LADDER TOWER

Ladder Tower

Campaign Service Bulletin
CSB24-600-001

DATE: **7/17/2024**

APPLIES TO: This service bulletin applies to certain model year 2004-2018 Gladiator, 2008-2009 and 2013-2017 Metro Star, and 2007 Advantage model emergency response apparatus vehicles, equipped with a 75 foot, 103 foot, and 100 foot TDA aerial devices built between December 22, 2004 and February 11, 2018.

CONDITION: The aerial rung has the potential for moisture intrusion, which could settle into the rung rail weldment and freeze resulting in splits, cracks, or bulges.

CORRECTION: Inspect rung rail for swelling and cracks and add drain holes.

LABOR ALLOCATION: 2-3 hours

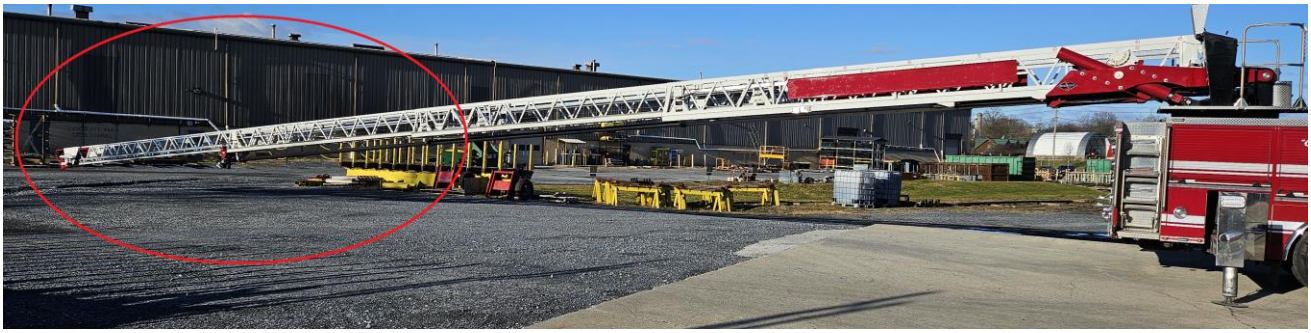
CLASSIFICATION: E3

GENERAL INSTRUCTIONS:
Thoroughly review entire service bulletin before starting work. If there are questions or concerns with steps defined in this service bulletin, contact Spartan Fire, LLC. Customer & Product Support Group.

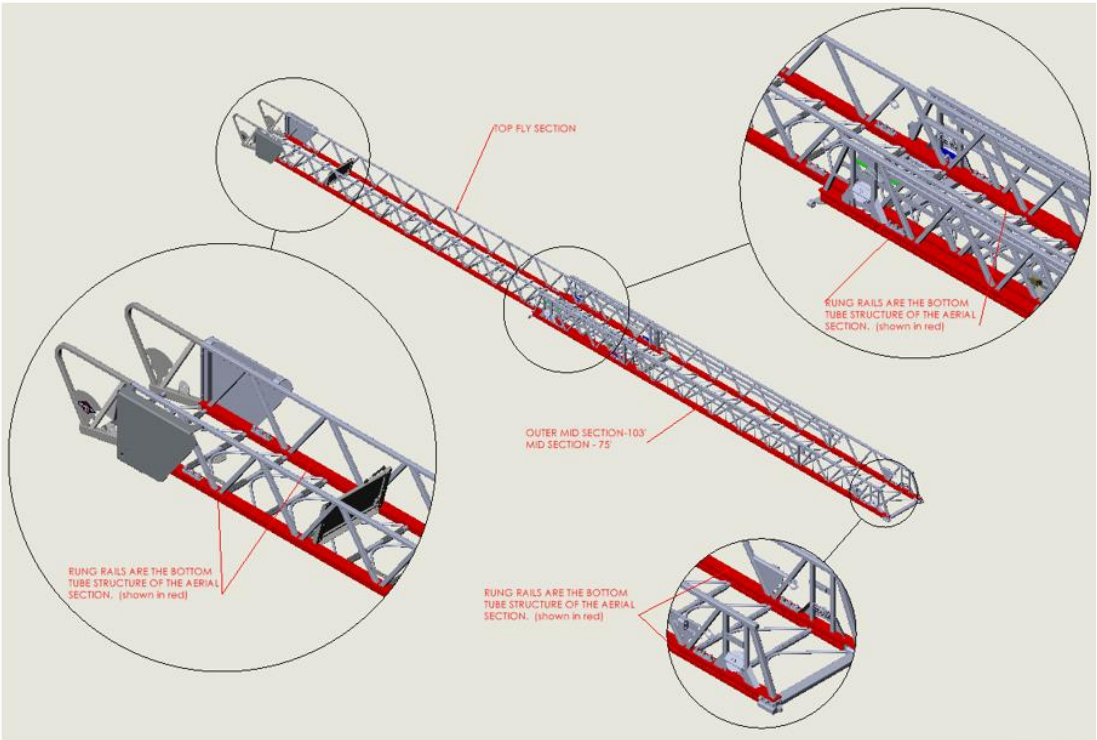
All applicable industry safety standards must be followed when performing work identified in this procedure.

