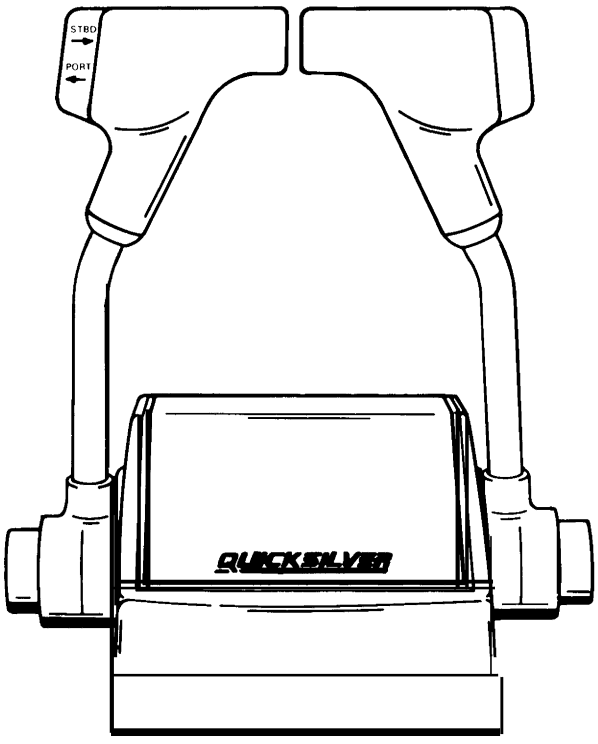
QUICKSILVER®
MARINE PARTS AND ACCESSORIES

88688A22 DUAL HANDLE TRIM CONTROL INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

NOTICE to INSTALLER

After Completing Installation, These Instructions Should Be Placed with the Product For the Owner's Future Use.



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Notice

Throughout this publication, and on your motor, DANGER, WARNINGS and CAUTIONS (accompanied by the international HAZARD Symbol ⚠) may be used to alert the installer/ user to special instructions concerning a particular service or operation that may be hazardous if performed incorrectly or carelessly. OBSERVE THEM CAREFULLY!

These "Safety Alerts" alone cannot eliminate the hazards that they signal. Strict compliance to these special instructions when performing the service, plus "common sense" operation, are major accident prevention measures.

⚠DANGER

DANGER - **Immediate hazards which WILL result in severe personal injury or death.**

⚠WARNING

WARNING - Hazards or unsafe practices which COULD result in severe personal injury or death.

⚠CAUTION

CAUTION - Hazards or unsafe practices which could result minor personal injury or product or property damage.

IMPORTANT: - Indicates information or instructions that are necessary for proper operation and/or maintenance.

Maintenance and Replacement Parts

Maintenance and safety instructions are owner's responsibility and must be performed at intervals specified, following:

Normal Service - Every 50 hrs. of operation or 60 days (whichever comes first)

***Severe Service - Every 25 hrs. of operation or 30 days (whichever comes first)**

*Operation in a salt water area is considered "Severe Service."

1. Check fasteners, which secure remote control to boat, to be sure that they are tight.
2. Check set screws, which secure control handles to remote control, to ensure they are torqued to 60 lb. in. (7 N.m.)
3. Check electrical connections to be sure that they are tight, and that harness is properly secured and kept away from bilge water.
4. Inspection and lubrication of remote control assembly should be performed once each year (by your authorized dealer), or whenever remote control is disassembled, or if control operating effort has increased. Lubricate with Quicksilver 2-4-C Marine Lubricant or equivalent.
5. Quicksilver throttle and shift control cables recommended for use in this remote control.

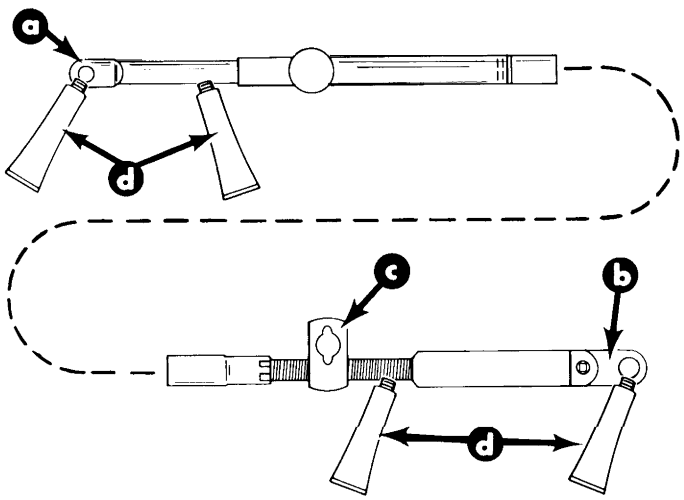
Selecting Remote Control Cables

Refer to outboard "Quicksilver Dealers' Guide" to determine correct length of control cables.

IMPORTANT: Remote control cables MUST BE THE CORRECT LENGTH, sharp bends on too-short cables result in "kinks"; too-long cables require unnecessary bends and/or loops. Both conditions place extra stress on the cables.

IMPORTANT: Check throttle and shift cables BEFORE installing in control modules to ensure that set screws in cable end guides are tight. Torque cable end guide set screws to 20 to 25 lbs. in. (2.3 to 2.8 N.m.)

Shift Cable/Throttle Cable Lubrication Points Use Quicksilver 2-4-C Marine Lubricant.



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a - Remote Control End
b - Engine End
c - Adjusting Barrel
d - Lubricant

Introduction

This console mount control provides complete one hand operation of the shift and throttle control. The control is equipped with a neutral start switch which must be connected to prevent accidental in-gear starting. The shift and throttle cables are not supplied with control; order cables separately after position of control is determined.

Quicksilver throttle and shift control cables are recommended for use in this remote control.

These installation instructions provide complete information for installing the remote control. Please read them carefully and thoroughly before starting installation.

Installation

1. Determine position of remote control, refer to remote control mounting.

⚠WARNING

If control handles are removed and reinstalled for any reason. The set screw in handle must be retorqued to 60 lbs. in. (7 N.m.) Failure to tighten screw securely could allow control handle to disengage with subsequent loss of throttle and shift control.

2. Install control cables to remote control. Refer to correct cable installation procedure in this manual. Note that cable installation is different, depending on which side the control will be installed. On some boat installations, it may be helpful to first make the cutout for remote control (using the attached template) and routing the control cables thru the boat before installing cables to control.
3. Mount the remote control following instructions. Make remote control wiring connections following "Wiring Diagram."
4. Install and adjust shift and throttle cables to power package following instructions which accompany the power package or refer to the Product Service Manual.
5. Final Checks and Adjustments.
   a. Re-check tightness of control handle set screw. Set screw should be torqued to 60 lb in. (7 N.m.)
   b. Before remote control is securely fastened, make sure parts are in place. Check to see that control cables are routed correctly.

