



C-12 MARINE PROPULSION

578 mhp
(570 bhp)
425 bkW

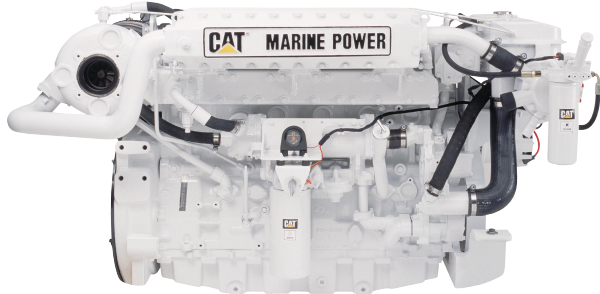


Image shown may not reflect actual Engine

SPECIFICATIONS

I-6, 4-Stroke-Cycle-Diesel

Emissions.....	IMO
Displacement.....	12.0 L (732.24 cu. in)
Rated Engine Speed.....	2300
Bore.....	130 mm (5.1 in)
Stroke.....	150 mm (5.9 in)
Aspiration.....	Turbocharged-Aftercooled
Governor.....	Electronic
Cooling System.....	Heat Exchanger
Weight, Net Dry (approx.).....	1,174 kg (2,588 lb)
Refill Capacity	
Cooling System.....	45 L (12.0 U.S. gal)
Lube Oil System.....	28 L (7.5 U.S. gal)
Oil Change Interval.....	250 hrs
Caterpillar Diesel Engine Oil 10W30 or 15W40	
Center Sump Oil Pan	
Rotation (from flywheel end).....	Counterclockwise
Flywheel and Flywheel Housing.....	SAE No. 1
Flywheel Teeth.....	113

STANDARD ENGINE EQUIPMENT

Air Inlet System

Corrosion resistant sea water aftercooler; air cleaner/fumes disposal system (closed)

Cooling System

Self priming gear driven sea water pump with rubber impeller, gear driven jacket water pump, integral heat exchanger/expansion tank with removable tube bundle and replaceable copper-nickel tubes, thermostat and housing

Exhaust System

Watercooled exhaust manifold and turbocharger, round flanged outlet

Fuel System

Fuel priming pump, fuel transfer pump, fuel filter - RH or LH service, flexible fuel lines

Instrumentation

Electric service meter

Lube System

Crankcase breather, engine oil cooler; oil filter - RH or LH service, oil level gauge - RH or LH service, oil filler, center sump oil pan, gear driven oil pump

Mounting System

Front support

Power Takeoffs

11 tooth spline SAE A hydraulic pump drive, single groove crankshaft pulley

Protection System

12 or 24 volt electronic shutdown (energized-to-run)

