

BOAT Name GARUFA Sail Nr ECU-11452	GPH 621.8	HULL Length Overall 10.790m Maximum Beam 3.654m Displacement 4,989kg Draft 2.082m IMS Reg. Division Cruiser/Racer Dynamic Allowance 0.005% Fwd Accommodation Yes Hull Construction Cored Carbon Rudder No Crew Arm Extension
GENERAL Class J35 Designer J. JHONSTONE Builder T&P Series 01/1982 Age 01/1982 Age Allowance 0.487% Offset File ECU11452.OFF - 25/09/2011 21:19:14 Measurement by - 27/04/2016		IMSL 9.305m VCGD 0.061m Sink 18.05kg/mm RL 8.969m VCGM 0.058m WS 23.63m² LSM0 9.246m Displacement/Length ratio 6.3118



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SCORING OPTIONS						
Time on Distance	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
	604.8			670.3		
Time on Time	0.9920			1.0070		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	704.8	553.0	496.9	905.2	673.0	588.7
Time on Time	0.9577	1.2206	1.3583	0.7457	1.0029	1.1466

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1000.4	835.3	741.9	705.1	688.7	680.3	677.4
52°	661.4	562.6	522.2	506.8	500.2	496.6	494.6
60°	627.4	543.5	511.6	496.4	488.4	483.8	480.0
75°	602.2	531.0	503.4	486.1	472.4	463.1	454.6
90°	610.7	531.9	502.1	483.2	466.3	451.1	430.5
110°	647.9	538.7	497.9	473.1	451.4	437.0	417.1
120°	664.6	548.8	502.4	475.8	450.5	428.4	399.5
135°	729.6	593.6	523.9	492.4	467.5	442.5	397.3
150°	860.4	685.7	581.3	522.0	493.3	470.3	425.3
Run VMG	993.5	791.8	670.6	592.9	539.2	504.4	459.1

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Number **FVEC7**
ORC Ref **ECU00008921**
Issued On **22/05/2019**
VPP Ver. **2019 1.01**
Valid until **31/03/2020**

Crew Weight
Default **616kg**
Maximum **650kg**
Minimum* **488kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring
ToD ToT
Non Spin GPH **647.1 0.9272**
Non Spin OSN **629.5 0.9532**

Selected Courses							
Windward / Leeward	996.9	813.5	706.2	649.0	614.0	592.3	568.2
Circular Random	848.5	688.5	603.7	555.1	525.4	506.0	481.3
Coastal / Long Distance	996.6	766.3	641.3	572.9	536.2	507.1	462.2
Non Spinnaker	893.0	720.4	627.7	573.8	540.7	519.0	491.5

Sails Limitations
Headsails **5** | Spinnakers **3**

Velocity Prediction in Knots for True Wind Speeds							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat Angles	42.1°	41.0°	39.5°	37.9°	37.3°	36.8°	36.8°
Beat VMG	3.60	4.31	4.85	5.11	5.23	5.29	5.31
52°	5.44	6.40	6.89	7.10	7.20	7.25	7.28
60°	5.74	6.62	7.04	7.25	7.37	7.44	7.50
75°	5.98	6.78	7.15	7.41	7.62	7.77	7.92
90°	5.89	6.77	7.17	7.45	7.72	7.98	8.36
110°	5.56	6.68	7.23	7.61	7.98	8.24	8.63
120°	5.42	6.56	7.17	7.57	7.99	8.40	9.01
135°	4.93	6.07	6.87	7.31	7.70	8.14	9.06
150°	4.18	5.25	6.19	6.90	7.30	7.66	8.46
Run VMG	3.62	4.55	5.37	6.07	6.68	7.14	7.84
Gybe Angles	145.7°	149.6°	150.8°	157.5°	180.0°	180.0°	180.0°

Class Division Length
CDL = **9.138**

Storm Sails Areas
Heavy Weather Jib **27.83**
Storm Jib (JL=9.34) **10.31**
Storm Trysail **9.28**

