





Video 1. DCA-8000 Instructions

## Testing Procedure – AGM and Lithium-Ion Batteries

To test batteries for warranty using the DCA-8000 or the GRX-3110HD, it's critical that all manually-entered information is accurate (i.e. date, part number, battery date codes, Vehicle Identification Number (VIN)). Using the scanner whenever possible is best (DCA-8000 only).

See Figure 1 and Note 2 in Diagnostic Mode Ticket (GRX-3110HD Only). It is important that the GRX-3110HD station has the latest software revision (2) installed to ensure that proper diagnostic tests are performed. Test result slips with missing or old software versions will not be accepted. Verify you have the current software update by reviewing the latest revision of Service Bulletin M1391A: MIDTRONICS GRX-3110HD SOFTWARE UPDATE. This service bulletin contains the most recent software updates and instructions on how to install them on the GRX-3110HD.

The DCA-8000 will send you automatic software update notifications, as long as it is connected to the internet. Make sure that your machine is connected to a good Wi-Fi connection and that it is updated when prompted. **The DCA-8000 does not provide you with a ticket, test results are sent to your email with the information necessary for filing a warranty claim.** See Figure 2.

### NOTE

**Aborting the charge in the DCA-8000 will produce an "Aborted Charge/No test" email response. This will void the test and no Test Code will be generated.**

## Testing Procedure – LiveWire 12V/2Amp Battery Only

Check battery voltage using a voltmeter. If voltage is equal to or higher than 8 volts, connect battery to a recommended Li-Ion charger, allow battery to fully charge, and test it in the vehicle for functionality. If voltage is below 8 volts, file a warranty claim noting the voltage in the claim comments.

## Filing a Warranty Claim

- See Figure 1 and Note 1 in Diagnostic Mode Ticket (GRX-3110HD Only). All warranty claims must have a valid GRX-3110HD test code (1) and battery date code entered into the comments section of the claim (excluding LiveWire 12V/2A battery).

- See Figure 2 and Note 1 in Diagnostic Mode Email (DCA-8000 Test Result Only). All warranty claims must have a valid DCA-8000 test code (3) and battery date code entered into the comments section of the claim (excluding LiveWire 12V/2A battery).
- If a battery tests good but is not operating properly, contact Tech Services prior to performing a warranty repair. Prior authorization is needed to replace batteries with Good Battery test results under warranty.
- For over-the-counter Parts and Accessories (P&A) batteries filed using DFS claim type, service start and service end dates must correlate to the DCA-8000 or GRX-3110HD test date.

## When a DCA or GRX Test Ticket Cannot Be Obtained

In cases where the dealer cannot obtain a DCA-8000 Test Code or GRX-3110HD ticket (e.g., GRX machine does not acknowledge that battery is connected, battery is leaking, swelling, overheating, etc.). The dealer must clearly explain the condition in the claim notes - no pre-authorization is required. However, the battery will be tested upon return to Harley-Davidson Motor Company (HDMC) and your claim may be rejected if the claimed condition cannot be verified.

### NOTE

**Batteries will warm up during load and charging cycles, this is normal. The tester has built-in thermocouples that will abort the test in case of overheating in most cases.**

## Requirements and Tips for Batteries Returned to HDMC

Make sure the battery returned to H-D is the correct battery for the VIN and/or claim:

- For VIN-related Claims (PRD/MC/PNA): Battery is the correct original equipment for the unit where the motorcycle has no previous history of battery replacement under warranty.
- Harley-Davidson will validate upon return that the OE battery was in fact the original battery married to that VIN at the factory. It is important to tag the unit immediately and keep batteries organized in your parts hold area to avoid mix-ups.

### NOTE

**P&A Batteries with missing date codes are not accepted.**

- For non-VIN Claims (DFS): Battery is the correct P&A unit sold to the consumer. Customer must provide proof of purchase which must be returned with the battery (if unit has been retailed).
- Ensure the battery manufacturing date codes match on the battery, the test information and in the claim notes.
- Include the corresponding GRX-3110HD ticket - protect the ticket by placing it in a plastic bag and securely attaching it to the battery. DO NOT apply tape directly to the GRX ticket as information will leach out and become illegible, potentially resulting in a rejected claim.
- For DCA-tested batteries: it is not necessary to return a test printout, the test information is automatically sent from your DCA-8000 to HDMC (machine must be connected to the internet).

