

# **OWNER'S GUIDE**



**CAL-BOATS**

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A BANGOR PUNTA COMPANY

## **IMPORTANT**

### **Please Read**



## OWNER'S GUIDE - CAL-29

Welcome into the fast-growing owner's group of Jensen Fiberglass Yachts! Your CAL-29 has been carefully engineered and built to require a minimum of maintenance and a maximum of sailing pleasure. To insure this, the following is a description of the operational checks and tasks normally dealt with by the owner to maintain his CAL-29.

Let's become acquainted with these various operations by preparing your CAL-29 for a day's sail and discussing the maintenance routine you should follow. Slide the main hatch forward and remove the hatch board. Look below, for here we start our "Sailing Check-Off List."

### I. STANDARD OUTBOARD MOTOR

Before going below, we should look at the standard outboard motor installation. First remove the "Transom Door" and stow it below. Now take the outboard from its stowage in the port cockpit seat locker and mount on the transom. Once mounted, the outboard may be tipped up, out of the water, for sailing.

### II. OPTIONAL INBOARD ENGINE

Complete inspectional access to the engine may be gained by lifting the main companionway step, removing the bulkhead and also by a sliding hatch in the port quarter berth. Operation procedures are well covered in the enclosed manual. Several important points should be re-emphasized.

#### A. ENGINE COOLING WATER INTAKE

Best access to this 1/2" valve is in the Battery Compartment under the main companionway step. This gate valve must be open while the engine is running. To OPEN, turn counter-clockwise; to CLOSE, turn clockwise. At least once a month, close and re-open this valve to keep it in working order. At this time, check the packing gland to avoid water seepage. While here, check the bilge for water. Our fiberglass hull is water-tight, but the Ice Box drains into the bilge! Also there could be some seepage from the Head and Galley thru-hull fittings and the propeller shaft packing gland. The optional Hand Bilge Pump is installed here in the Battery Compartment. Check the batteries. Factory installed batteries are an automotive type whose water level and charge must be maintained.

#### B. FUEL TANK

A 20 gallon regular gas fuel tank is located under the cockpit sole fill cap and vents aft on the starboard winch island. The Fuel



Shut-Off Valve is on the tank's forward starboard side and is reached via a "pop-out" access panel in the starboard quarter berth. When the handle is parallel to the fuel line, it is OPEN; at right angles, it is CLOSED. When not operating the engine, this valve should remain CLOSED. A partially filled gas tank can cause water condensation, a major cause of sticky valves. To avoid this, we recommend keeping the tank full and the carburetor bowl clean.

#### C. PROPELLER SHAFT PACKING GLAND

Best access to this item is via the port quarter berth sliding hatch. The Propeller Shaft Packing Gland should be damp --- tighten the nuts snug enough to eliminate any excessive water drips. While here, check the following items:

1. Keep the Engine Oil Level between the #1 and #2 marks on the Bayonet Oil Gauge. Oil should be changed every forty to fifty operating hours with three to four quarts of SAE #30 "H.D." detergent oil. Havoline is recommended by the manufacturer.
2. Distributor Oil Cup gets a couple drops of light oil and the Water Pump Grease Cap a turn periodically.
3. The carburetor bowl may have to be filled using the hand primer on the fuel pump.

#### D. INBOARD ENGINE STARTING PROCEDURE

1. Turn the Main Battery Switch, located in the starboard quarter berth, to the position you have designated as the engine battery. When the engine is running, NEVER pass through the "OFF" position to change from one battery to another for charging or the Alternator Diodes will be burned out. Switching from one battery to the other should only be done with the engine IDLING. If both batteries are of equal charge, keep selector switch in "ALL" position. This position is also used to start the engine when both batteries are low. When not operating the engine, use one battery for ship's gear, thus saving the second battery for starting the engine.
2. Run the Blower five minutes prior to starting the engine. Switch is on the main instrument panel above the Main Battery Switch while the blower discharges out thru the clam shell on the starboard deck, aft.
3. Place Shift Lever into the large diameter ring of the Morse Control Head on the port cockpit seat riser. Start engine with lever in Vertical or NEUTRAL position. Lever FORWARD is FORWARD, AFT is REVERSE.



