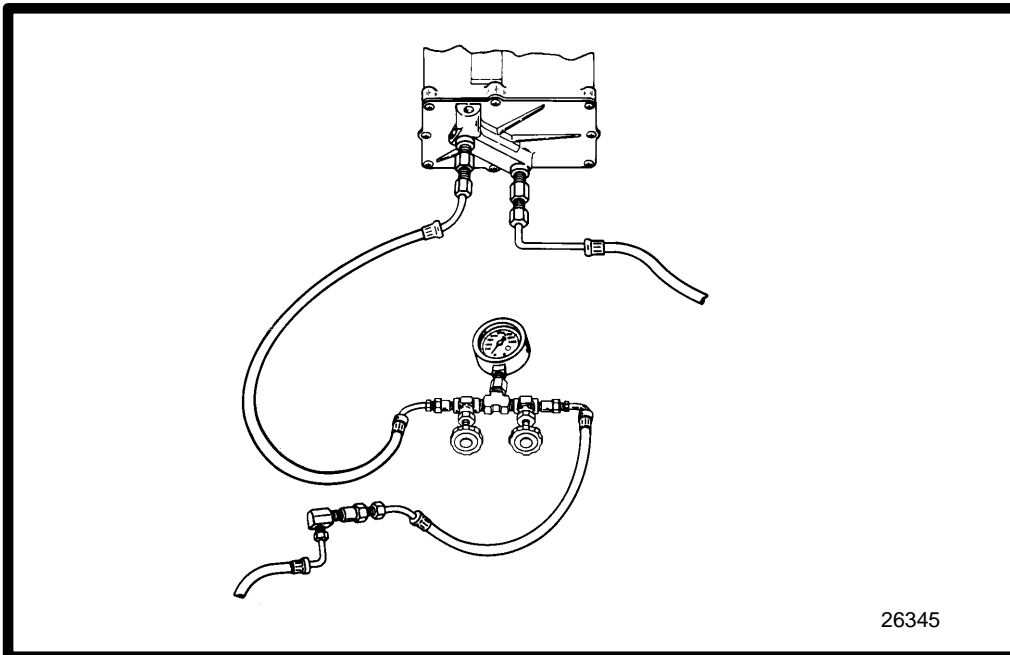


POWER TRIM



5

C

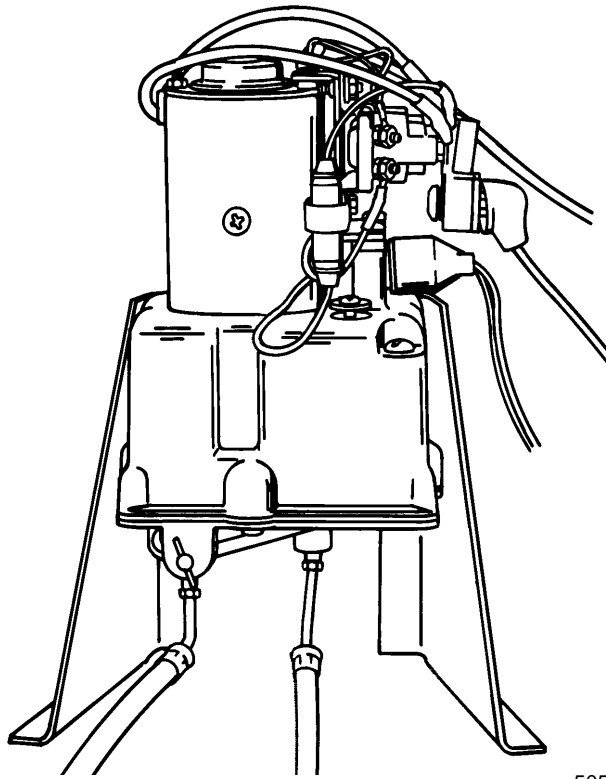
PRESTOLITE POWER TRIM PUMP

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Identification

Some MerCruiser Sterndrives will be equipped with a Prestolite Power Trim pump. This pump was used interchangeably with the Oildyne pump for a period of time.



50524

Prestolite Power Trim Pump

Specifications

Valve Pressure Specifications

Valve	Pressure
Up Circuit	2200 - 2600 PSI (15173 - 17932 kPa)
Down Circuit	400 - 600 PSI (2759 - 4138 kPa)

Electrical Specifications

Pump Amperage Draw	115 Amps at 2200 - 2600 PSI (15173 - 17932 kPa)
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Lubricants/Sealers/ Adhesives

Description	Part No.
Power Trim and Steering Fluid	92-90100A12
2-4-C Marine Lubricant	92-825407A2
Liquid Neoprene	92-25711-2

Special Tools

Description	Part No.
Test Gauge Kit	91-52915A6
Multi-Meter	91-99750
Torque Wrench (lb. ft.)	91-36210
Torque Wrench (lb. in.)	91-66274
Jumper Wire	Obtain Locally

Description

The Prestolite Power Trim Pump has internal valving that eliminates the need for an external reverse lock, as was required in the past. The pump generates a higher volume of fluid, but at a lower pressure than previous Prestolite pumps. This, in conjunction with large I.D. hydraulic hoses (gimbal housing to pump) and larger I.D. trim cylinders, should allow the drive unit to “kick-up” easier if an underwater object is struck.

⚠ CAUTION

Due to differences in internal valving, the new Prestolite trim pump cannot be used to replace an earlier Prestolite pump, or vice-versa. Use of incorrect pump will affect trim operation and may cause damage to trim system.

The pump motor is protected from overheating by an internal circuit breaker (on commutator end plate), that interrupts the current flow through the field windings in the event of an overheating condition. Electrical current overload protection is provided to the pump by a 110 amp fuse. Pump also is fitted with a 20 amp in-line fuse, which serves to protect the trim control and harness from an overload.

Thermal Circuit Breaker Operation

If the IN/DOWN or “Trailer” switch is kept depressed after drive unit reaches its end of travel, a thermal circuit breaker will open to prevent pump motor from overheating and pump motor will stop. Release switch(es) as soon as drive unit reaches end of travel, to prevent this from happening. If circuit breaker should open, allow motor to cool down and circuit breaker will automatically reset.

Manual Release Valve Operation

⚠ WARNING

Before loosening manual release valve, make sure all persons are clear of sterndrive unit.

In case of a Power Trim system malfunction, the sterndrive unit can be raised and lowered manually by turning the manual release valve counterclockwise approximately 3 turns and moving drive unit to desired position by hand. After drive unit has been placed in the desired position, close valve COMPLETELY. Power Trim system will not function properly, unless valve is completely closed.

Maintaining Power Trim Pump Oil Level

⚠ CAUTION

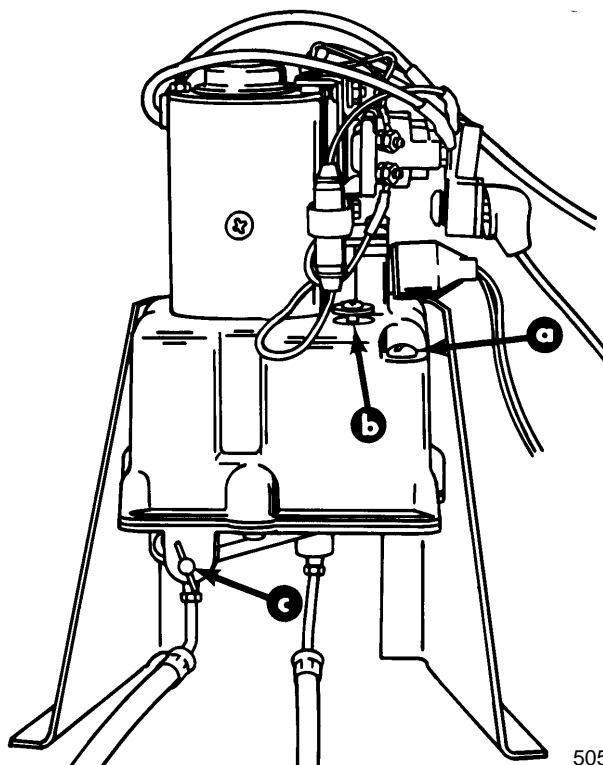
Vent screw **MUST BE** backed out two (2) full turns (after bottoming out) to vent pump reservoir. **FAILURE TO BACK SCREW OUT COULD RESULT IN DAMAGE TO PUMP.**

IMPORTANT: Check oil level with sterndrive unit in the full down position.

IMPORTANT: SAE 10W-30 or 10W-40 engine oil can be used in system, if Quicksilver Power Trim and Steering Fluid is not available.

1. Place drive unit in the full IN/DOWN position.
2. Remove “Fill” screw from pump. Oil level should be up to bottom of the threads in “Fill” screw hole. If necessary, add Quicksilver Power Trim and Steering Fluid or SAE 10W-30 or 10W-40 motor oil (through “Fill” screw hole).

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



- a - Fill Screw
- b - Vent Screw
- c - Manual Release Valve

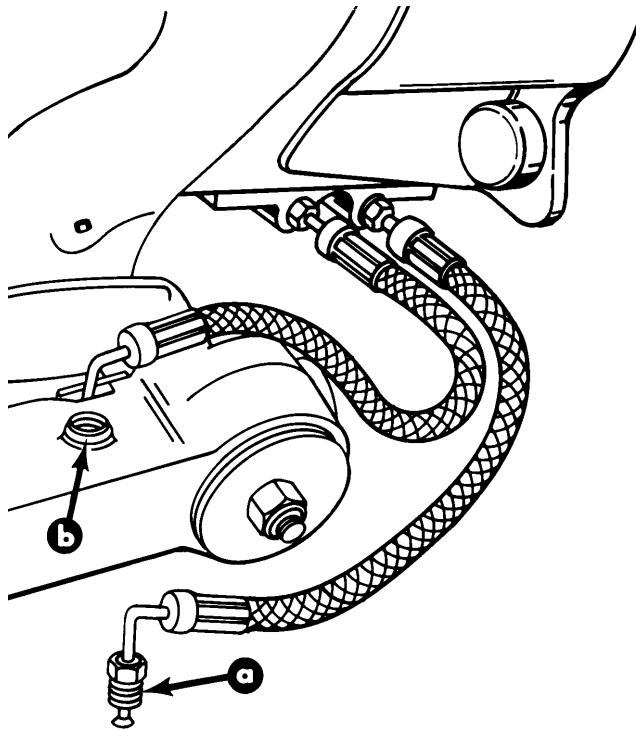
3. Raise and lower drive unit 6 to 10 times to purge any air from system; then, recheck oil level (with drive unit fully IN/DOWN) and add oil if necessary.

Air Bleeding Power Trim System

The power Trim System will purge itself of a small amount of air by raising and lowering the drive unit several times. However, if a rebuilt trim cylinder is being installed (which has not been filled with oil), the following bleeding procedure should be used to remove the air from the system.

Bleeding OUT/UP Trim Circuit

1. Fill pump reservoir to proper level as explained preceding. (Trim cylinder must be compressed).
2. Disconnect OUT/UP hose from front connection on trim cylinder. If both cylinders were rebuilt, disconnect hoses from both cylinders.
3. Direct end of trim hose(s) into a container.
4. Run trim pump in the UP direction until a solid, air-free stream of fluid is expelled from hose(s). Reconnect hose(s) and tighten securely.
5. Refill trim pump to proper level.

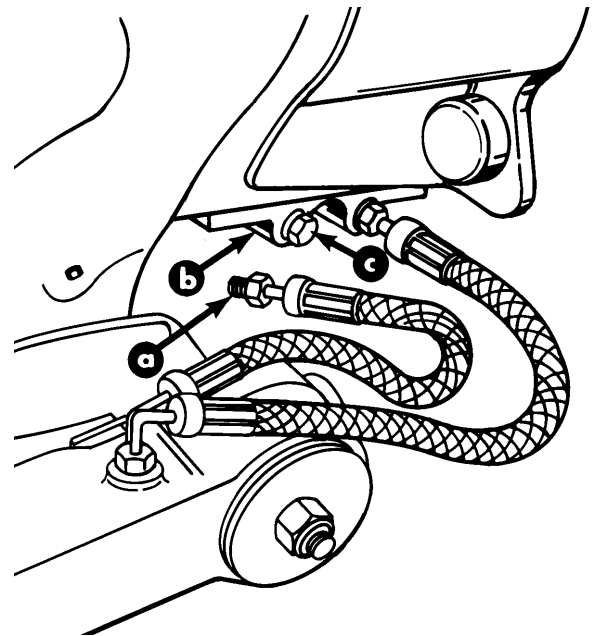


a - OUT/UP Trim Hose
b - Front Connection on Trim Cylinder

22089

Bleeding IN/DOWN Trim Circuit

1. Ensure pump reservoir is filled to proper level.
2. Disconnect IN/DOWN hose from rear connection on gimbal housing hydraulic connector. If both cylinders were rebuilt, disconnect hoses from both sides of hydraulic connector.
3. Plug holes in hydraulic connector, using plug (22-38609) or suitable device.
4. Direct end of trim hose(s) into container.
5. Run trim pump in the UP direction until trim cylinders are fully extended.
6. Remove plug(s) from gimbal housing hydraulic connector and momentarily run trim pump in the IN/DOWN direction until a solid, air-free stream of fluid is expelled from rear hole(s) in hydraulic connector. Reconnect trim hose(s) and tighten securely.
7. Lower drive unit to the full IN/DOWN position and refill trim pump to proper level. Run trim system IN/DOWN and OUT/UP several times and re-check fluid level.



