



# Marine Engine

# 3516B

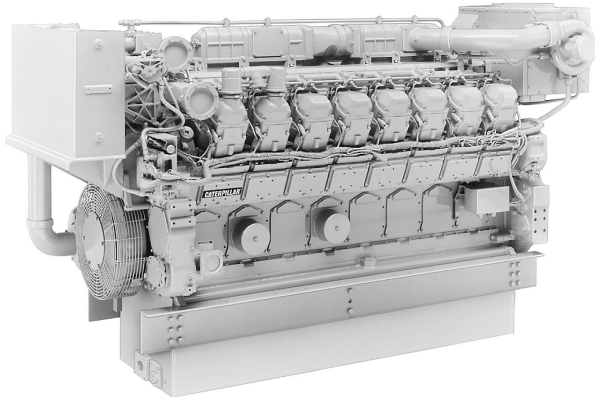
1492-1865 bkW  
2000-2500 bhp

1600-1800 rpm

## CATERPILLAR® ENGINE SPECIFICATIONS

### V-16, 4-Stroke-Cycle-Diesel

Emissions	IMO compliant
Bore—mm (in)	170 (6.7)
Stroke—mm (in)	190 (7.5)
High displacement	215 (8.5)
Displacement—L (cu in)	69 (4210)
High displacement	78.1 (4766)
Rotation (from flywheel end)	ccw or cw
Compression Ratio	14.0:1
Capacity for Liquids—L (U.S. gal)	
Cooling System	365.5 (96.6)
Lube Oil System (refill)	798.7 (211)
Oil Change Interval — hrs	1000
Minimum Lube Oil Grade (required)	CF-4
Engine Weight, Net Dry	
(approx) — kg (lb)	7795 (17 185)
High displacement	7798 (17 191)



Shown with  
Accessory Equipment

## STANDARD ENGINE EQUIPMENT

### Air Inlet System

air cleaners, regular duty; dual turbochargers, 152 mm (6 in) OD straight connection; separate circuit aftercooler core, corrosion resistant coating (air side)

### Control System

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

### Cooling System

auxiliary fresh water pump (on SCAC engines); auxiliary sea water pump, non-self priming (heat exchanger engines only); expansion tank; jacket water pump, gear driven, centrifugal; oil cooler; keel cooling connections (keel cooled engines only); thermostats and housing, full open temperature 92° C (198° F)

### Exhaust System

dry gas-tight manifolds with thermo-laminated heat shields; dual turbochargers with watercooled bearings and thermo-laminated heat shields; exhaust outlet, vertical, 356 mm (14 in); ID round flanged outlet

### Flywheels and Flywheel Housings

flywheel, SAE No. 00, 183 teeth; flywheel housing, SAE No. 00

### Fuel System

electronically controlled unit injectors; fuel filter, RH with service indicators; fuel transfer pump

### Instrumentation

electronic instrument panel, RH 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, fuel pressure, air inlet restriction; digital display only for: tachometer, service meter, fuel consumption (total and instantaneous)

### Lube System

dual crankcase breather, top mounted; deep sump oil pan; oil filler and dipstick, RH; oil filter, RH with service indicators; oil pump, gear type

### Mounting System

rails, engine length, ledge type, 203 x 203 mm (8 x 8 in)

### Power Take-Offs

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

### Protection System

ADEM II Electronic Monitoring System with customer programmable alarm, shutdown, and deration strategies; emergency stop pushbutton

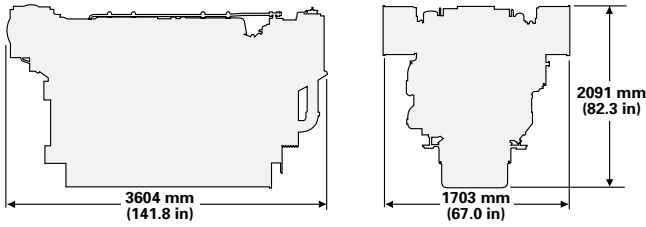
### General

lifting eyes; paint, Caterpillar yellow; 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.



### DIMENSIONS



### 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. 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.

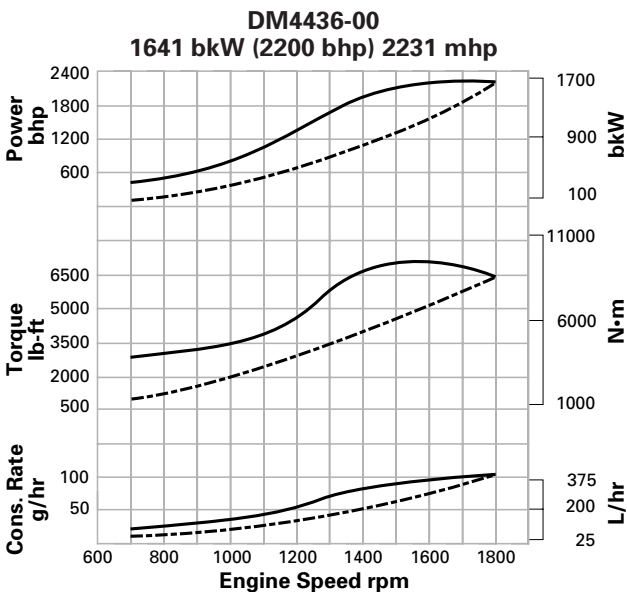
**Fuel rates** are based on fuel oil of 35° API [16° C (60° F)] gravity having an LHV of 42 780 kJ/kg (18 390 Btu/lb) when used at 29° C (85° F) and weighing 838.9 g/liter (7.001 lbs/U.S. gal). Fuel consumption shown with all oil, fuel, and water pumps, engine driven. For a “without pumps” condition, 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.

