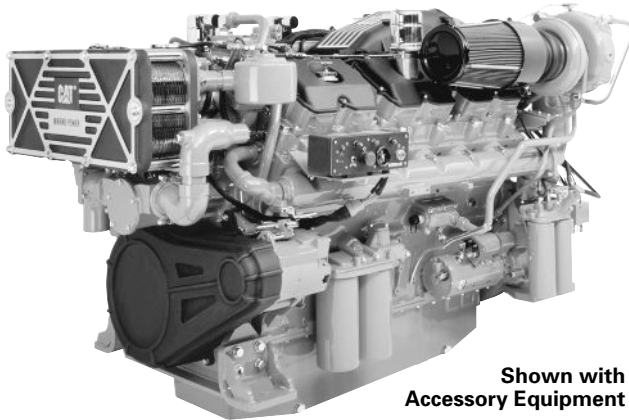


CATERPILLAR®

Marine Propulsion Engine 3412E

Fast Craft

895 bkW (1200 bhp) 1217 mhp @ 2300 rpm



Shown with
Accessory Equipment

STANDARD EQUIPMENT

Air Inlet System

Corrosion resistant aftercooler core, light duty air cleaner, open system (shipped loose)

Cooling System

Gear driven centrifugal auxiliary sea water pump; gear driven centrifugal jacket water pump; block heaters (one on each side); titanium plate heat exchanger with expansion tank; coolant recovery system; oil cooler

Exhaust System

Watercooled manifold and turbocharger; round flanged outlet, 130 mm (5.12 in.)

Flywheel and Flywheel Housing

SAE No. 1 (113 teeth)
SAE No. 0 (136 teeth) (side access engines only)

Fuel System

Fuel priming pump; fuel filter — RH service on port, LH service on starboard; Hydraulically actuated Electronically Controlled Unit Injector (HEUI) fuel system; flexible fuel lines; fuel transfer pump

Instruments

Instrument panel with start/stop switch; emergency button; maintenance due lamp; diagnostic lamp; electronic service meter; warning lamp; 15A breakers; starter motor magnetic switch; 5-hole panel with oil pressure, water temperature, and fuel pressure gauges

Lube System

Crankcase breather; oil filter — RH service on port, LH service on starboard; oil filler in valve cover; shallow center sump oil pan; deep sump oil pan (side access engines only)

Mounting System

Front support — adjustable; front support (side access engines only)

Protection System

Electronic — 24 volt only

General

Vibration damper and guard, Caterpillar yellow paint, lifting eyes

SPECIFICATIONS

V-12, 4-Stroke-Cycle-Diesel

Emissions	IMO compliant
Displacement	26.4 L (1649 cu. in.)
Bore	137.2 mm (5.4 in.)
Stroke	152.4 mm (6.0 in.)
Aspiration	Turbocharged-Aftercooled
Governor	Electronic
Engine Weight, Net Dry (approx)	
Standard Engines	2533 kg (5585 lb)
Side Access Engines	2649 kg (5840 lb)
Capacity for Liquids	
Cooling System	72.5 L (19.1 U.S. gal)
Lube Oil System	
Shallow Sump	85 L (22.5 U.S. gal)
Deep Sump	138 L (35.5 U.S. gal)
Oil Change Interval	
Shallow Sump	150 hr
Deep Sump	300 hr
Caterpillar DEO 10W30 or 15W40	
Rotation (from flywheel end)	Counterclockwise

