

BOAT Name VESPER Sail Nr USA 52007	GPH 435.2	HULL Length Overall 15.835m Maximum Beam 4.458m Displacement 7,204kg Draft 3.657m Plan Review IMS Reg. Division Performance Dynamic Allowance 0.000% Hull Construction Carbon, Aramid Carbon Rudder Yes Crew Arm Extension
GENERAL Class TP52 Designer BOTIN/CARKEEK Builder Series 06/2008 Age 06/2008 Age Allowance 0.390% Offset File US42659.OFF - 14/11/2018 17:30:22 Measurement by - 10/07/2016		IMSL 15.172m VCGD -1.396m Sink 32.02kg/mm RL 15.984m VCGM -1.402m WS 41.07m² LSM0 14.706m Displacement/Length ratio 2.2651



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SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	424.7			484.4		
Time on Time	1.4128			1.3936		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	496.9	388.7	331.4	649.5	492.7	414.2
Time on Time	1.3584	1.7366	2.0366	1.0393	1.3700	1.6297

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	718.6	593.1	549.6	528.2	511.7	500.3	494.0
52°	465.2	400.8	383.2	372.7	364.9	352.7	342.6
60°	435.4	386.3	367.2	354.0	345.2	334.9	321.5
75°	416.2	373.1	342.9	326.8	316.3	308.9	289.1
90°	409.7	366.3	337.2	309.7	294.2	283.2	268.7
110°	422.7	370.0	327.8	298.2	278.8	262.1	234.9
120°	446.4	383.0	339.9	301.2	272.1	250.9	223.8
135°	520.9	411.4	366.8	324.2	286.3	260.3	213.4
150°	626.9	486.9	416.0	371.5	337.6	297.5	233.9
Run VMG	723.9	562.3	480.3	433.2	389.8	343.6	270.1

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Number **US6034**
ORC Ref **0341000R5F**
Issued On **30/09/2020**
VPP Ver. **2020 1.02**
Valid until **31/12/2020**

Crew Weight

Default **1,193kg**
Maximum **1,305kg**
Minimum* **979kg**
**when applied by the NoR and SI*
Non Manual Pwr

Special Scoring

ToD	ToT
Non Spin GPH 472.7	1.2693
Non Spin OSN 464.2	1.2925

Selected Courses							
Windward / Leeward	721.3	577.7	515.0	480.7	450.8	421.9	382.0
Circular Random	599.2	485.1	423.1	385.3	359.2	339.4	309.3
Coastal / Long Distance	721.5	543.3	462.0	408.4	372.1	338.7	289.9
Non Spinnaker	660.5	530.5	458.9	415.0	385.2	363.3	331.7

Sails Limitations

Headsails	Spinnakers
7	5

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	43.5°	41.3°	39.0°	37.7°	36.8°	36.0°	36.0°
Beat VMG	5.01	6.07	6.55	6.82	7.04	7.20	7.29
52°	7.74	8.98	9.39	9.66	9.87	10.21	10.51
60°	8.27	9.32	9.80	10.17	10.43	10.75	11.20
75°	8.65	9.65	10.50	11.02	11.38	11.65	12.45
90°	8.79	9.83	10.68	11.62	12.24	12.71	13.40
110°	8.52	9.73	10.98	12.07	12.91	13.73	15.33
120°	8.07	9.40	10.59	11.95	13.23	14.35	16.09
135°	6.91	8.75	9.81	11.10	12.57	13.83	16.87
150°	5.74	7.39	8.65	9.69	10.66	12.10	15.39
Run VMG	4.97	6.40	7.49	8.31	9.24	10.48	13.33
Gybe Angles	140.3°	141.5°	147.3°	151.8°	144.0°	142.5°	144.5°

Class Division Length

CDL = **15.576**

Storm Sails Areas

Heavy Weather Jib **54.37**
Storm Jib (JL=13.05) **20.14**
Storm Trysail **26.36**

