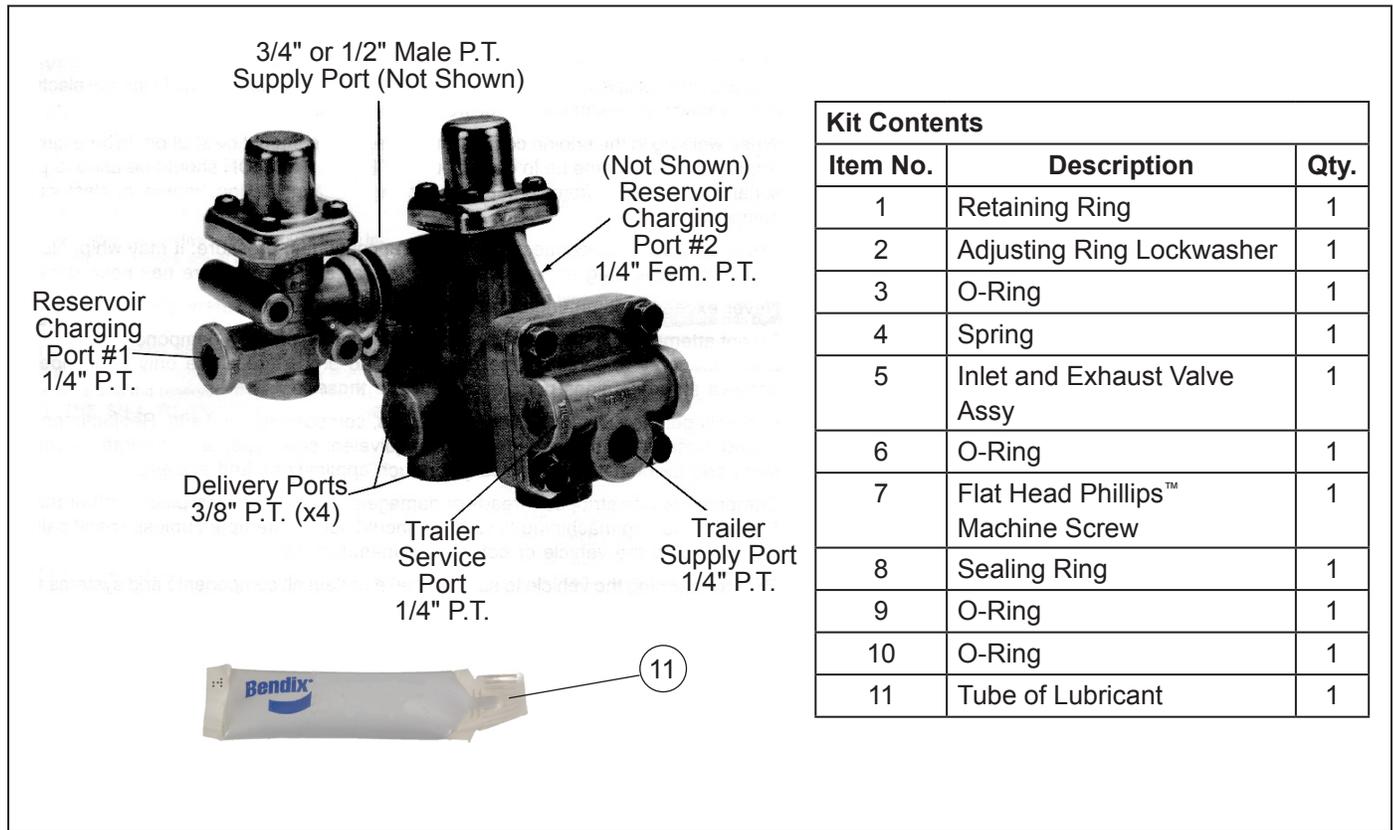


## BENDIX® SR-4™ SPRING BRAKE CONTROL VALVE REPLACEMENT / CHANGEOVER KIT



Kit Contents		
Item No.	Description	Qty.
1	Retaining Ring	1
2	Adjusting Ring Lockwasher	1
3	O-Ring	1
4	Spring	1
5	Inlet and Exhaust Valve Assy	1
6	O-Ring	1
7	Flat Head Phillips™ Machine Screw	1
8	Sealing Ring	1
9	O-Ring	1
10	O-Ring	1
11	Tube of Lubricant	1

Figure 1 – Bendix® SR-4™ Spring Brake Control Valve Replacement / Changeover Kit

### GENERAL

The Bendix® SR-4™ spring brake control valve is used in the trailer spring brake system to control the application and release of the trailer spring brakes. The SR-4 model can be used to replace competitive spring brake control valves by following the appropriate instructions presented here.

