

## Scorpion TMA Post Impact Survey Measurements

The purpose of the survey measurements is to determine whether or not the tube assemblies are still serviceable. Tube assemblies that are no longer in spec must be replaced before the TMA can be returned to service as a life saving piece of equipment.

A = \_\_\_\_\_

B = \_\_\_\_\_  
**As Built: 106" [2,692 mm]**  
**Difference between A and B must be less than 1" [25 mm]**

C = \_\_\_\_\_  
**Min: 79-3/4" [2,026 mm]**  
**Max: 80-3/4" [2,051 mm]**

D = \_\_\_\_\_  
**Min: 79-3/4" [2,026 mm]**  
**Max: 80-3/4" [2,051 mm]**

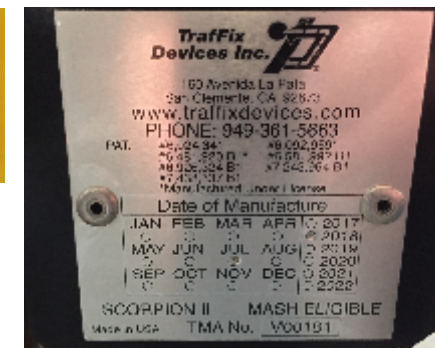
E = \_\_\_\_\_

F = \_\_\_\_\_  
**As Built: 96-1/4" [2,445 mm]**  
**Difference between E and F must be less than 1" [25 mm]**

G = \_\_\_\_\_  
**Min: 61-3/4" [1,569 mm]**  
**Max: 62-3/4" [1,594 mm]**

H = \_\_\_\_\_  
**Min: 61-3/4" [1,569 mm]**  
**Max: 62-3/4" [1,594 mm]**

Position 1 Module Serial #    Position 2 Module Serial #    Position 3 Module Serial #    Position 4 Module Serial #    TMA Serial #



### Instructions

- Record the TMA serial number and each energy absorbing module serial number in the spaces provided.
- Perform measurements A through H and record the values in the spaces provided.
- Dimension limits specified are valid for both NCHRP-350 tested Scorpion TMA and MASH tested Scorpion II TMA.
- All measurements must fall within the min/max values indicated for the tube assemblies to remain in service.
- If any measurements fall outside the acceptable limits, please consult with an appropriate TrafFix Devices representative.
- Any tube assemblies that are deemed "out of spec" must be destroyed by fully cutting the upper and lower tube.
- In some cases, it may be necessary to take measurements at the bottom as well as the top if damage is observed on the lower portion of the tube assemblies. Both top and bottom measurements must fall within the min/max values defined.

