NOTICE to INSTALLER
After completing installation, these instructions should be placed with the product for the owner's future use.

OUTBOARD POWER TRIM KIT

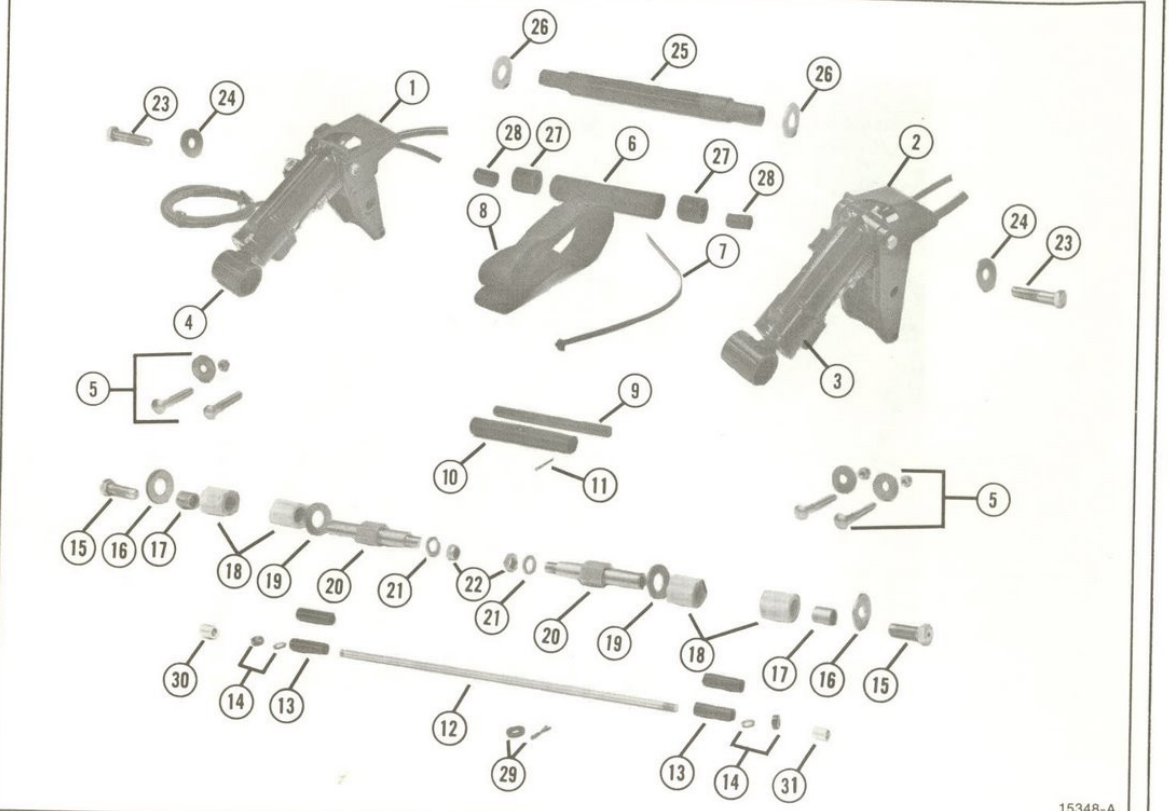
INSTALLATION MANUAL

INDEX

INSTALLING POWER TRIM COMPONENTS TO ENGINE
45 THRU 70 MODELS and
80 SHORT SHAFT MODEL

IMPORTANT: Power Trim Installation Kit (62538A2) For 1982 Models and Older or (62538A3) for All Models must be used in conjunction with this Power Trim Kit, when installing on 50 thru 70 Models. (Provides full steering range at all trim angles.)

Power Trim Components for Installation to Engine



15348-A

Items Marked • Are Part of Power Trim Installation Kit (62538A2 - For 50 thru 70 Models ONLY)
*Items Marked * Are Part of Power Trim Installation Kit (62538A3 - For 50 and 70 Models ONLY)*

1 - Port Trim Cylinder
2 - Starboard Trim Cylinder
3 - Starboard Trim Cylinder
4 - Port Trim Cylinder
5 - Carriage Bolts, Flat Washers and Locknuts (for Mounting Trim Cylinder Mounting Brackets to Transom)
6 - Rubber Cushion Tube
7 - Sta-Strap
8 - Nylon Strap
9 - Cross Pin
10 - Metal Tube
11 - Cotter Pin (Secure Cross Pin in Tube)
* • 12 - Threaded Rod - 18-7/8"
* • 13 - Spacer - 2 Sizes Supplied, 1-1/8" and 1-11/16" Long
14 - Hex Nut and Lock Washer (Fasten Rod)
15 - Hex Bolt 1-1/2" Long
16 - Flat Washer - 1-1/2" O.D. x 1/2" I.D.
17 - Metal Spacer
18 - Bushing (2 Per Cylinder)
* • 19 - Flat Washer - 1-1/2" O.D. x 3/4" I.D.
* • 20 - Lower Shock Mount Pin
* • 21 - Flat Washer
* • 22 - Locknut
* • 23 - Hex Bolt 3-1/4" Long (Fasten Bracket to Engine)
24 - Flat Washer - 1-1/2" O.D. x 1/2" I.D.
* 25 - Upper Shock Mount Pin
* 26 - Flat Washer - 1-1/2" O.D. x 3/4" I.D.
* • 27 - Spacer 1-1/4" O.D. x 1-1/8" Long
* • 28 - Spacer 3/4" O.D. x 1-1/8" Long
29 - Flat Washer (Black Color) and Cotter Pin (For Modifying Tilt Lock Pin)
30 - Metal Spacer 9/16" Long (80 Model)

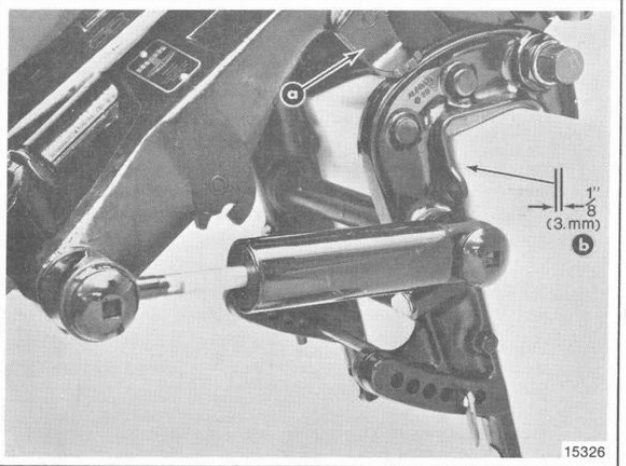
INSTALLING POWER TRIM COMPONENTS TO ENGINE
45 THRU 70 MODELS and
80 SHORT SHAFT MODEL

STEP 1

a. Install engine on boat transom following instructions in the "Engine Mounting Instructions" (supplied with engine).

b. Raise engine to full "UP" position and engage tilt lock lever (a).

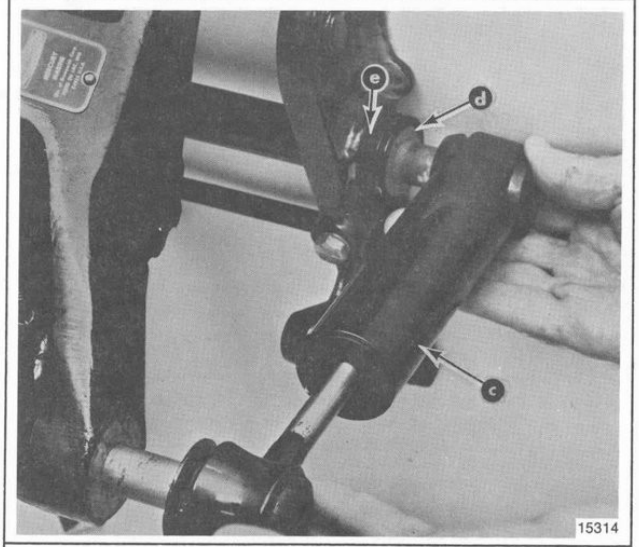
c. Loosen engine mounting bolts slightly so that engine transom brackets will be approximately ⅛" (3mm) from transom (b). (Retighten after trim kit is installed.)



STEP 2

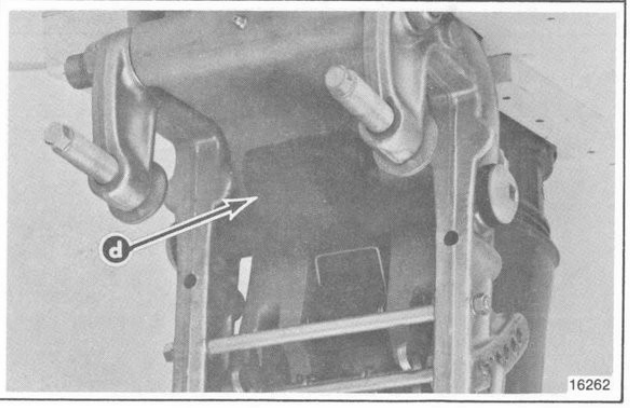
Models with Shock Absorbers

Remove both shock absorbers (c) from engine. Retain metal flat washers (d - except 80 Model) and bushings (e).



Models without Shock Absorbers

Remove (and discard) nylon strap (d) and upper and lower strap pins. Retain bushings from upper strap pin.



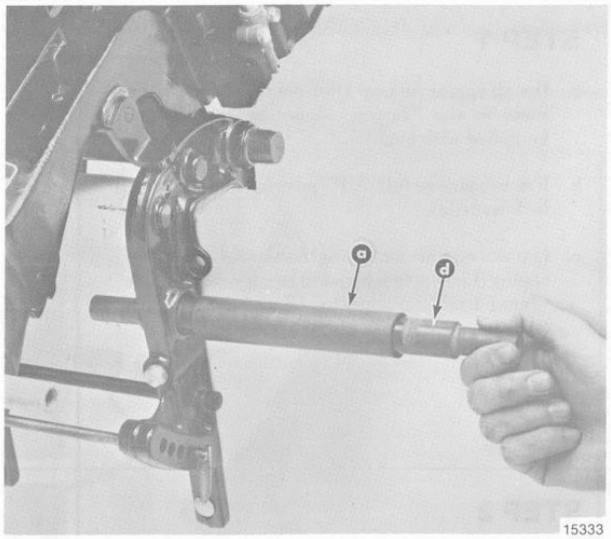
INSTALLING POWER TRIM COMPONENTS TO ENGINE
45 THRU 70 MODELS and
80 SHORT SHAFT MODEL

STEP 3

NOTE: 50 and 70 Models (1983 and newer) - Power Trim Installation Kit (62538A3) contains the upper shock mount pin (d) and flat washers (c).

a. Slide rubber tube (a) on upper shock mount pin as shown. Replace bushings (b) and flat washers (c - except 80 Model).

b. Remove tilt lock pin (d).



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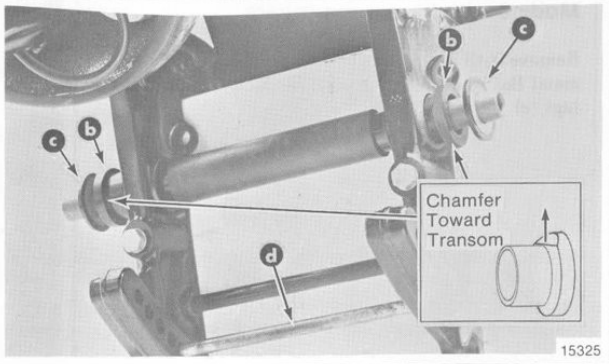

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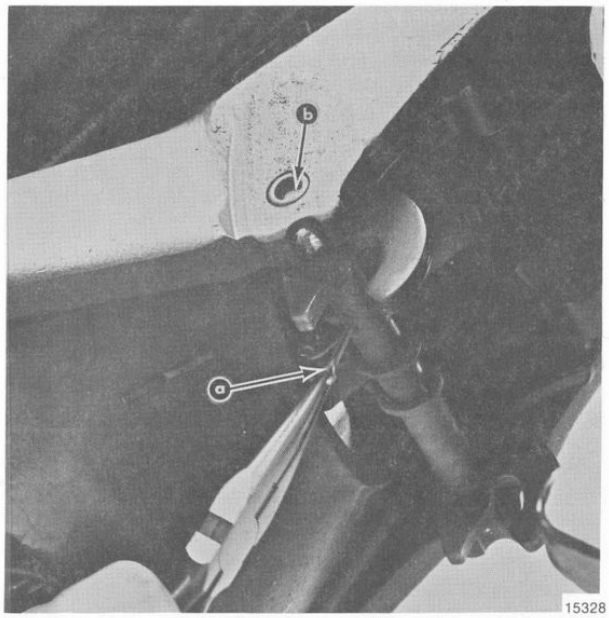
INSTALLING POWER TRIM COMPONENTS TO ENGINE
45 THRU 70 MODELS and
80 SHORT SHAFT MODEL

STEP 4

a. Remove cotter pin (a) from reverse lock hook assembly.

b. Slide cross pin (b) out of assembly, then disconnect spring and remove reverse lock hook assembly (c) from engine.

