

BOAT Name GARUFA Sail Nr ECU-11452	GPH 631,1	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 09:19:14 Measurement by P. GUTIERREZ - 27/04/2016		IMSL 9,305m VCGD 0,061m Sink 18,05kg/mm RL 8,434m VCGM 0,058m WS 23,63m² LSMO 9,246m Displacement/Length ratio 6,3118



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ORC International
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Rating Office
Federación Ecuatoriana
de Vela
Patricio D. Gutiérrez - RO
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SCORING OPTIONS	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
	Time On Distance	614,2			683,6	
Time On Time	0,9769			0,9874		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	720,9	560,1	498,3	933,1	688,4	594,4
Time on Time	0,9363	1,2051	1,3547	0,7234	0,9806	1,1356

TIME ALLOWANCES	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1049,4	876,5	777,1	727,1	703,0	689,6	682,6
52°	683,8	577,0	527,8	508,5	500,0	495,2	490,9
60°	643,9	549,8	513,2	495,8	486,0	480,1	474,4
75°	610,6	531,3	501,9	483,0	467,1	455,5	446,0
90°	610,6	530,3	499,9	480,6	462,5	445,6	422,6
110°	656,0	542,9	500,6	474,3	450,5	436,7	416,5
120°	673,5	554,5	506,0	479,6	453,7	429,2	400,2
135°	739,6	601,1	528,1	496,0	471,8	447,3	402,0
150°	871,4	692,8	586,8	525,2	496,1	473,6	429,1
Run VMG	1006,2	800,1	676,9	596,6	541,5	506,4	461,9

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VPP Ver. **2017 1.00**
Valid until **31/03/2018**

Crew Weight
Declared **650kg**
Default* **616kg**
Non Manual Pwr **No**

Special Scoring
ToD ToT
Non Spin GPH **654,6 0,9166**
Non Spin OSN **637,4 0,9414**

Selected Courses	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Windward / Leeward	1027,8	838,3	727,0	661,8	622,2	598,0	572,2
Circular Random	866,5	701,1	612,6	561,1	529,1	508,1	481,5
Ocean for PCS	1062,6	822,6	687,3	604,6	550,9	513,3	461,4
Non Spinnaker	907,2	730,5	634,9	578,7	543,6	520,4	490,7

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

Velocity Prediction in Knots for True Wind Speeds	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat Angles	43,6°	42,5°	42,0°	39,9°	38,9°	38,2°	37,7°
Beat VMG	3,43	4,11	4,63	4,95	5,12	5,22	5,27
52°	5,26	6,24	6,82	7,08	7,20	7,27	7,33
60°	5,59	6,55	7,01	7,26	7,41	7,50	7,59
75°	5,90	6,78	7,17	7,45	7,71	7,90	8,07
90°	5,90	6,79	7,20	7,49	7,78	8,08	8,52
110°	5,49	6,63	7,19	7,59	7,99	8,24	8,64
120°	5,35	6,49	7,11	7,51	7,93	8,39	8,99
135°	4,87	5,99	6,82	7,26	7,63	8,05	8,96
150°	4,13	5,20	6,13	6,85	7,26	7,60	8,39
Run VMG	3,58	4,50	5,32	6,03	6,65	7,11	7,79
Gybe Angles	145,9°	150,1°	151,1°	157,6°	180,0°	180,0°	180,0°

Class Division Length
CDL = **8,870**

Storm Sails Areas
Heavy Weather Jib **27,82**
Storm Jib (JL=9,33) **10,30**
Storm Trysail **9,35**

Owner
CARLOS LUIS LECARO
GUAYAQUIL


I certify that I understand my responsibilities under ORC Rules and Regulations

Signature

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

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		114,1kg·m	
Limit of positive stability / Stab.Index		108,0° / 105,8	
Freeboard at mast at 4,465		0,962	

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 12,530	E 4,265	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




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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	

COMMENTS	
EST Y FBDS + VELAS EXTIVOLI NUEVO ARMADOR	

MOVEABLE BALLAST	
N/A	

CENTERBOARD	
N/A	

SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0,150	0,89	1,61	2,73	3,57	31,71	32,31	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL	92,93		SL · (SFL + 4·SHW) / 6	
	14,03	14,03	14,03	7,99	7,78				
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
0,05	0,78	1,52	3,12	4,81	6,60	14,56	46,65			27/04/2016	Kevlar	REMEDIACION
0,07	0,77	1,52	3,10	4,76	6,56	14,37	45,72			03/06/2012	Kevlar	
0,09	0,80	1,53	3,07	4,76	6,52	14,32	45,46			03/06/2012	Kevlar	
0,10	0,48	0,90	1,80	2,82	3,93	10,59	20,01			07/10/2014	Dacron	

