

BOAT Name FUGA Sail Nr ECU-54	GPH 589,3	HULL Length Overall 16,292m Maximum Beam 3,414m Displacement 10.098kg Draft 1,807m IMS Reg. Division Cruiser/Racer Dynamic Allowance 0,382% Fwd Accommodation Yes Hull Construction Solid Carbon Rudder No Crew Arm Extension 0,00
GENERAL Class HUNTER 54 Designer HUNTER Builder HUNTER MARINE Series 01/1983 Age 01/1983 Age Allowance 0,487% Offset File US17644.OFF - 24/09/2011 08:06:10 Measurement by P. GUTIERREZ - 01/10/2017		IMSL 14,338m VCGD 0,162m Sink 31,35kg/mm RL 9,049m VCGM 0,141m WS 39,57m² LSMO 14,035m Displacement/Length ratio 3,6526



SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time On Distance	572,7			657,7		
Time On Time	1,0476			1,0263		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	705,3	513,6	446,6	938,2	662,1	558,3
Time on Time	0,9570	1,3143	1,5115	0,7195	1,0195	1,2090

Rating Office
Federación Ecuatoriana de Vela
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TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1090,5	879,8	765,6	702,0	668,5	649,7	639,7
52°	683,1	556,5	484,3	450,8	436,9	430,1	425,5
60°	623,0	511,7	449,6	426,8	417,7	412,9	408,6
75°	572,5	472,5	426,8	408,1	397,8	391,8	385,3
90°	565,7	466,3	422,1	402,6	388,0	374,6	359,9
110°	628,4	501,7	433,0	404,9	385,8	372,3	351,0
120°	649,1	517,6	442,6	410,1	389,4	367,2	334,4
135°	730,4	573,7	482,9	430,2	405,2	385,7	341,9
150°	870,6	672,7	560,1	485,7	441,0	418,1	386,4
Run VMG	1005,3	776,8	646,7	560,8	509,3	482,3	420,9

Certificate
Number **05402**
ORC Ref **ECU00005629**
Issued On **05/10/2017**
VPP Ver. **2017 1.00**
Valid until **31/03/2018**

Selected Courses							
Windward / Leeward	1047,9	828,3	706,2	631,4	588,9	566,0	530,3
Circular Random	838,5	664,9	569,7	513,6	479,1	456,9	429,5
Ocean for PCS	1047,5	792,3	646,7	557,0	498,6	458,1	403,0
Non Spinnaker	877,4	693,5	591,3	529,7	490,8	465,3	435,3

Crew Weight
Declared **790kg**
Default* **1.116kg**
Non Manual Pwr **No**

Special Scoring
ToD ToT
Non Spin GPH **611,6 0,9810**
Non Spin OSN **596,9 1,0052**

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	47,5°	46,3°	46,3°	45,5°	44,5°	43,7°	43,3°
Beat VMG	3,30	4,09	4,70	5,13	5,39	5,54	5,63
52°	5,27	6,47	7,43	7,99	8,24	8,37	8,46
60°	5,78	7,03	8,01	8,44	8,62	8,72	8,81
75°	6,29	7,62	8,43	8,82	9,05	9,19	9,34
90°	6,36	7,72	8,53	8,94	9,28	9,61	10,00
110°	5,73	7,18	8,31	8,89	9,33	9,67	10,26
120°	5,55	6,95	8,13	8,78	9,24	9,80	10,77
135°	4,93	6,28	7,46	8,37	8,88	9,33	10,53
150°	4,13	5,35	6,43	7,41	8,16	8,61	9,32
Run VMG	3,58	4,63	5,57	6,42	7,07	7,46	8,55
Gybe Angles	143,3°	146,4°	147,1°	147,1°	148,6°	150,3°	173,1°

Sails Limitations
Headsails **1** | Spinnakers **5**
Dacron Sails

Class Division Length
CDL = **11,694**

Storm Sails Areas
Heavy Weather Jib **37,66**
Storm Jib (JL=10,86) **13,95**
Storm Trysail **11,64**


