

February 2021
SF608A-D

Subject: Cascadia Road Train Brake System - Export Only

Models Affected: Specific Model Year 2020-2021 Freightliner Cascadia model vehicles, manufactured July 10, 2019, through September 14, 2020.

General Information

Daimler Trucks North America LLC (DTNA), on behalf of its Freightliner Trucks Division, is initiating Field Service Campaign SF608A-D to modify the vehicles mentioned above.

Specific Freightliner Cascadia right-hand-drive vehicles require a brake system modification in order to improve brake air release time, allowing for road train capability.

The brake system will be modified to allow much faster exhausting of the air during service brake release.

There are approximately 280 vehicles involved.

Additional Repairs

Dealers must complete all outstanding Recall and Field Service campaigns prior to the sale or delivery of a vehicle. A Dealer will be liable for any progressive damage that results from its failure to complete campaigns before sale or delivery of a vehicle.

Owners may be liable for any progressive damage that results from failure to complete campaigns within a reasonable time after receiving notification.

Please contact Warranty Campaigns for consideration of additional charges prior to performing the repair.

Work Instructions

Please refer to the attached work instructions. Prior to performing the campaign, check the vehicle for a completion sticker (Form WAR261).

Replacement Parts

Replacement parts are now available and can be obtained by ordering the part numbers listed below from your facing Parts Distribution Center.

If our records show your dealership has ordered any vehicle(s) involved in campaign number SF608, a list of the customers and vehicle identification numbers will be available on DTNAConnect. Please refer to this list when ordering parts for this campaign.

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Table 1 - Replacement Parts for SF608

Campaign Number	Part Number	Part Description	Qty.
SF608 A,B,C,D (plus additional parts below)	12-31467-000	BRKT-RELAY,ABOVE RAIL	1 ea
	12-31468-000	BRKT-MODULATOR, ABOVE RAIL	1 ea
	12-31470-000	BRKT-TP VALVE,U/BATT	1 ea
	23-09114-000	WASHER-0.69X1.31X.177,YLW ZN,STEEL,HRDN	10 ea
	23-12886-001	MOUNT-DUAL SWIVEL SADDLE SZ4	1 ea
	23-13476-000	CLAMP-CA TIE 4.13X15IN 0.5W	2 ea
	23-13848-001	PLUG-PIPE,HOLLOW HEX,1/2	2 ea
	23-14067-050	BOLT-HEX,ZNAL,BK,M16X1.5X50	5 ea
	23-14072-116	NUT-HEX,LKG,ZNAL,BK,M16X1.5	5 ea
	23-14392-014	CONN-STR,PTC,.50 MPT TO .62 NT	2 ea
	23-14395-003	ELBOW-45,PTC,.25 MPT TO .38 NT	4 ea
	23-14395-009	ELBOW-45,PTC,.50 MPT TO .50 NT	3 ea
	23-14395-011	ELBOW-45,PTC,.50 MPT TO .62 NT	1 ea
	23-14396-006	ELBOW-90,PTC,.38 MPT TO .38 NT	3 ea
	23-14396-015	ELBOW-90,PTC,.58 MPT TO .75 NT	1 ea
	23-14401-002	CONNECTOR-Y,PTC,.25NT,.38NT,.38NT	1 ea
	48-25811-012	TUBE-NYL 12,3/8 IN ,RED,REINF	As Required
	BW 294314	(Do Not Order) BRKT,RELAY VALVE	1 ea (Already Provided)
	BW K028462	SILENCER; KIT SPARES	1 ea
	BW K207716	RELAY VALVE	1 ea
	DDE N910105008042	HX HD SCREW	2 ea
	N913023 008003	NUT	2 ea
	PH 1220 10B RED250	TUBING NYLON HOSE	As Required
	PH 1220 8B RED500	NYLON 12 TUBING	As Required
TYC DCT110HIR	TIE STRAP	1 ea	
WAR261	BLANK COMPLETION STICKER	1 ea	
SF608 B (additional 2 parts)	23-09130-075	BRACKET-STANDOFF,.344X.344,ANGLE	1 ea
	23-14137-001	CABLE TIE-FIR TREE MOUNT,TYC	1 ea
SF608 C (additional 3 parts)	23-09130-075	BRACKET-STANDOFF,.344X.344,ANGLE	1 ea
	23-14137-001	CABLE TIE-FIR TREE MOUNT,TYC	1 ea
	23-14091-007	WASHER-STL,HDND,ZNAL,BK,.625	1 ea
SF608 D (additional 1 part)	23-14091-007	WASHER-STL,HDND,ZNAL,BK,.625	1 ea

Table 1

Removed Parts

U.S. and Canadian Dealers, please follow Warranty Failed Parts Tracking shipping instructions for the disposition of all removed parts. Export distributors, please destroy removed parts unless otherwise advised.

Labor Allowance

Table 2 - Labor Allowance

Campaign Number	Procedure	Time Allowed (hours)	SRT Code	Corrective Action
SF608 A-D	Air Lines, Brake System, Replumb	10.0	996-F074A	12-Repair Recall/Campaign

Table 2

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IMPORTANT: When the campaign has been completed, locate the base completion label in the appropriate location on the vehicle, and attach the gray completion sticker provided in the field service kit (Form WAR261). If the vehicle does not have a base completion label, clean a spot on the appropriate location of the vehicle and first attach the base completion label (Form WAR259). If a field service kit is not required or there is no completion sticker in the kit, write the campaign number on a blank sticker and attach it to the base completion label.

Claims for Credit

You will be reimbursed for your parts, labor, and handling (landed cost for Export Distributors) by submitting your claim through the Warranty system within 30 days of completing this campaign. Please reference the following information in OWL:

- Claim type is **Field Service Campaign**.
- In the Campaign field, enter the campaign number and appropriate condition code (**SF608-A, SF608-B, etc.**).
- In the Primary Failed Part field, enter **25-SF608-000**.
- In the Parts section, enter the appropriate part numbers as shown in the Replacement Parts Table.
- In the Labor section, enter the appropriate SRT from the Labor Allowance Table. Administrative time will be included automatically as SRT 939-6010A for 0.3 hours.
- The VMRS Component Code is **F99-999-005** and the Cause Code is **A1 - Campaign**.
- This Field Service Campaign will **terminate on February 28, 2022**. Dealers will be notified of any changes to the termination date via Important Campaign Information Letter posted on DTNACconnect.com.

IMPORTANT: OWL must be viewed prior to beginning work to ensure the vehicle is involved and the campaign has not previously been completed. Also, check for a completion sticker before beginning work.

All claims must be submitted within 30 days of the repair and within 30 days of the termination date of the campaign. U.S. and Canadian Dealers: All excess inventory to be returned to the PDC following the conclusion of the campaign must be returned in resaleable condition to the Memphis PDC within 90 days from the termination date. Please submit a PAR to request return to the Memphis PDC. (Canadian dealers should return the kits to their facing PDC.) Export Distributors: Excess inventory is not returnable.

For questions, U.S. and Canadian dealers, contact the Warranty Campaigns Department via Web inquiry at DTNACconnect.com/WSC, or the Customer Assistance Center at (800) 385-4357. Export distributors submit a Web inquiry or contact your International Service Manager.

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Copy of Notice to Owners

Subject: Cascadia Road Train Brake System - Export Only

Daimler Trucks North America LLC (DTNA), on behalf of its Freightliner Trucks division, is initiating Field Service Campaign SF608A-D to modify specific Model Year 2020-2021 Freightliner Cascadia model vehicles, manufactured July 10, 2019, through September 14, 2020.

Specific Freightliner Cascadia right-hand-drive vehicles require a brake system modification in order to improve brake air release time, allowing for road train capability.

The brake system will be modified to allow much faster exhausting of the air during service brake release.

Please contact an authorized Daimler Trucks North America dealer to arrange to have the campaign performed and to ensure that parts are available at the dealership. To locate an authorized dealer, go to Daimler-TrucksNorthAmerica.com/Contact-Us/. Scroll down to "Locate a Dealer," and select the appropriate brand. The campaign will take approximately ten hours and will be performed at no charge to you.

This Field Service Campaign will **terminate on February 28, 2022**. Please make sure the campaign is completed prior to this date. Work completed after this date will be done at the customer's expense.