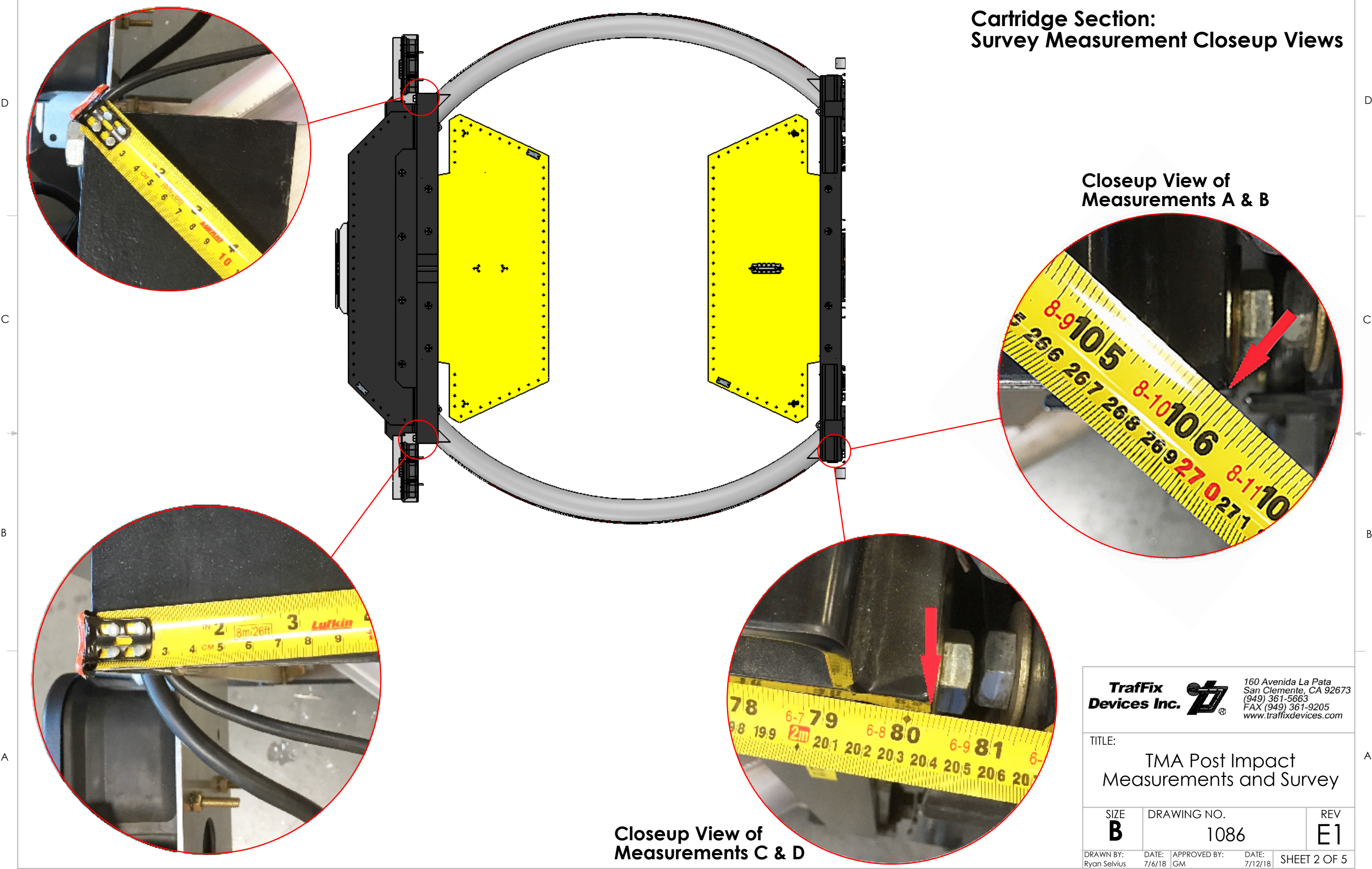
**TrafFix Devices Inc.**  160 Avenida La Pata  
 San Clemente, CA 92673  
 (949) 361-5663  
 FAX (949) 361-9205  
 www.traffixdevices.com

TITLE:  
**TMA Post Impact Measurements and Survey**

SIZE <b>B</b>	DRAWING NO. 1086	REV <b>E1</b>
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DRAWN BY: Ryan Selvius	DATE: 7/6/18	APPROVED BY: GM	DATE: 7/12/18	SHEET 1 OF 5
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**Cartridge Section:  
Survey Measurement Closeup Views**



