

Locomotive Certification Data Requirements									
Note: This list was developed from the FMPPro certification template.									
Data element number	Data Element Name		Column Name	Data element definition including permitted values	Format (max length, data type (A/N/D))	Choices/Sample Values	Collected from manufacturer?	Optional?	Comments
General Information									
1	manufacturer	manufacturer	MFR_NAME	Enter the full legal name of the U.S. manufacturer, U.S. U.S. importer, or U.S. representative seeking an EPA Certificate of Conformity and/or California ARB Executive Order (also referred to as the certificate holder). This is the individual or entity engaged in the manufacturing or assembling of freshly manufactured locomotives or freshly manufactured locomotive engines; or the importing of locomotives or locomotive engines originally manufactured on or after Jan. 1, 1973 and not remanufactured. (Note for internal use: This field won't be filled in by the mfr once the mfr code system is implemented.)	A65	CSX Transportation Inc.	yes	no	The manufacturer list could be a pull down menu.
2			MFR_CODE	Three character code assigned by EPA to this manufacturer.					Taken care of by CDX
3	engine_family	engine family	ENG_FAM	EPA Engine family name. 12 characters. Enter the 12-character engine family name for this application using EPA's specified engine family naming convention for the applicable model year. An engine family name is required for all submissions	A12	4CSXK064SEC2	yes	no	1-Should not be blank. 2- Should be a 12 digit family name. 3-the first digit should match the MY code. 4-2nd thru 5th position should be the manuf. Code
4	mfr_family_name	mfr family name	ENG_FAM_MFR	The manufacturer's engine family name.	A25	M234	yes	no	
5	model_year	model year	MODEL_YEAR	The model year of the engine family for certification purposes. The entered model year must be consistent with the first character of the engine family name.	N(4,0)	2005 - 2020	yes	no	The first position of the engine family should match the model year
6	certification_type	cert type	CERT_TYPE	Indicate whether certification is being sought for a locomotive or a locomotive engine.	A3	1. Locomotive (LOC), 2. Engine for Locomotive (ENG)	yes	no	
7	locomotive_category	category	CATEGORY	The type of locomotive engine family being certified. Fresh or Remanufactured. A freshly manufactured engine contains fewer than 25 percent previously used parts (weighted by the dollar value of the parts.) Remanufacture means to 1) replace, or inspect and qualify, each and every power assembly; 2) upgrade; 3) convert to a different fuel; or 4) install a remanufactured or freshly manufactured engine into a previously used locomotive.	A1	1. Fresh (F), 2. Remanufactured (R)	yes	no	CFR 92.2
8	service_class	locomotive type	SERV_CLASS	The type of service the engine will be used for.	A40	National Freight Line Haul (NFLH), National Freight Switch (NFSW), Local and Regional Freight (LRFR), Passenger (PASS).	yes	no	If switch, check that max hp is 2300 hp or less. From Locomotive Technical Highlights, EPA 420-F-97-051.
9	tier	tier	TIER	A designation for the standard applicable to the particular family being certified.	N(1,0)	0, 1, 2, 3	yes	no	
10	carryover	Is application carryover?	CARRYOVER	An indication (y/n) of whether the data being used as the basis for the application is new data collected for this family or old data collected for a previous version of this family, or for another previous family.	A1	Yes (Y) or No (N)	yes	no	Must fill in CO_FROM if this is yes.

11	carried_over_from	previous EF name	CO_FROM	The engine family name of the previously certified engine family from which test results are being borrowed for the purpose of certifying this family.	A12	3CSXK064SEC2	yes	no	
12	process_code	process code	PROCESS_CODE	The type of application being submitted.	A!	New Submission (N), FEL Change (F), Running Change (R), or Correction (C)	yes	no	Some of these choices may be deleted in the new system because of the manner in which applications can be modified
13	form_epa_fee	date fee paid	DATE_FEE_PAID	The date the manufacturer paid the certification fee.	D	1/1/2005	yes	no	This info should eventually come directly from the fees database
	cert_contact	cert contact name/address/phone		The first name, last name, street, city, state, zip, phone, fax, e-mail address and fax for the manufacturer's certification contact.			yes	no	These will be split into separate data elements and handled by CDX.
15	plant_location	plant location	PLANT_STREET1	Street address of manufacturing plant where selective enforcement audit would take place.	A40		yes	no	
16	plant_location	plant location	PLANT_STREET2	Second line of street address of manufacturing plant where selective enforcement audit would take place, if needed.	A40		yes	no	
17	plant_location	plant location	PLANT_CITY	City of manufacturing plant where selective enforcement audit would take place.	A20		yes	no	
18	plant_location	plant location	PLANT_STATE	State of manufacturing plant where selective enforcement audit would take place.	A2		yes	no	
19	plant_location	plant location	PLANT_MAILCODE	Mail code of manufacturing plant where selective enforcement audit would take place.	A10		yes	no	
20	plant_contact	plant contact	PLANT_CONT_FNAME	First name of the person to be contacted concerning matters at the manufacturing plant	A20		yes	no	
21	plant_contact	plant contact	PLANT_CONT_LNAME	Last name of the person to be contacted concerning matters at the manufacturing plant	A20		yes	no	
22	plant_contact	plant contact	PLANT_CONT_POSITION	Position name of the person to be contacted concerning matters at the manufacturing plant	A20	Plant Manager	yes	no	
23	plant_contact	plant contact	PLANT_CONT_PHONE	Telephone number of the person to be contacted concerning matters at the manufacturing plant	A20		yes	no	
	<b>Engine Family Characteristics</b>								
25	displacement	Eng_Displacement	ENG_DISPL	The total volume swept by the piston stroke, times the number of cylinders.	N(4,1)		yes	no	
26	displacement_units	Eng_Displacement_Units	ENG_DISPL_UNITS	The units used for engine displacement. Cubic inches or Liters	A1	1. Cubic inches (C), 2. Liters (L)	yes	no	
27	engine_config	shape of engine block	ENG_CONFIG	A description of the engine block. A code consisting of a letter identifying the block shape, and an integer identifying the number of cylinders.	A5	V-8, V-10, V-12, V-14, V-16, V-18, V-20, V-22, V-4, I-8, I-10, I-12, I-14, I-16, I-18, I-20, I-22, I-24	yes	no	
28			ENG_CONFIG_ALT	If the correct engine configuration is not provided as a choice describe the engine configuration here.	A30	L-4	yes	no	Should only be displayed and filled out if other is selected for ENG_CONFIG
29	emission_control_system	emission control system	AFTERTREAT	Indicate whether exhaust aftertreatment is used.	A1	Yes (Y) or No (N)	yes	no	If yes, then multiplicative DF must be used.
