

80 bkW @ 2400 rpm  
108 bhp @ 2400 rpm



Shown with  
Accessory Equipment

## SPECIFICATIONS

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

Bore—mm (in).....	100 (3.94)
Stroke—mm (in).....	127 (5.0)
Displacement—L (cu in).....	4.0 (243)
Aspiration.....	DIT
Rotation (from flywheel end).....	Counterclockwise
Compression Ratio.....	17.25:1
Capacity for Liquids—L (U.S. gal)	
Cooling System.....	19 (5.0)
Lube Oil System (refill).....	8.5 (2.25)
Oil Change Interval — hrs.....	250*
Caterpillar DEO 10W30 or 15W40	
Engine Weight (wet)	
(approx) — kg (lb).....	422.6 (933)

\*Engines in E applications and some D applications where load factors are less than 30 percent may be capable of an extended service interval of up to 500 hours for lube oil and filter change.

## STANDARD ENGINE EQUIPMENT

### Air Inlet System

air cleaner/fumes disposal (closed system), dry insulated turbocharger

### Control System

mechanical governor

### Cooling System

gear-driven centrifugal jacket water pump, gear-driven self-priming sea water pump (heat exchanger cooled arrangements), heat exchanger with cupro-nickel tube bundle (heat exchanger cooled arrangements), de-aeration expansion tank, keel cooling connections (keel cooled arrangements), plate-type engine oil cooler in oil filter base, thermostat and housing, transmission oil cooler

### Exhaust System

dry insulated turbocharger, water cooled exhaust manifold

### Flywheel and Flywheel Housing

SAE No. 3

### Fuel System

fuel filter

### Lube System

crankcase breather (closed system), oil filter, oil sump drain pump, LH service oil level gauge

### Protection System

shutoff solenoid (ETS)

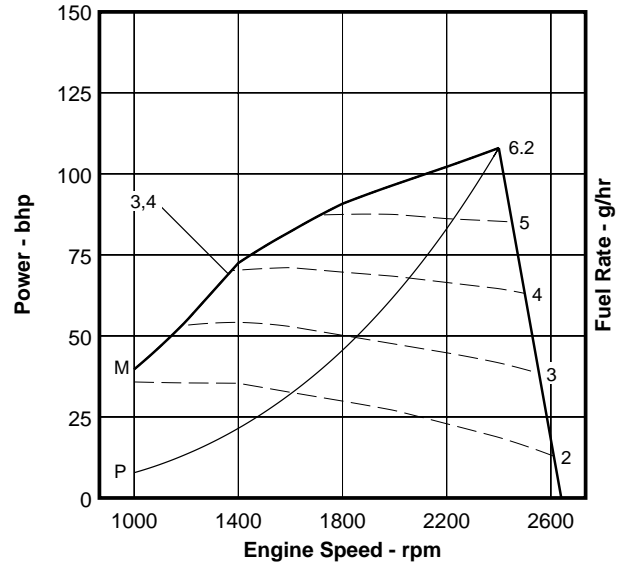
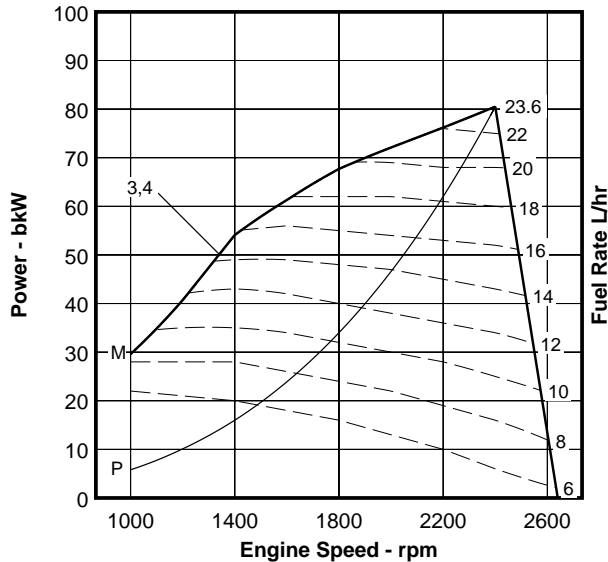
### General

