CLARKE®

FIRE PUMP ENGINES

MODELS

JU6R-UFAAD9 JU6R-UFAA33 JU6R-UFAAL1 JU6R-UFAA57 JU6R-UFAA67 JU6R-UFAAQ7
JU6R-UFAAD1 JU6R-UFAAG7 JU6R-UFAAM7 JU6R-UFAA49 JU6R-UFAA59 JU6R-UFAARF
JU6R-UFAA29 JU6R-UFAAL7 JU6R-UFAAM9 JU6R-UFAA51 JU6R-UFAA61 JU6R-UFAAS9
JU6R-UFAA31 JU6R-UFAAL9 JU6R-UFAAM1 JU6R-UFAA53 JU6R-UFAAPF JU6R-UFAA83

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

JU6R-UFAA MODEL ♦ λ	RATED SPEED													
	1470		1760		2100		2350		2600		2800		2960		3000	
UFAAD9			**107**	*80*	**139**	*104*	**141**	*105*								
UFAAD1							**141**	*105*	**139**	*104*						
UFAA29	**92**	*69*	**137**	*102*	**155**	*115.5*	**153**	*114*								
UFAA31							**153**	*114*	**151**	*113*						
UFAA33											**148**	*110*	**146**	*109*	**161**	*120*
UFAAG7	**128**	*95.5*	**146**	*109*												
UFAAL7			**170**	*127*												
UFAAL9			**170**	*127*	**168**	*125*	**166**	*124*								
UFAAL1							**166**	*124*	**164**	*122*						
UFAAM7	**134**	*100*	**172**	*128*												
UFAAM9			**172**	*128*	**202**	*151*	**193**	*144*								
UFAAM1							**193**	*144*	**191**	*142*						
UFAA57	**136**	*101*	**180**	*134*												
UFAA49			**180**	*134*	**205**	*153*	**200**	*149*								
UFAA51							**200**	*149*	**201**	*150*						
UFAA53											**204**	*152*	**202**	*151*	**202**	*151*
UFAA67	**170**	*127*	**195**	*145*												
UFAA59			**195**	*145*	**232**	*173*	**228**	*170*								
UFAA61							**228**	*170*	**226**	*168.5*						
UFAAPF	**203**	*151*														
UFAAQ7			**222**	*165.5*												
UFAARF			**247**	*184*												
UFAAS9					**252**	*188*										
UFAA83											**239**	*178*			**260**	*194*

♦ All Models are available for Export
λ = Non-Emissionized

SPECIFICATIONS

ITEM	JU6R-UFAA MODELS																							
	D9	D1	29	31	33	G7	L7	L9	L1	M7	M9	M1	57	49	51	53	67	59	61	PF	Q7	RF	S9	83
Number of Cylinders	6																							
Aspiration	T																TAA							
Rotation*	CW																							
Weight – lb (kg)	1744 (791)																1844 (836)							
Overall Dimensions L x W x H – in. (mm)	68.0 (1727) x 36.0 (914) x 60.0 (1524)																68.0 (1727) x 41.0 (1041) x 60.0 (1524)							
Compression Ratio	17.0:1																							
Displacement – cu. in. (l)	414 (6.8)																							
Engine Type	4 Stroke Cycle – Inline Construction																							
Bore & Stroke – in. (mm)	4.19 x 5.00 (106 x 127)																							
Installation Drawing	D684																D685							
Wiring Diagram AC	C07591																							
Wiring Diagram DC	C071590																							
Engine Series	John Deere 6068 Series																							
Speed Interpolation	Optional																							

Abbreviations: CW – Clockwise T – Turbocharged TAA – Turbocharged with Air to Air
*Rotation viewed from Radiator / 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 certified power curve. Contact Clarke or your Pump OEM Representative to obtain details.

ENGINE RATINGS BASELINES

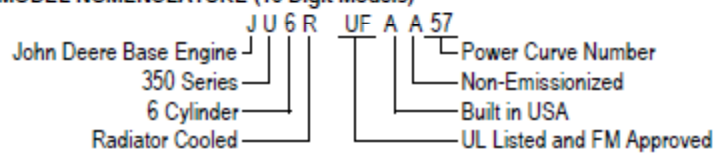
- Engines are to be used for stationary emergency standby fire pump service only. Engines are to be tested in accordance with NFPA 25.
- Engines are rated at standard SAE conditions of 29.61 in. (752.1 mm) Hg barometer and 77°F (25°C) inlet air temperature [approximates 300 ft. (91.4 m) above sea level] 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
Alternator	12V-DC, 42 Amps with Poly-Vee Belt and Guard	24V-DC, 40 Amps with Poly-Vee Belt and Guard
Exhaust Protection	Metal Guards on Manifolds and Turbocharger	
Coupling	Bare Flywheel	Listed Driveshaft and Guard, UFAAD9/D1/29/31/33 – CDS20-S1; UFAAG7/L7/L9/L1/M7/M9/M1/57/49/51/53/67/59/61/83 – CDS30-S1; UFAAPF/Q7/RF/S9 – CDS50-SC
Exhaust Flex Connection	Stainless Steel Flex, 150# ANSI Flanged Connection, 5”	Stainless Steel Flex, 150# ANSI Flanged Connection, 6”
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	Stainless Steel, Braided, cUL Listed, Supply and Return Lines
Fuel Filter	Primary Filter with Priming Pump	
Fuel Injection System	Stanadyne Direct Injection	
Engine Heater	115V-AC, 1360 Watt	230V-AC, 1360 Watt
Governor, Speed	Constant Speed, Mechanical	
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	
Radiator/Fan	Plate-Fin, Vertical Flow, Engine Mounted with Blower Fan	
Raw Water Solenoid Operation	Automatic from Fire Pump Controller and from Engine Instrument Panel	
Run – Stop Control	On Instrument Panel with Control Position Warning Light	
Run Solenoid	12V-DC Energized to Run	12V-DC Energized to Stop; 24V-DC Energized to Run; 24V-DC Energized to Stop
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, NPT(F) – National Pipe Tapered Thread (Female)

