

<b>BOAT</b> Name <b>RAMROD</b> Sail Nr <b>USA 106</b>	<b>GPH</b> <b>571.8</b>	<b>HULL</b> Length Overall <b>11.150m</b> Maximum Beam <b>3.294m</b> Displacement <b>4,215kg</b> Draft <b>2.185m</b> Plan Review IMS Reg. Division <b>Cruiser/Racer</b> Dynamic Allowance <b>0.089%</b> Hull Construction <b>Cored</b> Carbon Rudder <b>Yes</b> Crew Arm Extension
<b>GENERAL</b> Class <b>J 111</b> Designer <b>Johnstone</b> Builder <b>J Composites</b> Series <b>01/2010</b> Age <b>01/2014</b> Age Allowance <b>0.325%</b> Offset File <b>J111.OFF - 15/06/2020 12:14:40</b> Measurement by - <b>09/10/2020</b>		IMSL <b>10.390m</b> VCGD <b>-0.013m</b> Sink <b>18.08kg/mm</b> RL <b>9.578m</b> VCGM <b>-0.022m</b> WS <b>23.46m<sup>2</sup></b> LSM0 <b>10.091m</b> Displacement/Length ratio <b>4.1020</b>



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SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	<b>558.8</b>			<b>631.0</b>		
Time on Time	<b>1.0737</b>			<b>1.0697</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>643.3</b>	<b>510.2</b>	<b>456.9</b>	<b>836.5</b>	<b>631.7</b>	<b>559.7</b>
Time on Time	<b>1.0493</b>	<b>1.3231</b>	<b>1.4772</b>	<b>0.8069</b>	<b>1.0686</b>	<b>1.2061</b>

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>967.5</b>	<b>789.9</b>	<b>707.3</b>	<b>682.3</b>	<b>672.7</b>	<b>660.3</b>	<b>655.3</b>
52°	<b>633.8</b>	<b>528.4</b>	<b>491.7</b>	<b>481.4</b>	<b>476.8</b>	<b>473.5</b>	<b>466.3</b>
60°	<b>598.4</b>	<b>509.0</b>	<b>478.9</b>	<b>467.7</b>	<b>462.5</b>	<b>459.8</b>	<b>449.6</b>
75°	<b>550.2</b>	<b>487.2</b>	<b>468.1</b>	<b>450.3</b>	<b>438.9</b>	<b>432.7</b>	<b>425.0</b>
90°	<b>530.4</b>	<b>473.0</b>	<b>450.1</b>	<b>434.9</b>	<b>422.5</b>	<b>408.3</b>	<b>393.8</b>
110°	<b>546.9</b>	<b>477.8</b>	<b>445.9</b>	<b>416.1</b>	<b>392.0</b>	<b>375.7</b>	<b>351.5</b>
120°	<b>576.5</b>	<b>484.3</b>	<b>448.2</b>	<b>417.2</b>	<b>393.6</b>	<b>366.4</b>	<b>328.2</b>
135°	<b>645.8</b>	<b>516.3</b>	<b>466.8</b>	<b>433.0</b>	<b>398.4</b>	<b>364.0</b>	<b>311.9</b>
150°	<b>766.4</b>	<b>609.3</b>	<b>515.7</b>	<b>469.5</b>	<b>444.6</b>	<b>415.4</b>	<b>345.6</b>
Run VMG	<b>885.0</b>	<b>703.6</b>	<b>595.5</b>	<b>542.0</b>	<b>513.4</b>	<b>479.6</b>	<b>399.0</b>

**Certificate**  
Number **US6547**  
ORC Ref **0341000S0F**  
Issued On **14/10/2020**  
VPP Ver. **2020 1.02**  
Valid until **31/12/2020**

**Crew Weight**  
Default 697kg  
Maximum **650kg**  
Minimum\* **488kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr **No**

