



**Technical Service
BULLETIN**

January 26, 2006

Title:

**BATTERY MAINTENANCE FOR
IN-STOCK VEHICLES & PRE-DELIVERY**

Models:

All Models & Model Years

REVISED

PG001-06

PRODUCT GENERAL INFORMATION

TSB REVISION NOTICE:

- **November 28, 2006:** "Required SSTs" have been updated (SST P/N 00002–MCGR8 has been added). "Recommended Equipment" has been removed (superseded by SST P/N 00002–MCGR8). Screen prints and text have been updated in the "Battery Inspection Procedure". "Battery Service Procedure" has been renamed "Battery Inspection Results". Two sections have been added for SST P/N 00002–MCGR8: "Battery Charging Procedure" and "Battery Charging Results".
PLEASE READ ENTIRE TSB.

Previous versions of this TSB should be discarded.

TSB UPDATE NOTICE:

The information contained in this TSB supersedes TSB No. PG017–02.
TSB No. PG017–02 is now obsolete and should be discarded.

Introduction

A battery in a stored vehicle is subject to conditions that can reduce its performance and life. These conditions include storage period, temperature, parasitic drain, and battery load. Because of these factors, battery inspection and maintenance are required in order to ensure proper operation and optimal battery life.

As a matter of policy, Toyota does not provide battery warranty coverage for discharged and/or failed batteries due to lack of maintenance. It is the dealer's responsibility to maintain the specified State of Charge (SOC) of the vehicle's battery while in stock and assure proper State of Charge (SOC) at delivery.

To eliminate customer service concerns due to an undercharged battery during the first few weeks of ownership, **all dealers should check battery State of Charge (SOC) and recharge, if necessary, within 48 hours of delivery to customers.**

**Applicable
Vehicles**

- **All models and model years.**

**Warranty
Information**

OP CODE	DESCRIPTION	TIME	OFP	T1	T2
N/A	Not Applicable to Warranty	–	–	–	–



Required SSTs

ITEM NO.	SPECIAL SERVICE TOOLS (SSTs)	PART NUMBER	QTY	DRW**
1	<p>Digital Battery System Analyzer*</p> <p>NOTE:</p> <ul style="list-style-type: none"> All components from this kit/set are required 	00002-V8150-KIT	1	19
2	<p>GR8 Battery Diagnostic Station*</p> <p>NOTE:</p> <ul style="list-style-type: none"> All components from this kit/set are required 	00002-MCGR8	1	N/A***

* Essential SSTs.

** Drawer number in SST Storage System.

*** Not located in SST Storage System.

NOTE:

- The Digital Battery System Analyzer (P/N 00002-V8150-KIT) supersedes the Midtronics MICROPRO 815 Digital Battery Tester (P/N 00002-MP815-T). P/N 00002-MP815-T is now obsolete.
- The GR8 Battery Diagnostic Station (P/N 00002-MCGR8) supersedes the Automatic Trickle Charger (P/N 00002-YA122-01) and Fast Battery Chargers (Associated P/N ASE6003 and Christie P/N CAPPDQ). P/N 00002-YA122-01, ASE6003, and CAPPDQ are now obsolete.
- Additional SSTs may be ordered by calling SPX/OTC at 1-800-933-8335.

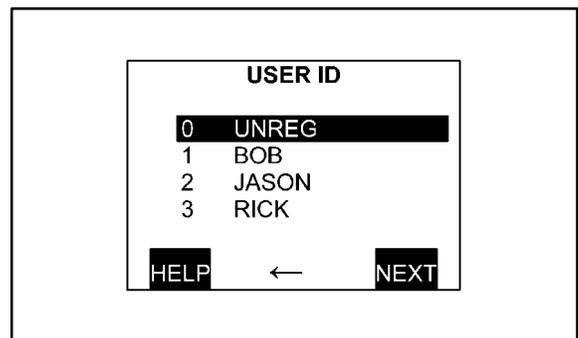
Battery Inspection Procedure

All vehicles are to be inspected according to the procedures listed below using the Digital Battery System Analyzer (P/N 00002-V8150-KIT) no more than 48 hours prior to customer vehicle delivery.

