

Name 12V2000G16F
Application Group 3B
Dataset Ref. 25°C/-; Air charge air cooling

Speed [rpm] 1500
Nominal power [kW] 665
Nominal power [bhp] 891
Frequency [Hz] 50

Exhaust Regulations NEA Singapore for ORDE; EPA Nonroad T2 Compliant;

Reference conditions

| No. | Description | Index | Value | Unit |
|-----|--------------------------------|-------|-------|------|
| 6 | Intake air temperature | | 25 | °C |
| 7 | Charge-air coolant temperature | | - | °C |
| 8 | Barometric pressure | | 1000 | mbar |
| 9 | Site altitude above sea level | | 100 | m |

0. Data-relevant engine design configuration

| No. | Description | Index | Value | Unit |
|-----|---|-------|-------|------|
| 43 | Amendment history drawing No. | | N | - |
| 44 | Amendment history drawing No. (cont.) | | N | - |
| 8 | Engine rated speed switchable (1500/1800 rpm) | | - | - |
| 13 | Engine without sequential turbocharging (turbochargers without cut-in/cut-out control) | | X | - |
| 31 | Engine with air-cooled charge air | | X | - |
| 61 | Engine with water/charge air cooling (LT, on-engine) | | - | - |

1. Power-related data

| No. | Description | Index | Value | Unit |
|-----|--|-------|-------|------|
| 1 | Engine rated speed | A | 1500 | rpm |
| 4 | Continuous power ISO 3046 (10% overload capability) (design power DIN 6280, ISO 8528) | A | 665 | kW |
| 5 | Fuel stop power ISO 3046 | A | 732 | kW |
| 8 | Mean effective pressure (MEP) (Continuous power ISO 3046) | | 19.9 | bar |
| 9 | Mean effective pressure (MEP) (Fuel stop power ISO 3046) | | 21.8 | bar |

2. General Conditions (for maximum power)

| No. | Description | Index | Value | Unit |
|-----|---|-------|-------|------|
| 46 | Individual power calculation (ESCM) required for maximum power | | X | - |
| 1 | Intake air depression (new filter) | A | 15 | mbar |
| 2 | Intake air depression, max. | L | 40 | mbar |
| 3 | Exhaust back pressure | A | 30 | mbar |
| 4 | Exhaust back pressure, max. | L | 50 | mbar |
| 5 | Fuel temperature at fuel feed connection | R | 25 | °C |
| 9 | Fuel temperature at fuel feed connection, max. (w/o power reduction) | L | - | °C |
| 10 | Fuel temperature at fuel feed connection, max. | L | 65 | °C |

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| | | | | |
|----|---|---|---|----|
| 49 | Max. ambient temperature in direct vicinity of vibration damper | L | - | °C |
| 18 | Fuel temperature at fuel feed connection, min. | L | N | °C |

3. Consumption

| No. | Description | Index | Value | Unit |
|-----|---|-------|-------|--------|
| 17 | Specific fuel consumption (be) - 100 % CP (+ 5 %; EN 590; 42.8 MJ/kg) | R | 198 | g/kWh |
| 18 | Specific fuel consumption (be) - 75 % CP (+ 5 %; EN 590; 42.8 MJ/kg) | R | 203 | g/kWh |
| 19 | Specific fuel consumption (be) - 50 % CP (+ 5 %; EN 590; 42.8 MJ/kg) | R | 213 | g/kWh |
| 20 | Specific fuel consumption (be) - 25 % CP (+ 5 %; EN 590; 42.8 MJ/kg) | R | 229 | g/kWh |
| 21 | Specific fuel consumption (be) - FSP (+ 5 %; EN 590; 42.8 MJ/kg) | R | 198 | g/kWh |
| 56 | Specific fuel consumption (be) - 100 % FSP (+ 5 %; EN 590; 42.8 MJ/kg) | R | - | g/kWh |
| 57 | Specific fuel consumption (be) - 75 % FSP (+ 5 %; EN 590; 42.8 MJ/kg) | R | - | g/kWh |
| 58 | Specific fuel consumption (be) - 50 % FSP (+ 5 %; EN 590; 42.8 MJ/kg) | R | - | g/kWh |
| 59 | Specific fuel consumption (be) - 25 % FSP (+ 5 %; EN 590; 42.8 MJ/kg) | R | - | g/kWh |
| 73 | No-load fuel consumption | R | 11 | kg/h |
| 92 | Lube oil consumption after 100 h of operation (B = fuel consumption per hour) Guideline value does not apply for the design of EGAT systems. Please consult the Applications Center with regard to the layout of EGA systems. | R | 0.35 | % of B |
| 62 | Lube oil consumption after 100 h of operation, max. (B = fuel consumption per hour) | L | 0.8 | % of B |

