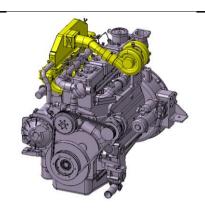


PU086TI FIRE PUMP ENGINE

© POWER RATING

Intermittent rating kW(PS) / rpm	Max. torque N.m(kg.m) / rpm	Fuel consumption g/kW.h(g/PS.h) / rpm
228 (310) / 2,450	1177 (120) / 1,500	228 (168) / 2,450

- 1. The engine performance corresponds to ISO 3046
- 2. Continuous power rating is to 169kW(230ps) @2200rpm.



© MECHANICAL SYSTEM

O Engine Model

In-line 4 cycle, water cooled ○ Engine Type

Turbo charged & intercooled

○ Combustion type Direct injection

O Cylinder Type Replaceable dry liner

O Number of cylinders

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

O Displacement 8.071(492.49) lit.(in3)

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

Above 28 kg/cm²(398 psi) at 200rpm Compression pressure

Approx. 800 kg (1,763 lb) Ony weight O Dimension 1,116 x 728 x 1,106 mm (LxWxH) (43.9 x 28.6 x 43.5 in.)

○ Rotation Counter clockwise viewed from Flywheel

• Fly wheel housing SAE NO.1M OFly wheel Clutch NO.14M

© MECHANISM

O Type Over head valve

O Number of valve Intake 1, exhaust 1 per cylinder Intake 0.30 mm(0.0118 in) O Valve lashes at cold

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 Stop solenoid

© FUEL SYSTEM

○ Injection pump Zexel in-line "PE6P" type ○ Governor RSV type(all speed control)

○ Feed pump Mechanical type ○ Injection nozzle Multi hole type

○ Opening pressure 224 kg/cm2 (3,186 psi) ○ Fuel filter Full flow, cartridge type

O 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 liters (4.09 gal.)

Low level 12 liters (3.17 gal.)

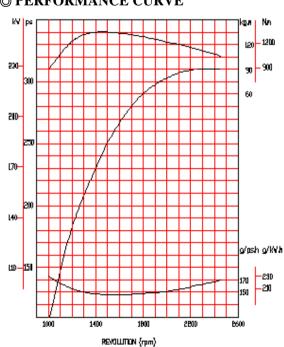
○ Angularity limit Front down 25 deg.

Front up 25 deg.

Side to side 25 deg.

○ Lub. Oil Refer to Operation Manual

© PERFORMANCE CURVE





PU086TI FIRE PUMP ENGINE

© 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 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

○ Cooling fan -

© ELECTRICAL SYSTEM

○ Charging generator○ Voltage regulator24V x 45A alternatorBuilt-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 273 liters/min @ 2,450 rpm ○ Heat rejection to coolant 33.9 kcal/sec @ 2,450 rpm ○ Air flow 18.5 m³/min @ 2,450 rpm ○ Exhaust gas flow 19.3 m³/min @ 2,450 rpm ○ Exhaust gas temp. 544 °C @ 2,450 rpm

○ Max. permissible restrictions

-.Intake system $220 \text{ mmH}_2\text{O}$ initial $635 \text{ mmH}_2\text{O}$ final

-.Exhaust system $1,000 \text{ mmH}_2\text{O max}$.

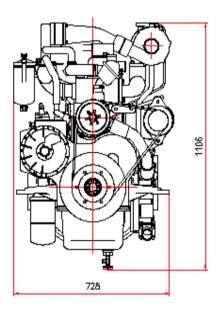
OINTERCOOLER DATA

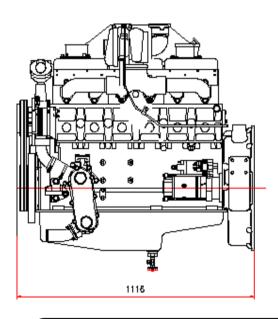
○ Heat rejection to coolant 10.5 kcal/sec @2,450 rpm

◆ CONVERSION TABLE

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