



*Figures based on pipeline quality natural gas.

Fuel System/Emission Controls	
Catalyst Type	TWC, ceramic
Catalyst Inlet Size	4 in
Fuel Supply System	Venturi mixer
Engine Control System	Wooward, SECM70
Fuel System	Air-fuel Mixer with Throttle Valve Control
Emissions Certificate	RMSAB22.0V22-001
Fuels	NG, LP (700-1800BTU)

Base Engine

Configuration	12 Cylinder - V Type - 4 Cycle
Aspiration	Turbo Charged and Intercooled
Firing Order	1-12-5-8-3-10-6-7-2-11-4-9
Displacement	21,927 cc
Fuel Type	Propane (LP), Natural Gas (NG), Field Gas
Combustion	Spark-Ignited
Direction of Rotation (Viewed from Flywheel Side)	Counterclockwise
Compression Ratio	10:2:1
Exhaust Manifold Type	Water-cooled
Flywheel Housing	SAE No. 1
Flywheel	No. 14
Dry Weight (Fan to Flywheel)	1510 Kg

Bore	128 mm
Stroke	142 mm
Timing gear system	Gear Driven Type
Cylinder liner type	Wet Type
Base Engine Size (LxWxH) (mm)	1955 (L) x 1290 (W) x 1710 (H)
Cooling System	
Cooling System	Water-cooled/Radiator
Engine Coolant Capacity	53 Liters
Radiator Coolant Capacity	80 Liters
Water Pump Type	Centrifugal, Pulley Driven
Thermostat Type	Unit (wax-pellet)
Thermostat Operating Temp Range	Cracking 71° C (160° F) Full Open 85° C (185° F)

Oiling System

Lubricating Oil Capacity	40 Liters
Oil Cooler Type	Water-cooled
Oil Specification	SAE 15W-40 Low Ash Natural gas engine oil, 0.25-0.5% ash by wt%, API CD/CF or higher
Lubrication Method	Pressurized Circulation
Oil Pump Type	External Spur Gear Type
Oil Pressure at Low Idle	1-3 BAR

Engine Timing

Valve Clearance, cold, intake (mm)	0.3 ± 0.05
Valve Clearance, cold, exhaust (mm)	0.4+/-0.05
Intake valve Opening	24° BTDC
Intake valve closing	36° ABDC
Exhaust valve opening	63° BBDC
Exhaust valve closing	27° ATDC

Ignition/Electrical

Spark Plug Type	Iridium/Platinum Electrode Plug	Ignition Type	One Coil per Cylinder
Standard Spark Plug Gap	0.3-0.4 mm	Battery Voltage	24 Volts
Ignition Timing	Controlled by ECM	Ignition Coil	Inductive Coil Pack