4. Place Throttle Lever into the Notched Control Head and advance about  $45^{\circ}$  to start engine. Note that the throttle may be adjusted without the lever by grasping the Notched Control Head and turning to the desired setting. Additional information on the Morse Control Unit may be obtained from the manufacturer.
5. Water and fuel lines OPEN?
6. Pull out the Choke and Starter Switch. Press the Ignition Button. When engine starts:
  - a. Gradually push in Choke.
  - b. Adjust Throttle to idling speed.
  - c. Check Oil Pressure: 30 to 35 pounds on a cold engine.
  - d. Cooling System is operating only if water is coming out of Exhaust Outlet on the transom, port side.
  - e. If oil pressure is low, STOP the engine and check oil level.
  - f. If water does not begin to flow out the transom outlet within 3 or 4 minutes, STOP the engine and check water intake valve.
  - g. Turn off Blower.
7. Run engine at idle when shifting into forward or reverse. If equipped with a Martec Prop, (Right Hand, 12" x 6 x 1") please follow the instructions in the Appendix. At half throttle the CAL 29 will power around 6 knots using about one gallon of fuel per hour. In smooth water, higher speeds can be obtained with higher RPM's but fuel consumption will increase accordingly.
8. To Shut Down engine:
  - a. Push IN the Starter Switch.
  - b. Close Fuel Shut-Off Valve and Cooling Water Intake Gate Valve.
  - c. Mark and align Propeller Shaft for Sailing Position and shift into FORWARD to lock. With a standard two blade solid or feathering prop, the blades should be vertical. With a folding prop, the blades should be horizontal.



## III. GALLEY

Water is supplied to the sink from a 25 gallon fresh water tank under the forward double berth. The tank fill, a bronze plug with a 1/2" square recess, is on the aft end and the vent is in the forepeak.

If the Galley Sink Drain Thru-Hull is equipped with the optional Gate Valve, this 3/4" valve is located directly under the sink. The valve should be kept closed while sailing as excessive heel on the port tack will fill the sink and splash water into the interior.

Remember that the 50 pound Ice Box drains into the Bilge!

A 2 or 3 burner Pressure Alcohol Stove is the normal optional installation. Operating instructions come with the stove but a few additional points on stove operation are important.

The optional 2 gallon pressure tank is located under the galley sink. When filling this tank, please observe the following BEFORE removing the stopper:

1. All burners are OFF.
2. Main Alcohol Shut-Off Valve on top of pressure tank is CLOSED.
3. Tank pressure is ZERO: Remove Stopper.
4. Fill the tank three-quarters full to allow for air pressure.
5. Replace stopper and screw down tight.
6. Experience has shown that 5 pounds of tank pressure is more than adequate and imposes less strain on the fittings than the recommended 10 pounds.

Please note that when you convert the Dinette Table into a Double Bunk, that the long pipe support is replaced by the shorter 12" pipe to give proper support to the Double Bunk.

## IV. HEAD

To flush the Marine Toilet, swing the valve OUTBOARD to OPEN and pump. To dry bowl, swing the valve INBOARD to CLOSE and pump. An instruction sheet is enclosed but additional information and replacement parts can be obtained from the manufacturer.

If you have supplied the thru-hulls with optional Sea Cocks, they may be kept open while sailing with no ill effects assuming the internal "jockey" valve is not held open by refuse. The 1/2" gate valve for the Water Intake is located aft under the forward Dinette Seat, while the 1-1/4" gate valve for Discharge is located just aft of the bowl.



V. ELECTRICAL SYSTEM

A. STANDARD - FOR OUTBOARD MOTOR

An electrical panel with three, 15 amp fused switches for the cabin lights, running lights and a spare is in the starboard quarter berth. Please see Step "B" below for the proper care of the optional factory installed battery.

B. OPTIONAL - FOR INBOARD MOTOR

A 12 volt battery, with Master Switch and 15 amp fuses stores power for either electrical system. The Battery Compartment is in the engine compartment, forward, under the main companionway step. Factory installed batteries are an automotive type whose water level and charge must be checked. Since the engine is equipped with a 30 amp alternator, the Master Switch gets special attention and is covered under Step "D" of the engine section.