STEP-BY-STEP INSTRUCTIONS

1. Fully extend the aerial device to visually inspect all rung rail tubes that are used for cable conduit that are using strain reliefs for wire entry. This will be the top 2 sections on both the 75’ and 103’ aerials.



2. Locating the rung rails. These are the bottom tube structures on the ladder sections.



3. Visually inspect all sides of the rung rails tubes looking for bulges or cracks in the tube. Using the tube gauge tool, run the appropriate gauge (per section) down the entire length of the rung rail tubing. If the gauge tool fits the tube, no bulging is present, proceed to step 4. If cracks are found and/or the gauge tool doesn't fit, measurements and photos are to be taken of the area.
See the proper fitment of the tube gauge example below in figure 3.1 and improper fitment in figure 4.1.

Proper fit of the gauge tool

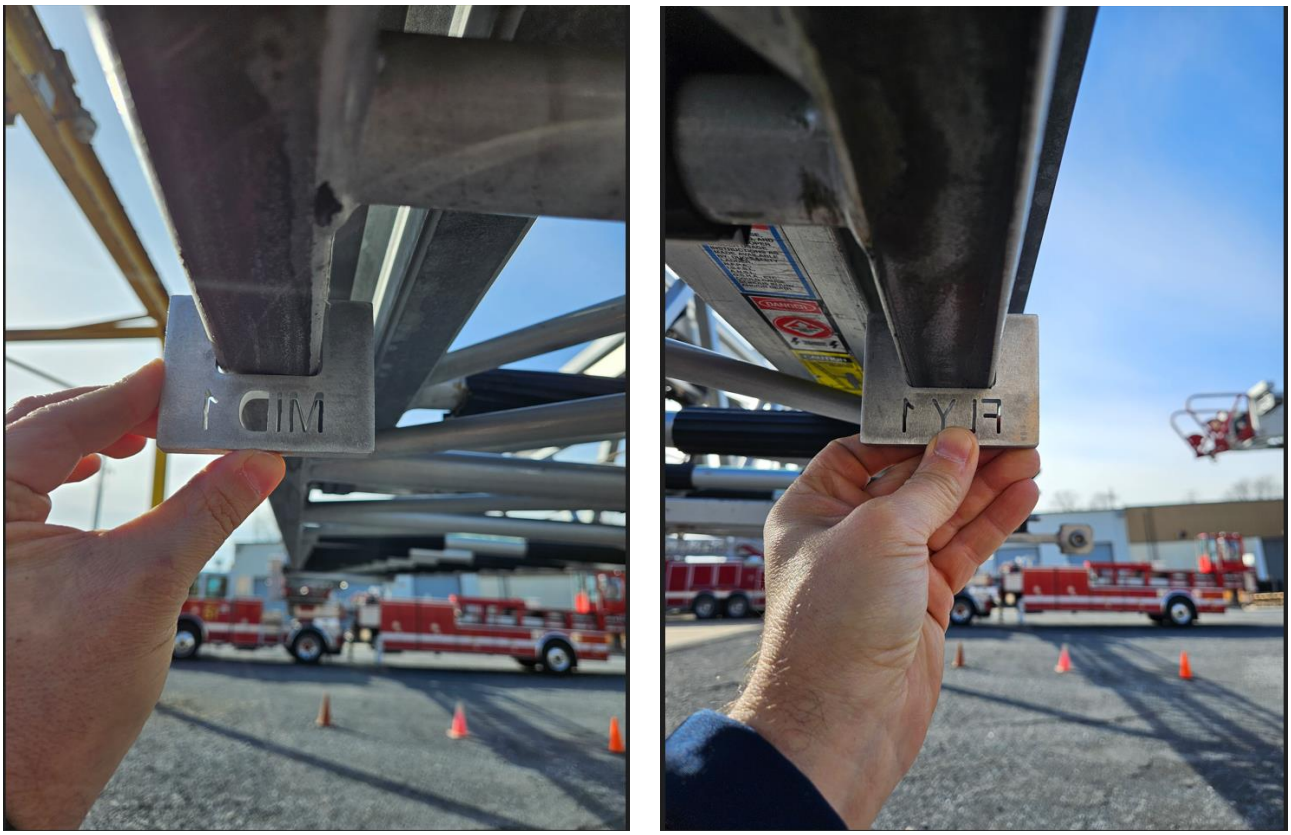


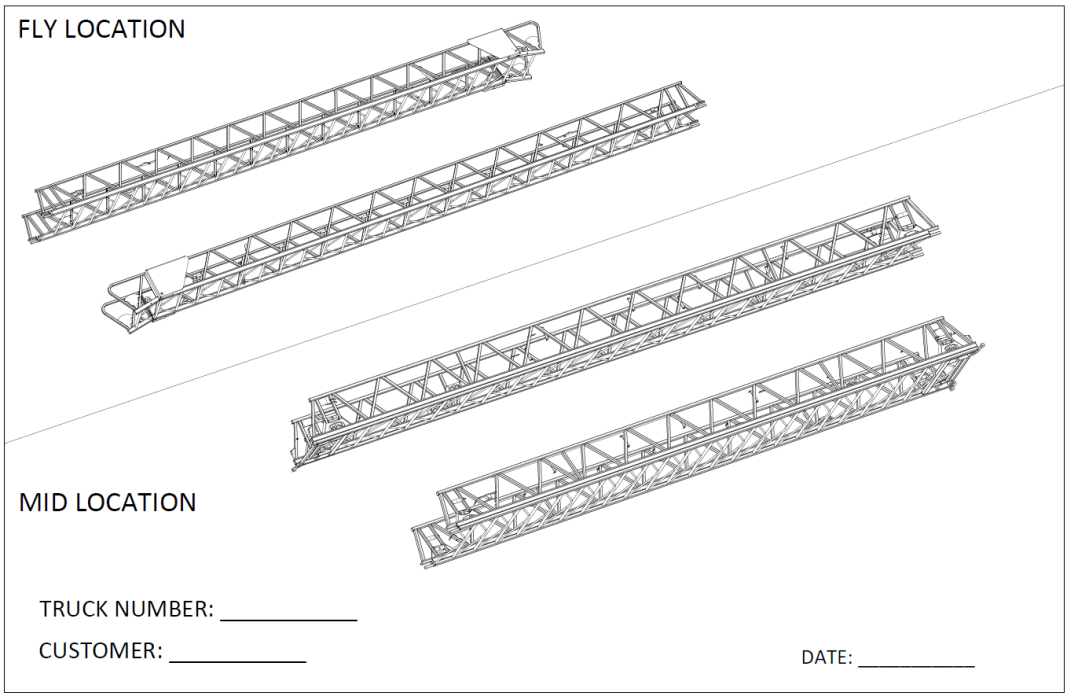
Figure 3.1

Gauge tool not properly fitting

Figure 4.1

4. If cracks exist or the gauge tool doesn't properly fit, note the location and measurement of the area on the drawing. Take pictures and measurements of its location and submit to customer service. *See figures 5.1 and 5.2.*

Figures 5.1



Figures 5.2

Service Bulletins are intended for use by Professional Technicians only. They are written to guide Professional Technicians in performing service to vehicles of specific nature in conjunction with industry standards. Professional Technicians should be appropriately trained on industry standards and have the tools and equipment to perform procedures safely and properly.

5. At the tip and bottom of each ladder sections rung rail, drill a 1/4" diameter hole centered in the bottom wall of the rung rail tube located 4" to 5" in from the end of the tube weldments.
(8) Holes in total will be added.
Once the holes are drilled, apply touch up paint on the drill openings.
See Figures 6.1, 7.1,7.2, 8.1, 8.2.

