



No. : T4.SPEC.600.3.B SHEET NO. : A/1	BROAD SPECIFICATIONS 4R810TA1 69.7kW@1800RPM	SECT. A	 Enriching Lives
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BROAD SPECIFICATIONS OF 4R810TA1 ENGINE FOR EMEGENCY STANDBY GENERATING SET APPLICATION


S. NO.	PARAMETER	UNIT	VALUE
1.1	Engine Model	--	4R810TA1
1.2	Engine Family	--	JKOEL3.24TAX
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	--	16.5 ± 1:1
1.10	Firing order (starting from flywheel end)	--	1-3-4-2
1.11	Combustion system	--	Direct Injection
1.12	Aspiration	--	Turbocharged & charge air cooled
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)	95 (69.7)
1.16	Maximum high idle speed	rpm	1805
1.17	B.M.E.P	bar	14.6
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	162
		75 % LOAD	162
		50 % LOAD	166
		25 % LOAD	184
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 (@ 1765 Lube oil Pump Speed with 3 bar oil pressure & 90° ± 10°C (194 ± 50 °F) Oil temperature)temperature)	lpm	44
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)	125 (257)
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 diffuser outlet)	kPa G	10 ± 1
1.32	Maximum allowable air temperature in inlet manifold	°C (°F)	50 (122)
1.33	Maximum allowable air temperature at CAC outlet	°C (°F)	48 ± 2 (118.4 ± 35.6)
1.34	Maximum allowable pressure drop across CAC	kPA	< 10
1.35	Maximum temperature rise from ambient to inlet of turbocharger	°C	To be updated
1.36	Maximum exhaust temperature (at exhaust turbine outlet / exhaust diffuser outlet)	°C	680 (1256)
1.37	Max. air inlet restriction - Clean air cleaner - Used air cleaner	mm H ₂ O	200 500
1.38	Maximum inlet air flow	(m ³ /min)	6.5

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SHEET NO. : A/3				
S. NO.	PARAMETER	UNIT	VALUE	
1.39	Maximum exhaust gas flow	(m ³ /min)	21.6	
1.40	Cooling Fan air flow (in open condition)	(m ³ /min)	174	

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