SAFETY RECALL

(Previously called Vehicle Recall)

SC336

(Does not apply to Mack Trucks Australia)

Date: **01/11/08 (Supersedes SC336 dated 12/21/07 and cancels SC329 dated 11/09/07)**

To: **All MACK Dealers**

Subject: **Spring Brake Modulating Relay (Bendix SR-7™) Valve**

Information:

It has been determined that a manufacturing defect exists in the cast metal body of certain spring brake modulating relay (Bendix SR-7™) valves. Suspect valves were manufactured by Bendix Commercial Vehicle Systems LLC between April 1, 2006 and May 24, 2006. The diameter of the check valve cavity inside the valve body is not correct, and the check valve may not seat properly, resulting in internal leakage. An improperly seated check valve can cause a delay in the application of the parking brakes after the vehicle operator pulls the dashboard park brake valve to park the vehicle, and the delayed application can occur without warning, leading to unintended vehicle roll-away.

Additionally, SR-7™ valves utilize a check valve fitting in the supply port. Certain 90-degree single check valve fittings which were manufactured by Parker Hannifin, may have a defect whereby the valve body retainer may become excessively worn and eventually break apart. Pieces of the check valve can become lodged inside the SR-7™ valve, potentially causing either leakage or preventing air from properly exhausting from the valve. This could then cause a delay it the application of the park brakes, the park brakes not fully releasing or a loss of isolation between the primary and secondary air circuits. These conditions can occur without warning, leading to unintended vehicle roll-away, dragging brakes or, in cases of a loss of primary air pressure, the inability to modulate the spring brakes by using the treadle valve.

Affected vehicles include CXN, CHN, CTP, CT, CV, MR and LE model chassis (straight-trucks and some tractors) manufactured between April 5, 2006 and June 5, 2006. Approximately 594 chassis are involved in this campaign. A list of affected chassis has been sent to all applicable dealers.

NOTE

This Safety Recall cancels previous spring brake modulating relay valve replacement Safety Recall SC313 dated 12/18/06 and SC329 dated 11/09/07. This Safety Recall covers all chassis on which SC313 or SC329 were not yet performed.

Procedures:

Before proceeding, verify Safety Recall eligibility by:

a. Checking Safety Recall status in eWarranty.

b. Checking the campaign completion label located on the passenger-side door of conventional models, or inside the cab for MR models. If the campaign has been completed, SC336 should be written on the label.

SERVICE PUBLICATIONS, ALLENTOWN, PA 18105

The SR-7™ valve and the supply port check valve (manufactured by Parker Hannifin) on all affected vehicles must be replaced. Replacement procedures are as follows:

1. Completely drain the air system.
2. Mark the air lines to ensure that the lines will be connected to the correct ports at reinstallation.

⚠ CAUTION

Make sure that pressure has been exhausted from the air lines before they are disconnected.

3. Disconnect all the air lines from the valve. Quick connect air lines are disconnected as follows:
   a. Using the push-to-connect release tool (tool No. 9032-1800TRK), depress the collet head to release the grip on the tubing. The tube release tool is available through the MACK Parts System.

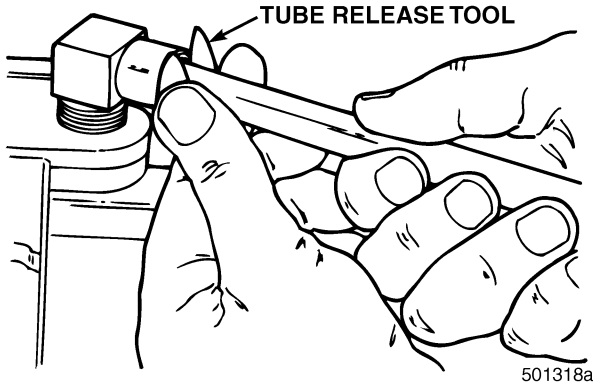

Figure 1 — Depressing Collet

   b. With the collet depressed, pull the tubing from the fitting.

