

|   |                            |  |
|---|----------------------------|--|
| <b>BOAT</b><br>Name <b>MARISOL</b><br>Sail Nr <b>USA 56443</b>  | <b>GPH</b><br><b>551.1</b> | <b>HULL</b><br>Length Overall <b>12.406m</b><br>Maximum Beam <b>3.474m</b><br>Displacement <b>5,680kg</b><br>Draft <b>2.102m</b><br>IMS Reg. Division <b>Cruiser/Racer</b><br>Dynamic Allowance <b>0.000%</b><br>Fwd Accommodation <b>Yes</b><br>Hull Construction <b>Cored</b><br>Carbon Rudder <b>No</b><br>Crew Arm Extension <b>0.00</b> |
| <b>GENERAL</b><br>Class <b>J-124</b><br>Designer <b>JOHNSTONE</b><br>Builder <b>PEARSON</b><br>Series <b>11/2005</b><br>Age <b>01/2006</b><br>Age Allowance <b>0.455%</b><br>Offset File <b>US41984.OFF - 09/08/2018 16:03:44</b><br>Measurement by - <b>22/05/2006</b> |                            | IMSL <b>11.495m</b> VCGD <b>0.101m</b> Sink <b>21.67kg/mm</b><br>RL <b>10.702m</b> VCGM <b>-0.053m</b> WS <b>28.73m<sup>2</sup></b><br>LSM0 <b>11.361m</b> Displacement/Length ratio <b>3.8735</b>   |



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| SCORING OPTIONS  |                         |               |               |                    |               |               |
|------------------|-------------------------|---------------|---------------|--------------------|---------------|---------------|
|                  | COASTAL / LONG DISTANCE |               |               | WINDWARD / LEEWARD |               |               |
| Time on Distance | <b>538.0</b>            |               |               | <b>605.3</b>       |               |               |
| Time on Time     | <b>1.1152</b>           |               |               | <b>1.1152</b>      |               |               |
| Triple Number    | Low                     | Medium        | High          | Low                | Medium        | High          |
| Time on Distance | <b>620.2</b>            | <b>491.5</b>  | <b>440.1</b>  | <b>806.7</b>       | <b>607.3</b>  | <b>534.7</b>  |
| Time on Time     | <b>1.0884</b>           | <b>1.3733</b> | <b>1.5336</b> | <b>0.8367</b>      | <b>1.1115</b> | <b>1.2625</b> |

| TIME ALLOWANCES |              |              |              |              |              |              |              |
|-----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Wind Velocity   | 6 kt         | 8 kt         | 10 kt        | 12 kt        | 14 kt        | 16 kt        | 20 kt        |
| Beat VMG        | <b>891.0</b> | <b>734.5</b> | <b>672.7</b> | <b>645.5</b> | <b>631.1</b> | <b>616.9</b> | <b>609.1</b> |
| 52°             | <b>579.9</b> | <b>490.6</b> | <b>467.4</b> | <b>458.2</b> | <b>452.9</b> | <b>449.0</b> | <b>440.8</b> |
| 60°             | <b>544.7</b> | <b>473.9</b> | <b>454.8</b> | <b>446.1</b> | <b>440.7</b> | <b>437.1</b> | <b>425.2</b> |
| 75°             | <b>517.8</b> | <b>463.1</b> | <b>441.8</b> | <b>428.9</b> | <b>420.0</b> | <b>414.2</b> | <b>404.1</b> |
| 90°             | <b>519.9</b> | <b>462.6</b> | <b>438.4</b> | <b>418.2</b> | <b>401.5</b> | <b>390.8</b> | <b>378.9</b> |
| 110°            | <b>558.8</b> | <b>467.8</b> | <b>436.0</b> | <b>417.2</b> | <b>399.7</b> | <b>385.4</b> | <b>355.3</b> |
| 120°            | <b>571.5</b> | <b>472.5</b> | <b>436.7</b> | <b>407.7</b> | <b>385.7</b> | <b>369.2</b> | <b>338.5</b> |
| 135°            | <b>649.9</b> | <b>508.7</b> | <b>453.8</b> | <b>423.5</b> | <b>391.7</b> | <b>360.2</b> | <b>305.5</b> |
| 150°            | <b>773.5</b> | <b>613.5</b> | <b>509.9</b> | <b>456.6</b> | <b>433.7</b> | <b>407.9</b> | <b>346.3</b> |
| Run VMG         | <b>893.2</b> | <b>708.4</b> | <b>588.7</b> | <b>527.2</b> | <b>500.7</b> | <b>470.9</b> | <b>399.9</b> |