4. Model-related data (basic design)

| No. | Description | Index | Value | Unit |
|-----|--|-------|-------|-------------|
| 3 | Engine with exhaust turbocharger (ETC) and intercooler | | X | - |
| 4 | Exhaust piping, non-cooled | | X | - |
| 33 | Working method: four-cycle, diesel, single-acting | | X | - |
| 34 | Combustion method: direct injection | | X | - |
| 36 | Cooling system: conditioned water | | X | - |
| 37 | Direction of rotation: c.c.w. (facing driving end) | | X | - |
| 6 | Number of cylinders | | 12 | - |
| 7 | Cylinder configuration: V angle | | 90 | degrees (°) |
| 10 | Bore | | 135 | mm |
| 11 | Stroke | | 156 | mm |
| 12 | Displacement, cylinder | | 2.233 | liter |

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|----|--|---|------|-------|
| 13 | Displacement, total | | 26.8 | liter |
| 14 | Compression ratio | | 17.5 | - |
| 40 | Cylinder heads: single-cylinder | | X | - |
| 41 | Cylinder liners: wet, replaceable | | X | - |
| 24 | Number of inlet valves, per cylinder | | 2 | - |
| 25 | Number of exhaust valves, per cylinder | | 2 | - |
| 15 | Number of turbochargers | | 2 | - |
| 16 | Number of L.P. turbochargers | | - | - |
| 17 | Number of H.P. turbochargers | | - | - |
| 18 | Number of intercoolers | | 1 | - |
| 19 | Number of L.P. intercoolers | | - | - |
| 20 | Number of H.P. intercoolers | | - | - |
| 28 | Standard flywheel housing flange (engine main PTO) | | 0 | SAE |
| 50 | Static bending moment at standard flywheel housing flange, max. | L | N | kNm |
| 51 | Dynamic bending moment at standard flywheel housing flange, max. | L | N | kNm |
| 43 | Flywheel interface (DISC) | | 18" | - |
| 46 | Engine mass diagram, drawing No. | | N | - |
| 47 | Engine mass diagram, drawing No. (cont.) | | N | - |

5. Combustion air / exhaust gas

| No. | Description | Index | Value | Unit |
|-----|--|-------|-------|---------|
| 33 | Charge-air flow through external air-to-air intercooler | A | N | m³/s |
| 34 | Charge-air temperature before external air-to-air intercooler | A | 188 | °C |
| 35 | Charge-air temperature after external air-to-air intercooler | A | 50 | °C |
| 36 | Charge-air temperature after external air-to-air intercooler, max. | L | 65 | °C |
| 37 | Charge-air temperature after external air-to-air intercooler, min. | L | 10 | °C |
| 39 | Pressure differential in external air-to-air intercooler, max. | L | 130 | mbar |
| 8 | Charge-air pressure before cylinder - CP | R | 2.9 | bar abs |
| 27 | Charge-air pressure before cylinder - FSP | R | 3.2 | bar abs |
| 9 | Combustion air volume flow - CP | R | 0.81 | m³/s |
| 10 | Combustion air volume flow - FSP | R | 0.89 | m³/s |
| 11 | Exhaust volume flow (at exhaust temperature) - CP | R | 2.2 | m³/s |
| 12 | Exhaust volume flow (at exhaust temperature) - FSP | R | 2.4 | m³/s |
| 17 | Exhaust temperature after engine - CP | R | 535 | °C |
| 18 | Exhaust temperature after engine - FSP | R | 540 | °C |
| 58 | Exhaust temperature after engine (turbocharger), max. | L | 670 | °C |

