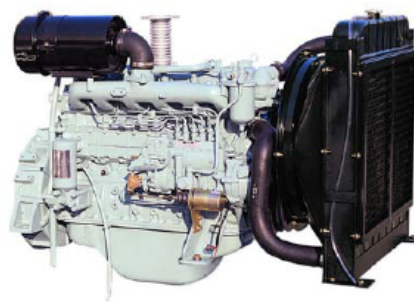


## DB58 G-DRIVE

### ◎ POWER RATING

Engine Speed rev/min	Type of Operation	Engine Power	
		kWm	Ps
1800	Prime Power	64	87
	Standby Power	70	95
1500	Prime Power	54	73
	Standby Power	59	80



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) shall 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	DB58
○ Engine Type	In-line 4 cycle, water cooled Naturally aspirated
○ Combustion type	Direct injection
○ Cylinder Type	Replaceable dry liner
○ Number of cylinders	6
○ Bore x stroke	102(4.02) x 118(4.65) mm(in.)
○ Displacement	5.785(353) lit.(in <sup>3</sup> )
○ Compression ratio	17.5 : 1
○ Firing order	1-5-3-6-2-4
○ Injection timing	13° BTDC
○ Compression pressure	Above 28 kg/cm <sup>2</sup> (398 psi) at 200rpm
○ Dry weight	Approx. 450 kg (992 lb)
○ Dimension (LxWxH)	1,155 x 705 x 854 mm (45.5 x 27.8 x 33.6 in.)
○ Rotation	Counter clockwise viewed from Flywheel
○ Fly wheel housing	SAE NO.3
○ Fly wheel	Clutch NO.11 1/2

### ◎ MECHANISM

○ Type	Over head valve
○ Number of valve	Intake 1, exhaust 1 per cylinder
○ Valve lashes at cold	Intake 0.40mm (0.0157 in.) Exhaust 0.40mm (0.0157 in.)

### ◎ VALVE TIMING

	Opening	Close
○ Intake valve	28 deg. BTDC	62 deg. ABDC
○ Exhaust valve	70 deg. BBDC	28 deg. ATDC

### ◎ FUEL CONSUMPTION

○ Prime Power (lit/hr)	<b>1,500 rpm</b>	<b>1,800 rpm</b>	
	25%	4.8	5.7
	50%	7.6	8.4
	75%	10.5	12.2
○ Standby Power (lit/h)	<b>1,500 rpm</b>	<b>1,800 rpm</b>	
	25%	5.9	6.4
	50%	8.8	9.8
	75%	11.7	13.1
100%	13.9	16.4	
100%	15.3	18.1	

### ◎ FUEL SYSTEM

○ Injection pump	Zexel in-line "A" type
○ Governor	RSV type ( all speed control )
○ Feed pump	Mechanical type
○ Injection nozzle	Multi hole type
○ Opening pressure	220 kg/cm <sup>2</sup> (3,129 psi)
○ Fuel filter	Full flow, cartridge type
○ Used fuel	Diesel fuel oil

~ 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 19 liters ( 5.016 gal.) Low level 16 liters ( 4.224 gal.)
○ Angularity limit	Front down 25 deg. Front up 25 deg. Side to side 30 deg.
○ Lub. Oil	Refer to Operation Manual

◎ **COOLING SYSTEM**

- Cooling method Fresh water forced circulation
- Water capacity 12 liters ( 3.17 gal.)  
(engine only)
- Pressure system Max. 0.9 kg/cm<sup>2</sup> ( 12.8 psi)
- Water pump Centrifugal type driven by belt
- Water pump Capacity 95 liters ( 25.1 gal.)/min  
at 1,800 rpm (engine)
- Thermostat Wax – pellet type  
Opening temp. 82°C  
Full open temp. 95°C
- Cooling fan Blower type, steel  
520 mm diameter, 6 blade

◎ **ELECTRICAL SYSTEM**

- Charging generator 24V x 45A [or 12V x 26A ] Aalternator
- Voltage regulator Built-in type IC regulator
- Starting motor 24V x 4.5kW [or 12V x 2.5kW ]
- Battery Voltage 24V [or 12V ]
- Battery Capacity 100 AH [or 150 AH ] (recommended)
- Starting aid (Option) Block heater

◎ **ENGINEERING DATA**

- Water flow 77 liters/min @1,500 rpm  
95 liters/min @1,800 rpm
- Heat rejection to coolant 15.5 kcal/sec @1,800 rpm
- Air flow 3.5 m<sup>3</sup>/min @1,500 rpm  
4.0 m<sup>3</sup>/min @1,800 rpm
- Exhaust gas flow 8.46 m<sup>3</sup>/min @1,800 rpm
- Exhaust gas temp. 570 °C @1,800 rpm
- Max. permissible restrictions
  - .Intake system 220 mmH<sub>2</sub>O initial  
635 mmH<sub>2</sub>O final
  - .Exhaust system 1,000 mmH<sub>2</sub>O max.

◆ **CONVERSION TABLE**

- |                                    |                                    |
|------------------------------------|------------------------------------|
| in. = mm x 0.0394                  | lb/ft = N.m x 0.737                |
| PS = kW x 1.3596                   | U.S. gal = lit. x 0.264            |
| psi = kg/cm <sup>2</sup> x 14.2233 | kW = 0.2388 kcal/s                 |
| in <sup>3</sup> = lit. x 61.02     | lb/PS.h = g/kW.h x 0.00162         |
| hp = PS x 0.98635                  | cfm = m <sup>3</sup> /min x 35.336 |
| lb = kg x 2.20462                  |                                    |