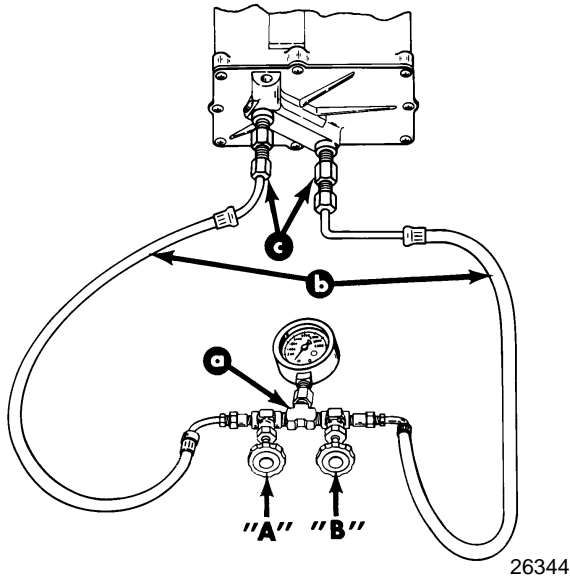
a - IN/DOWN Trim Hose
b - Hydraulic Connector
c - Plug (22-38609)

22089

Testing Power Trim Pump

Connecting Test Gauge

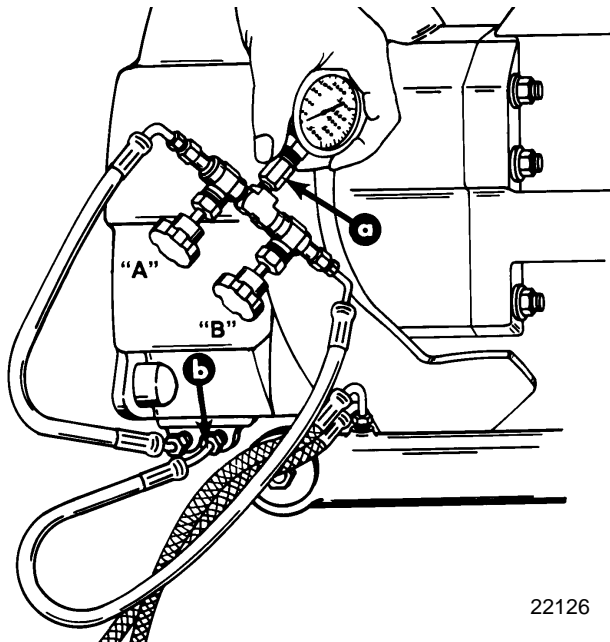
1. Check trim pump oil level. Fill if necessary.
2. Place drive unit in the full IN/DOWN position.
3. Connect test gauge at the most convenient location (at pump or hydraulic connector).



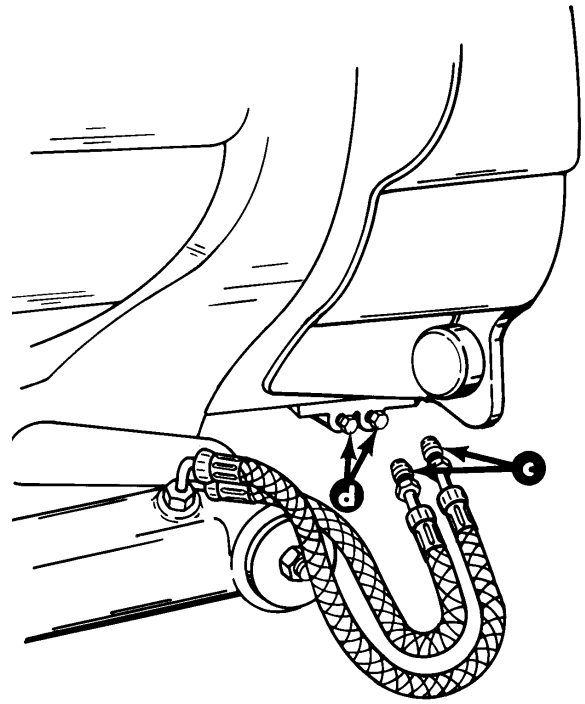
Gauge Connected at Pump

- a - Hydraulic Test Gauge 91-52915A6
- b - Extension Hoses 91-52915A6
- c - Fittings 22-77366

NOTE: Extension hoses *MUST BE* used to obtain accurate readings.



- a - Hydraulic Test Gauge (91-52915A6)
- b - Gimbal Housing Hydraulic Connector



22090

Gauge Connect to Hydraulic Connector

- c - Caps
- d - Plugs

4. Open Valve "A" and "B" and run pump UP and DOWN several times (to purge air).

Internal Restriction Test

1. Open valve "A" and "B."
2. Run pump OUT/UP and IN/DOWN while observing gauge.
3. Replace adapter, if pressure is in excess of 200 psi (1379 kPa).

OUT/UP Pressure Test

1. Leave Valve "A" open and close Valve "B."
2. Run pump OUT/UP while observing gauge. Reading should be 2200 - 2600 psi (15173 - 17932 kPa). If not, replace valve body and gear assembly.
3. Stop pumping OUT/UP. Pressure should not fall below 1900 psi (13104 kPa). If it does, check for and/or replace following:
 - External oil leaks
 - Valve Body and Gear Assembly

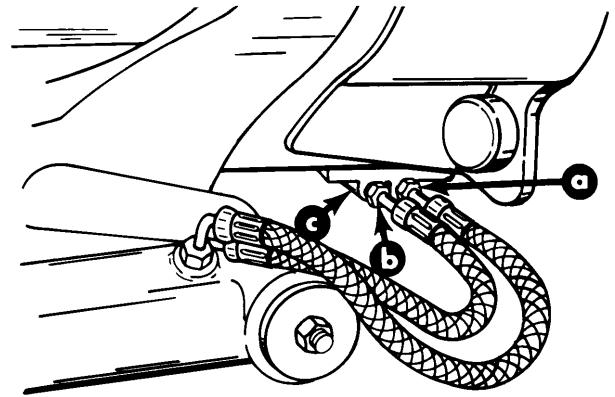
IN/DOWN Pressure Test

1. Close Valve "A" and open Valve "B."
2. Run pump IN/DOWN while observing gauge. Reading should be 400 - 600 psi (2759 - 4138 kPa). If not, replace valve body and gear assembly.
3. Stop pumping IN/DOWN. Pressure should not fall below 350 psi (2410 kPa). If it does, check for and/or replace the following:
 - External oil leaks
 - Valve Body and Gear Assembly

Trim Cylinder Internal Leak Test

IMPORTANT: The following test assumes that pump OUT/UP pressure is within specifications as determined by performing "Power Trim Pump Test."

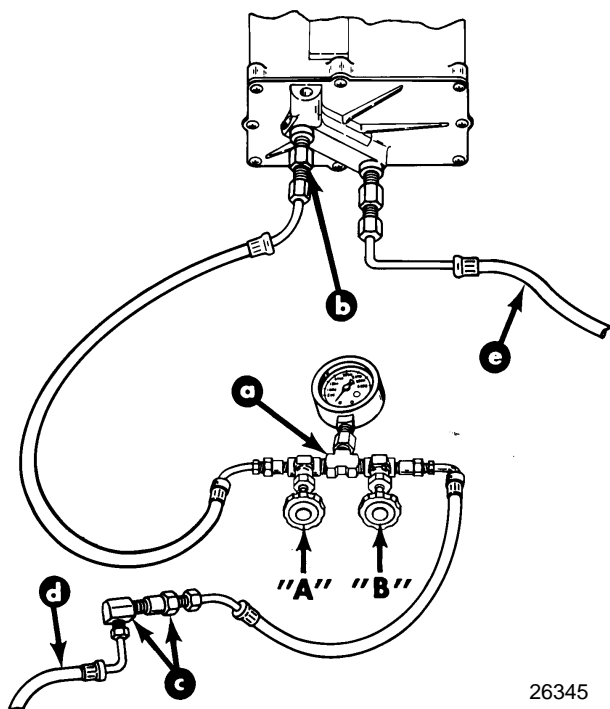
1. Reconnect trim cylinder hoses (if removed in previous test) as follows:
 - a. Remove plugs and caps.
 - b. Install UP hose to forward hole on hydraulic connector. Tighten securely.
 - c. Install DOWN hose to aft hole on hydraulic connector. Tighten securely.



22090

- a - UP Hose
- b - DOWN Hose
- c - Hydraulic Connector

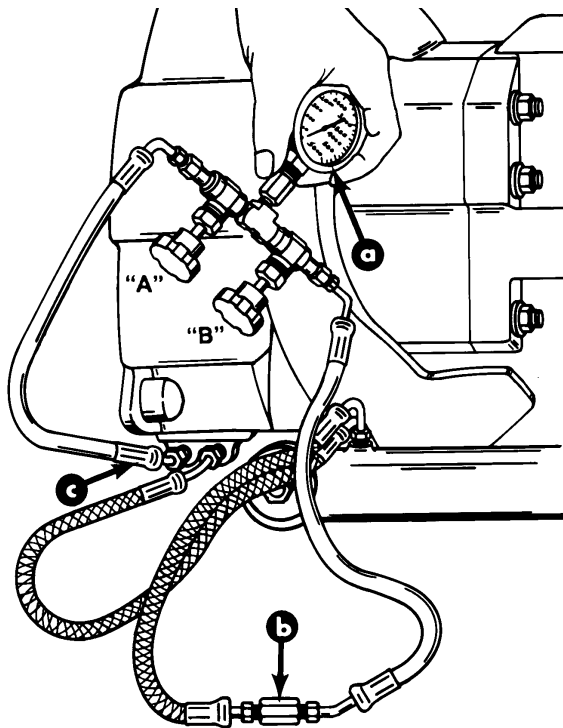
2. Connect gauge at most convenient location.



26345

Gauge Connected at Pump

- a - Hydraulic Test Gauge 91-52915A3
- b - Fitting (22-77366)
- c - Fittings (Supplied with Gauge)
- d - Black Hydraulic Hose (From Gimbal Housing)
- e - Gray Hydraulic Hose (From Gimbal Housing)



22126

Gauge Connected to Hydraulic Connector

- a - Test Gauge
- b - Coupling (Supplied with Gauge)
- c - Front Hydraulic Connector Port

3. Open Valve "A" and "B" and run pump OUT/UP and IN/DOWN; several times (to purge air).
4. Run pump OUT/UP until trim cylinders are fully extended; then, observe gauge while pumping. Pressure should be 2200 - 2600 psi (15173 - 17932 kPa).

5. Stop pumping OUT/UP. Pressure should not fall below 1900 psi (13104 kPa).

If readings are not within specifications, an internal trim cylinder leak is indicated. Use the following procedure to locate faulty cylinder.

- a. If gauge is connected at pump, reconnect gauge at gimbal housing hydraulic connector. Repeat Step 2; then, run pump in OUT/UP direction until trim cylinder are fully extended.
- b. Close Valve "B" on test gauge and repeat Steps 3 and 4.

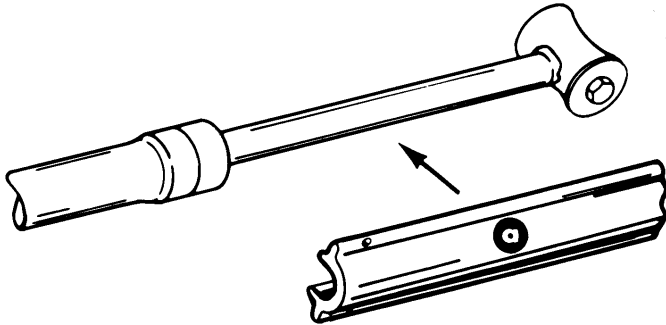
If Readings Are Now Within Specifications: Trim cylinder on the same side that test gauge is connected, is faulty.

If Readings Are Still Not Within Specifications: Trim cylinder on the opposite side from where the test gauge is connected, is faulty.

Trim Cylinder Shock Piston Test

If trim system checks out good, but drive unit will not trim IN/DOWN, problem may be due to a leaky trim cylinder shock piston. Use the following test to check for this condition. Test gauge is not required.

