



presents the

30th Annual

*Emergency & Municipal Apparatus
Maintenance Symposium*

September 19 thru 23, 2022
at the

OHIO FIRE ACADEMY

The Ohio Association of Emergency Vehicle Technicians will present it's 30th Annual Emergency & Municipal Apparatus Maintenance Symposium September 19 thru 23, 2022.

Classes will be conducted at the Ohio Fire Academy 8895 E. Main St. Reynoldsburg, Ohio.

SCHEDULE OF EVENTS

- Sept. 19-Monday **REGISTRATION AND OPENING REMARKS**
Registration 7:00 to 8:30 and Opening Remarks at 8:30
- Sept. 19 thru 23 **PRESENTATION OF CLASSES**
Monday - Friday Class Instruction starts at 9 AM
Monday - Thursday, class ends at 4 PM. Friday, class ends at noon.
- Sept. 21-Wednesday **OAEVT ANNUAL MEETING**
Held at the Ohio Fire Academy immediately following classes at 4:15 PM.
Presentation of EVT of the Year Award.
- Sept. 22-Thursday **EMERGENCY VEHICLE TECHNICIAN CERTIFICATION TESTING**
Ohio Fire Academy. Time: 4:00 PM Thursday.
Applicants must have preregistered and paid the required fees to the EVT Certification Commission prior to testing. Registration deadline, September 4, 2022. EVT Cert. Comm, P.O. Box 894, Dundee, IL 60118, 847-426-4075
Testing is not required to attend the symposium.

LODGING

The Holiday Inn & Suites 2806 Taylor Rd Extension, Pickerington, OH 43147
Confirmation 2022,OAEVT, with a special rate of \$89.00 per night for all style rooms, which includes a full breakfast bar. 614-861-8888

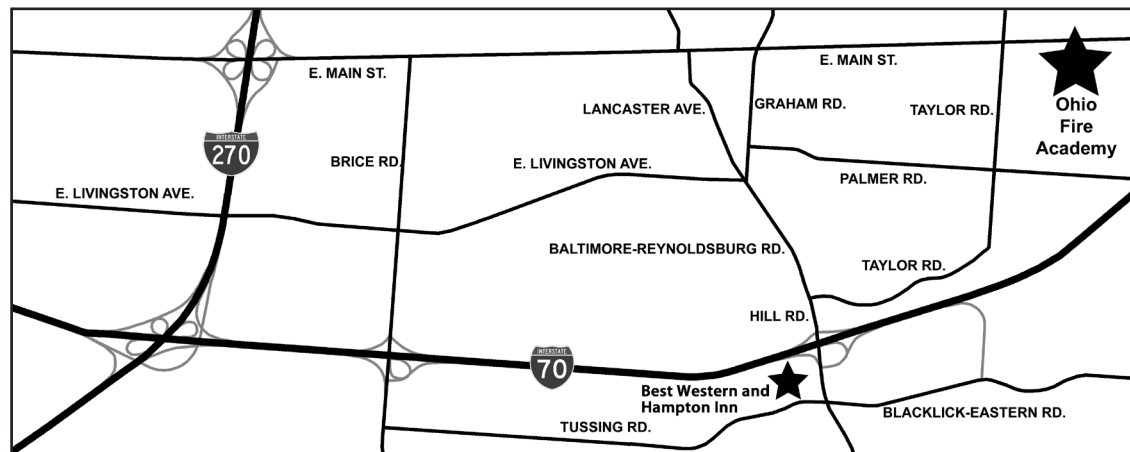
The Fairfield Inn & Suites 2826 Taylor Rd Extension, Pickerington, OH 43147
Confirmation 2022,OAEVT, with a special rate of \$109.00 per night for all style rooms, which includes a full breakfast bar. 614-864-4555

Ohio Fire Academy also has hotel style rooms available 1-888-726-7731

Hampton Inn – East 1890 Winderly Lane, Pickerington, OH, OAEVT Group pricing, 614-864-8383

Best Western Inn and Suites 1899 Winderly Lane, Pickerington, OH 614-860-9804

Comfort Inn – 1800 Hill Rd N Winderly Lane, Pickerington, OH, OAEVT Group pricing, 614-575-9900



