHT TRUCK
53	SUZUKI	701	MOTORCYCLE (000-050CC)
53	SUZUKI	702	MOTORCYCLE (051-124CC)
53	SUZUKI	703	MOTORCYCLE (125-349CC)
53	SUZUKI	704	MOTORCYCLE (350-449CC)
53	SUZUKI	705	MOTORCYCLE (450-749CC)
53	SUZUKI	706	MOTORCYCLE (750CC-OVER)
53	SUZUKI	709	MOTORCYCLE (UNKNOWN CC)
53	SUZUKI	731	ATC/ATV (000-050CC)
53	SUZUKI	732	ATC/ATV (051-124CC)
53	SUZUKI	733	ATC/ATV (125-349CC)
53	SUZUKI	734	ATC/ATV (350CC-OVER)
53	SUZUKI	739	ATC/ATV (UNKNOWN CC)
53	SUZUKI	799	UNKNOWN MOTORED CYCLE
53	SUZUKI	999	UNKNOWN VEHICLE
54	ACURA	31	INTEGRA
54	ACURA	32	LEGEND
54	ACURA	32	RL
54	ACURA	33	NSX
54	ACURA	34	VIGOR
54	ACURA	35	TL
54	ACURA	35	CL
54	ACURA	38	RSX
54	ACURA	39	TSX
54	ACURA	398	OTHER AUTOMOBILE
54	ACURA	399	UNKNOWN AUTOMOBILE
54	ACURA	401	SLX

Variable Definitions and Codes - GeneralVehicle Data Set

54	ACURA	421	MDX
54	ACURA	498	OTHER LIGHT TRUCK
54	ACURA	499	UNKNOWN TYPE LIGHT TRUCK
54	ACURA	999	UNKNOWN VEHICLE
55	HYUNDAI	31	PONY
55	HYUNDAI	32	EXCEL
55	HYUNDAI	33	SONATA
55	HYUNDAI	34	SCOUPE
55	HYUNDAI	35	ELANTRA
55	HYUNDAI	36	ACCENT
55	HYUNDAI	37	TIBURON
55	HYUNDAI	38	XG300/350
55	HYUNDAI	398	OTHER AUTOMOBILE
55	HYUNDAI	399	UNKNOWN AUTOMOBILE
55	HYUNDAI	401	SANTA FE
55	HYUNDAI	498	OTHER LIGHT TRUCK
55	HYUNDAI	499	UNKNOWN LIGHT TRUCK
55	HYUNDAI	999	UNKNOWN VEHICLE
56	MERKUR	31	XR4Ti
56	MERKUR	32	SCORPIO
56	MERKUR	398	OTHER AUTOMOBILE
56	MERKUR	399	UNKNOWN AUTOMOBILE
56	MERKUR	999	UNKNOWN VEHICLE
57	YUGO	31	GV
57	YUGO	398	OTHER AUTOMOBILE
57	YUGO	399	UNKNOWN AUTOMOBILE
57	YUGO	999	UNKNOWN VEHICLE
58	INFINITI	31	M30
58	INFINITI	32	Q45
58	INFINITI	33	G20
58	INFINITI	34	J30
58	INFINITI	35	I30
58	INFINITI	36	I35
58	INFINITI	37	G35
58	INFINITI	38	M45
58	INFINITI	39	FX35/45
58	INFINITI	398	OTHER AUTOMOBILE
58	INFINITI	399	UNKNOWN AUTOMOBILE
58	INFINITI	401	QX4
58	INFINITI	421	QX56
58	INFINITI	498	OTHER LIGHT TRUCK
58	INFINITI	499	UNKNOWN LIGHT TRUCK
58	INFINITI	999	UNKNOWN VEHICLE
59	LEXUS	31	ES250/ES-300
59	LEXUS	32	LS400
59	LEXUS	33	SC-300/SC-400
59	LEXUS	34	GS300/GS400
59	LEXUS	35	IS-300
59	LEXUS	36	SC 430
59	LEXUS	398	OTHER AUTOMOBILE
59	LEXUS	399	UNKNOWN AUTOMOBILE
59	LEXUS	401	RX300
59	LEXUS	402	GX470
59	LEXUS	421	LX 450/470
59	LEXUS	498	OTHER LIGHT TRUCK
59	LEXUS	499	UNKNOWN LIGHT TRUCK
59	LEXUS	999	UNKNOWN VEHICLE
60	DAIHATSU	31	CHARADE
60	DAIHATSU	398	OTHER AUTOMOBILE
60	DAIHATSU	399	UNKNOWN AUTOMOBILE

Variable Definitions and Codes - GeneralVehicle Data Set

60	DAIHATSU	401	ROCKY
60	DAIHATSU	498	OTHER LIGHT TRUCK
60	DAIHATSU	499	UNKNOWN LIGHT TRUCK
60	DAIHATSU	999	UNKNOWN VEHICLE
61	STERLING	31	827S
61	STERLING	398	OTHER AUTOMOBILE
61	STERLING	399	UNKNOWN AUTOMOBILE
61	STERLING	999	UNKNOWN VEHICLE
62	LAND ROVER	401	DISCOVERY (LR)
62	LAND ROVER	421	COUNTY LWB (RR) / COUNT CLASSIC (RR)
62	LAND ROVER	422	FREELANDER
62	LAND ROVER	422	4.0 SE (RR)
62	LAND ROVER	422	DEFENDER 90 (LR)
62	LAND ROVER	498	OTHER LIGHT TRUCK
62	LAND ROVER	499	UNKNOWN LIGHT TRUCK
62	LAND ROVER	999	UNKNOWN VEHICLE
63	KIA	31	SEPHIA
63	KIA	32	SPECTRA
63	KIA	33	RIO
63	KIA	34	OPTIMA
63	KIA	35	AMANTI
63	KIA	398	OTHER AUTOMOBILE
63	KIA	399	UNKNOWN AUTOMOBILE
63	KIA	401	SPORTAGE
63	KIA	402	SORRENTO
63	KIA	441	SEDONA
63	KIA	498	OTHER LIGHT TRUCK
63	KIA	499	UNKNOWN LIGHT TRUCK
63	KIA	999	UNKNOWN VEHICLE
64	DAEWOO	31	LANOS
64	DAEWOO	32	NUBIRA
64	DAEWOO	33	LEGANZA
64	DAEWOO	398	OTHER AUTOMOBILE
64	DAEWOO	399	UNKNOWN AUTOMOBILE
64	DAEWOO	999	UNKNOWN VEHICLE
65	MINI	31	COOPER, COOPER S
69	ASTON MARTIN	31	LAGONDA
69	ASTON MARTIN	31	OTHER AUTOMOBILE
69	ASTON MARTIN	31	UNKNOWN AUTOMOBILE
69	ASTON MARTIN	31	VOLANTE
69	ASTON MARTIN	31	SALOON
69	ASTON MARTIN	31	VANTAGE
69	BRICKLIN	32	OTHER AUTOMOBILE
69	BRICKLIN	32	UNKNOWN AUTOMOBILE
69	CITROEN	33	UNKNOWN AUTOMOBILE
69	CITROEN	33	OTHER AUTOMOBILE
69	DELOREAN	34	OTHER AUTOMOBILE
69	DELOREAN	34	UNKNOWN AUTOMOBILE
69	FERRARI	35	OTHER AUTOMOBILE
69	FERRARI	35	UNKNOWN AUTOMOBILE
69	HILLMAN	36	OTHER AUTOMOBILE
69	HILLMAN	36	UNKNOWN AUTOMOBILE
69	JENSEN	37	HEALY
69	JENSEN	37	UNKNOWN AUTOMOBILE
69	JENSEN	37	OTHER AUTOMOBILE
69	LAMBORGHINI	38	UNKNOWN AUTOMOBILE
69	LAMBORGHINI	38	JALPA
69	LAMBORGHINI	38	OTHER AUTOMOBILE
69	LAMBORGHINI	38	COUNTACH 5000S
69	LOTUS	39	EUROPE

Variable Definitions and Codes - GeneralVehicle Data Set

69	LOTUS	39	ESPRIT
69	LOTUS	39	UNKNOWN AUTOMOBILE
69	LOTUS	39	OTHER AUTOMOBILE
69	MASERATI	40	BITURBO
69	MASERATI	40	OTHER AUTOMOBILE
69	MASERATI	40	UNKNOWN AUTOMOBILE
69	MORRIS	41	MINOR
69	MORRIS	41	UNKNOWN AUTOMOBILE
69	MORRIS	41	OTHER AUTOMOBILE
69	ROLLS ROYCE/BENTLEY	42	CLOUD/SHADOW SERIES
69	ROLLS ROYCE/BENTLEY	42	UNKNOWN AUTOMOBILE
69	ROLLS ROYCE/BENTLEY	42	OTHER AUTOMOBILE
69	SIMCA	44	UNKNOWN AUTOMOBILE
69	SIMCA	44	OTHER AUTOMOBILE
69	SUNBEAM	45	OTHER AUTOMOBILE
69	SUNBEAM	45	UNKNOWN AUTOMOBILE
69	TVR	46	OTHER AUTOMOBILE
69	TVR	46	UNKNOWN AUTOMOBILE
69	DESTA	48	OTHER AUTOMOBILE
69	DESTA	48	UNKNOWN AUTOMOBILE
69	RELIANT	49	OTHER AUTOMOBILE
69	RELIANT	49	UNKNOWN AUTOMOBILE
69	BERTONE	52	OTHER AUTOMOBILE
69	BERTONE	52	UNKNOWN AUTOMOBILE
69	LADA	53	OTHER AUTOMOBILE
69	LADA	53	UNKNOWN AUTOMOBILE
69	OTHER FOREIGN MANUFACTURER (light vehicles)	398	OTHER MAKE
69	OTHER FOREIGN MANUFACTURER (light vehicles)	399	UNKOWN MAKE
69	OTHER FOREIGN MANUFACTURER (light vehicles)	498	OTHER LIGHT TRUCK
69	OTHER FOREIGN MANUFACTURER (light vehicles)	898	OTHER MEDIUM/HEAVY TRUCK
69	OTHER FOREIGN MANUFACTURER (light vehicles)	988	OTHER BUS
69	OTHER FOREIGN MANUFACTURER (light vehicles)	998	OTHER VEHICLE
70	BSA	701	MOTORCYCLE (000-050CC)
70	BSA	702	MOTORCYCLE (051-124CC)
70	BSA	703	MOTORCYCLE (125-349CC)
70	BSA	704	MOTORCYCLE (350-449CC)
70	BSA	705	MOTORCYCLE (450-749CC)
70	BSA	706	MOTORCYCLE (750CC-OVER)
70	BSA	709	MOTORCYCLE (UNKNOWN CC)
70	BSA	798	OTHER MOTORED CYCLE
70	BSA	799	UNKNOWN MOTORED CYCLE
71	DUCATI	701	MOTORCYCLE (000-050CC)
71	DUCATI	702	MOTORCYCLE (051-124CC)
71	DUCATI	703	MOTORCYCLE (125-349CC)
71	DUCATI	704	MOTORCYCLE (350-449CC)
71	DUCATI	705	MOTORCYCLE (450-749CC)
71	DUCATI	706	MOTORCYCLE (750CC-OVER)
71	DUCATI	709	MOTORCYCLE (UNKNOWN CC)
71	DUCATI	798	OTHER MOTORED CYCLE
71	DUCATI	799	UNKNOWN MOTORED CYCLE
72	HARLEY-DAVIDSON	701	MOTORCYCLE (000-050CC)
72	HARLEY-DAVIDSON	702	MOTORCYCLE (051-124CC)
72	HARLEY-DAVIDSON	703	MOTORCYCLE (125-349CC)
72	HARLEY-DAVIDSON	704	MOTORCYCLE (350-449CC)

Variable Definitions and Codes - GeneralVehicle Data Set

72	HARLEY-DAVIDSON	705	MOTORCYCLE (450-749CC)
72	HARLEY-DAVIDSON	706	MOTORCYCLE (750CC-OVER)
72	HARLEY-DAVIDSON	709	MOTORCYCLE (UNKNOWN CC)
72	HARLEY-DAVIDSON	798	OTHER MOTORED CYCLE
72	HARLEY-DAVIDSON	799	UNKNOWN MOTORED CYCLE
73	KAWASAKI	701	MOTORCYCLE (000-050CC)
73	KAWASAKI	702	MOTORCYCLE (051-124CC)
73	KAWASAKI	703	MOTORCYCLE (125-349CC)
73	KAWASAKI	704	MOTORCYCLE (350-449CC)
73	KAWASAKI	705	MOTORCYCLE (450-749CC)
73	KAWASAKI	706	MOTORCYCLE (750CC-OVER)
73	KAWASAKI	709	MOTORCYCLE (UNKNOWN CC)
73	KAWASAKI	731	ATC/ATV (000-050CC)
73	KAWASAKI	732	ATC/ATV (051-124CC)
73	KAWASAKI	733	ATC/ATV (125-349CC)
73	KAWASAKI	734	ATC/ATV (350CC-OVER)
73	KAWASAKI	739	ATC/ATV (UNKNOWN CC)
73	KAWASAKI	798	OTHER MOTORED CYCLE
73	KAWASAKI	799	UNKNOWN MOTORED CYCLE
74	MOTO-GUZZI	701	MOTORCYCLE (000-050CC)
74	MOTO-GUZZI	702	MOTORCYCLE (051-124CC)
74	MOTO-GUZZI	703	MOTORCYCLE (125-349CC)
74	MOTO-GUZZI	704	MOTORCYCLE (350-449CC)
74	MOTO-GUZZI	705	MOTORCYCLE (450-749CC)
74	MOTO-GUZZI	706	MOTORCYCLE (750CC-OVER)
74	MOTO-GUZZI	709	MOTORCYCLE (UNKNOWN CC)
74	MOTO-GUZZI	731	ATC/ATV (000-050CC)
74	MOTO-GUZZI	732	ATC/ATV (051-124CC)
74	MOTO-GUZZI	733	ATC/ATV (125-349CC)
74	MOTO-GUZZI	734	ATC/ATV (350CC-OVER)
74	MOTO-GUZZI	739	ATC/ATV (UNKNOWN CC)
74	MOTO-GUZZI	798	OTHER MOTORED CYCLE
74	MOTO-GUZZI	799	UNKNOWN MOTORED CYCLE
75	NORTON	701	MOTORCYCLE (000-050CC)
75	NORTON	702	MOTORCYCLE (051-124CC)
75	NORTON	703	MOTORCYCLE (125-349CC)
75	NORTON	704	MOTORCYCLE (350-449CC)
75	NORTON	705	MOTORCYCLE (450-749CC)
75	NORTON	706	MOTORCYCLE (750CC-OVER)
75	NORTON	709	MOTORCYCLE (UNKNOWN CC)
75	NORTON	798	OTHER MOTORED CYCLE
75	NORTON	799	UNKNOWN MOTORED CYCLE
76	YAMAHA	701	MOTORCYCLE (000-050CC)
76	YAMAHA	702	MOTORCYCLE (051-124CC)
76	YAMAHA	703	MOTORCYCLE (125-349CC)
76	YAMAHA	704	MOTORCYCLE (350-449CC)
76	YAMAHA	705	MOTORCYCLE (450-749CC)
76	YAMAHA	706	MOTORCYCLE (750CC-OVER)
76	YAMAHA	709	MOTORCYCLE (UNKNOWN CC)
76	YAMAHA	731	ATC/ATV (000-050CC)
76	YAMAHA	732	ATC/ATV (051-124CC)
76	YAMAHA	733	ATC/ATV (125-349CC)
76	YAMAHA	734	ATC/ATV (350CC-OVER)
76	YAMAHA	739	ATC/ATV (UNKNOWN CC)
76	YAMAHA	798	OTHER MOTORED CYCLE
76	YAMAHA	799	UNKNOWN MOTORED CYCLE
76	YAMAHA	998	OTHER VEHICLE
78	OTHER MAKE MOPED	701	0-50cc
78	OTHER MAKE MOPED	702	51-124cc
78	OTHER MAKE MOPED	709	UNKNOWN cc

Variable Definitions and Codes - GeneralVehicle Data Set

78	OTHER MAKE MOPED	798	OTHER MOTORED CYCLE
78	OTHER MAKE MOPED	799	UNKNOWN MOTORED CYCLE
79	OTHER MAKE MOTORED CYCLE	701	0-50cc
79	OTHER MAKE MOTORED CYCLE	702	51-124cc
79	OTHER MAKE MOTORED CYCLE	703	125-349cc
79	OTHER MAKE MOTORED CYCLE	704	350-449cc
79	OTHER MAKE MOTORED CYCLE	705	450-749cc
79	OTHER MAKE MOTORED CYCLE	706	750c or greater
79	OTHER MAKE MOTORED CYCLE	709	Unknown cc
79	OTHER MAKE MOTORED CYCLE	731	ATC/ATV 0-50cc
79	OTHER MAKE MOTORED CYCLE	732	ATC/ATV 51-124cc
79	OTHER MAKE MOTORED CYCLE	733	ATC/ATV 125-349cc
79	OTHER MAKE MOTORED CYCLE	734	ATC/ATV 350cc OR GREATER
79	OTHER MAKE MOTORED CYCLE	739	ATV/ATC UNKNOWN cc
79	OTHER MAKE MOTORED CYCLE	798	OTHER MOTORED CYCLE
79	OTHER MAKE MOTORED CYCLE	799	UNKNOWN MOTORED CYCLE
80	BROCKWAY	850	MEDIUM/HEAVY TRUCK BASED MOTORHOME
80	BROCKWAY	881	MEDIUM/HEAVY - CBE
80	BROCKWAY	882	MEDIUM/HEAVE - COE/LOW ENTRY
80	BROCKWAY	883	MEDIUM/HEAVY - COE HIGH ENTRY
80	BROCKWAY	884	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
80	BROCKWAY	890	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
80	BROCKWAY	898	MEDIUM/HEAVY - OTHER
80	BROCKWAY	899	UNKNOWN MEDIUM/HEAVY TRUCK
81	DIAMOND REO/REO	850	MEDIUM/HEAVY TRUCK BASED MOTORHOME
81	DIAMOND REO/REO	881	MEDIUM/HEAVY - CBE
81	DIAMOND REO/REO	882	MEDIUM/HEAVY - COE/LOW ENTRY
81	DIAMOND REO/REO	883	MEDIUM/HEAVY - COE/HIGH ENTRY
81	DIAMOND REO/REO	884	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
81	DIAMOND REO/REO	890	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
81	DIAMOND REO/REO	898	MEDIUM/HEAVY - OTHER
81	DIAMOND REO/REO	899	UNKNOWN MEDIUM/HEAVY TRUCK
82	FREIGHTLINER/WHITE	461	SPRINTER/ADVANTAGE
82	FREIGHTLINER/WHITE	470	M-LINE WALK IN VAN
82	FREIGHTLINER/WHITE	498	OTHER LIGHT TRUCK
82	FREIGHTLINER/WHITE	499	UNKNOWN LIGHT TRUCK
82	FREIGHTLINER/WHITE	850	MEDIUM/HEAVY TRUCK BASED MOTORHOME
82	FREIGHTLINER/WHITE	881	MEDIUM/HEAVY - CBE
82	FREIGHTLINER/WHITE	882	MEDIUM/HEAVY - COE/LOW ENTRY
82	FREIGHTLINER/WHITE	883	MEDIUM/HEAVY - COE/HIGH ENTRY
82	FREIGHTLINER/WHITE	884	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
82	FREIGHTLINER/WHITE	890	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
82	FREIGHTLINER/WHITE	898	MEDIUM/HEAVY - OTHER
82	FREIGHTLINER/WHITE	899	UNKNOWN LIGHT/MEDIUM/HEAVY TRUCK
82	FREIGHTLINER/WHITE	981	BUS CONVENTIONAL ENGINE OUT FRONT
82	FREIGHTLINER/WHITE	982	BUS FRONT ENGINE/FLAT FRONT
82	FREIGHTLINER/WHITE	983	BUS REAR ENGINE/FLAT FRONT
82	FREIGHTLINER/WHITE	988	OTHER BUS
82	FREIGHTLINER/WHITE	989	UNKNOWN BUS TYPE
82	FREIGHTLINER/WHITE	999	UNKNOWN VEHICLE
83	FWD	850	MEIDUM/HEAVY TRUCK BASED MOTORHOME
83	FWD	881	MEDIUM/HEAVY - CBE

Variable Definitions and Codes - GeneralVehicle Data Set

83	FWD	882	MEDIUM/HEAVY - COE/LOW ENTRY
83	FWD	883	MEDIUM/HEAVY - COE/HIGH ENTRY
83	FWD	884	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
83	FWD	898	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
83	FWD	898	MEDIUM/HEAVY - OTHER
83	FWD	899	UNKNOWN MEDIUM/HEAVY TRUCK
84	INTERNATIONAL HARVESTER/NAVISTAR	421	SCOUT
84	INTERNATIONAL HARVESTER/NAVISTAR	431	TRAVELALL
84	INTERNATIONAL HARVESTER/NAVISTAR	466	MULTISTOP VAN
84	INTERNATIONAL HARVESTER/NAVISTAR	481	PICKUP
84	INTERNATIONAL HARVESTER/NAVISTAR	498	OTHER LIGHT TRUCK
84	INTERNATIONAL HARVESTER/NAVISTAR	499	UNKNOWN LIGHT TRUCK
84	INTERNATIONAL HARVESTER/NAVISTAR	850	TRUCK BASED MOTORHOME
84	INTERNATIONAL HARVESTER/NAVISTAR	881	MEDIUM HEAVY - CBE
84	INTERNATIONAL HARVESTER/NAVISTAR	882	MEDIUM/HEAVY - COE LOW ENTRY
84	INTERNATIONAL HARVESTER/NAVISTAR	883	MEDIUM/HEAVY - COE HIGH ENTRY
84	INTERNATIONAL HARVESTER/NAVISTAR	884	MEDIUM/HEAVY: UNKNOWN ENGINE LOCATION
84	INTERNATIONAL HARVESTER/NAVISTAR	890	MEDIUM/HEAVY: COE ENTRY POSITION UNKNOWN
84	INTERNATIONAL HARVESTER/NAVISTAR	898	OTHER MEDIUM/HEAVY TRUCK
84	INTERNATIONAL HARVESTER/NAVISTAR	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
84	INTERNATIONAL HARVESTER/NAVISTAR	899	UNKNOWN MEDIUM/HEAVY TRUCK
84	INTERNATIONAL HARVESTER/NAVISTAR	950	BUS BASED MOTOHOME
84	INTERNATIONAL HARVESTER/NAVISTAR	981	CONVENTIONAL BUS
84	INTERNATIONAL HARVESTER/NAVISTAR	982	BUS-FLAT FRONT, FRONT ENGINE
84	INTERNATIONAL HARVESTER/NAVISTAR	983	BUS-FLAT FRONT, REAR ENGINE
84	INTERNATIONAL HARVESTER/NAVISTAR	988	OTHER BUS
84	INTERNATIONAL HARVESTER/NAVISTAR	989	UNKNOWN BUS TYPE
84	INTERNATIONAL HARVESTER/NAVISTAR	998	OTHER VEHICLE
84	INTERNATIONAL HARVESTER/NAVISTAR	999	UNKNOWN VEHICLE
85	KENWORTH	850	MEDIUM/HEAVY TRUCK BASED MOTORHOME
85	KENWORTH	881	MEDIUM/HEAVY - CBE
85	KENWORTH	882	MEDIUM/HEAVY - COE/LOW ENTRY
85	KENWORTH	883	MEDIUM/HEAVY - COE/HIGH ENTRY
85	KENWORTH	884	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
85	KENWORTH	890	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
85	KENWORTH	898	MEDIUM/HEAVY - OTHER
85	KENWORTH	899	UNKNOWN MEDIUM/HEAVY TRUCK
86	MACK	850	MEDIUM/HEAVY BASED MOTORHOME
86	MACK	881	MEDIUM/HEAVY - CBE
86	MACK	882	MEDIUM/HEAVY - COE/LOW ENTRY
86	MACK	883	MEDIUM/HEAVY - COE/HIGH ENTRY
86	MACK	884	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
86	MACK	890	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
86	MACK	898	MEDIUM/HEAVY - OTHER
86	MACK	899	UNKNOWN MEDIUM/HEAVY TRUCK
87	PETERBILT	850	MEDIUM/HEAVY BASED MOTORHOME
87	PETERBILT	881	MEDIUM/HEAVY - CBE
87	PETERBILT	882	MEDIUM/HEAVY - COE/LOW ENTRY
87	PETERBILT	883	MEDIUM/HEAVY - COE/HIGH ENTRY
87	PETERBILT	884	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
87	PETERBILT	890	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN

Variable Definitions and Codes - GeneralVehicle Data Set

87	PETERBILT	898	MEDIUM/HEAVY - OTHER
87	PETERBILT	899	UNKNOWN MEDIUM/HEAVY TRUCK
88	IVECO/MAGIRUS	850	MEDIUM/HEAVY BASED MOTORHOME
88	IVECO/MAGIRUS	881	MEDIUM/HEAVY - CBE
88	IVECO/MAGIRUS	882	MEDIUM/HEAVY - COE/LOW ENTRY
88	IVECO/MAGIRUS	883	MEDIUM/HEAVY - COE/HIGH ENTRY
88	IVECO/MAGIRUS	884	MEDIUM/HEAVY - UNKOWN ENGINE LOCATION
88	IVECO/MAGIRUS	890	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
88	IVECO/MAGIRUS	898	MEDIUM/HEAVY - OTHER
88	IVECO/MAGIRUS	899	UNKNOWN MEDIUM/HEAVY TRUCK
98	OTHER MAKE (med/heavy truck/bus or "other")	398	OTHER AUTOMOBILE
98	WINNEBAGO	470	VAN BASED MOTORHOME
98	OTHER MAKE (med/heavy truck/bus or "other")	498	OTHER LIGHT TRUCK
98	WINNEBAGO	498	LIGHT TRUCK BASED MOTORHOME
98	WINNEBAGO	499	UNKNOWN TYPE LIGHT MOTORHOME
98	AUTOCAR	801	MEDIUM/HEAVY BASED MOTORHOME
98	AUTOCAR	801	MEDIUM/HEAVY - CBE
98	AUTOCAR	801	MEDIUM/HEAVY - COE/HIGH ENTRY
98	AUTOCAR	801	MEDIUM/HEAVY - COE/LOW ENTRY
98	AUTOCAR	801	MEDIUM/HEAVY - UNKOWN ENGINE LOCATION
98	AUTOCAR	801	MEDIUM/HEAVY - OTHER
98	AUTOCAR	801	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	AUTO-UNION-DKW	802	MEDIUM/HEAVY BASED MOTORHOME
98	AUTO-UNION-DKW	802	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
98	AUTO-UNION-DKW	802	MEDIUM/HEAVY - COE/HIGH ENTRY
98	AUTOCAR	802	MEDIUM/HEAVY - COE/LOW ENTRY
98	AUTO-UNION-DKW	802	MEDIUM/HEAVY - CBE
98	AUTO-UNION-DKW	802	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	AUTO-UNION-DKW	802	MEDIUM/HEAVY - COE/LOW ENTRY
98	AUTO-UNION-DKW	802	MEDIUM/HEAVY - OTHER
98	DIVCO	803	MEDIUM/HEAVY BASED MOTORHOME
98	DIVCO	803	MEDIUM/HEAVY - COE/LOW ENTRY
98	DIVCO	803	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	DIVCO	803	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
98	DIVCO	803	MEDIUM/HEAVY - COE/HIGH ENTRY
98	DIVCO	803	MEDIUM/HEAVY - CBE
98	DIVCO	803	MEDIUM/HEAVY - OTHER
98	WESTERN STAR	804	MEDIUM/HEAVY BASED MOTORHOME
98	WESTERN STAR	804	MEDIUM/HEAVY - CBE
98	WESTERN STAR	804	MEDIUM/HEAVY - COE/HIGH ENTRY
98	WESTERN STAR	804	MEDIUM/HEAVY - OTHER
98	WESTERN STAR	804	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	WESTERN STAR	804	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
98	WESTERN STAR	804	MEDIUM/HEAVY - COE/LOW ENTRY
98	OSHKOSH	805	MEDIUM/HEAVY BASED MOTORHOME
98	OSHKOSH	805	MEDIUM/HEAVY - OTHER
98	OSHKOSH	805	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	OSHKOSH	805	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
98	OSHKOSH	805	MEDIUM/HEAVY - COE/HIGH ENTRY
98	OSHKOSH	805	MEDIUM/HEAVY - COE/LOW ENTRY

Variable Definitions and Codes - GeneralVehicle Data Set

98	OSHKOSH	805	MEDIUM/HEAVY - CBE
98	HINO	806	MEDIUM/HEAVY BASED MOTORHOME
98	HINO	806	MEDIUM/HEAVY - CBE
98	HINO	806	MEDIUM/HEAVY - OTHER
98	HINO	806	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	HINO	806	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
98	HINO	806	MEDIUM/HEAVY - COE/HIGH ENTRY
98	HINO	806	MEDIUM/HEAVY - COE/LOW ENTRY
98	SCANIA	807	MEDIUM/HEAVY BASED MOTORHOME
98	SCANIA	807	MEDIUM/HEAVY - CBE
98	SCANIA	807	MEDIUM/HEAVY - COE/LOW ENTRY
98	SCANIA	807	MEDIUM/HEAVY - OTHER
98	SCANIA	807	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	SCANIA	807	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
98	SCANIA	807	MEDIUM/HEAVY - COE/HIGH ENTRY
98	STERLING TRUCKS	808	MEDIUM/HEAVY - CBE
98	STERLING TRUCKS	808	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
98	STERLING TRUCKS	808	MEDIUM/HEAVY - OTHER
98	STERLING TRUCKS	808	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	STERLING TRUCKS	808	MEDIUM/HEAVY - COE/HIGH ENTRY
98	STERLING TRUCKS	808	MEDIUM/HEAVY - COE/LOW ENTRY
98	OTHER MAKE (med/heavy truck/bus or "other")	850	TRUCK BASED MOTORHOME
98	WINNEBAGO	850	MOTOR HOME
98	MARMON	898	MEDIUM/HEAVY - OTHER
98	MARMON	898	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	MARMON	898	MEDIUM/HEAVY - CBE
98	MARMON	898	MEDIUM/HEAVY - COE/HIGH ENTRY
98	WINNEBAGO	898	MEDIUM / HEAVY OTHER
98	OTHER MAKE (med/heavy truck/bus or "other")	898	OTHER MEDIUM/HEAVY TRUCK
98	WARD LAFRANCE	898	MEDIUM/HEAVY - OTHER
98	WARD LAFRANCE	898	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	WARD LAFRANCE	898	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
98	WARD LAFRANCE	898	MEDIUM/HEAVY - COE/HIGH ENTRY
98	WARD LAFRANCE	898	MEDIUM/HEAVY - COE/LOW ENTRY
98	WARD LAFRANCE	898	MEDIUM/HEAVY - CBE
98	WARD LAFRANCE	898	MEDIUM/HEAVY BASED MOTORHOME
98	MARMON	898	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
98	MARMON	898	MEDIUM/HEAVY - COE/LOW ENTRY
98	MARMON	898	MEDIUM/HEAVY BASED MOTORHOME
98	WINNEBAGO	899	MEDIUM / HEAVY UNKNOWN
98	NEOPLAN	902	BUS - CONVENTIONAL FRONT ENGINE
98	NEOPLAN	902	BUS BASED MOTORHOME
98	NEOPLAN	902	BUS - FRONT ENGINE/FLAT FRONT
98	NEOPLAN	902	BUS - REAR ENGINE/FLAT FRONT
98	NEOPLAN	902	OTHER BUS
98	OTHER MAKE (med/heavy truck/bus or "other")	950	BUS BASED MOTORHOME
98	OTHER MAKE (med/heavy truck/bus or "other")	988	OTHER BUS
98	OTHER MAKE (med/heavy truck/bus or "other")	998	OTHER VEHICLE
98	WINNEBAGO	999	UNKNOWN VEHICLE
99	UNKNOWN MANUFACTURER	399	UNKNOWN AUTOMOBILE
99	UNKNOWN FOREIGN MANUFACTURER	399	UNKNOWN AUTOMOBILE
99	UNKNOWN DOMESTIC MANUFACTURER	399	UNKNOWN AUTOMOBILE

Variable Definitions and Codes - GeneralVehicle Data Set

99	UNKNOWN MANUFACTURER	499	UNKNOWN LIGHT TRUCK
99	UNKNOWN DOMESTIC MANUFACTURER	499	UNKNOWN LIGHT TRUCK
99	UNKNOWN FOREIGN MANUFACTURER	499	UNKNOWN LIGHT TRUCK
99	UNKNOWN FOREIGN MANUFACTURER	799	UNKNOWN MOTORED CYCLE
99	UNKNOWN DOMESTIC MANUFACTURER	799	UNKNOWN MOTORED CYCLE
99	UNKNOWN MANUFACTURER	799	UNKNOWN MOTORED CYCLE
99	UNKNOWN MEDIUM/HEAVY TRUCKS AND BUSES MANUFACTURER	899	Unknown medium/heavy truck
99	UNKNOWN FOREIGN MANUFACTURER	899	UNKNOWN MEDIUM/HEAVY TRUCK
99	UNKNOWN MANUFACTURER	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
99	UNKNOWN DOMESTIC MANUFACTURER	899	UNKNOWN MEDIUM/HEAVY TRUCK
99	UNKNOWN MANUFACTURER	899	UNKNOWN MEDIUM/HEAVY TRUCK
99	UNKNOWN MEDIUM/HEAVY TRUCKS AND BUSES MANUFACTURER	988	Unknown bus type
99	UNKNOWN MANUFACTURER	989	UNKNOWN BUS TYPE
99	UNKNOWN FOREIGN MANUFACTURER	989	UNKNOWN BUS TYPE
99	UNKNOWN DOMESTIC MANUFACTURER	989	UNKNOWN BUS TYPE
99	UNKNOWN MANUFACTURER	999	UNKNOWN VEHICLE
99	UNKNOWN DOMESTIC MANUFACTURER	999	UNKNOWN VEHICLE
99	UNKNOWN FOREIGN MANUFACTURER	999	UNKNOWN VEHICLE

Vehicle Model Year

Definition: This variable establishes the model year that the vehicle was manufactured.

Source: Primary source is the VIN during vehicle inspection; secondary sources include the police report and interviews.

Cross Reference: Identical to Overview.OVEYear. Congruent with GeneralVehicle.VINYear, values will differ due to VIN vs. Researcher determined values. Related to TruckUnits.ManufactureDate if TruckUnit.TUNPosition = 1 when applicable.

Variable Name: GVEYear

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual model year
9999	Unknown

Body Type

Definition: This variable identifies the body type for this vehicle.

Source: Vehicle inspection, police report, and interview.

Cross Reference: Congruent with GeneralVehicle.VINBodyType, values will differ due to VIN vs. Researcher determined values. Identical to VehicleExterior.VEXBodyType when applicable. Elaborates on TruckExterior.PowerUnitType when applicable.

Variable Name: GVEBodyType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Convertible
2	2-door sedan, hardtop, coupe
3	3-door/2-door hatchback

Variable Definitions and Codes - GeneralVehicle Data Set

4	4-door sedan, hardtop
5	5-door/4-door hatchback
6	Station Wagon
7	Hatchback, number of doors unknown
8	Other automobile type
9	Unknown automobile type
10	Auto based pickup
11	Auto based panel
12	Large limousine
13	Three-wheel automobile or automobile derivative
14	Compact utility
15	Large utility
16	Utility station wagon
17	3-door coupe
19	Utility, unknown body type
20	Minivan
21	Large van
22	Step van or walk-in van
23	Van based motor home
24	Van based school bus
25	Van based other bus
28	Other van type
29	Unknown van type
30	Compact pickup
31	Large pickup
32	Pickup with slide-in camper
33	Convertible pickup
39	Unknown pickup style light conventional truck type
40	Cab chassis based
41	Truck based panel
42	Light truck based motor home (chassis mounted)
45	Other light conventional truck type
48	Unknown light truck type
49	Unknown light vehicle type
50	School bus
58	Other bus type
59	Unknown bus type
60	Step van
61	Single unit straight truck(4500kg<GVWR<=8850kg)
62	Single unit straight truck(8850kg<GVWR<=12000kg)
63	Single unit straight truck (GVWR > 12,000kg)
64	Single unit straight truck (GVWR unknown)
65	Medium/heavy truck based motor home
66	Truck-tractor (Cab Only, or any trailing units)
67	Truck-tractor with no cargo trailer
68	Truck-tractor pulling one trailer
69	Truck-tractor pulling two or more trailers
70	Truck-tractor (unknown if pulling trailer)
74	Medium/heavy Pickup (>=4,536kg)

Variable Definitions and Codes - GeneralVehicle Data Set

78	Unknown medium/heavy truck type
79	Unknown truck type (light/medium/heavy)
80	Motorcycle
81	Moped
82	Three-wheel motorcycle or moped
88	Other motored cycle (mini-bike, motor scooter)
89	Unknown motored cycle type
90	ATV (All-Terrain Vehicle) & ATC (All-Terrain Cycle)
91	Snowmobile
92	Farm equipment other than trucks
93	Construction equipment other than trucks
97	Other vehicle type
99	Unknown body type

Class Of Vehicle

Definition: This variable establishes the class of vehicle. This classification is largely based on size.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include police and other vehicle photographs. Partially determined by VIN information (size-based information).

Cross Reference: Identical to VehicleExterior.VEXVehicleClass when applicable. Identical to Events.ClassVehicle when applicable. Identical to Events.ClassVehicle2 when applicable.

Variable Name: GVEVehicleClass

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Subcompact/mini (wheelbase < 254 cm)
2	Compact (wheelbase >= 254 but < 265 cm)
3	Intermediate (wheelbase >= 265 but < 278 cm)
4	Full Size (wheelbase >= 278 but < 291 cm)
5	Largest (wheelbase >= 291 cm)
9	Unknown passenger car size
14	Compact utility vehicle
15	Large utility vehicle (<= 4,536 kg GVWR)
16	Utility station wagon (<= 4,536 kg GVWR)
19	Unknown utility type
20	Minivan (<= 4,536 kg GVWR)
21	Large van (<= 4,536 kg GVWR)
24	Van Based school bus (<= 4,536 kg GVWR)
28	Other van type (<= 4,536 kg GVWR)
29	Unknown van type (<= 4,536 kg GVWR)
30	Compact pickup truck (<= 4,536 kg GVWR)
31	Large pickup truck (<= 4,536 kg GVWR)
38	Other pickup truck type (<= 4,536 kg GVWR)
39	Unknown pick up truck (<=4,536 kg GVWR)
45	Other light truck (<= 4,536 kg GVWR)
48	Unknown light truck type (<= 4,536 kg GVWR)

Variable Definitions and Codes - GeneralVehicle Data Set

49	Unknown light vehicle type
50	School bus (excludes van based)(>4,536 kg GVWR)
58	Other bus (>4,536 kg GVWR)
59	Unknown bus type
60	Truck (>4,536 kg GVWR)
67	Tractor without trailer
68	Tractor-trailer(s)
78	Unknown medium/heavy truck type
79	Unknown light/medium/heavy truck type
80	Motored cycle
90	Other vehicle
99	Unknown

Curb Weight

Definition: This variable establishes the weight of the vehicle as specified by the manufacturer.

Source: Primary source is *Passenger Vehicle Specifications*, American Automobile Manufacturers Association (AAMA) of the U.S., Inc. Secondary sources are *Automotive News*, Crain Automotive Group, Inc., *Branham Automobile Reference Book*, Branham Publishing Company, and *Gasoline Truck Index and Diesel Truck Index*, Truck Index, Inc.

Cross Reference: Identical to VehicleExterior.VEXCurbWeight when applicable. Related to TruckExterior.TEXEmptyWeight, values will differ due to Curb weight vs. Empty weight. Related to the sum of TruckUnits.TUNEmptyWeight over each vehicle, values will differ due to Curb weight vs. Empty weight. Related to GeneralVehicle.BaseWeight, values will differ in part due to VIN vs. Researcher determined.

Variable Name: GVECurbWeight

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value (kg)
777777	Not inspected
999999	Unknown

Source Of Curb Weight

Definition: This variable establishes the source for the weight of the vehicle as reported in the variable "Curb Weight."

Source: Researcher specified.

Cross Reference: Identical to VehicleExterior.VEXWeightSource when applicable.

Variable Name: GVEWeightSource

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Curb weight unknown
1	AAMA
2	Automotive News

Variable Definitions and Codes - GeneralVehicle Data Set

3	Branham Automobile Reference Book
4	Gasoline Truck, Import Truck, and Diesel Truck Index
5	Canadian Specifications
8	Other (specify)
99	Curb Weight Source Unknown

Cargo Weight

Definition: This variable documents the weight of any cargo that is present in the vehicle at the time of the crash. This number does not include the weight of any occupants in the vehicle. For CDS vehicles that are towing a trailer, this weight represents the weight of the trailer plus its cargo. To obtain the cargo weight (only) of cargo being transported by heavy trucks, the variable CMBDCargoWeight (Total Cargo Weight) in the TruckExterior Data Set should be used.

Source: Researcher determined – inputs include vehicle inspection, interviewees, police report, and tow facility.

Cross Reference: Identical to VehicleExterior.VEXCargoWeight when applicable. Related to TruckExterior.CMDBCargoWeight, values will differ due to GeneralVehicle.GVECargoWeight including the weight of any trailers where TruckExterior.CMDBCargoWeight only includes payload cargo weight. Related to the sum of TruckUnits.TUNCargoWeight, values will differ due to GeneralVehicle.GVECargoWeight including the weight of any trailers where TruckUnits.TUNCargoWeight only includes payload cargo weight.

Variable Name: GVECargoWeight

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value (kg)
999999	Unknown

Source Of Cargo Weight Information

Definition: This variable establishes the source from which the value reported in the variable “Cargo Weight” was obtained.

Source: Researcher specified.

Cross Reference: Identical to VehicleExterior.VEXCargoSource when applicable.

Variable Name: GVECargoSource

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Cargo weight unknown
1	Vehicle inspection
2	Interview
3	PAR
4	Tow Yard Operator
8	Other (specify)
99	Cargo Weight Source Unknown

Variable Definitions and Codes - GeneralVehicle Data Set

Vehicle Identification Number (VIN)

Definition: This variable identifies the Vehicle Identification Number (VIN) for this vehicle.

Source: Primary source is vehicle inspection; a secondary source is the police report.

Cross Reference: Identical to TruckUnits.TUNVIN if TruckUnits.TUNPosition = 1 when applicable. Identical to VehicleExterior.VEXVIN when applicable.

Variable Name: GVEVIN

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual VIN value
9999999999	Unknown

Vehicle Special Use

Definition: This variable establishes any uses for the vehicle outside of personal use.

Source: Researcher determined – primary source is the police report; secondary sources include vehicle inspection, and interviewees.

Cross Reference: Identical to VehicleExterior.VEXSpecialUse when applicable.

Variable Name: GVESpecialUse

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No Special Use
1	Taxi
2	Vehicle used as a school bus
3	Vehicle used as other bus
4	Military
5	Police
6	Ambulance
7	Fire truck or car
9	Unknown
88	Heavy truck

Inspection Type

Definition: This variable documents the type of inspection completed for this vehicle.

Source: Researcher specified.

Cross Reference: Identical to VehicleExterior.InspectionType when applicable.

Variable Name: GVEInspection

Variable Definitions and Codes - GeneralVehicle Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No Inspection
1	Vehicle fully repaired - no damage evident
2	Partial inspection (specify):
3	Complete Inspection
8	Non qualifying vehicle

Date Of Inspection

Definition: This variable documents the date that the vehicle was inspected by the researcher.

Source: Researcher specified.

Cross Reference: Identical to VehicleExterior.VEXInspectionDate when applicable.

Variable Name: GVEInspectionDate

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Date (in YYYY-MM-DD format)
7777-77-77	Not qualifying vehicles
8888-88-88	Not inspected
9999-99-99	Unknown

Injury Severity Code – Police

Definition: This variable documents the highest injury severity code in the vehicle, as reported by police on the Police Accident Report (PAR).

Source: Police report.

Cross Reference: This in conjunction with NonMotorist.ANMPARSevCode aggregated yield Crash.CrashPARSevCode.

Variable Name: GVEPARSevCode

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	O - No injury
1	C - Possible injury
2	B - Non-incapacitating injury
3	A - Incapacitating injury
4	K - Killed
5	U - Injury, severity unknown
6	Died prior to crash
9	Unknown

Variable Definitions and Codes - GeneralVehicle Data Set

Injury Severity Code – Researched

Definition: This variable documents the highest injury severity code in the vehicle, as determined by injury coding and case narratives. This code is based on information obtained from medical records and/or case narratives and may differ from the police-reported injury severity code.

Source: Zone Center determined – based on occupant medical records and case narratives, including the police report.

Cross Reference: This in conjunction with NonMotorist.ANMRESsevCode aggregated yield Crash.CrashRESsevCode.

Variable Name: GVERESsevCode

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	O - No injury
1	C - Possible injury
2	B - Non-incapacitating injury
3	A - Incapacitating injury
4	K - Killed
5	U - Injury, severity unknown
6	Died prior to crash
9	Unknown

VIN Make

Definition: This variable is created by running the vehicle's Vehicle Identification Number (VIN) through the PCVINA computer program.

Source: Derived variable obtained from PCVINA program (VIN-based).

Cross Reference: Congruent with GeneralVehicle.GVEMake, values will differ due to VIN vs. Researcher determined values. Congruent with Overview.OVEMake, values will differ due to VIN vs. Researcher determined values.

Variable Name: VINMake

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	PCVINA returned value
9999999999	Unknown

VIN Model

Definition: This variable is created by running the vehicle's Vehicle Identification Number (VIN) through the PCVINA computer program.

Source: Derived variable obtained from PCVINA program (VIN-based).

Variable Definitions and Codes - GeneralVehicle Data Set

Cross Reference: Congruent with GeneralVehicle.GVEModel, values will differ due to VIN vs. Researcher determined values. Congruent with Overview.OVEModel, values will differ due to VIN vs. Researcher determined values.

Variable Name: VINModel

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	PCVINA returned value
9999999999	Unknown

VIN Year

Definition: This variable is created by running the vehicle's Vehicle Identification Number (VIN) through the PCVINA computer program.

Source: Derived variable obtained from PCVINA program (VIN-based).

Cross Reference: Congruent with GeneralVehicle.GVEYear, values will differ due to VIN vs. Researcher determined values. Congruent with Overview.OVEYear, values will differ due to VIN vs. Researcher determined values. Related to TruckUnits.ManufactureDate if TruckUnits.TUNPosition = 1 when applicable.

Variable Name: VINYear

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	PCVINA returned value

Series

Definition: This variable is created by running the vehicle's Vehicle Identification Number (VIN) through the PCVINA computer program.

Source: Derived variable obtained from PCVINA program (VIN-based).

Variable Name: Series

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	PCVINA returned value

VIN Body Type

Definition: This variable is created by running the vehicle's Vehicle Identification Number (VIN) through the PCVINA computer program.

Source: Derived variable obtained from PCVINA program (VIN-based).

Cross Reference: Congruent with GeneralVehicle.GVEBodyType, values will differ due to VIN vs. Researcher determined values. Congruent with VehicleExterior.VEXBodyType, values will differ due to VIN vs. Researcher determined values.

Variable Definitions and Codes - GeneralVehicle Data Set

Variable Name: VINBodyType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	PCVINA returned value
9999999999	Unknown

Roof1

Definition: This variable is created by running the vehicle's Vehicle Identification Number (VIN) through the PCVINA computer program.

Source: Derived variable obtained from PCVINA program (VIN-based).

Variable Name: Roof1

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	PCVINA returned value

Roof2

Definition: This variable is created by running the vehicle's Vehicle Identification Number (VIN) through the PCVINA computer program.

Source: Derived variable obtained from PCVINA program (VIN-based).

Variable Name: Roof2

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	PCVINA returned value

Roof3

Definition: This variable is created by running the vehicle's Vehicle Identification Number (VIN) through the PCVINA computer program.

Source: Derived variable obtained from PCVINA program (VIN-based).

Variable Name: Roof3

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	PCVINA returned value

Front Wheel Drive

Definition: This variable is created by running the vehicle's Vehicle Identification Number (VIN) through the PCVINA computer program.

Source: Derived variable obtained from PCVINA program (VIN-based).

Variable Definitions and Codes - GeneralVehicle Data Set

Cross Reference: Congruent with VehicleExterior.DriverWheels, values will differ due to VIN vs. Researcher determined values.

Variable Name: FrontWheelDrive

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	PCVINA returned value
8	Not applicable/No value returned by PCVINA
9	Unknown

Four Wheel Drive

Definition: This variable is created by running the vehicle's Vehicle Identification Number (VIN) through the PCVINA computer program.

Source: Derived variable obtained from PCVINA program (VIN-based).

Cross Reference: Congruent with VehicleExterior.DriverWheels, values will differ due to VIN vs. Researcher determined values.

Variable Name: FourWheelDrive

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	PCVINA returned value
8	Not applicable/No value returned by PCVINA
9	Unknown

Restraint Type

Definition: This variable is created by running the vehicle's Vehicle Identification Number (VIN) through the PCVINA computer program.

Source: Derived variable obtained from PCVINA program (VIN-based).

Cross Reference: Related to Airbags data set and Occupants.ManualBeltAvailable, but results not identical due to VIN vs. Researcher determined values.

Variable Name: GVERestraintType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	PCVINA returned value

Carburetion

Definition: This variable is created by running the vehicle's Vehicle Identification Number (VIN) through the PCVINA computer program.

Source: Derived variable obtained from PCVINA program (VIN-based).

Variable Name: Carburetion

Variable Definitions and Codes - GeneralVehicle Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	PCVINA returned value
888	Not applicable/No value returned by PCVINA
999	Unknown

Fuel Type

Definition: This variable is created by running the vehicle's Vehicle Identification Number (VIN) through the PCVINA computer program.

Source: Derived variable obtained from PCVINA program (VIN-based).

Variable Name: FuelType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	PCVINA returned value

VIN Weight

Definition: This variable is created by running the vehicle's Vehicle Identification Number (VIN) through the PCVINA computer program.

Source: Derived variable obtained from PCVINA program (VIN-based).

Variable Name: VINWeight

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	PCVINA returned value

Vehicle Type

Definition: This variable is created by running the vehicle's Vehicle Identification Number (VIN) through the PCVINA computer program.

Source: Derived variable obtained from PCVINA program (VIN-based).

Variable Name: VehicleType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	PCVINA returned value

Wheel Configuration

Definition: This variable is created by running the vehicle's Vehicle Identification Number (VIN) through the PCVINA computer program.

Source: Derived variable obtained from PCVINA program (VIN-based).

Variable Definitions and Codes - GeneralVehicle Data Set

Variable Name: WheelConfig

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	PCVINA returned value

Daytime Running Lights

Definition: This variable is created by running the vehicle's Vehicle Identification Number (VIN) through the PCVINA computer program.

Source: Derived variable obtained from PCVINA program (VIN-based).

Variable Name: DayRunningLights

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	PCVINA returned value

Base Weight

Definition: This variable is created by running the vehicle's Vehicle Identification Number (VIN) through the PCVINA computer program.

Source: Derived variable obtained from PCVINA program (VIN-based).

Cross Reference: Related to GeneralVehicle.GVECurbWeight, values will differ in part due to VIN vs. Researcher determined values. Related to VehicleExterior.VEXCurbWeight, values will differ in part due to VIN vs. Researcher determined values. Related to TruckExterior.TEXEmptyWeight, values will differ in part due to VIN vs. Researcher determined values. Related to the sum of TruckUnits.TUNEmptyWeight, values will differ in part due to VIN vs. Researcher determined values.

Variable Name: BaseWeight

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value (kg)
9999	Unknown

Motorcycle Displacement

Definition: This variable is created by running the vehicle's Vehicle Identification Number (VIN) through the PCVINA computer program.

Source: Derived variable obtained from PCVINA program (VIN-based).

Cross Reference: Related to GeneralVehicle.GVEModel (701-709), values will differ in part due to VIN vs. Researcher determined values. Related to Overview.OVEModel (701-709), values will differ in part due to VIN vs. Researcher determined values.

Variable Name: GVEMotorcycleDisplacement

Variable Definitions and Codes - GeneralVehicle Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	PCVINA returned value
88888887	Not applicable
99999999	Unknown

Police Reported Travel Speed

Definition: This variable documents the travel speed of the vehicle (prior to the crash) as reported by police on the Police Accident Report (PAR).

Source: Police report only.

Cross Reference: Identical to DriverDecisionAggression.ADATravelSpeed. Congruent with TruckExterior.TEXSpeed, values will differ due to Police Report vs. Vehicle's data recorder.

Variable Name: **GVETravelSpeed**

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Speed traveled (km/hr)
9999	Unknown

Posted Speed

Definition: This variable establishes the posted speed limit in effect for the crash location.

Source: Primary sources are scene inspection or statutory law. The police report is a secondary source.

Cross Reference: Identical to DriverDecisionAggression.ADAPostedSpeed.

Variable Name: **GVEPostedSpeed**

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual posted speed (km/hr)
9999	Unknown

Is The Driver Present?

Definition: This variable serves as a flag to identify driverless motor vehicles in-transport.

Source: Researcher determined, based on all available evidence.

Variable Name: **DriverPresent**

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No Driver Present
1	Yes
9	Unknown

Variable Definitions and Codes - GeneralVehicle Data Set

Police Reported Alcohol Present?

Definition: This variable establishes whether or not the police report indicates that the driver had consumed an alcoholic beverage. Presence is not an indication that alcohol was in any way a cause of the crash, even though it might have been. Finding opened or unopened alcoholic beverages in the vehicle does not by itself constitute presence.

Source: Police accident report.

Cross Reference: Congruent with Crash.CRAAlcohol, values will differ due to Police Report vs. Researcher determined values. Congruent with DriverAssessment.AlcoholUse, values will differ due to Police Report vs. Researcher determined values. Congruent with Overview.OVEAlcohol, values will differ due to Police Report vs. Researcher determined values.

Variable Name: PARAlcoholPresent

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No alcohol present
1	Yes alcohol present
7	Not reported
8	No driver present
9	Unknown

Alcohol Test For Driver

Definition: This variable establishes whether or not an alcohol test was administered to this driver.

Source: Police accident report.

Variable Name: PARAlcoholTest

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Test performed
95	Test refused
96	None given
97	AC test performed, results unknown
98	No driver present
99	Unknown

Alcohol Test Result

Definition: This variable reports the results of any analytical alcohol test conducted on the driver. Sources of information include the police report, medical records, and other official sources.

Source: Police report, carrier records, medical records, or other official sources.

Cross Reference: Congruent with DriverAssessment.AlcoholTest, values will differ due to Police Report vs. Researcher determined values.

Variable Name: PARAlcoholTestResult

Variable Definitions and Codes - GeneralVehicle Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-1000	Test result value [percent (times 100)]
8888	No Driver Present
9999	Unknown

Time Between Crash And Alcohol Test

Definition: This variable documents the time delay between the time of the crash and the administration of an alcohol test.

Source: Medical records, police report, carrier records, or other official sources.

Cross Reference: Congruent with DriverAssessment.TestDelay, values will differ due to Police Report vs. Researcher determined.

Variable Name: PARTestDelay

Attribute Codes

<u>Code</u>	<u>Meaning</u>
00:00-90:00	Time delayed (in HH:MM format)
97:97	Not applicable
98:98	No BAC test
99:99	Unknown

Source Of Alcohol Test Results

Definition: This variable establishes the source of the data provided in the variable "Alcohol Test Results."

Source: Police report, medical reports, or other official sources.

Cross Reference: Congruent with DriverAssessment.TestSource, values will differ due to Police Report vs. Researcher determined values.

Variable Name: PARTestSource

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No BAC test
1	Police reported
2	Company reported
3	Medical Record
4	Autopsy
5	Lay Coroner
6	No driver present
8	Other (specify)
9	Unknown

Variable Definitions and Codes - GeneralVehicle Data Set

Police Reported Other Drug Presence?

Definition: This variable establishes whether or not the police report indicated that the driver had ingested an “other” drug prior to the crash. An “other” drug includes all prescription, over-the-counter medications, as well as “illicit” (illegal) drugs. Police-reported presence of an “other” drug is not an indication that the drug usage was in any way the cause of the crash, even though it might have been. Finding other drugs in the vehicle does not by itself constitute presence.

Source: Police report.

Cross Reference: Congruent with DriverAssessment.DrugTest, values will differ due to Police Report vs. Researcher determined values. Congruent with Overview.AnyDrugsVeh, values will differ due to Police Report vs. Researcher determined values. Congruent with DriverDrugs data set, values will differ due to Police Report vs. Researcher determined values.

Variable Name: PARDrugsPresent

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No other drug(s) present
1	Yes, other drug(s) present
7	Not reported
8	No driver present
9	Unknown

Driver's Zip Code

Definition: This variable documents the 5-digit zip code for the driver's primary residence.

Source: Primary source is the police report; secondary sources include interviewees, medical records, and other official documents.

Cross Reference: Related to DMVViolation.LicState. Related to IntvwDrDriver.IDRLicenseState, values will differ in part due to Interview vs. Researcher determined values.

Variable Name: ZipCode

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Five-digit zip code
1	Driver not a resident of U.S. or territories
99999	Unknown

Race/Ethnic Origin Of Driver

Definition: This variable documents the self-identification of race/ethnic origin by the driver.

Source: Researcher determined – primary source is the interviewee; secondary sources include police report, medical records, and other official documents.

Cross Reference: Identical to Occupants.Race if Occupants.Role = 1.

Variable Name: EthnicOrigin

Variable Definitions and Codes - GeneralVehicle Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	White (non-Hispanic)
2	Black (non-Hispanic)
3	White (Hispanic)
4	Black (Hispanic)
5	American Indian, Eskimo or Aleut
6	Asian or Pacific Islander
7	Other (specify)
8	No driver present
9	Unknown

Commercial Motor Vehicle Crashes

Definition: This variable reports the number of crashes this driver has been involved in while driving a Commercial Motor Vehicle (CMV) in the past 5 years, as reported by the Department of Motor Vehicles (DMV).

Source: DMV records.

Cross Reference: Congruent with GeneralVehicle.MCMISCrashes, values will differ due to CDLIS vs. MCMIS values. Congruent with IntvwDrDriver.CommCrashes, values will differ due to Interview vs. CDLIS values.

Variable Name: CMVCrashes

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value
88	No driver present
97	No official records found

Commercial Motor Vehicle Violations

Definition: This variable reports the number of Commercial Motor Vehicle (CMV) violations received by this driver in the past 5 years, as reported by the Department of Motor Vehicles (DMV).

Source: DMV records.

Cross Reference: Related to IntvwDrDriver.CMVCitations, values will differ due to Citations vs. Violations and Interview vs. CDLIS.

Variable Name: CMVViolations

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value
88	No driver present
97	No official records found
98	Not a CMV driver

Variable Definitions and Codes - GeneralVehicle Data Set

Non-Commercial Motor Vehicle Crashes

Definition: This variable reports the number of crashes this driver has been involved in while driving a non-commercial motor vehicle in the past 5 years, as reported by the Department of Motor Vehicles (DMV).

Source: DMV records.

Cross Reference: Congruent with IntvwDrDriver.NonCommCrashes, values will differ due to Interview vs. CDLIS values.

Variable Name: NonCMVCrashes

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value
88	No driver present
97	No official records found

Non-Commercial Motor Vehicle Violations

Definition: This variable reports the number of violations received by this driver while driving a non-commercial motor vehicle in the past 5 years, as reported by the Department of Motor Vehicles (DMV).

Source: DMV records.

Variable Name: NonCMVViolations

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value
88	No driver present
97	No official records found

Total Crashes

Definition: This variable reports the total number of crashes this driver has been involved in while driving any type of vehicle in the past 5 years, as reported by the Department of Motor Vehicles (DMV).

Source: DMV records.

Variable Name: TotalCrashes

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value
88	No driver present
97	No official records found

Variable Definitions and Codes - GeneralVehicle Data Set

Total Violations

Definition: This variable reports the total number of violations received by this driver (both CMV and non-CMV) in the past 5 years, as reported by the Department of Motor Vehicles (DMV).

Source: DMV records.

Cross Reference: Related to the DMVViolations data set, violations pertaining to 5 years prior to the crash date.

Variable Name: `GVETotalViolations`

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value
88	No driver present
97	No official records found

Previous Violations

Definition: This variable reports the total number of violations received by this driver (both CMV and non-CMV) in the years previous to the last 5 years, as reported by the Department of Motor Vehicles (DMV).

Source: DMV records.

Cross Reference: Related to the DMVViolations data set, violations older than 5 years from the crash date.

Variable Name: `PrevViolations`

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value
88	No driver present
97	No official records found

Unknown Type Crashes

Definition: This variable reports the number of crashes this driver has been involved in while driving an unknown type vehicle in the past 5 years, as reported by the Department of Motor Vehicles (DMV).

Source: DMV records.

Variable Name: `UnkTypeCrashes`

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value
88	No driver present
97	No official records found

Variable Definitions and Codes - GeneralVehicle Data Set

MCMIS Crashes

Definition: This variable reports the number of crashes this driver has been involved in while driving a commercial motor vehicle (CMV), as reported to the Motor Carrier Management Information System (MCMIS).

Source: MCMIS records.

Cross Reference: Congruent with GeneralVehicle.CMVCrashes, values will differ due to CDLIS vs. MCMIS values. Congruent with IntvwDrDriver.CommCrashes, values will differ due to Interview vs. MCMIS values.

Variable Name: MCMISCrashes

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value
88	No driver present
97	No official records found
98	Not a CMV driver

MCMIS Commercial Motor Vehicle Violations

Definition: This variable represents the total number of types of inspection violations cited to this driver (not including local violations), as reported by the Motor Carrier Management Information System (MCMIS).

Source: MCMIS records.

Variable Name: MCMIScmvViolations

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value
88	No driver present
97	No official records found
98	Not a CMV driver

MCMIS Commercial Motor Vehicle Non-Violations

Definition: This variable represents the total number of types of "local" inspection violations cited to this driver, as reported by the Motor Carrier Management Information System (MCMIS).

Source: MCMIS records.

Variable Name: MCMIScmvNonViolations

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value
88	No driver present
97	No official records found
98	Not a CMV driver

Variable Definitions and Codes - HazMat Data Set

HazMat Data Set

The HazMat data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID, VehicleNumber and Material uniquely identify each record in this data set. CaseID and VehicleNumber should be used to merge the HazMat data set with vehicle level data sets. This data set also contains the following variables:

Source: All variables in this table are researcher determined. Primary source is the Level 1 Truck Inspection report; secondary sources include driver and carrier interviews.

Cross Reference: This table is related to TruckExterior.PlacardRequirement and TruckUnits.Hazard.

Hazardous Material

Definition: This variable establishes the type of hazardous material that the vehicle was transporting at the time of the crash, as reported by the Truck Inspector. The attributes are FMCSA-generated designations.

Cross Reference: Related to IntvwCarrier.PrimHazMat and IntvwCarrier.OtherHazMat, values will differ in part due to Interview vs. Researcher determined values.

Variable Name: Material

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	1.1 Explosives 1.1
2	1.2 Explosives 1.2
3	1.3 Explosives 1.3
4	1.4 Explosives 1.4
5	1.5 Explosives 1.5
6	1.6 Explosives 1.6
7	2.1 Flammable Gas
8	2.2 Nonflammable Gas
9	2.3 Poisonous Gas
10	2.1 LPG
11	2.1 Methane
12	2.2 Anhydrous Ammon
13	2.3 Zone A
14	2.3 Zone B
15	2.3 Zone C
16	2.3 Zone D
17	3 Flammable
18	3 Zone A
19	3 (PIH) Zone B
20	6.1 (Liquids)
21	3 Combustible Liquid
22	4.1 Flammable Solid
23	4.2 Spontan Combust
24	4.3 Dangerous wn/Wet
25	5.1 Oxidizer
26	5.2 Organic Peroxide

Variable Definitions and Codes - HazMat Data Set

27	6.2 Infectious Subst
28	6.1 Zone A
29	6.1 Zone B
30	6.1 (Solids)
31	7 Radioactive Materl
32	Hwy Route Cntr Qty
33	8 Corrosive Material
34	8 (PIH) Zone A
35	8 (PIH) Zone B
36	9 Miscellaneous HM
37	9 (Elev Temp Materl)
38	9 (Infectious Waste)
39	9 (Marine Pollutnts)
40	9 (Hazardous Subst)
41	9 (Hazardous Waste)
42	ORM-D

Reportable?

Definition: This variable establishes whether or not the hazardous material that was being transported was a reportable quantity, as reported by the Truck Inspector. This is an FMCSA-generated variable.

Variable Name: Reportable

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Yes
2	No
99	Unknown

Hazardous Material Waiver?

Definition: This variable establishes whether or not the carrier had a waiver in place for the hazardous material that was being transported at the time of the crash, as reported by the Truck Inspector. This is an FMCSA-generated variable.

