CLARKE®

FIRE PUMP ENGINES

MODELS

JU4H-UF04 JU4H-UF14 JU4H-UF24 JU4H-UFH2 JU4H-UF50
JU4H-UF10 JU4H-UF20 JU4H-UF34 JU4H-UF40 JU4H-UF52
JU4H-UF12 JU4H-UF22 JU4H-UFH0 JU4H-UF42 JU4H-UF54

UK Purchased

FM-UL-cUL APPROVED RATINGS KW/*BHP*

JU4H MODEL	RATED SPEED													
	1470		1760		2100		2350		2600		2800		3000	
UF04											45	*60*	45	*60*
UF10			31	*41*	38	*51*	41	*55*						
UF12							41	*55*	44	*59*				
UF14											52	*70*	53	*71*
UF20			45	*60*	50	*67*	54	*72*						
UF22							54	*72*	56	*75*				
UF24											60	*80*	62	*83*
UF34											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											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.

c UL us

Meets NFPA 20 Requirements

FM C US APPROVED

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FIRE PUMP ENGINES

MODELS

JU4H-UF10 JU4H-UF20 JU4H-UF34 JU4H-UF40
JU4H-UF12 JU4H-UF22 JU4H-UFH0 JU4H-UF42 JU4H-UF52
JU4H-UF14 JU4H-UF24 JU4H-UFH2 JU4H-UF50 JU4H-UF54

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)

J U 4 H - UF 50

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

CLARKE®