



ENGINE PERFORMANCE CURVE

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

POWERTECH 6.8L Engine
Model: 6068HF258

253 hp (189 kW) Prime
282 hp (210 kW) Standby
 [Option 16TM / 16TN]

Nominal Engine Power @ 1800 RPM			
Prime		Standby	
HP	kW	HP	kW
253	189	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	10.4	0.8	157-164	196-205	176-184	220-230	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)

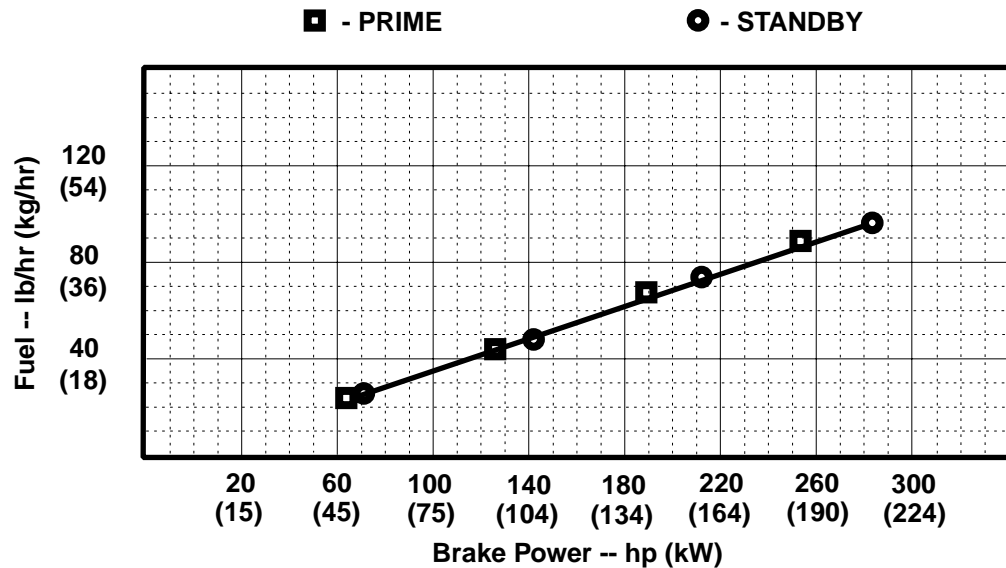
Gross power guaranteed within + or - 5% at SAE J1995 and ISO 3046 conditions:

- 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:

Emission Certifications:

CARB; EPA

Ref: Engine Emission Label

Certified by:

Kevin J Bailey
 21 Aug 2000

* Revised Data

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 August 2000

Engine Specification Data

General Data

Model 6068HF258
 Number of Cylinders 6
 Bore and Stroke--in. (mm)..... 4.19 x 5 (106 x 127)
 Displacement--in.³ (L)415 (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)44.9 (1141)
 Width--in. (mm)24.5 (623)
 Height--in. (mm)39.7 (1009)
 Weight, dry--lb (kg).....1254 (569)
 (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)0.04 (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) 491 (13.9) . 523 (14.8)		
Intake Manifold Pressure--psi (kPa) ... 23 (161) 26 (179)		
Rec'd. Intake Pipe Dia--in. (mm)..... 3 (76.2) 3 (76.2)		
Compress. Discharge Temp--°F (°C) 333 (167) .. 358 (181)		
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).. 113 (45)..... 113 (45)		

Exhaust System

	<u>Prime</u>	<u>Standby</u>
Exhaust Flow--ft ³ /min (m ³ /min)..... 1324(37.5).. 1423(40.3)		
Exhaust Temperature--°F (°C) 1024(551) ... 1053(567)		
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) 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)		
Maximum Water Pump Inlet Restrict.--in.H ₂ O (kPa)28 (7) 28 (7)		
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) ... 88.2*(40.1) ...97.0*(44.1)		
Total Fuel Flow--lb/hr (kg/hr) 212 (96) 212 (96)		
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)255 (124) ... 257 (125)		
Oil Pan Capacity, High--qt (L)33 (31.5) 33 (31.5)		
Oil Pan Capacity, Low--qt (L)29 (27.5) 29 (27.5)		
Total Engine Oil Capacity With Filters--qt (L)34 (32) 34 (32)		
Engine Angularity Limits (Continuous) Any Direction--degrees 20 20		

Performance Data

	<u>Prime</u>	<u>Standby</u>
Rated Power--hp (kW) 256 (191)..... 282 (210)		
Rated Speed--rpm 1800..... 1800		
Low Idle Speed--rpm 1400..... 1400		
BMEP--psi (kPa) 272 (1876).... 299 (2065)		
Friction Power @ Rated Speed--hp (kW) 23 (17)..... 23 (17)		
Altitude Capability--ft (m) 7500 (2300)..... 5000 (1500)		
Ratio--Air : Fuel..... 23.7:1 22.7:1		
Noise--dB(A) @ 1 m N/A..... N/A		

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

	<u>Prime</u>	<u>Standby</u>
25 % Power 23.5 (10.7) 25.3 (11.5)		
50 % Power 44.0 (20.0) 48.4 (22.0)		
75 % Power 67.5 (30.7) 74.6 (33.9)		
100 % Power 88.2 (40.1) 97.0 (44.1)		

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

* Revised Data
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 August 2000