



PROPELLER SELECTION ANALYSIS FORM – RE-POWER

DELIVERING PROPELLERS THAT PERFORM

NOTE: THE PROPER PROPELLER SUGGESTION CAN ONLY BE AS ACCURATE AS THE INFORMATION YOU PROVIDE.
 PROPELLER SELECTION IS DRIVEN FROM VALUES CALCULATED USING PERFORMANCE PREDICTION SOFTWARE.
 MINOR ADJUSTMENTS MAY BE REQUIRED TO OBTAIN OPTIMUM PERFORMANCE.

CONTACT INFORMATION	
NAME	_____
COMPANY	_____
TELEPHONE	_____
CELL	_____
FAX	_____
E MAIL	_____

VESSEL DATA - HULL	
BOTTOM DESIGN	<input type="checkbox"/> OPEN <input type="checkbox"/> TUNNEL
NOZZLE	<input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> FIXED <input type="checkbox"/> STEERING
SHAFT DIAMETER	_____ INCHES
SHAFT ANGLE	_____ DEGREES
STRUT	<input type="checkbox"/> SINGLE <input type="checkbox"/> V-STRUT

PRIMARY GOAL	
<input type="checkbox"/> ACHIEVE TOP SPEED OF:	_____
<input type="checkbox"/> TOWPULL (THRUST)	_____
<input type="checkbox"/> OTHER	_____

VESSEL DATA – STERN GEOMETRY	
PROP CENTER (SHAFT) TO HULL	(INCHES) _____
PROP CENTER TO WATERLINE	(INCHES) _____
SHAFT TO RUDDER	(INCHES) _____

TASKS	
<input type="checkbox"/> CHECK IF EXISTING PROPELLER RE-PITCH IS POSSIBLE	
<input type="checkbox"/> RECOMMEND A NEW PROPELLER SIZE / STYLE	
<input type="checkbox"/> RECOMMEND ULTIMATE GEARBOX RATIO	
<input type="checkbox"/> RECOMMEND A GEAR BOX RATIO FROM THE FOLLOWING:	_____

ENGINE / GEARBOX - NEW	
ENGINE MFG	_____
MODEL	_____
FUEL TYPE	<input type="checkbox"/> GAS <input type="checkbox"/> DIESEL
NO. OF CYLINDERS	_____
RATED HP	_____
RATED RPM	_____
PARASITIC LOSS (GEN SET) (HP)	_____
GEAR BOX RATIO	_____ :1

PRINCIPLE VESSEL OPERATING CONDITION	
VESSEL NAME	_____
HULL TYPE	<input type="checkbox"/> DISPLACEMENT <input type="checkbox"/> BARGE
	<input type="checkbox"/> SEMI – DISPLACEMENT <input type="checkbox"/> CATAMARAN
	<input type="checkbox"/> PLANING <input type="checkbox"/> SAILBOAT
SERVICE	<input type="checkbox"/> PASS / PLEASURE <input type="checkbox"/> TOWING
	<input type="checkbox"/> WORK / COMMERCIAL <input type="checkbox"/> BOLLARD
USAGE	<input type="checkbox"/> OCEAN <input type="checkbox"/> RIVER <input type="checkbox"/> LAKE
LENGTH (FT)	<input type="checkbox"/> WATERLINE
	<input type="checkbox"/> OVERALL
WEIGHT	LIGHT (LBS)
	FULL (LBS)

ENGINE / GEARBOX - OLD	
ENGINE MFG	_____
MODEL	_____
FUEL TYPE	<input type="checkbox"/> GAS <input type="checkbox"/> DIESEL
NO. OF CYLINDERS	_____
RATED HP	_____
RATED RPM	_____
PARASITIC LOSS (GEN SET) (HP)	_____
GEAR BOX RATIO	_____ :1

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SEA TRIAL - TYPICAL OPERATION OF YOUR VESSEL

CURRENT PROPELLER(S) DATA	
ROTATION VIEWED FROM ASTERN (CHECK ONE OR BOTH)	
IF CLOCKWISE	<input type="checkbox"/> RH
IF COUNTER-CLOCKWISE	<input type="checkbox"/> LH
DIAMETER (IN) _____	
PITCH _____	
NO OF BLADES _____	
CUP	<input type="checkbox"/> Yes <input type="checkbox"/> No
MANUFACTURER (IF KNOWN) _____	
HUB DIAMETER (IN) _____	
HUB LENGTH (IN) _____	
PROP MATERIAL	<input type="checkbox"/> MANGANESE BRONZE <input type="checkbox"/> STAINLESS <input type="checkbox"/> SUPERSTON <input type="checkbox"/> MILD STEEL <input type="checkbox"/> NIBRAL <input type="checkbox"/> ALUMINUM
PROPELLERS	<input type="checkbox"/> SINGLE <input type="checkbox"/> TWIN <input type="checkbox"/> TRIPLE

PRIOR PERFORMANCE			
DESIGNED SPEED	KTS _____		
	TRIAL ONE	TRIAL TWO	
FULL THROTTLE	KTS _____ RPM _____	KTS _____	RPM _____
CRUISE SPEED	KTS _____ RPM _____	KTS _____	RPM _____
RANGE OF SPEED (START AT CRUISE TO FULL THROTTLE)			
	KTS _____	RPM _____	KTS _____ RPM _____
	KTS _____	RPM _____	KTS _____ RPM _____
	KTS _____	RPM _____	KTS _____ RPM _____
	KTS _____	RPM _____	KTS _____ RPM _____
	KTS _____	RPM _____	KTS _____ RPM _____
	KTS _____	RPM _____	KTS _____ RPM _____
	KTS _____	RPM _____	KTS _____ RPM _____
	KTS _____	RPM _____	KTS _____ RPM _____
	KTS _____	RPM _____	KTS _____ RPM _____
	KTS _____	RPM _____	KTS _____ RPM _____

SPEED TRIAL	
DATE: _____	TEMPERATURE: _____
WEATHER: <input type="checkbox"/> CALM <input type="checkbox"/> FAIR <input type="checkbox"/> STORM	
LOCATION: _____	
VESSEL TRIAL WEIGHT: LIGHT _____	FULL _____
FUEL LOAD: _____	WATER: _____

Wind, Tide, and Current can impact the results of your Speed Trial. To determine a more accurate average, set your vessel's heading to have the wind and tide (or current) as close to bow-on as possible. Record the Range of Speeds at the various RPM's on the chart above and then turn the vessel 180 degrees and repeat the procedure again. The Trial Speed is the average of the measured speeds during each of the runs. You can repeat this process in various sea conditions.

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