

Technical Training

ELGIN **VACTOR** **GUZZLER**  **TRUVAC**
Subsidiary of Federal Signal Corporation by Vector Mfg., Inc.



Technical Training Choices

ESG Technical Training classes are complimentary for all attendees. There are two modes of training: Virtual Training and In-Person Training.

Training dates will be added regularly. Watch our registration site, www.esgtechtraining.eventbrite.com for training offerings and dates.

Virtual Training:

Only Standard level classes and seminars will be available as Virtual training. To participate in virtual training, you will need:

- High-speed internet access
- Computer with microphone and speakers or headset
- A webcam
- We recommend a larger monitor or television screen to see the presentation and video better than a laptop screen
- Email address for virtual class link. Training manuals (pdf) and certificates will be sent to this address

Virtual training will be offered in the same 2- or 3-day schedule as a regular class. Online time will be limited to two 2-hour sessions per day for the normal class offering. Classes will be offered on Eventbrite specifically marked as "Virtual". Each computer registered will get a link to the class. Multiple people can attend on one ticket if they're all on the same computer. Register at www.esgtechtraining.eventbrite.com

In-Person Training:

In-Person training classes will be offered at Elgin Sweeper and Vactor Manufacturing. This will include Standard level classes and the Advanced level classes.

Standard level classes are open to everyone. The Advanced level classes require having previously attended a Standard level class on a specific product. These prerequisites are required to ensure that advanced technicians have the chance to learn with other advanced technicians in an environment where the basic repairs are already understood. This allows all the class time to be devoted to advanced information and training. Registration for each person at the In-Person training is required. Register at www.esgtechtraining.eventbrite.com

Note:

- ESG Technical Training reserves the right to cancel classes 4 weeks prior to the start of a class if there is insufficient enrollment. Additional classes will be offered when possible if classes fill early.
- If a student cannot attend, notify ESG Technical Training at csr@fsdepot.com a minimum of one week before the scheduled class start date. Many classes have a waiting list so with sufficient cancellation notice, other potential attendees will have the chance to enroll.



Training Information

Class Offerings:

- Pelican Sweepers for Mechanics (3 days)
- Four-wheel Mechanical Sweepers for Mechanics (3 days)
- Waterless Eagle Sweepers for Mechanics (2 days)
- Vacuum Sweepers for Mechanics (3 days)
- Crosswind Sweepers for Mechanics (3 days)
- RegenX Sweepers for Mechanics (2 days)
- Electrical Diagnosis - Control System Circuits (3 days)
- Advanced Service Tool Diagnostics – Vansco Systems (3 days)
- Advanced Service Tool Diagnostics – Danfoss Systems (3 days)
- Advanced Single Engine Air Sweeper Repair and Diagnostics (3 days)

All In-Person classes at Elgin Sweeper start on Tuesday and attendance is 8:30 – 4:00 each day. Training consists of classroom and hands-on instruction. Training manuals are provided. Standard class size is limited to 10 in order to ensure individualized instruction. Advanced class size is limited to 8.

Virtual classes will be 9-11 AM and 1-3 PM CST each day. Training manual pdf's will be sent before class time.

While there is no charge for Elgin Sweeper training, registration is required. Registration is available online at:

www.esgtechtraining.eventbrite.com

Dress: Casual work clothes, safety toe shoes, and safety glasses with side shields. (shoe covers will be supplied if needed)

In-Person classes include lunch each day, refreshments in the classroom, and training material. Please notify us of any dietary restrictions. Transportation, lodging, and meals outside the class time are not included.

Location: Elgin Sweeper Co.
1300 W. Bartlett Road
Elgin, IL 60120

Recommended Hotels: (Call for reservations and availability of Elgin Sweeper rates)

Holiday Inn Express Chicago West/St. Charles
155 38th Avenue, St. Charles, IL 60174
(630) 587-6564

Hampton Inn Chicago/St. Charles
2875 Foxfield Rd, St Charles, IL 60174
(630) 584-0222

Marriott Courtyard Chicago/St. Charles (Shuttle Available)
700 Courtyard Dr, St Charles, IL 60174
(630) 377-6370

or to book at Elgin rate: <https://www.marriott.com/events/start.mi?id=1573837416282&key=CORP>



Class Offerings:

- Vactor 2100i Intuitouch Virtual Seminar (1 day)
- Vactor 2100i for Operators (2 days)
- Vactor 2100i for Mechanics (3 days)
- Vactor 2100 Plus for Mechanics (3 days)
- TRUVAC HXX Paradigm for Operators & Mechanics (3 days)
- TRUVAC HXX for Operators & Mechanics (3 days)
- Guzzler CL E for Mechanics (2 days)
- Advanced 2100i Electronic Troubleshooting (3 days)
- Advanced 2100 Plus Electronic Troubleshooting (3 days)
- Advanced TRUVAC HXX Electronic Troubleshooting (3 days)

All In-Person classes at Vactor Manufacturing are 8:30 – 4:00 each day. Training consists of classroom and hands-on instruction. Training manuals are provided. Operator class size is limited to 18. Mechanics class size is limited to 15 in order to ensure individualized instruction. Advanced class size is limited to 10.

Virtual classes will be 9-11 AM and 1-3 PM CST each day. Training manual pdf's will be sent before class time.

While there is no charge for this training, registration is required. Registration is available online at:

www.esgtechtraining.eventbrite.com

Dress: Casual work clothes, safety toe shoes, and safety glasses with side shields (shoe covers will be supplied if needed)

In-Person classes include lunch each day, refreshments in the classroom, and training material. Please notify us of any dietary restrictions. Transportation, lodging, and meals outside the class time are not included.