**Certificate**  
Number **US6457**  
ORC Ref **USAX021401A**  
Issued On **11/09/2019**  
VPP Ver. **2019 1.01**  
Valid until **31/12/2019**

**Crew Weight**  
Default **826kg**  
Maximum **817kg**  
Minimum\* **613kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr **No**

**Special Scoring**  
ToD ToT  
Non Spin GPH **578.3 1.0375**  
Non Spin OSN **566.3 1.0594**

| Selected Courses        |              |              |              |              |              |              |              |
|-------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Windward / Leeward      | <b>892.1</b> | <b>721.4</b> | <b>630.7</b> | <b>586.4</b> | <b>565.9</b> | <b>543.9</b> | <b>504.5</b> |
| Circular Random         | <b>750.0</b> | <b>609.1</b> | <b>535.3</b> | <b>493.1</b> | <b>466.7</b> | <b>447.8</b> | <b>418.7</b> |
| Coastal / Long Distance | <b>892.2</b> | <b>678.3</b> | <b>570.4</b> | <b>511.1</b> | <b>480.2</b> | <b>451.5</b> | <b>402.3</b> |
| Non Spinnaker           | <b>796.9</b> | <b>643.6</b> | <b>561.4</b> | <b>513.1</b> | <b>482.5</b> | <b>461.6</b> | <b>433.8</b> |

**Sails Limitations**  
Headsails **1** 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>43.4°</b>  | <b>42.1°</b>  | <b>39.9°</b>  | <b>38.4°</b>  | <b>37.6°</b>  | <b>37.1°</b>  | <b>37.2°</b>  |
| Beat VMG  | <b>4.04</b>   | <b>4.90</b>   | <b>5.35</b>   | <b>5.58</b>   | <b>5.70</b>   | <b>5.84</b>   | <b>5.91</b>   |
| 52°   | <b>6.21</b>   | <b>7.34</b>   | <b>7.70</b>   | <b>7.86</b>   | <b>7.95</b>   | <b>8.02</b>   | <b>8.17</b>   |
| 60°   | <b>6.61</b>   | <b>7.60</b>   | <b>7.91</b>   | <b>8.07</b>   | <b>8.17</b>   | <b>8.24</b>   | <b>8.47</b>   |
| 75°   | <b>6.95</b>   | <b>7.77</b>   | <b>8.15</b>   | <b>8.39</b>   | <b>8.57</b>   | <b>8.69</b>   | <b>8.91</b>   |
| 90°   | <b>6.92</b>   | <b>7.78</b>   | <b>8.21</b>   | <b>8.61</b>   | <b>8.97</b>   | <b>9.21</b>   | <b>9.50</b>   |
| 110°  | <b>6.44</b>   | <b>7.70</b>   | <b>8.26</b>   | <b>8.63</b>   | <b>9.01</b>   | <b>9.34</b>   | <b>10.13</b>  |
| 120°  | <b>6.30</b>   | <b>7.62</b>   | <b>8.24</b>   | <b>8.83</b>   | <b>9.33</b>   | <b>9.75</b>   | <b>10.63</b>  |
| 135°  | <b>5.54</b>   | <b>7.08</b>   | <b>7.93</b>   | <b>8.50</b>   | <b>9.19</b>   | <b>9.99</b>   | <b>11.78</b>  |
| 150°  | <b>4.65</b>   | <b>5.87</b>   | <b>7.06</b>   | <b>7.88</b>   | <b>8.30</b>   | <b>8.83</b>   | <b>10.39</b>  |
| Run VMG   | <b>4.03</b>   | <b>5.08</b>   | <b>6.11</b>   | <b>6.83</b>   | <b>7.19</b>   | <b>7.64</b>   | <b>9.00</b>   |
| Gybe Angles                                       | <b>142.9°</b> | <b>145.7°</b> | <b>146.7°</b> | <b>151.5°</b> | <b>150.3°</b> | <b>146.8°</b> | <b>143.1°</b> |

