

CAL 392, 393

## STEERING GEAR

Pedestal Steering. Steering gear on your boat has been selected and installed to give you smooth and reliable steering action. A basic familiarity with the steering system will help you avoid trouble. Heavy duty linked chain and sprockets in the steering pedestal control the steering cables. The cables run to a metal sheave box located under the cabin sole and then to a steering quadrant bolted to the rudder post. Access is via the cockpit seat hatch.

Service. It is imperative that the steering system be inspected and lubricated at regular intervals. All sheaves in the system should be inspected for wear and alignment. The rudder post bearings should be lubricated with a heavy marine grease at frequent intervals. Zerk fittings are provided in the rudder post assembly. The steering cable tension may be adjusted on the steering quadrant. Cable tension should be just enough to prevent the cables from jumping the sheaves, but not tight enough to create excessive system friction. If in doubt, have a competent mechanic inspect and adjust the system.

Emergency Steering Gear. The emergency tiller should be stored in a convenient and accessible place. A deck plate in the cockpit sole provides access to the rudder post. The emergency tiller is slotted to match cross pin in the rudder post. It is recommended that you practice the installation procedure before an emergency arises.

Tiller Steering. If your boat comes equipped with a tiller, it is important to check the rudder head and tiller bolts regularly. The rudder post should be lubricated with a heavy marine grease at regular intervals, depending on use.

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Rigging Adjustment. If you are without previous experience, it is suggested that you employ the services of an expert rigger or sailor to assist you in the adjustment of your rigging. Here is some information that will be helpful in the initial stages.

### Dockside Starting Point

1. The mast should set on its step so that it has about  $1\frac{1}{2}^{\circ}$  of aft rake. The step is adjustable fore and aft if changes are needed.
2. After the initial rake is determined, the welded plate on the mast should be bolted to the deck. This maintains a positive distance between the step and house top.
3. Attach all pieces of standing rigging to their respective turnbuckles. Leave loose.
4. See that the boat is floating level athwartship, then set the mast vertical athwartships by adjusting the upper shroud turnbuckles. Set them only hand tight.
5. Next, set the fore and aft lower shrouds. Be careful to see that the mast remains straight athwartship. The forward lowers should be a bit tighter than the aft lowers.
6. Next, set the headstay and backstay to be quite firm.

The next step is to get the boat sailing. Initial rig tuning should be done in light breezes (6 to 8 knots). Gradually, tighten all rigging to keep the mast straight. Initial stretch will necessitate retuning. Once the initial stretch is out of the wire, the rig should be set as follows for best sailing performance:

Upper shroud tension	1,500-1,600 pounds
Forward lower tension	400 pounds
Aft lower tension	100 pounds
Maximum backstay tension	4,000 pounds

These figures are meant as a guideline only. The most important thing is that the mast should remain reasonably straight while under sail, both fore and aft and athwartship. Any curvature should be minimal and be constant from deck to head while sighting up the sailtrack from the deck. There is no substitute for experience when tuning a rig.

# CAL II-39 WIRE RIGGING

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STD	OPT		NO. PER BOAT	DESCRIPTION
X		<p>THIMBLE <math>\frac{3}{16}</math>" LARGE P/N 67864 SLEEVE <math>\frac{3}{16}</math>" P/N 67627</p> <p>SHACKLE MAIN HALYARD <math>\frac{3}{8}</math>" PIN DOUBLE THREAD P/N 67731 THIMBLE <math>\frac{3}{16}</math>" SMALL P/N 67862 SLEEVE <math>\frac{3}{16}</math>" P/N 67627</p> <p>WIRE <math>\frac{3}{16}</math>" 7x19 SS P/N 67105</p> <p>52'-0"</p>	1	MAIN HALYARD
X		<p>THIMBLE <math>\frac{1}{4}</math>" P/N 32026 SLEEVE <math>\frac{1}{4}</math>" P/N 67628</p> <p>SHACKLE SNAP SWIVEL DEE LARGE P/N 67730 THIMBLE <math>\frac{1}{4}</math>" P/N 32026 SLEEVE <math>\frac{1}{4}</math>" P/N 67628</p> <p>WIRE <math>\frac{1}{4}</math>" 7x19 SS P/N 67016</p> <p>50'-0"</p>	1	JIB HALYARD
X		<p>THIMBLE <math>\frac{5}{32}</math>" P/N 67861 SLEEVE <math>\frac{5}{32}</math>" P/N 67626</p> <p>SHACKLE LIGHTWEIGHT DEE <math>\frac{3}{16}</math>" PIN NARROW P/N 67732 THIMBLE <math>\frac{5}{32}</math>" P/N 67861 SLEEVE <math>\frac{5}{32}</math>" P/N 67626</p> <p>WIRE <math>\frac{5}{32}</math>" 7x19 SS P/N 67104</p> <p>10'-8"</p>	1	OUTHAUL
X		<p>THIMBLE <math>\frac{1}{8}</math>" LARGE P/N 67860 SLEEVE <math>\frac{1}{8}</math>" P/N 67625</p> <p>MARINE EYE <math>\frac{1}{8}</math>" P/N 67785</p> <p>WIRE <math>\frac{1}{8}</math>" 7x7 PLASTIC COATED P/N 60211</p> <p>46'-0"</p>	1	BOOM TOPPING LIFT
X		<p>WIRE TO ROPE SPLICE P/N 67125</p> <p>SHACKLE SNAP SWIVEL DEE MED P/N 67729 THIMBLE</p> <p>WIRE <math>\frac{3}{16}</math>" 7x19 SS P/N 67105</p> <p>+ 35'-0" <math>\frac{3}{8}</math>" YACHT BRAID</p> <p>35'-0"</p>	1	STAYSAIL HALYARD