### REPLACING AN EXISTING SR-4 VALVE

1. Mark or otherwise identify ALL air lines connected to the SR-4 valve before removal.
2. Remove the air lines connected to the SR-4 valve then remove the SR-4 valve.
3. Install the replacement SR-4 valve in the reservoir making certain to use the 1-3/8" HEX portion of the male supply port/mounting stud to tighten the valve into the reservoir. **DO NOT MANUALLY TWIST THE SR-4 VALVE TO TIGHTEN IT INTO THE RESERVOIR.**
4. Reconnect all air lines to the proper ports on the SR-4 valve using the identification made in Step 1.
5. Test the completed installation using the procedure presented in the "TESTING" section of this instruction sheet.

### CHANGING OVER TO THE BENDIX SR-4 VALVE FROM A COMPETITIVE VALVE

#### GENERAL INSTRUCTIONS

1. The majority of makes and models of competitive spring brake control valves are presented on the following pages. Choose the correct changeover instructions using both the photos and schematics presented.
2. Before removing the competitive valve, study both the instructions presented and the actual vehicle on which the changeover will occur. Pay particular attention to the schematics and identify and tag all air lines before disconnecting them.
3. When installing the Bendix SR-4 valve on a reservoir, use the 1-3/8" hex portion of the supply port/mounting stud to tighten the valve into the reservoir. **DO NOT MANUALLY TWIST THE SR-4 VALVE TO TIGHTEN IT INTO THE RESERVOIR.**
4. Before placing the vehicle into service, test the completed changeover using the procedure presented in the "TESTING" section of this instruction sheet.



## 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:**

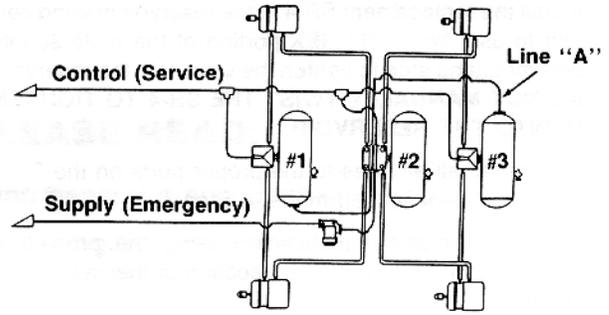
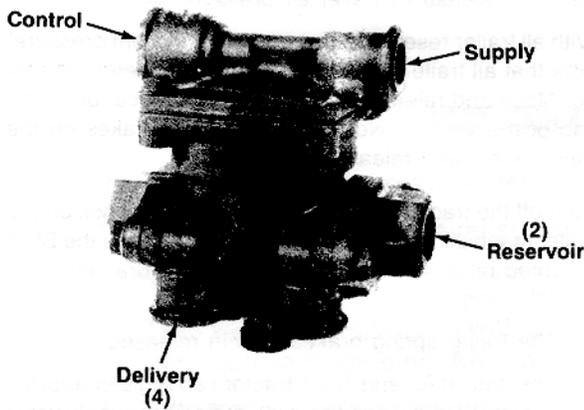
- ▲ Park the vehicle on a level surface, apply the parking brakes and always block the wheels. Always wear personal protection equipment.
- ▲ Stop the engine and remove the ignition key when working under or around the vehicle. When working in the engine compartment, the engine should be shut off and 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® AD-IS® air dryer system, a Bendix® DRM™ dryer reservoir module, or a Bendix® AD-9si® 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® 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® Wingman® system.
- ▲ You should consult the vehicle manufacturer's operating and service manuals, and any related literature, in conjunction with the Guidelines above.

## TESTING

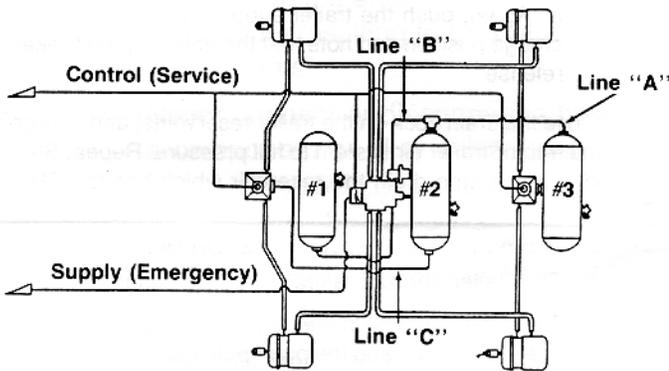
After completing the Bendix® SR-4™ valve installation, conduct the following operational tests. (Note: For additional service information see *Bendix Service Data Sheet SD-03-4514* available from [bendix.com](http://bendix.com).)

