Enriching Lives	**Engine Data Sheet** **Kirloskar Oil Engines Limited** **Laxmanrao Kirloskar Road** **Khadki, Pune - 411003 (India)**	**Basic Engine Model:** **KFP4R-UF08** Reference Number : EDS - UF08 - 00 Revision Date : 11.01.2018 Rev. Number : 00

General Engine Data

Engine Manufacturer……	KOEL
Ignition Type……..	Compression (Diesel)
Number of Cylinders……..	4
Bore and Stroke - in(mm)……	4.13 x 4.72 (105 x 120)
Displacement - in^3 (L)…….	254 (4.16)
Compression Ratio……..	17.5 : 1
Valve per cylinder - Intake……	1
Exhaust……	1
Combustion System…….	Direct Injection
Engine Type……	In-Line, 4 Stroke Cycle
Aspiration……	Naturally Aspirated
Firing Order…….	1-3-4-2
Charge Air Cooling Type……	Not Applicable
Rotation(Viewed from Flywheel end) - Clockwise..	Not Available
Counter-Clockwise……..	Standard
Engine Crankcase Vent System……	Open
Installation Drawing…….	4H.2215.00.0.00

Power Rating - Approved	**2800**	**2900**	**3000**
Engine Nameplate Power - HP(kW)……	77(57)	77(57)	76(56)

Cooling system	**2800**	**2900**	**3000**
Engine Coolant Heat - Btu/sec(kW)……	46(49)	46(49)	53(56)
Engine Radiated Heat - Btu/sec(kW)……..	11.4(12)	11.4(12)	4.7(5)
Heat Exchanger minimum Flow			
60^0F (16^0C) Raw Water - gal/min (LPM)….	10.5 (40)		
100^0F (38^0C) Raw Water - gal/min (LPM)…	11.8(45)		
Heat Exchanger Maximum Cooling Water			
Inlet Pressure - lb/in^2 (bar) …….	60 (4.13)		
Flow - gal/min (LPM)……..	18.5(70)		
Thermostat, Start to Open - ^{0}F (^{0}C)……..	165.2(74)		
Fully Opened - ^{0}F (^{0}C)……..	183.2(84)		
Engine Coolant capacity - L……	9.5		
Engine Coolant High Temp. Switch - ^{0}F (^{0}C)…….	203(95)		
Engine Coolant Low Temp. Switch - ^{0}F (^{0}C)…….	95(35)		
Raw water High Temp. Switch - ^{0}F (^{0}C)……	149(65)		

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Electric System - DC

System Voltage (Nominal)……..	12 V
Battery Capacity for Ambient above 32^0F (0^0C)	
Voltage (Nominal)…….	12 V
Current Capacity - Amp/hr……	150
Qty. per Battery Bank……..	1
CCA at 0^0F (-18^0C)……..	640
Reserve Capacity - Minutes……..	260
Battery Cable Minimum Size - $mm^{2.}$……	35
Charging Alternator Output - Amp…….	35
Starter Cranking Amps - at 60^0F (15^0C)……..	250 - 350

Exhaust System

	2800	2900	3000
Exhaust Flow - ft^3/min (m^3/min)……..	534.5(15.1)	582(16.5)	625.6(17.7)
Exhaust Temperature - ^{0}F (^{0}C)…….	1159(626)	1220(660)	1256(680)
Max. Allowable Back Pressure - in H_2O(kPa)……	16(4)		
Exhaust pipe Dia. In (mm) for further exhaust piping(Min.)……	4 (100)		

Fuel System

	2800	2900	3000
Fuel Consumption - gal/hr (L/hr)……	4.83(18.3)	4.99(18.9)	5.12(19.4)
Fuel Return - gal/hr (L/hr)……	33.77(127.7)	34.11(129.1)	34.48(130.6)
Total Supply Fuel Flow - gal/hr (L/hr)…….	38.6(146)	39.1(148)	39.6(150)
Fuel Pressure - lb/in^2 (kPa)……	36.25(250)		
Fuel Supply Line Size(Min.) - in(mm) ……	0.5(12.7)		
Fuel Return Line Size(Min.) - in(mm)……	0.375(9.5)		
Max. Allowable Fuel Pump Suction With Clean Filter - in H_2O (m H_2O)……	31 (0.8)		
Max. Allowable Fuel Head Above Fuel Pump Supply or Return - m (ft)……	5 (16.4)		
Fuel Filter Size - Micron…….	3 - 5 micron		

Heater System

Jacket Water Heater……..	Standard
Wattage (Nominal)……..	1500
Voltage - AC, 1P…….	240

Air Intake System

	2800	2900	3000
Air Cleaner Type…….	Dry type, Indoor service only		
Air Intake Restriction Maximum Limit			
Dirty Air Cleaner - in H_2O (kPa)……..	7.1(1.8) for 2800 to 3000 rpm		
Clean Air Cleaner - in H_2O (kPa)……	4(1.0)		
Engine Air Flow - ft^3/min (m^3/min)……	169.5(4.8)	176.6 (5)	187.2(5.3)
Air Temperature(At Engine Inlet) - ^{0}F (^{0}C)..……..	113(45) Max. Allowable		

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Lubrication System

Oil Pressure(Normal) - lb/in^2 (kPa)…….	36.26 to 79.77 (250 to 550)
Oil Temperature(In Pan) - ^{0}F (^{0}C) (max.)……..	248 (120)
Oil Pan Capacity, High - L……	9.5
Low - L…….	8.5
Total Oil Capacity with filter - L……..	11.5

Performance

	2800	2900	3000
BMEP - lb/in^2 (kPa)……..	85.9(592.3)	82.94(571.9)	79.13(545.6)
Piston Speed - ft/min (m/min)……..	2204(672)	2283(696)	2361(720)
Mechanical Noise - dB(A) at 1m……	102 approx.		
Power Curve……	Performance curve No. : EPC - UF08 - 00		

Note : The unit 'gal/hr or gal/min' mentioned in above data sheet is US gallon.