1. All Exterior Light Switches are in the instrument panel. The Fuse Panel is part of this panel which is above the Master Switch. All Cabin lights are individually switched but have their fuses here. Dim light indicates low batteries: Keep batteries well charged to avoid being "in the dark!"
2. The optional Speed Indicator thru-hull is under the center cabin sole inspection plate. The optional Depth Indicator Box is located under the forward Dinette seat.

We are now ready to get underway but should pause for a moment and look about the deck and thus become acquainted with the sailing gear.

VI. SPARS, RIGGING AND HARDWARE

Our masts are built to withstand any normal usage but improper tuning or handling can cause problems. Therefore, it is impossible to fully guarantee the mast of your CAL 29 under our current warranty program. Rigging, as well as tuning, becomes all important when setting up the mast because of the light weight section we use. A knowledgeable person should oversee the rigging and tuning so as to eliminate the possibility of an eccentric load which might occur with an improperly loaded shroud. Special attention should be given to the initial stretch of the uppers and a further gradual stretch of the wire over the first few hard outings

A. MAST TUNE

The mast should be set straight athwart-ships in the boat and have a slight rake aft. A straight mast can best be obtained by turn-buckle adjustment while sailing to windward in a 5 to 10 mph breeze.



The head of the mast should not "hook" to windward. If not straight, it would be more desirable to have the head "fall-off" slightly to leeward. This should give the mast a smooth, even curve from head to deck. Sighting along the back of the mast on each tack, from deck level, will give a comparison and indicate the necessary adjustments.

For normal cruising conditions, we recommend a "loose" rig. Thus a dock-side starting point would have the headstay, backstay and uppers just firm with the lowers fairly loose. Now the backstay may be made slightly tighter to "hook" the top of the mast aft. One should be able to stand facing the mast, reach out and pull on any stay and see the mast move in that direction. Try to get tension on both stays equal with about 1/2" to 2" of play on the uppers and 2" to 3" of play on the lowers. The forward lowers might be slightly tighter than the after lowers.

When racing, the backstay may be tightened up to compensate for the additional forward loading applied by the genoa. At the conclusion of the race it is best to "slack-off" the amount you "took-up" on the backstay turnbuckle. This avoids setting up unnecessary strains on the hull and rig. Under NO circumstances should any of the rigging be set up "bar-tight." This operation can easily be done by the optional backstay adjuster.

A description of all standing and running rigging if replacement is necessary, can be found in the Appendix. Following are some maintenance tips which should be of value.

## B. SPARS

The finish of natural aluminum is protected against corrosion by a thin, transparent film of aluminum oxide. Dust, dirt, smoke, salt and traffic fumes will adhere to this film, making the surface dull and unsightly. Coating the new surfaces with a good paste wax like Vista or Simonize, will help protect the aluminum oxide from foreign matter. If the surface has become tarnished, any high grade cleaner, wax, polish (Collinite #34 or #38 for example) will restore the original sheen. Heavier pitting can be removed by wet-sanding with #600 paper prior to polishing and waxing. You need not worry about sanding, cleaning or polishing destroying the aluminum oxide film as it reforms or "heals" immediately.

Painted spars may require a touch-up in areas of chafe. Use the same or compatible paints for this job. Epoxy is applied at the factory. "Rust-Oleum", in spray cans, is an excellent touch-up paint.

If spars are black anodized, hose down portions subject to salt water spray after each sail.



## C. RIGGING

Clean rigging means clean sails. A quick trip aloft with damp rags takes care of this problem. While aloft, check the entire rig for loose screws, nuts, bolts, cotter pins and chafe which may have resulted from hard sailing. Spreader tips well taped? Periodic inspection of the rig from aloft is your best insurance against rigging and spar failure. Keeping halyards tied away from the mast stops the annoying dockside clanking and saves the mast finish.

Salt water will gradually stiffen dacron line. Hosing with fresh water or soaking in warm soapy water will make the line soft and flexible again. Keep coiled and stowed in a dry spot below.

## D. HARDWARE

Many materials are used, all of which clean well with fresh water and a chamois. Winches must be kept clean and well oiled (Lubriplate is excellent unless the manufacturer recommends otherwise). This also applies to all turnbuckles, track slides, sheaves and shackles. The chrome and stainless steel brighten up with the chamois while a good automotive chrome cleaner or mild kitchen abrasive like Comet takes care of the tarnished spots.