IMPORTANT NOTE FOR HYBRID VEHICLES:

In hybrid vehicles, the Digital Battery System Analyzer (SST P/N 00002-V8150-KIT) is to be used **ONLY** on the **AUXILIARY** (12 volt) battery.

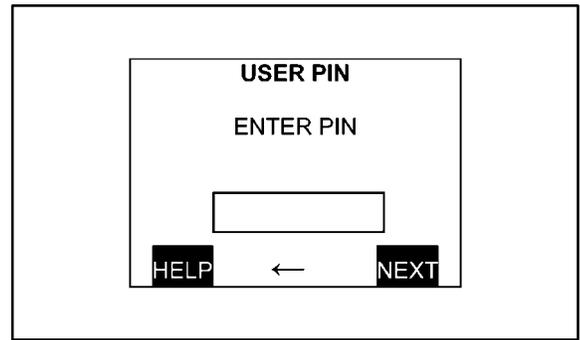
- Connect test clamps to the battery. (If the analyzer does NOT power up automatically, press the **POWER** button.)
- Select the correct **USER ID** (if applicable) and press the **NEXT** soft key.



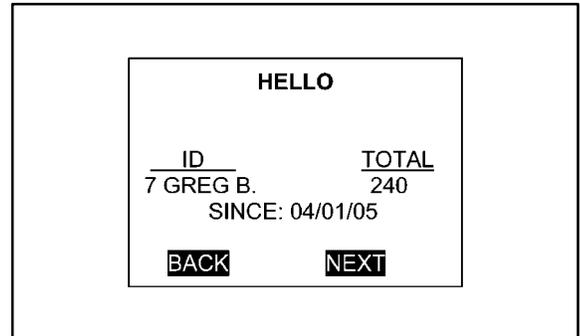
Battery Inspection Procedure
(Continued)

3. Enter **USER PIN** (if applicable) and press the **NEXT** soft key.

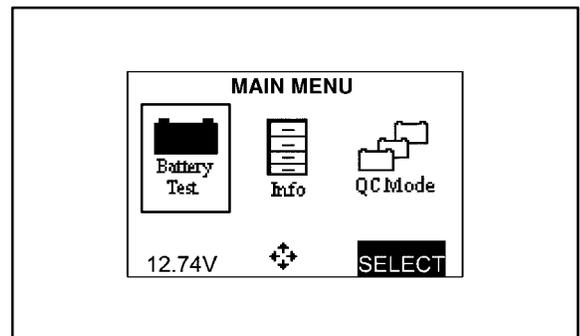
NOTE:
For details on defining **USER ID** or **PIN**, refer to the **NVS-8150 Instruction Manual**.



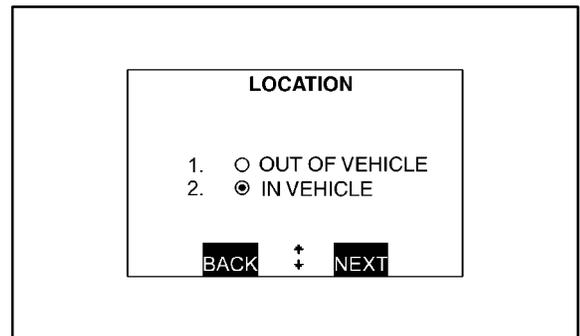
4. Press the **NEXT** soft key (if applicable) when the **HELLO** screen appears to proceed to the Main Menu.



