YORK®

ES Service Information

File In/With: 160.54-M1, 160.54-RP1
160.60-M1, 160.69-RP1

SI0169
New 6-07

Equipment Affected: YK & YD Chillers with Variable Geometry Diffuser

Variable Geometry Diffuser - New Stall Detector Board

On/about July 2007, new production chillers are supplied with a new Stall Detector Board. The part number of this board is 031-02418-001 (previous board part number is 031-02418-000). The new board is backward compatible to all previous chillers and will supercede the previous board as a replacement part.

This new board contains a filter that removes the noise associated with high gas flow/low head conditions and thus prevents VGD closing in response to conditions that are not true stall conditions.

Shunt jumper JP1 on this new board allows operation with or without the filter. With JP1 in the ENHANCED position (on pins 1&2), the filter is engaged. With it in the STANDARD position (on pins 2 & 3), the filter is not engaged and would operate the same as the -000 board. Normally, the board should be operated in ENHANCED mode. Use the following guidelines:

- ENHANCED Mode – The board is shipped configured in this mode. It filters the noise associated with high gas flow/low head conditions and thus prevents VGD closing in response to conditions that are not true stall conditions. The presence of this filter could require adjustment of the setpoints as follows: The Stall Detector Board outputs an analog voltage (displayed as “Stall Detector Voltage” on the VGD Screen) that represents the magnitude of stall noise present. When it reaches the value programmed as the HIGH LIMIT Setpoint (typically set to 0.8vdc), the VGD closes until the voltage decreases to the LOW LIMIT Setpoint (typically set to 0.6Vdc). Since the filter causes the “Stall Detector Voltage” to run 0.2 to 0.3vdc lower than STANDARD mode for the same condition, it may be necessary to lower the HIGH LIMIT and LOW LIMIT Setpoints if valid stall conditions are not being detected or surge occurs before stall is detected. Ideally, stall should be detected before surge occurs, allowing the VGD to react prior to surge. Also, since the PRV POSITION – VGD INHIBIT setpoint was the original vehicle to avoid VGD reaction to high gas flow/low head conditions, this setpoint should be set to 95% or 100% to avoid interference when ENHANCED mode is selected.

- STANDARD Mode – This mode should not be used unless under the advisement of Johnson Controls Tech Support.