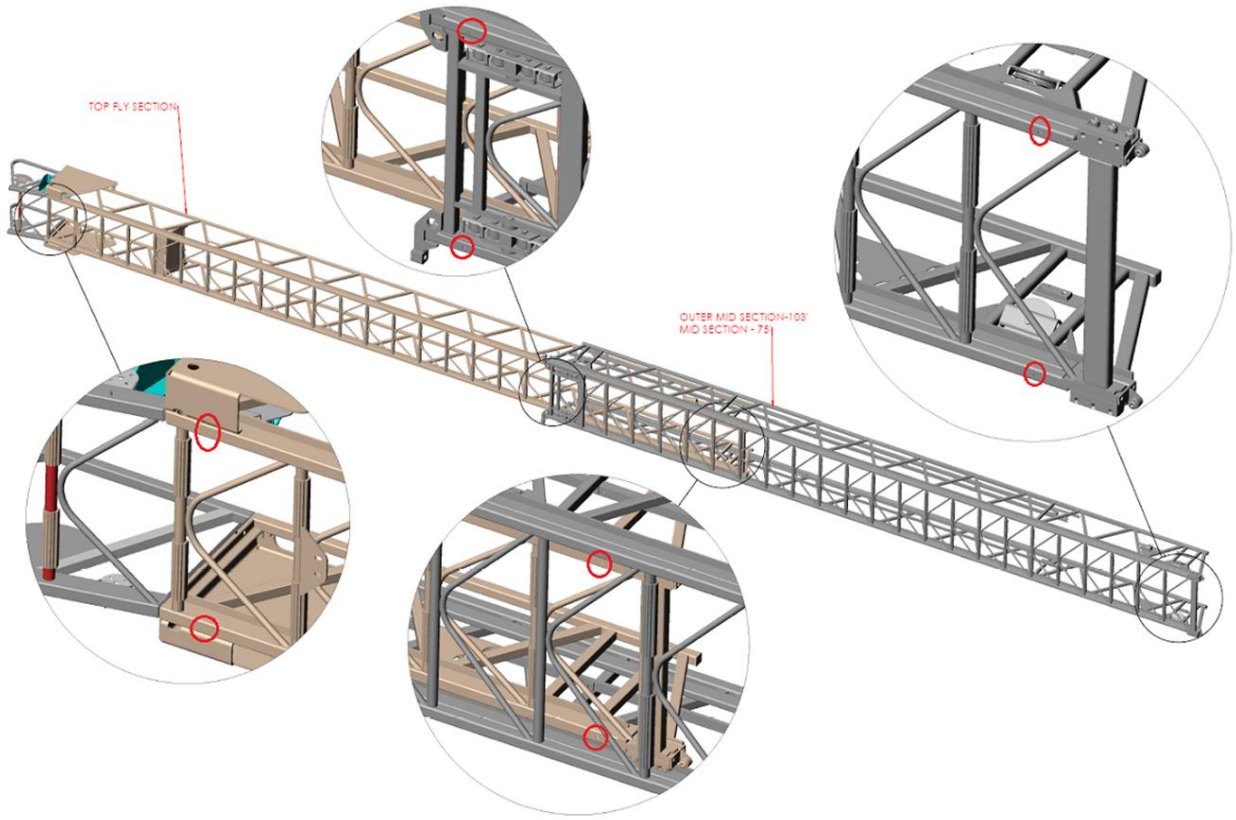


Figure 6.1

Image showing the ¼" hole at the tip of the outer mid rung rails

Figure 7.1

Image showing the ¼" hole at the tip of the fly rung rails

Figure 7.2

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Images showing the ¼" hole in the lower outer mid rung rails

Figure 8.1

Figure 8.2

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6. Locate the strain relief connections in the top of the rung rails and apply sealant to the tops of the wire entry points. *See Figure 9.1*

