



Fire Power

Engine Performance Curve

Cummins Fire Power
DePere, WI 54115
<http://www.cumminsfirepower.com>

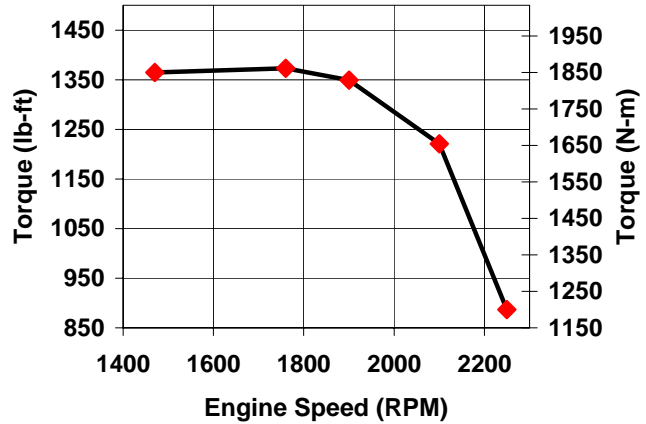
Basic Engine Model
CFP15E-F10

Curve Number: **FR - 10663**
Revision Date: **June 2007**

Engine Family:	Industrial	CPL Code:	8760-SC7
Displacement - in.3 (litre):	915 (15.0)	Emission Certification:	EPA/CARB Tier 3
Dry Weight - lbs (kg):	4029 (1813)	Aspiration:	Turbocharged, Chrg Air Cooled
Compression Ratio:	17.0:1	Engine Configuration:	D103007CX03
No. of Cylinders:	6	Minimum rating:	382 HP @ 1470 RPM
Fuel System:	HPI Electronic	Maximum rating:	488 HP @ 2100 RPM

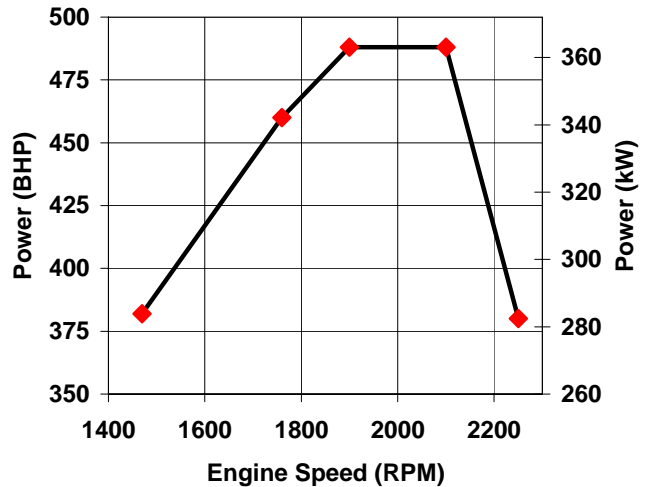
Torque Output

RPM	lb-ft	N-m
1470	1365	1850
1760	1373	1861
1900	1349	1829
2100	1220	1655
2250	887	1203



Horsepower Output

RPM	BHP	kW
1470	382	285
1760	460	343
1900	488	364
2100	488	364
2250	380	283



1. Curves shown above represent mature gross engine performance capabilities obtained and corrected in accordance with SAE J1349 conditions of 29.61 in Hg (100 kPa) barometric pressure [300 ft. (91.4 m) altitude], 77 °F (25 °C) inlet air temperature, and 0.30 in. Hg (1 kPa) water vapor pressure with No. 2 diesel fuel.
2. The engine may be operated without changing the fuel setting up to 300 ft. (91.4 m) altitude and up to 77°F (25 °C) ambient temperature. For sustained operation at high altitudes, the fuel rate of the engine should be adjusted to limit performance by 3% per 1,000 ft. (305 m) above 300 ft. (91.4 m) altitude. For sustained operation at high ambient temperatures, the fuel rate of the engine should be adjusted to limit performance by 1% per 10 °F above 77 °F (2% per 11 °C above 25 °C).
3. Engine is certified at any speed between 1470 and 2250 RPM.

Cummins Fire Power, DePere, WI 54115 U.S.A.

Manager CFP Engineering:

Scott Danforth



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Engine Datasheet

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Basic Engine Model
CFP15E-F40, F30, F20, F10

Curve Number: **FR - 10663**

CPL Code: **8760-SC7**

Configuration Number: **D103007CX03**

Installation Drawing: **11656**

Engine Family: **Industrial**

Revision Date: **January 2008**

General Engine Data

Type.....	4 Cycle; In-Line; 6 Cylinder
Aspiration.....	Turbocharged, Chrg Air Cooled
Bore & Stroke - in. (mm).....	5.39 x 6.65 (137 x 169)
Displacement - in. ³ (litre).....	915 (15.0)
Compression Ratio.....	17.0:1
Valves per Cylinder - Intake.....	2
- Exhaust.....	2
Dry Weight - lb (kg).....	4029 (1813)
Wet Weight - lb (kg).....	4179 (1881)
Maximum Allowable Bending Moment @ Rear Face of Block - lb.-ft. (N-m).....	1500 (2034)

