



# Marine Engine

# 3208

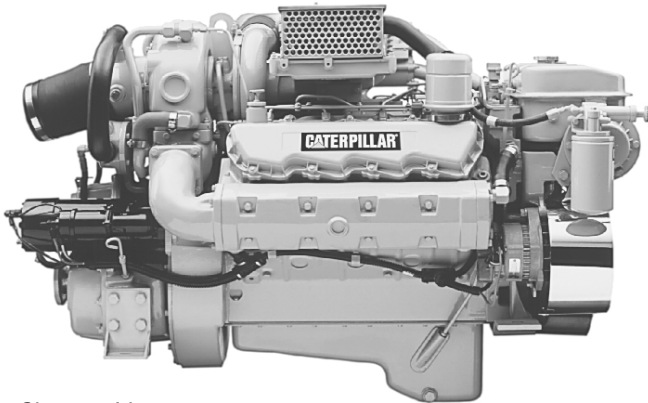
157-336 bkW  
210-450 bhp

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

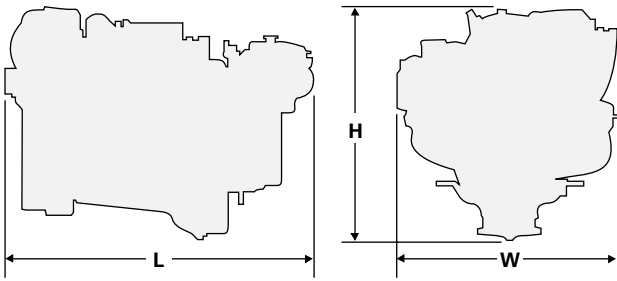
## OPTIONAL ATTACHMENTS

- 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.



### 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

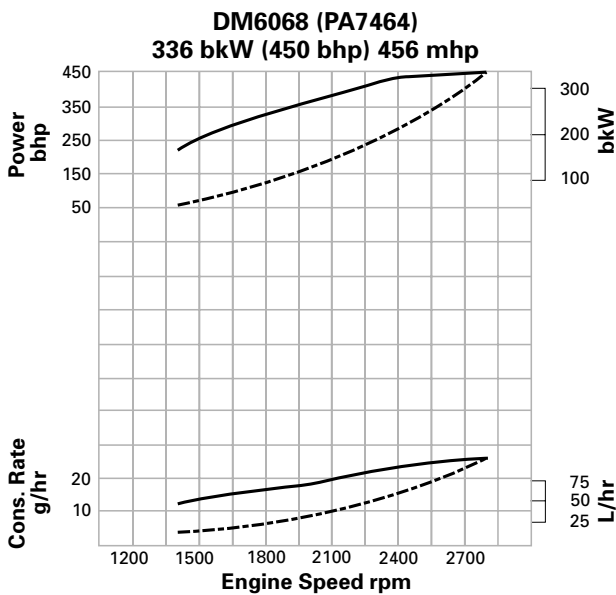
**Ratings** are based on SAE J1228/ISO8665 standard conditions of 100 kPa (29.61 in Hg), 25° C (77° F), and 30% relative humidity. These ratings also apply at ISO3046/1, DIN6271/3, and BS5514 conditions of 100 kPa (29.61 in Hg), 27° C (81° F), and 60% relative humidity.

**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



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)

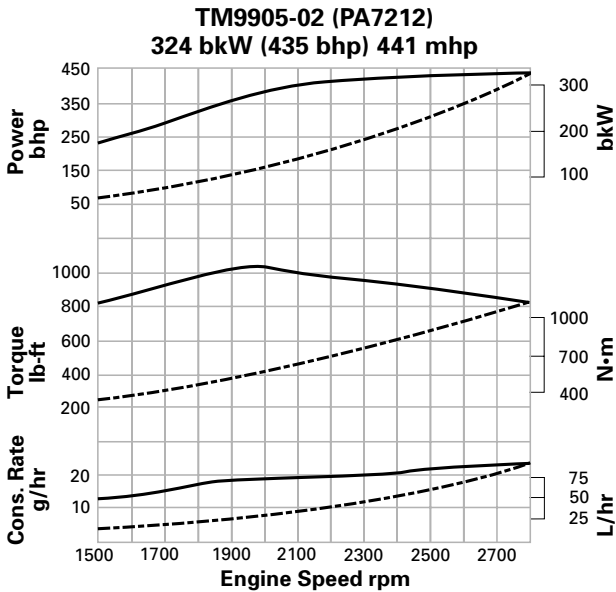
Engine Performance Parameters:

- Power ±3%
- Specific Fuel Consumption ±3%
- Fuel Rate ±5%

## 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

Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
2800	435	816	.386	24.0
2600	348	704	.357	17.8
2400	274	600	.344	13.4
2200	211	504	.339	10.2
2000	159	417	.340	7.7
1800	116	337	.353	5.8
1700	97	301	.365	5.1
1600	81	266	.376	4.4
1500	67	235	.381	3.6

