



IMPORTANT INFORMATION

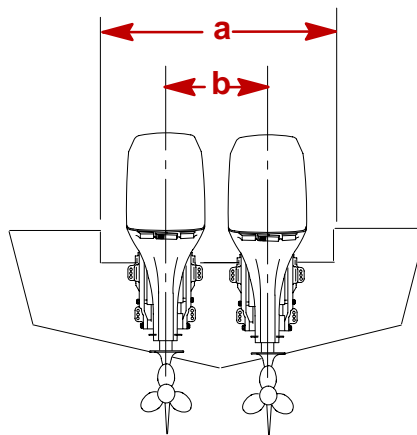
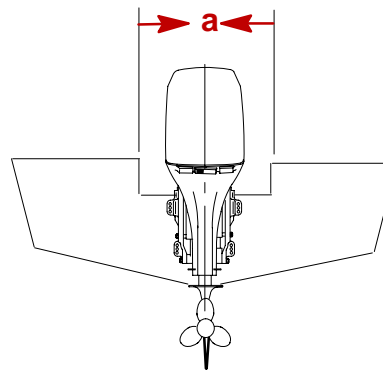
Section 1D - Outboard Motor Installation

**1
D**

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Installation Specifications


a – Transom Opening – Minimum

Single Engine (Remote) – 19 in. (483 mm)

Single Engine (Tiller) – 30 in. (762 mm)

Dual Engines – 40 in. (1016 mm)

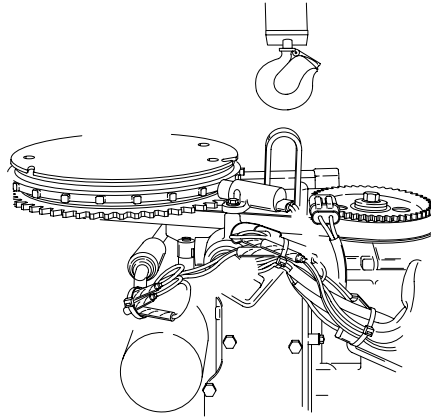
b – Engine Center Line For Dual Engine

26 in. (660 mm) Minimum



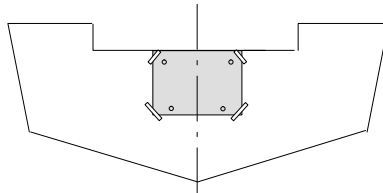
Lifting Outboard

1. Use lifting eye on engine.

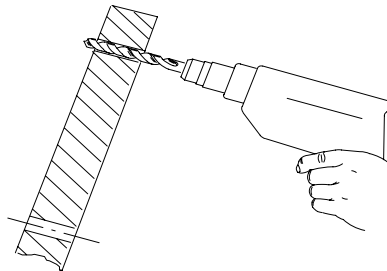


Installing Outboard – Non Thumb Screw Models

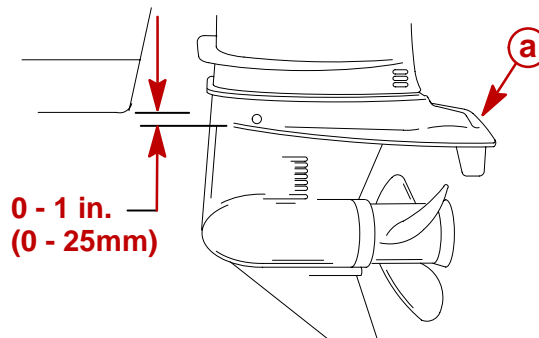
1. Attach (tape) engine mounting template (located in installation manual P/N 90-10184000) to boat transom.



2. Mark and drill four 17/32 in. (13.5mm) mounting holes.



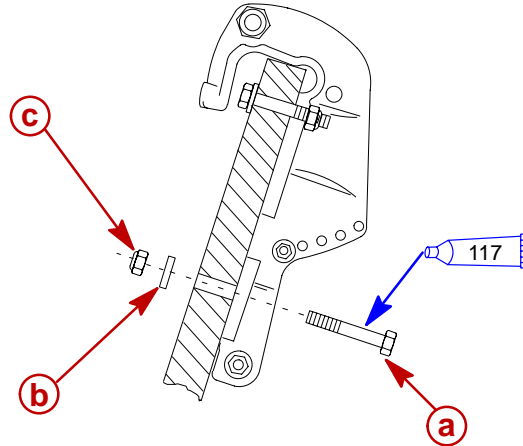
3. Install the outboard so that the anti-ventilation plate is in line or within 1 in. (25 mm) below the bottom of the boat.

