

Revised 3-11-98

## 135/150 Optimax Update

### Models Affected

#### MERCURY/MARINER

S/N 0G636539 Thru S/N 0G692839

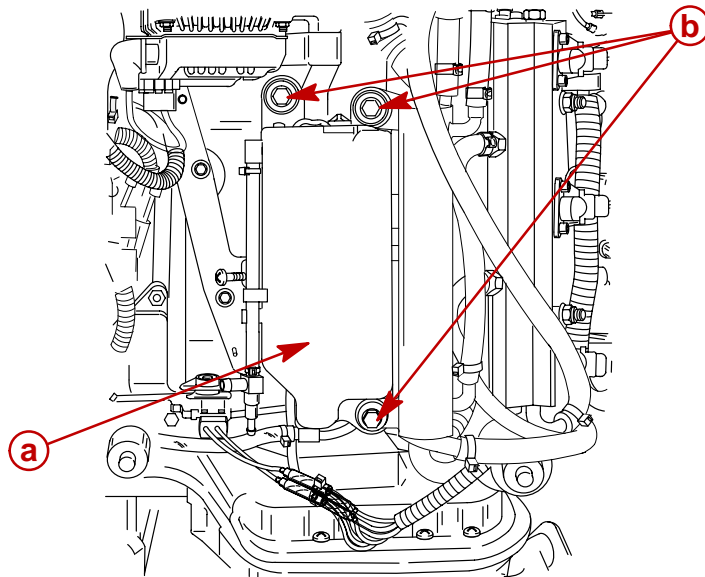
Listed are items to be updated on early production 135/150 HP, Optimax/DFI outboards. Improvements are being offered to current owners and are to be made on outboards in dealer inventory to provide improved reliability, durability and performance. The updated items listed have been implemented on production outboards as running changes.

### Owner Notification – USA/Canada

A letter will be sent to every registered owner of an affected outboard. The letter will advise the owner to return their outboard to their selling dealer or any Mercury/Mariner authorized dealer for the following up-dates. A copy of the letter is included with this Service Bulletin.

#### ITEM # 1 ENGINE OIL RESERVOIR – S/N 0G636539 THRU S/N 0G637527

Replace engine oil reservoir to avoid false low oil signals. The replacement engine oil reservoir sensor switch and float, are less sensitive to alternator magnetic field interference. New reservoir P/N 833069A3 includes new sensor and float assembly.

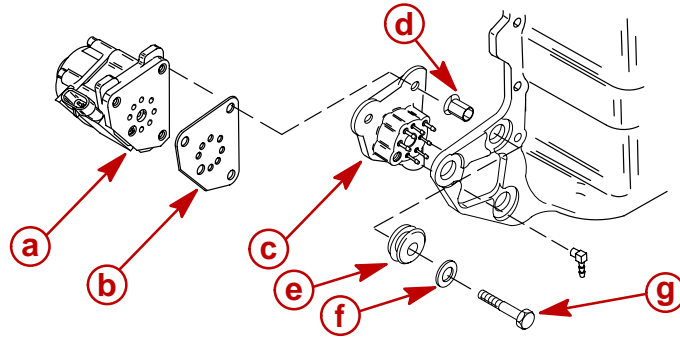


a - Engine Reservoir

b - Bolts (3) [Torque to 170 lb. in. (19.2 N·m)]

