



Image may not reflect actual engine

SPECIFICATIONS

I-6, 4-Stroke-Cycle-Diesel

Emissions	EPA Tier 2, EU Stage IIIA CCNR Stage II, IMO regulations
Displacement	18.1 L (1106 in ³)
Rated Engine Speed	2300
Bore	145 mm (5.7 in.)
Stroke	183 mm (7.2 in.)
Aspiration	Turbocharged-Aftercooled Governor
Cooling System	Electronic Heat-Exchanger Cooled
Weight, Net Dry (approx.)	1860 kg (4102 lb)
Refill Capacity	
Cooling System (engine and expansion tank)	45 L (11.9 gal)
Lube Oil System	49.2 L (13.0 gal)
Oil Change Interval	250 hours
Rotation (from flywheel end)	Counterclockwise

STANDARD EQUIPMENT

Air Inlet System

Corrosion-resistant sea water aftercooler, air cleaner/ fumes disposal (closed system with service indicator), turbocharger air cleaner/fumes disposal (closed system)

Control System

Electronic governing (A4 Electronic Control Unit), EUI fuel system, cold mode start strategy, programmable low idle, electronic diagnostics and fault logging, engine and transmission monitoring (speed temperature, pressure), fuel/air ratio control

Cooling System

Thermostat and housing, jacket water pump, gear-driven, sea water pump, rubber impeller, self-priming, heat exchanger — titanium plate with integral expansion tank and thermostat housing (fully open temp 92°C), integral fuel cooler, coolant recovery system

Exhaust System

Watercooled manifold, twin turbocharger

Flywheel and Flywheel Housings

Flywheel, SAE No. 1, 113 teeth, flywheel housing, SAE No. 1, 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

Instrument panel (24V): start/stop switch, emergency stop button, diagnostic light 15A and 3A breakers, start motor magnetic switch

Lube System

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

Mounting System

Adjustable front support

Power Take-Offs

Hydraulic pump drive, SAE A, 11 tooth spline, crankshaft pulley, two groove

Protection System

A4 ECU Electronic Monitoring System provides customer programmable engine de-rate strategies to protect against adverse operating conditions

General

Vibration damper, lifting eyes, RH or LH service options, literature, upper rear-facing customer wiring connector, electronic installation kit (connectors, pins, sockets)

ISO Certification

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

OPTIONAL EQUIPMENT

Air Inlet System

Aftercooler condensate drain

Charging System

Battery charger 10 amp, ammeter gauge 24V

Charging Alternators

24V 100 amp, 24V 150+ amp, bracket only (no alternator)

Cooling System

Sea water pump 110° inlet, transmission oil cooler

Exhaust System

Elbow dry — dual 152 mm, flexible fittings — dual 152 mm, exhaust outlet flange — dual 152 mm

Fuel System

Primary fuel filter, water separator, duplex fuel filters (RH/LH)

Instrumentation

OEM wiring harness: 30', 50', 80', engine-to-engine harness: 15', 30', digital tachometer, digital tachometer mounting, magnetic

pickup, marine power display, marine power display bracket, marine power display wiring group, marine analog power display wiring group, marine analog power display system, marine analog power display bracket, transmission oil cooler.

Power Take-Off

6-groove pulley and damper

Starting System

Starting aid, jacket water heater — 120V and 240V, battery sets — 24V dry

General

Wiring, guards, filter cover kit, tool set, decals for all engines

Literature

Optional literature — other languages than English, extra literature — English and other languages

