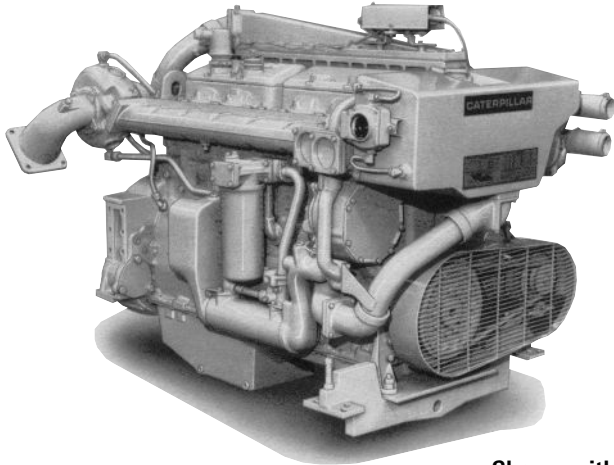




Marine Propulsion Engine 3406C

358 kW (480 bhp) 487 mhp @ 2100 rpm



Shown with Accessory Equipment

STANDARD EQUIPMENT

Air Inlet System

Corrosion resistant aftercooler core; dry, regular duty cleaner with service indicator

Cooling System

Gear driven self-priming auxiliary sea water pump with rotary rubber impeller (heat exchanger engines only), gear driven centrifugal jacket water pump, expansion tank, transmission oil cooler, engine oil cooler, thermostats and housing with 92°C (198°F) full open temperature

Exhaust System

Watercooled manifold and turbocharger; dry elbow and flange, 152 mm (6 in.); round flanged outlet

Flywheel and Flywheel Housing

SAE No. 1 (113 teeth)

Fuel System

Fuel priming pump, fuel transfer pump, LH fuel filter, fuel ratio control, flexible fuel lines

Instruments

Heavy-duty standard SAE rotation tachometer drive; LH instrument panel with service meter; oil pressure, water temperature, and fuel pressure gauges

Lube System

Crankcase breather, oil cooler, RH oil filter and oil level gauge, manual oil sump pump

Mounting System

Front support

General

Vibration damper and guard, Caterpillar yellow paint, lifting eyes

SPECIFICATIONS

I-6, 4-Stroke-Cycle-Diesel

Emissions	IMO compliant
Displacement	14.6 L (893 cu. in.)
Bore	137 mm (5.4 in.)
Stroke	165 mm (6.5 in.)
Aspiration	Turbocharged-Aftercooled
Governor	Hydra-mechanical
Engine Weight, Net Dry (approx)	
Heat Exchanger Cooled	1470 kg (3240 lb)
Keel Cooled	1435 kg (3165 lb)
Capacity for Liquids	
Cooling System (Engine only)	36.2 L (9.4 U.S. gal)
Lube Oil System (refill)	34.1 L (9.0 U.S. gal)
Oil Change Interval	250 hr
Caterpillar DEO 10W30 or 15W40	
Rotation (from flywheel end)	Counterclockwise

