



JOHN DEERE

ENGINE PERFORMANCE CURVE

Rating: Gross Power
 Application: Generator
 225 kVA Prime Gen-set Market
 1500 RPM (50 Hz)

PowerTech™ E 6.8L Engine
Model: 6068HFS55
 JD Electronic Control
 278 hp (207 kW) Prime
 306 hp (228 kW) Standby

Nominal Engine Power @ 1500 RPM			
Prime		Standby	
HP	kW	HP	kW
278	207	306	228

Generator Efficiency %	Fan Power (% of Standby)		Power Factor	Prime Rating		Standby Rating	
	hp	kW		kWe	kVA	kWe	kVA
88-92	14.751242	11.0	0.8	172-180	215-225	191-200	239-250

Note 1: Based on nominal engine power.

STANDARD CONDITIONS

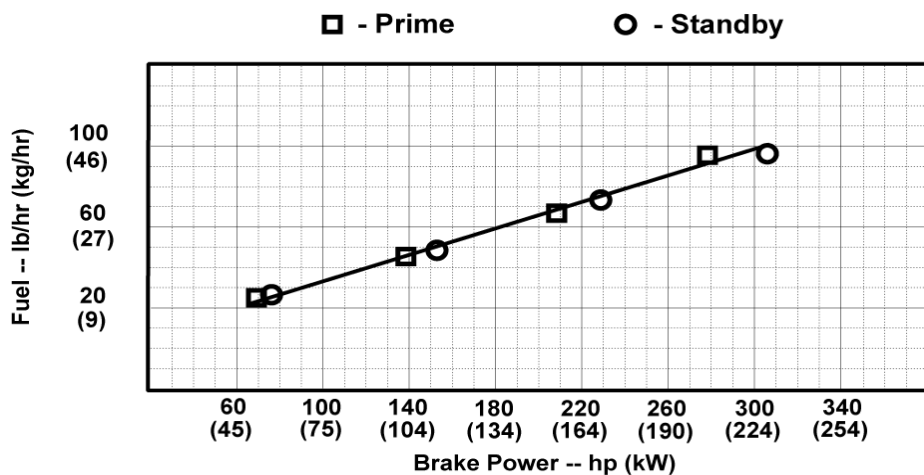
Air Intake Restriction.....12 in.H₂O (3 kPa)
 Exhaust Back Pressure.....30 in.H₂O (7.5 kPa)

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 = 0.85kg
 Torque: N·m = lb-ft x 1.356

All values are from currently available data and are subject to change without notice.

Notes: For Noise Data, Contact your Sales Engineer.



Designed/Calibrated to meet:	Certified by:
• EPA Tier 1	<i>[Signature]</i> 27 Apr. 2015
Ref: Engine Emission Label	

Performance Curve: 6068HFS55_B15

Engine Installation Criteria

General Data

Model	6068HFS55	
Number of Cylinders	6	
Bore	106 mm	4.2 in.
Stroke	127 mm	5.0 in.
Displacement	6.8 L	415 in. ³
Compression Ratio	17.2 : 1	
Valves per Cylinder, Intake/Exhaust	2 / 2	
Firing Order	1-5-3-6-2-4	
Combustion System	HPCR	
Engine Type	In-line, 4-cycle	
Aspiration	Turbocharged and air-to-air aftercooled	
Engine Crankcase Vent System	Open	

Physical Data

Length	1123 mm	44.2 in.
Width	604 mm	23.8 in.
Height	1084 mm	42.7 in.
Weight, with oil & no coolant (Includes engine, flywheel housing, flywheel & electrics)	730 kg	1609 lb
Center of Gravity Location, X-axis From Rear Face of Block	mm	
Center of Gravity Location, Y-axis Right of Crankshaft	mm	
Center of Gravity Location, Z-axis Above Crankshaft	mm	
Max. Allowable Static Bending Moment At Rear Face of Flywheel Housing with 5-G Load	814 N·m	600 lb-ft
Thrust Bearing Load Limit Forward, Intermittent	4000 N	899 lb
Thrust Bearing Load Limit Forward, Continuous	2200 N	495 lb
Thrust Bearing Load Limit Rearward, Intermittent	2000 N	450 lb
Thrust Bearing Load Limit Rearward, Continuous	1000 N	225 lb
Max. Continuous Damper Temp	82 °C	180 °F
Max. Torsional Vibration, Front of Crank	0.25 DDA	

Electrical System

Recommended Battery Capacity, 12V @32 °F (0 °C)	925 amps	
Recommended Battery Capacity, 24V @32 °F (0 °C)	625 amps	
Starter Rolling Current, 12V @32 °F (0 °C)	450 amps	
Starter Rolling Current, 24V @32 °F (0 °C)	250 amps	
Starter Rolling Current, 12V @-22 °F (-30 °C)	700 amps	
Starter Rolling Current, 24V @-22 °F (-30 °C)	400 amps	
Min. Voltage at ECU during Cranking, 12V	6 volts	
Min. Voltage at ECU during Cranking, 24V	10 volts	
Max. Allowable Start Circuit Resistance, 12V	0.0012 Ohm	
Max. Allowable Start Circuit Resistance, 24V	0.002 Ohm	
Max. Voltage From Engine to Crankshaft, 12V	0.15 volts	
Max. Voltage From Engine to Crankshaft, 24V	0.15 volts	
Max. ECU Temperature	105 °C	221 °F
Max. Harness Temperature	125 °C	257 °F
Max. Alternator Temperature	105 °C	221 °F
Max. Starter Temperature	120 °C	248 °F
Max. Temperature, All Other Electronics	125 °C	257 °F

