

Special Bulletin

SP22-304.

Date	Expiration	Release	Page
04.2022	04.2024	3	1(15)

First Release .

04-27-2022

TAG AXLE AIR SPRING RUBBING ISSUE – INSTALLATION OF NON-RETURN VALVE

Prevost vehicles

DESCRIPTION

On the vehicles affected by this bulletin, install the addition non-return valve to remedy a rubbing issue of the tag axle suspension air springs.

MODEL YEAR(S) AND VEHICLES INVOLVED

NOTICE TO SERVICE CENTERS	
<i>Verify vehicle eligibility by checking warranty bulletin status with SAP or via ONLINE WARRANTY SYSTEM available on Service / Warranty tab of Prevost website.</i>	
Model	VIN
X3-45 Commuter Model Year: 2021 - 2023	From 4RKJ33492 <u>M9737751</u> up to 4RKJ3349X <u>P9738019</u> incl.
This bulletin does not necessarily apply to all the above-mentioned vehicles, some vehicles may have been modified before delivery.	

Special Bulletin

SP22-304.

Date	Expiration	Release	Page
04.2022	04.2024	3	2(15)

MATERIAL NEEDED

Order kit **SP22-304** which includes the following parts

Part No.	Description	Qty
21551555	NON-RETURN VALVE	1
140521	ADAPTER ST M12F X 3/8 PM	1
501330	ELBOW 45, A 45 3/8PMX3/8PF	1
501699	TEE, A 3/8PMX3/8PFX3/8PF	1
504637	TIE, NYLON	15
145532	TUBBING, PNEUMATIC 3/8 (BLUE) 2200 mm long	1

Other parts that may be required:








Part No.	Description	Qty
630286	AIR SPRING 12-inch	1-2

NOTE

Material can be obtained through regular channels.

Date Expiration Release Page
04.2022 04.2024 3 3(15)

REQUIRED TOOLS

METRIC OPEN END WRENCH SET 	TORQUE WRENCH AND METRIC SOCKET SET 
CENTER PUNCH 	CUTTER 
CUTTING PLIERS 	SPRAY BOTTLE AND SOAPY WATER 
ELECTRICAL FABRIC TAPE or DUCT TAPE 	

Other shop products required

NOTE: The costs of workshop products are not covered under this bulletin

Description
 Loctite 567 Thread Sealant

Date	Expiration	Release	Page
04.2022	04.2024	3	4(15)

SAFETY PRECAUTIONS

- Eye protection should always be worn when working in a shop.
- Rules for Personal Protection Equipment should always be respected. Wear your PPE including but not limited to the following:



**Safety
First!**



Date	Expiration	Release	Page
04.2022	04.2024	3	5(15)

PART 1 – PNEUMATIC INSTALLATION

DANGER

Park vehicle safely, apply parking brake, stop the engine. Prior to working on the vehicle, set the ignition switch to the OFF position and trip the main circuit breakers equipped with a trip button. On Commuter type vehicles, set the battery master switch (master cut-out) to the OFF position.

Lockout & Tag out (LOTO) must be performed during set-up, maintenance or repair activities. Refer to your local procedure for detailed information regarding the control of hazardous energy.

PREPARATION

- 1) Open both hinged rear fenders (one fender per side).
- 2) In the front service compartment, set the automatic tag unload override valve to TAG UNLOAD.
- 3) Using mobile column lifts, lift the vehicle from under the front wheels and the drive axle wheels just enough so that the wheels do not touch the ground. For complete lifting information, refer to **MI14-01**.

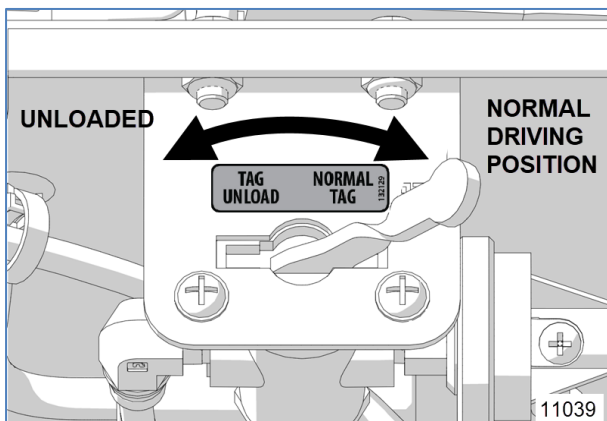


FIGURE 1: AUTOMATIC TAG UNLOAD OVERRIDE VALVE

- 4) In the front service compartment, drain the air system using the drain cock shown on the image below. Close the drain cock once done.