### PERFORMANCE CURVES

Aftercooler Temperature 60° C (140° F)

**C Rating – 1800 rpm**



**Cubic Prop Demand Curve Data**  
(for displacement hulls only)

Speed rpm	Power kW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1800	1641	8703	200	390.6
1600	1152	6877	202	276.9
1400	772	5265	209	192.4
1200	486	3868	216	125.1
1000	281	2686	223	74.7
900	205	2176	230	56.2
700	97	1316	270	31.0

Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
1800	2200	6419	.328	103.2
1600	1545	5072	.331	73.1
1400	1035	3883	.344	50.8
1200	652	2853	.355	33.0
1000	377	1981	.366	19.7
900	275	1605	.378	14.8
700	129	971	.444	8.2

**Max Power Curve Data**

Power kW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1641	8703	200	390.6
1641	9791	194	379.7
1378	9399	196	322.2
803	6390	209	200.1
476	4545	218	123.8
420	4456	221	110.7
275	3752	228	74.8

Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
2200	6419	.328	103.2
2200	7221	.319	100.3
1848	6932	.322	85.1
1077	4713	.344	52.9
638	3352	.359	32.7
563	3287	.363	29.2
369	2767	.375	19.8

**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.

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

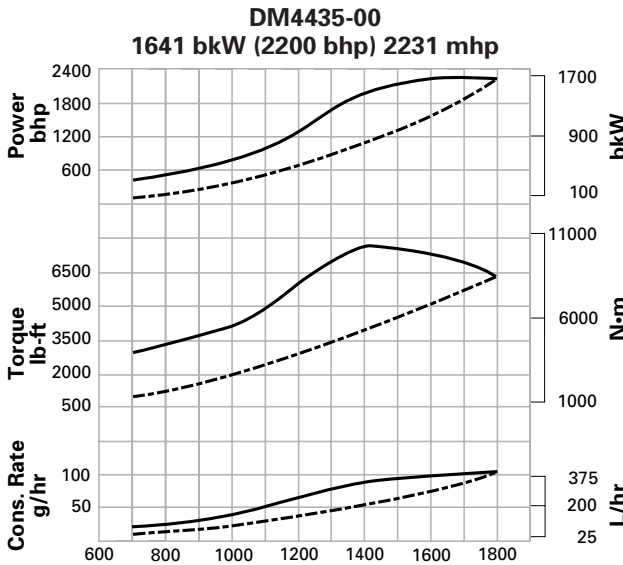
Engine Performance Parameters:

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

## PERFORMANCE CURVES

Aftercooler Temperature 30° C (86° F)

**C Rating – 1800 rpm**



**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
1800	1641	8703	200	391.3
1600	1152	6877	201	276.0
1400	772	5265	211	193.7
1200	486	3868	212	122.8
1000	281	2686	216	72.3
900	205	2176	224	54.8
700	97	1316	261	30.0

Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
1800	2200	6419	.329	103.4
1600	1545	5072	.330	72.9
1400	1035	3883	.346	51.2
1200	652	2853	.349	32.4
1000	377	1981	.354	19.1
900	275	1605	.368	14.5
700	129	971	.428	7.9

**Max Power Curve Data**

Power bkW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1641	8703	200	391.3
1641	9791	194	379.4
1504	10259	191	341.7
1005	7998	200	240.0
555	5300	213	140.6
479	5082	216	123.6
298	4065	216	76.9

Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
2200	6419	.329	103.4
2200	7221	.319	100.2
2017	7567	.313	90.3
1348	5899	.329	63.4
744	3909	.350	37.1
642	3748	.356	32.7
400	2998	.356	20.3

**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.

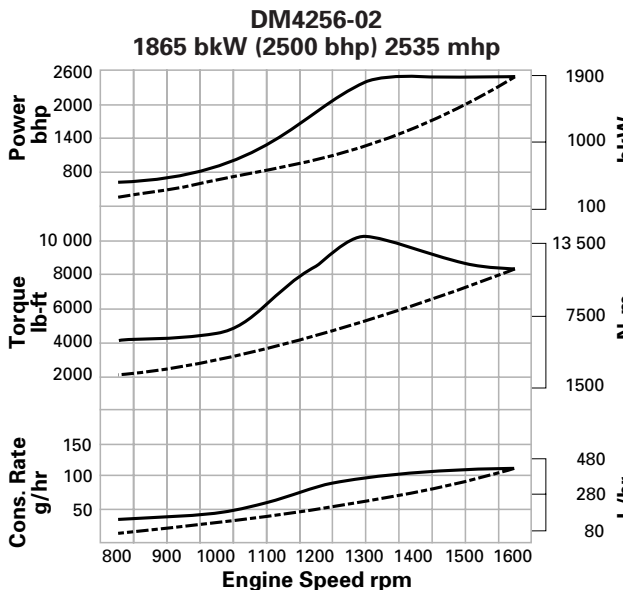
Prop Demand ----- 3.0 Exponent  
(for displacement hulls only)

Engine Performance Parameters:

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

Aftercooler Temperature 60° C (140° F)

**C Rating – 1600 rpm**



**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
1600	1865	11128	195	432.2
1500	1536	9780	192	351.2
1400	1249	8520	192	285.8
1300	1000	7346	195	232.4
1200	787	6259	200	187.4
1100	606	5260	205	147.8
1000	455	4347	207	112.5
900	332	3521	209	82.8
800	233	2782	212	58.9

Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
1600	2500	8208	.320	114.2
1500	2060	7213	.315	92.8
1400	1675	6284	.315	75.5
1300	1341	5418	.321	61.4
1200	1055	4616	.329	49.5
1100	813	3880	.337	39.0
1000	610	3206	.341	29.7
900	445	2597	.344	21.9
800	313	2052	.349	15.6

**Max Power Curve Data**

Power bkW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1865	11128	195	432.2
1865	11870	195	433.6
1865	12718	194	431.1
1865	13696	193	428.4
1481	11786	194	341.6
977	8482	202	235.4
681	6503	212	172.0
545	5783	220	143.1
456	5443	225	122.4

Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
2500	8208	.320	114.2
2500	8755	.321	114.5
2500	9380	.319	113.9
2500	10102	.317	113.2
1986	8693	.318	90.2
1310	6256	.332	62.2
913	4796	.348	45.4
731	4265	.362	37.8
612	4015	.370	32.3

**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.

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

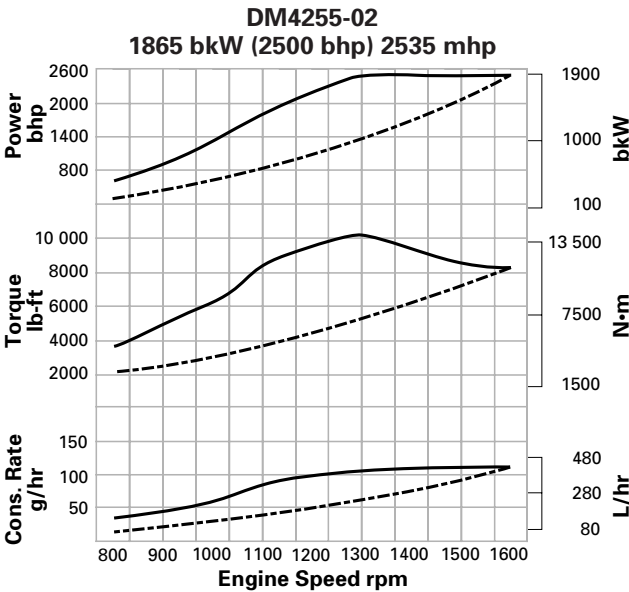
Engine Performance Parameters:

