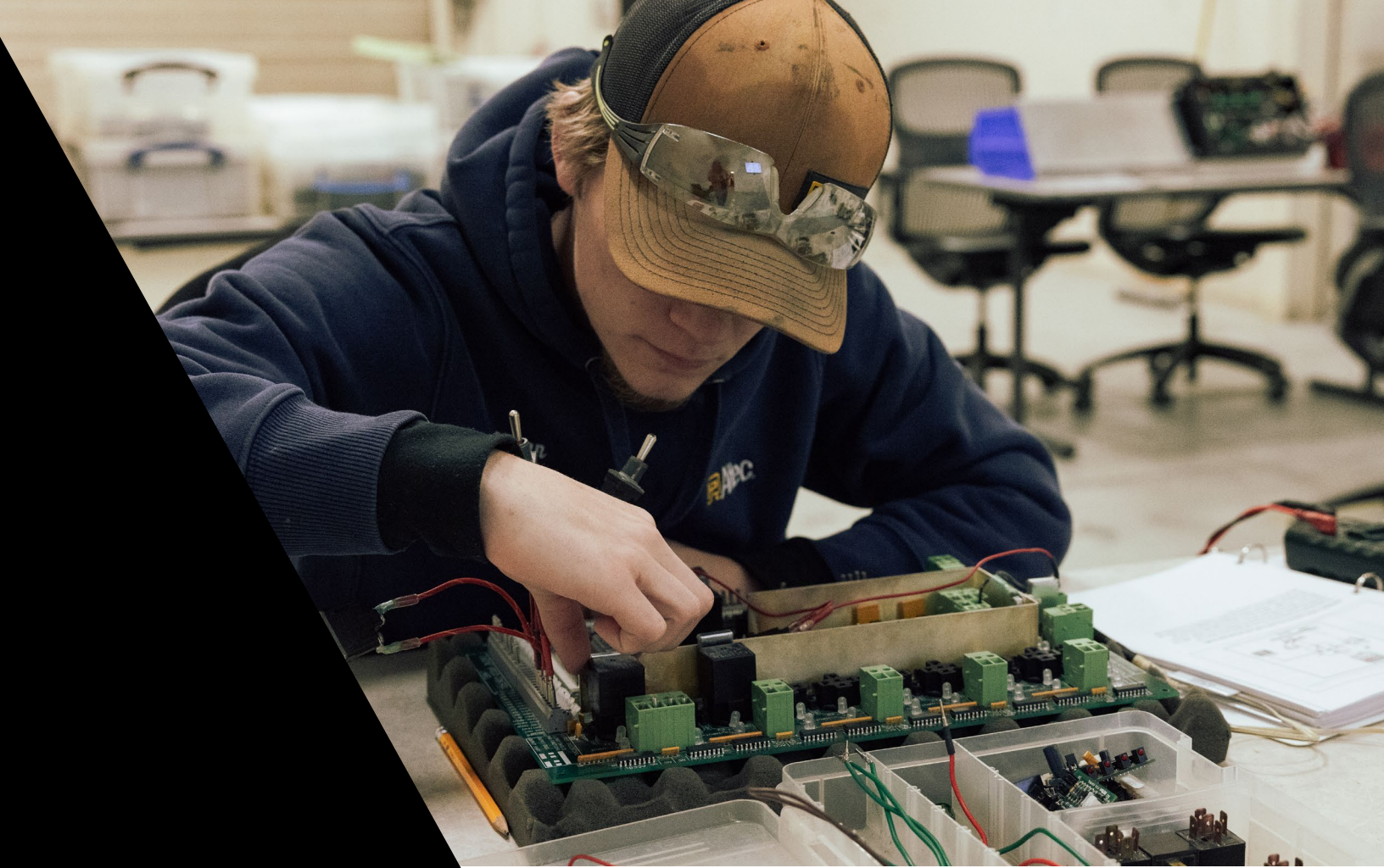




2027

SERVICE TRAINING CATALOG



TABLE OF CONTENTS

Altec: About Us	3
Virtual Maintenance Training Overview	4
Virtual Training	5-11
Altec Service Training: In-Person Overview	12
Basic Training	13-17
Unit Specific Training Explanation	18
Small Aerials	19-38
Large Aerials	39-49
Tree Care	51-55
Telecom	56-60
Lights and Signs	61-65
Digger Derricks	66-80
Specialty Products	81-89
Cranes	91-94
JEMS Training Explanation	95
JEMS	96-110
FPS Mobile Hydraulic Mechanic Certification	111
Course Index	112





Sign Up

You can sign up for individual webinars by contacting the Altec Service Training Department by email at service.training@altec.com or by calling (816) 901-4894.

After registering, you will receive an email. Use the meeting link in the email to attend the webinar at the scheduled time.

ABOUT ALTEC SERVICE TRAINING

Altec Service Training centers around how Altec equipment functions and how it can be maintained and repaired.

In this catalog, you will find details about the following training options:

Virtual Training

- eCourses
- How-To Videos
- Unit Specific Webinars
- Webinar courses/series of courses

In-Person Training

- Basic Training
 - Customer Boot Camp
 - Basic Unit Systems
- Unit Specific Training
 - Small Aerials
 - Large Aerials
 - Tree Care
 - Telecom
 - Lights and Signs
 - Digger Derricks
 - Specialty Products
 - Cranes
 - JEMS
- Mobile Hydraulic Mechanic Certification Test Prep

Customers come first to us. Let us know which service training can benefit you.



Altec is a leading provider of products and services to the electric utility, telecommunications, tree care, lights and signs, and contractor markets. We deliver products and services in more than 100 countries throughout the world.

Since 1929, Altec has been a company committed to excellence. Our products are the industry leaders and consistently raise the bar through innovative product design, integrated safety features and continued dedication to total customer satisfaction.

The history, tradition and culture of Altec are founded on our values:

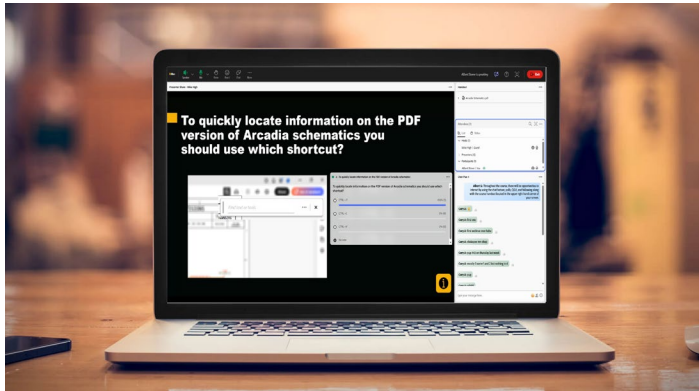
- | | |
|-----------------------|------------------------------------|
| • Customer first | • People are our greatest strength |
| • Enjoyment of work | • Quality |
| • Family | • Spiritual development |
| • Financial stability | • Teamwork |
| • Integrity | |

Altec promotes an environment built on teamwork where knowledge is shared and innovative solutions are the result. The expertise of our team is as critical to our success as the effectiveness of our products and solutions.

VIRTUAL MAINTENANCE TRAINING OVERVIEW

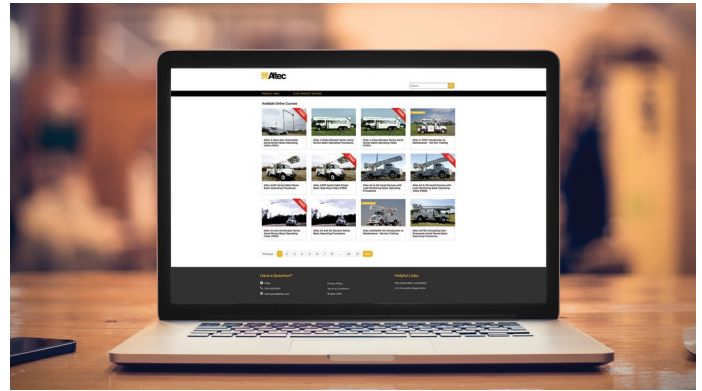
Overview

Interactive maintenance training webinars, eCourses and How To videos are available to help technicians learn virtually about preventive maintenance, hydraulic, electrical, and mechanical systems in addition to troubleshooting and other processes. After signing up, participants can access their upcoming courses, completed courses and training records.



Interactive Webinars

Interactive webinars are facilitated using a web-based virtual platform, virtual learning tools, handouts and real-time instruction. Interactivity and participation are included and encouraged throughout the training. Choose a topic, a series and/or available unit training.



Maintenance eCourses and How To Videos

Technicians can navigate through training on unit systems and components at their own pace 24/7 with eCourses. Short How To videos allow technicians to see a task or process when they need know.



Sign Up

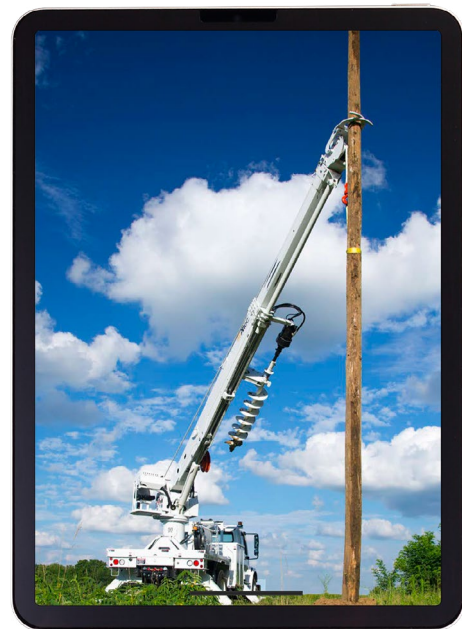
Select from the virtual training options and contact us to sign up. Email: service.training@altec.com or call (816) 901-4894 to learn more, schedule training or request training cost estimates.

These interactive unit specific courses have been tailored to be facilitated using a web-based virtual platform, handouts and real-time instruction. Course length varies based on unit complexity. Cost varies based on course length.



DH-E (16 hours)

The DH-E is an E-Series derrick which has a CAN-based control system providing enhanced machine performance and maintenance troubleshooting capabilities using the AXIS Service Tool. The virtual course is interactive and is divided into two days, covering an introduction, unit specifications, safety, preventive maintenance, hydraulic and the electrical systems.



JEMS S (4 hours)

This virtual training is divided into three parts. Participants will determine how to safely operate and troubleshoot the system, recognize individual components and explore circuits.

JEMS SE (4 hours)

This virtual training is divided into three parts. Participants will determine how to safely operate and troubleshoot the system, recognize individual components and explore circuits.



Sign Up

Tel: 816.901.4894

Email: service.training@altec.com

The 60-minute interactive webinar sessions include virtual learning tools, handouts and real-time instruction. These webinars are great as introductory training for new hires or as refresher training throughout the year. Technicians can participate in individual webinar courses, select a learning path for a topic or sign up for a week at a time. Course descriptions appear alphabetically on the following pages.

NOTE: Courses ending in numbers should be taken in order as they build on each other with 1 being foundational.

2027 WEBINAR SERIES WEEK 1

| JANUARY 25-28 | MARCH 15-18 | APRIL 12-15 | MAY 24-27 |
| JUNE 7-10 | JULY 12-15 | AUGUST 23-26 | OCTOBER 18-21 |
NOVEMBER 15-18 | DECEMBER 13-16 |

MONDAY

8:30 a.m. Maintenance Safety
10:00 a.m. Shop Tools
—BREAK—
12:30 p.m. Preventive Maintenance 1
2:00 p.m. Preventive Maintenance 2

TUESDAY

8:30 a.m. Preventive Maintenance 3
10:00 a.m. Introduction to Hydraulic Symbols
—BREAK—
12:30 p.m. Basic Hydraulics 1
2:00 p.m. Basic Electrical 1

WEDNESDAY

8:30 a.m. Basic Hydraulics 2
10:00 a.m. Basic Hydraulics 3
—BREAK—
12:30 p.m. Basic Electrical 2
2:00 p.m. Basic Electrical 3

THURSDAY

8:30 a.m. Power Distribution Module (PDM) 1
10:00 a.m. Electrical Diagnostic Tools
—BREAK—
12:30 p.m. Controller Area Network (CAN) 1
2:00 p.m. AXIS 1

2027 WEBINAR SERIES WEEK 2

| JANUARY 11-14 | FEBRUARY 8-11 | MARCH 29-APRIL 1 | APRIL 26-29 |
MAY 10-13 | JUNE 21-24 | JULY 26-29 | AUGUST 9-12 | SEPTEMBER 13-16 |
OCTOBER 4-7 | NOVEMBER 1-4 | NOVEMBER 29-DECEMBER 2 |

MONDAY

8:30 a.m. Analog Interpretation
10:00 a.m. Reading Hydraulic Schematics
—BREAK—
12:30 p.m. Reading Electrical Schematics
2:00 p.m. Power Distribution Module (PDM) 2

TUESDAY

8:30 a.m. Power Distribution Module (PDM) 3
10:00 a.m. Controller Area Network (CAN) 2
—BREAK—
12:30 p.m. Axis 2
2:00 p.m. Arcadia Schematics

WEDNESDAY

8:30 a.m. Electric-Over-Hydraulic Systems 1 (Open Center)
10:00 a.m. Electric-Over-Hydraulic Systems 2 (Closed Center)
—BREAK—
12:30 p.m. Pump Controls
2:00 p.m. Pre- and Post-Compensating Valves

THURSDAY

8:30 a.m. Preventative Maintenance 4: Cranes
10:00 a.m. Crane Computer Systems (LMAP)*

*for US technicians only

CENTRAL TIME SHOWN



Sign Up

Tel: 816.901.4894 | Email: service.training@altec.com

Analog Interpretation

Participants explore how to work with analog data, learning to collect, record and interpret it using tools including E-Series I/O modules, PDM test circuits and driver boards.

