

TECHNICAL BULLETIN



SILVER EAGLE
MANUFACTURING COMPANY

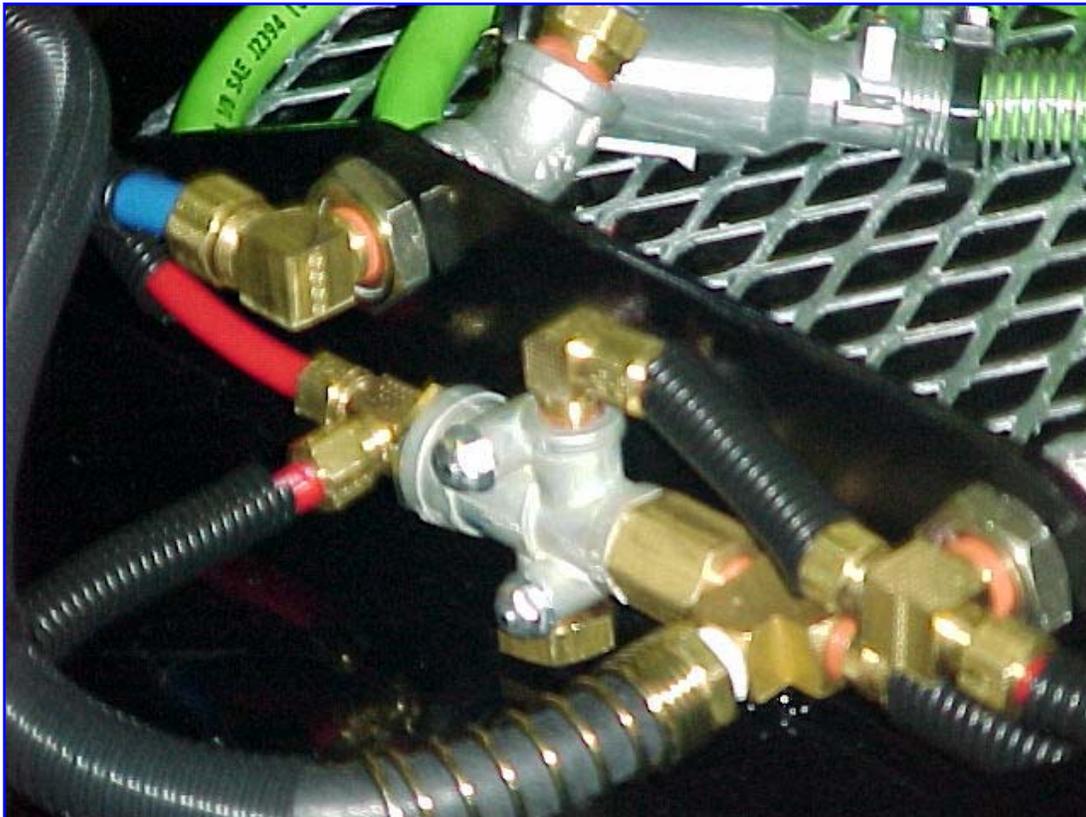
5825 NE Skyport Way, Portland, OR 97218
(800) 547-6792 Fax: (503) 335-2171

BULLETIN NO.:	TB03-002
DATE:	December 15, 2003
PAGE:	1 of 7

REFERENCE: **SILVER EAGLE CONVERTER DOLLY PRODUCT
ENHANCEMENT - BENDIX SV-4 VALVE RETROFIT**

BENEFIT: Provides 55 psi Air System Protection in the case of breakaway.
Prevents “false charging” and roll back (see page 2).

UNITS INVOLVED: All dollies not equipped with SV-4 Valves or equivalent.



TECHNICAL BULLETIN



Commercial Vehicle Systems
901 Cleveland Street
Elyria, Ohio 44036

440-329-9000

Function of the SV-4 valve in Dolly Systems

The function of this valve in the air system of a dolly is not readily apparent, but it does accomplish three functions. They are:

Breakaway and air system protection:

It provides air system protection to 55 psi for the dolly air system and all units ahead of the failure in the event of an attached trailer breaking away, or having a massive air leak. This pressure level is high enough to prevent the automatic emergency application of all units forward of the failure point.

Prevents false charging:

The SV-4 vents the supply line from any attached units. Pressure can sometimes be built up in a supply line behind a closed supply line shut-off valve that is not vented. Air can back-feed from the control line through the attached trailers anti-compounding system(s). If the control shut-off valve is open and the supply shut-off is off, this can happen. The SV-4 prevents any possible build up of pressure by venting it to atmosphere. Without this valve it is possible for the trapped pressure to reach a level that will release the spring brakes on the towed trailer and the emergency valve on the dolly. The vehicle can then be driven. When the brakes are used the pressure depletes and the spring brakes or emergency brakes can drag, causing overheating or a brake fire.

