



TEAM TIP

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IND

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Model Year(s): 2014-2018

— Confidential and Proprietary —

VERSION: R01 (May 10, 2018)

IMPORTANT

If you are working with a printed copy, please verify you have the most current version of these instructions.

SUBJECT

AGM Battery Charging and Maintenance

PURPOSE

2014-2018 Indian Motorcycles utilize Absorbent Glass Mat (AGM) batteries which are selected for their superior vibration resistance, weight savings, and high output. This Team Tip is being released to provide the Indian dealer network with specific recommendations to help maintain and restore the AGM type batteries used in Indian Motorcycles.

This communication will provide an advanced understanding of the AGM battery, charging guidelines, and maintenance best practices.

AFFECTED MODELS

MODEL YEAR	MODELS
2014-2018	All Indian Motorcycles

BATTERY CHARGING AND MAINTENANCE

IMPORTANT

Read and follow the safety precautions listed on the battery and the proper battery charging procedures outlined in the Service Manual.

AGM BATTERY CHARGER RECOMMENDATIONS

Indian Motorcycle recommends using the BatteryMINDER® 2012 AGM - 2 AMP battery charger (PN 2830438) to charge and maintain AGM batteries. The charger can be found on the Polaris PG&A website and ordered in DEX – Item Availability.

Batteries that fall below 12.5V run the risk of sulfation, a condition whereby sulfate crystals form inside the battery and significantly reduce performance. AGM chargers are designed specifically for charging AGM type batteries and use high frequency pulses to partially reverse sulfation.

IMPORTANT

The use of non-AGM battery chargers or non-AGM battery tenders may result in a misleading “battery not found” or “open cell” fault message. Please ensure you are using the recommended AGM charger when charging AGM type batteries.

INDIAN MOTORCYCLE RECOMMENDED AGM BATTERY TESTING PROCEDURE:

1. Test battery using the battery tester PU-50296.
2. If the tester indicates a test result other than “Good Battery,” follow the steps below before replacing the battery:
 - a. Connect battery to the recommended battery charger. If charging sequence begins as normal, fully charge battery and proceed to step 3.

The time listed on the PU-50296 battery tester printout is an estimate. The recommended automatic charger will indicate when the battery is fully charged on its display.
 - b. If charging sequence does not initialize, refer to **AGM Battery Charging Recommendations – Deeply Discharged (below 3 volts)** to attempt to restore the deeply discharged battery. If charging sequence will not finish as intended, the battery needs to be replaced.
3. Re-test battery. If the test results show that battery failed, proceed with battery replacement.

AGM BATTERY CHARGING RECOMMENDATIONS – LOW CHARGE

The nominal voltage for an Indian Motorcycle battery is 12.8 Volts when fully charged. The battery will self-discharge when disconnected from a vehicle, and will discharge at a faster rate when connected. If the battery voltage falls below 12.5V, it should be charged immediately using the recommended battery charger. Listed below are the recommended battery inspection schedules.

- Batteries which are not connected to a vehicle should be inspected every 60 days. The battery must be charged if found to be below 12.5 volts.
- Batteries which are connected to motorcycles should be inspected when they arrive at your dealership and at least once every month thereafter. The battery must be charged if found to be below 12.5 volts.
- Showroom bikes used to demonstrate radio, display and infotainment features should be charged daily. If possible, these bikes should be connected to the recommended battery charger continuously.

Always use the recommended automatic battery charger, and wait for the charger to complete the charge cycle before disconnecting it.

AGM BATTERY CHARGING RECOMMENDATIONS - DEEPLY DISCHARGED (BELOW 3 VOLTS)

AGM batteries discharged to a voltage of 3 volts or less may not be recognized by the recommended automatic battery charger. (The minimum voltage threshold recognized by other battery chargers may be as high as 10.5 volts). Often times deeply discharged batteries can be restored by attaching another, fully-charged, battery to “jump start” the low battery. Follow the steps below to restore a deeply discharged battery.