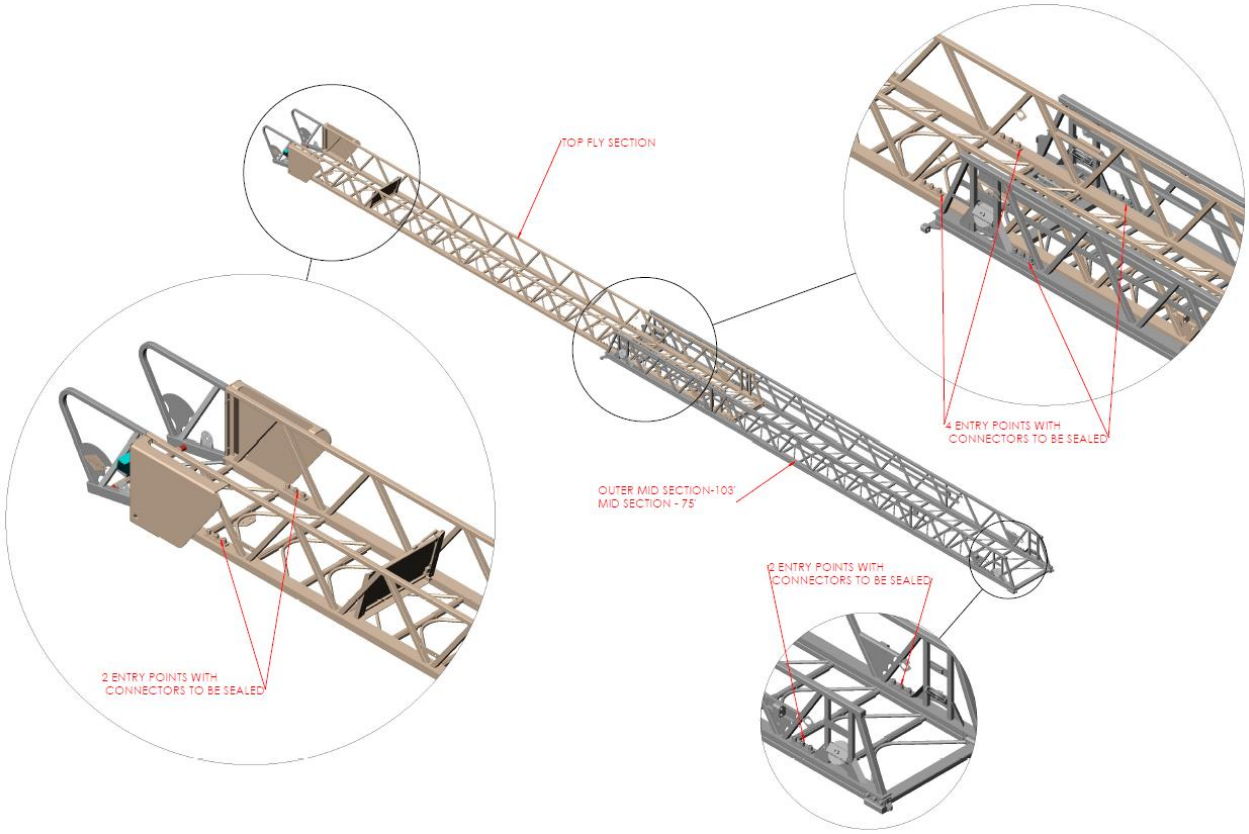


Figure 9.1

7. Sealant to be applied is a 3M Fast Cure 4000 UV (05280). The 3M product can be purchased on Amazon, Home Depot or a local hardware store. *See Figure 10.1.*

Figure 10.1

8. Apply sealant to the entry points where the wires enter the strain reliefs. Where multiple wires enter the strain reliefs, be sure to apply sealant between and around the wires. *See Figure 11.1.* Also seal around the base of the acorn nuts filling gaps and openings. *See Figure 11.2*

Wiring connections without sealant

Figure 11.1

Wiring connections with sealant.

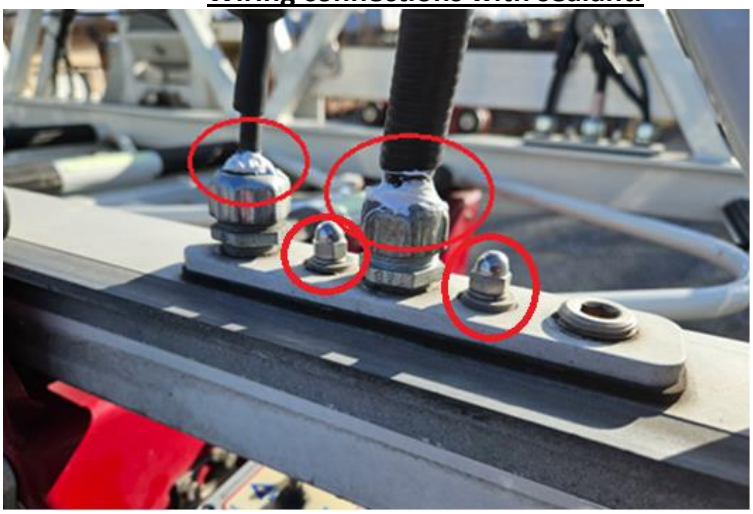
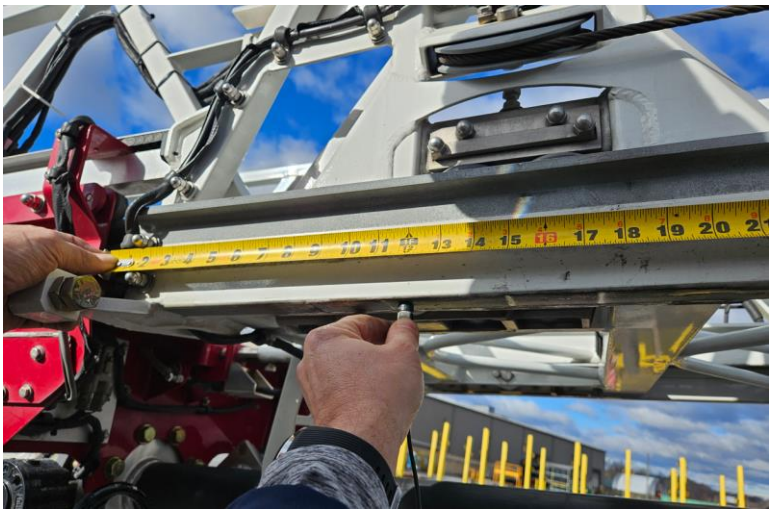