5. Choose **BATTERY TEST** and press the **SELECT** soft key.



6. Select **IN VEHICLE** and press the **NEXT** soft key.

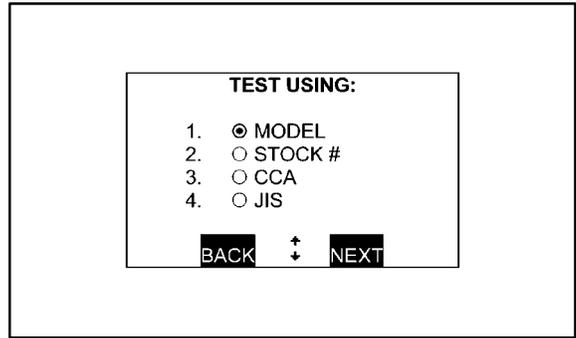


Battery Inspection Procedure
(Continued)

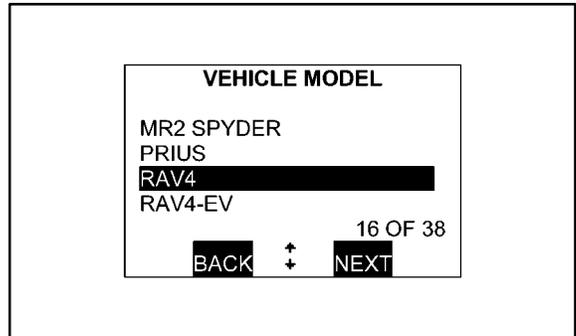
7. Select **MODEL** and press the **NEXT** soft key.

NOTE:

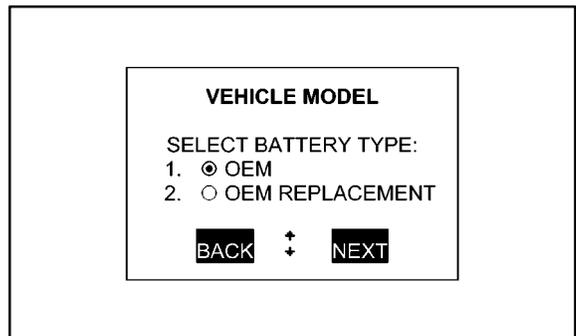
- “MODEL” or “STOCK #” **MUST** be used to receive a warranty code if the tester determines that the battery is bad.
- “MODEL” and “STOCK #” are linked to custom algorithms and are the most accurate testing procedures.



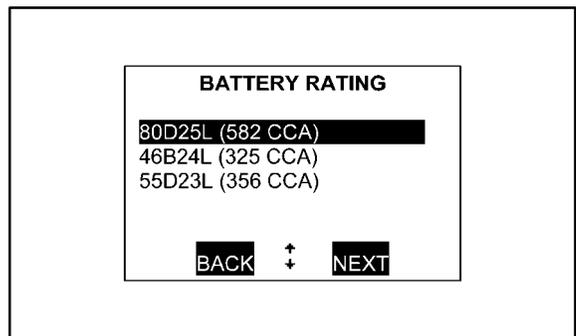
8. Select the appropriate model and press the **NEXT** soft key.



9. Select **OEM** battery type and press the **NEXT** soft key.

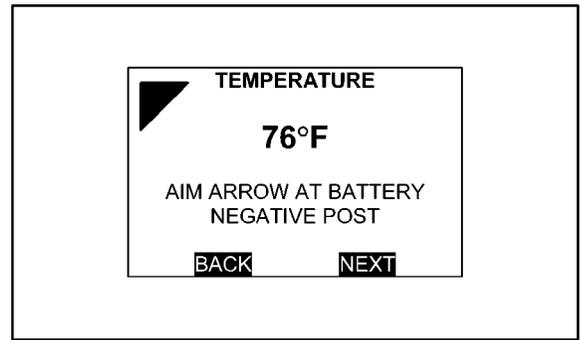


10. Choose the correct battery (model number and CCA) and press the **NEXT** soft key.

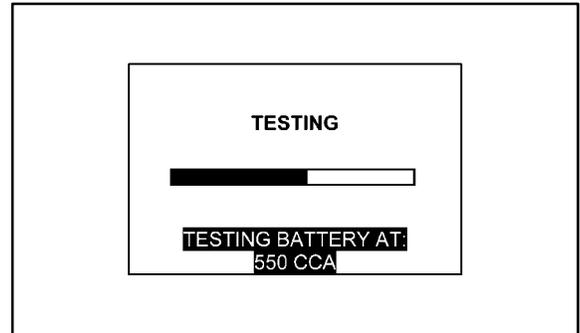


Battery Inspection Procedure
(Continued)

