2019 Technical Training Workshops

MACC

METROPOLITAN AIR CONDITIONING
CONTRACTORS OF NEW YORK

METROPOLITAN AIR CONDITIONING CONTRACTORS OF NEW YORK

123 South Street, Suite 112, Oyster Bay, NY 11771
P: 516-922-5832 | F: 516-922-1414
info@maccny.org | www.maccny.org

MACC MISSION STATEMENT

To assist and enable MACC members to acquire, serve and satisfy their customers by: providing the highest quality technical and management information and services. Promoting good business ethics and sound business practices. Being the standard of excellence by which others are measured. Influencing public policy to improve the business climate enhancing the image of contractor professionalism to government, industry and the public maintaining and expanding MACC's membership base and sphere of influence.

MACC 2018 SEMINARS

The objective of these education classes is to provide tangible value to current and future contractor members of MACC.

TABLE OF CONTENTS

SEMINAR DETAILS

Attendee Pricing:
- MACC Member Attendees: $199 per class
- Non-Member Attendees: $299 per class

Class Size
- There is a maximum of 12 students per class.

Class Location:
Electrical Training Center
65 Elm Street, Copiague, NY 11726
www.electricaltrainingcenter.edu

Registration:
Please visit www.maccny.org to register for classes.

Additional Details:
- All attendees will receive books and literature covering the class topics.
- Students should bring a notebook and pen to class.
- Classes where hands on training is indicated, **students must bring their hand tools**.
- Continental breakfast and lunch will be served at each class.

SEATING IS LIMITED PLEASE REGISTER NOW

TO REGISTER FOR COURSES PLEASE VISIT WWW.MACCNY.ORG OR CONTACT THE MACC OFFICE AT 516-922-5832 OR AT INFO@MACCNY.ORG

MACC TECHNICAL TRAINING WORKSHOP 2019

METROPOLITAN AIR CONDITIONING CONTRACTORS OF NEW YORK

Refrigerants & Devices (8 HOUR COURSE)

WORKSHOP DESCRIPTION

This seminar discusses the refrigerants and oils used in modern refrigeration and air conditioning systems. Today, new technologies and stringent environmental laws are driving changes in the HVAC industry. Older refrigerants that damage the environment are being phased out and replaced with more environmentally-friendly refrigerants. These new refrigerants often require new compressor lubricating oils. These modern refrigerants and oils also have new handling and service requirements with which technicians must be familiar.

THIS SEMINAR WILL BE HANDS-ON (students must bring their hand tools)

JANUARY

26

SATURDAY

8:00 AM - 4:00 PM

Class Location:
Electrical Training Center
65 Elm Street, Copiague, NY 11726

WHAT YOU WILL LEARN

- **Identify the various applications that require specific refrigerant characteristics.**
  - Identify the various applications that require specific refrigerant characteristics.

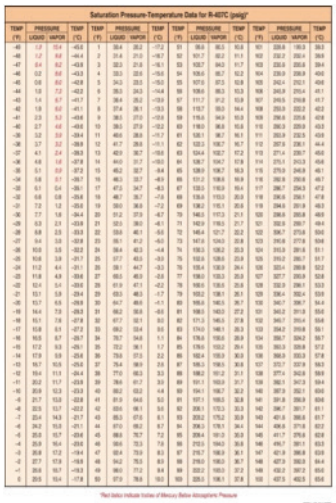
- **Identify various refrigerant classifications.**
  - Identify and describe compounded and blended refrigerants.
  - Identify the safety classifications of refrigerants.

- **Explain how to use pressure-temperature (P-T) charts to calculate superheat and subcooling.**
  - Explain how to use P-T charts for compound, azeotropic,and near-azeotropic refrigerants to calculate superheat and subcooling.
  - Explain how to use P-T charts for zeotropic refrigerants to calculate superheat and subcooling.

- **Describe the important issues related to the function of lubricating oils in the refrigerant circuit.**
  - Identify the important characteristics of refrigerant oils.
  - Identify mineral-based and synthetic oils.
  - Describe issues related to the movement of oil through the refrigerant circuit.
  - Describe the various types and sources of oil contamination.
  - Describe common practices associated with handling, charging, and removing oils.

