



Technical Service Bulletin

GROUP	NUMBER
ENGINE ELECTRICAL	20-EE-008H
DATE	MODEL(S)
October 2020	ALL MODELS

SUBJECT: DEALER BATTERY MAINTENANCE FOR PRE-DELIVERY AND IN-STOCK VEHICLES

This TSB supersedes 19-EE-006H to update Dealer Vehicle Stock Battery Maintenance Schedule monthly maintenance requirement to 65% SOC, except ISG vehicles that require 70% SOC. Power Fuse Switch and Dark Current Control System settings for stored vehicles are added.

Description:

This bulletin provides information on performing battery maintenance for Pre-Delivery Inspection (PDI) and In-Stock vehicle inventory.

- Dealers should inspect the battery as part of PDI within 7 days of vehicle arrival from Hyundai.
- The battery should be tested with a Hyundai approved battery tester when the PDI Tablet Application results in No Good “NG” during the AUTO CHECK function.
- It is the dealer’s responsibility to ensure proper battery condition for all dealer stock vehicles including offsite storage lots.
- Battery aged maintenance should be performed regularly in accordance with the Dealer Vehicle Stock Battery Maintenance Schedule procedures on page 2.
- Perform battery maintenance per WebDCS Dealer “Aged Inventory - Blue Link Alerts” (TSB 20-EE-003H) notifications.
- Follow the vehicle preparation tips on pages 6-8 to ensure all vehicles in dealer stock are prepared for minimal parasitic current draw on the battery during storage and to be able to display battery state of charge (SOC) in the vehicle instrument cluster at ignition ON.

Applicable Vehicles: All Dealer Stock Vehicles

Warranty Information:










Model	OP Code	Operation	OP Time	Causal Part #	Nature Code	Cause Code
ALL	37110A00	Battery Charging	0.3 M/H	00275-XXXXX	E21	ZZ3
	37110R00	Battery Replacement	Refer to Web LTS			

NOTICE

Warranty coverage is only applicable within 7 days of receiving the vehicle. Excessive dealer battery claims may be subject to audit. As stated in the Warranty Policy and Procedures Manual, Section 2.3, discharged and/or failed batteries due to lack of dealer maintenance are **not** part of the warranty coverage.

Dealer Vehicle Stock Battery Maintenance Schedule:

Perform the following battery maintenance procedure in conjunction with the PDI App for PDI and/or Aged Maintenance. For Blue Link equipped vehicles, WebDCS "[Aged Inventory – Blue Link Alerts](#)" will identify VINs with 50% or below State of Charge (SOC), and VINs that have not reported in 30 days.

Interval	Procedure	Warranty Claim																													
<p>Within 7 days of vehicle delivery to Dealer</p>	<p>Check battery condition by Cadex Battery Tester, and per result:</p> <ol style="list-style-type: none"> GOOD BATTERY – No action required. CHARGE & RETEST* - Use either option "A" or "B" below to charge the battery. <ol style="list-style-type: none"> Engine Idle with Headlights On Automatic Regulated Battery Charger REPLACE BATTERY* - Replace Battery. 	<p>YES</p> <p>(Claims may be submitted by Hyundai approved Testers – see page-4)</p>																													
<p>Every Month in the Storage Lot</p>	<p>Check Battery SOC by either of these methods:</p> <table border="1" data-bbox="297 831 1305 1346"> <thead> <tr> <th>Method</th> <th>Diagram</th> <th>Goal</th> </tr> </thead> <tbody> <tr> <td> Instrument Cluster SOC (See pages 7-8 for details of how to enable instrument cluster display of the Battery SOC) </td> <td>  </td> <td> 65% SOC or above. 70% SOC or above for vehicles with ISG.  (idle stop/start system) </td> </tr> <tr> <td> Hyundai Battery Tester (Cadex Rapid RC Tester) </td> <td>  </td> <td> GOOD BATTERY result and SOC as stated above) </td> </tr> </tbody> </table> <p>NOTE: Battery Tester SOC may differ from instrument cluster SOC/WebDCS SOC.</p> <p>Charge the battery if SOC is less than 65% by using either option "A" or "B" below.</p> <ol style="list-style-type: none"> Engine Idle with Headlights On Automatic Regulated Battery Charger <p>Approximate Charge Time table for worst case vehicles:</p> <table border="1" data-bbox="297 1593 1252 1908"> <thead> <tr> <th rowspan="2">Battery SOC</th> <th colspan="2">Estimated Charge Time** to reach 65% SOC or above</th> </tr> <tr> <th>A. Engine Idle (with Headlights On)</th> <th>B. Automatic Regulated Battery Charger</th> </tr> </thead> <tbody> <tr> <td>60% or above</td> <td>30 mins</td> <td>20 mins</td> </tr> <tr> <td>50-59%</td> <td>1hour</td> <td>45 mins</td> </tr> <tr> <td>40-49%</td> <td>1.5 hours</td> <td>1 hour</td> </tr> <tr> <td>30-39%</td> <td>2 hours</td> <td>1.5 hours</td> </tr> <tr> <td>29% and less</td> <td>not recommended***</td> <td>2+ hours</td> </tr> </tbody> </table>	Method	Diagram	Goal	Instrument Cluster SOC (See pages 7-8 for details of how to enable instrument cluster display of the Battery SOC)		65% SOC or above. 70% SOC or above for vehicles with ISG.  (idle stop/start system)	Hyundai Battery Tester (Cadex Rapid RC Tester)		GOOD BATTERY result and SOC as stated above)	Battery SOC	Estimated Charge Time** to reach 65% SOC or above		A. Engine Idle (with Headlights On)	B. Automatic Regulated Battery Charger	60% or above	30 mins	20 mins	50-59%	1hour	45 mins	40-49%	1.5 hours	1 hour	30-39%	2 hours	1.5 hours	29% and less	not recommended***	2+ hours	<p>NO</p>
Method	Diagram	Goal																													
Instrument Cluster SOC (See pages 7-8 for details of how to enable instrument cluster display of the Battery SOC)		65% SOC or above. 70% SOC or above for vehicles with ISG.  (idle stop/start system)																													
Hyundai Battery Tester (Cadex Rapid RC Tester)		GOOD BATTERY result and SOC as stated above)																													
Battery SOC	Estimated Charge Time** to reach 65% SOC or above																														
	A. Engine Idle (with Headlights On)	B. Automatic Regulated Battery Charger																													
60% or above	30 mins	20 mins																													
50-59%	1hour	45 mins																													
40-49%	1.5 hours	1 hour																													
30-39%	2 hours	1.5 hours																													
29% and less	not recommended***	2+ hours																													

