



Tridem Drive Air Brake Modification Instructions

Tool Requirements: Basic hand tools

Technical requirements: Basic mechanical knowledge.

Rework Kit Contents:

- (2) R12P Relay Valve
- (1) 1/2" NPT Brass Tee Fitting
- (1) 5/8" tubing X 1/2" NPT fitting
- (2) 3/8" tubing X 1/2" NPT fitting
- (1) 8 feet of 5/8" red tubing
- (1) 8 feet of 3/8" red tubing

General Instructions:

Use a commercial grade teflon thread sealant on the threads of all fittings prior to installation.

Tubing is removed from fittings by first pushing and holding in on the collar, then pulling out on the tubing



Prior to installing tubing into fittings verify the end of the tubing is cut square. Insert tubing into collar of fitting and push in firmly. Pull gently on the tubing to verify the lock has engaged.



Diagram 1 (page 2) is a piping diagram of the original configuration for reference.

Diagram 2 (page 3) is a piping diagram after the modification has been completed.

Diagram 1
Original Configuration

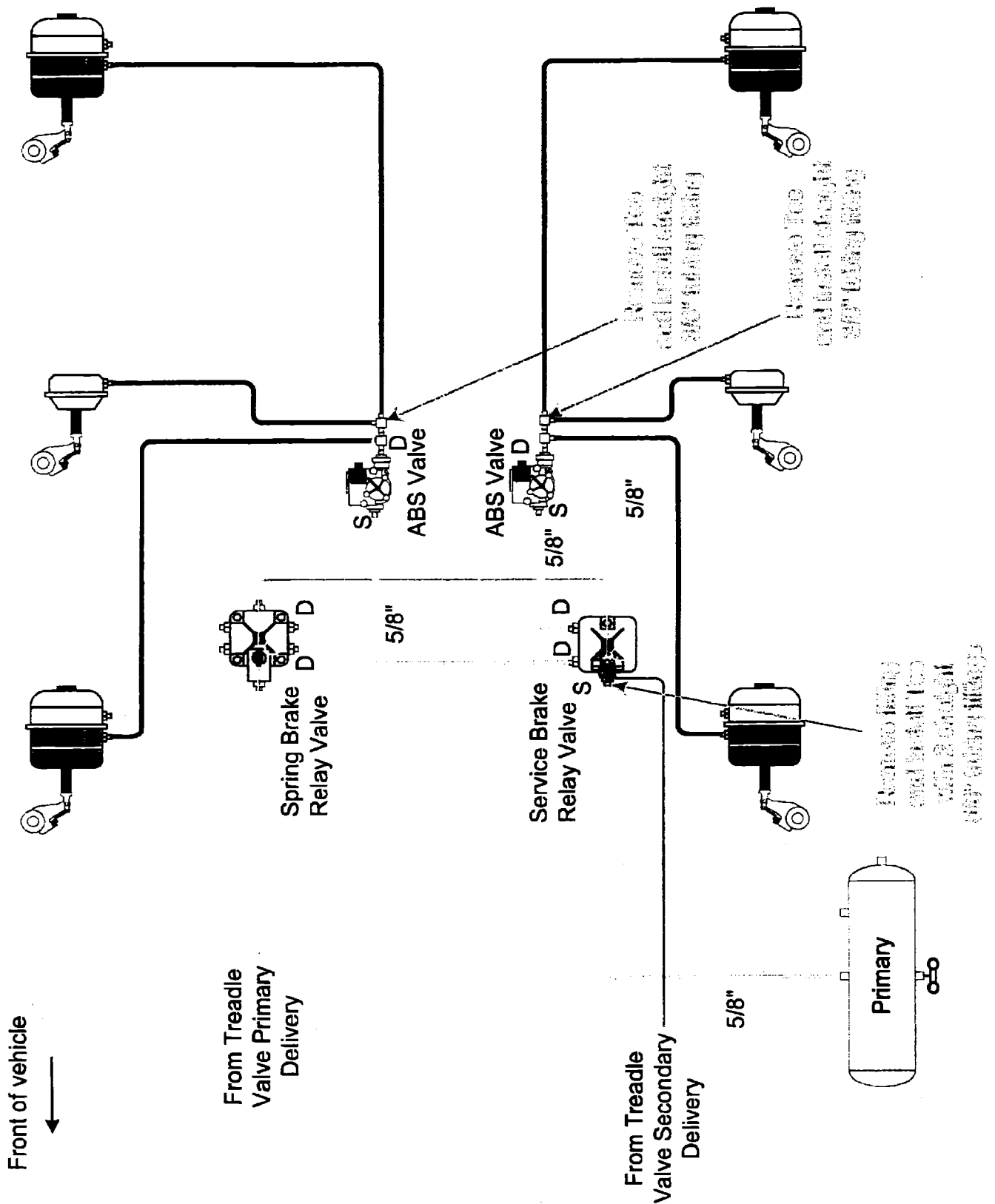
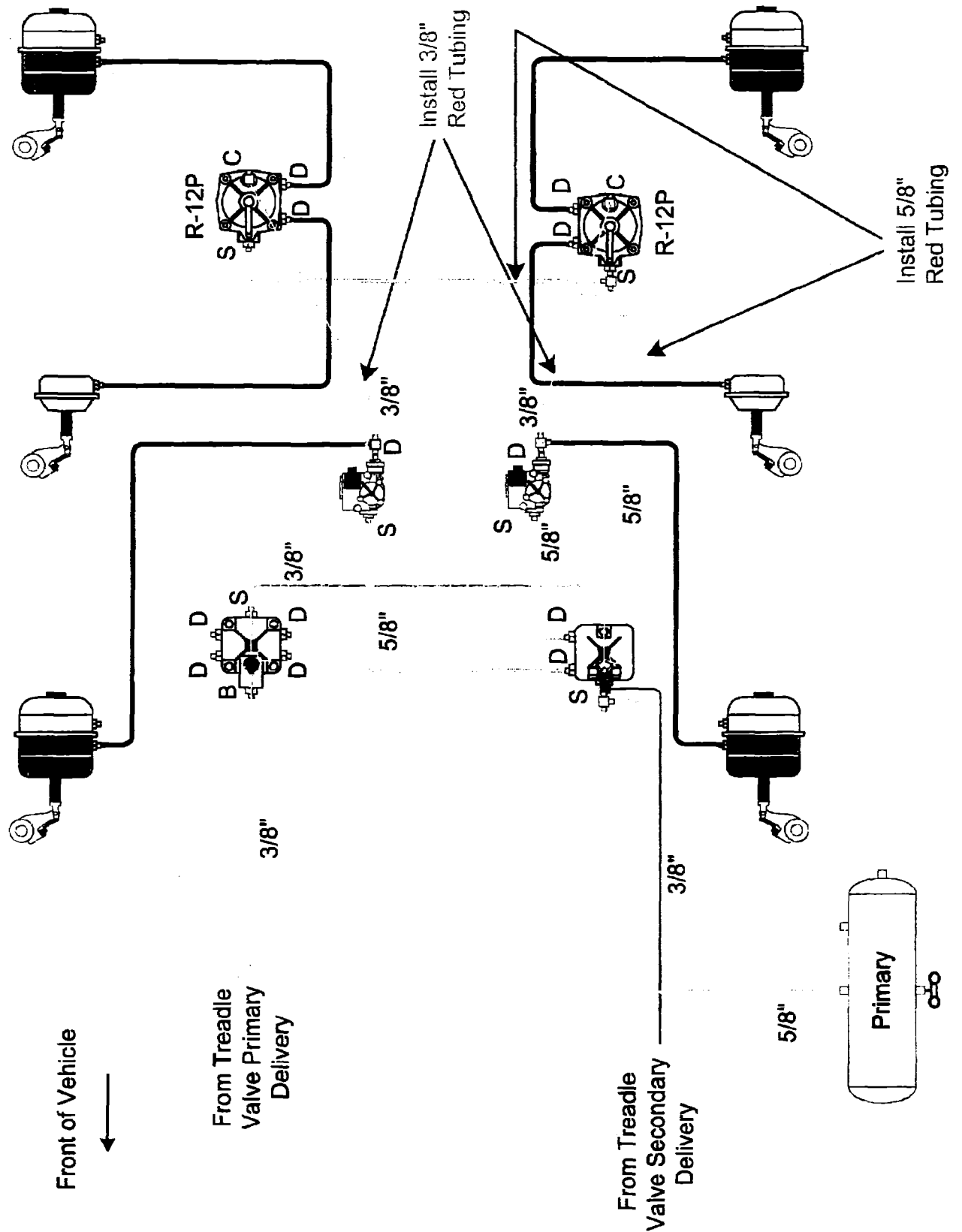