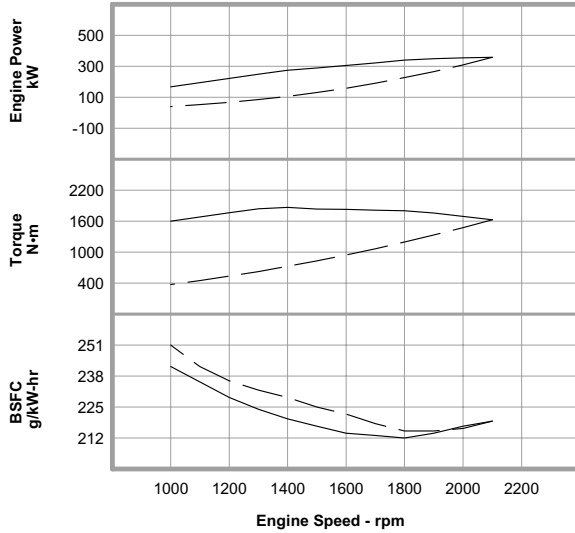
ACCESSORY EQUIPMENT

- Air Inlet Adapter, 152 mm (6 in.)
- Air Starting Motor
- Alarm Contactors
- 12V 51 Amp, 12V 105, 24V 35 Amp, 24V 60 Amp
- Alternator
- Auxiliary Drive Pulley
- Auxiliary and Hydraulic Pump Drive
- Cruise Kits
- Digital Tachometer
- Double Wall Fuel Lines
- Dry Charge Coolant Conditioner
- Duplex Fuel Filters
- Electric Service Meter
- Electric Shutoffs
- Electric Starting Motor
- Exhaust Elbow, Pipe, Flange, Flexible Fittings
- Heat Exchanger
- 12-Hole Instrument Panel
- 4-Hole Instrument Panel
- Magnetic Pickup
- Pilot House Instrument Panel
- Primary Fuel Filter/Water Separator
- Remote-Mounted Pilot House Controls
- Remote Positive Locking Governor Control
- Spare Parts Kit
- Solenoid Shutoffs
- Starting Aid
- Throttle Position Sensor

PERFORMANCE CURVES

C Rating — DM6099-01

IMO Compliant

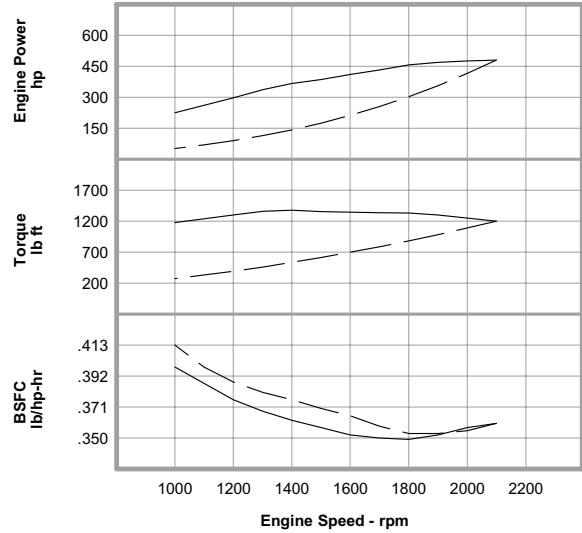


Metric Maximum Power
Prop Demand 358 kW

Performance Data

	Engine Speed rpm	Engine Power kW	Engine Torque N-m	BSFC g/kW-hr	Fuel Rate L/hr
Maximum Power Data	2100	358	1629	219.0	93.4
	2000	355	1694	217.0	91.6
	1900	350	1758	214.0	89.3
	1800	340	1802	212.0	85.9
	1700	322	1811	213.0	81.7
	1600	306	1826	214.0	78.2
	1500	288	1833	217.0	74.4
	1400	274	1865	220.0	71.7
	1300	250	1838	224.0	66.9
	1200	221	1762	229.0	60.5
	1000	167	1598	242.0	48.3
Prop Demand Data	2100	358	1629	219.0	93.4
	2000	309	1477	216.0	79.7
	1900	265	1333	215.0	67.8
	1800	226	1197	215.0	57.7
	1700	190	1067	218.0	49.3
	1600	158	946	222.0	41.8
	1500	131	831	225.0	35.1
	1400	106	724	229.0	28.9
	1300	85	624	232.0	23.5
	1200	67	532	236.0	18.8
	1100	52	447	242.0	14.9
1000	39	369	251.0	11.6	

