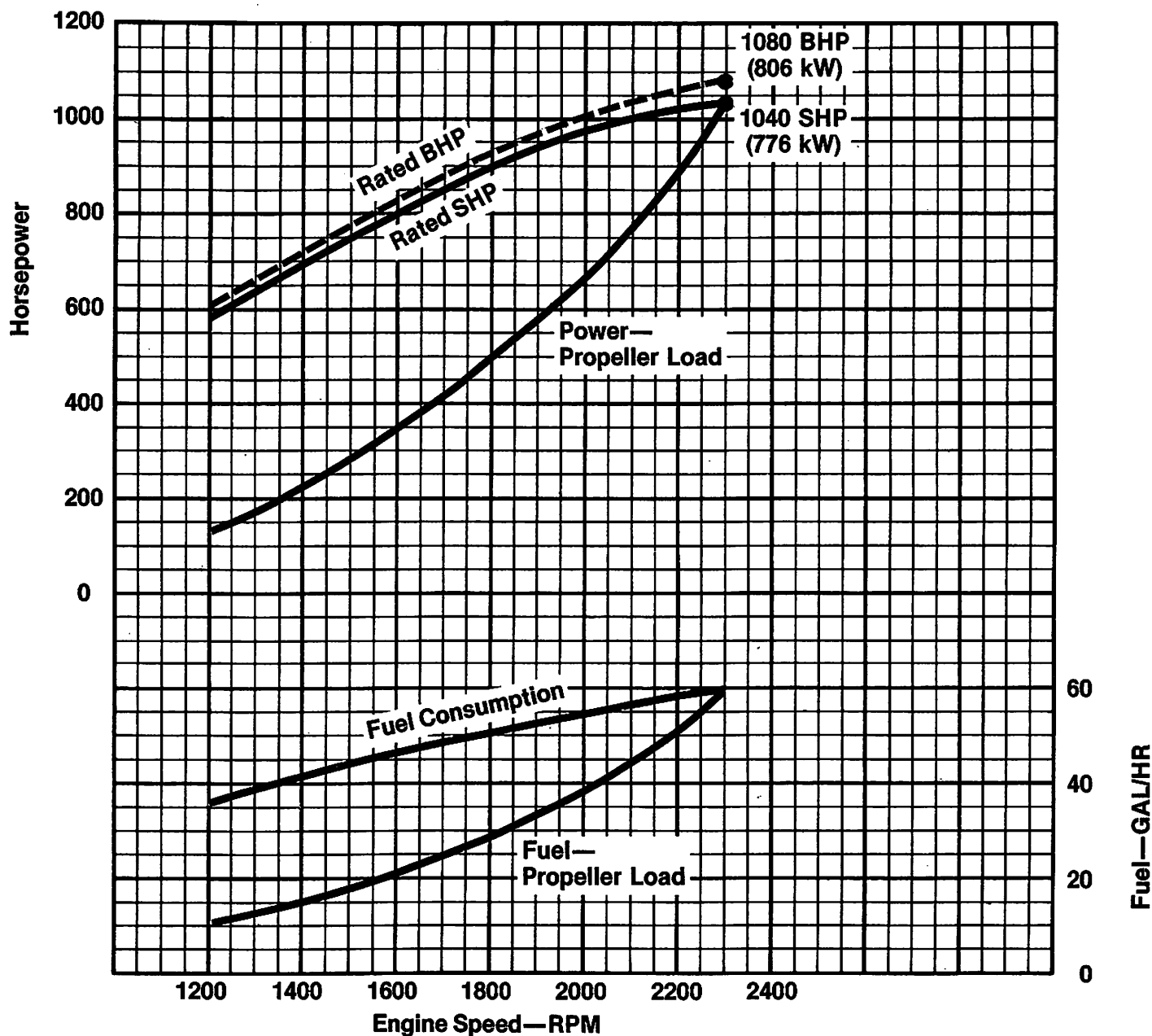




12V-92TA  
Marine  
Rating: Maximum  
1080 BHP @ 2300 RPM  
1040 SHP @ 2300 RPM  
Injector: 7125  
Turbocharger: TW83 (1.19 A/R)

## ENGINE PERFORMANCE CURVE



ACCESSORIES: DD273V GEAR, RAW WATER PUMP, ALTERNATOR 24V, 65A

Air Intake Restriction - in. H<sub>2</sub>O (kPa) . . 10 (2.5)

Exhaust Back Pressure - in. H<sub>2</sub>O (kPa) . . 15 (3.7)

- Power output guaranteed within 5% at SAE J1228 conditions; 77°F (25°C) air inlet temperature; 29.32 in. Hg (99kPa) dry barometer; 100°F (39°C) fuel inlet temperature (.853 specific gravity at 60°F).
- Conversion factors: Power: kW = bhp x 0.746  
Fuel: kg/kW-hr = lb/bhp-hr x 0.608  
Torque: N·m = lb-ft x 1.356
- Values derived are from currently available data and subject to change without notice.

