

Service Procedure for:
eGO[®] Cycle
Helio[™] Cycle



Replace Sevcon with SC Controller

Models applicable:

EC-100 EC-200 EC-200EU EC-300

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TIME NEEDED:

60 minutes

SKILLS REQUIRED:

Mechanical, Electrical

TOOLS and EQUIPMENT REQUIRED:

Allen wrenches:

- 2mm
- 3mm
- 4mm
- 5mm
- 6mm

Open end wrenches:

- 8mm
- 10mm
- 12mm
- 13mm
- 15mm

Other tools:

PARTS REQUIRED:

- New SC Controller
- Replacement connector (desired but optional)
- 8 butt connectors for splicing wires

OVERVIEW:

This procedure describes the installation of an SC Controller in a cycle that has a SEVCON Controller

Preparation & Safety:

- Always Wear EYE protection during and Service Procedure
- Make sure the Key is REMOVED from the switch
- Make sure the AC charging cord is disconnected
- Remove all watches, rings, jewelry from your hands

PROCEDURE DESCRIPTION:

1. Follow the BATTERY REMOVAL PROCEDURE to remove batteries from the cycle.
2. OPEN the dash cavity using a 4mm hex wrench by removing the 3 bolts on either side of the dash
3. DISCONNECT the wires from the SEVCON controller (blue box on lower right of the dash cavity)
4. DISCONNECT the 8-pin connector from the controller
5. DISCONNECT motor leads on M1 post of controller
6. DISCONNECT the RED wires from the B+ post of the controller
7. DISCONNECT the BLACK wires from the B- post of the controller
8. REMOVE the SEVCON controller from the cycle by removing the 2 bolts holding it in place.
9. MOUNT the new SC controller (silver metal edges and a black plastic face) in place by securing the 2 bolts holding it in place.
10. RECONNECT the motor lead to the M- post on the SC Controller
11. RECONNECT the RED wires from the B+ post of the controller
12. RECONNECT the BLACK wires from the B- post of the controller
- 13.
14. REPLACE the full grip Magura-brand throttle with the 1/2 Grip HE-brand throttle
15. THREAD the new throttle wires through the chassis rubber grommet
- 16.
17. NEXT STEP Can be done 2 ways: 1.) with connector or 2.) hardwired
18. (the instructions for both methods follow - CHOOSE ONE method)
- 19.
20. :::::: **IF YOU HAVE A REPLACEMENT CONNECTOR** from eGO with bare wires to connect to the SC Controller 8-pin connector ::::::
21. Hold the OLD connector FROM THE CYCLE in the cycle in your hand and write down the colors of the wires and the pin# of each wire
22. CUT this connector FROM THE CYCLE by cutting each wire close to the connector - ** DO NOT CUT THE NEW CONNECTOR FROM THE NEW CONTROLLER **
23. SPLICE the REPLACEMENT CONNECTOR (from part 17) into wires #1, #2, #3,

- #4, & #8 using a butt connector
24. PIN#1 from the old connector to PIN#1 on the replacement connector
 25. PIN#2 from the old connector to PIN#2 on the replacement connector
 26. etc.
 27. NOTICE the wires from the REPLACEMENT CONNECTOR #5, #6, #7 have the new throttle connector
 28. After the throttle wire is threaded through the rubber grommet on the chassis push the 3 wire ends into the connector provided
 29. CONNECT the THROTTLE connector to the black connector found on step 27.)
 30. PLEASE NOW CONTINUE with instruction #XXXXX
 - 31.
 - 32.
 33. :::::: IF YOU **DO NOT HAVE A REPLACEMENT CONNECTOR** and will be **HARDWIRING the new controller** ::::::
 34. Hold the OLD connector FROM THE CYCLE in the cycle in your hand and write down the colors of the wires and the pin# of each wire
 35. Hold the NEW connector FROM THE CONTROLLER in the cycle in your hand and write down the colors of the wires and the pin# of each wire
 36. One by one - CUT each wire from the same PIN# and SPLICE the controller wire to the cycle wire of the same PIN# with a butt connector
 37. DO this for pins #1, #2, #3, #4, #8
 38. FIND the new throttle wires - RED, YELLOW, WHITE
 39. SPLICE throttle wire RED to PIN#5 on the controller, throttle wire YELLOW to PIN#6 on the controller, throttle wire WHITE to PIN#7 on the controller
 - 40.
 - 41.
 42. ::::::: **CONTINUE HERE** :::::::
 43. CLOSE and SECURE the dash cavity using a 4mm hex wrench by installing the 3 bolts on either side of the dash
 44. Follow the BATTERY INSTALLATION PROCEDURE to re-install the batteries from into the cycle.
 45. TEST

Testing:

1. TURN ON key and test operation
2. TEST both GO FAR and GO FAST modes

Troubleshooting:

PIN#	Deutch connector	SC controller
1	RED	BROWN
2	BLUE	YELLOW
3	GREEN	ORANGE
4	YELLOW	BLUE
5	WHITE	RED (small)
6	BROWN	YELLOW (small)
7	PURPLE	WHITE

8

ORANGE

GRAY