As stated in the terms of your express limited warranty, Daimler Trucks North America LLC will not pay for any damage caused by failure to properly maintain your vehicle. Daimler Trucks North America LLC considers the work necessary under this campaign to be proper maintenance and will, therefore, not pay for any damage to your vehicle caused by your failure to have the repairs that are the subject of this campaign performed in a reasonable time.

Contact the Warranty Campaigns Department at (800) 547-0712, Monday through Friday, e-mail address DTNA.Warranty.Campaigns@Daimler.com, or the Customer Assistance Center at (800) 385-4357, if you have any questions or need additional information.

WARRANTY CAMPAIGNS DEPARTMENT

Enclosure

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Work Instructions

Subject: Cascadia Road Train Brake System - Export Only

Models Affected: Specific Model Year 2020-2021 Freightliner Cascadia model vehicles, manufactured July 10, 2019, through September 14, 2020.

Front Brakes and Foot Valve Replacement—Tractor Valve Assembly

Refer to [Fig. 1](#) for air brake plumbing diagram.

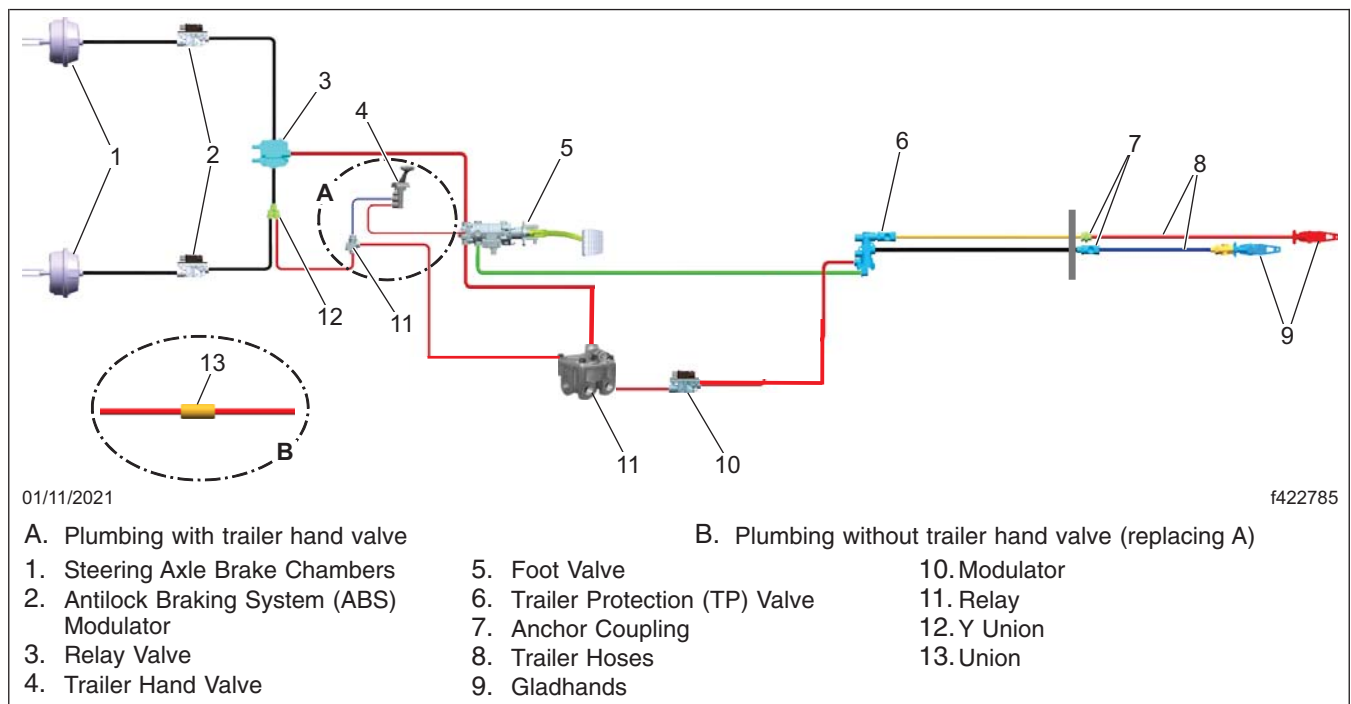


Fig. 1, Air Brake Plumbing Diagram

1. Check the base label (Form WAR259) for a completion sticker for SF608 (Form WAR260) indicating this work has been done. The base label is usually located on the passenger-side door, about 12 inches (30 cm) below the door latch. If a sticker is present for SF608, no work is needed. If there is no sticker, proceed with the next step.
2. Park the vehicle on a level surface, shut down the engine, and set the parking brake. Chock the tires.

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3. Pull the rain tray drain tube out in order to create space to lower the air conditioning cassette during removal. See [Fig. 2](#).



Fig. 2, Rain Tray Drain Tube Removal

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4. Remove the passenger side splash shield.
5. Remove the two nuts and zip ties that attach the air line bracket to the underside of the engine tunnel.
See [Fig. 3](#).



Fig. 3, Air Line Mounting Bracket Nut Locations

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- Remove the mounting nuts that attach the air conditioning cassette lines to the underside of the engine tunnel. See [Fig 4](#) and [Fig. 5](#). This will allow the air conditioning cassette and air line mounting bracket to be lowered so the airline bundle can be removed.

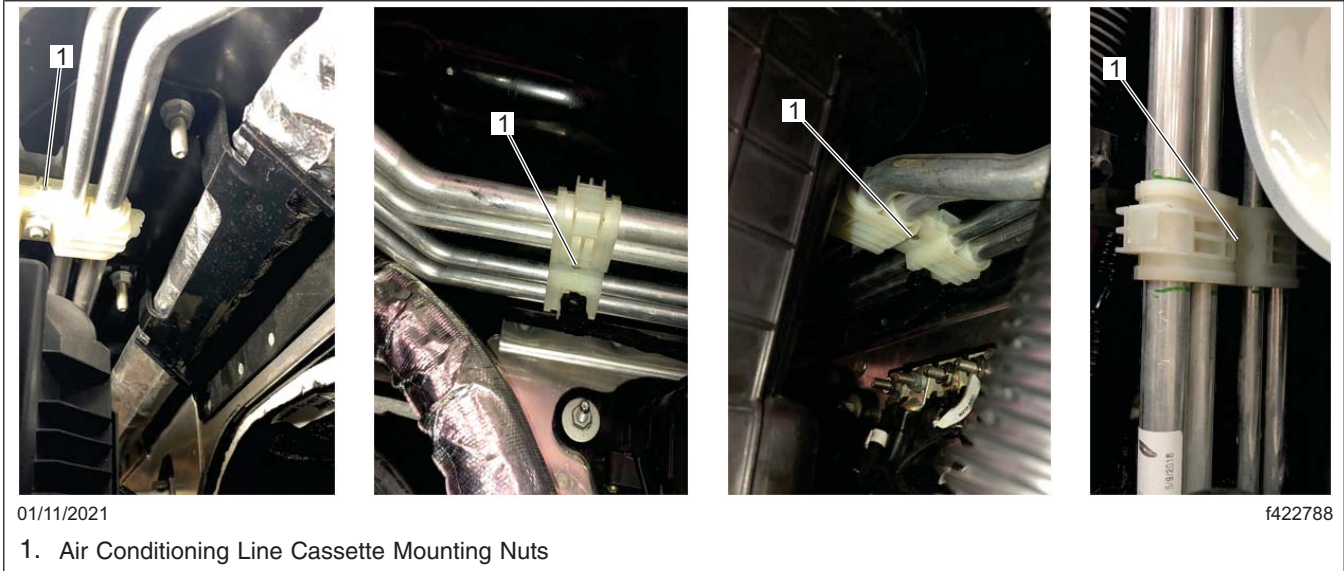


Fig. 4, Air Conditioning Line Cassette Mounting Nut Locations

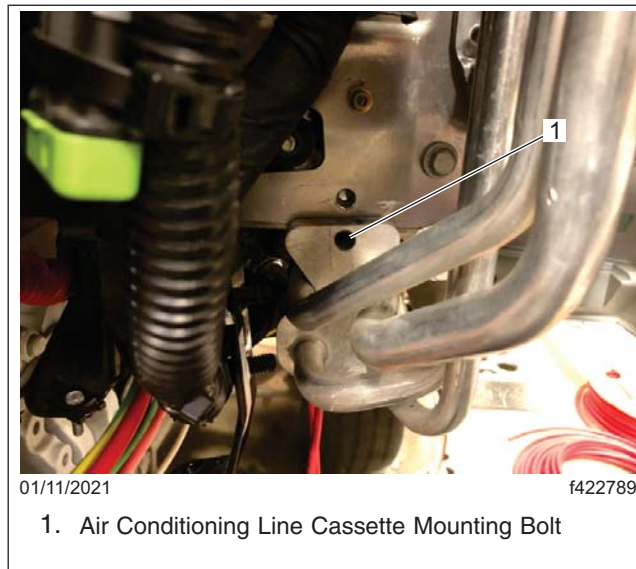


Fig. 5, Air Conditioning Line Cassette Mounting Bolt Location

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7. Disconnect all the air lines from the foot valve and the front wall.
8. Pull the air line bundle across the passenger side of the vehicle, so that the air lines can be removed and installed in the air bundle without removing the heat shield. See [Fig. 6](#).