Certified by:

*Mark S. Kuhn*

Curve No.

E4-8122-32-3

Date: 6-25-86

Rev/Date: 6/11-6-91

Sht. 1 of 3

# Marine Engine Specification Data

## General Data

Model	8122-7400
Number of Cylinders	12
Bore and Stroke In (mm)	4.84x5.00 (123x127)
Displacement-In <sup>3</sup> (L)	1104 (18.1)
Compression Ratio	17:1
Piston Speed-ft/min (m/min)	1917 (584)
Valves Per Cylinder	
Intake	NOT APPLICABLE
Exhaust	4
Combustion System	DIRECT INJECTION
Engine Type	63.5° VEE- 2 CYCLE
Aspiration	TURBOCHARGED

## Configuration

Turbocharger	(2)TW83 (1.19 A/R)
Charge Air Cooling System	JWAC with Boost Cooler
Blower Type	100% - relieved - Bypass
Blower Drive Ratio	2.60:1
Low Idle Speed-r/min	550
Maximum No Load Speed-r/min	2500
Engine Crankcase Vent System	CLOSED*
Maximum Pressure-In H <sub>2</sub> O (kPa)	-6.0 - 3.5 (-1.49-0.87)*

## Physical Data

	With Gear*	W/O Gear**
Size		
Length-In (mm)	93.9 (2385)	73.35 (1863)
Width-In (mm)	50.1 (1273)	50.1 (1273)
Height-In (mm)	50.9 (1293)	50.9 (1293)
Weight, dry-lb (kg)	5861 (2658)	5200 (2359)
Weight, wet-lb (kg)	6180 (2803)	5519 (2503)
Center of Gravity Distance		
From R.F.O. Flg/Blk (x axis)-In (mm)	43.1 (1095)	26.6 (676)
Above Output Shaft (y axis)-In (mm)	15.4 (391)	8.4 (213)
Right of Output Shaft (z axis)-In (mm)	-0.2 (-5.08)	-0.53 (-13.5)
Installation Drawing	23504646	

## Marine Gear

Type	DD-232EV*
Reduction Ratio	1.76*
Lube Oil Capacity approx.-qts (litre)	13.7 (13.0)*
(Marine gear must use straight viscosity oil)	
Gear Weight-lb (kg)	661 (300)**
Gear Center of Gravity Distance**	
From R.F.O.F. (x axis)-In (mm)	10.55 (268)
Above Output Shaft (y axis)-In (mm)	5.51 (140)
Right of Output Shaft (z axis)-In (mm)	2.36 (60)

## Fuel System

Fuel Injector/Timing	7125/1.508#
Fuel Injection Pump/Timing	NOT APPLICABLE
Fuel Consumption-lb/hr (kg/hr)	422.2 (191.5)
Fuel Spill Rate-gal/hr (L/hr)	136.0 (514.0)
Total Fuel Flow-gal/hr (L/hr)	196.0 (743.0)
Maximum Allowable Fuel Pump Suction	
Clean System-In Hg (kPa)	6 (20)
Dirty System-In Hg (kPa)	12 (41)
Fuel Filter Micron Size	
Primary - Micron	30
Secondary - Micron	12
Recommended Supply Line I.D.	
In (mm)	0.75 (19.1)

## Lubrication System

Oil Pressure	
Rated Speed-lb/in <sup>2</sup> (kPa)	49-70 (338-483)
Low Idle-lb/in <sup>2</sup> (kPa)	5 (34)
In Pan Oil Temperature-°F (°C)	200-250 (93-121)
Oil Flow-gal/min (L/min)	64 (242)
Oil Pan Capacity at Installation Angle	10°
High-qt (L)	42 (40)
Low-qt (L)	34 (32)
Total Engine Oil Capacity with filters-qt (L)	50 (47)
Installation Angle	10° - 15°**

## Emission Data

CO-g/hr	6300
HC-g/hr	200
NO <sub>x</sub> -g/hr	7400
SO <sub>x</sub> -g/hr	1915
Smoke - Bosch Number	1.2
Noise - dB(A) @ 1m	105.5

## # Advanced Camshaft Timing

Revised  
\*\* Added

Mechanical Data Sheet: E4-8000-00-2

All values at rated speed and power and with standard engine hardware unless otherwise noted.