Air Induction System

Max. Temperature Rise Between Ambient Air and Engine Air Inlet - °F (°C).....	30 (16.7)
Maximum Inlet Restriction with Dirty Filter - in. H ₂ O (mm H ₂ O).....	25 (635)
Recommended Air Cleaner Element - (Standard).....	K&N Serviceable/Disposable..... RC-7030
- (Optional).....	Fleetguard Housing AH19266..... AF25708M

Lubrication System

Oil Pressure Range at Rated - PSI (kPa) ... (Warm).....	35-40 (242-276)
Oil Capacity of Pan (High - Low) - U.S. quarts (litre)	48-40 (45-38)
Total System Capacity - U.S. Gal. (litre)	13 (49)
Recommended Lube Oil Filter	Fleetguard (Cummins)..... LF9000 (3101868)

Cooling System

Raw Water Working Pressure Range at Heat Exchanger - PSI (kPa)	60 (413) MAX
Recommended Min. Water Supply Pipe Size to Heat Exchanger - in. (mm).....	1.25 (31.75)
Recommended Min. Water Disch. Pipe Size From Heat Exchanger - in. (mm).....	1.50 (38.10)
Coolant Water Capacity (Engine Side) - U.S. gal. (litre)	13 (49.2)
Standard Thermostat - Type.....	Modulating
- Range - deg F (deg C)	180-200 (82-93)
Normal Operating Temperature - °F (°C).....	180-212 (82-100)
Minimum Raw Water Flow	
with Water Temperatures to 50 °F (10 °C) - U.S. GPM (litre/s)	20 (1.26)
with Water Temperatures to 75 °F (24 °C) - U.S. GPM (litre/s)	25 (1.58)
with Water Temperatures to 90 °F (32 °C) - U.S. GPM (litre/s)	30 (1.89)
Recommended Cooling Water Filter: Fleetguard (Cummins).....	WF2126 (4907485)
A jacket water heater is mandatory on this engine. The recommended heater wattage is 3000 down to 40 °F (4 °C).	

Exhaust System

Max. Back Pressure Imposed by Complete Exhaust System in in. H ₂ O (kPa)	40.8 (10.2)
Exhaust Pipe Size Normally Acceptable - in. (mm)	6.0 (152)

Noise Emissions

Top.....	97.7 dBa
Right Side.....	98.3 dBa
Left Side.....	99.6 dBa
Front.....	98.9 dBa
Exhaust.....	120 dBa

The noise emission values are estimated sound pressure levels at 3.3 ft. (1 m.).

Fuel Supply / Drain System - RPM

	1470		1760		1900		2100		2250	
CFP15E-F40 Nominal Fuel Consumption - Gal./hr. (L/hr)	24.9	(94)	28.1	(106)	29.6	112	30.8	(117)	24.5	(93)
CFP15E-F30 Nominal Fuel Consumption - Gal./hr. (L/hr)	23.5	(89)	26.5	(100)	27.9	(105)	29.1	(110)	23.1	(87)
CFP15E-F20 Nominal Fuel Consumption - Gal./hr. (L/hr)	21.4	(81)	24.1	(91)	25.4	(96)	26.5	(100)	21.1	(80)
CFP15E-F10 Nominal Fuel Consumption - Gal./hr. (L/hr)	19.9	(75)	22.5	(85)	23.6	(90)	24.7	(93)	19.6	(74)
Fuel Type	Number 2 Diesel Only									
Minimum Supply Line Size - in. (mm)	0.75				0.75		(19.05)			
Minimum Drain Line Size - in. (mm)	0.75				0.75		(19.05)			
Maximum Fuel Line Length Between Supply Tank & Fuel Pump - ft. (m)	40				40		(12)			
Maximum Fuel Height above C/L Crankshaft - in. (mm)	120				120		(3048)			
Recommended Fuel Filter - Primary	Fleetguard (Cummins).....		FS1041		FS1041		(3104081)			
- Secondary	None Required.....		NA		NA					
Maximum Restriction @ Lift Pump-Inlet - With Clean Filter - in. Hg (mm Hg)	6.0				6.0		(152)			
Maximum Restriction @ Lift Pump-Inlet - With Dirty Filter - in. Hg (mm Hg)	10.0				10.0		(254)			
Maximum Return Line Restriction - Without Check Valves - in. Hg (mm Hg)	9				9		(229)			
Minimum Fuel Tank Vent Capability - ft ³ /hr (m ³ /hr)	70				70		(2.10)			
Maximum Fuel Temperature @ Lift Pump Inlet - °F (°C)	160				160		(71)			

Starting and Electrical System

	12V	24V
Min. Recommended Batt. Capacity - Cold Soak at 0°F (-18°C) or Above		
Engine Only - Cold Cranking Amperes - (CCA)	12 volt	1400
Engine Only - Reserve Capacity - Minutes	option is	360
Battery Cable Size (Maximum Cable Length Not to Exceed 5 ft. [1.5 m] AWG)	not	00
Maximum Resistance of Starting Circuit - Ohms	offered	0.002
Typical Cranking Speed - RPM		100
Alternator (Standard), Internally Regulated - Ampere		70
Wiring for Automatic Starting (Negative Ground)	Standard	
Reference Wiring Diagram	10423	

Performance Data

All data is based on the engine operating with fuel system, water pump, lubricating oil pump, air cleaner, and alternator; not included are compressor, fan, optional equipment, and driven components. Data is based on operation at SAE standard J1394 conditions of 300 ft. (91.4 m) altitude, 29.61 in. (752 mm) Hg dry barometer, and 77 °F (25 °C) intake air temperature, using No.2 diesel or a fuel corresponding to ASTM-D2.

