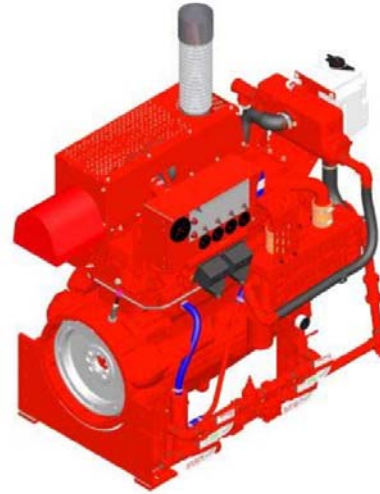


JU6H-UF32	JU6H-UFM2	JU6H-UF54	JU6H-UFKAQ8
JU6H-UF34	JU6H-UF58	JU6H-UF60	JU6H-UFKARG
JU6H-UF30	JU6H-UFM8	JU6H-UF62	JU6H-UFKAS0
JU6H-UF32	JU6H-UFM0	JU6H-UF52	JU6H-UF84

UK Purchased

FM-UL-cUL APPROVED RATINGS KW/BHP

JU6H MODEL	RATED SPEED							
	1470	1760	2100	2350	2600	2800	3000	
UFD0		82 110	107 144	110 148				
UFD2				110 148	110 148			
UF30	70 94	104 140	119 160	119 160				
UF32				119 160	119 160			
UF34				119 160	119 160	119 160	131 175	
UFM8	101 136	131 175						
UFM0		131 175	154 207	149 200				
UFM2				149 200	149 200			
UF58	103 138	137 183						
UF50		137 183	157 210	157 210				
UF52				157 210	157 210			
UF54				157 210	161 216	161 216	161 216	
UF60		149 200	179 240	179 240				
UF62				179 240	179 240			
UFKAPG	164 220							
UFKAQ8		169 227						
UFKARG		188 252						
UFKAS0			194 260					
UF84				181 243	184 247	193 259	205 275	



Picture shown represents JU6H-TRWA engine model

SPECIFICATIONS

ITEM	JU6H MODELS															
	D0	D2	30	32	34	M8	M0	M2	58	50	52	54	60	62	KAPG/Q8/RG/S0	84
Number of Cylinders	6															
Aspiration	T												TRWA			
Rotation*	CW															
Overall Dimensions - mm (in.)	1178 (46.4) H x 1510 (59.4) L x 942 (37.1) W												1178 (46.4) H x 1510 (59.4) L x 944 (37.2) W			
Crankshaft Centerline Height - mm (in.)	356 (14)															
Weight - kg (lb)	750 (1657)												766 (1693)			
Compression Ratio	17.0:1															
Displacement - l (cu. in.)	6.8 (414)															
Engine Type	4 Stroke Cycle - Inline Construction															
Bore & Stroke - mm (in.)	4.19 x 5.00 (106 x 127)															
Installation Drawing	D538															
Wiring Diagram AC	C07651															
Wiring Diagram DC	C072145															
Engine Series	John Deere 6068 Series															

Abbreviations: CW - Clockwise T - Turbocharged TRWA - Turbocharged with Raw Water Aftercooling 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.



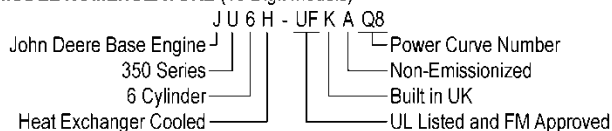
JU6H-UF32	JU6H-UFM2	JU6H-UF54	JU6H-UFKAQ8
JU6H-UF34	JU6H-UF58	JU6H-UF60	JU6H-UFKARG
JU6H-UF20	JU6H-UF50	JU6H-UF62	JU6H-UFKAS0
JU6H-UF22	JU6H-UFM0	JU6H-UFKAPG	JU6H-UF84
JU6H-UF30			

