



JOHN DEERE

ENGINE PERFORMANCE CURVE

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

PowerTech 6.8L Engine
 Model: **6068HF275**

200 hp (149 kW) Prime
220 hp (164 kW) Standby

[See Option Code Tables]

Nominal Engine Power @ 1800 RPM			
Prime		Standby	
HP	kW	HP	kW
200	149	220	164

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	11.0	8.2	0.8	124-130	155-162	137-143	171-179	96%

Note 1: Based on nominal engine power. Derate 4% for 100% block load capability.

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

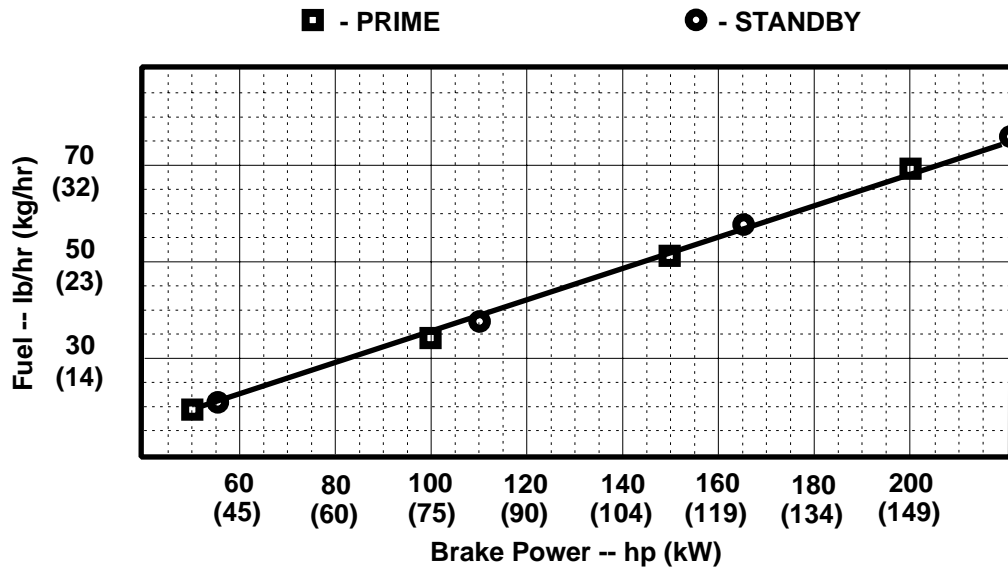
Gross power guaranteed within + or - 5% at SAE J1995 and ISO 3046 conditions:

- 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:

Tier-2 Emission Certifications:

Certified by:

CARB; EPA

Ref: Engine Emission Label

Brian L. Carlson
 30 Aug 04

* Revised Data

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 August 2004

Engine Specification Data

General Data

Model 6068HF275
 Number of Cylinders 6
 Bore and Stroke--in. (mm)..... 4.19 x 5.00 (106 x 127)
 Displacement--in.³ (L).....414 (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) 43.9 (1116)
 Width--in. (mm)24.5 (623)
 Height--in. (mm)39.9 (1012)
 Weight, dry--lb (kg).....1290 (587)
 (Includes flywheel hsg., flywheel & electrics)
 Center of Gravity Location
 From Rear Face of Block (X-axis)--in. (mm) .14.5 (369)
 Right of Crankshaft (Y-axis)--in. (mm)0.12 (3)
 Above Crankshaft (Z-axis)--in. (mm)6.1 (154)
 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)

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) ... 420 (11.9) ..445 (12.6)
 Intake Manifold Pressure--psi (kPa)....19 (128)21 (143)
 Compress. Discharge Temp--°F (°C) 295(146) ...313 (156)
 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) 140 (60)140 (60)

Cooling System

Prime Standby

Engine Heat Reject.--BTU/min (kW) .4040 (71) ...4324 (76)
 Air/Air Exchanger Heat Rejection--
 BTU/min (kW)1024 (18) ... 1252 (22)
 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)
 Engine Coolant Capacity--qt (L) 12 (11.3) 12 (11.3)
 Min. 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)

Electrical System

Minimum 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

Exhaust System

Prime Standby

Exhaust Flow--ft³/min (m³/min).....1081(30.6) . 1155(32.7)
 Exhaust Temperature--°F (°C)966(519) 990(532)
 Maximum Allowable Back
 Pressure--in.H₂O (kPa)30 (7.5) 30 (7.5)

Fuel System

Prime Standby

Fuel Injection Pump (Stanadyne)..... DE10 DE10
 Governor Regulation..... 4 % 4 %
 Governor Type ElectronicElectronic
 Fuel Consumption--lb/hr (kg/hr).....70 (31.7) 77 (34.9)
 Total Fuel Flow--lb/hr (kg/hr)182 (82.7) 182 (82.7)
 Maximum Fuel Transfer Pump
 Suction--ft (m) fuel3 (0.9) 3 (0.9)
 Fuel Filter Micron Size @ 98 % Efficiency .. 2 2

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)241 (116) ... 244 (118)

Performance Data

Prime Standby

Rated Power--hp (kW) 200 (149)..... 220 (164)
 Rated Speed--rpm 1800..... 1800
 Low Idle Speed--rpm 1150..... 1150
 BMEP--psi (kPa) 212 (1463).... 233 (1611)
 Friction Power
 @ Rated Speed--hp (kW) 23 (17)..... 23 (17)
 Altitude Capability--ft (m) ...10,000 (3050) ... 10,000 (3050)
 Ratio--Air : Fuel..... 25.4:1..... 24.4:1
 Noise--dB(A) @ 1 m NA..... NA

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

Prime Standby

25 % Power19.4 (8.8)20.9 (9.5)
 50 % Power34.5 (15.7) ...37.6 (17.1)
 75 % Power51.5 (23.4) ...57.4 (26.1)
 100 % Power69.7 (31.7) ...76.8 (34.9)

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

* Revised Data
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