

# OWNER'S MANUAL

Factory Activated VRLA (AGM) Maintenance Free Battery

- Usage
- Installation
- Charging
- Familiar Failure
- Caution



Read carefully this manual before use.

## 1 TO START TO USE

(1) The battery is used for motorcycle starting, lighting and ignition. All characteristics reach the following standard; JISD5302, JISC8702 and JB/T4282. This kind of battery is airtight with non-floating electrolyte inside and the acid mist is leakproof. Normally the gas produced in the battery is absorbed by itself, so the battery is maintenance free and it is unnecessary to add water. This battery can be used as a solid electric supplier of unfixed testing, emergency lighting devices, etc.

(2) The batteries leave factory in a filled and charged state. The storage period is 3 months since the date leaving the factory. In the period, the battery may be installed to use directly without recharge, but it's better to give the battery a supplementary charge if possible.

(3) If storage exceeds 3 months, the user must recharge it before installing and using.

(4) Rated voltage of supplementary charge: For 6V battery, 7.2V~7.5V; For 12V battery, 14.4V~15.0V. The electric current of the initial charge should not exceed  $0.3C_{10}$  ( $C_{10}$  means the rated capacity at 10 hour). The charge should stop when the current has been stable for 3 hours (The charging time should be between 3~6 hours).

## 2 INSTALLATION

(1) The transit and installment of the battery should be in the upright position, avoiding shaking and impact.

(2) The electrocircuit should be cut when the battery is connected with the load of the vehicles or the charger.

(3) The connection way between the battery and vehicle or charger should be secure. The positive terminal of the battery should connect with the positive one of the vehicle or charger, negative terminal with the negative one. Important: do not cross the positive and negative connections.

### CONNECT TERMINALS:



Positive red cable from ignition to Positive Post.



Negative black cable from engine or chassis to Negative Post.

(4) The battery should be fixed firmly in the correct position of vehicles or devices.

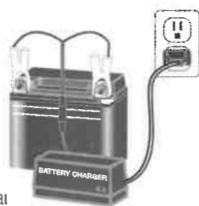
## 3 CHARGING

### (1) Floating charge

Floating charge should be under the rated voltage: for 6V battery, 6.8V~6.9V; For 12V battery, 13.5V~13.8V. The electric current of the initial charge should not exceed  $0.3XC_{10}$ . When the battery is used on the vehicle, the consumption is not much at starting time because of short continuance although the current is large, on the other hand, the battery can get charge from the vehicle when running and recover fully charged situation after a while.

### (2) Full charge

The battery should be unloads to charge fully when the discharge is too large caused by frequent starting or some other reasons but timely charge is unavailable or the charging voltage is not enough on the vehicle (The battery used in other way should also be fully charged after discharge). Full charge should be under the rated voltage: for 6V battery, 7.2V~7.5V; For 12V battery, 14.4V~15.0V. The electric current of the initial charge should not exceed  $0.3C_{10}$ . The charge should stop when the charging current has been stable for 3 hours (The charging time should be between 16~24 hours and the charging current should be 1.2~1.5 times than discharging).



## 4 COMMON FAILURE

### (1) Vehicle creepage

This problem is caused by long time usage, aging circuitry, and bare circuitry and an improper connection on the vehicle. You can test for this problem by connecting an ammeter in series with the battery. The reading should be  $< 0.02A$ , otherwise to test or change the circuitry.

### (2) Exceptional charging voltage

The charging voltage should be 13.5V~13.8V normally with idle speed and should not exceed 14.8V, otherwise it may lead to insufficient charging or possibly shortening the life of the battery.

(3) Improper connection: This may cause electric sparks or burning the terminal, so it is necessary to clean the terminals and get rid of the oxid not the connector, then tighten the nuts.

## 5 CAUTION

(1) Batteries will lose power in storage, and may need to be recharged every 3 months.

(2) The charge voltage should not exceed 15.0V during usage, otherwise it would cause losing water and influence the characters.

(3) The battery should be fully charged after a discharge. It should not be kept under the discharging situation.

(4) The connector contact points should be kept clean to avoid short circuit. The battery should keep far away from fire.

(5) Do not tip the battery or otherwise cause the battery acid to come into contact with skin or clothing.

