Ordering Parts

The parts lists in this chapter supply enough detail for you to order replaceable parts.

If you require additional information or troubleshooting assistance, contact GE Technical Support.

To order parts, contact Service Parts at the address or telephone number listed on the "How to Reach Us..." page included with this manual.

Parts

The table below lists replaceable assemblies that can be ordered.

Item Number	Description
2031069-002	Battery door and tray
2031069-003	Battery
2031069-004	Patient Data Module mount rail and pull tab
2031069-005	Label kit Nellcor
2031069-006	Label kit Masimo
2031069-007	NBP assembly with MFLD hose
2031069-008	NBP MFLD hose, coupling, elbow only
2031069-009	Top housing
2031069-010	Main cpu (includes software CD)
2028845-001	Solar to Patient Data Module adapter
2017098-001 2017098-003 2017098-005	ePort to host interface cable, 5 ft. ePort to host interface cable, 15 ft. ePort to host interface cable, 25 ft.
2021968-001	Fixed mount adapter (Mini dock)
2030340-002	Bedside dock
2030341-001	Transport dock

Disassembly guidelines

WARNING
REPAIR TO THE FRU LEVEL—Field repairs are recommended to the field replaceable unit (FRU) only. Attempting a field repair on a pcb or a factory sealed component or assembly could jeopardize the safe and effective operation of the Patient Data Module.

NOTE

GE recommends using the new fasteners (screws, washers, etc.) provided in the FRU kits rather than re-using the old fasteners. Some fasteners are not intended to be re-used more than three times.

Take advantage of existing thread pattern cut by turning the screw counterclockwise until it drops into the existing thread pattern.

Tools required

A T10 and T6 TORX-style screwdriver and a standard set of hand tools are required for disassembly and assembly. Wearing safety glasses is recommended.

Before disassembly

Before disassembling the Patient Data Module, always do the following:

- Remove all cables.
- Remove the battery.
- Provide appropriate electrostatic discharge protection to prevent damaging the Patient Data Module. See Electrostatic discharge (ESD) precautions below for details.

Hardware precautions

Observe the following guidelines when disassembling the Patient Data Module:

- Note the positions of wires, cables and different sized screws; marking them if necessary to ensure they are replaced correctly.
- *Do not* kink, pinch, stretch, twist, or tightly fold a flex cable.

Electrostatic discharge (ESD) precautions

All external connectors of the Patient Data Module are designed with protection from ESD damage. However if the module requires service, exposed components and assemblies inside are susceptible to ESD damage. This includes human hands, non-ESD protected work stations or improperly grounded test equipment.

The following guidelines may not guaranty a 100% static-free workstation, but can greatly reduce the potential for failure of any electronic assemblies being serviced:

- Discharge any static charge you may have built up before handling semiconductors or assemblies containing semiconductors.
- A grounded, antistatic wristband (3M part number 2046 or equivalent) or heel strap should be worn at all times while handling or repairing assemblies containing semiconductors.
- Use properly grounded soldering and test equipment.
- Use a static-free work surface (3M part number 8210 or equivalent) while handling or working on assemblies containing semiconductors.

- *Do not* remove semiconductors or assemblies containing semiconductors from antistatic containers (Velo-stat bags) until absolutely necessary.
- Make sure power to an assembly is turned off before removing or inserting a semiconductor.
- *Do not* slide semiconductors or electrical/electronic assemblies across any surface.
- *Do not* touch semiconductor leads unless absolutely necessary.
- Semiconductors and electronic assemblies should be stored only in antistatic bags or boxes.
- Handle all PCB assemblies by their edges.
- *Do not* flex or twist a circuit board.

Replacement procedures

Unless otherwise stated, reassemble the Patient Data Module in reverse order of disassembly.

Battery

1. Open the battery door by gently pulling on the battery door pull tab.

862A

2. Pull the battery tray out of the Patient Data Module using the battery tray strap and remove the battery.
3. Insert the new battery with the test button facing up and the arrow pointing into the Patient Data Module.

