

POWER TRIM KIT

MERCURY/MARINER 30/40 FOURSTROKE

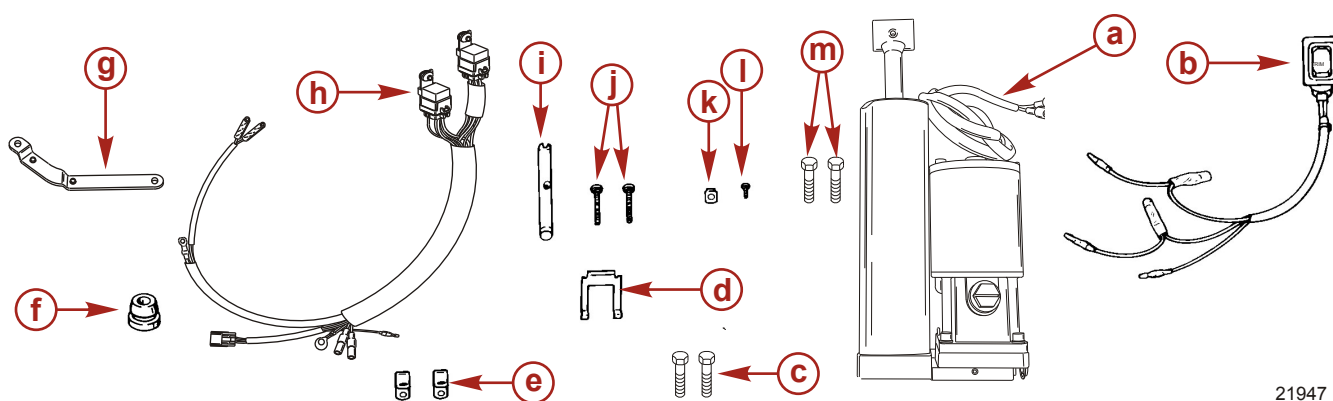
NOTICE

After completing installation, place these instructions with the product for the owner's future use.

NOTICE

This document is written to aid our dealers, boatbuilders, and company service personnel in the proper installation or service of our products. Persons who are not familiar with these or similar products produced by Mercury Marine, and who have not been trained in the recommended servicing or installation procedures should have the work performed by an authorized Mercury Marine dealer technician. Improper installation or servicing of the Mercury product could result in damage to the product or personal injury to the installer or persons operating the product.

Components Contained in Kit



21947

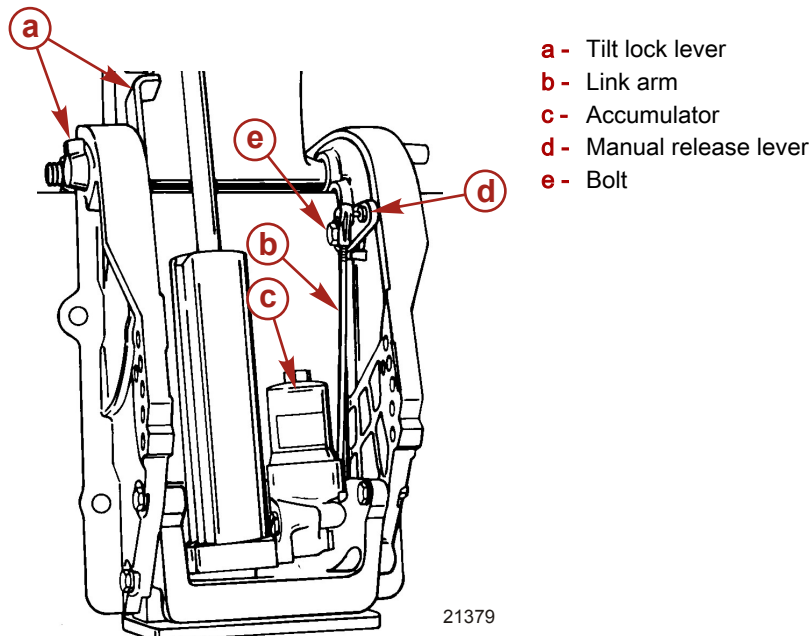
Ref.	Qty.	Description	Part Number
a	1	BigFoot power trim assembly	—
		Non-BigFoot power trim assembly	—
b	1	Trim switch	8M0042301
c	2	Screw (M6 x 25)	821291-25
d	1	Retainer	8M0032848
e	2	Cable clamp	22740
f	1	Grommet	19565002
g	1	Bracket	882831
h	1	Trim harness assembly	826802T29
i	1	Upper pivot pin	822869001
j	2	Trilobe pin	821539
k	1	C-washer	69205
l	1	Screw (10-16 x 0.50)	878608
m	2	Screw (M6 x 16)	824832--4