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

**PERFORMANCE CURVES**

Aftercooler Temperature 30° C (86° F)

**C Rating – 1600 rpm**



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

**High Displacement**

Cubic Prop Demand Curve Data  
(for displacement hulls only)

Speed rpm	Power kW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1600	1865	11128	191	423.5
1500	1536	9780	190	347.0
1400	1249	8520	189	281.8
1300	1000	7346	191	227.1
1200	787	6259	194	182.2
1100	606	5260	198	143.2
1000	455	4347	201	109.0
900	332	3521	203	80.4
800	233	2782	208	57.8

Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
1600	2500	8208	.313	111.9
1500	2060	7213	.312	91.7
1400	1675	6284	.311	74.4
1300	1341	5418	.313	60.0
1200	1055	4616	.319	48.1
1100	813	3880	.326	37.8
1000	610	3206	.330	28.8
900	445	2597	.334	21.2
800	313	2052	.342	15.3

Max Power Curve Data

Power kW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1865	11128	191	423.5
1865	11870	190	422.2
1865	12718	189	420.8
1865	13696	189	419.1
1679	13361	188	376.8
1344	11667	194	310.1
898	8575	202	216.1
653	6929	210	163.4
450	5372	215	115.4

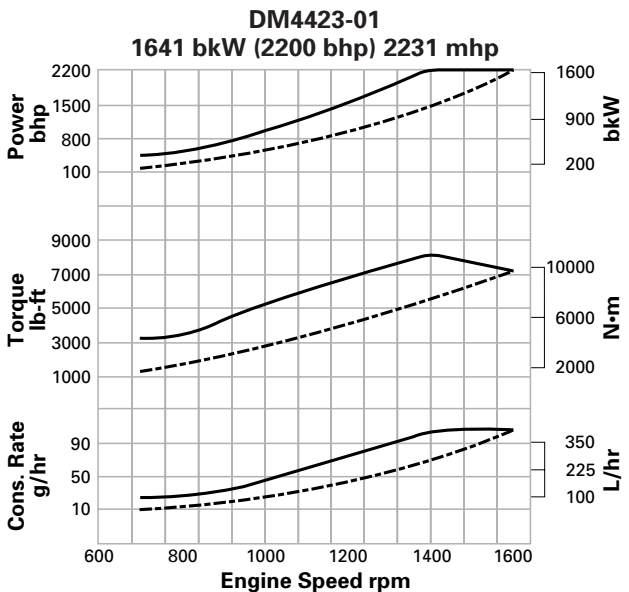
  

Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
2500	8208	.313	111.9
2500	8755	.312	111.5
2500	9380	.311	111.2
2500	10102	.310	110.7
2252	9855	.310	99.5
1802	8605	.318	81.9
1204	6325	.332	57.1
876	5111	.345	43.2
603	3962	.354	30.5

**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.

Aftercooler Temperature 60° C (140° F)

**C Rating – 1600 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 kW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1600	1641	9791	203	397.5
1400	1099	7496	205	269.0
1200	692	5507	205	168.8
1000	401	3825	210	100.3
800	205	2448	222	54.3
700	137	1874	235	38.5

Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
1600	2200	7221	.334	105.0
1400	1474	5529	.338	71.1
1200	928	4062	.336	44.6
1000	537	2821	.346	26.5
800	275	1806	.365	14.3
700	184	1382	.386	10.2

Max Power Curve Data

Power kW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1641	9791	203	397.5
1641	11190	200	390.6
1179	9382	198	277.6
727	6942	212	183.4
391	4667	226	105.1
319	4352	233	88.5

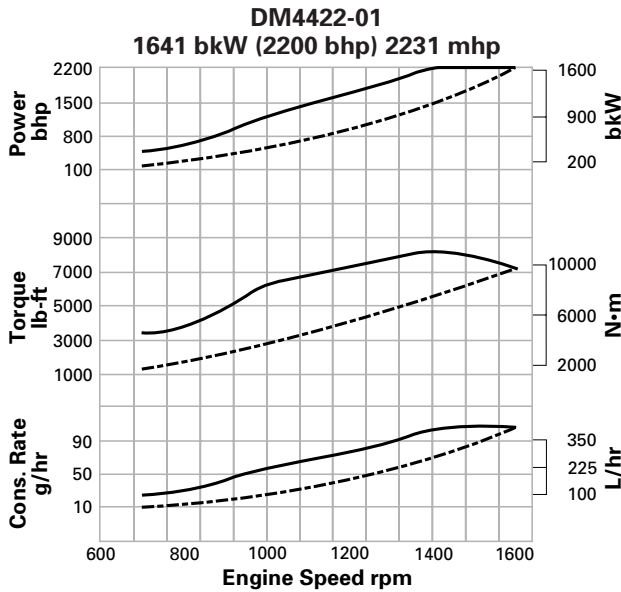
Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
2200	7221	.334	105.0
2200	8253	.328	103.2
1581	6920	.325	73.3
975	5120	.348	48.4
524	3442	.371	27.8
428	3210	.383	23.4

**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.

## PERFORMANCE CURVES

Aftercooler Temperature 30° C (86° F)

### C Rating – 1600 rpm



**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
1600	1641	9791	202	395.1
1400	1099	7496	203	266.4
1200	692	5507	201	165.7
1000	401	3825	206	98.3
800	205	2448	220	53.8
700	137	1874	236	38.7

**Max Power Curve Data**

Power bkW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1641	9791	202	395.1
1641	11190	198	387.6
1256	9995	194	289.7
898	8575	205	219.8
431	5145	221	113.5
346	4720	227	93.7

Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
1600	2200	7221	.332	104.4
1400	1474	5529	.334	70.4
1200	928	4062	.330	43.8
1000	537	2821	.338	26.0
800	275	1806	.362	14.2
700	184	1382	.388	10.2