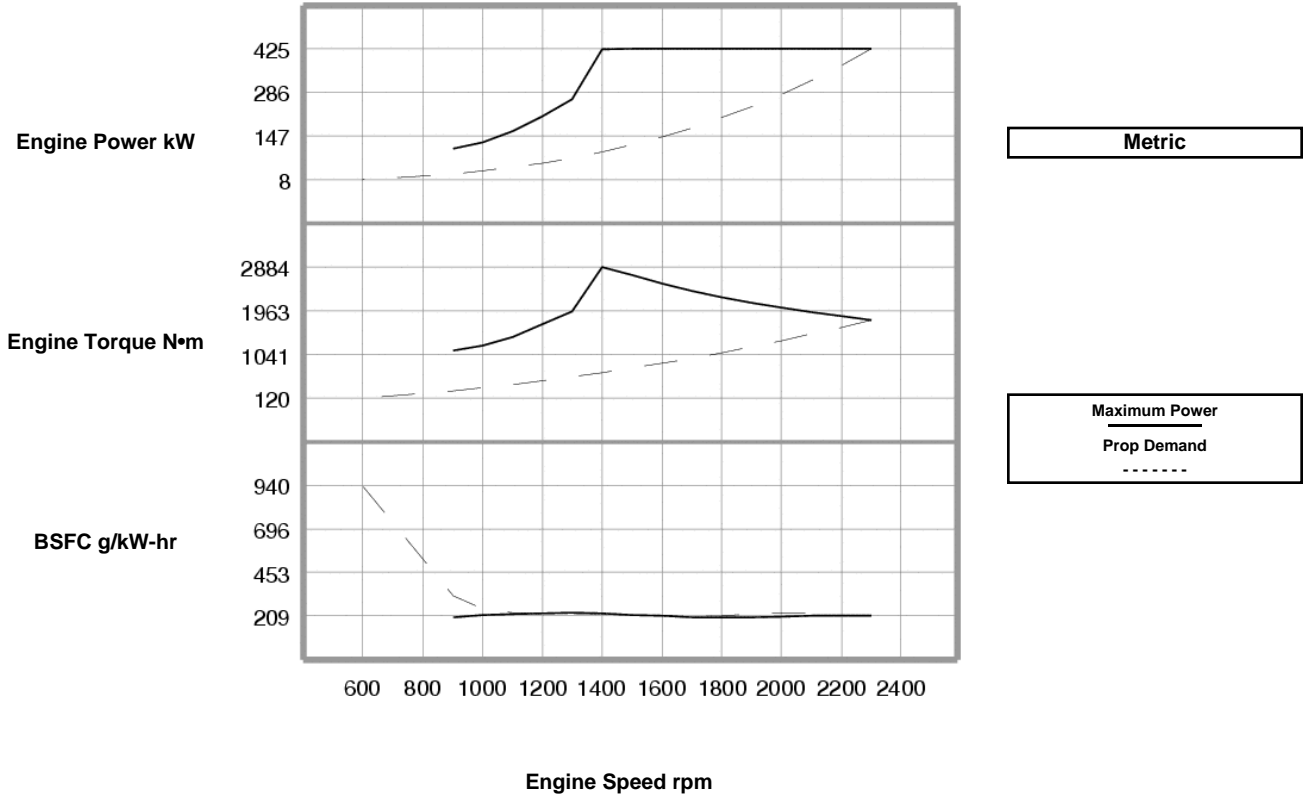
General

Vibration damper and guard, Caterpillar yellow paint, lifting eyes, variable engine wiring, customer wiring connector and service tool connector