Gas Assist Trim Cylinder Removal

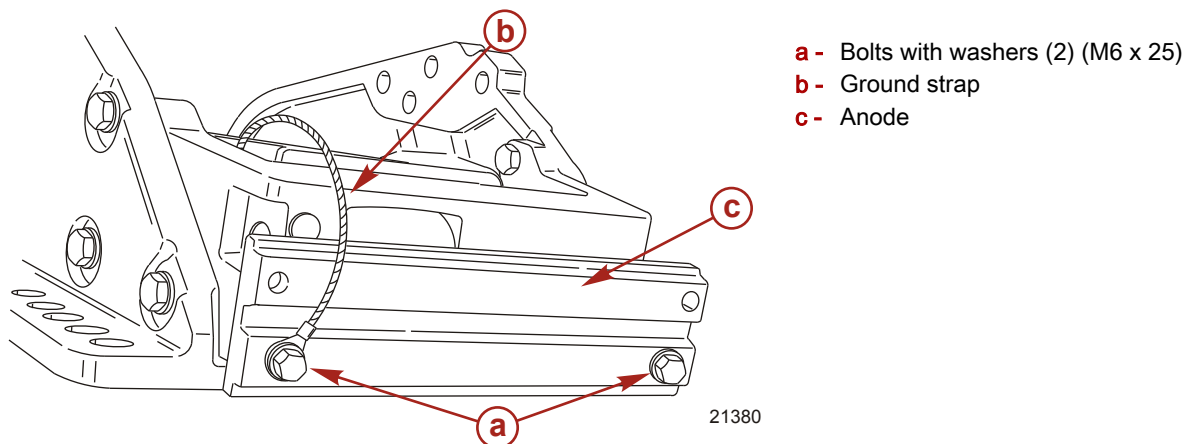
⚠ WARNING

Performing service or maintenance without first disconnecting the battery can cause product damage, personal injury, or death due to fire, explosion, electrical shock, or unexpected engine starting. Always disconnect the battery cables from the battery before maintaining, servicing, installing, or removing engine or drive components.

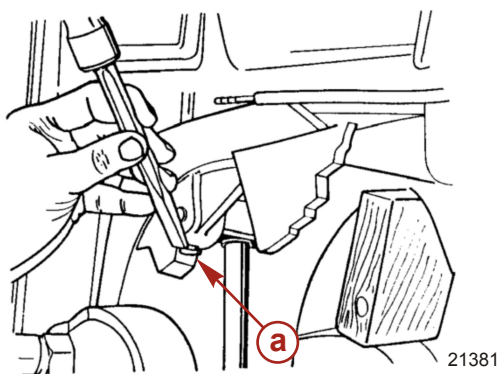
1. Raise the outboard to the full up position and use the tilt lock lever to support the outboard.
IMPORTANT: Support the outboard to ensure that it does not tip over center when removing or installing the gas assist trim cylinder.
2. Remove the link arm between the accumulator and the manual release lever.
3. Remove the bolt securing the manual release lever.
4. Remove the manual release lever through the clamp bracket access hole.



