

Diesel Emissions Quantifier Default Values

The purpose of this document is to provide users of the Diesel Emissions Quantifier (DEQ) with default values for certain input fields. However, the use of “real world” data for these fields will provide a more accurate assessment of emission reductions and is strongly encouraged.

On Highway					
Vehicle Type	Vehicle Class	VMT/ (mi/yr)	Fuel use (gal/yr)	Idling hours (hr/yr)	Source
School Bus	School Bus	13,000	1,597	270	NCDC Cost Effectiveness Report, MOBILE6, Clean School Bus USA Program
Transit Bus	Transit Bus	35,000 - 40,000	5,000 – 5,700	600 ^a	Federal Transit Association, American Public Transportation Association, California Air Resources Board
Refuse Hauler	Class 7	45,149	6,060	730	MOBILE6, SmartWay Program, SmartWay Fleet Model
Short Haul Truck	Class 5, 6, or 7	See Table 1b	See Table 1b	730	MOBILE6, SmartWay Program, SmartWay Fleet Model
Long Haul Truck	Class 8	100,000	16,667	2,400	SmartWay Program, SmartWay Fleet Model
Delivery Truck (beverage, bulk, etc.)	Class 5, 6, or 7	See Table 1b	See Table 1b	730	MOBILE6
Emergency Vehicle (fire truck, ambulance, etc.)	Class 5, 6, or 7	See Table 1b	See Table 1b	___ ^b	MOBILE6
City/County Vehicle (utility, DOT type truck)	Class 5, or 6	See Table 1b	See Table 1b	___ ^b	MOBILE6

Table 1a. Default values for certain fields in the Diesel Emissions Quantifier. See figure 1 at the end of this document for a visual description of vehicles by class.

^a This value is based on rough information from a variety of sources and is subject to change as more accurate data becomes available.

^b Due to the uncertainty of time an emergency vehicle is at a particular location and the variety of city/county vehicles, it is not possible to estimate default idling hours for these vehicle types.

Vehicle Type	VMT/ (mi/yr)	Fuel use (gal/yr)	Sources
Class 5	19,610	2,448	MOBILE6
Class 6	45,149	5,526	MOBILE6
Class 7	45,149	6,060	MOBILE6

Table 1b. Default values for certain fields in the Diesel Emissions Quantifier.

Diesel Emissions Quantifier Default Values

Nonroad				
Vehicle Type	Usage rate (hr/yr)	Power (Hp) ^c	Fuel use (gal/yr)	Source
Agriculture				
2-wheel tractor	544	11	148	NONROAD model
Agricultural Mowers	363	100	944	NONROAD model
Agricultural Tractors	475	175	1,855	NONROAD model
Balers	95	75	254	NONROAD model
Combines	150	300	848	NONROAD model
Irrigation Sets	749	100	1,716	NONROAD model
Off-Highway Tractors	855	750	22,584	NONROAD model
Off-Highway Trucks	1641	750	43,422	NONROAD model
Other Ag Equipment	381	175	1,912	NONROAD model
Sprayers	90	175	438	NONROAD model
Swathers	110	100	330	NONROAD model
Ports and Airports				
AC Refrigeration	1341	50	1491	NONROAD model
Aerial Lifts	384	50	277	NONROAD model
Airport Support Equipment	732	175	4,354	NONROAD model
Cranes	990	175	4,403	NONROAD model
Forklifts	1700	75	5,429	NONROAD model
Off-Highway Tractors	855	750	22,584	NONROAD model
Off-Highway Trucks	1641	750	43,422	NONROAD model
Other Construction Equipment	606	300	6,012	NONROAD model
Other General Industrial Equipment	878	100	1,841	NONROAD model
Other Material Handling Equipment	421	175	674	NONROAD model
Signal Boards	535	25	265	NONROAD model
Skid Steer Loaders	818	75	578	NONROAD model
Terminal Tractors	1257	175	6,780	NONROAD model
Rail				
Aerial Lifts	384	50	277	NONROAD model
Cranes	990	175	4,403	NONROAD model
Forklifts	1700	75	5,429	NONROAD model
Line Haul Locomotive	4350	2000	27,150	NONROAD model

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Vehicle Type	Usage rate (hr/yr)	Power (Hp) ^c	Fuel use (gal/yr)	Source
Off-Highway Trucks	1641	750	43,422	NONROAD model
Off-Highway Tractors	855	750	22,584	NONROAD model
Other General Industrial Equipment	878	100	1,841	NONROAD model
Other Materials Handling Equipment	421	175	674	NONROAD model
Passenger Locomotive	4350	2000	27,150	NONROAD model
Switch Locomotive	4450	2000	22,250	NONROAD model
Terminal Tractor	1257	175	6,780	NONROAD model
Construction				
Bore/Drill Rigs	466	175	1,955	NONROAD model
Cement & Mixers	275	75	137	NONROAD model
Cranes	990	175	4,403	NONROAD model
Crawler Tractors	936	175	8,887	NONROAD model
Crushing/Proc. Equipment	955	16	3,115	NONROAD model
Dumpers/Tenders	566	300	284	NONROAD model
Excavators	1092	175	6,063	NONROAD model
Forklifts	1700	75	5,429	NONROAD model
Graders	962	300	6,175	NONROAD model
Off-Highway Tractors	855	750	22,584	NONROAD model
Off-Highway Trucks	1641	750	43,422	NONROAD model
Other Construction Equipment	606	300	6,012	NONROAD model
Pavers	821	175	2,980	NONROAD model
Paving Equipment	622	175	1,473	NONROAD model
Plate Compactors	484	6	82	NONROAD model
Rollers	760	100	2,216	NONROAD model
Rough Terrain Forklifts	662	75	2,042	NONROAD model
Rubber Tire Loaders	761	175	5,721	NONROAD model
Scrapers	914	600	11,086	NONROAD model
Signal Boards	535	25	265	NONROAD model
Skid Steer Loaders	818	75	578	NONROAD model
Tractor/Loader/Balckhoe	1135	100	1,472	NONROAD model

Table 2. Default values for certain fields in the Diesel Emissions Quantifier.

^c In the NONROAD model, the horsepower range for an individual application can vary greatly. To simplify this, the horsepower of the highest population application will be employed.

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Figure 1. Truck Types by gross vehicle weight.

