# 1. Replacing the NXIC Battery Board

The purpose of this Application Note is to guide the user in the replacement of the NXIC Battery Board.

## 2. CONTENTS OF PACKAGE

- One - NXIC Battery Board TRDI Part Number C176-172 Rev 1B.
- This Application Note.

## 3. REMOVING THE ELECTRONICS

Refer to the NXIC manual section 6 for more information.

To remove the electronics from the housing first remove the Connector end cap, and unplug the connectors. Then remove the Sensor end cap:

1. Using a 3/8-inch hex nut driver loosen the self-locking nut on the band clamp securing the end cap as shown in Figure 1.

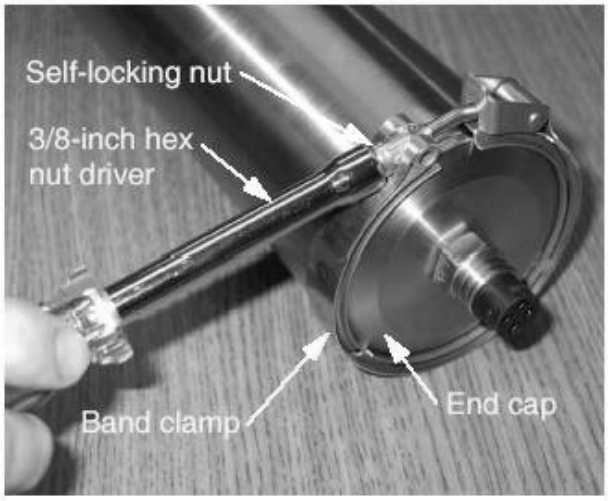


**Figure 1: Loosening the Self-Locking Nut on the Band Clamp**


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2. Release the band clamp catch as shown in Figure 2, and then remove the bank clamp by spreading the band slightly and sliding it over the end cap.

**Caution:** Do not use a sharp metallic object, such as a screwdriver or putty knife, to pry open the end cap as damage to the end cap, housing or O-ring could occur.

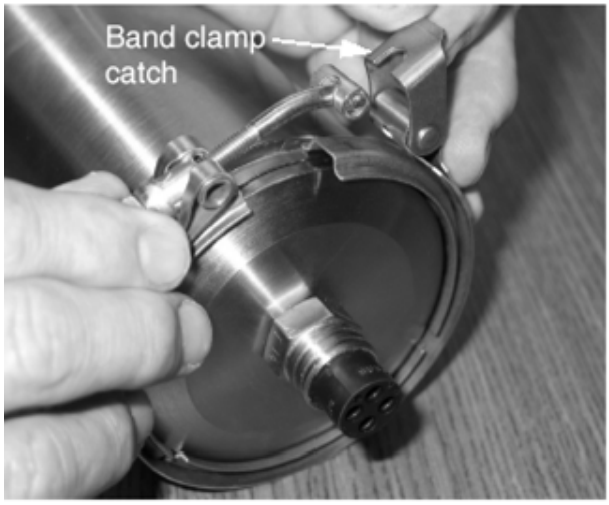


**Figure 2: Releasing the Band Clamp Catch**

3. Carefully remove the Connector End cap by grasping the housing in one hand and the end cap connector in the other as shown in Figure 3 and pulling straight out. It may be necessary to twist the end cap slightly while pulling. If necessary a flat plastic, nonmetallic tool can be used to pry the end cap from the housing.

**Figure 3: Removing the End Cap**

4. Disconnect the in-line connectors JP3 and JP4 and remove the foam pad as shown in Figure 4, exposing the battery pack. If the Option 1 and Option 2 connectors are installed, refer instead to Figure 5.

