



JOHN DEERE

ENGINE PERFORMANCE CURVE

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

PowerTech 6.8L Engine

Model: **6068TF275**

150 hp (112 kW) Prime

165 hp (123 kW) Standby

[See Option Code Tables]

Nominal Engine Power @ 1800 RPM			
Prime		Standby	
HP	kW	HP	kW
150	112	165	123

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	8.2	6.2	0.8	93-97	116-122	103-108	129-134	100%

Note 1: Based on nominal engine power.

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:

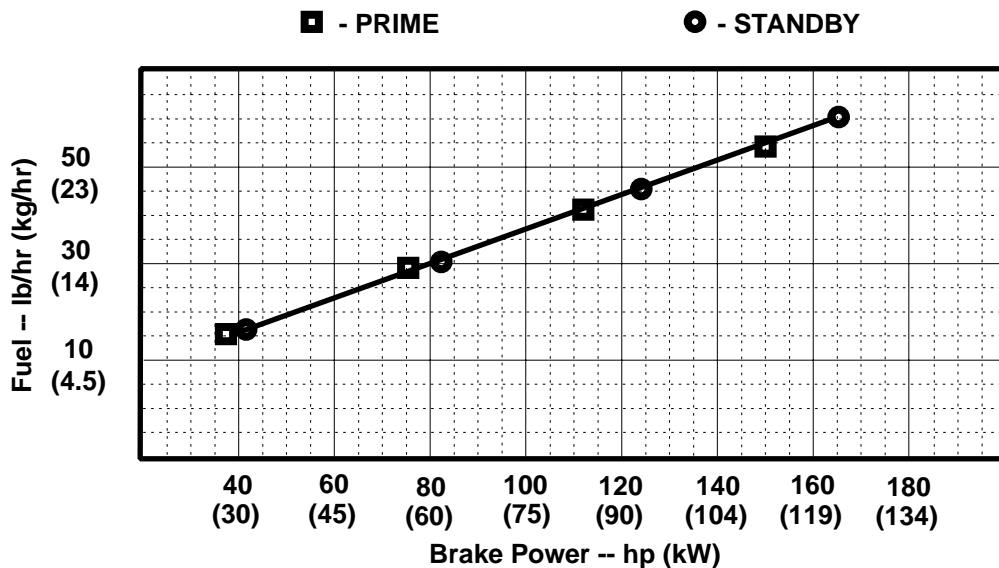
- 77 °F (25 °C) air inlet temperature
- 29.31 in.Hg (99 kPa) barometer
- 104 °F (40 °C) fuel inlet temperature
- 0.853 fuel specific gravity @ 60 °F (15.5 °C)

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	<i>Brian L. Carlson</i>
Ref: Engine Emission Label	30 Aug 04

* Revised Data
 Curve 6068TF2751800165 Sheet 1 of 2
 August 2004

Engine Specification Data

General Data

Model6068TF275
 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
 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

	<u>Prime</u>	<u>Standby</u>
Max. Allowable Temp Rise--Ambient Air to Engine Inlet--°F (°C)..... 15 (8)	15 (8)	15 (8)
Maximum Air Intake Restriction Dirty Air Cleaner--in.H ₂ O (kPa) ... 25 (6.25)	25 (6.25)	25 (6.25)
Clean Air Cleaner--in.H ₂ O (kPa) 12 (3)	12 (3)	12 (3)
Engine Air Flow--ft ³ /min (m ³ /min)325 (9.2)	325 (9.2)	346 (9.8)
Intake Manifold Pressure--psi (kPa)....15 (101)	15 (101)	18 (121)

Cooling System

	<u>Prime</u>	<u>Standby</u>
Engine Heat Reject.--BTU/min (kW) .3812 (67) ...	4324 (76)	4324 (76)
Coolant Flow--gal/min (L/min).....46 (174)	46 (174)	46 (174)
Thermostat Start to Open--°F (°C)180 (82)	180 (82)	180 (82)
Thermostat Fully Open--°F (°C).....201 (94)	201 (94)	201 (94)
Engine Coolant Capacity--qt (L) 12 (11.3)	12 (11.3)	12 (11.3)
Min. Pressure Cap--psi (kPa)10 (69)	10 (69)	10 (69)
Max. Top Tank Temp--°F (°C)221 (105) ...	221 (105)	221 (105)
Min. Coolant Fill Rate--gal/min (L/min) ...3 (11)	3 (11)	3 (11)
Min. Air-to-Boil Temperature--°F (°C) .117 (47)	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

	<u>Prime</u>	<u>Standby</u>
Exhaust Flow--ft ³ /min (m ³ /min).....851(24.1) ...	939(26.6)	939(26.6)
Exhaust Temperature--°F (°C)984(529) ..	1040(560)	1040(560)
Maximum Allowable Back Pressure--in.H ₂ O (kPa).....30 (7.5)	30 (7.5)	30 (7.5)

Fuel System

	<u>Prime</u>	<u>Standby</u>
Fuel Injection Pump (Stanadyne)..... DE10	DE10	DE10
Governor Regulation.....4 %	4 %	4 %
Governor Type Electronic	Electronic	Electronic
Fuel Consumption--lb/hr (kg/hr).....55 (24.8)	61 (27.6)	61 (27.6)
Total Fuel Flow--lb/hr (kg/hr).....167 (75.8)	167 (75.8)	167 (75.8)
Maximum Fuel Transfer Pump Suction--ft (m) fuel3 (0.9)	3 (0.9)	3 (0.9)
Fuel Filter Micron Size @ 98 % Efficiency .. 2	2	2

Lubrication System

	<u>Prime</u>	<u>Standby</u>
Oil Pressure at Rated Speed--psi (kPa)	50 (345)	50 (345)
Oil Pressure at Low Idle--psi (kPa) 15 (105)	15 (105)	15 (105)
In Pan Oil Temperature--°F (°C)241 (116) ...	244 (118)	244 (118)

Performance Data

	<u>Prime</u>	<u>Standby</u>
Rated Power--hp (kW)	150 (112)	165 (123)
Rated Speed--rpm	1800	1800
Low Idle Speed--rpm	1150	1150
BMEP--psi (kPa)	159 (1098)	175 (1206)
Friction Power @ Rated Speed--hp (kW)	23 (17)	23 (17)
Altitude Capability--ft (m) ...10,000 (3050)	10,000 (3050)	10,000 (3050)
Ratio--Air : Fuel..... 25.6:1	24.5:1	24.5:1
Noise--dB(A) @ 1 m	NA	NA

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

	<u>Prime</u>	<u>Standby</u>
25 % Power	16.3 (7.4)	16.9 (7.7)
50 % Power	29.3 (13.3)	30.8 (14.0)
75 % Power	42.2 (19.2)	46.0 (20.9)
100 % Power	54.6 (24.8)	60.7 (27.6)

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

* Revised Data Curve 6068TF1800165	Sheet 2 of 2 August 2004
---	-----------------------------