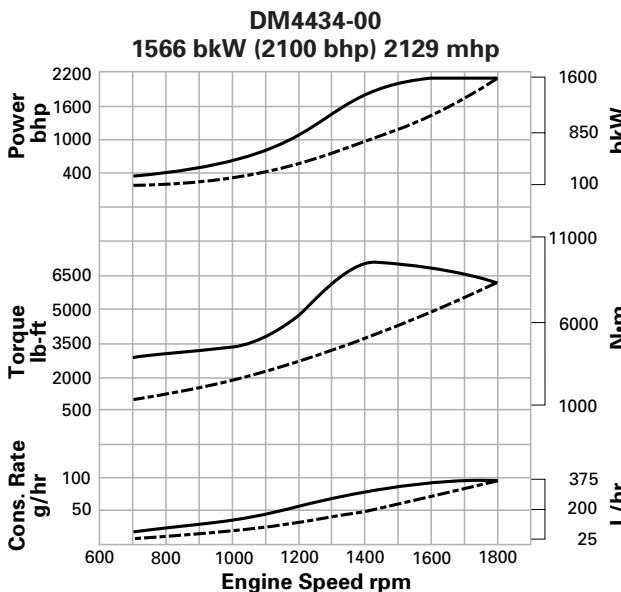
Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
2200	7221	.332	104.4
2200	8253	.326	102.4
1684	7372	.318	76.5
1204	6325	.338	58.1
578	3795	.363	30.0
464	3481	.373	24.8

**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.

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

Aftercooler Temperature 60° C (140° F)

### B Rating – 1800 rpm



**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
1800	1566	8308	200	373.0
1600	1100	6564	203	265.7
1400	737	5026	210	184.4
1200	464	3692	217	119.8
1000	269	2564	224	71.6
900	196	2077	232	54.1
700	92	1256	274	30.1

**Max Power Curve Data**

Power bkW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1566	8308	200	373.0
1566	9346	195	363.4
1378	9399	196	322.4
803	6390	209	200.1
476	4545	218	123.8
420	4456	221	110.7
275	3752	228	74.8

Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
1800	2100	6128	.328	98.5
1600	1475	4841	.333	70.2
1400	988	3707	.345	48.7
1200	622	2723	.356	31.6
1000	360	1891	.368	18.9
900	263	1532	.381	14.3
700	124	926	.451	8.0

Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
2100	6128	.328	98.5
2100	6893	.320	96.0
1848	6932	.323	85.2
1077	4713	.344	52.9
638	3352	.359	32.7
563	3287	.363	29.2
369	2767	.375	19.8

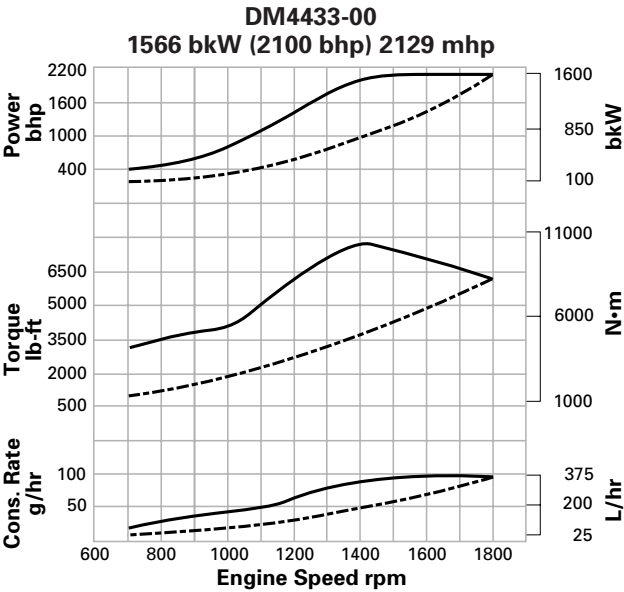
**B RATING** – Vessels such as midwater trawlers, purse seiners, crew and supply boats, ferries, and towboats where locks, sandbars, and curves dictate frequent slowing, and engine load and speed are constant with some cycling.

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

**PERFORMANCE CURVES**

Aftercooler Temperature 30° C (86° F)

**B Rating – 1800 rpm**



**Cubic Prop Demand Curve Data**  
(for displacement hulls only)

Speed rpm	Power kW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1800	1566	8308	200	373.3
1600	1100	6564	202	264.5
1400	737	5026	211	185.5
1200	464	3692	213	117.6
1000	269	2564	217	69.4
900	196	2077	226	52.7
700	92	1256	265	29.1

Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
1800	2100	6128	.329	98.6
1600	1475	4841	.332	69.9
1400	988	3707	.347	49.0
1200	622	2723	.350	31.1
1000	360	1891	.356	18.3
900	263	1532	.372	13.9
700	124	926	.435	7.7

**Max Power Curve Data**

Power kW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1566	8308	200	373.3
1566	9346	194	362.5
1504	10259	191	341.9
1005	7998	200	240.0
555	5300	213	140.6
479	5082	216	123.6
298	4065	216	76.9

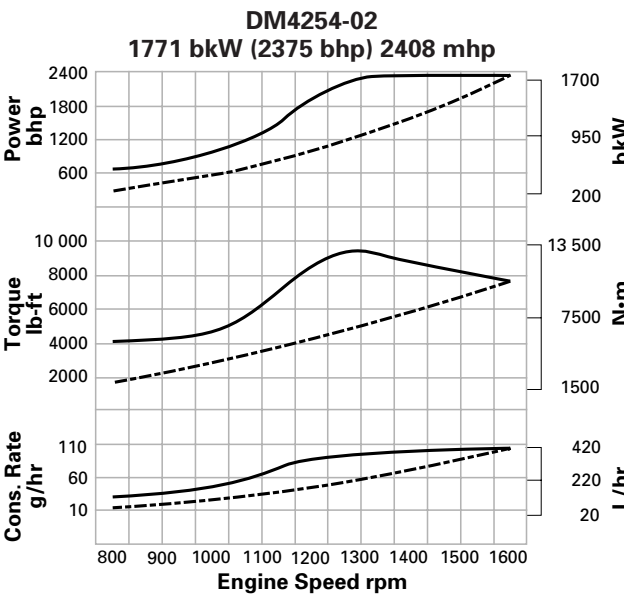
Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
2100	6128	.329	98.6
2100	6893	.319	95.8
2017	7567	.314	90.3
1348	5899	.329	63.4
744	3909	.350	37.1
642	3748	.356	32.7
400	2998	.356	20.3