Fig. 6, Air Line Bundle Moved to the Passenger Side of the Vehicle

9. From the air line bundle, remove the two red #8 air lines that were connected to the front two ports on the foot valve by disconnecting them from the air line union near the fender.
10. Locate the front brakes, then disconnect and remove the #8 red air hose that connects the 90 degree fitting at the control port of the front brake relay valve to the Y-union, located in the frame rail. See [Fig. 7](#).

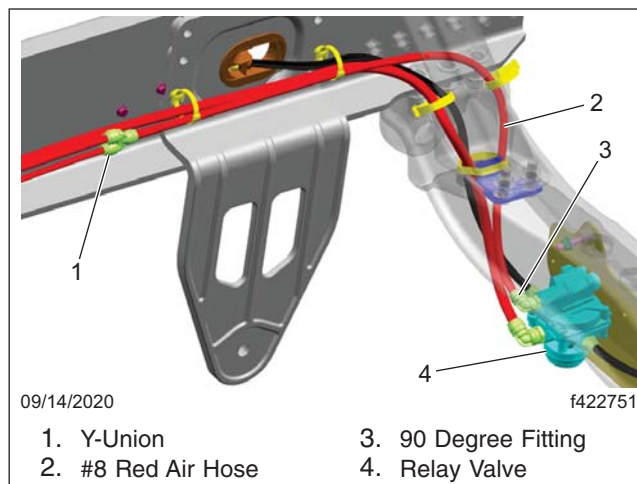


Fig. 7, Disconnecting and Removing the #8 Red Air Hose

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11. Remove fitting 23-14396-013 from the front brake valve control port and replace it with fitting 23-14396-006. See **Fig. 8**.

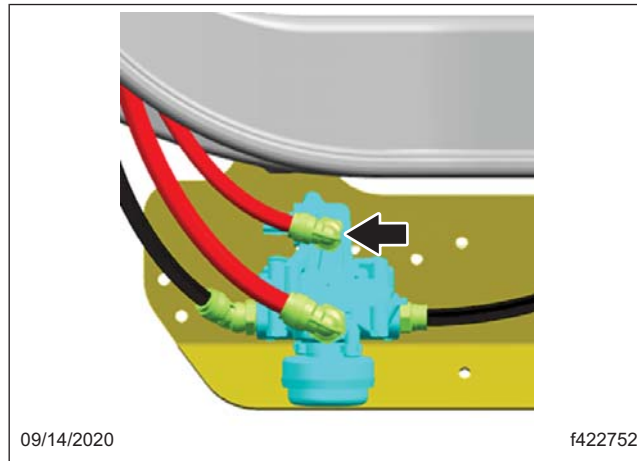


Fig. 8, Removing Fitting 23-14396-013

12. At the foot valve, disconnect the red #8 hoses from the two indicated fittings. Replace both 23-14396-013 fittings with 23-14396-006 fittings. See **Fig. 9**.

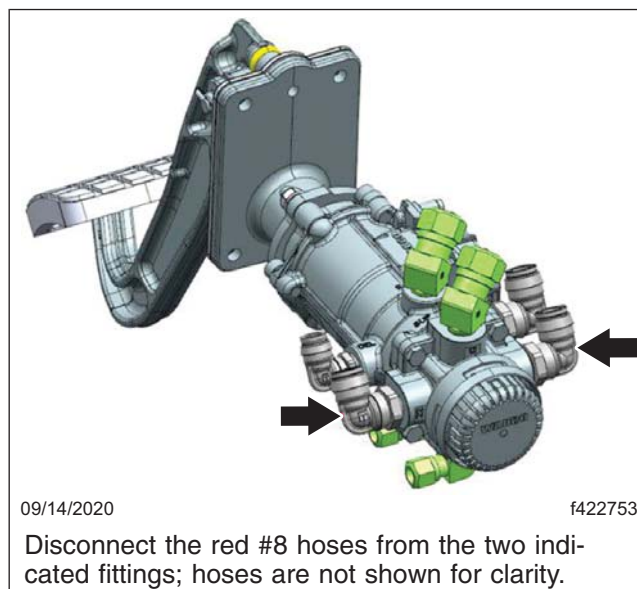


Fig. 9, Disconnecting the Red #8 Hoses

13. In the left frame rail, disconnect the #4 air hose from the Y-union and remove the Y-union as well as the remaining #8 hose connected to it that was just disconnected from the foot valve. This will require tracing the hose and cutting several zip ties on the air hose bundle.

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14. Add a #6 air hose (48-25811-012) from the 23-14396-006 fitting on the inboard side of the foot valve to the new fitting installed on the control port of the front brakes. See [Fig. 10](#) and [Fig. 11](#).

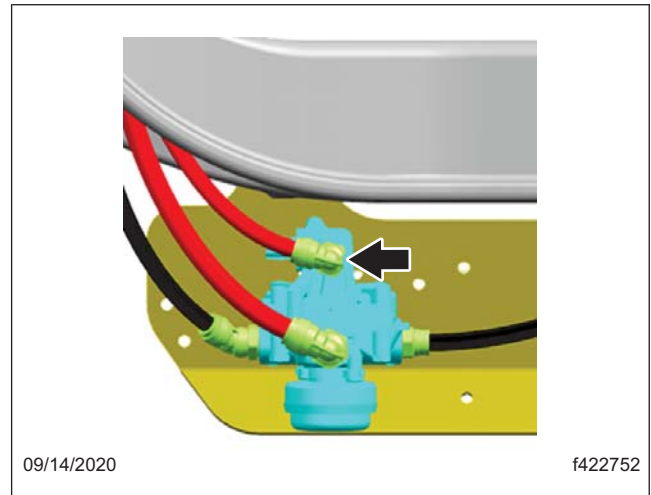
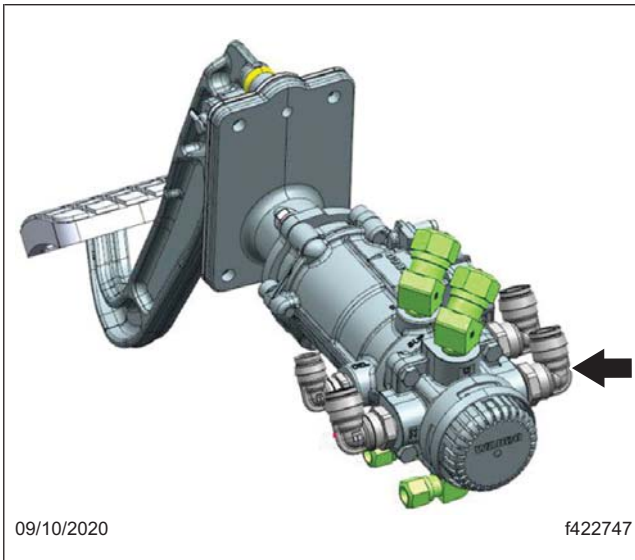


Fig. 11, Fitting on the Control Port

Fig. 10, Fitting on the Inboard Side of the Foot Valve

15. At the previous location of the Y-union, cut the #6 air hose and install a new Y-union (23-14401-002). Attach the #4 hose to this Y-union, in the same orientation as the previous Y-union. See [Fig. 12](#).