Owner

BOAT	Name VESPER	Sail Nr USA 52007
	File US6034	Data in meters/kilograms

RIG	Forestay Tension Aft	Spreaders 3	
	Inner Stay None Fitted	Runners/Checkstays 2	
	Carbon Mast Yes	Jib Furler	
	Fiber Rigging Yes	Main Furler	
	Non-Circular Rigging		
	Articulated Bowsprit No		
P 20.990	E 7.174	MDT1 0.138	MW 0.301
IG 19.930	J 6.160	MDL1 0.304	GO 0.343
ISP 23.040	SFJ 0.401	MDT2 0.101	BD 0.420
BAS 2.130	SPL	MDL2 0.152	MWT 248.00
FSD 0.040	TPS 9.000	TL 2.050	MCG 7.254

INCLINING TEST AND FREEBOARDS			
Inclining Test Current Inclining			
Flotation date 29/09/2020		SG 1.0250	
FFM 1.480	FF 1.480	SFFP 0.855	
FAM 1.150	FA 1.150	SAFP 15.835	
W1 154.8	PD1 500.8	WD 17.615	
W2 154.8	PD2 500.8	GSA 1.0	
W3 154.8	PD3 500.8	RSA 1.0	
W4 154.8	PD4 500.8	PLM 9000.0	
LCF from stem on CL / on sheer		8.654 / 8.907	
Maximum beam station from stem		12.749	
RM Measured		428.8kg-m	
RM Default		358.9kg-m	
Limit of positive stability / Stab.Index		146.9° / 145.7	
Freeboard at mast at 6.561		1.277	



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IMS Measurement
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MIZZEN RIG AND SAILS
N/A

PROPELLER		
Installation Strut	PRD 0.455	
Type Folding 2 blades	PBW 0.120	
Twin Screw	PIPA 0.0042	
ST1 0.056	ST3 0.205	ST5 0.320
ST2 0.205	ST4 0.114	EDL 1.100

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COMMENTS

MOVABLE BALLAST
N/A

CENTERBOARD
N/A



SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	1.81	2.52	3.49	5.01	6.22	100.47	103.16	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		
	26.05	21.69	23.87	13.60	13.74	271.08	AS · (SFL + 4·SHW) / 6		

