

BOAT Name WIZARD Sail Nr USA 70000	GPH 366.4	HULL Length Overall 21.500m Maximum Beam 5.696m Displacement 14,391kg Draft 4.544m IMS Reg. Division Performance Dynamic Allowance 0.002% Fwd Accommodation No Hull Construction , Aramid Carbon Rudder Yes Crew Arm Extension
GENERAL Class VOLVO OPEN 70 Designer Juan Kouyoum Djan Builder MULTIPLAST Series 01/2011 Age 01/2011 Age Allowance 0.195% Offset File Wizard.off - 13/04/2018 01:40:40 Measurement by Anderson - 06/03/2018		IMSL 21.439m VCGD -1.369m Sink 62.72kg/mm RL 25.018m VCGM -1.369m WS 75.65m² LSM0 21.735m Displacement/Length ratio 1.4016



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SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	356.2			413.8		
Time on Time	1.6843			1.6311		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	453.8	319.3	253.8	608.8	419.4	333.7
Time on Time	1.4873	2.1143	2.6593	1.1087	1.6096	2.0229

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	692.5	538.7	455.5	422.2	403.5	390.7	364.6
52°	433.9	345.2	306.9	285.6	271.1	262.2	239.9
60°	392.9	326.6	286.8	266.7	252.7	243.3	219.5
75°	353.4	304.1	256.8	235.7	220.5	210.2	189.8
90°	349.0	302.2	250.9	218.2	203.3	193.2	176.4
110°	378.3	323.3	283.4	241.4	194.9	181.4	162.0
120°	422.6	340.1	295.1	251.2	219.7	199.1	171.8
135°	494.1	374.5	322.0	283.3	245.8	215.0	178.0
150°	594.2	448.7	372.7	332.6	297.0	258.0	198.1
Run VMG	686.1	518.1	430.3	384.0	343.0	298.0	228.7

Certificate

Number **7000**
ORC Ref **AUS00001342**
Issued On **16/04/2018**
VPP Ver. **2017 1.00**
Valid until **30/06/2018**

Crew Weight

Default **2,083kg**
Maximum **2,083kg**
Minimum* **1,562kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

	ToD	ToT
Non Spin GPH	387.5	1.5484
Non Spin OSN	381.9	1.5713

Selected Courses							
Windward / Leeward	689.3	528.4	442.9	403.1	373.2	344.3	296.7
Circular Random	535.4	420.0	354.4	312.7	283.8	261.8	228.5
Coastal / Long Distance	676.9	503.8	403.8	340.0	295.5	261.7	211.7
Non Spinnaker	564.0	443.6	374.9	331.5	301.4	278.5	242.2

Sails Limitations

Headsails	Spinnakers
8	6

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	47.1°	45.9°	40.8°	37.4°	36.3°	37.2°	39.7°
Beat VMG	5.20	6.68	7.90	8.53	8.92	9.22	9.87
52°	8.30	10.43	11.73	12.60	13.28	13.73	15.01
60°	9.16	11.02	12.55	13.50	14.25	14.80	16.40
75°	10.19	11.84	14.02	15.28	16.32	17.13	18.97
90°	10.32	11.91	14.35	16.50	17.71	18.63	20.40
110°	9.52	11.13	12.70	14.91	18.47	19.84	22.22
120°	8.52	10.58	12.20	14.33	16.38	18.08	20.95
135°	7.29	9.61	11.18	12.71	14.65	16.75	20.22
150°	6.06	8.02	9.66	10.83	12.12	13.95	18.18
Run VMG	5.25	6.95	8.37	9.38	10.50	12.08	15.74
Gybe Angles	139.8°	139.7°	144.7°	148.9°	141.6°	136.9°	141.0°

Class Division Length

CDL = **23.231**

Storm Sails Areas

Heavy Weather Jib **93.56**
Storm Jib (JL=17.11) **34.65**
Storm Trysail **41.50**