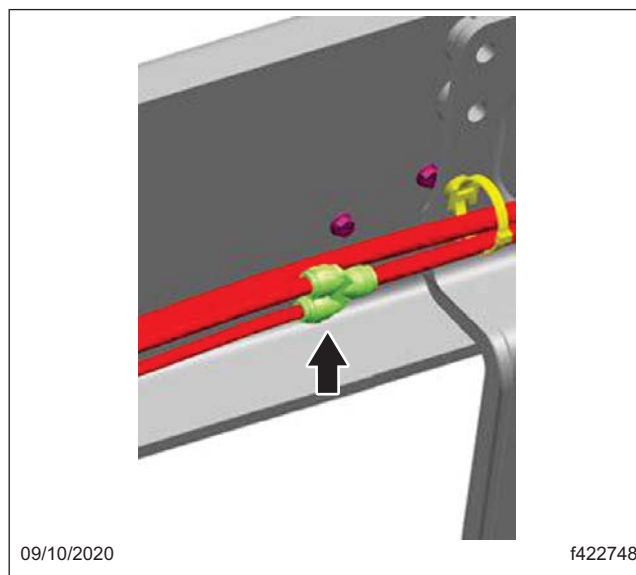


Fig. 12, New Y-Union Installed

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Trailer Air Valve Replacement

1. Disconnect all of the hoses and remove the trailer valve assembly from inside the left-hand (LH) side frame rail, under the fifth wheel. See **Fig. 13** and **Fig. 14**.

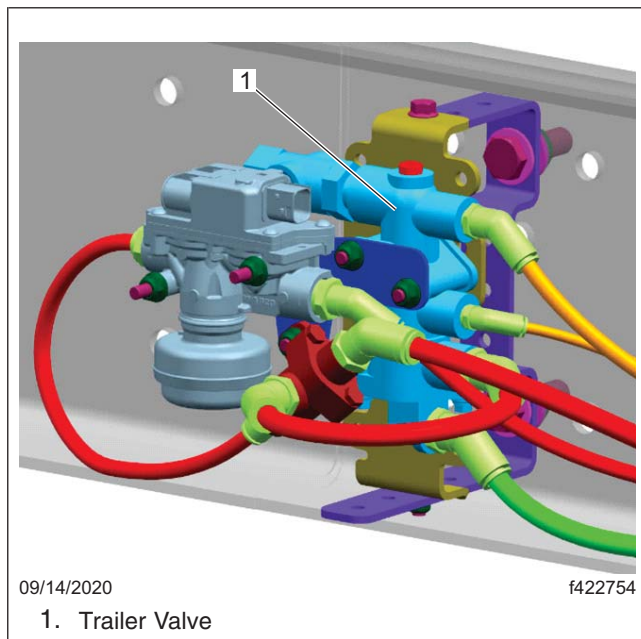


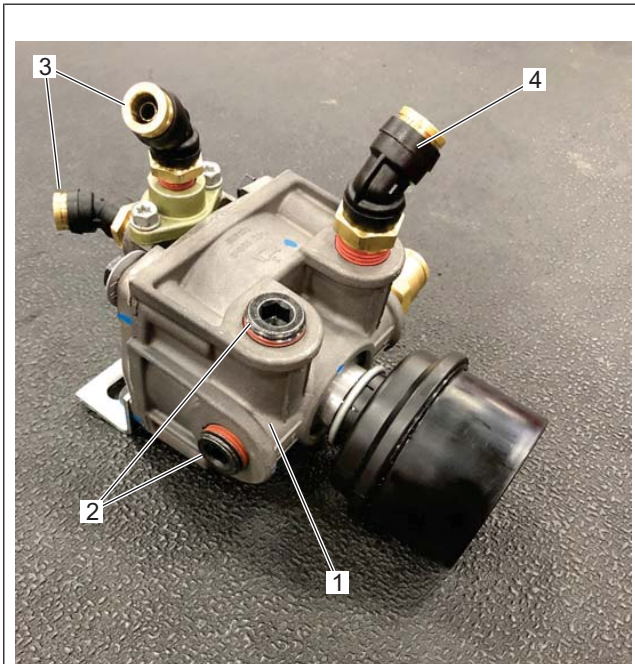
Fig. 13, Trailer Valve Assembly



Fig. 14, Trailer Valve Assembly Removed From the Vehicle

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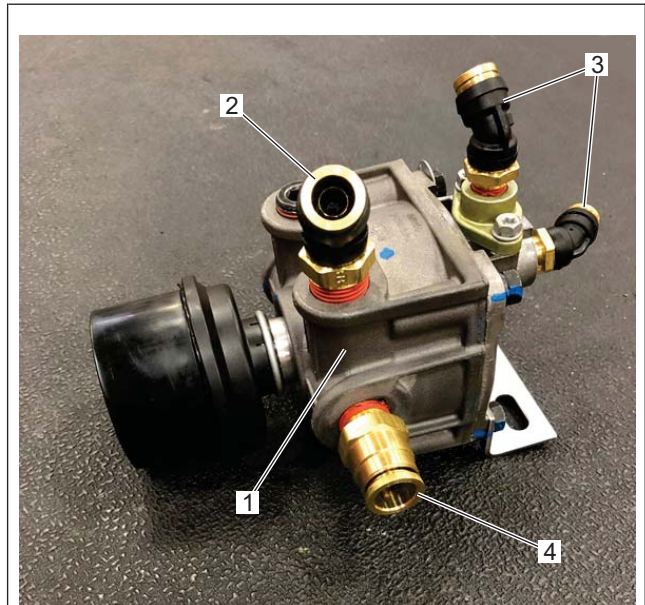
2. Remove the modulator valve from the trailer valve assembly.
3. Install plug 23-13848-001 and fittings 23-14392-014, 23-14395-003, and 23-14395-009 into the R-12 relay valve (BW K207179) as shown in [Fig. 15](#) and [Fig. 16](#) .



01/11/2021 f422791

1. R-12 Relay Valve
2. Plug, 23-13848-001 (PLUG-PIPE,HOLLOW HEX, 1/2 MPT)
3. Elbow Joint, 23-14395-003 (ELB-45, 3/8 PTC X 1/4 MPT)
4. Elbow Joint, 23-14395-009 (ELB-45, 1/2 PTC X 1/2 MPT)

Fig. 15, R-12 Relay Valve Left Side View

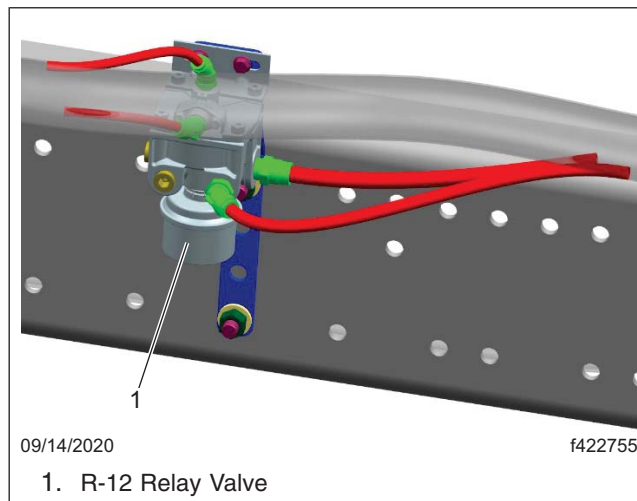


01/11/2021 f422792

1. R-12 Relay Valve
2. Elbow Joint, 23-14395-009 (ELB-45, 1/2 PTC X 1/2 MPT)
3. Elbow Joint, 23-14395-003 (ELB-45, 3/8 PTC X 1/4 MPT)
4. Straight Connector, 23-14392-014 (CONN-STR, 5/8 PTC X 1/2 MPT)

Fig. 16, R-12 Relay Valve Right Side View

4. Assemble the R-12 relay valve assembly on the vehicle as follows. See [Fig. 17](#).



09/14/2020 f422755

1. R-12 Relay Valve

Fig. 17, R-12 Relay Valve Assembly

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- 4.1 Remove the forward fasteners from the left-hand (LH) rear engine mount. See [Fig. 18](#).

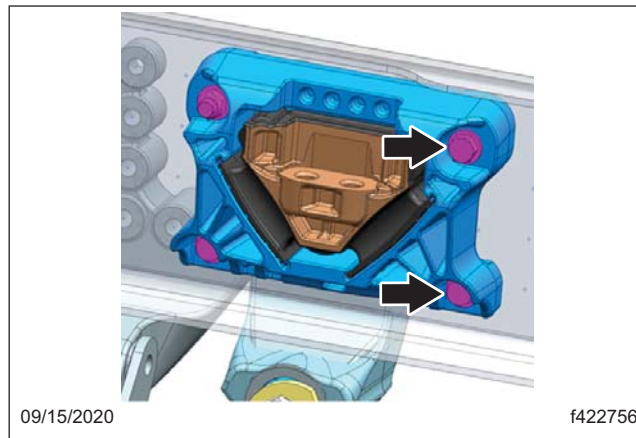


Fig. 18, Forward Fasteners

- 4.2 Install them through the relay assembly on the outside of the frame rail. See [Fig. 19](#).