Location: Vactor Manufacturing
1621 S. Illinois St.
Streator, IL 61364

Recommended Hotels: (Call for reservations and availability of Vactor rates)

Holiday Inn Express & Suites
2850 Columbus St., Ottawa, IL 61350
(815) 320-2230

Fairfield Inn
3000 Fairfield Lane, Ottawa, IL 61350
(815) 431-8955

Hampton Inn Ottawa
4115 Holiday Lane, Ottawa, IL 61350
(815) 434-6040

AmericInn Hotel & Suites Streator
1705 N. Bloomington St., Streator, IL 61364
(815) 672-0080

Comfort Inn - Ottawa
120 W. Stevenson Road, Ottawa, IL 61350
(815) 433-0029

TRAINER BIOGRAPHIES



Elgin Sweeper



Steve Dunning is the Technical Training Instructor for Elgin products. As a technician in the early 1980's, he worked on his first Elgin sweeper, a Pelican. During that time he achieved ASE Master Certification in both Automotive and Heavy Duty Truck. After ten years as a technician, Steve moved to fleet maintenance management. That's where he started training, helping technicians prepare for ASE Certification.

In 1999, Steve moved to Kubota Engine America as Service Engineer and Service Trainer. In thirteen years at Kubota, he taught classes for equipment manufacturers and engine distributors in the US, Mexico, and Europe. Moving up to Assistant Manager of Technical Service Training, Steve was responsible for all the training on the new electronically controlled diesel and gaseous-fueled engines.

STEVE DUNNING Since joining Elgin Sweeper in 2012, Steve strives to improve the training quality and offer a more advanced level of training for our dealers and customers.

Steve and his wife Tesa have two daughters. Their older daughter teaches kindergarten at an elementary school in Aurora, IL. The younger daughter is a research scientist for a pharmaceutical company in North Chicago, IL.



Vactor Manufacturing

Jerry Smith is a Technical Training Instructor for Vactor Manufacturing. He has over 30 years experience in repair, service, maintenance, inspection, troubleshooting, and training in the automotive and vacuum truck fields. He joined Vactor in March of 2008 as a quick repair technician. Along with inspecting, testing and repairing the Vactor trucks, Jerry has also created repair and testing documents that are used in Vactor's service department.

Before coming to Vactor Jerry was a General Motors and Saab technician for 20 years, specializing in electrical diagnosis and repair. Along with inspecting, maintenance, diagnosing and repairs, he provided training to other General Motors technicians through General Motors. While working as a General Motors and Saab technician Jerry attained ASE Master Auto Technician and L1 Advanced Engine Performance certification. He also attained General Motors Master Technician certification, and was a Saab certified technician.



JERRY SMITH

Jerry is assigned to the Vactor Manufacturing facility where he has access to the Engineering department, Technical Publications, and Service to assist with the development of all Vactor training.

Jerry resides in Streator Illinois. And since Jerry has run over 28 marathons and has more than 20 thousand miles on his bicycle over the last 10 years, you may find him training for his next race, triathlon, or Ironman when he is not working.

VACTOR**GUZZLER**
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Vector Manufacturing

Matt Abbott is a Technical Training Instructor for Vector Manufacturing. He attended Universal Technical Institute and Mercedes Benz factory training prior to working for Mercedes Benz dealers in Detroit, MI and Westmont, IL. He moved back to the Streator area to work at the Dodge Chrysler Jeep dealership.

Matt has achieved certifications including ASE Master Auto Technician, Advanced L1 Engine Performance, Mercedes Benz Gold Level III Master, and Level 4 Dodge Chrysler Jeep Master. He also worked at Anthony Liftgates providing technical assistance, parts, sales, and service support, coordinated warranty repairs, and assisted the assembly and shipping departments.

In 2011, he joined Vector as an assembler before rapidly advancing to Electrical Engineering Technician in the Engineering Department. He spent 4 years at the Streator FS Solutions group (Vector Service Center) as an Electric and Hydraulic Technician. During this time, he did repairs, rebuilds, troubleshooting, and performed various evaluations on Vector units.

Matt and his wife Brianne and sons Race and Jett live in Streator, IL. Look for them outdoors, fishing, hiking, or hunting. Both boys are part of the local junior shooters club. Race is wanting to become a Streator Fire Fighter and an Astronaut. Jett wants to own a farm with animals and work at Vector.



MATT ABBOTT

ELGIN VACTOR

Elgin Sweeper and Vector Manufacturing Electrical/Electronics



Bill Sprague works for the Technical Publications department and his work focuses on electrical and electronic systems and diagnostics. He helps with curriculum development for both Elgin and Vector and is also responsible for Elgin CNG course materials, course development and training. Bill develops the Danfoss diagnostic software for the Service Tool and teaches many of the Advanced Diagnostic classes at Elgin.

Bill has spent more than 25 years as a technical training instructor for the U.S. Coast Guard, Chrysler Corporation (both internationally and in the U.S.), Volvo Penta and other companies and has worked with and instructed all types of electrical and electronic control systems for engines, transmissions and body systems.

Before becoming an instructor Bill spent 10 years active duty in the U.S. Coast Guard as a Machinery Technician followed by 10 years in automotive shops as a technician. During those years as a technician and an instructor for Chrysler Bill was ASE Master Auto Technician and L1 Advanced Engine Performance certified.

