CATERPILLAR®

Marine Propulsion

3054B

64 bkW @ 2400 rpm 86 bhp @ 2400 rpm



SPECIFICATIONS

I-4, 4-Stroke-Cycle-Diesel

Bore—mm (in)
Stroke—mm (in)
Displacement—L (cu in) 4.2 (258)
Aspiration DINA
Rotation (from flywheel end)Counterclockwise
Compression Ratio
Capacity for Liquids—L (U.S. gal)
Cooling System
Lube Oil System (refill) 8.5 (2.25)
Oil Change Interval — hrs 250 st
Caterpillar DEO 10W30 or 15W40
Engine Weight (wet)
(approx) — kg (lb)
*Engines in E applications and some D applications where load factors are

^{*}Engines in E applications and some D applications where load factors ar 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)

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

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)

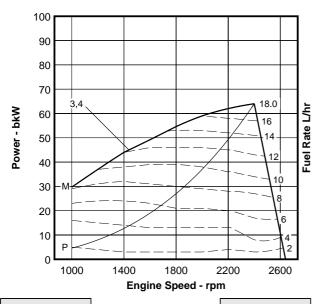
General

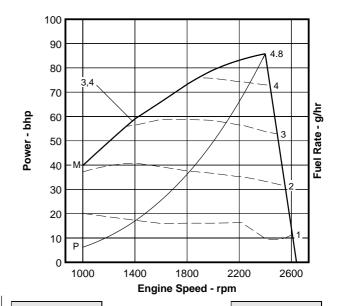
English decals, lifting eyes, plastic wrap packaging, belt cover

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 — DM6323-00





English

Exh

Gas

Flow

cfm

431

374 300

226

194

Exh

Stack

Temp

992

979

900

815

Intake

64 kW

Engine

Speed

SI Metric

Stack

Temp

Exh

Gas

Flow

Performance Data

Fuel

Rate

BSFC

g/

Engine

Power

Intake

Air

Flow

	rpm	kW	kW-h	L/h	m ³ /min	°C	m³/min
Zone 3	2400	64.0	236	18.0	4.3	533	12.2
Curve: 3		59.0	227	16.0	3.8	526	10.6
	1600	49.2	224	13.1	3.2	482	8.5
	1200	37.0	229	10.1	2.6	435	6.4
	1000	29.7	233	8.3	2.3	415	5.5
-							
Max	2400	64.0	236	18.0	4.3	533	12.2
Limit	2000	59.0	227	16.0	3.8	526	10.6
Curve: 4		49.2	224	13.1	3.2	482	8.5
	1200	37.0	229	10.1	2.6	435	6.4
_	1000	29.7	233	8.3	2.3	415	5.5
	0.400	04.0	000	40.0	4.0		10.0
Max	2400	64.0	236	18.0	4.3	533	12.2
Power Curve: N	2000	59.0	227	16.0	3.8	526	10.6
Curve: N	1200	49.2 37.0	224 229	13.1 10.1	3.2 2.6	482 435	8.5 6.4
	1000	29.7	233	8.3	2.6	435 415	5.5
-	1000	20.1	200	0.3	2.0	415	<u> </u>
Prop	2400	64.0	236	18.0	4.3	533	12.2
Demand		49.3	224	13.2	4.1	417	9.8
Curve: F		37.0	223	9.8	3.9	339	8.2
	1800	27.0	226	7.3	3.7	277	6.9
	1600	19.0	241	5.4	3.3	227	5.7
	1400	12.7	290	4.4	3.0	185	4.7
	1200	8.0	350	3.3	2.7	206	4.3
	1000	4.6	412	2.3	2.3	319	3.3

			Perfor	mance	Data
	Engine Speed rpm	Engine Power hp	BSFC lb/ hp-h	Fuel Rate gph	Intake Air Flow cfm
Zone 3 Curve:	2400 3 2000 1600 1200 1000	86 79 66 50 40	.388 .373 .368 .376 .383	4.8 4.2 3.5 2.7 2.2	152 134 113 92 81

86 hp

Max	2400	86	.388	4.8	152	992	431
Limit	2000	79	.373	4.2	134	979	374
Curve: 4	1600	66	.368	3.5	113	900	300
	1200	50	.376	2.7	92	815	226
	1000	40	.383	2.2	81	779	194
_							

Max	2400	86	.388	4.8	152	992	431
Power	2000	79	.373	4.2	134	979	374
Curve: M	1600	66	.368	3.5	113	900	300
	1200	50	.376	2.7	92	815	226
	1000	40	.383	2.2	81	779	194

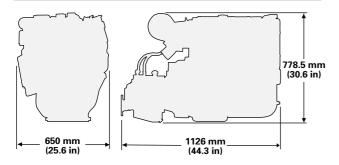
Prop	2400	86	.388	4.8	152	992	431
Demand	2200	66	.369	3.5	145	783	346
Curve: F	2000	50	.366	2.6	138	642	289
	1800	36	.371	1.9	131	431	243
	1600	25	.396	1.4	116	443	201
	1400	17	.477	1.2	106	366	166
	1200	11	.576	0.9	95	403	152
	1000	6	.677	0.6	81	282	116

Brake Mean Effective Pressure	756 kPa
Heat Rejection to Coolant	58.7 kW
Heat Rejection to Exhaust	48 kW
Heat Radiation to Atmosphere from Engine	8.5 kW

Brake Mean Effective Pressure	110 psi
Heat Rejection to Coolant	
Heat Rejection to Exhaust	2729.7 Btu/min
Heat Radiation to Atmosphere from Engine	483.4 Btu/min



DIMENSIONS



with ZF 45 A 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.



3054B MARINE PROPULSION – 64 bkW (86 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.