Variable Name: Waiver

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Yes
2	No
99	Unknown

Variable Definitions and Codes - HazMatInsp Data Set

HazMatInsp Data Set

The HazMatInsp data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID, VehicleNumber and HMIInspection uniquely identify each record in this data set. CaseID and VehicleNumber should be used to merge the HazMatInsp data set with vehicle level data sets. This data set also contains the following variables:

Source: The source for all variables in this table is the Level 1 Truck Inspection report.

Hazardous Material Inspection

Definition: This variable is a listing of the inspection items required by FMCSA, to be completed by the Truck Inspector, when the truck is transporting hazardous materials. This is an FMCSA-generated variable.

Variable Name: HMIInspection

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Ship paper/manifest (HA)
2	HM license (HB)
3	HW registration (HC)
4	Placards (HD)
5	Packaging (HE)
6	Markings (HF)
7	Labels (HG)
8	Loading/securement (HH)
9	Cargo/portable tanks (HI)
10	Safety equipment (HJ)
11	Not applicable
12	(Inspection not required)
99	Unknown

Inspection Exists?

Definition: This variable establishes whether or not the truck was inspected by a certified North American Commercial Vehicle Inspector, and that an official truck inspection document exists.

Variable Name: InspectionExists

Attribute Codes

<u>Code</u>	<u>Meaning</u>
Yes	Yes
No	No
N/A	Not applicable
UNK	Unknown

Violation?

Definition: This variable indicates whether or not the items listed in the variable "Hazardous Material Inspection" are in violation of FMCSA standards. This is an FMCSA-generated variable.

Variable Definitions and Codes - HazMatInsp Data Set

Cross Reference: Related to TruckInspection.TINViolationCode (when the code relates to Hazardous Material Violations).

Variable Name: HMIViolation

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Yes
2	No
9	Unknown

Out-Of-Service?

Definition: This variable establishes whether or not a particular violation is classified as “out-of-service.” This variable is related to the “Violation” variable, which is related to the “Hazardous Material Inspection” variable. This is an FMCSA-generated variable.

Cross Reference: Related to TruckInspection.TINOutOfService.

Variable Name: HMIOutOfService

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Yes
2	No
9	Unknown

Disposition

Definition: This variable documents the disposition of each violation (how it was handled) by the Truck Inspector. This variable is related to the “Violation” variable, which is related to the “Hazardous Material Inspection” variable. This is an FMCSA-generated variable.

Cross Reference: Related to TruckInspection.TINDisposition.

Variable Name: HMIDisposition

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Repaired at scene
2	Towed/Escorted
3	Other (specify)
8	Not applicable
9	Unknown

Variable Definitions and Codes - Injuries Data Set

Injuries Data Set

The Injuries data set contains the variables CaseID, PSU, PSUStrat, RATWeight, VehicleNumber, OccupantNumber and InjuryNumber. OccupantNumber is assigned to each occupant in a vehicle. InjuryNumber is assigned to each occupant's injuries. CaseID, VehicleNumber, OccupantNumber and InjuryNumber uniquely identify each record in this data set. CaseID, VehicleNumber and OccupantNumber should be used to merge the Injuries data set with the Occupant data sets. This data set also contains the following variables:

Occupant Injury Description

Definition: This variable provides a description of each injury.

Source: Zone Center determined – inputs include driver interview and medical records.

Variable Name: OINDescription

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	AIS code provided in text format

AIS Code

Definition: This variable is a listing of the Abbreviated Injury Scale (AIS) codes. The AIS is a numerical method for ranking and comparing injuries by severity.

Source: Zone Center determined – inputs include driver interview and medical records.

Variable Name: AISCode

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1130006	Head Crush
1150997	Closed head injury/blunt head trauma/traumatic brain injury NFS
1152997	Traumatic brain injury NFS
1159997	Closed Head Injury (Died Without Further Evaluation - No Autopsy)
1202025	Anterior cerebral artery laceration
1202043	Anterior cerebral artery thrombosis (occlusion)
1202063	Anterior cerebral artery traumatic aneurysm
1202993	Anterior cerebral artery NFS
1204025	Basilar artery laceration
1204045	Basilar artery thrombosis (occlusion)
1204065	Basilar Artery Traumatic Aneurysm
1204995	Basilar artery NFS
1206024	Carotid-cavernous fistula
1208024	Cavernous sinus laceration
1208045	Cavernous sinus open laceration or segmental loss
1208063	Cavernous sinus thrombosis (occlusion)
1208993	Cavernous sinus NFS
1210025	Internal carotid artery laceration
1210044	Internal carotid artery thrombosis (occlusion)

Variable Definitions and Codes - Injuries Data Set

1210063	Internal carotid artery traumatic aneurysm
1210993	Internal carotid artery NFS
1212024	Intracranial vessel laceration
1212043	Intracranial vessel thrombosis (occlusion)
1212063	Intracranial vessel traumatic aneurysm
1212993	Intracranial vessel NFS
1214025	Middle cerebral artery laceration
1214044	Middle cerebral artery thrombosis (occlusion)
1214063	Middle cerebral artery traumatic aneurysm
1214993	Middle cerebral artery NFS
1216024	Other head artery laceration
1216043	Other head artery thrombosis (occlusion)
1216063	Other head artery traumatic aneurysm
1216993	Other head artery NFS
1218025	Posterior cerebral artery laceration
1218043	Posterior cerebral artery thrombosis (occlusion)
1218063	Posterior cerebral artery traumatic aneurysm
1218993	Posterior cerebral artery NFS
1220024	Sigmoid sinus laceration
1220045	Sigmoid sinus open laceration or segmental loss
1220064	Sigmoid sinus thrombosis (occlusion)
1220994	Sigmoid sinus NFS
1222024	Sinus or major vein laceration
1222043	Sinus or major vein thrombosis (occlusion)
1222993	Sinus NFS or major vein NFS
1224024	Superior longitudinal (sagittal) sinus laceration
1224045	Superior longitudinal (sagittal) sinus open laceration or segmental loss
1224064	Superior longitudinal (sagittal) sinus thrombosis (occlusion)
1224994	Superior longitudinal (sagittal) sinus NFS
1226024	Transverse sinus laceration
1226045	Transverse sinus open laceration or segmental loss
1226064	Transverse sinus thrombosis (occlusion)
1226994	Transverse sinus NFS
1228025	Vertebral artery laceration
1228043	Vertebral artery thrombosis (occlusion)
1228063	Vertebral artery traumatic aneurysm
1228993	Vertebral artery NFS
1302022	Cranial nerve contusion
1302042	Cranial nerve laceration
1302992	Cranial nerve NFS
1304022	I Olfactory nerve contusion
1304042	I Olfactory nerve laceration
1304992	I Olfactory nerve NFS
1306022	II Optic nerve--intracranial and intracanalicular segments contusion
1306042	II Optic nerve--intracranial and intracanalicular segments contusion bilateral
1306062	II Optic nerve--intracranial and intracanalicular segments laceration
1306082	II Optic nerve--intracranial and intracanalicular segments laceration bilateral
1306992	II Optic nerve--intracranial and intracanalicular segments NFS
1308022	III Oculomotor nerve contusion or compression

Variable Definitions and Codes - Injuries Data Set

1308042	III Oculomotor nerve laceration
1308992	III Oculomotor nerve NFS
1310022	IV Trochlear nerve contusion
1310042	IV Trochlear nerve laceration
1310992	IV Trochlear nerve NFS
1312022	V Trigeminal nerve contusion
1312042	V Trigeminal nerve laceration
1312992	V Trigeminal nerve NFS
1314022	VI Abducens nerve contusion
1314042	VI Abducens nerve laceration
1314992	VI Abducens nerve NFS
1316022	VII Facial nerve contusion
1316042	VII Facial nerve laceration
1316992	VII Facial nerve NFS
1318022	VIII Acoustic Nerve contusion
1318042	VIII Acoustic Nerve laceration
1318062	VIII Acoustic Nerve laceration bilateral
1318992	VIII Acoustic Nerve NFS
1320022	IX Glossopharyngeal nerve contusion
1320042	IX Glossopharyngeal nerve laceration
1320992	IX Glossopharyngeal nerve NFS
1322022	X Vagus nerve contusion
1322042	X Vagus nerve laceration
1322992	X Vagus nerve NFS
1324022	XI Spinal accessory nerve contusion
1324042	XI Spinal accessory nerve laceration
1324992	XI Spinal accessory nerve NFS
1326022	XII Hypoglossal nerve contusion
1326042	XII Hypoglossal nerve laceration
1326992	XII Hypoglossal nerve NFS
1402025	Brain stem compression
1402045	Brain stem contusion
1402065	Brain stem diffuse axonal injury (white matter shearing)
1402085	Brain stem infarction
1402105	Brain stem injury involving hemorrhage
1402126	Brain stem laceration
1402146	Brain stem massive destruction
1402166	Brain stem penetrating injury
1402186	Brain stem transection
1402995	Brain stem NFS
1404023	Cerebellum contusion, single or multiple, NFS
1404033	Cerebellum contusion small
1404044	Cerebellum contusion large
1404055	Cerebellum contusion extensive
1404065	Cerebellum diffuse axonal injury (white matter shearing)
1404104	Cerebellum hematoma/hemorrhage NFS - extra axial
1404144	Cerebellum hematoma/hemorrhage epidural or extradural NFS
1404184	Cerebellum hematoma/hemorrhage epidural or extradural small
1404225	Cerebellum epidural or extradural hematoma/hemorrhage large

Variable Definitions and Codes - Injuries Data Set

1404264	Cerebellum hematoma/hemorrhage intracerebellar NFS
1404304	Cerebellum hematoma/hemorrhage intracerebellar small
1404345	Cerebellum hematoma/hemorrhage intracerebellar large
1404384	Cerebellum hematoma/hemorrhage subdural NFS
1404424	Cerebellum hematoma/hemorrhage subdural small
1404465	Cerebellum hematoma/hemorrhage subdural large
1404503	Cerebellum brain swelling/edema
1404543	Cerebellum edema
1404583	Cerebellum infarction
1404623	Cerebellum ischemia
1404663	Cerebellum subarachnoid hemorrhage
1404703	Cerebellum subpial hemorrhage
1404744	Cerebellum laceration
1404785	Cerebellum penetrating injury
1404993	Cerebellum NFS
1406023	Cerebrum contusion NFS
1406043	Cerebrum contusion single NFS
1406063	Cerebrum contusion single small
1406084	Cerebrum contusion single large
1406105	Cerebrum contusion single extensive
1406113	Cerebrum Contusions - multiple NFS
1406123	Cerebrum contusion multiple, on same side NFS
1406143	Cerebrum contusion multiple, on same side small
1406164	Cerebrum contusion multiple, on same side large
1406185	Cerebrum contusion multiple, on same side extensive
1406203	Cerebrum contusion multiple, at least one on each side but NFS
1406223	Cerebrum contusion multiple, at least one on each side small
1406244	Cerebrum contusion multiple, at least one on each side large
1406265	Cerebrum contusion multiple, at least one on each side extensive
1406285	Cerebrum diffuse axonal injury (white matter shearing)
1406294	Cerebrum hematoma/hemorrhage NFS - extra axial
1406304	Cerebrum hematoma/hemorrhage epidural or extradural NFS
1406324	Cerebrum hematoma/hemorrhage epidural or extradural small
1406345	Cerebrum hematoma/hemorrhage epidural or extradural small bilateral
1406365	Cerebrum hematoma/hemorrhage epidural or extradural large
1406384	Cerebrum hematoma/hemorrhage intracerebral NFS
1406404	Cerebrum hematoma/hemorrhage intracerebral small
1406424	Cerebrum hematoma/hemorrhage intracerebral small petechial hemorrhage(s)
1406444	Cerebrum hematoma/hemorrhage intracerebral small subcortical hemorrhage
1406465	Cerebrum hematoma/hemorrhage intracerebral bilateral
1406485	Cerebrum hematoma/hemorrhage intracerebral large
1406504	Cerebrum hematoma/hemorrhage subdural NFS
1406524	Cerebrum hematoma/hemorrhage subdural small
1406545	Cerebrum hematoma/hemorrhage subdural small bilateral
1406565	Cerebrum hematoma/hemorrhage subdural large
1406603	Cerebrum brain swelling/edema NFS
1406623	Cerebrum brain swelling mild
1406644	Cerebrum brain swelling moderate

Variable Definitions and Codes - Injuries Data Set

1406665	Cerebrum brain swelling severe
1406683	Cerebrum edema NFS
1406703	Cerebrum edema mild
1406724	Cerebrum edema moderate
1406745	Cerebrum edema severe
1406763	Cerebrum infarction
1406784	Cerebrum intraventricular hemorrhage/intracerebral hematoma in ventricular system
1406803	Cerebrum ischemia (directly related to trauma)
1406823	Cerebrum pneumocephalus (directly related to trauma)
1406843	Cerebrum subarachnoid hemorrhage
1406863	Cerebrum subpial hemorrhage
1406884	Cerebrum laceration
1406905	Cerebrum penetrating injury
1406993	Cerebrum NFS (use if described as 'brain' injury)
1407993	Pituitary injury
1500002	Skull fracture NFS
1502003	Base (basilar) skull fracture NFS
1502023	Base (basilar) skull fracture without CSF leak
1502043	Base (basilar) skull fracture with CSF leak
1502064	Base (basilar) skull fracture complex
1504002	Vault skull fracture NFS
1504022	Vault skull fracture closed
1504043	Vault skull fracture comminuted
1504064	Vault skull fracture complex
1504084	Vault skull fracture massively depressed
1602022	Length of Unconsciousness < 1 Hr.
1602043	Length of Unconsciousness known to be <1 hr. with neurological deficit
1602063	Length of Unconsciousness known to be 1-6 hrs.
1602084	Length of Unconsciousness known to be 1-6 hrs. with neurological deficit
1602104	Length of Unconsciousness known to be 6-24 hrs.
1602125	Length of Unconsciousness known to be 6-24 hrs. with neurological deficit
1602145	Length of Unconsciousness known to be > 24 hrs.
1604021	Awake post resuscitation on Admission or Initial Observation at Scene (GCS 15) no prior unconsciousness
1604042	Awake post resuscitation on Admission or Initial Observation at Scene (GCS 15) no prior unconsciousness with neurological deficit
1604062	Awake post resuscitation on Admission or Initial Observation at Scene (GCS 15) prior unconsciousness, but length of time NFS
1604083	Awake post resuscitation on Admission or Initial Observation at Scene (GCS 15) prior unconsciousness with neurological deficit
1604102	Awake post resuscitation on Admission or Initial Observation at Scene (GCS 15) amnesia
1604123	Awake post resuscitation on Admission or Initial Observation at Scene (GCS 15) amnesia with neurological deficit
1604142	Awake post resuscitation on Admission or Initial Observation at Scene (GCS 15) unconsciousness known to be < 1 hr.
1604163	Awake post resuscitation on Admission or Initial Observation at Scene (GCS 15) unconsciousness known to be <1 hr. with neurological deficit
1604991	Awake post resuscitation on Admission or Initial Observation at Scene (GCS 15) NFS

Variable Definitions and Codes - Injuries Data Set

1606022	Lethargic, Stuporous, Obtunded post resuscitation on Admission or Initial Observation at Scene (GCS 9-14) no prior unconsciousness
1606043	Lethargic, Stuporous, Obtunded post resuscitation on Admission or Initial Observation at Scene (GCS 9-14) no prior unconsciousness with neurological deficit
1606062	Lethargic, Stuporous, Obtunded post resuscitation on Admission or Initial Observation at Scene (GCS 9-14) prior unconsciousness, but length of time NFS
1606083	Lethargic, Stuporous, Obtunded post resuscitation on Admission or Initial Observation at Scene (GCS 9-14) prior unconsciousness, but length of time NFS with neurological deficit
1606102	Lethargic, Stuporous, Obtunded post resuscitation on Admission or Initial Observation at Scene (GCS 9-14) unconsciousness known to be < 1 hr.
1606123	Lethargic, Stuporous, Obtunded post resuscitation on Admission or Initial Observation at Scene (GCS 9-14) unconsciousness known to be <1hr. with neurological deficit
1606143	Lethargic, Stuporous, Obtunded post resuscitation on Admission or Initial Observation at Scene (GCS 9-14) 1-6 hrs. unconsciousness
1606164	Lethargic, Stuporous, Obtunded post resuscitation on Admission or Initial Observation at Scene (GCS 9-14)1-6 hrs. unconsciousness with neurological deficit
1606992	Lethargic, Stuporous, Obtunded post resuscitation on Admission or Initial Observation at Scene (GCS 9-14) NFS
1608023	Unconscious post resuscitation on Admission or Initial Observation at Scene (GCS <9) length of unconsciousness NFS
1608044	Unconscious post resuscitation on Admission or Initial Observation at Scene (GCS <9) length of unconsciousness NFS with neurological deficit
1608063	Unconscious post resuscitation on Admission or Initial Observation at Scene (GCS <9) < 1 hr.
1608084	Unconscious post resuscitation on Admission or Initial Observation at Scene (GCS <9) <1 hr. with neurological deficit
1608103	Unconscious post resuscitation on Admission or Initial Observation at Scene (GCS < 9) 1-6 hrs.
1608124	Unconscious post resuscitation on Admission or Initial Observation at Scene (GCS <9) 1-6 hrs. with neurological deficit
1608144	Unconscious post resuscitation on Admission or Initial Observation at Scene (GCS <9) 6-24 hrs.
1608165	Unconscious post resuscitation on Admission or Initial Observation at Scene (GCS <9) 6-24 hrs. with neurological deficit
1608185	Unconscious post resuscitation on Admission or Initial Observation at Scene (GCS <9) > 24 hrs.
1608204	Unconscious post resuscitation on Admission or Initial Observation at Scene (GCS <9) appropriate movements with painful stimuli no matter length of time
1608225	Unconscious post resuscitation on Admission or Initial Observation at Scene (GCS <9) appropriate movements with painful stimuli no matter length of unconsciousness with neurological deficit
1608245	Unconscious post resuscitation on Admission or Initial Observation at Scene (GCS <9) inappropriate movements no matter length of unconsciousness
1608993	Unconscious post resuscitation on Admission or Initial Observation at Scene (GCS <9) NFS
1610002	Cerebral Concussion
1900991	Scalp NFS

Variable Definitions and Codes - Injuries Data Set

1902021	Scalp abrasion
1904021	Scalp contusion/subgaleal hematoma
1906001	Scalp laceration NFS
1906021	Scalp laceration minor
1906042	Scalp laceration major
1906063	Scalp laceration blood loss >20% by volume
1908001	Scalp avulsion NFS
1908021	Scalp avulsion superficial
1908042	Scalp avulsion major
1908063	Scalp avulsion blood loss > 20% by volume
1908083	Scalp total scalp loss
1920001	Head unspecified burn
1920021	Head 1st degree burn
1920042	Head 1st degree burn
1920061	Head 2nd degree burn <10% TBS
1920082	Head 3rd degree burn <10% TBS
1920103	Head 3rd degree burn <10% TBS with face/hand/genitalia involvement
1920122	Head 2 or 3 degree burn 10-19% TBS
1920143	Head 2 or 3 degree burn 10-19% TBS <5 years
1920163	Head 2 or 3 degree burn 10-19% TBS w/ face/hand/genitalia involmmt
2150997	Blunt/Traumatic Facial Injury NFS
2159997	Blunt/Traumatic Facial Injury - Died without further evaluation (no autopsy)
2202001	External carotid artery branch(es) NFS
2202021	External carotid artery minor
2202043	External carotid artery major (blood loss > 20% by volume)
2302022	Optic nerve injury contusion
2302042	Optic nerve injury laceration
2302062	Optic nerve injury avulsion
2302991	Optic nerve injury NFS
2402041	Ear canal injury
2402081	Ear Inner or middle ear injury
2402121	Ear Ossicular chain (ear bone) dislocation
2402161	Ear Tympanic membrane (ear drum) rupture
2402201	Ear Vestibular apparatus injury
2402991	Ear NFS
2404022	Eye avulsion
2404081	Eye Canaliculus (tear duct) laceration
2404121	Eye Choroid rupture
2404161	Eye Conjunctiva injury/Subconjunctiva
2404991	Eye NFS
2406021	Cornea abrasion
2406041	Cornea contusion
2406061	Cornea laceration
2406991	Cornea NFS
2408001	Iris laceration
2410001	Retina laceration
2410022	Retinal laceration with retinal detachment
2412001	Sclera laceration
2412022	Sclera laceration involving globe

Variable Definitions and Codes - Injuries Data Set

2414991	Uvea injury
2416991	Vitreous injury
2430991	Mouth injury NFS
2432021	Gingiva (gum) contusion
2432041	Gingiva (gum) laceration
2432061	Gingiva (gum) avulsion
2432991	Gingiva (gum) NFS
2434001	Tongue laceration NFS
2434021	Tongue laceration superficial
2434042	Tongue laceration deep/extensive
2502002	Alveolar ridge (bone) fracture
2504001	Facial bone(s) fracture NFS
2506001	Mandible fracture NFS
2506021	Mandible fracture closed but NFS as to location
2506041	Mandible fracture closed body/angle with or without ramus involvement
2506061	Mandible fracture closed ramus
2506082	Mandible fracture closed subcondylar
2506102	Mandible fracture open/displaced/comminuted but NFS as to location
2506122	Mandible fracture open/displaced/comminuted body/angle with or without ramus involvement
2506142	Mandible fracture open/displaced/comminuted ramus
2506162	Mandible fracture open/displaced/comminuted subcondylar
2506991	Mandible NFS
2508002	Maxilla fracture NFS
2508022	Maxilla fracture closed
2508042	Maxilla fracture LeFort I
2508062	Maxilla fracture LeFort II
2508083	Maxilla fracture LeFort III
2508104	Maxilla fracture LeFort III blood loss > 20% by volume
2510001	Nose fracture NFS
2510021	Nose fracture closed
2510042	Nose fracture open/displaced/comminuted
2510901	Nose - rupture of mucosal/vessels
2510991	Nose NFS
2512002	Orbit fracture NFS
2512022	Orbit fracture closed
2512043	Orbit fracture open/displaced/comminuted
2514021	Teeth dislocation or loosened
2514041	Teeth fracture
2514061	Teeth avulsion
2514991	Teeth NFS
2516021	Temporomandibular joint sprain
2516042	Temporomandibular joint dislocation
2516991	Temporomandibular joint NFS
2518002	Zygoma/malar fracture
2900991	Facial Skin/Subcutaneous tissue/Muscle - NFS
2902021	Facial Skin abrasion
2904021	Facial Skin contusion
2906001	Facial Skin laceration NFS
2906021	Facial Skin laceration minor

Variable Definitions and Codes - Injuries Data Set

2906042	Facial Skin laceration major
2906063	Facial Skin laceration blood loss > 20% by volume
2908001	Facial Skin avulsion NFS
2908021	Facial Skin avulsion superficial
2908042	Facial Skin avulsion major
2908063	Facial Skin avulsion blood loss >20% by volume
2920001	Face unspecified burn
2920021	Face 1st degree burn
2920042	Face 1st degree burn
2920061	Face 2nd degree burn <10% TBS
2920082	Face 3rd degree burn <10% TBS
2920103	Face 3rd degree burn <10% TBS with face/hand/genitalia involvement
2920122	Face 2 or 3 degree burn 10-19% TBS
2920143	Face 2 or 3 degree burn 10-19% TBS <5 years
2920163	Face 2 or 3 degree burn 10-19% TBS w/ face/hand/genitalia involvement
2970991	Eyelid or orbit (soft tissue) NFS
2972021	Eyelid abrasion
2974021	Eyelid contusion
2976021	Eyelid laceration
2978021	Eyelid avulsion
3110006	Decapitation
3150997	Blunt/Traumatic Neck/Throat Injury NFS
3159997	Blunt/Traumatic Neck/Throat injury - died without further evaluation (no autopsy)
3202023	Carotid (common, internal) artery intimal tear, no disruption
3202044	Carotid (common, internal) artery intimal tear, no disruption with neurological deficit (stroke)
3202063	Carotid (common, internal) artery laceration NFS
3202083	Carotid (common, internal) artery laceration minor
3202104	Carotid (common, internal) artery laceration minor with neurological deficit (stroke)
3202124	Carotid (common, internal) artery laceration major
3202145	Carotid (common, internal) artery laceration major with neurological deficit (stroke)
3202163	Carotid (common, internal) artery laceration major with thrombosis (occlusion) secondary to trauma
3202184	Carotid (common, internal) artery laceration major with thrombosis (occlusion) with neurological deficit (stroke)
3202203	Carotid (common, internal) artery thrombosis (occlusion) secondary to trauma
3202224	Carotid (common, internal) artery thrombosis (occlusion) secondary to trauma with neurological deficit (stroke)
3202993	Carotid (common, internal) artery NFS
3204022	Carotid (external) artery intimal tear, no disruption
3204042	Carotid (external) artery laceration NFS
3204062	Carotid (external) artery laceration minor
3204083	Carotid (external) artery laceration major
3204102	Carotid (external) artery laceration with thrombosis (occlusion) secondary to trauma
3204122	Carotid (external) artery thrombosis (occlusion) secondary to trauma
3204992	Carotid (external) artery NFS

Variable Definitions and Codes - Injuries Data Set

3206021	Jugular vein, external laceration NFS
3206041	Jugular vein, external laceration minor
3206063	Jugular vein, external laceration major
3206991	Jugular vein, external NFS
3208022	Jugular vein, internal laceration NFS
3208042	Jugular vein, internal laceration minor
3208063	Jugular vein, internal laceration major
3208991	Jugular vein, internal NFS (All OIS Grade II)
3210022	Vertebral artery intimal tear, no disruption
3210043	Vertebral artery intimal tear, no disruption with neurological deficit (stroke)
3210062	Vertebral artery laceration NFS
3210082	Vertebral artery laceration minor
3210103	Vertebral artery laceration minor with neurological deficit (stroke)
3210123	Vertebral artery laceration major
3210144	Vertebral artery laceration major with neurological deficit (stroke)
3210163	Vertebral artery laceration with thrombosis (occlusion) secondary to trauma
3210183	Vertebral artery thrombosis (occlusion) secondary to trauma
3210204	Vertebral artery thrombosis (occlusion) secondary to trauma with neurological deficit (stroke)
3210992	Vertebral artery NFS
3302992	Phrenic injury
3304991	Vagus injury
3402022	Larynx contusion
3402042	Larynx laceration, puncture NFS
3402062	Larynx laceration no perforation
3402083	Larynx laceration perforation
3402104	Larynx laceration perforation with vocal cord involvement
3402125	Larynx laceration massive destruction
3402992	Larynx NFS
3406023	Pharynx contusion
3406042	Pharynx laceration, puncture NFS
3406063	Pharynx laceration no perforation
3406084	Pharynx laceration perforation
3406105	Pharynx laceration massive destruction
3406993	Pharynx or Retropharyngeal area NFS
3410023	Salivary gland with ductal involvement or transection
3410992	Salivary gland NFS
3414021	Thyroid gland contusion
3414042	Thyroid gland laceration
3414991	Thyroid gland NFS
3418022	Vocal cord unilateral
3418043	Vocal cord bilateral
3418992	Vocal cord NFS
3502002	Hyoid fracture
3900991	Neck/Throat Skin/Subcutaneous tissue/Muscle NFS
3902021	Neck/Throat Skin abrasion
3904021	Neck/Throat Skin contusion
3906001	Neck/Throat Skin laceration NFS
3906021	Neck/Throat Skin laceration minor
3906042	Neck/Throat Skin laceration major

Variable Definitions and Codes - Injuries Data Set

3906063	Neck/Throat Skin laceration blood loss > 20% by volume
3908001	Neck/Throat Skin avulsion NFS
3908021	Neck/Throat Skin avulsion superficial
3908042	Neck/Throat Skin avulsion major
3908063	Neck/Throat Skin avulsion blood loss > 20% by volume
3920001	Neck unspecified burn
3920021	Neck 1st degree burn
3920042	Neck 1st degree burn
3920061	Neck 2nd degree burn <10% TBS
3920082	Neck 3rd degree burn <10% TBS
3920103	Neck 3rd degree burn <10% TBS with face/hand/genitalia involvement
3920122	Neck 2 or 3 degree burn 10-19% TBS
3920143	Neck 2 or 3 degree burn 10-19% TBS <5 years
3920163	Neck 2 or 3 degree burn 10-19% TBS w/ face/hand/genitalia involmmt
4110002	Breast avulsion, female
4130006	Chest Crush
4150997	Blunt/Traumatic chest (thoracic) injury NFS
4159997	Blunt/Traumatic chest (thoracic) injury died without further evaluation, no autopsy
4202024	Aorta, thoracic intimal tear, no disruption
4202045	Aorta, thoracic intimal tear with aortic valve involvement
4202064	Aorta, thoracic laceration NFS
4202084	Aorta, thoracic laceration minor
4202105	Aorta, thoracic laceration major
4202125	Aorta, thoracic laceration major with aortic root or valve involvement
4202145	Aorta, thoracic laceration major with paraplegia not due to direct spinal cord trauma
4202165	Aorta, thoracic laceration major with hemorrhage confined to mediastinum
4202186	Aorta, thoracic laceration major with hemorrhage not confined to mediastinum (OIS Grade VI)
4202994	Aorta, thoracic NFS
4204023	Brachiocephalic (innominate) artery intimal tear, no disruption
4204043	Brachiocephalic (innominate) artery laceration NFS
4204063	Brachiocephalic (innominate) artery laceration minor
4204084	Brachiocephalic (innominate) artery laceration major
4204993	Brachiocephalic (innominate) artery NFS (All OIS Grade III)
4206023	Brachiocephalic (innominate) vein laceration NFS
4206043	Brachiocephalic (innominate) vein laceration minor
4206064	Brachiocephalic (innominate) vein laceration major
4206085	Brachiocephalic (innominate) vein laceration major with air embolus right side
4206993	Brachiocephalic (innominate) vein NFS (All OIS Grade II)
4208005	Coronary artery laceration/thrombosis
4210023	Pulmonary artery intimal tear, no disruption
4210043	Pulmonary artery laceration NFS
4210063	Pulmonary artery laceration minor
4210084	Pulmonary artery laceration major
4210993	Pulmonary artery NFS (All OIS Grades IV and V)
4212023	Pulmonary vein laceration NFS
4212043	Pulmonary vein laceration minor

Variable Definitions and Codes - Injuries Data Set

4212064	Pulmonary vein laceration major
4212993	Pulmonary vein NFS (All OIS Grades IV and V)
4214023	Subclavian artery intimal tear, no disruption
4214043	Subclavian artery laceration NFS
4214063	Subclavian artery laceration minor
4214084	Subclavian artery laceration major
4214993	Subclavian artery NFS (All OIS Grade III)
4216023	Subclavian vein laceration NFS
4216043	Subclavian vein laceration minor
4216064	Subclavian vein laceration major
4216993	Subclavian vein NFS (All OIS Grade II)
4218023	Vena Cava laceration NFS
4218043	Vena Cava laceration minor with or without thrombosis
4218064	Vena Cava laceration major
4218085	Vena Cava laceration major with air embolus right side
4218993	Vena Cava NFS (All OIS Grades IV and V)
4220022	Other named chest arteries intimal tear, no disruption
4220042	Other named chest arteries laceration NFS
4220062	Other named chest arteries laceration minor
4220083	Other named chest arteries laceration major
4220992	Other named chest arteries NFS (All OIS Grade I)
4222022	Other named chest veins laceration NFS
4222042	Other named chest veins laceration minor
4222063	Other named chest veins laceration major
4222992	Other named chest veins NFS (All OIS Grades I except azygos Grade II)
4304991	Vagus nerve injury
4402021	Bronchus distal contusion
4402042	Bronchus distal laceration NFS
4402062	Bronchus distal laceration no perforation
4402083	Bronchus distal laceration perforation
4402104	Bronchus distal laceration complex
4402123	Bronchus distal fracture NFS
4402143	Bronchus distal fracture simple
4402164	Bronchus distal fracture major
4402991	Bronchus distal to main stem NFS
4404005	Chordae tendineae laceration
4406022	Diaphragm contusion (OIS Grade I)
4406043	Diaphragm laceration (OIS Grade II thru IV)
4406064	Diaphragm rupture with herniation
4406992	Diaphragm NFS
4408022	Esophagus contusion (OIS Grade I)
4408043	Esophagus laceration NFS
4408063	Esophagus laceration no perforation (OIS Grades I and II)
4408084	Esophagus laceration perforation (OIS Grade III)
4408105	Esophagus laceration complex with tissue loss (OIS Grades IV and V)
4408992	Esophagus NFS
4410021	Heart (Myocardium) contusion (hematoma) NFS
4410023	Heart (Myocardium) contusion NFS
4410041	Heart (Myocardium) contusion minor

Variable Definitions and Codes - Injuries Data Set

4410043	Heart (Myocardium) contusion minor
4410064	Heart (Myocardium) contusion major
4410083	Heart (Myocardium) laceration NFS
4410103	Heart (Myocardium) laceration no perforation, no chamber involvement
4410125	Heart (Myocardium) laceration perforation
4410146	Heart (Myocardium) laceration perforation complex or ventricular rupture
4410166	Heart (Myocardium) multiple lacerations
4410186	Heart (Myocardium) Avulsion
4410991	Heart (Myocardium) NFS
4410993	Heart (Myocardium) NFS
4412005	Intracardiac valve laceration
4413005	Intraventricular or inter-atrial septum laceration (rupture)
4414023	Lung contusion NFS with or without hemo-/pneumothorax
4414063	Lung contusion unilateral with or without hemo-/pneumothorax
4414104	Lung contusion bilateral with or without hemo-/pneumothorax
4414143	Lung laceration NFS with or without hemo-/pneumothorax
4414163	Lung laceration NFS with pneumomediastinum
4414184	Lung laceration NFS with hemomediastinum
4414204	Lung laceration NFS with blood loss > 20% by volume
4414225	Lung laceration NFS with tension pneumothorax
4414245	Lung laceration NFS with parenchymal laceration with massive air leak
4414265	Lung laceration NFS with systemic air embolus
4414303	Lung laceration unilateral with or without hemo-/pneumothorax
4414323	Lung laceration unilateral with or without hemo-/pneumothorax with pneumomediastinum
4414344	Lung laceration unilateral with or without hemo-/pneumothorax with hemomediastinum
4414364	Lung laceration unilateral with or without hemo-/pneumothorax with blood loss > 20% by volume
4414385	Lung laceration unilateral with or without hemo-/pneumothorax with tension pneumothorax
4414405	Lung laceration unilateral with or without hemo-/pneumothorax with parenchymal laceration with massive air leak
4414425	Lung laceration unilateral with or without hemo-/pneumothorax with systemic air embolus
4414504	Lung laceration bilateral with or without hemo-/pneumothorax
4414524	Lung laceration bilateral with or without hemo-/pneumothorax with pneumomediastinum
4414544	Lung laceration bilateral with or without hemo-/pneumothorax with hemomediastinum
4414565	Lung laceration bilateral with or without hemo-/pneumothorax with blood loss > 20% by volume
4414585	Lung laceration bilateral with or without hemo-/pneumothorax with tension pneumothorax
4414605	Lung laceration bilateral with or without hemo-/pneumothorax with parenchymal laceration with massive air leak
4414625	Lung laceration bilateral with or without hemo-/pneumothorax with systemic air embolus
4414993	Lung NFS
4416022	Pericardium laceration
4416043	Pericardium injury with tamponade without heart injury

Variable Definitions and Codes - Injuries Data Set

4416065	Pericardium herniation of the heart
4416992	Pericardium NFS
4418002	Pleura laceration
4418023	Pleura laceration with hemo-/pneumothorax
4418042	Pleura contusion
4422023	Thoracic cavity injury with hemo-/pneumothorax
4422043	Thoracic cavity injury with pneumomediastinum
4422064	Thoracic cavity injury with hemomediastinum
4422084	Thoracic cavity injury with blood loss > 20% by volume
4422105	Thoracic cavity injury with tension pneumothorax
4422125	Thoracic cavity injury with systemic air embolus
4422141	Thoracic cavity chest wall strain
4422997	Thoracic cavity injury NFS
4424022	Thoracic duct laceration
4426023	Trachea and main stem bronchus contusion
4426043	Trachea and main stem bronchus laceration NFS
4426063	Trachea and main stem bronchus laceration no perforation
4426084	Trachea and main stem bronchus laceration perforation
4426105	Trachea and main stem bronchus laceration complex
4426124	Trachea and main stem bronchus fracture NFS
4426144	Trachea and main stem bronchus fracture simple
4426165	Trachea and main stem bronchus fracture major with laryngeal-tracheal separation
4426993	Trachea and main stem bronchus NFS
4502021	Rib cage contusion
4502101	Rib cage fracture NFS
4502102	Rib cage multiple rib fractures NFS
4502113	Rib cage multiple rib fractures NFS with hemo-/pneumothorax
4502121	Rib cage fracture 1 rib
4502143	Rib cage fracture 1 rib with hemo-/pneumothorax (OIS Grade I)
4502202	Rib cage fracture 2-3 ribs any location (OIS Grade I, II or III)
4502223	Rib cage fracture 2-3 ribs any location with hemo-/pneumothorax
4502303	Rib cage fracture >3 ribs on one side and <=3 ribs on the other side, stable chest or NFS
4502324	Rib cage fracture >3 ribs on one side and <=3 ribs on other side, stable chest or NFS == with hemo-/pneumothorax
4502404	Rib cage fracture > 3 ribs on each of two sides, with stable chest or NFS
4502425	Rib cage fracture >3 ribs on each of two sides, with hemo-/pneumothorax
4502503	Rib cage fracture open/displaced/comminuted (any or combination; >1 rib)
4502524	Rib cage fracture open/displaced/comminuted with hemo-/pneumothorax
4502604	Rib cage flail chest NFS (OIS Grade III or IV)
4502623	Rib cage flail chest without lung contusion (OIS Grade III or IV)
4502644	Rib cage flail chest with lung contusion (OIS Grade III or IV)
4502665	Rib cage flail chest bilateral flail with or without lung contusion (OIS Grade V)
4502685	Rib cage flail chest < 15 years old - flail with or without lung contusion
4502991	Rib cage NFS
4508021	Sternum contusion
4508042	Sternum fracture (OIS Grade II or III)
4508991	Sternum NFS

Variable Definitions and Codes - Injuries Data Set

4900991	Chest Skin/Subcutaneous tissue/Muscle/Chest Wall NFS
4902021	Chest Skin abrasion
4904021	Chest Skin contusion (OIS Grade I)
4906001	Chest Skin laceration NFS
4906021	Chest Skin laceration minor (OIS Grade I, II)
4906042	Chest Skin laceration major
4906063	Chest Skin laceration blood loss > 20% by volume
4908001	Chest Skin avulsion NFS
4908021	Chest Skin avulsion superficial
4908042	Chest Skin avulsion major
4908063	Chest Skin avulsion blood loss > 20% by volume
4920001	Chest unspecified burn
4920021	Chest 1st degree burn
4920042	Chest 1st degree burn
4920061	Chest 2nd degree burn <10% TBS
4920082	Chest 3rd degree burn <10% TBS
4920103	Chest 3rd degree burn <10% TBS with face/hand/genitalia involvement
4920122	Chest 2 or 3 degree burn 10-19% TBS
4920143	Chest 2 or 3 degree burn 10-19% TBS <5 years
4920163	Chest 2 or 3 degree burn 10-19% TBS w/ face/hand/genitalia involmmt
5150997	Blunt/Traumatic abdominal injury
5159997	Blunt/Traumatic abdominal injury died without further evaluation, no autopsy
5202024	Aorta, abdominal intimal tear, no disruption
5202044	Aorta, abdominal laceration NFS
5202064	Aorta, abdominal laceration minor
5202085	Aorta, abdominal laceration major
5202994	Aorta, abdominal NFS
5204023	Celiac Artery intimal tear, no disruption
5204043	Celiac Artery laceration NFS
5204064	Celiac Artery laceration minor
5204085	Celiac Artery laceration major
5204993	Celiac Artery NFS
5206023	Iliac artery intimal tear, no disruption
5206043	Iliac artery laceration NFS
5206063	Iliac artery laceration minor
5206084	Iliac artery laceration major
5206993	Iliac artery NFS
5208023	Iliac vein (common) laceration NFS
5208043	Iliac vein (common) laceration minor
5208064	Iliac vein (common) laceration major
5208993	Iliac vein (common) NFS
5210022	Iliac vein (internal, external) laceration NFS
5210042	Iliac vein (internal, external) laceration minor
5210063	Iliac vein (internal, external) laceration major
5210992	Iliac vein (internal, external) NFS
5212023	Vena cava, inferior laceration NFS
5212043	Vena cava, inferior laceration minor
5212064	Vena cava, inferior laceration major
5212993	Vena cava, inferior NFS

Variable Definitions and Codes - Injuries Data Set

5214023	Other named abdomen arteries intimal tear, no disruption
5214043	Other named abdomen arteries laceration NFS
5214063	Other named abdomen arteries laceration minor
5214084	Other named abdomen arteries laceration major
5214993	Other named abdomen arteries NFS
5216023	Other named abdomen veins laceration NFS
5216043	Other named abdomen veins laceration minor
5216064	Other named abdomen veins laceration major
5216993	Other named abdomen veins NFS
5304991	Vagus nerve injury
5402101	Adrenal gland contusion NFS
5402121	Adrenal gland contusion minor
5402142	Adrenal gland contusion major
5402201	Adrenal gland laceration NFS
5402221	Adrenal gland laceration minor
5402242	Adrenal gland laceration major
5402263	Adrenal gland laceration complex
5402991	Adrenal gland NFS
5404101	Anus contusion
5404202	Anus laceration NFS
5404222	Anus laceration no perforation
5404243	Anus laceration perforation
5404264	Anus laceration massive
5404991	Anus NFS
5406102	Bladder contusion (OIS Grade I)
5406202	Bladder laceration NFS
5406223	Bladder laceration no perforation (OIS Grade I)
5406244	Bladder laceration perforation (OIS Grade II, III, IV)
5406264	Bladder laceration massive (OIS Grades II, III, IV)
5406403	Bladder rupture NFS
5406992	Bladder NFS
5408102	Colon contusion (OIS Grade I)
5408202	Colon laceration NFS
5408222	Colon laceration no perforation (OIS Grade I or II)
5408243	Colon laceration perforation (OIS Grade III)
5408264	Colon laceration massive (OIS Grade IV and V)
5408992	Colon NFS
5410102	Duodenum contusion (OIS Grades I or II)
5410123	Duodenum contusion with obstruction
5410203	Duodenum laceration NFS
5410223	Duodenum laceration no perforation (OIS Grade I or II)
5410233	Duodenum laceration (OIS Grade IV)
5410244	Duodenum laceration (OIS Grade IV)
5410265	Duodenum laceration perforation involving pancreatic head, duct, ampulla
5410285	Duodenum laceration massive (OIS Grade V)
5410992	Duodenum NFS
5412102	Gallbladder contusion (OIS Grade I)
5412202	Gallbladder laceration NFS (OIS Grade II)
5412222	Gallbladder laceration minor

Variable Definitions and Codes - Injuries Data Set

5412243	Gallbladder laceration massive (OIS Grade III)
5412264	Gallbladder laceration massiver with common or hepatic bile duct "laceration" (OIS Grade IV and V)
5412992	Gallbladder NFS
5414102	Jejunum-ileum contusion (OIS Grade I)
5414202	Jejunum-ileum laceration NFS
5414222	Jejunum-ileum laceration no perforation (OIS Grade I or II)
5414243	Jejunum-ileum laceration perforation (OIS Grade III)
5414264	Jejunum-ileum laceration massive (OIS Grades IV or V)
5414992	Jejunum-ileum NFS
5416102	Kidney contusion NFS
5416122	Kidney contusion minor (OIS Grade I or II)
5416143	Kidney contusion major
5416202	Kidney laceration NFS
5416222	Kidney laceration minor (OIS Grade II)
5416243	Kidney laceration moderate (OIS Grade III)
5416264	Kidney laceration major (OIS Grade IV)
5416285	Kidney hilum avulsion (OIS Grade V)
5416404	Kidney rupture NFS
5416992	Kidney NFS
5418102	Liver contusion NFS
5418122	Liver contusion minor (OIS Grade I or II)
5418143	Liver contusion major (OIS Grade III)
5418202	Liver laceration NFS
5418222	Liver laceration minor (OIS Grade I or II)
5418243	Liver laceration moderate (OIS Grade III)
5418264	Liver laceration major (OIS Grade IV)
5418285	Liver laceration complex (OIS Grade V)
5418306	Liver laceration hepatic avulsion (OIS Grade VI)
5418404	Liver rupture NFS
5418992	Liver NFS
5420102	Mesentery contusion
5420202	Mesentery laceration NFS
5420222	Mesentery laceration minor
5420243	Mesentery laceration major
5420264	Mesentery laceration complex
5420992	Mesentery NFS
5422102	Omentum contusion
5422202	Omentum laceration NFS
5422222	Omentum laceration minor
5422243	Omentum laceration major
5422992	Omentum NFS
5424002	Ovarian (Fallopian) tube laceration
5426101	Ovary contusion (OIS Grade I)
5426202	Ovary laceration NFS
5426222	Ovary laceration minor (OIS Grade II)
5426243	Ovary laceration major (OIS Grade III, IV or V)
5426991	Ovary NFS
5428102	Pancreas contusion NFS
5428122	Pancreas contusion minor (OIS Grade I)

Variable Definitions and Codes - Injuries Data Set

5428143	Pancreas contusion major (OIS Grade I or II)
5428202	Pancreas laceration NFS
5428222	Pancreas laceration minor (OIS Grade I)
5428243	Pancreas laceration moderate (OIS Grade III)
5428264	Pancreas laceration moderate if involving ampulla (OIS Grade IV)
5428284	Pancreas laceration major
5428304	Pancreas laceration major if involving ampulla (OIS Grade IV)
5428325	Pancreas laceration complex (OIS Grade V)
5428992	Pancreas NFS
5430101	Penis contusion
5430201	Penis laceration NFS
5430221	Penis laceration minor
5430242	Penis laceration major
5430263	Penis laceration complex
5430991	Penis NFS
5432101	Perineum contusion
5432201	Perineum laceration NFS
5432221	Perineum laceration minor
5432242	Perineum laceration major
5432263	Perineum laceration major complex
5432991	Perineum NFS
5434003	Placenta abruption NFS
5434024	Placenta abruption blood loss > 20% by volume
5436102	Rectum contusion (OIS Grade I)
5436202	Rectum laceration NFS
5436222	Rectum laceration no perforation (OIS Grades I and II)
5436243	Rectum laceration perforation (OIS Grade III)
5436254	Rectum laceration perforation (OIS Grade IV)
5436265	Rectum laceration massive (OIS Grade V)
5436992	Rectum NFS
5438003	Retroperitoneum hemorrhage or hematoma
5440101	Scrotum contusion
5440201	Scrotum laceration NFS
5440221	Scrotum laceration minor
5440242	Scrotum laceration major
5440991	Scrotum NFS
5442102	Spleen contusion NFS
5442122	Spleen contusion minor (OIS Grade I or II)
5442143	Spleen contusion major (OIS Grade III)
5442202	Spleen laceration NFS
5442222	Spleen laceration minor (OIS Grade I or II)
5442243	Spleen laceration moderate (OIS Grade III)
5442264	Spleen laceration major (OIS Grade IV)
5442285	Spleen laceration complex (OIS Grade V)
5442403	Spleen rupture (fracture) NFS
5442992	Spleen NFS
5444102	Stomach contusion (OIS Grade I)
5444202	Stomach laceration NFS
5444222	Stomach laceration no perforation (OIS Grade I)

Variable Definitions and Codes - Injuries Data Set

5444243	Stomach laceration perforation (OIS Grade II and III)
5444264	Stomach laceration massive (OIS Grade IV and V)
5444992	Stomach NFS
5446101	Testes contusion
5446201	Testes laceration NFS
5446221	Testes laceration minor
5446242	Testes laceration major
5446991	Testes NFS
5448102	Ureter contusion (OIS Grade I)
5448202	Ureter laceration NFS
5448222	Ureter laceration no perforation (OIS Grade II)
5448243	Ureter laceration perforation (OIS Grade III)
5448263	Ureter laceration massive (OIS Grades IV and V)
5448992	Ureter NFS
5450102	Urethra contusion (OIS Grade I)
5450202	Urethra laceration NFS
5450222	Urethra laceration no perforation (OIS Grade III)
5450243	Urethra laceration perforation (OIS Grade IV)
5450263	Urethra laceration massive (OIS Grade IV)
5450284	Urethra laceration massive with posterior tissue loss (OIS Grade V)
5450992	Urethra NFS
5452102	Uterus contusion (OIS Grade I)
5452202	Uterus laceration NFS
5452222	Uterus laceration minor (OIS Grade II)
5452263	Uterus laceration minor if pregnancy in the 2nd trimester or 3rd trimester
5452303	Uterus laceration major (OIS Grade III)
5452343	Uterus laceration major if pregnancy in 2nd trimester
5452364	Uterus laceration major if pregnancy in 3rd trimester
5452403	Uterus laceration complex (OIS Grade IV and V)
5452424	Uterus laceration complex if pregnancy in 2nd trimester
5452465	Uterus laceration complex if pregnancy in 3rd trimester
5452991	Uterus NFS
5454101	Vagina contusion (OIS Grade I)
5454201	Vagina laceration NFS
5454221	Vagina laceration minor (OIS Grade II)
5454242	Vagina laceration major (OIS Grade III)
5454263	Vagina laceration complex (OIS Grades IV and V)
5454991	Vagina NFS
5456101	Vulva contusion (OIS Grade I)
5456201	Vulva laceration NFS
5456221	Vulva laceration minor (OIS Grade II)
5456242	Vulva laceration major (OIS Grade III)
5456263	Vulva laceration complex (OIS Grades IV and V)
5456991	Vulva NFS
5900991	Abdomen Skin/Subcutaneous tissue/Muscle NFS
5902021	Abdomen Skin abrasion
5904021	Abdomen Skin contusion
5906001	Abdomen Laceration NFS
5906021	Abdomen Skin laceration minor

Variable Definitions and Codes - Injuries Data Set

5906042	Abdomen Skin laceration major
5906063	Abdomen Skin laceration blood loss > 20% by volume
5908001	Abdomen Skin avulsion NFS
5908021	Abdomen Skin avulsion superficial
5908042	Abdomen Skin avulsion major
5908063	Abdomen Skin avulsion blood loss > 20% by volume
5920001	Abdomen unspecified burn
5920021	Abdomen 1st degree burn
5920042	Abdomen 1st degree burn
5920061	Abdomen 2nd degree burn <10% TBS
5920082	Abdomen 3rd degree burn <10% TBS
5920103	Abdomen 3rd degree burn <10% TBS with face/hand/genitalia involvement
5920122	Abdomen 2 or 3 degree burn 10-19% TBS
5920143	Abdomen 2 or 3 degree burn 10-19% TBS <5 years
5920163	Abdomen 2 or 3 degree burn 10-19% TBS w/ face/hand/genitalia involmmt
6150997	Blunt/traumatic cervical spine injury NFS
6159997	Blunt/traumatic cervical spine injury died without further evaluation, no autopsy
6160997	Blunt/traumatic thoracic spine injury NFS
6169997	Blunt/traumatic throacic spine injury died without further evaluation, no autopsy
6170997	Blunt/traumatic lumbar spine injury NFS
6179997	Blunt/traumatic lumbar spine injury died without further evaluation, no autopsy
6302022	Cervical Spine nerve root contusion
6302042	Cervical Spine nerve root laceration NFS
6302062	Cervical Spine nerve root laceration single
6302083	Cervical Spine nerve root laceration multiple
6302102	Cervical Spine Brachial plexus incomplete plexus injury NFS
6302122	Cervical Spine Brachial plexus incomplete plexus injury contusion
6302142	Cervical Spine Brachial plexus incomplete plexus injury laceration
6302162	Cervical Spine Brachial plexus incomplete plexus injury avulsion
6302202	Cervical Spine Brachial plexus complete plexus injury but NFS as to fracture/dislocation
6302223	Cervical Spine Brachial plexus complete plexus contusion
6302243	Cervical Spine Brachial plexus complete plexus laceration
6302263	Cervical Spine Brachial plexus complete plexus avulsion
6302602	Cervical Spine nerve root NFS
6302622	Cervical Spine nerve root avulsion NFS
6302642	Cervical Spine nerve root avulsion single
6302663	Cervical Spine nerve root avulsion multiple
6302841	Interspinous ligament laceration
6302992	Cervical Spine Brachial plexus NFS
6304022	Thoracic Spine Nerve root contusion
6304042	Thoracic Spine Nerve root laceration NFS
6304062	Thoracic Spine Nerve root laceration single
6304083	Thoracic Spine Nerve root laceration multiple
6304102	Thoracic Spine Nerve root avulsion
6304122	Thoracic Spine Nerve root avulsion single
6304143	Thoracic Spine Nerve root avulsion multiple

Variable Definitions and Codes - Injuries Data Set

6304992	Thoracic Spine Nerve root NFS
6306003	Lumbar Spine Cauda equina contusion NFS
6306023	Lumbar Spine Cauda equina contusion with transient neurological signs NFS as to fracture/dislocation
6306043	Lumbar Spine Cauda equina contusion with transient neurological signs with no fracture or dislocation
6306063	Lumbar Spine Cauda equina contusion with transient neurological signs with fracture
6306083	Lumbar Spine Cauda equina contusion with transient neurological signs with dislocation
6306103	Lumbar Spine Cauda equina contusion with transient neurological signs with fracture and dislocation
6306203	Lumbar Spine Cauda equina incomplete syndrome NFS as to fracture/dislocation
6306223	Lumbar Spine Cauda equina incomplete syndrome with no fracture or dislocation
6306243	Lumbar Spine Cauda equina incomplete syndrome with fracture
6306263	Lumbar Spine Cauda equina incomplete syndrome with dislocation
6306283	Lumbar Spine Cauda equina incomplete syndrome with fracture and dislocation
6306304	Lumbar Spine Cauda equina complete syndrome NFS as to fracture/dislocation
6306324	Lumbar Spine Cauda equina complete syndrome with no fracture or dislocation
6306344	Lumbar Spine Cauda equina complete syndrome with fracture
6306364	Lumbar Spine Cauda equina complete syndrome with dislocation
6306384	Lumbar Spine Cauda equina complete syndrome with fracture and dislocation
6306602	Lumbar Spine Nerve root or sacral plexus contusion
6306622	Lumbar Spine Nerve root or sacral plexus laceration NFS
6306642	Lumbar Spine Nerve root or sacral plexus laceration single
6306663	Lumbar Spine Nerve root or sacral plexus laceration multiple
6306682	Lumbar Spine Nerve root or sacral plexus avulsion NFS
6306702	Lumbar Spine Nerve root or sacral plexus avulsion single
6306723	Lumbar Spine Nerve root or sacral plexus avulsion multiple
6306992	Lumbar Spine Nerve root or sacral plexus NFS
6402003	Cervical Spine Cord contusion NFS
6402013	Cervical Spine Cord contusion with transient neurological signs NFS
6402023	Cervical Spine Cord contusion with transient neurological signs with no fracture or dislocation
6402043	Cervical Spine Cord contusion with transient neurological signs with fracture
6402063	Cervical Spine Cord contusion with transient neurological signs with dislocation
6402083	Cervical Spine Cord contusion with transient neurological signs with fracture and dislocation
6402104	Cervical Spine Cord contusion incomplete cord syndrome but NFS
6402124	Cervical Spine Cord contusion incomplete cord syndrome with no fracture or dislocation
6402144	Cervical Spine Cord contusion incomplete cord syndrome with fracture
6402164	Cervical Spine Cord contusion incomplete cord syndrome with dislocation

Variable Definitions and Codes - Injuries Data Set

6402184	Cervical Spine Cord contusion incomplete cord syndrome with fracture and dislocation
6402205	Cervical Spine Cord contusion complete cord syndrome NFS
6402215	Cervical Spine Cord contusion complete cord syndrome C-4 or below, NFS as to fracture/dislocation, or NFS as to site
6402225	Cervical Spine Cord contusion complete cord syndrome C-4 or below with no fracture or dislocation
6402245	Cervical Spine Cord contusion complete cord syndrome C-4 or below with fracture
6402265	Cervical Spine Cord contusion complete cord syndrome C-4 or below with dislocation
6402285	Cervical Spine Cord contusion complete cord syndrome C-4 or below with fracture and dislocation
6402296	Cervical Spine Cord contusion complete cord syndrome C-3 or above NFS as to fracture/dislocation
6402306	Cervical Spine Cord contusion complete cord syndrome C-3 or above with no fracture or dislocation
6402326	Cervical Spine Cord contusion complete cord syndrome C-3 or above with fracture
6402346	Cervical Spine Cord contusion complete cord syndrome C-3 or above with dislocation
6402366	Cervical Spine Cord contusion complete cord syndrome C-3 or above with fracture and dislocation
6402405	Cervical Spine Cord laceration NFS
6402425	Cervical Spine Cord laceration incomplete cord syndrome NFS as to fracture/dislocation
6402445	Cervical Spine Cord laceration incomplete cord syndrome with no fracture or dislocation
6402465	Cervical Spine Cord laceration incomplete cord syndrome with fracture
6402485	Cervical Spine Cord laceration incomplete cord syndrome with dislocation
6402505	Cervical Spine Cord laceration incomplete cord syndrome with fracture and dislocation
6402605	Cervical Spine Cord laceration complete cord syndrome NFS
6402615	Cervical Spine Cord laceration complete cord syndrome C-4 or below NFS as to fracture/dislocation
6402625	Cervical Spine Cord laceration complete cord syndrome C-4 or below with no fracture or dislocation
6402645	Cervical Spine Cord laceration complete cord syndrome C-4 or below with fracture
6402665	Cervical Spine Cord laceration complete cord syndrome C-4 or below with dislocation
6402685	Cervical Spine Cord laceration complete cord syndrome with fracture and dislocation
6402696	Cervical Spine Cord laceration complete cord syndrome C-3 or above NFS as to fracture/dislocation
6402706	Cervical Spine Cord laceration complete cord syndrome C-3 or above with no fracture or dislocation
6402726	Cervical Spine Cord laceration complete cord syndrome C-3 or above with fracture
6402746	Cervical Spine Cord laceration complete cord syndrome C-3 or above with dislocation

Variable Definitions and Codes - Injuries Data Set

6402766	Cervical Spine Cord laceration complete cord syndrome C-3 or above with fracture and dislocation
6402781	Cervical Spine Strain
6404003	Thoracic Spine cord contusion NFS
6404013	Thoracic Spine cord contusion with transient neurological signs NFS as to fracture/dislocation
6404023	Thoracic Spine cord contusion with transient neurological signs with no fracture or dislocation
6404043	Thoracic Spine cord contusion with transient neurological signs with fracture
6404063	Thoracic Spine cord contusion with transient neurological signs with dislocation
6404083	Thoracic Spine cord contusion with transient neurological signs with fracture and dislocation
6404104	Thoracic Spine cord contusion incomplete cord syndrome NFS as to fracture/dislocation
6404124	Thoracic Spine cord contusion incomplete cord syndrome with no fracture or dislocation
6404144	Thoracic Spine cord contusion incomplete cord syndrome with fracture
6404164	Thoracic Spine cord contusion incomplete cord syndrome with dislocation
6404184	Thoracic Spine cord contusion incomplete cord syndrome with fracture and dislocation
6404205	Thoracic Spine cord contusion complete cord syndrome NFS as to fracture/dislocation
6404225	Thoracic Spine cord contusion complete cord syndrome with no fracture or dislocation
6404245	Thoracic Spine cord contusion complete cord syndrome with fracture
6404265	Thoracic Spine cord contusion complete cord syndrome with dislocation
6404285	Thoracic Spine cord contusion complete cord syndrome with fracture and dislocation
6404405	Thoracic Spine Cord laceration NFS
6404425	Thoracic Spine cord laceration incomplete cord syndrome NFS as to fracture/dislocation
6404445	Thoracic Spine cord laceration incomplete cord syndrome with no fracture or dislocation
6404465	Thoracic Spine cord laceration incomplete cord syndrome with fracture
6404485	Thoracic Spine cord laceration incomplete cord syndrome with dislocation
6404505	Thoracic Spine cord laceration incomplete cord syndrome with fracture and dislocation
6404605	Thoracic Spine cord laceration complete cord syndrome NFS as to fracture/dislocation
6404625	Thoracic Spine cord laceration complete cord syndrome with no fracture or dislocation
6404645	Thoracic Spine cord laceration complete cord syndrome with fracture
6404665	Thoracic Spine cord laceration complete cord syndrome with dislocation
6404685	Thoracic Spine cord laceration complete cord syndrome with fracture and dislocation
6404781	Thoracic Spine Strain
6406003	Lumbar Spine Cord contusion NFS
6406013	Lumbar Spine cord contusion with transient neurological signs NFS as to fracture/dislocation
6406023	Lumbar Spine cord contusion with transient neurological signs with no fracture or dislocation

Variable Definitions and Codes - Injuries Data Set

6406043	Lumbar Spine cord contusion with transient neurological signs with fracture
6406063	Lumbar Spine cord contusion with transient neurological signs with dislocation
6406083	Lumbar Spine cord contusion with transient neurological signs with fracture and dislocation
6406104	Lumbar Spine cord contusion incomplete cord syndrome NFS as to fracture/dislocation
6406124	Lumbar Spine cord contusion incomplete cord syndrome with no fracture or dislocation
6406144	Lumbar Spine cord contusion incomplete cord syndrome with fracture
6406164	Lumbar Spine cord contusion incomplete cord syndrome with dislocation
6406184	Lumbar Spine cord contusion incomplete with fracture and dislocation
6406205	Lumbar Spine cord contusion complete cord syndrome NFS as to fracture/dislocation
6406225	Lumbar Spine cord contusion complete cord syndrome with no fracture or dislocation
6406245	Lumbar Spine cord contusion complete cord syndrome with fracture
6406265	Lumbar Spine cord contusion complete cord syndrome with dislocation
6406285	Lumbar Spine cord contusion complete cord syndrome with fracture and dislocation
6406405	Lumbar Spine Cord laceration NFS
6406425	Lumbar Spine cord laceration incomplete cord syndrome NFS as to fracture/dislocation
6406445	Lumbar Spine cord laceration incomplete cord syndrome with no fracture or dislocation
6406465	Lumbar Spine cord laceration incomplete cord syndrome with fracture
6406485	Lumbar Spine cord laceration incomplete cord syndrome with dislocation
6406505	Lumbar Spine cord laceration incomplete cord syndrome with fracture and dislocation
6406605	Lumbar Spine cord laceration complete cord syndrome NFS as to fracture/dislocation
6406625	Lumbar Spine cord laceration complete cord syndrome with no fracture or dislocation
6406645	Lumbar Spine cord laceration complete cord syndrome with fracture
6406665	Lumbar Spine cord laceration complete cord syndrome with dislocation
6406685	Lumbar Spine cord laceration complete cord syndrome with fracture and dislocation
6406781	Lumbar Spine Strain
6502002	Cervical Spine Disc injury herniation NFS
6502022	Cervical Spine Disc injury without nerve root damage
6502033	Cervical Spine Disc injury with nerve root damage ruptured disc
6502042	Cervical Spine dislocation
6502063	Cervical Spine dislocation atlanto-axial (odontoid)
6502082	Cervical Spine dislocation atlanto-occipital
6502092	Cervical Spine dislocation facet NFS
6502103	Cervical Spine dislocation facet unilateral
6502123	Cervical Spine dislocation facet bilateral
6502162	Cervical Spine fracture
6502182	Cervical Spine fracture spinous process
6502202	Cervical Spine fracture transverse process
6502223	Cervical Spine fracture facet

Variable Definitions and Codes - Injuries Data Set

6502243	Cervical Spine fracture lamina
6502263	Cervical Spine fracture pedicle
6502283	Cervical Spine fracture odontoid (dens)
6502302	Cervical Spine fracture vertebral body NFS
6502322	Cervical Spine fracture vertebral body minor compression
6502343	Cervical Spine fracture vertebra; body major compression
6502992	Cervical Spine Disc injury NFS
6504002	Thoracic Spine Disc injury herniation NFS
6504022	Thoracic Spine Disc injury without nerve root damage
6504033	Thoracic Spine Disc injury with nerve root damage; ruptured disc
6504042	Thoracic Spine Dislocation NFS test
6504092	Thoracic Spine Dislocation facet NFS
6504103	Thoracic Spine Dislocation facet unilateral
6504123	Thoracic Spine Dislocation facet bilateral
6504162	Thoracic Spine fracture NFS
6504182	Thoracic Spine fracture spinous process
6504202	Thoracic Spine fracture transverse process
6504223	Thoracic Spine fracture facet
6504243	Thoracic Spine fracture lamina
6504263	Thoracic Spine fracture pedicle
6504302	Thoracic Spine fracture vertebral body NFS
6504322	Thoracic Spine fracture vertebral body minor compression
6504343	Thoracic Spine fracture vertebral body major compression
6504841	Interspinous ligament laceration
6504992	Thoracic Spine Disc injury NFS
6506002	Lumbar Spine Disc injury herniation NFS
6506022	Lumbar Spine Disc injury without nerve root damage
6506033	Lumbar Spine Disc injury with nerve root damage ; ruptured disc
6506042	Lumbar Spine Dislocation NFS
6506092	Lumbar Spine Dislocation facet NFS
6506102	Lumbar Spine Dislocation facet unilateral
6506123	Lumbar Spine Dislocation facet bilateral
6506162	Lumbar Spine Fracture NFS
6506182	Lumbar Spine fracture spinous process
6506202	Lumbar Spine fracture transverse process
6506223	Lumbar Spine fracture facet
6506243	Lumbar Spine fracture lamina
6506263	Lumbar Spine fracture pedicle
6506302	Lumbar Spine fracture vertebral body NFS
6506322	Lumbar Spine fracture vertebral body minor compression
6506343	Lumbar Spine fracture vertebral body major compression
6506841	Interspinous ligament laceration
6506992	Lumbar Spine Disc injury NFS
6900991	Back Skin (subcutaneous tissue/muscle) NFS
6902021	Back Skin abrasion
6904021	Back Skin contusion
6906001	Back Skin laceration NFS
6906021	Back Skin laceration minor
6906042	Back Skin laceration major