Bill is a native Virginian who resides in and is based out of Virginia. He loves the woods, the beach, and the water so when he is not working you'll probably find him in one of those places.

Pelican Sweepers for Mechanics

Objectives:

This three day class is designed to help mechanics set, maintain, and repair the Pelican sweeper for the best operation. Setting of brooms and conveyors will be discussed with emphasis on safety, proper operation, maintenance, and repair.



Technicians will learn troubleshooting of electrical, electronic, and hydraulic systems related to sweeping functions. Hydrostatic drives and hubs will also be reviewed for troubleshooting and repair. Sweepers discussed will include the Pelican NP and Waterless Pelican (NR).

- Safety
- Sweeper Operation from the Mechanic's Point of View
- Operating Parameters
- Main and Side Broom Settings and Operation
- Conveyor Systems – Settings, Operation, Maintenance, and Repair
- Operating and Emptying the Hopper
- Water Pumps and Spray Nozzles
- Waterless Sweeper Components and Operation
- Maintenance of the Sweeper – Maintenance Schedule
- Electrical Systems
- Electronic Controls and the Electronic Service Tools
- Hydraulics and Hydrostatic Drive System
- Hubs and Brakes
- Troubleshooting Pelican systems
- Power Systems and After-Treatment, Diesel and CNG

This In-Person class meets Tuesday through Thursday at 8:30 AM to 4:00 PM. Attendance at the entire session is required.

Virtual class meets Tuesday through Thursday, 9:00-11:00 AM and 1:00-3:00 PM Central time.

Who should attend: New and experienced maintenance personnel and mechanics who want a better understanding of the Elgin Pelican sweeper.

See www.esgtechtraining.eventbrite.com for current dates



Four-Wheel Mechanical Sweepers for Mechanics

Objectives:

This three day class is designed to help mechanics set, maintain, and repair the four-wheel mechanical sweeper for the best operation. Setting of brooms, elevators, and conveyors will be discussed with emphasis on safety, proper operation, maintenance, and repair.

Class will include troubleshooting of electrical, pneumatic, and hydraulic systems related to sweeping functions. Sweepers discussed will include the 4M Broom Bear, 4M Road Wizard, and 4M Eagle.



- Safety
- Sweeper Operation from the Mechanic's Point of View
- Operating Parameters
- Main and Side Broom Settings and Operation
- Conveyor Systems – Settings, Operation, Maintenance, and Repair
- Elevator Systems – Settings, Operation, Maintenance, and Repair
- Operating and Emptying the Hopper
- Water Pumps and Spray Nozzles
- Maintenance of the Sweeper – Maintenance Schedule
- Hydraulic System
- Pneumatic System
- Electrical System
- Electronics and the Electronic Service Tool
- Troubleshooting all sweeper systems
- Power Systems, Diesel and CNG

This In-Person class meets Tuesday through Thursday at 8:30 AM to 4:00 PM. Attendance at the entire session is required.

Virtual class meets Tuesday through Thursday, 9:00-11:00 AM and 1:00-3:00 PM Central time.

Who should attend: New and experienced maintenance personnel and mechanics who want a better understanding of the Elgin mechanical sweeper line.

See www.esgtechtraining.eventbrite.com for current dates



Waterless Eagle Sweepers for Mechanics

Objectives:

This two day class is designed to help mechanics set, maintain, and repair the Waterless Eagle sweeper for the best operation. Setting of brooms, conveyors, and dust control system will be discussed with emphasis on safety, proper operation, maintenance, and repair.



Class will include troubleshooting of electrical, hydraulic, and pneumatic systems related to sweeping functions.

- Safety
- Sweeper Operation from the Mechanic's Point of View
- Operating Parameters
- Main and Side Broom Settings and Operation
- Conveyor Systems – Settings, Operation, Maintenance, and Repair
- Dust Control System – Settings, Operation, Maintenance, and Repair
- Operating and Emptying the Hopper
- Water Pumps and Spray Nozzles
- Maintenance of the Sweeper – Maintenance Schedule
- Hydraulic System
- Pneumatic System
- Electrical System
- Troubleshooting all sweeper systems
- Power Systems and After-Treatment

This In-Person class meets Tuesday through Wednesday at 8:30 AM to 4:00 PM. Attendance at the entire session is required.

Virtual class meets Tuesday through Wednesday, 9:00-11:00 AM and 1:00-3:00 PM Central time.

Who should attend: New and experienced maintenance personnel and mechanics who want a better understanding of the Elgin Waterless Eagle sweeper.

See www.esgtechtraining.eventbrite.com for current dates



Vacuum Sweepers for Mechanics

Objectives:

This three day class is designed to help mechanics set and maintain the Whirlwind, Whirlwind1, and Megawind sweeper for the best operation. Setting of brooms and nozzles will be discussed with emphasis on safety, proper operation, maintenance, and repair.

Technicians will learn troubleshooting of electrical, pneumatic, and hydraulic systems related to sweeping functions. We will discuss use of and troubleshooting of the wandering hose and high pressure wash system.

Sweepers discussed will be the Whirlwind, Whirlwind1, and Megawind.

