

|   |                            |   |
|---|----------------------------|---|
| <b>BOAT</b><br>Name <b>FOX</b><br>Sail Nr <b>USA 55052</b>  | <b>GPH</b><br><b>430.9</b> | <b>HULL</b><br>Length Overall <b>15.850m</b><br>Maximum Beam <b>4.422m</b><br>Displacement <b>6,976kg</b><br>Draft <b>3.601m</b><br>IMS Reg. Division <b>Performance</b><br>Dynamic Allowance <b>0.000%</b><br>Fwd Accommodation <b>No</b><br>Hull Construction <b>Carbon, Aramid</b><br>Carbon Rudder <b>Yes</b><br>Crew Arm Extension |
| <b>GENERAL</b><br>Class <b>Pac 52</b><br>Designer <b>BOTIN PARTNERS</b><br>Builder<br>Series <b>01/2015</b><br>Age <b>06/2015</b><br>Age Allowance <b>0.130%</b><br>Offset File <b>US42602F.OFF - 07/11/2018 15:40:12</b><br>Measurement by - <b>11/05/2016</b> |                            | IMSL <b>15.421m</b> VCGD <b>-1.366m</b> Sink <b>32.20kg/mm</b><br>RL <b>16.556m</b> VCGM <b>-1.367m</b> WS <b>40.79m<sup>2</sup></b><br>LSM0 <b>15.083m</b> Displacement/Length ratio <b>2.0330</b>   |



**ORC**  
Offshore Racing Congress  
World leader in rating technology

**2019**  
ORC International  
Certificate

**Rating Office**

Offshore  
Racing  
Congress

**COPY ONLY**  
**Invalid for**  
**RACING**

World Leader In Rating Technology

| <b>SCORING OPTIONS</b> |                                |               |               |                           |               |               |
|------------------------|--------------------------------|---------------|---------------|---------------------------|---------------|---------------|
|                        | <b>COASTAL / LONG DISTANCE</b> |               |               | <b>WINDWARD / LEEWARD</b> |               |               |
| Time on Distance       | <b>419.9</b>                   |               |               | <b>477.3</b>              |               |               |
| Time on Time           | <b>1.4290</b>                  |               |               | <b>1.4141</b>             |               |               |
| Triple Number          | Low                            | Medium        | High          | Low                       | Medium        | High          |
| Time on Distance       | <b>493.1</b>                   | <b>384.9</b>  | <b>326.2</b>  | <b>640.0</b>              | <b>485.8</b>  | <b>407.4</b>  |
| Time on Time           | <b>1.3690</b>                  | <b>1.7538</b> | <b>2.0691</b> | <b>1.0547</b>             | <b>1.3895</b> | <b>1.6568</b> |

| <b>TIME ALLOWANCES</b> |              |              |              |              |              |              |              |
|------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Wind Velocity          | 6 kt         | 8 kt         | 10 kt        | 12 kt        | 14 kt        | 16 kt        | 20 kt        |
| Beat VMG               | <b>704.1</b> | <b>581.6</b> | <b>539.5</b> | <b>519.0</b> | <b>502.7</b> | <b>491.3</b> | <b>485.2</b> |
| 52°                    | <b>455.8</b> | <b>394.7</b> | <b>377.2</b> | <b>366.0</b> | <b>357.5</b> | <b>344.4</b> | <b>333.9</b> |
| 60°                    | <b>427.2</b> | <b>380.4</b> | <b>360.3</b> | <b>346.7</b> | <b>337.5</b> | <b>326.5</b> | <b>312.7</b> |
| 75°                    | <b>409.1</b> | <b>366.6</b> | <b>335.4</b> | <b>319.1</b> | <b>308.3</b> | <b>300.5</b> | <b>278.8</b> |
| 90°                    | <b>412.1</b> | <b>369.3</b> | <b>329.4</b> | <b>301.5</b> | <b>285.6</b> | <b>274.3</b> | <b>258.4</b> |
| 110°                   | <b>445.6</b> | <b>377.1</b> | <b>342.1</b> | <b>315.2</b> | <b>289.4</b> | <b>259.6</b> | <b>227.1</b> |
| 120°                   | <b>460.5</b> | <b>383.2</b> | <b>337.8</b> | <b>310.4</b> | <b>288.6</b> | <b>262.5</b> | <b>229.1</b> |
| 135°                   | <b>516.1</b> | <b>407.9</b> | <b>363.2</b> | <b>320.2</b> | <b>281.7</b> | <b>254.4</b> | <b>221.1</b> |
| 150°                   | <b>621.0</b> | <b>482.5</b> | <b>412.6</b> | <b>368.1</b> | <b>332.9</b> | <b>293.2</b> | <b>230.8</b> |
| Run VMG                | <b>717.1</b> | <b>557.2</b> | <b>476.4</b> | <b>429.9</b> | <b>384.4</b> | <b>338.5</b> | <b>266.5</b> |

