CATERPILLAR®

C18 ACERT™ MARINE PROPULSION

357 bkW
(479 bhp)

Image may not reflect actual engine

SPECIFICATIONS

I-6, 4-Stroke-Cycle-Diesel

Displacement	18.1 L (1106 in³)
Rated Engine Speed	1800
Bore	145 mm (5.7 in.)
Stroke	183 mm (7.2 in.)
Aspiration	Turbocharged-Aftercooled
Governor	Electronic
Cooling System	Keel-Cooled/ Heat-Exchanger Cooled
Weight, Net Dry (approx.)	
Keel-Cooled	1539 kg (3394 lb)
Heat Exchanger-Cooled	1673 kg (3688 lb)
Refill Capacity	
Cooling System	45.8 L (12.1 gal)
Lube Oil System	64 L (16.9 gal)
Oil Change Interval	500 hours
Caterpillar Diesel Engine Oil 10W30 or 15W40	
Rotation (from flywheel end)	Counterclockwise
Flywheel and flywheel housing	SAE No. 1 and SAE No. 0
Flywheel Teeth	
SAE No. 1	113
SAE No. 0	136
Maximum Exhaust Backpressure	6.7 kPa (26.9 in. water)

STANDARD EQUIPMENT

Air Inlet System
Corrosion-resistant sea water aftercooler, air cleaner/fumes disposal (closed system), jacket water cooled turbocharger, turbocharger inlet OD straight connection

Control System
Electronic governing (A4), programmable low idle, electronic diagnostics and fault logging, fuel/air ratio control, electronic throttle position sensor

Cooling System
Thermostat and housing, block heater (1500W, 120V AC current), gear-driven jacket water pump, self priming, gear-driven sea water pump with bronze impeller, titanium plate type heat exchanger or separate circuit keel cooling

Exhaust System
Watercooled exhaust manifold and turbocharger, round-flanged outlet

Flywheel and Flywheel Housings
Standard SAE No. 1 flywheel and flywheel housing, 113 teeth, SAE standard rotation; optional SAE No. 0 flywheel and flywheel housing, 136 teeth, SAE standard rotation

Fuel System
Fuel filter, RH service on port, LH service on starboard; fuel transfer pump; fuel priming pump; flexible fuel lines

Instrumentation
Electric service meter, instrument panel (24V), start/stop switch, emergency stop button, maintenance due light, diagnostic light, warning light, maintenance clear switch, start motor magnetic switch, 15 and 3A breakers

Lube System
Crankcase breather; oil cooler; spin-on oil filter, RH service on port, LH service on starboard; center sump deep oil pan; oil filler; dipstick, RH service on port, LH service on starboard; gear-driven oil pump

Mounting System
Adjustable front support

Power Take-Offs
Hydraulic pump drive, SAE A, 11 tooth spline, 46 ft-lbs max torque, counterclockwise as viewed from front of the engine looking into the drive and turns 1.41 x engine speed, 292 mm crankshaft pulley, 15.88 mm width

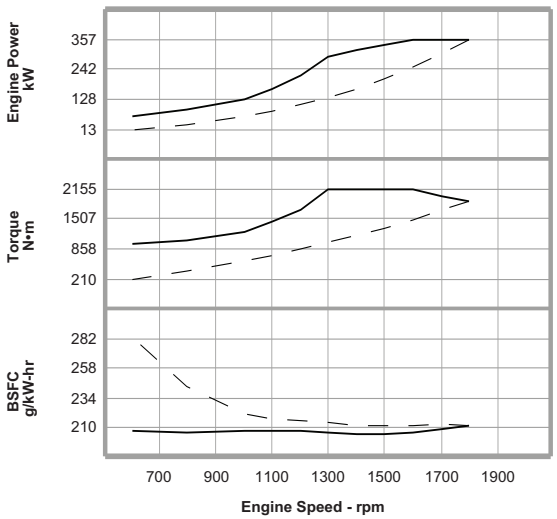
General
Vibration damper; lifting eyes, RH or LH service options; literature; variable engine wiring; upper rear-facing customer wiring connector and service tool connections

