

### PRELIMINARY

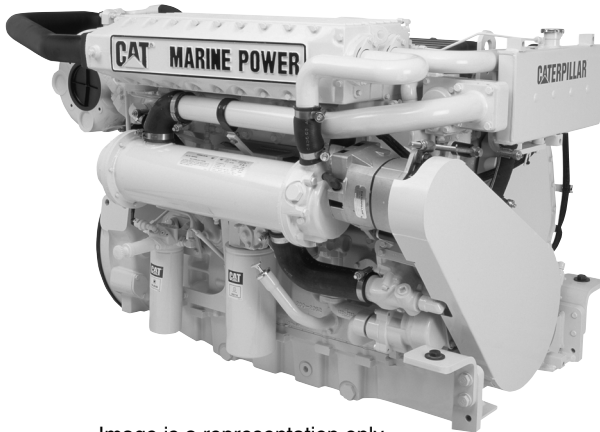


Image is a representation only,  
and may not show optional  
attachments.

## SPECIFICATIONS

### I-6, 4-Stroke-Cycle-Diesel

Emissions	IMO Compliant
Displacement	12 L (732 cu. in.)
Rated Engine Speed	2300
Bore	130.0 mm (5.1 in.)
Stroke	150.0 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, heat exchanger with removable tube bundle and replaceable copper-nickel tubes, expansion tank, 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



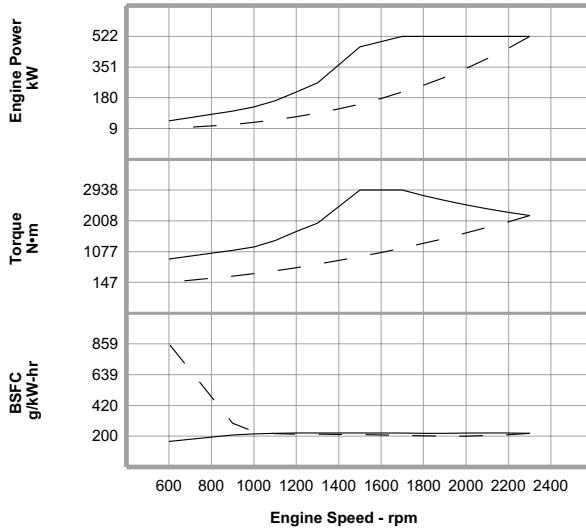
## MARINE ENGINE PERFORMANCE

### C12 DITA

522 kW (700 hp) @ 2300 rpm

E Rating (High Performance) — DM7380-02

IMO Compliant

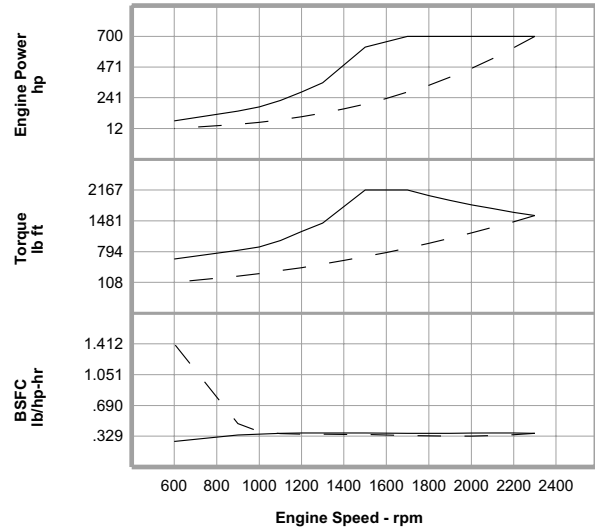


**Metric**      **Maximum Power**      **Prop Demand**      **522 kW**

#### Performance Data

	Engine Speed rpm	Engine Power kW	Engine Torque N·m	BSFC g/kW-hr	Fuel Rate L/hr
<b>Maximum Power Data</b>	2300	522	2167	220.0	136.6
	2200	522	2266	224.0	139.5
	2100	522	2374	224.0	139.5
	2000	522	2492	222.0	138.2
	1900	522	2623	220.0	137.1
	1700	522	2932	221.0	137.4
	1500	462	2938	223.0	122.5
	1200	211	1683	223.0	56.1
	1100	163	1418	220.0	42.7
	900	106	1120	207.0	26.0
600	53	845	161.0	10.2	
<b>Prop Demand Data</b>	2300	522	2167	220.0	136.6
	2200	457	1983	210.0	114.6
	2100	397	1807	204.0	96.5
	1900	294	1479	200.0	70.2
	1800	250	1327	202.0	60.3
	1600	176	1049	208.0	43.5
	1500	145	922	211.0	36.3
	1300	94	692	213.0	24.0
	1100	57	496	218.0	14.8
	900	31	332	291.0	10.8
600	9	147	859.0	9.5	

