

BOAT Name LADY GREY Sail Nr USA 679	GPH 623.0	HULL Length Overall 10.970m Maximum Beam 3.365m Displacement 5,652kg Draft 1.768m IMS Reg. Division Cruiser/Racer Dynamic Allowance 0.035% Fwd Accommodation No Hull Construction Cored Carbon Rudder No Crew Arm Extension
GENERAL Class J-110 Designer Johnstone Builder Johnstone Series 02/1995 Age 05/1995 Age Allowance 0.487% Offset File US31158.OFF - 21/10/2002 10:16:42 Measurement by - 18/09/2018		IMSL 9.681m VCGD 0.011m Sink 18.55kg/mm RL 8.193m VCGM -0.015m WS 24.66m² LSM0 9.618m Displacement/Length ratio 6.3525



ORC
Offshore Racing Congress
World leader in rating technology

2019
ORC International
Certificate

Rating Office

Offshore
Racing
Congress



SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	608.3			682.9		
Time on Time	0.9863			0.9885		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	702.2	554.3	505.4	907.6	684.2	610.3
Time on Time	0.9612	1.2177	1.3357	0.7437	0.9866	1.1061

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1048.4	874.8	778.2	737.7	719.5	710.6	708.1
52°	684.2	576.6	527.4	510.7	504.1	500.9	499.6
60°	643.3	550.0	512.8	497.7	491.0	487.3	484.8
75°	611.3	532.3	502.1	485.7	474.4	467.4	460.5
90°	616.3	532.1	499.8	481.7	466.5	452.9	434.4
110°	612.5	516.8	483.9	463.3	449.8	440.0	421.5
120°	624.1	521.7	485.3	460.0	436.9	421.3	401.7
135°	698.9	559.3	500.7	473.6	447.7	422.3	377.0
150°	820.2	658.5	554.7	505.3	484.8	467.7	426.8
Run VMG	947.1	760.4	640.5	582.8	556.6	514.4	471.0

Certificate
Number **US6374**
ORC Ref **USAX0220A71**
Issued On **20/03/2019**
VPP Ver. **2019 1.01**
Valid until **31/12/2019**

Crew Weight
Default 651kg
Maximum **651kg**
Minimum* **488kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

	ToD	ToT
Non Spin GPH	658.5	0.9112
Non Spin OSN	642.5	0.9339

Selected Courses							
Windward / Leeward	997.8	817.6	709.3	660.2	638.0	612.5	589.6
Circular Random	846.3	687.7	604.7	558.2	530.7	513.2	491.2
Coastal / Long Distance	992.7	767.2	641.3	576.3	542.9	513.4	469.1
Non Spinnaker	911.5	734.0	638.4	582.9	549.2	527.6	502.0

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	43.6°	42.5°	42.1°	40.8°	39.9°	39.5°	39.5°
Beat VMG	3.43	4.12	4.63	4.88	5.00	5.07	5.08
52°	5.26	6.24	6.83	7.05	7.14	7.19	7.21
60°	5.60	6.55	7.02	7.23	7.33	7.39	7.43
75°	5.89	6.76	7.17	7.41	7.59	7.70	7.82
90°	5.84	6.77	7.20	7.47	7.72	7.95	8.29
110°	5.88	6.97	7.44	7.77	8.00	8.18	8.54
120°	5.77	6.90	7.42	7.83	8.24	8.55	8.96
135°	5.15	6.44	7.19	7.60	8.04	8.52	9.55
150°	4.39	5.47	6.49	7.12	7.43	7.70	8.43
Run VMG	3.80	4.73	5.62	6.18	6.47	7.00	7.64
Gybe Angles	144.9°	148.0°	147.9°	150.8°	173.6°	176.5°	177.6°

Class Division Length
CDL = **8.938**

Storm Sails Areas
Heavy Weather Jib **27.28**
Storm Jib (JL=9.24) **10.11**
Storm Trysail **10.66**

Owner

BOAT		
Name LADY GREY	Sail Nr USA 679	
File US6374	Data in meters/kilograms	

RIG				
Forestay Tension Aft		Spreaders 2		
Inner Stay None Fitted		Runners 0		
Carbon Mast Yes		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 12.896	E 4.720	MDT1 0.150	MW 0.195	
IG 14.168	J 4.015	MDL1 0.231	GO 0.208	
ISP 14.417	SFJ 0.000	MDT2 0.103	BD 0.151	
BAS 1.587	SPL 0.000	MDL2 0.191	MWT 147.30	
FSP 0.056	TPS 5.685	TL 2.010	MCG 4.791	

INCLINING TEST AND FREEBOARDS				
Inclining Test Boom Inclining		LCFD		
Flotation date 28/09/2018		SG 1.0060		
FFM 1.157	FF 1.164	SFFP 0.975		
FAM 0.907	FA 0.912	SAFP 10.307		
W1 107.2	PD1 315.1	WD 4.322		
W2 107.2	PD2 310.4	GSA 1.0		
W3 107.2	PD3 306.3	RSA 1.0		
W4 107.2	PD4 301.9	PLM 9000.0		
LCF from stem on CL / on sheer		6.101 / 6.330		
Maximum beam station from stem		6.111		
RM Measured		118.3kg-m		
RM Default		117.0kg-m		
Limit of positive stability / Stab.Index		115.0° / 117.9		
Freeboard at mast at 4.015		1.030		



ORC
Offshore Racing Congress
World leader in rating technology

2019
IMS Measurement
Certificate

MIZZEN RIG AND SAILS				
N/A				

PROPELLER				
Installation Shaft exposed	PRD 0.440			
Type Folding 2 blades	PBW 0.110			
Twin Screw	PIPA 0.0057			
PSA 21.000	PHL 0.129	ST3 0.083	ESL 0.880	
PSD 0.024	ST1 0.019	ST4 0.045		
PHD 0.080	ST2 0.082	ST5 0.190		

