

No. : 4H.SPEC.600.3.B SHEET NO. : A/1	BROAD SPECIFICATIONS 4K1080TA1 114.7kW@1800RPM	SECT. A	
---	---	------------------------------	---

BROAD SPECIFICATIONS OF 4K1080TA1 ENGINE FOR EMEGENCY STANDBY GENERATING SET APPLICATION

S. NO.	PARAMETER	UNIT	VALUE
1.1	Engine Model	--	4K1080TA1
1.2	Engine Family	--	JKOEL4.33TAX
1.3	Emission compliance	--	US EPA TIER-III
1.4	Engine cooling	--	Water cooled
1.5	Bore x Stroke	mm x mm	105 x 125
1.6	No. of cylinders	--	4 Cylinder Vertical Inline
1.7	Total displacement	cc	4330
1.8	Valves per cylinder – intake/exhaust	--	2/2
1.9	Compression Ratio	--	15.5 ± 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)	156 (114.7)
1.16	Maximum high idle speed	rpm	1805
1.17	B.M.E.P	bar	18.0
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	To be updated
		75 % LOAD	To be updated
		50 % LOAD	To be updated
		25 % LOAD	To be updated
1.19	Type of governing / Speed governor	--	Isochronous / Electronic

Prepared by	Checked & approved by	Revision No.	Date	Issued by
NRS	VMT/ YVA	00	26/10/2018	CRE / KOEL

No. : 4H.SPEC.600.3.B		BROAD SPECIFICATIONS		SECT.	
SHEET NO. : A/2		4K1080TA1 114.7kW@1800RPM		A	
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)			lpm	39
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.)			% fuel consumption	To be updated
1.27	Fuel used			--	Ultra-Low Sulfur Diesel (ULSD)
1.28	Fuel Injection type			--	Mechanical PLN, Inline Pump
1.29	Fuel filter			--	1.0 liter Single bowl
1.30	Pre-filter			--	Not applicable
1.31	Maximum allowable back pressure of exhaust system at rated power (at exhaust diffuser outlet)			kPa G	4.9 ± 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			bar	To be updated
1.35	Maximum temperature rise from ambient to inlet of turbocharger			°C (°F)	To be updated
1.36	Maximum exhaust temperature (at exhaust turbine outlet/ exhaust diffuser outlet)			°C (°F)	750 (1382)
1.37	Maximum air inlet restriction - Clean air cleaner - Used air cleaner			mm H ₂ O	200 500
1.38	Maximum inlet air flow			(m ³ /min)	To be updated
Prepared by		Checked & approved by	Revision No.	Date	Issued by
NRS		VMT/ YVA	00	26/10/2018	CRE / KOEL

No. : 4H.SPEC.600.3.B		BROAD SPECIFICATIONS 4K1080TA1 114.7kW@1800RPM	SECT. A	
SHEET NO. : A/3				
S. NO.	PARAMETER	UNIT	VALUE	
1.39	Maximum exhaust gas flow	(m³/min)	To be updated	
1.40	Cooling Fan air flow (in open condition)	(m³/min)	To be updated	

Prepared by	Checked & approved by	Revision No.	Date	Issued by
NRS	VMT/ YVA	00	26/10/2018	CRE / KOEL