



ATV

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TECH EXCHANGE

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Announcement

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Unique Charging System Characteristics - YZF450

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The YFZ450 Charging System is designed to supply at low to medium engine rpm a maximum charging rate with the headlights in the ON position. Under some conditions (e.g., low speed with cooling fan running frequently or continuous high rpm riding), it may be necessary to ride with the headlights in the ON position continuously to maintain a fully charged battery.

If a customer complains of the battery discharging while riding, first check the condition of the battery.

NOTE: If improperly charged or boost charged, these compact batteries could overheat and become permanently damaged. To prevent overheating, charge the battery using a low output charger (e.g., Optimate III, ACC-OPTIM-AT-E3), and test the battery to make sure it is in good condition. Next, Check the output of the charging system.

To avoid mis-diagnosis, follow these procedures and specifications in the order below:

1. Minimum key off (battery voltage must be 12.80 VDC).
 - Voltage too low: recharge and load test the battery.
2. Measure the battery voltage at **idle**. *It should be 14.0 ~ 14.9 VDC before the cooling fan starts to cycle ON and OFF.
 - Voltage too low: check the stator coil resistance. The correct specifications are:
 - Yellow to Ground = 0.22 ~ 0.60 ohms
 - White to Ground = 0.29 ~ 0.84 ohms
 - Out of Spec: replace stator assembly

- Voltage is too high: check wire continuity (particularly the black wire which should have continuity between the Ground). The Yellow/Red wire should have continuity between the lighting coil and the regulator.

NOTE: If continuity checks good, replace the regulator assembly. (Commonly, both headlights are burned if the regulator has failed.)

- Voltage Okay:
 - Check the radiator for blockage and correct as required.
 - Advise the customer to use the key switch to turn the engine off. Only use the engine switch (on the handle bar) in an emergency.
 - Advise the customer to switch the headlights ON to increase the charging output.

NOTE: Do not check the battery voltage at 5000 rpm as explained in the Service Manual. Charging output will decrease as rpm increases. This is a normal characteristic of this model.

*Since the system normally discharges anytime the cooling fan is ON, all testing must be done before the fan starts to cycle on and off. Otherwise, the maximum measurable battery voltage will be lower than 14.0 VDC.

If you have technical tips you think other dealers could use, let us know. You'll receive credit in the Tech Exchange for the ideas we use, and we'll send you an exclusive Yamaha Tech Exchange hat as our thanks.
Send your tips to: Yamaha Motor Corporation, U.S.A., Attn: Tech Exchange, P.O. Box 6555, Cypress, CA 90630

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Introducing YFZ450 Resistor Charging Kit System - Resistor Kit for Competition Usage - YFZ450

Symptom:

As explained in the previous subject (page 1), the YFZ450 Charging System is designed to supply at low to medium engine rpm a maximum charging rate with the headlights switched to the ON position. If the headlights are removed for competition use, the unit may experience battery discharging.

Remedy:

Install the YFZ450 Resistor Charging Kit. The kit contains a ceramic resistor which takes the

place of the headlights to maximize the charging rate, plus it provides a higher temperature fan thermostitch to minimize current draw.

NOTE: This higher temperature is still low enough to not cause engine overheating.

The kit is optional for competition use and warranty does not apply. The kit was developed to allow maximum charging and reduce battery load.

Part Number	Description	Dealer Cost	Retail Cost
5TG-REGST-KT-00	YFZ450 Resistor Charging Kit	\$35.40	\$45.00

YFZ450 Resistor Kit Installation Instructions Announcement

See the attached installation instructions for the proper installation procedures for the

YFZ450 Resistor Charging Kit (P/N: 5TG-REGST-KT-00).