



Service Bulletin

Bulletin No. 2005-11

Circulate to: ☐ Sales Manager ☐ Accounting ☒ Service Manager ☒ Technician ☒ Parts Manager

30-60 Horsepower FourStroke Voltage Regulator Replacement Models Affected

Models Covered	Serial Number Or Year
Mercury/Mariner 30/40 3 Cylinder FourStroke	Model Year 2002 and 2003 0T438281 through 0T800906 Belgium 0P156468 through 0P269818
Mercury/Mariner 40/50/60 4 Cylinder FourStroke	Model Year 2002 and 2003 0T416659 through 0T800906 Belgium 0P156559 through 0P270043

Situation

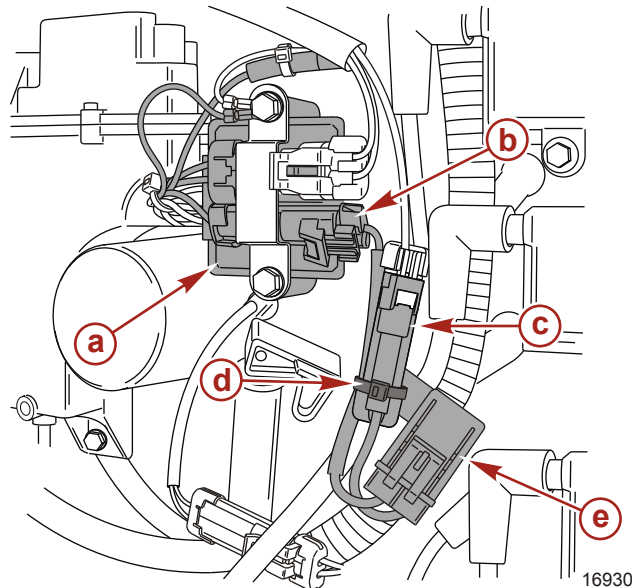
Mercury Marine has received reports of voltage regulator failures on the above identified models. A failure of the voltage regulator will prevent the battery from maintaining a proper charge. Included in the observed failure modes is electrical arcing within the regulator, which can be an ignition source. Mercury Marine has made changes to the voltage regulator, and related components, to address this issue. The models identified above will be upgraded, at no cost to the customer, with a kit (described below), which includes a new voltage regulator.

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Repair Identification

Inspect the engine for the installation of a fuse harness (c) required for the use of this new kit. If the fuse harness is installed, the bulletin has been performed on the engine and no further action is necessary.



- a** - Voltage regulator
- b** - Fuse harness connector to voltage regulator
- c** - Fuse harness connector to wiring harness
- d** - Cable tie securing fuse and harness
- e** - 25 ampere fuse assembly

Correction

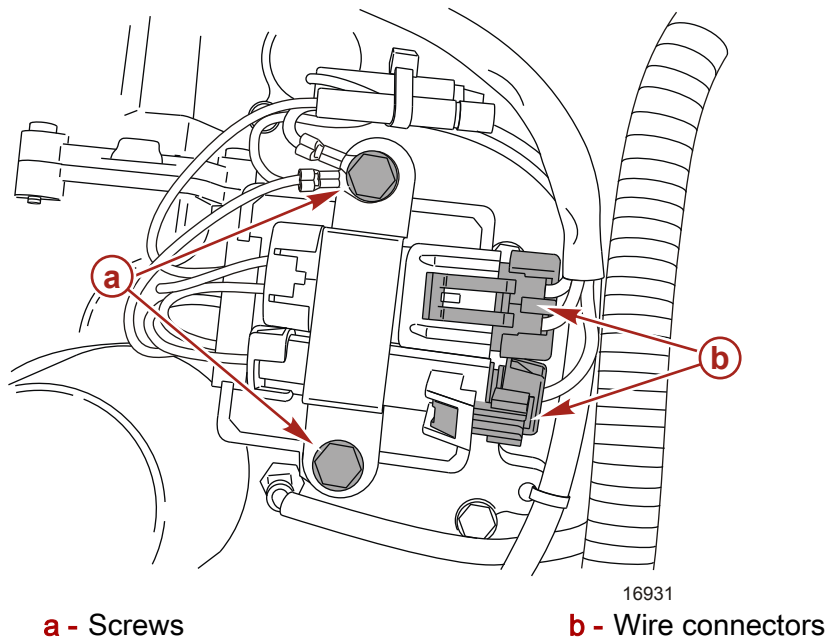
If the repair has not been previously completed, install the appropriate voltage regulator kit per the following instructions:

1. Disconnect the battery leads from the battery.
2. Remove the top cowl.
3. Remove the spark plug leads from the spark plugs.
4. Remove the bottom cowls.
5. Disconnect the voltage regulator wire connectors.

