

# NIRVANA II TUNING GUIDE

This quick reference tuning guide is designed to present some basic ideas for rigging the Nirvana II for optimum sailing performance in almost all wind conditions she is capable of handling (1 - 15+ knots). Note that these recommendations are starting points for your own experimentation. There is a higher confidence / experience level in the light and optimum air recommendations; with the strong and extreme conditions measurements still somewhat theoretical. Main Objective: Tuning Repeatability.

Before Launch: Tuning the boat for optimum performance for the most critical point of sail, beating to windward, will also provide good tuning for all other points of sail. Mast rake (fore & aft) is measured from the deck at the point of the bow to the top of the forestay hook bracket<sup>^</sup> on the mast. Sail camber is measured from the center of booms to base or foot of sail with boat laying on its side.

With the measurements set for optimum conditions and with steady moderate wind of 3 - 7 knots (or mph) launch the boat and sail on a close hauled beat to windward. The boat should sail several boat lengths with the rudder centered before slightly / slowly coming up into the wind. You now have the desired amount of "slight weather helm". You will have to periodically and slightly steer to the lee. If you have too much weather helm you will be continually steering to the lee; rake the mast forward by shortening the forestay and try again. In puffs and stronger winds weather helm will increase which is an advantage in maintaining boat control. Ease out the sheets to reduce heel.

The amount of main sail twist is controlled by the boom vang. For light to optimum wind conditions set the boom vang just snug. As wind increases loosen boom vang to allow more twist in the upper portion of the main sail to spill air at the top of the main; reducing heel. Optimum heel angle: 30 - 35°.

Read Tuning Tips and Tricks at [http://www.sailrc.com/sailrcnirvana/Nirvana\\_T\\_T.html](http://www.sailrc.com/sailrcnirvana/Nirvana_T_T.html)

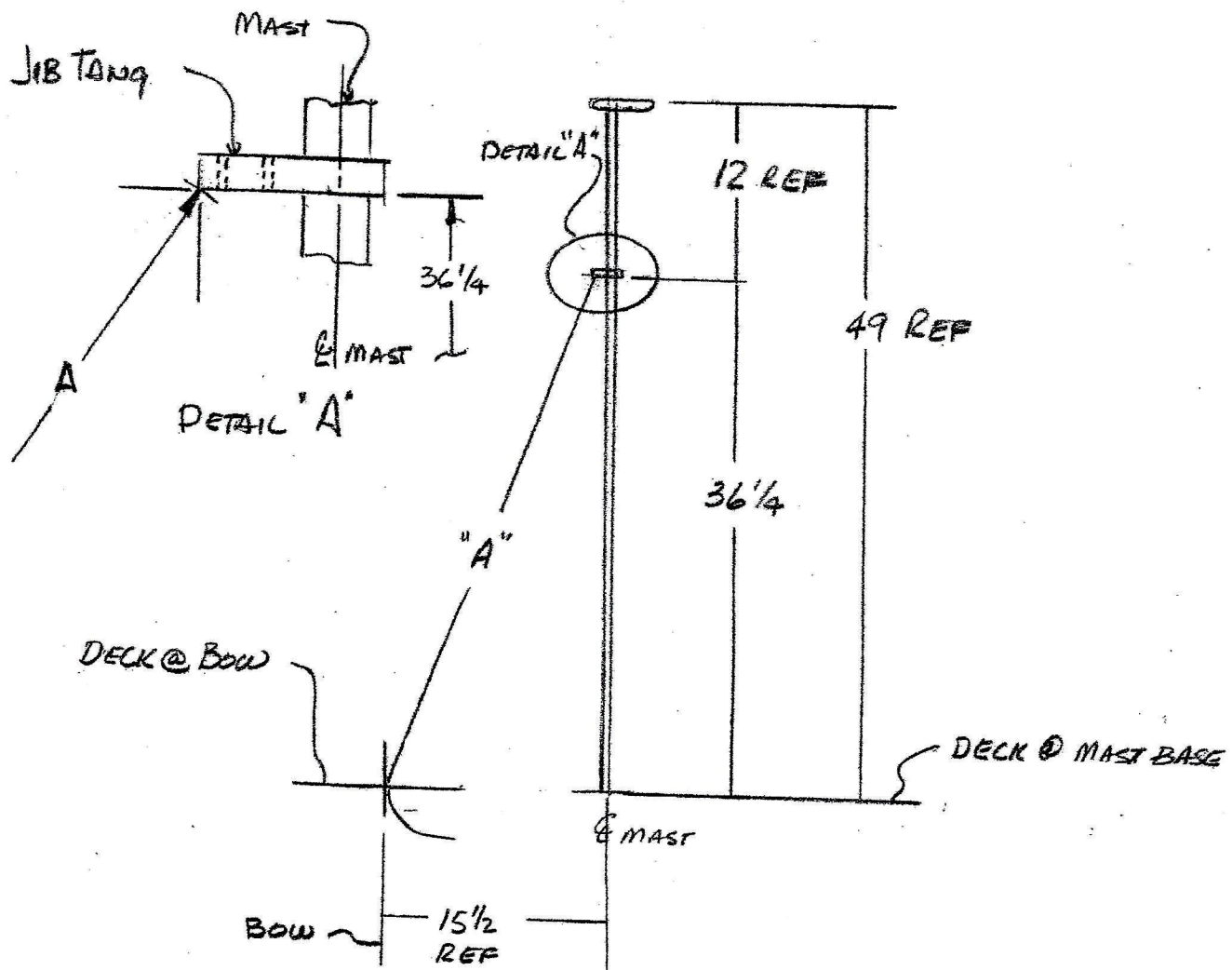
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WIND (Knots)	LIGHT 0 - 2	OPTIMUM 3 - 7	STRONG 8 - 14	EXTREME 15 +
MAST RAKE (Forestay Length)	40 1/4 " (1022 mm)	40 -- " (1016 mm)	39 3/4 " (1010 mm)	39 1/2 " (1003 mm)
MAIN BOOM (f/Centerline)	8° - 10°	5° *	8°	10° +
JIB BOOM/CLUB (f/ Centerline)	18°+	15° **	15°	15° +
BACK STAY TENSION	LOOSE Vertical Mast	BARELY TIGHT Trace Mast Bend	TIGHT Some Mast Bend	VY TIGHT Max Mast Bend
SHROUD TENSION	SNUG	FIRM	TIGHT	TIGHT
MAIN SAIL CAMBER	1 1/8 " (28 mm)	1 1/4 " (32 mm)	1 " (25 mm)	Very Flat
JIB SAIL CAMBER	1 " (25 mm)	1 1/8 " (28 mm)	1 " (25 mm)	Very Flat

