Club Car Regen II



IC3645SH4D222C1, 222C2, 222C5, 272C1, 272C2, 272C5, 352C2, 352C5, 503C2R1, 503C2R2, 503C5R1, 503C5R2

This sheet is provided to aid in the installation of your remanufactured GE controller. Upon installation, you may encounter problems that may, or may not, be due to a faulty controller. The following steps must be taken to help diagnose a possible cart fault or faulty controller. An analog or digital volt ohm meter (VOM) will be needed to perform these checks.

WARRANTY WILL BE VOID

If These Steps are Not Performed Before Installing The Control

STEPS TO PERFORM ***BEFORE*** CONTROL INSTALLATION

CHECK MOTOR WINDINGS:

☐ Set your VOM to RESISTANCE (Ω).
☐ With your motor disconnected, measure A1 to A2. This must measure BETWEEN .3Ω and 1Ω.
☐ With your motor disconnected, measure F1 to F2. This must measure BETWEEN 1Ω and 2Ω.
☐ With your motor disconnected, measure A1 to F1. This must measure OPEN.
☐ With your motor disconnected, measure F1 to motor case. This must measure greater than 5MΩ.

CHECK MAIN SOLENOID:

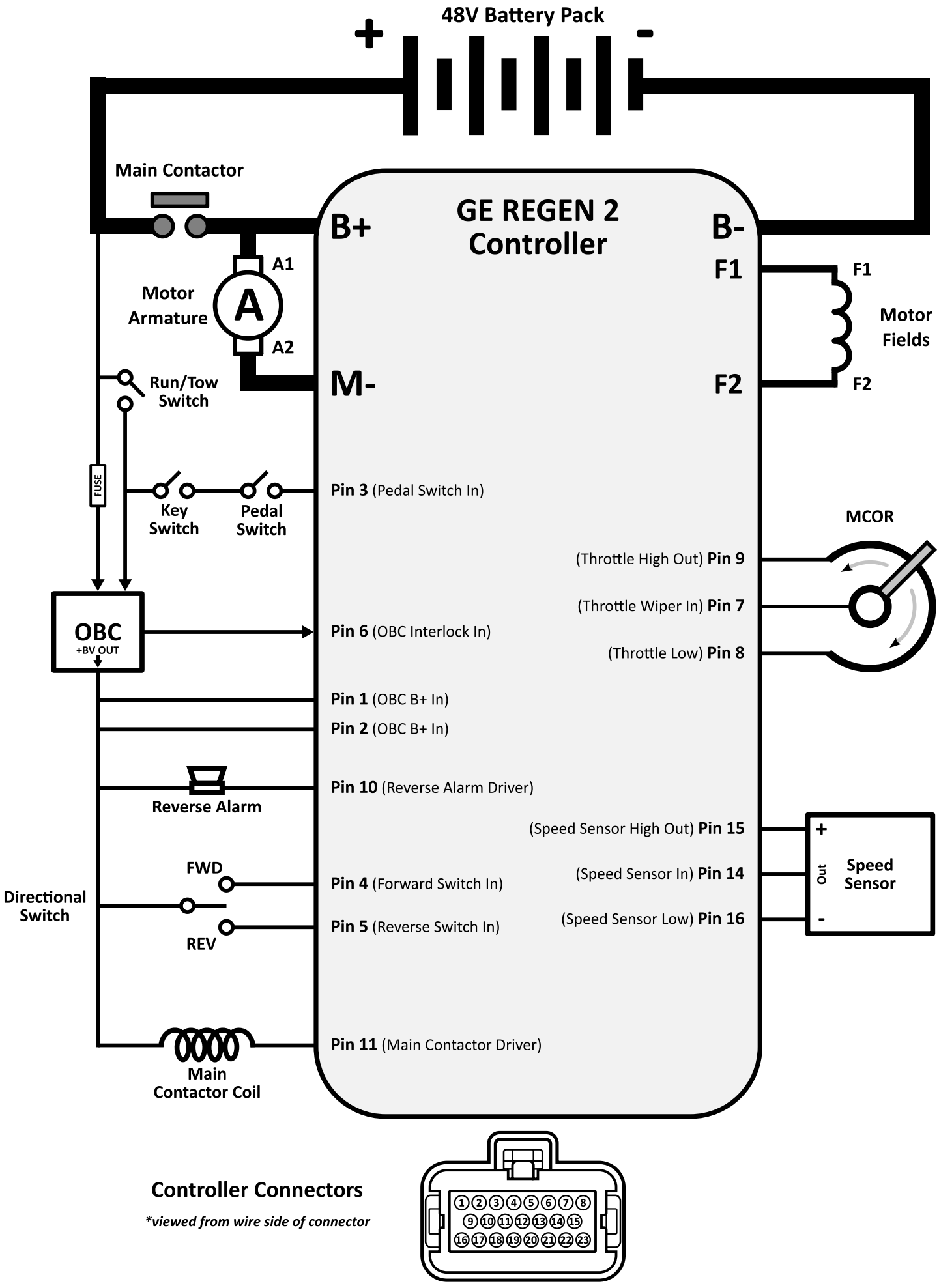
☐ Disconnect all wires from the main solenoid.
☐ Set your VOM to RESISTANCE (Ω).
☐ Measure the solenoid coil. This should measure NO LESS than 180Ω.
☐ Connect VOM leads to the main solenoid lugs.
☐ Attach jumpers from main battery positive and negative to the coil (small terminals).
☐ Meter must jump from infinity to LESS THAN .3Ω.
☐ Remove jumpers and reconnect solenoid wiring from the harness. (If suppression diode is present, the non-banded side must go to the blue wire – pin 11 from controller.)