NOTE: On short shaft engines, it will be necessary to disconnect push rod from reverse hook before push rod can be removed.



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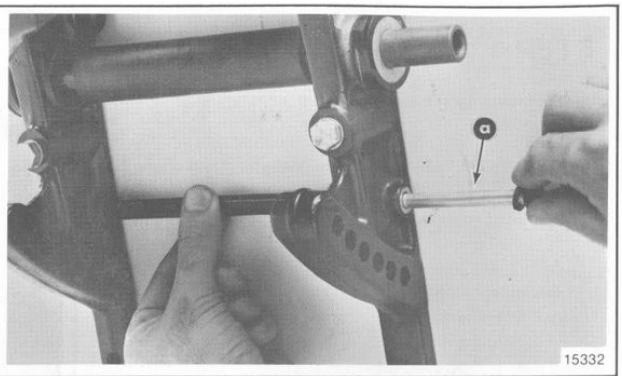
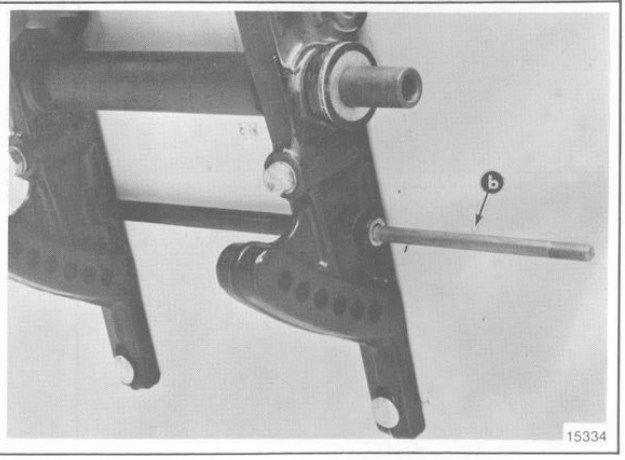
INSTALLING POWER TRIM COMPONENTS TO ENGINE
45 THRU 70 MODELS and
80 SHORT SHAFT MODEL

STEP 5

Remove existing rod (a) and replace with (b) 18⅞" long rod for 50 and 70 Models or 16⅝" long rod for 80 Model.





INSTALLING POWER TRIM COMPONENTS TO ENGINE
45 THRU 70 MODELS and
80 SHORT SHAFT MODEL

STEP 6

a. Wrap nylon strap (a) around upper shock pin as shown.

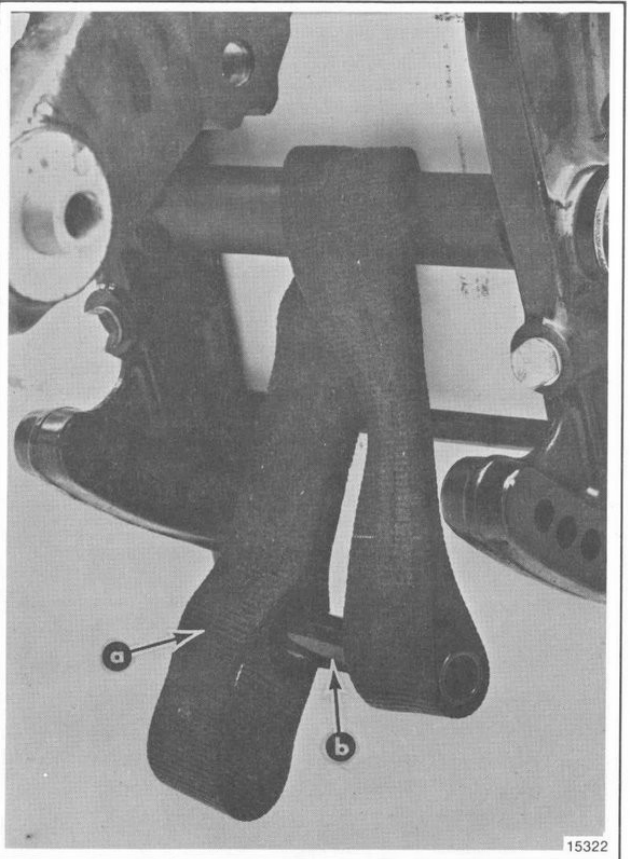
b. Place metal tube (b) thru loops in strap as shown.

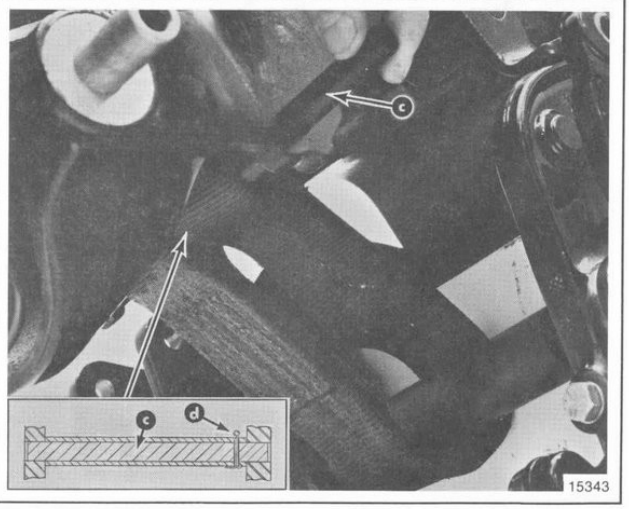
c. Align metal tube with thru holes in swivel bracket and slide cross pin (c) thru tube.

NOTE: On earlier model engines, it may be necessary to drill holes for cross pin to 33/64" (13mm) diameter.

d. Secure cross pin in the metal tube with cotter pin (d) as shown (bend end of cotter pin).

(Step 6 continued on next page)

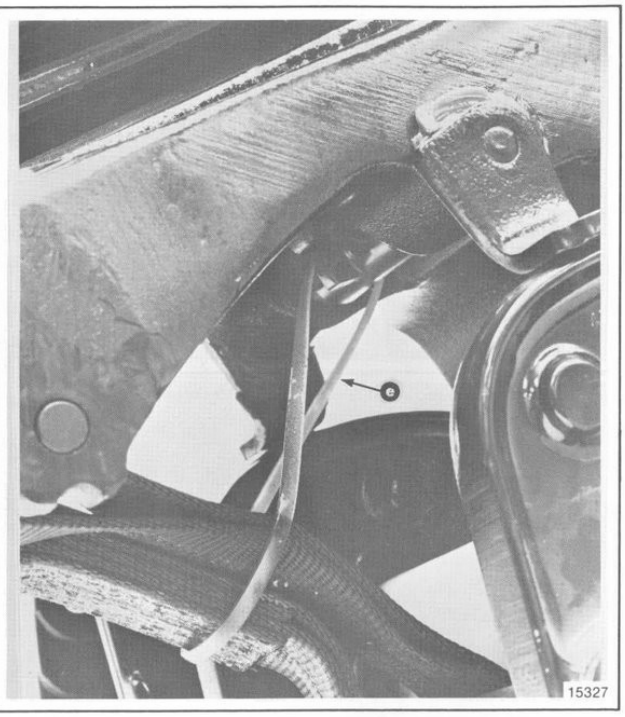




INSTALLING POWER TRIM COMPONENTS TO ENGINE
45 THRU 70 MODELS and
80 SHORT SHAFT MODEL

(Step 6 continued)

e. Fasten sta-strap (e) around nylon strap and shaft of tilt lock lever. Raise engine by hand as high as possible, then pull sta-strap tight. Cut off excess sta-strap.

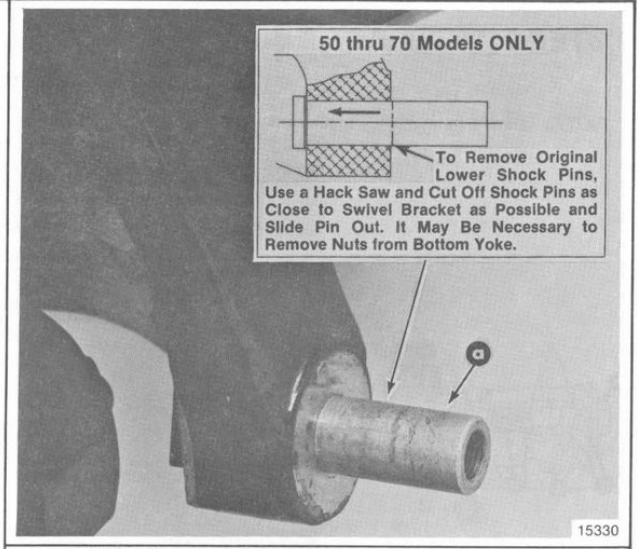


INSTALLING POWER TRIM COMPONENTS TO ENGINE
45 THRU 70 MODELS and
80 SHORT SHAFT MODEL

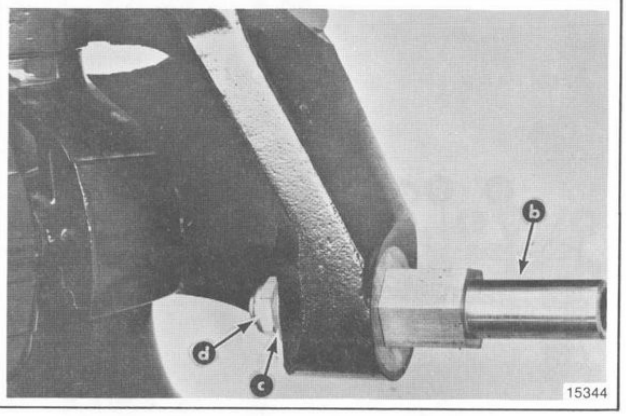
STEP 7 (50 thru 70 Models ONLY - Not Required for 80 Models)

If your engine is equipped with lower shock pins (a), then remove lower shock pins, as shown.

a. Remove original lower shock pins (a), as shown.

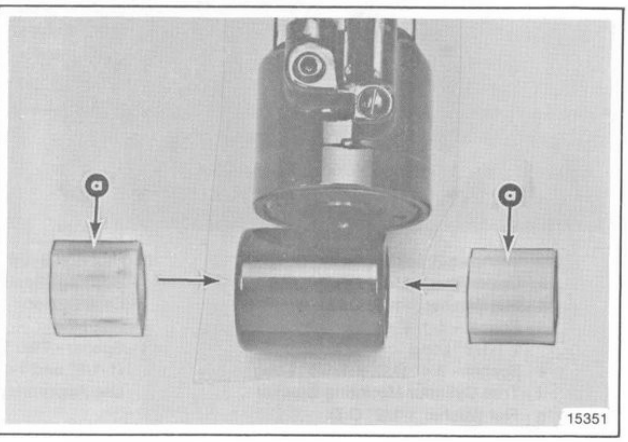


b. Install new lower shock pins (b) with flat washers (c) and locknuts (d).



STEP 8

Push nylon bushings (a) into lower rod eye of each power trim cylinder. Center the bushings so equal length of bushing extends out from each side.

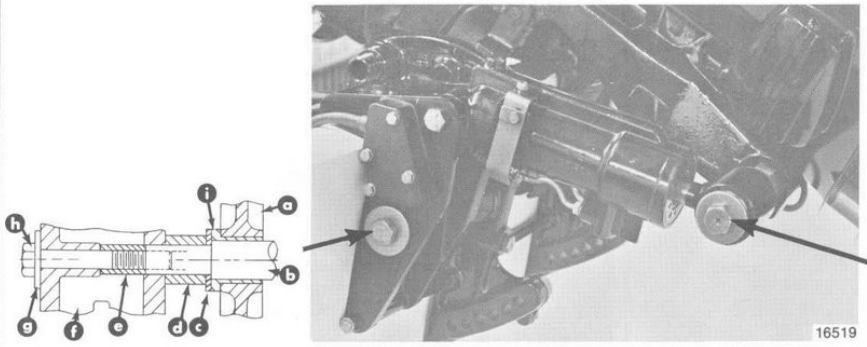


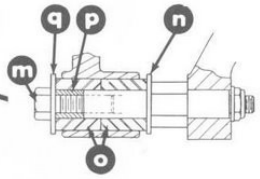
INSTALLING POWER TRIM COMPONENTS TO ENGINE
45 THRU 70 MODELS and
80 SHORT SHAFT MODEL

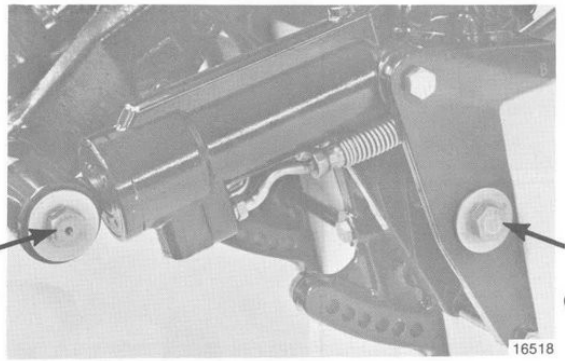
STEP 9 **Install trim cylinders to lower shock pins, as shown (80 Model Short Shaft Next Page).**

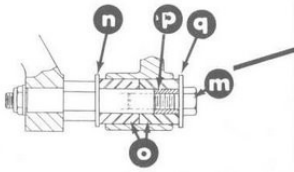
50 THRU 70 MODELS

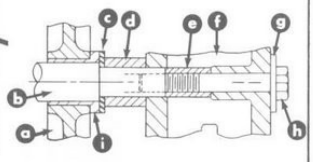
NOTE: Install trim cylinders to mounting brackets after trim hoses are connected.

