YORK
BY JOHNSON CONTROLS

Service Information

File In/With: N/A	**SI0228** **New** **710**
Equipment Affected: AIR COOLED CHILLERS	
PROCEDURES TO FOLLOW BEFORE CHANGING A SUSPECTED LEAKING COIL	

GENERAL

Although coil leaks on air cooled chillers are relatively rare, the Warranty Return Center finds that most coils that are returned do not have actual leaks. Those that do have leaks are typically leaking due to contact damage. This is true for both the "Tube and Fin" design and "Microchannel" type coils.

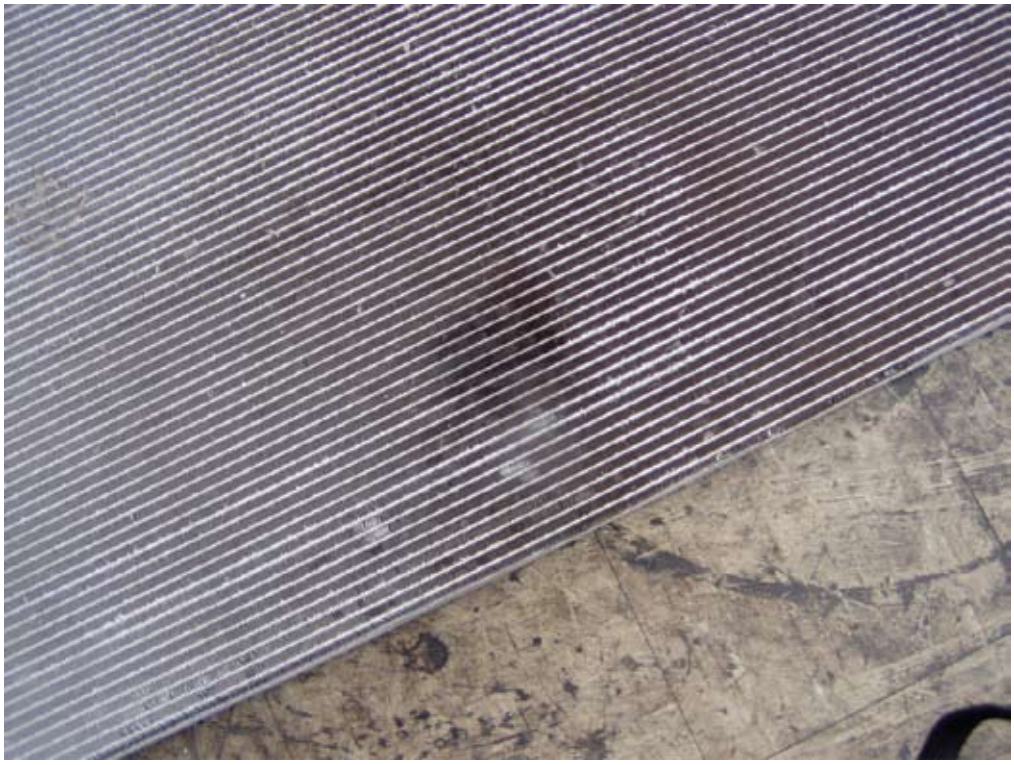
Coils are often mistakenly condemned for leaks due to a low refrigerant charge that is the result of one or more of the following:

- A leak elsewhere.
- The system may have been a little low on charge from the factory.
- The system is low on refrigerant due to prior service work.

The reason for condemning the coils as the cause is primarily due to discoloration or a stain in an area of the coil that leads to the assumption that it is due to a leak. Stains may occur on aluminum "Tube and Fin" or aluminum "Microchannel" type coils. Coils are often replaced without actually checking for a leak with a leak detector or using soap bubbles. An example of a discolored coil that was incorrectly diagnosed as leaking is shown in the following photos:

LD14679

Stain on coil incorrectly assumed to be a leak.



LD14680

The stain on the coil in the photo above was not caused by a leak. This instruction is intended to alert technicians of this situation and outline recommended leak check procedures to verify a leaking coil.

LEAK IDENTIFICATION

Always check the suspect coil for an actual leak using an electronic leak detector or soap bubbles. If a leak cannot be detected in the coil, it probably doesn't exist. If a leak is detected, mark the location on the coil with spray paint. When possible, spray paint a small circle around the area to identify the location or paint an arrow pointing to the leak area. This will aid in identifying the leak location when the coil is returned to the Warranty Return Center. Also, keep in mind that if a leak is caused by obvious contact damage to the coil, it should not be repaired on a warranty. Leaking coils damaged by impact will be back charged as well as coils that are replaced under warranty and not returned to the Warranty Return Center. If a coil is changed in error, contact the Warranty Return Center and let them know that a mistake was made so it can be accounted for correctly in the warranty system.

If there is no doubt that the stain is the result of oil, check other surrounding areas for leaks such as relief valves, fittings, etc., that could have caused oil to be sprayed or pulled into the coil due to air flow from the fans. Keep in mind that in most cases, the stain or discoloration is due to one or more of the following:

- Dirt from chiller installation
- Transport to the site
- Environmental or manufacturing