Keep all gear lubricated and in good working condition. Remember, the less an item is used, a turnbuckle, for example, the more apt it is to freeze-up.

## VII. SAILS

The mainsail, with battens removed and outhaul slacked, is properly furled on the boom, under a cover. Headsails have been stripped of sheets, properly folded and are bagged below ready to be brought on deck. The dacron and nylon sails can get wet and become caked with salt. When they do, hose them off with fresh water and dry thoroughly by hoisting them at the dock on a still, warm day.

Take care of your sails with periodic checks, especially spinnakers, for small tears and chafe. Hoisting and lowering sails, except spinnakers, while head-to-wind is good practice and easier on the sails.

## VIII. FIBERGLASS SURFACES

Periodic application of Tide and fresh, warm water with deck brush and sponge followed by a good hosing and chamois will do the cleaning job. If the gloss dulls or fades, wax the smooth surfaces with Vista or Meguiar's Mirror Glaze paste wax. Surfaces that have started to oxidize can be brought back with Meguiar's Fiberglass Boat Cleaner or DuPont White #7 Polishing Compound. Wax the hull with a power buffer and paste wax once a year. The non-skid surfaces can be brought back to life with a lather of Tide or Mr. Clean. Be sure to follow up with lots of fresh water to avoid streaks on the topsides.



Avoid any metal fillings on the fiberglass surfaces as they will leave rust spots. These spots can be removed with oxalic acid or Teak-Brite but first test a small area against bleaching out the surface color.

Consult the enclosed booklet for touch-up work and repair of minor scars or breaks.

#### IX. WOOD SURFACES

The tiller, along with the spreaders, has been well covered with a high grade marine varnish at the factory. In order to maintain the original high luster and protect the wood, sanding and re-varnishing will be necessary when the gloss fades or bare spots appear. The rest of the exterior wood is teak, which is weather resistant due to its natural oils. Teak does fade to a dull gray, which, if objectionable, can be scrubbed clean with "Teak-Brite." Teak's natural color and texture can be preserved by applications of Weldwood's "Woodlife" or similar sealers.

Teak, when well varnished, produces the ultimate in a yacht wood finish but requires constant loving care!

All below deck mahogany surfaces are finished with a satin varnish. Treat all the materials used below deck as a home interior. Air is a wonderful cleaner: Bring the vacuum cleaner aboard and always keep the boat well ventilated, especially the bilge and lockers.

Jensen Marine's interest in both customer and product continues long after you have commissioned your CAL 29. Within the limits of our specifications, the company's Parts Department is ready to serve your nearest dealer quickly and efficiently. All replacement parts or accessories are delivered through your dealer. He must have detailed information from you to be certain we send the parts requested.

Additional sailing and maintenance tips can be found in various boating publications. Yachting's Annual Maintenance issue in April is an excellent starting point.

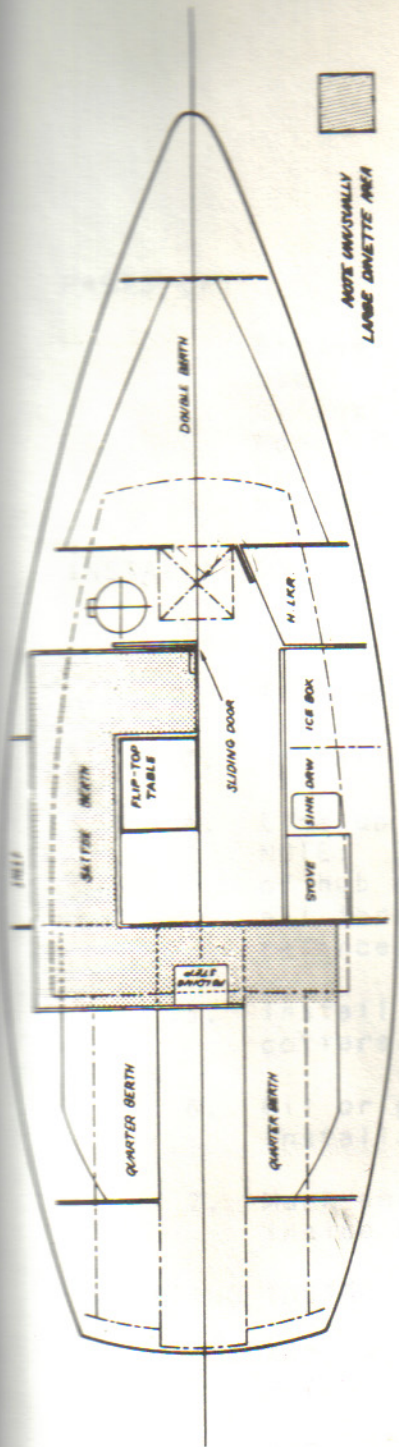
This brings us to the end of our "Sailing Check-List" and leaves only the securing of your CAL 29. If we ran the list in reverse, adding only one item, your CAL 29 will be ready for the next sail. This one important item is a GOOD HOSING. Nothing keeps a boat better than fresh water and the chamois. Use plenty of pressure, especially in the cockpit scuppers, non-skid areas and metal surfaces. Turn to with sponge and chamois and you will be rewarded with a sharp, sparkling yacht that is only matched by its comparable performance.