* Warranty claim must be submitted with a “Before” and an “After” testing/charging print out ticket(s) from Cadex tester. Submit the warranty claim Cadex ticket test results scanning using the GDS Battery Claim App per TSB 20-EE-002.

** Charging time will depend on battery condition and vehicle model.

*** Charging by battery charger is best for deep discharged battery <29% SOC to remove sulfation on the battery plates.

Vehicle Battery Inspection At Dealer:

Utilize the Cadex Rapid RC Tester to check battery condition within 7 days of vehicle arrival. If the battery test result is “Charge & Retest” or “Replace Battery” in the initial check, the vehicle may qualify for a warranty claim.



Warranty Claim Permissible with either of the following OP CODE:

- 37110A00 (Battery Charging)
- 37110R00 (Battery Replacement)

(Up to 7 days from vehicle arrival date)



Warranty Claim NOT permissible during Dealer Stock Maintenance - Dealer is expected to follow vehicle storage preparation and battery maintenance schedule from this TSB to ensure battery longevity.

NOTICE

Refer to **TSB 18-EE-004**, and in HyundaiDealer.com, Service, Document Library, and Warranty for factory installed and replacement battery information. Select the correct type of battery (AGM or Flooded) when performing battery testing or charging.

Hyundai Approved Battery Testers for Warranty Claims Submission:



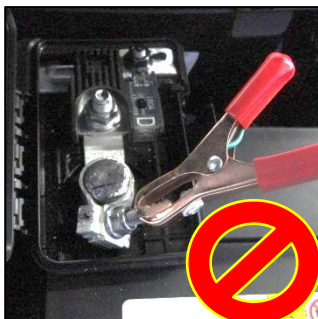
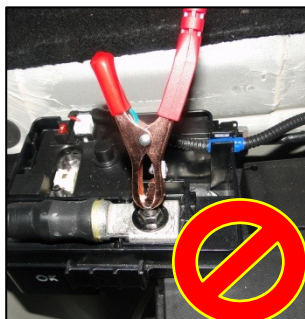
Refer to the TSB numbers below for operating procedures and warranty claims detail:

Tester Name	Picture	Notes
<p>Cadex Rapid RC Battery Tester</p>		<ul style="list-style-type: none"> • Test in the “PDI/Stock/New Veh” test type only for new/in stock vehicle battery. • DO NOT use the “Customer Used Veh” test type. • Use the GDS Battery Claim App to submit battery test data for warranty claims. Refer to TSB 20-EE-002H GDS Cadex Tester Battery Claim App. See TSB 17-EE-003 (or newer TSB) for additional information on Cadex Tester.
<p>Midtronics GR8 Battery Tester/Charger</p>		<ul style="list-style-type: none"> • Test only in the “Battery Test” mode for new vehicle testing. • DO NOT test in “Diagnostic Charge” mode. <p>See TSB 18-EE-003 (or newer TSB) for additional information on GR8.</p>


