

COMMISSIONING

Your Cal Yacht dealer will supervise the commissioning and testing of your new boat. His knowledge and experience will insure that all systems and components will function properly when the boat is delivered to you.

We have included some guidelines and instructions in this section to aid you and your dealer.

PRE-LAUNCH CHECK LIST

1. All seacocks operational, closed, and tightened. _____
2. Accessory thru-hulls installed and tightened. _____
3. Diesel: Propeller in place; 2 nuts and cotter pin installed. _____
4. Zinc anodes installed on shaft. _____
5. Batteries secure, filled, and charged. _____
6. Rigging installed on spar; cotter pins spread and taped. _____
7. Masthead sheaves free to rotate; lubricated. _____
8. Mast lights working. _____
9. All required safety equipment on board. _____

NOTE: THIS IS A ~~RAC~~ PRE-LAUNCH CHECK LIST.

POST-LAUNCH CHECK LIST

1. All seacocks open and water tight. _____
2. Shaft aligned to .003" tolerance. _____
3. Engine shaft packing nut tightened. (See Stuffing Box under Engine Operation Instructions.) _____
4. Engine oil levels checked. (Refer to Engine Manual.) _____
5. Fuel tank filled and system checked for leaks. _____
6. Engine operates and passes water thru exhaust. _____
7. Engine controls operate correctly and checked for tight nuts, bolts, and spread cotter pins. _____
8. Mast stepped and mast collar installed. (Collar on Cal 35 and Cal 39 only.) _____
9. Mast bolted to mast collar ears.* _____
10. Turnbuckles attached; cotter pins spread and taped. _____
11. Boom and running rigging installed. _____
12. Water tank filled. (See Note 2 - Water Heater.) _____
13. Faucets work and lines checked for leaks. _____
14. Stove fuel tank filled; system checked for leaks. (Refer to Propane Stove Instructions, if applicable.) _____
15. Electrical equipment operational. (See Note 1 for Shore-Power System.) _____
16. Steering gear operational. _____
17. Rudder shaft greased. _____
18. Bilge pump operational. _____
19. Toilets operational; hoses secure. _____
20. Deck hardware checked for leaks. _____
21. Warranties and manuals delivered to owner. _____

* * (After first light-air sail. See Instructions.)

COMMISSIONING NOTES

Note No. 1

If your Cal Yacht is supplied with a 110V AC shore-power system, it will have a control panel with a main breaker (30 amp) and separate (15 amp) breaker switches for the outlets and water heater. In addition, there are both audible (buzzer) and visual (yellow light on panel) reverse-polarity indicators. With all switches off, attach the power cable to the power inlet on the boat. Next, connect the power cable to the dockside outlet.

WARNING: IF THE POLARITY INDICATORS LIGHT AND/OR SOUND, DISCONNECT THE CORD IMMEDIATELY. THIS INDICATES A REVERSE POLARITY SITUATION WHICH IS DANGEROUS. SEVERE INJURY OR DEATH MAY RESULT. DIAGNOSE AND CORRECT THE PROBLEM BEFORE PROCEEDING.

It is recommended that any appliances used on board be wired with three-wire grounded plug.

Note No. 2

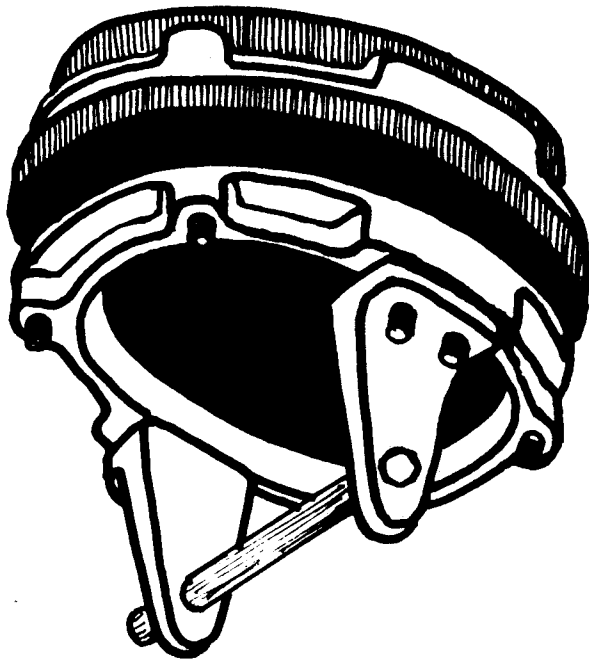
If your Cal Yacht is equipped with a water heater, it will be installed to operate off both the engine cooling system and the 110V AC electric system. Before switching the 110V system on, be sure the water-heater tank is filled. Open the valve in the inlet water line, and be sure the check valve is installed with the arrow pointed toward the water heater. Operate the pressure-water system until you get a steady stream through the hot-water faucets.

