

31.8L



ENERGY

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|-----------------|
| [Stoic.] |
| 56100023 Rev: 2 |

| General Engine Data ⁵ | | | | | | | | | | | |
|---|--|-----|-------|------|---|--|--|--|-----|------------|--------|
| Type | V-Series | | | | Flywheel housing | | | SAE No.0 | | | |
| Number of cylinders | 12 | | | | Flywheel | | | SAE No.18 | | | |
| Aspiration | Charged Cooled Forced Induction | | | | Dry Weight (Fan to Flywheel) | | | lb | kg | 6888 3124 | |
| Firing Order | 1 - 8 - 5 - 10 - 3 - 7 - 6 - 11 - 2 - 9 - 4 - 12 | | | | Wet Weight (Fan to Flywheel) | | | lb | kg | 7384 3349 | |
| Rotation Viewed from Flywheel | Counter Clockwise | | | | CG From Rear Face of Block | | | in | mm | 37.0 941 | |
| Bore | in | mm | 5.906 | 150 | CG Above Crank Centerline | | | in | mm | 0 0 | |
| Stroke | in | mm | 5.906 | 150 | Oil Specification | | | SAE 15W-40 Low Ash Gas engine oil (.25-.5% by wt), API CD/CF or higher | | | |
| Displacement | in ³ | L | 1941 | 31.8 | Engine Oil Capacity ⁸ | | | Min | qts | L | 95 90 |
| Compression Ratio | 10.5 : 1 | | | | Max | | | qts | L | 129 122 | |
| Exhaust Manifold Type | Water Cooled | | | | ECU Oil Pressure Warning ⁶ | | | psi | kPa | 57 393 | |
| Turbo Exhaust Outlet Pipe Size | in | mm | 3.5 | 89 | ECU Oil Pressure Shut Down ⁶ | | | psi | kPa | 47 324 | |
| Catalyst Inlet Size | in | mm | 5 | 127 | Oil Pressure at 1000 rpm (Idle) | | | Min | psi | kPa | 74 510 |
| Catalyst Dp | in-H ₂ O | kPa | 20.5 | 5.1 | Max | | | psi | kPa | 82 565 | |
| Maximum Allowable Exhaust Back Pressure | in-Hg | kPa | 3.0 | 10.2 | Max Allowable Oil Temperature | | | °F | °C | 250 121 | |
| Maximum EPR Rated Pressure | psi | kPa | 1.0 | 6.9 | Coolant Capacity (Engine only) | | | gal | L | 29.1 110.0 | |
| Maximum Operating pressure to EPR | in-H ₂ O | kPa | 11.0 | 2.7 | Coolant Capacity (Radiator only) | | | gal | L | 39.0 147.6 | |
| Minimum Operating pressure to EPR | in-H ₂ O | kPa | 7.0 | 1.7 | Radiator Weight (Dry) | | | lb | kg | 1275 578 | |
| Minimum Gas Supply Pipe Size ⁵ | in | mm | 3 | 76 | Standard Thermostat Range | | | Normal Operation Temperature ⁹ | | | |
| Maximum Pressure Drop Across CAC | psi | kPa | 1 | 6.9 | 50°C Ambient Capable ¹¹ | | | Pass | | | |
| Max Allowable Intake Restriction | | | | | Max External Coolant Friction Head | | | psi | kPa | 7.25 50 | |
| Clean Air Filter | in-H ₂ O | kPa | 5 | 1.24 | CAC Rise Above Ambient Specified | | | F | C | 15 9 | |
| Dirty Air Filter | in-H ₂ O | kPa | 15 | 3.73 | | | | | | | |
| Spark Plug Part Number | Denso GK3-5 | | | | | | | | | | |
| Standard Spark Plug Gap ¹⁰ | in | mm | 0.012 | 0.3 | | | | | | | |
| Spark Plug Coil - Primary Resistance | Ohms 0.59Ω ± 10% | | | | | | | | | | |
| Battery Voltage | Volts 24 | | | | | | | | | | |
| Starter Motor Power | HP | kW | 15.7 | 11.7 | | | | | | | |

| Performance Data 60Hz ^{3,5} | | | | | | | | | | |
|--------------------------------------|-----------------|-----|------|-----|------------------------------------|--|--|----------|---------------------|------------|
| Nominal Engine Speed | RPM 1800 | | | | Water Pump Speed | | | RPM 3705 | | |
| Mean Piston Speed | ft/min | m/s | 1772 | 9.0 | Engine Coolant Flow | | | gal/min | L/min | 361 1368 |
| RPM Range (Min-Max) ISO 8528-5 G1 | RPM 1778 - 1823 | | | | Cooling Fan Power ¹¹ | | | HP | kW | 62.8 47 |
| Charging Alternator Voltage | Volts 28 | | | | Cooling Fan Speed | | | RPM 1050 | | |
| Charging Alternator Current | Amps 55 | | | | Cooling Fan Air Flow ¹¹ | | | SCFM | m ³ /min | 65100 1843 |