English decals, lifting eyes, plastic wrap packaging, belt cover

*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.*

### PERFORMANCE CURVES

#### C Rating — DM6324-00



**80 kW**

**SI Metric**

#### Performance Data

	Engine Speed rpm	Engine Power kW	BSFC g/kW-h	Fuel Rate L/h	Intake Air Flow m <sup>3</sup> /min	Exh Stack Temp °C	Exh Gas Flow m <sup>3</sup> /min
<b>Zone 3</b>	2400	80.5	246	23.6	7.2	475	18.8
<b>Curve: 3</b>	2000	72.1	244	21.0	6.1	486	16.1
	1600	61.3	242	17.7	5.0	486	13.4
	1200	40.7	240	11.6	3.5	440	8.5
	1000	29.6	241	8.5	2.5	417	6.1
<b>Max Power</b>	2400	80.5	246	23.6	7.2	475	18.8
<b>Limit</b>	2000	72.1	244	21.0	6.1	486	16.1
<b>Curve: 4</b>	1600	61.3	242	17.7	5.0	486	13.4
	1200	40.7	240	11.6	3.5	440	8.5
	1000	29.6	241	8.5	2.5	417	6.1
<b>Prop Demand</b>	2400	80.5	246	23.6	7.2	475	18.8
<b>Curve: P</b>	2200	62.0	248	18.4	6.6	411	15.6
	2000	46.6	253	14.0	6.0	359	13.0
	1800	34.0	257	10.4	5.3	312	10.6
	1600	23.9	264	7.5	4.4	274	8.2
	1400	16.0	287	5.5	3.6	233	6.1
	1200	10.1	310	3.7	3.0	229	5.2
	1000	5.8	315	2.2	2.5	166	3.8

**108 hp**

**English**

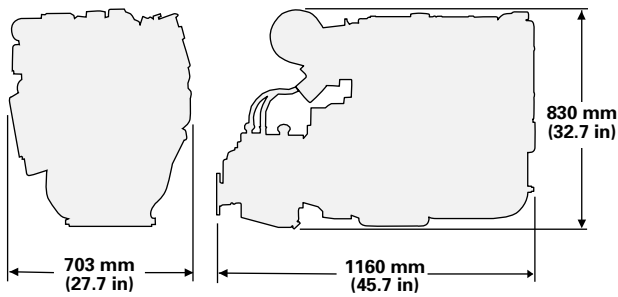
#### Performance Data

	Engine Speed rpm	Engine Power hp	BSFC lb/hp-h	Fuel Rate gph	Intake Air Flow cfm	Exh Stack Temp °F	Exh Gas Flow cfm
<b>Zone 3</b>	2400	108	.405	6.2	254	886	663
<b>Curve: 3</b>	2000	97	.401	5.5	215	906	568
	1600	82	.398	4.7	176	906	473
	1200	55	.394	3.1	124	824	300
	1000	40	.396	2.2	88	782	215
<b>Max Power</b>	2400	108	.405	6.2	254	886	663
<b>Limit</b>	2000	97	.401	5.5	215	906	568
<b>Curve: 4</b>	1600	82	.398	4.7	176	906	473
	1200	55	.394	3.1	124	824	300
	1000	40	.396	2.2	88	782	215
<b>Prop Demand</b>	2400	108	.405	6.2	254	886	663
<b>Curve: P</b>	2200	83	.408	4.9	233	771	550
	2000	62	.416	3.7	212	679	459
	1800	46	.423	2.7	187	593	374
	1600	32	.435	2.0	155	525	289
	1400	21	.472	1.5	127	451	215
	1200	14	.510	1.0	106	445	183
	1000	8	.518	0.6	88	331	134

Brake Mean Effective Pressure .....1009 kPa  
 Heat Rejection to Coolant ..... 74 kW  
 Heat Rejection to Exhaust ..... 57.2 kW  
 Heat Radiation to Atmosphere from Engine ..... 23.3 kW

Brake Mean Effective Pressure .....146 psi  
 Heat Rejection to Coolant ..... 4208.3 Btu/min  
 Heat Rejection to Exhaust ..... 3252.9 Btu/min  
 Heat Radiation to Atmosphere from Engine ..... 1325.1 Btu/min

## DIMENSIONS



with Newage PRM 500D Transmission

## RATING DEFINITIONS AND CONDITIONS

**C RATING** – 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.

**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. Ratings are valid for air cleaner inlet temperatures up to and including 50°C (122°F). Emissions are certified for sea water temperatures of 30°C (86°F) and lower. No derates or engine life penalties will result from sea water temperatures up to and including 42°C (108°F).

**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/liter (7.001 lbs/U.S. gal). Fuel consumption shown with all oil, fuel, and water pumps, engine driven. For a “without pumps” condition, deduct approximately 0.5% for each pump not engine driven.

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.

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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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