GOODMAN TECHNICAL SERVICES

# GoodNews Tech Tips

VOLUME 3, ISSUE 2 MAY 2012

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**NATE Certification**

**Goodman encourages and supports HVAC contractors who earn NATE Certification. The NATE badge is a symbol recognized by an ever-increasing number of homeowners as the official mark of technician excellence.**

## 2012 Technical Services Managers' Meeting

Goodman's Technical Services Department would like to thank all of you who attended our 2012 Technical Services Managers' meeting. This year's meeting was held April 16 - 17 in Nashville, TN at the Sheraton Music City Hotel. In attendance were 16 Company-Owned and 61 Independent technical service and training managers.

The Technical Services' department was pleased to offer NATE continuing-education credit hours for various presentations given at the meeting. The guest-speaker presentation and the product-information presentations were NATE certified for a total of six continuing-education credit hours.

Day one of this year's meeting was prefaced in the morning with a tour of the Fayetteville, TN plant and engineering labs. The meeting itself began in the afternoon in Nashville, TN. Marshall Blackham, Vice President of Quality, spoke on Goodman's Quality Vision. Joe McAbee, Director of Logistics, and Daniel Rawson, Project Manager, gave a presentation on the new warranty system, which garnered a lot of interest and questions; and James Richter, Field Training Coordinator, gave an overview of the new Technical Training section in PartnerLink. The Technical Training section contains information on upcoming technical training classes, copies of training presentations, as well as information on upcoming webinars and instructions on how to register for these webinars.

Christopher Mohalley of HVAC Dynamics was this year's guest speaker. Christopher gave a very dynamic, engaging presentation on the importance of continual technical training with an emphasis on system air-flow awareness titled "Training Contractors to be Craftsman."

Day two of this year's meeting was a full day devoted to product-information sessions covering the furnace, split system, package and light commercial groups. Presentations were given by the Goodman product specialist for each product group, and the product manager and selected engineers for each group were available for questions and answers. In addition, there were representatives from FasTest, Nidec-Motor, McDaniel Metals, Emerson, EWC Controls and Honeywell who presented on various products and were also available for questions and answers.

An online survey was sent out on April 19, 2011 to all those who attended the meeting. We rely on your feedback to continue improving these meetings; so, please take a minute to fill out the survey.

If you were unable to attend this year's meeting, all presentations are available online in PartnerLink under the Technical Training section in the Technical Training Presentations folder.

Thank you again to all those who attended this year's meeting, and we look forward to seeing everyone at the 2013 Technical Services Managers' meeting in Houston, TX.



Goodman Air Conditioning & Heating

# LAKT Low-Ambient Kit Instructions

We recently have made changes to our LAKT01, 02 and 03 kits. These kits are currently used as field or factory option on all Goodman® brand light commercial CPC*, CPG* and CPH* package unit models. The LAKT 01 is also used as a field accessory on Goodman® and Amana® brand GSX11090/11120, GSZ11090/11120, GSC10090/10120, GSH10090/10120, G/VSX13*, G/VSZ13*, GSX14*, GSZ14*, SSX14*, SSZ14*, SSX16*, SSZ16*, ASX13*, ASZ13*, ASX14* and ASZ14* split system units.

The changes to the kit are as follows:

- IO-709E has been updated with new mounting instructions for the control.
- New mounting bracket Part # 0121M00047 has been added to the kit.
- The low ambient kit will now be pre-set at the factory with a label placed over the adjustment screws to prevent field adjustment.

**Note:** Although the LAKT01 kit is used on Commercial, Package and Split System units, the new bracket supplied in the kit will not be used on split system applications. If you have older kits already installed in the field, the proper settings should be set as depicted in Figure 1 (Cutout speed set to max or fully clockwise and hard start set between min and max range). Figure 2 shows the location of the factory preset label.