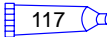


a - Anti-Ventilation Plate



4. Fasten outboard with provided mounting hardware shown. Apply RTV 587 Silicone Sealer to shanks of bolts, not threads.



 RTV 587 Silicone Sealer

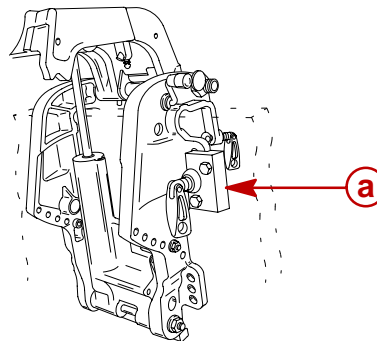
- a** - 1/2 in. Diameter Bolts (4)
- b** - Flat Washers (4)
- c** - Locknuts (4)

Installing Outboard – Thumb Screw Models

WARNING

Outboard must be fastened to boat transom one of two ways: 1. permanently fastened to transom with thumb screws, and mounting bolts (provided), or 2. secured to the transom using the optional outboard mounting kit (shown below). Should the outboard strike an underwater object or be steered into a sharp turn, failure to fasten outboard correctly to the boat transom with mounting bolts or optional mounting kit could result in outboard ejecting suddenly off boat transom causing serious injury, death, boat damage, or loss of outboard.

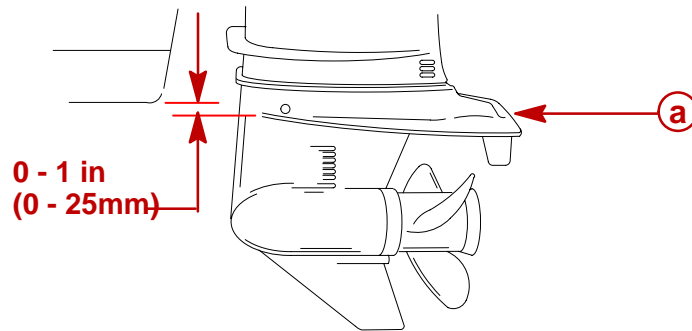
1. Optional outboard mounting kits shown, must be used if outboard will not be permanently fastened to the transom with mounting bolts.



- a** - Outboard Mounting Kit Part No. 812432A4

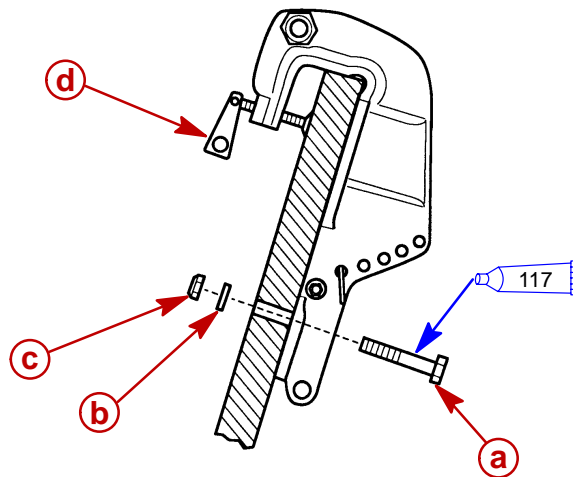


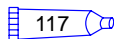
- Center outboard on the transom.
- Install the outboard so that the anti-ventilation plate is in line or within 1 in. (25 mm) below the bottom of the boat.



a - Anti-Ventilation Plate

- Fasten outboard with provided mounting hardware shown. Apply RTV 587 Silicone Sealer to shanks of bolts, not threads.



