



Ducted Systems Technical Services Service Tips Letter

Letter: **ST-003-2021**

Date: February 17, 2021

To: Ducted Systems (Factory Direct) S1 HVAC Branch Service, Sales, Warranty Managers
Ducted Systems (UPG/Applied) Distribution Service, Sales, Warranty Managers
BSNA Service and Sales Managers

Subject: **Premier Modulating Gas Heat Lockout**

Product: **Premier RTU (Model GV, GZ, GS, GT, GX) with Modulating Gas Heat**

Summary: **Some modulating gas heat systems have been found to short cycle on what appears to be a lockout fault however the furnace never locks out. Fault A03 on the modulating heat control is displayed with a “Furnace 1 lockout” message on the unit display.**

It has been reported that some Modulating Gas Heat units are short cycling 5 minutes on and 5 minutes off. The Unit display shows “Furnace 1 Lockout” but when the modulating heat control is checked it shows “OFF”. This has been identified as a twofold problem. **First**, the modulating control monitors inducer pressure and when the pressure falls below a minimum setpoint related to the heat command, the module begins to increase inducer fan voltage. If at the end of 5 minutes, the pressure hasn’t risen to at least the minimum pressure setting, the control enters a “Derating” mode and issues a diagnostic code of A03 (Insufficient combustion air). This code is NOT a fault code, it is a diagnostic code issued to provide assistance in troubleshooting the heater. **Second**, when this diagnostic code is issued by the modulating gas heat control board, the unit controller interprets this as a fault code and shuts down the heat, staged heat command drops to 0, and “Furnace 1 Lockout” is displayed on the unit controller. Once the heat shuts down the modulating heat control board exits “Derating” mode and the A03 code is removed. Seeing the code removed, the unit controller fault resets itself and the staged heating command is reinstated. Gas heating resumes in normal operating mode and the cycle repeats.

This cycle is repeated approximately every 10 minutes (5 operating, 5 off). If this sequence is found on a unit please verify the codes being displayed both on the modulating gas heat control as well as on the unit display. Report this issue to Product Technical Services (PTS) at the number 877-874-7378 and choose prompts to reach Large Commercial queue or email CG-upgtechsupport@jci.com being sure to provide unit model and serial numbers and a return telephone number, and a case will be logged. There is no fix for either part of this problem at this time however our engineering team and the heat section manufacturer are working on a resolution. When a corrective action is reached, all documented cases will be notified.

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