



JOHN DEERE

ENGINE PERFORMANCE CURVE

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

PowerTech 6.8L Engine

Model: **6068HF275**

256 hp (191 kW) Prime

282 hp (210 kW) Standby

[See Option Code Tables]

Nominal Engine Power @ 1800 RPM			
Prime		Standby	
HP	kW	HP	kW
256	191	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	14.1	10.5	0.8	159-166	198-207	176-184	219-229	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)

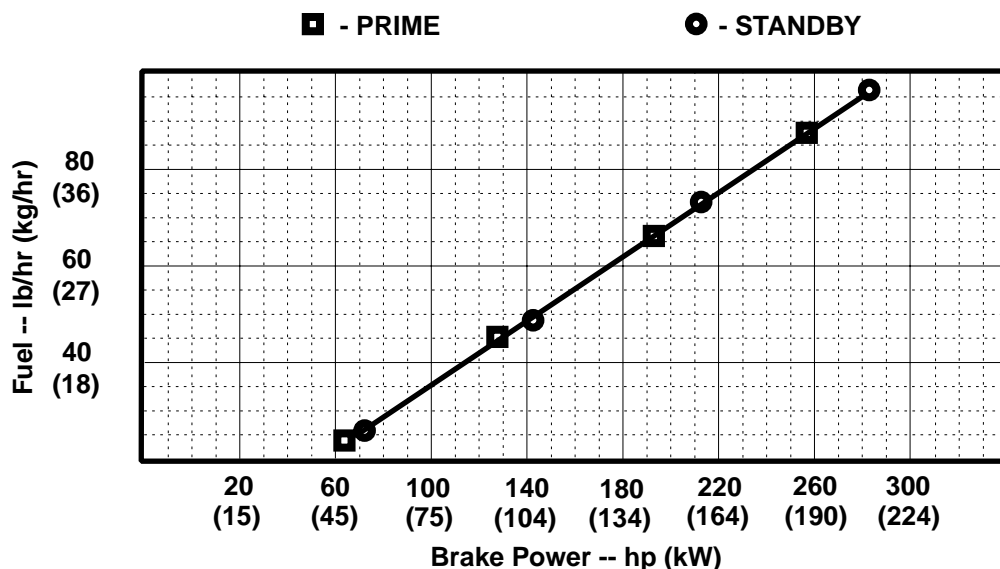
Gross power guaranteed within + or - 5% at SAE J1995 and ISO 3046 conditions:

- 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:

Tier-2 Emission Certifications:

Certified by:

CARB; EPA

Brian L. Carlson
 3 Dec 2001

Ref: Engine Emission Label

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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)

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).... 494 (14.0) .. 530 (15.0)
 Intake Manifold Pressure--psi (kPa) ... 24 (163)..... 27 (186)
 Recm'd Intake Pipe Dia--in. (mm).....3 (76.2) 3 (76.2)
 Compress. Discharge Temp--°F (°C).331(166) ... 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).....1306(37.0) .1412(40.0)
 Exhaust Temperature--°F (°C)991(533) .. 1020(550)
 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)
 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 (Bosch)..... VP44VP44
 Governor Regulation..... 4 % 4 %
 Governor Type ElectronicElectronic
 Fuel Consumption--lb/hr (kg/hr)87 (39.7) 97 (44.1)
 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 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) 255 (124) ... 257 (125)

Performance Data

Prime Standby

Rated Power--hp (kW) 256 (191)..... 282 (210)
 Rated Speed--rpm 1800..... 1800
 Low Idle Speed--rpm 1150..... 1150
 BMEP--psi (kPa) 271 (1873).... 298 (2059)
 Friction Power
 @ Rated Speed--hp (kW) 23 (17)..... 23 (17)
 Altitude Capability--ft (m) ... 10,000 (3050).... 10,000 (3050)
 Ratio--Air : Fuel..... 24.0:1 23.3:1
 Noise--dB(A) @ 1 m NA..... NA

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

Prime Standby

25 % Power24.0 (10.9) ... 26.0 (11.8)
 50 % Power45.1 (20.5) ... 49.5 (22.5)
 75 % Power66.4 (30.2) ... 72.8 (33.1)
 100 % Power 87.3 (39.7) ... 97.0 (44.1)

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

* Revised Data
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Engine Specification Data

Electronic Engine Controls (JDEC)

Performance System Option Code Table		
Option Codes		System
Injection Pump	Performance Software	Voltage
16YS	7286	12V
16YT	7287	24V

ECU Feature Software Option Code (8300 Group) Table Generator Applications - Bosch VP44							
Option Code	Oil Pressure Sensor	Governing: 4 % or Isochronous	Cruise Control	Engine Protection		Available Throttle Inputs	
				ECU Software	External Input	Analog	Digital
8337	No	Selectable	No	None	Derate & Shutdown	Two	2-State
8338	Yes	Selectable	No	None	Derate & Shutdown	Two	2-State
8340	Yes	Selectable	No	Shutdown Only	Derate & Shutdown	Two	2-State
8348*	No	Selectable	No	None	Derate & Shutdown	Two	Adj. 3-State
8349*	Yes	Selectable	No	None	Derate & Shutdown	Two	Adj. 3-State
8350*	Yes	Selectable	No	Shutdown Only	Derate & Shutdown	Two	Adj. 3-State

* Added March 2002

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

* Revised Data
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