

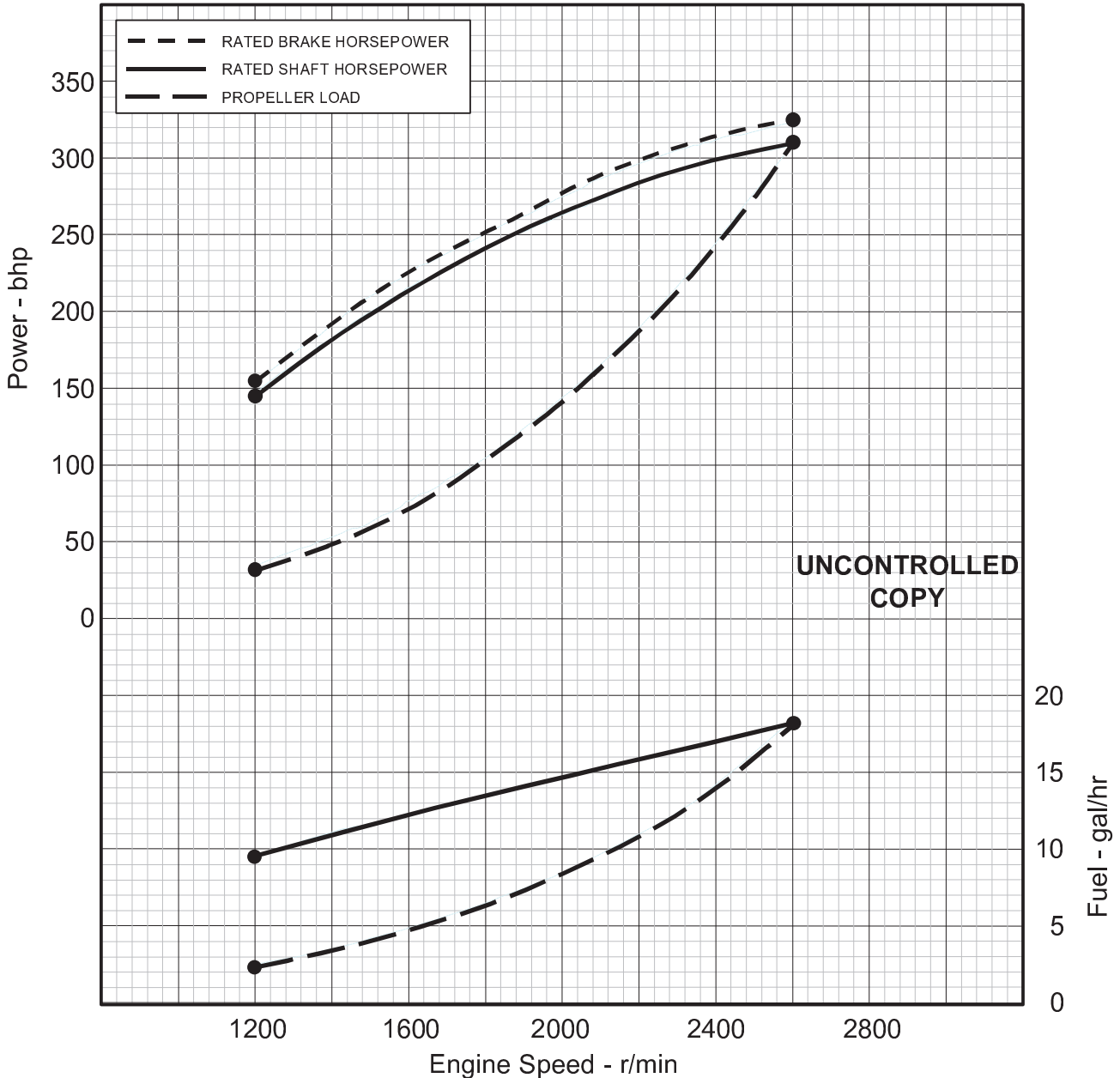


Marine Power

Model: 4-71TI DDEC®

Rating: 325 bhp (242 kW) @ 2600 r/min
310 shp (231 kW) @ 2600 r/min

Maximum
Net Power



<p>Power output guaranteed within 5% SAE J1228 conditions: 77°F (25°C) air inlet temperature; 29.31 in. Hg (99kPa) dry barometer; 100°F (38°C) fuel inlet temperature; .853 specific gravity at 60°F. Power rated in accordance with NMMA Procedure Air intake restriction: 10 in. H₂O (2.5 kPa) Exhaust Back Pressure: 15 in. H₂O (3.7 kPa)</p>	<p>Conversion Factors: Power: kW = hp x 0.746 Fuel: L/hr = gal/hr x 3.785</p>	<p>Turbo: TW7304 (1.03 A/R) Injector: 7035 Accessories: DD-5050V Gear Alternator: 12V, 66A Raw Water Pump: Included</p>
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Certified by: *JR Schringer*

