

# Installation Instructions

Recall Campaign No. 16E045

# FIELD REPAIR KIT FOR THE BENDIX<sup>®</sup> SR-5<sup>™</sup> TRAILER SPRING BRAKE VALVE

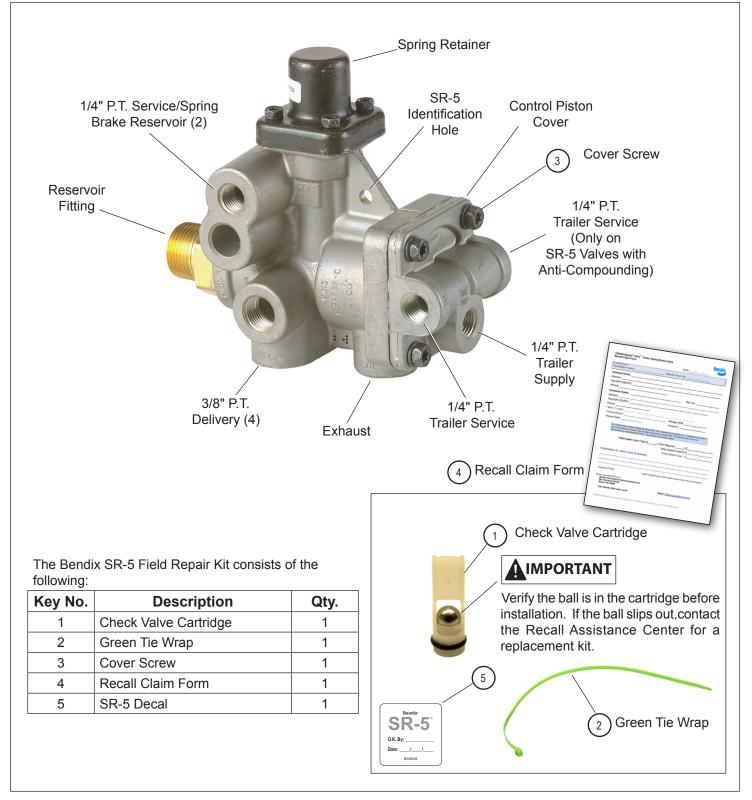


Figure 1 – Bendix SR-5 Trailer Spring Brake Valve Exterior View

# 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 guidelines should be observed AT ALL TIMES:

- ▲ Park the vehicle on a level surface, apply the parking brakes and always block the wheels. Always wear personal protection equipment.
- ▲ Stop the engine and remove the 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.
- ▲ 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.
- ▲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 a Bendix<sup>®</sup> AD-IS<sup>®</sup> air dryer system, a Bendix<sup>®</sup> DRM<sup>™</sup> dryer reservoir module, or a Bendix<sup>®</sup> AD-9si<sup>®</sup> air dryer, be sure to drain the purge reservoir.
- ▲ Following the vehicle manufacturer's recommended procedures, deactivate the electrical system in a manner that safely removes all electrical power from the vehicle.
- ▲ Never exceed manufacturer's recommended pressures.
- ▲ Never connect or disconnect a hose or line containing pressure; it may whip and/or cause hazardous airborne dust and dirt particles. Wear eye protection. Slowly open connections with care, and verify that no pressure is present. Never remove a component or plug unless you are certain all system pressure has been depleted.
- ▲Use only genuine Bendix<sup>®</sup> brand replacement parts, components and kits. Replacement hardware, tubing, hose, fittings, wiring, etc. must be of equivalent size, type and strength as original equipment and be designed specifically for such applications and systems.
- ▲ 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.
- ▲ Prior to returning the vehicle to service, make certain all components and systems are restored to their proper operating condition.
- ▲ For vehicles with Automatic 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.
- ▲ The power MUST be temporarily disconnected from the radar sensor whenever any tests USING A DYNAMOMETER are conducted on a vehicle equipped with a Bendix<sup>®</sup> Wingman<sup>®</sup> system.
- ▲ You should consult the vehicle manufacturer's operating and service manuals, and any related literature, in conjunction with the Guidelines above.

# GENERAL

This instruction sheet is intended to provide the necessary information to service the Bendix<sup>®</sup> SR-5<sup>™</sup> trailer spring brake valve with an internal check valve cartridge. This is in connection with Recall Campaign number 16E045.

This kit contains a check valve cartridge (1), a green tie wrap (2) and one cover screw (3). The cover screw (3) is included in the event one is damaged or lost during the installation process.