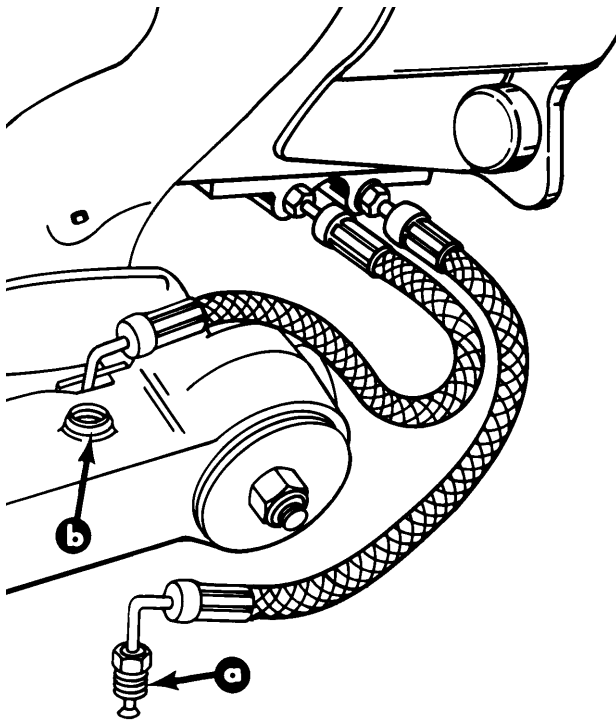
1. Run pump in OUT/UP direction until trim cylinders are fully extended.
2. Prevent trim cylinder piston rods from retracting, using a suitable device. Quicksilver Trailing Kit works well for this purpose.



22562

a - Trailing Clip

3. Disconnect UP trim hose from trim cylinders.



22089

a - UP Trim Hose
b - Front Connection

4. Run pump in IN/DOWN direction. If oil flows from UP port on trim cylinder, shock piston is leaking and must be replaced.

Motor and Electrical Bench Tests

Trim Pump Motor Test (In Boat)

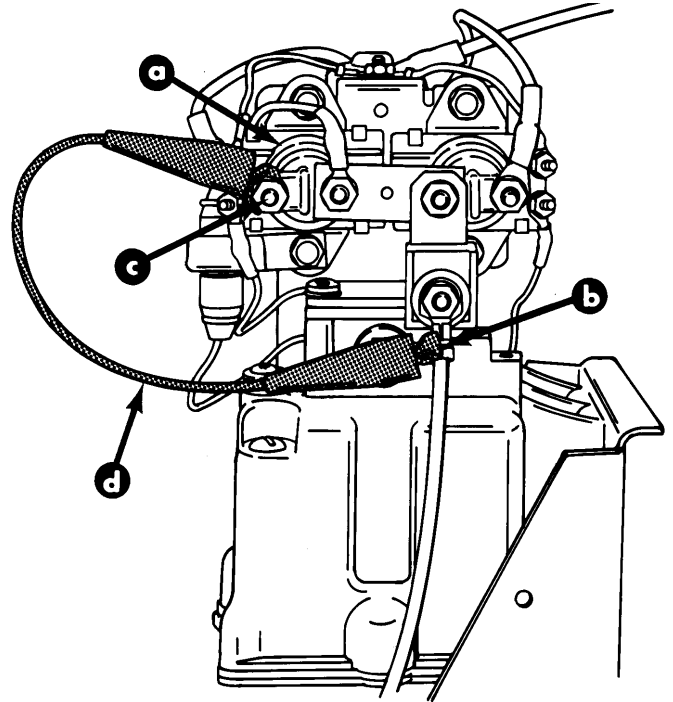
⚠ WARNING

DO NOT perform this test near flammables (or explosives), as a spark may occur when making connections.

⚠ WARNING

Remain clear of drive unit when performing power trim pump motor tests with pump in the boat and hydraulic hoses connected.

1. OUT/UP Operation:
 - a. Connect a jumper wire between positive (+) solenoid terminal and BLUE/WHITE motor lead terminal.
 - b. Motor should run.

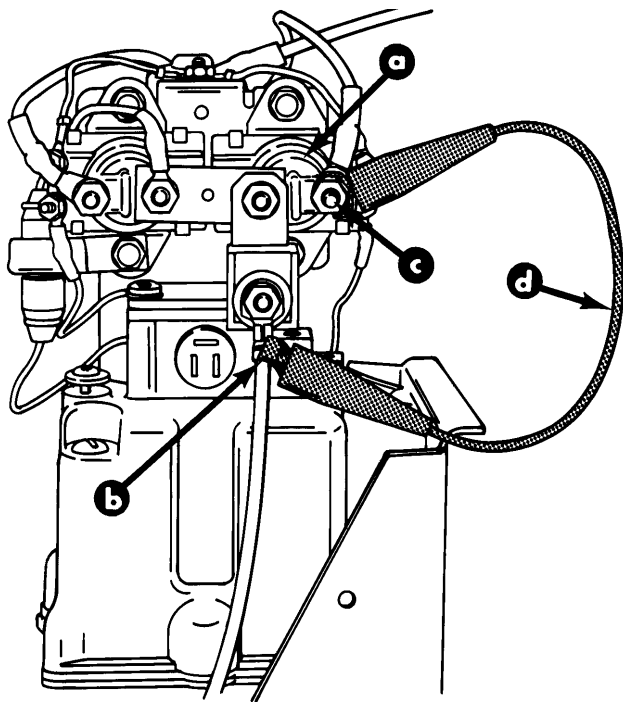


50523

a - OUT/UP Solenoid
b - POSITIVE Terminal (+)
c - BLUE/WHITE Motor Lead Terminal
d - Jumper Wire

2. IN/DOWN Operation:

- a. Connect a jumper wire between positive (+) solenoid terminal and GREEN/WHITE motor lead terminal.
- b. Motor should run.



50523

- a - IN/DOWN Solenoid
- b - POSITIVE Terminal (+)
- c - GREEN/WHITE Motor Lead Terminal
- d - Jumper Wire

3. If motor does not run, refer to "Motor Repair." See Table of Contents.

Trim Pump Motor Test (Out of Boat)

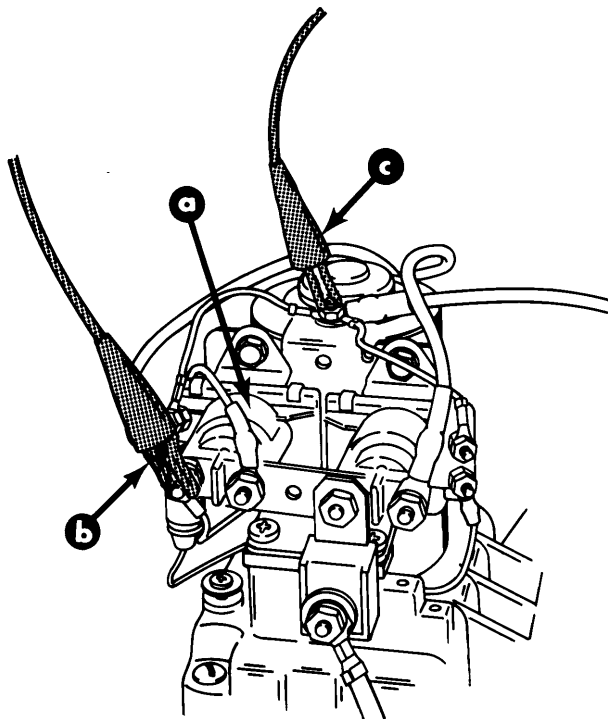
⚠ WARNING

DO NOT perform this test near flammables (or explosives), as a spark may occur when making connections.

1. Remove trim pump from boat. Refer to "Trim Pump Removal." See Table of Contents.
2. Remove fluid from trim pump reservoir.

3. OUT/UP Operation:

- a. Connect a 12 volt positive (+) supply lead to BLUE/WHITE motor lead terminal.
- b. Connect the negative (-) supply lead to a good ground on pump.
- c. Motor should run.

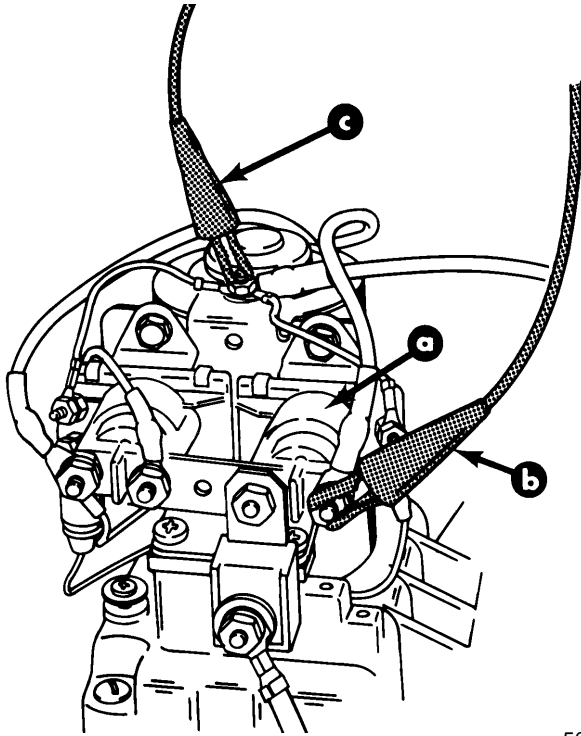


50523

- a - OUT/UP Solenoid
- b - 12 Volt POSITIVE (+) Supply Lead
- c - NEGATIVE (-) Supply Lead

4. IN/DOWN Operation:

- a. Connect a 12 volt positive (+) supply lead to GREEN/WHITE motor lead terminal.
- b. Connect the negative (-) supply lead to a good ground on pump.
- c. Motor should run.



50524

- a - IN/DOWN Solenoid
b - 12 Volt POSITIVE (+) Supply Lead
c - NEGATIVE (-) Supply Lead

NOTE: If motor does not run, refer to "Motor Repair."

Solenoid Test (Pump in Boat)

⚠ WARNING

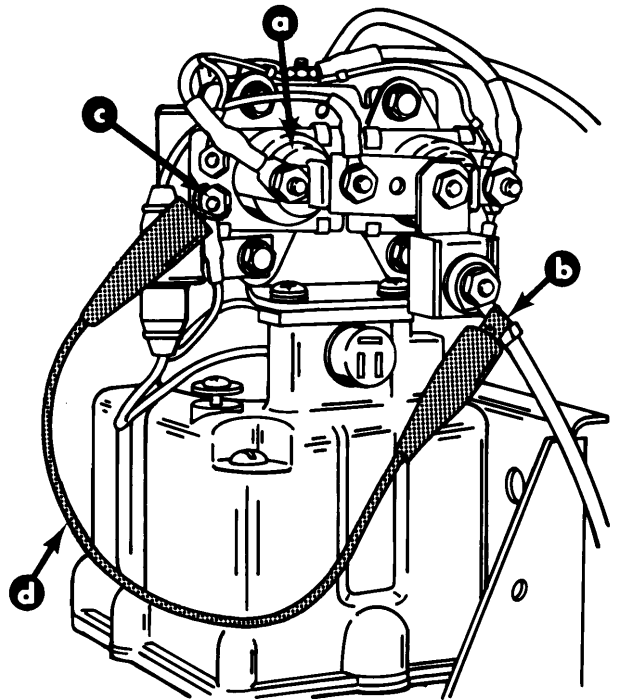
DO NOT perform this test near flammables (or explosives), as a spark may occur when making connections.

⚠ CAUTION

Remain clear of drive unit when performing power trim pump motor tests with pump in boat and hydraulic hose connected.

1. UP/OUT Solenoid:

- a. Connect jumper wire between positive (+) solenoid terminal and BLUE/WHITE harness wire terminal.
- b. Motor should run.

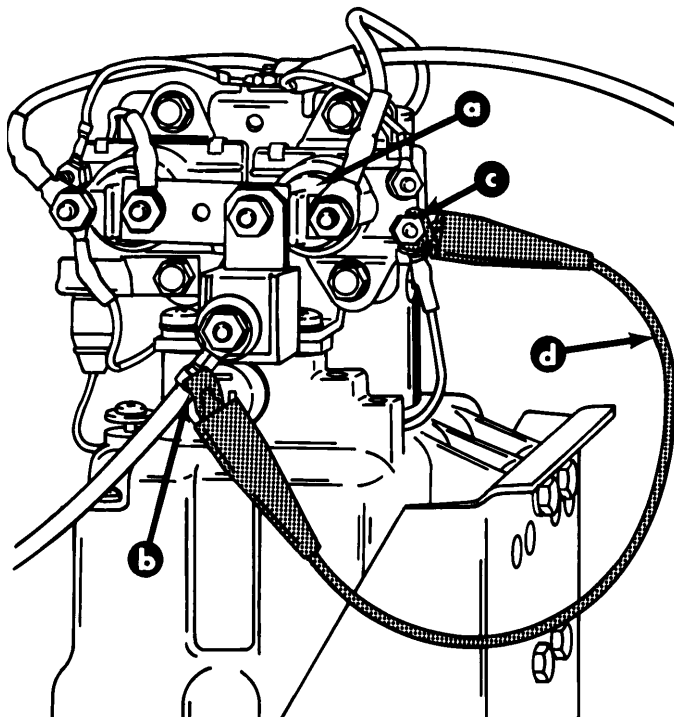


50521

- a - OUT/UP Solenoid
b - Positive (+) Terminal
c - BLUE/WHITE Harness Wire Terminal
d - Jumper Wire

2. IN/DOWN Solenoid:

- a. Connect a jumper wire between positive (+) solenoid terminal and GREEN/WHITE harness wire terminal.
- b. Motor should run.