5. Remove the sacrificial anode from the clamp bracket.

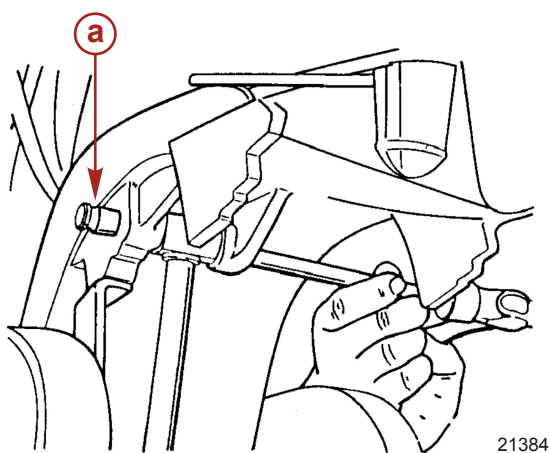


6. Remove (drive down) and discard the upper trilobe pin.



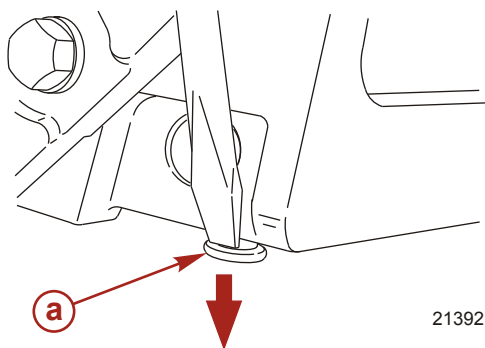
a - Trilobe pin

7. Drive out and discard the upper pivot pin.



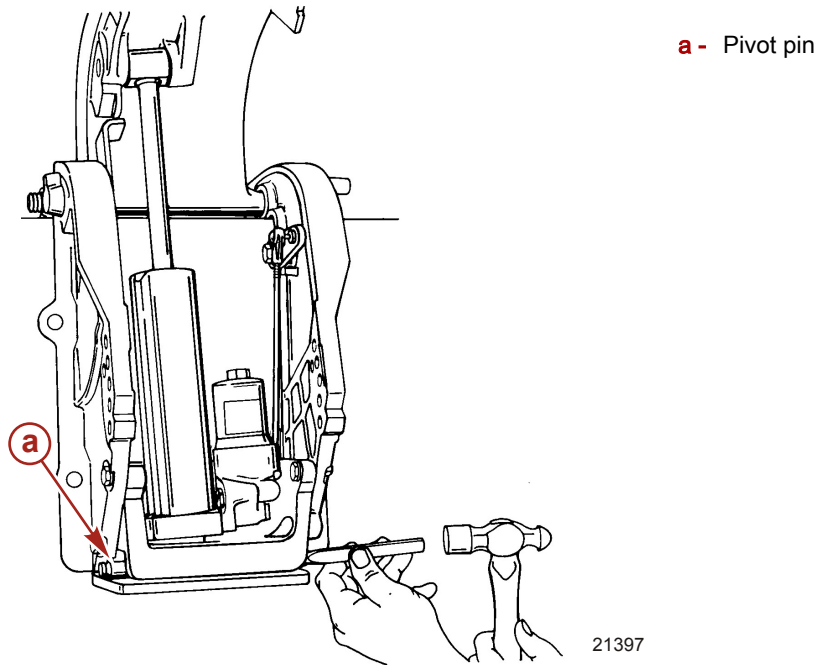
a - Pivot pin

8. Remove (drive down) and discard the lower dowel pin.

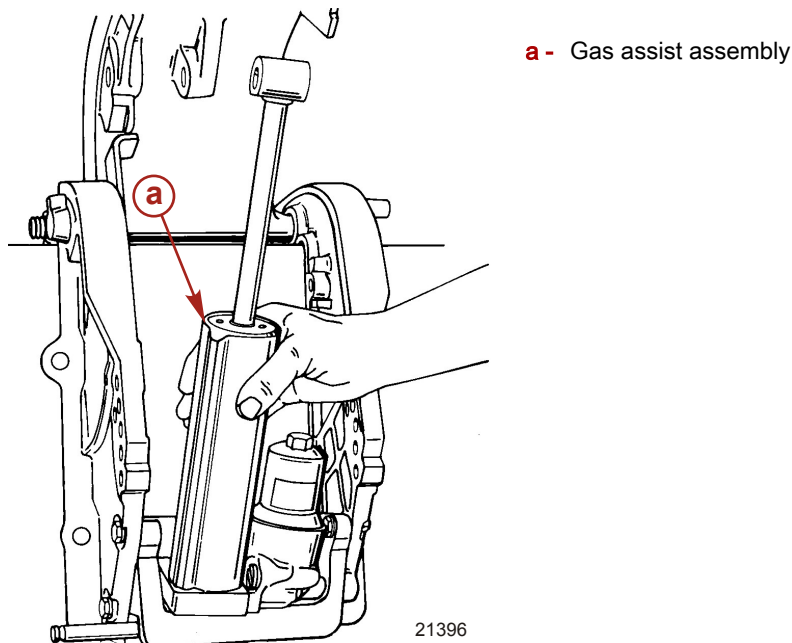


a - Dowel pin

9. Drive out and retain the lower pivot pin.



10. Tilt the top end of the gas assist assembly out from the clamp bracket and remove the assembly.



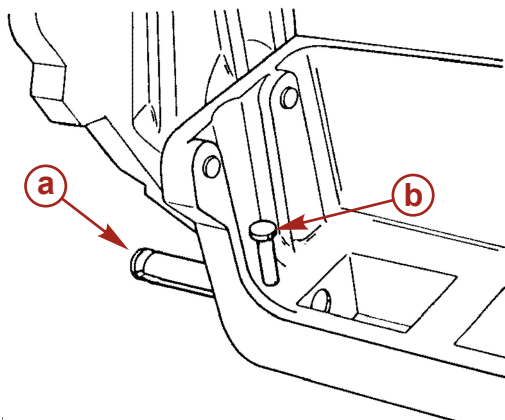
Power Trim Assembly Installation

IMPORTANT: Prior to installing the power trim assembly into the clamp bracket, connect a jumper lead between the blue wire of the trim motor and the positive terminal of a 12 volt battery. Touch the green wire from the trim motor to the negative battery terminal. Run the trim motor until the ram is fully extended. Disconnect the trim motor leads from the battery terminals. The power trim assembly can now be positioned into the clamp bracket.

IMPORTANT: Support the outboard to ensure that it does not tip over center when removing or installing the power trim assembly.


1. Lubricate the lower pivot pin and the pivot pin bore with 2-4-C with Teflon.

2. Start the lower pivot pin (retained) into the pivot pin bore and position the lower trilobe pin into its respective hole.

