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

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| Prepared by NRS | Checked & approved by VMT/ YVA | Revision No. 00 | Date 26/10/2018 | Issued by CRE / KOEL |
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| No. : 4H.SPEC.600.3.B SHEET NO. : A/2 | BROAD SPECIFICATIONS 4K1080TA1 114.7kW@1800RPM | SECT. A |  Enriching Lives |
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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) | 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 |

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

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| NRS | VMT/ YVA | 00 | 26/10/2018 | CRE / KOEL |