



PRODUCT BULLETIN

North America HVAC Systems & Service

Date: 3/18/2016

Subject: 3-27.5 Ton 48 Series Gas Design Change

Dept: RCS

Number: 111-16-04

Product Model Number(s):
48TC, KC, HC, LC
RTU's 3-27.5 ton

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All 3-27.5 Ton 48 Series Gas Design Changes

To help comply with new safety standards and improve upon gas heat combustion air flow sensing in our Weather Series (48) Gas Heat models, we are announcing some great modifications on all 3 to 27.5 ton rooftops starting with production on April 4, 2016.

Please see the below information and the attached 'Technical Supplement' for more details:

Product Improvement	Current Design	New Design
Proof of combustion air	Hall effect sensor (sensor at end of the inducer motor)	Pressure Switch
Integrated Gas Controller (IGC)	Designed for Hall Effect sensor	Designed for pressure switch plus meets new UL standard
Ignition wire connection to the IGC board	Stick pin design	¼" spade connection
IGC Part Number (not interchangeable)	LH33WP002 (460/575) LH33WP003 (208/230)	LH33EP001 (All voltages)

OTHER IMPORTANT NOTES:

- There are NO performance or electrical rating changes
- There are NO warranty or price changes
- There are NO change in sequence of operation (just how combustion air is sensed)
- Production will start April 4, 2016 (serial number 1516)*
- Each gas heat unit mentioned here will have a special installation packet insert to draw attention to this change. Catalog Number is: IGC-TS-01SI
- Although there is little mention of the 'Hall Effect' design in our support material today, we will be updating to include this change. We also will be updating our Bynum Training manuals. Watch for separate notice.
- Designs between current and new are not interchangeable or backward compatible.

*Models below were produced as our pre-production run and also include the changes mentioned above:

Model Number	Serial Number
48TCDA04A2A5-0A0A0	4015C51337
48TCEA04A2A6-0A0A0	4015C51338
48TCDA07A2A6-0A0A0	4015C84415
48TCEA07A1A5-0A0A0	4015C84416
48TCDA05A2A6-0A0A0	4015C51568
48TCEA05A2A5-0A0A0	4015C51569
48TCEA06A2A5-0A0A0	4015C51570
48TCDA06A2A6-0A0A0	4015C51571
48TCFA07A2M1-0B0A0	4015C87848
48TCFA06A2M1-0B0A0	4015C87849

INTEGRATED GAS CONTROLLER – IGC BOARD AND FLUE GAS PRESSURE SWITCH

Technical Supplement NOTICE

This unit contains an upgraded Integrated Gas Controller (IGC) board. This control board implements a “Flue Gas Pressure Switch” that senses pressure drop in the heat exchanger due to the combustion inducer. Prior models utilized a “Hall Effect” sensor built into the inducer motor.

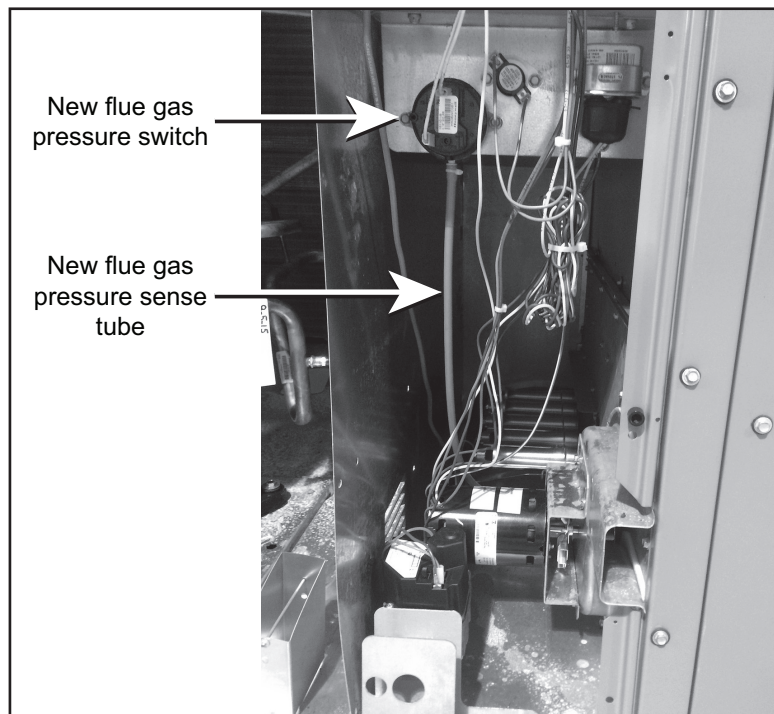


Fig. 1 - Flue Gas Pressure Switch and Pressure Sense Tube - Typical Location

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SEQUENCE OF OPERATION

When the thermostat calls for heating, power is sent to W on the Integrated Gas Controller (IGC) board. An LED (light emitting diode) on the IGC board turns on and remains on during normal operation. A check is made to ensure that the rollout switch and limit switch are closed, and that the pressure switch is open. If the check was successful, the induced draft motor is energized. When the pressure in the heat exchanger is low enough to close the pressure switch, the ignition activation period begins. Once ignition occurs, the IGC board will continue to monitor the condition of the rollout switch, the limit switches, the pressure switch, and the flame sensor. Assuming the unit is controlled through a room thermostat set for “fan auto”, 45 seconds after ignition occurs, the indoor fan motor will energize, and the outdoor air dampers will open to their minimum position. If the “over temperature limit” opens prior to the start of the indoor fan blower, the IGC will shut down the burners, and the control will shorten the 45 second delay to 5 seconds less than the time to tip the limit (e.g. – if the limit trips at 37 seconds, the control will change the “fan on delay” from 45 seconds to 32 seconds). Once the “fan on delay” has been modified, it will not change back to 45 seconds unless power is reset to the control. On units with 2 stages of heat, W2 closes and initiates power to the second stage of the main gas valve when additional heat is required. When the thermostat is satisfied, W1 and W2 open and the gas valve closes, interrupting the flow of gas to the main burners. If the call for W1 lasted less than 1 minute, the heating cycle will not terminate until 1 minute after W1 became active. If the unit is controlled through a room thermostat set for fan auto, the indoor fan motor will continue to operate for an additional 45 seconds, then stop. An LED indicator is provided on the IGC to monitor operation.