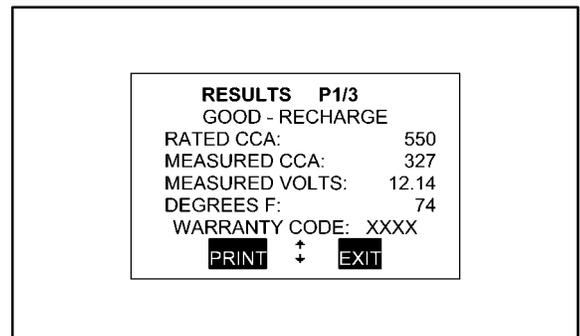
- Aim the infrared (IR) temperature measurement sensor at the negative (-) battery post and press the **NEXT** soft key.



The battery is now being tested. The progress bar fills in across the screen while testing.



- Read or print the battery test results (press the **PRINT** soft key to print).



Battery Inspection Results

Once the test completes, proceed with one of the 5 procedures below according to the **BATTERY CONDITION** results.

- Battery Condition: “GOOD BATTERY”**

Return the battery to service.

- Battery Condition: “GOOD-RECHARGE”**

Fully charge the battery using the GR8 Battery Diagnostic Station (P/N 00002-MCGR8) and return it to service.

**Battery
Inspection
Results**
(Continued)

3. Battery Condition: “CHARGE & RETEST”

Fully charge the battery using the GR8 Battery Diagnostic Station (P/N 00002–MCGR8) and retest.

NOTE:

Failure to fully charge the battery before retesting may cause false readings.

4. Battery Condition: “REPLACE BATTERY”

Replace the battery.

NOTE:

A **REPLACE BATTERY** result may also mean a poor connection between the battery cables and the battery. Retest the battery using the out-of-vehicle test before replacing it.

5. Battery Condition: “BAD CELL–REPLACE”

Replace the battery. The decision indicates a bad cell within the battery.

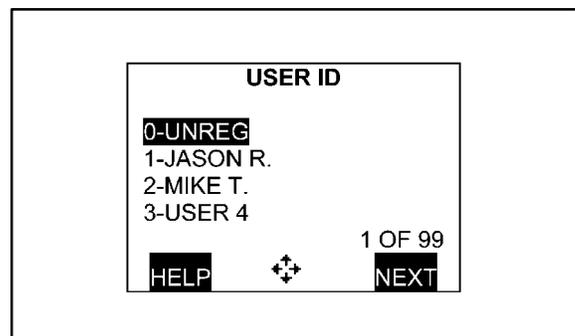
CAUTION:

- If “**FROZEN BATTERY**” is displayed as the test result, allow the battery to reach a temperature of 40°F (4°C) before retesting.
- **NEVER CHARGE A FROZEN BATTERY. GASES MAY FORM, CRACKING THE CASE AND CAUSING BATTERY ACID TO LEAK.**

**Battery
Charging
Procedure**

If the battery requires charging, follow the procedures below using the GR8 Battery Diagnostic Station (P/N 00002–MCGR8).

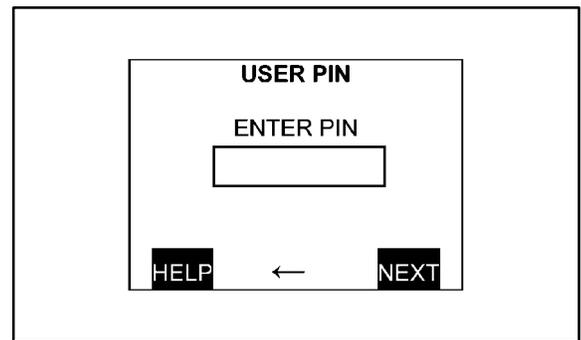
1. Connect the charger cables to the positive (+) and negative (–) battery terminals.
2. Plug the charger into the 110V outlet and turn the switch to the **ON** position.
3. Select appropriate **USER ID** (if applicable) and press the **NEXT** soft key.