**Note:** The Option 1 and Option 2 in-line connectors in Figure 5 may look different depending on your unit.

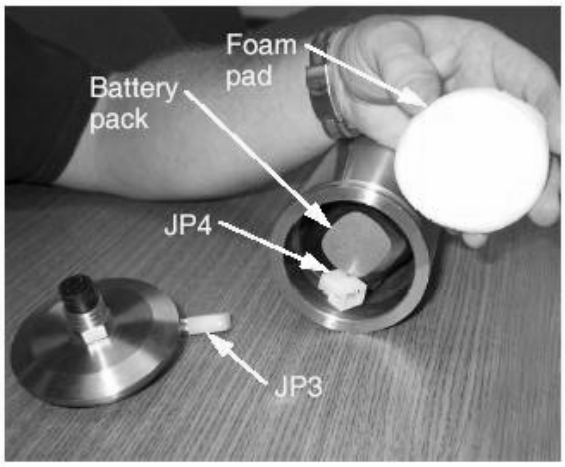


**Figure 4: Disconnecting the JP3 and JP4 In-Line Connectors**

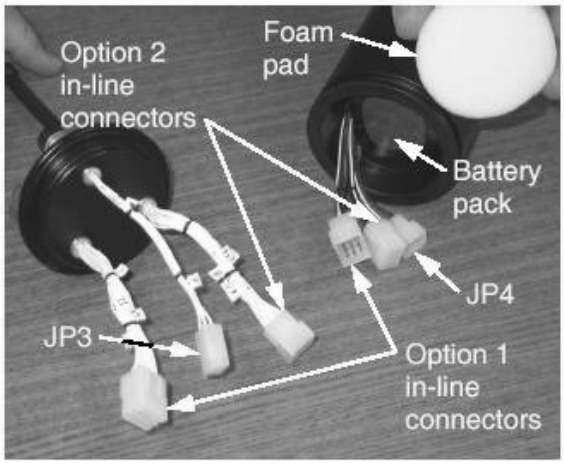


**Figure 5: Disconnecting the JP3 and JP4 In-Line Connectors with Optional Connectors**

5. Remove the battery pack and another foam pad as shown in Figure 6. Disconnect the battery pack in-line connector. Next remove the Sensor End cap by loosening the band clamp and gently pull the electronics out of the housing.

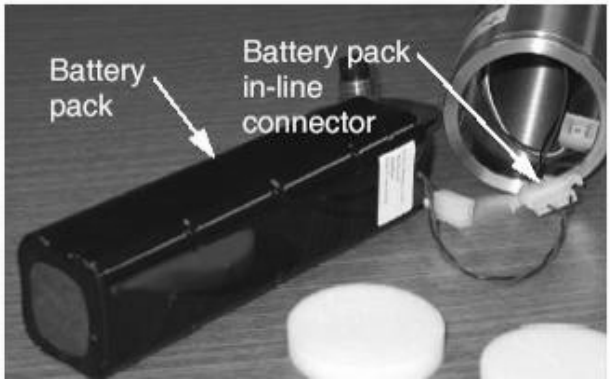


**Figure 6: Removing the Battery**

## 4. REPLACING THE BATTERY BOARD

There are two styles of NXIC's that have the battery board the AUTO and the ADC.

1. Remove the endplate using a Phillips head screwdriver.

If replacing the battery board on a NXIC-AUTO see figure 7

If replacing it on a NXIC-ADC see figure 8. There is no need to remove the wires from the options board.

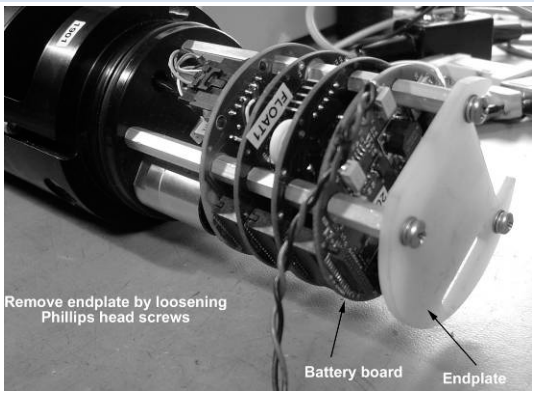


**Figure 7: Removing the End Plate on an AUTO**

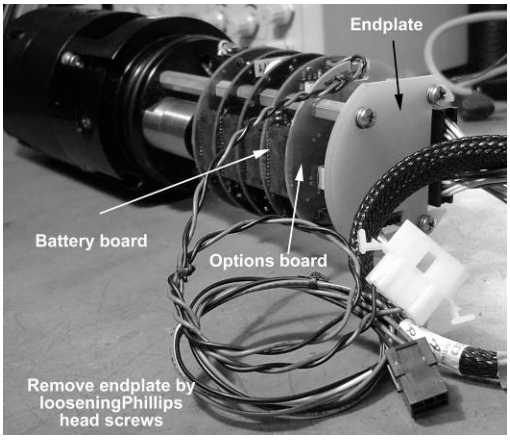


**Figure 8: Removing the End Plate on an ADC**

2. On the NXIC-ADC the options board must be removed before the battery board can be accessed. Using a ¼" nut driver remove the hex standoffs from the options board. These standoffs are longer than the ones holding the battery board on so keep them separate. Carefully pull the board off the stack. See figure 9.

