



P R E S E N T S

“Hands-on”
Servicing & Maintaining
Residential Refrigerators

September 11 & 12, 2018

Hosted by the Huntsville Housing Authority in Alabama

THIS TSA WORKSHOP IS DESIGNED FOR:

- **Maintenance Staff who service and maintain refrigerators**

This “Hands-on” workshop is designed specifically for Facility Maintenance personnel. Its focus is on trouble-shooting common problems that occur in refrigerators, which prevent them from cooling properly and, therefore, costing more money to operate.

The fundamentals of a Refrigerator Operating System will be covered early in the workshop so that participants can learn and understand how to differentiate between a rare refrigeration system problem, and the more common problems related to electrical components and air flow. A complete study of wiring schematics and the specifics related to refrigerator electrical components will be explained prior to the “hands-on” procedures. During the “hands-on” portion of the workshop, participants will use meters to test components and to test for specific problems such as: Running but not cooling; Compressors not starting; Units that are not running at all. During the workshop, different types of refrigerators will be covered along with safety procedures that should be followed when servicing them.

In addition to the “hands-on” trouble-shooting and testing of actual refrigerators, the workshop will include an excellent video presentation that takes you through every step of trouble-shooting refrigerators. The video has excellent views of cut-away refrigerators and working parts of the system. All hands-on learning will be performed under the supervision of our experienced workshop leader, who has serviced appliances full time for more than 30 years.

Detailed workbooks that explain HOW TO perform refrigerator trouble-shooting, servicing, and repairs will be provided to each participant, which can later be used as reference material when performing future servicing. **TSA** certificates will be presented to all workshop participants.

A G E N D A

Day One: 8:00 am - 4:00 pm

Day Two: 8:00 am - noon

MAJOR TOPICS THAT WILL BE COVERED DURING THE WORKSHOP:

REFRIGERATION SYSTEM FUNDAMENTALS RELATED TO REFRIGERATORS

1. Compressors
2. Condensers
3. Evaporators
4. Capillary Tube Metering Devices
5. The Refrigeration Cycle
6. Heat Exchangers in Refrigerator Sealed Systems
7. Conventional Refrigerators
8. Cycle Defrost Refrigerators
9. Frost-Free Refrigerators

UNDERSTANDING AIR FLOW SYSTEMS IN FROST FREE REFRIGERATORS

1. Condensing Air Flow
2. Evaporator Air Flow

THE REFRIGERATOR ELECTRICAL SYSTEM AND ITS COMPONENTS

1. Understanding Wiring Diagrams and How to Use Them
2. Compressor Motor Windings
3. Relays and Start Capacitors
4. Compressor Overload Protectors
5. Evaporator Fan Motors

6. Condenser Fan Motors
7. Fan and Light Switches
8. Thermostats
9. Defrost Timers
10. Defrost Termination Thermostats
11. Defrost Heaters

USING METERS TO TROUBLESHOOT REFRIGERATOR ELECTRICAL COMPONENTS

1. Using a Voltmeter
2. Testing Current Draw
3. Understanding Testing for Resistance
4. Understanding Testing for Continuity

SPECIFIC TROUBLESHOOTING PROBLEMS (Hands-on)

1. Refrigerator not cooling, no light, and nothing works, or only the light works
2. Not cooling, compressor runs, or one or both sections are not cool enough
3. Compressor tries to start but clicks off
4. Refrigerator too cold and freezes everything or freezes just in random areas
5. Refrigerator runs too much and water deposits form on walls
6. Freezer has snow on evaporator cover and food section is not cooling enough
7. The cabinet light does not work
8. There is an odor in the refrigerator
9. There is water on the floor near the refrigerator
10. Something electrical smells like it is burning
11. Other problems brought up by the workshop attendees
12. Tips on ordering parts

REGISTRATION FORM

TSA WORKSHOP: Hands-on Servicing Refrigerators

DATES: September 11 & 12, 2018

COST: \$345./person

AMOUNT ENCLOSED: \$ _____

PLACE: Huntsville Housing Authority – Oscar Mason Community Center
149 Mason Court
Huntsville, AL 35805

PHONE: 256-532-5677 (Call for directions, if needed)

NAME & ADDRESS of ORGANIZATION: _____

_____ zip _____

NAME(s) & POSITION(s) of THOSE ATTENDING: _____

PHONE: (____) _____ **FAX:** (____) _____ **EMAIL:** _____

- Please make your own arrangements for travel, hotel, and meals. Suggested hotel is Homewood Suites Downtown (256-539-1445) or Springhill Suites Downtown (256-512-0188). Please ask for the government room rate.
- To register for this workshop, please visit our website: <http://www.trainingservicesassoc.com>. You may also email completed registration form to **TSA** at tsa@trainingservicesassoc.com, or fax it to 520-297-2322
- Please mail this registration form with payment to Training Services Association, 1959 Cassim Ln., Tucson, AZ 85704. Do not hand carry checks or cash to the workshop. **Questions?** Contact Bill Cogley **TSA** Director: tsa@trainingservicesassoc.com, or <http://www.trainingservicesassoc.com/contact-us/>, Phone, 520-297-3868
- In the event of the UNLIKELY cancellation of this workshop, non-refundable airline tickets are purchased at your own risk. Full refunds for the workshop will be provided, if cancellations are made by the registration deadline – August 22nd.

Training Services Association, LLC
1959 Cassim Ln.
Tucson, AZ 85704

Return Service Requested

Attn: Facility Management