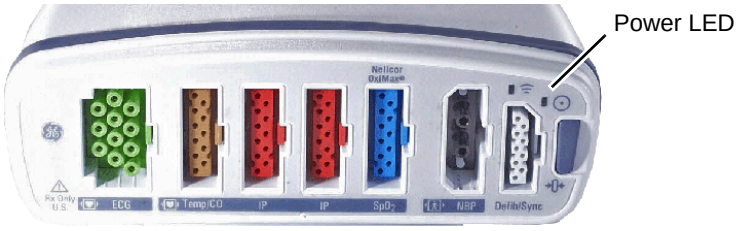
855A

4. Press the battery door closed until it seals the battery compartment.

WARNING
PHYSICAL INJURY—Make sure the battery is completely inserted and that the battery door is securely sealed.

Falling batteries could seriously or fatally injure neonatal or other vulnerable patients.

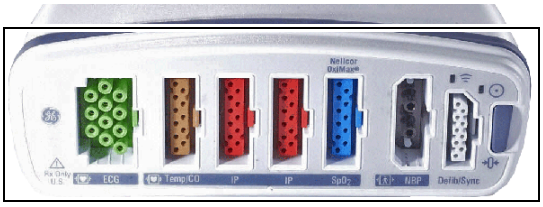
5. Press the **Power** button on the Patient Data Module.
6. Verify that the **Power** LED illuminates amber while the Patient Data Module boots up, then illuminates green.



404C

Labels

Apply labels as shown.



404C

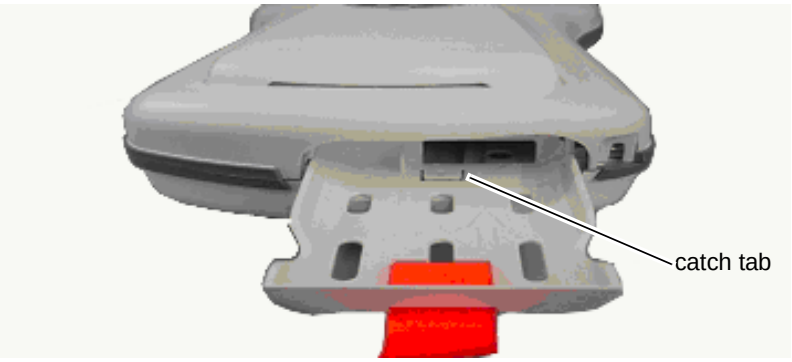
464A

Battery door and tray

1. Remove 1 screw that holds the battery door to the housing and remove the door and washer.

462A

2. Remove the battery if one is in the tray.
3. Use a flathead screw driver to lift the catch tab on the tray as you pull it out of the housing.



468A

Pull tab and mount rail

1. Remove 2 screws on the latch stop. Remove the latch stop.

463A

2. Grasp the pull tab between thumb and index finger as shown and gently pull it straight out about a 12.7 mm (half inch). Lift the assembly out of the rail slot.

469A

NOTE

In the event that the pull tab assembly comes apart when pulled from the rail slot, reassemble as shown below.

470A

471A

3. Remove 2 short screws at the rear of the mount rail and 2 long screws at the front of the mount rail.

464A

4. Unseat the mount rail by twisting it slightly. Lift mount rail off the top housing.

NOTE

When reassembling, make sure there are not gaps between the mount rail and the housing when re-seating.

Top housing

1. Remove the pull tab and mount rail per above steps.
2. Remove 4 machine screws that hold the top and bottom housing together.