Monday, 8:30 a.m. CST • WEEK 2

Arcadia Schematics

Participants dive into reading Arcadia electrical drawings and learn how to locate the right ones for a specific unit. They practice using and understanding the schematics by following circuits to find specific components with confidence.

Tuesday, 2:00 p.m. CST • WEEK 2

AXIS 1

Participants discuss the benefits of the AXIS tool, navigation, credentials, inputs and outputs.

Thursday, 2:00 p.m. CST • WEEK 1

AXIS 2

Participants use in-depth AXIS system knowledge to troubleshoot real-world scenarios on E-series units. They learn how to navigate diagnostic pages effectively to pinpoint issues and guide repairs with confidence.

Tuesday, 12:30 p.m. CST • WEEK 2

Basic Electrical 1

Participants define basic electrical concepts, examine Ohm's Law, discuss the importance of electrical safety, and describe series and parallel circuits. They also determine correct lead placement on the DVOM to test voltage, resistance, and current and determine where to place leads when testing.

Tuesday, 2:00 p.m. CST • WEEK 1

Basic Electrical 2

Participants recall potential safety concerns when dealing with electrical circuits and components, identify electrical components by their symbols and trace flow through an electrical circuit.

Wednesday, 12:30 p.m. CST • WEEK 1

Basic Electrical 3

Participants identify components on electrical drawings, discuss types of chassis/machine interfaces, the outrigger interlock system, electrical control systems and basic electrical diagnostics.

Wednesday, 2:00 p.m. CST • WEEK 1

Basic Hydraulics 1

Participants use the basic principles of fluid power to answer questions, describe properties of hydraulic fluids and recognize corresponding symbols for components.

Tuesday, 12:30 p.m. CST • WEEK 1

WEEK 1

Jan 25-28
March 15-18
April 12-15
May 24-27
June 7-10
July 12-15
Aug 23-26
Oct 18-21
Nov 15-18
Dec 13-16

WEEK 2

Jan 11-14
Feb 8-11
March 29-April 1
April 26-29
May 10-13
June 21-24
July 26-29
Aug 9-12
Sept 13-16
Oct 4-7
Nov 1-4
Nov 29-Dec 2

**Sign Up**

You can sign up for individual webinars by contacting the Altec Service Training Department by email at service.training@altec.com or by calling (816) 901-4894.

After registering, you will receive an email. Use the meeting link in the email to attend the webinar at the scheduled time.

Basic Hydraulics 2

Participants recognize damaging effects of contamination and improper fluid in a hydraulic system, determine the proper procedure for taking a hydraulic fluid sample and identify where to find specifications for fluid conductors.

Wednesday, 8:30 a.m. CST • WEEK 1

Basic Hydraulics 3

Participants identify hydraulic symbols for valves, determine valve placement in a system and identify internal valve components and types of flow controls.

Wednesday, 10:00 a.m. CST • WEEK 1

Controller Area Network (CAN) 1

Participants identify types of chassis/machine interfaces and how to locate parameters on schematics and discuss how to isolate a fault in a circuit.

Thursday, 12:30 p.m. CST • WEEK 1

Controller Area Network (CAN) 2

Participants explore how e-Stop, I/O modules and nodes are incorporated into and operate with Altec CAN systems, gaining an understanding of each component and the CAN network.

Tuesday, 10:00 a.m. CST • WEEK 2

Crane Computer Systems (LMAP) FOR US TECHNICIANS ONLY

Participants are introduced to computer systems commonly used on Altec cranes. They learn to recognize the differences between the Hirschmann and Greer systems and to navigate them while troubleshooting real-world scenarios with confidence.

Thursday, 10:00 a.m. CST • WEEK 2

Electrical Diagnostic Tools

Participants discuss how to properly maintain and use digital volt-ohm meters (DVOMs) and amp clamps for basic electrical testing. They determine how to set and use a DVOM in real-world scenarios.

Thursday, 10:00 a.m. CST • WEEK 1

Electric-Over-Hydraulic Systems 1 (Open Center)

Participants explore basics of electric-over-hydraulic open center system components and operation. They draw an open center system as directed and use AT200A schematics to explain how an open center system works.

Wednesday, 8:30 a.m. CST • WEEK 2

Electric-Over-Hydraulic Systems 2 (Closed Center)

Participants explore basics of electric-over-hydraulic closed center system components and operation including how load sense, pre-compensation and actuation work. They examine and discuss DM47-B schematics.

Wednesday, 10:00 a.m. CST • WEEK 2

WEEK 1

Jan 25-28
March 15-18
April 12-15
May 24-27
June 7-10
July 12-15
Aug 23-26
Oct 18-21
Nov 15-18
Dec 13-16

WEEK 2

Jan 11-14
Feb 8-11
March 29-April 1
April 26-29
May 10-13
June 21-24
July 26-29
Aug 9-12
Sept 13-16
Oct 4-7
Nov 1-4
Nov 29-Dec 2

**Sign Up**

You can sign up for individual webinars by contacting the Altec Service Training Department by email at service.training@altec.com or by calling (816) 901-4894.

After registering, you will receive an email. Use the meeting link in the email to attend the webinar at the scheduled time.

Introduction to Hydraulic Symbols

Participants break down individual symbol components and identify symbols in a schematic.

Tuesday, 10:00 a.m. CST • WEEK 1

Maintenance Safety

Participants review key best practices for maintenance safety. Discussion includes how to complete a job hazard assessment, select proper PPE and follow Sentry procedures. They consider common jobsite hazards and how to practice safe, effective countermeasures.

Monday, 8:30 a.m. CST • WEEK 1

Power Distribution Module (PDM) 1

Participants get a general overview of PDM boards (PDM, PDM 10 and PDM 6A). They practice identifying parts of the board with correct terminology and locating components with a board drawing. They also explore how basic interconnects including ignition and truck/machine systems are tied into board layout.

Thursday, 8:30 a.m. CST • WEEK 1

Power Distribution Module (PDM) 2

This course builds on content from PDM 1. Participants identify key components needed to complete the PDM circuit and to activate and complete the start/stop and throttle circuits for truck/machine operation. They dive deeper into how circuits connect with PTO systems and overall machine functionality, building a strong foundation in system circuitry.

Monday, 2:00 p.m. CST • WEEK 2

Power Distribution Module (PDM) 3

Participants explore how to troubleshoot and recover a unit using PDM's built-in features. They practice interpreting real-time system feedback to diagnose issues in truck/machine and throttle circuits with a focus on start/stop and PTO activation.

Tuesday, 8:30 a.m. CST • WEEK 2

Pre- and Post- Compensating Valves

Participants learn what pre- and post-compensating valves are, how they function in hydraulic systems and their importance in system performance and control.

Wednesday, 2:00 p.m. CST • WEEK 2

Preventive Maintenance 1

Participants identify sections of the Altec Maintenance Manual, discuss how to conduct a preventive maintenance inspection, use the Preventive Maintenance Checklist to determine when to replace filters and reference charts for inspection processes and procedures.

Monday, 12:30 p.m. CST • WEEK 1

WEEK 1

Jan 25-28
March 15-18
April 12-15
May 24-27
June 7-10
July 12-15
Aug 23-26
Oct 18-21
Nov 15-18
Dec 13-16

WEEK 2

Jan 11-14
Feb 8-11
March 29-April 1
April 26-29
May 10-13
June 21-24
July 26-29
Aug 9-12
Sept 13-16
Oct 4-7
Nov 1-4
Nov 29-Dec 2

**Sign Up**

You can sign up for individual webinars by contacting the Altec Service Training Department by email at service.training@altec.com or by calling (816) 901-4894.

After registering, you will receive an email. Use the meeting link in the email to attend the webinar at the scheduled time.

Preventive Maintenance 2

Participants identify proper torquing procedures determine when to perform turntable tilt, HOP and side load test inspections. They also review how to locate basic testing procedures.

Monday, 2:00 p.m. CST • WEEK 1

Preventive Maintenance 3

Participants discuss hydraulic system pressure checks, the rotation bearing and gearbox, structural tests, manual stowage and atmospheric vent testing.

Tuesday, 8:30 a.m. CST • WEEK 1

Preventive Maintenance 4: Cranes

Participants cover basic preventive maintenance for cranes and radio remotes, learning to recognize key components and perform essential checks to help keep crane systems running smoothly and safely. They determine if LMAP is reading correctly based on a load chart, how to check and adjust boom retract cables and how to safely lubricate crane boom and winch cables.

Thursday, 8:30 a.m. CST • WEEK 2

Pump Controls

Participants explore pump controls to understand how pump compensators work. They examine how margin pressure, compensated pressure and load sense interact to affect pump output and overall system performance.

Wednesday, 12:30 p.m. CST • WEEK 2

Reading Electrical Schematics

Using schematics, participants trace the flow of electrons through an electric circuit and troubleshoot a real-world scenario.

Monday, 12:30 p.m. CST • WEEK 2

Reading Hydraulic Schematics

Using schematics, participants trace the flow of hydraulic oil through an electric-over- hydraulic system and troubleshoot a real-world scenario.

Monday, 10:00 a.m. CST • WEEK 2

Shop Tools

Participants review usage, care and storage of basic testing and troubleshooting tools. They consider when to use tools such as a flow meter, pressure gauge, dynamometer, test bracket, caliper, micrometer, and dial indicator in real-world scenarios. They cover the importance of calibrating tools and recognize which tools require annual calibration.

Monday, 10:00 a.m. CST • WEEK 1

WEEK 1

Jan 25-28
March 15-18
April 12-15
May 24-27
June 7-10
July 12-15
Aug 23-26
Oct 18-21
Nov 15-18
Dec 13-16

WEEK 2

Jan 11-14
Feb 8-11
March 29-April 1
April 26-29
May 10-13
June 21-24
July 26-29
Aug 9-12
Sept 13-16
Oct 4-7
Nov 1-4
Nov 29-Dec 2

**Sign Up**

You can sign up for individual webinars by contacting the Altec Service Training Department by email at service.training@altec.com or by calling (816) 901-4894.

After registering, you will receive an email. Use the meeting link in the email to attend the webinar at the scheduled time.

NEW: IFPS Mobile Hydraulic Mechanic Prep eCourse

Self-paced (30 mins)

Introductory Level eCourses

Self-paced (1 hour)

Introductory maintenance eCourses are available for some Altec units. Each course can be completed in approximately one hour at the learner's convenience and pace. The courses allow learners to navigate through unit systems and components to better understand inspections and repairs. These introductory courses are a good starting point for technicians who are unfamiliar with a specific Altec unit and can serve as solid preparation for the live, unit specific trainings.

Course Content

- Unit specifications
- Safety
- Preventive maintenance and inspection
- Hydraulic system(s)
- Mechanical system(s)
- Electrical system(s)
- Troubleshooting

eCourse units available:

- AA/AN/AN-OC
- AM50/55/60
- AT200A
- AT235P
- AT30-G/AT35-G/AT37-G
- A-T40C
- AT40-G
- D2000B/3000B/4000B
- DLB/DMB
- DT80
- T40P
- TA50/55/60



To enroll, contact the Altec Service Training Department by email at service.training@altec.com or call (816) 901-4894.



Maintenance How To Videos (short/exact length varies)

A collection of short maintenance How To videos is now available. The videos illustrate different tasks and procedures that can serve as a great starting point for technicians learning to perform specific checks/tests and to use Altec resources. Each video provides a quick look at how to do something and can be handy when a technician needs it.

- Altec Rotation Fastener Annual Torque Inspection
- Checking Pilot Pressure
- DH-E Slip Ring Overview
- HOP Testing
- How to Perform a Structural Test
- How to Use the Altec Maintenance Manual
- How to Use the Lubrication Chart
- How to Use the Preventive Maintenance Checklist
- How to Use the Weld Figure
- Hydraulic Oil Sample
- Hydraulic System Filters

IN-PERSON TRAINING OVERVIEW

Customers can request unit specific and/or tailored on-site training programs. Additionally, individuals can participate in classes held throughout the year at Altec Service Centers across the United States and Canada.