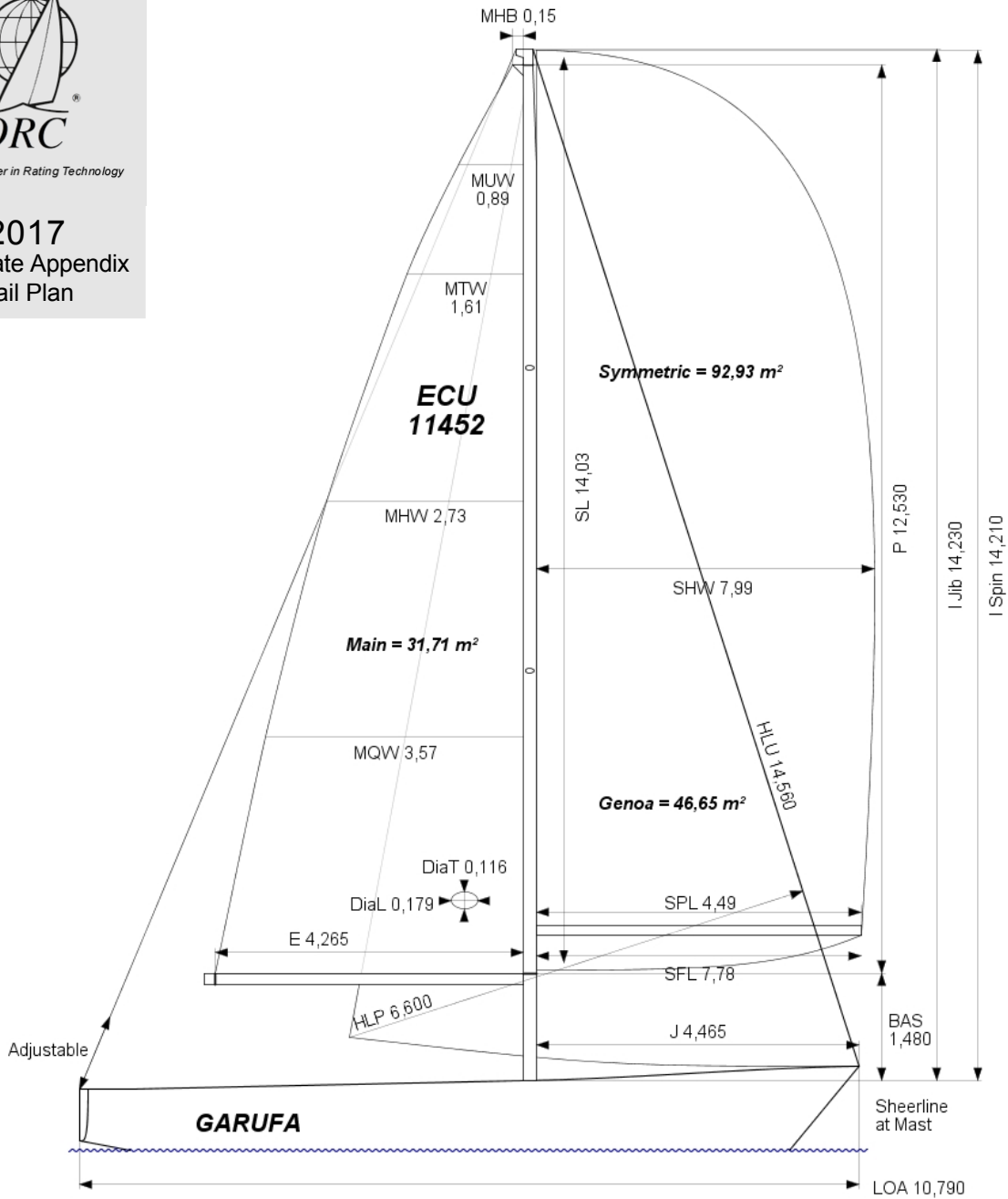
MEASUREMENT INVENTORY				
Measurer PATRICIO GUTIERREZ P G				
Date 30/09/2017				
Comment				
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>
<i>Id</i>	<i>Item</i>	<i>Maker</i>	<i>Model</i>	
C4	Engine	YANMAR	18 HP	
<i>Id</i>	<i>Item</i>	<i>Weight Description</i>		

MEASUREMENT INVENTORY							
<i>Id</i>	<i>Item</i>	<i>Tank Use</i>	<i>Tank Type</i>	<i>Capcty</i>	<i>Dist.</i>	<i>VCG</i>	<i>Condtn Description</i>
E6	Tank	PETROLEO	ALUMINIO	90,0	5,80	0,00	12,0
B6	Tank	AGUA	PVC	100,0	5,80	0,00	0,0
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>			
E5	Battery	30,0	7,90	0,00 2 X 12 V - 100 AMP			



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Sail Plan



SAILS INVENTORY

MAINSAIL (1)

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
MN	0,150	0,89	1,61	2,73	3,57	31,71	A V M	27/04/2016	ELVSTROM	Kevlar	REMEDICION

HEADSAILS (4)

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
G1	0,05	0,78	1,52	3,12	4,81	6,60	14,56	148%	46,65			A V M	27/04/2016	ELVSTROM	Kevlar	REMEDICION
K 2	0,07	0,77	1,52	3,10	4,76	6,56	14,37	147%	45,72			F	03/06/2012	SOBSTAD	Kevlar	
KL	0,09	0,80	1,53	3,07	4,76	6,52	14,32	146%	45,46			F	03/06/2012	QUANTUM	Kevlar	
JIB	0,10	0,48	0,90	1,80	2,82	3,93	10,59	88%	20,01			R	07/10/2014	NEIL PRIDE	Dacron	

SYMMETRIC SPINNAKERS (3)

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
S 2	14,03	14,03	14,03	7,99	7,78	92,93	F CARLIER	03/06/2012	SOBSTAD	Nylon	0,5
S2N	14,00	14,00	14,00	8,00	7,66	92,54	A V M	27/04/2016	ELVSTROM	Nylon	REMEDICION
S 5	14,00	14,00	14,00	7,93	7,84	92,31	F CARLIER	03/06/2012	SOBSTAD	Nylon	0,75

ASYMMETRIC SPINNAKERS (0)

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
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