**Certificate**

Number **US6322**  
ORC Ref **USAX023C86N**  
Issued On **28/03/2019**  
VPP Ver. **2019 1.01**  
Valid until **31/12/2019**

**Crew Weight**

Default **1,237kg**  
Maximum **1,350kg**  
Minimum\* **1,013kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr **No**

**Special Scoring**

|                           |               |
|---------------------------|---------------|
| ToD                       | ToT           |
| Non Spin GPH <b>464.4</b> | <b>1.2920</b> |
| Non Spin OSN <b>456.4</b> | <b>1.3148</b> |

| <b>Selected Courses</b> |              |              |              |              |              |              |              |
|-------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Windward / Leeward      | <b>710.6</b> | <b>569.4</b> | <b>508.0</b> | <b>474.4</b> | <b>443.5</b> | <b>414.9</b> | <b>375.9</b> |
| Circular Random         | <b>594.5</b> | <b>480.8</b> | <b>419.0</b> | <b>380.9</b> | <b>354.5</b> | <b>334.3</b> | <b>304.1</b> |
| Coastal / Long Distance | <b>711.2</b> | <b>536.3</b> | <b>455.6</b> | <b>404.1</b> | <b>368.9</b> | <b>335.0</b> | <b>285.4</b> |
| Non Spinnaker           | <b>648.7</b> | <b>521.2</b> | <b>450.9</b> | <b>407.5</b> | <b>378.0</b> | <b>356.0</b> | <b>324.1</b> |

**Sails Limitations**

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

| <b>Velocity Prediction in Knots for True Wind Speeds</b> |               |               |               |               |               |               |               |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Wind Velocity  | 6 kt          | 8 kt          | 10 kt         | 12 kt         | 14 kt         | 16 kt         | 20 kt         |
| Beat Angles  | <b>43.7°</b>  | <b>40.8°</b>  | <b>38.9°</b>  | <b>37.3°</b>  | <b>36.3°</b>  | <b>35.4°</b>  | <b>35.7°</b>  |
| Beat VMG   | <b>5.11</b>   | <b>6.19</b>   | <b>6.67</b>   | <b>6.94</b>   | <b>7.16</b>   | <b>7.33</b>   | <b>7.42</b>   |
| 52°  | <b>7.90</b>   | <b>9.12</b>   | <b>9.54</b>   | <b>9.83</b>   | <b>10.07</b>  | <b>10.45</b>  | <b>10.78</b>  |
| 60°  | <b>8.43</b>   | <b>9.46</b>   | <b>9.99</b>   | <b>10.38</b>  | <b>10.67</b>  | <b>11.03</b>  | <b>11.51</b>  |
| 75°  | <b>8.80</b>   | <b>9.82</b>   | <b>10.73</b>  | <b>11.28</b>  | <b>11.68</b>  | <b>11.98</b>  | <b>12.91</b>  |
| 90°  | <b>8.74</b>   | <b>9.75</b>   | <b>10.93</b>  | <b>11.94</b>  | <b>12.60</b>  | <b>13.13</b>  | <b>13.93</b>  |
| 110°   | <b>8.08</b>   | <b>9.55</b>   | <b>10.52</b>  | <b>11.42</b>  | <b>12.44</b>  | <b>13.87</b>  | <b>15.85</b>  |
| 120°   | <b>7.82</b>   | <b>9.39</b>   | <b>10.66</b>  | <b>11.60</b>  | <b>12.48</b>  | <b>13.71</b>  | <b>15.71</b>  |
| 135°   | <b>6.98</b>   | <b>8.83</b>   | <b>9.91</b>   | <b>11.24</b>  | <b>12.78</b>  | <b>14.15</b>  | <b>16.28</b>  |
| 150°   | <b>5.80</b>   | <b>7.46</b>   | <b>8.73</b>   | <b>9.78</b>   | <b>10.81</b>  | <b>12.28</b>  | <b>15.60</b>  |
| Run VMG  | <b>5.02</b>   | <b>6.46</b>   | <b>7.56</b>   | <b>8.37</b>   | <b>9.37</b>   | <b>10.63</b>  | <b>13.51</b>  |
| Gybe Angles  | <b>140.6°</b> | <b>141.2°</b> | <b>147.4°</b> | <b>151.6°</b> | <b>142.9°</b> | <b>142.5°</b> | <b>144.2°</b> |

