5

Disassembly/Reassembly

WARNING

- Performance verification: do not place the system into operation after repair or maintenance has been performed, until all performance tests and safety tests listed in "Testing and Maintenance" on page 79 of this Service Guide have been performed. Failure to perform all tests could result in erroneous parameter readings, or patient/operator injury.

- Energized circuits are accessible with the covers open. Do not work on the base station with the covers open while the base station is connected to a monitor. Only authorized and qualified service personnel should open or disassemble the base station.

- Before attempting to open or disassemble the base station, disconnect it from the fetal monitor.

CAUTION

Observe ESD (electrostatic discharge) precautions when working within the unit.

WARNING

To avoid contaminating or infecting personnel, the environment or other equipment, make sure you disinfect and decontaminate the monitor appropriately before disposing of it in accordance with your country's laws for equipment containing electrical and electronic parts. For disposal of parts and accessories such as thermometers, where not otherwise specified, follow local regulations regarding disposal of hospital waste.

Introduction

- Remember to store all screws and parts in a safe place for later refitting.

- The disassembly sections detail the step-by-step procedures you use to access replaceable parts of the base station.

- All the CL transducers are sealed at the factory and are not repairable. Replacement CL transducers are supplied complete with both battery and belt button fitted.
  - Exception: The battery of the CL transducers can be replaced.

The Avalon CL base station consists of two major assemblies:

- The top cover assembly
- The bottom assembly

Tools Required

CAUTION

When replacing the front cover, do not over-torque the screws. Excessive torque may damage the plastic screw mountings.

You need the following tools:

Small flat-head screwdriver, 2.0-3.0 mm

Torx-head screwdriver, size T-10

Torx bit, for suitable driver, size T-10

Long-nosed pliers

Antenna cable removal tool (attached to the antenna holder at first, and later stored in the designated interlock in the bottom housing).

Disassembly Top Cover Avalon CL Base Station

Removing Top Cover Assembly CL Base Station

1   Remove CL transducers and turn the base station over.

2 Remove the screw on the cable cover first to open it.

3   Gently remove the cable by pulling the adapter from its interlock (1), pulling too hard will damage the connector. Disconnect the cable from the connector (2) located on the main PCA. The procedure is same for all connector cables (red connector, black connector, and external power supply).
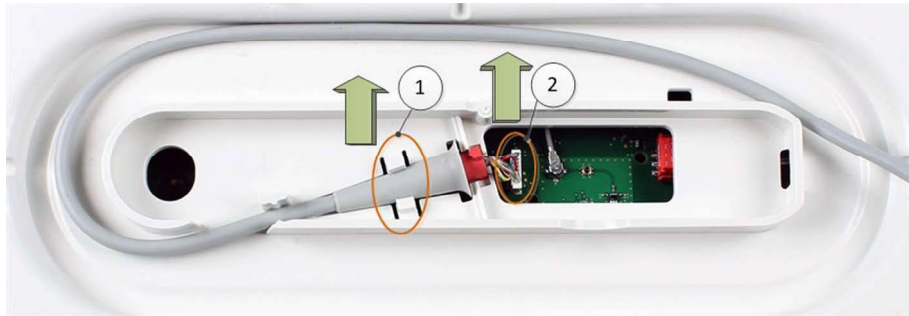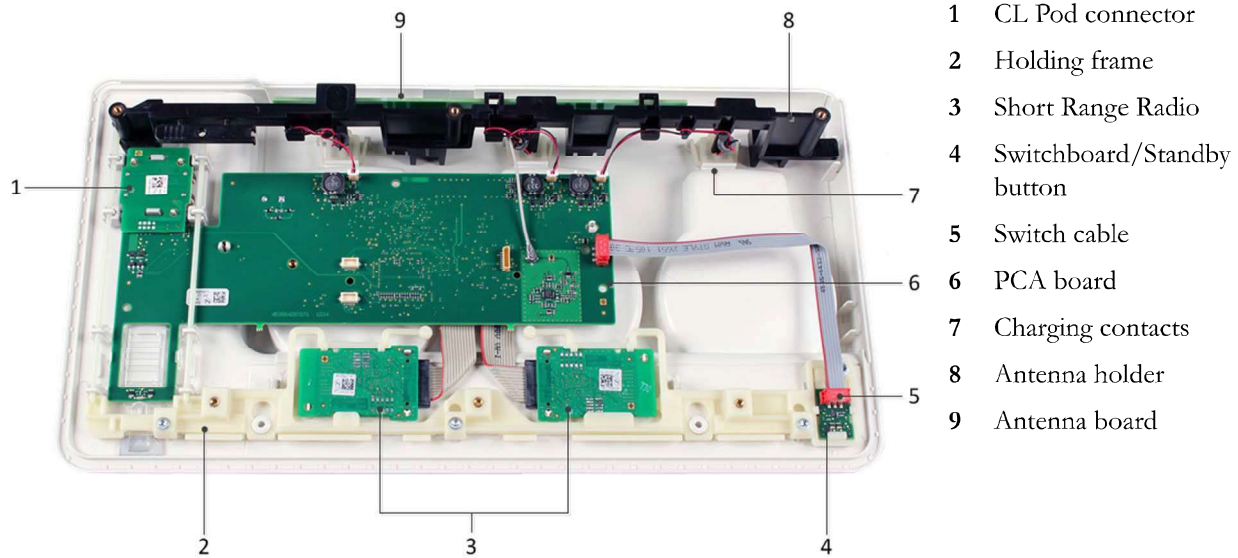

4   Remove the six screws around the bottom housing.

5   After removing the screws, turn the base station back around, and lift the top housing from the bottom housing by gently prying them apart.
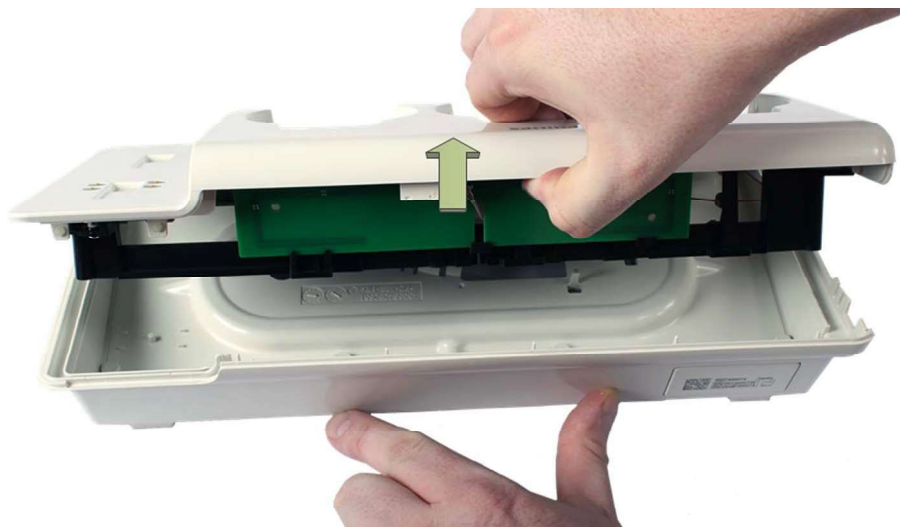
Top Cover Assembly Overview

