Installing a NXIC CTD End Cap Switch Kit

INTRODUCTION

This Application Note illustrates how to replace the original NXIC CTD end cap with a new end cap that contains a shorting plug. The shorting plug allows the battery power to be connected and disconnected without having to open the NXIC CTD.

SUMMARY

The NXIC CTD End cap Switch Kit gives the user the ability to easily connect and disconnect the NXIC internal battery. The original 4-pin bulkhead is replaced with a 6-pin bulkhead connector. When the 6-pin bulkhead is open or the dummy plug is connected there is no power drawn from the battery. Plugging in the Battery Shorting plug or the Battery Adapter cable draws battery power. If external power is applied the battery does not supply power.

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There are four different NXIC CTD Endcap Switch Kits. These kits differ only by the endcap that is supplied with each kit; all other contents are the same. Use Figure 1 to verify that the Switch Kit is complete. If there are any parts missing call TRDI for a replacement.

Table 1: NXIC End cap Switch Kit Contents

Part Number	Description	Quantity
NXIC-E-ORINGKIT	Contains two o-rings and one packet of silicone o-ring grease. The o-ring with the larger diameter is used for the endcap's face-seal and the smaller diameter o-ring is used for the endcap's piston-seal.	1
2106-DCMC6M	A 6-pin open dummy plug	1
A176-206	A 6-pin shorting plug used to connect battery power.	1
B176-207	A 20-inch cable with a 6-pin male connector to a 4-pin female connector to connect to the standard NXIC test cable. This cable also connects the battery and will draw battery power unless external power is applied.	1

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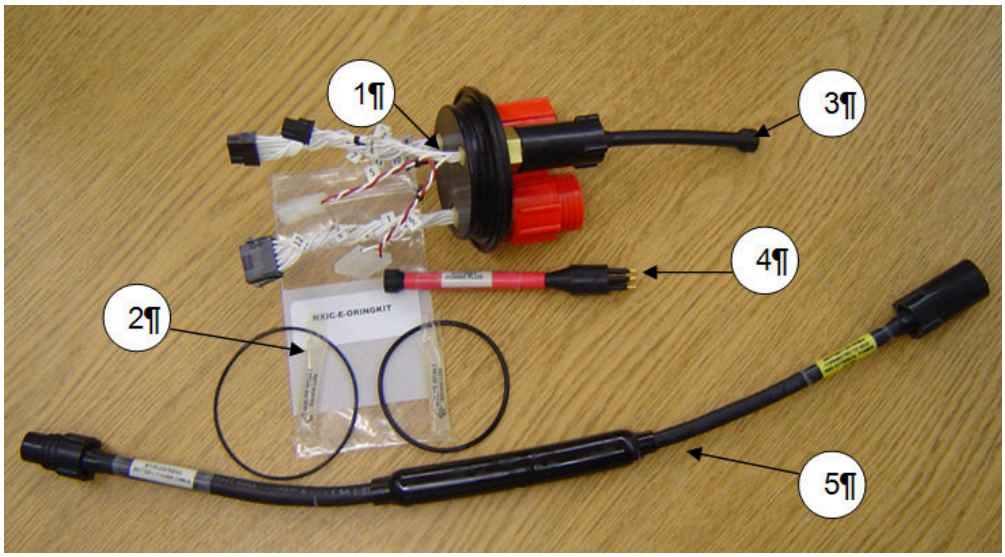

Figure 1. Contents of NXIC CTD Endcap Switch Kit:

(1) Endcap Assembly (e.g. NXICADC-SESKIT) (2) O-ring kit, (3) Dummy Plug (4) Shorting Plug (5) Battery Adapter Cable.

REMOVE ORIGINAL END CAP WITH 4-PIN BULKHEAD CONNECTOR

1. Using a 3/8-inch hex nut driver, loosen the self-locking nut on the band clamp that secures the end cap
2. Release the band clamp catch and then remove the band clamp by spreading the band slightly and sliding it over the end cap.
3. Lift the original endcap off by pulling on the bulkhead connectors; a slight rocking action is useful to free the endcap. Do not use a metal tool to pry the endcap off, as it may scratch the o-ring surface.
4. Disconnect all inline connectors from the endcap.

ASSEMBLE NEW END CAP WITH 6-PIN BULKHEAD CONNECTOR

1. Mount O-Rings into O-Ring Grooves of New End cap. O-rings must be free of dirt and debris to work properly. Clean the O-rings on the end cap and the O-ring surface on the housing with a lint-free cloth or paper towel. Carefully inspect the O-rings for any nicks or scratches. If nicks or scratches are found on an O-ring, replace it. Lightly lubricate the new O-rings with silicone grease and install it onto the end cap.
2. Reconnect the Electrical Connections. All connectors are uniquely keyed and will only connect one way.

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3. Press the end cap into the housing, being careful not to pinch the wires. Watch that the face-seal o-ring stays within the face-seal groove.
4. Spread the band clamp slightly, and then install it over the 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.
5. Latch the band clamp catch, and then tighten the self-locking nut until it is snug. Do not over tighten.

TEST NEW END CAP ASSEMBLY

Connect the battery adapter cable to the new end cap and a standard test cable to the adapter. The unit should operate normally. Refer to application note AN2006004 for more information on using the new battery switch.

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