Owner
SANDRO NAVAS GIANGRANDE
AV. FRANCISCO BOLONIA, B.
KENEDY
GUAYAQUIL

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

BOAT	
Name FUGA	Sail Nr ECU-54
File ECU54	Data in meters/kilograms

INCLINING TEST AND FREEBOARDS		
Inclining Test Current Inclining		
Flotation date 01/10/2017		SG 1,0253
FFM 1,331	FF 1,338	SFFP 0,917
FAM 0,990	FA 0,989	SAFP 14,664
W1 120,0	PD1 465,6	WD 11,350
W2 120,0	PD2 462,3	GSA 1,0
W3 120,0	PD3 460,1	RSA 1,0
W4 120,0	PD4 462,9	PLM 9000,0
LCF from stem on CL / on sheer		9,520 / 9,672
Maximum beam station from stem		9,869
RM Measured		231,8kg·m
RM Default		247,2kg·m
Limit of positive stability / Stab.Index		106,3° / 115,8
Freeboard at mast at 6,580		1,171

RIG			
Forestay Tension Fixed	Spreaders 2		
Inner Stay Fixed	Runners 0		
Carbon Mast No	Jumper Struts None		
Taper Hollows No	Jib Furler Yes		
Fiber Rigging No	Main Furler No		
Lenticular Rigging No	Without Backstay No		
Articulated Bowsprit No			
P 14,820	E 4,490	MDT1 0,145	MW 0,220
IG 16,620	J 6,040	MDL1 0,250	GO 0,250
ISP 16,620	SFJ 0,540	MDT2 0,130	BD 0,172
BAS 1,627	SPL 	MDL2 0,220	MWT 0,00
FSP 0,080	TPS 6,100	TL 2,300	MCG 0,000




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IMS Measurement Certificate

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MIZZEN RIG AND SAILS	
N/A	

PROPELLER		
Installation Strut	PRD 0,440	
Type Feathering 3 blades	PBW 0,085	
Twin Screw No	PIPA 0,0015	
ST1 0,027	ST3 0,091	ST5 0,274
ST2 0,122	ST4 0,064	EDL 1,219

COMMENTS	

MOVEABLE BALLAST	
N/A	

CENTERBOARD	
N/A	

SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0,150	0,93	1,64	2,83	3,75	39,12	39,66	P/8 · (E + 2·MQW + 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric Not Available									
Asymmetric	SLU	SLE	SL	SHW	SFL	Area	Area (r)	Formula	
	16,60	14,74	15,67	8,90	9,94	118,94	121,76	AS · (SFL + 4·SHW) / 6	

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
0,10	1,10	2,12	4,29	6,54	9,03	16,76	73,61			01/10/2017	Carbon	* Copied from legacy *
0,08	0,46	0,83	1,65	2,59	3,63	14,92	25,97			01/10/2017	Dacron	

