C18 ACERT™
Fire Pump
Tier 2
597 bkW/800 bhp @ 2100 rpm

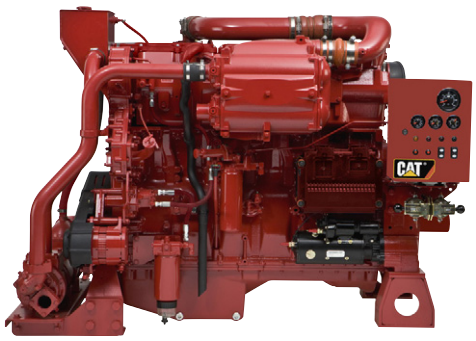

Image shown may not reflect actual engine

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)..... 1769 kg (3900 lb)

FEATURES

Emissions & Regulations

Meets U.S. EPA Tier 2 and CARB emissions requirements. FM approved. UL listed - US and Canada. Meets NFPA 20 requirements.

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, 127.0 mm (5.0 in)
Separate Circuit Aftercooled (SCAC)

Charging System

Charging alternator 24 volt, 50 amp

Control System

Dual Electronic Control Modules (ECMs) - primary and secondary
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 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 CURVES

EM0022-01

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.

Engine Speed rpm	Engine Power kW	Torque N•m	BSFC g/kW-hr	Fuel Rate L/hr
2100	597	2712	225.2	160.2
2100	537	2441	223.8	143.2
2100	477	2170	224.9	128.0
2100	447	2034	226	120.5
2100	418	1899	227.4	113.2
2100	358	1627	231.1	98.6
2100	298	1356	236.2	84.0
2100	239	1085	243.3	69.2
2100	179	814	255.1	54.4
2100	149	678	264.5	47.0
2100	119	542	284	40.4
2100	60	271	392.3	27.9

PERFORMANCE CURVES

EM0022-01

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.

Engine Speed rpm	Engine Power bhp	Engine Torque lb•ft	BSFC lb/bhp-hr	Fuel Rate gal/hr
2100	800	2000	.370	42.3
2100	720	1800	.368	37.8
2100	640	1601	.370	33.8
2100	600	1500	.372	31.8
2100	560	1401	.374	29.9
2100	480	1200	.380	26.0
2100	400	1000	.388	22.2
2100	320	800	.400	18.3
2100	240	600	.419	14.4
2100	200	500	.435	12.4
2100	160	400	.467	10.7
2100	80	200	.645	7.4

CATERPILLAR®

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Tier 2

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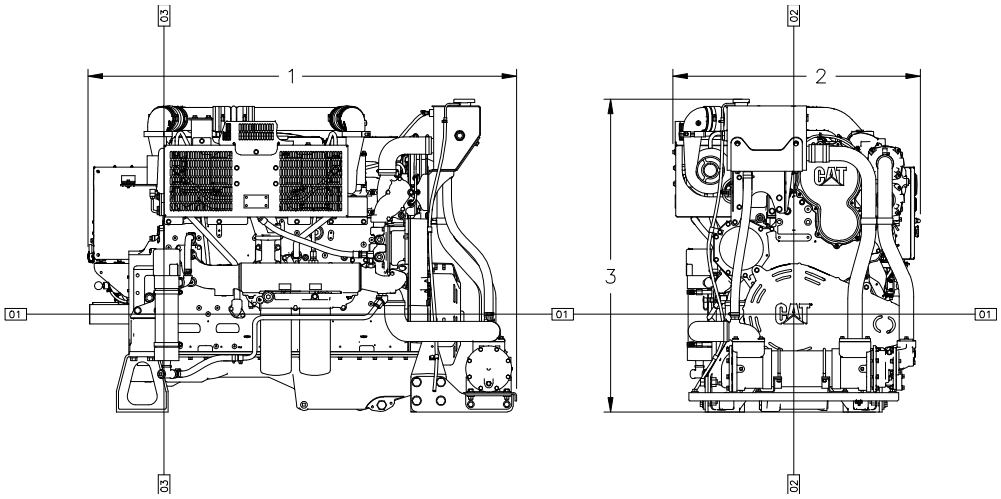
RATINGS AND CONDITIONS

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 standards. Engine rating is FM approved and UL listed (US and Canada).

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 25ºC (77ºF) temperature. Performance measured using a standard fuel with fuel gravity of 35º 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	
(1) Length	1889.0 mm (74.37 in)
(2) Width	1091.0 mm (42.95 in)
(3) Height	1379.7 mm (54.32 in)

Note: Do not use for installation design. See general dimension drawings for detail (Drawing #3222516).

Performance Number: EM0022-01

Feature Code: C18DF03 Arr. Number: 3149714

Materials and specifications are subject to change without notice.

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