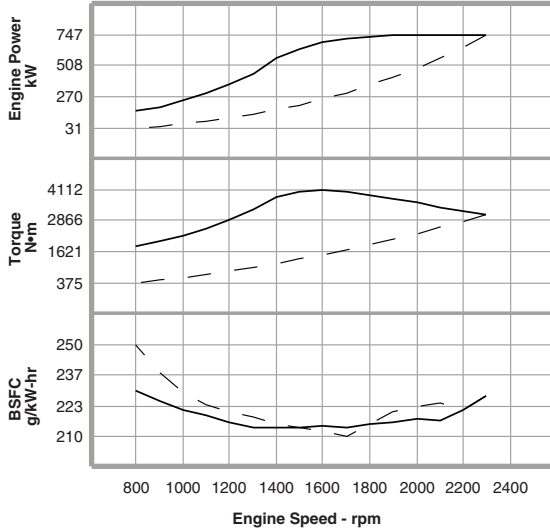
Packing

Engine protective cover, storage preservation, export packing

PERFORMANCE CURVES

Turbocharged-Aftercooled

E Rating — 1015 mhp (1001 bhp) 747 bkW @ 2300 rpm
EM0013-00

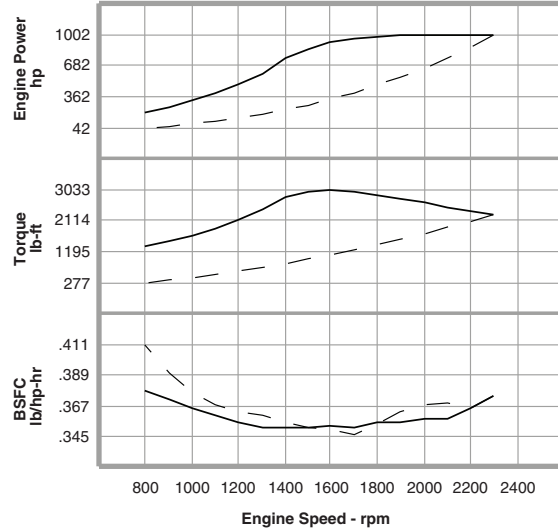


Metric Maximum Power Prop Demand 747 kW

Performance Data

	Engine Speed rpm	Engine Power kW	Engine Torque N·m	B FC g/k -hr	Fue l Rate L/hr
Maximum Power Data	2300	747.0	3101	227.9	203.0
	2200	747.0	3242	222.2	197.8
	2100	747.0	3397	217.0	193.3
	1900	747.0	3754	215.8	192.2
	1800	735.0	3899	215.3	188.6
	1600	689.0	4112	214.2	175.9
	1500	631.0	4017	213.5	160.6
	1300	449.0	3298	213.6	114.3
	1100	294.0	2552	218.6	76.6
	900	191.0	2027	225.9	51.4
800	154.0	1838	229.9	42.2	
Prop Demand Data	2300	746.5	3099	227.9	202.8
	2200	653.3	2836	222.1	173.0
	2100	568.2	2584	225.1	152.4
	1900	420.8	2115	221.1	110.9
	1800	357.8	1898	214.9	91.7
	1600	251.3	1500	212.2	63.6
	1500	207.1	1318	213.5	52.7
	1300	134.8	990	218.3	35.1
	1100	81.7	709	224.1	21.8
	900	44.7	475	237.4	12.7
800	31.4	375	249.8	9.4	

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



English Maximum Power Prop Demand 1001 hp

Performance Data

	Engine Speed rpm	Engine Power hp	Engine Torque lb-ft	B FC lb/hp-hr	Fue l Rate gph
Maximum Power Data	2300	1001.7	2287	.375	53.6
	2200	1001.7	2391	.365	52.3
	2100	1001.7	2505	.357	51.1
	1900	1001.7	2769	.355	50.8
	1800	985.7	2876	.354	49.8
	1600	924.0	3033	.352	46.5
	1500	846.2	2963	.351	42.4
	1300	602.1	2432	.351	30.2
	1100	394.3	1882	.359	20.2
	900	256.1	1495	.371	13.6
800	206.5	1356	.378	11.1	
Prop Demand Data	2300	1001.1	2286	.375	53.6
	2200	876.1	2092	.365	45.7
	2100	762.0	1906	.370	40.3
	1900	564.3	1560	.363	29.3
	1800	479.8	1400	.353	24.2
	1600	337.0	1106	.349	16.8
	1500	277.7	972	.351	13.9
	1300	180.8	730	.359	9.3
	1100	109.6	523	.368	5.8
	900	59.9	350	.390	3.4
800	42.1	277	.411	2.5	

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.

