TECHNICAL SERVICE BULLETIN

Classification:	Reference:	Date:
EL09-004M	NTB09-022M	October 26, 2022

12 VOLT BATTERY STORAGE AND MAINTENANCE FOR NEW VEHICLES IN DEALER INVENTORY

This bulletin has been amended. See AMENDMENT HISTORY on the last page.
Please discard previous versions of this bulletin.

APPLIED VEHICLES: All new (unsold) Nissan vehicles in dealer inventory

SERVICE INFORMATION

Design and process changes have been made to improve battery voltage at dealer receipt. Our goal is to deliver vehicles to customers with a 12 volt battery in excellent condition. Proper dealership storage and maintenance of vehicle 12 volt batteries is essential for good battery operating life and customer satisfaction.

Dealers are responsible for maintaining vehicles in their inventory. The 12 volt battery in new vehicles in dealer inventory should always be kept at a healthy state of charge. This will prevent excessive discharge during storage and keep vehicles ready for delivery to customers at any time.

If 12 volt batteries in new vehicles are allowed to discharge for a prolonged period of time, battery life may be drastically reduced. This condition may lead to premature battery replacement and customer dissatisfaction.

IMPORTANT:

- CPX-900 is now an accepted testing tool to use along with or in place of the DSS-5000.
- CPX-900 operating instructions are found at: https://nissancpx900.midtronics.com/
- DSS-5000 operating instructions are found at: https://nissandss5000.midtronics.com/
- DCA-8000 is now a required testing tool to be used for all warranty replacement decisions. The DCA-8000 is also a more efficient charger than previously available, and will charge any available 12 volt lead acid battery safely and accurately as long as all precautions and inputs are made correctly. The DCA-8000 operating instructions are found at: https://nissandca8000.midtronics.com/

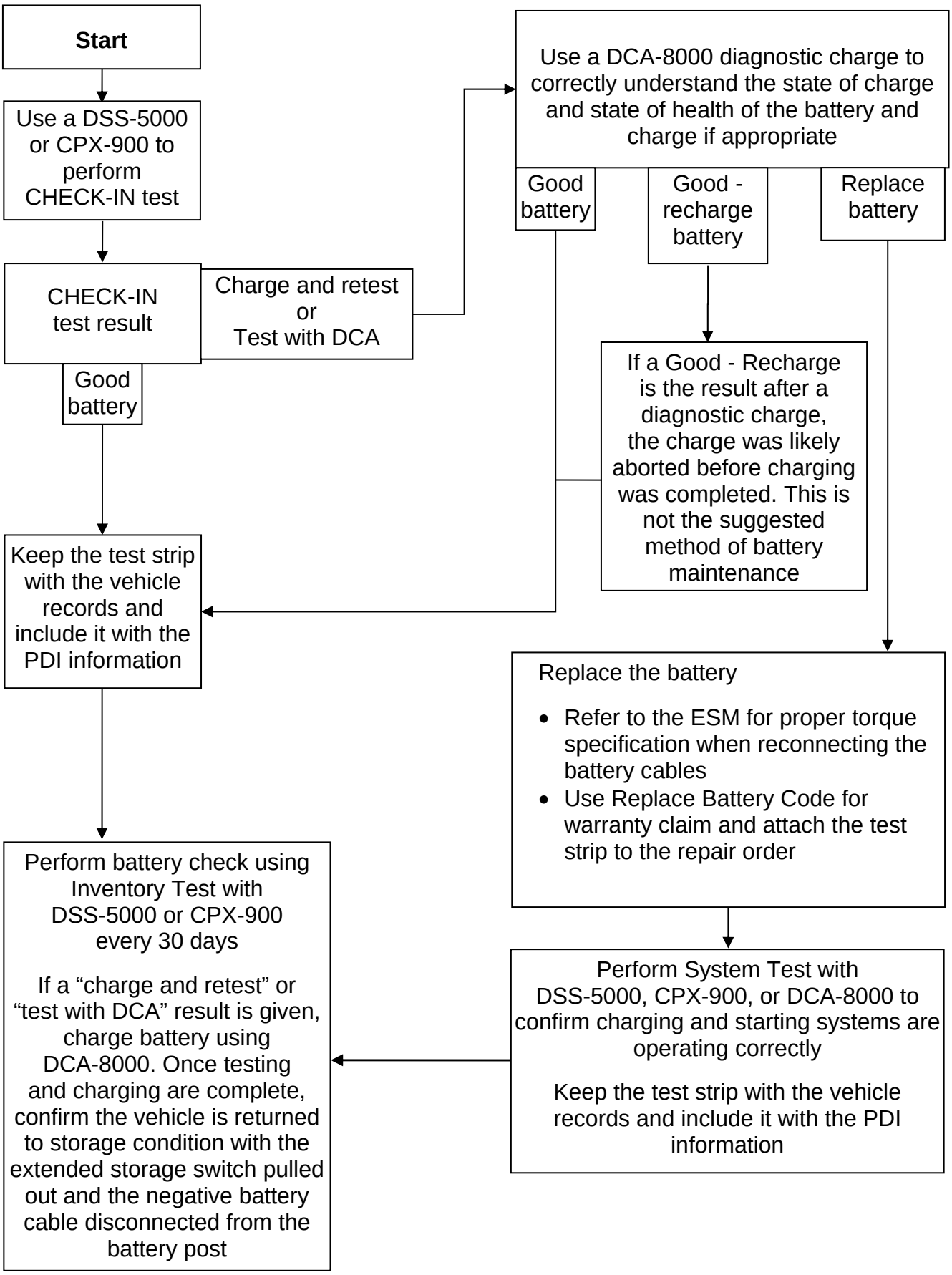
Required PDI Check-in (PDI Battery Test) Process Flow Overview