Altec Service in-person training offers specialized instruction with hands on and classroom time for mechanics. The training emphasizes how Altec equipment functions and how it can be maintained and repaired. Technicians participate in exercises to test, diagnose and repair unit systems and components.



Sign Up
816.901.4894
service.training@altec.com



Find Lodging
Some locations offer a reduced rate for Altec training guests. When calling to make reservations at the specified location, ask for the Altec rate.

BASIC TRAINING

The **Altec Customer Boot Camp** provides an introduction to basic hydraulic and electrical systems and an introduction to the power distribution module (PDM) for newly hired technicians or seasoned technicians.

In-depth trainings on **hydraulic systems, electrical systems and PDM** are available to technicians wishing to strengthen basic skills building blocks.

UNIT SPECIFIC TRAINING

Unit specific trainings offer technicians an overview of internal machine functions. These classes are standardized based on Altec Maintenance Manuals and cover an introduction to the unit, maintenance safety, unit operation, preventive maintenance, unit inspection, and minor troubleshooting and repairs.

Upon completion of the program, trainees should be able to successfully and efficiently perform scheduled maintenance on equipment.

FPS TEST PREPARATION

Fluid Power Society (FPS) review and test preparation sessions are also offered by Altec to give mechanics and technicians the ability to earn FPS Mobile Hydraulic Mechanic certifications.

Before enrolling in unit specific trainings, Altec recommends technicians attend Altec Customer Boot Camp, enroll in Altec virtual maintenance training or otherwise have a basic aptitude of electrical and mechanical systems.



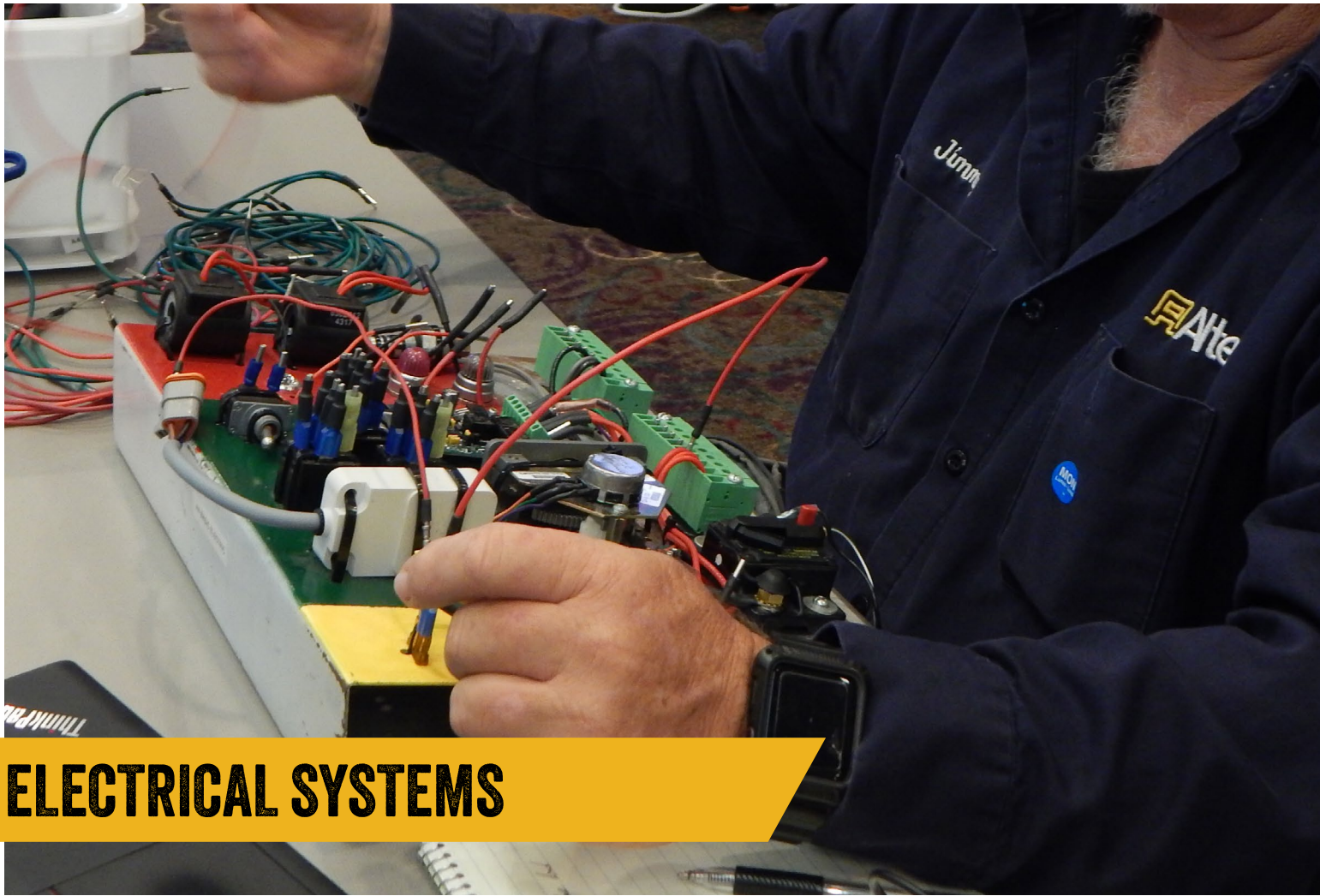
ALTEC CUSTOMER BOOT CAMP

Basic Training Package Four Days (32 hours)

The basic fundamentals of hydraulics and electrical systems, an introduction to the power distribution module (PDM) and an introduction to troubleshooting are taught in this hands on course. This training focuses on proper interpretation of schematic drawings and the ability to apply functional troubleshooting applications to real life situations.

Course Content

- Maintenance safety
- Fundamentals of hydraulics
- Fundamentals of electricity
- PDM introduction
- Component identification
- Schematics
- DVOM and test light usage
- Component testing
- Hands on labs



ELECTRICAL SYSTEMS

Introduction to Electrical Systems

Two Days (16 hours)

This course uses hands on, activity-based exercises to develop a basic understanding of electrical theory, components, circuits, Altec wiring diagrams and the use of a Digital Volt Ohm Meter (DVOM). It also covers safety, interpretation and testing applications. Technicians progress through the basics of schematics, wiring principles and testing procedures. Technicians use a DVOM and learn when test lights can safely be used. The course culminates with a hands on lab for technicians to apply theoretical learning to situational applications with equipment and live circuits.

Course Content

- Safety
- Fundamentals of electricity
- Components
- Schematics and wiring
- DVOM and test light usage
- Component testing
- Hands on lab



HYDRAULIC SYSTEMS

Introduction to Hydraulic Systems

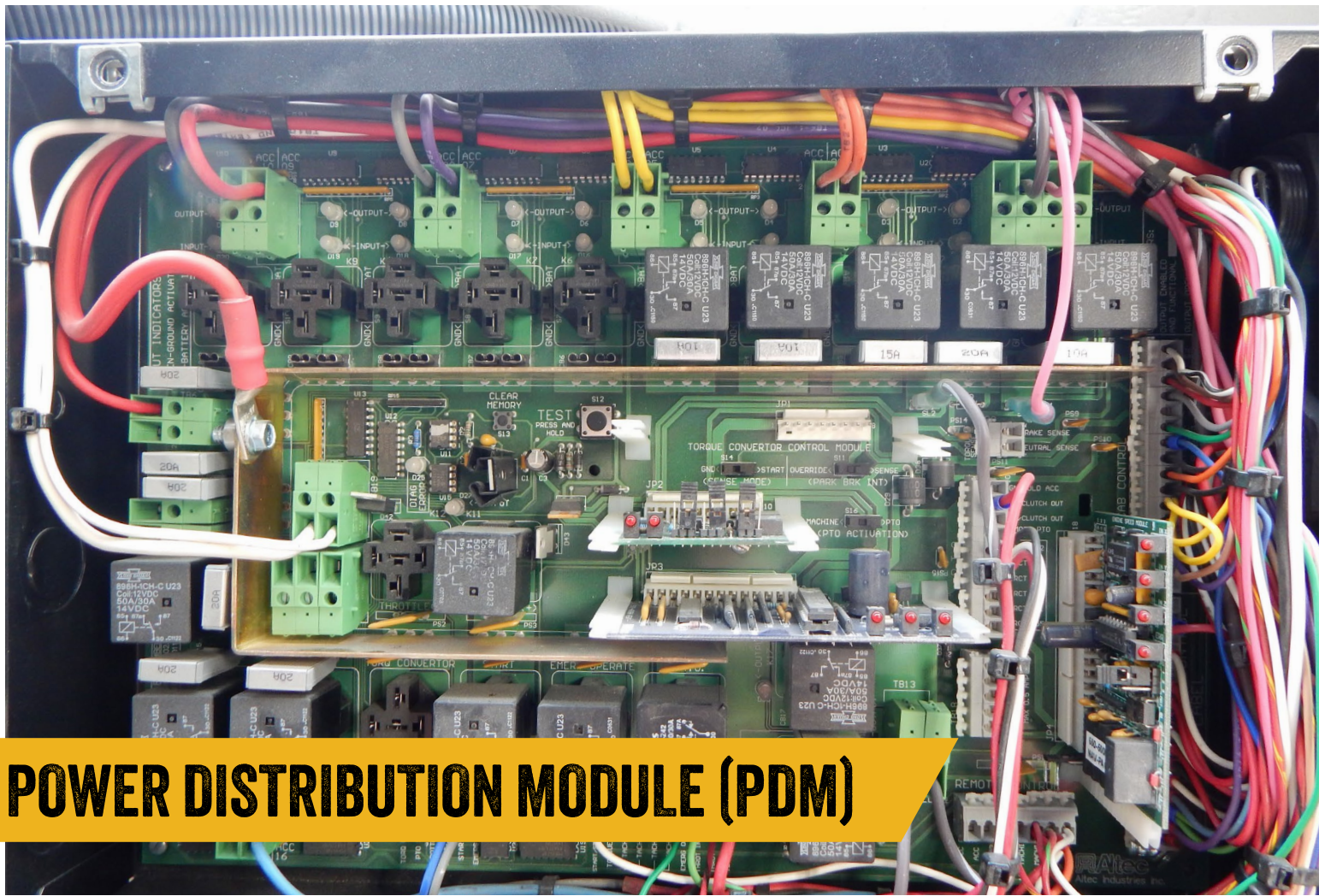
One Day (8 hours)

The course begins with basic hydraulic principles and progresses to intermediate and advanced concepts. Upon completion of this course, technicians should understand:

- Basic physical laws as they apply to fluid power
- Typical hydraulic systems components
- How components function and interact
- Hydraulic schematics

Course Content

- Safety
- Prime mover connections
- Fluids and fluid conditioning
- Pumps
- Actuators
- Pressure controls
- Directional controls
- Flow control
- Accessory components
- Fluid conductors
- Schematics and design



POWER DISTRIBUTION MODULE (PDM)

PDM Familiarization

One and a Half Days (12 hours)

This course familiarizes technicians with accessory circuits which include switched, battery-hot and ignition-hot circuits. Participants also learn about function circuits such as start/stop, secondary stowage operation, PTO operation and throttle. Technicians participate in hands on labs to learn about functional wiring and circuit troubleshooting. They also learn how to work within the PDM while maintaining personal and component electrical safety.

Course Content

- Familiarization
- Pre-wired
- Accessory circuits
- Function circuits
- Troubleshooting
- Stop/start card throttle circuits
- Speed card throttle circuits
- PTO circuits
- Stop/start card circuits
- Hands on labs



CONTROLLER AREA NETWORK (CAN)

Advanced Electrical System Training Course length varies based on unit

Altec Controller Area Network (CAN) training is part of unit specific course for Altec products with features that use the advanced electrical system communication. Advanced control and diagnostic capabilities are afforded by systems that use CAN. Altec uses CAN across many different models. Some units are equipped with simple protection systems on otherwise completely hydraulic units. Other units have complete control systems using CAN communication to manipulate the position of the unit.

Course Content

- Fundamentals of CAN communication
- How unit specific components use CAN
- Troubleshooting system errors
- Hands on troubleshooting practice and diagnostics on the unit

CAN-Based Systems or Features

Some of the units which feature CAN are:

UNIT CONTROL SYSTEM
E-Series Derricks (DM-E, DH-E, D3000E, DT65E, DT85E), AC40E, AC45E, and more

ZONE RATING SYSTEM
DH-H and DH-B Derricks

PLATFORM-TO-GROUND ENHANCEMENT
AN67-E100 with material handling package

ROTATION INTERLOCK
LS49, LS60, LS63, and LS87

LOAD MONITORING SYSTEM
AT40-G, AT41/48ME, L42A, AA55, AN55-OC

JEMS
AT series, L series, TA series, AA series, AM series and S/SE/LE

VEHICLE ENGINE INTERFACE
DB38, DB41B, TDA58



Specific Units

Course lengths vary based on unit as listed on the following pages

Unit specific trainings reinforce best maintenance safety practices and introduce unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of the selected training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.