| NG 60hz Prime Load | Load | | 100% | | 75% | | 50% | | 25% | |
|---|--|---------------------|-------|------|-------|------|-------|------|-------|-----|
| | Power Rating ^{1,2,3,4} Per ISO 3046 | HP | kWm | 821 | 612 | 616 | 459 | 410 | 306 | 206 |
| MEP (@ rated Load on NG) | psi | bar | 186 | 12.8 | 140 | 9.6 | 93 | 6.4 | 47 | 3.2 |
| Fuel Consumption ^{3,4,7} | lb/hr | kg/hr | 310 | 141 | 242 | 110 | 178 | 81 | 109 | 50 |
| BSFC | lb/(hp-hr) | g/(kW-hr) | 0.378 | 230 | 0.393 | 239 | 0.435 | 265 | 0.530 | 323 |
| Turbine Outlet Temperature | °F | °C | 1138 | 615 | 1084 | 585 | 1040 | 560 | 999 | 537 |
| Exhaust Mass Flow (entire engine) | lb/hr | kg/hr | 5472 | 2482 | 4323 | 1961 | 3175 | 1440 | 2030 | 921 |
| Exhaust Flow at Turbine Outlet Conditions | ACFM | m ³ /min | 3220 | 91 | 2409 | 68 | 1683 | 48 | 1046 | 30 |

| Air Induction System ⁵ | | | | | | | | | | |
|--|-------|---------------------|------|------|------|------|------|------|------|-----|
| Combustion Air required (entire engine) | lb/hr | kg/hr | 5162 | 2341 | 4082 | 1851 | 2997 | 1359 | 1920 | 871 |
| Combustion Air Volume Required (entire engine) | ACFM | m ³ /min | 1125 | 32 | 890 | 25 | 653 | 18 | 419 | 12 |
| Compressor Outlet Temperature ² | °F | °C | 260 | 127 | 236 | 113 | 187 | 86 | 132 | 55 |

| Thermal Balance ⁵ | | | | | | | | | | |
|--|---------|----|--------|------|-------|------|-------|------|-------|-----|
| Total Fuel | BTU/min | kW | 106753 | 1877 | 83790 | 1473 | 61277 | 1078 | 39049 | 687 |
| Mechanical Power | BTU/min | kW | 34804 | 612 | 26103 | 459 | 17402 | 306 | 8751 | 154 |
| Heat Rejected to Cooling Water at Rated Load | BTU/min | kW | 29142 | 512 | 24385 | 429 | 19593 | 345 | 14160 | 249 |
| Heat Rejection CAC at Rated Power | BTU/min | kW | 3229 | 57 | 2075 | 36 | 1120 | 20 | 352 | 6 |
| Heat Rejection to Exhaust (LHV to 150C) | BTU/min | kW | 22577 | 397 | 16594 | 292 | 11314 | 199 | 6578 | 116 |
| Engine Radiated Heat | BTU/min | kW | 17001 | 299 | 14634 | 257 | 11849 | 208 | 9207 | 162 |

¹ Standby and overload ratings based on ISO 3046 gross flywheel power.

² Technical data based on ISO 3046-1 standards of 77°F(25°C), absolute pressure 14.5Psi(100kPa) and 30% relative humidity.

³ Production tolerances in engines and installed components can account for power variations of ± 5%. Altitude, temperature and excessive exhaust and intake restrictions should be applied to power calculations.

⁴ All fuel and thermal calculations unless otherwise noted are done at ISO 3046 rated load using LHV for NG of 48.17 MJ/kg.

⁵ All values in the following section are provided for informational purpose only and are non-binding.

⁶ >1400RPM.

⁷ See PSI Energy Technical Spec. 56300019 - Fuel Standard.

⁸ Standard Sump Capacity.

⁹ ± 2 degrees Celsius.

¹⁰ ± 0.002" or 0.05mm.

¹¹ At 0.5 in-H₂O of Package Restriction at STP.