CHECK THE CART WIRE HARNESS:

☐ Check the connectors on the wire harness for corrosion, loose, broken, burnt or missing pins.
☐ Repair or replace pins as necessary.

IF ANY OF THE ABOVE ITEMS ARE NOT WITHIN THE SPECIFICED RANGES THE CONTROLLER WILL FAIL. THESE ITEMS MUST BE CORRECTED BEFORE THE CONTROLLER IS INSTALLED OR WARRANTY WILL BE VOID.

It is recommended to replace your solenoid at the time of controller replacement. FSIP now stocks popular replacement White Rodgers solenoids for your convenience.


48V Battery Pack
+
-
Main Contactor
GE REGEN 2
Controller
B+
B-
F1
F2
M-
A1
A2
Motor
Armature
A
Motor
Fields
Run/Tow
Switch
FUSE
Key
Switch
Pedal
Switch
Pin 3 (Pedal Switch In)
MCOR
(Throttle High Out) Pin 9
(Throttle Wiper In) Pin 7
(Throttle Low) Pin 8
OBC
+BV OUT
Pin 6 (OBC Interlock In)
Pin 1 (OBC B+ In)
Pin 2 (OBC B+ In)
Pin 10 (Reverse Alarm Driver)
Reverse Alarm
(Speed Sensor High Out) Pin 15
(Speed Sensor In) Pin 14
(Speed Sensor Low) Pin 16
Speed
Sensor
Out
FWD
Directional
Switch
REV
Pin 4 (Forward Switch In)
Pin 5 (Reverse Switch In)
Pin 11 (Main Contactor Driver)
Main
Contactor Coil
Controller Connectors
*viewed from wire side of connector
1 2 3 4 5 6 7 8
9 10 11 12 13 14 15
16 17 18 19 20 21 22 23

Club Car Regen II Troubleshooting Sequence

FOR SAFETY, ALWAYS LIFT THE DRIVE WHEELS OFF THE GROUND WHEN TROUBLESHOOTING!

ALL TESTS ARE CONDUCTED WITH RUN-TOW/MAINTENANCE SWITCH IN THE RUN. ALSO, THE CONNECTOR MUST BE ATTACHED TO THE CONTROLLER WHEN MAKING THESE CHECKS. YOU WILL NEED TO 'BACK PROBE' THE PINS FROM THE WIRE SIDE OF THE CONNECTOR. USE A PAPERCLIP IF NECESSARY.