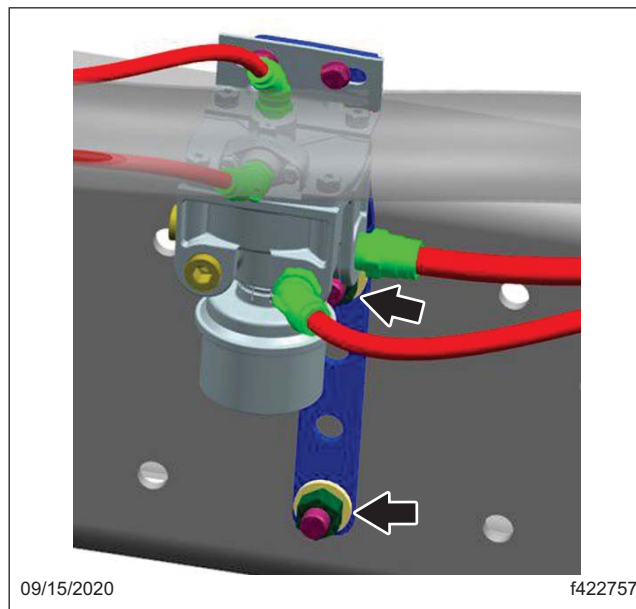


Fig. 19, Relay Assembly Attached with the Forward Fasteners

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5. Remove the trailer valve assembly, including the brackets and double check valve. See [Fig. 20](#).
6. Assemble the new modulator assembly as shown in [Fig. 21](#).

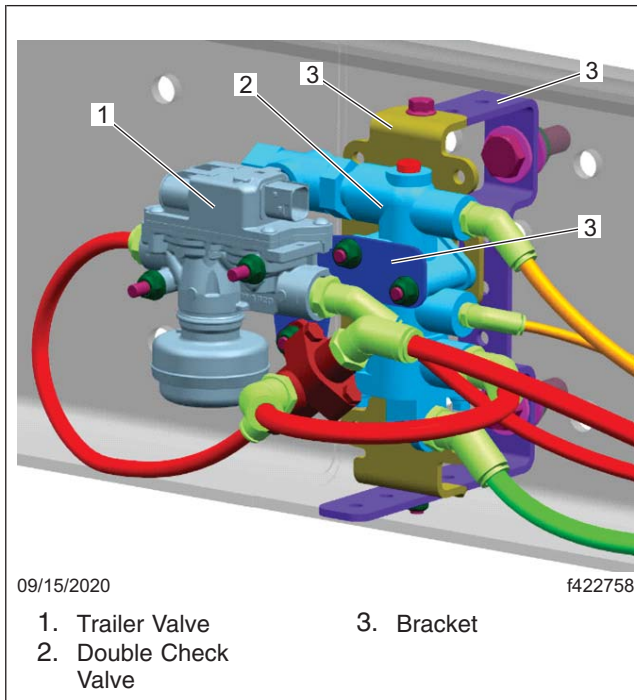


Fig. 20, Trailer Valve Assembly

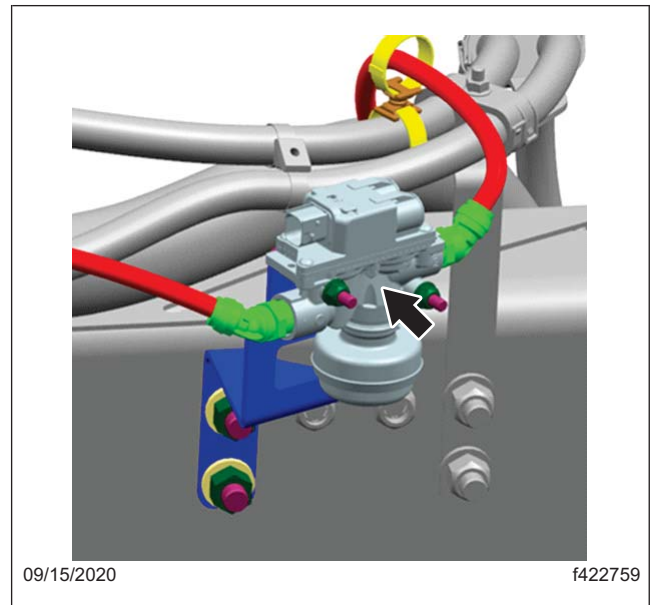


Fig. 21, New Modulator Assembly

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7. At frame location 1225 mm on the left frame rail, drill a hole 50 mm below the existing hole that holds the fastener for a routing and clipping bracket. Install the modulator assembly as shown in [Fig. 22](#).

For vehicles equipped with a 53-gallon diesel exhaust fluid (DEF) tank, install a washer on the upper fastener, between the modulator bracket and the frame. See [Fig. 23](#).

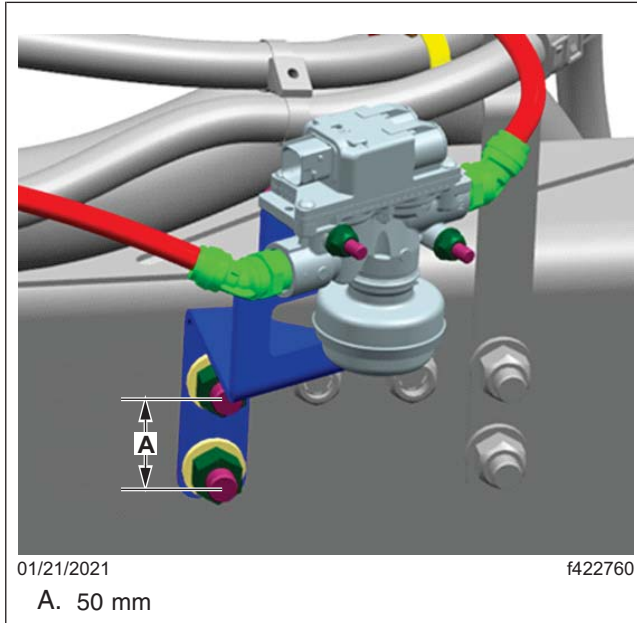


Fig. 22, Modulator Assembly Installed

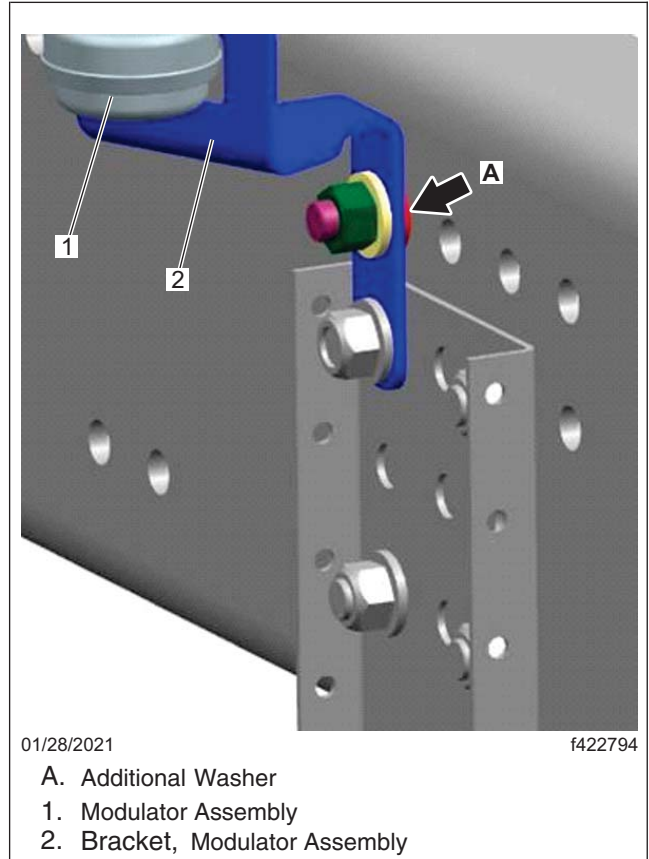


Fig. 23, Additional Washer to be Installed on Vehicles with a 53-Gallon DEF Tank

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8. Assemble the new tractor protection valve assembly as shown in [Fig. 24](#).