Good Luck and Happy Sailing

JENSEN MARINE

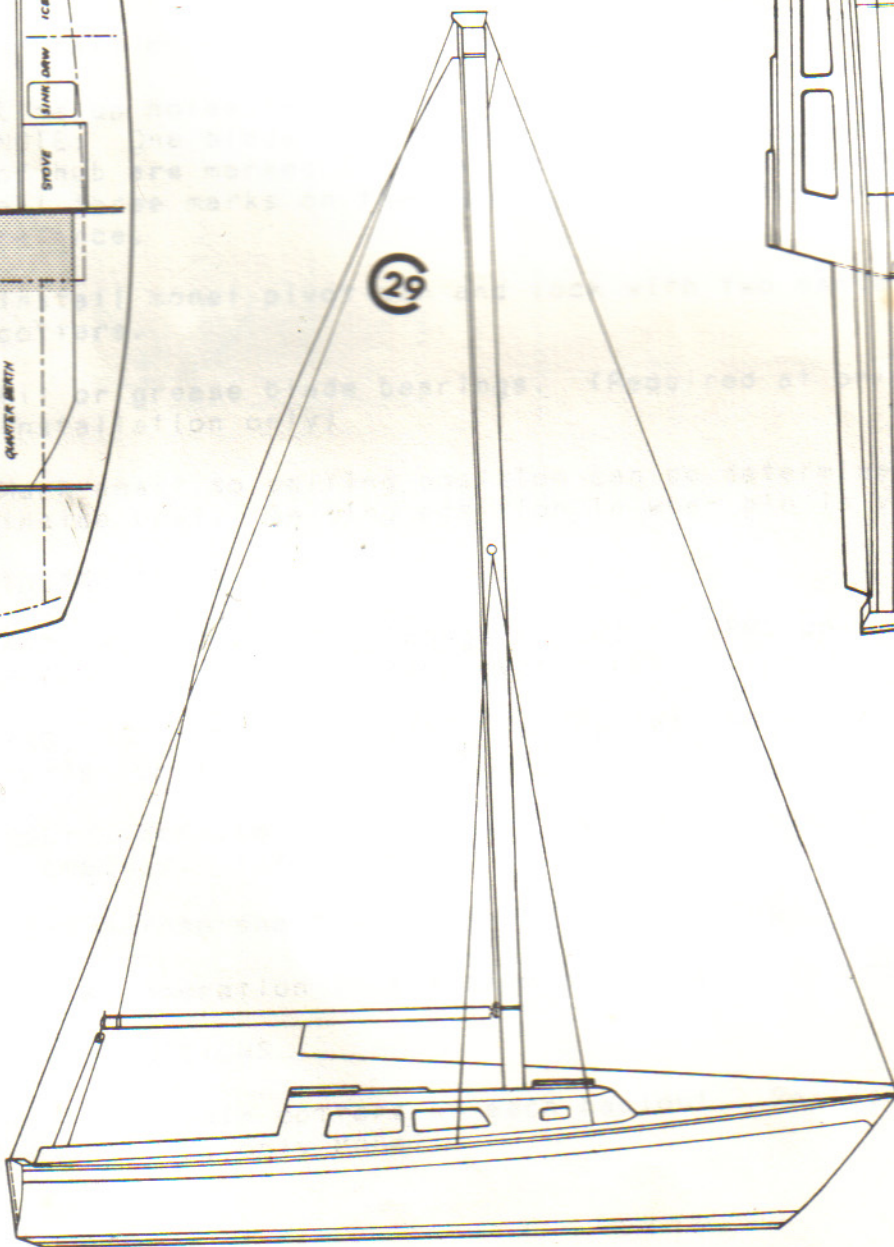
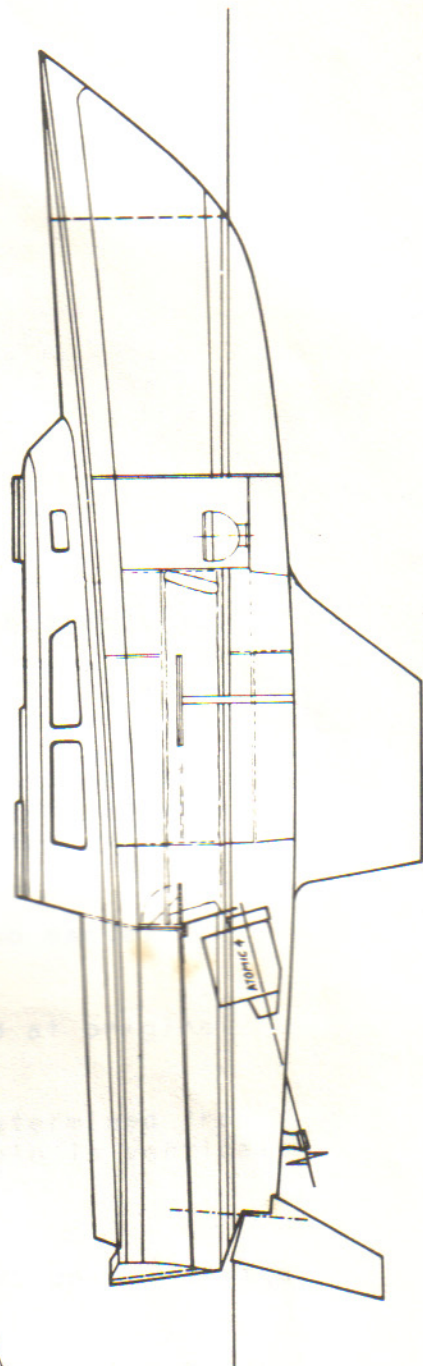


