



Enriching Lives

Engine Data Sheet

Kirloskar Oil Engines Limited
Laxmanrao Kirloskar Road
Khadki, Pune - 411003 (India)

Basic Engine Model:
KFP6S-UF35

Reference Number : EDS - UF35 - 00

Revision Date : 13.02.2014

Rev. Number : 01

General Engine Data

Engine Manufacturer.....	KOEL
Ignition Type.....	Compression (Diesel)
Number of Cylinders.....	6
Bore and Stroke - in.(mm).....	4.64 x 5.31 (118 x 135)
Displacement - in. ³ (L).....	540.6 (8.86)
Compression Ratio.....	17.5 : 1
Valve per cylinder - Intake.....	1
Exhaust.....	1
Combustion System.....	Direct Injection
Engine Type.....	In-Line, 4 Stroke Cycle
Aspiration.....	Turbocharged, Aftercooled
Firing Order.....	1-5-3-6-2-4
Charge Air Cooling Type.....	Raw Watercooled
Rotation(Viewed from Flywheel end) - Clockwise..	Not Available
Counter-Clockwise.....	Standard
Engine Crankcase Vent System.....	Open
Installation Drawing.....	F6.2769.00.00

Cooling system

	1760	2100	2200	2350
Engine Coolant Heat - Btu/sec.(kW).....	164(172)	199(210)	200(211)	204(215)
Engine Radiated Heat - Btu/sec.(kW).....	38(40)	46(49)	47(49)	48(51)
Heat Exchanger minimum Flow				
59°F (15°C) Raw Water - gal/min. (LPM)....	16(61)	19(73)	24(91)	30(113)
95°F (35°C) Raw Water - gal/min. (LPM)....	25(94)	29(109)	32(121)	36(136)
Heat Exchanger Maximum Cooling Water				
Inlet Pressure - bar (lb./in. ²) (kPa).....	4 (60)(400)			
Flow - gal/min. (LPM).....	66 (250)			
Thermostat, Start to Open - °F (°C).....	165.2 (74)			
Fully Opened - °F (°C).....	183.2 (84)			
Engine Cooling capacity - L.....	21			
Engine Coolant Temperature(Maximum) - °F (°C)..	203 (95)			
Engine Coolant Temperature(Minimum) - °F (°C)..	165.2 (74)			
Engine Coolant Low Temperature Switch - °F (°C)..	89.6(32) - 100.4(38)			
Raw water High Temperature Switch - °F (°C).....	143.6(62) - 154.4(68)			

Continued.....

Electric System - DC

System Voltage (Nominal).....	24 V
Battery Capacity for Ambients above 32°F (0°C)	
Voltage (Nominal).....	24 V
Qty. per Battery Bank.....	2 (12 V Each)
SAE size per J537.....	8D - 900
CCA at 0°F (-18°C).....	900
Reserve Capacity - Min.....	430
Battery Cable Circuit*, Max. Resistance - ohm.....	0.002
Battery Cable Minimum Size	
0 - 120 in. Circuit* Length.....	0
121 - 160 in. Circuit* Length.....	0
161 - 200 in. Circuit* Length.....	0
Charging Alternator Output - Amp.....	55
Starter Cranking Amps - at 60°F (15°C).....	500
*Positive and Negative Cables Combined Length	

Exhaust System

	1760	2100	2200	2350
Exhaust Flow - ft ³ /min (m ³ /min).....	1721(48.7)	2170(61.5)	2181(61.8)	2303(65.2)
Exhaust Temperature - °F (°C).....	1022 (550)	1022 (550)	1022 (550)	1022 (550)
Max. Allowable Back Pressure - in. of H ₂ O(kPa)...	21(5.3) at 1760 rpm and 30(7.5) at 2350 rpm			
Exhaust pipe Dia. In. (mm)** for further exhaust piping(Min.).....	6 (152.4)			

Fuel System

	1760	2100	2200	2350
Fuel Consumption - gal./hr. (L/hr.).....	12.8(58.3)	15.6(70.9)	15.7(71.3)	16(72.7)
Fuel Return - gal./hr. (L/hr.).....	38.4(175)	46.8(212.7)	47.1(214)	48(216)
Total Supply Fuel Flow - gal./hr. (L/hr.).....	51.2(233.3)	62.4(283.6)	62.8(285.3)	64(288.7)
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 ₂ O (m H ₂ O).....	31(0.8)			
Max. Allowable Fuel Head Above Fuel Pump Supply or Return - m (ft.).....	2.7(9)			
Fuel Filter Size - Micron.....	10			

Heater System

Jacket Water Heater.....	Standard
Wattage (Nominal).....	2000
Voltage - AC, 1P.....	240

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Induction Air System

	1760	2100	2200	2350
Air Cleaner Type.....	Dry			
Air Intake Restriction Maximum Limit				
Dirty Air Cleaner - in. of Water (kPa).....	10 (2.5) at 1760 rpm and 20 (5) at 2350 rpm			
Clean Air Cleaner - in. of Water (kPa)...	6 (1.5)			
Engine Air Flow - ft.3/min. (m3/min).....	632(17.9)	798(22.6)	802(22.7)	848(24)
Air Temperature(At Engine Inlet) - °F (°C)***	113(45) Max. Allowable			

Lubrication System

Oil Pressure(Normal) - lb./in. ² (kPa).....	36.26 to 72.5 (250 to 500)
Oil Temperature(In Pan) - °F (°C) (max.).....	230 - 248(110 -120)
Oil Pan Capacity, High - L.....	24
Low - L.....	22
Total Oil Capacity with filter - L.....	26

Performance

	1760	2100	2200	2350
BMEP - lb./in. ² (kPa).....	236(1632)	231(1595)	218(1505)	203(1400)
Piston Speed - ft./min (m/min).....	1559(475)	1860(567)	1949(594)	2083(635)
Mechanical Noise - dB(A) at 1m.....	103 Approx			
Power Curve.....	Performance curve No. EPC - UF35 - 00			