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

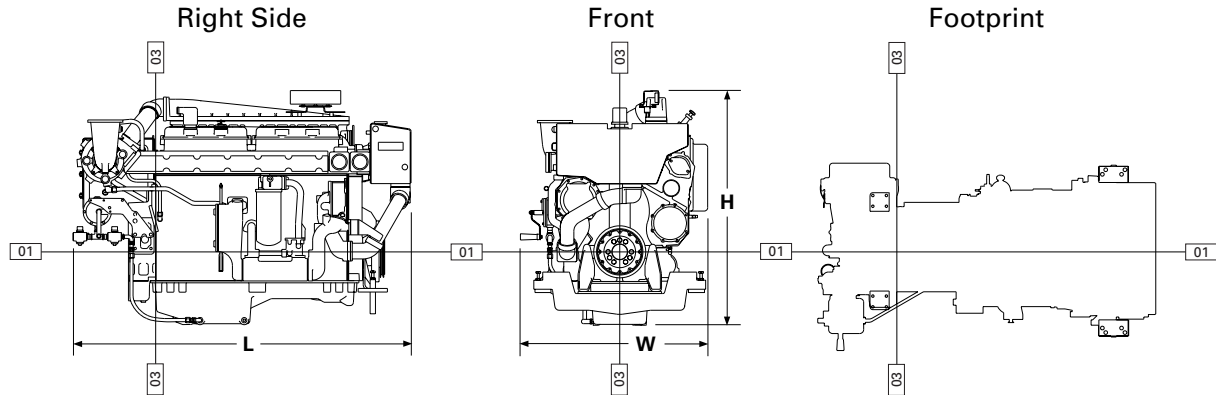


English Maximum Power
Prop Demand 480 hp

Performance Data

	Engine Speed rpm	Engine Power hp	Engine Torque lb ft	BSFC lb/hp-hr	Fuel Rate gph
Maximum Power Data	2100	480	1201	.360	24.7
	2000	476	1249	.357	24.2
	1900	469	1297	.352	23.6
	1800	456	1329	.349	22.7
	1700	432	1336	.350	21.6
	1600	410	1347	.352	20.7
	1500	386	1352	.357	19.7
	1400	367	1375	.362	18.9
	1300	336	1356	.368	17.7
	1200	297	1300	.376	16.0
	1000	224	1179	.398	12.8
Prop Demand Data	2100	480	1201	.360	24.7
	2000	415	1089	.355	21.1
	1900	356	983	.353	17.9
	1800	303	883	.353	15.2
	1700	255	787	.358	13.0
	1600	212	698	.365	11.0
	1500	175	613	.370	9.3
	1400	142	534	.376	7.6
	1300	114	460	.381	6.2
	1200	90	392	.388	5.0
	1100	69	330	.398	3.9
1000	52	272	.413	3.1	

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*

	mm	in.		
Overall Length	1901.2	74.9		
Length from front to rear face of block	1435.3	56.5		
Overall Height	1315.4	51.8		
Height from crankshaft centerline to top of engine	903.2	35.6		
Height from crankshaft centerline to bottom of oil pan	412.2	16.2		
Overall Width	1052.6	41.4		
Width from crankshaft centerline to port side (left side)	494.3	19.5		
Width from crankshaft centerline to starboard side (right side)	558.3	22.0		
	Front		Rear	
	mm	in.	mm	in.
Customer mounting hole diameter	20.5	0.8	15.9	5/8
Width from crankshaft centerline to mounting holes	431.8	17.0	252.4	9.9
	457.2	18.0	312.8	12.3
Length from rear face of block to mounting holes	1156.1	44.8	57.9	2.3
	1175.1	46.3	134.1	5.3
	1264.1	49.8		
	1283.1	50.5		

*Illustrations and dimensions from drawing: 180-6365.

RATING DEFINITIONS AND CONDITIONS

C Rating –

Typical Application . . . Vessels such as ferries, harbor tugs, fishing boats moving at higher speeds out and back (e.g. lobster, crayfish, and tuna), offshore service boats, and also displacement hull yachts and short trip coastal freighters where engine load and speed are cyclical.

- Typical Hours Per Year 2000 to 4000
- Time at Rated Speed Up to 50%
- Load Factor 20 to 80%
- Typical Time at Full Load 6 out of 12 hours
- Rated Speed 2100 rpm
- Maximum Cruise Speed 2000 rpm
- Maximum Continuous Cruise Speed 1900 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.



3406C MARINE PROPULSION — 358 bkW (480 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.: DM6099-01 (6-29-01)

Materials and specifications are subject to change without notice.

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

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