ATTENDEE REGISTRATION FORM

2022 OHIO ASSOCIATION OF EMERGENCY VEHICLE TECHNICIANS EMERGENCY & MUNICIPAL APPARATUS MAINTENANCE SYMPOSIUM

NOTE: PLEASE PRINT or TYPE all information. This form must be filled out completely or it will be returned to you. DEADLINE for registration is September 9, 2022. All late registrations after 9-9-22 will be required to pay a fee of \$30 per day/class or \$150 total for the week. Full registration refund prior to 8-19-22. 50% refund on or before 9-2-22. No refund after 9-2-22.

Name _____

Preferred Address _____

City _____ State _____ Zip _____

Cell Phone () _____ Work Phone () _____

E-mail _____

Fire Dept./ Agency / Company _____

Address _____ Zip _____

Tee-Shirt Size _____

REGISTRATION

Carefully fill out the registration form and send it along with full tuition or payment verification: (for example purchase order number from your employer). Electronic payment available online at oaevt.org/training-symposium.

Scan and email completed registration to pguhde@aol.com or by mail,

**Ohio Association of Emergency Vehicle Technicians, Inc.
P.O. Box 303 • Avon, Ohio 44011**

Use class selection number — PLEASE indicate second choice!

	Monday	Tuesday	Wednesday	Thursday	Friday
First Choice					
Second Choice					

Form may be photocopied as needed.

TUITION INFORMATION

REGISTRATION CLOSSES SEPTEMBER 9, 2022

Late registration rate will be required. \$30 per day/class.

FULL PACKAGE

Includes the 5 day symposium and daily lunch:

\$595.00 _____

Daily Rate - Any Class..... \$200.00 _____

TOTAL ENCLOSED _____

Late Registration after 9-6-22 Full Week..... \$150.00 _____

Per Day/Class..... \$30.00 _____

TOTAL INCLUDING LATE REGISTRATION _____

***Send registration form along with full tuition or payment verification:
(for example, purchase order number from your employer)
Electronic payment available online at oaevt.org/training-symposium.***

**Registration: Monday 7:00 AM to 8:30 AM Welcome & Opening Remarks: 8:30 AM
Class Times: Classes are Monday thru Thursday from 9 AM to 4 PM, with one hour for
lunch and two 15 minute breaks. Friday 9 AM - 12 PM**

Lunch will be in the Ohio Fire Academy cafeteria. Meal tickets will be issued to each student. Some classes are limited in size due to hands-on training. Register early, classes will be filled on a first come, first served basis.

Class registrations must be postmarked by September 9, 2022. Electronic or scanned registrations are encouraged; send to pguhde@aol.com.

Certificates of attendance will be awarded upon payment of all fees and verification of attendance.

Students are responsible for providing suitable personal protective equipment, i.e., eye protection, hearing protection, as may be needed for the hands-on portion of any class.

O.A.E.V.T. reserves the right to cancel or substitute classes due to conditions beyond our control. Reasonable efforts have been made to confirm the classes and instructors scheduled.

Please call Pat Guhde (440) 476-8707 or E-mail at pguhde@AOL.com

Class 050 Apparatus crash review: Not if but when your organization is involved in a collision

3 Hrs.

This course will provide insight and education for the audience to learn from and think about the four critical ambulance crashes the City of Lebanon Fire Division has been involved in over the past five years. Following a case study review of each crash we will discuss what to expect, what the standards are and how to rest knowing that your apparatus is held to a standard that can withstand the worst-case scenario. The insight into what occurs beyond the legal issues of ambulance crashes but how it affects the people riding in them. An overview of the records, and standards we are held to in these scenarios.

Instructor: Ron Whitaker, Lebanon Fire Division

Class 200 Pump Repair & Maintenance by Darley - Tuesday & Wednesday

12 Hrs.

This two (2) day class covers the care, operation and maintenance of the Darley mid-ship pump, using an actual training pump components, the gearbox, impeller assembly and all valves normally supplied with the pump will be removed, explained, examined and re-assembled. Components will be Darley specific, and class will be a terrific refresher or can be used as a prep class.