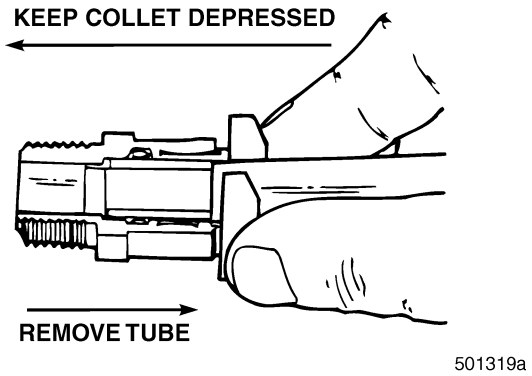

Figure 2 — Removing Tube

4. After all the air lines have been disconnected, remove the valve from the chassis.
5. Remove all the fittings and plugs from the existing valve.
6. Using a suitable pipe sealant, install the fittings and plugs onto the replacement valve (part No. 745-K022705). Install the fittings finger tight, and then tighten 1-1/2 to 2 turns. For elbow fittings, tighten no more than one additional turn to final position.

NOTE

Replace the existing supply port check valve (manufactured by Parker Hannifin) with the check valve included in the External Check Valve Replacement Kit (part No. 745-K022698). Refer to the attached Bendix Installation Instructions, S-1499, for information pertaining to the supply port check valve. This document is also available online by visiting the Bendix website at *www.bendix.com*.

NOTE

Teflon® tape is not a suitable substitute for pipe sealant.

7. Using the existing capscrews, install the new valve on the mounting bracket. Tighten the mounting capscrews to 200 lb-in (23 N•m).
8. Connect the air lines to the valve (refer to the following illustration for port locations).

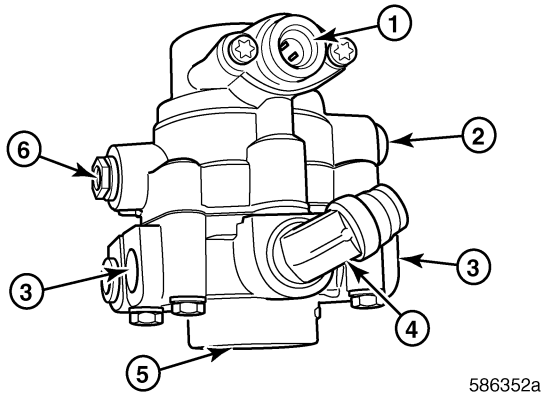

Figure 3 — SR-7™ Valve Port Locations

1. Control Port (line from park brake control valve) 2. Balance Port (line from service brake relay valve) 3. Delivery Ports (lines to spring brake chambers)	4. Supply Port (from secondary reservoir) with a 90-degree elbow check valve (part No. 745-K022698) 5. Exhaust Port 6. Control Port (secondary system signal pressure)

Install the push-to-connect air lines as follows:

a. Make any final alignment adjustments to the air fittings with a wrench on the hex or flats of the fitting body. DO NOT use a wrench near the tubing entry or collet head of the fitting.

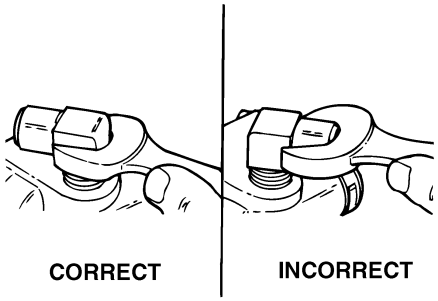

Figure 4 — Proper Fitting Installation

b. Inspect the end of the tube. The end of the tube should have a square (90-degree), clean cut edge. (An angled cut up to 15 degrees is acceptable.)

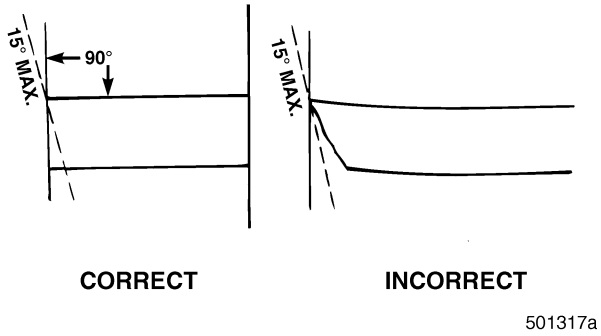

Figure 5 — Inspect Tube End

If the tube end cut is not clean or square, use a tubing cutter (Weatherhead part No. T919 or equivalent) to cut the tube. Dull knives, side cutters or other types of cutting tools may not ensure a good, clean cut. Burrs, oval tubing and contamination can damage the fitting seals.