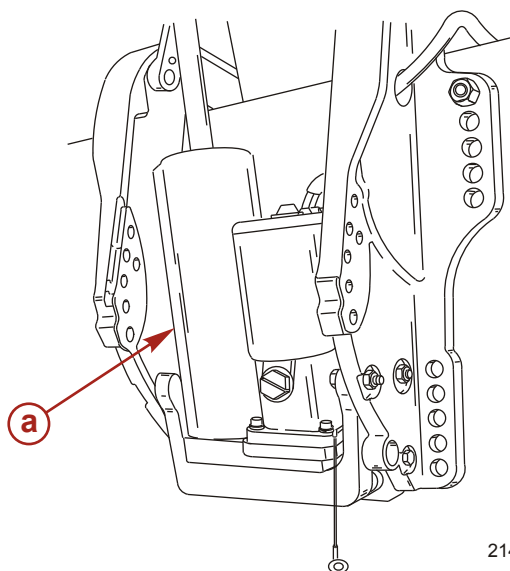


- a** - Lower pivot pin
- b** - Lower trilobe pin

21402

Tube Ref No.	Description	Where Used	Part No.
 95	2-4-C with Teflon	Surface of lower pivot pin and pivot pin bore	92-802859A 1

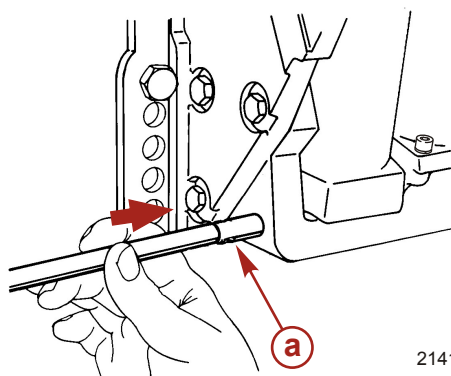
3. Position the power trim assembly (bottom first) between the clamp brackets.



- a** - Power trim assembly

21409

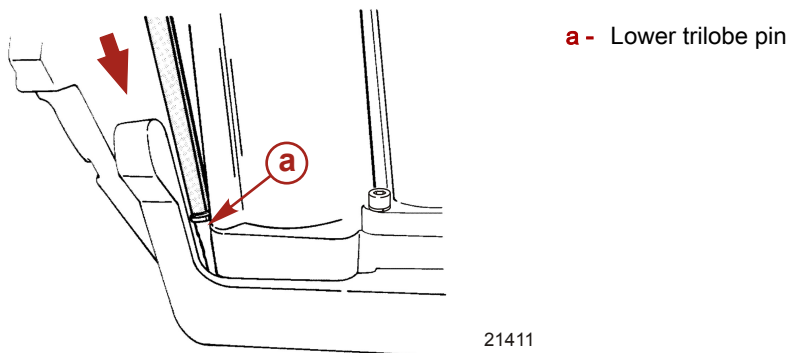
4. Using a suitable punch, drive the lower pivot pin into the clamp bracket and trim cylinder assembly until the pivot pin is flush with the outside surface.



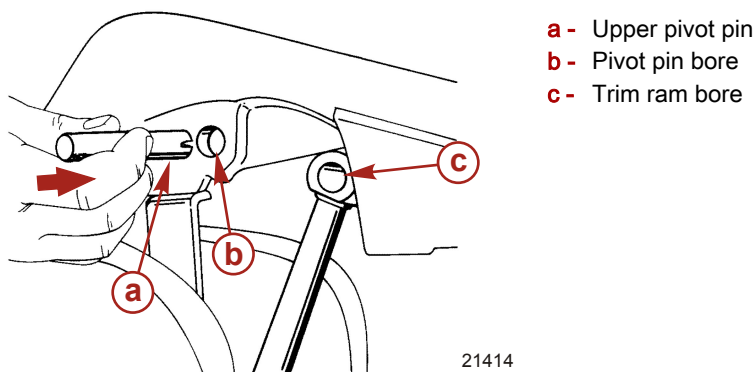
- a** - Lower pivot pin


21410

5. Using a suitable punch, drive the lower trilobe pin into its hole until seated.

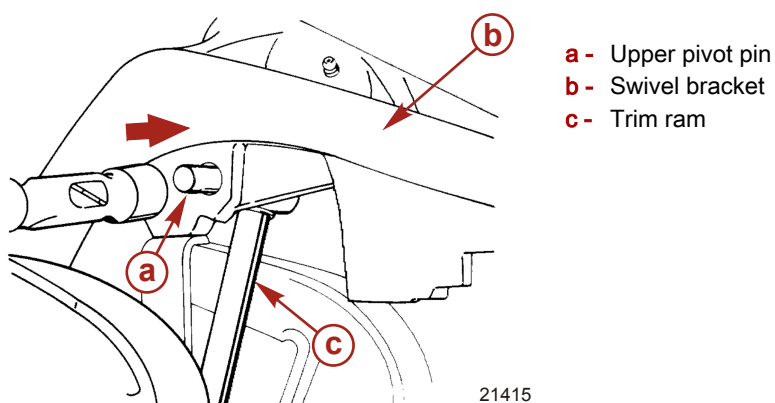


6. Apply 2-4-C with Teflon to the surface of the upper pivot pin, pivot pin bore, and trim ram bore. Install the upper pivot pin, slotted end first, towards the center of the swivel bracket so that the trim sender can be installed (if equipped).