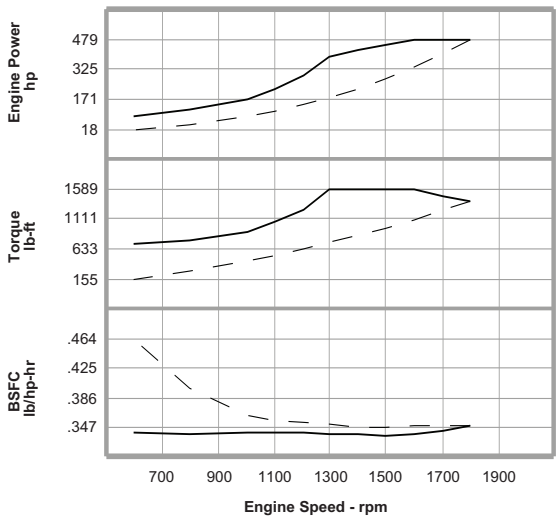
ISO Certification
Factory-designed systems built at Caterpillar ISO 9001:2000 certified facilities.

PERFORMANCE CURVES

Turbocharged-Aftercooled

A Rating — 357 bkW (479 bhp) @ 1800 rpm
DM9569-00





Metric | Maximum Power — | Prop Demand - - - | **357 kW**

English | Maximum Power — | Prop Demand - - - | **479 hp**

Performance Data

	Engine Speed rpm	Engine Power kW	Engine Torque N•m	BSFC g/kW-hr	Fuel Rate L/hr
Maximum Power Data	1800	357.0	1894	211.3	89.9
	1700	357.0	2006	207.4	88.3
	1600	357.0	2131	205.4	87.4
	1500	337.0	2145	204.4	82.1
	1400	316.0	2155	204.5	77.0
	1300	290.0	2130	205.5	71.0
	1200	215.8	1717	206.5	53.1
	1100	168.6	1464	206.5	41.5
	1000	126.7	1210	206.1	31.1
	800	88.6	1057	205.7	21.7
	600	60.2	957	206.4	14.8
Prop Demand Data	1800	357.0	1894	211.3	89.9
	1700	300.7	1689	212.2	76.1
	1600	250.7	1496	211.3	63.2
	1500	206.6	1315	210.3	51.8
	1400	168.0	1146	211.0	42.2
	1300	134.5	988	213.2	34.2
	1200	105.8	842	214.7	27.1
	1100	81.5	707	215.8	21.0
	1000	61.2	585	219.8	16.0
	800	31.3	374	242.9	9.1
	600	13.2	210	282.4	4.5

Cubic prop demand curve with 3.0 exponent for displacement hulls only.

