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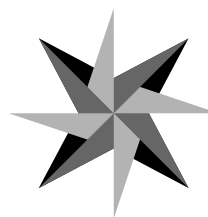
INSTALLATION INSTRUCTIONS AND OWNERS MANUAL

Part # 055000-609, Rev 2, 07/2013

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MJB CONTROL CH2500P



SEASTAR
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*Before you do it your way,
please try it our way.*

Locating and Mounting Control

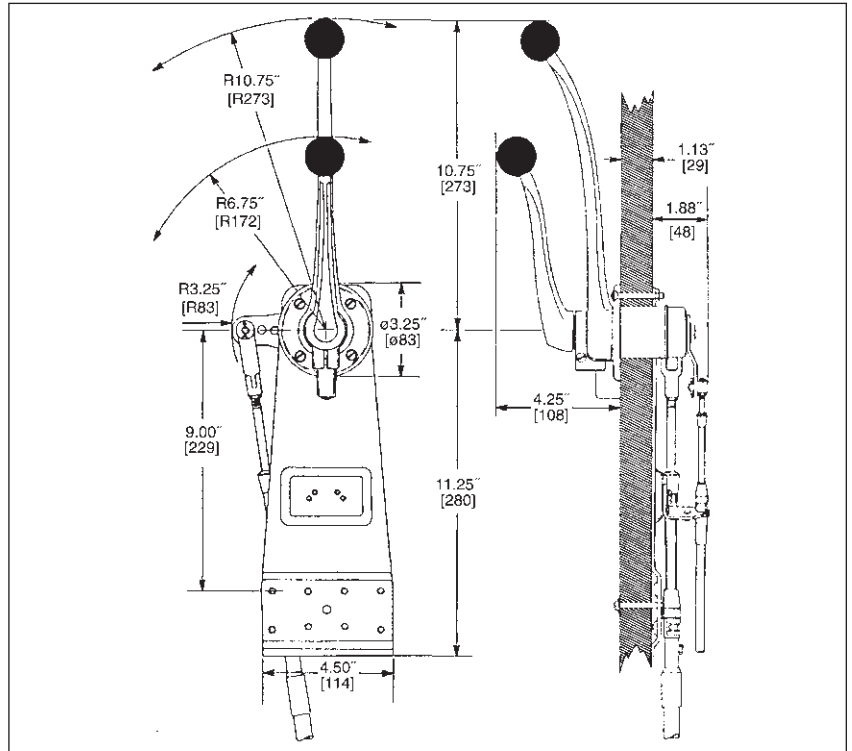


Figure 1.

NOTE: This control can be adapted for either right hand or left hand installation.

STEP 1. Adequate clearance must be provided for the Control Head Hand Levers to move through their full ranges (approximately 90 degrees). See Figure 1.

STEP 2. The location of the control head must allow clearance for full forward and reverse movement of the control hand levers, PLUS adequate space behind the mounting surface for the hanger assembly and an unobstructed path for running the control cables to the propulsion unit.

STEP 3. Cut or drill a 1.88 in. (47.6mm) mounting hole at the control head location. The mounting surface must be 1.13 in. (28.6mm) thick to allow for proper installation and stability of the control head. Shims must be added, if necessary, to achieve this thickness.

STEP 4. Remove the screw (Item #1), lockwasher (Item #2), throttle arm (Item #3), bolt (Item #6), nut (Item #35), clutch arm (Item #5) and nylon bearing (Item #7) from the control head. See exploded view (Figure 3) for location of parts.

STEP 5. Insert the lever and housing assembly into the mounting hole.

STEP 6. Using the housing as a template, drill four .203 in. (5.2mm) holes for the mounting screws.

STEP 7. Using the mounting screws (Item #19) and nuts (Item # 29) provided, secure the housing and hanger plate to the mounting surface in the position which allows the most direct cable path.

STEP 8. The hanger plate should also be secured to the mounting surface by inserting a .25 in. (6.4mm) bolt through the mounting surface and the .266 in. (6.8mm) hole in the hanger plate and tightened securely.

Push-Pull Operation Variations

Although the typical right hand installation has the clutch arm positioned for push-to-go-forward and the throttle arm for pull-to-open, these operations can be changed to meet the individual requirements of the propulsion unit. Any combination of push-pull operations is possible without additional parts.

STEP 1. The clutch may be re-set 180 degrees from the original position. The cables must then be repositioned on the opposite side of the hanger plate (Item #9) by moving the cable clamp (Item #22) to the opposite side of the hanger plate.

STEP 2. Throttle operation can be changed from pull-to-open to push-to-open by rotating the throttle arm 180 degrees. The cable clip must then be repositioned to allow the throttle cable to line up with the cable terminal (Item #31).

Installation of Cables

A. BEND RADIUS. When routing the control cables, select a path with the minimum number of bends, making the bends as large as possible. Sharp or frequent bends will result in difficult throttle or shift control, loss of motion, and premature cable wear. **DO NOT MAKE BENDS OF LESS THAN THE RECOMMENDED MINIMUM BEND RADIUS AS NOTED BELOW.**

Cable Type	Minimum Bend Radius
Standard 3300/33C	8"
Xtreme 3300 Cable	4"
Xtreme 6400 Cable	8"

For best performance, SeaStar Solutions recommends using Xtreme cables with this control.

