

BOAT	GPH	HULL
Name NICOLE Sail Nr USA 2021	655.8	Length Overall 11.963m Maximum Beam 3.328m Displacement 7,325kg Draft 1.770m IMS Reg. Division Cruiser/Racer Dynamic Allowance 0.272% Fwd Accommodation Yes Hull Construction Solid Carbon Rudder No Crew Arm Extension 0.00
GENERAL		IMSL 9.593m VCGD -0.083m Sink 20.86kg/mm RL 7.489m VCGM -0.082m WS 30.47m² LSM0 9.578m Displacement/Length ratio 8.3365
Class CAL 40 Designer LAPWORTH Builder CAL Series 11/1963 Age 05/1970 Age Allowance 0.487% Offset File US40911b.OFF - 08/05/2018 12:50:24 Measurement by - 24/08/1995		



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SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	636.8			714.2		
Time on Time	0.9422			0.9451		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	762.1	578.2	512.3	988.6	720.6	617.2
Time on Time	0.8857	1.1674	1.3176	0.6828	0.9367	1.0936

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1133.5	944.8	833.7	771.6	743.4	730.0	727.3
52°	731.0	616.4	546.9	517.2	506.8	501.8	498.5
60°	688.6	582.0	525.6	502.0	492.0	487.0	483.0
75°	657.0	556.7	511.7	490.5	476.5	467.7	459.7
90°	659.9	556.9	508.1	483.8	470.2	456.1	435.8
110°	680.3	558.5	502.1	475.7	455.2	438.3	420.9
120°	700.6	571.8	508.2	479.6	456.9	435.9	406.0
135°	770.3	622.9	535.3	495.7	472.2	450.3	410.7
150°	907.7	717.0	604.1	530.9	496.0	473.9	434.0
Run VMG	1048.2	828.1	697.4	607.9	550.0	508.3	464.1
Selected Courses							
Windward / Leeward	1090.8	886.4	765.6	689.8	646.7	619.2	595.7
Circular Random	911.1	732.5	635.8	579.2	544.6	522.7	497.7
Coastal / Long Distance	1086.6	830.5	685.5	597.9	553.8	520.9	472.0
Non Spinnaker	954.1	763.4	659.1	597.5	559.4	535.0	506.2

Certificate

Number **US6293**
ORC Ref **USAX018MA1E**
Issued On **08/05/2018**
VPP Ver. **2018 1.00**
Valid until **31/12/2018**

Crew Weight

Default **647kg**
Maximum **647kg**
Minimum* **485kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

ToD ToT
Non Spin GPH **680.4 0.8818**
Non Spin OSN **660.7 0.9082**

Sails Limitations

Headsails	Spinnakers
5	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	44.9°	43.6°	43.9°	43.3°	41.9°	41.5°	41.7°
Beat VMG	3.18	3.81	4.32	4.67	4.84	4.93	4.95
52°	4.92	5.84	6.58	6.96	7.10	7.17	7.22
60°	5.23	6.19	6.85	7.17	7.32	7.39	7.45
75°	5.48	6.47	7.03	7.34	7.55	7.70	7.83
90°	5.46	6.46	7.08	7.44	7.66	7.89	8.26
110°	5.29	6.45	7.17	7.57	7.91	8.21	8.55
120°	5.14	6.30	7.08	7.51	7.88	8.26	8.87
135°	4.67	5.78	6.73	7.26	7.62	8.00	8.77
150°	3.97	5.02	5.96	6.78	7.26	7.60	8.30
Run VMG	3.43	4.35	5.16	5.92	6.55	7.08	7.76
Gybe Angles	146.4°	150.4°	150.4°	155.3°	171.0°	180.0°	180.0°

