INFINITI

TECHNICAL SERVICE BULLETIN

Classification:	Reference:	Date:
EL23-012A	ITB23-019A	August 3, 2023

12 VOLT BATTERY TESTING FOR IN-SERVICE VEHICLES

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

APPLIED VEHICLES: All Infiniti vehicles

SERVICE INFORMATION

The following Service Information lists NNA procedural recommendations for establishing good connections while performing 12V battery testing. These recommendations are expected to promote uniformity during the connection process, therefore reducing the number of incorrect “Test with DCA” and “Replace” results.

HINT: If 12 volt batteries 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 client 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 charge sessions. 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/

SPECIAL TOOLS

Hand Held Testing Tools

- CPX-900

Figure 1

- DSS-5000

Figure 2

Connecting Hand Held Testing Tools

- Positive directly to battery post

Figure 3

- Positive on battery terminal

Figure 4

- Negative directly to battery post

Figure 5

- Negative on ground strap (if equipped)

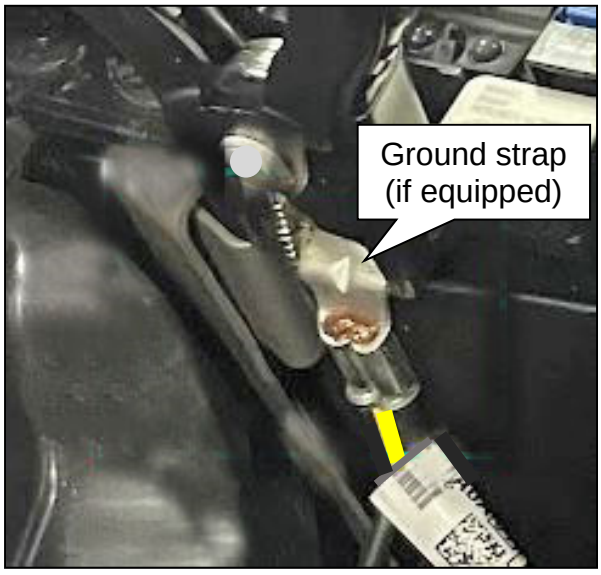

Figure 6

- Negative on battery terminal

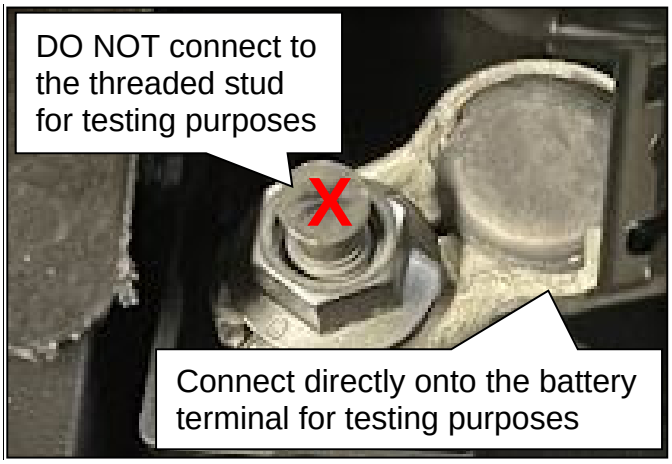

Figure 7

Stand Alone Testing Tools

- DCA-8000
    - It is recommended to remove the battery from the vehicle and connect directly to the battery posts when performing testing with the DCA-8000.

Figure 8

12 Volt Battery Maintenance for In-Service Vehicles Subject to Extended Stay

- 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 retailer 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.

  IMPORTANT:

  - **Retailers 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 2022 and newer QX60 (L51), 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 7-10.

  - 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**).

Enhanced Flooded Batteries (EFB)

An increasing number of Infiniti 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 9 through Figure 11 on page 7 through 8.
    - If an EFB battery type cannot be determined by markings on the battery, contact the battery supplier.