Refer to the Course Index to identify unit specific trainings.

Course Categories

- Small aerials
- Large aerials
- Tree care
- Telecom
- Lights and signs
- Digger derricks
- Specialty products
- Cranes

Course Content

- Safety
- Unit Operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs



SMALL AERIALS

FULL-FLOW HYDRAULIC SYSTEM

AT200A/AT235

One Day (8 hours)

The AT200A and AT235 are non-insulating aerial devices with all-steel boom construction. The units are equipped with a hydraulically extended boom. Turntable and boom rotation are non-continuous through 370 degrees. The units feature a full-flow, open-center hydraulic system with simple 12-volt DC controls. Many units have an inverter to provide a 120-volt AC circuit in the boom with outlets at the platform.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SMALL AERIALS

FULL-FLOW HYDRAULIC SYSTEM

AT235P/AT237

One Day (8 hours)

The AT235P and AT237 are non-insulating aerial devices with telescopic, articulating steel booms. The units feature a full-flow, open-center hydraulic system with a 12-volt DC multiplexed control system. Turntable and boom rotation are non-continuous through 370 degrees. The units are equipped with a 120-volt AC circuit in the booms with outlets at the platform.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SMALL AERIALS

FULL-FLOW HYDRAULIC SYSTEM

AT30/35/37-G

One Day (8 hours)

The AT30/35/37-G are ANSI Category C insulating aerial devices rated at 46kV and below. The units feature a telescopic, articulating boom and a full-flow, open-center hydraulic system with full pressure controls. Turntable and boom rotation are continuous.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SMALL AERIALS

FULL-FLOW HYDRAULIC SYSTEM

AT37-GW

One Day (8 hours)

The AT37-GW is an AT37-G mounted on a tracked carrier for easy backyard access. Two fixed-displacement pumps provide full-flow, open-center hydraulic control for both the aerial and the tracked carrier. Track drive controls are simple 12-volt DC.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SMALL AERIALS

FULL-FLOW HYDRAULIC SYSTEM

AT40-GW

Two Days (16 hours)

The AT40-GW is an AT40-G mounted on a tracked carrier for easy backyard access. This aerial device has an ISO boom, articulating arm and continuous rotation on a tracked carrier. A control panel on the platform dashboard provides controls for auxiliary functions. The AT40-GW uses a fixed-displacement, tandem-section gear pump in a full-flow, open-center hydraulic system.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SMALL AERIALS

LOAD-SENSE HYDRAULIC SYSTEM

AT41MW/PW and AT48MW/PW

One and a Half Days (12 hours)

The AT41MW/PW AT48MW/PW is a telescoping and articulating aerial device mounted on a backyard track carrier. A variable-displacement, pressure-compensated piston pump provides flow in a load-sense, closed-center system. A CAN-based control system controls both the track carrier valve and the aerial valve. The unit can be driven through a 36-inch wide gate.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SMALL AERIALS

FULL-FLOW HYDRAULIC SYSTEM

AT36/40M/S/P

One Day (8 hours)

The AT36 and AT40 units are telescoping and articulating aerial devices with a full-flow, open-center hydraulic system with full pressure lower and upper control valves. The M-version has a boom tip jib and winch for material handling; the P-version is a personnel-only unit; and the S-version has an open framework aluminum platform for lights and signs work.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SMALL AERIALS

FULL-FLOW HYDRAULIC SYSTEM

AT37/41/48 M/P/S **One Day (8 hours)**

This unit is a telescoping and articulating aerial device with a full-flow hydraulic system with full pressure lower and upper control valves. The M-version has a boom tip jib and winch for material handling; the P-version is a personnel-only unit; and the S-version has an open framework aluminum platform for lights and signs work.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SMALL AERIALS

FULL-FLOW HYDRAULIC SYSTEM

AT37-41-48 ME/PE/SE

One and a Half Days (12 hours)

This unit is a telescoping and articulating aerial device with a full-flow hydraulic system with fiber optic upper controls, a load-sensing lower control valve and a CAN-based control system. The M-version has a boom tip jib and winch for material handling; the P-version is a personnel-only unit; and the S-version has an open framework aluminum platform for lights and signs work.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SMALL AERIALS

LOAD-SENSE HYDRAULIC SYSTEM

A-T40C

One and a Half Days (12 hours)

This aerial unit is a large, non-insulated, telescoping, cable placer certified for towering for mobile cable placing procedures. The A-T40C has a closed-center hydraulic system. This unit has a 39-foot working height. The rotation system is not continuous but has 720 degrees of articulation. The system is primarily powered by a 208-volt, three-phase power unit. The reel lifter is capable of lifting 5,000 or 6,000 pounds dependent on chassis GVW.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SMALL AERIALS

FULL-FLOW HYDRAULIC SYSTEM

AT40-G

One and a Half Days (12 hours)

This unit has a fixed-displacement pump in a full-flow, open-center hydraulic system. The AT40-G has fiber optic upper controls and a load-sensing valve at the turntable. The platform is leveled by hydraulic cylinders.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SMALL AERIALS

FULL-FLOW HYDRAULIC SYSTEM

AT248F

One Day (8 hours)

The AT248F has a fixed-displacement pump in a full-flow, open-center hydraulic system. This non-insulating unit features multiplexed electrical upper and lower controls and hydraulic platform leveling.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SMALL AERIALS

FULL-FLOW HYDRAULIC SYSTEM

L36A/L42A

One Day (8 hours)

The L36A and L42A are over-center aerial devices, each with a fixed-displacement pump and a full-flow, open-center hydraulic system. These personnel-only units have full-flow upper and lower control valves and a chain-and-rod platform leveling system.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SMALL AERIALS

FULL-FLOW HYDRAULIC SYSTEM

L37M/L42-45M

One Day (8 hours)

These over-center aerial devices each have a fixed-displacement pump, a full-flow, open-center hydraulic system, and full-pressure upper and lower control valves. A boom-tip jib and winch provide materialhandling capability. Platform leveling is via a chain-and-rod system.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SMALL AERIALS

FULL-FLOW HYDRAULIC SYSTEM

AT238P

One Day (8 hours)

The AT238P is a non-insulating, cable-placing aerial device with telescopic articulating steel booms. The unit has a full-flow, open-center hydraulic system with a flow-sharing, load-sensing valve. The control system is CAN-based. Turntable and boom rotation are non-continuous through 370 degrees. The AT238P is equipped with a 120-volt AC circuit in the booms with outlets at the platform.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SMALL AERIALS

LOAD-SENSE HYDRAULIC SYSTEM

T40P

Two Days (16 hours)

The T40P aerial is a large, non-insulated telescoping cable placer for mobile cable placing procedures. It uses a closed-center, electric-over-hydraulic control system. Double-acting hydraulic cylinders are used to position the platform, lower and upper booms, and the reel lifter. The upper boom is capable of being extended from within the lower boom a total distance of 10 feet. Turntable and boom rotation are non-continuous through 370 degrees. The unit may be equipped with a single station reel lifter assembly.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SMALL AERIALS

LOAD-SENSE HYDRAULIC SYSTEM

TA36/37M/40/41M/45M

One Day (8 hours)

This version of the TA-Series aerial device has a full-pressure hydraulic system with full-flow upper and lower control valves. An articulating arm and a telescoping upper boom provide unique boom positioning. The M-versions have a boom-tip jib and winch for material handling.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SMALL AERIALS

FULL-FLOW HYDRAULIC SYSTEM

TA50/55/60

One Day (8 hours)

This version of the TA-Series aerial device has a full-flow hydraulic system with full-flow upper and lower control valves. An articulating arm and a telescoping upper boom provide unique boom positioning. Material handling, dual platforms and dual upper controls are available.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SMALL AERIALS

LOAD-SENSE HYDRAULIC SYSTEM

TDA58

One Day (8 hours)

This unit is a telescopic, double-articulating aerial device with insulating lower arms, an insulating telescopic upper boom and an insulating system at the boom tip. It uses a pilot-operated, hydraulic control system. The TDA58 is a combined multiplex unit which features an outrigger-boom-interlock system that prevents the boom from being unstowed until all unit outriggers have been fully extended and have detected ground contact. The TDA58 comes with hand-held pendant ground drive controls.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SMALL AERIALS

LOAD-SENSE HYDRAULIC SYSTEM

L42-44E

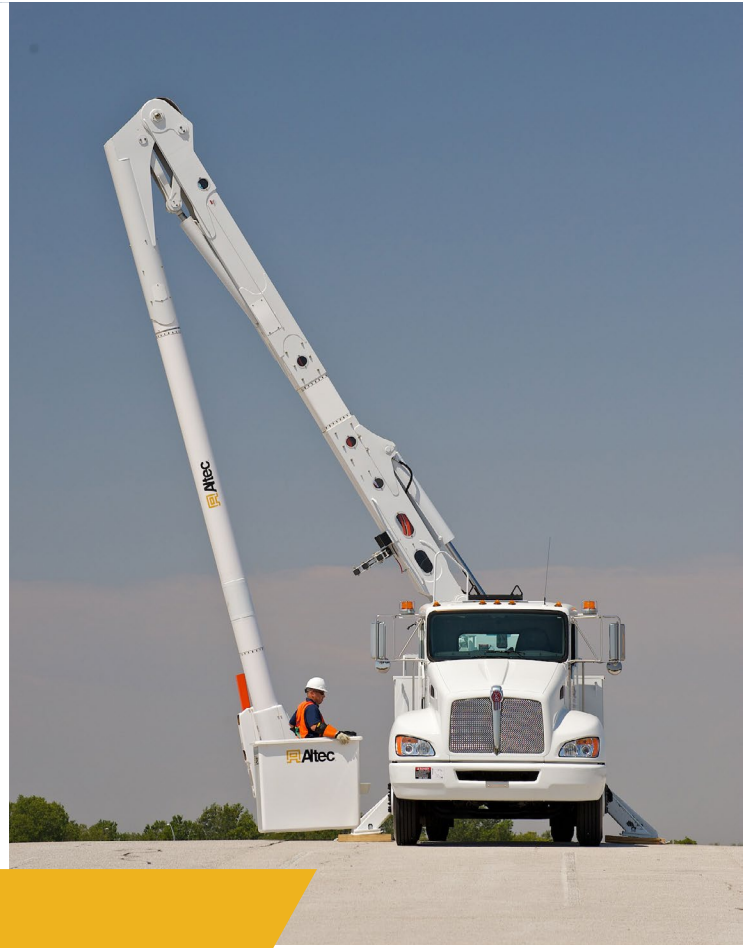
One Day (8 hours)

This over-center unit has a fixed-displacement pump in a full-flow, open-center hydraulic system. The L42E and L44E have fiber optic upper controls, a load-sensing valve at the turntable and chain-and-rod platform leveling.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



LARGE AERIALS

LOAD-SENSE HYDRAULIC SYSTEM

AA/AN/AN-OC

Two Days (16 hours)

AA/AN units are non-overcenter aerial devices. The AA is equipped with hydraulic upper boom compensation. AN-OC units are over-center aerial devices. All of the units feature a chain-and-rod leveling system in the lower and upper booms and a load-sense hydraulic system with pilot-pressure upper controls.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



LARGE AERIALS

LOAD-SENSE HYDRAULIC SYSTEM

ALB

One Day (8 hours)

A fixed-displacement pump provides full flow in an open-center system for the ALB series aerial devices. Both the upper and lower controls have full-pressure valves. A single extension cylinder paired with extend and retract cables controls the second and third stage booms. Platform leveling is hydraulically controlled.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



LARGE AERIALS

LOAD-SENSE HYDRAULIC SYSTEM

AM50/55/60

Two Days (16 hours)

AM units are over-center aerial devices with a side-by-side boom arrangement. The AMs feature a chain-and-rod leveling system with two options for a hydraulic system: load-sense with pilot upper controls or full pressure with full-pressure upper controls.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



LARGE AERIALS

LOAD-SENSE HYDRAULIC SYSTEM

A-CLASS (A65/70/75/72-T/77-T/82-T)

One Day (8 hours)

This series of A-Class units is a non-over-center aerial device with a load sense hydraulic system and pilot upper controls. The T-models have a seven-foot telescoping upper boom. Platform leveling is accomplished with a pendulum valve and two cylinders at the boom tip.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



LARGE AERIALS

LOAD-SENSE HYDRAULIC SYSTEM

A-CLASS (A47/50/55/55E-OC)

One Day (8 hours)

A-Class units in this series are over-center aerial devices with a load-sense hydraulic system and pilot upper controls. The E- model lower boom has greater articulation for farther side reach. Platform leveling is accomplished with a pendulum valve and two cylinders at the boom tip.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



LARGE AERIALS

LOAD-SENSE HYDRAULIC SYSTEM

AH75/85/100

Three Days (24 hours)