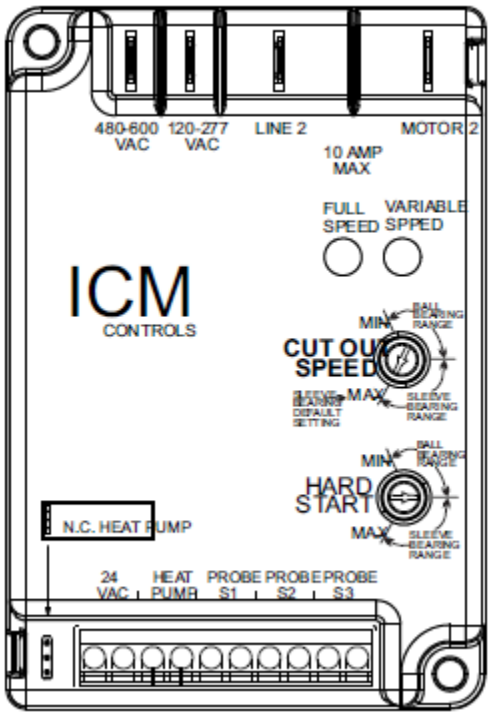



**Figure 1**

**Figure 2**

**Note: Altering these settings can greatly reduce the life of the motor.**



Goodman® Air Conditioning & Heating

# New Generation ARUF and ARPT Air Handlers

New generation ARUF and ARPT air handlers are currently being introduced. The re-design improves the performance, quality, reliability and marketability of the existing AR** product line. The ARUF units are equipped with flowrators, which can be used with the existing R22 and standard R410A units; and the ARPT units are equipped with a non-adjustable TXV which will be used on R410A units only.

The new air handlers will have the following standard features.

1. Units are available in B, C, and D chassis widths.
2. All units are 21” in depth.
3. Units have a metal frame and all components are attached to the frame and not to the wrapper.
4. No screws are on the sides or back of the air handlers. All screws are on the front.
5. Units are easily converted from upflow to downflow or horizontal airflow.
6. Redesigned drain pan holds minimal water.
7. Redesigned filter frame uses standard size filters.
8. Knockout in front coil panel to accommodate installation of UV light. New HKS heat kit for new ARPF/ARPT air handlers only. HKS heat kits are not backwards compatible.

Plans are in development to introduce other single-piece air handlers in the new generation design with the ASPT units being introduced in mid- 2012.

# AR Air-Handler Service Coils

Copper corrosion on hairpin bends caused by copper contamination on foil insulation was found on retuned air-handler aluminum service coils. Goodman designed a plastic cover **(Picture 1)**, as a temporary solution, that went into production on January 1, 2012. The permanent solution of metal return bend covers **(Picture 2)** on all air-handler service coils went into production in February, 2012.

**Picture 1**

**Picture 2**

Note: The plastic cover must **not be removed** in order to prevent future tube corrosion. These covers should eliminate any chance of copper contamination when replacing original copper coils with aluminum service coils. Care always should be taken when switching from copper coil to aluminum coil to minimize copper contamination to the aluminum coil.

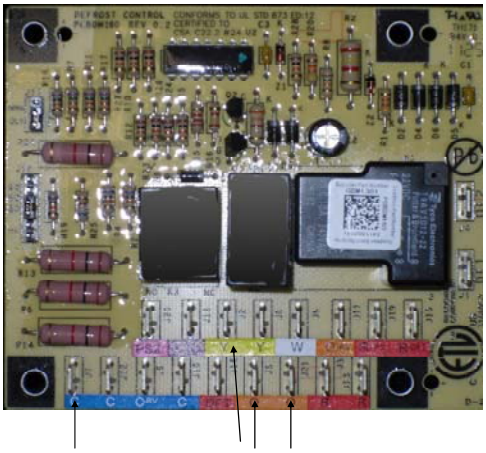
# PCBDM 160 Control Board

Over the past few months, we have received numerous phone calls from technicians who are having trouble wiring the new PCBDM 160 control board which replaces the PCBDM 133 control board.

To turn off the system when using a float switch on the split system, Goodman recommends breaking the RED wire going to the thermostat instead of breaking the Y terminal going to the condensing unit.

All of the terminals of the PCBDM 160 board are the same except for four terminals that were added to accommodate the two- stage commercial units and the single-stage heat pump systems (see picture below).

