



Smeal Fire Apparatus

Technical Service Bulletin
TSB24-600-001

DATE: 1/30/2024

APPLIES TO: This service bulletin applies to certain 2013 through 2023 model year, Rear Mounted Aerial model Emergency Response vehicles and equipment aerials built between January 2014 and September 2023.

CONDITION: Bolts that fasten the torque frame to some outrigger locations and some frame rail locations may fail.

CORRECTION: Inspect and measure gaps between torque box mounting plates and the frame. Shim if necessary and install new fasteners.

LABOR ALLOCATION: 2-8 hours per mount

CLASSIFICATION: T3

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.

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Technical Service Bulletin
TSB24-600-001

Step by Step Instructions

- 1) This bulletin is intended for use in addressing cases where torque frame mount fasteners have been found to be broken. This is not intended to be used for proactive repair/replacement of fasteners that have not failed.
- 2) The bulletin is divided into two sections:
 - a. Section A: Inspection and Measurement
 - b. Section B: Mounting Bolt Replacement Procedure
- 3) Upon inspection of torque box or outrigger mounting bolts, if bolts are found to be broken, choose the appropriate category in Section A for your aerial length and mounting plate location below to measure and record the gap between the mounting plate and the frame rails.
- 4) Once measurements are collected and if they are outside of the specification, contact Spartan Customer Service **1-800-867-6478** for procurement of correct spacer shims to correct gap disparity.
- 5) Once shims/fasteners are received, use the appropriate category in Section B (*starting on page 13*) for your aerial length and mounting plate location to correctly install and torque the shims and fasteners.

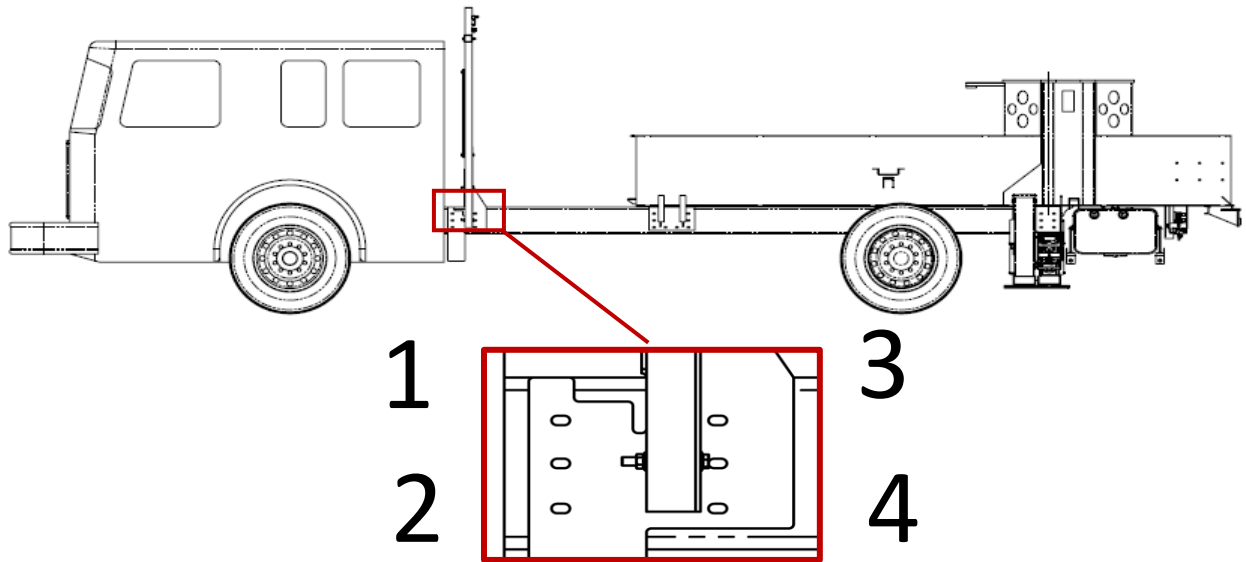
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Section A: Inspection and Measurement

75' Aerial Ladder Rest Mounting Plate

1. Remove all fasteners from the front ladder rest mounting frame plate. One side at a time, as necessary.
2. Measure the gap using feeler gauges at the top and bottom of the plate. This will give a shim thickness. If the measurement is greater than .031", a shim pack will be made to take up that space.