50521

- a - IN/DOWN Solenoid
- b - Positive (+) Terminal
- c - GREEN/WHITE Harness Wire Terminal
- d - Jumper Wire

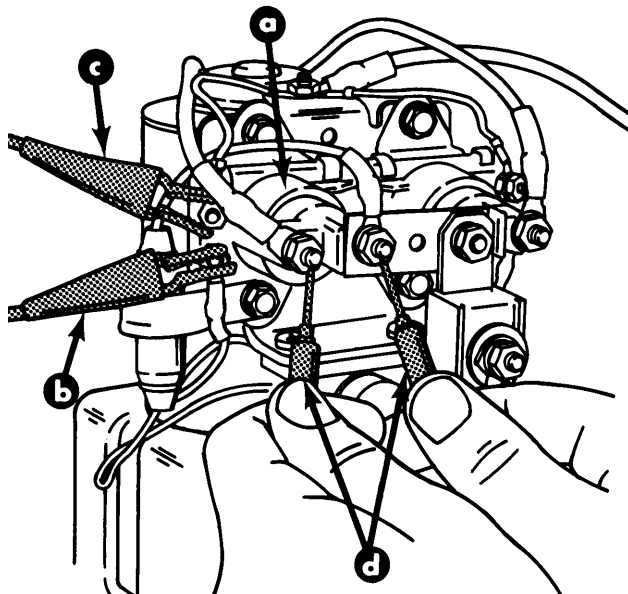
3. If motor does not run in one direction or another, replace appropriate solenoid. (See Wiring Diagram at end of this section for wire connection points).

Solenoid Test (Pump Out of Boat)

⚠ WARNING

DO NOT perform this test near flammables (or explosives), as a spark may occur when making connections.

1. Remove trim pump from boat. Refer to "Trim Pump Removal." See Table of Contents.
2. Remove fluid from trim pump reservoir.
3. OUT/UP Solenoid:
 - a. Connect 12 volt positive (+) supply lead to BLUE/WHITE harness wire terminal.
 - b. Connect negative (-) supply lead to solenoid ground terminal.
 - c. Connect ohmmeter leads to large terminals on solenoid.



50521

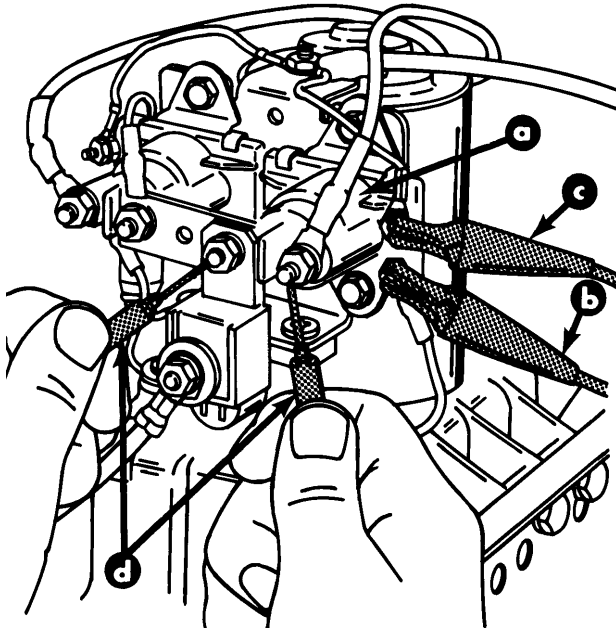
- a - OUT/UP Solenoid
- b - 12 Volt Positive (+) Supply Lead
- c - Negative (-) Supply Lead
- d - Ohmmeter Leads

4. **Zero Ohms Reading (Full Continuity):** Solenoid is OK.

High Ohms Reading (No Continuity): Replace solenoid.

5. IN/DOWN Solenoid:

- a. Connect 12 volt positive (+) supply lead to GREEN/WHITE harness wire terminal.
- b. Connect negative (-) supply lead to solenoid ground terminal.
- c. Connect ohmmeter leads to large terminals on solenoid.



50521

- a - IN/DOWN Solenoid
- b - 12 Volt Positive (+) Supply Lead
- c - Negative (-) Supply Lead
- d - Ohmmeter Leads

6. **Zero Ohms Reading (Full Continuity):** Solenoid is OK.

High Ohms Reading (No Continuity): Replace solenoid.

See Wiring Diagram at the end of this section for wiring connection points.

110 Amp Fuse Test (Pump in Boat)

⚠ WARNING

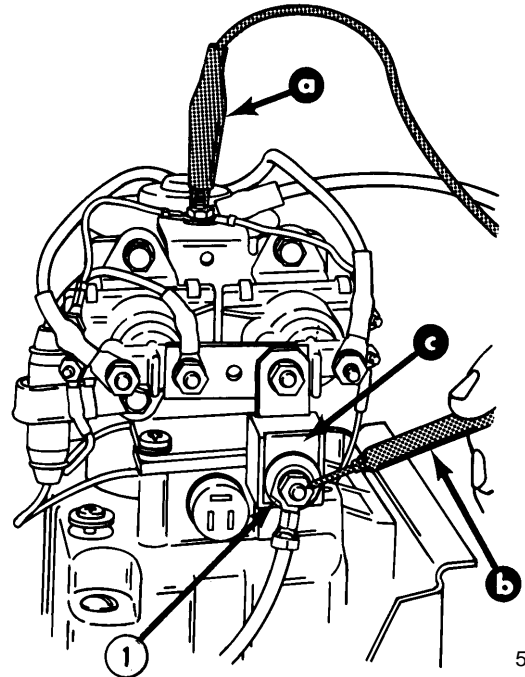
DO NOT perform this test near flammables (or explosives), as a spark may occur when making connections.

1. Check for voltage at terminal "1" using a volt meter. Voltage **MUST BE** indicated before proceeding with next check.

2. Check for voltage at terminal "2," using volt meter.

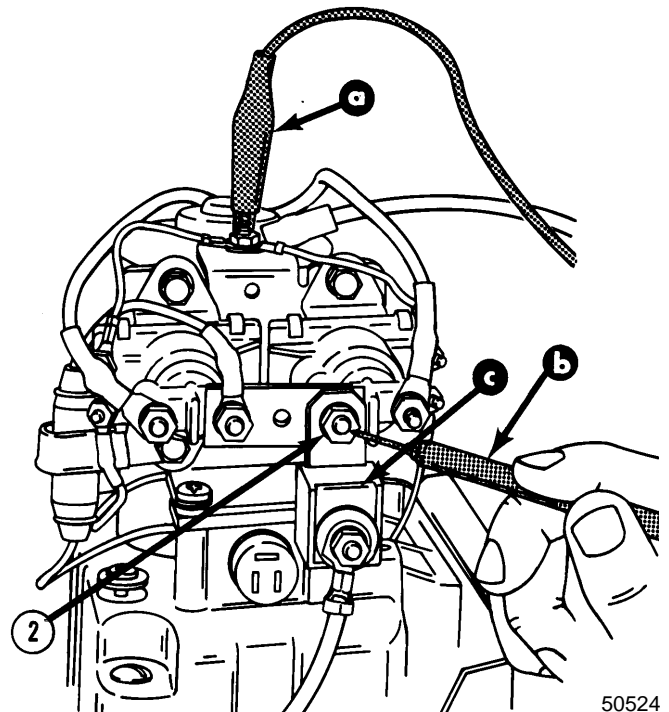
Voltage Indicated: Fuse OK.

Voltage Not Indicated: Replace fuse.



50523

- a - Volt Meter Negative (-) Lead
- b - Volt Meter Positive (+) Lead
- c - Fuse



50524

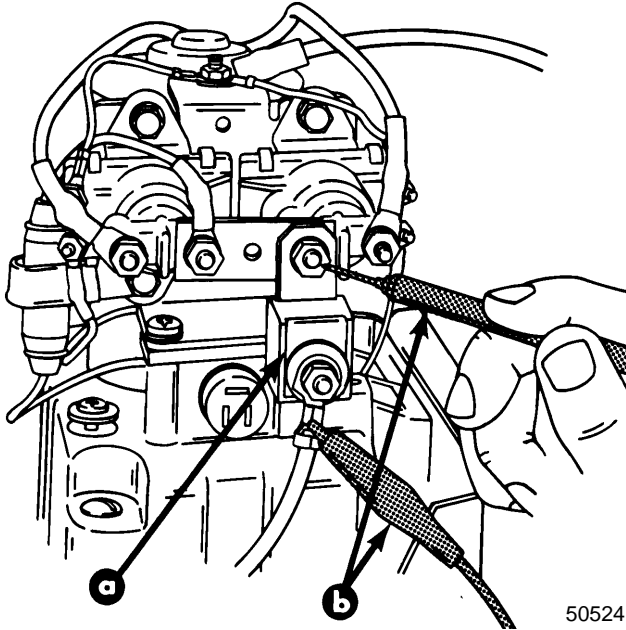
- a - Volt Meter Negative (-) Lead
- b - Volt Meter Positive (+) Lead
- c - Fuse

110 Amp Fuse Test (Pump Out of Boat)

1. Connect ohmmeter leads between terminals on fuse.

ZEro Ohms Reading (Full Continuity): Fuse OK

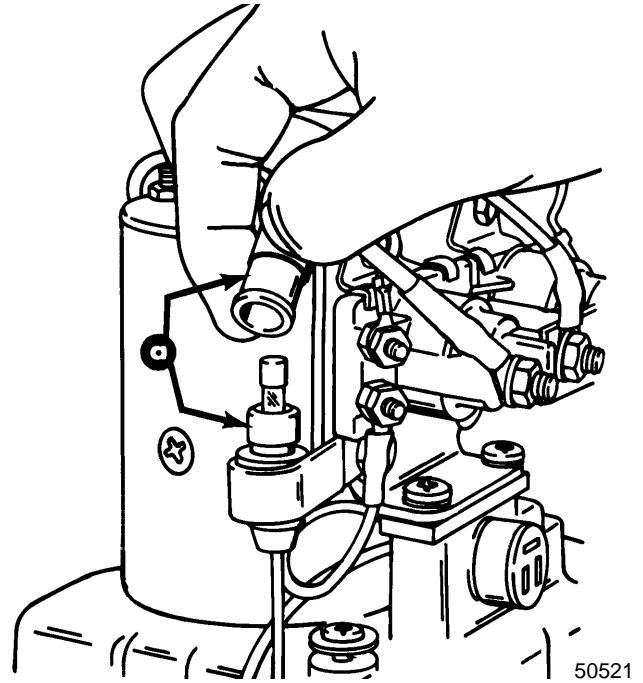
HIGH OHMS READING (No Continuity): Replace fuse



a - 110 Amp Fuse
b - Ohmmeter Leads

20 Amp Fuse Test

1. Remove fuse from fuse holder.

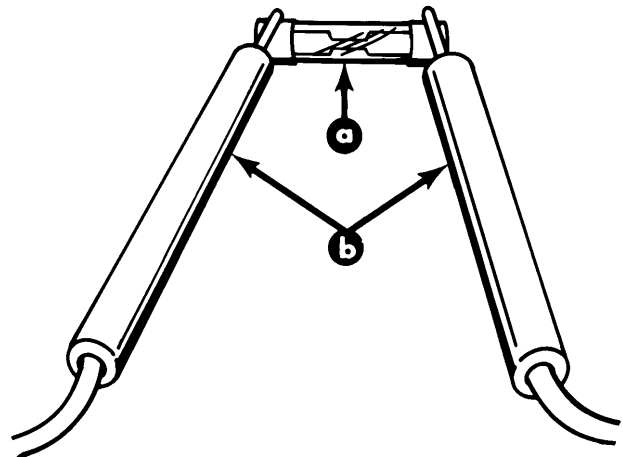


a - Fuse Holder

2. Connect ohmmeter; one lead to each end of fuse.

Zero Ohms Reading (Full Continuity): Fuse OK.

