

# 75-125 HP Outboard Installation Manual

## NOTICE to INSTALLER

After completing assembly, these instructions should be placed with the product for the owner's future use.

**IMPORTANT:** If the boat is to be water tested, the operator should be familiar with the operation procedures in the Operation and Maintenance Manual.

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## Important Information

### Electric Fuel Pump

If an electric fuel pump is used, the fuel pressure must not exceed 4 psig at the engine. If necessary, install a pressure regulator to regulate the pressure.

## Boat Horsepower Capacity

U.S. COAST GUARD CAPACITY	
MAXIMUM HORSEPOWER	XXX
MAXIMUM PERSON CAPACITY (POUNDS)	XXX
MAXIMUM WEIGHT CAPACITY	XXX

Do not overpower or overload the boat. Most boats will carry a required capacity plate indicating the maximum acceptable power and load as determined by the manufacturer following certain federal guidelines. If in doubt, contact your dealer or the boat manufacturer.

### WARNING

Using an outboard that exceeds the maximum horsepower limit of a boat can: 1. cause loss of boat control 2. place too much weight at the transom altering the designed flotation characteristics of the boat or 3. cause the boat to break apart, particularly around the transom area. Overpowering a boat can result in serious injury, death, or boat damage.

### Start in Gear Protection

The remote control connected to the outboard must be equipped with a start-in-gear protection device. This prevents the engine from starting in gear.

### WARNING

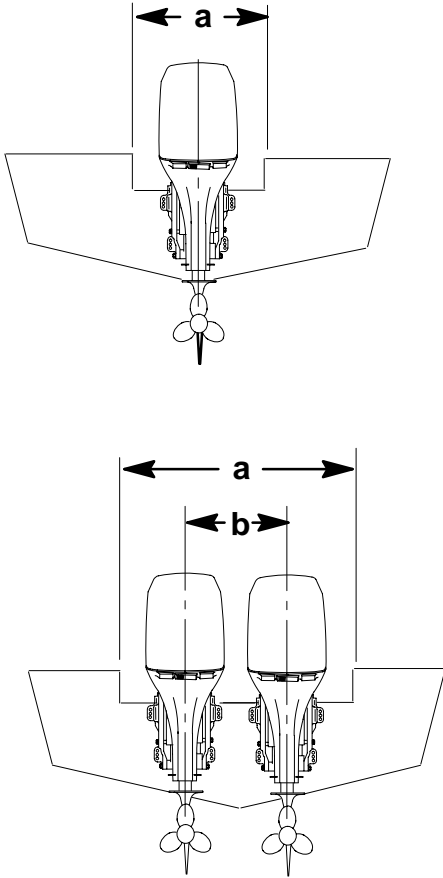
Avoid serious injury or death from a sudden unexpected acceleration when starting your engine. The design of this outboard requires that the remote control used with it must have a built in start-in-gear protection device.

### Selecting Accessories For The Outboard

Genuine Quicksilver Parts and Accessories have been specifically designed and tested for this outboard.

Some accessories not manufactured or sold by Quicksilver are not designed to be safely used with this outboard or outboard operating system. Acquire and read the installation, operation, and maintenance manuals for all selected accessories.

# Installation Specifications



**a – Transom Opening – Minimum**

Single Engine – 32-1/2 in. (826 mm)

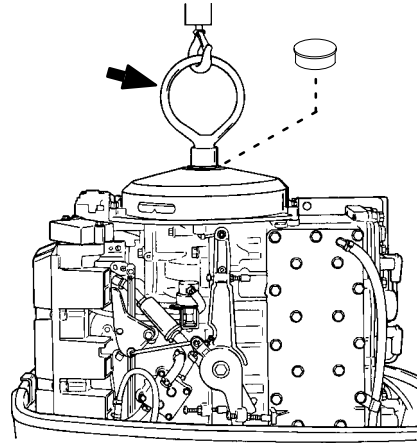
Dual Engines – 59 in. (1499 mm)

**b – Engine Centerline For Dual Engine**

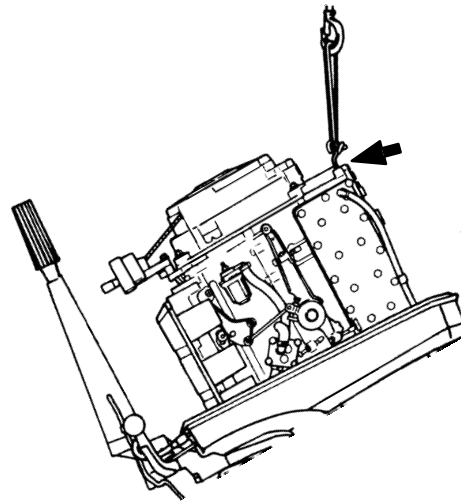
22-1/2 in. (572 mm) Minimum

# Lifting Outboard

**Electric Start Models** – Remove plastic cap from flywheel hub. Thread lifting ring into flywheel a minimum of 5 turns. Replace plastic cap after installation.



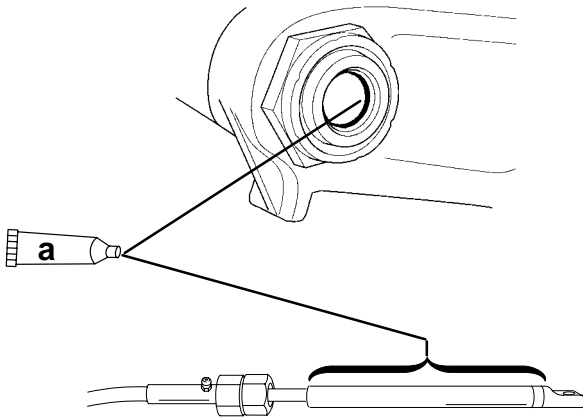
1. **Manual Start Models** – Use lifting eye on engine and lift outboard on boat transom.



