Furio Drive Wheel Replacement Guide for Dollies with StableTrac

Introduction

This document describes how to replace the drive wheels on your Furio Dolly system.

The replacement process requires **two people** at minimum, and takes approximately **30 minutes** to complete.

CAUTION: Ensure the dolly is **OFF** before starting the wheel replacement process.

Before You Begin

The Furio dolly has four wheel units; one drive wheel set and three passive wheel units. This document describes how to replace the drive wheel set on the **StableTrac side** of the dolly.

Before you begin, read and understand all instructions.
If you have any questions, contact **Ross Video Technical Support**: techsupport@rossvideo.com.

Wheel Replacement Contents

The following items are provided within the **Drive Wheel Replacement Kit (FRO-SP-WHDRV-ST-U)**:

- One drive wheel set including drive belt (motor unit not included)
- One 6 mm hexagonal wrench
- One 5 mm hexagonal wrench
- One 4 mm hexagonal wrench
- One 2.5 mm hexagonal wrench

Required Tools

The following tools are required to replace Furio drive wheel set:

- One wooden prop block approximately 5-1/2” x 5-1/2” x 7” (140 mm x 140 mm x 180 mm)

Procedure Overview

The instructions for this replacement procedure include:

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Removing the Stability Arms or Wheels

There are two sliding passive wheel sets on the dolly, each containing either stability arms or wheels, depending on your Furio configuration, which ensure the wheels are securely fixed to the track. Refer to **Figure 1**.

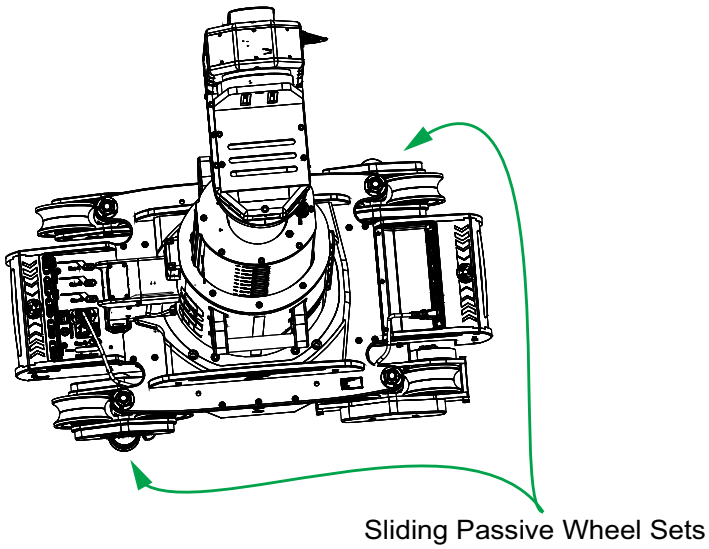

Figure 1 - *Sliding Passive Wheels with Stability Wheels*

Removing these arms or wheels allows the dolly to be lifted from the track.

For stability arm removal, proceed to "**Remove the Stability Arms**" on **page 3**.

For stability wheel removal, proceed to "**Remove the Stability Wheels**" on **page 3**.

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Remove the Stability Arms

For the two sliding passive wheel sets, complete the following:

1. Locate the stability arms.
2. Remove all locking pins and stability arms on the passive sliding wheel sets. Refer to **Figure 2**.