**Closeup View of  
Measurements A & B**

**Closeup View of  
Measurements C & D**

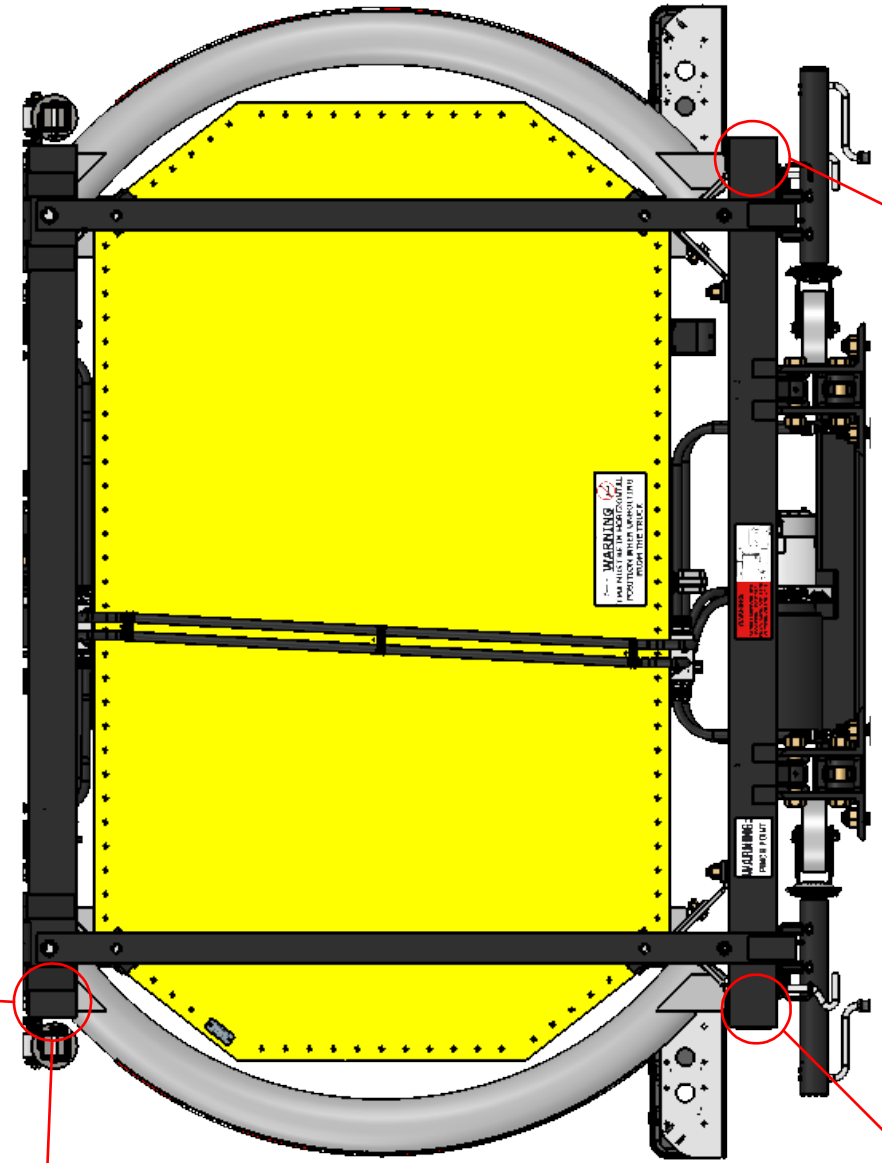
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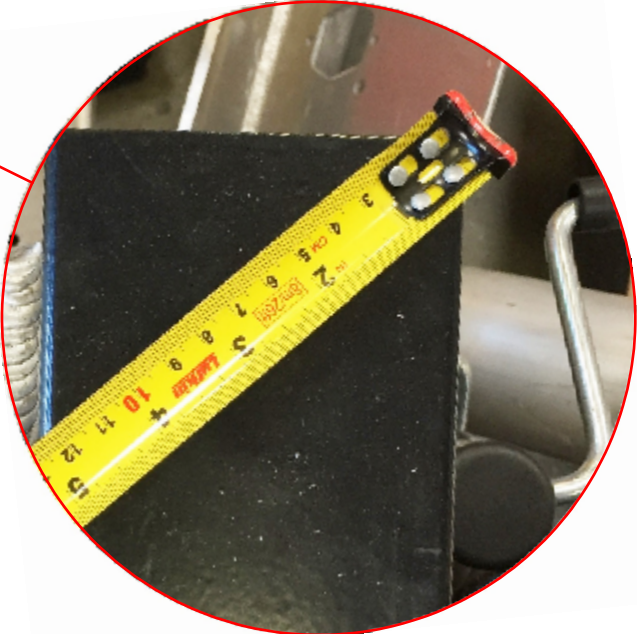