# Steering Cable

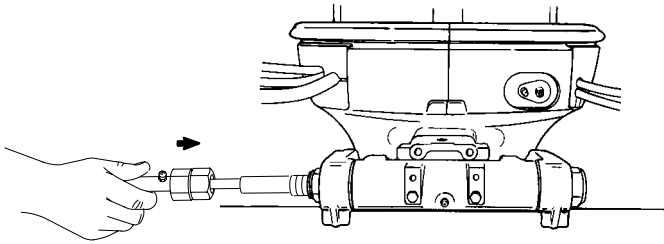
## STARBOARD SIDE ROUTED CABLE

1. Lubricate O-ring seal and entire cable end.

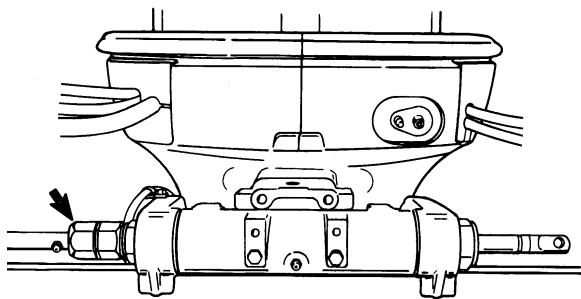


a - Quicksilver 2-4-C Marine Lubricant with Teflon

2. Insert steering cable into tilt tube.

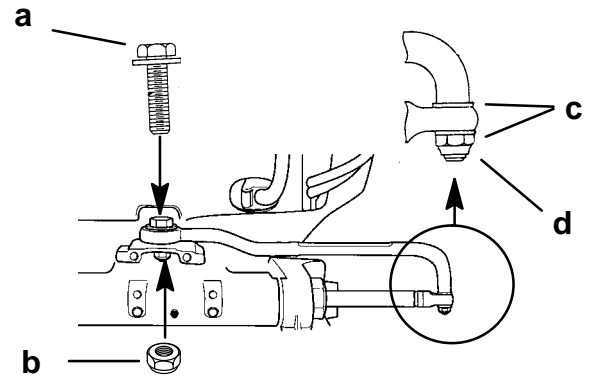


3. Torque nut to 35 lb. ft. (47.5 N-m).



# Steering Link Rod

1. Install steering link rod per illustration.



a - Special Bolt (10-90041) Torque to 20 lb. ft. (27.1 N-m)

b - Nylon Insert Locknut (11-34863) Torque to 20 lb. ft. (27.1 N-m)

c - Flat Washer (2)

d - Nylon Insert Locknut (11-34863) Tighten Locknut 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 washer head bolt (“a” – Part Number 10-14000) and self locking nuts (“b” & “c” – Part Number 11-34863). 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**

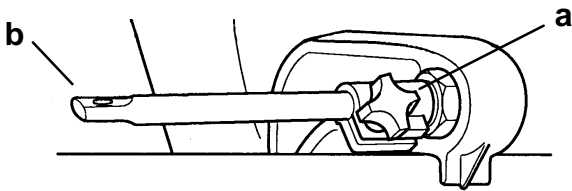
Disengagement of a steering link rod can result in the boat taking a full, sudden, sharp turn. This potentially violent action can cause occupants to be thrown overboard exposing them to serious injury or death.

# Co-Pilot – Tiller Handle Models

## ⚠ WARNING

Avoid possible serious injury or death from loss of boat control. The co-pilot assembly must be installed and adjusted to maintain sufficient steering friction to prevent the outboard from steering into a full turn if the tiller handle is released.

1. Tighten the friction collar onto the tilt tube. Position the adjustment knob forward.
2. Insert pilot rod (b) into the friction collar.



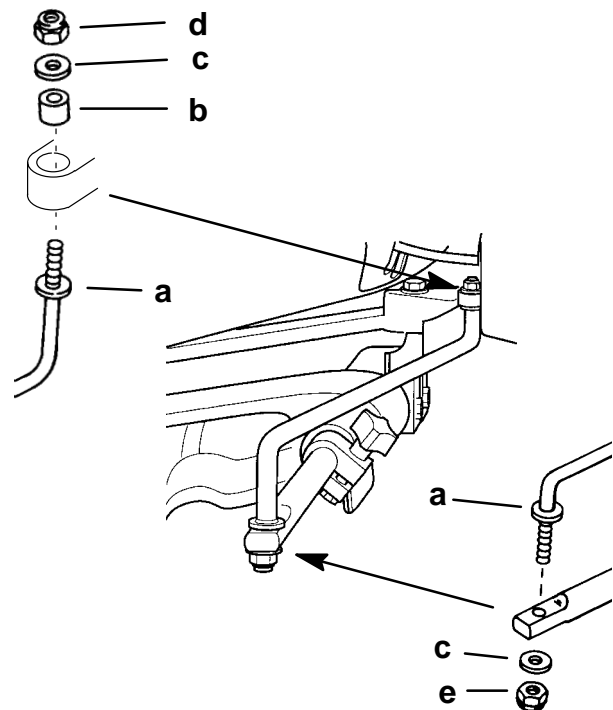
a - Friction Collar  
b - Pilot Rod

**IMPORTANT:** The co-pilot link rod (a) must be fastened using self locking nylon insert locknuts. 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 the co-pilot 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.

