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Viewed: 426

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Coding Information

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Title: Starter Diagnostics and Warranty Claim Procedure

Applies To: U.S. and Canadian Dealers and All starter replacements

DESCRIPTION

Starter Diagnostic and Warranty Replacement Procedure

The following information details the procedure that need to be followed to assure proper Starter Diagnosis and requirement to empower dealer to perform correct repairs.

The program requires the use of the MidTronics EXP tester, and the Starter Diagnostic Worksheet when performing starter diagnostics.

Benefits of using this procedure are:

- Increased customer confidence that the vehicle is fixed right the first time.
- Increased productivity, through accuracy of diagnosis.
- Reduced in bay shop time, vehicle down time, and shop come backs.
- Correct diagnosis to protect Dealer from No Problem Found Charge backs after part is reviewed and tested.
- Built-in repair documentation to provide with a Warranty Claim.

EFFECTIVE

November 1, 2012

WARRANTY AND CLAIM INFORMATION

When testing for a Starter related failure, the technician should employ the **MidTronics EXP tester**, and complete the proper [diagnostic worksheet](#). Critical diagnostic testing values are to be recorded and submitted with the claim.

A copy of the completed [diagnostic worksheet](#) should be retained with the warranty claim repair order. For better understanding of failures, the worksheet must be attached to the claim documentation.

NOTE:

Dealers must attach a copy of the starter diagnostic worksheet to all iClaim submissions.

NOTE:

All MIDTRONICS test data/results or diagnostic check list must be submitted with warranty claim in order to receive warranty reimbursement.

All Starters replaced under Warranty (Warranty Codes 01,03,39,55 and 98) will be requested back to be reviewed and tested. Any which are found non-defective or unnecessarily replaced will be charged back to the dealer.

This diagnostic process is being utilized to provide the tools and ability to empower the dealer to make the correct diagnosis/repair without the need of a iApproval.

REPAIR PROCEDURE

Starter Diagnostic Procedure:

CAUTION :

Always perform diagnosis with transmission set in neutral or park, parking brake set, and all electrical loads off.

CAUTION :

Wear face and eye protection at all times while performing diagnosis.

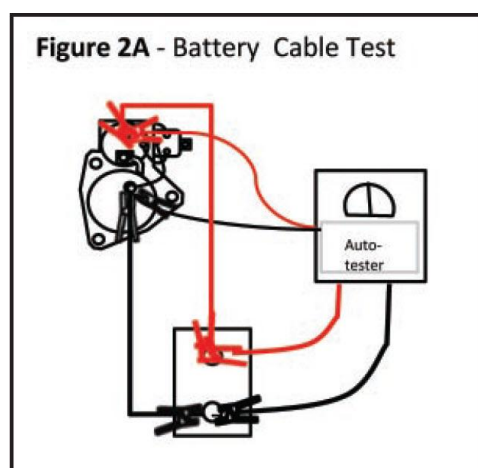
Following this procedure will help determine if there is an issue with a starter motor and help prevent warranty denials for No Trouble Found (NTF) .

Step 1: Test Batteries and Connections

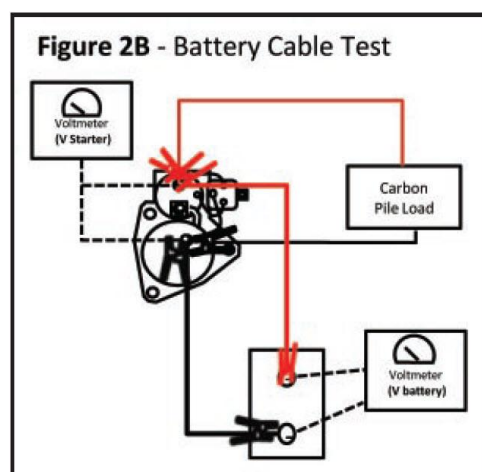
1. Follow the procedure for testing the battery pack; as described in the [Midtronics EXP Instruction Manual](#).
2. Continue by selecting 'Break pack down', and test each battery individually as described in the manual.

Step 2: Test Battery Cables

1. Navistar recommends using the Midtronics equipment to test battery cables and voltage drop.
 - If the proper Midtronics equipment to perform this testing is unavailable, a voltmeter and carbon pile load tester can be used (both methods are shown below).

Step 2A - Testing Battery Cables with Midtronics (Preferred Method)

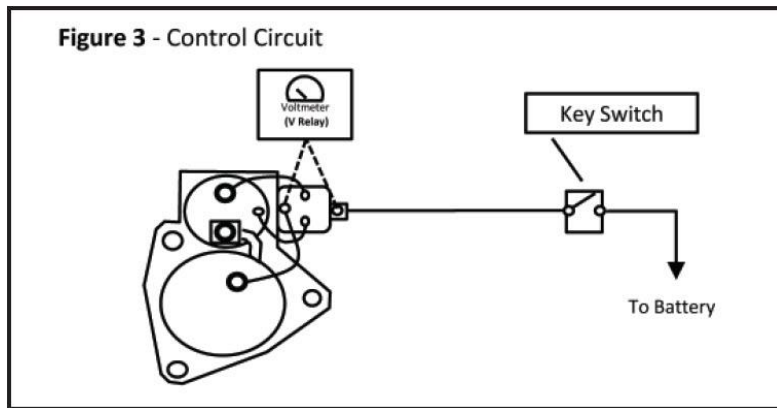
1. Connect tester (refer to above image).
2. Follow Midtronics procedure for testing battery cables.
3. Battery cable circuit resistance must be less than 2 mΩ.
4. Check results, if OK proceed to Step 3.

Step 2B - Testing Battery Cables with Carbon Pile Load (Optional Method if Midtronics Tester Not Available)

1. Connect devices (refer to above image).
2. Maintain 500 amp load using Carbon Pile.
3. Measure voltage drop at starter. Use formula below to calculate voltage drop.

$$V_{\text{battery}} - V_{\text{Starter}} = \text{Voltage Drop}$$
4. If the voltage drop is greater than 1 volt this indicates a problem with the battery cables.

Step 3: Test Control Circuit



1. Connect the measurement devices (refer to above image).
2. Ensure parking brake is set and all electrical loads are off.
3. Turn Key Switch to crank position.
4. Check Relay voltage. Voltage must be at least 11.4 v.
5. If voltage is greater than 11.4 v and starter does not engage, replace the starter.

Step 4: Visually Inspect Ring Gear

1. Inspect Ring gear 360 degrees for damage, burrs, and excess wear.
 - Replace if needed.

Hide Details

Feedback Information

Viewed: 425
Helpful: 9
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	DYYNJZ1	You received the following feedback From: dyynjz1 - Nick Zogelman Email Address: nick@williamsservice.com Job Classification: SE003, Service Manager Dealer: WILLIAMS SERVICE Feedback: what if it is parts warranty and we do not have the truck to do diag on	11/30/2012 3:05:22 PM