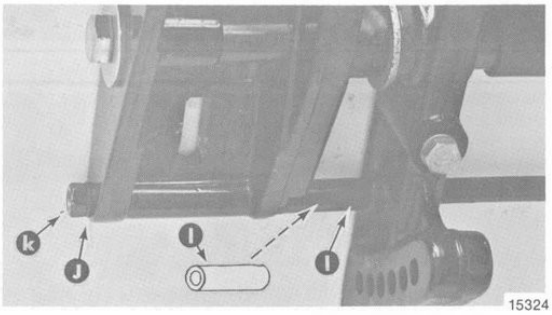


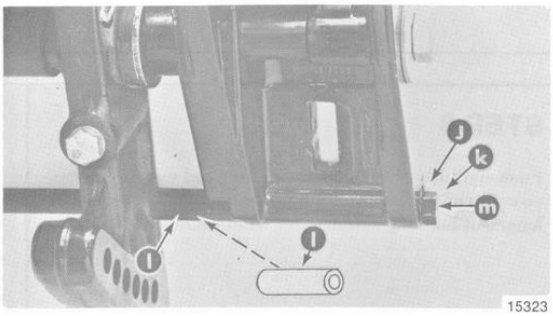










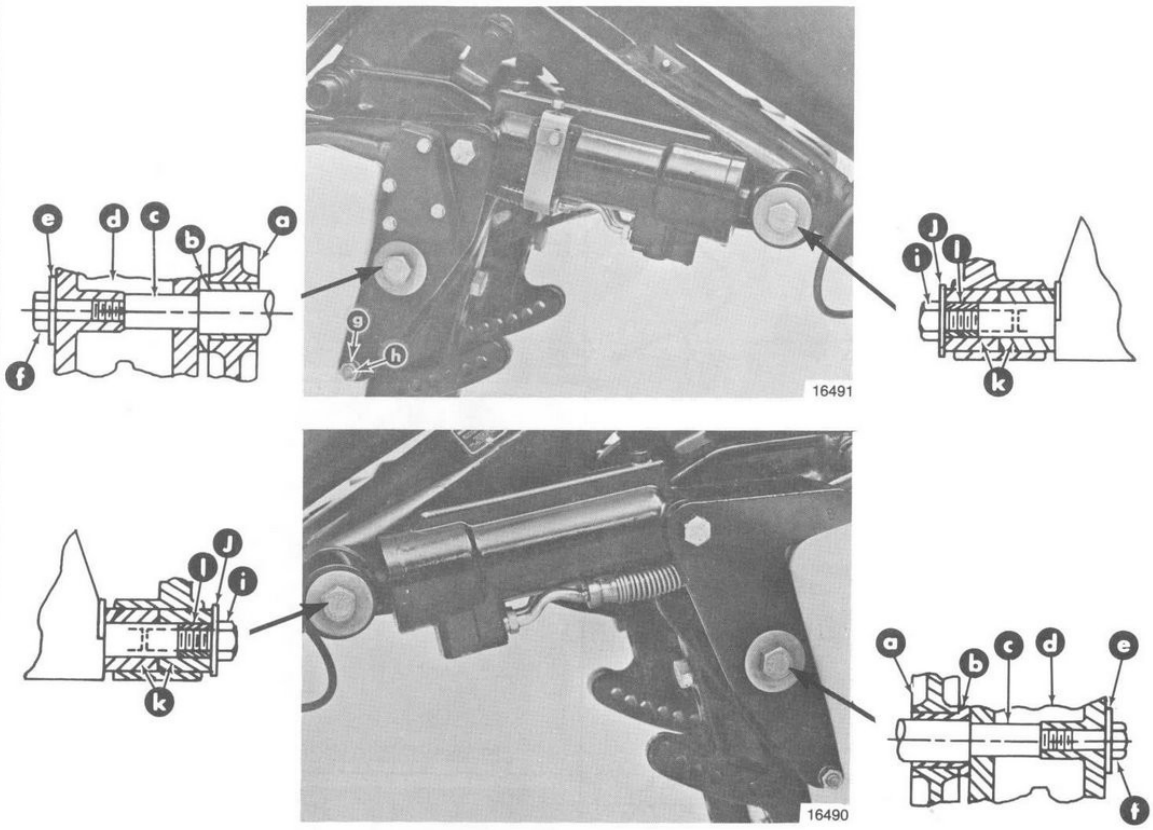


a - Transom Bracket
b - Upper Shock Mount Pin
c - Flat Washer 1-1/2" O.D.
d - Spacer - 1-1/4" O.D. x 1-1/8" Long
e - Spacer - 3/4" O.D. x 1-1/8" Long
f - Trim Cylinder Mounting Bracket
g - Flat Washer 1-1/2" O.D.
h - Hex Bolt 3-1/4" Long
i - Bushing (Retained from Engine)
j - Lockwasher
k - Hex Nut
l - Spacer - Two Sizes are Supplied (1-1/8" and 1-11/16" Long) - Use Appropriate Length Spacer
m - Hex Bolt 1-1/2" Long
n - Flat Washer 1-1/2" O.D. x 3/4" I.D.
o - Nylon Bushings
p - Metal Spacer 3/4" Long x 1/2" I.D.
q - Flat Washer 1-1/2" O.D. x 1/2" I.D.

INSTALLING POWER TRIM COMPONENTS TO ENGINE
45 THRU 70 MODELS and
80 SHORT SHAFT MODEL

STEP 10 **Install trim cylinders to lower shock pins, as shown.**

80 (SHORT SHAFT MODEL)



a - Transom Bracket
b - Bushing-Shock Mount Pin
c - Upper Shock Mount Pin
d - Trim Cylinder Mounting Bracket
e - Flat Washer 1-1/2" O.D.
f - Hex Bolt 2-1/4" Long
g - Lock Washer
h - Hex Nut
i - Hex Bolt 1-1/2" Long
j - Flat Washer 1-1/2" O.D. x 1/2" I.D.
k - Nylon Bushings
l - Metal Spacer 3/4" Long x 1/2" I.D.

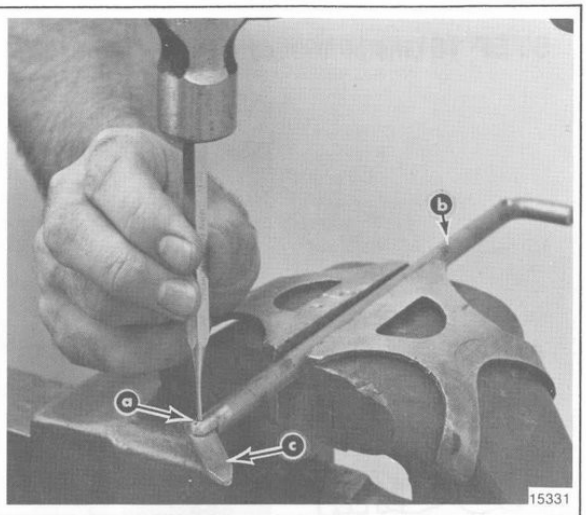
INSTALLING POWER TRIM COMPONENTS TO ENGINE
50 THRU 70 MODELS and
80 SHORT SHAFT MODEL

STEP 11

Modify Tilt Lock Pin as follows:

a. Use a punch and remove roll pin (a) from tilt lock pin (b). Remove tilt pin swivel (c) from tilt lock pin.

b. Replace tilt stop pin into transom brackets with flat washer (d) and cotter pin (e). Adjust tilt stop pin after installation of kit is complete. Refer to Trim "IN" Angle Adjustment.



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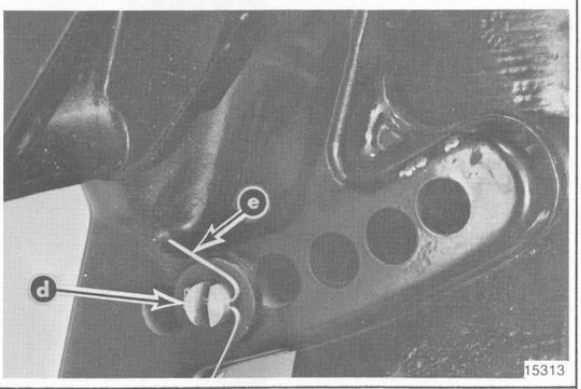

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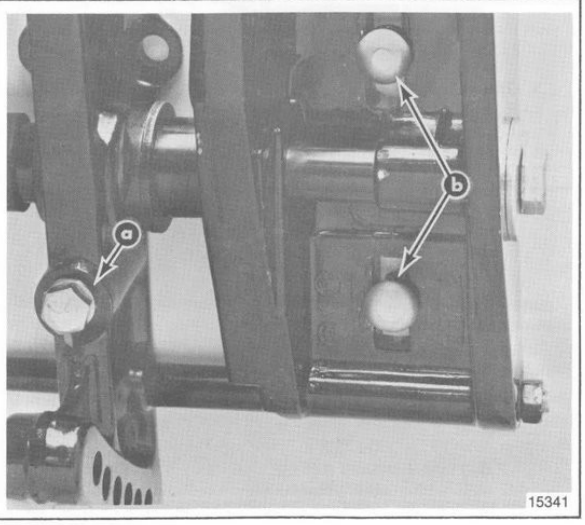
Raise engine to full "UP" position and engage tilt lock lever.

Retighten engine mounting bolts (a) then drill two ⅜" diameter mounting holes thru transom for each trim cylinder mounting bracket.

Apply marine sealer to shanks of carriage bolts (b) and fasten each trim cylinder mounting bracket with 2 carriage bolts, flat washers and locknuts, as shown.

SAFETY WARNING: DO NOT, under any circumstances, allow carriage bolts for trim cylinder mounting brackets to be closer than 1" (25.4mm) from top of (real) boat transom, not shims.



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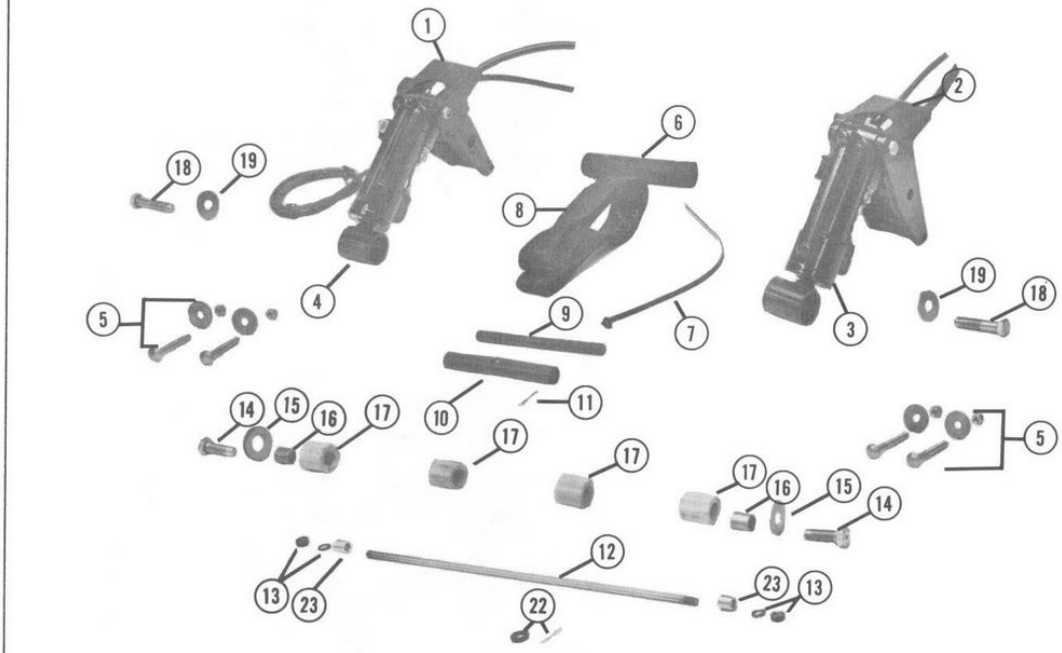
INSTALLING POWER TRIM COMPONENTS TO ENGINE
80 LONG SHAFT THRU 150 (IN-LINE) MODELS