**B RATING** – Vessels such as midwater 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.

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

Aftercooler Temperature 60° C (140 ° F)

**B Rating – 1600 rpm**



**Cubic Prop Demand Curve Data**  
(for displacement hulls only)

Speed rpm	Power kW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1600	1771	10570	196	413.8
1500	1459	9290	192	334.4
1400	1186	8093	192	272
1300	950	6978	196	221.6
1200	747	5946	200	178.4
1100	576	4996	205	140.5
1000	432	4129	207	106.8
900	315	3344	210	78.7
800	221	2642	213	56.2

Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
1600	2375	7796	.322	109.3
1500	1957	6852	.316	88.3
1400	1591	5969	.316	71.9
1300	1274	5147	.322	58.5
1200	1002	4386	.329	47.1
1100	772	3685	.337	37.1
1000	580	3045	.341	28.2
900	423	2466	.344	20.8
800	297	1949	.350	14.8

**High Displacement**

**Max Power Curve Data**

Power kW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1771	10570	196	413.8
1771	11274	195	410.5
1771	12080	193	407.3
1771	13009	192	404.8
1481	11786	193	341.2
977	8482	202	235.3
681	6503	212	172.0
545	5783	220	143.1
456	5443	225	122.4

Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
2375	7796	.322	109.3
2375	8315	.320	108.4
2375	8910	.317	107.6
2375	9595	.315	106.9
1986	8693	.318	90.1
1310	6256	.332	62.2
913	4796	.348	45.4
731	4265	.362	37.8
612	4015	.370	32.3

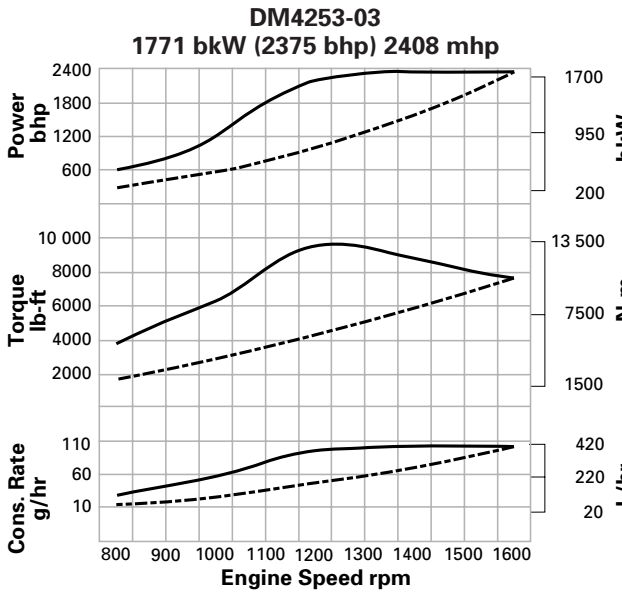
Prop Demand ----- 3.0 Exponent  
(for displacement hulls only)  
Engine Performance Parameters:  
Power ± 3%  
Specific Fuel Consumption ± 3%  
Fuel Rate ± 5%

**B RATING** – Vessels such as midwater 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.

## PERFORMANCE CURVES

Aftercooler Temperature 30° C (86° F)

**B Rating – 1600 rpm**



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

### High Displacement

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
1600	1771	10570	192	404.5
1500	1459	9290	190	330.1
1400	1186	8093	189	267.9
1300	950	6978	191	216.4
1200	747	5946	195	173.6
1100	576	4996	199	136.4
1000	432	4129	201	103.7
900	315	3344	204	76.6
800	221	2642	209	55.3

Max Power Curve Data

Power bkW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1771	10570	192	404.5
1771	11275	190	400.9
1771	12080	189	398.1
1771	13009	188	396.2
1679	13361	188	375.6
1344	11668	194	309.9
898	8575	202	216.1
653	6929	210	163.4
450	5371	215	115.4

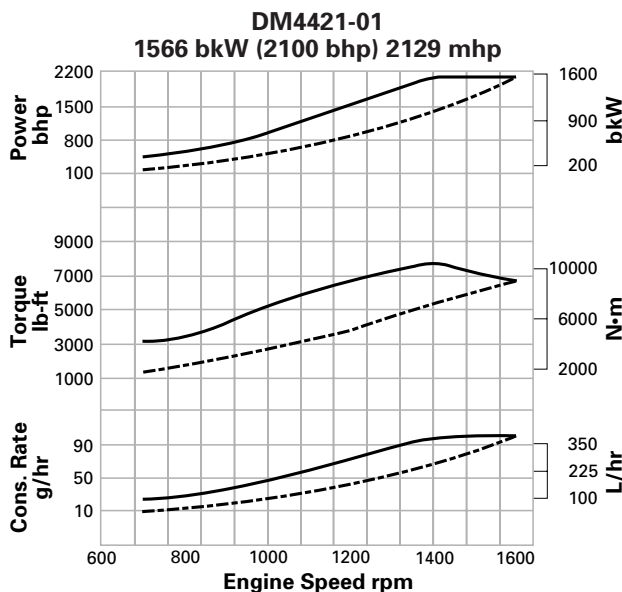
Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
1600	2375	7796	.315	106.9
1500	1957	6852	.312	87.2
1400	1591	5969	.311	70.8
1300	1274	5147	.314	57.2
1200	1002	4386	.320	45.9
1100	772	3685	.327	36.0
1000	580	3045	.331	27.4
900	423	2466	.335	20.2
800	297	1949	.344	14.6

Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
2375	7796	.315	106.9
2375	8316	.312	105.9
2375	8910	.310	105.2
2375	9595	.309	104.7
2252	9855	.309	99.2
1802	8606	.318	81.9
1204	6325	.332	57.1
876	5111	.345	43.2
603	3961	.354	30.5

**B RATING** – Vessels such as midwater 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.

Aftercooler Temperature 60° C (140° F)

**B Rating – 1600 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
1600	1566	9346	203	378.9
1400	1049	7156	206	257.2
1200	661	5257	205	161.6
1000	382	3651	211	96.0
800	196	2337	224	52.2
700	131	1789	237	37.1

Max Power Curve Data

Power bkW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1566	9346	203	378.9
1566	10682	200	374.0
1179	9382	198	277.9
727	6942	212	183.4
391	4667	226	105.1
319	4352	233	88.5

Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
1600	2100	6893	.334	100.1
1400	1407	5278	.338	67.9
1200	886	3877	.337	42.7
1000	513	2693	.346	25.4
800	263	1724	.368	13.8
700	176	1319	.390	9.8

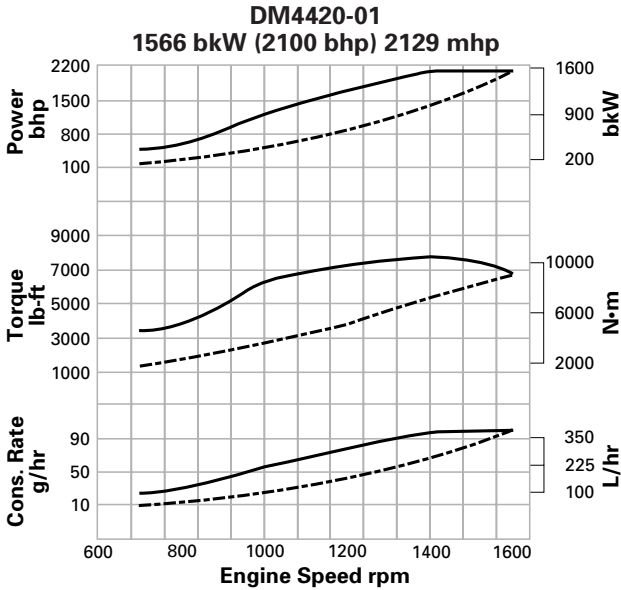
Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
2100	6893	.334	100.1
2100	7879	.329	98.8
1581	6920	.325	73.4
975	5120	.348	48.4
524	3442	.371	27.8
428	3210	.383	23.4

**B RATING** – Vessels such as midwater 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.

**PERFORMANCE CURVES**

Aftercooler Temperature 30° C (86° F)

**B Rating – 1600 rpm**



**Cubic Prop Demand Curve Data**  
(for displacement hulls only)

Speed rpm	Power kW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1600	1566	9346	202	376.5
1400	1049	7156	204	254.8
1200	661	5257	201	158.6
1000	382	3651	207	94.2
800	196	2337	222	51.8
700	131	1789	239	37.3

**Max Power Curve Data**

Power kW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1566	9346	202	376.5
1566	10682	199	370.9
1256	9995	194	289.8
898	8575	205	219.8
431	5145	221	113.5
346	4720	227	93.7

Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
1600	2100	6893	.332	99.5
1400	1407	5278	.335	67.3
1200	886	3877	.331	41.9
1000	513	2693	.340	24.9
800	263	1724	.365	13.7
700	176	1319	.392	9.9

Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
2100	6893	.332	99.5
2100	7879	.327	98.0
1684	7372	.318	76.6
1204	6325	.338	58.1
578	3795	.363	30.0
464	3481	.373	24.8

**B RATING** – Vessels such as midwater 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.

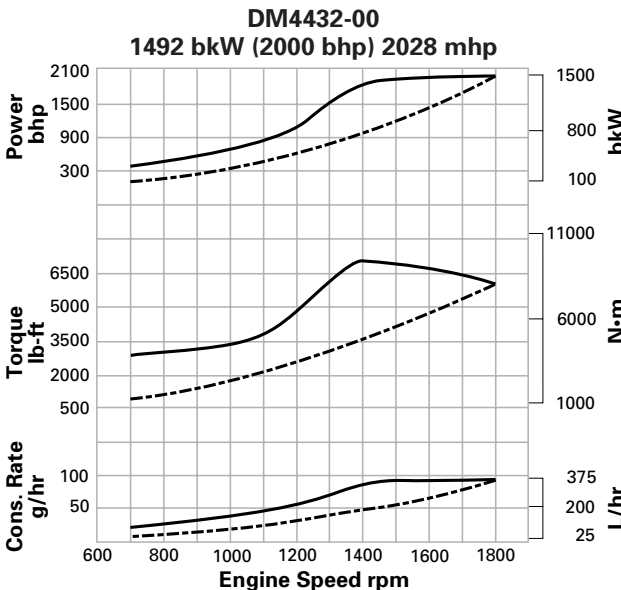
Prop Demand ----- 3.0 Exponent  
(for displacement hulls only)

Engine Performance Parameters:

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

Aftercooler Temperature 60° C (140° F)

**A Rating – 1800 rpm**



**Cubic Prop Demand Curve Data**  
(for displacement hulls only)

Speed rpm	Power kW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1800	1492	7913	200	355.7
1600	1048	6252	204	254.4
1400	702	4787	211	176.4
1200	442	3517	217	114.5
1000	256	2442	225	68.6
900	186	1978	234	52.0
700	88	1197	279	29.2

**Max Power Curve Data**

Power kW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1492	7913	200	355.7
1492	8902	195	347.4
1378	9399	197	322.7
803	6390	209	200.1
476	4545	218	123.8
420	4456	221	110.7
275	3752	228	74.8

Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
1800	2000	5836	.329	94.0
1600	1405	4611	.335	67.2
1400	941	3531	.347	46.6
1200	593	2594	.357	30.2
1000	343	1801	.370	18.1
900	250	1459	.385	13.7
700	118	883	.459	7.7

Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
2000	5836	.329	94.0
2000	6566	.321	91.8
1848	6932	.323	85.2
1077	4713	.344	52.9
638	3352	.359	32.7
563	3287	.363	29.2
369	2767	.375	19.8

**A RATING** – For heavy-duty service in vessels such as freighters, tugboats, bottom drag trawlers, and deep river towboats where 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  
(for displacement hulls only)

Engine Performance Parameters:

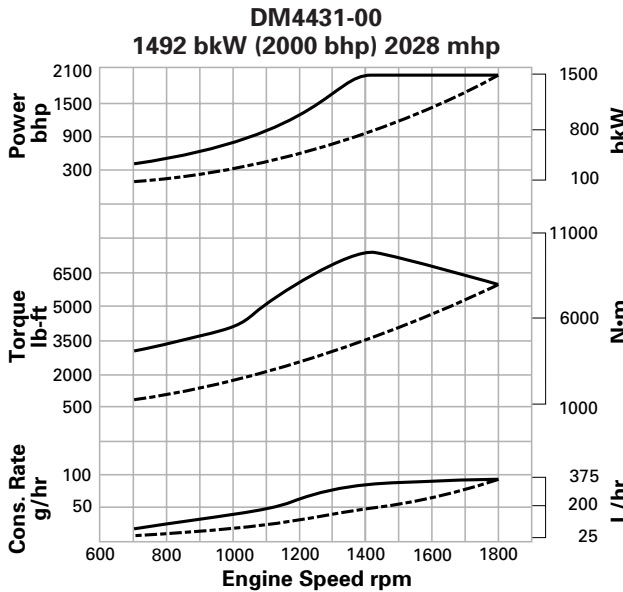
- Power ± 3%
- Specific Fuel Consumption ± 3%
- Fuel Rate ± 5%