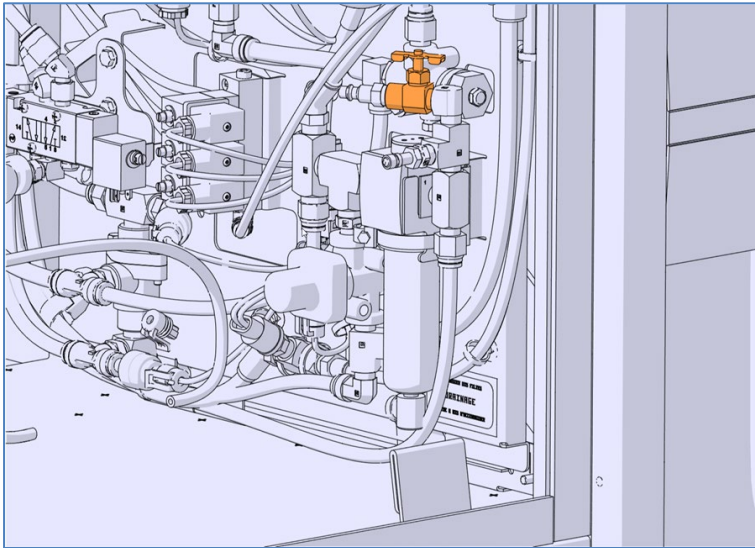


Figure 2

- 5) On each side of the vehicle, disconnect the upper end (rubber bushing) of the rear height control valve arm linkage (one per side).

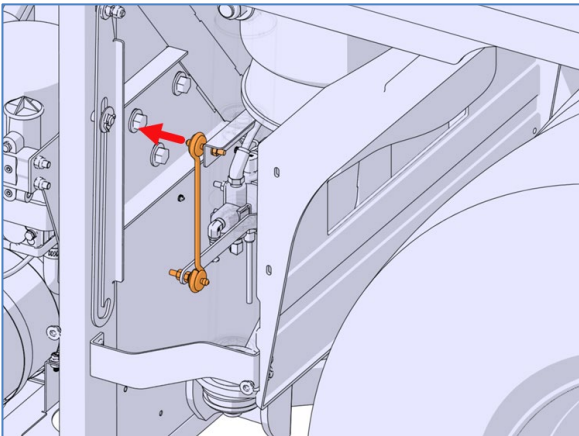


Figure 3: HEIGHT CONTROL VALVE ARM LINKAGE STREET SIDE

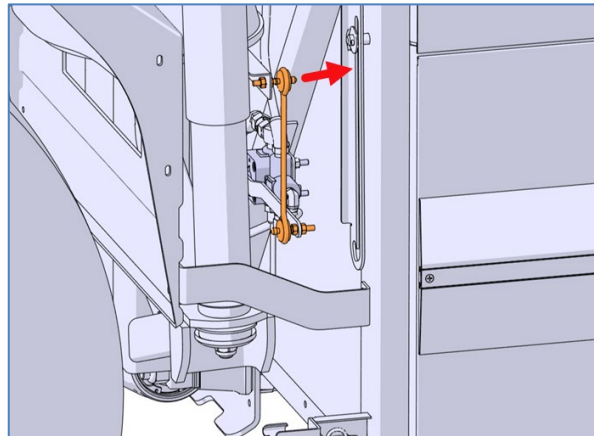


Figure 4: HEIGHT CONTROL VALVE ARM LINKAGE CURB SIDE

- 6) Lift the height control valve arm to purge the rear suspension air springs.
- 7) Using the mobile column lifts, lift the vehicle to the appropriate height and then support the tag axle using two jack stands.