**Special Scoring**  
ToD ToT  
Non Spin GPH **619.5 0.9685**  
Non Spin OSN **602.8 0.9953**

Selected Courses							
Windward / Leeward	<b>926.2</b>	<b>746.8</b>	<b>651.4</b>	<b>612.2</b>	<b>593.0</b>	<b>569.9</b>	<b>527.2</b>
Circular Random	<b>777.4</b>	<b>631.7</b>	<b>555.3</b>	<b>511.8</b>	<b>484.4</b>	<b>464.8</b>	<b>434.9</b>
Coastal / Long Distance	<b>922.1</b>	<b>701.2</b>	<b>589.3</b>	<b>532.6</b>	<b>501.7</b>	<b>468.8</b>	<b>413.2</b>
Non Spinnaker	<b>865.6</b>	<b>693.2</b>	<b>600.1</b>	<b>545.7</b>	<b>511.7</b>	<b>488.7</b>	<b>458.1</b>

**Sails Limitations**  
Headsails **6** Spinnakers **4**

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>42.8°</b>	<b>41.3°</b>	<b>39.8°</b>	<b>38.4°</b>	<b>38.3°</b>	<b>37.9°</b>	<b>38.4°</b>
Beat VMG	<b>3.72</b>	<b>4.56</b>	<b>5.09</b>	<b>5.28</b>	<b>5.35</b>	<b>5.45</b>	<b>5.49</b>
52°	<b>5.68</b>	<b>6.81</b>	<b>7.32</b>	<b>7.48</b>	<b>7.55</b>	<b>7.60</b>	<b>7.72</b>
60°	<b>6.02</b>	<b>7.07</b>	<b>7.52</b>	<b>7.70</b>	<b>7.78</b>	<b>7.83</b>	<b>8.01</b>
75°	<b>6.54</b>	<b>7.39</b>	<b>7.69</b>	<b>8.00</b>	<b>8.20</b>	<b>8.32</b>	<b>8.47</b>
90°	<b>6.79</b>	<b>7.61</b>	<b>8.00</b>	<b>8.28</b>	<b>8.52</b>	<b>8.82</b>	<b>9.14</b>
110°	<b>6.58</b>	<b>7.53</b>	<b>8.07</b>	<b>8.65</b>	<b>9.18</b>	<b>9.58</b>	<b>10.24</b>
120°	<b>6.24</b>	<b>7.43</b>	<b>8.03</b>	<b>8.63</b>	<b>9.15</b>	<b>9.83</b>	<b>10.97</b>
135°	<b>5.57</b>	<b>6.97</b>	<b>7.71</b>	<b>8.31</b>	<b>9.04</b>	<b>9.89</b>	<b>11.54</b>
150°	<b>4.70</b>	<b>5.91</b>	<b>6.98</b>	<b>7.67</b>	<b>8.10</b>	<b>8.67</b>	<b>10.42</b>
Run VMG	<b>4.07</b>	<b>5.12</b>	<b>6.05</b>	<b>6.64</b>	<b>7.01</b>	<b>7.51</b>	<b>9.02</b>
Gybe Angles	<b>143.0°</b>	<b>146.0°</b>	<b>149.0°</b>	<b>151.5°</b>	<b>148.5°</b>	<b>146.3°</b>	<b>142.5°</b>

**Class Division Length**  
CDL = **9.975**

**Storm Sails Areas**  
Heavy Weather Jib **29.26**  
Storm Jib (JL=9.57) **10.84**  
Storm Trysail **10.65**

**Owner**

<b>BOAT</b>	Name <b>RAMROD</b>	Sail Nr <b>USA 106</b>
	File <b>US6547</b>	Data in <b>meters/kilograms</b>

<b>RIG</b>	Forestay Tension <b>Aft</b>	Spreaders <b>2</b>	
	Inner Stay <b>None Fitted</b>	Runners/Checkstays <b>0</b>	
	Carbon Mast <b>Yes</b>	Jib Furler <b>No</b>	
	Fiber Rigging <b>No</b>	Main Furler <b>No</b>	
	Non-Circular Rigging <b>No</b>		
	Articulated Bowsprit <b>No</b>		
P <b>13.767</b>	E <b>4.418</b>	MDT1 <b>0.110</b>	MW <b>0.175</b>
IG <b>14.641</b>	J <b>4.230</b>	MDL1 <b>0.175</b>	GO <b>0.198</b>
ISP <b>15.683</b>	SFJ <b>0.303</b>	MDT2 <b>0.095</b>	BD <b>0.170</b>
BAS <b>1.711</b>	SPL <b>0.000</b>	MDL2 <b>0.134</b>	MWT <b>106.00</b>
FSD <b>0.035</b>	TPS <b>6.525</b>	TL <b>1.050</b>	MCG <b>5.080</b>

