



C12

345 mhp (340 bhp) 254 bkW

MARINE PROPULSION

SPECIFICATIONS

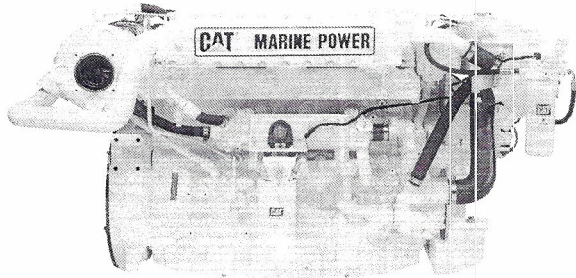


Image shown may not reflect actual Engine

I-6, 4-Stroke-Cycle-Diesel

Emissions.....	EPA-IMO
Displacement.....	11.95 L (729.23 in ³)
Rated Speed.....	1800
Bore.....	130.0 mm (5.12 in)
Stroke.....	150.0 mm (5.91 in)
Aspiration.....	TA
Governor.....	Electronic
Cooling System.....	Heat Exchanger
Weight, Net Dry (approx.).....	1,078 kg (2,377 lb)
Refill Capacity	
Cooling System.....	45.0 L (11.9 gal)
Lube Oil System.....	28.0 L (7.4 gal)
Oil Change Interval.....	250 hrs
Caterpillar Diesel Engine Oil 10W30 or 15W40	
Center Sump Oil Pan	
Rotation (from flywheel end).....	CCW
Flywheel and Flywheel Housing.....	SAE NO. 1
Flywheel Teeth	

STANDARD ENGINE EQUIPMENT

Air Inlet System

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

Control System

Electronic governing, Cold mode start strategy, Power compensation for fuel temperature, Programmable low idle, Electronic diagnostics and fault logging, Engine and transmission monitoring (speed, temperature, pressure), Fuel/air ratio control.

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

ISO Certification

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



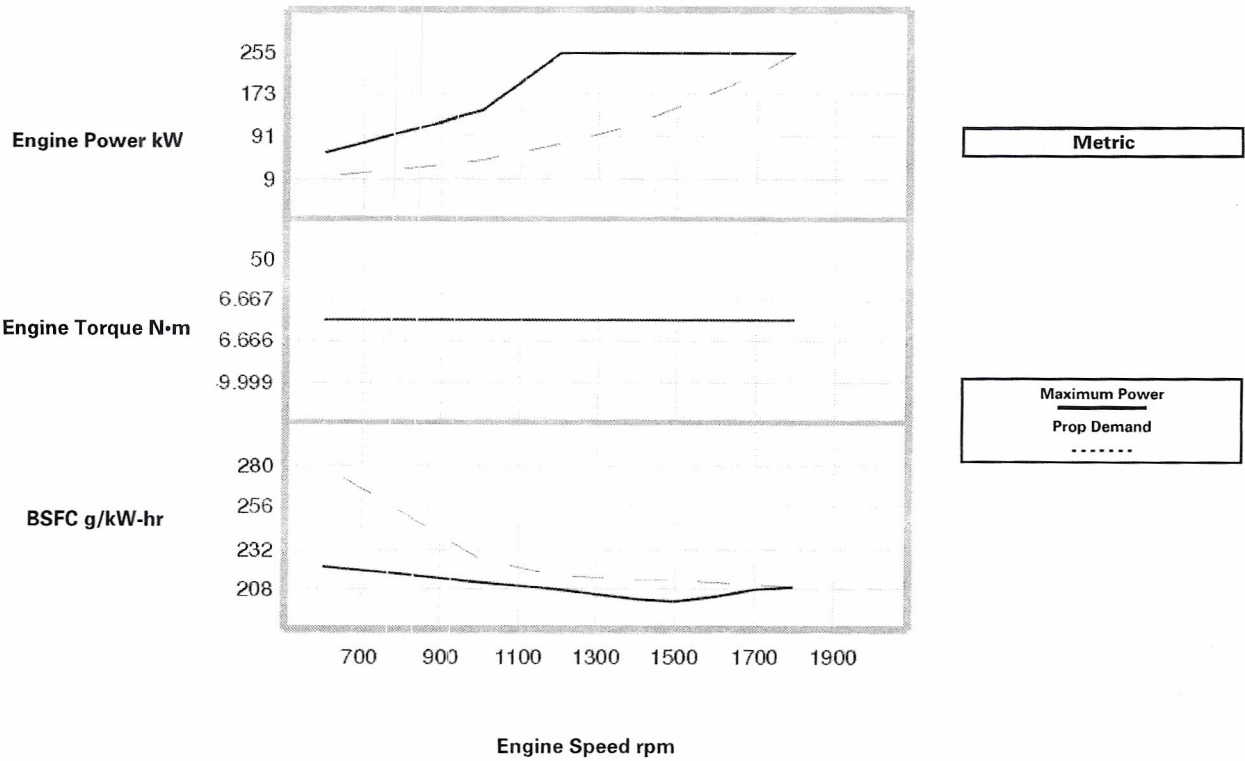
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PERFORMANCE CURVES