1	CL Pod connector
2	Holding frame
3	Short Range Radio
4	Switchboard/Standby button
5	Switch cable
6	PCA board
7	Charging contacts
8	Antenna holder
9	Antenna board

Replacing Top Cover Assembly CL Base Station

1   Set the top housing of the base station gently on the bottom housing.

2   Press gently on the top housing until it is arrested on the bottom housing.

3   Turn the base station over and fasten the six screws of the bottom housing.

4   Reconnect the cable to its connector on the PCA (1).

5   Arrest the cable adapter back into its interlock (2).

6   Set the cable in the left cable guide (3).

7   Replace the cable cover by inserting the arrestor on the right in its interlock (4), before closing the cable cover.
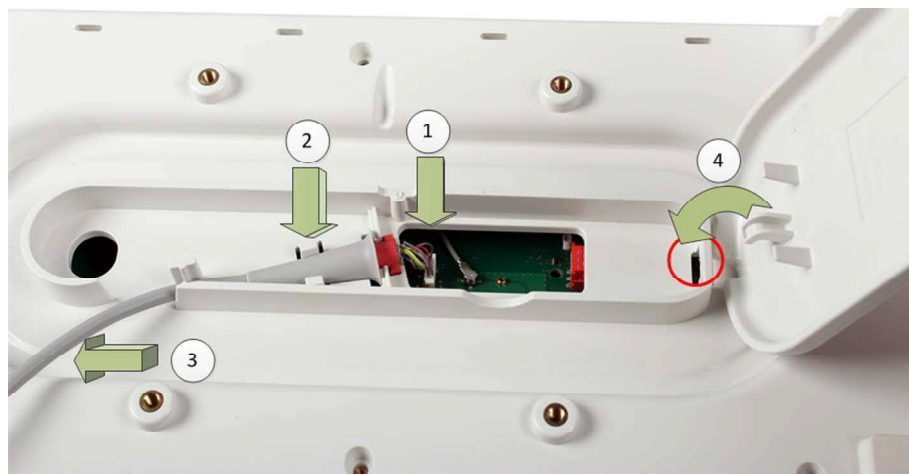
8   Fasten the cable cover screw.

Disassembly Short Range Radio Boards

Removing the Short Range Radio Boards

1   Unplug the Short Range Radio (SRR) cables from both of the Short Range boards.
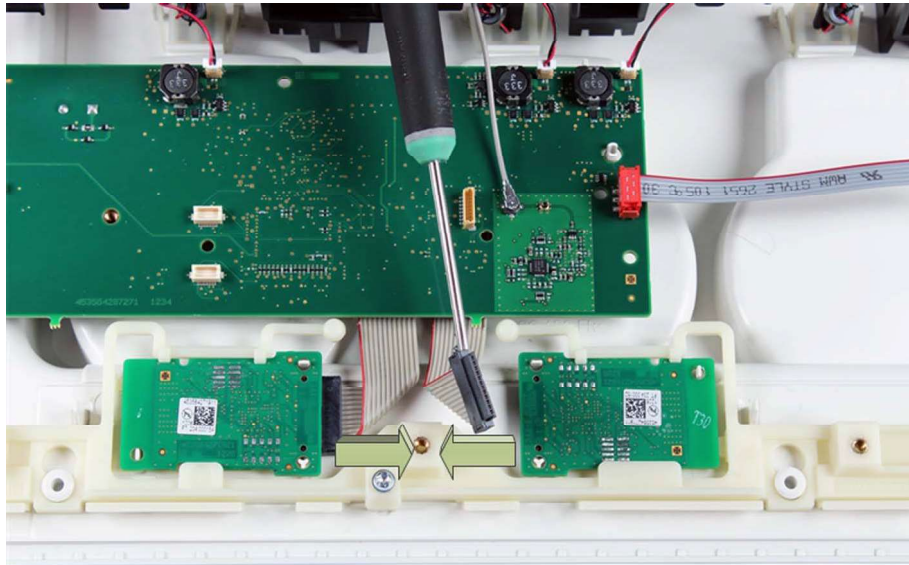
2   Lift up the top holding frame (1), and pick up the SRR board (2) releasing it from its interlock.
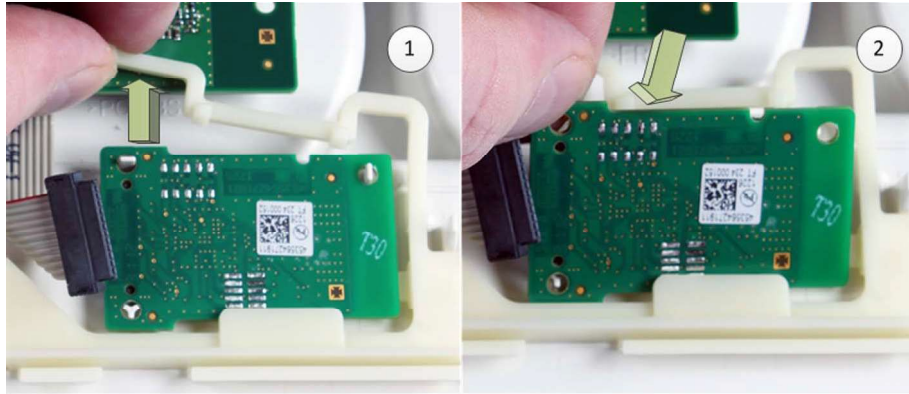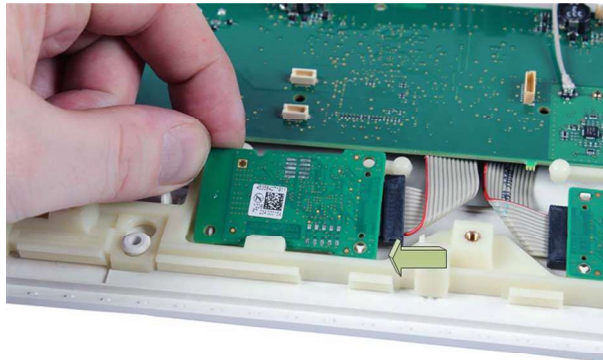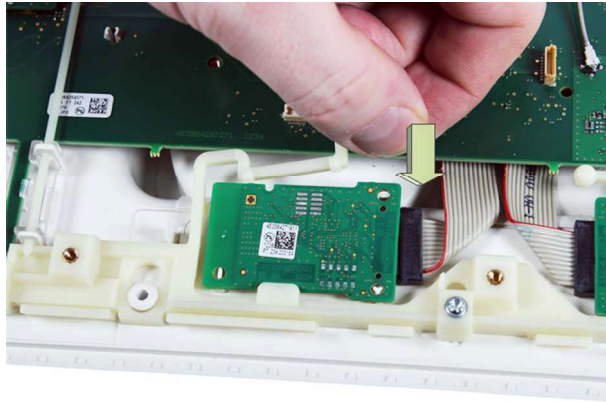