- Safety
- Vacuum Sweepers – identifying main components
- Sweeper Operation from the mechanic's point of view
- Setting and Operating the Side and Center Brooms
- Setting and Operating the Nozzle(s)
- Impellers, Air System operation, impeller replacement, drive systems, and repair
- Maintenance and Maintenance Schedule
- Hydraulic System
- Pneumatic System
- Electrical Systems
- Electronics and the Electronic Service Tool
- Water pumps and spray nozzles
- High pressure water and nozzles
- Operating the Wandering Hose and High Pressure Wash System
- Troubleshooting all sweeper systems
- Operating and emptying the Hopper
- Shared Power system
- Power Systems - Diesel engines and the Variable Power Divider

This In-Person class meets Tuesday through Thursday at 8:30 AM to 4:00 PM. Attendance at the entire session is required.

Virtual class meets Tuesday through Thursday, 9:00-11:00 AM and 1:00-3:00 PM Central time.

Who should attend: New and experienced maintenance personnel and mechanics who want a better understanding of the Elgin vacuum sweeper line.

See www.esgtechtraining.eventbrite.com for current dates



Crosswind Sweepers For Mechanics

Objectives:

This three day class is designed to help mechanics set and maintain the Crosswind sweeper for the best operation. Setting of brooms and pickup heads will be discussed with emphasis on safety, proper operation, maintenance, and repair.



Technicians will learn troubleshooting of electrical, pneumatic, and hydraulic systems related to sweeping functions. We will discuss use of and troubleshooting of the wandering hose and high pressure wash system.

Sweepers discussed will include the Elgin Crosswind and the Elgin Crosswind1.

- Safety
- Regenerative Air Sweepers – Identifying main components
- Sweeper Operation from the mechanic's point of view
- Setting and Operating the Side and Pickup Head Brooms
- Setting and Operating the Pickup Head
- Impellers - Air System operation, impeller replacement, drive systems, and repair
- Maintenance and Maintenance Schedule
- Hydraulic System
- Pneumatic System
- Electrical Systems
- Electronics and the Electronic Service Tool
- Water pumps and spray nozzles
- Operating the Wandering Hose and High Pressure Wash System
- Troubleshooting all sweeper systems
- Operating and emptying the Hopper
- Shared Power system
- Power Systems – Diesel, CNG, and the Variable Power Divider

This In-Person class meets Tuesday through Thursday at 8:30 AM to 4:00 PM. Attendance at the entire session is required.

Virtual class meets Tuesday through Thursday, 9:00-11:00 AM and 1:00-3:00 PM Central time.

Who should attend: New and experienced maintenance personnel and mechanics who want a better understanding of the Elgin Crosswind or Elgin Crosswind1.

See www.esgtechtraining.eventbrite.com for current dates



RegenX Sweepers For Mechanics

Objectives:

This two day class is designed to help mechanics set and maintain the RegenX sweeper for the best operation. Setting of brooms and pickup heads will be discussed with emphasis on safety, proper operation, maintenance, and repair.



Technicians will learn troubleshooting of electrical, pneumatic, and hydraulic systems related to sweeping functions.

Sweepers discussed will include the Elgin RegenX and Elgin RegenX1.

- Safety
- Regenerative Air Sweepers – Identifying main components
- Sweeper Operation from the mechanic's point of view
- Setting and Operating the Side Brooms
- Setting and Operating the Pickup Head
- Impellers - Air System operation, impeller replacement, drive systems, and repair
- Maintenance and Maintenance Schedule
- Hydraulic System
- Pneumatic System
- Electrical Systems
- Water pumps and spray nozzles
- Troubleshooting all sweeper systems
- Operating the Wandering hose and High Pressure wash systems
- Operating and emptying the Hopper
- Power Systems - Diesel and Vairable Power Divider

This In-Person class meets Tuesday through Wednesday at 8:30 AM to 4:00 PM. Attendance at the entire session is required.

Virtual class meets Tuesday through Wednesday, 9:00-11:00 AM and 1:00-3:00 PM Central time.

Who should attend: New and experienced maintenance personnel and mechanics who want a better understanding of the Elgin RegenX or Elgin RegenX1.

See www.esgtechtraining.eventbrite.com for current dates



Electrical Diagnosis - Control System Circuits

Objectives:

This three day class is designed to help mechanics diagnose electrical issues faster and more accurately. Tools used in the class will include multimeters and oscilloscopes.



Technicians will learn troubleshooting of electrical systems related to control systems. This includes input sensors, outputs, power and ground connections, and the communication circuits.

While no prerequisite is required, we recommend students attend at least one Standard class in the last three years.

- Diagnostic Procedure
- Reading and applying schematics
- Diagnosing power feeds and regulated sensor feeds
- Diagnosing high current and low current grounds
- Input Circuits - Identifying and diagnosis
- Output Circuits - Identifying and diagnosis
- Communication circuits including CAN and LIN
- Using the multimeter and other electrical diagnostic tools for diagnosis

This In-Person class meets Tuesday through Thursday at 8:30 AM to 4:00 PM. Attendance at the entire session is required.

Who should attend: New and experienced maintenance personnel and mechanics who want a better understanding of electrical system diagnosis.

This class will only be offered as in-person training.

See www.esgtechtraining.eventbrite.com for current dates

Advanced Service Tool Diagnostics – Vansco Systems (Prerequisite Required – See Below)



Objectives:

This three day class is designed to help the Technician diagnose issues on any Elgin product using electrical diagnosis and the Elgin Service Tool (Vansco System). Time will be spent in the classroom and lab. Hands-on modules will give your technicians experience that will help them solve problems back at their shops. Your technician will receive in-depth training with the service tool. This class will cover all Elgin products with Vansco electronic systems.