WARNING: FAILURE TO FILL THE WATER HEATER BEFORE SWITCHING ON THE 110V CIRCUIT WILL RESULT IN DAMAGE TO THE HEATING ELEMENT.

KENYON MAST COLLAR
INSTALLATION INSTRUCTIONS

Part of the Commissioning
Procedure

Cal 35 and Cal 39 only



TO INSTALL THE COLLAR

1. Before stepping the mast, remove the mast collar from the deck, slide one of the aluminum rings, flat side down, up the spar to the gooseneck. Slide the neoprene collar up the spar, flat side down, under the flat ring (be sure that the end of the collar with the holes closest together is facing forward).
2. Step the spar through the deck, slide the other ring on, with flat side up, against the headliner (be sure that the end of the collar with the holes closest together is facing forward). If the mast is also to go through the table, the table should be in place. Set the spar onto the mast step.
3. After the mast is in place, install the mast-collar bolts. Don't forget to install the ears on the lower ring.
4. Fill the sail groove in the spar with silicone sealer in the area of the collar. It is a good idea to provide extra leak protection by putting a bead of silicone around the spar, on top of the neoprene collar.

KENYON MAST COLLAR INSTALLATION INSTRUCTIONS - Continued

5. After sailing the boat and re-tuning the rigging, drill through the ears and through the spar. Install the 5/16" x 5 1/2" or 6" bolt. Do not over-tighten this bolt. If it is over-tightened, excessive side pressure can be placed on the ears.

This collar seals the deck in the area of the spar, to prevent any leaks. It also ties the deck to the mast to prevent deck flexing in heavy seas or winds. Proper installation is important!

STEPPING AND TUNING THE MAST

Before stepping the mast, be sure all running and standing rigging is properly installed, cotter pins are spread, and halyard sheaves are free to rotate. The upper shroud is run through the groove in the outboard end of the spreader; on either side of the groove is a hole. Through these holes run a stainless wire. Wrap it around the stay several times in such a manner as to prevent the shroud from jumping out of groove. After the shroud is wired in place, tape over all the wire to protect the sails, and to prevent the wire from unraveling. Check the spar lights to be sure they are operational. Open all turnbuckles to their full extension.

Cal 35 and Cal 39: Refer to Separate Sheet for Mast-Collar Instructions.

Step the spar through the deck and table (if applicable), and then onto the mast step. Be careful not to pinch the mast wires during the stepping. (Cal 35 and Cal 39 - The mast step was set at the factory to provide an aft rake. If you wish to adjust this, loosen the mast-step bolts and slide the step fore or aft.)

Attach all the shrouds, tighten the headstay, backstay, and upper shrouds to a taut condition. For now, leave the lower shrouds slack. Adjust the headstay and backstay to achieve a straight spar, when sighting up the trailing edge. Next, with the boat level athwartships, tighten the upper shrouds to get the mast straight. Finally, tighten the lowers no more than hand tight.

STEPPING AND TUNING THE MAST - Continued

Final tuning must be accomplished while sailing. In a light breeze (6 - 8 knots) adjust the shrouds to achieve a straight spar on either tack. In heavier winds, any curvature should be gradual and constant from the deck to the mast head. After the initial sail, go below, and drill through the spar and install the bolt that passes through the mast collar ears and spar (Cal 35 and Cal 39). This serves to hold the deck from flexing and should not be installed until the boat has been sailed and the rig tuned, to assure proper location of the hole.