Replacing the Short Radio Boards

1   Set SRR board at a steep angle with the bottom edge first so that the guiding eye matches the arrestor.

2   Set the SRR board with its bottom edge under the holding frame.
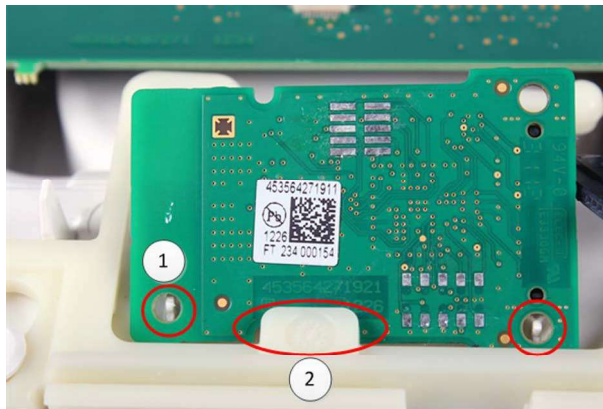
3   Reconnect the SRR cable.

4   Reattach the holding frame.

Disassembly CL Pod Device Charger

Removing CL Pod Charger

1   Remove plastic mounting pins.
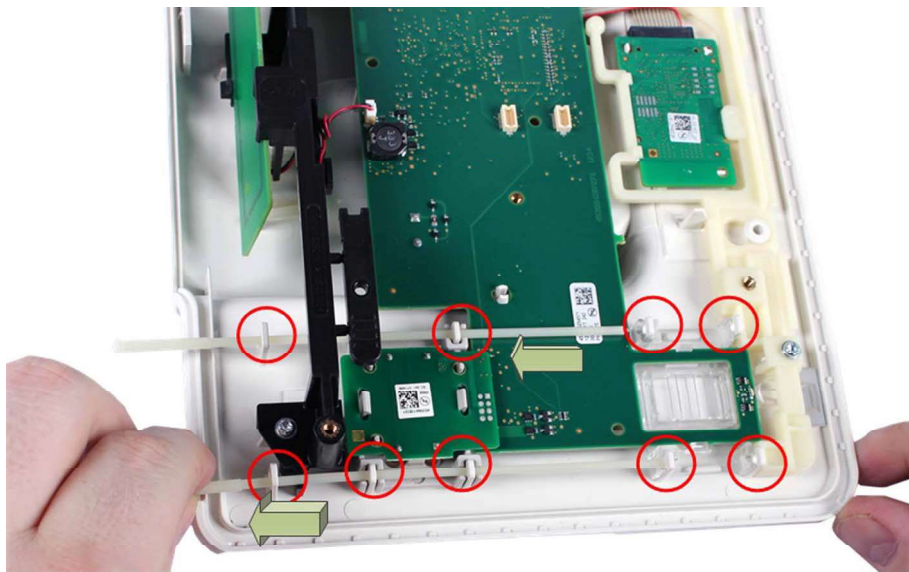
2   Lift CL Pod charger perpendicular up from its interlock.
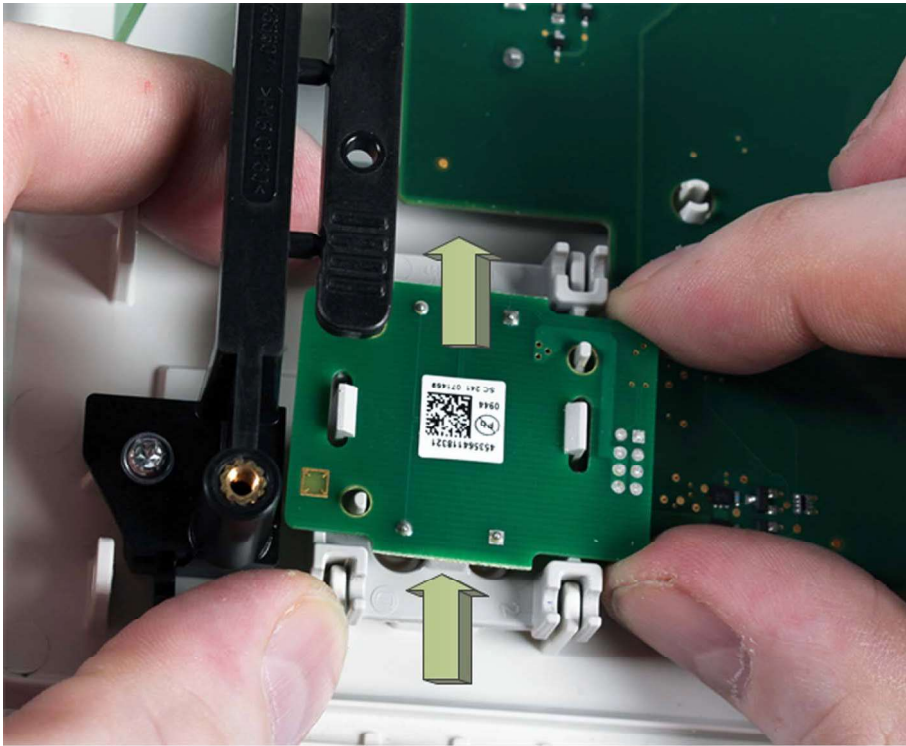
Replacing CL Pod Charger