Each technician must bring a laptop with the Elgin service tool installed. Class starts Tuesday with checking the technician's computers and ensuring the service tool functions and is up-to-date (required). The technician will be required to connect to a sweeper and use the tool.

- Diagnostic Procedure
- Electrical Systems – Reading and applying schematics
- Electrical System diagnosis and repair
- Electronic Service Tool – Vansco
- Hands-on labs for Electrical and Electronic systems
- Information systems for Elgin Technicians

This class meets Tuesday through Thursday at 8:30 AM to 4:00 PM. Attendance at the entire session is required.

Who should attend: Technicians wanting to improve their ability to use the Elgin Service Tool and troubleshoot issues on all Elgin products with Vansco systems.

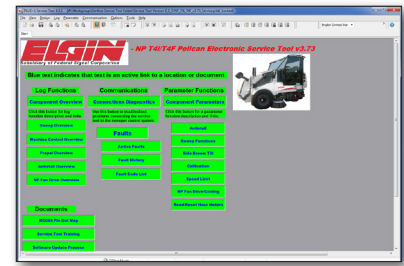
Prerequisites:

Technicians must have completed a standard class within the last 3 years on Four-Wheel Mechanical Sweepers, Crosswind Sweepers, or Vacuum Sweepers before attending. While not required, previous attendance in the Electrical Diagnostics - Control System Circuits training will be helpful in getting the most out of this class.

This class will only be offered as in-person training.

See www.esgtechtraining.eventbrite.com for current dates

Advanced Service Tool Diagnostics – Danfoss Systems (Prerequisite Required – See Below)



Objectives:

This three day class is designed to help the Technician diagnose issues on the Elgin Pelican using electrical diagnosis and the Elgin Service Tool (Danfoss System). Time will be spent in the classroom and lab. Hands-on modules will give your technicians experience that will help them solve problems back at their shops. Your technician will receive in-depth training with the service tool. This class will cover the Danfoss system in the current Pelican.

Each technician must bring a laptop with the Elgin Danfoss service tool installed. Class starts Tuesday with checking the technician's computers and ensuring the service tool functions and is up-to-date (required). The technician will be required to connect to a sweeper and use the tool.

- Diagnostic Procedure
- Electrical Systems – Reading and applying schematics
- Electrical System diagnosis and repair
- Electronic Service Tool – Danfoss
- Hands-on labs for Electrical and Electronic systems
- Information systems for Elgin Technicians

This class meets Tuesday through Thursday at 8:30 AM to 4:00 PM. Attendance at the entire session is required.

Who should attend: Technicians wanting to improve their ability to use the Elgin Service Tool and troubleshoot issues on Elgin Pelicans with Danfoss systems.

Prerequisites:

Technicians must have completed the standard Pelican Sweepers for Mechanics class within the last 3 years before attending. While not required, previous attendance in the Electrical Diagnostics - Control System Circuits training will be helpful in getting the most out of this class.

This class will only be offered as in-person training.

See www.esgtechtraining.eventbrite.com for current dates



Advanced Single Engine Air Sweeper Repair and Diagnosis (Prerequisite Required – See Below)

Objectives:

Building on the Crosswind Sweepers for Mechanics, Vacuum Sweepers for Mechanics, and RegenX Sweepers for Mechanics training, this three day class is designed to prepare the technician for work on the single engine air sweeper. Time will be spent in the classroom and lab. Hands-on modules will give your technicians experience that will help them solve problems back at their shops.



Each technician should bring a laptop so they can install the BODAS service tool for the VPD system.

- Variable Power Divider – Operation, R&R, and Diagnostic Procedure
- Electrical Systems – Reading and applying schematics
- Electrical System diagnosis and repair
- Electronic Service Tool – BODAS tool for VPD system
- Hands-on labs for Electrical and Electronic systems
- Information systems for Elgin Technicians

This class meets Tuesday through Thursday at 8:30 AM to 4:00 PM. Attendance at the entire session is required.

Who should attend: Technicians expecting to work on the Crosswind1, Whirlwind1, or RegenX1.

Prerequisites:

Technicians must have completed the standard Crosswind Sweepers for Mechanics, Vacuum Sweepers for Mechanics, or RegenX Sweepers for Mechanics class within the last 3 years before attending. While not required, previous attendance in the Electrical Diagnostics - Control System Circuits training will be helpful in getting the most out of this class.

This class will only be offered as in-person training.

See www.esgtechtraining.eventbrite.com for current dates.



Vactor 2100i Intuitouch Virtual Seminar

Objectives:

In this one-day on-line class we will give an overview of the controls on the 2100i. We will then discuss the navigation and information on the 2 Intuitouch screens, one in the cab and one on front hose reel. At the end of this seminar the technician will have a better understanding of the controls on the 2100i, and where to find information in the Intuitouch screens to assist with operation and diagnosing issues that may come up during the operation of the truck.

There will be worksheets for the technicians to fill out before class time.

Since this is virtual training, to attend this seminar, you will need:

- High-speed internet access
- Computer with microphone and speakers or headset
- A webcam
- We recommend a larger monitor to see the presentation and video better than a laptop screen
- Email address for virtual class link. Training manuals (pdf) and certificates will be sent to this address

What will be covered:

- Layout and operation of the controls on the front hose reel
- Layout and operation of the body and rear door controls
- Setup of the different operational modes
- Setup of the operational characteristics of the work and strobe lights
- Viewing the different cameras
- Navigation of the in-cab and hose reel Intuitouch screens
- How/where to find the inputs and outputs of the controllers
- Diagnostic screens of the major operating components

This virtual class meets one day, 9:00-11:00 AM and 1:00-3:00 PM Central Time.