\* Main Boom Points at Edge of Transom; \*\* Jib Boom Points at Shrouds

<sup>^</sup> Top of mast to top of forestay hook bracket: 12"

REN - 5/10

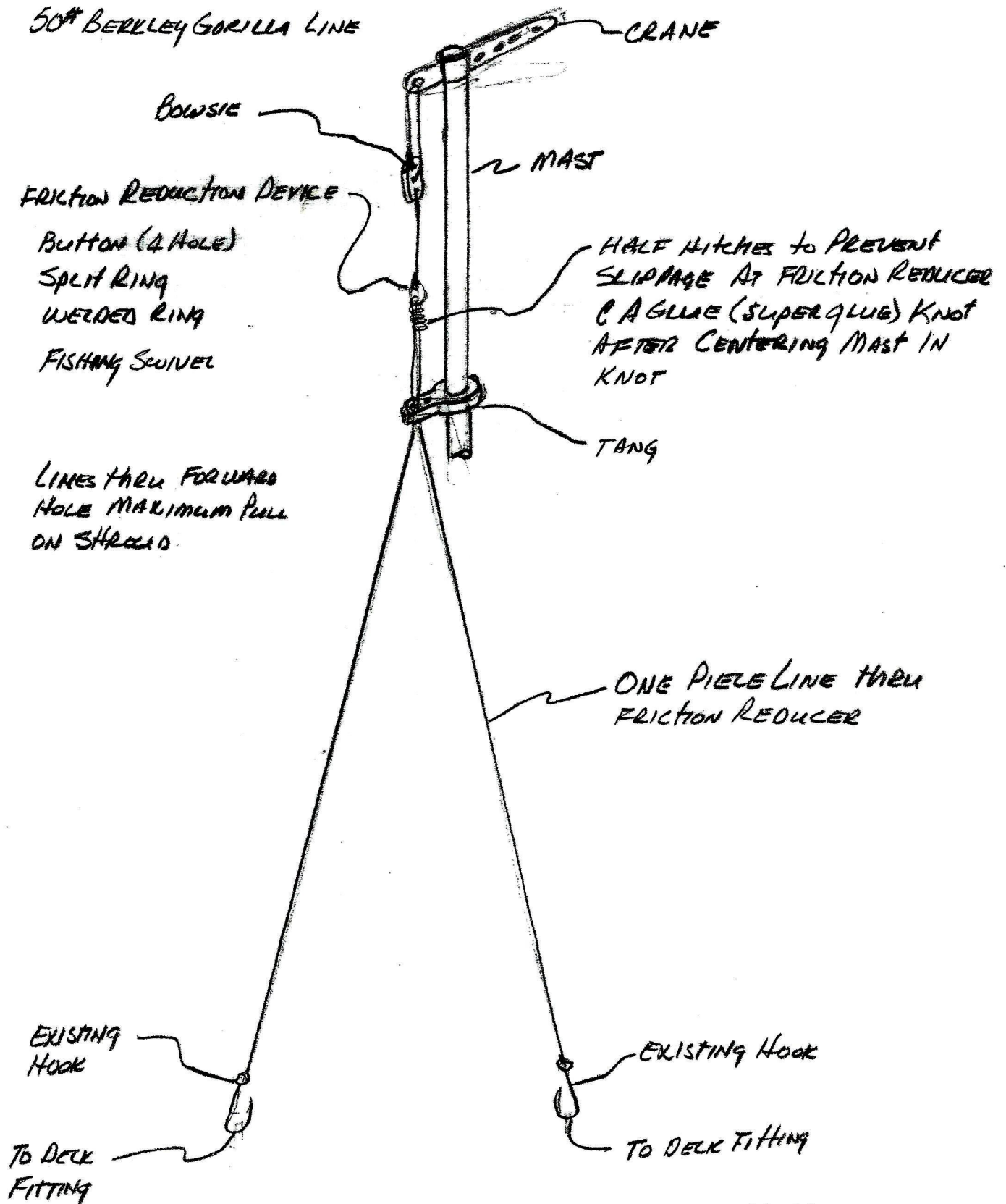


### Dim "A" DETAILS

- $A = 40'8''$  = MAST VERTICAL = PERPENDICULAR TO KEEL (5 to 10 mph)
- $A = 39'3/4''$  = MAST FORWARD 1" @ TANG/MAST  $\angle$  ( $4.80^\circ$ )  
HIGH WIND + 10 mph
- $A = 40'1/2''$  = MAST BACK 1" @ TANG/MAST  $\angle$  ( $4.80^\circ$ )  
LOW WIND 0 to 5 mph