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6. Remove the mounting screws and remove the voltage regulator.

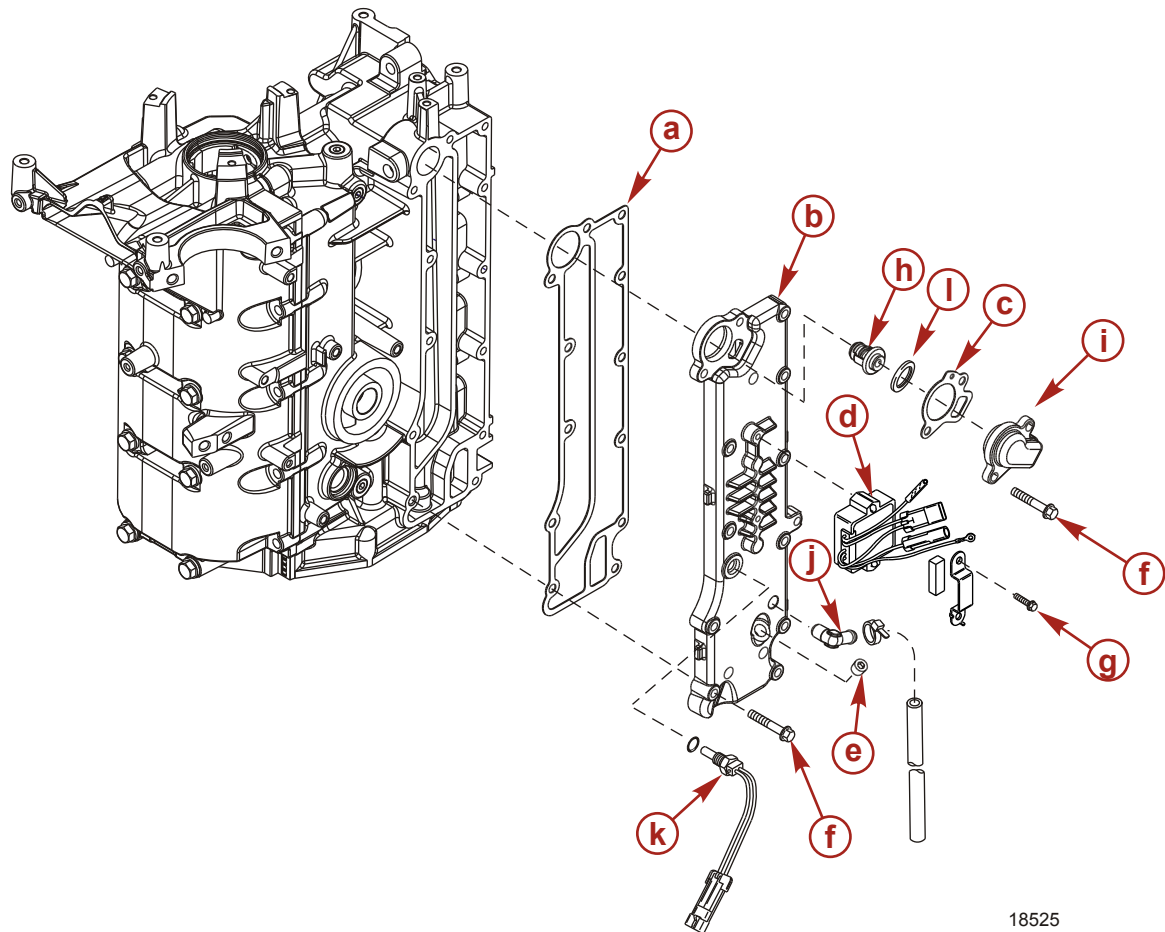


7. Remove the temperature sensor from the exhaust cover. (Retain for installation into the new exhaust cover.)
8. Remove the thermostat cover. (Retain for installation into the new exhaust cover.)
9. Remove the exhaust cover.
10. Properly clean the gasket surface of the exhaust chest.
11. Install the new exhaust cover with the gasket provided.
12. Install the new thermostat, thermostat cover, and new thermostat gasket to the new exhaust cover.

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NOTE: The installation of this kit requires the replacement of the engine exhaust cover. Refer to the appropriate service manual for removal and installation instructions.