464A

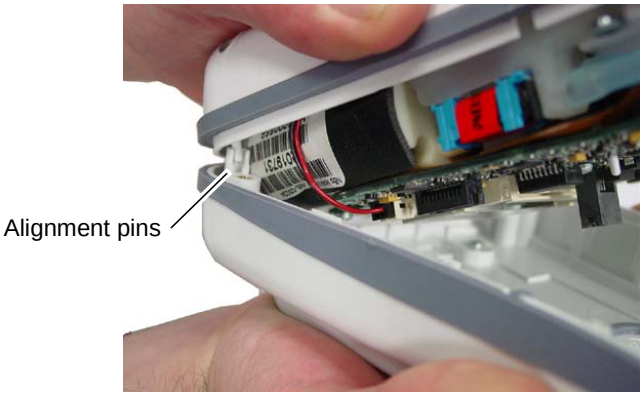
3. Turn the Patient Data Module right side up and lift off the top housing.
4. Install the top housing as follows:
   a. Inspect the gasket in the top housing to be sure it is securely placed in the groove.

472A

   b. Make sure the flex connector to the front panel board is connected securely.

473A

c. Starting at the rear of the module, position alignment pins of the top housing into the bottom housing holes, then close the housing straight down.



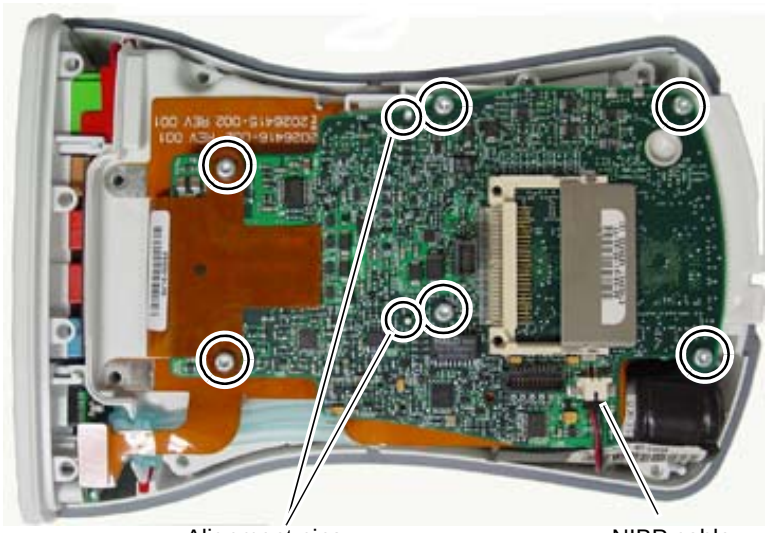
474A

d. Squeeze the top and bottom housings together to eliminate gaps. Install the screw near the Power ON button first.

475A

Main board

1. Remove the top housing per above steps.
2. Disconnect the NIBP cable from the connector without pulling on the wires.

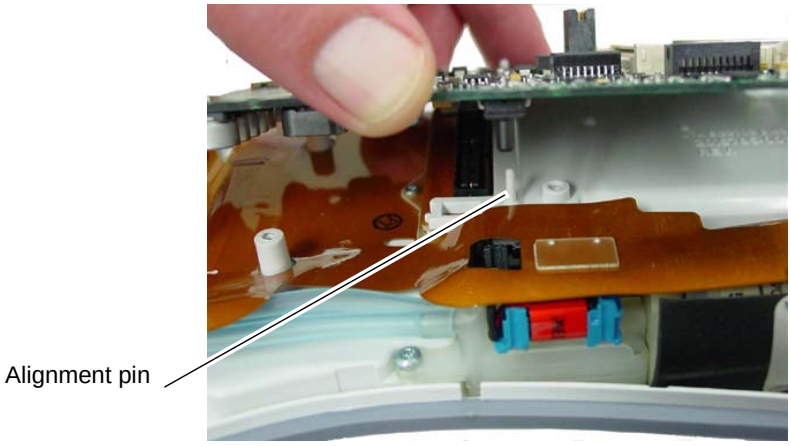


465A

3. Remove 6 screws on the main board.
4. Remove the main board.

NOTE

When installing the main board, position it into the alignment pins, (See figures above and below.) fold the flex material over the top of the board and hold in place while installing screws.