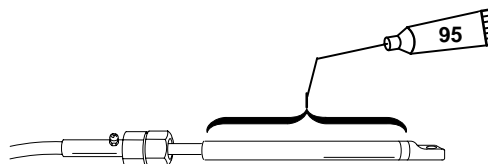
 RTV 587 Silicone Sealer

- a** - 1/2 in. Diameter Bolts (2)
- b** - Flat Washers
- c** - Locknuts
- d** - Thumb Screws - Tighten Securely

Steering Cable

STARBOARD SIDE ROUTED CABLE

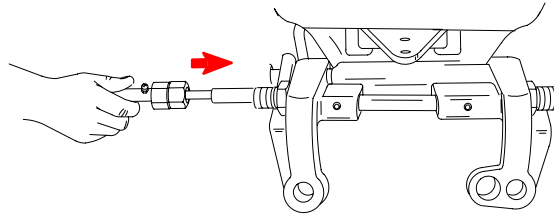
- Lubricate the entire cable end.



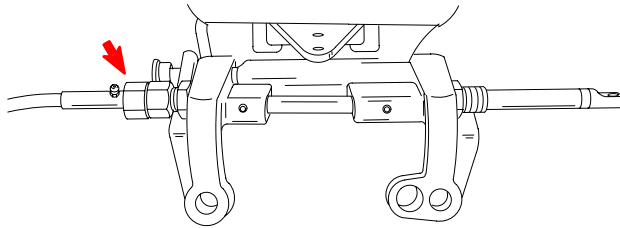
 2-4-C Marine Lubricant with Teflon



2. Insert steering cable into tilt tube.



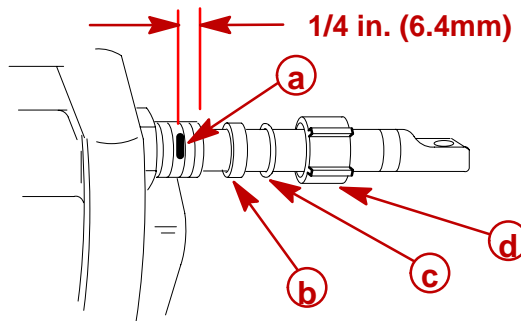
3. Tighten nuts to the specified torque.



Steering Cable Nut Torque
35 lb. ft. (47.5 N-m)

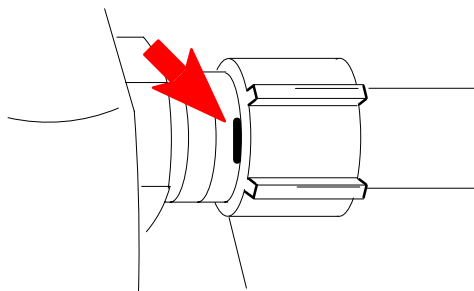
Steering Cable Seal

1. Mark tilt tube 1/4 in. (6.4 mm) from end. Install seal components.



- a** - 1/4 in. (6.4 mm) Mark
- b** - Plastic Spacer
- c** - O-Ring Seal
- d** - Cap

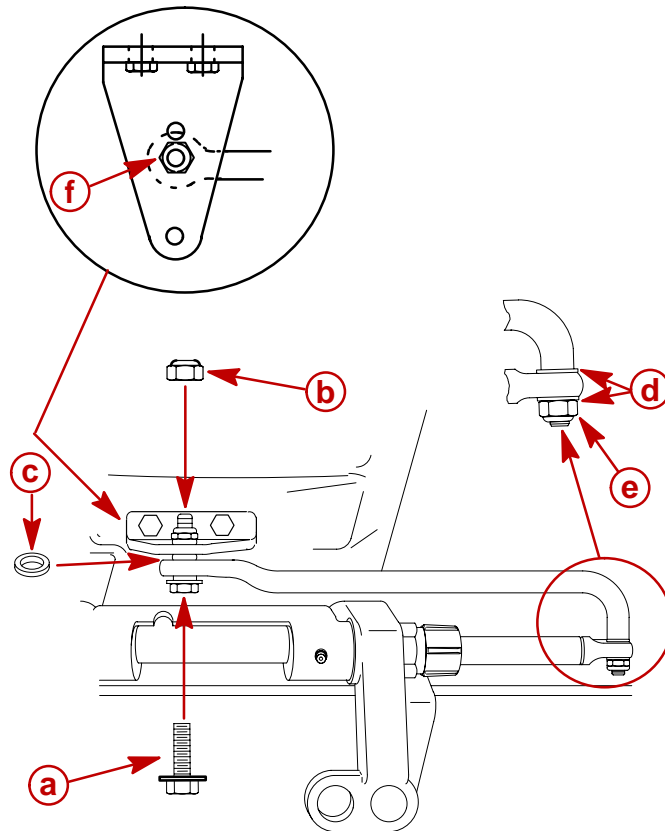
2. Thread cap to the mark.