**Class Division Length**  
CDL = **11.099**

**Storm Sails Areas**  
Heavy Weather Jib **36.91**  
Storm Jib (JL=10.75) **13.67**  
Storm Trysail **13.38**

**Owner**

|                     |                                 |  |
|---------------------|---------------------------------|--|
| <b>BOAT</b>         |                                 |  |
| Name <b>MARISOL</b> | Sail Nr <b>USA 56443</b>        |  |
| File <b>US6457</b>  | Data in <b>meters/kilograms</b> |  |

|  |                  |                       |                  |  |  |
|--|------------------|-----------------------|------------------|--|--|
| <b>INCLINING TEST AND FREEBOARDS</b>     |                  |                       |                  |  |  |
| Inclining Test <b>Current Inclining</b>  |                  |                       |                  |  |  |
| Flotation date <b>08/08/2018</b>         |                  |                       | SG <b>1.0240</b> |  |  |
| FFM <b>1.262</b>                         | FF <b>1.262</b>  | SFFP <b>0.457</b>     |                  |  |  |
| FAM <b>0.880</b>                         | FA <b>0.880</b>  | SAFP <b>11.735</b>    |                  |  |  |
| W1 <b>87.5</b>                           | PD1 <b>571.7</b> | WD <b>11.690</b>      |                  |  |  |
| W2 <b>87.5</b>                           | PD2 <b>571.7</b> | GSA <b>1.0</b>        |                  |  |  |
| W3 <b>87.5</b>                           | PD3 <b>571.7</b> | RSA <b>1.0</b>        |                  |  |  |
| W4 <b>87.5</b>                           | PD4 <b>571.7</b> | PLM <b>9000.0</b>     |                  |  |  |
| LCF from stem on CL / on sheer           |                  | <b>6.856 / 7.060</b>  |                  |  |  |
| Maximum beam station from stem           |                  | <b>7.391</b>          |                  |  |  |
| RM Measured                              |                  | <b>140.9kg-m</b>      |                  |  |  |
| RM Default                               |                  | <b>153.6kg-m</b>      |                  |  |  |
| Limit of positive stability / Stab.Index |                  | <b>115.9° / 118.4</b> |                  |  |  |
| Freeboard at mast at 0.000               |                  | <b>1.072</b>          |                  |  |  |



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|                                |                            |                   |                  |  |  |
|--------------------------------|----------------------------|-------------------|------------------|--|--|
| <b>RIG</b>                     |                            |                   |                  |  |  |
| Forestay Tension <b>Aft</b>    | Spreaders <b>2</b>         |                   |                  |  |  |
| Inner Stay <b>Adjustable</b>   | Runners <b>0</b>           |                   |                  |  |  |
| Carbon Mast <b>Yes</b>         | Jumper Struts <b>None</b>  |                   |                  |  |  |
| Taper Hollows <b>No</b>        | Jib Furler <b>Yes</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>14.753</b>                | E <b>5.182</b>             | MDT1 <b>0.119</b> | MW <b>0.177</b>  |  |  |
| IG <b>16.533</b>               | J <b>6.309</b>             | MDL1 <b>0.226</b> | GO <b>0.177</b>  |  |  |
| ISP <b>16.533</b>              | SFJ <b>-1.509</b>          | MDT2 <b>0.119</b> | BD <b>0.125</b>  |  |  |
| BAS <b>1.689</b>               | SPL <b>0.000</b>           | MDL2 <b>0.177</b> | MWT <b>0.00</b>  |  |  |
| FSP <b>0.000</b>               | TPS <b>6.309</b>           | TL <b>1.768</b>   | MCG <b>0.000</b> |  |  |