PERFORMANCE CURVES

D-RATING - DM7387-03

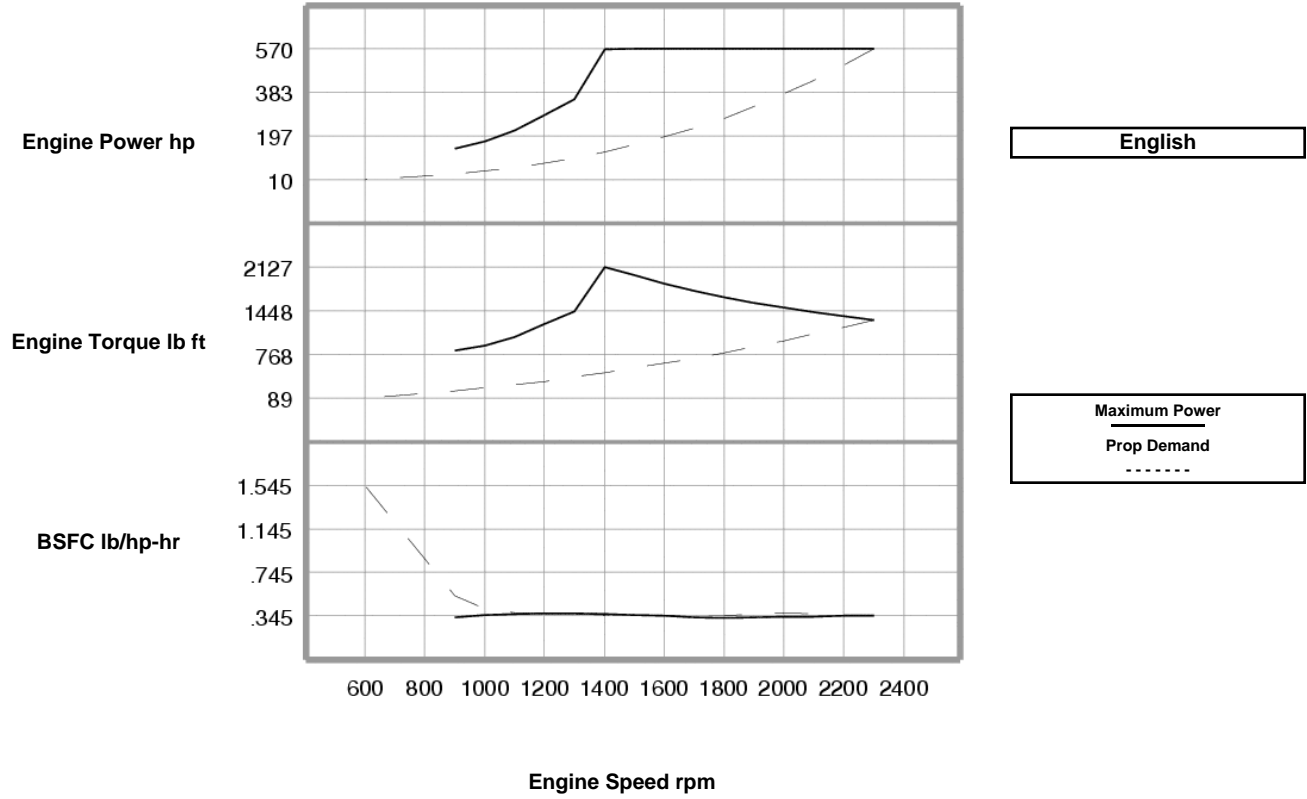


Maximum Power Data					Prop Demand Data				
Engine Speed rpm	Engine Power kW	Engine Torque N•m	BSFC g/kW-hr	Fuel Rate L/hr	Engine Speed rpm	Engine Power kW	Engine Torque N•m	BSFC g/kW-hr	Fuel Rate L/hr
2300	425	1764	209	105.8	2300	425	1765	209	105.8
2200	425	1845	209	105.9	2200	371.9	1614	210	93.2
2100	425	1933	207	104.9	2100	323.5	1471	220	84.8
2000	425	2029	203	102.9	2000	279.4	1334	228	75.9
1900	425	2137	199	101.0	1900	239.6	1204	219	62.7
1800	425	2255	198	100.3	1800	203.7	1081	210	50.9
1700	425	2388	201	102.0	1700	171.6	964	209	42.8
1600	425	2537	208	105.2	1600	143.1	854	212	36.1
1500	425	2706	214	108.7	1500	117.9	751	214	30.1
1400	423	2884	221	111.5	1400	95.8	654	216	24.7
1300	264	1938	224	70.6	1300	76.7	564	219	20.0
1200	211	1683	223	56.2	1200	60.4	480	222	16.0
1100	163	1418	219	42.7	1100	46.5	404	228	12.6
1000	128	1225	213	32.6	1000	34.9	334	248	10.3
900	106	1120	201	25.2	900	25.5	270	318	9.6
					600	7.5	120	940	8.5

NOTE: Prop demand data is a cubic prop demand curve with 3.0 exponent for displacement hulls only.

PERFORMANCE CURVES

D-RATING - DM7387-03



Maximum Power Data					Prop Demand Data				
Engine Speed rpm	Engine Power hp	Engine Torque lb ft	BSFC lb/hp-hr	Fuel Rate gph	Engine Speed rpm	Engine Power hp	Engine Torque lb ft	BSFC lb/hp-hr	Fuel Rate gph
2300	570	1301	.344	27.9	2300	570	1302	.344	27.9
2200	570	1361	.344	28.0	2200	499	1190	.345	24.6
2100	570	1426	.340	27.7	2100	434	1085	.362	22.4
2000	570	1497	.334	27.2	2000	375	984	.375	20.1
1900	570	1576	.327	26.7	1900	321	888	.360	16.6
1800	570	1663	.326	26.5	1800	273	797	.345	13.4
1700	570	1761	.330	26.9	1700	230	711	.344	11.3
1600	570	1871	.342	27.8	1600	192	630	.349	9.5
1500	570	1996	.352	28.7	1500	158	554	.352	8.0
1400	567	2127	.363	29.5	1400	128	482	.355	6.5
1300	354	1429	.368	18.7	1300	103	416	.360	5.3
1200	283	1241	.367	14.8	1200	81	354	.365	4.2
1100	219	1046	.360	11.3	1100	62	298	.375	3.3
1000	172	904	.350	8.6	1000	47	246	.408	2.7
900	141	826	.330	6.7	900	34	199	.523	2.5
					600	10	89	1.545	2.2

NOTE: Prop demand data is a cubic prop demand curve with 3.0 exponent for displacement hulls only.