**ITEM # 2 OIL PUMP GASKET – S/N 0G636539 THRU 0G654821**

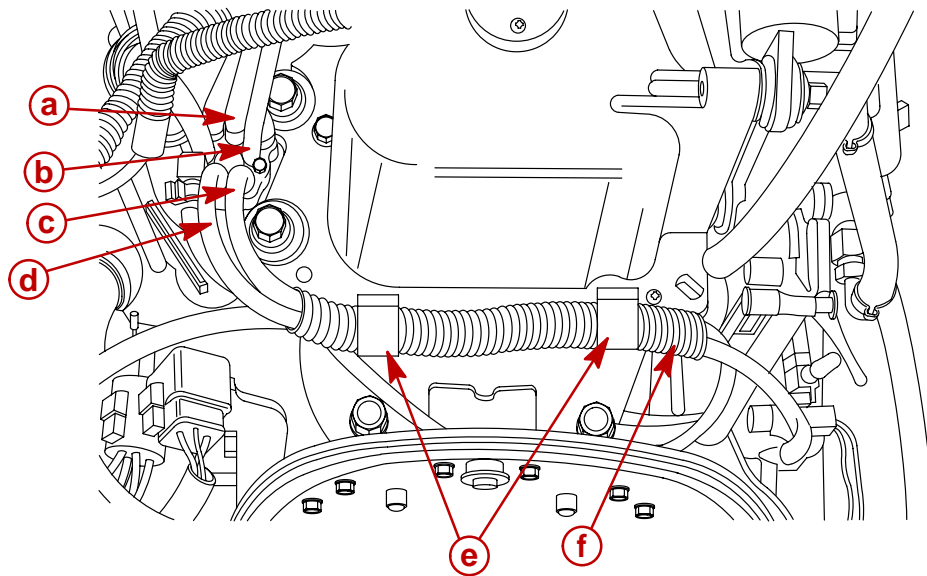
Replace gasket between the oil pump and oil pump bracket. New gasket P/N 27-856542 1 has improved sealing capabilities. New gasket is included in service kit P/N 802707A2.



- a - Oil Pump
- b - Gasket
- c - Bracket
- d - Bushing (3)
- e - Rubber Grommet (3) – Insert into Hole
- f - Washer (3)
- g - Bolt (3) – Torque to 16 lb. ft. (22.0 N·m)

**ITEM # 3 OIL HOSES – S/N 0G636539 THRU 0G692839**

Replace the four smaller diameter oil hoses that supply oil to the port side cylinders, and air compressor. New hoses are made of an improved material. Four 28-1/2 in. hoses will be supplied in the kit, three must be cut to length. Route hoses as shown below, using conduit and clamps supplied with kit P/N 802707A2.



- a - Oil Hose Air Compressor
- b - # 2 Cylinder
- c - # 4 Cylinder
- d - # 6 Cylinder
- e - New "J" Clamps, Torque Clamp Retainer Bolts to 100 lb. in. (12.0 N·m)
- f - Conduit Supplied with Kit

**NOTE:** When oil reservoir, oil pump gasket, or oil hoses are changed, the oil pump priming procedure must be performed. Refer to section 3C-4 of the 135/150 Direct Fuel Injection Service Manual (P/N 90-855347) for correct procedure.

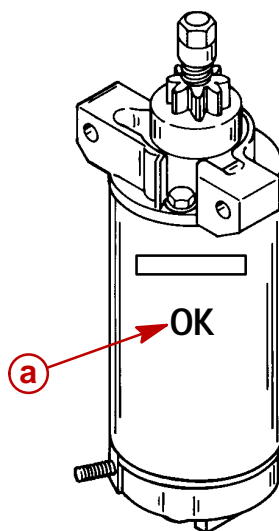
**ITEM # 4 STARTER MOTOR – S/N 0G636539 THRU 0G638551**

The rubber snubber inside the motor housing may have been, dislodged during assembly. Inspect engine carton, or starter motor for having been reworked at the factory. Rework identification listed below. If engine has **NOT** been reworked at the factory, replace the starter motor with **P/N 50-833153 2**.

**Rework identification:**

**FACTORY REWORK:** Engines reworked at the factory will have a Blue dot marked on the engine carton near the serial number location, and the white letters "OK" marked on the starter motor near the part number label.