## PCBDM160



**Arrows indicate location of new terminals on the PCBDM 160 control board.**

Features of the PCBDM 160 Control Board:

- A soft-shift delay built into the board which can be selected for delay or for normal.
- A three-minute time delay on start up or loss of power.
- A 30, 60 or 90 minute defrost cycle (The factory setting is 60 minutes.) Each cycle can be selected by moving the jumper pin to the desired time.
- The board accumulates run time, and if the defrost sensor is closed, it will go into a defrost cycle. The board will terminate the defrost cycle after 12 minutes.
- The jumper pin can be moved to the test leads in order to test the defrost board.



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# Training Website Enhancement

"The biggest room in the world is the room for improvement." (Author unknown)

As technology advances, improvements in every aspect of life are always a certainty. Products we use today are upgraded at a steady rate. Many who have served the HVAC industry for a number of years can recall the advancements in efficiencies, controls, and mechanics. The information behind this new technology must be understood by all who sell and service the products.

One method used to relay this information is training presentations made available online to all who are associated with Goodman® products. The online website has been redesigned so that the information is structured into a more user-friendly format. All training materials are organized under specialized or topical categories making them easier to locate. The information below will guide you through the various pages of the website.

To access the training information:

- Log onto the Goodman® or Amana® PartnerLink site.
- Then select the Technical Training tab at the top of the page or the Technical Training link in the menu bar on the left. This will direct you to the Training Documents page.

All information is now listed under three major categories:

1. *Organizational Documents* contains agenda and promotional materials that are relevant to the technical training program, such as the Technical Training Program Brochure and the Webinar Registration Flyer, all of which can be printed and displayed at company-owned and independent distributors.
2. *Technical Training Presentations* contains PowerPoint and PDF documents used for classroom or individual education. This category is broken down into four subcategories:
    a. *The General* subcategory contains training topics that cover vital technical subjects and specialized areas of interest such as R-410A and Evacuation and Charging.
    b. *The Product Specific* subcategory contains Goodman and Amana product training which is searchable by the following category types: Controls, Furnaces, Indoor Air Quality, Mini Splits, PTAC, and Packaged Units and Split Systems.
    c. *The Component Troubleshooting* subcategory deals with the understanding and diagnostics of individual parts functioning within the heating or cooling system, such as Compressor Troubleshooting and ECM Motors.
    d. *The Additional Presentations* subcategory contains technical training materials from the yearly Technical Services Managers' Meeting and other specialty training.
3. *Specialized Technical Information* contains technical training articles from vendors and contains other relative information that will assist one's understanding of Goodman® and Amana® system components, installation, and operation. The Test Data Sheet and an article on TXVs by Emerson Climate Technologies are two examples of information found in this category.

In conjunction with the web site face lift, a training calendar has been added to the site. This calendar directs employees, distributors, dealers, and contractors to the training of their choice. A filtering capability assists users in locating training by state, topic, type, or training category. Updates on the new training calendar will be coming soon.

We look forward to the challenge of future updates to our website as we add on to the room for improvements. Thank you for your cooperation and have a happy web search.

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**Thank goodness for Goodman™.**

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Heating & Air Conditioning
Amana
Lasts and Lasts and Lasts
™.

**We've become one of the largest manufacturers of residential and light commercial air conditioning, heating, and indoor air quality products and systems by focusing on just one thing-building the most reliable and refreshingly affordable indoor comfort products in the market.**

**The complete line if Goodman brand products are built on the principle of founder Harold Goodman, a former air conditioning contractor.**

**Harold's goal was to manufacture air conditioning and heating equipment that:**

- **Provides industry leading product warranties**
- **Offers greater reliability and longer-lasting performance than competing products**
- **Is designed for quick., trouble-free installations**
- **Makes reliable cooling and heating as affordable as possible.**

**Building our products to Harold's standards, and protecting those products with some of the best limited warranties in the industry, has helped to make the Goodman brand widely recognized as a leading brand in the residential and light commercial heating, ventilation and air conditioning industry today.**

**We're on the web!**

**www.goodmanmfg.com**