

Catalina 34 MK II "Trident" Rig Tuning

Rigging	Wire Size inches	Break Strength pounds	Max Tension % Break Strength	Max Tension lbs.	Max Tension Loos Gauge No.	Use % of Break Strength	Tension, lbs	Use Loos Gauge No.	Measured Date	Measured Tension lbs.
Upper Shroud, Star.	5/16	12,500	15	1875	29	13	1,625	27		
Upper Shroud, Port	5/16	12,500	15	1875	29	13	1,625	27		
Lower Shroud, S. Fore	1/4	8,600	15	1290	14	12	1,100	12		
Lower Shroud, P. Fore	1/4	8,600	15	1290	14	12	1,100	12		
Lower Shroud, S. Aft	1/4	8,600	15	1290	14	11	950	10.5		
Lower Shroud, P. Aft	1/4	8,600	15	1290	14	11	950	10.5		
Back Stay, Star.	1/4	8,600	15	1290	14	10	860	9		
Back Stay, Port	1/4	8,600	15	1290	14	10	860	9		

Calculations for backstay tension:

Method A,

Forestay break strength (15%) = 12500 (0.15) = 1875 lbs less 15% because of greater angle of backstay
 $1875 - [(0.15) 1875] = 281$ lbs, $1875 - 281 = 1594$ lbs for backstay, backstay bridle tension $1594/2 = 797$ lbs

Method B,

Backstay break strength (10%) = 8600 (0.1) = 860 lbs

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