## Cooling System

Engine Heat Rejection-Btu/min (kW)	43295 (761)
Boost Cooler Heat Reject.-Btu/min (kW)	9945 (174.9)
Engine Radiated Heat-Btu/min (kW)	4520 (79.6)
Max. Fresh Water Flow-gal/min (L/min)	338 (1280)
Raw Water Flow-gal/min (L/min)	143 (541)
Maximum Water Pump Inlet Restriction	
Fresh water-In Hg (kPa)	3.0 (10.2)
Raw water-In Hg (kPa)	5.0 (17.0)
Fresh Water Capacity-qt (L)	145 (137.2)
Maximum Coolant Pressure (Exclusive of Pressure Cap)-lb/in <sup>2</sup> (kPa)	17 (117)
Maximum raw water pump Pressure	
lb/in <sup>2</sup> (kPa)	14 (96.5)
Maximum Top Tank Temperature-°F (°C)	210 (99)
Suggested Raw Water Pipe Size - In (mm)	3.0 (76)
Suggested Sea Strainer Size	
Simplex - In (mm)	3.0 (76)
Duplex - In (mm)	4.0 (102)

## Air System

Maximum Allowable Temperature Rise (Outside Air to Engine Inlet)-°F (°C)	30 (16.7)
Air Intake Restriction Maximum Limit	
Dirty Air Cleaner-In H <sub>2</sub> O (kPa)	15 (3.7)
Clean Air Cleaner-In H <sub>2</sub> O (kPa)	10 (2.5)
Engine Air Flow-ft <sup>3</sup> /min (m <sup>3</sup> /min)	2850 (80.7)
Engine Air Box/Manifold Pressure-In Hg (kPa)	60.4 (216.1)
Recommended Intake Pipe Dia.-In (mm)	6.0 (152)
Suggested min. engine room vent area (Max. engine room depression 0.2 in. H <sub>2</sub> O)-in <sup>2</sup> (cm <sup>2</sup> )	274 (1765)

## Exhaust System

Exhaust Flow-ft <sup>3</sup> /min (m <sup>3</sup> /min)	5780 (163.7)
Exhaust Temperature-°F (°C)	830 (332)
Maximum Allowable Back Pressure-In Hg (kPa)	2.5 (8.4)
Recommended Dry Exhaust Pipe Dia.	
Single-In (mm)	10.0 (254)
Dual-In (mm)	8.0 (203)

## Electrical System

### Recommended Battery Capacity

(CCA @ 0°F)	
12 Volt System	
Above 32°F (0°C)-A	1900
Below 32°F (0°C)-A	2500
24 Volt System	
Above 32°F (0°C)-A	950
Below 32°F (0°C)-A	1250
Maximum Allowable Resistance of Starting Circuit	
12 volt system - ohm	0.0012
24 volt system - ohm	0.002

## Performance Data

BMEP-lb/in <sup>2</sup> (kPa)	168.4 (1161)
Friction Power - rated speed-fhp (kW)	188 (140)

Engine Speed r/min	Power bhp (kW)	Power shp (kW)	Fuel gal/hr (liter/hr)	BSFC lb/bhp hr (g/kW hr)
2300	1080 (806)	1040 (776)	60.4 (228.7)	.391 (238)
2100	1035 (772)	1001 (747)	56.5 (214.0)	.382 (232)
1800	930 (694)	899 (671)	50.3 (190.3)	.378 (230)
1500	778 (580)	751 (560)	43.4 (164.5)	.390 (237)
1200	600 (448)	578 (431)	36.0 (136.4)	.420 (255)

Engine Speed r/min	Prop Load shp (kW)	Prop Fuel gal/hr (liter/hr)	Prop BSFC lb/bhp hr (g/kW hr)
2300	1040 (776)	60.4 (228.6)	.392 (238)
2100	792 (591)	44.3 (167.8)	.375 (228)
1800	499 (372)	29.0 (109.9)	.383 (233)
1500	288 (215)	18.0 (68.3)	.400 (243)
1200	148 (110)	10.3 (38.8)	.423 (257)

Curve No. E4-8122-32-3  
Date: 6-25-87  
Rev/Date: 8/11-08-91  
Sht. 2 of 3