MODEL NOMENCLATURE (10 Digit Models)



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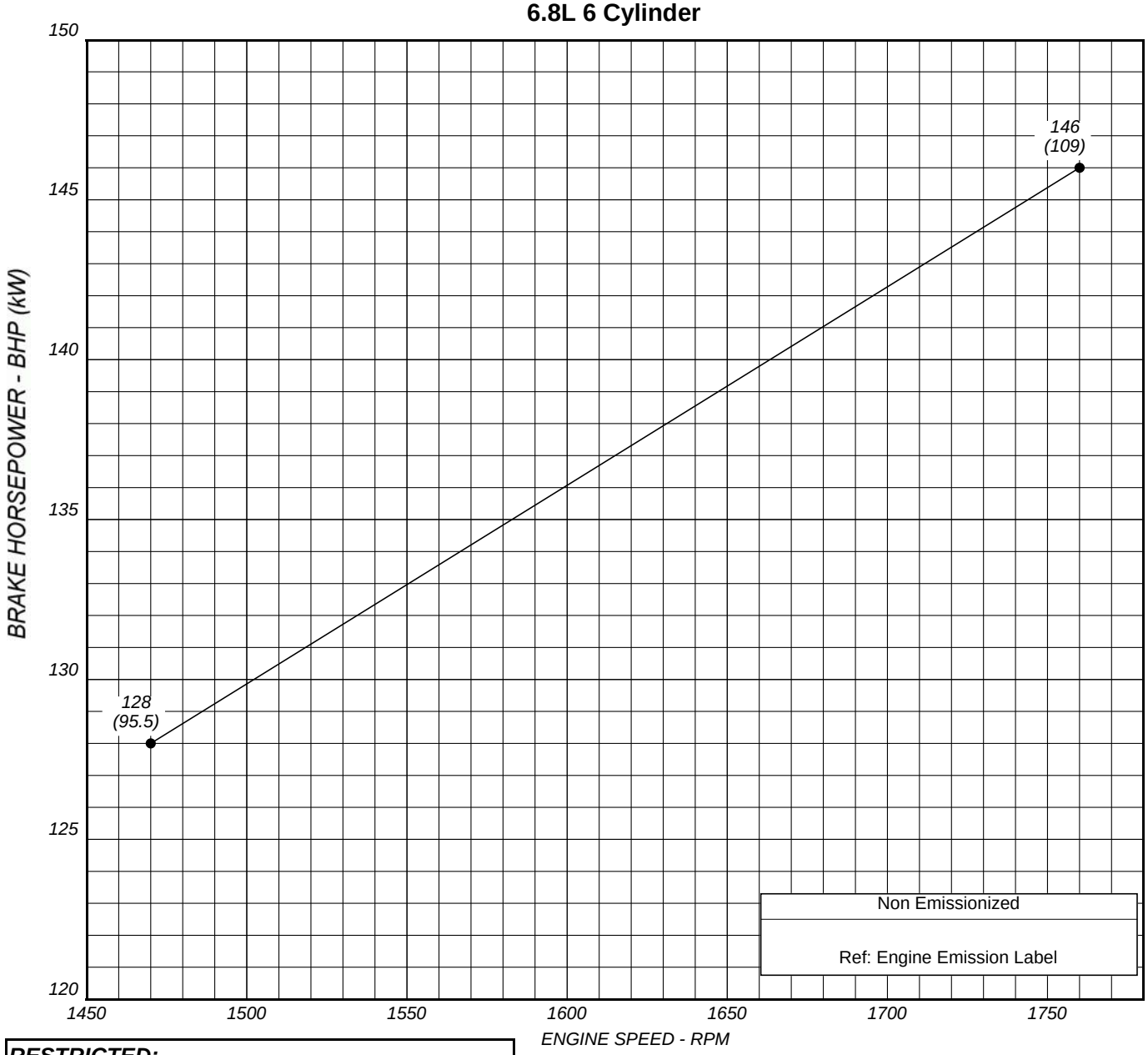
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CLARKE

Fire Protection Products, Inc.