SIZE <b>B</b>	DRAWING NO. 1086	REV <b>E1</b>
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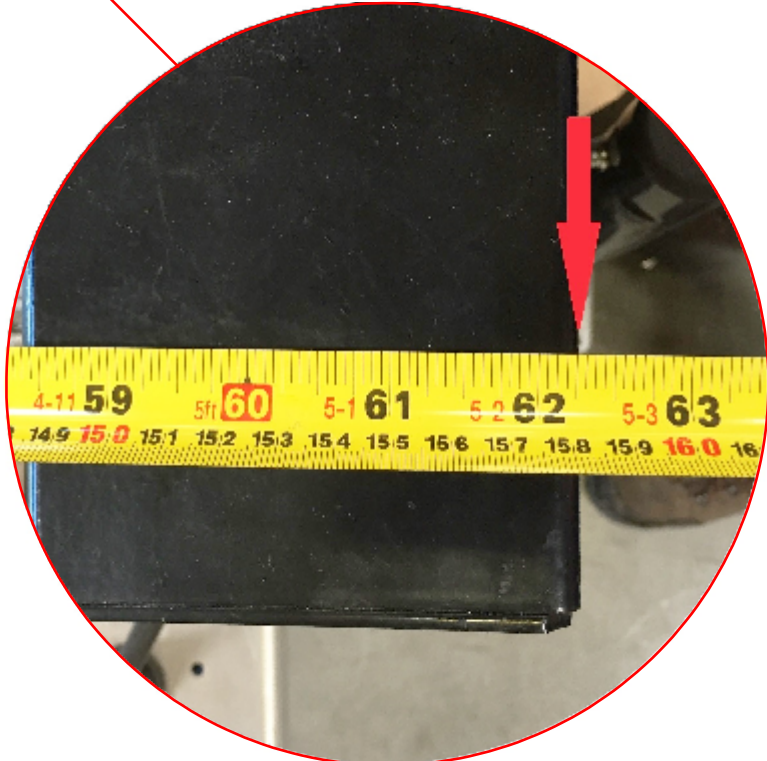
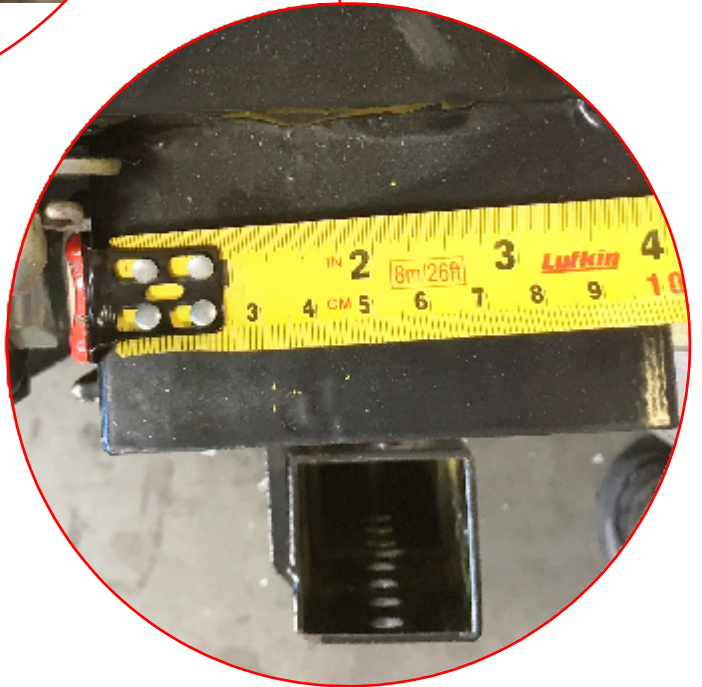
### Strut Section: Survey Measurement Closeup Views