This transmission aerial device is available in 75-, 85- and 100-foot working heights and uses a piston pump in a load-sense, closed-center hydraulic system. The control system utilizes OEM fiber optic MRC 10X electric-over-hydraulic controls with threshold, max-out, low-range, ramp-up and ramp-down metering. The upper boom has one hydraulically extendable boom section while the lower boom has two hydraulically extendable boom sections. The unit features automatic platform leveling and is upgradeable to Category A.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



LARGE AERIALS

LOAD-SENSE HYDRAULIC SYSTEM

AH75/85/100A

Three Days (24 hours)

This transmission aerial device is available in 75-, 85- and 100-foot working heights and uses a piston pump in a load-sense, closed-center hydraulic system. The control system utilizes Altec fiber optic, CAN-based, electric-over-hydraulic controls with max-out, low-range, ramp-up and ramp-down metering. The upper boom has one hydraulically extendable section.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



LARGE AERIALS

LOAD-SENSE HYDRAULIC SYSTEM

AH75B/AH85B/AH100B

Three Days (24 hours)

The AH-B is available in 75-, 85-, and 100-foot working heights and uses a piston pump in a load-sense, closed-center hydraulic system. The control system uses CAN-based controls with fiber-optic platform-to-turntable communication. The upper boom has one hydraulically-extendable section.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



LARGE AERIALS

LOAD-SENSE HYDRAULIC SYSTEM

AH125

Three Days (24 hours)

AH125 aerial devices have a piston pump in a load-sense, closed-center hydraulic system and use fiber optic upper controls. Boom assemblies have an upper and lower boom joined by an elbow and incorporating a telescoping segment in each boom. Booms are elevated by double-acting cylinders at each of the pivot points.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



LARGE AERIALS

LOAD-SENSE HYDRAULIC SYSTEM

AH125B

Three Days (24 hours)

AH125B uses a piston pump in a load-sense, closed-center hydraulic system. The control system uses CAN-based controls with fiber-optic platform-to-turnstile communication. The lower boom has two hydraulically extendable sections, and the upper boom has one hydraulically extendable section.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



LARGE AERIALS

LOAD-SENSE HYDRAULIC SYSTEM

AH150

Three Days (24 hours)

This large, 150-foot-working-height transmission aerial device uses a piston pump in a load-sense, closed-center hydraulic system. The control system utilizes OEM fiber optic, super flex, electric-over-hydraulic controls with threshold, max-out, low-range, ramp-up and ramp-down metering. The upper boom has one hydraulically extendable boom section while the lower boom has two hydraulically extendable boom sections. The unit features automatic platform leveling and is upgradeable to Category A.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



LARGE AERIALS

LOAD-SENSE HYDRAULIC SYSTEM

HL125

Three Days (24 hours)

This large, 125-foot-working-height transmission aerial device uses a piston pump in a load-sense, closed-center hydraulic system. The control system utilizes OEM fiber optic MRC 10X electric-over-hydraulic controls with threshold, max-out, low-range, ramp-up and ramp-down metering. The upper boom does not extend, and the lower boom has two hydraulically extendable boom sections. The unit features automatic platform leveling and is upgradeable to Category A.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



TREE CARE

FULL-FLOW HYDRAULIC SYSTEM

LRV/LR7/LR8/LRV60E70/LR760E70/LR860E70

One Day (8 hours)

The LRV, LR7 and LR8 are over-center, articulating aerial devices with full-flow, open-center hydraulic systems and full-pressure upper and lower control valves. The leveling system uses chain and rods through both booms. A 10-foot elevator can be mounted under either unit to provide for 70 feet of platform height.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



TREE CARE

FULL-FLOW HYDRAULIC SYSTEM

CHIPPERS

One Day (8 hours)

The Chipper class covers disc and drum-style chippers. This training focuses mainly on the DSC1317 and the DRM12. In addition, this course covers information on the WC126 and the DSC6 models. If specifically requested, the DRM12he can also be covered.

Technicians learn how to safely perform blade changes and disc and drum change and repair. Trainees also learn about the interworkings of feed control systems.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



TREE CARE

LOAD-SENSE HYDRAULIC SYSTEM

TDA58

One Day (8 hours)

This unit is a telescopic, double-articulating aerial device with insulating lower arms, an insulating telescopic upper boom and an insulating system at the boom tip. It uses a pilot-operated hydraulic control system. The TDA58 is a combined multiplex unit which features an outrigger-boom-interlock system that prevents the boom from being unstowed until all unit outriggers have been fully extended and have detected ground contact. The TDA58 comes with hand-held pendant ground drive controls.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



TREE CARE

LOAD-SENSE HYDRAULIC SYSTEM

JT75

One Day (8 hours)

The JT75 is a non-insulating telescopic saw installed on a chassis with an articulating operator cab. A variable-displacement, pressure-compensated piston pump provides hydraulic flow in a load-sense, closed-center hydraulic system. Hydraulic pilot controls give the operator smooth control of all boom functions.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



TREE CARE

LOAD-SENSE HYDRAULIC SYSTEM

MT66-E76

Two Days (16 hours)

The MT66-E76 has a variable-displacement, pressure-compensated piston pump in a closed-center hydraulic system. The booms articulate to an overcenter position and a 10-foot elevator provides for extra reach. The CAN-based control system is operated via radio controls for line clearing of limbs up to 150 pounds.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



TELECOM

FULL-FLOW HYDRAULIC SYSTEM

AT200A/AT235

One Day (8 hours)

The AT200A and AT235 are non-insulating aerial devices with all-steel boom construction. The units are equipped with a hydraulically-extended boom. Turntable and boom rotation are non-continuous through 370 degrees. The units feature a full-flow, open-center hydraulic system with simple 12-volt DC controls. Many units have an inverter to provide a 120-volt AC circuit in the boom with outlets at the platform.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



TELECOM

FULL-FLOW HYDRAULIC SYSTEM

AT235P/AT237

One Day (8 hours)

The AT235P and AT237 are non-insulating aerial devices with telescopic, articulating steel booms. The units feature a full-flow, open-center hydraulic system with a 12-volt DC multiplexed control system. Turntable and boom rotation are non-continuous through 370 degrees. The units are equipped with a 120-volt AC circuit in the booms with outlets at the platform.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



TELECOM

FULL-FLOW HYDRAULIC SYSTEM

AT335

One Day (8 hours)

The AT335 is a non-insulated (Category E dielectric rating) aerial with telescoping and articulating steel booms. The unit has a full-flow, open-center hydraulic system with variable speed controls. The control system is CAN-based. Turntable and boom rotation are non-continuous through 370 degrees. The unit is equipped with a 120-volt AC circuit in the booms with outlets at the platform.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



TELECOM

LOAD-SENSE HYDRAULIC SYSTEM

A-T40C

One and a Half Days (12 hours)

This aerial unit is a large, non-insulated telescoping cable placer certified for towering for mobile cable placing procedures. The A-T40C has a closed-center hydraulic system. This unit has a 39-foot working height. The rotation system is not continuous but has 720 degrees of articulation. The system is primarily powered by a 208-volt, three-phase power unit. The reel lifter is capable of lifting 5,000 or 6,000 pounds dependent on chassis GVW.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



TELECOM

LOAD-SENSE HYDRAULIC SYSTEM

T40P

Two Days (16 hours)

The T40P aerial is a large, non-insulated telescoping cable placer for mobile cable placing procedures. It uses a closed-center, electric-over-hydraulic control system. Double-acting hydraulic cylinders are used to position the platform, lower and upper booms and the reel lifter. The upper boom is capable of being extended from within the lower boom a total distance of 10 feet. Turntable and boom rotation non-continuous through 370 degrees. The unit may be equipped with a single station reel-lifter assembly.

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs



LIGHTS AND SIGNS

FULL-FLOW HYDRAULIC SYSTEM

AT248F

One Day (8 hours)

The AT248F has a fixed-displacement pump in a full-flow, open-center hydraulic system. This non-insulating unit features multiplexed electrical upper and lower controls and hydraulic platform leveling.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



LIGHTS AND SIGNS

FULL-FLOW HYDRAULIC SYSTEM

LS49

One and a Half Days (12 hours)

The LS49 has a two-section, hydraulically extended telescopic boom. A gear pump provides flow to the open-center hydraulic system. A CAN-based valve controls all aerial functions. The control system is CAN-based and includes rotation interlocks for short-side jacking.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



LIGHTS AND SIGNS

FULL-FLOW HYDRAULIC SYSTEM

LS60

Two Days (16 hours)

A piggy-backed extension cylinder telescopes the second and third stage booms. The LS60 has a fixed-displacement pump, a full-flow, open-center hydraulic system and multiplexed electrical upper controls. Paired hydraulic cylinders provide platform leveling.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



LIGHTS AND SIGNS

FULL-FLOW HYDRAULIC SYSTEM

LS63

Two Days (16 hours)

A piggy-backed extension cylinder telescopes the second and third stage booms. The LS63 has a fixed-displacement pump, a full-flow, open-center hydraulic system and multiplexed electrical upper controls. Paired hydraulic cylinders provide platform leveling.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



LIGHTS AND SIGNS

LOAD-SENSE HYDRAULIC SYSTEM

LS87

Two Days (16 hours)

The LS87 has a four-stage boom, a variable-displacement piston pump and a closed-center hydraulic system. Multiplexed electrical upper controls operate the load-sensing valve at the turntable. Paired hydraulic cylinders provide platform leveling.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



DIGGER DERRICKS

DERRICK SCHOOL 1

Four Days (32 hours)

This course covers derricks with an electric-over-hydraulic control system. The following units are covered in this training:

- DL/DM w/B series
- D2-3-4000A/B
- DT-80
- DB37
- DR42B
- DH45B-DH48B-DH50B

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



DIGGER DERRICKS

DERRICK SCHOOL 2

Three Days (24 hours)

This course covers digger derricks with a hydraulic and hydraulic-over-hydraulic control system. The following units are covered in this training:

- D3000H
- DC
- DH45-DH48-DH50H
- DT65H

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



DIGGER DERRICKS

ELECTRIC-OVER-HYDRAULIC CONTROLS

DB37

One Day (8 hours)

Riding on a carrier that fits through backyard gates, the DB37 has a multiplexed, electric-over-hydraulic control system with fixed-displacement pumps providing flow in a full-flow, open-center hydraulic system.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



DIGGER DERRICKS

ELECTRIC-OVER-HYDRAULIC CONTROLS

DB41B

Two Days (16 hours)

Riding on a carrier that fits through backyard gates, the DB41B has a multiplexed, electric-over-hydraulic control system with piston pump providing flow in a load-sense, closed-center hydraulic system.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



DIGGER DERRICKS

ELECTRIC-OVER-HYDRAULIC CONTROLS

DR41B/DR42B

Two Days (16 hours)

The DR41B/DR42B track unit has long outriggers for sloped set-up. The controls are multiplexed, electric-over-hydraulic with a piston pump providing flow in a load-sense, closed-center hydraulic system.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



DIGGER DERRICKS

ELECTRIC-OVER-HYDRAULIC CONTROLS

DL-B/DM-B

Three Days (24 hours)

The DL-B and DM-B Series derricks use a multiplexed control system over a closed-center, load-sense hydraulic system. A 43 GPM piston pump allows multiple functions to operate simultaneously with little or no slow-down. Optional plug-and-play radio controls are available.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



