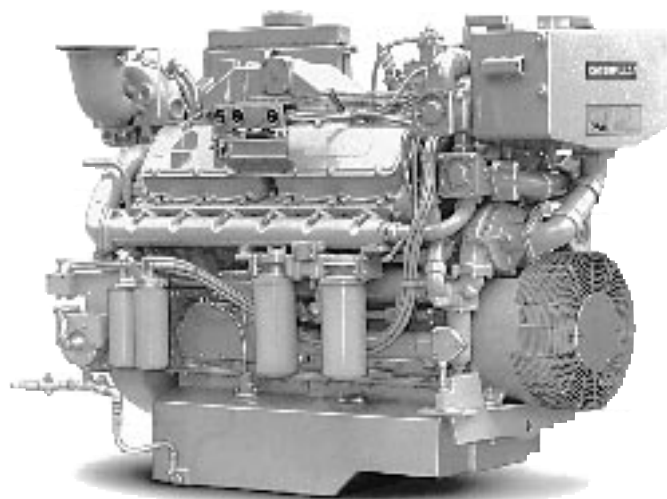


CATERPILLAR®

Marine Engine

3412C

317-354 bkW/425-475 bhp
1200 rpm



TA Shown with
Accessory Equipment

CATERPILLAR® ENGINE SPECIFICATIONS

V-12, 4-Stroke-Cycle-Diesel

Bore — mm (in) 137 (5.4)

Stroke — mm (in) 152 (6.0)

Displacement — L (cu in) 27.0 (1649)

Rotation (from flywheel end) .. Counterclockwise

Compression Ratio 14.5:1

Capacity for Liquids — L (U.S. gal)

Cooling System 162.0 (42.8)

Lube Oil System (refill) 72.0 (19.0)

Oil Change Interval 250 hrs

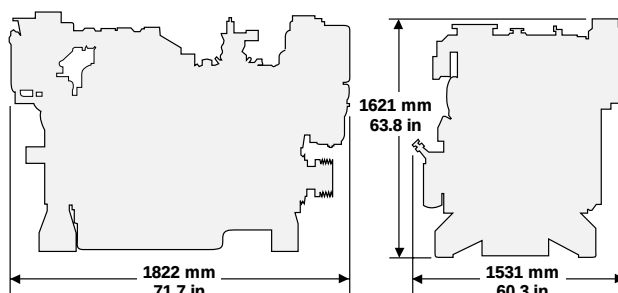
Engine Weight, Net Dry

(approx) — kg (lb) 2313 (5100)

DITA Heat Exchanger Cooling 2458 (5420)

DITA Keel Cooling 2415 (5325)

DIMENSIONS



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.



RATING DEFINITIONS AND CONDITIONS

Ratings are based on SAE J1228/ISO8665 standard conditions of 100 kPa (29.61 in Hg) and 25° C (77° F). These ratings also apply at ISO3046/1, DIN6271, 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.

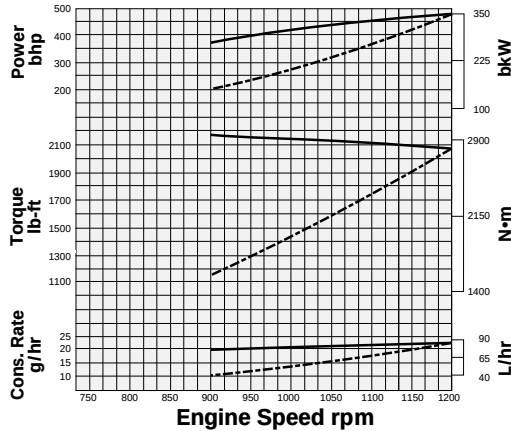


3412C MARINE ENGINE - 317-354 bkW

PERFORMANCE CURVES

Turbocharged-Aftercooled

B Rating – 1200 rpm 354 bkW (475 bhp) 481 mhp

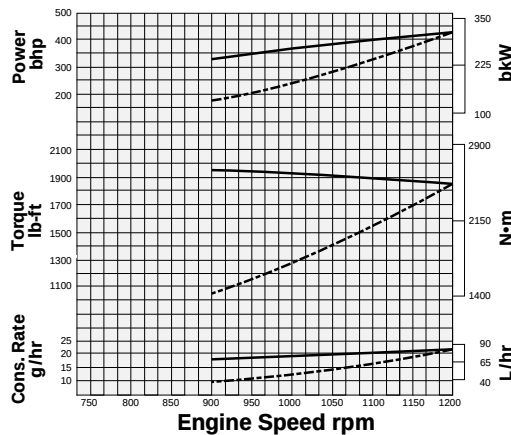


Prop Demand Curve Data					Max Power Curve Data			
Speed rpm	Power bkW	Torque N·m	Fuel Cons g/bkW-hr	Fuel Rate L/hr	Power bkW	Torque N·m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1200	354	2817	211	88.8	354	2817	211	88.8
1100	273	2367	214	69.4	330	2863	211	82.9
1000	205	1956	220	53.8	305	2909	215	77.9
900	149	1585	230	40.9	278	2952	221	73.4

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
1200	475	2078	.346	23.5	475	2078	.346	23.5
1100	366	1746	.351	18.3	442	2112	.347	21.9
1000	275	1443	.362	14.2	409	2146	.353	20.6
900	200	1169	.377	10.8	373	2177	.364	19.4

B RATING – Vessels such as mid-water trawlers, purse seiners, crew and supply boats, ferries, and towboats where locks, sandbars, and curves dictate frequent slowing, and engine load and speed are constant with some cycling.

A Rating – 1200 rpm 317 bkW (425 bhp) 431 mhp



Prop Demand Curve Data					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
1200	317	2523	212	80.0	317	2523	212	80.0
1100	244	2120	216	62.9	297	2581	212	75.0
1000	183	1752	223	48.7	274	2617	216	70.4
900	134	1419	231	36.9	250	2653	223	66.3

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
1200	425	1861	.348	21.1	425	1861	.348	21.1
1100	327	1564	.355	16.6	399	1904	.348	19.8
1000	246	1292	.366	12.9	368	1930	.354	18.6
900	179	1047	.380	9.7	335	1957	.366	17.5

A RATING – For heavy-duty service in vessels such as freighters, tugboats, bottom drag trawlers, and deep river towboats when the engine is operated at rated load and speed up to 100% of the time without interruption or load cycling.

- Prop Demand ----- 3.0 Exponent
- Engine Performance Parameters: Power +/- 3%;
Specific Fuel Consumption +/- 3%; Fuel Rate +/- 5%.