**GORE® Aerospace Ethernet Cables**

**LEMO® 2B Series Connector System**

The following procedures are based on Gore's best practices for terminating GORE® Aerospace Ethernet Cables with the LEMO® 2B Series Connector System for both plug (pin) and socket versions. Following these procedures will enable you to maximize the performance of your assembly; however, results may vary depending on the specific application.

**Preparing the Cable and Parts**

1. Gather the tools and materials required for assembly and termination (Figures 1 – 6).
2. Be sure to evaluate the tools and procedures in these termination instructions for potential hazards; collect the proper personal protective equipment you will need.
3. Verify that you have the correct parts for your assembly by checking the part numbers for the connectors and the GORE® Aerospace Ethernet Cables listed on drawing DDA0238.
4. Cut a piece of cable to the desired assembly length minus 3.6 cm for the length of the connectors you are terminating:
   - 2.0 cm for the plug connector
   - 1.6 cm for the socket connector
5. Print any labels required by the end-user, and slide the center label onto the cable.
6. To identify the end of the plug connector, place a piece of tape on the end in which the pairs rotate clockwise in order of green ➔ brown ➔ blue ➔ orange (Figure 7).
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**Termination Instructions — LEMO® 2B Series Connector System**

**Preparing the Plug Connector**

1. With the small end nearest the cable, slide the connector cap onto the cable (Figure 8).

2. With the smallest end near the cable, slide the collet nut over the cable; then slide the collet over the cable with the teeth facing the collet nut (Figure 9).

3. Measure and mark the cable 0.5 inch from its end (Figure 10).

4. Using a scalpel or scissors, slit the cable's jacket from its edge to the mark (Figure 11).

5. Using needle-nose pliers, gently pull the outer jacket down the cable until you have exposed approximately 1.5 inches of braid (Figure 12).

6. With your fingers, push the braid back over the cable to expose approximately 1.5 inches of the foil (Figure 13).
7. Remove as much white filler as possible.

8. Cut four pieces of polyimide tape that are 0.50-inch long. Wrap a piece of the tape around each pair 0.25 inch from the end of the cable, keeping the foil wrapped as tight as possible (Figure 14).

9. With cutters, cut the foil on each pair where it meets the tape (Figure 15). Tear the foil along the edge.

10. Measure and mark each conductor 0.15 inch from the end (Figure 16).

11. Install the DCE.91.072.BVC positioner for the pin contact into the DPC.91.701.V hand crimpers, and select setting 5. To prevent stray wire strands during crimping, strip and crimp one primary at a time using contacts from the connector (Figure 17).

12. Insert the contacts into the insulator (Figure 18). The green conductor goes into the position closest to the insulator key as shown in the diagram in Figure 19.
13. Slide the braid back toward the insulator, and trim the braid so that its end is even with or slightly covers the tape on the foil (Figure 20).

14. Using your fingers or needle nose pliers, slide the outer jacket back so that it is 0.8 inch from the end of the insulator, and trim any excess material (Figure 21).

15. Align the two parts of the mid-piece, and hold them in place so you can complete the next several steps (Figure 22).

16. Slide the collet down, and align it with the notch on the mid-piece (Figure 23).

17. Insert the connector housing on the mid-piece, ensuring that the red dot is aligned with the key on the insulator (Figures 24 and 25).
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Preparing the Socket Connector

1. With the small end nearest the cable, slide the connector cap onto the cable (Figure 26).

2. With the smallest end near the cable, slide the collet nut over the cable; then slide the collet over the cable with the teeth facing the collet nut (Figure 27).

3. Measure and mark the cable 0.5 inch from its end (Figure 28).

4. Using a scalpel or scissors, slit the cable's jacket from its edge to the mark (Figure 29).

5. Using needle-nose pliers, gently pull the outer jacket down the cable until you have exposed approximately 1.5 inches of braid (Figure 30).

6. With your fingers, push the braid back over the cable to expose approximately 1.5 inches of the foil (Figure 31).
7. Remove as much white filler as possible.

8. Cut four pieces of polyimide tape that are 0.50-inch long. Wrap a piece of the tape around each pair 0.25 inch from the end of the cable, keeping the foil wrapped as tight as possible (Figure 32).

9. With cutters, cut the foil on each pair where it meets the tape (Figure 33). Tear the foil along the edge.

10. Measure and mark each conductor 0.15 inch from the end (Figure 34).

11. Install the DCE.91.072.BVM positioner for the pin contact into the DPC.91.701.V hand crimpers, and select setting 5. To prevent stray wire strands during crimping, strip and crimp one primary at a time using contacts from the connector (Figure 35).

12. Insert the contacts into the insulator (Figure 36). The green conductor goes into the position closest to the insulator key as shown in the diagram in Figure 37.
13. Slide the braid back toward the insulator, and trim the braid so that its end is even with or slightly covers the tape on the foil (Figure 38).

14. Using your fingers or needle nose pliers, slide the outer jacket back so that it is 0.8 inch from the end of the insulator, and trim any excess material (Figure 39).

15. Align the two parts of the mid-piece, and hold them in place so you can complete the next several steps (Figure 40).

16. Slide the collet down, and align it with the notch on the mid-piece (Figure 41).

17. Insert the connector housing on the mid-piece, ensuring that the red dot is aligned with the key on the insulator (Figures 42 and 43).
**GORE® Aerospace Ethernet Cables**

**Termination Instructions — LEMO® 2B Series Connector System**

**Closing the Connector**

1. Perform all in-process testing. At a minimum, verify proper wiring and continuity, and check for shorts. Local authorities and end-users may require additional testing.

2. Verify that the assembly length is accurate.

3. Set a torque meter to 40 inch-pounds, and apply torque to the collet nut.

4. Slide the connector caps down the cable, and snap them onto the collet nuts of both connectors (Figures 44 and 45).

5. Perform all final testing. At a minimum, verify proper wiring and continuity, and check for shorts. Local authorities and end-users may require additional testing.

6. Using a heat-gun, shrink any applicable labels.

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**Figure 44: Installing the connector cap on plug end**

**Figure 45: Installing the connector cap on socket end**