1. Carefully connect the two batteries' positive terminals, then the negative terminals using jumper cables.
2. Connect the recommended battery charger to the low battery and initiate the charging sequence.

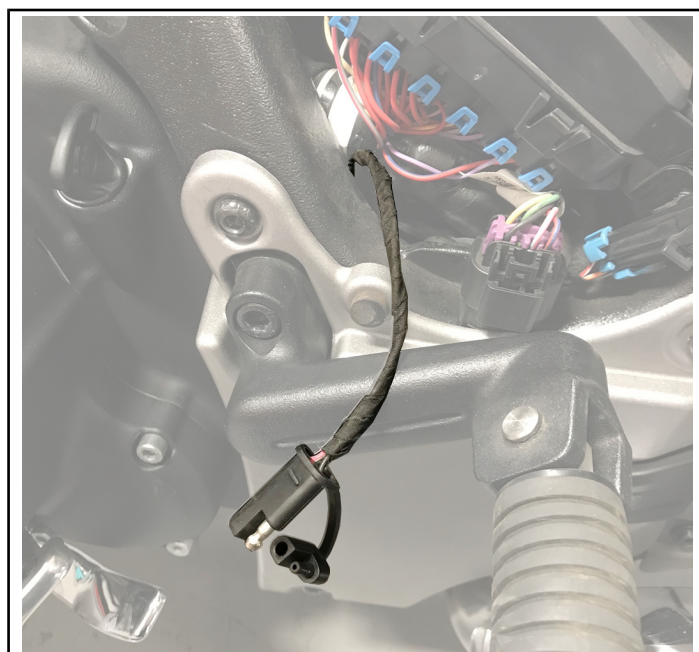
WARNING

Always check to ensure the positive cables are connected to the positive terminals before powering the charger on. Reversing polarity when charging can damage electrical components and risk personal injury. Be careful not to let battery cable clamps touch each other.

3. After the charging sequence has initiated, disconnect the fully-charged battery. Always disconnect the fully-charged battery positive first, followed by low battery positive, low battery negative, and finally fully-charged battery negative
4. Proceed with charging both batteries to full capacity. Listed in the table below are the approximate charging times for deeply discharged batteries. Always use the recommended automatic battery charger, and wait for the charger to complete the charge cycle before disconnecting it. The recommended automatic charger will indicate when the battery is fully charged on its display.

BATTERY PN	CHARGING TIME	BATTERY CAPACITY	CHARGING RATE
4011496	11 hours	18 AH	2 amps
4014770	8 hours	12 AH	2 amps

3. Batteries will self-discharge more quickly when dirty. Periodic cleaning of the battery terminals using a terminal brush will help maximize battery life. Wash terminals with a solution of one tablespoon baking soda and one cup water. Rinse well with tap water and dry off with clean shop towels. Coat the terminals with dielectric grease or petroleum jelly.
4. Battery connections should be tightened to the correct torque during installation. This will reduce voltage drop and ensure a reliable connection between the regulator/rectifier and battery.
5. Model year 2017 (and newer) Indian Motorcycles with 111 c.i. engines are conveniently equipped with a SAE bullet style connector for quick access to charging the battery. The recommended BatteryMINDER® 2012 charger comes with the mating connector for easy plug and play maintenance. The connector is located behind the left hand side cover and taped back to the chassis harness. Carefully remove the tape to expose the connector and length of wire. Be sure to properly secure the wire and connector before operating the vehicle.



AGM BATTERY MAINTENANCE TIPS

1. If the motorcycle will not be driven for more than 2 weeks, maintaining the battery with the BatteryMINDER® 2012 AGM - 2 AMP charger (PN 2830438) is recommended.
2. To help prolong battery life, it is recommended to remove the battery from vehicles stored ONE month or longer. To maximize the life of stored batteries, they should be kept in a cool / dry location. Batteries will self discharge more rapidly when stored in extreme temperatures. Batteries should be maintained using the recommended battery charger while in storage.