⚠CAUTION

Do not try to shift remote control into "Reverse" on outboard installations when outboard is not running. Forcing the shift mechanism into reverse may damage the mechanism.

   c. Operate control handle several times (see "Caution" preceding.) Adjust control handle friction adjustment screw to desired tension. Any binding or stiffness in the operation of the control handle is usually caused by the following.
      1 - Bend or tension on control cables, close to the control.
      2 - Excessive number of bends in cables.
      3 - Bends are too small in cables.
      4 - Tight engine linkage.
   d. Adjust the control handle detent adjustment screw to desired tension.
   e. Check operation of neutral start switch. Engine must only be able to start when control handle is in neutral position. Make sure water intake in lower unit is in water when starting engine.

Port Side Control Module Cable Installation

All Outboards thru 250 (3 Litre)

IMPORTANT: Control modules are stamped port and starboard and control cables must be installed accordingly.

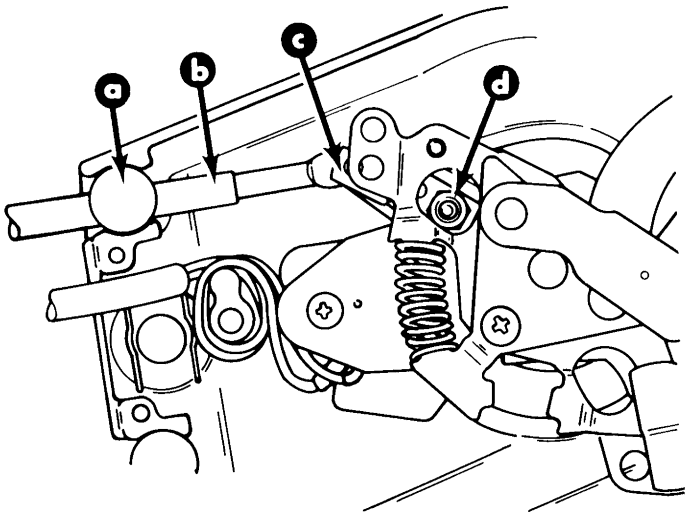
IMPORTANT: Port Control module is to be connected to port engine and is assembled to attach to a counter rotating engine.

If installing port module to a standard rotation engine, control module shift cable fastener must be changed.

⚠CAUTION

Before tightening cable fastener locknut, be sure that pin (one end of cable fastener) is completely thru cable end and shift/throttle lever. A pin, that is partially thru cable end and lever, may cause fastener to bend when nut is tightened.

SHIFT CABLE (Counter Rotation Engine)



a - Shift Anchor Barrel
b - Shift Cable
c - Cable Fastener
d - Cable Fastener Locknut

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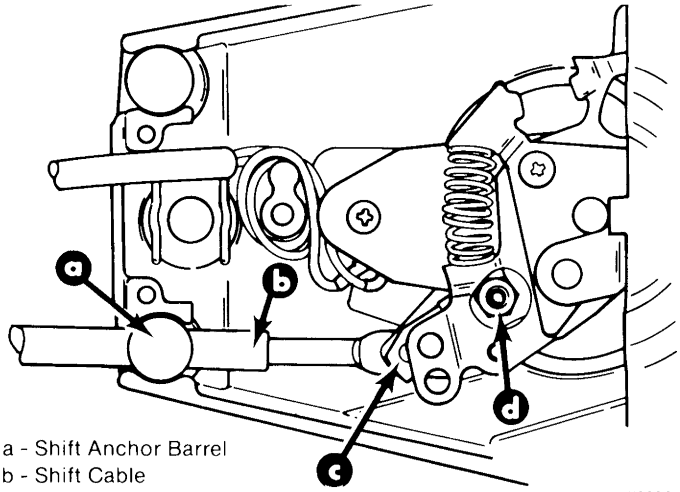
SHIFT CABLE (Standard Rotation Engine)



a - Shift Anchor Barrel
b - Shift Cable
c - Cable Fastener
d - Cable Fastener Locknut

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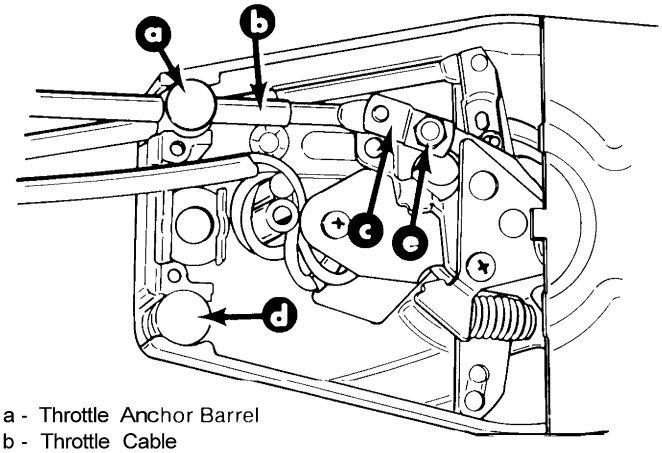
Torque shift cable fastener locknut to 20-25 lbs. in. **(2.3** to 2.8 N.m.)

THROTTLE CABLE (Standard or Counter Rotation)



a - Throttle Anchor Barrel
b - Throttle Cable
c - Cable Fastener
d - Spacers (From Parts Bag)
e - Cable Fastener Locknut

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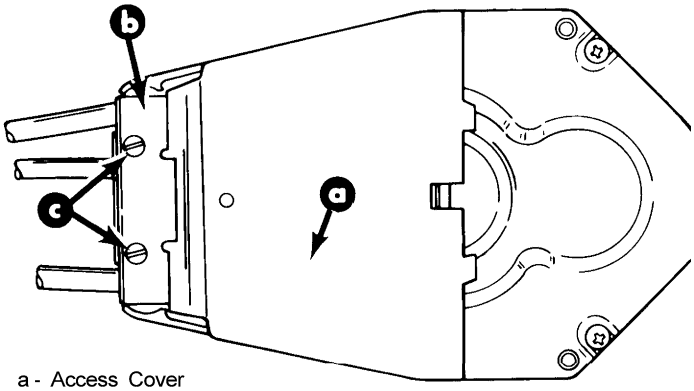
Torque throttle cable fastener locknut to 20 to 25 lbs. in. (2.3 to 2.8 N.m.)



a - Access Cover
b - Cable Retainer
c - Screws

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Position access cover and cable retainer onto back side of control and secure both to control with 2 screws. Torque screws to 60 lbs. in. (7 N.m.)