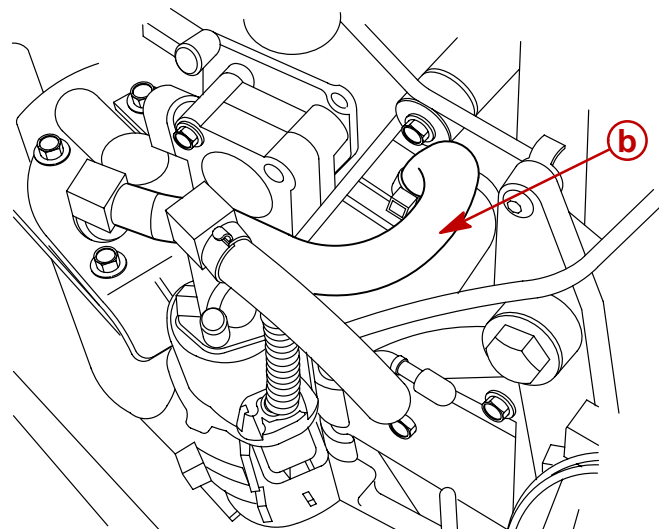
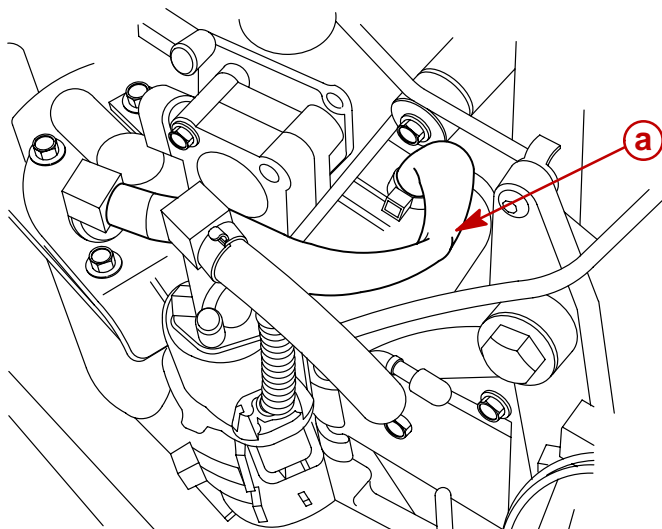
**DEALER REWORK:** Mark the replacement starter motor with the white letters "OK" near the part number label.



a - Factory rework marking (OK)

**ITEM # 5 FUEL HOSE – S/N 0G636539 THRU 0G666068**

The pulse fuel pump hose to the vapor separator tank (VST) could have a partial kink at the formed bend. Inspect hose and shorten at the VST end to remove kink. The amount of hose removed may vary between 3/8 in. to 1/2 in.

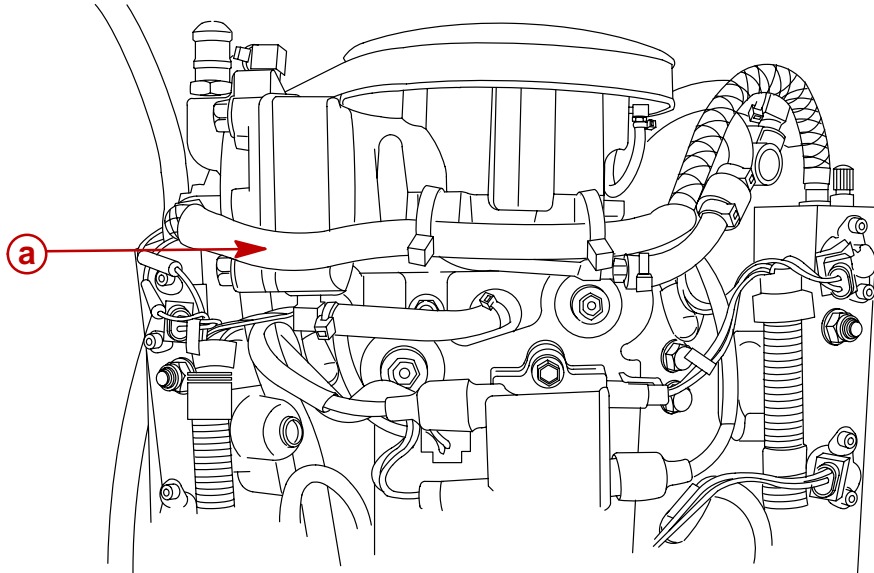


a - Fuel hose with kink  
b - Fuel hose with correct contour (no kink)