MODIFICATION

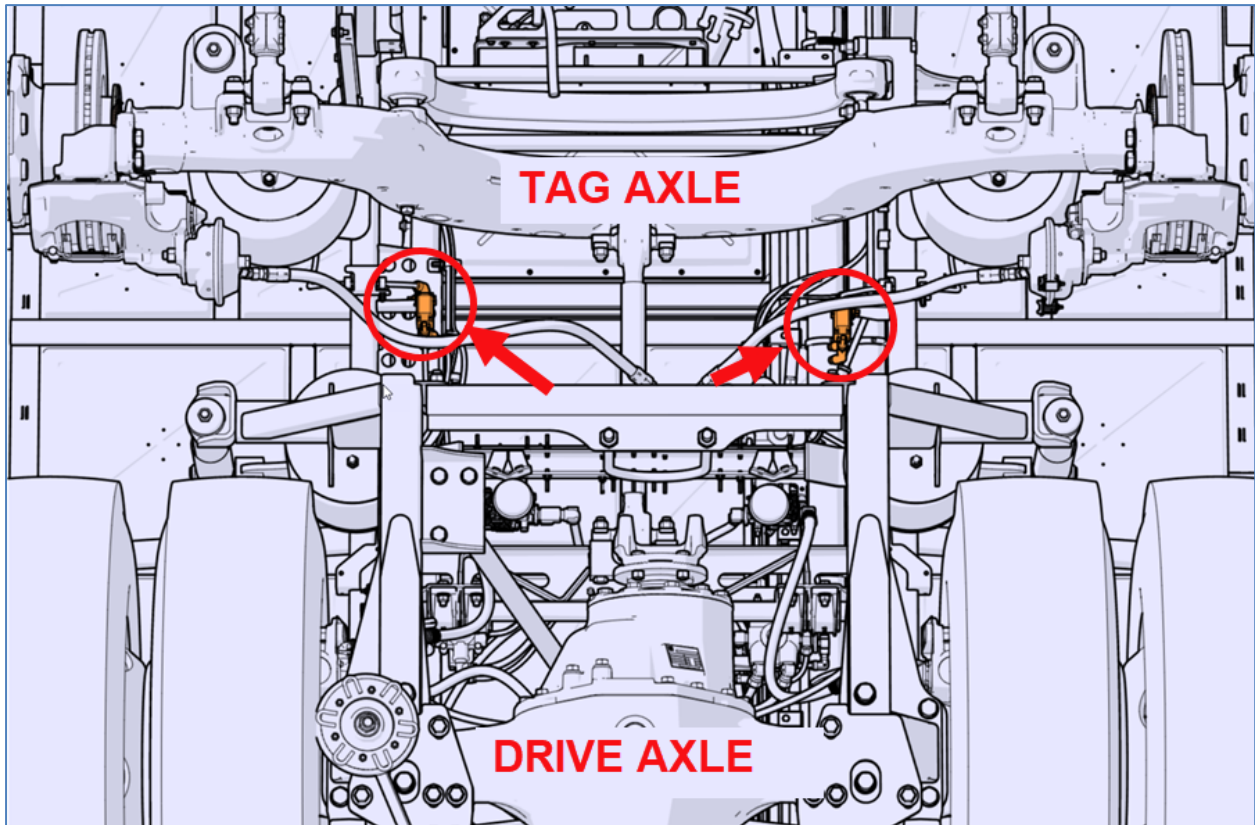


Figure 5: IDENTIFICATION OF THE TWO VALVES INVOLVED (SEEN FROM UNDER THE VEHICLE)

