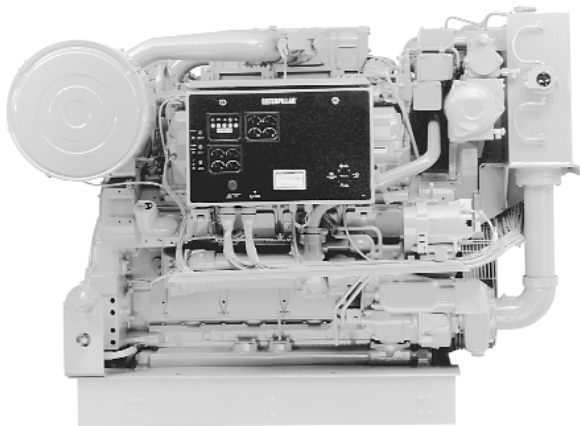


CATERPILLAR®



Shown with
Accessory Equipment

Marine Engine

3508B

High Performance

1119 bkW @ 1925 rpm

1500 bhp @ 1925 rpm

SPECIFICATIONS

V-8, 4-Stroke-Cycle-Diesel

Emissions.....	IMO compliant
Bore—mm (in).....	170 (6.7)
Stroke—mm (in).....	190 (7.5)
Displacement—L (cu in).....	34.5 (2,105)
Rotation (from flywheel end).....	ccw or cw
Compression Ratio.....	14.0:1
Capacity for Liquids—L (U.S. gal)	
Cooling System (engine only).....	102.7 (27.1)
Lube Oil System (refill).....	104 (27)
Oil Change Interval — hrs.....	250
Minimum Lube Oil Grade (required).....	CF-4
Engine Weight, Net Dry	
(approx) — kg (lb).....	4882 (10,763)

STANDARD ENGINE EQUIPMENT

Air Inlet System

regular duty air cleaners, dual turbochargers, 152 mm (6 in) OD straight connection, sea water aftercooler core with copper-nickel tubes and copper fins

Control System

dual Advanced Diesel Engine Management (ADEM II) modules with electronically controlled unit injectors

Cooling System

air separator (deaerator), shipped loose; self priming auxiliary sea water pump, gear-driven centrifugal jacket water pump, oil cooler, thermostats and housing with 92° C (198° F) full open temperature, coolant shunt tank, not installed

Exhaust System

dry gas-tight exhaust manifolds with thermo-laminated heat shields, dual turbochargers with watercooled bearings and thermo-laminated heat shields, vertical exhaust outlet, 203 mm (8 in) ID round flanged outlet

Flywheel and Flywheel Housings

SAE No. 0 flywheel (151 teeth) and SAE No. 0 flywheel housing

Fuel System

electronically controlled unit injectors, front mounted fuel filter with service indicators, fuel transfer pump

Instruments

RH electronic instrument panel with analog gauges and digital display of data for: oil and fuel pressure, oil and fuel filter differential, system DC voltage, exhaust and water temperature, air inlet restriction; digital display only for: tachometer, service meters, fuel consumption (total and instantaneous), start/stop switch

Lube System

top mounted crankcase breather, rear sump oil pan, oil filler and dipstick, spin-on type front mounted oil filter, gear type oil pump, gear type scavenge oil pump

Mounting System

front trunnion, rear pads on sides of flywheel housing

Power Take-Offs

accessory drive on standard rotation engines: lower RH, lower LH; on opposite rotation engines: upper and lower RH and lower LH; two-sided front housing

Protection System

ADEM II electronic monitoring system with customer programmable engine deration strategies, emergency stop pushbutton

General

front and rear lifting eyes, Caterpillar yellow paint, vibration damper and guard