Altitude Above Which Output Should be Limited - ft. (m)	300	(91.4)
Correction Factor per 1000 ft. (305 m) above Altitude Limit	3%	
Temperature Above Which Output Should be Limited - °F (°C)	77	(25)
Correction Factor per 10 °F (11 °C) Above Temperature Limit	1%	(2%)

Exhaust Emissions (EPA Tier T3) [Reference Emissions Data Doc. 9815]

	g/kW-hr	g/BHP-hr
Hydrocarbons (HC/OMHCE).....	0.14	0.10
Oxides of Nitrogen (NOx).....	3.73	2.78
Non-Methane Hydrocarbons + NOx (NMHC+NOx).....	3.87	2.89
Carbon Monoxide (CO).....	0.90	0.67
Particulate.....	0.12	0.09

FM Approved and UL Listed Ratings for CFP15E-F40, F30, F20, F10

Engine Speed - RPM	1470	1760	1900	2100	2250
CFP15E-F40 Output - BHP (kW)	477 (356)	575 (429)	610 (455)	610 (455)	475 (354)
Ventilation Air Required for Combustion - CFM (litre/sec) .	1116 (527)	1345 (635)	1442 (681)	1563 (738)	1641 (775)
Exhaust Gas Flow - CFM (litre/sec)	2877 (1358)	3268 (1542)	3476 (1641)	3672 (1733)	3856 (1820)
Exhaust Gas Temperature - °F (°C)	964 (518)	908 (487)	897 (481)	888 (476)	781.4 (416)
Engine Heat Rejection to Coolant- BTU/min. (kW)	7503 (132)	8332 (146)	8897 (156)	10077 (177)	10178 (179)
Engine Heat Rejection to Ambient - BTU/min. (kW)	1678 (29)	1963 (34)	2375 (42)	2374 (42)	2350 (41)
CFP15E-F30 Output - BHP (kW)	450 (336)	542 (404)	575 (429)	575 (429)	448 (334)
Ventilation Air Required for Combustion - CFM (litre/sec) .	1063 (502)	1312 (619)	1405 (663)	1544 (729)	1621 (765)
Exhaust Gas Flow - CFM (litre/sec)	2740 (1293)	3164 (1493)	3328 (1571)	3577 (1688)	3756 (1773)
Exhaust Gas Temperature - °F (°C)	969 (521)	905 (485)	906 (486)	884 (473)	777.9 (414)
Engine Heat Rejection to Coolant- BTU/min. (kW)	7010 (123)	7849 (138)	8725 (153)	9111 (160)	9202 (162)
Engine Heat Rejection to Ambient - BTU/min. (kW)	1568 (28)	1849 (32)	2330 (41)	2147 (38)	2125 (37)
CFP15E-F20 Output - BHP (kW)	411 (306)	494 (368)	524 (391)	525 (391)	409 (305)
Ventilation Air Required for Combustion - CFM (litre/sec) .	1018 (480)	1258 (594)	1382 (652)	1515 (715)	1591 (751)
Exhaust Gas Flow - CFM (litre/sec)	2620 (1237)	2991 (1412)	3188 (1505)	3474 (1640)	3648 (1722)
Exhaust Gas Temperature - °F (°C)	960 (516)	895 (479)	857 (458)	851 (455)	748.9 (398)
Engine Heat Rejection to Coolant- BTU/min. (kW)	6683 (117)	7303 (128)	7954 (140)	8789 (154)	8877 (156)
Engine Heat Rejection to Ambient - BTU/min. (kW)	1495 (26)	1721 (30)	2124 (37)	2071 (36)	2050 (36)
CFP15E-F10 Output - BHP (kW)	382 (285)	460 (343)	488 (364)	488 (364)	380 (283)
Ventilation Air Required for Combustion - CFM (litre/sec) .	970 (458)	1217 (574)	1357 (641)	1469 (693)	1542 (728)
Exhaust Gas Flow - CFM (litre/sec)	2500 (1180)	2881 (1360)	3099 (1463)	3308 (1561)	3473 (1639)
Exhaust Gas Temperature - °F (°C)	957 (514)	883 (473)	826 (441)	844 (451)	742.7 (395)
Engine Heat Rejection to Coolant- BTU/min. (kW)	6361 (112)	6947 (122)	7730 (136)	8085 (142)	8166 (143)
Engine Heat Rejection to Ambient - BTU/min. (kW)	1423 (25)	1637 (29)	2064 (36)	1905 (33)	1886 (33)

All Data is Subject to Change Without Notice.

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