FIRE PUMP MODEL: JU6R-UFAAG7
Radiator Cooled
Turbocharged
6.8L 6 Cylinder



RESTRICTED:
USE ONLY FOR STAND-BY FIRE PUMP APPLICATIONS

ENGINE PERFORMANCE:
STANDARD CONDITIONS: (SAE J1349, ISO 3046)
77°F (25°C) AIR INLET TEMPERATURE
29.61 IN. (751.1MM) HG BAROMETRIC PRESSURE
#2 DIESEL FUEL (SEE C13940)

KEVIN KUNKLER 06SEP12

NAMEPLATE BHP (MAXIMUM PUMP LOAD)

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CREATED	DATE CREATED
KTF	09/06/12

ENGINE MODEL JU6R-UFAAG7

DRAWING NO.	REV
C134811	A

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Fire Protection Products, Inc.

JU6R-UFAAG7
INSTALLATION & OPERATION DATA (I&O Data)
USA Produced

Basic Engine Description

Engine Manufacturer	John Deere Co.
Ignition Type	Compression (Diesel)
Number of Cylinders	6
Bore and Stroke - in (mm)	4.19 (106) X 5 (127)
Displacement - in³ (L)	415 (6.8)
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)	1-5-3-6-2-4
Aspiration	Turbocharged
Charge Air Cooling Type	None
Rotation, viewed from front of engine, Clockwise (CW)	Standard
Engine Crankcase Vent System	Open
Installation Drawing	D684
Weight - lb (kg)	1744 (791)

Power Rating	**1470**	**1760**
Nameplate Power - HP (kW)	128 (95.5)	146 (109)

Cooling System - Radiator - [C051781] [C051242]	**1470**	**1760**
Engine Coolant Heat - Btu/sec (kW)	66 (69.6)	59 (62.3)
Engine Radiated Heat - Btu/sec (kW)	29 (30.6)	34 (35.9)
Radiator Minimum Ventilation Flow - ft.³/min (m³/min)	2032 (57.5)	4147 (117)
Typical Engine H_20 Operating Temp - °F (°C)[1]	180 (82.2) - 195 (90.6)	
Thermostat		
Start to Open - °F (°C)	170 (76.7)	
Fully Opened - °F (°C)	190 (87.8)	
Engine Coolant Capacity - qt (L)	42.5 (40.2)	
Coolant Pressure Cap - lb/in² (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)	215 (102)	

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]	55	[C071366]
Starter Cranking Amps, Rolling - @60°F (15°C)	440	[RE69704/RE70404]	250	[C07819/C07820]

Exhaust System	**1470**	**1760**
Exhaust Flow - ft.³/min (m³/min)	667 (18.9)	790 (22.4)
Exhaust Temperature - °F (°C)	1178 (637)	1044 (562)
Maximum Allowable Back Pressure - in H_20 (kPa)	20 (5)	30 (7.5)
Minimum Exhaust Pipe Dia. - in (mm)[3]	5 (127)	5 (127)

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. [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.)

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Fire Protection Products, Inc.

JU6R-UFAAG7
INSTALLATION & OPERATION DATA (I&O Data)
USA Produced

Fuel System	**1470**	**1760**
Fuel Consumption - gal/hr (L/hr)	9.1 (34.4)	9.5 (36)
Fuel Return - gal/hr (L/hr)	4.9 (18.5)	5.1 (19.3)
Fuel Supply - gal/hr (L/hr)	14 (53)	14.6 (55.3)
Fuel Pressure - lb/in² (kPa)	3 (20.7) - 4 (27.6)	
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)	1360	1360
Voltage - AC, 1 Phase	115 (+5% -10%)	230 (+5%, -10%)
Part Number	[C123640]	[C123644]

Air System	**1470**	**1760**	
Combustion Air Flow - ft.³/min (m³/min)	211 (6)	283 (8)	
Air Cleaner	**Standard**		**Optional**
Part Number	[C03396]		[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)[4]			
Clean Air Cleaner - in H_20 (kPa)	6 (1.5)		5 (1.2)
Maximum Allowable Temperature (Air To Engine Inlet) - °F (°C)[5]	130 (54.4)		

Lubrication System	
Oil Pressure - normal - lb/in² (kPa)	40 (276) - 60 (414)
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)	21.1 (20)

Lube Oil Heater	**Optional**	**Optional**
Wattage (Nominal)	150	150
Voltage	120V (+5%, -10%)	240V (+5%, -10%)
Part Number	C04430	C04431

Performance	**1470**	**1760**
BMEP - lb/in² (kPa)	166 (1140)	158 (1090)
Piston Speed - ft/min (m/min)	1225 (373)	1467 (447)
Mechanical Noise - dB(A) @ 1m	Consult Factory	
Power Curve	C134811	

[4]For Engine Models JU6H-UF30, UFG8, UFABL8, UFM8 and UF58 and JU6R-UFAA29, UFAAG7, UFAAM7 and UFAA57 the Air Filter Restriction Maximum Limit is 10(2.5) in H_2O(kPa) at 1470RPM only and 12(3) in H_2O(kPa) at all other speeds. [5]Review for horsepower derate if ambient air entering engine exceeds 77°F (25°C). [ ] indicates component reference part number.