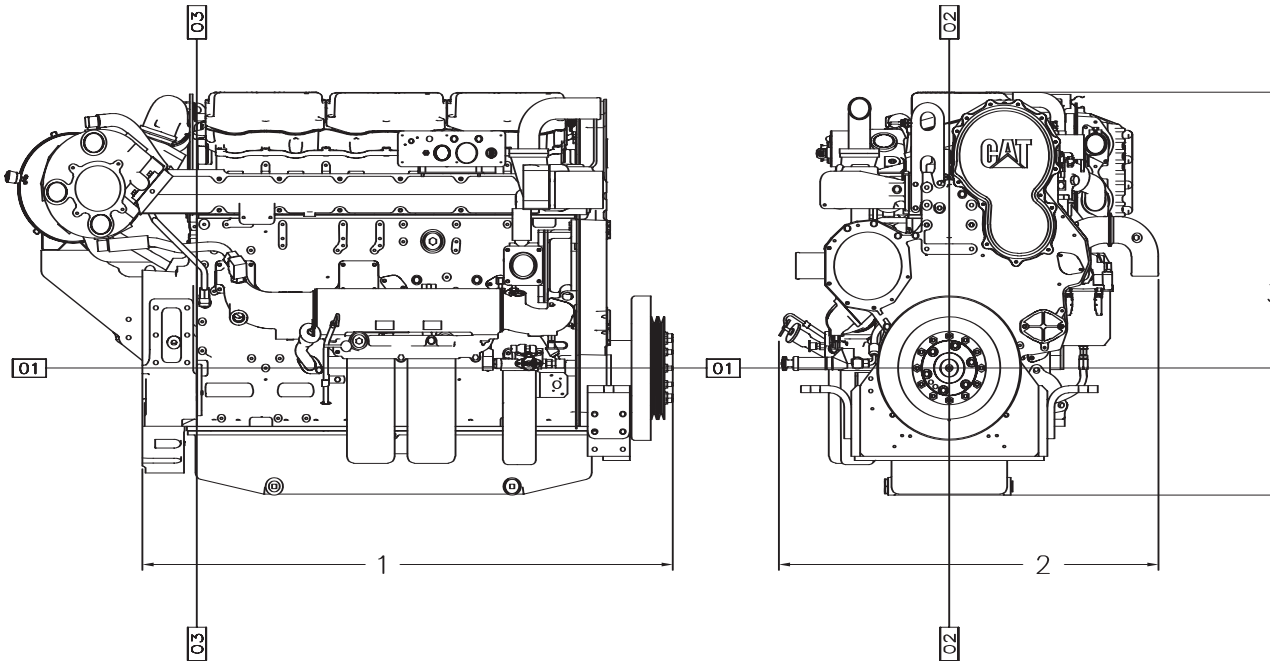
Performance Data

	Engine Speed rpm	Engine Power hp	Engine Torque lb-ft	BSFC lb/hp-hr	Fuel Rate gph
Maximum Power Data	1800	478.7	1397	.347	23.7
	1700	478.7	1479	.341	23.3
	1600	478.7	1572	.338	23.1
	1500	451.9	1582	.336	21.7
	1400	423.8	1589	.336	20.3
	1300	388.9	1571	.338	18.8
	1200	289.4	1266	.339	14.0
	1100	226.1	1080	.339	11.0
	1000	169.9	892	.339	8.2
	800	118.8	780	.338	5.7
	600	80.7	706	.339	3.9
Prop Demand Data	1800	478.7	1397	.347	23.7
	1700	403.2	1246	.349	20.1
	1600	336.2	1103	.347	16.7
	1500	277.1	970	.346	13.7
	1400	225.3	845	.347	11.1
	1300	180.4	729	.351	9.0
	1200	141.9	621	.353	7.2
	1100	109.3	521	.355	5.5
	1000	82.1	431	.361	4.2
	800	42.0	276	.399	2.4
	600	17.7	155	.464	1.2

Power produced at the flywheel will be within standard tolerances up to 50°C (122°F) combustion air temperature measured at the air cleaner inlet, and fuel temperature up to 52°C (125°F) measured at the fuel filter base. Power rated in accordance with NMMA procedure as crankshaft power. Reduce crankshaft power by 3% for propeller shaft power.

For most current information, please refer to TMI.

ENGINE DIMENSIONS



C18 ACERT Engine Dimensions (approx.)		
Length to Flywheel Housing		
Heat-Exchanger Cooled	1504.8 mm	59.24 in.
Keel-Cooled	1504.8 mm	59.24 in.
Width		
Heat-Exchanger Cooled	1077.2 mm	42.41 in.
Keel-Cooled	1077.2 mm	42.41 in.
Height		
Heat-Exchanger Cooled	1143.9 mm	45.04 in.
Keel-Cooled	1143.9 mm	45.04 in.
Weight (dry)		
Heat-Exchanger Cooled	1673 kg	3688 lb
Keel-Cooled	1539 kg	3394 lb

Note: Do not use for installation design. See general dimension drawings for detail (Drawing #315-3171).

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RATING DEFINITIONS AND CONDITIONS

A Rating (Unrestricted Continuous)
Typical applications: For vessels operating at rated load and rated speed up to 100% of the time without interruption or load cycling (80% to 100% load factor). Typical applications could include but are not limited to vessels such as freighters, tugboats, bottom drag trawlers, or deep river tugboats. Typical operation ranges from 5000 to 8000 hours per year.

Power at declared engine speed is in accordance with ISO3046-1:2002E. Caterpillar maintains ISO9001:1994/QS-9000 approved engine test facilities to assure accurate calibration of test equipment. Electronically controlled engines are set at the factory at the advertised power corrected to standard ambient conditions. The published fuel consumption rates are in accordance with ISO3046.

Fuel rates are based on fuel oil of 35° API [16°C (60°F)] gravity having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29°C (85°F) and weighing 838.9 g/L (7.001 lb/U.S. gal). Additional ratings may be available for specific customer requirements. Consult your Caterpillar representative for additional information.

Performance data is calculated in accordance with tolerances and conditions stated in this specification sheet and is only intended for purposes of comparison with other manufacturers' engines. Actual engine performance may vary according to the particular application of the engine and operating conditions beyond Caterpillar's control.

Power produced at the flywheel will be within standard tolerances up to 49°C (120°F) combustion air temperature measured at the air cleaner inlet, and fuel temperature up to 52°C (125°F) measured at the fuel filter base. Power rated in accordance with NMMA procedure as crankshaft power. Reduce crankshaft power by 3% for propeller shaft power.

Performance No.: DM9569-00
U.S. Sourced
LEHM7355-01 (1-08)