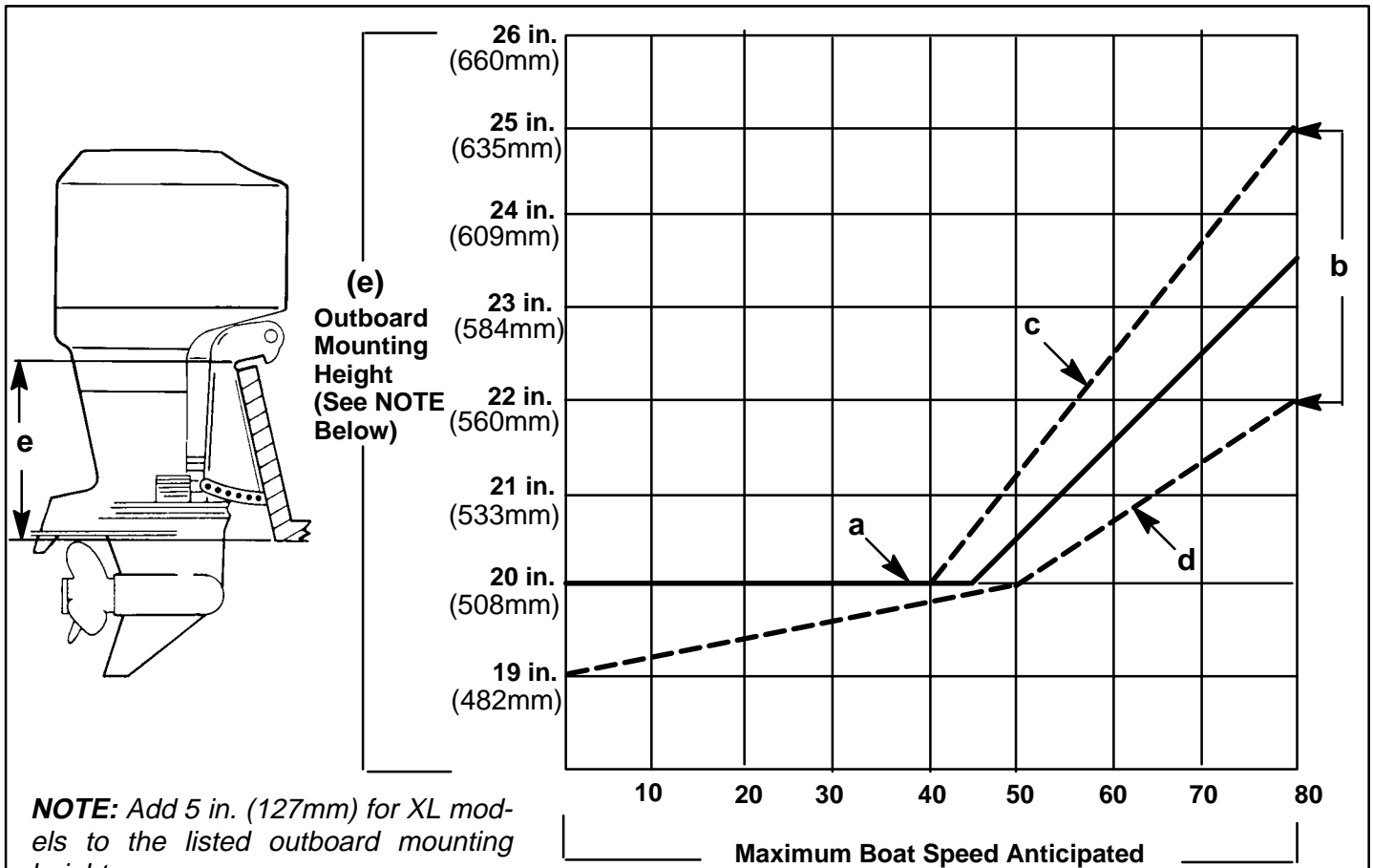
3. Lubricate both ends of the link rod with Quicksilver 2-4-C Marine Lubricant. Install co-pilot link rod between the tiller handle and pilot rod as shown.



a - Co-Pilot Link Rod  
b - Spacer  
c - Flat Washer  
d - Locknut - [Torque to 120 lb. in. (13.5 N·m)]  
e - Locknut - Tighten Until it Seats; Then Back Off The Locknut 1/4 Turn.

# Installing Outboard

## Determining Recommended Outboard Mounting Height



**NOTE:** Add 5 in. (127mm) for XL models to the listed outboard mounting height.

### IMPORTANT

#### NOTICE TO INSTALLER

1. The outboard should be mounted high enough on the transom so that the exhaust relief hole will stay at least 1 in. (25.4 mm) above the water line when the engine is running at idle speed. Having the exhaust relief hole above the water line will prevent exhaust restriction. Exhaust restriction will result in poor performance at idle.
2. However, keep in mind that the mounting height (e) of the outboard must not exceed 25 in. (635 mm) for L models, 30 in. (762 mm) for XL models. Mounting the outboard higher may cause damage to the gear case components.

**a.** This solid line is recommended to determine the outboard mounting height.

**IMPORTANT:** Increasing the height of outboard generally will provide the following: 1) Less steering torque, 2) more top speed, 3) greater boat stability, but, 4) will cause more prop "break loose" which may be particularly noticeable when planing off or with heavy load.

**b.** These broken lines represent the extremes of known successful outboard mounting height dimensions.

**c.** This line may be preferred to determine outboard mounting height dimension, if maximum speed is the only objective.

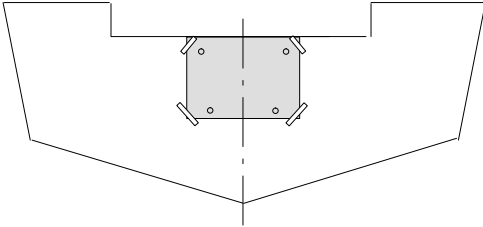
**d.** This line may be preferred to determine outboard mounting height dimension for dual outboard installation.

**e.** Outboard mounting height (height of outboard transom brackets from bottom of boat transom). For heights over 22 in. (560mm), a propeller, that is designed for surfacing operation is usually preferred.

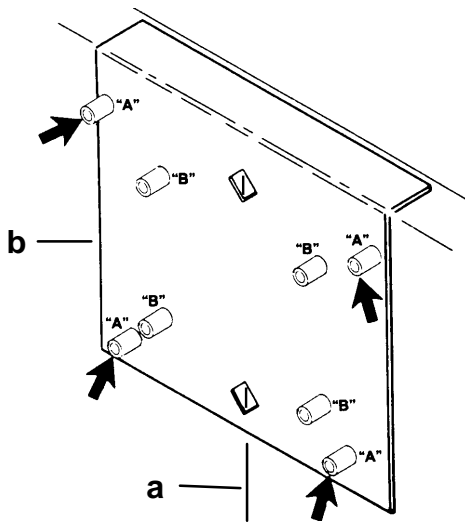
# Installing Outboard

## Drilling Outboard Mounting Holes

1. Attach (tape) engine mounting template (located in center on this manual) to boat transom.

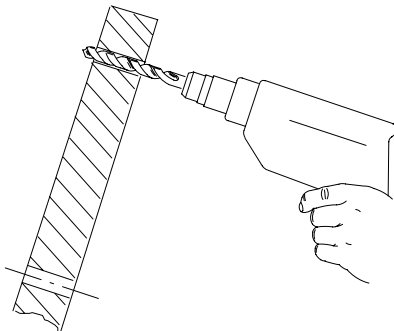


**IMPORTANT:** If using “Transom Drilling Fixture” (part number 91-98234A2), use drill guide holes marked “A” when drilling outboard mounting holes.