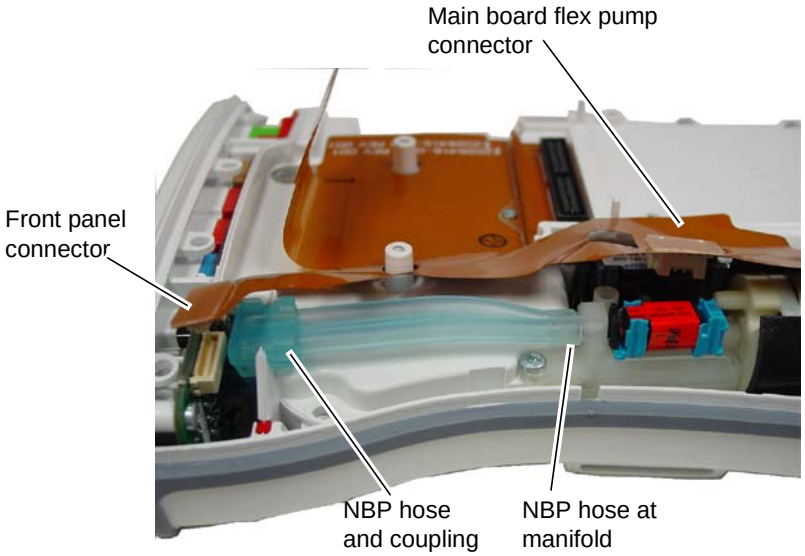
476A

5. Load new software from the CD included in the Main board FRU kit. Go to Software Transfer on page 4-9 for instructions.
6. Calibrate analog out. Go to Calibration on page 4-10 for instructions.

7. Licensing information must be re-entered. Contact GE technical support and provide the Patient Data Module serial number and MAC address to proceed. See the “How to Reach Us...” page included with this manual for contact information. Go to Licensing on page 4-9 for instructions on entering the new activation code.
8. Manufacturer’s serial number must be re-entered. Go to Asset Settings on page 4-8 for instructions on entering the manufacturer’s serial number.
9. Go to the Solar 8000M/i patient monitor service manual and complete checkout procedures.

NBP hose and coupling

1. Remove the top housing and main board per above steps.
2. Disconnect the front panel connector.



477A

3. Disconnect the main board flex pump connector.
4. Hold flex out of the way and disconnect the NBP hose from the coupling.
5. Remove hose from the manifold.

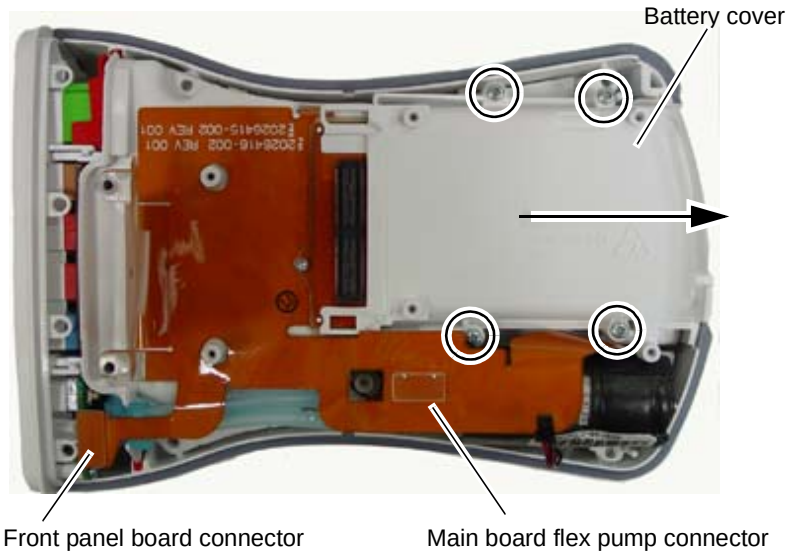
   NOTE

   When reassembling, slide hose all the way onto the manifold fitting so that the hose lays flat.