RATING DEFINITIONS AND CONDITIONS

D Rating (Intermittent Duty) – % Load Factor: up to 50
% Time at Rated RPM: up to 16
Typical Time at Full Load: 2 hours out of 12
Typical Hour/Year: 1000 to 3000
Typical Applications: For vessels operating at rated load and rated speed up to 16% of the time (up to 50% load factor). Typical applications could include but are not limited to vessels such as offshore patrol boats, customs boats, police boats, some fishing, fireboats, or harbor tugs. Typical operation ranges from 1000 to 3000 hours per year.

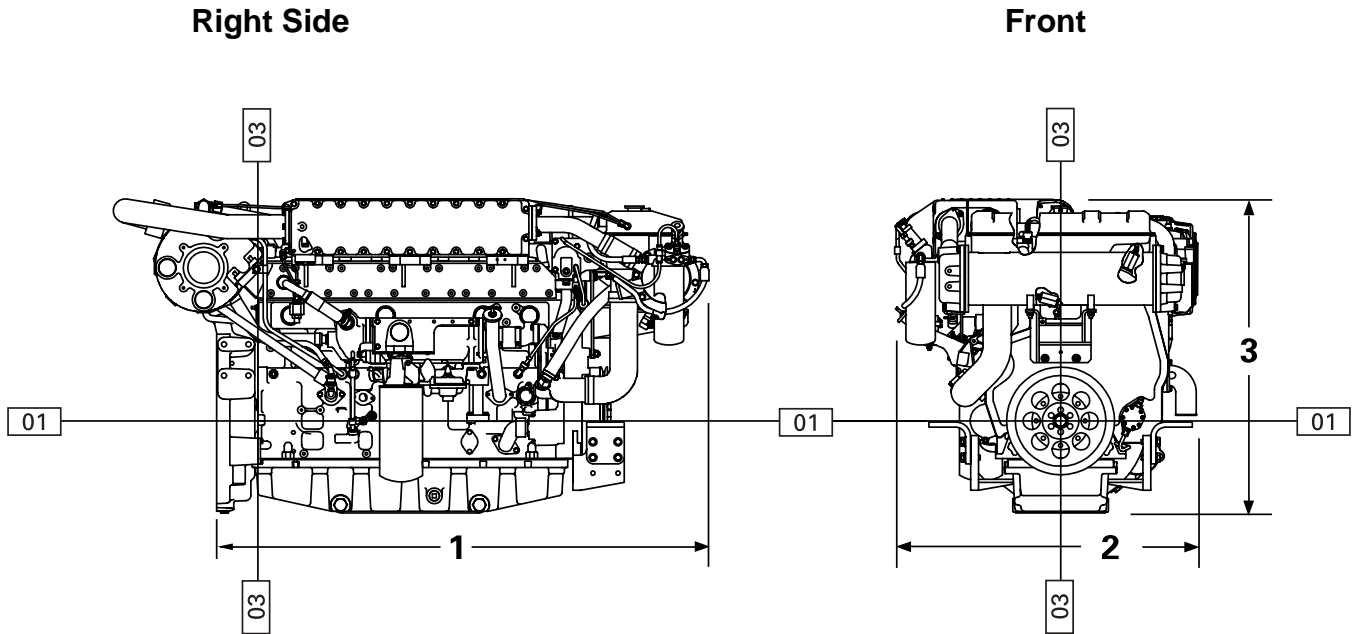
Power at declared engine speed is in accordance with ISO3046-1:2002E. Caterpillar maintains ISO9001:1994/QS-9000 approved engine test facilities to assure calibration of test equipment. Electronically controlled engines are set at the factory at the advertised power corrected to standard ambient conditions.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

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 manufacturer's 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 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.

DIMENSIONS



Engine Dimensions		
(1) Length to Flywheel Housing	1573.9 mm	61.96 in
(2) Width	968.6 mm	38.13 in
(3) Height	1008.7 mm	39.71 in
Weight, Net Dry (approx)	1174 kg	2,588 lb

Note: Do not use for installation design. See general dimension drawings for detail (Drawing # 2169705).

Borusan Power Systems, Marine Department - ISTANBUL can provide additional information.

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Performance No.: DM7387-03

Feature Code: C12DM04

U.S. Sourced

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Materials and specifications are subject to change without notice.

The International System of Units (SI) is used in this publication.