DIGGER DERRICKS

HYDRAULIC-OVER-HYDRAULIC CONTROLS

DC45/47

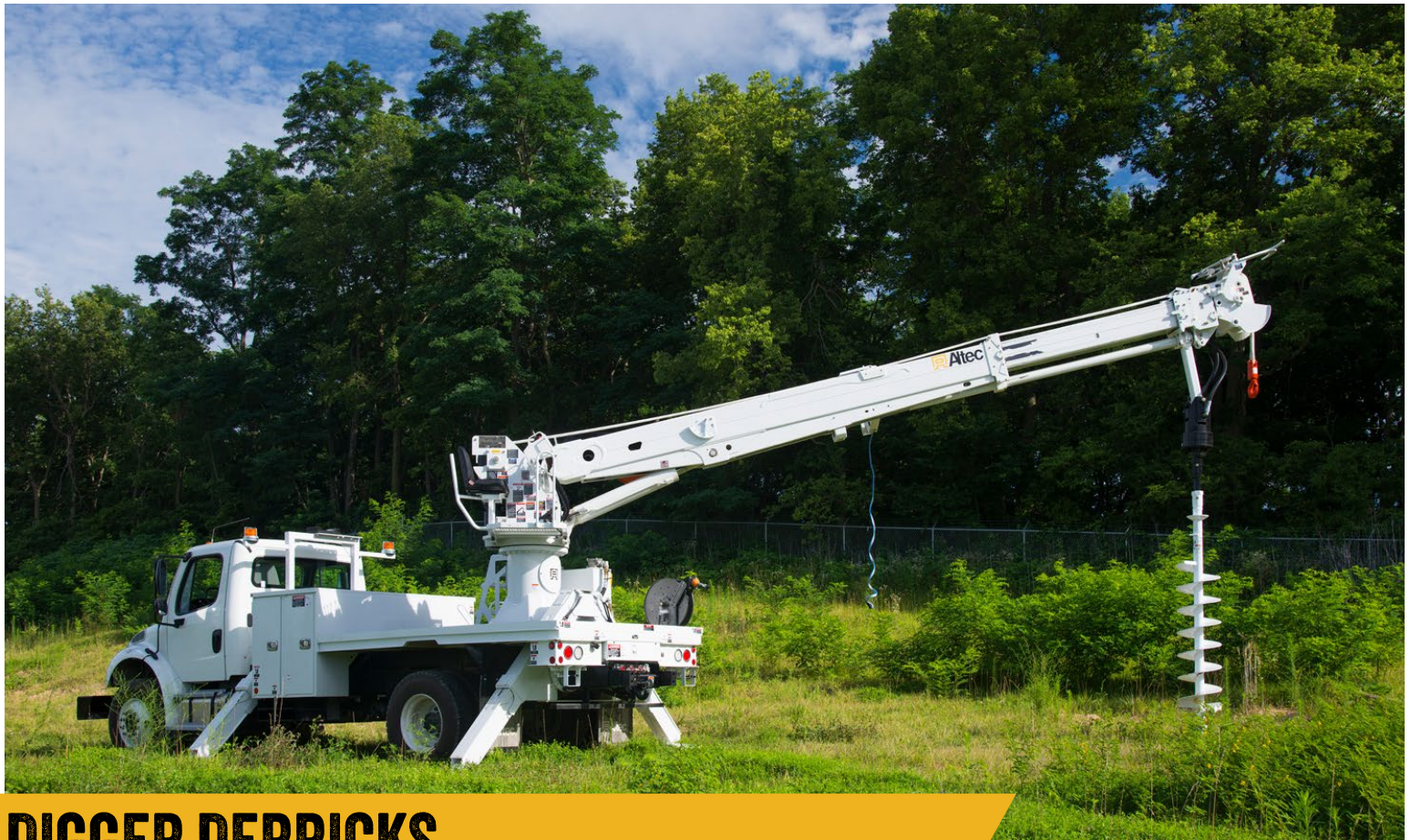
Two Days (16 hours)

The DC45 and DC47 have direct-activation hydraulic controls at the operator's control station. Fixed-displacement pumps provide flow for the full-flow, open-center hydraulic system. Simple 12-volt relays control interlock and HOP circuits.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



DIGGER DERRICKS

HYDRAULIC-OVER-HYDRAULIC CONTROLS

DH45/48/50H

Two Days (16 hours)

H-Series derricks have a pilot hydraulic-over-hydraulic control system. A piston pump provides flow in a load-sense, closed-center hydraulic system. Simple 12-volt relays control interlock and HOP circuits. The Zone Rating System senses boom position to alert the operator when in zones of less stability.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



DIGGER DERRICKS

ELECTRIC-OVER-HYDRAULIC CONTROLS

DH45/48/50B

Two Days (16 hours)

The DH-B Series has a multiplexed, electric-over-hydraulic control system with a piston pump which provides flow in a load-sense, closed-center hydraulic system. The Zone Rating System senses boom position to alert the operator when in zones of less stability.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



DIGGER DERRICKS

ELECTRIC-OVER-HYDRAULIC CONTROLS

D2/3/4000A/B

Three Days (24 hours)

These derricks have a multiplexed, electric-over-hydraulic control system. The 4000-Series also has a Load Control System that sets lifting capacity throughout the range of motion. The A-Series has a fixed-displacement pump in a full-flow, open-center hydraulic system. The B-Series has a piston pump in a load-sense, closed-center hydraulic system.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



DIGGER DERRICKS

CAN-BASED CONTROL SYSTEM

E-SERIES (DH-E, D3000E, DM-E, DT65E, DT85E)

Three Days (24 hours)

The E-Series derricks have a CAN-based control system providing enhanced machine performance and maintenance troubleshooting capabilities using the AXIS Service Tool. A piston pump provides flow for the load-sense, closed-center hydraulic system.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



DIGGER DERRICKS

HYDRAULIC-OVER-HYDRAULIC CONTROLS

D3000H

Two Days (16 hours)

H-Series derricks have a pilot hydraulic-over-hydraulic control system. A piston pump provides flow in a load-sense, closed-center hydraulic system. Simple 12-volt relays control interlock and HOP circuits.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



DIGGER DERRICKS

HYDRAULIC-OVER-HYDRAULIC CONTROLS

DT65H

Two Days (16 hours)

H-Series derricks have a pilot hydraulic-over-hydraulic control system. A piston pump provides flow in a load-sense, closed-center hydraulic system. Simple 12-volt relays control interlock and HOP circuits.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



DIGGER DERRICKS

ELECTRIC-OVER-HYDRAULIC CONTROLS

DT80

Two Days (16 hours)

The DT80 has a multiplexed, electric-over-hydraulic control system with fixed-displacement pumps in a full-flow, open-center hydraulic system. Units with out-and-down outriggers have a Load Control and Rotation Interlock System to allow less-than-full-span outrigger operation.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



DIGGER DERRICKS

ELECTRIC-OVER-HYDRAULIC CONTROLS

DT105

Two Days (16 hours)

This large transmission derrick uses a piston pump in a load-sense, closed-center hydraulic system. Controls are CAN-based electric-over-hydraulic with ramp-in and ramp-out metering. The four-stage boom extends hydraulically by cylinders for 2nd and 3rd stage; 4th stage extends by cables.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SPECIALTY PRODUCTS

LOAD-SENSE HYDRAULIC SYSTEM

HW80

Two Days (16 hours)

The HW80 has two piston pumps in a load-sense, closed-center hydraulic system, one pump each for boom functions and nozzle functions. Electric-over-hydraulic controls operate the boom, nozzle and outrigger functions.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SPECIALTY PRODUCTS

LOAD-SENSE HYDRAULIC SYSTEM

HW145

Two Days (16 hours)

The HW145 has two piston pumps in a load-sense, closed-center hydraulic system, one pump each for boom functions and nozzle functions. Electric-over-hydraulic controls operate the boom, nozzle and outrigger functions.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SPECIALTY PRODUCTS

ELECTRIC-OVER-HYDRAULIC CONTROLS

LP108

Two Days (16 hours)

The LP108 is an underground and overhead cable handler for truck-mounted installations. It is used primarily for transporting, removing and pulling underground cable through ducts. The LP108 has two main valve options; both are electric-over-hydraulic actuated. Each valve option is supplied by a piston pump in a load-sense, closed-center system. On/off proportional controls are powered by simple 12 volts.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SPECIALTY PRODUCTS

ELECTRIC-OVER-HYDRAULIC CONTROLS

LP108-ES

Two Days (16 hours)

The LP108-ES is an underground and overhead cable handler for truck-mounted installations. It is used primarily for transporting, removing and pulling underground cable through ducts. The LP108-ES has two main electric-over-hydraulic valves and a CAN-based control system to operate all functions powered by simple 12 volts. Operation is from one main or an optional second control station as well as optional radio controls.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SPECIALTY PRODUCTS

ELECTRIC-OVER-HYDRAULIC CONTROLS

AD108

Two Days (16 hours)

The AD108 is a self-loading, trailer mounted, underground cable puller. The trailer is self-propelled for easy mobility in tight places. The AD108 has a large electric-over-hydraulic main valve supplied by a piston pump in a load-sense, closed-center system. Both on/off and proportional controls are simple 12 volts.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SPECIALTY PRODUCTS

LOAD-SENSE HYDRAULIC SYSTEM

AD108E

Two Days (16 hours)

The AD108E is a self-loading, trailer-mounted, underground cable puller. The unit has a CAN-based control system with optional radio controls. A piston pump provides flow in a load-sense, closed-center hydraulic system to two CAN-operated control valves.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SPECIALTY PRODUCTS

FULL-FLOW HYDRAULIC SYSTEM

HD35A

Two Days (16 hours)

The HD35A is a continuous-duty, direct-drive pressure digger with capacities of 72-inch digging diameter and up to 25,000 pounds of downward force. This pressure digger has a piston pump and piston motor in a hydrostatic transmission turning a direct-drive gearbox. Fixed-displacement pumps in a full-flow, open-center hydraulic system run the cylinders. Simple 12-volt relays control the outriggers and pole guides.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SPECIALTY PRODUCTS

FULL-FLOW HYDRAULIC SYSTEM

TS20-4P

Half Day (4 hours)

The TS20-4P is a trailer-mounted, four-drum puller used for overhead stringing of conductors. It has a closed-loop hydrostatic drive to turn the rope drums and a secondary full-flow, open-center hydraulic circuit for the hydraulic front jack and the level wind arms. Maximum line pull for overhead tensioning is 2,000 pounds.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SPECIALTY PRODUCTS

FULL-FLOW HYDRAULIC SYSTEM

TS40-PT/TS336-BW

One Day (8 hours)

The TS40-PT/TS336-BW are puller/tensioners used for the installation of new overhead conductors. The TS40-PT uses a piston pump and piston motor in a hydrostatic transmission to turn the reel drive. A fixed-displacement pump in a full-flow, open-center hydraulic system operates the outriggers and level-wind cylinders. The TS336-BW has a hydraulic braking system and may include an optional fixed-displacement pump for hydraulic outriggers.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



SPECIALTY PRODUCTS

FULL-FLOW HYDRAULIC SYSTEM

TS40H-PT

One Day (8 hours)

The TS40H-PT is a puller/tensioner used for the installation of new overhead conductors. With a 4,000-pound max line pull and up to 22,000 feet of rope per drum, the TS40H-PT uses a piston pump and piston motor in a hydrostatic transmission to turn the reel drive system. A fixed-displacement pump in a full-flow, open-center hydraulic system operates the outriggers, reel lock, and level-wind cylinders.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



CRANES

10-YEAR INSPECTION

Five Days (40 hours)

This training goes through full disassembly and reassembly of a crane boom while performing the inspection process. Any testing that needs to be done before and after taking the boom apart will be completed so the whole process can be done from start to finish. The AC38 boom is the primary unit used for this course.

Course Content

- Safety
- Crane boom disassembly
- Crane boom reassembly
- Unit inspection

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



CRANES

E-SERIES CRANES

UNIT SYSTEMS TRAINING (AC40E/AC45E/AC65E)

Three Days (24 hours)

The AC40E/AC45E/AC65E has a CAN-based control system with a closed-center, load-sense hydraulic system. It utilizes a variable displacement piston pump for crane functions and two fixed displacement pumps for outriggers and auxiliary functions. A CAN-based hydraulic valve controls crane functions. These units feature Altec's Load Moment Area Protection (LMAP) system to monitor crane operations and to send alerts of potential overloads. The AC40E, AC45E and AC65E units' aerial mode of operation complies with the ANSI A92.2 aerial lift standard when outfitted with optional equipment.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



CRANES

EFFER SYSTEMS

EFFER KNUCKLEBOOM CRANE: BASIC AND INTERMEDIATE

Four Days (32 hours)

This training covers Effer systems and components. It includes most Effer models and options, preventive maintenance, and intermediate troubleshooting and repairs.

Course Content

- Model and options identification
- Preventive maintenance
- Systems and components: identification and function
- Felling grapple maintenance and repairs
- Intermediate troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



CRANES

PILOT-OPERATED CONTROL SYSTEMS

UNIT SYSTEMS TRAINING (AC18/23/30/35/38/40/45)

Three Days (24 hours)

The training focuses on the AC-Series of cranes that have a pilot-operated control system with an optional radio remote system. Units could feature a Hirschmann or Greer LMAP system (Load Moment Area Protection) to monitor the crane's operation and to warn of a potential overload. The AC40 and AC45 units' aerial mode of operation complies with the ANSI A92.2 aerial-lift standard when outfitted with optional equipment. Any unit ranging from AC18 up to AC45 that is pilot operated can be used for the course to cover the fundamentals of the hydraulic system. A pilot-operated training simulator could also be utilized if no unit is available.

Course Content

- Safety
- Unit operation
- Preventive maintenance
- Unit inspection
- Minor troubleshooting and repairs

This training is designed for the development of technicians by reinforcing best maintenance safety practices and introducing unit specific knowledge. Trainees are given the opportunity to learn both the theoretical and practical skills needed to perform preventive maintenance, inspections, minor troubleshooting and repairs. Upon completion of this training, technicians will be able to demonstrate applied knowledge of the unit's hydraulic, mechanical and electrical systems.



JEMS Unit Systems Training

Course lengths vary with system as listed on the following pages

JEMS courses are intended to provide technicians with an understanding of the fundamental operational principles on a specific JEMS system. The courses include hands on exercises in diagnosis and repairs of a JEMS system. Various tools are used along with schematics to test system and component functionality. After completing a course, trainees should have a better understanding of the electrical and hydraulic components used in the JEMS system and be better able to test and diagnose the system as needed.