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

|                              |                    |                  |
|------------------------------|--------------------|------------------|
| <b>PROPELLER</b>             |                    |                  |
| Installation <b>Strut</b>    | PRD <b>0.458</b>   |                  |
| Type <b>Folding 2 blades</b> | PBW <b>0.116</b>   |                  |
| Twin Screw <b>No</b>         | PIPA <b>0.0032</b> |                  |
| ST1 <b>0.049</b>             | ST3 <b>0.177</b>   | ST5 <b>0.366</b> |
| ST2 <b>0.174</b>             | ST4 <b>0.095</b>   | EDL <b>1.457</b> |

|                               |  |
|-------------------------------|--|
| <b>Certificate</b>            |  |
| Number <b>US6457</b>          |  |
| ORC Ref <b>USAX021401A</b>    |  |
| Issued On <b>11/09/2019</b>   |  |
| VPP Ver. <b>2019 1.01</b>     |  |
| Valid until <b>31/12/2019</b> |  |

|                 |
|-----------------|
| <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  |  |
|                              | 0.170 | 1.07  | 1.91  | 3.31  | 4.35  | 45.22  | 46.11    | P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB) |  |
| Symmetric<br>Not Available   |       |       |       |       |       |        |          |  |  |
| Asymmetric on centerline     | SLU   | SLE   | SL    | SHW   | SFL   |        |          |  |  |
|                              | 19.20 | 16.52 | 17.86 | 10.53 | 10.73 | 157.32 |          | 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) |      |      |      |      |      |       |       |     |     |           |          |            |
| HHB   | HUW  | HTW  | HHW  | HQW  | HLP  | HLU   | Area  | Btn | Fly | Meas.Date | Material | Comment    |
| 0.05  | 0.99 | 1.94 | 3.89 | 5.82 | 7.74 | 17.05 | 66.23 |     |     |           |          | ULLJIB2018 |

|                              |        |         |             |                 |
|------------------------------|--------|---------|-------------|-----------------|
| <b>MEASUREMENT INVENTORY</b> |        |         |             |                 |
| Measurer                     | Date   | Comment |             |                 |
| Id                           | Item   | Weight  | Distance    | VCG Description |
| a                            | Ancher | 0-0     | 0-00        |                 |
| Id                           | Item   | Weight  | Description |                 |