- a - Centerline of Transom
- b - Transom Drilling Fixture (91-98234A2)

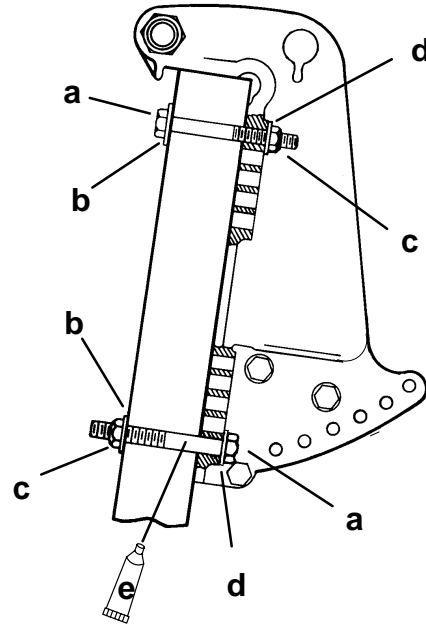
2. Mark and drill four 17/32 in. (13.5mm) mounting holes.



## Securing Outboard To Boat Transom

1. Refer to “Determining Recommended Outboard Motor Mounting Height”, preceding and Install outboard to the nearest recommended mounting height.
2. Fasten outboard with provided mounting hardware shown.

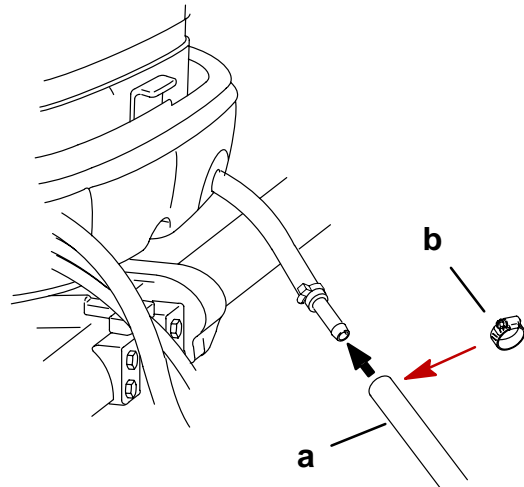
**NOTE:** The addition of the four flat washers (d) is a manufacturing running change. Outboards built before the running change will not have the flat washers.



- a - 1/2 In. Diameter Bolts (4)
- b - Flat Washers (4)
- c - Locknuts (4)
- d - Flat Washers (4)
- e - Marine Sealer - Apply to Shanks of Bolts, Not Threads

## Remote Fuel Hose Connection

Connect remote fuel hose to fitting with hose clamp.



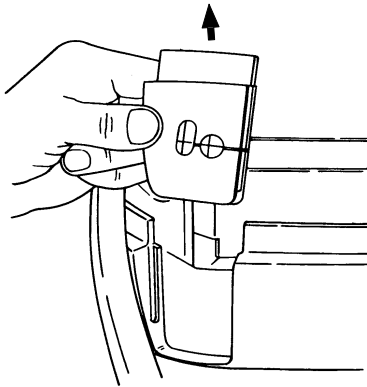
- a - Remote Fuel Hose
- b - Hose Clamp – Secure Remote Fuel Hose

# Electrical Wiring

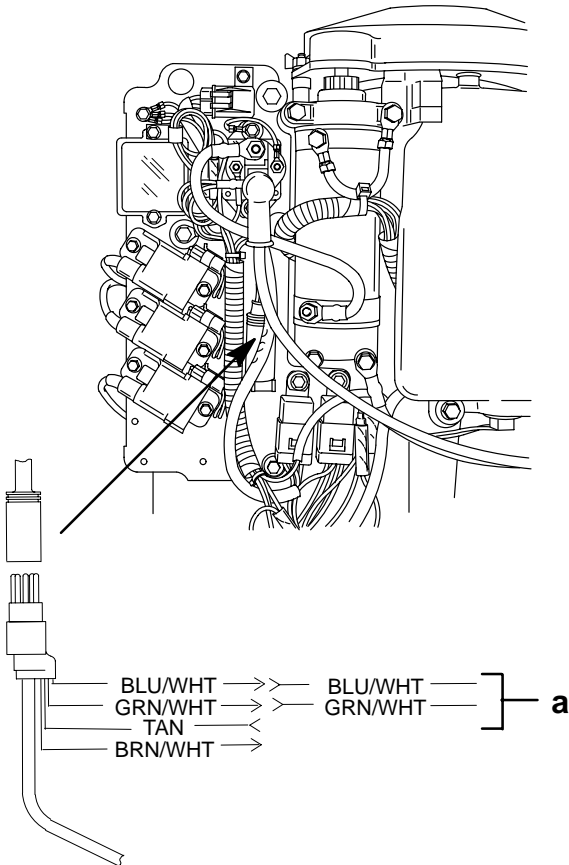
**IMPORTANT: Warning Horn Requirement** – The remote control or key switch assembly must be wired with a warning horn. This warning horn is used with the engine warning system.