Instructor: James Jones, Darley Corporation

Class 400 Fundamental Electrical Troubleshooting - Monday & Tuesday

12 Hrs.

This two (2) day class repeated twice has a student limit of 12 and will cover the book authored by Dan. He will take the electrical beast and slaughter it. Dan's fun way of learning this practice is apparent throughout the book and he will be live and in person to deliver the facts, myths and explain electricity for the mechanic. Any electrical engineers in the audience will not be allowed. Sign up now.

Instructor: Dan Sullivan, Author Fundamental Electrical Troubleshooting

Class 500 Fundamental Electrical Troubleshooting - Wednesday & Thursday

12 Hrs.

This two (2) day class repeated twice has a student limit of 12 and will cover the book authored by Dan. He will take the electrical beast and slaughter it. Dan's fun way of learning this practice is apparent throughout the book and he will be live and in person to deliver the facts, myths and explain electricity for the mechanic. Any electrical engineers in the audience will not be allowed. Sign up now.

Instructor: Dan Sullivan, Author Fundamental Electrical Troubleshooting

Class 600 Sutphen Aerial Maintenance Multiplex Systems - Wednesday & Thursday

6 Hrs.

This class will cover the recommended maintenance practices specifically for the Sutphen Aerial product to include the multiplex portion of the outrigger interlock systems. Class will consist of classroom and an actual truck for hands-on. This is a two day class

Instructor: Janelle Kizer, Tim Roush, Brian Teach, & Jeremiah Johnson, Sutphen Corporation

Class 100 EVT Objective Review for F-3 Fire Pumps and Accessories

6 Hrs.

Class 124 EVT Objective Review for F-3 Fire Pumps and Accessories

6 Hrs.

Class prepares the technician to understand the general design, performance and testing standards for pumper apparatus, per the NFPA 1901 & 1911. The technician will understand the hydraulic principles of water movement in pumping operations, learn the terms that relate to the basic hydraulic principles used in the fire service, understand the mechanical principles of pumps, pump controls and accessories during pumping operations, understanding the procedures necessary to overhaul a fire pump and the procedures of performing a pump service test. (Textbooks Recommended: NFPA 1901, NFPA 1911, NFPA 1915, Standards for Fire Apparatus Preventative Maintenance Program, IFSTA Pumping Apparatus Driver/Handbook, second edition. Note; Student must preregister with EVTCC for testing.

Instructor: James Jones, Darley Corporation

Class 101 Spartan Air Conditioning Maintenance and Repair - Monday

6 Hrs.

Class 117 Spartan Air Conditioning Maintenance and Repair - Wednesday

6 Hrs.

This class taught by John should say it all, but he will go over in the classroom basics and theory first and then move to the demo to do some hands on. Class will include maintenance, troubleshooting and repair of the air conditioning systems in fire apparatus.

Instructor: Wade Nichols, Spartan Chassis

Class 102 Fire Pump Familiarization - Monday

6 Hrs.

Class 128 Fire Pump Familiarization - Thursday

6 Hrs.

This class is designed for the technician to familiarize and understand Fire Pump operations and all the components of Fire Pump operation as used by the firefighter. The class will enable practical evolutions to enable the technician to fully understand the common practices used at fire scenes and theory to back it up which will help identify problems or find specific problems or repairs when faced with them. Perfect class for the Technician that wants to know why all those chrome gauges, handles and labels. This one day class repeated twice 102 on Monday and 128 on Thursday

Instructor: Dave Woodward, Retired Violet Township Fire

Class 103 Electrical Troubleshooting E-100

6 Hrs.

This class is designed to instruct technicians on the repair and maintenance of Basic Electrical Systems. The class will start at the basics with power and ground and work up from there. Class includes lecture, demonstration, and hands-on instruction. Students must have this class to be eligible for E-200 or E-300

Instructor: John Merrifield,, Spartan Chassis

Class 104 EVT Objective Review Class, E-2 & F-4 Amb. & Fire Truck Electrical Systems

6 Hrs.

Class 127 EVT Objective Review Class, E-2 & F-4 Amb. & Fire Truck Electrical Systems

6 Hrs.

This class reviews the objectives for the technician to understand The EVTCC E-2 exam which covers the basic design and performance requirements of ambulance electrical systems, components of electrical systems, and preventive maintenance and troubleshooting activities. And the EVTCC F-4 Fire Truck Electrical, Any Heavy Duty Truck Electrical Manual & Fire Dept. Pumping Apparatus Maintenance.