Variable Definitions and Codes - Injuries Data Set

6906063	Back Skin laceration blood loss > 20% by volume
6908001	Back Skin avulsion NFS
6908021	Back Skin avulsion superficial
6908042	Back Skin avulsion major
6908063	Back Skin avulsion blood loss > 20% by volume
6920001	Back unspecified burn
6920021	Back 1st degree burn
6920042	Back 1st degree burn
6920061	Back 2nd degree burn <10% TBS
6920082	Back 3rd degree burn <10% TBS
6920103	Back 3rd degree burn <10% TBS with face/hand/genitalia involvement
6920122	Back 2 or 3 degree burn 10-19% TBS
6920143	Back 2 or 3 degree burn 10-19% TBS <5 years
6920163	Back 2 or 3 degree burn 10-19% TBS w/ face/hand/genitalia involmmt
7110003	Upper Extremity Amputation
7130003	Upper Extremity Crush
7150002	Upper Extremity injury with compartment syndrome
7150097	Blunt/traumatic upper extremity injury NFS
7150997	Blunt/Traumatic upper extremity injury NFS
7159997	Blunt/traumatic upper extremity injury died without further evaluation, no autopsy
7202022	Axillary artery intimal tear, no disruption
7202042	Axillary artery laceration NFS
7202062	Axillary artery laceration minor
7202083	Axillary artery laceration major
7202992	Axillary artery NFS
7204022	Axillary vein laceration NFS
7204042	Axillary vein laceration minor
7204063	Axillary vein laceration major
7204992	Axillary vein NFS
7206022	Brachial artery intimal tear, no disruption
7206042	Brachial artery laceration NFS
7206062	Brachial artery laceration minor
7206083	Brachial artery laceration major
7206992	Brachial artery NFS
7208021	Brachial vein laceration NFS
7208041	Brachial vein laceration minor
7208063	Brachial vein laceration major
7208991	Brachial vein NFS
7210021	Other named upper extremity arteries intimal tear, no disruption
7210041	Other named upper extremity arteries laceration NFS
7210061	Other named upper extremity arteries laceration minor
7210083	Other named upper extremity arteries laceration major
7210991	Other named upper extremity arteries NFS
7212021	Other named upper extremity veins laceration NFS
7212041	Other named upper extremity veins laceration minor
7212063	Other named upper extremity veins laceration major
7212991	Other named upper extremity veins NFS
7302021	Upper Extremity Digital nerve contusion
7302041	Upper Extremity Digital nerve laceration

Variable Definitions and Codes - Injuries Data Set

7302991	Upper Extremity Digital nerve NFS
7304101	Median, radial, or ulnar nerve contusion
7304201	Median, radial, or ulnar nerve laceration NFS
7304302	Median, radial, or ulnar nerve laceration single nerve
7304402	Median, radial, or ulnar nerve laceration multiple nerves
7304502	Median, radial, or ulnar nerve laceration with motor loss
7304991	Median, radial, or ulnar nerve NFS
7402001	Upper Extremity Tendon laceration NFS
7402101	Tendon laceration multiple tendons (in hand)
7402201	Tendon laceration multiple tendons (other than hand)
7404002	Upper Extremity Muscle laceration
7404021	Upper Extremity Muscle strain or contusion
7406002	Upper Extremity joint capsule laceration
7502101	Acromioclavicular joint contusion
7502201	Acromioclavicular joint sprain
7502302	Acromioclavicular joint dislocation
7502402	Acromioclavicular joint laceration into joint
7502991	Acromioclavicular joint NFS
7504021	Carpal-Metacarpal, Metacarpal-Phalangeal, or Interphalangeal joint sprain
7504041	Carpal-Metacarpal, Metacarpal-Phalangeal, or Interphalangeal joint dislocation
7504991	Carpal-Metacarpal or Metacarpal-Phalangeal Joint NFS
7506101	Elbow joint contusion
7506201	Elbow joint sprain
7506301	Elbow joint dislocation
7506402	Elbow joint laceration NFS
7506422	Elbow joint laceration with ligament involvement
7506442	Elbow joint laceration with single nerve laceration
7506462	Elbow joint laceration with multiple nerve lacerations
7506503	Elbow joint crush
7506991	Elbow joint NFS
7508001	Interphalangeal joint dislocation
7510101	Shoulder (glenohumeral joint) contusion
7510201	Shoulder (glenohumeral joint) sprain
7510302	Shoulder (glenohumeral joint) dislocation
7510402	Shoulder (glenohumeral joint) laceration into joint
7510503	Shoulder (glenohumeral joint) crush
7510991	Shoulder (glenohumeral joint) NFS
7512101	Sternoclavicular joint contusion
7512201	Sternoclavicular joint sprain
7512302	Sternoclavicular joint dislocation
7512402	Sternoclavicular joint laceration into joint
7512991	Sternoclavicular joint NFS
7514101	Wrist (carpus) joint contusion
7514201	Wrist (carpus) joint sprain
7514302	Wrist (carpus) joint dislocation
7514402	Wrist (carpus) joint laceration into joint
7514503	Wrist (carpus) joint crush
7514991	Wrist (carpus) joint NFS
7516002	Acromion fracture

Variable Definitions and Codes - Injuries Data Set

7518002	Arm - Wrist fracture NFS
7519002	Forearm fracture NFS
7520002	Carpus or Metacarpus NFS
7520022	Carpus or metacarpus fracture
7520042	Metacarpal bone crush
7520063	Carpal bone crush
7522002	Clavicle fracture (OIS Grade I or II)
7524001	Finger NFS
7524022	Finger amputation
7524041	Finger fracture
7524062	Finger crush
7525002	Hand fracture NFS
7526002	Humerus fracture NFS
7526022	Humerus fracture closed
7526043	Humerus fracture open/displaced/comminuted
7526063	Humerus fracture with radial nerve involvement
7528002	Radius fracture NFS
7528022	Radius fracture closed
7528043	Radius fracture open/displaced/comminuted
7528063	Radius fracture with radial nerve involvement
7530002	Scapula fracture (OIS Grade II)
7532002	Ulna fracture NFS
7532022	Ulna fracture closed
7532043	Ulna fracture open/displaced/comminuted
7532063	Ulna fracture with ulnar nerve involvement
7900991	Upper Extremity Skin NFS
7902021	Upper Extremity Skin abrasion
7904021	Upper Extremity Skin contusion
7906001	Upper Extremity Skin laceration NFS
7906021	Upper Extremity Skin laceration minor
7906042	Upper Extremity Skin laceration major
7906063	Upper Extremity Skin laceration blood loss > 20% by volume
7908001	Upper Extremity Skin avulsion NFS
7908021	Upper Extremity Skin avulsion superficial
7908042	Upper Extremity Skin avulsion major
7908063	Upper Extremity Skin avulsion blood loss > 20% by volume
7920001	Upper extremity unspecified burn
7920021	Upper extremity 1st degree burn
7920042	Upper extremity 1st degree burn
7920061	Upper extremity 2nd degree burn <10% TBS
7920082	Upper extremity 3rd degree burn <10% TBS
7920103	Upper extremity 3rd degree burn <10% TBS w/ face/hand/genitalia involvement
7920122	Upper extremity 2 or 3 degree burn 10-19% TBS
7920143	Upper extremity 2 or 3 degree burn 10-19% TBS <5 years
7920163	Upper extremity 2 or 3 degree burn 10-19% TBS w/ face/hand/genitalia involvement
7940022	Degloving injury arm or forearm
7940042	Degloving injury finger(s) only
7940063	Degloving injury hand, palm or entire extremity

Variable Definitions and Codes - Injuries Data Set

8110003	Lower Extremity Amputation NFS
8110023	Amputation below knee; entire foot; calcaneus
8110044	Amputation above knee
8130002	Lower Extremity Crush NFS
8130022	Crush below knee; entire foot; calcaneus
8130043	Crush knee or above
8150002	Lower Extremity Injury with compartment syndrome
8150997	Lower Extremity Injury NFS
8159997	Traumatic lower extremity injury died without further evaluation, no autopsy
8202023	Femoral artery intimal tear, no disruption
8202043	Femoral artery laceration NFS
8202063	Femoral artery laceration minor
8202084	Femoral artery laceration major
8202993	Femoral artery NFS
8204022	Femoral vein laceration NFS
8204042	Femoral vein laceration minor
8204063	Femoral vein laceration major
8204992	Femoral vein NFS
8206022	Popliteal artery intimal tear, no disruption
8206042	Popliteal artery laceration NFS
8206062	Popliteal artery laceration minor
8206083	Popliteal artery laceration major
8206992	Popliteal artery NFS
8208022	Popliteal vein laceration NFS
8208042	Popliteal vein laceration minor
8208063	Popliteal vein laceration major
8208992	Popliteal vein NFS
8210021	Other named lower extremity arteries intimal tear, no disruption
8210041	Other named lower extremity arteries laceration NFS
8210061	Other named lower extremity arteries laceration minor
8210083	Other named lower extremity arteries laceration major
8210991	Other named lower extremity arteries NFS
8212021	Other named lower extremity veins laceration NFS
8212041	Other named lower extremity veins laceration minor
8212063	Other named lower extremity veins laceration major
8212991	Other named lower extremity veins NFS
8302021	Digital nerve contusion
8302041	Digital nerve laceration
8302991	Digital nerve NFS
8304022	Sciatic nerve contusion
8304043	Sciatic nerve laceration NFS
8304063	Sciatic nerve laceration incomplete
8304083	Sciatic nerve laceration complete
8304992	Sciatic nerve NFS
8306022	Femoral, tibial, peroneal nerve contusion
8306042	Femoral, tibial, peroneal nerve laceration NFS
8306062	Femoral, tibial, peroneal nerve laceration single nerve
8306082	Femoral, tibial, peroneal nerve laceration multiple nerves
8306102	Femoral, tibial, peroneal nerve laceration with motor loss

Variable Definitions and Codes - Injuries Data Set

8306992	Femoral, tibial, peroneal nerve NFS
8402002	Achilles tendon laceration NFS
8402022	Achilles tendon laceration incomplete
8402042	Achilles tendon laceration complete
8404022	Collateral or cruciate ligament laceration ankle
8404042	Collateral or cruciate ligament laceration knee
8404063	Posterior cruciate with complete disruption at knee
8406002	Lower Extremity Muscle laceration
8406021	Lower Extremity Muscle strain
8408022	Lower Extremity Tendon laceration
8408042	Lower Extremity Tendon laceration multiple tendons
8410022	Patellar tendon laceration
8410042	Patellar tendon laceration total transection
8502021	Ankle (Tarsus) Joint contusion
8502061	Ankle (Tarsus) Joint sprain
8502102	Ankle (Tarsus) Joint dislocation NFS
8502142	Ankle (Tarsus) Joint dislocation without involving articular cartilage
8502182	Ankle (Tarsus) Joint dislocation involving articular cartilage
8502222	Ankle (Tarsus) Joint laceration into joint
8502991	Ankle (Tarsus) Joint NFS
8504001	Foot joint NFS
8504021	Foot joint dislocation
8504041	Foot joint sprain
8506021	Hip contusion
8506061	Hip sprain
8506102	Hip dislocation NFS
8506142	Hip dislocation without involving articular cartilage
8506182	Hip dislocation involving articular cartilage
8506222	Hip laceration into joint NFS
8506991	Hip NFS
8508021	Knee contusion
8508062	Knee dislocation NFS
8508102	Knee dislocation without involving articular cartilage
8508142	Knee dislocation involving articular cartilage
8508182	Knee laceration into joint
8508222	Knee meniscus tear
8508262	Knee sprain
8508991	Knee NFS
8510021	Metatarsal, Phalangeal, or Interphalangeal joint sprain
8510061	Metatarsal, Phalangeal, or Interphalangeal joint dislocation NFS
8510101	Metatarsal, Phalangeal, or Interphalangeal joint dislocation without involving articular cartilage
8510141	Metatarsal, Phalangeal, or Interphalangeal joint dislocation involving articular cartilage
8510991	Metatarsal, Phalangeal, or Interphalangeal joint NFS
8512021	Subtalar, transtalar, or transmetatarsal joint sprain
8512031	Subtalar, transtalar, or transmetatarsal joint dislocation NFS
8512041	Subtalar, transtalar, or transmetatarsal joint dislocation without involving articular cartilage

Variable Definitions and Codes - Injuries Data Set

8512061	Subtalar, transtarsal, or transmetatarsal joint dislocation involving articular cartilage
8512991	Subtalar, transtarsal, or transmetatarsal joint NFS
8514002	Calcaneus fracture
8516021	Fibula contusion
8516041	Fibula contusion with peroneal nerve injury
8516052	Fibula fracture NFS
8516062	Fibula fracture head, neck, shaft
8516082	Fibula fracture lateral malleolus
8516102	Fibula fracture lateral malleolus open/displaced/comminuted
8516122	Fibula fracture bimalleolar or trimalleolar
8516143	Fibula fracture, bimalleolar or trimalleolar, open/displaced/comminuted
8516991	Fibula NFS
8518003	Femur fracture NFS
8518013	Femur fracture open/displaced/comminuted but NFS as to site
8518022	Femur fracture < 12 years old
8518043	Femur fracture condylar
8518062	Femur fracture condylar < 12 years old
8518083	Femur fracture head
8518103	Femur fracture intertrochanteric
8518123	Femur fracture neck
8518143	Femur fracture shaft
8518162	Femur fracture shaft < 12 years old
8518183	Femur fracture subtrochanteric
8518202	Femur fracture subtrochanteric < 12 years old
8518223	Femur fracture supracondylar
8518242	Femur fracture supracondylar < 12 years old
8520002	Foot fracture NFS
8520022	Leg or Ankle fracture NFS
8522002	Metatarsal or Tarsal fracture
8524002	Patella fracture
8526002	Pelvis fracture NFS
8526022	Pelvis fracture closed
8526043	Pelvis fracture open/displaced/comminuted
8526064	Pelvis Crush
8526084	Pelvis crush blood loss < 20% by volume
8526105	Pelvis crush blood loss > 20% by volume
8528003	Sacroiliac fracture
8530003	Symphysis pubis separation
8532002	Talus fracture
8534021	Tibia contusion
8534042	Tibia fracture NFS
8534053	Tibia fracture, any type, but NFS as to site, open/displaced/comminuted
8534062	Tibia fracture condyles
8534083	Tibia fracture condyles open/displaced/comminuted
8534102	Tibia fracture intercondyloid spine
8534122	Tibia fracture medial malleolus
8534142	Tibia fracture medial malleolus open/displaced/comminuted
8534162	Tibia fracture posterior malleolus
8534183	Tibia fracture posterior malleolus open/displaced/comminuted

Variable Definitions and Codes - Injuries Data Set

8534202	Tibia fracture shaft
8534223	Tibia fracture shaft open/displaced/comminuted
8534991	Tibia NFS
8536021	Toe fracture
8536042	Toe amputation
8536062	Toe crush
8536991	Toe NFS
8900991	Lower Extremity Skin NFS
8902021	Lower Extremity Skin abrasion
8904021	Lower Extremity Skin contusion
8906001	Lower Extremity Skin laceration NFS
8906021	Lower Extremity Skin laceration minor
8906042	Lower Extremity Skin laceration major
8906063	Lower Extremity Skin laceration blood loss > 20% by volume
8908001	Lower Extremity Skin avulsion NFS
8908021	Lower Extremity Skin avulsion superficial
8908042	Lower Extremity Skin avulsion major
8908063	Lower Extremity Skin avulsion blood loss > 20% by volume
8920001	Lower extremity unspecified burn
8920021	Lower extremity 1st degree burn
8920042	Lower extremity 1st degree burn
8920061	Lower extremity 2nd degree burn <10% TBS
8920082	Lower extremity 3rd degree burn <10% TBS
8920103	Lower extremity 3rd degree burn <10% TBS w/ face/hand/genitalia involvement
8920122	Lower extremity 2 or 3 degree burn 10-19% TBS
8920143	Lower extremity 2 or 3 degree burn 10-19% TBS <5 years
8920163	Lower extremity 2 or 3 degree burn 10-19% TBS w/ face/hand/genitalia involvement
8940022	Degloving injury toe(s) only, single or multiple
8940042	Degloving injury thigh, calf
8940063	Degloving injury knee, ankle, sole of foot, entire extremity
9192002	Inhalation injury NFS
9192012	Inhalation Injury
9192023	Inhalation injury
9192044	Inhalation injury moderate
9192065	Inhalation injury severe
9192086	Inhalation Injury NFS including nonintentional carbon monoxide exposure (mucosal sloughing, necrosis, endoluminal obliteration)
9196021	Accidental hypothermia 34 degrees C
9196042	Accidental hypothermia 33-32 degrees C
9196063	Accidental hypothermia 31-30 degrees C
9196084	Accidental hypothermia 29-28 degrees C
9196105	Accidental hypothermia <28 degrees C
9902001	Whole or unknown area skin abrasion
9904001	Whole or unknown area skin contusion
9906001	Whole or unknown area skin laceration
9908002	Whole area skin Avulsion
9920001	Unknown body region burn
9920021	Unknown body region 1st degree burn

Variable Definitions and Codes - Injuries Data Set

9920042	Unknown body region 1st degree burn
9920061	Unknown body region 2nd degree burn <10% TBS
9920071	3rd degree burn <or equal to 100cm2 (except face <or equal to 25cm2)
9920082	Unknown body region 3rd degree burn >100cm2 (except face > 25cm2) or <10% TBS
9920103	Unknown body region 3rd degree burn <10% TBS w/ face/hand/genitalia
9920122	Unknown body region 2 or 3 degree burn 10-19% TBS
9920143	Unknown body region 2 or 3 degree burn 10-19% TBS <5 years
9920163	Unknown body region 2 or 3 degree burn 10-19% TBS w/ face/hand/genitalia
9920183	Two or more body regions burned 2 or 3 degree burn 20-29% TBS
9920204	Two or more body regions burned 2 or 3 degree burn 20-29% TBS <5 years old
9920224	Two or more body regions burned 2 or 3 degree burn 20-29% TBS w/face/hand/genit
9920244	Two or more body regions burned 2 or 3 degree burn 30-39% TBS
9920265	Two or more body regions burned 2 or 3 degree burn 30-39% TBS <5 years old
9920285	Two or more body regions burned 2 or 3 degree burn 30-39% TBS w/face/hand/genitalia involvement
9920305	Two or more body regions burned 2 or 3 degree burn 40-89% TBS
9920326	Two or more body regions burned 2 or 3 degree burn >89% TBS
9940001	Whole or Unknoww area degloving injury

Aspect

Definition: This variable documents the location on the body where the injury occurred.

Source: Zone Center determined - inputs include driver interview and medical records.

Variable Name: Aspect

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Whole Region
1	Right
2	Left
3	Bilateral
4	Central
5	Anterior/Front/Ventral
6	Posterior/Back/Dorsal
7	Superior/Upper
8	Inferior/Lower
9	Unknown/Multiple Regions
10	Upper Extremity
11	Elbow
12	Forearm
13	Wrist
14	Hand/Digits
15	Buttock
16	Thigh
17	Knee

Variable Definitions and Codes - Injuries Data Set

18	Lower Leg
19	Ankle
20	Foot/Toes
21	C1C2
22	C2C3
23	C3C4
24	C4C5
25	C5C6
26	C6C7
27	T1T2
28	T2T3
29	T3T4
30	T4T5
31	T5T6
32	T6T7
33	T7T8
34	T8T9
35	T9T10
36	T10T11
37	T11T12
38	L1L2
39	L2L3
40	L3L4
41	L4L5
43	C1
44	C2
45	C3
46	C4
47	C5
48	C6
49	C7
50	T1
51	T2
52	T3
53	T4
54	T5
55	T6
56	T7
57	T8
58	T9
59	T10
60	T11
61	T12
62	L1
63	L2
64	L3
65	L4
66	L5
68	Cauda Equina

Variable Definitions and Codes - Injuries Data Set

99	Unknown
100	I
101	II
102	III
103	IVa
104	IVb
105	V
106	VI
107	VII
108	VIII
110	Lateral
121	medial
888	Multiple Regions
889	R Rib 1
890	R Rib 2
891	R Rib 3
892	R Rib 4
893	R Rib 5
894	R Rib 6
895	R Rib 7
896	R Rib 8
897	R Rib 9
898	R Rib 10
899	R Rib 11
900	R Rib 12
901	L Rib 1
902	L Rib 2
903	L Rib 3
904	L Rib 4
905	L Rib 5
906	L Rib 6
907	L Rib 7
908	L Rib 8
909	L Rib 9
910	L Rib 10
911	L Rib 11
912	L Rib 12
913	SHoulder
914	Hip

Injury Source Category

Definition: This variable documents the general area of the vehicle in which the source of injury is located.

Source: Zone Center determined – inputs include vehicle inspection, interviewee, and medical records.

Variable Name: InjurySourceCat

Variable Definitions and Codes - Injuries Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Front
2	Left Side
3	Right Side
4	Interior
5	Air Bag
6	Roof
7	Floor
8	Rear
9	Adaptive (Assistive) Driving Equipment
10	Exterior of Occupant's Vehicle
11	Exterior of Other Motor Vehicle
12	Other Vehicle or Object in the Environment
13	Noncontact Injury
14	Injured, unknown source
20	Other Injury
30	Pedestrian Injury Sources
99	Unknown

Injury Source

Definition: This variable documents the object that caused a particular injury.

Source: Zone Center determined – inputs include vehicle inspection, interviewee, and medical records.

Variable Name: InjurySource

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Windshield
2	Mirror
3	Sun visor
4	Steering wheel rim
5	Steering wheel hub/spoke
6	Steering wheel (combination of codes 004 and 005)
7	Steering column, transmission selector lever, other attachment
8	Cellular telephone or CB radio
9	Add on equipment (e.g., tape deck, air conditioner)
10	Left instrument panel and below
11	Center instrument panel and below
12	Right instrument panel and below
13	Glove compartment door
14	Knee bolster
15	Win. incl. 1/+fr header, A(A1/A2)-pillar, instrument panel, mirror, or steering assembly(driver)
16	Win. Incl. 1/+fr header, A(A1/A2)-pillar, instrument panel, or mirror(passenger)
17	Windshield reinforced by exterior object(specify)

Variable Definitions and Codes - Injuries Data Set

19	Other front object (specify)
20	Sun visor reinforced by front header
51	Left side interior surface, excluding hardware or armrests
52	Left side hardware or armrest
53	Left A(A1/A2)-pillar
54	Left B-pillar
55	Other left pillar(specify)
56	Left side window glass
57	Left side window frame
58	Left side window sill
59	Lt side win. glass incl. 1/+:frame,win. sill, A(A1/A2)-pillar, B-pillar, or roof side rail
60	Other left side object (specify)
101	Right side interior surface, excluding hardware or armrests
102	Right side hardware or armrest
103	Right A (A1/A2)-pillar
104	Right B-pillar
105	Other right pillar (specify)
106	Right side window glass
107	Right side window frame
108	Right side window sill
109	Right side win. glass incl. 1/+:frame,win. sill, A(A1/A2)-pillar, B-pillar, or roof side rail
110	Other right side object (specify)
151	Seat, back support
152	Belt restraint webbing/buckle
153	Belt restraint B-pillar or door frame attachment point
154	Other restraint system component (specify)
155	Head restraint system
160	Other occupants(specify)
161	Interior loose objects (specify)
162	Child safety seat (specify)
163	Other interior object (specify)
164	Center console first row
165	Center console second row
166	Center console other row
167	Fold down armrest first row
168	Fold down armrest second row
169	Fold down armrest other row
170	Airbag-driver side
171	Airbag-driver side and eyewear
172	Airbag-driver side and jewelry
173	Airbag-driver side and object held
174	Airbag-driver side and object in mouth
175	Airbag compartment cover-driver side
176	Airbag compartment cover-driver side and eyewear
177	Airbag compartment cover-driver side and jewelry
178	Airbag compartment cover-driver side and object held
179	Airbag compartment cover-driver side and object in mouth
180	Airbag-passenger side

Variable Definitions and Codes - Injuries Data Set

181	Airbag-passenger side and eyewear
182	Airbag-passenger side and jewelry
183	Airbag-passenger side and object held
184	Airbag-passenger side and object in mouth
185	Airbag compartment cover-passenger side
186	Airbag compartment cover-passenger side and eyewear
187	Airbag compartment cover-passenger side and jewelry
188	Airbag compartment cover-passenger side and object held
189	Airbag compartment cover-passenger side and object in mouth
190	Other Airbag (specify)
195	Other Airbag compartment cover (specify)
201	Front header
202	Rear header
203	Roof left side rail
204	Roof right side rail
205	Roof or convertible top
206	Roof map light/console
207	Sunroof/components
208	Roll-bar
251	Floor (including toe pan)
252	Floor or console mounted transmission lever, including console
253	Parking brake handle
254	Foot controls including parking brake
301	Backlight (rear window)
302	Backlight storage rack, door, etc
303	Other rear object(specify)
401	Hand controls for breaking/acceleration
402	Steering control devices (attached to OEM steering wheel)
403	Steering knob attached to steering wheel
405	Replacement steering wheel (i.e., reduced diameter)
406	Joy stick steering controls
407	Wheelchair tie-downs
408	Modification to seat belts, (specify)
409	Additional or relocated switches, (specify)
410	Raised roof
411	Wall mounted head rest (used behind wheel chair)
412	Other adaptive device (specify)
451	Hood
452	Outside hardware (e.g., outside mirror, antenna)
453	Other exterior surface or tires (specify)
454	Unknown exterior objects
501	Front bumper
502	Hood edge
503	Other front of vehicle (specify)
504	Hood
505	Hood ornament
506	Windshield, roof rail, A-pillar
507	Side surface
508	Side mirrors

Variable Definitions and Codes - Injuries Data Set

509	Other side protrusions (specify)
510	Rear surface
511	Undercarriage
512	Tires and wheels
513	Other exterior of other motor vehicle (specify)
514	Unknown exterior of other motor vehicle
551	Ground
570	Same occupant contact (specify) [ex- knee]
571	Interior loose object (specify)
572	Seat LATCH points for child restraints
573	Grab handles
574	Engine shroud/cover
575	Seatback trays
598	Other vehicle or object (specify)
599	Unknown vehicle or object
601	Fire in vehicle
602	Flying glass
603	Other non-contact injury source (specify)
604	Airbag exhaust gases
697	Injured, unknown source
699	Other Injury
700	Front bumper
701	Front lower valance/spoiler
702	Front grille
703	Front hood edge and/or trim
704	Front hood ornament (fixed)
705	Front hood ornament (spring loaded)
706	Front headlight
707	Front retractable headlight door (open/closed)
708	Front turn signal/parking lights
718	Other front or add an object (specify)
719	Unknown front object
720	Left front fender side surface
721	Left front antenna
722	Left A1 pillar
723	Left A2 pillar
724	Left B pillar
725	Left C pillar
726	Left D pillar
728	Other left pillar (specify)
729	Left side roof rail
730	Left side door surface
731	Left side door handle
732	Left side mirror fixed housing
733	Left side folding mirror
734	Left side glazing forward of B pillar
735	Left side glazing rearward of B pillar
736	Left side back fender or quarter panel
737	Left rear antenna

Variable Definitions and Codes - Injuries Data Set

738	Other left side object (specify)
739	Unknown left side component
740	Right front fender side surface
741	Right front antenna
742	Right A1 pillar
743	Right A2 pillar
744	Right B pillar
745	Right C pillar
746	Right D pillar
748	Other right pillar (specify)
749	Right side roof rail
750	Right side door surface
751	Right side door handle
752	Right side mirror fixed housing
753	Right side folding mirror
754	Right side glazing forward of B pillar
755	Right side glazing rearward of B pillar
756	Right rear antenna
757	Right rear fender or quarter panel
758	Other right side object (specify)
759	Unknown right side component
760	Rear (back) bumper
761	Tailgate
762	Hatchback, vertical surface
768	Other back component (specify)
769	Unknown back component
770	Top hood surface
771	Top hood surface reinforced by under hood component
772	Front fender top surface
773	Cowl area
774	Wiper blade & mountings
775	Windshield glazing
776	Top front header
777	Top roof surface
778	Top backlight glazing
779	Top rear header
780	Top hatchback
781	Top rear trunk lid
788	Other top component (specify)
789	Unknown top component
790	Left front wheel/tire
791	Right front wheel/tire
792	Left rear wheel/tire
793	Right rear wheel/tire
798	Other wheel/tire (specify)
799	Unknown wheel/tire
800	Front cross-member
801	Steering assembly/Front suspension
802	Oil pan

Variable Definitions and Codes - Injuries Data Set

803	Exhaust system pipe
804	Transmission
805	Drive shaft
806	Catalytic converter
807	Muffler
808	Floor pan
809	Fuel tank
810	Rear suspension
818	Other undercarriage component (specify)
819	Unknown undercarriage component
820	Air scoop, deflector
821	Cellular or CB radio antenna
822	Emergency lights or bar
823	Fog lights
824	Luggage, ski, or bike rack
825	Cargo (specify)
826	Spare tire
827	Spotlight
828	Other accessory (specify)
947	Ground
948	Other object (specify)
949	Unknown object in environment
959	Unknown object on contacting vehicle
997	Non-contact injury source
999	Unknown injury source

Intrusion Row

Definition: This variable documents the seat row of the vehicle where the intrusion occurred.

Source: Zone Center determined – inputs include vehicle inspection and vehicle photos.

Cross Reference: Related to Occupants.Row.

Variable Name: IntrusionRow

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Front Seat
2	Second Seat
3	Third Seat
4	Fourth Seat
5	Fifth Seat
97	Catastrophic
98	Other
99	Unknown

Variable Definitions and Codes - Injuries Data Set

Intrusion Location

Definition: This variable describes the location within a particular seat row of the vehicle into which the intrusion occurred.

Source: Zone Center determined – inputs include vehicle inspection and vehicle photos.

Cross Reference: Related to Occupants.OCCLocation.

Variable Name: IntrusionLocation

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Left
2	Middle
3	Right
99	Unknown

Crush Direction

Definition: This variable documents the direction of the intrusion of a particular component into the passenger compartment.

Source: Zone Center determined – inputs include vehicle inspection and vehicle photos.

Variable Name: CrushDirection

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Vertical
2	Longitudinal
3	Lateral
7	Catastrophic
9	Unknown

Crush Magnitude

Definition: This variable documents a component's magnitude of intrusion into the passenger compartment.

Source: Zone Center determined – inputs include vehicle inspection and vehicle photos.

Variable Name: CrushMagnitude

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	<= 2 cms
1	>= 3 to < 8 cms
2	>= 8 to < 15 cms
3	>= 15 to < 30 cms
4	>= 30 to < 46 cms
5	>= 46 to < 61 cms

Variable Definitions and Codes - Injuries Data Set

6	>= 61 cms
7	Catastrophic
9	Unknown

Component Intrusion

Definition: This variable documents the vehicle component that intruded into the passenger compartment and caused a particular injury.

Source: Zone Center determined – inputs include vehicle inspection and vehicle photos.

Variable Name: Component

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Steering Assembly
2	Instrument panel left
3	Instrument panel center
4	Instrument panel right
5	Toe pan
6	A (A1/A2)-pillar
7	B-pillar
8	C-pillar
9	D-pillar
10	Side panel - forward of the A1/A2 pillar
11	Door panel (side)
12	Side panel - rear of the B-pillar
13	Roof (or convertible top)
14	Roof side rail
15	Windshield
16	Windshield header
17	Window frame
18	Floor pan (includes sill)
19	Backlight header
20	Front seat back
21	Second seat back
22	Third seat back
23	Fourth seat back
24	Fifth seat back
25	Seat cushion
26	Back door/panel (e.g., tailgate)
27	Other interior component (specify):
30	Hood
31	Outside surface of this vehicle (specify):
32	Other exterior object in the environment (specify):
33	Unknown exterior object
98	Intrusion of unlisted component(s) (specify):
99	Unknown

Variable Definitions and Codes - Injuries Data Set

Information Source

Definition: This variable identifies the source of information used to complete AIS coding for each injury.

Source: Zone Center specified.

Variable Name: InformationSource

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Autopsy
2	Post-ER Medical Record
3	Admission Records
4	Discharge Summary
5	Operative Report
6	Radiographic
7	History/Physical Examination
8	Emergency Room Records
9	Private Physician
10	Lay Coroner
11	EMS Record
12	Interviewee
13	Police Report
14	Other (specify)
15	Discharge Face Sheet
99	Unknown

Variable Definitions and Codes - JackknifeAssessments Data Set

JackknifeAssessments Data Set

The JackknifeAssessments data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID and VehicleNumber uniquely identify each record in this data set and should be used to merge the JackknifeAssessments data set with other vehicle level data sets. This data set also contains the following variables:

Source: All variables in this table are determined by Case Reviewer using all available information inputs. Primary sources include the scaled schematic, police report, driver interviews, witness interviews, and vehicle inspection results.

Type Of Jackknife Event

Definition: This variable establishes the type of precrash jackknife event that is experienced by the subject vehicle. In general, the type of jackknife event is determined by the unit of the articulated combination that begins to rotate first. For example, if the tractor/cab unit is the first unit to begin rotating, the event is generally considered a tractor jackknife. If, on the other hand, the trailer unit is the first unit to begin rotating, the event is generally considered to be trailer swing.

Cross Reference: Elaborates on CrashAssessment.ACRJackknife. Elaborates on Overview.OVEJackknife.

Variable Name: AJKType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No pre-crash jackknife
1	Tractor jackknife
2	Trailer swing
7	Not applicable
9	Unknown

Source Of Jackknife Impetus

Definition: This variable establishes the source of the jackknife impetus.

Variable Name: AJKSource

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No pre-crash jackknife
1	Steering input
2	Braking input
3	Steering and braking input
4	Environmental condition (specify)
5	Vehicle condition (specify)
7	Not applicable
8	Combination of sources (specify)
9	Unknown

Variable Definitions and Codes - JackknifeAssessments Data Set

Vehicle Location At Start Of Jackknife

Definition: This variable establishes the location of the vehicle at the start of the jackknife sequence.

Cross Reference: Congruent with IntvwDrJackknife.IDJLocation, values will differ due to Interview vs. Researcher determined values.

Variable Name: AJKLocation

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No pre-crash event
1	On roadway
2	On shoulder
3	On roadside
4	On median
7	Not applicable
9	Unknown

Direction Of Rotation

Definition: This variable establishes the direction of rotation of the first unit within the articulated vehicle configuration to begin jackknifing.

Cross Reference: Congruent with IntvwDrJackknife.RotationDirection, values will differ due to Interview vs. Researcher determined values.

Variable Name: AJKDirection

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No pre-crash jackknife
1	Clockwise
2	Counterclockwise
7	Not applicable
9	Unknown

Jackknifed While Count

Definition: This variable documents the number of circumstances in which the jackknife occurred that were coded to this vehicle.

Cross Reference: Computed from the following variables in the JackknifeAssessments data set: AJKConstant, AJKCurve, AJKTurn, AJKLightBraking, AJKAccelerating, AJKAvoidance, AJKOther, AJKDecelerating, AJKModerateBraking, AJKHeavyBraking, AJKStraight.

Variable Name: WhileCount

Variable Definitions and Codes - JackknifeAssessments Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value counter
88	No Driver
99	Unknown

Driving At Constant Velocity

Definition: This variable establishes whether or not the driver is attempting to maintain a constant velocity at the time the vehicle begins to jackknife. (This variable was originally an attribute choice under the variable "Circumstances In Which Event Occurred.")

Cross Reference: Congruent with IntwvDrJackknife.IDJDrivingConstantVelocity, values will differ due to Interview vs. Researcher determined values.

Variable Name: AJKConstant

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Traversing A Curve

Definition: This variable establishes whether or not the driver is traversing a curve at the time the vehicle begins to jackknife. (This variable was originally an attribute choice under the variable "Circumstances In Which Event Occurred.")

Cross Reference: Congruent with IntwvDrJackknife.IDJTraversingCurve, values will differ due to Interview vs. Researcher determined values.

Variable Name: AJKCurve

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Completing A Turn

Definition: This variable establishes whether or not the driver is attempting to turn at the time the vehicle begins to jackknife. (This variable was originally an attribute choice under the variable "Circumstances In Which Event Occurred.")

Cross Reference: Congruent with IntwvDrJackknife.IDJCompletingTurn, values will differ due to Interview vs. Researcher determined values.

Variable Name: AJKTurn

Variable Definitions and Codes - JackknifeAssessments Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Light Braking

Definition: This variable establishes whether or not the driver is decelerating using light braking effort at the time the vehicle begins to jackknife. While the term “light braking” is a subjective evaluation, it generally implies that the level of braking effort is less than the level typically associated with a normal traffic stop. (This variable was originally an attribute choice under the variable “Circumstances In Which Event Occurred.”)

Cross Reference: Congruent with IntvwDrJackknife.IDJLightBraking, values will differ due to Interview vs. Researcher determined values.

Variable Name: AJKLightBraking

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Accelerating

Definition: This variable establishes whether or not the driver is accelerating at the time the vehicle begins to jackknife. (This variable was originally an attribute choice under the variable “Circumstances In Which Event Occurred.”)

Cross Reference: Congruent with IntvwDrJackknife.IDJAccelerating, values will differ due to Interview vs. Researcher determined values.

Variable Name: AJKAccelerating

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Completing Avoidance Maneuver

Definition: This variable establishes whether or not the driver initiates a precrash avoidance maneuver at or prior to the time the vehicle begins to jackknife. (This variable was originally an attribute choice under the variable “Circumstances In Which Event Occurred.”)

Cross Reference: Congruent with IntvwDrJackknife.IDJCompletingAvoidance, values will differ due to Interview vs. Researcher determined values.

Variable Name: AJKAvoidance

Variable Definitions and Codes - JackknifeAssessments Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Other Jackknife Circumstance

Definition: This variable establishes whether or not the circumstance associated with the jackknife is not described by the other jackknife event variables. (This variable was originally an attribute choice under the variable "Circumstances In Which Event Occurred" and was the "Other (specify):" attribute.)

Cross Reference: Congruent with IntvwDrJackknife.OtherSpecify, values will differ due to Interview vs. Researcher determined values.

Variable Name: AJKOther

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Throttle Input Only

Definition: This variable establishes whether or not the driver is decelerating and decelerates solely by reducing throttle input at the time the vehicle begins to jackknife. (This variable was originally an attribute choice under the variable "Circumstances In Which Event Occurred.")

Cross Reference: Congruent with IntvwDrJackknife.IDJDecelerating, values will differ due to Interview vs. Researcher determined values.

Variable Name: AJKDecelerating

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Moderate Braking

Definition: This variable establishes whether or not the driver is decelerating using a moderate level of braking effort at the time the vehicle begins to jackknife. A moderate level of braking effort generally implies that the level of braking effort is similar to the level typically associated with a normal traffic stop. (This variable was originally an attribute choice under the variable "Circumstances In Which Event Occurred.")

Cross Reference: Congruent with IntvwDrJackknife.IDJModerateBraking, values will differ due to Interview vs. Researcher determined values.

Variable Name: AJKModerateBraking

Variable Definitions and Codes - JackknifeAssessments Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Heavy Braking

Definition: This variable establishes whether or not the driver is decelerating using a heavy level of braking effort (e.g. panic stop) at the time the vehicle begins to jackknife. The vehicle will typically experience wheel “lock-up” in this circumstance; however, wheel lock is not a requirement for using this designation. (This variable was originally an attribute choice under the variable “Circumstances In Which Event Occurred.”)

Cross Reference: Congruent with IntvwDrJackknife.IDJHeavyBraking, values will differ due to Interview vs. Researcher determined values.

Variable Name: AJKHeavyBraking

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Traversing A Straight Section

Definition: This variable establishes whether or not the driver is traversing a straight roadway segment at the time the vehicle begins to jackknife. (This variable was originally an attribute choice under the variable “Circumstances In Which Event Occurred.”)

Cross Reference: Congruent with IntvwDrJackknife.IDJTraversingStraightSection, values will differ due to Interview vs. Researcher determined values.

Variable Name: AJKStraight

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

MCMISdriverData Data Set

The MCMISdriverData data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID and VehicleNumber uniquely identify each record in this data set and should be used to merge the MCMISdriverData data set with vehicle level data sets. This data set also contains the following variables:

Source: The source for all variables in this table was the Motor Carrier Management Information System (MCMIS). MCMIS is operated and maintained by the Federal Motor Carrier Safety Administration (FMCSA). It contains information on the safety fitness of commercial motor carriers and hazardous material (HM) shippers subject to the Federal Motor Carrier Safety Regulations and the Hazardous Materials Regulations. For more information go to <http://mcmiscatalog.fmcsa.dot.gov/beta/Catalogs&Documentation/catalogs/chap1.asp>.

Number Of Crashes

Definition: This variable represents the total number of crashes for this driver, as reported by the Motor Carrier Management Information System (MCMIS).

Source: These data may be extracted from the MCMIS database by running a query count against the CRASH_DRIVER table and using the driver's license number, or name and date of birth.

Variable Name: Crashes

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value
99	Unknown

Number Of Inspections

Definition: This variable represents the total number of inspections performed on a vehicle driven by this driver, as reported by the Motor Carrier Management Information System (MCMIS).

Source: These data may be extracted from the MCMIS database by running a query count against the INSP_DRIVER table and using the driver's license number, or name and date of birth.

Variable Name: Inspections

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value
99	Unknown

Driver Out-Of-Service Violations

Definition: This variable represents the total number of "driver" out-of-service violations for this driver, as reported by the Motor Carrier Management Information System (MCMIS).

Source: These data may be extracted from the MCMIS database by performing a join on INSP_VIOLATION and INSP_DRIVER using the INSPECTION_ID field, then running a query

Variable Definitions and Codes - MCMISdriverData Data Set

count using the driver's license number, or name and date of birth, of records having a INSP_VIOL_UNIT value of 'D' (for driver).

Cross Reference: Related to MCMISViolations.NumOOSviols when only driver violations are aggregated.

Variable Name: InspDriverOOS

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value
99	Unknown

Vehicle Out-Of-Service Violations

Definition: This variable represents the total number of “vehicle” out-of-service violations for this driver, as reported by the Motor Carrier Management Information System (MCMIS).

Source: These data may be extracted from the MCMIS database by performing a join on INSP_VIOLATION and INSP_UNIT using the INSPECTION_ID field, then running a query count using the Vehicle Identification Number (INSP_UNIT_VEHICLE_ID_NUMBER), or the vehicle registration and registration state (INSP_UNIT_LICENSE and INSP_UNIT_LICENSE_STATE).

Cross Reference: Related to MCMISViolations.NumOOSviols when only vehicle violations are aggregated.

Variable Name: InspVehOOS

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value
99	Unknown

Total Types Of Local Violations

Definition: This variable represents the total number of types of “local” inspection violations cited to this driver, as reported by the Motor Carrier Management Information System (MCMIS).

Source: These data may be extracted from the MCMIS database by performing a join on INSP_VIOLATION and INSP_DRIVER using the INSPECTION_ID field, then running a query count of violation records with a value of '392' for the PART_NO and '2%' for the PART_NO_SECTION, and the driver's license number, or name and date of birth. A 392.2 indicates a violation of local laws.

Cross Reference: Related to MCMISViolations.NumViols when only local violations are aggregated.

Variable Name: LocalViols

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value
99	Unknown

Variable Definitions and Codes - MCMISdriverData Data Set

Total Types Of Inspection Violations

Definition: This variable represents the total number of types of inspection violations cited to this driver (not including local violations), as reported by the Motor Carrier Management Information System (MCMIS).

Source: These data may be extracted from the MCMIS database by performing a join on INSP_VIOLATION and INSP_DRIVER using the INSPECTION_ID field, then running a query count of violation records, and the driver's license number, or name and date of birth.

Cross Reference: Related to MCMISViolations.NumViols if violations other than local are aggregated.

Variable Name: InspViols

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value
99	Unknown

Variable Definitions and Codes - MCMISviolation Data Set

MCMISviolation Data Set

The MCMISviolation data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID, VehicleNumber and Code uniquely identify each record in this data set. CaseID and VehicleNumber should be used to merge the MCMISviolation data set with the MCMISdriverData data set and vehicle level data sets. This data set also contains the following variables:

Source: The source for all variables in this table was the Motor Carrier Management Information System (MCMIS). MCMIS is operated and maintained by the Federal Motor Carrier Safety Administration (FMCSA). It contains information on the safety fitness of commercial motor carriers and hazardous material (HM) shippers subject to the Federal Motor Carrier Safety Regulations and the Hazardous Materials Regulations. For more information go to <http://mcmiscatalog.fmcsa.dot.gov/beta/Catalogs&Documentation/catalogs/chap1.asp>.

Violation Code

Definition: This variable represents the violation codes cited to this driver, as reported by the Motor Carrier Management Information System (MCMIS). This coding structure was established by the Federal Motor Carrier Safety Administration.

Source: These data may be extracted from the MCMIS database from the INSP_VIOLATION table. It may be associated with the driver's license number, or name and date of birth by performing a join on this table and INSP_DRIVER using the INSPECTION_ID field.

Variable Name: Code

Attribute Codes

<u>Code</u>	<u>Meaning</u>
107.620B	No copy of US DOT HM registration number
13901	Operating w/o proper motor carrier authority
13902C4B	Operating beyond geographical restrictions
13906	Oper w/o proper insurance or other securities
171.11D	US requirements for ICAO shipment
171.12AB	US requirements for TDG shipment
171.12B	US requirements for IMDG shipment
171.2A	Failure to comply with HM regulations
171.2B	Failed to comply with exemption
171.5A1I	Fail to deter if dischrge system is leak free
171.5A1III	Unload w/o prompt activation of internl valve
171.5A1V	Fail to displ emerg operat proced for transf
171.5A1VI	Fail to provide training for oper under 171.5
171.5B	Fail to mark cargo tank used under 171.5
172.200A	No shipping paper provided offeror
172.201A1	HM not distinguished from non HM
172.201A2	HM description not printed legibly in english
172.201A3	HM description contains abbreviation or code
172.201A4	Additional information after hm basic desc
172.201C	Failure to list page of pages
172.201D	ER phone number not listed
172.202A1	No proper shipping name
172.202A2	No proper hazard class

Variable Definitions and Codes - MCMISviolation Data Set

172.202A3	Wrong or no id number
172.202A4	No packing group listed
172.202A5	Total quantity not listed
172.202B	Description not in proper sequence
172.202C	Total quantity proper location
172.202E	Non HM entered with class or ID#
172.203A	Exemption number not listed
172.203B	Limited quantity not shown
172.203C1	Hazardous substance entry missing
172.203C2	RQ not on shipping paper
172.203D1	Radioactive material not noted
172.203D10	No exclusive use notation
172.203D11	No ISA-SCO notation
172.203D2	Radionuclide name not on shipping paper
172.203D3	No ram physical or chemical form
172.203D4	No ram activity
172.203D5	No ram label category
172.203D6	No ram transport index
172.203D7	No fissile radioactive entry
172.203D8	No DOE/NRC package approval
172.203D9	IAEA authority noted
172.203E	No empty packaging noted
172.203H1	No qt/nqt for anhydrous ammonia
172.203H2	No qt/nqt for lpg
172.203K	No technical name for nos entry
172.203M1	Poison or toxic with subsid hazard
172.203M2	No tech name 6.1 pg i or ii or 2.3
172.203M3	No poison inhalation hazard and/or zone A
172.203N	No "hot" on shipping paper
172.203O	No temp controls noted 4.1 and 5.2
172.205	Hazardous waste manifest not as required
172.301A	No shipping name or ID# on non-bulk
172.301B	No technical name on non-bulk
172.301C	No exemption number on non-bulk
172.301D	No consignee/consignor on non-bulk
172.302	Marking requirements bulk packagings
172.302A	No ID# (portable and cargo tank)
172.302B	Bulk package marking incorrect size
172.302C	No exemption number on bulk package
172.303A	Prohibited HM marking on package
172.304A1	Package marking not durable, english or print
172.304A2	Marking not on sharply contrasting color
172.304A3	Marking obscured by label or attachments
172.304A4	Marking not away from other marking
172.308A	Package marked with unauthorized abbreviation
172.310A	No gross weight on RAM package >50KG
172.310A1	No gross weight on RAM package >159 kg
172.310A2	RAM package not marked "type A or B"
172.310A3	No "USA" marking when required

Variable Definitions and Codes - MCMISviolation Data Set

172.310B	RAM package not marked "Type A or B"
172.310C	Type B,B(U),B(M) pkg not mrkd w/radiation sym
172.312A	No package orientation arrows
172.312B	Prohibited use of orientation arrows
172.313A	No "inhalation hazard" on package
172.313B	No "poison" on non-bulk plastic package
172.316A	ORM non-bulk package not marked
172.320A	Class 1 package not marked with ex-number
172.322B	No marpol marking on bulk packaging
172.324	Non-bulk hazardous substance not marked
172.325	No "hot" marking for bulk elevated temp
172.325A	Elevated temp not marked "Hot"
172.325B	Improperly marked molten alum/sulphur
172.326A	Port tank no proper shipping name or ID#
172.326B	No port tank owner or lessee marking
172.326C1	No ID# marking on veh carrying portable tank
172.326C2	Shipper failed to provide ID# to carrier
172.328A	Shipper failed to provide or affix ID# for ct
172.328B	Cargo tank not marked for class 2
172.328C	No qt/nqt marked on cargo tank (mc330/331)
172.330A2	Tank car tank (non cylinder) not mrkd as reqd
172.330B	Vehicle with tank car tank not marked
172.331	Markings for other bulk packages
172.332	ID# marking for (b) panel (c) placards
172.334	Prohibited id number marking
172.338	Carrier failed to replace missing ID number
172.400A	Package/containment not labeled as required
172.401	Prohibited labeling
172.402A	No label for subsidiary hazard
172.402B	Display of class number on label
172.402D	Subsidiary labeling for ram
172.402E	subsidiary labeling for class 1 materials
172.403A	RAM label requirement
172.403F	RAM package 2 labels on opposite sides
172.403G	Failed to label RAM properly
172.404A	Mixed package not properly labeled
172.404B	Failed to properly label consolidated package
172.406A1	Label placement not as required
172.406C	Multiple label placement not as required
172.406D	Label not on contrasting bkgnd or no border
172.406E	Failed to display duplicate label as required
172.406F	Label obscured by marking or attachment
172.502A1	Prohibited placarding
172.502A2	Sign/device could be confused with HM placard
172.504A	Vehicle not placarded as required
172.504B	Dangerous placard violation
172.505A	No placard for poison inhalation hazard
172.505B	No placard for RAM and corrosive
172.505C	Placard for subsidiary dangerous when wet

Variable Definitions and Codes - MCMISviolation Data Set

172.506A	Failed to provide placards shipper
172.506A1	Placards not affixed to vehicle
172.507	RAM highway route controlled quantity
172.512A	Freight container not placarded
172.514A	Bulk package offered without placard
172.514B	Bulk package not placarded residue of hm
172.516A	Placard not visible from direction it faces
172.516C1	Placard not securely affixed or attached
172.516C2	Placard not clear of appurtenance
172.516C4	Placard improper location
172.516C5	Placard not reading horizontally
172.516C6	Placard damaged, deteriorated, or obscured
172.516C7	Placard not on contrasting bckgrnd or border
172.519	Placard does not meet specifications
172.600C	ER info not available
172.602A	ER info missing
172.602B	ER info not accessible
172.602C1	Maintenance of ER information
172.700	Training of HM employees
173.24AA1	Non-bulk inner packaging closure
173.24AA3	Non-bulk packaging securing and cushioning
173.24AB	Non-bulk package filling limit
173.24AC	Non-bulk package mixed contents requirements
173.24B	Filed to meet general package requirements
173.24B1	Release of HM from package
173.24BA	Bulk package outage or filling limit rqmts
173.24BD2	Exceed max weight of rating on spec plate
173.24C	Unauthorized packaging
173.24F1	Closures for pkgs must not be open or leaking
173.25A	Failed to meet overpack conditions
173.29A	Transporting empty packages (residue)
173.30	Loading/unloading transport vehicles
173.315A	Cargo or portable tank class 2, filling denst
173.315B	Filling density butadiene or LPG
173.315J3	Residential gas tank not secure in transport
173.315J4	LPG storage tank overfilled for transport
173.318B10	Marking inlets and outlets cryogenic tanks
173.318G	No one way travel time (owtt)
173.31D	Retesting for multiunit tank car tanks
173.32BA	IM portable tank periodic testing
173.32BD	Test date marking
173.32CG1	IM101/102 outlet closures
173.32CG2	IM101/102 outlet closures
173.32E1	Portable tank retest schedule (out of date)
173.32E3	Portable tank retest marking
173.33A	Cargo tank general requirements
173.33B	Cargo tank loading requirements
173.33C2	Cargo tank not marked with design or mawp
173.34A	Cylinder qualification and use

Variable Definitions and Codes - MCMISviolation Data Set

173.34C	Cylinder markings
173.34E	Cylinder retest and marking
173.35A	Intermediate bulk container requirements
173.35D	liquid filled ibc-ullage over 98%
173.35F2	IBC not secured to or within vehicle
173.40	General requirements poisons in cylinder
173.412	Gen type a failing to meet addtl req design
173.412B	No seal for type a RAM package
173.427AIV	No instructions for exclusive use pkg LSA
173.427AVI	LSA package not marked as required
173.431	Exceeded activity limits type A or B package
173.441A	Exceeding radiation LVL allowed for transport
173.441B	Exceeding radiation level for exclusive use
173.441C	No exclusive use instructions
173.447	RAM transport storage violation
173.448	General RAM transport requirements
173.54	Forbidden explosives, offering or transportng
173.60	General packaging requirements explosives
173.9B	Failed to warn of fumigated load
177.804	Failed to comply with FMCSR
177.816	Driver training requirements
177.817A	No shipping papers (carrier)
177.817B	Shipper certification missing (when required)
177.817E	Shipping paper accessibility
177.823A	No placards/markings when required
177.834A	Package not secure in vehicle
177.834C	Smoking while loading or unloading
177.834G	Failed to prevent relative motion
177.834I	Attendance of cargo tank (load or unload)
177.834J	Manholes and valves not closed or leak free
177.834M1	Securing spec 106a or 110a tanks
177.834N	Improper spec 56, 57, im101 and im102
177.835	Improper transport of explosives (class 1)
177.838	Improper transport of class 4, 5 or div 4.2
177.839	Improper transporting of class 8
177.840	Improper transport of class 2
177.840G	Discharge valve not closed in transit class 2
177.841	Improper transort of division 6.1 or 2.3
177.841E	Poison label loaded with foodstuffs
177.842A	Total TI exceeds 50 non-exclusive use
177.842B	Distance from package to person RAM
177.842D	Blocking and bracing of RAM packages
177.848D	Prohibited load/transport/storage combination
177.848F	Class 1 load separation or segregation
178.245-4	DOT51 integrity and securement
178.245-5	DOT51 valve protection
178.245-6	DOT51 ID plate
178.245-6B	DOT51 spec markings
178.251	Gen dsign/const DOT56(178.252) DOT57(178.253)

Variable Definitions and Codes - MCMISviolation Data Set

178.251-4	DOT 56/57 integrity and securement
178.251-7	DOT 56/57 ID plate
178.251-7B	DOT56/57 spec markings
178.253-2	DOT57 manhole
178.253-3	DOT57 valve protection
178.253-4	DOT57 pressure relief
178.255-11	DOT60 integrity and securement
178.255-14	DOT60 ID plate
178.255-4	DOT60 manhole
178.255-7	DOT60 valve protection
178.255-8	DOT60 pressure relief
178.270-1	IM101/102 general design
178.270-11D1	IM101/102 pressure relief
178.270-14	IM101/102 spec plate
178.270-4	IM101/102 frames
178.270-6	IM 101/102 frames
178.270-8	IM101/102 valve protection
178.270-9	IM101/102 manholes
178.32CM	IM101/102 load securement
178.336-10	Protecting of fittings MC330
178.336-13	Anchoring of tank MC330
178.336-17	Metal ID plate marking MC330
178.336-17A	Certification plate MC330
178.336-9A	Safety relief devices MC330
178.336-9C	Marking of inlets/outlets MC330
178.337-10A	Protection of fittings MC331
178.337-10D	Rear end protection MC331
178.337-11A2	Internal valve MC331
178.337-11A2I	Remote control >3500 gal MC331
178.337-11A2II	Remote control <3500 gal MC331
178.337-11B	Shut off valves MC331
178.337-13	MC331 supports and anchoring
178.337-17A	Metal id plate missing MC331
178.337-8A2	Outlets MC331
178.337-9	Pressure relief devices MC331
178.337-9C	Marking inlets/outlets MC331
178.338-10A	Protection of fittings MC338
178.338-10C	Rear end protection MC338
178.338-10E	Ground clearance MC338
178.338-11B	Manual shutoff valve MC338
178.338-11C	Internal valve MC338
178.338-11C1	Remote control >3500 gal MC338
178.338-11C2	Remote control <3500 gal MC338
178.338-12	Shear section MC338
178.338-13	Supports and anchoring MC338
178.338-18A	Name plate missing MC338
178.338-18B	Specification plate missing MC338
178.338-6	Manhole MC338
178.338-8	Pressure relief devices MC338

Variable Definitions and Codes - MCMISviolation Data Set

178.340-10B	MC306/307/312 metal certificatn plate missing
178.340-6	MC306/307/312 supports and anchoring
178.340-7A	MC306/307/312 ring stiffeners
178.340-7C	MC306/307/312 double bulkhead drain
178.340-7D2	MC306/307/312 ring stiffener drain hole
178.340-8A	MC306/307/312 appurtenances attachment
178.340-8B	MC306/307/312 rearend protection
178.340-8C	MC306/307/312 overturn protection
178.340-8D1	MC306/307/312 piping protection
178.340-8D2	MC306/307/312 minimum road clearance
178.341-3A	MC 306 no manhole closure
178.341-4	MC306 venting
178.341-4D1	MC306 inadequate emergency venting
178.341-4D2	MC 306 pressure activated vents
178.341-4D3	MC 306 no fusible venting
178.341-5A	MC306 internal valves
178.341-5A1	MC306 heat actuated safety
178.341-5A2	MC306 remote control shutoff
178.342-3	MC307 manhole closure
178.342-4	MC307 venting
178.342-5A	MC307 internal valve
178.342-5A1	MC307 heat actuated safety
178.342-5A2	MC307 remote control shutoff
178.343-3	Manhole closure MC312
178.343-4	Venting MC312 (show calculations)
178.343-5A	MC 312 top outlet and valve
178.343-5B1	MC312 bottom valve/piping protection
178.345-10	DOT406/407/412 pressure reliev
178.345-11B	DOT406/407/412 tank valves
178.345-11B1I	DOT406/407/412 remote control
178.345-11B1II	DOT406/407/412 thermal and remote
178.345-14B	DOT406/407/412 name plate
178.345-14C	DOT406/407/412 specification plate
178.345-1I2	406, 407, 412 double bulkhead drain
178.345-5D	DOT406/407/412 manhole securement
178.345-5E	DOT 406/407/412 manhole marking
178.345-6	DOT406/407/412 supports and anchoring
178.345-7D4	DOT406/407/412 ring stiffener drain
178.345-8A	DOT406/407/412 accident protection
178.345-8A5	DOT406/407/412 minimum road clearance
178.345-8B	DOT406/407/412 bottom damage protection
178.345-8C	DOT406/407/412 rollover damage protection
178.345-8D	DOT406/407/412 rear end protection
178.703A	IBC manufacturer markings
178.703B	IBC additional markings
178.704E	IBC protection valves
178.800C6	IBC test dates
179.300-12	DOT106/110aw protection of fittings
179.300-13	DOT106/110aw venting and valves

Variable Definitions and Codes - MCMISviolation Data Set

179.300-15	DOT106/110aw safety relief devices
179.300-18	DOT106/110aw stamping of tanks
180.352B	IBC retest or inspection
180.352D	IBC retest date marking
180.405B	Cargo tank specifications
180.405J	Cargo tank withdrawal certification
180.407C	Cargo tank periodic test and inspection
180.415B	Cargo tank test or inspection markings
383.21A	Operating a CMV with more than 1 drv license
383.23A2	Operating a CMV without a CDL
383.23C	Operating on learner's permit w/o CDL holder
383.23C1	Operating on learner's permit w/o CDL holder
383.23C2	Oper on learner's permit w/o valid drv lic
383.51A	Driving a CMV (CDL) while disqualified
383.91A	Operating a CMV with improper CDL group
383.93B1	No double/triple trailer endorsement on CDL
383.93B2	No passenger vehicle endorsement on CDL
383.93B3	No tank vehicle endorsement on CDL
383.93B4	No hazardous materials endorsement on CDL
383.95A	Violating airbrake restriction
387.301A	No evidence of public liab and prop dmg insur
387.301B	No evidence of cargo insurance
387.303B4	No copy of certificate of registration
387.307	Prop brkr-no evdn of bond or trust fund agrm
387.31F	No proof of financial resp-foreign passenger
387.403A	Freight forwarder-no evidence of insurance
387.403B	Frt fwdrd-no evdnce of pub liab and prop dmg ins
387.7F	No proof of financial responsibility-foreign
390.21A	No DOT # marking and/or name/city/state
390.21B	Carrier name and/or USDOT reqd; Not displayed
390.21C	Improper marking, size, shape
390.21E	Improper marking, rented CMV
391.11	Driver qualification
391.11B1	Interstate driver under 21 years of age
391.11B2	Non-english speaking driver
391.11B4	Oper com veh w/o corr lenses or hearing aid
391.11B5	Not licensed for type vehicle being operated
391.11B6	Operating CMV without corrective lenses
391.11B7	No or invalid driver's license CMV
391.15A	Driving a CMV while disqualified
391.41A	No medical certificate on driver's possession
391.43E	Improper medical exam form
391.43G	Improper medical examiner's certificate
391.45B	Expired medical examiner's certificate
391.49J	No valid medical waiver in driver's possessn
392.10A1	Failing to stop at railroad crossing-bus
392.10A2	Failing to stop at railroad crossing-chlorin
392.10A3	Failing to stop at railroad crossing-placard
392.10A4	Failing to stop at railroad crossing-HM cargo

Variable Definitions and Codes - MCMISviolation Data Set

392.14	Failed to use caution for hazardous condition
392.15A	Failing or improper use of turn signal
392.15B	Failed to signal direction from parked positn
392.15C	Failing to signal a lane change
392.15D	Using turn signal to indicate disabled vehicl
392.15E	Using turn signal as a "do pass"
392.16	Failing to use seat belt while operating CMV
392.2	Local laws (general)
392.20	Failing to properly secure parked vehicle
392.22A	Failing to use hazard warning flashers
392.22B	Failing/improper placement of warning devices
392.2C	Local laws/failure to obey traff cntl device
392.2FC	Local law/following too close
392.2LC	Local law/improper lane change
392.2P	Local law/improper passing
392.2R	Local law/reckless driving
392.2S	Local law/speeding
392.2T	Local laws/improper turns
392.2W	Local laws/size and weight
392.2Y	Local laws/failure to yield right of way
392.3	Operating a CMV while ill/fatigued
392.33	Operating CMV with lamps/reflectors obscured
392.4A	Driver uses or is in possession of drugs
392.5A	Poss/use/under inflnce alcohol-4hrs prio duty
392.5C2	Violating OOS order pursuant to 392.5(a)/(b)
392.6	Scheduling run to necessitate speeding
392.60A	Unauthorized passenger on board CMV
392.63	Pushing/towing a loaded bus
392.7	No pretrip inspection
392.71A	Using or equipping a CMV with radar detector
392.8	Failing to inspect/use emergency equipment
392.9	Driver load secure
392.9A	Failing to secure load
392.9A1	Failing to secure cargo/393.100-393.106
392.9A2	Failing to secure vehicle equipment
392.9A3	Driver's view/movement is obstructed
392.9AAR	Operating without registration (49 USC 13902)
392.9AAS	Operating beyond registration scope (49 USC 13902)
392.9B	Hearing aid not worn while operating CMV
393.100	No or improper load securement
393.100A	No or improper load securement
393.100E	Improper securement of intermodal containers
393.102	Improper securement system (tiedown assembls)
393.102A	Improper securement syst (tiedown assemblies)
393.104A	Improper blocking and/or bracing-longitudinal
393.104B	Improper blocking and/or bracing-lateral
393.106A	No/improper front end structure/headerboard
393.11	No/defective lighting devices/ref/projected
393.11LR	Lwr rr retroreflct sht/reflx reflct mfg>12/93

