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TrailerTail Has Damaged or Torn Panels

A1. Minor to Moderate Panel Damage

Panels creases or tears typically smaller than 12" in length can often be repaired with panel patches.

- Panel patches come in 12" x 12" squares. They can be riveted over a section of damaged or torn panel to reinforce the panel material and ensure proper panel stiffness.
- The panel patch will typically be placed on the inside of the panel (the side facing the trailer doors). If the patch covers any brackets or hardware, it should be placed on the opposite side of the brackets. If this is the case, a rivet with a larger grip range must be used. STEMCO supplied rivets will not work for combined material thicknesses of larger than 5/16".
- Use at least 4 rivets to secure the panel patch. It is preferred to insert the rivet from the outside of the panel.

A2. Major Panel Damage

Estimated time required to:
- Replace top or bottom panel ~ 10 min
- Replace Trident lateral panel ~ 12 min
- Replace 4x4 lateral panel ~ 15 min

For tears between 10–14" in length, the panel patch may be rotated to cover the full length of the tear.

For tears larger than 14" in length, consider using multiple panel patches or replacing the entire panel. See [ATD002975] TrailerTail Spare Parts Catalog for details on ordering.

A3. Curled Bottom Panels (TrailerTail 4x4 only)

The bottom panels curling at the center of the trailer is natural for some TrailerTail configurations. It will not affect performance or functionality of the TrailerTail.

If there is noticeable creasing or tearing near the curl, contact Customer Support.

No Bottom Panel curling.

Acceptable Bottom Panel curling.
TrailerTail Has Damaged or Missing Components

A4. Damaged or Missing Components

Estimated time required to:
- Replace gas spring, rotary latch, or AutoDeploy radar speed sensor ~ 5 min
- Replace swingarm ~ 10 min
- Replace AutoDeploy or ZeroTouch latch ~ 15 min
- Replace all other components ~ 5 min

Damaged or missing components should be replaced. Contact Customer Support or refer to [ATD002975] TrailerTail Spare Parts Catalog for ordering. Below are examples of certain components.

A5. Stiffening Rib

Estimated time required to:
- Add 1-2 new rib rivets < 5 min
- Replace rib (22" or 29" long) ~ 8 min
- Replace rib (77" long) ~ 12 min

The stiffening ribs are designed to behave as a breakaway material upon impact to save the more critical panel material. If a stiffening rib is damaged, cracked, or split completely, it will need to be replaced.

Replacing A Cracked or Split Stiffening Rib

Use a drill or a chisel and a hammer to remove all rivets from the damaged rib. Replace with a new rib and rivet it to the existing panel holes using STEMCO supplied rivets.

Pulled-out Rivets

In some cases, 1 or 2 rivets may pull out of the rib during a collision with no actual damage to the rib. If this is the case, the rib may continue to be used.

- Remove the pulled-out rivets.
- Drill a new hole approximately 1–2" above the old hole into the panel.
- Use your hand to press the rib against the panel material at the separation and extend the hole through to the rib.
- Use a rivet gun to fasten a new rivet in the new hole.

Top and Bottom Panel stiffening ribs will require the same procedures.
TrailerTail Has Damaged or Missing Components

A6. DOT Conspicuity Tape

*Estimated time required to apply new DOT tape* < 5 min

The red/silver reflective tape located at the top and bottom of the lateral panels are mandated by the DOT. If any tape is missing or beginning to peel off, it must be replaced.

A7. Living Hinge

*Estimated time required to replace living hinge* < 5 min

The black, plastic Living Hinges are designed to behave as a sacrificial breakaway material upon impact to save the more critical panel material. If the TrailerTail is damaged due to a crash, the Living Hinges may be the first components to fail.

**Removing the Living Hinge**

Use a drill or a chisel and hammer to remove all 5 rivets from the damaged Living Hinge. The rivet must be completely removed in order to install another rivet in the same hole.

