

TECHNICAL SERVICE BULLETIN

Bulletin No.: TSB-031

Date: June 8, 2018

Subject: VP Chassis Modification

Models: All Quantum Virtual Pipeline Trailers

Background

Quantum Virtual Pipeline (VP) trailers utilize a standard cargo container chassis configuration. The container construction and its interface to the chassis is also an industry standard design.

Condition

In some cases accelerated wear and corrosion at the interface between the container front sill and the chassis rail have been observed. This accelerated wear can result in weakening of the front of the container and a settling of the container on the chassis.

In certain chassis manufacturers products, if this condition is not addressed, the container may wear to the point that it could interfere with the glad hand bulkhead fittings resulting in an air leak.

**Cause**

The high loads observed in this area of the container in conjunction with corrosion occurring in this area may result in accelerated wear and damage to the front sill of the container.

Correction

A reinforcement bracket is being added to the chassis to help distribute the load on the front sill of the container. In addition to distributing this load, a corrosion resistant wear strip is being added to the container sill.

In cases where the container wear has already exceeded established limits, an additional repair process to the container will need to be performed.

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All VP Trailers with Pratt Chassis:

Labor OP Time: Straight Time 0.6 Hour

All VP Trailers with Chassis King Chassis:

Labor OP Time: Straight Time 1.0 Hour

All VP Trailers with Cheetah Chassis:

Labor OP Time: Straight Time 1.0 Hour

Chassis Parts Information

Description	Part Number	Qty
Chassis Update Kit, Chassis King	119347	AR
Chassis Update Kit, Pratt	119377	AR
Chassis Update Kit, Cheetah	119350	AR
Seal- Latch, Container	118998-001	2

Container Parts Information

Description	Part Number	Qty
Wear Plate, Container, Front Sill	119322	AR
Rivet- Stainless Steel	118880-006	6
Repair Kit- Container, Front Sill	119372	1

Application

All Quantum Virtual Pipeline trailers manufactured before June 8, 2018

Contact Information:E-Mail: QTService@qtw.com

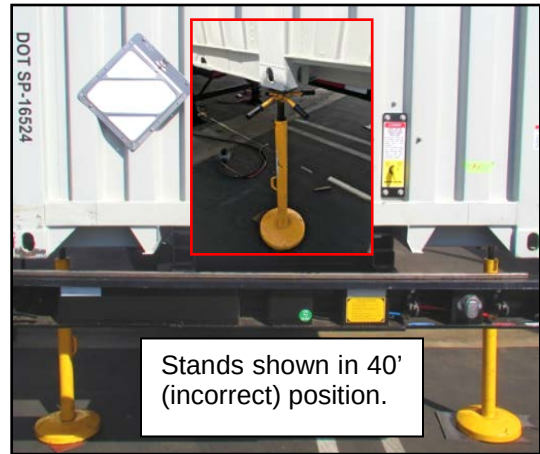
Phone: 800.816.8691

Fax: 949.930.3401

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Repair Procedure, Trailer Preparation

1. Back and stop abruptly to shift container rearward on the chassis. Ensure that the front of the container is not in contact with the chassis header. Make sure the trailer is parked on a flat, hard surface.
2. Before disconnecting the tractor open the back door and verify the pressure gauges show below 500 psi, if more pressure is present **DO NOT PROCEED**. The added weight from the fuel in the cylinders may cause issues with lifting and or supporting the container.
3. Place trailer jacks under the two front corner container supports.



4. Remove the seals from the container latch pins at the two front corners of the container and retract the container pins.



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5. Retract the landing gear to allow the chassis to drop from under the container.
Note: The chassis will not fully drop from under the front of the container with only its own weight, if necessary place a lever between the container and the front of the chassis to drop the front of the chassis approximately 8" below the front of the container.



6. Place metal or wooden blocks between the container and the chassis to hold the front of the chassis in a lowered position.