A-RATING - DM7527-03



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
1800	253	1345	208.3	62.9	1800	253.5	1345	208.3	62.9
1700	254	1424	206.8	62.5	1700	213.6	1200	210.1	53.5
1600	253	1511	203.3	61.4	1600	178.1	1063	211.4	44.9
1500	253	1613	200.1	60.4	1500	146.7	934	212.3	37.1
1400	255	1738	201.5	61.2	1400	119.3	814	213.1	30.3
1300	254	1865	204.3	61.8	1300	95.5	702	214.1	24.4
1200	253	2014	207	62.5	1200	75.1	598	216.2	19.4
1000	144	1370	211.7	36.2	1000	43.5	415	227	11.8
600	58	915	221	15.1	600	9.4	149	279.6	3.1

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



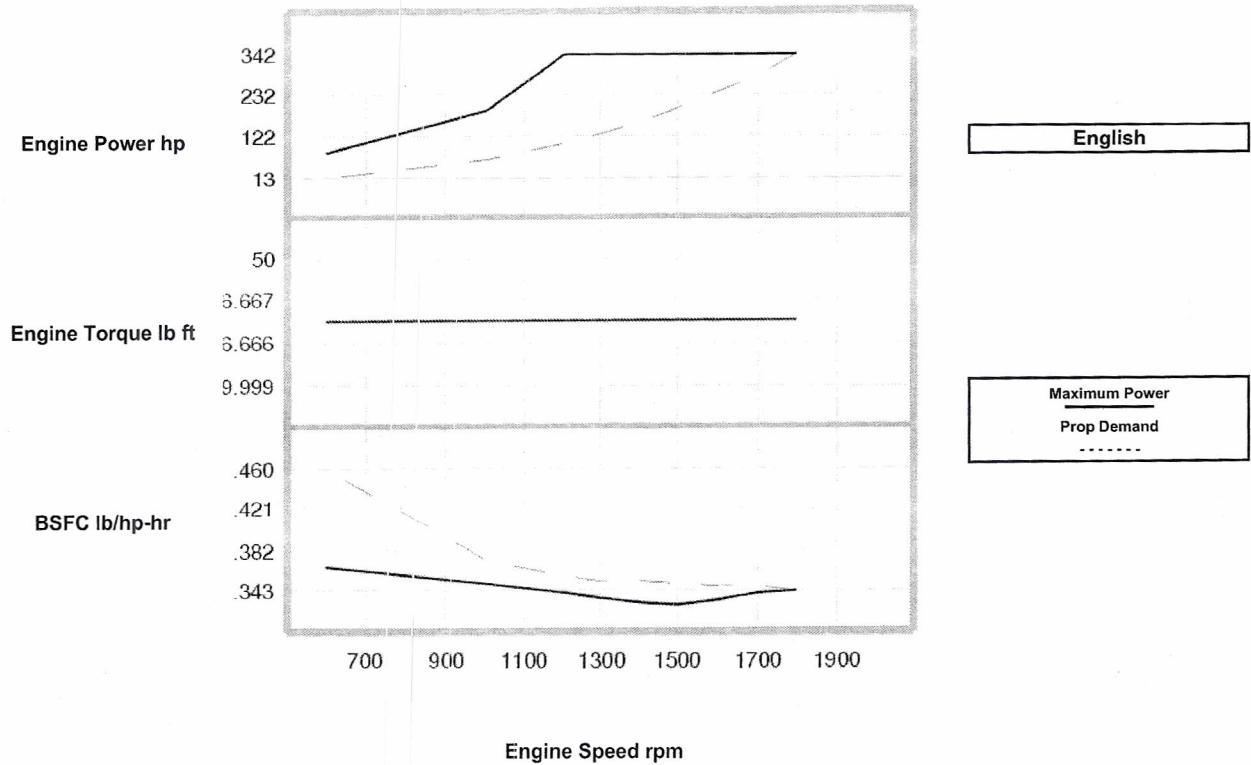
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1800	340	992	.342	16.6	1800	340	992	.342	16.6
1700	340	1050	.340	16.5	1700	286	885	.345	14.1
1600	340	1114	.334	16.2	1600	239	784	.348	11.9
1500	340	1190	.329	16.0	1500	197	689	.349	9.8
1400	342	1282	.331	16.2	1400	160	600	.350	8.0
1300	340	1376	.336	16.3	1300	128	518	.352	6.4
1200	339	1485	.340	16.5	1200	101	441	.355	5.1
1000	192	1010	.348	9.6	1000	58	306	.373	3.1
600	77	675	.363	4.0	600	13	110	.460	0.8