Measurement				
Gap	1	2	3	4
Drivers				
Officers				

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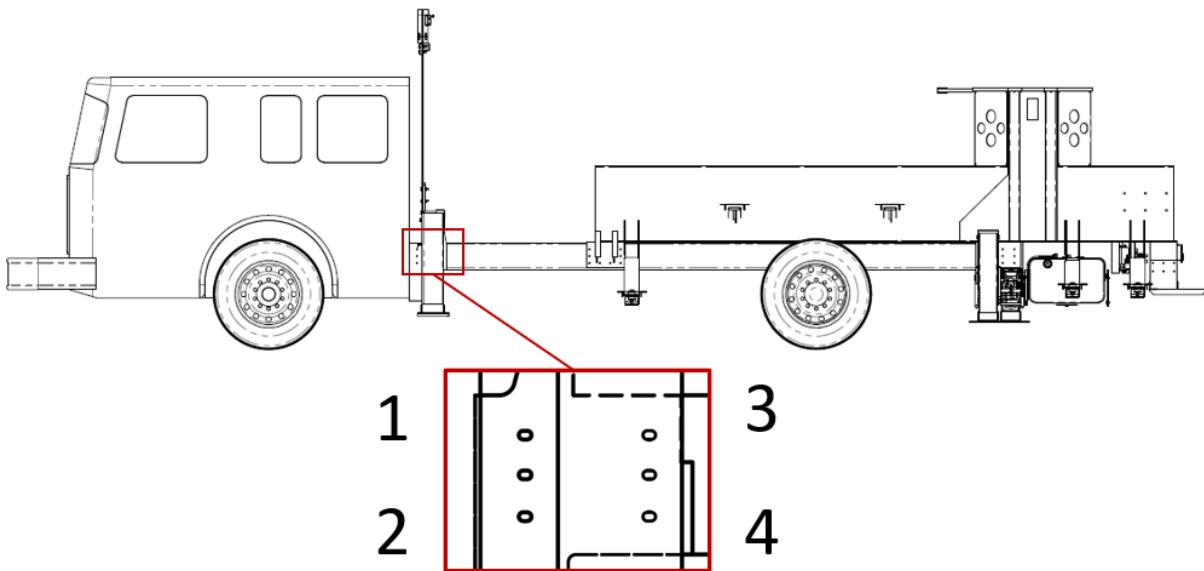


Smeal Fire Apparatus

Technical Service Bulletin
TSB24-600-001

75' Aerial Front Stabilizers Gap Measurement

1. Remove all fasteners from the front outrigger mounting frame plate. One side at a time, as necessary.
2. Measure the gap using feeler gauges at the top and bottom of the plate. This will give a shim thickness. If the measurement is greater than .031", a shim pack will be made to take up that space.



Measurement				
Gap	1	2	3	4
Drivers				
Officers				

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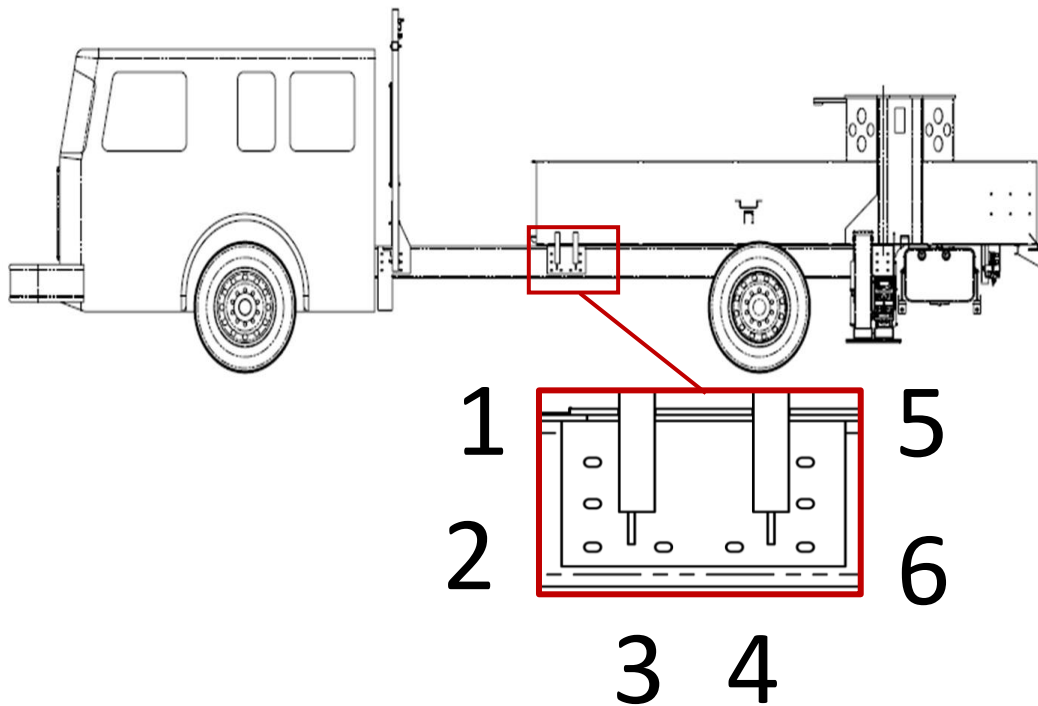
Smeal Fire Apparatus

Technical Service Bulletin
TSB24-600-001

75' Aerial Mid Torque Box Mounting Plate Gap Measurement

1. Remove all fasteners from the mid torque box mounting frame plate. One side at a time, as necessary.

2. Measure the gap using feeler gauges at the top and bottom of the plate. This will give a shim thickness. If the measurement is greater than .031", a shim pack will be made to take up that space.