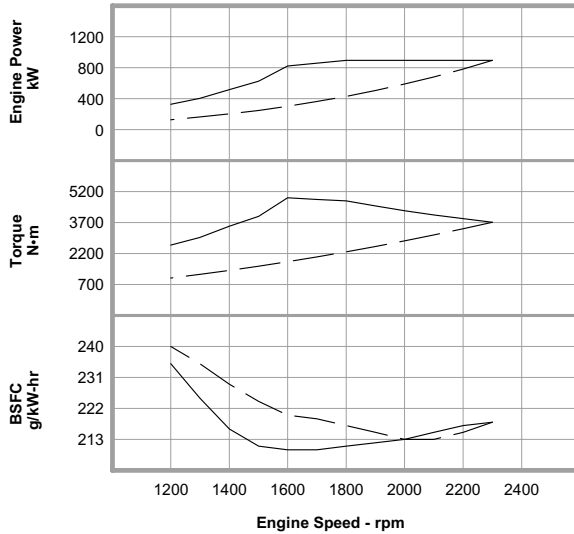
ACCESSORY EQUIPMENT

Air Starting Motor (side access engines only)
Alarm Contactor — Transmission Oil Pressure and Oil Temperature
24V 60 Amp Alternator
Digital Tachometer
Double Wall Oil Lines
Duplex Fuel Filter, RH or LH
Duplex Oil Filter (side access engines only)
24V Electric Starting Motor
Engine Monitoring System
Engine-to-Engine Wiring Harness
Engine Vision Display System
Fuel Cooler
GPS Interface Module
8-Hole Instrument Panel
Hose Kit
Hydraulic Pump Drives
Marine Power Display System
Non-Self-Priming Auxiliary Sea Water Pump
OEM Wiring Harness
Pilot House Instrument Panel
Primary Fuel Filter/Water Separator
Sea Water Inlet Connection (LH, U-Shaped; RH, Straight)
Sea Water Outlet Connection, 57 mm (2.25 in.)
Spare Parts Kit
Throttle Position Sensor
Vibration Isolation Mounting

PERFORMANCE CURVES

D Rating — DM4126-01

IMO Compliant

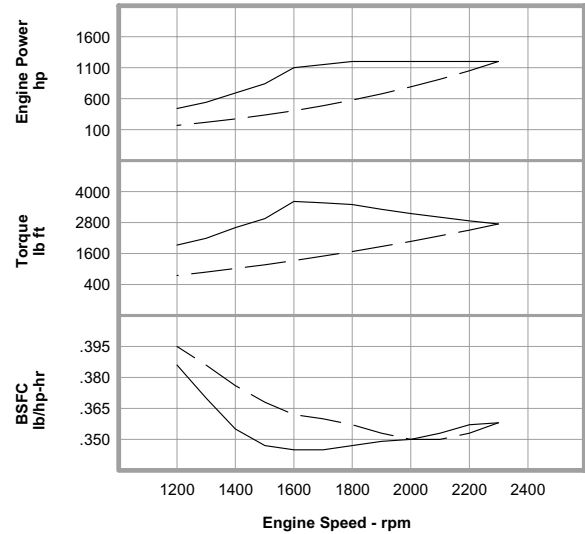


Metric Maximum Power
Prop Demand **895 kW**

Performance Data

	Engine Speed rpm	Engine Power kW	Engine Torque N-m	BSFC g/kW-hr	Fuel Rate L/hr
Maximum Power Data	2300	895	3716	218.0	232.9
	2200	895	3885	217.0	231.4
	2100	895	4069	215.0	229.3
	2000	895	4272	213.0	227.2
	1900	895	4496	212.0	226.0
	1800	895	4746	211.0	225.2
	1700	859	4822	210.0	215.3
	1600	821	4897	210.0	205.0
	1500	627	3994	211.0	157.5
	1400	516	3522	216.0	133.0
	1300	404	2969	225.0	108.2
1200	328	2612	235.0	91.8	
Prop Demand Data	2300	895	3716	218.0	232.9
	2200	783	3400	215.0	200.4
	2100	681	3098	213.0	172.6
	2000	589	2810	213.0	149.1
	1900	505	2536	215.0	129.2
	1800	429	2276	217.0	111.2
	1700	361	2030	219.0	94.3
	1600	301	1798	220.0	79.1
	1500	248	1581	224.0	66.1
	1400	202	1377	229.0	55.0
	1300	162	1187	235.0	45.2
1200	127	1012	240.0	36.4	

