

**JU4H-UFH8**

**INSTALLATION & OPERATION DATA (I&O Data)**

USA Produced

**Basic Engine Description**

Engine Manufacturer	John Deere Co.
Ignition Type	Compression (Diesel)
Number of Cylinders	4
Bore and Stroke - in (mm)	4.19 (106) X 5 (127)
Displacement - in <sup>3</sup> (L)	275 (4.5)
Compression Ratio	17.0:1
Valves per cylinder	
Intake	1
Exhaust	1
Combustion System	Direct Injection
Engine Type	In-Line, 4 Stroke Cycle
Fuel Management Control	Mechanical, Rotary Pump
Firing Order (CW Rotation)	1-3-4-2
Aspiration	Turbocharged
Charge Air Cooling Type	None
Rotation, viewed from front of engine, Clockwise (CW)	Standard
Engine Crankcase Vent System	Open
Installation Drawing	D534
Weight - lb (kg)	935 (424)

**Power Rating**

	<b>1470</b>	<b>1760</b>
Nameplate Power - HP (kW)	63 (47)	73 (54)

**Cooling System - [C051128]**

	<b>1470</b>	<b>1760</b>
Engine Coolant Heat - Btu/sec (kW)	34 (35.9)	40 (42.2)
Engine Radiated Heat - Btu/sec (kW)	14 (14.8)	16 (16.9)
Heat Exchanger Minimum Flow		
60°F (15°C) Raw H <sub>2</sub> O - gal/min (L/min)	6 (22.7)	8 (30.3)
95°F (35°C) Raw H <sub>2</sub> O - gal/min (L/min)	9 (34.1)	10 (37.9)
Heat Exchanger Maximum Cooling Raw Water		
Inlet Pressure - psi (bar)	60 (4.1)	
Flow - gal/min (L/min)	40 (151)	
Typical Engine H <sub>2</sub> O Operating Temp - °F (°C) <sup>[1]</sup>	180 (82.2) - 195 (90.6)	
Thermostat		
Start to Open - °F (°C)	187 (86.1)	
Fully Opened - °F (°C)	196 (91.1)	
Engine Coolant Capacity - qt (L)	14.79 (14)	
Coolant Pressure Cap - lb/in <sup>2</sup> (kPa)	10 (68.9)	
Maximum Engine Coolant Temperature - °F (°C)	200 (93.3)	
Minimum Engine Coolant Temperature - °F (°C)	160 (71.1)	
High Coolant Temp Alarm Switch - °F (°C)	205 (96.1)	

**Electric System - DC**

	<u>Standard</u>		<u>Optional</u>	
System Voltage (Nominal)	12		24	
Battery Capacity for Ambients Above 32°F (0°C)				
Voltage (Nominal)	12	[C07633]	24	[C07633]
Qty. Per Battery Bank	1		2	
SAE size per J537	8D		8D	
CCA @ 0°F (-18°C)	1400		1400	
Reserve Capacity - Minutes	430		430	
Battery Cable Circuit, Max Resistance - ohm	0.0012		0.0012	
Battery Cable Minimum Size				
0-120 in. Circuit Length <sup>[2]</sup>	00		00	
121-160 in. Circuit Length <sup>[2]</sup>	000		000	
161-200 in. Circuit Length <sup>[2]</sup>	0000		0000	
Charging Alternator Maximum Output - Amp,	40	[C07639]	40	[C071048]
Starter Cranking Amps, Rolling - @60°F (15°C)	345	[RE59595/RE59589]	250	[C07819/C07820]

NOTE: This engine is intended for indoor installation or in a weatherproof enclosure. <sup>1</sup>Engine H<sub>2</sub>O temperature is dependent on raw water temperature and flow. <sup>2</sup>Positive and Negative Cables Combined Length.