**ITEM # 6 AIR PRESSURE HOSE – S/N 0G636539 THRU 0G665930**

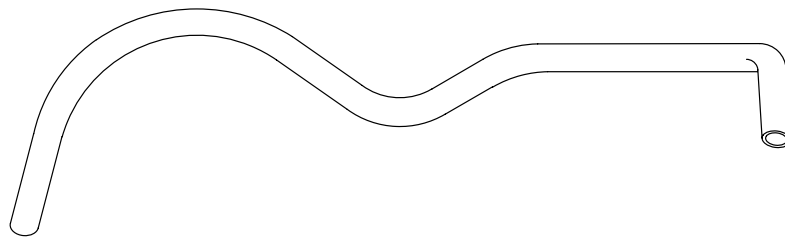
Replace the air compressor output hose. This new formed hose has improved alignment with the fitting on compressor and fuel rail. Engines that have been reworked at the factory, have a GREEN dot marked on the engine carton near the serial number.

New air pressure hose P/N 32-850251 1 and metal clamps are included in kit P/N 802707A2.

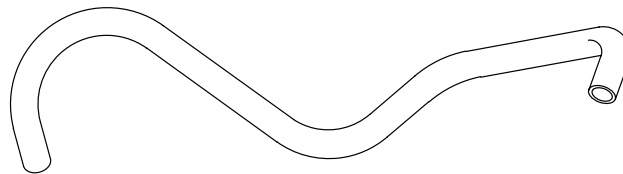


**Rear View Of Power Head**

a - Air pressure hose



**Old Air Hose Contour**

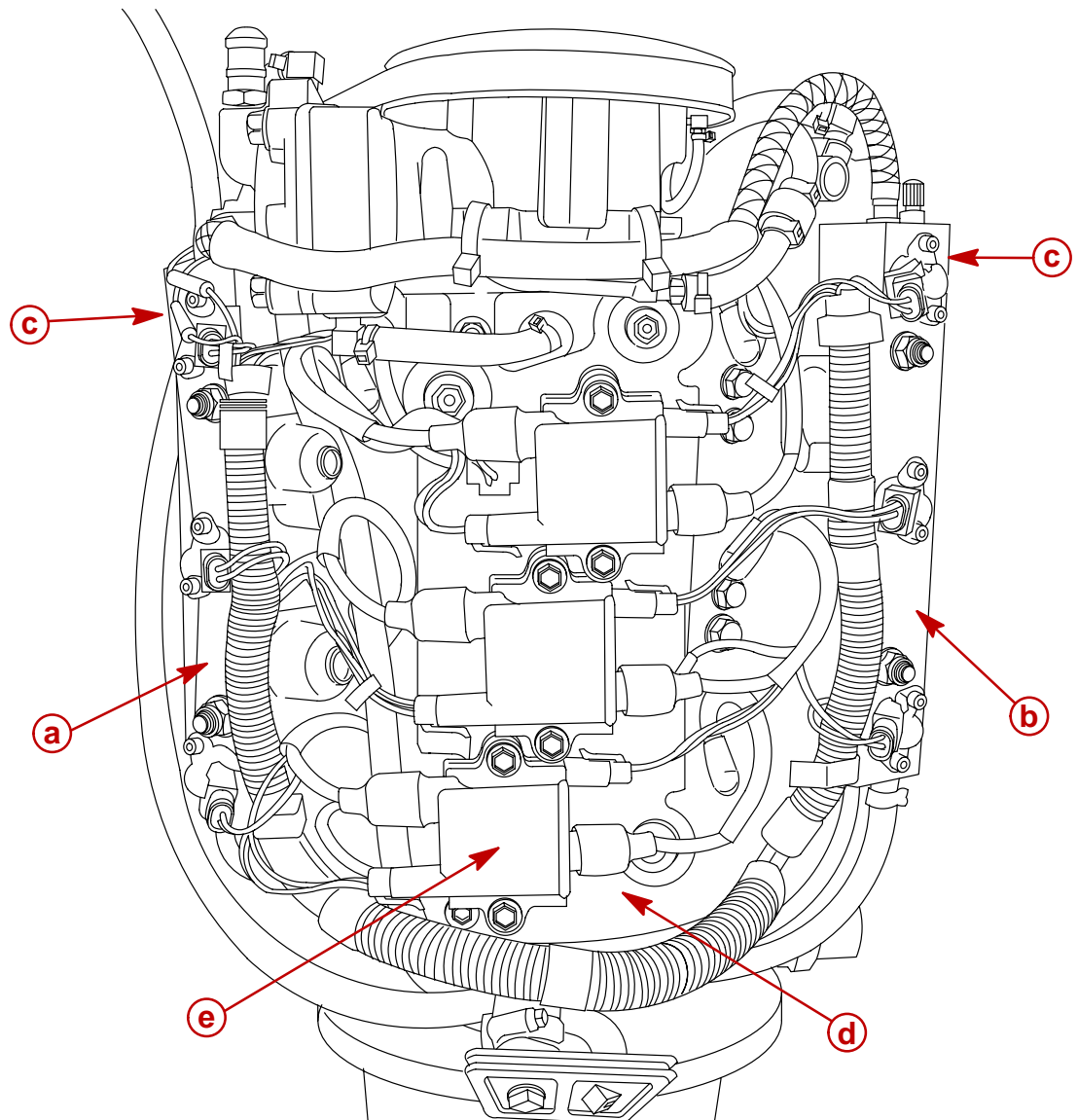


**New Air Hose Contour**

**ITEM # 7 FUEL RAIL PART NUMBER LABEL – S/N 0G670200 THRU S/N 0G681161**

The fuel rails are identified with part number labels. The starboard fuel rail between serial numbers listed above may have incorrect labels. Part number labels on engine components should not be used when ordering part. To eliminate any confusion, check for the correct part number label on the starboard fuel rail. If the label is incorrect, remove and discard, replacement label is not required.

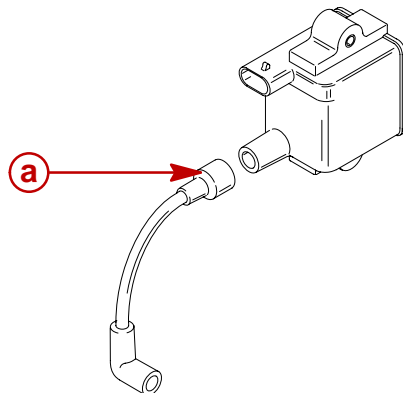
**Incorrect part number**      **852378A4**  
**Correct part number**        **852379A4**



- a - Port fuel rail
- b - Starboard fuel rail
- c - Label location
- d - Ignition coil plate assembly mounting bolts (4) torque 235 in. lbs. (27.0 N·m)
- e - Ignition coils (stacked in pairs)