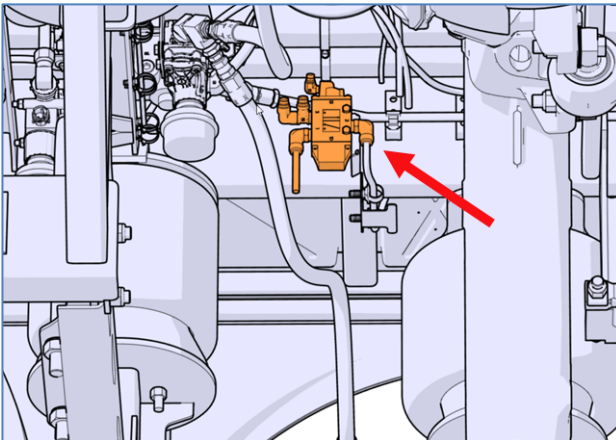


Figure 6: CURB SIDE VALVE

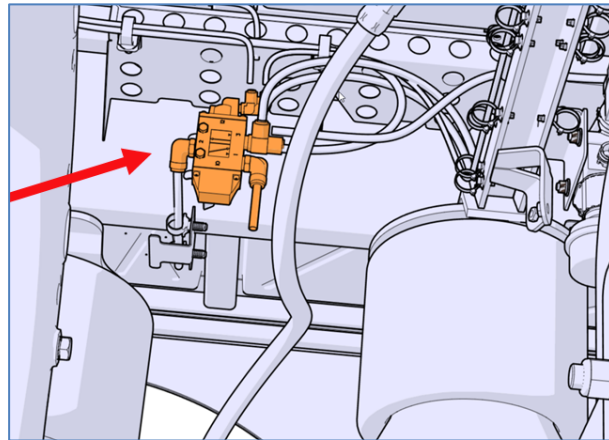


Figure 7: STREET SIDE VALVE

8) Refer to Figure 5 - Figure 7 to identify the two valves involved.

Curb Side Valve Modification

9) Discard the exhaust tube (Figure 8).

Date	Expiration	Release	Page
04.2022	04.2024	3	8(15)

10) Rotate the elbow 30° from the horizontal as shown on Figure 9.

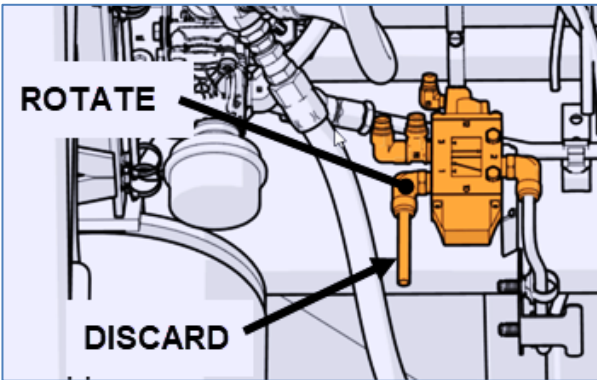


Figure 8

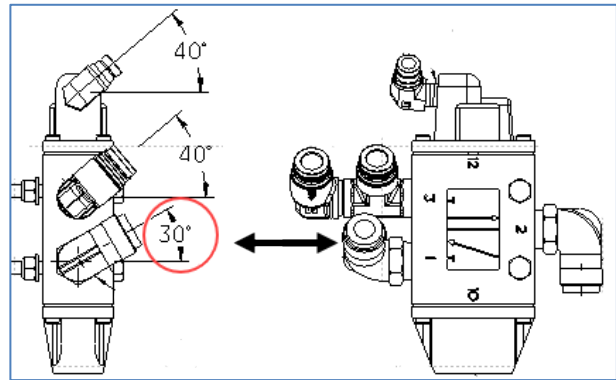


Figure 9

Street Side Valve Modification

11) Discard the exhaust tube. Remove the elbow shown and save for later use (Figure 10).

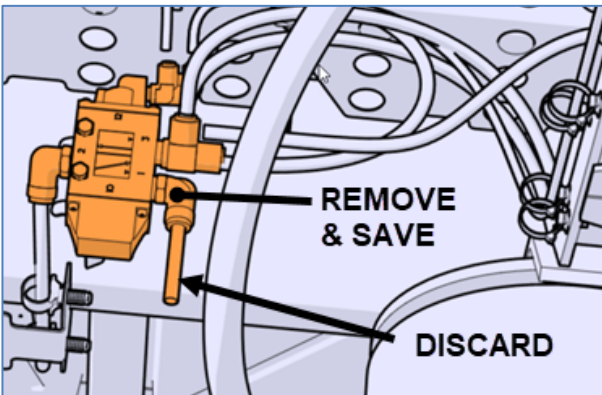


Figure 10

12) On the valve body, install the following components (refer to Figure 11).

