

# MULTI-CRAFT maintenance 101

## Multi-Craft Maintenance 101

3-DAY  
TRAINING

### Training Description:

These 3 days of training will establish a foundation of **core competencies** in electrical, mechanical and safety that every maintenance technician must have to be effective and safe. The goal of this training is to reduce your machine-downtime and accidents.

Our Multi-Craft Maintenance Training Program was designed for you, the modern maintenance technician, who is asked to be a jack-of-all-trades. You must perform electrical and mechanical repairs and remain safe at the same time. This course covers *electrical, mechanical, and safety* topics that help build a great foundation for today's multi-craft maintenance personnel. This is not a course on theory; rather it is practical knowledge that will help you everyday. It is a how-to course on keeping your critical systems up and running.

We have been training maintenance personnel for many years and have applied our practical and award-winning training methods to these courses. During development, our own experienced maintenance personnel asked the question, What tasks do multi-craft maintenance technicians regularly perform and what do they need to know to do their jobs effectively?

We will discuss the proper methods of troubleshooting that will remove the frustration you may currently experience. You will learn the proper use of a multimeter, as well as the half-splitting method. We will show you how to stop being a parts-changer and begin being a troubleshooter by sharing with you our many years of experience.

We will also destroy the myths about electrical safety that often come from learning it through on-the-job training. Just because an old-timer says, I've done it this way for years and I'm not dead yet, does not mean it is the right way. A wealth of electrical safety knowledge has been gained in recent years, causing improvements and regulatory changes. We will get you up-to-date so you can go home safely after your shift.

### Training Topics:

#### FUNDAMENTALS OF ELECTRICITY

- Ohm's Law
- Electrical Drawings
- Relays & Contactors
- Motor Control Circuits
- Transformers
- Single-Phase Power Distribution
- Three-Phase Power Distribution
- Three-Phase Induction Motors
- Motor Protection
- Motor Starter Heaters
- Fuses
- Fuse Sizing
- Test Three-Phase Motors

#### HANDS-ON ELECTRICAL TROUBLESHOOTING

- Multimeter Basics
- Component Testing
- Resistance Measurement
- Test Fuses
- Test Coils
- Test Contacts
- Test Contactors
- Test Motor Starters
- Half-Splitting Method
- Measure Voltage
- Building Control Circuits
- Procedures for Troubleshooting
- Troubleshooting Circuits
- Repairing Circuits
- Troubleshoot Live Circuits

#### SAFETY

- Safety Attitude
- NFPA 70E Topics of Interest
- Background of 70E
- Qualified vs. Unqualified
- Hazard Analysis
- Shock Hazards
- Arc Flash Hazards
- Approach Boundaries
- Insulated Gloves
- Insulated Tools
- Flash Protection Boundaries
- PPE
- Fire Resistant Clothing (definitions)
- Fire Resistant Clothing Use

#### MECHANICAL

- Bearings
- Lubrication
- Bearing Replacement
- Belt Tension
- Pulley Wear

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