*If using a drill, use caution to ensure the drill bit does not wander and elongate the existing hole in the panel.*

**Installing the Living Hinge**

- Insert the Living Hinge Fabric between the panel and the Living Hinge Plastic.
- Insert the STEMCO supplied 1/4” rivet through the hole from the Living Hinge side (the large head of the rivet should be on the Living Hinge side).
- Use a rivet gun and 5 rivets to secure the Living Hinge & Living Hinge Fabric pair against the panel.
TrailerTail Opens Partially, Short of its Fully Deployed Shape

B1. Acceptable Stall
A manual pull or tug on the Lateral Panel is needed to assist TrailerTail deployment, but the panels open the last half of the way into their deployed position without driver assistance.

No adjustments required. TrailerTails intentionally have an initial low-force automated opening for driver safety and ergonomic closing.

B2. Gas Spring Inspection
Manually pull the TrailerTail into its deployed position and let go. If the panels fold inwards towards the trailer door at all, the gas spring most likely has lost pressure. If the TrailerTail can hold itself in its fully deployed position, there is most likely no issue with the gas springs.

Remove the Gas Spring
If you are able to compress it by hand with less than 60 lbs of force, order a replacement.

- Insert a small, flat-head screw driver into the small metal release clip at the metal end fitting.
- Lightly turn or lift the screw driver to pull up and release the metal clip. Release both clips on each end of the gas spring.

Do not over turn the screw driver as it may fully remove the clip. It can be difficult to reinsert the clip if it is removed.

SAFETY WARNING: TrailerTail panels may close suddenly once the gas spring has been removed. Keep head clear of top panels as they may suddenly collapse.

STEMCO recommends that the TrailerTail be moved into its full deployed shape to assist with gas spring removal/replacement. Temporarily unclip the top and bottom cables and "over-open" the swingarm until the gas spring is at its maximum length. If needed, the tie-rod end may also be temporarily removed from the top panel.
TrailerTail Opens Partially, Short of its Fully Deployed Shape

B3. **Tie-Rod Inspection**

If you need to pull the TrailerTail panels *all the way* into the deployed position due to major resistance in the opening system, the Tie-Rods may have seized.

- Remove both Tie-Rods and try to rotate the rod ends. If rotating is impossible or very difficult, order a replacement.
- Check that the rod ends are installed in the correct orientation. Remove and reattach in the correct orientation, if necessary.
- Check that the Tie-Rod itself is not bent. If the Tie-Rod is bent, order a replacement.

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B4. **Limit Cable Inspection** *(TrailerTail Trident only)*

Inspect the TrailerTail in its deployed position—if the carabiner is twisted, rotate it to its correct position (shown below). This will allow the TrailerTail to deploy the last few inches.

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### Issues with Opening the TrailerTail®

#### TrailerTail Opens Partially, Short of its Fully Deployed Shape

**B5. Other Cable Inspections**

Using the chart below, make sure that the correct cable version and attachment point is used for each location (all images show the curbside door). Some cables may have thimbles at each end—if so, make sure the thimble is not twisted or caught, which would shorten the overall cable length. Also check that each cable is not caught on any TrailerTail or trailer door components. If either a thimble or the cable is caught, rotate or reposition until the cable is no longer caught.

<table>
<thead>
<tr>
<th></th>
<th>TrailerTail 4x4</th>
<th>TrailerTail Trident</th>
<th>TrailerTail Trident Slim</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Top Cable</strong></td>
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</table>
**Issues with Opening the TrailerTail®**

**TrailerTail Does Not Open at All (One or Both Sides)**

**C1. Secondary Cable Latch Inspection**
If a cable is holding the panels closed (shown below), unclip the carabiner. A secondary cable latch should only be used during rail transport or on the front trailer of a long combination vehicle (LCV).

![Unclip the secondary cable latches.](image)

**C2. Striker Bolt and Latch Misalignment**
If the striker bolt binds against the latch when released, loosen the jam nuts with two 1/2” wrenches and adjust the bolt location within the slot until it is centered with the latch. If binding persists, inspect the latch and striker bolt bracket for damage and/or deformation. Bend back into shape or order replacement latch.

![The striker bolt can slide within the slot.](image)  
![Place the striker bolt close to the latch to determine the optimal location of the striker bolt.](image)

**C3. Ice Build-up**
If the latch is frozen due to ice build-up, carefully break any visible external ice build-up. Then, firmly pull down on the red knob while simultaneously pulling the TrailerTail Lateral Panel away from the door. If required, allow the trailer to sit in a heated bay until the ice melts.