- item 11: elbow 501330
- item 10: Tee 501699
- item 12: adapter 140521
- item 1: non-return valve 21551555
- item 8: elbow (previously removed)

NOTE: Apply Loctite 567 Thread Sealant

Date	Expiration	Release	Page
04.2022	04.2024	3	9(15)

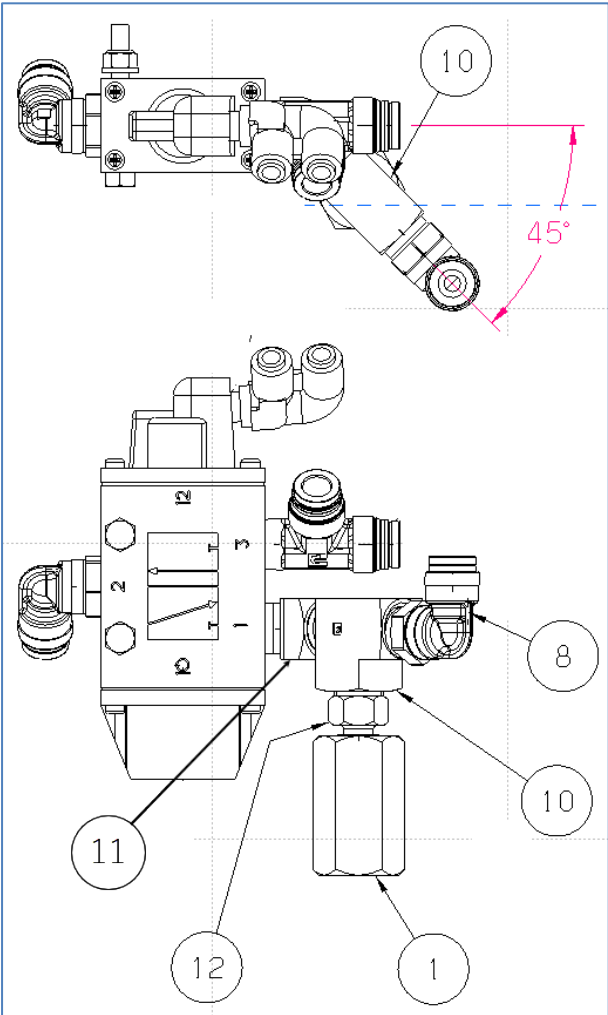


Figure 11

Pneumatic Hook Up

13) Route the blue pneumatic tubing from the exhaust port of a valve up to the exhaust port of the other valve (see Figure 12 to Figure 14).

Date	Expiration	Release	Page
04.2022	04.2024	3	10(15)