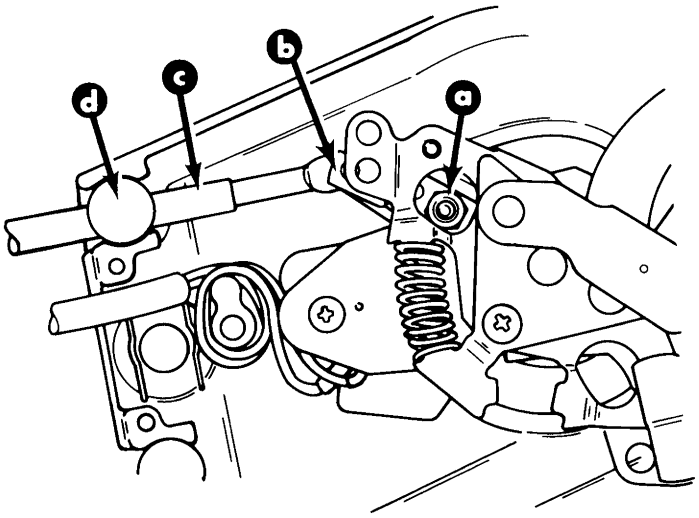
Starboard Side Control Module Cable Installation

All Outboards thru 250 (3 Litre)

⚠CAUTION

Before tightening cable fastener locknut, be sure that pin (on end of cable fastener) is completely thru cable end and shift/throttle lever. A pin, which is partially thru cable and lever, may cause fastener to bend when locknut is tightened.

Shift Cable



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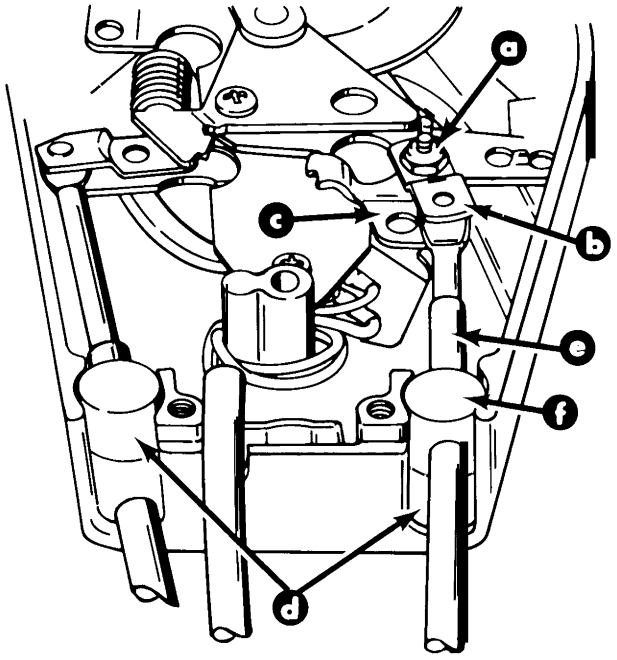
a - Cable Fastener Locknut
b - Cable Fastener
c - Shift Cable
d - Cable Anchor Barrel

Torque shift cable fastener locknut to 20 to 25 lbs. in. (2.3 to 2.8 N.m.)

Throttle Cable



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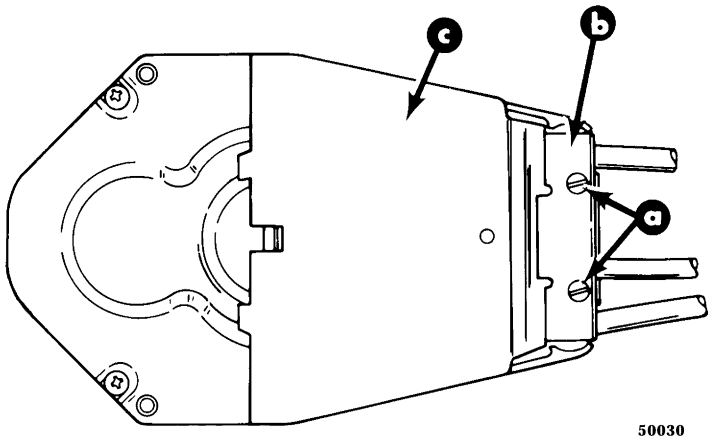
a - Cable Fastener Locknut
b - Cable Fastener
c - Throttle Lever
d - Spacers (From Parts Bag)
e - Throttle Cable
f - Cable Anchor Barrel

Torque throttle cable fastener locknut to 20 to 25 lbs. in. (2.3 to 2.8 N.m.)



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a - Screws
b - Cable Retainer
c - Access Cover

Position access cover and cable retainer onto back side of control and secure both using 2 screws. Torque screws to 60 lbs. in. (7 N.m.)

Remote Control Mounting

⚠CAUTION

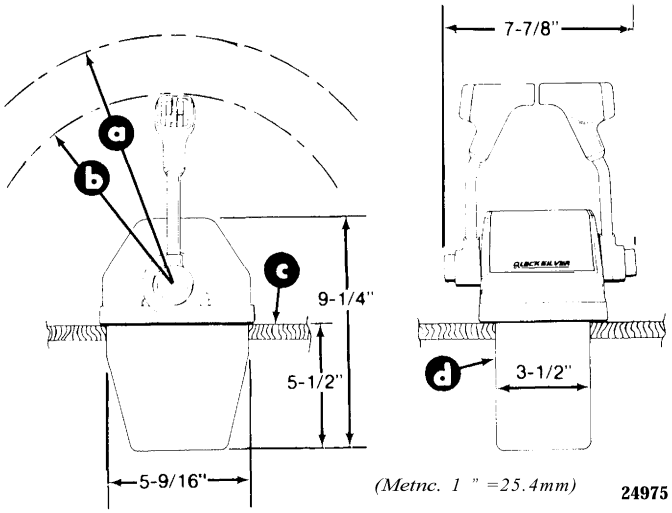
This trim control can be connected only to Power Trims that are equipped with a 2-solenoid trim pump. If Power Trim is equipped with only one solenoid, a Trim Solenoid Kit must be purchased and installed on Power Trim pump.