# CAL II-39 WIRE RIGGING

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STD	OPT	TURNBUCKLE NUMBERS WIRE x BODY x PIN SIZE (32 NDS OF AN INCH)	NO. PER BOAT	DESCRIPTION
X		MARINE EYE: $\frac{5}{16}$ " W x $\frac{5}{8}$ " PIN MERRIMAN STUD $\frac{5}{16}$ " WIRE x $\frac{5}{8}$ " PIN 10-20-20 P/N 67212  WIRE $\frac{5}{16}$ " 1 x 19 SS 50'-9"	1	HEADSTAY
X		MARINE EYE $\frac{5}{16}$ " W x $\frac{5}{8}$ " PIN MERRIMAN STUD $\frac{5}{16}$ " WIRE x $\frac{5}{8}$ " PIN 10-20-20 P/N 67212  WIRE $\frac{5}{16}$ " 1 x 19 SS 52'-8"	1	BACKSTAY
X		MARINE EYE $\frac{5}{16}$ " W x $\frac{5}{8}$ " PIN MERRIMAN STUD $\frac{5}{16}$ " WIRE x $\frac{5}{8}$ " PIN 10-20-20 P/N 67212  WIRE $\frac{5}{16}$ " 1 x 19 SS 45'-11 $\frac{1}{2}$ "	2	UPPER SHROUD
X		MARINE EYE $\frac{9}{32}$ " W x $\frac{1}{2}$ " PIN MERRIMAN STUD $\frac{9}{32}$ " WIRE x $\frac{1}{2}$ " PIN 9-16-16 P/N 67211  WIRE $\frac{9}{32}$ " 1 x 19 SS P/N 67102 23'-5 $\frac{1}{2}$ "	2	FWD LOWER SHROUD
X		MARINE EYE $\frac{9}{32}$ " W x $\frac{1}{2}$ " PIN MERRIMAN STUD $\frac{9}{32}$ " WIRE x $\frac{1}{2}$ " PIN 9-16-16 P/N 67211  WIRE $\frac{9}{32}$ " 1 x 19 SS P/N 67102 23'-8 $\frac{1}{2}$ "	2	AFT LOWER SHROUD
X		MARINE EYE $\frac{5}{16}$ " W x $\frac{5}{8}$ " PIN MARINE EYE $\frac{5}{16}$ " W x $\frac{5}{8}$ " PIN  WIRE $\frac{5}{16}$ " 1 x 19 SS 50'-4 $\frac{1}{2}$ "	1	OPTIONAL BACKSTAY