Certificate	
Number US6374	
ORC Ref USAX0220A71	
Issued On 20/03/2019	
VPP Ver. 2019 1.01	
Valid until 31/12/2019	

COMMENTS				

MOVABLE BALLAST				
N/A				

CENTERBOARD				
N/A				



SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.160	0.99	1.74	3.04	3.97	36.23	37.02	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric Not Available									
Asymmetric on centerline	SLU	SLE	SL	SHW	SFL	Area	Formula		
	17.20	14.50	15.85	10.45	10.00	136.84	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
0.15	0.82	1.57	3.08	4.63	6.23	14.24	44.33					Headsail

MEASUREMENT INVENTORY				
Measurer	Date	Comment		
Id	Item	Weight	Distance	VCG Description
a	Anchor	0-0	0-00	
Id	Item	Weight Description		

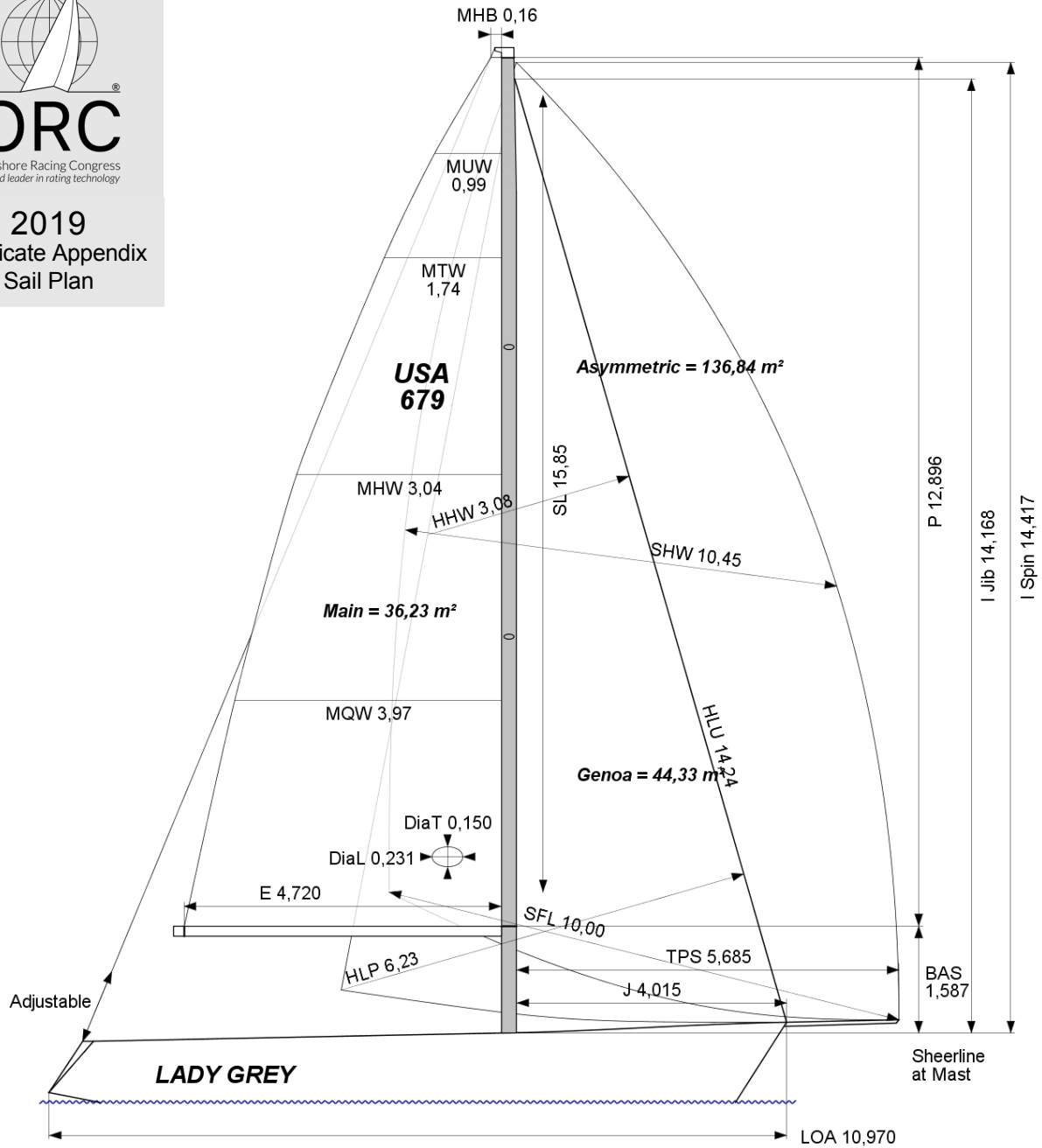
MEASUREMENT INVENTORY									
Id	Item	Tank	Use	Tank Type	Capcty	Dist.	VCG	Condtn	Description
	Tank					0.00	0.00	0-0	
Id	Item	Weight	Distance	VCG Description					



ORC

Offshore Racing Congress
World leader in rating technology

2019
Certificate Appendix
Sail Plan



SAILS INVENTORY

MAINSAIL (1)

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
2181707	0.16	0.99	1.74	3.04	3.97	36.15			Steve Pickel		Mainsail

HEADSAILS (1)

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
2181715	0.15	0.82	1.57	3.08	4.63	6.23	14.24	155%	44.33					Steve Pickel		Headsail

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
2181725	17.20	14.50	15.85	10.45	10.00	136.84	asym			Steve Pickel		Asym 2018