Figure 11.2

9. If during the process of adding the drain holes starting on page 6 step 5, water drains out of the holes, continue with step 10. If water wasn't present, step 10 can be skipped.

10. Using an Ultrasonic tester, start at the top of each ladder section (fly and mid) and measure the rung rail tube wall thickness every 12". *See Figures 12.1 and 12.2.*



Figures 12.1

Figure 12.2

11. Ultrasonic readings should be taken at the paint line on the under-side of the rug rail tube. Measure both the left and the right side of the tube paint line *See Figure 13.1 and 13.2*. Record

your readings on the documents provided on pages 14 -16. After readings are taken and recorded, submit results to ***andy.haigh@spartanmotors.com*** for review.

Figure 13.1

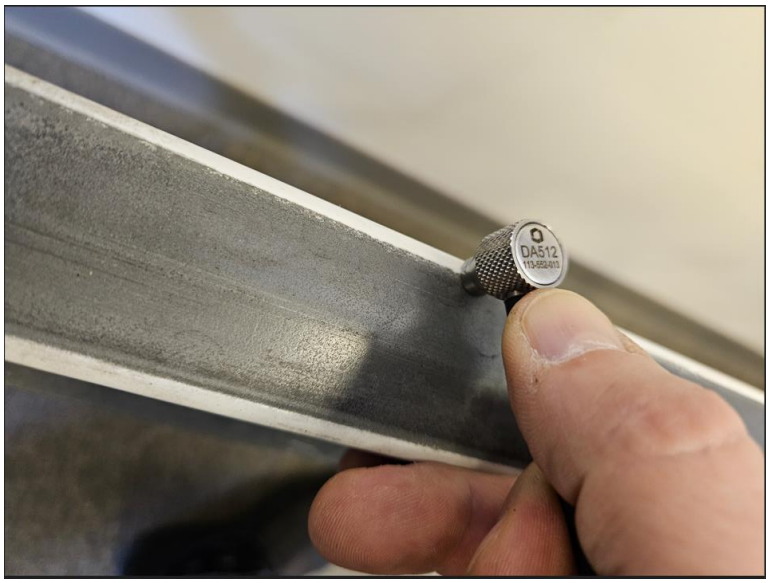


Figure 13.2

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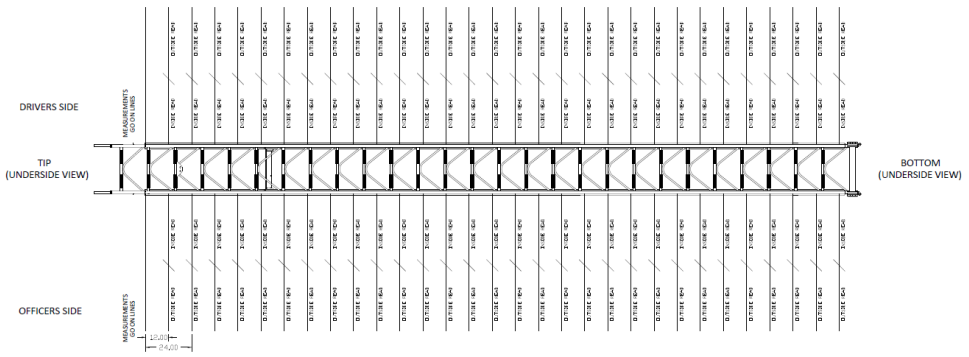
Use the attached drawings to record wall thickness measurements.