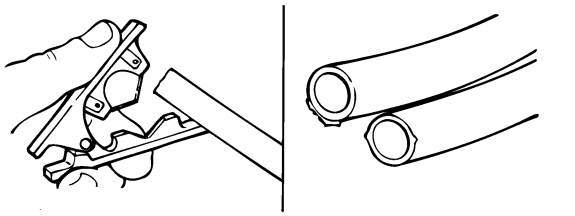

Figure 6 — Use a Tubing Cutter for Proper Cut Edge

c. Insert the tubing straight into the fitting until a solid stop is felt. The tubing grip and seal (on the O-ring) is then accomplished. Always protect against contaminants in the cartridges and fittings during assembly.

NOTE

DO NOT use detergent, soap and water or similar types of solutions as a lubricant when installing the tube.

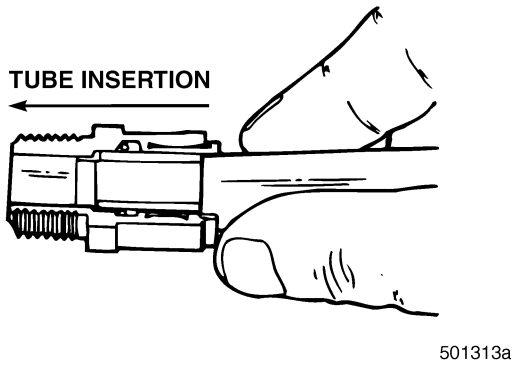

Figure 7 — Inserting Tube

d. After the tube has been fully inserted, gently tug on the tubing to ensure that it is secure in the fitting.

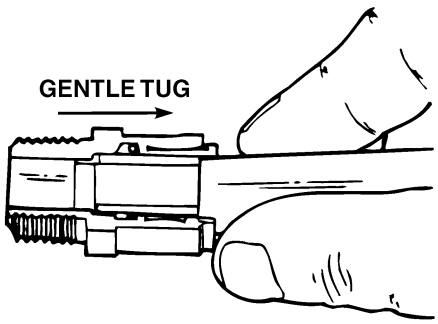

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Figure 8 — Ensure Tubing is Secure

e. Check the completed installation. Be sure to allow ample room for a gradual bend. Severe bends can collapse the tubing, resulting in line blockage, flow restrictions and an eventual air leak.

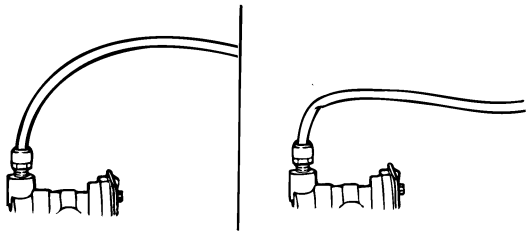

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Figure 9 — Inspect Final Installation

9. After all the air lines have been connected, start the engine and allow the air system to build pressure to governor cut-out. Stop the engine and perform the following leakage and operational tests:

⚠ DANGER

Make sure the wheels are blocked and the air system is at least 896 kPa (130 psi).

Leakage Test

a. Place the dashboard park brake control valve in the RELEASE position.

b. Using a soap and water solution, coat all ports including the exhaust port. A 25.4 mm (1") bubble in 3 seconds is allowable.

c. With both the primary and secondary reservoirs at 896 kPa (130 psi), drain the secondary reservoir. With the secondary reservoir empty 0 kPa (0 psi), pressure in the primary reservoir should not drop below 689.5 kPa (100 psi).

Operational Test

a. Place the dashboard park brake control valve in the PARK position and observe that the park brakes apply promptly (within 3 seconds).

b. Place the dashboard park brake control valve in the RELEASE position and observe that the parking brakes release fully.

If leakage is excessive or the valve does not function as described above, the replacement valve may be defective and should be replaced with a new valve.

NOTE

To signify that the campaign has been completed, use a permanent-type marker (such as a Sharpie®) to write the campaign number (SC336) and completion date in the spaces provided on the Campaign Completion label located on the lower edge (below the door latch) of the passenger-side door, or inside the cab for MR models. If a label is not already affixed to the door, apply a label (part No. TS897) and supply the information as required. Campaign Completion labels are available in packs of 50 and can be ordered by faxing a completed BR313 to Pacesetters Business Services at 610-264-9465.