Measurement						
Gap	1	2	3	4	5	6
Drivers						
Officers						

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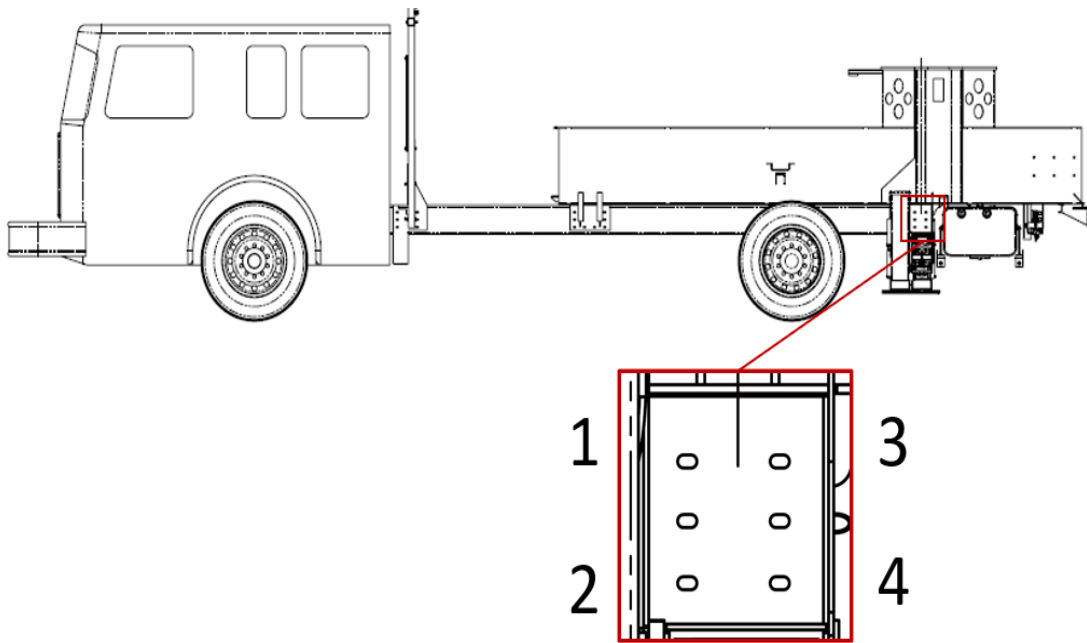


Smeal Fire Apparatus

Technical Service Bulletin
TSB24-600-001

75' Aerial Rear Torque Box Mounting Plate Gap Measurement

1. Remove all fasteners from the rear torque box mounting frame plate. One side at a time, as necessary.
2. Measure the gap using feeler gauges at the top and bottom of the plate. This will give a shim thickness. If the measurement is greater than .063", a shim pack will be made to take up that space.



Measurement				
Gap	1	2	3	4
Drivers				
Officers				

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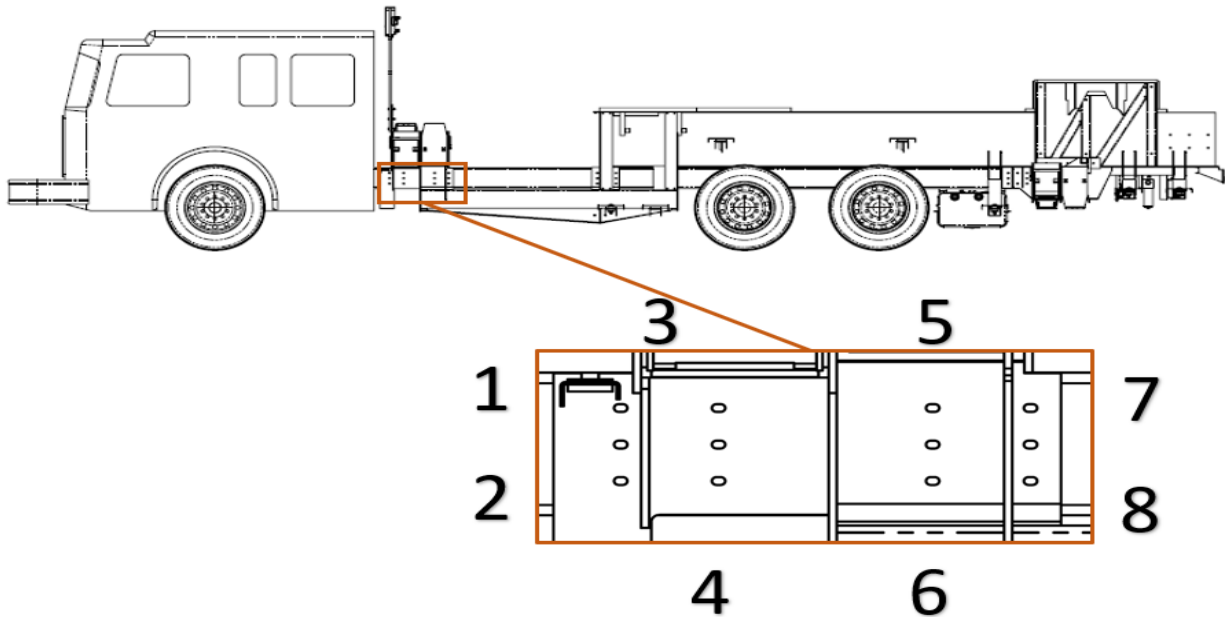