1   Set CL Pod charger perpendicular down into its interlock.
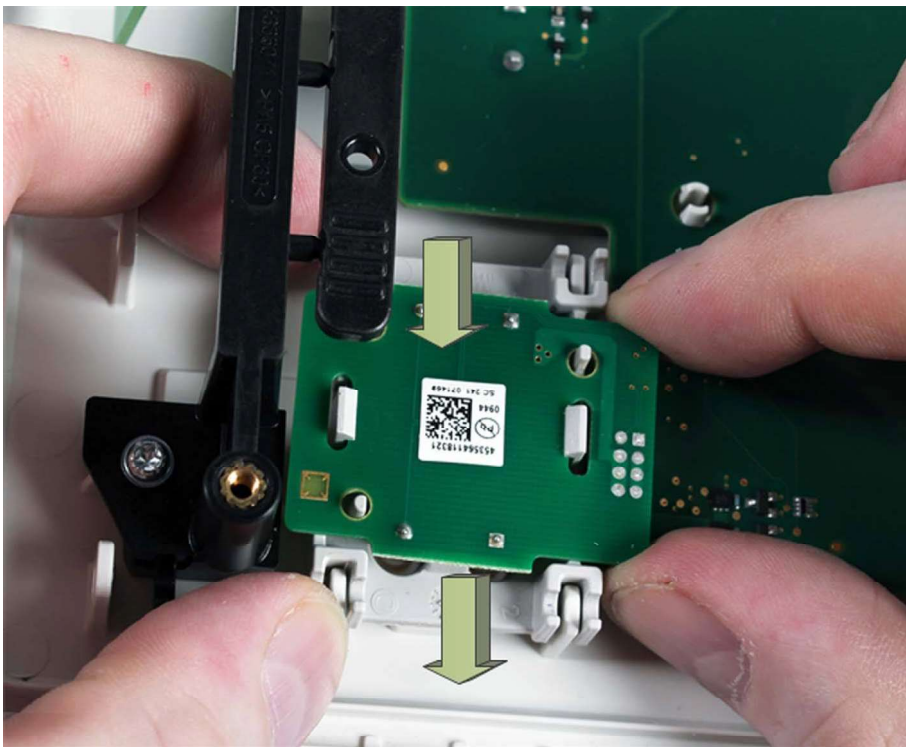
2   Replace the mounting pins.
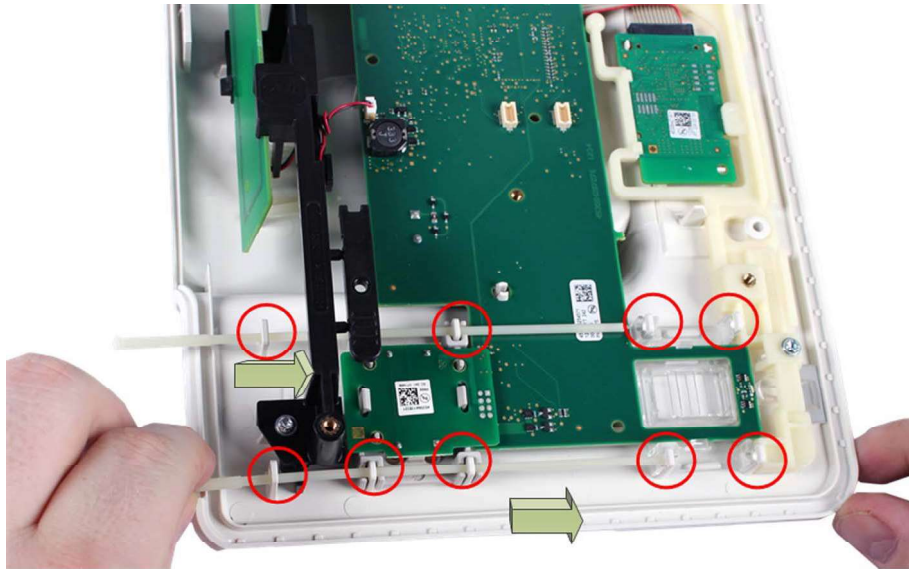
Disassembly Charging Contacts

Removing Charging Contacts

1   First you have to remove the antenna removal tool that is attached to the antenna holder.

2   Break or cut off (using a side cutter/pilot punch) the tool gently off the antenna holder.

3   With the tool unplug the antenna cable from the antenna board.

4   Place the antenna removal tool into the designated interlock in the bottom housing with the fork part facing up and bracing against the side wall from the bottom housing.

5   Remove the antenna board from the antenna holder by extracting it from the bottom interlock first.
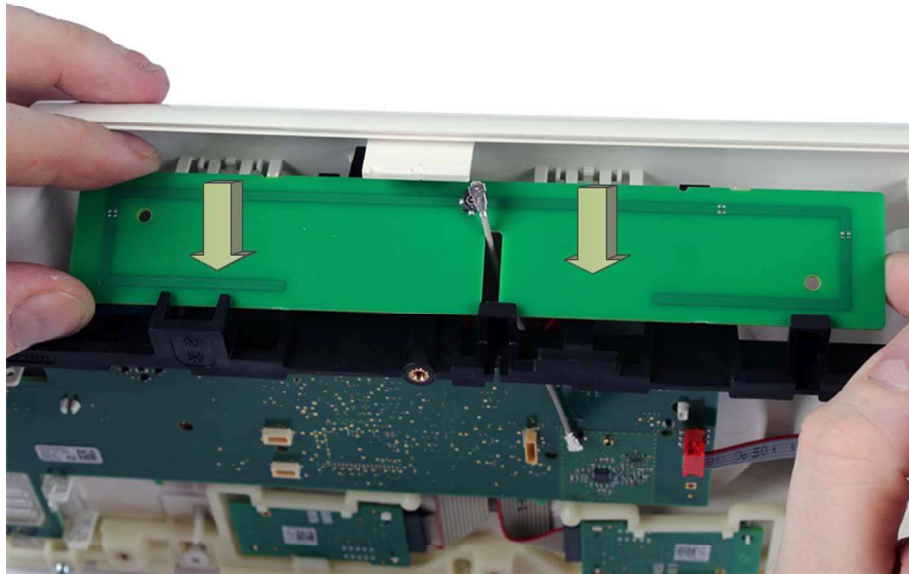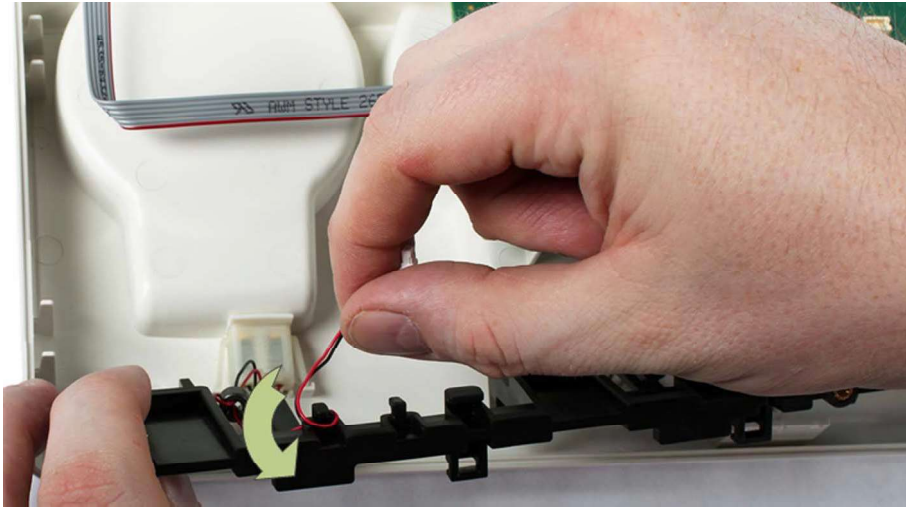

