

JU4H-UF50

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 ³ (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

	1760	2100	2350
Nameplate Power - HP (kW)	110 (82)	130 (97)	127 (95)

Cooling System - [C051128]

	1760	2100	2350
Engine Coolant Heat - Btu/sec (kW)	40 (42.2)	47 (49.6)	47 (49.6)
Engine Radiated Heat - Btu/sec (kW)	25 (26.4)	29 (30.6)	28 (29.5)
Heat Exchanger Minimum Flow			
60°F (15°C) Raw H ₂ O - gal/min (L/min)	10 (37.9)	13 (49.2)	13 (49.2)
95°F (35°C) Raw H ₂ O - gal/min (L/min)	13 (49.2)	14 (53)	14 (53)
Heat Exchanger Maximum Cooling Raw Water			
Inlet Pressure - psi (bar)	60 (4.1)		
Flow - gal/min (L/min)	40 (151)		
Typical Engine H ₂ O Operating Temp - °F (°C) ^[1]	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 ² (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

	Standard		Optional	
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 ^[2]	00		00	
121-160 in. Circuit Length ^[2]	000		000	
161-200 in. Circuit Length ^[2]	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. ¹Engine H₂O temperature is dependent on raw water temperature and flow. ²Positive and Negative Cables Combined Length.

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Exhaust System	1760	2100	2350
Exhaust Flow - ft. ³ /min (m ³ /min) -----	554 (15.7)	698 (19.8)	752 (21.3)
Exhaust Temperature - °F (°C) -----	1108 (598)	1076 (580)	998 (537)
Maximum Allowable Back Pressure - in H ₂ O (kPa) -----	30 (7.5)	30 (7.5)	30 (7.5)
Minimum Exhaust Pipe Dia. - in (mm) ^[3] -----	4 (102)	4 (102)	4 (102)
Fuel System	1760	2100	2350
Fuel Consumption - gal/hr (L/hr) -----	3.8 (14.4)	4.5 (17)	4.9 (18.5)
Fuel Return - gal/hr (L/hr) -----	7.9 (29.9)	8.5 (32.2)	9 (34.1)
Fuel Supply - gal/hr (L/hr) -----	11.7 (44.3)	13 (49.2)	13.9 (52.6)
Fuel Pressure - lb/in ² (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 ₂ O (mH ₂ 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	Standard	Optional	
Engine Coolant Heater			
Wattage (Nominal) -----	1000	1000	
Voltage - AC, 1 Phase -----	115 (+5%, -10%)	230 (+5%, -10%)	
Part Number -----	[C122188]	[C122192]	
Air System	1760	2100	2350
Combustion Air Flow - ft. ³ /min (m ³ /min) -----	190 (5.4)	244 (6.9)	277 (7.8)
Air Cleaner	Standard	Optional	
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 ₂ O (kPa) -----	10 (2.5)	10 (2.5)	
Clean Air Cleaner - in H ₂ O (kPa) -----	5 (1.2)	5 (1.2)	
Maximum Allowable Temperature (Air To Engine Inlet) - °F (°C) ^[4] -----	130 (54.4)		
Lubrication System			
Oil Pressure - normal - lb/in ² (kPa) -----	35 (241) - 50 (345)		
Low Oil Pressure Alarm Switch - lb/in ² (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	Optional	Optional	
Wattage (Nominal) -----	150	150	
Voltage -----	120V (+5%, -10%)	240V (+5%, -10%)	
Part Number -----	C04430	C04431	
Performance	1760	2100	2350
BMEP - lb/in ² (kPa) -----	180 (1240)	178 (1230)	156 (1080)
Piston Speed - ft/min (m/min) -----	1467 (447)	1750 (533)	1958 (597)
Mechanical Noise - dB(A) @ 1m -----	C13912		
Power Curve -----	C13477		

³Based 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.) ⁴Review for horsepower derate if ambient air entering engine exceeds 77°F (25°C). [] indicates component reference part number.