Owner

BOAT	
Name WIZARD	Sail Nr USA 70000
File 7000	Data in meters/kilograms

INCLINING TEST AND FREEBOARDS					
Inclining Test Current Inclining					
Flotation date 14/11/2013				SG 1.0250	
FFM 1.903	FF 1.902	SFFP 1.000			
FAM 1.406	FA 1.409	SAFP 21.495			
W1 50.0	PD1 56.0	WD 27.110			
W2 100.0	PD2 113.0	GSA 19.6			
W3 150.0	PD3 169.0	RSA 9503.0			
W4 200.0	PD4 225.0	PLM 3022.0			
LCF from stem on CL / on sheer				12.477 / 12.739	
Maximum beam station from stem				15.738	
RM Measured				1270.7kg·m	
RM Default				784.0kg·m	
Limit of positive stability / Stab.Index				119.5° / 123.0	
Freeboard at mast at 10.330				1.646	



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IMS Measurement Certificate

RIG					
Forestay Tension Aft	Spreaders 4				
Inner Stay Adjustable	Runners 2				
Carbon Mast Yes	Jumper Struts None				
Taper Hollows No	Jib Furler No				
Fiber Rigging Yes	Main Furler No				
Lenticular Rigging No	Without Backstay No				
Articulated Bowsprit No					
P 28.000	E 8.470	MDT1 0.175	MW 0.370		
IG 26.326	J 9.500	MDL1 0.370	GO 0.370		
ISP 29.980	SFJ 0.830	MDT2 0.155	BD 0.380		
BAS 1.880	SPL	MDL2 0.270	MWT		
FSP 0.000	TPS 12.360	TL 3.560	MCG		

Certificate	
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MIZZEN RIG AND SAILS	
N/A	

PROPELLER	
Type No Propeller	

COMMENTS	
BALLAST TANKS not used capacity 1252 liters Hydraulic Tank Full for canting keel SFFP 1.0 SAFP 21.50	

MOVABLE BALLAST	
Keel Angle 40.0	
List Angle 13.4	
BLR Index 1.4964	



Invalid for Racing

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BILGEBOARD			
BS 3.700	BT 0.075	BA 0.0	
BF 0.000	BX 9.446		
BC 0.610	BY 1.050		

SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	3.130	3.67	4.69	6.21	7.36	167.58	171.25	P/8 · (E + 2·MQW + 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric Not Available									
Asymmetric	SLU	SLE	SL	SHW	SFL	Area	Formula		
	33.85	30.05	31.95	18.18	19.23	489.63	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	2.24	4.12	7.29		12.93	27.00	185.81	Y			Carbon	

