CLARKE
Fire Protection Products, Inc.

JU4H-UF52
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	**2350**	**2600**
Nameplate Power - HP (kW)	127 (95)	127 (95)

Cooling System - [C051128]	**2350**	**2600**
Engine Coolant Heat - Btu/sec (kW)	47 (49.6)	53 (55.9)
Engine Radiated Heat - Btu/sec (kW)	28 (29.5)	28 (29.5)
Heat Exchanger Minimum Flow		
60°F (15°C) Raw H_20 - gal/min (L/min)	13 (49.2)	13 (49.2)
95°F (35°C) Raw H_20 - gal/min (L/min)	14 (53)	18 (68.1)
Heat Exchanger Maximum Cooling Raw Water		
Inlet Pressure - psi (bar)	60 (4.1)	
Flow - gal/min (L/min)	40 (151)	
Typical Engine H_20 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. [1]Engine H_2O temperature is dependent on raw water temperature and flow. [2]Positive and Negative Cables Combined Length.

CLARKE
Fire Protection Products, Inc.

JU4H-UF52
INSTALLATION & OPERATION DATA (I&O Data)
USA Produced

Exhaust System	**2350**	**2600**
Exhaust Flow - ft.³/min (m³/min)	752 (21.3)	839 (23.8)
Exhaust Temperature - °F (°C)	998 (537)	966 (519)
Maximum Allowable Back Pressure - in H_20 (kPa)	30 (7.5)	30 (7.5)
Minimum Exhaust Pipe Dia. - in (mm)[3]	4 (102)	4 (102)

Fuel System	**2350**	**2600**
Fuel Consumption - gal/hr (L/hr)	4.9 (18.5)	7.9 (29.9)
Fuel Return - gal/hr (L/hr)	9 (34.1)	9.5 (36)
Fuel Supply - gal/hr (L/hr)	13.9 (52.6)	17.4 (65.9)
Fuel Pressure - lb/in² (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_20 (mH_20)	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	**2350**	**2600**	
Combustion Air Flow - ft.³/min (m³/min)	277 (7.8)	316 (9)	
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_20 (kPa)	10 (2.5)		10 (2.5)
Clean Air Cleaner - in H_20 (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/in² (kPa)	35 (241) - 50 (345)
Low Oil Pressure Alarm Switch - lb/in² (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	**2350**	**2600**
BMEP - lb/in² (kPa)	156 (1080)	141 (972)
Piston Speed - ft/min (m/min)	1958 (597)	2167 (661)
Mechanical Noise - dB(A) @ 1m	C133125	
Power Curve	C130562	

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