National Association of Amusement Ride Safety Officials
690 Atlantis Rd, Suite 4, Melbourne, FL 32904
Phone: (813)661-2779
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40th Annual Safety Seminar

Secondary Track

The classes in this track are intended for those individuals with more than five (5) years' experience in the Amusement industry, anyone who already hold a Level I or above Inspector Certification, or anyone looking for approved continuing education hours for renewal purposes. These sessions will provide deeper instruction in their specific areas. Attendees will need to sign-up for classes all of Monday, Tuesday, and Thursday. After registering for the seminar, you will use the Secondary link on the confirmation email to select your classes. The same classes are offered on Monday and Tuesday. Any Operations or Aquatic Operations sessions are available during these days. Please review those Track explanations for further information. If you wish to incorporate the Specials or Certified track of classes, make sure to sign up for the full day of sessions on the appropriate day. For those individuals who need a full 40 hours of approved continuing education hours, there will be several options for classes on Friday. Advanced sign-up for those classes is not required.

Inspector Certification Exams will be offered on Friday afternoon, January 29th. If you are taking an exam, please visit our website, www.naarso.com, click on the Certification tab, scroll over to the Exam Checklists to find the application and any required class information along with any additional paperwork requirement. Registration for the seminar DOES NOT complete the paperwork necessary to sit for any exams.

While NAARSO does not teach the information found in our exams, the classes highlighted in yellow provide information that may be helpful during an exam.

*Class Titles with an * after it are previously approved QSI classes for students.*

Secondary Classes (Monday/Tuesday)

Reading and Understanding Electrical Schematics *	Whether you are in the construction or maintenance field for amusement rides or devices, you need a good understanding of electrical symbols you may encounter in blueprints or manuals. This class will look at how to identify what an electrical symbol is, how to interpret the symbol, and what their function is within the operation of the rides.
Introduction to Ropes Courses, Aerial Adventure Parks, and Zip Lines (2 hours)	This two-part introduction workshop will provide attendees with insight into ropes course, aerial adventure park, & Zip line industries. Participants will be introduced to common terminology, system designs, components, life-safety systems & inspection considerations. The class will introduce ANSI/ACCT standards, provide insight into what ANSI/ACCT inspectors evaluate during professional inspections & explore areas where ANSI/ACCT standards, Inspection practices, & applicable ASTM Standards may intersect.
Fall Arrest Basic *	This class will go over the safety of Fall Arrest for employees. It will look at the OSHA requirements and discuss how to come into compliance when staff have to climb. It will look at the different systems available. In addition, it will look at the common mistakes regarding compliance with OSHA standards and how to avoid them.

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Developing a Maintenance Program (2 hours) *	Using the ASTM guidelines as a base the instructor will show how to develop a maintenance program for amusement rides & devices. He will identify which standard is applicable for this process and why it was developed. He will also encourage the students to read their manuals on these devices for the recommendations by the manufacturer for preventative maintenance. The class will provide the students an outline they can follow to review their current programs and bring them up-to-date to meet the criteria of this nationally recognized standard.
What Turns an Accident into a Lawsuit	This class will discuss the legal system & how it views the amusement industry. The instructor will define an accident & review possible cause. Discussion will include litigation strategy and how to recreate defense hurdles to reduce exposure including training documentation, maintenance documentation, etc.
Introduction to PLCs *	This class will explain the purpose of a Programable Logic Controller as it applies to amusement rides and devices. It will see how it functions and what controls this component. It can often be the source of trouble with its many sensors and recording responsibilities. This class will look at how to troubleshoot errors with PLCs.
Understanding Accelerometer Data *	Accelerometer measurements are helpful in the design and maintenance of amusement rides. How to understand the data put out by a meter can be difficult. This class, led by an industry expert, will try to instruct its students on how the data is captured and interpreted.
Inspection Points - Portable Rides *	Seasoned inspectors will provide additional inspection points on amusement rides and devices operated by traveling shows or are portable type rides at fixed locations that may not be a part of the manufacturer's inspection criteria. While not intended to supersede the manufacturer's recommendations, they are points that can provide additional insight to potential problems. Familiarity with device manuals will be encouraged for these pieces of equipment.
ANSI B77 Updates	Updates will be provided for this industry recognized standard affecting aerial tramways or passenger ropeways. This standard emphasis is safety in the design, operation, and maintenance of these devices.
Safety Straps	This class will go over the importance of maintenance on the various straps for amusement rides & devices along with proper installation and applications.
Corrosion Ingredients for AHJ Inspectors	Inspecting amusement rides & attractions for corrosion can be a tedious & arduous task. Lots of hidden areas that can be hard to see & hard to inspect. We will cover telltale signs of corrosion and how to navigate them. We will also discuss how one might determine if the corrosion is significant or insignificant.
Electrical Troubleshooting for Amusement Rides *	An introduction to & framework for troubleshooting electrical issues for amusement rides & devices. This includes identifying the many systems & possible points of failure. Discussion will emphasis electrical issues.
Troubleshooting Amusement Ride Hydraulic Systems	Attendees will learn how to troubleshoot malfunctioning hydraulic systems that are commonly found in Amusement rides or devices.
Foam Padding *	An industry expert will look at foam padding used on amusement rides & devices. They will discuss the different types of padding available and provide its uses. In addition, they will discuss the care, maintenance, inspection of and testing of the padding integrity.
Inspection Points - Park type Rides *	Seasoned inspectors will provide additional inspection points on amusement rides and devices located in permanent locations that may not be a part of the manufacturer's inspection criteria. While not intended to supersede the

