CATERPILLAR ENGINE SPECIFICATIONS

I-6, 4-Stroke-Cycle Diesel

- Bore: 145.0 mm (5.71 in)
- Stroke: 183.0 mm (7.2 in)
- Displacement: 18.1 L (1,104.53 in³)
- Aspiration: Turbocharged Aftercooled
- Compression Ratio: 16.3:1
- Rotation (from flywheel end): Counterclockwise
- Weight, Net Dry (approximate kg. lb): 1673 kg (3688 lb)

FEATURES

Worldwide Supplier Capability
Caterpillar
- Casts engine blocks, heads, cylinder liners, and flywheel housings
- Machines critical components
- Assembles complete engine
- Factory-designed systems built at Caterpillar ISO 9001:2000 certified facilities
Ownership of these manufacturing processes enables Caterpillar to produce high quality, dependable product.

Testing
Prototype testing on every model:
- Proves computer design
- Verifies system torsional stability
- Functionality tests every model

Every Caterpillar engine is dynamometer tested under full load to ensure proper engine performance.

Full Range of Attachments
Wide range of bolt-on system expansion attachments, factory designed and tested.

Unmatched Product Support Offered Through Worldwide Caterpillar Dealer Network
More than 1,800 dealer outlets
Caterpillar factory-trained dealer technicians service every aspect of your industrial engine
99.7% of parts orders filled within 24 hours worldwide
Caterpillar parts and labor warranty
Preventive maintenance agreements available for repair before failure options

Scheduled Oil Sampling program matches your oil sample against Caterpillar set standards to determine:
- Internal engine component condition
- Presence of unwanted fluids
- Presence of combustion by-products

Web Site
For all your industrial power requirements, visit www.cat-industrial.com.
## STANDARD ENGINE EQUIPMENT

**Air Inlet System**
- Dual turbocharger: front and rear inlet, 237.0 mm (5 in)
- Separate Circuit Aftercooled (SCAC)

**Charging System**
- Charging alternator 24 volt, 50 amp

**Control System**
- Electronic governing, PTO speed control
- Programmable ratings
- Cold mode start strategy
- Automatic altitude compensation
- Power compensation for fuel temperature
- Programmable low and high idle and total engine limit (TEL)
- Electronic diagnostics and fault logging
- Engine monitoring and protection system (speeds, temperature, pressure)
- J1939 Broadcast (diagnostic, engine status and control)

**Cooling System**
- Thermostats and housing, vertical outlet
- Jacket water pump, gear driven, centrifugal
- Heat exchanger (installed)
- Expansion tank

**Exhaust System**
- Exhaust manifold, dry
- Dual turbo: exhaust elbow, dry 203 mm (8 in)

**Flywheels and Flywheel Housing**
- Flywheel, SAE #1
- Flywheel housing, SAE #1
- SAE standard rotation

**Fuel System**
- Electronic unit injector
- Fuel filter, secondary, mid-mount (LH 2 micron high performance)
- Fuel transfer pump, LH front
- Fuel priming pump, LH mid-mount
- Fuel sample valve, mounted on fuel filter base
- Primary filter / water separator

**Instrumentation**
- Instrument panel, LH
- Engine oil pressure gauge
- Voltmeter gauge
- Water temperature gauge
- Tachometer / engine hour meter

**Lube System**
- Crankcase breather, front valve cover
- Oil cooler, RH (dual)
- Oil filter, RH
- Oil pan, front sump
- Oil filler, LH front
- Oil dipstick, LH front
- Oil pump

**Mounting System**
- Front and rear support

**Power Take-Offs**
- Flywheel and stub shaft

**Protection System**
- Stop-Start System, automatic (compatible with NFPA 20 requirements, able to be energized from either of two battery sources and capable of manual starter actuation)

**Starting System**
- 24 volt, LH electric starting motor
- Jacket water heater (3 kW, 120-240 volt)

**General**
- Vibration damper and guard
- Paint, Caterpillar fire pump red
- Lifting eyes
- Automatic variable timing, electronic
- Electronic installation kit, 70 pin connector (connectors, pins, sockets)
- Literature, Owner and Operator's Manual
Performance curve is not shown since fire pump technical data is published at constant speed (rpm).
Below data is shown from 100% load to 10% load.

<table>
<thead>
<tr>
<th>Engine Speed rpm</th>
<th>Engine Power bhp</th>
<th>Engine Torque lb-ft</th>
<th>BSFC lb/bhp-hr</th>
<th>Fuel Rate gal/hr</th>
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<tbody>
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<td>700</td>
<td>2101</td>
<td>.358</td>
<td>35.8</td>
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<tr>
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<td>1891</td>
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<td>1575</td>
<td>.373</td>
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<tr>
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<tr>
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<td>1260</td>
<td>.386</td>
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</table>
Standby Fire Pump  Ratings represent the output which may be utilized to drive stationary fire pumps where the pumping equipment has been sized according to NFPA 20 guidelines and for expected use of 30 hours per year where pump demand is about 90% or less of the certified power. Standby fire pump ratings are not equivalent to IND-E or any other standard Industrial ratings.

Engine Performance  Diesel Engines — 7 liter and higher  
All rating conditions are based on SAE J1995, inlet air standard conditions of 99 kPa (29.31 in. Hg) dry barometer and 25°C (77°F) temperature. Performance measured using a standard fuel with fuel gravity of 35° API having a lower heating value of 42,780 kJ/kg (18,390 btu/lb) when used at 29°C (84.2°F) with a density of 838.9 g/L.

### Engine Dimensions

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Length</td>
<td>74.37 in</td>
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<tr>
<td>(2) Width</td>
<td>42.95 in</td>
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<tr>
<td>(3) Height</td>
<td>54.32 in</td>
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Note: Do not use for installation design. See general dimension drawings for detail (Drawing # null ).