MERCURY MerCruiser

Service Bulletin

Bulletin No. 2006-02
OEM No. 2006-02

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

Official Recall Notification U.S. Federal Boat Safety Act—Possible Chafing of Orange Alternator Wire on 5.0L/5.7L/6.2L MPI Engines

Models Affected

Models Covered	Engine Serial Number
5.0 MPI	Alpha Drive 0M300000 to 0W387854
350 MAG MPI	
350 MAG MPI Horizon	
MX6.2 MPI	
MX6.2 MPI Horizon	
5.0 MPI	Bravo Drive 0M300000 to 0W386609
350 MAG MPI	
350 MAG MPI Horizon	
MX6.2 MPI	
MX6.2 MPI Horizon	

Situation

On the units identified above, an orange wire attached to the output terminal of the alternator (the orange alternator wire) was routed by MerCruiser in one of two ways. One way was correct, the other was incorrect.

The incorrect routing places the orange alternator wire between the oil dipstick tube and the alternator. With that incorrect routing, it is possible that the insulating material will be chafed by the dipstick tube or the alternator, which could cause the wire to fail. If the wire fails, it could become an ignition source. See the "incorrect routing" photographs below.

The correct routing passes the orange alternator wire beneath the alternator, not in contact with the dipstick tube, which eliminates the opportunity for chafing and failure identified above. See the "correct routing" photograph following.

In addition to the two orange wire routings described above, many boatbuilders modify or disconnect the orange wire to facilitate the installation of battery isolators. Boats that have been so modified will not require the corrective action outlined below.

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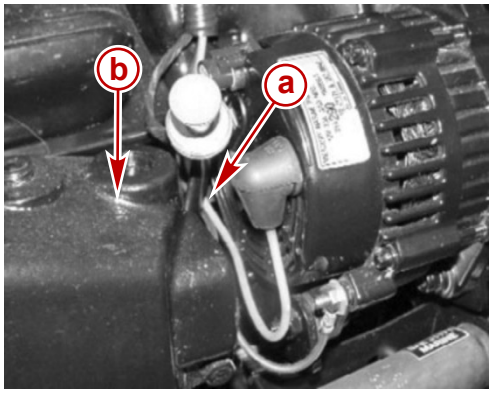
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Inspection

Identify the orange alternator wire. If it is routed between the oil dipstick tube and the alternator, then continue with the procedures described in the correction section below. However, if the orange wire is not routed between the dipstick tube and the alternator, then no further action is required.

Correction

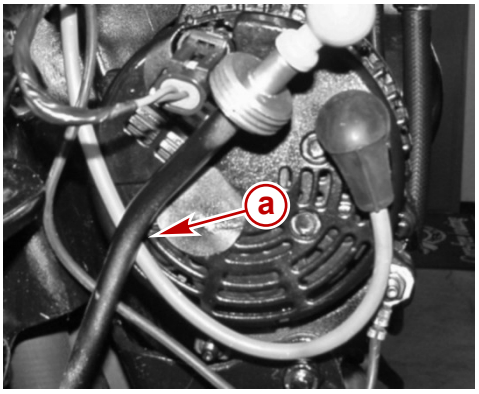
1. Inspect the routing and condition of the orange wire, specifically checking for signs of denting, chafing, or rubbing from the point of connection on the output terminal back to the end of the protective convoluted tubing.



21326

On engine—Incorrect routing

a - Wire pinched by dipstick tube



21333

On engine—Incorrect routing (exhaust manifold removed for clarity)

a - Wire pinched by dipstick tube

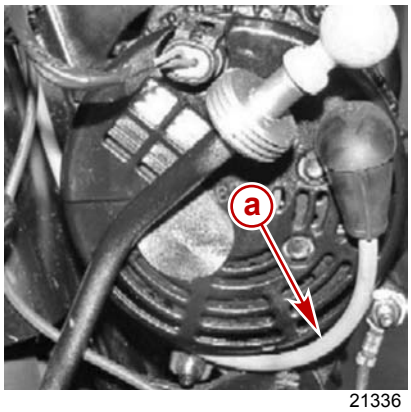
2. a. If the orange alternator wire is found to be free of evidence of damage caused by denting, rubbing, or chafing, route the wire under the alternator as shown below. No further action is required.

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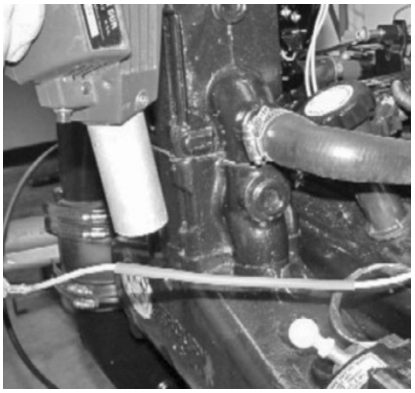
b. If the orange wire shows damage, proceed to step 3. *Refer to the instruction sheet provided with the required Alternator Wire Shielding Kit for complete instructions.*



21336

On engine—Correct routing (exhaust manifold removed for clarity)

3. Disconnect the positive and negative battery cables from the battery.
4. Remove the orange wire from the back of the alternator.
5. Slide the protective boot off the wire and over the eye terminal.
6. Slide the full 15.2 cm (6 in.) piece of heat shrink tubing completely over the ring terminal, ensuring that the damaged section of the wire insulation is completely covered by the heat shrink tubing.
7. Heat the tubing evenly and completely using an electric heat gun.



21338

8. Allow to cool.
9. Gently pull the orange wire away from the engine.

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10. Slide the 17.8 cm (7 in.) convoluted tubing over the orange wire.



21340

11. Wrap the end of the convoluted tubing nearest the main harness with electrical tape in a cross pattern to ensure that the convoluted tubing is securely fastened to the main harness.



21341

12. Wrap the other end of the convoluted tubing with electrical tape to prevent the wire from coming out of the tubing.



21344

13. Slide the protective boot back over the ring terminal.
14. Route the wire under the alternator, ensuring that the wire is not pinched.

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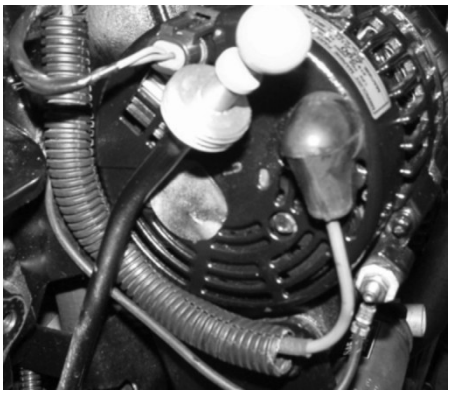
15. Reconnect the eye terminal to the output terminal on the alternator. Tighten the nut and lock washer, and slide the protective boot over the terminal connection.



21345

Description	Nm	lb. in.	lb. ft.
Orange wire terminal nut	2.82–4.52	25–40	

16. Ensure that the wire is routed below the alternator and not pinched by the dipstick tube.



21346

Wire Routed Under Alternator (exhaust manifold removed for clarity)

17. Reconnect the battery cables, positive (+) terminal first, then the negative(–) terminal.

Ordering the Replacement Kit

Qty.	Description	Part Number
1 per engine	Shielding Kit, Alternator Wire	889282A03

Warranty

Mercury Marine will credit the dealer for the cost of parts and labor. Submit a warranty claim through your normal warranty-processing channel, listing:

- Engine Serial Number:
- Flat Rate Code: NJC
- Labor: 0.5 hours
- Part Code: 301
- Failure Code: 40

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