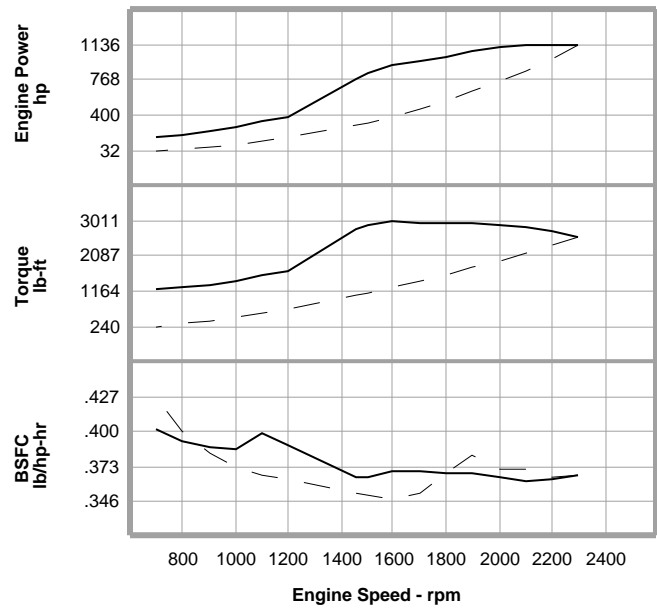
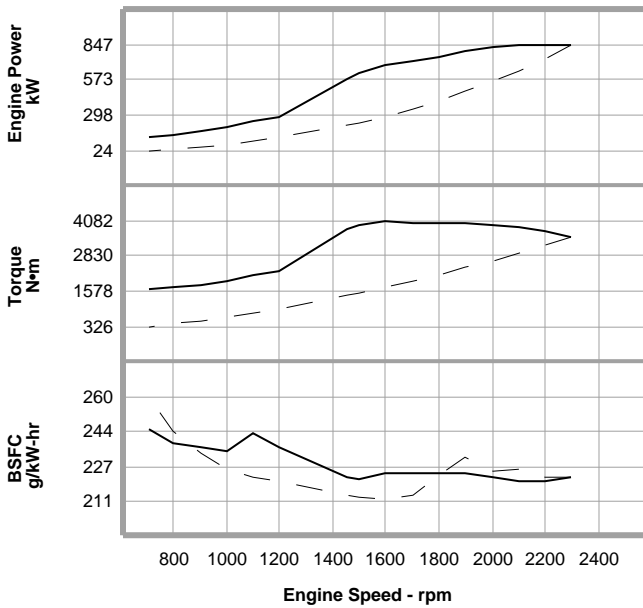
Marine Engine Performance C18 DITA

