#### OWNER'S GUIDE - CAL-40

Welcome into the fast-growing owner's group of Jensen Fiberglass Yachts! Your CAL-40 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-40.

Let's become acquainted with these various operations by preparing a CAL-40 for a day's sail and discussing the maintenance routine which you should follow. It is good practice to close the Fuel Shut-off Valve and all Sea Cocks when leaving your boat, especially for extended periods of time. The "coming on board" and the opening of these fittings starts our "Sailing Check-off List."

#### I. TANKAGE

#### A. FUEL

The 44 gallon regular gas tank is under the cockpit sole fill cap and vents through the stern pulpit. The Fuel Shut-off Valve is on the tank's starboard side. When the handle is parallel to the 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.

While in the starboard quarter berth note the area between the fuel tank and engine. Your optional Electric Bilge Pump is mounted here and exhausts under a clam-shell mounted above the starboard cockpit sole scupper.

# B. FRESH WATER PUMP REPAIR KIT WILCOX-CRITTENDEN#6523

This 45 gallon tank is in the main bilge and filled via the aft cabin sole inspection plate at the foot of the companionway ladder. 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 thru-hull fittings and the propeller shaft packing gland.

The thru-hull fitting for the optional Speed Indicator is located aft of the water tank.

SALT WATER PUMP PAR #4265-2

#### II. SEA COCKS

Gate Valves on the thru-hulls OPEN by turning counter-clockwise and CLOSE in a clockwise direction. Periodically check the packing gland to avoid seepage.

#### A. ENGINE EXHAUST

A  $l^{\frac{1}{4}}$ " valve mounted in the Lazarette on the transom must be open prior to starting the engine.

#### B. ENGINE COOLING WATER INTAKE

A  $\frac{1}{2}$ " valve under the forward part of the port quarter berth must also be opened prior to starting the engine.

#### C. GALLEY SINK

A  $1\frac{1}{4}$ " valve is directly underneath the sink and should be closed while sailing. Excessive heel, on the starboard tack, will fill the sink and splash water into the cabin. The Hand Bilge Pump and optional Electric Pressure Water Pump are also located below the sink.

#### D. HEAD LAVATORY DRAIN AND MARINE TOILET INTAKE

A  $\frac{1}{2}$ " valve serves both and is reached under the head lavatory. This valve should also be closed if hard sailing causes the sink to fill on the starboard tack.

#### E. MARINE TOILET DISCHARGE

A  $l\frac{1}{h}$ " valve is directly under the bowl. This valve may be kept open while sailing with no ill effects assuming the internal "joker" valve is not held open by refuse.

#### III. ENGINE

Operating procedures for the standard marine gas engine are well covered in the enclosed manual. Several points should be re-emphasized.

A. Turn the Main Battery Switch, located to starboard of the companionway ladder 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.

- B. Run the Blower five minutes prior to starting the engine. Switch is on the main instrument panel while the blower exhausts out the port winch handle box.
- C. Complete access to the engine is obtained by removing the companionway ladder. For our purpose, removing the panel on the port side will be sufficient. CHECK:
  - 1. Oil level with Bayonet Gauge. Oil should be changed every forty to fifty hours with four to five quarts of SAE #30 "H.D." detergent oil. RPM DELO Multi-Service oil has been used at the factory. A quart of Bardahl may also be added.
  - 2. Oil in the V-Drive Box should be changed after the first fifty hours and every 500 hours thereafter. Less than a one pound can of "Lubriplate APG-80" or the equivalent will fill the box to the proper dipstick 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 its entering the engine. The "Zerk" fitting on the Universal Joint of the engine to V-Drive shaft needs a periodic shot of grease.
  - 3. The Propeller Shaft Packing Gland should be damp. Tighten the nuts snug enough to eliminate any excessive water drips.
  - 4. Distributor and Tachometer Oil Cups should get a couple of drops of light oil and the Water Pump Grease Cap tightened a turn periodically.
- D. Place Shift Lever, #3 winch handle, in NEUTRAL position. FORWARD is UP, REVERSE is DOWN.
- E. Pull out Choke.
- F. Pull out Throttle  $\frac{1}{4}$ " to  $\frac{1}{2}$ ".
- G. Water and Fuel ON? Exhaust OPEN?
- H. Pull out Ignition and press Starter Button. When engine starts:
  - 1. Gradually push in Choke.
  - 2. Adjust Throttle to idling speed of 800 to 1000 RPM.
  - 3. Check Oil Pressure: 30 to 35 pounds on a cold engine.
  - 4. Cooling system is operating only if water is coming out of Exhaust Outlet in transom. Temperature on cockpit instrument gauge should gradually go up to 140° or 150°.

