

Technically Speaking

By Matt Vallez

The difference between a good golf car mechanic and someone who just works on golf cars for a living lies in ones ability to correctly troubleshoot. A good mechanic can diagnose the problem and fix it in a hurry. Today we will cover some basics of troubleshooting electric golf cars. For many of you this article may not be of much help because it is basic. If that's the case pass it on to someone with less experience.

For most 36-volt electric golf cars here is a short list of things to check. Always remember, block the front wheels and raise the rear wheels off the ground. Place the directional switch in forward and the key switch in the on position; depress the accelerator. If the wheels do not move proceed to step one.

- 1) Check the battery pack for full charge; check all connections related to batteries.
- 2) Does the main solenoid click? NO next step, YES to step 7.
- 3) Find main battery positive and follow the control wire (this wire will be of smaller size or higher gauge than the 6 gauge power wires) to next circuit until you reach the main solenoid.
- 4) At each circuit, either micro or key switch, check for continuity before and after switch.
- 5) Replace micro or key switch as needed.
- 6) Does the solenoid click. If no replace.
- 7) Solenoid Clicks. But the wheels still do not move. Test other main components.
- 8) Motor, check for continuity of armature to ground and fields to ground, this indicates a shorted condition.

Beyond this point there are variations based on the year and make of the golf car. If the vehicle is equipped with a solid-state speed controller, the input to the controller is the place to look first. For older cars with solid-state controllers the easiest way to check the controller is by replacing it with one that is known to be good. The newer generations of solid-state controllers have excellent testing and troubleshooting capabilities. I strongly recommend consulting the service manual before diagnosing the newer solid-state speed controllers. Follow all manufacturer procedures

and or warnings for cars equipped with electronic speed controllers. Certain controllers can be damaged if not disconnected and reconnected properly. This is especially true of all regenerative braking controllers. Please be careful.

The 48-volt Club Car is a little different in that you cannot work from battery positive until the OBC or on board computer has been bypassed. Always block the front wheels and raise the rear wheels off the ground. Place the directional switch in forward and the key switch in the on position; depress the accelerator. If the wheels do not move proceed to step one.

- 1) Check the battery pack for full charge; check all connections related to batteries.
- 2) Does the main solenoid click? NO next step.
- 3) Replace solenoid with one that is known to be good. If still no click bypass OBC.
- 4) Turn the key switch to off position and put directional selector to neutral.
- 5) Locate the yellow wire from the OBC to the Z-plug on the controller. Unplug this wire about 3" from the controller.
- 6) Connect an 18-gauge jumper wire from the yellow wire coming from Z-plug to battery negative on battery #6 (the rear driver side battery negative terminal).
- 7) Turn the key switch on. If solenoid clicks replace OBC.

At this point there are too many other factors to contend with to proceed with step-by-step instruction. The above recommendations should cover most common problems associated with electric golf cars. I know that by following these simple procedures time and effort can be saved in the troubleshooting and repair of many common problems.

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