Smeal Fire Apparatus

Technical Service Bulletin
TSB24-600-001

100' Platform Mid Torque Box Mounting Plate Gap Measure

1. Remove all fasteners from front outrigger mounting frame plate. One side at a time, as necessary.
2. Measure the gap using feeler gauges at the top and bottom of the plate. This will give a shim thickness. If the measurement is greater than .031", a shim pack will be made to take up that space.



Measurement								
Gap	1	2	3	4	5	6	7	8
Drivers								
Officers								

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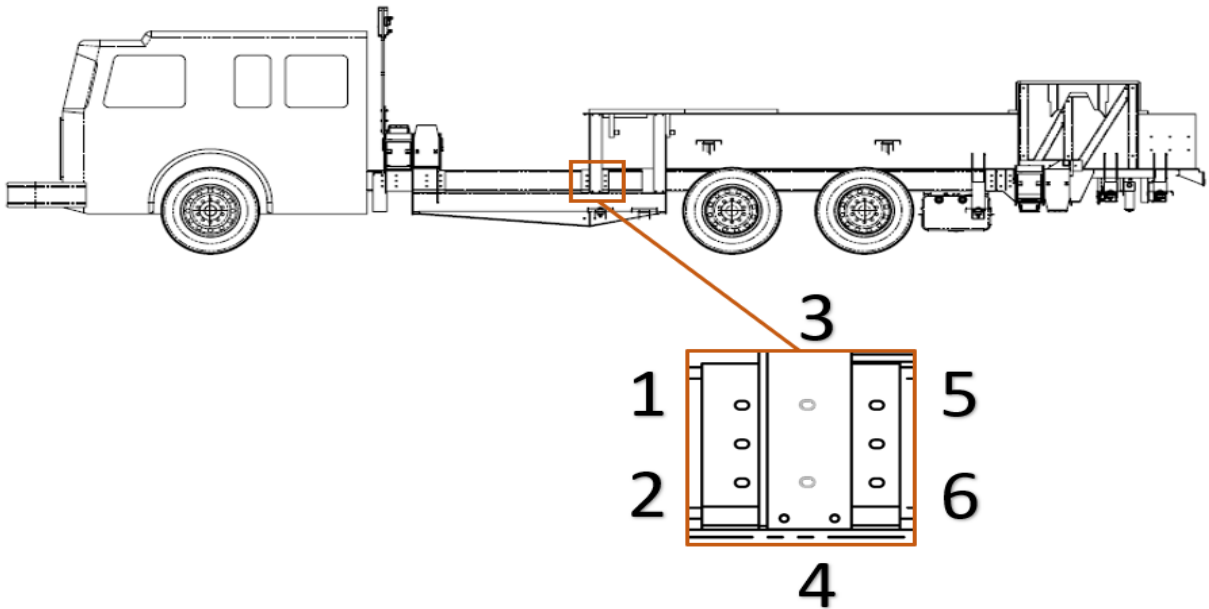


Smeal Fire Apparatus

Technical Service Bulletin
TSB24-600-001

100' Platform Mid Torque Box Mounting Plate Gap Measure

1. Remove all fasteners on mid torque box mounting frame plate. One side at a time, as necessary.
2. Measure the gap using feeler gauges at the top and bottom of the plate. This will give a shim thickness. If the measurement is greater than .031", a shim pack will be made to take up that space.



