# **E**mpulse

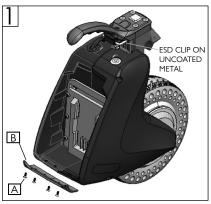
# **R90™ SHROUD REPLACEMENT**

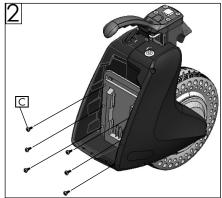


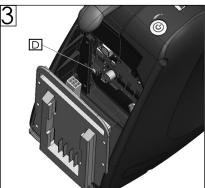
Please read these instructions carefully before beginning the assembly. Failure to understand and follow assembly instructions may result in injury to technician and/or end user and may void the warranty. If you have any questions call Sunrise Medical Technical Support at +1(800) 333-4000.

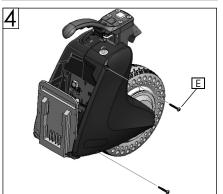
#### **Tools required**

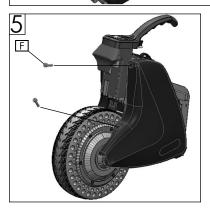
- 1. Allen wrench, sizes: 2mm, 4mm
- 2. Flat head screw driver
- 3. T-handle, sizes: T-15, T-20
- ESD (Electrostatic Discharge) Field Kit 8501 or 8507

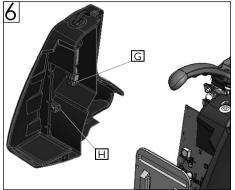












# **DEALER/TECHNICIAN WARNING**

Attention dealers and qualified technicians, do not operate or service this device without first reading the owners manual. If you do not understand the instructions and warnings in the owners manual please contact the Sunrise Medical Technical Service Department before operating and/or servicing the Empulse device. Failure to do so may result in damage and/or injury. Find more information and important warnings see the device owner's manual or at: www.SunriseMedical.com.

Before beginning the shroud replacement, ensure you heed the following warnings.

## MARNING

Minimal electronics experience is required to complete Shroud Replacement.

#### **WARNING**

Ensure your work surface is free of any build up of liquids and/or static electricity. Touch a metal surface to discharge static electricity prior to touching the PCB (Printed Circuit Board).

# **A** WARNING

Limit touching of the PCB to outer edges with as light a touch as possible, minimizing pressure on the PCB.

### A WARNING

If the PCB must remain outside of the enclosure. place it in a static protective bag until ready for reassembly.

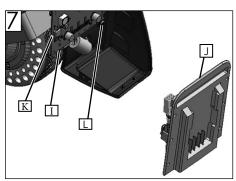
# MARNING

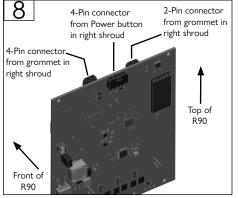
Attach the ground cord from the ESD (Electrostatic Discharge) Field Kit to the uncoated metal shown in Figure 1. Follow all instructions provided in the ESD Field Kit to ensure not to damage the PCB.

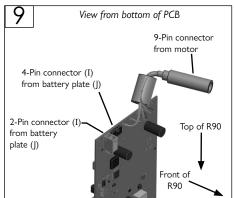
- To remove skid plate (B), use an M2 Allen wrench to remove screws (A). (Fig. 1)
- To remove battery plate hardware, use a T-20 t-handle to remove torx screws (C) and loosen the battery plate (Fig. 2)
- To loosen PCB mounting hardware, use a T-15 t-handle to loosen screw (D). (Fig 3)
- To remove hardware on side of shroud, use a T-20 t-handle to remove screws (E).
- To remove hardware on front of shroud, use a M4 Allen wrench to remove socket head screws (F). (Fig. 5)
- To remove the left shroud, disconnect the charger port harness (G). Then, remove the shroud. (Fig. 6)
  - Note: If replacing the left shroud only, reverse the order of steps 1-6 to fit the new left shroud. Before tightening the hardware ensure you line up the shroud and the PCB, fitting the PCB into the shroud slot (H). (Fig. 6)

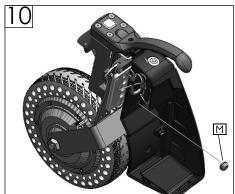


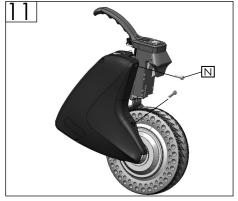
# **R90™ SHROUD REPLACEMENT**

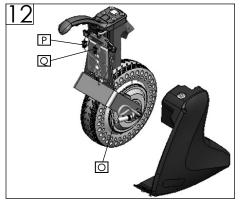


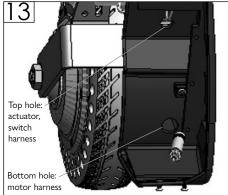












- To remove the PCB (K) from the right shroud, loosen the screw (L). (Fig. 7)
  Note: for reassembly, ensure screw is aligned with PCB mounting hole.
- 8. Disconnect the connectors from the top of the PCB (Fig. 8). Pull the 9-Pin connector from the motor (Fig. 9) through the right shroud before disconnecting. Ensure the motor harness stays on the outside until the PCB is reconnected.
- 9. Disconnect the connectors (I) from the bottom of the PCB (Fig. 9) and remove the battery plate (J) (Fig. 7).
- Remove the wire grommet (M) on the shroud using a flat head screw driver. (Fig. 10)
- To remove right shroud front hardware, use a M4 Allen wrench to remove socket head cap screws (N). (Fig. 11)
- To remove right shroud, pull the harnesses for the motor (O), the actuator (P), and switch (Q) through the shroud. (Fig. 12)
- 13. Ensure you note the orientation of the PCB shown in Fig. 8 and Fig. 9 before reinstalling the PCB. Incorrect installation will result in damage to the PCB. You will need to connect the motor connector from the PCB first. Then, push the motor connector back through the hole in the right shroud.
- 14. Connect the motor connector from the PCB first. Push the motor connector back through the hole in the right shroud.
- 15. Connect the connectors on the top of the PCB (Fig. 8). Connect the connectors from the battery plate (J) to the bottom of the PCB (Fig. 9). Reconnect the connector from the charger port (G) (Fig. 6) to the battery plate (J) (Fig. 7).
- 16. Replace the right shroud by following steps 10-12 in reverse.
- 17. Complete reassembly by following steps 1-6 in reverse.

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