Owner

BOAT	
Name GARUFA	Sail Nr ECU-11452
File ECU11452	Data in meters/kilograms

RIG	
Forestay Tension Aft	Spreaders 2
Inner Stay None Fitted	Runners 0
Carbon Mast No	Jumper Struts None
Taper Hollows No	Jib Furler No
Fiber Rigging No	Main Furler No
Lenticular Rigging No	Without Backstay No
Articulated Bowsprit No	
P 12.590	E 4.210 MDT1 0.116 MW 0.123
IG 14.230	J 4.465 MDL1 0.179 GO 0.162
ISP 14.210	SFJ 0.000 MDT2 0.093 BD 0.151
BAS 1.480	SPL 4.495 MDL2 0.129 MWT 141.50
FSP 0.062	TPS TL 1.400 MCG 4.700

INCLINING TEST AND FREEBOARDS			
Inclining Test Current Inclining			
Flotation date 30/09/2017		SG 1.0253	
FFM 1.141	FF 1.142	SFFP 0.735	
FAM 0.835	FA 0.835	SAFP 10.030	
W1 65.0	PD1 491.8	WD 11.240	
W2 65.0	PD2 492.1	GSA 1.0	
W3 65.0	PD3 493.6	RSA 1.0	
W4 65.0	PD4 491.0	PLM 9000.0	
LCF from stem on CL / on sheer		6.163 / 6.413	
Maximum beam station from stem		6.410	
RM Measured		116.9kg-m	
RM Default		114.4kg-m	
Limit of positive stability / Stab.Index		108.0° / 105.8	
Freeboard at mast at 4.465		0.962	



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MIZZEN RIG AND SAILS	
N/A	

PROPELLER			
Installation Shaft exposed	PRD 0.412		
Type Folding 2 blades	PBW 0.110		
Twin Screw No	PIPA 0.0029		
PSA 17.700	PHL 0.150	ST3 0.130	ESL 0.800
PSD 0.025	ST1 0.046	ST4 0.043	
PHD 0.045	ST2 0.100	ST5 0.163	

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COMMENTS	
EST Y FBDS + VELAS EX TIVOLI NUEVO ARMADOR	

MOVABLE BALLAST	
N/A	

CENTERBOARD	
N/A	



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SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.170	0.88	1.59	2.73	3.56	31.70	32.29	P/8 · (E + 2·MQW + 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL				
	14.00	14.00	14.00	7.93	7.84	92.31		SL · (SFL + 4·SHW) / 6	
Asymmetric									
Not Available									

HEADSAILS												
Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB)												
HHB	HUW	HTW	HHW	HQW	HLP	HLU	Area	Btn	Fly	Meas.Date	Material	Comment
0.08	0.83	1.60	3.18	4.80	6.49	14.64	47.12			17/05/2019	Carbon	NUEVA
0.07	0.78	1.50	3.05	4.70	6.51	14.36	45.19			29/03/2019	Kevlar	REMEDIACION
0.10	0.48	0.90	1.80	2.82	3.93	10.59	20.02			07/10/2014	Dacron	

MEASUREMENT INVENTORY				
Measurer P G				
Date 30/09/2017				
Comment				
Id	Item	Weight	Distance	VCG Description
Id	Item	Maker	Model	
C4	Engine	YANMAR	18 HP	
Id	Item	Weight Description		

