



ENGINE PERFORMANCE CURVE

Rating: Gross Power
 Application: Generator
 1500 RPM (50 Hz)

POWERTECH 6.8L Engine
 Model: **6068TF150**

114 hp (85 kW) Prime
126 hp (94 kW) Standby
 [Option 1681 / 1688]*

Factory pump must be adjusted from 1800 RPM to 1500 RPM.*

Nominal Engine Power @ 1500 RPM			
Prime		Standby	
HP	kW	HP	kW
114	85	126	94

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	4.7	3.5	0.8	72-75	90-94	80-83	100-104	100%*

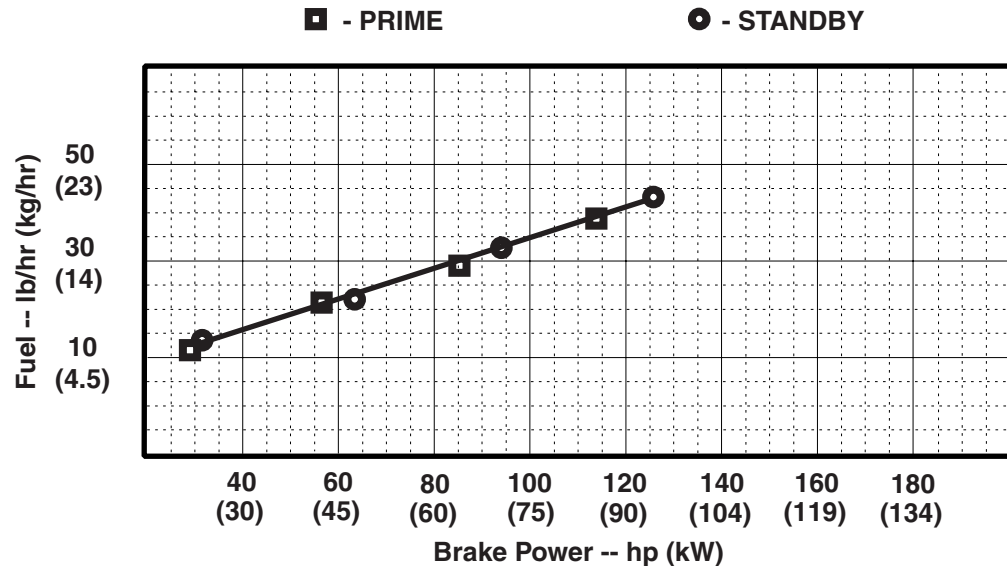
Note 1: Based on nominal engine power.*

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:

All OEM Gen Set Engine Applications must be pre-screened for torsional vibration compatibility with the respective alternator end hardware.

*OEM Engine Application Engineering will perform this computer-based analysis work upon request. **

Emission Certifications:

Certified by:

NONE

Ref: Engine Emission Label

Kevin J Bailey
 31 MAY 1999

* Revised Data

Curve 6068TF1500126NC..... Sheet 1 of 2
 June 1999

Engine Specification Data

General Data

Model	6068TF150
Number of Cylinders	6
Bore and Stroke--in. (mm).....	4.19 x 5 (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.H ₂ O (kPa)	2 (0.5)

Physical Data

Length--in. (mm)	44.0 (1117)
Width--in. (mm)	23.5 (598)
Height--in. (mm)	38.7 (984)
Weight, dry--lb (kg).....	1172 (533)

(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)	0.05 (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

	<u>Prime</u>	<u>Standby</u>
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).....	229 (6.5)	233 (6.6)
Intake Manifold Pressure--psi (kPa)	6.2 (43)	7.4 (51)
Rec'd. Intake Pipe Dia--in. (mm).....	3 (76.2)	3 (76.2)

Exhaust System

	<u>Prime</u>	<u>Standby</u>
Exhaust Flow--ft ³ /min (m ³ /min).....	590 (16.7)	625 (17.7)
Exhaust Temperature--°F (°C)	968 (520)	1018 (548)
Maximum Allowable Back		
Pressure--in.H ₂ O (kPa).....	30 (7.5)	30 (7.5)
Recm'd Exhaust Pipe Dia--in. (mm) ..	4 (101.6)	4 (101.6)

Cooling System

	<u>Prime</u>	<u>Standby</u>
Engine Heat Reject.--BTU/min (kW).....	2787 (49)	3070 (54)
Coolant Flow--gal/min (L/min).....	38 (144)	38 (144)
Thermostat Start to Open--°F (°C)	180 (82)	180 (82)
Thermostat Fully Open--°F (°C).....	202 (94)	202 (94)
Maximum Water Pump		
Inlet Restrict.--in.H ₂ O (kPa).....	20 (5)	20 (5)
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

	<u>Prime</u>	<u>Standby</u>
Fuel Injection Pump	Stanadyne	Stanadyne
Governor Regulation.....	5 %	5 %
Governor Type	Mechanical	Mechanical
Fuel Consumption--lb/hr (kg/hr)	38.9 (17.7)	43.3 (19.3)
Total Fuel Flow--lb/hr (kg/hr).....	205 (93)	205 (93)
Maximum Fuel Transfer Pump		
Suction--ft (m) fuel	3 (0.9)	3 (0.9)
Fuel Filter Micron Size @ 98 % Efficiency ...	8	8

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)
In Pan Oil Temperature--°F (°C)	240 (115)	240 (115)
Oil Pan Capacity, High--qt (L)	17 (16.1)	17 (16.1)
Oil Pan Capacity, Low--qt (L)	16 (15.1)	16 (15.1)
Total Engine Oil Capacity		
With Filters--qt (L)	18 (17)	18 (17)
Engine Angularity Limits (Continuous)		
Any Direction--degrees.....	20	20

Performance Data

	<u>Prime</u>	<u>Standby</u>
Rated Power--hp (kW)	114 (85)	126 (94)
Rated Speed--rpm	1500	1500
Low Idle Speed--rpm	1150*	1150*
BMEP--psi (kPa)	145 (1002)	161 (1108)
Friction Power		
@ Rated Speed--hp (kW)	17 (13)	17 (13)
Altitude Capability--ft (m) ...	13,500 (4100)	11,000(3300)*
Ratio--Air : Fuel.....	25.3:1	23.3:1
Noise--dB(A) @ 1 m	90.5	91

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

	<u>Prime</u>	<u>Standby</u>
25 % Power	11.7 (5.3)	14.3 (6.5)
50 % Power	20.2 (9.2)	22 (10)
75 % Power	29.3 (13.3)	32.6 (14.8)
100 % Power	38.9 (17.7)	43.3 (19.7)

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

* Revised Data
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June 1999