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[Stoic.]
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| General Engine Data ⁵ | | | | | | | | | | | | | | | | |
|---|--|-----|-------|------|---|-----|----|------|--|-----|------|-------|-----|-----|-----|----|
| Type | V-Series | | | | Flywheel housing | | | | SAE No.0 | | | | | | | |
| Number of cylinders | 12 | | | | Flywheel | | | | SAE No.18 | | | | | | | |
| Aspiration | Charged Cooled Forced Induction | | | | Dry Weight (Fan to Flywheel) | | | | lb | kg | 6888 | 3124 | | | | |
| Firing Order | 1 - 8 - 5 - 10 - 3 - 7 - 6 - 11 - 2 - 9 - 4 - 12 | | | | Wet Weight (Fan to Flywheel) | | | | lb | kg | 7384 | 3349 | | | | |
| Rotation Viewed from Flywheel | Counter Clockwise | | | | CG From Rear Face of Block | | | | in | mm | 37.0 | 941 | | | | |
| Bore | in | mm | 5.906 | 150 | CG Above Crank Centerline | | | | in | mm | 0 | 0 | | | | |
| Stroke | in | mm | 5.906 | 150 | Oil Specification | | | | SAE 15W-40 Low Ash Gas engine oil (.25-.5% by wt), API CD/CF or higher | | | | | | | |
| Displacement | in ³ | L | 1941 | 31.8 | Engine Oil Capacity ⁸ | | | | Min | qts | L | 95 | 90 | | | |
| Compression Ratio | 10.5 : 1 | | | | Max | | | | qts | L | 129 | 122 | | | | |
| Exhaust Manifold Type | Water Cooled | | | | ECU Oil Pressure Warning ⁶ | | | | psi | kPa | 57 | 393 | | | | |
| Turbo Exhaust Outlet Pipe Size | in | mm | 3.5 | 89 | ECU Oil Pressure Shut Down ⁶ | | | | psi | kPa | 47 | 324 | | | | |
| Catalyst Inlet Size | in | mm | 5 | 127 | Oil Pressure at 1000 rpm (Idle) | | | | Min | psi | kPa | 74 | 510 | | | |
| Catalyst Dp | in-H ₂ O | kPa | 20.5 | 5.1 | Max | | | | psi | kPa | 82 | 565 | | | | |
| Maximum Allowable Exhaust Back Pressure | in-Hg | kPa | 3.0 | 10.2 | Max Allowable Oil Temperature | | | | °F | °C | 250 | 121 | | | | |
| Maximum EPR Rated Pressure | psi | kPa | 1.0 | 6.9 | Coolant Capacity (Engine only) | | | | gal | L | 29.1 | 110.0 | | | | |
| Maximum Operating pressure to EPR | in-H ₂ O | kPa | 11.0 | 2.7 | Coolant Capacity (Radiator only) | | | | gal | L | 39.0 | 147.6 | | | | |
| Minimum Operating pressure to EPR | in-H ₂ O | kPa | 7.0 | 1.7 | Radiator Weight (Dry) | | | | lb | kg | 1275 | 578 | | | | |
| Minimum Gas Supply Pipe Size ⁵ | in | mm | 3 | 76 | Standard Thermostat Range | | | | Normal Operation Temperature ⁹ | | | °F | °C | 176 | 80 | |
| Maximum Pressure Drop Across CAC | psi | kPa | 1 | 6.9 | 50°C Ambient Capable ¹¹ | | | | Pass | | | | | | | |
| Max Allowable Intake Restriction | Clean Air Filter | | | | in-H ₂ O | kPa | 5 | 1.24 | Full Open Temperature ⁹ | | | | °F | °C | 198 | 92 |
| | Dirty Air Filter | | | | in-H ₂ O | kPa | 15 | 3.73 | ECU Coolant Temp Warning | | | | °F | °C | 203 | 95 |
| Spark Plug Part Number | Denso GK3-5 | | | | ECU Coolant Temp Shutdown | | | | °F | °C | 208 | 98 | | | | |
| Standard Spark Plug Gap ¹⁰ | in | mm | 0.012 | 0.3 | Max External Coolant Friction Head | | | | psi | kPa | 7.25 | 50 | | | | |
| Spark Plug Coil - Primary Resistance | Ohms | | | | CAC Rise Above Ambient Specified | | | | F | C | 15 | 9 | | | | |
| Battery Voltage | Volts | | | | 24 | | | | | | | | | | | |
| Starter Motor Power | HP | kW | 15.7 | 11.7 | | | | | | | | | | | | |