Note: Student Must be Pre-Registered with the EVTCC to take test

Instructor: Kenny Stevens, EVTS – Emergency Vehicle Technical Support Inc.

Class 105 Advance Electrical / Multiplexing By Weldon

6 Hrs.

This class is designed to instruct technicians on the repair and maintenance of V-Mux Electrical Systems. The class will start at the basics with power and ground and work up from there. Class includes lecture, demonstration, and hands-on instruction.

Instructor: Jeff Dilgren, & Markus Kelley, Weldon – IDEX Fire Group

Class 106 GM Hybrid & EV Diagnostics and Multiplex Networks

6 Hrs.

This seminar will provide technicians with the diagnostic techniques and strategies required to diagnose Hybrid and EV vehicles, and help understand to diagnose multiplex networks. Setup procedures for all related modules will be reviewed. This course will include simulated diagnostic exercises to apply the principles learned

Instructor: Robert Roth, Raytheon

- Class 107 Cummins Engines ISB, ISC, ISL Maintenance and common failures** **6 Hrs.**
Class 122 Cummins Engines ISB, ISC, ISL Maintenance and common failures **6 Hrs.**
 This class will cover the Cummins product line from years back to current production to include the 5.9, 8.3, and the big block family. Live engine troubleshooting and the regeneration aftertreatment process will be discussed. This technical trainer comes from Cummins Bridgeway Columbus branch and needless to say he has seen a bunch. Don't miss this. Repeated, Monday and Wednesday
Instructor: Ron Heitman, Michael Baldwin & Seth Romine, Cummins Bridgeway
- Class 108 Tires & Wheel Clinic - Monday** **6 Hrs.**
Class 123 Tires & Wheel Clinic - Wednesday **6 Hrs.**
 This class will go over the tire behavior handling and wear. Instructor will go over tire nomenclature, loads vs. tire pressures, tire life, OOS criteria, and the application of treads and emergency service effects. TJ is the tire guy. Don't miss this
Instructor: T. J. Tennent, The Tyreguy
- Class 109 Disc & Drum Air Brake Maintenance and Repair** **6 Hrs.**
 This class will cover air brake theory and proper set-up to enable the technician to understand the air brake system and properly troubleshoot and repair them. John will focus on the Air Drum and Air Disc systems and will have hands on demonstration stands for students to work on.
Instructor: Wade Nichols , Spartan Chassis
- Class 110 Sutphen Custom Pumper Maintenance** **6 Hrs.**
 This class will cover the recommended maintenance practices specifically for the Sutphen product. Class will consist of classroom and an actual truck for hands-on.
Instructor: Janelle Kizer, Tim Roush, Brian Teach, & Jeremiah Johnson, Sutphen Corporation
- Class 111 Electrical Troubleshooting by Spartan E-200** **6 Hrs.**
 This class is designed to instruct technicians on the repair and maintenance of Electrical Systems. The class will continue to test your basic knowledge with power and ground and work up to become an Intermediate electrical troubleshooter. Class includes lecture, demonstration, and hands-on instruction. Student must have had or shall take E-100 prior to being in this class
Instructor: John Merrifield , Spartan Chassis
- Class 112 EVT Objective Electrical E-3 Ambulance HVAC** **6 Hrs.**
 This class will review the objectives that covers basic design, requirements and components of these systems.
 Note; Student Must be Pre-Registered with the EVTCC to take test
Instructor: Kenny Stevens, EVTS – Emergency Vehicle Technical Support Inc.
- Class 113 Kussmaul Electronics Troubleshooting** **3 Hrs.**
Class 120 Kussmaul Electronics Troubleshooting **3 Hrs.**
 This class will review basic electric and chassis electrical troubleshooting. Also included in this class is the troubleshooting and repair of the Kussmaul Electronic Products. This class is a shortened version of the standard full class.
Instructor: Danny Graham & Brian Cassell, Kussmaul Electronics
- Class 114 GM Diesel Emissions, Aftertreatment and EVAP systems** **6 Hrs.**