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**Exhaust System**

	<b><u>1470</u></b>	<b><u>1760</u></b>
Exhaust Flow - ft. <sup>3</sup> /min (m <sup>3</sup> /min) -----	284 (8)	362 (10.3)
Exhaust Temperature - °F (°C) -----	780 (416)	794 (423)
Maximum Allowable Back Pressure - in H <sub>2</sub> O (kPa) -----	30 (7.5)	30 (7.5)
Minimum Exhaust Pipe Dia. - in (mm) <sup>[3]</sup> -----	4 (102)	4 (102)

**Fuel System**

	<b><u>1470</u></b>	<b><u>1760</u></b>
Fuel Consumption - gal/hr (L/hr) -----	1.8 (6.8)	2.1 (8)
Fuel Return - gal/hr (L/hr) -----	7.4 (28)	7.9 (29.9)
Fuel Supply - gal/hr (L/hr) -----	9.2 (34.8)	10 (37.8)
Fuel Pressure - lb/in <sup>2</sup> (kPa) -----	3 (20.7) - 6 (41.4)	
Minimum Line Size - Supply - in. -----	.50 Schedule 40 Steel Pipe	
Pipe Outer Diameter - in (mm) -----	0.848 (21.5)	
Minimum Line Size - Return - in. -----	.375 Schedule 40 Steel Pipe	
Pipe Outer Diameter - in (mm) -----	0.675 (17.1)	
Maximum Allowable Fuel Pump Suction Lift with clean Filter - in H <sub>2</sub> O (mH <sub>2</sub> O) -----	31 (0.8)	
Maximum Allowable Fuel Head above Fuel pump, Supply or Return - ft (m) -----	4.5 (1.4)	
Fuel Filter Micron Size -----	5	

**Heater System**

	<b><u>Standard</u></b>	<b><u>Optional</u></b>
Engine Coolant Heater		
Wattage (Nominal) -----	1000	1000
Voltage - AC, 1 Phase -----	115 (+5%, -10%)	230 (+5%, -10%)
Part Number -----	[C122188]	[C122192]

**Air System**

	<b><u>1470</u></b>	<b><u>1760</u></b>	
Combustion Air Flow - ft. <sup>3</sup> /min (m <sup>3</sup> /min) -----	103 (2.9)	154 (4.4)	
Air Cleaner	<b><u>Standard</u></b>		<b><u>Optional</u></b>
Part Number -----	[C03749]		[C03327]
Type -----	Indoor Service Only, with Shield		Canister, Single-Stage
Cleaning method -----	Washable		Disposable
Air Intake Restriction Maximum Limit			
Dirty Air Cleaner - in H <sub>2</sub> O (kPa) -----	10 (2.5)		10 (2.5)
Clean Air Cleaner - in H <sub>2</sub> O (kPa) -----	5 (1.2)		5 (1.2)
Maximum Allowable Temperature (Air To Engine Inlet) - °F (°C) <sup>[4]</sup> -----	130 (54.4)		

**Lubrication System**

Oil Pressure - normal - lb/in <sup>2</sup> (kPa) -----	35 (241) - 50 (345)
Low Oil Pressure Alarm Switch - lb/in <sup>2</sup> (kPa) -----	20 (138)
In Pan Oil Temperature - °F (°C) -----	220 (104) - 245 (118)
Total Oil Capacity with Filter - qt (L) -----	15.5 (14.7)

**Lube Oil Heater**

	<b><u>Optional</u></b>	<b><u>Optional</u></b>
Wattage (Nominal) -----	150	150
Voltage -----	120V (+5%, -10%)	240V (+5%, -10%)
Part Number -----	C04430	C04431

**Performance**

	<b><u>1470</u></b>	<b><u>1760</u></b>
BMEP - lb/in <sup>2</sup> (kPa) -----	123 (848)	119 (820)
Piston Speed - ft/min (m/min) -----	1225 (373)	1467 (447)
Mechanical Noise - dB(A) @ 1m -----	C131495	
Power Curve -----	C131297	

<sup>3</sup>Based on Nominal System. Back pressure flow analysis must be done to assure maximum allowable back pressure is not exceeded. (Note: minimum exhaust Pipe diameter is based on: 15 feet of pipe, one 90° elbow, and a silencer pressure drop no greater than one half of the maximum allowable back pressure.) <sup>4</sup>Review for horsepower derate if ambient air entering engine exceeds 77°F (25°C). [ ] indicates component reference part number.