1. Connect a tractor to the trailer and set the tractor parking brakes. Block (chock) the wheels on both the tractor and trailer.
2. Drain air pressure from all reservoirs on the tractor and trailer, then close the drain cocks.
3. Connect the trailer supply (emergency) and control (service) air hoses.
4. Start the tractor engine and build the tractor air system to full pressure. Release the tractor parking brakes, then place the trailer supply valve (red octagon button) in the trailer charge position. Note that the trailer spring brakes begin to release as trailer air pressure increases.
5. With all trailer reservoirs charged to full system pressure, note that all trailer spring brakes are completely released. Make and release a service brake application in the cab of the vehicle. Note that all service brakes on the trailer apply and release promptly.
6. Turn off the tractor's engine. Open the drain cock on the trailer reservoir (reservoirs) which does not have the SR-4 valve mounted on it. After all the air has been drained, note the following:
  - A. The trailer spring brakes remain released.
  - B. The dash gauge(s) in the tractor cab register approximately 55 psi and the push-pull trailer supply valve remains in the trailer charge position (pushed in).
  - C. Pull the trailer supply valve to the exhaust position and note that the trailer spring brakes promptly apply. Again, push the trailer supply valve to the trailer charge position and note that the trailer spring brakes release.
7. Close the drain cock on the trailer reservoir(s) and charge the tractor/trailer air system to full pressure. Repeat Step #6 but this time drain the reservoir which has the SR-4 valve mounted in it. After all air pressure has been drained, note the following:
  - A. The trailer spring brakes remain released.
  - B. The dash gauge(s) in the tractor cab register approximately 55 psi and the push-pull trailer supply valve remains in the trailer charge position (pushed in).
  - C. A service brake application made in the tractor should not result in the trailer service brakes being applied.
  - D. Pull the trailer supply valve to the exhaust position and note that the trailer spring brakes promptly apply. Again push the trailer supply valve to the trailer charge position and note that the trailer spring brakes release.
8. If the SR-4 trailer spring brake valve fails to operate in the manner described in Steps 5 through 7, recheck all air connections.
9. Before placing the trailer in service, build up trailer system air pressure and using a soap solution check all air connections for leakage. Tighten as required.

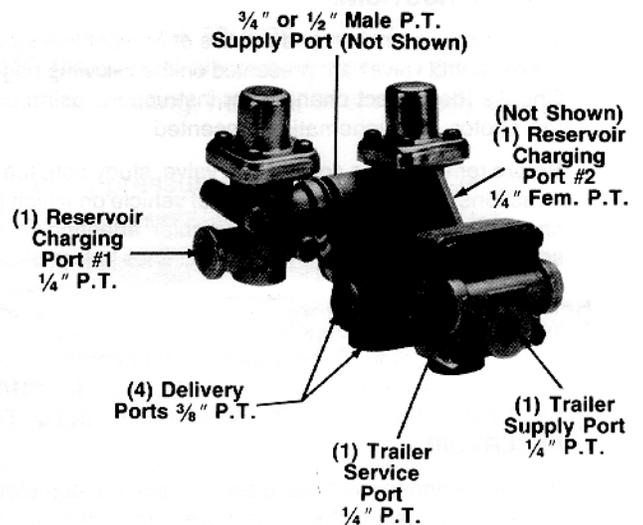
## CHANGEOVER INSTRUCTIONS FROM SEALCO® RATIO RELAY TO BENDIX® SR-4™ VALVE



Sealco® 3-Tank System



Bendix® SR-4™ System



### IMPORTANT SYSTEM & CHANGEOVER INFORMATION

Minimum line size of line "C" is 5/8" tubing.

Minimum air volume for reservoir #1 is four times service brake chamber air volume; normally approximately 9-1/2" x 22". The combined air volume of reservoirs #2 and #3 must also be at least four times the service brake chamber air volume.

Competitive service relay valves should be replaced using the Bendix® R-12® relay valve.

Installing the SR-4 valve as shown will change the system operation. Characteristics of the finished system will be equivalent to an original-equipment installation of the SR-4 in conjunction with competitive service brake relay valves.

