

# TECHNICAL SERVICE BULLETIN

<b>Classification:</b> EL09-0050	<b>Reference:</b> ITB09-0150	<b>Date:</b> August 3, 2023
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## 12 VOLT BATTERY STORAGE AND MAINTENANCE FOR NEW VEHICLES IN RETAILER 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) Infiniti vehicles in retailer inventory

### SERVICE INFORMATION

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

Retailers are responsible for maintaining vehicles in their inventory. The 12 volt battery in new vehicles in retailer 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 clients 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 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/>

Infiniti Bulletins are intended for use by qualified technicians, not 'do-it-yourselfers'. Qualified technicians are properly trained individuals who have the equipment, tools, safety instruction, and know-how to do a job properly and safely. NOTE: If you believe that a described condition may apply to a particular vehicle, DO NOT assume that it does. See your Infiniti retailer to determine if this applies to your vehicle.

## 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)

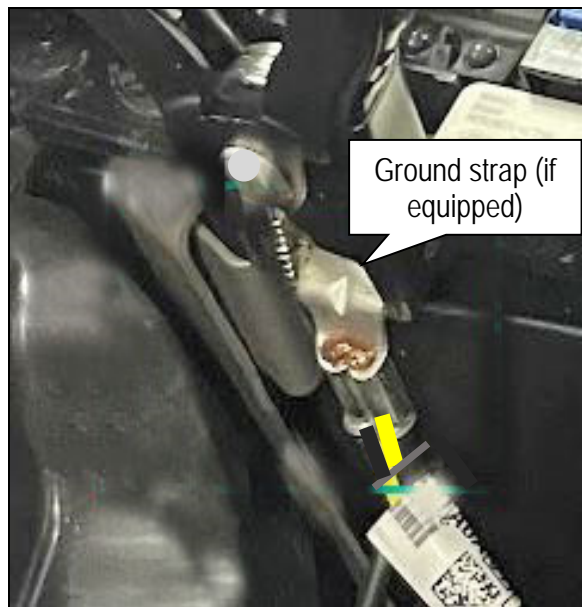


Figure 6

- Negative on battery terminal

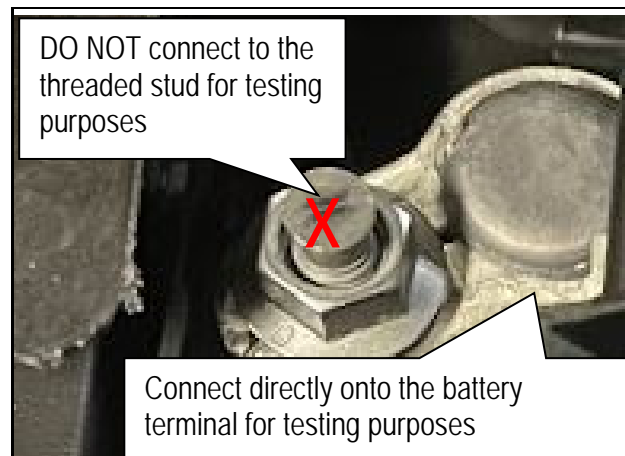


Figure 7

### 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

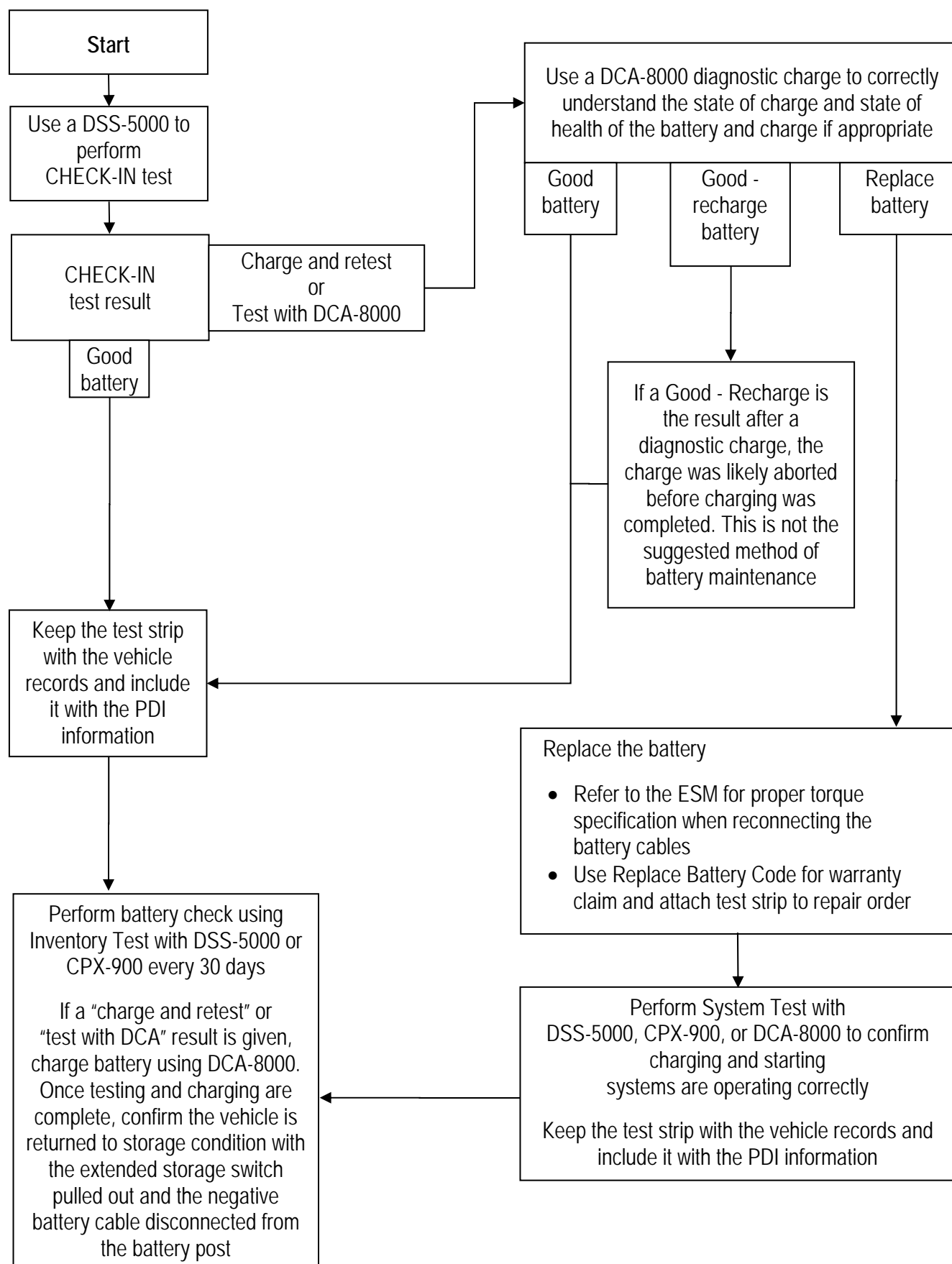