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

DATUMS:
-A- - MOUNTING FACE OF FLYWHEEL
-B- - ENGINE CRANKSHAFT HORIZONTAL ℄
-C- - ENGINE CRANKSHAFT VERTICAL ℄
⊕ - CENTER OF GRAVITY
↷ - CLOCKWISE (CW) ROTATION WHEN VIEWED FROM FRONT OF ENGINE

CAUTION:
ALL PLUMBING MUST BE SUPPORTED AND/OR ISOLATED SO THAT NO WEIGHT OR STRESS IS APPLIED TO ANY ENGINE COMPONENT

ATTENTION:
REFER TO THE SPECIFIC MODELS' "INSTALLATION AND OPERATION DATA" FOR INSTALLATION GUIDELINES

AVAILABLE MODELS:
JU6R-UFAA29, JU6R-UFAA31, JU6R-UFAAD9
JU6R-UFAAD1, JU6R-UFAAG7, JU6R-UFAAL7
JU6R-UFAAL9, JU6R-UFAAL1, JU6R-UFAA33
JU6R-UFAAM7, JU6R-UFAAM9, JU6R-UFAAM1
JU6R-UFAA57, JU6R-UFAA49,
JU6R-UFAA51, JU6R-UFAA53

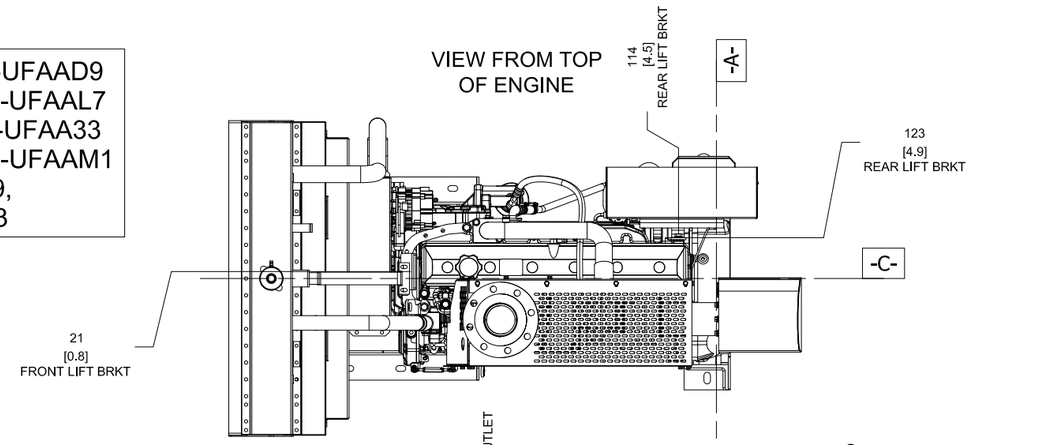
(ALL MODELS ARE TURBOCHARGED)

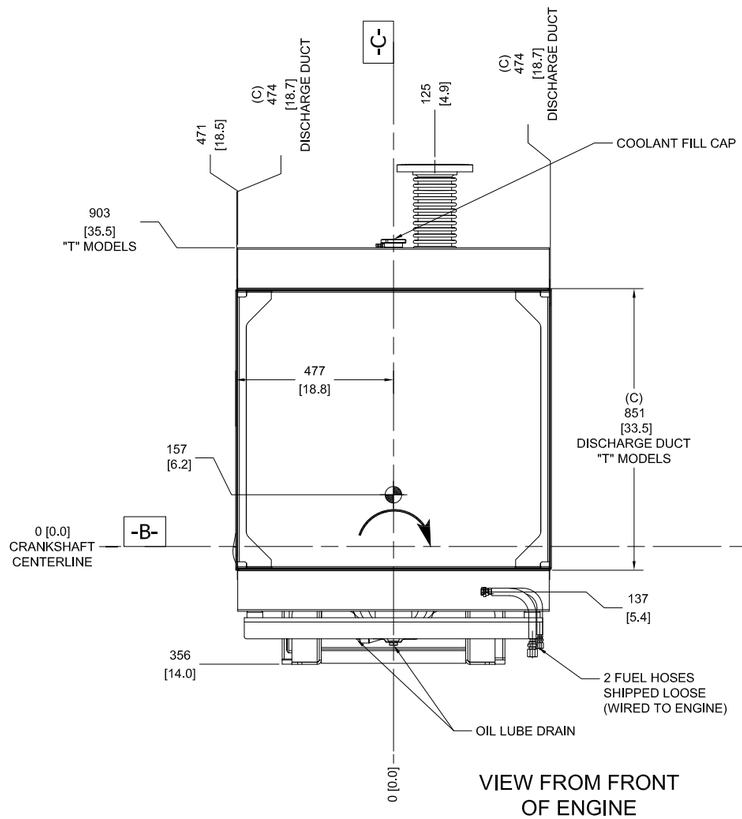
NOTES:
1) FUEL SUPPLY PIPING FROM TANK TO ENGINE SHOULD BE 1/2" MINIMUM PIPE DIAMETER
2) FUEL RETURN PIPING FROM TANK TO ENGINE SHOULD BE 3/8" MINIMUM PIPE DIAMETER

