

HARLEY-DAVIDSON 12 VOLT BATTERIES

GENERAL

Kit Number

65948-00A, 65989-90B, 65991-82B, 66010-82B, 65958-04A, 65989-97C, 66010-97C

Models

For model fitment information, see the P&A Retail Catalog or the Parts and Accessories section of www.harley-davidson.com (English only).

Additional Parts Required

⚠ 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 information. A service manual is required for this installation and is available from a Harley-Davidson Dealer.

Kit Contents

There are no Service Parts available with this kit.

General Battery Information

All Absorbed Glass Mat (AGM) batteries are permanently sealed, maintenance-free, valve-regulated, lead/calcium and sulfuric acid batteries. The batteries are shipped pre-charged and ready to be put into service. Do not attempt to open these batteries for any reason.

⚠ 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

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)

Table 1. Battery Electrolyte Antidote

Physical Location	Procedure
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 with water and get immediate medical attention.

⚠ 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. (00019e)



Figure 1. Battery Warning Label

CARE AND MAINTENANCE

Voltmeter Test

See Table 2. The voltmeter test provides a general indicator of battery condition. Check the voltage of the battery to verify that it is in a 100% fully-charged condition. If the open circuit (disconnected) voltage reading is below 12.7 V, charge the battery and then check the voltage again after the battery has set for one to two hours. If the voltage reading is 12.7 V or above, perform a load test.

Table 2. Voltmeter Test For Battery Charge Conditions

VOLTAGE (OCV)	STATE OF CHARGE
12.7 V	100%
12.6 V	75%
12.3 V	50%
12.0 V	25%
11.8 V	0%

Disconnection and Removal

Refer to a service manual for specific disconnection and removal steps. Pay attention to all warnings and cautions within the manual and remove battery from battery box/tray.

Battery Charging

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)

1. Never charge a battery without first reviewing the instructions for the charger being used.
2. Perform a voltmeter test to determine the state of charge. See BATTERY TESTING, VOLTMETER TEST. If battery needs to be charged, proceed to Step 3.

CAUTION

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

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)

3. See applicable service manual and remove the battery from the motorcycle. Place the battery on a level surface.
4. Inspect battery for damage. Replace battery if visibly damaged or frozen.
5. Inspect battery charger, verify that the charger leads are not damaged, frayed or loose.

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, which could result 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)

6. Connect the red charger lead to the positive (+) terminal of the battery.
7. Connect the black charger lead to the negative (-) terminal of the battery.

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)

WARNING

If battery becomes hot, gassing or spewing of electrolyte can occur, which could cause death or serious injury. **Unplug or turn OFF the charger until battery cools.** (00412b)

CAUTION

If battery releases an excessive amount of gas during charging, decrease the charging rate. Overheating can result in plate distortion, internal shorting, drying out or damage. (00413b)

8. See Table 3 for charging conditions. Step away from the battery and turn on the charger.

Table 3. Battery Charging Rates/Estimated Times

Amp Hour Part Number	State of Charge		Typical Charging Times (Hours)			
	Voltage	% of Charge	5 Amp Charger	2 Amp Charger	1.5 Amp Charger	0.75 Amp Charger
12 Amp Hour 65958-04A, 65948-00A	12.7 V	100%	Full	Full	Full	Full
	12.6 V	75%	1.6	2.5	3.0	5.0
	12.3 V	50%	2.2	4.0	5.0	9.0
	12.0 V	25%	2.8	5.5	7.0	13.0
	11.8 V	0%	3.4	7.0	9.0	17.0
19 Amp Hour 65989-90B, 65991-82B, 65989-97C	12.7 V	100%	Full	Full	Full	Full
	12.6 V	75%	2.0	3.4	4.2	7.3
	12.3 V	50%	2.9	5.8	7.3	13.7
	12.0 V	25%	3.9	8.1	10.5	20.0
	11.8 V	0%	4.8	10.5	13.7	26.3
28 Amp Hour 66010-82B, 66010-97C	12.7 V	100%	Full	Full	Full	Full
	12.6 V	75%	2.4	4.5	5.7	10.3
	12.3 V	50%	3.8	8.0	10.3	19.7
	12.0 V	25%	5.2	11.5	15.0	29.0
	11.8 V	0%	6.6	15.0	19.7	38.3

Based on available Battery Tender™ charger sizes from Deltran
 Times provided for reference. Chargers are automatic. Continue charging until the charger indicates full.
 Final letter of part number subject to change.

⚠ WARNING

Unplug or turn OFF battery charger before disconnecting charger cables from battery. Disconnecting clamps with charger ON can cause a spark and battery explosion, which could result in death or serious injury. (00067a)

9. After the battery is fully charged, turn off or unplug the battery charger, then disconnect the black battery charger lead to the negative (-) terminal of the battery.
10. Disconnect the red battery charger lead to the positive (+) terminal of the battery.
11. Mark the charging date on the battery.

Battery Storage

⚠ 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)

CAUTION

Do not allow battery to completely discharge. The electrolyte in a discharged battery will freeze. The more discharged a battery is, the more easily it can freeze and crack the battery case. (00218a)

If the motorcycle will not be operated for several months, such as during the winter season, remove the battery from the motorcycle and charge fully. See BATTERY CHARGING.