30		emission control system	AT_TYPE	Select the type of aftertreatment on this engine family.	A20	Permitted values: oxidation catalyst, reduction catalyst, PM catalyst, Diesel oxidation catalyst, selective catalytic reduction, oxidation/reduction catalyst, PM trap, other	yes	no	More than one may be selected. Any other choices needed?
31		emission control system	AT_TYPE_ALT	If the necessary aftertreatment system is not provided as a choice describe the aftertreatment system here.	A30		yes	no	Should only be displayed if other is selected for AT_TYPE.
32		emission control system	SPL	Indicate whether a smoke puff limiter is used on this engine family.	A1	Yes (Y) or No (N)	yes	no	
33		emission control system	EGR	An indication of whether this engine is equipped with Exhaust Gas Recirculation. Permitted values: Yes, No.	A1	Yes (Y) or No (N)	yes	no	

34		injector type	INJECTOR_TYPE	Indicate whether the injectors are electrically or hydraulically actuated.	A1	1. Electrical (E), 2. Hydraulic (H)	yes	no	
35		timing	TIMING_CONTROL	Indicate whether injection timing is controlled mechanically or by an electronic control unit.	A1	1. Electronic (E), 2. Mechanical (M)	yes	no	
36		feedback system	FEEDBACK_SYSTEM	Indicate whether parameters are sensed in or around the engine for the purpose of controlling the ignition timing, pulse width, EGR flow, or other characteristics of the engine.	A1	Yes (Y) or No (N)	yes	no	
37	projected_sales	sales estimate	PROJ_SALES	The estimate of sales for the family .	N(3,0)		yes	no	
38	begin_production	estimated production start date	EST_SOP	The date the manufacturer expects to start building engines.	D		yes	no	
39	end_production	estimated production end date	EST_EOP	The date the manufacturer expects to stop building engines.	D		yes	no	
40	intro_into_commerce	estimated intro-to-commerce date	EST_COMMERCE	The date the manufacturer expects to introduce the engines into commerce.	D		yes	no	
41	fuel_type	fuel type	FUEL_TYPE	Indicate the type of fuel burned in the engine.	A15	Diesel, Compressed Natural Gas, Liquefied Natural Gas, Other	yes	no	
42			FUEL_TYPE_ALT	If the necessary fuel type is not provided as a choice describe the fuel type here.	A30		yes	no	Should only be displayed if other is selected for FUEL_TYPE.
43	fuel_system_type	fuel system type	FUEL_SYST_TYPE	The type of fuel injection used.	A1	1. Direct Injection (D), 2. Other (O)	yes	no	
44			FUEL_SYST_TYPE_ALT	If the necessary fuel system type is not provided as a choice describe the fuel system type here.	A30		yes	no	Should only be displayed if other is selected for FUEL_SYST_TYPE.
45	gaseous additive df	additive or multiplicative DF	DF_TYPE	An indication of how the Deterioration Factor (DF) is applied to the results.	A1	1. Additive (A), 2. Multiplicative (M)	yes	no	If exhaust aftertreatment is installed then this should be multiplicative. Multiplicative DFs must be rounded to three decimal places. Additive DFs must be rounded to a minimum of two decimal places (92.9).
46	aspiration	aspiration type	ASPIRATION	Indicate the type of engine aspiration.	A30	Permitted values: natural, roots blower, turbocharged (no aftercooling), turbocharged air-to-water, turbocharged air-to-air, supercharged air-to-air, supercharged air-to-water	yes	no	
47			ASPIRATION_ALT	If the necessary aspiration type is not provided as a choice describe the aspiration type here.	A30		yes	y	Should only be displayed if other is selected for ASPIRATION.
48	fel_switch_pm	PM_FEL_Switch	PM_FEL_SW	The Family Emission Limit (FEL) for PM for a switch locomotive in g/bhp-hr.	N(3,2)		yes	no	
49	fel_LH_pm	PM_FEL_LH	PM_FEL_LH	The Family Emission Limit (FEL) for PM for a line haul locomotive in g/bhp-hr.	N(3,2)		yes	no	
50	fel_switch_nox	NOX_FEL_Switch	NOX_FEL_SW	The Family Emission Limit (FEL) for NOx for a switch locomotive in g/bhp-hr.	N(3,1)		yes	no	
51	fel_LH_nox	NOX_FEL_LH	NOX_FEL_LH	The Family Emission Limit (FEL) for NOx for a line haul locomotive in g/bhp-hr.	N(3,1)		yes	no	
52	alternate_co\pm	CO_Alt_Std	CO_Alt_Std	An indication (y/n) of whether the manufacturer is certifying to alternate Carbon Monoxide (CO) standards. CFR 92.8(a)(3)	A1	Yes (Y) or No (N)	yes	no	
53		PM_Alt_Std	PM_Alt_Std	An indication (y/n) of whether the manufacturer is certifying to alternate PM standards. CFR 92.8(a)(3)	A1	Yes (Y) or No (N)	yes	no	
	<b>AECDs</b>								User should be able to enter as many AECDs as needed.
55	Aux_Emiss_Cont_Dev	AECD_Description	AECD_NAME	The name of this Auxilliary Emission Control Device.	A40		yes	no	AECD Name, Sensed Parameters, Controlled Parameters, and Reduced Effectiveness go together to describe one AECD. User should be able to enter as many AECDs as needed.

