

# PU086T FIRE PUMP ENGINE

## © POWER RATING

Intermittent rating kW(PS) / rpm	Max. torque N.m(kg.m) / rpm	Fuel consumption g/kW.h(g/PS.h) / rpm
173 (235) / 2,450	902 (92) / 1,400	230 (169) / 2,450

- 1. The engine performance corresponds to ISO 3046
- 2. Continuous power rating is to 129kW(175ps) @2200rpm.

## **© MECHANICAL SYSTEM**

○ Engine Model PU086T

○ Engine Type In-line 4 cycle, water cooled

Turbo charged

○ Combustion type Direct injection

O Cylinder Type Replaceable dry liner

O Number of cylinders 6

O Bore x stroke 111(4.37) x 139(5.47) mm(in.)

8.071(492.49) lit.(in3) O Displacement

○ Compression ratio 16.7:1 1-5-3-6-2-4 ○ Firing order 18° BTDC O Injection timing

Above 28 kg/cm<sup>2</sup>(398 psi) at 200rpm Compression pressure

Approx. 790 kg (1,741 lb) O Dry weight O Dimension 1,183 x 824 x 1,074 mm (LxWxH) (46.5 x 32.4 x 42.2 in.)

○ Rotation Counter clockwise viewed from Flywheel

○ Fly wheel housing SAE NO.2M

Clutch NO.11 1/2M OFly wheel

# **© MECHANISM**

○ Type Over head valve

O Number of valve Intake 1, exhaust 1 per cylinder

O Valve lashes at cold Intake 0.30 mm(0.0118 in)

Exhaust 0.30 mm(0.0118 in.)

## © VALVE TIMING

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

## **© OPTION & ACCESSORY PARTS**

Fly wheel & housing O Engine parts

Intake & exhaust manifold

Accessory parts

O Electrical parts Gauge panel & stop solenoid

## **© FUEL SYSTEM**

○ Injection pump Zexel in-line "AD" type RSV type(all speed control) ○ Governor

○ Feed pump Mechanical type ○ Injection nozzle Multi hole type

○ Opening pressure 214 kg/cm2 (3,044 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

High level 15 liters (4.09 gal.) Oil pan capacity

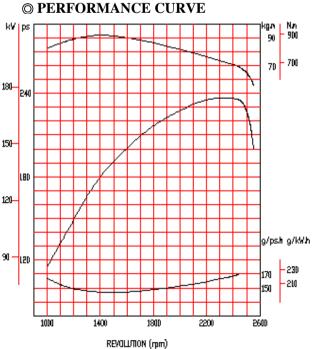
Low level 12 liters (3.17 gal.)

○ 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. 0.5 kg/cm² (7.1 psi)
○ Water pump Centrifugal type driven by belt

○ Water pump Capacity 273 liters ( 60.1 gal.)/min

at 2,450 rpm (engine)

○ Thermostat Wax – pellet type

Opening temp. 71°C Full open temp. 85°C

## © ENGINEERING DATA

○ Water flow
○ Heat rejection to coolant
○ Air flow
○ Exhaust gas flow
○ Exhaust gas temp.
273 liters/min @2,450 rpm
37.1 kcal/sec @2,450 rpm
9.0 m³/min @2,450 rpm
10.3 m³/min @2,450 rpm
537 °C @2,450 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.

## © ELECTRICAL SYSTEM

○ Charging generator○ Voltage regulator24V x 45A alternator○ Built-in type IC regulator

○ Starting motor 24V x 4.5kW

○ Battery Voltage 24V

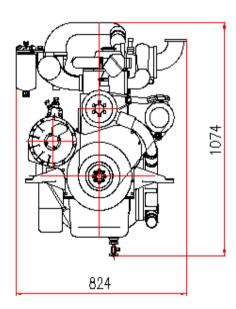
○ Battery Capacity 100 AH [or 150 AH ](recommended)

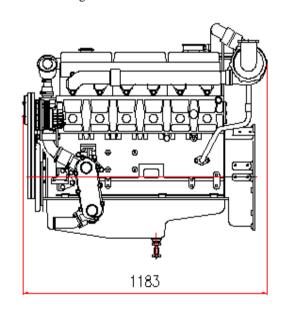
# **◆ CONVERSION TABLE**

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/cm2 x 14.223: kW = 0.2388 kcal/s

in3 = lit. x 61.02 lb/PS.h = g/kW.h x 0.00162 hp = PS x 0.98635 cfm =  $m^3$ /min x 35.336

 $1b = kg \times 2.20462$ 







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\* Speccifications are subject to change without prior notice