

TECHNICAL SERVICE BULLETIN

Bulletin No.: TSB-050

Date: June 19, 2024

Subject: Pratt Chassis Front Cross Member

Models: Quantum 40' VP Trailers with Pratt Chassis

Background

The Quantum VP Trailer assembly is comprised of a custom container fitted with Quantum Type 4 composite cylinders, and a custom chassis designed specifically to meet the needs and requirements of this assembly and support the custom container.

One of the differences of these custom chassis' is the addition of a front cross member located directly behind the trailer header panel. The front cross member is intended to be flush with the top of the frame rails and provide additional support to the front sill of the container.

Condition

In some cases, the front cross member may not be at the same height as the top of the frame rails. If the front cross member is too low, it may affect the durability of the container.

This decreased height may result in accelerated wear of the container front sill or in some cases cracking of the floor pan or cracks in the container structure around the front sill.

Cause

In some Pratt chassis the front cross member may be installed too low from the factory. This nonconformity was not observed when the containers and chassis were assembled together.

Correction

The front cross member height must be measured in relation to the frame rail top flanges.

Any cross member that is lower than the top of the frame rail flange by more than 0.063" (1.6mm) should have material added following the instructions included in this bulletin until the cross member top surface is within 0.063" (1.6mm) of the frame rail top surface.

If the cross member required modification, the front sill of the container and wear plate must be inspected. If the wear plate has been bent or deformed, remove the wear plate and inspect the container front sill and adjacent areas for damage or cracking. Any damage to the front sill or adjacent areas should be repaired and follow standard welding practices and refinished using O.E. primer and topcoat.

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Labor Time

Labor OP:

TSB-050	Labor Op Desc.: Front Cross Member Shim Inst. Includes refinishing and lock R&R	Time: 3.5 Hrs
TSB-050A	Labor Op Desc.: Front Abrasion Plate R&R	Time: 1.0 Hrs
TSB-050C	Labor Op Desc.: Container Repair	Time: T&M

Repair of normal wear and tear or corrosion repairs to the chassis or the container will not be covered by this bulletin.

If requesting reimbursement for any container repairs, pictures of any container damage being repaired must be submitted for preauthorization or submitted with any warranty claim for verification of eligibility.

Parts Information

Description	Part Number	Qty
PLATE- ABRASION, CONTAINER, FRT, VP	120367	A/R
RIVET, 1/4" X 1", STAINLESS	118880-005	3
ADHESIVE-SIKAFLEX 1A, 10.1 OZ	118018-001	AR
PRIMER- EPOXY, TWO PART, HARDENER	118846-004	AR
PRIMER- EPOXY, TWO PART, BASE, WHITE	118846-005	AR
PAINT- VISTA, WHITE, SEMI GLOSS, VP	118497-003	AR
NUT- NY-LOK, 3/8-16	110970-014	2
SCREW- HEX HD, 3/8-16 X 2.75"	120353-024	2

Depending on the measurement, the following sheet metal sizes are suggested:

- 1/8" x 31-1/4" x 3" – ASTM A36
- 3/16" x 31-1/4" x 3" – ASTM A36
- 1/4" x 31-1/4" x 3" – ASTM A36

Special Tools

Description	Part Number
TRAILER SUPPORT STANDS (Qty 2)	See link below

The tools listed in this table are recommended to safely and properly complete this repair.

[Global Industrial™ Economy Trailer Stabilizing Jack Stand 50,000 Lb. Static Capacity](#)

Contact Information:

E-Mail: QTService@qtww.com
QTWarranty@qtww.com

Phone: 800.816.8691

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Application

All 45' Pratt chassis used in Quantum applications.

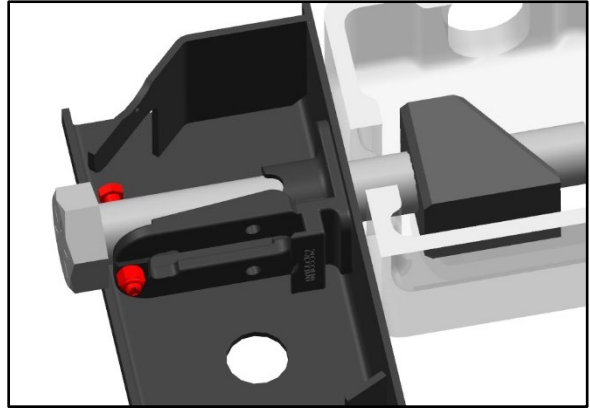
All 40' Pratt chassis used in Quantum applications built prior to April 2023.