- It is always a good idea to capture a picture of the ticket in case it gets lost. For DCA-tested batteries: save the email with the test result information that the DCA-8000 sends to you. Keep it for at least 60 days after your claim has been credited.
- Do not include terminal screws with battery.

### Diagnostic Mode Ticket (GRX-3110HD Only)

See Figure 1.

- **NOTE 1:** The test code (1) must be provided with every warranty claim.
- **NOTE 2:** The last letter, which in this example is "K", displays current software (2) on the machine. Refer to service bulletin M1391A for latest update.

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**DIAGNOSTIC MODE**

**REPLACE BATTERY**

VOLTAGE 10.47

MEASURED 4 CCA

P/N 65958-04C

CHARGE TIME 00:40:00

AMP HOURS 0.2 AH

STATE OF HEALTH

REPLACE OK

LAST 8 OF VIN  
LB427222

DATE CODE: A22

MID CODE  
3VN000-0N4500-0020000

TEST CODE 1  
1DN40D-VB078R1

TECH ID: UNREG

VERSION: 2  
192-210335K

1. Test code  
2. Current software


Figure 1. Diagnostic Mode Ticket

### Diagnostic Mode Email (DCA-8000 Test Result Only)

See Figure 2.




- **NOTE 1:** The 3 digit battery date (2) and test code (3) must be provided with every warranty claim.

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 **Harley-Davidson, Inc.**  
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4143434056

### Battery and Electrical System Analysis

Diagnostic Charge Technician: HDMC  
 08/14/2024 3:29 PM  
 Date Code: A24

Decision	Comments
 <b>Replace Battery</b>	Ampere-Hours: 2 Ah Cranking Health  Charge & Retest Part Number: 66000134 Measured: 1 CCA Voltage: 4.50 V Ah Replaced: 0.00 Ah Time Elapsed: 00:01:00 Temperature: 78° F Battery fails to meet industry accepted standards.
	Reserve Health  No test System conditions have prevented a test of the battery reserve capacity in this vehicle. Before attempting any retest, ensure the ignition and all vehicle accessory loads are turned off.

Test Code: 0028CD-QW0WD1D

0028CD-QW0WD1D  


Created on: Wed Aug 14 15:30:37 CDT 2024 DCA-8000 192-412045-800-0028 #0224140608

1. Date and time of test
2. Battery date code
3. Test code

Figure 2. DCA-8000 Test Result

# Information on Battery

## Date Codes on AGM Batteries

Battery date codes can vary. Most batteries will display a letter, representing the month, and a single number, representing the year.

In Figure 3, the letter “D” represents the month of April and the number “2” represents the year, in this case 2022.

- When entering the date code in the GRX, a letter and two numbers or four numbers (MMYY) are required.
- DCA-8000: When entering the date code, one letter for the month and two numbers for the year must be entered (entry is limited to 3 digits), see date code conversion for each month in the chart below. See Figure 2.
- See Figure 3. Alpha numeric date code example, enter “D22” for the date code in the GRX Machine.
- Figure 4 P&A AGM battery example, enter “0222” in the GRX Machine.
- Figure 5 P&A Lithium-Ion battery example, enter “1221” in the GRX Machine.
- Figure 6 Original Equipment Manufacturer (OEM) AGM battery example, enter “F22” in the GRX Machine.

## Differentiating OEM and P&A AGM Batteries

Figure 4 The P&A battery will display a large bar code on the left side of the label (circled in yellow) and a small “P” in the upper left side of the part number field (circled in red).

Figure 6 An OEM battery does not have these features.