6. Go to the Solar 8000M/i patient monitor service manual and complete checkout procedures.

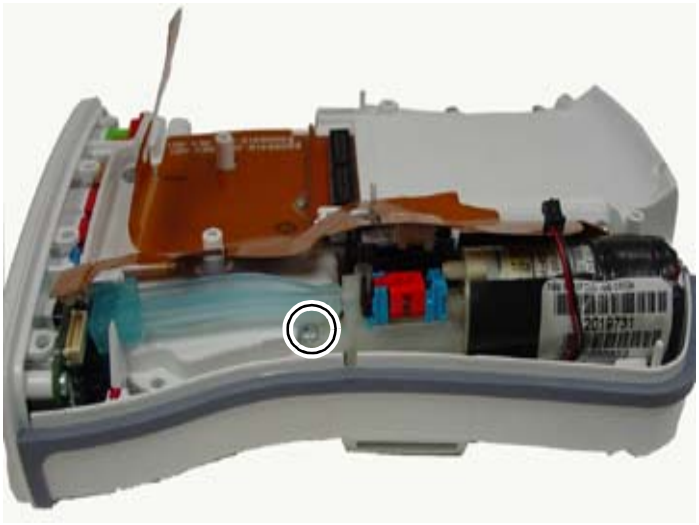
NBP assembly with manifold hose

1. Remove the top housing, main board, NBP hose and coupling per above steps.
2. Remove 4 screws from the battery cover.



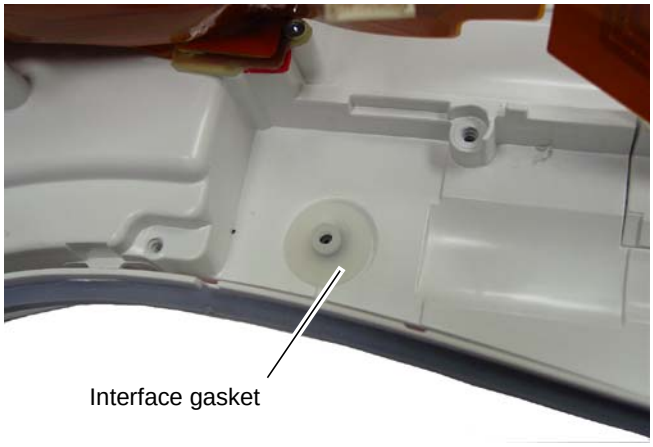
467A

3. Grasp and slide the battery cover out to the rear.
4. Remove 1 screw under the pump tube connection.



466A

5. Lift off the manifold with pump.
6. Remove the interface gasket.



478A

7. Before installing the NBP assembly with manifold:

   a. Make sure the pump and manifold are fully seated together.

   b. Make sure the gasket is in place.

   c. Position the manifold and pump in the bottom housing and carefully press to seat connector.

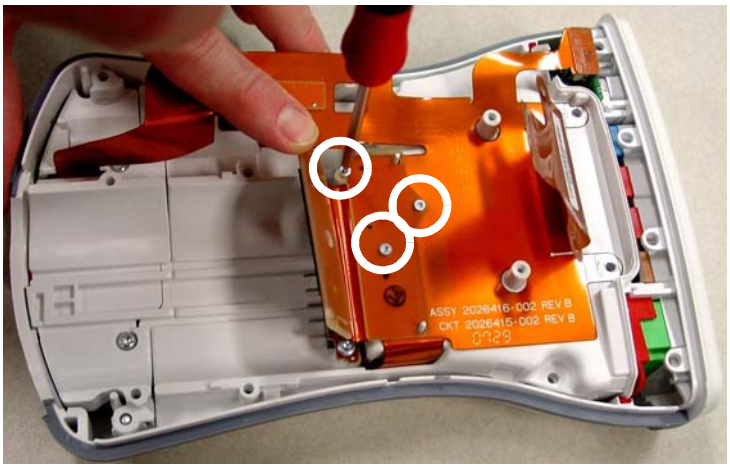
   d. Install the screw, then connect the hose. Slide hose all the way onto the manifold fitting so that the hose lays flat.

   e. Make sure the pump is resting between the positioning protrusions.