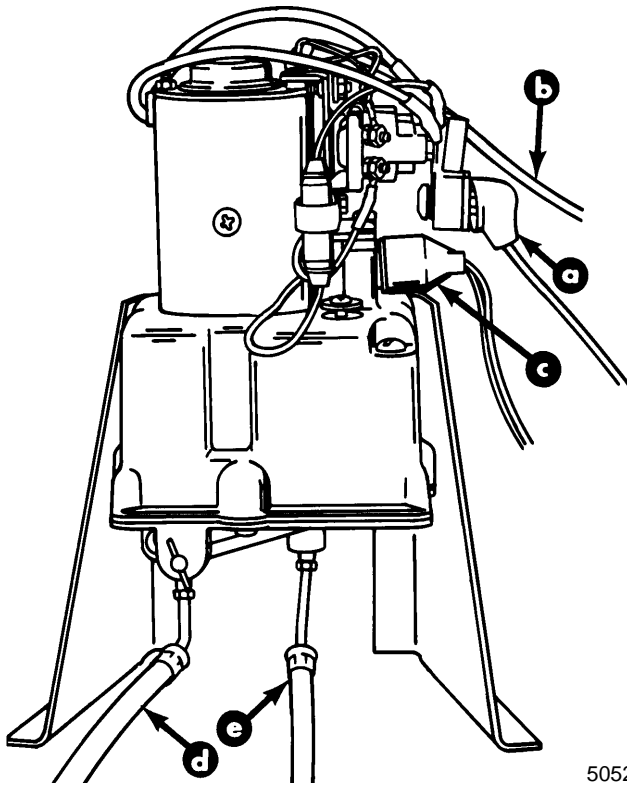
HIGH OHMS READING (No Continuity): Replace fuse.



a - 20 Amp Fuse
b - Ohmmeter Leads

Trim Pump Removal

1. Disconnect trim pump battery leads from battery (negative lead first).
2. Disconnect trim harness connector (3 pronged) from trim pump.
3. Remove hydraulic hoses from trim pump. Cap end of hoses.
4. Remove lag bolts and washers, and lift pump and floor bracket from boat.



50524

- a - Positive Battery Lead
- b - Negative Battery Lead
- c - Harness Connector
- d - Black Hydraulic Hose (UP Hose)
- e - Gray Hydraulic Hose (DOWN Hose)

Hydraulic Repair

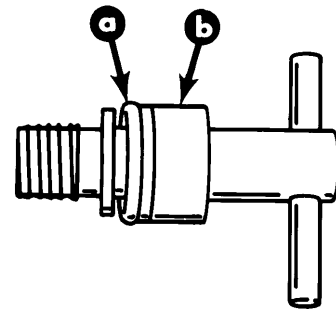
Manual Release Valve Replacement

NOTE: Replacement of manual release valve can be completed without removing the trim pump from boat.

⚠ WARNING

Before loosening the manual release valve, make sure all people are clear of drive unit as drive unit will drop to full IN/DOWN position when valve is loosened.

Slowly turn manual release valve counterclockwise to remove. To install new valve, turn valve clockwise until it seats.



50461

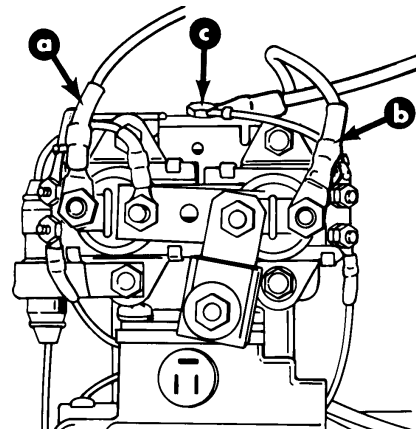
- a - O-ring
- b - Rubber Seal

Disassembly

⚠ CAUTION

Work area must be dirt and lint free. The slightest amount of dirt in hydraulic system can cause pump malfunction.

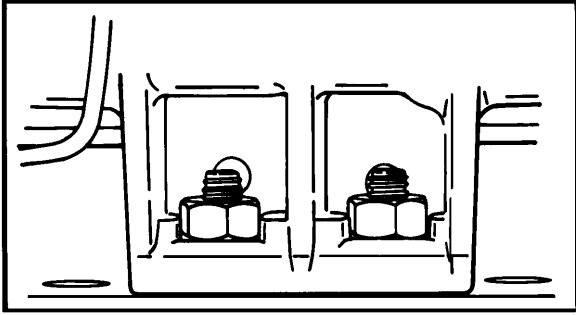
1. Disconnect trim motor wires.



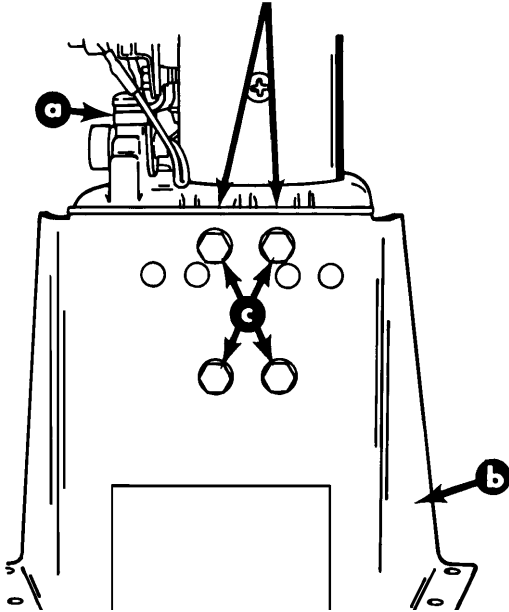
50520

- a - BLUE/WHITE Motor Wire
- b - GREEN/WHITE Motor Wire
- c - BLACK Ground Wires

- Remove mounting bolts and remove trim pump from floor bracket.



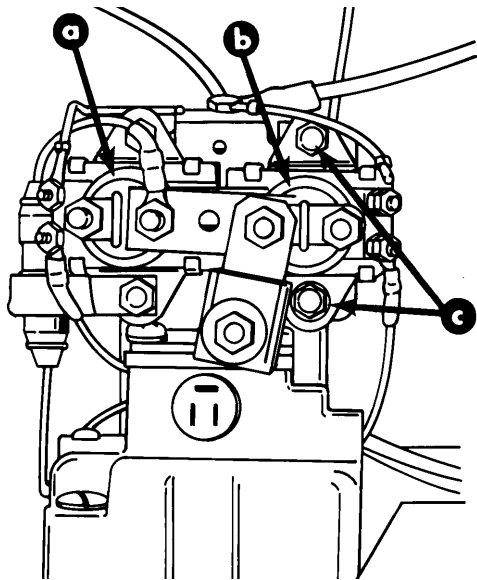
50522



50522

- a - Trim Pump
- b - Floor Bracket
- c - Mounting Bolts

- Remove solenoids (if replacement is necessary).

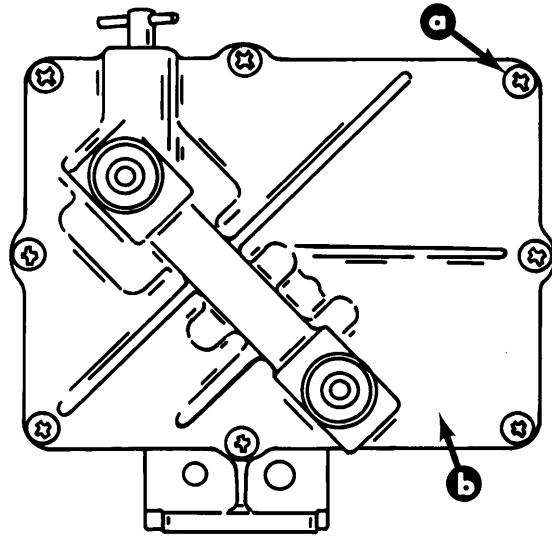


50520

- a - UP Solenoid
- b - DOWN Solenoid
- c - Mounting Bolts (2 On Each Solenoid)

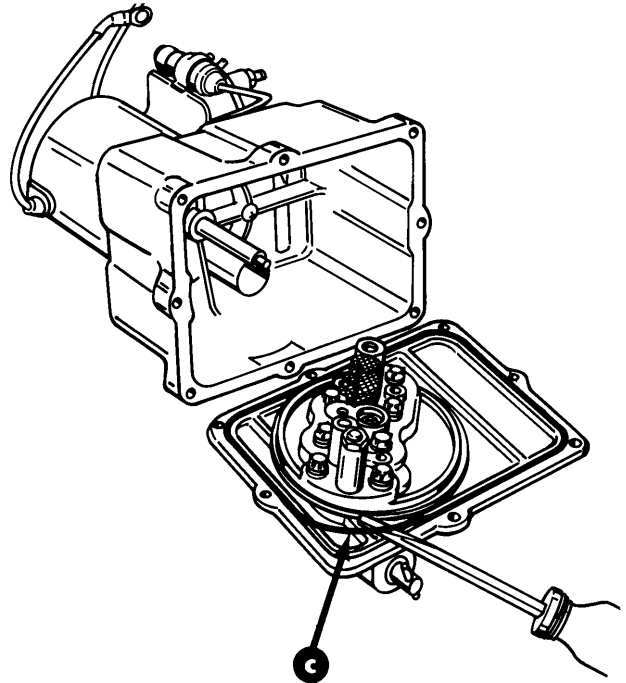
Valve Body and Gear Assembly

- Place pump in a container to catch oil when valve body and gear assembly is removed.
- Remove valve body, gear assembly and seal.



50460

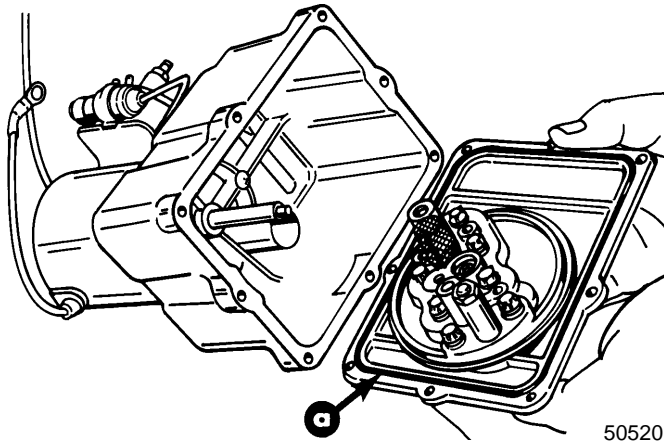
- a - Screws (8)
- b - Valve Body And Gear Assembly



50520

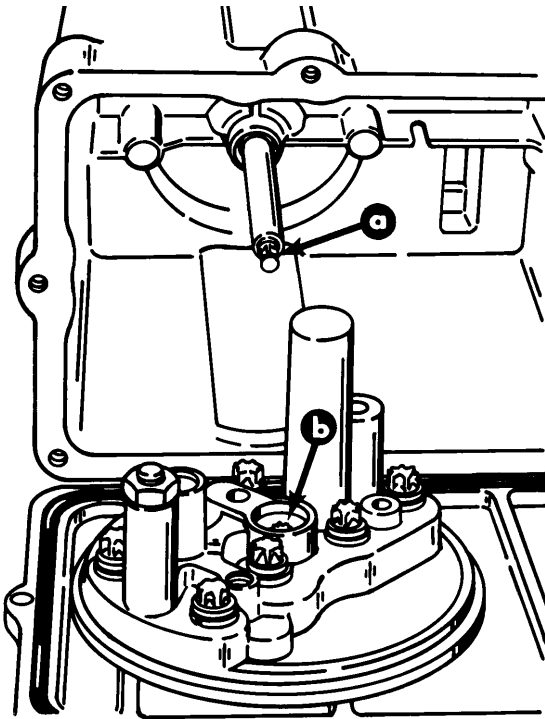
- c - Seal

3. Install new seal in reservoir.



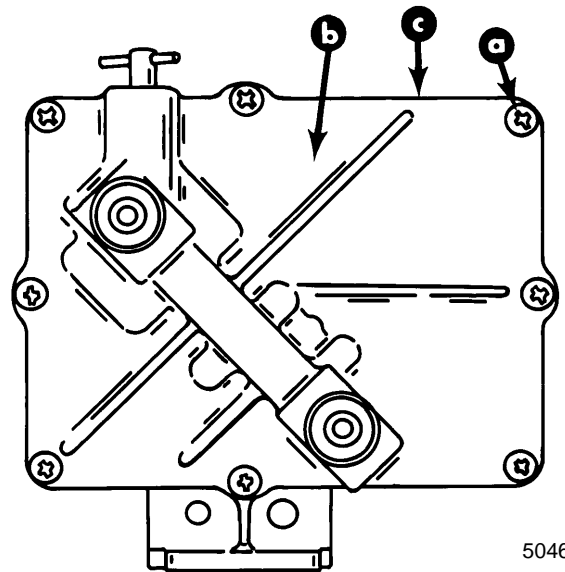
a - Seal

4. Align motor shaft with gear assembly.



a - Motor Shaft
b - Gear Assembly

5. Install valve body and gear assembly.

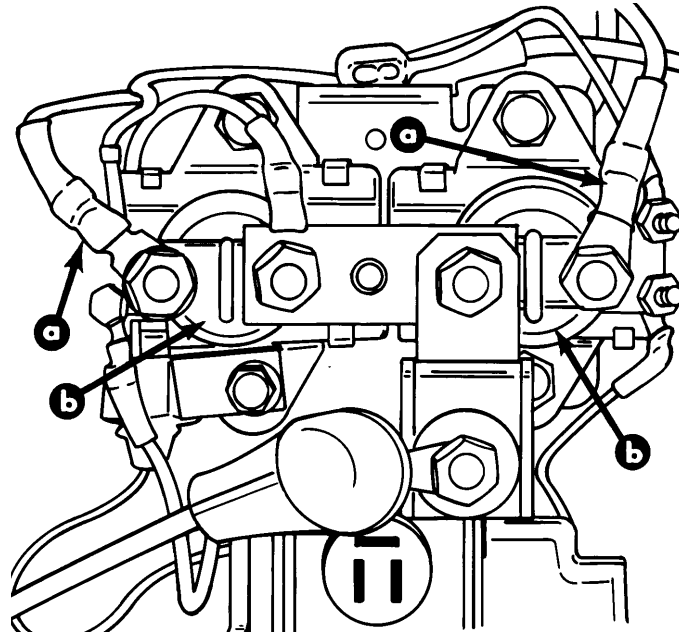


a - Screws (8)
b - Valve Body And Gear Assembly
c - New Seal (Not Seen)

