P086TI-1 G-DRIVE

◎ POWER RATING

Engine Speed rev/min	Type of Operation	Engine Power	
		kWm	Ps
1800	Continuous Power	158	214
	Prime Power	174	237
	Standby Power	191	260
1500	Continuous Power	135	183
	Prime Power	149	203
	Standby Power	164	223
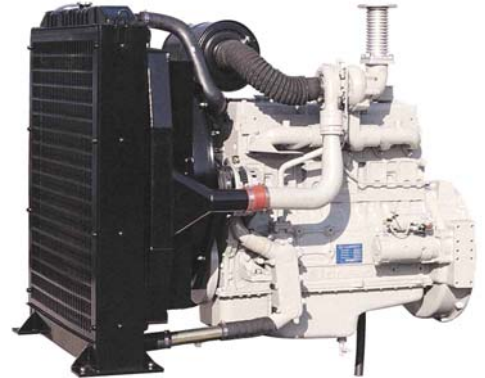
Note : -. The engine performance corresponds to ISO 3046, BS 5514 and DIN 6271.

  -. Ratings are based on ISO 8528.

   → **Prime power** available at variable load. The permissible average power out put (during 24h period) shell not exceed 70% of the prime power rating.

   → **Standby power** available in the event of a main power network failure. No overload is permitted.

◎ MECHANICAL SYSTEM

○ Engine Model   P086TI-1
○ Engine Type   In-line 4 cycle, water cooled
    Turbo charged & intercooled (air to air)
○ Combustion type   Direct injection
○ Cylinder Type   Replaceable dry liner
○ Number of cylinders   6
○ Bore x stroke   111(4.37) x 139(5.47) mm(in.)
○ Displacement   8.071(492.49) lit.(in^3)
○ Compression ratio   16.4 : 1
○ Firing order   1-5-3-6-2-4
○ Injection timing   12° BTDC
○ Compression pressure   Above 28 kg/cm2(398 psi) at 200rpm
○ Dry weight   Approx. 790 kg (1,742 lb)
○ Dimension   1,242 x 918 x 1,099.5 mm
  (LxWxH)   (48.9 x 36.1 x 43.3 in.)
○ Rotation   Counter clockwise viewed from Flywheel
○ Fly wheel housing   SAE NO.1
○ Fly wheel   Clutch NO.14

◎ MECHANISM

○ Type   Over head valve
○ Number of valve   Intake 1, exhaust 1 per cylinder
○ Valve lashes at cold   Intake 0.30mm (0.0118 in.)
    Exhaust 0.30mm (0.0118 in.)

◎ VALVE TIMING

	Opening	Close
○ Intake valve	16 deg. BTDC	36 deg. ABDC
○ Exhaust valve	46 deg. BBDC	14 deg. ATDC

◎ FUEL CONSUMPTION

○ **Prime Power** (lit/hr)	**1,500 rpm**	**1,800 rpm**
25%	10.1	12.2
50%	18.7	22.1
75%	26.7	31.6
100%	35.4	42.4
○ **Standby Power** (lit/h)	**1,500 rpm**	**1,800 rpm**
25%	10.9	13.3
50%	20.3	24
75%	29.2	34.7
100%	39.0	46.7

◎ FUEL SYSTEM

○ Injection pump   Zexel in-line "P" type
○ Governor   Electric type
○ Feed pump   Mechanical type
○ Injection nozzle   Multi hole type
○ Opening pressure   224 kg/cm^2 (3,186 psi)
○ Fuel filter   Full flow, cartridge type
○ Used fuel   Diesel fuel oil

◎ LUBRICATION SYSTEM

○ Lub. Method   Fully forced pressure feed type
○ Oil pump   Gear type driven by crankshaft
○ Oil filter   Full flow, cartridge type
○ Oil pan capacity   High level 15.5 liters (4.09 gal.)
    Low level 12 liters (3.17 gal.)
○ Angularity limit   Front down 25 deg.
    Front up 25 deg.
    Side to side 25 deg.
○ Lub. Oil   Refer to Operation Manual