Steering Link Rod

1. Install steering link rod per illustration.



- a** - Special Bolt (10-823919)
- b** - Nylon Insert Locknut (11-826709113)
- c** - Spacer (12-71970)
- d** - Flat Washer (2)
- e** - Nylon Insert Locknut (11-826709113)
- f** - Use Middle Hole

(a) Special Bolt Torque
20 lb. ft. (27 N·m)
(b) Nylon Insert Locknut Torque
20 lb. ft. (27 N·m)
(e) Nylon Insert Locknut Torque
Tighten Until It Seats, Then Back Nut Off 1/4 Turn

IMPORTANT: The steering link rod that connects the steering cable to the engine must be fastened using special bolt (“a” - P/N 10-823919) and self locking nuts (“b” & “e” - P/N 11-826709113). These locknuts must never be replaced with common nuts (non locking) as they will work loose and vibrate off, freeing the link rod to disengage.

⚠ WARNING

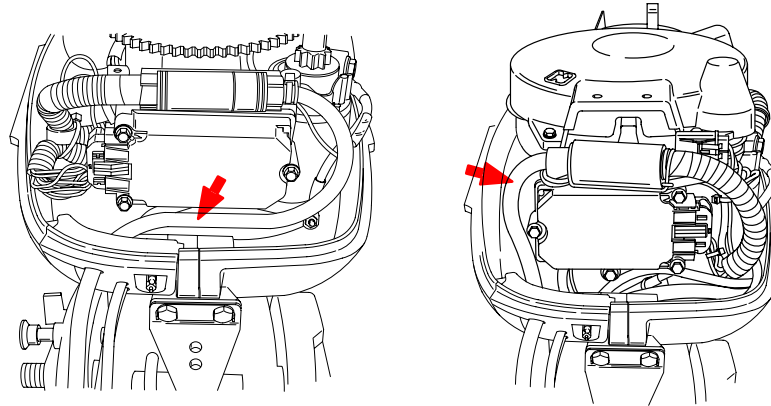
Disengagement of a steering link rod can result in the boat taking a full, sudden, sharp turn. This potentially violent action can cause occupants to be thrown overboard exposing them to serious injury or death.



