



ENGINE PERFORMANCE CURVE

Rating: Gross Power
 Application: Generator
 1800 RPM (60 Hz)

POWERTECH 6.8L Engine
Model: 6068HF150

253 hp (189 kW) Prime
282 hp (210 kW) Standby
 [Option 16TM / 16TN]

Nominal Engine Power @ 1800 RPM			
Prime		Standby	
HP	kW	HP	kW
253	189	282	210

Generator Efficiency %	Fan Power		Power Factor	Prime Rating		Standby Rating ¹		4 sec Standby Block Load Capability
	hp	kW		kW	kVA	kW	kVA	
88-92	14	10.4	0.8	157-164	196-205	176-184	220-230	80%

Note 1: Based on nominal engine power. Derate 20% for 100% block load capability.

Air Intake Restriction 12 in.H₂O (3 kPa)
 Exhaust Back Pressure 30 in.H₂O (7.5 kPa)

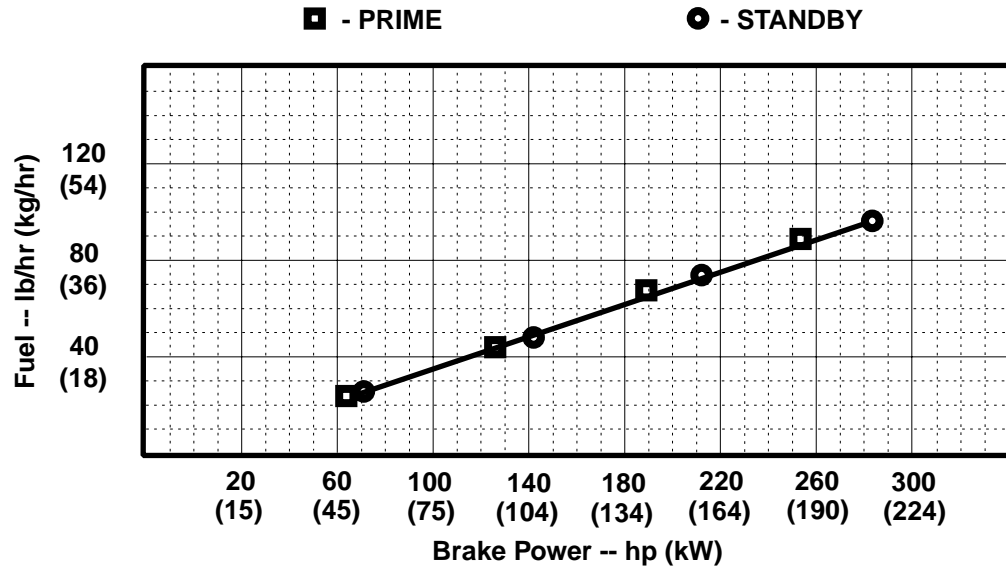
Gross power guaranteed within + or - 5% at SAE J1995 and ISO 3046 conditions:

- 77 °F (25 °C) air inlet temperature
- 29.31 in.Hg (99 kPa) barometer
- 104 °F (40 °C) fuel inlet temperature
- 0.853 fuel specific gravity @ 60 °F (15.5 °C)

Conversion factors:

- Power: kW = hp x 0.746
- Fuel: 1 gal = 7.1 lb, 1 L = 0.85 kg
- Torque: N•m = lb-ft x 1.356

All values are from currently available data and are subject to change without notice.



Notes:

Emission Certifications:

CARB; EPA

Ref: Engine Emission Label

Certified by:

Kevin J Bailey
 21 Aug 2000

* Revised Data

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 August 2000

Engine Specification Data

General Data

Model 6068HF150
 Number of Cylinders 6
 Bore and Stroke--in. (mm)..... 4.19 x 5 (106 x 127)
 Displacement--in.³ (L) 415 (6.8)
 Compression Ratio 17.0:1
 Valves per Cylinder--Intake/Exhaust 1/1
 Firing Order 1-5-3-6-2-4
 Combustion System Direct Injection
 Engine Type In-line, 4-Cycle
 Aspiration Turbocharged
 Charge Air Cooling System Air-to-Air
 Engine Crankcase Vent System Open
 Maximum Crankcase Pressure--in.H₂O (kPa) 2 (0.5)

Physical Data

Length--in. (mm) 44.9 (1141)
 Width--in. (mm) 24.5 (623)
 Height--in. (mm) 39.7 (1009)
 Weight, dry--lb (kg)..... 1254 (569)
 (Includes flywheel hsg., flywheel & electrics)
 Center of Gravity Location
 From Rear Face of Block (X-axis)--in. (mm) .17.2 (438)
 Right of Crankshaft (Y-axis)--in. (mm) 0.04 (1)
 Above Crankshaft (Z-axis)--in. (mm) 6.2 (157)
 Max. Allow. Static Bending Moment at Rear
 Face of Flywhl Hsg w/ 5-G Load--lb-ft (N*m) .. 600 (814)
 Thrust Bearing Load Limit (Forward)
 Continuous--lb (N) 500 (2224)
 Intermittent--lb (N)..... 900 (4003)