Courses

- AT JEMS
- AT JEMS +IMS
- L JEMS
- L JEMS +IMS
- JEMS DC Drive*
- JEMS 2A
- JEMS 4A
- JEMS 4EA
- JEMS 6E6
- JEMS 12E8
- JEMS 1820
- JEMS 18E20
- JEMS S
- JEMS SE
- JEMS LE

Course Content

- System safety
- System overview and operations
- Hands-on component overview
- Hydraulic system overview
- Electrical system and circuit overview
- Testing of the electrical systems
- Minor troubleshooting and repairs

EACH COURSE STANDS ALONE

*Indicates courses that can be requested in combination with a unit specific training



JEMS

JOBSITE ENERGY MANAGEMENT SYSTEM

AT JEMS

UNIT SYSTEMS TRAINING (AVAILABLE ON AT3X-G AND AT40-G MODELS)

Three Days (24 hours)

The AT JEMS is a mild hybrid system that uses lead acid battery technology and stored electrical energy to power the aerial device, tools and exportable power in addition to providing cab comfort. The energy storage system is recharged by plugging into shore power or by the truck's internal combustion engine.

Course Content

- System safety
- System overview and operations
- Hands-on component overview
- Hydraulic system overview
- Electrical system and circuit overview
- Testing of the electrical systems
- Minor troubleshooting and repairs

This course is intended to provide technicians with an understanding of the fundamental operational principles on the AT JEMS mild hybrid system. The course includes hands on exercises in diagnosis and repairs of the AT JEMS hybrid system. Various tools are used along with schematics to test system and component functionality. After completing the course, trainees should have a better understanding of the electrical and hydraulic components used in the hybrid system and be better able to test and diagnose the system as needed.



JEMS

JOBSITE ENERGY MANAGEMENT SYSTEM

AT JEMS +IMS

UNIT SYSTEMS TRAINING (AVAILABLE ON AT3X-G AND AT40-G MODELS)

One and a Half Days (12 hours)

The AT JEMS +IMS is a mild hybrid system that utilizes lead acid battery technology and the ZeroRPM Idle Mitigation System (IMS) for engine-off operations. The system uses stored electrical energy to power the aerial device, tools and exportable power, and to provide cab comfort. The energy storage system is recharged by plugging into shore power or by the truck's internal combustion engine.

Course Content

- System safety
- System overview and operations
- Hands-on component overview
- Hydraulic system overview
- Electrical system and circuit overview
- Testing of the electrical systems
- Minor troubleshooting and repairs

This course is intended to provide technicians with an understanding of the fundamental operational principles on the L JEMS +IMS mild hybrid system. The course includes hands on exercises in diagnosis and repairs of the L JEMS +IMS hybrid system. Various tools are used along with schematics to test system and component functionality. After completing the course, trainees should have a better understanding of the electrical and hydraulic components used in the hybrid system and be better able to test and diagnose the system as needed.



JEMS

JOBSITE ENERGY MANAGEMENT SYSTEM

L JEMS

UNIT SYSTEMS TRAINING (AVAILABLE ON L42-44, LR SERIES, TA37/41/45 AND AT37/41/48M MODELS)

One Day (8 hours)

The L JEMS is a mild hybrid system that uses lead acid battery technology and stored electrical energy to power the aerial device, tools and exportable power in addition to providing cab comfort. The energy storage system is recharged by plugging into shore power or by the truck's internal combustion engine.

Course Content

- System safety
- System overview and operations
- Hands-on component overview
- Hydraulic system overview
- Electrical system and circuit overview
- Testing of the electrical systems
- Minor troubleshooting and repairs

This course is intended to provide technicians with an understanding of the fundamental operational principles on the L JEMS mild hybrid system. The course includes hands on exercises in diagnosis and repairs of the L JEMS hybrid system. Various tools are used along with schematics to test system and component functionality. After completing the course, trainees should have a better understanding of the electrical and hydraulic components used in the hybrid system and be better able to test and diagnose the system as needed.



JEMS JOBSITE ENERGY MANAGEMENT SYSTEM

L JEMS +IMS

UNIT SYSTEMS TRAINING (AVAILABLE ON L42-44, LR SERIES, TA37/41/45 AND AT37/41/48M MODELS)

One and a Half Days (12 hours)

The L JEMS is a mild hybrid system that utilizes lead acid battery technology and the ZeroRPM Idle Mitigation System (IMS) for engine-off operations. The system uses stored electrical energy to power the aerial device, tools and exportable power in addition to providing cab comfort. The energy storage system is recharged by plugging into shore power or by the truck's internal combustion engine.

Course Content

- System safety
- System overview and operations
- Hands-on component overview
- Hydraulic system overview
- Electrical system and circuit overview
- Testing of the electrical systems
- Minor troubleshooting and repairs

This course is intended to provide technicians with an understanding of the fundamental operational principles on the L JEMS +IMS mild hybrid system. The course includes hands on exercises in diagnosis and repairs of the L JEMS +IMS hybrid system. Various tools are used along with schematics to test system and component functionality. After completing the course, trainees should have a better understanding of the electrical and hydraulic components used in the hybrid system and be better able to test and diagnose the system as needed.



JEMS JOBSITE ENERGY MANAGEMENT SYSTEM

JEMS DC DRIVE UNIT SYSTEMS TRAINING (AVAILABLE ON AT200A AND AT235/237 MODELS)

Half Day (4 hours) Stand-alone or in combination with unit-specific training

The JEMS DC Drive is a mild hybrid system that uses lead acid battery technology and stored electrical energy to power the aerial device, tools and exportable power. The energy storage system is recharged by plugging into shore power, by the truck's internal combustion engine or by the auxiliary generator.

Course Content

- System safety
- System overview and operations
- Hands-on component overview
- Hydraulic system overview
- Electrical system and circuit overview
- Testing of the electrical systems
- Minor troubleshooting and repairs

This course supplements the unit specific training to provide technicians with an understanding of the fundamental operational principles of the JEMS DC Drive mild hybrid system. The course includes hands on exercises in diagnosis and repairs of the JEMS DC Drive hybrid system. Various tools are used along with schematics to test system and component functionality. After completing the course, trainees should have a better understanding of the electrical and hydraulic components used in the hybrid system and be better able to test and diagnose the system as needed.



JEMS

JOBSITE ENERGY MANAGEMENT SYSTEM

JEMS 2A

UNIT SYSTEMS TRAINING (AVAILABLE ON AT200A AND AT235 MODELS)

Half Day (4 hours) Stand-alone or in combination with unit-specific training

The JEMS 2A is a mild hybrid system that uses lithium battery technology and stored energy to run chassis electrical loads at the jobsite so the engine can remain off. When the aerial device interlock is activated to move the booms, the engine starts and runs until the operator stops moving the aerial device. The energy storage system is recharged by plugging into shore power or by the chassis charging system.

Course Content

- System safety
- System overview and operations
- Hands-on component overview
- Hydraulic system overview
- Electrical system and circuit overview
- Testing of the electrical systems
- Minor troubleshooting and repairs

This course supplements the unit specific training to provide technicians with an understanding of the fundamental operational principles of the JEMS 2A mild hybrid system. The course includes hands on exercises in diagnosis and repairs of the JEMS 2A hybrid system. Various tools are used along with schematics to test system and component functionality. After completing the course, trainees should have a better understanding of the electrical and hydraulic components used in the hybrid system and be better able to test and diagnose the system as needed.



JEMS JOBSITE ENERGY MANAGEMENT SYSTEM

JEMS 4A UNIT SYSTEMS TRAINING (AVAILABLE ON ANY AERIAL DEVICE, SERVICE-BODY ONLY UNITS AND PICKUPS) Two Days (16 hours)

The JEMS 4A is a mild hybrid system that utilizes lithium ion battery technology and the ZeroRPM Idle Mitigation System (IMS) for engine-off operations. The system uses stored electrical energy to power chassis loads and to provide engine-off cab comfort heating and cooling. The energy storage system is recharged by plugging into shore power or by the truck's internal combustion engine.

Course Content

- System safety
- System overview and operations
- Hands-on component overview
- Hydraulic system overview
- Electrical system and circuit overview
- Testing of the electrical systems
- Minor troubleshooting and repairs

This course is intended to provide technicians with an understanding of the fundamental operational principles on the JEMS 4A mild hybrid system. The course includes hands on exercises in diagnosis and repairs of the JEMS 4A hybrid system. Various tools are used along with schematics to test system and component functionality. After completing the course, trainees should have a better understanding of the electrical and hydraulic components used in the hybrid system and be better able to test and diagnose the system as needed.



JEMS JOBSITE ENERGY MANAGEMENT SYSTEM

JEMS 4E4 UNIT SYSTEMS TRAINING (AVAILABLE ON AT3X-G AND AT40-G MODELS) Two Days (16 hours)

The JEMS 4E4 is a mild hybrid system that utilizes lithium ion battery technology and the ZeroRPM Idle Mitigation System (IMS) for engine-off operations. The system uses stored electrical energy to power the aerial device, tools and exportable power in addition to providing cab comfort. The energy storage system is recharged by plugging into shore power or by the truck's internal combustion engine.

Course Content

- System safety
- System overview and operations
- Hands-on component overview
- Hydraulic system overview
- Electrical system and circuit overview
- Testing of the electrical systems
- Minor troubleshooting and repairs

This course is intended to provide technicians with an understanding of the fundamental operational principles on the JEMS 4E4 mild hybrid system. The course includes hands on exercises in diagnosis and repairs of the JEMS 4E4 hybrid system. Various tools are used along with schematics to test system and component functionality. After completing the course, trainees should have a better understanding of the electrical and hydraulic components used in the hybrid system and be better able to test and diagnose the system as needed.



JEMS JOBSITE ENERGY MANAGEMENT SYSTEM

JEMS 6E6

UNIT SYSTEMS TRAINING (AVAILABLE ON L42-44, LR SERIES, TA37/41/45 AND AT37/41/48M MODELS)

Two Days (16 hours)

The JEMS 6E6 is a mild hybrid system that utilizes lithium ion battery technology and the ZeroRPM Idle Mitigation System (IMS) for engine-off operations. The system uses stored electrical energy to power the aerial device, tools and exportable power in addition to providing cab comfort. The energy storage system is recharged by plugging into shore power or by the truck's internal combustion engine.

Course Content

- System safety
- System overview and operations
- Hands-on component overview
- Hydraulic system overview
- Electrical system and circuit overview
- Testing of the electrical systems
- Minor troubleshooting and repairs

This course is intended to provide technicians with an understanding of the fundamental operational principles on the JEMS 6E6 mild hybrid system. The course includes hands on exercises in diagnosis and repairs of the JEMS 6E6 hybrid system. Various tools are used along with schematics to test system and component functionality, and results are recorded on a worksheet. After completing the course, trainees should have a better understanding of the electrical and hydraulic components used in the hybrid system and be better able to test and diagnose the system as needed.



JEMS JOBSITE ENERGY MANAGEMENT SYSTEM

JEMS 12E8 UNIT SYSTEMS TRAINING (AVAILABLE ON TA50/55/60 MODELS) Two Days (16 hours)

The JEMS 12E8 is a mild hybrid system that utilizes lithium ion battery technology and the ZeroRPM Idle Mitigation System (IMS) for engine-off operations. The system uses stored electrical energy to power the aerial device, tools and exportable power in addition to providing cab comfort. The energy storage system is recharged by plugging into shore power or by the truck's internal combustion engine.

Course Content

- System safety
- System overview and operations
- Hands-on component overview
- Hydraulic system overview
- Electrical system and circuit overview
- Testing of the electrical systems
- Minor troubleshooting and repairs

This course is intended to provide technicians with an understanding of the fundamental operational principles on the JEMS 12E8 mild hybrid system. The course includes hands on exercises in diagnosis and repairs of the JEMS 12E8 hybrid system. Various tools are used along with schematics to test system and component functionality. After completing the course, trainees should have a better understanding of the electrical and hydraulic components used in the hybrid system and be better able to test and diagnose the system as needed.



JEMS

JOBSITE ENERGY MANAGEMENT SYSTEM

JEMS 1820

UNIT SYSTEMS TRAINING (AVAILABLE ON AM/AM-E, AA, AN AND TA MODELS)

Two Days (16 hours)

The JEMS 1820 is a mild hybrid system that uses lithium ion battery technology and stored electrical energy to power the aerial device, tools and exportable power in addition to providing cab comfort. The energy storage system is recharged by plugging into shore power or by the truck's internal combustion engine.