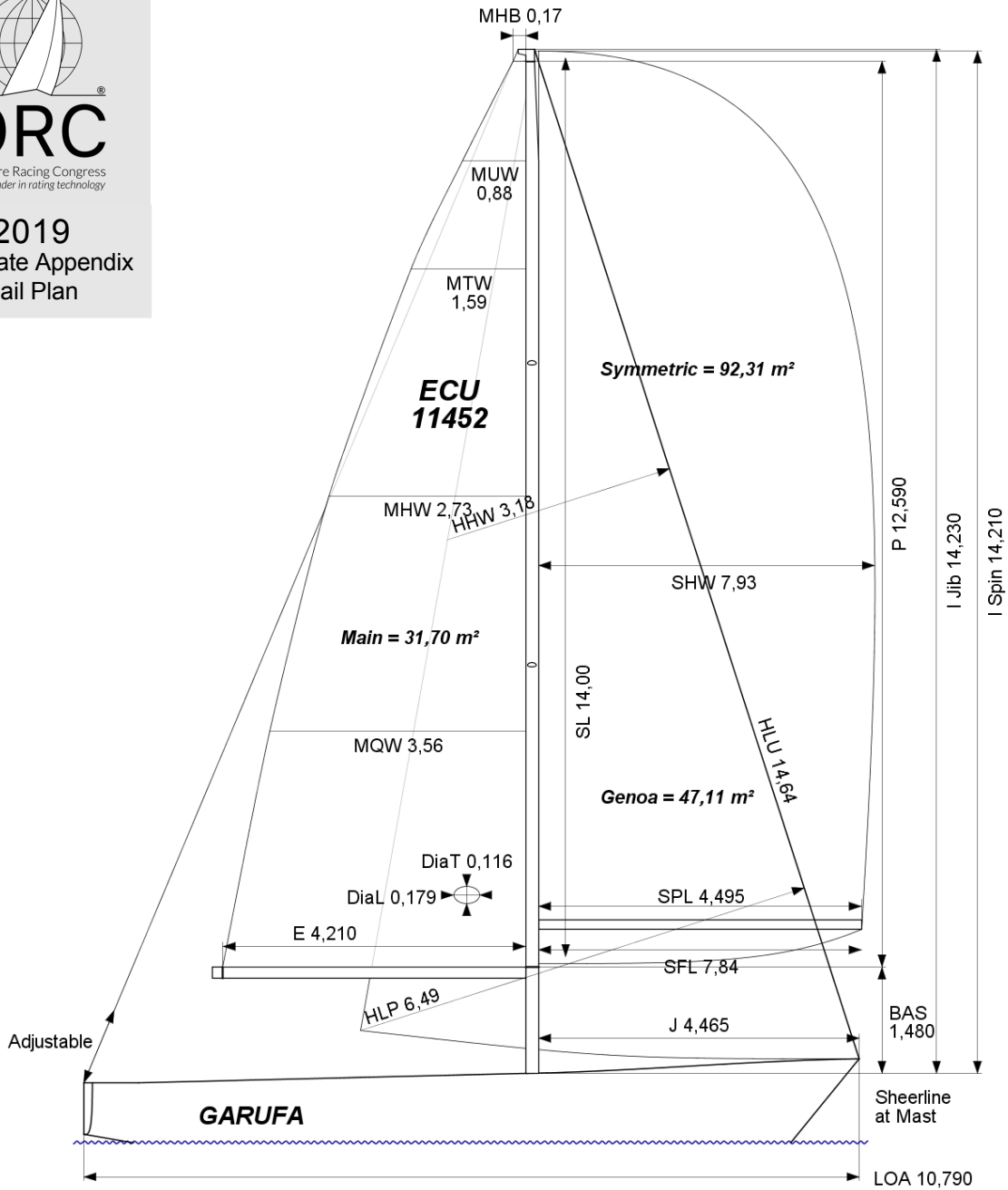
MEASUREMENT INVENTORY								
Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condtn	Description
E6	Tank	PETROLEO	ALUMINIO	90.0	5.80	0.00		12-0
B6	Tank	AGUA	PVC	100.0	5.80	0.00		0-0
Id	Item	Weight	Distance	VCG Description				
E5	Battery	30.0	7.90	0.00 2 X 12 V - 100 AMP				



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SAILS INVENTORY

MAINSAIL (1)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
M4	0.17	0.88	1.59	2.73	3.56	31.70		17/05/2019	NORTH	Carbon	NUEVA					
HEADSAILS (3)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
G1 LM	0.08	0.83	1.60	3.18	4.80	6.49	14.64	145%	47.12				17/05/2019	NORTH	Carbon	NUEVA
G1	0.07	0.78	1.50	3.05	4.70	6.51	14.36	146%	45.19				29/03/2019	ELVSTROM	Kevlar	REMEDICION
JIB	0.10	0.48	0.90	1.80	2.82	3.93	10.59	88%	20.02				07/10/2014	NEIL PRIDE	Dacron	
SYMMETRIC SPINNAKERS (2)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
S 5	14.00	14.00	14.00	7.93	7.84	92.31		03/06/2012	SOBSTAD	Nylon	0,75					
S2N	13.98	13.98	13.98	7.99	7.56	92.09		29/03/2019	ELVSTROM	Nylon	REMEDICION					
ASYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				