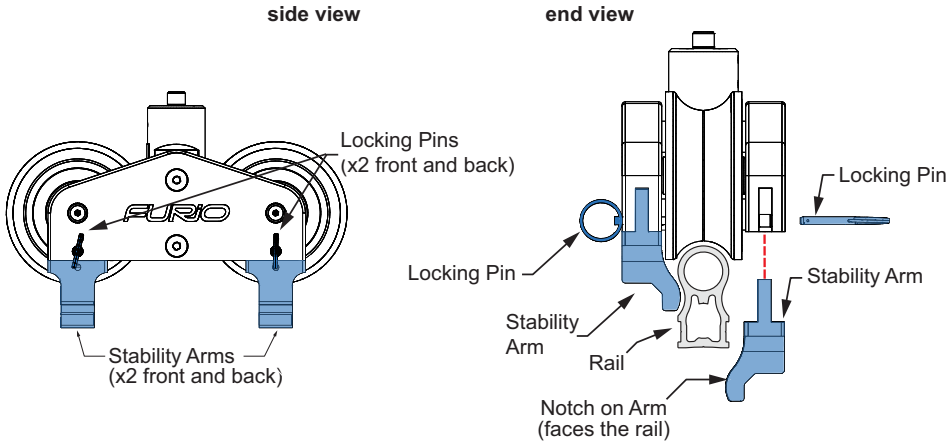

Figure 2 - *Removing Stability Wheels*

Remove the Stability Wheels

For the two sliding passive wheel sets, complete the following:

1. Locate the stability wheel.
2. Remove the locking pin by pressing and holding the pin lock button while sliding the locking pin out. Refer to **Figure 3**.

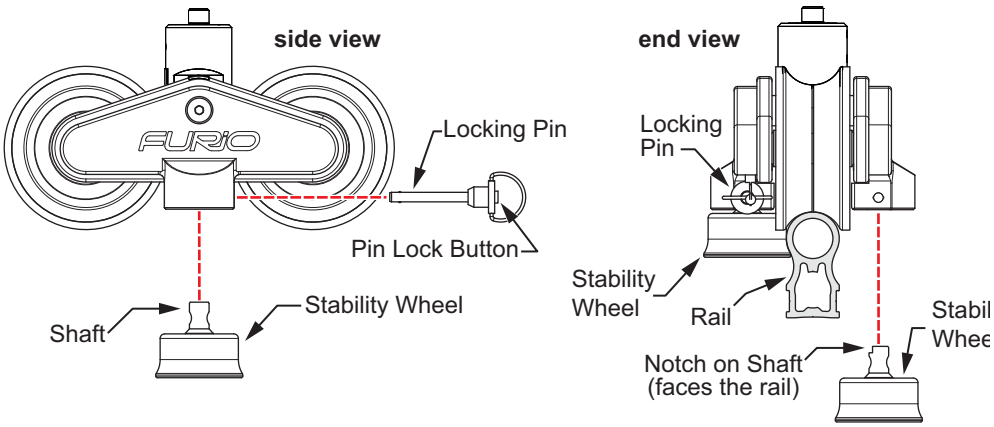

Figure 3 - *Removing Stability Wheels*

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Removing the Drive Wheel Set

The drive wheel set must be detached from the dolly base to replace the wheels. Follow the instructions below to detach the drive wheel set and motor from the base.

Remove the Drive Wheel Set

1. Move the dolly to where there is plenty of working space, ideally above a straight track and close to the wiredraw enclosure. Ensure the end with the drive wheel set is between traverses (cross pieces), so nothing is between the bottom of the dolly and the floor.
2. Lower the lift column, disconnect the power cable to the head, turn off power to the dolly, and disconnect the dolly power cable.
3. Detach the wiredraw cable from the dolly with the 6 mm hexagonal wrench and hold it.

   Note: Grasp the cable end tightly, but do not wrap it around your hand or bend it.

   CAUTION: Handle the wiredraw cable with care to avoid permanently damaging the cable and wiredraw unit. NEVER allow the cable to snap back into the wiredraw unit. If you release the cable and it snaps back into the wiredraw unit, the unit may be irreparably damaged.
4. Hold the cable close to the floor and parallel to the track to avoid rubbing the steel cable against the wiredraw enclosure box, protecting the cable from damage.
5. Slowly walk the cable back to the wiredraw unit. Do not allow it to snag or rub against anything, except the part of the rail it normally contacts (curved tracks only).

   IMPORTANT: Do not allow the cable to snap back to the wiredraw enclosure!
6. Have one or two people lift and hold up the end of the dolly by the dolly base handles.
7. Place the wooden prop block under the IEC Module of the dolly, and then gently lower the dolly onto it. Ensure the two wheel sets opposite the prop block are properly seated on the track. Refer to **Figure 4**.

