

## Tenacious Beneteau 44.7 7531

<b>Class:</b> Beneteau 44.7 <b>Configuration:</b> <b>Sail Number:</b> 7531 <b>Year Built:</b> 2004 <b>Builder:</b> BENETEAU <b>Owner(s):</b> Charters, Alec	<b>Benchmark Ratings</b>	<b>PHRF</b> TOD (Spin)  <i>ORR-Ez PHRF are based on the Farr 40 MH as Scratch Boat.</i>
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<b>Certificate #:</b> EZ11466 <b>Valid Year:</b> 2024 <b>Type:</b> Renew Chg <b>Issue Date:</b> 2023-12-13 <b>Exp.Date:</b> 2024-12-31 <b>Offsets_file:</b> F222.OFF <b>Cert Group:</b> ORR-Ez SOCAL <b>Comment:</b>	
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<b>Rig Type:</b> Sloop <b>Forestay:</b> Fractional <b>Keel Type:</b> Fin <b>Prop Type:</b> Folding <b>Prop Install:</b> Exposed <b>Prop Blades:</b> 3	
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<b>LOA:</b> 43.81 ft <b>LWL:</b> 37.70 ft <b>Rated Length:</b> 39.79 ft <b>Beam Max:</b> 13.01 ft <b>Draft:</b> 8.64 ft <b>Disp Empty:</b> 21524 lbs <b>Disp Sailing:</b> 23808 lbs <b>Crew:</b> 1270 lbs <b>Water Ballast:</b> lbs <b>Wetted Area:</b> 410,8 ft <sup>2</sup> <b>LPS:</b> 114.9 ° <b>RM20:</b> 1598.5 ft-lbs <b>Stab Index:</b> 121 °	
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<b>Spinnaker:</b> Asymmetrical tacked centerline on bow, sprit or prod <b>Genoa/Jib Leech:</b> No Roach - Leech is straight <b>Large Roach Headsail:</b> No <b>Jib Furler:</b> Yes Above Deck <b>Main Roller Furling:</b> No
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Rig Dimensions	Mainsail Meas.	Jib/Genoa Meas.	Asymmetric Spin. Meas.
IG: 56.10 ft	HB: 0.50 ft	LP: 22.87 ft	ASLU: 70.60 ft
ISP: 62.60 ft	MGT: 4.10 ft	LPG %: 144.0 %	ASLE: 57.78 ft
J: 15.88 ft	MGU: 7.51 ft	J Luff: 52.50 ft	AMG: 32.25 ft
P: 56.66 ft	MGM: 12.99 ft	J Leech: ft	ASF: 32.19 ft
E: 20.58 ft	MGL: 17.09 ft	Area: 600.3 ft <sup>2</sup>	Area: 1724.5 ft <sup>2</sup>
TPS: 17.83 ft	Area: 696.1 ft <sup>2</sup>		

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#### Table of Time Allowances (sec/mile)\* (at True Wind Angles)

True Wind Speed	4 kts	6 kts	8 kts	10 kts	12 kts	16 kts	20 kts	24 kts
Opt Beat Angle	46.2	44.9	43.2	41.1	39.0	36.9	36.4	36.4
Beat VMG	1,329.5	959.8	785.0	703.4	663.1	627.3	610.4	602.1
52°	842.52	615.25	510.09	478.05	463.57	448.34	439.19	433.91
60°	770.81	572.27	484.24	459.96	447.79	433.97	425.40	420.31
75°	695.42	529.85	463.62	439.30	428.10	412.84	402.70	395.99
90°	648.20	501.17	447.34	425.78	411.63	393.47	381.91	373.62
110°	649.28	498.74	441.21	414.06	397.96	375.13	359.93	349.78
120°	679.49	518.01	453.61	422.89	400.41	369.07	351.08	339.51
135°	885.8	626.4	502.43	458.72	431.20	390.10	353.26	320.05
150°	1,084.9	767.2	612.6	531.1	476.34	419.96	382.36	347.70
165°	1,210.1	855.7	683.3	592.3	528.0	450.23	406.68	373.33
Run VMG	1,252.7	885.9	707.4	613.2	546.7	465.0	416.9	382.3
Opt Run Angle	131.4	133.7	136.8	145.2	154.5	173.2	173.6	173.2

#### Performance

##### Metrics

SA/D Dnwind:	46.810
SA/D Average:	36.09
SA/D Upwind:	25.370
D/Length:	168.7
Ave Perf Screen:	21.400
DnWind Perf	27.7
Screen:	