Variable Definitions and Codes - MCMISviolation Data Set

393.11N	No retroreflect sheet/reflex mfg > 12/93
393.11RT	Retroreflect not affixed as req Trl.mfg>12/93
393.11S	Side retroreflect sht/reflx reflect mfg>12/93
393.11TL	TT lwr rr mud flaps retro sht/reflex mfg>7/97
393.11TT	TT no retroreflect sht/reflx reflect mfg>7/97
393.11TU	TT upr body corners retro sht/reflex mfg>7/97
393.11UR	Up rr retroreflect sht/reflx reflct mfg>12/93
393.13A	No retroreflect sht/reflex reflect mfg <12/93
393.13B	No retroreflect sht/reflex reflect mfg >12/93
393.13C1	Side retroreflect sht/reflx reflect mfg<12/93
393.13C2	Lwr retroreflect sht/reflex reflect mfg<12/93
393.13C3	Up rr retroreflect sht/reflx reflct mfg<12/93
393.13D1	Side retroreflect sht/reflx reflect mfg>11/93
393.13D2	Lwr rr retroreflct sht/reflx reflct mfg>11/93
393.13D3	Up rr retrorefect sht/reflx reflect mfg>11/93
393.17	No/defective lamp/reflector-towaway operation
393.17A	No/defective lamps-towing unit-towaway oper
393.17B	No/defective side marker
393.19	No/defective turn/hazard lamp as required
393.20	No/improper mounting of clearance lamps
393.201A	Frame cracked/broken/bent/loose
393.201B	Bolts securing cab broken/loose/missing
393.201C	Frame rail flange improperly bent/cut/notched
393.201D	Frame accessories not bolted/riveted securely
393.201E	Prohibited holes drilled in frame rail flange
393.203	Cab/body parts requirements violations
393.203A	Cab door missing/broken
393.203B	Cab/body improperly secured to frame
393.203C	Hood not securely fastened
393.203D	Cab seats not securely mounted
393.203E	Cab front bumper missing/unsecured/protrude
393.205A	Wheel/rim cracked or broken
393.205B	Stud/bolt holes elongated on wheels
393.205C	Wheel fasteners loose and/or missing
393.207A	Axle positioning parts defective/missing
393.207B	Adj axle locking pin missing/disengaged
393.207C	Leaf spring assembly defective/missing
393.207D	Coil spring cracked and/or broken
393.207E	Torsion bar cracked and/or broken
393.207F	Air suspension pressure loss
393.209A	Steering wheel not secured/broken
393.209B	Excessive steering wheel lash
393.209C	Loose steering column
393.209D	Steering system components worn/welded/missng
393.209E	Power steering violations
393.24B	Non-compliance with headlamp requirements
393.25B	Lamps are not visible as required
393.25E	Lamp not steady burning
393.25F	Stop lamp violations

Variable Definitions and Codes - MCMISviolation Data Set

393.26	Requirements for reflectors
393.28	Improper or no wiring protection as required
393.30	Improper battery installation
393.32	Improper electrical connections
393.33	Improper wiring installations
393.40	Inadequate brake system on a CMV
393.41	No or defective parking brake system on CMV
393.42	No brakes as required
393.43	No/improper breakaway or emergency braking
393.43A	No/improper tractor protection valve
393.43D	No or defective automatic trailer brake
393.44	No/defective bus front brake line protection
393.45	Brake tubing and hose adequacy
393.45A4	Brake hose/tubing chaffing and/or kinking
393.45A5	Brake hose/tubing contacting exhaust system
393.46	Brake hose/tube connection
393.46B	Brake connections with leaks/constrictions
393.47	Inadequate brake lining for safe stopping
393.48A	Inoperative/defective brakes
393.48B1	Defective brake limiting device
393.50	Inadequate reservoir for air/vacuum brakes
393.50A	Failing to have sufficient air/vacuum reserve
393.50B	Failing to equip veh-prevent res air/vac leak
393.50C	No means to ensure operable check valve
393.51	No or defective brake warning device
393.53A	Auto brake adjuster cmv mfg >10/19/93 hyd brk
393.53B	Auto brake adjuster cmv mfg >10/19/94 air brk
393.53C	Brake adj ind cmv mfg >10/19/94 ext auto adj
393.55A	ABS all cmvs mfg >2/99 with hydraulic brakes
393.55B	ABS malfunction indicators for hydr brake sys
393.55C1	ABS all tractors mfg >2/97 air brake system
393.55C2	ABS all other cmvs mfg >2/98 air brake system
393.55D1	ABS malf circ/signl mfg>2/97,sgl cmv mfg>2/98
393.55D2	ABS malf indctr to cab of towing cmv mfg>2/01
393.55D3	ABS malf indctr conec from towed cmv mfg>2/01
393.55E	ABS malfunct lamps towed cmv mfg>2/98mfg<2/09
393.60B	Damaged or discolored windshield
393.60C	Use of vision reducing matter on windows
393.60D	Glazing permits < 70% of light
393.61A	Inadequate or missing truck side windows
393.61B	Buses-window escape inoperative/obstructed
393.61B2	No or defective bus emergency exits
393.61C	Buses-push out window requirements violation
393.62	Window obstructed which would hinder escape
393.63	No or inadequate bus escape window markings
393.65	Fuel system requirements
393.65B	Improper location of fuel system
393.65C	Improper securement of fuel tank
393.65F	Improper fuel line protection

Variable Definitions and Codes - MCMISviolation Data Set

393.67	Fuel tank requirement violations
393.67C7	Fuel tank fill pipe cap missing
393.67C8	Improper fuel tank safety vent
393.70	Fifth wheel
393.70A	Defective coupling device-improper tracking
393.70B	Defective/improper fifth wheel assemblies
393.70B2	Defective fifth wheel locking mechanism
393.70C	Defective coupling devices for full trailer
393.70D	No/improper safety chains/cables for full trl
393.71	Improper coupling driveaway/towaway operation
393.71H	Towbar requirement violations
393.71H10	No/improper safety chains/cables for towbar
393.75A	Flat tire or fabric exposed
393.75A1	Tire-ply or belt material exposed
393.75A2	Tire-tread and/or sidewall separation
393.75A3	Tire-flat and/or audible air leak
393.75A4	Tire-cut exposing ply and/or belt material
393.75B	Tire-front tread depth less than 4/32 of inch
393.75C	Tire-other tread depth less than 2/32 of inch
393.75D	Tire-bus regrooved/recap on front wheel
393.75E	Tire-regrooved on front of truck/truck-trac
393.75F	Tire-load weight rating/under inflated
393.75F1	Weight carried exceeds tire load limit
393.75F2	Tire under-inflated
393.76	Sleeper berth requirement violations
393.77	Defective and/or prohibited heaters
393.77B11	Bus heater fuel tank location
393.77B5	Tampering with bus heater
393.78	Windshield wipers inoperative/defective
393.79	Defroster inoperative
393.80	No or defective rear-vision mirror
393.81	Horn inoperative
393.82	Speedometer inoperative
393.83A	Exhaust system location
393.83B	Exhaust discharge fuel tank/filler tube
393.83C	Improper exhaust-bus (gasoline)
393.83D	Improper exhaust-bus (diesel)
393.83E	Improper exhaust discharge (not rear of cab)
393.83F	Improper exhaust system repair (patch/wrap)
393.83G	Exhaust leak under truck cab and/or sleeper
393.83H	Exhaust system not securely fastened
393.84	Inadequate floor condition
393.86	No or improper rearend protection
393.86A1	Rear Impct Grds all tlrs/semitlrs mfg>1/26/98
393.86A2	Impct grd width all tlrs/semitlrs mfg>1/26/98
393.86A3	Impct grd hght all tlrs/semitlrs mfg>1/26/98
393.86A4	Impct grd rear all tlrs/semitlrs mfg>1/26/98
393.86A5	Crs-sec vert ht all tlrs/semitlrs mfg>1/26/98
393.86B1	Rear Impact Grds mv mfg >12/31/52 see excepts

Variable Definitions and Codes - MCMISviolation Data Set

393.87	No flag on projecting load
393.88	Improperly located tv receiver
393.89	Bus driveshaft not properly protected
393.9	Inoperable lamp (other than head/tail)
393.90	Bus-no or obscure standee line
393.91	Bus-improper aisle seats
393.92	Bus-no/improper emergency door marking
393.93A	Bus-not equipped with seat belt
393.93B	Truck not equipped with seat belt
393.95A	No/discharged/unsecured fire extinguisher
393.95C	Spare fuses not as required
393.95F	Emergency warning devices not as required
393.95G	HM-restricted emergency warning device
393.9H	Inoperable head lamps
393.9T	Inoperable tail lamp
395.13D	Driving after being declared out-of-service
395.15B	Onboard rcdng devc info requirements not met
395.15C	Onboard rcdng devc improper form and manner
395.15F	Onboard rcdng devc fails to reconstruct info
395.15G	On-board recording device info not available
395.15I5	Onboard rcdng devc doesn't display req. info
395.111	15,20,70/80 hours of service violations (AK)
395.112	Adverse driving conditions violations (AK)
395.3A1	10 hour rule violation
395.3A2	15 hour rule violation
395.3B	60/70 hour rule violation
395.8	Log violation (general/form and manner)
395.8A	No drivers record of duty status
395.8E	False report of drivers record of duty status
395.8F1	Drivers record of duty status not current
395.8K2	Driver failing to retain previous 7 days logs
396.1	Must have knowledge of and comply with regs
396.11	Driver vehicle inspection report
396.13C	No reviewing driver's signature on DVIR
396.17C	Operating a CMV without periodic inspection
396.3A	Inspection, repair, and maintenance
396.3A1	Inspection/repair and maintenance
396.3A1B	Brakes (general)
396.3A1BA	Brake-out of adjustment
396.3A1BC	Brake-air compressor violation
396.3A1BD	Brake-defective brake drum
396.3A1BL	Brake-reserve system pressure loss
396.3A1T	Tires (general)
396.5	Excessive oil leaks
396.5B	Oil and/or grease leak
396.7	Unsafe operations forbidden
396.9C2	Operating an out-of-service vehicle
396.9D2	Failure to correct defects noted on insp
396.9D3	Failure to return insp rpt within 15 days

Variable Definitions and Codes - MCMISviolation Data Set

397.101B	RAM vehicle not on preferred route
397.101D	No written route plan - RAM
397.101E2	Copy of training record/route (RAM)
397.11A	Hazmat vehicle operated near open fire
397.11B	Hazmat vehicle parked within 300 ft. of fire
397.13	Smoking within 25 ft of HM vehicle
397.15	HM vehicle fueling violation
397.17	No tire examine hazmat vehicle
397.19	No instructions/docs 1.1/1.2/1.3
397.19C	Required documents not in possession-explosiv
397.1B	Driver/carrier must obey part 397
397.2	Must comply w/ rules Parts 390-397-transp HM
397.3	State/local laws ordinances regulations
397.5A	Unattended explosives 1.1/1.2/1.3
397.5C	Unattended hazmat vehicle
397.67	HM vehicle routing violation (non RAM)
397.7A	Improperly parked explosives vehicle
397.7B	Improperly parked hazmat vehicle
398.3B	Driver qualif-migrant workers
398.3B8	No doctor's certificate in possession
398.4	Driving of veh-migrant workers
398.5	Parts/access-migrant workers
398.6	Violation of hours of service reg-migrant
398.7	Inspect/maint mv-migrant workers
399.207	Vehicle access requirements violations
399.211	Inadequate maintenance of driver access

Violation Description

Definition: This variable provides a description of each type of violation received by this driver.

Source: These data may be extracted from the MCMIS database from the PART_SECTION table using the SECTION_DESC field.

Variable Name: ViolDesc

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Text description information about each type of violation

Total Number Of Violations

Definition: This variable represents the total number of violations cited to this driver, as reported by the Motor Carrier Management Information System (MCMIS).

Source: These data may be extracted from the MCMIS database by performing a join on INSP_VIOLATION and INSP_DRIVER using the INSPECTION_ID field and the driver's license number, or name and date of birth, and then performing a query count.

Variable Name: NumViols

Variable Definitions and Codes - MCMISviolation Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value
99	Unknown

Number Of Out-Of-Service Violations

Definition: This variable represents the total number of out-of-service violations cited to this driver, as reported by the Motor Carrier Management Information System (MCMIS).

Source: These data may be extracted from the MCMIS database by performing a join on INSP_VIOLATION and INSP_DRIVER using the INSPECTION_ID field, then running a query count using the driver's license number, or name and date of birth.

Variable Name: NumOOSviols

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value
99	Unknown

Variable Definitions and Codes - NonMotorists Data Set

NonMotorists Data Set

The NonMotorists data set contains the variables CaselD, PSU, PSUStrat, RATWeight, and NonMotoristNumber. NonMotoristNumber is assigned to each non-motorist (i.e., pedestrian, pedal cyclist, etc.) involved in the crash. CaselD and NonMotoristNumber uniquely identify each record in this data set and should be used to merge the NonMotorists data set with the crash data set. This data set also contains the following variables:

Nonmotorist's Age

Definition: This variable establishes the nonmotorist's age at the time of the crash. Age is recorded with respect to the nonmotorist's last birthday.

Source: Researcher determined – primary source is the interview data; secondary sources include the police report and other official records.

Variable Name: ANMAge

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value (years)
999	Unknown

Nonmotorist's Height

Definition: This variable establishes the height of the nonmotorist, recorded in centimeters.

Source: Researcher determined – primary source is the interview data; secondary sources include the police report and other official records.

Variable Name: ANMHeight

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value (cms)
9999	Unknown

Nonmotorist's Weight

Definition: This variable establishes the weight of the nonmotorist, recorded in kilograms.

Source: Researcher determined – primary source is the interview data; secondary sources include the police report and other official records.

Variable Name: ANMWeight

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value (kgs)
9999	Unknown

Variable Definitions and Codes - NonMotorists Data Set

Nonmotorist's Gender

Definition: This variable reports the gender of the nonmotorist.

Source: Researcher determined – primary source is the interview data; secondary sources include the police report and other official records.

Variable Name: ANMGender

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Male
2	Female - not reported pregnant
3	Female - pregnant
4	Female - unknown if pregnant
9	Unknown

Nonmotorist Type

Definition: This variable establishes the specific type of nonmotorist involved in the crash.

Source: Researcher determined – primary sources are the on-site investigation findings and interview data; secondary sources include the police report and other official records.

Variable Name: ANMType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Pedestrian
1	Pedal cyclist
2	Skater
3	Other (specify)
9	Unknown

Nonmotorist Attitude

Definition: This variable describes the nonmotorist's vertical orientation just prior to the nonmotorist's first avoidance action. If there was no avoidance action, this variable represents the nonmotorist's vertical orientation just prior to first impact. Individuals who are standing in a stationary position, walking, or running are all classified as standing.

Source: Researcher determined – primary sources are the on-site investigation findings and interview data; secondary sources include the police report and other official records.

Variable Name: ANMPosition

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Standing
2	Crouching
3	Kneeling
4	Bending at waist

Variable Definitions and Codes - NonMotorists Data Set

5	One foot on skateboard/other on pavement
6	Sitting
7	Lying prone
10	Standing/straddling pedal cycle while stopped
11	Sitting upright, pedaling/coasting
12	Crouched over handlebars, pedaling/coasting
13	Standing on pedals, pedaling
14	Standing on pedals, coasting
88	Other (specify)
99	Unknown

Nonmotorist's Motion

Definition: This variable describes the motion of the nonmotorist just prior to the nonmotorist's first avoidance action. If there was no avoidance action, this represents the nonmotorist's motion just prior to the first impact.

Source: Researcher determined – primary source is the on-site investigation findings and interview data; secondary sources include the police report and other official records.

Variable Name: Motion

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not Moving
1	Walking slowly
2	Walking rapidly
3	Running or jogging
4	Hopping
5	Skipping
8	Pedaling at a slow rate
9	Pedaling at a medium rate
10	Pedaling at a rapid rate
14	Skating at a slow pace
15	Skating at a medium pace
16	Skating at a rapid pace
17	Moving at a slow pace
18	Moving at a medium pace
19	Moving at a rapid pace
27	Coasting
28	Starting from a stopped position
29	Falling
30	Jumping
31	Falling/stumbling/rising
88	Other (specify)
99	Unknown

Variable Definitions and Codes - NonMotorists Data Set

Nonmotorist's Action Relative To Vehicle

Definition: This variable describes the direction of the nonmotorist's motion with respect to the vehicle, prior to the first avoidance action. If there was no avoidance action, this variable represents the nonmotorist's motion with respect to the vehicle, just prior to first impact.

Source: Researcher determined – primary sources are the on-site investigation findings and interview data; secondary sources include the police report and other official records.

Variable Name: Action

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Stopped
1	Crossing road, straight
2	Crossing road, diagonally
3	Crossing road, weaving
4	Moving in road with traffic (straight)
5	Moving in road with traffic (weaving)
6	Moving in road against traffic (straight)
7	Moving in road against traffic (weaving)
8	Off road, approaching road
9	Off road, going away from road
10	Off road, moving parallel
11	Off road, crossing driveway
12	Off road, moving along driveway
98	Other (specify)
99	Unknown

Nonmotorist's Body (Chest) Orientation Relative To Striking Vehicle...

Definition: This variable describes the nonmotorist's body orientation with respect to the striking vehicle prior to avoidance actions. "Facing vehicle" indicates the nonmotorist's body (chest) is facing the path of travel of the striking vehicle (which may be tracking or yawing).

Source: Researcher determined – primary sources are the on-site investigation findings and interview data; secondary sources include the police report and other official records.

Variable Name: Orientation

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Facing vehicle
2	Facing away
3	Left side to vehicle
4	Right side to vehicle
8	Other (specify)
99	Unknown

Variable Definitions and Codes - NonMotorists Data Set

Nonmotorist Sight Impairments

Definition: This variable establishes nonmotorist sight impairments. An individual is considered sight impaired if the corrected vision level exceeds 20/70 on a standard measurement scale.

Source: Researcher determined – primary source is the interview data; secondary sources include the police report and other official records.

Variable Name: SightImpaired

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not sight impaired
1	Sight impaired (specify)
9	Unknown

Nonmotorist Sight Restrictions

Definition: This variable establishes nonmotorist sight restrictions with respect to the nonmotorist's pre-crash view of the striking vehicle. Specifically, did the nonmotorist have an unobstructed view regardless of whether or not the nonmotorist actually checked for approaching traffic?

Source: Researcher determined – primary sources are the on-site investigation findings and interview data; secondary sources include the police report.

Variable Name: SightRestricted

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No sight restrictions
1	Intervening vehicle
2	Building
3	Shrubbery
5	Rain, fog
6	Solar glare
7	Headlight glare
9	Other Obstruction (specify)
88	Other Obscuration (specify)
99	Unknown

Nonmotorist Hearing Impairments

Definition: This variable establishes nonmotorist hearing impairments. Total deafness is considered a hearing impairment.

Source: Researcher determined – primary source is the interview data; secondary sources include the police report and other official records.

Variable Name: HearingImpaired

Variable Definitions and Codes - NonMotorists Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No hearing impairment
1	Hearing impairment (specify)
9	Unknown

Nonmotorist Hearing Restrictions

Definition: This variable establishes nonmotorist hearing restrictions. This information is important with respect to the nonmotorist hearing the approaching vehicle and/or warnings (horn) attempted by the vehicle driver.

Source: Researcher determined – primary sources are the on-site investigation findings and interview data; secondary sources include the police report.

Variable Name: HearingRestricted

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No hearing restrictions
1	Use of radio/cassette/CD
2	Wind noise
3	Helmet configuration (specify)
8	Other (specify)
9	Unknown

Nonmotorist Distractions

Definition: This variable documents nonmotorist pre-crash distraction as a result of engaging in a variety of activities.

Source: Researcher determined – primary sources are the on-site investigation findings and interview data; secondary sources include the police report.

Variable Name: Distraction

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not distracted
1	Conversing with another pedal cyclist
2	Conversing with another skater
3	Conversing with another non-motorist
4	Conversing with pedestrian
5	Conversing with pedestrian/pedal cyclist
6	Conversing with another vehicle occupant
7	Talking on cell phone
8	Reading book/magazine
9	Looking for street address
10	Looking at buildings

Variable Definitions and Codes - NonMotorists Data Set

11	Looking at other vehicles
88	Other (specify)
99	Unknown

Nonmotorist Decision Errors

Definition: This variable documents decision errors made by the nonmotorist during the pre-crash phase.

Source: Researcher determined – primary sources are the on-site investigation findings and interview data; secondary sources include the police report.

Variable Name: ANMDecision

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No decision error involved
1	Assumed striking vehicle would stop/yield right-of-way
2	Assumed driver was aware of presence
3	Other faulty assumption (specify)
4	Misjudged velocity/gap distance of vehicle
8	Other decision error (specify)
9	Unknown

Nonmotorist Risk-Taking Behavior

Definition: This variable documents pre-crash risk-taking behavior by the nonmotorist. This is a subjective evaluation based on the preponderance of evidence. Examples of risk-taking behavior would include crossing the street in a mid-block area without the benefit of a defined pedestrian crosswalk and associated TCD, crossing against a “Don’t Walk” pedestrian signal warning, and walking in the traffic lane.

Source: Researcher determined – primary sources are the on-site investigation findings and interview data; secondary sources include the police report.

Variable Name: RiskTaking

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Did not exhibit risk taking behavior
1	Exhibited risk taking behavior (specify)
9	Unknown

Nonmotorist First Avoidance Action

Definition: This variable documents the nonmotorist’s first pre-crash avoidance action. To be considered an avoidance action, the nonmotorist activity must be a conscious or instinctive action and not a kinematic response to the impact.

Source: Researcher determined – primary sources are the on-site investigation findings and interview data; secondary sources include the police report.

Variable Definitions and Codes - NonMotorists Data Set

Variable Name: ANMAvoidance

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No avoidance action
1	Stopped (froze)
2	Stopped
3	Accelerated pace
4	Reduced pace
5	Reduced pedaling pace
6	Reduced skating pace
7	Reduced pace
8	Jumped
9	Jumped from pedal cycle
10	Turned toward vehicle
11	Turned away from vehicle
12	Dove or fell away
13	Dove or fell away with pedal cycle
88	Other (specify)
99	Unknown

Nonmotorist Hand Use In Avoidance Action

Definition: This variable describes the nonmotorist's attempted use of his or her hands in completing the avoidance action. The primary categories for attempted hand use are vaulting and bracing. These actions may or may not be successful and may or may not be appropriate. The primary factor here is nonmotorist intent.

Source: Researcher determined – primary sources are the on-site investigation findings and interview data; secondary sources include the police report.

Variable Name: HandsUsed

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Did not use hands
1	Vaulted corner of vehicle
2	Vaulted onto vehicle
3	Braced against vehicle
8	Other (specify)
9	Unknown

Injury Severity Code – Police

Definition: This variable represents the police-reported injury severity code for the nonmotorist.

Source: Police report.

Cross Reference: This in conjunction with GeneralVehicle.GVEPARSevCode aggregated yield Crash.CrashPARSevCode.

Variable Name: ANMPARSevCode

Variable Definitions and Codes - NonMotorists Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	O - No injury
1	C - Possible injury
2	B - Non-incapacitating injury
3	A - Incapacitating injury
4	K - Killed
5	U - Injury, severity unknown
6	Died prior to crash
9	Unknown

Injury Severity Code – Researched

Definition: This variable represents the nonmotorist's injury severity code, as determined by injury coding and case narratives. This code is based on occupant medical records and/or case narratives and may differ from the police-reported injury severity code.

Source: Zone Center determined – primary sources are non-motorist medical records and interview data; secondary sources include the police report and other official records.

Cross Reference: This in conjunction with GeneralVehicle.GVERESsevCode aggregated yield Crash.CrashRESsevCode.

Variable Name: ANMRESsevCode

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	O - No injury
1	C - Possible injury
2	B - Non-incapacitating injury
3	A - Incapacitating injury
4	K - Killed
5	U - Injury, severity unknown
6	Died prior to crash
9	Unknown

Variable Definitions and Codes - Occupants Data Set

Occupants Data Set

The Occupants data set contains the variables CaseID, PSU, PSUStrat, RATWeight, VehicleNumber and OccupantNumber. OccupantNumber is assigned to each occupant in a vehicle. CaseID, VehicleNumber and OccupantNumber uniquely identify each record in this data set. CaseID and VehicleNumber should be used to merge the Occupant data set with vehicle level data sets. This data set also contains the following variables:

Occupant's Age

Definition: This variable documents the age of the occupant at the time of the crash with respect to the occupant's last birthday.

Source: Primary source is interviewee; secondary sources include police reports and other official records (i.e., medical records).

Variable Name: OCCAge

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value (years)
9999	Unknown

Occupant's Height

Definition: This variable documents the height of the occupant to the nearest centimeter.

Source: Researcher determined – inputs include interviewee or official records (e.g., medical).

Variable Name: OCCHeight

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value (cm)
9999	Unknown

Occupant's Weight

Definition: This variable documents the weight of the occupant to the nearest kilogram.

Source: Researcher determined – inputs include interviewee or official records (e.g., medical).

Variable Name: OCCWeight

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value (kgs)
9999	Unknown

Variable Definitions and Codes - Occupants Data Set

Occupant's Sex

Definition: This variable identifies the gender of the occupant and includes information regarding pregnancy.

Source: Primary source is the interview, secondary sources include police report and official records (e.g. medical).

Variable Name: OCCGender

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Male
2	Female, not reported pregnant
3	Female, pregnant - 1st trimester (1st-3rd month)
4	Female, pregnant - 2nd trimester (4th-6th month)
5	Female, pregnant - 3rd trimester (7th-9th month)
6	Female, pregnant - term unknown
9	Unknown

Occupant's Role

Definition: This variable describes the role of the occupant within the vehicle – driver or passenger.

Source: Primary source is interviewee; secondary source is police report.

Variable Name: Role

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Driver
2	Passenger
9	Unknown

Race/Ethnic Origin Of Occupant

Definition: This variable represents the occupant's self-identification of his/her race or ethnic origin. Self-identification represents self-classification by people according to the race with which they identify themselves.

Source: Primary source is the interview, secondary sources include police report, medical records, and other official documents.

Cross Reference: Identical to GeneralVehicle.EthnicOrigin if Occupants. Role = 1.

Variable Name: Race

Attribute Codes

Code	Meaning
1	White (non-Hispanic)
2	Black (non-Hispanic)
3	White (Hispanic)

Variable Definitions and Codes - Occupants Data Set

4	Black (Hispanic)
5	American Indian, Eskimo or Aleut
6	Asian or Pacific Islander
7	Other (specify)
8	No driver present
9	Unknown

Occupant's Eyewear

Definition: This variable documents whether or not the occupant was wearing any type of eyewear, including contact lenses, at the time of the crash.

Source: Researcher determined — primary source is the interview and secondary sources include vehicle inspection and medical records.

Variable Name: Eyewear

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Eyeglasses/sunglasses
2	Contact lenses
3	Contact lenses w/ sunglasses
9	Unknown

Police Reported Air Bag Availability/Function

Definition: This variable captures what was documented on the police report regarding the availability and functioning of any air bag system.

Source: Police report.

Cross Reference: Related to the Airbags data set, values will differ in part due to Police Report vs. Researcher determined values.

Variable Name: AirbagAvail

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No airbag available
1	Police did not indicate airbag availability/function
2	Deployed
3	Not deployed
4	Unknown if deployed
9	Police indicated 'unknown'

Police Reported Belt Use

Definition: This variable captures what was documented on the police report regarding occupant use of available vehicle restraints (i.e. manual belts, child safety seat, or automatic restraints).

Source: Police report.

Variable Definitions and Codes - Occupants Data Set

Variable Name: BeltUsed

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	None Used
1	Police did not indicate belt use
2	Shoulder Belt
3	Lap Belt
4	Lap and shoulder belt
5	Belt used, type not specified
6	Child safety seat
7	Automatic belt
8	Other type belt (specify)
9	Police indicated 'unknown'

Ejection Type

Definition: This variable describes the type of occupant ejection that was involved during the crash sequence. Ejection refers to the person being completely or partially thrown from the vehicle as a result of the impact or rollover.

Source: Researcher determined – inputs include the vehicle inspection, interviewee, medical records, and the police report.

Variable Name: EjectionType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No Ejection
1	Complete Ejection
2	Partial Ejection
3	Ejection, unknown degree
9	Unknown

Ejection Area

Definition: This variable describes the general area of the vehicle from where the occupant ejection occurred during the crash sequence. Ejection refers to the person being completely or partially thrown from the vehicle as a result of the impact or rollover.

Source: Researcher determined – inputs include the vehicle inspection, interviewee, medical records, and the police report.

Variable Name: EjectionArea

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No Ejection
1	Windshield
2	Left Front
3	Right Front

Variable Definitions and Codes - Occupants Data Set

4	Left Rear
5	Right Rear
6	Rear
7	Roof
8	Other area
9	Unknown

Ejection Medium

Definition: This variable describes the component of the vehicle from which the occupant was ejected during the crash sequence. Ejection refers to the person being completely or partially thrown from the vehicle as a result of the impact or rollover.

Source: Researcher determined – inputs include the vehicle inspection, interviewee, medical records, and the police report.

Variable Name: Medium

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No Ejection
1	Door/hatch/tailgate
2	Non-fixed Roof Structure
3	Fixed Glazing
4	Non-fixed Glazing (specify)
5	Integral Structure
8	Other medium (specify)
9	Unknown

Medium Status

Definition: This variable describes the status of the component of the vehicle from which the occupant was ejected during the crash sequence. This variable represents the status of the component immediately prior to the impact.

Source: Researcher determined – inputs include the vehicle inspection, interviewee, medical records, and the police report.

Variable Name: MediumStatus

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No Ejection
1	Open
2	Closed
3	Integral Structure
9	Unknown

Variable Definitions and Codes - Occupants Data Set

Multi-Ejection?

Definition: This variable indicates whether or not there were multiple ejections associated with a particular vehicle.

Source: Researcher determined – inputs include the vehicle inspection, interviewee, medical records, and the police report.

Variable Name: MultiEjection

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes

Entrapment

Definition: This variable documents whether or not the occupant was physically trapped inside the vehicle by an integral part of the vehicle (e.g. intruding component).

Source: Researcher determined – inputs include the vehicle inspection, interview and police report.

Variable Name: Entrapment

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not trapped/exit not inhibited
1	Trapped/pinned - mechanically restrained
2	Could not exit vehicle due to jammed doors, fire, etc (specify)
9	Unknown

Occupant Mobility

Definition: This variable documents the mobility of the occupant (how the occupant exited the vehicle) after the crash.

Source: Investigator determined – inputs include PAR, fire and or EMS personnel/records, medical records, witnesses, and interviewees.

Variable Name: Mobility

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Occupant fatal before removed from vehicle
1	Removed from vehicle while unconscious or not oriented to time or place
2	Removed from vehicle due to perceived serious injuries
3	Exited vehicle with some assistance
4	Exited vehicle under own power
5	Occupant fully ejected
8	Removed from vehicle for other reasons (specify)
9	Unknown

Variable Definitions and Codes - Occupants Data Set

Number Of Intrusions

Definition: This variable documents the number of vehicle components that intruded into the passenger compartment of the vehicle as a result of the crash.

Source: Researcher determined – inputs include the vehicle inspection, interviewee, medical records, and the police report.

Variable Name: Intrusions

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Count of intrusions

Row

Definition: This variable identifies in which row in the vehicle the occupant was seated.

Source: Primary source is interviewee; secondary sources include vehicle inspection, police report, or official records (i.e., medical).

Cross Reference: Related to Injuries.IntrusionRow.

Variable Name: Row

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	First row
2	Second row
3	Third row
4	Fourth row
5	Fifth row
O	Other
U	Unknown

Occupant Location

Definition: This variable identifies in which seat in the vehicle the occupant was located. This variable is used in conjunction with the variable “Row” to determine the exact seating location for a particular occupant.

Source: Primary source is interviewee; secondary sources include vehicle inspection, police report, or official records (i.e., medical).

Cross Reference: Related to Injuries.IntrusionLocation.

Variable Name: OCCLocation

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	First location
2	Second location
3	Third location

Variable Definitions and Codes - Occupants Data Set

4	Fourth location
O	Other position
U	Unknown

Occupant's Posture

Definition: This variable describes the occupant's last known position in the vehicle just prior to impact. This variable is designed to capture those instances where an occupant was not in the usual upright, forward-facing seated position prior to the crash.

Source: Primary source is interviewee; secondary sources include vehicle inspection, police report, or official records (i.e., medical).

Variable Name: Posture

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Normal Posture
1	Kneeling or standing on seat
2	Lying on or across seat
3	Kneeling, standing or sitting in front of seat
4	Sitting Sideways/turned to talk with another occupant/look out rear
5	Sitting on a console
6	Lying back in a reclined seat position
7	Bracing with feet or hands on a surface in front of seat
8	In the lap of another occupant
9	Sharing a seat - sitting side by side - not primary
10	In a Child Seat
88	Other posture (specify)
99	Unknown

Head Restraint Type At This Occupant's Position

Definition: This variable describes the type of head restraint available for a particular seating position.

Source: Vehicle inspection.

Variable Name: OCCRestraintType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	No head restraints
2	Integral
3	Adjustable
4	Add-on
8	Other (specify)
9	Unknown

Variable Definitions and Codes - Occupants Data Set

Head Restraint Damage By Occupant At This Occupant Position

Definition: This variable describes any type of damage to the head restraint by the occupant at a particular seating position.

Source: Vehicle inspection.

Variable Name: RestraintDamage

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	No head restraints
2	No damage
3	Damaged during crash
9	Unknown

Seat Type

Definition: This variable describes the type of seat available for a particular occupant position.

Source: Vehicle inspection.

Variable Name: SeatType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Bucket
2	Bucket with folding back
3	Bench
4	Bench with separate back cushions
5	Bench with folding back(s)
6	Split bench with separate back cushions
7	Split bench with folding back(s)
8	Pedestal (i.e., column supported)
9	Box mounted seat (i.e., van type)
10	Other seat type (specify)
99	Unknown

Seat Orientation

Definition: This variable describes the orientation (the direction that it is facing) of a particular seat in the vehicle.

Source: Vehicle inspection.

Variable Name: SeatOrientation

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Forward facing seat
2	Rear facing seat
3	Side facing seat (inward)

Variable Definitions and Codes - Occupants Data Set

4	Side facing seat (outward)
8	Other (specify)
9	Unknown

Seat Track Position

Definition: This variable describes the seat position (on its track) at the time of impact.

Source: Researcher determined – inputs include the vehicle inspection with interviewee as confirming or secondary source.

Variable Name: TrackPosition

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Non-adjustable seat track
2	Seat at forward most track position
3	Seat between forward most and middle track positions
4	Seat at middle track position
5	Seat between middle and rear most track positions
6	Seat at rear most track position
9	Unknown

Seat Performance

Definition: This variable assesses the performance of the seat during the crash sequence. The attributes are indications of whether the seat failed or was deformed in any way.

Source: Vehicle inspection.

Variable Name: SeatPerformance

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	No seat performance failure(s)
2	Seat adjusters failed
3	Seat back folding locks or 'seat back' failed (specify)
4	Seat track/anchors failed
5	Deformed by impact of occupant
6	Deformed by passenger compartment intrusion (specify)
7	Combination of above (specify)
8	Other (specify)
9	Unknown

Does The Seat Have Integrated Passenger Belts?

Definition: This variable indicates whether or not the seat belts associated with a particular seat are an integral part of the seat. In other words, the belts are a part of the seat itself.

Source: Vehicle inspection.

Variable Name: IntegratedRestraints

Variable Definitions and Codes - Occupants Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes
99	Unknown

Seat Back Incline Prior To Impact

Definition: This variable describes the pre-crash position of the seat back for a particular seat in the vehicle and is relevant only for adjustable (reclining) seat backs.

Source: Researcher determined – vehicle inspection with driver/occupant interview as corroboration.

Variable Name: PriorInclination

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Not Adjustable
2	Upright
3	Slightly Reclined
4	Completely Reclined
9	Unknown

Seat Back Incline Position Post Impact

Definition: This variable describes the post-impact position of the seat back for a particular seat in the vehicle and is relevant only for adjustable (reclining) seat backs. This variable reflects the change in the seat back incline position as a result of forces upon it during the crash sequence.

Source: Researcher determined – vehicle inspection with driver/occupant interview as corroboration.

Variable Name: PostInclination

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Not Adjustable
11	Moved to completely rearward position
12	Moved to rearward midrange position
13	Moved to slightly rearward position
14	Retained pre-impact position
15	Moved to slightly forward position
16	Moved to forward midrange position
17	Moved to completely forward position
21	Moved to completely rearward position
22	Moved to rearward midrange position
23	Retained pre-impact position
24	Moved to upright position
25	Moved to slightly forward position
26	Moved to forward midrange position

Variable Definitions and Codes - Occupants Data Set

27	Moved to completely forward position
31	Retained pre-impact position
32	Moved to rearward midrange position
33	Moved to slightly rearward position
34	Moved to upright position
35	Moved to slightly forward position
36	Moved to forward midrange position
37	Moved to completely forward position
99	Unknown

Child Safety Seat Used?

Definition: This variable indicates whether or not a particular occupant was seated in a child safety seat.

Source: Researcher determined – inputs include the vehicle inspection, interviewee, and the police report.

Variable Name: ChildSeatAvailable

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes
99	Unknown

Manual (Active) Belt System Availability

Definition: This variable identifies the type of manual belt system available for a particular seating position.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include the interview, medical records, and police report. NOTE: The use of the police report is limited. If there is no vehicle inspection and the only secondary source is the PAR, then the PAR "narrative" must clearly state that the manual belt system was used or available. An indication of usage or availability in a "restraint system" block is, by itself, not usable.

Cross Reference: Related to GeneralVehicle.GVERestraintType, values will differ in part due to VIN vs. Researcher determined values.

Variable Name: ManualBeltAvailable

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	None available
1	Belt removed/destroyed
2	Shoulder Belt
3	Lap Belt
4	Lap and shoulder belt
5	Belt available - type unknown
6	Shoulder (lap destroyed/removed)

Variable Definitions and Codes - Occupants Data Set

7	Lap (shoulder destroyed/removed)
8	Other Belt (specify)
9	Unknown

Manual (Active) Belt System Used In This Crash?

Definition: This variable documents actual usage of a manual belt at a particular seating position.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include the interview and medical records. NOTE: Do not use the police crash report as a source for coding this variable.

Variable Name: ManualBeltUsed

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not Used/ not available/ removed or destroyed
1	Inoperative (specify)
2	Shoulder Belt
3	Lap Belt
4	Lap and shoulder belt
5	Belt used - type unknown
8	Other belt used (specify)
12	Shoulder w/child safety seat
13	Lap w/child safety seat
14	Lap & shoulder w/child safety seat
15	Belt w/child seat - type unknown
18	Other belt w/child seat (specify)
99	Unknown if belt used

Proper Use Of Manual (Active) Belts

Definition: This variable documents if the manual belt system was used as it was intended to be used (as it was designed) at a particular seating location.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include the interview, police report, and medical records. NOTE: The use of the police report is limited. If there is no vehicle inspection and the only secondary source is the PAR, then the PAR "narrative" must clearly state that the manual belt system was used properly or improperly.

Variable Name: ManualBeltProper

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not equipped/not available/not used
1	Used properly
2	Used properly w/child seat
3	Improper-shoulder worn under arm
4	Improper-shoulder worn behind back or seat
5	Improper-belt worn around more than one person

Variable Definitions and Codes - Occupants Data Set

6	Improper-lap belt worn on abdomen
7	Lap or lap/shoulder used improperly w/child seat (specify)
8	Other improper use (specify)
9	Unknown
10	Used, unknown if proper

Manual (Active) Belt Failure Modes During Crash

Definition: This variable indicates failure of a manual belt system during the crash sequence, based on physical evidence.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources may include interviewee and police report if a vehicle inspection is obtained.

Variable Name: ManualBeltFailure

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	None used / Not available
1	No manual belt failure(s)
2	Torn webbing (stretched webbing not included)
3	Broken buckle or latch plate
4	Upper anchorage separated
5	Other anchorage separated (specify)
6	Broken retractor
7	Combination of above (specify)
8	Other manual belt failure (specify)
9	Unknown

Manual Shoulder Belt Upper Anchorage Adjustment

Definition: This variable documents the position of the adjustable upper anchorage point of the manual shoulder belt at the time of the crash.

Source: Researcher determined – inputs include vehicle inspection and occupant interview.

Variable Name: AnchorAdjustment

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No manual shoulder belt
1	None for manual shoulder belt
2	In full up position
3	In mid position
4	In full down position
5	Position unknown
9	Unknown if adjuster present

Variable Definitions and Codes - Occupants Data Set

Seat Belt Pretensioners Present

Definition: This variable identifies whether or not a seat belt pretensioner is present for a manual belt. Pretensioners are designed to take up the slack in the seat belt during a crash of sufficient deceleration. When the vehicle is involved in a collision of sufficient force, a microprocessor causes current to flow through the seat belt deployment loops to the initiator. Current passing through the initiator ignites the material in the canister, producing a rapid generation of gas. The gas produced from this reaction deploys the seat belt pretensioners and shortens the seat belt pretensioner height, which removes all of the slack in the seat belts. The seat belt pretensioners will deploy immediately before the frontal initiator (air bag) modules deploy.

Source: Researcher determined – primary source is vehicle inspection; secondary sources include the interview and manufacturer's data.

Variable Name: PreTensionerAvailable

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Not reinstalled
2	None present
3	Present
9	Unknown

Pretensioners Actuate?

Definition: This variable documents whether or not a manual seat belt pretensioner activated during the crash.

Source: Researcher determined – primary source is vehicle inspection; secondary source is the interview.

Variable Name: PreTensionerActuated

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes
9	Unknown

Pretensioner Travel

Definition: This variable documents the distance (in millimeters) the pretensioner moved from its original position during the crash.

Source: Vehicle inspection.

Variable Name: PreTensionerTravel

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value (mm)
999	Unknown

Variable Definitions and Codes - Occupants Data Set

Retractor Type

Definition: This variable describes the type of retractor associated with a particular seat belt. Retractors wind up the loose webbing of the unused 3-point safety belt, take up the slack, and provide slight tension on belts that are in use.

Source: Vehicle inspection.

Variable Name: Retractor

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	None Present
1	Emergency Locking Retractor (ELR)
2	Automatic Locking Retractor
3	Switchable Retractor in ELR Mode
4	Switchable Retractor in ALR Mode
5	Switchable Retractor-Unknown Mode
9	Unknown Retractor Type

Source Of Researcher's Determination Of Manual Belt Use

Definition: This variable documents from where the researcher obtained the preponderance of information to make the determination that the manual belt system was used.

Source: Researcher determined.

Variable Name: ManualBeltSource

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not Equipped/Not Available/Destroyed or Rendered Inoperative
1	Vehicle Inspection
2	Official Injury Data
3	Driver/occupant interview
8	Other (specify)
9	Unknown if belt used

Automatic (Passive) Belt System Availability/Function

Definition: This variable identifies the type of automatic belt system available for a particular seating position.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include the interview, medical records, and police report. NOTE: The use of the police report is limited. If there is no vehicle inspection and the only secondary source is the PAR, then the PAR "narrative" must clearly state that the manual belt system was used or available. An indication of usage or availability in a "restraint system" block is, by itself, not usable.

Variable Name: AutoBeltAvailable

Variable Definitions and Codes - Occupants Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not Equipped/Not Available
1	Two point automatic belts
2	Three point automatic belts
3	Automatic type unknown
4	Automatic destroyed or rendered inoperative
9	Unknown

Automatic (Passive) Belt System Use

Definition: This variable documents actual usage of an automatic belt at a particular seating position.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include the interview and medical records. NOTE: Do not use the police crash report as a source for coding this variable.

Variable Name: **AutoBeltUsed**

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not Equipped/Not Available/destroyed or rendered inoperative
1	Automatic belt in use
2	Not in use (manually disconnected, motorized track inoperative) (specify)
3	Automatic belt use unknown
4	Automatic belt used with child restraint
9	Unknown

Automatic (Passive) Belt System Type

Definition: This variable indicates whether the automatic belt system is motorized or non-motorized.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include the interview, police report, and medical records. NOTE: The use of the police report is limited. If there is no vehicle inspection and the only secondary source is the PAR, then the PAR "narrative" must clearly state what type of automatic belt system was used.

Variable Name: **BeltMotorized**

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not Equipped/Not Available
1	Non-motorized system
2	Motorized system
9	Unknown

Variable Definitions and Codes - Occupants Data Set

Proper Use Of Automatic (Passive) Belt System

Definition: This variable documents if the automatic belt system was used as it was intended to be used (as it was designed) at a particular seating location.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include the interview, police report, and medical records. NOTE: The use of the police report is limited. If there is no vehicle inspection and the only secondary source is the PAR, then the PAR "narrative" must clearly state that the automatic belt system was used properly or improperly.

Variable Name: AutoBeltProper

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not Equipped/Not Available/Not Used
1	Used properly
2	Used properly w/child safety seat
3	Shoulder belt worn under arm
4	Shoulder belt worn behind back
5	Belt worn around more than one person
6	Lap portion worn on abdomen
7	Lap/shoulder belt/automatic shoulder belt used improperly with child safety seat (specify)
8	Other improper use (specify)
9	Unknown

Automatic (Passive) Belt Failure Modes During Crash

Definition: This variable indicates failure of an automatic belt system during the crash sequence, based on physical evidence.

Source: Researcher determined – primary source is the vehicle inspection; additional input may include the interview and police report if a vehicle inspection is obtained.

Variable Name: AutoBeltFailure

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not Equipped/Not Available/Not In Use
1	No automatic belt failure(s)
2	Torn webbing (stretched webbing not included)
3	Broken buckle or latch plate
4	Upper anchorage separated
5	Other anchorage separated (specify)
6	Broken retractor
7	Combination of above (specify)
8	Other automatic belt failure (specify)
9	Unknown

Variable Definitions and Codes - Occupants Data Set

Source Of Researcher's Determination Of Automatic Belt Use

Definition: This variable documents from where the researcher obtained the preponderance of information to make the determination that the automatic belt system was used.

Source: Researcher determined.

Variable Name: AutoBeltSource

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not Equipped/Not Available/Destroyed or Rendered Inoperative
1	Vehicle Inspection
2	Official Injury Data
3	Driver/occupant interview
8	Other (specify)
9	Unknown if belt used

Injury Severity Code – Police

Definition: This variable identifies the police-reported injury severity for a particular occupant.

Source: Police report.

Variable Name: OCCInjSeverityCode

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	O - No injury
1	C - Possible injury
2	B - Non-incapacitating injury
3	A - Incapacitating injury
4	K - Killed
5	U - Injury, severity unknown
6	Died prior to crash
9	Unknown

Mortality

Definition: This variable documents whether or not the occupant died as a result of the crash (either due to injuries received during the crash or due to a physical incapacitation that led to the crash).

Source: Researcher determined – inputs include interviewee, police report, and medical records.

Variable Name: Mortality

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not Fatal
1	Fatal

Variable Definitions and Codes - Occupants Data Set

2	Fatal - ruled disease (specify)
9	Unknown

Medical Treatment

Definition: This variable describes the type of medical treatment an occupant received as a result of the crash.

Source: Researcher determined – primary source is medical records; secondary sources include police report and interviews.

Cross Reference: Related to Crash.Treatment.

Variable Name: InitialTreatment

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No treatment
1	Dead on Arrival (DOA) at hospital
2	Dead prior to Admission
3	Hospitalization
4	Transported and released
5	Treatment at scene - non-transported
6	Treatment later
7	Transported to a medical facility-unknown if treated
8	Treatment - other (specify)
9	Unknown

Type Of Medical Facility (Initial Treatment)

Definition: This variable describes the category of medical facility that provided initial treatment to an occupant as a result of injuries from the crash.

Source: Researcher determined – inputs include police report, interviewee, official records, and the American College of Surgeons classification criteria.

Variable Name: InitialFacility

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not treated at a medical facility
1	Trauma Center
2	Hospital
3	Medical clinic
4	Physician's Office
5	Treatment later at medical facility
8	Other (specify)
9	Unknown

Variable Definitions and Codes - Occupants Data Set

Hospital Stay

Definition: This variable documents the number of days that the occupant was hospitalized (after being admitted) in a primary medical care facility.

Source: Researcher determined – inputs include interviewee and medical reports.

Variable Name: HospitalDays

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value (days)
99	Unknown

Working Days Lost

Definition: This variable documents the actual number of “work” days lost due to the crash by an employed person or a full-time college student. Employed is defined to mean that the occupant was scheduled to work at least four hours on each of the days lost. The days lost need not be due to injury.

Source: Primary source is the interviewee; a secondary source is the person's employer.

Variable Name: WorkDaysLost

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value (days)
88	Not applicable
99	Unknown

Death Date

Definition: This variable identifies the actual date of death for a fatally injured occupant.

Source: Zone Center determined – primary source is medical records; secondary sources include police report, autopsy report, or other official records for actual date of death for fatally injured occupants.

Variable Name: DateOfDeath

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Date (in YYYY-MM format)
9999-99	Unknown

Death Time

Definition: This variable identifies the actual time of death for a fatally injured occupant (military clock time).

Variable Definitions and Codes - Occupants Data Set

Source: Zone Center determined – primary source is medical records; secondary sources include police report, autopsy report, or other official records for actual time of death for fatally injured occupants.

Variable Name: TimeOfDeath

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Time (in HH:MM format)
99:99	Unknown

Number Of Injuries For This Occupant

Definition: This variable represents the total number of coded injuries (coded by the Zone Center) for a particular occupant.

Source: Zone Center determined – inputs include official medical records and interviewee data from the PSU.

Cross Reference: Identical to the aggregation of the Injuries data set.

Variable Name: InjuryCount

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual count of coded injuries

Glasgow Coma Scale (GCS) Score (At Medical Facility)

Definition: This variable documents the actual value of the initial GCS score obtained at a medical facility. The Glasgow Coma Scale assesses three neurological functions: eye opening, motor response, and verbal response. The GCS is taken from medical records.

Source: Zone Center determined from official medical records.

Variable Name: GCSScore

Attribute Codes

<u>Code</u>	<u>Meaning</u>
00	Not Injured
1	Injured - not treated at medical facility
2	No GCS Score at medical facility
3	GCS = 3
4	GCS = 4
5	GCS = 5
6	GCS = 6
7	GCS = 7
8	GCS = 8
9	GCS = 9
10	GCS = 10
11	GCS = 11
12	GCS = 12

Variable Definitions and Codes - Occupants Data Set

13	GCS = 13
14	GCS = 14
15	GCS = 15
97	Injured, details unknown
99	Unknown if injured

Was The Occupant Given Blood?

Definition: This variable documents the number of blood units given to an occupant for treatment of injuries resulting from the crash.

Source: Zone Center determined from official medical records or Emergency Medical Service (EMS) reports.

Variable Name: UnitsTransfused

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No Blood Given
1	1 Unit given
2	2 Unit given
3	3 Unit given
4	4 Unit given
5	5 Unit given
6	6 Unit given
7	7 Unit given
8	8 Unit given
9	9 Unit given
10	10 or more Units given
97	Blood given, # units unknown
99	Unknown if blood given

Arterial Blood Gases – ABG (HCO₃)

Definition: This variable documents the reported HCO₃ (bicarbonate) value obtained for this occupant. This information is found on medical records.

Source: Zone Center determined from official medical records.

Variable Name: ABGTest

Attribute Codes

Code	Meaning
00	Not Injured
1	Injured, ABG not measured or reported
2	ABG = 2
3	ABG = 3
4	ABG = 4
5	ABG = 5
6	ABG = 6
7	ABG = 7

Variable Definitions and Codes - Occupants Data Set

8	ABG = 8
9	ABG = 9
10	ABG = 10
11	ABG = 11
12	ABG = 12
13	ABG = 13
14	ABG = 14
15	ABG = 15
16	ABG = 16
17	ABG = 17
18	ABG = 18
19	ABG = 19
20	ABG = 20
21	ABG = 21
22	ABG = 22
23	ABG = 23
24	ABG = 24
25	ABG = 25
26	ABG = 26
27	ABG = 27
28	ABG = 28
29	ABG = 29
30	ABG = 30
31	ABG = 31
32	ABG = 32
33	ABG = 33
34	ABG = 34
35	ABG = 35
36	ABG = 36
37	ABG = 37
38	ABG = 38
39	ABG = 39
40	ABG = 40
41	ABG = 41
42	ABG = 42
43	ABG = 43
44	ABG = 44
45	ABG = 45
46	ABG = 46
47	ABG = 47
48	ABG = 48
49	ABG = 49
50	ABG = 50
96	ABG reported, HCO3 unknown
97	Injured, details unknown
99	Unknown if injured

Variable Definitions and Codes - Overview Data Set

Overview Data Set

The Overview data set contains the variables CaseID, PSU, PSUStrat, RATWeight and VehicleNumber. CaseID and VehicleNumber uniquely identify each record in this data set and should be used to merge the Overview data set with other vehicle level data sets. This data set also contains the following variables:

Vehicle Make

Definition: This vehicle identifies the vehicle make for this vehicle.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include police report, interview, and other vehicle photographs.

Cross Reference: Identical to GeneralVehicle.GVEMake. Congruent with GeneralVehicle.VINMake, values will differ due to VIN vs. Researcher determined values.

Variable Name: OVEMake

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	AMC
2	JEEP / KAISER-JEEP
3	AM GENERAL
6	CHRYSLER
7	DODGE
8	IMPERIAL
9	PLYMOUTH
10	EAGLE
12	FORD
13	LINCOLN
14	MERCURY
18	BUICK
19	CADILLAC
20	CHEVROLET
21	OLDSMOBILE
22	PONTIAC
23	GMC
24	SATURN
25	GRUMMAN
29	OTHER DOMESTIC MANUFACTURER (light vehicles)
30	VOLKSWAGEN
31	ALFA ROMEO
32	AUDI
33	AUSTIN / AUSTIN HEALEY
34	BMW
35	NISSAN / DATSUN
36	FIAT
37	HONDA
38	ISUZU
39	JAGUAR

Variable Definitions and Codes - Overview Data Set

40	LANCIA
41	MAZDA
42	MERCEDES BENZ
43	MG
44	PEUGEOT
45	PORSCHE
46	RENAULT/AMC
47	SAAB
48	SUBARU
49	TOYOTA
50	TRIUMPH
51	VOLVO
52	MITSUBISHI
53	SUZUKI
54	ACURA
55	HYUNDAI
56	MERKUR
57	YUGO
58	INFINITI
59	LEXUS
60	DAIHATSU
61	STERLING
62	LAND ROVER
63	KIA
64	DAEWOO
65	MINI
69	OTHER FOREIGN MANUFACTURER (light vehicles)
70	BSA
71	DUCATI
72	HARLEY-DAVIDSON
73	KAWASAKI
74	MOTO-GUZZI
75	NORTON
76	YAMAHA
78	OTHER MAKE MOPED
79	OTHER MAKE MOTORED CYCLE
80	BROCKWAY
81	DIAMOND REO/REO
82	FREIGHTLINER/WHITE
83	FWD
84	INTERNATIONAL HARVESTER/NAVISTAR
85	KENWORTH
86	MACK
87	PETERBILT
88	IVECO/MAGIRUS
98	OTHER MAKE (med/heavy truck/bus or "other")
99	UNKNOWN MANUFACTURER

Variable Definitions and Codes - Overview Data Set

Vehicle Model (with Vehicle Make)

Definition: This variable identifies the vehicle model for this vehicle.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include police report, interview, and other vehicle photographs.

Cross Reference: Identical to GeneralVehicle.GVEModel. Congruent with GeneralVehicle.VINModel, values will differ due to VIN vs. Researcher determined values.