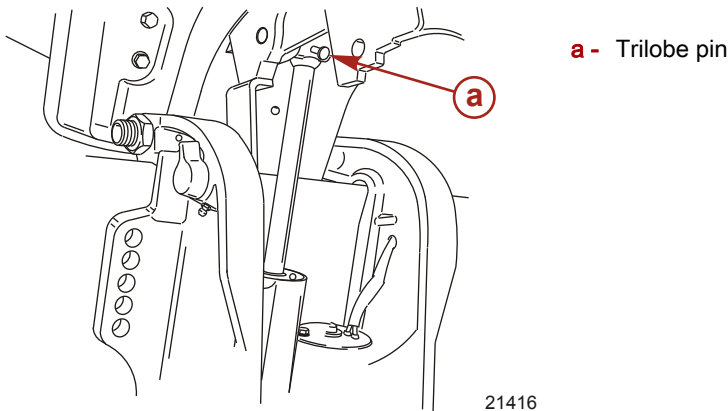


Tube Ref No.	Description	Where Used	Part No.
 95	2-4-C with Teflon	Surface of upper pivot pin, pivot pin bore, and trim ram bore	92-802859A 1

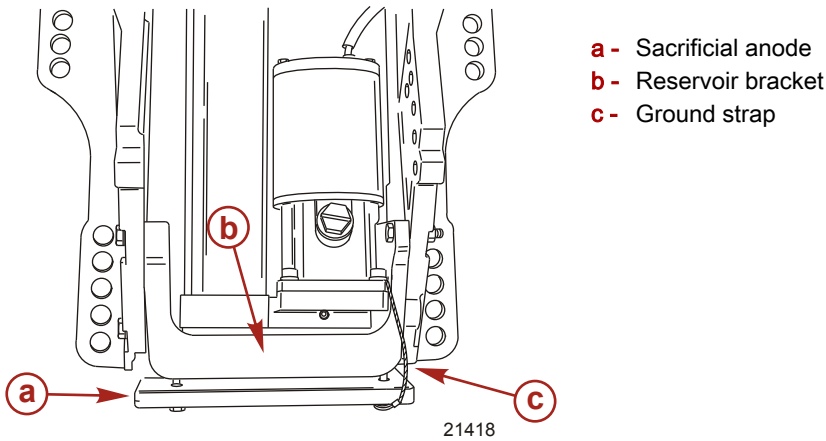
7. Drive the upper pivot pin into the swivel bracket and through the trim ram until the pivot pin is flush with the swivel bracket.



8. Align the pivot cross hole with the cross hole in the rod eye. Drive the trilobe pin into its hole until seated.

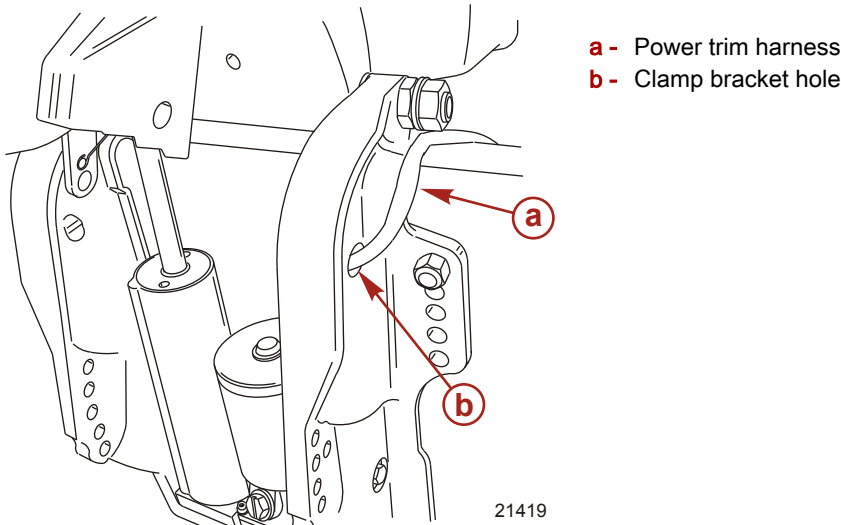


9. Install the sacrificial anode to the reservoir bracket. Secure the ground strap to the anode with the anode attaching screw. Tighten the screws to the specified torque.



Description	Nm	lb-in.	lb-ft
Screw (M6 x 25)	7	62	

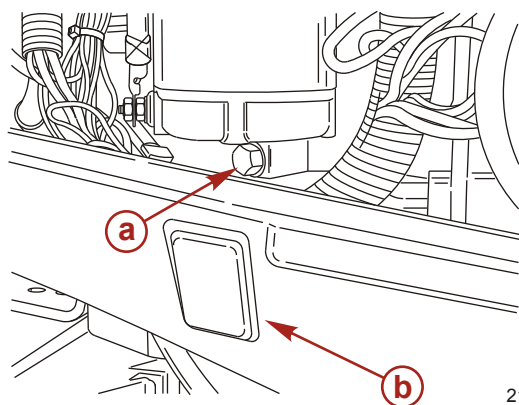
10. Route the power trim harness through the clamp bracket hole.



