CATERPILLAR®

3412D
MARINE PROPULSION

760 mhp
(750 bhp)
559 bkW

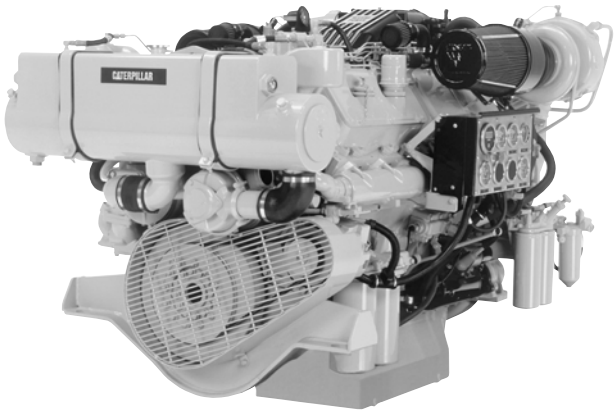


Image is a representation only, and may not show optional attachments.

SPECIFICATIONS

V-12, 4-Stroke-Cycle-Diesel

Emissions . . . . . EPA and IMO compliant
Displacement . . . . . 32.10 L (1958.92 cu. in.)
Rated Engine Speed . . . . . 1800 rpm
Bore . . . . . 145.0 mm (5.7 in.)
Stroke . . . . . 162.0 mm (6.4 in.)
Aspiration. . . . . Twin Turbocharged-Aftercooled
Governor . . . . . Mechanical
Cooling System. . . . . Heat Exchanger/ Keel Cooled
Engine Weight, Net Dry (approx) . . . . . 2434 kg (5366 lb)
Refill Capacity
  Cooling System . . . . . 67.0 L (17.7 U.S. gal)
  Lube Oil System . . . . . 139.0 L (36.7 U.S. gal)
Oil Change Interval . . . . . 500 hr
  Caterpillar Diesel Engine Oil 10W30 or 15W40
  Deep Sump Oil Pan
Rotation (from flywheel end) . . . . . Counterclockwise
Flywheel and Flywheel Housing . . . . . SAE No. 0
Flywheel Teeth 136

STANDARD ENGINE EQUIPMENT

Air Inlet System
Corrosion-resistant aftercooler core, standard duty air cleaner — open element with service indicator, turbocharger inlets

Cooling System
Gear driven centrifugal self-priming auxiliary sea water pump, gear driven centrifugal jacket water pump, expansion tank, engine oil cooler, thermostats and housing, transmission oil cooler

Exhaust System
Watercooled exhaust manifold and turbochargers, dry elbows and flanges

Fuel System
Fuel filter — RH service, fuel transfer pump, fuel priming pump, flexible fuel lines, fuel ratio control

Instrumentation
Heavy-duty (1/2 engine speed) SAE standard rotation tachometer drive; RH instrument panel with oil pressure, water temperature, and fuel pressure gauges; service meter

Lube System
Crankcase breather, oil filter — RH service, oil filler in valve cover, deep sump oil pan, manual oil sump pump

Mounting System
Front support

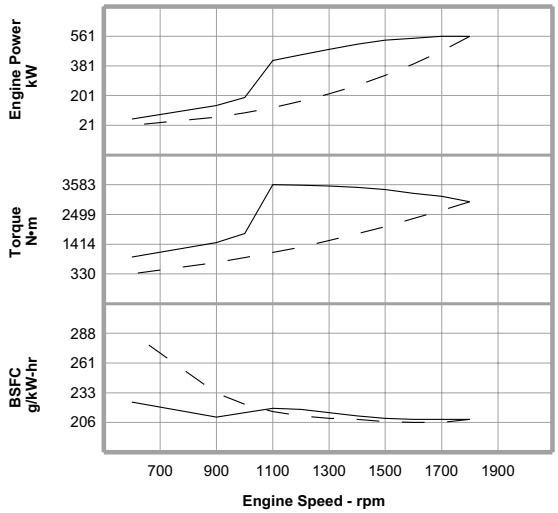
General
Vibration damper, Caterpillar yellow paint, lifting eyes

CATERPILLAR FACILITIES ISO 9001 CERTIFIED

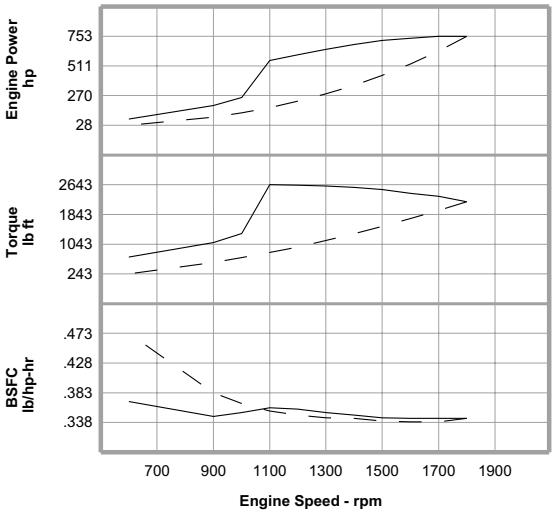
MARINE ENGINE PERFORMANCE

3412D DITA
A Continuous Rating — DM7297-00

2004 EPA Compliant, IMO Compliant



Metric | Maximum Power — | Prop Demand — — | **559 kW**



English | Maximum Power — | Prop Demand — — | **750 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	559	2966	209.0	139.4
	1700	561	3152	209.0	139.7
	1600	547	3267	209.0	136.5
	1500	536	3409	210.0	134.3
	1400	511	3485	212.0	129.2
	1300	481	3533	215.0	123.3
	1200	448	3564	218.0	116.4
	1100	413	3583	219.0	107.9
	1000	190	1812	215.0	48.6
	900	140	1485	211.0	35.3
	600	59	941	225.0	15.9
Prop Demand Data	1800	559	2966	209.0	139.4
	1700	471	2645	206.0	115.6
	1600	393	2343	206.0	96.2
	1500	324	2059	207.0	79.8
	1400	263	1794	209.0	65.4
	1300	211	1547	210.0	52.8
	1200	166	1318	212.0	41.9
	1100	128	1108	216.0	32.9
	1000	96	915	223.0	25.4
	900	70	741	233.0	19.4
	600	21	330	288.0	7.1

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	750	2187	.344	36.8
	1700	753	2325	.344	36.9
	1600	734	2409	.344	36.1
	1500	718	2514	.345	35.5
	1400	685	2570	.349	34.1
	1300	645	2606	.353	32.6
	1200	601	2629	.358	30.7
	1100	554	2643	.360	28.5
	1000	254	1336	.353	12.8
	900	188	1095	.347	9.3
	600	79	694	.370	4.2
Prop Demand Data	1800	750	2187	.344	36.8
	1700	631	1951	.339	30.5
	1600	526	1728	.339	25.4
	1500	434	1519	.340	21.1
	1400	353	1323	.344	17.3
	1300	282	1141	.345	13.9
	1200	222	972	.349	11.1
	1100	171	817	.355	8.7
	1000	129	675	.367	6.7
	900	94	547	.383	5.1
	600	28	243	.473	1.9

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 (Preliminary)		
Length (to flywheel housing)	1821.7 mm	71.72 in
Width	1369.9 mm	53.93 in
Height	1528.2 mm	60.2 in
Weight, Net Dry (approx)	2434 kg	5366 lb

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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 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 ISO3046-1:2002E.

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.

TMI Reference No.: DM7297-00
U.S. Sourced
LEHM3275-00 (9-03)