

UK Purchased

FM-UL-cUL APPROVED RATINGS KW/BHP

JU4H MODEL	RATED SPEED											
	1470	1760	2100	2350	2600	2800	3000					
UF04				37 50	41 55	45 60	45 60					
UF10		31 41	38 51	41 55								
UF12				41 55	44 59							
UF14				41 55	44 59	52 70	53 71					
UF20		45 60	50 67	54 72								
UF22				54 72	56 75							
UF24				54 72	56 75	60 80	62 83					
UF34				63 85	63 85	78 104	86 115					
UFH0		54 73	66 88	73 98								
UFH2				73 98	74 99							
UF40		70 94	78 105	79 106								
UF42				79 106	79 106							
UF50	59 79	82 110	97 130	95 127								
UF52				95 127	95 127							
UF54				91 122	104 139	108 145	108 145					



Picture shown represents a JU4H-NA engine model

SPECIFICATIONS

ITEM	JU4H MODELS					
	UF04/10/12/14	UF20/22/24	UF34	UFH0/H2	UF40/42	UF50/52/54
Number of Cylinders	4					
Aspiration	NA		T			
Rotation*	CW					
Overall Dimensions – mm (in.)	989 (39) H x 1226 (48) L x 916 (36.1) W		1166 (45.9) H x 1357 (53.4) L x 934 (36.8) W			
Crankshaft Centerline Height – mm (in.)	356 (14)					
Weight – kg (lb)	413 (910)		424 (935)			
Compression Ratio	17.6:1		17.0:1			
Displacement – l (cu. in.)	4.5 (275)					
Engine Type	4 Stroke Cycle – Inline Construction					
Bore & Stroke – mm (in.)	106 x 127 (4.19 x 5.00)					
Installation Drawing	D545					
Wiring Diagram AC	C07651					
Wiring Diagram DC	C072145					
Engine Series	John Deere 4045 Series					

Abbreviations: CW – Clockwise NA – Naturally Aspirated T – Turbocharged L - Length W – Width H - Height

*Rotation viewed from Heat Exchanger / Front of engine

CERTIFIED POWER RATING

- Each engine is factory tested to verify power and performance.
- Although FM-UL ratings are shown at specific speeds, Clarke engines can be applied at any intermediate speed. To determine the intermediate speed power; make a linear interpolation from the Clarke FM-UL power curve. Contact Clarke or your Pump OEM Representative to obtain details.

ENGINE RATINGS BASELINES

- Engines are to be used for stationary emergency standby fire pump service only. Engines are to be tested in accordance with NFPA 25.
- Engines are rated at standard SAE conditions of 29.61 in. (752.1 mm) Hg barometer and 77°F (25°C) inlet air temperature [approximates 300 ft. (91.4 m) above sea level] by the testing laboratory (see SAE Standard J 1349).
- A deduction of 3 percent from engine horsepower rating at standard SAE conditions shall be made for diesel engines for each 1000 ft. (305 m) altitude above 300 ft. (91.4 m)
- A deduction of 1 percent from engine horsepower rating as corrected to standard SAE conditions shall be made for diesel engines for every 10°F (5.6°C) above 77°F (25°C) ambient temperature.



ENGINE EQUIPMENT

EQUIPMENT	STANDARD	OPTIONAL
Air Cleaner	Direct Mounted, Washable, Indoor Service with Drip Shield	Disposable, Drip Proof, Indoor Service Outdoor Type, Single or Two Stage (Cyclonic)
Alarms	Overspeed Alarm & Shutdown, Low Oil Pressure, Low & High Coolant Temperature, Low Raw Water Flow, High Raw Water Temperature	Low Coolant Level, Low Oil Level, Oil Filter Differential Pressure, Fuel Filter Differential Pressure, Air Filter Restriction
Alternator	12V-DC, 42 Amps; with Poly-Vee Belt and Guard	24V-DC, 40 Amps; with Belt Guard
Coupling	Bare Flywheel	Listed Driveshaft and Guard, UF10/12/14, UF20/22/24 – CDS10-SC; UFH0/H2, UF40/42 – CDS20-SC; UF50/52/54 – CDS30-S1
Engine Heater	230V-AC, 1000 Watt	115V-AC, 1000 Watt
Exhaust Flex Connection	For NA Engines - SS, Clamped, 3" For T Engines – SS, Clamped, 4"	SS Flex, Clamped, 4" & 5"
Exhaust Protection	Blankets on Naturally Aspirated Models, Metal Guards on Manifolds and Turbocharger on Turbocharged Models	
Flywheel Housing	SAE #3	
Flywheel Power Take Off	11.5" SAE Industrial Flywheel Connection	
Fuel Connections	Fire Resistant, Flexible, USA Coast Guard Approved, Supply and Return Lines	
Fuel Filter	Primary Filter with Priming Pump	
Fuel Injection System	Stanadyne, Direct Injection	
Fuel Solenoid	12V-DC Energized to Stop (ETS)	12V-DC Energized to Run (ETR); 24V-DC Energized to Run (ETR); 24V-DC Energized to Stop (ETS)
Governor, Speed	Constant Speed, Mechanical	
Heat Exchanger	Tube and Shell Type, 4 BAR (60 PSI), BSP(F) Connections	Sea Water Compatible
Instrument Panel	English and Metric, Tachometer, Hourmeter, Water Temperature, Oil Pressure and Two (2) Voltmeters	
Junction Box	Integral with Instrument Panel; For DC Wiring Interconnection to Engine Controller	
Lube Oil Cooler	Engine Water Cooled, Plate Type	
Lube Oil Filter	Full Flow with By-Pass Valve	
Lube Oil Pump	Gear Driven, Gear Type	
Manual Start Control	On Instrument Panel with Control Position Warning Light	
Overspeed Control	Electronic with Reset and Test on Instrument Panel	
Raw Water Cooling Loop – w/Alarms	Galvanized	Seawater, All 316SS, High Pressure
Raw Water Cooling Loop – Solenoid Operation	Automatic from Fire Pump Controller and from Engine Instrument Panel (for Horizontal Fire Pump Applications)	Not Supplied (for Vertical Turbine Fire Pump Applications)
Run – Stop Control	On Instrument Panel with Control Position Warning Light	
Starters	Two (2) 12V-DC	Two (2) 24V-DC
Throttle Control	Adjustable Speed Control, Tamper Proof	
Water Pump	Centrifugal Type, Poly-Vee Belt Driven	

Abbreviations: DC –Direct Current, AC – Alternating Current, SAE – Society of Automotive Engineers, NA – Naturally Aspirated, T- Turbocharged, BSP(F) – British Standard Pipe Thread (Female), SS – Stainless Steel

MODEL NOMENCLATURE (8 Digit Models)

John Deere Base Engine J U 4 H - UF 50
 350 Series
 4 Cylinder
 Heat Exchanger Cooled
 Power Curve Number
 UL Listed and FM Approved

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