See Figure 2. Self-discharge is a normal condition and occurs continuously at a rate that depends on ambient temperature and the battery's state of charge. Batteries discharge at a faster rate at higher ambient temperatures. To reduce self-discharge rate, store battery in a cool (not freezing), dry place.

Charge the battery every month if stored at temperatures below 60 °F. (16 °C). Charge the battery more frequently if stored in a warm area above 60 °F. (16 °C).

NOTE

Harley-Davidson Constant Monitoring Battery Chargers may be used to maintain battery charge for extended periods of time without risk of overcharging or boiling.

When returning a battery to service after storage, refer to the instructions under BATTERY CHARGING.

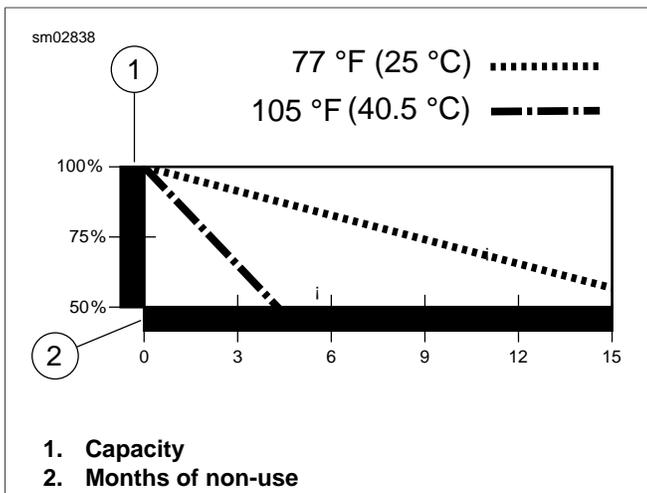


Figure 2. Battery Self-Discharge Rate

INSTALLATION

Battery Cable Routing

Route all battery cables as described in the applicable service manual.

Battery Installation and Connection

1. Clean battery cable connectors of oxidation and apply a light coat of Harley-Davidson Electrical Contact Lubricant (99861-02) to battery terminals and cable connectors.
2. Place the fully-charged battery into the motorcycle in the correct position. See the applicable service manual.

CAUTION

Connect the cables to the correct battery terminals. Failure to do so could result in damage to the motorcycle electrical system. (00215a)

WARNING

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WARNING

Connect positive (+) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00068a)

CAUTION

Do not over-tighten bolts on battery terminals. Use recommended torque values. Over-tightening battery terminal bolts could result in damage to battery terminals. (00216a)

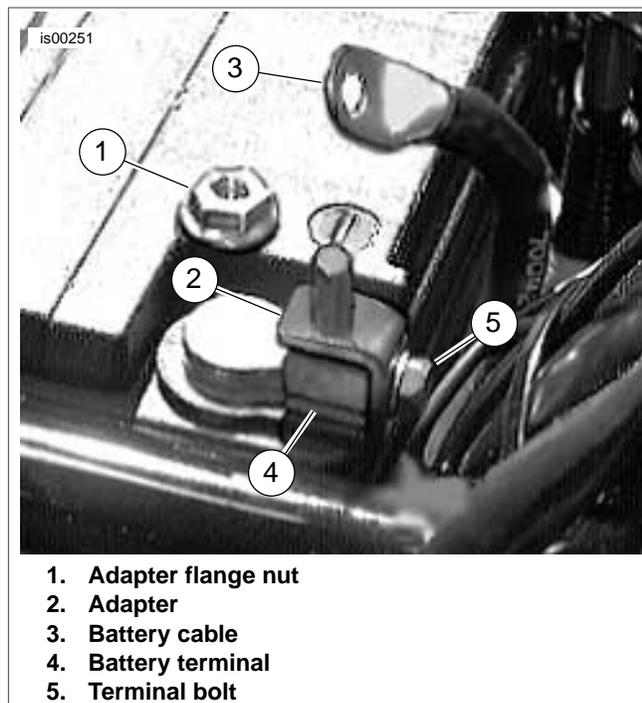


Figure 3. Terminal Adapter Kit

3. Refer to a service manual and connect the battery.
On most models, insert bolt through battery positive cable (red) into threaded hole of battery positive (+) terminal. Tighten bolt to 60-70 **in-lbs** (6.8-7.9 Nm).
Insert bolt through negative battery cable (black) into threaded hole of battery negative (-) terminal. Tighten bolt to 60-70 **in-lbs** (6.8-7.9 Nm).

NOTE

Battery part number 66010-82B requires a battery terminal adapter kit when used on 1980-1992 model motorcycles. This adapter kit is part number 66056-00 and is packaged with the battery.

4. For battery part number 66010-82B, when used on 1980-1992 model vehicles, use the terminal adapter kit as follows:
 - a. See Figure 3. Insert existing terminal bolt through hole in adapter and secure adapter to terminal. Tighten bolt.
 - b. Place battery cable on top of adapter screw connection and secure cable with adapter nut. Tighten nut to 60-70 **in-lbs** (6.8-7.9 Nm).
 - c. Repeat procedure for other terminal.
5. Clean battery cable connectors of any oxidation and apply a light coating of Harley-Davidson Electrical Contact Lubricant (HD-99861-02) to the battery terminals and cable connectors.

NOTE

Failure to secure battery properly may cause battery to malfunction and will void battery warranty.

6. Secure battery using procedures in the applicable service manual.