Variable Name: OVEModel (with OVEMake)

Attribute Codes

<u>MAKE</u>		<u>MODEL</u>	
<u>Code</u>	<u>Meaning</u>	<u>Code</u>	<u>Meaning</u>
1	AMC	1	RAMBLER/AMERICAN
1	AMC	2	REBEL/MATADOR
1	AMC	3	AMBASSADOR
1	AMC	4	PACER
1	AMC	5	AMX
1	AMC	6	JAVELIN
1	AMC	7	HORNET/CONCORD
1	AMC	8	SPIRIT/GREMLIN
1	AMC	9	EAGLE
1	AMC	10	EAGLE SX-4
1	AMC	398	OTHER AUTOMOBILE
1	AMC	399	UNKNOWN AUTOMOBILE
1	AMC	999	UNKNOWN VEHICLE
2	JEEP / KAISER-JEEP	401	CJ-2/CJ-3/CJ-4
2	JEEP / KAISER-JEEP	402	CJ-5/CJ-6/CH-7/CH-8
2	JEEP / KAISER-JEEP	403	YJ-SERIES
2	JEEP / KAISER-JEEP	404	CHEROKEE (1984 ON)
2	JEEP / KAISER-JEEP	405	LIBERTY
2	JEEP / KAISER-JEEP	421	CHEROKEE (1963 - 1983)
2	JEEP / KAISER-JEEP	431	GRAND WAGONEER
2	JEEP / KAISER-JEEP	481	PICKUP
2	JEEP / KAISER-JEEP	482	COMANCHE
2	JEEP / KAISER-JEEP	498	OTHER LIGHT TRUCK
2	JEEP / KAISER-JEEP	499	UNKNOWN LIGHT TRUCK
2	JEEP / KAISER-JEEP	999	UNKNOWN VEHICLE
3	AM GENERAL	401	DISPATCHER
3	AM GENERAL	421	HUMMER
3	AM GENERAL	466	DISPATCHER
3	AM GENERAL	498	OTHER LIGHT TRUCK
3	AM GENERAL	499	UNKNOWN LIGHT TRUCK
3	AM GENERAL	884	MEDIUM/HEAVY TRUCK
3	AM GENERAL	898	OTHER MEDIUM/HEAVY TRUCK
3	AM GENERAL	899	UNKNOWN MEDIUM/HEAVY TRUCK
3	AM GENERAL	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
3	AM GENERAL	983	BUS - REAR ENGINE/FLAT FRONT
3	AM GENERAL	988	OTHER BUS
3	AM GENERAL	989	UNKNOWN BUS TYPE
3	AM GENERAL	999	UNKNOWN VEHICLE
6	CHRYSLER	9	CORDOBA
6	CHRYSLER	10	NEW YORKER FIFTH AVENUE ('89)
6	CHRYSLER	10	NEWPORT
6	CHRYSLER	13	RAMPAGE 2.2 (CAR BASED PICKUP)
6	CHRYSLER	14	RWD ONLY-NEW YORKER/NEWPORT/5TH AVENUE/IMPERIAL

Variable Definitions and Codes - Overview Data Set

6	CHRYSLER	14	NEW YORKER ('83-'90)
6	CHRYSLER	14	NEW YORKER SALON
6	CHRYSLER	14	NEW YORKER/E CLASS/IMPERIAL/5TH AVENUE
6	CHRYSLER	15	LASER
6	CHRYSLER	16	LEBARON
6	CHRYSLER	17	LEBARON GTS/GTC
6	CHRYSLER	18	INTREPID (CANADIAN)
6	CHRYSLER	19	NEON (EXPORT)
6	CHRYSLER	31	TC (MASERATI SPORT)
6	CHRYSLER	35	CONQUEST
6	CHRYSLER	41	CONCORDE
6	CHRYSLER	42	LHS
6	CHRYSLER	43	SEBRING
6	CHRYSLER	44	CIRRUS
6	CHRYSLER	51	300M
6	CHRYSLER	52	PT CRUISER
6	CHRYSLER	53	PROWLER
6	CHRYSLER	54	PACIFICA
6	CHRYSLER	55	CROSSFIRE
6	CHRYSLER	398	OTHER AUTOMOBILE
6	CHRYSLER	399	UNKNOWN AUTOMOBILE
6	CHRYSLER	441	TOWN AND COUNTRY
6	CHRYSLER	442	VOYAGER
6	CHRYSLER	498	OTHER LIGHT TRUCK
6	CHRYSLER	499	UNKNOWN LIGHT TRUCK
6	CHRYSLER	999	UNKNOWN VEHICLE
7	DODGE	1	DART
7	DODGE	2	CORONET/CHARGER/MAGNUM
7	DODGE	3	POLARA/MONACO/ROYAL MONACO
7	DODGE	4	VIPER
7	DODGE	5	CHALLENGER
7	DODGE	6	ASPEN
7	DODGE	7	DIPLOMAT
7	DODGE	8	OMNI/CHARGER
7	DODGE	9	MIRADA
7	DODGE	10	ST REGIS
7	DODGE	11	ARIES (K)
7	DODGE	12	400
7	DODGE	13	RAMPAGE 2.2, GT, SPORT
7	DODGE	14	600
7	DODGE	15	DAYTONA
7	DODGE	16	LANCER
7	DODGE	17	SHADOW
7	DODGE	18	DYNASTY
7	DODGE	19	SPIRIT
7	DODGE	20	NEON
7	DODGE	33	CHALLENGER (ALL IMPORTED)
7	DODGE	34	COLT (EXCLUDES VISTA)
7	DODGE	35	CONQUEST
7	DODGE	39	STEALTH
7	DODGE	40	MONACO
7	DODGE	41	INTREPID
7	DODGE	42	AVENGER
7	DODGE	43	STRATUS
7	DODGE	398	OTHER AUTOMOBILE
7	DODGE	399	UNKNOWN AUTOMOBILE
7	DODGE	401	RAIDER
7	DODGE	421	RAMCHARGER
7	DODGE	422	DURANGO

Variable Definitions and Codes - Overview Data Set

7	DODGE	441	VISTA
7	DODGE	442	CARAVAN
7	DODGE	461	B-SERIES VANS
7	DODGE	462	SPRINTER
7	DODGE	470	VAN DERIVATIVE
7	DODGE	471	D50, COLT P/U, RAM 50/RAM 100
7	DODGE	472	DAKOTA
7	DODGE	481	D, W-SERIES PICKUP, W100-W350
7	DODGE	482	RAM
7	DODGE	498	OTHER LIGHT TRUCK
7	DODGE	499	UNKNOWN LIGHT TRUCK
7	DODGE	881	MEDIUM/HEAVY: CBE
7	DODGE	882	MEDIUM/HEAVY: COE LOW ENGRY
7	DODGE	883	MEDIUM/HEAVY: COE HIGH ENTRY
7	DODGE	884	MEDIUM/HEAVY: UNKNOWN ENGINE LOCATION
7	DODGE	890	MEDIUM/HEAVY: COE ENTRY POSITION UNKNOWN
7	DODGE	898	OTHER MEDIUM/HEAVY TRUCK
7	DODGE	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
7	DODGE	899	UNKNOWN MEDIUM/HEAVY TRUCK
7	DODGE	981	MEDIUM BUS
7	DODGE	988	OTHER BUS
7	DODGE	989	UNKNOWN BUS TYPE
7	DODGE	998	OTHER VEHICLE
7	DODGE	999	UNKNOWN VEHICLE
8	IMPERIAL	10	IMPERIAL
8	IMPERIAL	398	OTHER AUTOMOBILE
8	IMPERIAL	399	UNKNOWN AUTOMOBILE
8	IMPERIAL	999	UNKNOWN VEHICLE
9	PLYMOUTH	1	VALIANT/DUSTER/SCAMP
9	PLYMOUTH	2	SATELLITE/BELVEDERE
9	PLYMOUTH	3	FURY
9	PLYMOUTH	4	GRAN FURY
9	PLYMOUTH	5	BARRACUDA
9	PLYMOUTH	6	VOLARE
9	PLYMOUTH	7	CARAVELLE
9	PLYMOUTH	8	HORIZON
9	PLYMOUTH	11	RELIANT (K)
9	PLYMOUTH	13	SCAMP (CAR BASED PICKUP)
9	PLYMOUTH	17	SUNDANCE
9	PLYMOUTH	19	ACCLAIM
9	PLYMOUTH	20	NEON
9	PLYMOUTH	31	CRICKET
9	PLYMOUTH	32	ARROW
9	PLYMOUTH	33	SAPPORO
9	PLYMOUTH	34	CHAMP/COLT (EXCLUDES VISTA)
9	PLYMOUTH	35	CONQUEST
9	PLYMOUTH	37	LASER
9	PLYMOUTH	38	BREEZE
9	PLYMOUTH	39	PROWLER
9	PLYMOUTH	398	OTHER AUTOMOBILE
9	PLYMOUTH	399	UNKNOWN AUTOMOBILE
9	PLYMOUTH	421	TRAILDUSTER
9	PLYMOUTH	441	COLT VISTA
9	PLYMOUTH	442	VOYAGER (MINIVAN)
9	PLYMOUTH	461	VAN-FULLSIZE (B-SERIES)
9	PLYMOUTH	471	ARROW PICKUP (FOREIGN)
9	PLYMOUTH	498	OTHER LIGHT TRUCK
9	PLYMOUTH	499	UNKNOWN LIGHT TRUCK

Variable Definitions and Codes - Overview Data Set

9	PLYMOUTH	999	UNKNOWN VEHICLE
10	EAGLE	34	SUMMIT
10	EAGLE	37	TALON
10	EAGLE	40	PREMIER
10	EAGLE	41	VISION
10	EAGLE	44	MEDALLION
10	EAGLE	398	OTHER AUTOMOBILE
10	EAGLE	399	UNKNOWN AUTOMOBILE
10	EAGLE	441	SUMMIT WAGON
10	EAGLE	498	OTHER LIGHT TRUCK
10	EAGLE	499	UNKNOWN LIGHT TRUCK
10	EAGLE	999	UNKNOWN VEHICLE
12	FORD	1	FALCON
12	FORD	2	FAIRLANE
12	FORD	3	MUSTANG/MUSTANG II
12	FORD	4	THUNDERBIRD (ALL SIZES)
12	FORD	5	LTD II
12	FORD	6	LTD/CUSTOM/GALAXIE (ALL SIZES)
12	FORD	7	RANCHERO
12	FORD	8	MAVERICK
12	FORD	9	PINTO
12	FORD	10	TORINO/GRAN TORINO/ELITE
12	FORD	11	GRANADA
12	FORD	12	FAIRMONT
12	FORD	13	ESCORT/EXP
12	FORD	15	TEMPO
12	FORD	16	CROWN VICTORIA
12	FORD	17	TAURUS
12	FORD	18	PROBE
12	FORD	31	ENGLISH FORD
12	FORD	32	FIESTA
12	FORD	33	FESTIVA
12	FORD	34	LASER
12	FORD	35	CONTOUR
12	FORD	36	ASPIRE
12	FORD	37	FOCUS
12	FORD	38	GT
12	FORD	398	OTHER AUTOMOBILE
12	FORD	399	UNKNOWN AUTOMOBILE
12	FORD	401	EXPLORER/BRONCO ii/BRONCO (-77)
12	FORD	402	ESCAPE
12	FORD	421	BRONCO-FULLSIZE
12	FORD	422	EXPEDITION
12	FORD	431	EXCURSION
12	FORD	441	AEROSTAR
12	FORD	442	WINDSTAR
12	FORD	443	FREESTAR
12	FORD	461	E-SERIES VANS
12	FORD	470	VAN DERIVATIVE
12	FORD	471	RANGER
12	FORD	472	COURIER
12	FORD	473	SPORT TRAC
12	FORD	481	F-SERIES PICKUP
12	FORD	498	OTHER LIGHT TRUCK
12	FORD	499	UNKNOWN LIGHT TRUCK
12	FORD	880	F450/550 PICKUP >4536 GVWR
12	FORD	881	MEDIUM/HEAVY CBE
12	FORD	882	MEDIUM/HEAVY COE LOW ENGRY
12	FORD	883	MEDIUM/HEAVY COE HIGH ENTRY

Variable Definitions and Codes - Overview Data Set

12	FORD	884	MEDIUM/HEAVY: UNKNOWN ENGINE LOCATION
12	FORD	890	MEDIUM/HEAVY: COE ENTRY POSITION UNKNOWN
12	FORD	898	OTHER MEDIUM/HEAVY TRUCK
12	FORD	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
12	FORD	899	UNKNOWN MEDIUM/HEAVY TRUCK
12	FORD	981	MEDIUM BUS
12	FORD	988	OTHER BUS
12	FORD	989	UNKNOWN BUS TYPE
12	FORD	998	OTHER VEHICLE
12	FORD	999	UNKNOWN VEHICLE
13	LINCOLN	1	CONTINENTAL/TOWN CAR
13	LINCOLN	2	MARK
13	LINCOLN	5	CONTINENTAL (82-ON)
13	LINCOLN	11	VERSAILLES
13	LINCOLN	12	LS
13	LINCOLN	398	OTHER AUTOMOBILE
13	LINCOLN	399	UNKNOWN AUTOMOBILE
13	LINCOLN	401	AVIATOR
13	LINCOLN	421	NAVIGATOR
13	LINCOLN	481	BLACKWOOD
13	LINCOLN	498	OTHER LIGHT TRUCK
13	LINCOLN	499	UNKNOWN LIGHT TRUCK
13	LINCOLN	999	UNKNOWN VEHICLE
14	MERCURY	2	CYCLONE
14	MERCURY	3	CAPRI-DOMESTIC
14	MERCURY	4	COUGAR/XR7
14	MERCURY	6	MARQUIS/MONTEREY
14	MERCURY	8	COMET
14	MERCURY	9	BOBCAT
14	MERCURY	10	MONTEGO
14	MERCURY	11	MONARCH
14	MERCURY	12	ZEPHYR
14	MERCURY	13	LYNX/LN-7 (82-83)
14	MERCURY	15	TOPAZ
14	MERCURY	17	SABLE
14	MERCURY	31	CAPRI-FOREIGN
14	MERCURY	33	PANTERA
14	MERCURY	36	TRACER
14	MERCURY	37	MYSTIQUE
14	MERCURY	38	COUGAR
14	MERCURY	39	MARAUDER
14	MERCURY	398	OTHER AUTOMOBILE
14	MERCURY	399	UNKNOWN AUTOMOBILE
14	MERCURY	401	MOUNTAINEER
14	MERCURY	443	VILLAGER
14	MERCURY	444	MONTEREY (2004+)
14	MERCURY	498	OTHER LIGHT TRUCK
14	MERCURY	499	UNKNOWN LIGHT TRUCK
14	MERCURY	999	UNKNOWN VEHICLE
18	BUICK	1	SPECIAL/SKYLARK (thru 1972)
18	BUICK	2	LESABRE/CENTURION/WILDCAT
18	BUICK	3	ELECTRA/ELECTRA 225/PARK AVENUE (91-ON)
18	BUICK	4	ROADMASTER
18	BUICK	5	RIVIERA
18	BUICK	7	CENTURY
18	BUICK	8	APOLLO/SKYLARK (73-76)
18	BUICK	10	REGAL
18	BUICK	12	SKYHAWK

Variable Definitions and Codes - Overview Data Set

18	BUICK	15	SKYLARK (76-85)
18	BUICK	18	SOMERSET(85-87)/SKYLARK(86-ON)
18	BUICK	20	REGAL (FWD)
18	BUICK	21	REATA
18	BUICK	31	OPEL KADETT
18	BUICK	32	OPEL MANTA
18	BUICK	33	OPEL GT
18	BUICK	34	OPEL ISUZU
18	BUICK	398	OTHER AUTOMOBILE
18	BUICK	399	UNKNOWN AUTOMOBILE
18	BUICK	401	RENDEZVOUS
18	BUICK	402	RAINIER
18	BUICK	498	OTHER LIGHT TRUCK
18	BUICK	499	UNKNOWN LIGHT TRUCK
18	BUICK	999	UNKNOWN VEHICLE
19	CADILLAC	3	DEVILLE/FLEETWOOD
19	CADILLAC	4	LIMOUSINE
19	CADILLAC	5	ELDORADO
19	CADILLAC	6	COMMERCIAL SERIES
19	CADILLAC	9	ALLANTE
19	CADILLAC	14	SEVILLE
19	CADILLAC	16	CIMARRON
19	CADILLAC	17	CATERA
19	CADILLAC	18	CTS
19	CADILLAC	19	XLR
19	CADILLAC	20	SRX
19	CADILLAC	398	OTHER AUTOMOBILE
19	CADILLAC	399	UNKNOWN AUTOMOBILE
19	CADILLAC	421	ESCALADE
19	CADILLAC	431	ESCALADE ESV
19	CADILLAC	480	ESCALADE EXT
19	CADILLAC	498	OTHER LIGHT TRUCK
19	CADILLAC	498	UNKNOWN LIGHT TRUCK
19	CADILLAC	999	UNKNOWN VEHICLE
20	CHEVROLET	1	CHEVELLE/MALIBU (83-)
20	CHEVROLET	2	IMPALA/CAPRICE
20	CHEVROLET	4	CORVETTE
20	CHEVROLET	6	CORVAIR
20	CHEVROLET	7	EL CAMINO
20	CHEVROLET	8	NOVA (-79)
20	CHEVROLET	9	CAMARO
20	CHEVROLET	10	MONTE CARLO ('70-'88) (RWD ONLY)
20	CHEVROLET	11	VEGA
20	CHEVROLET	12	MONZA
20	CHEVROLET	13	CHEVETTE
20	CHEVROLET	15	CITATION
20	CHEVROLET	16	CAVALIER
20	CHEVROLET	17	CELEBRITY
20	CHEVROLET	19	BERETTA/CORSICA
20	CHEVROLET	20	LUMINA
20	CHEVROLET	31	SPECTRUM
20	CHEVROLET	32	NOVA/GEO PRIZM
20	CHEVROLET	33	SPRINT/GEO SPRINT
20	CHEVROLET	34	GEO METRO
20	CHEVROLET	35	GEO STORM
20	CHEVROLET	36	MONTE CARLO (1995+) (FWD ONLY)
20	CHEVROLET	37	MALIBU (1997+)
20	CHEVROLET	38	SSR
20	CHEVROLET	39	AVEO
20	CHEVROLET	398	OTHER AUTOMOBILE

Variable Definitions and Codes - Overview Data Set

20	CHEVROLET	399	UNKNOWN AUTOMOBILE
20	CHEVROLET	401	S-10 BLAZER, BLAZER
20	CHEVROLET	402	GEO TRACKER
20	CHEVROLET	403	TRAILBLAZER (2002 and later)
20	CHEVROLET	404	EQUINOX
20	CHEVROLET	421	FULLSIZE BLAZER (K, Tahoe)
20	CHEVROLET	431	SUBURBAN
20	CHEVROLET	441	ASTRO VAN
20	CHEVROLET	442	LUMINA APV/VENTURE
20	CHEVROLET	461	G-SERIES VAN
20	CHEVROLET	466	P-SERIES VAN
20	CHEVROLET	470	VAN DERIVATIVE
20	CHEVROLET	471	S-10/T-10
20	CHEVROLET	472	LUV
20	CHEVROLET	473	COLORADO
20	CHEVROLET	481	C, K, R, V-SERIES PICKUP
20	CHEVROLET	482	AVALANCHE
20	CHEVROLET	498	OTHER LIGHT TRUCK
20	CHEVROLET	499	UNKNOWN LIGHT TRUCK
20	CHEVROLET	881	MEDIUM/HEAVY CBE
20	CHEVROLET	882	MEDIUM/HEAVY COE LOW ENTRY
20	CHEVROLET	883	MEDIUM/HEAVY COE HIGH ENTRY
20	CHEVROLET	884	MEDIUM/HEAVY; UNKNOWN ENGINE LOCATION
20	CHEVROLET	890	MEDIUM/HEAVY; UNKNOWN ENGINE LOCALTON
20	CHEVROLET	898	OTHER MEDIUM/HEAVY TRUCK
20	CHEVROLET	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
20	CHEVROLET	899	UNKNOWN MEDIUM/HEAVY TRUCK
20	CHEVROLET	981	BUS
20	CHEVROLET	988	OTHER BUS
20	CHEVROLET	989	UNKNOWN BUS TYPE
20	CHEVROLET	998	OTHER VEHICLE
20	CHEVROLET	999	UNKNOWN VEHICLE
21	OLDSMOBILE	1	CUTLASS (RWD-ONLY)
21	OLDSMOBILE	2	DELTA 88
21	OLDSMOBILE	3	NINETY-EIGHT
21	OLDSMOBILE	5	TORONADO-TROFEO
21	OLDSMOBILE	6	COMMERCIAL SERIES
21	OLDSMOBILE	12	STARFIRE
21	OLDSMOBILE	15	OMEGA
21	OLDSMOBILE	16	FIRENZA
21	OLDSMOBILE	17	CIERA
21	OLDSMOBILE	18	CALAIS
21	OLDSMOBILE	20	CUTLASS (FWD)
21	OLDSMOBILE	21	ACHIEVA
21	OLDSMOBILE	22	AURORA
21	OLDSMOBILE	23	INTRIGUE
21	OLDSMOBILE	24	ALERO
21	OLDSMOBILE	398	OTHER AUTOMOBILE
21	OLDSMOBILE	399	UNKNOWN AUTOMOBILE
21	OLDSMOBILE	401	BRAVADA
21	OLDSMOBILE	441	SILHOUETTE
21	OLDSMOBILE	498	OTHER LIGHT TRUCK
21	OLDSMOBILE	499	UNKNOWN LIGHT TRUCK
21	OLDSMOBILE	998	OTHER VEHICLE
21	OLDSMOBILE	999	UNKNOWN VEHICLE
22	PONTIAC	1	LEMANS/TEMPEST (THRU 79)
22	PONTIAC	2	BONNEVILLE/CATALINA/PARISIENNE
22	PONTIAC	5	FIERO

Variable Definitions and Codes - Overview Data Set

22	PONTIAC	8	VENTURA
22	PONTIAC	9	FIREBIRD/TRANS AM
22	PONTIAC	10	GRAND PRIX (RWD)
22	PONTIAC	11	ASTRE
22	PONTIAC	12	SUNBIRD (THRU 80)
22	PONTIAC	13	T1000/1000
22	PONTIAC	15	PHOENIX
22	PONTIAC	16	J2000/SUNBIRD/SUNFIRE
22	PONTIAC	17	6000
22	PONTIAC	18	GRAND AM
22	PONTIAC	20	GRAND PRIX (FWD)
22	PONTIAC	31	LEMANS (88-on)
22	PONTIAC	398	OTHER AUTOMOBILE
22	PONTIAC	399	UNKNOWN AUTOMOBILE
22	PONTIAC	401	AZTEK
22	PONTIAC	402	VIBE
22	PONTIAC	441	TRANS SPORT/MONTANA
22	PONTIAC	498	OTHER LIGHT TRUCK
22	PONTIAC	499	UNKNOWN LIGHT TRUCK
22	PONTIAC	999	UNKNOWN VEHICLE
22	PONTIAC		OTHER LIGHT
23	GMC	7	CABALLERO/SPRINT
23	GMC	398	OTHER AUTOMOBILE
23	GMC	399	UNKNOWN AUTOMOBILE
23	GMC	401	JIMMY/TYPHOON/ENVOY
23	GMC	421	FULLSIZE JIMMY/YUKON
23	GMC	431	SUBURBAN
23	GMC	441	SAFARI (MINIVAN)
23	GMC	461	G-SERIES VAN
23	GMC	466	P-SERIES VAN
23	GMC	470	VAN DERIVATIVE
23	GMC	471	S15/T15/SONOMA
23	GMC	472	CANYON
23	GMC	481	C, K, R, V-SERIES PICKUP
23	GMC	498	OTHER LIGHT TRUCK
23	GMC	499	UNKNOWN LIGHT TRUCK
23	GMC	881	MEDIUM/HEAVY CBE
23	GMC	882	MEDIUM/HDAVY COE LOW ENTRY
23	GMC	883	MEDIUM/HEAVY COE HIGH ENTRY
23	GMC	884	MEDIUM/HEAVY: UNKNOWN ENGINE LOCATION
23	GMC	890	MEDIUM/HEAVY: COE ENTRY POSITION UNKNOWN
23	GMC	898	OTHER MEDIUM/HEAVY TRUCK
23	GMC	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
23	GMC	899	UNKNOWN MEDIUM/HEAVY TRUCK
23	GMC	981	MEDIUM BUS
23	GMC	988	OTHER BUS
23	GMC	989	UNKNOWN BUS TYPE
23	GMC	999	UNKNOWN VEHICLE
24	SATURN	1	SL
24	SATURN	2	SC
24	SATURN	3	SW
24	SATURN	4	EV
24	SATURN	5	LS/ LS1/ LS2/L100/L200/L300
24	SATURN	6	LW/LW1/ LW2/ LW200/300
24	SATURN	7	ION
24	SATURN	398	OTHER AUTOMOBILE
24	SATURN	399	UNKNOWN AUTOMOBILE
24	SATURN	401	VUE

Variable Definitions and Codes - Overview Data Set

24	SATURN	498	OTHER LIGHT TRUCK
24	SATURN	499	UNKNOWN LIGHT TRUCK
24	SATURN	999	UNKNOWN VEHICLE
25	GRUMMAN	441	LLV
25	GRUMMAN	442	STEP-IN VAN
25	GRUMMAN	498	OTHER LIGHT TRUCK
25	GRUMMAN	499	UNKNOWN LIGHT TRUCK
25	GRUMMAN	881	MEDIUM/HEAVY TRUCK - CBE
25	GRUMMAN	882	MEDIUM/HEAVY TRUCK - COE LOW ENTRY
25	GRUMMAN	883	MEDIUM/HEAVY TRUCK - COE HIGH ENTRY
25	GRUMMAN	884	MEDIUM/HEAVY TRUCK UNKNOWN ENGINE LOCATION
25	GRUMMAN	890	MEDIUM/HEAVY TRUCK ENTRY POSITION UNKNOWN
25	GRUMMAN	898	OTHER MEDIUM/HEAVY TRUCK
25	GRUMMAN	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
25	GRUMMAN	899	UNKNOWN MEDIUM/HEAVY TRUCK
25	GRUMMAN	983	BUS-FLAT FRONT, REAR ENGINE
25	GRUMMAN	988	OTHER BUS
25	GRUMMAN	989	UNKNOWN BUS TYPE
25	GRUMMAN	999	UNKNOWN VEHICLE
29	STUDEBAKER	1	LARK
29	STUDEBAKER	1	GRAN TURISMO
29	STUDEBAKER	1	CRUISER
29	STUDEBAKER	1	HAWK
29	STUDEBAKER	1	OTHER AUTOMOBILE
29	AVANTI	1	OTHER AUTOMOBILE
29	AVANTI	1	UNKNOWN AUTOMOBILE
29	STUDEBAKER	1	UNKNOWN AUTOMOBILE
29	CHECKER	2	MARATHON
29	CHECKER	2	TAXI
29	CHECKER	2	AEROBUS
29	CHECKER	2	SUPERBA
29	CHECKER	2	UNKNOWN AUTOMOBILE
29	CHECKER	2	OTHER AUTOMOBILE
29	EXCALIBER	398	OTHER AUTOMOBILE
29	CONSULIER	398	OTHER AUTOMOBILE
29	CONSULIER	398	UNKNOWN AUTOMOBILE
29	OTHER DOMESTIC MANUFACTURER (light vehicles)	398	OTHER MAKE
29	EXCALIBER	398	UNKNOWN AUTOMOBILE
29	HUDSON	398	UNKNOWN AUTOMOBILE
29	DESOTO	398	UNKNOWN AUTOMOBILE
29	STUTZ	398	OTHER AUTOMOBILE
29	HUDSON	398	OTHER AUTOMOBILE
29	STUTZ	398	UNKNOWN AUTOMOBILE
29	DESOTO	398	OTHER AUTOMOBILE
29	OTHER DOMESTIC MANUFACTURER (light vehicles)	399	UNKNOWN MAKE
29	OTHER DOMESTIC MANUFACTURER (light vehicles)	498	OTHER LIGHT TRUCK
29	INDIAN	701	MOTORCYCLE (000-050CC)
29	BUELL	701	MOTORCYCLE (000-051CC)
29	INDIAN	702	MOTORCYCLE (051-124CC)
29	BUELL	702	MOTORCYCLE (051-124CC)
29	INDIAN	703	MOTORCYCLE (125-349CC)
29	BUELL	703	MOTORCYCLE (125-349CC)
29	INDIAN	704	MOTORCYCLE (350-449CC)
29	BUELL	704	MOTORCYCLE (350-449CC)
29	INDIAN	705	MOTORCYCLE (450-749CC)

Variable Definitions and Codes - Overview Data Set

29	BUELL	705	MOTORCYCLE (450-749CC)
29	INDIAN	706	MOTORCYCLE (750CC OR GREATER)
29	BUELL	706	MOTORCYCLE (750CC OR GREATER)
29	INDIAN	709	MOTORCYCLE (UNKNOWN CC)
29	BUELL	709	MOTORCYCLE (UNKNOWN CC)
29	INDIAN	798	OTHER MOTORED CYCLE
29	BUELL	798	OTHER MOTORED CYCLE
29	INDIAN	799	UNKNOWN MOTORED CYCLE
29	BUELL	799	UNKNOWN MOTORED CYCLE
29	OTHER DOMESTIC MANUFACTURER (light vehicles)	898	OTHER MEDIUM/HEAVY TRUCK
29	OTHER DOMESTIC MANUFACTURER (light vehicles)	988	OTHER BUS
29	OTHER DOMESTIC MANUFACTURER (light vehicles)	998	OTHER VEHICLE
30	VOLKSWAGEN	31	KARMANN GHIA
30	VOLKSWAGEN	32	BEETLE 1300/1500
30	VOLKSWAGEN	33	SUPER BEETLE
30	VOLKSWAGEN	34	411/412
30	VOLKSWAGEN	35	SQUAREBACK/FASTBACK
30	VOLKSWAGEN	36	RABBIT
30	VOLKSWAGEN	37	DASHER
30	VOLKSWAGEN	38	SCIROCCO
30	VOLKSWAGEN	40	JETTA
30	VOLKSWAGEN	41	QUANTUM
30	VOLKSWAGEN	42	GOLF/CABRIOLET/GTI
30	VOLKSWAGEN	43	RABBIT PICKUP
30	VOLKSWAGEN	44	FOX
30	VOLKSWAGEN	45	CORRADO
30	VOLKSWAGEN	46	PASSAT
30	VOLKSWAGEN	47	JETTA III
30	VOLKSWAGEN	48	GOLF III
30	VOLKSWAGEN	49	NEW BEETLE
30	VOLKSWAGEN	50	PHAETON
30	VOLKSWAGEN	398	OTHER AUTOMOBILE
30	VOLKSWAGEN	399	UNKNOWN AUTOMOBILE
30	VOLKSWAGEN	401	THE THING (181)
30	VOLKSWAGEN	421	TOUAREG
30	VOLKSWAGEN	441	VANAGON/CAMPER
30	VOLKSWAGEN	442	EUROVAN
30	VOLKSWAGEN	498	OTHER LIGHT TRUCK
30	VOLKSWAGEN	499	UNKNOWN LIGHT TRUCK
30	VOLKSWAGEN	998	OTHER VEHICLE
30	VOLKSWAGEN	999	UNKNOWN VEHICLE
31	ALFA ROMEO	31	SPIDER
31	ALFA ROMEO	32	SPORTS SEDAN
31	ALFA ROMEO	33	SPRINT SPECIAL
31	ALFA ROMEO	34	GTV-6
31	ALFA ROMEO	35	164
31	ALFA ROMEO	398	OTHER AUTOMOBILE
31	ALFA ROMEO	399	UNKNOWN AUTOMOBILE
31	ALFA ROMEO	999	UNKNOWN VEHICLE
32	AUDI	31	SUPER 90
32	AUDI	32	100/A6
32	AUDI	33	FOX
32	AUDI	34	4000
32	AUDI	35	5000
32	AUDI	36	80/90
32	AUDI	37	200
32	AUDI	38	V8 QUATTRO

Variable Definitions and Codes - Overview Data Set

32	AUDI	39	COUPE QUATTRO
32	AUDI	40	S4/S6
32	AUDI	41	CABRIOLET
32	AUDI	42	A4
32	AUDI	43	A3
32	AUDI	44	A8
32	AUDI	45	TT
32	AUDI	46	S8
32	AUDI	47	ALLROAD
32	AUDI	398	OTHER AUTOMOBILE
32	AUDI	399	UNKNOWN AUTOMOBILE
32	AUDI	999	UNKNOWN VEHICLE
33	AUSTIN / AUSTIN HEALEY	31	MARINA
33	AUSTIN / AUSTIN HEALEY	32	AMERICA
33	AUSTIN / AUSTIN HEALEY	33	HEALEY SPRITE
33	AUSTIN / AUSTIN HEALEY	34	HEALY 3000
33	AUSTIN / AUSTIN HEALEY	35	MINI
33	AUSTIN / AUSTIN HEALEY	398	OTHER AUTOMOBILE
33	AUSTIN / AUSTIN HEALEY	399	UNKNOWN AUTOMOBILE
33	AUSTIN / AUSTIN HEALEY	999	UNKNOWN VEHICLE
34	BMW	31	1600, 2002
34	BMW	32	COUPE
34	BMW	33	BAVARIA SEDAN
34	BMW	34	3 SERIES
34	BMW	35	5 SERIES
34	BMW	36	6 SERIES
34	BMW	37	7 SERIES
34	BMW	38	8 SERIES
34	BMW	39	Z3
34	BMW	40	Z8
34	BMW	42	Z4
34	BMW	398	OTHER AUTOMOBILE
34	BMW	399	UNKNOWN AUTOMOBILE
34	BMW	401	X5
34	BMW	402	X3
34	BMW	498	OTHER LIGHT TRUCK
34	BMW	499	UNKNOWN LIGHT TRUCK
34	BMW	701	MOTORCYCLE (000-050CC)
34	BMW	702	MOTORCYCLE (051-124CC)
34	BMW	703	MOTORCYCLE (125-349CC)
34	BMW	704	MOTORCYCLE (350-449CC)
34	BMW	705	MOTORCYCLE (450-749CC)
34	BMW	706	MOTORCYCLE (750CC-OVER)
34	BMW	709	MOTORCYCLE (UNKNOWN CC)
34	BMW	799	UNKNOWN MOTORED CYCLE
34	BMW	999	UNKNOWN VEHICLE
35	NISSAN / DATSUN	31	F10
35	NISSAN / DATSUN	32	200/240 SX
35	NISSAN / DATSUN	33	1200/210/B210
35	NISSAN / DATSUN	34	Z-CAR, ZX
35	NISSAN / DATSUN	35	310
35	NISSAN / DATSUN	36	510
35	NISSAN / DATSUN	37	610
35	NISSAN / DATSUN	38	710
35	NISSAN / DATSUN	39	810/MAXIMA
35	NISSAN / DATSUN	40	ROADSTER
35	NISSAN / DATSUN	41	PL411, RL411
35	NISSAN / DATSUN	42	STANZA
35	NISSAN / DATSUN	43	SENTRA
35	NISSAN / DATSUN	44	PULSAR

Variable Definitions and Codes - Overview Data Set

35	NISSAN / DATSUN	45	MICRA
35	NISSAN / DATSUN	46	NX 1600/2000
35	NISSAN / DATSUN	47	ALTIMA
35	NISSAN / DATSUN	48	350Z
35	NISSAN / DATSUN	49	MURANO
35	NISSAN / DATSUN	398	OTHER AUTOMOBILE
35	NISSAN / DATSUN	399	UNKNOWN AUTOMOBILE
35	NISSAN / DATSUN	401	PATHFINDER
35	NISSAN / DATSUN	402	XTERRA
35	NISSAN / DATSUN	421	PATHFINDER ARMADA
35	NISSAN / DATSUN	441	VAN
35	NISSAN / DATSUN	442	AXXESS
35	NISSAN / DATSUN	443	QUEST
35	NISSAN / DATSUN	471	DATSUN/NISSAN PU/Frontier
35	NISSAN / DATSUN	473	TITAN
35	NISSAN / DATSUN	498	OTHER LIGHT TRUCK
35	NISSAN / DATSUN	499	UNKNOWN LIGHT TRUCK
35	NISSAN / DATSUN	883	MEDIUM/HEAVY COE HIGH ENTRY
35	NISSAN / DATSUN	898	OTHER MEDIUM/HEAVY TRUCK
35	NISSAN / DATSUN	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
35	NISSAN / DATSUN	899	UNKNOWN MEDIUM/HEAVY TRUCK
35	NISSAN / DATSUN	999	UNKNOWN VEHICLE
36	FIAT	31	124 (COUPE/SEDAN)
36	FIAT	32	124 SPIDER/RACER
36	FIAT	33	BRAVA - 131
36	FIAT	34	850 (COUPE/SPYDER)
36	FIAT	35	128
36	FIAT	36	X-1/9
36	FIAT	37	STRADA
36	FIAT	398	OTHER AUTOMOBILE
36	FIAT	399	UNKNOWN AUTOMOBILE
36	FIAT	882	MEDIUM/HEAVY COE LOW ENTRY
36	FIAT	883	MEDIUM/HEAVY COE HIGH ENTRY
36	FIAT	890	MEDIUM/HEAVY COE ENTRY POSITION UNKNOWN
36	FIAT	898	OTHER MEDIUM/HEAVY TRUCK
36	FIAT	899	UNKNOWN MEDIUM/HEAVY TRUCK
36	FIAT	999	UNKNOWN VEHICLE
37	HONDA	31	CIVIC/CRX/DEL SOL
37	HONDA	32	ACCORD
37	HONDA	33	PRELUDE
37	HONDA	34	600
37	HONDA	35	S2000
37	HONDA	37	INSIGHT
37	HONDA	38	FCX
37	HONDA	398	OTHER AUTOMOBILE
37	HONDA	399	UNKNOWN AUTOMOBILE
37	HONDA	401	PASSPORT
37	HONDA	402	CR-V
37	HONDA	403	ELEMENT
37	HONDA	421	PILOT
37	HONDA	441	ODYSSEY
37	HONDA	498	OTHER LIGHT TRUCK
37	HONDA	499	UNKNOWN LIGHT TRUCK
37	HONDA	701	MOTORCYCLE (000-050CC)
37	HONDA	702	MOTORCYCLE (051-124CC)
37	HONDA	703	MOTORCYCLE (125-349CC)
37	HONDA	704	MOTORCYCLE (350-449CC)
37	HONDA	705	MOTORCYCLE (450-749CC)
37	HONDA	706	MOTORCYCLE (750CC-OVER)

Variable Definitions and Codes - Overview Data Set

37	HONDA	709	MOTORCYCLE (UNKNOWN CC)
37	HONDA	731	ATC/ATV (000-050CC)
37	HONDA	732	ATC/ATV (051-124CC)
37	HONDA	733	ATC/ATV (125-349CC)
37	HONDA	734	ATC/ATV (350CC-OVER)
37	HONDA	739	ATC/ATV (UNKNOWN CC)
37	HONDA	798	OTHER MOTORED CYCLE
37	HONDA	999	UNKNOWN VEHICLE
38	ISUZU	31	I-MARK
38	ISUZU	32	IMPULSE
38	ISUZU	33	STYLUS
38	ISUZU	398	OTHER AUTOMOBILE
38	ISUZU	399	UNKNOWN AUTOMOBILE
38	ISUZU	401	TROOPER/TROOPER II
38	ISUZU	402	RODEO
38	ISUZU	403	AMIGO
38	ISUZU	404	VEHICROSS
38	ISUZU	405	AXIOM
38	ISUZU	421	ASCENDER
38	ISUZU	441	OASIS
38	ISUZU	471	P'UP (PICKUP) HOMBRE
38	ISUZU	498	OTHER LIGHT TRUCK
38	ISUZU	499	UNKNOWN LIGHT TRUCK
38	ISUZU	881	MEDIUM/HEAVY - CBE
38	ISUZU	882	MEDIUM/HEAVY COE LOW ENTRY
38	ISUZU	883	MEDIUM/HEAVY COE HIGH ENTRY
38	ISUZU	884	MEDIUM/HEAVY UNKNOWN ENGINE LOCATION
38	ISUZU	890	MEDIUM/HEAVY COE ENTRY POSITION UNKNOWN
38	ISUZU	898	OTHER MEDIUM/HEAVY TRUCK
38	ISUZU	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
38	ISUZU	899	UNKNOWN MEDIUM/HEAVY TRUCK
38	ISUZU	981	CONVENTIONAL FRONT ENGINE
38	ISUZU	982	FRONT ENGINE/FLAT FRONT
38	ISUZU	983	REAR ENGINE/FLAT FRONT
38	ISUZU	988	OTHER BUS
38	ISUZU	989	UNKNOWN BUS TYPE
38	ISUZU	999	UNKNOWN VEHICLE
39	JAGUAR	31	XJ-S COUPE
39	JAGUAR	32	VANDEN PLAS
39	JAGUAR	32	XJ6/12 SEDAN/COUPE/XJ8/
39	JAGUAR	33	XKE
39	JAGUAR	34	S-TYPE
39	JAGUAR	34	X100
39	JAGUAR	35	X-TYPE
39	JAGUAR	398	OTHER AUTOMOBILE
39	JAGUAR	399	UNKNOWN AUTOMOBILE
39	JAGUAR	999	UNKNOWN VEHICLE
40	LANCIA	31	BETA SEDAN-HPE
40	LANCIA	32	BETA COUPE - ZAGATO
40	LANCIA	33	SCORPION
40	LANCIA	398	OTHER AUTOMOBILE
40	LANCIA	399	UNKNOWN AUTOMOBILE
40	LANCIA	999	UNKNOWN VEHICLE
41	MAZDA	31	RX2
41	MAZDA	32	RX3
41	MAZDA	33	RX4
41	MAZDA	34	RX7
41	MAZDA	35	GLC/PROTEGE/323

Variable Definitions and Codes - Overview Data Set

41	MAZDA	36	COSMO
41	MAZDA	37	626
41	MAZDA	38	808
41	MAZDA	39	MIZER
41	MAZDA	40	R-100
41	MAZDA	41	616/618
41	MAZDA	42	1800
41	MAZDA	43	929
41	MAZDA	44	MX-6
41	MAZDA	45	MIATA
41	MAZDA	46	MX-3
41	MAZDA	47	MILLENIA
41	MAZDA	48	MP3
41	MAZDA	49	RX-8
41	MAZDA	50	MAZDA 6
41	MAZDA	51	MAZDA3
41	MAZDA	398	OTHER AUTOMOBILE
41	MAZDA	399	UNKNOWN AUTOMOBILE
41	MAZDA	401	NAVAJO
41	MAZDA	402	TRIBUTE
41	MAZDA	441	MPV
41	MAZDA	471	MAZDA PICKUP
41	MAZDA	498	OTHER LIGHT TRUCK
41	MAZDA	499	UNKNOWN LIGHT TRUCK
41	MAZDA	999	UNKNOWN VEHICLE
42	MERCEDES BENZ	31	200/220/230/240/250/260/280/300/320 SE,CD,D,SD,ETC
42	MERCEDES BENZ	32	230/280 SL
42	MERCEDES BENZ	33	300/350/380/450/500SL/560SL
42	MERCEDES BENZ	34	350/380/420/450/560/ SLC
42	MERCEDES BENZ	35	280/300SEL
42	MERCEDES BENZ	36	380/420/450/500/560SEL/500SEC/560S EC/350SDL/300SDL
42	MERCEDES BENZ	37	300 SE/380/450 SE
42	MERCEDES BENZ	38	600, 6.9 SEDAB
42	MERCEDES BENZ	39	190
42	MERCEDES BENZ	40	300
42	MERCEDES BENZ	41	400/500 E
42	MERCEDES BENZ	42	220/280 C
42	MERCEDES BENZ	43	S CLASS
42	MERCEDES BENZ	44	SL CLASS
42	MERCEDES BENZ	45	SLK
42	MERCEDES BENZ	46	CL
42	MERCEDES BENZ	47	CLK
42	MERCEDES BENZ	48	E
42	MERCEDES BENZ	398	OTHER AUTOMOBILE
42	MERCEDES BENZ	399	UNKNOWN AUTOMOBILE
42	MERCEDES BENZ	401	M
42	MERCEDES BENZ	402	G CLASS
42	MERCEDES BENZ	470	VAN DERIVATIVE
42	MERCEDES BENZ	498	OTHER LIGHT TRUCK
42	MERCEDES BENZ	499	UNKNOWN LIGHT TRUCK
42	MERCEDES BENZ	881	MEDIUM/HEAVE - CBE
42	MERCEDES BENZ	882	MEDIUM/HEAVY - COE LOW ENTRY
42	MERCEDES BENZ	883	MEDIUM/HEAVY - COE HIGH ENTRY
42	MERCEDES BENZ	884	MEDIUM/HEAVY; UNKNOWN ENGINE LOCATION
42	MERCEDES BENZ	890	MEDIUM/HEAVY: COE ENTRY POSITION UNKNOWN
42	MERCEDES BENZ	898	OTHER MEDIUM/HEAVY TRUCK

Variable Definitions and Codes - Overview Data Set

42	MERCEDES BENZ	899	UNKNOWN MEDIUM/HEAVY TRUCK
42	MERCEDES BENZ	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
42	MERCEDES BENZ	981	MEDIUM BUS
42	MERCEDES BENZ	988	OTHER BUS
42	MERCEDES BENZ	989	UNKNOWN BUS TYPE
42	MERCEDES BENZ	999	UNKNOWN VEHICLE
43	MG	31	MIDGET
43	MG	32	MGB ('76-'79)
43	MG	33	MGB ('67-'75)
43	MG	34	MGA
43	MG	35	TA/TC/TD/TF
43	MG	36	MGC
43	MG	398	OTHER AUTOMOBILE
43	MG	399	UNKNOWN AUTOMOBILE
43	MG	999	UNKNOWN VEHICLE
44	PEUGEOT	31	304
44	PEUGEOT	32	403
44	PEUGEOT	33	404
44	PEUGEOT	34	504/505
44	PEUGEOT	35	604
44	PEUGEOT	36	405
44	PEUGEOT	398	OTHER AUTOMOBILE
44	PEUGEOT	399	UNKNOWN AUTOMOBILE
44	PEUGEOT	701	MOTORCYCLE (000-050CC)
44	PEUGEOT	702	MOTORCYCLE (051-124CC)
44	PEUGEOT	709	MOTORCYCLE (UNKNOWN CC)
44	PEUGEOT	799	UNKNOWN MOTORED CYCLE
44	PEUGEOT	999	UNKNOWN VEHICLE
45	PORSCHE	31	911
45	PORSCHE	32	912
45	PORSCHE	33	914
45	PORSCHE	34	924
45	PORSCHE	35	928
45	PORSCHE	36	930
45	PORSCHE	37	944
45	PORSCHE	38	959
45	PORSCHE	39	968
45	PORSCHE	40	986 BOXSTER
45	PORSCHE	398	OTHER AUTOMOBILE
45	PORSCHE	399	UNKNOWN AUTOMOBILE
45	PORSCHE	421	CAYENNE
45	PORSCHE	999	UNKNOWN VEHICLE
46	RENAULT/AMC	31	LECAR
46	RENAULT/AMC	32	DAUPHINE/10/R-8/CARAVELLE
46	RENAULT/AMC	33	12
46	RENAULT/AMC	34	15
46	RENAULT/AMC	35	16
46	RENAULT/AMC	36	17
46	RENAULT/AMC	37	R18I
46	RENAULT/AMC	38	FUEGO
46	RENAULT/AMC	39	ALLIANCE/ENCORE/GTA, CONVERTIBLE
46	RENAULT/AMC	41	ALPINE
46	RENAULT/AMC	44	MEDALLION
46	RENAULT/AMC	45	PREMIER
46	RENAULT/AMC	398	OTHER AUTOMOBILE
46	RENAULT/AMC	399	UNKNOWN AUTOMOBILE
46	RENAULT/AMC	999	UNKNOWN VEHICLE
47	SAAB	31	99/99E/900
47	SAAB	32	SONNETT
47	SAAB	33	95/96/97

Variable Definitions and Codes - Overview Data Set

47	SAAB	34	9000, CS
47	SAAB	35	9 - 3
47	SAAB	36	9 - 5
47	SAAB	398	OTHER AUTOMOBILE
47	SAAB	399	UNKNOWN AUTOMOBILE
47	SAAB	999	UNKNOWN VEHICLE
48	SUBARU	31	DL/FE/G/GF/GL/GLF/STD/LOYALE
48	SUBARU	32	STAR
48	SUBARU	33	360
48	SUBARU	34	LEGACY
48	SUBARU	35	XT/XT6
48	SUBARU	36	JUSTY
48	SUBARU	37	SVX
48	SUBARU	38	IMPREZA
48	SUBARU	43	BRAT DL, GL
48	SUBARU	44	BAJA
48	SUBARU	45	OUTBACK
48	SUBARU	398	OTHER AUTOMOBILE
48	SUBARU	399	UNKNOWN AUTOMOBILE
48	SUBARU	401	FORESTER
48	SUBARU	498	OTHER LIGHT TRUCK
48	SUBARU	499	UNKNOWN LIGHT TRUCK
48	SUBARU	999	UNKNOWN VEHICLE
49	TOYOTA	31	CORONA
49	TOYOTA	32	COROLLA
49	TOYOTA	33	CELICA
49	TOYOTA	34	SUPRA
49	TOYOTA	35	CRESSIDA
49	TOYOTA	36	CROWN
49	TOYOTA	37	CARINA
49	TOYOTA	38	TERCEL
49	TOYOTA	39	STARLET
49	TOYOTA	40	CAMRY
49	TOYOTA	41	MR-2
49	TOYOTA	42	PASEO
49	TOYOTA	43	AVALON
49	TOYOTA	44	SOLARA
49	TOYOTA	45	ECHO
49	TOYOTA	46	PRIUS
49	TOYOTA	48	SCION XA
49	TOYOTA	49	SCION XB
49	TOYOTA	398	OTHER AUTOMOBILE
49	TOYOTA	399	UNKNOWN AUTOMOBILE
49	TOYOTA	401	4-RUNNER
49	TOYOTA	402	RAV-4
49	TOYOTA	403	HIGHLANDER
49	TOYOTA	403	HIGHLANDER
49	TOYOTA	404	MATRIX
49	TOYOTA	421	LANDCRUISER
49	TOYOTA	422	SEQUOIA
49	TOYOTA	441	MINVAN/PREVIA
49	TOYOTA	442	SIENNA
49	TOYOTA	471	PICKUP
49	TOYOTA	472	TACOMA
49	TOYOTA	481	T-100
49	TOYOTA	482	TUNDRA
49	TOYOTA	498	OTHER LIGHT TRUCK
49	TOYOTA	499	UNKNOWN LIGHT TRUCK
49	TOYOTA	999	UNKNOWN VEHICLE
50	TRIUMPH	31	SPITFIRE

Variable Definitions and Codes - Overview Data Set

50	TRIUMPH	32	GT-6
50	TRIUMPH	33	TR4
50	TRIUMPH	34	TR6
50	TRIUMPH	35	TR7/8
50	TRIUMPH	36	HERALD
50	TRIUMPH	37	STAG
50	TRIUMPH	398	OTHER AUTOMOBILE
50	TRIUMPH	399	UNKNOWN AUTOMOBILE
50	TRIUMPH	701	MOTORCYCLE (000-050CC)
50	TRIUMPH	702	MOTORCYCLE (051-124CC)
50	TRIUMPH	703	MOTORCYCLE (125-349CC)
50	TRIUMPH	704	MOTORCYCLE (350-449CC)
50	TRIUMPH	705	MOTORCYCLE (450-749CC)
50	TRIUMPH	706	MOTORCYCLE (750CC-OVER)
50	TRIUMPH	709	MOTORCYCLE (UNKNOWN CC)
50	TRIUMPH	799	UNKNOWN MOTORED CYCLE
50	TRIUMPH	999	UNKNOWN VEHICLE
51	VOLVO	31	122
51	VOLVO	32	142/144/145
51	VOLVO	33	164
51	VOLVO	34	240/242/244/245
51	VOLVO	35	262/264/265
51	VOLVO	36	1800
51	VOLVO	38	760/780
51	VOLVO	39	740
51	VOLVO	40	940
51	VOLVO	41	960
51	VOLVO	42	850
51	VOLVO	43	70 SERIES
51	VOLVO	44	90 SERIES
51	VOLVO	45	80 SERIES
51	VOLVO	46	40 SERIES
51	VOLVO	47	60 SERIES
51	VOLVO	398	OTHER AUTOMOBILE
51	VOLVO	399	UNKNOWN AUTOMOBILE
51	VOLVO	401	XC90
51	VOLVO	881	MEDIUM/HEAVY CBE
51	VOLVO	882	MEDIUM/HEAVY COE LOW ENTRY
51	VOLVO	883	MEDIUM/HEAVY COE HIGH ENTRY
51	VOLVO	884	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
51	VOLVO	890	MEDIUM/HEAVY: COE ENTRY POSITION UNKNOWN
51	VOLVO	898	OTHER MEDIUM/HEAVY TRUCK
51	VOLVO	899	UNKNOWN MEDIUM/HEAVY TRUCK
51	VOLVO	981	MEDIUM BUS
51	VOLVO	988	OTHER BUS
51	VOLVO	989	UNKNOWN TYPE BUS
51	VOLVO	999	UNKNOWN VEHICLE
52	MITSUBISHI	31	STARION
52	MITSUBISHI	32	TREDIA
52	MITSUBISHI	33	CORDIA
52	MITSUBISHI	34	GALANT
52	MITSUBISHI	35	MIRAGE
52	MITSUBISHI	36	PRECIS
52	MITSUBISHI	37	ECLIPSE
52	MITSUBISHI	38	SIGMA
52	MITSUBISHI	39	3000GT
52	MITSUBISHI	40	DIAMANTE
52	MITSUBISHI	46	LANCER

Variable Definitions and Codes - Overview Data Set

52	MITSUBISHI	398	OTHER AUTOMOBILE
52	MITSUBISHI	399	UNKNOWN AUTOMOBILE
52	MITSUBISHI	401	MONTERO
52	MITSUBISHI	402	OUTLANDER
52	MITSUBISHI	403	ENDEAVOR
52	MITSUBISHI	441	MINIVAN
52	MITSUBISHI	442	EXPO WAGON
52	MITSUBISHI	471	PICKUP
52	MITSUBISHI	498	OTHER LIGHT TRUCK
52	MITSUBISHI	499	UNKNOWN LIGHT TRUCK
52	MITSUBISHI	882	MEDIUM/HEAVY - COE LOW ENTRY
52	MITSUBISHI	898	OTHER MEDIUM/HEAVY TRUCK
52	MITSUBISHI	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
52	MITSUBISHI	899	UNKNOWN MEDIUM/HEAVY TRUCK
52	MITSUBISHI	981	CONVENTIONAL FRONT ENGINE
52	MITSUBISHI	982	FRONT ENGINE/FLAT FRONT
52	MITSUBISHI	983	REAR ENGINE/FLAT FRONT
52	MITSUBISHI	988	OTHER BUS
52	MITSUBISHI	989	UNKNOWN TYPE BUS
52	MITSUBISHI	999	UNKNOWN VEHICLE
53	SUZUKI	31	SA310
53	SUZUKI	34	SWIFT
53	SUZUKI	35	ESTEEM
53	SUZUKI	36	AERIO
53	SUZUKI	37	FORENZA
53	SUZUKI	38	VERONA
53	SUZUKI	398	OTHER AUTOMOBILE
53	SUZUKI	399	UNKNOWN AUTOMOBILE
53	SUZUKI	401	SAMURAI
53	SUZUKI	402	SIDEKICK/GRAND VITARA
53	SUZUKI	403	X-90/VITARA
53	SUZUKI	404	GRAND VITARA
53	SUZUKI	405	XL7
53	SUZUKI	498	OTHER LIGHT TRUCK
53	SUZUKI	499	UNKNOWN LIGHT TRUCK
53	SUZUKI	701	MOTORCYCLE (000-050CC)
53	SUZUKI	702	MOTORCYCLE (051-124CC)
53	SUZUKI	703	MOTORCYCLE (125-349CC)
53	SUZUKI	704	MOTORCYCLE (350-449CC)
53	SUZUKI	705	MOTORCYCLE (450-749CC)
53	SUZUKI	706	MOTORCYCLE (750CC-OVER)
53	SUZUKI	709	MOTORCYCLE (UNKNOWN CC)
53	SUZUKI	731	ATC/ATV (000-050CC)
53	SUZUKI	732	ATC/ATV (051-124CC)
53	SUZUKI	733	ATC/ATV (125-349CC)
53	SUZUKI	734	ATC/ATV (350CC-OVER)
53	SUZUKI	739	ATC/ATV (UNKNOWN CC)
53	SUZUKI	799	UNKNOWN MOTORED CYCLE
53	SUZUKI	999	UNKNOWN VEHICLE
54	ACURA	31	INTEGRA
54	ACURA	32	LEGEND
54	ACURA	32	RL
54	ACURA	33	NSX
54	ACURA	34	VIGOR
54	ACURA	35	TL
54	ACURA	35	CL
54	ACURA	38	RSX
54	ACURA	39	TSX
54	ACURA	398	OTHER AUTOMOBILE
54	ACURA	399	UNKNOWN AUTOMOBILE

Variable Definitions and Codes - Overview Data Set

54	ACURA	401	SLX
54	ACURA	421	MDX
54	ACURA	498	OTHER LIGHT TRUCK
54	ACURA	499	UNKNOWN TYPE LIGHT TRUCK
54	ACURA	999	UNKNOWN VEHICLE
55	HYUNDAI	31	PONY
55	HYUNDAI	32	EXCEL
55	HYUNDAI	33	SONATA
55	HYUNDAI	34	SCOUPE
55	HYUNDAI	35	ELANTRA
55	HYUNDAI	36	ACCENT
55	HYUNDAI	37	TIBURON
55	HYUNDAI	38	XG300/350
55	HYUNDAI	398	OTHER AUTOMOBILE
55	HYUNDAI	399	UNKNOWN AUTOMOBILE
55	HYUNDAI	401	SANTA FE
55	HYUNDAI	498	OTHER LIGHT TRUCK
55	HYUNDAI	499	UNKNOWN LIGHT TRUCK
55	HYUNDAI	999	UNKNOWN VEHICLE
56	MERKUR	31	XR4Ti
56	MERKUR	32	SCORPIO
56	MERKUR	398	OTHER AUTOMOBILE
56	MERKUR	399	UNKNOWN AUTOMOBILE
56	MERKUR	999	UNKNOWN VEHICLE
57	YUGO	31	GV
57	YUGO	398	OTHER AUTOMOBILE
57	YUGO	399	UNKNOWN AUTOMOBILE
57	YUGO	999	UNKNOWN VEHICLE
58	INFINITI	31	M30
58	INFINITI	32	Q45
58	INFINITI	33	G20
58	INFINITI	34	J30
58	INFINITI	35	I30
58	INFINITI	36	I35
58	INFINITI	37	G35
58	INFINITI	38	M45
58	INFINITI	39	FX35/45
58	INFINITI	398	OTHER AUTOMOBILE
58	INFINITI	399	UNKNOWN AUTOMOBILE
58	INFINITI	401	QX4
58	INFINITI	421	QX56
58	INFINITI	498	OTHER LIGHT TRUCK
58	INFINITI	499	UNKNOWN LIGHT TRUCK
58	INFINITI	999	UNKNOWN VEHICLE
59	LEXUS	31	ES250/ES-300
59	LEXUS	32	LS400
59	LEXUS	33	SC-300/SC-400
59	LEXUS	34	GS300/GS400
59	LEXUS	35	IS-300
59	LEXUS	36	SC 430
59	LEXUS	398	OTHER AUTOMOBILE
59	LEXUS	399	UNKNOWN AUTOMOBILE
59	LEXUS	401	RX300
59	LEXUS	402	GX470
59	LEXUS	421	LX 450/470
59	LEXUS	498	OTHER LIGHT TRUCK
59	LEXUS	499	UNKNOWN LIGHT TRUCK
59	LEXUS	999	UNKNOWN VEHICLE
60	DAIHATSU	31	CHARADE
60	DAIHATSU	398	OTHER AUTOMOBILE

Variable Definitions and Codes - Overview Data Set

60	DAIHATSU	399	UNKNOWN AUTOMOBILE
60	DAIHATSU	401	ROCKY
60	DAIHATSU	498	OTHER LIGHT TRUCK
60	DAIHATSU	499	UNKNOWN LIGHT TRUCK
60	DAIHATSU	999	UNKNOWN VEHICLE
61	STERLING	31	827S
61	STERLING	398	OTHER AUTOMOBILE
61	STERLING	399	UNKNOWN AUTOMOBILE
61	STERLING	999	UNKNOWN VEHICLE
62	LAND ROVER	401	DISCOVERY (LR)
62	LAND ROVER	421	COUNTY LWB (RR) / COUNT CLASSIC (RR)
62	LAND ROVER	422	FREELANDER
62	LAND ROVER	422	4.0 SE (RR)
62	LAND ROVER	422	DEFENDER 90 (LR)
62	LAND ROVER	498	OTHER LIGHT TRUCK
62	LAND ROVER	499	UNKNOWN LIGHT TRUCK
62	LAND ROVER	999	UNKNOWN VEHICLE
63	KIA	31	SEPHIA
63	KIA	32	SPECTRA
63	KIA	33	RIO
63	KIA	34	OPTIMA
63	KIA	35	AMANTI
63	KIA	398	OTHER AUTOMOBILE
63	KIA	399	UNKNOWN AUTOMOBILE
63	KIA	401	SPORTAGE
63	KIA	402	SORRENTO
63	KIA	441	SEDONA
63	KIA	498	OTHER LIGHT TRUCK
63	KIA	499	UNKNOWN LIGHT TRUCK
63	KIA	999	UNKNOWN VEHICLE
64	DAEWOO	31	LANOS
64	DAEWOO	32	NUBIRA
64	DAEWOO	33	LEGANZA
64	DAEWOO	398	OTHER AUTOMOBILE
64	DAEWOO	399	UNKNOWN AUTOMOBILE
64	DAEWOO	999	UNKNOWN VEHICLE
65	MINI	31	COOPER,COOPER S
69	ASTON MARTIN	31	LAGONDA
69	ASTON MARTIN	31	OTHER AUTOMOBILE
69	ASTON MARTIN	31	UNKNOWN AUTOMOBILE
69	ASTON MARTIN	31	VOLANTE
69	ASTON MARTIN	31	SALOON
69	ASTON MARTIN	31	VANTAGE
69	BRICKLIN	32	OTHER AUTOMOBILE
69	BRICKLIN	32	UNKNOWN AUTOMOBILE
69	CITROEN	33	UNKNOWN AUTOMOBILE
69	CITROEN	33	OTHER AUTOMOBILE
69	DELOREAN	34	OTHER AUTOMOBILE
69	DELOREAN	34	UNKNOWN AUTOMOBILE
69	FERRARI	35	OTHER AUTOMOBILE
69	FERRARI	35	UNKNOWN AUTOMOBILE
69	HILLMAN	36	OTHER AUTOMOBILE
69	HILLMAN	36	UNKNOWN AUTOMOBILE
69	JENSEN	37	HEALY
69	JENSEN	37	UNKNOWN AUTOMOBILE
69	JENSEN	37	OTHER AUTOMOBILE
69	LAMBORGHINI	38	UNKNOWN AUTOMOBILE
69	LAMBORGHINI	38	JALPA
69	LAMBORGHINI	38	OTHER AUTOMOBILE
69	LAMBORGHINI	38	COUNTACH 5000S

Variable Definitions and Codes - Overview Data Set

69	LOTUS	39	EUROPE
69	LOTUS	39	ESPRIT
69	LOTUS	39	UNKNOWN AUTOMOBILE
69	LOTUS	39	OTHER AUTOMOBILE
69	MASERATI	40	BITURBO
69	MASERATI	40	OTHER AUTOMOBILE
69	MASERATI	40	UNKNOWN AUTOMOBILE
69	MORRIS	41	MINOR
69	MORRIS	41	UNKNOWN AUTOMOBILE
69	MORRIS	41	OTHER AUTOMOBILE
69	ROLLS ROYCE/BENTLEY	42	CLOUD/SHADOW SERIES
69	ROLLS ROYCE/BENTLEY	42	UNKNOWN AUTOMOBILE
69	ROLLS ROYCE/BENTLEY	42	OTHER AUTOMOBILE
69	SIMCA	44	UNKNOWN AUTOMOBILE
69	SIMCA	44	OTHER AUTOMOBILE
69	SUNBEAM	45	OTHER AUTOMOBILE
69	SUNBEAM	45	UNKNOWN AUTOMOBILE
69	TVR	46	OTHER AUTOMOBILE
69	TVR	46	UNKNOWN AUTOMOBILE
69	DESTA	48	OTHER AUTOMOBILE
69	DESTA	48	UNKNOWN AUTOMOBILE
69	RELIANT	49	OTHER AUTOMOBILE
69	RELIANT	49	UNKNOWN AUTOMOBILE
69	BERTONE	52	OTHER AUTOMOBILE
69	BERTONE	52	UNKNOWN AUTOMOBILE
69	LADA	53	OTHER AUTOMOBILE
69	LADA	53	UNKNOWN AUTOMOBILE
69	OTHER FOREIGN MANUFACTURER (light vehicles)	398	OTHER MAKE
69	OTHER FOREIGN MANUFACTURER (light vehicles)	399	UNKOWN MAKE
69	OTHER FOREIGN MANUFACTURER (light vehicles)	498	OTHER LIGHT TRUCK
69	OTHER FOREIGN MANUFACTURER (light vehicles)	898	OTHER MEDIUM/HEAVY TRUCK
69	OTHER FOREIGN MANUFACTURER (light vehicles)	988	OTHER BUS
69	OTHER FOREIGN MANUFACTURER (light vehicles)	998	OTHER VEHICLE
70	BSA	701	MOTORCYCLE (000-050CC)
70	BSA	702	MOTORCYCLE (051-124CC)
70	BSA	703	MOTORCYCLE (125-349CC)
70	BSA	704	MOTORCYCLE (350-449CC)
70	BSA	705	MOTORCYCLE (450-749CC)
70	BSA	706	MOTORCYCLE (750CC-OVER)
70	BSA	709	MOTORCYCLE (UNKNOWN CC)
70	BSA	798	OTHER MOTORED CYCLE
70	BSA	799	UNKNOWN MOTORED CYCLE
71	DUCATI	701	MOTORCYCLE (000-050CC)
71	DUCATI	702	MOTORCYCLE (051-124CC)
71	DUCATI	703	MOTORCYCLE (125-349CC)
71	DUCATI	704	MOTORCYCLE (350-449CC)
71	DUCATI	705	MOTORCYCLE (450-749CC)
71	DUCATI	706	MOTORCYCLE (750CC-OVER)
71	DUCATI	709	MOTORCYCLE (UNKNOWN CC)
71	DUCATI	798	OTHER MOTORED CYCLE
71	DUCATI	799	UNKNOWN MOTORED CYCLE
72	HARLEY-DAVIDSON	701	MOTORCYCLE (000-050CC)
72	HARLEY-DAVIDSON	702	MOTORCYCLE (051-124CC)
72	HARLEY-DAVIDSON	703	MOTORCYCLE (125-349CC)

Variable Definitions and Codes - Overview Data Set

72	HARLEY-DAVIDSON	704	MOTORCYCLE (350-449CC)
72	HARLEY-DAVIDSON	705	MOTORCYCLE (450-749CC)
72	HARLEY-DAVIDSON	706	MOTORCYCLE (750CC-OVER)
72	HARLEY-DAVIDSON	709	MOTORCYCLE (UNKNOWN CC)
72	HARLEY-DAVIDSON	798	OTHER MOTORED CYCLE
72	HARLEY-DAVIDSON	799	UNKNOWN MOTORED CYCLE
73	KAWASAKI	701	MOTORCYCLE (000-050CC)
73	KAWASAKI	702	MOTORCYCLE (051-124CC)
73	KAWASAKI	703	MOTORCYCLE (125-349CC)
73	KAWASAKI	704	MOTORCYCLE (350-449CC)
73	KAWASAKI	705	MOTORCYCLE (450-749CC)
73	KAWASAKI	706	MOTORCYCLE (750CC-OVER)
73	KAWASAKI	709	MOTORCYCLE (UNKNOWN CC)
73	KAWASAKI	731	ATC/ATV (000-050CC)
73	KAWASAKI	732	ATC/ATV (051-124CC)
73	KAWASAKI	733	ATC/ATV (125-349CC)
73	KAWASAKI	734	ATC/ATV (350CC-OVER)
73	KAWASAKI	739	ATC/ATV (UNKNOWN CC)
73	KAWASAKI	798	OTHER MOTORED CYCLE
73	KAWASAKI	799	UNKNOWN MOTORED CYCLE
74	MOTO-GUZZI	701	MOTORCYCLE (000-050CC)
74	MOTO-GUZZI	702	MOTORCYCLE (051-124CC)
74	MOTO-GUZZI	703	MOTORCYCLE (125-349CC)
74	MOTO-GUZZI	704	MOTORCYCLE (350-449CC)
74	MOTO-GUZZI	705	MOTORCYCLE (450-749CC)
74	MOTO-GUZZI	706	MOTORCYCLE (750CC-OVER)
74	MOTO-GUZZI	709	MOTORCYCLE (UNKNOWN CC)
74	MOTO-GUZZI	731	ATC/ATV (000-050CC)
74	MOTO-GUZZI	732	ATC/ATV (051-124CC)
74	MOTO-GUZZI	733	ATC/ATV (125-349CC)
74	MOTO-GUZZI	734	ATC/ATV (350CC-OVER)
74	MOTO-GUZZI	739	ATC/ATV (UNKNOWN CC)
74	MOTO-GUZZI	798	OTHER MOTORED CYCLE
74	MOTO-GUZZI	799	UNKNOWN MOTORED CYCLE
75	NORTON	701	MOTORCYCLE (000-050CC)
75	NORTON	702	MOTORCYCLE (051-124CC)
75	NORTON	703	MOTORCYCLE (125-349CC)
75	NORTON	704	MOTORCYCLE (350-449CC)
75	NORTON	705	MOTORCYCLE (450-749CC)
75	NORTON	706	MOTORCYCLE (750CC-OVER)
75	NORTON	709	MOTORCYCLE (UNKNOWN CC)
75	NORTON	798	OTHER MOTORED CYCLE
75	NORTON	799	UNKNOWN MOTORED CYCLE
76	YAMAHA	701	MOTORCYCLE (000-050CC)
76	YAMAHA	702	MOTORCYCLE (051-124CC)
76	YAMAHA	703	MOTORCYCLE (125-349CC)
76	YAMAHA	704	MOTORCYCLE (350-449CC)
76	YAMAHA	705	MOTORCYCLE (450-749CC)
76	YAMAHA	706	MOTORCYCLE (750CC-OVER)
76	YAMAHA	709	MOTORCYCLE (UNKNOWN CC)
76	YAMAHA	731	ATC/ATV (000-050CC)
76	YAMAHA	732	ATC/ATV (051-124CC)
76	YAMAHA	733	ATC/ATV (125-349CC)
76	YAMAHA	734	ATC/ATV (350CC-OVER)
76	YAMAHA	739	ATC/ATV (UNKNOWN CC)
76	YAMAHA	798	OTHER MOTORED CYCLE
76	YAMAHA	799	UNKNOWN MOTORED CYCLE
76	YAMAHA	998	OTHER VEHICLE
78	OTHER MAKE MOPED	701	0-50cc
78	OTHER MAKE MOPED	702	51-124cc

Variable Definitions and Codes - Overview Data Set

78	OTHER MAKE MOPED	709	UNKNOWN cc
78	OTHER MAKE MOPED	798	OTHER MOTORED CYCLE
78	OTHER MAKE MOPED	799	UNKNOWN MOTORED CYCLE
79	OTHER MAKE MOTORED CYCLE	701	0-50cc
79	OTHER MAKE MOTORED CYCLE	702	51-124cc
79	OTHER MAKE MOTORED CYCLE	703	125-349cc
79	OTHER MAKE MOTORED CYCLE	704	350-449cc
79	OTHER MAKE MOTORED CYCLE	705	450-749cc
79	OTHER MAKE MOTORED CYCLE	706	750c or greater
79	OTHER MAKE MOTORED CYCLE	709	Unknown cc
79	OTHER MAKE MOTORED CYCLE	731	ATC/ATV 0-50cc
79	OTHER MAKE MOTORED CYCLE	732	ATC/ATV 51-124cc
79	OTHER MAKE MOTORED CYCLE	733	ATC/ATV 125-349cc
79	OTHER MAKE MOTORED CYCLE	734	ATC/ATV 350cc OR GREATER
79	OTHER MAKE MOTORED CYCLE	739	ATV/ATC UNKNOWN cc
79	OTHER MAKE MOTORED CYCLE	798	OTHER MOTORED CYCLE
79	OTHER MAKE MOTORED CYCLE	799	UNKNOWN MOTORED CYCLE
80	BROCKWAY	850	MEDIUM/HEAVY TRUCK BASED MOTORHOME
80	BROCKWAY	881	MEDIUM/HEAVY - CBE
80	BROCKWAY	882	MEDIUM/HEAVE - COE/LOW ENTRY
80	BROCKWAY	883	MEDIUM/HEAVY - COE HIGH ENTRY
80	BROCKWAY	884	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
80	BROCKWAY	890	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
80	BROCKWAY	898	MEDIUM/HEAVY - OTHER
80	BROCKWAY	899	UNKNOWN MEDIUM/HEAVY TRUCK
81	DIAMOND REO/REO	850	MEDIUM/HEAVY TRUCK BASED MOTORHOME
81	DIAMOND REO/REO	881	MEDIUM/HEAVY - CBE
81	DIAMOND REO/REO	882	MEDIUM/HEAVY - COE/LOW ENTRY
81	DIAMOND REO/REO	883	MEDIUM/HEAVY - COE/HIGH ENTRY
81	DIAMOND REO/REO	884	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
81	DIAMOND REO/REO	890	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
81	DIAMOND REO/REO	898	MEDIUM/HEAVY - OTHER
81	DIAMOND REO/REO	899	UNKNOWN MEDIUM/HEAVY TRUCK
82	FREIGHTLINER/WHITE	461	SPRINTER/ADVANTAGE
82	FREIGHTLINER/WHITE	470	M-LINE WALK IN VAN
82	FREIGHTLINER/WHITE	498	OTHER LIGHT TRUCK
82	FREIGHTLINER/WHITE	499	UNKNOWN LIGHT TRUCK
82	FREIGHTLINER/WHITE	850	MEDIUM/HEAVY TRUCK BASED MOTORHOME
82	FREIGHTLINER/WHITE	881	MEDIUM/HEAVY - CBE
82	FREIGHTLINER/WHITE	882	MEDIUM/HEAVY - COE/LOW ENTRY
82	FREIGHTLINER/WHITE	883	MEDIUM/HEAVY - COE/HIGH ENTRY
82	FREIGHTLINER/WHITE	884	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
82	FREIGHTLINER/WHITE	890	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
82	FREIGHTLINER/WHITE	898	MEDIUM/HEAVY - OTHER
82	FREIGHTLINER/WHITE	899	UNKNOWN LIGHT/MEDIUM/HEAVY TRUCK
82	FREIGHTLINER/WHITE	981	BUS CONVENTIONAL ENGINE OUT FRONT
82	FREIGHTLINER/WHITE	982	BUS FRONT ENGINE/FLAT FRONT
82	FREIGHTLINER/WHITE	983	BUS REAR ENGINE/FLAT FRONT
82	FREIGHTLINER/WHITE	988	OTHER BUS
82	FREIGHTLINER/WHITE	989	UNKNOWN BUS TYPE
82	FREIGHTLINER/WHITE	999	UNKNOWN VEHICLE
83	FWD	850	MEIDUM/HEAVY TRUCK BASED MOTORHOME

