

CTRL Systems, Inc. Best Practices

Industry

Packaging and Distribution

Application

Leak Detection: Compressed Air

System

Pneumatic Conveyor System

Component

Valves, Fittings, Hoses, and Lines under pressure

Current Procedures

A maintenance technician walks the conveyor system during down time in order to listen for air leaks. In many cases, ambient noise and cover panels masks the sound of leaking air and no leaks are found. If an air leak is heard, the technician tries to locate the source of the leak for repairs.



Courtesy of Target Distribution

UL101 Test Procedures

1. Select UL101 Receiver, Headset, Mini-Concentrator, and 1-Inch Acoustic Tip from case.
2. Attach Mini-Concentrator and plug in headset to UL101 Receiver.
3. Test battery by moving output switch to headset only position. If meter needle is below the 5-10 (½ scale) of the meter, replace the battery. Return output switch to headset/meter position.
4. Turn gain switch to ½ scale (half moon); adjust potentiometer knob between 1 and 2.
5. Begin at one end of the conveyor/building. Point the UL101 receiver in the direction of the valves, fittings, hoses, and lines under pressure and walk along while scanning with the receiver.
6. An air leak is indicated by a jump in the meter and a loud rushing sound through the headset.
7. Once an air leak is detected, pinpoint by switching the Mini-Concentrator attachment with the 1-Inch Acoustic Tip. Adjust the potentiometer down to locate the exact source of the leak.
8. Indicate the location and issue a work order for repair. Verify repairs with UL101.

Benefit

The purpose of detecting compressed air leaks is to save energy by minimizing the amount of compressor run time, which increases compressor life expectancy, and to maintain an efficient uninterrupted operation.

The UL101 is much faster and more effective at locating leaks, even during peak operation. Leak location and identification is not impeded by ambient noise and therefore, less down time and less guess work are involved. Maintenance technicians do not have to wait for a quiet day to find leaks. More leaks can be found and properly identified for repair. Once repairs have been made a noticeable reduction in electric bills due to less compressor run time should be noticed. Monitoring with the UL101 provides instantaneous real-time information.