- If oil pressure is low, STOP engine and check oil level.
- 6. If water does not begin to flow out of transom outlet within 3 or 4 minutes, STOP engine and check water intake and exhaust gate valves.
- 7. Turn off Blower.

Run engine at Idle when shifting into forward or reverse. If equipped with a Martec Prop (Right Hand  $-16" \times 10 \times 1 \times 1/8"$ ) please follow the instructions in the Appendix. At half throttle, the CAL-40 will power around 7 knots at 1700 RPM using about one gallon of fuel per hour. In smooth water, higher speeds can be obtained with higher RPM's (2200 Maximum) but fuel consumption will increase accordingly.

To Shut Down engine:

alt. Prop: 16x 16 4-21-82 # 225 blades

Turn OFF Ignition Switch.

2. Close Fuel Shut-off Valve and Water Intake and Engine 355. Exhaust Gate Valves.

Align Propeller Shaft for Sailing Position and shift 3. into FORWARD to lock. For the standard solid 2 blade or feathering prop, the blades should be vertical. For a folding prop, the blades should be horizontal.

If your CAL-40 has been equipped with a Diesel, you will find it closely resembles its gasoling counterpart. It follows therefore, that it requires the same treatment and that gross negligance such as running the engine short of oil, with sludged oil or with water boiling will have the same expensive consequences. We have included the manufacturer's operating manual which should answer any additional questions.

#### IV. GALLEY

The Water System and Sink Drain have been covered earlier. Mention was also made that the 100 pound Ice Box drains into the bilge. A 2 or 3 burner Pressure Alcohol Stove is the normal optional installation so we have included operating instructions in the Appendix. A few additional points on stove operation are important.

The optional 2 gallon pressure tank is located in the port quarter berth sailbin. When filling this tank, please observe the following BEFORE removing the stopper:

- 1. All burners are OFF.
- 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.

#### V. HEAD

Complete operating instructions for the Marine Toilet are on a metal plate to be mounted where desired. This plate, along with additional instructions and a parts list have been included.

Don't forget the earlier Sea Cock Instructions.

Across from the head is the Hanging Locker. If you have the optional Depth Indicator Box, it will be mounted here.

#### VI. 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 of the automotive type whose water level and charge must be checked. Since the engine is equipped with a 30 amp Alternator (40 amp in the Diesel), the Master Switch gets special consideration and was covered under Step "A" of the Engine Section. We have included the CAL-40's wiring system in the Appendix for both gasoline and Diesel engines.

The Fuse Panel is above the engine, on the rear of the cockpit instrument panel. The Cabin Lights have their own individual switches but fuse here. Dim lights indicate low batteries: keep your batteries well charged to avoid being "in the dark!"

The optional 110 volt Shore Power Breaker Switches are mounted at the foot of the starboard quarter berth. There are two outlets, at the head of both quarter berths, controlled by these switches.

With the engine running, your CAL-40 is ready to get underway. We should pause for a moment and look about the deck thus becoming acquainted with the sailing gear.

# VII. SPARS, RIGGING AND HARDWARE

It is impossible to fully guarantee the mast of your CAL-40 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  $\frac{1}{2}$ " to 2" of play on the uppers and 2" to 3" 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 turn-buckle. 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 sprayafter each sail.

The spreaders are of spruce and have been well varnished. Because of sail chafe and weather, they should be sanded and re-varnished every six months and the tips re-taped.

#### 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. 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) as do 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.

#### VIII. SAILS

The mainsail, with battens removed and out haul slacked, is properly furled on the boom, under a cover. Headsails have

been stripped of sheets and battens, properly folded and are bagged below ready to be brought on deck. The dacron and nylon sails do 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.