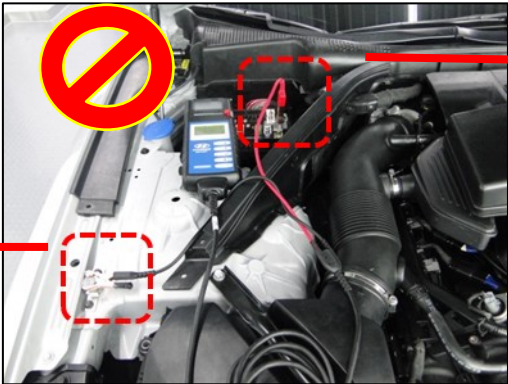
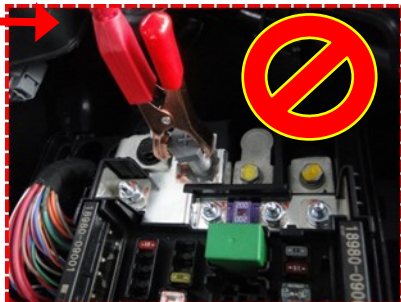
Instructions for Battery Tester Clamps Connection:

*** IMPORTANT**

- **Battery Test clamps or Charger clamps must be connected directly onto the battery posts. Do not connect clamps to the jumper terminals in the engine compartment.**
- Improper connection may produce an inaccurate test result. For example, a test result could yield "Replace Battery" although the battery is in good condition.

PROPER CONNECTION		IMPROPER CONNECTION	
			





- In certain vehicles, the battery is located in the trunk. **DO NOT** connect the battery tester clamps to the remote jump start posts in the engine compartment.

		
Negative (-) Remote Jump Start Post	DO NOT test at the Under Hood Remote Jump Start Post	Positive (+) Remote Jump Start Post

NOTICE

A battery in a prolonged discharged state may adversely be damaged from internal plate sulfation. After jump starting the vehicle, take it to the Service Department and have the battery tested with an approved Hyundai battery tester or diagnostic charger. Take additional action based on the test results on Page 2.

Dealer Vehicle Stock Preparation:

Step	DESCRIPTION	PICTURE
1.	Ensure the IGN switch is in the “OFF” position and key is removed from key cylinder. Ensure the Start Stop Button is turned “OFF”.	
2.	Ensure that the glove box is firmly closed.	
3.	Ensure that all doors are closed (including hood, trunk, tail gate, and fuel filler door).	
4.	Ensure that all interior and exterior lights are turned “OFF”.	

5. Depending on model and year, the vehicle is equipped with **either:**

(A) Dark Current Control System

(B) Power Fuse Switch (also known as the Shipping Fuse).

See the next 2 pages for details of each system. These systems allow for the following:

- Minimizes current draw and battery discharge at the ignition OFF state after a set sleep period (normally 15-20 minutes after ignition OFF).

NOTE: Certain vehicle functions may not operate at this sleep state with the Power Fuse Switch OFF, refer to the details of next page.

- Full normal vehicle operation will occur at ignition ON and engine run or Ready mode ON conditions.
- Displays Battery SOC% on the instrument cluster at ignition ON and during engine run or Ready mode ON when battery is charging.

NOTE:

- Most vehicles will display Battery SOC%, but a small portion of vehicles that don't have battery sensor will not display battery SOC on instrument cluster.
- Do not leave ignition ON in event of using a battery charger to charge the battery. However momentarily turning ON to check Battery SOC% display during charging is OK. Return to ignition OFF to resume full battery charger charging.

(A) Dark Current Control System

It is highly recommended to set the Dark Current Control to **“Dealer/Shipping Mode”** using the instructions in TSB 20-EE-005H.

When vehicles are in dealer stock, setting the Dark Current Control to **“Dealer/Shipping Mode”** minimizes vehicle current draw and reduces battery discharge.

Dark Current Control set to **“Dealer/Shipping Mode”** will not affect vehicle functionality or performance.

Dark Current Control set to **“Dealer/Shipping Mode”** at vehicle storage which helps prevent battery discharge.



(B) Power Fuse Switch

It is highly recommended to turn the Power Fuse Switch “OFF” by locating the switch under the dash fuse box, and turning it to the “OFF” position.

When vehicles are in dealer stock, turning the Power Fuse Switch “OFF” minimizes vehicle current draw and reduces battery discharge.

When the Power Fuse Switch is “OFF”, the following conditions occur to reduce current draw from the battery.

- Power door lock/unlock function is disabled.
- Some exterior and interior lights are disabled.
- Vehicle continuous panic alarm function will not work, only a single beep will occur when the keyless remote panic button is pressed.
- Some other convenient features may be disabled.

NOTICE

A reminder message will appear on the instrument cluster if the vehicle is driven with Power Fuse Switch turned “OFF”. There is no drivability symptoms associated with the Power Fuse Switch in the “OFF” position.

Power Fuse Switch turned “OFF” at vehicle storage which helps prevent battery discharge.



Instrument Cluster Warning Reminder to turn Power Fuse “ON” during test drive or customer delivery.