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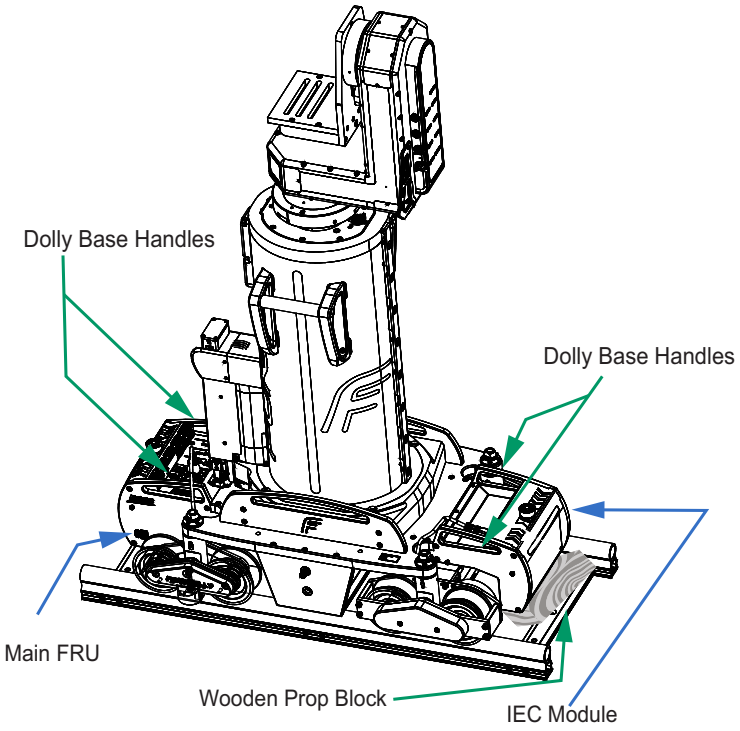

Figure 4 - *Dolly Handles and Wooden Prop Block*

IMPORTANT: Lift only by the lift points shown in the illustration. Never lift the payload or the top section of the lift column! Improper lifting may damage the payload and/or dolly. Follow workplace safety rules and do not tip or drop the dolly.

IMPORTANT: Do not attempt to disconnect the motor cables between the drive wheel set and the dolly. Do not pull the cables taut. Damage to the cables may result.

IMPORTANT: Do not straddle the rails with the wooden prop block. This may damage the rails.

8. Use a 2.5 mm hexagonal wrench to remove the 5 screws holding the bushing in place above the drive wheel set. The bushing can be easily moved out of the way after the 5 screws are removed.
   Refer to **Figure 5**.
   Note: Set these screws aside, you'll need them in a later step for reassembly.

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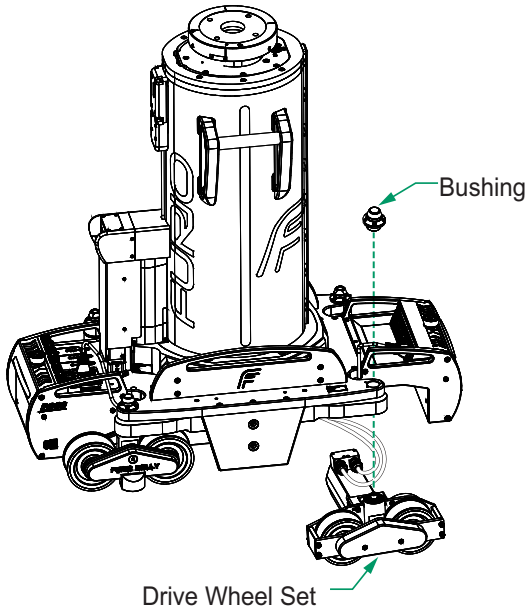

Figure 5 - *Removing the Drive Wheel Set Bushing*

9. Use a 6 mm hexagonal wrench to remove the drive wheel set from the dolly base and place it beside the dolly.
Note: Turn the hexagonal wrench clockwise to loosen the drive wheel set.

10. Use a 4 mm hexagonal wrench to remove two screws that secure the blind mate connector to the dolly plate. Refer to **Figure 6**.

