

Summary Report

4-Jan-2006

Project: **Nordhavn 68 Twin Screw**Vessel: **N6805****Prepared by**Mickey Smith
Boat Systems, Inc.**For**

Pacific Asian Enterprises

Vessel

Vessel type	Displacement	Length [On WL]	63.5 ft
Service	Passenger/Pleasure	Weight	76.30 LT
Water type	Salt	Speed/power by	Average hull
Propellers	2	Avg. hull mult	1.000
Max. diameter	39.0 in		
Immersion	36.0 in		
Propeller style	Open		

Engine

Model	Lugger L1276A2 340HP	Design power [316 hp]	100 %
Manufacturer	Alaskan Diesel	Design RPM [1800]	100 %
Fuel type	Diesel	Parasitic loss	24 hp
Rated power	340 hp	Gear efficiency	0.970
Rated RPM	1800		
Fuel rate	16.3 gal/hr		

Sizing

Model	Generic motor yacht	Calc. sizing for	Top
Manufacturer		Design speed	12.9 kts
Series	GawnAEW	Blade area ratio [Keep]	0.700
Blades	4	Diameter [Keep]	38.5 in
Cup type	None	Pitch [Size]	37.0 in
Cup drop	0.000 in	Gear ratio [Keep]	3.000
Propeller material	Mn Bronze	Calc'd max. speed	12.9 kts

Analysis

Speed [kts]	Engine RPM	Power [hp]	Thrust [lbf]	Cavitation	Strength
12.9 (Top)	1800	316	5020	OK	OK
9.0 (Cruise)	1237	101	2314	OK	OK

Utility

Shaft material	Aquamet 22HS	Time at top [12.9 kts]	5 %
Shear strength	70000.0 psi	Time at cruise [9.0 kts]	95 %
Safety factor	5	Hours/year	500
Req'd min diam	2.5 in	Total annual fuel	5364 gal
Cylinders	6		
Phase check	OK		

Notes

This evaluation has been carefully prepared to meet professional standards. Since it is not possible to determine the accuracy of the provided data, the preparer of this report assumes no liability nor makes any performance guarantees of any kind.