Who should attend: Technicians wanting to understand the differences between the Vactor 2100 Plus and Vactor 2100i control systems.

See www.esgtechtraining.eventbrite.com for current dates.



Vactor 2100i for Operators

Objectives:

This two day class is designed to help operators and new mechanics set up and maintain the Vactor 2100i for the best operation. Engaging the hydraulics, rodder pump and vacuum systems (fan and PD units) will be discussed with emphasis on safety, industry standards and best practices, proper operation, and maintenance.



Class will include basic troubleshooting of systems related to sewer cleaning including the boom and high pressure water system. Discussion will include how to set the Vactor unit up for various applications.

- Safety
- Pre-Trip Inspections
- Understand the Hose Reel, Rodder Pump, Vacuum source (Fan or P.D.), Body, and Boom Functions
- Nozzle Selection and Operation
- Filtration and Vacuum Systems
- Maintenance and the Maintenance Schedule
- Hydraulic Component Identification
- Navigation of the Intuitouch Screens

This In-Person class meets two days, 8:30 - 4:00. Attendance at the entire session is required.

Virtual class meets two days, 9:00-11:00 AM and 1:00-3:00 PM Central Time.

Who should attend: New and experienced operators, new mechanics, supervisory or demonstration personnel who want a better understanding of the New Vactor 2100i operations

See www.esqtechtraining.eventbrite.com for current dates.

Vactor 2100i for Mechanics

Objectives:

This three day class will give the mechanics basic operational information to confirm diagnosis and repair of the Vactor 2100i. We will discuss screens on the 2 Intuitouch displays, one in the cab and the other on the front hose reel. We will spend time in the classroom along with time in the hands-on lab. The lab time will consist of the disassembly and reassembly of the rodder pump and the fan assembly used on the Vactor units. Mechanics will learn how to troubleshoot the rodder pump, hose reel, boom systems, vacuum systems (fan and blower), hydraulic, pneumatic and electrical/electronic systems using the Intelliview's diagnostic screens.

The mechanics will make a repair to the thermoplastic hose and learn how to test it. The mechanics will learn the proper use of the flow and pressure meters in the Intelview screen for water system diagnosis. This class will provide a basic introduction to the electronic control systems. The mechanics must take this class before the Advanced class.



- Safety
- Understand the Hose Reel, Rodder Pump, and Boom Functions
- Basic Operation for Repair Confirmation
- Rodder Pump Rebuild
- Vacuum Fan Rebuild
- Maintenance of the Vactor Unit
- Hydraulic component identification
- How to Manually override hydraulic and pneumatic functions
- Navigation of both Intuitouch Screens
- Intuitouch Screens for Diagnostic Assistance
- Introduction to Electrical Diagnosis
- Introduction and Navigation of the Service Cloud

This In-Person class meets Tuesday through Thursday at 8:30 AM to 4:00 PM. Attendance at the entire session is required.

Virtual class meets Tuesday through Thursday, 9:00-11:00 AM and 1:00-3:00 PM Central time.

Who should attend: New and experienced mechanics or supervisory personnel that need to have a better understanding of the New Vactor 2100i repair procedures and recommendations.

See www.esgtechtraining.eventbrite.com for current dates.

Vactor 2100 Plus for Mechanics

Objectives:

This three day class will give mechanics operational information to confirm diagnosis, repair, maintenance and system troubleshooting. We will spend time in the hands-on lab and the classroom. Mechanics will learn how to troubleshoot the rodder pump, hose reel, boom systems, vacuum systems (SEF fan and PD blower), hydraulic, pneumatic and electrical/electronic systems using the Intelliview's diagnostic screens.



Mechanics will disassemble the rodder pump and fan used in their Vactor units. The mechanics will make a repair to the thermoplastic hose and learn how to test it. We will demonstrate the proper use of the on-board flow meter and pressure gauge for water system diagnosis. This class will provide a basic introduction to the electronic control systems. The mechanics must take this class before the Advanced class.

- Safety
- Understand the Hose Reel, Rodder Pump, and Boom Functions
- Basic Operation for Repair Confirmation
- Rodder Pump Rebuild
- Vacuum Fan Rebuild
- Maintenance of the Vactor Unit
- Hydraulic component identification
- How to Manually override hydraulic and pneumatic functions
- Navigation of the Intelliview Screens
- Intelliview Screens for Diagnostic Assistance
- Introduction to Electrical Diagnosis
- Introduction and Navigation of the Service Cloud

This In-Person class meets Tuesday through Thursday at 8:30 AM to 4:00 PM. Attendance at the entire session is required.

Virtual class meets Tuesday through Thursday, 9:00-11:00 AM and 1:00-3:00 PM Central time.

Who should attend: New and experienced mechanics or supervisory personnel that need to have a better understanding of the Vactor 2100 Plus repair procedures and recommendations.

See www.esgtechtraining.eventbrite.com for current dates.

TRUVAC HXX Paradigm for Operators & Mechanics

Objectives:

This three day class is designed to help operators and mechanics set up and maintain the TRUVAC Paradigm units for best operation. Give mechanics operational information to confirm diagnosis, repair, and system troubleshooting. Engaging the hydraulics, water pump, and vacuum systems will be discussed with emphasis on safety, industry standards, best practices, proper operation, and maintenance. We will cover mechanical repairs and function, the hydraulic and electrical/electronic systems. We will spend time in the hands-on lab and the classroom.