# CAL 29



## DIMENSIONS

L.O.A. ....	29'
L.W.L. ....	24'
Beam ....	9'3"
Draft ....	4'6"
Sail Area .....	434 sq. ft.
Displacement .....	8000 lb.
Ballast .....	3350 lb.





# MARTEC LOW DRAG PROPELLER

## FOR SAILBOATS

### PARTS LIST

Blades	(2)
Hub	(1)
Cylindrical Nut	(1)
Monel Pivot Pin	(1)
Key	(1)
Monel Cotters	(4)

### INSTALLATION INSTRUCTIONS

1. Assembly hub, key, and nut on shaft.
2. Tighten nut. Line up cotter holes thru hub and nut.
3. Install monel cotters. Spread cotters inside nut.
4. Line up holes in hub and blades carefully.  
NOTE: One blade, one end of pivot pin, and one side of hub are marked ("I") and should be assembled with all three marks on the same side to maintain fit and balance.
5. Install monel pivot pin and lock with two manual cotters.
6. Oil or grease blade bearings. (Required at original installation only)
7. Mark shaft so sailing position can be determined from inside boat. Sailing position in when pin is vertical.

### OPERATING INSTRUCTIONS

FORWARD, BOAT STOPPED: Engage at idling RPMs only. Damage could result if engaged much over 1000 RPM.

FORWARD, BOAT MOVING FORWARD: Engage at RPM corresponding to boat's forward speed.

