



Ducted Systems Technical Services Service Letter

Letter: **YS-005-2018**

Date: August 30, 2018

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

Subject: 16 SEER Heat Pump AOC Control Board Logic Error

Product: **Residential YHM, CH16 & TH16 16 SEER Heat Pumps**

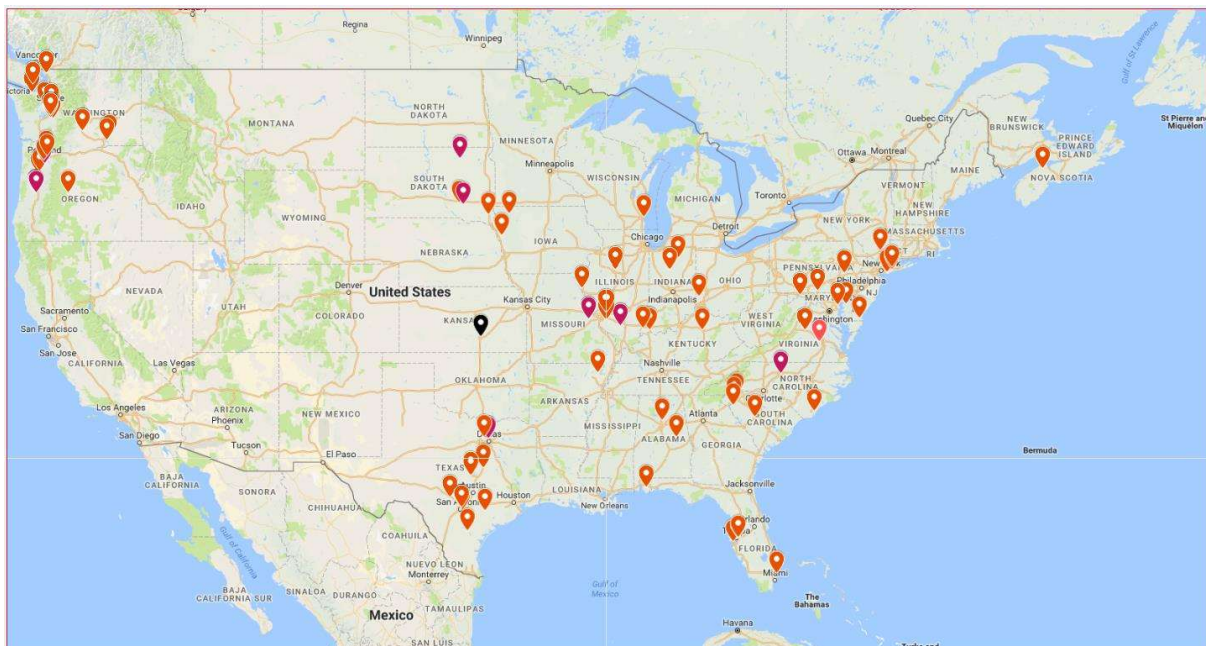
Effective: **August 30, 2018**

Expires: **August 30, 2021**

Warranty: Final warranty claims referring to this service letter must be submitted no later than 90 days after the expiration date noted above.

Summary: **This service letter provides information regarding a logic error found on the AOC control board that is used on the 16 SEER Heat Pump models listed above.**

During our investigation into the FC26 issues that are being reported on the 16 SEER heat pumps, we found a logic error in the AOC control board that would incorrectly recognize the fault upon the exit of 4-6 consecutive defrost cycles. The system would enter a retry operation but if three faults occur in a 12 hour time period, the unit will lockout. The conditions found to create the fault were operation in heating for over 12 hours where the thermostat call was not satisfied due to a high building load and under heavy defrost conditions. The logic error was replicated in our test chambers on multiple unit sizes and a solution validated at the same conditions. Below is a site map of where these conditions were reported to us this past heating season.



This logic error is present on the AOC control boards used on all 2, 3, 4 & 5 ton models of the 16 SEER heat pump model families listed above and has existed since these units first went into production. This AOC control board logic issue is not related to the IGBT failures that we are experiencing on the 3 ton inverter drives. We are continuing our investigation into that issue with the vendor and will publish a service letter regarding that issue once we determine a root cause.