Measurement						
Gap	1	2	3	4	5	6
Drivers						
Officers						

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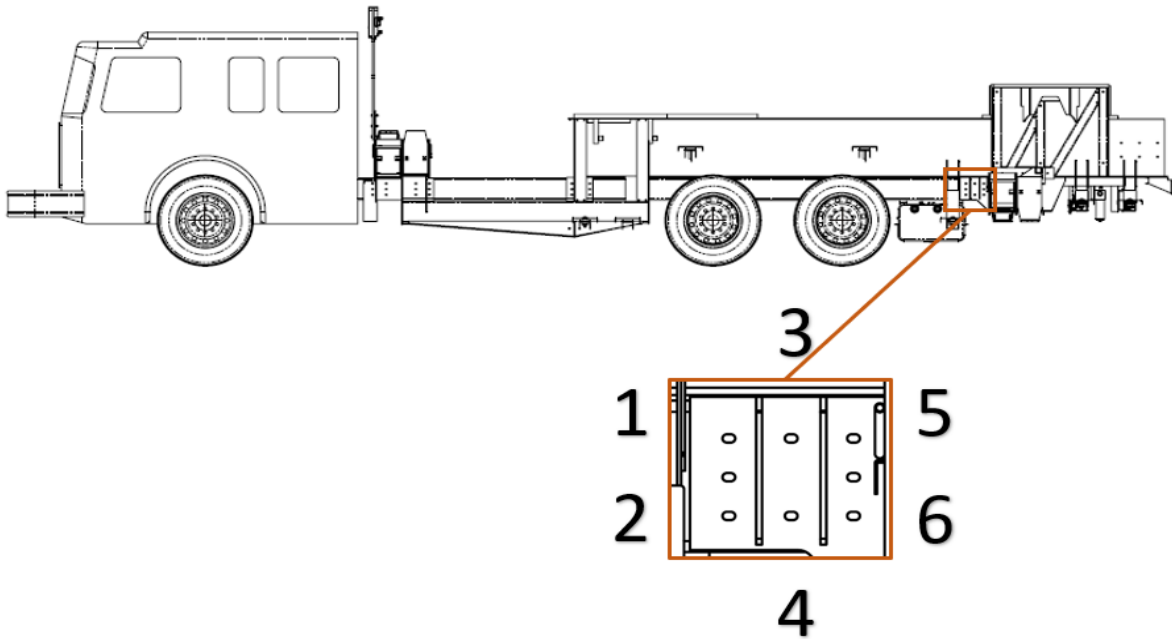


Smeal Fire Apparatus

Technical Service Bulletin
TSB24-600-001

100' Platform Rear Torque Box Mounting Plate Gap Measure

1. Remove all fasteners on rear torque box mounting frame plate. One side at a time, as necessary.
2. Measure the gap using feeler gauges at the top and bottom of the plate. This will give a shim thickness. If the measurement is greater than .063", a shim pack will be made to take up that space.



Measurement						
Gap	1	2	3	4	5	6
Drivers						
Officers						

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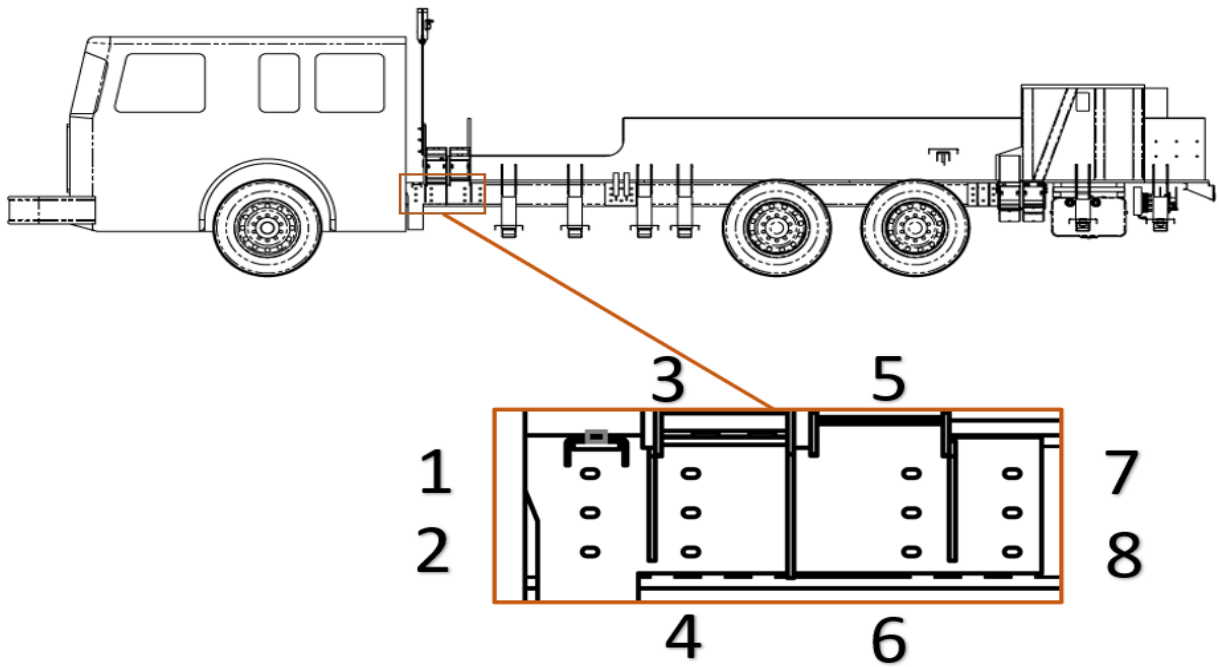


Smeal Fire Apparatus

Technical Service Bulletin
TSB24-600-001

105' Aerial Front Outrigger Mounting Plate Gap Measure

1. Remove all fasteners from the front outrigger mounting frame plate. One side at a time, as necessary.
2. Measure the gap using feeler gauges at the top and bottom of the plate. This will give a shim thickness. If the measurement is greater than .031", a shim pack will be made to take up that space.