Performance Curve

Curve No. E4-1042-32-2
Rev. / Date: 4 / 12-22-97
Sheet No. 1 of 2

MARINE SPECIFICATION SHEET

General Data

Model	1042-5300,-7300
Number of Cylinders	4
Bore and Stroke – in. x in. (mm x mm)	4.25 x 5.00 (108 x 127)
Displacement – in. ³ (L)	284 (4.65)
Compression Ratio	17.0:1
Piston Speed – ft/min (m/min)	2167 (660)
Exhaust Valves	4
Combustion System	Direct Injection
Engine Type	INLINE – 2 Cycle
Aspiration	Turbocharged

Configuration

Injection Device	MUI
Turbocharger	TW7304 (1.03 A/R)
Charge Air Cooling System	RWIC
Blower Type	BYPASS
Blower Drive Ratio	2.05:1
Low Idle Speed – r/min	500
Maximum No Load Speed – r/min	2800
Engine Crankcase Vent System	CLOSED

Physical Data

Size:	WITH GEAR	WITHOUT GEAR
Length – in. (mm)	58.12 (1476)	56.05 (1424)
Width – in. (mm)	31.52 (801)	31.52 (801)
Height – in. (mm)	35.24 (895)	35.24 (895)
Weight, dry – lb (kg)	2037 (924)	1848 (838)
Weight, wet – lb (kg)	2164 (982)	1970 (894)
Center of Gravity Distance:		
From R.F.O.F Ig/Blk. (x axis) – in. (mm)	26.76 (680)	Not Available
Above Output Shaft (y axis) – in. (mm)	12.91 (328)	Not Available
Right of Output Shaft (z axis) – in. (mm)	0.41 (10.4)*	Not Available
Installation Drawing	Not Available	

Mechanical Data

E4-1000-32-1

Marine Gear

Type	DD5050V
Reduction Ratio	1.53:1
Lube Oil Capacity – qt (L)	2.5 (2.4)
(marine gear must use straight viscosity oil)	
Gear Weight, dry – lb (kg)	189 (86)
Center of Gravity Distance:	
From Output Flange (x axis) – in.(mm)	4.87 (124)
Above Output Shaft (y axis) – in.(mm)	3.18 (81)
Right of Output Shaft (z axis) – in.(mm)	1.13 (29)

Fuel System

Fuel Injector-Part Number	7035
Injection Timing Height – in.	1.520
Fuel Consumption – lb/hr (kg/hr)	126.5 (57.4)
Fuel Spill Rate gal/hr (L/hr)	77.4 (293.0)
Total Fuel Flow gal/hr (L/hr)	95.5 (361.5)
Maximum Fuel Inlet Temperature – °F (°C)	140 (60)
Maximum Fuel Pump Suction:	
Clean System – in. Hg (kPa)	6 (20.3)
Dirty System – in. Hg (kPa)	12 (41)
Fuel Filter Size, Primary – microns	30
Fuel Filter Size, Secondary – microns	12
Recommended Supply Line I.D. – in.(mm)	0.5 (12.7)

Lubrication System

Oil Pressure at Rated Speed – lb/in. ² (kPa)	42-55 (290-379)
Oil Pressure at Low Idle – lb/in. ² (kPa)	5.0 (34)
In Pan Oil Temperature – °F(°C)	200 – 250 (93 – 121)
Oil Flow – gal/min (L/min)	28 (106)
Oil Pan Capacity at Installation Angle	0° 7°
High Limit – qt (L)	18.0 (17.0) 18.0 (19.0)
Low Limit – qt (L)	15.0 (14.2) 15.0 (14.2)
Total Engine Oil Capacity with Filters – qt (L)	20.0 (18.9) 20.0 (18.9)
Maximum Installation Angle - Degrees	7.0