6. Heat dissipation

| No. | Description | Index | Value | Unit |
|-----|-------------|-------|-------|------|
|-----|-------------|-------|-------|------|

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|----|---|---|-----|----|
| 60 | Heat dissipated by engine coolant - CP (high-temperature circuit) | R | 280 | kW |
| 61 | Heat dissipated by engine coolant - CP (low-temperature circuit) | R | - | kW |
| 62 | Heat dissipated by engine coolant - FSP (high-temperature circuit) | R | 300 | kW |
| 63 | Heat dissipated by engine coolant - FSP (low-temperature circuit) | R | - | kW |
| 26 | Charge-air heat dissipation - CP | R | 130 | kW |
| 27 | Charge-air heat dissipation - FSP | R | 160 | kW |
| 31 | Heat dissipated by return fuel flow - CP | R | 3.5 | kW |
| 32 | Heat dissipated by return fuel flow - FSP | R | 3.5 | kW |
| 33 | Radiation and convection heat, engine - CP | R | 35 | kW |
| 34 | Radiation and convection heat, engine - FSP | R | 35 | kW |

7. Coolant system (high-temperature circuit)

| No. | Description | Index | Value | Unit |
|-----|---|-------|-------|-------------------|
| 17 | Coolant temperature (at engine outlet to cooling equipment) | A | 100 | °C |
| 20 | Coolant temperature after engine, limit 1 | L | 102 | °C |
| 21 | Coolant temperature after engine, limit 2 | L | 105 | °C |
| 25 | Coolant antifreeze content, max. | L | 50 | % |
| 30 | Cooling equipment: coolant flow rate | A | 31.6 | m ³ /h |
| 35 | Coolant pump: inlet pressure, min. | L | 0.4 | bar |
| 36 | Coolant pump: inlet pressure, max. | L | 1.5 | bar |
| 41 | Pressure loss in off-engine cooling system, max. | L | 1.0 | bar |
| 72 | Pressure loss in off-engine cooling system, min. | L | 0.3 | bar |
| 47 | Breather valve (expansion tank) opening pressure (excess pressure) | R | 1.0 | bar |
| 54 | Cooling equipment: height above engine, max. | L | 20 | m |
| 50 | Thermostat, starts to open | R | 79 | °C |

8. Coolant system (low-temperature circuit)

| No. | Description | Index | Value | Unit |
|-----|--|-------|-------|-------------------|
| 9 | Coolant temperature before intercooler (at engine inlet from cooling equipment) | A | - | °C |
| 13 | Coolant antifreeze content, max. | L | - | % |
| 17 | Charge-air temperature after intercooler, max. | L | - | °C |
| 76 | Temperature differential between intake air and charge-air coolant before intercooler | A | - | K |
| 20 | Cooling equipment: coolant flow rate | A | - | m ³ /h |
| 24 | Coolant pump: inlet pressure, min. | L | - | bar |
| 25 | Coolant pump: inlet pressure, max. | L | - | bar |
| 29 | Pressure loss in off-engine cooling system, max. | L | - | bar |
| 62 | Pressure loss in off-engine cooling system, min. | L | - | bar |
| 43 | Cooling equipment: height above engine, max. | L | - | m |

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|----|---|---|---|-----|
| 36 | Breather valve (expansion tank) opening pressure (excess pressure) | R | - | bar |
| 39 | Thermostat, starts to open | R | - | °C |