##### Benchmark Ratings

	TOT (Spin)	TOD (Spin)
GPH	0.946	560.1
IR#	0.951	563.7

##### PHRF Benchmark

	TOD (Spin)
	27.5

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

#### PCS Ratings

	TOD (Spin)							
	4	6	8	10	12	16	20	24
RANDOM LEG	1,057.5	760.3	618.7	545.0	502.5	458.9	435.4	419.4
W50/L50	1,316.9	941.1	760.5	667.6	612.5	551.9	518.7	497.0
W60/L40	1,325.1	948.9	768.7	677.1	624.4	568.2	538.3	519.2
MOSTLY WW	1,392.5	996.5	806.6	707.3	651.4	598.7	576.0	564.5
MOSTLY LW	1,148.1	816.8	656.8	569.1	514.5	451.7	415.8	392.2
MOSTLY REACH	965.5	697.9	571.6	507.8	471.8	435.0	413.7	398.4

#### PHRF Single Wind

	TOD (Spin)
RANDOM LEG	33.0
W50/L50	40.7
W60/L40	39.8
MOSTLY WW	35.6
MOSTLY LW	42.0
MOSTLY REACH	30.8

#### 5 Wind Ratings

	TOD (Spin)					TOD (Spin)				
	V.Light	Light	Lt/Med	Medium	Heavy	V.Light	Light	Lt/Med	Medium	Heavy
RANDOM LEG	0.455	0.592	0.750	0.896	1.098	1,057.5	812.2	641.3	536.7	437.9
W50/L50	0.447	0.585	0.745	0.897	1.126	1,316.9	1,006.2	789.7	655.7	522.5
W60/L40	0.453	0.592	0.752	0.901	1.108	1,325.1	1,014.2	798.2	666.6	541.9
MOSTLY WW	0.452	0.591	0.752	0.902	1.086	1,392.5	1,065.2	836.8	697.6	579.7
MOSTLY LW	0.423	0.556	0.714	0.874	1.158	1,148.1	873.9	680.9	555.9	419.9
MOSTLY REACH	0.467	0.605	0.760	0.899	1.084	965.5	745.0	592.5	501.2	415.7

#### Single Wind

	TOT	TOD
	(Spin)	(Spin)
RANDOM LEG	0.940	553.5
W50/L50	0.940	675.4
W60/L40	0.942	687.6
MOSTLY WW	0.951	722.7
MOSTLY LW	0.926	570.8
MOSTLY REACH	0.940	516.3

#### 4 Wind Ratings

	TOD (Spin)				TOD (Spin)			
	V.Light	Light	Medium	Heavy	V.Light	Light	Medium	Heavy
RANDOM LEG	0.455	0.716	0.947	1.099	1,057.5	671.1	507.7	437.3
W50/L50	0.447	0.711	0.951	1.128	1,316.9	827.6	618.7	521.6
W60/L40	0.453	0.719	0.953	1.110	1,325.1	835.9	630.5	541.0
MOSTLY WW	0.452	0.718	0.955	1.087	1,392.5	876.7	658.8	578.8
MOSTLY LW	0.423	0.680	0.934	1.160	1,148.1	714.9	520.3	418.9
MOSTLY REACH	0.467	0.728	0.946	1.085	965.5	618.8	476.2	415.2

#### PHRF 5 Winds

	TOD (Spin)				
	V.Light	Light	Lt/Med	Medium	Heavy
RANDOM LEG	68.6	50.0	36.6	29.0	34.8
W50/L50	109.4	77.6	53.3	36.1	34.6
W60/L40	105.6	75.7	52.7	35.7	31.8
MOSTLY WW	85.9	63.2	46.2	33.6	25.4
MOSTLY LW	86.3	62.9	46.4	37.0	48.9
MOSTLY REACH	58.7	43.0	32.0	27.1	34.1

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Beat VMG	1,329.5	959.8	785.0	703.4	663.1	627.3	610.4	602.1
52°	842.52	615.25	510.09	478.05	463.57	448.34	439.19	433.91
60°	770.81	572.27	484.24	459.96	447.79	433.97	425.40	420.31
75°	695.42	529.85	463.62	439.30	428.10	414.54	405.33	399.23
90°	686.55	524.93	461.49	431.63	415.52	400.11	389.25	381.34
110°	773.41	575.07	487.53	453.04	429.64	394.76	374.26	363.86
120°	871.00	636.64	528.42	475.85	447.70	408.87	378.12	358.91
135°	1,195.93	827.43	644.96	548.46	487.79	431.82	395.73	364.78
150°	1,502.94	1,007.87	760.39	623.52	538.21	451.39	409.01	376.53
165°	1,597.09	1,076.84	816.92	662.69	567.22	460.82	412.57	377.48
Run VMG	1,628.7	1,097.3	831.7	673.8	575.9	466.4	417.4	382.3
Opt Run Angle	172.0	172.0	172.1	172.1	172.2	173.2	173.6	173.2