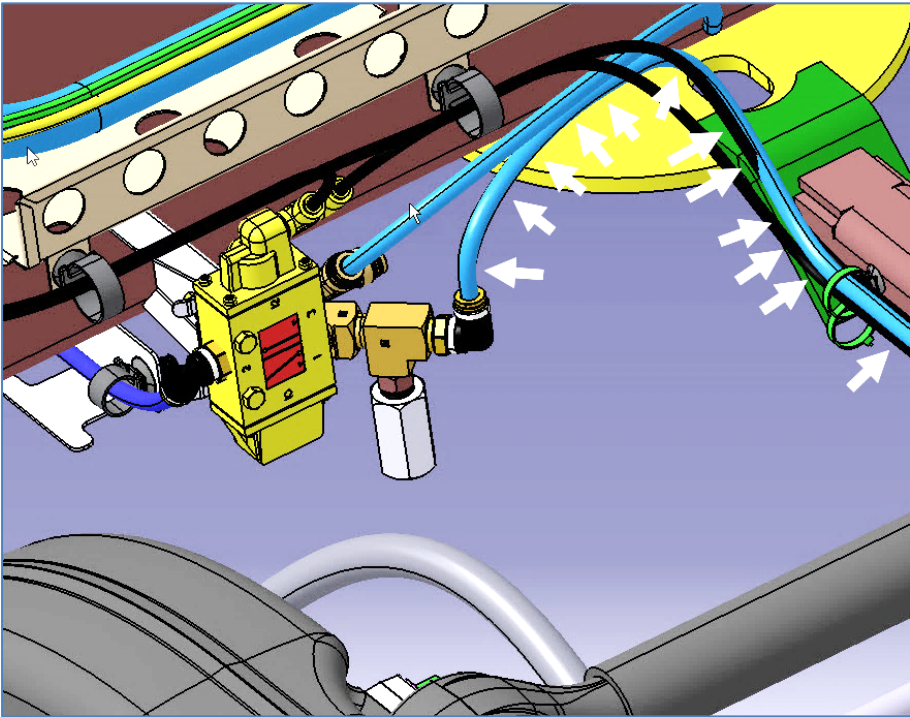


Figure 12: STREET SIDE VALVE

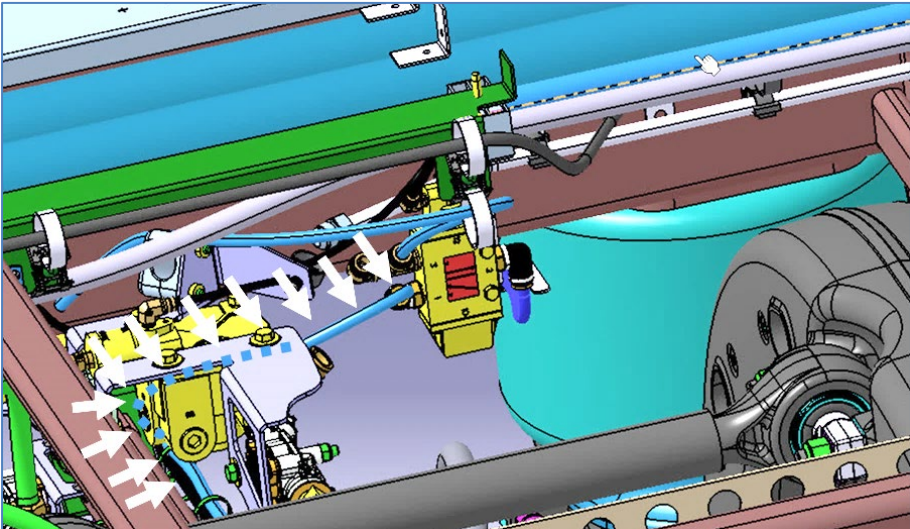


Figure 13: CURB SIDE VALVE

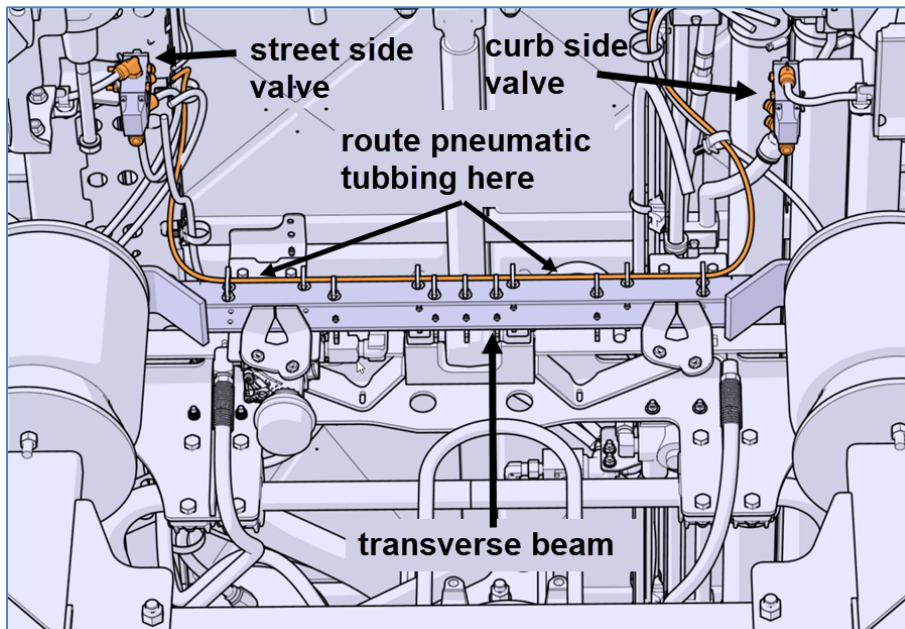


Figure 14

FINAL STEPS

IMPORTANT NOTE

Tag axle air springs showing evidence of cracks, punctures, chafing with surface deterioration, must be replaced. To do so, see **PART 2 - AIR SPRING REPLACEMENT**