ENGINE EQUIPMENT

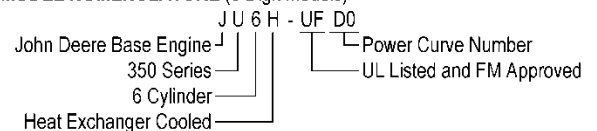
EQUIPMENT	STANDARD	OPTIONAL
Air Cleaner	Direct Mounted, Washable, Indoor Service with Drip Shield	Disposable, Drip Proof, Indoor Service Outdoor Type, Single or Two Stage (Cyclonic)
Alarms	Overspeed Alarm & Shutdown, Low Oil Pressure, Low & High Coolant Temperature, Low Raw Water Flow, High Raw Water 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, UFD0/D2/30/32/34 – CDS20-S1; UFM8/M0/M2/58/50/52/54/60/62/84– CDS30-S1; UFKAQ8/KAPG/RG/S0 – CDS50-SC
Engine Heater	230V-AC, 1360 Watt	115V-AC, 1360 Watt
Exhaust Flex Connection	SS Flex, Clamped, 5"	SS Flex, Clamped, 6"
Exhaust Protection	Metal Guards on Manifolds and Turbocharger	
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 Drive with Guard	

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

MODEL NOMENCLATURE (10 Digit Models)



MODEL NOMENCLATURE (8 Digit Models)



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Grange Works, Lomond Rd., Coatbridge, ML5-2NN
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Tel +44-1236-429946 Fax +44-1236-427274
www.clarkefire.com

CLARKE Fire Protection Products, Inc.
100 Progress Place, Cincinnati, Ohio 45246
United States of America
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www.clarkefire.com

CLARKE®

JU4H, JU4R & JU6H, JU6R ENGINE MODELS ENGINE MATERIALS AND CONSTRUCTION

Air Cleaner

Type..... Indoor Usage Only
Oiled Fabric Pleats
Material..... Surgical Cotton
Aluminum Mesh

Air Cleaner - Optional

Type..... Canister
Material..... Pleated Paper
Housing..... Enclosed

Camshaft

Material..... Cast Iron
Chill Hardened
Location..... In Block
Drive..... Gear, Spur
Type of Cam..... Ground

Charge Air Cooler (JU6H-60,62,68,74,84, ADK0, AD58, ADNG, ADN0, ADQ0, ADR0, AAQ8, AARG, ADP8, ADP0, ADT0, AD88, ADR8, AD98, ADS0, ADW8, ADX8, AD98 only)

Type..... Raw Water Cooled
Materials (in contact with raw water)
Tubes..... 90/10 CU/NI
Headers..... 36500 Muntz
Covers..... 83600 Red Brass
Plumbing..... 316 Stainless Steel/ Brass
90/10 Silicone

Charge Air Cooler (JU6R-AA67, 59, 61, PF, Q7, RF, S9, 83 only)

Type..... Air to Air Cooled
Materials
Core..... Aluminum

Coolant Pump

Type..... Centrifugal
Drive..... Poly Vee Belt

Coolant Thermostat

Type..... Non Blocking
Qty..... 1

Cooling Loop (Galvanized)

Tees, Elbows, Pipe..... Galvanized Steel
Ball Valves..... Brass ASTM B 124,
Solenoid Valve..... Brass
Pressure Regulator..... Bronze
Strainer..... Cast Iron (1/2" - 1" loops) or
Bronze (1.25" - 2" loops)

Cooling Loop (Sea Water)

Tees, Elbows, Pipe..... 316 Stainless Steel
Ball Valves..... 316 Stainless Steel
Solenoid Valve..... 316 Stainless Steel
Pressure Regulator/Strainer Cast Brass ASTM B176
C87800

Cooling Loop (316SS)

Tees, Elbows, Pipe..... 316 Stainless Steel
Ball Valves..... 316 Stainless Steel
Solenoid Valve..... 316 Stainless Steel
Pressure Regulator/Strainer 316 Stainless Steel

