

I-Beam Replacement Over Lift Gate Bogie

August 23, 2023

Introduction:

This procedure addresses the replacement of broken or damaged I-beam at the front of the bogie tubes on a trailer with a lift gate.

Labor Requirements:

The standard repair time will vary based on how many sections of floorboard have to be replaced and how large each section is. This procedure is written based on a proven shop practice for replacing a single section of floorboard. It identifies critical areas of concern. If read and followed, it will increase safety and efficiency and will prevent further damage to the trailer.

⚠ CAUTION: Individuals who work with power tools are advised to always use proper safety equipment, including: safety glasses, hearing protection, cut-resistant gloves, steel-toed shoes, knee pads, and face shields, dust masks, etc.

Tools Required:

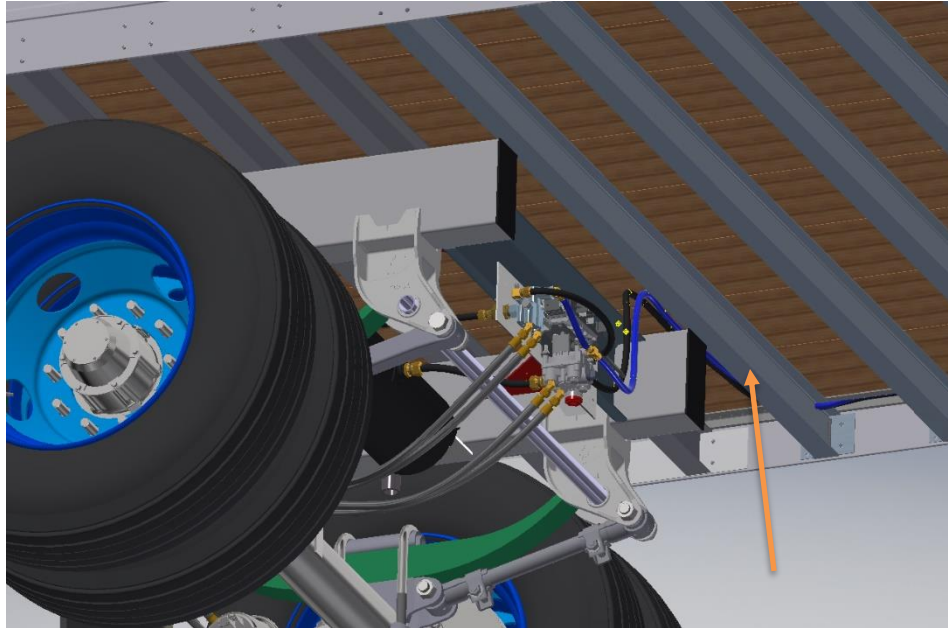
- Air hammer and chisel
- Drill with Torx bit for floor screws

Trailer Setup:

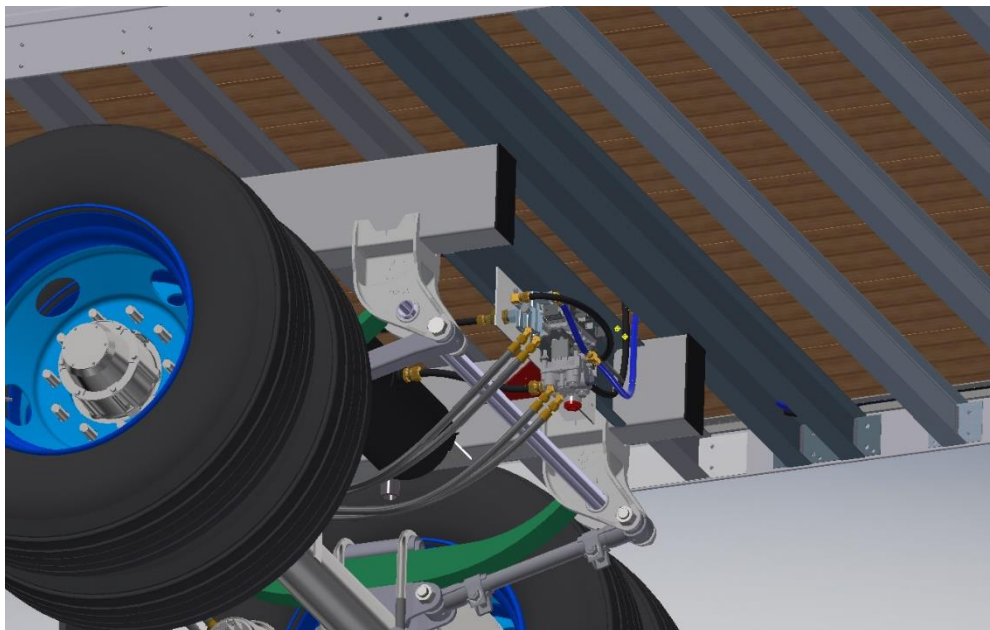
Completely unload the trailer and park on a level shop floor. Ensure adequate lighting is available in the area of the floor repair. Inspect all cross-members for breaks, cracks or other damage.