Variable Definitions and Codes - Overview Data Set

83	FWD	881	MEDIUM/HEAVY - CBE
83	FWD	882	MEDIUM/HEAVY - COE/LOW ENTRY
83	FWD	883	MEDIUM/HEAVY - COE/HIGH ENTRY
83	FWD	884	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
83	FWD	898	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
83	FWD	898	MEDIUM/HEAVY - OTHER
83	FWD	899	UNKNOWN MEDIUM/HEAVY TRUCK
84	INTERNATIONAL HARVESTER/NAVISTAR	421	SCOUT
84	INTERNATIONAL HARVESTER/NAVISTAR	431	TRAVELALL
84	INTERNATIONAL HARVESTER/NAVISTAR	466	MULTISTOP VAN
84	INTERNATIONAL HARVESTER/NAVISTAR	481	PICKUP
84	INTERNATIONAL HARVESTER/NAVISTAR	498	OTHER LIGHT TRUCK
84	INTERNATIONAL HARVESTER/NAVISTAR	499	UNKNOWN LIGHT TRUCK
84	INTERNATIONAL HARVESTER/NAVISTAR	850	TRUCK BASED MOTORHOME
84	INTERNATIONAL HARVESTER/NAVISTAR	881	MEDIUM HEAVY - CBE
84	INTERNATIONAL HARVESTER/NAVISTAR	882	MEDIUM/HEAVY - COE LOW ENTRY
84	INTERNATIONAL HARVESTER/NAVISTAR	883	MEDIUM/HEAVY - COE HIGH ENTRY
84	INTERNATIONAL HARVESTER/NAVISTAR	884	MEDIUM/HEAVY: UNKNOWN ENGINE LOCATION
84	INTERNATIONAL HARVESTER/NAVISTAR	890	MEDIUM/HEAVY: COE ENTRY POSITION UNKNOWN
84	INTERNATIONAL HARVESTER/NAVISTAR	898	OTHER MEDIUM/HEAVY TRUCK
84	INTERNATIONAL HARVESTER/NAVISTAR	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
84	INTERNATIONAL HARVESTER/NAVISTAR	899	UNKNOWN MEDIUM/HEAVY TRUCK
84	INTERNATIONAL HARVESTER/NAVISTAR	950	BUS BASED MOTOHOME
84	INTERNATIONAL HARVESTER/NAVISTAR	981	CONVENTIONAL BUS
84	INTERNATIONAL HARVESTER/NAVISTAR	982	BUS-FLAT FRONT, FRONT ENGINE
84	INTERNATIONAL HARVESTER/NAVISTAR	983	BUS-FLAT FRONT, REAR ENGINE
84	INTERNATIONAL HARVESTER/NAVISTAR	988	OTHER BUS
84	INTERNATIONAL HARVESTER/NAVISTAR	989	UNKNOWN BUS TYPE
84	INTERNATIONAL HARVESTER/NAVISTAR	998	OTHER VEHICLE
84	INTERNATIONAL HARVESTER/NAVISTAR	999	UNKNOWN VEHICLE
85	KENWORTH	850	MEDIUM/HEAVY TRUCK BASED MOTORHOME
85	KENWORTH	881	MEDIUM/HEAVY - CBE
85	KENWORTH	882	MEDIUM/HEAVY - COE/LOW ENTRY
85	KENWORTH	883	MEDIUM/HEAVY - COE/HIGH ENTRY
85	KENWORTH	884	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
85	KENWORTH	890	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
85	KENWORTH	898	MEDIUM/HEAVY - OTHER
85	KENWORTH	899	UNKNOWN MEDIUM/HEAVY TRUCK
86	MACK	850	MEDIUM/HEAVY BASED MOTORHOME
86	MACK	881	MEDIUM/HEAVY - CBE
86	MACK	882	MEDIUM/HEAVY - COE/LOW ENTRY
86	MACK	883	MEDIUM/HEAVY - COE/HIGH ENTRY
86	MACK	884	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
86	MACK	890	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
86	MACK	898	MEDIUM/HEAVY - OTHER
86	MACK	899	UNKNOWN MEDIUM/HEAVY TRUCK
87	PETERBILT	850	MEDIUM/HEAVY BASED MOTORHOME
87	PETERBILT	881	MEDIUM/HEAVY - CBE
87	PETERBILT	882	MEDIUM/HEAVY - COE/LOW ENTRY
87	PETERBILT	883	MEDIUM/HEAVY - COE/HIGH ENTRY
87	PETERBILT	884	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION

Variable Definitions and Codes - Overview Data Set

87	PETERBILT	890	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
87	PETERBILT	898	MEDIUM/HEAVY - OTHER
87	PETERBILT	899	UNKNOWN MEDIUM/HEAVY TRUCK
88	IVECO/MAGIRUS	850	MEDIUM/HEAVY BASED MOTORHOME
88	IVECO/MAGIRUS	881	MEDIUM/HEAVY - CBE
88	IVECO/MAGIRUS	882	MEDIUM/HEAVY - COE/LOW ENTRY
88	IVECO/MAGIRUS	883	MEDIUM/HEAVY - COE/HIGH ENTRY
88	IVECO/MAGIRUS	884	MEDIUM/HEAVY - UNKOWN ENGINE LOCATION
88	IVECO/MAGIRUS	890	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
88	IVECO/MAGIRUS	898	MEDIUM/HEAVY - OTHER
88	IVECO/MAGIRUS	899	UNKNOWN MEDIUM/HEAVY TRUCK
98	OTHER MAKE (med/heavy truck/bus or "other")	398	OTHER AUTOMOBILE
98	WINNEBAGO	470	VAN BASED MOTORHOME
98	OTHER MAKE (med/heavy truck/bus or "other")	498	OTHER LIGHT TRUCK
98	WINNEBAGO	498	LIGHT TRUCK BASED MOTORHOME
98	WINNEBAGO	499	UNKNOWN TYPE LIGHT MOTORHOME
98	AUTOCAR	801	MEDIUM/HEAVY BASED MOTORHOME
98	AUTOCAR	801	MEDIUM/HEAVY - CBE
98	AUTOCAR	801	MEDIUM/HEAVY - COE/HIGH ENTRY
98	AUTOCAR	801	MEDIUM/HEAVY - COE/LOW ENTRY
98	AUTOCAR	801	MEDIUM/HEAVY - UNKOWN ENGINE LOCATION
98	AUTOCAR	801	MEDIUM/HEAVY - OTHER
98	AUTOCAR	801	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	AUTO-UNION-DKW	802	MEDIUM/HEAVY BASED MOTORHOME
98	AUTO-UNION-DKW	802	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
98	AUTO-UNION-DKW	802	MEDIUM/HEAVY - COE/HIGH ENTRY
98	AUTOCAR	802	MEDIUM/HEAVY - COE/LOW ENTRY
98	AUTO-UNION-DKW	802	MEDIUM/HEAVY - CBE
98	AUTO-UNION-DKW	802	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	AUTO-UNION-DKW	802	MEDIUM/HEAVY - COE/LOW ENTRY
98	AUTO-UNION-DKW	802	MEDIUM/HEAVY - OTHER
98	DIVCO	803	MEDIUM/HEAVY BASED MOTORHOME
98	DIVCO	803	MEDIUM/HEAVY - COE/LOW ENTRY
98	DIVCO	803	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	DIVCO	803	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
98	DIVCO	803	MEDIUM/HEAVY - COE/HIGH ENTRY
98	DIVCO	803	MEDIUM/HEAVY - CBE
98	DIVCO	803	MEDIUM/HEAVY - OTHER
98	WESTERN STAR	804	MEDIUM/HEAVY BASED MOTORHOME
98	WESTERN STAR	804	MEDIUM/HEAVY - CBE
98	WESTERN STAR	804	MEDIUM/HEAVY - COE/HIGH ENTRY
98	WESTERN STAR	804	MEDIUM/HEAVY - OTHER
98	WESTERN STAR	804	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	WESTERN STAR	804	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
98	WESTERN STAR	804	MEDIUM/HEAVY - COE/LOW ENTRY
98	OSHKOSH	805	MEDIUM/HEAVY BASED MOTORHOME
98	OSHKOSH	805	MEDIUM/HEAVY - OTHER
98	OSHKOSH	805	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	OSHKOSH	805	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION

Variable Definitions and Codes - Overview Data Set

98	OSHKOSH	805	MEDIUM/HEAVY - COE/HIGH ENTRY
98	OSHKOSH	805	MEDIUM/HEAVY - COE/LOW ENTRY
98	OSHKOSH	805	MEDIUM/HEAVY - CBE
98	HINO	806	MEDIUM/HEAVY BASED MOTORHOME
98	HINO	806	MEDIUM/HEAVY - CBE
98	HINO	806	MEDIUM/HEAVY - OTHER
98	HINO	806	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	HINO	806	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
98	HINO	806	MEDIUM/HEAVY - COE/HIGH ENTRY
98	HINO	806	MEDIUM/HEAVY - COE/LOW ENTRY
98	SCANIA	807	MEDIUM/HEAVY BASED MOTORHOME
98	SCANIA	807	MEDIUM/HEAVY - CBE
98	SCANIA	807	MEDIUM/HEAVY - COE/LOW ENTRY
98	SCANIA	807	MEDIUM/HEAVY - OTHER
98	SCANIA	807	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	SCANIA	807	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
98	SCANIA	807	MEDIUM/HEAVY - COE/HIGH ENTRY
98	STERLING TRUCKS	808	MEDIUM/HEAVY - CBE
98	STERLING TRUCKS	808	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
98	STERLING TRUCKS	808	MEDIUM/HEAVY - OTHER
98	STERLING TRUCKS	808	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	STERLING TRUCKS	808	MEDIUM/HEAVY - COE/HIGH ENTRY
98	STERLING TRUCKS	808	MEDIUM/HEAVY - COE/LOW ENTRY
98	OTHER MAKE (med/heavy truck/bus or "other")	850	TRUCK BASED MOTORHOME
98	WINNEBAGO	850	MOTOR HOME
98	MARMON	898	MEDIUM/HEAVY - OTHER
98	MARMON	898	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	MARMON	898	MEDIUM/HEAVY - CBE
98	MARMON	898	MEDIUM/HEAVY - COE/HIGH ENTRY
98	WINNEBAGO	898	MEDIUM / HEAVY OTHER
98	OTHER MAKE (med/heavy truck/bus or "other")	898	OTHER MEDIUM/HEAVY TRUCK
98	WARD LAFRANCE	898	MEDIUM/HEAVY - OTHER
98	WARD LAFRANCE	898	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	WARD LAFRANCE	898	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
98	WARD LAFRANCE	898	MEDIUM/HEAVY - COE/HIGH ENTRY
98	WARD LAFRANCE	898	MEDIUM/HEAVY - COE/LOW ENTRY
98	WARD LAFRANCE	898	MEDIUM/HEAVY - CBE
98	WARD LAFRANCE	898	MEDIUM/HEAVY BASED MOTORHOME
98	MARMON	898	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
98	MARMON	898	MEDIUM/HEAVY - COE/LOW ENTRY
98	MARMON	898	MEDIUM/HEAVY BASED MOTORHOME
98	WINNEBAGO	899	MEDIUM / HEAVY UNKNOWN
98	NEOPLAN	902	BUS - CONVENTIONAL FRONT ENGINE
98	NEOPLAN	902	BUS BASED MOTORHOME
98	NEOPLAN	902	BUS - FRONT ENGINE/FLAT FRONT
98	NEOPLAN	902	BUS - REAR ENGINE/FLAT FRONT
98	NEOPLAN	902	OTHER BUS
98	OTHER MAKE (med/heavy truck/bus or "other")	950	BUS BASED MOTORHOME
98	OTHER MAKE (med/heavy truck/bus or "other")	988	OTHER BUS
98	OTHER MAKE (med/heavy truck/bus or "other")	998	OTHER VEHICLE
98	WINNEBAGO	999	UNKNOWN VEHICLE
99	UNKNOWN MANUFACTURER	399	UNKNOWN AUTOMOBILE

Variable Definitions and Codes - Overview Data Set

99	UNKNOWN FOREIGN MANUFACTURER	399	UNKNOWN AUTOMOBILE
99	UNKNOWN DOMESTIC MANUFACTURER	399	UNKNOWN AUTOMOBILE
99	UNKNOWN MANUFACTURER	499	UNKNOWN LIGHT TRUCK
99	UNKNOWN DOMESTIC MANUFACTURER	499	UNKNOWN LIGHT TRUCK
99	UNKNOWN FOREIGN MANUFACTURER	499	UNKNOWN LIGHT TRUCK
99	UNKNOWN FOREIGN MANUFACTURER	799	UNKNOWN MOTORED CYCLE
99	UNKNOWN DOMESTIC MANUFACTURER	799	UNKNOWN MOTORED CYCLE
99	UNKNOWN MANUFACTURER	799	UNKNOWN MOTORED CYCLE
99	UNKNOWN MEDIUM/HEAVY TRUCKS AND BUSES MANUFACTURER	899	Unknown medium/heavy truck
99	UNKNOWN FOREIGN MANUFACTURER	899	UNKNOWN MEDIUM/HEAVY TRUCK
99	UNKNOWN MANUFACTURER	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
99	UNKNOWN DOMESTIC MANUFACTURER	899	UNKNOWN MEDIUM/HEAVY TRUCK
99	UNKNOWN MANUFACTURER	899	UNKNOWN MEDIUM/HEAVY TRUCK
99	UNKNOWN MEDIUM/HEAVY TRUCKS AND BUSES MANUFACTURER	988	Unknown bus type
99	UNKNOWN MANUFACTURER	989	UNKNOWN BUS TYPE
99	UNKNOWN FOREIGN MANUFACTURER	989	UNKNOWN BUS TYPE
99	UNKNOWN DOMESTIC MANUFACTURER	989	UNKNOWN BUS TYPE
99	UNKNOWN MANUFACTURER	999	UNKNOWN VEHICLE
99	UNKNOWN DOMESTIC MANUFACTURER	999	UNKNOWN VEHICLE
99	UNKNOWN FOREIGN MANUFACTURER	999	UNKNOWN VEHICLE

Vehicle Model Year

Definition: This variable establishes the model year that the vehicle was manufactured.

Source: Primary source is the VIN during vehicle inspection; secondary sources include the police report and interviews.

Cross Reference: Identical to GeneralVehicle.GVEYear. Congruent with GeneralVehicle.VINYear, values will differ due to VIN vs. Researcher determined values. Related to TruckUnits.ManufactureDate if TruckUnits.TUNPosition =1 when applicable.

Variable Name: OVEYear

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual coded model year
9999	Unknown

Truck Configuration

Definition: This variable provides a summary of the configuration of the rig. Letter codes are “strung together” (listed from left to right) to represent the order of equipment in the rig. For example, a tractor pulling two trailers connected by an A-dolly would have a configuration of “TSAS”.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include police or other vehicle photographs.

Cross Reference: Identical to TruckExterior.TEXConfiguration when applicable. Elaborates on TruckExterior.PowerUnitType when applicable.

Variable Name: OVEConfiguration

Variable Definitions and Codes - Overview Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
R	Straight truck
T	Tractor
S	Semi-trailer
F	Full trailer
G	Gooseneck hitch
O	Other trailer (specify)
U	Unknown trailer type
A	A dolly
B	B train
C	C dolly
X	Unknown dolly
J	Jeep
P	Bus
I	Implement of husbandry
Not Insp	Not inspected
88	Non truck
99	Unknown

Pre-Event Movement

Definition: This variable establishes the subject vehicle's pre-critical event movement pattern. The pre-event movement pattern is usually described as the point that both precedes the critical precrash envelope and that precedes vehicle motions that place the involved vehicle(s) on an imminent collision path.

Source: Determined by the Case Reviewer using all available information inputs. Primary sources include the scaled schematic, police report, driver interviews, and witness interviews. It should be noted, however, that this may be a subjective decision based on the preponderance of available evidence.

Cross Reference: Identical to CrashAssessment.PreEventMovement.

Variable Name: Movement

Attribute Codes

<u>Code</u>	<u>Meaning</u>
00	No driver present
1	Going Straight
2	Decelerating in traffic lane
3	Accelerating in traffic lane
4	Starting in traffic lane
5	Stopped in traffic lane
6	Passing or overtaking another vehicle
7	Disabled or parked in travel lane
8	Leaving a parking position
9	Entering a parking position
10	Turning right
11	Turning left

Variable Definitions and Codes - Overview Data Set

12	Making a U-turn
13	Backing up (other than for parking position)
14	Negotiating a curve
15	Changing lanes
16	Merging
17	Successful avoidance maneuver to a previous critical event
98	Other (specify)
99	Unknown

Critical Precrash Event

Definition: This variable identifies the event which made the crash imminent (i.e. something occurred which made the collision inevitable). A precrash critical event is coded for each vehicle in the crash and documents the circumstances leading to this vehicle's first impact in the crash sequence.

Source: Determined by the Case Reviewer using all available information inputs. Primary sources include the scaled schematic, police report, driver interviews, witness interviews, and vehicle inspection results. It should be noted, however, that this may be a subjective decision based on the preponderance of available evidence.

Cross Reference: Identical to CrashAssessment.ACRCriticalEvent. Elaborates on CrashAssessment.CriticalEventCat.

Variable Name: OVECriticalEvent

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Blow out/flat tire, (specify blow out/flat, location/make)
2	Stalled engine
3	Disabling vehicle failure (e.g., wheel fell off) Specify:
4	Non-disabling vehicle problem (e.g., hood flew up) Specify:
5	Poor road conditions (Puddle, pot hole, ice, etc.) Specify:
6	Traveling too fast for conditions
7	Jackknife Event
8	Other cause of control loss (specify)
9	Unknown cause of control loss
10	Over the lane line on left side of travel lane
11	Over the lane line on right side of travel lane
12	Off the edge of the road on the left side
13	Off the edge of the road on the right side
14	End departure
15	Turning left at intersection
16	Turning right at intersection
17	Crossing over (passing through) intersection
18	This vehicle decelerating
19	Unknown travel direction
50	Other vehicle stopped
51	Traveling in same direction with low steady speed
52	Traveling in same direction while decelerating
53	Traveling in same direction with higher speed

Variable Definitions and Codes - Overview Data Set

54	Traveling in opposite direction
55	In crossover
56	Backing
59	Unknown travel direction of other motor vehicle in lane
60	From adjacent lane (same direction) - over left lane line
61	From adjacent lane (same direction) - over right lane line
62	From opposite direction-over left lane line
63	From opposite direction -over right lane line
64	From parking lane
65	From crossing street, turning into same direction
66	From crossing street, across path
67	From crossing street, turning into opposite direction
68	From crossing street, intended path not known
70	From driveway, turning into same direction
71	From driveway, across path
72	From driveway, turning into opposite direction
73	From driveway, intended path not known
74	From entrance to limited access highway
78	Encroachment by other vehicle-details unknown
80	Pedestrian in roadway
81	Pedestrian approaching roadway
82	Pedestrian-unknown location
83	Pedalcyclist or other nonmotorist in roadway (specify):
84	Pedalcyclist or other nonmotorist approaching roadway Specify
85	Pedalcyclist or other nonmotorist-unknown location (specify)
87	Animal in roadway
88	Animal approaching roadway
89	Animal - unknown location
90	Object in roadway
91	Object approaching roadway
92	Object - unknown location
98	Other (specify)
99	Unknown
100	Cargo Shift
125	Not involved first harmful event

Critical Reason For The Critical Precrash Event

Definition: This variable establishes the critical reason for the occurrence of the critical event. The critical reason is the immediate reason for this event and is often the last failure in the causal chain (i.e. closest in time to the critical precrash event). Although the critical reason is an important part of the description of crash events, it is not the cause of the crash nor does it imply the assignment of fault.

Source: Determined by the Case Reviewer using all available information inputs. Primary sources include the scaled schematic, police report, driver interviews, witness interviews, and vehicle inspection results. It should be noted, however, that this may be a subjective decision based on the preponderance of available evidence.

Cross Reference: Identical to CrashAssessment.ACRReason. Elaborates on CrashAssessment.ReasonCat.

Variable Definitions and Codes - Overview Data Set

Variable Name: **OVERReason**

Attribute Codes

<u>Code</u>	<u>Meaning</u>
000	Critical event not coded to this vehicle
100	Sleep, that is, actually asleep
101	Heart attack or other physical impairment of the ability to act
108	Other critical non-performance (specify)
109	Unknown critical non-performance
110	Inattention (i.e., daydreaming)
111	Internal distraction
112	External distraction
113	Inadequate surveillance (e.g., failed to look, looked but did not see)
118	Other recognition error (specify)
119	Unknown recognition error
120	Too fast for conditions to be able to respond to unexpected actions of other road users (specify)
121	Too slow for traffic stream
122	Misjudgment of gap or other's speed
123	Following too closely to respond to unexpected actions
124	False assumption of other road user's actions
125	Illegal maneuver
126	Failure to turn on headlamps
127	Inadequate evasive action, e.g. braking only, not braking and steering
128	Aggressive driving behavior
138	Other decision error (specify)
139	Unknown decision error
140	Too fast for curve/turn
141	Panic/Freezing
142	Overcompensation
143	Poor directional control e.g., failing to control vehicle with skill ordinarily expected
148	Other performance error (specify)
149	Unknown performance error
199	Type of driver error unknown
200	Tires/wheels failed
201	Brakes failed
202	Steering failed
203	Cargo shifted
204	Trailer attachment failed
205	Suspension failed
206	Lights failed
207	Vehicle related vision obstructions
208	Body, doors, hood failed
209	Jackknifed
298	Other vehicle failure (specify)
299	Unknown vehicle failures
500	Signs/signals missing
501	Signs/signals erroneous/defective
502	Signs/signals inadequate

Variable Definitions and Codes - Overview Data Set

503	View obstructions by roadway design/furniture
504	View obstructed by other vehicles
505	Road design - roadway geometry (e.g., ramp curvature)
506	Road design - sight distance
507	Road design - other
508	Maintenance problems (potholes, deteriorated road edges, etc.)
509	Slick roads (low friction road surface due to ice, loose debris, any other cause)
518	Other highway-related condition (specify)
521	Rain, snow
522	Fog
523	Wind gust
528	Other weather-related condition (specify)
530	Glare
531	Blowing debris
538	Other sudden change in ambience (specify)
540	Degraded braking capability
541	Transmission/engine failure
999	Unknown reason for critical event

Attempted Avoidance Maneuver

Definition: Attempted avoidance maneuvers are movements/actions initiated by the subject driver, within the crucial crash envelope, in response to a critical precrash event. Attempted avoidance maneuvers occur after the driver has realization of an impending danger. This variable documents the driver's actions initiated in response to the realization of impending danger.

Source: Determined by Case Reviewer using all available information inputs. Primary sources include the scaled schematic, police report, driver interviews, witness interviews, and vehicle inspection results.

Cross Reference: Identical to CrashAssessment.ACRAvoidance.

Variable Name: OVEAvoidance

Attribute Codes

<u>Code</u>	<u>Meaning</u>
00	No driver present
1	No avoidance maneuver
2	Braking (no lockup)
3	Braking (lockup)
4	Braking (lockup unknown)
5	Releasing brakes
6	Steering left
7	Steering right
8	Braking and steering left
9	Braking and steering right
10	Accelerating
11	Accelerating and steering left
12	Accelerating and steering right

Variable Definitions and Codes - Overview Data Set

98	Other action (specify)
99	Unknown

Pre-Impact Stability

Definition: The purpose of this variable is to assess the stability of the vehicle after the critical event. The stability of the vehicle prior to an avoidance action is not considered except in the following situation: A vehicle that is out of control (e.g. yawing clockwise) prior to an avoidance maneuver is coded "Other vehicle loss of control" only if an avoidance action was taken in response to an impending danger. Thus, the variable focuses upon this vehicle's dynamics after the critical event.

Source: Determined by Case Reviewer using all available information inputs. Primary sources include the scaled schematic, police report, driver interviews, witness interviews, and vehicle inspection results.

Cross Reference: Identical to CrashAssessment.ACRStability.

Variable Name: OVEStability

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No driver present
1	Tracking
2	Skidding longitudinally->rotation less than 30 degrees
3	Skidding laterally->clockwise rotation
4	Skidding laterally->counterclockwise rotation
8	Other vehicle loss-of-control (specify)
9	Pre-crash stability unknown

Pre-Impact Location

Definition: This variable reports the location of the subject vehicle at the point where its pre-impact stability is determined.

Source: Determined by Case Reviewer using all available information inputs. Primary sources include the scaled schematic, police report, driver interviews, witness interviews, and vehicle inspection results.

Cross Reference: Identical to CrashAssessment.ACRLocation.

Variable Name: OVELocation

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No driver present
1	Stayed in original travel lane
2	Stayed on roadway but left original travel lane
3	Stayed on roadway, not known if left original travel lane
4	Departed roadway
5	Remained off roadway

Variable Definitions and Codes - Overview Data Set

6	Returned to roadway
7	Entered roadway
9	Unknown

Right-Of-Way?

Definition: This variable establishes vehicle right-of-way characteristics, from a legal perspective, for the subject vehicle. Specifically, did this vehicle have the right-of-way?

Source: Determined by Case Reviewer using all available information inputs. Primary sources included the scaled schematic, police report, driver interviews, witness interviews, and vehicle inspection reports.

Cross Reference: Identical to CrashAssessment.ACRRRightOfWay.

Variable Name: OVERightOfWay

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Yes
2	No
88	Not applicable
99	Unknown

Crash Configuration

Definition: This variable is used in categorizing the collisions of drivers involved in crashes. A collision is defined here as the first harmful event in a crash between a vehicle and some object, accompanied by property damage or human injury. The object may be another vehicle, a person, an animal, a fixed object, the road surface, or the ground. If the first collision is a rollover, the impact is with the ground or road surface. The collision may also involve plowing into soft ground, if severe deceleration results in damage or injury. A road departure without damage or injury is not defined as a collision. This variable is part of the larger variable "Crash Type." The "Crash Type" variable is actually broken down into three components: the crash category, the crash configuration, and the accident type. This variable only deals with the configuration of the crash.

Source: Determined by Case Reviewer using all available information inputs. Primary sources include the scaled schematic, police report, driver interviews, witness interviews, and vehicle inspection reports.

Cross Reference: Identical to CrashAssessment.AccidentCat. Derived from CrashAssessment.CrashCode. Derived from Overview.OVECrashCode.

Variable Name: OVEAccidentType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Right Roadside Departure
2	Rear-End
3	Head-On
4	Turn Across Path
5	Straight Paths
6	Same Trafficway Opposite Directions - Sideswipe/Angle

Variable Definitions and Codes - Overview Data Set

7	Left Roadside Departure
8	Same Trafficway Same Direction - Forward Impact
9	Same Trafficway Opposite Directions - Forward Impact
10	Turn Into Path
11	Single Driver - Forward Impact
12	Same Trafficway Same Direction - Sideswipe/Angle
13	Miscellaneous
99	Backing, Etc.: Unknown Crash Type

Crash Type

Definition: This variable is used in categorizing the collisions of drivers involved in crashes. A collision is defined here as the first harmful event in a crash between a vehicle and some object, accompanied by property damage or human injury. The object may be another vehicle, a person, an animal, a fixed object, the road surface, or the ground. If the first collision is a rollover, the impact is with the ground or road surface. The collision may also involve plowing into soft ground, if severe deceleration results in damage or injury. A road departure without damage or injury is not defined as a collision. This variable encompasses the "Crash Configuration" variable, which is a component of this variable. Cases where the crash type is "No Impact" include fire and immersion.

Source: Determined by Case Reviewer using all available information inputs. Primary sources include the scaled schematic, police report, driver interviews, witness interviews, and vehicle inspection reports.

Cross Reference: Identical to CrashAssessment.CrashCode. Elaborates on CrashAssessment.AccidentCat. Elaborates on Overview.OVEAccidentType.

Variable Name: OVECrashCode

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No Impact
1	Right roadside departure, drive off road
2	Right roadside departure, control/traction loss
3	Right roadside departure; avoid collision with vehicle, pedestrian, animal
4	Right roadside departure, specific other
5	Specifics Unknown
6	Left roadside departure, drive off road
7	Left roadside departure, control/traction loss
8	Left roadside departure; avoid collision with vehicle, pedestrian, animal
9	Left roadside departure, specifics other
10	Specifics Unknown
11	Forward Impact, parked vehicle
12	Forward impact, stationary object
13	Forward Impact, pedestrian/animal
14	End Departure
15	Forward Impact, Specifics Other
16	Specifics Unknown
20	Rear-end: Stopped
21	Rear-end: Stopped, Straight
22	Rear-end: Stopped, Left

Variable Definitions and Codes - Overview Data Set

23	Rear-end: Stopped, Right
24	Rear-end: Slower
25	Slower, Going Straight
26	Rear-end: Slower, Going Left
27	Rear-end: Slower, Going Right
28	Rear-end: Decelerating (Slowing)
29	Rear-end: Decelerating (Slowing), Going Straight
30	Rear-end: Decelerating (Slowing), Going Left
31	Rear-end: Decelerating (Slowing), Going Right
32	Rear-end: Specifics Other
33	Rear-end: Specifics Unknown
34	Forward Impact: Control/Traction Loss
35	Forward Impact: Control/Traction Loss
36	Forward Impact: Control/Traction Loss
37	Forward Impact: Control/Traction Loss
38	Forward Impact: Avoid Collision with Vehicle.
39	Forward Impact: Avoid Collision with Vehicle
40	Forward Impact: Avoid Collision with Object
41	Forward Impact: Avoid Collision with Object
42	Forward Impact: Specifics Other
43	Forward Impact: Specifics Unknown
44	Sideswipe/Angle: Straight Ahead on Left
45	Sideswipe/Angle: Straight Ahead on Left/Right
46	Sideswipe/Angle: Changing Lanes to the Right
47	Sideswipe/Angle: Changing Lanes to the Left
48	Sideswipe/Angle: Specifics Other
49	Sideswipe/Angle: Specifics Unknown
50	Head-On: Lateral Move (Left/Right)
51	Head-On: Lateral Move (Going Straight)
52	Head-On: Specifics Other
53	Head-On: Specifics Unknown
54	Forward Impact: Control/Traction Loss
55	Forward Impact: Control/Traction Loss
56	Forward Impact: Control/Traction Loss
57	Forward Impact: Control/Traction Loss
58	Forward Impact: Avoid Collision with Vehicle
59	Forward Impact: Avoid Collision with Vehicle
60	Forward Impact: Avoid Collision with Object
61	Forward Impact: Avoid Collision with Object
62	Forward Impact: Specifics Other
63	Forward Impact: Specifics Unknown
64	Sideswipe/Angle: Lateral Move (Left/Right)
65	Sideswipe/Angle: Lateral Move (Going Straight)
66	Sideswipe/Angle: Specifics Other
67	Sideswipe/Angle: Specifics Unknown
68	Turn Across Path: Initial Opposite Directions (Left/Right)
69	Turn Across Path: Initial Opposite Directions (Going Straight)
70	Turn Across Path: Initial Same Directions (Turning Right)
71	Turn Across Path: Initial Same Directions (Going Straight)

Variable Definitions and Codes - Overview Data Set

72	Turn Across Path: Initial Same Directions (Turning Left)
73	Turn Across Path: Initial Same Directions (Going Straight)
74	Turn Across Path: Specifics Other
75	Turn Across Path: Specifics Unknown
76	Turn Into Same Direction (Turning Left)
77	Turn Into Same Direction (Going Straight)
78	Turn Into Same Direction (Turning Right)
79	Turn Into Same Direction (Going Straight)
80	Turn Into Opposite Directions (Turning Right)
81	Turn Into Opposite Directions (Going Straight)
82	Turn Into Opposite Directions (Turning Left)
83	Turn Into Opposite Directions (Going Straight)
84	Turn Into Path: Specifics Other
85	Turn Into Path: Specifics Unknown
86	Straight Paths: Striking from the Right
87	Straight Paths: Struck on the Right
88	Straight Paths: Striking from the Left
89	Straight Paths: Struck on the Left
90	Straight Paths: Specifics Other
91	Straight Paths: Specifics Unknown
92	Misc.: Backing Vehicle
93	Misc.: Other Vehicle or Object
98	Misc.: Other Crash Type
99	Misc.: Unknown Crash Type

Jackknife Occurrence

Definition: This variable indicates whether or not a jackknife occurred for this vehicle.

Source: Determined by Case Reviewer using all available information inputs. Primary sources include the scaled schematic, police report, driver interviews, witness interviews, and vehicle inspection results.

Cross Reference: Identical to CrashAssessment.ACRJackknife. Derived from JackknifeAssessments.AJKType.

Variable Name: OVEJackKnife

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Cargo Shift

Definition: This variable indicates whether or not a cargo shift occurred for this vehicle.

Source: Determined by Case Reviewer using all available information inputs. Primary sources include the scaled schematic, police report, driver interviews, witness interviews, and vehicle inspection results. Input from the truck inspection staff can also be utilized to code this variable.

Variable Definitions and Codes - Overview Data Set

Cross Reference: Identical to CrashAssessment.ACRCargoShift. Derived from CargoShiftAssessments.ACSType.

Variable Name: OVECargoShift

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Alcohol Involvement

Definition: This variable indicates whether or not there was any alcohol involvement for this vehicle/driver.

Source: Police report, medical report, other official records, OR the field observation of the NASS Researcher.

Cross Reference: Derived from DriverAssessment.AlcoholUse. Congruent with GeneralVehicle.PARAlcoholPresent, values will differ due to Police Report vs. Researcher determined values.

Variable Name: OVEAlcohol

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Drug Involvement

Definition: This variable indicates whether or not any illegal drugs were coded as present for this vehicle/driver.

Source: For illegal drugs: Police report, medical report, carrier records, or other official records. For over-the-counter and prescription drugs: The primary source of this information is the driver interview. The information, however, may also be obtained from other occupants in the vehicle and from surrogate interviews. When appropriate, official records including police reports and medical reports may also be used.

Cross Reference: Derived from DriverAssessment.DrugTest. Congruent with GeneralVehicle.PARDrugsPresent, values will differ due to Police Report vs. Researcher determined values.

Variable Name: AnyDrugsVeh

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Definitions and Codes - Overview Data Set

Driver Physical Factors

Definition: This variable indicates whether or not there were any other physical factors coded for this vehicle/driver.

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the driver interview, carrier records, medical records, and the police report. Secondary sources include other occupant interviews and surrogate interviews with family members/friends.

Cross Reference: Derived from the combination of the following variables from the DriverHealth data set: IllnessFactorCount, LegallyBlind, Myopic, Hyperopic, Glaucoma, ColorBlind, Astigmatic, OtherVision, and OtherFactorCount.

Variable Name: DriverPhysical

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Driver Fatigue

Definition: This variable indicates whether or not the driver in this vehicle was coded as being fatigued at the time of the crash.

Source: Determined by the Case Reviewer using all available information inputs. The primary data source here is the driver interview, however, due to the inaccuracies inherent in these data, the Case Reviewer should compare driver responses with other data sources including log book entries, time stamped fuel and toll receipts, carrier records, and other interview sources to determine the veracity of the driver responses. The final assessment of fatigue involvement is made from all of these sources and may include the on-site assessments of the NASS Researcher.

Cross Reference: Derived from DriverAssessment.Fatigue.

Variable Name: DriverFatigue

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Recognition Factors

Definition: This variable indicates whether or not any recognition-related factors were coded for this vehicle/driver.

Source: Determined by the Case Reviewer using all available information inputs. The primary data source is the driver interview; secondary data sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Variable Definitions and Codes - Overview Data Set

Cross Reference: Derived from the combination of the following variables from the DriverRecognitionDistraction data set: Inattention, Conversation, ADDRognition, InteriorDistractionCount, and ExteriorDistractionCount.

Variable Name: OVERecognition

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Decision Factors

Definition: This variable indicates whether or not any decision-related factors were coded for this vehicle/driver.

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the police report, the driver interview; interviews with witnesses, other vehicle occupants, and other drivers. Secondary sources include surrogate interviews with family members/friends.

Cross Reference: Derived from the combination of the following variables from the DriverDecisionAggression data set: Assumption, Evasion, ADAOtherFactor, and ManeuverCount.

Variable Name: OVEDecision

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Aggression Factors

Definition: This variable indicates whether or not any aggression factors were coded for this vehicle/driver.

Source: Determined by the Case Reviewer using all available information inputs. Primary data sources include the police report, the driver interview; interviews with witnesses, other vehicle occupants, and other drivers. Secondary sources include surrogate interviews with family members/friends.

Cross Reference: Derived from DriverDecisionAggression.AggressionCount.

Variable Name: Aggression

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Definitions and Codes - Overview Data Set

Surveillance Factors

Definition: This variable indicates whether or not any surveillance-related factors were coded for this vehicle/driver.

Source: Determined by the Case Reviewer using all available information inputs. The primary data source is the driver interview; secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Cross Reference: Derived from the combination of the following variables: DriverAssessment.SightLine, DriverAssessment.Obscured, DriverAssessment.Focused, and DriverRecognitionDistraction.ADDSurveillance.

Variable Name: OVESurveillance

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Emotion/Experience Factors

Definition: This variable indicates whether or not there were any emotional or experience-related factors coded for this vehicle/driver.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Cross Reference: Derived from the combination of the following variables from the DriverAssessment data set: Upset, Hurrying, Emotional, KnewVehicle, KnewRoad, WorkPressureCount, and ComfortCount.

Variable Name: EmotionExperience

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Carrier/Employer Factors

Definition: This variable indicates whether or not any carrier or employer factors were coded for this vehicle/driver.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview and the carrier interview. Secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Cross Reference: Derived from the combination of the following variables from the DriverAssessment data set: LoadPressure, WorkFatigueCount, and OtherPressureCount.

Variable Definitions and Codes - Overview Data Set

Variable Name: CarrierEmployer

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Traffic Factors

Definition: This variable indicates whether or not any traffic-related factors were coded for this vehicle/driver.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources are the driver interview, the police report, and the researcher on-scene investigation; secondary sources include interviews with other vehicle occupants, witnesses, other drivers, and surrogate interviews with family members/friends.

Cross Reference: Identical to the opposite of FactorAssessment.NoTraffic.

Variable Name: Traffic

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Vehicle Factors

Definition: This variable indicates whether or not any vehicle-related factors (deficiencies or malfunctions) were coded for this vehicle.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include vehicle inspection, the Level 1 inspection results, the police report, and the driver interview. Secondary data sources include the carrier interview, interviews with other vehicle occupants, witnesses, and other vehicle drivers.

Cross Reference: Derived from FactorAssessment.VehicleDefectCount.

Variable Name: VehicleState

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Roadway Factors

Definition: This variable indicates whether or not any roadway-related factors were coded for this vehicle/driver.

Variable Definitions and Codes - Overview Data Set

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the scaled schematic, scene measurement log, scene photographs, General Vehicle Form, and the police report. Secondary sources include the driver interviews and interviews with other vehicle occupants and witnesses.

Cross Reference: Derived from FactorAssessment.RoadwayFactorCount.

Variable Name: Roadway

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Weather Factors

Definition: This variable indicates whether or not any weather-related factors were coded for this vehicle/driver.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include the police report and local weather information provided by the NASS Researcher. Secondary data sources include driver interviews and interviews with other vehicle occupants, witnesses, and other drivers.

Cross Reference: Derived from FactorAssessment.WeatherCount.

Variable Name: Weather

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Environmental Factors

Definition: This variable indicates whether or not there were any environmental factors coded for this vehicle/driver.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher on-scene investigation, the police report, and the driver interview. Secondary data sources include interviews with other vehicle occupants, witnesses, and other drivers.

Cross Reference: Derived from FactorAssessment.EnvironmentCount.

Variable Name: OVEenvironment

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Definitions and Codes - Overview Data Set

Speed/Distance Factors

Definition: This variable indicates whether or not any speed-related or gap distance-related factors were coded for this vehicle/driver.

Source: Determined by the Case Reviewer using all available information inputs. Primary data source is the driver interview; secondary sources include interviews with other vehicle occupants, witnesses, other drivers, surrogate interviews with family members/friends, and the police report.

Cross Reference: Derived from the combination of the following variables from the DriverDecisionAggression data set: Speeding, Tailgating, and Misjudgment.

Variable Name: OVESpeed

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Nonmotorist Involvement

Definition: This variable indicates whether or not a nonmotorist was involved in an impact with this vehicle.

Source: Determined by the Case Reviewer using all available information inputs. The primary data sources include researcher on-scene investigation, the police report, and the driver interview; secondary sources include interviews with other vehicle occupants, witnesses, other drivers, and surrogate interviews with family members/friends.

Cross Reference: Can be derived from Crash.NonMotoristCount. Can be derived from NonMotorist data set.

Variable Name: NonMotorist

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present

Variable Definitions and Codes - PARViolations Data Set

PARViolations Data Set

The PARViolations data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID, VehicleNumber and PARViolationCode uniquely identify each record in this data set. CaseID and VehicleNumber should be used to merge the PARViolations data set with vehicle level data sets. This data set also contains the following variables:

Violations Charged As A Result Of This Crash

Definition: This variable indicates violation of the Vehicle Code as charged by the investigating officer and as noted on the police report.

Source: Researcher determined – primary source is the police report. Secondary sources include driver interviews and DMV records.

Variable Name: PARViolationCode

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	None
1	Manslaughter or homicide
2	Willful reckless driving, driving to endanger, negligent driving
3	Unsafe reckless (not willful, wanton reckless) driving
4	Inattentive, careless, improper driving
5	Fleeing or eluding police
6	Failure to obey police, fireman, authorized person directing traffic
7	Hit-and-run, failure to stop after accident
8	Failure to give aid, info, wait for police after accident
9	Serious violation resulting in death
11	Driving while intoxicated (alco/drug) or BAC above limit(any detect BAC for CDLs)
12	Driving while impaired
13	Driving while under influence of substance not intended to intoxicate
14	Drinking while operating
15	Illegal possession of alcohol or drugs
16	Driving with detectable alcohol
18	Refusal to submit to chemical test
19	Alcohol, drug or impairment violations, generally
21	Racing
22	Speeding (above the speed limit)
23	Speed greater than reasonable & prudent (not necessarily over the limit)
24	Exceeding special speed limit(e.g.:for trucks, buses, bridge, school zone, etc.)
25	Energy speed (exceeding 55 mph, non-pointable)
26	Driving too slowly
29	Speed related, violations, generally
31	Failure to stop for red signal
32	Failure to stop for flashing red
33	Violation of turn on red (failure to stop & yield to pedestrians before turning)
34	Failure to obey flashing signal (yellow or red)
35	Failure to obey signal, generally

Variable Definitions and Codes - PARViolations Data Set

36	Violate RR grade crossing device/regulations
37	Failure to obey stop sign
38	Failure to obey yield sign
39	Failure to obey traffic control device, generally
41	Turn in violation of traffic control (this is not a right-on-red violation)
42	Improper method & position of turn (too wide, wrong lane)
43	Failure to signal for turn or stop
45	Failure to yield to emergency vehicle
46	Failure to yield, generally
48	Enter intersection, when space insufficient
49	Turn, yield, signaling violations, generally
51	Driving wrong way on one-way road
52	Driving on left, wrong side of road, generally
53	Improper, unsafe passing
54	Pass on right (drive off pavement to pass)
55	Pass stopped school bus
56	Failure to give way when overtaken
58	Following too closely
59	Wrong side, passing, following violations, generally
61	Unsafe or prohibited lane change
62	Improper use of lane (center of 3-lane road, HOV designed lane)
63	Certain traffic to use right lane (trucks, slow-moving, etc.)
66	Motorcycle lane violation (more than two per lane, riding between lanes, etc.)
67	Motorcyclist attached to another vehicle
69	Lane violations, generally
71	Driving while license withdrawn (including violation of work permit)
72	Other driver license violations
73	Commercial driver violations (log book, hours, permits carried)
74	Vehicle registration violations
75	Failure to carry insurance card
76	Driving uninsured vehicle
79	Non-moving violations, generally
81	Lamp violations
82	Brake violations
83	Failure to require restraint use (by self or passengers)
84	Motorcycle equipment violations (helmet, special equipment)
85	Violation of hazardous cargo regulations
86	Size, weight, load violations
89	Equipment violations, generally
91	Parking
92	Theft, unauthorized use of motor vehicle
93	Driving where prohibited (sidewalk, limited access, off truck route)
98	Other moving violation (coasting, backing, opening door)
99	Unknown violation

Police Description Of Violation

Definition: This variable describes the violations charged to the driver as indicated on the police report.

Variable Definitions and Codes - PARViolations Data Set

Source: Police accident report.

Cross Reference: Congruent with IntvwDrCondition.IDVViolation, values will differ due to Interview vs. Police Report.

Variable Name: PARDescription

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Descriptive information about the violations charged on the police accident report

Variable Definitions and Codes - SaferAuthorityStatus Data Set

SaferAuthorityStatus Data Set

The SaferAuthorityStatus data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID and VehicleNumber uniquely identify each record in this data set and should be used to merge the SaferAuthorityStatus data set with vehicle level data sets. This data set also contains the following variables:

Source: The source for all variables in this table is the SAFER database. SAFER is developed, maintained and hosted by the John A. Volpe National Transportation Systems Center. SAFER uses carrier information from existing government motor carrier safety data bases. Presently, it consists of interstate carrier data and several states' intrastate data, and interstate vehicle registration data. For more information go to <http://safer.fmcsa.dot.gov/about.aspx>.

Common Status

Definition: This variable describes the standing of the common carrier certificate (operating authority).

Variable Name: CommonStatus

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Text

Contract Status

Definition: This variable describes the standing of the contract carrier permit (operating authority).

Variable Name: ContractStatus

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Text

Broker Status

Definition: This variable describes the standing of the broker license (operating authority).

Variable Name: BrokerStatus

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Text

Variable Definitions and Codes - SaferCarrier Data Set

SaferCarrier Data Set

The SaferCarrier data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID and VehicleNumber uniquely identify each record in this data set and should be used to merge the SaferCarrier data set with vehicle level data sets. This data set also contains the following variables:

Source: The source for all variables in this table is the SAFER database. SAFER is developed, maintained and hosted by the John A. Volpe National Transportation Systems Center. SAFER uses carrier information from existing government motor carrier safety data bases. Presently, it consists of interstate carrier data and several states' intrastate data, and interstate vehicle registration data. For more information go to <http://safer.fmcsa.dot.gov/about.aspx>.

Carrier Status

Definition: This variable describes the status of the carrier in MCMIS (Motor Carrier Management Information System).

Variable Name: Status

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Text

Authorized For-Hire

Definition: This variable indicates whether the carrier's type of business was Authorized For-Hire.

Cross Reference: Related to a combination of IntvwCarrier.CAICarrierType and IntvwCarrier.CAIStatus, values will differ in part due to Interview vs. SAFER values. Related to IntvwDrCondition.CarrierType, values will differ in part due to Interview vs. SAFER values.

Variable Name: AuthorizedForHire

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes

Exempt For-Hire

Definition: This variable indicates whether the carrier's type of business was Exempt For-Hire.

Cross Reference: Related to a combination of IntvwCarrier.CAICarrierType and IntvwCarrier.CAIStatus, values will differ in part due to Interview vs. SAFER values. Related to IntvwDrCondition.CarrierType, values will differ in part due to Interview vs. SAFER values.

Variable Name: ExemptForHire

Variable Definitions and Codes - SaferCarrier Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes

Private Property

Definition: This variable indicates whether the carrier's type of business was Private Property.

Cross Reference: Related to a combination of IntvwCarrier.CAICarrierType and IntvwCarrier.CAIStatus, values will differ in part due to Interview vs. SAFER values. Related to IntvwDrCondition.CarrierType, values will differ in part due to Interview vs. SAFER values.

Variable Name: PrivateProperty

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes

Private Passengers (Business)

Definition: This variable indicates whether the carrier's type of business was Private Passengers (Business).

Cross Reference: Related to a combination of IntvwCarrier.CAICarrierType and IntvwCarrier.CAIStatus, values will differ in part due to Interview vs. SAFER values. Related to IntvwDrCondition.CarrierType, values will differ in part due to Interview vs. SAFER values.

Variable Name: PrivatePassengersBusiness

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes

Private Passengers (Non-Business)

Definition: This variable indicates whether the carrier's type of business was Private Passengers (Non-Business).

Cross Reference: Related to a combination of IntvwCarrier.CAICarrierType and IntvwCarrier.CAIStatus, values will differ in part due to Interview vs. SAFER values. Related to IntvwDrCondition.CarrierType, values will differ in part due to Interview vs. SAFER values.

Variable Name: PrivatePassengersNonBusiness

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes

Variable Definitions and Codes - SaferCarrier Data Set

Migrant

Definition: This variable indicates whether the carrier's type of business was Migrant.

Cross Reference: Related to a combination of IntvwCarrier.CAICarrierType and IntvwCarrier.CAIStatus, values will differ in part due to Interview vs. SAFER values. Related to IntvwDrCondition.CarrierType, values will differ in part due to Interview vs. SAFER values.

Variable Name: Migrant

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes

U.S. Mail

Definition: This variable indicates whether the carrier's type of business was U.S. Mail.

Cross Reference: Related to a combination of IntvwCarrier.CAICarrierType and IntvwCarrier.CAIStatus, values will differ in part due to Interview vs. SAFER values. Related to IntvwDrCondition.CarrierType, values will differ in part due to Interview vs. SAFER values.

Variable Name: USMAIL

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes

Federal Government

Definition: This variable indicates whether the carrier's type of business was Federal Government.

Cross Reference: Related to a combination of IntvwCarrier.CAICarrierType and IntvwCarrier.CAIStatus, values will differ in part due to Interview vs. SAFER values. Related to IntvwDrCondition.CarrierType, values will differ in part due to Interview vs. SAFER values.

Variable Name: FederalGovernment

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes

State Government

Definition: This variable indicates whether the carrier's type of business was State Government.

Cross Reference: Related to a combination of IntvwCarrier.CAICarrierType and IntvwCarrier.CAIStatus, values will differ in part due to Interview vs. SAFER values. Related to IntvwDrCondition.CarrierType, values will differ in part due to Interview vs. SAFER values.

Variable Definitions and Codes - SaferCarrier Data Set

Variable Name: StateGovernment

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes

Local Government

Definition: This variable indicates whether the carrier's type of business was Local Government

Cross Reference: Related to a combination of IntvwCarrier.CAICarrierType and IntvwCarrier.CAIStatus, values will differ in part due to Interview vs. SAFER values. Related to IntvwDrCondition.CarrierType, values will differ in part due to Interview vs. SAFER values.

Variable Name: LocalGovernment

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes

Indian Tribe

Definition: This variable indicates whether the carrier's type of business was Indian Tribe.

Cross Reference: Related to a combination of IntvwCarrier.CAICarrierType and IntvwCarrier.CAIStatus, values will differ in part due to Interview vs. SAFER values. Related to IntvwDrCondition.CarrierType, values will differ in part due to Interview vs. SAFER values.

Variable Name: IndianTribe

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes

Other

Definition: This variable indicates whether the carrier's type of business was Other.

Cross Reference: Related to a combination of IntvwCarrier.CAICarrierType and IntvwCarrier.CAIStatus, values will differ in part due to Interview vs. SAFER values. Related to IntvwDrCondition.CarrierType, values will differ in part due to Interview vs. SAFER values.

Variable Name: Other

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes

Variable Definitions and Codes - SaferCarrier Data Set

Unknown

Definition: This variable indicates whether the carrier's type of business was Unknown.

Cross Reference: Related to a combination of IntvwCarrier.CAICarrierType and IntvwCarrier.CAIStatus, values will differ in part due to Interview vs. SAFER values. Related to IntvwDrCondition.CarrierType, values will differ in part due to Interview vs. SAFER values.

Variable Name: Unknown

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes

Carrier Operation Description

Definition: This variable describes the carrier's type of operation – it describes where the carrier is allowed to go (intrastate vs. interstate).

Cross Reference: Related to a combination of IntvwCarrier.CAIHazMat and IntvwCarrier.CAIStatus, values will differ in part due to Interview vs. SAFER values.

Variable Name: CarrierOperationDescription

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Text

Cargo Carried

Definition: This variable describes the specific type of cargo hauled by this carrier.

Variable Name: CargoCarried

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Text

Number Of Drivers

Definition: This variable documents the number of drivers employed by this carrier.

Cross Reference: Congruent with the sum of IntvwCarrier.FullTime and IntvwCarrier.PartTime, values will differ due to Interview vs. SAFER values.

Variable Name: CountDrivers

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value
999999999999	Unknown

Variable Definitions and Codes - SaferCarrier Data Set

Number Of Power Units

Definition: This variable documents the number of power units owned, trip-leased, and term-leased by this carrier.

Cross Reference: Congruent with the sum of IntvwCarrier.TruckOper and IntvwCarrier.TractorOper, values will differ due to Interview vs. SAFER values.

Variable Name: CountPowerUnits

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value

Mileage Year

Definition: This variable documents the calendar year on the carrier's MCS-150 form that represents the year in which the Carrier-Reported Mileage was obtained.

Variable Name: MileageYear

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value (year)
999999999999	Unknown

Carrier-Reported Mileage

Definition: This variable documents the carrier's total fleet mileage to the nearest 10,000 miles for the last calendar year, as reported by the carrier on the MCS-150 form.

Variable Name: Mileage

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value (miles)
999999999999	Unknown

Variable Definitions and Codes - SaferCrashSummary Data Set

SaferCrashSummary Data Set

The SaferCrashSummary data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID, VehicleNumber and SCSYear uniquely identify each record in this data set. CaseID and VehicleNumber should be used to merge the SaferCrashSummary data set with vehicle level data sets. This data set also contains the following variables:

Source: The source for all variables in this table is the SAFER database. SAFER is developed, maintained and hosted by the John A. Volpe National Transportation Systems Center. SAFER uses carrier information from existing government motor carrier safety data bases. Presently, it consists of interstate carrier data and several states' intrastate data, and interstate vehicle registration data. For more information go to <http://safer.fmcsa.dot.gov/about.aspx>.

Crash Year

Definition: This variable identifies the year from which the crash data is taken.

Variable Name: SCSYear

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value (year)

Number Of Fatalities

Definition: This variable documents the number of crashes that caused at least one fatality for this carrier in a particular year. This number includes both the carrier's driver(s) and occupants in any other involved vehicles.

Variable Name: SCSFatalities

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value

Number Of Injuries

Definition: This variable documents the number of crashes that caused at least one injury for this carrier in a particular year. This number includes both the carrier's driver(s) and occupants in any other involved vehicles.

Variable Name: SCSInjuries

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value

Number Of Towaways

Definition: This variable documents the number of crashes that caused at least one vehicle to be towed from the scene of a crash involving one of this carrier's vehicles in a particular year. This number includes both the carrier vehicle and any other involved vehicles.

Variable Definitions and Codes - SaferCrashSummary Data Set

Variable Name: SCSTowaway

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value

Variable Definitions and Codes - SaferDriverCrashReport Data Set

SaferDriverCrashReport Data Set

The SaferDriverCrashReport data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID and VehicleNumber should be used to merge the SaferDriverCrashReport data set with the SaferDriverInspection data set and vehicle level data sets. This data set also contains the following variables:

Source: The source for all variables in this table is the SAFER database. SAFER is developed, maintained and hosted by the John A. Volpe National Transportation Systems Center. SAFER uses carrier information from existing government motor carrier safety data bases. Presently, it consists of interstate carrier data and several states' intrastate data, and interstate vehicle registration data. For more information go to <http://safer.fmcsa.dot.gov/about.aspx>.

Date Of Crash

Definition: This variable identifies the date of a particular crash.

Variable Name: SCDDate

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Date (in YYYY-MM format)

Crash State

Definition: This variable identifies the State in which a particular crash occurred.

Variable Name: SCDDate

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Two-letter state abbreviation

Driver's Date Of Birth

Definition: This variable identifies the driver's year of birth for a particular crash.

Variable Name: SCDDateOfBirth

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual Value (year)

Number Of Fatalities

Definition: This variable documents the total number of fatalities as a result of a particular crash.

Variable Name: SCDFatalities

Variable Definitions and Codes - SaferDriverCrashReport Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value

Number Of Injuries

Definition: This variable documents the total number of persons injured as a result of a particular crash.

Variable Name: SCDInjuries

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value

Towaway?

Definition: This variable indicates whether or not a vehicle involved in a particular crash was towed away from the scene of the crash.

Variable Name: SCDTowaway

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes

Hazardous Material?

Definition: This variable indicates whether or not there was any hazardous material involved/released in the crash.

Variable Name: HazardousMaterial

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes

Collision Involving Animal (ANL)

Definition: This variable indicates whether or not the sequence of events in the crash included a collision with an animal.

Variable Name: ANL

Attribute Codes

<u>Code</u>	<u>Meaning</u>
ABS	Absent
ANL	Present

Variable Definitions and Codes - SaferDriverCrashReport Data Set

Collision Involving Pedal Cycle (BIK)

Definition: This variable indicates whether or not the sequence of events in the crash included a collision with a pedal cycle.

Variable Name: BIK

Attribute Codes

<u>Code</u>	<u>Meaning</u>
ABS	Absent
BIK	Present

Noncollision: Cargo Loss Or Shift (CGO)

Definition: This variable indicates whether or not the sequence of events in the crash included a noncollision event involving a cargo loss or shift.

Variable Name: CGO

Attribute Codes

<u>Code</u>	<u>Meaning</u>
ABS	Absent
CGO	Present

Noncollision: Failure (EQF)

Definition: This variable indicates whether or not the sequence of events in the crash included a noncollision event involving a vehicle failure (e.g. brake failure, blown tire, etc.).

Variable Name: EQF

Attribute Codes

<u>Code</u>	<u>Meaning</u>
ABS	Absent
EQF	Present

Noncollision: Explosion Or Fire (FIR)

Definition: This variable indicates whether or not the sequence of events in the crash included a noncollision event involving an explosion or fire.

Variable Name: FIR

Attribute Codes

<u>Code</u>	<u>Meaning</u>
ABS	Absent
FIR	Present

Variable Definitions and Codes - SaferDriverCrashReport Data Set

Collision Involving Fixed Object (FOB)

Definition: This variable indicates whether or not the sequence of events in the crash included a collision with a fixed object.

Variable Name: FOB

Attribute Codes

<u>Code</u>	<u>Meaning</u>
ABS	Absent
FOB	Present

Noncollision: Jackknife (JAK)

Definition: This variable indicates whether or not the sequence of events in the crash included a noncollision event involving a jackknife.

Variable Name: JAK

Attribute Codes

<u>Code</u>	<u>Meaning</u>
ABS	Absent
JAK	Present

Collision Involving Motor Vehicle In Transport (MVH)

Definition: This variable indicates whether or not the sequence of events in the crash included a collision with a motor vehicle in transport.

Variable Name: MVH

Attribute Codes

<u>Code</u>	<u>Meaning</u>
ABS	Absent
MVH	Present

Noncollision: Cross Median/Centerline (NCM)

Definition: This variable indicates whether or not the sequence of events in the crash included a noncollision event where the vehicle crossed the centerline or the median.

Variable Name: NCM

Attribute Codes

<u>Code</u>	<u>Meaning</u>
ABS	Absent
NCM	Present

Variable Definitions and Codes - SaferDriverCrashReport Data Set

Noncollision: Other (NCO)

Definition: This variable indicates whether or not the sequence of events in the crash included a noncollision event not described by the other Event variable choices.

Variable Name: NCO

Attribute Codes

<u>Code</u>	<u>Meaning</u>
ABS	Absent
NCO	Present

Noncollision: Ran Off Road (OFR)

Definition: This variable indicates whether or not the sequence of events in the crash included a noncollision event where the vehicle ran off the roadway.

Variable Name: OFR

Attribute Codes

<u>Code</u>	<u>Meaning</u>
ABS	Absent
OFR	Present

Collision Involving Other Moveable Object (OOB)

Definition: This variable indicates whether or not the sequence of events in the crash included a collision with an “other” moveable object.

Variable Name: OOB

Attribute Codes

<u>Code</u>	<u>Meaning</u>
ABS	Absent
OOB	Present

Other (OTH)

Definition: This variable indicates whether or not the sequence of events in the crash included an “other” type of collision.

Variable Name: OTH

Attribute Codes

<u>Code</u>	<u>Meaning</u>
ABS	Absent
OTH	Present

Variable Definitions and Codes - SaferDriverCrashReport Data Set

Noncollision: Overturn/Rollover (OVR)

Definition: This variable indicates whether or not the sequence of events in the crash included a noncollision event involving an overturn/rollover.

Variable Name: OVR

Attribute Codes

<u>Code</u>	<u>Meaning</u>
ABS	Absent
OVR	Present

Collision Involving Pedestrian (PED)

Definition: This variable indicates whether or not the sequence of events in the crash included a collision with a pedestrian.

Variable Name: PED

Attribute Codes

<u>Code</u>	<u>Meaning</u>
ABS	Absent
PED	Present

Collision Involving Parked Motor Vehicle (PVH)

Definition: This variable indicates whether or not the sequence of events in the crash included a collision with a parked motor vehicle.

Variable Name: PVH

Attribute Codes

<u>Code</u>	<u>Meaning</u>
ABS	Absent
PVH	Present

Collision: Downhill Runaway (RUN)

Definition: This variable indicates whether or not the sequence of events in the crash included a collision that involved a downhill runaway vehicle.

Variable Name: RUN

Attribute Codes

<u>Code</u>	<u>Meaning</u>
ABS	Absent
RUN	Present

Variable Definitions and Codes - SaferDriverCrashReport Data Set

Noncollision: Separation Of Unit (SEP)

Definition: This variable indicates whether or not the sequence of events in the crash included a noncollision event involving a separation of units.

Variable Name: SEP

Attribute Codes

<u>Code</u>	<u>Meaning</u>
ABS	Absent
SEP	Present

Collision Involving Train (TRN)

Definition: This variable indicates whether or not the sequence of events in the crash included a collision with a train.

Variable Name: TRN

Attribute Codes

<u>Code</u>	<u>Meaning</u>
ABS	Absent
TRN	Present

Collision Involving Unknown Moveable Object (UMO)

Definition: This variable indicates whether or not the sequence of events in the crash included a collision with an unknown moveable object.

Variable Name: UMO

Attribute Codes

<u>Code</u>	<u>Meaning</u>
ABS	Absent
UMO	Present

Noncollision: Unknown (UNK)

Definition: This variable indicates whether or not the sequence of events in the crash included a noncollision event of an unknown nature.

Variable Name: UNK

Attribute Codes

<u>Code</u>	<u>Meaning</u>
ABS	Absent
UNK	Present

Variable Definitions and Codes - SaferDriverCrashReport Data Set

Collision Involving Work Zone Maintenance Equipment (WZE)

Definition: This variable indicates whether or not the sequence of events in the crash included a collision with work zone maintenance equipment.