56	AECD_Effectiveness_Reduction	AECD_Effect_Reduction	AECD_EFFECT	Indicate yes if this AECD reduces the effectiveness of the emission control system, no if it does not.	A1	Yes (Y) or No (N)	yes	no	
57	AECD_Parameter_Sensed	AECD_Sensed_Parameter	AECD_SENS_PARA	The name of a parameter sensed and used as inputs to this AECD.	A20		yes	no	Allow entry of as many as needed.
58	AECD_Parameter_Controlled	AECD_Controlled_Parameter	AECD_CONT_PARA	The names of parameters controlled by the AECD above. (separate by commas)	A20		yes	no	Allow entry of as many as needed.
<b>Technical Description</b>									
60	tech_description	technical description	TECH_DESC	Describe the design and operation of the engine. Include such topics as combustion cycle, engine control system, emission control system, fuel injection system, engine and air cooling systems, bore and stroke dimensions, intake and exhaust event timing, intake and exhaust port locations and sizes, combustion chamber configuration, piston ring description, method of air aspiration and approximate boost pressure, air inlet system, and lubrication system. If this is a locomotive, include a description of the basic locomotive design. If this is an engine, include a description of the locomotive designs in which the engines are to be used.	A6000		yes	no	
61	container field for maintenance instructions	container for maintenance instructions	MAINT_INST	Enter the maintenance instructions for the engine here or attach a copy of the maintenance instructions as a separate file.	A5000		yes	no	
62	ADJ_parameters	ADJ_Parameter	ADJ_PARA_NAME	Name of this adjustable parameter, which is something that can be adjusted on an engine such as screws that control engine timing or fuel flow.	A25	Basic injection timing	yes	no	Form should allow entry of as many adjustable parameters as needed. Name, range, and stops go together to describe one adjustable parameter.
63	Adj_range	Adj_Range	ADJ_PARA_RANGE_INT	A description of the intended range applicable to this adjustable parameter. Example: 2 degrees	A25		yes	no	
64	Adj_para_tamper_resist	Adjustment_Lock_Out	ADJ_PARA_STOPS	Describe the anti-tampering method used for this adjustable parameter. Include a description of why this method is the most effective means of preventing adjustment.	A50	e.g., Computer password only known to manufacturer	yes	no	
<b>Models Information</b>									
66	eng_model	engine model	ENG_MODEL	The designation used to identify the engine model used for this configuration.	A20		yes	no	Particular engine model and locomotive model combination make a unique combination and identify a particular configuration.
67	locomotive_model	locomotive model	LOCO_MODEL	The designation used to identify the locomotive model for this configuration.	A20		yes	no	Particular engine model and locomotive model combination make a unique combination and identify a particular configuration.
68	max_power	rated power	HP_MAX	The maximum brake power (rated power) of this particular model configuration, in horsepower.	N(4,0)		yes	no	
69	rpm_at_max_power	rated speed	SPEED_HP_MAX	The rated speed at maximum power of this model.	N(4,0)	Values should be lower than 5000	yes	no	
70	fuel_rate_at_max_power	max fuel rate pounds per hour	FUEL_RATE_MAX_LBS	The fuel rate in pounds per hour at Rated Power.	N(4,0)	Values should be lower than 3000	yes	no	
71	fuel rate cube mm per str	max fuel rate cubic mm per str	FUEL_RATE_MAX_MM	The fuel rate in cubic millimeters per stroke at Rated Power.	N(5,1)	Values should be lower than 4000	yes	no	
72	useful life megawatts loc 1	useful life in mW	USEFUL_LIFE_MW	The amount of energy in megawatts corresponding to the useful life of the family which is the period during which the locomotive engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured.	N(5,0)		yes	no	The manufacturer must fill out useful life in 1. megawatts or miles, and 2. years. Additionally, the form must allow him to enter additional useful lives in the same form.

73	useful life miles loc 1	useful life in miles	USEFUL_LIFE_MILES	The distance in miles corresponding to the useful life of the family which is the period during which the locomotive engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured.	N(6,0)		yes	no	The manufacturer must fill out useful life in 1. megawatts or miles, and 2. years. Additionally, the form must allow him to enter additional useful lives in the same form.
74	useful life years corresponding to miles loc 1	useful life in years for the miles number in D.E. 37.	USEFUL_LIFE_YRS	The amount of time in years corresponding to the useful life in the field above.	N(2,0)		yes	no	Must be >= 10 years (92.9). The manufacturer must fill out useful life in 1. megawatts or miles, and 2. years. Additionally, the form must allow him to enter additional useful lives in the same form.
	<b>Test information</b>								Form should allow additional sets of test data.
76	loc model	locomotive model - test	LOCO_MODEL_TEST	The designation used to identify the locomotive model used for the cert test.	A20		yes	no	Allow selection from the engine and locomotive models entered earlier.