#### PREPARATION

- 1. Use a wire brush to clean the exterior of the SR-5 valve especially around the control piston cover. Use compressed air to blow away loose debris to ensure that the valve does not become contaminated when serviced.
- 2. Verify that the valve does not have a black or green tie wrap already through the SR-5 identification hole. If a tie wrap is present, this valve has already been serviced with this kit. Return the vehicle into service.
- 3. Verify the valve meets the recall criteria as outlined in the RECALL GUIDELINES section of this document. If the valve falls outside of these parameters, return the vehicle to service.

### DISASSEMBLY

The installation of this kit requires that the control piston cover be loosened, but not completely removed from the valve body.

- 1. Identify and disconnect all the air lines connected to the control piston cover. (*Refer to Figure 4.*)
- 2. It is necessary to rotate the fitting in the trailer supply port to complete this step. Rotate the fitting counterclockwise only (loosening) no more than 90°. (*Refer to Figure 3.*)
- Remove cover screws "B", "C", and "D". While holding the control piston cover in place, loosen cover screw "A" 4-5 turns. Carefully rotate the cover clockwise – pivoting on screw "A"–until the check valve passage in the body is visible. Hold the cover in this position to retain the control piston in the body. (*Refer to Figure 5.*)



OVER-ROTATING THE COVER MAY ALLOW THE CONTROL PISTON AND RETURN SPRING TO COME OUT OF THE VALVE. IF THIS HAPPENS, REMOVE ANY DEBRIS THAT MAY ADHERE TO THE PISTON AND REINSERT, SPRING FIRST. (*Refer to Figure 7.*)

4. Exercise caution to prevent damage to the cover seal as shown in Figure 6.

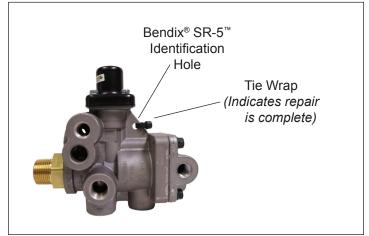


Figure 2 – Tie Wrap Location

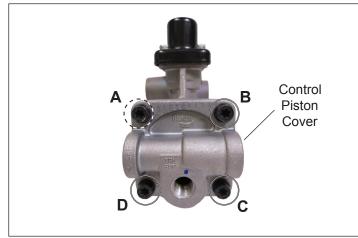


Figure 3 – Control Piston Cover Screws

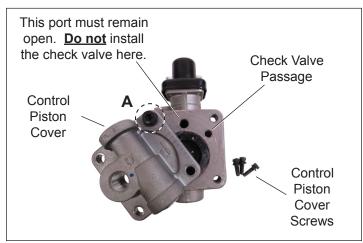


Figure 5 – Check Valve Passage



Figure 6 – Cover Seal

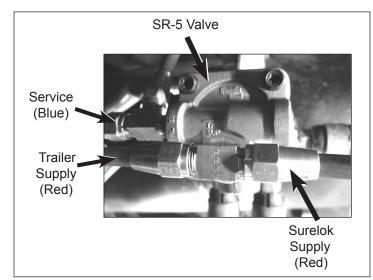


Figure 4 – Piston Cover Air Line Connections



Figure 7 – Piston and Spring



- 1. Ensure that the check valve cartridge (1) is intact as shown in Figure 8.
- Holding the larger diameter (o-ring end) of the check valve cartridge (1), insert the pointed end into the air passage. Push the check valve cartridge (1) in lightly with your finger until it is flush with the body housing. (*Refer to Figure 8.*)



THE CHECK VALVE CARTRIDGE (1) WILL FIT SNUGLY INTO THE CORRECT AIR PASSAGE. DO NOT INSERT THE CHECK VALVE CARTRIDGE (1) INTO THE LARGER AIR PASSAGE.

- 3. Rotate the cover back into position and install the three screws. Torque all four screws in a crossing pattern to 100 in-lbs. (A, C, D then B). (*Refer to Figure 3.*)
- 4. Reposition any fittings that may have been moved and reconnect the air lines.
- 5. Perform the OPERATIONAL AND LEAKAGE TESTS detailed below before placing the vehicle back into service.

# **OPERATIONAL AND LEAKAGE TESTS**

This test can be performed by connecting the red trailer gladhand to a tractor or an external air source. Check the air source gauge against a gauge known to be accurate before performing these tests.

- 1. Block all wheels or hold the vehicle by means other than the air brakes: drain all pressure from the trailer reservoir.
- 2. Install a gauge in the trailer reservoir(s). Connect the air source to the red supply gladhand of the trailer on which the Bendix<sup>®</sup> SR-5<sup>™</sup> trailer spring brake valve is to be tested. Build the trailer to full system pressure by placing the tractor park control valve in the charge position, or by applying an external air source. Make sure that the spring brake chambers release before the reservoir starts to fill.
- When full system pressure is reached and the spring brakes are fully released – apply a soap solution to the control piston cover and fittings that were removed during the repair. A one inch bubble in five seconds is permissible.
- 4. Place the trailer air supply valve in the exhaust position, or disconnect the external air source. The spring brakes should apply. This will be evident by a full exhausting of chamber pressure at the SR-5 valve exhaust port.