**ITEM # 8 SPARK PLUG BOOTS – S/N 0G636539 THRU S/N 0G681161**

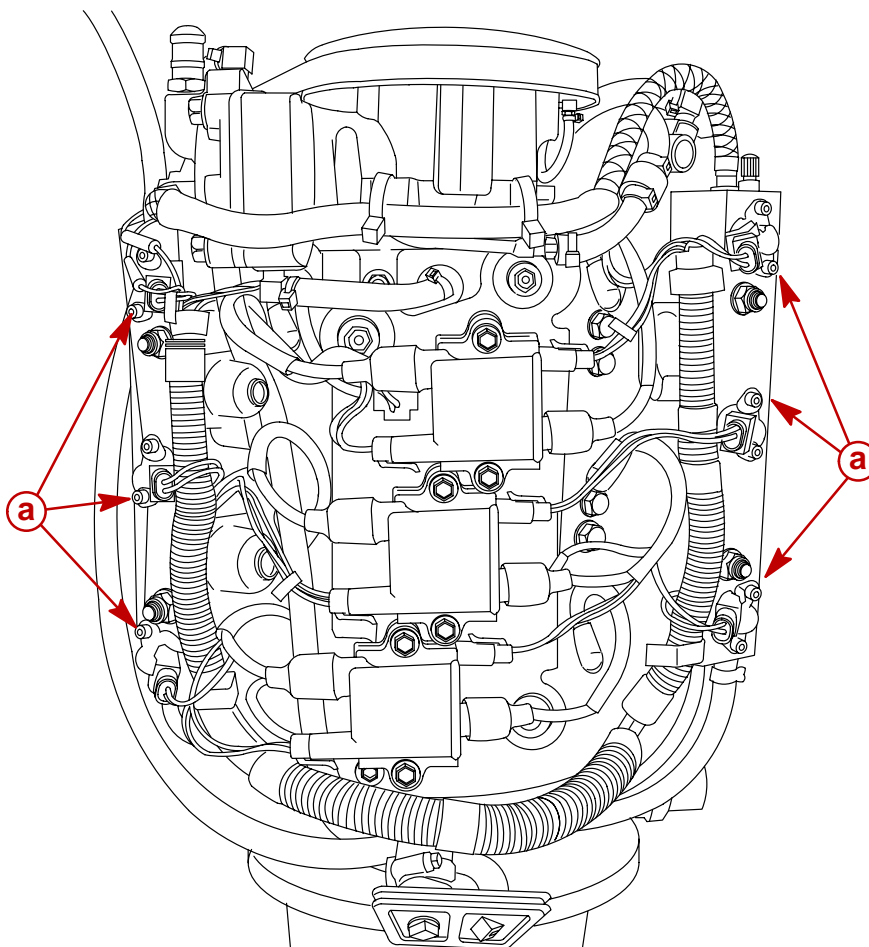
The boot on the ignition coil high voltage tower may become loose, allowing contaminants to enter. Ignition coils now have the boot glued in place to prevent loosening. Because of the difficulty in cleaning the existing boots and coil towers, to insure good bonding of parts, replace the complete ignition coil plate assembly. For this up-date only order one ignition plate P/N 850675A3 for each outboard. Ignition plate assembly will include all coils, and Hi-tension leads, pre assembled and ready to install.



a - Coil high voltage tower boot

**ITEM # 9 FUEL INJECTOR RETAINER BOLTS – S/N 0G680738 THRU S/N 0G693228**

The fuel injector retainer bolts may have been torqued incorrectly. Check the torque of the 12 bolts that retain the 6 fuel injectors. Torque should be 55 in. lbs. (6.2 N·m).



a - Fuel Injector Retainer Bolts (12) – Torque to 55 lb. in. (6.2 N·m)

**ITEM # 10 POWER TRIM PISTON/ROD – S/N 0G653854 THRU 0G681265**

The port side power trim piston/rod assembly may have been incorrectly machined on some of the engines listed. This could cause the tilt relief valve function to become disabled, allowing the engine to trim past the clamp brackets at higher than normal propeller thrust.