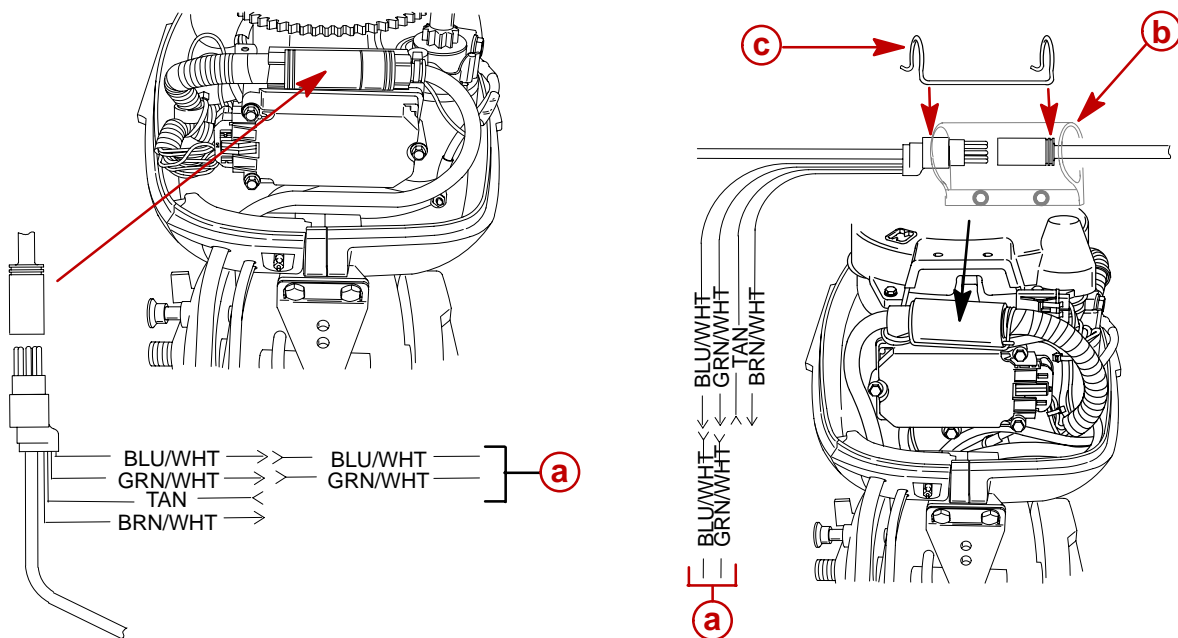
Wiring Harness

IMPORTANT: Warning Horn Requirement – The remote control or key switch assembly must be wired with a warning horn. This warning horn is used with the engine warning system.

1. Route wiring harness into bottom cowl.



2. Connect wiring. Push the wiring harness connectors together inside the rubber sleeve. Push the retainer over the exposed ends of the connectors. This will hold the connectors together.

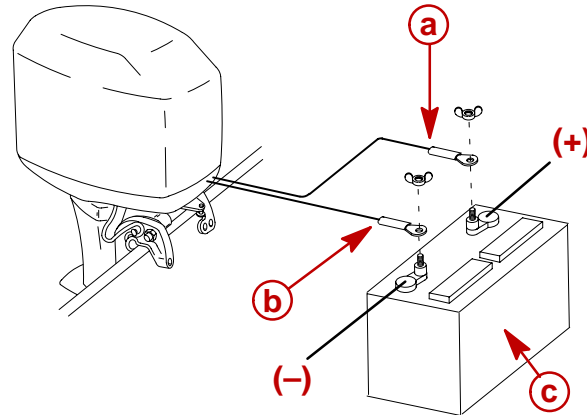


- a** - Power Trim Connections
- b** - Rubber Sleeve (25 hp) – Place Harness Connectors Inside
- c** - Retainer (25 hp) – Push Over Connector Ends



Battery Cable Connections

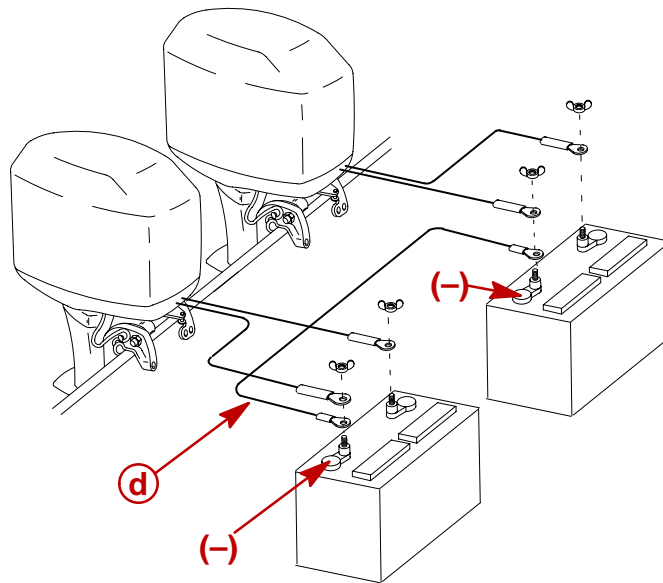
SINGLE OUTBOARD



- a** - Red Sleeve (Positive)
- b** - Black Sleeve (Negative)
- c** - Starting Battery

DUAL OUTBOARD

1. Connect a common ground cable (wire size same as engine battery cables) between negative (-) terminals on starting batteries.