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◎ COOLING SYSTEM

○ Cooling method   Fresh water forced circulation

○ Water capacity   14 liters (3.70 gal.)
(engine only)

○ Pressure system   Max. 0.9 kg/cm^2 (12.8 psi)

○ Water pump   Centrifugal type driven by belt

○ Water pump Capacity   150 liters (39.6 gal.)/min
at 1,800 rpm (engine)

○ Thermostat   Wax – pellet type
Opening temp. 71°C
Full open temp. 85°C

○ Cooling fan   Blower type, plastic
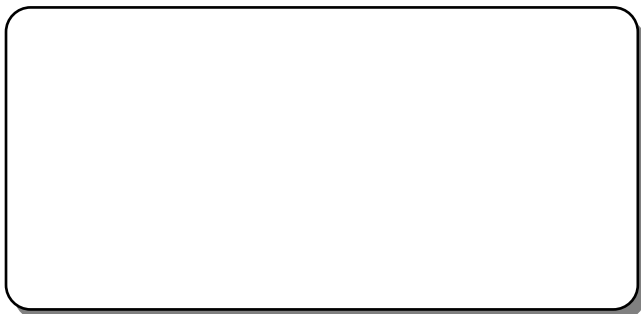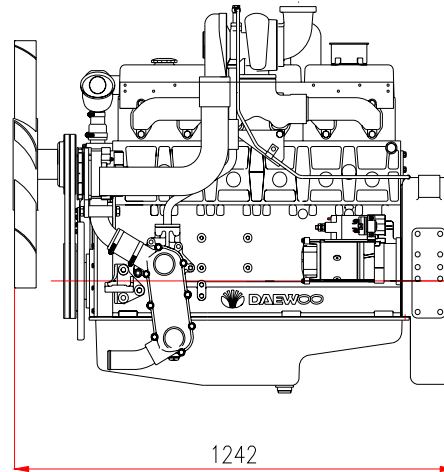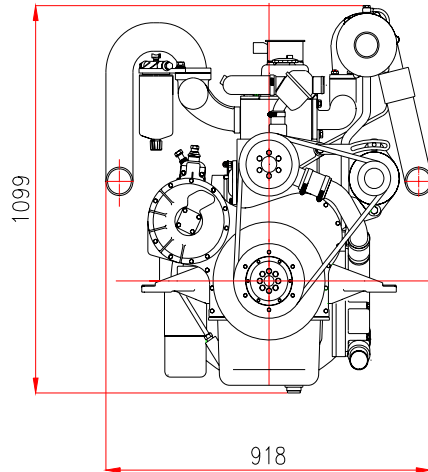660.4 mm diameter, 7 blade

◎ ELECTRICAL SYSTEM

○ Charging generator   24V x 45A alternator

○ Voltage regulator   Built-in type IC regulator

○ Starting motor   24V x 6.0kW

○ Battery Voltage   24V

○ Battery Capacity   100 AH (recommended)

○ Starting aid (Option)   Block heater

◎ ENGINEERING DATA

○ Water flow   130 liters/min @1,500 rpm
150 liters/min @1,800 rpm

○ Heat rejection to coolant   20.3 kcal/sec @1,800 rpm

○ Heat rejection to CAC   10.8 kcal/sec @1,800 rpm

○ Air flow   13.9 m^3/min @1,500 rpm
16.8 m^3/min @1,800 rpm

○ Exhaust gas flow   38.8 m^3/min @1,800 rpm

○ Exhaust gas temp.   530 °C @1,800 rpm

○ Max. permissible restrictions
−.Intake system   220 mmH$_2$O initial
635 mmH$_2$O final
−.Exhaust system   600 mmH$_2$O max.

◆ CONVERSION TABLE

in. = mm x 0.0394

PS = kW x 1.3596

psi = kg/cm2 x 14.2233

in3 = lit. x 61.02

hp = PS x 0.98635

lb = kg x 2.20462

lb/ft = N.m x 0.737

U.S. gal = lit. x 0.264

kW = 0.2388 kcal/s

lb/PS.h = g/kW.h x 0.00162

cfm = m^3/min x 35.336

1099
918

1242

※ Speccifications are subject to change without prior notice