10. Lube oil system

| No. | Description | Index | Value | Unit |
|-----|---|-------|-------|------|
| 1 | Lube oil operating temp. before engine, from | R | 75 | °C |
| 2 | Lube oil operating temp. before engine, to | R | 100 | °C |
| 5 | Lube oil temperature before engine, limit 1 | L | 103 | °C |
| 6 | Lube oil temperature before engine, limit 2 | L | 105 | °C |
| 8 | Lube oil operating press. bef. engine, from | R | 5.8 | bar |
| 9 | Lube oil operating press. bef. engine, to | R | 8.5 | bar |
| 10 | Lube oil pressure before engine, alarm | L | 4.5 | bar |
| 11 | Lube oil pressure before engine, shutdown | L | 4.0 | bar |
| 19 | Lube oil fine filter (main circuit): number of units | | 1 | - |
| 20 | Lube oil fine filter (main circuit): number of elements per unit | | 2 | - |
| 32 | Lube oil fine filter (main circuit): pressure differential, max. | L | 1.0 | bar |

11. Fuel system

| No. | Description | Index | Value | Unit |
|------|---|-------|---------------|-----------|
| 3307 | Fuel pressure at fuel feed connection, min. (when engine is starting), absolute pressure | L | 0.5 | bar abs |
| 3309 | Fuel pressure at fuel feed connection, max. (when engine is starting), absolute pressure | L | 1.5 | bar abs |
| 3308 | Fuel pressure at fuel feed connection, min. (when engine is running), absolute pressure | L | 0.5 | bar abs |
| 3310 | Fuel pressure at fuel feed connection, max. (permanent), absolute pressure | L | 1.0 | bar abs |
| 3311 | Fuel pressure at fuel feed connection, specification | | XZ54407000001 | - |
| 4211 | Max. fuel supply volume Normal mode | A | 25 | liter/min |
| 4212 | Max. fuel supply volume Failure mode | A | 25 | liter/min |
| 77 | Max. fuel return volume Normal mode | R | 25 | liter/min |
| 4184 | Max. fuel return volume Failure mode | R | 25 | liter/min |
| 10 | Fuel pressure at return connection on engine, max. | L | 0.5 | bar |
| 13 | Fuel temperature differential before/after engine, max. | L | 15 | K |
| 18 | Fuel fine filter (main circuit): number of units | A | 1 | - |
| 19 | Fuel fine filter (main circuit): number of elements per unit | A | 4 | - |
| 20 | Fuel fine filter (main circuit): particle retention | A | 0.005 | mm |
| 21 | Fuel fine filter (main circuit): pressure differential, max. | L | 1.0 | bar |

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12. General operating data

| No. | Description | Index | Value | Unit |
|------|--|-------|-------|------------------|
| 1 | Cold start capability: air temperature (w/o starting aid, w/o preheating) - (case A) | R | 0 | °C |
| 22 | Coolant preheating, preheating temperature, min. | L | 32 | °C |
| 3506 | Coolant preheating, preheating temperature, max. | L | 55 | °C |
| 28 | Breakaway torque (without driven machinery) coolant temperature +5°C | R | - | Nm |
| 30 | Breakaway torque (without driven machinery) coolant temperature +40°C | R | - | Nm |
| 29 | Cranking torque at firing speed (without driven machinery) coolant temperature +5°C | R | - | Nm |
| 31 | Cranking torque at firing speed (without driven machinery) coolant temperature +40°C | R | - | Nm |
| 96 | Starting is blocked if the engine coolant temperature is below | | -20 | °C |
| 37 | High idling speed, max. (static) | L | 1660 | rpm |
| 38 | Limit speed for overspeed alarm / emergency shutdown | L | 1800 | rpm |
| 42 | Firing speed, from | R | 100 | rpm |
| 43 | Firing speed, to | R | 120 | rpm |
| 44 | Engine coolant temperature before starting full-load operation, recommended min. | R | 40 | °C |
| 48 | Minimum continuous load | R | 20 | % |
| 49 | Extended low or no-load operation possible (consultation required) | | X | - |
| 50 | Engine mass moment of inertia (without flywheel) | R | 2.67 | kgm ² |
| 52 | Standard flywheel mass moment of inertia | R | 2.99 | kgm ² |
| 1981 | Block bending moment - SAE 0 | R | N | kNm |
| 69 | Speed droop (with electronic governor) adjustable, from | R | 0 | % |
| 70 | Speed droop (with electronic governor) adjustable, to | R | 5 | % |