B. SUPPORTING THE CABLE. Do not tie or clamp the cable within 36 inches of the control. When supporting the cable beyond 36 inches of the control, cables should be loosely clamped or tied for support at regular intervals.

CAUTION

Cables must not be bundled together with electrical wiring.

Cables must not rest on sharp edges which can cause chafing.

C. CABLE ROUTING. Cables shall not be installed in areas of excess heat such as on, or close to, exhaust manifolds where temperatures may exceed 212°F (100°C).

Installation of Clutch Cable

NOTICE

Use 6400 series cable.

STEP 1. Mount the cable to the mounting bracket using the shim (Item #21), cable clamp (Item #22) and screws (Item #23) provided.

NOTE: Ensure that the cable clamp engages the groove in the cable hub properly to assure proper mounting.

STEP 2. Thread the terminal (Item #28) onto the cable rod end until the clevis aligns with the desired hole.

NOTE: The outer hole in the clutch lever arm (Item #5) gives 4.00 in. (101.6mm) of travel, and the middle hole gives 3.00 in. (76.2mm) of travel. Choose the hole that will allow the transmission shift lever to achieve full shift range.

STEP 3. Lubricate the clevis pin (Item #29) and attach the clevis to the proper hole in the clutch lever arm. Secure the clevis pin in place with the cotter pin (Item #31) provided.

STEP 4. Tighten the cable rod nut against the clevis to secure in place.

Installation of Throttle Cable

NOTICE

Use 3300/33C series cable.

STEP 1. Mount the throttle cable mounting bracket (Item #24) to the hanger plate using the screws (Item #25) and lockwashers (Item #26) provided. Refer to exploded view (Figure 3) to determine which holes to use in regard to whether the cable is push-to-open or pull-to-open.

STEP 2. Secure the cable to the mounting bracket as described above for the clutch cable.

STEP 3. Thread the cable terminal (Item #31) onto the cable threaded rod until it aligns with the hole in the throttle lever. Insert and secure with the cotter pin (Item #30) provided.

STEP 4. Tighten the cable rod nut against the terminal to secure in place.

Connect Cables at Engine (Figure 2)

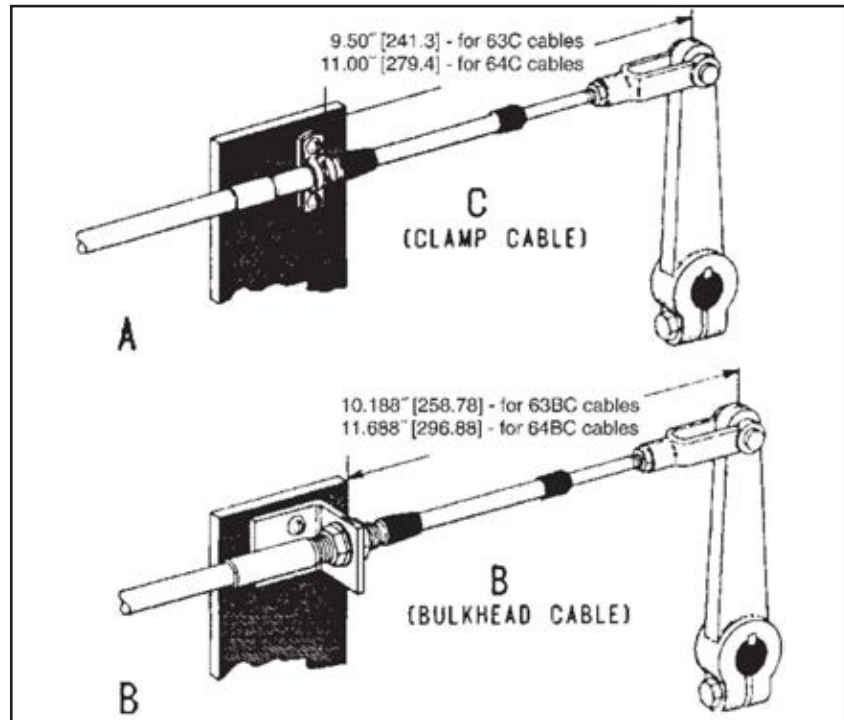


Figure 2.

STEP 1. Instructions covering throttle connection are included in the throttle connection kit.

STEP 2. Instructions covering clutch connection are included in the clutch connection kit.

Final Check and Adjustment

STEP 1. Tighten all the cable supports, screws, nuts and cable terminals.

STEP 2. The control hand levers should operate freely. Any stiffness or binding can usually be traced to:

- Excessive number of bends in the cable.
- Bends smaller than the recommended minimum radius.
- Tight or misaligned linkage on the propulsion unit.
- Cable compressed to tightly by cable supports.