Motor Repair

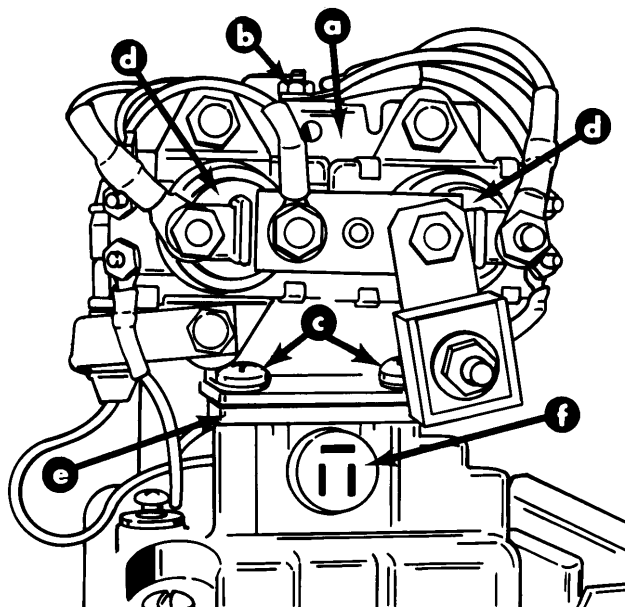
Disassembly

1. Disconnect trim pump motor leads.



a - Trim Pump Motor Leads
b - Solenoids

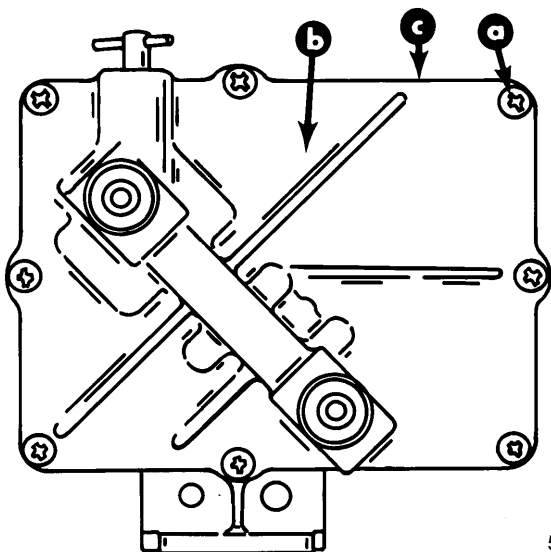
2. Remove solenoid plate and connector and harness.



50459

- a - Solenoid Plate
- b - Nut
- c - Screws
- d - Solenoids
- e - Spacer
- f - Connector and Harness

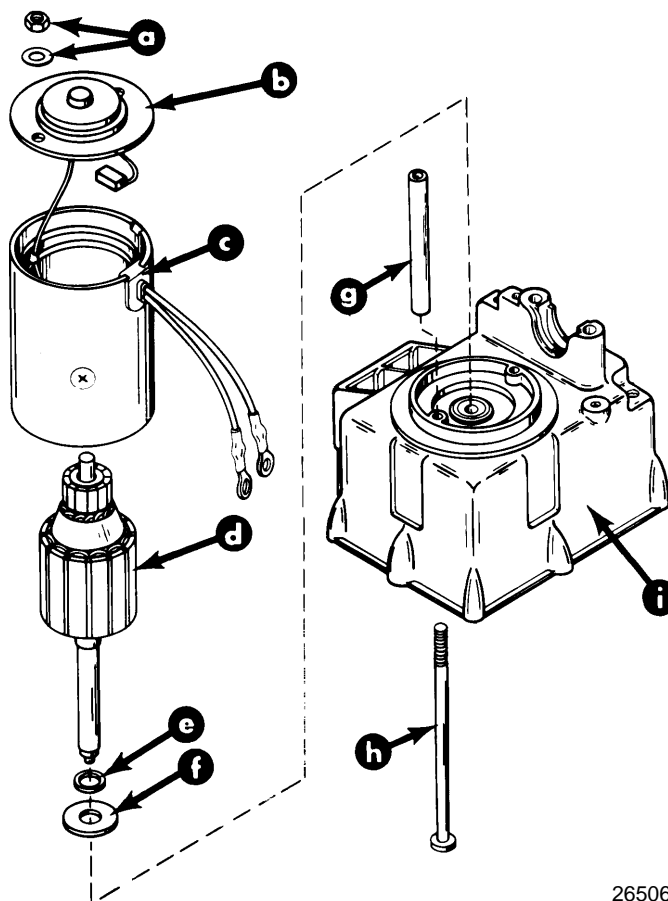
3. Remove valve body and gear assembly.



50460

- a - Screws (8)
- b - Valve Body And Gear Assembly
- c - Seal (Not Seen)

4. Remove motor assembly.



26506

- a - Nut And Washer (2)
- b - End Plate Assembly
- c - Field and Frame Assembly
- d - Armature
- e - Small Thrust Washer(s)
- f - Large Thrust Washer
- g - Spacer (1)
- h - Studs (2)
- i - Reservoir

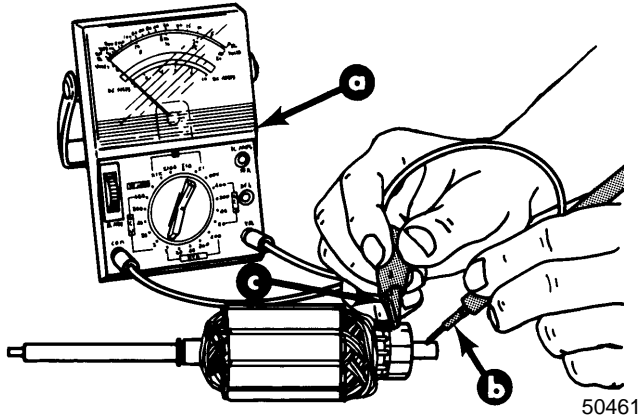
Armature Tests

CONTINUITY TEST

1. Check armature for continuity. Set ohmmeter on Rx1 scale. Connect leads as shown.

Continuity Indicated: Armature is grounded (replace armature).

Continuity Not Indicated: Armature is OK.



- a - Ohmmeter
- b - Meter Lead - Place On Armature Shaft
- c - Meter Lead - Place On All Commutator Bars (One At A Time)

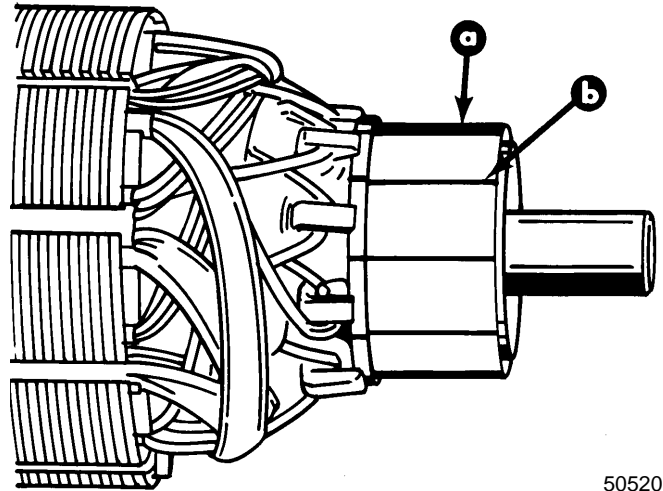
TEST FOR SHORTS

1. Check armature on a growler (follow growler manufacturers instructions). Indication of a short requires replacement.

CLEANING COMMUTATOR

NOTE: If commutator is worn it can be turned down on a lathe or an armature conditioner tool.

1. Clean commutator with "00" garnet grit sandpaper. DO NOT use emery paper.
2. Check gaps between commutator bars for material. Remove material if present.



- a - Commutator
- b - Gap

50520

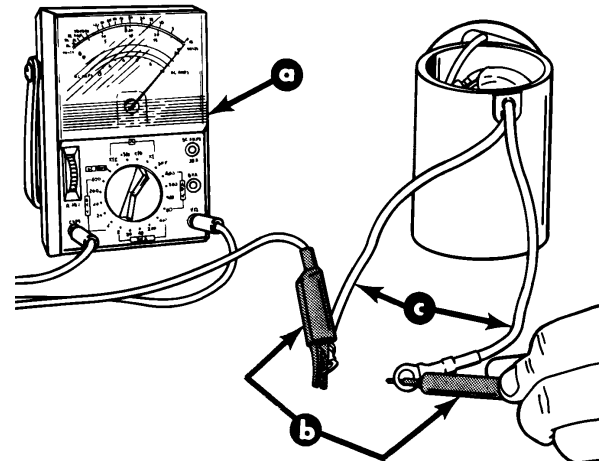
Field Test

TEST FOR OPEN CIRCUIT

1. Set ohmmeter to Rx1 scale and connect meter leads between field leads.

Zero Ohms Indicated (Full Continuity): Field OK.

Zero Ohms Not Indicated (No Continuity): Replace field assembly.



- a - Ohmmeter
- b - Meter Leads - Connect Between Field Leads
- c - Field Leads

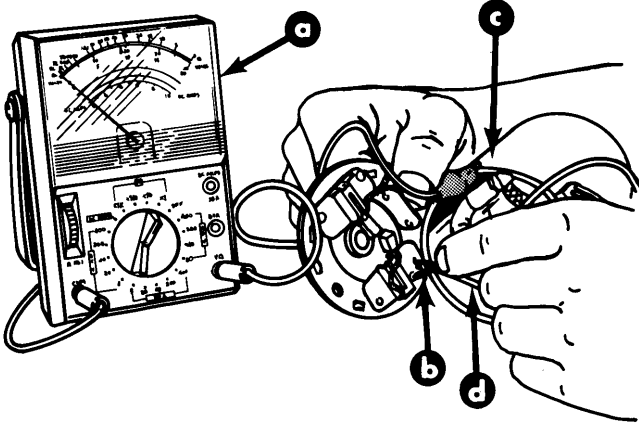
50461

TEST FOR SHORT IN FIELD

1. Set ohmmeter on Rx1 scale. Connect ohmmeter between field brush lead and field frame.

Zero Ohms Indicated (full continuity) - Short indicated (Replace field assembly).

Zero Ohms Not Indicated (no continuity) - Field OK.



50461

- a - Ohmmeter
- b - Meter Lead - Place On Positive Brush Holder Lead
- c - Meter Lead - Place On Frame
- d - Field Lead

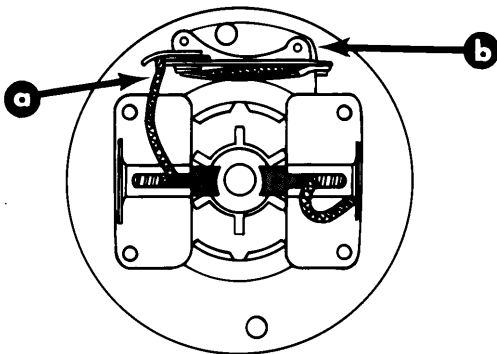
Thermal Switch Test

CONTINUITY TEST

1. Test thermal circuit breaker for continuity, using ohmmeter set on Rx1 scale.

Zero Ohms Indicated (Full Continuity): Thermal switch OK.

Zero Ohms Not Indicated (No Continuity): Replace thermal switch.