77	engine model	engine model -test	ENG_MODEL_TEST	The designation used to identify the engine model used for the cert test.	A20		yes	no	
78	test_data_set	data set number	DATA_SET_NUMBER	The manufacturer assigned unique designation for the test data.	A12		yes	no	
79	locomotive_ID	locomotive ID	LOCO_ID	An identification number for the specific locomotive used for the test.	A20		yes	no	
80			ENG_SERIAL	The serial number of the specific locomotive engine used for the test.	A20		yes	no	
81			ENG_TIME	Indicate the number of hours of operation this test engine had accumulated prior to beginning the testing.	N(4,0)	1200	yes	no	
82	test_procedure	test procedure	TEST_PROCEDURE_TYPE	The test procedure type.	A1	Permitted values: Part 92 (9), Special (S), Alternative (A)	yes	no	
83	cert_fuel	cert fuel	FUEL_TEST	The type of fuel used for the cert test. Permissible values: 92.113, other	A1	Permissible values: 92.113 (9), Other (O)	yes	no	
84	test_date	test date	TEST_DATE	The date the cert test was run.	D		yes	no	
85	fa9_rated power	power rating	HP_RATED	The power rating in Horsepower for the test engine.	N(5,0)		yes	no	
86	fa9_rated speed	rated speed	SPEED_RATED	The Rated Speed of the test engine.	N(4,0)		yes	no	
87	LI_THC	THC_LI	THC_LI	The Total Hydrocarbon (THC) emissions during the Low Idle (LI) mode of the test in g/bhp-hr.	N(4,2)		yes	no	
88	LI_NMHC	NMHC_LI	NMHC_LI	The Non-Methane Hydrocarbon (NMHC) emissions during the LI mode of the test in g/bhp-hr.	N(4,2)		yes	no	
89	LI_Nox	NOX_LI	NOX_LI	The Oxides of Nitrogen (NOx) emissions during the LI mode of the test in g/bhp-hr.	N(4,2)		yes	no	
90	LI_CO	CO_LI	CO_LI	The Carbon Monoxide (CO) emissions during the LI mode of the test in g/bhp-hr.	N(4,2)		yes	no	
91	LI_PM	PM_LI	PM_LI	The Particulate Matter (PM) emissions during the LI mode of the test in g/bhp-hr.	N(4,2)		yes	no	
92	low idle THCE	THCE_LI	THCE_LI	The Total Hydrocarbon Equivalent (THCE) emissions during the LI mode of the test in g/bhp-hr.	N(4,2)		yes	no	
93	LI_HP	HP_LI	HP_LI	The power in horsepower for the LI mode of the test.	N(6,1)		yes	no	
94	LI_RPM	RPM_LI	RPM_LI	The engine speed during the LI mode of the test.	N(6,2)		yes	no	
95	LI_FR	FR_LI	FR_LI	The fuel rate during the LI mode of the test in pounds/hour.	N(5,1)		yes	no	
96	NI_THC	THC_NI	THC_NI	The THC emissions during the Normal Idle (NI) mode of the test, in g/bhp-hr.	N(4,2)		yes	no	
97	NI_NMHC	NMHC_NI	NMHC_NI	The NMHC emissions during the Normal Idle (NI) mode of the test, in g/bhp-hr.	N(4,2)		yes	no	
98	NI_Nox	NOX_NI	NOX_NI	The NOx emissions during the NI mode of the test, in g/bhp-hr.	N(4,2)		yes	no	

99	NI_CO	CO_NI	CO_NI	The CO emissions during the NI mode of the test, in g/bhp-hr.	N(4,2)	yes	no
100	NI_PM	PM_NI	PM_NI	The PM emissions during the NI mode of the test, in g/bhp-hr.	N(4,2)	yes	no
101	NI_THCE	THCE_NI	THCE_NI	The THCE emissions during the NI mode of the test, in g/bhp-hr.	N(4,2)	yes	no
102	NI_HP	HP_NI	HP_NI	The power in horsepower for the NI mode of the test.	N(6,1)	yes	no
103	NI_RPM	RPM_NI	RPM_NI	The engine speed during the NI mode of the test.	N(6,2)	yes	no
104	NI_FR	FR_NI	FR_NI	The fuel rate during the NI mode of the test, in pounds/hour.	N(5,1)	yes	no
105	Dyn_Brk_THC	THC_DB	THC_DB	The THC emissions during the Dynamic Brake (DB) mode of the test, in g/bhp-hr.	N(4,2)	yes	no
106	Dyn_Brk_NMHC	NMHC_DB	NMHC_DB	The NMHC emissions during the Dynamic Brake (DB) mode of the test, in g/bhp-hr.	N(4,2)	yes	no
107	Dyn_Brk_Nox	NOX_DB	NOX_DB	The NOx emissions during the Dynamic Brake (DB) mode of the test, in g/bhp-hr.	N(4,2)	yes	no
108	Dyn_Brk_CO	CO_DB	CO_DB	The CO emissions during the Dynamic Brake (DB) mode of the test, in g/bhp-hr.	N(4,2)	yes	no
109	Dyn_Brk_PM	PM_DB	PM_DB	The PM emissions during the Dynamic Brake (DB) mode of the test, in g/bhp-hr.	N(4,2)	yes	no
110	Dyn_Brk_THCE	THCE_DB	THCE_DB	The THCE emissions during the Dynamic Brake (DB) mode of the test, in g/bhp-hr.	N(4,2)	yes	no
111	Dyn_Brk_HP	HP_DB	HP_DB	The power in horsepower for the Dynamic Brake (DB) mode of the test.	N(6,1)	yes	no
112	Dyn_Brk_RPM	RPM_DB	RPM_DB	The engine speed during the Dynamic Brake (DB) mode of the test.	N(6,2)	yes	no
113	Dyn_Brk_FR	FR_DB	FR_DB	The fuel rate during the Dynamic Brake (DB) mode of the test.	N(5,1)	yes	no
114	Notch1_THC	THC EMISS@NOTCH1	THC_N1	The THC emissions during Notch 1 of the test, in g/bhp-hr.	N(4,2)	yes	no
115	Notch1_NMHC	NMHC EMISS@NOTCH1	NMHC_N1	The NMHC emissions during Notch 1 of the test, in g/bhp-hr.	N(4,2)	yes	no
116	Notch1_Nox	NOX EMISS@NOTCH1	NOX_N1	The NOx emissions during Notch 1 of the test, in g/bhp-hr.	N(4,2)	yes	no
117	Notch1_CO	CO EMISS@NOTCH1	CO_N1	The CO emissions during Notch 1 of the test, in g/bhp-hr.	N(4,2)	yes	no
