

<b>BOAT</b> Name <b>KALEVALA II</b> Sail Nr <b>USA-52439</b>	<b>GPH</b> <b>612.2</b>	<b>HULL</b> Length Overall <b>11.310m</b> Maximum Beam <b>3.672m</b> Displacement <b>7,383kg</b> Draft <b>2.334m</b> IMS Reg. Division <b>Cruiser/Racer</b> Dynamic Allowance <b>0.224%</b> Fwd Accommodation <b>Yes</b> Hull Construction <b>Cored</b> Carbon Rudder <b>Yes</b> Crew Arm Extension <b>0.00</b>
<b>GENERAL</b> Class <b>GRAND SOLEIL 37 BC</b> Designer <b>BOTIN/CARKEEK</b> Builder <b>DEL PARDO</b> Series <b>05/2005</b> Age <b>07/2005</b> Age Allowance <b>0.455%</b> Offset File <b>GS37BC.OFF - 17/05/2005 13:06:46</b> Measurement by - <b>04/04/2017</b>		IMSLS <b>10.403m</b> VCGD <b>0.214m</b> Sink <b>22.65kg/mm</b> RL <b>9.167m</b> VCGM <b>0.118m</b> WS <b>28.98m<sup>2</sup></b> LSM0 <b>10.193m</b> Displacement/Length ratio <b>6.9715</b>



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SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	<b>594.2</b>			<b>660.0</b>		
Time on Time	<b>1.0098</b>			<b>1.0227</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>702.8</b>	<b>542.1</b>	<b>483.1</b>	<b>905.9</b>	<b>664.9</b>	<b>572.1</b>
Time on Time	<b>0.9604</b>	<b>1.2452</b>	<b>1.3973</b>	<b>0.7451</b>	<b>1.0152</b>	<b>1.1799</b>

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>1029.9</b>	<b>857.1</b>	<b>755.4</b>	<b>697.4</b>	<b>675.7</b>	<b>666.4</b>	<b>654.3</b>
52°	<b>678.0</b>	<b>575.6</b>	<b>518.0</b>	<b>493.9</b>	<b>484.0</b>	<b>479.9</b>	<b>476.2</b>
60°	<b>642.8</b>	<b>549.0</b>	<b>503.3</b>	<b>483.0</b>	<b>472.7</b>	<b>467.9</b>	<b>464.2</b>
75°	<b>616.4</b>	<b>529.8</b>	<b>492.7</b>	<b>473.9</b>	<b>460.8</b>	<b>451.2</b>	<b>441.9</b>
90°	<b>619.6</b>	<b>521.2</b>	<b>481.6</b>	<b>463.1</b>	<b>454.6</b>	<b>443.7</b>	<b>421.7</b>
110°	<b>620.8</b>	<b>517.7</b>	<b>477.7</b>	<b>455.8</b>	<b>436.1</b>	<b>418.8</b>	<b>400.3</b>
120°	<b>639.9</b>	<b>529.3</b>	<b>482.9</b>	<b>459.1</b>	<b>437.7</b>	<b>417.6</b>	<b>383.9</b>
135°	<b>708.4</b>	<b>577.9</b>	<b>506.3</b>	<b>474.6</b>	<b>453.1</b>	<b>431.7</b>	<b>390.8</b>
150°	<b>836.7</b>	<b>667.4</b>	<b>566.9</b>	<b>505.5</b>	<b>475.8</b>	<b>455.4</b>	<b>415.4</b>
Run VMG	<b>966.1</b>	<b>770.6</b>	<b>654.0</b>	<b>576.6</b>	<b>522.8</b>	<b>486.2</b>	<b>445.2</b>

**Certificate**

Number **US6129**  
ORC Ref **USAX020H6DH**  
Issued On **21/02/2019**  
VPP Ver. **2019 1.01**  
Valid until **31/12/2019**

**Crew Weight**

Default **707kg**  
Maximum **707kg**  
Minimum\* **530kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr **No**

**Special Scoring**

ToD	ToT
Non Spin GPH <b>646.5</b>	<b>0.9281</b>
Non Spin OSN <b>625.9</b>	<b>0.9587</b>