DRAWING SUBJECT TO CHANGE WITHOUT NOTICE

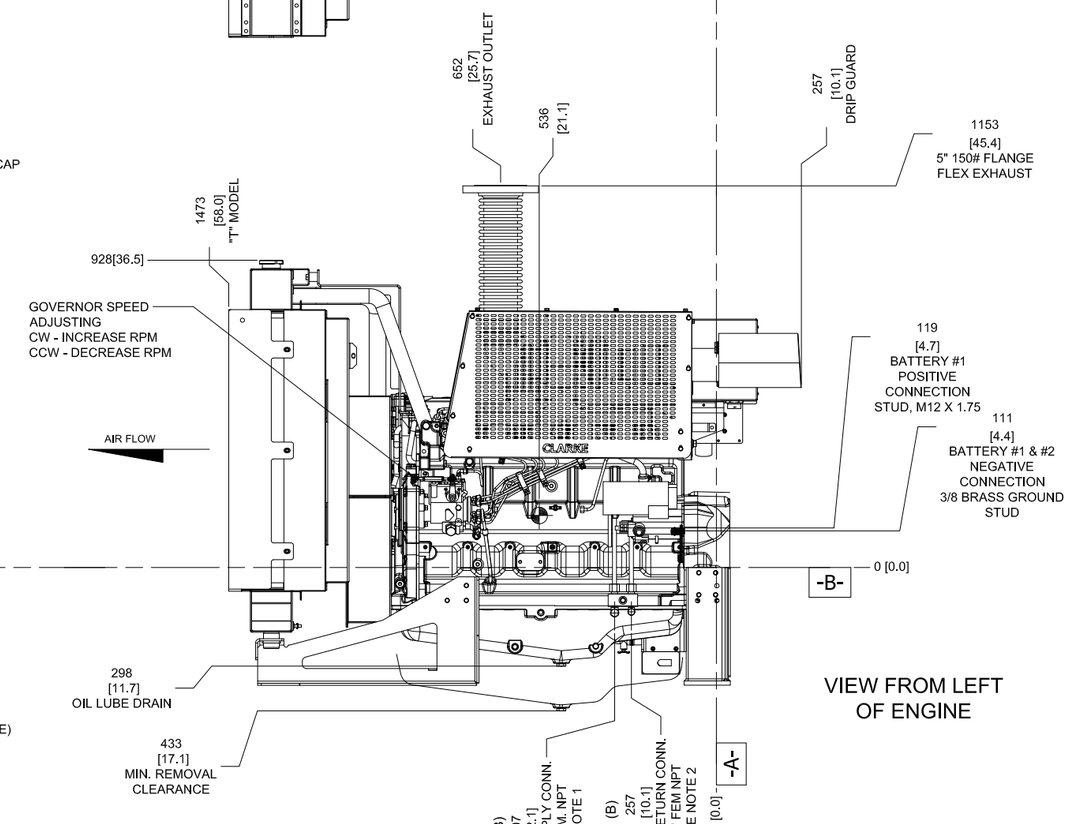
DO NOT SCALE

"T" (TURBOCHARGED) MODELS	JU6R-UFAA29, JU6R-UFAA31, JU6R-UFAAD9 JU6R-UFAAD1, JU6R-UFAAG7, JU6R-UFAAL7 JU6R-UFAAL9, JU6R-UFAAL1, JU6R-UFAA33 JU6R-UFAAM7, JU6R-UFAAM9, JU6R-UFAAM1 JU6R-UFAA57, JU6R-UFAA49, JU6R-UFAA51, JU6R-UFAA53





VIEW FROM FRONT OF ENGINE



VIEW FROM LEFT OF ENGINE

DRAWING SUBJECT TO CHANGE WITHOUT NOTICE

DO NOT SCALE

FOR ENGINE SPECIFIC OPTIONS SEE www.clarkefire.com

REV	DESCRIPTION	ECN#	DWN	APVD	DATE
A	ISSUED ENGINEERING DRAWING	2350	JCA	MDM MLL	07SEPT12
B	CORRECTED INCORRECT DIMENSIONS	2350	MLL	MDM	31JAN13
C	CORRECTED INCORRECT DIMENSIONS	3558	JCA	JCA	28DEC14
D	UPDATED DIMS, FLYWHEEL INFO ADDED	4179	PMK	MDM	04AUG15
E	ADDED DIMS TO ENGINE LIFTING BRACKETS	5061	MDM	MDM	22JUN17

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CONTROLLED DRAWING: YES / NO

MACHINE TOLERANCE

DECIMAL	mm	inch
X	± 1.5	
X.X	± 0.8	± 0.06
X.XX	± 0.3	± 0.03
X.XXX	± 0.025	± 0.01
X.XXXX		± 0.001

ANGULAR: ± 0.5°

FABRICATION TOLERANCE

DECIMAL	mm	inch
X	± 3	
X.X	± 1.5	± 0.12
X.XX		± 0.06

ANGULAR: ± 1.0°

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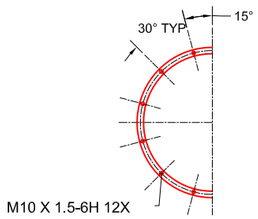
DRWN	JAUGENSTEIN
DATE	05SEPT12
ENGR	MJDEMBKOWSKI
MATERIAL	N/A
ASSEMBLY	RADIATOR-COOLED ENGINES