- 14) On each side of the vehicle, connect the upper end (rubber bushing) of the rear height control valve arm linkage (one per side). Refer to Figure 3 & Figure 4.
- 15) Lower the vehicle.
- 16) Set the automatic tag unload override valve to NORMAL TAG (see Figure 2).
- 17) Start the vehicle and allow the air system to reach normal pressure.
- 18) Using soapy water, check the new installation for air leaks.
- 19) Perform functional test of the new installation. To do so, set the automatic tag unload override valve from NORMAL TAG to TAG UNLOAD and then back to NORMAL TAG. Check that the tag axle unloads (air springs deflate) and then returns to normal state (air springs inflate).

Date	Expiration	Release	Page
04.2022	04.2024	3	12(15)

PART 2 - AIR SPRING REPLACEMENT

REMOVAL

NOTE: Suspension air springs (drive and tag axles) can be removed without removing the entire axle assembly.

1. **PREVIOUSLY DONE IN PART 1.** Safely support vehicle at the recommended body jacking points. To gain access to a given air spring, the corresponding wheel can be removed as follows.
2. **PREVIOUSLY DONE IN PART 1.** Jack vehicle until the tire clears the ground, and place safety supports underneath body.

CAUTION: Only the recommended jacking points must be used as outlined in MI14-01.

3. Support the axle with a suitable hydraulic floor jack at the recommended jacking point.
4. **PREVIOUSLY DONE IN PART 1.** Exhaust compressed air from accessory air tank by opening drain cock under reservoir.
5. **PREVIOUSLY DONE IN PART 1.** Disconnect the height control valve link and pull down the control arm to ensure all air is exhausted from air springs.

NOTE: While performing this step, do not change the height control valve control arm adjustment.

