

MODELS: Kawasaki Motorcycles

TITLE: KAWASAKI BATTERY ACTIVATION REQUIREMENTS

SERVICE POLICY

SUBJECT

Kawasaki motorcycles come with four types of batteries. While some require activation and others are pre-activated, they all require charging and additional maintenance charging if activated and allowed to sit in the vehicle for an extended time on the showroom floor or in storage.

The following is a summary of activation and charging guidelines for each battery type. Refer to the appropriate Assembly & Preparation Manual for activation and charging procedures for each specific model.

KAWASAKI APPROVED CHARGERS

As outlined in bulletin SP23-01, in order to properly activate the battery delivered with each Kawasaki vehicle, Kawasaki dealers are required to have the correct battery charging and testing equipment for all types of batteries used in Kawasaki products. The following are chargers approved by Kawasaki.

Conventional/Sealed/Pre-Serviced Lead-Acid Chargers

MAKE	MODEL	KAWASAKI PART #
TecMATE	OptiMATE PRO-1 DUO (TM-650) Single-Battery	57001-TM-650
TecMATE	BatteryMATE 150-9 (TS02) Single-Battery	N/A
TecMATE	OptiMATE PRO-4 (TS53) Four-Bank	N/A
TecMATE	OptiMATE Pro-8 (TS45) Eight-Bank	N/A
TecMATE	OptiMATE 3 (TM431) Single Bank	N/A
YUASA	MB-2040/2060 Four-Bank	022-0148DLWH
CHRISTIE	C10122S Two-Bank	N/A

57001-TM-650



KAWASAKI APPROVED CHARGERS (cont'd)

Lithium-Ion Chargers

MAKE	MODEL	KAWASAKI PART #
TecMATE	OptiMATE Lithium 4s (TM-291) 12.8V 5A Single-Bank	C57001-291
TecMATE	OptiMATE Lithium 4s (TM-471) 0.8 amp Single-Bank	C57001-471
Skyrich	Skyrich (HBC-LF0201) 12V 2A Single Bank	N/A



C57001-291
5 AMP
DEALERS



C57001-471
0.8 AMP
CONSUMERS

Always charge batteries according to the instructions on the Kawasaki-approved charger. Charging batteries at a rate higher than specified may ruin the battery. Charging at a high rate causes excess heat that can warp the internal plates and cause shorting. Higher-than-normal charging rates also cause the plates to shed active material, allowing deposits to accumulate which can lead to internal shorting.

Do not charge lithium-ion batteries with a lead-acid battery charger. Lead-acid battery chargers do not include the proper charging method for lithium-ion batteries and will damage them. Lithium-ion chargers approved by Kawasaki apply minimal amperage to the battery to detect its current voltage and then applies the proper charge based on returned voltage. Lithium-ion chargers contain functionality to prevent overcharging and damage to the battery.

⚠ DANGER

Batteries produce an explosive gas mixture of hydrogen and oxygen that can cause serious injury and burns if ignited. Keep the battery away from sparks and open flames during charging. When using a battery charger, connect the battery to the charger before turning on the charger. This procedure prevents sparks at the battery terminals which could ignite any battery gases.

CONVENTIONAL

Model: KLR™ 650

Activation

1. Remove filling plugs and sealing tube, discard tube.
2. Install vent hose.
3. Fill battery with electrolyte (sulfuric acid dilution with a specific gravity of 1.280).

NOTICE: Electrolyte is not included with battery. Do not use water or any other liquid to activate.

4. Let the battery stand at least one hour so the liquid can thoroughly soak the plates. Move or gently tap battery to expel any bubbles between the plates.

NOTICE: if electrolyte level drops below the upper line, refill the battery with more electrolyte before charging.



Charging

1. Charge for 3-5 hours at a current equivalent to 1/10th of the battery's rated capacity (Amp Hours). Charging the battery at a higher rate causes excess heat, which can warp the plates and permanently damage the battery.

Example: Charge at 1.4 amps for a 14 amp-hour battery.

2. Check electrolyte level during charging. If it has fallen, fill with distilled water to the upper level and charge for another hour at same rate to mix the water and acid.
3. After charging, install plugs and finger tighten.
4. Wash off any spilled acid with a water and baking soda solution, then dry.
5. Check voltage. If not at least 12.6 volts repeat charging cycle.

ABSORBED GLASS MAT (AGM)

Models: KLX®110/140, Z125 PRO, KLX®250, Versys® -X 300/650/1000LT, Ninja® 400/ZX™-6R/1000 ABS/ZX™-14R,, Concours® 14 ABS, Vulcan® 900/1700

Activation

1. Make sure that the model name of the electrolyte container matches that on the battery; the names must match.

NOTICE: Each battery comes with its own specific electrolyte container; using the wrong container will incorrectly fill the battery with electrolyte which can shorten battery life, deteriorate battery performance and cause electrolyte to spill from the battery.



2. Remove filler ports sealing sheet from battery, and strip of caps from electrolyte container. Retain strip of caps.
3. Place the electrolyte container with the six sealed cells into the filler ports of the battery. Holding the container level, evenly push it down to break the seals of all six cells. You should see air bubbles rise into each cell as the ports fill.

If there are no air bubbles or if the container cells do not empty completely, tap the container to help the electrolyte flow into the battery.