## Required PDI Check-in (PDI Battery Test) Process Flow Overview

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

- A CHECK-IN test must be performed with the DSS-5000 or CPX-900.
- The retailer is responsible for keeping detailed records of battery maintenance, including the CHECK-IN test results, with the PDI information.
- 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 INFINITI University Online in the INFINITI 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)



**HINT:** 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 Retailer'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 retailer lot, routinely check the battery State Of Charge (SOC) 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.

### 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, 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 10-13.
- 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. 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 Infiniti Assurance Products Resource Manual (APRM) and the latest warranty policy bulletins for battery claims procedures.

## 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.
    - 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.

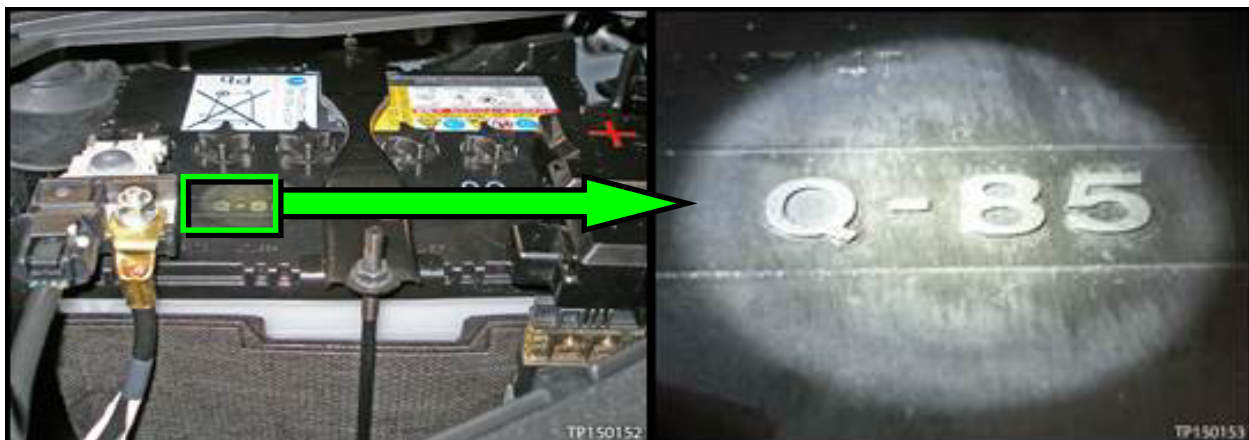


Figure 10



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.
  - If the correct battery type cannot be determined by markings on the battery, contact the battery supplier.