118	Notch1_PM	PM EMISS@NOTCH1	PM_N1	The PM emissions during Notch 1 of the test, in g/bhp-hr.	N(4,2)	yes	no
119	Notch1_THCE	THCE EMISS@NOTCH1	THCE_N1	The THCE emissions during Notch 1 of the test, in g/bhp-hr.	N(4,2)	yes	no
120	Notch1_HP	HP @NOTCH1	HP_N1	The power in horsepower for Notch 1 of the test.	N(6,1)	yes	no
121	Notch1_RPM	RPM @NOTCH1	RPM_N1	The engine speed during Notch 1 of the test.	N(6,2)	yes	no
122	Notch1_FR	FR @NOTCH1	FR_N1	The fuel rate during Notch 1 of the test, in pounds/hour.	N(5,1)	yes	no
123	Notch2_THC	THC EMISS@NOTCH2	THC_N2	The THC emissions during Notch 2 of the test, in g/bhp-hr.	N(4,2)	yes	no
124	Notch2_NMHC	NMHC EMISS@NOTCH2	NMHC_N2	The NMHC emissions during Notch 2 of the test, in g/bhp-hr.	N(4,2)	yes	no
125	Notch2_Nox	NOX EMISS@NOTCH2	NOX_N2	The NOx emissions during Notch 2 of the test, in g/bhp-hr.	N(4,2)	yes	no
126	Notch2_CO	CO EMISS@NOTCH2	CO_N2	The CO emissions during Notch 2 of the test, in g/bhp-hr.	N(4,2)	yes	no
127	Notch2_PM	PM EMISS@NOTCH2	PM_N2	The PM emissions during Notch 2 of the test, in g/bhp-hr.	N(4,2)	yes	no
128	Notch2_THCE	THCE EMISS@NOTCH2	THCE_N2	The THCE emissions during Notch 2 of the test, in g/bhp-hr.	N(4,2)	yes	no
129	Notch2_HP	HP @NOTCH2	HP_N2	The power in Horsepower for Notch 2 of the test.	N(6,1)	yes	no

130	Notch2_RPM	RPM @NOTCH2	RPM_N2	The engine speed during Notch 2 of the test.	N(6,2)	yes	no
131	Notch2_FR	FR @NOTCH2	FR_N2	The fuel rate during Notch 2 of the test, in pounds/hour.	N(5,1)	yes	no
132	Notch3_THC	THC EMISS@NOTCH3	THC_N3	The THC emissions during Notch 3 of the test, in g/bhp-hr.	N(4,2)	yes	no
133	Notch3_NMHC	NMHC EMISS@NOTCH3	NMHC_N3	The NMHC emissions during Notch 3 of the test, in g/bhp-hr.	N(4,2)	yes	no
134	Notch3_Nox	NOX EMISS@NOTCH3	NOX_N3	The NOx emissions during Notch 3 of the test, in g/bhp-hr.	N(4,2)	yes	no
135	Notch3_CO	CO EMISS@NOTCH3	CO_N3	The CO emissions during Notch 3 of the test, in g/bhp-hr.	N(4,2)	yes	no
136	Notch3_PM	PM EMISS@NOTCH3	PM_N3	The PM emissions during Notch 3 of the test, in g/bhp-hr.	N(4,2)	yes	no
137	Notch3_THCE	THCE EMISS@NOTCH3	THCE_N3	The THCE emissions during Notch 3 of the test, in g/bhp-hr.	N(4,2)	yes	no
138	Notch3_HP	HP @NOTCH3	HP_N3	The power in Horsepower for Notch 3 of the test.	N(6,1)	yes	no
139	Notch3_RPM	RPM @NOTCH3	RPM_N3	The engine speed during Notch 3 of the test.	N(6,2)	yes	no
140	Notch3_FR	FR @NOTCH3	FR_N3	The fuel rate during Notch 3 of the test, in pounds/hour.	N(5,1)	yes	no
141	Notch4_THC	THC EMISS@NOTCH4	THC_N4	The THC emissions during Notch 4 of the test, in g/bhp-hr.	N(4,2)	yes	no
142	Notch4_NMHC	NMHC EMISS@NOTCH4	NMHC_N4	The NMHC emissions during Notch 4 of the test, in g/bhp-hr.	N(4,2)	yes	no
143	Notch4_Nox	NOX EMISS@NOTCH4	NOX_N4	The NOx emissions during Notch 4 of the test, in g/bhp-hr.	N(4,2)	yes	no
144	Notch4_CO	CO EMISS@NOTCH4	CO_N4	The CO emissions during Notch 4 of the test, in g/bhp-hr.	N(4,2)	yes	no
145	Notch4_PM	PM EMISS@NOTCH4	PM_N4	The PM emissions during Notch 4 of the test, in g/bhp-hr.	N(4,2)	yes	no
146	Notch4_THCE	THCE EMISS@NOTCH4	THCE_N4	The THCE emissions during Notch 4 of the test, in g/bhp-hr.	N(4,2)	yes	no
147	Notch4_HP	HP @NOTCH4	HP_N4	The power in horsepower for Notch 4 of the test.	N(6,1)	yes	no
148	Notch4_RPM	RPM @NOTCH4	RPM_N4	The engine speed during Notch 4 of the test.	N(6,2)	yes	no
149	Notch4_FR	FR @NOTCH4	FR_N4	The fuel rate during Notch 4 of the test, in pounds/hour.	N(5,1)	yes	no
150	Notch5_THC	THC EMISS@NOTCH5	THC_N5	The THC emissions during Notch 5 of the test, in g/bhp-hr.	N(4,2)	yes	no
151	Notch5_NMHC	NMHC EMISS@NOTCH5	NMHC_N5	The NMHC emissions during Notch 5 of the test, in g/bhp-hr.	N(4,2)	yes	no
152	Notch5_Nox	NOX EMISS@NOTCH5	NOX_N5	The NOx emissions during Notch 5 of the test, in g/bhp-hr.	N(4,2)	yes	no
153	Notch5_CO	CO EMISS@NOTCH5	CO_N5	The CO emissions during Notch 5 of the test, in g/bhp-hr.	N(4,2)	yes	no
154	Notch5_PM	PM EMISS@NOTCH5	PM_N5	The PM emissions during Notch 5 of the test, in g/bhp-hr.	N(4,2)	yes	no
155	Notch5_THCE	THCE EMISS@NOTCH5	THCE_N5	The THCE emissions during Notch 5 of the test, in g/bhp-hr.	N(4,2)	yes	no
156	Notch5_HP	HP @NOTCH5	HP_N5	The power in horsepower for Notch 5 of the test.	N(6,1)	yes	no
157	Notch5_RPM	RPM @NOTCH5	RPM_N5	The engine speed during Notch 5 of the test.	N(6,2)	yes	no
158	Notch5_FR	FR @NOTCH5	FR_N5	The fuel rate during Notch 5 of the test, in pounds/hour.	N(5,1)	yes	no
159	Notch6_THC	THC EMISS@NOTCH6	THC_N6	The THC emissions during Notch 6 of the test, in g/bhp-hr.	N(4,2)	yes	no
160	Notch6_NMHC	NMHC EMISS@NOTCH6	NMHC_N6	The NMHC emissions during Notch 6 of the test, in g/bhp-hr.	N(4,2)	yes	no