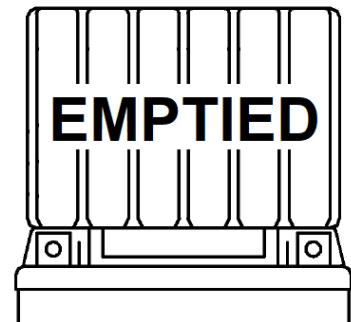
NOTICE: Do not remove the container from the battery until all electrolyte has entered the battery. Doing so can shorten the service life of the battery.

4. After the battery is filled, leave the empty electrolyte container in place and let the battery stand for a minimum of 30 minutes so that the separator mats within the cells of the battery can absorb the electrolyte.



NOTICE: Failure to allow adequate time for the electrolyte to fully saturate the separator mats can shorten the service life of the battery

5. Place the strip of caps loosely over the filler ports and press down firmly with both hands to seat the strip into the battery. Do not pound or hammer the strip of caps. When properly installed, the strip of caps will be level with the top of the battery.



Charging:

1. Place on Kawasaki approved sealed-battery charger and charge according to the charger's instructions.
2. Let battery sit for 30 minutes after initial charge, then check voltage with a voltmeter. If voltage is not at least 12.6 volts, repeat charging cycle.
3. To ensure maximum battery life and customer satisfaction, load test the battery at three times its amp-hour rating for 15 seconds. Re-check voltage and if less than 12.6 volts repeat charging cycle and load test. If still below 12.6 volts the battery is defective.

AGM - PRE-SERVICED/CHARGED

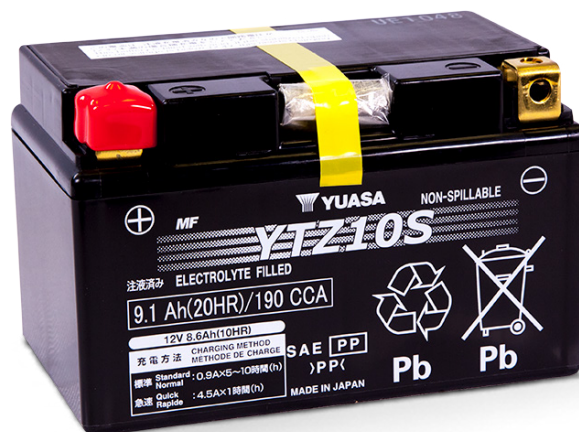
Models: Ninja® 650/ZX™ -10R/H2/H2 SX/H2R,
Vulcan® S, Z650

Preparation and Charging:

1. During Preparation for sale, check battery voltage with a volt meter to make sure it meets the minimum 12.6 volts. For inventory units, periodically check voltage and charge if below 12.6 volts.

NOTE: Because batteries discharge at different rates based on varying conditions, check voltage every month on any inventory unit.

2. Prior to delivering a purchased unit to a customer, charge the battery to 100% following the instructions on a Kawasaki-approved charger.



LITHIUM-ION

Model: KX™ 450

Activation: No activation is required for the KX450 battery.

Charging:

Due to transportation regulations, the KX450 lithium-ion battery is shipped in a state of 30% charge. All 2019 KX450 batteries must be charged to 100% on a Kawasaki approved lithium-ion charger prior to delivery to the customer.

1. Charge the battery according to the instructions on the Kawasaki-approved lithium-ion battery charger.
2. For inventory units, measure battery voltage regularly and charge if voltage is less than 12.8 volts.



TIPS TO PREVENT PREMATURE BATTERY FAILURE

- Use the correct charger
- Be sure electrolyte pack matches AGM battery
- Be sure all electrolyte drains from pack into battery
 - o A battery that is not filled with the correct amount of acid will have poor performance and a shorter life than expected, depending on the amount of acid missing from the battery. Batteries are designed to operate with a certain acid level and not enough acid will cause the batteries to dry out faster, can cause a faster discharge and lower performance.
- Allow at least 30 minutes for the electrolyte to soak into the electrode plates.
 - o The electrolyte must be fully absorbed by the plates since it helps create the chemical reaction between the positive and negative plates during charging.
 - o If the battery is rushed to charging before the electrolyte can be fully absorbed, there is a potential for acid leakage.
- Provide initial charge to 100% state of charge
 - o If not initially charged to 100%, the battery may never reach its full performance potential and may never reach 100% state of charge, leading to poor performance and shorter life.
- For any activated batteries in inventory units, provide a refresh charge every 30 days to maintain battery voltage.
 - o Batteries continuously discharge. Failure to maintain an activated battery can allow voltage to drop to levels that allow sulfation to form within the battery plates. Sulfated batteries may be damaged beyond repair and are not warrantable.
- Store batteries in a dark, cool and dry area.

HAVE A PROCESS FOR CHARGING BATTERIES FOR VEHICLE SALES

- Each dealer manages this process differently. The most important step in ensuring your customers don't leave your dealership with an improperly activated battery is that your dealership has a process for activating batteries for sold vehicles.
- Allow adequate set-up time so that the battery can be properly activated and charged prior to delivery to the customer.
- Avoid activating and charging batteries until a vehicle is sold.
- Create a rotation to refresh charge for any activated and charged batteries, whether in a vehicle or for over-the-counter replacement batteries, every 30 days.