13. Starting (electric)

| No. | Description | Index | Value | Unit |
|------|---|-------|------------|------|
| 2309 | Manufacturer | | PRESTOLITE | - |
| 2310 | Number of starter | | 1 | - |
| 2312 | Starter electrically redundant | | - | - |
| 2313 | Rated power per starter | R | 7.5 | kW |
| 2314 | Starter, rated voltage | R | 24 | VDC |
| 2315 | Rated short-circuit current per starter | L | 1730 | A |
| 2316 | Power consumption per starter (at an engine speed of 100 rpm) | R | 720 | A |
| 3000 | Power consumption per starter (at an engine speed of 100 rpm, SAE0) | R | - | A |
| 3002 | Power consumption per starter (at an engine speed of 100 rpm, SAE1) | R | - | A |

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|------|---|---|------------|-----|
| 2317 | Internal resistance of power supply + line resistance per starter | A | 0.008 | Ω |
| 2318 | Manufacturer | | PRESTOLITE | - |
| 2319 | Number of starter | | 2 | - |
| 2320 | Starter electrically redundant | | X | - |
| 2321 | Rated power per starter | R | 7.5 | kW |
| 2322 | Starter, rated voltage | R | 24 | VDC |
| 2323 | Rated short-circuit current per starter | L | 1730 | A |
| 2324 | Power consumption per starter (at an engine speed of 100 rpm) | R | 720 | A |
| 3001 | Power consumption per starter (at an engine speed of 100 rpm, SAE0) | R | - | A |
| 3003 | Power consumption per starter (at an engine speed of 100 rpm, SAE1) | R | - | A |
| 2325 | Internal resistance of power supply + line resistance per starter | A | 0.008 | Ω |
| 2347 | Generally valid data for starter | | X | - |
| 2342 | Rated starting-attempt Duration (at +20°C ambient temperature with battery) | R | 3 | s |
| 2343 | Interval between starts (at rated starting-attempt duration), min. | L | 5 | s |
| 2345 | Maximum acceptable starting-attempt duration | L | 15 | s |
| 2344 | Interval between starts (when starting-attempt duration > rated starting-attempt duration) | R | 60 | s |
| 2346 | Starting attempts within 30 minutes (at +20°C ambient temperature with battery full), max. | L | 6 | - |

15. Starting (pneumatic/oil pressure starter)

| No. | Description | Index | Value | Unit |
|-----|---|-------|-------|-------|
| 36 | Pneumatic starter: make TDI | | X | - |
| 5 | Starting air pressure before starter motor, min. | R | 8 | bar |
| 6 | Starting air pressure before starter motor, max. | R | 9 | bar |
| 7 | Starting air pressure before starter motor, min. | L | 8 | bar |
| 8 | Starting air pressure before starter motor, max. | L | 9 | bar |
| 18 | Start attempt duration (engine preheated) | R | 3 | s |
| 19 | Start attempt duration (engine not preheated) | R | 5 | s |
| 20 | Start attempt duration, max. | L | - | s |
| 114 | Air consumption/start attempt (engine preheated) Engine without generator Control with engine controller | R | 1.1 | m³n |
| 115 | Air consumption/start attempt (engine not preheated) Engine without generator Control with engine controller | R | 1.2 | m³n |
| 116 | Air consumption with external control for air-starter (per second) | R | 0.6 | m³n |
| 23 | Starting air tank for 3 start attempts (max. 40 bar) (engine preheated) | R | - | liter |