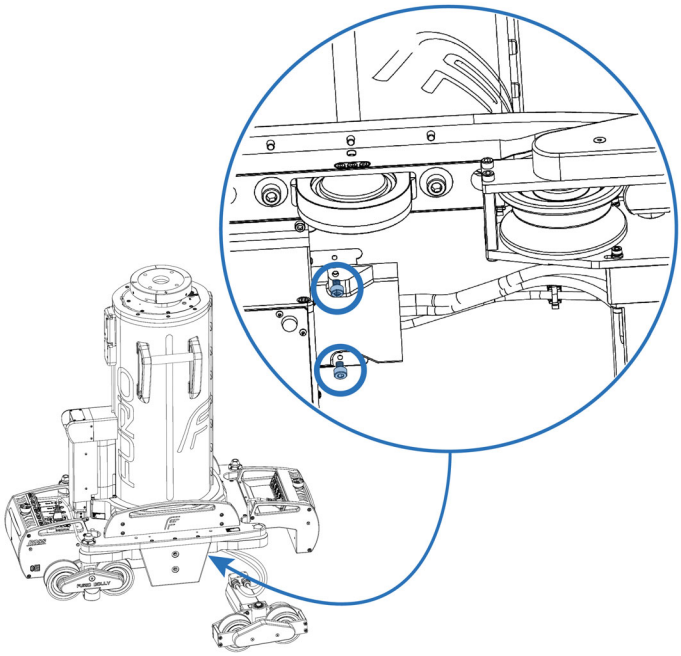

Figure 6 - *Removing the Blind Mate Screws*

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Transferring the Motor Unit

The drive wheel set attaches directly to the motor unit. Changing the drive wheels requires the drive wheel to be separated from the motor unit. In this procedure, you will remove the motor unit from the old drive wheel set and reattach the motor unit to the new drive wheel set and pulley.

Remove the Motor Unit from the Old Drive Wheel Set

The replacement drive wheel set does not include a motor unit. You must transfer the motor unit to the new drive wheel set.

1. Use the 4 mm hexagonal wrench to remove the four screws that attach the motor unit to the drive wheel set.

   Refer to **Figure 7**.

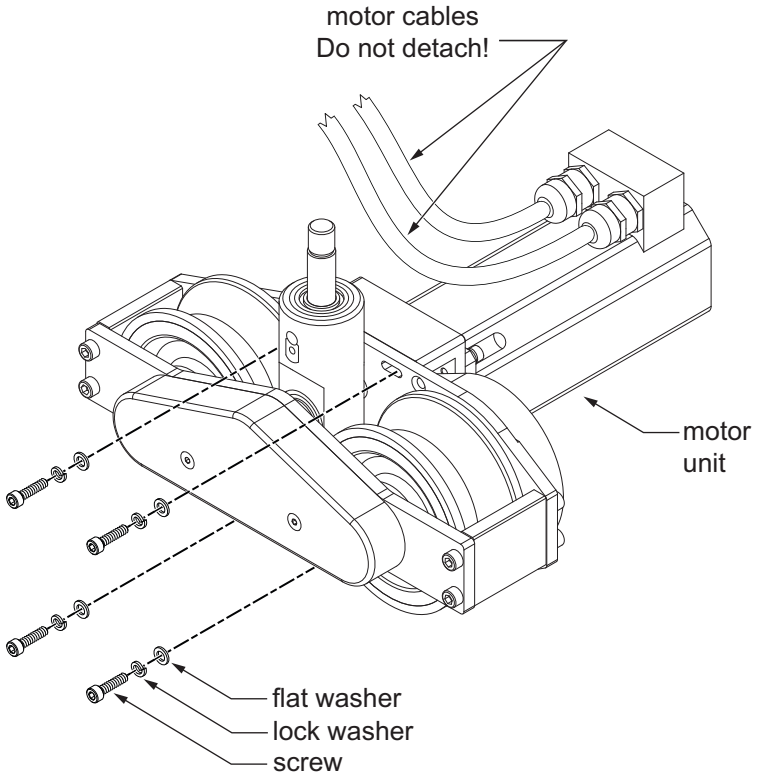

Figure 7 - *Removing the Motor Unit from the Drive Wheel Set*

   Tip: Each screw has a flat washer and a lock washer. Do not lose the washers.