**Class Division Length**

**CDL = 15.990**

**Storm Sails Areas**

Heavy Weather Jib **55.34**  
Storm Jib (JL=13.16) **20.50**  
Storm Trysail **25.90**

**Owner**

|                    |                                 |
|--------------------|---------------------------------|
| <b>BOAT</b>        |                                 |
| Name <b>FOX</b>    | Sail Nr <b>USA 55052</b>        |
| File <b>US6322</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 <b>1</b>                                     |
| Carbon Mast <b>Yes</b>         | Jumper Struts <b>None</b>                            |
| Taper Hollows <b>No</b>        | Jib Furler   |
| Fiber Rigging <b>Yes</b>       | Main Furler <b>No</b>                                |
| Lenticular Rigging <b>No</b>   | Without Backstay <b>No</b>                           |
| Articulated Bowsprit <b>No</b> |  |
| P <b>21.200</b>                | E <b>6.980</b> MDT1 <b>0.133</b> MW <b>0.282</b>     |
| IG <b>20.245</b>               | J <b>6.200</b> MDL1 <b>0.300</b> GO <b>0.282</b>     |
| ISP <b>23.145</b>              | SFJ <b>0.540</b> MDT2 <b>0.104</b> BD <b>0.360</b>   |
| BAS <b>1.945</b>               | SPL <b>0.000</b> MDL2 <b>0.152</b> MWT <b>270.80</b> |
| FSP <b>0.070</b>               | TPS <b>9.000</b> TL <b>3.085</b> MCG <b>8.000</b>    |

|  |                  |                       |  |
|--|------------------|-----------------------|--|
| <b>INCLINING TEST AND FREEBOARDS</b>     |                  |                       |  |
| Inclining Test <b>Current Inclining</b>  |                  |                       |  |
| Flotation date <b>14/07/2018</b>         |                  | SG <b>1.0230</b>      |  |
| FFM <b>1.465</b>                         | FF <b>1.466</b>  | SFFP <b>0.406</b>     |  |
| FAM <b>1.124</b>                         | FA <b>1.124</b>  | SAFP <b>15.845</b>    |  |
| W1 <b>122.1</b>                          | PD1 <b>450.0</b> | WD <b>19.420</b>      |  |
| W2 <b>122.1</b>                          | PD2 <b>450.0</b> | GSA <b>1.0</b>        |  |
| W3 <b>122.1</b>                          | PD3 <b>450.0</b> | RSA <b>1.0</b>        |  |
| W4 <b>122.1</b>                          | PD4 <b>450.0</b> | PLM <b>9000.0</b>     |  |
| LCF from stem on CL / on sheer           |                  | <b>8.777 / 9.040</b>  |  |
| Maximum beam station from stem           |                  | <b>11.379</b>         |  |
| RM Measured                              |                  | <b>415.0kg-m</b>      |  |
| RM Default                               |                  | <b>356.4kg-m</b>      |  |
| Limit of positive stability / Stab.Index |                  | <b>143.6° / 142.4</b> |  |
| Freeboard at mast at 6.740               |                  | <b>1.242</b>          |  |