Locating and Drilling Mounting Area for Remote Control

⚠CAUTION

Area directly under control must be free of obstructions (bulkhead, braces, etc.) Cables always must protrude from rear of control, extending straight-down and parallel to each other. Radius (at point where cables are routed toward stern of boat) must not be less than 12" (30.5cm). This will prevent placing a load or bind on control cables that would result in hard shifting or binding throttle action.

1. Locate area where control will be mounted in boat. Be sure to allow sufficient clearance for control handles when they are in full forward and full reverse position.
2. Place Template (provided on last page) over area where control is to be mounted.
3. Cut and drill mounting area as indicated on template.

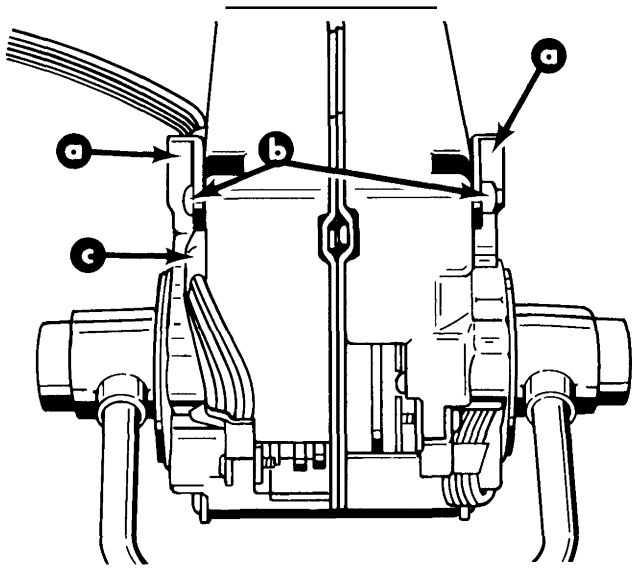


a - 9-3/8 in. (24.45cm) Radius Provides 2 in. (51mm) Hand Clearance
b - 7-3/8 in. (19.37cm) Radius Maximum Travel Available
c - Mounting Surface
d - Dual Console Control

Clearance Requirements

Mounting Control

1. Place control modules back-to-back, then position a mounting bracket onto each module and secure brackets and modules together with two 4 in. (10.2cm) screws and locknuts. Do not tighten locknuts securely at this time).



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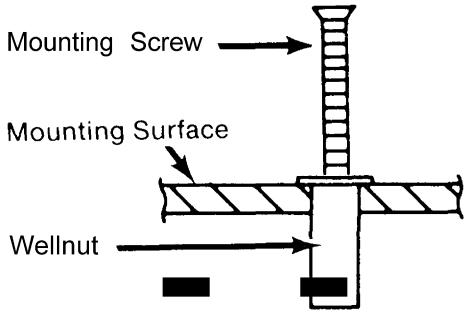
a - Mounting Brackets
b - Screws and Locknuts
c - Plastic Sleeve

Mounting Brackets Installed on Control Modules

2. Insert wellnut fasteners into drilled holes with flange against the outer surface.

NOTE: It may be helpful to thread a mounting screw into wellnut when inserting into drilled hole.

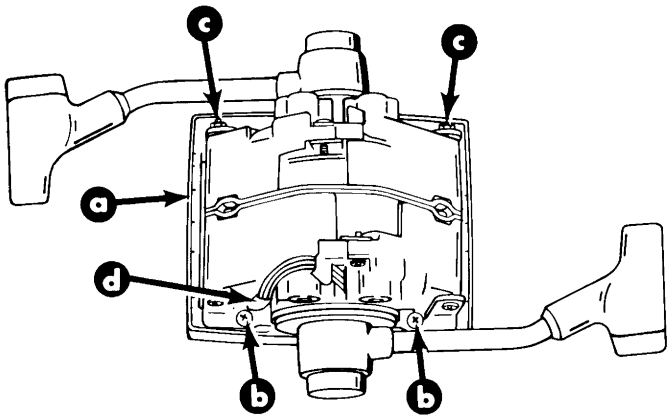


3. Feed control cables, neutral start safety switch wiring harnesses and trim harness thru control base and opening in mounting panel (cut previously) and set control in position.

⚠WARNING

Trim wiring harness must be positioned with plastic sleeves (on harness) at the exact location shown to keep harnesses from being pinched or cut by mounting brackets.

4. Position trim harness so that plastic sleeve is at the exact location shown.
5. Insert mounting screws (4) thru control mounting brackets, control base and mounting panel. Tighten securely.
6. Move one control handle to full "Forward" position and one control handle to full "Reverse" position. Apply a slight amount of downward force on each handle to align the 2 control modules, then torque locknuts (which secure mounting brackets on control modules together) to 35 lbs. in. (4 N.m.)



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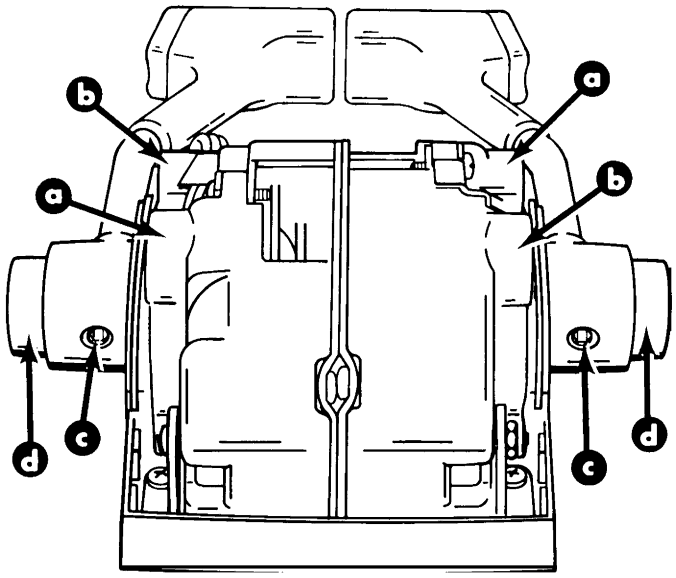
a - Control Base
b - Control Mounting Screws
c - Locknuts (Torque to 35 lb. in.)
d - Plastic Sleeve

⚠WARNING

Set screws in control handles must be torqued to specification. Failure to tighten set screws securely could allow control handles to disengage, with subsequent loss of throttle and shift control.