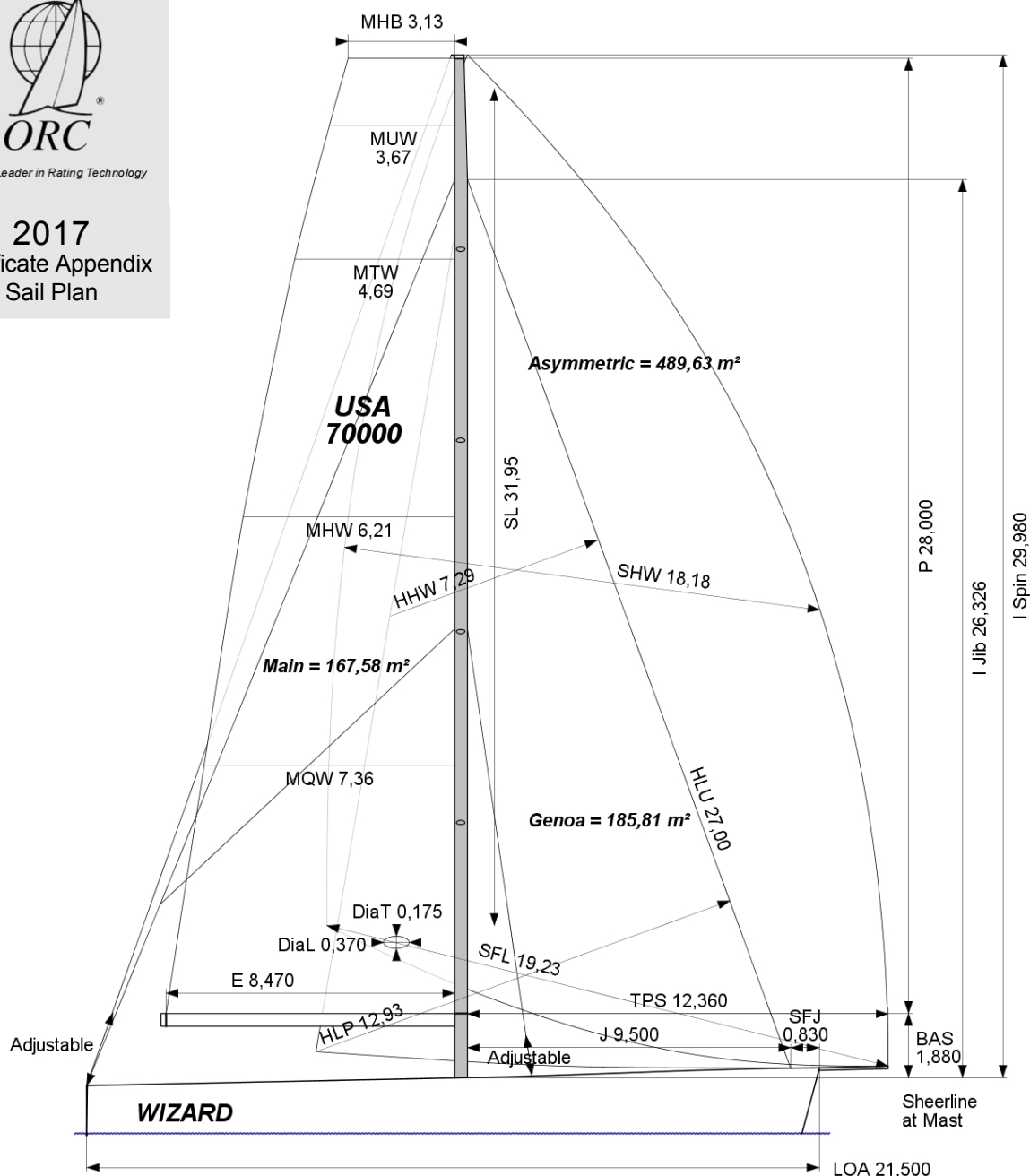
MEASUREMENT INVENTORY				
Measurer Martin Hannon John Anderson NZ9 & AUS				
Date 14/11/2013				
Comment Checked 12/3/2018 Anderson				
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>
<i>Id</i>	<i>Item</i>	<i>Maker</i>	<i>Model</i>	
1	Engine	VOLVO	D2 - 75 F	
<i>Id</i>	<i>Item</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 Condtn Description</i>
5	Tank	FRESH	CARBON	120.0	9.80	0-0
4	Tank	FRESH	CARBON	120.0	9.80	0-0
3	Tank	FRESH	PLASTIC	50.0	14.30	0-0
2	Tank	FUEL	PLASTIC	110.0	19.30	0-0
1	Tank	FUEL	PLASTIC	110.0	19.30	50-0
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>		
3	Battery	35.0	13.50	7 X 5kgs Lithium Starboard Side		
2	Battery	35.0	13.50	7 X 5kgs Lithium Port Side		
1	Battery	50.0	13.50	2 X 25kgs High Capacity Port Side		



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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
1	3.130	3.67	4.69	6.21	7.36	167.58			North	Carbon	

HEADSAILS (1)

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
1	0.10	2.24	4.12	7.29		12.93	27.00	136%	185.81	Y				Nporth	Carbon	

SYMMETRIC SPINNAKERS (0)

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
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ASYMMETRIC SPINNAKERS (1)

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
1	33.85	30.05	31.95	18.18	19.23	489.63	asym			North	Unknown	