Power Trim Components for Installation to Engine



1 - Port Trim Cylinder Mounting Bracket
2 - Starboard Trim Cylinder Mounting Bracket
3 - Starboard Trim Cylinder
4 - Port Trim Cylinder
5 - Carriage Bolts, Flat Washers and Locknuts (4 Req'd) - Mounting Hardware for Trim Cylinder Mounting Brackets
6 - Rubber Cushion Tube
7 - Sta-Strap
8 - Nylon Strap
9 - Cross Pin
10 - Metal Tube
11 - Cotter Pin (Secure Cross Pin in Tube)
12 - Threaded Rod
13 - Hex Nut and Lock Washer (2 Req'd) - Secure Threaded Rod
14 - Hex Bolt 1-1/2" Long
15 - Flat Washer 1-1/2 O.D. x 1/2" I.D.
16 - Metal Spacer 3/4" Long
17 - Nylon Bushings - 2 per Cylinder
18 - Hex Bolt 2-1/2" Long (Fasten Mounting Bracket to Engine)
19 - Flat Washer 1-1/2" O.D. x 1/2" I.D.
20 - Pilot Bolt 3-1/2" Long
21 - Shim - Install Between Cylinder and Bracket (Side Toward Engine)
22 - Flat Washer (Black Color) and Cotter Pin - for Modifying Tilt Lock Pin
23 - Metal Spacer 9/16" Long
24 - Locknut

INSTALLING POWER TRIM COMPONENTS TO ENGINE 80 LONG SHAFT THRU 150 (IN-LINE) MODELS

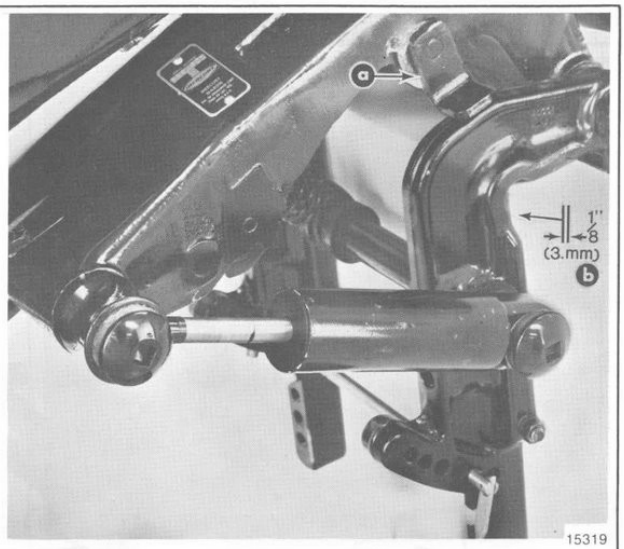
STEP 1

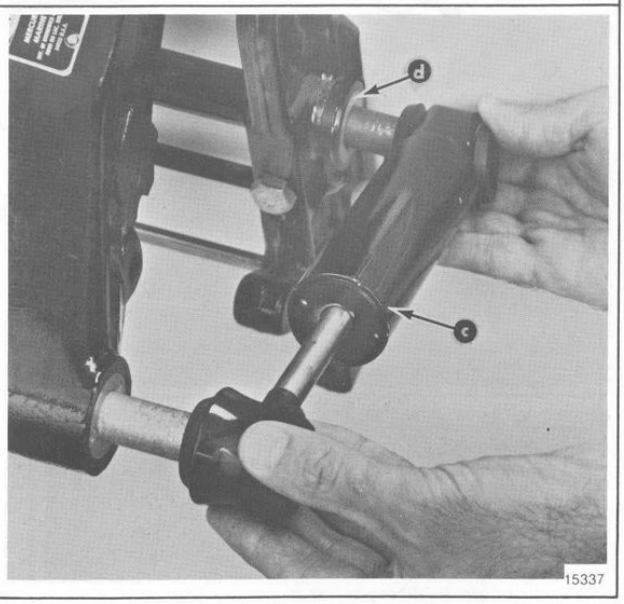
a. Install engine on boat transom following instructions in the "Engine Mounting Instructions" (supplied with engine).

b. Raise engine to full "UP" position and engage tilt lock lever (a).

c. Loosen engine mounting bolts slightly so that engine transom brackets will be approximately ⅛" (3mm) from transom (b). (Retighten after trim kit is installed.)

d. Remove both shock absorbers (c) and metal flat washers ("d" if equipped) from engine.



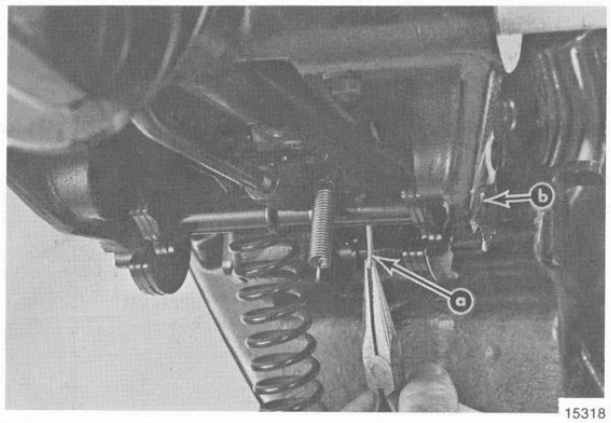


INSTALLING POWER TRIM COMPONENTS TO ENGINE
80 LONG SHAFT THRU 150 (IN-LINE) MODELS

STEP 2

a. Remove cotter pin (a) from reverse lock hook assembly.

b. Slide cross pin (b) out of assembly, then disconnect spring and remove reverse lock hook assembly (c) from engine.



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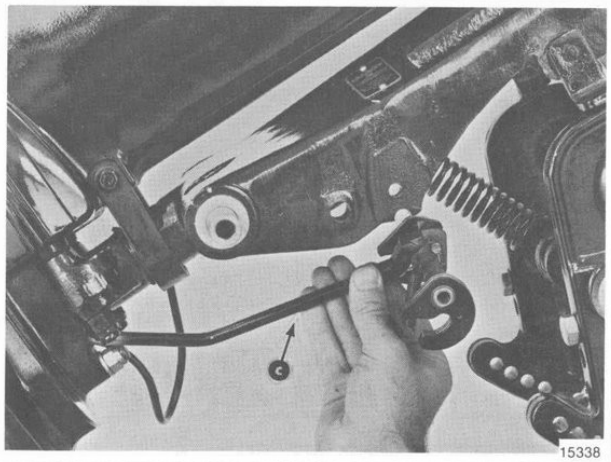

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INSTALLING POWER TRIM COMPONENTS TO ENGINE
80 LONG SHAFT THRU 150 (IN-LINE) MODELS

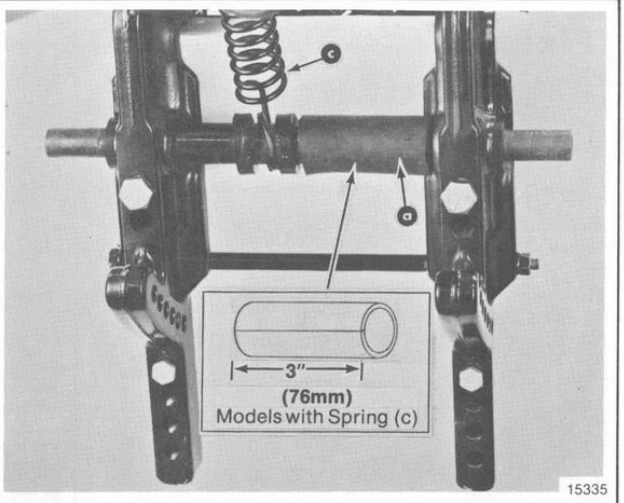
STEP 3

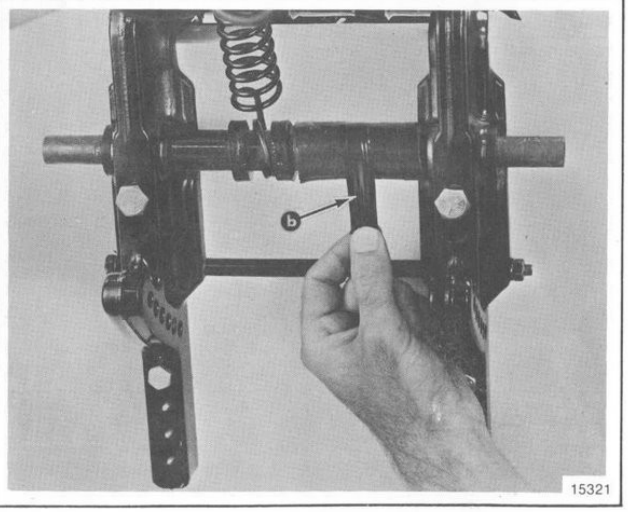
a. Shorten rubber tube (a) to 3″ (76mm) in length, for models with spring (c).

b. Slit rubber tube lengthwise.

c. Apply Quicksilver Bellows Adhesive to inside of rubber tube and slip tube (a) over upper shock pin as shown.

d. Secure rubber tube in place by wrapping plastic type electrical tape (b) around tube as shown.





INSTALLING POWER TRIM COMPONENTS TO ENGINE
80 LONG SHAFT THRU 150 (IN-LINE) MODELS

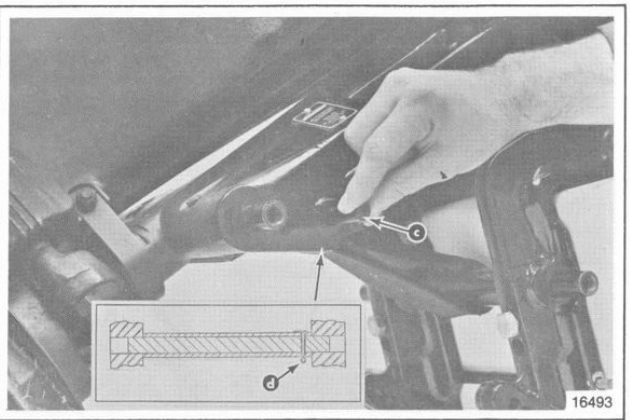
(Step 5 continued)

c. Align metal tube with thru holes in swivel bracket and slide cross pin (c) thru tube.

NOTE: On earlier model engines, it may be necessary to drill holes for cross pin to 33/64" (13mm) diameter.

d. Secure cross pin in the metal tube with cotter pin (d) as shown (bend end of cotter pin).

e. Fasten sta-strap (e) around nylon strap and shaft of tilt lock lever. Raise engine by hand as high as possible, then pull sta-strap tight. Cut off excess sta-strap.



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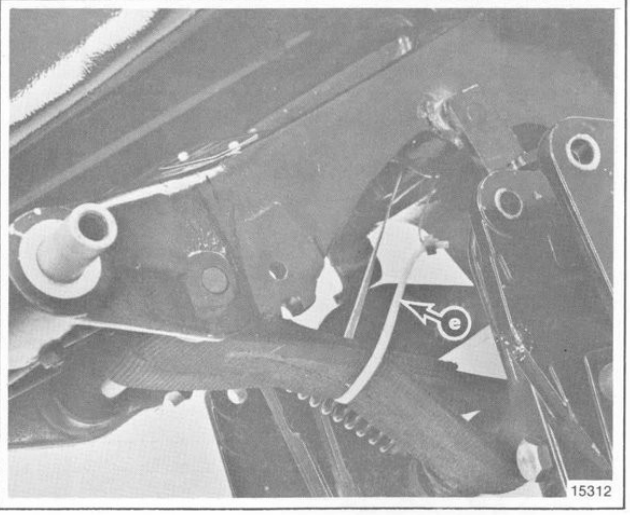

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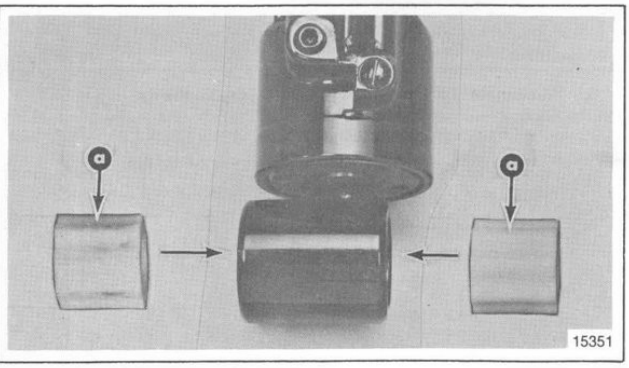
STEP 6

Push nylon bushings (a) into lower rod eye of each power trim cylinder. Center the bushings so equal length of bushing extends out from each side.



