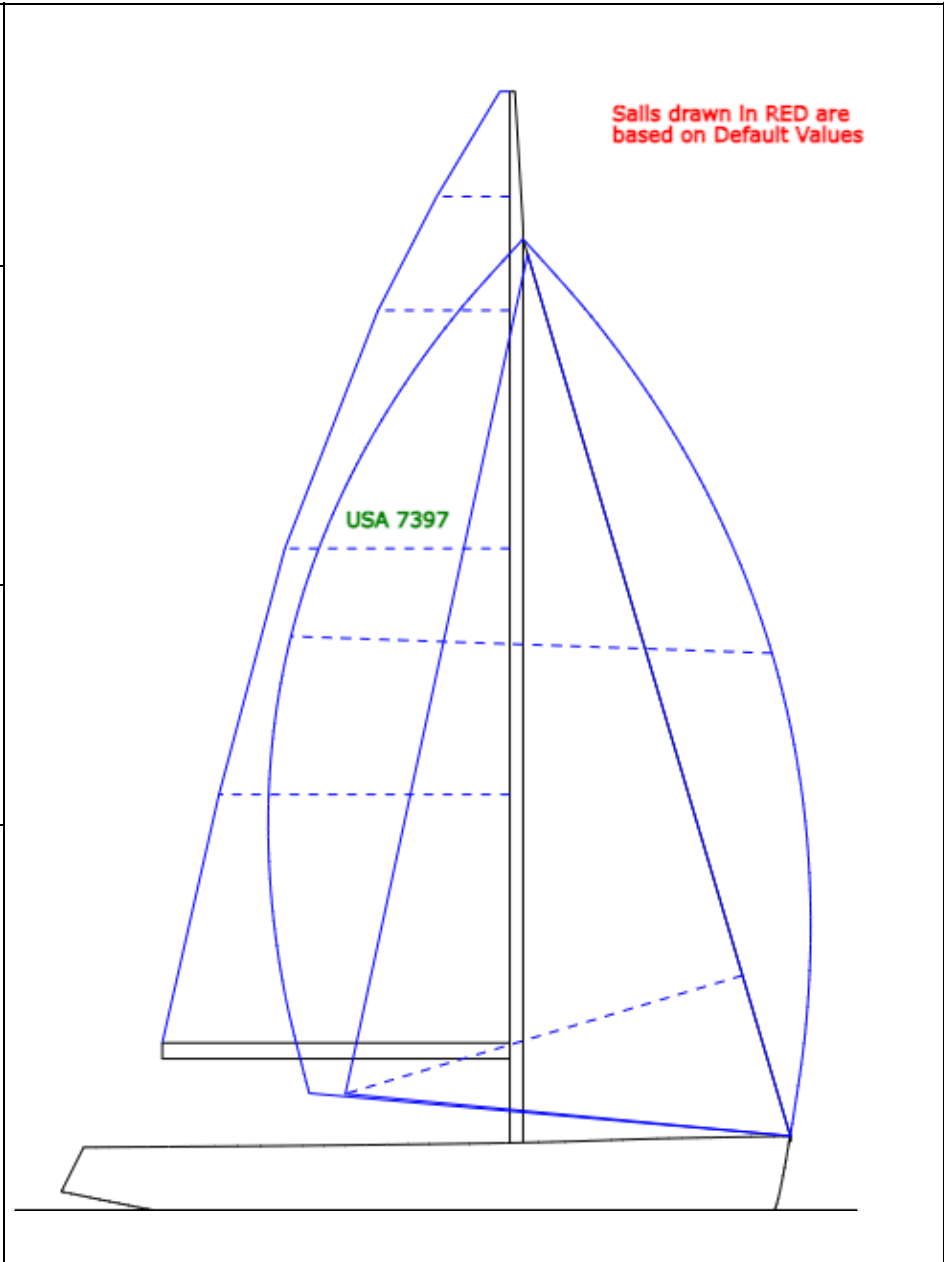


## Menace XXIV Nelson Marek 43 FR USA 7397

<b>Spinnaker</b>	<b>GPH: 0.984 / 538.5</b>	<b>IR#: 0.982 / 545.9</b>	<b>PHRF BM: 9.7</b>
<b>Non-Spin</b>	<b>GPH: 0.940 / 563.3</b>	<b>IR#: 0.958 / 559.5</b>	<b>PHRF BM: 23.3</b>

