

| | | |
|---|----------------------------|---|
| BOAT Name ORION Sail Nr USA 12282 | GPH 576.0 | HULL Length Overall 12.200m Maximum Beam 3.638m Displacement 6,989kg Draft 2.219m IMS Reg. Division Cruiser/Racer Dynamic Allowance 0.095% Fwd Accommodation Yes Hull Construction Cored Carbon Rudder Yes Crew Arm Extension 0.00 |
| GENERAL Class J-122 Designer ALAN JOHNSTONE Builder J EUROPE Series 01/2006, CIN 37 Age 05/2006 Age Allowance 0.422% Offset File us42407.off - 27/05/2014 12:43:22 Measurement by - 27/05/2017 | | IMSL 11.052m VCGD -0.073m Sink 22.85kg/mm RL 10.029m VCGM -0.090m WS 30.47m² LSM0 10.907m Displacement/Length ratio 5.3864 |



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| SCORING OPTIONS | | | | | | |
|------------------------|--------------------------------|---------------|---------------|---------------------------|---------------|---------------|
| | COASTAL / LONG DISTANCE | | | WINDWARD / LEEWARD | | |
| Time on Distance | 560.3 | | | 629.3 | | |
| Time on Time | 1.0708 | | | 1.0727 | | |
| Triple Number | Low | Medium | High | Low | Medium | High |
| Time on Distance | 655.6 | 510.9 | 459.7 | 848.2 | 630.1 | 556.3 |
| Time on Time | 1.0296 | 1.3213 | 1.4685 | 0.7958 | 1.0713 | 1.2133 |

| TIME ALLOWANCES | | | | | | | |
|------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Wind Velocity | 6 kt | 8 kt | 10 kt | 12 kt | 14 kt | 16 kt | 20 kt |
| Beat VMG | 981.7 | 806.4 | 708.6 | 666.8 | 649.9 | 642.1 | 625.9 |
| 52° | 640.2 | 536.4 | 487.3 | 469.3 | 462.5 | 459.0 | 453.4 |
| 60° | 603.3 | 512.7 | 474.4 | 458.1 | 450.2 | 446.1 | 441.8 |
| 75° | 575.3 | 496.7 | 465.2 | 447.5 | 434.4 | 425.4 | 417.6 |
| 90° | 580.0 | 487.4 | 461.1 | 445.4 | 428.6 | 413.0 | 391.4 |
| 110° | 568.9 | 479.1 | 446.3 | 425.6 | 411.9 | 401.0 | 379.4 |
| 120° | 582.3 | 485.9 | 449.8 | 423.7 | 399.4 | 383.1 | 360.3 |
| 135° | 651.3 | 524.8 | 468.3 | 440.6 | 414.4 | 388.4 | 335.6 |
| 150° | 772.3 | 617.4 | 522.5 | 472.8 | 451.5 | 431.9 | 387.3 |
| Run VMG | 891.7 | 712.9 | 603.3 | 545.5 | 518.8 | 482.9 | 437.2 |

Certificate
Number **US6115**
ORC Ref **USAX0297OQK**
Issued On **07/06/2019**
VPP Ver. **2019 1.01**
Valid until **31/12/2019**

Crew Weight
Default 779kg
Maximum **850kg**
Minimum* **638kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring
ToD ToT
Non Spin GPH **616.2 0.9737**
Non Spin OSN **599.0 1.0016**

| Selected Courses | | | | | | | |
|-------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Windward / Leeward | 936.7 | 759.7 | 655.9 | 606.1 | 584.3 | 562.5 | 531.5 |
| Circular Random | 789.1 | 638.4 | 558.8 | 513.6 | 486.1 | 467.6 | 441.2 |
| Coastal / Long Distance | 932.2 | 712.9 | 593.2 | 529.6 | 497.3 | 469.3 | 423.8 |
| Non Spinnaker | 863.9 | 691.0 | 596.9 | 541.4 | 506.9 | 484.1 | 454.4 |

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 | 42.9° | 41.5° | 40.6° | 39.1° | 38.3° | 38.1° | 37.5° |
| Beat VMG | 3.67 | 4.46 | 5.08 | 5.40 | 5.54 | 5.61 | 5.75 |
| 52° | 5.62 | 6.71 | 7.39 | 7.67 | 7.78 | 7.84 | 7.94 |
| 60° | 5.97 | 7.02 | 7.59 | 7.86 | 8.00 | 8.07 | 8.15 |
| 75° | 6.26 | 7.25 | 7.74 | 8.05 | 8.29 | 8.46 | 8.62 |
| 90° | 6.21 | 7.39 | 7.81 | 8.08 | 8.40 | 8.72 | 9.20 |
| 110° | 6.33 | 7.51 | 8.07 | 8.46 | 8.74 | 8.98 | 9.49 |
| 120° | 6.18 | 7.41 | 8.00 | 8.50 | 9.01 | 9.40 | 9.99 |
| 135° | 5.53 | 6.86 | 7.69 | 8.17 | 8.69 | 9.27 | 10.73 |
| 150° | 4.66 | 5.83 | 6.89 | 7.61 | 7.97 | 8.33 | 9.29 |
| Run VMG | 4.04 | 5.05 | 5.97 | 6.60 | 6.94 | 7.46 | 8.23 |
| Gybe Angles | 143.5° | 146.6° | 148.4° | 150.8° | 152.2° | 176.0° | 177.5° |