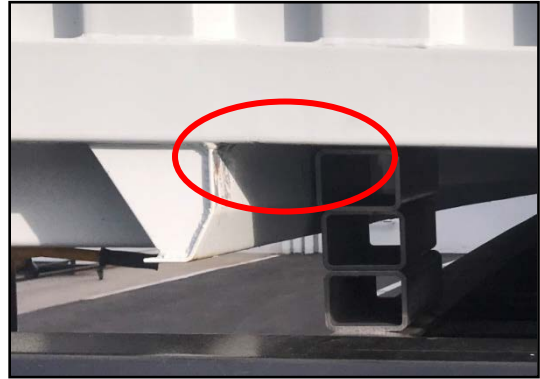


TECHNICAL SERVICE BULLETIN**Container Inspection**

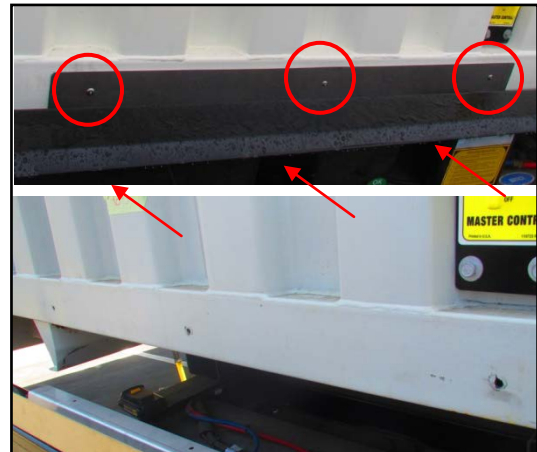
Inspect the container in the area shown where it contacts the chassis, if there is wear in the area shown document the depth of the wear on the work order or paperwork.

If the wear is less than 0.050" (1.3 mm) continue with this procedure.

If the wear is greater than the allowable limit, note the wear on the work order and report the wear to Quantum Service at QTSservice@gtww.com or 800.816.8691 then continue with Chassis retrofit procedures.



1. Loose fit the wear strip to the lower channel of the container, ensure it is fully seated against the bottom of the container channel.
2. Mark the holes to be drilled in the center of the slots.

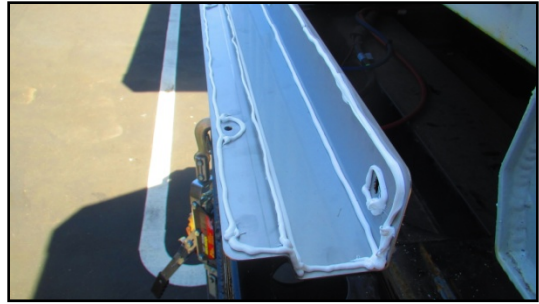


3. Drill the six holes to 0.25" (0.63 mm)
4. Apply a zinc rich primer or equivalent to the drilled holes.



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5. Apply silicone or RTV sealer to all corners and edges of the inner surface of the wear strip and install on the container channel.
6. Apply silicone or RTV sealer to the rivets and secure the wear strip in place with 6 rivets.



TECHNICAL SERVICE BULLETIN**Repair Procedure, (Chassis King Chassis)**

1. Disconnect the air lines from the glad hand bulkhead fittings.
2. Remove and discard the glad hand bulk head and fittings.
3. Install chafe protection over the air lines as shown.



Apply a zinc rich primer or equivalent to any exposed metal surfaces around the glad hand bulkhead holes.



4. Route the air lines through the hole with the electrical harness as shown.



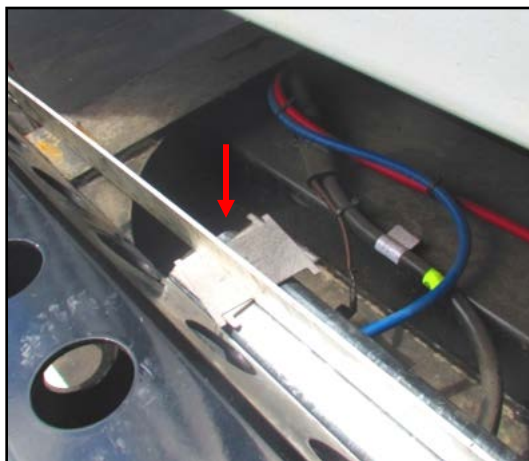
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5. Clean all dirt and debris from the area where the support channels will be placed.
6. Position the shim holders on the bottom of the container support channels and position the container support channels in the appropriate locations (Left and Right), the holes in the support channels should align with the glad hand bulk head holes.

