

# INSTALLATION AND OPERATING INSTRUCTIONS

002B088-00 Rev A  
Cage Code 56183  
Date 25 April 91

## CHECK VALVE MODIFICATION KIT FOR 6-PAK AIR DRYERS

### GENERAL

The TX P/N 5612M147 check valve modification kit is designed to eliminate tank pressure air from escaping through the back pressure valve (TX P/N 5620M59) on each dryer module. Loss of tank pressure through stand-by systems and high back pressure valve setting (max. settings: 40 PSIG) will be eliminated. In addition, this modification will improve air compressor operating conditions. The check valve will replace the ¼ turn shut-off valve used to open and close the air line between associated drying modules and air receiver manifold.

### KIT INCLUDES

Quantity	Part #	Part Description
3	5612A132	Check Valves
3	143B110-02	½ " Close Nipple
1	143B061-80	½ " Poly Tube x ½ " MPT Straight Male Connector

**IMPORTANT:** Before installing be sure to take inventory of all parts and make necessary arrangements to provide an alternate source of dry air to maintain cable plant for one hour, which is approximately the total installation time required. Also, please read entire document before installation.

### TOOLS REQUIRED

10" standard adjustable wrench  
10" standard pipe wrench  
Teflon tape  
Workbench with vise

### INSTALLATION PROCEDURE

#### SYSTEM "A" (Bottom) Figure 1

1. Disconnect the alarm plug(s) and remove all electrical power from the air dryer.
2. Locate upper and lower screws securing the black center gauge panel door (Item 1 – Figures 1 and 3). Swing this hinged panel open which will provide a comfortable working area. At this time, notice that both tank and outlet pressure gauges read zero (0). If they do not, pull the ring on safety valve which is plumbed to the bottom of the tank pressure regulator (Item 2 – Figure 1) to bleed all air out of the drying system.
3. Disconnect the ½ " black polytube connections that run from the output (left) of "A" system's back pressure regulator to the input of the ¼ turn shut-off valve (Item 3 – Figure 1). Avoid twisting or bending since this section of tubing will be reinstalled.
4. Remove the ¼ turn shut-off valve from the air dryer (Item 4 – Figure 1). The handle may have to be removed so that the valve can be easily turned out to clear Air receiver manifold.
5. Place the ¼ turn shut-off valve in a vise so the 90° elbow ½ " polytube x ½ " MPT can be removed (Item 5 – Figure 1). Set this elbow aside for it will be reinstalled with new check valve.

6. Locate one ½ “ close nipple provided in kit (Item 7 – Figure 1). Apply Teflon tape and hand tighten to 90° street elbow (Item 6 – Figure 1).
7. Locate one of the check valves provided in kit (Item 8 – Figure 1). Plumb the check valve as shown on Figure 1, making sure that the **arrow points up or towards air receiver manifold** to assure proper air flow direction.
8. Reinstall the 90° elbow ½ “ polytube x ½ “ MPT (Item 5 – Figure 1) to check valve as shown in Figure 1. **Apply Teflon tape to MPT only.**
9. Reinstall ½ “ black polytube connections (Item 3 – Figure 1) to “A” systems back pressure regulator and input to new check valve.

## INSTALLATION PROCEDURE

### SYSTEM “B” (Center) Figure 2

1. Disconnect the ½ “ black polytube connections that run from the output (left) of “B” system’s back pressure regulator to the input of the ¼ turn shut-off valve (Item 1 – Figure 2). Avoid twisting or bending since this section of tubing will be reinstalled.
2. Remove the ¼ turn shut-off valve from the air dryer (Item 2 – Figure 2). The handle may have to be removed so that the valve can be easily turned out to clear air receiver manifold.
3. Locate one ½ “ close nipple provided in kit (Item 3 – Figure 2). Apply Teflon tape and hand tighten to 90° street elbow (Item 4 – Figure 2).
4. Locate one of the check valves provided in kit (Item 5 – Figure 2). Plumb the check valve as shown in Figure 2, making sure that the **arrow points towards the rear of the air dryer** or towards the air receiver manifold to assure proper air flow direction.
5. Locate **one** ½ “ polytube x ½ “**MPT straight male connector**, provided in kit (Item 6 – Figure 2). Apply Teflon tape to **MPT only** and plumb connector to check valve as shown in Figure 2.
6. Reinstall ½ “ black polytube connection (Item 1 – Figure 2) to “B” systems back pressure regulator and input to new check valve.

