

GENERAL ENGINE DATA

| | | |
|--------------------------------------|--|---------|
| Type | 4-Cycle, Water Cooled | |
| Aspiration | Turbo-Charged, Inter Cooler (Fresh water to Cooler) | |
| Cylinder Arrangement | 60°V | |
| No. of Cylinders | 12 | |
| Bore mm(in.) | 170 | (6.69) |
| Stroke mm(in.) | 180 | (7.09) |
| Displacement liter(in ³) | 49.03 | (2992) |
| Compression Ratio | 14.5:1 | |
| Dry Weight - Engine only - kg(lb) | 5270 | (11620) |
| Wet Weight - Engine only - kg(lb) | 5555 | (12249) |

PERFORMANCE DATA

| | | |
|--|-----------------|----------|
| Steady State Speed Stability Band at any Constant Load | | |
| Electric Governor - % | ±0.25 or better | |
| Maximum Overspeed Capacity - rpm | 2100 | |
| Moment of inertia of Rotating Components - kgf·m ² (lbf·ft ²) | 75.3 | (1787.2) |
| (Includes Std. Flywheel) | | |
| Cyclic Speed Variation with Flywheel at 1800rpm | 1/576 | |

ENGINE MOUNTING

| | | |
|---|-----|----------|
| Maximum Bending Moment at Rear Face of Flywheel Housing - kgf·m(lbf·ft) | 450 | (3255.6) |
|---|-----|----------|

AIR INLET SYSTEM

| | | |
|---|-----|--------|
| Maximum Intake Air Restriction (Includes piping) | | |
| With Clean Filter Element - mm H ₂ O (in.H ₂ O) | 400 | (15.7) |
| With Dirty Filter Element - mm H ₂ O (in.H ₂ O) | 635 | (25.0) |

EXHAUST SYSTEM

| | | |
|---|-----|--------|
| Maximum Allowable Back Pressure - mm H ₂ O (in.H ₂ O) | 600 | (23.6) |
|---|-----|--------|

LUBRICATION SYSTEM

| | | |
|---|------------------------|------------|
| Oil Pressure at Idle - kgf/cm ² (psi) | 2 ~ 3 (29 ~ 43) | |
| at Rate Speed - kgf/cm ² (psi) | 5 ~ 6.5 (71 ~ 93) | |
| Maximum Oil Temperature - °C(°F) | 110 | 230 |
| Oil Capacity of Standard Pan | High - liter (U.S.gal) | 150 (40) |
| | Low - liter (U.S.gal) | 108 (28.5) |
| Total System Capacity (Includes Oil Filter) - liter (U.S.gal) | 180 (47.6) | |
| Maximum Angle of Installation (Std. Pan) | Front Down | 6.5° |
| (Engine Only) | Front Up | 6.5° |
| | Side to Side | 22.5° |

COOLING SYSTEM

| | | |
|--|-----------------------------|--------|
| Coolant Capacity of Jacket (Engine only) - liter (U.S.gal) | 116 | (30.6) |
| Coolant Capacity of Air cooler (Engine only) - liter (U.S.gal) | 14 | (3.7) |
| Maximum External Friction Head at Engine Outlet - kgf/cm ² (psi) | (For Jacket and Air Cooler) | |
| | 0.35 | (5.0) |
| Maximum Static Head of Coolant above Crankshaft Center - m(ft) | 10 | (32.8) |
| Standard Thermostat (modulating) Range of Jacket - °C(°F) | 71 ~ 85 (160 ~ 185) | |
| Standard Thermostat (modulating) Range of Air Cooler - °C(°F) | 42 ~ 55 (108 ~ 131) | |
| Maximum Coolant Temperature at Engine Outlet of Jacket - °C(°F) | 98 | (208) |
| Minimum Coolant Expansion Space - % of System Capacity | (For Jacket and Air Cooler) | |
| | 10 | (0.4) |
| Maximum Coolant Temperature at Intercooler Inlet, PTAW type - °C(°F) | 45 | (113) |
| Maximum Air Restriction on Discharge Side of Radiator and Fan - mm H ₂ O(in.H ₂ O) | 10 | (0.4) |