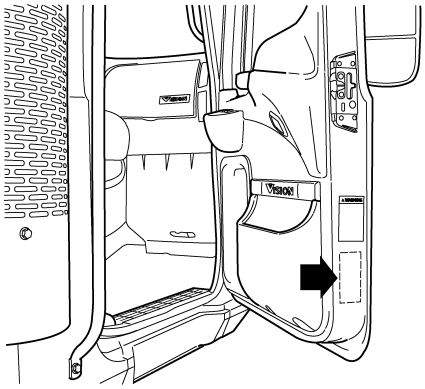

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Figure 10 — Campaign Completion Label Location — Conventional Models

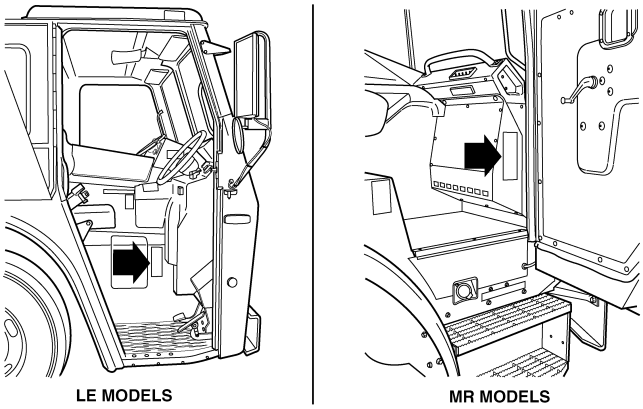

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Figure 11 — Campaign Completion Label Location — MR and LE Models

Parts Required:

NOTE

The spring brake modulating relay valve kits (part No. 745-K022705) will be on hold in the Baltimore and Chicago Parts Distribution Centers, and can only be released by the MACK Customer Service Department in Allentown. To order the relay valve kits for this campaign, call your Customer Service Representative. The kits can be released as either a stock order or an emergency order, but keep in mind that the freight policies are different between these two order types.

International orders are to be prefixed — V.O.R.

Qty.	Part No.	Description
1	745-K022705	Spring brake modulating relay (SR-7™) valve kit (includes instructions)
1	745-K022698	External Check Valve Replacement Kit (contains one single check valve fitting and one green tie wrap)

Removed Parts:

The removed supply port check valve and SR-7™ valve must be returned to Bendix Commercial Vehicle Systems LLC at the address listed below:

SR7 Recall Center
Bendix Commercial Vehicle Systems LLC
901 Cleveland Street
REV Elyria, Ohio 44035

Return both valves removed from the vehicle along with a copy of the MACK warranty claim form. Use this Bendix-provided UPS® Ground shipping account number A7T571 for no-cost returns.

NOTE

A parts return tag will not be issued by the eWarranty system.

Reimbursement:

Campaign expenses are to be recovered through normal warranty claim procedures. Enter the following information on the warranty claim:

UNDER	ENTER	
Failed Part (Causal Part)	SC0336	
eWarranty Authorization No.....	SC0336	
Labor Code/Allowance	533 8C BC 95 — 0.2 hr.	Time allowed to take charge of vehicle and determine campaign status. NOTE: Only one “take-charge” time per vehicle repair visit can be submitted.
	533 8D BC 95 — 0.7 hr.	Time allowed to remove and replace spring brake modulating relay valve (SR-7™) and supply port check valve on vehicles involved in this campaign. Does not include “take-charge” time.

NOTE

As required by Federal Motor Vehicle Safety Standards 49 CFR 573.11, no vehicle subject to an open safety campaign shall be delivered to the customer until such time as the defect or noncompliance is remedied.

Installation Instructions

PARKER SINGLE CHECK VALVE REPLACEMENT KIT

BENDIX® SR-7™ SPRING BRAKE MODULATING VALVE

Recall Campaign No.: 07E-038

Vous pouvez vous procurer une copie de ce document en français sur le site www.Bendix.com en cliquant sur le lien “Recall Assistance Center” (Centre d’assistance pour les rappels produits).