Measurement								
Gap	1	2	3	4	5	6	7	8
Drivers								
Officers								

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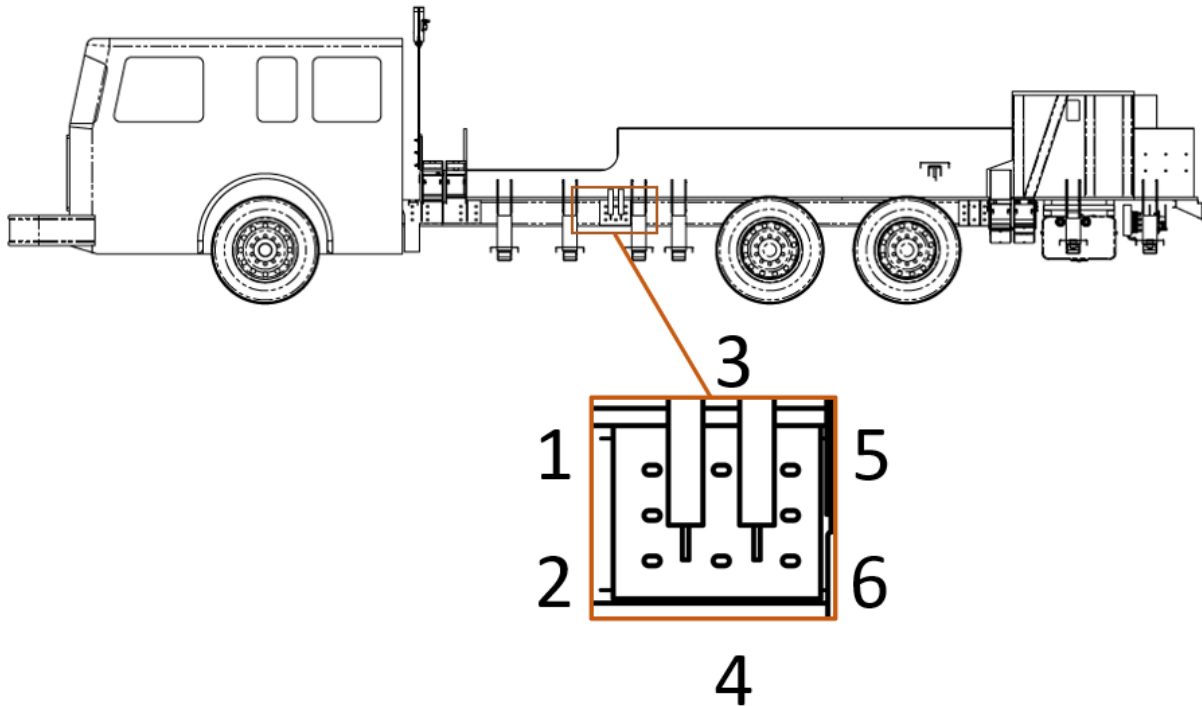


Smeal Fire Apparatus

Technical Service Bulletin
TSB24-600-001

105' Aerial Mid Torque Box Mounting Plate Gap Measure

1. Remove all fasteners from the mid torque box mounting frame plate. One side at a time, as necessary.
2. Measure the gap using feeler gauges at the top and bottom of the plate. This will give a shim thickness. If the measurement is greater than .031", a shim pack will be made to take up that space.



Measurement						
Gap	1	2	3	4	5	6
Drivers						
Officers						

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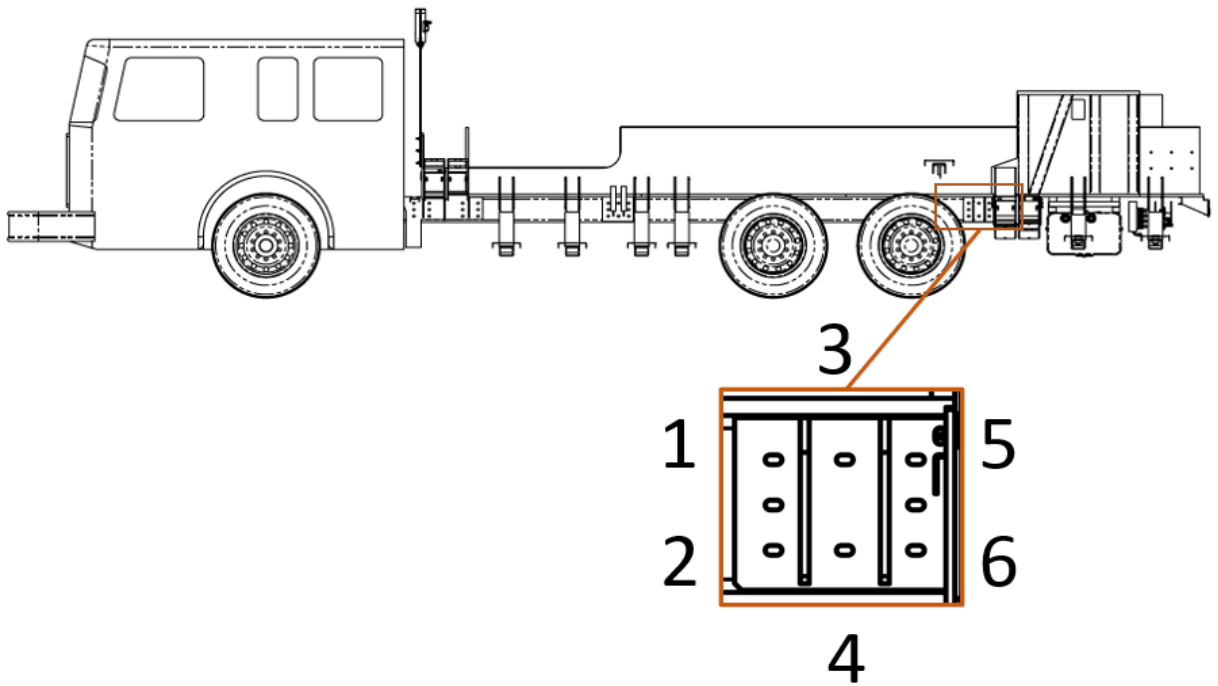