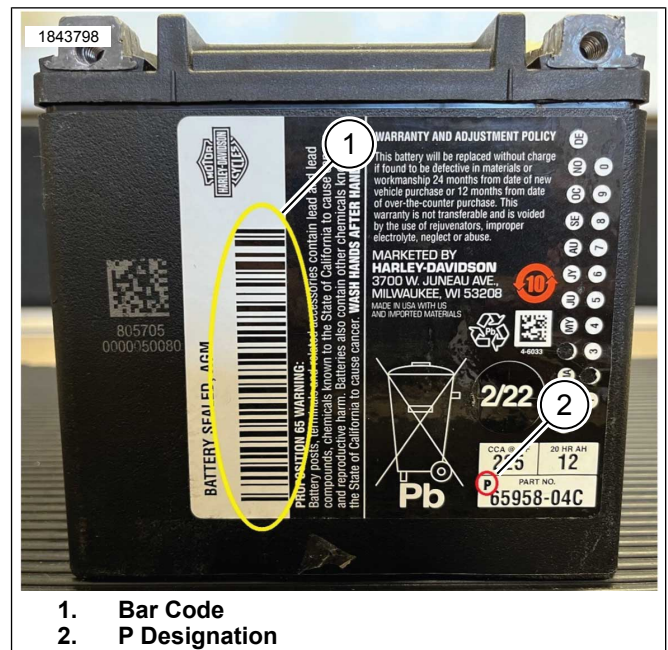


Figure 4. P&A AGM Battery



Figure 5. P&A Lithium-Ion Battery

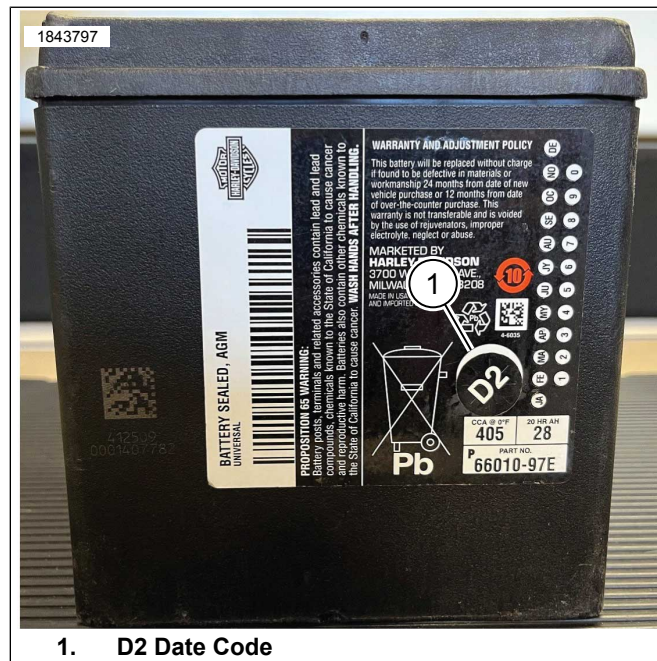
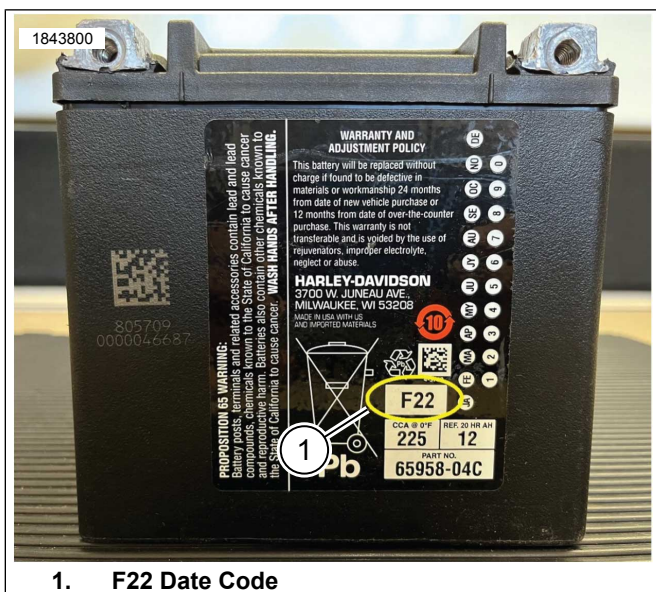


Figure 3. Alpha Numeric Date Code



1. F22 Date Code

Figure 6. OEM AGM Battery

Table 3. Month Date Code Conversion Table

Month	Alpha code
January	A
February	B
March	C
April	D
May	E
June	F
July	G
August	H
September	J
October	K
November	L
December	M

## E-Commerce Battery Part Numbers

E-Commerce batteries have different part numbers; however, they are physically the same Original Equipment (OE) and P&A units that you find at a Harley-Davidson dealership. The E-Commerce battery part numbers are not currently available in the DCA or GRX, follow the conversion table below when testing E-Commerce batteries:

Table 4.

E-Commerce Part Number	Original Equipment/Parts and Accessories Part number
66000340	66010-97E
66000345	65958-04C
66000343	65989-97E
66000344	65989-90B