

## CABLE PRESSURE SYSTEM PIPE SYSTEMS GENERAL

### 1. GENERAL

1.001 This addendum supplements Section 637-050-100, Issue 4.

1.002 This addendum is reissued to:

- (a) Revise Figure 1,
- (b) Revise flow alarm setting,
- (c) Add ordering information on CA-3131 UM Gas Feeder Pipe and manifold hardware,
- (d) Refer splicing forces to Section 637-305-901NB,
- (e) Revise Figure 8, and
- (f) Revise Paragraphs 6 & 7

### 3. DETAILS OF PIPE SYSTEM AT CENTRAL OFFICE

The following changes apply to Part 3 of the section:

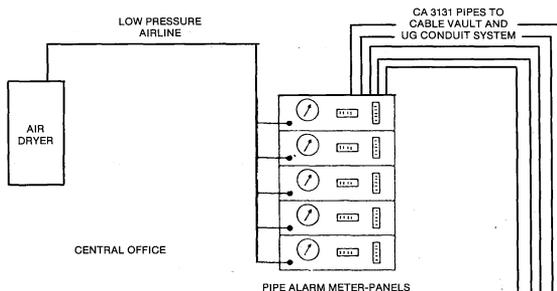
- (a) 3.01 — revised
- (b) Figure 1 — revised

#### WITHOUT CPMS

3.01 Dry air is delivered from the air outlet of the air dryer in the C.O. to a separate air flow

monitor (Figure 1) for each pipe feeding the vault or leaving the office. At the monitor, the air pressure is regulated to 10 psig, the air then passes through the air flow monitor to the pipe outlet connection. The monitor provides necessary data on dry air usage and should be **logged daily** to serve as a guide for maintenance operations. The flow alarm indicates instantaneous dry air-flow rate in standard cubic feet per day (scfd) and can be adjusted so that an alarm will be given for any desired increase in flow rate. Field trial tests have indicated that a flow alarm which is set to operate at 100 scfd above the normal flow rate will provide:

- (a) **An immediate alarm** for a major pipe failure or a break in the tubing connection between the pipe and the manifold.
- (b) **An alarm within a few minutes** for a break in the tubing between the manifold and one of the cables.
- (c) **An alarm generally within 1 to 5 hours** where a zero type leak occurs in an UG cable. The speed of alarm operation is a function of the pneumatic resistance of the cable and the location of the leak relative to the nearest manifold.



**Figure 1**  
**Schematic of One Pipe Route in a Basic Pipe System**

**NOTICE:**  
Not for use or disclosure outside Indiana Bell  
except under written agreement.

6. DESCRIPTION OF MATERIALS AND EQUIPMENT

The following changes apply to Part 6 of the section:

- (a) 6.02.1 — add sub-paragraph
- (b) 6.07 — revised
- (c) 6.13 — add paragraph
- (d) Figure 8 — revised

6.02.1 CA-3131 UM Gas Feeder Pipe is available on reels in standard lengths of 7000 ft. The same guidelines for installing CA-3131 should be used for CA-3131 UM.

6.07 The C automatic shut-off valve (AT8779) or Dahl (DM-9288L), Figure 6, is essentially a check valve which can be connected between the manifold and individual cables as shown in Figure 8. When installed as shown in Figure 8, it serves to protect underground cables in the event of a pipe failure plus prevent interlacing of air pressure from one cable to another through the manifold. The valve will close if there is a condition whereby air would flow opposite the normal direction, i.e., from the cables back into the manifold assembly. It will reopen when the manifold pressure builds up to 0.3 psig above the cable pressure. The pressure drop through the valve is a maximum of 0.5 psi for a corresponding airflow rate of 60 scfh.

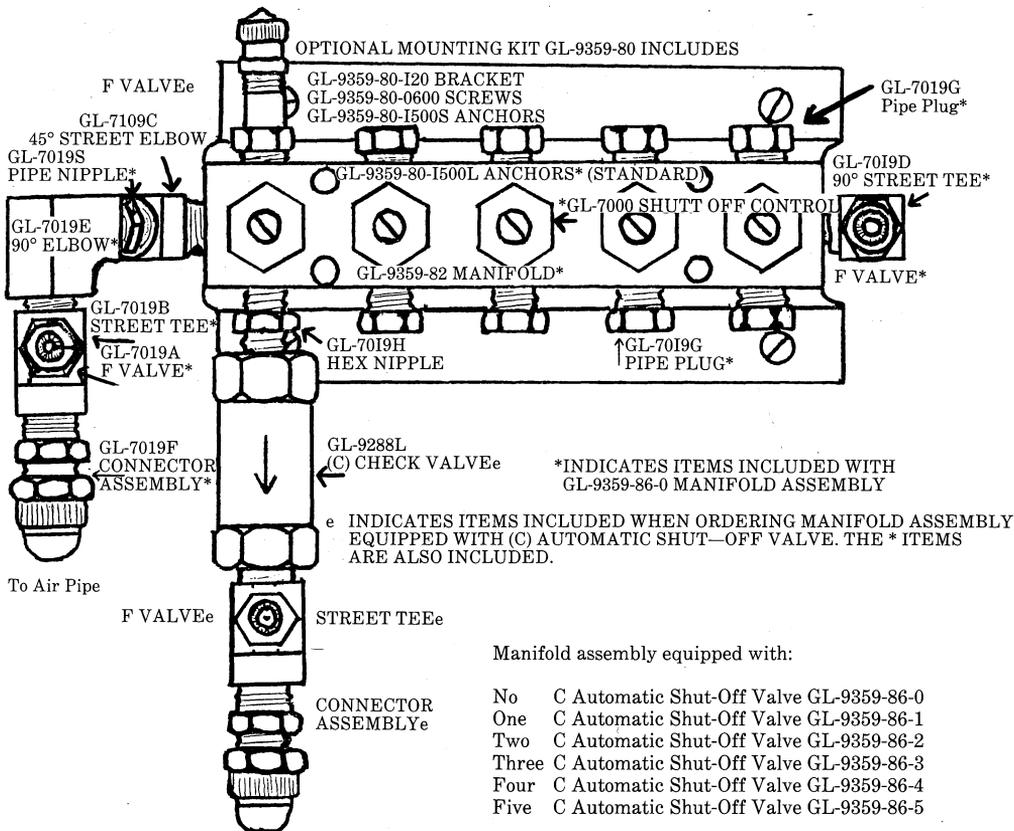


FIGURE 8

**6.13** The parts shown in Figure 8 are available from the Great Lakes Telephone Supply, Inc., Carmel, Indiana, 46032, 317-844-6073. The same individual parts are available from Dahl Manufacturing Corporation using part numbers from their catalog or through Western Electric.

#### **7. GENERAL CONDITIONS**

The following changes apply to Part 7 of the section:

- (a) 7.03 — revised
- (b) 7.04 — add

**7.03 Cable Splicing Work:** Because of the importance attributed to rapid response to an operated pipe alarm, it is essential that the splicing forces follow the procedures outlined in BSP Section 637-305-901NB.

#### **7.04 C Automatic Shut-Off Valve:**

- (a) It should be recognized that the use of C automatic shut-off valve could easily result in lower pipe pressure and higher flow rates when a leak develops in the pressure system. For this reason, the use of the C automatic shut-off valve and the B automatic shut-off valve should not be used together in the same pipe route.
- (b) When the C automatic shut-off valve is installed, as shown in Figure 8, pressure inter-lacing will be eliminated through the manifold block and aid in leak locating procedures. It will also necessitate a quicker response to pressure alarms and the need to closely monitor flows and pressures when converting existing pipe routes equipped with the B shut-off valve.