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



RATING DEFINITIONS AND CONDITIONS

A Rating (Unrestricted Continuous) -

% Load Factor: 80 to 100

% Time at Rated RPM: up to 80

Typical Time at Full Load: No Limit

Typical Hour/Year: 5000 to 8000

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 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 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.



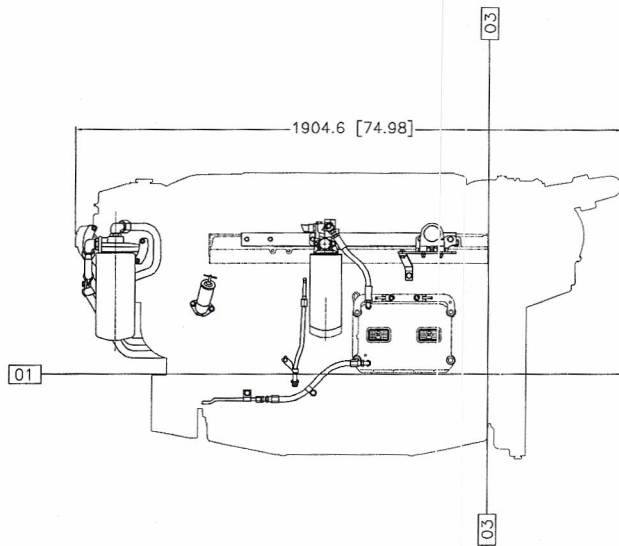
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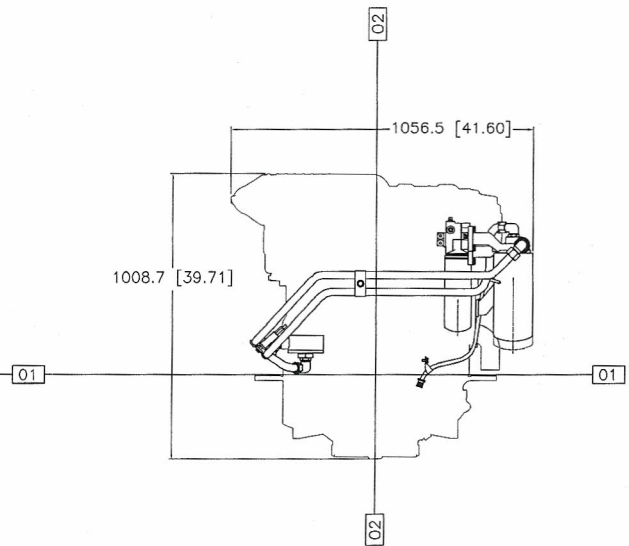
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DIMENSIONS

Right Side



Front



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)	1078 kg	2,377 lb

Note: Do not use for installation design. See general dimension drawings for detail (Drawing # 2479677).



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Performance No.: DM7527-03

Feature Code: C12MC21

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.

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