- d** - Ground Cable (Same Wire Size As Engine Battery Cable) – Connect Between Negative (-) Terminals



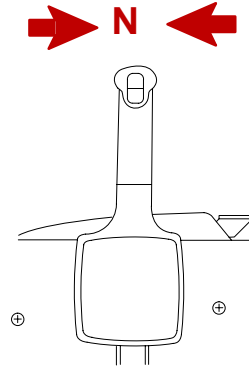
Shift and Throttle Cable

Install cables into the remote control following the instructions provided with the remote control.

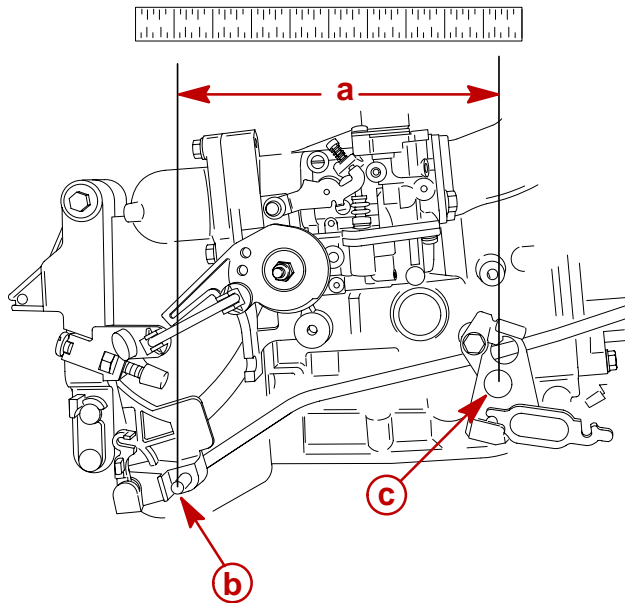
NOTE: Install the shift cable to the engine first. The shift cable is the first cable to move when the remote control handle is moved out of neutral.

Shift Cable Installation

1. Position remote control into neutral.



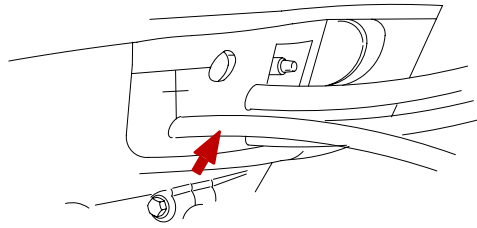
2. Shift outboard into neutral.
3. Measure the distance between pin and center of lower hole.



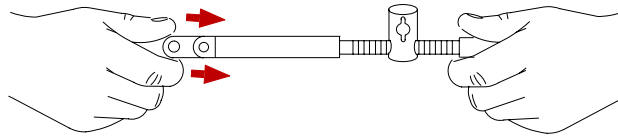
- a** - Distance Between Pin And Center of Lower Hole
- b** - Pin
- c** - Lower Hole



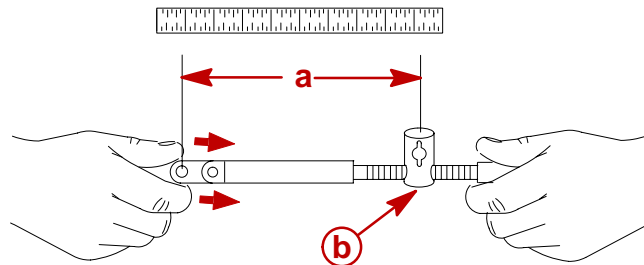
- Fit shift cable through rubber grommet.



- Push in on the cable end until resistance is felt.

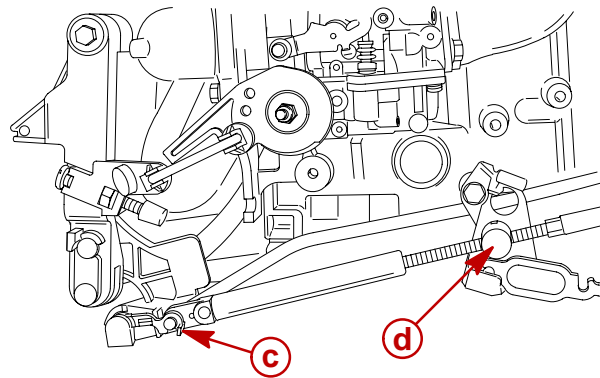


- While pushing in on the cable end, adjust the cable barrel to attain the measured distance taken in Step 3.