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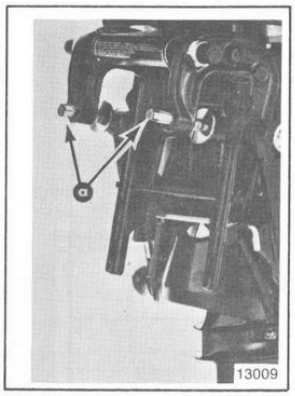
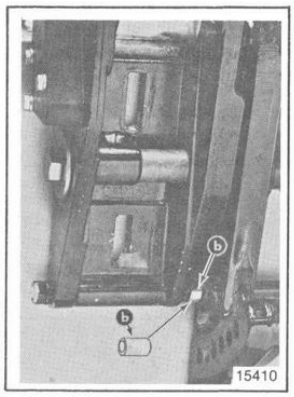
INSTALLING POWER TRIM COMPONENTS TO ENGINE 80 LONG SHAFT THRU 150 (IN-LINE) MODELS

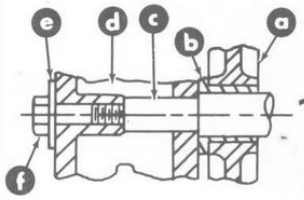
STEP 7 **Install trim cylinders to lower shock pins, as shown.**

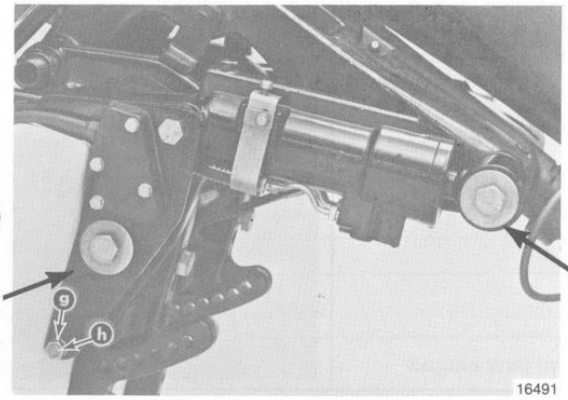
SPECIAL INSTRUCTIONS

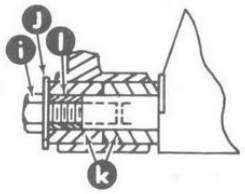
If installing this kit on an engine that has the type of transom bracket with clamp screws (a), then install the 9/16" long metal spacer (b) between each transom bracket and trim cylinder mounting bracket.

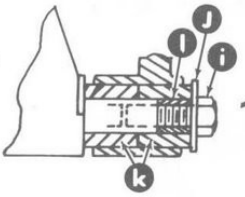


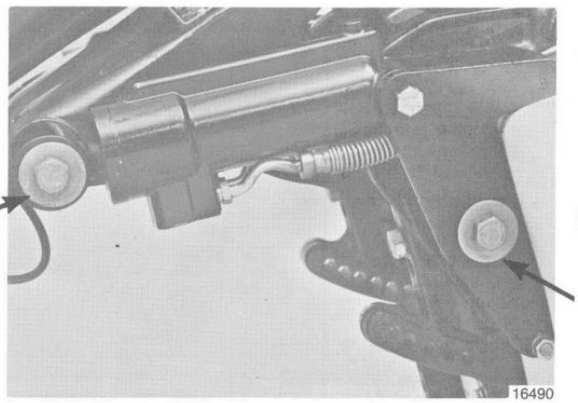


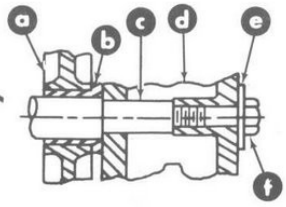












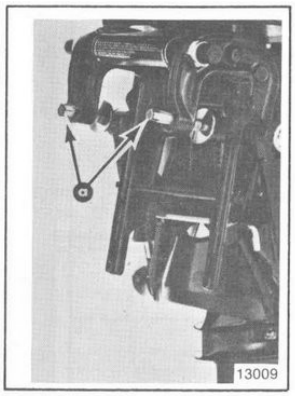
a - Transom Bracket
b - Bushing-Shock Mount Pin
c - Upper Shock Mount Pin
d - Trim Cylinder Mounting Bracket
e - Flat Washer 1-1/2" O.D.
f - Hex Bolt 2-1/4" Long
g - Lock Washer
h - Hex Nut
i - Hex Bolt 1-1/2" Long
j - Flat Washer 1-1/2" O.D. x 1/2" I.D.
k - Nylon Bushings
l - Metal Spacer 3/4" Long x 1/2" I.D.

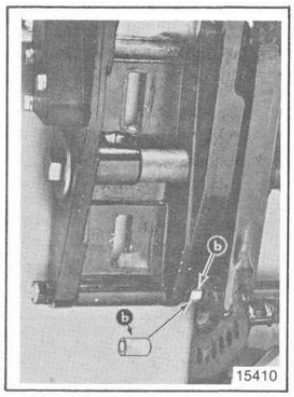
INSTALLING POWER TRIM COMPONENTS TO ENGINE 80 LONG SHAFT THRU 150 (IN-LINE) MODELS

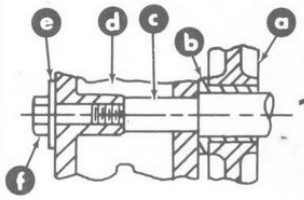
STEP 7 **Install trim cylinders to lower shock pins, as shown.**

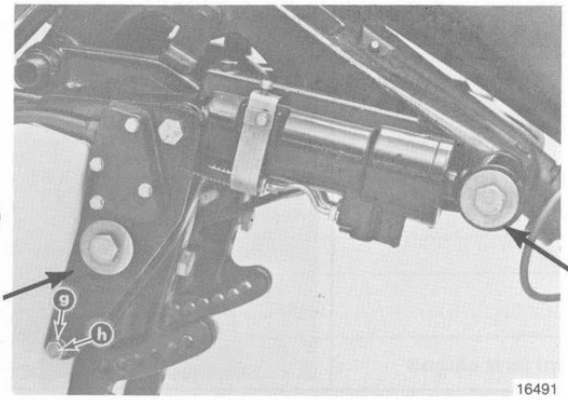
SPECIAL INSTRUCTIONS

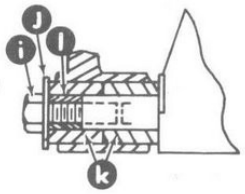
If installing this kit on an engine that has the type of transom bracket with clamp screws (a), then install the 9/16" long metal spacer (b) between each transom bracket and trim cylinder mounting bracket.

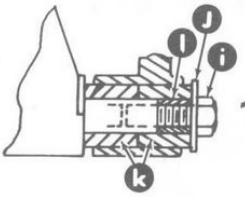


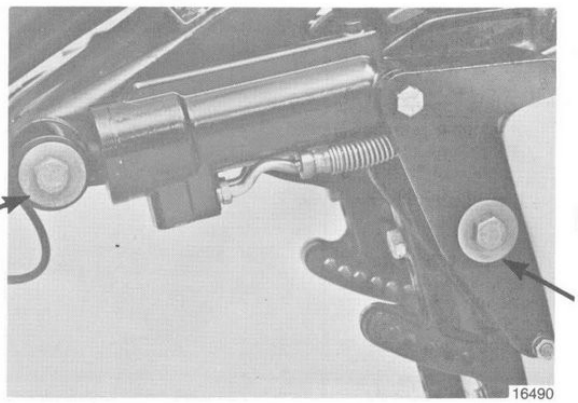


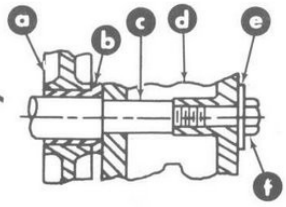












a - Transom Bracket
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f - Hex Bolt 2-1/4" Long
g - Lock Washer
h - Hex Nut
i - Hex Bolt 1-1/2" Long
j - Flat Washer 1-1/2" O.D. x 1/2" I.D.
k - Nylon Bushings
l - Metal Spacer 3/4" Long x 1/2" I.D.

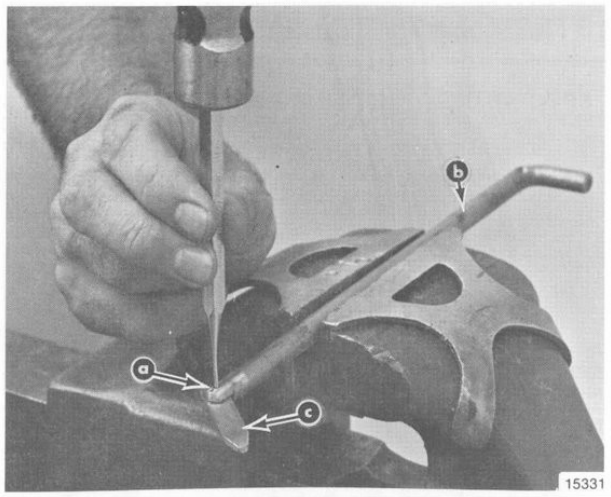
INSTALLING POWER TRIM COMPONENTS TO ENGINE 80 LONG SHAFT THRU 150 (IN-LINE) MODELS

STEP 8

Modify Tilt Lock Pin as follows:

a. Use a punch and remove roll pin (a) from tilt lock pin (b). Remove tilt pin swivel (c) from tilt lock pin.

b. Replace tilt stop pin into transom brackets with flat washer (d) and cotter pin (e). Adjust tilt stop pin after installation of kit is complete. Refer to Trim "IN" Angle Adjustment.



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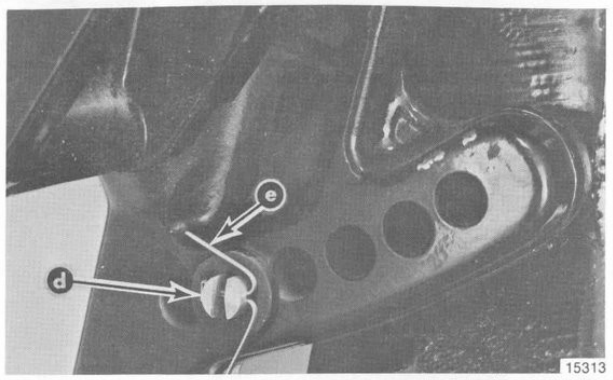

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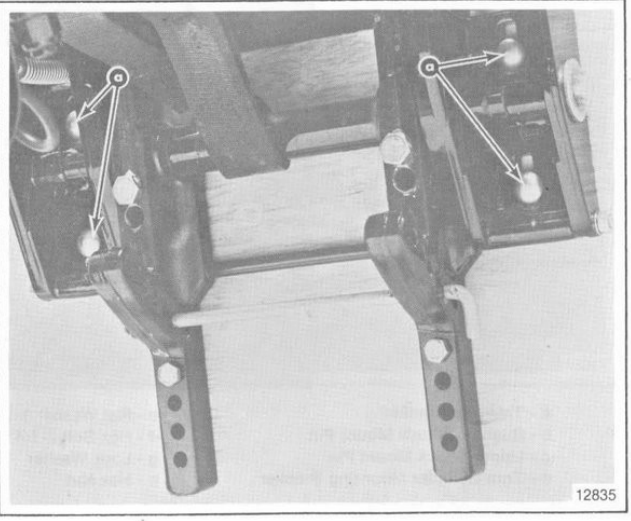
STEP 9

a. Raise engine to full "UP" position and engage tilt lock lever (a).

b. Retighten engine mounting bolts, then drill two ⅜" diameter mounting holes thru transom for each trim cylinder mounting bracket.

c. Apply marine sealer to shanks of carriage bolts (a) and fasten each trim cylinder mounting bracket with 2 carriage bolts, flat washers and locknuts, as shown.

SAFETY WARNING: DO NOT, under any circumstances, allow carriage bolts for trim cylinder mounting brackets to be closer than 1" (25.4mm) from top of (real) boat transom, not shims.



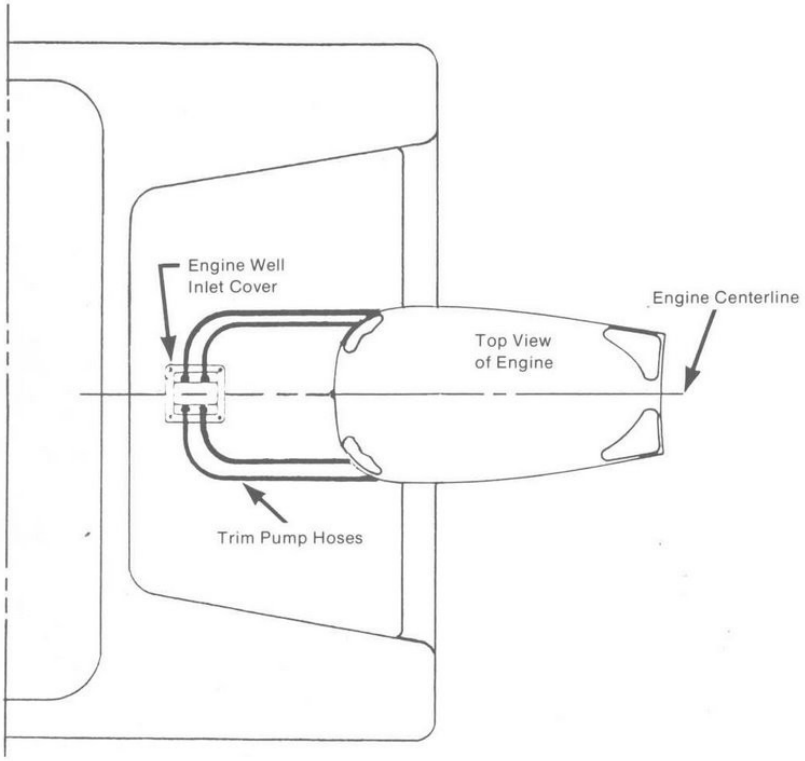
12835

INSTALLING POWER TRIM PUMP

STEP 1 SELECTING MOUNTING LOCATION FOR ENGINE WELL INLET COVER

Select a location that is:

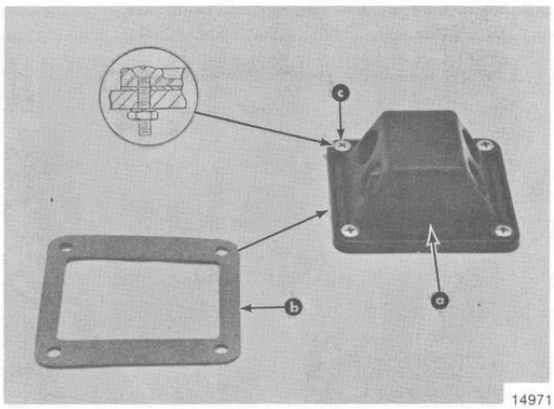
1. In-line with engine and on a flat surface.
2. In an area where cover will not interfere with engine fully tilted up.
3. Close enough to transom to allow trim hoses to extend to the Power Trim pump. (Refer to Step 3 for locating the trim pump.)