Upon receipt of new vehicles, dealers are responsible for performing a CHECK-IN test on the 12 volt battery within 72 hours of delivery, or upon receipt from a dealer trade.

- A CHECK-IN test must be performed with the DSS-5000 or CPX-900.
- The dealer is responsible for keeping detailed records of battery maintenance, including the CHECK-IN test results, in the vehicle folder.
- Prior to beginning the CHECK-IN test, please ensure the following conditions are met:
    - The battery is above 0°C (32°F).
    - The battery posts are clean and secure.
    - For at least 5 minutes, the vehicle's engine has been OFF and the battery has not been charged.
        - If a battery is discharged or rapidly charged within a close time to battery testing, it can cause a polarization/stratification of the battery electrolyte. This will cause inaccurate testing of the battery and could result in an improper replacement decision from the testing tools. In the case of the DCA-8000, it will likely generate a warning, delaying testing due to the stratification of the electrolyte.
- For additional information regarding testing procedures, refer to the **12-volt Battery Maintenance and Diagnosis** eLearning course available on Nissan Virtual Academy in the Nissan Technician Online Courses category.

Required PDI Check-in (PDI Battery Test) Process Flow Overview continued on the next page.

Required PDI Check-in (PDI Battery Test) Process Flow Overview (continued)



NOTE: The time allowance for the battery CHECK-IN (and possible subsequent diagnostic charge) test(s) is included in the total PDI flat rate time and will be reimbursed as part of the current PDI payment, even though the remainder of PDI activities may take place at a later time.

Required 12 Volt Battery Maintenance for Dealer's New Vehicle Inventory

For unsold vehicles:

- Maintain vehicles with transit mode and extended storage switch in inventory-condition (storage-mode) to reduce battery drain.

- If a vehicle is being stored on the dealer lot, routinely check the battery State Of Charge (SOC) with the DSS-5000 or the CPX-900 and charge the battery as needed using the DCA-8000 every 30 days.

    - For display vehicles, be sure to check every other day and charge as needed to avoid low SOC conditions.

NOTE:

- **Dealers should discontinue the practice of starting an engine to see if the battery is "good."** Batteries may still start an engine even with a low SOC and the battery may be further damaged if the battery is not recharged after starting. **Battery checks should always be performed with the DSS-5000, CPX-900, or DCA-8000.**

- Idling the engine to charge the battery is NOT recommended for most vehicles since the effectiveness is highly dependent on the vehicle storage conditions such as temperature, vehicle type, initial SOC, and alternator type.

    - For 2021 and newer Rogue (T33) and 2022 and newer Pathfinder (R53), idle charging can be used when properly prepared.

        - Ensure the vehicle is in shipping mode by confirming the position of the extended storage switch. The position of the extended storage switch should not be changed while the ignition is ON.

- Prior to charging any battery, determine if it is a standard flooded battery, an enhanced flooded battery (EFB), or an absorbent glass mat battery (AGM). Refer to pages 6-9.

- Testing a "cold" battery (below freezing) may result in incorrect test decisions. If a "REPLACE" decision is reached yet the vehicle starts without hesitation, perform a diagnostic charge with DCA-8000. The DCA-8000 can more accurately determine the battery temperature and will generate a warning if the battery is too cold to accurately test. It can warm the battery directly through a discharge/charge micro-cycle to more quickly test a battery too cold for normal testing. Please allow the battery sufficient time for resting before attempting to retest from this condition, preferably once the battery has risen above 0°C (32°F).

