

# O'Day 222 & O'Day 192

## Operating and Rigging Instructions

**CAUTION: DO NOT BEGIN OPERATING OR RIGGING YOUR BOAT UNTIL YOU HAVE READ ALL OF THE FOLLOWING OPERATING AND RIGGING INSTRUCTIONS THOROUGHLY. ALSO SEE SAFETY INFORMATION SHEET ENCLOSED WITH OWNER'S PACKET.**

### Safety Information

**THE MAST, THE STAYS, AND ALL OTHER PARTS** of O'Day sailboats under 26 feet, following the general boating industry practice, **ARE NOT GROUNDED**. Should your O'Day sailboat be struck by lightning or make contact with electrical power lines, substantial injury or death may result to the occupants, and substantial damage may result to the boat. We recommend that if you wish to attempt to minimize damage resulting from lightning and provide a measure of safety for occupants, that you have your O'Day sailboat grounded by an authorized O'Day dealer or other reputable boat yard in the manner recommended by the American Boat and Yacht Council of Amityville, New York. **NOTE:** That while the grounding system specified by the Council is the most widely accepted lightning protection system known to us, we urge you to avoid exposing yourself to lightning, since no system will provide complete protection to the boat and its occupants in all circumstances. Whether or not your boat is grounded, when lightning is present in your boating area, **DO NOT TOUCH THE MAST, BOOM, STANDING RIGGING, OR OTHER METALLIC OBJECTS. THESE ARE ALL ELECTRICAL CONDUCTORS, WHICH WILL CARRY HIGH VOLTAGE AND CAUSE SEVERE SHOCK, INJURY, OR DEATH.**

The following is a list of standard equipment that comes with your boat.

1. A mast with one set of spreaders.
2. A boom.
3. Flat package containing rudder and tiller.
4. Box of rigging containing main halyard, jib halyard, stays, main sheet, outhaul, jib sheet and reef line.
5. Berth cushions.
6. Sailbag containing mainsail and jib and battens for the mainsail.
7. Penboards that seal off the cabin.

#### Suggested Equipment for Rigging Boat

A medium sized screwdriver, a pair of pliers, and a small roll of tape to cover the cotter pins.

**Optional Equipment** — See your dealer on what is available. Optional equipment comes complete with installation instructions where applicable.

#### Mast

The first step is to remove the plastic cover from the mast and remove all protective padding. Remove the two spreaders which are taped on to the mast. You will notice that these two aluminum tubes, or spreaders, have a hole in one end and a fitting with a slot in the other end. These spreaders should be inserted in the spreader fittings about one-half way up the mast. The long cotter pin should pass through the hole in the spreader and spreader fitting. See Fig. 1.

The upper sidestay passes through the outer spreader end. It rests in the slot. Stainless steel or monel seizing wire should be used to hold the wire in the slot. Tape both the spreader ends and bases well with rigging tape.

Before you step the mast, pull the shackles on the ends of the halyards to the foot of the mast and cleat the other end of the halyards to prevent them from getting out of reach.

#### Stepping the Mast

We recommend that you have assistance in stepping the mast. Open the turnbuckles at ends of the stays to one-half open position. Then, attach the backstay to the stern chainplate with clevis pin and cotter ring. (See Fig. 4), and proceed to attach sidestays, both upper and lower, to the side chainplates. The lower stays that go to the mast tangs located just below the spreader bases attach to the forward part of the chainplate and the upper stays that go over the spreaders attach to the aft part of the chainplate. (See Fig. 2.) Do not attach the headstay yet. A tabernacle is provided on the cabin top for ease in mast stepping. With the

mast in the horizontal position and the main hatch closed, insert the aft mast base tabernacle pin and cotter ring. (See Fig. 3). Next push up and forward on the spar until the mast is in a vertical position. With one person holding the spar, attach the headstay to the forward hole in the stemhead fitting with the clevis pin and cotter ring. (See Fig. 5). Next put the forward pin in the mast tabernacle and secure it with the cotter ring. (See Fig. 3). After all stays are securely attached and the tabernacle pins are in, take the slack out of the rigging and tighten. Try to ensure even pressure upon the mast step/tabernacle pins in a fore & aft direction. With the mast so positioned, the headstay, backstay, and two upper sidestays should be tightened no more than hand tight. The two lower sidestays should be just taut, not hand tight.