Class Division Length

CDL = 8.541

Storm Sails Areas

Heavy Weather Jib **26.86**
Storm Jib (JL=9.17) **9.95**
Storm Trysail **11.40**

Owner

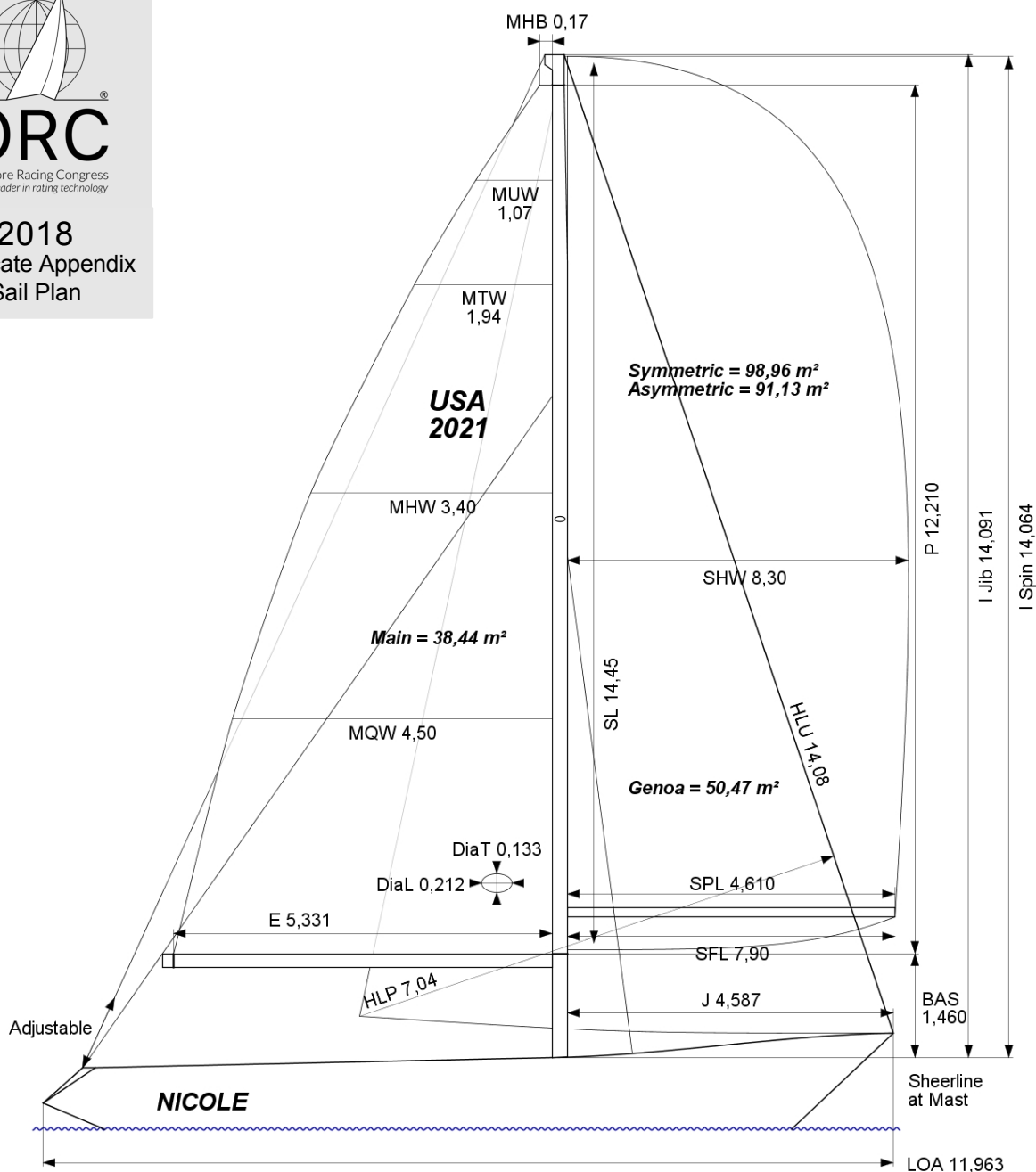
BOAT Name NICOLE Sail Nr USA 2021 File US6293 Data in meters/kilograms		INCLINING TEST AND FREEBOARDS Inclining Test Current Inclining Flotation date 28/05/2016 SG 1.0080		 ORC Offshore Racing Congress World leader in rating technology 2018 IMS Measurement Certificate					
RIG Forestay Tension Aft Spreaders 1 Inner Stay Fixed Runners 1 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		FFM 1.323 FF 1.329 SFFP 0.593 FAM 0.857 FA 0.863 SAFFP 11.223 W1 97.2 PD1 524.4 WD 12.125 W2 97.2 PD2 524.4 GSA 1.0 W3 97.2 PD3 524.4 RSA 1.0 W4 97.2 PD4 524.4 PLM 9000.0							
P 12.210 E 5.331 MDT1 0.133 MW 0.168 IG 14.091 J 4.587 MDL1 0.212 GO 0.172 ISP 14.064 SFJ 0.000 MDT2 0.133 BD 0.192 BAS 1.460 SPL 4.610 MDL2 0.165 MWT 179.60 FSP 0.067 TPS 0.000 TL 2.500 MCG 5.092		LCF from stem on CL / on sheer 6.437 / 6.649 Maximum beam station from stem 6.675 RM Measured 177.0kg-m RM Default 171.3kg-m Limit of positive stability / Stab.Index 116.9° / 123.8 Freeboard at mast at 4.587 1.006							
MIZZEN RIG AND SAILS N/A		PROPELLER Installation Shaft exposed PRD 0.460 Type Feathering 2 blades PBW 0.152 Twin Screw No PIPA 0.0013 PSA 18.000 PHL 0.146 ST3 0.000 ESL 0.000 PSD 0.030 ST1 0.000 ST4 0.000 PHD 0.070 ST2 0.000 ST5 0.000							
COMMENTS N/A		MOVABLE BALLAST N/A		Certificate Number US6293 ORC Ref USAX018MA1E Issued On 08/05/2018 VPP Ver. 2018 1.00 Valid until 31/12/2018					
		CENTERBOARD N/A							
SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.171	1.07	1.94	3.40	4.50	38.44	39.59	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL				
	14.45	14.45	14.45	8.30	7.90	98.96		SL · (SFL + 4·SHW) / 6	
Asymmetric	SLU	SLE	SL	SHW	SFL				
	14.05	14.05	14.05	7.66	8.27	91.13		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 7.04 14.08 50.46									
MEASUREMENT INVENTORY Measurer Date Comment						MEASUREMENT INVENTORY Id Item Tank Use Tank Type Capcty Dist. VCG Condtn Description Tank 0.00 0.00 0-0			
Id Item Weight Distance VCG Description a Anchor 0-0 0-00						Id Item Weight Distance VCG Description			
Id Item Weight Description									



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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
630555	0.18	1.07	1.94	3.40	4.50	38.47					

HEADSAILS (1)

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
630553						7.04	14.08	153%	50.46							

SYMMETRIC SPINNAKERS (1)

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
1768363	14.45	14.45	14.45		7.90	98.97			QUANTUM		2018 TRY RADIAL SYMMETRICAL

ASYMMETRIC SPINNAKERS (1)

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
630549			0.00	7.66	8.27	91.14	asym					