

BOAT Name FLYER Sail Nr USA 2213	GPH 652.8	HULL Length Overall 11.963m Maximum Beam 3.328m Displacement 7,176kg Draft 1.777m IMS Reg. Division Cruiser/Racer Dynamic Allowance 0.256% Fwd Accommodation Yes Hull Construction Solid Carbon Rudder No Crew Arm Extension 0.00
GENERAL Class CAL 40 Designer LAPWORTH, WM Builder JENSEN Series 01/1963 Age 01/1963 Age Allowance 0.487% Offset File US40911b.OFF - 08/05/2018 12:50:24 Measurement by - 19/05/2018		IMSL 9.557m VCGD -0.047m Sink 20.77kg/mm RL 7.613m VCGM -0.041m WS 30.33m² LSM0 9.515m Displacement/Length ratio 8.3302



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SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	634.1			710.1		
Time on Time	0.9463			0.9505		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	756.3	576.1	511.3	980.8	716.2	614.4
Time on Time	0.8925	1.1717	1.3201	0.6882	0.9425	1.0986

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1119.7	932.8	823.0	765.3	738.8	725.2	721.2
52°	725.6	611.0	543.4	516.4	506.9	502.2	498.8
60°	682.9	578.0	523.7	501.6	492.7	487.9	483.9
75°	647.7	553.3	510.9	490.2	476.8	469.0	461.4
90°	650.8	552.7	508.1	484.5	470.1	456.2	437.4
110°	677.1	557.5	502.5	476.2	455.9	438.9	419.1
120°	697.8	570.6	508.6	480.1	457.2	436.2	406.5
135°	768.1	621.5	535.7	496.4	472.7	450.4	410.6
150°	904.9	715.0	603.1	530.6	496.0	474.1	433.8
Run VMG	1044.9	825.7	696.0	607.1	549.1	508.0	463.8

Certificate
Number **US6307**
ORC Ref **USAX025MKE4**
Issued On **25/04/2019**
VPP Ver. **2019 1.01**
Valid until **31/12/2019**

Crew Weight
Default **641kg**
Maximum **647kg**
Minimum* **485kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring
ToD ToT
Non Spin GPH **676.9 0.8864**
Non Spin OSN **657.5 0.9126**

Selected Courses							
Windward / Leeward	1082.3	879.2	759.5	686.2	643.9	616.6	592.5
Circular Random	904.9	728.3	632.9	577.2	543.2	521.5	496.5
Coastal / Long Distance	1078.5	824.2	681.1	596.0	552.7	520.2	472.0
Non Spinnaker	947.5	758.7	655.8	595.1	557.6	533.5	505.0

Sails Limitations
Headsails **5** Spinnakers **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	44.4°	43.3°	43.5°	42.6°	41.4°	40.9°	41.1°
Beat VMG	3.22	3.86	4.37	4.70	4.87	4.96	4.99
52°	4.96	5.89	6.63	6.97	7.10	7.17	7.22
60°	5.27	6.23	6.87	7.18	7.31	7.38	7.44
75°	5.56	6.51	7.05	7.34	7.55	7.68	7.80
90°	5.53	6.51	7.08	7.43	7.66	7.89	8.23
110°	5.32	6.46	7.16	7.56	7.90	8.20	8.59
120°	5.16	6.31	7.08	7.50	7.87	8.25	8.86
135°	4.69	5.79	6.72	7.25	7.62	7.99	8.77
150°	3.98	5.04	5.97	6.79	7.26	7.59	8.30
Run VMG	3.45	4.36	5.17	5.93	6.56	7.09	7.76
Gybe Angles	146.4°	150.4°	151.1°	155.5°	171.2°	180.0°	180.0°

Class Division Length
CDL = **8.585**

Storm Sails Areas
Heavy Weather Jib **26.99**
Storm Jib (JL=9.19) **10.00**
Storm Trysail **11.33**

Owner

BOAT	
Name FLYER	Sail Nr USA 2213
File US6307	Data in meters/kilograms

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	
P 12.135	E 5.334 MDT1 0.134 MW 0.180
IG 14.076	J 4.570 MDL1 0.242 GO 0.200
ISP 14.049	SFJ 0.000 MDT2 0.130 BD 0.192
BAS 1.460	SPL 4.704 MDL2 0.180 MWT 185.50
FSP 0.058	TPS 4.570 TL 2.500 MCG 4.737

INCLINING TEST AND FREEBOARDS		
Inclining Test Boom Inclining	LCFD	
Flotation date 19/05/2018	SG 1.0060	
FFM 1.323	FF 1.393	SFFP 0.593
FAM 0.857	FA 0.825	SAFP 11.223
W1 106.0	PD1 599.1	WD 12.245
W2 106.0	PD2 594.9	GSA 1.0
W3 106.0	PD3 597.9	RSA 1.0
W4 106.0	PD4 595.7	PLM 9000.0
LCF from stem on CL / on sheer	6.534 / 6.746	
Maximum beam station from stem	6.675	
RM Measured	171.2kg-m	
RM Default	169.6kg-m	
Limit of positive stability / Stab.Index	114.6° / 121.4	
Freeboard at mast at 4.570	1.032	



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MIZZEN RIG AND SAILS	
N/A	

PROPELLER		
Installation Shaft exposed	PRD 0.317	
Type Feathering 3 blades	PBW 0.120	
Twin Screw No	PIPA 0.0017	
PSA 18.000	PHL 0.145 ST3 0.000 ESL 0.203	
PSD 0.031	ST1 0.000 ST4 0.000	
PHD 0.076	ST2 0.000 ST5 0.000	