**CAUTION: IT IS VERY IMPORTANT THAT YOU DO NOT TIGHTEN THE STAYS TOO MUCH. AS THIS CAN CAUSE DAMAGE TO THE HULL. BE SURE ALL LOCK NUTS ARE SECURELY TIGHTENED BY PLIERS OR A WRENCH AND THEN TAPED TO PREVENT LOOSENING.**

After the stays have been adjusted, insert the cotter pins in the turnbuckle studs. (See Fig. 2). Bend the cotter pins over and securely tape the cotter pins to prevent them from catching on anything.

#### Attaching The Boom To The Mast

Put the gooseneck, which is on the forward end of the boom, into the gooseneck fitting on the mast. (See Fig. 6). Attach with the provided bolt. Secure the aft end of the boom to the topping lift pigtail on the backstay. (See Fig. 4).

#### Mainsheet

Take the free end of the mainsheet, thread it through the upper sheave on the block attached to the triangular plate in the backstay, bring it up through the block on the boom, then back down to the bottom sheave and thru the jam cleat. This type of mainsheet arrangement frees up the cockpit considerably. Tie a figure eight knot in the end of the mainsheet so you won't lose it. (See Fig. 4).

#### To Attach The Rudder

On the stern of the boat are two gudgeons into which are inserted the pintles on the rudder. After the rudder is hung on the transom, insert the rudder lock pin in the hole in the bottom of the top pintle (See Fig. 7). This is to prevent rudder loss.

The rudder can be made to rise (kick up) by releasing the line which is cleated in the clam cleat under the tiller. (See Fig. 7). Be sure to keep the line tight and cleated while sailing or loss of control may result.

#### To Hoist or Raise The Mainsail

To raise the mainsail, insert the battens in their pockets, and then, starting near the gooseneck, feed the foot of the sail clew first into the slot in the boom. The pin in the gooseneck fitting secures the tack of the sail. Draw the foot of the sail out along the boom until the foot is tight. The outhaul line is tied to the clew of the sail and passed aft on the boom through the block on the starboard side of the boom and forward to the boom cleat approx. two thirds of the way forward on the boom (Figs. 4 & 9). The cleat is here to permit the crew to change the tension on the foot of the sail while sailing.

Next, fasten the main halyard to the head of the sail and feed the luff slugs of the sail into the stainless steel mast "gate" located above the gooseneck on the starboard side of the mast. Hoist the sail fully and then cleat the halyard. Then close the mast "gate" and tighten the knurled screw to hold it in place. The sail may then be lowered and furled. (Fig. 9).

#### To Hoist and Operate The Roller Furling Jib

The roller furling jib is designed to give ease of setting and furling of the jib. It is not designed to provide reefing.

The furling drum is pre-wrapped with the furling line at the factory. Ten feet of the total of twenty-five feet should be wrapped in the drum. The drum is attached to the large pad eye aft of the stemhead fitting (See Fig. 5) and the furling line is led aft through the black plastic fairleads to the cockpit. The jib tack should then be attached to the top of the drum with the clevis pin and cotter pin. (Fig. 5). The jib should be in an unfurled (i.e. loose) condition at this time. Attach the supplied sheet to the clew of the jib by looping the middle of the sheet through the clew, leaving two loose ends of seventeen feet each. Run the sheet ends

outside the shrouds and then through the jib lead blocks on each side of the cabin top. Tie a figure 8 knot in the end of each sheet to prevent loss. Next attach the upper swivel unit of the roller furling system to the head of the sail. Be sure the "up" arrow on the swivel unit is pointing up. Next attach the jib halyard to the upper swivel and hoist the jib (Fig. 8). The jib halyard tension should be just slightly greater than the headstay tension. This will allow proper furling of the jib and help prevent the jib tangling with the headstay. The jib can now be furled by pulling on the furling line. Keep light tension on one of the jib sheets while furling. **Be Sure** that both jib sheets are free to run. If there is any resistance stop pulling the furling line. Watch the sail as it is being furled to prevent the sail from wrapping around the forestay as it furls. Furling and unfurling should **always** be done with the boat facing into the wind. To unfurl the jib, first uncleat the furling line and make sure that it is free to run. Face the boat into the wind and pull on the leeward jib sheet until the jib is fully unfurled. Then recleat the furling line

We do recommend that the furling drum and halyard swivel be washed with fresh water every month. We also recommend that the jib be taken down and stowed away if the boat is left for an extended period of time. A furling cover may be installed if the jib is to be left up for extended periods. This will help prevent ultra violet degradation to the sailcloth.