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Technical Service Bulletin
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105' Aerial Rear Torque Box Mounting Plate Gap Measure

1. Remove all fasteners from the rear torque box mounting frame plate. One side at a time, as necessary.
2. Measure the gap using feeler gauges at the top and bottom of the plate. This will give a shim thickness. If the measurement is greater than .063", a shim pack will be made to take up that space.



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Gap	1	2	3	4	5	6
Drivers						
Officers						

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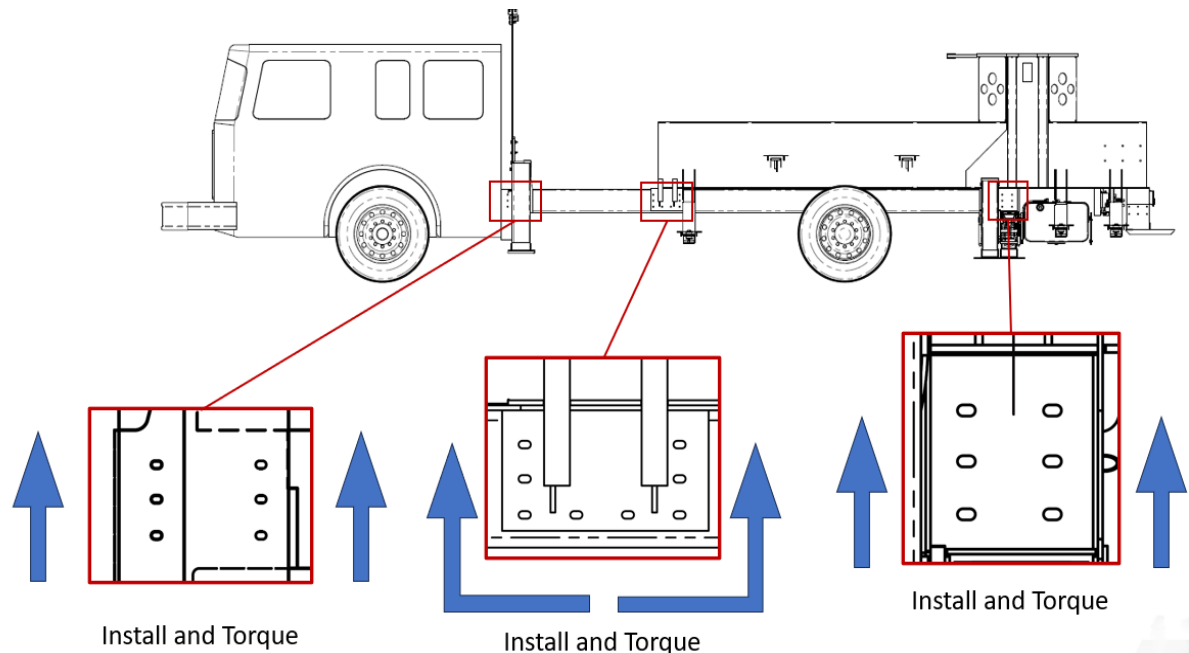


Section B: Mounting Bolt Replacement Procedure

75' Aerial Torque Box Mounting Bolts Replacement Procedure

Objective: Install new Grade 8 Bolts and Nuts and shims if required.

- Use the same procedure for both sides of the apparatus.
- One plate at a time, install fasteners and shims, if required. Torque bolts to 50%, beginning in the lower center of the plate working out and up.
- After bolts are installed and torqued to 50%, repeat procedure and torque to final value.
- Final Torque Values:
 - 1/2" bolt – 80 ft-lb
 - 5/8" bolt – 175 ft-lb