If the repair was completed correctly, the park brakes should be set, and the reservoir pressure should hold steady with no decay. If the valve does not perform properly, repeat the installation procedure and retest.

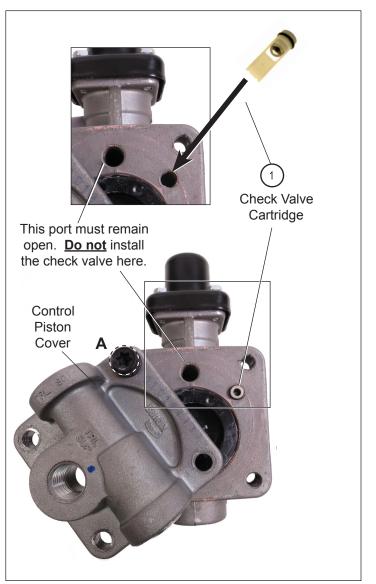


Figure 8 – Check Valve Cartridge Installation

- 5. Drain the reservoirs and remove the gauge that was installed in the trailer reservoir(s) for testing purposes. Reinstall the fitting that was removed. Recharge the trailer air system and check for leaks using a soap solution. A one inch bubble in five seconds is permissible.
- 6. For identification purposes, secure the green tie wrap (2) through the identification hole located on the valve body. (*Refer to Figure 2.*)
- 7. Included in this kit is an SR-5 decal (5) that can be placed on the trailer upon completion of the valve installation. <u>The installation of this decal *is not* required; however, it</u> <u>may be helpful for quick identification of the trailers that</u> <u>have been serviced per the recall</u>. Space is provided for the technician's name and date of installation.

# **RECALL DOCUMENTATION**

After finishing the Bendix<sup>®</sup> SR-5<sup>™</sup> valve repair, complete the Recall Claim Form (4) provided. This documentation is required for labor reimbursement and for NHTSA completion verification.

#### **RECALL GUIDELINES**

Note: Bendix SR-5 valves with a green or black tie wrap through the identification hole in the body have already been repaired. No further servicing is required. (Refer to Figure 2.)

The SR-5 valves covered by this campaign can be identified by the supplier code <u>and</u> the date of manufacture located on the valve body. Verification of <u>both</u> is required to determine if the valve <u>is</u> a part of the campaign. Valves covered by this campaign must meet the following criteria:

- The supplier code-"IKD" located as shown in Figure 9; and
- 2. The date of manufacture between January 1, 2014 and March 4, 2016, inclusive. To verify the date code see INTERPRETING THE DATE CODE below.

#### INTERPRETING THE DATE CODE

A date code is stamped (not cast) on the SR-5 valve body housing. *Locate the date code – removing the paint coating, if necessary – to read the code*. Disregard the Work Team Number, Shift of Manufacture, Manufacturing Plant and Shift Serial Number codes shown in gray below. The portion of the date code that determines the date of manufacture is highlighted and can be interpreted as follows:

- The first field is the month (A=January, B=February, etc. – excluding the letter I – so that J=September, and so on),
- The next two fields are the day of the month (e.g. 01 = 1<sup>st</sup>); and
- The next two fields are the year (e.g. 14=2014).

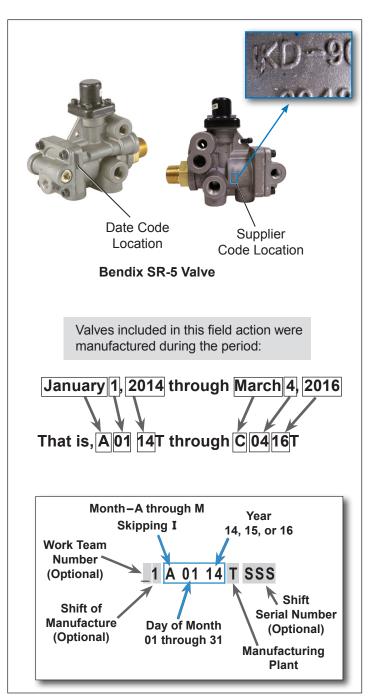


Figure 9 – Recall Identification

Visit the online Product Action Center under the Services and Support tab on bendix.com. Applicable information on the recall is available and refreshed often.

# Bendix

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