Figure 12

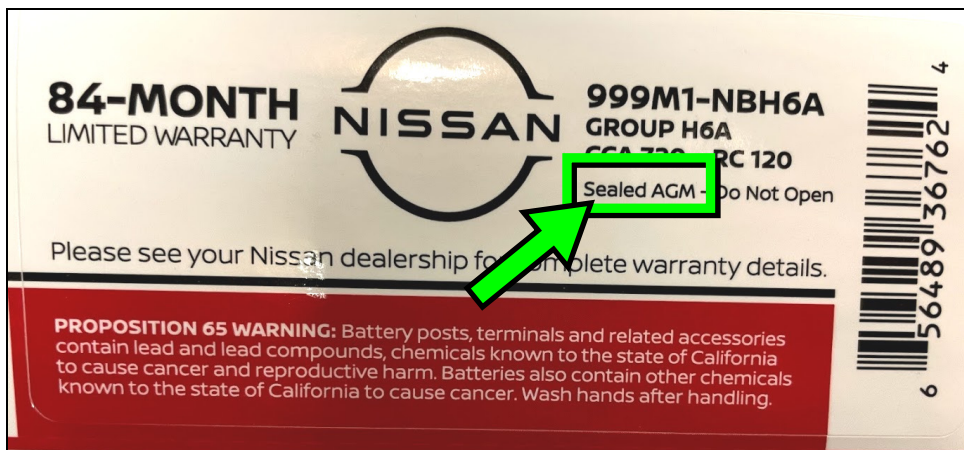


Figure 13

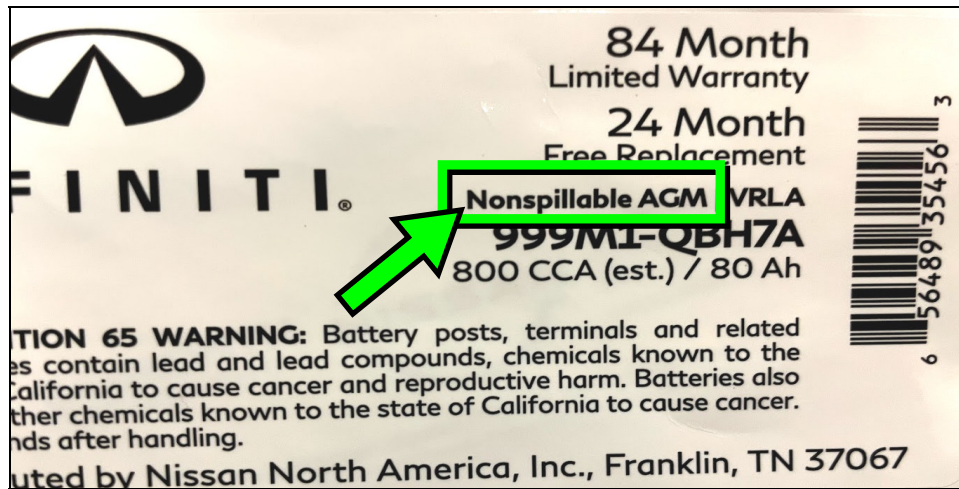


Figure 14

**⚠ 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
March 23, 2009	ITB09-015	Original bulletin published
May 27, 2011	ITB09-015A	Changes made throughout
August 31, 2011	ITB09-015B	Pages 1-4 revised
December 10, 2012	ITB09-015C	Publication date updated to include the latest models and model years
January 18, 2013	ITB09-015D	Changes made throughout
February 11, 2014	ITB09-015E	Pages 1-4 revised
April 29, 2015	ITB09-015F	Changes made throughout
November 20, 2015	ITB09-015G	Page 3 revised
July 7, 2017	ITB09-015H	Changes made throughout
March 13, 2018	ITB09-015I	Publication date updated to include the latest models and model years
August 7, 2020	ITB09-015J	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	ITB09-015K	Changes made throughout
December 3, 2021	ITB09-015L	Changes made throughout
October 26, 2022	ITB09-015M	Changes made to pages 1-5, the WARNING on pages 7 and 9 revised, and the latest models and model years applied
June 20, 2023	ITB09-015N	Publication date updated to include the latest models and model years, added pages 2-5, NOTE references changed to HINT
August 3, 2023	ITB09-015O	Revised IMPORTANT statement on page 1