JOHN DEERE

ENGINE PERFORMANCE CURVE

Rating: Gross Power
Application: Generator (60 Hz)
Target: 200 kWe Standby Market

PowerTech Plus™ 6.8L Engine
Model: **6068HF485**

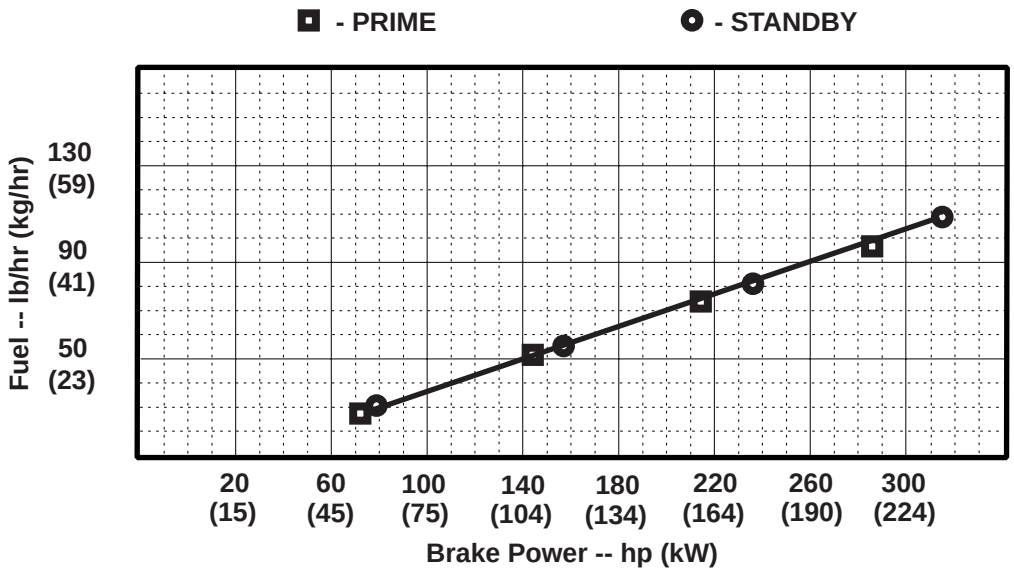
286 hp (214 kW) Prime
315 hp (235 kW) Standby

[See Option Code Tables]

Nominal Engine Power @ 1800 RPM			
Prime		Standby	
HP	kW	HP	kW
286	214	315	235

Generator Efficiency %	Fan Power (6% of Standby)		Power Factor	Prime Rating [2]		Standby Rating [1,2]		4 sec Standby Block Load Capability
	hp	kW		kWe	kVA	kWe	kVA	
88-92	18.9	14.1	0.8	176-184	220-230	194-203	243-254	80%

Note 1: Based on nominal engine power. Derate 20% for 100% block load capability.
Note 2: kWe / kVA rating assumes 90% efficiency. "Generator Efficiency %" will vary.



STANDARD CONDITIONS

Air Intake Restriction ..... 12 in.H_2O (3 kPa)
Exhaust Back Pressure ..... 30 in.H_2O (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.

Tier-3 Emission Certifications:	Certified by:
CARB; EPA	22 June '07
Ref: Engine Emission Label	

* Revised Data
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Engine Installation Criteria

General Data

Model	6068HF485
Number of Cylinders	6
Bore and Stroke--in. (mm)	4.19 x 5.00 (106 x 127)
Displacement--in.^{3} (L)	415 (6.8)
Compression Ratio	17.0:1
Valves per Cylinder--Intake/Exhaust	2 / 2
Firing Order	1-5-3-6-2-4
Combustion System	Unit Injection
Engine Type	In-line, 4-Cycle
Aspiration	Turbocharged
Charge Air Cooling System	Air-to-Air
Engine Crankcase Vent System	Open

Physical Data

Length--in. (mm)	45.7* (1161*)
Width--in. (mm)	24.3* (616*)
Height--in. (mm)	44.4* (1128*)
Weight, with oil--lb (kg)	1495 (678)
(Includes flywheel hsg., flywheel & electrics)	
Center of Gravity Location	
From Rear Face of Block (X-axis)--in. (mm)	15.5 (394)
Right of Crankshaft (Y-axis)--in. (mm)	-0.1 (-2.24)
Above Crankshaft (Z-axis)--in. (mm)	7.4 (189)
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 --lb (N)	Forward	Rearward
Intermittent	899 (4000)	450 (2000)
Continuous	495 (2200)	225 (1000)

Max. Front of Crank. Torsional Vibration--DDA	0.25
Max. Continuous Damper Temp--°F (°C)	180 (82)

Electrical System	12 Volt	24 Volt
Min. Battery Capacity (CCA)--amp	800	570
Max. Allow. Start. Circ't Resist.--Ohm	0.0012	0.002
Starter Rolling Current:		
At 32 °F (0 °C)--amp	920	600
At -22 °F (-30 °C)--amp	1300	700
Min. Volts at ECU while Cranking--volts	6	10
Max. ECU Temperature--°F (°C)	221 (105)	
Max. VTG Actuator Surface Temp.--°F (°C)	356 (180)	
Max. Harness Temperature--°F (°C)	248 (120)	
Maximum Voltage From Engine Crankshaft/ Generator Shaft to Ground--VAC	0.15	0.15

