

<b>BOAT</b> Name <b>TIBURON</b> Sail Nr <b>ECU-4223</b>	<b>GPH</b> <b>544,7</b>	<b>HULL</b> Length Overall <b>12,960m</b> Maximum Beam <b>3,910m</b> Displacement <b>7.870kg</b> Draft <b>2,752m</b> IMS Reg. Division <b>Cruiser/Racer</b> Dynamic Allowance <b>0,000%</b> Fwd Accommodation <b>No</b> Hull Construction <b>Cored</b> Carbon Rudder <b>Yes</b> Crew Arm Extension
<b>GENERAL</b> Class <b>SWAN 42 CLUB</b> Designer <b>FRERS</b> Builder <b>NAUTOR</b> Series <b>02/2006</b> Age <b>02/2007</b> Age Allowance <b>0,357%</b> Offset File <b>SWAN42CS.OFF - 31/07/2014 01:38:00</b> Measurement by <b>P. GUTIERREZ - 28/09/2017</b>		IMSL <b>11,894m</b> VCGD <b>-0,474m</b> Sink <b>24,66kg/mm</b> RL <b>11,194m</b> VCGM <b>-0,378m</b> WS <b>33,37m<sup>2</sup></b> LSMO <b>11,628m</b> Displacement/Length ratio <b>5,0056</b>



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**2017**  
ORC International  
Certificate

**Rating Office**  
Federación Ecuatoriana  
de Vela  
Patricio D. Gutiérrez - RO  
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SCORING OPTIONS	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
	Low	Medium	High	Low	Medium	High
Time On Distance	<b>530,3</b>			<b>595,9</b>		
Time On Time	<b>1,1315</b>			<b>1,1328</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>618,3</b>	<b>484,3</b>	<b>432,3</b>	<b>801,5</b>	<b>597,5</b>	<b>525,1</b>
Time on Time	<b>1,0917</b>	<b>1,3939</b>	<b>1,5614</b>	<b>0,8422</b>	<b>1,1298</b>	<b>1,2854</b>

TIME ALLOWANCES	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>919,3</b>	<b>758,0</b>	<b>668,9</b>	<b>631,1</b>	<b>612,3</b>	<b>600,9</b>	<b>586,0</b>
52°	<b>600,6</b>	<b>502,1</b>	<b>460,8</b>	<b>446,7</b>	<b>439,7</b>	<b>435,5</b>	<b>427,0</b>
60°	<b>564,6</b>	<b>479,5</b>	<b>448,3</b>	<b>434,1</b>	<b>426,7</b>	<b>421,8</b>	<b>413,3</b>
75°	<b>534,6</b>	<b>464,7</b>	<b>438,2</b>	<b>420,1</b>	<b>405,5</b>	<b>397,1</b>	<b>388,6</b>
90°	<b>535,4</b>	<b>460,8</b>	<b>437,0</b>	<b>417,6</b>	<b>398,0</b>	<b>380,0</b>	<b>360,3</b>
110°	<b>539,7</b>	<b>455,7</b>	<b>425,1</b>	<b>409,7</b>	<b>395,3</b>	<b>381,0</b>	<b>354,1</b>
120°	<b>555,0</b>	<b>462,7</b>	<b>428,9</b>	<b>401,2</b>	<b>382,5</b>	<b>367,6</b>	<b>339,0</b>
135°	<b>619,5</b>	<b>499,2</b>	<b>447,8</b>	<b>420,9</b>	<b>393,4</b>	<b>364,8</b>	<b>311,9</b>
150°	<b>735,8</b>	<b>587,9</b>	<b>498,3</b>	<b>451,0</b>	<b>430,2</b>	<b>410,0</b>	<b>358,3</b>
Run VMG	<b>849,6</b>	<b>678,9</b>	<b>575,4</b>	<b>520,0</b>	<b>494,6</b>	<b>462,1</b>	<b>413,7</b>

**Certificate**  
Number **422302**  
ORC Ref **ECU00005624**  
Issued On **04/10/2017**  
VPP Ver. **2017 1.00**  
Valid until **31/03/2018**

**Crew Weight**  
Declared **800kg**  
Default\* **854kg**  
Non Manual Pwr **No**

**Special Scoring**  
ToD ToT  
Non Spin GPH **580,9** **1,0329**  
Non Spin OSN **566,8** **1,0587**

Selected Courses	884,4	718,4	622,2	575,6	553,4	531,5	499,9
Windward / Leeward	<b>884,4</b>	<b>718,4</b>	<b>622,2</b>	<b>575,6</b>	<b>553,4</b>	<b>531,5</b>	<b>499,9</b>
Circular Random	<b>744,9</b>	<b>603,6</b>	<b>528,7</b>	<b>485,7</b>	<b>458,9</b>	<b>440,2</b>	<b>412,5</b>
Ocean for PCS	<b>913,2</b>	<b>707,8</b>	<b>592,8</b>	<b>522,9</b>	<b>477,2</b>	<b>444,4</b>	<b>396,1</b>
Non Spinnaker	<b>811,5</b>	<b>650,7</b>	<b>563,1</b>	<b>511,1</b>	<b>478,1</b>	<b>455,8</b>	<b>426,3</b>