**ORC**  
Offshore Racing Congress  
World leader in rating technology

**2019**  
IMS Measurement  
Certificate

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

|                              |                    |                  |  |
|------------------------------|--------------------|------------------|--|
| <b>PROPELLER</b>             |                    |                  |  |
| Installation <b>Strut</b>    | PRD <b>0.410</b>   |                  |  |
| Type <b>Folding 2 blades</b> | PBW <b>0.110</b>   |                  |  |
| Twin Screw                   | PIPA <b>0.0026</b> |                  |  |
| ST1 <b>0.045</b>             | ST3 <b>0.160</b>   | ST5 <b>0.310</b> |  |
| ST2 <b>0.160</b>             | ST4 <b>0.086</b>   | EDL <b>1.200</b> |  |

|                               |  |
|-------------------------------|--|
| <b>Certificate</b>            |  |
| Number <b>US6322</b>          |  |
| ORC Ref <b>USAX023C86N</b>    |  |
| Issued On <b>28/03/2019</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                |  |



**COPY ONLY**  
**Invalid for Racing**

World Leader In Rating Technology

|                              |       |       |       |       |       |        |                        |  |  |
|------------------------------|-------|-------|-------|-------|-------|--------|------------------------|--|--|
| <b>SAILS (Maximum Areas)</b> |       |       |       |       |       |        |                        |  |  |
| Mainsail                     | MHB   | MUW   | MTW   | MHW   | MQW   | Area   | Area (r)               | Formula  |  |
|                              | 1.990 | 2.66  | 3.57  | 4.97  | 6.10  | 101.04 | 103.68                 | P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB) |  |
| Symmetric<br>Not Available   |       |       |       |       |       |        |                        |  |  |
| Asymmetric<br>on centerline  | SLU   | SLE   | SL    | SHW   | SFL   | Area   | Formula                |  |  |
|                              | 26.40 | 21.88 | 24.14 | 13.27 | 13.59 | 268.24 | 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 |
| 0.09  | 1.05 | 1.77 | 3.30 | 4.74 | 6.19 | 20.65 | 66.84 |     |     | J-1 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                            | Anchor      | 0-0           | 0-00               |                        |
| <i>Id</i>                    | <i>Item</i> | <i>Weight</i> | <i>Description</i> |                        |