#### IX. 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 filings on the fiberglass surfaces as they will leave rust spots. These spots can be removed with oxcolic 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 minor scars or breaks.

#### X. WOOD SURFACES

Aside from the spreaders, only the tiller will require a gloss varnish and should be re-varnished along with the spreaders. The rest of the exterior 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-40. 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 (April, 1966) is an excellent starting point.

This brings us to the end of our "Sailing Check-List" and leaves only the securing of your CAL-40. If we ran the list in reverse, adding only one item, your CAL-40 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

#### 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 ("l") 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.



# CALIFORNIA MARINE PRODUCTS INC.

P O. BOX 1743 . (714) 646 1823 . NEWFORT BEATH CALIF 92663

# HILLERANGE

# INSTRUCTIONS FOR CARE AND OPERATION

The alcohol burners in this range are designed to give trouble-free operation during years of use. Follow the simple operational suggestions and you will be assured of full satisfaction.

#### **FUEL**

Gum-free alcohol should be used. To check, pour a little in a clean saucer, ignite it, and if a gummy residue remains, do not use in the stove. Personally I prefer a good clean denatured alcohol, some of which are virtually odorless.

## **OPERATION**

- 1. Priming the HILLERANGE is quickly and easily accomplished. It is necessary to preheat the burner and generator tube that runs over the center of the burner which gasifies the liquid alcohol.
- 2. First, pump up the tank pressure to approximately 10 pounds. Then turn valve knob counter-clockwise about ½ turn and count three slowly, which allows alcohol to flow into the pan under the burner. CLOSE THE VALVE. Wait a moment or two for the fuel to soak into priming wick. Then light. The priming flame should not be more than three or four inches above the burner. IF IT IS HIGHER, YOU ARE PRIMING TOO MUCH!
- 3. When the fuel in the priming pan is nearly burned out or blue flame around the burner shows the generator is heated, open the valve slowly, thus lighting the burner.

The full blue cooking flame will appear when the prime is entirely burned out.

- 4. Perfect control of your cooking flame is obtained by opening or closing the control valve. Unless fuel tank is nearly empty, very little additional pumping is required to maintain the air pressure. If more heat is desired, simply increase the tank pressure.
- 5. When through cooking, shut the control valve, BUT NOT TOO TIGHT. It usually takes a few seconds after closing the valve for the flame to die down. DO NOT ATTEMPT TO FORCE THE BURNER CLOSED. Force will injure the burner seat and may render the entire stove useless until new parts are installed. Release the pressure in the fuel tank by loosening the filler cap. Then loosen the burner control valve slightly so it will not seize or stick when the burner cools. WHEN THROUGH COOK-ING, WE AGAIN EMPHASIZE: RE-LEASE THE AIR PRESSURE IN THE FUEL TANK AND SEE THAT ALL BURNER CONTROLS ARE CLOSED!

### **MAINTENANCE**

Your HILLERANGE requires no attention other than normal cleaning. A poor or improper flame will usually indicate a dirty burner or clogged generator. In the event the trouble is in the generator, it is best to secure the services of a mechanic familiar with alcehol burners

## **LEAKAGE**

The threaded joints in the HILLE-RANGE are all set up with an excellent heat resistant joint compound, and leaks at these points are extremely rare. The stuffing box on the valve stem is filled with a time tested packing. If leakage occurs at this point and flame appears at the stuffing nut, a ½" open end wrench will quickly tighten the nut, moving the wrench clockwise. If it persists a drop of light oil on the valve stem will lubricate the stem, and once the nut is tightened, no more trouble should occur.

REMEMBER: Water extinguishes burning alcohol. Your priming flame should not be more than three or four inches above the burner. IF IT IS HIGHER YOU ARE

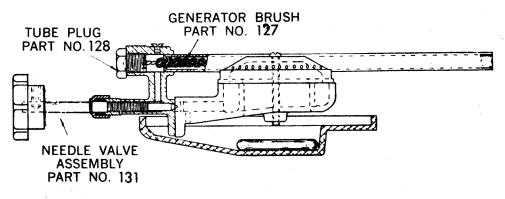
PRIMING TOO MUCH. Releasing the air pressure on the tank always cuts off all fuel flow through piping and burners.