Connecting Rod

Type..... I-Beam Taper
Material..... Forged Steel Alloy

Crank Pin Bearings

Type..... Precision Half Shell
Number..... 1 Pair Per Cylinder
Material..... Wear-Guard

Crankshaft

Material..... Forged Steel
Type of Balance..... Dynamic

Cylinder Block

Type..... One Piece with
Non-Siamese Cylinders
Material..... Annealed Gray Iron

Cylinder Head

Type..... Slab 2 Valve
Material..... Annealed Gray Iron

Cylinder Liners

Type..... Centrifugal Cast, Wet Liner
Material..... Alloy Iron Plateau, Honed

Fuel Pump

Type..... Diaphragm
Drive..... Cam Lobe

Heat Exchanger (USA) - JU4H & JU6H Only

Type..... Tube & Shell
Materials
Tube & Headers..... Copper
Shell..... Copper
Electrode..... Zinc

Heat Exchanger (UK) - JU4H & JU6H Only

Type..... Tube & Bundle

Materials

Tube & Headers..... Copper
Shell..... Aluminum

Injection Pump

Type..... Rotary
Drive..... Gear

Lubrication Cooler

Type..... Plate

Lubrication Pump

Type..... Gear
Drive..... Gear

Main Bearings

Type..... Precision Half Shells
Material..... Steel Backed-Aluminum
Lined

Piston

Type and Material..... Aluminum Alloy with
Reinforced Top Ring Groove
Cooling..... Oil Jet Spray

Piston Pin

Type..... Full Floating - Offset

Piston Rings

Number/Piston..... 3
Top..... Keystone Barrel Faced -
Plasma Coated
Second..... Tapered Cast Iron
Third..... Double Rail Type
w/Expander Spring

Radiator - JU4R & JU6R Only

Type..... Plate Fin

Materials

Core..... Copper & Brass
Tank & Structure..... Steel

Optional

Marine Coating..... Baked Phenolic

Valves

Type..... Poppet
Arrangement..... Overhead Valve
Number/Cylinder..... 1 intake
1 exhaust
Operating Mechanism..... Mechanical Rocker Arm
Type of Lifter..... Large Head
Valve Seat Insert..... Replaceable

CLARKE®

JU6H-UF54 NOISE DATA UK Produced

Mechanical Engine Noise *

Octave Band

RPM	BHP	OVERALL dB(A)	31.5 Hz dB(A)	63 Hz dB(A)	125 Hz dB(A)	250 Hz dB(A)	500 Hz dB(A)	1 kHz dB(A)	2 kHz dB(A)	4 kHz dB(A)	8 kHz dB(A)	16 kHz dB(A)
2800	216	107.20	67.10	69.20	80.30	88.00	97.80	99.60	99.00	100.50	98.90	87.00
3000	216	108.00	66.30	69.50	78.80	92.50	99.20	100.20	101.10	100.50	96.00	88.60

Raw Exhaust Engine Noise **

Octave Band

RPM	BHP	OVERALL dB(A)	31.5 Hz dB(A)	63 Hz dB(A)	125 Hz dB(A)	250 Hz dB(A)	500 Hz dB(A)	1 kHz dB(A)	2 kHz dB(A)	4 kHz dB(A)	8 kHz dB(A)	16 kHz dB(A)
2800 - 3000	216	107.60	0.00	97.40	101.80	96.50	98.70	98.30	101.00	97.20	87.90	81.50

* Values above are provided at 3.3ft (1m) from engine block and do not include the raw exhaust noise.

** Values above are provided at 23ft (7m), 90° horizontal, from a vertical exhaust outlet and does not include noise created mechanically by the engine.

The above data reflects nominal values for a typical engine of this model, speed and power in a free-field environment, tested at a no-load condition.

Installation specifics such as background noise level and amplification of noise levels from reflecting off of surrounding objects, will affect the overall noise levels observed. As a result of this, Clarke makes no guarantees to the above levels in an actual installation.

