



Engine Technical Data

Revision: 0

Unit	2TNV70-ASA
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General Data

Number of Cylinders	-	2
Engine Type	-	Inline, Water-Cooled, 4 Stroke Diesel
Bore x Stroke	mm x mm	70x74
Total Displacement	cc	570
Combustion type	-	Indirect Injection
Aspiration	-	Natural Aspiration
Valves per Cylinder	-	2
Compression ratio	-	23.4
Firing Order	-	1-2

Performance Data

Net Intermittent Power	HP [kW] / rpm]	13.7 [10.2]/3600
Net Continuous Power	HP [kW] / rpm]	--
Net Max Torque	ft-lb [Nm]/rpm	23.9 [32.4]/2600
Low Idle Speed	rpm	1300+/-25
High Idle Speed	rpm	3815+/-25
BMEP, Net Power	Psi [kPa]	86.7 [598]
BMEP, Cont. Power	Psi [kPa]	-

Physical Data

Direction of rotation	-	Counter Clockwise (view from flywheel)
Length - Inches	Inches [mm]	16.3 [413]
Width - Inches	Inches [mm]	16.5 [418]
Height - Inches	Inches [mm]	20.6 [523]
Dry Weight	lbs [kg]	185 [84]
Center of Gravity:	-	
From Rear Face of Block	Inches [mm]	5.96 [151.3]
From Crankshaft to Exhaust Side	Inches [mm]	0.17 [4.3]
Above Crankshaft	Inches [mm]	2.56 [64.9]

PTO System

Flywheel	-	SAE #6
Flywheel Housing	-	SEMI-SAE #6 (80 mm Depth)
Gear Case	-	with SAE Hydraulic Pump Flange without SAE Hydraulic Pump Flange

Lubrication System

Inclination, Continuous	degrees	25
Inclination, 3 minutes Max.	degrees	30
Oil Pan Style	-	Shallow
Lubrication Oil Filter Type	-	Paper Element
Temperature Limit (main oil pressure passage)	°F [°C]	248 [120]
Nominal Oil Pressure	psi [kgf/cm2]	48 [3.4]
Oil Capacity, Effective	Liters	0.7
Total System Capacity	Liters	1.7
Oil Change Interval, Hours	hr	250 (50, initial)
Recommended Oil Type	API	CD, CE, CF or higher grade

Cooling System

Fan Type	-	Suction
Fan Diameter	Inches [mm]	10.6 [270]
Number of Blades	-	5

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Fan Pulley Diameter	Inches [mm]	4.3 [110]
Crank Pulley Diameter	Inches [mm]	4.3 [110]
Fan Spacer Thickness - Inches [mm]	Inches [mm]	0.98 [25]
Max. Coolant Temp.	°F [°C]	221 [105]
Thermostat Starts Opening	°F [°C]	160±2.7 [71 ± 1.5]
Thermostat Fully Open	°F [°C]	185 [85]
Coolant Capacity (Engine)	Liters	0.6
Coolant Flow (C. W. Pump)	Liters / min	49.32
Heat Rejection at Rated Power	BTU/hr [kcal/hr]	46800 [11800]

Fuel System

Fuel Filter Type	-	Paper Element
Fuel Injection Pump Type	-	Inline Type
Water Separator (Standard)	-	Mesh size: 100-mesh/inch, water reservoir 150 cc
Max. Suction Head (Fuel pickup to Injection pump)	Inches [mm]	40 [1000]
Fuel Feed Pump Type	-	Electrical
Fuel Flow (Feed pump)	Liters / hr	60
Max. Allowable Fuel Temperature	° F [°C]	176 [80] Fuel Injection In
Required Separation Distance Between Pickup & Return	Inches [mm]	min. 4 [100]
Fuel Consumption at rated output	lb/hp-hr [g/kW-hr]	0.51 [313]

Intake System

Max. Air Intake Restriction, initial	Inch Aq [mmAq]	11.8 [300]
Max. Air Intake Restriction, replace element	Inch Aq [mmAq]	25.0 [635]
Crankcase Ventilation Type	-	Closed
Engine Air Flow (For sizing air cleaner)	ft ³ / min. [m ³ /min]	32.6 [0.92]

Exhaust System

Max. Allowable Back Pressure, initial	Inch Aq [mmAq]	19.7 [500]
Max. Allowable Back Pressure, cleaning	Inch Aq [mmAq]	23.6 [600]
Exhaust Air Flow @ Max Power Temp.	ft ³ / min. [m ³ /min]	113 [3.20]
Exhaust Temperature at Max. Power	° F [°C]	1022 [550]
Exhaust Temperature at Max. Torque	° F [°C]	968 [520]

Electrical System

System Voltage	Volts	12 V
Electric Stop Device	-	Stop Solenoid (Pull Coil Timer: 1 sec.)
Alternator	-	12V-40A
Starting Aid Device	-	Glow Plug, 12V
Standard pre-heat time	Seconds	3
Engine Block Heater Port	-	Exhaust Side
Starting Motor Type	-	Conventional
Starting Motor Power	kW	1.1 ± 0.3
Maximum Starter Cable Resistance	Ohm (Ω)	0.05
Maximum Battery Cable Resistance	Ohm (Ω)	0.002

Manager	S. Manager	Written/Checked
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