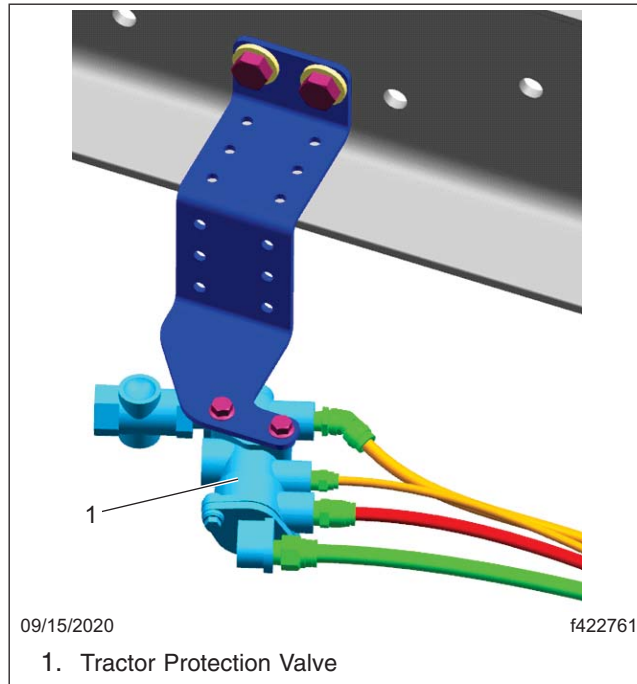


Fig. 24, Tractor Protection Valve Assembly

9. Drill a pattern of two 50 mm holes that are 200 mm rear and 50 mm below the forward battery box mounting hole on the left frame rail as shown in [Fig. 25](#).

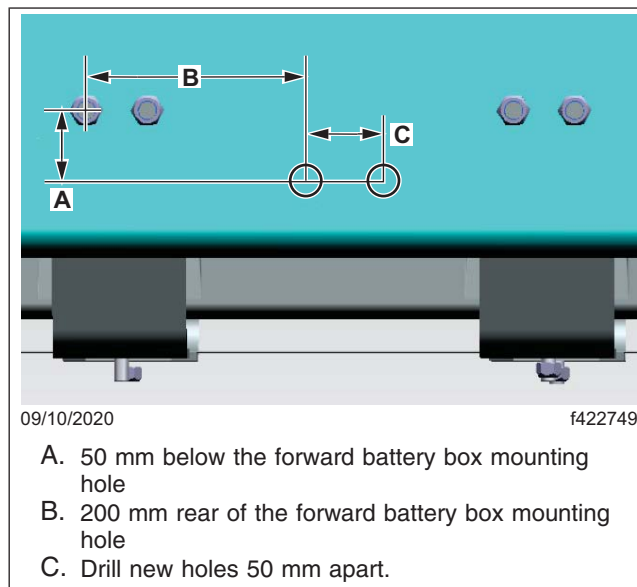


Fig. 25, Drill Pattern

10. Mount the new tractor protection valve assembly as shown on the two drilled holes. See [Fig. 24](#).

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11. Install a #6 red air hose on the foot valve air fitting, shown in [Fig. 26](#), to the top control port on the R-12 relay. See [Fig. 27](#).

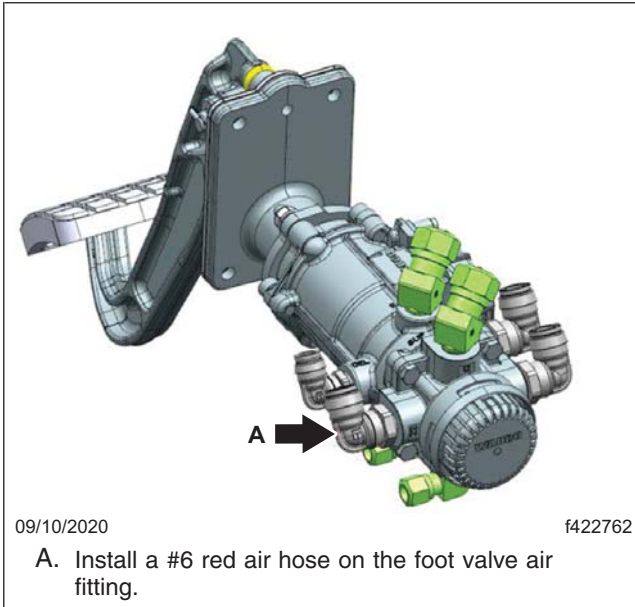


Fig. 26, Foot Valve, Air Fitting

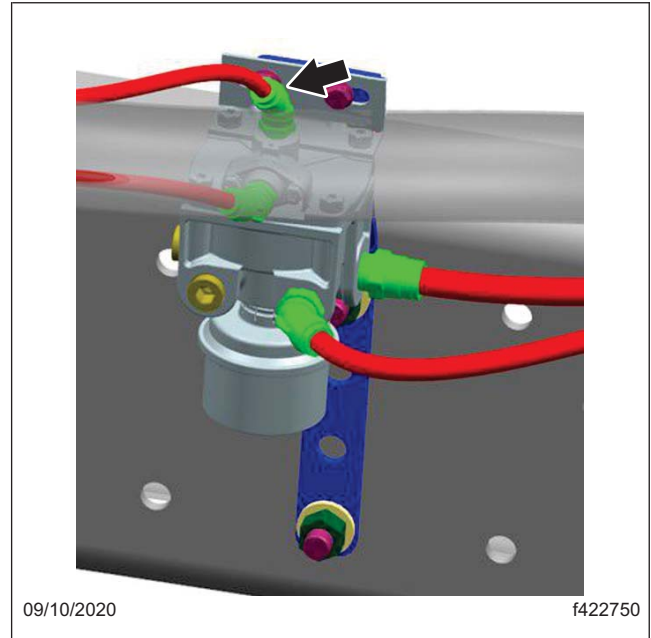


Fig. 27, R-12 Relay, Top Control Port

12. Take the #6 red air hose from the front-wall double check valve center port, which previously routed to the modulator assembly in the left frame rail, and shorten it to route to the lower control port of the R-12 relay. See [Fig. 28](#).