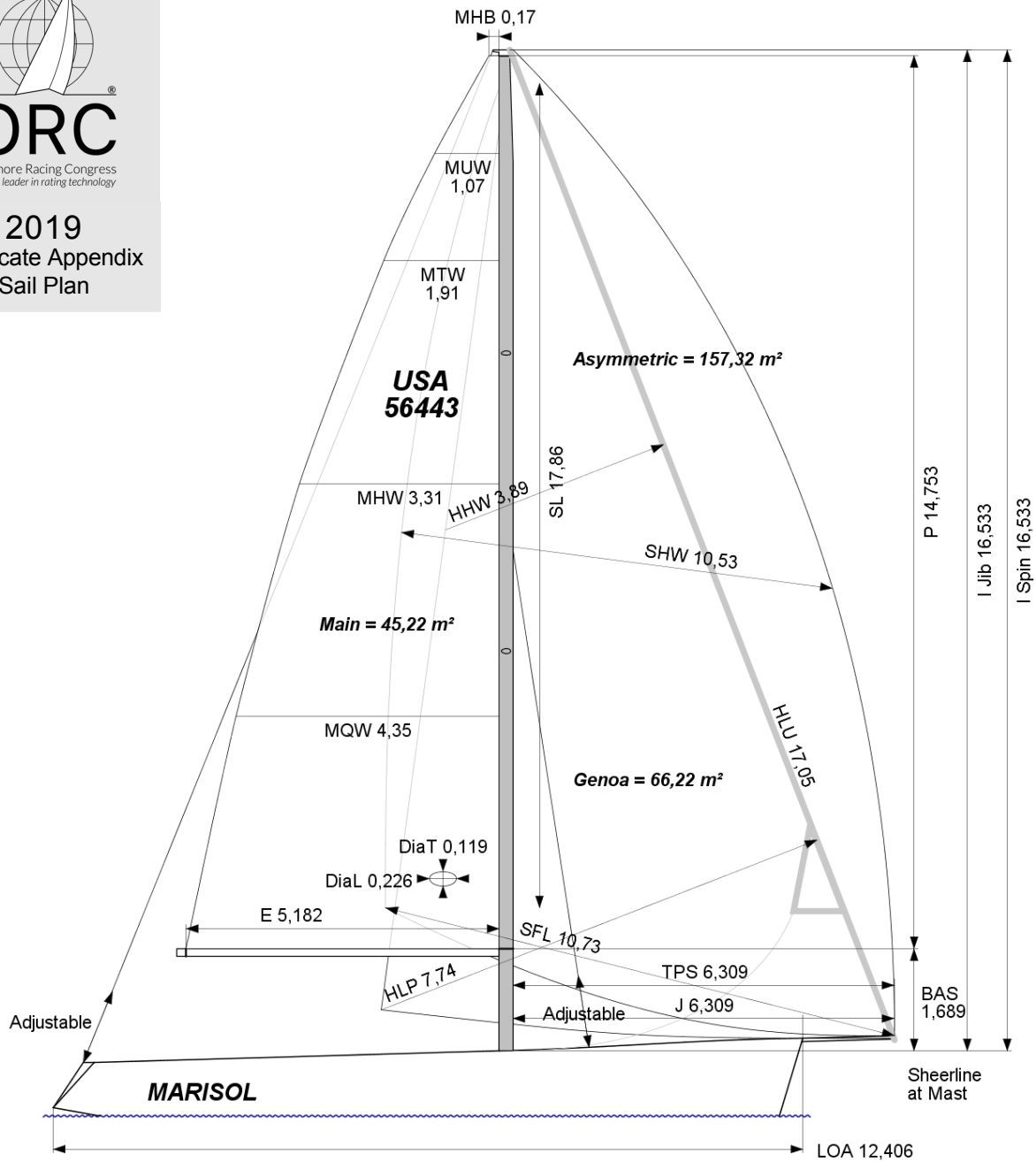
|                              |      |        |          |           |             |       |      |        |             |
|------------------------------|------|--------|----------|-----------|-------------|-------|------|--------|-------------|
| <b>MEASUREMENT INVENTORY</b> |      |        |          |           |             |       |      |        |             |
| Id                           | Item | Tank   | Use      | Tank Type | Capcty      | Dist. | VCG  | Condtn | Description |
|                              |      | Tank   |          |           |             | 0.00  | 0.00 | 0-0    |             |
| Id                           | Item | Weight | Distance | VCG       | Description |       |      |        |             |



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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         |
|---------|------|------|------|------|------|-------|----------|-----------|-------------|----------|-----------------|
| 1988142 | 0.17 | 1.07 | 1.91 | 3.31 | 4.35 | 45.23 |          |           | BRUCE       |          | 2018 CARBON FP+ |

**HEADSAILS (1)**

| Id      | HHB  | HUW  | HTW  | HHW  | HQW  | HLP  | HLU   | Ovrlp | Area  | Btn | Fly | Measurer | Meas.Date | Manufacture | Material | Comment    |
|---------|------|------|------|------|------|------|-------|-------|-------|-----|-----|----------|-----------|-------------|----------|------------|
| 2085689 | 0.05 | 0.99 | 1.94 | 3.89 | 5.82 | 7.74 | 17.05 | 123%  | 66.23 |     |     |          |           | Bruce       |          | ULLJIB2018 |

**SYMMETRIC SPINNAKERS (0)**

| Id | SLU | SLE | SL | SHW | SFL | Area | Measurer | Meas.Date | Manufacture | Material | Comment |
|----|-----|-----|----|-----|-----|------|----------|-----------|-------------|----------|---------|
|----|-----|-----|----|-----|-----|------|----------|-----------|-------------|----------|---------|

**ASYMMETRIC SPINNAKERS (1)**

| Id      | SLU   | SLE   | SL    | SHW   | SFL   | Area   | Kind | Measurer | Meas.Date | Manufacture | Material | Comment             |
|---------|-------|-------|-------|-------|-------|--------|------|----------|-----------|-------------|----------|---------------------|
| 1988152 | 19.20 | 16.52 | 17.86 | 10.53 | 10.73 | 157.32 | asym |          |           | BRUCE       |          | 2018 CODE 2A ULLMAN |