 This class will cover GM Diesel Emissions, Aftertreatment and EVAP systems. Common mistakes on diagnosing, repair and identification of problems with each system in the GM product. Class will consist of diagnostics, troubleshooting and repair of the systems
Instructor: Robert Roth, Raytheon
- Class 115 International Engine Maintenance and After Treatment - Tuesday** **6 Hrs.**
Class 130 International Engine Maintenance and After Treatment - Thursday **6 Hrs.**
 This class will cover the Diamond Logic and ISIS systems used by International Truck to diagnose and repair the engine and chassis systems. Joel will present material for the DT and V8 Engine product line as well as maintenance tips and tricks for the exhaust after treatment systems. Class Repeated Tuesday & Thursday
Instructor: Joel Crist & Tim White, International Truck – Rush International
- Class 116 Hydraulic Principles and Theory – Smart Power Generators** **6 Hrs.**
 This class taught a senior trainer and manager in the field of hydraulic generators. Class will cover the hydraulic principles and theories and then get into the care and maintenance and proper installation of the smart power products. The instructor's will also offer some common troubleshooting and repair procedures.
Instructor: Jordan Rautiola & Scott Jones, Smart Power
- Class 118 Electrical Troubleshooting E-300** **6 Hrs.**
 This day class is designed to instruct the technician on the repairs and maintenance of Fire Apparatus Electrical Equipment. Class will not review E-100 or E-200 rather build off them, Student must have had or shall take E-100 and E-200 prior to being in this class. Class includes lecture, demonstration, and hands-on instruction. The Weldon Multiplex system will be included in the segment.
Instructor: John Merrifield, Spartan Chassis
- Class 119 EVT Objective Review F-1 & E-0 Maintenance, Inspection, and Testing of Ambulances & Fire Trucks** **6 Hrs.**
 This class reviews the objectives the Maintenance, Inspection, and Testing of Ambulances and F-1 Fire Trucks as covered in KKK-A-A822 Federal Specification for the Star of Life Ambulance, Meritor Preventive Maintenance and Lubrication, and NFPA 1911, Standard for the Inspection, Maintenance, Testing and Retirement of In-Service Fire Apparatus. Note; Student Must be Pre-Registered with the EVTCC to take test
Instructor: Kenny Stevens, EVTS – Emergency Vehicle Technical Support Inc
- Class 121 GM Charging and Starting Systems** **6 Hrs.**
 This seminar covers battery, starting, and charging system component operation, diagnosis and testing, and correct service practices. The discussion on battery operation will include details on flooded and Absorbent Glass Mat, (AGM) types of batteries with emphasis on correct diagnosis and service. Starting topics will include processor controlled cranking systems, stop / start technology, and current diagnostic procedures. Participants will discuss computer-controlled charging systems including Regulated Voltage Controls (RVC), electrical power management, and advanced diagnostic procedures.
Instructor: Robert Roth, Raytheon

Class 125 EVT Objective Review F-1 & E-0 Maintenance, Inspection, and Testing of Ambulances & Fire Trucks

6 Hrs.

This class reviews the objectives the Maintenance, Inspection, and Testing of Ambulances and F-1 Fire Trucks as covered in KKK-A-A822 Federal Specification for the Star of Life Ambulance, Meritor Preventive Maintenance and Lubrication, and NFPA 1911, Standard for the Inspection, Maintenance, Testing and Retirement of In-Service Fire Apparatus. Note; Student Must be Pre-Registered with the EVTCC to take test

Instructor: Wade Nichols , Spartan Chassis

Class 126 Data Link Diagnostics, Code Reading via gauges, DVM

6 Hrs.

This class is designed to instruct the participant on how to extract information from the fire truck electronics used the above methods. Wade knows his way around the truck and will help you use the trucks technology to help diagnose issues that you have. Bring your electronic tools and he will also be able to show you how to use them.