6   Remove the three screws from the antenna holder.
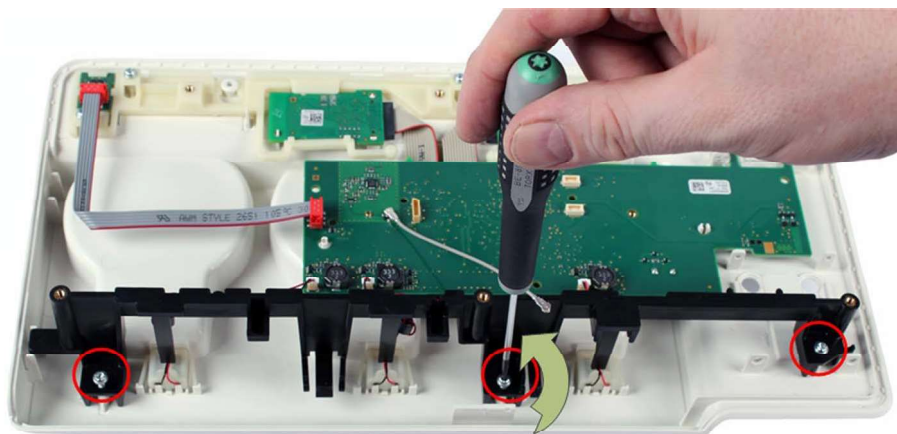
7   Unplug the three charging connectors from the PCA board.
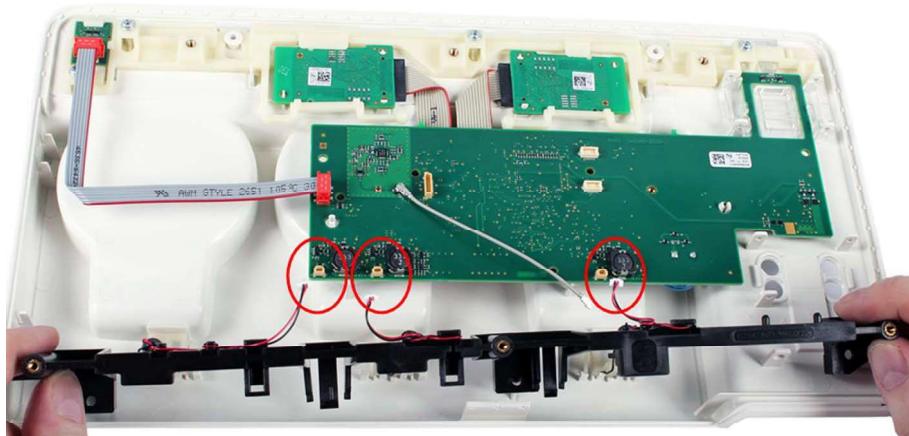
8   Unwind the cable of the connector from its mounting at the antenna holder.

9   Remove the charging contact from its interlock by pressing the springs on each side of it. Assure that the silicon sealing stays attached to the contact.
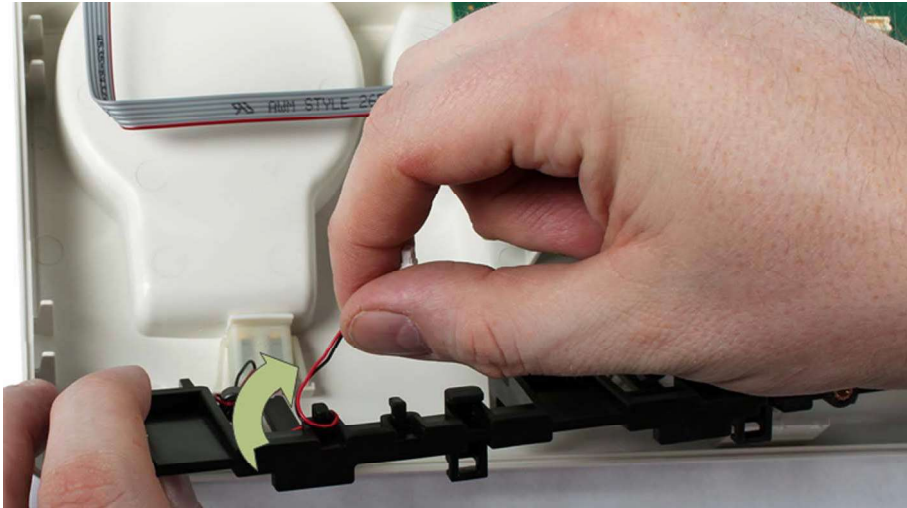

