

SPIN DOCTOR USA7447

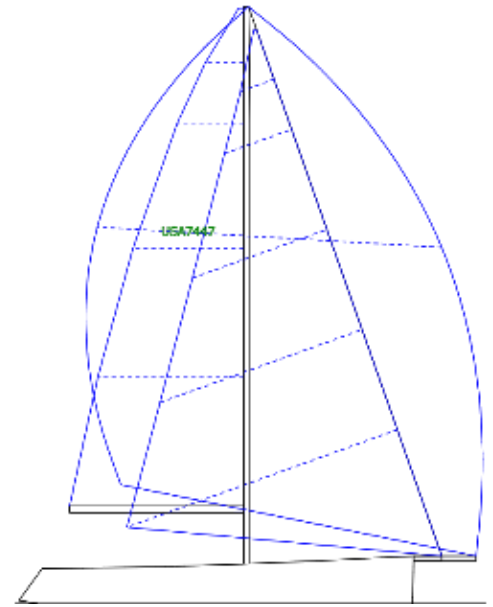
ORR Type: Offshore
Measurement: **Full Measured**
Valid Year: 2023

Certification #: US41725-1
Issue Date: 21-Jun-2023
Build Date: 01-Sep-2007
Measure Date: 01-Sep-2007
Float Date: 05-Feb-2018

Owner(s): Farrell, Paul

LOA: 39.705 ft
Beam Max: 11.562 ft
Crew: 1824 lbs
Stab Index: 134.3 °
PIPA: 0.0581 ft²
ABS Plan:
ECE: 0 ft
Canting Angle: 0.0 °
List Angle: 0.0 °
Water Ballast: 0 lbs
Trim Water Ball: 0.000 ft³
Stored Power:

Class: Andrews 40
Builder: BETTS
Rig Type: Masthead Sloop
Prop Type: 2 Blade Folding Strut Drive
Comment:
Keel Type: Fixed Keel
Spinnaker: Asymmetrical tacked centerline on bow, sprit or prod
Hull Const: Cored
Mast Const: Carbon
Offset File: FASTEXIT.OFF



General Purpose Handicap(GPH): 525.4 SpM

Measurement Trim	Genoa/Jib	Mainsail/Mast	Mizzen
SFFP: 3.281 ft	IG: 55.069 ft	GO: 0.492 ft	EB: 0.000 ft
SAFP: 37.369 ft	J: 19.275 ft	MW: 0.492 ft	PY: 0.000 ft
FFM: 4.596 ft	SFJ: -2.822 ft	P: 49.213 ft	EY: 0.000 ft
FAM: 3.504 ft	JLP: 28.839 ft	E: 17.487 ft	HBV: ft
SG: 1.025	FSP: 0.000 ft	HB: 0.492 ft	MGTY: ft
Disp Empty: 11197 lbs	JLU: 55.315 ft	MGT: 3.839 ft	MGUY: ft
LCB: 20.889 ft	JH: 0.295 ft	MGU: 6.660 ft	MGMY: ft
VCGD: -1.119 ft	JMGT: 3.576 ft	MGM: 11.122 ft	MGLY: ft
VCGM: -1.109 ft	JMGU: 7.152 ft	MGL: 14.633 ft	Area Mizzen: 0.0 ft ²
Wetted Area: 310.1 ft ²	JMGM: 14.337 ft	Area Main: 521.7 ft ²	MDT1Y: 0.000 ft
Draft: 8.970 ft	JMGL: 21.555 ft	Main Wt: 51.8 lbs	MDL1Y: 0.000 ft
LSM0: 37.198 ft	JLE: 50.984 ft	MDT1: 0.407 ft	MDL2Y: 0.000 ft
RMC: 1326.2 ft-lbs	Area Jib: 795.1 ft ²	MDL1: 0.650 ft	MDT2Y: 0.000 ft
Sink/Float: 1256.1 lb/in	Fstay Adj: Via Backstay	MDT2: 0.322 ft	TLY: 0.000 ft
MTCT: 2659.33 ft-lbs/in	Inner Fst Adj: None	MDL2: 0.492 ft	
Sailing Trim	Whisker Pole: <input type="checkbox"/>	TL: 11.368 ft	Large Roach Headsail
FF: 4.469 ft	Outtrigger: <input type="checkbox"/>	Mast Wt: 293.0 lbs	ILRH: 55.069 ft
FA: 3.268 ft	Spinnaker(s)	Mast CG: 16.667 ft	JLRH: 19.275 ft
Disp Sailing: 14262 lbs	ISP: 55.069 ft	BAS: 5.712 ft	LRHLP: ft
LCB: 21.542 ft	SL: ft		LRHLU: ft
VCGM: -0.354 ft	SMW: ft	Mizzen Staysail	LRHHB: ft
Wetted Area: 340.6 ft ²	SF: ft	YSD: ft	LRHTW: ft
Draft: 9.157 ft	Area Symm: 0.0 ft ²	YSMG: ft	LRHUW: ft
Rated Length: 38.858 ft	TPS: 22.736 ft	YSF: ft	LRHMW: ft
LSM1: 39.068 ft	ASLU: 61.877 ft	Area Staysail: 0.0 ft ²	LRHQW: ft
LSM3: 40.676 ft	ASLE: 53.839 ft		LRHSHW: ft
LSM4: 42.297 ft	AMG: 34.613 ft		LRHF: ft
RM2: 1475.7 ft-lbs	ASF: 35.728 ft		LRHLE: ft
RM20: 1213.5 ft-lbs	Area Asym: 1679.6 ft ²		Area LRH: 0.0 ft ²
RM40: 895.7 ft-lbs	Propeller	EDL: 2.126 ft	ST1: 0.154 ft
RM60: 660.9 ft-lbs	Prop Dia.: 1.414 ft		ST2: 0.591 ft
RM90: 366.9 ft-lbs	Twin Prop Inst: <input type="checkbox"/>		ST3: 0.591 ft
LPS: 134.0 °			ST4: 0.361 ft
			ST5: 0.869 ft