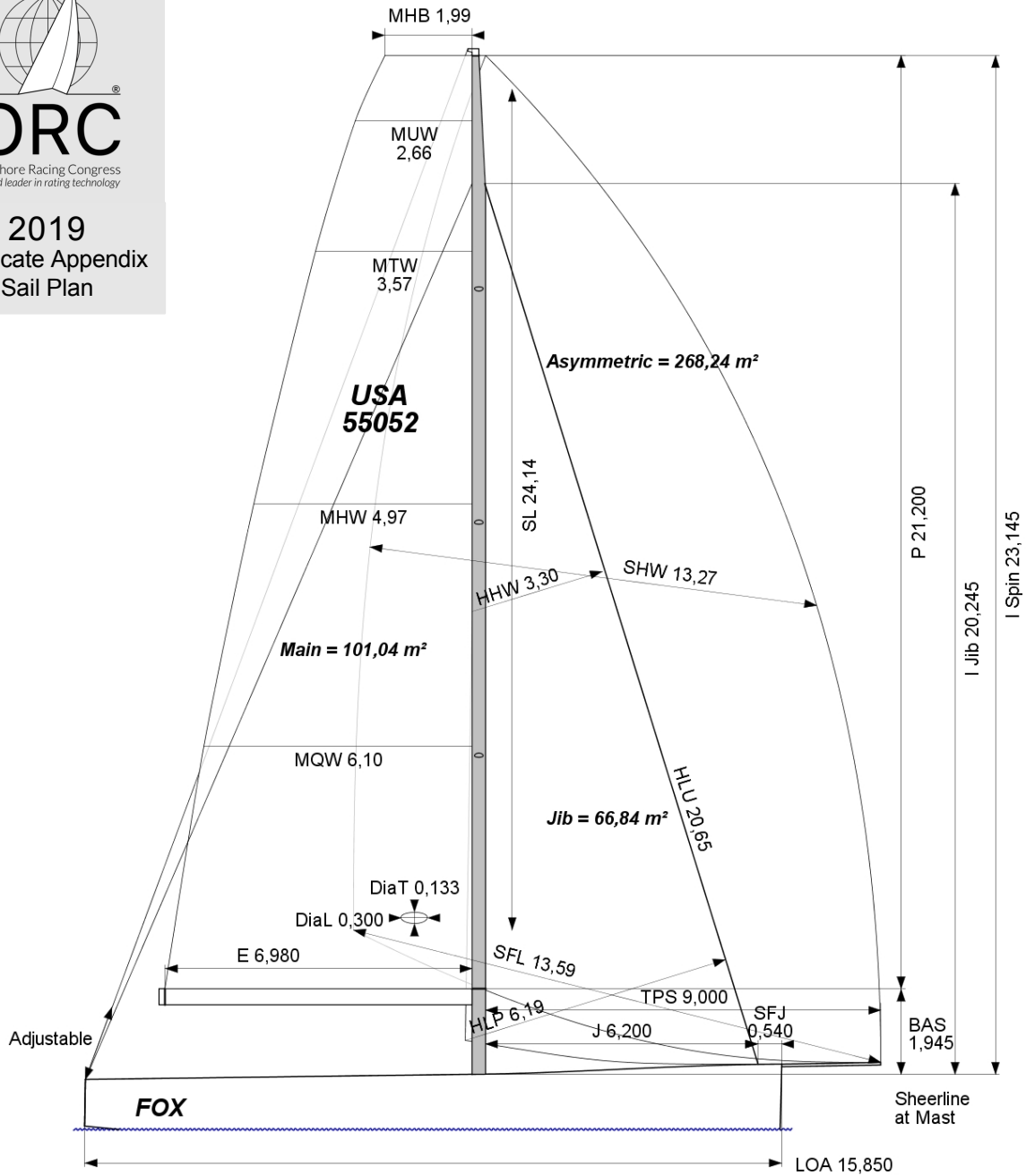
|                              |             |                 |                  |                        |              |            |               |                    |  |
|------------------------------|-------------|-----------------|------------------|------------------------|--------------|------------|---------------|--------------------|--|
| <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       | 0-0           |                    |  |
| <i>Id</i>                    | <i>Item</i> | <i>Weight</i>   | <i>Distance</i>  | <i>VCG Description</i> |              |            |               |                    |  |



**ORC**

Offshore Racing Congress  
World leader in rating technology

**2019**  
Certificate Appendix  
Sail Plan



**SAILS INVENTORY**

**MAINSAIL (1)**

| Id      | MHB  | MUW  | MTW  | MHW  | MQW  | Area   | Measurer | Meas.Date | Manufacture | Material | Comment          |
|---------|------|------|------|------|------|--------|----------|-----------|-------------|----------|------------------|
| 1957614 | 1.99 | 2.66 | 3.57 | 4.97 | 6.10 | 101.05 |          |           | DAVID       |          | MN-5 MEASURED 16 |

**HEADSAILS (1)**

| Id      | HHB  | HUW  | HTW  | HHW  | HQW  | HLP  | HLU   | Ovrlp | Area  | Btn | Fly | Measurer | Meas.Date | Manufacture | Material | Comment  |
|---------|------|------|------|------|------|------|-------|-------|-------|-----|-----|----------|-----------|-------------|----------|----------|
| 1957623 | 0.09 | 1.05 | 1.77 | 3.30 | 4.74 | 6.19 | 20.65 | 100%  | 66.84 |     |     |          |           | DAVID       |          | J-1 2018 |

**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       |
|---------|-------|-------|-------|-------|-------|--------|------|----------|-----------|-------------|----------|---------------|
| 1957635 | 26.40 | 21.88 | 24.14 | 13.27 | 13.59 | 268.24 | asym |          |           | DAVID       |          | A-2 JULY 2018 |