Electrical Installation

1. Remove the bottom starter mount bolt.

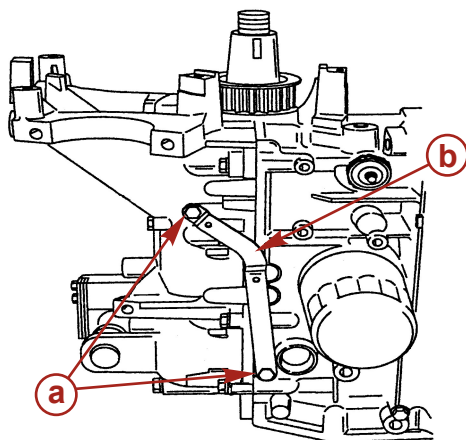
2. Remove the trim switch plug from the side of the cowl.



- a** - Starter mount bolt
- b** - Trim switch plug

21422

3. Fasten the trim relay mounting bracket to the cylinder block with two M6 x 16 screws.
4. Tighten the trim relay mounting bracket screws to the specified torque.



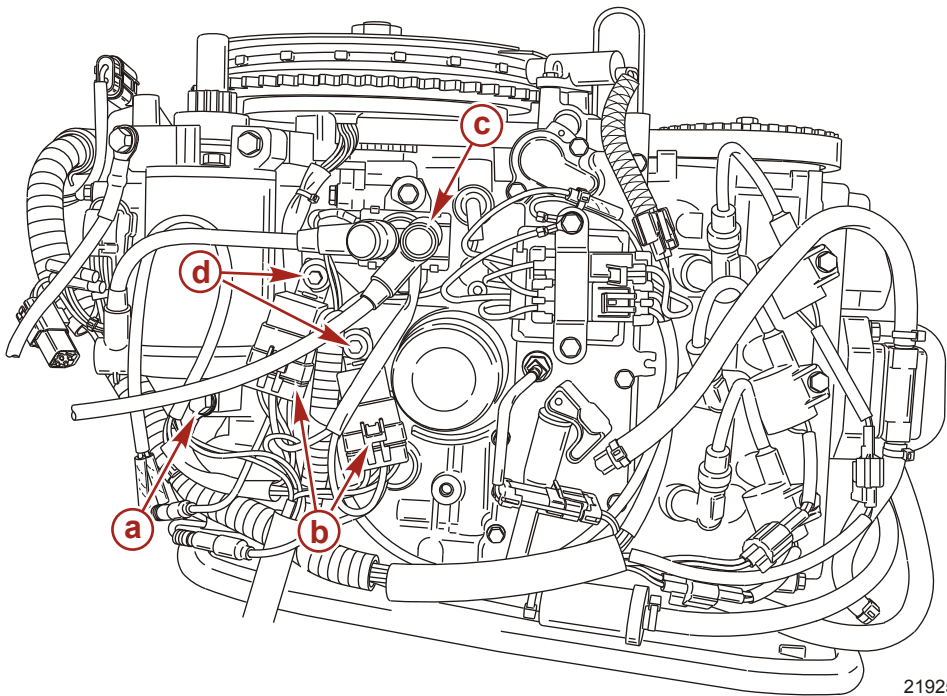
- a** - Screws (M6 x 16)
- b** - Mounting bracket for power trim relays

21918

Description	Nm	lb-in.	lb-ft
Screw (M6 x 16)	6.8	60	

5. Assemble the trim relays to the mounting bracket with two self-tapping screws (M6 x 25). Tighten the screws securely.
6. Connect the double black leads from the power trim relays to the bottom starter mount bolt. Tighten the bolt to the specified torque.

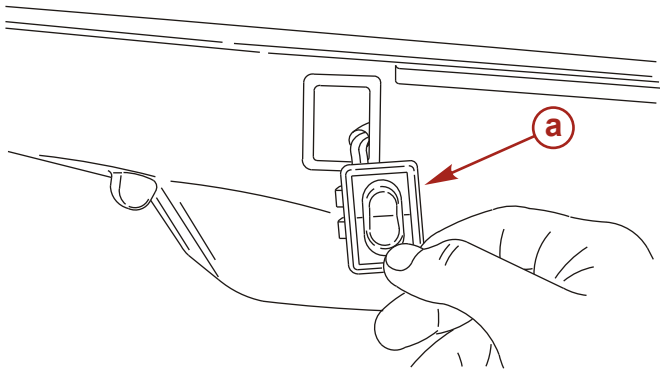
7. Connect the double red leads from the trim relay harness to the starter solenoid battery terminal.