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

Velocity Prediction in Knots for True Wind Speeds	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat Angles	<b>42,9°</b>	<b>41,7°</b>	<b>40,5°</b>	<b>38,4°</b>	<b>37,5°</b>	<b>36,8°</b>	<b>36,2°</b>
Beat VMG	<b>3,92</b>	<b>4,75</b>	<b>5,38</b>	<b>5,70</b>	<b>5,88</b>	<b>5,99</b>	<b>6,14</b>
52°	<b>5,99</b>	<b>7,17</b>	<b>7,81</b>	<b>8,06</b>	<b>8,19</b>	<b>8,27</b>	<b>8,43</b>
60°	<b>6,38</b>	<b>7,51</b>	<b>8,03</b>	<b>8,29</b>	<b>8,44</b>	<b>8,53</b>	<b>8,71</b>
75°	<b>6,73</b>	<b>7,75</b>	<b>8,22</b>	<b>8,57</b>	<b>8,88</b>	<b>9,07</b>	<b>9,26</b>
90°	<b>6,72</b>	<b>7,81</b>	<b>8,24</b>	<b>8,62</b>	<b>9,05</b>	<b>9,47</b>	<b>9,99</b>
110°	<b>6,67</b>	<b>7,90</b>	<b>8,47</b>	<b>8,79</b>	<b>9,11</b>	<b>9,45</b>	<b>10,17</b>
120°	<b>6,49</b>	<b>7,78</b>	<b>8,39</b>	<b>8,97</b>	<b>9,41</b>	<b>9,79</b>	<b>10,62</b>
135°	<b>5,81</b>	<b>7,21</b>	<b>8,04</b>	<b>8,55</b>	<b>9,15</b>	<b>9,87</b>	<b>11,54</b>
150°	<b>4,89</b>	<b>6,12</b>	<b>7,22</b>	<b>7,98</b>	<b>8,37</b>	<b>8,78</b>	<b>10,05</b>
Run VMG	<b>4,24</b>	<b>5,30</b>	<b>6,26</b>	<b>6,92</b>	<b>7,28</b>	<b>7,79</b>	<b>8,70</b>
Gybe Angles	<b>143,2°</b>	<b>145,8°</b>	<b>148,8°</b>	<b>151,6°</b>	<b>152,4°</b>	<b>176,2°</b>	<b>143,2°</b>

**Class Division Length**  
CDL = **11,545**

**Storm Sails Areas**  
Heavy Weather Jib **45,19**  
Storm Jib (JL=11,89) **16,74**  
Storm Trysail **16,94**

**Owner**  
JULIO HIDALGO


I certify that I understand my responsibilities under ORC Rules and Regulations

Signature

<b>BOAT</b>	
Name <b>TIBURON</b>	Sail Nr <b>ECU-4223</b>
File <b>ECU4223</b>	Data in <b>meters/kilograms</b>

<b>INCLINING TEST AND FREEBOARDS</b>		
Inclining Test <b>Current Inclining</b>		
Flotation date <b>28/09/2017</b>	SG <b>1,0253</b>	
FFM <b>1,442</b>	FF <b>1,448</b>	SFFP <b>0,474</b>
FAM <b>1,110</b>	FA <b>1,109</b>	SAFP <b>12,543</b>
W1 <b>120,0</b>	PD1 <b>469,1</b>	WD <b>11,420</b>
W2 <b>120,0</b>	PD2 <b>470,4</b>	GSA <b>1,0</b>
W3 <b>120,0</b>	PD3 <b>470,8</b>	RSA <b>1,0</b>
W4 <b>120,0</b>	PD4 <b>470,8</b>	PLM <b>9000,0</b>
LCF from stem on CL / on sheer		<b>7,174 / 7,425</b>
Maximum beam station from stem		<b>8,347</b>
RM Measured		<b>229,5kg·m</b>
RM Default		<b>217,7kg·m</b>
Limit of positive stability / Stab.Index		<b>136,0° / 139,1</b>
Freeboard at mast at 5,369		<b>1,226</b>

<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>Yes</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>17,260</b>	E <b>5,608</b>	MDT1 <b>0,137</b>	MW <b>0,248</b>
IG <b>18,022</b>	J <b>5,014</b>	MDL1 <b>0,250</b>	GO <b>0,323</b>
ISP <b>19,422</b>	SFJ <b>0,355</b>	MDT2 <b>0,101</b>	BD <b>0,206</b>
BAS <b>1,947</b>	SPL <b>0,000</b>	MDL2 <b>0,177</b>	MWT
FSP <b>0,068</b>	TPS <b>7,350</b>	TL <b>1,005</b>	MCG




