

CTRL Systems, Inc. Best Practices

Industry

Residential Real Estate

Application

Leak Detection

System

HVAC

Component

Valves, Fittings, Hoses, and Lines under pressure

Current Procedures

A maintenance technician walks a charged HVAC system looking for oil stains from leaking refrigerant, bubbles while spraying soap and water on various lines and fittings or an electronic refrigerant sniffer to detect leaks.



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 gain (half moon); adjust potentiometer knob between 1 and 2.
5. Begin at one end of the HVAC system. Point the UL101 receiver in the direction of the refrigerant lines and fittings and walk along while scanning with the receiver.
6. A leak is indicated by a jump in the meter and a loud rushing sound through the headset.
7. Once a 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 by marking the leak, and repair. Verify repairs with UL101.

Benefit

When a technician has difficulty finding a leak that is causing a reduced refrigerant charge in HVAC systems additional detection methods may be needed. There are various methods of leak detection, and more than one method may be necessary to conduct a thorough system diagnosis.

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 guess work is involved. More leaks can be found and properly identified for repair, thereby decreasing lost refrigerant and down time of the HVAC unit. Monitoring with the UL101 provides instantaneous real-time information.