

SERVICE BULLETIN

International Comfort Products

TM



Number: SB16-0018

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Revision:

Expires:

Title: Software Enhancement Single
Stage Control Boards

Category: Informational

Dept: Quality

Dealer Bulletin Number: DB16-0018

Product Category : 35" Tall Condensing Gas Furnaces

MODELS AFFECTED:

N9MSB	N9MSE	*9MXE	F9MES**	WFSR	WFAR	R9MSB
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**Export Model

Serial Number(s): Beginning with serial number A1640

SITUATION:

The inducer housing pressure switch (HPS) on some single stage furnaces can open during furnace operation. Site visits and testing have determined there are several causes to this issue and are not limited to: oversizing of the furnace, incorrect venting, incorrect condensate piping, drainage and water droplets from condensed flue gas migrating into the inducer housing pressure port.

However, under some conditions, water droplets can briefly pass over the pressure switch port of the inducer assembly. The condensation droplets momentarily block the pressure signal from the inducer assembly to the Housing Pressure Switch, causing the pressure switch to open. While this is not a common occurrence, it can occur even if all other installation related items are correct.

This situation is easily identifiable by intermittent fluctuation of pressure at the inducer housing pressure when a mannehelic gauge is connected to the inducer housing pressure switch port. The pressure at the inducer housing will briefly drop below the break point of the switch, then quickly rise back up above the make point of the switch. If this happens several times in succession, the mannehelic appears to be "bouncing", hence the term, "pressure switch bounce".

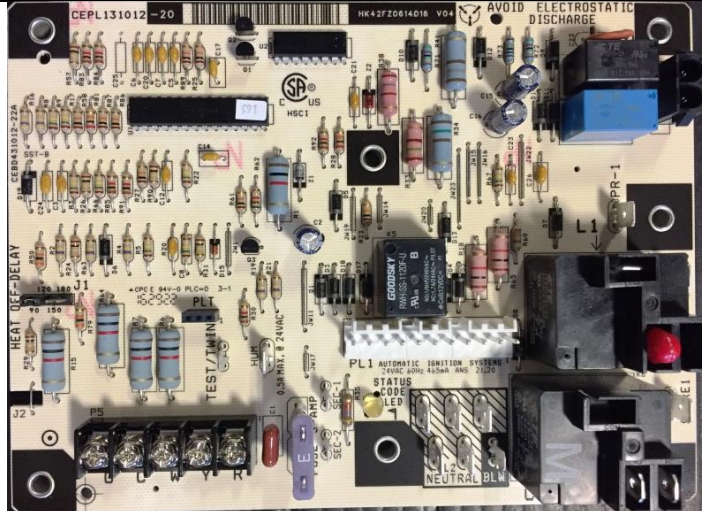
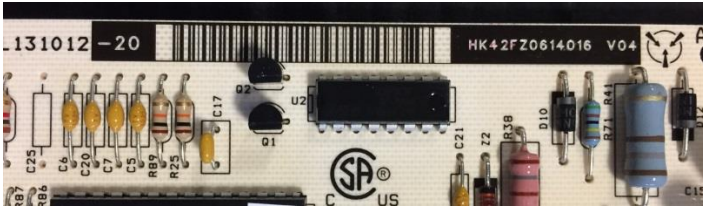
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SOLUTION:

To improve furnace performance and reduce incidents of Status Code 3 caused by nuisance pressure switch trips, a four second time delay has been added to the control board software. This time delay will allow the furnace control to briefly ignore the signal loss from an open Inducer Housing Pressure Switch. If the signal loss time is greater than four seconds, the furnace will go through the normal Code 3 routine. Testing has indicated that a four second delay is long enough for all nuisance pressure switch trips due to pressure fluctuations in the inducer housing. These pressure fluctuations are caused by large water droplets passing over the Inducer Housing pressure switch port and are not indicative of a true loss of pressure in the inducer housing.

This enhancement builds on the first software enhancement covered in I084. These controls will continue to incorporate the software enhancement covered in I084.

All condensing single stage furnaces are now being produced with a software version label. The single stage furnace control boards can be identified by a software version label, for example, V04 on the control board after the barcode and vendor part number:

Example of Single Stage Control Board	Example of Barcode, Software Version, vendor Number & Date Code
	<p>In this example: The software version is 04 The part number is 1186115 vendor # HK42FZ061 Produced in week 40 of 2016 Note: See Table 1 for production date codes</p> 

Factory production of furnaces with this software version began on Week 40, of 2016. A list of control board part numbers and software version numbers are shown in Table 1 below.

FACTORY ACTION: None

DISTRIBUTOR ACTION: None

FIELD ACTION:

If a furnace is not experiencing code 3 from nuisance pressure switch tripping, no action is necessary.

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If a furnace is experiencing nuisance pressure switch trips (Code 3), first verify all furnace and vent installation issues have been corrected. If the furnace continues to have nuisance pressure switch trips (Code 3), replace the control board with a board that contains the latest software as described in the Solution section. Refer to Table 1 for control board part numbers and software version numbers.

Additional information on venting, condensate piping and Code 3 is covered in the following field communications:

Service Managers Bulletins		Technical Information Communication	
I079	35" Condensing Gas Furnace Nuisance Pressure Switch Tripping	TIC2013-0007	New 35" Condensate Furnace Condensate Drain
I080	35" Condensing Gas Furnace Revised Vent Requirements	TIC2014-0002	Residential Furnace Concentric Vent Freezing
I081	Revised Inducer Housing Pressure Tap		
I084	Software Enhancement for Code 31 Issues		
I085	35" Condensing Gas Furnace Vent Tables and Requirements		

Parts/Kits:

The current FAST parts inventory of single stage control boards has been exchanged for control boards with the latest software. The individual boxed controls will be initially marked with a colored dot near the label on the box. The colored dot will be eventually phased out when a new, yet to be determined marking method is implemented.

Single Stage Control Board part numbers and software version numbers:

Control Board Vendor Number and Part Number	HK42FZ047 1184412	HK42FZ062 1186024	HK42FZ036 1184783	HK42FZ045 1184594 (Export)
Software Version	Version 6	Version 4	Version 4	Version 4
Control Board Date Code	4016	4016	4016	4016
Table 1				