| Performance Data 50Hz ^{3,5} | | | | | | | | | | | | | | | | |
|--------------------------------------|--------|-----|------|-----|---------------------|--|--|--|------------------------------------|-------|-----|------|------|---------------------|-------|------|
| Nominal Engine Speed | RPM | | | | 1500 | | | | Water Pump Speed | | | RPM | | 3088 | | |
| Mean Piston Speed | ft/min | m/s | 1476 | 7.5 | Engine Coolant Flow | | | | gal/min | L/min | 297 | 1126 | | | | |
| RPM Range (Min-Max) ISO 8528-5 G1 | RPM | | | | 1477 - 1519 | | | | Cooling Fan Power ¹¹ | | | | HP | kW | 36.4 | 27 |
| Charging Alternator Voltage | Volts | | | | 28 | | | | Cooling Fan Speed | | | | RPM | | 875 | |
| Charging Alternator Current | Amps | | | | 53 | | | | Cooling Fan Air Flow ¹¹ | | | | SCFM | m ³ /min | 54200 | 1535 |

| NG 50hz Prime Load | Load | | 100% | | 75% | | 50% | | 25% | |
|--|------------|---------------------|-------|------|-------|------|-------|------|-------|-----|
| | HP | kWm | 684 | 510 | 513 | 383 | 342 | 255 | 172 | 128 |
| Power Rating ^{1,2,3,4} Per ISO 3046 | psi | bar | 186 | 12.8 | 140 | 9.6 | 93 | 6.4 | 47 | 3.2 |
| MEP (@ rated Load on NG) | lb/hr | kg/hr | 252 | 114 | 197 | 89 | 147 | 67 | 90 | 41 |
| Fuel Consumption ^{3,4,7} | lb/(hp-hr) | g/(kW-hr) | 0.369 | 224 | 0.383 | 233 | 0.429 | 261 | 0.523 | 318 |
| BSFC | °F | °C | 1048 | 564 | 1015 | 546 | 972 | 522 | 899 | 481 |
| Turbine Outlet Temperature | lb/hr | kg/hr | 4234 | 1921 | 3344 | 1517 | 2459 | 1116 | 1573 | 713 |
| Exhaust Mass Flow (entire engine) | ACFM | m ³ /min | 2432 | 69 | 1865 | 53 | 1330 | 38 | 830 | 23 |
| Exhaust Flow at Turbine Outlet Conditions | | | | | | | | | | |

| Air Induction System ⁵ | | | | | | | | | | |
|--|-------|---------------------|------|------|------|------|------|------|------|-----|
| Combustion Air required (entire engine) | lb/hr | kg/hr | 3982 | 1806 | 3147 | 1428 | 2313 | 1049 | 1483 | 673 |
| Combustion Air Volume Required (entire engine) | ACFM | m ³ /min | 868 | 25 | 686 | 19 | 504 | 14 | 323 | 9 |
| Compressor Outlet Temperature ² | °F | °C | 239 | 115 | 201 | 94 | 156 | 69 | 119 | 48 |

| Thermal Balance ⁵ | | | | | | | | | | |
|--|---------|----|-------|------|-------|------|-------|-----|-------|-----|
| Total Fuel | BTU/min | kW | 86712 | 1525 | 68302 | 1201 | 49891 | 877 | 31587 | 555 |
| Mechanical Power | BTU/min | kW | 29003 | 510 | 21752 | 383 | 14502 | 255 | 7293 | 128 |
| Heat Rejected to Cooling Water at Rated Load | BTU/min | kW | 24848 | 437 | 21229 | 373 | 17150 | 302 | 12640 | 222 |
| Heat Rejection CAC at Rated Power | BTU/min | kW | 2517 | 44 | 1502 | 26 | 631 | 11 | 220 | 4 |
| Heat Rejection to Exhaust (LHV to 150C) | BTU/min | kW | 15628 | 275 | 11716 | 206 | 7959 | 140 | 4527 | 80 |
| Engine Radiated Heat | BTU/min | kW | 14715 | 259 | 12104 | 213 | 9650 | 170 | 6908 | 121 |

¹ Standby and overload ratings based on ISO 3046 gross flywheel power.

² Technical data based on ISO 3046-1 standards of 77°F(25°C), absolute pressure 14.5Psi(100kPa) and 30% relative humidity.

³ Production tolerances in engines and installed components can account for power variations of ± 5%. Altitude, temperature and excessive exhaust and intake restrictions should be applied to power calculations.

⁴ All fuel and thermal calculations unless otherwise noted are done at ISO 3046 rated load using LHV for NG of 48.17 MJ/kg.

⁵ All values in the following section are provided for informational purpose only and are non-binding.

⁶ >1400RPM.

⁷ See PSI Energy Technical Spec. 56300019 - Fuel Standard.

⁸ Standard Sump Capacity.

⁹ ± 2 degrees Celsius.

¹⁰ ± 0.002" or 0.05mm.

¹¹ At 0.5 in-H₂O of Package Restriction at STP.