Charge Air Cooling System

Air-to-Air Heat Rejection	40.5 kW	2305 BTU/min
Compressor Discharge Temperature @77°F(25°C) Ambient Air	206 °C	403 °F
Intake Manifold Pressure	217.1 kPa	31.5 psi
Max. Temperature Out of Charge Air Cooler @All Ambient Conditions	88 °C	190 °F
Intake Manifold Temperature at which Power De-rate Occurs	89.5 °C	193 °F
Intake Manifold Temperature at which Severe Power De-rate Occurs	91 °C	195.8 °F
Max. CAC System Volume	NA	
Max. Pressure Drop through CAC	13 kPa	52.0 in. H ₂ O
Max. Temperature Out of Charge Air Cooler @77°F (25°C) Ambient Air	56 °C	133 °F

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Engine Installation Criteria

Cooling System

Engine Heat Rejection	88.0 kW	5009 BTU/min
Engine Radiated Heat	23.0 kW	1309 BTU/min
Coolant Flow	252 L/min	67 gal/min
Thermostat Start to Open	85 °C	185 °F
Thermostat Fully Open	97 °C	207 °F
Engine Coolant Capacity	12.7 Liter	13.4 quart
Min. Coolant Fill Rate	12 L/min	3.2 gal/min
Min. Pump Inlet Pressure @203°F (95°C) Coolant	110 kPaa	16 psia
Max. External Coolant Restriction	35 kPa	5 psi
Max. Top Tank Temperature	110 °C	230 °F
Max. Top Tank Temperature 95% of Operating Hours	103 °C	217 °F
Min. Limiting Ambient Temperature	47 °C	117 °F

Exhaust System

Exhaust Flow	34.6 m ³ /min	1222 ft. ³ /min
Exhaust Temperature	530.4 °C	987 °F
Max. Allowable Exhaust Restriction	7.5 kPa	30 in. H ₂ O
Max. Bending Moment on Turbo Outlet	7.0 N·m	5.2 lb-ft
Max. Shear on Turbine Outlet	11 kg	24 lb

Fuel System

ECU Description	L 24 Controller	
Fuel Injection Pump	Denso HP4	
Governor Type	Electronic	
Governor Regulation	0	
Total Fuel Flow	kg/hr	
Fuel Consumption	43.7 kg/hr	96.3 lb/hr
Fuel Temperature Rise, Inlet to Return	39.2 Δ°C	71 Δ°F
Min. Fuel Inlet Pressure	-30 kPa	-120 in. H ₂ O
Max. Fuel Inlet Pressure	NA	
Max. Fuel Return Pressure	20 kPa	80 in. H ₂ O
Max. Fuel Inlet Temperature	60 °C	140 °F
Fuel Filter @98% Efficiency	2 mic	

Lubrication System

Oil Pressure at Rated Speed	314 kPa	46 psi
Oil Pressure at Low Idle	kPa	
Max. Oil Carryover in Blow-By	g/hr	
Max. Airflow in Blow-By	L/min	
Max. Crankcase Pressure	2 kPa	8 in. H ₂ O

Air Intake System

Engine Air Flow	13.5 m ³ /min	477 ft. ³ /min
Air Mass Flow	913 kg/hr	2013 lb/hr
Maximum Allowable Temperature Rise, Ambient Air to Engine Inlet	8 Δ°C	15 Δ°F
Max. Air Intake Restriction, Clean Air Cleaner	3.75 kPa	15.0 in. H ₂ O
Max. Air Intake Restriction, Dirty Air Cleaner	6.25 kPa	25.0 in. H ₂ O
Air Cleaner Efficiency	99.9 %	

Performance Data

Rated Power, Prime	207 kW	278 HP
Rated Power, Standby	228 kW	306 HP
Rated Speed	1500 rpm	
Rated Torque, Prime	1315 N·m	970 lb-ft
BMEP, Prime	2469 kPa	970 psi
Altitude Capability	ft	
Friction Power @Rated Speed	kW	
Air:Fuel Ratio	20.3 : 1	
Smoke @Rated Speed	0.1 Bosch No.	
Noise @1 m	NA	
0-100% Standby Load Acceptance	sec	
Load Acceptance, ISO 8528-5	G3	

Fuel Consumption	Prime		Standby	
	lb/hr	kg/h	lb/hr	kg/h
25 % Power	25.1	11.4	26.7	12.1
50 % Power	45.6	20.7	49.4	22.4
75 % Power	67.2	30.5	72.8	33.0
100 % Power	96.3	43.7	96.3	43.7

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