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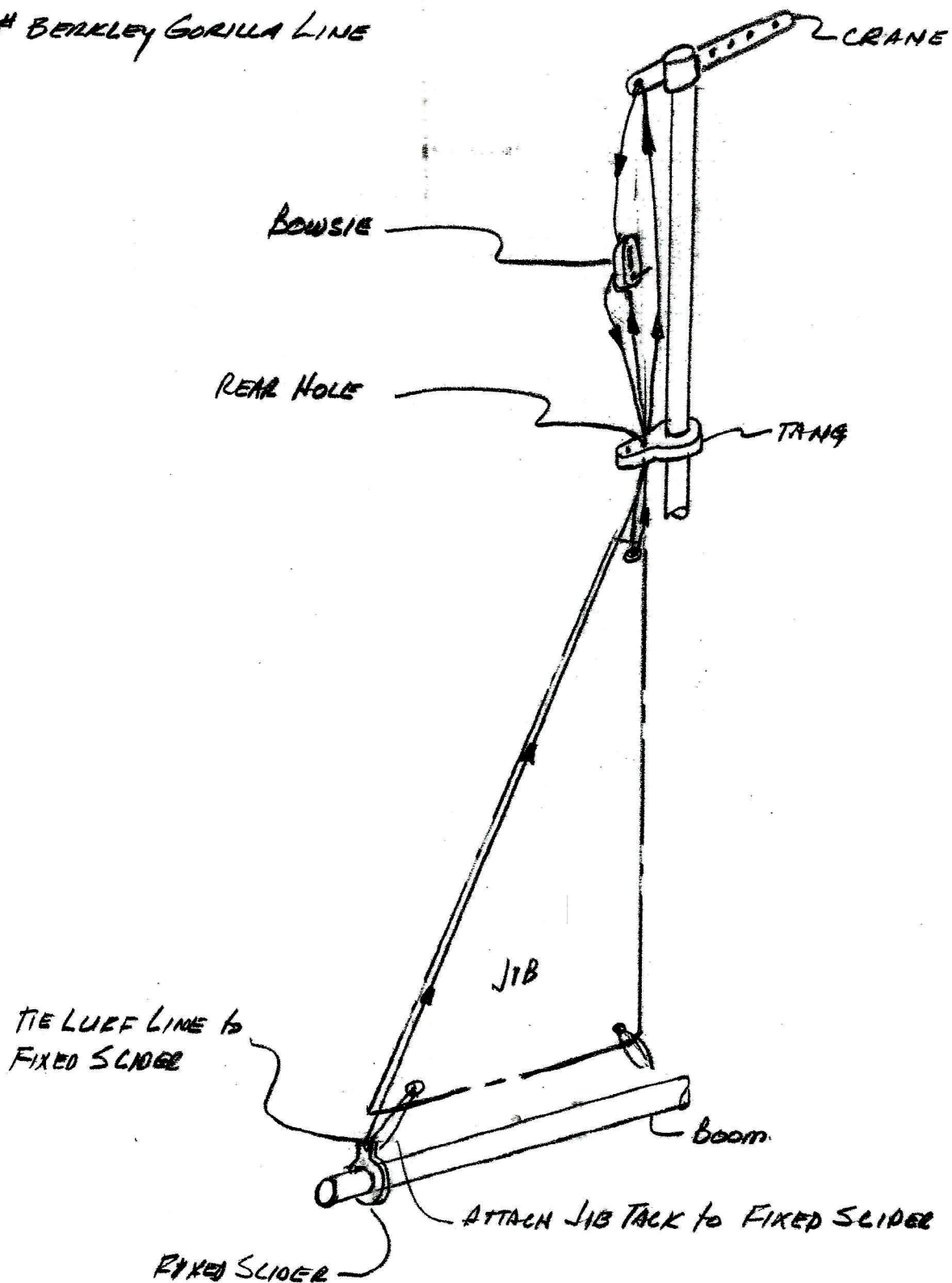
HIGH WIND MODIFICATION  
SHROUD REPLACEMENT  
50# BERKELEY GORILLA LINE



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# HIGH WIND JIB LUFF LINE MODIFICATION