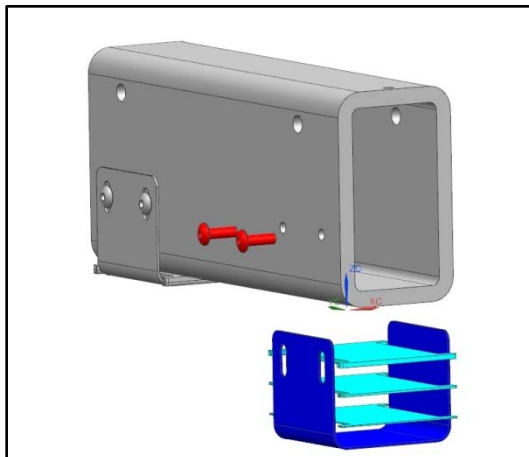


7. Place a straight edge across the frame rails and support channels. Gauge the needed shim stack that needs to be added by placing shims between the container support channel and the straight edge. Repeat this process one shim location at a time as shown.

The shim stack should result in zero clearance between the straight edge and the support channel or slightly lift the straight edge but no more than 0.050".



8. Place the shims in the shim holders and verify the final support channel height is between flush to 0.050" (1.3 mm) above the frame rail height.
9. Secure the calculated shim packages to the support channels as shown with stainless steel rivets.



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10. Place the container support channels with the shims installed back in the appropriate locations, verify the support channels are level and the height of the support channel is within specification.



11. Place the emergency glad hand support bracket in position and secure through the chassis header panel and support channel. Tighten to 35 lb ft (47 N.m)
12. Repeat the previous step for the service glad hand support bracket.



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13. Install the new glad hands on the glad hand support brackets.

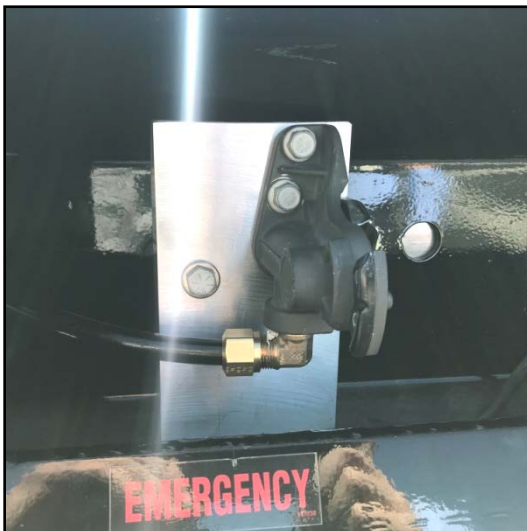
IMPORTANT: Verify the RED glad hand is installed on the Emergency side and the BLUE glad hand is installed on the service side.

Tighten fasteners to 16 lb ft (22 N.m)



14. Trim the air lines to the appropriate length and connect to the repositioned glad hands.

IMPORTANT: before trimming the air lines verify the new routing is not causing any strain or abrasion points on the air lines.



15. CONTINUE TO REASSEMBLY PROCEDURE

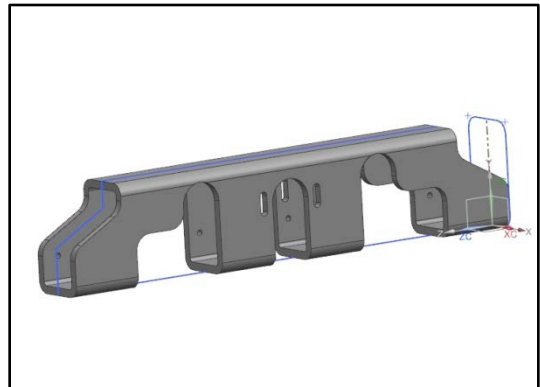
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Repair Procedure (Pratt)

1. Clean all dirt and debris from the area where the support channels will be placed.
2. Remove the nuts and bolts retaining the trailer electrical connector.