40' Chassis

14210261	49210324	26220388	38220436	01230484	14230539
14210262	49210325	27220389	40220437	52220485	14230540
14210263	51210326	27220390	39220438	02230486	15230541
15210264	51210327	27220391	39220439	02230487	18230543
16210265	52210328	28220392	41220440	02230488	16230548
16210266	48210333	28220393	43220441	02230489	18230552
17210267	48210334	28220394	41220442	03230490	17230553
18210268	05220335	29220395	41220443	03230491	17230554
17210269	06220336	30220396	41220444	03230492	18230555
18210270	06220342	29220397	39220445	03230493	18230556
18210271	07220343	29220398	42220446	04230494	19230557
18210272	15220344	30220399	42220447	01230495	19230558
19210273	16220345	30220400	44220448	04230496	19230559
19210274	16220346	30220401	42220449	04230497	19230560
20210275	13220348	30220402	43220450	05230498	20230563
20210276	13220350	31220403	43220451	05230499	20230564
21210277	14220352	31220404	43220452	05230500	21230565
21210278	14220353	31220405	44220453	05230501	21230566
22210279	15220354	32220406	44220454	06230503	21230567
22210280	16220355	32220407	44220455	06230504	21230568
23210281	17220356	32220408	45220456	06230505	23230571
24210282	17220357	33220409	45220457	06230506	23230572
24210283	18220358	33220410	45220458	07230507	23230573
25210285	18220359	33220411	45220459	07230508	23230574
25210286	18220360	35220412	46220460	07230509	24230578
27210287	19220361	36220413	46220461	07230510	24230579
31210288	19220362	34220414	46220462	08230512	24230580
29210289	19220367	34220415	46220463	08230513	25230581
30210290	20220368	35220416	47220464	08230514	25230582
30210291	20220369	35220417	47220465	09230515	25230583
31210292	21220370	36220418	47220466	09230516	25230584
31210293	21220371	36220419	47220467	09230517	26230585
33210294	21220372	37220420	47220468	10230518	26230586
33210295	22220373	37220421	49220469	09230520	26230587
34210296	22220374	39220422	49220470	10230521	26230588
35210297	22220375	39220423	49220471	10230522	27230589
35210298	23220376	40220424	49220472	10230523	27230591
36210299	23220377	32220425	50220473	11230524	28230592
37210300	23220378	40220426	50220474	11230525	28230596
50210315	24220379	33220427	50220475	11230526	29230597
44210316	24220380	34220428	50220476	11230527	29230601
44210317	24220381	34220429	51220477	12230529	29230602
45210318	25220382	35220430	51220478	12230530	30230603
45210319	25220383	36220431	51220479	12230531	30230604
46210320	25220384	37220432	51220480	12230532	31230608
46210321	25220385	38220433	52220481	13230533	31230609
47210322	26220386	38220434	52220482	13230534	31230610
49210323	26220387	38220435	01230483	13230535	

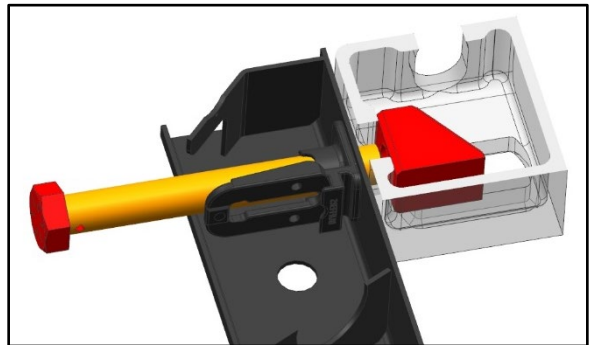
TECHNICAL SERVICE BULLETIN**Cross Member Inspection**

1. Remove and discard the container lock bolt, cross bolt and locking nut.



2. Remove and retain the container lock bolt and nut.

Repeat steps 1 and 2 for the opposite side.



