# BuildAnInstaller™

The BuildAnInstaller program is an intense, two-week program designed to provide your new hire with the knowledge and confidence to install a system your company can be proud of.

The class agenda below explains how Lennox learning Solutions can mold any installer from little to no experience to a certified HVAC installer.

### **BuildAnInstaller Agenda (Week One)**

#### Day One Theory:

- Safety
  - Personal
  - Job site
  - Tools and equipment
  - Handling pressurized cylinders
  - · Brazing and fire
- Technician Communication
  - Proper appearance
  - Communication
  - Record keeping

## **Day Two Theory:**

- Wiring projects
  - Wiring to loads
  - Wiring switches
  - Wiring Thermostats
    - Gas electric
    - Heat Pump
  - Wiring accessories
    - Float switches
    - Condensate pumps
    - High and low pressure switches
    - Hard start kits
    - Electrical checks on units



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#### **Day Three Theory:**

- Basic Refrigeration
  - o Superheat
  - Sub-cooling
  - o Fixed metering devices
  - TXV metering devices
  - o Approach
  - Charging charts
  - Typical pressures
  - Typical temperatures
  - o Using typical value charts

#### **Day Three Lab Assignment:**

- Hands on Checking of
  - Superheat
  - o Sub-cooling
- · Checking charge using
  - o Superheat
  - o Sub-cooling
  - o Approach
- Determining types of metering devices

## **Day Four Theory:**

- · Gas heating
  - o Basic gas combustion
  - 80% operation and venting
  - 90% operation and venting
  - o Single and multi-stage operation
  - o Gas pressure adjustment
  - o Combustion analysis

# **Day Four Lab Assignment:**

- Check and adjust gas pressures on single and multi-stage furnaces
- Perform combustion analysis on both 80% and 90% furnaces



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- Measure temperature rise
- Adjust blower speeds based on temperature rise

#### **Day Five Theory:**

- EPA Exam
- Recovery of refrigerant
- Measuring liquid line and weighing in charge
- Brazing
- Dryers and filters

### **Day Five Lab Assignment:**

- Recover refrigerant in system
- Calculate charge and weigh in refrigerant
- Hands-on brazing projects

## **Build-An-Installer Agenda (Week Two)**

#### **Day One Lab Assignment:**

- Uninstall multiple Air Conditioning Systems
  - o Recover refrigerant from entire system
  - o Disconnect tubing at condenser and evaporator
  - o Disconnect high voltage wiring (install new disconnect)
  - o Disconnect low voltage wiring
  - o Disconnect condensate drain
  - o Remove condenser and evaporator

## Day Two Lab Assignment:

- Uninstall multiple Furnaces
  - o Disconnect vent system
  - o Disconnect high voltage wiring
  - Disconnect low voltage wiring (run new wiring)
  - o Disconnect condensate drain (90%)
  - o Disconnect gas piping
  - Remove furnace



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### **Day Three Lab Assignment:**

- install multiple furnaces
  - o Connect vent system
  - o Connect high voltage wiring
  - o Connect low voltage wiring
  - Connect condensate drain
  - o Connect gas piping

## **Day Four Lab Assignment:**

- install multiple air conditioning systems
  - Connect tubing at condenser and evaporator
  - Connect high voltage wiring (install new disconnect)
  - o Connect low voltage wiring
  - Connect condensate drain

### **Day Five Theory:**

NATE Installer Technician Exam