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**IMS Measurement Certificate**

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

<b>PROPELLER</b>		
Installation <b>Strut</b>	PRD <b>0,438</b>	
Type <b>Folding 2 blades</b>	PBW <b>0,110</b>	
Twin Screw	PIPA <b>0,0040</b>	
ST1 <b>0,064</b>	ST3 <b>0,179</b>	ST5 <b>0,295</b>
ST2 <b>0,176</b>	ST4 <b>0,110</b>	EDL <b>1,926</b>

<b>COMMENTS</b>	

<b>MOVEABLE BALLAST</b>	
N/A	

<b>CENTERBOARD</b>	
N/A	

<b>SAILS (Maximum Areas)</b>									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0,175	1,47	2,43	3,78	4,84	60,52	61,95	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
<b>Symmetric</b>									
Not Available									
<b>Asymmetric</b>									
	SLU	SLE	SL	SHW	SFL	185,82	AS · (SFL + 4·SHW) / 6		
	21,62	18,42	20,02	11,11	11,25				

<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>	<b>Material</b>	<b>Comment</b>
0,10	0,78	1,47	2,69	3,90	5,34	18,17	48,92	Y		29/09/2017	Carbon	3DI-NUEVO
0,10	0,77	1,45	2,69	3,92	5,33	18,17	48,89	Y		29/09/2017	Carbon	3DI-NUEVO
0,10	0,65	1,25	2,47	3,77	5,24	18,26	46,48	Y		26/09/2014	Carbon	
0,03		1,12	2,22	3,34	4,50	15,80	35,38			04/10/2017	Pentex	NUEVO

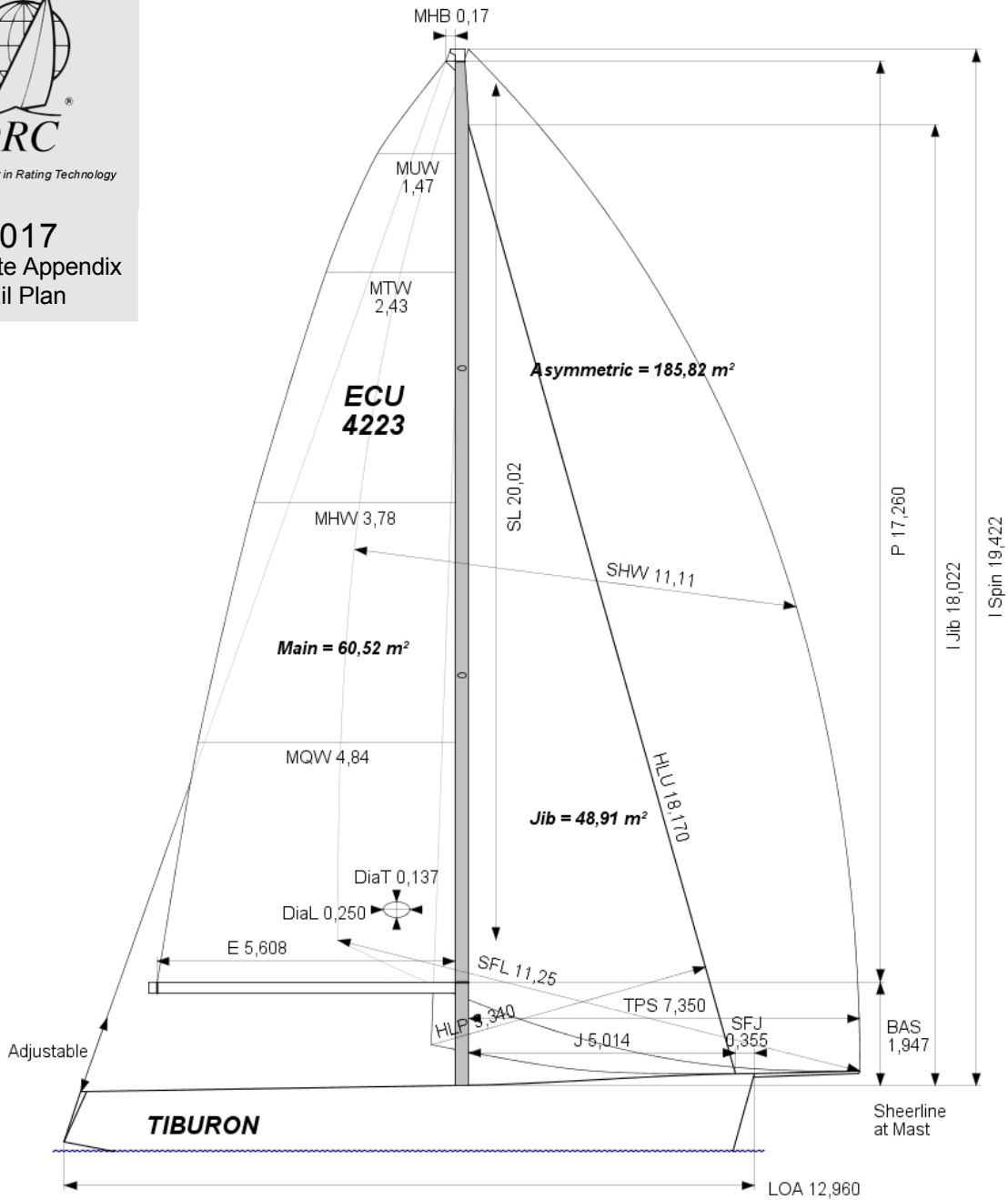
<b>MEASUREMENT INVENTORY</b>				
Measurer <b>PATRICIO GUTIERREZ P G</b>				
Date <b>28/09/2017</b>				
Comment				
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Distance</b>	<b>VCG Description</b>
<b>Id</b>	<b>Item</b>	<b>Maker</b>	<b>Model</b>	
3A	Engine	VOLVO PENTA	40 HP	
<b>Id</b>	<b>Item</b>	<b>Weight Description</b>		