NAME: DRAWING, FIRE PUMP INSTALLATION - JU6R-UFAA "T"

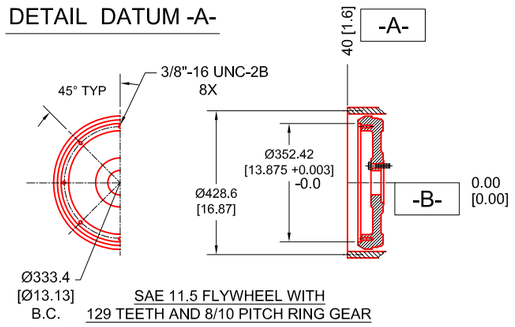
PART NO. D684 REV E

SCALE NTS | UNITS MM [INCH] | PAGE 1 OF 2

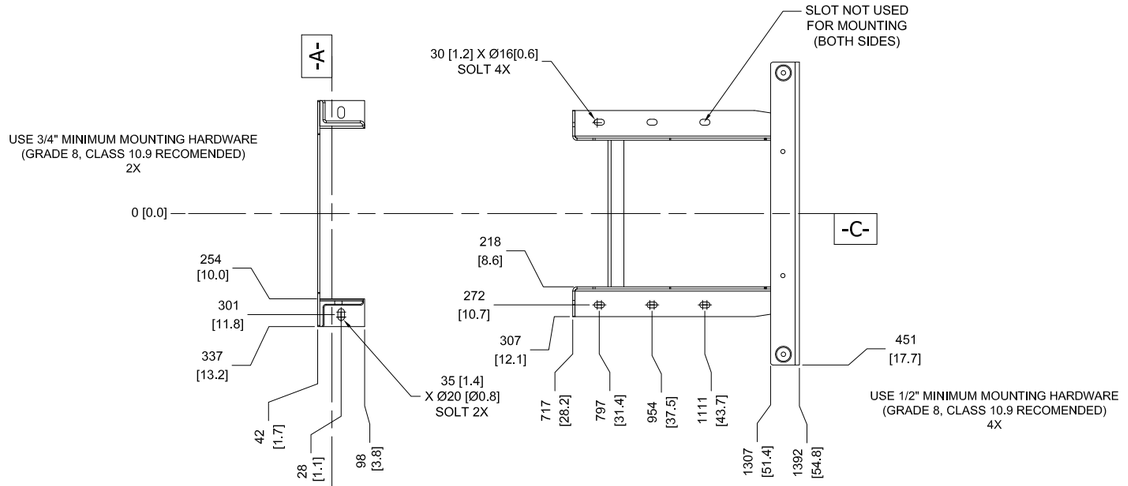
DETAIL DATUM -A-

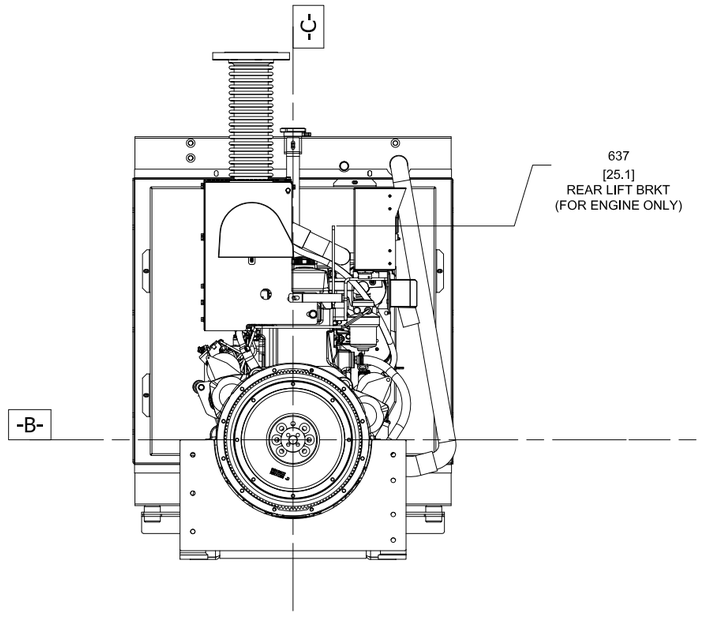


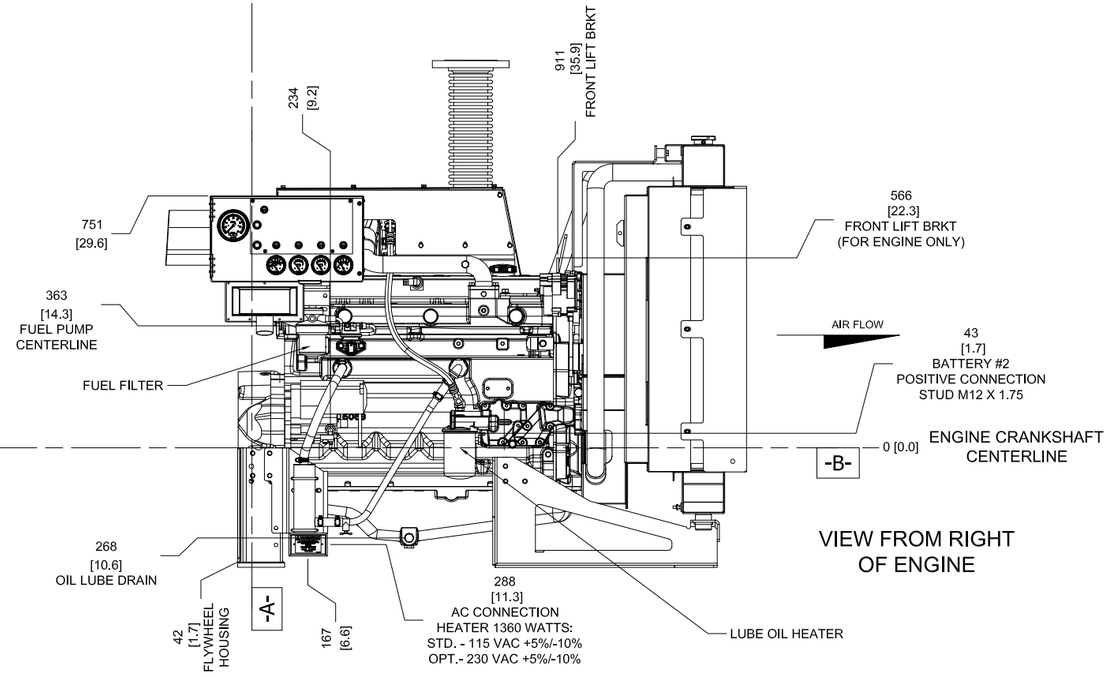
SAE #3
FLYWHEEL HOUSING



SAE 11.5 FLYWHEEL WITH
129 TEETH AND 8/10 PITCH RING GEAR







VIEW FROM RIGHT
OF ENGINE

DRAWING SUBJECT TO CHANGE WITHOUT NOTICE

DO NOT SCALE

FOR ENGINE SPECIFIC OPTIONS SEE www.clarkefire.com

"T" (TURBOCHARGED) MODELS	JU6R-UFAA29, JU6R-UFAA31, JU6R-UFAAD9 JU6R-UFAAD1, JU6R-UFAAG7, JU6R-UFAAL7 JU6R-UFAAL9, JU6R-UFAAL1, JU6R-UFAA33 JU6R-UFAAM7, JU6R-UFAAM9, JU6R-UFAAM1 JU6R-UFAA57, JU6R-UFAA49, JU6R-UFAA51, JU6R-UFAA53

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MACHINE TOLERANCE

DECIMAL	mm	Inch
X	± 1,5	
X,X	± 0,8	± 0,06
X,XX	± 0,3	± 0,03
X,XXX	± 0,025	± 0,01
X,XXXX		± 0,001
ANGULAR: ± 0,5°		

FABRICATION TOLERANCE

DECIMAL	mm	Inch
X	± 3	
X,X	± 1,5	± 0,12
X,XX		± 0,06
ANGULAR: ± 1,0°		

CONTROLLED DRAWING (YES / NO)

CLARKE