### INSTRUCTIONS

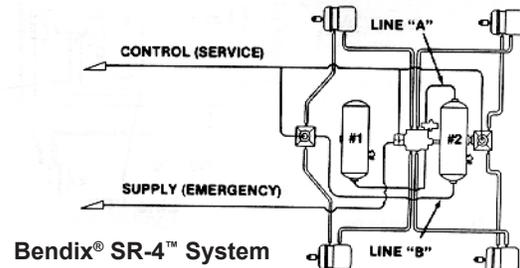
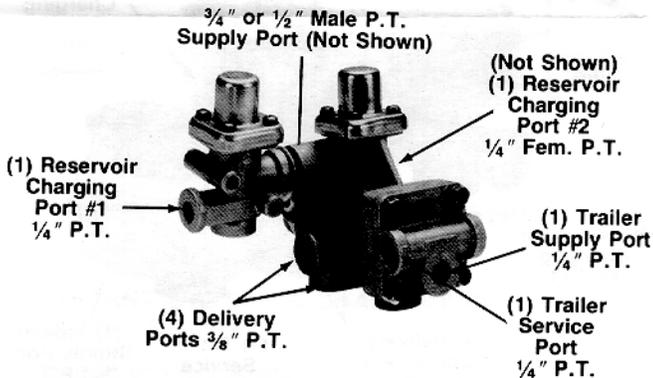
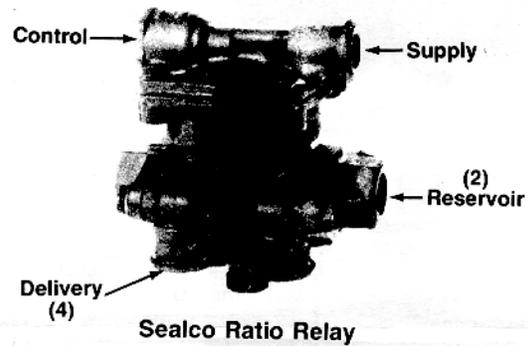
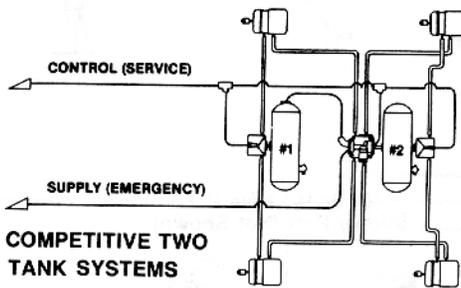
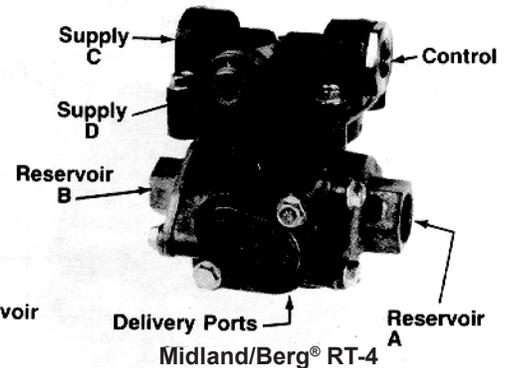
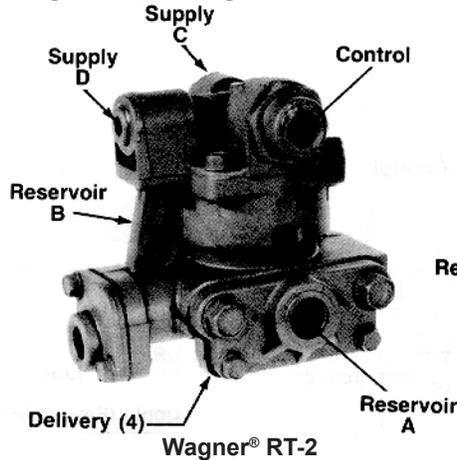
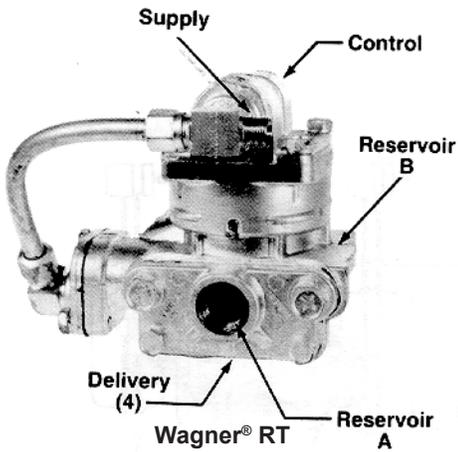
1. Remove the competitive valve.
2. Screw the SR-4 valve into the same port that the competitive valve was mounted in. (For a 3/4" port, use SR-4 part number 101112; for a 1/2" port, use SR-4 part number 101622.)

3. Connect all lines that were previously plumbed to the competitive valve, as follows:

LINE	PORT LABEL
Trailer Supply	"TRL SUP"
Trailer Control	"TRL SERV"
Spring Brake Deliveries (x4)	"DEL" (3/8" P.T.)
Supply to Tank #1	"SERV RES"

4. Connect line "A" to tank #2. Previously it was connected to the Sealco Ratio Relay Valve.
5. Add the reservoir charge line for tank #2, labeled line "B" in the diagram. It should be connected to the 1/4" P.T. port labeled "DEL".
6. The differences in the operation of the SR-4 valve require that both service brake relay valves be supplied from tank #2 or tank #3. Therefore, the relay valve which is nipple-mounted on tank #1 must be removed and bracket-mounted. Add a new supply line, labeled "C" in the diagram, to supply the valve from tank #2 or tank #3.
7. Remove the Sealco in-line filter, and reconnect the supply line with appropriate fittings.