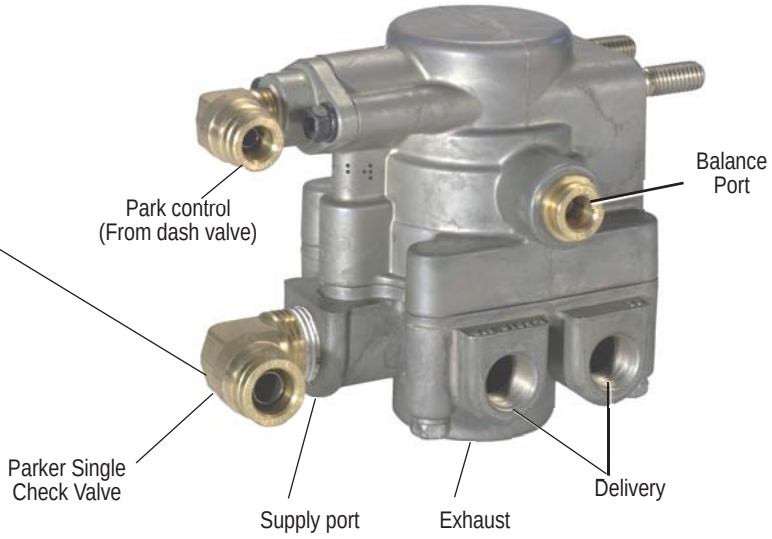
Para obtener una copia de este documento en español, usted puede visitarnos al sitio en Internet www.Bendix.com y hacer un clic en el anexo “Recall Assistance Center” (Centro de asistencia para los productos devueltos).

Single Check Valves that might be found in the supply port of the SR-7™ valve

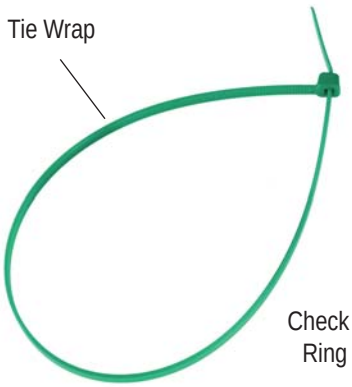
Parker Single Check Valve Replace under recall campaign

No replacement necessary

SR-7™ Valve port designations



Kit Contents



External single check valve replacement kit part number K022698 contains the following components:

Description	Qty.
Single Check Valve	1
Green Tie Wrap	1

Figure 1 - *BENDIX® SR-7™ SPRING BRAKE MODULATING VALVE PORT DESIGNATIONS AND KIT CONTENTS*

GENERAL

This instruction sheet is intended to provide the necessary information to replace the Parker external single check valve attached to the supply port of an SR-7™ spring brake modulating valve in connection with Recall Campaign number 07E-038.

GENERAL SAFETY GUIDELINES

WARNING! PLEASE READ AND FOLLOW THESE INSTRUCTIONS TO AVOID PERSONAL INJURY OR DEATH:

When working on or around a vehicle, the following general precautions should be observed at all times.

1. Park the vehicle on a level surface, apply the parking brakes, and always block the wheels. Always wear safety glasses.

2. Stop the engine and remove ignition key when working under or around the vehicle. When working in the engine compartment, the engine should be shut off and the ignition key should be removed. Where circumstances require that the engine be in operation, EXTREME CAUTION should be used to prevent personal injury resulting from contact with moving, rotating, leaking, heated or electrically charged components.
3. Do not attempt to install, remove, disassemble or assemble a component until you have read and thoroughly understand the recommended procedures. Use only the proper tools and observe all precautions pertaining to use of those tools.
4. If the work is being performed on the vehicle's air brake system, or any auxiliary pressurized air systems, make certain to drain the air pressure from all reservoirs before beginning ANY work on the vehicle. If the vehicle is equipped with an AD-IS® air dryer system or a dryer reservoir module, be sure to drain the purge reservoir.
5. Following the vehicle manufacturer's recommended procedures, deactivate the electrical system in a manner that safely removes all electrical power from the vehicle.
6. Never exceed manufacturer's recommended pressures.
7. Never connect or disconnect a hose or line containing pressure; it may whip. Never remove a component or plug unless you are certain all system pressure has been depleted.
8. Use only genuine Bendix® replacement parts, components and kits. Replacement hardware, tubing, hose, fittings, etc. must be of equivalent size, type and strength as original equipment and be designed specifically for such applications and systems.
9. Components with stripped threads or damaged parts should be replaced rather than repaired. Do not attempt repairs requiring machining or welding unless specifically stated and approved by the vehicle and component manufacturer.
10. Prior to returning the vehicle to service, make certain all components and systems are restored to their proper operating condition.
11. For vehicles with Antilock Traction Control (ATC), the ATC function must be disabled (ATC indicator lamp should be ON) prior to performing any vehicle maintenance where one or more wheels on a drive axle are lifted off the ground and moving.