8. After replacing the NBP assembly with manifold, use the PDM Service Tool to clear all NBP statistics and perform the checkout procedures in the Solar 8000M/i service manual, Maintenance and checkout chapter.

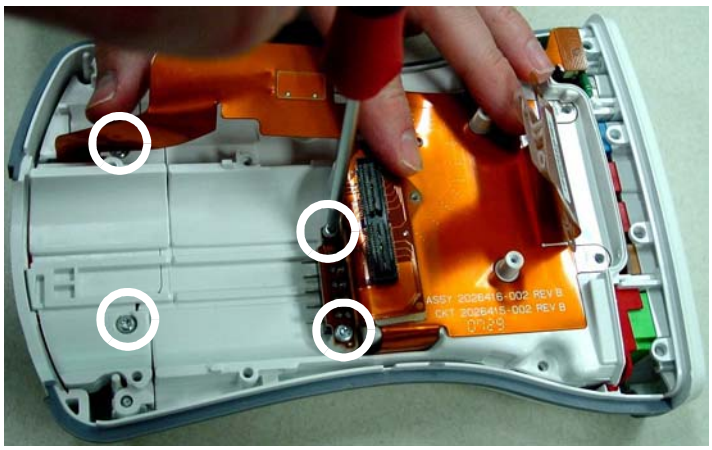
Main flex circuit assembly

1. Using a T6 screwdriver, remove the 3 screws from the flex circuit assembly.



100A

2. Remove the 2 screws holding the battery connector to the bottom housing and the 2 screws holding the DAS rear cover to the bottom housing.

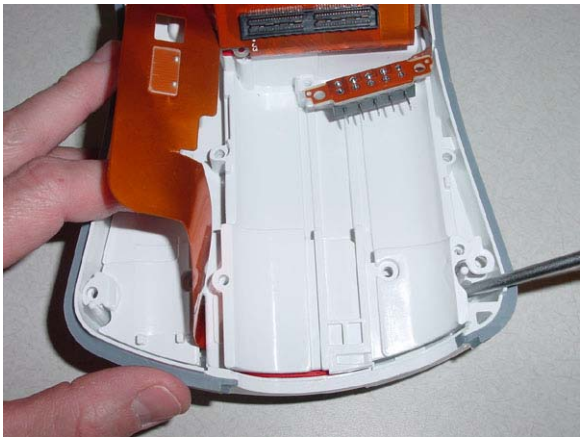


101A

3. Insert a screwdriver under the DAS rear cover, pop up and remove the DAS rear cover.

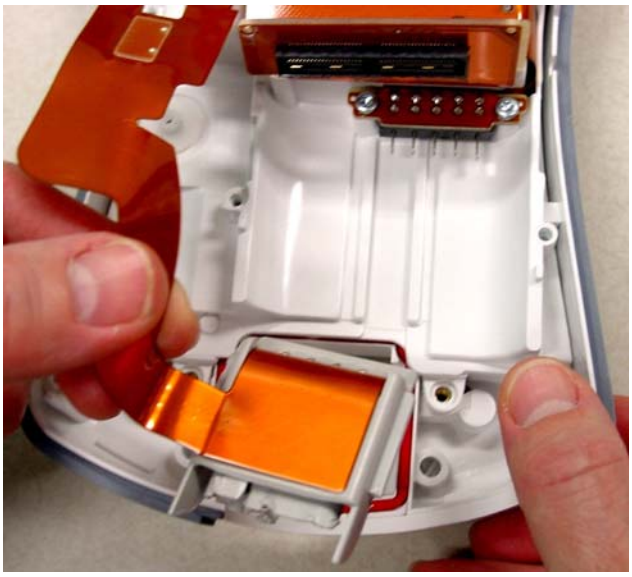
NOTE

If the DAS rear cover is damaged, replace it with the new cover provided in the FRU kit when reassembling the PDM module. See steps 8 and 9.