#### Performance Metrics

SA/D:	25.37
D/Length:	168.7
Perf Screen:	15.0

#### Benchmark Ratings

	TOT (Non-Spin)	TOD (Non-Spin)
GPH	0.888	596.7
IR#	0.917	584.9

#### PHRF Benchmark

	TOD (Spin)
	27.5

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

#### PCS Ratings

	TOD (Spin)							
	4	6	8	10	12	16	20	24
RANDOM LEG	1,057.5	760.3	618.7	545.0	502.5	458.9	435.4	419.4
W50/L50	1,316.9	941.1	760.5	667.6	612.5	551.9	518.7	497.0
W60/L40	1,325.1	948.9	768.7	677.1	624.4	568.2	538.3	519.2
MOSTLY WW	1,392.5	996.5	806.6	707.3	651.4	598.7	576.0	564.5
MOSTLY LW	1,148.1	816.8	656.8	569.1	514.5	451.7	415.8	392.2
MOSTLY REACH	965.5	697.9	571.6	507.8	471.8	435.0	413.7	398.4

#### PHRF Single Wind

	TOD (Non-Spin)
RANDOM LEG	67.1
W50/L50	76.2
W60/L40	68.2
MOSTLY WW	43.5
MOSTLY LW	99.3
MOSTLY REACH	65.1

#### 5 Wind Ratings

	TOT (Non-Spin)					TOD (Non-Spin)				
	V.Light	Light	Lt/Med	Medium	Heavy	V.Light	Light	Lt/Med	Medium	Heavy
RANDOM LEG	0.409	0.539	0.693	0.846	1.069	1,175.6	892.4	693.4	568.1	449.6
W50/L50	0.393	0.524	0.688	0.859	1.125	1,498.5	1,121.5	855.1	684.7	523.0
W60/L40	0.409	0.543	0.706	0.871	1.108	1,469.9	1,106.4	850.6	689.9	542.3
MOSTLY WW	0.441	0.579	0.740	0.893	1.084	1,426.0	1,087.3	850.3	704.6	580.7
MOSTLY LW	0.355	0.476	0.629	0.799	1.123	1,368.5	1,020.4	772.7	608.1	432.7
MOSTLY REACH	0.419	0.549	0.700	0.845	1.049	1,076.1	821.3	643.2	532.9	429.6

#### Single Wind

	TOT (Non-Spin)	TOD (Non-Spin)
RANDOM LEG	0.886	587.6
W50/L50	0.893	710.9
W60/L40	0.905	716.0
MOSTLY WW	0.940	730.6
MOSTLY LW	0.842	628.1
MOSTLY REACH	0.882	550.6

#### 4 Wind Ratings

	TOT (Non-Spin)				TOD (Non-Spin)			
	V.Light	Light	Medium	Heavy	V.Light	Light	Medium	Heavy
RANDOM LEG	0.409	0.660	0.902	1.072	1,175.6	728.5	532.8	448.7
W50/L50	0.393	0.652	0.924	1.127	1,498.5	902.6	636.3	522.0
W60/L40	0.409	0.670	0.932	1.110	1,469.9	895.9	644.7	541.3
MOSTLY WW	0.441	0.706	0.948	1.086	1,426.0	891.8	663.8	579.7
MOSTLY LW	0.355	0.595	0.867	1.127	1,368.5	817.0	560.6	431.4
MOSTLY REACH	0.419	0.668	0.897	1.050	1,076.1	674.4	502.1	428.9

#### PHRF 5 Winds

	TOD (Spin)				
	V.Light	Light	Lt/Med	Medium	Heavy
RANDOM LEG	68.6	50.0	36.6	29.0	34.8
W50/L50	109.4	77.6	53.3	36.1	34.6
W60/L40	105.6	75.7	52.7	35.7	31.8
MOSTLY WW	85.9	63.2	46.2	33.6	25.4
MOSTLY LW	86.3	62.9	46.4	37.0	48.9
MOSTLY REACH	58.7	43.0	32.0	27.1	34.1