

CATERPILLAR

Marine Engine

3208

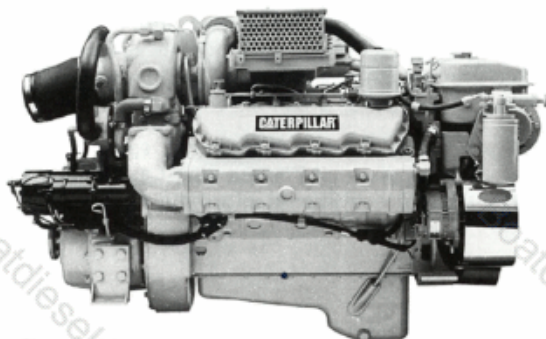
157-336 bkW
210-450 bhp

2800 rpm

CATERPILLAR® ENGINE SPECIFICATIONS

V-8, 4-Stroke-Cycle-Diesel

Bore—mm (in)	114.3 (4.5)
Stroke—mm (in)	127 (5.0)
Displacement—L (cu in)	10.4 (636)
Rotation (from flywheel end)	Counterclockwise
Compression Ratio	16.5:1
435 and 450 hp	15.5:1
Capacity for Liquids—L (U.S. gal)	
Cooling System (engine only)	
DINA	47.3 (12.5)
DITA	56.0 (14.8)
Lube Oil System (refill)	
DINA	12.0 (3.2)
DITA	15.0 (4.0)
Oil Change Interval—hrs	250
Engine Weight, Net Dry (approx) — kg (lb)	
210 hp	722 (1592)
375 hp	772 (1702)
435 hp	899 (1982)
450 hp	899 (1982)
Emissions	IMO compliant

Shown with
Accessory Equipment

STANDARD EQUIPMENT

Air Intake

dry type, single stage air cleaner; AirSep for 435 & 375 hp Classic Editions

Alternator

belt driven, 51 Amp, 12 Volt

Cooling System

thermostats, jacket water pump, auxiliary sea water pump, expansion tank, coolant recovery tank (DITA), marine gear oil cooler (DITA: sea water cooled, DINA: jacket water cooled), engine mounted heat exchanger

Exhaust System

exhaust manifold and turbocharger, water cooled, 152 mm (6 in) round flanged outlet (DITA); exhaust manifold, water cooled, dual 64 mm (2.5 in) round

flanged threaded outlets (DINA)

Flywheel and Housing

SAE No. 2, SAE No. 3

Fuel System

filter, priming pump

Governor

mechanical

Instrument Panel

tachometer drive, wiring harness

Lube System

oil filter, filler, oil level gauge, crankcase breather (DITA), positive crankcase ventilation valve (DINA)

Mounting System

front

Starting

12V electric

OPTIONAL ATTACHMENTS

Air Cleaner — AirSep

Alternator — 12V-105 amp, 24V-35, 55 amp

Belt Guards

Crankshaft Pulleys

Cruise Kits

Dress-up Kits

Electric Service Meter

Electric Starting Motors, 24V

Exhaust Elbows, Pipes, Flexible Fittings, Flanges, Riser, Muffler, Rain Cap

Flywheel Housing Adapter and Drive

Front Support Conversions

Gauges — Single and Dual Station

Instrument Panels

Low Coolant Sensor

Oil Filter — RH Mounted

Shutoff Solenoids — ETS: 12V, 24V; ETR: 24V

Spare Parts Kits

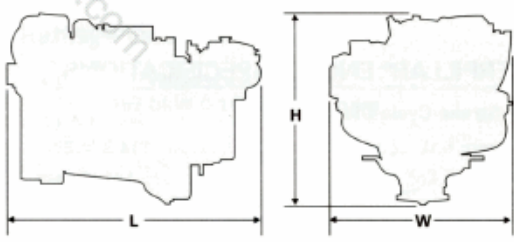
Power produced at the flywheel will be within standard tolerances up to 50° C (122° F) combustion air temperature measured at the air cleaner inlet, and fuel temperature up to 52° C (125° F) measured at the fuel filter base. Power rated in accordance with NMMA procedure as crankshaft power. Reduce crankshaft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





3208 MARINE ENGINE - 157-336 bkW

DIMENSIONS



Type	L		H		W	
	mm	in	mm	in	mm	in
DINA	1086	42.7	921	36.2	917	36.1
DITA	1271	50.0	1019	40.1	963	37.9

RATING DEFINITIONS AND CONDITIONS

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.