The rig will need adjustment after a few sails to compensate for the stretch in the wire. Be sure to install cotter pins in all turnbuckles and clevis pins, and tape over them to prevent injury to crew or damage to sails.

Fine tuning for the best performance will depend upon your local conditions and your sails. Consult your dealer or local sail-maker for their suggestions.

WARNING: WHEN HAULING, LAUNCHING, AND SAILING NEAR LOW OVERHEAD WIRES CARE MUST BE TAKEN THAT THE MAST NOT COME IN CONTACT WITH SUCH WIRES. CONTACT COULD CAUSE THE MAST TO CONDUCT ELECTRICITY AND CAUSE INJURY OR DEATH.

RIGGING DIMENSIONS

The following table shows the critical dimensions and materials used for the standing and running rigging on your Cal yacht.

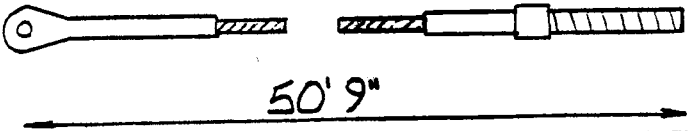
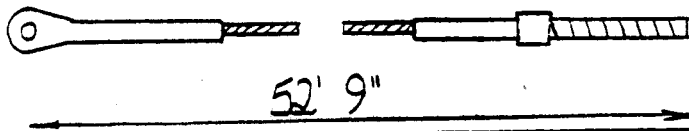
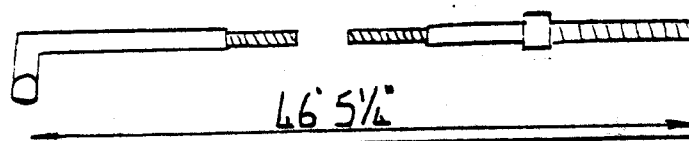
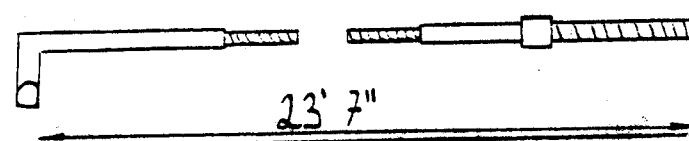
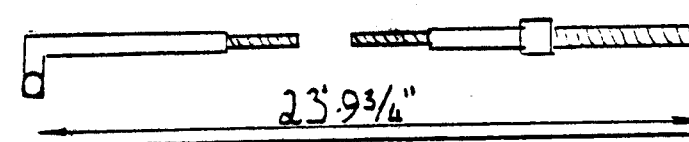
In the event you should need to replace any of the rigging, you can order the materials through your Cal dealer. If this is not convenient, this table will allow you or a local rigger to obtain the proper materials.

The standing rigging measurements are the overall length of the stay, from the center of the hole in the upper terminal to the end of the swaged stud. If using a different turnbuckle than supplied by Bangor Punta Marine, be sure to allow for possible length difference. We would strongly recommend actually measuring any standing rigging before replacing, to assure 100% accuracy.

All running rigging should be checked periodically for chafe or damage and replaced, when necessary. If excessive wear is noted on running rigging, check all blocks and sheaves to be sure they are free to rotate and are properly aligned.

All standing rigging should be inspected for cracks in the swages, proper installation of cotter pins, and wear on clevis pins. Replace any damaged or suspect rigging.

As you may have noticed on some sailboats, the swaged ends of the shrouds will ooze **rust**, and in severe cases, the swage will split. One way to prevent **this problem** is to heat up the swaged section and place a **bar of beeswax** against the 1 x 19 stainless steel wire. As it **melts**, the beeswax will run into the swaged section, sealing it from the elements.

