



World Leader in Rating Technology

**2016
ORC Club
Certificate**

Rating Office

**ORC
Central Rating Office
issuing certificates for
CANADA**



Certificate

Number **021/16**
 Issued On **25.3.2016**.
 ORC Ref **CAN00062118**
 VPP Ver. **2016 1.01**
 Valid until **31.12.2016**.

Crew Weight

Declared **610kg**
 Default* **644kg**
 Non Manual Pwr **Rig**

Special Scoring

ToD ToT
 Non Spin GPH **665.9 0.9010**
 Non Spin OSN **644.2 0.9314**
 N/S Perf. Line **2.9 0.578**

Sails Limitations

Headsails **6** Spinnakers **3**

Spinnaker configuration

Symmetric: **No**
 Asymmetric: **Yes 118.03**
 Flying H/S: **No**
 Spin. Pole: **No**

Class Division Length

CDL = **9.105**

Stability

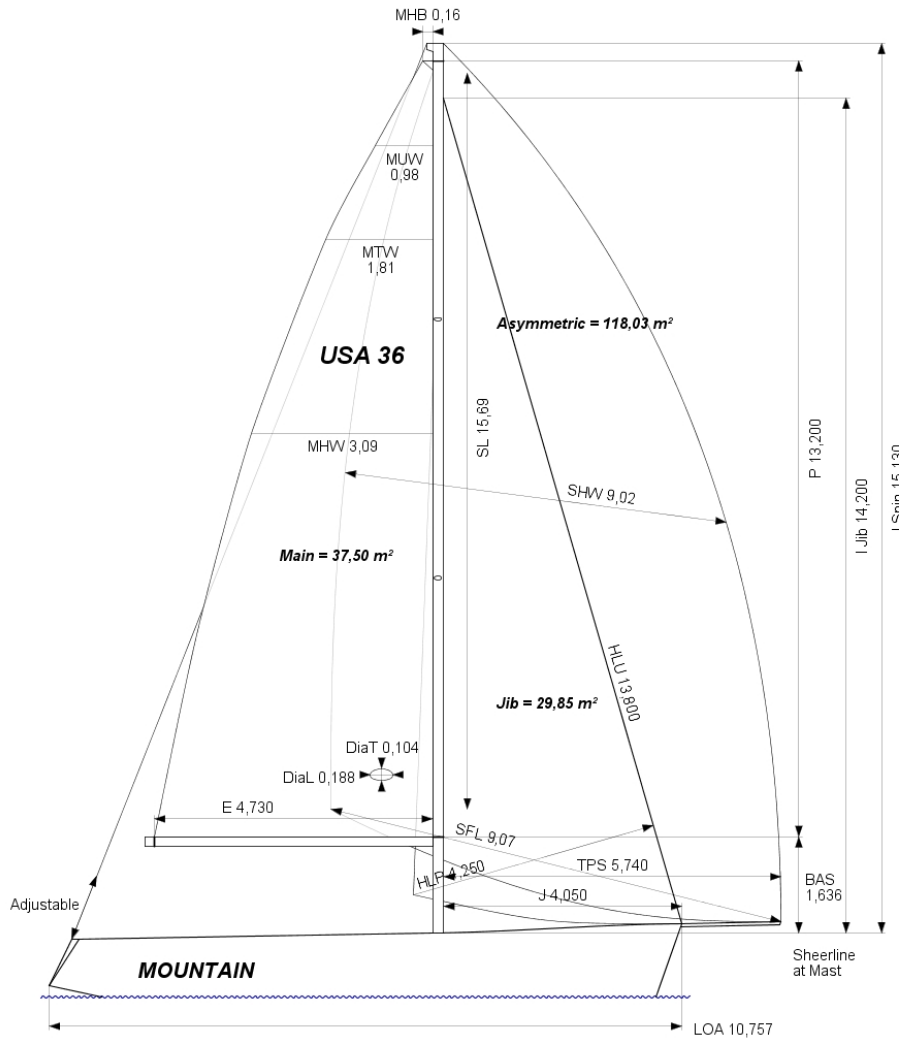
LPS (Estimated): **118.0°**
 Stability Index: **118.3**
 OSR Category: **N/A**