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Issued On 25/04/2019	
VPP Ver. 2019 1.01	
Valid until 31/12/2019	

COMMENTS

MOVABLE BALLAST	
N/A	

BILGEBOARD		
BS	BT	BA
BF	BX	
BC	BY	



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SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.180	1.16	2.08	3.48	4.52	39.07	40.43	P/8 · (E + 2·MQW + 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL	96.28		SL · (SFL + 4·SHW) / 6	
Asymmetric	SLU	SLE	SL	SHW	SFL	87.31		AS · (SFL + 4·SHW) / 6	
	14.97	12.04	13.51	7.48	8.87				

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
					6.86	14.15	49.41					

MEASUREMENT INVENTORY				
Measurer	Date	Comment		
Id	Item	Weight	Distance	VCG Description
a	Ancher	0.0	0.00	
Id	Item	Weight Description		

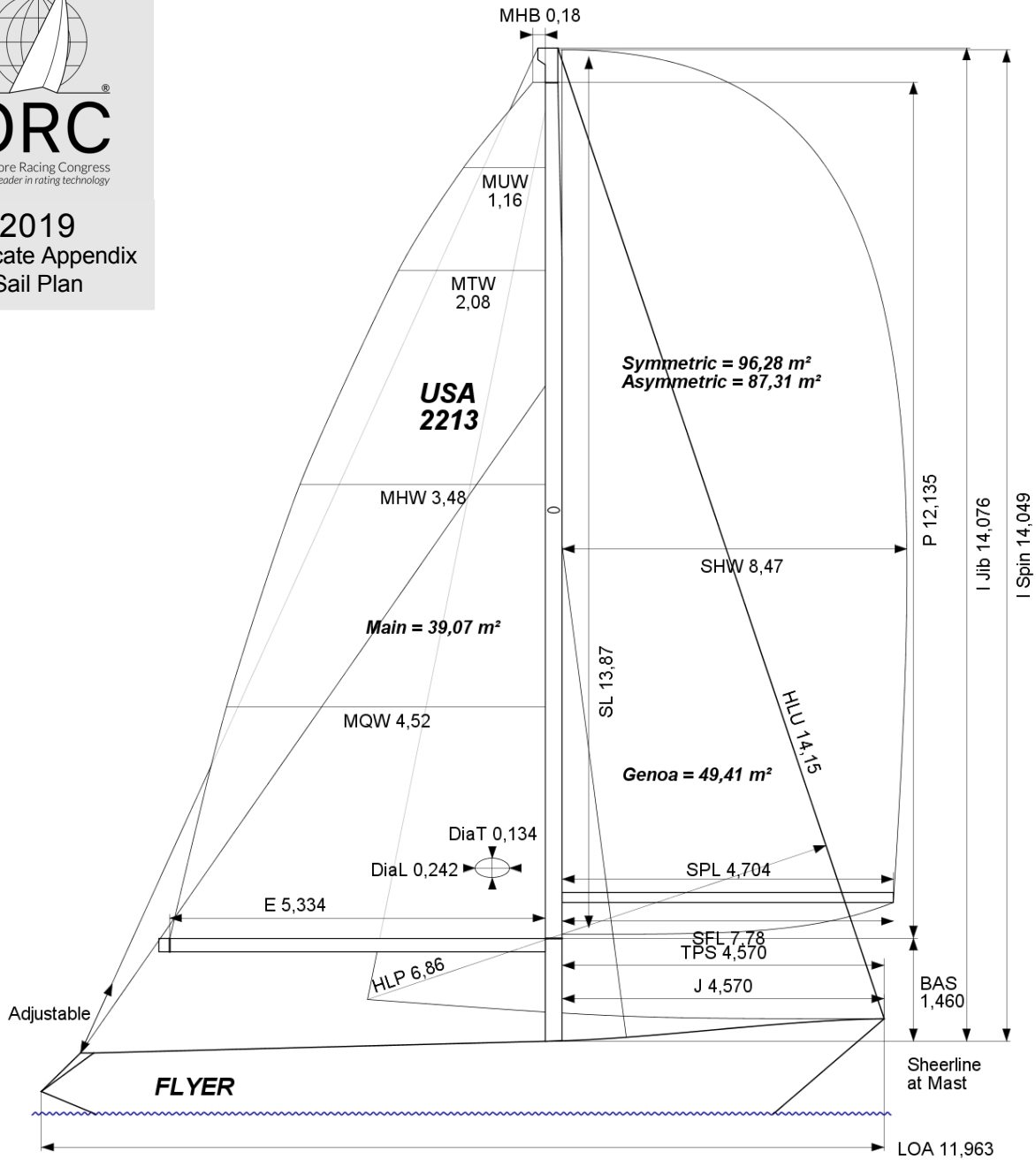
MEASUREMENT INVENTORY									
Id	Item	Tank	Use	Tank Type	Capcty	Dist.	VCG	Condtn	Description
	Tank					0.00	-0.10	150.0	
Id	Item	Weight	Distance	VCG Description					



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Sail Plan



SAILS INVENTORY

MAINSAIL (1)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
344517	0.18	1.16	2.08	3.48	4.52	38.99										
HEADSAILS (1)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
344515						6.86	14.15	150%	49.41							
SYMMETRIC SPINNAKERS (1)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
344513	13.87	13.87	13.87		7.78	96.28										
ASYMMETRIC SPINNAKERS (1)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				
1836215	14.97	12.04	13.50	7.48	8.87	87.31	asym				Bill	Asym 2018				