PARKER SINGLE CHECK VALVE REPLACEMENT

CAUTION: **Do not** disconnect air lines and fittings unless specified. Installation of this kit does not require that the SR-7™ spring brake modulating valve be removed or that all the air lines be disconnected.

1. Locate the SR-7™ valve on the vehicle. Typically, it is located near the rear axle mounted on the frame rail or cross member.

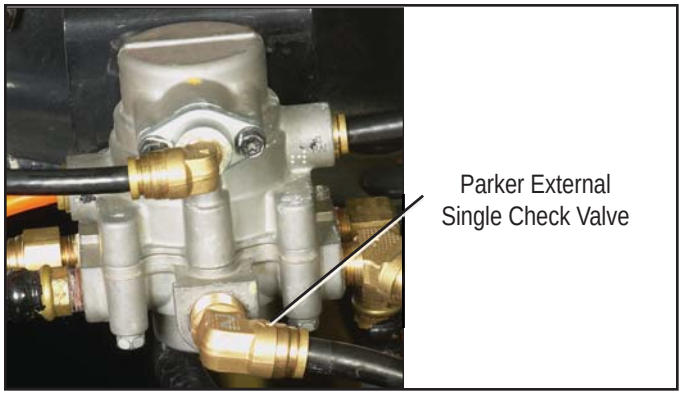


Figure 2 - *SR-7™ VALVE & PARKER SINGLE CHECK VALVE*

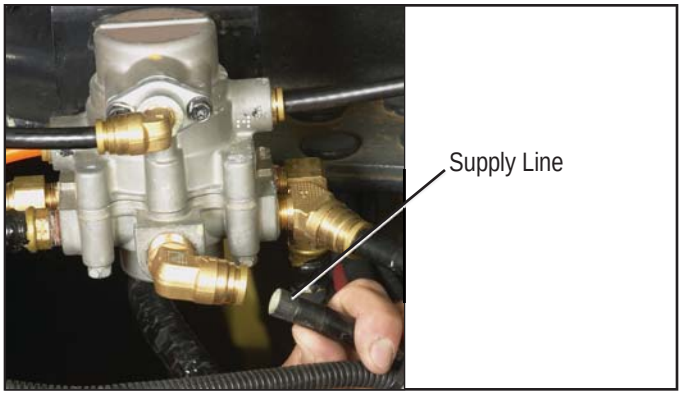


Figure 3 - *DISCONNECTING THE SUPPLY LINE*

2. Locate the external single check valve installed in the supply port of the SR-7™ valve as shown in Figure 1.
3. **Note: Verify the external check valve is a Parker single check valve. Refer to Figure 1. If the check valve is not a Parker single check valve, replacement of the check valve is not necessary and is not covered by this campaign.**
4. Remove the 1/2" OD supply line from the Parker single check valve supply port. See Figures 2 and 3. Note: Some SR-7™ valves may have a fitting between the single check valve and the SR-7™ valve.
5. Note the orientation of and remove the external check valve. Refer to Figures 4 and 5. **IMPORTANT: Inspect the outlet (threaded side) of the Parker single check valve to ensure the presence of check valve components. Verify that the brass retainer is present and intact. Refer to Figure 6.**
6. **NOTE:** If the brass retainer is NOT present and intact, both the Parker external single check valve AND the entire SR-7™ valve must be replaced. **Do not proceed with this kit.** The SR-7™ valve replacement kit part must be obtained and installed.