Figure 9

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

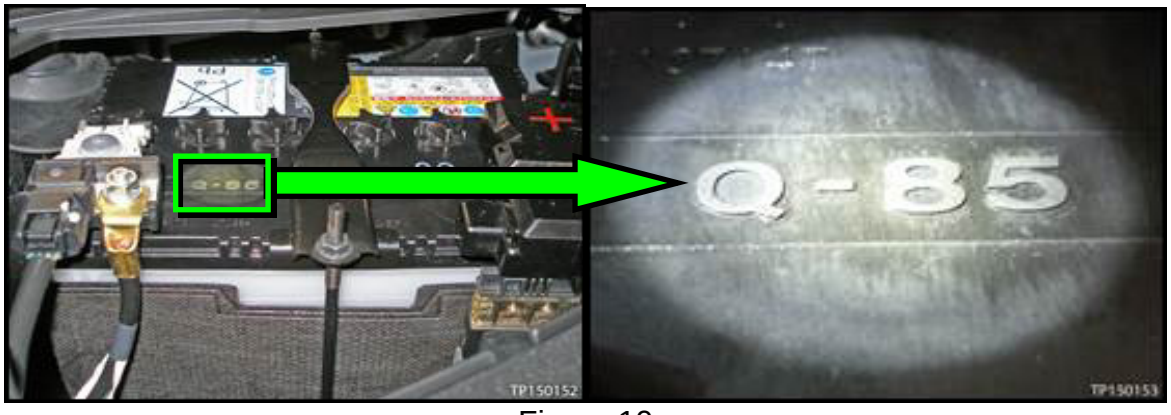

Figure 10

Figure 11

HINT:

- 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 12 through Figure 14 on page 9 through page 10.
  - If the correct battery type cannot be determined by markings on the battery, contact the battery supplier.

Figure 12

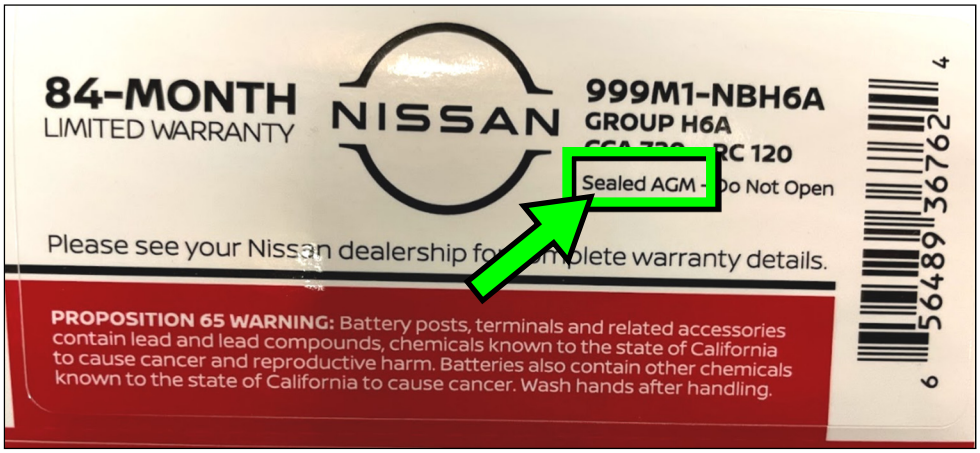

Figure 13

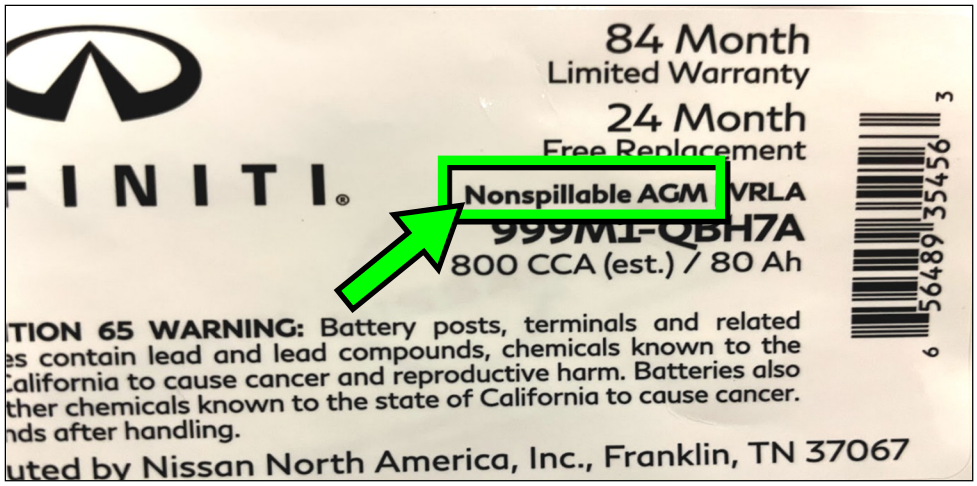

Figure 14

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
June 16, 2023	ITB23-019	Original bulletin published
August 3, 2023	ITB23-019A	Revised IMPORTANT statement on page 1