Parts Kits Available

CAUTION

This control must be entirely disassembled and re-assembled to install contents of these kits. Because proper assembly and cable adjustment is so important to the boat's performance, we recommend this conversion be completed by a boat dealer or boat repair facility.

Bearing Replacement Kit CA68012P includes:

Small bearings (2)

Large bearings (2)

Handles Replacement Kit CA68011P includes:

Throttle handle

Clutch handle

Detent/Friction Replacement Kit CA68013P includes:

Throttle brake housing

Clutch detent parts

Hardware Kit #062307 includes:

Clevis for 6400 series cable

Clevis pin

Cotter pins

Pivot for 3300/33C series cable

Clamps to anchor both 3300/33C and 6400 series cables

Ball Knob Kit CA68287P includes:

Red knob

Black knob

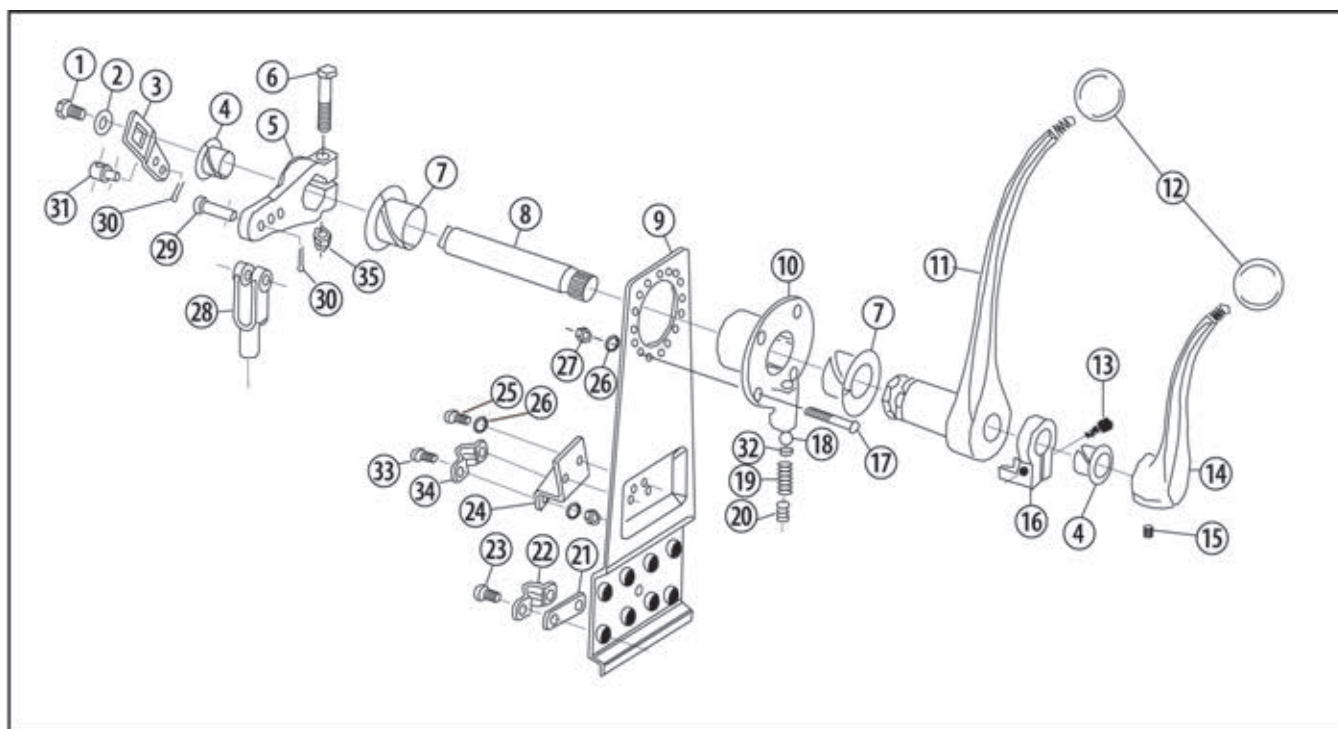


Figure 3.

Maintenance Notes

1. After a few hours of operation and at frequent intervals thereafter, check all fasteners and the complete control system for security and integrity.

DANGER

Loosening or loss of one or more fasteners may cause failure of the control system and could cause property damage, injury, or death.

2. Keep all moving parts free from build-up of salt and other foreign material. This will affect their operation and create control problems.

3. Periodically inspect for corrosion. Any parts affected by corrosion must be replaced. Any replacement hardware must be as originally supplied (i.e. similar material and locking features).

4. Periodically inspect control cables for cracks and other damage. If any is found the cable must be replaced.

5. If cable is stiff in operation, it is unsafe to use and must be replaced immediately.

DANGER

DO NOT cover cracks with tape or other sealants. This will create a hazard in which the cable can fail suddenly without warning, resulting in property damage, injury, or death.

NOTICE

Boat builder and boat dealer, please supply these Installation Instructions and Owner's Manual with the delivery of boat. Boat owner keep these instructions with your boat for future reference. Boat owner consult with your boat builder, boat dealer, or SeaStar Solutions if you have any questions regarding these instructions.

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