Replacing Charging Contacts

1   Insert the silicon sealing into the opening.

2   Take the new charging contact and place it in the sealing, and then in the interlock. Assure that the charging contact is placed behind the middle interlock, or you will be unable to arrest the springs in their interlocks.
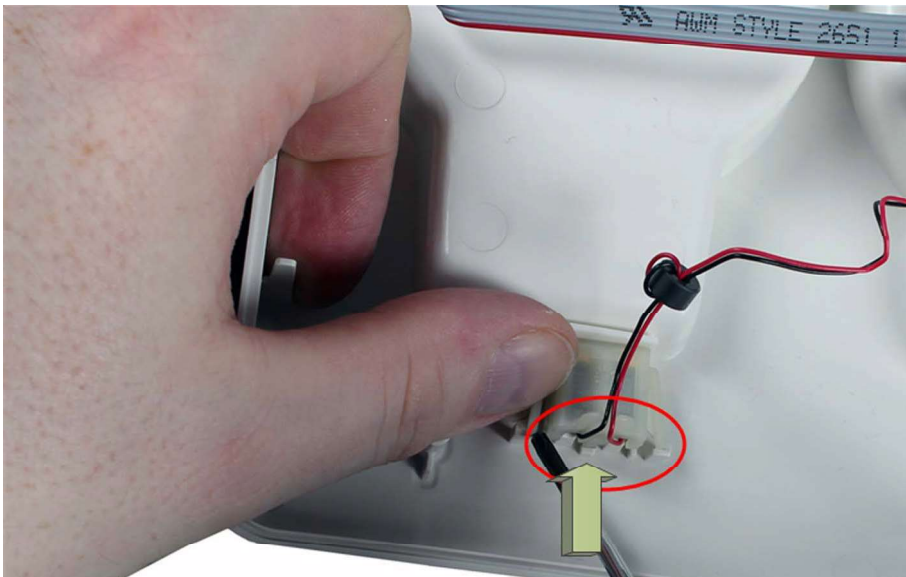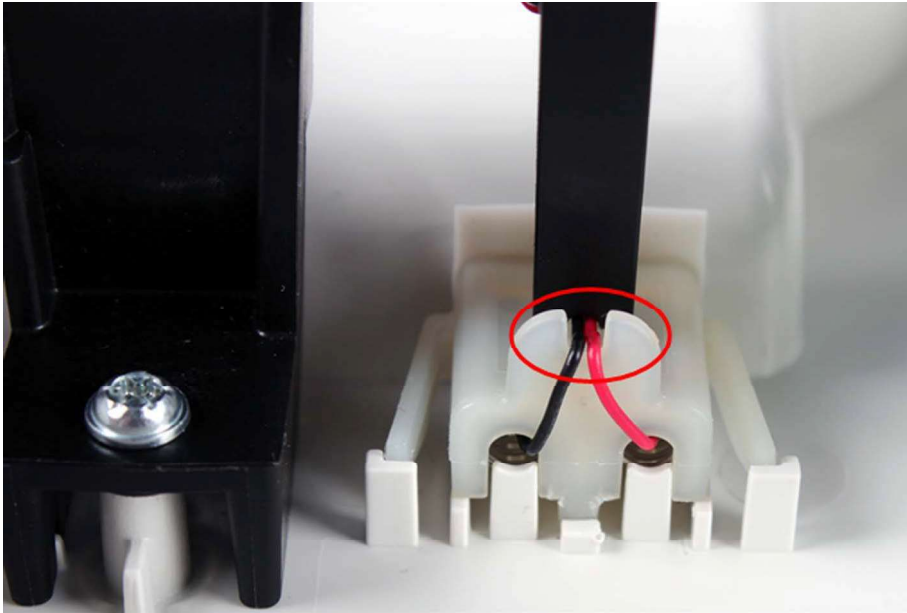
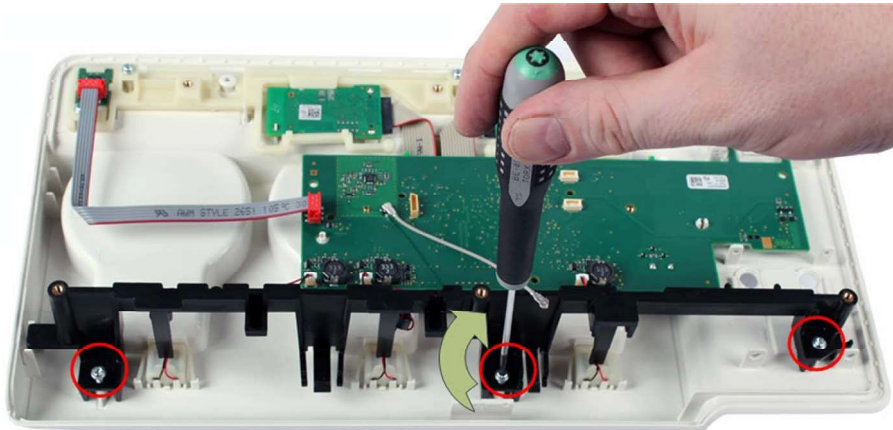**3**   Wind the charging contact cable back on its mounting.

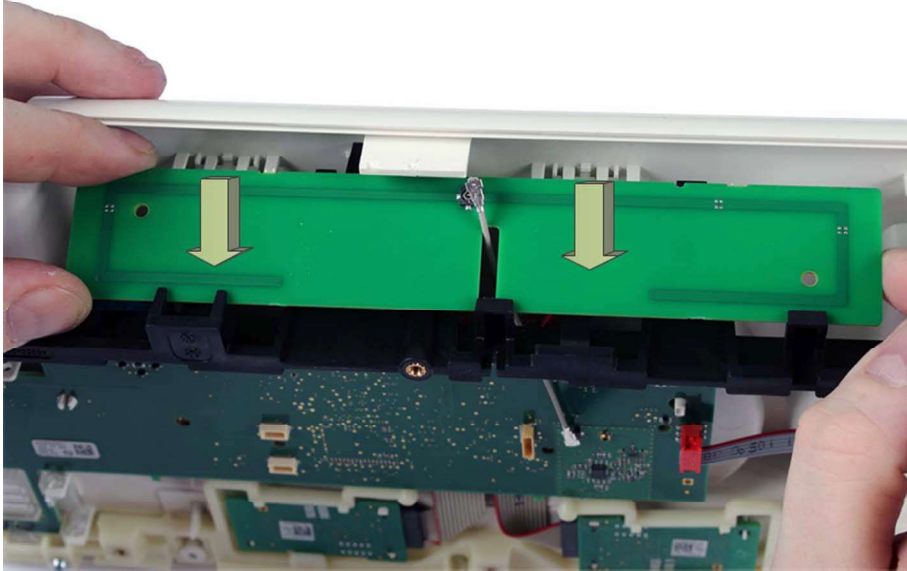**4**   Plug the charging connector back into the PCA board.
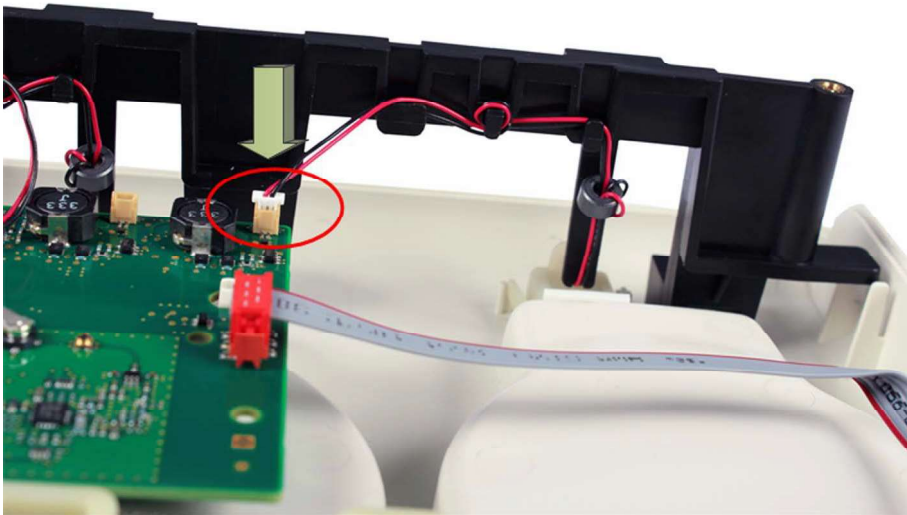
5   Assure that all charging connector cables are lined up in the cable guides of the antenna holder.