3. Position the trailer support stands under the corners of the container, ensure they are firmly and securely positioned to support the weight of the container.
4. Lower the landing gear to allow the front of the chassis to separate from the container. It may be necessary to use a lever to push the front of the chassis down to achieve sufficient clearance.

Ensure any wiring between the container and chassis is disconnected and secured out of the way.



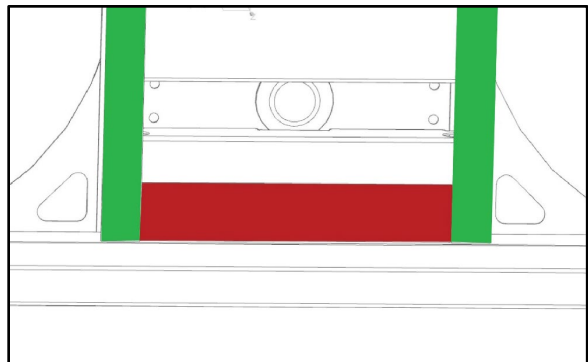
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5. Insert wooden or steel blocks between the chassis and container to hold them separated.



6. Inspect the chassis front crossmember, measure the difference in height between the frame rails (shown in green) and the crossmember (shown in red).

- If the difference in height is less than 0.063" (1.6mm) no rework is required.
- **If the difference in height is greater than 0.063" (1.6mm) complete the cross member modification as instructed by this document.**
- Return to this procedure once the chassis modification is complete.

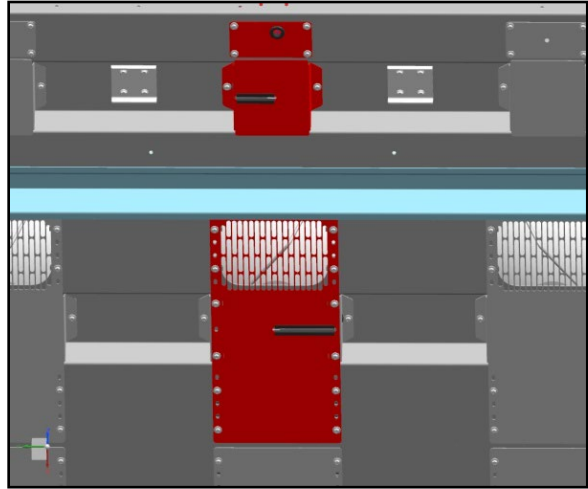


7. Inspect the container abrasion plate, if any physical damage or deformation is observed, remove the abrasion plate to allow for inspection of the container.

Picture of abrasion plate

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8. Remove and retain the lower cover assemblies and hardware.



9. Inspect the underside of the container for damage or cracks.

IMPORTANT

If container repairs are needed, supply pictures of damage with invoice.

10. Repair any cracks found on the container.



Care must be taken to protect the cylinders from any heat exposure, sparks or impact damage during container repairs. Follow the precautions noted below to ensure a safe working environment.

- ***Ensure the work area is well ventilated.***
- ***Verify the trailer is well grounded to avoid damage to any electrical components.***
- ***Have welding blankets in place to protect the cylinders from any heat exposure or sparks.***

Failure to follow these instructions will result in death or serious injury.

11. Prime and paint any repaired areas using OE paint and primer following the manufacturer's instructions.

12. Apply sealer to the container abrasion plate as shown and install the abrasion plate.

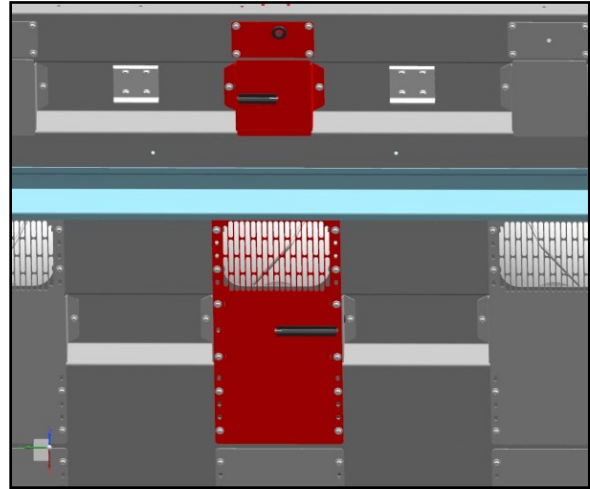
Use rivets to secure the abrasion plate in position.