## PERFORMANCE CURVES

Aftercooler Temperature 30° C (86° F)

**A Rating** – 1800 rpm



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
1800	1492	7913	200	355.8
1600	1048	6252	203	253.0
1400	702	4787	212	177.2
1200	442	3517	213	112.4
1000	256	2442	218	66.5
900	186	1978	228	50.7
700	88	1197	270	28.2

Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
1800	2000	5836	.329	94.0
1600	1405	4611	.333	66.8
1400	941	3531	.348	46.8
1200	593	2594	.351	29.7
1000	343	1801	.359	17.6
900	250	1459	.375	13.4
700	118	883	.443	7.4

Max Power Curve Data

Power bkW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1492	7913	200	355.8
1492	8902	195	346.1
1492	10173	191	339.4
1005	7998	200	240.0
555	5300	213	140.6
479	5082	216	123.6
298	4065	216	76.9

Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
2000	5836	.329	94.0
2000	6566	.320	91.4
2000	7503	.314	89.7
1348	5899	.329	63.4
744	3909	.350	37.1
642	3748	.356	32.7
400	2998	.356	20.3

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

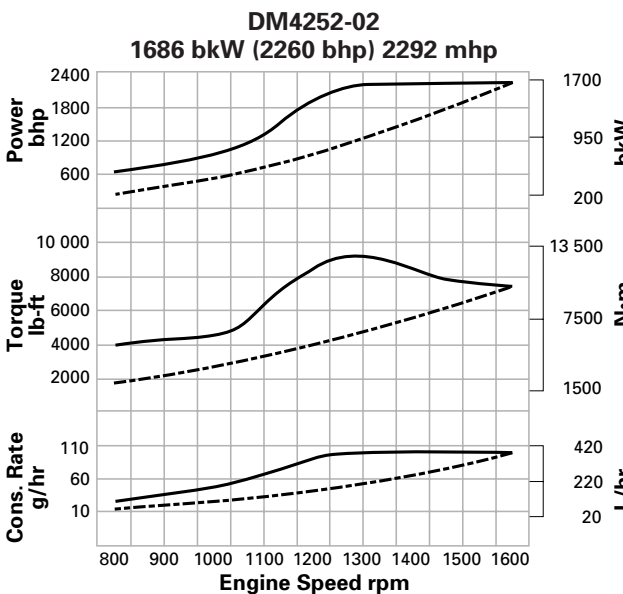
Prop Demand ----- 3.0 Exponent (for displacement hulls only)

Engine Performance Parameters:

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

Aftercooler Temperature 60° C (140° F)

**A Rating** – 1600 rpm



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
1600	1686	10060	197	395.0
1500	1389	8841	193	319.0
1400	1129	7702	193	259.8
1300	904	6641	197	211.7
1200	711	5659	201	170.1
1100	548	4755	205	133.7
1000	412	3930	207	101.7
900	300	3183	210	75.0
800	211	2515	214	53.7

Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
1600	2260	7420	.323	104.3
1500	1862	6521	.317	84.3
1400	1514	5681	.317	68.6
1300	1212	4898	.323	55.9
1200	954	4174	.330	44.9
1100	734	3507	.337	35.3
1000	552	2899	.341	26.9
900	402	2348	.345	19.8
800	283	1855	.351	14.2

Max Power Curve Data

Power bkW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1686	10 060	197	395.0
1686	10 730	194	389.7
1686	11 497	192	385.8
1686	12 381	191	383.9
1481	11 786	193	340.8
977	8482	202	235.2
681	6503	212	172.1
545	5783	220	143.1
456	5443	225	122.4

Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
2260	7420	.323	104.3
2260	7914	.319	102.9
2260	8480	.316	101.9
2260	9132	.314	101.4
1986	8693	.317	90.0
1310	6256	.332	62.1
913	4796	.349	45.5
731	4265	.362	37.8
612	4015	.370	32.3

**A RATING** – For heavy-duty service in vessels such as freighters, tugboats, bottom drag trawlers, and deep river towboats where 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 (for displacement hulls only)

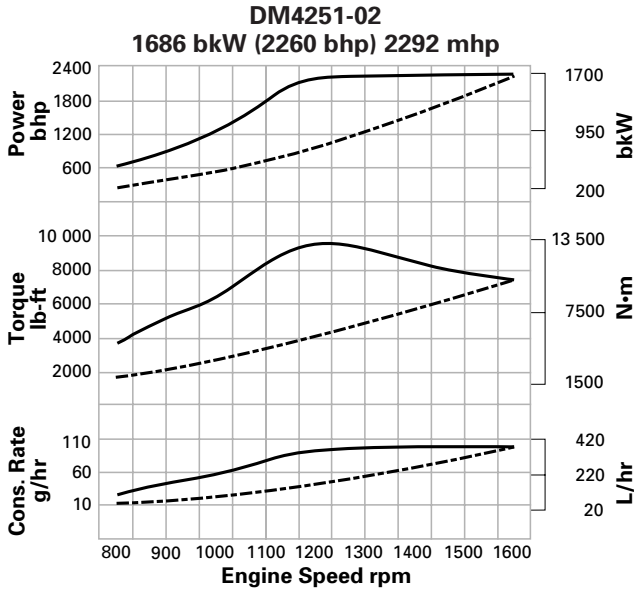
Engine Performance Parameters:

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

**PERFORMANCE CURVES**

Aftercooler Temperature 30° C (140° F)

**A Rating – 1600 rpm**



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

**High Displacement**

Cubic Prop Demand Curve Data  
(for displacement hulls only)