Item – Description

- 1 - screw
- 2 – tank pressure regulator
- 3 - ½" black polytube connection
- 4 – ¼" turn shut-off valve
- 5 – 90 ° elbow ½" polytube x ½" MPT
- 6 - 90 ° street elbow ½" MPT x ½" FPT
- 7 – ½" close nipple (kit item)
- 8 – check valve (kit item)

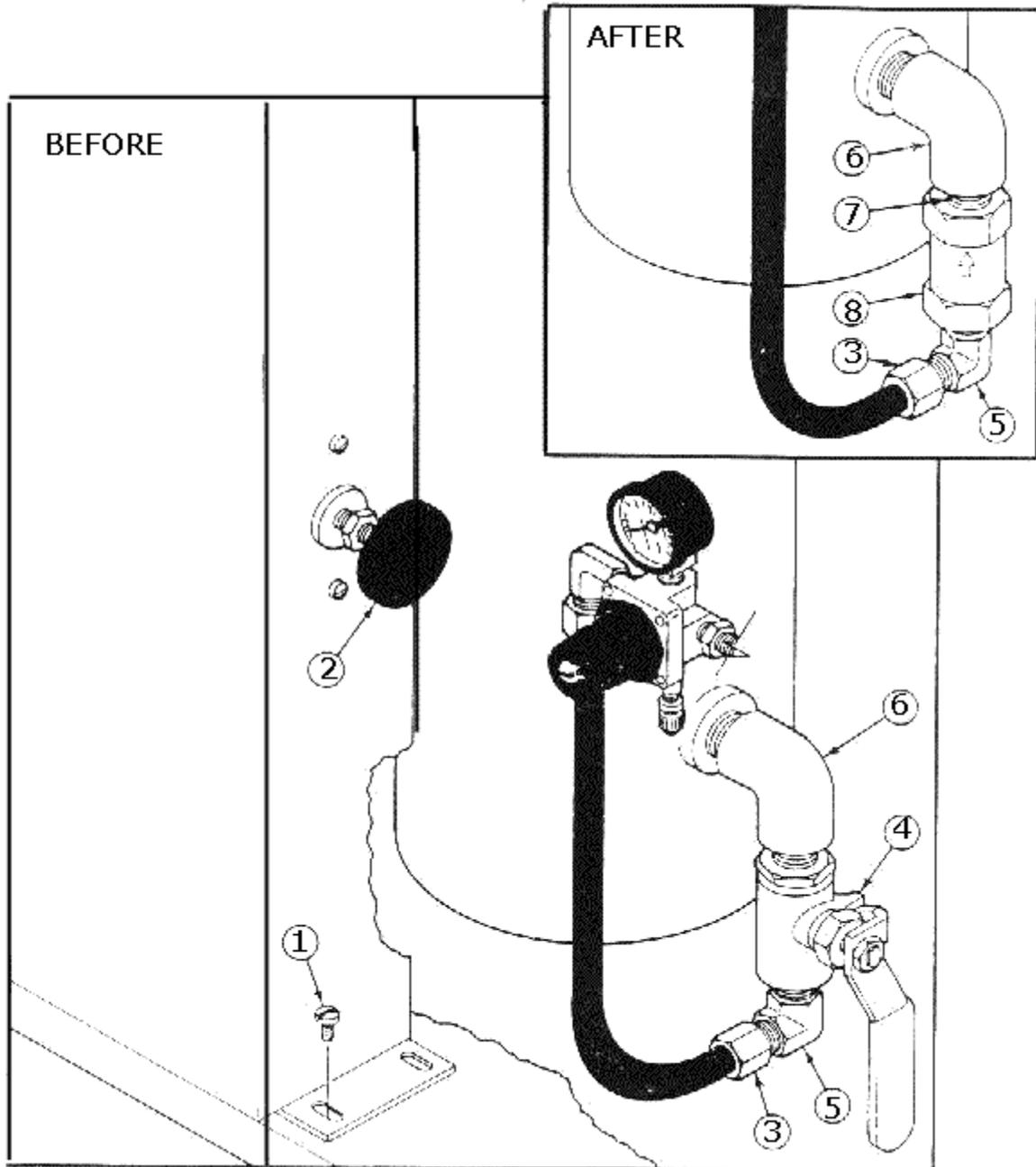


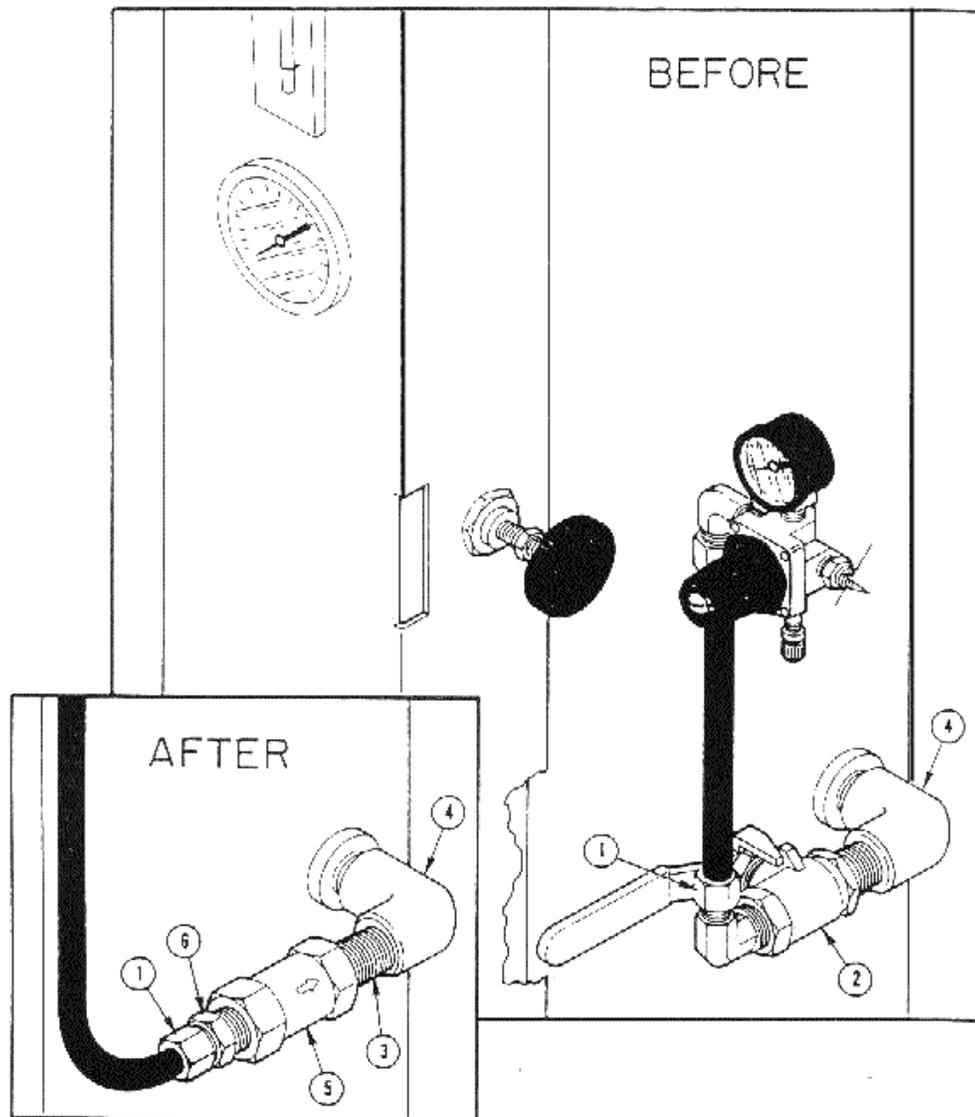
Figure 1. "A" System (bottom)

## INSTALLATION PROCEDURE

### SYSTEM "C" (Top) Figure 3

1. Disconnect the ½" black polytube connections that run from the output (left) of "C" system's back pressure regulator to the input of the ¼ turn shut off valve (Item 2 – Figure 3). Avoid twisting or bending since this section of tubing will be reinstalled.
2. Remove the ¼ turn shut-off valve from the air dryer (Item 3 – Figure 3). The handle may have to be removed so that the valve can be easily turned out to clear air receiver manifold.
3. Place the ¼ turn shut-off valve in a vise so the 90° elbow ½ " polytube x ½ " MPT can be removed (Item 5 – Figure 3). Set this elbow aside for it will be reinstalled with new check valve.
4. Locate one ½ " close nipple provided in kit (Item 5 – Figure 3). Apply Teflon tape and hand tighten to 90° street elbow (Item 6 – Figure 3).
5. Locate one of the check valves provided in kit (Item 7 – Figure 3). Plumb the check valve as shown in Figure 3, making sure that the **arrow points towards the rear of the air dryer** or towards the air receiver manifold to assure proper air flow direction.
6. Reinstall the 90° elbow ½ " polytube x ½ " MPT (Item 4 – Figure 3) to check valve as shown in Figure 1. **Apply Teflon tape to MPT only.**
7. Reinstall ½ " black polytube connection (Item 2 – Figure 3) to "C" systems back pressure regulator and input to new check valve.
8. Restore power to check dryer operation. Be certain that there is **no** pressure reading on any module back pressure regulator gauge except on the operating system(s) which should read 42 – 44 PSIG. Be sure to check each system. If any non-operating module (system) shows pressure, review the installation procedure concerning the arrow on check valve for proper air flow direction.
9. Secure the black gauge panel door (Item 1 – Figures 1 & 3) with screws.
10. Clear any alarms you may have activated and reconnect the alarm plug(s).