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|----|--|---|---|-------|
| 24 | Starting air tank for 3 start attempts (max. 30 bar) (engine preheated) | R | - | liter |
| 25 | Starting air tank for 6 start attempts (max. 40 bar) (engine preheated) | R | - | liter |
| 26 | Starting air tank for 6 start attempts (max. 30 bar) (engine preheated) | R | - | liter |
| 27 | Starting air tank for 10 start attempts (max. 40 bar) (engine preheated) | R | - | liter |
| 28 | Starting air tank for 10 start attempts (max. 30 bar) (engine preheated) | R | - | liter |
| 29 | Starting air tank for 3 start attempts (max. 40 bar) (engine not preheated) | R | N | liter |
| 30 | Starting air tank for 3 start attempts (max. 30 bar) (engine not preheated) | R | N | liter |
| 31 | Starting air tank for 6 start attempts (max. 40 bar) (engine not preheated) | R | N | liter |
| 32 | Starting air tank for 6 start attempts (max. 30 bar) (engine not preheated) | R | N | liter |
| 33 | Starting air tank for 10 start attempts (max. 40 bar) (engine not preheated) | R | N | liter |
| 34 | Starting air tank for 10 start attempts (max. 30 bar) (engine not preheated) | R | N | liter |

16. Inclinations - standard oil system (ref.: waterline)

| No. | Description | Index | Value | Unit |
|-----|---|-------|-------|-------------|
| 15 | Longitudinal inclination, continuous max. driving end down (Option: max. operating inclinations) | L | 5 | degrees (°) |
| 17 | Longitudinal inclination, continuous max. driving end up (Option: max. operating inclinations) | L | 5 | degrees (°) |
| 19 | Transverse inclination, continuous max. (Option: max. operating inclinations) | L | 10 | degrees (°) |

18. Capacities

| No. | Description | Index | Value | Unit |
|-----|---|-------|-------|-------|
| 1 | Engine coolant capacity (without cooling equipment) | R | 63 | liter |
| 10 | Intercooler coolant capacity | R | - | liter |
| 11 | On-engine fuel capacity | R | 6 | liter |
| 14 | Engine oil capacity, initial filling (standard oil system) (Option: max. operating inclinations) | R | 92 | liter |
| 20 | Oil change quantity, max. (standard oil system) (Option: max. operating inclinations) | R | 80 | liter |

[BL] Reference value: fuel stop power
Maximum engine power that cannot be run continuously on some applications (stabilization reserve)

[DL] Reference value: continuous power
Engine power that can be run continuously under standard conditions

[>] Actual value must be greater than specified value
[<] Actual value must be less than specified value

[X] Applicable
The module is valid for this product type

[] Non-applicable
The module is not valid for this product type

[N] Value not named
The value has not yet been named or will not be named

[+] Adequate verification not yet available (tolerance +/- 10%)
[+/-] Adequate verification not yet available (tolerance +/- 5%)

[A] Design value
Value required for the design of an external system (plant)

[R] Guideline value
Typical average value as information – only suitable for design purposes to a limited extent

[L] Limit value
A value representing the lower limit/minimum value or upper limit/maximum value that may not be exceeded. Not suitable for design purposes

| | | | |
|--------------------------|-------------------------------------|----------------------------|------|
| Name | 12V2000G16F | Speed [rpm] | 1500 |
| Application Group | 3B | Nominal power [kW] | 665 |
| Dataset | Ref. 25°C/-; Air charge air cooling | Nominal power [bhp] | 891 |
| | | Frequency [Hz] | 50 |

Exhaust Regulations NEA Singapore for ORDE; EPA Nonroad T2 Compliant;

| | | | | |
|------|--|---|----|-------|
| 2024 | Oil pan capacity, dipstick mark min. (standard oil system) | R | 65 | liter |
| 2025 | Oil pan capacity, dipstick mark max. (standard oil system) | R | 70 | liter |