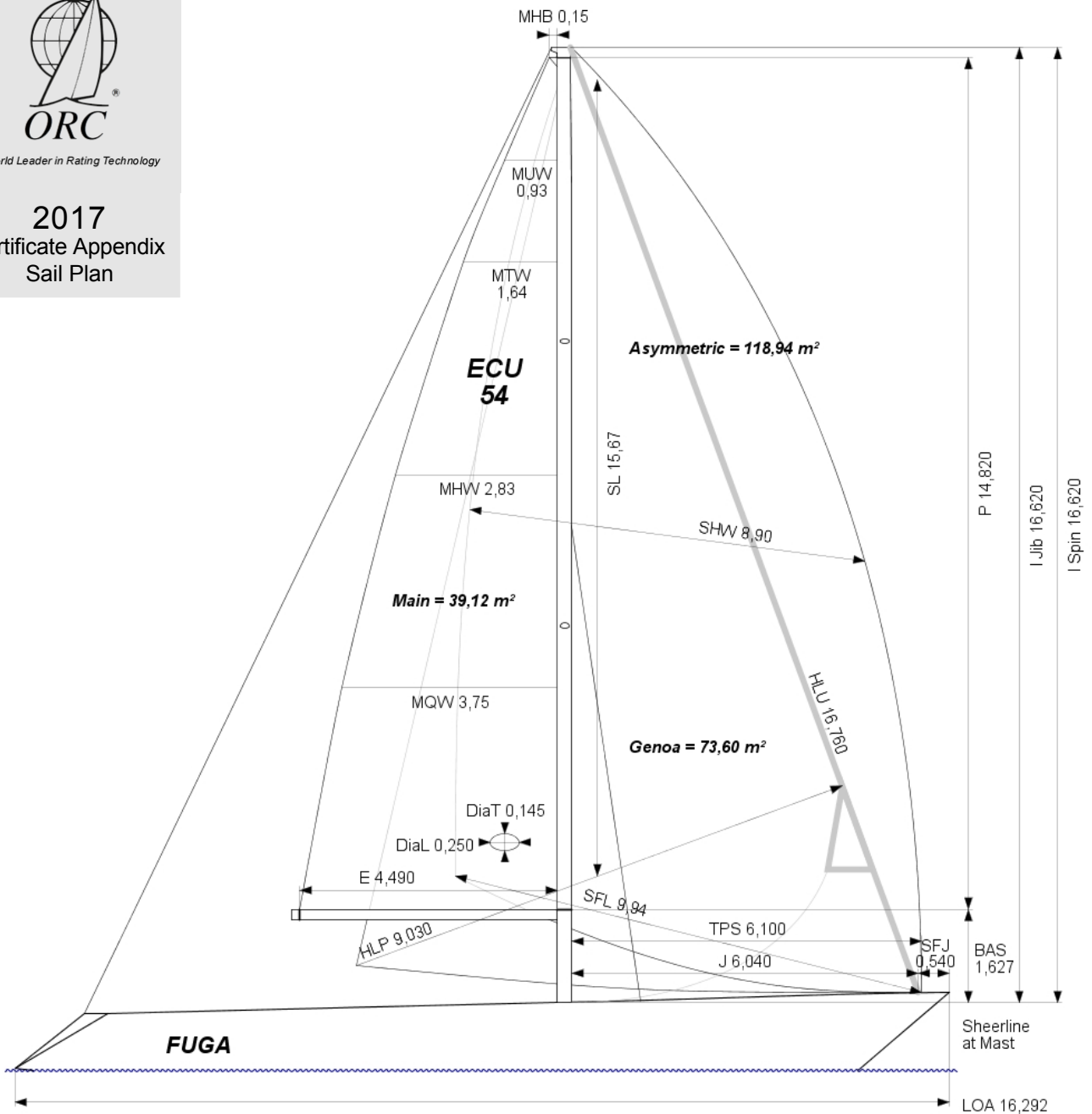
MEASUREMENT INVENTORY				
Measurer PATRICIO GUTIERREZ P G				
Date 01/10/2017				
Comment				
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>
<i>Id</i>	<i>Item</i>	<i>Maker</i>	<i>Model</i>	
C4	Engine	YANMAR	75 HP	
<i>Id</i>	<i>Item</i>	<i>Weight Description</i>		

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</i>	<i>Description</i>
56	Tank	AGUA	INOX	180,0	1,50	0,00	0-0	
B6	Tank	AGUA	INOX	180,0	1,50	0,00	0-0	
E5	Tank	PETROLEO	INOX	252,0	6,00	0,00	03,0	
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>				
E3	Battery	16,0	11,64	0,00 12 V - 138 AMP				
E3	Battery	16,0	11,64	0,00 12 V - 138 AMP				
E3	Battery	16,0	11,64	0,00 12 V - 138 AMP				



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Certificate Appendix
Sail Plan



SAILS INVENTORY

MAINSAIL (1)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
M1	0,150	0,93	1,64	2,83	3,75	39,12	PG	01/10/2017	UK	Dacron	* Copied from legacy					
HEADSAILS (2)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
G1	0,10	1,10	2,12	4,29	6,54	9,03	16,76	150%	73,61			PG	01/10/2017	UK	Carbon	* Copied from legacy *
TRINQ	0,08	0,46	0,83	1,65	2,59	3,63	14,92	60%	25,97			PG	01/10/2017	UK	Dacron	
SYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
ASYMMETRIC SPINNAKERS (1)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				
A3	16,60	14,74	15,67	8,90	9,94	118,94	asym	PG	01/10/2017	UK	Nylon	* Copied from legacy *				