AOC control boards that contain the correct logic can be identified by software revision code that is placed on the CSA label shown in figure 2. Boards with the correct logic will note software version 1.01 on the label. The vendor is currently producing control boards for us with the new software logic and will indicate the software version on the CSA label has mentioned above; however, the SAP part number will still show as 5143958 (as shown in the red square of Figure 1). Eventually, the SAP part number will change to 5539148 which will be printed in the same location of the red square box in Figure 1. All of the control boards we had on hand in Source 1 inventory are being reflashed with the new software by the vendor and will also contain the CSA label indicating the software version 1.01.

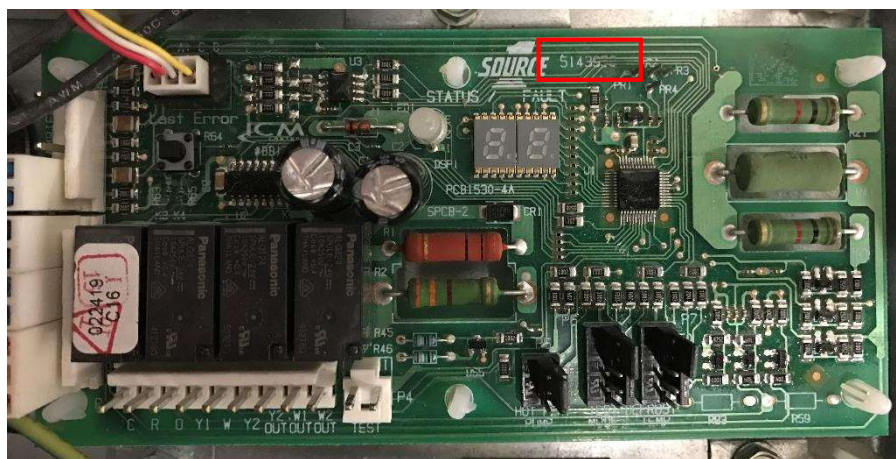


Figure 1 – Part number Location



Figure 2 – Reflashed Identifier

Distributor Inventory

Any units you have in your inventory will contain this logic error and need to be addressed. We will offer the option of paying you to rework your inventory by replacing the control boards or returning your inventory to Wichita for rework. If you chose to return your inventory, please contact your Customer Service Representative and request an RA. Note that they will need to know the serial numbers of the units you are returning to prepare the RA.

If you chose to rework your inventory, we will reimburse you a fair and reasonable allowance for time and expenses to inspect your inventory and to implement the rework. Submit a spreadsheet indicating the model and serial numbers of the units inspected and/or reworked to Mark Freund at mark.w.freund@jci.com. Make sure you provide the amount of time spent performing the inspection, rework, labor cost and any associated charges. Upon review and approval, we will issue a lump sum credit to your account.

Field Installed Units

Units installed in the field (that were produced prior to September 1, 2018 (W1K8 date code) should have the AOC control board replaced to prevent this nuisance fault. This service letter will allow one hour's labor time plus credit for the control board. Make sure the dealer references this YS letter when filing their claim.

Repair Parts

If you have any stock of these control boards (S1-33103500000) in your inventory, please contact your Source 1 account rep and request a Return Authorization so that you can get credit for those parts. We will want any of these boards you are receiving credit on returned to the Warranty Return Center at the following address:

Johnson Controls Inc.
801 E. 37th Street North
Building 6, Dock 12
Wichita, Kansas 67219
Attention: Eric Joseph

Please use UPS Ground (account # 89V4F9) when shipping these controls back to us.

We will advise further information regarding the IGBT failures being experienced on the 3 ton models as soon as it becomes available. In the meantime, please feel free to contact the undersigned or anyone in the Residential Technical Support group at 877-874-7378 if you have any questions.



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Johnson Controls Ducted Systems
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Shawn Hern
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