## **CLEANING FUEL TANKS**

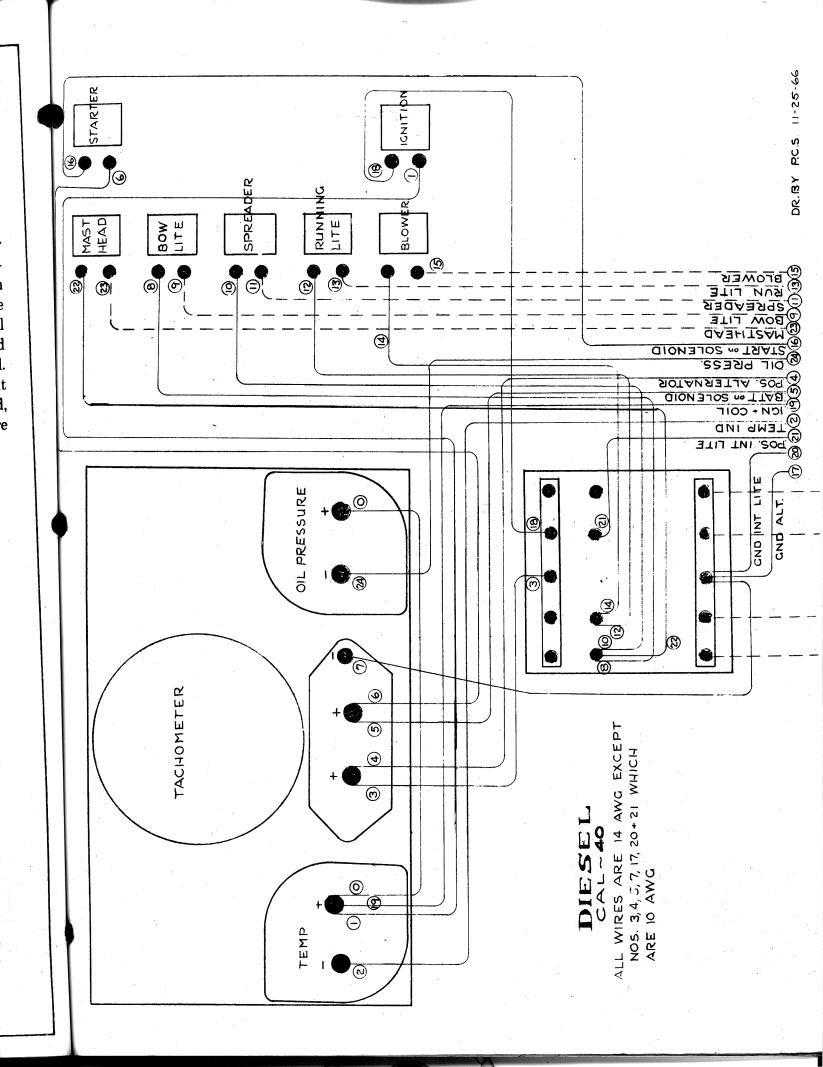
When moisture accumulates in the fuel tank or in the cans kept as storage — the entire mixture should be thrown out. Water or moisture will tend to increase the accumulation of rust, dirt and foreign substances in the tank. These particles, carried to the burner will bake hard in the generator until the passages become completely clogged and the burner and generator must be replaced. It is suggested in cleaning the tank that it be removed from the boat, and dumped, making sure all scale, etc. is removed before replacing.

IN CASE OF FIRE ABOUT BURNERS OR IN OVEN,
DASH WATER ON FLAMES —
THIS IS ALWAYS EFFECTIVE ON AN ALCOHOL FIRE.