Prevents roll-back:

The SV-4 improves parking brake release times, by providing an exhaust function on the supply line.

Bendix recommends the use of the SV-4 because it prevents any back charging of the supply line, helps release times and isolates systems. The supply line is only chargeable from the towing trailer, when a pressure of more than 55 psi is available. Without supply line pressure throughout the combination the vehicle can not be driven away.

SILVER EAGLE CONVERTER DOLLY SV-4 VALVE RETROFIT PROCEDURE

Required Parts:

Silver Eagle p/n	Quantity	Description
6302	1	VALVE, SYNCHRO, SV-4, W/BRTHR & CHCK VLV
1804	1	ELBOW, 90, 3/8T X 1/4 NPT-M, BR
1808	1	TEE, MALE RUN, 3/8T X 1/4 NPT-M, BR
3064	1	TEE, ST, 1/4 NPT, BR
5894	1	TEE, MALE BRANCH, 3/8T X 3/8 NPT-M, BR
5491	2	CAPSCREW, 1/4-20 UNC X 2-1/4, HX, GR 5 PLTD
1401	2	NUT, 1/4-20 UNC, METAL LOCK, HX, GR C, PLTD
1374	4	WASHER, 1/4", SAE, PLTD
5856	1	TEE, MALE BRANCH, 3/8T X 1/4 NPT-M, BR
1816	1	CONNECTOR, 3/8T X 1/4 NPT-M, BR

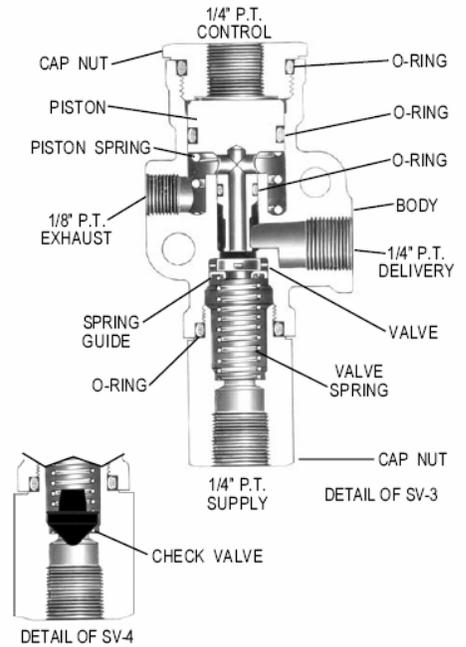
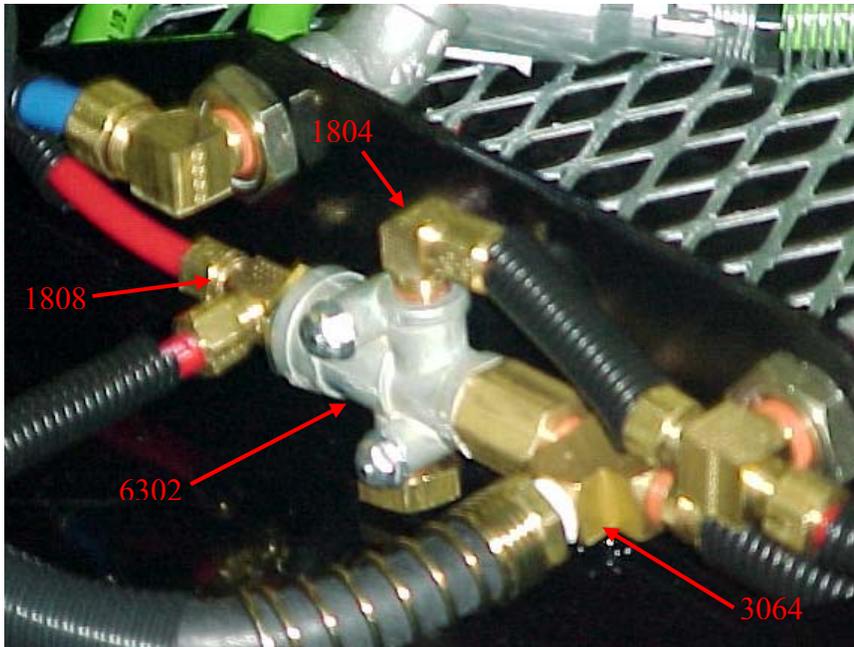
Red 3/8" nylon airbrake tubing

Procedure

Remove the brass and air lines from the dolly bulkhead on the "emergency" side, leaving the coiled red hose and bulkhead in place, see photo below.