Closeup View of  
Measurements E & F



Closeup View of  
Measurements G & H



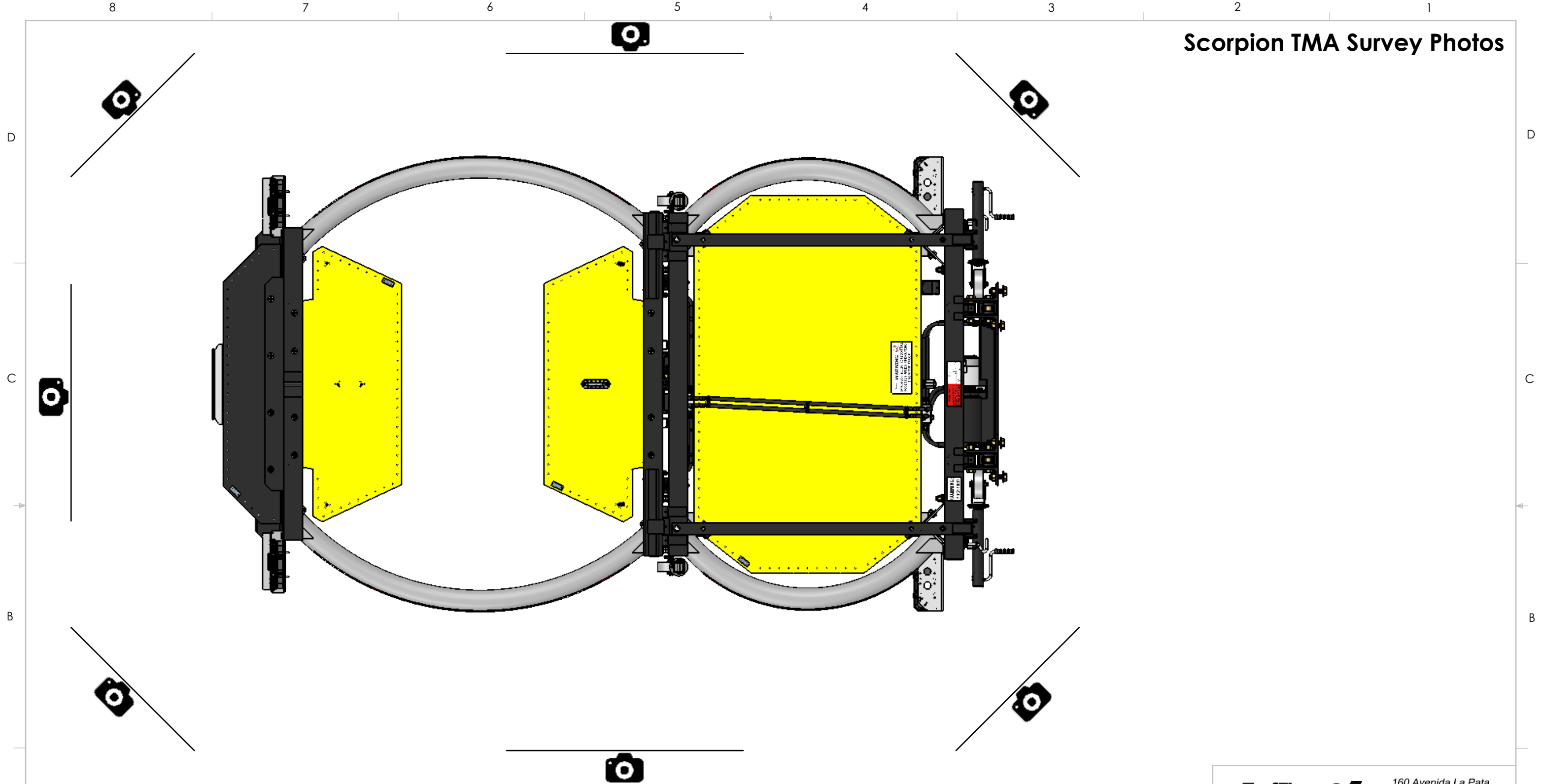
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# Scorpion TMA Survey Photos



Please provide photos of the TMA taken at the approximate angles shown. The views depicted are required at a minimum for Traffix Devices to assess the damage and make repair recommendations. If any gouges, indentations, or cracks on the tube assemblies are discovered during the inspection, closeup photos should be taken.

Closeup photos should also be provided of any damaged components that are observed during the visual inspection of the TMA.