Class Division Length
CDL = **10.542**

Storm Sails Areas
Heavy Weather Jib **37.81**
Storm Jib (JL=10.88) **14.01**
Storm Trysail **14.62**

Owner

| | |
|--------------------|---------------------------------|
| BOAT | |
| Name ORION | Sail Nr USA 12282 |
| File US6115 | Data in meters/kilograms |

| | | |
|--|------------------|-----------------------|
| INCLINING TEST AND FREEBOARDS | | |
| Inclining Test Current Inclining | | |
| Flotation date 27/05/2017 | | SG 1.0040 |
| FFM 1.367 | FF 1.380 | SFFP 0.300 |
| FAM 0.982 | FA 0.987 | SAFP 11.850 |
| W1 108.3 | PD1 550.9 | WD 11.850 |
| W2 108.3 | PD2 548.9 | GSA 1.0 |
| W3 108.3 | PD3 549.5 | RSA 1.0 |
| W4 108.3 | PD4 547.8 | PLM 9000.0 |
| LCF from stem on CL / on sheer | | 6.762 / 6.984 |
| Maximum beam station from stem | | 7.800 |
| RM Measured | | 184.0kg-m |
| RM Default | | 181.7kg-m |
| Limit of positive stability / Stab.Index | | 121.2° / 125.0 |
| Freeboard at mast at 4.874 | | 1.164 |



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|--------------------------------|----------------------------|-------------------|-------------------|--|
| RIG | | | | |
| Forestay Tension Aft | Spreaders 2 | | | |
| Inner Stay None Fitted | Runners 0 | | | |
| Carbon Mast Yes | Jumper Struts None | | | |
| Taper Hollows No | Jib Furler No | | | |
| Fiber Rigging No | Main Furler No | | | |
| Lenticular Rigging No | Without Backstay No | | | |
| Articulated Bowsprit No | | | | |
| P 15.643 | E 5.337 | MDT1 0.146 | MW 0.212 | |
| IG 16.620 | J 4.574 | MDL1 0.241 | GO 0.243 | |
| ISP 17.807 | SFJ 0.300 | MDT2 0.134 | BD 0.225 | |
| BAS 1.719 | SPL 0.000 | MDL2 0.192 | MWT 177.50 | |
| FSP 0.072 | TPS 6.450 | TL 2.200 | MCG 5.832 | |

| | |
|-----------------------------|--|
| MIZZEN RIG AND SAILS | |
| N/A | |

| | | |
|---------------------------------|--------------------|------------------|
| PROPELLER | | |
| Installation Strut | PRD 0.420 | |
| Type Feathering 3 blades | PBW 0.110 | |
| Twin Screw No | PIPA 0.0041 | |
| ST1 0.065 | ST3 0.180 | ST5 0.290 |
| ST2 0.180 | ST4 0.110 | EDL 2.200 |

| | |
|-------------------------------|--|
| Certificate | |
| Number US6115 | |
| ORC Ref USAX0297OQK | |
| Issued On 07/06/2019 | |
| VPP Ver. 2019 1.01 | |
| Valid until 31/12/2019 | |

| |
|-----------------|
| COMMENTS |
| |

| | |
|------------------------|--|
| MOVABLE BALLAST | |
| N/A | |

| | | |
|-------------------|----|----|
| BILGEBOARD | | |
| BS | BT | BA |
| BF | BX | |
| BC | BY | |



| | | | | | | | | | |
|------------------------------|-------|-------|-------|-------|-------|--------|------------------------|--|--|
| SAILS (Maximum Areas) | | | | | | | | | |
| Mainsail | MHB | MUW | MTW | MHW | MQW | Area | Area (r) | Formula | |
| | 0.160 | 1.10 | 2.00 | 3.45 | 4.43 | 49.43 | 50.36 | 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 | | |
| | 18.07 | 18.07 | 18.07 | 10.13 | 10.08 | 152.39 | AS · (SFL + 4·SHW) / 6 | | |

| | | | | | | | | | | | | |
|---|------|------|------|------|-------|-------|------|-----|-----|-----------|----------|------------------------|
| HEADSAILS | | | | | | | | | | | | |
| 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 |
| 0.65 | 1.29 | 2.56 | 3.80 | 5.03 | 16.35 | 41.61 | | | | | | * Copied from legacy * |

| | | | | |
|------------------------------|--------|--------------------|----------|-----------------|
| MEASUREMENT INVENTORY | | | | |
| Measurer | Date | Comment | | |
| Id | Item | Weight | Distance | VCG Description |
| a | Anchor | 0.0 | 0.00 | |
| Id | Item | Weight Description | | |

| | | | | | | | | | |
|------------------------------|------|--------|----------|-----------------|--------|-------|-------|--------|-------------|
| MEASUREMENT INVENTORY | | | | | | | | | |
| Id | Item | Tank | Use | Tank Type | Capcty | Dist. | VCG | Condtn | Description |
| | Tank | | | | | 5.20 | -0.10 | 50.0 | |
| Id | Item | Weight | Distance | VCG Description | | | | | |

