



JOHN DEERE

ENGINE PERFORMANCE CURVE

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

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

228 hp (170 kW) Prime
250 hp (187 kW) Standby

[See Option Code Tables]

Nominal Engine Power @ 1800 RPM			
Prime		Standby	
HP	kW	HP	kW
228	170	250	187

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	12.5	9.4	0.8	141-148	177-185	156-163	195-204	90%

Note 1: Based on nominal engine power. Derate 10% for 100% block load capability.

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

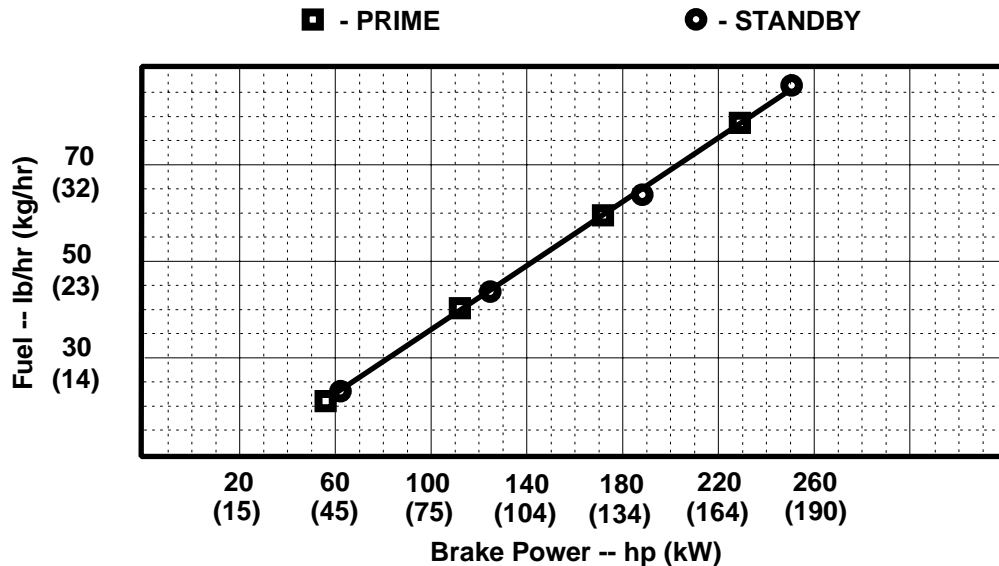
Gross power guaranteed within + or - 5% at SAE J1995 and ISO 3046 conditions:

- 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

Curve 6068HF2751800250 Sheet 1 of 2
 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.H ₂ O (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.H ₂ O (kPa) ...	25 (6.25) 25 (6.25)
Clean Air Cleaner--in.H ₂ O (kPa).....	12 (3) 12 (3)
Engine Air Flow--ft ³ /min (m ³ /min) ...	452 (12.8) ..484 (13.7)
Intake Manifold Pressure--psi (kPa).....	21 (148) 24 (169)
Compress. Discharge Temp--°F (°C) 316(158) ...	343 (173)
Max. Press. Drop Through	
Charge Air Cooler--in.H ₂ O (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) .4097 (72) ...	4438 (78)
Air/Air Exchanger Heat Rejection--	
BTU/min (kW)	1252 (22) ... 1366 (24)
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--ft ³ /min (m ³ /min).....	1162(32.9) . 1264(35.8)
Exhaust Temperature--°F (°C)	968(520) .. 1009(543)
Maximum Allowable Back	
Pressure--in.H ₂ O (kPa)	30 (7.5) 30 (7.5)

Fuel System

Prime Standby

Fuel Injection Pump (Bosch).....	VP44 VP44
Governor Regulation.....	4 % 4 %
Governor Type	Electronic Electronic
Fuel Consumption--lb/hr (kg/hr).....	78 (35.5) 87 (39.5)
Total Fuel Flow--lb/hr (kg/hr)	352 (160) 352 (160)
Maximum Fuel Transfer Pump	
Suction--ft (m) fuel	3 (0.9) 3 (0.9)
Fuel Filter Micron Size @ 98 % Efficiency ...	5

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)	250 (121) . 2524 (122)

Performance Data

Prime Standby

Rated Power--hp (kW)	228 (170)..... 250 (187)
Rated Speed--rpm	1800..... 1800
Low Idle Speed--rpm	1150..... 1150
BMEP--psi (kPa)	242 (1667).... 266 (1833)
Friction Power	
@ Rated Speed--hp (kW)	23 (17)..... 23 (17)
Altitude Capability--ft (m) ...	10,000 (3050) ... 10,000 (3050)
Ratio--Air : Fuel.....	23.8:1..... 22.9:1
Noise--dB(A) @ 1 m	NA..... NA

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

Prime Standby

25 % Power	22.0 (10.0) ... 23.5 (10.7)
50 % Power	40.7 (18.5) ... 44.0 (20.0)
75 % Power	59.4 (27.0) ... 63.8 (29.0)
100 % Power	78.1 (35.5) ... 86.9 (39.5)

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

* Revised Data
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August 2004