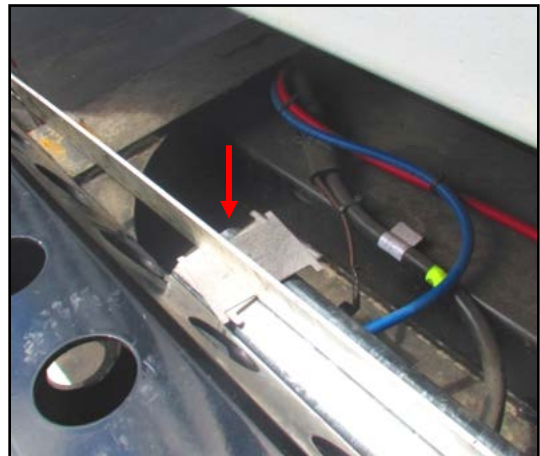


3. Position the shim holders on the bottom of the container support channel and position the container support channel in the appropriate location.
 Verify the support channel sits flat on the plate in the chassis and does not interfere with or impact any of the air or electrical connections



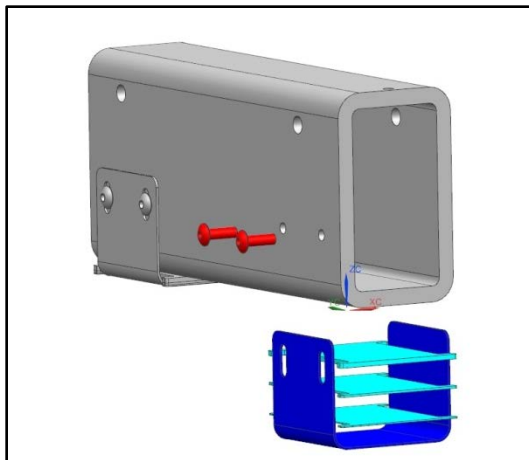
4. Place a straight edge across the frame rails and support channels. Gauge the needed shim stack that needs to be added by placing shims between the container support channel and the straight edge. Repeat this process one shim location at a time as shown.

The shim stack should result in zero clearance between the straight edge and the support channel or slightly lift the straight edge but no more than 0.050".

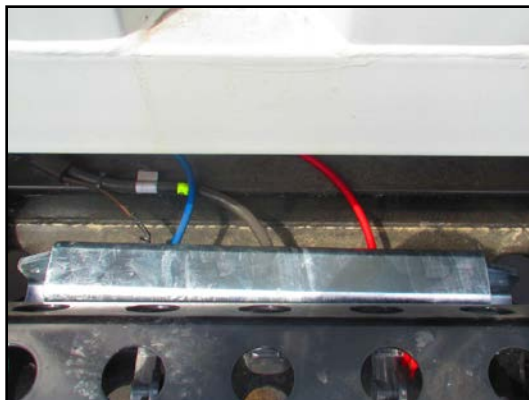


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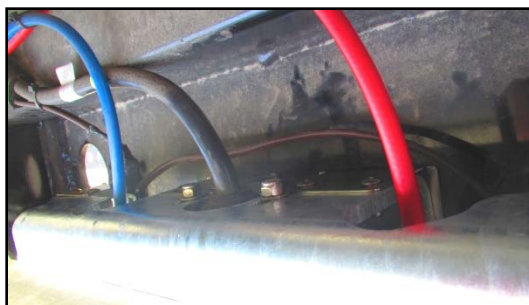
5. Place the shims in the shim holders and verify the final support channel height is between flush to 0.050" (1.3 mm) above the frame rail height.
6. Secure the calculated shim packages to the support channels as shown with stainless steel rivets.



7. Place the container support channels with the shims installed back in the appropriate locations, verify the support channels are level and the height of the support channel is within specification.



8. Place bolts with flat washers through the trailer electrical connector and secure through the chassis header panel and support channel. Tighten to 35 lb ft (47 N.m)



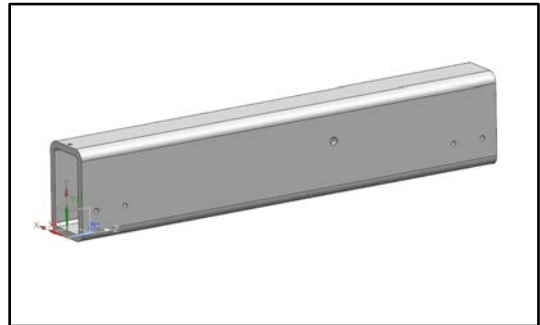
9. CONTINUE TO REASSEMBLY PROCEDURE

TECHNICAL SERVICE BULLETIN**Repair Procedure (Cheetah)**

1. Clean all dirt and debris from the area where the support channels will be placed.
2. Remove any p-clips as needed and tie wire harness away from area where block will rest.

