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TSS Bulletin

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Checking the Battery / Charging System on a Propane Buffer With a Kawasaki Engine

Option 1:

Using a multi-meter, turn the dial to the DC voltage setting. Put the black lead from the meter on the black (negative) post on the battery and the red lead from the meter on the red (positive) post on the battery. The meter will measure and display the voltage in the battery. A good battery should show at least 12 volts. If the voltage is lower than 12 volts, then the battery is weak or bad and will need to be charged or replaced.

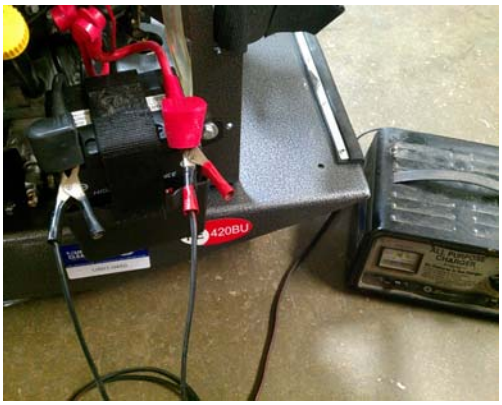
Option 2:

Similar to Option 1. Instead of the black lead from the meter on the black (negative) post of the battery, the black lead can be touched to the block of the engine or a bare metal ground on the frame.

Option 3:

Turn the key to the "Run" position. Locate the voltage regulator on the right side of the engine between the starter and the right valve cover. Pull off the red wire on the voltage regulator and insert the red lead from the meter into the wire connector. Then touch the black lead from the meter to the block of the engine or a bare metal ground on the frame. The meter will display the battery voltage. The voltage should be the same using all 3 options.

Charging the Battery



If the engine turns over slowly, then the battery is most likely weak. Use an all purpose 12 volt battery charger by attaching the black lead from the charger to the black (negative) post of the battery and the red lead from the charger to the red (positive) post of the battery. Select the highest charging option on the charger for a few minutes or the middle option for a longer charge. If the engine still turns over slow after charging, then the battery is too weak to accept a charge and will need to be replaced.

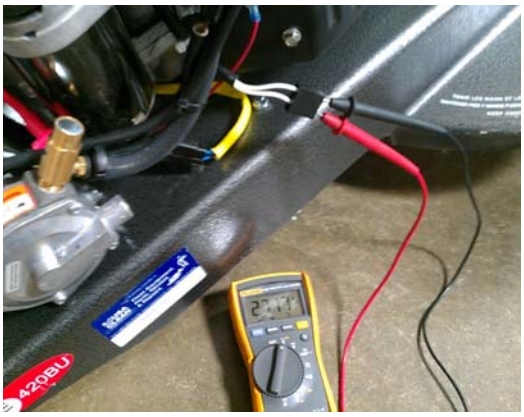
Load Testing the Battery Using a Load Tester

Using a 12 volt battery load tester, attach the black clamp from the tester to the black (negative) post on the battery and the red clamp from the tester to the red (positive) post on the battery. Once the clamps have been attached, the reading on the tester will show the battery voltage. Press the red, load switch for a few seconds. This will test the power of the battery to hold a load and simulates providing power to turn over the engine when trying to start. If the peg in the tester holds steady in the green range, then the battery is good. If the peg drops into the weak or replace range, then the battery needs to be charged or replaced.

Checking the Battery Charging Voltage

Start the engine. Using a multi-meter, turn the dial to the DC voltage setting. Put the black lead from the meter on the black (negative) post on the battery and the red lead from the meter on the red (positive) post on the battery. The meter will display the battery charging voltage. A good battery will charge at around 14 volts when the engine is running. If the meter displays 12 volts, then the battery is not charging. Make sure the black plug from the stator and the red charging wire from the harness are attached to the voltage regulator and are not damaged. If the wires are attached and in good condition, then the voltage regulator has failed and will need to be replaced.

Checking the Charging Coil Stator for Proper Voltage Output



With the engine not running, remove the black plug from the stator on the voltage regulator. Insert the black and red leads from the multi-meter into each side of the plug. Turn the dial on the multi-meter to the DC voltage setting. Start the engine. The meter will display the voltage output from the stator. The voltage output should be around 26 volts or greater with the engine running on high speed. If the voltage is lower than 26, or has no output at all, then the stator has failed and will need to be replaced.