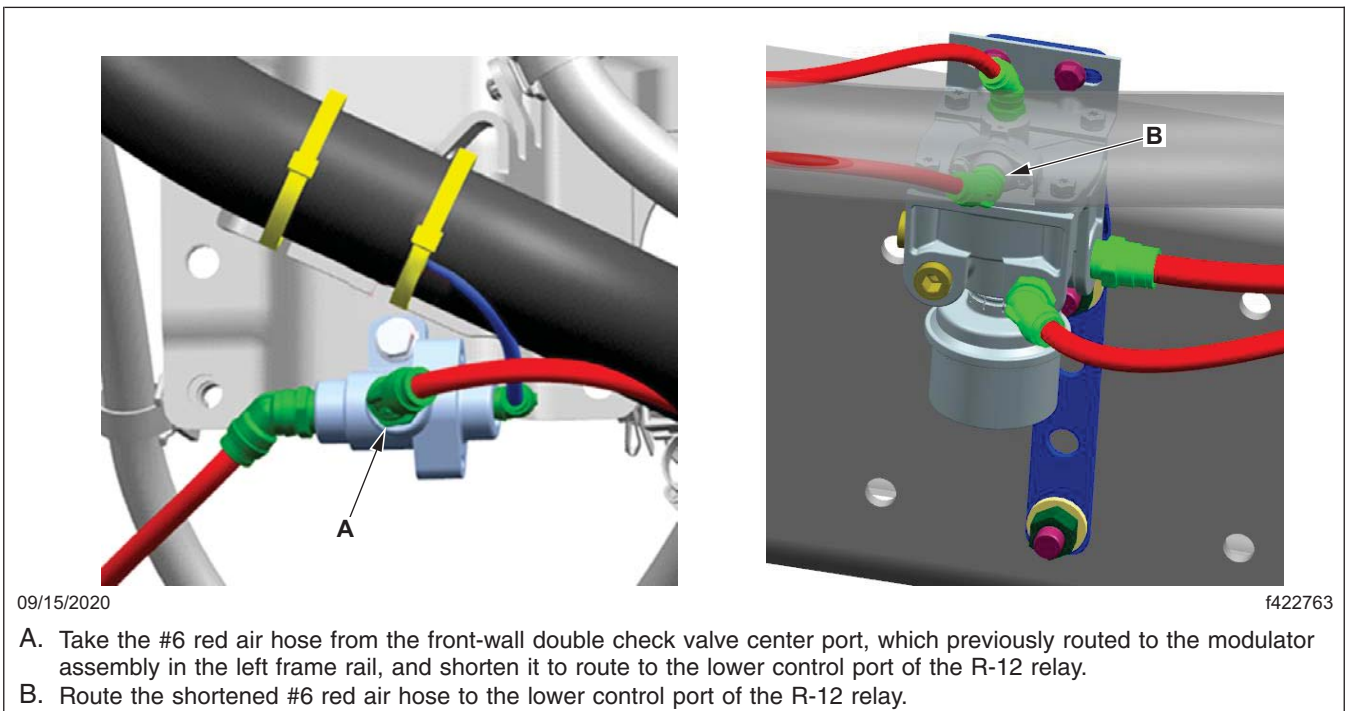


Fig. 28, Shortening the #6 Red Air Hose

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13. Add one air fitting (23-14396-015) to an available port on the secondary air tank. See [Fig. 29](#). An additional brass T-fitting may be required if there is no port available. Route a #10 red air hose from this air fitting to the supply port on the R-12 relay. See [Fig. 30](#).

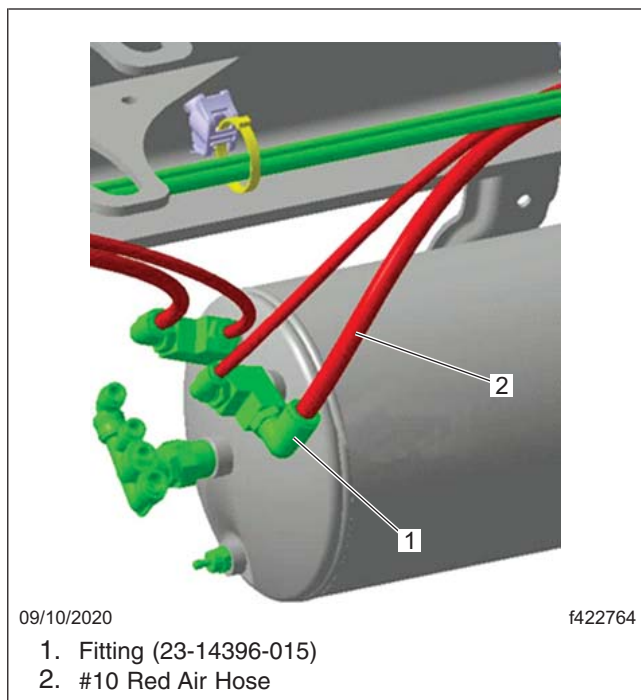


Fig. 29, Secondary Air Tank

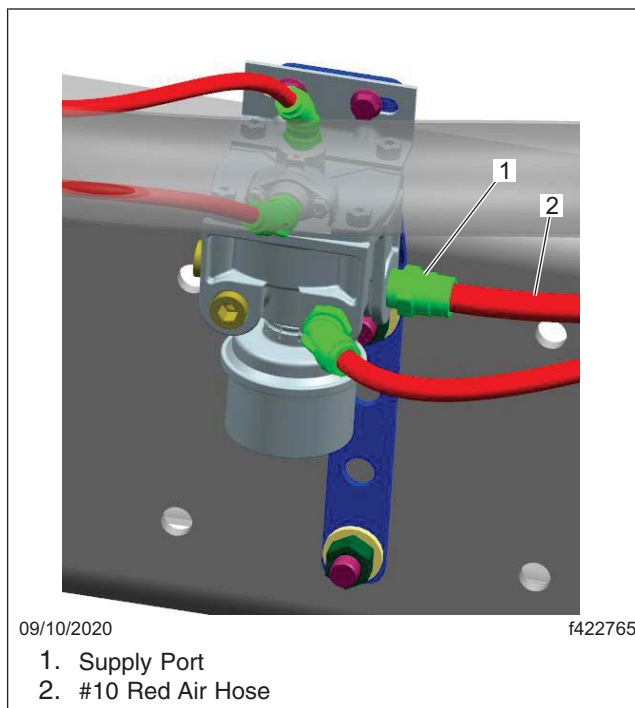


Fig. 30, R-12 Relay, Supply Port

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14. Connect a #8 red hose to the delivery port of the R-12 relay and to the supply port of the modulator valve.
See [Fig. 31](#) and [Fig. 32](#).

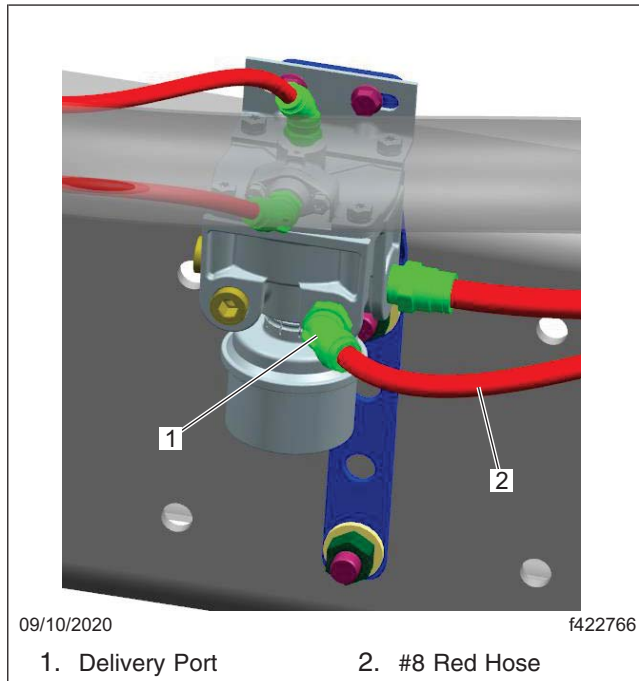


Fig. 31, R-12 Relay, Delivery Port

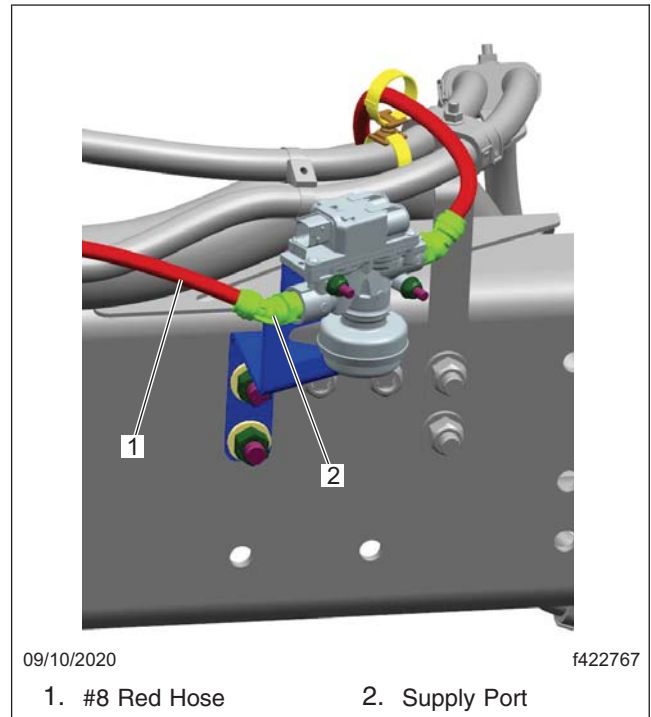


Fig. 32, Modulator Valve, Supply Port

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15. On the tractor protection valve, remove the red #8 hose from the fitting shown in [Fig. 33](#). Install a #8 red hose on the modulator valve delivery port to the indicated fitting on the tractor protection valve. See [Fig. 34](#).