# ALCOHOL BURNER REPAIR PARTS



| Order By<br>Part No. | Description  |         |
|----------------------|--|---------|
| 124                  | Burner complete, as illustrated                                  | \$19.00 |
| 128                  | Generator Tube Plug  | .75     |
| 127                  | Generator Brush  | 1.50    |
| 125                  | Generator Tube, with end castings (does not include Part No. 128 | 9.50    |
| 129                  | Burner Casting only  | 3.50    |
| 130                  | Priming Pan  | 3.00    |
| 131                  | Needle Valve Assembly  | 3.50    |
|                      |  |         |



14 × 3/16 SOUTH COAST HOW. @ BALBOX JIB TRACKS 2 × 1/4 MARINE HOW, Ca BOOMTRACK SPIN, POLE TRACK 144×3/16 50' +25' 1/32 (2)50/4 50'5/16 CAL-40 STANDING RIGGING 1 - Headstay -  $\frac{9}{32}$ " lx19 s/s x  $\frac{46!2\frac{1}{4}}{4}$ ", Marine Eye &  $\frac{1}{2}$ " Thd. Shank 1 - Backstay -  $\frac{1}{4}$ " lx19 s/s x  $\frac{49!11}{1}$ ", " " " " " " " OR OPTIONAL 1 - Boom Lift 2 - Uppers 2 - Fwd. Lowers 2012 - Aft. Lowers 2 - Life Lines NOTE: All dimensions are center eye to eye or end of Thd. Shank. 1) Center all Toggles on chainplates with washers. Insulated Backstay has (2) insulators spaced, top to bottom: Regular Backstay - 7'0" to 40'11" to 2'0" = 49'11"

Adj. Backstay - 6'0" to 40'4 7/8" to 2'0" = 48'4 7/8" RUNNING RIGGING - 3/16" 7x19 s/s x 88' Wire Rope SILVER SOLDER RAW END 1 - Main Halyard 1 - Jib Halyard - 3/16" 7x19 s/s x 47' " "
1 - Jib Halyard Tail - 3/8" x 46' Dacron Yacht Braid - 1/2" x 100' " 1 - Main Sheet 11 \$ 60 FOR 180 B 11 72170 CUT-OFF I END WHEN WORN.  $-\frac{1}{2}$ " x 56' 11 2 - Jib Sheets - 5/16" x 6' 1 -- Down Haul 1 - Boom Lift Tackle - 5/16" x 24' " 1 - Out Havi Tackle - 5/16" x 9" 1 - Out Haul Wire - 1/8" 7x19 s/s x 7', Nicopress Thimble each end SPINNAKER GEAR 1/51 - Spinnaker Halyard - 1/2" x 94" Dacron Yacht Braid 75
2 - Spinnaker Sheets 75 - 1/2" x 95" " " " " " 07
1 - Topping Lift - 3/8" x 65' " " " " 105' TO TRIM @ COCKPIT 95 " " @ MAST onie 76 65 15 OK. - 3/8" x 55' " CORNECT FOR THIMING 1 - Fore Guy REEFING GEAR FROM COCKPITS 2- SPIN- SHES 2 - LY SPIN. SHYS × 55 1 - Clew Pennant - 7/16" x 35' Dacron Yacht Braid 1 - Tack Pennant - 3/8" x 19' " " " ROLLER REEFING BOOM 1 - Boom Lift Tackle - 5/16" x 22' Dacron Yacht Braid
1 - Boom Lift Pennant - 1/8" 7x19 s/s x 80', Nicopress Thimble each end
1 - Outhaul Wire - 1/8" 7x19 s/s x 20', " " " " 2- REACHER SHEETS -LIGHT, NO SHACKLE 2- GENOA STAYSAIL SHEET - LEAVE ON SAIL. 3/4 OR 1/6 × 30' CUNNINGHAM - 318" X 24" BRAID TO TRIM @ COCKPIT.

BOOM TUBE - 4'X 75/8" OBROUND X 16'6'4" 132.50 FROM JENSEN

C-40 MAST & STAY DIMENSIONS 2" MOVEMENT @ DECK = 51' (2") = 20.4" MOVEMENT @ HEAD BY SCALING, BACK STAY LENGTHENS APPROX. 1/2 FOR 3' AT HEAD.  $\frac{20''}{60} = \frac{20''}{612''} = \frac{20''}{612''} = .03268$   $d = 1^{\circ} 52/2'$