- **Explain the considerations related to various refrigerant conversion processes.**
  - Identify issues of concern for all refrigerant conversions.
  - Describe common practices related to popular refrigerant conversions.

03301-13_F20.EPS



MACC
METROPOLITAN AIR CONDITIONING CONTRACTORS OF NEW YORK

TECHNICAL TRAINING WORKSHOP 2019

Controls 2 - Circuit and Motor Troubleshooting (8 HOUR COURSE)

WORKSHOP DESCRIPTION

This workshop provides students with information and skills needed to troubleshoot control circuits and electric motors found in heating and cooling equipment. Developing troubleshooting skills for control circuits and electric motors is vital to the future success of trainees in the HVAC/R trade. To that end, a portion of this module is devoted to hands-on practice.

THIS SEMINAR WILL BE HANDS-ON (students must bring their hand tools)

FEBRUARY
23
SATURDAY
8:00 AM - 4:00 PM

Class Location:
Electrical Training Center
65 Elm Street, Copiague, NY 11726

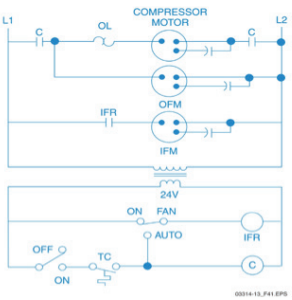
WHAT YOU WILL LEARN

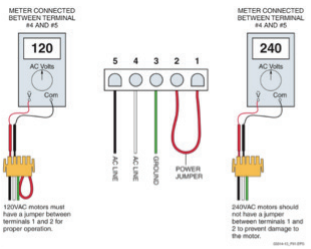
- **Identify and describe the operation of common HVAC control circuit devices.**
  - Identify and describe the operation of relays, contactors, and motor starters.
  - Identify and describe the operation of other common safety and control circuit devices.

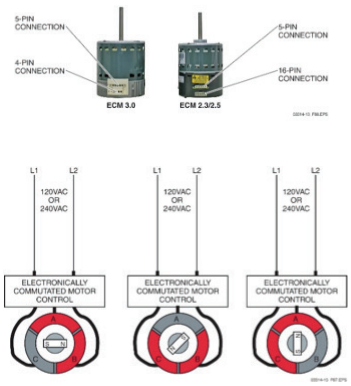
- **Describe the sequence of operation for basic HVAC systems**
  - Describe the sequence of operation of a basic cooling-only system.
  - Describe the sequence of operation for a common heating and cooling system.
  - Describe the operation of basic pneumatic control systems

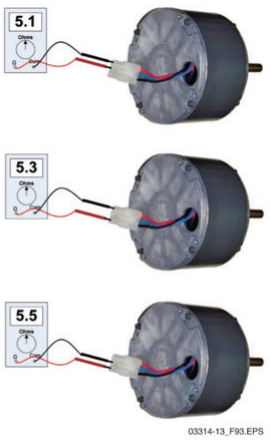
- **Explain how to troubleshoot common control circuits and load components.**
  - Identify basic safety practices related to troubleshooting HVAC power and control circuits.
  - Explain how to approach HVAC-related problems and prepare for troubleshooting.
  - Explain how to test high-voltage power sources.
  - Explain how to troubleshoot control circuits and low-voltage power sources.
  - Explain how to troubleshoot both resistive and Inductive loads, including motors and their related devices.
  - Explain how to troubleshoot various hydronic control system components

- **Describe the sequence of operation for basic HVAC systems**
  - Discuss the safety aspects of electrical troubleshooting.
  - Discuss why an organized approach is necessary when troubleshooting
  - Demonstrate how to use control circuit wiring diagrams to isolate electrical faults
  - Demonstrate how test and/or troubleshoot the required components.









HVAC SYSTEMS AREN'T THE ONLY THING THAT BLOWS HOT AND COLD

EMPLOYEES AND CHANGE DON'T ALWAYS MIX. ARE YOU READY FOR THE MOOD SWINGS? ARE YOU READY FOR CHANGE?

Federal and State Labor & Employment Laws are in a state of flux right now. So much is happening at once. Are you ready for the start of Paid Family Leave? Are you prepared for minimum wage increases? Are you ready to answer your employees' questions?

Rest easy, we've got this. Our team of highly skilled HR consultants and on-site attorneys have got you covered.