APPLICATION : GENERATOR

Pub. No. T13-0634-E

Oct. '06 Printed in Japan



Certified for US EPA-Tier 2 / Constant Speed

Standard Model [1250kWe/60Hz]

mitsubishi

S12R-Y2PTAW-1

SPECIFICATION SHEET

DIESEL ENGINES

FUEL SYSTEM

| | | |
|--|-------|-------------------------|
| Fuel Injector | _____ | Mitsubishi PS6 Type × 2 |
| Maximum Suction Head of Feed Pump - mm Hg (in. Hg) | _____ | 75 (3.0) |
| Maximum Static Head of Return Pipe - mm Hg (in.Hg) | _____ | 150 (5.9) |

STARTING SYSTEM

| | | |
|--|-------|------------|
| Battery Charging Alternator - V- Ah | _____ | 24-30 |
| Starting Motor Capacity - V - kW | _____ | 24-7.5 × 2 |
| Maximum Allowable Resistance of Cranking Circuit - m | _____ | 1.5 |
| Recommended Minimum Battery Capacity | | |
| At 5°C (41°F) and above - Ah | _____ | 300 |
| Below 5°C (41°F) through - 5°C (23°F) | _____ | 600 |

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S12R-Y2PTAW-1

SPECIFICATION SHEET

MITSUBISHI

DIESEL ENGINES

ENGINE RATING

All data represent net performance with standard accessories such as air cleaner, inlet /exhaust manifolds, fuel oil system, L.O. pump, etc. under the condition of 100kPa(29.6inHg) barometric pressure, 77°F(25°C) ambient temperature and 30% relative humidity.

| ITEM | UNIT | STAND-BY POWER | PRIME POWER | | |
|--|------------------------------|--------------------|--------------------|--|--|
| | | 60Hz | 60Hz | | |
| Engine Speed | rpm | 1800 | 1800 | | |
| No. of Cylinders | | 12 | | | |
| Bore | mm (in.) | 170 (6.69) | | | |
| Stroke | mm (in.) | 180 (7.09) | | | |
| Displacement | liter (in. ³) | 49.03 (2992) | | | |
| Brake Horse power without Fan | HP (kW) | 1881 (1403) | 1709 (1275) | | |
| Brake Mean Effective Pressure without Fan | kgf/cm ² (psi) | 19.4 (276) | 17.7 (252) | | |
| Mean Piston Speed | m/s (ft/min) | 10.8 (2126) | 10.8 (2126) | | |
| Maximum Regenerative Power Absorption Capacity without Fan | HP (kW) | 193 (144) | 193 (144) | | |
| Intake Air flow | m ³ /min (CFM) | 135 (4767) | 121 (4273) | | |
| Exhaust Gas Flow | m ³ /min (CFM) | 356 (12570) | 320 (11299) | | |
| Coolant Flow | liter/min (U.S. GPM) | 1850 (489) | 1850 (489) | | |
| Coolant Flow to Intercooler (PTAW only) | liter/min (U.S. GPM) | 340 (90) | 340 (90) | | |
| Cooling Air Flow (Std. Fan) | m ³ /min (CFM) | - | - | | |
| Allowable Fan Loss Horse Power | HP (kW) | 67 (50) | 67 (50) | | |
| Radiated Heat to Ambient | kcal/hr (BTU/min) | 101344 (6703) | 91105 (6026) | | |
| Heat Rejection to Coolant | kcal/hr (BTU/min) | 439159 (29045) | 394787 (26111) | | |
| Heat Rejection to Air Cooler (PTAW Version) | kcal/hr (BTU/min) | 439159 (29045) | 394787 (26111) | | |
| Heat Rejection to Exhaust | kcal/hr (BTU/min) | 1192141 (78847) | 1059861 (70098) | | |
| Noise Level (1 m height & distance) (excludes, Intake,Exhaust & Fan) | dB(A) | 110 | 108 | | |

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