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| General Engine Data ⁵ | | | | | | | | | | | | | | | | |
|---|--|-----|-------|------|---|-----|----|------|--|-----|------|-------|-----|-----|-----|----|
| Type | V-Series | | | | Flywheel housing | | | | SAE No.0 | | | | | | | |
| Number of cylinders | 12 | | | | Flywheel | | | | SAE No.18 | | | | | | | |
| Aspiration | Charged Cooled Forced Induction | | | | Dry Weight (Fan to Flywheel) | | | | lb | kg | 6888 | 3124 | | | | |
| Firing Order | 1 - 8 - 5 - 10 - 3 - 7 - 6 - 11 - 2 - 9 - 4 - 12 | | | | Wet Weight (Fan to Flywheel) | | | | lb | kg | 7384 | 3349 | | | | |
| Rotation Viewed from Flywheel | Counter Clockwise | | | | CG From Rear Face of Block | | | | in | mm | 37.0 | 941 | | | | |
| Bore | in | mm | 5.906 | 150 | CG Above Crank Centerline | | | | in | mm | 0 | 0 | | | | |
| Stroke | in | mm | 5.906 | 150 | Oil Specification | | | | SAE 15W-40 Low Ash Gas engine oil (.25-.5% by wt), API CD/CF or higher | | | | | | | |
| Displacement | in ³ | L | 1941 | 31.8 | Engine Oil Capacity ⁸ | | | | Min | qts | L | 95 | 90 | | | |
| Compression Ratio | 10.5 : 1 | | | | Max | | | | qts | L | 129 | 122 | | | | |
| Exhaust Manifold Type | Water Cooled | | | | ECU Oil Pressure Warning ⁶ | | | | psi | kPa | 57 | 393 | | | | |
| Turbo Exhaust Outlet Pipe Size | in | mm | 3.5 | 89 | ECU Oil Pressure Shut Down ⁶ | | | | psi | kPa | 47 | 324 | | | | |
| Catalyst Inlet Size | in | mm | 5 | 127 | Oil Pressure at 1000 rpm (Idle) | | | | Min | psi | kPa | 74 | 510 | | | |
| Catalyst Dp | in-H ₂ O | kPa | 20.5 | 5.1 | Max | | | | psi | kPa | 82 | 565 | | | | |
| Maximum Allowable Exhaust Back Pressure | in-Hg | kPa | 3.0 | 10.2 | Max Allowable Oil Temperature | | | | °F | °C | 250 | 121 | | | | |
| Maximum EPR Rated Pressure | psi | kPa | 1.0 | 6.9 | Coolant Capacity (Engine only) | | | | gal | L | 29.1 | 110.0 | | | | |
| Maximum Operating pressure to EPR | in-H ₂ O | kPa | 11.0 | 2.7 | Coolant Capacity (Radiator only) | | | | gal | L | 39.0 | 147.6 | | | | |
| Minimum Operating pressure to EPR | in-H ₂ O | kPa | 7.0 | 1.7 | Radiator Weight (Dry) | | | | lb | kg | 1275 | 578 | | | | |
| Minimum Gas Supply Pipe Size ⁵ | in | mm | 3 | 76 | Standard Thermostat Range | | | | Normal Operation Temperature ⁹ | | | °F | °C | 176 | 80 | |
| Maximum Pressure Drop Across CAC | psi | kPa | 1 | 6.9 | 50°C Ambient Capable ¹¹ | | | | Pass | | | | | | | |
| Max Allowable Intake Restriction | Clean Air Filter | | | | in-H ₂ O | kPa | 5 | 1.24 | Full Open Temperature ⁹ | | | | °F | °C | 198 | 92 |
| | Dirty Air Filter | | | | in-H ₂ O | kPa | 15 | 3.73 | ECU Coolant Temp Warning | | | | °F | °C | 203 | 95 |
| Spark Plug Part Number | Denso GK3-5 | | | | ECU Coolant Temp Shutdown | | | | °F | °C | 208 | 98 | | | | |
| Standard Spark Plug Gap ¹⁰ | in | mm | 0.012 | 0.3 | Max External Coolant Friction Head | | | | psi | kPa | 7.25 | 50 | | | | |
| Spark Plug Coil - Primary Resistance | Ohms | | | | CAC Rise Above Ambient Specified | | | | F | C | 15 | 9 | | | | |
| Battery Voltage | Volts | | | | 24 | | | | | | | | | | | |
| Starter Motor Power | HP | kW | 15.7 | 11.7 | | | | | | | | | | | | |