161	Notch6_Nox	NOX EMISS@NOTCH6	NOX_N6	The NOx emissions during Notch 6 of the test, in g/bhp-hr.	N(4,2)	yes	no

162	Notch6_CO	CO EMISS@NOTCH6	CO_N6	The CO emissions during Notch 6 of the test, in g/bhp-hr.	N(4,2)		yes	no	
163	Notch6_PM	PM EMISS@NOTCH6	PM_N6	The PM emissions during Notch 6 of the test, in g/bhp-hr.	N(4,2)		yes	no	
164	Notch6_THCE	THCE EMISS@NOTCH6	THCE_N6	The THCE emissions during Notch 6 of the test, in g/bhp-hr.	N(4,2)		yes	no	
165	Notch6_HP	HP @NOTCH6	HP_N6	The power in horsepower for Notch 6 of the test.	N(6,1)		yes	no	
166	Notch6_RPM	RPM @NOTCH6	RPM_N6	The engine speed during Notch 6 of the test.	N(6,2)		yes	no	
167	Notch6_FR	FR @NOTCH6	FR_N6	The fuel rate during Notch 6 of the test, in pounds/hour.	N(5,1)		yes	no	
168	Notch7_THC	THC EMISS@NOTCH7	THC_N7	The THC emissions during Notch 7 of the test, in g/bhp-hr.	N(4,2)		yes	no	
169	Notch7_NMHC	NMHC EMISS@NOTCH7	NMHC_N7	The NMHC emissions during Notch 7 of the test, in g/bhp-hr.	N(4,2)		yes	no	
170	Notch7_Nox	NOX EMISS@NOTCH7	NOX_N7	The NOX emissions during Notch 7 of the test, in g/bhp-hr.	N(4,2)		yes	no	
171	Notch7_CO	CO EMISS@NOTCH7	CO_N7	The CO emissions during Notch 7 of the test, in g/bhp-hr.	N(4,2)		yes	no	
172	Notch7_PM	PM EMISS@NOTCH7	PM_N7	The PM emissions during Notch 7 of the test, in g/bhp-hr.	N(4,2)		yes	no	
173	Notch7_THCE	THCE EMISS@NOTCH7	THCE_N7	The THCE emissions during Notch 7 of the test, in g/bhp-hr.	N(4,2)		yes	no	
174	Notch7_HP	HP @NOTCH7	HP_N7	The power in horsepower for Notch 7 of the test.	N(6,1)		yes	no	
175	Notch7_RPM	RPM @NOTCH7	RPM_N7	The engine speed during Notch 7 of the test.	N(6,2)		yes	no	
176	Notch7_FR	FR @NOTCH7	FR_N7	The fuel rate during Notch 7 of the test, in pounds/hour.	N(5,1)		yes	no	
177	Notch8_THC	THC EMISS@NOTCH8	THC_N8	The THC emissions during Notch 8 of the test, in g/bhp-hr.	N(4,2)		yes	no	
178	Notch8_NMHC	NMHC EMISS@NOTCH8	NMHC_N8	The NMHC emissions during Notch 8 of the test, in g/bhp-hr.	N(4,2)		yes	no	
179	Notch8_Nox	NOX EMISS@NOTCH8	NOX_N8	The NOX emissions during Notch 8 of the test, in g/bhp-hr.	N(4,2)		yes	no	
180	Notch8_CO	CO EMISS@NOTCH8	CO_N8	The CO emissions during Notch 8 of the test, in g/bhp-hr.	N(4,2)		yes	no	
181	Notch8_PM	PM EMISS@NOTCH8	PM_N8	The PM emissions during Notch 8 of the test, in g/bhp-hr.	N(4,2)		yes	no	
182	Notch8_THCE	THCE EMISS@NOTCH8	THCE_N8	The THCE emissions during Notch 8 of the test, in g/bhp-hr.	N(4,2)		yes	no	
183	Notch8_HP	HP @NOTCH8	HP_N8	The power in horsepower for Notch 8 of the test.	N(6,1)		yes	no	
184	Notch8_RPM	RPM @NOTCH8	RPM_N8	The engine speed during Notch 8 of the test.	N(6,2)		yes	no	
185	Notch8_FR	FR @NOTCH8	FR_N8	The fuel rate during Notch 8 of the test, in pounds/hour.	N(5,1)		yes	no	
186	cert result thc line haul	THC_Comp_LH	THC_COMP_LH	The composite THC result. This number is calculated by taking the raw test results from above combining them with the Line-haul weighting factors in 92.132, table B132-1. In g/bhp-hr	N(5,3)		yes	no	
187	cert result nmhc line haul	NMHC_Comp_LH	NMHC_COMP_LH	The composite NMHC result. This number is calculated by taking the raw test results from above combining them with the Line-haul weighting factors in 92.132, table B132-1. In g/bhp-hr.	N(5,3)		yes	no	
188	cert result nox line haul	NOX_Comp_LH	NOX_COMP_LH	The composite NOX result. This number is calculated by taking the raw test results from above combining them with the Line-haul weighting factors in 92.132, table B132-1. In g/bhp-hr.	N(5,3)		yes	no	



189	cert result co line haul	CO_Comp_LH	CO_COMP_LH	The composite CO result. This number is calculated by taking the raw test results from above combining them with the Line-haul weighting factors in 92.132, table B132-1. In g/bhp-hr.	N(5,3)		yes	no	
190	cert result pm line haul	PM_Comp_LH	PM_COMP_LH	The composite PM result. This number is calculated by taking the raw test results from above combining them with the Line-haul weighting factors in 92.132, table B132-1. In g/bhp-hr.	N(5,3)		yes	no	
191	cert result thce line haul	THCE_Comp_LH	THCE_COMP_LH	The composite THCE result. This number is calculated by taking the raw test results from above combining them with the Line-haul weighting factors in 92.132, table B132-1. In g/bhp-hr.	N(5,3)		yes	no	
192	cert result thc switch	THC_Comp_SW	THC_COMP_SW	The composite THC result. This number is calculated by taking the raw test results from above combining them with the Switch weighting factors in 92.132, table B132-1. In g/bhp-hr.	N(5,3)		yes	no	
193	cert result nmhc switch	NMHC_Comp_SW	NMHC_COMP_SW	The composite NMHC result. This number is calculated by taking the raw test results from above combining them with the Switch weighting factors in 92.132, table B132-1. In g/bhp-hr.	N(5,3)		yes	no	