STEP 2 INSTALLING ENGINE WELL INLET COVER

1. Cut out inlet cover template from end of these instructions.
2. Locate template at desired location (Step 1) and drill holes thru mounting surface as indicated on template.
3. Install inlet cover (a) along with gasket (b). Secure with four 10-32 screws, lockwashers and hex nuts (c). Cut off excess screw length.

Engine Well Inlet Cover Installed



INSTALLING POWER TRIM PUMP

STEP 3

SELECTING MOUNTING LOCATION FOR POWER TRIM PUMP

1. Power Trim pump can be mounted two ways, either 1) on a side of an internal bulkhead using mounting bracket supplied with pump or 2) using optional floor mount bracket.

2. Select an appropriate mounting location for the trim pump that meets the following requirements.

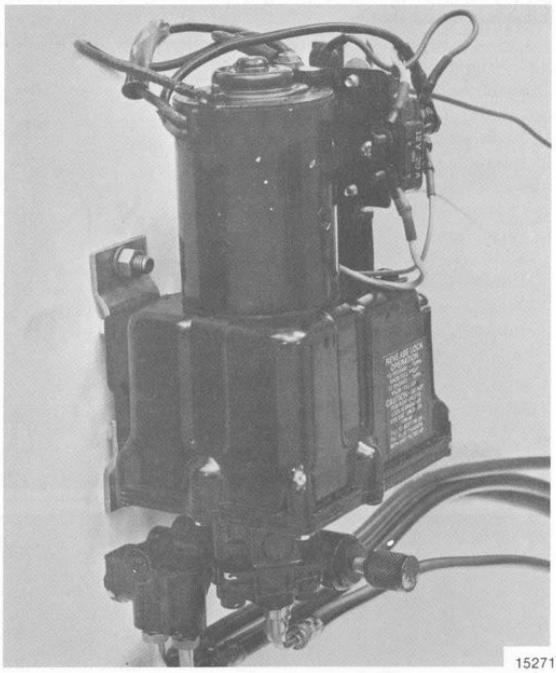
   a. Trim pump must be mounted so pump hoses can be routed free of stress.

   b. Trim hoses when routed thru engine well MUST extend to pump.

   c. Trim pump should be mounted to allow easy access to the "Fill/Vent" screw (a) and to manual tilt knob (b) on the pump.

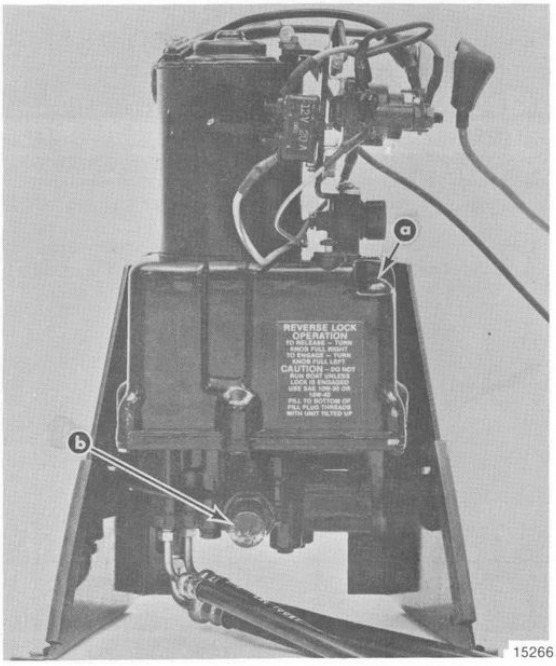
   d. Install pump in an area where bilge water will not contaminate pump.

Power Trim Pump Installed on a Internal Bulkhead



15271

Power Trim Pump Installed on Optional Floor Mount Bracket (Part No. C-88893A4)



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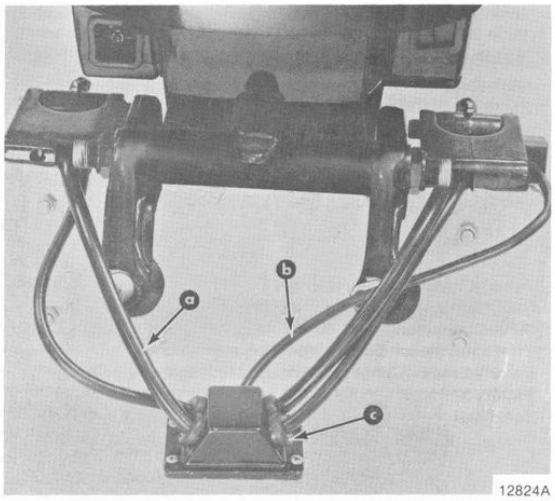
INSTALLING POWER TRIM PUMP

STEP 4

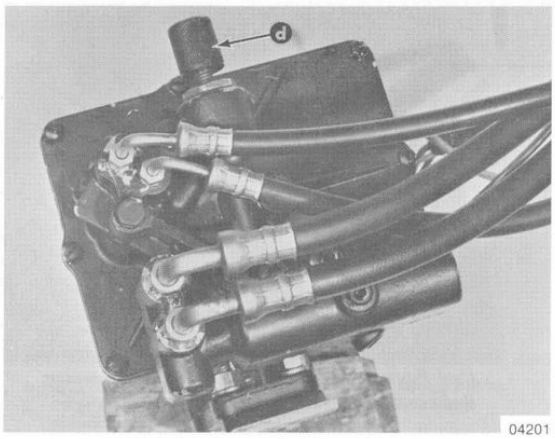
Mounting the Power Trim Pump

Route trim hoses (a) and trim limit switch leads (b) thru inlet cover as shown. Make sure hoses and leads are free of stress, then install rubber grommets (c) as shown.



1. Turn control knob (d) full left (counterclockwise) before removing valve port caps. This will prevent oil from draining from the pump while attaching hoses.

2. Attach hoses to valve ports as shown. Use caution that hose fittings and hose ports are not damaged by cross threading.



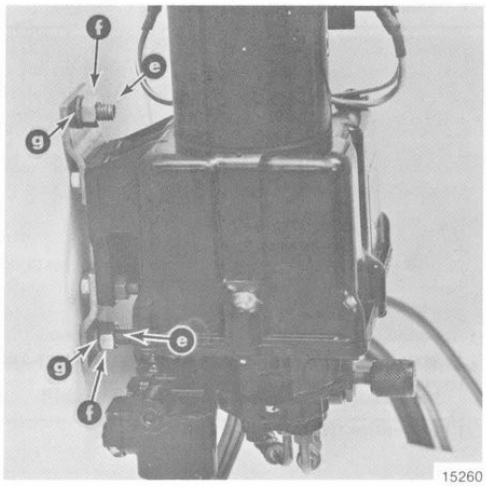
If mounting pump on a side of an internal bulkhead, follow steps "a" thru "c".

a. Cut out pump mounting template from end of these instructions.

b. Locate template at desired location and drill holes thru mounting surface as indicated on template.

c. Secure pump to mounting surface with two 1¾" long hex bolts (e), lockwashers (g) and hexnuts (f).

If mounting the pump on a floor mount bracket, mount pump to bracket and install floor mount bracket by following instructions which accompany the floor mount bracket.

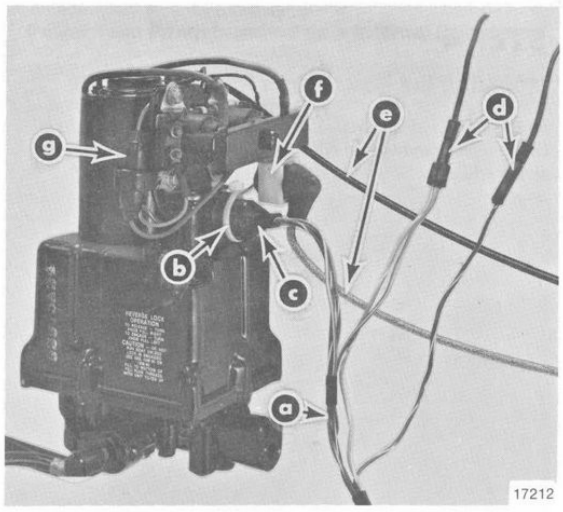


Power Trim Pump Electrical Connections

IMPORTANT: The Power Trim pump is equipped with a 90-amp fuse and a 20-amp (in-line) fuse to protect the trim system from overload. If trim system becomes inoperative, check for blown 90-amp fuse (no continuity between fuse mount bracket and fuse terminal) or blown 20-amp fuse (remove from fuse holder and visually inspect). If either fuse has blown, the cause for overload MUST BE found and corrected BEFORE replacing fuse.

a - Remote Control Wiring Harness
b - Sta-Strap or Hose Clamp
c - 3-Pin Connector
d - Trim Limit Switch Leads (From Engine)
e - Battery Leads - Connect Black Lead to Negative (-) Battery Terminal and Red Lead to Positive (+) Battery Terminal
f - 90-amp Fuse
g - 20-amp Fuse

Power Trim Pump Electrical Connections



Filling and Bleeding the Power Trim

IMPORTANT: Check oil level in pump only when engine is fully tilted up. Pump reservoir must be vented for pump to operate properly.

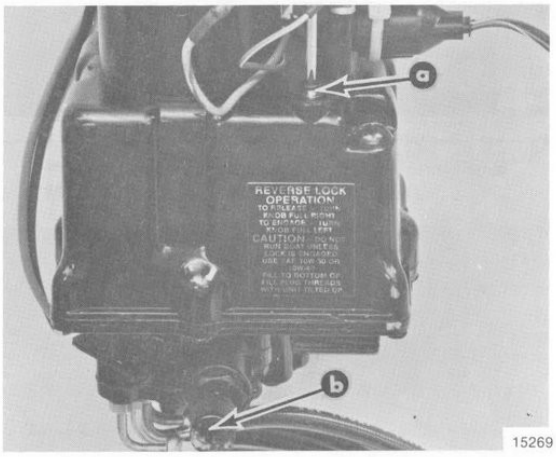
1. Open pump vent screw (a) 2 turns.
2. Make sure manual tilt knob (b) is turned out (counter-clockwise).

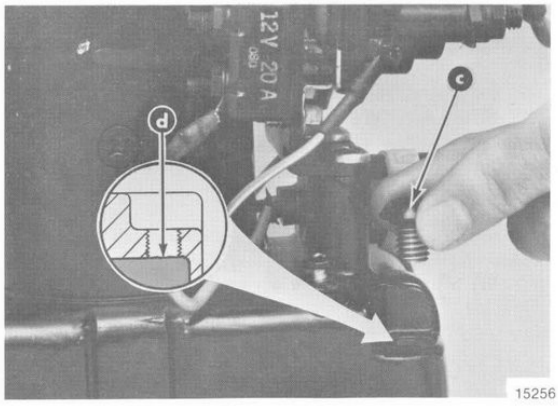
   NOTE: For trim pump to electrically operate, the engine harness connector must be connected to engine (See Page 14) and engine and trim pump battery leads connected to battery.

3. Actuate the "Trailer" switch and trim engine to full up position.
4. Remove fill screw (c) and check oil level in pump. Oil level should be to the bottom of the fill hole threads (d). If necessary, add SAE 10W-30 or 10W-40 motor oil. DO NOT overfill.

   NOTE: In tropical areas, single viscosity SAE 30W motor oil may be used.

5. Bleed any remaining air from the trim system by trimming engine several times thru entire trailering range. Recheck pump oil level each time engine is trimmed up and add oil if necessary.
6. Reinstall and tighten fill screw. Vent screw stays open to vent the pump reservoir.
7. Check entire trim system for leaks.