**CAUTION: THE FURLING DRUM AND SWIVEL IS ONLY DESIGNED FOR THE SUPPLIED LAPPER JIB. UNDER NO CIRCUMSTANCES SHOULD A LARGER SAIL BE USED WITH THIS UNIT.**

#### Jiffy Reefing

Your mainsail can be easily reefed as your boat and sail are equipped with jiffy reefing. To reef, release the main halyard slowly until the metal ring located about three feet up the mainsail luff can be hooked into the hook on the starboard side of the gooseneck. Then tighten the halyard again. **CAUTION WHEN THE MAIN HALYARD IS LOWERED, THE BOOM WILL FALL UNLESS RESTRAINED BY THE TOPPING LIFT PIGTAIL ON THE BACKSTAY.** Next, the reefing line, which should be attached to the eye on the starboard side of the boom approx. eighteen inches forward of the aft end of the boom, passed up through the grommet on the leech of the mainsail, down through the block on the port side of the boom and forward to the cleat on the port side of the boom, should be pulled tight. You have now reduced the area of your mainsail by more than 20%. Additional small lines may be used to secure the excess mainsail, by running them through the three small grommets in the middle of the sail and tying them under the boom.

#### Outboard Motor

We recommend a maximum of 15 horsepower with a long shaft. The outboard motor is attached to the outboard motor bracket. We feel that 4-8 hp will be more than adequate.

**CAUTION: BE CAREFUL WHEN TURNING THE RUDDER BLADE AS IT CAN COME IN CONTACT WITH THE PROPELLER.**

#### Trailer

You will need a trailer that will support the complete boat's weight plus 20 per cent which will cover weight of normal gear. It is a good idea to pad all areas of the mast that come in contact with the boat and trailer. All halyards and stays should be securely fastened to the mast while trailering. Also be sure that the boat is securely fastened to the trailer itself. The majority of hull weight should be in the keel support bed of the trailer.

Do not have excessive weight on the two side supports, for ease in hauling and launching, and for proper weight distribution on the hull. When launching your boat you will have to back the trailer into the water and float the boat off. This can easily be done with any average-sloped launching ramp. In salt water, be sure to wash the trailer down immediately to minimize corrosion. If your trailer is equipped with "bearing buddies," be sure to check for sufficient grease.

**NOTE: Trailers rated for gross loads require a 2-inch trailer ball. (I.E., over 2,000 lbs.)**

#### Sink Drain, Cockpit Drain and Centerboard Tube Hose

Be sure to check all connections for water tightness. Hose clamps should be checked at each sailing.

#### Bilge Cover

The bilge cover in the cabin floor located over the keel is provided so that any water in the hull can be pumped out. Be sure to check this area prior to sailing.

#### Centerboard

The fiberglass centerboard is held in the centerboard trunk by a centerboard hanger that holds the board up and is inserted from the bottom of the keel. Should the centerboard need to be removed for replacement, repair, painting, or for pendant renewal, the hanger is easily removed by unscrewing the fastenings that secure it in place on the bottom of the keel. In the forward end of the cockpit there is a centerboard pendant and cleat. To secure the centerboard pendant, simply wrap it around the cleat. Watch the pendant for wear and replace when necessary.

## Boating Safety Act

A Federal Boating Safety Act was passed in 1971 to further encourage safety in boating. Lear Siegler Marine certifies that it reasonably complies with requirements of the Act. There are several specific aspects of the Act new customers should understand.

1. Every O'Day boat has a special numbering system. Numbers are permanently molded into the transom on all models. The first three letters are our manufacturing I.D. Code, the next letter represents the boat model code letter, the next four numbers are the sail, class or hull number; the next letter and number represent the month and year of manufacture; the last two digits represent the model year.
2. Approved life saving devices are required for each crew member on board.
3. Availability of approved fire extinguishers is required on many boats. Customers should consider having an extinguisher even when not required.
4. Recommended horsepower for engines should be complied with for safety and warranty reasons.
5. After dark, boats must be lit in an approved fashion — customers must make provision for this.
6. Lear Siegler Marine is obligated to inform customers of manufacturing defects which may exist in specific boats. Obviously, Lear Siegler Marine cannot do this readily without record of each boat's owner, which is supplied by return of the Warranty Card. The Company strongly urges this Card be returned promptly.