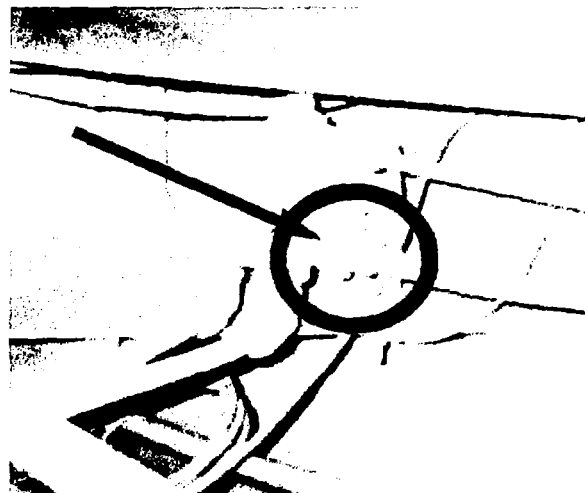
Diagram 2
Modification Completed



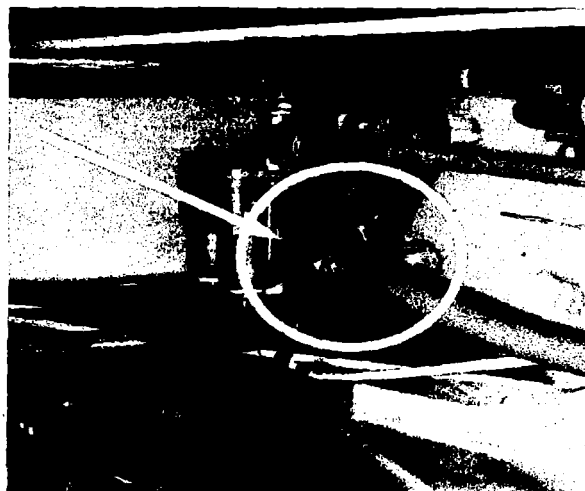


1. Drain all air from air reservoirs using the purge valves on each tank.

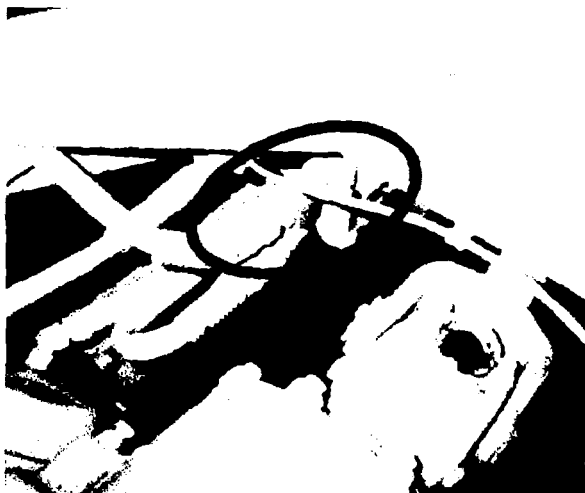
2. Locate the crossmember between the first and middle drive axles. On the left (drivers) front side of the crossmember is the service relay valve. Locate the 5/8" red air line in the supply port on the lower front of the valve (refer to the top photo). Disconnect the air line by first pressing in on the black release collar and then pulling out on the air line. With the air line removed, remove and retain the straight 5/8" tubing fitting from the valve.



3. Install the supplied 1/2" Tee fitting into the valve, and a straight 5/8" tubing fitting into each of the Tee ports. Reinstall the air line previously removed into the straight run of the Tee. Install one end of the red 5/8" supplied air line into the 90 degree leg of the Tee and route back through the opening between the crossmember and the frame sill. Refer to the photo at right for finished configuration.



4. On the under side of the crossmember, locate the two ABS modulator valves. On the rear of each modulator valve are two (2) Tee fittings that connect with three (3) rubber hoses supplying the three (3) drive axle brake chambers on each side of the vehicle (refer to photo at right).





Disconnect the two (2) rear hoses at the rearward Tee fitting and remove the Tee fitting, leaving the forward Tee and brake hose intact.



4. Install the supplied 3/8" straight fitting using thread sealant on the threads. Install one end of the 3/8" red tubing into the fitting.



5. Install the left and right supplied relay valves on the rear of the crossmember utilizing the existing holes in the crossmember for mounting. 1/4" bolts thread up through the crossmember into the valve bracket (right side shown in photo at right). The valves mount with the large spring fittings inboard, the left valve has a 5/8" tubing Tee while the right has a single 5/8" tubing fitting.

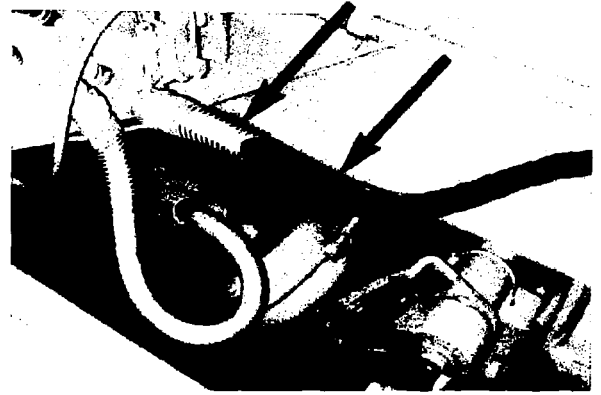


6. Cut to length the new 3/8" air line previously installed in each modulator valve and install into the top fitting of the relay valve (left to left and right to right).

7. Install the rubber brake hose from the center axle brake chamber on each side to the front fitting of the relay valve (right side shown in photo at right). Left to left and right to right.



8. Fit up the rubber brake hose from each rear axle brake chamber to the rear fitting of each relay valve. Cut off the required amount of hose for the best fit-up (approximately 6") and install onto the new fitting with a new sleeve. Left to left and right to right. Right side shown.



9. Fit up the 5/8" red supply tube (routed from the service relay valve through the crossmember in step 3) to the Tee fitting in the front of the left side relay valve. Cut the hose to the proper length and install into the fitting.

10. Install another piece of the 5/8" red tubing into the remaining port on the Tee fitting of the left relay valve and route across the crossmember to the right relay valve. Cut the hose to fit and install into the fitting.