| Performance Data 60Hz ^{3,5} | | | | | | | | | | | | | | | | |
|--------------------------------------|--------|-----|------|-----|---------------------|--|--|--|------------------------------------|-------|-----|------|------|---------------------|-------|------|
| Nominal Engine Speed | RPM | | | | 1800 | | | | Water Pump Speed | | RPM | | 3705 | | | |
| Mean Piston Speed | ft/min | m/s | 1772 | 9.0 | Engine Coolant Flow | | | | gal/min | L/min | 361 | 1368 | | | | |
| RPM Range (Min-Max) ISO 8528-5 G1 | RPM | | | | 1778 - 1823 | | | | Cooling Fan Power ¹¹ | | | | HP | kW | 62.8 | 47 |
| Charging Alternator Voltage | Volts | | | | 28 | | | | Cooling Fan Speed | | | | RPM | | 1050 | |
| Charging Alternator Current | Amps | | | | 55 | | | | Cooling Fan Air Flow ¹¹ | | | | SCFM | m ³ /min | 65100 | 1843 |

| LPG 60hz Prime Load | Load | | 100% | | 75% | | 50% | | 25% | |
|--|------------|---------------------|-------|--------|-------|------|-------|------|-------|-----|
| | HP | kWm | 541 | 403.75 | 406 | 303 | 271 | 202 | 136 | 102 |
| Power Rating ^{1,2,3,4} Per ISO 3046 | psi | bar | 123 | 8.5 | 92 | 6.3 | 61 | 4.2 | 31 | 2.1 |
| MEP (@ rated Load on NG) | lb/hr | kg/hr | 237 | 107 | 197 | 89 | 131 | 59 | 106 | 48 |
| Fuel Consumption ^{3,4,7} | lb/(hp-hr) | g/(kW-hr) | 0.437 | 266 | 0.485 | 295 | 0.482 | 293 | 0.777 | 473 |
| BSFC | °F | °C | 1147 | 619 | 1089 | 587 | 1036 | 558 | 955 | 513 |
| Turbine Outlet Temperature | lb/hr | kg/hr | 4061 | 1842 | 3113 | 1412 | 2280 | 1034 | 1636 | 742 |
| Exhaust Mass Flow (entire engine) | ACFM | m ³ /min | 2508 | 71 | 1843 | 52 | 1287 | 36 | 843 | 24 |
| Exhaust Flow at Turbine Outlet Conditions | | | | | | | | | | |

| Air Induction System ⁵ | | | | | | | | | | |
|--|-------|---------------------|------|------|------|------|------|-----|------|-----|
| Combustion Air required (entire engine) | lb/hr | kg/hr | 3824 | 1735 | 2916 | 1323 | 2150 | 975 | 1530 | 694 |
| Combustion Air Volume Required (entire engine) | ACFM | m ³ /min | 833 | 24 | 635 | 18 | 469 | 13 | 333 | 9 |
| Compressor Outlet Temperature ² | °F | °C | 239 | 115 | 194 | 90 | 149 | 65 | 119 | 48 |

| Thermal Balance ⁵ | | | | | | | | | | |
|--|---------|----|-------|------|-------|------|-------|-----|-------|-----|
| Total Fuel | BTU/min | kW | 81653 | 1436 | 62332 | 1096 | 45795 | 805 | 32844 | 578 |
| Mechanical Power | BTU/min | kW | 22961 | 404 | 17221 | 303 | 11480 | 202 | 5773 | 102 |
| Heat Rejected to Cooling Water at Rated Load | BTU/min | kW | 27785 | 489 | 23401 | 411 | 18526 | 326 | 13540 | 238 |
| Heat Rejection CAC at Rated Power | BTU/min | kW | 2398 | 42 | 1314 | 23 | 551 | 10 | 199 | 4 |
| Heat Rejection to Exhaust (LHV to 150C) | BTU/min | kW | 17220 | 303 | 12166 | 214 | 8387 | 147 | 5011 | 88 |
| Engine Radiated Heat | BTU/min | kW | 11290 | 199 | 8230 | 145 | 6850 | 120 | 8321 | 146 |

¹ Standby and overload ratings based on ISO 3046 gross flywheel power.

² Technical data based on ISO 3046-1 standards of 77°F(25°C), absolute pressure 14.5Psi(100kPa) and 30% relative humidity.

³ Production tolerances in engines and installed components can account for power variations of ± 5%. Altitude, temperature and excessive exhaust and intake restrictions should be applied to power calculations.

⁴ All fuel and thermal calculations unless otherwise noted are done at ISO 3046 rated load using LHV for LPG 46.38 MJ/kg.

⁵ All values in the following section are provided for informational purpose only and are non-binding.

⁶ >1400RPM.

⁷ See PSI Energy Technical Spec. 56300019 - Fuel Standard.

⁸ Standard Sump Capacity.

⁹ ± 2 degrees Celsius.

¹⁰ ± 0.002" or 0.05mm.