Course Content

- System safety
- System overview and operations
- Hands-on component overview
- Hydraulic system overview
- Electrical system and circuit overview
- Testing of the electrical systems
- Minor troubleshooting and repairs

This course is intended to provide technicians with an understanding of the fundamental operational principles on the JEMS 1820 mild hybrid system. The course includes hands on exercises in diagnosis and repairs of the JEMS 1820 hybrid system. Various tools are used along with schematics to test system and component functionality. After completing the course, trainees should have a better understanding of the electrical and hydraulic components used in the hybrid system and be better able to test and diagnose the system as needed.



JEMS

JOBSITE ENERGY MANAGEMENT SYSTEM

JEMS 18E20

UNIT SYSTEMS TRAINING (AVAILABLE ON AM/AM-E, AA, AN AND TA MODELS)

Two Days (16 hours)

The JEMS 18E20 is a mild hybrid system that utilizes lithium ion battery technology and the ZeroRPM Idle Mitigation System (IMS) for engine-off operations. The system uses stored electrical energy to power the aerial device, tools and exportable power in addition to providing cab comfort. The energy storage system is recharged by plugging into shore power or by the truck's internal combustion engine.

Course Content

- System safety
- System overview and operations
- Hands-on component overview
- Hydraulic system overview
- Electrical system and circuit overview
- Testing of the electrical systems
- Minor troubleshooting and repairs

This course is intended to provide technicians with an understanding of the fundamental operational principles on the JEMS 18E20 mild hybrid system. The course includes hands on exercises in diagnosis and repairs of the JEMS 18E20 hybrid system. Various tools are used along with schematics to test system and component functionality. After completing the course, trainees should have a better understanding of the electrical and hydraulic components used in the hybrid system and be better able to test and diagnose the system as needed.



JEMS

JOBSITE ENERGY MANAGEMENT SYSTEM

JEMS S

UNIT SYSTEMS TRAINING (AVAILABLE ON ANY AERIAL DEVICE, SERVICE-BODY ONLY TRUCKS)

Two Days (16 hours)

The JEMS S is a mild hybrid system that utilizes lithium ion battery technology and Altec's Anti-Idle (AI) system for engine-off operations. The system uses stored electrical energy to power chassis loads and to provide engine-off cab comfort heating and cooling. The energy storage system is recharged by grid power or by the truck's internal combustion engine.

Course Content

- System safety
- System overview and operations
- Hands-on component overview
- Hydraulic system overview
- Electrical system and circuit overview
- Testing of the electrical systems
- Minor troubleshooting and repairs

This course is intended to provide technicians with an understanding of the fundamental operational principles on the JEMS S mild hybrid system. The course includes hands on exercises in diagnosis and repairs of the JEMS S hybrid system. Various tools are used along with schematics to test system and component functionality. After completing the course, trainees should have a better understanding of the electrical and hydraulic components used in the hybrid system and be better able to test and diagnose the system as needed.



JEMS

JOBSITE ENERGY MANAGEMENT SYSTEM

JEMS SE UNIT SYSTEMS TRAINING (AVAILABLE ON AT 3X-G, AT40G, L SERIES AND AT-M) Two Days (16 hours)

The JEMS SE is a mild hybrid system that utilizes lithium ion battery technology and Altec's Anti-Idle (AI) system for engine-off operations. The system uses stored electrical energy to power the aerial device, tools and exportable power in addition to providing cab comfort (if equipped). The energy storage system is recharged by grid power or by the truck's internal combustion engine.

Course Content

- System safety
- System overview and operations
- Hands-on component overview
- Hydraulic system overview
- Electrical system and circuit overview
- Testing of the electrical systems
- Minor troubleshooting and repairs

This course is intended to provide technicians with an understanding of the fundamental operational principles on the JEMS SE mild hybrid system. The course includes hands on exercises in diagnosis and repairs of the JEMS SE hybrid system. Various tools are used along with schematics to test system and component functionality, and results are recorded on a worksheet. After completing the course, trainees should have a better understanding of the electrical and hydraulic components used in the hybrid system and be better able to test and diagnose the system as needed.



JEMS

JOBSITE ENERGY MANAGEMENT SYSTEM

JEMS LE

UNIT SYSTEMS TRAINING (AVAILABLE ON AM, AA, AN, LR AND TA SERIES)

Two Days (16 hours)

The JEMS LE is a mild hybrid system that utilizes lithium ion battery technology and Altec's Anti-Idle (AI) system for engine-off operations. The system uses stored electrical energy to power the aerial device, tools and exportable power in addition to providing cab comfort (if equipped). The energy storage system is recharged by grid power or by the truck's internal combustion engine.

Course Content

- System safety
- System overview and operations
- Hands-on component overview
- Hydraulic system overview
- Electrical system and circuit overview
- Testing of the electrical systems
- Minor troubleshooting and repairs

This course is intended to provide technicians with an understanding of the fundamental operational principles on the JEMS LE mild hybrid system. The course includes hands on exercises in diagnosis and repairs of the JEMS LE hybrid system. Various tools are used along with schematics to test system and component functionality, and results are recorded on a worksheet. After completing the course, trainees should have a better understanding of the electrical and hydraulic components used in the hybrid system and be better able to test and diagnose the system as needed.



Five Days (40 hours)

This training includes an FPS review and test preparation session to give mechanics and technicians the ability to earn the FPS Mobile Hydraulic Mechanic certification. The first four days consist of a review of hydraulic maintenance, field repairs, shop repairs and troubleshooting responsibilities in addition to practice hands on tests. The FPS Mobile hydraulic Mechanic and Job Performance tests are administered on the fifth day. This course is facilitated by Altec and FPS accredited instructors and follows the training curriculum set by FPS. Note: this course is not designed to replace individual preparedness.

FPS Subject Matter Outline

Maintenance

- Replace an SAE O-ring fitting.
- Add hydraulic fluid to the reservoir.
- Replace hydraulic filters.
- Make up a crimped hose assembly.
- Align hoses and fittings.
- Check the condition of hydraulic filters.
- Examine hydraulic fluid for debris (contamination).
- Set the pressure relief valve.
- Inspect a hydraulic or pneumatic cylinder for internal and external leaks.
- Check (rod) seals and packings for wear.
- Inspect pumps and fluid motors for leaks.
- Adjust a hydraulic packing gland.
- Draw a fluid sample from the reservoir.
- Make a flared tube assembly.
- Inspect a cylinder for binding.
- Make up a tube assembly.
- Test petroleum fluid for water.
- Check a reservoir for silt build-up.
- Charge a hydropneumatic accumulator.

Field Repairs

- Replace a hose assembly.
- Verify the operating pressure with a gauge.
- Verify the relief valve setting.
- Replace a hydraulic cylinder.
- Check cylinder alignment and mounting.
- Check directional control valve solenoids.

Shop Repairs

- Replace a hydraulic pump unit.
- Drain, flush and refill a system.
- Replace a directional control stack valve (module).
- Mount a pump and align the shaft coupling.
- Replace a hydraulic motor unit.
- Replace a pressure relief valve.
- Install an overhaul kit in a hydraulic cylinder.

Troubleshooting

- Determine why a cylinder will not extend.
- Determine the cause of no, low or high pressure.
- Identify components in a circuit diagram.
- Determine why a cylinder fails to hold the load.
- Determine why system operation is erratic.
- Determine the cause of excessive heat.
- Determine the cause of no flow, low flow or high flow.



Find Lodging
Some locations offer a reduced rate for Altec training guests. When calling to make reservations at the specified location, ask for the Altec rate.

Model/Course	Course Length	Page
Virtual Training		
eCourses & How-To Videos	Self-paced (times vary)	11
Interactive Webinars	Scheduled (times vary)	5-10

Basic Training		
Altec Customer Boot Camp	4 Days (32 hours)	13
Controller Area Network (CAN)	Varies	17
Electrical Systems	2 Days (16 hours)	14
Hydraulic Systems	1 Day (8 hours)	15
Power Distribution Module	1 1/2 Days (12 hours)	16

Small Aerials		
AT30/35/37-G	1 Day (8 hours)	21
AT36/40M/S/P	1 Day (8 hours)	25
AT37/41/48 M/P/S	1 Day (8 hours)	26
AT37-41-48 ME/PE/SE	1 1/2 Days (12 hours)	27
AT37-GW	1 Day (8 hours)	22
AT40-GW	2 Day (16 hours)	23
AT41MW/PW AT48MW/PW	1 1/2 Days (12 hours)	24
A-T40C	1 1/2 Days (12 hours)	28
AT40-G	1 1/2 Days (12 hours)	29
AT200A/AT235	1 Day (8 hours)	19
AT235P/AT237	1 Day (8 hours)	20
AT238P	1 Day (8 hours)	33
AT248F	1 Day (8 hours)	30
L36A/L42A	1 Day (8 hours)	31
L37M/L42-45M	1 Day (8 hours)	32
L42-44E	1 Day (8 hours)	38
T40P	2 Days (16 hours)	34
TA36/37M/40/41M/45M	1 Day (8 hours)	35
TA50/55/60	1 Day (8 hours)	36
TDA58	1 Day (8 hours)	37

Large Aerials		
A-Class:		
A65/70/75/72-T/77-T/82-T	1 Day (8 hours)	42
A-Class:		
A47/50/55/55E-OC	1 Day (8 hours)	43
AA/AN/AN-OC	2 Day (16 hours)	39
AH75/85/100	3 Days (24 hours)	44
AH75/85/100A	3 Days (24 hours)	45
AH75B/AH85B/AH100B	3 Days (24 hours)	46
AH125	3 Days (24 hours)	47
AH125B	3 Days (24 hours)	48
AH150	3 Days (24 hours)	49
ALB	1 Day (8 hours)	40
AM50/55/60	2 Day (16 hours)	41
HL125	3 Days (24 hours)	50

Tree Care Aerials		
Chippers	1 Day (8 hours)	52
JT75	1 Day (8 hours)	54
LRV/LR7/LR8/LRV60E70/LR760E70/LR860E70	1 Day (8 hours)	51
MT66-E76	2 Days (16 hours)	55
TDA58	1 Day (8 hours)	53

Telecom Aerials		
AT200A/AT235	1 Day (8 hours)	56
AT235P/AT237	1 Day (8 hours)	57
AT335	1 Day (8 hours)	58
A-T40C	1 1/2 Days (12 hours)	59
T40P	2 Days (16 hours)	60

Lights and Signs Aerials		
AT248F	1 Day (8 hours)	61
LS49	1 1/2 Days (12 hours)	62
LS60	2 Days (16 hours)	63
LS63	2 Days (16 hours)	64
LS87	2 Days (16 hours)	65

Digger Derricks		
D3000H	2 Days (16 hours)	77
D2/3/4000A/B	3 Days (24 hours)	75
DB37	1 Day (8 hours)	68
DB41B	2 Days (16 hours)	69
DC45/47	2 Days (16 hours)	72
DH45/48/50H	2 Days (16 hours)	73
DH45/48/50B	2 Days (16 hours)	74
DL-B/DM-B	3 Days (24 hours)	71
DR41B/DR42B	2 Days (16 hours)	70
DT65H	2 Days (16 hours)	78
DT80	2 Days (16 hours)	79
DT105	2 Days (16 hours)	80
Derrick School 1	4 Days (32 hours)	66
Derrick School 2	3 Days (24 hours)	67
E-Series:		
_DH-E, D3000E, DT65E, DT85E	3 Days (24 hours)	76

Specialty Products		
AD108	2 Days (16 hours)	85
AD108E	2 Days (16 hours)	86
HD35A	2 Days (16 hours)	87
HW80	2 Days (16 hours)	81
HW145	2 Days (16 hours)	82
LP108	2 Days (16 hours)	83
LP108-ES	2 Days (16 hours)	84
TS20-4P	1/2 Day (4 hours)	88
TS40-PT/TS336-BW	1 Day (8 hours)	89
TS40H-PT	1 Day (8 hours)	90

Cranes		
10-Year Inspection	5 Days (40 hours)	91
E-Series Cranes	3 Days (24 hours)	92
Effer Knuckleboom Crane:		
Basic and Intermediate	4 Days (32 hours)	93
Pilot Operated Cranes	3 Days (24 hours)	94

JEMS		
AT JEMS	1 Day (8 hours)	96
AT JEMS +IMS	2 Days (12 hours)	97
JEMS DC Drive	1/2 Day (4 hours)	100
JEMS 2A	1/2 Day (4 hours)	101
JEMS 4A	2 Days (16 hours)	102
JEMS 4E4	2 Days (16 hours)	103
JEMS 6E6	2 Days (16 hours)	104
JEMS 12E8	2 Days (16 hours)	105
JEMS 1820	2 Days (16 hours)	106
JEMS 18E20	2 Days (16 hours)	107
JEMS S	2 Days (16 hours)	108
JEMS SE	2 Days (16 hours)	109
JEMS LE	2 Days (16 hours)	110
L JEMS	1 Day (8 hours)	98
L JEMS +IMS	1 1/2 Days (12 hours)	99

Certification		
FPS Mobile Hydraulic Mechanic Certification	5 Days (40 hours)	111