# CHANGEOVER INSTRUCTIONS FROM WAGNER® RT, RT-2, MIDLAND/BERG® RT-4, AND SEALCO® RATIO RELAY TO BENDIX® SR-4™ VALVE



## IMPORTANT SYSTEM & CHANGEOVER INFORMATION

Minimum line size of line "B" is 5/8" tubing.

For a tandem trailer with type 30/30 spring brakes the minimum volume for each reservoir is four times the total service brake volume of the spring brake. Each reservoir in this instance would normally contain approximately 1375 cubic inches of air and measure 9-1/2" diameter x 22" long.

Competitive service relay valves should be replaced using the Bendix R-12 valve.

Characteristics of the finished system will be equivalent to an original-equipment installation of the SR-4 in conjunction with competitive service brake relay valves.

## INSTRUCTIONS

1. Remove the competitive valve.
2. Screw the SR-4 into the same port that the competitive valve was mounted in. (For a 3/4" port, use SR-4 part number 101112; for a 1/2" port, use SR-4 part number 101622.)

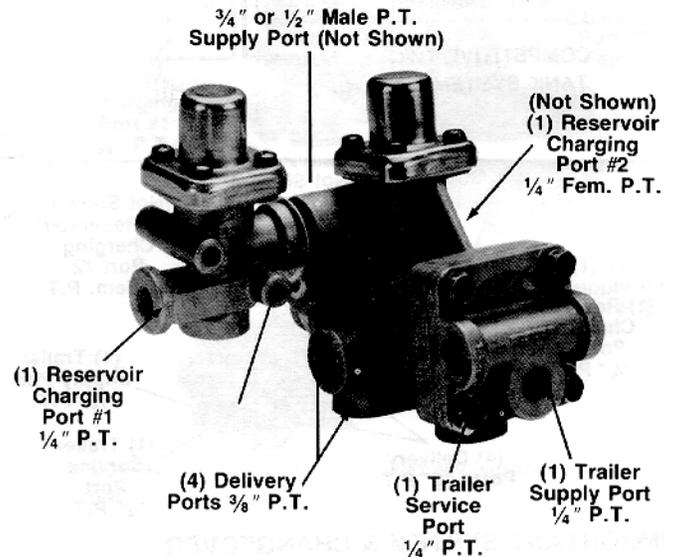
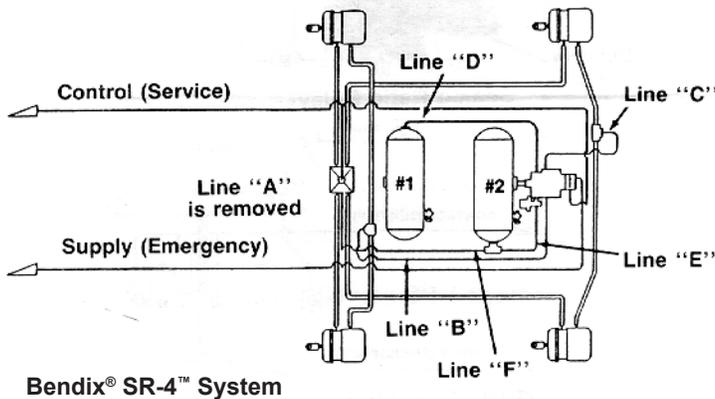
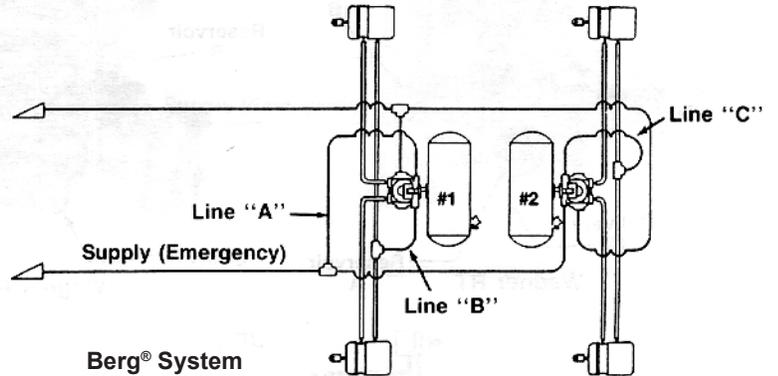
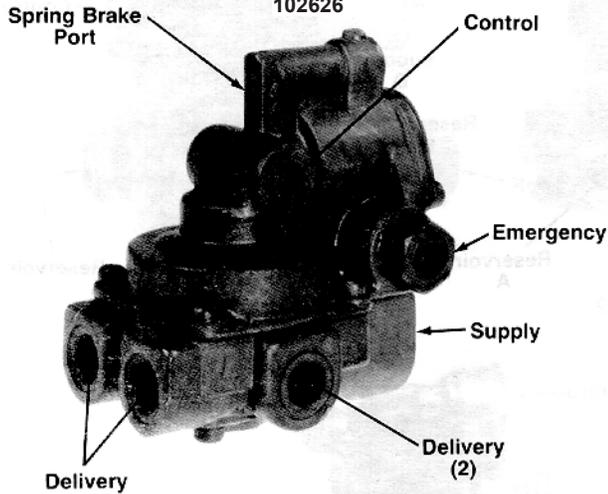
3. Connect all lines that were previously plumbed to the competitive valve, as follows:

