

<b>BOAT</b> Name <b>VESPER</b> Sail Nr <b>USA 52007</b>	<b>GPH</b> <b>434.6</b>	<b>HULL</b> Length Overall <b>15.835m</b> Maximum Beam <b>4.458m</b> Displacement <b>7,286kg</b> Draft <b>3.660m</b> Plan Review IMS Reg. Division <b>Performance</b> Dynamic Allowance <b>0.000%</b> Hull Construction <b>Carbon, Aramid</b> Carbon Rudder <b>Yes</b> Crew Arm Extension
<b>GENERAL</b> Class <b>TP52</b> Designer <b>BOTIN/CARKEEK</b> Builder Series <b>06/2008</b> Age <b>06/2008</b> Age Allowance <b>0.390%</b> Offset File <b>US42659.OFF - 14/11/2018 17:30:22</b> Measurement by - <b>10/07/2016</b>		IMSL <b>15.190m</b> VCGD <b>-1.512m</b> Sink <b>32.15kg/mm</b> RL <b>16.141m</b> VCGM <b>-1.521m</b> WS <b>41.23m<sup>2</sup></b> LSM0 <b>14.738m</b> Displacement/Length ratio <b>2.2760</b>



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SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	<b>423.9</b>			<b>483.7</b>		
Time on Time	<b>1.4154</b>			<b>1.3956</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>497.3</b>	<b>388.0</b>	<b>330.1</b>	<b>649.9</b>	<b>491.9</b>	<b>413.5</b>
Time on Time	<b>1.3573</b>	<b>1.7397</b>	<b>2.0447</b>	<b>1.0386</b>	<b>1.3721</b>	<b>1.6326</b>

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>719.9</b>	<b>591.6</b>	<b>547.1</b>	<b>525.6</b>	<b>509.9</b>	<b>497.8</b>	<b>491.1</b>
52°	<b>466.2</b>	<b>400.2</b>	<b>382.1</b>	<b>371.1</b>	<b>362.9</b>	<b>351.5</b>	<b>340.2</b>
60°	<b>436.3</b>	<b>386.1</b>	<b>365.9</b>	<b>352.2</b>	<b>343.1</b>	<b>333.7</b>	<b>319.1</b>
75°	<b>417.0</b>	<b>373.5</b>	<b>342.2</b>	<b>325.1</b>	<b>314.2</b>	<b>306.6</b>	<b>286.7</b>
90°	<b>410.3</b>	<b>366.1</b>	<b>337.1</b>	<b>309.0</b>	<b>292.3</b>	<b>280.8</b>	<b>265.8</b>
110°	<b>423.3</b>	<b>370.6</b>	<b>328.0</b>	<b>297.3</b>	<b>277.2</b>	<b>260.3</b>	<b>232.8</b>
120°	<b>447.2</b>	<b>383.6</b>	<b>340.8</b>	<b>301.6</b>	<b>271.3</b>	<b>249.4</b>	<b>222.2</b>
135°	<b>521.7</b>	<b>412.0</b>	<b>367.5</b>	<b>325.1</b>	<b>286.8</b>	<b>259.3</b>	<b>213.0</b>
150°	<b>627.8</b>	<b>487.7</b>	<b>416.5</b>	<b>372.0</b>	<b>338.6</b>	<b>298.6</b>	<b>234.5</b>
Run VMG	<b>724.9</b>	<b>563.2</b>	<b>480.9</b>	<b>433.7</b>	<b>391.0</b>	<b>344.8</b>	<b>270.7</b>

**Certificate**  
Number **US6034**  
ORC Ref **0341000QFL**  
Issued On **16/09/2020**  
VPP Ver. **2020 1.02**  
Valid until **31/12/2020**

**Crew Weight**  
Default **1,197kg**  
Maximum **1,305kg**  
Minimum\* **979kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr

**Special Scoring**

ToD	ToT
Non Spin GPH <b>472.4</b>	<b>1.2701</b>
Non Spin OSN <b>463.7</b>	<b>1.2941</b>