2. Detach the motor unit and the drive belt. Refer to **Figure 8**.

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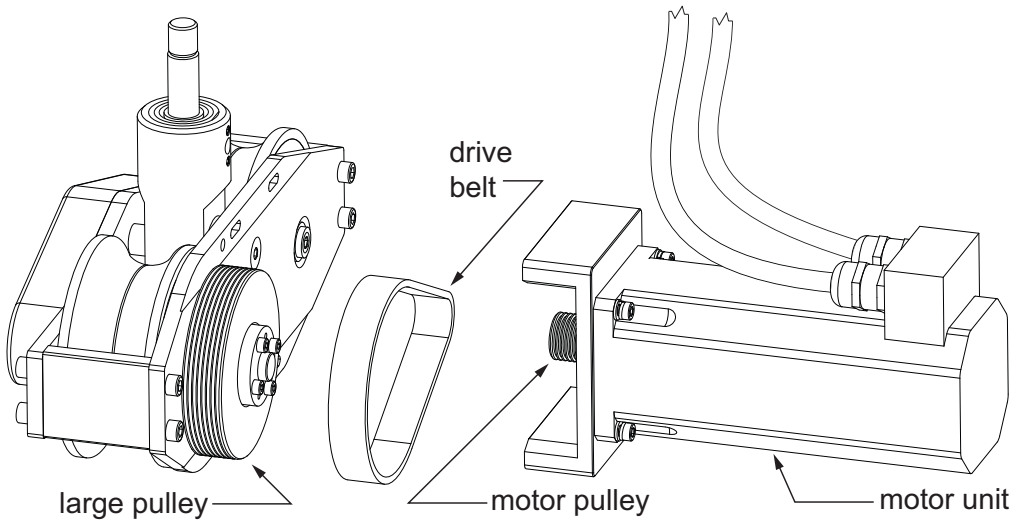

Figure 8 - *Detaching the Drive Belt*

3. Discard the old drive belt. You will replace it with a new one.

Attach the Motor Unit to the New Drive Wheel Set

1. Obtain the new drive wheel set, drive belt, and motor bracket from the kit provided.
2. Use a 4 mm hexagonal wrench to remove the bracket off the motor. Set aside the screws and washers.
3. Use the screws and washers from **Step 2** to secure the new motor bracket supplied in the kit. Mount the motor to the bracket using the lower holes as shown in **Figure 10**. Refer to **Figure 9** for proper orientation.

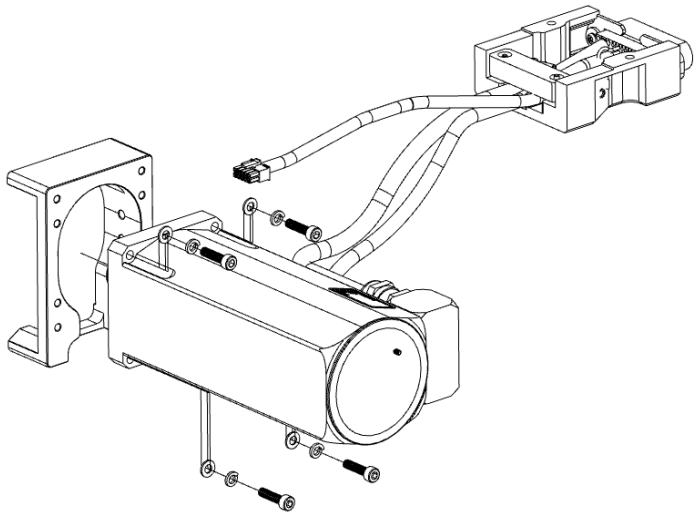

Figure 9 - Proper Orientation of Motor Bracket to Secure Screws and Washers

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Important: For Axor motors, rotate the motor so that the cables coming out of the motor face opposite the large pulley. Refer to **Figure 10**.

4. On the new drive wheel set, place the new drive belt over the large pulley, ensuring the belt is centered on the pulley.
5. Align the motor unit to the new drive wheel set, placing the drive belt over the motor pulley. Ensure the belt is centered on the motor pulley.
6. Insert and snug the four screws removed in **Step 1** from "**Remove the Motor Unit from the Old Drive Wheel Set**" on **page 7**. These will be tightened after the belt has been tightened.

