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Document ID: IK0800482

Availability: ISIS, Bus ISIS, FleetISIS

Revision: 9

Major System: ELECTRICAL SYSTEM

Created: 2/19/2014

Current Language: English

Last Modified: 5/10/2016

Other Languages: [Español](#),

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Viewed: 6044

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Coding Information

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Title: Battery Testing, Diagnostics, and Maintenance information

Applies To: All Vehicles

CHANGE LOG

05/10/2016 - Added Enersys/Odyssey Warranty Information.
 04/01/2016 - Author addressed feedback
 02/19/2016 - Added further clarification about submitting for 55 OTC parts warranty in Red Font at top of page in description section.
 01/25/2016 - Changed in SRT Section

DESCRIPTION

This document covers battery diagnostics, maintenance, and storage requirements. Failure to follow the instructions can result in a false indication of a failed battery(s).

Note : If battery is being tested under 55(Parts over the counter warranty), when prompted on the battery tester "Is this a Navistar Vehicle", select 'YES'

Note : If vehicle is equipped with Odyssey Batteries please file warranty through Odyssey. These are NOT warrantable through Navistar. Continue using the diagnostics provided in this document, but for any warranty inquiries/deviations please review enersys/Odyssey policy shown below in the Appendix. If any further information is needed there is a contact method listed below in the appendix.

SYMPTOMS

The vehicle may have one or more of the following symptoms:

- No start
- Hard to start
- Low voltage on gauge
- Repeated jump starts

SPECIAL TOOLS

Tool Description	Tool Number	Comments	Instructions
MidTronics inTellec EXP battery and electrical diagnostic tester	n/a		

DIAGNOSTIC STEPS

Step	Action	Decision
1	Pre-Test Inspection 1. Inspect for loose connections at the battery and connected components (Starter, Alternator, Ground, etc...) 2. Remove any corrosion with battery cleaning spray, or baking soda/water paste. Then rinse clean. Have all connections been found tight, and without corrosion?	Go to Step 2

Step	Action	Decision
2	Battery Pack Breakdown Test 1. Do the "Test Preparation" as described in Section 4 of the Midtronics EXP Instruction Manual. 2. Select "System Test" and follow procedure for testing battery individual battery, as described in Section 5 of the Midtronics EXP Instruction Manual Note : Do not test as a pack. Test batteries individually. Note : Use Midtronics battery stud adaptors and tighten properly on each battery tested. Failure to do so will yield inaccurate results. Note : Keep all generated MidTronics codes during testing to later be submitted on Warranty Claim (If 01,03,39, or 55 warranty applies) What were the individual test results for each Battery?	Good Battery(s) : Battery Diagnostics complete. Replace/Bad Cell : Go to Step 3 Charge and Retest : Charge batteries to a minimum 75% (12.6V), and reperform Step 2

Step	Action	Decision
3	Battery Replacement 1. Replace only the batteries that the tester has failed. 2. The technician must ensure that the open circuit voltage of the new battery is near the voltage of the remaining batteries in the pack, to avoid arcing and overheating of the terminals as the new battery is being installed. Note : Replace bad batteries with the same part number as the remaining good batteries Note : Do not mix battery types. AGM, flooded, or hybrid must be matched with the same.. Note : Do not mix CCA (Cold Cranking Amp) or RC (Reserve Capacity) ratings. Note : For sleeper applications, do not use flooded batteries. Use only AGM or other Navistar approved parts. Note : For sleeper applications, do not use flooded batteries. Use only AGM, or other Navistar approved parts Is No/Slow cranking concern still present?	Yes : Continue to Starter diagnostics located at IK0800407 (For ISB applications go to : IK0800503) No : Release the Vehicle

WARRANTY INFORMATION

Warranty Claim Coding:

Group:	08550
Nouns:	710, 712

Standard Repair Time(s):

Step	Description	SRT Link	Hours
1-2	Battery Test	A08-2710A	SRT Time
3	Battery Replacement	Model Dependent	SRT Time

Special Requirements

Dealers: For each battery filed under warranty (01,03,39,55 Over the counter, and service part), test result codes generated by the Midtronics tester must be printed out, and attached to the claim, or scanned and added as an attachment. Refer to [CTS-1100](#), and [WPL2800114](#).

Fleets: Refer to fleet battery warranty policy.