<b>INCLINING TEST AND FREEBOARDS</b>			
Inclining Test <b>Boom Inclining</b>	LCFD <b>6.192</b>		
Flotation date <b>09/10/2020</b>	SG <b>1.0100</b>		
FFM <b>1.247</b>	FF <b>1.250</b>	SFFP <b>0.994</b>	
FAM <b>0.892</b>	FA <b>0.898</b>	SAFP <b>10.966</b>	
W1 <b>88.7</b>	PD1 <b>291.9</b>	WD <b>4.140</b>	
W2 <b>88.7</b>	PD2 <b>292.6</b>	GSA <b>1.0</b>	
W3 <b>88.7</b>	PD3 <b>292.7</b>	RSA <b>1.0</b>	
W4 <b>88.7</b>	PD4 <b>294.9</b>	PLM <b>9000.0</b>	
LCF from stem on CL / on sheer	<b>6.053 / 6.263</b>		
Maximum beam station from stem	<b>7.000</b>		
RM Measured	<b>98.7kg-m</b>		
RM Default	<b>105.1kg-m</b>		
Limit of positive stability / Stab.Index	<b>118.0° / 117.6</b>		
Freeboard at mast at 4.533	<b>1.074</b>		



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

<b>PROPELLER</b>	
Installation <b>Strut</b>	PRD <b>0.408</b>
Type <b>Folding 2 blades</b>	PBW <b>0.125</b>
Twin Screw <b>No</b>	PIPA <b>0.0035</b>
ST1 <b>0.040</b>	ST3 <b>0.180</b>
ST2 <b>0.180</b>	ST4 <b>0.113</b>
	ST5 <b>0.305</b>
	EDL <b>2.253</b>

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<b>COMMENTS</b>
Cushions on all but v-berths Folding salon table

<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	
	0.20	1.06	1.88	3.08	3.80	38.13	38.99	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		
	18.10	14.85	16.48	9.64	9.10	130.87	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)												
<b>HBB</b>	<b>HUW</b>	<b>HTW</b>	<b>HHW</b>	<b>HQW</b>	<b>HLP</b>	<b>HLU</b>	<b>Area</b>	<b>Btn</b>	<b>Flying</b>	<b>Meas.Date</b>	<b>Material</b>	<b>Comment</b>
0.10	0.67	1.26	2.34	3.38	4.38	14.31	32.81	Y	No	04/06/2020	Unknow	2020 J1

<b>MEASUREMENT INVENTORY</b>				
Measurer				
Date <b>09/10/2020</b>				
Comment				
<b>Internal Ballast total = 0.0</b>				
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>
<i>Id</i>	<i>Item</i>	<i>Maker</i>	<i>Model</i>	
1	Engine	Volvo	D1-20 18 hp	
<i>Id</i>	<i>Item</i>	<i>Weight Description</i>		