7. Move control handles to allow access to set screws. Torque set screws to 60 lbs. in. (7 N.m.)



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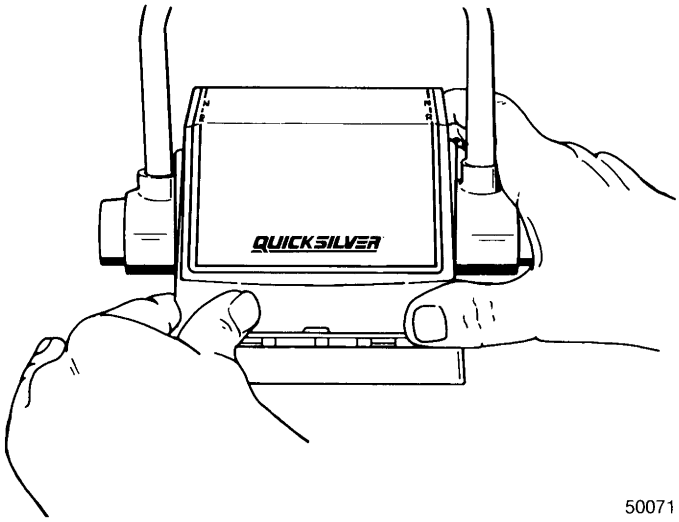
a - Detent Adjustment Screw
b - Control Handle Friction Screw
c - Set Screw
d - "Throttle-Only" Button

8. Install cover by snapping into control base.



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⚠WARNING

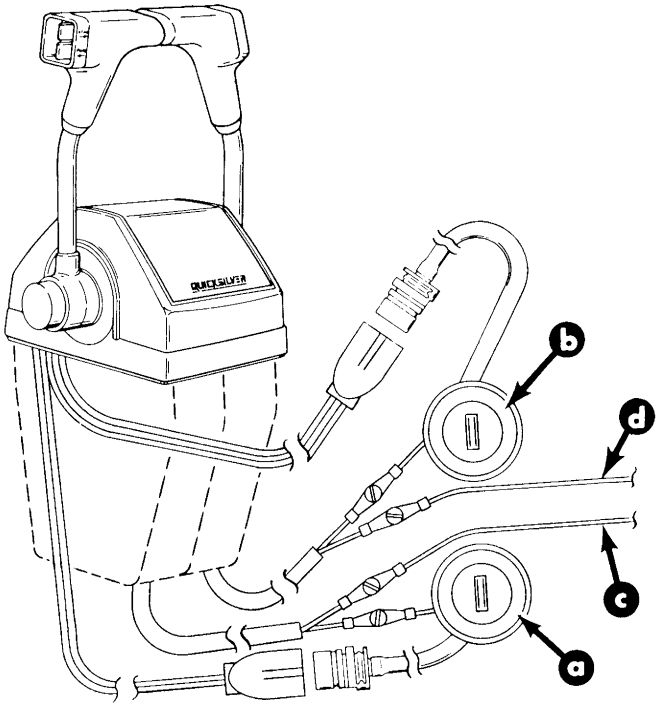
Failure to connect neutral start safety switch leads properly could allow engine to start while in gear. If engine starts while in gear, immediate boat movement and a hazard to unseated occupants of boat or persons and property outside of boat may result.

⚠CAUTION

Neutral start switches must be connected with port control module switch to port engine and starboard control module switch to starboard engine for correct starting safety feature to function.

Connect each neutral start safety switch harness (from each control module) into boat wiring harness system, as shown. When routing neutral start safety switch harness, secure each harness every 18 " (45.7cm). Be sure that wiring does not rub or get pinched and that it does not come in contact with water.

Neutral Start Safety Switch Harness Connections



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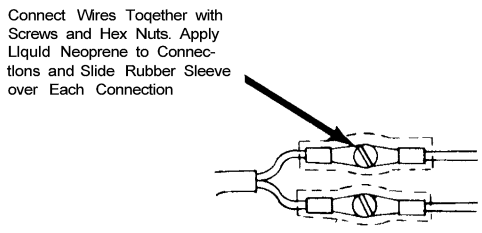
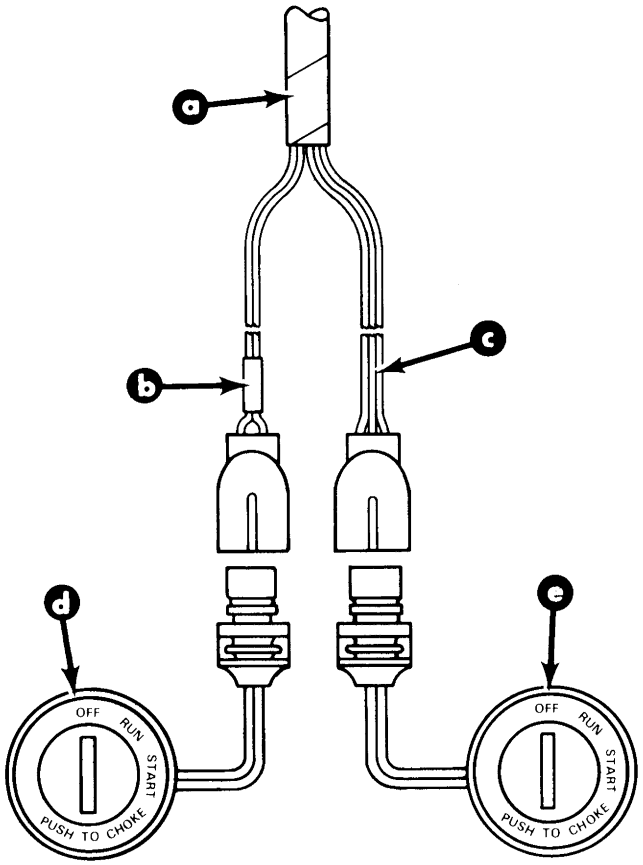
a - Port Ignition Key Switch (2 Wire)
b - Starboard Ignition Key Switch (3 Wire)
c - To Port Engine Harness
d - To Starboard Engine Harness



Plug Trim Connections from control into connectors from ignition key switches.