## Remote Wiring Harness

1. Pull up the cowl seal and remove the rubber grommet.



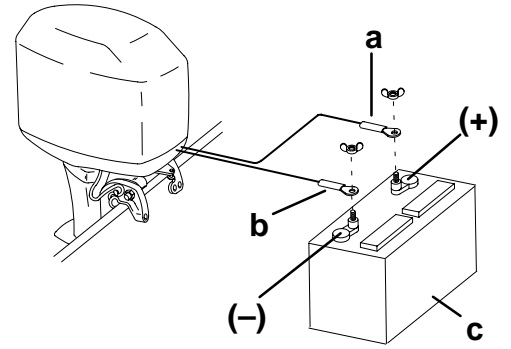
2. Connect wiring. Place harness into the holder.



a - Power Trim Connections

# Battery Cables

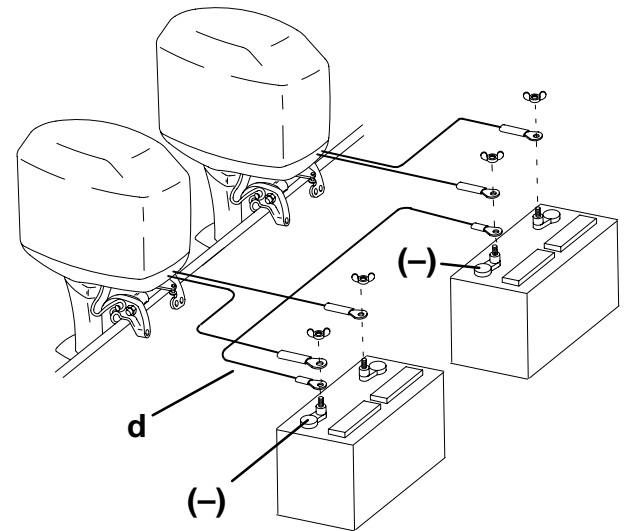
## Single Outboard



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

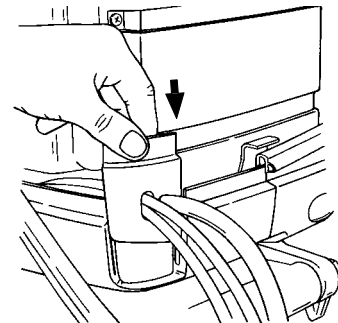
## Dual Outboard

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)

Insert the battery cables and remote wiring harness into the rubber grommet. Reinstall the rubber grommet. Push the cowl seal back in place.



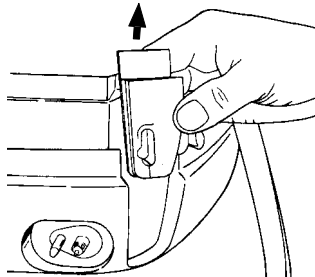
# Shift and Throttle Cables

Install the shift cable and throttle cable into the remote control and mount the remote control following instructions which are provided the remote control.

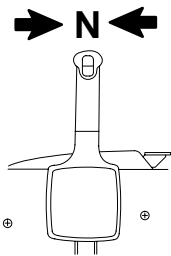
**NOTE:** Install the shift cable before the throttle cable. The shift cable is the first cable to move when the remote control handle is moved into gear.

## Shift Cable Installation

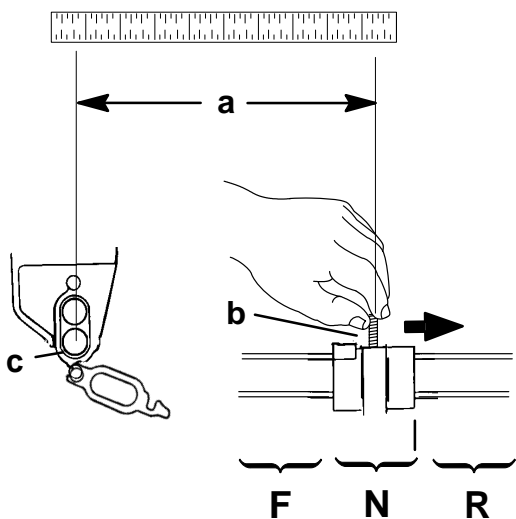
1. Pull up the cowl seal and remove the rubber grommet.



2. Position the remote control into neutral.

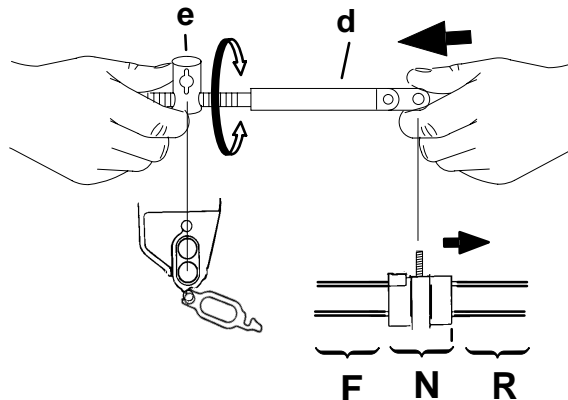


3. Shift outboard into neutral (N) position.
4. Slide mounting pin (b) to rear until neutral (N) position stops.
5. Measure distance (a).



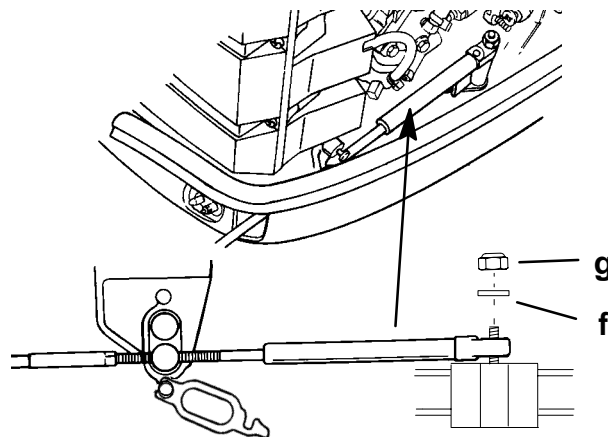
- a - Measure Distance Between Pin And Middle Of Barrel Holder
- b - Push Mounting Pin Until Resistance is Felt
- c - Barrel Holder

6. Push in on the shift cable end (d) until resistance is felt. Adjust the cable barrel (e) to attain distance (a) taken in Step 5.