Variable Name: WZE

Attribute Codes

<u>Code</u>	<u>Meaning</u>
ABS	Absent
WZE	Present

Variable Definitions and Codes - SaferDriverInspection Data Set

SaferDriverInspection Data Set

The SaferDriverInspection data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID and VehicleNumber should be used to merge the SaferDriverInspection data set with vehicle level data sets. This data set also contains the following variables:

Source: The source for all variables in this table is the SAFER database. SAFER is developed, maintained and hosted by the John A. Volpe National Transportation Systems Center. SAFER uses carrier information from existing government motor carrier safety data bases. Presently, it consists of interstate carrier data and several states' intrastate data, and interstate vehicle registration data. For more information go to <http://safer.fmcsa.dot.gov/about.aspx>.

Level Code

Definition: This variable indicates the level of the inspection for a particular inspection.

Variable Name: LevelCode

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Full Inspection
2	Walk-Around
3	Driver-Only Inspection
4	Special Study

Inspection Date

Definition: This variable documents the date of a particular inspection.

Variable Name: SDIDate

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Date (in YYYY-MM format)

Inspection State

Definition: This variable documents the State in which a particular inspection took place.

Variable Name: SDIState

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Two-letter state abbreviation

Driver Date Of Birth

Definition: This variable documents the driver's year of birth as it relates to a particular inspection.

Variable Name: SDIDriverDOB

Variable Definitions and Codes - SaferDriverInspection Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value (year)

Total Number Of Violations

Definition: This variable indicates the total number of violations found during a particular inspection.

Variable Name: TotalViolations

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value

Total Number Of Out-Of-Service Violations

Definition: This variable indicates the total number of out-of-service violations found during a particular inspection.

Variable Name: TotalOOS

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value

HazMat?

Definition: This variable indicates whether or not a particular inspection involved hazardous materials.

Variable Name: HazMat

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes

Variable Definitions and Codes - SaferDriverViolation Data Set

SaferDriverViolation Data Set

The SaferDriverViolation data set contains the variables CaselID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaselID and VehicleNumber should be used to merge the SaferDriverViolation data set with the SaferDriverInspection data set and vehicle level data sets. This data set also contains the following variables:

Source: The source for all variables in this table is the SAFER database. SAFER is developed, maintained and hosted by the John A. Volpe National Transportation Systems Center. SAFER uses carrier information from existing government motor carrier safety data bases. Presently, it consists of interstate carrier data and several states' intrastate data, and interstate vehicle registration data. For more information go to <http://safer.fmcsa.dot.gov/about.aspx>.

Violation Type

Definition: This variable lists the different types of violations assigned to this particular driver within a particular time period.

Variable Name: SDVViolation

Attribute Codes

<u>Code</u>	<u>Meaning</u>
BRKADJ	Brakes, out of adjustment
BRKOTH	Brakes, all others
COUPLR	Coupling devices
EMREQP	Emergency equipment
EXHST	Exhaust discharge
FRAMES	Frames
FUEL	Fuel systems
HOTHR	All other hazmat violations
HPLCRD	Improper placarding
IMPTRN	Improper turn
LDSECR	Load securement
LIGHTS	Lighting
LOGVIO	Log book violation
OTHDRV	All other driver violations
OTHER	All other vehicle defects
PERINS	Periodic inspection
SIZWGT	Size and weight
STERNG	Steering mechanism
SUSPEN	Suspension
TIRES	Tires
UNKNOWN	Unknown
WHEELS	Wheels
WNSHDL	Windshield

Unit Number

Definition: This variable is an identifier used to distinguish individual units inspected.

Variable Name: UnitNumber

Variable Definitions and Codes - SaferDriverViolation Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value

Unit Type

Definition: This variable indicates the type of unit on which a particular inspection is conducted.

Variable Name: SDVUnitType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
FT	Full trailer
OT	Other
SB	School bus
ST	Semitrailer
TR	Straight truck
TT	Truck tractor

Number Of Out-Of-Service Violations

Definition: This variable documents the number of out-of-service violations for a particular driver within a particular time period.

Variable Name: SDVOutOfService

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes

Variable Definitions and Codes - SaferInspectionsSummary Data Set

SaferInspectionsSummary Data Set

The SaferInspectionsSummary data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID and VehicleNumber uniquely identify each record in this data set and should be used to merge the SaferInspectionsSummary data set with vehicle level data sets. This data set also contains the following variables:

Source: The source for all variables in this table is the SAFER database. SAFER is developed, maintained and hosted by the John A. Volpe National Transportation Systems Center. SAFER uses carrier information from existing government motor carrier safety data bases. Presently, it consists of interstate carrier data and several states' intrastate data, and interstate vehicle registration data. For more information go to <http://safer.fmcsa.dot.gov/about.aspx>.

Number Of Driver Inspections

Definition: This variable documents the total number of driver inspections for this carrier in the 24 months prior to the date of inquiry.

Variable Name: DriverInspections

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value

Number Of Driver Out-Of-Service Inspections

Definition: This variable documents the total number of driver out-of-service inspections where out-of-service violations were found for this carrier in the 24 months prior to the date of inquiry.

Variable Name: DriverOutOfService

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value

Driver Out-Of-Service Percentage

Definition: This variable documents the percentage of inspections that resulted in one or more driver out-of-service violations for this carrier in the 24 months prior to the date of inquiry.

Variable Name: DriverOutOfServicePerc

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value (percent)

Average Number Of Driver Out-Of-Service Violations

Definition: This variable documents the average number of driver out-of-service violations found per inspection for this carrier in the 24 months prior to the date of inquiry.

Variable Name: DriverViolationsAverage

Variable Definitions and Codes - SaferInspectionsSummary Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value
999999999999.0	Unknown

Number Of Vehicle Inspections

Definition: This variable documents the total number of vehicle inspections for this carrier in the 24 months prior to the date of inquiry.

Variable Name: VehicleInspections

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value

Number Of Vehicle Out-Of-Service Inspections

Definition: This variable documents the total number of vehicle out-of-service inspections where out-of-service violations were found for this carrier in the 24 months prior to the date of inquiry.

Variable Name: VehicleOutOfService

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value

Vehicle Out-Of-Service Percentage

Definition: This variable documents the percentage of inspections that resulted in one or more vehicle out-of-service violations for this carrier in the 24 months prior to the date of inquiry.

Variable Name: VehicleOutOfServicePerc

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value (percent)

Average Number Of Vehicle Out-Of Service Violations

Definition: This variable documents the average number of vehicle out-of-service violations found per inspection for this carrier in the 24 months prior to the date of inquiry.

Variable Name: VehicleViolationsAverage

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value

Variable Definitions and Codes - SaferInspectionsSummary Data Set

Number Of HazMat Inspections

Definition: This variable documents the total number of Hazmat inspections for this carrier in the 24 months prior to the date of inquiry.

Variable Name: HazMatInspections

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value

Number Of HazMat Out-Of-Service Inspections

Definition: This variable documents the total number of Hazmat out-of-service inspections where out-of-service violations were found for this carrier in the 24 months prior to the date of inquiry.

Variable Name: HazMatOutOfService

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value

HazMat Out-Of-Service Percentage

Definition: This variable documents the percentage of inspections that resulted in one or more Hazmat out-of-service violations for this carrier in the 24 months prior to the date of inquiry.

Variable Name: HazMatOutOfServicePerc

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value (percent)
99999.0	Unknown

Average Number Of HazMat Out-Of-Service Violations

Definition: This variable documents the average number of Hazmat out-of-service violations found per inspection for this carrier in the 24 months prior to the date of inquiry.

Variable Name: HazMatViolationsAverage

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value
999999999999.00	Unknown

Variable Definitions and Codes - SaferInspectionsSummary Data Set

Total Number Of Inspections

Definition: This variable documents the total number of inspections (any type) for this carrier in the 24 months prior to the date of inquiry. The Total Number Of Inspections may not reflect a simple addition of all the driver, vehicle, and Hazmat inspections because two or more of these types of violations may occur on the same inspection.

Variable Name: SISTotal

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value

Variable Definitions and Codes - SaferInsurance Data Set

SaferInsurance Data Set

The SaferInsurance data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID and VehicleNumber uniquely identify each record in this data set and should be used to merge the SaferInsurance data set with vehicle level data sets. This data set also contains the following variables:

Source: The source for all variables in this table is the SAFER database. SAFER is developed, maintained and hosted by the John A. Volpe National Transportation Systems Center. SAFER uses carrier information from existing government motor carrier safety data bases. Presently, it consists of interstate carrier data and several states' intrastate data, and interstate vehicle registration data. For more information go to <http://safer.fmcsa.dot.gov/about.aspx>.

Bodily Injury & Property Damage Insurance Required?

Definition: This variable documents whether or not the carrier is required to have Bodily Injury & Property Damage insurance coverage.

Variable Name: BIPDRequired

Attribute Codes

<u>Code</u>	<u>Meaning</u>
Y	Yes
N	No
N/A	Unknown

Bodily Injury & Property Damage Insurance Status

Definition: This variable documents whether or not the carrier has the required Bodily Injury & Property Damage insurance coverage.

Variable Name: BIPDOK

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Text
N/A	Unknown

Cargo Insurance Required

Definition: This variable documents whether or not the carrier is required to have cargo insurance coverage.

Variable Name: CargoRequired

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Text
N/A	Unknown

Variable Definitions and Codes - SaferInsurance Data Set

Cargo Insurance Status

Definition: This variable documents whether or not the carrier has cargo insurance coverage when required to have this type of coverage.

Variable Name: CargoOK

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Text
N/A	Unknown

Bond Required

Definition: This variable documents whether or not a \$10,000 surety bond is required for the broker's license (authority).

Variable Name: BondRequired

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Text
N/A	Unknown

Bond Status

Definition: This variable documents whether or not the surety bond was in place on the broker's license (authority).

Variable Name: BondOK

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Text
N/A	Unknown

Minimum Coverage Amount

Definition: This variable documents (in thousands of dollars) the minimum amount of liability insurance coverage that this carrier is required to have.

Variable Name: MinCoverageAmount

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value (thousand \$)
888888887.00	Unknown

Variable Definitions and Codes - SaferInsurance Data Set

Liability Insurance Amount

Definition: This variable documents the amount (in thousands of dollars) of the liability insurance coverage that this carrier has.

Variable Name: LiabilityInsurance

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value (thousand \$)
N/A	Unknown

Variable Definitions and Codes - SaferReview Data Set

SaferReview Data Set

The SaferReview data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID, VehicleNumber and ReviewDate uniquely identify each record in this data set. CaseID and VehicleNumber should be used to merge the SaferReview data set with vehicle level data sets. This data set also contains the following variables:

Source: The source for all variables in this table is the SAFER database. SAFER is developed, maintained and hosted by the John A. Volpe National Transportation Systems Center. SAFER uses carrier information from existing government motor carrier safety data bases. Presently, it consists of interstate carrier data and several states' intrastate data, and interstate vehicle registration data. For more information go to <http://safer.fmcsa.dot.gov/about.aspx>.

Rating Date

Definition: This variable documents the date that the current Federal safety rating was assigned to this carrier.

Variable Name: RatingDate

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Date (in YYYY-MM format)

Safety Rating

Definition: This variable documents the current Federal safety rating assigned to this carrier.

Variable Name: Rating

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Text
• 999999999	Unknown

Review Date

Definition: This variable documents the date that the most recent Safety/Compliance Review was performed on this carrier.

Variable Name: ReviewDate

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Date (in YYYY-MM format)

Review Type

Definition: This variable documents the type of review performed on this carrier.

Variable Name: ReviewType

Variable Definitions and Codes - SaferReview Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Text

Variable Definitions and Codes - SafeStat Data Set

SafeStat Data Set

The SafeStat data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID and VehicleNumber should be used to merge the SafeStat data set with other vehicle level data sets. This data set also contains the following variables:

Source: All data in this table may be found in the MCMIS database. Below are given descriptions of how to find the value of each variable in the MCMIS database by specifying each table and field in the format <TABLE>.<FIELD>.

SafeStat Score Date

Definition: This variable establishes the date that a particular SafeStat score was assigned to a carrier.

Source: Currently SafeStat is run once per month. The run date for a particular SafeStat run is given by SAFESTAT_RUN.SAFESTAT_RUN_DATE.

Variable Name: STADate

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Date (in YYYY-MM format)

Overall SafeStat Score

Definition: This variable documents the overall SafeStat Score, where SafeStat score = 2 x Accident SEA + 1.5 x Driver SEA + Vehicle SEA + Safety Management SEA.

Source: A carrier's SafeStat score may be found in SS_RESULTS_<YYYYMMDD>.SAFESTAT_SCORE, where <YYYYMMDD> gives the exact date of the SafeStat run.

Variable Name: Score

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value
999	Unknown

Accident Safety Evaluation Area (SEA)

Definition: This variable documents the SafeStat score for the Accident SEA category for this carrier.

Source: A carrier's Accident SEA is given by SS_RESULTS_<YYYYMMDD>.ACC_SEA.

Variable Name: AccidentSEA

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value

Variable Definitions and Codes - SafeStat Data Set

Driver Safety Evaluation Area (SEA)

Definition: This variable documents the SafeStat score for the Driver SEA category for this carrier.

Source: A carrier's Accident SEA is given by SS_RESULTS_<YYYYMMDD>.DRV_SEA.

Variable Name: DriverSEA

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value

Vehicle Safety Evaluation Area (SEA)

Definition: This variable documents the SafeStat score for the Vehicle SEA category for this carrier.

Source: A carrier's Accident SEA is given by SS_RESULTS_<YYYYMMDD>.VEH_SEA.

Variable Name: VehicleSEA

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value

Safety Management Safety Evaluation Area (SEA)

Definition: This variable documents the SafeStat score for the Safety Management SEA category for this carrier.

Source: A carrier's Accident SEA is given by SS_RESULTS_<YYYYMMDD>.MGT_SEA.

Variable Name: SafetySEA

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Actual value

SafeStat Category

Definition: This variable provides the letter code for the category indicator value calculated for this carrier.

Source: A carrier's SafeStat category is given by SS_RESULTS_<YYYYMMDD>.SAFESTAT_CATEGORY.

Variable Name: STACategory

Variable Definitions and Codes - SafeStat Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
A	≥ 350
B	$\geq 225 < 350$
C	< 225
D	Only ACSEA ≥ 75
E	Only DRSEA ≥ 75
F	Only VHSEA ≥ 75
G	Only SMSEA ≥ 75
H	At least one SEA value calculated and all SEA values < 75

Category Description

Definition: This variable describes the SafeStat indicator value calculated for this carrier.

Source: Category descriptions are standard. They are described in *SafeStat; Motor Carrier Safety Status Measurement System Methodology*.

Variable Name: CategoryDescription

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Text

Variable Definitions and Codes - TruckExterior Data Set

TruckExterior Data Set

The TruckExterior data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID and VehicleNumber uniquely identify each record in this data set and should be used to merge the TruckExterior data set with vehicle level data sets. This data set also contains the following variables:

Power Unit Type

Definition: This variable establishes the type of power unit involved in this crash.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include the police report.

Cross Reference: Derived from GeneralVehicle.GVEBodyType when applicable. Derived from Overview.OVEConfiguration when applicable. Derived from TruckExterior.TEXConfiguration.

Variable Name: PowerUnitType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Straight truck
2	Tractor
7	Not inspected
8	Other (specify)
9	Unknown

Cab Style

Definition: This variable establishes the cab style of the power unit involved in the crash.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include police or other vehicle photographs.

Variable Name: CabStyle

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Conventional
2	Cab-over-engine
3	Cab forward
7	Not inspected
8	Other (specify)
9	Unknown

Dromedary Box?

Definition: This variable establishes the presence of a dromedary box on the vehicle. A dromedary box is essentially a storage box that is typically mounted on the tractor chassis immediately rearward of the rear wall of the tractor cab. Access is typically located on the sides of the vehicle. These boxes are used to store tarps, tie-downs, tools, and the driver's personal gear. On occasion, dromedary boxes are utilized to haul cargo.

Variable Definitions and Codes - TruckExterior Data Set

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include police or other photographs.

Variable Name: DromedaryBox

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Yes
2	No
8	Not inspected
99	Unknown

Sleeper Berth?

Definition: This variable establishes the presence of a sleeper berth as an integral part of the cab structure.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include police or other vehicle photographs.

Variable Name: SleeperBerth

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Yes
2	No
8	Not inspected
9	Unknown

Were Blind Spots Related To Crash?

Definition: This variable establishes links between the vehicle's mirror system and crash causation.

Source: Researcher determined – primary source is the vehicle inspection in combination with the driver interview. Secondary sources include the police report and witness statements.

Variable Name: BlindSpot

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Yes (specify)
2	No
8	Not inspected
9	Unknown

Data Recorder Installed?

Definition: This variable establishes the presence of an engine control/data recorder unit.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include the inspection record and carrier records.

Variable Definitions and Codes - TruckExterior Data Set

Variable Name: DataRecorder

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	No
2	Yes (specify)
8	Not inspected
9	Unknown

Engine RPM

Definition: This variable establishes the engine RPM as obtained from the truck's data recorder.

Source: Researcher determined from inspection of truck's data recorder.

Variable Name: RPM

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-9994	Engine RPM
9995	EC/DR unit installed, no RPM recording capability
9996	EC/DR unit not installed
9997	Not inspected
9998	Unknown if EC/DR unit installed
9999	EC/DR unit installed, unknown RPMs

Vehicle Speed

Definition: This variable establishes the speed of the vehicle as indicated by information obtained from the truck's data recorder.

Source: Researcher determined from inspection of truck's data recorder.

Cross Reference: Congruent with DriverDecisionAggression.ADATravelSpeed, values will differ due to Police Report vs. Vehicle's data recorder. Congruent with GeneralVehicle.GVETravelSpeed, values will differ due to Police Report vs. Vehicle's data recorder.

Variable Name: TEXSpeed

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-994	Speed value
995	EC/DR unit installed, no speed recording capability
996	EC/DR unit not installed
997	Not inspected
998	Unknown if EC/DR unit installed
999	EC/DR unit installed, unknown speed

Variable Definitions and Codes - TruckExterior Data Set

Gear Position

Definition: This variable establishes the gear position of the truck as indicated by information obtained from the data recorder.

Source: Researcher determined from inspection of truck's data recorder.

Variable Name: GearPosition

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-9	Gear position
95	EC/DR unit installed, no gear position recording capability
96	EC/DR unit not installed
97	Not inspected
98	Unknown if EC/DR unit installed
99	EC/DR unit installed, unknown gear position

Total Number Of Trailers

Definition: This variable establishes the number of trailers that are included in the vehicle configuration.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include police or other vehicle photographs.

Cross Reference: Can be derived from Overview.OVEConfiguration when applicable. Can be derived from TruckExterior.TEXConfiguration. Can be derived from TruckUnits.TUNUnitType.

Variable Name: TrailerCount

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value
0	No trailer *and* power unit not straight truck
7	Straight truck with no trailers
8	Not inspected
9	Unknown number of trailers

Total Empty Weight

Definition: This variable establishes the combined total empty weight for all units in the truck configuration. The empty weight for each unit is specified by the unit's manufacturer.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include the Level 1 inspection report, carrier records and vehicle specification literature.

Cross Reference: Related to GeneralVehicle.GVECurbWeight, values will differ due to Curb Weight vs. Empty Weight. In conjunction with TruckExterior.CMDBCargoWeight greater than TruckExterior.TOTALGVWR relates to FactorAssessment.VehicleOverweight. Related to GeneralVehicle.BaseWeight, values will differ in part due to VIN vs. Researcher determined values.

Variable Definitions and Codes - TruckExterior Data Set

Variable Name: TEXEmptyWeight

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value (kgs)
777777	Not inspected
999999	Unknown

Total Cargo Weight

Definition: This variable establishes the total weight of all cargo in all trailers combined. This value represents payload cargo only, not the weight of the trailer, the driver, or the driver's personal effects.

Source: Researcher determined – primary source is vehicle inspection; secondary sources include company records, the driver interview, and the Level 1 inspection report.

Cross Reference: Related to GeneralVehicle.GVECargoWeight, values will differ due to GeneralVehicle.GVECargoWeight including the weight of any trailers where TruckExterior.CMDBCargoWeight only includes payload cargo weight. In conjunction with TruckExterior.TEXEmptyWeight greater than TruckExterior.TOTALGVWR relates to FactorAssessment.Overweight.

Variable Name: CMDBCargoWeight

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value (kgs)
777777	Not inspected
999999	Unknown

Total GVWR

Definition: This is the total combined gross vehicle weight rating for all units of the truck configuration. The GVWR is specified by the manufacturer and represents the sum of the weights each axle within a unit is designed to carry.

Source: Researcher determined – primary source is vehicle inspection; secondary sources include vehicle specification literature and the Level 1 inspection report.

Cross Reference: This being greater than the sum of TruckExterior.TEXEmptyWeight and TruckExterior.CMDBCargoWeight relates to FactorAssessment.Overweight.

Variable Name: TOTALGVWR

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value (kgs)
777777	Not inspected
888887	Not applicable
999999	Unknown

Variable Definitions and Codes - TruckExterior Data Set

Truck Configuration

Definition: This variable provides a summary of the configuration of the rig. Letter codes are “strung together” (listed from left to right) to represent the order of equipment in the rig. For example, a tractor pulling two trailers connected by an A-dolly would have a configuration of “TSAS”.

Source: Researcher determined – primary source is vehicle inspection; secondary sources include the Level 1 inspection report, driver interview, police report, and other vehicle photographs.

Cross Reference: Identical to Overview.OVEConfiguration when applicable. Elaborates on TruckExterior.PowerUnitType.

Variable Name: TEXConfiguration

Attribute Codes

<u>Code</u>	<u>Meaning</u>
R	Straight truck
T	Tractor
S	Semi-trailer
F	Full trailer
G	Gooseneck hitch
O	Other trailer (specify)
U	Unknown trailer type
A	A dolly
B	B train
C	C dolly
X	Unknown dolly
J	Jeep
P	Bus
I	Implement of husbandry
Not Insp	Not inspected

Total Length

Definition: This variable establishes the total length of the entire truck configuration. Due to overlapping vehicle connection points, the total length of the vehicle configuration will be less than the sum of the unit lengths.

Source: Researcher determined – primary source is vehicle inspection; secondary sources include measurements taken from undamaged vehicle configurations that match the crash-involved vehicles.

Variable Name: TEXTotalLength

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value (m)
77	Not inspected
99	Unknown

Variable Definitions and Codes - TruckExterior Data Set

Placard Required?

Definition: This variable establishes whether or not the trailer unit was placarded (i.e. had warning symbol on it), indicating the trailer was carrying hazardous cargo.

Source: Researcher determined – primary source is vehicle inspection; secondary sources include the Level 1 inspection report, the driver interview, and carrier records.

Cross Reference: Related to TruckUnits.Hazard. Related to HazMat data set.

Variable Name: PlacardRequired

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No placard required
1	Yes, placard required
8	Not inspected
9	Unknown

Mirror Count

Definition: This variable establishes the total number of mirrors on the truck configuration.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include the driver interview and on-scene vehicle photographs.

Variable Name: MirrorCount

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value
0	No mirror
7	Not inspected
9	Unknown mirror count

Right Door Mirror

Definition: This variable establishes whether or not the truck's power unit has an exterior mirror mounted on its right door. (This variable was originally an attribute choice under the variable "Exterior Mirror Location.")

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include the driver interview and on-scene vehicle photographs.

Variable Name: RightDoorMirror

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present
7	Not inspected
9	Unknown

Variable Definitions and Codes - TruckExterior Data Set

Left Door Mirror

Definition: This variable establishes whether or not the truck's power unit has an exterior mirror mounted on its left door. (This variable was originally an attribute choice under the variable "Exterior Mirror Location.")

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include the driver interview and on-scene vehicle photographs.

Variable Name: LeftDoorMirror

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present
7	Not inspected
9	Unknown

Right Fender Mirror

Definition: This variable establishes whether or not the truck's power unit has an exterior mirror mounted on its right fender. (This variable was originally an attribute choice under the variable "Exterior Mirror Location.")

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include the driver interview and on-scene vehicle photographs.

Variable Name: RightFenderMirror

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present
7	Not inspected
9	Unknown

Left Fender Mirror

Definition: This variable establishes whether or not the truck's power unit has an exterior mirror mounted on its left fender. (This variable was originally an attribute choice under the variable "Exterior Mirror Location.")

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include the driver interview and on-scene vehicle photographs.

Variable Name: LeftFenderMirror

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present
7	Not inspected
9	Unknown

Variable Definitions and Codes - TruckExterior Data Set

Other Location Mirror

Definition: This variable establishes whether or not the truck's power unit has an exterior mirror mounted on locations other than its doors or fenders. (This variable was originally an attribute choice under the variable "Exterior Mirror Location" and was the "Other (specify):" attribute choice.)

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include the driver interview and on-scene vehicle photographs.

Variable Name: OtherLocationMirror

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present
7	Not inspected
9	Unknown

ITS Equipment Count

Definition: This variable establishes the total number of ITS equipment on the truck.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include police or other vehicle photographs.

Variable Name: ITSCount

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value
0	No ITS equipment
7	Not inspected
9	Unknown

Headway Detection Unit

Definition: This variable establishes whether or not a headway detection unit is installed in the cab of the vehicle and is functional. These units are intended to assist the driver in avoiding rear-end crashes. While several operational modes are in active use, all of these units measure the gap distance to a vehicle/object located forward of the driver's position. When the gap distance diminishes to a pre-selected unacceptable level, the unit issues an auditory alert to the driver. (This variable was originally an attribute choice under the variable "ITS Equipment Installed.")

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include police or other vehicle photographs.

Variable Name: ITSHeadway

Variable Definitions and Codes - TruckExterior Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present
7	Not inspected

Side/Object Detection Unit

Definition: This variable establishes whether or not a side/object detection unit is installed in the cab of the vehicle and is functional. These units are intended to assist the driver in avoiding side impacts as a result of intruding into adjacent lanes or as a result of other vehicle's intruding into the truck lanes. These units are also useful with respect to avoiding obstacles while backing. While several operational modes are in active use, all of these units typically issue alerts when clearances to the sides of the vehicle diminish to unacceptable levels. (This variable was originally an attribute choice under the variable "ITS Equipment Installed.")

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include police or other vehicle photographs.

Variable Name: ITSSideObject

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present
7	Not inspected

Rollover Warning Unit

Definition: This variable establishes whether or not a rollover warning unit is installed in the cab of the vehicle and is functional. While several operational modes are in active use, these devices typically measure lateral acceleration and issue an alert to the driver when these forces rise to a level that may create an unstable condition. (This variable was originally an attribute choice under the variable "ITS Equipment Installed.")

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include police or other vehicle photographs.

Variable Name: ITSRollover

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present
7	Not inspected

Variable Definitions and Codes - TruckExterior Data Set

Other ITS Equipment

Definition: This variable establishes whether or not other ITS equipment (other than headway detection units, side/object detection units, and rollover warning units) is installed in the cab of the vehicle and is functional. (This variable was originally an attribute choice under the variable "ITS Equipment Installed" and was the "Other (specify):" attribute choice.)

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include police or other vehicle photographs.

Variable Name: ITSOther

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Absent
1	Present
7	Not inspected

Variable Definitions and Codes - TruckInspection Data Set

TruckInspection Data Set

The TruckInspection data set contains the variables CaselD, PSU, PSUStrat, RATWeight, and VehicleNumber. CaselD, VehicleNumber, TINPosition and TINViolationCode uniquely identify each record in this data set. CaselD and VehicleNumber should be used to merge the TruckInspection data set with the TruckExterior data set and other vehicle level data sets. CaselD, VehicleNumber and TINPosition should be used to merge the TruckInspections data set with the TruckUnits data set. This data set also contains the following variables:

Source: The source for all variables in this table is the Level 1 inspection report.

Unit Position

Definition: This variable indicates which unit in the truck configuration received a specific violation, based on its position in the truck's configuration.

Variable Name: TINPosition

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1-4	Unit Position
9	Unknown

Violation Code

Definition: This variable indicates the numerical violation code as it corresponds to a specific violation. These codes are found in the Federal Motor Carrier Safety Regulations "Code of Federal Regulations, Title 49."

Cross Reference: Related to HazMatInsp.HMIViolation, if there is a hazardous material violation.

Variable Name: TINViolationCode

Attribute Codes

<u>Code</u>	<u>Meaning</u>
107.620B	No copy of US DOT HM registration number
13901	Operating w/o proper motor carrier authority
13902C4B	Operating beyond geographical restrictions
13906	Oper w/o proper insurance or other securities
171.11D	US requirements for ICAO shipment
171.12AB	US requirements for TDG shipment
171.12B	US requirements for IMDG shipment
171.2A	Failure to comply with HM regulations
171.2B	Failed to comply with exemption
171.5A1I	Fail to deter if dischrge system is leak free
171.5A1III	Unload w/o prompt activation of internl valve
171.5A1V	Fail to displ emerg operat proced for transf
171.5A1VI	Fail to provide training for oper under 171.5
171.5B	Fail to mark cargo tank used under 171.5
172.200A	No shipping paper provided offeror
172.201A1	HM not distinguished from non HM

Variable Definitions and Codes - TruckInspection Data Set

172.201A2	HM description not printed legibly in english
172.201A3	HM description contains abbreviation or code
172.201A4	Additional information after hm basic desc
172.201C	Failure to list page of pages
172.201D	ER phone number not listed
172.202A1	No proper shipping name
172.202A2	No proper hazard class
172.202A3	Wrong or no id number
172.202A4	No packing group listed
172.202A5	Total quantity not listed
172.202B	Description not in proper sequence
172.202C	Total quantity proper location
172.202E	Non HM entered with class or ID#
172.203A	Exemption number not listed
172.203B	Limited quantity not shown
172.203C1	Hazardous substance entry missing
172.203C2	RQ not on shipping paper
172.203D1	Radioactive material not noted
172.203D10	No exclusive use notation
172.203D11	No ISA-SCO notation
172.203D2	Radionuclide name not on shipping paper
172.203D3	No ram physical or chemical form
172.203D4	No ram activity
172.203D5	No ram label category
172.203D6	No ram transport index
172.203D7	No fissile radioactive entry
172.203D8	No DOE/NRC package approval
172.203D9	IAEA authority noted
172.203E	No empty packaging noted
172.203H1	No qt/nqt for anhydrous ammonia
172.203H2	No qt/nqt for lpg
172.203K	No technical name for nos entry
172.203M1	Poison or toxic with subsid hazard
172.203M2	No tech name 6.1 pg i or ii or 2.3
172.203M3	No poison inhalation hazard and/or zone A
172.203N	No "hot" on shipping paper
172.203O	No temp controls noted 4.1 and 5.2
172.205	Hazardous waste manifest not as required
172.301A	No shipping name or ID# on non-bulk
172.301B	No technical name on non-bulk
172.301C	No exemption number on non-bulk
172.301D	No consignee/consignor on non-bulk
172.302	Marking requirements bulk packagings
172.302A	No ID# (portable and cargo tank)
172.302B	Bulk package marking incorrect size
172.302C	No exemption number on bulk package
172.303A	Prohibited HM marking on package
172.304A1	Package marking not durable, english or print
172.304A2	Marking not on sharply contrasting color

Variable Definitions and Codes - TruckInspection Data Set

172.304A3	Marking obscured by label or attachments
172.304A4	Marking not away from other marking
172.308A	Package marked with unauthorized abbreviation
172.310A	No gross weight on RAM package >50KG
172.310A1	No gross weight on RAM package >159 kg
172.310A2	RAM package not marked "type A or B"
172.310A3	No "USA" marking when required
172.310B	RAM package not marked "Type A or B"
172.310C	Type B,B(U),B(M) pkg not mrkd w/radiation sym
172.312A	No package orientation arrows
172.312B	Prohibited use of orientation arrows
172.313A	No "inhalation hazard" on package
172.313B	No "poison" on non-bulk plastic package
172.316A	ORM non-bulk package not marked
172.320A	Class 1 package not marked with ex-number
172.322B	No marpol marking on bulk packaging
172.324	Non-bulk hazardous substance not marked
172.325	No "hot" marking for bulk elevated temp
172.325A	Elevated temp not marked "Hot"
172.325B	Improperly marked molten alum/sulphur
172.326A	Port tank no proper shipping name or ID#
172.326B	No port tank owner or lessee marking
172.326C1	No ID# marking on veh carrying portable tank
172.326C2	Shipper failed to provide ID# to carrier
172.328A	Shipper failed to provide or affix ID# for ct
172.328B	Cargo tank not marked for class 2
172.328C	No qt/nqt marked on cargo tank (mc330/331)
172.330A2	Tank car tank (non cylinder) not mrkd as reqd
172.330B	Vehicle with tank car tank not marked
172.331	Markings for other bulk packages
172.332	ID# marking for (b) panel (c) placards
172.334	Prohibited id number marking
172.338	Carrier failed to replace missing ID number
172.400A	Package/containment not labeled as required
172.401	Prohibited labeling
172.402A	No label for subsidiary hazard
172.402B	Display of class number on label
172.402D	Subsidiary labeling for ram
172.402E	subsidiary labeling for class 1 materials
172.403A	RAM label requirement
172.403F	RAM package 2 labels on opposite sides
172.403G	Failed to label RAM properly
172.404A	Mixed package not properly labeled
172.404B	Failed to properly label consolidated package
172.406A1	Label placement not as required
172.406C	Multiple label placement not as required
172.406D	Label not on contrasting bkgnd or no border
172.406E	Failed to display duplicate label as required
172.406F	Label obscured by marking or attachment

Variable Definitions and Codes - TruckInspection Data Set

172.502A1	Prohibited placarding
172.502A2	Sign/device could be confused with HM placard
172.504A	Vehicle not placarded as required
172.504B	Dangerous placard violation
172.505A	No placard for poison inhalation hazard
172.505B	No placard for RAM and corrosive
172.505C	Placard for subsidiary dangerous when wet
172.506A	Failed to provide placards shipper
172.506A1	Placards not affixed to vehicle
172.507	RAM highway route controlled quantity
172.512A	Freight container not placarded
172.514A	Bulk package offered without placard
172.514B	Bulk package not placarded residue of hm
172.516A	Placard not visible from direction it faces
172.516C1	Placard not securely affixed or attached
172.516C2	Placard not clear of appurtenance
172.516C4	Placard improper location
172.516C5	Placard not reading horizontally
172.516C6	Placard damaged, deteriorated, or obscured
172.516C7	Placard not on contrasting bckgrnd or border
172.519	Placard does not meet specifications
172.600C	ER info not available
172.602A	ER info missing
172.602B	ER info not accessible
172.602C1	Maintenance of ER information
172.700	Training of HM employees
173.24AA1	Non-bulk inner packaging closure
173.24AA3	Non-bulk packaging securing and cushioning
173.24AB	Non-bulk package filling limit
173.24AC	Non-bulk package mixed contents requirements
173.24B	Filed to meet general package requirements
173.24B1	Release of HM from package
173.24BA	Bulk package outage or filling limit rqmts
173.24BD2	Exceed max weight of rating on spec plate
173.24C	Unauthorized packaging
173.24F1	Closures for pkgs must not be open or leaking
173.25A	Failed to meet overpack conditions
173.29A	Transporting empty packages (residue)
173.30	Loading/unloading transport vehicles
173.315A	Cargo or portable tank class 2, filling denst
173.315B	Filling density butadiene or LPG
173.315J3	Residential gas tank not secure in transport
173.315J4	LPG storage tank overfilled for transport
173.318B10	Marking inlets and outlets cryogenic tanks
173.318G	No one way travel time (owtt)
173.31D	Retesting for multiunit tank car tanks
173.32BA	IM portable tank periodic testing
173.32BD	Test date marking
173.32CG1	IM101/102 outlet closures

Variable Definitions and Codes - TruckInspection Data Set

173.32CG2	IM101/102 outlet closures
173.32E1	Portable tank retest schedule (out of date)
173.32E3	Portable tank retest marking
173.33A	Cargo tank general requirements
173.33B	Cargo tank loading requirements
173.33C2	Cargo tank not marked with design or mawp
173.34A	Cylinder qualification and use
173.34C	Cylinder markings
173.34E	Cylinder retest and marking
173.35A	Intermediate bulk container requirements
173.35D	liquid filled ibc-ullage over 98%
173.35F2	IBC not secured to or within vehicle
173.40	General requirements poisons in cylinder
173.412	Gen type a failing to meet addtl req design
173.412B	No seal for type a RAM package
173.427AIV	No instructions for exclusive use pkg LSA
173.427AVI	LSA package not marked as required
173.431	Exceeded activity limits type A or B package
173.441A	Exceeding radiation LVL allowed for transport
173.441B	Exceeding radiation level for exclusive use
173.441C	No exclusive use instructions
173.447	RAM transport storage violation
173.448	General RAM transport requirements
173.54	Forbidden explosives, offering or transportng
173.60	General packaging requirements explosives
173.9B	Failed to warn of fumigated load
177.804	Failed to comply with FMCSR
177.816	Driver training requirements
177.817A	No shipping papers (carrier)
177.817B	Shipper certification missing (when required)
177.817E	Shipping paper accessibility
177.823A	No placards/markings when required
177.834A	Package not secure in vehicle
177.834C	Smoking while loading or unloading
177.834G	Failed to prevent relative motion
177.834I	Attendance of cargo tank (load or unload)
177.834J	Manholes and valves not closed or leak free
177.834M1	Securing spec 106a or 110a tanks
177.834N	Improper spec 56, 57, im101 and im102
177.835	Improper transport of explosives (class 1)
177.838	Improper transport of class 4, 5 or div 4.2
177.839	Improper transporting of class 8
177.840	Improper transport of class 2
177.840G	Discharge valve not closed in transit class 2
177.841	Improper transort of division 6.1 or 2.3
177.841E	Poison label loaded with foodstuffs
177.842A	Total TI exceeds 50 non-exclusive use
177.842B	Distance from package to person RAM
177.842D	Blocking and bracing of RAM packages

Variable Definitions and Codes - TruckInspection Data Set

177.848D	Prohibited load/transport/storage combination
177.848F	Class 1 load separation or segregation
178.245-4	DOT51 integrity and securement
178.245-5	DOT51 valve protection
178.245-6	DOT51 ID plate
178.245-6B	DOT51 spec markings
178.251	Gen dsign/const DOT56(178.252) DOT57(178.253
178.251-4	DOT 56/57 integrity and securement
178.251-7	DOT 56/57 ID plate
178.251-7B	DOT56/57 spec markings
178.253-2	DOT57 manhole
178.253-3	DOT57 valve protection
178.253-4	DOT57 pressure relief
178.255-11	DOT60 integrity and securement
178.255-14	DOT60 ID plate
178.255-4	DOT60 manhole
178.255-7	DOT60 valve protection
178.255-8	DOT60 pressure relief
178.270-1	IM101/102 general design
178.270-11D1	IM101/102 pressure relief
178.270-14	IM101/102 spec plate
178.270-4	IM101/102 frames
178.270-6	IM 101/102 frames
178.270-8	IM101/102 valve protection
178.270-9	IM101/102 manholes
178.32CM	IM101/102 load securement
178.336-10	Protecting of fittings MC330
178.336-13	Anchoring of tank MC330
178.336-17	Metal ID plate marking MC330
178.336-17A	Certification plate MC330
178.336-9A	Safety relief devices MC330
178.336-9C	Marking of inlets/outlets MC330
178.337-10A	Protection of fittings MC331
178.337-10D	Rear end protection MC331
178.337-11A2	Internal valve MC331
178.337-11A2I	Remote control >3500 gal MC331
178.337-11A2II	Remote control <3500 gal MC331
178.337-11B	Shut off valves MC331
178.337-13	MC331 supports and anchoring
178.337-17A	Metal id plate missing MC331
178.337-8A2	Outlets MC331
178.337-9	Pressure relief devices MC331
178.337-9C	Marking inlets/outlets MC331
178.338-10A	Protection of fittings MC338
178.338-10C	Rear end protection MC338
178.338-10E	Ground clearance MC338
178.338-11B	Manual shutoff valve MC338
178.338-11C	Internal valve MC338
178.338-11C1	Remote control >3500 gal MC338

Variable Definitions and Codes - TruckInspection Data Set

178.338-11C2	Remote control <3500 gal MC338
178.338-12	Shear section MC338
178.338-13	Supports and anchoring MC338
178.338-18A	Name plate missing MC338
178.338-18B	Specification plate missing MC338
178.338-6	Manhole MC338
178.338-8	Pressure relief devices MC338
178.340-10B	MC306/307/312 metal certificatn plate missing
178.340-6	MC306/307/312 supports and anchoring
178.340-7A	MC306/307/312 ring stiffeners
178.340-7C	MC306/307/312 double bulkhead drain
178.340-7D2	MC306/307/312 ring stiffener drain hole
178.340-8A	MC306/307/312 appurtenances attachment
178.340-8B	MC306/307/312 rearend protection
178.340-8C	MC306/307/312 overturn protection
178.340-8D1	MC306/307/312 piping protection
178.340-8D2	MC306/307/312 minimum road clearance
178.341-3A	MC 306 no manhole closure
178.341-4	MC306 venting
178.341-4D1	MC306 inadequate emergency venting
178.341-4D2	MC 306 pressure activated vents
178.341-4D3	MC 306 no fusible venting
178.341-5A	MC306 internal valves
178.341-5A1	MC306 heat actuated safety
178.341-5A2	MC306 remote control shutoff
178.342-3	MC307 manhole closure
178.342-4	MC307 venting
178.342-5A	MC307 internal valve
178.342-5A1	MC307 heat actuated safety
178.342-5A2	MC307 remote control shutoff
178.343-3	Manhole closure MC312
178.343-4	Venting MC312 (show calculations)
178.343-5A	MC 312 top outlet and valve
178.343-5B1	MC312 bottom valve/piping protection
178.345-10	DOT406/407/412 pressure relief
178.345-11B	DOT406/407/412 tank valves
178.345-11B1I	DOT406/407/412 remote control
178.345-11B1II	DOT406/407/412 thermal and remote
178.345-14B	DOT406/407/412 name plate
178.345-14C	DOT406/407/412 specification plate
178.345-112	406, 407, 412 double bulkhead drain
178.345-5D	DOT406/407/412 manhole securement
178.345-5E	DOT 406/407/412 manhole marking
178.345-6	DOT406/407/412 supports and anchoring
178.345-7D4	DOT406/407/412 ring stiffener drain
178.345-8A	DOT406/407/412 accident protection
178.345-8A5	DOT406/407/412 minimum road clearance
178.345-8B	DOT406/407/412 bottom damage protection
178.345-8C	DOT406/407/412 rollover damage protection

Variable Definitions and Codes - TruckInspection Data Set

178.345-8D	DOT406/407/412 rear end protection
178.703A	IBC manufacturer markings
178.703B	IBC additional markings
178.704E	IBC protection valves
178.800C6	IBC test dates
179.300-12	DOT106/110aw protection of fittings
179.300-13	DOT106/110aw venting and valves
179.300-15	DOT106/110aw safety relief devices
179.300-18	DOT106/110aw stamping of tanks
180.352B	IBC retest or inspection
180.352D	IBC retest date marking
180.405B	Cargo tank specifications
180.405J	Cargo tank withdrawal certification
180.407C	Cargo tank periodic test and inspection
180.415B	Cargo tank test or inspection markings
383.21A	Operating a CMV with more than 1 drv license
383.23A2	Operating a CMV without a CDL
383.23C	Operating on learner's permit w/o CDL holder
383.23C1	Operating on learner's permit w/o CDL holder
383.23C2	Oper on learner's permit w/o valid drv lic
383.51A	Driving a CMV (CDL) while disqualified
383.91A	Operating a CMV with improper CDL group
383.93B1	No double/triple trailer endorsement on CDL
383.93B2	No passenger vehicle endorsement on CDL
383.93B3	No tank vehicle endorsement on CDL
383.93B4	No hazardous materials endorsement on CDL
383.95A	Violating airbrake restriction
387.301A	No evidence of public liab and prop dmg insur
387.301B	No evidence of cargo insurance
387.303B4	No copy of certificate of registration
387.307	Prop brkr-no evdn of bond or trust fund agrm
387.31F	No proof of financial resp-foreign passenger
387.403A	Freight forwarder-no evidence of insurance
387.403B	Frt fwdrd-no evdnce of pub liab and prop dmg ins
387.7F	No proof of financial responsibility-foreign
390.21A	No DOT # marking and/or name/city/state
390.21B	Carrier name and/or USDOT reqd; Not displayed
390.21C	Improper marking, size, shape
390.21E	Improper marking, rented CMV
391.11	Driver qualification
391.11B1	Interstate driver under 21 years of age
391.11B2	Non-english speaking driver
391.11B4	Oper com veh w/o corr lenses or hearing aid
391.11B5	Not licensed for type vehicle being operated
391.11B6	Operating CMV without corrective lenses
391.11B7	No or invalid driver's license CMV
391.15A	Driving a CMV while disqualified
391.41A	No medical certificate on driver's possession
391.43E	Improper medical exam form

Variable Definitions and Codes - TruckInspection Data Set

391.43G	Improper medical examiner's certificate
391.45B	Expired medical examiner's certificate
391.49J	No valid medical waiver in driver's possessn
392.10A1	Failing to stop at railroad crossing-bus
392.10A2	Failing to stop at railroad crossing-chlorin
392.10A3	Failing to stop at railroad crossing-placard
392.10A4	Failing to stop at railroad crossing-HM cargo
392.14	Failed to use caution for hazardous condition
392.15A	Failing or improper use of turn signal
392.15B	Failed to signal direction from parked positn
392.15C	Failing to signal a lane change
392.15D	Using turn signal to indicate disabled vehicl
392.15E	Using turn signal as a "do pass"
392.16	Failing to use seat belt while operating CMV
392.2	Local laws (general)
392.20	Failing to properly secure parked vehicle
392.22A	Failing to use hazard warning flashers
392.22B	Failing/improper placement of warning devices
392.2C	Local laws/failure to obey traff cntl device
392.2FC	Local law/following too close
392.2LC	Local law/improper lane change
392.2P	Local law/improper passing
392.2R	Local law/reckless driving
392.2S	Local law/speeding
392.2T	Local laws/improper turns
392.2W	Local laws/size and weight
392.2Y	Local laws/failure to yield right of way
392.3	Operating a CMV while ill/fatigued
392.33	Operating CMV with lamps/reflectors obscured
392.4A	Driver uses or is in possession of drugs
392.5A	Poss/use/under inflnce alcohol-4hrs prio duty
392.5C2	Violating OOS order pursuant to 392.5(a)/(b)
392.6	Scheduling run to necessitate speeding
392.60A	Unauthorized passenger on board CMV
392.63	Pushing/towing a loaded bus
392.7	No pretrip inspection
392.71A	Using or equipping a CMV with radar detector
392.8	Failing to inspect/use emergency equipment
392.9	Driver load secure
392.9A	Failing to secure load
392.9A1	Failing to secure cargo/393.100-393.106
392.9A2	Failing to secure vehicle equipment
392.9A3	Driver's view/movement is obstructed
392.9AAR	Operating without registration (49 USC 13902)
392.9AAS	Operating beyond registration scope (49 USC 13902)
392.9B	Hearing aid not worn while operating CMV
393.100	No or improper load securement
393.100A	No or improper load securement
393.100E	Improper securement of intermodal containers

Variable Definitions and Codes - TruckInspection Data Set

393.102	Improper securement system (tiedown assembls)
393.102A	Improper securement syst (tiedown assemblies)
393.104A	Improper blocking and/or bracing-longitudinal
393.104B	Improper blocking and/or bracing-lateral
393.106A	No/improper front end structure/headerboard
393.11	No/defective lighting devices/ref/projected
393.11LR	Lwr rr retroreflect sht/reflx reflect mfg>12/93
393.11N	No retroreflect sheet/reflex mfg > 12/93
393.11RT	Retroreflect not affixed as req Trl.mfg>12/93
393.11S	Side retroreflect sht/reflx reflect mfg>12/93
393.11TL	TT lwr rr mud flaps retro sht/reflex mfg>7/97
393.11TT	TT no retroreflect sht/reflx reflect mfg>7/97
393.11TU	TT upr body corners retro sht/reflex mfg>7/97
393.11UR	Up rr retroreflect sht/reflx reflect mfg>12/93
393.13A	No retroreflect sht/reflex reflect mfg <12/93
393.13B	No retroreflect sht/reflex reflect mfg >12/93
393.13C1	Side retroreflect sht/reflx reflect mfg<12/93
393.13C2	Lwr retroreflect sht/reflex reflect mfg<12/93
393.13C3	Up rr retroreflect sht/reflx reflect mfg<12/93
393.13D1	Side retroreflect sht/reflx reflect mfg>11/93
393.13D2	Lwr rr retroreflect sht/reflx reflect mfg>11/93
393.13D3	Up rr retroreflect sht/reflx reflect mfg>11/93
393.17	No/defective lamp/reflector-towaway operation
393.17A	No/defective lamps-towing unit-towaway oper
393.17B	No/defective side marker
393.19	No/defective turn/hazard lamp as required
393.20	No/improper mounting of clearance lamps
393.201A	Frame cracked/broken/bent/loose
393.201B	Bolts securing cab broken/loose/missing
393.201C	Frame rail flange improperly bent/cut/notched
393.201D	Frame accessories not bolted/riveted securely
393.201E	Prohibited holes drilled in frame rail flange
393.203	Cab/body parts requirements violations
393.203A	Cab door missing/broken
393.203B	Cab/body improperly secured to frame
393.203C	Hood not securely fastened
393.203D	Cab seats not securely mounted
393.203E	Cab front bumper missing/unsecured/protrude
393.205A	Wheel/rim cracked or broken
393.205B	Stud/bolt holes elongated on wheels
393.205C	Wheel fasteners loose and/or missing
393.207A	Axle positioning parts defective/missing
393.207B	Adj axle locking pin missing/disengaged
393.207C	Leaf spring assembly defective/missing
393.207D	Coil spring cracked and/or broken
393.207E	Torsion bar cracked and/or broken
393.207F	Air suspension pressure loss
393.209A	Steering wheel not secured/broken
393.209B	Excessive steering wheel lash

Variable Definitions and Codes - TruckInspection Data Set

393.209C	Loose steering column
393.209D	Steering system components worn/welded/missng
393.209E	Power steering violations
393.24B	Non-compliance with headlamp requirements
393.25B	Lamps are not visible as required
393.25E	Lamp not steady burning
393.25F	Stop lamp violations
393.26	Requirements for reflectors
393.28	Improper or no wiring protection as required
393.30	Improper battery installation
393.32	Improper electrical connections
393.33	Improper wiring installations
393.40	Inadequate brake system on a CMV
393.41	No or defective parking brake system on CMV
393.42	No brakes as required
393.43	No/improper breakaway or emergency braking
393.43A	No/improper tractor protection valve
393.43D	No or defective automatic trailer brake
393.44	No/defective bus front brake line protection
393.45	Brake tubing and hose adequacy
393.45A4	Brake hose/tubing chaffing and/or kinking
393.45A5	Brake hose/tubing contacting exhaust system
393.46	Brake hose/tube connection
393.46B	Brake connections with leaks/constrictions
393.47	Inadequate brake lining for safe stopping
393.48A	Inoperative/defective brakes
393.48B1	Defective brake limiting device
393.50	Inadequate reservoir for air/vacuum brakes
393.50A	Failing to have sufficient air/vacuum reserve
393.50B	Failing to equip veh-prevent res air/vac leak
393.50C	No means to ensure operable check valve
393.51	No or defective brake warning device
393.53A	Auto brake adjuster cmv mfg >10/19/93 hyd brk
393.53B	Auto brake adjuster cmv mfg >10/19/94 air brk
393.53C	Brake adj ind cmv mfg >10/19/94 ext auto adj
393.55A	ABS all cmvs mfg >2/99 with hydraulic brakes
393.55B	ABS malfunction indicators for hydr brake sys
393.55C1	ABS all tractors mfg >2/97 air brake system
393.55C2	ABS all other cmvs mfg >2/98 air brake system
393.55D1	ABS malf circ/signl mfg>2/97,sgl cmv mfg>2/98
393.55D2	ABS malf indctr to cab of towing cmv mfg>2/01
393.55D3	ABS malf indctr conec from towed cmv mfg>2/01
393.55E	ABS malfunct lamps towed cmv mfg>2/98mfg<2/09
393.60B	Damaged or discolored windshield
393.60C	Use of vision reducing matter on windows
393.60D	Glazing permits < 70% of light
393.61A	Inadequate or missing truck side windows
393.61B	Buses-window escape inoperative/obstructed
393.61B2	No or defective bus emergency exits

Variable Definitions and Codes - TruckInspection Data Set

393.61C	Buses-push out window requirements violation
393.62	Window obstructed which would hinder escape
393.63	No or inadequate bus escape window markings
393.65	Fuel system requirements
393.65B	Improper location of fuel system
393.65C	Improper securement of fuel tank
393.65F	Improper fuel line protection
393.67	Fuel tank requirement violations
393.67C7	Fuel tank fill pipe cap missing
393.67C8	Improper fuel tank safety vent
393.70	Fifth wheel
393.70A	Defective coupling device-improper tracking
393.70B	Defective/improper fifth wheel assemblies
393.70B2	Defective fifth wheel locking mechanism
393.70C	Defective coupling devices for full trailer
393.70D	No/improper safety chains/cables for full trl
393.71	Improper coupling driveaway/towaway operation
393.71H	Towbar requirement violations
393.71H10	No/improper safety chains/cables for towbar
393.75A	Flat tire or fabric exposed
393.75A1	Tire-ply or belt material exposed
393.75A2	Tire-tread and/or sidewall separation
393.75A3	Tire-flat and/or audible air leak
393.75A4	Tire-cut exposing ply and/or belt material
393.75B	Tire-front tread depth less than 4/32 of inch
393.75C	Tire-other tread depth less than 2/32 of inch
393.75D	Tire-bus regrooved/recap on front wheel
393.75E	Tire-regrooved on front of truck/truck-trac
393.75F	Tire-load weight rating/under inflated
393.75F1	Weight carried exceeds tire load limit
393.75F2	Tire under-inflated
393.76	Sleeper berth requirement violations
393.77	Defective and/or prohibited heaters
393.77B11	Bus heater fuel tank location
393.77B5	Tampering with bus heater
393.78	Windshield wipers inoperative/defective
393.79	Defroster inoperative
393.80	No or defective rear-vision mirror
393.81	Horn inoperative
393.82	Speedometer inoperative
393.83A	Exhaust system location
393.83B	Exhaust discharge fuel tank/filler tube
393.83C	Improper exhaust-bus (gasoline)
393.83D	Improper exhaust-bus (diesel)
393.83E	Improper exhaust discharge (not rear of cab)
393.83F	Improper exhaust system repair (patch/wrap)
393.83G	Exhaust leak under truck cab and/or sleeper
393.83H	Exhaust system not securely fastened
393.84	Inadequate floor condition

Variable Definitions and Codes - TruckInspection Data Set

393.86	No or improper rearend protection
393.86A1	Rear Impct Grds all tlr/semitlr mfg>1/26/98
393.86A2	Impct grd width all tlr/semitlr mfg>1/26/98
393.86A3	Impct grd hght all tlr/semitlr mfg>1/26/98
393.86A4	Impct grd rear all tlr/semitlr mfg>1/26/98
393.86A5	Crs-sec vert ht all tlr/semitlr mfg>1/26/98
393.86B1	Rear Impact Grds mv mfg >12/31/52 see excepts
393.87	No flag on projecting load
393.88	Improperly located tv receiver
393.89	Bus driveshaft not properly protected
393.9	Inoperable lamp (other than head/tail)
393.90	Bus-no or obscure standee line
393.91	Bus-improper aisle seats
393.92	Bus-no/improper emergency door marking
393.93A	Bus-not equipped with seat belt
393.93B	Truck not equipped with seat belt
393.95A	No/discharged/unsecured fire extinguisher
393.95C	Spare fuses not as required
393.95F	Emergency warning devices not as required
393.95G	HM-restricted emergency warning device
393.9H	Inoperable head lamps
393.9T	Inoperable tail lamp
395.13D	Driving after being declared out-of-service
395.15B	Onboard rcdng devc info requirements not met
395.15C	Onboard rcdng devc improper form and manner
395.15F	Onboard rcdng devc fails to reconstruct info
395.15G	On-board recording device info not available
395.15I5	Onboard rcdng devc doesn't display req. info
395.111	15,20,70/80 hours of service violations (AK)
395.112	Adverse driving conditions violations (AK)
395.3A1	10 hour rule violation
395.3A2	15 hour rule violation
395.3B	60/70 hour rule violation
395.8	Log violation (general/form and manner)
395.8A	No drivers record of duty status
395.8E	False report of drivers record of duty status
395.8F1	Drivers record of duty status not current
395.8K2	Driver failing to retain previous 7 days logs
396.1	Must have knowledge of and comply with regs
396.11	Driver vehicle inspection report
396.13C	No reviewing driver's signature on DVIR
396.17C	Operating a CMV without periodic inspection
396.3A	Inspection, repair, and maintenance
396.3A1	Inspection/repair and maintenance
396.3A1B	Brakes (general)
396.3A1BA	Brake-out of adjustment
396.3A1BC	Brake-air compressor violation
396.3A1BD	Brake-defective brake drum
396.3A1BL	Brake-reserve system pressure loss

Variable Definitions and Codes - TruckInspection Data Set

396.3A1T	Tires (general)
396.5	Excessive oil leaks
396.5B	Oil and/or grease leak
396.7	Unsafe operations forbidden
396.9C2	Operating an out-of-service vehicle
396.9D2	Failure to correct defects noted on insp
396.9D3	Failure to return insp rpt within 15 days
397.101B	RAM vehicle not on preferred route
397.101D	No written route plan - RAM
397.101E2	Copy of training record/route (RAM)
397.11A	Hazmat vehicle operated near open fire
397.11B	Hazmat vehicle parked within 300 ft. of fire
397.13	Smoking within 25 ft of HM vehicle
397.15	HM vehicle fueling violation
397.17	No tire examine hazmat vehicle
397.19	No instructions/docs 1.1/1.2/1.3
397.19C	Required documents not in possession-explosiv
397.1B	Driver/carrier must obey part 397
397.2	Must comply w/ rules Parts 390-397-transp HM
397.3	State/local laws ordinances regulations
397.5A	Unattended explosives 1.1/1.2/1.3
397.5C	Unattended hazmat vehicle
397.67	HM vehicle routing violation (non RAM)
397.7A	Improperly parked explosives vehicle
397.7B	Improperly parked hazmat vehicle
398.3B	Driver qualif-migrant workers
398.3B8	No doctor's certificate in possession
398.4	Driving of veh-migrant workers
398.5	Parts/access-migrant workers
398.6	Violation of hours of service reg-migrant
398.7	Inspect/maint mv-migrant workers
399.207	Vehicle access requirements violations
399.211	Inadequate maintenance of driver access

Violation Type

Definition: This variable indicates if a violation was in effect prior to the crash, or if the violation was a result of the crash.

Variable Name: ViolationType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Pre-Crash
2	Crash Related
3	No
999	Unknown

Variable Definitions and Codes - TruckInspection Data Set

Out Of Service Violation?

Definition: This variable indicates whether or not a specific violation was classified as “out-of-service.”

Cross Reference: Related to HazMatInsp.HMIOutOfService, if there is a hazardous material violation.

Variable Name: TINOutOfService

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Yes
2	No
9	Unknown

Disposition Of Truck

Definition: This variable establishes the disposition of the truck as indicated by violations found during the FMCSA truck inspection.

Cross Reference: Related to HazMatInsp.HMIDisposition, if there is a hazardous material inspection.

Variable Name: TINDisposition

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Repaired at scene
2	Towed/Escorted
3	Other (specify)
8	Not applicable
9	Unknown

TruckUnits Data Set

The TruckUnits data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID, VehicleNumber and TUNPosition uniquely identify each record in this data set. CaseID and VehicleNumber should be used to merge the TruckUnits data set with the TruckExterior data set and other vehicle level data sets. CaseID, VehicleNumber and TUNPosition should be used to merge the TruckUnits data set with the TruckInspections data set. This data set also contains the following variables:

Unit Position In Vehicle Configuration

Definition: This variable identifies the position of a particular unit within the vehicle configuration. Position "1" should identify a straight truck or a power unit in a multiple combination, with each trailer then assigned the next number as it moves away from the power unit.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include police or other vehicle photographs, and the Level 1 inspection report.

Variable Name: TUNPosition

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1- 4	Value
9	Unknown

Unit Type In Vehicle Configuration

Definition: This variable describes the unit type for each unit in the vehicle configuration.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include police or other vehicle photographs, and the Level 1 inspection report.

Cross Reference: Related to TruckExterior.TrailerCount.

Variable Name: TUNUnitType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Semi
2	Full
3	Power unit
6	Not inspected
7	Not applicable (includes no trailer)
8	Other (specify)
9	Unknown

Trailer Body Type

Definition: This variable establishes the type of trailer unit/cargo body identified within the vehicle configuration. If the vehicle is a straight truck, this designation is also used to describe the body type of the straight truck (e.g. cement mixer).

Variable Definitions and Codes - TruckUnits Data Set

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include police or other vehicle photographs.

Cross Reference: Related to GeneralVehicle.GVEBodyType and GeneralVehicle.GVEVehicleClass.

Variable Name: TUNBodyType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Van
2	Open top van
3	Refrigerated van
4	Livestock carrier
5	Flatbed
6	Low boy
7	Flatbed with equipment
8	Flatbed with sides
9	Pole/logging
10	Tank-liquid
11	Tank-compressed gas
12	Tank-dry bulk
13	Auto carrier
14	Dump
15	Bottom dump/hopper bottom
16	Garbage/refuse
17	Cement mixer
18	Other (specify)
77	Not applicable (includes tractor power unit)
88	Not inspected
99	Unknown

Cargo Type

Definition: This variable establishes the type of cargo carried in each unit of the vehicle configuration. A tractor power unit is normally classified with the “Not applicable” designation since these units typically do not carry cargo. For the unusual circumstance where a tractor power unit is carrying cargo, either the “Tractor power unit with container cargo” or “Tractor power unit with other bulk cargo (specify):” designations are used as appropriate.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include company records and the driver interview.

Variable Name: CargoType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Empty
1	General freight
2	Household goods
3	Building materials
4	Metal (coil, sheets)

Variable Definitions and Codes - TruckUnits Data Set

5	Heavy machinery
6	Large objects
7	Motor vehicles
8	Piggyback/tow-away
9	Gases in bulk
10	Solids in bulk
11	Liquids in bulk
12	Explosives
13	Logs, poles, lumber
14	Refrigerated foods
15	Mobile home
16	Farm products
17	Live animals
18	Other (specify):
75	Tractor power unit with container cargo
76	Tractor power unit with other bulk cargo (specify):
77	Not applicable
88	Not inspected
99	Unknown

Unit VIN

Definition: This variable establishes the Vehicle Identification Number (VIN) for each unit in the vehicle configuration.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include the police report and the Level 1 inspection report.

Cross Reference: Identical to GeneralVehicle.GVEVIN when TruckUnits.TUNPosition=1 when applicable.

Variable Name: TUNVIN

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value
9999999999	Unknown

Manufacture Date

Definition: This variable establishes the month and year in which each unit in the vehicle configuration was manufactured.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include carrier records.

Cross Reference: Related to GeneralVehicle.GVEYear. Related to Overview.OVEYear. Related to GeneralVehicle.VINYear.

Variable Name: ManufactureDate

Variable Definitions and Codes - TruckUnits Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Manufacture date (in MM/YY format)
88/88	Not inspected
99/99	Unknown

Empty Weight Of Unit

Definition: This variable establishes the empty weight for each unit of the vehicle configuration. This value represents the empty weight of each unit as specified by the unit's manufacturer.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include vehicle specification literature.

Cross Reference: Related to GeneralVehicle.GVECurbWeight, values will differ due to Curb Weight vs. Empty Weight. Related to FactorAssessment.VehicleOverweight by the sum of TruckUnits.TUNEmptyWeight over each vehicle added to the sum of TruckUnits.TUNCargoWeight over each vehicle being greater than the sum of TruckUnits.GVWR over each vehicle. Related to GeneralVehicle.BaseWeight, values will differ in part due to VIN vs. Researcher determined values.

Variable Name: TUNEmptyWeight

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value (kgs)
888888	Not inspected
999999	Unknown

Cargo Weight Of Unit

Definition: This variable establishes the weight of the cargo transported in each unit of the vehicle configuration. This value represents the payload associated with each unit of the vehicle combination. Payload is the total weight of the unit and cargo minus the weight of the unit before the cargo is loaded. Payload does not include miscellaneous items in the cab or dromedary box of power units or other items such as chains and tie downs. However, in rare situations cargo may be carried in the dromedary box.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include company records and the driver interview.

Cross Reference: Related to GeneralVehicle.GVECargoWeight, values will differ due to GeneralVehicle.GVECargoWeight including the weight of any trailers where TruckUnits.TUNCargoWeight only includes payload cargo weight. Related to FactorAssessment.VehicleOverweight by the sum of TruckUnits.TUNEmptyWeight over each vehicle added to the sum of TruckUnits.TUNCargoWeight over each vehicle being greater than the sum of TruckUnits.GVWR over each vehicle.