# CAL II-39 ROPE RIGGING

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STANDARD	OPTIONAL	SIZE, LENGTH, & PART NO. DACRON YACHT BRAID (UNLESS OTHERWISE SPECIFIED)  COMMENTS	WIRE-ROPE SPLICE	EYESPLICE	SHACKLE/BLOCK PART NUMBER DESCRIPTION (OR EQUIVALENT)	NO. PER BOAT	DESCRIPTION
							DATE REVISED
X		1/2" x 65'-0" P/N 67152				1	MAINSHEET
X		1/2" x 60'-0" P/N 67152				2	JIB SHEETS
X		7/16" x 18'-0" P/N 67151				1	CUNNINGHAM/ REEF TACK
X		5/16" x 7'-0" P/N 67148 ATTACHED TO OUTHAUL WIRE, INSTALLED ON BOOM		X		1	OUTHHAUL TAIL
X		5/16" x 25'-0" P/N 67148 SHACKLE AND BLOCK ATTACHED TO LINE, INSTALLED ON BOOM		X	P/N 67732 MAR 153 SHACKLE P/N 67744 RF 334 BLOCK	1	BOOM TOPPING LIFT TAIL
X		3/8" x 20'-0" P/N 67150				2	TRAVELLER CONTROL LINE
X		1/16" x 54'-0" P/N 67151				1	MAIN HALYARD TAIL
X		7/16" x 54'-0" P/N 67151				1	JIB HALYARD TAIL
X		7/16" x 30'-0" P/N 67151				1	1ST REEF
X		1/2" x 110'-0" P/N 67152		X	P/N 67730 SNAP SHACKLE SWIVEL D LARGE	1	SPINNAKER HALYD
X		7/16" x 81'-0" P/N 67151		X	P/N 67729 SNAP SHACKLE SWIVEL D MEDIUM	1	POLE TOPPING, LIFT
X		7/16" x 45'-0" P/N 67151		X	P/N 67729 SNAP SHACKLE SWIVEL D MEDIUM	1	FOREGUY
X		1/2" x 80'-0" P/N 67152		X	P/N 67730 SNAP SHACKLE SWIVEL D LARGE	2	SPIN. SHEETS
X		3/8" x 20'-0" P/N 67150				2	SPIN CAR CONTROL
X		7/16" x 35'-0" P/N 67151		X		1	STAYSAIL HALYD TAIL
X		7/16" x 40'-0" P/N 67151				2	STAYSAIL SHEETS

NOTES: FOR WIRE TO ROPE SPLICES, ADD  
2' TO LENGTH GIVEN WHEN SENDING  
MATS. OUT.

BY: BRUCE MARKK BOAT: CAL II-39 DATE: 11-16-77

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Care of Fiberglass. Your boat requires periodic cleaning and waxing. The frequency of cleaning and waxing will depend upon the degree of care you exercise after each sail. Detergents remove wax. If you want to keep your fiberglass hull smooth and shiny with wax, do not use a detergent when you wash down your boat.

When the fiberglass takes on a dull appearance, the gelcoat surface is oxidized and requires rubbing out. Use a light rubbing compound or polish for this procedure. If you use a buffing machine, be careful not to power through the gelcoat.

After buffing or polishing, a coat of wax will preserve the shiny appearance of your gelcoat. Any good wax will do. Personal preference and ease of application may be your guide in the selection of waxes.

In the event of minor gelcoat damage, consult your local marine hardware store. For more extensive damage, contact a professional.

Spar Maintenance. The spars fitted for your vessel are lightweight extruded aluminum alloy. The finish is protected against corrosion by a thin, transparent film of aluminum oxide. Dust, dirt, and salt will adhere to this film, making the surface appear dull. Coating the clean surface with a good paste wax will help protect the finish of your spars and make cleaning easier.

If the surface has become tarnished, any high grade cleaner/wax will restore the original sheen. If your spars are black anodized or sprayed, hose off the salt spray after each sail to preserve the finished appearance.

Rigging Maintenance. Clean rigging assures clean sails. A quick trip aloft with a damp rag is all that is necessary to clean the rigging. While you're up there, check for loose screws, nuts, bolts, cotter pins, and any chafe which may have resulted from hard sailing. Also, inspect swagged fittings and chainplates for hairline cracks that may have resulted from stress. Replace any such fittings or hardware. Periodic inspection is your best insurance against rigging or hardware failures. Occasional lubrication of the turnbuckles with WD-40, or equivalent, will ensure easy adjustment.

Salt water will gradually stiffen dacron line. Frequent fresh water wash downs or soaking in warm soapy water will keep the lines soft and flexible. Keep your lines coiled and stowed in a dry place below decks.

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Caring For Your Topside Teak. All woodwork topside is unfinished teak. When the teak becomes dirty or turns color, it may be desirable to clean and refinish it with teak oil.

There are many two and three part products on the market that will satisfactorily clean and finish your teak. Most of them, however, will stain fiberglass or painted surfaces if allowed to stand. Follow the instructions on the package.

Any good quality teak oil may be used after the wood is completely clean. Most hardware stores and any marine hardware store will carry this product.

If varnish is desired, the wood must first be scrubbed with a strong teak cleaner and bronze wool. It should then be sanded smooth and thoroughly dusted down before applying varnish. Follow the directions as supplied by the various manufacturers of teak care products.