- d - Shift Cable End
- e - Cable Barrel

7. Place cable barrel into holder.
8. Fasten the shift cable with nylon washer (f) and locknut (g). Tighten locknut against the nylon washer, then back-off the locknut 1/4 turn.



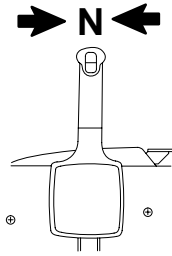
- f - Nylon Washer
- g - Locknut – Tighten Locknut, Then Back-Off The Locknut 1/4 Turn

9. Check shift cable adjustments as follows:
  - a. With remote control in forward the propshaft should lock solidly in gear. If it does not, adjust the cable barrel closer to the cable end guide.
  - b. Shift remote control into neutral. The propshaft should turn freely without drag. If not, adjust the barrel away from the cable end guide. Repeat steps a and b.
  - c. Shift remote control into reverse while turning propeller. The propshaft should lock solidly in gear. If not, adjust the barrel away from the cable end guide. Repeat steps a thru c.
  - d. Return remote control handle to neutral. The propeller should turn freely without drag. If not, adjust the barrel closer to the cable end guide. Repeat steps a thru d.

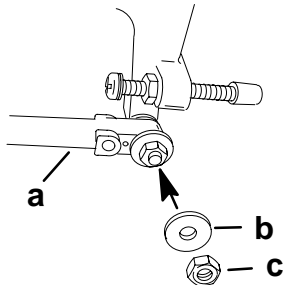


# Throttle Cable Installation

1. Position remote control into neutral.

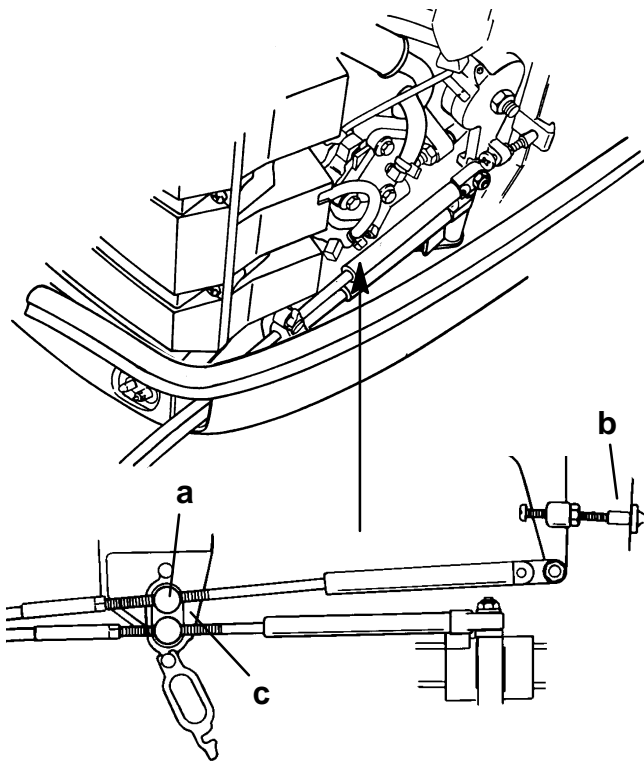


2. Install cable to the throttle lever. Tighten locknut, then back-off the locknut 1/4 turn.



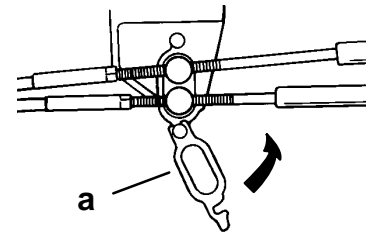
- a - Throttle Cable
- b - Nylon Washer
- c - Locknut – Tighten Locknut, Then Back-Off The Locknut 1/4 Turn

3. Adjust the cable barrel so that the installed throttle cable will hold the idle adjustment screw against the stop.



- a - Cable Barrel – Adjust To Hold Idle Adjustment Screw Against Stop
- b - Idle Adjustment Screw
- c - Barrel Holder

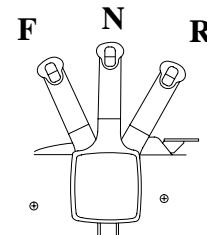
4. Lock the cable barrels in-place with cable latch.



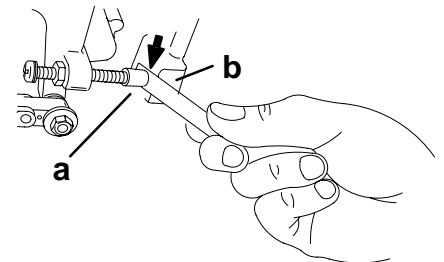
a - Cable Latch

5. Check throttle cable adjustment as follows:

a. Shift outboard into gear a few times to activate the throttle linkage. Make sure to rotate the propeller shaft while shifting into reverse.



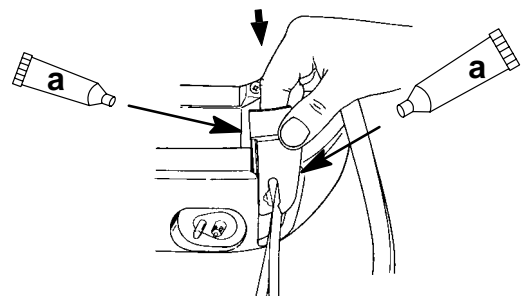
b. Return remote control to neutral. Place a thin piece of paper between idle adjustment screw and idle stop. Adjustment is correct when the paper can be removed without tearing, but has some drag on it. Readjust cable barrel if necessary.