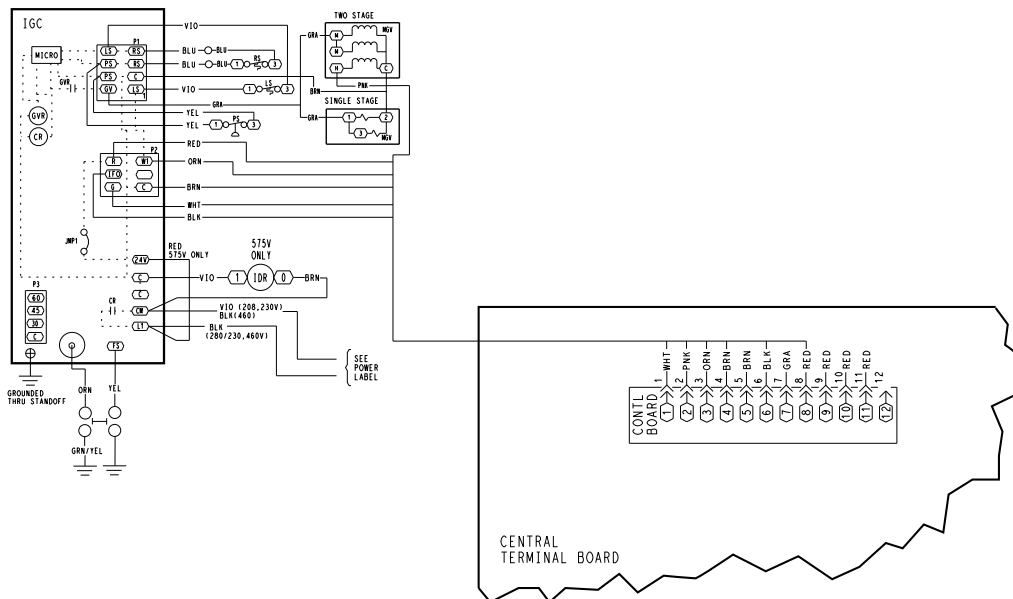


Fig. 2 - Typical IGC Control Wiring Diagram

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NOTE: For details pertaining to a specific unit, see the Wiring Diagram label on the unit.

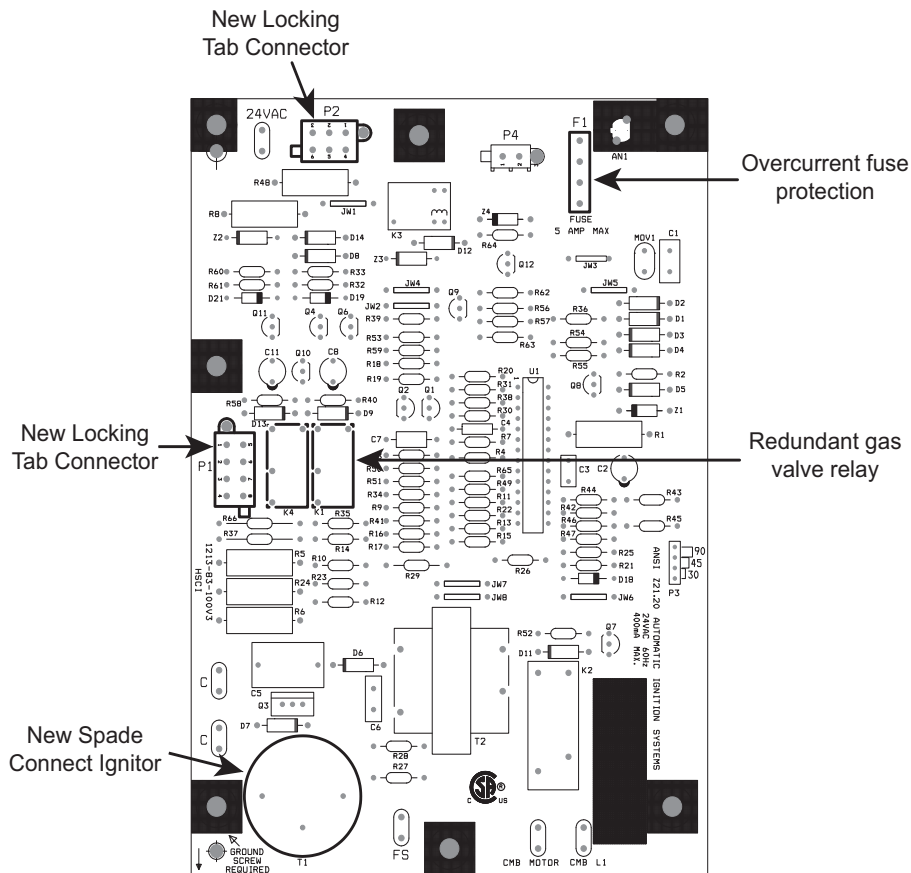


Fig. 3 - Component Layout of New Designed Integrated Gas Control (IGC) Board

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Contact your local TOTALINE/FAST PARTS expert for required replacement parts.