- a** - Adjust Cable Barrel To Attain The Measured Distance Taken In Step 3
- b** - Cable Barrel

- Place cable barrel into the barrel holder. Fasten cable with retainer.



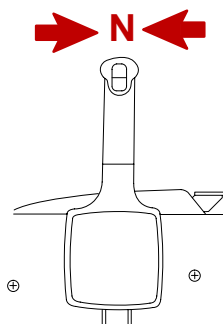
- c** - Place Barrel Into Barrel Holder
- d** - Retainer



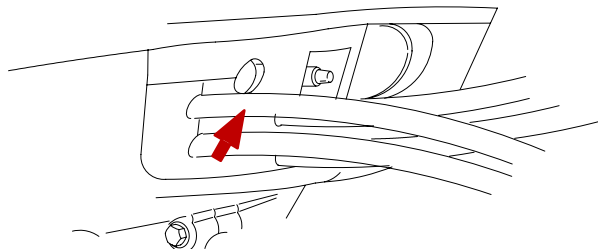
8. Check shift cable adjustments as follows:
 - a. Shift remote control into forward. The propeller shaft should be locked in gear. If not, adjust the barrel closer to the cable end.
 - b. Shift remote control into neutral. The propeller shaft should turn freely without drag. If not, adjust the barrel away from the cable end. Repeat steps a and b.
 - c. Shift remote control into reverse while turning propeller. The propeller shaft should be locked in gear. If not, adjust the barrel away from the cable end. Repeat steps a through c.
 - d. Shift remote control back to neutral. The propeller shaft should turn freely without drag. If not, adjust the barrel closer to the cable end. Repeat steps a through d.

Throttle Cable Installation

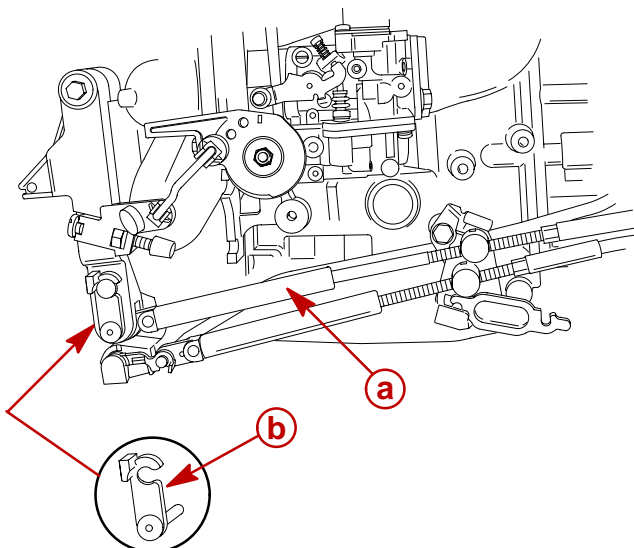
1. Position remote control into neutral.