- a - Idle Adjustment Screw
- b - Idle Stop

6. Lubricate the rubber grommet. Slip the grommet over the control cables and push back into place.

**NOTE:** The rubber grommet has to be lubricated to ease installation.

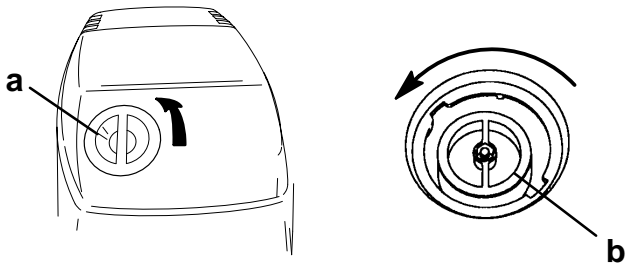


a - Lubricant

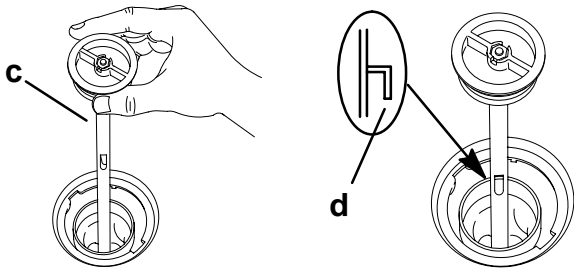
# Oil Injection Setup

## Filling The Oil Injection System

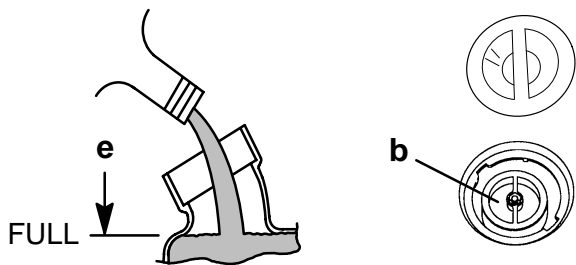
1. Open the cowl cap (a). Turn the oil fill cap (b) to the left and remove.



2. Use the dipstick (c) to check oil level.
3. Hook the dipstick (d) on the tank during filling.

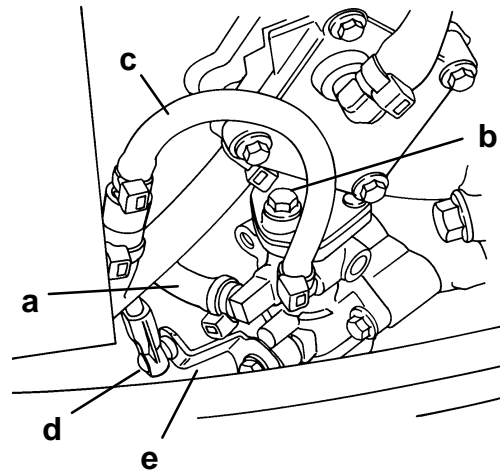


4. Slowly fill the oil tank with oil. **Do Not overfill** – add only enough oil to bring the oil level up to the bottom of the fill neck (e).
5. Install oil filler cap (b) and re-tighten. Reinstall the cowl cap.



## Bleeding Air From The Oil Injection System

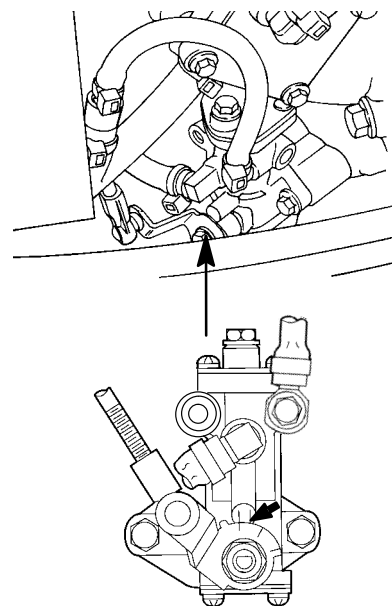
1. Inspect the oil pump inlet hose for air bubbles. If air exists, place a shop towel below the oil pump and loosen bleed screw four turns. Allow oil to flow out of the bleed hole until air is removed from the hose.
2. Inspect the oil pump outlet oil hose for air bubbles. If air exists, disconnect link rod from oil pump. Start engine and run at 1000 to 1500 RPM. Rotate (and hold) the pump arm full clockwise until the air is purged out of the hose.



- a - Inlet Hose
- b - Bleed Screw – Torque to 15 lb. in. (N-m)
- c - Outlet Hose
- d - Link Rod
- e - Pump Arm

## Adjusting The Oil Injection Pump

Set linkage at idle position. Alignment marks should line-up. If necessary, adjust link rod.

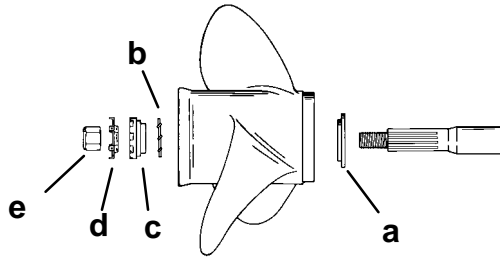


# Propeller Installation

**⚠ WARNING**

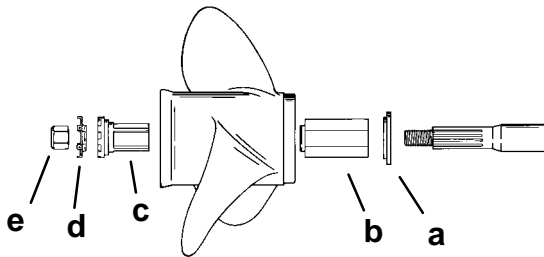
If the propeller shaft is rotated while the engine is in gear, there is the possibility that the engine will crank over and start. To prevent this type of accidental engine starting and possible serious injury caused from being struck by a rotating propeller, always shift outboard to neutral position and remove spark plug leads when you are servicing the propeller.