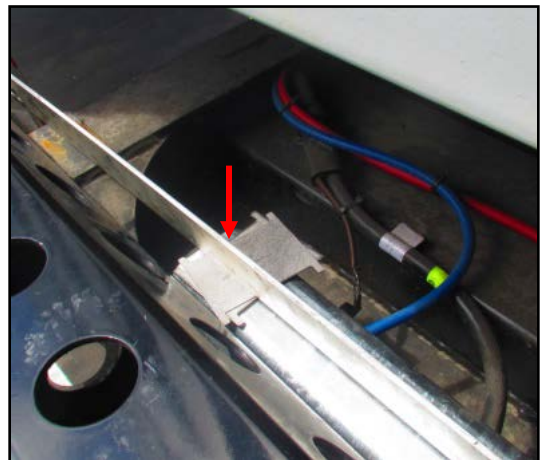


3. Position the shim holders on the bottom of the container support channel and position the container support channel in the appropriate location.
Verify the support channel sits flat on the plate in the chassis and does not interfere with or impact any of the air or electrical connections, the mounting hole should be toward the passenger side.



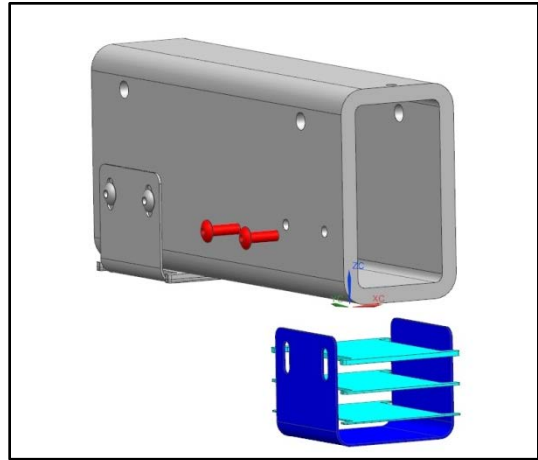
4. Place a straight edge across the frame rails and support channels. Gauge the needed shim stack that needs to be added by placing shims between the container support channel and the straight edge. Repeat this process one shim location at a time as shown.

The shim stack should result in zero clearance between the straight edge and the support channel or slightly lift the straight edge but no more than 0.050".



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5. Place the shims in the shim holders and verify the final support channel height is between flush to 0.050" (1.3 mm) above the frame rail height.
6. Secure the calculated shim packages to the support channels as shown with stainless steel rivets.



7. From the back side, insert a marker through the channel to mark the hole position on the header panel.
Remove the channel and from the inside of the header panel drill an 1/8" hole and verify the hole is properly positioned.

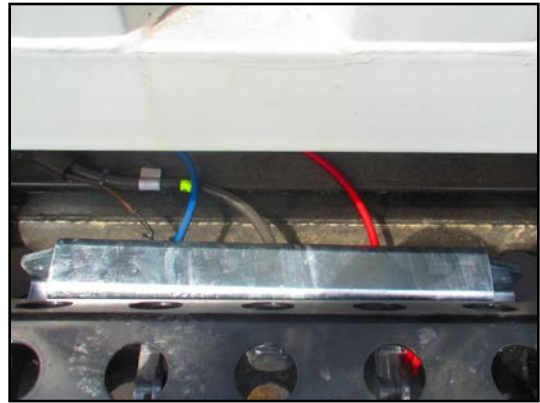


8. Once the hole position is verified, drill the mounting hole to 1/2".



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9. Place the container support channels with the shims installed back in the appropriate locations, verify the support channels are level and the height of the support channel is within specification.



10. Install the supplied hardware and secure the support channel to the chassis header panel. Tighten to 33 lb ft (45 N.m)



11. CONTINUE TO REASSEMBLY PROCEDURE

TECHNICAL SERVICE BULLETIN**Repair Procedure, Reassembly**

1. Remove the metal or wooden blocks separating the Chassis and the container.



2. Extend the landing gear to remove the weight from the trailer stands.



3. Position the two front container latch pins in the locked position and secure the latch with an appropriate seal.



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Completed Retrofit

