



● A BANGOR PUNTA COMPANY  
848 AIRPORT ROAD, FALL RIVER, MASSACHUSETTS 02722

1971

## Day Sailer, O'Day 15, Javelin and Widgeon

# RIGGING INSTRUCTIONS

The following is a list of parts which come with your boat. (Standard equipment)

1. A long shipping tube containing mast, halyards, stays, two spreaders.
2. A shorter shipping tube containing boom with blocks, mainsheet, jib sheet, and outhaul line. Widgeon mast and boom packaged in same tube.
3. Flat package containing rudder, tiller, owners manual, a boom crutch (Day Sailer or Javelin only)
4. Sailbag containing mainsail and jib sail, if ordered. (The battens for the mainsail will be found in the sailbag.)
5. Forward compartment cover(s) for Day Sailer, Javelin, and Widgeon.

### SUGGESTED EQUIPMENT FOR RIGGING BOAT

You will need a medium-sized screwdriver, a pair of pliers, a small roll of tape.

### MAST

The first step is to remove the two spreaders which are taped onto the mast. You will notice that these two aluminum tubes, or spreaders, have a hole in one end and a slot in the other end. These spreaders should be fastened with clevis pins onto the fittings on either side of the mast about one third up. Open ends of cotter pins after they are in place and tape.

Into each of the slots place a side stay. A small wire will be found in a hole at the slotted end of the spreader. Wrap the wire around the stay as many times as possible which will prevent the stay from jumping out of the slot. This area should then be covered with tape to protect the mainsail when it is blown up against these rough edges.

Before you step the mast, tie a figure 8 knot in the end of each halyard to prevent them from getting out of reach, then pull the shackles on the other end of the halyards to the foot of the mast. This puts the shackles in reach when the mast is stepped.

### STEPPING THE MAST

We recommend that you get assistance in stepping the mast until you are familiar with the stepping procedure. A "tabernacle" is a great help on the Day Sailer and Javelin, as it permits easy one person stepping. This is a slotted mast and the slot side faces the stern when in position to be stepped.

On the Day Sailer, Javelin, and Widgeon, the mast is stepped through an opening in the deck - be sure the base of the mast is properly seated on mast step. Once accomplished, the mast will stay in place, however, on the O'Day 15 the mast steps directly onto the mast step and, therefore, must be held while attaching stays.

Now fasten the sidestays to the chainplates on either side of the hull (the O'Day 15 has a set of lower stays as well as a set of upper stays - attach lowers to forward hole in chainplate and uppers to aft hole). Next fasten headstay to stemhead fitting. Turnbuckles, which permit adjustment, are provided on the lower ends of all stays.

After all stays are attached, take the slack out of the rigging and tighten so that when you hit the wire with an object, it emits a dull "thunk." If you find a stay too long or short, check for proper length or possibly the mast step may have been positioned incorrectly. In the latter case, remove mast and then mast step. Next, step mast on to unattached mast step (be sure to hold mast at all times) and attach stays. When properly set up, mark new position of mast step - finally, unstep mast and screw step in place.

**CAUTION!** It is very important that you do not tighten the stays too much as this can cause damage to the hull.

### ATTACHING BOOM TO MAST

Slip the gooseneck, which is on the forward end of the boom, into the slot on the mast and rest the other end in the boom crutch on the Day Sailer and Javelin - use the main halyard to hold end up on the O'Day 15 and Widgeon.

### MAINSHEET

Day Sailer, Javelin, and Widgeon - take the free end of the mainsheet and thread it through the blocks on the port, then the starboard side on the stern of the boat, and up through the block on the end of the boom, through the block on the center of the boom, and finally, down through the cam action mainsheet cleat which is mounted on the aft end of the centerboard trunk. O'Day 15 is equipped with mid-boom sheeting - attach end with block on it to traveler car and feed other end up through forward block on boom, down through block on traveler car, up through aft block on boom, and finally down to cam action jam cleat. Tie a figure 8 knot in the end of the mainsheet so that you won't lose it.