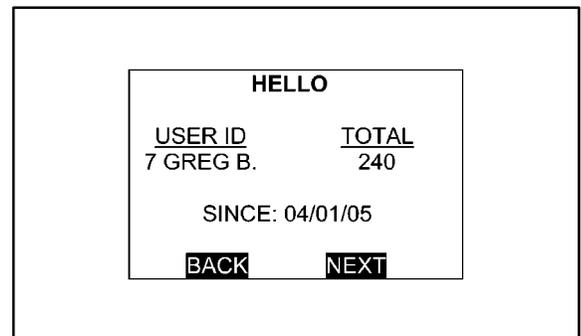
Battery Charging Procedure
(Continued)

4. Enter **USER PIN** (if applicable) and press the **NEXT** soft key.

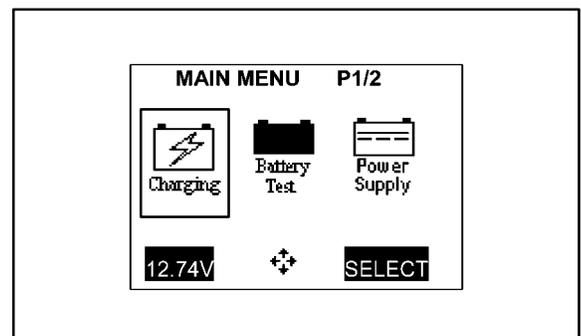
NOTE:
For details on defining **USER ID** or **PIN**, refer to the **GR8 Instruction Manual**.



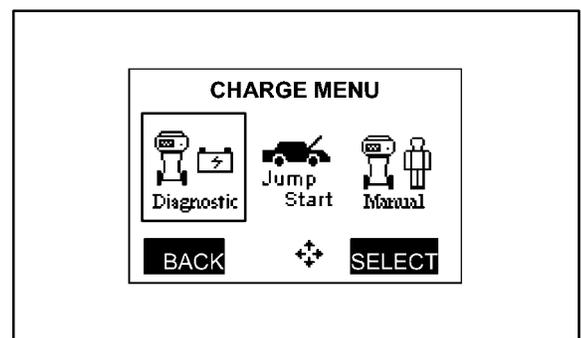
5. Press the **NEXT** soft key when the **HELLO** screen appears to proceed to the Main Menu.



6. Select **CHARGING** from the Main Menu screen and press the **SELECT** soft key.

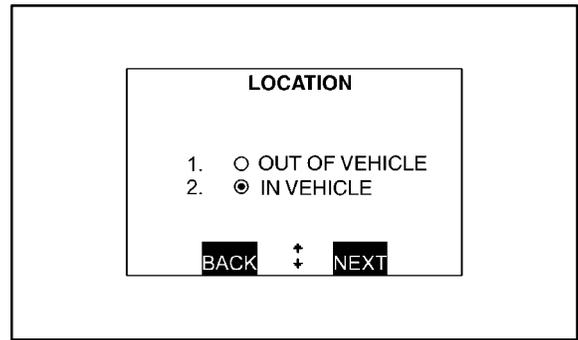


7. Select **DIAGNOSTIC** from the Charge Menu screen and press the **SELECT** soft key.



Battery Charging Procedure
(Continued)

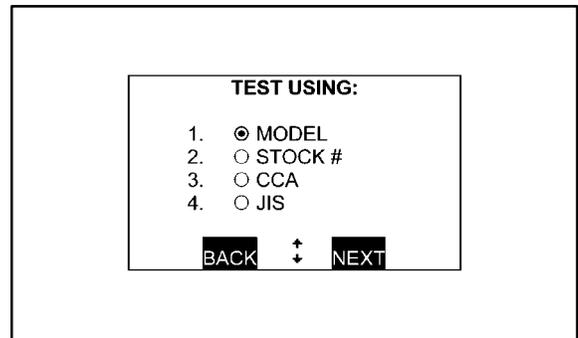
8. Select **IN VEHICLE** and press the **NEXT** soft key.