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



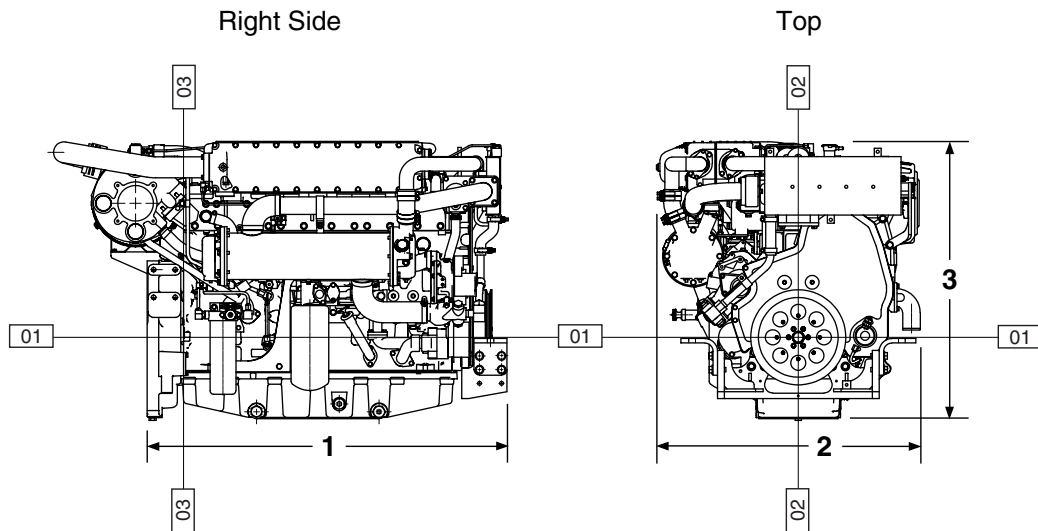
**English**      **Maximum Power**      **Prop Demand**      **700 hp**

#### Performance Data

	Engine Speed rpm	Engine Power hp	Engine Torque lb ft	BSFC lb/hp-hr	Fuel Rate gph
<b>Maximum Power Data</b>	2300	700	1598	.362	36.1
	2200	700	1671	.368	36.9
	2100	700	1751	.368	36.9
	2000	700	1838	.365	36.5
	1900	700	1935	.362	36.2
	1700	700	2162	.363	36.3
	1500	619	2167	.367	32.4
	1200	283	1241	.367	14.8
	1100	219	1046	.362	11.3
	900	141	826	.340	6.9
600	71	623	.265	2.7	
<b>Prop Demand Data</b>	2300	700	1598	.362	36.1
	2200	613	1463	.345	30.3
	2100	533	1333	.335	25.5
	1900	395	1091	.329	18.5
	1800	336	979	.332	15.9
	1600	236	774	.342	11.5
	1500	194	680	.347	9.6
	1300	126	510	.350	6.3
	1100	77	366	.358	3.9
	900	42	245	.478	2.9
600	12	108	1.412	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.

### DIMENSIONS



Engine Dimensions		
(1) Length to Flywheel Housing	1329.9 mm	52.36 in
(2) Width	956.8 mm	37.67 in
(3) Height	1011.7 mm	39.83 in
Weight, Net Dry (approx)	1174 kg	2,588 lb

Note: Do not use for installation design. See general dimension drawings for detail (Drawing #248-6176).

**RATING DEFINITIONS AND CONDITIONS**

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**E Rating (High Performance)**

% Load Factor: up to 30

% Time at Rated RPM: up to 8

Typical Time at Full Load: 1/2 hours out of 6

Typical Hour/Year: 250 to 1000

Typical Applications: For vessels operating at rated load and rated speed up to 8% of the time (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 ISO3046-1.

**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 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 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.