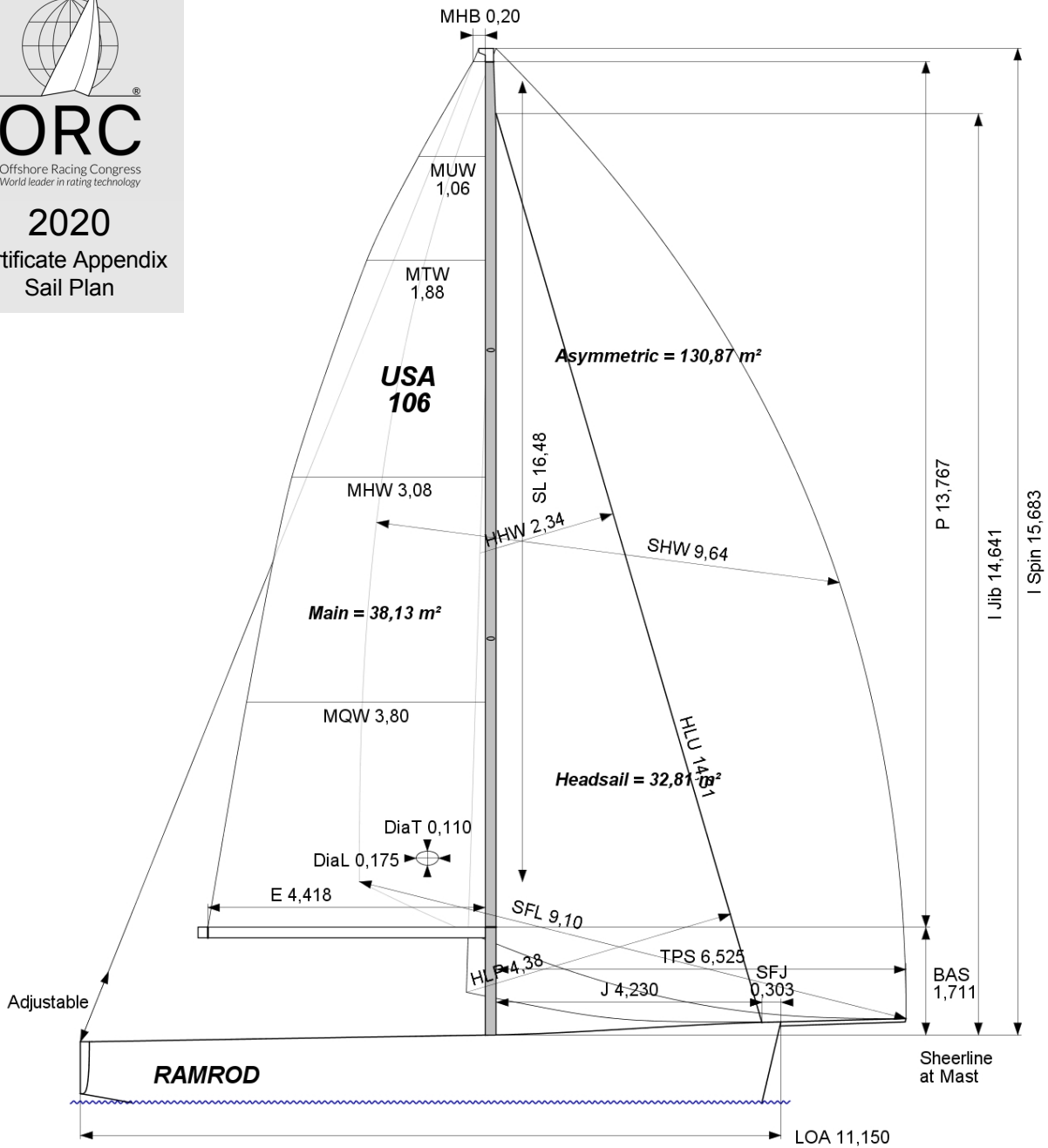
<b>MEASUREMENT INVENTORY</b>								
<i>Id</i>	<i>Item</i>	<i>Tank Use</i>	<i>Tank Type</i>	<i>Capcty</i>	<i>Dist.</i>	<i>VCG</i>	<i>Condtn</i>	<i>Description</i>
3	Tank Fuel		PVC	50.0	8.47	0.30	<del>0.0</del>	Aft centerline
2	Tank Water		Bladder	100.0	5.50	0.20	<del>0.0</del>	Port settee
1	Tank Waste		PVC	50.0	3.43	0.65	<del>0.0</del>	Port side head
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>				
2	Battery	20.0	5.53	0.20 12V engine battery stbd settee				
1	Battery	25.0	5.31	0.20 12V house battery stbd settee				



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Sail Plan



**SAILS INVENTORY**

MAINSAIL (1)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
OUK4010699	0.20	1.06	1.88	3.08	3.80	38.14		04/06/2020	North Sails	Unknown	2020 MAIN					
HEADSAILS (1)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Flying	Measurer	Meas.Date	Manufacture	Material	Comment
OUK400	0.10	0.67	1.26	2.34	3.38	4.38	14.31	104%	32.81	Y	No		04/06/2020	North Sails	Unknow	2020 J1
SYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
ASYMMETRIC SPINNAKERS (2)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				
OUK4011276	18.10	14.85	16.48	9.64	9.10	130.87	asym		04/06/2020	North Sails	Unknown	2020 A2				
Code 0	16.04	14.50	15.27	5.92	7.80	80.12	asy76		07/07/2020	North	Unknown					