6   Fasten the three screws of the antenna holder.

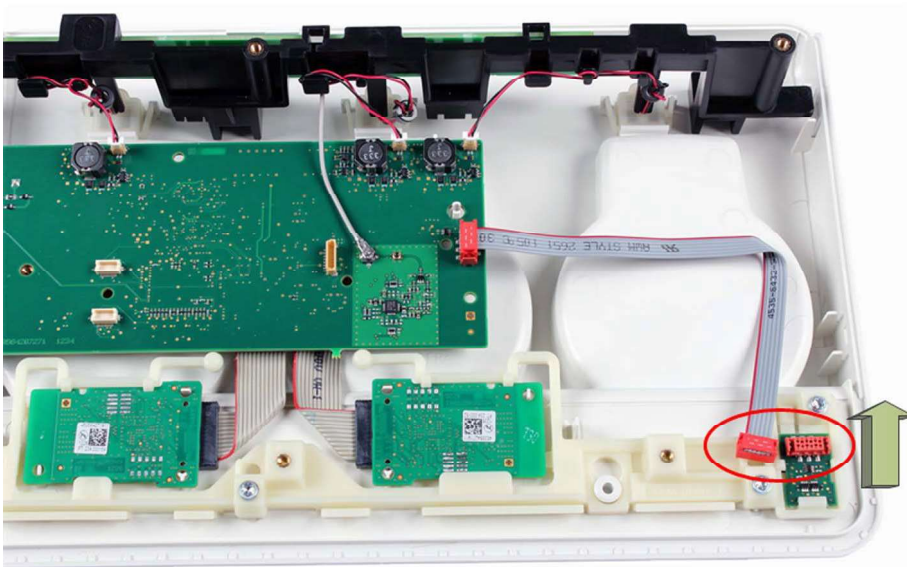7   Replace the antenna board back into its interlock at the antenna holder.

8   Reconnect the antenna cable.
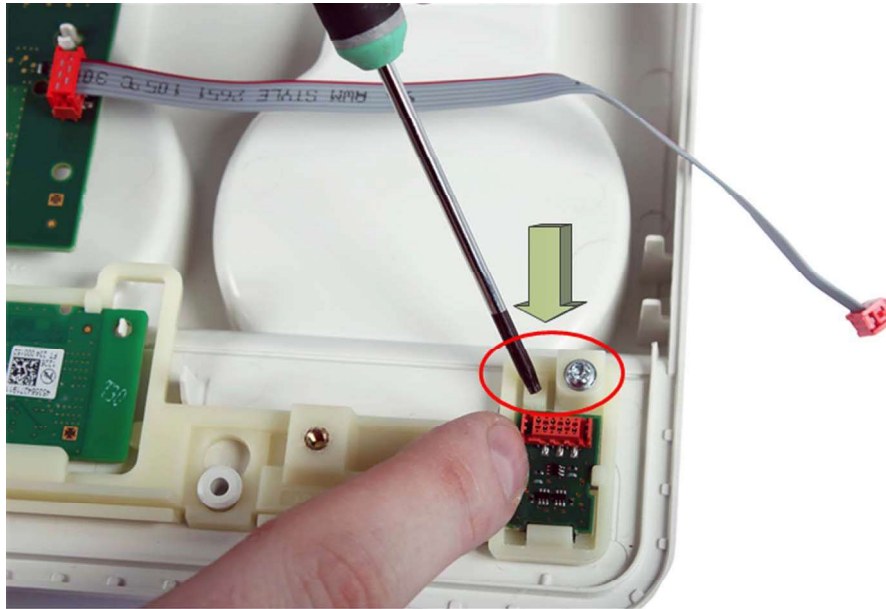
Disassembly Standby Button/Switchboard
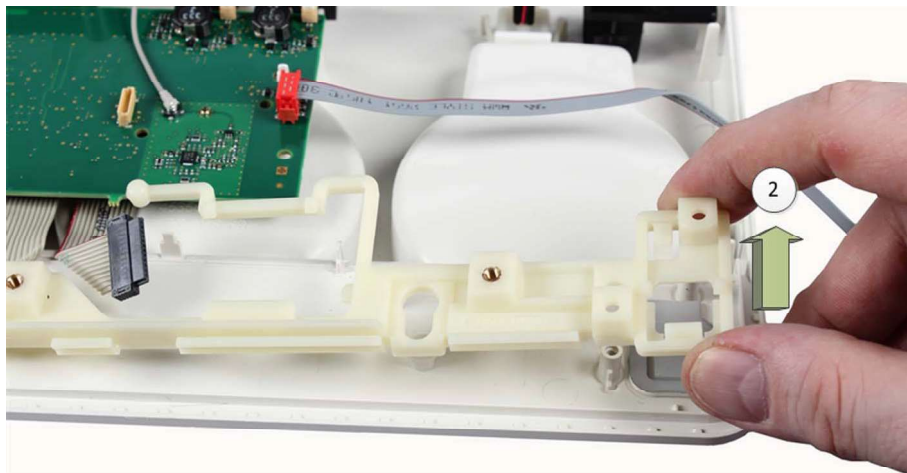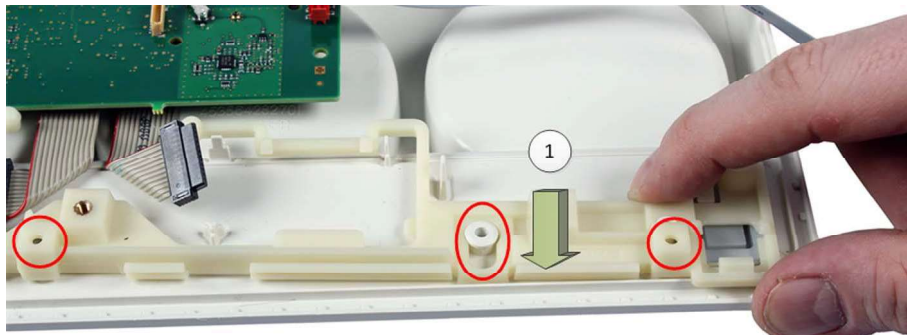
Removing Standby Button/Switchboard

