

DESIGN		12m DPB	DSN # 77											PROPELLER SHAFT										
														di =	33.89	mm								
														Shaft dp =	37.06	mm								
	DSPL (lb)	20940		9498.22	kg		Disp Length	165.35											Bearing S =	1.578	m			
	L.W.L. (ft)	38.38		11.70	m											f =	0.874							
	B.W.L. (ft)	10.7		3.26	m		Max SL v DL	1.69											UTS	618	MPa			
	Hd (ft)	1.97		0.60	m											at S.L. =	1.53	316	618					
				The speed is calculated with														SPEED	9.46	Knts	2205	680		
				SHP at 85% of MAX H.P.															959	ft/min	Theoretical Propeller H.P. & Boat Speed for different R.P.M.'s			
																			10.23	ins				
PC	S/L RATIO	SPEED	SHP	Reqd H.P.	Fuel - l/hr	I/NM	DL v SL	Max Dspl	SLIP	0.39	%	Standard Prop												
0.53	1.00	6.20	17.26	20.31	4.32	0.70						R.P.M	Prop HP	Speed	Torque									
0.54	1.10	6.81	22.98	27.03	5.74	0.84	****				14.20	ins	Csm =	2.55E-08	Knots	lbft	Nm							
0.58	1.20	7.43	29.83	35.09	7.46	1.00	****					3 Blade	361	mm	3800	0.00	0.00							
0.62	1.30	8.05	37.92	44.62	9.48	1.18						2 Blade	364	mm	3700	0.00	0.00	0.00	0.00					
0.63	1.34	8.30	41.53	48.86	10.38	1.25	**								3600	0.00	0.00	0.00	0.00					
0.64	1.40	8.67	47.37	55.73	11.84	1.37	301.02	38,120.67	LB	DIAMETER					3500	0.00	0.00	0.00	0.00					
0.66	1.50	9.29	58.26	68.54	14.56	1.57	241.13	30,536.32			20.40	ins			3400	0.00	0.00	0.00	0.00					
0.68	1.60	9.91	70.71	83.18	17.68	1.78	195.94	24,813.79					3 Blade	518	mm	3300	0.00	0.00	0.00	0.00				
0.69	1.70	10.53	84.81	99.78	21.20	2.01	161.24	20,419.03					2 Blade	544	mm	3200	0.00	0.00	0.00	0.00				
0.70	1.80	11.15	100.67	118.44	25.17	2.26	134.17	16,990.94							3100	68.00	9.80	285.71	387.37					
0.70	1.90	11.77	118.40	139.30	29.60	2.51	112.76	14,279.61					OPTIMUM PITCH RATIO			3000	62.24	9.52	270.22	366.37				
0.70	2.00	12.39	138.10	162.47	34.52	2.79	95.61	12,108.45					Average	0.82	2900	56.79	9.23	255.09	345.85					
														Maximum	0.97	2800	51.66	8.95	240.31	325.82				
														Minimum	0.65	2700	46.83	8.66	225.91	306.29				
														Actual	0.67	2600	42.29	8.37	211.87	287.25				
																2500	38.04	8.08	198.20	268.73				
														MIN ACCEPTABLE DIA			2400	34.07	7.79	184.91	250.71			
														Dmin =	18.69	ins	2300	30.37	7.50	172.01	233.21			
															475	mm	2200	26.94	7.20	159.49	216.24			
ENGINE		Yanmar 4JH4-TE															2100	23.76	6.91	147.36	199.79			
MAX H.P.		68.00	MAX CONT.															2000	20.83	6.61	135.63	183.89		
MAX RPM		3100.00														1900	18.13	6.31	124.31	168.54				
GEARBOX		2.48														1800	15.67	6.01	113.39	153.74				
RPM @ 90%		2790.00														1700	13.43	5.71	102.89	139.50				
S.L. RATIO		1.50														1600	11.40	5.41	92.81	125.84				
(85% max H.P.)																								
SPEED		9.29																						
100% H.P. - S.L. =		1.58																						
SPEED		9.80																						