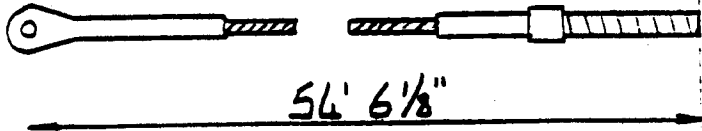
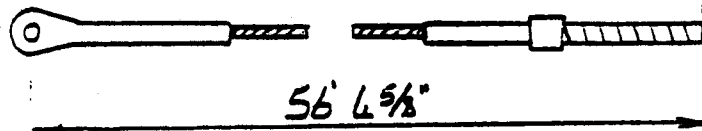
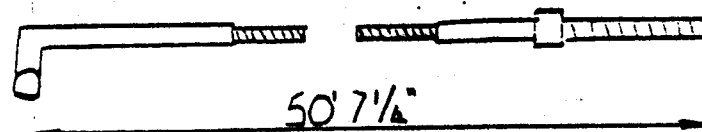
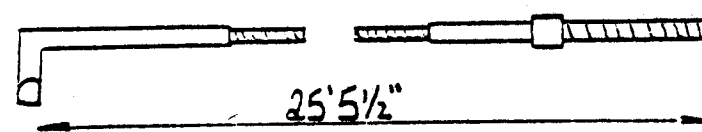
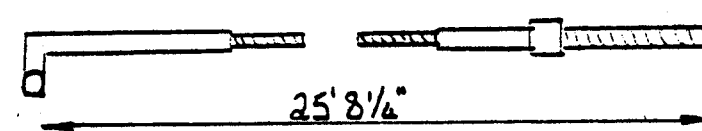
CAL 39		WIRE RIGGING STANDARD RIG		
STD	OPT	TURNBUCKLE DESCRIPTION WIRE x BODY x PIN SIZE (IN 32 NOS OF AN INCH)		DESCRIPTION
STD RIG		MAR. EYE 5/16 x 5/8 PIN WIRE 5/16 1x19SS MERR STUD 10-20-20  50' 9"	1	HEADSTAY Pt # 66804
STD RIG		MAR EYE 5/16 x 5/8 PIN WIRE 5/16 1x19SS MERR STUD 10-20-20  52' 9"	1	BACKSTAY Pt # 66805
STD RIG		BALL TERM 5/16 WIRE 5/16 1x19SS MERR STUD 10-20-20  46' 5 1/2"	2	UPPER SHROUD Pt # 66810
STD RIG		BALL TERM 3/32 WIRE 3/32 1x19SS MERR STUD 9-16-16  23' 7"	2	FWD LOWER SHROUD Pt # 66806
STD RIG		BALL TERM 3/32 WIRE 3/32 1x19SS MERR STUD 9-16-16  23' 9 3/4"	2	AFT LOWER SHROUD Pt # 66807
ORIG		RELEASED: DRWG 320132 WIRE RIGGING SCHEDULE STD		
REV		DESCRIPTION		
				11-21-79
				DATE

Cal 39 Standard Rig

Running Rigging

<u>Item</u>	<u>Length</u>	<u>Diameter</u>	<u>Material</u>	<u>Fitting</u>
Main Sheet	65'	1/2"	Yacht Braid	
Jib Sheet	60'	9/16"	Yacht Braid	
Main Halyard Rope	55'6"	7/16"	Yacht Braid	
Wire	53'4"	3/16"	7 x 19 SS Cable	Screw Pin Hal- yard Shackle
Jib Halyard Rope	57'6"	7/16"	Yacht Braid	
Wire	53'4"	7/32"	7 x 19 SS Cable	Snap Shackle
Reef - Port	36'	3/8"	Yacht Braid	
Starboard	28'	3/8"	Yacht Braid	
Outhaul	45'	5/16"	Yacht Braid	Spliced to Block Inside Boom
Boom Topping Lift Mast	45'	1/4"	Pre-stretched Yacht Braid	Eye Splice Upper End - Bullet Block Lower End Eye Splice One End
Boom	14'	5/16"	Yacht Braid	
Traveler Control Lines	20'	3/8"	Yacht Braid	

Note: Main and Jib Halyards are wire to rope spliced.
Dimensions given are before splicing.
Splice length is 2'2"

