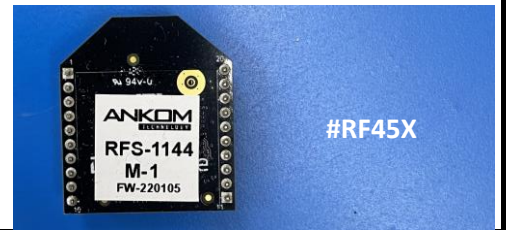
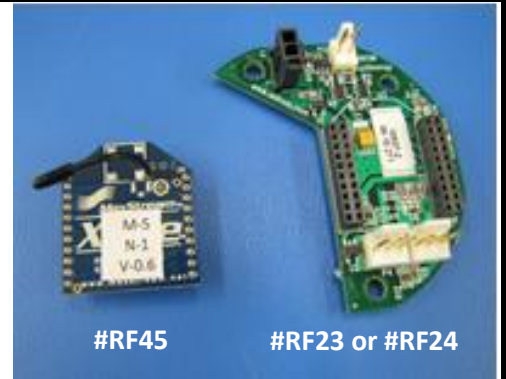


This Service Procedure helps facilitate the replacement of a circuit board and/or chip in an #RF1, #RF1X, or #RF5, #RF5X module when the circuit board or chip is suspect or failing.

1. To replace the circuit board and/or RF chip, you should have received a replacement circuit board (Part #: RF23 or RF24), and/or a RF chip (Part #: RF45 or RF45X). Reference the images at right to identify.



2. Open the #RF1/RF1X or #RF5/RF5X module by removing the red lid, followed by removing the battery to allow for easy access to the other components.



- 2.1 **To remove the circuit board or the circuit board and chip, continue onto step 3. To remove the chip, skip to step 4.**

**3. Circuit Board and Chip Removal**

Gen 3 module users do not need to remove the temperature sensor.

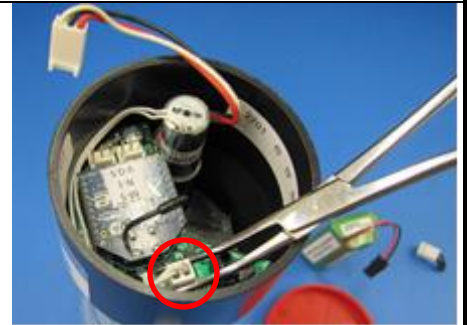
**Note:** If your module has an embedded temperature sensor, skip this step.



- 3.1. Disconnect the three-wire pressure sensor connector from the circuit board as shown.



- 3.2. For RF1/RF1X Modules disconnect the two-wire solenoid connector from the circuit board.
- Note:** RF5/RF5X Zero modules will not have this connector, so this step may be skipped if the circuit board and chip are being replaced on an RF5/RF5X Zero module.



- 3.3. With all the connectors removed from the circuit board remove the two screws holding the circuit board in the housing, as shown in image right.



- 3.4. Remove the old circuit board and chip and install the replacement components.



- 3.5. Repeat steps 3.4 through 3 in reverse order, screwing the circuit board back in place, reconnecting the two-wire solenoid connector, the three-wire pressure sensor connector, and the temperature sensor.

Set the battery back in place, but do not plug in until ready for use. The reassembled module should appear as shown.

The module is now ready to be tested according to **Service Procedure RFS001 Module Pressure Testing**.



**4. Chip Removal**

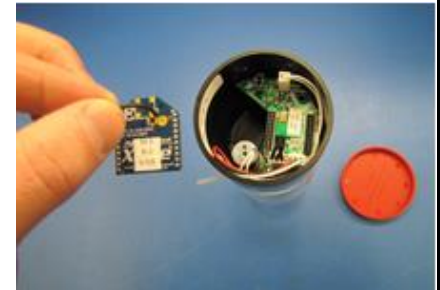
Lift gently on the underside of the front edge of the chip near the antenna until the front edge lifts slightly from the circuit board.



4.1. Lift gently on the bottom left corner of the chip until the corner lifts slightly from the circuit board.



4.2. At this point, the chip should be dislodged enough from the circuit board that you should be able to lift the chip from the circuit board by lifting gently on the antenna. If the chip is still snug in the circuit board, repeat steps 4 and 4.1, and try lifting on other sides of the chip.



**The #RF45X does not have an antenna. In this case, the sides of the #RF45X can be wiggled back and forth until the #RF45X pops out.**

**Note:** Pulling too hard may break the antenna from the chip.

4.3. Insert the new chip onto the circuit board so both rows of pins on the back of the chip connect into the outer rows of holes in the two rows of black sockets on the circuit board.

Be sure that each pin has a hole to mate with, and that the bottom edge of the board is seated firmly and level.

Press firmly on top of both rows of pins as depicted to make sure the chip seats in the circuit board properly.



4.4. Reassembled module should appear as shown.

The module is now ready to be tested according to **RF Service Procedure RFS001 Module Pressure Testing.**