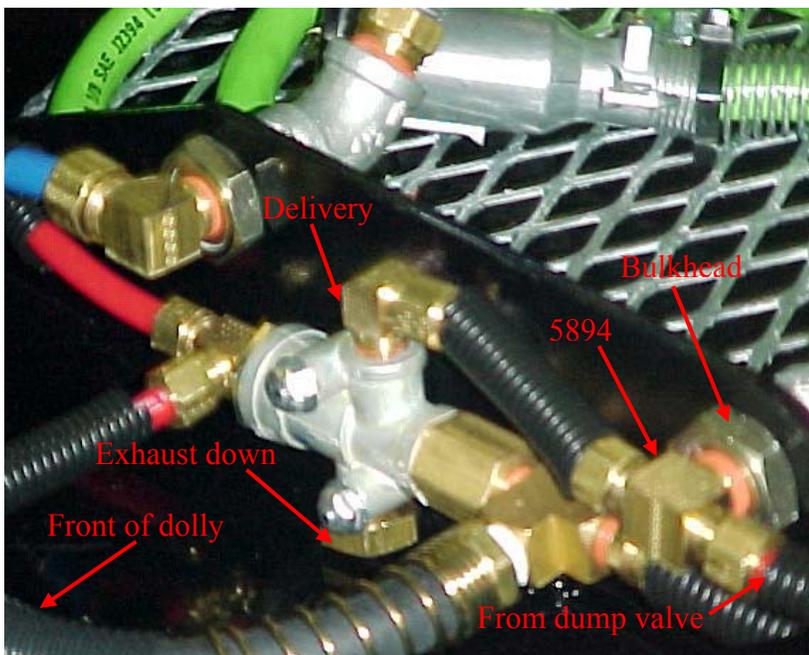


Add the fittings to the (new) 6302 valve and orient them as shown in the photo below. The 3064 connects to the supply port of the valve, the 1804 to the delivery port and the 1808 to the control port.



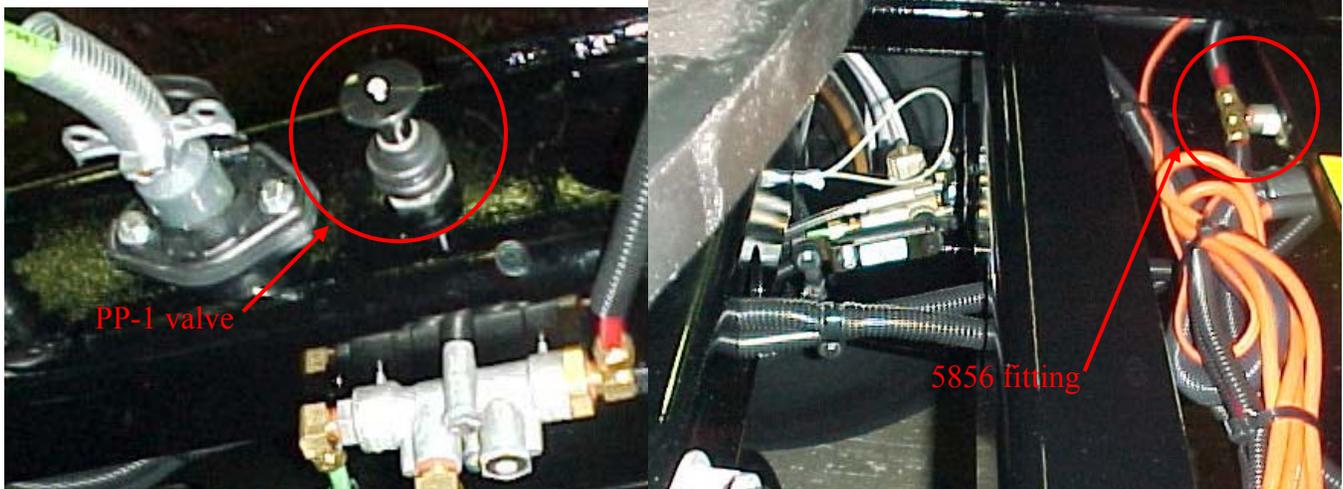
Attach the 5894 fitting to the bulkhead and orient as shown in the photo below.

Mount the 6302 valve to the front valve plate of the dolly, see photo below. Two 9/32" holes need to be drilled to accommodate the valve. Orient with the exhaust facing down, but not so low that the exhaust is blocked in any way. Use the 5491 capscrews, 1401 nuts, and 1374 washers.