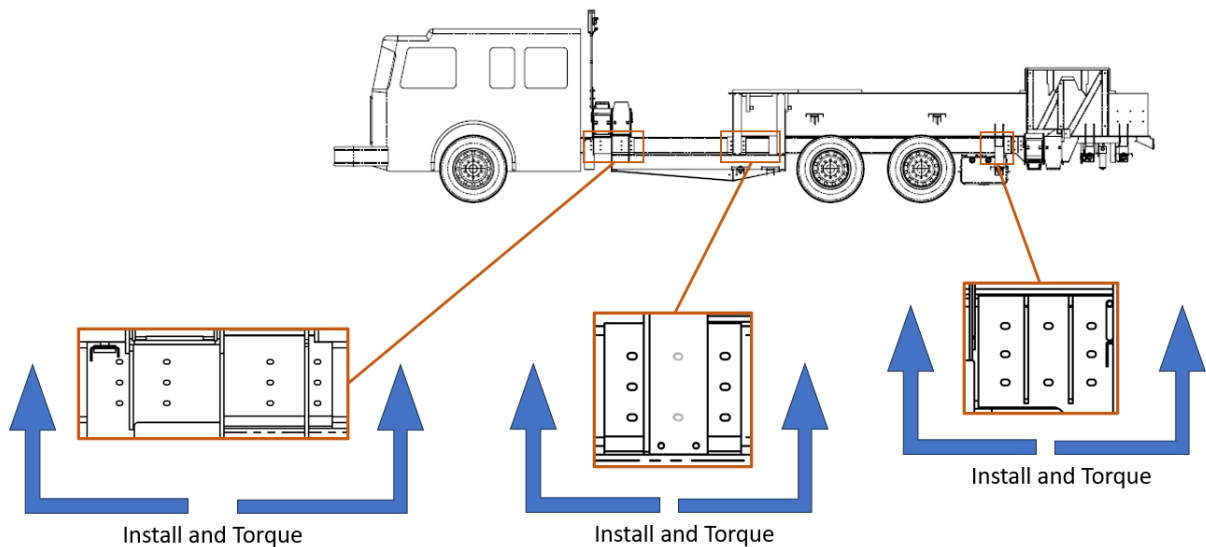
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100' Rear Mount Platform Torque Box Mounting Bolts Replacement Procedure

Objective: Install new Grade 8 Bolts and Nuts and shims if required.

- Use the same procedure for both sides of the apparatus.
- One plate at a time, install fasteners and shims, if required. Torque bolts to 50%, beginning in the lower center of the plate working out and up.
- Torque bolts to 50%, beginning in the lower center of the plate working out and up.
- After bolts are installed and torqued to 50%, repeat procedure and torque to final value.
- Final Torque Values:
 - 1/2" bolt – 80 ft-lb
 - 5/8" bolt – 175 ft-lb



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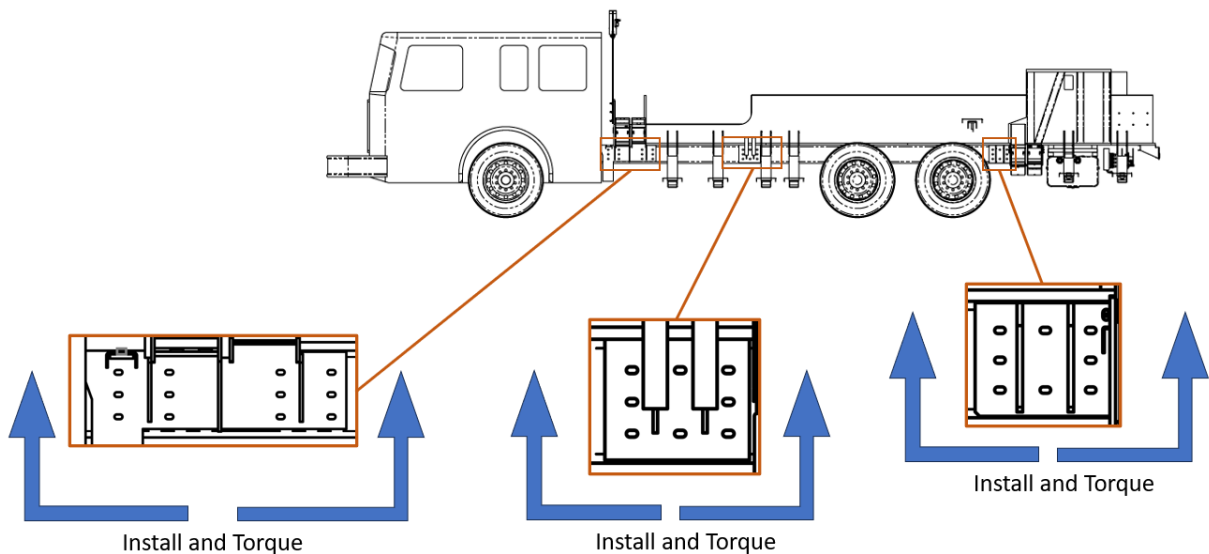
Smeal Fire Apparatus

Technical Service Bulletin
TSB24-600-001

105' Aerial Torque Box Mounting Bolts Procedure

Objective: Install new Grade 8 Bolts and Nuts and shims if required.

- Use the same procedure for both sides of the apparatus.
- One plate at a time, install fasteners and shims, if required. Torque bolts to 50%, beginning in the lower center of the plate working out and up.
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