HR CONSULTING
TRAINING
EMPLOYEE HANDBOOKS
AFFIRMATIVE ACTION COMPLIANCE
CAREER TRANSITION
LABOR RELATIONS

Toll Free: 800 921 2195 www.pmpHR.com

portnoy messinger pearl & associates, inc.

Ameristar™
HEATING & COOLING

New York: Brooklyn (347) 404-5814 Ronkonkoma (516) 874-7357 Long Island City (718) 269-3632 Plainview (631) 952-9477

New Jersey: Pine Brook (973) 882-3220 South Plainfield (908) 412-1001 Teterboro (201) 489-9001

CONTACT YOUR LOCAL STORE FOR MORE INFORMATION

TRANE Supply

As a leading insurance provider for HVAC Contractors in the New York Metro area, USI's Long Island office brings over 35 years of industry experience to your team. Our dedicated Construction Insurance Specialists provide top quality risk management with bottom line benefits to deliver individualized solutions.

Contact:
Frank Abbatiello & Tommy Williams
Tel: 516-419-4095
Fax: 610-537-4187
Email: Tommy.Williams@usi.com

USI®

Specializing in Insurance Programs For the HVAC Industry for over 35 Years

Trust. Expertise. Commitment
Risk Management Solutions for Plumbing Contractors

MACC
METROPOLITAN AIR CONDITIONING CONTRACTORS OF NEW YORK

TECHNICAL TRAINING WORKSHOP 2019

Air Conditioning Maintenance (8 HOUR COURSE)

WORKSHOP DESCRIPTION

HVAC/R technicians must be familiar with common items such as gaskets, belts and filters. The service and repair of equipment requires technicians to make decisions regarding correct materials to use in specific situations. This seminar will present information related to maintenance-oriented materials, as well as guidelines for the inspection and periodic maintenance with a basic overview of cooling in regards to refrigerants.

THIS SEMINAR WILL BE HANDS-ON (students must bring their hand tools)

MARCH
23
SATURDAY
8:00 AM - 4:00 PM

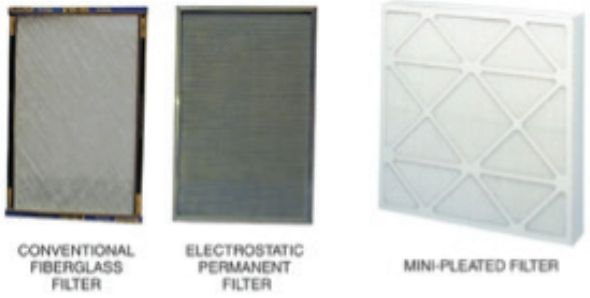
Class Location:
Electrical Training Center
65 Elm Street, Copiague, NY 11726

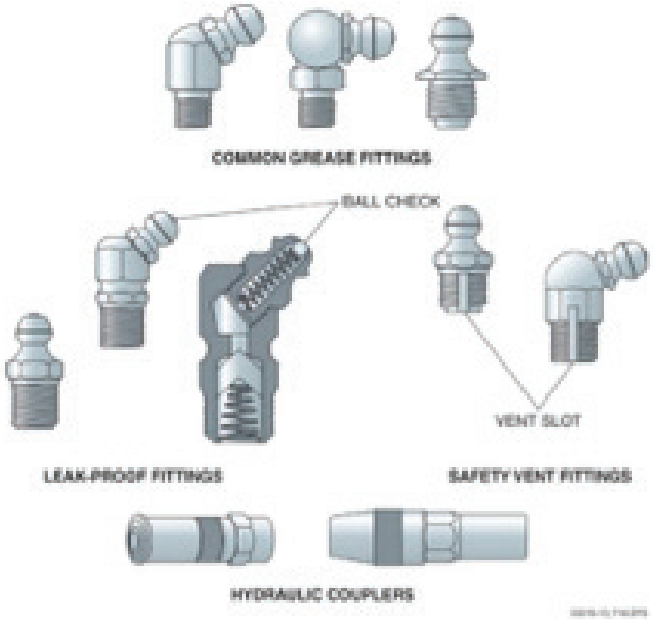
WHAT YOU WILL LEARN

- **Identify different types of belt drives and describe how they are installed and adjusted.**
  - Identify various types of drive belts.
  - Explain how to install & adjust drive belts.

