



EPA Tier 2 Emission Data
Fire Pump NSPS Compliant

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 | CO | PM | NMHC+NOx | CO | PM | °F | °C | CFM | L/sec |
| 1470 | 320 | 15.1 | 57.2 | 3.841 | 0.746 | 0.091 | 5.151 | 1.000 | 0.123 | 946 | 508 | 1663 | 785 |
| 1760 | 373 | 17.8 | 67.4 | | | | | | | 917 | 492 | 1943 | 917 |
| 2100 | 331 | 16.0 | 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 | CO | PM | NMHC+NOx | CO | PM | °F | °C | CFM | L/sec |
| 1470 | 320 | 15.1 | 57.2 | 4.183 | 0.746 | 0.104 | 5.610 | 1.000 | 0.140 | 946 | 508 | 1663 | 785 |
| 1760 | 373 | 17.8 | 67.4 | | | | | | | 917 | 492 | 1943 | 917 |
| 2100 | 331 | 16.0 | 60.6 | | | | | | | 779 | 415 | 1857 | 877 |

QSM11 Base Model Manufactured by Cummins Inc.
- Using fuel rating 20091 (combination of FR2912 and FR 2940)

Reference EPA Standard Engine Family: 4CEXL0661AAD

No special options needed to meet current regulation emissions 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: 40-48
Reference: ASTM D975 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 using two fuel ratings 2912 (for the 2100 rating) and 2940 (for the 1470 and 1760 ratings). The highest exhaust emissions for either fuel rating are stated above.