OWNER'S GUIDE

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IMPORTANT
PLEASE READ

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OWNER'S GUIDE - CAL-28

Welcome into the fast-growing owner's group of Jensen Fiberglass Yachts! Your CAL-28 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-28.

Let's become acquainted with these various operations by preparing a CAL-28 for a day's sail and discussing the maintenance routine which you should follow. A unique feature of the CAL-28 is the optional engine arrangement. The "coming on board" and the inspection of the engine starts our "Sailing Check-off List."

I. ENGINE OPERATION

A. OUTBOARD MOTOR

The lazarette becomes the engine compartment and is completely sealed off from the rest of the boat. This eliminates noise and gas fumes from the below deck living area. The lazarette is self-bailing with an outboard motor well. A fiberglass plug seals the well while sailing and presents a smooth surface to the water below. When sailing, the outboard can be stowed in the lazarette along with the gas tank, or, when racing, under the cockpit aft of the companionway ladder.

B. INBOARD MOTOR

Engine operation procedures are well covered in the enclosed manual. Several important points should be re-emphasized.

1. The 18 gallon regular Fuel Tank is located under the settee, forward, and fills from deck at the port chain plates. Notice the fuel tank vent at the side of the hull just below the deck plate fill cap. The Fuel Shut-off Valve is on the aft side of the Battery Compartment, which is to port of the engine box, under the settee. When the handle is horizontal, the line is OPEN; when vertical, it's CLOSED. When not operating the engine, the valve should remain CLOSED.

   A partially filled gas tank can result in water condensation, a major cause of sticky valves. To avoid this, we recommend keeping the tank full and carburetor fuel bowl clean.

2. Turn the Main Battery Switch, located below the Fuel Shut-off Valve, to the position you have designated as the engine battery. When the engine is IDLING, you may switch from one battery to another for charging. NEVER pass through the "OFF" position or the Alternator Diodes will be burned out. 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 running the engine use one battery for ship's gear, thus saving the second battery for starting the engine.

3. Run the Blower for five minutes prior to starting the engine. The pull switch is in the cockpit instrument panel, next to the clamshell blower discharge cover.

4. Open the Engine Water Intake Sea Cock located below the battery compartment. Gate Valves OPEN counter-clockwise and CLOSE clockwise. It is good practice to close all gate valves when leaving your boat, especially for extended periods of time. Also check the packing gland periodically to avoid water seepage. While in this compartment, check the 12 volt batteries for water and charge and the 15 amp fuses in the panel above.

5. Complete inspectional access to the engine is gained by removing the ladder and lifting the engine box cover. Check the following:

   a) The carburetor fuel bowl may have to be filled using the hand primer on the fuel pump.

   b) Propeller Shaft Packing Gland is directly under the transmission and should be damp. Tighten the nuts snug enough to eliminate any excessive water drips. Look in the bilge for water. Our fiberglass hull is watertight but the Ice Box can drain into the bilge as an optional extra! Also there could be some seepage from the thru-hull fittings. The optional Hand Bilge Pump is located in the battery compartment.

   c) Keep the Engine Oil Level between the #1 & #2 marks on the Bayonet Oil Gage. Oil should be changed every forty to fifty operating hours with 3 to 4 quarts of SAE #30 "H.D." detergent oil. Havoline is recommended by the manufacturer. After 1966, the built-in hand sump pump was replaced by a separate hand sump pump.

   d) Oil in the V-Drive Box should be changed after the first fifty hours and every 500 hours there-

after. Clean the magnetic drain plug at this time. Less than a one pound can of "Lubriplate APG-80" or the equivalent will fill the box to the proper dip-stick level. Note the dip-stick on the port side and the rubber hoses leading in and out. The main engine sea water circulating system cools the V-Drive prior to entering the engine.

e) Periodically oil the Distributor Cup and tighten the Water Pump Grease Cap.

6. Place Shift Lever, #3 winch handle, in NEUTRAL position. FORWARD is UP, REVERSE is DOWN.

7. Pull out Choke.

8. Pull out Throttle $\frac{1}{4}$" to $\frac{1}{2}$".

9. Water and fuel ON?

10. Turn Key Ignition Switch, starting engine. NOW:

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 in transom.

e) If oil pressure is low, STOP the engine and check oil level.

f) If water does not begin to flow out of the transom outlet within 3 or 4 minutes, STOP the engine and check water intake valve and exhaust line.

g) Turn off Blower.

11. Run engine at Idle when shifting into forward or reverse. If equipped with a Martec Prop, (Right Hand, 16" x 10 x 1") follow the instructions in the Appendix. At half throttle, the CAL-28 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.

12. To Shut Down engine:

a) Turn OFF Ignition 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 2 blade solid or feathering prop, the blades should be vertical. With a folding prop, the blades would be horizontal.

II. GALLEY

Water is supplied to the sink from a 25 gallon tank under the forward double berth. The tank fill is on top; the vent is in the forepeak.

The Ice Box hold 25 pounds and can be equipped with an optional bilge drain.

Operating instructions for the optional factory installed stove are inclosed. Additional instructions and information can be obtained from the manufacturer.

III. 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 inclosed but additional information and replacement parts can be obtained from the manufacturer.

If you have supplied the thru-hulls with Sea Cocks, they may be kept open while sailing with no ill effects assuming the internal "joker" valve is not held open by refuse.

IV. ELECTRICAL SYSTEM

A 12 volt battery with Master Switch and 15 amp fuses stores power for the electrical system. The Battery Compartment is under the starboard quarter berth. 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 "A" of the engine section.

A. RUNNING LIGHTS

Two Pull Switches, adjacent to the Master Switch, turn on the Running lights. The Stern, Port and Starboard lights are activated by the Inboard Switch. The white light on the mast is the Outboard switch. Note that the fuses are in back of the switches.

B. INTERIOR LIGHTS

The cabin lights have their own individual switches. Dim lights indicate low batteries; keep batteries well charged to avoid being "in the dark."

After mid-1966, the engine ignition system was transistorized, changing the engine wiring diagram in the manual. This "new" diagram, along with the ship's wiring system, appears in the Appendix. The Lighting System for an outboard engine installation is also included.

With the engine running, your CAL-28 is ready to get underway. We should pause for a moment and look about the deck and thus become acquainted with the sailing gear.

V. SPARS, RIGGING AND HARDWARE

It is impossible to fully guarantee the mast of your CAL-28 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 races.

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 turnbuckle 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 ½" to 2" of play on the uppers and 2" to 3" of play on the 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."

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 (Colline #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 compatable 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.