REVERSE: Increase throttle as required when using reverse under headway. (Stopping)

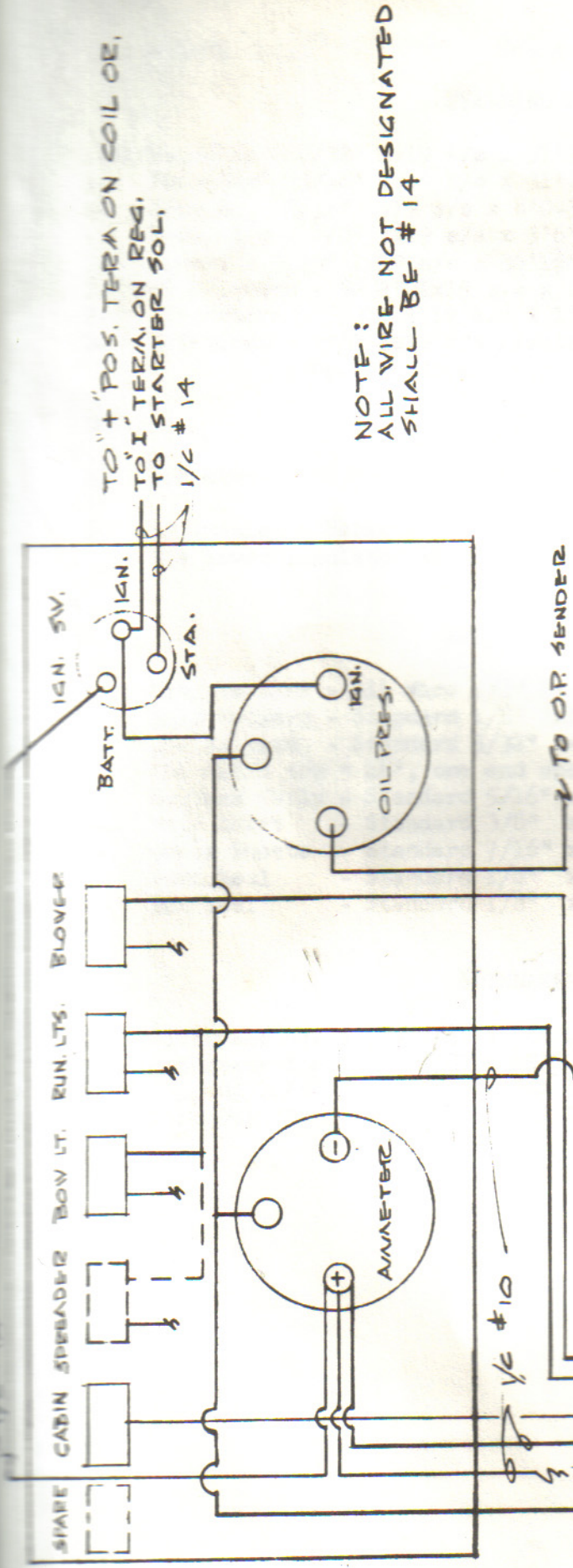
RACING: Rotate shaft manually to sailing position.

Otherwise, operation is the same as for a solid propeller.