JU6H-UF54

Stationary Fire Pump Engine Driver

EMISSION DATA

EPA 40 CFR Part 60

6 Cylinders
 Four Cycle
 Lean Burn
 Turbocharged

500 PPM SULFUR #2 DIESEL FUEL								
RPM	BHP ⁽³⁾	FUEL GAL/HR (L/HR)	GRAMS / HP/ HR				EXHAUST	
			NMHC	NOx	CO	PM ⁽⁴⁾	°F (°C)	CFM (m ³ /min)
2800	216	13.3 (50.3)	0.17	4.36	0.98	0.24	1018 (548)	1631 (46.2)
3000	216	12.6 (47.7)	0.19	4.67	1.13	0.25	1057 (569)	1796 (50.9)

Notes:

- 1) 6068TF252 Base Engine Model manufactured by John Deere Corporation.
For John Deere Emissions Conformance to EPA 40 CFR Part 60 see Page 2 of 2.
- 2) The Emission Warranty for this engine is provided directly to the owner by John Deere Corporation. A copy of the John Deere Emission Warranty can be found in the Clarke Operation and Maintenance Manual.
- 3) Engines are rated at standard conditions of 29.61in. (7521 mm) Hg barometer and 77°F (25° C) inlet air temperature. (SAE J1349)
- 4) PM is a measure of total particulate matter, including PM₁₀.

CLARKE

FIRE PROTECTION PRODUCTS
 3133 EAST KEMPER ROAD
 CINCINNATI, OH 45241

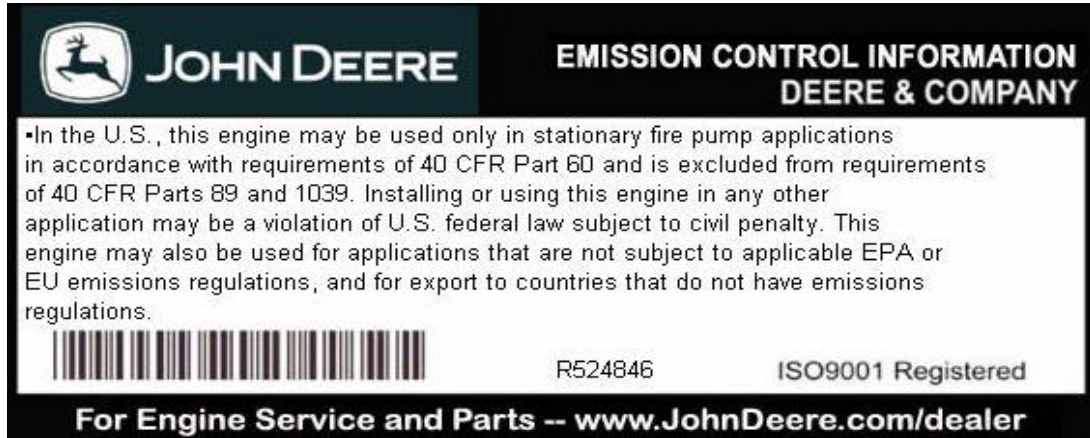


John Deere Power Systems
 3801 W. Ridgeway Ave., PO Box 5100
 Waterloo, Iowa USA 50704-5100

31 October 2007

Subject: Fire Pump Ratings – Conformance to EPA 40 CFR Part 60 (NSPS requirements)

All John Deere stationary fire pump engines conform to the requirements of 40 CFR Part 60. All such engines include an emission label, stating the engine conforms to the requirements of 40 CFR Part 60. An example of the emission label is show below:



This label applies to all of the following engine models, sold to Clarke Fire Protection, for use in stationary fire pump applications:

John Deere Engine Model
4045DF120
4045DF159
4045TF252
4045TF254
4045TF220
6068TF252
6068TF254
6068HF252
6068HF254
6068HF120
6068TF220
6081AF001
6081HF001
6125AF001
6125HF070

All engines conforming to 40 CFR Part 60 (identified by emission label, as shown above) are covered under the emissions warranty of 40 CFR Part 89.

Sincerely,

Kyle J. Tingle
 Regional Sales Manager, JDPS