Class:	Nelson Marek 43 FR
Configuration:	
Sail Number:	USA 7397
Year Built:	1997
Builder:	WESTEASE
Owner(s):	Conner, Dennis
Certificate #:	EZ11897
Valid Year:	2024
Type:	New Cert
Issue Date:	2024-03-02
Exp.Date:	2024-12-31
Offsets_file:	US30821E.OFF
Cert Group:	ORR-Ez SOCAL
Comment:	
Rig Type:	Sloop
Forestay:	Fractional
Keel Type:	Fin
Prop Type:	Folding
Prop Install:	Strut Drive
Prop Blades:	2
LOA:	43.17 ft
LWL:	37.00 ft
Rated Length:	37.44 ft
Beam Max:	12.25 ft
Draft:	9.70 ft
Disp Empty:	12937 lbs
Disp Sailing:	15038 lbs
Crew:	1756 lbs
Water Ballast:	0 lbs
Wetted Area:	336.6 ft <sup>2</sup>
LPS:	131.6 °
RM20:	1193.2 ft·lbs
Stab Index:	132 °



Spinnaker:	Asymmetrical tacked centerline on bow, sprit or prod
Genoa/Jib Leech:	No Roach - Leech is straight
Large Roach Headsail:	No
Jib Furler:	No
Main Roller Furling:	No

Rig Dimensions	Mainsail Meas.	Jib/Genoa Meas.	Asymmetric Spin. Meas.
IG: 53.50 ft	HB: 0.59 ft	LP: 24.54 ft	ASLU: 57.47 ft
ISP: 53.50 ft	MGT: 4.33 ft	LPG %: 155.0 %	ASLE: 54.73 ft
J: 15.83 ft	MGU: 7.81 ft	J Luff: 54.46 ft	AMG: 28.48 ft
P: 56.33 ft	MGM: 13.32 ft	J Leech: 50.85 ft	ASF: 28.49 ft
E: 20.58 ft	MGL: 17.22 ft	Area: 668.2 ft <sup>2</sup>	Area: 1331.5 ft <sup>2</sup>
TPS: 15.83 ft	Area: 705.6 ft <sup>2</sup>		

### Spinnaker

#### Polar Time Allowances

True Wind Speed	4 kts	6 kts	8 kts	10 kts	12 kts	16 kts	20 kts	24 kts
Opt Beat Angle	44.8	43.4	41.5	38.3	36.4	35.1	34.9	35.1
Beat VMG	1,178.20	864.06	720.07	660.51	630.83	604.01	590.04	583.18
52°	730.12	556.10	486.38	463.72	451.46	436.43	427.47	422.80
60°	663.88	517.35	466.89	447.64	436.44	422.09	413.23	406.83
75°	624.93	489.68	445.36	427.71	416.51	397.06	382.78	372.22
90°	628.27	486.63	435.45	412.29	395.81	371.79	353.49	338.01
110°	642.10	491.33	432.40	398.34	377.34	343.61	317.01	296.79
120°	666.36	509.50	447.92	413.06	383.27	333.00	301.81	280.40
135°	883.76	622.76	498.26	455.34	425.23	373.79	311.29	259.39
150°	1,082.38	762.72	606.63	528.78	474.59	412.92	364.75	304.11
165°	1,207.24	850.70	676.60	589.78	525.62	446.01	395.36	339.19
Run VMG	1,249.83	880.71	700.47	610.58	544.16	452.58	400.30	351.15
Opt Run Angle	126.5	130.7	137.0	145.4	155.4	173.1	172.9	137.6

#### Benchmark Ratings

	TOT (Spin)	TOD (Spin)
GPH	0.984	538.5
IR#	0.982	545.9

#### Performance Metrics

SA/D Dnwind:	53.500
SA/D Average:	44.95
SA/D Upwind:	36.400
D/Length:	127.9
Ave Perf Screen:	35.100
DnWind Perf	41.8
Screen:	

#### PCS Ratings

	4 kts	6 kts	8 kts	10 kts	12 kts	16 kts	20 kts	24 kts
RANDOM LEG	1,004.0	725.2	593.5	524.8	484.4	439.2	410.0	386.0
W50/L50	1,237.8	890.5	725.3	643.8	594.2	534.0	499.7	471.4
W60/L40	1,231.6	889.4	727.5	649.1	603.1	549.2	518.9	494.9
MOSTLY WW	1,277.3	921.5	753.1	667.4	619.7	575.1	554.3	541.9
MOSTLY LW	1,126.2	800.2	642.5	554.9	498.3	428.0	383.3	348.0
MOSTLY REACH	919.8	668.2	550.5	490.4	455.2	414.4	385.6	362.8