Instructor; John Merrifield, Spartan Chassis

Class 129 GM Hands on Electrical Class with Live Demo Board

6 Hrs.

The class will cover hands on electrical diagnostics and with the GM trainer and the live trainer board for the common electrical systems found in the GM product, although no electrical systems is the same manufacture to manufacture. it does all operate on the same 12 volt power. Don't miss this practical class taught by the best GM trainer, with tips for everyday troubleshooting

Instructor: Robert Roth, Raytheon

Class 131 Equipment Specs and Tool overview for the EVT

6 Hrs.

This course is designed to introduce the emergency vehicle technician with the overview of what the firefighter paramedic expects and how they abuse their apparatus. This class will provide you with an overview and education to topics such as the actual width of hose for hose trays, overview and pump operations hands on training to provide firsthand experience of what is needed to fine tune water flow from the truck to the end of the nozzle and a brief overview of the tools carried and when we deploy them. We will also discuss the importance of effective communication between the EVT and their firefighters.

Instructor: Ron Whitaker, Lebanon Fire Division

OAEVT MAINTENANCE SYMPOSIUM SCHEDULE • SEPTEMBER 19 THROUGH 23

MONDAY 9-19	TUESDAY 9-20	WEDNESDAY 9-21	THURSDAY 9-22	FRIDAY 9-23
EVT Objective Review F-3 Fire Pump 100	Fire Pump Maint. & Repairs by Darley 200 <i>Day 1 of 2</i>	Fire Pump Maint. & Repairs by Darley 200 <i>Day 2 of 2</i>	EVT Objective Review F-3 Fire Pump 124	Apparatus Crash Review Not If – When 050
Air Conditioning Maint. & Repair by Spartan 101	Disc & Drum Brakes - Maint. & Troubleshooting 109	Air Conditioning Maint. & Repair by Spartan 117	EVT Objective Review F-1 & E-0 Maint & Inspection 125	
Fundamental Electrical Troubleshooting 400 <i>Day 1 of 2</i>	Fundamental Electrical Troubleshooting 400 <i>Day 2 of 2</i>	Fundamental Electrical Troubleshooting 500 <i>Day 1 of 2</i>	Fundamental Electrical Troubleshooting 500 <i>Day 2 of 2</i>	
Fire Pump Familiarization 102	Sutphen Custom Pumper Chassis Maint. 110	Sutphen Aerial Maint., Repairs & Troubleshooting 600 <i>Day 1 of 2</i>	Sutphen Aerial Maint., Repairs & Troubleshooting 600 <i>Day 2 of 2</i>	
E-100 Electrical By Spartan 103	E - 200 Electrical By Spartan 111	E - 300 Electrical By Spartan 118	Data Link Diagnostics Electrical Accessory 126	
EVT Objective Review E-2 & F-4 Elec. 104	EVT Objective Review E-3 HVAC 112	EVT Objective Review F-1 & E-0 Maint & Inspection 119	EVT Objective Review E-2 & F-4 Elec. 127	
Weldon Multiplex Design and Troubleshooting 105	Kussmaul Electronics Products, Troubleshooting and Repair 113	Kussmaul Electronics Products, Troubleshooting and Repair 120	Fire Pump Familiarization 128	
GM Hybrid & EV Diagnostics Diagnosing Multiplex Networks 106	GM Diesel Emissions and Aftertreatment Evap Diagnosis 114	GM Starting, Charging & Ignition Systems 121	GM Hands-on Electrical Class with Live Demo Boards 129	
Cummins ISB,ISC,ISL Maintenance 107	International Engine Maint. & after Treatment 115	Cummins ISB,ISC,ISL Maintenance 122	International Engine Maint. & Aftertreatment 130	
Tire & Wheel Clinic 108	Hydraulic Principles and Generators 116	Tire & Wheel Clinic 123	Equipment Specs & Tool Review 131	
			EVT Testing OFA 4:00 PM	

Ohio Association of Emergency Vehicle Technicians
P.O. Box 303
Avon, Ohio 44011

FIRST CLASS MAIL
DATED MATERIAL