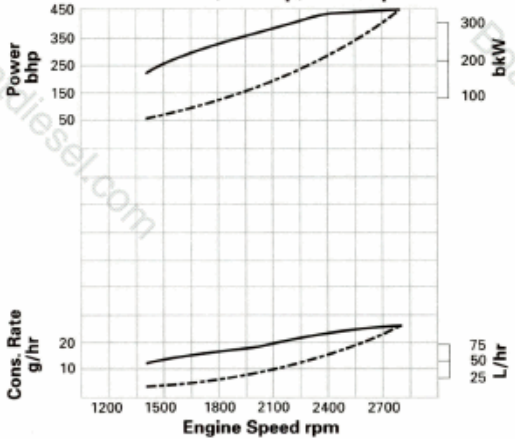
Fuel rates are based on fuel oil of 35° API [16° C (60° F)] gravity having an LHV of 42 780 kJ/kg (18 390 Btu/lb) when used at 29° C (85° F) and weighing 838.9 g/liter (7.001 lbs/U.S. gal).

Additional ratings may be available for specific customer requirements. Consult your Caterpillar representative for additional information.

PERFORMANCE CURVES

E Rating - 2800 rpm

DM6068 (PA7464)
336 bkW (450 bhp) 456 mhp



Cubic Prop Demand Curve Data (for displacement hulls only)

Speed rpm	Power bkW	Fuel Cons g/bkW-hr	Fuel Rate L/hr
2800	336	249	99.4
2400	211	222	55.9
2000	122	216	31.5
1600	63	225	16.8
1400	42	234	11.7

Speed rpm	Power bhp	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
2800	450	.409	26.3
2400	283	.365	14.8
2000	164	.355	8.3
1600	84	.370	4.4
1400	56	.385	3.1

Max Power Curve Data

Speed rpm	Power bkW	Fuel Cons g/bkW-hr	Fuel Rate L/hr
2800	336	249	99.4
2400	323	234	90.0
2000	269	223	71.5
1600	214	227	58.0
1400	165	234	45.9

Speed rpm	Power bhp	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
2800	450	.409	26.3
2400	433	.384	23.8
2000	361	.366	18.9
1600	287	.373	15.3
1400	221	.385	12.1

E RATING - Planing hull vessels such as pleasure craft, harbor patrol, harbor master, and some fishing and pilot boats.

Prop Demand ----- 3.0 Exponent (for displacement hulls only)
 Engine Performance Parameters:
 Power ± 3%
 Specific Fuel Consumption ± 3%
 Fuel Rate ± 5%

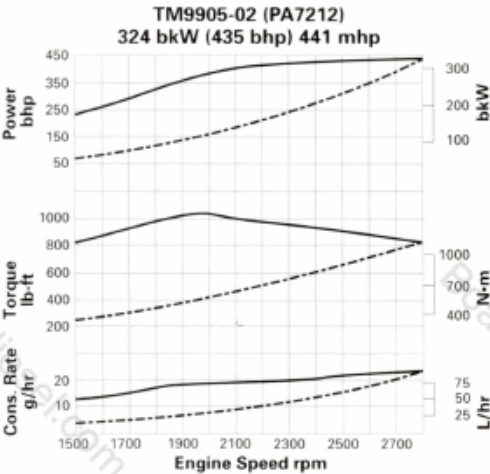
3208 MARINE ENGINE - 157-336 bkW



PERFORMANCE CURVES

Turbocharged-Aftercooled (DITA) — Separate Circuit Aftercooling 30° C (86° F) sea water

E Rating – 2800 rpm



Prop Demand ----- 3.0 Exponent
 (for displacement hulls only)
 Engine Performance Parameters:
 Power ± 3%
 Specific Fuel Consumption ± 3%
 Fuel Rate ± 5%

Cubic Prop Demand Curve Data
 (for displacement hulls only)