#### TO ATTACH RUDDER

On the stern of the boat are two gudgeons into which are inserted the pintles on the rudders. Note that on the front of the rudder head between the pintles there is a rudder stop which prevents the rudder from accidentally coming loose. The top of the rudder stop with the rudder in place should rest under gudgeon - if adjustment is necessary, remove the stop and bend so it will bear against pintle. The rudder blade will pivot back, should you hit an underwater object, but the blade should be in the down position while sailing. If the blade works up while sailing, weather helm will increase thereby increasing drag and steering will become less efficient. An aluminum hold-down bolt is provided to keep the blade vertical on the O'Day 15 and Widgeon, which is designed to shear on impact - merely replace. On the Day Sailer and Javelin tighten the blade pivot bolt or wedge blade in down position. Be sure to place the filler over the mainsheet on Day Sailer, Javelin, and Widgeon.

#### CENTERBOARD

Day Sailer, O'Day 15, and Widgeon - the fiberglass centerboard is held in the centerboard trunk with a stainless steel bolt on which it pivots. On the top of the centerboard there are two adjustment pendants - one running forward which exits near the forward top end of the trunk and is used to raise the centerboard, and the second running aft which exits on top of the trunk approximately 1/2 the way aft and is used to lower the centerboard. Watch these pendants for wear and replace when necessary by removing the centerboard bolt and lowering the centerboard out of the trunk. Cleat pendants to maintain proper centerboard position, except do not cleat aft pendant when sailing in shallow water.

Javelin - because the centerboard weighs 50 pounds only, a centerboard raising pendant is provided as the centerboard will lower itself because of its weight.

Should the centerboard bolt leak, it can be tightened - if leaking still persists, seal the bolt with a substance like silicone sealant.

#### TO HOIST OR RAISE MAINSAIL

To raise the mainsail, insert battens and then starting near the gooseneck, feed the foot of the sail, clew first into the slot on the boom. (The Widgeon has a loose footed mainsail and, therefore, the boom does not have a slot - it is held at tack and clew only.) The pin in the gooseneck slips through the tack of the sail to hold it in place. Draw the foot of the sail out along the boom until the foot is tight. The outhaul line should be attached to the clew of the sail, then passed through hole in fitting on end of boom, then cleated on boom cleat which is located approximately 2/3 of the way up on the right side of the boom. The cleat is located here to permit the crew to change the tension on the foot of the sail while sailing. A "block-action outhaul" is a help here as it greatly reduces the friction on the outhaul line. Next, fasten the main halyard to the head of the mainsail and feed the luff of the sail into the mast slot cutout. Hoist the sail fully and cleat it.

#### DOWNHAUL

Tighten the luff of the sail by pulling down on the line attached to the gooseneck and then cleat it to the downhaul cleat. The position of this cleat on the mast may be changed by loosening the two screws, moving cleat, and then tightening screws again.

#### TO HOIST JIB

Fasten all the jib snaps on the luff of the jib to the headstay and attach fitting on the tack to the stemhead fitting. The jib halyard is then attached to the head of the jib just as the mainsail was. Tie the center of the jib sheet to the clew of the jib and run them aft on either side of the mast inside the stay wires, through the blocks mounted on either side of the cockpit, then to the cam action jam cleats on the centerboard trunk.

O'Day 15 - the end of the jib sheet after leading through the block on the track goes aft to the block mounted just forward of traveler and then across boat to jam cleat mounted on side deck. The purpose of the aft block is to provide an aft lead for the crew out on the trapeze while holding the jib sheet. The lead will prevent him from losing his balance and going forward of mast.

Day Sailer, O'Day 15, Javelin - the jib sheet block on track is adjustable fore and aft - position it so that the tension on the foot and leech of the sail is about equal. Move lead forward to help stop leech flutter and aft to help stop foot flutter.

#### OUTBOARD MOTOR

Day Sailer, Javelin, and Widgeon - the transom is reinforced so an engine can be clamped directly to it on either side of rudder. We recommend a pad or transom plates which will prevent engine loss and scarring of fiberglass.

#### ROLLER REEFING

Day Sailer and Javelin only - your mainsail can be easily reefed, as the boat is equipped with a spring loaded gooseneck. First, remove the block in the middle of the boom. Second, release the main halyard but keep it under tension. Third, pull the boom back from the mast so that you can turn it. Fourth, roll the boom clockwise as you or your crew lets off slowly on the halyard. The sail will roll on the boom. Fifth, when you have rolled about 5 or 6 times, you will have reduced your sail area by 1/3. Experience will teach you how much to reef under various conditions. Sixth, lock your boom back into place by letting the boom go forward and tighten up halyard. When reefed, the mainsheet is handled directly from the end of the boom. A "roller reefing claw" is recommended, if you reef a good deal of the time, as it permits the mainsheet to be led in the normal manner instead of from the end of the boom. O'Day 15 can also be reefed, but a reefing claw is a must, and you will need a two-sheave block for mainsheet. To shake out, just reverse procedure.