Class will include basic troubleshooting of systems related to hydro excavation, including the boom, the water end of the high pressure CAT pump, fan assembly and perform a blower inspection. Discussion will include how to set the TRUVAC unit up for various applications..

Please provide your serial number for your HXX Paradigm so the trainer can cover the attendee's specific options.

TRUVAC products discussed will include the Paradigm.

- Safety
- Pre-trip inspections
- Understanding the CAT Water Pump, Alkota water heater, and body functions
- Digging Nozzle selection and operation
- Filtration and Vacuum Systems - vacuum source (Fan or PD)
- Maintenance and the Maintenance Schedule
- Basic Operation and Repair confirmation
- Operation and Maintenance of the Air Compressor
- How to Manually Override Hydraulic and Pneumatic Functions
- Hydraulic Component Identification
- Navigation of the IQAN/MD4 Intelliview Screens
- Electrical/Electronic Troubleshooting and Repairs
- Introduction and Navigation of the Service Cloud

This In-Person class meets Tuesday through Thursday at 8:30 AM to 4:00 PM. Attendance at the entire session is required.

Virtual class is meets Tuesday through Thursday, 9:00-11:00 AM and 1:00-3:00 PM Central time.

Who should attend: New and experienced operators, mechanics, supervisory or demonstration personnel that need to have a better understanding of HXX Paradigm operation, repair procedures and recommendations.

See www.esgtechtraining.eventbrite.com for current dates.



TRUVAC HXX for Operators & Mechanics

Objectives:

This three day class is designed to help operators and mechanics set up and maintain the TRUVAC HXX for best operation. Give mechanics operational information to confirm diagnosis, repair, maintenance and system troubleshooting. Engaging the hydraulics, water pump, and vacuum systems will be discussed with emphasis on safety, industry standards, best practices, proper operation, and maintenance. We will cover mechanical repairs and function, the hydraulic and electrical/electronic systems. We will spend time in the hands-on lab and the classroom.



Classes will include basic troubleshooting for systems related to hydro excavation, including the boom, the water end of the high pressure CAT pump, fan assembly, and performing a blower inspection. Discussion will include how to set the TRUVAC unit up for various applications.

Please provide your machine serial number for your HXX so the trainer can cover the attendee's specific model.

HXX products discussed will include HXX, 824, and Prodigy

- Safety
- Pre-trip inspections
- Understand the CAT Water Pump, Alkota water heater, Body, and Boom Functions
- Digging nozzle selection and operation
- Filtration and Vacuum Systems - vacuum source (Fan or PD)
- Maintenance and the Maintenance Schedule
- Hydraulic Component Identification
- How to Manually Override Hydraulic and Pneumatic Functions
- Navigation of the IQAN/MD4 Intelliview Screens
- Electrical/Electronic Troubleshooting and Repair
- Introduction and Navigation of the Service Cloud

This In-Person class meets Tuesday through Thursday at 8:30 AM to 4:00 PM. Attendance at the entire session is required.

Virtual class meets Tuesday through Thursday, 9:00-11:00 AM and 1:00-3:00 PM Central time.

Who should attend: New and experienced operators, mechanics, supervisory, or demonstration personnel that need to have a better understanding of TRUVAC HXX operation, repair procedures, and recommendations.

See www.esgtechtraining.eventbrite.com for current dates.



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See www.esgtechtraining.eventbrite.com for current dates.

Guzzler CL E for Mechanics

Objectives:

This two day class will give mechanics operational information to confirm diagnosis, repair, maintenance and system troubleshooting. We will spend time in the hands-on lab and a lecture setting.

Mechanics will learn how to troubleshoot the boom systems, vacuum systems, hydraulic, pneumatic and electrical/electronic systems.

- Safety
- Understand Body and Boom Functions
- Basic Operation for Repair Confirmation
- Blower Operation
- Diagnose Vacuum Related Problems
- Maintenance and the Maintenance Schedule
- Hydraulic Component Identification
- How to Manually Override Hydraulic and Pneumatic Functions
- Electrical/Electronic Troubleshooting, Diagnostics and Repairs
- Introduction and Navigation of the Service Cloud

If any special option packages are needed, please inform at registration to ensure the material is covered:

This In-Person class meets Tuesday through Wednesday at 8:30 AM to 4:00 PM. Attendance at the entire session is required.

Virtual class meets Tuesday through Wednesday, 9:00-11:00 AM and 1:00-3:00 PM Central time.

Who should attend: New and experienced mechanics that need to have a better understanding of the Guzzler repair procedures and recommendations.

See www.esgtechtraining.eventbrite.com for current dates.



Advanced 2100i Electronic Troubleshooting (Prerequisite Required - See Below)

Objectives:

This three day class will give experienced technicians diagnostic information to perform troubleshooting and repairs to the Vactor 2100i electrical systems. We will review the hydraulic, pneumatic, and vacuum systems of the Vactor 2100i units. We will spend approximately half the time in the hands-on lab and the other half in a lecture setting.

The technician will learn how to troubleshoot the boom system, vacuum system, hydraulic and pneumatic systems using the Intelliview screens.



- Safety
- Navigation of both Intuitouch Screens
- Intuitouch Screens for Diagnostic Assistance
- Electrical/Electronic Troubleshooting, Diagnostics and Repairs
- CAN BUS Diagnostics
- How to use the Diagnostic Manual
- Using the Electrical Schematics to Compliment the Diagnostic Process

This class meets Tuesday through Thursday at 8:30 AM to 4:00 PM. Attendance at the entire session is required.