¹¹ At 0.5 in-H₂O of Package Restriction at STP.

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| General Engine Data ⁵ | | | | | | | | | | | | | |
|---|--|-----|-------|------|---|--|--|--|--|-----|------|-------|-----|
| Type | V-Series | | | | Flywheel housing | | | | SAE No.0 | | | | |
| Number of cylinders | 12 | | | | Flywheel | | | | SAE No.18 | | | | |
| Aspiration | Charged Cooled Forced Induction | | | | Dry Weight (Fan to Flywheel) | | | | lb | kg | 6888 | 3124 | |
| Firing Order | 1 - 8 - 5 - 10 - 3 - 7 - 6 - 11 - 2 - 9 - 4 - 12 | | | | Wet Weight (Fan to Flywheel) | | | | lb | kg | 7384 | 3349 | |
| Rotation Viewed from Flywheel | Counter Clockwise | | | | CG From Rear Face of Block | | | | in | mm | 37.0 | 941 | |
| Bore | in | mm | 5.906 | 150 | CG Above Crank Centerline | | | | in | mm | 0 | 0 | |
| Stroke | in | mm | 5.906 | 150 | Oil Specification | | | | SAE 15W-40 Low Ash Gas engine oil (.25-.5% by wt), API CD/CF or higher | | | | |
| Displacement | in ³ | L | 1941 | 31.8 | Engine Oil Capacity ⁸ | | | | Min | qts | L | 95 | 90 |
| Compression Ratio | 10.5 : 1 | | | | Max | | | | qts | L | 129 | 122 | |
| Exhaust Manifold Type | Water Cooled | | | | ECU Oil Pressure Warning ⁶ | | | | psi | kPa | 57 | 393 | |
| Turbo Exhaust Outlet Pipe Size | in | mm | 3.5 | 89 | ECU Oil Pressure Shut Down ⁶ | | | | psi | kPa | 47 | 324 | |
| Catalyst Inlet Size | in | mm | 5 | 127 | Oil Pressure at 1000 rpm (Idle) | | | | Min | psi | kPa | 74 | 510 |
| Catalyst Dp | in-H ₂ O | kPa | 20.5 | 5.1 | Max | | | | psi | kPa | 82 | 565 | |
| Maximum Allowable Exhaust Back Pressure | in-Hg | kPa | 3.0 | 10.2 | Max Allowable Oil Temperature | | | | °F | °C | 250 | 121 | |
| Maximum EPR Rated Pressure | psi | kPa | 1.0 | 6.9 | Coolant Capacity (Engine only) | | | | gal | L | 29.1 | 110.0 | |
| Maximum Operating pressure to EPR | in-H ₂ O | kPa | 11.0 | 2.7 | Coolant Capacity (Radiator only) | | | | gal | L | 39.0 | 147.6 | |
| Minimum Operating pressure to EPR | in-H ₂ O | kPa | 7.0 | 1.7 | Radiator Weight (Dry) | | | | lb | kg | 1275 | 578 | |
| Minimum Gas Supply Pipe Size ⁵ | in | mm | 3 | 76 | Standard Thermostat Range | | | | Normal Operation Temperature ⁹ | | | | |
| Maximum Pressure Drop Across CAC | psi | kPa | 1 | 6.9 | 50°C Ambient Capable ¹¹ | | | | Pass | | | | |
| Max Allowable Intake Restriction | | | | | Full Open Temperature ⁹ | | | | °F | °C | 198 | 92 | |
| Clean Air Filter | in-H ₂ O | kPa | 5 | 1.24 | ECU Coolant Temp Warning | | | | °F | °C | 203 | 95 | |
| Dirty Air Filter | in-H ₂ O | kPa | 15 | 3.73 | ECU Coolant Temp Shutdown | | | | °F | °C | 208 | 98 | |
| Spark Plug Part Number | Denso GK3-5 | | | | Max External Coolant Friction Head | | | | psi | kPa | 7.25 | 50 | |
| Standard Spark Plug Gap ¹⁰ | in | mm | 0.012 | 0.3 | CAC Rise Above Ambient Specified | | | | F | C | 15 | 9 | |
| Spark Plug Coil - Primary Resistance | Ohms 0.59Ω ± 10% | | | | | | | | | | | | |
| Battery Voltage | Volts 24 | | | | | | | | | | | | |
| Starter Motor Power | HP | kW | 15.7 | 11.7 | | | | | | | | | |