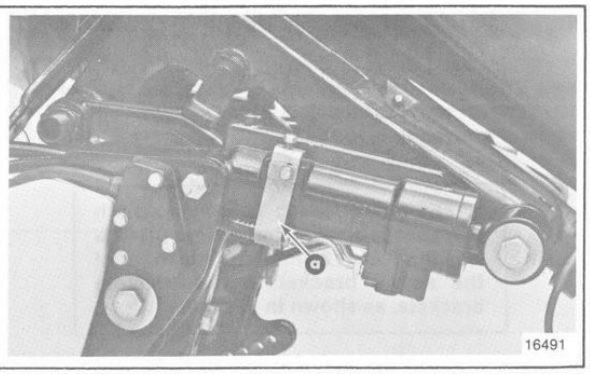




POWER TRIM ADJUSTMENTS

IMPORTANT: If engine only trims out partways or does not trim out at all, but will trim in and trailer up, the problem may be that cam (a) is not making sufficient contact with the trim limit switch plunger. If necessary, bend cam (a) out closer to the plunger.

If cam (a) is repositioned, recheck Trim "out" Angle Adjustment below.



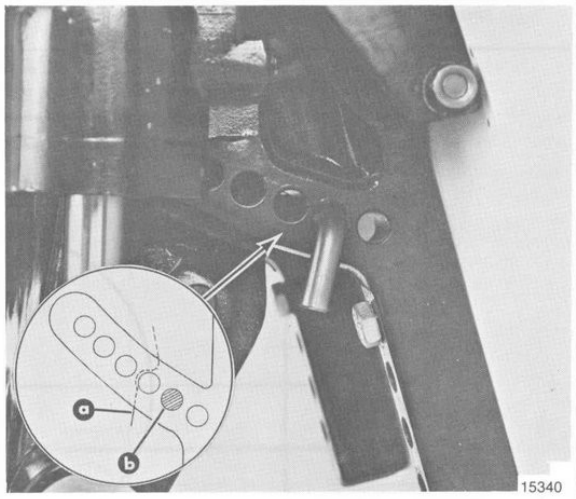
TRIM "IN" ANGLE ADJUSTMENT

Trim "In" angle is adjusted by repositioning the tilt stop pin.

SAFETY WARNING: Operating some boats at minimum trim "in" at planing speeds will cause undesirable and/or unsafe steering conditions. Each boat should be tested for handling characteristics after any adjustment is made to the tilt angle.

DO NOT OPERATE motor with tilt stop pin removed.

Trim engine so gear housing anti-ventilation plate is parallel with bottom of boat, then adjust the trim "IN" angle by installing tilt stop pin one hole ahead of engine swivel bracket flange. (Figure 1)



a - Engine Swivel Bracket Flange (position of flange will be determined when anti-ventilation plate is positioned parallel with bottom of boat)
b - Tilt Stop Pin

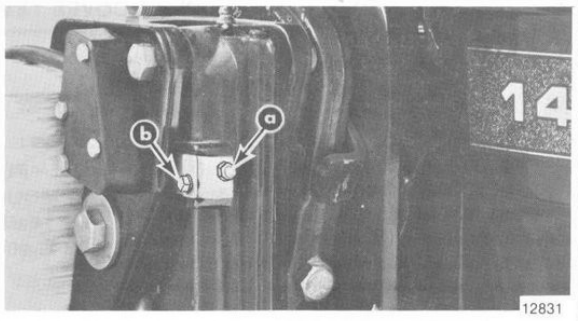
Figure 1. Trim "IN" Angle Adjustment

TRIM "OUT" ANGLE ADJUSTMENT

1. Trim engine to full "IN" position then trim engine out until pump motor stops. Outward trim of engine must stop so that engine swivel bracket maintains a MINIMUM of ½" (12.7mm) engagement within transom bracket flanges, as shown in Figure 3.
2. Pull out on engine lower unit to take up all slack in hydraulic cylinders while checking trim limit tilt position.

IMPORTANT: If cylinder pistons retract into hydraulic cylinders more than ⅛" (3.2mm) while pulling out on engine lower unit, it will be necessary to bleed air from hydraulic system (see "bleeding" instructions, pg. 24).

(continued)



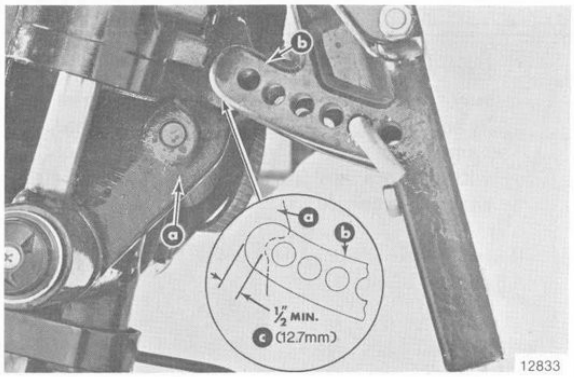
a - Trim Limit Switch Adjustment Nut b - Retainer Screw

Figure 2. Trim Limit Switch Adjustment

3. If engine (swivel bracket) trims out further than specified in Step 1, or if engine does not trim out far enough, loosen trim limit switch retainer screw. (Figure 2) Turn trim limit switch adjustment nut counterclockwise to reduce outward trim travel or turn clockwise to increase outward trim travel.

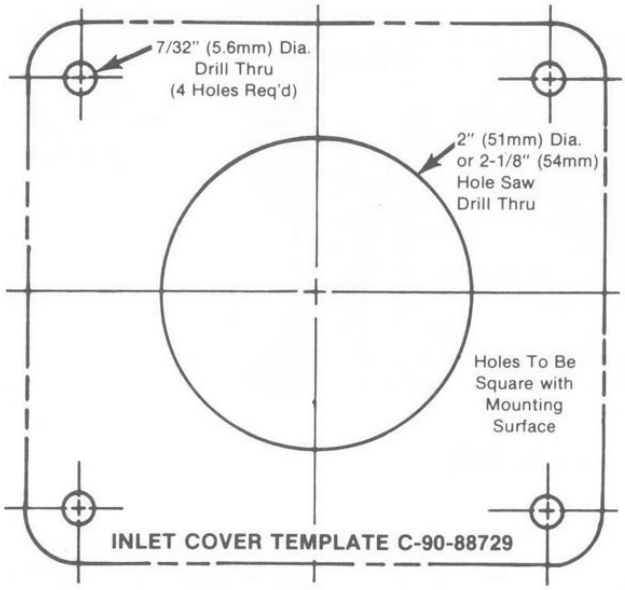
SAFETY WARNING: Trim limit switch must never be adjusted so that there is less than ½" (12.7mm) engagement of the swivel bracket in the transom brackets, as shown in Figure 3.

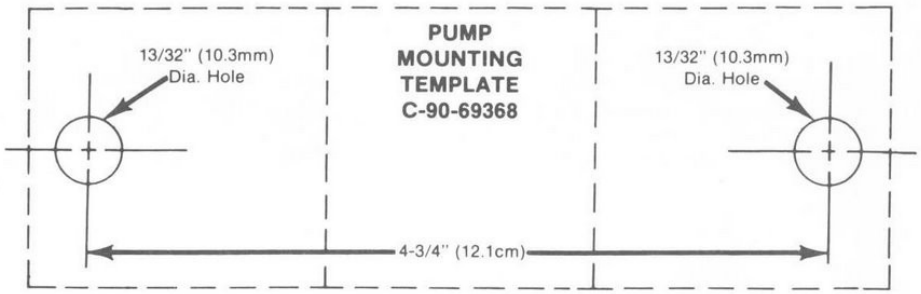
4. Tighten retainer screw and again trim engine out until pump motor stops. Recheck swivel bracket/transom bracket engagement. (Figure 3)

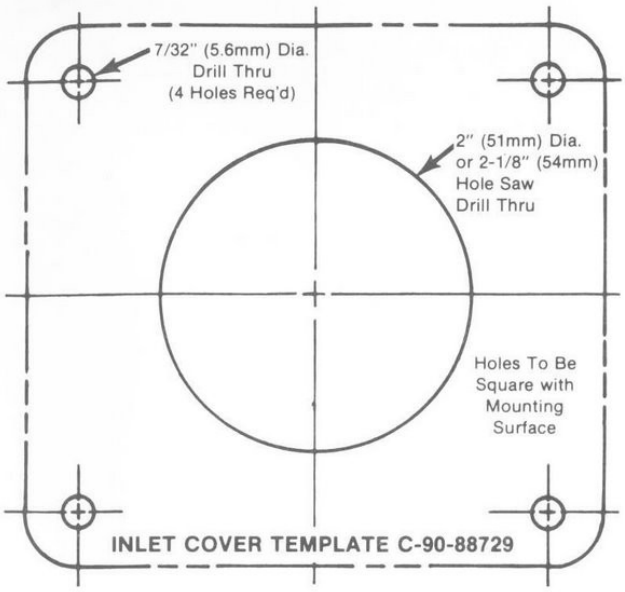


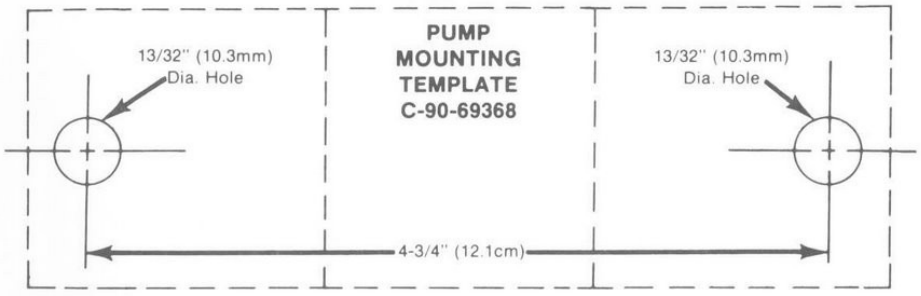
a - Swivel Bracket Flange
b - Transom Bracket Flange
c - 1/2" Minimum

Figure 3. Trim Limit Travel






7/32" (5.6mm) Dia.
Drill Thru
(4 Holes Req'd)
2" (51mm) Dia.
or 2-1/8" (54mm)
Hole Saw
Drill Thru
Holes To Be
Square with
Mounting
Surface
INLET COVER TEMPLATE C-90-88729


13/32" (10.3mm)
Dia. Hole
PUMP
MOUNTING
TEMPLATE
C-90-69368
13/32" (10.3mm)
Dia. Hole
4-3/4" (12.1cm)

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

OUTBOARD POWER TRIM
OWNERS GUIDE
For OPERATION and MAINTENANCE

15418

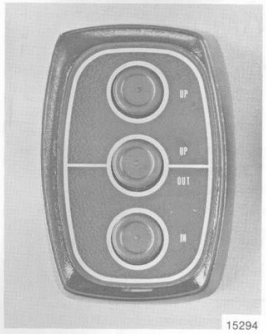
Printed in U.S.A.

90-97929 1-1283

SAFETY WARNING: A tight grip on the steering wheel is always advisable and is required when accelerating, decelerating or when trimming the boat. Upon reaching cruising speed, the outboard should be trimmed to obtain a balanced steering condition. While trimming, steering loads will vary and will pull in one direction until a balanced condition has been attained. If the outboard is trimmed past the balanced steering condition, the steering wheel then will have a tendency to pull in the opposite direction. Excessive trimming past the balanced steering position will result in increased steering loads and, in most boat applications, a decrease in performance.

CAUTION: When using Power Trim on some boats, operation at extreme "In" or "Out" positions greatly increases steering torque, and steering becomes difficult. Outboard should be trimmed to a safe operating angle (Figure 5) to provide easy steering.

Your boat will most likely be equipped with one of the following types of power trim switch controls, as shown in Figures 1 thru 4.



15294

Figure 1. 3-Button Power Trim Control Panel

15294

Figure 2. Toggle Switch Type Power Trim Control Panel

15118

Figure 3. Power Trim Switches in Handle of Quicksilver Side Mount or Panel Mount Remote Control

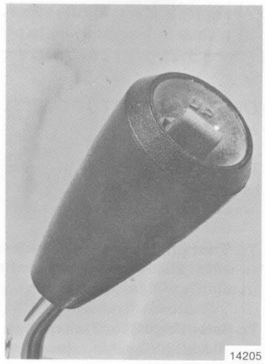

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Figure 4. Power Trim Switch in Handle of Quicksilver Console Remote Control

OPERATION OF TRIM SWITCHES

OPERATION OF THE 3-BUTTON TRIM PANEL (Figure 1)

To Trim Engine "Out" - Press the "Up/Out" button. The trim system has an adjustable trim limit switch built in, to prevent the engine from being trimmed out beyond a safe operating limit.

To Trim Engine "In" (or Down from Trailer Position) - Press the "In" button until engine is at desired trim "In" angle or at end of travel.