6. Disconnect air line from air spring and cover both the line end and fitting to prevent the entry of foreign matter.

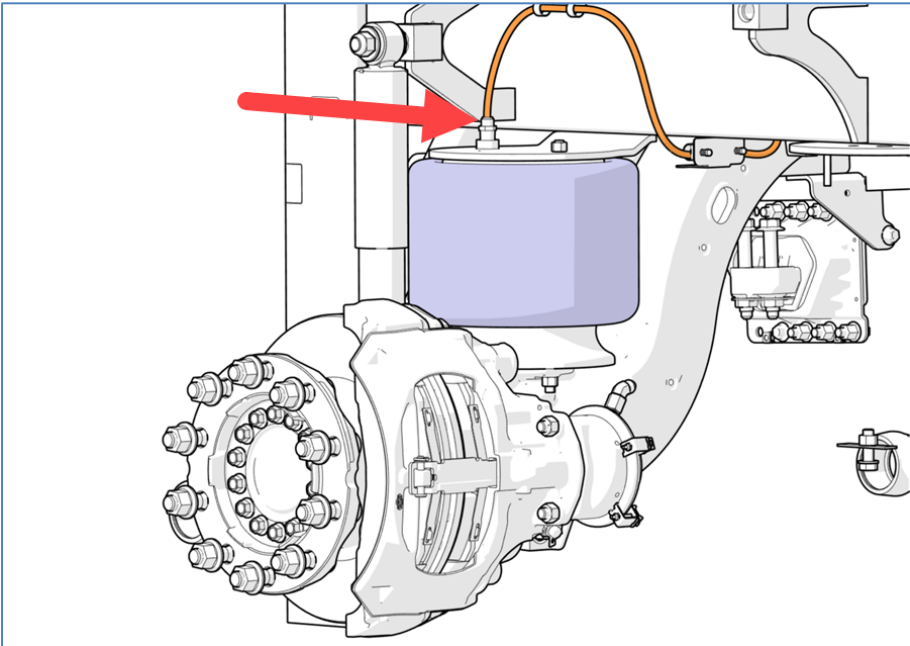


Figure 15

7. Remove the air spring upper nut, and then the two lower nuts.

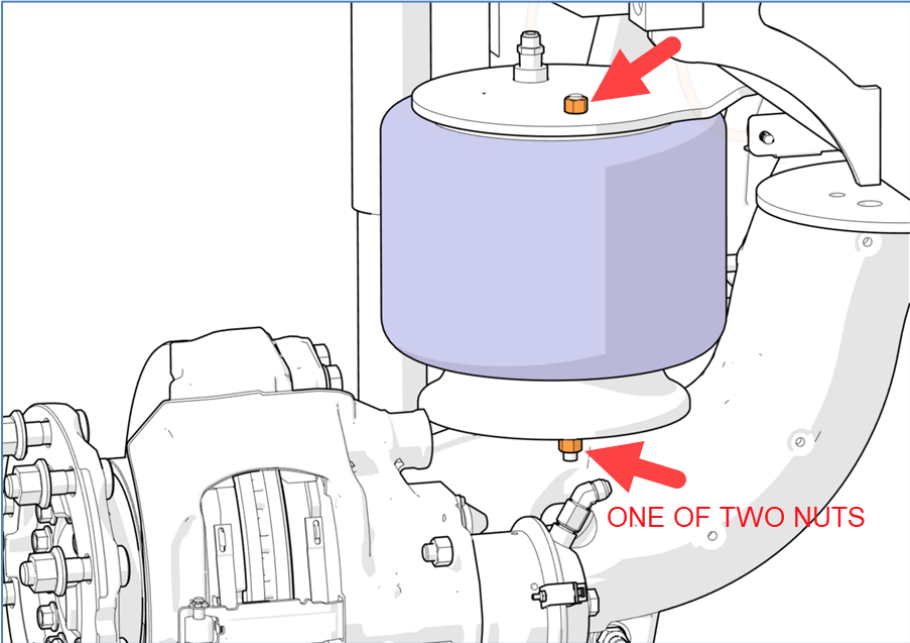


Figure 16

8. Remove air spring.

Date	Expiration	Release	Page
04.2022	04.2024	3	14(15)

INSTALLATION

1. Compress air spring as necessary and position air spring between both the lower and upper supports.

NOTE: To facilitate air spring installation, compress it manually then put a piece of tape over the air line threaded fitting. This prevents air from getting back into the bellows and keeps it compressed, thus enabling to place the bellows in between the mounting plates and greatly easing installation.

2. Thread the lower nuts and the upper nut a few turns. Tighten and torque the nuts.

TORQUE: 31-38 lb-ft (42-52 Nm)

3. Connect air line.
4. Connect the height control valve link.
5. Build up air pressure in system.

NOTE: To accelerate this operation, air reservoirs can be filled from an exterior air supply connected to the accessory tank fill valve or to the emergency fill valve.

7. Check operation of bellows, and with the primary air system at normal operating pressure, coat the air line connections and air spring mounting areas with a water and soap solution. Bubbles will indicate an air leak, and none is permissible. Repair or replace defective parts.
9. Remove the hydraulic floor jacks from under the axle, then lower vehicle to ground.

Special Bulletin

SP22-304.

Date	Expiration	Release	Page
04.2022	04.2024	3	15(15)

PARTS / WASTE DISPOSAL

Discard waste according to applicable environmental regulations (Municipal/State [Prov.]/ Federal)

ESTIMATED TIME

The time required to perform this special bulletin:

Pneumatic installation: 1.25 h

Air spring replacement (per air spring): 0.75 h

OTHER

VBC Bulletin	N/A
Fail Code	16.04
Defect Code	09
Syst. Cond	B
Causal Part	132133

Access all our Service Bulletins on
<http://techpub.prevestcar.com/en/>
or scan the QR-Code with your smart phone.



Prevest engages in a continuous program of testing and evaluating to provide the best possible product. Prevest, however, is not committed to, or liable for updating existing products.