Electrical System

Recommended Battery Capacity (CCA)
 12 Volt System--am 800
 24 Volt System--am 570
 Maximum Allowable Starting Circuit Resistance
 12 Volt System--Ohm 0.0012
 24 Volt System--Ohm 0.002
 Starter Rolling Current--12 Volt System
 At 32 °F (0 °C)--amp 920
 At -22 °F (-30 °C)--a 1300
 Starter Rolling Current--24 Volt System
 At 32 °F (0 °C)--amp 600
 At -22 °F (-30 °C)--amp 700

Air System

Prime Standby

Max. Allowable Temp Rise--Ambient Air to
 Engine Inlet--°F (°C) 15 (8) 15 (8)
 Maximum Air Intake Restriction
 Dirty Air Cleaner--in.H₂O (kPa) 25 (6.25) 25 (6.25)
 Clean Air Cleaner--in.H₂O (kPa) 12 (3) 12 (3)
 Engine Air Flow--ft³/min (m³/min) 491 (13.9) . 523 (14.8)
 Intake Manifold Pressure--psi (kPa) ... 23 (161) 26 (179)
 Rec'd. Intake Pipe Dia--in. (mm)..... 3 (76.2) 3 (76.2)
 Compress. Discharge Temp--°F (°C) 333 (167) .. 358 (181)
 Max. Press. Drop Through
 Charge Air Cooler--in.H₂O (kPa).... 52 (13)..... 52 (13)
 Max. Temp. Out of Charge Air Cooler @
 77°F (25°C) Ambient Air--°F (°C).. 113 (45)..... 113 (45)

Exhaust System

Prime Standby

Exhaust Flow--ft³/min (m³/min)..... 1324(37.5).. 1423(40.3)
 Exhaust Temperature--°F (°C) 1024(551) ... 1053(567)
 Maximum Allowable Back
 Pressure--in.H₂O (kPa) 30 (7.5) 30 (7.5)
 Recm'd Exhaust Pipe Dia--in. (mm) .. 4 (101.6) 4 (101.6)

Cooling System

Prime Standby

Engine Heat Reject.--BTU/min (kW) 4609 (81) ... 4950 (87)
 Air/Air Exchanger Heat Rejection--
 BTU/min (kW) 1479 (26) ... 1707 (30)
 Coolant Flow--gal/min (L/min)..... 46 (174) 46 (174)
 Thermostat Start to Open--°F (°C) 180 (82) 180 (82)
 Thermostat Fully Open--°F (°C)..... 201 (94) 201 (94)
 Maximum Water Pump
 Inlet Restrict.--in.H₂O (kPa) 28 (7) 28 (7)
 Engine Coolant Capacity--qt (L) 12 (11.3) 12 (11.3)
 Recm'd Pressure Cap--psi (kPa) 10 (69) 10 (69)
 Max. Top Tank Temp--°F (°C) 221 (105) ... 221 (105)
 Min. Coolant Fill Rate--gal/min (L/min) ... 3 (11) 3 (11)
 Min. Air-to-Boil Temperature--°F (°C) . 117 (47) 117 (47)

Fuel System

Prime Standby

Fuel Injection Pump Stanadyne ... Stanadyne
 Governor Regulation..... 5 % 5 %
 Governor Type Mechanical .. Mechanical
 Fuel Consumption--lb/hr (kg/hr) ... 88.2*(40.1) ... 97.0*(44.1)
 Total Fuel Flow--lb/hr (kg/hr) 212 (96) 212 (96)
 Maximum Fuel Transfer Pump
 Suction--ft (m) fuel 3 (0.9) 3 (0.9)
 Fuel Filter Micron Size @ 98 % Efficiency ... 8 8

Lubrication System

Prime Standby

Oil Pressure
 at Rated Speed--psi (kPa) 50 (345) 50 (345)
 Oil Pressure at Low Idle--psi (kPa) 15 (105) 15 (105)
 In Pan Oil Temperature--°F (°C) 255 (124) ... 257 (125)
 Oil Pan Capacity, High--qt (L) 33 (31.5) 33 (31.5)
 Oil Pan Capacity, Low--qt (L) 29 (27.5) 29 (27.5)
 Total Engine Oil Capacity
 With Filters--qt (L) 34 (32) 34 (32)
 Engine Angularity Limits (Continuous)
 Any Direction--degrees 20 20

Performance Data

Prime Standby

Rated Power--hp (kW) 256 (191)..... 282 (210)
 Rated Speed--rpm 1800 1800
 Low Idle Speed--rpm 1400 1400
 BMEP--psi (kPa) 272 (1876).... 299 (2065)
 Friction Power
 @ Rated Speed--hp (kW) 23 (17)..... 23 (17)
 Altitude Capability--ft (m) 7500 (2300)..... 5000 (1500)
 Ratio--Air : Fuel 23.7:1 22.7:1
 Noise--dB(A) @ 1 m N/A N/A

Fuel Consumption -- lb/hr (kg/h)

Prime Standby

25 % Power 23.5 (10.7) 25.3 (11.5)
 50 % Power 44.0 (20.0) 48.4 (22.0)
 75 % Power 67.5 (30.7) 74.6 (33.9)
 100 % Power 88.2 (40.1) 97.0 (44.1)

All values at rated speed and power with standard options unless otherwise noted.

* Revised Data
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 August 2000