

Circulate to: Sales Manager Accounting Service Manager Technician Parts Manager

Alternator Warranty Claims

NOTICE

This bulletin supersedes the previous service bulletin number 2009-01/OEM 2009-01 June 2009.

Scope

Worldwide

Situation

Mercury Marine's failure analysis group receives and inspects all returned alternators submitted for Warranty, Mercury Product Protection, and Certified Pre-Owned Contract claims. There are claims denied because the alternator output (volt and amps) are within the alternators specifications.

NOTE: All Mercury Marine Pre-authorizations and/or claims are subject to parts inspection by authorized Mercury Marine personnel prior to reimbursement.

Inspection/Test

IMPORTANT: Please refer to the appropriate service manual for proper test procedures and standard results.

There are some obvious causes that could result in a misdiagnosis of a failed alternator charging system on the outboard engines.

Please follow the listed items below in order to help us reduce the unnecessary return of alternators.

1. Failed fusible link: Engines that use a belt driven alternator will have a fusible link between the alternator and the start solenoid. The fusible link is designed to protect the alternator from damage due to accidental reverse polarity connection at the battery. If the battery cables are connected with reverse polarity, the fusible link will create an open circuit and must be replaced. When the fusible link is open, the engine can be started, but the run time will be limited because the alternator is not charging the battery due to an open circuit on the alternator's output to the battery. Failure of the fusible link can only be caused by reverse polarity cable connection at the battery or by contacting engine ground with the solenoid end of the fusible link while the battery is connected to the engine. Fusible link failures are not covered by the Mercury Limited Warranty.

NOTE: A key indicator that a fusible link is open/shorted is a high voltage measurement at the alternator with the engine running. Check the fusible link first for an open or short before replacing an alternator.

2. Weak or open ground on the alternator: Always check for a good ground at the alternator's body. The alternator ground strap could be corroded or a terminal is broken. The cable should be removed for inspection. If a ground strap is not utilized, the alternator should be removed to inspect for corrosion between the alternator mounting surfaces.
3. Check the connector on the alternator for battery voltage. The sense wire should have battery voltage when the battery is connected to the engine. The ignition wire terminal may not have battery voltage until the engine is cranking.
4. Check the alternator belt condition and tension.
5. Check the wire connections at the alternator for tightness and absence of corrosion. Wires that are discolored are an indication the connection is loose or corroded.
6. Check wire connections at the battery for tightness and absence of corrosion.
7. Check the battery condition.

THE INFORMATION IN THIS DOCUMENT IS CONFIDENTIAL AND PROTECTED BY COPYRIGHT AND IS THE PROPERTY OF MERCURY MARINE.

This document is provided for the sole and exclusive use of the original recipient as prescribed by Mercury Marine and may not be distributed or copied, digitally or otherwise, without the prior written consent of Mercury Marine.

Alternator Warranty Claims

8. If the voltage measurement at the alternator output terminal with the engine running reads 13 V (+1/-0), it *may* indicate the alternator is charging, however, the amp output of the alternator at idle RPM, may be less than the amount of amps that is being used from the battery. Today's boats can consist of many accessories. Always verify the amp load out of the battery does not exceed the output (amps) of the alternator.

Warranty

Alternators that are received, tested, and are within output specifications or have failed due to conditions not covered by product warranties or extended service contracts, will have the claim denied. These alternators will be returned to the dealer.

IMPORTANT: This information request will appear on all alternator claims. Verify this information is included when filing an alternator claim. Please provide the voltage output test results at the alternator terminals and separately at the battery terminals. Test results must be recorded with the engine off (not running) as well as with the engine running.

Test Description	Voltage Readings
Alternator terminals (engine off)	Volts
Alternator terminals (engine running)	Volts
Battery terminals (engine off)	Volts
Battery terminals (engine running)	Volts

THE INFORMATION IN THIS DOCUMENT IS CONFIDENTIAL AND PROTECTED BY COPYRIGHT AND IS THE PROPERTY OF MERCURY MARINE.

This document is provided for the sole and exclusive use of the original recipient as prescribed by Mercury Marine and may not be distributed or copied, digitally or otherwise, without the prior written consent of Mercury Marine.