194	cert result nox switch	NOX_Comp_SW	NOX_COMP_SW	The composite NOX result. This number is calculated by taking the raw test results from above combining them with the Switch weighting factors in 92.132, table B132-1. In g/bhp-hr.	N(5,3)		yes	no	
195	cert result co switch	CO_Comp_SW	CO_COMP_SW	The composite CO result. This number is calculated by taking the raw test results from above combining them with the Switch weighting factors in 92.132, table B132-1. In g/bhp-hr.	N(5,3)		yes	no	
196	cert result pm switch	PM_Comp_SW	PM_COMP_SW	The composite PM result. This number is calculated by taking the raw test results from above combining them with the Switch weighting factors in 92.132, table B132-1. In g/bhp-hr.	N(5,3)		yes	no	
197	cert result thce switch	THCE_Comp_SW	THCE_COMP_SW	The composite THCE result. This number is calculated by taking the raw test results from above combining them with the Switch weighting factors in 92.132, table B132-1. In g/bhp-hr.	N(5,3)		yes	no	
198	LH_DF_THC	THC_DF_LH	THC_DF_LH	The Deterioration Factor (DF) for THC for a line haul locomotive.	N(4,3)		yes	no	
199	LH_DF_NMHC	NMHC_DF_LH	NMHC_DF_LH	The Deterioration Factor (DF) for NMHC for a line haul locomotive.	N(4,3)		yes	no	
200	LH_DF_NOX	NOX_DF_LH	NOX_DF_LH	The Deterioration Factor (DF) for NOx for a line haul locomotive.	N(4,3)		yes	no	
201	LH_DF_CO	CO_DF_LH	CO_DF_LH	The Deterioration Factor (DF) for CO for a line haul locomotive.	N(4,3)		yes	no	
202	LH_DF_PM	PM_DF_LH	PM_DF_LH	The Deterioration Factor (DF) for PM for a line haul locomotive.	N(4,3)		yes	no	
203	LH_DF_THCE	THCE_DF_LH	THCE_DF_LH	The Deterioration Factor (DF) for THCE for a line haul locomotive.	N(4,3)		yes	no	
204	SW_DF_THC	THC_DF_SW	THC_DF_SW	The Deterioration Factor (DF) for THC for a switch locomotive.	N(4,3)		yes	no	
205	SW_DF_NMHC	NMHC_DF_SW	NMHC_DF_SW	The Deterioration Factor (DF) for NMHC for a switch locomotive.	N(4,3)		yes	no	
206	SW_DF_NOX	NOX_DF_SW	NOX_DF_SW	The Deterioration Factor (DF) for NOx for a switch locomotive.	N(4,3)		yes	no	
207	SW_DF_CO	CO_DF_SW	CO_DF_SW	The Deterioration Factor (DF) for CO for a switch locomotive.	N(4,3)		yes	no	
208	SW_DF_PM	PM_DF_SW	PM_DF_SW	The Deterioration Factor (DF) for PM for a switch locomotive.	N(4,3)		yes	no	

209	SW_DF_THCE	THCE_DF_SW	THCE_DF_SW	The Deterioration Factor (DF) for THCE for a switch locomotive.	N(4,3)		yes	no	
210	LH_Crt_Lv_THC	THC_CL_LH	THC_CL_LH	The final, certification level, result for THC for a line haul locomotive. Calculated by applying the THC deterioration factor to the THC Line-haul composite results. In g/bhp-hr.	N(4,2)		yes	no	
211	LH_Crt_Lv_NMHC	NMHC_CL_LH	NMHC_CL_LH	The final, certification level, result for NMHC for a line haul locomotive. Calculated by applying the NMHC deterioration factor to the NMHC Line-haul composite results. In g/bhp-hr.	N(4,2)		yes	no	
212	LH_Crt_Lv_NOX	NOX_CL_LH	NOX_CL_LH	The final, certification level, result for NOx for a line haul locomotive. Calculated by applying the NOx deterioration factor to the NOx Line-haul composite results. In g/bhp-hr.	N(4,2)		yes	no	
213	LH_Crt_Lv_CO	CO_CL_LH	CO_CL_LH	The final, certification level, result for CO for a line haul locomotive. Calculated by applying the CO deterioration factor to the CO Line-haul composite results. In g/bhp-hr.	N(4,2)		yes	no	
214	LH_Crt_Lv_PM	PM_CL_LH	PM_CL_LH	The final, certification level, result for PM for a line haul locomotive. Calculated by applying the PM deterioration factor to the PM Line-haul composite results. In g/bhp-hr.	N(4,2)		yes	no	
215	cert level thce line haul	THCE_CL_LH	THCE_CL_LH	The final, certification level, result for THCE for a line haul locomotive. Calculated by applying the THCE deterioration factor to the THCE Line-haul composite results. In g/bhp-hr.	N(4,2)		yes	no	
216	Sw_Crt_Lv_THC	THC_CL_SW	THC_CL_SW	The final, certification level, result for THC for a Switch locomotive. Calculated by applying the THC deterioration factor to the THC Switch composite results. In g/bhp-hr.	N(4,2)		yes	no	
217	Sw_Crt_Lv_NMHC	NMHC_CL_SW	NMHC_CL_SW	The final, certification level, result for NMHC for a Switch locomotive. Calculated by applying the NMHC deterioration factor to the NMHC Switch composite results. In g/bhp-hr.	N(4,2)		yes	no	
218	Sw_Crt_Lv_NOX	NOX_CL_SW	NOX_CL_SW	The final, certification level, result for NOx for a Switch locomotive. Calculated by applying the NOx deterioration factor to the NOx Switch composite results. In g/bhp-hr.	N(4,2)		yes	no	