Max Power Curve Data

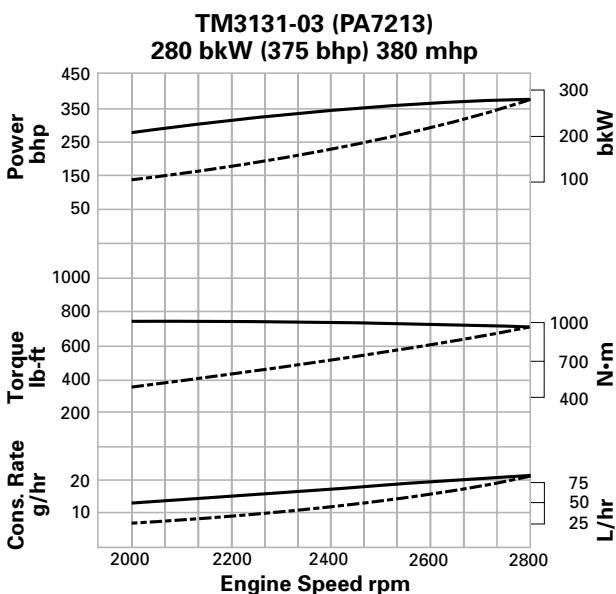
Power bkW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
325	1107	235	90.7
322	1184	221	85.1
315	1251	209	78.3
303	1314	205	73.9
293	1397	210	73.1
255	1352	214	65.1
221	1241	215	56.7
194	1158	217	50.2
174	1105	225	46.6

Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
435	816	.386	24.0
432	873	.363	22.5
422	923	.344	20.7
406	969	.337	19.5
392	1030	.345	19.3
342	997	.352	17.2
296	915	.353	15.0
260	854	.357	13.3
233	815	.370	12.3

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

Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
2800	375	703	.391	21.0
2600	300	606	.370	15.9
2400	236	516	.357	12.0
2000	137	360	.332	6.5

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

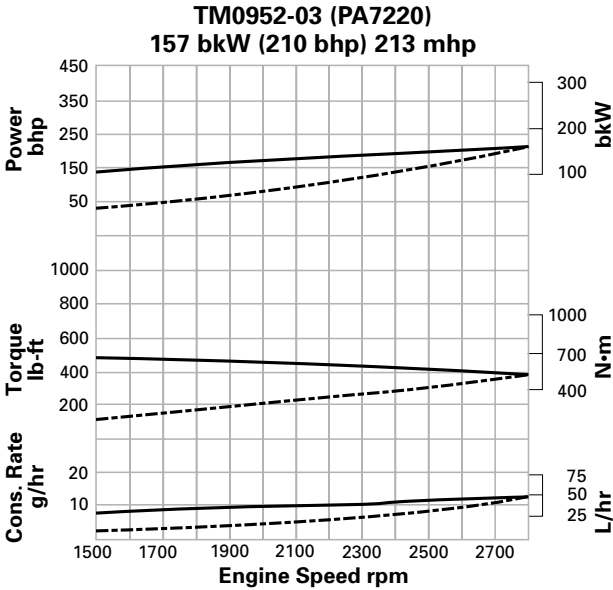
Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
375	703	.391	21.0
361	729	.376	19.4
341	746	.345	16.8
280	735	.327	13.1

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

### PERFORMANCE CURVES

Naturally Aspirated (DINA)

**E Rating – 2800 rpm**



Cubic Prop Demand Curve Data (for displacement hulls only)					Max Power Curve Data			
Speed rpm	Power bkW	Torque N·m	Fuel Cons g/bkW-hr	Fuel Rate L/hr	Power bkW	Torque N·m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
2800	157	534	241	45.0	157	534	241	45.0
2600	125	460	226	33.8	151	554	237	42.6
2400	99	392	226	26.5	144	574	232	39.9
2200	76	330	230	20.8	137	595	225	36.8
2000	57	272	236	16.1	129	615	222	34.0
1800	42	221	246	12.2	120	636	216	30.9
1700	35	197	251	10.5	115	645	218	29.9
1600	29	174	257	9.0	109	653	217	28.3
1500	24	153	263	7.5	104	663	213	26.4

Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
2800	210	394	.397	11.9	210	394	.397	11.9
2600	168	339	.372	8.9	202	409	.390	11.3
2400	132	289	.371	7.0	193	423	.381	10.5
2200	102	243	.377	5.5	184	439	.370	9.7
2000	76	201	.389	4.3	173	454	.364	9.0
1800	56	163	.404	3.2	161	469	.355	8.2
1700	47	145	.413	2.8	154	476	.359	7.9
1600	39	128	.423	2.4	147	482	.357	7.5
1500	32	113	.433	2.0	140	489	.350	7.0

**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%