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13. Install any removed lower covers:

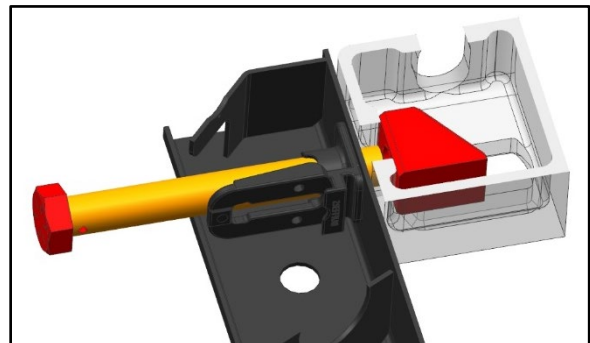
Tighten to 22 lb ft. (30 N.m.)



14. Lower the landing gear to raise the chassis into position under the container and realign the chassis to the container pockets.



15. Apply anti seize to the first 2" - 3" of threads of the bolt.
16. Place the bolt through the chassis header panel. Insert the bolt until it is flush with the inside of the container corner pocket.



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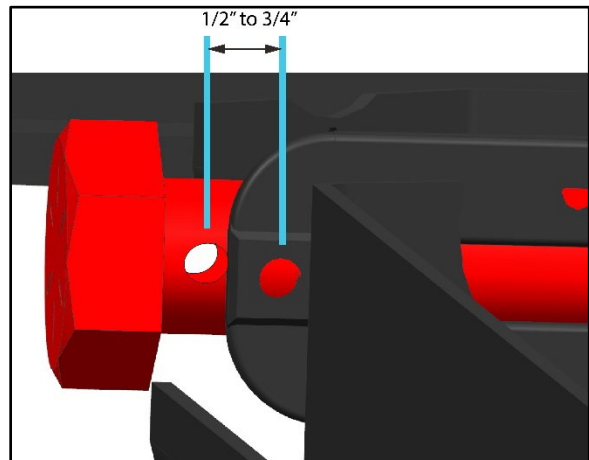
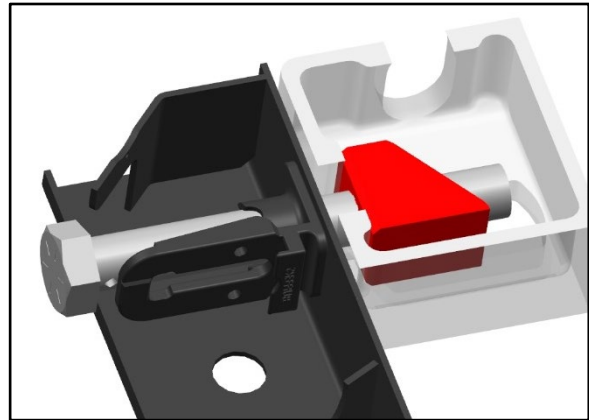
17. Apply anti seize to the threads inside the nut.

Insert the nut through the bottom opening of the container corner pocket with the taper side facing rearward for Pratt and Kwik chassis, then rotate 90 degrees.

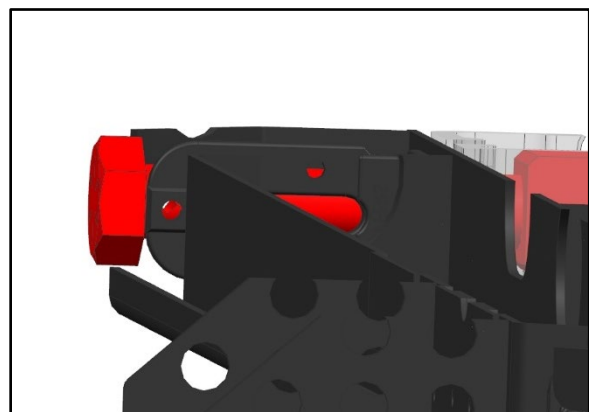
Note: Picture showing inner pocket installation with taper facing rearward.