Who should attend: Technicians wanting to improve their ability to troubleshoot 2100i functions and electronic systems.

Prerequisites:

Technicians must have completed the standard 2100i Mechanics class or 2100 Plus Mechanics class within the last 3 years before attending.

This class will be offered only as In-Person Training.

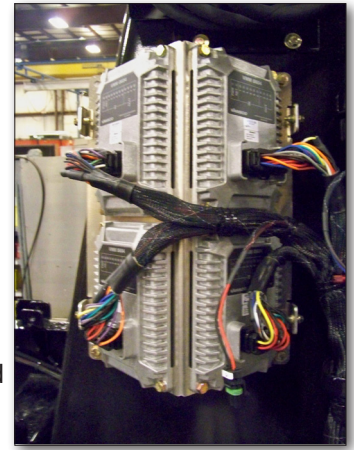
See www.esqtechtraining.eventbrite.com for current dates.

Advanced 2100 Plus Electronic Troubleshooting (Prerequisite Required - See Below)

Objectives:

This three day class will give experienced technicians diagnostic information to perform repairs, system troubleshooting and maintenance. We will spend approximately half the time in the hands-on lab and the other half in a lecture setting.

Technicians will learn how to troubleshoot the hydraulic system, pneumatic systems and the on-board electrical/electronic systems.



- Safety
- Navigation of the Intelliview Screens
- Intelliview Screens for Diagnostic Assistance
- Electrical/Electronic Troubleshooting, Diagnostics and Repairs
- CAN BUS Diagnostics
- How to use the Diagnostic Manual
- Using the Electrical Schematics to Compliment the Diagnostic Process

This class meets Tuesday through Thursday at 8:30 AM to 4:00 PM. Attendance at the entire session is required.

Who should attend: Technicians wanting to improve their ability to troubleshoot 2100 Plus functions and electronic systems.

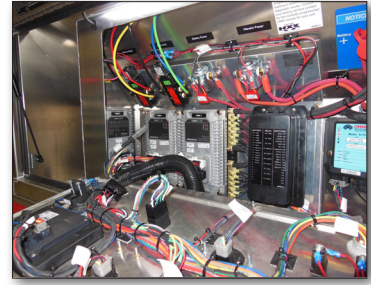
Prerequisites:

Technicians must have completed the standard 2100 Plus Mechanics class within the last 3 years before attending.

This class will only be offered as In-Person Training.

See www.esgtechtraining.eventbrite.com for current dates.

Advanced TRUVAC HXX Electronics Troubleshooting (Prerequisite Required - See Below)



Objectives:

This three day class will give experienced technicians diagnostic information to perform repairs and system troubleshooting. We will spend time in the hands-on lab and in a lecture setting.

Technicians will learn how to troubleshoot the boom systems, vacuum systems, hydraulic, water heaters, water pumps, air compressors, pneumatic systems using the on-board electrical/electronic systems.

Please provide your serial number for your HXX so the trainer can cover the attendee's specific model.

Hydro excavator products discussed will include HXX, 824, and Prodigy.

- Safety
- Navigation of the Intelliview Screens
- Intelliview Screens for Diagnostic Assistance
- Electrical/Electronic Troubleshooting, Diagnostics and Repairs
- CAN BUS Diagnostics
- How to use the Diagnostic Manual
- Using the Electrical Schematics to Compliment the Diagnostic Process

This class meets Tuesday through Thursday at 8:30 AM to 4:00 PM. Attendance at the entire session is required.

Who should attend: Technicians wanting to improve their ability to troubleshoot HXX function and electronic systems.

Prerequisites:

Technicians must have completed the standard HXX for Mechanics class within the last 3 years before attending.

This class will only be offered as In-Person Training.

See www.esgtechtraining.eventbrite.com for current dates.

Request for Field Training for Elgin, Vactor, Guzzler, or TRUVAC Products

Field training is available for dealers or customers (end users) on all products. Mechanics training or a combination of operator/maintenance training is available.

The cost for field training is the same regardless of product. First day in a location is \$2500 per trainer, each additional day in the same location is \$1500 per trainer, plus trainer's expenses. Please discuss location with your Dealer and Vactor or Elgin Technical Training Department for approval.

Requests for Vactor operator training must be submitted through the dealer for our 2100 Plus and 2100i.

For the TRUVAC and Guzzler products, please contact your Regional Sales Representative, FS Solutions store, or go to <http://requestfieldtraining.eventbrite.com>.

The dealer must fill out the Request for Field Training form. All requests must be received a minimum of ninety (90) days before any requested date.

Register your request at the following:

<http://requestfieldtraining.eventbrite.com>

Host's Responsibility:

- Responsible to register with our online registration program
- Obtain approved school start and completion dates from Technical Training department.
- Coordinate all matters concerning attendance
- Provide adequate meeting space for presentations using a screen and ensure writing space for all attendees, as agreed upon with Technical Training Department.
- Have a functional unit or units on-hand at training site for walkaround training sessions
- Provide presentation equipment (projector, screen, flip chart). Ensure meeting room is setup and maintained for duration of the meeting.
- Provide all refreshments and/or meals for attendees.
- Provide sign-in sheet of all attendees to trainer.

Trainer's Responsibility:

- Provide presentation materials for video and projector presentation.
- Provide training manuals for each attendee. (Cost of manuals will be billed)

Notice: Field Training assignments will only be accepted as time and scheduling permits.