847 kW (1136 hp) @ 2300 rpm

E-RATING - EM0012-03



EPA T2 CERTIFIED



Metric **Maximum Power** ——— **847 kW**
Prop Demand - - -

English **Maximum Power** ——— **1136 hp**
Prop Demand - - -

Performance Data

Performance Data

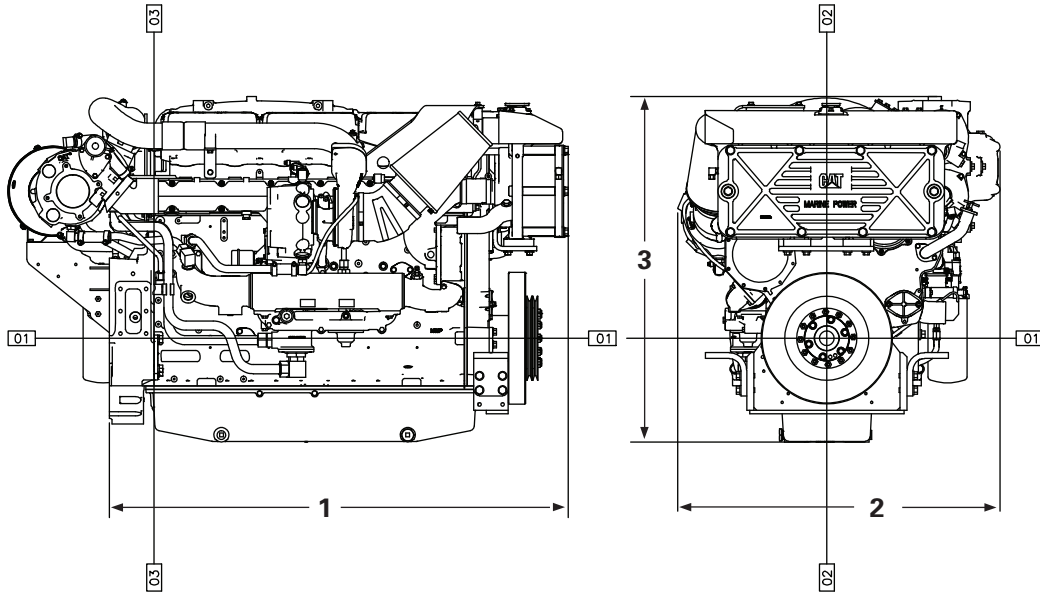
	Engine Speed rpm	Engine Power kW	Engine Torque N•m	BSFC g/kW-hr	Fuel Rate L/hr
Maximum Power Data	2300	847.0	3517	222.7	224.8
	2200	847.0	3676	220.3	222.5
	2100	847.0	3852	219.8	221.9
	1900	797.0	4006	224.2	213.0
	1800	755.0	4005	224.2	201.8
	1600	684.0	4082	224.7	183.2
	1500	618.0	3934	221.1	162.9
	1200	288.0	2292	237.0	81.4
	1000	201.0	1919	235.1	56.3
	800	144.0	1719	238.6	41.0
700	120.0	1637	244.6	35.0	
Prop Demand Data	2300	847.0	3517	222.7	224.8
	2200	741.3	3217	221.9	196.0
	2100	644.7	2932	226.2	173.9
	1900	477.5	2400	232.4	132.3
	1800	406.0	2154	223.9	108.4
	1600	285.1	1702	211.3	71.8
	1500	234.9	1496	212.6	59.5
	1200	120.3	957	220.0	31.5
	1000	69.6	665	226.8	18.8
	800	35.6	425	243.8	10.4
700	23.9	326	259.9	7.4	

	Engine Speed rpm	Engine Power hp	Engine Torque lb-ft	BSFC lb/hp-hr	Fuel Rate gph
Maximum Power Data	2300	1135.8	2594	.366	59.4
	2200	1135.8	2711	.362	58.8
	2100	1135.8	2841	.361	58.6
	1900	1068.8	2955	.369	56.3
	1800	1012.5	2954	.369	53.3
	1600	917.3	3011	.369	48.4
	1500	828.8	2901	.363	43.0
	1200	386.2	1690	.390	21.5
	1000	269.5	1415	.387	14.9
	800	193.1	1268	.392	10.8
700	160.9	1207	.402	9.2	
Prop Demand Data	2300	1135.8	2594	.366	59.4
	2200	994.1	2373	.365	51.8
	2100	864.6	2162	.372	45.9
	1900	640.3	1770	.382	34.9
	1800	544.5	1589	.368	28.6
	1600	382.3	1255	.347	19.0
	1500	315.0	1103	.350	15.7
	1200	161.3	706	.362	8.3
	1000	93.3	490	.373	5.0
	800	47.7	313	.401	2.7
700	32.1	240	.427	2.0	

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

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.

ENGINE DIMENSIONS



C18 ACERT Engine Dimensions (approx.)		
Length to flywheel housing	1591 mm	62.64 in.
Width	1118 mm	44.02 in.
Height	1199.2 mm	47.21 in.
Weight, Net Dry (approx.)	1860 kg	4102 lb

Note: Do not use for installation design. See general dimension drawings for detail (Drawing #2070024).

RATING DEFINITIONS AND CONDITIONS

E Rating (High Performance)

Typical applications: For vessels operating at rated load and rated speed up to 8% of the time, or 1/2 hour out of 6, (up to 30% load factor). Typical applications could include but are not limited to vessels such as pleasure craft, harbor patrol boats, harbor master boats, some fishing or patrol boats. Typical operation ranges from 250 to 1000 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.

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