



Southern California Regional Transit Training Consortium

SYLLABUS

COURSE NAME: *Servicing HVAC Systems for Transit*

Course Item Number: SC-HV-3000-II

Prerequisites: HVAC I and a thorough understanding of transit air conditioning components and flow. Knowledge of meters and meter testing or equivalent experience.

Course Description: This course is designed to prepare the technician to service the air conditioning systems used on transit vehicles. The class will concentrate on safely performing the service procedures needed to maintain these systems. Through the use of demonstration and practice, this course will enable the technician to successfully deal with changing systems and refrigerants. Integrated into this course is a review of the components used on transit specific applications. The student will be working with the tools and equipment for transit air conditioning service such as, Micron Gauges, Vacuum Pumps, and Recovery Machines. Safety will be emphasized.

Course Benefits: The benefit of this course is for the technician to be able to safely and correctly perform service and preventative maintenance procedures on transit bus air conditioning systems. Trouble shooting and diagnosis require a thorough understanding of these procedures. Students will gain knowledge about the need for the correct tools and properly functioning equipment for the diverse air conditioning systems. The technician would also be able to safely use the special tools and equipment required for air conditioning service.

What you will learn:

1. Safety issues and concerns with Air Conditioning systems;
2. Review of Air Conditioning Components and Flow
3. Air Conditioning Tools and Equipment: Recovery, Micron Gauges, Vacuum Pump, etc.
4. Pressure Temperature Chart Use
5. Service Procedures:
 - Recover, Recycle, Reclaim
 - Checking for Non-Condensables
 - Checking Refrigerant Charge
 - Adding Refrigerant
 - Evacuation
 - Re-charge
 - Compressor Oil Level
 - Compressor Oil Pressure
 - Adding Compressor Oil
 - Compressor Oil Testing
 - Compressor Pump Down
 - Low Side Pump Down

Additional learning:

- Introduction to A/C Tools: Manifold Gauge Sets, Leak Testing, etc.
- Heat, Temperature, Pressure
- Refrigerants and Oils
- A/C Basic Circuit Flow and Function
- Transit Specific A/C Components
- Basic Clutch Circuit and Electrical Testing
- Transit Systems Overview
- Fundamentals of Gauge Diagnosis

Course Times: 7:00 am – 3:30 pm

Number of Days: 2

Continuing Education Units (CEU): 0

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