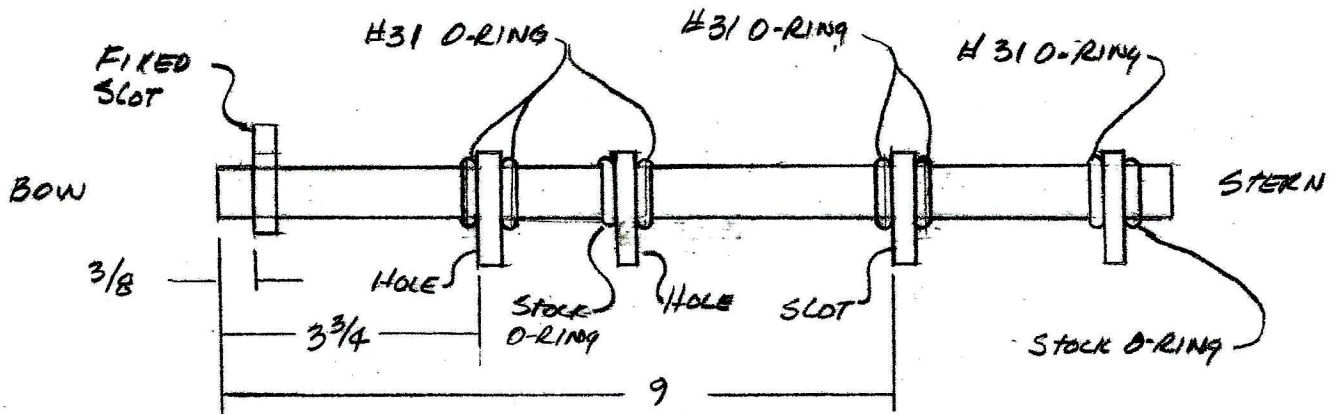
50' BERKLEY GORILLA LINE



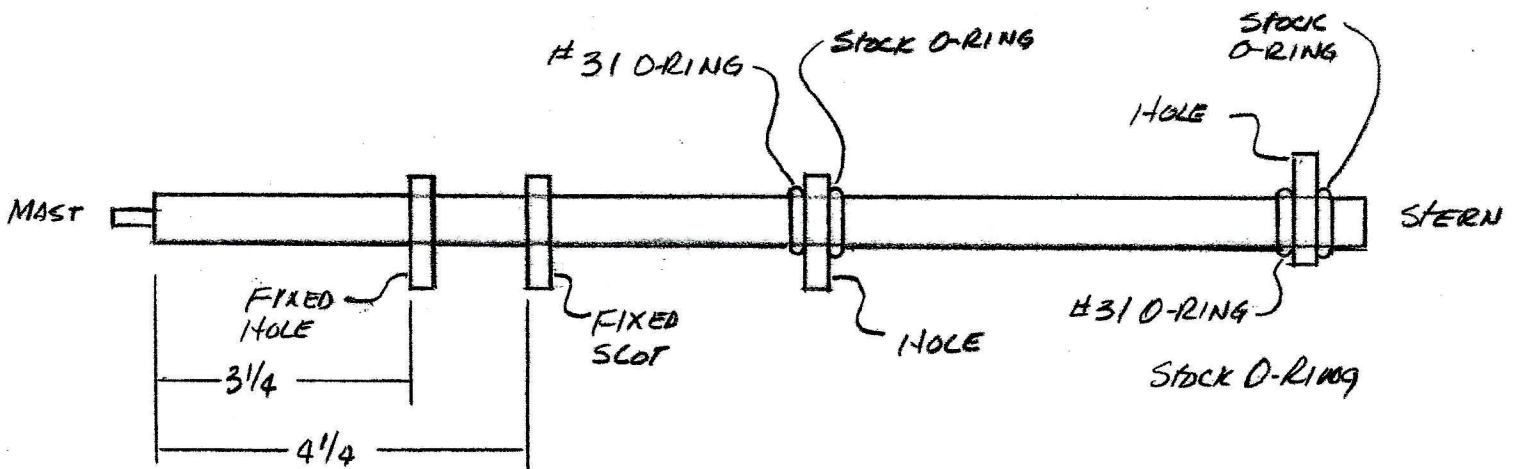
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## SLIDER SLIPAGE PROBLEM IN HIGH WINDS



#31 O-RINGS - 8 PLACES.  
STOCK O-RING 4 PLACES.

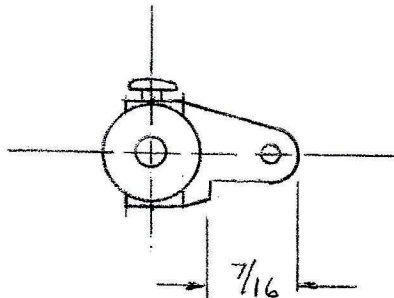


TO ELIMINATE SLIDER SLIPAGE PROBLEMS IN HIGH WINDS:

1. REPLACE STOCK O-RINGS WITH DANCO #31 ( $1/2$  DIA X  $5/16$  ID X  $9/16$  OD) O-RINGS AVAILABLE @ LOWES, HOME DEPOT, HARDWARE STORES IN PLUMBING DEPT. PACKAGE OF 10 ea. APPROX \$2.50 PER PACK.
2. SEE SAILRC WEB SITE FOR INSTRUCTIONS ON REMOVING FIXED SLIDERS
3. REUSE STOCK O-RINGS AS SHOWN

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## RUDDER ARM MODIFICATION TO ELIMINATE ROD INTERFERENCE



1. FILE CLEARANCE FOR RUDDER CONTROL ROD AS SHOWN.
2. AT FULL TRAVEL THE ROD WILL HIT THE ARM AND BIND.
3. CHECK THE ARM TRAVEL @ RUBBER BOOT FOR MINIMUM LATERAL MOVEMENT. RUDDER ARM CAN BE ON EITHER SIDE OF RUDDER POST TO GIVE MINIMUM LATERAL TRAVEL AT RUBBER BOOT.
4. RUDDER DIRECTION CAN BE CHANGED AT THE TRANSMITTER USING THE #1 SLIDE SWITCH.

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