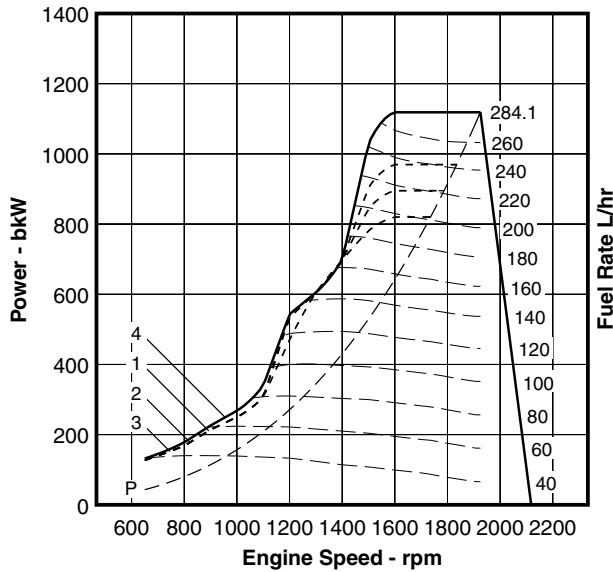
Power produced at the flywheel will be within standard tolerances up to 50° C (122° F) combustion air temperature measured at the air cleaner inlet, and fuel temperature up to 52° C (125° F) measured at the fuel filter base. Power rated in accordance with NMMA procedure as crankshaft power. Reduce crankshaft power by 3% for propeller shaft power.



PERFORMANCE CURVES

E_{hp} Rating — DM4546-00

IMO Compliant — Aftercooler Temperature 30° C (86° F)



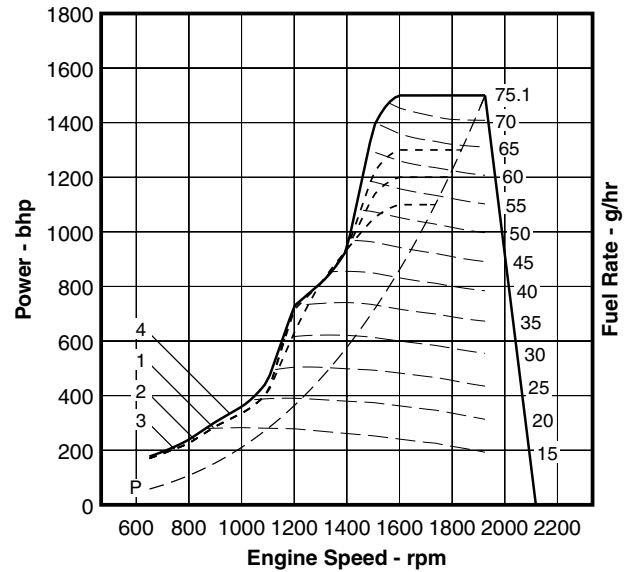
1119 kW

SI Metric

Performance Data

	Engine Speed rpm	Engine Power kW	BSFC g/kW-h	Fuel Rate L/h	Boost Press kPa Gauge	Intake Air Flow m³/min	Exh Manif Temp °C	Exh Gas Flow m³/min
Zone	1735	820.0	207	202.0	226.9	79.0	531	165.7
Limit	1600	820.0	202	197.6	219.6	71.9	552	156.2
Curve: 1	1200	470.0	208	116.8	85.8	30.7	625	80.6
	800	168.0	236	47.3	12.6	11.9	544	26.9
	650	127.0	250	37.8	6.3	9.4	528	20.5
Zone	1785	895.0	208	222.1	246.0	85.0	549	180.8
Limit	1600	895.0	202	215.7	241.2	76.3	574	168.1
Curve: 2	1200	533.0	208	132.0	105.7	34.3	645	89.6
	800	168.0	236	47.3	12.6	11.9	544	26.9
	650	127.0	250	37.8	6.3	9.4	528	20.5
Zone	1835	969.5	210	242.6	260.8	89.9	573	195.5
Limit	1600	969.5	203	234.2	261.6	80.4	598	180.2
Curve: 3	1200	543.0	208	134.4	109.0	34.9	648	91.0
	800	168.0	236	47.3	12.6	11.9	544	26.9
	650	127.0	250	37.8	6.3	9.4	528	20.5
Zone	1925	1118.5	213	284.1	277.1	96.1	634	220.8
Limit	1600	1118.5	205	272.7	296.6	86.2	654	204.7
Curve: 4	1200	543.0	207	134.3	109.0	34.9	648	91.0
	800	178.0	236	50.1	13.7	12.0	572	27.5
	650	132.0	252	39.6	6.9	9.5	550	21.0
Prop Demand	1925	1118.5	213	284.1	277.1	96.1	635	220.8
Curve: P	1600	642.3	204	156.4	165.8	60.5	509	128.4
	1400	430.3	209	106.9	91.2	38.1	506	86.5
	1200	270.9	220	71.2	40.0	23.5	499	55.6
	1000	156.8	236	44.2	15.2	15.7	419	33.6
	800	80.3	268	25.6	5.4	11.3	313	20.7
	650	43.1	312	16.0	1.6	8.8	242	13.7