### Non-Spinnaker

#### Polar Time Allowances

True Wind Speed	4 kts	6 kts	8 kts	10 kts	12 kts	16 kts	20 kts	24 kts
Opt Beat Angle	44.8	43.4	41.5	38.3	36.4	35.1	34.9	35.1
Beat VMG	1,178.20	864.06	720.07	660.51	630.83	604.01	590.04	583.18
52°	730.12	556.10	486.38	463.72	451.46	436.43	427.47	422.80
60°	663.88	517.35	466.89	447.64	436.44	422.09	413.23	408.39
75°	624.93	489.68	445.36	427.71	416.51	401.19	390.24	382.90
90°	627.29	486.63	436.39	414.77	401.74	383.04	368.21	357.41
110°	670.23	516.84	459.66	427.60	401.58	365.21	345.21	327.52
120°	760.78	569.81	487.50	451.12	424.17	376.33	337.24	317.31
135°	1,075.90	736.85	594.94	508.38	466.00	411.25	363.75	311.27
150°	1,317.71	902.45	719.27	593.10	510.88	434.54	386.34	338.25
165°	1,469.71	1,006.55	787.44	640.26	545.50	448.30	395.76	349.37
Run VMG	1,521.56	1,042.06	803.46	652.07	554.84	453.93	400.74	354.38
Opt Run Angle	119.4	130.6	172.3	172.4	172.3	173.1	172.9	171.8

#### Benchmark Ratings

	TOT (Non-Spin)	TOD (Non-Spin)
GPH	0.940	563.3
IR#	0.958	559.5

#### Performance Metrics

SA/D:	36.40
D/Length:	127.9
Perf Screen:	28.5

#### PCS Ratings

	4 kts	6 kts	8 kts	10 kts	12 kts	16 kts	20 kts	24 kts
RANDOM LEG	1,071.4	769.4	625.4	547.5	501.8	452.1	423.7	402.2
W50/L50	1,373.2	970.2	773.9	665.8	601.0	534.7	500.0	473.1
W60/L40	1,339.4	953.1	766.5	666.9	608.6	549.7	519.2	496.3
MOSTLY WW	1,299.8	935.3	762.0	672.7	623.1	576.7	556.0	544.4
MOSTLY LW	1,275.8	891.8	702.9	595.1	526.8	446.4	399.5	366.8
MOSTLY REACH	981.2	709.5	581.3	513.1	473.6	430.1	403.5	381.4

*Menace XXIV Nelson Marek 43 FR USA 7397*

## Spinnaker

### Standard 5 Winds

	TOT (Spin)					TOD (Spin)				
	V.Light <5	Light 5-7	Lt/Med 7-9	Medium 9-15	Heavy >15	V.Light <5	Light 5-7	Lt/Med 7-9	Medium 9-15	Heavy >15
RANDOM LEG	0.518	0.672	0.847	1.009	1.264	1,004.0	774.2	614.5	516.1	411.7
W50/L50	0.513	0.667	0.843	1.004	1.265	1,237.8	951.2	753.2	631.9	501.7
W60/L40	0.526	0.682	0.858	1.014	1.243	1,231.6	949.5	755.3	639.0	521.0
MOSTLY WW	0.538	0.698	0.880	1.042	1.233	1,277.2	983.9	780.7	659.4	557.1
MOSTLY LW	0.470	0.618	0.794	0.980	1.369	1,126.2	856.3	665.9	539.7	386.4
MOSTLY REACH	0.528	0.681	0.852	1.006	1.253	919.8	712.9	569.7	482.8	387.6

### Standard Single Wind

	TOT (Spin) Single	TOD (Spin) Single
RANDOM LEG	0.983	529.5
W50/L50	0.980	647.9
W60/L40	0.987	656.2
MOSTLY WW	1.008	681.8
MOSTLY LW	0.959	551.2
MOSTLY REACH	0.983	494.1

### Legacy 4 Winds

	TOT (Spin)				TOD (Spin)			
	V.Light	Light	Medium	Heavy	V.Light	Light	Medium	Heavy
RANDOM LEG	0.479	0.749	0.984	1.169	1,004.0	642.2	488.8	411.3
W50/L50	0.475	0.747	0.982	1.174	1,237.8	787.5	599.1	501.2
W60/L40	0.488	0.761	0.988	1.154	1,231.6	788.8	607.9	520.5
MOSTLY WW	0.493	0.771	1.005	1.131	1,277.2	815.9	626.1	556.4
MOSTLY LW	0.432	0.695	0.965	1.261	1,126.2	699.5	503.6	385.6
MOSTLY REACH	0.490	0.758	0.982	1.164	919.8	594.3	458.9	387.1