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

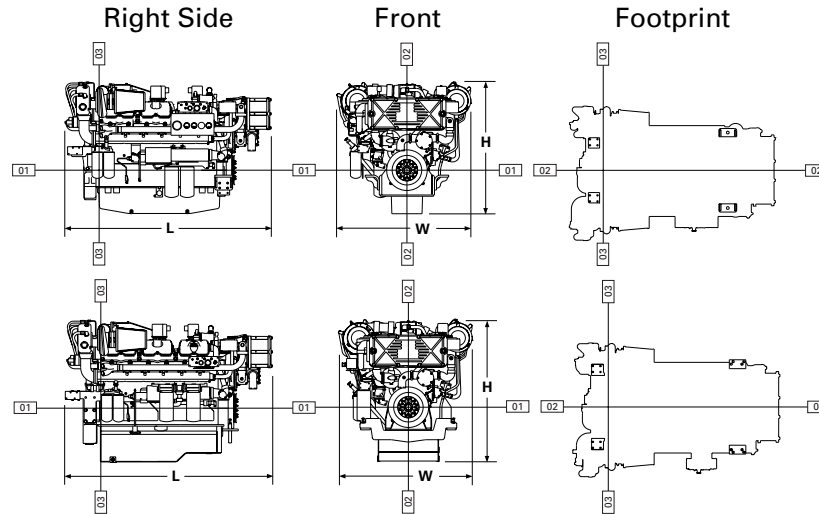


English Maximum Power
Prop Demand **1200 hp**

Performance Data

	Engine Speed rpm	Engine Power hp	Engine Torque lb ft	BSFC lb/hp-hr	Fuel Rate gph
Maximum Power Data	2300	1200	2741	.358	61.5
	2200	1200	2865	.357	61.1
	2100	1200	3001	.353	60.6
	2000	1200	3151	.350	60.0
	1900	1200	3316	.349	59.7
	1800	1200	3500	.347	59.5
	1700	1151	3556	.345	56.9
	1600	1100	3612	.345	54.2
	1500	841	2946	.347	41.6
	1400	692	2598	.355	35.1
	1300	542	2190	.370	28.6
1200	440	1926	.386	24.3	
Prop Demand Data	2300	1200	2741	.358	61.5
	2200	1050	2508	.353	52.9
	2100	914	2285	.350	45.6
	2000	789	2072	.350	39.4
	1900	677	1870	.353	34.1
	1800	575	1679	.357	29.4
	1700	485	1497	.360	24.9
	1600	404	1326	.362	20.9
	1500	333	1166	.368	17.5
	1400	271	1016	.376	14.5
	1300	217	875	.386	11.9
1200	170	746	.395	9.6	

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*

	Standard Engine		Side Access Engine	
	mm	in.	mm	in.
Overall Length				
Length from front to rear face of block	1734.7	68.3	1734.7	68.3
Length from rear face of block to back of engine	341.9	13.5	358.1	14.1
Overall Height				
Height from crankshaft centerline to top of engine	1327.5	52.3	1437.2	56.6
Height from crankshaft centerline to bottom of oil pan	438.7	17.3	548.4	21.6
Overall Width				
Width from crankshaft centerline to port side (left side)	646.2	25.4	646.2	25.4
Width from crankshaft centerline to starboard side (right side)	708.0	27.9	708.0	27.9
Standard Engine	Front		Rear	
	mm	in.	mm	in.
Customer mounting hole diameter	27.5	1.1		5/8
Width from crankshaft centerline to side	380.0	15.0	252.4	9.9
			312.7	12.3
Length from rear face to block to mounting hole	1255.1	49.4	57.9	2.3
			134.2	5.3
Side Access Engine	Front		Rear	
	mm	in.	mm	in.
Customer mounting hole diameter	20.5	0.8		5/8
Width from crankshaft centerline to side	431.8	17.0	352.7	13.9
	457.2	18.0	413.0	16.3
Length from rear face of block to mounting hole	1242.5	48.9	78.4	3.1
	1261.5	49.7	154.6	6.1
	1350.5	53.2		
	1369.5	53.9		

*Illustrations and dimensions from drawings: 170-5461 Standard Engine, 173-0014 Side Access Engine.

RATING DEFINITIONS AND CONDITIONS

D Rating –

Typical Application Planing hull vessels such as offshore patrol boats, customs, police, and some fire and fishing boats. Also used for bow and stern thrusters.

Typical Hours Per Year 1000 to 3000
 Time at Rated Speed Up to 16%
 Load Factor Up to 50%
 Typical Time at Full Load 2 out of 12 hours
 Rated Speed 2300 rpm
 Maximum Cruise Speed 2150 rpm
 Maximum Continuous Cruise Speed 2000 rpm

Engine Performance Parameters

Power ±3%
 Specific Fuel Consumption ±3%
 Fuel Rate ±5%

Ratings are based on SAE J1228/ISO8665 standard conditions of 100 kPa (29.61 in. Hg), 25°C (77°F), and 30% relative humidity. These ratings also apply at ISO3046/1, DIN6271/3, and BS5514 conditions of 100 kPa (29.61 in. Hg), 27°C (81°F), and 60% relative humidity.

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.



3412E MARINE PROPULSION — 895 bkW (1200 bhp)

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.

TMI Reference No.: DM4126-01 (6-19-01)

Materials and specifications are subject to change without notice.

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

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