LINE	PORT LABEL
Trailer Supply	"TRL SUP"
Trailer Control	"TRL SERV"
Spring Brake Deliveries (x4)	"DEL" (3/8" P.T.)
Supply to Tank #1	"SERV RES"

4. Add the reservoir charge line for tank #2, labeled line "A" in the diagram. It should be connected to the 1/4" P.T. port labeled "DEL".
5. The differences in the operation of the SR-4 valve require that both service brake relay valves be supplied from tank #2. Therefore, the relay valve which is nipple-mounted on tank #1 must be removed and bracket-mounted. Add a new supply line, labeled "B" in the diagram, to supply the valve from tank #2.
6. Remove the in-line filter if present and reassemble the supply line with appropriate fittings.

# CHANGEOVER INSTRUCTIONS BERG® SERV TO BENDIX® SR-4™ VALVE

Note:  
Changeover  
Requires  
R-12® Relay  
Valve  
102626



## IMPORTANT SYSTEM & CHANGEOVER INFORMATION

Minimum line size of the "F" is 5/8" tubing.

Minimum air volume for each reservoir is four times service brake chamber air volume; normally approximately 1375 cubic inches, or approximately 9-1/2"x 22".

Installing the SR-4 valve as shown will change system operation. Characteristics of the finished system will be equivalent to an original-equipment installation using Bendix valves.

## INSTRUCTIONS

**NOTE:** When retrofitting Bendix valves in place of a Berg "Serv" valve, a complete SR-4 and R-12 system must be installed.

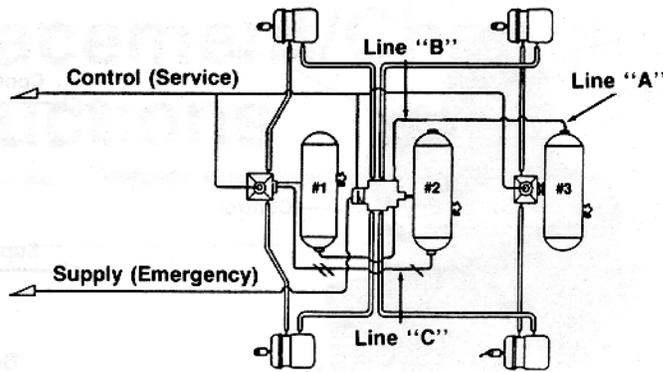
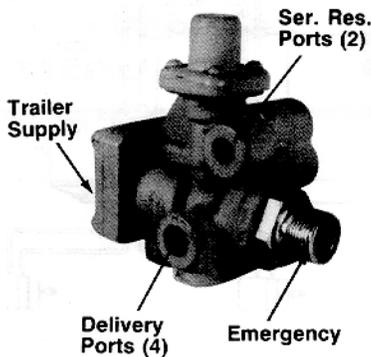
1. Remove both Berg valves.

2. Remove line "A", and plug the tee in the supply line.
3. Screw the SR-4 into tank #2 and plumb as follows (for a 3/4" port, use SR-4 part number 101112; for a 1/2" port, use SR-4 part number 101622):

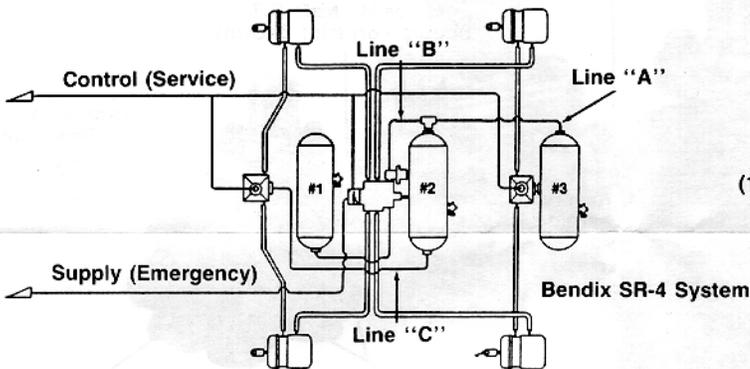
LINE	PORT LABEL
Trailer Sup	"TRL SUP"
Trailer Control	"TRL SERV"
Line "B" (to spring brake hoses)	"DEL" (3/8" P.T.)
Line "C" (to spring brake hoses)	"DEL" (3/8" P.T.)
Add line "D", supply to tank #1	"SERV RES"
Add line "E", to charge tank #2	"DEL" (1/4" P.T.)