To Raise Engine for Trailering (or for Shallow Water Operation) - Press the "Up/Out" and "Up" buttons at the same time. This overrides the trim limit switch and allows the engine to be raised for trailering or operating in shallow water at idle RPM. See CAUTION immediately following.

CAUTION: DO NOT operate engine above idle RPM with engine trimmed beyond transom mounting bracket side support flanges (Figure 7), as the swivel bracket will have no side thrust support. Exercise caution when operating at extreme angles in shallow water. Be sure that water level is above water pickup in gear housing to prevent damage to water pump.

OPERATION of TOGGLE TYPE TRIM SWITCH (Figures 2, 3 and 4)

To Trim Engine "Out" - Move trim switch to "UP" position. The trim system has an adjustable trim limit switch built in, to prevent the engine from being trimmed out beyond a safe operating limit.

To Trim Engine "In" (or Down from Trailer Position) - Move the trim switch to "Down" position until engine is at desired trim "In" angle or at end of travel.

To Raise Engine for Trailering (or for Shallow Water Operation) - Press the "TRAILER" button, this overrides the trim limit switch and allows the engine to be raised for trailering or operation in shallow water at idle RPM. See CAUTION immediately following.

CAUTION: DO NOT operate engine above idle RPM with engine trimmed beyond transom mounting bracket side support flanges (Figure 7), as the swivel bracket will have no side thrust support. Exercise caution when operating at extreme angles in shallow water. Be sure that water level is above water pickup in gear housing to prevent damage to water pump.

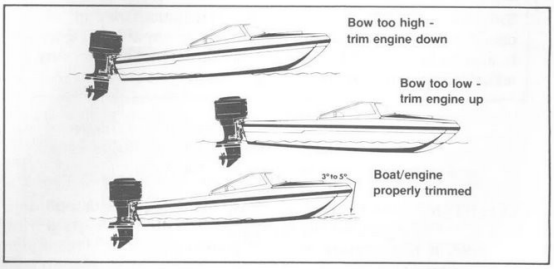


Figure 5. How to Plane a Boat

TRIMMING ENGINE "UP" ("OUT") CHARACTERISTICS

1. Will lift bow of boat, generally increasing top speed.
2. Transfers steering torque harder to left on installations below 23" (58cm) transom height.
3. Increases clearance over submerged objects.
4. In excess, can cause porpoising and/or ventilation.
5. If trimmed out beyond the water pickup, reduced water supply can cause serious overheating.

SAFETY WARNING: Excessive trim "out" also may reduce the stability of some high speed hulls. To correct instability at high speed, reduce the power GRADUALLY and trim the motor "in" slightly before resuming high speed operation. (Rapid reduction in power will cause a sudden change of steering torque and may cause additional momentary boat instability.)

TRIMMING ENGINE "DOWN" ("IN") CHARACTERISTICS

1. Will help planing off, particularly with a heavy load.
2. Usually improves ride in choppy water.
3. In excess, can cause boat to veer to the left or right (bow steer).
4. Transfers steering torque harder to right (or less to the left).
5. Improves planing speed acceleration.

SAFETY WARNING: Excessive speed at minimum trim "in" will cause undesirable and/or unsafe steering conditions. Each boat should be tested for handling characteristics after any adjustment is made to the tilt angle (tilt pin relocation).

NOTE: Because varying hull designs react differently in various degrees of rough water, it is recommended to experiment with trim positions to determine whether trimming up or down will improve the ride in rough water.

IMPORTANT: This Power Trim pump is equipped with a 90-amp fuse and a 20-amp (in-line) fuse to protect the trim system from overload. If trim system becomes inoperative, check for blown 90-amp fuse (no continuity between fuse mount bracket and fuse terminal) or blown 20-amp fuse (remove from fuse holder and visually inspect). If either fuse has blown, the cause for overload MUST BE found and corrected BEFORE replacing fuse.

NOTE: If trim or trailer switch(s) remain depressed after engine 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 switch/button be released as soon as engine reaches end of travel. If cut-out switch should open, do not depress switch/button for approximately one minute. After this period of time, cut-out switch will close (reset itself) and pump again may be operated.

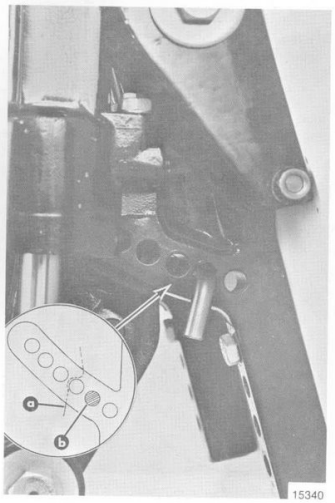
TRIM "IN" ANGLE ADJUSTMENT

Trim "In" angle is adjusted by repositioning the tilt stop pin.

SAFETY WARNING: Operating some boats at minimum trim "in" at planing speeds will cause undesirable and/or unsafe steering conditions. Each boat should be tested for handling characteristics after any adjustment is made to the tilt angle.

DO NOT OPERATE motor with tilt stop pin removed.

Trim engine so gear housing anti-ventilation plate is parallel with bottom of boat, then adjust the trim "IN" angle by installing tilt stop pin thru transom brackets, one hole ahead of engine swivel bracket (Figure 6).



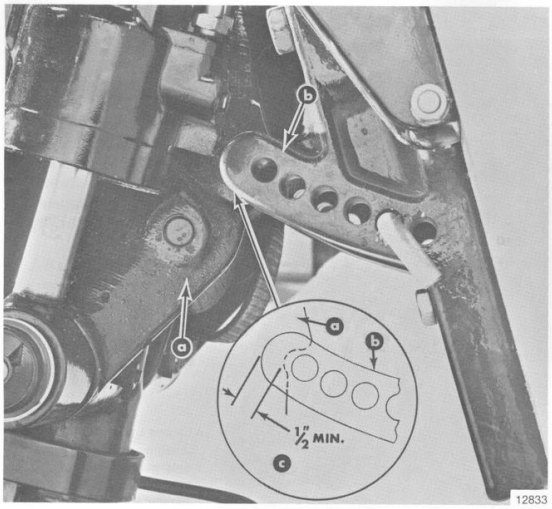
a - Engine Swivel Bracket Flange (position of flange will be determined when anti-ventilation plate is positioned parallel with bottom of boat)
b - Tilt Stop Pin

Figure 6. Trim "IN" Angle Adjustment

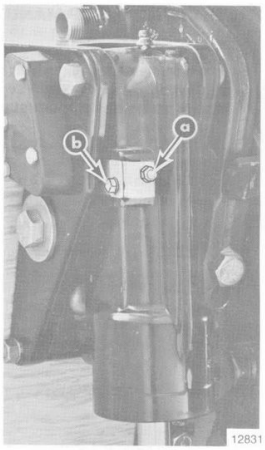
TRIM "OUT" ANGLE ADJUSTMENT

1. Trim engine to full "IN" position then trim engine out until pump motor stops. Outward trim of engine must stop so that engine swivel bracket maintains a MINIMUM of ½" (12.7mm) engagement within transom bracket flanges, as shown in Figure 7.
2. Pull out on engine lower unit to take up all slack in hydraulic cylinders while checking trim limit tilt position.

   IMPORTANT: If cylinder pistons retract into hydraulic cylinders more than ⅛" (3.2mm) while pulling out on engine lower unit, it will be necessary to bleed air from hydraulic system (see "bleeding" instructions, Step 6 on Page 9).



3. If engine (swivel bracket) trims out further than specified in Step 2, or if engine does not trim out far enough, loosen trim limit switch retainer screw; (Figure 8) Turn trim limit switch adjustment nut counterclockwise to reduce outward trim travel or turn clockwise to increase outward trim travel.



a - Trim Limit Switch Adjustment Nut
b - Retainer Screw

Figure 8. Trim Limit Switch Adjustment

SAFETY WARNING: Trim limit switch must never be adjusted so that there is less than ½" (12.7mm) engagement of the swivel bracket in the transom brackets, as shown in Figure 7.

4. Tighten retainer screw and again trim engine out until pump motor stops. Recheck swivel bracket/transom bracket engagement. (Figure 7).

a - Swivel Bracket Flange
b - Transom Bracket Flange
c - 1/2" Minimum

Figure 7. Trim Limit Travel

TILTING ENGINE UP MANUALLY

SAFETY WARNING: Shift remote control into neutral and remove ignition key from switch before attempting to tilt outboard up-or-down manually or making any adjustments on Power Trim.

1. Rotate manual control knob (Figure 9) fully to right (clockwise). (This releases reverse lock valve and allows manual tilting "up" of engine from "down" position).

   NOTE: The manual control knob does not allow tilting engine "down" from any position (whether tilting was done manually or with hydraulic pump).

2. To lock engine in full "up" position, lift engine up and rotate tilt lock lever.
3. After engine has been tilted-up manually, turn control valve to left (counterclockwise) to re-engage reverse lock valve in pump motor.

TILTING ENGINE DOWN

Engine cannot be tilted-down manually. Tilt-down of engine must be accomplished by depressing "IN" button to operate hydraulic pump motor.

NOTE: In an emergency only, engine can be released from "up" position by disconnecting one of the smaller diameter trim hoses from trim cylinder or from the trim pump and allowing oil to escape while engine tilts down. See your Authorized Servicing Dealer as soon as possible to determine and correct cause for pump motor failure to pump down.

MAINTENANCE

INSPECTION

Lubrication and maintenance inspection 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)**

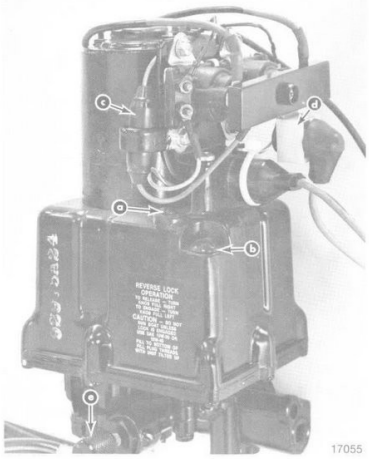
**Operation in salt water areas is considered severe service.*

1. Carefully check Power Trim components for wear. Have worn parts replaced by your Authorized Servicing Dealer.

2. Check for oil leaks and worn or kinked hoses in the hydraulic system.
3. Check that trim limit switch (Figure 8) is properly adjusted (see "Trim OUT Angle Adjustment", preceding).
4. Lubricate grease fittings (located on top of trim cylinders) with Quicksilver 2-4-C Lubricant (92-86154) or Quicksilver Multipurpose Lubricant (92-75605).
5. Check oil level in pump as follows:
   a. Trim engine to full "up" position.
   b. Remove fill screw (Figure 9) and check oil level in pump. Oil level should be to the bottom of the fill hole threads. If necessary, add SAE 10W-30 or 10W-40 motor oil. DO NOT overfill.

      NOTE: In tropical areas, single viscosity SAE 30W motor oil may be used.

   c. Reinstall and tighten fill screw.
6. If any air has entered the trim system, bleed the air from the trim system by trimming engine several times thru entire trailering range. Recheck pump oil level each time engine is trimmed "up" and add oil as necessary.



a - Reservoir Vent Screw
b - Fill Screw
c - 20-Amp Fuse (P/N 88-79091)
d - 90-Amp Fuse (P/N 88-79023A90)
e - Manual Control Knob

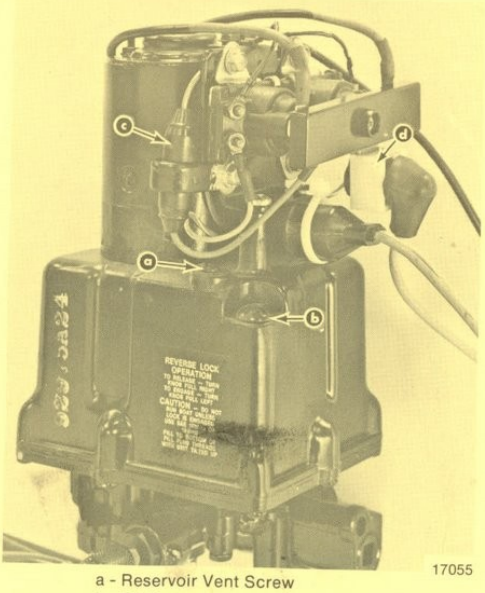
Figure 9. Power Trim Pump

(DEALER: DO NOT REMOVE THIS TAG)

IMPORTANT

Pump reservoir vent must be open for proper operation. Open vent by backing vent screw out 2 to 2-1/2 turns.

This Power Trim pump is equipped with a 90-amp fuse and a 20-amp (in-line) fuse to protect the trim system from overload. If trim system becomes inoperative, check for blown 90-amp fuse (no continuity between fuse mount bracket and fuse terminal) or blown 20-amp fuse (remove from fuse holder and visually inspect). If either fuse has blown, the cause for overload MUST BE found and corrected BEFORE replacing fuse.



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a - Reservoir Vent Screw
b - Fill Screw
c - 20-Amp Fuse (P/N 88-79091)
d - 90-Amp Fuse (P/N 88-79023A90)

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