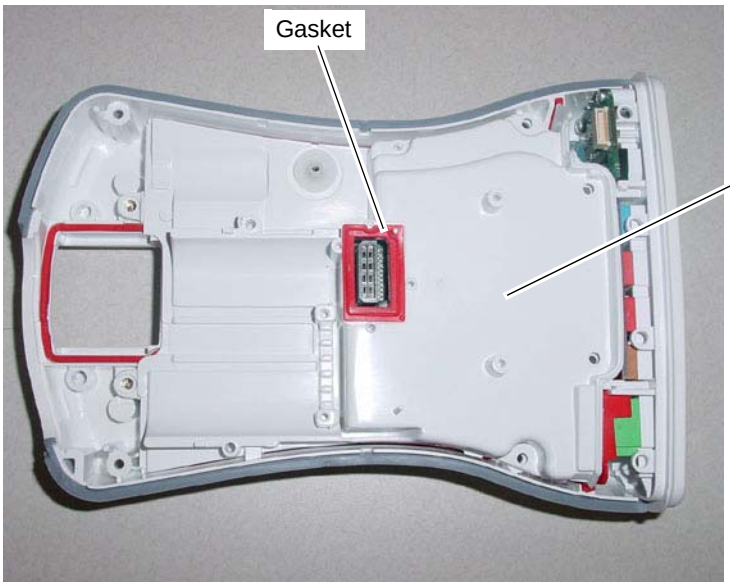
102A

4. Remove the ePort connector attached to the flex circuit assembly from the bottom housing.



103A

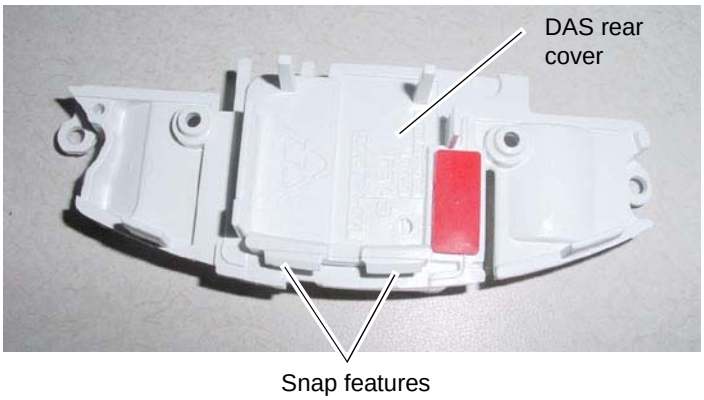
5. Remove the flex circuit assembly from the PDM module.
6. Before installing the replacement flex circuit assembly, ensure that the red gasket is in place on the DAS top cover as shown. (Gasket may remain attached to the removed flex circuit assembly.)



104A

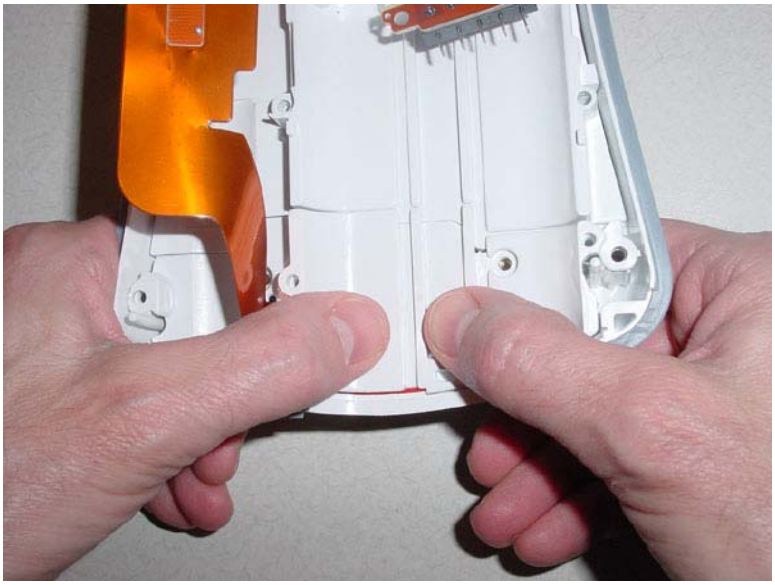
7. Replace the main flex circuit assembly in the reverse order of disassembly.