*Warning: Do not apply heat from a torch directly to the latch. Excessive heat may permanently damage internal components.*
TrailerTail Does Not Latch Closed

D1. Striker Bolt and Latch Misalignment
If the striker bolt binds against the latch when released, loosen the jam nuts with two 1/2” wrenches and adjust the bolt location within the slot until it is centered with the latch. If binding persists, inspect the latch and striker bolt bracket for damage and/or deformation. Bend back into shape or order a replacement latch.

*The TrailerTail should close and lock with ease. Slamming the device closed is not necessary. If it is difficult to get the latch to engage, it may mean the striker bolt is still out of alignment.*

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D2. Weighted Latches
Prior to April 2013, some TrailerTail units received weighted latches to assist with automated TrailerTail deployment at highway speeds. This latch version has been discontinued—if your TrailerTail has weighted latches and has trouble staying latched, order replacement, non-weighted latches.
**Deployed TrailerTail Does Not Fold Closed Easily**

**E1. Missing cables**

If a TrailerTail has a missing or improperly installed cable, its panels could over-rotate during deployment and become difficult to fold and close. Using the chart below, ensure the correct cable version and attachment point is used for each location (all images show the curbside door).

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<td>Carabiner on both ends</td>
<td>Carabiner on both ends</td>
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</table>
Deployed TrailerTail Does Not Fold Closed Easily

E2. **Gas Spring Version** *(TrailerTail 4x4 only)*

Read the text on the Gas Spring label of your TrailerTail 4x4. The force should be 70 or 80 LBF (311 or 355 N). If you encounter a 100 LBF (445 N) Gas Spring, a TrailerTail Trident gas spring has been incorrectly installed on a TrailerTail 4x4. The additional force can make it difficult to close the TrailerTail. Remove the gas spring and replace with an 80 LBF TrailerTail 4x4 Gas Spring.

**Remove the Gas Spring**

- Insert a small, flat-head screwdriver into the small metal release clip at the metal end fitting.
- Lightly turn or lift the screwdriver to pull up and release the metal clip. Release both clips on each end of the gas spring.

*Do not over turn the screwdriver as it may fully remove the clip. It can be difficult to reinsert the clip if it is removed.*

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**SAFETY WARNING: TrailerTail panels may close suddenly once the gas spring has been removed. Keep head clear of top panels as they may suddenly collapse.**

**STEMCO recommends that the TrailerTail be moved into its full deployed shape to assist with gas spring removal/replacement. Temporarily unclip the top and bottom cables and "over-open" the swingarm until the gas spring is at its maximum length. If needed, the tie-rod end may also be temporarily removed from the top panel.***

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E3. **Snow Build-up** *(TrailerTail 4x4 only)*

Excessive snow build-up on the bottom panels may make it difficult to close and latch the TrailerTail. Remove any snow that has accumulated by either scooping it off or by shaking a partially folded Bottom Panel. This will allow snow to slide out through the drainage cutout between the Bottom Panel edge and the trailer door.
Issues with Stack-up at Side of Trailer

**TrailerTail Does Not Latch to Side of Trailer**

**F1. Trailer Hinge Rubber Bumpers**

The rubber bumpers located on the trailer hinges add significant stack-up when folding the door to the side of the trailer. Because the TrailerTail acts as a buffer and protector for the hinges, the rubber bumpers should be removed. A bolt can be placed in the remaining hole or caulking can be applied to fill the hole.

**F2. Snow or Debris Build-up (TrailerTail 4x4 only)**

Excessive snow or debris build-up on the bottom panels may make it difficult to rotate the trailer door to the side of the trailer and secure it with a chain link. Remove any snow that has accumulated on the bottom panels by either scooping it off or by shaking a partially folded Lateral Panel. This will allow snow to slide out through the drainage cutout between the Bottom Panel edge and the trailer door.