## Flo-Torq I Drive Hub Propellers



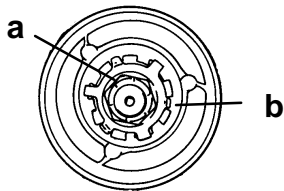
- a - Forward Thrust Hub
- b - Continuity Washer
- c - Thrust Hub
- d - Propeller Nut Retainer
- e - Propeller Nut

## Flo-Torq II Drive Hub Propellers



- a - Forward Thrust Hub
- b - Replaceable Drive Sleeve
- c - Rear Thrust Hub
- d - Propeller Nut Retainer
- e - Propeller Nut

1. Tighten propeller nut to 55 lb.ft. (75 N·m). Bend tabs into grooves.



- a - Propeller Nut - Torque To 55 lb. ft. (75 N·m)
- b - Bend Tabs Into Grooves

# Trim Tab Adjustment

Propeller steering torque may cause the boat to pull in one direction. This steering torque results from the outboard not being trimmed so the propeller shaft is parallel to the water surface. The trim tab can help compensate for this steering torque and can be adjusted within limits to reduce any unequal steering effort.

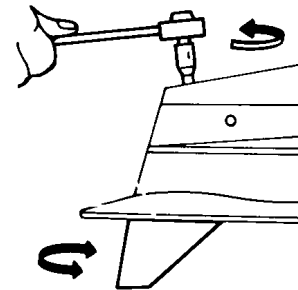
## MODELS WITHOUT POWER STEERING

Operate the boat at normal cruising speed, trimmed to desired position. Turn the boat left and right and note the direction the boat turns more easily.

If adjustment is necessary, loosen trim tab bolt until trim tab moves freely (does not rub against locking ridges). DO NOT strike tab to make adjustments. Make small adjustments at a time. If the boat turns more easily to the left, move the trailing edge of trim tab to the left. If the boat turns more easily to the right move the trailing edge of trim tab to the right. Position trim tab in one of the locating grooves BEFORE tightening bolt to prevent damage to holding mechanism. Torque bolt to 40 lb. ft. (54.2 N·m) and retest.

## MODELS WITH POWER STEERING

Trim tab adjustment is not required. The trailing edge of the trim tab should be set straight back.



## Trim “In” Angle Adjustment

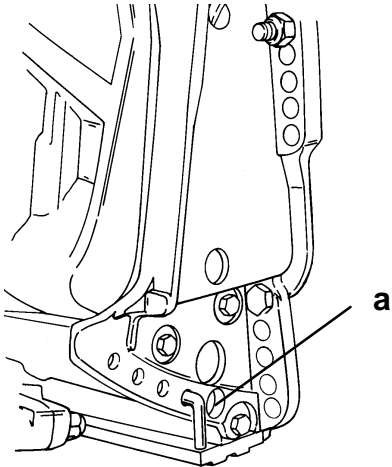
Some outboard boats, particularly some bass boats, are built with a greater than normal transom angle which will allow the outboard to be trimmed further “in” or “under”. This greater trim “under” capability is desirable to improve acceleration, reduce the angle and time spend in a bow high boat attitude during planing off, and in some cases, may be necessary to plane off a boat with aft live wells, given the variety of available propellers and height range of engine installations.

However, once on plane, the engine should be trimmed to a more intermediate position to avoid a bow-down planing condition called “plowing”. Plowing can cause “bow steering” or “over steering” and inefficiently consumes horsepower. In this condition, if attempting a turn or encountering a diagonal, moderate wake, a more abrupt turn than intended may result.

In rare circumstances, the owner may decide to limit the trim under. This can be accomplished by purchasing a stainless steel tilt pin (P/N 17-49930A1) and inserting it through whatever pin hole is desired. The non-stainless steel shipping bolt should not be used in this application other than on a temporary basis.

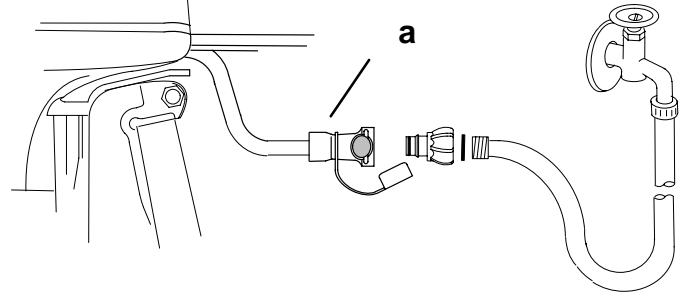
### **⚠ WARNING**

**Avoid possible serious injury or death. Adjust outboard to an intermediate trim position as soon as boat is on plane to avoid possible ejection due to boat spin-out. Do not attempt to turn boat when engine is trimmed extremely under or in.**



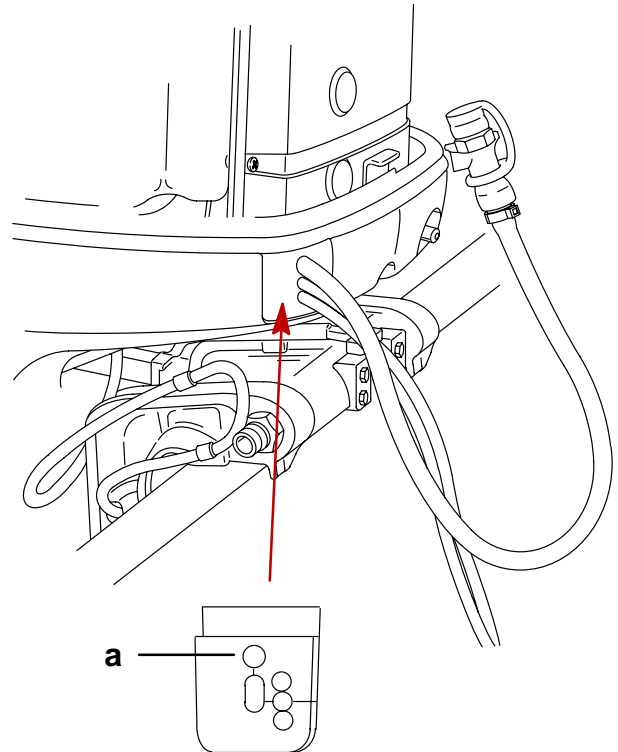
a - Tilt Pin

## Routing Flush Hose for Models having Coastal Flush Attachment



a - Flush Attachment

1. Locate the hose inside the cowling. Route the hose through the port side cowl grommet as shown.



a - Route Hose Through This Hole

2. Place the hose and attachment in the boat at a suitable location.