YORK BY JOHNSON CONTROLS

SB0108	709
File In: N/A	
SERVICE BULLETIN	Affected Equipment: YCAV & YCIV Chillers

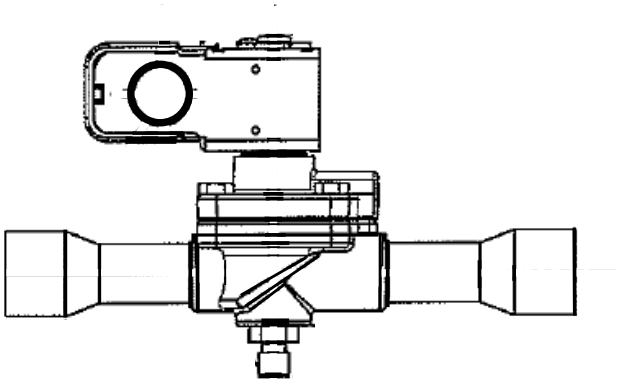
Subject: REPAIR KIT FOR ECONOMIZER VALVES

Issue Date:	**07/09/09**	**Withdrawal Date: N/A**
Material Needed:	**Economizer Repair Kit 025-42973-000, IOM**	
Tools Required:	**Basic Chiller Tools**	
Est. Time Required:	**Aprox. 8 Hours**	
Warranty:	**N/A**	
Revision Notes:	**N/A**	

General

A new valve repair kit (P/N 025-42973-000) is now available to repair leaking economizer valves. This kit will allow replacement of valve components without the need to remove the entire valve. This kit may be used to repair economizer valves on both YCAV and YCIV chillers. The kit contains a replacement for the original enclosure tube. The replacement enclosure tube will look slightly different than the original. Please begin using the kit immediately to repair a leaking enclosure tube.

The kit should also be used to replace a defective solenoid coil. When using the kit to replace the coil, be sure and install the new enclosure tube, since the new style enclosure tube is meant to be used with the new style coil. A tool is provided in the kit to allow removal and replacement of the enclosure tube. Also included is an o-ring and a wave spring that must be installed between the coil and the body of the valve.



Work on this equipment should only be done by properly trained personnel who are qualified to work on this type of equipment. Failure to comply with this requirement could expose the worker, the equipment and the building and its inhabitants to the risk of injury or property damage.

The instructions on this service bulletin are written assuming the individual who will perform this work is a fully trained HVAC & R journeyman or equivalent, certified in refrigerant handling and recovery techniques, and knowledgeable with regard to electrical lock out/tag out procedures. The individual performing this work should be aware of and comply with all national, state and local safety and environmental regulations while carrying out this work. Before attempting to work on any equipment, the individual should be thoroughly familiar with the equipment by reading and understanding the associated service literature applicable to the equipment. If you do not have this literature, you may obtain it by contacting a Johnson Controls Service Office.

Should there be any question concerning any aspect of the tasks outlined in this bulletin, please consult a Johnson Controls Service Office prior to attempting the work. Please be aware that this information may be time sensitive and that Johnson Controls reserves the right to revise this information at any time. Be certain you are working with the latest information.

Procedure

Replacing a leaking enclosure tube will require removal of refrigerant from the low side of the system or pump it to the high side.

1. To pump refrigerant to the high side close the liquid line shut-off valve.
2. Open the feed and drain valves to 100% in the SERVICE mode and disconnect the wiring to the valves at the control panel or an intermediate plug.
3. Put 115VAC on the economizer valve to open it using a clip lead or wire connected to wire 1 and the relay board of the economizer solenoid output.
4. Start the compressor and allow it to pump down the low side of the system until the system goes out on low pressure. Turn the system off if the pressure nears a vacuum. Close the discharge service valve and the oil line valve. Turn off the system switch of the system that is being serviced or turn off the unit switch.
5. If the pumpdown sequence needs to be repeated, wait until the anti-recycle timer times out. Open the discharge service valve and the oil line valve. Turn on the system switch of the system being serviced and/or the unit switch as needed and repeat step number 4.
6. When most of the refrigerant has been removed from the low side of the system, close the discharge and oil line valves and shut the system down using the unit and/or system switches. Recover the remaining refrigerant from the low side of the system.
7. Remove the leaking enclosure tube using the tool provided.
8. Install the new enclosure tube and new o-ring.
9. Install the wave spring on the enclosure tube and install the coil.
10. Evacuate the low side of the system to 500 microns and assure it holds a vacuum.
11. Break the vacuum and re-install any refrigerant recovered from the low side.
12. Open all system valves that were closed.
13. Remove the jumper on the economizer solenoid.
14. Reconnect the drain and feed valve wiring.
15. Use the SERVICE mode to close the drain and feed valves to 0%.
16. Repower the 115 VAC feed to the control panel to align the micro to reposition the valves to 0 % if needed.
17. Return the system to operation. Please note, the system may go down on low pressure during the first start, since the refrigerant was pumped into the high side. A couple of starts and a few minutes of operation should solve the problem.
18. Add refrigerant as needed to clear bubbles from the sight glass. Check the subcooling to assure it is 8-10°F fully loaded.