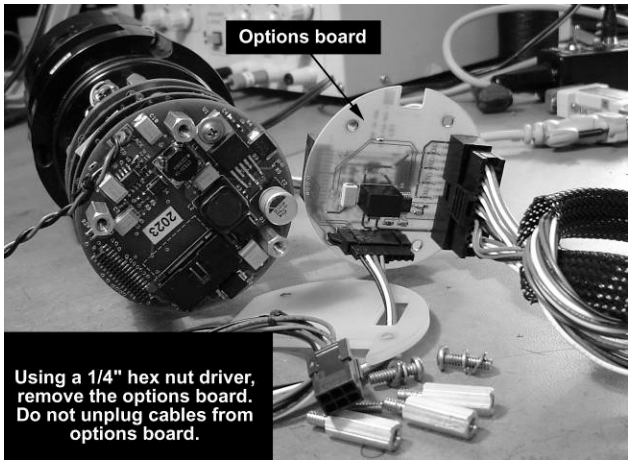


**Figure 9: Removing the Options Board on the ADC**

3. To remove the Battery board, from either the AUTO or ADC, use a ¼" nut driver to remove the hex standoffs from the board. Carefully pull the old battery board off the stack. Place the new rev board on the stack. Be careful to make sure the connector mates smoothly.

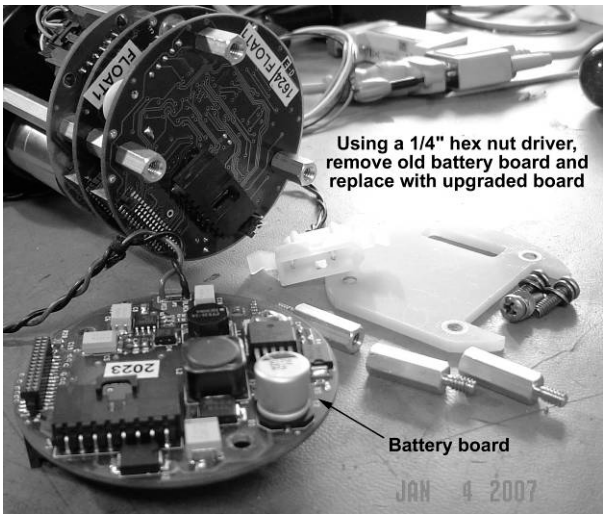


**Figure 10: Removing the Battery Board**

## 5. REASSEMBLE THE BOARD STACK

At this point, in the reverse order presented in Section 4 reassemble the boards. Reinstall the hex spacers on the battery board, on the ADC make sure that the smaller standoffs are used. Do not over tighten.

1. For NXIC-ADC place the options board on the stack and install the longer standoffs.
2. Place the endplate on top of the standoffs and fasten using the Phillips screws. Tighten securely

## 6. REASSEMBLE THE NXIC

In the reverse order presented in Section 3, reassemble the NXIC. Inspect all o-rings and o-ring surfaces and make sure they are clean.

1. Slide the housing back over the board stack. Make sure that none the wires get caught.
2. Spread the band clamp slightly, and then install it over the sensor end cap and housing such that it straddles the groove in the housing and the lip of the end cap, holding the housing and end cap together.
3. Latch the band clamp catch, and then tighten the self-locking nut until it is snug. Do not over tighten.
4. Insert a foam pad followed by the battery pack, wire end first, part way into the housing. Then insert the battery pack in-line connector between the housing and the battery. Reconnect all of the connectors.
5. Press the end cap into the housing, being careful not to pinch the wires.
6. Install the band clamp.

## 7. TEST NXIC

Test that the NXIC is correctly sealed and then run the NXIC to test that the electrical system works properly.


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