



INSTRUCTIONS

-J00787

REV. 5-25-2004

Kit Number 66006-29F

HARLEY-DAVIDSON 6-VOLT BATTERY

General

This instruction sheet provides service information for a **DRY-CHARGED** conventional battery.

There are no Service Parts available with this product.

WARNING

The rider's safety depends upon the correct installation of this kit. Use the appropriate service manual procedures. If the procedure is not within your capabilities or you do not have the correct tools, have a Harley-Davidson dealer perform the installation. Improper installation of this kit could result in death or serious injury. (00333a)

NOTE

This instruction sheet references Service Manual instructions. A Service Manual for your motorcycle is available from your Harley-Davidson dealer.

WARNING

Engine exhaust from this product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. (00004b)

WARNING

Do not run motorcycle in a closed garage or confined area. Inhaling motorcycle exhaust, which contains poisonous carbon monoxide gas, could result in death or serious injury. (00005a)

Activate Battery

WARNING

Batteries contain sulfuric acid, which could cause severe burns to eyes and skin. Wear a protective face shield, rubberized gloves and protective clothing when working with batteries. KEEP BATTERIES AWAY FROM CHILDREN. (00063a)

WARNING

Batteries, battery posts, terminals and related accessories contain lead and lead compounds, and other chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling. (00019c)