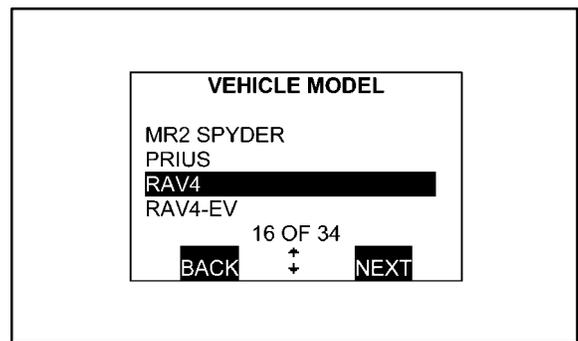
9. Select **MODEL** and press the **NEXT** soft key.

NOTE:

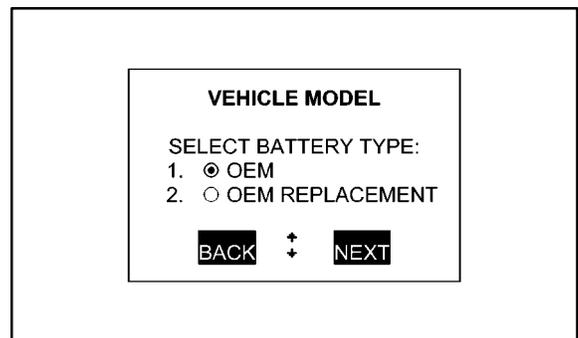
- “MODEL” or “STOCK #” **MUST** be used to receive a warranty code if the tester determines that the battery is bad.
- “MODEL” and “STOCK #” are linked to custom algorithms and are the most accurate testing procedures.



10. Select the appropriate model and press the **NEXT** soft key.

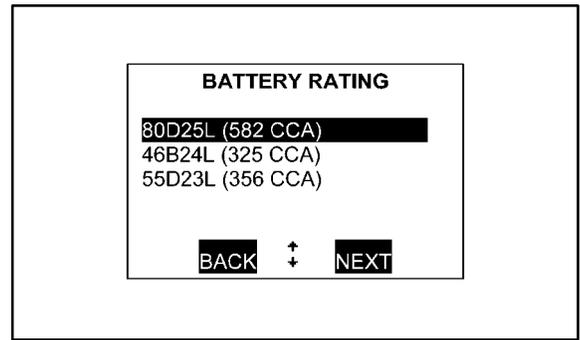


11. Select **OEM** battery type and press the **NEXT** soft key.

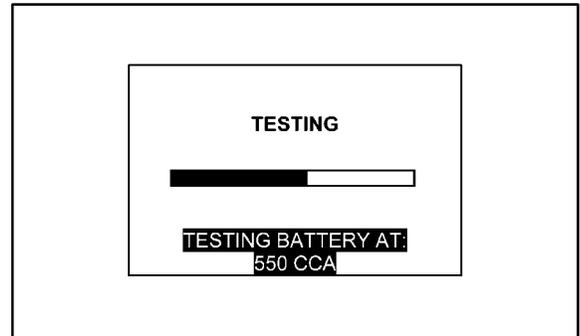


Battery Charging Procedure
(Continued)

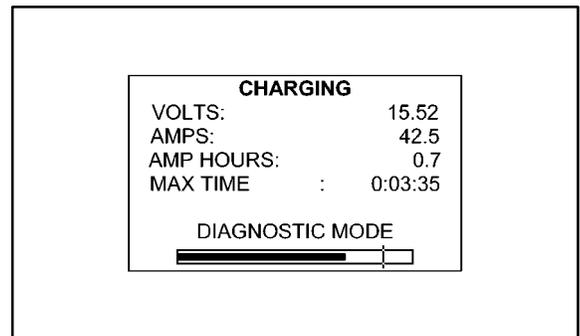
12. Choose the correct battery (model number and CCA) and press the **NEXT** soft key.