   Tip: Each screw has a flat washer and a lock washer. Position the lock washer between the screw head and the flat washer.
7. Use a 4 mm hexagonal wrench to tighten the belt tensioner screw into the lower of the two holes in **Figure 10** to apply the correct tension to the belt.
   Tighten the adjustment screw until the belt is snug, then give an additional 1/4 to 1/2 turn.
   Important: Do not over-tighten.

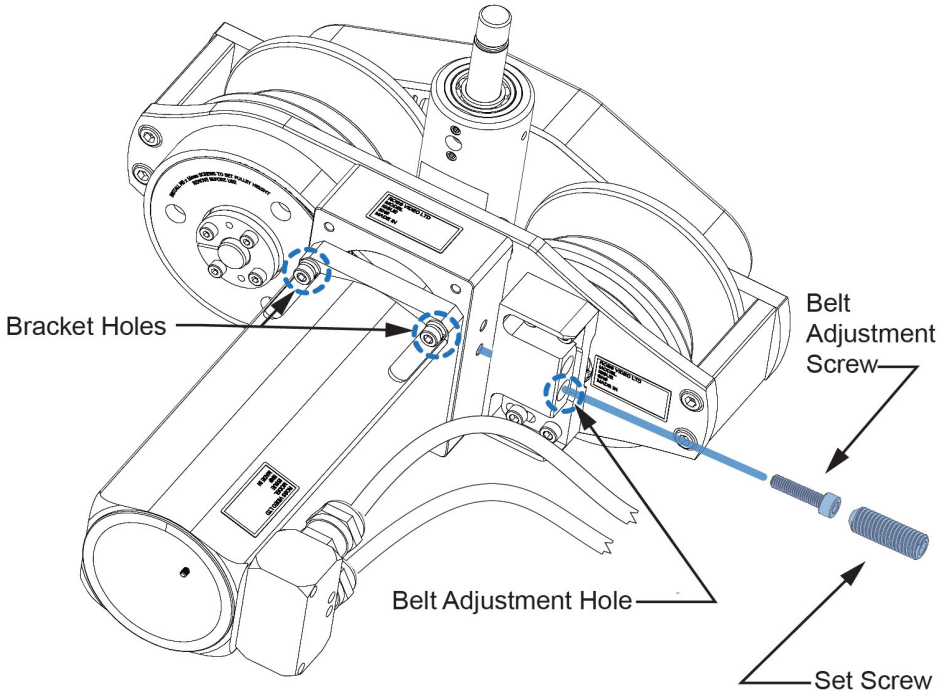

Figure 10 - *Apply Tension to the Belt via the Belt Screw & Set Screw*

8. Once the tension is set, insert the set screw and use a 6 mm hexagonal wrench to prevent the adjustment screw from backing out.
9. Tighten the screws from **Step 6**.
10. Turn the wheels a few times and observe the drive belt, to ensure that it remains centered on the pulleys.
11. Use a 4 mm hexagonal wrench to reattach the two screws that secure the blind mate connector to the dolly plate. Refer to **Figure 4** above.

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Reinstalling the Drive Wheel Set

Now that your new drive wheel set is attached to the motor unit, the reassembly process begins. In the instructions that follow, you'll secure the drive wheel set to the dolly base and align the dolly on the track.

Reinstall the Drive Wheel Set

1. Attach the drive wheel set threading its vertical shaft in the threaded the hole in the StableTrac arm and dolly base and loosely attaching the bushing.
2. Use a 6 mm hexagonal wrench to secure the drive wheel set to the pivoting arm.
3. Use a 2.5 mm hexagonal wrench to secure the 5 screws holding the bushing screws in place above the drive wheel set.
4. Remove the wooden prop block, and then gently lower the dolly onto the track. Ensure all wheels are properly seated on the track.
5. Use the 6 mm hexagonal wrench to reattach the track wiredraw cable to the dolly.

Reattaching the Stability Arms or Wheels

With the drive wheel set successfully installed and the dolly secured on the track, you can now reattach the stability arms or wheels, depending on your Furio system configuration. Note that only the two sliding passive wheels have stability wheels. Refer to **Figure 1** above.