CAL 39		WIRE RIGGING TALL RIG		
STD	OPT	TURNBUCKLE DESCRIPTION WIRE x BODY x PIN SIZE (IN 32 NET OF AN INCH)		DESCRIPTION
TALL RIG		MAR EYE 5/16 x 5/8 PIN WIRE 5/16 1x19SS MERR STUD 10-20-20  54' 6 1/8"	1	<u>HEADSTAY</u> PT # 66834
TALL RIG		MAR EYE 5/16 x 5/8 PIN WIRE 5/16 1x19SS MERR STUD 10-20-20  56' 4 5/8"	1	<u>BACKSTAY</u> PT # 66835
TALL RIG		BALL TERM 5/16 WIRE 5/16 1x19SS MERR STUD 10-20-20  50' 7 1/8"	2	<u>UPPER SHROUD</u> PT # 66836
TALL RIG		BALL TERM 3/32 WIRE 5/16 1x19SS MERR STUD 9-16-16  25' 5 1/2"	2	<u>FWD LOWER SHROUD</u> PT # 66837
TALL RIG		BALL TERM 3/32 WIRE 5/16 1x19SS MERR STUD 9-16-16  25' 8 1/4"	2	<u>AFT LOWER SHROUD</u> PT # 66838
ORIG		RELEASED: DRWG # A0131 WIRE RIGGING SCHEDULE TALL		11-21-79
REV		DESCRIPTION		DATE

Cal 39 Tall Rig

Running Rigging

<u>Item</u>	<u>Length</u>	<u>Diameter</u>	<u>Material</u>	<u>Fitting</u>
Main Sheet	65'	1/2"	Yacht Braid	
Jib Sheet	60'	9/16"	Yacht Braid	
Main Halyard Rope	59'	7/16"	Yacht Braid	
Wire	57'3"	3/16"	7 x 19 SS Cable	Screw Pin Hal- yard Shackle
Jib Halyard Rope	63'	7/16"	Yacht Braid	
Wire	58'7"	7/32"	7 x 19 SS Cable	Snap Shackle
Reef - Port	36'	3/8"	Yacht Braid	
Starboard	28'	3/8"	Yacht Braid	
Outhaul	45'	5/16"	Yacht Braid	Spliced to Block Inside Boom
Boom Topping Lift				
Mast	45'	1/4"	Pre-stretched Yacht Braid	Eye Splice Upper End - Bullet Block on Lower End
Boom	14'	5/16"	Yacht Braid	Eye Splice One End
Traveler Control Lines	20'	3/8"	Yacht Braid	

NOTE: Main and Jib Halyards are wire to rope spliced.
Dimensions given are before splicing.
Splice length is 2'2".

BOAT STORAGE

Whenever a boat is pulled from the water, for work or storage, care must be taken to provide adequate and proper support of the hull. This is especially true of fin-keel sailboats.

It is not recommended that the weight of the boat be rested solely on the keel. Because of the small area of the keel bottom, the localized loads on the hull in the area of the keel would be severe, and could result in permanent damage to the shape or structure of the boat.

If poppets are used for support, they should be located so that the pads are under bulkheads, berth fronts or pan stringers, so that the load is dispersed (See Docking Plan). Failure to properly position the poppets could result in hull depression. Be sure to use an adequate number of supports, and locate them to prevent the boat from tipping fore or aft. A storage cradle designed for this boat is available through your Cal dealer.

When hauling any boat with a propeller shaft, be sure to disconnect the coupling before lifting the boat. This will prevent bending of the shaft as the boat changes shape when lifted.

Do not careen a fin-keel sailboat. The hull, keel, and rudder should survive any **accidental** groundings. However, care must be taken to keep the boat **as balanced** and upright as possible to prevent excessive loads.

WARNING: WHEN HAULING, LAUNCHING, AND SAILING NEAR LOW OVERHEAD WIRES, CARE MUST BE **TAKEN** THAT THE MAST NOT COME IN CONTACT WITH SUCH WIRES. **CONTACT COULD CAUSE THE MAST TO CONDUCT ELECTRICITY AND CAUSE INJURY OR DEATH.**