8. When replacing the DAS rear cover, ensure that the red rectangular gasket is in place as shown below. Note the 2 snap features on the DAS rear cover that secure the DAS rear cover to the bottom housing.



105A

9. Press the DAS rear cover firmly into the bottom housing until the 2 snap features snap into place as shown:



106A

10. After replacing the flex assembly, reassemble the PDM module in the reverse order listed.
11. Go to the Solar 8000M/i patient monitor service manual and complete checkout procedures.

Recommended calibration and checkout tests

After reassembling the Patient Data Module, *always* complete the electrical safety tests, checkout procedures, calibration tests, and regular maintenance procedures identified and described in this manual.

The following table indicates the recommended calibration and checkout tests to perform after corrective maintenance (FRU replacement).

Part Number	Description	Calibration Tests	Checkout Procedures	Electrical Safety Tests
2031069-002	Battery door and tray	None	None	None
2031069-003	Battery	None	None	None
2031069-004	Patient Data Module mount rail and pull tab	None	None	None
2031069-005	Label kit Nellcor	None	None	None
2031069-006	Label kit Masimo	None	None	None

Part Number	Description	Calibration Tests	Checkout Procedures	Electrical Safety Tests
2031069-007	NBP assembly with MFLD hose	“NBP calibration” in the Solar 8000M/i patient monitor service manual	ECG, respiration, invasive blood pressure, temperature, Masimo or Nellcor OxiMax SpO2 (depending on the PDM SpO2 type), and defib sync/analog output tests in the “Parameter tests” section of the Solar 8000M/i patient monitor service manual.	Complete electrical safety tests in the Solar 8000M/i patient monitor service manual.
2031069-008	NBP MFLD hose, coupling, elbow only	“NBP calibration” in the Solar 8000M/i patient monitor service manual	ECG, respiration, invasive blood pressure, temperature, Masimo or Nellcor OxiMax SpO2 (depending on the PDM SpO2 type), and defib sync/analog output tests in the “Parameter tests” section of the Solar 8000M/i patient monitor service manual.	Complete electrical safety tests in the Solar 8000M/i patient monitor service manual.
2031069-009	Top housing	None	None	Complete electrical safety tests in the Solar 8000M/i patient monitor service manual.
2031069-010	Main CPU (includes software CD)	“NBP calibration” in the Solar 8000M/i patient monitor service manual	ECG, respiration, invasive blood pressure, temperature, Masimo or Nellcor OxiMax SpO2 (depending on the PDM SpO2 type), and defib sync/analog output tests in the “Parameter tests” section of the Solar 8000M/i patient monitor service manual.	Complete electrical safety tests in the Solar 8000M/i patient monitor service manual.
2031069-013	Main Flex Assembly	“NBP calibration” in the Solar 8000M/i patient monitor service manual	ECG, respiration, invasive blood pressure, temperature, Masimo or Nellcor OxiMax SpO2 (depending on the PDM SpO2 type), and defib sync/analog output tests in the “Parameter tests” section of the Solar 8000M/i patient monitor service manual.	Complete electrical safety tests in the Solar 8000M/i patient monitor service manual.
2028845-001	Solar to Patient Data Module adapter	None	None	None
2017098-001	ePort to host interface cable, 5 ft	None	None	None
2017098-003	ePort to host interface cable, 15 ft	None	None	None
2017098-005	ePort to host interface cable, 25 ft	None	None	None
2021968-001	Fixed mount adapter (mini dock)	None	None	None

Part Number	Description	Calibration Tests	Checkout Procedures	Electrical Safety Tests
2030340-001	Bedside dock	None	None	None
2030341-001	Transport dock	None	None	None