- **Identify and describe common gaskets, packing materials, seals and bearing.**
  - Identify and describe common gasket and packing materials
  - Identify and describe common types of seals.
  - Identify and describe common types of bearings.

- **Describe the inspection and/or maintenance requirements for selected equipment.**
  - Identify common health hazards associated with HVAC maintenance activities.
  - Describe the common inspection & maintenance procedures for DX cooling & heat pump systems.
  - Describe the common inspection & maintenance procedures for various systems accessories.
  - Describe how to properly complete common HVAC service reports.





MACC
METROPOLITAN AIR CONDITIONING CONTRACTORS OF NEW YORK

TECHNICAL TRAINING WORKSHOP 2019

Compressor Maintenance & Repair (8 HOUR COURSE)

WORKSHOP DESCRIPTION

The compressor is considered to be the heart of the HVAC system. It provides the force that moves the refrigerant through the cycle and it raises the pressure of the refrigerants so that the heat absorbed in the evaporator can be transferred again at the condenser. It is important to understand compressors and to know how to service and troubleshoot them. Improper servicing can result in serious damage to the com- pressor, and incorrect problem diagnosis can result in unnecessary replacement task.

THIS SEMINAR WILL BE HANDS-ON (students must bring their hand tools)

APRIL
27
SATURDAY
8:00 AM - 4:00 PM

Class Location:
Electrical Training Center
65 Elm Street, Copiague, NY 11726

WHAT YOU WILL LEARN

- **Identify and describe the operation of various compressor types.**
  - Identify and describe the operation of reciprocating compressors, various hermetic & semi-hermetic compressors, rotary compressors, scroll compressors, screw compressors & centrifugal compressors.

- **Identify and describe various approaches to compressor capacity control.**
  - Identify and describe capacity control methods for reciprocating and scroll compressors.
  - Identify and describe capacity control methods for screw and centrifugal compressors.

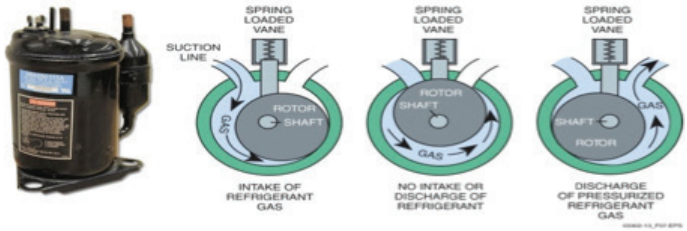
- **Describe common compressor failures.**
  - Describe compressor failures related to the refrigerator circuit.
  - Describe compressor failures related to electrical issues.

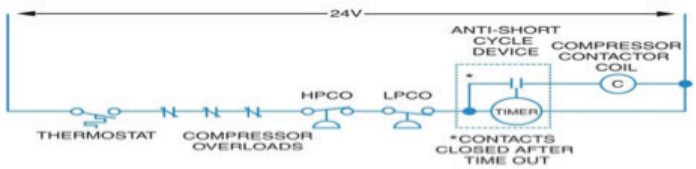
- **Identify and explain the operation of various compressor protection devices.**
  - Identify and explain the operation of various overload devices.
  - Identify and explain the operation of other compressor protection devices.

- **Explain how to analyze the operation of a hermetic compressor.**
  - Explain how to evaluate the mechanical operation of an operable compressor.
  - Explain how to evaluate the electrical operation of an operable compressor.


BEFORE


AFTER
(POSITIVE RESULT)





Commercial & Industrial Insulation

Committed to Service & Quality

Throughout New York and New England

New York City/ Hudson Valley Branch

516-261-9919

atlanticcontracting.com

Branch Locations

Albany 518-272-2715
Boston 508-530-9020
Hartford 860-896-9269
Syracuse 315-453-3766

Atlantic

Contracting & Specialties

Specialty Contracting Services

Mechanical & Plumbing Insulation Contracting
- Commercial
- Industrial
- Power Generation
- Nuclear

Certified Energy Audits/Appraisals
Asbestos/Lead Abatement
Fire Protection/Fire Stopping
Hazardous Waste Remediation
Noise Control
Specialized Fabrication Services

Roof Services

RALPH W. PLOTKE INC. D/B/A

Pre-Job Roof Inspections

Let us inspect the roof before you install new penetrations. This will document all existing problems and you'll never be blamed for a problem that was there before you began.

