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
Weight(Dry engine) - lb (kg)……	1322 (600)
Installation Drawing…….	4H.2215.00.0.00

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

Cooling system	**2800**	**3000**
Engine Coolant Heat - Btu/sec.(kW)……	46(49)	53(56)
Engine Radiated Heat - Btu/sec.(kW)……..	11.4(12)	4.7(5)
Heat Exchanger minimum Raw Water Flow		
59^{0}F (15^{0}C) Raw Water - gal/min. (LPM)….	10.5 (40)	10.5(40)
100^{0}F (38^{0}C) Raw Water - gal/min. (LPM)…	11.8(45)	11.8(45)
Heat Exchanger Maximum Cooling Raw 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 Temperature Switch - ^{0}F (^{0}C)..	203(95)	
Engine Coolant Low Temperature Switch - ^{0}F (^{0}C)..	95(35)	
Raw water High Temperature 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 - Min……	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	3000
Exhaust Flow - ft3./min (m3/min)……..	534.5(15.1)	625.6(17.1)
Exhaust Temperature - ^{0}F (^{0}C)…….	1159(626)	1256(680)
Max. Allowable Back Pressure - in. of H_2O(kPa)…	16(4)	16(4)
Exhaust pipe Dia. In. (mm) for further exhaust piping(Min.)……	4 (100)	

Fuel System

	2800	3000
Fuel Consumption - gal./hr. (L/hr.)……	4.83(18.3)	5.12(19.4)
Fuel Return - gal./hr. (L/hr.)…….	33.77(127.7)	34.48(130.6)
Total Supply Fuel Flow - gal./hr. (L/hr.)…….	38.6(146)	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) max. for 2800 to 3000 rpm	
Fuel Filter Size - Micron…….	3 - 5 micron	

Heater System

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

Induction Air System

	2800	3000
Air Cleaner Type…….	Dry type, Indoor service only	
Air Intake Restriction Maximum Limit		
Dirty Air Cleaner - in. of Water (kPa)…..	7.1(1.8) for 2800 to 3000 rpm	
Clean Air Cleaner - in. of Water (kPa)…	4(1.0)	
Engine Air Flow - ft.3/min. (m3/min)…….	169(4.8)	187(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	3000
BMEP - lb./in.^{2} (kPa)……..	85.9(592.3)	79.13(545.6)
Piston Speed - ft./min (m/min)……..	2204(672)	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.