Selected Courses							
Windward / Leeward	<b>998.0</b>	<b>813.9</b>	<b>704.7</b>	<b>637.0</b>	<b>599.3</b>	<b>576.3</b>	<b>549.7</b>
Circular Random	<b>843.1</b>	<b>681.0</b>	<b>594.0</b>	<b>543.5</b>	<b>512.5</b>	<b>492.3</b>	<b>466.7</b>
Coastal / Long Distance	<b>994.8</b>	<b>764.4</b>	<b>635.7</b>	<b>559.2</b>	<b>521.8</b>	<b>493.9</b>	<b>447.9</b>
Non Spinnaker	<b>905.4</b>	<b>724.8</b>	<b>626.3</b>	<b>568.1</b>	<b>532.1</b>	<b>508.7</b>	<b>479.6</b>

**Sails Limitations**

Headsails	Spinnakers
<b>5</b>	<b>3</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>42.5°</b>	<b>40.5°</b>	<b>40.0°</b>	<b>38.8°</b>	<b>37.9°</b>	<b>37.6°</b>	<b>37.2°</b>
Beat VMG	<b>3.50</b>	<b>4.20</b>	<b>4.77</b>	<b>5.16</b>	<b>5.33</b>	<b>5.40</b>	<b>5.50</b>
52°	<b>5.31</b>	<b>6.25</b>	<b>6.95</b>	<b>7.29</b>	<b>7.44</b>	<b>7.50</b>	<b>7.56</b>
60°	<b>5.60</b>	<b>6.56</b>	<b>7.15</b>	<b>7.45</b>	<b>7.62</b>	<b>7.69</b>	<b>7.76</b>
75°	<b>5.84</b>	<b>6.79</b>	<b>7.31</b>	<b>7.60</b>	<b>7.81</b>	<b>7.98</b>	<b>8.15</b>
90°	<b>5.81</b>	<b>6.91</b>	<b>7.48</b>	<b>7.77</b>	<b>7.92</b>	<b>8.11</b>	<b>8.54</b>
110°	<b>5.80</b>	<b>6.95</b>	<b>7.54</b>	<b>7.90</b>	<b>8.25</b>	<b>8.60</b>	<b>8.99</b>
120°	<b>5.63</b>	<b>6.80</b>	<b>7.46</b>	<b>7.84</b>	<b>8.22</b>	<b>8.62</b>	<b>9.38</b>
135°	<b>5.08</b>	<b>6.23</b>	<b>7.11</b>	<b>7.59</b>	<b>7.95</b>	<b>8.34</b>	<b>9.21</b>
150°	<b>4.30</b>	<b>5.39</b>	<b>6.35</b>	<b>7.12</b>	<b>7.57</b>	<b>7.91</b>	<b>8.67</b>
Run VMG	<b>3.73</b>	<b>4.67</b>	<b>5.50</b>	<b>6.24</b>	<b>6.89</b>	<b>7.40</b>	<b>8.09</b>
Gybe Angles	<b>144.6°</b>	<b>149.4°</b>	<b>151.4°</b>	<b>156.5°</b>	<b>174.5°</b>	<b>180.0°</b>	<b>180.0°</b>

**Class Division Length**

CDL = **9.786**

**Storm Sails Areas**

Heavy Weather Jib **31.62**  
Storm Jib (JL=9.95) **11.71**  
Storm Trysail **13.58**

**Owner**

<b>BOAT</b>	
Name <b>KALEVALA II</b>	Sail Nr <b>USA-52439</b>
File <b>US6129</b>	Data in <b>meters/kilograms</b>