1   Unplug the switch cable from the switchboard.

2   Press with the screw driver on the release catch and gently slide the switchboard from its mounting.

3   Remove the right SRR board as described in the topic "Removing the Short Range Radio Boards" on page 52.

4   Remove the three screws (1) and slide the holding frame from its position out the interlock and lift it up (2).
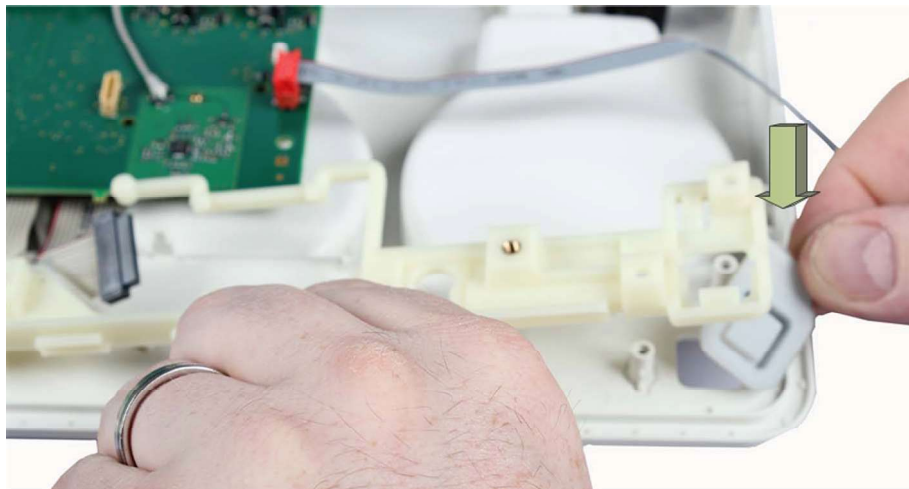
5   Remove the Standby button.
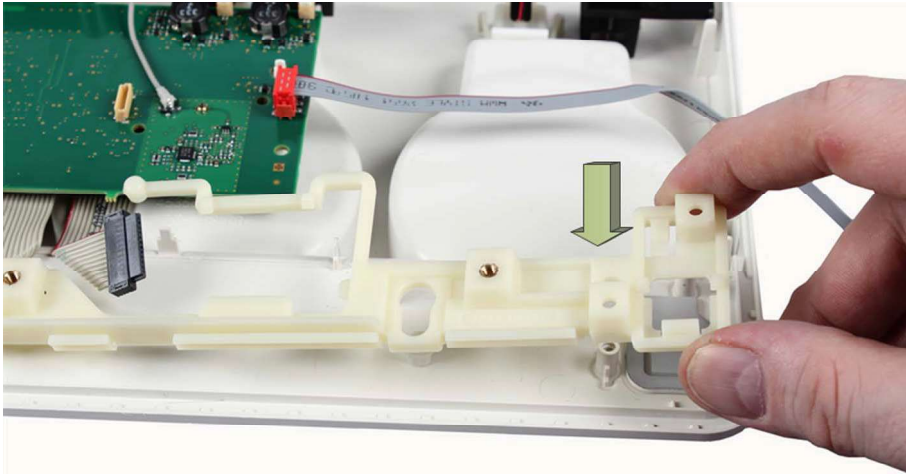

Replacing Standby Button/Switchboard

1   Replace Standby button.

NOTE

The Standby button and the light pipe are part of the support kit and are part of one silicon item. Separate the parts using scissors, and extract the part you need.

1   Slide the holding frame back in its interlock and fasten the three screws.

2   Reinsert the SRR board as described in "Replacing the Short Radio Boards" on page 53.

3   Slide/replace the switchboard in the interlock in the holding frame and reconnect the switchboard cable.
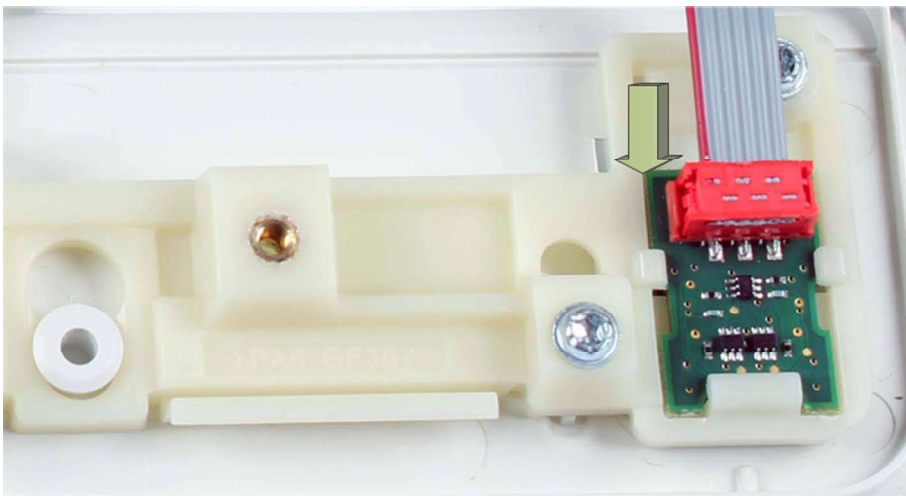
Disassembly Bottom Cover Avalon CL Base Station

Removing Bottom Cover Assembly CL Base Station

The bottom cover is removed the same way the top cover is removed "Removing Top Cover Assembly CL Base Station" on page 48.

Replacing Bottom Cover Assembly CL Base Station

1   If there is an antenna cable removal tool in the designated interlock in the old bottom cover remove it.

2   To remove the name plate gently press the arrestors of the name plate with a small flat nose pliers together as you pull it out its interlock.