Attach voltmeter negative (-) lead to main battery – for the following tests

Use the following sequence when checking individual pins (don't skip steps). **If you find a fault, do not move on to the next step until the fault is corrected:**

☐ Measure the voltage at the main battery positive post (let's call it Pack Voltage)

☐ **Pin 6** ***With charger disconnected***, must be greater than 30V (if less than 30V this control will be dead)
- *If not, your OBC may be in sleep mode. Put your cart on charge for 1 minute, disconnect then recheck. If you still do not have more than 30V at this pin, you may have an OBC issue.*

☐ **Pin 1** Must be equal to Pack Voltage
- *If not Pack Voltage, check wiring and Fuse. Check OBC for issues.*

☐ **Pin 2** Must be equal to Pack Voltage
- *If not Pack Voltage, check wiring and Fuse. Check OBC for issues.*

☐ **Pin 4** ***With F/R Switch in Forward***, must equal Pack Voltage
- *If not Pack Voltage, check wiring and F/R Switch for an open condition.*

☐ **Pin 5** ***With F/R Switch in Reverse*** must equal Pack Voltage
- *If not Pack Voltage, check wiring and F/R Switch for an open condition.*

☐ **Pin 3** ***With Pedal Up***, must equal 0V
- *If not 0V, check wiring and Pedal Switch for a shorted condition.*

☐ **Pin 3** ***With Key Switch On and Pedal Down***, must equal Pack Voltage
- *If not Pack Voltage, check wiring, Key Switch, and Pedal Switch for an open condition.*

☐ **Pin 11** ***With Pedal Up***, must equal approximately Pack Voltage
- *If not approximately pack voltage, check solenoid coil and wiring for an open condition.*

☐ **Pin 11** ***With Pedal Down***, must equal approximately 0V
- *If not approximately 0V, check terminal for being burnt/corroded. If terminal is clean, controller may be defective.*

☐ **Pin 10** ***With Direction Switch in Reverse***, must equal approximately 0V (and beeper sounds)
- *If not approximately 0V, check connector and wire terminal for being burnt/corroded. If terminal is clean, controller may be defective.*

☐ **Pin 8** Must equal 0V
- *If not 0V, check connector and wire terminal for being burnt/corroded. If terminal is clean, controller may be defective.*

☐ **Pin 9** Must equal approximately 3.5V
- *If not approximately 3.5V, check connector and wire terminal for being burnt/corroded. If terminal is clean, controller may be defective.*

☐ **Pin 7** ***With Pedal Up***, must be approximately 3.5V
- *If not approximately 3.5V, check wiring and MCOR for open condition.*

☐ **Pin 7** ***With Pedal Fully Down***, must equal approximately 0.5V
- *If not approximately 0.5V, check wiring and MCOR for shorted condition.*

Continued on next page…

☐ **Pin 15** Must equal approximately 10V* (**Change 10V & 11.5V to 5V for 222C1 & 272C1 [early model] controls)*

- *If not approximately 10V*, remove speed sensor to see if voltage recovers to 11.5V*. If it does return, replace speed sensor, if it does not return, check wiring.*

☐ **Pin 16** Must equal approximately 0V

- *If not approximately 0V, check terminal for being burnt/corroded. If terminal is clean, controller may be defective.*

☐ **Pin 14** ***While slowly turning the drive wheel***, must toggle between 0V and approximately 4.5V

- *If not toggling, check wiring and if necessary, replace Speed Sensor and magnet.*

FSIP Electronics also offers the following Technical Support options …

Troubleshooting Manuals / Codes
www.shop.fsip.biz/en/content/technical-documents

Live Tech Support Chat
www.shop.fsip.biz

Technical Support Forum
fsip.websitetoolbox.com

PRE-INSTALLATION INSTRUCTIONS MUST BE FOLLOWED OR WARRANTY WILL BE VOID

IMPORTANT!
CLUB CAR REGEN II
TROUBLESHOOTING INFORMATION
INCLUDED IN THIS PACKET