<b>INCLINING TEST AND FREEBOARDS</b>			
Inclining Test <b>Current Inclining</b>			
Flotation date <b>10/05/2017</b>		SG <b>1.0030</b>	
FFM <b>1.397</b>	FF <b>1.425</b>	SFFP <b>0.254</b>	
FAM <b>1.031</b>	FA <b>1.028</b>	SAFP <b>10.708</b>	
W1 <b>98.0</b>	PD1 <b>550.0</b>	WD <b>11.895</b>	
W2 <b>98.0</b>	PD2 <b>550.0</b>	GSA <b>1.0</b>	
W3 <b>98.0</b>	PD3 <b>550.0</b>	RSA <b>1.0</b>	
W4 <b>98.0</b>	PD4 <b>550.0</b>	PLM <b>9000.0</b>	
LCF from stem on CL / on sheer		<b>6.426 / 6.678</b>	
Maximum beam station from stem		<b>7.326</b>	
RM Measured		<b>166.9kg-m</b>	
RM Default		<b>180.1kg-m</b>	
Limit of positive stability / Stab.Index		<b>111.1° / 115.0</b>	
Freeboard at mast at 4.347		<b>1.192</b>	



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<b>RIG</b>			
Forestay Tension <b>Aft</b>	Spreaders <b>2</b>		
Inner Stay <b>None Fitted</b>	Runners <b>0</b>		
Carbon Mast <b>No</b>	Jumper Struts <b>None</b>		
Taper Hollows <b>No</b>	Jib Furler <b>No</b>		
Fiber Rigging <b>No</b>	Main Furler <b>No</b>		
Lenticular Rigging <b>No</b>	Without Backstay <b>No</b>		
Articulated Bowsprit <b>No</b>			
P <b>15.194</b>	E <b>5.105</b>	MDT1 <b>0.113</b>	MW <b>0.201</b>
IG <b>15.209</b>	J <b>4.102</b>	MDL1 <b>0.201</b>	GO <b>0.226</b>
ISP <b>16.584</b>	SFJ <b>0.245</b>	MDT2 <b>0.108</b>	BD <b>0.167</b>
BAS <b>1.615</b>	SPL <b>4.117</b>	MDL2 <b>0.164</b>	MWT <b>184.00</b>
FSP <b>0.068</b>	TPS <b>4.920</b>	TL <b>0.750</b>	MCG <b>5.600</b>

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

<b>PROPELLER</b>			
Installation <b>Strut</b>	PRD <b>0.435</b>		
Type <b>Folding 2 blades</b>	PBW <b>0.110</b>		
Twin Screw <b>No</b>	PIPA <b>0.0038</b>		
ST1 <b>0.065</b>	ST3 <b>0.175</b>	ST5 <b>0.295</b>	
ST2 <b>0.180</b>	ST4 <b>0.105</b>	EDL <b>2.465</b>	

<b>COMMENTS</b>	

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

<b>BILGEBOARD</b>		
BS	BT	BA
BF	BX	
BC	BY	



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<b>SAILS (Maximum Areas)</b>									
<b>Mainsail</b>	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.180	1.09	1.92	3.28	4.24	45.97	46.82	P/8 · (E + 2·MQW + 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
<b>Symmetric</b>	SLU	SLE	SL	SHW	SFL			SL · (SFL + 4·SHW) / 6	
	16.39	16.39	16.39	7.41	7.29	100.88			
<b>Asymmetric</b>	SLU	SLE	SL	SHW	SFL			AS · (SFL + 4·SHW) / 6	
	16.04	15.30	15.67	5.46	7.16	75.74 85.17			

<b>HEADSAILS</b>										
Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB)										
<b>HHB</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>Fly</b>	<b>Meas.Date</b>
0.10	0.66	1.25	2.34	3.38	4.30	14.70	33.47			light medium Jib re-measured 2018

<b>MEASUREMENT INVENTORY</b>				
Measurer	Date	Comment		
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>
a	Ancher	0.0	0.00	
<i>Id</i>	<i>Item</i>	<i>Weight Description</i>		