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Table of Boat Speed Polars (knots)* (at True Wind Angles)

True Wind Speed	6 kts	8 kts	10 kts	12 kts	16 kts	20 kts	24 kts
Opt Beat Angle	44.8°	43.3°	39.6°	37.2°	35.0°	34.8°	35.1°
Optimum Beat	5.67	6.79	7.14	7.32	7.52	7.66	7.74
52°	6.29	7.49	7.96	8.24	8.52	8.68	8.73
60°	6.84	7.85	8.27	8.53	8.82	8.98	9.04
75°	7.34	8.26	8.67	8.95	9.39	9.74	10.00
90°	7.49	8.41	8.95	9.39	10.12	10.70	11.18
110°	7.50	8.60	9.27	9.87	11.03	12.12	12.91
120°	7.24	8.36	9.18	9.97	11.34	12.68	13.76
135°	6.24	7.52	8.23	8.84	10.26	12.97	14.83
150°	4.45	5.75	6.91	7.77	9.00	10.33	12.36
165°	3.53	4.68	5.75	6.74	8.21	9.30	10.58
180°	3.17	4.22	5.22	6.15	7.74	8.82	9.88
Optimum Run	6.19	7.22	7.43	7.60	8.35	13.12	15.06
Opt Run Angle	135.5°	138.1°	144.8°	152.5°	161.8°	134.4°	140.0°

* Speed through the water. Available as a Performance Package from the Offshore Racing Association with detailed polar charts and files to upload into popular tactical programs. Go to: <https://offshoreracingrule.org/orr/polar-package>"

Table of Time Allowances (sec/mile)*

True Wind Speed	6 kts	8 kts	10 kts	12 kts	16 kts	20 kts	24 kts
Opt Beat Angle	44.8	43.3	39.6	37.2	35.0	34.8	35.1
Beat VMG	895.4	728.8	653.8	616.8	584.2	572.6	568.6
52°	572.3	480.8	452.0	437.1	422.3	415.0	412.3
60°	526.1	458.6	435.2	422.0	408.2	401.0	398.2
75°	490.6	436.1	415.5	402.5	383.2	369.4	360.1
90°	480.6	428.0	402.1	383.4	355.7	336.5	321.9
110°	480.3	418.7	388.2	364.8	326.4	297.1	278.8
120°	497.1	430.7	392.0	361.2	317.4	284.0	261.5
135°	577.0	478.7	437.6	407.4	350.8	277.3	242.8
150°	706.5	580.5	514.0	463.4	400.1	339.6	270.1
165°	788.0	647.5	573.3	516.1	438.4	378.8	301.2
Run VMG	815.8	670.3	593.5	534.3	453.8	392.2	311.8
Opt Run Angle	135.5	138.1	144.8	152.5	161.8	134.4	140.0

* Sec/mile rating assume gybing downwind when target angles are deeper than best VMG angles.

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GPH Rating (SPM)

GPH	525.4
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Ratings by Wind Speed (TCF)

	Light	Medium	Heavy
Closed Course	0.8748	1.0062	1.2370
WL 50/50	0.8436	0.9961	1.2621
WL 60/40	0.8520	1.0012	1.2380

Performance Metrics

SA/D Dnwind:	59.900
SA/D Average:	47.87
SA/D Upwind:	35.830
D/Length:	108.5
Ave Perf Screen:	44.100

General Ratings (TCF)

Ocean Non Spinnaker	1.0061
Offshore Offwind	0.9901

Performance Curve Scoring (PCS) Ratings (SPM)

	6kt	8kt	10kt	12kt	16kt	20kt	24kt
Closed Course	711.3	580.4	511.4	470.3	423.2	391.6	365.5
WL 50/50	873.7	713.3	631.8	582.4	524.2	486.2	443.0
WL 60/40	881.7	719.5	638.4	590.9	537.4	504.6	469.1
Newport to Bermuda	782.2	610.9	511.8	443.6	373.7	349.9	334.3
Marion to Bermuda	786.7	615.6	517.5	450.5	382.1	358.8	343.6

Custom Ratings (TCF) ORA works with OA's to create custom ratings for your race course and wind conditions.

<i>Chicago Mac Upwind</i>	1.0128	<i>California Offshore</i>	0.9939	<i>Acapulco WW/LW</i>	0.9961
<i>Chicago Mac AP</i>	1.0066	<i>Pacific Cup</i>	0.9817	<i>Acapulco Random</i>	1.0044
<i>Chicago Mac Offwind</i>	0.9901	<i>Transpac (Approx.)</i>	0.8826	<i>Acapulco WW/LW5</i>	1.0009
<i>Bayview Mac</i>	1.0083	<i>Puerto Vallarta</i>	0.9889	<i>Acapulco Stat Fit</i>	1.0020
		<i>Cabo San Lucas</i>	0.9842	<i>San Francisco Bay</i>	1.0060

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Sails drawn in RED are based on Default Values