4. Plug any 3/8" delivery ports that are not used.
5. Bracket mount the R-12 valve, and add a supply line from tank #2 (line "F"). Connect the trailer control line to the R-12 control port, and connect all four service chambers to the R-12's delivery ports. It is likely that two new longer delivery hoses will be required to reach the rear service chambers.

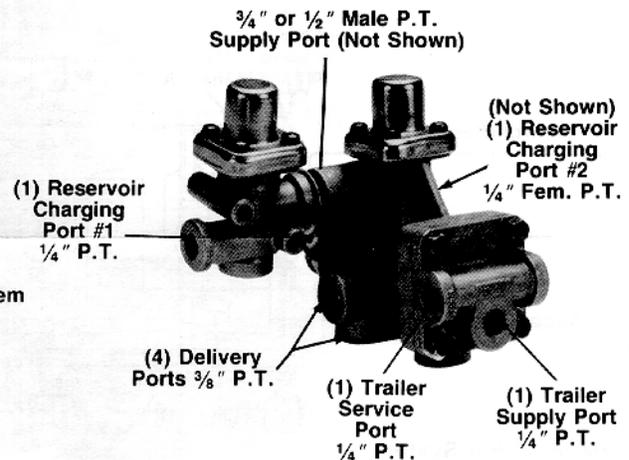
## CHANGEOVER INSTRUCTIONS FROM BENDIX® SR-2™ VALVE TO BENDIX® SR-4™ VALVE



Bendix® SR-2™ System



Bendix® SR-4™ System



### IMPORTANT SYSTEM & CHANGEOVER INFORMATION

Minimum line size of line "C" is 5/8" tubing.

Minimum air volume for reservoir #1 is four times service brake chamber air volume; normally approximately 9-1/2" x 22". The combined air volume of reservoirs #2 and #3 must also be at least four times the service brake chamber air volume.

Service relay valves should be replaced using the Bendix® R-12® valve.

Installing the SR-4 valve as shown will change the system operation. Characteristics of the finished system will be equivalent to an original-equipment installation of the SR-4 valve in conjunction with competitive service brake relay valves.