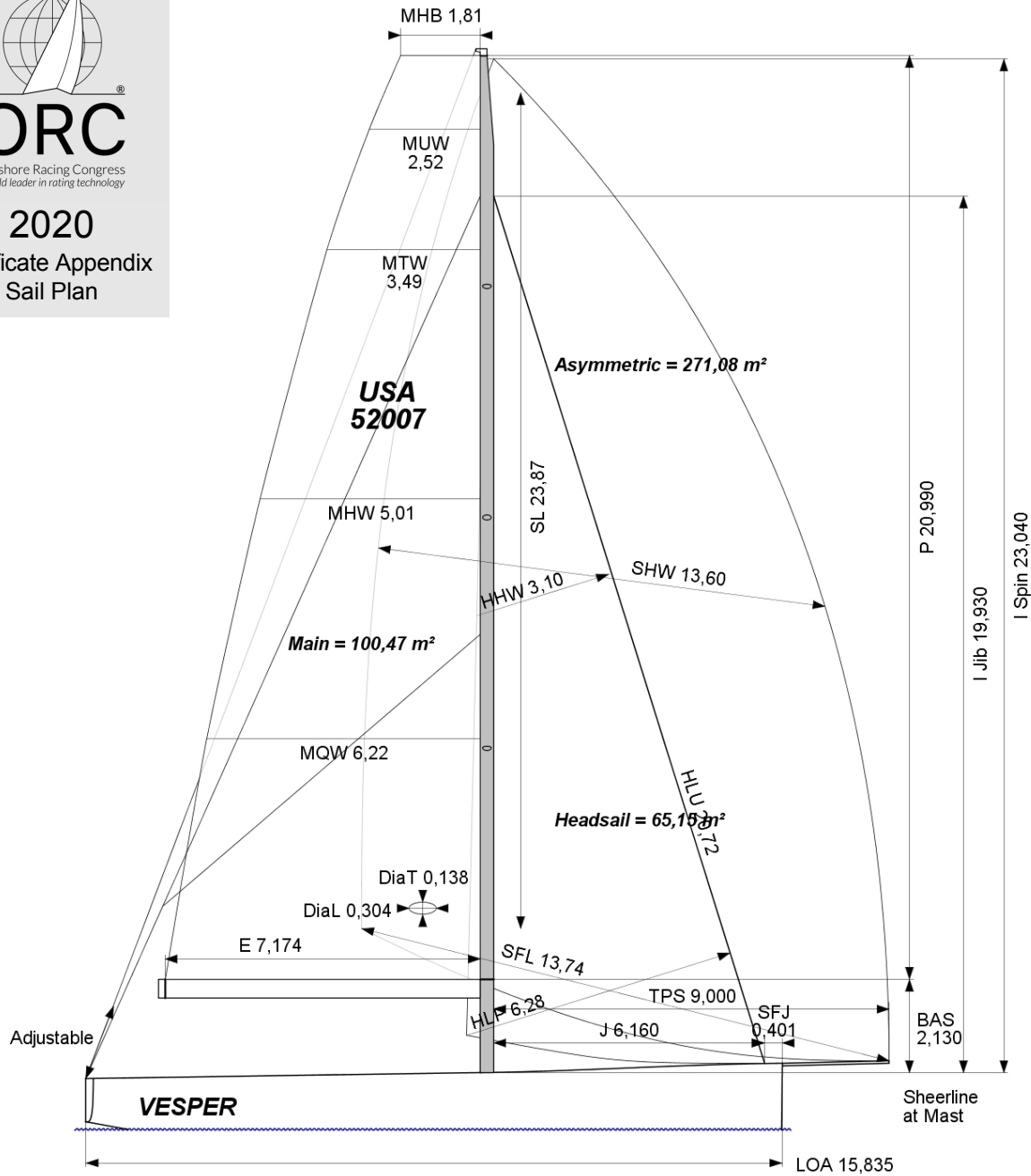
HEADSAILS												
Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB)												
HHB	HUW	HTW	HHW	HQW	HLP	HLU	Area	Btn	Flying	Meas.Date	Material	Comment
0.12	0.91	1.67	3.10	4.60	6.28	20.72	65.15	No	No	24/06/2020	Unknow	ous138809-001
0.12	0.91	1.67	3.10	4.60	6.28	20.71	65.12	No	No	11/06/2020	Unknow	ous138809-002
0.12	0.91	1.65	3.09	4.60	6.29	20.72	65.06	No	No	11/06/2020	Unknow	ous138810-002



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Sail Plan



SAILS INVENTORY

MAINSAIL (1)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
1SQ MAIN	1.81	2.52	3.49	5.01	6.22	100.48		26/06/2020	NORTH	Unknown	OUSS138810-001					
HEADSAILS (3)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Flying	Measurer	Meas.Date	Manufacture	Material	Comment
light 1	0.12	0.91	1.67	3.10	4.60	6.28	20.72	102%	65.15	No			24/06/2020	northn	Unknow	ous138809-001
light	0.12	0.91	1.67	3.10	4.60	6.28	20.71	102%	65.12	No			11/06/2020	north	Unknow	ous138809-002
medium	0.12	0.91	1.65	3.09	4.60	6.29	20.72	102%	65.06	No			11/06/2020	North	Unknow	ous138810-002
SYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
ASYMMETRIC SPINNAKERS (5)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				
A2.4	26.05	21.69	23.87	13.60	13.74	271.09	asym		28/08/2020		Unknown					
A1.5	25.71	22.30	24.01	13.18	14.39	268.50	asym		10/06/2020		Unknown	OUS138810-005				
2020 A1	25.68	22.00	23.84	12.56	13.40	252.87	asym		09/06/2020		Unknown	OUS138810-004				
C0	23.94	21.60	22.77	8.17	10.68	164.56	asy77		19/08/2020	NORTH	Unknown	OUS 138810-007				
FR0	21.44	19.50	20.47	8.00	10.63	145.44	asy76		06/02/2016	NSNZ	Unknown	ONZ1162-002				