



BY JOHNSON CONTROLS

SB0136

Supersedes: SB0136 (1212)

113

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SERVICE BULLETIN

**Affected YK Falling Film Chillers with P8, P9, H9
Equipment: Compressors AWD 12' or 14' shells**

Subject: Condenser level adjustment, refrigerant charge, and variable orifice setting

Issue Date: 1/3/2013

Withdrawal Date: 6/1/2013

Materials Needed: R134a Refrigerant

Tools Required: Determined by Field Technician

Est. Time Required: 1 hour

BACKGROUND

Some units with falling film evaporators are not operating at the projected operating efficiency due to less than optimum sub cooler set up, manually open variable orifice or incorrect refrigerant charge. **In addition to efficiency levels this can also cause excessive vibration and increase sound levels of the machine.**

REFRIGERANT LEVEL CONTROL

The refrigerant level control is enabled when leaving the factory, **it must not be disabled.**

REFRIGERANT LEVEL SETPOINT

The refrigerant level setpoint must be adjusted on the OptiView Control Panel to ensure the level of the condenser is in the middle of the sight glass.

REFRIGERANT CHARGE ADJUSTMENT

At full load, the liquid refrigerant must be visible in the evaporator sight glass and the evaporator small temperature difference must be close to the design value.

If these conditions are not fulfilled, increase the refrigerant charge in the chiller and use the attached form to notify the factory of the new refrigerant charge.

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 Johnson Controls, 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.

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YK CHILLER LOG SHEET

Contract: _____

Chiller Serial No: _____

Chiller Location: Country _____ State _____ City _____

Customer Name: _____

Has the chiller been commissioned? Yes or No

PLEASE COMPLETE ALL OF THE STEPS BELOW (if possible).

COMMISSIONED, RUNNING & LOADED _____ COMMISSIONED UNITS AND CAN RUN _____ COMMISSIONED UNITS _____	1.	Collect the following printouts before making adjustments according to SB0136 a. Status Printout (from Home Screen) <input type="checkbox"/> b. Setpoint Printout (from Setpoints Screen) <input type="checkbox"/> c. Security Log Report Printout (from Security Log Screen) <input type="checkbox"/> d. History Printout (from History Screen) <input type="checkbox"/> e. Number of operating hours on panel. _____ hrs f. Controls version from SETPOINTS SETUP-DIAGNOSTICS screen _____	
	2.	Refrigerant Level Control a. Was Refrigerant Level Control found: <input type="checkbox"/> Enabled or <input type="checkbox"/> Disabled b. Confirm that Refrigerant Level Control is left Enabled: <input type="checkbox"/>	
	3.	Refrigerant Level Setpoint a. Level in the Condenser Sight Glass before adjusting the setpoint: _____ % b. New condenser level setpoint in the OptiView Panel (if required): _____ % c. Level in the Condenser Sight Glass after adjusting the setpoint: _____ %	
	4.	Refrigerant Charge Adjustment a. Level in the Evaporator Sight Glass before adjusting the refrigerant charge: _____ % b. Evaporator small temperature before adjusting the refrigerant charge: _____ °F c. Refrigerant charge before adjusting the refrigerant charge: _____ lbs. d. Additional refrigerant charge (if required): _____ lbs. e. Level in the Evaporator Sight Glass after adjusting the refrigerant charge: _____ % f. Evaporator small temperature after adjusting the refrigerant charge: _____ °F	

Remarks: _____

When completed, send this Log Sheet and the data collected to Daniel.W.Woodring@jci.com or fax to his attention at 717-771-6820.

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