- a** - Starter mounting bolt
- b** - Trim relays
- c** - Starter solenoid battery terminal
- d** - Self-tapping screws (M6 x 25)

Description	Nm	lb-in.	lb-ft
Starter mounting bolt (M8 x 45)	30		22
Relay mounting screws (M6 x 25)	Drive tight		

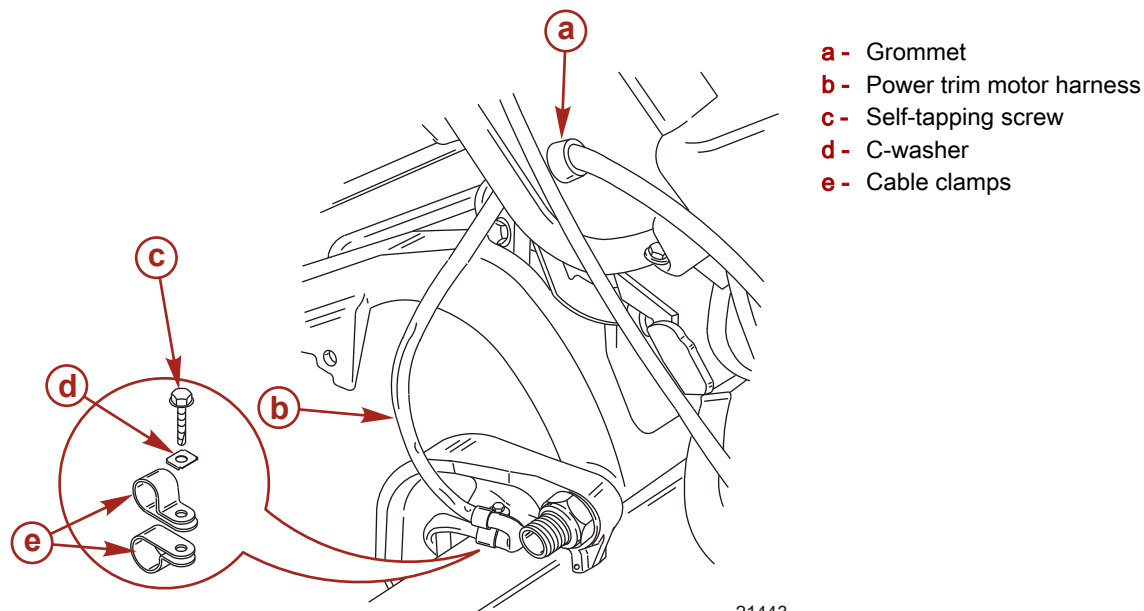
8. Route the trim relay wire harness from the front of the engine to the port side.
9. Route the trim switch wires through the hole in the side of the cowl. Push the trim switch into the lower cowl and lock the switch in place with the retainer.



- a** - Trim switch

10. Install the grommet and route the trim motor harness through the adapter plate.

11. Route the trim motor harness through the cable clamps. Secure the cable clamps and the C-washer to the starboard clamp bracket with a self-tapping screw.