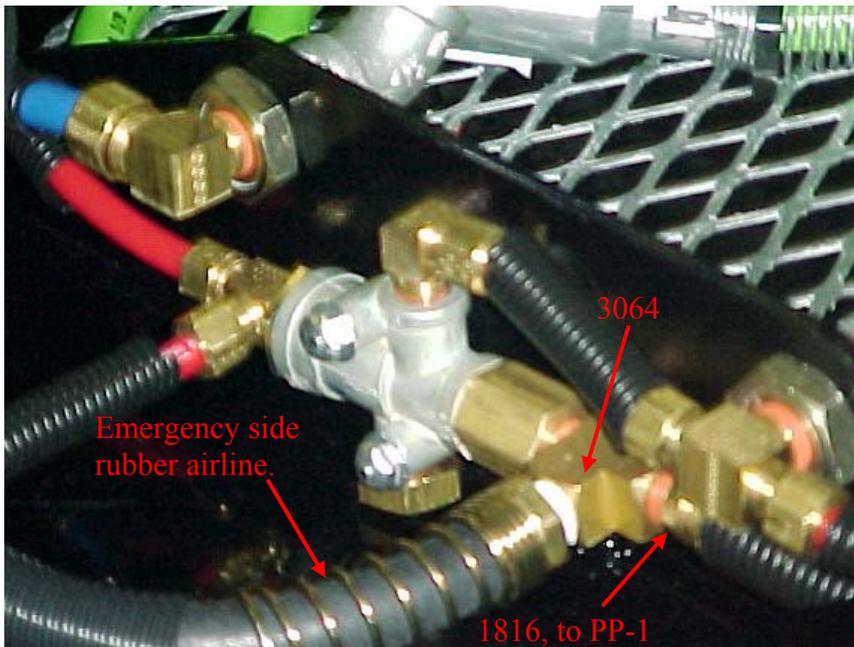


Attach the red 3/8" air line coming from the air suspension dump valve to one side of the 5894 fitting, see above photo. This line was previously detached from the fittings at this location. Also connect the delivery port of the 6302 valve (top fitting in above photo) to the other side of the 5894 fitting.

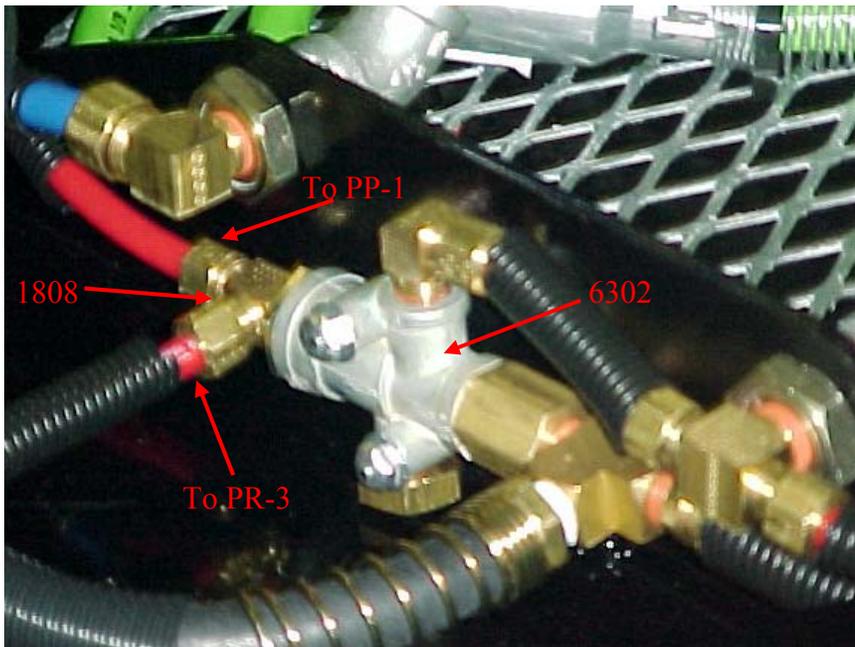
Find the PP-1 valve (hostling valve) on the front crossmember of the dolly. Remove the brass fitting from the bottom of the valve and replace with a 5856 fitting. The 5856 fitting is two-sided; the sides connect to opposite ends of the 6302 valve.



Add the 1816 fitting to the 3064 fitting already on the 6302 valve. Connect this fitting to one side of the 5856 fitting on the bottom of the PP-1 valve using red 3/8" nylon airbrake tubing (not provided). Also connect the rubber air line with the red gladhand (emergency side) to the other port of the 3064 fitting.



The other end of the 6302 valve connects to the PP-1 hostling valve and the PR-3 pressure protection valve. The previously installed 1808 valve has two ports, connecting to the PP-1 and the PR-3. Make these connections using red 3/8" air line tubing (not provided).



Apply air to the dolly, checking for leaks with at all fittings. Check dolly for full air system functionality.

Refer to the air system diagram on the following page for air line routing if necessary. Note that portions of the air system are intentionally left off the diagram.