1. Place battery on a level surface.

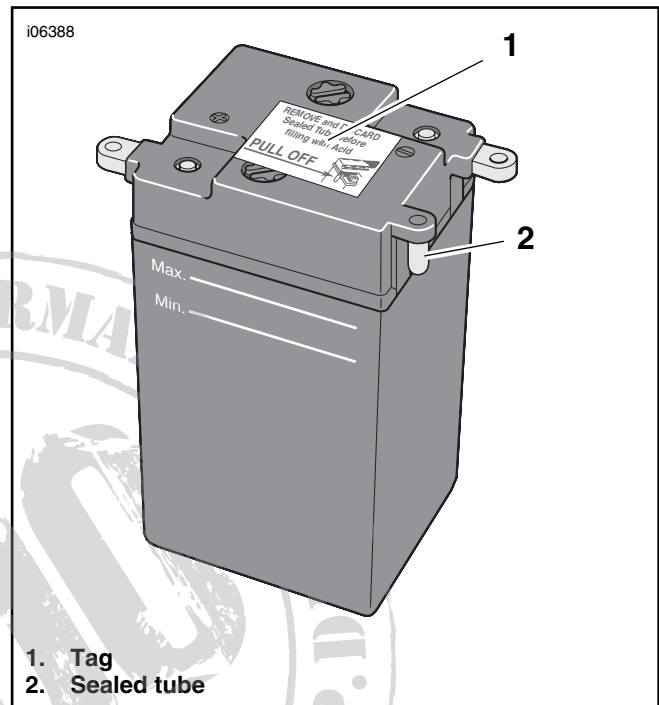


Figure 1. Reminder Tag/Sealed Shipping Tube

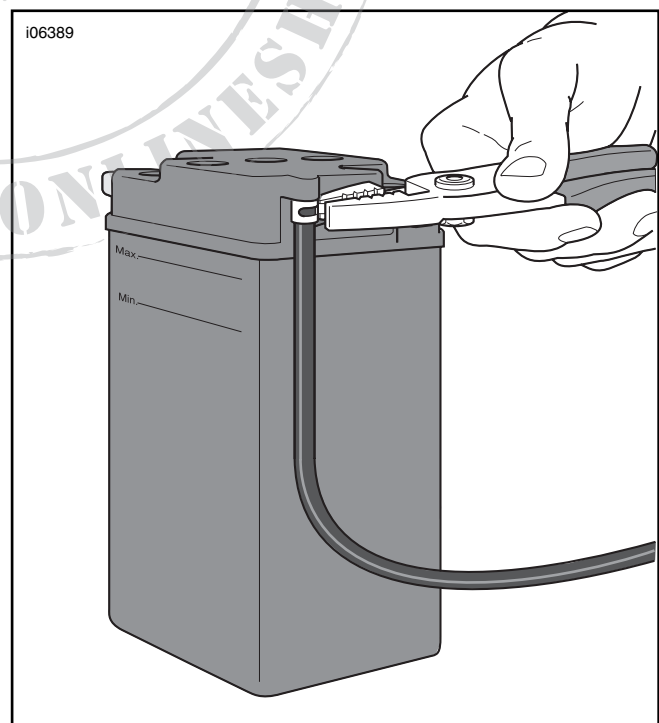
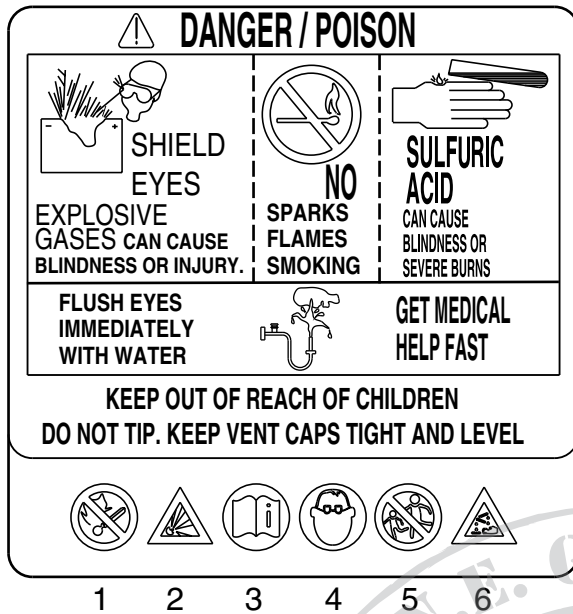


Figure 2. Battery Vent Tube Clamp



1. KEEP FLAMES AWAY
2. CONTENTS ARE EXPLOSIVE
3. READ INSTRUCTIONS
4. WEAR SAFETY GLASSES
5. DO NOT ALLOW CHILDREN TO PLAY WITH BATTERY
6. CONTENTS ARE CORROSIVE

Figure 3. Battery Warning Label

CAUTION

Remove battery from motorcycle before charging. Electrolyte leakage will damage motorcycle parts. (00213a)

2. See Figure 1. Remove reminder tag from battery. Remove sealed tube from battery vent elbow.

WARNING

A sealed tube which is left in place could cause a build-up of internal gas pressure. Internal gas pressure can cause a battery to explode causing death or serious injury.

3. See Figure 2. Check that battery vent elbow is dry and clean. Install long vent tube on vent elbow and secure long vent tube to elbow of battery using clamp. Rotate prongs of clamp toward side of battery.
4. Place other end of long vent tube in a suitable container to collect electrolyte which might overflow through vent tube.
5. Remove all battery cell filler caps (3 caps on 6-volt batteries).

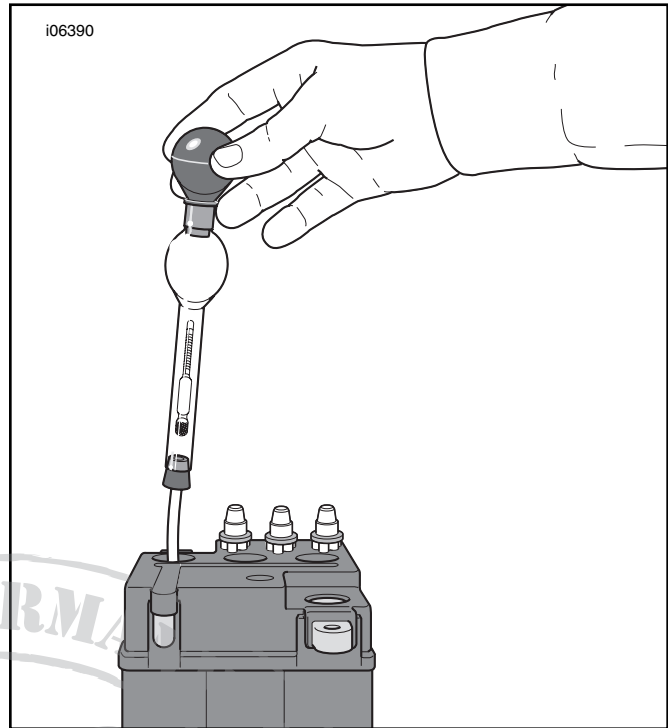


Figure 4. Hydrometer

WARNING

Never remove warning label attached to top of battery. Failure to read and understand all precautions contained in warning, could result in death or serious injury. (00064a)

ANTIDOTE

EXTERNAL: Flush with water.