Electrical System

Recommended Battery Capacity (CCA @ 0°F):	
12 Volt System, Above 32°	950
12 Volt System, Below 32°	1250
24 Volt System, Above 32°	475
24 Volt System, Below 32°	625
Maximum Resistance of Starting Circuit:	
12 Volt System – ohms	0.0012
24 Volt System – ohms	0.002

Cooling System

Engine Heat Rejection – Btu/min (kW)	10500 (184.6)
Engine Radiated Heat – Btu/min (kW)	580 (10.2)
Coolant Flow:	
Fresh Water Flow – gal/min (L/min)	100 (379)
Raw Water Flow – gal/min (L/min)	51 (193)
Maximum Water Pump:	Fresh Water Raw Water
Inlet Restriction – in. Hg (kPa)	3.0 (10.2) 5.0 (17.0)
Fresh Water Capacity – qt (L)	40 (37.9)
Maximum Coolant Pressure	
(Exclusive of Pressure Cap) – lb/in. ² (kPa)	40 (275.8)
Maximum Raw Water Pump Pressure – lb/in. ² (kPa)	14 (97)
Maximum Top Tank Temperature – °F (°C)	210 (99)
Recommended Raw Water Pipe I.D.	
Inlet – in. (mm)	4.0 (152)
Outlet – in. (mm)	3.0 (76)
Recommended Sea Strainer Size:	
(Max. Screen Opening – 2.0 mm)	
Simplex – in.(mm)	3.0 (76)
Duplex – in.(mm)	4.0 (102)

Air System

Maximum Temperature Rise	
(Ambient Air to Engine Inlet) – °F (°C)	30 (16.7)
Maximum Air Intake Restriction:	
Clean Air Cleaner – in. H ₂ O (kPa)	10 (2.5)
Dirty Air Cleaner – in. H ₂ O (kPa)	15 (3.7)
Engine Air Flow – ft ³ /min (m ³ /min)	1125 (31.9)
Air Box Pressure – in. Hg (kPa)	67.5 (227.9)
Recommended Intake Pipe Dia. – in. (mm)	5.0 (127)
Minimum Net Engine Room Vent Area, – in. ² (cm ²)	108 (697)
Maximum Crankcase Pressure – in. H ₂ O (kPa)	3.0 (0.80)

Exhaust System

Exhaust Flow – ft ³ /min (m ³ /min)	2270 (64.3)
Exhaust Temperature – °F (°C)	605 (318)
Maximum Back Pressure – in. Hg (kPa)	2.5 (8.4)
Recommended Exhaust Pipe Diameter:	Dry Wet
Single – in. (mm)	5.0 (127) 6 (152)
Dual – in. (mm)	Not Applicable

Performance Data

BMEP – lb/in. ² (kPa)	174.5 (1203)
Friction Power – fhp (kW)	80 (60)

Engine Speed	Brake Power	Shaft Power	Rated Fuel Usage	Rated BSFC
r/min	bhp (kW)	shp (kW)	gal/hr(L/hr)	lb/bhp-hr (g/kW-hr)
2600	325 (242)	310 (231)	18.1 (68.5)	0.389 (237)
2400	313 (233)	299 (223)	16.8 (63.5)	0.375 (228)
2100	287 (214)	274 (204)	15.0 (56.9)	0.366 (223)
1800	252 (188)	241 (179)	13.3 (50.2)	0.368 (224)
1500	210 (157)	200 (149)	11.5 (43.5)	0.382 (233)
1200	154 (115)	146 (109)	9.4 (35.7)	0.428 (260)

Engine Speed	Prop Load	Prop Fuel Usage	Prop BSFC
r/min	shp (kW)	gal/hr (L/hr)	lb/bhp-hr (g/kW-hr)
2600	310 (231)	18.1 (68.5)	0.389 (237)
2400	244 (182)	13.9 (52.6)	0.379 (230)
2100	163 (122)	9.4 (35.6)	0.381 (232)
1800	103 (77)	6.2 (23.4)	0.393 (239)
1500	60 (44)	3.9 (14.6)	0.418 (254)
1200	31 (23)	2.2 (8.2)	0.443 (269)

Emissions Data

Smoke, Rated Speed – Bosch Number	0.2
Noise – dB(A) @ 1	100
Additional Noise Data	Not Available
NO _x – g/hr	4800
CO – g/hr	340
HC – gh/r	75
SO ₂ – g/hr	574

* - Z axis dimension is negative for model 1042-7300

All values are at rated speed and power at SAE J1228 with standard engine hardware, unless otherwise noted.

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All information subject to change without notice.

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