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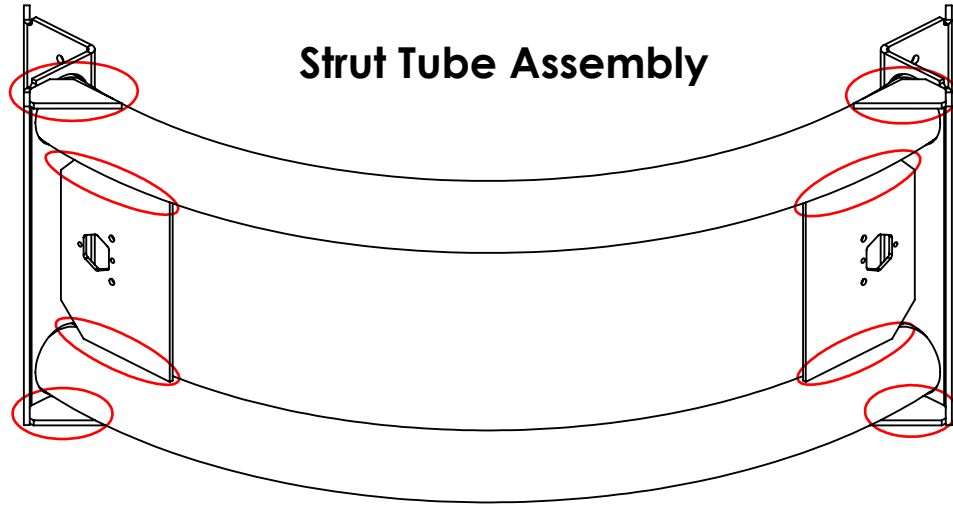
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### Inspection on Strut and Cartridge Tube Assemblies

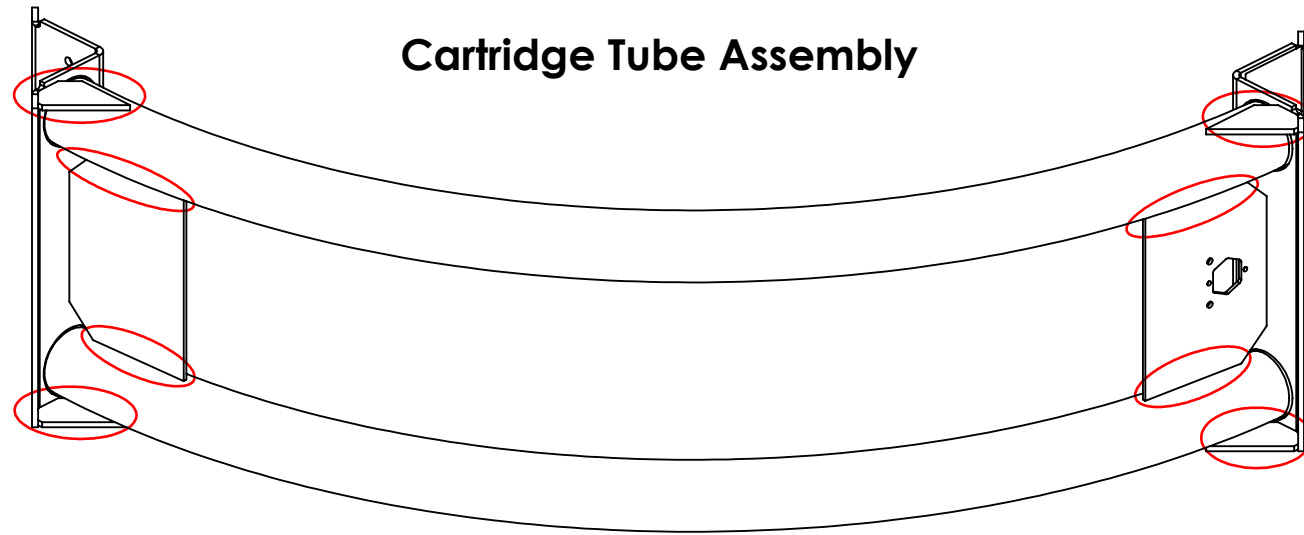
Conduct a visual inspection of all welds on the strut and cartridge tube assemblies. Pay close attention to the areas outlined in red. Check for the presence of cracks in the welds and the tubes themselves. Inspect for any signs of material deformation such as gouges, chips, dents, or scrapes along the entire length of the top and bottom tubes.

If the tube assemblies pass the post impact measurement inspection but cracks, gouges, or other damage is discovered, please contact Traffix Devices' Engineering Department for advisement on repair. Please be prepared to provide photos of any damage discovered and appropriate measurements to indicate size and depth of damage.

**Strut Tube Assembly**



**Cartridge Tube Assembly**



### Examples of Tube Deformation



### Examples of Cracks That Can Occur



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