BPS Emergency Repair Guide

The Barcode Positioning System (BPS) ensures precise positioning with sub-millimeter accuracy of the Track axis of a Furio dolly system.

This document outlines how to use the BPS Emergency Repair Kit to temporarily fix damaged barcode tape on your dolly system.

Temporary Use Only

The repair kit is intended for temporary fixes only.

The self-printed barcodes do not match the optical and mechanical properties of the original tape and should not be used as a permanent solution.

Original Repair Tapes

Replacement tapes are available to order in the following lengths:

- **10 meters** (Product Code **FRO-BPS-TAPE-10**)
- **20 meters** (Product Code **FRO-BPS-TAPE-20**)
- **30 meters** (Product Code **FRO-BPS-TAPE-30**)
- **40 meters** (Product Code **FRO-BPS-TAPE-40**)
- **50 meters** (Product Code **FRO-BPS-TAPE-50**)
- **70 meters** (Product Code **FRO-BPS-TAPE-70**)

The emergency repair is not a long-term solution and appropriate tape lengths should be installed shortly after the emergency repair.

Required Tools

Tools needed to perform an emergency repair include:

- **Cleaning Cloth**
- **Scissors**
- **Printer**
- **A4 Printing Paper**
- **Adhesive**

Emergency Repair Procedures

If a barcode tape is damaged, you can use the BPS Emergency Repair Kit to perform a **temporary** fix.

Follow these steps to download and use the repair kit:

- **Power Off the Dolly**
- **Download the Repair Kit**
- **Prepare Track Surface**
- **Apply Printed Barcodes**

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- **Power On the Dolly**
- **Test the Repair**
- **Troubleshooting and Further Assistance**

Power Off the Dolly

1. Use the SmartShell control station to bring the dolly to a complete stop.
2. Flip the power switch on the Main FRU. This controls the power to the dolly, the robotic lift (if present), and the robotic head.
   Note: The power switch is located on the dolly and may be difficult to access. Customers typically leave dollies powered ON for long periods.
   Important: Always turn the dolly power switch OFF before connecting or disconnecting any cables.
3. Safely disconnect the power supply from the AC mains to ensure there is no power going to the dolly during the repair process.

Download the Repair Kit

1. Go to www.leuze.com.
2. Navigate to: **Products** > **Measuring Sensors** > **Sensors for Positioning** > **Bar Code Positioning Systems**.
3. Go to the **Downloads** tab and select the **Repair Kit**.
4. Choose **Repair kit - 0–2000 m G30 H25 - pdf** to download the necessary files.

Important: Although there are two types of repair kits available for download, Ross dolly systems use **BCB G30** (refer to ***Figure 1***):

› Each A4 sheet contains 0.9 meters of barcodes

› Five lines of 18 cm with six code segments of 30 mm each.

Figure 1 - *BCB G30 -repair kit (30 mm grid)*

Prepare Track Surface

1. Identify the damaged areas to determine the exact barcode(s) to replace.
2. Print the replacement code using the repair kit files obtained in **Download the Repair Kit** above.

   Note: Adjust printer settings to ensure the barcode is not distorted.

Apply Printed Barcodes

1. Print repair kit, ensuring enough barcodes are printed for the full repair.
2. Cut the required amount of barcodes.
3. Apply an adhesive to the back of the printed barcode.
4. Apply the printed barcodes over the damaged section of the barcode tape securely and smoothly.

5. Ensure the printed barcodes are level with the tape.

   Damage Tolerance: The BPS system can continue to function if one or two barcode segments are damaged. However, two consecutive damaged segments is the maximum the system can tolerate before accuracy is affected.

Power On the Dolly

1. Ensure all connections are secure and reconnect the power supply to the dolly.
2. Turn on the power switch of the dolly and allow it to boot up.
   Note: Verify that all status LEDs on the Main FRU and other components indicate normal operation (typically green).
3. Wait for the BPS system to initialize. The system will perform a self-check and display a ready status once complete.

Test the Repair

1. Open the SmartShell control station and select the dolly you have repaired.
2. Command the dolly to move along the entire track, ensuring it passes over the repaired section of the barcode tape.
3. Ensure that the positional data is consistent and matches the expected values for the track positions.
4. Monitor the SmartShell interface for any error messages or warnings during the test movements.
5. Run the dolly back and forth over the repaired section multiple times.

Troubleshooting and Further Assistance

In the event of BPS reading error, perform the following:

- **Retry Repair:** If errors persist or the system does not function properly, print a new set of repair strips and repeat the repair process.
- **Contact Support:** If problems continue, contact Ross Video technical support for further assistance.