Work Instructions

Subject: TBB Minotour Backup Cameras

Models Affected: Specific Model Year 2019-2020 Thomas Built Buses Minotour SRW school buses manufactured August 17, 2018, through March 31, 2019.

Parts

Kit Contents:

- Mirror Mount
- Mirror/Monitor
- Allen Wrench

The harness is supplied in three sections (see **Figure 1**):

- Monitor End – Marked A
- Extension – Marked B
- Camera End – Marked C

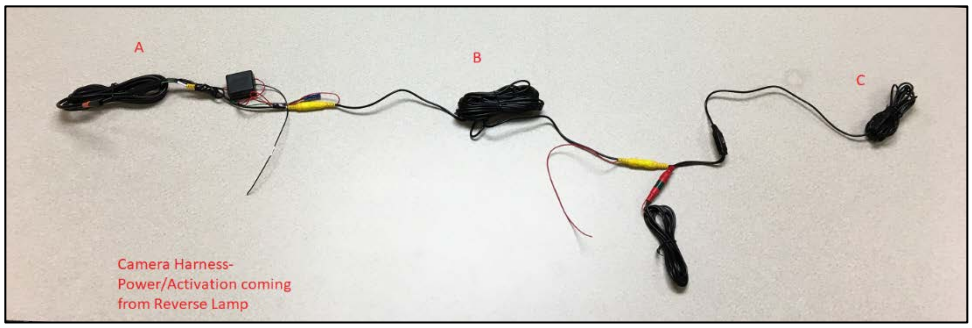

Figure 1: Three-Part Harness, Shown Connected

Mirror/Monitor Mounting

1. Park the vehicle on a level surface, shut down the engine, and set the parking brake. Chock the tires
2. Remove the rear view mirror from the front glass, leaving the mounting block on the glass.
3. Attach the mirror mount to the back of the mirror/monitor. Ensure correct orientation.
4. Install the mirror/monitor and mount on the windshield using the existing mounting block. Tighten with the Allen wrench. See **Figure 2**.

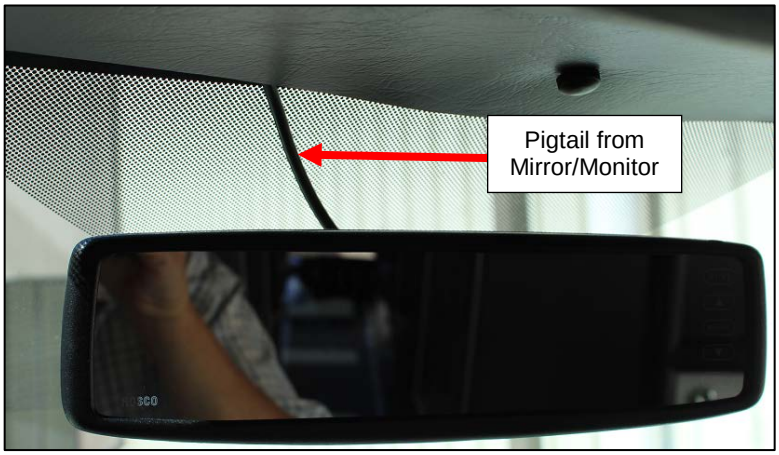

Figure 2: Mirror/Monitor Mounted

5. Connect the orange-taped end of Section A of the harness to the pigtail from the mirror/monitor. See **Figures 2** and **3**.

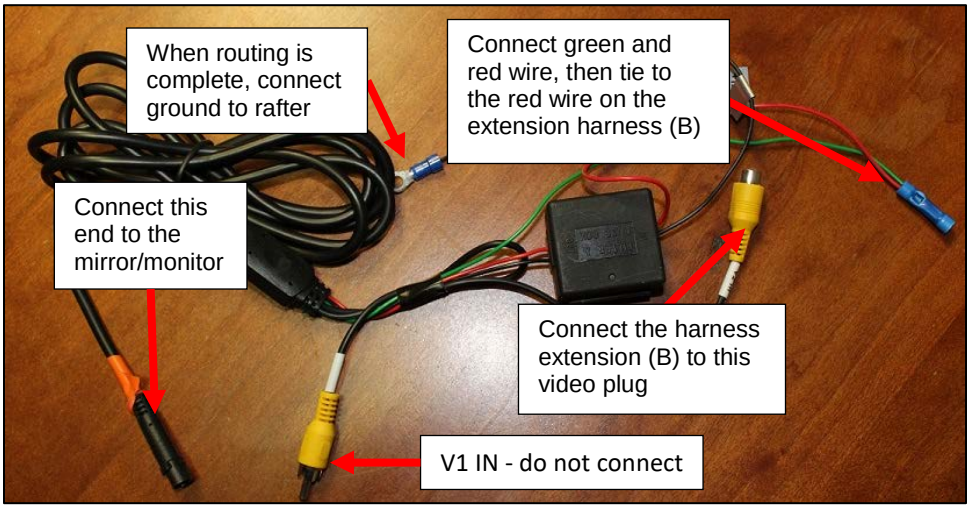

Figure 3: Harness Section A

6. Install loom on this entire section.
7. Feed this end through the bulkhead hole with all other switch harnesses.
8. Pull the harness out near the windshield and over to the mirror/monitor so it feeds down in a straight line.
9. Connect the pigtail and harness; tuck excess up into the bulkhead.
10. Route harness Section A toward the main body harness. Use a method that supports the harness.