## General Information

The following information is to be used as a guide and if you are not sure or need more help, do not hesitate to call upon us or our dealer.

**Tuning** — Do not overtighten stays as mainsheet tension will dictate tension on headstay. While sailing, the leeward stays will always go slack due to mast bend, stretching, etc., so under no circumstances should you tighten them under sail — all adjustments should be made while at rest with the sails down.

#### Maintenance

**Fiberglass Repairs** — Although fiberglass is a relatively simple material to work with, we urge that you familiarize yourself with the proper procedures in order to insure good results.

The surface color (gel coat) should be cleaned and waxed at least twice a year in order to maintain its luster. The color may fade due to weathering and if ordinary cleaning will not bring the color back, try a regular automotive compound followed up by waxing.

**Sails** — Dry and fold carefully after each use and if used on salt water, wash with fresh water every so often. Fold by stretching out the sail on the lawn or clean surface and starting at foot with person at clew and tack, make one foot to two foot folds by bringing the head down towards you gradually and evenly. Finally, fold from clew to tack or vice versa.

**Preventive Maintenance** — Be sure that the screws and bolts on the tabernacle are periodically checked.

#### • **Woodwork—**

Varnish at least once a year, using any good marine varnish. Teak can be either oiled or varnished. Teak should be oiled at least twice a year to prevent splitting.

**Bottom Paint** — recommended in both fresh and salt water. Follow directions on can — be sure to paint keel and centerboard as well as bottom.

**Leaking** — Should any leaks develop through hardware fastenings, hull and deck joints, etc., these can be easily fixed by applying a good marine sealant.

**Trailer** — Normally, any good marine boat trailer is sufficient that will support the complete boat's weight plus approximately 20 percent which will cover the weight of normal gear.

#### **For The Racer**

The rake of the mast can be changed by adjusting the jib halyard and then re-adjusting the sidestays. In general, a boat will perform better while sailing to windward with some aft rake and better downwind with the mast plumb or slightly raked forward. Races are usually won to weather, so favor more aft rake, if anything.

#### **Sail Set —**

The jib halyard should be taken up so that the tension on the luff, while under sail, should be greater than that of the headstay. The tension on the foot and luff of the mainsail should be such that there are no stress lines or wrinkles in the sail. Apply more tension as the wind increases, which will move the draft forward and decrease heeling moment, etc. In general, the outhaul should be slackened while sailing off the wind in order to create more draft in sail.

**Tell Tales** are an invaluable aid in determining wind direction — 8 inch pieces of yarn tied to sidestays 2 ft. to 4 ft. up from chainplate and a wind pennant on top of mast.

6 inch to 8 inch pieces of yarn taped to luff of jib on both sides every 3 feet or so on bottom half of sail 8 inches back from luff wire are excellent wind-flow guides. If you point too high, weather yarn flutters and if pointing too low, leeward yarn flutters. Both should flow back evenly — remember this only tells you flow pattern for a given jib trim, so trim must be correct for sailing angle.

#### **Manufacturing Changes**

Leir Siegler Marine reserves the right to make specification and design changes. If your boat is different from the enclosed instructions in any way, check with your dealer for correct procedures.

## Glossary

**AFT:** In the neighborhood or direction of the stern.

**BATTEN:** A thin wooden or plastic strip placed in a pocket in the leech of a sail to help hold its form.

**BLOCK:** Pulley consisting of a frame in which is set one or more sheaves or rollers. Ropes are run over these rollers.

**BOOM:** Spar at the foot of the mainsail.

**BOOM VANG:** Tackle secured to the bottom of the boom about 3' aft of the gooseneck. The other block attaches to an eye at the base of the mast. The vang's purpose is to keep the boom steady and horizontal while sailing.

