

| General Engine Data | | |
|-----------------------|---------------------------------|--|
| Type | | In-Line 4 cycle, water cooled, 6 Cylinder |
| Aspiration | | Turbocharged |
| Cylinder Type | | Replaceable dry liner |
| Bore x Stroke | <i>mm (inch)</i> | 111 x 139 (4.37 x 5.47) |
| Displacement | <i>litre (inch³)</i> | 8,071 (492.49) |
| Compression Ratio | | 16.7 : 1 |
| Valves per Cylinder | - Intake | 1 |
| | - Exhaust | 1 |
| Valves lashes at cold | - Intake <i>mm (inch)</i> | 0.30 (0.0118) |
| | - Exhaust <i>mm (inch)</i> | 0.30 (0.0118) |
| Valve Timing | - Intake | Opening: 16° BTDC Close: 36° ABDC |
| | - Exhaust | Opening: 46° BBDC Close: 14° ATDC |
| Combustion Type | | Direct Injection |
| Firing Order | | 1-5-3-6-2-4 |
| Injection Timing | | 18° BTDC |
| Rotation | | Counter Clockwise, viewed from flywheel |
| Dimension (L x W x H) | <i>mm</i> | 1,264 x 899 x 1,453 (Construction Length – Height with Pedestal) |
| Dry Weight | <i>Approx. kg (lb.)</i> | 742 (1,636) |

| Approved N Ratings | | 1,470 rpm | 1,760 rpm | 2,100 rpm | 2,350 rpm | 2,450 rpm |
|--------------------|----------------|-----------|-----------|-----------|-----------|-----------|
| DF08TH-F Output | <i>kW (hp)</i> | 133 (178) | 158 (212) | 173 (232) | 174 (233) | 174 (233) |

| Fuel System | | |
|--------------------------|------------------|--------------------------------|
| Injection Pump | | Zexel in-line "AD" type |
| Governor | | RSV type (all speed control) |
| Feed Pump | | Mechanical type |
| Injection Nozzle | | Multi hole type |
| Opening Pressure | <i>kPa (psi)</i> | 20,986 (3,043.8) |
| Fuel Filter | | Full flow, cartridge type |
| Used Fuel | | Diesel fuel type 2-D Only |
| Fuel consumption | | See table no. 03.100.06FCEN.XX |
| Minimum Supply line Size | <i>mm (inch)</i> | 10 (0.39) |
| Minimum Return line Size | <i>mm (inch)</i> | 10 (0.39) |

| Electrical System | | 24 Volts (Nominal) |
|------------------------------|----------------------|--------------------|
| Starter motor | <i>kW</i> | 1 x 6 |
| Recommended Battery Capacity | <i>Ah</i> | 150 |
| Quantity per battery bank | | 2 |
| Cold Cranking Amperes | <i>@ -18°C (0°F)</i> | 950 |
| Charging Alternator Output | <i>Amps</i> | 45 |

| Air Induction System | | |
|-----------------------------|---------------------------|-------------------------|
| Air Cleaner Type | | Drip proof, Replaceable |
| Engine Air Flow | <i>m³/min.</i> | 17.6 @ 2,450 rpm |
| Air Inlet Restriction Dirty | <i>kPa (mmH2O)</i> | 6.2 (635) |
| Air Inlet Restriction Clean | <i>kPa (mmH2O)</i> | 2.2 (220) |

| Cooling system | | |
|---------------------------------------|-------------------------------|---------------------------------|
| Heat Exchanger Minimum Raw Water Flow | | 1 litre/Minute per kW installed |
| Engine Water Pump | | Centrifugal type driven by belt |
| Water Pump Capacity | <i>litre/min. (gal./min.)</i> | 270 (71) @ 2,450 rpm |
| Heat Exchanger Raw water Inlet | | |
| Maximum Pressure | <i>kPa (psi)</i> | 1,500 (217.6) |
| Flow | <i>litre/min. (gal./min.)</i> | 174 (38.3) |
| Inlet Temperature | <i>°C (°F)</i> | 37.8 (100) |
| Thermostat, Start to Open | <i>°C (°F)</i> | 71 (160) |
| Fully Opened | <i>°C (°F)</i> | 85 (185) |
| Coolant Capacity | <i>litre (gal.)</i> | 21 (5.55) |
| Coolant Pressure Cap | <i>kPa (psi)</i> | 95 (13.8) |
| Maximum Raw Water Supply pipe | | Please Contact Manufacturer |
| Connection IN – OUT Heat Exchanger | <i>inch</i> | 1 ½" BSP |
| Minimum Raw Water Pipe sizing | | Please Contact Manufacturer |
| Raw water Ratio IN-OUT | | OUT one size bigger than IN |
| Max. Engine Coolant Temperature | <i>°C (°F)</i> | 96 (204.8) |
| Pressure loss Engine Cooling circuit | <i>kPa (psi)</i> | 70 (10.2) |

| Lubrication System | | |
|----------------------------|---------------------|---|
| Lubricating Method | | Fully Forced pressure feed type |
| Oil Pump | | Gear type driven by crankshaft |
| Oil Filter | | Full Flow, Cartridge type |
| Oil pressure Range, normal | <i>kPa (psi)</i> | 100 (14.5) at idle 300-400 (43.5-58.0) at maximum speed |
| Max. Oil Sump Temperature | <i>°C (°F)</i> | 95 (203) |
| Oil Sump Capacity High | <i>litre (gal.)</i> | 15 (3.96) |
| Low | <i>litre (gal.)</i> | 12 (3.17) |
| Total Engine Oil Capacity | <i>litre (gal.)</i> | 15 (3.96) |
| Minimum Oil Pressure | <i>kPa (psi)</i> | 75 (10.9) |

| Exhaust System | | |
|-------------------------------|---------------------------|-------------------------|
| Exhaust Gas Flow | <i>m³/min.</i> | 20.7 @ 2,450 rpm |
| Exhaust Gas Temperature | <i>°C (°F)</i> | 580 (1,076) @ 2,450 rpm |
| Max. Allowable Back Pressure | <i>kPa (mmH2O)</i> | 9.8 (1,000) |
| Minimum Exhaust Pipe Diameter | <i>mm(inch)*</i> | 107 (4") |

* Based on Nominal System. Flow analysis must be done to assure adherence to system limitations!

(Minimum exhaust pipe diameter is based on 15 feet of pipe, one elbow, and a silencer. Pressure drop no greater than one half the max. allowable back pressure)

| Heater System | | |
|-------------------|----------|-------|
| Wattage (Nominal) | <i>W</i> | 3,000 |
| Voltage – AC | <i>V</i> | 230 |

| Engine Performance Data | | |
|---|----------------|------------|
| All data is based on the engine operating with fuel system, lubricating oil pump, air cleaner, and alternator; not included are compressor, fan, optional equipment, and driven components. Data is based on operation at SAE standard J1394 conditions of 300ft (91.4m) altitude, 29.61 in.(752mm) Hg dry barometer, and 77°F (25°C) intake air temperature, using No.2 diesel or a fuel corresponding to ASTM-D2. | | |
| Altitude above which output should be Limited | <i>m (ft.)</i> | 91.4 (300) |
| Correction Factor per 305m.(1,000ft.) above Altitude Limit | | 3% |
| Temperature above which output should be Limited | <i>°C (°F)</i> | 25 (77) |
| Correction Factor per 11°C (10°F) above Temperature Limit | | 2% (1%) |