50092

a - Trim Harness (From Remote Controls)
b - 2 Wire Connector (Port)
c - 3 Wire Connector (Starboard)
d - Port - Ignition Key Switch
e - Starboard - Ignition Key Switch

Repositioning Control Handles

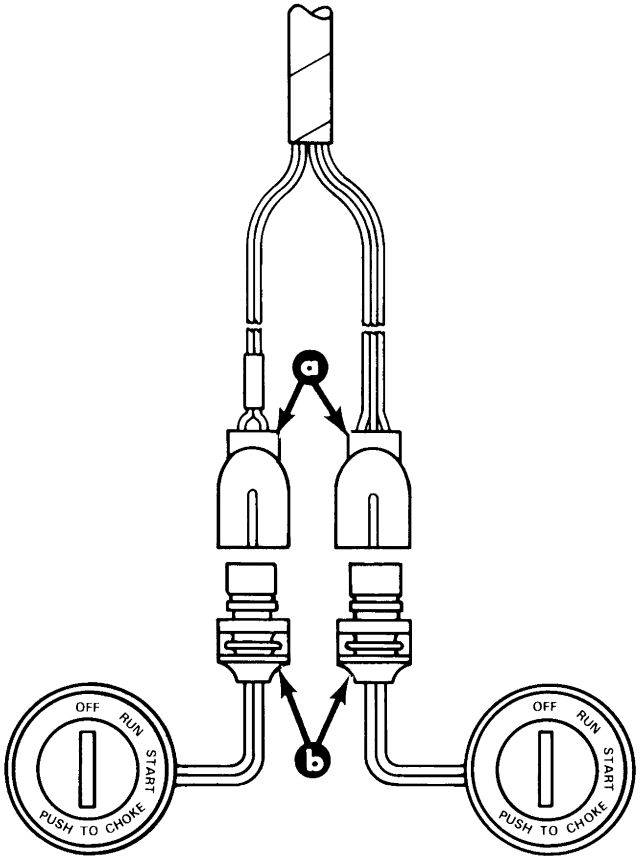
NOTE: Repositioning of control handle (on control shafts) is necessary only if the standard neutral position of control handles are undesireable.

IMPORTANT: When repostioning control handles (on control shaft), position handles so that full forward and reverse can be achieved.

⚠WARNING

Before repositioning control handles on control shafts, be sure to disconnect the trim wire connectors.

1. Disconnect the trim connections from the ignition key switch connections.



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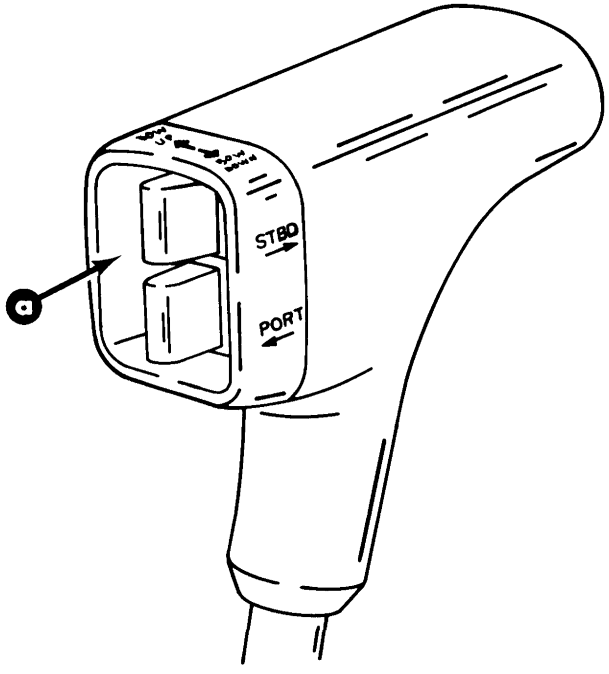
a - Trim Connections
b - Ignition Key Switch Connections

2. Pry trim switch retainer/cover from handle.



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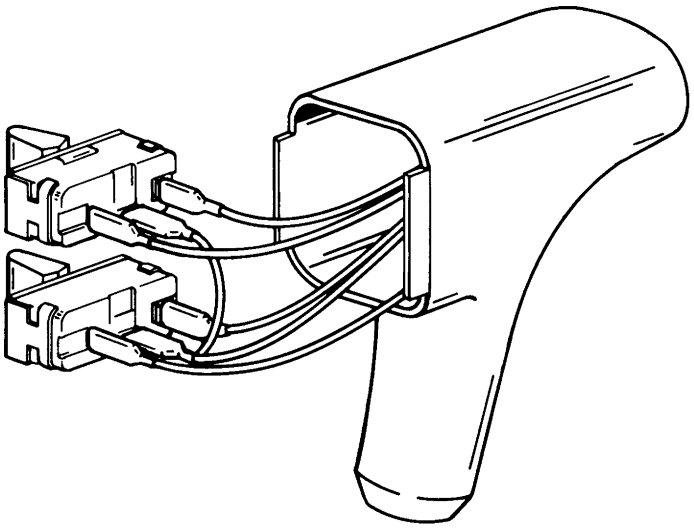
a - Retainer/Cover

3. Pull trim switches out from handle and remove wires from switches.



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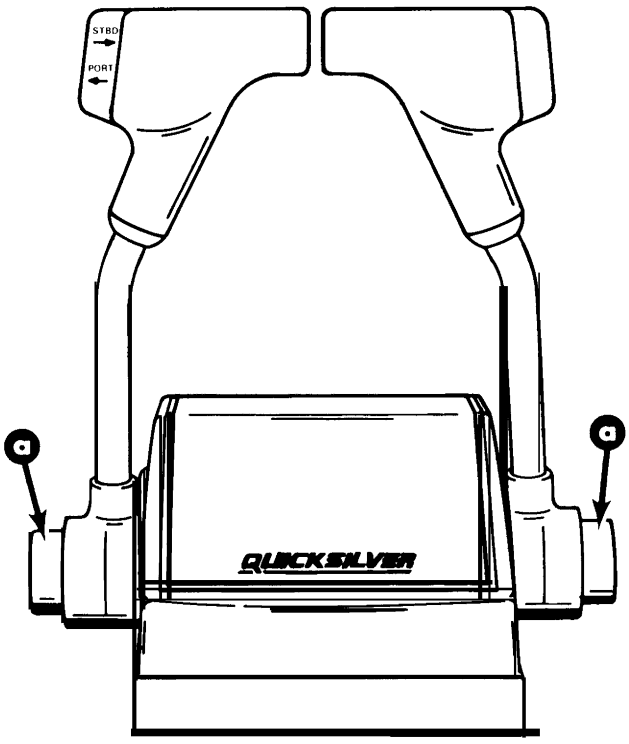
4. Pull throttle only buttons from control shaft.