Fire Protection Products, Inc.

DRWN	JAUGENSTEIN
DATE	07SEPT12
ENGR	MJDEMBKOWSKI
MATERIAL	N/A
ASSEMBLY	RADIATOR-COOLED ENGINES
NAME	DRAWING, FIRE PUMP INSTALLATION - JU6R-UFAA "T"
PART NO.	D684
REV	E
SCALE	NTS
UNITS	MM [INCH]
PAGE	2
OF	2

CLARKE

www.clarkefire.com

Fire Protection Products

JU6R-UFAAG7

FIRE PUMP DRIVER

NOISE DATA

Mechanical Engine Noise *

RPM	BHP	L dB(A)	Octave Band 31.5 Hz dB(A)	63 Hz dB(A)	125 Hz dB(A)	250 Hz dB(A)	500 Hz dB(A)	1k Hz dB(A)	2k Hz dB(A)	4k Hz dB(A)	8k Hz dB(A)	16k Hz dB(A)
1470	128	TO BE PROVIDED LATER										
1760	146	101.3	60.2	64	74.8	82.1	89.7	94.4	97.5	96.3	89.1	80.3

Raw Exhaust Engine Noise **

RPM	BHP	OVERAL L dB(A)	Octave Band 31.5 Hz dB(A)	63 Hz dB(A)	125 Hz dB(A)	250 Hz dB(A)	500 Hz dB(A)	1k Hz dB(A)	2k Hz dB(A)	4k Hz dB(A)	8k Hz dB(A)	16k Hz dB(A)
1470-1760	128-146	109.5		99.3	103.7	98.4	100.6	100.2	102.9	99.1	89.8	83.4

** 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 values for a typical engine of this model, speed and power in a free-field environment.

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.