Camera Mounting

1. Drill a 5/8-inch hole approximately 1 inch below the horizontal centerline, as shown in **Figure 4**.

Figure 4: Camera Location

2. Remove the nut from the back of the camera and retain. Feed the wire from the back of the camera into the bulkhead.
3. Attach the double-sided tape to the camera and then the camera to the rear cap, centered over the drilled hole. Ensure the camera faces down and is level horizontally.
4. Feed the nut along the harness to the camera and tighten. Ensure the mounting of the camera does not move.
5. Remove the harness covers above the windows on the driver's side of the bus.
6. Cover the camera harness with loom and route above the windows on the driver's side of the bus. See **Figure 5**.

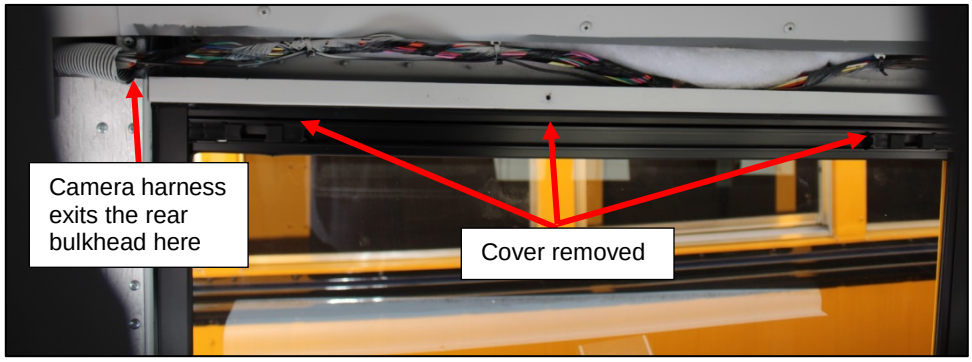

Figure 5: Routing the Main Body Harness Along the Driver's Side of the Bus

7. Connect Section C of the harness as shown in **Figure 6**.

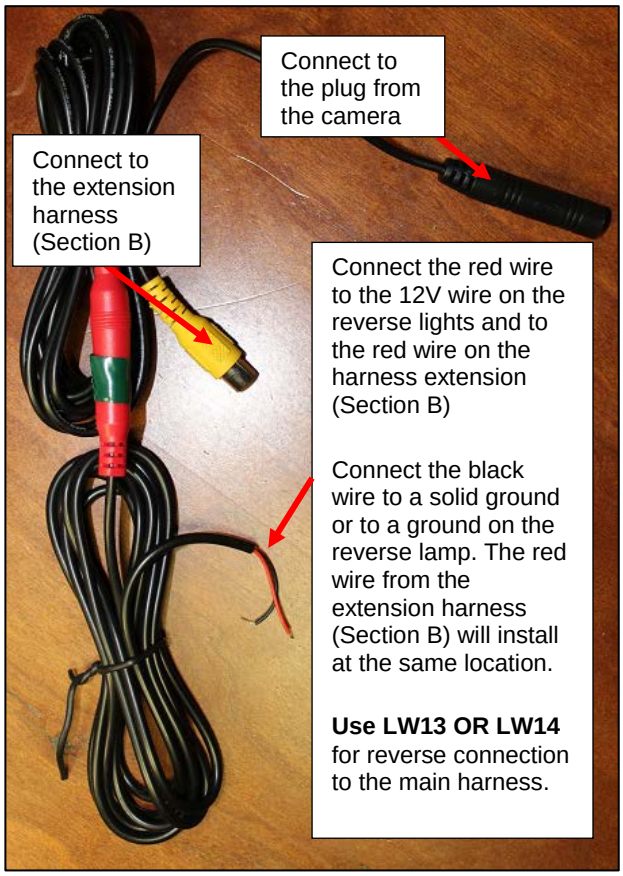

Figure 6: Section C Harness Connections

8. Connect the harness extension (Section B) yellow video plug with the red wire to the video plug on the main harness. It may be installed in either direction. Note: Do not use the AV1 section of the main harness.
9. Tie up excess wiring evenly along the main harness.
10. Check for proper operation of the backup camera.
11. Install the harness cover and bulkhead cover removed earlier.