INTERNAL: Drink large quantities of milk or water followed by milk of magnesia, vegetable oil or beaten eggs. Call doctor immediately.

EYES: Flush eyes with water and get immediate medical attention.

6. Carefully fill each cell of battery with **electrolyte** (diluted sulfuric acid) of 1.265 specific gravity to upper level indicated on battery. Let battery stand for 1/2 hour.

NOTES

DO NOT ACTIVATE BATTERY USING WATER OR ANY LIQUID OTHER THAN DILUTED SULFURIC ACID.

Electrolyte should be at room temperature (approximately 70° F/21° C) before filling.

7. After 1/2 hour, gently tap battery to dislodge air bubbles from cell plates. If electrolyte level has fallen during standing, refill battery with **electrolyte** to upper level.
8. Install filler caps.

Charge Battery

Safety Precautions

Never charge a battery without first reviewing the manufacturer's instructions for the charger. In addition to the manufacturer's instructions, follow these safety precautions:

⚠ WARNING

- Always wear proper eye, face and hand protection.
- Always charge batteries in a well-ventilated area.
- Turn the charger OFF before connecting the leads to the battery to avoid dangerous sparks.
- Never try to charge a visibly damaged or frozen battery.
- Connect the charger leads to the battery; red positive (+) lead to the positive (+) terminal and black negative (-) lead to the negative (-) terminal. If the battery is still in the vehicle, connect the negative lead to the chassis ground. Be sure that the ignition and all electrical accessories are turned off.
- Make sure that the charger leads to the battery are not broken, frayed or loose.
- If the battery becomes hot, or if violent gassing or spewing of electrolyte occurs, turn off the charger temporarily.
- Always turn the charger "OFF" before removing charger leads from the battery to avoid dangerous sparks.

Failure to adhere to these precautions, could result in death or serious injury.

⚠ WARNING

Explosive hydrogen gas, which escapes during charging, could cause death or serious injury. Charge battery in a well-ventilated area. Keep open flames, electrical sparks and smoking materials away from battery at all times. **KEEP BATTERIES AWAY FROM CHILDREN.** (00065a)

CAUTION

If the battery releases an excessive amount of gas during charging, decrease the charging rate. If battery gets hotter than 110° F (43° C) during charging, discontinue charging and let battery cool. Overheating may result in plate distortion, internal shorting, drying out or other damage.

CAUTION

Remove battery from motorcycle before charging. Electrolyte leakage will damage motorcycle parts. (00213a)

1. Follow instructions in applicable Service Manual to remove the battery from the motorcycle.
2. Place the battery on a level surface.

⚠ WARNING

Unplug or turn OFF battery charger before connecting charger cables to battery. Connecting cables with charger ON can cause a spark and battery explosion, resulting in death or serious injury. (00066a)

CAUTION

Do not reverse the charger connections described in the following steps or the charging system of the motorcycle could be damaged. (00214a)

3. Refer to Table 1. Set battery charger to the recommended charging rate.

Table 1. Recommended Charging Rate

| PART NO. | VOLT | CAPACITY (AMP/hr.) | MAX. BENCH CHARGE RATE (AMP) |
|------------|------|-----------------------|------------------------------------|
| 66006-29F* | 6 | 22 | 2 |

* Charge with caps off

4. Connect the red charger lead to the positive (+) battery terminal.
5. Connect the black charger lead to the negative (-) battery terminal.
6. See Figure 4. Measure specific gravity with a HYDROMETER (Part No. HD-96910-35). Charge battery until specific gravity of electrolyte increases to 1.260 - 1.270 at 80° F (27° C). Cell variance must not exceed 0.010 specific gravity.