Speed rpm	Power kW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1600	1686	10060	193	388.2
1500	1389	8841	190	315.0
1400	1129	7702	190	255.3
1300	904	6641	192	206.6
1200	711	5659	196	165.7
1100	548	4755	199	130.1
1000	412	3930	202	98.9
900	300	3183	204	73.0
800	211	2515	211	52.9

Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
1600	2260	7420	.318	102.6
1500	1862	6521	.313	83.2
1400	1514	5681	.312	67.4
1300	1212	4898	.315	54.6
1200	954	4174	.321	43.8
1100	734	3507	.327	34.4
1000	552	2899	.331	26.1
900	402	2348	.336	19.3
800	283	1855	.347	14.0

Max Power Curve Data

Power kW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1686	10060	193	388.2
1686	10730	190	382.3
1686	11497	188	378.1
1686	12381	187	375.6
1679	13361	187	374.5
1344	11667	193	309.7
898	8575	202	216.1
653	6929	210	163.4
450	5372	215	115.4

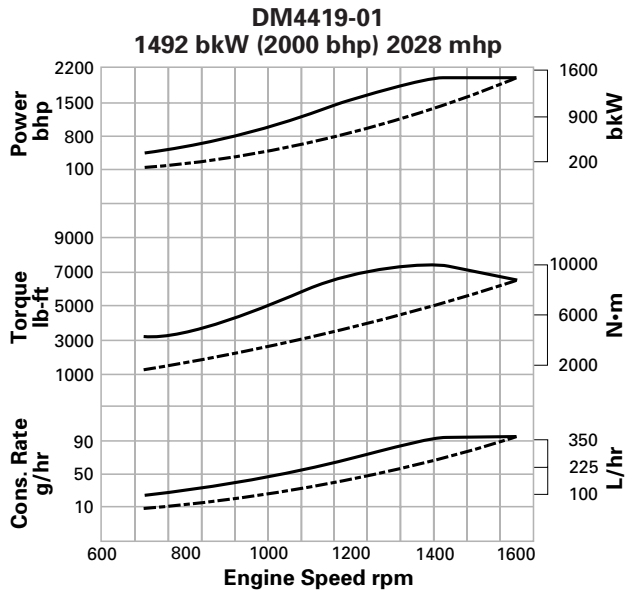
  

Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
2260	7420	.318	102.6
2260	7914	.313	101.0
2260	8480	.309	99.9
2260	9132	.307	99.2
2252	9855	.308	98.9
1802	8605	.318	81.8
1204	6325	.332	57.1
876	5111	.345	43.2
603	3962	.354	30.5

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

Aftercooler Temperature 60° C (140° F)

**A Rating – 1600 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 kW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1600	1492	8902	204	362.0
1400	999	6815	206	245.6
1200	629	5007	206	154.3
1000	364	3477	211	91.7
800	186	2225	225	50.1
700	125	1704	240	35.7

Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
1600	2000	6566	.335	95.6
1400	1340	5026	.339	64.9
1200	844	3693	.338	40.8
1000	488	2564	.347	24.2
800	250	1641	.371	13.2
700	167	1257	.394	9.4

Max Power Curve Data

Power kW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1492	8902	204	362.0
1492	10173	201	357.6
1179	9382	198	278.3
727	6942	212	183.4
391	4667	226	105.1
319	4352	233	88.5

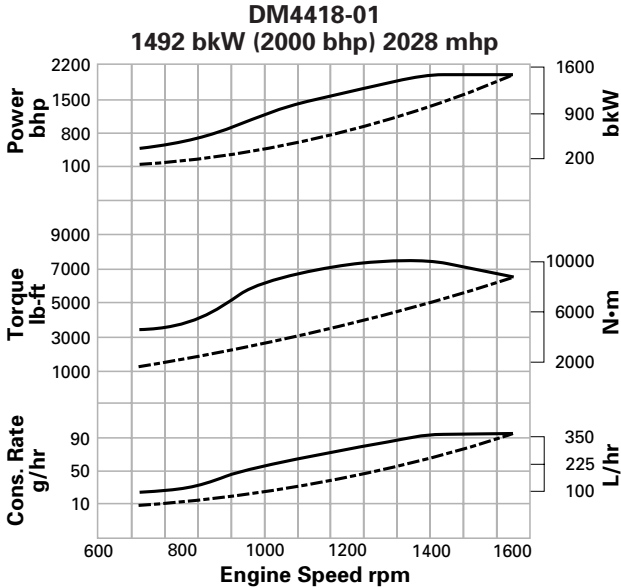
Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
2000	6566	.335	95.6
2000	7503	.331	94.5
1581	6920	.326	73.5
975	5120	.348	48.4
524	3442	.371	27.8
428	3210	.383	23.4

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

## PERFORMANCE CURVES

Aftercooler Temperature 30° C (140° F)

**A Rating** – 1600 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
1600	1492	8902	202	359.5
1400	999	6815	204	243.2
1200	629	5007	202	151.5
1000	364	3477	208	90.1
800	186	2225	224	49.7
700	125	1704	242	36.0

**Max Power Curve Data**

Speed rpm	Power bkW	Torque N·m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1600	1492	8902	202	359.5
1400	999	6815	204	243.2
1200	629	5007	202	151.5
1000	364	3477	208	90.1
800	186	2225	224	49.7
700	125	1704	242	36.0

Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
1600	2000	6566	.332	95.0
1400	1340	5026	.336	64.2
1200	844	3693	.332	40.0
1000	488	2564	.341	23.8
800	250	1641	.368	13.1
700	167	1257	.397	9.5

Speed rpm	Power bkW	Torque N·m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1600	1492	8902	202	359.5
1400	1492	10173	199	354.5
1200	1256	9995	194	290.0
1000	898	8575	205	219.8
800	431	5145	221	113.5
700	346	4720	227	93.7

Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
1600	2000	6566	.332	95.0
1400	2000	7503	.328	93.6
1200	1684	7372	.318	76.6
1000	1204	6325	.338	58.1
800	578	3795	.363	30.0
700	464	3481	.373	24.8

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



# 3516B MARINE ENGINE — 1492-1865 kW

TMI Reference No.: DM4436-00, DM4435-00, DM4256-02, DM4255-02, DM4423-01, DM4422-01, DM4434-00, DM4433-00, DM4254-02  
DM4253-03, DM4421-01, DM4420-01, DM4432-00, DM4431-00, DM4252-02, DM4251-02, DM4419-01, DM4418-01

Materials and specifications are subject to change without notice.

The International System of Units (SI) is used in this publication.

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