

Exhibit 13-1: Fire pump engine specification sheet provided to SDAPCD



California ATCM Tier 2 Emission Data
EPA Tier 2 Emission Data

CFP11E-F10 Fire Pump Driver

Type: 4 Cycle; In-Line; 6 Cylinder
Aspiration: Turbocharged, Charge Air Cooled

15 PPM Diesel Fuel																	
RPM	BHP	Fuel Consumption		D2 Cycle Exhaust Emissions										Exhaust			
		Gal/Hr	L/Hr	Grams per BHP - HR					Grams per kW - HR					Temperature		Gas Flow	
				NMHC	NOx	MHC+NO	CO	PM	NMHC	NOx	MHC+NO	CO	PM	°F	°C	CFM	L/sec
1780	320	15.1	57.2	0.185	3.809	3.787	0.597	0.072	0.248	5.108	5.079	0.800	0.098	948	508	1883	785
2100	373	17.8	67.4											917	492	1943	917
2600	331	16	60.6											779	415	1857	877

The emissions values above are based on CARB approved calculations for converting EPA (500 ppm) fuel to CARB (15 ppm) fuel.

300-500 PPM Diesel Fuel																	
RPM	BHP	Fuel Consumption		D2 Cycle Exhaust Emissions										Exhaust			
		Gal/Hr	L/Hr	Grams per BHP - HR					Grams per kW - HR					Temperature		Gas Flow	
				NMHC	NOx	MHC+NO	CO	PM	NMHC	NOx	MHC+NO	CO	PM	°F	°C	CFM	L/sec
1470	320	15.1	57.2	0.224	3.907	4.131	0.597	0.082	0.300	5.240	5.540	0.800	0.110	948	508	1883	785
1780	373	17.8	67.4											917	492	1943	917
2100	331	16.0	60.6											779	415	1857	877

OSM11 Base Model Manufactured by Cummins Inc.
- Using fuel rating 20091 (combination of FR2912 and FR 2940)

Reference EPA Standard Engine Family: 5CEXL0661AAE

No special options needed to meet current emission regulations for all 50 states.

Test Methods:

EPA/CARB Nonroad emissions recorded per 40CFR89 (ref. ISO8178-1) and weighted at load points prescribed in Subpart E, Appendix A, for Constant Speed Engines (ref. ISO8178-4, D2).

Diesel Fuel Specifications:

Cetane Number: 40-49
Reference: ASTM D875 No. 2-D

Reference Conditions:

Air Inlet Temperature: 25°C (77°F)
Fuel Inlet Temperature: 40°C (104°F)
Barometric Pressure: 100 kPa (29.53 in Hg)
Humidity: 10.7 g/kg (75 grains H₂O/lb) of dry air, required for NOx correction
Restrictions: Intake Restriction set to a maximum allowable limit for clean filter; Exhaust Back Pressure set to maximum allowable limit.

Tests conducted using alternate test methods, instrumentation, fuel or reference conditions can yield different results.

The data was obtained by engine test using 2012 (for the 2100 rating) and 2010 (for the 1470 and 1780 ratings). The highest test emissions for the fuel rating are stated above.

Revision:

April 2008 - listed NMHC and NOx separately
April 2008 - Update EPA Engine Family to 5CEXL0661AAE