NOTES

- When using a syringe hydrometer, read electrolyte level at bottom of meniscus (curved upper surface of fluid).
- Specific gravity changes with temperature differences. When the temperature increases, specific gravity of a typical fluid decreases, and vice versa. If electrolyte temperature in battery is not 80° F (27° C), use the following formula to compute temperature-corrected specific gravity:

- ▼ For each 10° F (5.5° C) above 80° F (27° C), add 0.004 to actual specific gravity reading.
- ▼ For each 10° F (5.5° C) below 80° F (27° C), subtract 0.004 from actual specific gravity reading.

For example:

| | |
|----------------------------|----------------|
| Electrolyte temperature | 100° F (38° C) |
| Hydrometer reading | 1.272 |
| Adjustment for temperature | + 0.008 |
| Corrected specific gravity | 1.280 |

7. After initial charge, gently tap battery to dislodge air bubbles from cell plates. If electrolyte level has fallen, refill battery with distilled water to the upper level and charge an additional 1 - 2 hours.

⚠ WARNING

Unplug or turn OFF battery charger before connecting charger cables to battery. Connecting cables with charger ON can cause a spark and battery explosion, resulting in death or serious injury. (00066a)

8. When fully charged, disconnect the black charger lead to the negative (-) terminal of the battery.
9. Disconnect the red charger lead to the positive (+) terminal of the battery.
10. Install all battery filler caps. Wash off any acid spillage from battery using water. Wipe battery dry.
11. Mark date on battery.

Install Battery

1. Clean cable connectors and battery terminals using a wire brush or sandpaper; remove any oxidation.
2. Follow Service Manual instructions to install new, fully charged battery with vent tube onto motorcycle.
3. Follow Service Manual instructions to secure battery to battery tray using original mounting hardware.

⚠ WARNING

Connect the positive (+) battery cable first. If the positive (+) cable should contact ground with the negative (-) cable connected, the resulting sparks may cause a battery explosion resulting in death or serious injury. (00069a)

CAUTION

Connect cables to correct terminals of battery; otherwise, serious damage to motorcycle electrical system may occur.

4. Connect positive cable to positive (+) battery terminal.
5. After positive cable has been connected to positive terminal, connect negative cable to negative (-) battery terminal.
6. Apply light coat of Harley-Davidson Electrical Contact Lubricant (HD-99861-02) to both terminals.

CAUTION

Route battery vent tube on the vehicle side opposite the secondary drive chain, or tube may be damaged by rubbing against chain.

⚠ WARNING

Route battery vent tube away from ends of mufflers, or sparks from mufflers could cause battery to explode causing death or serious injury.

CAUTION

Battery vent tube has a small slit near each end of tube. The slit near battery vent elbow provides a pressure release for battery gases should bottom of tube become obstructed (internal gas pressure can cause a battery to explode). You may trim off bottom end of tube 1 - 2 inches below the bottom of the frame after tube is properly routed; however, always make sure that end with remaining slit is attached to battery vent elbow.

5. Route battery vent tube making sure that it does not become kinked or obstructed, that it does not chafe or touch moving parts, and that its outlet is directed away from metal components.
6. Install motorcycle seat and/or any other previously removed components.

⚠ WARNING

After installing seat, pull upward on front of seat to be sure it is locked in position. If seat is loose, it could shift position during vehicle operation, resulting in loss of control of vehicle and death or serious injury. (00070a)

Store and Maintain Battery

Check battery electrolyte level after the first 500 miles. Thereafter, check battery electrolyte level after every 500 miles or every week. Check and, if needed, clean battery terminals each time you check the electrolyte level.

If motorcycle will not be operated for several months, such as during the winter season, remove the battery from the motorcycle and charge the battery until the correct specific gravity is obtained. Refer to appropriate Service Manual for detailed procedures.

Charge the battery every month (according to appropriate Service Manual procedures) if it is stored at temperatures below 60° F (16° C). Charge battery more frequently than once a month if stored in a warm area, above 60° F (16° C).

⚠ WARNING

Store batteries where they cannot be reached by children, to protect children from death or serious injury.

CAUTION

The electrolyte in a discharged battery will freeze if exposed to freezing temperatures. Freezing may crack battery case and buckle battery plates.