Attach the Stability Arms

For the two sliding passive wheel sets, complete the following:

1. Insert the shaft of the stability arm into its hole.
2. Ensure the notch on the shaft faces the rail.
3. Slide the locking pins into their holes.

   Refer to **Figure 11**.

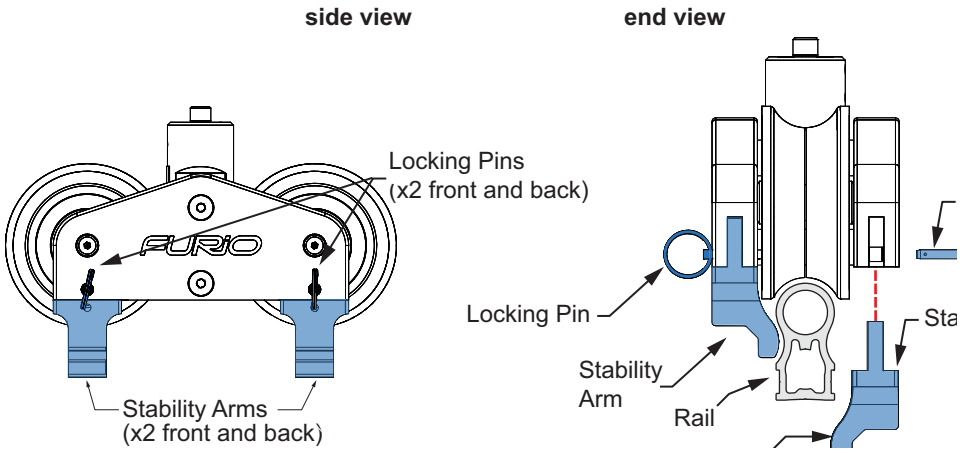

Figure 11 - *Attaching Stability Wheels*

Attach the Stability Wheels

For the two sliding passive wheel sets, complete the following:

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1. Insert the shaft of the stability wheel into its hole.
2. Rotate the stability wheel shaft so the notch on the shaft faces the drive wheel set.
3. Pull and hold the pin lock button, then slide the locking pin into its hole.
   Refer to **Figure 12**.

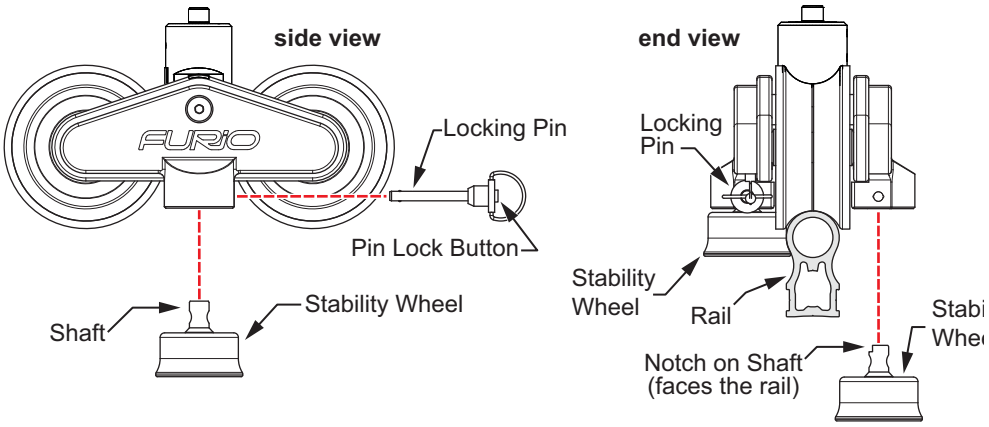

Figure 12 - *Attaching Stability Wheels*

Restoring Dolly Power and Connectivity

The drive wheel set installation process is complete. In this final process, restore the dolly's power and ensure all parts are functioning properly, as outlined below.

Restore Dolly Power and Connectivity

1. Reconnect the power cable to the dolly.
2. Connect power back to the head.
3. Turn the dolly on, and test that it travels smoothly.
4. Check that the drive belt tracks properly on the pulleys.
   Note: Listen to ensure there is no rubbing noise. If there is, the belt is not properly installed.

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