2. Fit throttle cable through rubber grommet.



3. Install throttle cable with retainer pin. Lock retainer pin in place.

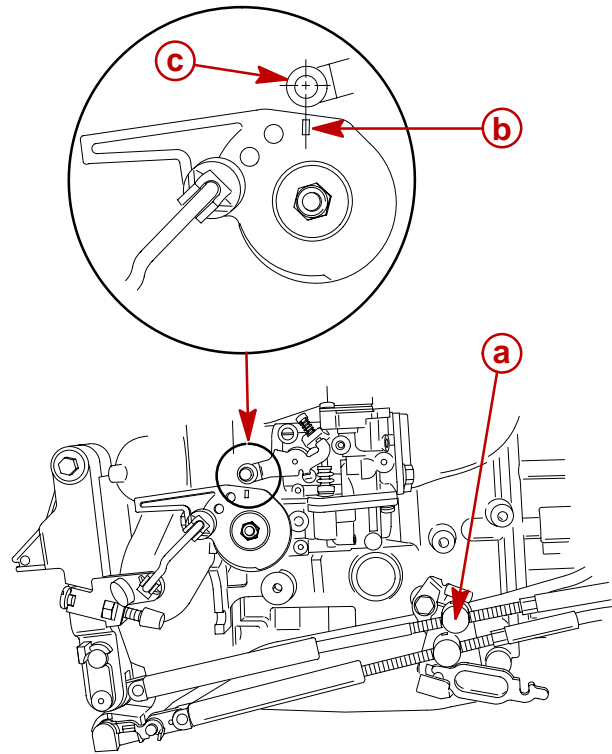


a - Throttle Cable

b - Retainer Pin

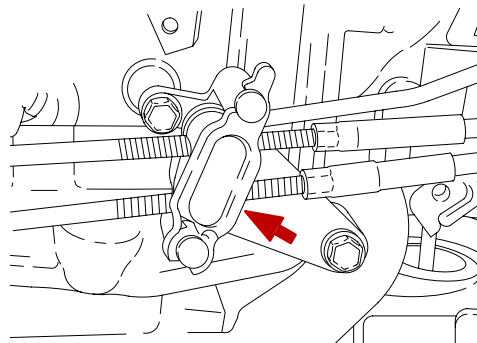


- Adjust cable barrel until the alignment mark on the cam lines up with center of the roller.



- a** - Cable Barrel
- b** - Alignment Mark
- c** - Roller

- Fasten control cables with the cable latch.



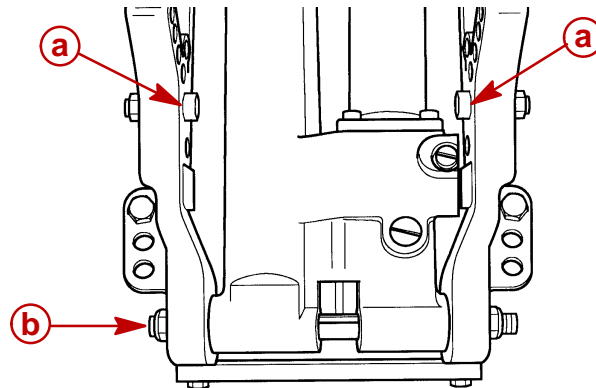
IMPORTANT: After installation, move the remote control handle a few times from the neutral position to the wide-open-throttle position in forward gear. Check for the specified gap between the oval shaped boss and the throttle cam. If necessary, readjust the barrel.



Trim-In Stop Adjustment – Power Trim Models

If an adjustment is required to the the trim-in stop, reposition the tilt stop pins as follows:

1. Lock the outboard in the full tilt position.
2. Remove bottom pivot pin.
3. Swing the power trim system outward to gain access to the tilt stop pins. Reposition the tilt stop pins in the desired holes.
4. Reinstall the bottom pivot pin. Tighten nuts to the specified torque.



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- a - Tilt Stop Pins
- b - Bottom Pivot Pin

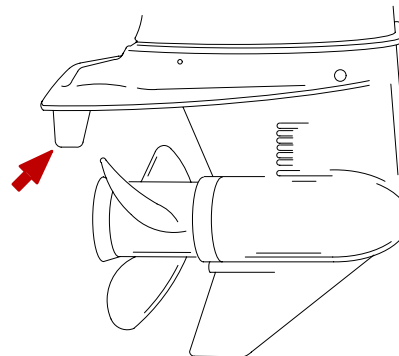
Bottom Pivot Pin Nut Torque
18 lb. ft. (24.5 N-m)

Trim Tab Adjustment

The trim tab can be adjusted within limits to help to compensate for steering torque.

Adjust trim tab as follows:

1. If boat tends to pull to the right, move the rear edge of the trim tab to the right.
2. If boat tends to pull to the left, move the rear edge of the trim tab to the left.



NOTE: Trim tab adjustment will have little effect reducing steering torque if the the anti-ventilation plate is raised 2 inches (50mm) or more above the boat bottom.