Variable Name: TUNCargoWeight

Variable Definitions and Codes - TruckUnits Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value (kgs)
888887	Not applicable
888888	Not inspected
999999	Unknown

GVWR

Definition: This variable establishes the Gross Vehicle Weight Rating (GVWR) for each unit of the vehicle configuration. The GVWR is specified by the manufacturer and represents the sum of the weights each axle within a unit is designed to carry.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include vehicle specification literature.

Cross Reference: Related to FactorAssessment.VehicleOverweight by the sum of TruckUnits.TUNEmptyWeight over each vehicle added to the sum of TruckUnits.TUNCargoWeight over each vehicle being greater than the sum of TruckUnits.GVWR over each vehicle.

Variable Name: GVWR

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value (kgs)
888887	Not available
888888	Not inspected
999999	Unknown

Total Length Of Unit

Definition: This variable establishes the length of each unit of the vehicle's configuration. Unit lengths are established by measuring from the furthest forward projection to the furthest rearward projection.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include measurements taken from undamaged vehicle configurations which match the crash-involved vehicle.

Variable Name: TUNTotalLength

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value (m)
7777	Not inspected
9999	Unknown

Variable Definitions and Codes - TruckUnits Data Set

Percent Of Cargo Capacity

Definition: This variable establishes the proportion of available cargo space that is used to transport cargo in each unit of the vehicle configuration. The reported percentages are subjective estimates of the total available space that is used.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include company records and the driver interview.

Variable Name: CapacityPercent

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value (percent)
777	Not inspected
888	Not applicable
999	Unknown

Tank Capacity

Definition: This variable is used with tankers (liquid loads) and establishes the total capacity of that particular tank.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include company records and the driver interview.

Variable Name: TankCapacity

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value (liters)
88888	Not inspected
99999	Unknown

Tank Load

Definition: This variable is used with tankers (liquid load) and establishes the total load being carried in that particular tank at the time of the crash.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include company records and the driver interview.

Variable Name: TankLoad

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value (liters)
88888	Not inspected
99999	Unknown

Variable Definitions and Codes - TruckUnits Data Set

Hazardous Cargo?

Definition: This variable establishes the presence of hazardous cargo in each unit of the vehicle configuration. A cargo is hazardous if it is corrosive, explosive, flammable, or radioactive. This includes all petroleum products except motor oil in cans and finished plastics. If the cargo was required by law to be placarded (i.e. warning symbol), it should be classified as hazardous.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include company records and the driver interview.

Cross Reference: Relates to TruckExterior.PlacardRequired. Relates to HazMat data set.

Variable Name: Hazard

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Yes
2	No
7	Not applicable (includes tractor power unit)
8	Not inspected
9	Unknown

Cargo Spillage

Definition: This variable establishes the occurrence of cargo spillage during the crash sequence. To qualify, the cargo spillage must occur as a result of or following the first harmful event. Spillage of fuel from the involved vehicles and the scattering of debris from the crash are not considered cargo spillage. Similarly, cargo spillage that occurs prior to the first harmful event (i.e. pre-crash phase) is not considered applicable to this variable.

Source: Researcher determined – primary source is the vehicle and scene inspection; secondary sources include the police report and the driver interview.

Variable Name: TUNSpillage

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No spillage
1	Non-hazardous spillage
2	Hazardous spillage
7	Not applicable (includes tractor power unit)
8	Not inspected
9	Unknown

Number Of Axles In Use

Definition: This variable establishes the number of axles in use for each unit of the vehicle configuration. This number does not include lift axles that are up and therefore, not in use at the time of the crash.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include police or other vehicle photographs.

Variable Definitions and Codes - TruckUnits Data Set

Variable Name: AxlesUsed

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value
7	Not inspected
9	Unknown

Number Of Lift Axles (Not In Use)

Definition: This variable establishes the number of axles that were lifted and not in use at the time of the crash. The number of lift axles is reported for each unit of the vehicle configuration.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include police or other vehicle photographs.

Variable Name: AxlesNotUsed

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value
777	Not inspected
888	Not applicable
999	Unknown

Number Of Steer Axles

Definition: This variable establishes the number of steer axles (including self-aligning steer axles) on each unit within the configuration. For most articulated vehicles on U.S. trafficways, there will typically be one steer axle within the configuration (i.e. the front steer axle of the tractor unit). Within those configurations that utilize a C-dolly however, there can be self-aligning axles on the C-dolly.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include police or other vehicle photographs.

Variable Name: SteerableAxles

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value
777	Not inspected
888	Not applicable
999	Unknown

Retroflective Tape Condition On Rear

Definition: This variable establishes the condition of the tape on the rear of each trailer/cargo body. For this variable, tape condition factors are limited to visibility issues (e.g. clean/dirty).

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include the driver interview and on-scene vehicle photographs.

Variable Definitions and Codes - TruckUnits Data Set

Cross Reference: In conjunction with the following variables from TruckUnits: SideTapeCond, UnderrideTapePeel, RearTapePeel, and SideTapePeel, related to FactorAssessment.ReflectiveTapeMissingObscured.

Variable Name: RearTapeCond

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No tape
1	Clean
2	Some dirt
3	Very dirty
7	Not applicable
8	Not inspected
9	Unknown

Retroflective Tape Condition On Sides

Definition: This variable establishes the condition of the tape on the sides of each trailer/cargo body. For this variable, tape condition factors are limited to visibility issues (e.g. clean/dirty).

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include the driver interview and on-scene vehicle photographs.

Cross Reference: In conjunction with the following variables from TruckUnits: RearTapeCond, UnderrideTapePeel, RearTapePeel, and SideTapePeel, related to FactorAssessment.ReflectiveTapeMissingObscured.

Variable Name: SideTapeCond

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No tape
1	Clean
2	Some dirt
3	Very dirty
7	Not applicable
8	Not inspected
9	Unknown

Retroflective Tape Used?

Definition: This variable establishes the use/presence of retroflective tape to improve truck conspicuity. It should be noted that the first unit in the vehicle configuration for this variable is designated as the power unit cargo body. This designation refers to the cargo body of a straight truck. If the power unit is a tractor, the “Not applicable” designation would typically be used.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include the driver interview and on-scene vehicle photographs.

Variable Name: ReflectTapeType

Variable Definitions and Codes - TruckUnits Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes
7	Not applicable
8	Not inspected
9	Unknown

Retroflective Tape Pattern

Definition: This variable establishes the pattern of tape markings that are present.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include the driver interview and on-scene vehicle photographs.

Variable Name: ReflectTapePattern

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No tape
1	Side/rear per FMVSS 108 or similar
6	Not inspected
7	Not applicable
8	Other pattern (specify):
9	Unknown

Retroflective Tape Color

Definition: This variable establishes the color of tape markings that are present.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include the driver interview and on-scene vehicle photographs.

Variable Name: ReflectTapeColor

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No tape
1	Red/white per FMVSS 108
6	Not inspected
7	Not applicable
8	Other color (specify):
9	Unknown

Retroflective Tape Peeling/Damaged On Rear Underride Guard

Definition: This variable establishes the proportion of tape on the rear underride guard that is peeling or damaged.

Variable Definitions and Codes - TruckUnits Data Set

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include the driver interview and on-scene vehicle photographs.

Cross Reference: In conjunction with the following variables from TruckUnits: RearTapeCond, SideTapeCond, RearTapePeel, and SideTapePeel, related to FactorAssessment.ReflectiveTapeMissingObscured.

Variable Name: UnderrideTapePeel

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value (percent)
666	No tape
777	Not inspected
888	Not applicable
999	Unknown

Retroflective Tape Peeling/Damaged On Other Rear Area

Definition: This variable establishes the proportion of the tape on the rear area of each unit (excluding the underride guard) that is peeling or damaged.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include the driver interview and on-scene vehicle photographs.

Cross Reference: In conjunction with the following variables from TruckUnits: RearTapeCond, SideTapeCond, UnderrideTapePeel, and SideTapePeel, related to FactorAssessment.ReflectiveTapeMissingObscured.

Variable Name: RearTapePeel

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value
666	No tape
777	Not inspected
888	Not applicable
999	Unknown

Retroflective Tape Peeling/Damaged On Sides

Definition: This variable establishes the proportion of the tape on the sides of the trailer that is peeling or damaged.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include the driver interview and on-scene vehicle photographs.

Cross Reference: In conjunction with the following variables from TruckUnits: RearTapeCond, SideTapeCond, UnderrideTapePeel, and RearTapePeel, related to FactorAssessment.ReflectiveTapeMissingObscured.

Variable Name: SideTapePeel

Variable Definitions and Codes - TruckUnits Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Value (percent)
666	No tape
777	Not inspected
888	Not applicable
999	Unknown

Variable Definitions and Codes - VehicleEvents Data Set

VehicleEvents Data Set

The VehicleEvents data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID and VehicleNumber uniquely identify each record in this data set and should be used to merge the VehicleEvents data set with other vehicle level data sets. This data set also contains the following variables:

Origin Of Fire

Definition: This variable identifies the location of fire initiation.

Source: Primary source is the vehicle inspection; secondary sources include the interviewee(s) and police crash report.

Cross Reference: Congruent with IntvwDrFire.FireSmokeBefore, values will differ due to Interview vs. Researcher determined values.

Variable Name: FireOrigin

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Vehicle exterior (front, side, back, top)
2	Exhaust System
3	Fuel tank (and other fuel retention system parts)
4	Engine compartment
5	Cargo/Truck compartment
6	Instrument panel
7	Passenger compartment area
8	Other location (specify)
88	No fire
99	Unknown

Fire Occurrence

Definition: This variable documents the degree of fire involvement.

Source: Primary source is the vehicle inspection; secondary sources include the interviewee(s), police crash report, and occupant medical records.

Variable Name: FireSeverity

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Minor Fire
2	Major Fire
9	Unknown
88	No fire

Variable Definitions and Codes - VehicleEvents Data Set

Rollover Type

Definition: This variable describes the type of rollover event that occurred for this vehicle. Rollover is defined as any vehicle rotation of 90 degrees or more about any true longitudinal or lateral axis. Rollover can occur at any time during the collision and is coded independently of other configuration questions.

Source: Primary sources are the vehicle and scene inspections; secondary sources include photographs, police report, driver interviews, and other interviewees.

Cross Reference: Related to IntvwDrRollover.IDLDirection, values will differ due to Interview vs. Researcher determined values. Derived from VehicleEvents.RollDirect.

Variable Name: RolloverType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No rollover (no overturning)
1	Longitudinal axis
98	Rollover, end-over-end (i.e., primarily about the lateral axis)
99	Rollover (overturn), details unknown

Quarter Turns

Definition: This variable documents the number of quarter turns that the vehicle rolled during the crash sequence. A quarter turn is defined as a rotation of 90 degrees about the longitudinal axis of the vehicle; this does not include rotation about the vertical axis, commonly called yaw.

Source: Researcher determined – primary sources are the vehicle and scene inspections; secondary sources include photographs, police report, driver interviews, and other interviewees.

Cross Reference: Congruent with IntvwDrRollover.Turns, values will differ due to Interview vs. Researcher determined values.

Variable Name: QuarterTurns

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No rollover
1-9	Value (quarter turns)
88	Not applicable
99	Unknown

Rollover Initiation Type

Definition: This variable describes the type of rollover event in terms of how the rollover was initiated. The attributes are used for rollovers initiated about the longitudinal axis.

Source: Researcher determined – primary sources are the scene and vehicle inspections; secondary sources are photographs, police report, driver interviews, and other interviewees.

Variable Name: RollInitType

Variable Definitions and Codes - VehicleEvents Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No rollover
1	Trip-over
2	Flip-over
3	Turn-over (specify)
4	Climb-over
5	Fall-over
6	Bounce-over
7	Collision with another vehicle
8	Other rollover initiation type (specify)
98	Rollover-end-over-end
99	Unknown rollover initiation type

Rollover Initiation Location

Definition: This variable establishes the location of the trip point or start of the vehicle's roll that was identified in the variable "Rollover Initiation Type."

Source: Researcher determined – primary source is the scene inspection; secondary sources are vehicle inspection, photographs, police report, driver interviews, and other interviewees.

Cross Reference: Congruent with IntvwDrRollover.IDLBegan, values will differ due to Interview vs. Researcher determined values.

Variable Name: RollInitLocation

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No rollover
1	On roadway
2	On shoulder -paved
3	On shoulder - unpaved
4	On roadside or divided trafficway median
8	Rollover - end-over-end
9	Unknown

Rollover Initiation – Object Contacted

Definition: This variable is related to the variable "Rollover Initiation Type," and identifies the source of the force that acted upon the vehicle, which resulted in the rollover.

Source: Researcher determined – primary source is the scene inspection; secondary sources are vehicle inspection, photographs, police report, driver interviews, and other interviewees.

Variable Name: RollObject

Variable Definitions and Codes - VehicleEvents Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No rollover
1	Vehicle#1
2	Vehicle#2
3	Vehicle#3
4	Vehicle#4
5	Vehicle#5
6	Vehicle#6
7	Vehicle#7
8	Vehicle#8
9	Vehicle#9
10	Vehicle#10
11	Vehicle#11
12	Vehicle#12
13	Vehicle#13
14	Vehicle#14
15	Vehicle#15
16	Vehicle#16
17	Vehicle#17
18	Vehicle#18
19	Vehicle#19
20	Vehicle#20
21	Vehicle#21
22	Vehicle#22
23	Vehicle#23
24	Vehicle#24
25	Vehicle#25
26	Vehicle#26
27	Vehicle#27
28	Vehicle#28
29	Vehicle#29
30	Vehicle#30
31	Overturn->rollover (excludes end-over-end)
32	Rollover->end-over-end
33	Fire or explosion
34	Jackknife
35	Other intraunit damage (specify)
36	Noncollision injury
38	Other noncollision (specify)
39	Noncollision->details unknown
41	Tree (<= 10 cm in diameter)
42	Tree (> 10 cm in diameter)
43	Shrubbery or bush
44	Embankment
45	Breakaway pole or post (any diameter)
50	Nonbreakaway pole or post (<=10cm in diameter)
51	Nonbreakaway pole or post (>10 cm but <= 30 cm in diameter)

Variable Definitions and Codes - VehicleEvents Data Set

52	Nonbreakaway pole or post (>30 cm in diameter)
53	Nonbreakaway pole or post (diameter unknown)
54	Concrete traffic barrier
55	Impact attenuator
56	Other traffic barrier (includes guardrail) (specify)
57	Fence
58	Wall
59	Building
60	Ditch or culvert
61	Ground
62	Fire hydrant
63	Curb
64	Bridge
68	Other fixed object (specify)
69	Unknown fixed object
70	Pass. car, light truck, van, or other vehicle not in-transport
71	Medium/heavy truck or bus not in-transport
72	Pedestrian
73	Cyclist or cycle
74	Other nonmotorist or conveyance (specify)
75	Vehicle occupant
76	Animal
77	Train
78	Trailer, disconnected in transport
79	Object fell from vehicle in-transport
88	Other nonfixed object (specify)
89	Unknown nonfixed object
98	Other event (specify)
99	Unknown event or object

Location On Vehicle Where Initial Principal Tripping Force Is Applied

Definition: This variable establishes the specific point on the vehicle where the tripping force was applied.

Source: Researcher determined – primary source is vehicle inspection. Secondary sources are scene inspection, photographs, police report, driver interviews, and other interviews.

Variable Name: RollTrip

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No rollover
1	Wheels/tires
2	Side plane
3	End plane
4	Undercarriage
5	Other location on vehicle (specify)

Variable Definitions and Codes - VehicleEvents Data Set

6	Non-contact rollover forces (specify)
8	Rollover - end-over-end
9	Unknown

Direction Of Initial Roll

Definition: This variable establishes the direction in which the vehicle initially rolled.

Source: Researcher determined – primary sources are the scene and vehicle inspections; secondary sources are the police report, driver interviews, and other interviewees.

Cross Reference: Congruent with IntvwDrRollover.IDLDirection, values will differ due to Interview vs. Researcher determined values. Expands on VehicleEvents.RolloverType.

Variable Name: RollDirect

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No rollover
1	Roll right - primarily about the longitudinal axis
2	Roll left - primarily about the longitudinal axis
8	Rollover - end-over-end
9	Unknown roll direction

Manner Of Collision

Definition: This variable is intended to describe the primary impact (in terms of delta V) sustained by this vehicle during the collision sequence. The primary impact may not be the first impact sustained by this vehicle.

Source: Researcher determined – primary sources include the scene and vehicle inspections; secondary sources include the police report and interviews.

Variable Name: CollisionManner

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not a collision with a motor-vehicle in transit
1	Rear-end
2	Head-on
3	Rear-to-rear
4	Angle
5	Sideswipe - same direction
6	Sideswipe - opposite direction
8	Other (specify)
9	Unknown

First Harmful Event

Definition: This variable establishes the first property or injury-producing event that can be determined to have occurred during the crash sequence.

Variable Definitions and Codes - VehicleEvents Data Set

Source: Researcher determined – primary sources include the scene and vehicle inspections; secondary sources include the police report and interviews.

Cross Reference: Related to CDCCrush.CDCObjectContact if CDCCrush.EventNumber = 1.
Related to Events.EVEObjectContact if Events.EventSequence = 1.

Variable Name: FirstHarmfulEvent

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Overturn
2	Fire/explosion
3	Immersion
4	Gas Inhalation
5	Fell from vehicle
6	Injured in vehicle
7	Other non-collision
8	Pedestrian
9	Pedal cycle
10	Railway train
11	Animal
12	Motor vehicle in transport
13	Motor vehicle in transport in other roadway
14	Parked motor vehicle
15	Other type non-motorist
16	Thrown or falling object
17	Boulder
18	Other object (not fixed)
19	Building
20	Impact attenuator/crash cushion
21	Bridge pier or abutment
22	Bridge parapet end
23	Bridge rail
24	Guardrail
25	Concrete traffic barrier
26	Other longitudinal barrier
27	Highway/traffic sign post
28	Overhead sign support
29	Luminaire/light support
30	Utility pole
31	Other post, pole or support
32	Culvert
33	Curb
34	Ditch
35	Embankment - earth
36	Embankment - rock, stone or concrete
37	Embankment - material type unknown
38	Fence
39	Wall
40	Fire hydrant

Variable Definitions and Codes - VehicleEvents Data Set

41	Shrubbery
42	Tree
43	Other fixed object
44	Pavement surface irregularity
45	Transport device used as equipment
46	Traffic signal support
99	Unknown

Variable Definitions and Codes - VehicleExterior Data Set

VehicleExterior Data Set

The VehicleExterior data set contains the variables CaseID, PSU, PSUStrat, RATWeight, and VehicleNumber. CaseID and VehicleNumber uniquely identify each record in this data set and should be used to merge the VehicleExterior data set with other vehicle level data sets. This data set also contains the following variables:

Body Category

Definition: This variable describes the vehicle's general body category.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include vehicle specification literature, police report, and interview.

Variable Name: BodyCategory

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Automobiles
2	Automobiles Derivatives
3	Utility Vehicles (<= 4,536 kgs GVWR)
4	Van Based Light Trucks (<= 4,536 kgs GVWR)
5	Light Conventional Trucks (Pickup style cab, <=4,536 kgs GVWR)
6	Other Light Trucks (<=4,536 kgs GVWR)
7	Buses (Excludes Van Based)
8	Medium/Heavy Trucks (> 4,536 Kgs GVWR)
9	Motored Cycles(Does Not Include all- Terrain Veh /Cycles)
10	Other Vehicles
99	Unknown Vehicle Type

Body Type

Definition: This variable documents the body type of the vehicle, as identified by the manufacturer.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include vehicle specification literature, police report, and interview.

Cross Reference: Identical to GeneralVehicle.GVEBodyType when applicable. Congruent with GeneralVehicle.VINBodyType, values will differ due to VIN vs. Researcher determined values. Expands on VehicleExterior.VEXVehicleClass.

Variable Name: VEXBodyType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Convertible
2	2-door sedan, hardtop, coupe
3	3-door/2-door hatchback
4	4-door sedan, hardtop
5	5-door/4-door hatchback
6	Station Wagon

Variable Definitions and Codes - VehicleExterior Data Set

7	Hatchback, number of doors unknown
8	Other automobile type
9	Unknown automobile type
10	Auto based pickup
11	Auto based panel
12	Large limousine
13	Three-wheel automobile or automobile derivative
14	Compact utility
15	Large utility
16	Utility station wagon
17	3-door coupe
19	Utility, unknown body type
20	Minivan
21	Large van
22	Step van or walk-in van
23	Van based motor home
24	Van based school bus
25	Van based other bus
28	Other van type
29	Unknown van type
30	Compact pickup
31	Large pickup
32	Pickup with slide-in camper
33	Convertible pickup
39	Unknown pickup style light conventional truck type
40	Cab chassis based
41	Truck based panel
42	Light truck based motor home (chassis mounted)
45	Other light conventional truck type
48	Unknown light truck type
49	Unknown light vehicle type
50	School bus
58	Other bus type
59	Unknown bus type
60	Step van
61	Single unit straight truck(4500kg<GVWR<=8850kg)
62	Single unit straight truck(8850kg<GVWR<=12000kg)
63	Single unit straight truck (GVWR > 12,000kg)
64	Single unit straight truck (GVWR unknown)
65	Medium/heavy truck based motor home
66	Truck-tractor (Cab Only, or any trailing units)
67	Truck-tractor with no cargo trailer
68	Truck-tractor pulling one trailer
69	Truck-tractor pulling two or more trailers
70	Truck-tractor (unknown if pulling trailer)
74	Medium/heavy Pickup (>=4,536kg)
78	Unknown medium/heavy truck type
79	Unknown truck type (light/medium/heavy)
80	Motorcycle

Variable Definitions and Codes - VehicleExterior Data Set

81	Moped
82	Three-wheel motorcycle or moped
88	Other motored cycle (mini-bike, motor scooter)
89	Unknown motored cycle type
90	ATV(All-Terrain Vehicle) & ATC(All-Terrain Cycle)
91	Snowmobile
92	Farm equipment other than trucks
93	Construction equipment other than trucks
97	Other vehicle type
99	Unknown body type

Class Of Vehicle

Definition: This variable documents the class of vehicle, as determined by the researcher. This classification system is based on documentation provided by the Passenger Car Classification Committee A3B11(1) of the Transportation Research Board, Traffic Records and Accident Analysis Committee, A3B11. This classification is based on the size of the vehicle's wheelbase.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include police and other vehicle photographs. Partially determined by VIN information (size-based information).

Cross Reference: Identical to GeneralVehicle.GVEVehicleClass when applicable. Identical to Events.ClassVehicle and Events.ClassVehicle2 when applicable. Derived from VehicleExterior.VEXBodyType.

Variable Name: VEXVehicleClass

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not a motor vehicle
1	Subcompact/mini (wheelbase < 254 cm)
2	Compact (wheelbase >= 254 but < 265 cm)
3	Intermediate (wheelbase >= 265 but < 278 cm)
4	Full Size (wheelbase >= 278 but < 291 cm)
5	Largest (wheelbase >= 291 cm)
9	Unknown passenger car size
14	Compact utility vehicle
15	Large utility vehicle (<= 4,536 kg GVWR)
16	Utility station wagon (<= 4,536 kg GVWR)
19	Unknown utility type
20	Minivan (<= 4,536 kg GVWR)
21	Large van (<= 4,536 kg GVWR)
24	Van Based school bus (<= 4,536 kg GVWR)
28	Other van type (<= 4,536 kg GVWR)
29	Unknown van type (<= 4,536 kg GVWR)
30	Compact pickup truck (<= 4,536 kg GVWR)
31	Large pickup truck (<= 4,536 kg GVWR)
38	Other pickup truck type (<= 4,536 kg GVWR)
39	Unknown pick up truck (<=4,536 kg GVWR)
45	Other light truck (<= 4,536 kg GVWR)

Variable Definitions and Codes - VehicleExterior Data Set

48	Unknown light truck type (<= 4,536 kg GVWR)
49	Unknown light vehicle type
50	School bus (excludes van based)(>4,536 kg GVWR)
58	Other bus (>4,536 kg GVWR)
59	Unknown bus type
60	Truck (>4,536 kg GVWR)
67	Tractor without trailer
68	Tractor-trailer(s)
78	Unknown medium/heavy truck type
79	Unknown light/medium/heavy truck type
80	Motored cycle
90	Other vehicle
99	Unknown

Source Of Curb Weight Information

Definition: This variable identifies the source from which the curb weight of the vehicle was obtained.

Source: Researcher identified.

Cross Reference: Identical to GeneralVehicle.GVEWeightSource when applicable.

Variable Name: VEXWeightSource

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Curb weight unknown
1	AAMA
2	Automotive News
3	Branham Automobile Reference Book
4	Gasoline Truck, Import Truck, and Diesel Truck Index
5	Canadian Specifications
8	Other (specify)
99	Unknown curb weight source

Cargo Weight

Definition: This variable documents the weight of any cargo inside the vehicle at the time of the crash and most often represents a researcher's "best guess" estimate of the cargo weight. This value is based on interview information, the PAR, and vehicle inspection.

Source: Researcher determined – inputs include vehicle inspection, interviews, police report, and tow yard operator.

Cross Reference: Identical to GeneralVehicle.GVECargoWeight when applicable.

Variable Name: VEXCargoWeight

Variable Definitions and Codes - VehicleExterior Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-20000	Cargo Weight value (kgs)
999999	Unknown

Source Of Cargo Weight Information

Definition: This variable documents the source from which the estimate of the weight of the cargo inside the vehicle at the time of the crash was obtained.

Source: Researcher identified.

Cross Reference: Identical to GeneralVehicle.GVECargoSource when applicable.

Variable Name: VEXCargoSource

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Unknown
1	Vehicle inspection
2	Interview
3	PAR
4	Tow Yard Operator
8	Other (specify)

Vehicle Identification Number (VIN)

Definition: This variable documents the Vehicle Identification Number (VIN) of the vehicle, as determined by the researcher from vehicle inspection.

Source: Primary source is vehicle inspection; a secondary source is the police report.

Cross Reference: Identical to GeneralVehicle.GVEVIN when applicable.

Variable Name: VEXVIN

Attribute Codes

<u>Code</u>	<u>Meaning</u>
	Actual VIN text
9999999999	Unknown

Vehicle Special Use

Definition: This variable documents specific other uses for the vehicle in addition to personal use.

Source: Researcher determined – primary source is the police report; secondary sources include vehicle inspection, and interviewees.

Cross Reference: Identical to GeneralVehicle.GVESpecialUse when applicable.

Variable Name: VEXSpecialUse

Variable Definitions and Codes - VehicleExterior Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No Special Use
1	Taxi
2	Vehicle used as a school bus
3	Vehicle used as other bus
4	Military
5	Police
6	Ambulance
7	Fire truck or car
8	Other (specify)
9	Unknown

Is The Vehicle In Transport?

Definition: This variable determines whether or not the vehicle was in transport at the time of the crash. To be considered “in transport,” a vehicle must be on the roadway or in motion within the trafficway

Source: Researcher determined from all available sources, including scene inspection, interviews, and the police report.

Variable Name: InTransport

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No
1	Yes
99	Unknown

Inspection Type

Definition: This variable documents the type of inspection performed on the vehicle by the researcher. It allows users to identify cases with complete documentation of required damage data (exterior and interior).

Source: Researcher specified.

Cross Reference: Identical to GeneralVehicle.GVEInspection when applicable.

Variable Name: InspectionType

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Vehicle fully repaired -no damage evident
2	Partial inspection (specify):
3	Complete Inspection

Date Of Inspection

Definition: This variable documents the date that the researcher inspected the vehicle.

Variable Definitions and Codes - VehicleExterior Data Set

Source: Researcher specified.

Cross Reference: Identical to GeneralVehicle.GVEInspectionDate when applicable.

Variable Name: VEXInspectionDate

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Date (in YYYY-MM format)

Type Of Transmission

Definition: This variable documents the type of transmission that is in the vehicle.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include vehicle specification literature.

Variable Name: Transmission

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Manual
2	Automatic
9	Unknown

Drive Wheels

Definition: This variable describes the type of drive wheels that power the vehicle.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources include vehicle specification literature.

Cross Reference: Congruent with GeneralVehicle.FrontWheelDrive and GeneralVehicle.FourWheelDrive, value will differ due to VIN vs. Researcher determined values.

Variable Name: DriveWheels

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Front Wheel Drive (FWD)
2	Rear Wheel Drive (RWD)
3	Four Wheel Drive (4WD)
4	All Wheel Drive (AWD)
9	Unknown

Left Front Tire Restricted?

Definition: This variable documents whether or not the vehicle's left front tire was prevented from rotation by damaged components of this vehicle as a result of the crash.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources may include police vehicle photographs.

Variable Definitions and Codes - VehicleExterior Data Set

Variable Name: LFRestricted

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Yes
2	No
3	Not applicable
4	Unknown

Left Rear Tire Restricted?

Definition: This variable documents whether or not the vehicle's left rear tire was prevented from rotation by damaged components of this vehicle as a result of the crash.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources may include police vehicle photographs.

Variable Name: LRRestricted

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Yes
2	No
3	Not applicable
4	Unknown

Right Rear Tire Restricted?

Definition: This variable documents whether or not the vehicle's right rear tire was prevented from rotation by damaged components of this vehicle as a result of the crash.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources may include police vehicle photographs.

Variable Name: RRRestricted

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Yes
2	No
3	Not applicable
4	Unknown

Right Front Tire Restricted?

Definition: This variable documents whether or not the vehicle's right front tire was prevented from rotation by damaged components of this vehicle as a result of the crash.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources may include police vehicle photographs.

Variable Name: RFRestricted

Variable Definitions and Codes - VehicleExterior Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Yes
2	No
3	Not applicable
4	Unknown

Left Front Tire Deflated?

Definition: This variable documents whether or not the vehicle's left front tire was deflated as a result of the crash.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources may include police vehicle photographs.

Variable Name: LFDeflated

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Yes
2	No
3	Not applicable
4	Unknown

Left Rear Tire Deflated?

Definition: This variable documents whether or not the vehicle's left rear tire was deflated as a result of the crash.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources may include police vehicle photographs.

Variable Name: LRDeflated

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Yes
2	No
3	Not applicable
4	Unknown

Right Rear Tire Deflated?

Definition: This variable documents whether or not the vehicle's right rear tire was deflated as a result of the crash.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources may include police vehicle photographs.

Variable Name: RRDeflated

Attribute Codes

Variable Definitions and Codes - VehicleExterior Data Set

<u>Code</u>	<u>Meaning</u>
1	Yes
2	No
3	Not applicable
4	Unknown

Right Front Tire Deflated?

Definition: This variable documents whether or not the vehicle's right front tire was deflated as a result of the crash.

Source: Researcher determined – primary source is the vehicle inspection; secondary sources may include police vehicle photographs.

Variable Name: RFDeflated

Attribute Codes

<u>Code</u>	<u>Meaning</u>
1	Yes
2	No
3	Not applicable
4	Unknown

Wheelbase

Definition: This variable reflects the length of the vehicle's original or undamaged wheelbase to the nearest centimeter, based on manufacturer specifications.

Source: Primary source is *Passenger Vehicle Specifications*, American Automobile Manufacturers Association (AAMA) of the U.S., Inc. Secondary sources are *Automotive News*, Crain Automotive Group, Inc., *Branham Automobile Reference Book*, Branham Publishing Company, and *Gasoline Truck Index and Diesel Truck Index*, Truck Index, Inc.

Variable Name: Wheelbase

Attribute Codes

<u>Code</u>	<u>Meaning</u>
100-650	Value (cm)
999	Unknown

Overall Length

Definition: This variable documents the overall length of the vehicle, as specified by the manufacturer.

Source: Primary source is *Passenger Vehicle Specifications*, American Automobile Manufacturers Association (AAMA) of the U.S., Inc. Secondary sources are *Automotive News*, Crain Automotive Group, Inc., *Branham Automobile Reference Book*, Branham Publishing Company, and *Gasoline Truck Index and Diesel Truck Index*, Truck Index, Inc.

Variable Name: OverallLength

Variable Definitions and Codes - VehicleExterior Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
100-850	Value (cm)
9999	Unknown

Maximum Width

Definition: This variable documents the overall/maximum width of the vehicle, as specified by the manufacturer.

Source: Primary source is *Passenger Vehicle Specifications*, American Automobile Manufacturers Association (AAMA) of the U.S., Inc. Secondary sources are *Automotive News*, Crain Automotive Group, Inc., *Branham Automobile Reference Book*, Branham Publishing Company, and *Gasoline Truck Index and Diesel Truck Index*, Truck Index, Inc.

Variable Name: MaxWidth

Attribute Codes

<u>Code</u>	<u>Meaning</u>
100-350	Value (cm)
999	Unknown

Curb Weight

Definition: This variable documents the vehicle's curb weight, as identified by manufacturer specifications.

Source: Primary source is *Passenger Vehicle Specifications*, American Automobile Manufacturers Association (AAMA) of the U.S., Inc. Secondary sources are *Automotive News*, Crain Automotive Group, Inc., *Branham Automobile Reference Book*, Branham Publishing Company, and *Gasoline Truck Index and Diesel Truck Index*, Truck Index, Inc.

Cross Reference: Identical to GeneralVehicle.GVECurbWeight when applicable. Congruent with GeneralVehicle.BaseWeight, values will differ due to VIN vs. Researcher determined values.

Variable Name: VEXCurbWeight

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0-20000	Value range (kgs)
999999	Unknown

Average Track Width

Definition: This variable documents the vehicle's average track width, calculated by averaging the front and rear track width, values that are identified by the manufacturer. This value represents the average track width prior to the crash (undamaged).

Source: Researcher determined from values obtained from manufacturer specifications. Primary source is *Passenger Vehicle Specifications*, American Automobile Manufacturers Association (AAMA) of the U.S., Inc. Secondary sources are *Automotive News*, Crain Automotive Group, Inc.,

Variable Definitions and Codes - VehicleExterior Data Set

Branham Automobile Reference Book, Branham Publishing Company, and *Gasoline Truck Index and Diesel Truck Index*, Truck Index, Inc.

Variable Name: AverageTrack

Attribute Codes

<u>Code</u>	<u>Meaning</u>
100-200	Value (cm)
999	Unknown

Front Overhang

Definition: This variable documents the front overhang of the vehicle as identified by manufacturer specifications. Front overhang is the distance between the front axle and the maximum forward projection of the vehicle. This value represents the vehicle's front overhang prior to the crash (undamaged).

Source: Primary source is *Passenger Vehicle Specifications*, American Automobile Manufacturers Association (AAMA) of the U.S., Inc. Secondary sources are *Automotive News*, Crain Automotive Group, Inc., *Branham Automobile Reference Book*, Branham Publishing Company, and *Gasoline Truck Index and Diesel Truck Index*, Truck Index, Inc.

Variable Name: FrontOverhang

Attribute Codes

<u>Code</u>	<u>Meaning</u>
25-150	Value (cm)
999	Unknown

Rear Overhang

Definition: This variable documents the rear overhang of the vehicle as identified by manufacturer specifications. Rear overhang is the distance between the rear axle and the maximum rear projection of the vehicle. This value represents the rear overhang prior to the crash (undamaged).

Source: Primary source is *Passenger Vehicle Specifications*, American Automobile Manufacturers Association (AAMA) of the U.S., Inc. Secondary sources are *Automotive News*, Crain Automotive Group, Inc., *Branham Automobile Reference Book*, Branham Publishing Company, and *Gasoline Truck Index and Diesel Truck Index*, Truck Index, Inc.

Variable Name: RearOverhang

Attribute Codes

<u>Code</u>	<u>Meaning</u>
25-200	Value (cm)
999	Unknown

Undeformed End Width

Definition: This variable represents the undamaged dimension of either the contacted end plane or the front undamaged plane if the side plane is contacted.

Variable Definitions and Codes - VehicleExterior Data Set

Source: Researcher determined – primary source is vehicle inspection; secondary sources include *Passenger Vehicle Specifications*, American Automobile Manufacturers Association (AAMA) of the U.S., Inc., *Automotive News*, Crain Automotive Group, Inc., *Branham Automobile Reference Book*, Branham Publishing Company, and *Gasoline Truck Index and Diesel Truck Index*, Truck Index, Inc.

Variable Name: EndWidth

Attribute Codes

<u>Code</u>	<u>Meaning</u>
100-250	Value (cm)
999	Unknown

Researcher's Assessment Of Vehicle Disposition

Definition: This variable represents the researcher's assessment of the disposition of the vehicle and is based primarily on inspection of the vehicle.

Source: Researcher determined – primary source is vehicle inspection; secondary source is the driver interview.

Variable Name: VehicleDisposition

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	Not towed due to vehicle damage
1	Towed due to vehicle damage
9	Unknown

Justification For Researcher's Assessment Of Vehicle Disposition

Definition: This variable represents the reason for the determination that the vehicle was or was not towed, based on the researcher's assessment of the disposition of the vehicle.

Source: Researcher specified.

Variable Name: Justification

Attribute Codes

<u>Code</u>	<u>Meaning</u>
*	Text justification for the assessment of vehicle disposition

Multi-Stage Or Altered Vehicle?

Definition: This variable documents whether the vehicle is a multi-stage (initially an incomplete) vehicle or an altered (modified) vehicle. The determination is based on a label attached to the vehicle that demonstrates compliance with all Federal Motor Vehicle Safety Standards.

Source: Researcher determined – primary source is vehicle inspection; secondary source is the VIN.

Variable Name: MultiStage

Variable Definitions and Codes - VehicleExterior Data Set

Attribute Codes

<u>Code</u>	<u>Meaning</u>
0	No post-manufacturer modifications
1	Yes – post manufacturer modification (specify)
9	Unknown if vehicle is modified

Index

A

AASHToDistance 170
AASHTORecommended 192
ABGTest 356
ABSFunctional 47
ABSInstalled 47
AccessControl 161
AccidentCat 87
AccidentSEA 437
ACDcode 91
ACDdetail 91
ACRAvoidance 83
ACRCargoshift 88
ACRCriticalEvent 78
ACRJackknife 88
ACRLocation 84
ACRReason 80
ACRRightOfWay 84
ACRStability 83
ACSAccelerating 54
ACSAvoidance 54
ACSConstant 53
ACSCurve 53
ACSDecelerating 55
ACSHeavyBraking 55
ACSLightBraking 53
ACSLocation 51
ACSModerateBraking 55
ACSSpillage 52
ACSStraight 56
ACSTurn 53
ACSType 51
Action 328
ADAOtherFactor 118
ADAPostedSpeed 117
ADATravelSpeed 117
ADDAdjustingRadio 144
ADDialingPhone 144
ADDPreviousCrash 146
ADDRecognition 143
ADDSurveillance 142
ADHCorrectedVision 129
AdjustorType 47
ADROtherFactor 97
ADRTrafficFlow 108
ADRWorkSchedule 94
ADSLongestDay 155
ADSShortestDay 155
AFTCurveRadius 191
AFTFog 199
AFTHail 200
AFTNoDriver 203
AFTPreviousCrash 180
AFTRain 199
AFTSleet 200
AFTSnow 199
Aggression 399
AggressionCount 122
AggressionReason 126
AirbagAvail 336
AirbagDamage 43
AirbagFailure 41
AirbagLocation 39
Airbags Data Set 38
AirbagStatus 39
AirbagType 40
AIROccupantNumber 38
AISCode 257
AJKAccelerating 304
AJKAvoidance 304
AJKConstant 303
AJKCurve 303
AJKDecelerating 305
AJKDirection 302
AJKHeavyBraking 306
AJKLightBraking 304
AJKLocation 302
AJKModerateBraking 305
AJKOther 305
AJKSource 301
AJKStraight 306
AJKTurn 303
AJKType 301
AlcoholTest 98
AlcoholUse 97
AnchorAdjustment 347
ANL 417
ANMAge 325
ANMAvoidance 331
ANMDecision 331
ANMGender 326
ANMHeight 325
ANMPARSevCode 332, 333
ANMPosition 326
ANMType 326
ANMWeight 325
AnyDrugsCrash 77
AnyDrugsVeh 397
Approach 116
ApproachingTraffic 147
Aspect 289
Assumption 117

Astigmatic 134
AuthorizedForHire 408
AutoBeltAvailable 349
AutoBeltFailure 351
AutoBeltProper 351
AutoBeltSource 352
AutoBeltUsed 350
AverageDay 155
AverageTrack 496
Axle 46
AxlesNotUsed 473
AxlesUsed 472

B

BadLaneMarkings 195
BaffleFailure 58
BaseWeight 244
BeltMotorized 350
BeltUsed 336
BIK 418
BIPDOK 432
BIPDRequired 432
BlindSpot 441
BlockingOthers 125
BlowingDebris 202
BodyCategory 486
BondOK 433
BondRequired 433
BrakeFailure 184
Brakes Data Set 46
BrakesInoperative 187
BrakesOutOfAdjustment 186
BrakesSystemDeficiency 187
BrakeType 46
BRAPosition 46
BrokerStatus 407
Building 148

C

CabStyle 440
CapacityPercent 471
Carburetion 242
CARCount 72
CargoCarried 412
CargoLoadSecurement 188
CargoOK 433
CargoRequired 432
CargoshiftAssessments Data Set 51
CargoType 467
CarrierEmployer 400
CarrierOperationDescription 412
CaseID 17
CategoryDescription 439
CauseCount 52

CDC 45
CDCCategory 69
CDCCrush Data Set 61
CDCObjectContact 62
CDCWidth 69
CGO 418
ChamberSize 47
ChamberType 48
ChildSeatAvailable 345
CitDate 90
ClassVehicle 174
ClassVehicle2 177
ClockForce 64
CMDBCargoWeight 444
CMVCrashes 249
CMVViolations 249
Code 310
ColdFlu 131
CollisionManner 483
CollisionType 74
ColorBlind 134
ComfortCount 106
CommonStatus 407
CompartmentFailure 58
Component 299
ConstructionZone 181
ContactOther 45
ContractStatus 407
ConvDate 90
Conversant 141
Conversation 140
CountDrivers 412
CountPowerUnits 413
CRAAlcohol 77
Crash Data Set 71
CrashAssessment Data Set 78
CrashCode 85
CrashDate 71
CrashDiscussion Data Set 89
Crashes 307
CrashPARSevCode 73
CrashRESSevCode 73
CrashTime 71
CriticalEventCat 80
CrossedLine 119
CrushDirection 298
CrushMagnitude 298

D

DamageArea 175
DamageArea2 178
DamageLocation 68
DamageSource 43
DataRecorder 441
DateOfDeath 354

Day 74
Daylight 162
DayRunningLights 244
DCType 61
DeformCode 68
DeformDistribution 67
DeformExtent 67
DeformLocation 65
DeformLong 65
DeformVertical 66
Demoted 105
Deployment 41
Depowered 40
DesignDefect 167
DesignedObstructedView 183
DiabeticBlackout 130
Discussion 89
Distraction 330
DMVViolation Data Set 90
DriverAssessment Data Set 92
DriverDecisionAggression Data Set 115
DriverDrugs Data Set 127
DriverFatigue 398
DriverHealth Data Set 129
DriverInspections 428
DriverOutOfService 428
DriverOutOfServicePerc 428
DriverPhysical 398
DriverPresent 245
DriverRecognitionDistraction Data Set 140
DriverReported 127
DriverSEA 438
DriverSleep Data Set 149
DriverViolationsAverage 428
DriveWheels 492
DromedaryBox 440
DrugName 127
DrugTest 99
DrugType 127

E

EjectionArea 337
EjectionType 337
EmergencyVehicle 181
Emotional 101
EmotionExperience 400
EndWidth 497
EngineProblem 185
Entrapment 339
ENVDust 172
ENVFog 171
ENVHail 172
Environment Data Set 158
EnvironmentCount 201
ENVNoConditions 170

ENVOtherConditions 173
ENVRain 170
ENVSleet 172
ENVSnow 171
ENVTrafficFlow 159
ENVWindGusts 171
EpilepticSeizure 130
EQF 418
EthnicOrigin 248
Evasion 118
EVE ObjectContact 176
Events Data Set 174
ExemptForHire 408
ExhaustLeak 190
EXP WorkSchedule 104
ExteriorDistractionCount 146
ExternalPerson 147
ExtraLoads 105
Eyewear 336

F

FactorAssessment Data Set 180
FamilyProblems 95
Fatigue 99
FederalGovernment 410
FieldLocation 68
FillInTrips 112
FIR 418
FireOrigin 478
FireSeverity 478
FirstHarmfulEvent 483
FlapsDamaged 43
FlapsOpen 42
Flashing 125
FloorRetrieval 145
FlowRestriction 160
FOB 419
Focused 94
ForceDirection 64
FourWheelDrive 242
FrontOverhang 497
FrontWheelDrive 241
FuelSystemProblem 190
FuelType 243
FunctionalClass 162
Functioning 164

G

GCSScore 355
GearPosition 443
GeneralVehicle Data Set 204
Glare 202
Glaucoma 133
GVEBodyType 232

GVECargoSource 236
GVECargoWeight 236
GVECurbWeight 235
GVEInspection 237
GVEInspectionDate 238
GVEMake 204
GVEModel(with GVEMake) 206
GVEMotorcycleDisplacement 244
GVEPARSevCode 238
GVEPostedSpeed 245
GVERESSevCode 239
GVERestraintType 242
GVESpecialUse 237
GVETotalViolations 251
GVETravelSpeed 245
GVEVehicleClass 234
GVEVIN 237
GVEWeightSource 235
GVEYear 232
GVWR 470

H

HandsUsed 332
Hazard 472
HazardousMaterial 417
HazMat 425
HazMat Data Set 253
HazMatInsp Data Set 255
HazMatInspections 430
HazMatOutOfService 430
HazMatOutOfServicePerc 430
HazMatViolationsAverage 430
HearingImpaired 329
HearingImpairment 136
HearingRestricted 330
HeartAttack 129
HMIDisposition 256
HMIInspection 255
HMIOutOfService 256
HMIViolation 255
Honking 124
HospitalDays 354
HoursDriving 152
HoursOnDuty 152
HoursSinceSleep 150
HoursWorked 154
Hurrying 101
Hyperopic 133

I

IllegalUTurn 120
Illness 96
IllnessFactorCount 129
ImpactNumber 68

ImproperBulkLoading 56
ImproperGeneralLoading 56
Inattention 140
IndianTribe 411
InformationSource 300
InitialFacility 353
InitialTreatment 353
Injuries Data Set 257
InjuryCount 355
InjurySource 292
InjurySourceCat 291
InspDriverOOS 307
InspectionExists 255
Inspections 307
InspectionType 491
InspVehOOS 308
InspViols 309
InsufficientSight 194
IntegratedRestrains 343
Interchange 159
InteriorDistractionCount 143
IntersectionType 160
InTransport 491
IntrusionLocation 298
IntrusionRow 297
Intrusions 340
ITSHeadway 448
ITSOther 450
ITSRollover 449
ITSSideObject 449

J

JackknifeAssessments 301
JAK 419
Junction 158
Justification 498

K

KnewRoad 102
KnewVehicle 102

L

LastSleepEnd 150
LastSleepHours 149
LastSleepStart 149
LastWeekHours 156
LastWeekMoonlight 156
LeftDoorMirror 447
LeftFenderMirror 447
LeftLength 49
LegallyBlind 132
LevelCode 424
LFDinflated 494

LFRestricted 492
LiabilityInsurance 434
LicState 90
LightViolations 123
LoadObstructedView 183
LoadPressure 109
LocalGovernment 411
LocalViols 308
LRDeflated 494
LRRestricted 493

M

MainSleepEnd 151
MainSleepHours 150
MainSleepStart 151
ManeuverCount 119
ManualBeltAvailable 345
ManualBeltFailure 347
ManualBeltProper 346
ManualBeltSource 349
ManualBeltUsed 346
ManufactureDate 468
Material 253
MaxCrushLocation 69
MaxWidth 496
MCMIScmvNon Violations 252
MCMIScmvViolations 252
MCMIScrashes 252
MCMISdriverData Data Set 307
MCMISviolation Data Set 310
MedianWidth 191
Medium 338
MediumStatus 338
Migrant 410
Mileage 413
MileageYear 413
MinCoverageAmount 433
MirrorCount 446, 448
Misjudgment 116
Mobility 339
Mortality 352
Motion 327
Movement 387
MovementCount 52
MultiEjection 339
MultiStage 498
MVH 419
Myopic 133

N

NarrowRoad 195
NarrowShoulders 195
NCM 419
NCO 420

NewPosition 103
NoApplicableFatigue 111
NoApplicableRelations 113
NoDriverPresent 96
NoFactors 136
NonCMVCrashes 250
NonCMVViolations 250
NonMotorist 403
NonMotoristCount 72
NonMotorists Data Set 325
NormalVision 132
NoTraffic 180
NumOOSviols 324
NumViols 323

O

ObjectContactClass 37, 61
ObjectObscured 193
ObsceneGestures 125
Obscured 92
OCCAge 334
OCCFatality 77
OCCGender 335
OCCHeight 334
OCCInjSeverityCode 352
OCCLocation 340
OCCRestraintType 341
OccupantMovement 144
Occupants Data Set 334
OCCWeight 334
OFR 420
OINDescription 257
OOB 420
Orientation 328
OTH 420
Other 411
OtherAggression 126
OtherBlackout 131
OtherCargos 59
OtherChangeSpecify 203
OtherComfortFactor 108
OtherControls 145
OtherDefect 185
OtherDefectSpecify 186
OtherExternal 148
OtherFactorCount 136
OtherFactorPhysical 139
OtherFatigue 111
OtherIllness 131
OtherInternal 146
OtherLiquids 59
OtherLocationMirror 448
OtherManeuver 121
OtherMovement 54
OtherPressure 106

OtherPressureCount 111
OtherProblem 198
OtherProblemSpecify 198
OtherRelations 114
OtherRetrieval 145
OtherSeizure 130
OtherSolids 57
OtherTraffic 182
OtherTrafficSpecify 182
OtherViewObstruction 184
OtherVision 135
OtherWeather 201
OtherWeatherSpecify 201
OutsideLocation 142
OVEAccidentType 393
OVEAlcohol 397
OVEAvoidance 391
OVECargoShift 396
OVEConfiguration 386
OVECrashCode 394
OVECriticalEvent 388
OVEDecision 399
OVEEnvironment 402
OVEJackKnife 396
OVELocation 392
OVEMake 358
OVEModel 360
OverallLength 495
OVEReason 389
OVERecognition 398
OVERightOfWay 393
OverrideDesc 64
Overview Data Set 358
OVESpeed 403
OVEStability 392
OVESurveillance 400
OVEYear 386
OVR 421

P

PARAlcoholPresent 246
PARAlcoholTest 246
PARAlcoholTestResult 246
Paraplegia 137
PARDescription 405
PARDrugsPresent 248
PARTestDelay 247
PARTestSource 247
PARViolationCode 404
PARViolations Data Set 404
PED 421
PersonalProblems 95
PlacardRequired 446
PoorCondition 196
PositionNumber 61

PostInclination 344
Posture 341
PowerUnitType 440
PreEventMovement 78
PreTensionerActuated 348
PreTensionerAvailable 348
PreTensionerTravel 348
PrevViolations 251
PriorCrashes 44
PriorInclination 344
PriorMaintenance 44
PrivatePassengersBusiness 409
PrivatePassengersNonBusiness 409
PrivateProperty 409
Prosthesis 137
PSU 17
PSUStrata 17
PVH 421

Q

QuarterTurns 479
Quotas 104

R

Race 335
Railroad 164
RampSpeed 196
RanLights 121
RapidAcceleration 124
Rating 435
RatingDate 435
RATWeight 17
RearOverhang 497
RearTapeCond 473
RearTapePeel 476
ReasonCat 82
ReflectiveTapeMissingObscured 189
ReflectTapeColor 475
ReflectTapePattern 475
ReflectTapeType 474
Reportable 254
RestraintDamage 342
Retractor 349
ReviewDate 435
ReviewType 435
RFDeflated 495
RFRestricted 493
RightDoorMirror 446
RightFenderMirror 447
RightLength 49
RiskTaking 331
RoadAlignment 165
RoadGeometry 194
RoadProfile 165

RoadRelation 158
RoadSurface 166
Roadway 401
RoadwayClass 164
RoadwayFactorCount 192
Role 335
RollDirection 483
RollInitLocation 480
RollInitType 479
RollObject 480
RolloverType 479
RollTrip 482
Roof1 241
Roof2 241
Roof3 241
RotatingShift 110
Rotation 154
Row 340
RPM 442
RRDeflated 494
RRRestricted 493
RumbleStrip 168
RUN 421
RushHour 181

S

SaferAuthorityStatus Data Set 407
SaferCarrier Data Set 408
SaferCrashSummary Data Set 414
SaferDriverCrashReport Data Set 416
SaferDriverInspection Data Set 424
SaferDriverViolation Data Set 426
SaferInspectionsSummary Data Set 428
SaferInsurance Data Set 432
SaferReview Data Set 435
SafeStat Data Set 437
SafetySEA 438
SCDDate 416
SCDDateOfBirth 416
SCDFatalities 416
SCDInjuries 417
SCDState 416
SCDTowaway 417
ScheduledExtensions 110
Score 437
SCSFatalities 414
SCSInjuries 414
SCSTowaway 414
SCSYear 414
SDIDate 424
SDIDriverDOB 424
SDIState 424
SDVOutOfService 427
SDVUnitType 427
SDVViolation 426

SeatLocation1 38
SeatLocation2 39
SeatOrientation 342
SeatPerformance 343
SeatRow1 38
SeatRow2 39
SeatType 342
SelfInducedIllegal 105
SelfInducedOther 106
SEP 422
Series 240
ShippingDeadline 104
ShortNoticeTrips 112
ShoulderType 168
ShoulderWidth 168
SideTapeCond 474
SideTapePeel 476
SightDistance 191
SightImpaired 329
SightLine 92
SightLineDistance 169
SightLineRestriction 169
SightRestricted 329
Signage 161
SignsMissing 193
SISTotal 431
SleepApnea 138
SleeperBerth 441
SlickSurface 196
Sloshing 58
Smoke 203
SocialSchedule 95
SparseTieDowns 57
Speeding 115
SpeedingBehavior 122
STACategory 438
STADate 437
StateGovernment 410
Status 408
SteerableAxles 473
SteeringWheelProblem 190
StopRequired 93
Stratum 174
StreetAddress 147
StrenuousNonWork 138
StrenuousRecreation 138
StrokeType 49
Subject 141
Summary 72, 74
SurfaceCondition 166
SurfaceDefect 167
SuspensionFrameDeficiency 189
SwitchStatus 42
SwitchType 41

T

Tailgating 115
TailgatingBehavior 123
TankCapacity 471
TankFailure 59
TankLoad 471
TestDelay 99
TestResult 128
TestSource 98
TEXConfiguration 445
TEXEmptyWeight 443
TEXSpeed 442
TEXTotalLength 445
TimeOfDeath 354
TimeStopped 93
TINDisposition 465
TINOutOfService 465
TINPosition 451
TINViolationCode 451
TireDeficiency 186
TireFailure 184
TotalCrashes 250
TOTALGVWR 444
TotalOOS 425
TotalViolations 425
TowingUnitProblem 189
Tracking 143
TrackPosition 343
Traffic 401
TrafficControl 163
TrafficDensity 107
TrafficSpeed 107
TrailerCount 443
Transmission 492
TransmissionFailure 185
Travellanes 161
Treatment 76
TRN 422
TruckCount 71
TruckExterior Data Set 440
TruckInspection Data Set 451
TruckUnits Data Set 466
TUNBodyType 466
TUNCargoWeight 469
TUNEmptyWeight 469
TUNPosition 466
TUNSpillage 472
TUNTtotalLength 470
TUNUnitType 466
TUNVIN 468

U

UMO 422
UnderrideTapePeel 475

Undertaking 120
UnderWater 197
UnitNumber 426
UnitsTransfused 356
UNK 422
Unknown 412
UnknownCause 60
UnknownFactor 97
UnknownVision 135
UnkTypeCrashes 251
UnpaidLoading 113
UnscheduledExtensions 110
UnspecifiedExternal 148
Upset 100
USMAIL 410

V

VariableCompensation 113
VehicleCount 71
VehicleDefectCount 182
VehicleDisposition 498
VehicleEvents Data Set 478
VehicleExterior Data Set 486
VehicleInspections 429
VehicleLightingDeficiency 188
VehicleLoad 108
VehicleNumber 17
VehicleObscured 193
VehicleOutOfService 429
VehicleOutOfServicePerc 429
VehicleOverweight 187
VehicleSEA 438
VehicleState 401
VehicleType 243
VehicleViolationsAverage 429
VEXBodyType 486
VEXCargoSource 490
VEXCargoWeight 489
VEXCurbWeight 496
VEXInspectionDate 491
VEXSpecialUse 490
VEXVehicleClass 488
VEXVIN 490
VEXWeightSource 489
VINBodyType 240
VINMake 239
VINModel 239
VINWeight 243
VINYear 240
ViolationType 464
ViolDesc 323
ViolDescription 91

W

Waiver 254
WashedOut 197
WeakTieDowns 57
Weather 402
WeatherCount 198
Weaving 123
WeekAverage 153
WeekLongest 152
WeekShortest 153
Wheelbase 495
WheelConfig 243

WhileCount 302
WindGust 200
WorkDaysLost 354
WorkFatigueCount 109
WorkPressureCount 103
Wrong Way 121
WrongTurnLane 120
WZE 423

Z

Zip Code 248

Appendix A: LTCCS Sampling and Analytical Issues

Sample Design

The selection of crashes for the LTCCS was accomplished in two stages, using the infrastructure of the National Automotive Sampling System (NASS) Crashworthiness Data System (CDS). The first stage is the selection of geographic areas called primary sampling units (PSUs). The United States has been divided into 1,195 PSUs where each PSU is comprised on a large city, a large county, or a group of counties. The PSUs are grouped into 12 categories or strata described by geographic region (northeast, midwest, south, west) and degree of population (central city, large county, and group of counties). PSUs were selected for the sample in 1986 based on probabilities proportional to the number of fatal and injury crashes in that PSU in 1983. The more crashes in a PSU, the greater the likelihood that PSU would be included in the sample. The four geographic regions are:

Northeast

New Jersey – Ocean County
New York – Kings County (Brooklyn)
New York – Ulster County
Pennsylvania – Allegheny County (except Pittsburgh)
Pennsylvania – Montgomery County
Pennsylvania – Philadelphia

Midwest

Illinois – Chicago
Indiana – Lake County
Michigan – Genesee County
Michigan – Muskegon County
Michigan – Washtenaw County
Nebraska – Douglas County

South

Alabama – Bibb and Tuscaloosa Counties
Florida – Fort Lauderdale and Hollywood
Maryland – Charles and Prince George's Counties
North Carolina – Wake County
Tennessee – Knox County
Texas – Dallas

West

Arizona – Gila, Graham, and Greenlee Counties
Arizona – Yuma and La Paz Counties
California – Los Angeles
Colorado – Gilpin and Jefferson Counties
Washington – King County (except Seattle)
Washington – Seattle

In the second stage, researchers were notified of truck crashes within their PSU. To qualify for the LTCCS, a crash had to involve a large truck and at least one fatality that could be classified

as “K,” or at least one injury that could be classified as “A” or “B” on the KABCOU scale defined as:

- K = Killed
- A = Incapacitating Injury
- B= Non-Incapacitating Injury
- C= Possible Injury
- O=No Injury
- U = Unknown

In most PSUs the goal was to research all qualifying crashes. However, due to notification difficulties the crashes sampled were in reality a subset of the crashes occurring in the PSU. The difference is accounted for in the sampling weights. Also, researchers sometimes responded to crashes that didn't qualify for the nationally representative sample. If such cases were researched, they remain in the LTCCS files for anecdotal analysis with weights of zero (see *Sampling Weights*).

Sampling Weights

Each LTCCS case has a value in the variable RATWEIGHT (“Ratio Weight”). This variable gives the statistical sampling weight of the case for national representation. RATWEIGHT should be used as the weighting variable in all statistical analyses.

The LTCCS case weights sum to NHTSA's NASS General Estimates System (GES) estimate of in-transport large truck crashes of maximum injury severity K, A or B nationwide from April 1, 2001 to December 31, 2003 inclusive. The GES was used because it covers all types of crashes regardless of vehicle type. The CDS focuses only on those crashes in which at least one passenger vehicle was towed due to damage.

In each PSU, within-PSU weights were derived as the ratio of qualifying GES cases listed during the period of the study to qualifying sampled LTCCS cases in the PSU over the entire period of the study. The resulting weights were then multiplied by the CDS PSU weight (the inverse of the PSU probability of selection) for the respective CDS PSUs. Use of the GES PSU weights would not have been valid as PSU weights because the GES has 60 PSUs whereas the truck study was only performed only in the 24 CDS PSUs.

In a final step, the weights resulting from the above steps were post-stratified to GES national estimates by PSU region and **researched** maximum injury severity (see below). This was conducted by applying to the unadjusted weight a ratio equal to the ratio of the GES estimate of the number of qualifying crashes to the unadjusted LTCCS estimate of the number of qualifying crashes by region and researched severity. The 24 CDS PSUs are evenly distributed among four NASS geographic regions of the United States, so that each region contains six PSUs. The post-stratification was applied to remove biases that could occur toward higher injury levels due to the notification process.

Weighted Injury Severity

The LTCCS case weights sum by maximum injury severity to the GES estimates by maximum injury severity **if and only if** the following variables are used for maximum severity:

Crash file	CRASHRESsevCode
General Vehicle File	GVERESsevCode
NonMotorists file	ANMRESsevCode

Explanation

Each LTCCS case contains two different variables assessing the showing the maximum injury severity that was recorded on the PAR for the case. However, the truck cases were weighted to the GES estimate of similar cases nationwide. In the GES, coders overrule the PAR severity if the PAR narrative disagrees with the PAR severity. Therefore, a similar coding procedure was undertaken for the truck cases. Experienced NASS injury coders reviewed each vehicle narrative and occupant injury coding for each vehicle in each truck case, and recorded the maximum injury level by vehicle. The coders also reviewed all non-motorist injuries. If initial reviews were not in agreement, the case was re-examined until consensus was reached. If no information was available except the PAR assessment, the PAR assessment was migrated into the researched assessment.

The results of the researched severity assessment were coded into the variables GVERESsevCode at the vehicle level and ANMRESsevCode for non-motorists. The crash level CRASHRESsevCode was derived from GVERESsevCode and ANMRESsevCode by taking the highest researched severity in a crash in either the GeneralVehicle or NonMotorists file.

Cases of Weight Zero

Of 1070 truck cases in the files, 963 have weights greater than zero. These 963 are the nationally representative sample of in-transport large truck cases with maximum injury severity K, A, or B occurring between April 1, 2001 and December 31, 2003. LTCCS cases not belonging to that universe of cases have weights of zero. Zero-weight cases have **not** been removed from the truck database so that may be available for clinical analysis and anecdotal data. However, they should not be included in analyses for national representation. Note that in any software package with a weight statement, using the weighted data will result in omission of any cases with weight zero. Zero-weight cases fall into at least one of the following categories:

Crashes Occurring Before April 1, 2001

These cases are considered pilot cases and do not occur in every PSU. During this time, procedures were being tested and finalized. Seventy-five cases fall into this category.

Crashes Where Maximum Researched Injury Severity Is Not K, A, Or B

These cases are not part of the universe represented by the weighted cases. These cases include those where the maximum researched injury severity was C (5 cases), O (11 cases), U (1 case), or where the only non-C/O/U injury was a fatality ruled as occurring prior to the crash (three cases). To weight these cases to GES cases of the same maximum injury level would change the universe of the weighted LTCCS, and would also be impractical given their very small sample sizes.

Crashes Where The Only Involved Large Truck Was Not In Transport

Crashes where the only involved large truck was not in transport (for instance parked on shoulder) are not part of the universe represented by the weighted cases. Twelve non-pilot LTCCS cases fall into this category. Their case ID (variable name CASEID) numbers are: 207003882, 333006634, 333006859, 806004774, 806005979, 807005027, 808004521, 811005122, 812004811, 816005021, 817005068 and 821003827.

Analysis Issues

Standard Errors

The LTCCS employed a complex sample design involving stages of sampling. Therefore, statistical analyses involving variances or standard errors (or procedures that use them, such as hypothesis testing and confidence intervals) should be conducted using a software product that can take the sampling stages into account, such as RTI's Survey Data Analysis (SUDAAN). The nesting variables to use in such an analysis are PSUSTRATA and PSU. The weight variable is

RATWEIGHT. Using regular SAS procedures will give standard errors that treat the sample as a simple random sample and are likely to be underestimated.

Time Period

Due to the small sample size, it is strongly recommended that the truck sample be used as a whole rather than broken down into years, months, weeks, days of the week or time of day. Estimates or trends based on years, months, weeks, days of the week or time of day will not be valid.

Injury Severity

Weighted and unweighted counts for maximum injury severity as measured by PAR vs. researched assessment will not necessarily match. The researched severity assessments – CRASHRESsevCode, GVERESsevCode and ANMRESsevCode - should be used for any weighted analysis involving severity. The PAR severity variables (CrashPARsevCode, GVEPARsevCode, ANMPARsevCode) should not be used for weighted analyses involving severity.