- a - Exhaust cover gasket

b - Exhaust cover

c - Thermostat cover gasket

d - Voltage regulator

e - Pipe plug (drive tight)

f - Screw (M6 x 35) (12 each)
- g - Screw (M6 x 40) (2 each)

h - Thermostat

i - Thermostat cover

j - Elbow

k - Temperature sensor

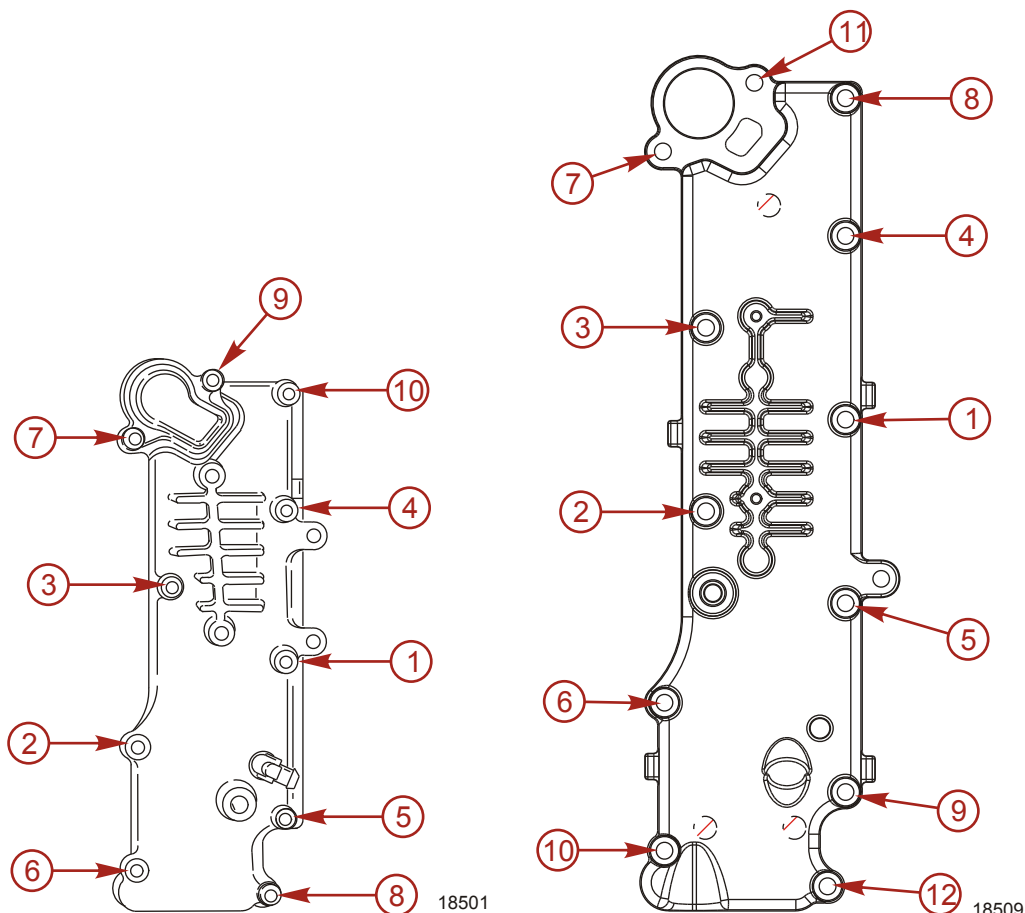
l - Thermostat gasket

Description		Nm	lb. in.	lb. ft.
Screw (M6 x 35)	First	6	53	
	Final	12	106	
Screw (M6 x 40)		8.5	75	

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13. Torque the exhaust cover and thermostat cover screws in the proper torque sequence. Reference the correct sequence below.



Three cylinder exhaust cover

Four cylinder exhaust cover

Description		Nm	lb. in.	lb. ft.
Exhaust cover screw torque	First	6	53	
	Final	12	106	

14. Install the new plastic fitting and pipe plug to the exhaust cover (drive tight).
 15. Install the temperature sensor. Torque to specifications.