**Repair Identification**

Outboards within the serial number range listed that have been reworked at the factory are identified by:

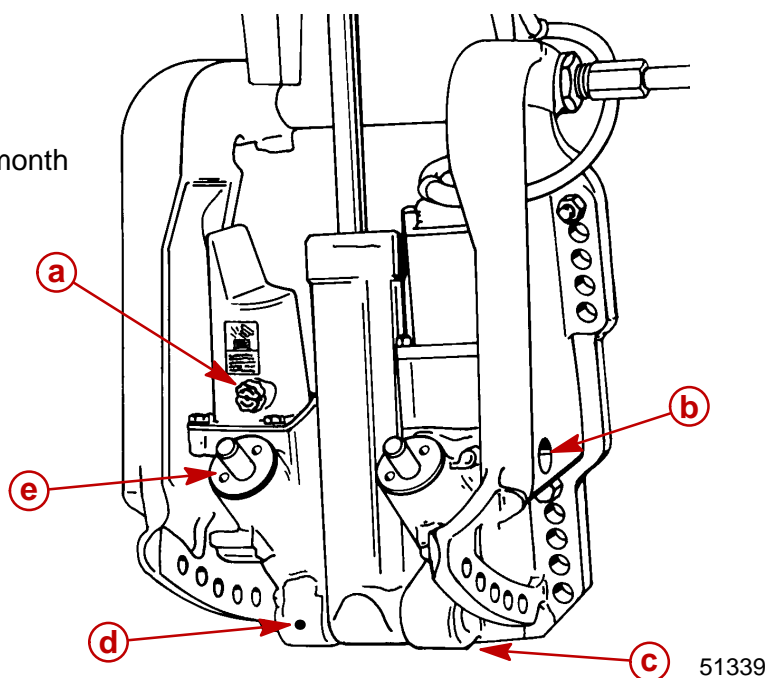
- A white paint dot on the port side of the trim manifold near the tilt cylinder lower cross pin area.
- Engine carton will have a **ORANGE** dot near the serial number location.

Any engine that **DOES NOT** have the factory rework marking, should have the anode assembly removed from the power trim, to inspect for affected date codes. Affected date codes are 7I02 thru 7K07. Power trims with date codes that are not in the affected range do not require trim piston/rod replacement.

Date code explanation:


  
 year    month    day of month

I – September  
 J – October  
 K – November



- a - Fill cap  
 b - Manual valve  
 c - Date code location  
 d - Factory rework mark (white dot)  
 e - Port trim ram

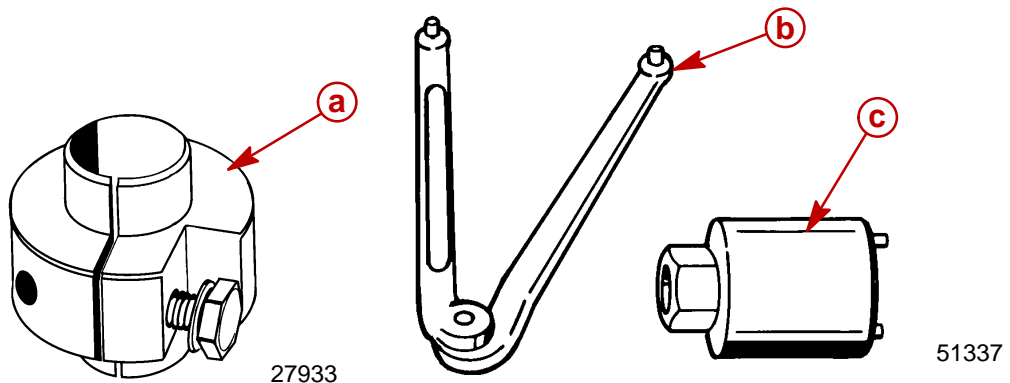


## Correction

With engine in up right position and installed on boat, or suitable engine cart:

1. Tilt outboard to the full "UP" position and engage tilt lock lever.
2. Slowly remove "Fill" plug, and turn manual release valve 3 to 4 turns (counterclockwise) to bleed pressure.
3. Place a clean pan under trim system to catch fluid.
4. Loosen the port side trim rod cylinder cap using spanner wrench (91-74951), or cap removal tool (91-44487A1). Before removing, clean any dirt or loose paint chips from around cap area.
5. Remove trim rod cylinder cap.
6. Install trim rod removal tool (91-44486A1) and pull trim piston/rod assembly from cylinder.
7. Install cylinder cap over new piston/rod assembly.
8. Apply Quicksilver Power Trim and Steering Fluid on all O-rings and seals before installation.
9. Install trim rod and cap.
10. Tighten cap securely.
11. Close the manual tilt valve and reservoir cap.
12. Disengage the tilt lock lever.
13. Cycle the trim system 2 times (full tilt to full retract) and recheck fluid level.