APPENDIX

MAINTAINING BATTERIES DURING VEHICLE STORAGE

Truck and Bus batteries must be maintained during vehicle storage or battery deterioration, or possible failure can result. Battery life will be shortened if the batteries are not kept properly charged while in storage.

If batteries fail while the vehicle is in storage, or on the lot will not be considered for reimbursement or warranty.

The Dealer is responsible for adequate storage and protection of new vehicles, whether they are on Dealer premises or elsewhere. Correct any conditions creating unnecessary expense and/or preventable customer dissatisfaction. When vehicles are delivered directly to a TEM / body manufacturer, the Dealer should arrange for proper vehicle storage and maintenance. We recommend sending a copy of these procedures to the body manufacturer.

The complete Navistar Vehicle Storage policy is explained in the [Warranty Policy Manual CTS1100](#), and [WPL2800091](#)

Battery/ Battery Pack Charging Chart

Note : This chart is only to be used as a guideline illustrating approximate charge times for certain battery/battery pack conditions.

Estimated recharge time for discharged batteries			
Single (1) group 31 battery (180 RC- reserve capacity minutes)			
Voltage	Percent Charged	70 amp charger	50 amp charger
12.6	100%	charge time	charge time
12.4	75%	41 minutes	50 minutes
12.2	50%	1 hour	1 hour and 20 min.
12.0	25%	1 hour and 26 min.	1 hour and 50 min.
11.8	0%	1 hour and 50 min.	2 hours and 25 min.

2 battery pack			
Voltage	Percent Charged	70 amp charger	50 amp charger
12.6	100%	charge time (hrs.)	charge time (hrs.)
12.4	75%	1 hour and 21 min.	1 hour and 40 min.
12.2	50%	2 hours and 7 min.	2 hours and 43 min.
12.0	25%	2 hours and 52 min.	3 hours and 47 min.
11.8	0%	3 hours and 38 min.	4 hours and 50 min.

3 battery pack			
Voltage	Percent Charged	70 amp charger	50 amp charger
12.6	100%	charge time (hrs.)	charge time (hrs.)
12.4	75%	2 hours	2 hours and 30 min.
12.2	50%	3 hours and 10 min.	4 hours
12.0	25%	4 hours and 18 min.	5 hours and 40 min.
11.8	0%	5 hours and 26 min.	7 hours and 15 min.

4 battery pack			
Voltage	Percent Charged	70 amp charger	50 amp charger
12.6	100%	charge time (hrs.)	charge time (hrs.)
12.4	75%	2 hours and 42 min.	3 hours and 18 min.
12.2	50%	4 hours and 15 min.	5 hours and 26 min.
12.0	25%	5 hours and 45 min.	7 hours and 30 min.
11.8	0%	7 hours and 15 min.	9 hours and 40 min.

Mark Ehlers 5/16/13

Odyssey Battery Distributor / Specialist WARRANTY CLAIM PROCEDURE

This procedure provides the process that is to be followed to perform an ODYSSEY® battery warranty claim by any authorized ODYSSEY Distributors. Per the

ODYSSEY® Battery General Product Limited Warranty, warranty service can be provided by any authorized ODYSSEY battery distributor, wholesaler, or dealer provided it is determined that failure is due to defective material or workmanship under the terms of the ODYSSEY Battery Product Warranty. Warranty Validation Procedure and Warranty Portal instructions included in this document.

1. ODYSSEY Distributors / Specialists will perform the "ODYSSEY Product Warranty Validation Procedure" for batteries that are at least 10.0V OCV and have failed within the warranty period based on battery model and application use according to the most current ODYSSEY® Battery General Product Limited Warranty can be warranted.

2. Defective batteries that are unrecoverable and meet the ODYSSEY® Battery General Product Limited Warranty and warranty validation procedure requirements are warrantable and claims should be submitted via the EnerSys Warranty Claim Portal for ODYSSEY® batteries. A claim number will be assigned to the claim for the submitter reference. Note that the 14 digit Serial Number from both the warranty claim battery and the replacement battery will be required to submit the warranty claim.

3. Upon receipt of warranty claim request and approval by EnerSys Customer Service via the warranty claim portal a stock replacement battery will be shipped to the ODYSSEY dealer location that submitted the claim.

Contact your EnerSys Customer Service Representative or EnerSys Warranty Portal Support at 888-422-0317 or warranty@enersys.com for warranty deviation inquiries, approvals for alternate testing, or consideration of other non-standard potential warranty issues.

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