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_2O (kPa)	25 (6.25)	25 (6.25)
Clean Air Cleaner--in.H_2O (kPa)	15 (3.75)	15 (3.75)
Engine Air Flow--ft^3/min (m^3/min)	520 (14.7)	619 (17.5)
Air Cleaner Efficiency--%	99.9	

Charge Air Cooling System	Prime	Standby
Air/Air Exchanger Heat Rejection--BTU/min (kW)	2298(40.37)	3264(57.34)
Compress. Dischrg. Temp.(Rated) @ 77 °F (25°C) Amb. Air--°F (°C)	365(185)	441(227)
Compress. Dischrg. Temp.(Max.) @ 47°C amb. and 80 kPa bar.--°F (°C)	000(000)	000(000)
Press. Drop, thru CAC--in.H_2O (kPa)		
Max.	64 (16)	64 (16)
Min.	32 (8)	32 (8)
Intake Manifold Pressure--psi (kPa)	27 (188)	37 (252)
CAC Out Temp @ 77°F (25°C) Amb.--°F (°C)		
Max.	126 (52)	126 (52)
Min.	109 (43)	109 (43)
CAC Out Temp @ any Ambient--°F (°C)		
Max.	190 (88)	190 (88)

Cooling System	Prime	Standby
Engine Heat Reject.--BTU/min (kW)	4766(83.7)	5404(94.9)
Coolant Flow--gal/min (L/min)	70 (265)	70 (265)
Thermostat Start to Open--°F (°C)	180 (82)	180 (82)
Thermostat Fully Open--°F (°C)	203 (95)	203 (95)
Engine Coolant Capacity--qt (L)	13 (11.9)	13 (11.9)
Min. Pressure Cap--psi (kPa)	14.5 (100)	14.5 (100)
Max. Top Tank Temp--°F (°C)	230 (110)	230 (110)
Min. Coolant Fill Rate--gal/min (L/min)	3 (11)	3 (11)
Min. Air-to-Boil Temperature--°F (°C)	117 (47)	117 (47)
Min. Pump Inlet Pressure--psi (kPa)	4.4 (30)	4.4 (30)

Exhaust System	Prime	Standby
Exhaust Flow--ft^3/min (m^3/min)	1371 (38.8)	1514 (42.9)
Exhaust Temperature--°F (°C)	982 (528)	905 (485)
Max. Exhaust Restriction----in. H_2O (kPa)	40 (10)	
Min. Exhaust Restriction----in. H_2O (kPa)	16 (4)	
Max. Bend. Moment, Turbo Out.--lb-ft (N•m)	5.2 (7.0)	
Max. Shear on Turbo Outlet--lb (kg)	24 (11)	

Fuel System	Prime	Standby
ECU Description	L14 Controller	
Fuel System Description	HPCR	
Fuel Injection Pump	Denso HP3	
Governor Type	Electronic	
Total Fuel Flow--lb/hr (kg/hr)	161 (73.1)	174 (78.7)
Fuel Consumption--lb/hr (kg/hr)	97 (44)	110 (50)
Max. Fuel Inlet Temp.--°F (°C)	176 (80)	
Fuel Temp. Rise, Inlt to Retrn--°F (°C)	97.2(54)	100.8(56)
Max. Fuel Inlet Restriction--in. H_2O (kPa)	80 (20)	
Max. Fuel Inlet Pressure--in. H_2O (kPa)	NA (NA)	
Max. Fuel Return Pressure--in. H_2O (kPa)	80 (20)	

Lubrication System	Prime	Standby
Oil Press. at Rated Speed--psi (kPa)	49 (339)	49 (339)
Oil Pressure at Low Idle--psi (kPa)	15 (105)	
Max. Oil Carryover in Blow-by--lb/hr (g/hr)	0.002 (1.0)	
Max. Oil Airflow in Blow-by--gal/min (l/min)	34 (130)	
Max. Crankcase Pressure--in. H_2O (kPa)	2 (0.5)	

Performance Data	Prime	Standby
Rated Power--hp (kW)	286 (214)	315 (235)
Rated Speed--rpm	1800	1800
Low Idle Speed--rpm	1150	1150
Rated Torque--lb-ft (N•m)	1536 (1133)	1690 (1247)
BMEP--psi (kPa)	304 (2094)	334 (2304)
Friction Power @ Rated Speed--hp (kW)	25 (18.7)	25 (18.7)
Altitude Capability--ft (m)	10,000 (3000)	
Ratio--Air : Fuel	23.0 : 1	24.0 : 1
Smoke @ Rated Speed--Bosch No.	0.45	0.77
Noise--dB(A) @ 1 m	89.0*	89.0*

Fuel Consumption -- lb/hr (kg/h)	Prime	Standby
25 % Power	27.8 (12.6)	30.3 (13.7)
50 % Power	51.4 (23.3)	56.2 (25.5)
75 % Power	73.2 (33.2)	80.4 (36.5)
100 % Power	97.2 (44.1)	109.7 (49.8)

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

* Revised Data

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June 2007