

No. : T4.SPEC.400.3.B SHEET NO. : A/1	BROAD SPECIFICATIONS 4R810NA1 35.8kW@1800RPM	SECT. A	
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BROAD SPECIFICATIONS OF 4R810NA1 ENGINE FOR EMEGENCY STANDBY GENERATING SET APPLICATION

S. NO.	PARAMETER		UNIT	VALUE
1.1	Engine Model		--	4R810NA1
1.2	Engine Family			JKOEL3.24NAX
1.3	Emission compliance		--	US EPA TIER-III
1.4	Engine cooling		--	Water cooled
1.5	Bore x Stroke		mm x mm	96 x 112
1.6	No. of cylinders & Arrangement		--	4 Cylinder Vertical Inline
1.7	Total displacement		cc	3240
1.8	Valves per cylinder – intake/exhaust		--	1/1
1.9	Compression Ratio		--	17.5 ± 1:1
1.10	Firing order (starting from flywheel end)		--	1-3-4-2
1.11	Combustion system		--	Direct Injection
1.12	Aspiration		--	Naturally Aspirated
1.13	Engine crankcase vent system		--	Closed crankcase vent System
1.14	Rated speed		rpm	1800 ± 5
1.15	Rated Brake Power output (Production Tolerance: ± 5%)		hp (kW)	48.7 (35.8)
1.16	Maximum high idle speed		rpm	1805
1.17	B.M.E.P		bar	7.5
1.18	Brake Specific fuel consumption (corresponding to gross power under NTP conditions, after 125 hrs. of engine de-green cycle) (Production Tolerance: + 5%)	100 % LOAD	g/hp hr.	172
		75 % LOAD		164
		50 % LOAD		164
		25 % LOAD		203
1.19	Type of governing / Speed governor		--	Isochronous / Electronic

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S. NO.	PARAMETER	UNIT	VALUE
1.20	Lubricating oil grade	--	SAE15W40, CI4
1.21	Lubricating pump type	--	Positive displacement G- Rotor
1.22	Maximum Lubricating oil flow (@ 1412 Lube oil Pump Speed with 3 bar oil pressure & 90° ± 10° C (194°±50° F) Oil temperature)	lpm	18
1.23	Maximum Lubricating oil pressure at 100% load	bar	5.5
1.24	Lubricating oil change period (* First oil change at 50 hrs.)	hours	250
1.25	Maximum Oil temperature	°C (°F)	120 (248)
1.26	Lubricating oil consumption (As per KOEL std. test cycle and test procedure. Subject to change.)	% of fuel consumption	0.15
1.27	Fuel used	--	Ultra-Low Sulfur Diesel (ULSD)
1.28	Fuel Injection type	--	Mechanical PLN, Inline Pump
1.29	Fuel filter	--	0.6 liter Single bowl
1.30	Pre-filter	--	0.8 liter Single bowl
1.31	Maximum allowable back pressure of exhaust system at rated brake power (at exhaust manifold outlet)	kPa G	6.7 ± 1
1.32	Maximum allowable air temperature in inlet manifold	°C (°F)	50 (122)
1.33	Maximum exhaust temperature (at exhaust manifold outlet)	°C (°F)	650 (1202)
1.34	Max. air inlet restriction - Clean air cleaner - Used air cleaner	mm H ₂ O	200 500
1.35	Maximum inlet air flow	(m ³ /min)	2.7
1.36	Maximum exhaust gas flow	(m ³ /min)	8.6
1.37	Cooling fan air Flow (in open condition)	(m ³ /min)	87

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