The battery will be tested before charging will occur. The progress bar fills in across the screen while testing.



The charger starts charging upon completion of testing. The screen displays the status of charge.

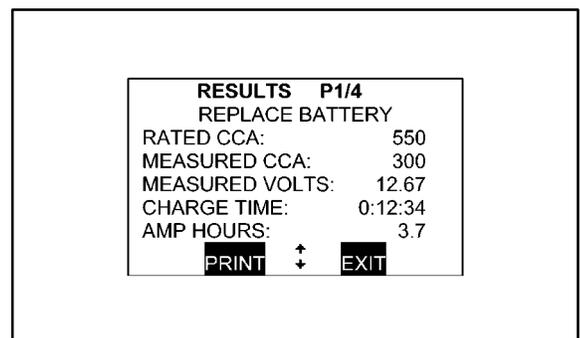


13. Read or print the battery test results.

- P 1/4:** BATTERY RESULTS
- P 2/4:** STATE OF CHARGE (SOC)
- P 3/4:** STATE OF HEALTH (SOH)
- P 4/4:** WARRANTY CODE

To print:

Align the Midtronics IR Printer (P/N 00002–A0870, component of P/N 00002–V8150–KIT) in front of the IR port on the charger and select the **PRINT** soft key.



Battery Charging Results

Once the test completes, proceed with 1 of the 3 procedures below according to the **BATTERY CONDITION** results.

1. Battery Condition: “GOOD BATTERY”

Return the battery to service.

2. Battery Condition: “REPLACE BATTERY”

Replace the battery. Print the **RESULTS** screen for WARRANTY CODE by pressing the **PRINT** soft key.

NOTE:

A REPLACE BATTERY result may also mean a poor connection between the battery cables and the battery. Retest the battery using the out-of-vehicle test before replacing it.

3. Battery Condition: “BAD CELL-REPLACE”

Replace the battery. The decision indicates a bad cell within the battery. Print the **RESULTS** screen for WARRANTY CODE by pressing the **PRINT** soft key.

Battery Replacement

If a vehicle battery needs to be replaced for a warrantable condition, complete a Warranty Battery Label and affix it to the failed battery for proper warranty parts and claim processing. **Include the Vehicle Identification Number (VIN) and warranty code on the Warranty Battery Label.**

WARRANTY BATTERY LABEL ETIQUETA PARA BATERIA DE GARANTIA <small>(Please Print / Llénese con Letra de Molde Por Favor)</small>		
_____ Dealer Code Código de Agencia		
_____ Vehicle Identification Number (VIN) Número de Identificación de Vehículo (NIV)		
_____ Repair Order No. No. de Orden de Reparación	_____ Repair Date Fecha de Reparación	_____ Failure Code Código de Falla
_____ Veh. Date of First Use Fecha de Primer Uso del Veh.	_____ Original Install Date Fecha de Instalación Original <small>(Svc. part replacement only/ solamente para el reemplazo de partes de servicio)</small>	_____ Battery Mos. In Svc. Número de meses que Batería está en servicio
08/02		00404-BTTRY-LABEL

Battery Maintenance

Recommended Battery Maintenance:

In addition to this new pre-delivery battery test, a monthly battery inspection is still required for stored vehicles. If your dealership is located in an area subject to extreme temperatures (hot or cold), periodic maintenance may need to be performed more frequently.

To reduce parasitic battery drain on vehicles in storage for one week or more, the negative (-) battery cable should always be disconnected to reduce battery discharge. When the negative (-) battery cable is reconnected, please check and reset electrical components, such as the clock, radio, etc., and re-initialize all applicable systems/functions.

Refer to the appropriate model and year service bulletins for specific details. For example:

- TSB No. PD008-05, “Power System Initialization During PDS” (2005 model year)
- TSB No. PD014-06, “Power System Initialization During PDS” (2006 model year)