### INSTRUCTIONS

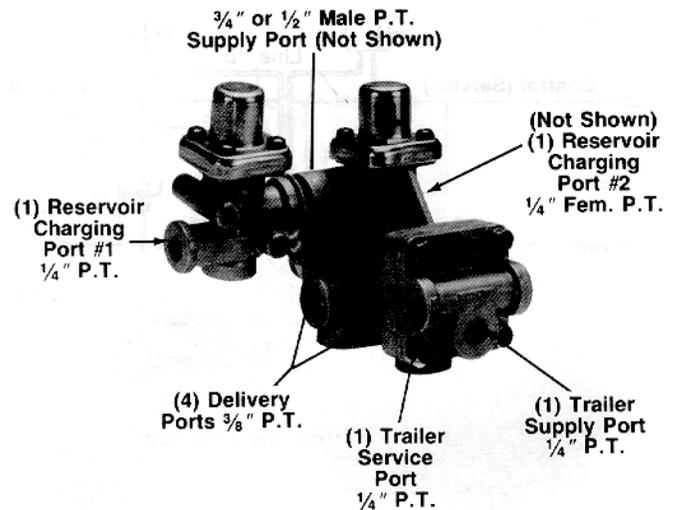
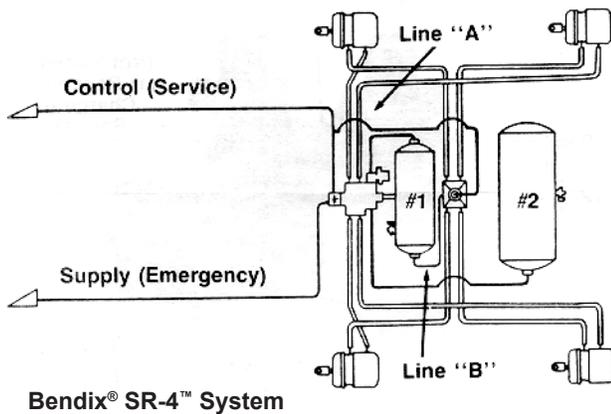
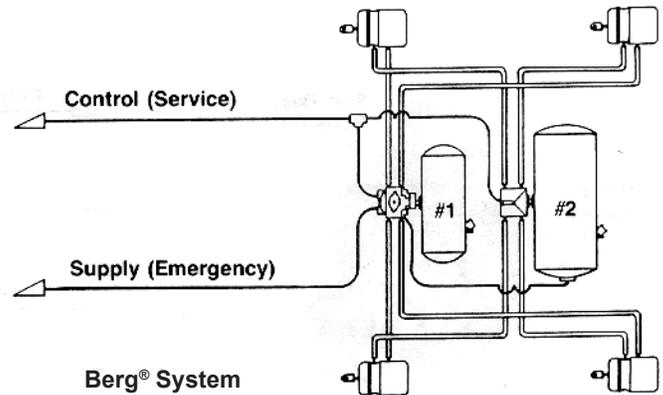
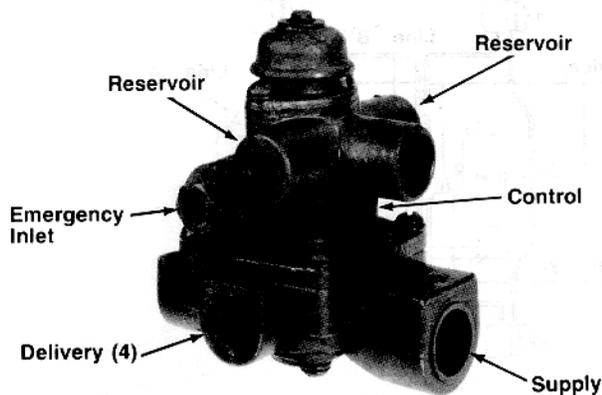
1. Remove the SR-2 valve. Note: A SR-2 service replacement valve is a more direct replacement.
2. Screw the SR-4 valve into the same port that the SR-2 valve was mounted in. (For a 3/4" port, use SR-4 part number 101112; for a 1/2" port, use SR-4 part number 101622.)

3. Connect all lines that were previously plumbed to the SR-2 valve, as follows:

LINE	PORT LABEL
Trailer Supply	"TRL SUP"
Trailer Control	"TRL SERV"
Spring Brake Deliveries (x4)	"DEL" (3/8" P.T.)
Supply to Tank #1	"SERV RES"

4. Connect line "A" to tank #2. Previously it was connected to the SR-2 valve.
5. Add the reservoir charge line for tank #2, labeled line "B" in the diagram. It should be connected to the 1/4" P.T. port labeled "DEL".
6. The differences in the operation of the SR-4 valve require that both service brake relay valves be supplied from tank #2 or tank #3. Therefore, the relay valve which is nipple-mounted on tank #1 must be removed and bracket-mounted. Add a new supply line, labeled "C" in the diagram, to supply the valve from tank #2 or tank #3.

## CHANGEOVER INSTRUCTIONS FROM BERG® TASK TO BENDIX® SR-4™ VALVE



### IMPORTANT SYSTEM & CHANGEOVER INFORMATION

Minimum line size of line "B" is 5/8" tubing.

Minimum air volume for each reservoir is four times the service brake chamber air volume; normally approximately 1375 cubic inches, or approximately 9-1/2"x 22".

Competitive service relay valves should be replaced using the Bendix® R-12® valve.

Installing the SR-4 valve as shown will change the system operation. Characteristics of the finished system will be equivalent to an original-equipment installation of the SR-4 in conjunction with competitive service brake relay valves.

### INSTRUCTIONS

1. Remove the competitive valve.
2. Screw the SR-4 into the same port that the competitive valve was mounted in. (For a 3/4" port, use SR-4 part number 101112; for a 1/2" port, use SR-4 part number 101622.)

3. Connect all lines that were previously plumbed to the competitive valve, as follows:

LINE	PORT LABEL
Trailer Supply	"TRL SUP"
Trailer Control	"TRL SERV"
Spring Brake Deliveries (x4)	"DEL" (3/8" P.T.)
Supply to Tank #2	"SERV RES"

4. Add the reservoir charge line for tank #2, labeled line "A" in the diagram. It should be connected to the 1/4" P.T. port labeled "DEL".
5. The differences in the operation of the SR-4 valve require that both service brake relay valves be supplied from tank #1. Therefore, the relay valve which is nipple-mounted on tank #2 must be removed and bracket-mounted. Add a new supply line, labeled "B" in the diagram, to supply the valve from tank #1.
6. Remove the in-line filter if present and reassemble the supply line with appropriate fittings.



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