Brake Mean Effective Pressure2021 kPa
Heat Rejection to Coolant (total)483 kW
Heat Rejection to Aftercooler385 kW
Heat Rejection to Exhaust (total)907 kW
Heat Radiation to Atmosphere From Engine114 kW



1500 hp

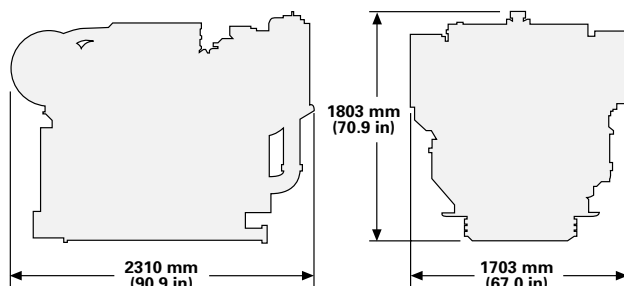
English

Performance Data

	Engine Speed rpm	Engine Power hp	BSFC lb/hp-h	Fuel Rate gph	Boost Press in.Hg. Gauge	Intake Air Flow cfm	Exh Manif Temp °F	Exh Gas Flow cfm
Zone	1735	1100	.340	53.4	67.2	2788	988	5847
Limit	1600	1100	.332	52.2	65.0	2537	1026	5512
Curve: 1	1200	630	.343	30.9	25.4	1083	1157	2844
	800	225	.389	12.5	3.7	420	1011	949
	650	170	.410	10.0	1.9	332	982	723
Zone	1785	1200	.342	58.7	72.8	2999	1021	6380
Limit	1600	1200	.332	57.0	71.4	2692	1065	5932
Curve: 2	1200	715	.341	34.9	31.3	1210	1193	3162
	800	225	.389	12.5	3.7	420	1011	949
	650	170	.410	10.0	1.9	332	982	723
Zone	1835	1300	.345	64.1	77.2	3172	1063	6899
Limit	1600	1300	.333	61.9	77.5	2837	1108	6359
Curve: 3	1200	728	.341	35.5	32.3	1232	1198	3211
	800	225	.389	12.5	3.7	420	1011	949
	650	170	.410	10.0	1.9	332	982	723
Zone	1925	1500	.350	75.1	82.1	3391	1174	7792
Limit	1600	1500	.336	72.0	87.8	3042	1209	7223
Curve: 4	1200	728	.341	35.5	32.3	1232	1198	3211
	800	239	.388	13.2	4.1	423	1062	970
	650	177	.414	10.5	2.0	335	1022	741
Prop Demand	1925	1500	.350	75.1	82.1	3391	1174	7792
Curve: P	1600	861	.336	41.3	49.1	2135	947	4531
	1400	577	.343	28.2	27.0	1344	944	3052
	1200	363	.362	18.8	11.8	829	929	1962
	1000	210	.389	11.7	4.5	554	787	1186
	800	108	.440	6.8	1.6	399	595	730
	650	58	.513	4.2	0.5	311	468	483

Brake Mean Effective Pressure293 psi
Heat Rejection to Coolant (total)27468 Btu/min
Heat Rejection to Aftercooler21895 Btu/min
Heat Rejection to Exhaust (total)51580 Btu/min
Heat Radiation to Atmosphere From Engine6483 Btu/min

DIMENSIONS



RATING DEFINITIONS AND CONDITIONS

E_{hp} RATING – Fast patrol craft and fast yachts with low load factors.

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) and for sea water temperatures up to and including 42° C (108° F) at sea level.

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.



3508B MARINE ENGINE – 1119 kW (1500 bhp)