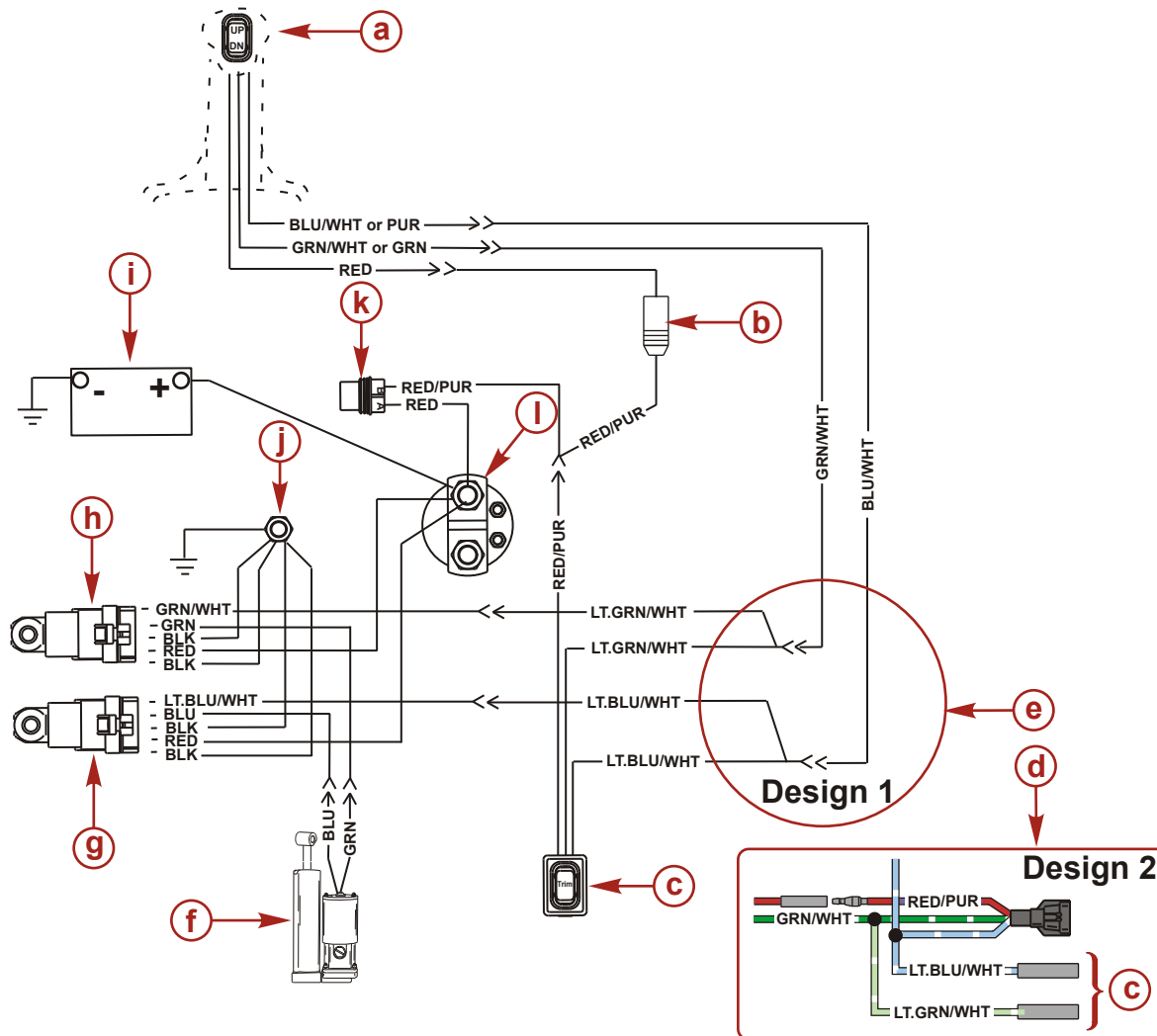
Wire Color Code Abbreviations

Wire Color Abbreviations				
BLK	Black		BLU	Blue
BRN	Brown		GRY	Gray
GRN	Green		ORN or ORG	Orange
PNK	Pink		PPL or PUR	Purple
RED	Red		TAN	Tan
WHT	White		YEL	Yellow
LT or LIT	Light		DK or DRK	Dark

Electrical Connections

1. Connect the light blue/white and green/white leads from the trim relays to the light blue/white and green/white leads of the trim switch assembly.
2. Connect the red/purple lead from the trim switch to the red/purple lead from the electrical plate harness.
3. Connect the blue and green leads from the trim pump harness to the blue and green leads on the trim relay harness.

4. Connect the light blue/white and green/white leads from the trim switch to the blue/white and green/white leads of the remote control.

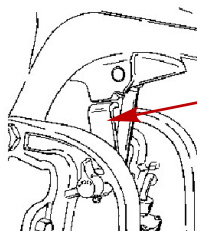


21936

- a** - Trim switch (remote control mounted)
- b** - Remote control plug connector
- c** - Cowl switch
- d** - Design 2 - harness connector and bullet connectors
- e** - Design 1 - bullet connectors
- f** - Trim pump motor
- g** - Up relay
- h** - Down relay
- i** - Battery
- j** - Starter bolt
- k** - Fuse holder
- l** - Solenoid

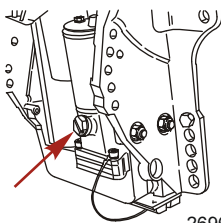
Checking Power Trim Fluid

1. Tilt outboard to the full up position and engage the tilt support lock.




26967

2. Remove the fill cap and check the fluid level. The fluid level should be even with the bottom of the fill hole. Add Quicksilver or Mercury Precision Lubricant Power Trim and Steering Fluid. If not available, use automotive automatic transmission fluid (ATF).

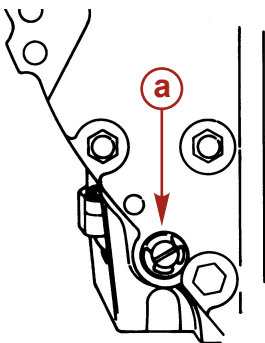


26968

Tube Ref No.	Description	Where Used	Part No.
 114	Power Trim and Steering Fluid	Power trim reservoir	92-858074K01

Manual Release Valve

This power trim system is equipped with a manual release valve. In an emergency, if the boat battery voltage is low and unable to operate the trim system, the manual release valve may be turned approximately three to four turns counterclockwise. The outboard can now be moved manually to the desired position, either for trailering or for operation. To lock the outboard in position, and before operating the outboard, the manual release valve must be turned clockwise until seated.



21469

a - Manual release valve

Products of Mercury Marine
W6250 Pioneer Road
Fond du Lac, WI 54936-1939

Mercury, Mercury Marine, MerCruiser, Mercury MerCruiser, Mercury Racing, Mercury Precision Parts, Mercury Propellers, Mariner, Quicksilver, Alpha, Axios, Bravo One, Bravo Two, Bravo Three, K-Planes, MerCathode, OptiMax, Precision Pilot, Pro Max, SeaCore, Skyhook, SmartCraft, Sport-Jet, Total Command, Verado, VesselView, Zero Effort, Zeus, #1 On The Water, M with Waves logo, Mercury with Waves logo, and SmartCraft logo are all registered trademarks of Brunswick Corporation. Mercury Product Protection logo is a registered service mark of Brunswick Corporation.