Trailer Repair:

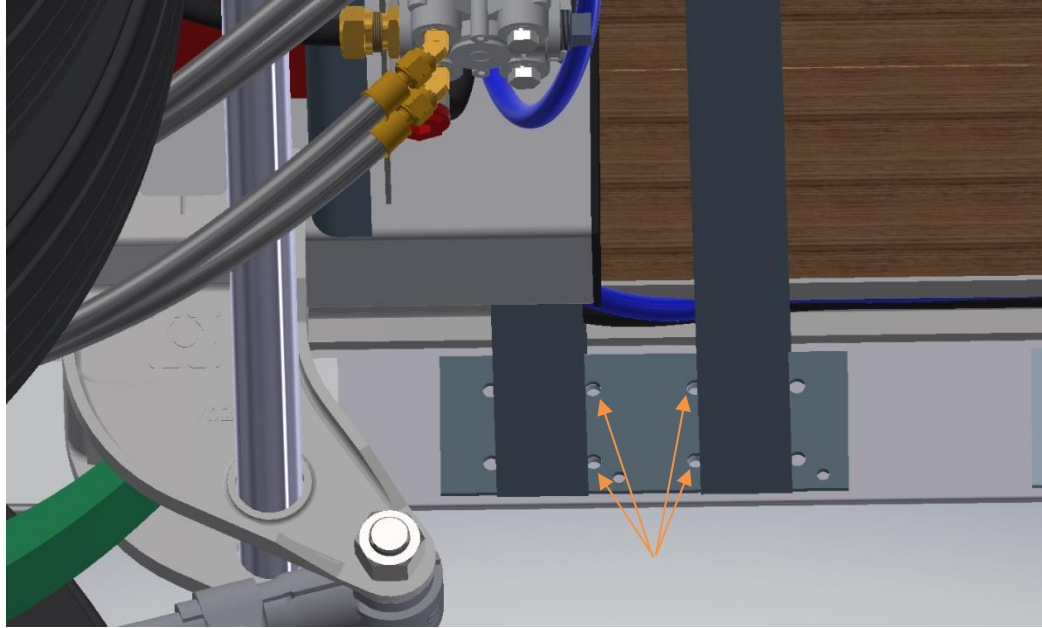
1. Locate the damaged I-beams. If the I-beam at the front of the bogie tube is cracked or broken, remove the floor screws from the I-beam. If I-beams over the bogie are cracked, they will be plated later. Leave the floor screws in at this time.



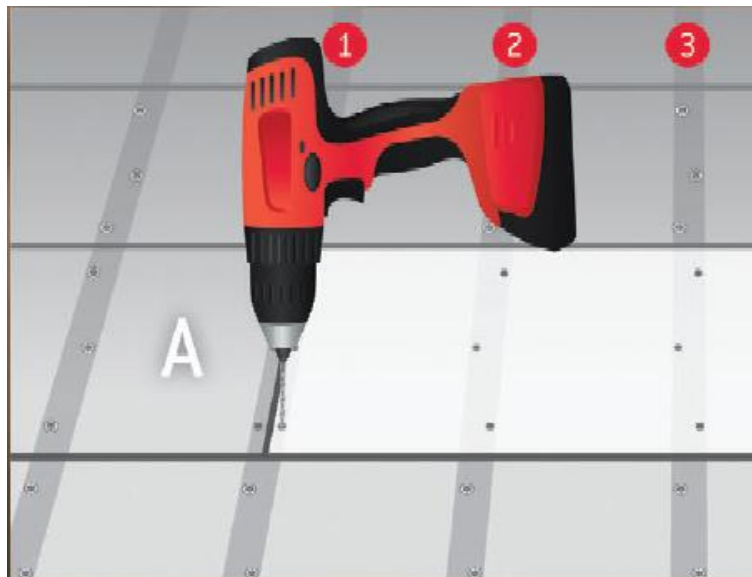
2. Remove the Huck fasteners from the end of the I-beam to be replaced.
3. Remove the broken I-beam and replace with a new one. This new I-beam will sit farther back over the bogie tube than the one that was removed.



4. The front mounting holes of the new I-beam will line up with the rear holes in the rail from the original I-beam. Another I-beam will use the other mounting holes. The arrows in the image below shows the existing holes in the lower rail from the original I-beam.



5. Back drill the remaining holes and install new Huck fasteners, attaching the I-beams to the lower rails. If Hucks cannot be used, use the same bolts and nuts that are used at the upper coupler.
6. Drill new holes in the floor boards with F bit or 17/64" bit through the two new I-beams. The holes should be in the flange of the cross-members halfway between the web and the edge of the cross-members. Drill two holes per cross-member per board. Be sure to alternate the holes on each side of the cross-member web where possible.



7. Install 5/16" floor screws in all of the drilled holes.



8. Clean a sufficient area on the new I-beam and bogie tube to allow the two to be welded together. Weld both sides of the I-beam flange to the top of the bogie tube.
9. If any other I-beams over the bogie were cracked they will need to be plated. Drill a 1/8" hole at each end of the existing crack if possible. Then weld a 2 1/2" x 4" x 10 gauge steel plate to the I-beam web, centered over the crack. The plate needs to be fully welded, all the way around.
10. Paint over any welded areas to prevent corrosion.