Warranty Submission Requirements

A battery claim may be denied if the following processes are not followed:

- PDI battery tests must be conducted or administered using the tester “CHECK-IN” function.
- The correct VIN or model must be selected to ensure the correct battery rating for the test.
- The 15 digit battery test code generated by the DCA-8000 must be submitted with every PDI battery replacement claim.
- “Good battery” codes and test strips from “CHECK-IN” or “Systems Test” should be kept with the vehicle records and included with the PDI information.
- Do not submit “Good Battery” test codes with warranty claims.
- Refer to warranty policy bulletin WPB/11-023 for additional information regarding battery claim policy procedures.

CLAIMS INFORMATION

Reference the current Nissan Assurance Products Resource Manual (APRM) and the latest warranty policy bulletins for battery claims procedures.

Enhanced Flooded Batteries (EFB)

An increasing number of Nissan vehicles are being equipped with an Enhanced Flooded Battery (EFB). It is important to verify battery type to ensure the correct tests are performed and no damage occurs to the battery or other vehicle systems.

⚠WARNING

To avoid the risk of death, severe personal injury or damage to the vehicle, do not use a battery charger that does not have an EFB specific charging profile. Failure to do so may cause battery acid to leak onto the vehicle and/or flammable gases to combust while charging.

- EFBs require an equalization charge to address electrolyte stratification that can occur in this type of battery.
  - **If a vehicle has the factory equipped 12 volt battery**: The Midtronics battery testing software will automatically perform the correct charge. The type of factory equipped battery is determined by entering the vehicle information into the tester.
  - **If the vehicle's 12 volt battery has been replaced**: It is important to determine if the battery is an EFB or not.
    - Check the battery for a designation, such as those shown in Figure 1 through Figure 3.
    - If an EFB battery type cannot be determined by markings on the battery, contact the battery supplier.

Figure 1

- EFBs also come in ranges such as Q-85 and Q-95.

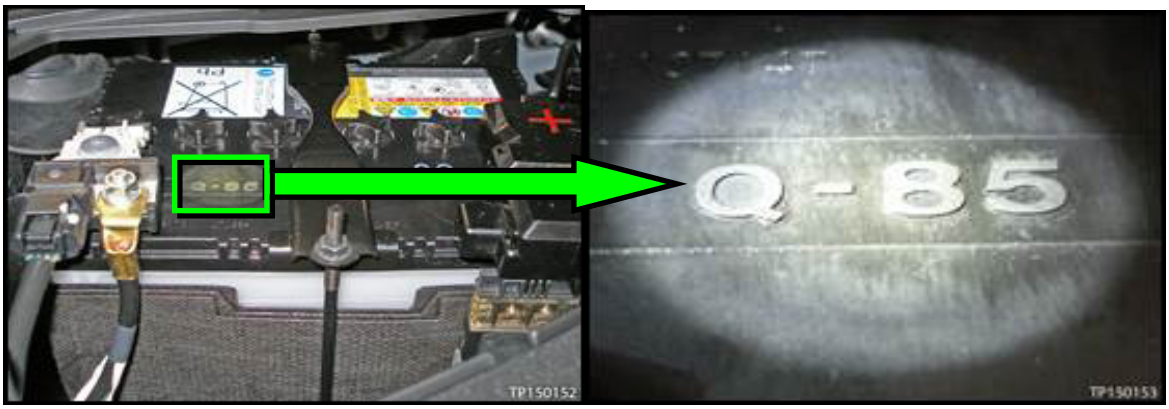


Figure 2

Figure 3

NOTE:

- Charging requirements for EFBs are different from standard flooded batteries.
- ONLY testers with an EFB charging profile will properly charge an EFB that has a low SOC.
- The equalization charge for EFBs may take up to 5 hours.
- Failure to properly identify an EFB could result in inaccurate test results (for example, calling a good battery bad).

⚠WARNING

To avoid the risk of death, severe personal injury or property damage, remove the battery from the vehicle and place it in a well-ventilated area before starting the charging cycle. Charging the battery while in the vehicle may cause battery acid to leak onto the vehicle and/or flammable gases to combust while charging.

NOTICE

To avoid the risk of damage to the battery, do not charge an EFB battery using a non-EFB diagnostic charge.

Absorbent Glass Mat (AGM) Batteries

An increasing number of service batteries are now sourced as Absorbent Glass Mat (AGM) batteries. It is important to verify battery type to ensure the correct tests are performed and no damage occurs to the battery or other vehicle systems.

⚠WARNING
To avoid the risk of death, severe personal injury or damage to the vehicle, do not use a battery charger that does not have an AGM specific charging profile. Failure to do so may cause battery acid to leak onto the vehicle and/or flammable gases to combust while charging.

- AGM batteries require a specialized slow charge for correct SOC recovery without battery damage.
- It is important to determine if the battery is an AGM or not.
  - Check the battery for a designation, such as those shown in Figure 4 through Figure 6.
  - If the correct battery type cannot be determined by markings on the battery, contact the battery supplier.