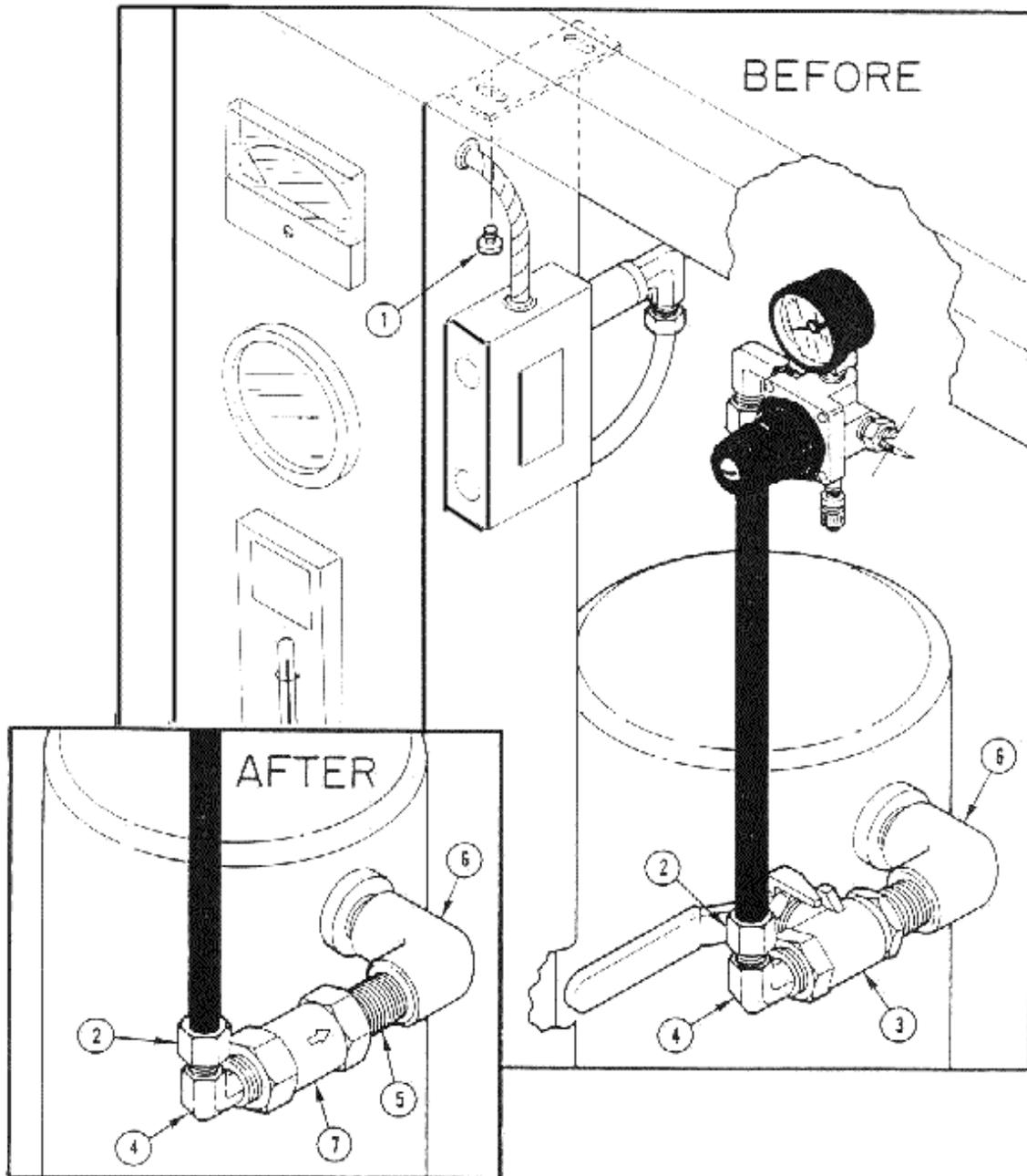
**\*Any questions concerning the content of this document can be answered by the TX Technical Service Department. (973) 442-7500.**



**Figure 2. "B" System (center)**

Item – Description

- 1 - 1/2" black polytube connection
- 2 - 1/4" turn shut-off valve
- 3 - 1/2" close nipple (kit item)
- 4 - 90° street elbow
- 5 - check valve (kit item)
- 6 - straight male connector  
1/2" polytube x 1/2" MPT (kit item)



**Figure 3. "C" System (top)**

Item – Description

- 1 - screw
- 2 - 1/2" black polytube connection
- 3 - 1/4" turn shut-off valve
- 4 - 90 ° elbow 1/2" polytube x 1/2" MPT
- 5 - 1/2" close nipple (kit item)
- 6 - 90 ° street elbow
- 7 - check valve (kit item)