Selected Courses							
Windward / Leeward	<b>722.4</b>	<b>577.4</b>	<b>514.0</b>	<b>479.6</b>	<b>450.5</b>	<b>421.3</b>	<b>380.9</b>
Circular Random	<b>599.5</b>	<b>484.9</b>	<b>422.6</b>	<b>384.4</b>	<b>358.2</b>	<b>338.1</b>	<b>307.8</b>
Coastal / Long Distance	<b>722.7</b>	<b>543.1</b>	<b>461.3</b>	<b>407.5</b>	<b>371.2</b>	<b>337.6</b>	<b>288.1</b>
Non Spinnaker	<b>661.1</b>	<b>530.5</b>	<b>458.6</b>	<b>414.4</b>	<b>384.4</b>	<b>362.3</b>	<b>330.3</b>

**Sails Limitations**

Headsails	Spinnakers
<b>7</b>	<b>5</b>

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	<b>43.5°</b>	<b>41.3°</b>	<b>39.0°</b>	<b>37.5°</b>	<b>36.4°</b>	<b>35.8°</b>	<b>35.8°</b>
Beat VMG	<b>5.00</b>	<b>6.08</b>	<b>6.58</b>	<b>6.85</b>	<b>7.06</b>	<b>7.23</b>	<b>7.33</b>
52°	<b>7.72</b>	<b>9.00</b>	<b>9.42</b>	<b>9.70</b>	<b>9.92</b>	<b>10.24</b>	<b>10.58</b>
60°	<b>8.25</b>	<b>9.32</b>	<b>9.84</b>	<b>10.22</b>	<b>10.49</b>	<b>10.79</b>	<b>11.28</b>
75°	<b>8.63</b>	<b>9.64</b>	<b>10.52</b>	<b>11.07</b>	<b>11.46</b>	<b>11.74</b>	<b>12.56</b>
90°	<b>8.77</b>	<b>9.83</b>	<b>10.68</b>	<b>11.65</b>	<b>12.31</b>	<b>12.82</b>	<b>13.54</b>
110°	<b>8.50</b>	<b>9.71</b>	<b>10.98</b>	<b>12.11</b>	<b>12.99</b>	<b>13.83</b>	<b>15.47</b>
120°	<b>8.05</b>	<b>9.39</b>	<b>10.56</b>	<b>11.94</b>	<b>13.27</b>	<b>14.44</b>	<b>16.20</b>
135°	<b>6.90</b>	<b>8.74</b>	<b>9.80</b>	<b>11.07</b>	<b>12.55</b>	<b>13.88</b>	<b>16.90</b>
150°	<b>5.73</b>	<b>7.38</b>	<b>8.64</b>	<b>9.68</b>	<b>10.63</b>	<b>12.06</b>	<b>15.35</b>
Run VMG	<b>4.97</b>	<b>6.39</b>	<b>7.49</b>	<b>8.30</b>	<b>9.21</b>	<b>10.44</b>	<b>13.30</b>
Gybe Angles	<b>140.3°</b>	<b>141.5°</b>	<b>147.5°</b>	<b>151.8°</b>	<b>144.0°</b>	<b>142.5°</b>	<b>144.3°</b>

**Class Division Length**  
CDL = **15.664**

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

**Owner**

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

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

<b>INCLINING TEST AND FREEBOARDS</b>		
Inclining Test <b>Current Inclining</b>		
Flotation date <b>25/08/2020</b>	SG <b>1.0235</b>	
FFM <b>1.476</b>	FF <b>1.476</b>	SFFP <b>0.855</b>
FAM <b>1.148</b>	FA <b>1.148</b>	SAFP <b>15.835</b>
W1 <b>154.8</b>	PD1 <b>487.3</b>	WD <b>17.901</b>
W2 <b>154.8</b>	PD2 <b>487.3</b>	GSA <b>1.0</b>
W3 <b>154.8</b>	PD3 <b>487.3</b>	RSA <b>1.0</b>
W4 <b>154.8</b>	PD4 <b>487.3</b>	PLM <b>9000.0</b>
LCF from stem on CL / on sheer		<b>8.660 / 8.913</b>
Maximum beam station from stem		<b>12.749</b>
RM Measured		<b>447.8kg-m</b>
RM Default		<b>360.7kg-m</b>
Limit of positive stability / Stab.Index		<b>148.5° / 147.3</b>
Freeboard at mast at 6.561		<b>1.274</b>



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<b>MIZZEN RIG AND SAILS</b>	
N/A	

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

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<b>COMMENTS</b>

<b>MOVABLE BALLAST</b>	
N/A	

<b>CENTERBOARD</b>	
N/A	



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<b>SAILS (Maximum Areas)</b>									
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		