## Non-Spinnaker

### Standard 5 Winds

	TOT (Non-Spin)					TOD (Non-Spin)				
	V.Light <5	Light 5-7	Lt/Med 7-9	Medium 9-15	Heavy >15	V.Light <5	Light 5-7	Lt/Med 7-9	Medium 9-15	Heavy >15
RANDOM LEG	0.486	0.633	0.804	0.968	1.222	1,071.4	822.1	647.4	537.9	426.0
W50/L50	0.462	0.611	0.790	0.973	1.263	1,373.2	1,039.1	803.3	652.1	502.6
W60/L40	0.484	0.635	0.814	0.989	1.242	1,339.4	1,019.7	795.5	655.3	521.7
MOSTLY WW	0.529	0.688	0.870	1.034	1.229	1,299.8	999.1	790.0	664.4	559.0
MOSTLY LW	0.414	0.553	0.724	0.915	1.308	1,275.8	956.9	729.9	577.8	404.2
MOSTLY REACH	0.495	0.641	0.807	0.961	1.199	981.2	757.4	601.3	505.0	405.0

### Standard Single Wind

	TOT (Non-Spin) Single	TOD (Non-Spin) Single
RANDOM LEG	0.941	553.3
W50/L50	0.941	674.3
W60/L40	0.956	677.3
MOSTLY WW	0.999	687.6
MOSTLY LW	0.891	593.7
MOSTLY REACH	0.936	518.5

### Legacy 4 Winds

	TOT (Non-Spin)				TOD (Non-Spin)			
	V.Light	Light	Medium	Heavy	V.Light	Light	Medium	Heavy
RANDOM LEG	0.449	0.709	0.948	1.130	1,071.4	677.9	507.0	425.4
W50/L50	0.428	0.696	0.966	1.172	1,373.2	845.0	608.9	502.0
W60/L40	0.448	0.719	0.975	1.153	1,339.4	834.9	615.8	521.1
MOSTLY WW	0.484	0.761	0.999	1.127	1,299.8	826.4	629.7	558.3
MOSTLY LW	0.381	0.631	0.911	1.206	1,275.8	770.4	533.8	403.0
MOSTLY REACH	0.459	0.717	0.942	1.113	981.2	628.4	478.1	404.6

### Spinnaker

#### PHRF Benchmark

9.7

Aligned Ratings are based on the Farr 40 MH as Scratch Boat.

#### PHRF Single Wind

RANDOM LEG	9.0
W50/L50	13.2
W60/L40	8.4
MOSTLY WW	-5.3
MOSTLY LW	22.4
MOSTLY REACH	8.6

#### PHRF 5 Winds

	V.Light <5	Light 5-7	Lt/Med 7-9	Medium 9-15	Heavy >15
RANDOM LEG	15.1	12.0	9.8	8.4	8.6
W50/L50	30.3	22.6	16.8	12.3	13.8
W60/L40	12.1	11.0	9.8	8.1	10.9
MOSTLY WW	-29.4	-18.1	-9.9	-4.6	2.8
MOSTLY LW	64.4	45.3	31.4	20.8	15.4
MOSTLY REACH	13.0	10.9	9.2	8.7	6.0

### Non-Spinnaker

#### PHRF Benchmark

23.3

Aligned Ratings are based on the Farr 40 MH as Scratch Boat.

#### PHRF Single Wind

RANDOM LEG	32.8
W50/L50	39.6
W60/L40	29.5
MOSTLY WW	0.5
MOSTLY LW	64.9
MOSTLY REACH	33.0

#### PHRF 5 Winds

	V.Light <5	Light 5-7	Lt/Med 7-9	Medium 9-15	Heavy >15
RANDOM LEG	82.5	59.9	42.7	30.2	22.9
W50/L50	165.7	110.5	66.9	32.5	14.7
W60/L40	119.9	81.2	50.0	24.4	11.6
MOSTLY WW	-6.8	-2.9	-0.6	0.4	4.7
MOSTLY LW	214.0	145.9	95.4	58.9	33.2
MOSTLY REACH	74.4	55.4	40.8	30.9	23.4