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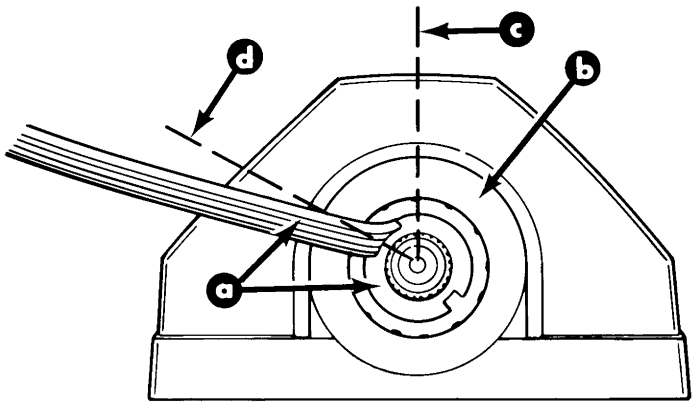
a - Throttle Only Buttons

5. Position handles to allow access to set screw and loosen screws.
6. Return handle to neutral position and remove from control shaft.

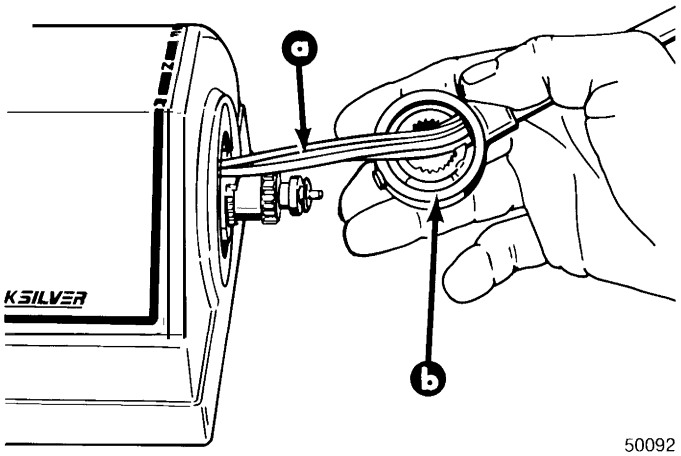
7. Rotate trim wires and trim wire rotator (on control shaft) to the position that neutral is desired when control handle is reinstalled.



50092

a - Trim Wires and Rotator
b - Spacer Disc
c - Standard Position of Trim Wires and Rotator
d - If Trim Wires and Rotator are Moved to This Angle (or Any Other Angle) from the Standard Position, the Control Handle Must Also Be Installed (on Control Shaft) in the Same Angle (thus Neutral is Changed to This Angle from Standard Neutral Position)

8. Reinstall handle to control shaft (make certain full forward and full reverse can be achieved) at desired location.



50092

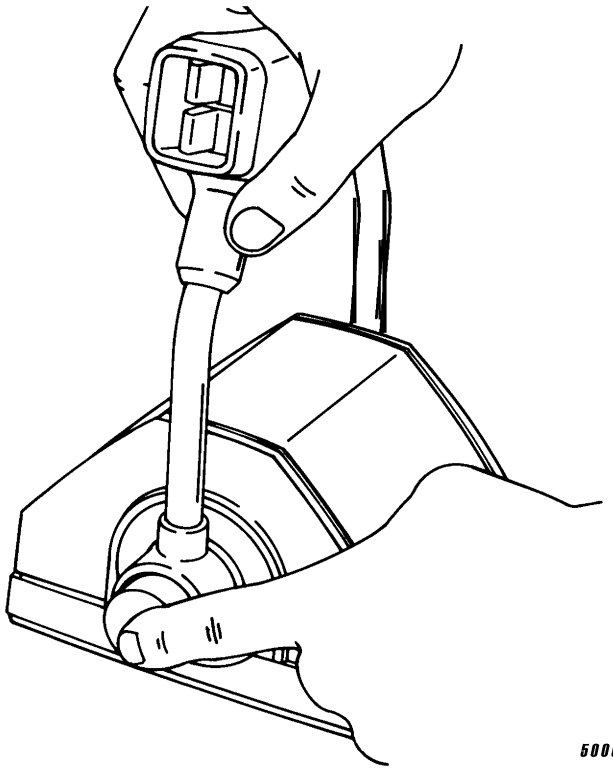
a - Trim Wires
b - Control Handle

⚠WARNING

Control handle set screw must be torqued to specification. Failure to tighten set screws securely could allow control handle to disengage, with subsequent loss of throttle/shift control.

9. While holding is on hub of control handle, move handle until access to set screw is achieved. Torque control handle set screw to 60 lbs. in. (7 N.m.)

10. Push the "Throttle-Only" button onto control shaft.



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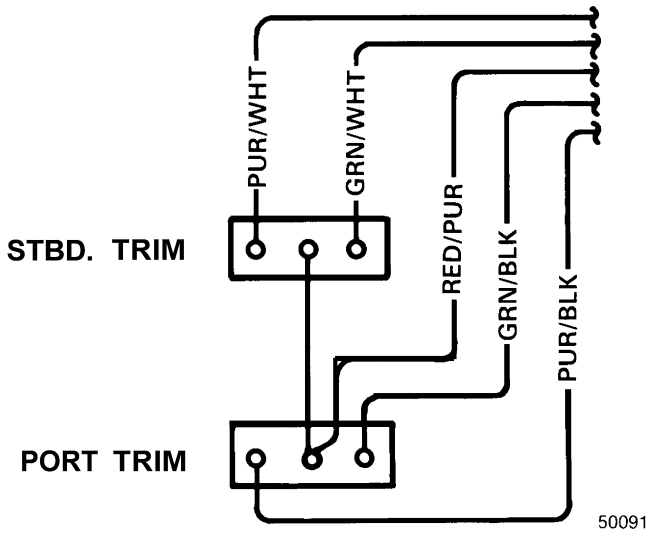
11. Reconnect trim wires to terminals on trim switch.



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12. Place trim switches into handle, and install trim switch retainer/cover onto handle.

13. Reconnect trim wire connections to ignition switch connections.

Operation

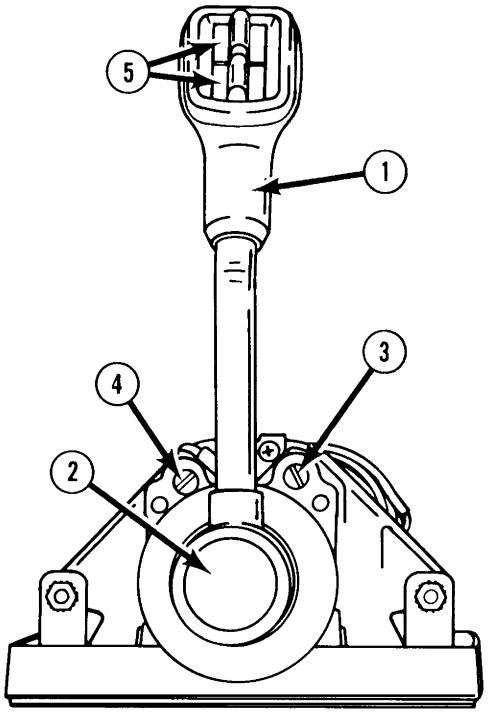
1. **Control handles,** feature full gear shift and throttle. Always shift with a firm, quick motion. Approximately the first 40-degrees of control handle travel ("Forward" and "Reverse") shifts the engines. Remainder of control handle movement advances the throttle. Do not try to shift into "Reverse", if control is used with an outboard and outboard is not running. Forcing shift lever (on an outboard) under this condition may result in damaged shift mechanism.