C135379 revB
28OCT14 DSP

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

JU6R-UFAA MODEL ♦ λ	RATED SPEED 1470		1760		2100		2350		2600		2800		2960		3000	
UFAAD9			**107**	*80*	**139**	*104*	**141**	*105*								
UFAAD1							**141**	*105*	**139**	*104*						
UFAA29	**92**	*69*	**137**	*102*	**155**	*115.5*	**153**	*114*								
UFAA31							**153**	*114*	**151**	*113*						
UFAA33											**148**	*110*	**146**	*109*	**161**	*120*
UFAAG7	**128**	*95.5*	**146**	*109*												
UFAAL7			**170**	*127*												
UFAAL9			**170**	*127*	**168**	*125*	**166**	*124*								
UFAAL1							**166**	*124*	**164**	*122*						
UFAAM7	**134**	*100*	**172**	*128*												
UFAAM9			**172**	*128*	**202**	*151*	**193**	*144*								
UFAAM1							**193**	*144*	**191**	*142*						
UFAA57	**136**	*101*	**180**	*134*												
UFAA49			**180**	*134*	**205**	*153*	**200**	*149*								
UFAA51							**200**	*149*	**201**	*150*						
UFAA53											**204**	*152*	**202**	*151*	**202**	*151*
UFAA67	**170**	*127*	**195**	*145*												
UFAA59			**195**	*145*	**232**	*173*	**228**	*170*								
UFAA61							**228**	*170*	**226**	*168.5*						
UFAAPF	**203**	*151*														
UFAAQ7			**222**	*165.5*												
UFAARF			**247**	*184*												
UFAAS9					**252**	*188*										
UFAA83											**239**	*178*			**260**	*194*

♦ All Models are available for Export
λ = Non-Emissionized

SPECIFICATIONS

ITEM	JU6R-UFAA MODELS D9 D1 29 31 33 G7 L7 L9 L1 M7 M9 M1 57 49 51 53 67 59 61 PF Q7 RF S9 83
Number of Cylinders	6
Aspiration	T / TAA
Rotation*	CW
Weight – lb (kg)	1744 (791) / 1844 (836)
Overall Dimensions L x W x H – in. (mm)	68.0 (1727) x 36.0 (914) x 60.0 (1524) / 68.0 (1727) x 41.0 (1041) x 60.0 (1524)
Compression Ratio	17.0:1
Displacement – cu. in. (l)	414 (6.8)
Engine Type	4 Stroke Cycle – Inline Construction
Bore & Stroke – in. (mm)	4.19 x 5.00 (106 x 127)
Installation Drawing	D684 / D685
Wiring Diagram AC	C07591
Wiring Diagram DC	C071590
Engine Series	John Deere 6068 Series
Speed Interpolation	Optional

Abbreviations: CW – Clockwise T – Turbocharged TAA – Turbocharged with Air to Air
*Rotation viewed from Radiator / 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 certified power curve. Contact Clarke or your Pump OEM Representative to obtain details.

ENGINE RATINGS BASELINES

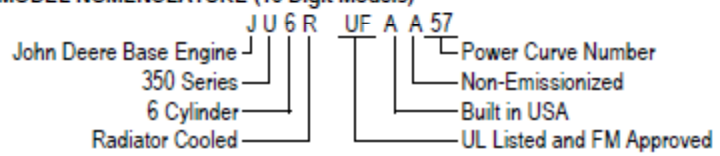
- Engines are to be used for stationary emergency standby fire pump service only. Engines are to be tested in accordance with NFPA 25.
- Engines are rated at standard SAE conditions of 29.61 in. (752.1 mm) Hg barometer and 77°F (25°C) inlet air temperature [approximates 300 ft. (91.4 m) above sea level] 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
Alternator	12V-DC, 42 Amps with Poly-Vee Belt and Guard	24V-DC, 40 Amps with Poly-Vee Belt and Guard
Exhaust Protection	Metal Guards on Manifolds and Turbocharger	
Coupling	Bare Flywheel	Listed Driveshaft and Guard, UFAAD9/D1/29/31/33 – CDS20-S1; UFAAG7/L7/L9/L1/M7/M9/M1/57/49/51/53/67/59/61/83 – CDS30-S1; UFAAPF/Q7/RF/S9 – CDS50-SC
Exhaust Flex Connection	Stainless Steel Flex, 150# ANSI Flanged Connection, 5”	Stainless Steel Flex, 150# ANSI Flanged Connection, 6”
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	Stainless Steel, Braided, cUL Listed, Supply and Return Lines
Fuel Filter	Primary Filter with Priming Pump	
Fuel Injection System	Stanadyne Direct Injection	
Engine Heater	115V-AC, 1360 Watt	230V-AC, 1360 Watt
Governor, Speed	Constant Speed, Mechanical	
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	
Radiator/Fan	Plate-Fin, Vertical Flow, Engine Mounted with Blower Fan	
Raw Water Solenoid Operation	Automatic from Fire Pump Controller and from Engine Instrument Panel	
Run – Stop Control	On Instrument Panel with Control Position Warning Light	
Run Solenoid	12V-DC Energized to Run	12V-DC Energized to Stop; 24V-DC Energized to Run; 24V-DC Energized to Stop
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, NPT(F) – National Pipe Tapered Thread (Female)

MODEL NOMENCLATURE (10 Digit Models)



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