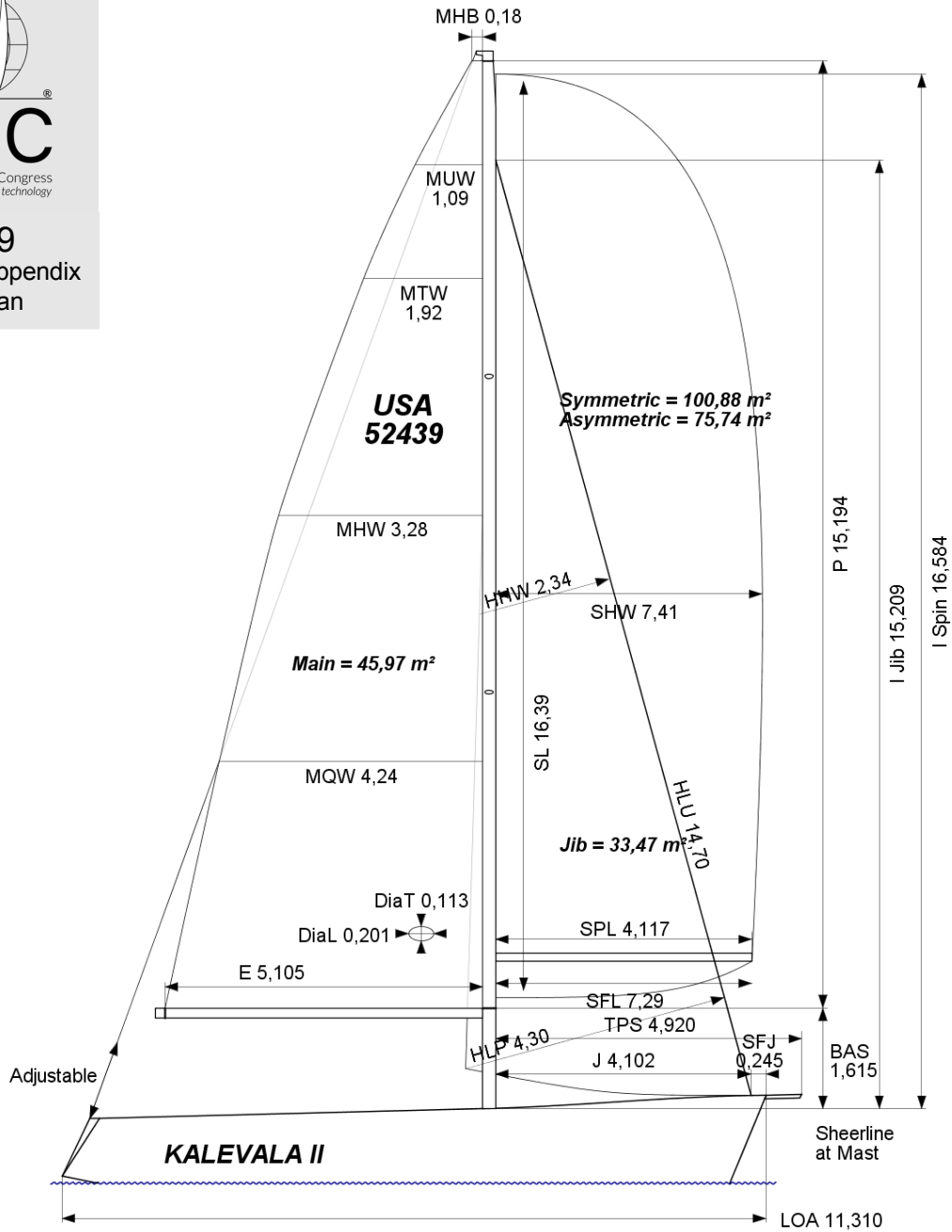
<b>MEASUREMENT INVENTORY</b>									
<i>Id</i>	<i>Item</i>	<i>Tank Use</i>	<i>Tank Type</i>	<i>Capcty</i>	<i>Dist.</i>	<i>VCG</i>	<i>Condtn</i>	<i>Description</i>	
	Tank				0.00	0.00	00.0		
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>					



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Sail Plan



**SAILS INVENTORY**

MAINSAIL (1)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
1647090	0.18	1.09	1.92	3.28	4.24	45.98			north sails		2018 3Di					
HEADSAILS (1)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
1647080	0.10	0.66	1.25	2.34	3.38	4.30	14.70	105%	33.47							light medium Jib re-
SYMMETRIC SPINNAKERS (1)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
1647099	16.39	16.39	16.39	7.41	7.29	100.89			STEVEN		QS-2					
ASYMMETRIC SPINNAKERS (1)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				
1647366	16.04	15.30	15.67	5.46	7.16	75.74	asym					Code Zero				