Owner

Reed Bernhard / Dana Morse
 8032 16th Ave Ne
 98115 Seattle WA
 USA

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

Signature



BOAT Name Mountain Sail Nr USA 36		GPH 624.4	HULL Data File USA36.dxt LOA 10.757m Offset File F199.OFF MB 3.524m Displacement 5,274kg Draft 2.144m			
CLASS Class J 109 Designer J Boats Builder TPI Composites Series 01.2001 Age Date 01.2003 Age Allowance 0.487%		IMS Division Cruiser/Racer Dynamic All. 0.192% Fwd Accom. Yes Construction Cored Fiber Rigging No Aramid Core No Crew Arm Ex Carbon Rudder No Light Stanchions No		IMSL 9.700m VCGD 0.014m Sink 18.50kg/mm RL 8.509m VCGM -0.028m WS 25.06m2 LSM0 9.545m Displacement/Length ratio 6.0647		
COMMENTS		Water Ballast 0 Trim Tab No		CENTERBOARD N/A		
PROPELLER Installation Strut PRD 0.410 Type Folding 2 blades PBW 0.112 PIPA 0.0031						
SCORING OPTIONS						
	OFFSHORE COASTAL / LONG DISTANCE			INSHORE WINDWARD / LEEWARD		
Time On Distance	606.9			680.8		
Time On Time	0.9886			0.9916		
Performance Line	PLT	PLD		PLT	PLD	
	0.679	43.9		0.861	220.0	
Triple Number	Low	Medium	High	Low	Medium	High
	0.9410	1.2219	1.3718	0.7234	0.9849	1.1369



World Leader in Rating Technology

2016

ORC Club Certificate Appendix

BOAT	
Name	Mountain
Sail Nr	USA 36
Certificate Number	021/16
Issued On	25.3.2016.

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1098.2	903.9	791.6	723.9	696.2	682.3	667.4
52°	713.1	595.1	530.1	502.9	492.2	486.8	481.7
60°	669.0	561.5	511.6	489.9	478.2	472.3	467.3
75°	633.0	536.9	498.4	478.1	462.2	449.7	438.6
90°	618.7	518.9	489.4	477.6	461.6	444.2	417.4
110°	611.7	513.6	478.4	454.4	440.2	428.2	408.1
120°	630.0	523.2	484.5	457.4	430.6	412.4	389.5
135°	706.1	569.6	504.4	475.8	450.1	424.3	373.8
150°	833.1	665.4	562.6	510.1	486.5	468.3	425.1
Run VMG	962.0	768.3	649.6	588.7	557.5	513.2	467.9

Selected Courses							
Windward / Leeward	1030.1	836.1	720.6	656.3	626.8	597.7	567.7
Circular Random	861.3	694.7	605.6	554.1	522.4	501.4	473.6
Ocean for PCS	1055.9	815.4	679.9	597.1	543.6	506.2	454.6
Non Spinnaker	939.8	749.3	644.7	582.5	543.5	517.8	485.3

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	43.5°	42.0°	41.9°	40.1°	39.0°	38.3°	37.7°
Beat VMG	3.28	3.98	4.55	4.97	5.17	5.28	5.39
52°	5.05	6.05	6.79	7.16	7.31	7.39	7.47
60°	5.38	6.41	7.04	7.35	7.53	7.62	7.70
75°	5.69	6.71	7.22	7.53	7.79	8.01	8.21
90°	5.82	6.94	7.36	7.54	7.80	8.10	8.62
110°	5.89	7.01	7.52	7.92	8.18	8.41	8.82
120°	5.71	6.88	7.43	7.87	8.36	8.73	9.24
135°	5.10	6.32	7.14	7.57	8.00	8.48	9.63
150°	4.32	5.41	6.40	7.06	7.40	7.69	8.47
Run VMG	3.74	4.69	5.54	6.12	6.46	7.01	7.69
Gybe Angles	144.5°	147.9°	147.9°	150.3°	173.8°	176.7°	177.9°