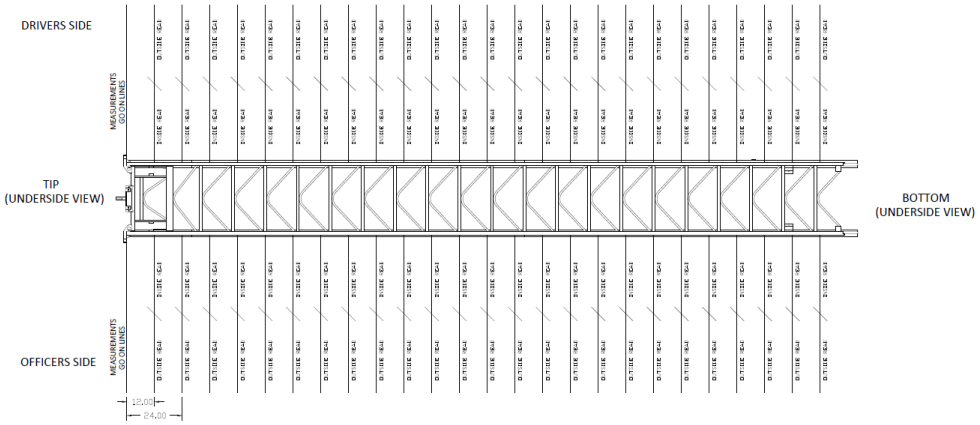
FLY MEASUREMENTS



TRUCK NUMBER: _____

CUSTOMER: _____ DATE: _____

MID/OUTER MID MEASUREMENTS



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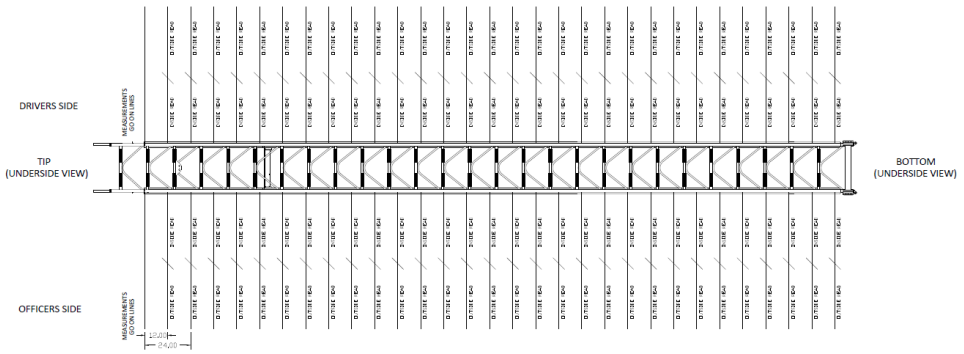

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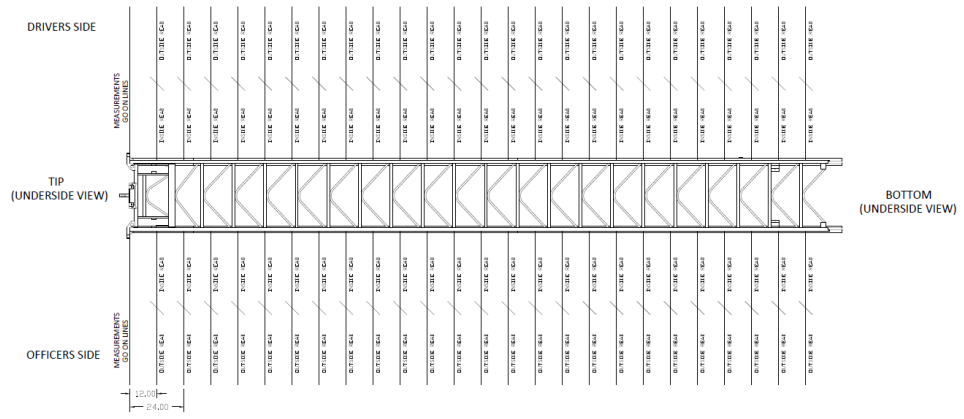

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