**BOW:** The forward part of a boat.

**CENTERBOARD:** A keel like device that can be hoisted or lowered in a trunk that acts as a keel in shoal draft boats.

**CENTERBOARD PENDANT:** Line used to raise and lower centerboard.

**CHAINPLATES:** Strips of metal fastened to the boat's hull near the deck line to take the stress of stays.

**CLEAT:** A fitting to which ropes are made fast.

**CLEVIS PIN:** A small stainless steel pin that has a hole in one end for a cotter pin and is used to secure stays to chainplates and mast fittings.

**CLEW:** The aftermost lower corner of a sail.

**COCKPIT:** An open area lower than a boat's deck where the occupants sit.

**COTTER PIN:** A straight or circular split metal pin used to hold a clevis pin in place.

**DOWNHAUL:** A device used to tighten the luff of a sail.

**FAIRLEAD:** An eye used to lead line in the direction desired.

**FOOT:** The lower edge of a sail.

**GOOSENECK:** A metal device that secures the boom to the mast.

**GUDGEON:** A metal socket attached to the transom to receive the pintle of the rudder.

**GUNWALES:** The upper edge of a boat's side, where it meets the deck.

**HALYARD:** A line for hoisting (or raising) the sails.

**HEAD:** The upper corner of a sail.

**HEADBOARD:** The fitting at the head of a sail with a hole in it to receive the main halyard.

**HEADSTAY:** The foremost stay on a sailboat. A jib is set on a headstay.

**HULL:** Main body of a boat.

**JIB:** A triangular sail set forward of the mast.

**JIB SNAPS:** Small fittings that are attached to the luff of a jib which secure the jib to the headstay.

**JIBE:** The action of the mainsail when shifting from one side of the boat to the other, when heading down wind.

**LEECH:** The after edge of a sail.

**LEEWARD:** Away from the wind.

**LINE:** The common expression for a rope in use.

**LUFF:** The forward edge of a sail.

**MAINSAIL:** The principal sail on the mainmast.

**MAINSHEET:** The line used to trim a mainsail.

**MAST:** An aluminum tube designed to stand on end so as to support a boom plus one or more sails.

**MASTHEAD:** The top of the mast.

**MASTHEAD FITTING:** The fitting at the top of the mast.

**MAST STEP:** A metal fitting that holds the base of the mast in position.

**OUTHAUL:** A line used to haul the clew of a sail out to the end of the boom.

**PINTLES:** Pins on the forward side of a boat's rudder designed to rest in and pivot on the gudgeons secured to the transom.

**PORT:** The left side of a vessel facing forward.

**REEFING:** To reduce a sail by rolling or folding up part of it.

**RIGGING:** The wire supporting the spars is called standing rigging (stays or shrouds) and the ropes used in setting and trimming sails are known as running rigging (halyards and sheets).

**RUDDER:** A vertical plate attached to the stern of a boat used in steering it.

**SELF RESCUING:** A feature which enables the crew to right and sail away a boat which has capsized.

**SHACKLE:** A U-shaped piece of metal with a pin across the open ends.

**SHEET:** A rope used to trim a sail.

**SHROUD:** Same as a stay.

**SLACK:** The opposite of taut. Slack away or off, to pay out.

**SLOOP:** A one masted vessel with two or more sails.

**SPAR:** A mast, a boom, etc.

**SPREADERS:** Aluminum tubes that project from a mast in a traverse direction in order to keep a stay at proper tension and to help hold the mast erect.

**STARBOARD:** The right side of a boat, facing forward.

**STAY:** A length of wire used to support a spar.

**STEMHEAD FITTING:** The fitting nearest the bow on the deck where the headstay attaches.

**STEP:** To step a mast is to set it in position.

**STERN:** The after part of a boat.

**TABERNACLE:** A fitting designed so that the mast can be lowered when passing under obstructions; also facilitates stepping and unstepping the mast.

**TACK:** The lower forward corner of a sail.

**TILLER:** A piece of wood connected with the rudder head. By this the rudder is moved as desired.

**TOPPING LIFT:** A wire and/or rope that attaches to the top of the mast and fastens to the end of the boom. Its purpose is to hold the end of the boom up when the mainsail is lowered.

**TRIM:** To trim sails. To put them in correct relation to the wind, by means of sheets.

**TRUNK:** A centerboard housing.

**TURNBUCKLE:** A device used to maintain correct tension on rigging.

**WINDWARD:** Toward the wind.

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# O'Day 222 & O'Day 192