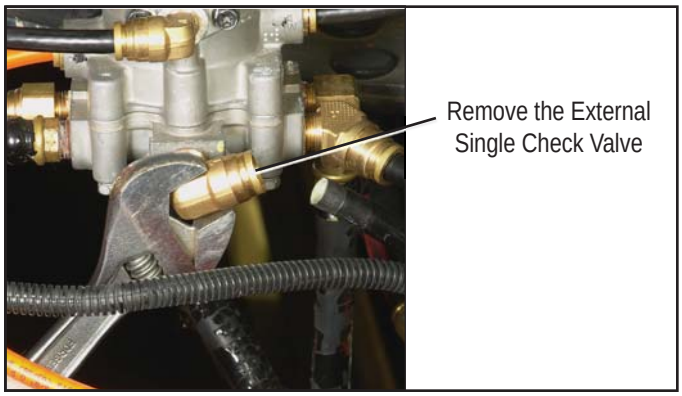


Figure 4- *REMOVING THE EXTERNAL SINGLE CHECK VALVE*

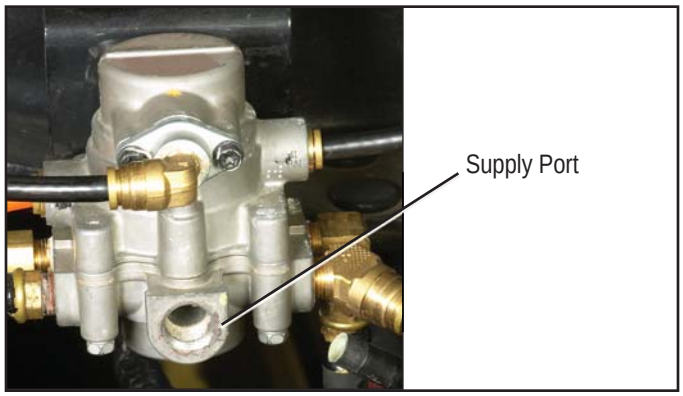


Figure 5- *EXTERNAL SINGLE CHECK VALVE REMOVED*

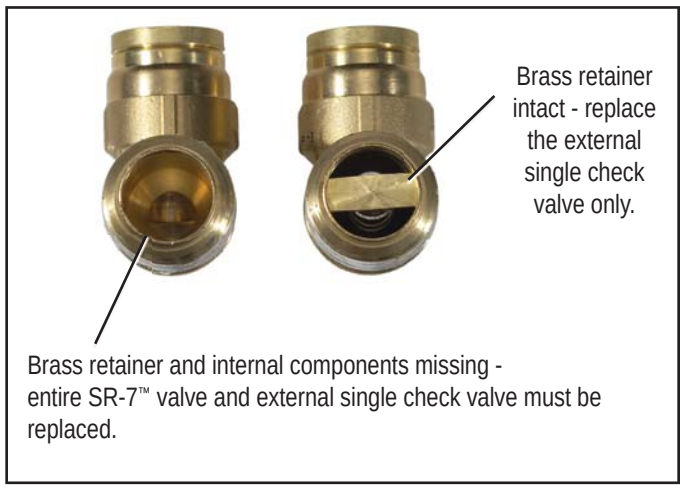


Figure 6 - *PARKER SINGLE CHECK VALVE*

7. Using pipe sealant install the new external single check valve and any fittings that were removed. **Note**: Do not remove the check valve identification ring from the replacement single check valve. Be sure that orientation of the fittings is the same. Teflon tape is not an acceptable substitute for pipe sealant. Install fittings finger tight, then tighten 1.5 - 2 turns. For shaped fittings, such as tees and elbows, tighten no more than one additional turn to the final position.
8. Reconnect any air lines that were disconnected.

TESTING THE SR-7™ SPRING BRAKE MODULATING VALVE

Perform operating and leakage tests as outlined below.

OPERATING TEST

Block vehicle and hold by means other than vehicle brakes. Charge air brake system to governor cut-out pressure.

Place parking control valve in “release” position. Observe that spring brake actuators release fully.

Place parking control valve in “park” position. Observe that spring brake actuators apply promptly, within 3 seconds.

LEAKAGE TEST

Place the park control valve in the “release” position; using a soap solution, coat all ports including the exhaust port and external check valve, if applicable. A 1" bubble in 3 seconds is permitted (175 SCCM).

With both service reservoirs at 120 PSI, decrease the pressure at the secondary reservoir to 0 PSI. The primary reservoir should not drop below 100 PSI.

If the Parker external check valve or SR-7™ valve do not function as described, or if leakage is excessive, it is recommended that it be replaced with a new unit available from a Bendix parts outlet.

INSTALLATION IDENTIFICATION

If the tie wrap has not already been secured to the valve, secure it to the valve or fitting in a conspicuous location to identify that the field repair has been performed.

Recall Assistance Center
1-877-461-2732

www.Bendix.com

sr7campaign@bendix.com