Warranted Penetrations

Not only does Roof Services stand by the work we do, we are also approved by every major roofing manufacturer in the New York area. That means that no matter what type of roof the building has, we can flash the new penetrations while maintaining the existing warranty.

Water Testing

Is it leaking because of your new unit? Is the roof the source of the leak? Maybe the walls? When the source of the leak is hard to determine, we provide water testing services to positively document which building components are water tight, and which are leaking.

1-800-660-3230

www.roofservices.com

MACC
METROPOLITAN AIR CONDITIONING CONTRACTORS OF NEW YORK

TECHNICAL TRAINING WORKSHOP 2019

Trouble Shooting Gas Heating (8 HOUR COURSE)

WORKSHOP DESCRIPTION

Most homes have some type of heating. Installing and servicing furnaces is a big responsibility. Because flame and combustible fuels are involved, there is a potential for fire or explosion types of equipment for heating shall be installed by manufactures instructions, and periodically inspected and serviced by qualified technicians, they will operate satisfactorily for many years.

THIS SEMINAR WILL BE HANDS-ON (students must bring their hand tools)

OCTOBER
19
SATURDAY
8:00 AM - 4:00 PM

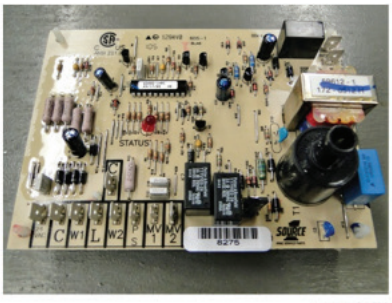
Class Location:
Electrical Training Center
65 Elm Street, Copiague, NY 11726

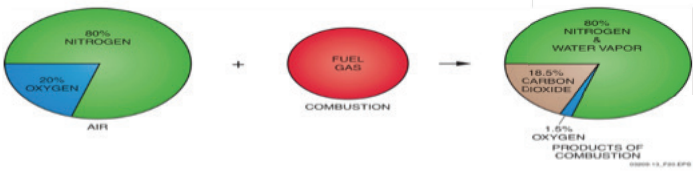
WHAT YOU WILL LEARN

- **Describe the sequence of operation of gas-fired furnaces and boilers and describes how to troubleshoot components related to gas heating.**
  - Introduce the components found in various gas-fired furnaces and boilers and how they interact.
  - Review procedures for troubleshooting individual components and circuits that operate and control gas-fired heating equipment
  - Present troubleshooting information related to system and burner airflow.

- **Explores infrared gas heaters and presents the equipment and procedures related to combustion analysis.**
  - Describe the various types of gas infrared heaters and discuss their operating characteristics.
  - Explain the purpose of a combustion analysis and identify the products of combustion.
  - Identify the tools and equipment required to conduct a combustion analysis.
  - Review the steps to completing a combustion analysis.

- **Students will trainees conduct a combustion analysis on a gas-fired furnace or boiler.**
  - Using a combustion analyzer, demonstrate how to set up the equipment and conduct a combustion analysis
  - Discuss the results of the analysis and explain how to make improvements in the combustion efficiency.





Customer Relations For Technicians (4 HOUR CLASS)

WORKSHOP DESCRIPTION

This 4 Hour workshops will Review, Explain and Practice the skills crucial to being an Efficient, Effective Communicator.

Classes would focus on all of the following topics:

WHAT YOU WILL LEARN

- **NonVerbal Communication.**
  - Appearance
  - Eye Contact
  - Facial Expressions and Body Language
  - Paralinguistics

- **Verbal Communication**
  - Turn-Taking
  - Asking Questions
  - Clarifying
  - Language Use and Code-Switching

- **Customer Skills**
  - How to Prepare
  - How to Make a Good
  - Impression
  - How to Interact
  - How to Speak
  - How to Listen

NOVEMBER
16
SATURDAY
8:00 AM - 12:00 PM
Pricing: $99 member/ $129 nonmember

Class Location:
Electrical Training Center
65 Elm Street, Copiague, NY 11726

03316-13_F05.EPS

SERVICE UPDATE

Local Law 196 of 2017 requires certain workers and supervisors to receive safety training at construction sites that are required to designate a Construction Superintendent, Site Safety Coordinator or Site Safety Manager. Training will be provided by private course providers approved by the Department. The deadlines below indicate an effective date that will be extended to the later date if the Department determines there is insufficient capacity to provide training.