219	Sw_Crt_Lv_CO	CO_CL_SW	CO_CL_SW	The final, certification level, result for CO for a Switch locomotive. Calculated by applying the CO deterioration factor to the CO Switch composite results. In g/bhp-hr.	N(4,2)		yes	no	
220	Sw_Crt_Lv_PM	PM_CL_SW	PM_CL_SW	The final, certification level, result for PM for a Switch locomotive. Calculated by applying the PM deterioration factor to the PM Switch composite results. In g/bhp-hr.	N(4,2)		yes	no	
221	cert level thce switch	THCE_CL_SW	THCE_CL_SW	The final, certification level, result for THCE for a Switch locomotive. Calculated by applying the THCE deterioration factor to the THCE Switch composite results. In g/bhp-hr.	N(4,2)		yes	no	
222	cert result smoke steady state	Smoke_SS	SMOKE_SS	The raw steady state smoke opacity result.	N(4,2)		yes	no	
223	SS_DF	Smoke_SS_DF	SMOKE_SS_DF	The deterioration factor for steady state smoke.	N(4,2)		yes	no	
224	SS_Cert_Level	Smoke_SS_CL	SMOKE_SS_CL	The final, certification level, result for steady state smoke. Raw test result with DF applied.	N(2,0)		yes	no	
225	cert result smoke 30 sec	Smoke_30Peak	SMOKE_30PEAK	The raw 30-second peak smoke result.	N(4,2)		yes	no	
226	Pk_30sec_DF	Smoke_30Peak_DF	SMOKE_30PEAK_DF	The deterioration factor for 30-second peak smoke.	N(4,2)		yes	no	

227	Pk_30sec_Cert_Level	Smoke_30Peak_CL	SMOKE_30PEAK_CL	The final, certification level, result for the 30 second peak smoke test. Raw test result with DF applied.	N(2,0)		yes	no	
228	cert result smoke 3 sec	Smoke_3Peak	SMOKE_3PEAK	The raw 3-second peak smoke result.	N(4,2)		yes	no	
229	Pk_3sec_DF	Smoke_3Peak_DF	SMOKE_3PEAK_DF	The deterioration factor for 3-second peak smoke.	N(4,2)		yes	no	
230	Pk_3sec_Cert_Level	Smoke_3Peak_CL	SMOKE_3PEAK_CL	The final, certification level, result for the 3 second peak smoke test. Raw test result with DF applied.	N(2,0)		yes	no	
<b>Parts Info</b>									
232	eng model	engine model	ENG_MODEL	The designation used to identify the engine model used for this configuration.	A20		yes	no	Models and codes entered above should be shown here for selection by the user. A particular engine model and locomotive model combination provides the unique basis for a parts list.
233	loc model	locomotive model	LOCO_MODEL	The designation used to identify the locomotive model for this configuration.	A20		yes	no	
234	injection_pump	IP number	INJ_PUMP_NO	The part number of the injection pump.	A20		yes	no	
235	injector	INJ number	INJECTOR_NO	The part number of the injector.	A20		yes	no	
236	turbo_charger	T/C number	TURBO_CHG_NO	The part number of the turbocharger	A20		yes	no	
237	electronic_control_module	ECM number	ECM_NO	The part number of the engine computer.	A20		yes	no	
238	after_treatment_device	CAT number	AFTERTREAT_NO	The part number of the catalyst or other aftertreatment device.	A20		yes	no	
239	smoke_puff_limiter	SPL number	SPL_NO	The part number of the smoke puff limiter.	A20		yes	no	
240	sensor_description	sensor assembly description	SENS_ASSBLY_NAME	The name of a sensor assembly.	A30		yes	no	Allow user to enter additional sensor assembly names and numbers
241	sensor_assembly_number	SA number	SENS_ASSBLY_NO	The part number of this sensor assembly.	A20		yes	no	
242	ADDL PART NAME 1	Part_Name	PART_NAME	The name of a part included in the engine or the remanufacturing kit.	A20		yes	no	Form should allow additional part names and numbers to be added as needed.
243	PN1_BLANK	Part_Number	PART_NO	The part number of this additional part included in the engine or the remanufacturing kit.	A20		yes	no	Form should allow additional part names and numbers to be added as needed.
244	model year range for kit yr1	Kit_Begin_MY	KIT_BEGIN_MY	The first model year of production of this engine family which may be rebuilt with this kit.	N(4,0)		yes	no	Only show this DE if this is a remanufactured engine.
245	model year range for kit yr2	Kit_End_MY	KIT_END_MY	The last model year of production of this engine family which may be rebuilt with this kit.	N(4,0)		yes	no	Only show this DE if this is a remanufactured engine.
246		Reqd_Part_Name	PART_REQD_NAME	The name of a part which must be on the engine/locomotive before installing this rebuild kit.	A20		yes	no	Only show this DE if this is a remanufactured engine. Repeat this DE and the next two as many times as needed.
247		Reqd_Part_Number	PART_REQD_NO	The part number of this part.	A20		yes	no	
	CBI Until5	confidential Test information, temporarily		Description of data on the Test Form which is confidential for a limited time... <a href="#">VERIFY system may or may not keep track of CBI this way</a>	15,A		yes	no	
	CBI Forever5	confidential Test information, permanently		Description of data on the Test Form which is confidential forever	15,A		yes	no	