| Performance Data 50Hz ^{3,5} | | | | | | | | | | | | |
|--------------------------------------|-----------------|-----|------|-----|------------------------------------|--|--|--|----------|---------------------|-------|------|
| Nominal Engine Speed | RPM 1500 | | | | Water Pump Speed | | | | RPM 3088 | | | |
| Mean Piston Speed | ft/min | m/s | 1476 | 7.5 | Engine Coolant Flow | | | | gal/min | L/min | 297 | 1126 |
| RPM Range (Min-Max) ISO 8528-5 G1 | RPM 1477 - 1519 | | | | Cooling Fan Power ¹¹ | | | | HP | kW | 36.4 | 27 |
| Charging Alternator Voltage | Volts 28 | | | | Cooling Fan Speed | | | | RPM 875 | | | |
| Charging Alternator Current | Amps 53 | | | | Cooling Fan Air Flow ¹¹ | | | | SCFM | m ³ /min | 54200 | 1535 |

| | Load | | 100% | | 75% | | 50% | | 25% | |
|--|------------|---------------------|-------|--------|-------|------|-------|-----|-------|-----|
| | HP | kWm | 462 | 344.25 | 346 | 258 | 231 | 172 | 116 | 87 |
| Power Rating ^{1,2,3,4} Per ISO 3046 | psi | bar | 126 | 8.7 | 94 | 6.5 | 63 | 4.3 | 32 | 2.2 |
| MEP (@ rated Load on NG) | lb/hr | kg/hr | 195 | 88 | 159 | 72 | 113 | 51 | 83 | 38 |
| Fuel Consumption ^{3,4,7} | lb/(hp-hr) | g/(kW-hr) | 0.422 | 256 | 0.459 | 279 | 0.489 | 298 | 0.714 | 435 |
| BSFC | °F | °C | 1106 | 597 | 1052 | 566 | 1004 | 540 | 930 | 499 |
| Turbine Outlet Temperature | lb/hr | kg/hr | 3292 | 1493 | 2509 | 1138 | 1892 | 858 | 1340 | 608 |
| Exhaust Mass Flow (entire engine) | ACFM | m ³ /min | 2005 | 57 | 1463 | 41 | 1018 | 29 | 671 | 19 |
| Exhaust Flow at Turbine Outlet Conditions | | | | | | | | | | |

| Air Induction System ⁵ | | | | | | | | | | |
|--|-------|---------------------|------|------|------|------|------|-----|------|-----|
| Combustion Air required (entire engine) | lb/hr | kg/hr | 3098 | 1405 | 2350 | 1066 | 1779 | 807 | 1257 | 570 |
| Combustion Air Volume Required (entire engine) | ACFM | m ³ /min | 675 | 19 | 512 | 15 | 388 | 11 | 274 | 8 |
| Compressor Outlet Temperature ² | °F | °C | 206 | 97 | 166 | 74 | 134 | 57 | 110 | 43 |

| Thermal Balance ⁵ | | | | | | | | | | |
|--|---------|----|-------|------|-------|-----|-------|-----|-------|-----|
| Total Fuel | BTU/min | kW | 66171 | 1164 | 50331 | 885 | 38014 | 668 | 26709 | 470 |
| Mechanical Power | BTU/min | kW | 19577 | 344 | 14683 | 258 | 9789 | 172 | 4923 | 87 |
| Heat Rejected to Cooling Water at Rated Load | BTU/min | kW | 22124 | 389 | 18727 | 329 | 15525 | 273 | 11914 | 209 |
| Heat Rejection CAC at Rated Power | BTU/min | kW | 1533 | 27 | 779 | 14 | 361 | 6 | 113 | 2 |
| Heat Rejection to Exhaust (LHV to 150C) | BTU/min | kW | 13111 | 231 | 9339 | 164 | 6593 | 116 | 3971 | 70 |
| Engine Radiated Heat | BTU/min | kW | 9827 | 173 | 6803 | 120 | 5746 | 101 | 5788 | 102 |

¹ Standby and overload ratings based on ISO 3046 gross flywheel power.

² Technical data based on ISO 3046-1 standards of 77°F(25°C), absolute pressure 14.5Psi(100kPa) and 30% relative humidity.

³ Production tolerances in engines and installed components can account for power variations of ± 5%. Altitude, temperature and excessive exhaust and intake restrictions should be applied to power calculations.

⁴ All fuel and thermal calculations unless otherwise noted are done at ISO 3046 rated load using LHV for LPG 46.38 MJ/kg.

⁵ All values in the following section are provided for informational purpose only and are non-binding.

⁶ >1400RPM.

⁷ See PSI Energy Technical Spec. 56300019 - Fuel Standard.

⁸ Standard Sump Capacity.

⁹ ± 2 degrees Celsius.

¹⁰ ± 0.002" or 0.05mm.

¹¹ At 0.5 in-H₂O of Package Restriction at STP.