Effective December 1, 2018 or June 1, 2019

Who does not need training?

- Delivery persons, flag persons, professional engineers, registered architects, Department-licensees and Department-registrants (excluding safety professionals) are not required to be trained.
- Workers at job sites that only involve minor alterations or the construction of a new 1-, 2-, or 3-family home are not required to be trained.

NOTES:

- *If you fall into one of these categories but serve as a Site Safety Manager, Site Safety Coordinator, Concrete Safety Manager, Construction Superintendent or competent person, you **must** receive training.*
- *While licensees themselves do not need to be trained, employees working under their direct and continuing supervision do need to be trained.*

NYC Buildings

Information provided by NYC DOB

WORKERS

1. OSHA 30-Hour Class

2. 100-Hour Training Program Approved by the Department

   - At a minimum meets the coursework identified in item 1 or 2 above.

3. Prior Experience (See Note)
   - 4-Hour Fall Prevention
   - 4-Hour Supported Scaffold User

Temporary SST Card (10 Hours)
Expires after six months during which time training must be completed to receive a Limited SST Card or SST Card

1.OSHA 10-Hour Class

SUPERVISORS

Supervisor SST Card (62 Hours)
Expires after five years and renewable upon applicants showing that they have completed 16 training hours specified by the Department (see below) in the one-year period preceding submission of a renewal application

- OSHA 30-Hour Class
- 8-Hour Fall Prevention
- 8-Hour Chapter 33 (Site Safety Manager Refresher)
- 4-Hour Supported Scaffold User
- 2-Hour Site Safety Plan
- 2-Hour Tool Box Talks
- 2-Hour Pre-Task Safety Meetings
- 2-Hour General Electives
- 2-Hour Specialized Electives
- 2-Hour Drug and Alcohol Awareness

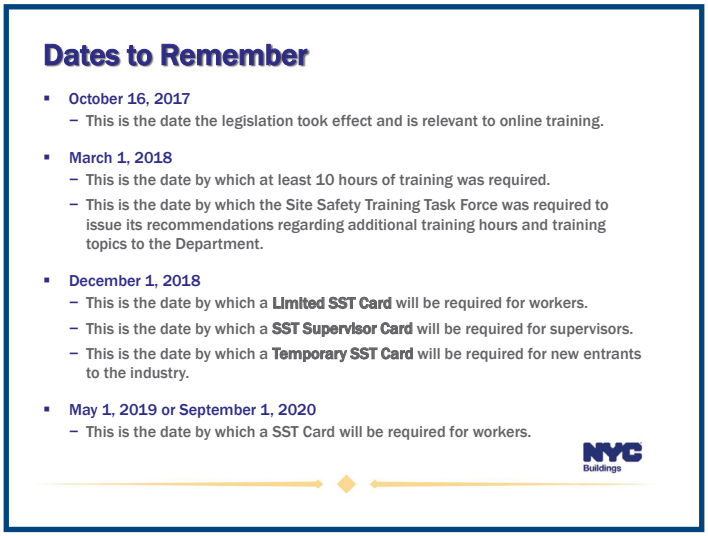
Effective May 1, 2019 or September 1, 2020

WORKERS

SST Card (40 Hours)
Expires after five years and renewable upon applicants showing that they have completed eight training hours specified by the Department (see below) in the one-year period preceding submission of a renewal application

OSHA 30-Hour Class With 10-Hours of Additional Training

- OSHA 30-Hour Class



Information provided by NYC DOB

For additional information and to enroll
Please contact the MACC Office
at 516-922-5832
Or at info@maccny.org

MACC

METROPOLITAN AIR CONDITIONING
CONTRACTORS OF NEW YORK

123 South Street, Suite 112, Oyster Bay, NY 11771

Phone: 516.922.5832 - Fax: 516.922.1414

www.maccny.org

info@maccny.org