Description	Nm	lb. in.	lb. ft.
Temperature sensor	1.7	15	

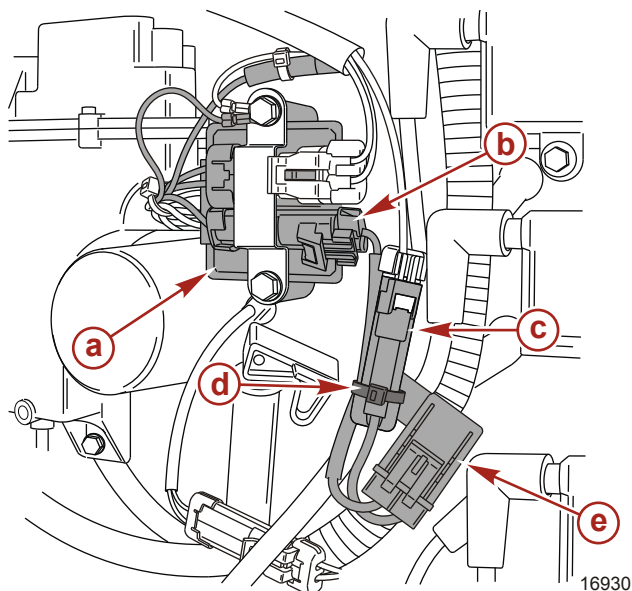
16. Install the new voltage regulator.

Description	Nm	lb. in.	lb. ft.
Voltage regulator/rectifier mounting screw torque	8.5	75	

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17. Route and secure wiring as shown.



- a** - Voltage regulator
- b** - Fuse harness connector to voltage regulator
- c** - Fuse harness connector to wiring harness
- d** - Cable tie securing fuse and harness
- e** - 25 ampere fuse assembly

18. Reinstall bottom cowls.

19. Reinstall spark plug leads.

20. Reconnect battery cables.

21. Test run outboard and inspect exhaust cover for leakage.

22. Reinstall the top cowl.

Parts Required

Qty. 1 of the appropriate voltage regulator kit:

Qty.	Description	Part Number
1	30/40 3 cylinder FourStroke carburetor or EFI	893640A01
1	40/50/60 4 cylinder FourStroke carburetor or EFI	893640A02

Dealer Parts Inventory

USA customers: Return any 883071T1 voltage regulators in your inventory using the Mercury Precision Parts UNDER 30 DAYS RETURNS PROGRAM. You may use the form on the back of any parts and accessories packing list. **Please note on the form that the return is part of Service Bulletin 2005-11.** All returns must be sent freight prepaid to:

Mercury Marine

Attn: Return Goods

W6250-20C Pioneer Road

Fond du Lac, WI 54935

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Non-USA customers: Return any 883071T1 voltage regulator to the appropriate distribution center for credit. Follow the normal return parts procedure. Please make reference to Service Bulletin 2005-11.

Owner Notification

All registered owners within the affected serial number range will receive a letter from Mercury Marine. The letter will explain the situation and request that they contact their local dealer to set-up a time to have this repair performed.

Warranty

Mercury Marine will credit the dealer for the cost of parts and labor until September 30, 2008.

Complete the warranty claim listing:

- Outboard engine serial number
- Qty. 1 P/N 893640A01 or 893640A02
- 1.0 hour labor
- Warranty Flat Rate Code = SB10
- Part Code = 330
- Failure Code = 00

US AND CANADA

Complete/process the claim via MercNET or return a warranty claim form.

INTERNATIONAL

Follow instructions issued by the Marine Power International office or by an authorized Marine Power Distributor.

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Dear Mercury Marine Owner

Thank you for your purchase of a Mercury Outboard. We at Mercury Marine are dedicated to providing superior reliability and customer satisfaction. As part of our commitment to superior customer satisfaction, we have determined that it is necessary to replace the voltage regulator on your engine to insure the durability of your Mercury Outboard.

What is the condition?

On a small number of engines, it is possible that the voltage regulator may fail resulting in the loss of battery charging capacity. Included in the observed failure modes is electrical arcing within the regulator, which can be an ignition source. To eliminate the possibility of this occurring, Mercury Marine will replace the voltage regulator, and other related components (which have been redesigned to address this issue) at no charge to you.

What will Mercury Marine do?

Any authorized Mercury Marine dealer will inspect and if necessary replace your voltage regulator at no charge to you.

What should you do?

Please contact your Mercury Outboard dealer to schedule an appointment to have the voltage regulator replaced. Your dealer is able to determine how long the repair will take on your engine.

Please present this notice to your dealer when you bring your engine in for your service appointment.

What if you have other questions or if you no longer own this engine?

Please contact your Mercury Outboard dealer or call Mercury Outboard Customer Service at 1-920-929-5040 between 7:30 AM and 5:30 PM CST.

We have sent this notice in the interest of your continued satisfaction with our product, and we sincerely regret any inconvenience this may cause you.

Thank you for boating with Mercury Marine

Mercury Marine Service