<b>MEASUREMENT INVENTORY</b>							
<b>Id</b>	<b>Item</b>	<b>Tank Use</b>	<b>Tank Type</b>	<b>Capcty</b>	<b>Dist.</b>	<b>VCG</b>	<b>Condtn Description</b>
4D	Tank	PETROL	PLASTICO	60,0	5,43	0,18	<del>30,0</del> POR EL LADO DE
4C	Tank	PETROL	PLASTICO	60,0	5,43	0,18	<del>30,0</del> POR EL LADO DE
4B	Tank	AGUA	PLASTICO	160,0	6,66	0,18	<del>0,0</del> 02 TANQUES POR
4A	Tank	AGUA	PLASTICO	160,0	6,66	0,18	<del>0,0</del> 02 TANQUES POR
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Distance</b>	<b>VCG Description</b>			
C6	Ballast	19,0	6,90	0,00 1 LINGOTE DE PLOMO			
E4	Battery	15,0	9,07	0,05 01 BATERIA A POPA A ESTRBOR			
C7	Battery	15,0	6,36	0,12 01 BATERIA EN CRUJIA			
C7	Battery	15,0	5,80	0,12 01 BATERIA EN CRUJIA			
C6	Misc	5,0	9,39	0,37 GATO HIDRAULICO			
B4	Misc	10,0	7,19	0,47 MOTOR CONGELADOR			
E4	Misc	3,0	7,15	0,39 CONVERTIDOR ELECTRICO			
C4	Misc	10,0	9,82	0,00 TERMO TANQUE AGUA			



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Certificate Appendix  
Sail Plan



SAILS INVENTORY																
MAINSAIL (1)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
M4	0,175	1,47	2,43	3,78	4,84	60,52	P GUTIERREZ	29/09/2017	NORTH	Carbon	3DI-NUEVO					
HEADSAILS (4)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
G1 L	0,10	0,78	1,47	2,69	3,90	5,34	18,17	107%	48,92	Y	P	P	29/09/2017	NORTH	Carbon	3DI-NUEVO
G1 M	0,10	0,77	1,45	2,69	3,92	5,33	18,17	106%	48,89	Y	P	P	29/09/2017	NORTH	Carbon	3DI-NUEVO
J-H-1	0,10	0,65	1,25	2,47	3,77	5,24	18,26	105%	46,48	Y	G LIZA	G LIZA	26/09/2014	NORTH	Carbon	
ST.SAIL	0,03		1,12	2,22	3,34	4,50	15,80	90%	35,38			DECLAR	04/10/2017	NORTH	Pentex	NUEVO
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				
A1.5	21,62	18,42	20,02	11,11	11,25	185,82	asym	P GUTIERREZ	29/09/2017	NORTH	Nylon	BL - NUEVO				
A2	22,37	18,15	20,26	10,90	11,33	185,48	asym	P GUTIERREZ	29/09/2017	NORTH	Nylon	BL - NUEVO				
A4	21,37	18,14	19,76	10,88	11,03	179,61	asym	P GUTIERREZ	03/10/2017	NORTH	Nylon	ROJO				
A3	20,88	18,37	19,63	9,72	10,94	162,95	asym	P GUTIERREZ	29/09/2017	NORTH	Nylon	BL - NUEVO				
A0	20,62	18,17	19,40	7,79	10,28	133,95	asym	P GUTIERREZ	01/10/2017	NORTH	Kevlar	GRIS				