Widgeon does not have roller reefing.



### FLOTATION

There is sufficient flotation material (in block form) located between the hull and deck to support the crew and normal gear, should the hull and deck compartment take on water through a leak or hull puncture. Be sure to check these areas prior to sailing and pump out any water.

On the Day Sailer and O'Day 15 the cockpit is totally sealed and as long as it remains intact, no leaking should occur, except possibly through inspection/bailing hand-hole covers in the cockpit floor or centerboard bolt. These can be easily resealed.

Javelin and Widgeon - water can enter through the compartment door(s) and mast hole in deck. Be sure gasket on door(s) is working properly and you might consider sealing any voids between mast and deck hole with silicone sealant.

### DRAIN PLUG

Widgeon only - just aft of the centerboard trunk you will find a nylon drain plug. This is provided to drain the bilge when the boat is out of water. Check to see that the plug is securely installed each time before putting your boat in the water.

### CAPSIZING PROCEDURE

Should the boat capsize while sailing, there are a number of steps that should be taken to insure the safety of the boat and crew.

1. Make sure that each occupant has a life jacket on
2. To prevent the boat from turning turtle (upside down), which can occur, put some weight on the centerboard which will help to right the boat.
3. Take down the sails, if sailing under severe condition:
4. Bail out any water in cockpit
5. Remember your boat is equipped with flotation material and it can act as a life preserver.

## GENERAL INFORMATION

The following information is to be used as a general guide and if you are unclear 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. We have an excellent 37-page manual by Ferro which retails for \$3 - we make it available for \$2 which includes handling and postage. If interested, please send a check or money order to us.

The surface color (gelcoat) 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.

**Woodwork** -

**Teak** - be sure to treat with a teak dressing available at marine dealers, which will help prevent splitting and keep it looking like new.

**Mahogany** - varnish at least once a year, using any good marine varnish.

**Iron centerboards and keels** - be sure to paint every year and if rusting persists, check with your O'Day dealer on how to prevent. Definitely recommend that the centerboard be removed each year so you can maintain all of it.

**Bottom paint** - recommended in both fresh and salt water. Follow directions on can - be sure to paint centerboard and keel 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 sealant similar to G. E. Silicone Sealant.

### TRAILER

**Centerboard Model** - Normally any good marine boat trailer is sufficient that will support the complete boat's weight plus say 20 per cent which will cover weight of normal gear.

**Keel Model** - Here, again, you will need a trailer which will support the complete boat's weight plus say 20 per cent which will cover weight of normal gear. You can purchase a flat-bed trailer and simply secure the storage cradle on top of the trailer, or you can have a special frame made up which will hold the boat in the proper position with the keel attached. It is a good idea to support some of the weight of the keel.

A "trailing package" is a great help, as it keeps mast and boom off the boat and makes tying down easier.

## FOR THE RACER

The rake of the mast can be changed by adjusting the headstay turnbuckle and then re-adjusting the sidestays. An "adjustable mast step" gives far more latitude in rake adjustment and is recommended for racing. 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. As an example, many of today's successful sailors carry as much as four feet of aft rake upwind.

Sail set - the jib halyard should be taken up so that the tension on the luff, while under sail, is the same as on 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 movement, etc. - In general, the outhaul should be slacked 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 2 ft. or so on bottom half of sail 6 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.

## GLOSSARY

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

**BATTEN:** A thin wooden 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 (shivs) or rollers. Ropes are run over these rollers.

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

**BOW:** The forward part of the 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:** A flat strip 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 the 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 lines 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 pintles of the rudder.

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

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

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

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

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

**MAINSAIL:** The largest sail.

**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.

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

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

**PINTLES:** A pin 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.

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

**ROLLER REEFING:** A system used to reduce sail area of mainsail in a strong breeze.

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

**SELF-BAILING:** Any water that collects in cockpit will drain out as the cockpit floor is above the waterline.

**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.

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

**TRUNK:** Of a centerboard - the vertical shaft it lifts and lowers.

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