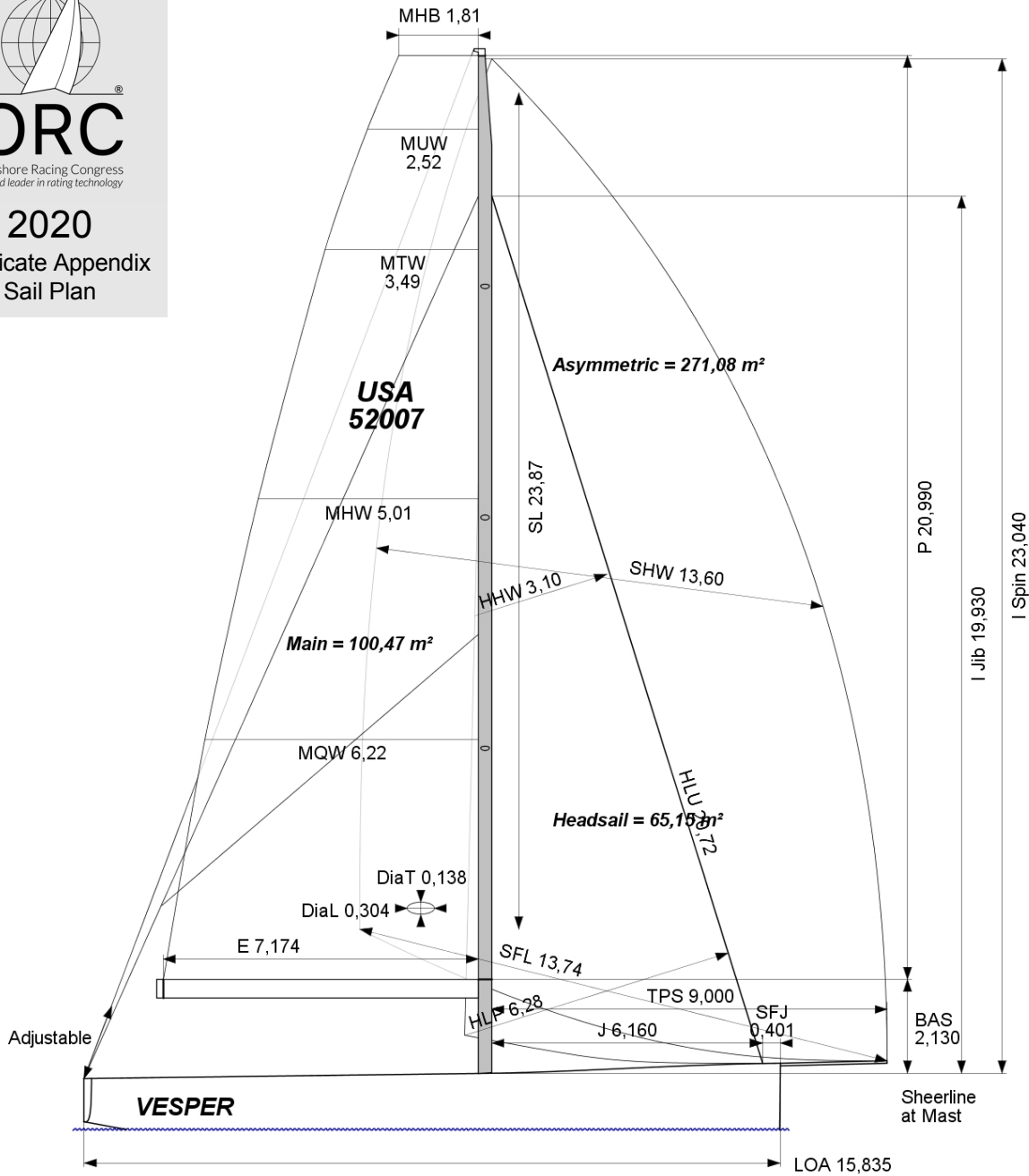
<b>HEADSAILS</b>												
Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB)												
HBB	HUW	HTW	HHW	HQW	HLP	HLU	Area	Btn	Flying	Meas.Date	Material	Comment
0.12	0.91	1.67	3.10	4.60	6.28	20.72	65.15	No	No	24/06/2020	Unknow	ous138809-001
0.12	0.91	1.67	3.10	4.60	6.28	20.71	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				