2. **"Throttle-Only button,** (located in the center of each control handle hub) allows engine throttle advancement without shifting the engines. This is done by disengaging the shift mechanism from the control handle. "Throttle-Only" buttons can be depressed only when control handles are in neutral, and should be used only to assist in starting the engines.

3. **Detent adjustment screw,** located in each control module. The detent adjustment screws will increase or decrease the effort necessary to move control handles in or out of neutral position. To increase detent, thread detent screws "in" (clockwise.) To decrease detent, thread detent screws "out" (counterclockwise.) (Do not thread detent screws all-the-way out.)

4 **Control handle friction screw,** located in each control module. The control handle friction screws are an adjustment that sustains a set engine speed without the driver's hand holding onto the control handles. To increase control handle friction, thread friction screws "in" (clockwise). To decrease control handle friction, thread friction screws "out" (counterclockwise.) (Do not thread friction screws all-the-way out.)

5. **Trim switch,** push toward "UP" to trim outboard out or push toward "DOWN" to trim in.



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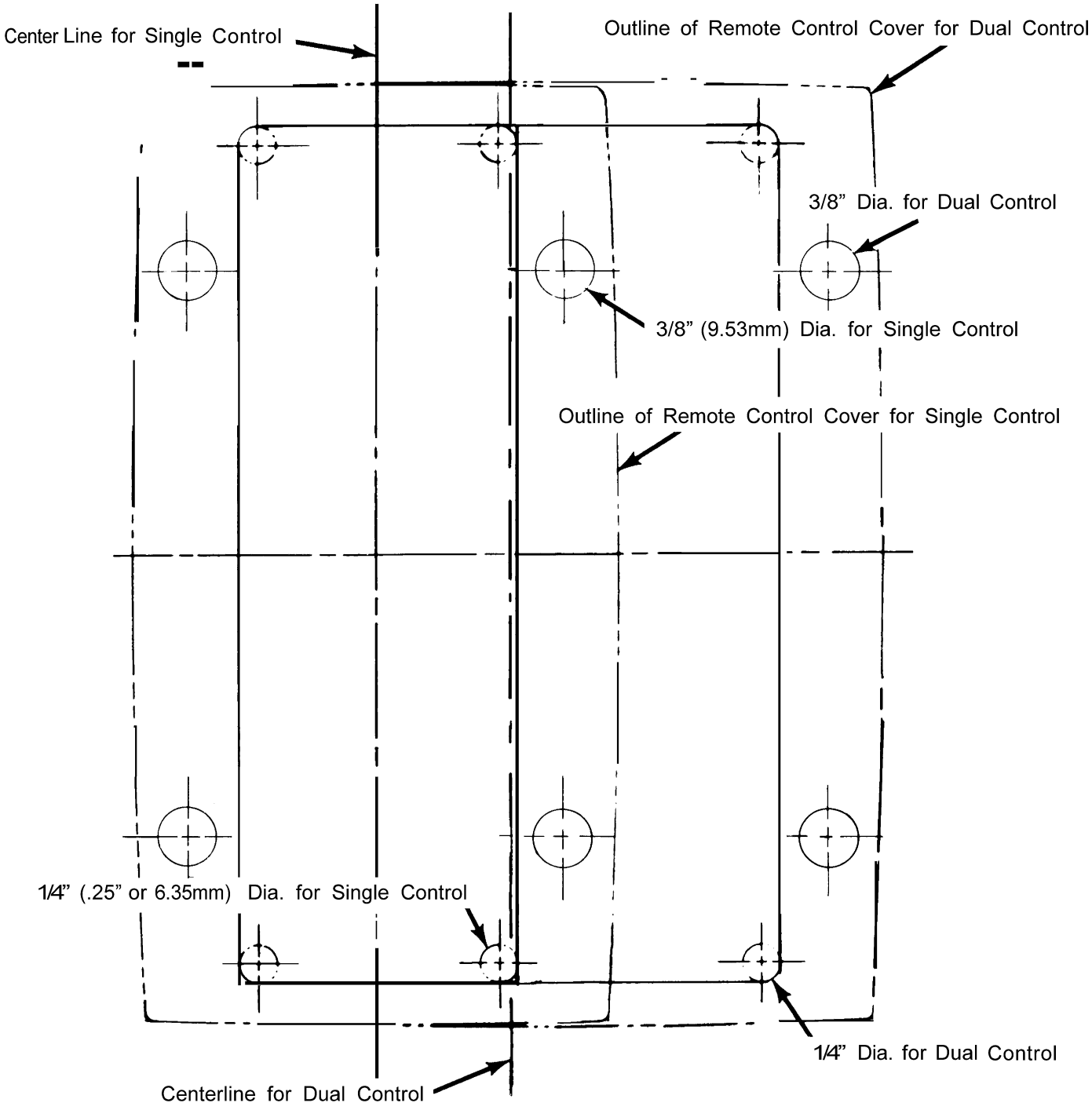
⚠CAUTION

If engines will be operated in shallow water check that water level is above water intake ports. (Should water level fall below water intake ports, damage from overheating or water pump impeller damage could occur.)

NOTE: If the trim switch remains pushed toward the "DOWN" position, or the "Trailer" button remains depressed after lower unit reaches its end of travel, an overload cut-out switch will open and pump motor will stop. To prevent cut-out switch from opening, it is recommended that trim switch and trailer button be released as soon as lower unit reaches end of travel. If cut-out switch should open, do not depress switch or button for approximately one minute. After this period of time, cut-out switch will close (reset itself) and pump again may be operated.

Template for Dual and Single Console Controls



⚠CAUTION

Area (located directly under mounting panel) must be free from obstructions and must allow cables to form a gradual bend when routed toward stern of boat.