26507

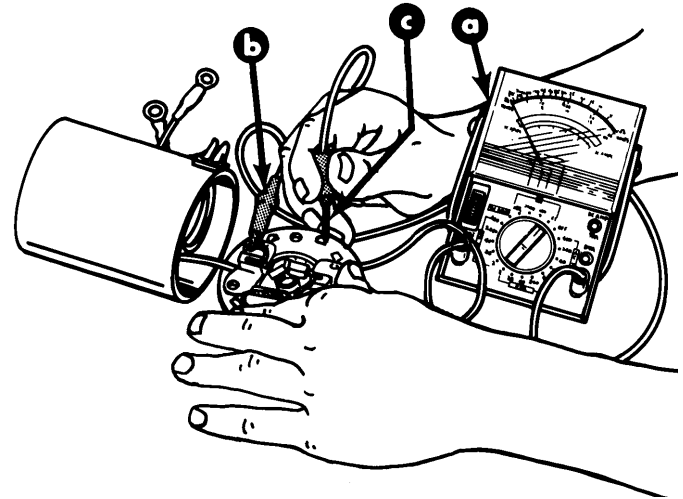
- a - Place Meter Lead At This Point
- b - Place Meter Lead At Ground

Brush Lead Tests

1. Set ohmmeter on Rx1 scale. Connect leads as shown. Test positive brush lead for ground.

Continuity Indicated: Grounded condition; replace end plate assembly.

No continuity: Brush lead OK.



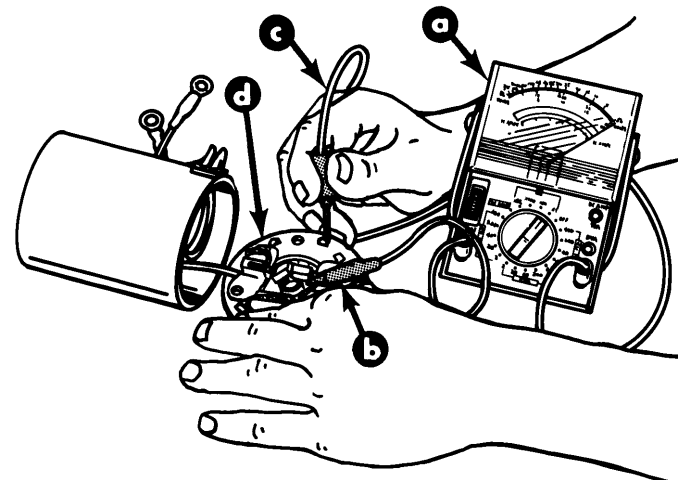
50460

- a - Ohmmeter
- b - Meter Lead - Place On Positive Brush Lead
- c - Meter Lead - Place On End Cap

2. Set ohmmeter on rx1 scale. Connect leads as shown. Test negative brush lead for an open condition.

Continuity Indicated: Brush lead OK.

Continuity NOT Indicated: Inspect lead for a poor connection.



50460

- a - Ohmmeter
- b - Meter Lead - Place On Negative Brush Lead
- c - Meter Lead - Place On End Cap
- d - Positive Brush Lead

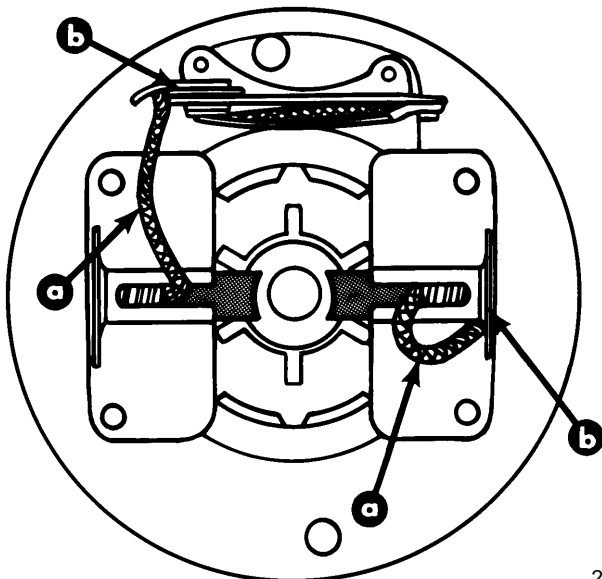
Brush Replacement

Inspect brushes and replace if:

- Pitted
- Chipped
- Brush is less than 1/4 in. (6mm) long
- Leads are fraying

BRUSH REPLACEMENT

1. Cut brush leads off as close to brush holders as possible.
2. Using 70-30 tin-lead alloy rosin core solder, solder new brushes to brush holders.

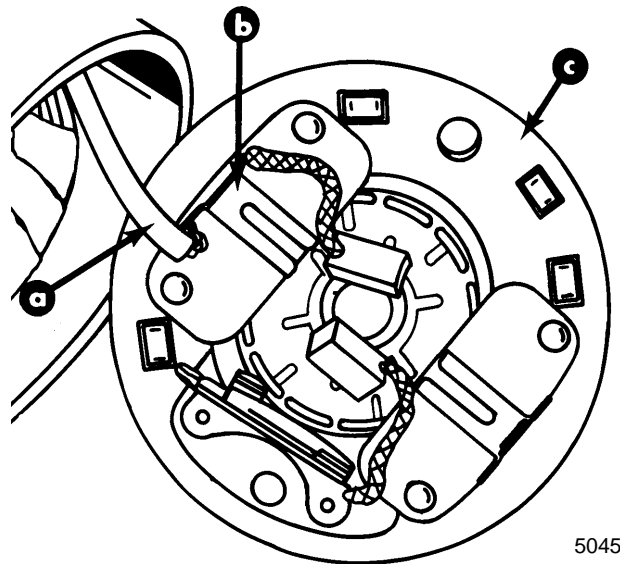


a - Brush Leads
b - Brush Holders

26507

END CAP AND BRUSH ASSEMBLY REPLACEMENT

1. Cut off field to positive brush holder lead as close to brush holder as possible.
2. Using 70-30 tin-lead alloy rosin core solder, solder field lead to brush holder on new end cap.

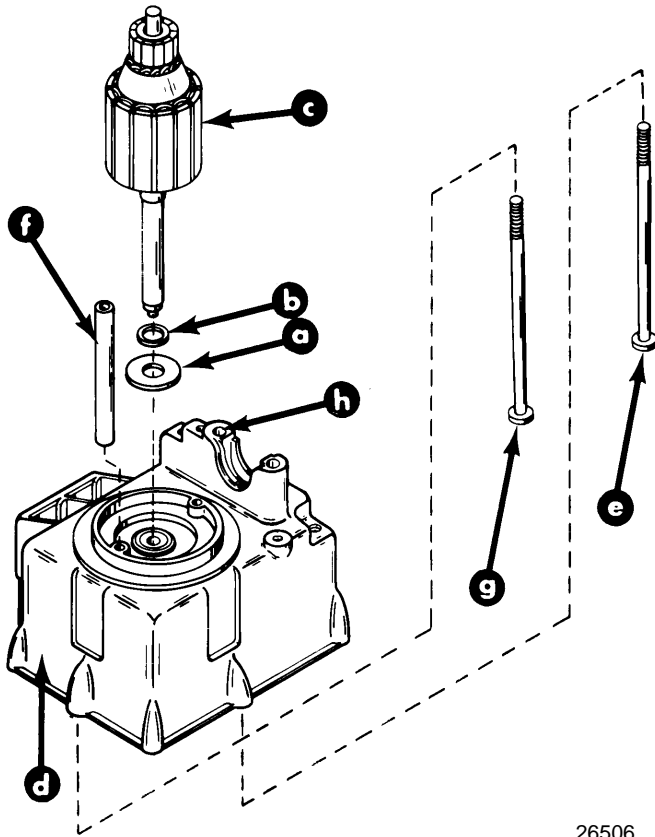


a - Field Lead
b - Positive Brush Holder
c - End Cap

50459

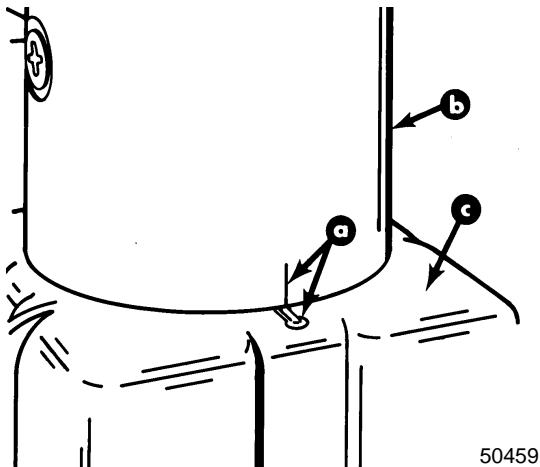
Reassembly

1. Install armature and washers.



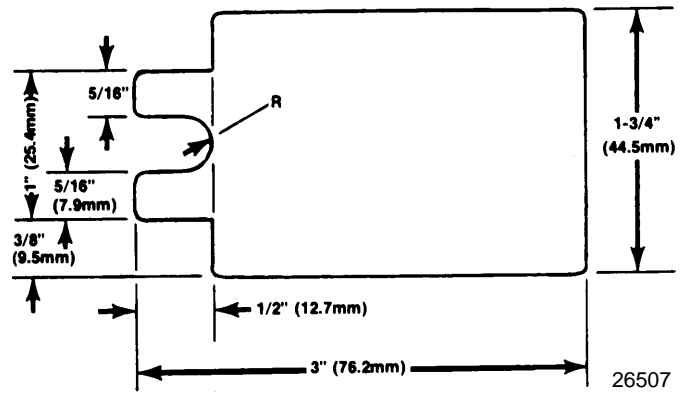
- a - Large Washer
- b - Small Washer(s)
- c - Armature
- d - Reservoir
- e - Long Stud
- f - Sleeve (1)
- g - Small Stud
- h - Connector And Harness Holder

2. Install field and frame assembly. Align index mark on field and frame assembly with mark on reservoir.

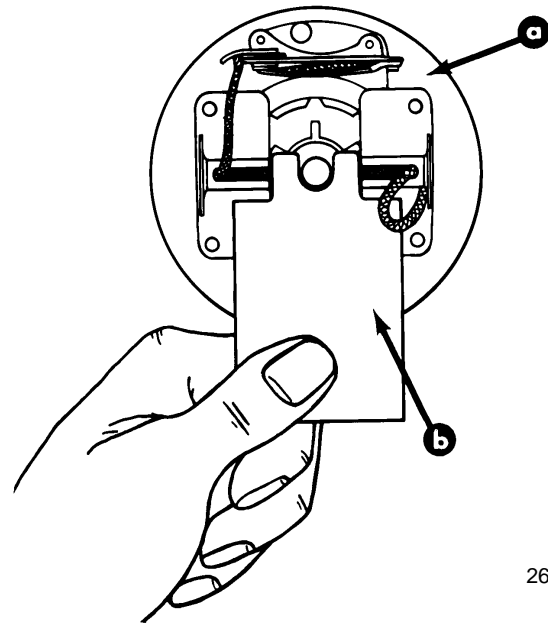


- a - Index Marks - Align
- b - Field And Frame Assembly
- c - Reservoir

NOTE: Brush holder tool can be made as shown.

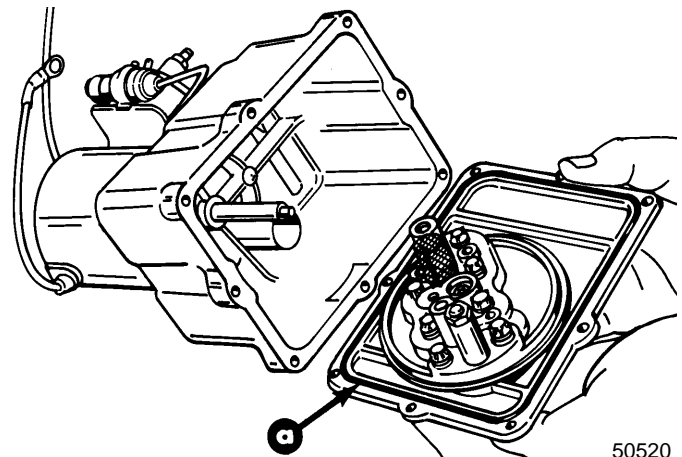


3. Spread brushes with brush holder tool and install end plate over armature. Secure end cap with nuts and washers.



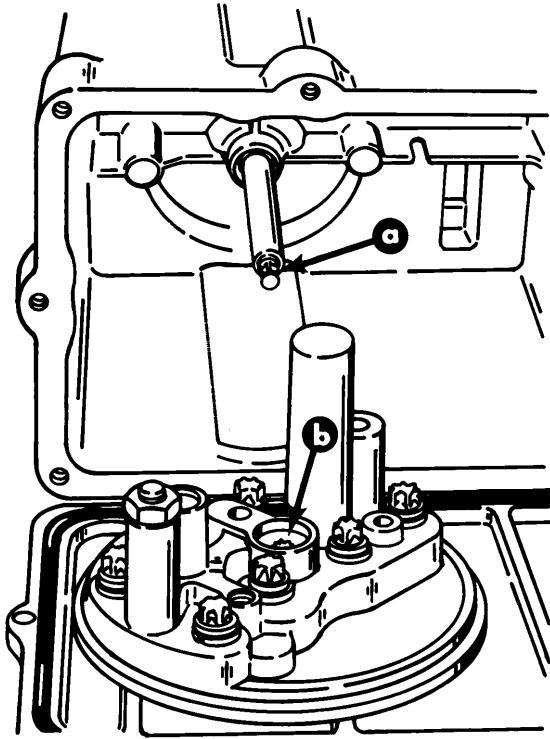
- a - End Plate

4. Ensure seal is in place in reservoir.



- a - Seal

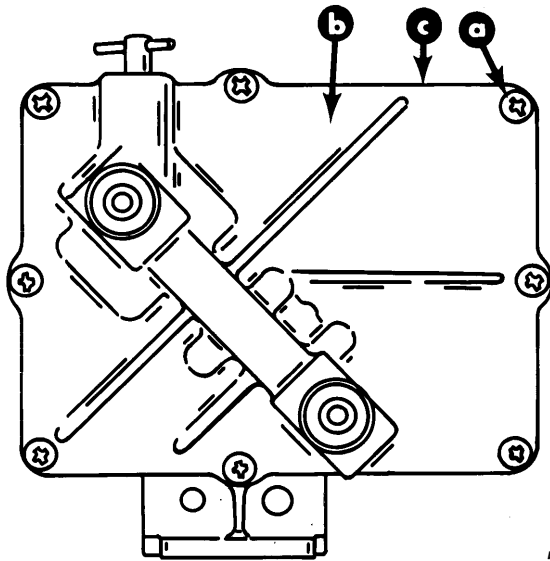
5. Align motor shaft with gear assembly.