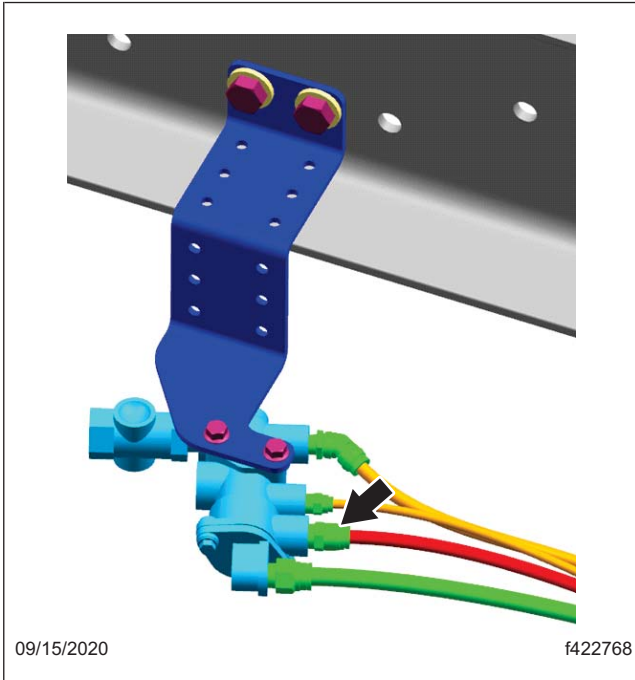


Fig. 33, Removing the Red #8 Hose from the Fitting, Tractor Protection Valve

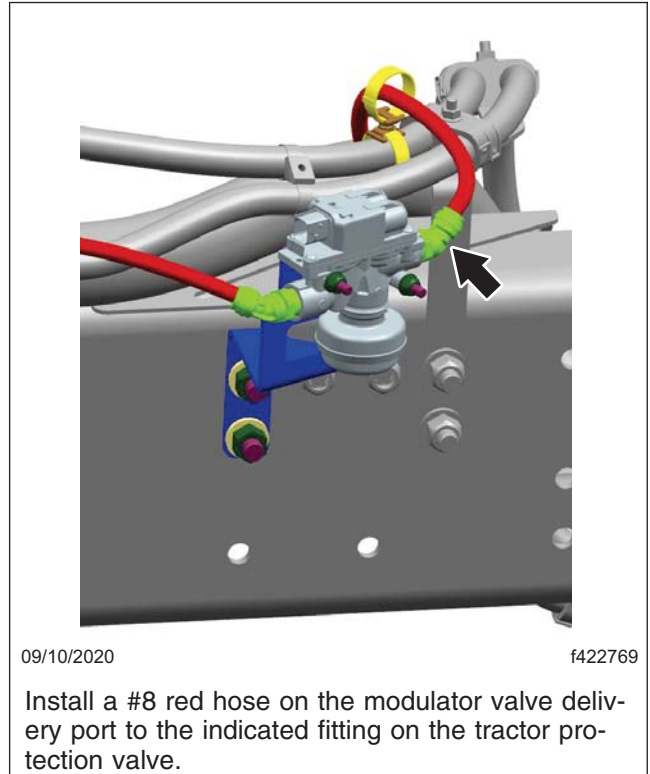


Fig. 34, Modulator Valve Delivery Port

16. Shorten and attach the green hose and two orange hoses that were disconnected from the old trailer air assembly to the new tractor protection valve assembly as shown in [Fig. 35](#).

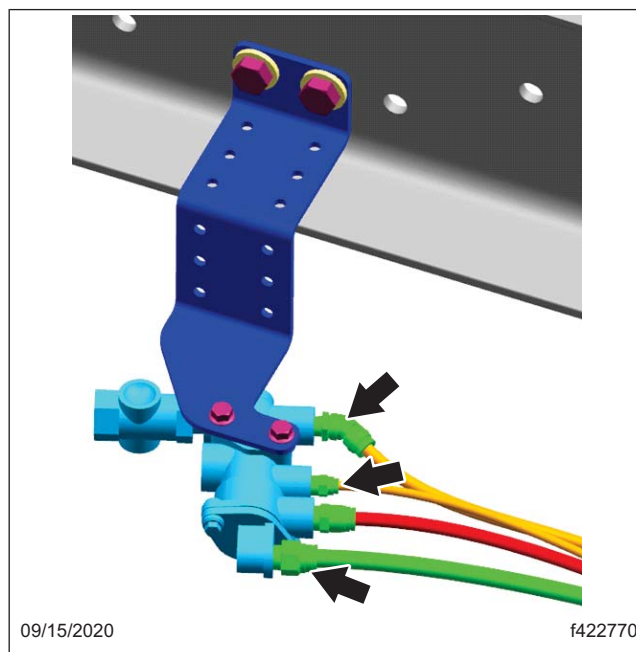


Fig. 35, New Tractor Protection Valve Assembly

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17. Shorten the black hose and orange hose that were disconnected, and attach to the new tractor protection valve assembly. Install the routing bracket on the rear battery box mount. See [Fig. 36](#).

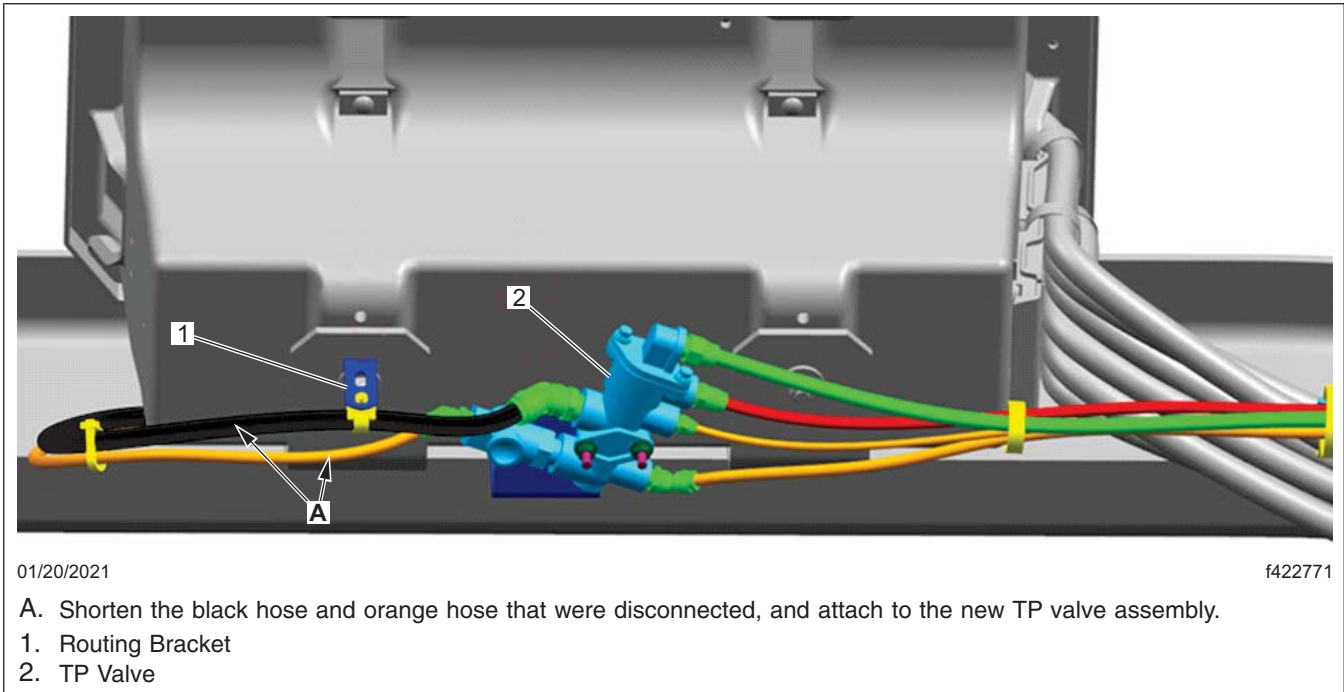


Fig. 36, Shortening the Black and Orange Hoses

18. Verify that all air hoses are connected per schematic L12-28820-004.
19. Test the brakes for proper operation.
20. Remove and discard all air hoses that were disconnected and not used on the new trailer air valves.
21. Securely fasten all air hose bundles.
22. Install the air lines from the left-hand (LH) side to the right-hand (RH) side of the vehicle, under the cowl.
23. Install the air conditioning cassette lines under the cowl.
24. Install the rain tray drain tube between the air conditioning cassette and the fender.
25. Discard all removed components that were not used for the new trailer air valve installation.
26. Clean a spot on the base label (Form WAR259). Write the recall number, SF608, on a completion sticker (Form WAR260), and attach it to the base label to indicate this recall has been completed.