Figure 4

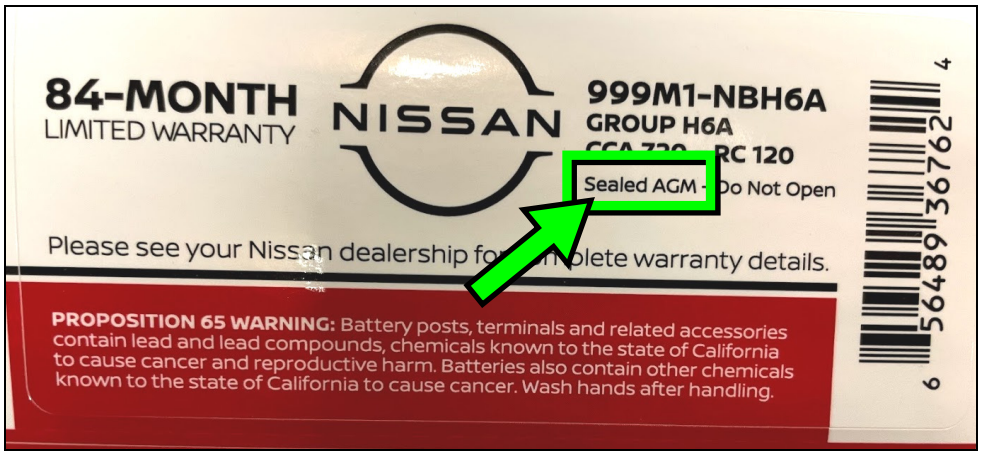


Figure 5

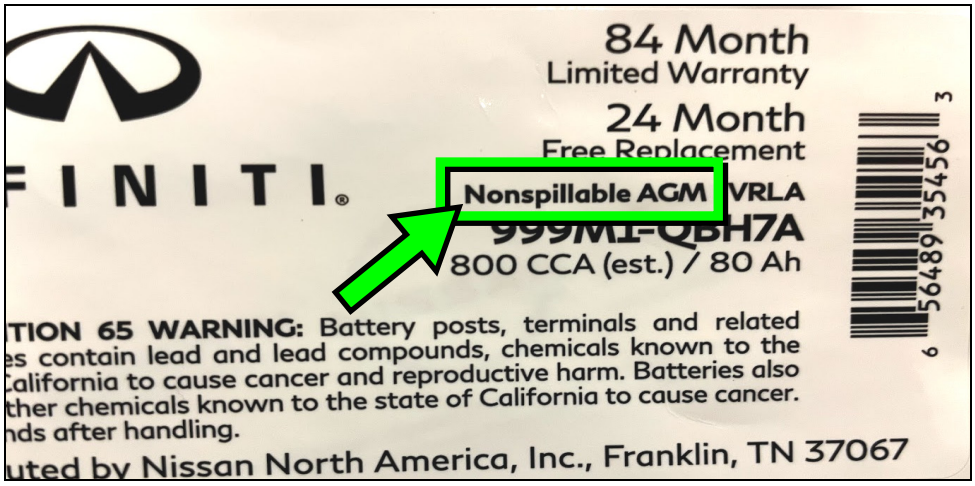


Figure 6

⚠WARNING

To avoid the risk of death, severe personal injury or property damage, remove the battery from the vehicle and place it in a well-ventilated area before starting the charging cycle. Charging the battery while in the vehicle may cause battery acid to leak onto the vehicle and/or flammable gases to combust while charging.

NOTICE

To avoid the risk of damage to the battery, do not charge an AGM battery using a non-AGM diagnostic charge.

AMENDMENT HISTORY

PUBLISHED DATE	REFERENCE	DESCRIPTION
March 23, 2009	NTB09-022	Original bulletin published
May 27, 2011	NTB09-022A	Changes made throughout
August 31, 2011	NTB09-022B	Pages 1-4 revised
December 10, 2012	NTB09-022C	Publication date updated to include the latest models and model years
January 18, 2013	NTB09-022D	Changes made throughout
February 11, 2014	NTB09-022E	Pages 1-4 revised
April 29, 2015	NTB09-022F	Changes made throughout
November 20, 2015	NTB09-022G	Page 3 revised
July 7, 2017	NTB09-022H	Changes made throughout
March 13, 2018	NTB09-022I	Publication date updated to include the latest models and model years
August 7, 2020	NTB09-022J	Publication date updated to include the latest models and model years, and a statement to reference the ESM for proper torque specification when reconnecting battery cables added to pages 2 and 3
February 26, 2021	NTB09-022K	Changes made throughout
December 3, 2021	NTB09-022L	Changes made throughout
October 26, 2022	NTB09-022M	Changes made to pages 1-5, the WARNING on pages 7 and 9 revised, and the latest models and model years applied