

# **DB58 G-DRIVE**

# **© POWER RATING**

Engine	Type of	Engine	Power
Speed	Operation	Engine	Tower
rev/min		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.

Exhaust 0.40mm (0.0157 in.)

-. 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.

**© FUEL CONSUMPTION** 

 $\rightarrow$  Standby power available in the event of a main power network failure. No overload is permitted.

## **© MECHANICAL SYSTEM**

O Engine Model	DB58	• Prime Power (lit/hr)	1,500 rpm	1,800 rpm
O Engine Type	In-line 4 cycle, water cooled	25%	4.8	5.7
	Naturally aspirated	50%	7.6	8.4
Combustion type	Direct injection	75%	10.5	12.2
○Cylinder Type	Replaceable dry liner	100%	13.9	16.4
<ul> <li>Number of cylinders</li> </ul>	6	• Standby Power (lit/h	1,500 rpm	1,800 rpm
○Bore x stroke	102(4.02) x 118(4.65) mm(in.)	25%	5.9	6.4
<ul> <li>Displacement</li> </ul>	5.785(353) lit.(in <sup>3</sup> )	50%	8.8	9.8
• Compression ratio	17.5 : 1	75%	11.7	13.1
○ Firing order	1-5-3-6-2-4	100%	15.3	18.1
<ul> <li>Injection timing</li> </ul>	13° BTDC			
O Compression pressure	Above 28 kg/cm2(398 psi) at 200rpm	◎ FUEL SYSTEM		
<sup>O</sup> Dry weight	Approx. 450 kg (992 lb)	○ Injection pump	Zexel in-line "A	" type
<ul> <li>Dimension</li> </ul>	1,155 x 705 x 854 mm	• Governor	RSV type ( all speed control )	
(LxWxH)	(45.5 x 27.8 x 33.6 in.)	○ Feed pump	Mechanical type	2
• Rotation	Counter clockwise viewed from Flywheel	○ Injection nozzle	Multi hole type	
○Fly wheel housing	SAE NO.3	• Opening pressure	220 kg/cm <sup>2</sup> (3,1	29 psi)
○ Fly wheel	Clutch NO.11 1/2	○ Fuel filter	Full flow, cartrie	dge type
		○ Used fuel	Diesel fuel oil	
<b>© MECHANISM</b>		© LUBRICATION S	SYSTEM	
⊙ Туре	Over head valve	○ Lub. Method	Fully forced pre	ssure feed type
○ Number of valve	Intake 1, exhaust 1 per cylinder	○ Oil pump	Gear type driver	n by crankshaft
○ Valve lashes at cold	Intake 0.40mm (0.0157 in.)	○ Oil filter	Full flow, cartrie	dge type

### **© VALVE TIMING**

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	Opening	Close		Front up 25 deg.
○Intake valve	28 deg. BTDC	62 deg. ABDC		Side to side 30 deg.
○Exhaust valve	70 deg. BBDC	28 deg. ATDC	○Lub. Oil	Refer to Operation Manual

• Oil pan capacity

• Angularity limit

Front down 25 deg.

High level 19 liters ( 5.016 gal.) Low level 16 liters ( 4.224 gal.)



# © COOLING SYSTEM

<ul> <li>Cooling method</li> <li>Water capacity (engine only)</li> </ul>	Fresh water forced circulation 12 liters ( 3.17 gal.)
• 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
○ Thermostat	at 1,800 rpm (engine) Wax – pellet type Opening temp. 82°C
• Cooling fan	Full open temp. 95°C Blower type, steel 520 mm diameter, 6 blade

## **© ENGINEERING DATA**

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○ 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 restriction	S
Intake system	220 mmH <sub>2</sub> O initial
	635 mmH <sub>2</sub> O final
Exhaust system	$1,000 \text{ mmH}_2\text{O} \text{ max}.$

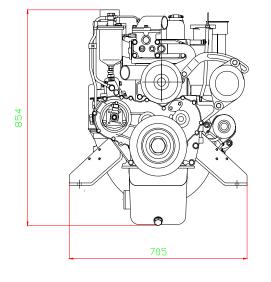
#### **© ELECTRICAL SYSTEM**

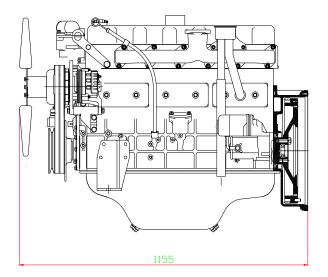
<sup>O</sup> Charging generator	24V x 45A [or 12V x 26A ] Aalternator	in. =
○ Voltage regulator	Built-in type IC regulator	PS =
○ Starting motor	24V x 4.5kW [or 12V x 2.5kW]	psi =
○ Battery Voltage	24V [or 12V ]	in3
<ul> <li>Battery Capacity</li> </ul>	100 AH [or 150 AH ] (recommended)	hp =
• Starting aid (Option)	Block heater	lb =

# **♦ CONVERSION TABLE**

$in. = mm \ge 0.0394$
$PS = kW \ge 1.3596$
psi = kg/cm2 x 14.2233
in3 = lit. x 61.02
hp = PS x 0.98635
$lb = kg \ge 2.20462$

 $lb/ft = N.m \ x \ 0.737$ U.S. gal = lit. x 0.264 kW = 0.2388 kcal/s lb/PS.h = g/kW.h x 0.00162 cfm = m<sup>3</sup>/min x 35.336







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\* Speccifications are subject to change without prior notice