50522

- a - Motor Shaft
- b - Gear Assembly

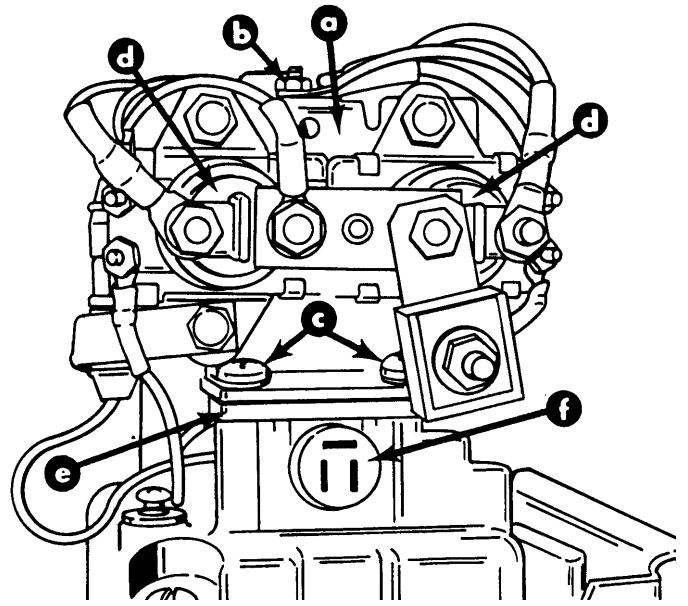
6. Install valve body and gear assembly.



50460

- a - Screws (8)
- b - Valve Body and Gear Assembly
- c - New Seal (Not Seen)

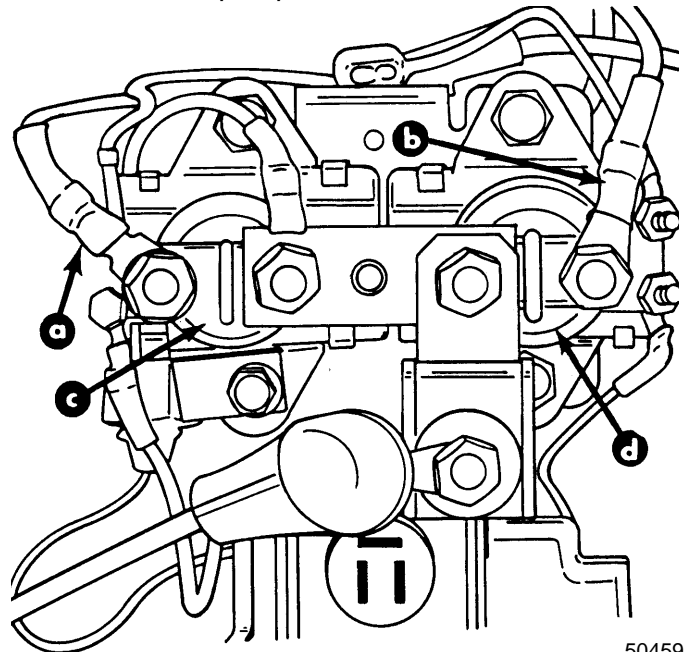
7. Install solenoid plate and connector and harness.



50459

- a - Solenoid Plate
- b - Nut
- c - Screws
- d - Solenoids
- e - Spacer
- f - Connector And Harness

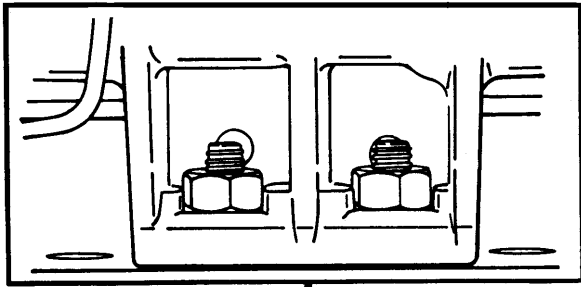
8. Secure trim pump motor leads to solenoids.



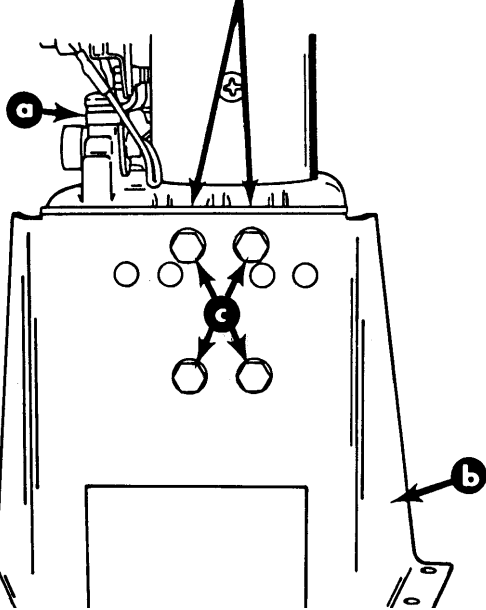
50459

- a - Blue Lead - Connect to OUT/UP Solenoid
- b - Green Lead - Connect to IN/DOWN Solenoid
- c - OUT/UP Solenoid
- d - IN/DOWN Solenoid

9. Install trim pump on floor bracket. Tighten securely.



50522

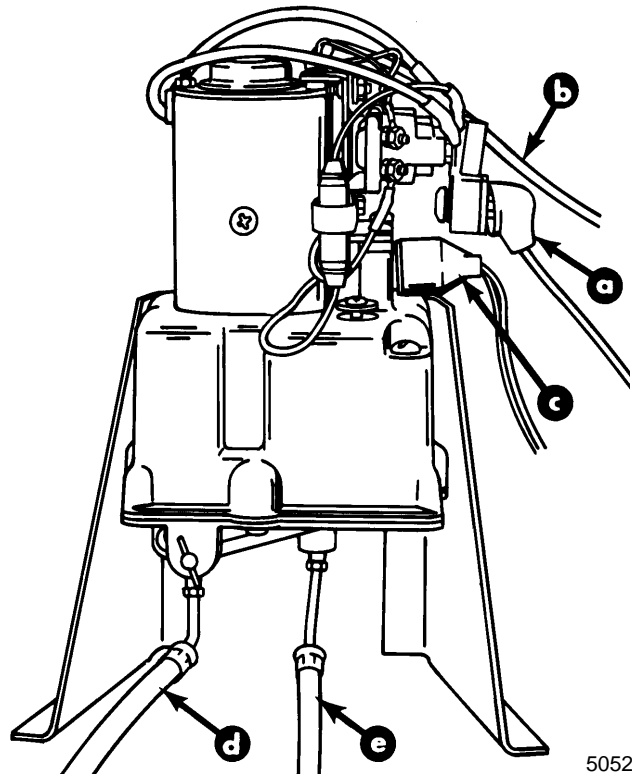


50522

- a - Trim Pump
- b - Floor Bracket
- c - Screws and Lock Washers

Trim Pump Installation

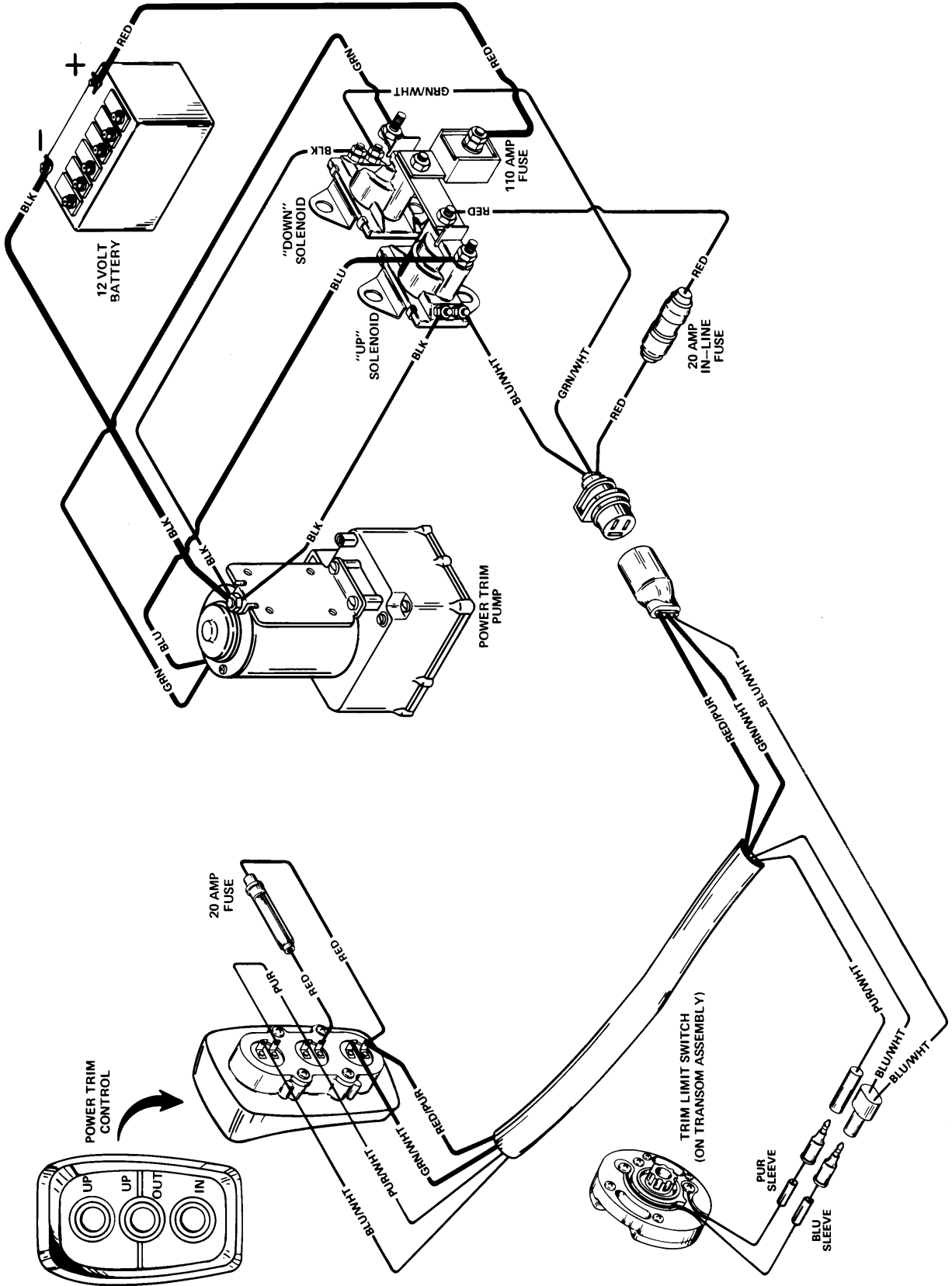
1. Secure pump and mounting bracket to boat using lag bolts and washers.
2. Reconnect trim hoses to pump. Black hose to left connection; gray hose to right connection. DO NOT cross-thread or overtighten hose fittings. Torque to 70 - 150 lb. in. (7.9 - 16.9 N•m).
3. Reconnect trim harness connector to trim pump.
4. Reconnect battery leads to battery.
5. Check fluid level and fill if necessary. (Refer to "Maintaining Power Trim Pump Oil Level" in this section.)



50524

- a - Positive Battery Lead
- b - Negative Battery Lead
- c - Harness Connector
- d - Black Hydraulic Hose (UP Hose)
- e - Gray Hydraulic Hose (DOWN Hose)

Wiring Diagram



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