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Availability: ISIS, Bus ISIS, FleetISIS, NotSIR

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Coding Information

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Title: Battery Testing, Diagnostics, and Maintenance information

Applies To: All Vehicles

Change Log

Please refer to the change log text box below for recent changes to this article:

09/05/2019 - Updated links to CTS-1100 Warranty Policy & Procedure Manual
11/29/2018 - Fixed hyperlink for Midtronics manual
11/26/2018 - Spanish translation updated.
11/20/2018 - Requested translation for Spanish
10/22/2018 - Added clarification to step 2, updated the Midtronics manual hyperlink
12/14/2016 - Updated Odyssey selections for testing.

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 the battery is being tested under 55 (Parts over the counter warranty), the [AutoMeter BCT-468NAV/K Tester](#) should be used.
- If the vehicle is equipped with Odyssey Batteries please file a warranty claim through Navistar.
- If equipped with Odyssey Batteries, select SPIRAL when prompted for Battery Chemistry.
- The [Midtronics EXP Tester](#) may still be used for battery diagnostics and Warranty Authorization Code (WAC) generation.

Symptoms

Diagnostic Trouble Codes & Dashboard Indicator Lights:

DTC/Light	Description
No Faults or Warning Lights	

Customer Observations or Concerns:

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

Special Tools / Software

Tool Description	Tool Number	Comments	Instructions
AutoMeter Battery and Electrical System Analyzer	BCT-468NAVK		Instruction Manual

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	Individual Battery Test 1. Connect the tool to the individual battery as outlined on page 28 of the AutoMeter BCT-468NAVK Tester instructions. NOTE: ◦ If the batteries have threaded studs, screw the negative (-) stud adapter onto the negative terminal, and the positive (+) adapter onto the positive terminal. (Stud adapters pg 11 of AutoMeter Instructions) 2. Perform the battery test as described on page 28. ◦ Test each battery individually for accurate results. ◦ Keep all generated Warranty Authorization Codes (WAC) during testing to later be submitted on Warranty Claim (If 01, 03, 39 or 55 warranty applies) NOTE: ◦ Navistar only uses Group 31 batteries for battery type ◦ If equipped with Odyssey Batteries, select SPIRAL for battery chemistry What were the individual test results for each Battery?	"Good Battery" → Battery diagnostics complete. "Replace Battery" or "Bad Cell-Replace" → Go to Step 3 "Charge and Retest" → Charge batteries to a minimum 75% (12.6V), and return to 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	Yes : Continue to Starter diagnostics located in IK0800407 (For ISB applications go to : IK0800503)

	- Do not mix battery types. AGM, flooded, or hybrid must be matched with the same. - Do not mix CCA (Cold Cranking Amp) or RC (Reserve Capacity) ratings. - For sleeper applications, do not use flooded batteries. Use only AGM or other Navistar approved parts.	
		No : Release the Vehicle

Is No/Slow cranking concern still present?

Warranty Information

Warranty Claim Coding:

Group:	08550 - Batteries / Battery Run Down Protection
Nouns:	710 - Battery, Cranking 712 - Battery, Auxiliary

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 parts), test result codes generated by the Autometer tester must be printed out, and attached to the claim, or scanned and added as an attachment. Refer to [CTS-1100](#) and [WPL2800114](#).

If the battery is being placed due to physical damage (IE cracked body or cap, swelling/leaking ECT), please provide pictures of the damage with the warranty claim.

The [Midtronics EXP Tester](#) may still be used for battery diagnostics and Warranty Authorization Code (WAC) generation.

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 CTS-1100](#) 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.

When a battery or batteries need to be charged the following procedures need to be followed.

- The Midtronics Smart Charger PSC550CC is the recommended equipment for charging batteries.
- This type of charger will charge the battery or batteries to ensure proper and safe charging without overcharging.
- If a smart charger is not available, a regular charger can be used. Follow the table below as a guide on how long it takes to charge each battery.

NOTE: The charge rates are for one battery. For additional batteries take each time and multiply it by the number of batteries in the pack.

Battery Type		State of Charge	Charger Output Rate & Charge Time	
Flooded	AGM		55 AMP	70 AMPS
12.6V	12.8V	100%		
12.4V	12.6V	75%	0.5	0.7
12.2V	12.3V	50%	1.2	1
12.0V	12.0V	25%	1.8	1.4
11.8V	11.8V	0%	2.5	1.8

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