SPECTROLINE®
HVAC/R

LEAK DETECTION SAVES MORE THAN JUST REFRIGERANT

TECHNICAL BULLETIN #197

Leak detection is important in keeping all air conditioning and refrigeration (AC&R) systems running efficiently.

LEAK DETECTION **IMPROVES AC&R SYSTEM RELIABILITY**

Moisture in AC&R Systems Leaks allow air and moisture to enter an A/C system or chiller. Moisture can react with refrigerant to form corrosive acids and sludge that can damage a compressor, plug up orifice tubes, and/or eat pinholes in evaporators and condensers.

AC&R Systems not Cooling Properly This can lead to product spoilage or processing problems as their operating temperatures can no longer be maintained.

Damage to AC&R System Operation AC&R systems operating at a low charge can experience excessive wear as the oil heats up and loses lubricity, or does not circulate throughout the system properly. Non-azeotropic refrigerant blends can fractionalize if they leak in a vaporous state. This can also alter a system's operating characteristics.

LEAK DETECTION **SAVES MONEY**

Refrigerant is Expensive It may seem cheaper to keep recharging your system with refrigerant than fix a leak—but it isn't in the long run.

Refrigerant Leaks are Expensive A leaking system is not operating at its optimal level of performance. A small loss of the system's refrigerant charge can have a large impact on the system's efficiency, resulting in significantly increased power consumption.

LEAK DETECTION **BENEFITS THE ENVIRONMENT**

Refrigerant Leaks Are Harmful to the Environment Refrigerant leakage is destructive to the environment from increased CO_2 emissions due to efficiency losses and from refrigerant chemical reactions in the atmosphere.

LEAK DETECTION **SUPPORTS THE LAW**

In many countries, it is illegal to service known leaking systems. Leaks must be repaired by law, and leak testing must be performed at least once per year.

SOLUTION TO REFRIGERANT LEAKS

Small leaks can be indications of developing system problems. If they are found when they are small, they can be repaired before a catastrophic failure occurs.

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