18. Hold the nut against the forward inside surface of the container corner block and thread the bolt into the nut.

19. While holding the nut against the inside of the container corner block, thread the bolt in until the cross drilled hole in the bolt is between $\frac{1}{2}$ " – $\frac{3}{4}$ " (13mm -19 mm) from the latch retainer hole.

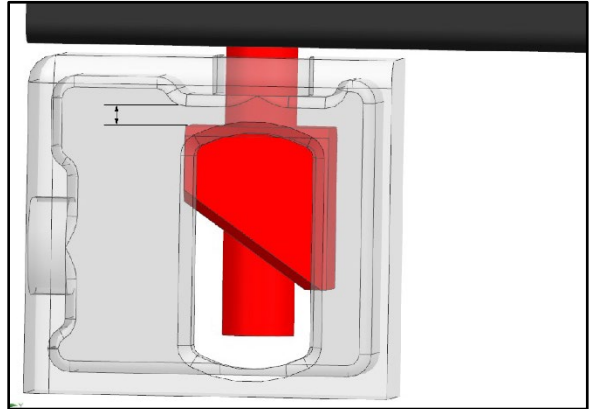


20. Press the bolt in until the cross drill hole in the bolt aligns with the hole in the bracket and insert the cross bolt.

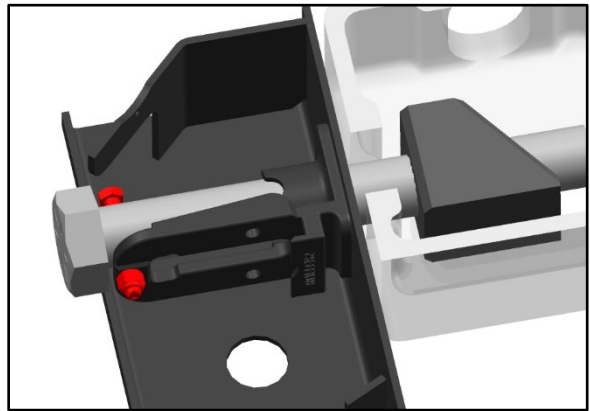


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21. Verify that the nut is not in hard contact with the inside surface of the container corner block, if properly adjusted it should float inside the compartment and not touch any side. Adjust as needed.



22. Install a new cross bolt and locking nut and tighten until there is zero clearance between the bolt and the bracket.



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Cross Member Modification

1. Remove and retain the hardware securing the front panel housing the electrical connector and air lines.
2. Move and protect the air lines and wire harness as needed to ensure they are not damaged by the welding operation.



3. Prepare the area where the plate will be welded.
4. Fit a plate of the appropriate thickness, fabricated from ASTM A36 steel plate on top of the existing cross member.
The steel plate should be as far forward as possible, up against the chassis header but leaving enough room for welding.

The plates being installed should be sized as shown below.

Depending on the measurement, the following sheet metal sizes are suggested:

- 1/8" x 31-1/4" x 3" – ASTM A36
- 3/16" x 31-1/4" x 3" – ASTM A36
- 1/4" x 31-1/4" x 3" – ASTM A36

5. Verify the final height of the cross member will be flush to -0.063" (1.6mm) from the top of the frame flanges.

TECHNICAL SERVICE BULLETIN**IMPORTANT****DO NOT WELD TO THE FRAME FLANGES!**

6. Fully weld all sides of the steel plate ensuring no gaps exist.
7. Grind all welds smooth and flush with the frame rails.
8. Finish the steel plate and rework area with zinc rich primer or epoxy primer and apply a topcoat of a black urethane paint or equivalent.



9. Install the front panel housing the electrical connector and air lines.

Reconnect any wiring between the chassis and container that may have been disconnected.