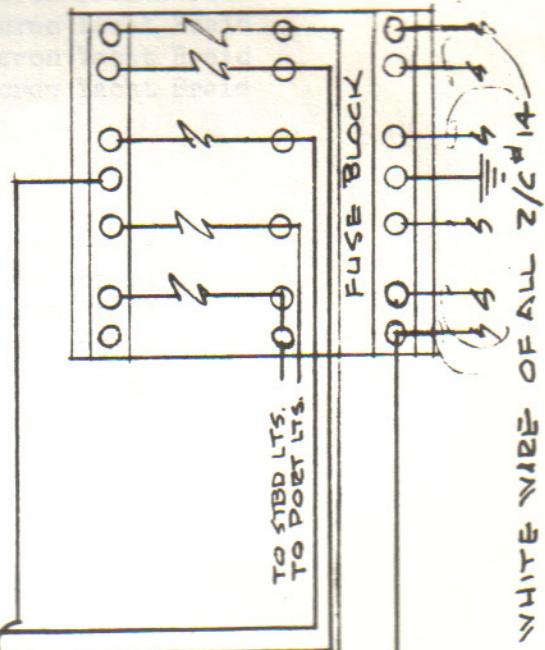
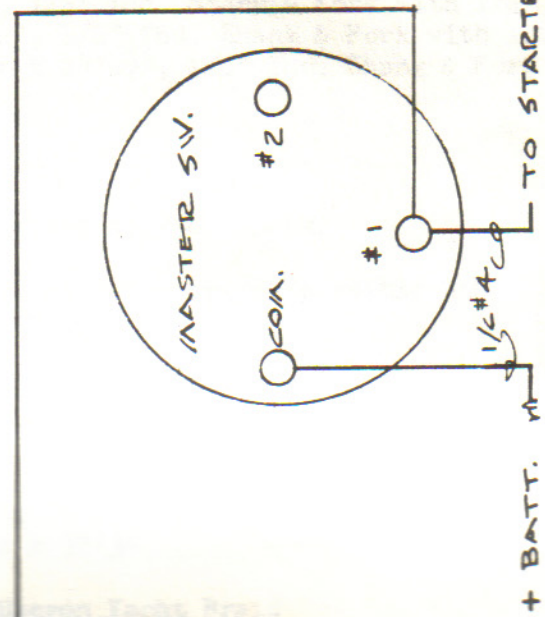
### MAINTENANCE INSTRUCTIONS

Inspect pivot pin cotters at each haulout. Replace if indicated. Use only Monel.





NOTE:  
ALL WIRE NOT DESIGNATED  
SHALL BE #14



WIRING DIAG. CAL 2-30/29  
JENSEN MARINE J.M.



1x19 LOAD\*

STANDING RIGGING

- 1-~~400~~ Headstay - 7/32" 1x19 s/s x 37'9", 1/2" & 7/16" Marine Eyes
- 1- Backstay - 3/16" 1x19 s/s x 31'7 1/2", 3/8" Marine Eye & Fork with 5/16" hole
- 2- Bridles - 5/32" 1x19 s/s x 8'0-3/4", 1/4" Thd. Shank & Fork with 1/4" hole
- 1- Boom Lift - 1/8" 7x19 s/s x 3'6", 1 1/4" Nico Loop & Nico Snap Hook
- 2-~~500~~ Uppers - 3/16" 1x19 s/s x 36'1 1/2", 3/8" Thd. Shank & Fork with 5/16" hole
- 2-~~350~~ Fwd. Lowers - 5/32" 1x19 s/s x 17'4 1/2", 1/4" Thd. Shank & Fork with 1/4" hole
- 2-~~250~~ Aft Lowers - 5/32" 1x19 s/s x 17'6-3/4", 1/4" Thd. Shank & Fork with 1/4" hole
- 2- Lifelines - 1/8" 1x19 s/s Plastic Coat x 28'4 1/4", 1/4" Thd. Shank & Fork with Pelican Hook

NOTE:

- 1) All dimensions are center eye to eye or end of Thd. Shank.
- 2) On Insulated Backstays, keep insulators as far apart as possible and the lower insulator above the Backstay Bridle Plate.

RUNNING RIGGING

- 1- Main Halyard - All Wire 1/8" 7x19 s/s x 69'7" Wire Rope
- 1- Main Halyard - Standard 1/8" 7x19 s/s x 34'8" Wire Rope
- 1- Jib Halyard - Standard 5/32" 7x19 s/s x 37'3"  
For cabin top = 48', one end open.
- 2- Halyard Tails - Standard 5/16" x 38' Dacron Yacht Braid
- 1- Main Sheet - Standard 3/8" x 80' Dacron Yacht Braid
- 2- Genoa Sheets - Standard 7/16" x 45' Dacron Yacht Braid
- 1- Down Haul - Standard 1/4" x 6' Dacron Yacht Braid
- 1- Out Haul - Standard 1/8" x 4' Dacron Yacht Braid

SPINNAKER GEAR

- 1- Spinnaker Halyard - 3/8" x 90' Dacron Yacht Braid
- 2- Spinnaker Sheets - 3/8" x 45' Dacron Yacht Braid
- 1- Topping Lift - 3/8" x 60' Dacron Yacht Braid
- 1- Fore Guy - 3/8" x 38' Dacron Yacht Braid