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## INTERIOR MAINTENANCE

The maintenance requirements inside your boat have been reduced to a minimum through the use of teak, formica, and fiberglass. The formica and fiberglass surfaces can be kept clean and shining by most household cleaner/waxes. The interior teak can be kept looking new with an occasional oiling. An interior quality teak oil is best, as an exterior grade oil may leave excessive residue.

Vacuum inside as necessary. Sand and grit will speed up the aging process on surfaces and fabrics.

Remember, you Cal 39 is a floating home. Treat it accordingly and you can look forward to many years of life afloat.

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Many precautions are taken to ensure the integrity of your boat during the delivery process. Your dealer is responsible for final delivery. He performs an elaborate final check on every system on your boat to ensure safe delivery to you.

We suggest that you work closely with your dealer while he is installing any optional equipment. He is best qualified to familiarize you with the various systems on your new yacht.

Below is a checklist similar to the one your dealer uses in the commissioning process:

### Prelaunch

1. Touch-up bottom paint.
2. Install prop.
3. Through hull fittings tight.
4. Rudder moves freely.
5. No excessive play in steering system.

### Engine

1. Refer to owner's manual.
2. Exhaust hook-up complete.
3. Electrical checkout.
4. Controls function.
5. Oil level.
6. Engine/shaft alignment.

### Deck

1. Water test windows, rails, and stanchions.
2. Lifelines secure.
3. Turnbuckle locknuts tight.

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## Launch

1. Through hull check.
2. Open gate valves, check lines.
3. Head functions.
4. Fill water system, check water pumps and lines.
5. Adjust standing rigging.
6. Check all electrical systems.
7. Fill fuel tank and check fuel system.
8. Sea trials under power.

## Engine Running

1. Exhaust water flow.
2. Oil pressure.
3. Fuel leaks.
4. Refer to owner's manual.

## Final Check

1. Boat clean.
2. Optional equipment aboard.
3. Warranty registration completed with a copy to the owner and a copy to the factory.

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Coming Aboard. Here's a checklist approach for your crew:

1. Check bilge for excessive water.
2. Check weather condition and tides.
3. Check food supply.
4. Check foul weather gear.
5. Linen, sleeping bags.
6. Fuel.
7. Water.
8. Sun screens and sun glasses.
9. Tools.
10. Docking and anchoring gear.
11. Check radio operation.
12. Navigation charts and instruments.
13. Cruise plan to a friend or Coast Guard.
14. Fuel for stove.
15. Cooking and eating utensils.
16. Check battery water level.
17. Oil level should be checked.
18. Tight V-belts.
19. Check for loose electrical connections in engine room.
20. Secure tools or any loose equipment in engine room so as not to get fouled in engine.
21. AC systems off, electrical cord stowed.

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22. Doors and drawers secured.
23. Check steering lock to lock.
24. Check mast for rigging irregularities and tightness.
25. Halyards and sheets clear and ready to run.
26. No lines or other obstructions near the propeller or bow.
27. Anchor ready to run.
28. Check lifelines for tightness.
29. Turn on fuel and water lines.
30. Stow all loose gear.

### Going Ashore

1. Sails dry and stowed.
2. Fuel and water lines turned off.
3. Bilge pumped dry.
4. Wallet, jewelry and other valuables are not left onboard.
5. Battery switch off.
6. Charger on.
7. Hatches and ports locked.
8. Topsides clean.
9. Appropriate seacocks closed.
10. Clean interior of food and rubbish.
11. Fenders in place.
12. Halyards secured away from mast.

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13. Dock lines secured.
14. Loose gear stowed.
15. Main companionway locked.
16. Check in with whomever kept your cruise plan.

Fueling. Below is a basic checklist for visits to the fuel dock.

1. Do not smoke.
2. Stop all engines and electric motors that might cause sparks.
3. Turn off stove and oven.
4. Close all ports and hatches.
5. Keep filling nozzle in contact with deck plate to avoid static sparks.
6. Wipe up and hose down any fuel spills on deck. Be sure not to get any water in your fuel tank.
7. Open all ports and hatches to ventilate after fueling.
8. Turn on optional blower and ventilate bilge after a "sniff" test.
9. Always filter your fuel when refueling in a foreign port.

## CAL PERFORMANCE YOU CAN COUNT ON

Performance is bred into the Cal Boats line of cruising sailboats as a result of many years of design and construction improvements. We want you to enjoy your new Cal cruising boat to its fullest. Feel free to contact your Cal dealer if you should have a question, or if a problem arises. You can count on Cal for more than performance.