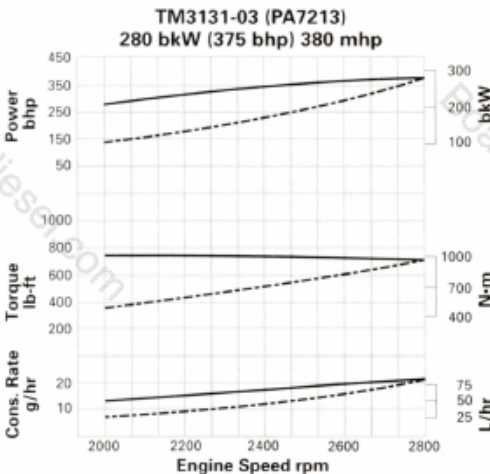
Speed rpm	Power bkW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
2800	325	1107	235	90.7
2600	260	954	217	67.3
2400	204	813	209	50.8
2200	157	683	206	38.6
2000	118	565	207	29.2
1800	86	457	215	22.0
1700	73	408	222	19.2
1600	61	361	229	16.6
1500	50	318	232	13.8

Max Power Curve Data

Power bkW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
325	1107	235	90.7
322	1184	221	85.1
315	1251	209	78.3
303	1314	205	73.9
293	1397	210	73.1
255	1352	214	65.1
221	1241	215	56.7
194	1158	217	50.2
174	1105	225	46.6

E RATING – Planing hull vessels such as pleasure craft, harbor patrol, harbor master, and some fishing and pilot boats.

E Rating – 2800 rpm



Prop Demand ----- 3.0 Exponent
 (for displacement hulls only)
 Engine Performance Parameters:
 Power ± 3%
 Specific Fuel Consumption ± 3%
 Fuel Rate ± 5%

Cubic Prop Demand Curve Data
 (for displacement hulls only)

Speed rpm	Power bkW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
2800	280	956	238	79.5
2600	224	824	225	60.1
2400	176	702	217	45.5
2000	102	490	202	24.5

Max Power Curve Data

Power bkW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
280	956	238	79.5
269	991	229	73.5
254	1015	210	63.7
209	1000	199	49.6

E RATING – Planing hull vessels such as pleasure craft, harbor patrol, harbor master, and some fishing and pilot boats.



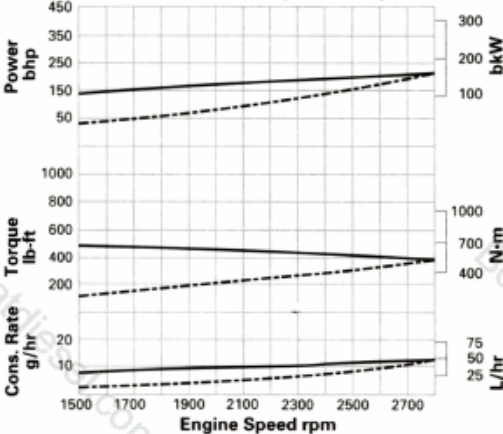
3208 MARINE ENGINE - 157-336 bkW

PERFORMANCE CURVES

Naturally Aspirated (DINA)

E Rating - 2800 rpm

**TM0952-03 (PA7220)
157 bkW (210 bhp) 213 mhp**



Prop Demand ----- 3.0 Exponent
(for displacement hulls only)

Engine Performance Parameters:

- Power $\pm 3\%$
- Specific Fuel Consumption $\pm 3\%$
- Fuel Rate $\pm 5\%$

Cubic Prop Demand Curve Data
(for displacement hulls only)

Speed rpm	Power bkW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
2800	157	534	241	45.0
2600	125	460	226	33.8
2400	99	392	226	26.5
2200	76	330	230	20.8
2000	57	272	236	16.1
1800	42	221	246	12.2
1700	35	197	251	10.5
1600	29	174	257	9.0
1500	24	153	263	7.5

Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
2800	210	394	.397	11.9
2600	168	339	.372	8.9
2400	132	289	.371	7.0
2200	102	243	.377	5.5
2000	76	201	.389	4.3
1800	56	163	.404	3.2
1700	47	145	.413	2.8
1600	39	128	.423	2.4
1500	32	113	.433	2.0

Max Power Curve Data

Power bkW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
157	534	241	45.0
151	554	237	42.6
144	574	232	39.9
137	595	225	36.8
129	615	222	34.0
120	636	216	30.9
115	645	218	29.9
109	653	217	28.3
104	663	213	26.4

Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
210	394	.397	11.9
202	409	.390	11.3
193	423	.381	10.5
184	439	.370	9.7
173	454	.364	9.0
161	469	.355	8.2
154	476	.359	7.9
147	482	.357	7.5
140	489	.350	7.0

E RATING - Planing hull vessels such as pleasure craft, harbor patrol, harbor master, and some fishing and pilot boats.