19. Masses / dimensions

| No. | Description | Index | Value | Unit |
|-----|---|-------|-------|------|
| 9 | Engine mass, dry (basic engine configuration acc. to scope of supply specification) | R | 2640 | kg |
| 10 | Engine mass, wet (basic engine configuration acc. to scope of supply specification) | R | 2805 | kg |

20. Fan / fan cooler

| No. | Description | Index | Value | Unit |
|-----|----------------------------------|-------|-------|------|
| 1 | Standard design | | - | - |
| 3 | Fan, pusher-type | | X | - |
| 9 | Fan drive: mechanical via V-belt | | X | - |
| 13 | Fan: speed | R | N | rpm |

21. Exhaust emissions

| No. | Description | Index | Value | Unit |
|------|--|-------|-------------|------|
| 1956 | Emissions data sheet: US EPA Tier 2 | | EDS20000436 | - |
| 2005 | Emissions data sheet: NEA Singapore for ORDE | | EDS20000408 | - |

22. Acoustics

| No. | Description | Index | Value | Unit |
|-----|--|-------|---------|-------|
| 101 | Exhaust noise, unsilenced - CP (free-field sound-pressure level Lp, 1m distance, ISO 6798, +3dB(A) tolerance) | R | 112 | dB(A) |
| 201 | Exhaust noise, unsilenced - CP (sound power level LW, ISO 6798, +3dB(A) tolerance) | R | 125 | dB(A) |
| 103 | Exhaust noise, unsilenced - CP (free-field sound-pressure level Lp, 1m distance, ISO 6798) Spectrum No. | R | 736690e | - |
| 109 | Engine surface noise with attenuated intake noise (filter) - CP (free-field sound-pressure level Lp, 1m distance, ISO 6798, +2dB(A) tolerance) | R | 100 | dB(A) |

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| | | | |
|--------------------------|-------------------------------------|----------------------------|------|
| Name | 12V2000G16F | Speed [rpm] | 1500 |
| Application Group | 3B | Nominal power [kW] | 665 |
| Dataset | Ref. 25°C/-; Air charge air cooling | Nominal power [bhp] | 891 |
| | | Frequency [Hz] | 50 |

Exhaust Regulations NEA Singapore for ORDE; EPA Nonroad T2 Compliant;

| | | | | |
|-----|---|---|---------|-------|
| 209 | Engine surface noise with attenuated intake noise (filter) - CP (sound power level LW, ISO 6798, +2dB(A) tolerance) | R | 117 | dB(A) |
| 111 | Engine surface noise with attenuated intake noise (filter) - CP (free-field sound-pressure level Lp, 1m distance, ISO 6798) Spectrum No. | R | 736704e | - |

23. TBO and load profile (case A)

| No. | Description | Index | Value | Unit |
|-----|---|-------|-------|------|
| 1 | TBO (Time between Overhaul) (related to standard load profile (Pn,tn)) | L | 18000 | h |
| 22 | P1 (percent load related to CP) | R | 110 | % |
| 3 | t1 (percentage of operating time) | R | 1 | % |
| 24 | P2 (percent load related to CP) | R | 100 | % |
| 5 | t2 (percentage of operating time) | R | 9 | % |
| 26 | P3 (percent load related to CP) | R | 70 | % |
| 7 | t3 (percentage of operating time) | R | 90 | % |
| 28 | P4 (percent load related to CP) | R | - | % |
| 9 | t4 (percentage of operating time) | R | - | % |
| 30 | P5 (percent load related to CP) | R | - | % |
| 18 | t5 (percentage of operating time) | R | - | % |
| 11 | Mean utilization rate (percentage of rated power) | R | <75 | % |
| 12 | Number of load changes/hour, type I (< 10% to >90% load) | R | 2 | - |
| 13 | Number of load changes/hour, type II (< 10% to between 70% and 90% load) | R | 2 | - |
| 15 | Maintenance schedule No. | | N | - |
| 16 | Maintenance schedule No. (cont.) | | N | - |

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