**NOTE:** For more detailed power trim repair information consult appropriate service manual.



- a - Trim rod removal tool (91-44486A1)  
 b - Spanner Wrench (91-74951)  
 c - Cap removal tool (91-44487A1)





**Warranty:**

The normal 3 year Optimax warranty applies.

When performing all ITEMS listed

Complete warranty claim listing:

Outboard serial number

Parts as required

Determine labor time per chart—enter total as applicable

Flat rate code NJC

Failure code 799-00

<b>Labor Time Chart</b>	
Time for testing and adjusting is included	
Item #1	0.2 hours
Item #2	0.4 hours
Item #3	<u>1.0 hours</u>
Item #4	<u>0.2 hours</u>
Item #5	0.2 hours
Item #6	0.2 hours
Item #7	0.2 hours
Item #8	0.4 hours
Item #9	0.2 hours
Item #10	1.0 hours
Item #11	0.2 hours

**Update Group Chart**

Group #1	0G636539 thru 0G637527	Items 1, 2, 3, 4, 5, 6, 8, 11
Group #2	0G637528 thru 0G638551	Items 2, 3, 4, 5, 6, 8, 11
Group #3	0G638552 thru 0G683853	Items 2, 3, 5, 6, 8, 11
Group #4	0G653854 thru 0G654821	Items 2, 3, 5, 6, 8, 10, 11
Group #5	0G654822 thru 0G665930	Items 3, 5, 6, 8, 10, 11
Group #6	0G665931 thru 0G666068	Items 3, 5, 8, 10, 11
Group #7	0G666069 thru 0G670199	Items 3, 8, 10, 11
Group #8	0G670200 thru 0G680737	Items 3, 7, 8, 10, 11
Group #9	0G680738 thru 0G681161	Items 3, 7, 8, 9, 10, 11
Group #10	0G681162 thru 0G681265	Items 3, 9, 10
Group #11	0G681266 thru 0G692839	Items 3, 9
Group #12	0G692840 thru 0G693228	Items 9

US & Canada—Complete/process claim via Midas or return a warranty claim form.

Return starter motors, ignition coil plate assembly, and ECM's with warranty claim. All other parts tag and hold for 60 days after credit is received.

INTERNATIONAL: Follow instructions issued by Marine Power International office or by your distributor.



W6250 PIONEER ROAD  
P.O. BOX 1939  
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PHONE (920) 929-5000 ■ FAX (920) 929-5060

Dear Optimax Owner:

Congratulations on your decision to purchase a new Optimax, the most technologically advanced outboard ever designed.

Through continuing research, we have developed advanced components that will make your engine even more durable and dependable. To ensure your continued satisfaction, we would like to have them installed on your engine. All of them mount outside the engine block and do not require any major disassembly. Your dealer can explain about the work that will be done.

Please contact your dealer and make arrangements to have this service performed. If your boat presently is in storage, you may want to arrange to have this work done at a later date when you take the boat out of storage.

### **What You Should Do**

First, contact your authorized dealer, preferably the one who sold you the outboard, and make an appointment to have your engine serviced per Service Bulletin 98-3. Then, deliver your boat to your dealer at the appointed time. The reverse side of this letter comprises a claim form that the dealer will send to us for reimbursement, so please give it to the dealer.

We apologize for any inconvenience, but the benefits of having these improvements incorporated into your engine are significant. You're a valued customer, and we want to do everything possible to enhance the quality of your experience. Thanks for this chance to serve you.