**F3. Chain Link Extender Kit**

Some trailer types require a Chain Link Extender to facilitate latching the swing door to the side of the trailer. If your trailer doors do not have Chain Link Extenders and have difficulty latching to the side of the trailer, contact Customer Support or refer to [ATD002975] TrailerTail Spare Parts Catalog for ordering.
TrailerTail Lateral Panel Bows at the Top Center

G1. Acceptable Bowing
A closed TrailerTail may show bowing at the top of the Lateral Panel. This is natural and will not affect performance or functionality of the TrailerTail.

G2. Excessive or Undesired Bowing
If excessive bowing is noticeable and visually undesired, the upper portion of the Lateral Panel can often be pulled in by adjusting the lengths of the Tie-Rods.

- Loosen both 3/8” jam nuts located at each end of the tie-rod.
- Shorten the Tie-Rod by three revolutions and check functionality.
- Adjust more or less as needed.
- Tighten both 3/8” jam nuts to complete adjustment.

Avoid excessive Tie-Rod adjustments; TrailerTail should still open and close functionally after adjustment.
Periodic Inspection and Maintenance Procedures

Driver Pre/Post Trip Inspection

This section outlines a list of components to inspect before and after every trip throughout the life of the TrailerTail. It is the responsibility of the maintenance crew and/or the driver to follow the presented procedures to ensure full and proper usage of the TrailerTail.

1. Open TrailerTail

2. Visually inspect all TrailerTail components for impact damage or missing parts.
   - Panels
   - Hinges
   - Swingarms
   - Latches
   - Fasteners

3. Check that all lock rods are engaged at the top and bottom.

4. Visually inspect all DOT reflective tape.

5. If your TrailerTail is equipped with AutoDeploy™, See [ATD001619] AutoDeploy, Field Service Manual for the maintenance schedule and procedures. If your TrailerTail is equipped with ZeroTouch™, See [ATD002690] ZeroTouch, Field Service Manual for the maintenance schedule and procedures.
### Driver Pre/Post Trip Inspection

6. In the event of damage, notify dispatch with details and level of severity from list below.

<table>
<thead>
<tr>
<th>Severity Level</th>
<th>Description</th>
<th>Action</th>
</tr>
</thead>
</table>
| **Non-Critical** | Any minor defect or damage such as a broken cable, broken rib or minor panel damage that can be safely driven with the TrailerTail deployed or latched closed. | - Complete route with TrailerTail deployed or latched closed as necessary.  
- Schedule for repairs upon returning to terminal or repair facility. |
| **Critical**    | Any moderate damage that can be safely driven with the TrailerTail closed and secured in place with driver supplied strapping. | - Complete route with TrailerTail strapped and secured closed.  
- Schedule for immediate repairs. |
| **Out of Service** | In the unlikely event a catastrophic collision prevents the driver from closing one or both sides of the damaged TrailerTail and they can’t secure it in place with strapping. | - Request immediate road service. |
TrailerTail 4x4 Parts Diagram

Assembly Overview

[Diagram showing various parts and components labeled with ASY TT Swingarm, RDS, ASY TT Top Panel, CBS, etc.]
TrailerTail 4x4 Parts Diagram

TrailerTail 4x4 Lateral Panel Assembly

Front of Lateral Panel (UV side)

Back of Lateral Panel (non-UV side)
TrailerTail 4x4 Parts Diagram

TrailerTail 4x4 Top Panel Assembly

Front of Top Panels (UV side)

Back of Top Panels (non-UV side)

TrailerTail 4x4 Bottom Panel Assembly

Front of Bottom Panels (UV side)

Back of Bottom Panels (non-UV side)
Appendix A

TrailerTail Trident Parts Diagram

Assembly Overview
TrailerTail Trident Parts Diagram

TrailerTail Trident Lateral Panel Assembly

Decal, DOT Reflective Tape, Silver, 12” x 2”

Decal, TrailerTail by STEMCO, Blue on White, 10” x 2 ¼”

Front of Lateral Panel (UV side)

Back of Lateral Panel (non-UV side)

TrailerTail Trident Top Panel Assembly

Living Hinge

ASY Origami Hinge Male

Footman Loop

Cable, 35 ¼”

Square Rib, 28”

Tie-Rod Bracket

Lateral Hinge Female

Front of Top Panels (UV side)

Back of Top Panels (non-UV side)