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	manufacturer's recommendations, they are points that can provide additional insight to potential problems. Familiarity with device manuals will be encouraged for these pieces of equipment.
Comprehensive Ride Evaluation *	This class will cover how to accomplish a proper ride evaluation and what items to look for when performing the ride inspection. This includes using multiple information points including but not limited to the ride manual, industry related codes & standards, manufacturer's website, and other sites to accomplish a more comprehensive inspection.
Electrical Grounding & Bonding (2 hours) *	Course is designed to cover the National Electrical Code and the difference is. It will also cover where and when bonding is allowed as per the code.
NDT Practices *	This class will discuss the various types of Non-Destructive Testing available including X-ray, Ultrasound, Magnetic Particle, and Dye Penetrate. You will also discuss which types are better suited to the component to be tested.
Flumes and Raft Rides *	Discussion will include definition and/or identification of these devices and inspection points on flumes, rafts and/or wave pools. Students will learn about the different codes/standards that govern these devices including but not limited to aquatic/water quality and amusement industry organizations. This will include any recent changes to these standards.
Everything Welding *	During this class instruction will include multiple industry related welding topics including processes, documentation including welder qualification records, procedure specifications, terms, and forms.
Inspector Communications	Understanding how to relate to Inspectors can be half the battle when it comes to getting your ride open. This course will discuss steps in dealing with inspectors from preparation before they come to when they leave your location.
Inspecting Generators - Midway Distribution Systems (2 hours) *	Electrical shock is something to be avoided. This advanced generator class will look at the generator/electrical distribution systems that may be found on fairgrounds, midways, or permanent locations. Discussion will include information on proper grounding and bonding techniques. It will look at the NEC standard that is applicable to these devices and any recent changes in the standard. And will provide instruction on the inspection technique including proper personal protection.
Roller Coaster Wheel Safety & Inspection *	An industry expert will discuss the large variety of wheel types available for use on amusement rides and devices. They will also discuss why certain types of wheels are better fitted for particular applications. Discussion will also include the proper care of wheels and how to perform inspections on this equipment component.
Electrical Motors and Trouble Shooting (2 hours) *	The course will go over the pros & cons of AC motors, how they function, and different ways & techniques to troubleshoot issues.
Understanding Hydraulic Systems *	This class will cover hydraulic system terminology, mindset, common components and their functions, how to read & follow schematics, and how to translate schematics into real world systems.
Developing an Inspection Program *	Using the ASTM guidelines as a base the instructor will show how to develop an inspection program for amusement rides & devices. He will identify which standard is applicable for this process and why it was developed. It will provide the students an outline they can follow to review their current programs and bring them up-to-date to meet the criteria of this nationally recognized standard.
Life Safety Code	Course covers the NFPA, Life Safety Code 101 & how it applies to the Amusement industry & Special Amusement Buildings.

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Secondary Classes (Thursday)

Pneumatic Systems *	This class includes a basic overview of pneumatic systems and components. How to read and understand schematic diagrams and interpret drawings, along with what to look for during an inspection
Ride Bulletins *	Manufacturer service bulletins and safety alerts carry critical information, but only if they reach the right people and get acted on. This session covers the types of bulletins in circulation, who issues them, and what owners, operators, and inspectors are expected to do when one is received under ASTM F24 standards. It also addresses common challenges, such as rides with no active manufacturer, bulletins that conflict with past practice, and proving that a bulletin has been addressed
Carousel Maintenance and Inspection (2 hours) *	This course is designed to educate attendees on maintaining and inspecting antique Carrousel. I will also provide some differences between newly manufactured carrousels and antique carrousels.
Battech Enterprises (2 hours) *	Ride representatives will discuss bulletins and issues related to their rides.
PA Updates	A representative from the PA Dept of Agriculture will update students on any update or changes to their rules and/or regulations.
Event & Site Security	This class will touch on entry/exit safety & protocols, the use of drones for crowd surveillance, quick reaction force (QFR), and radio communication. Discussion will include best practices for sick & injured patrons (ambulance routes), and ride & game side mapping for LE and EMS. The instructor will discuss how state, local, & event officials should be notified in the event of a ride injury or event.
Insurance Inspections	Course will cover the areas that are needed to be looked at and inspected when going out to do an insurance inspection for an insurance company.
Arc Flash Safety *	Whenever you are dealing with Electrical equipment, there is a danger of Arc Flash. Using personal experience, this class will discuss the dangers of this event and how it can cause serious physical injury to an individual, even death. They will go over how to avoid this catastrophic incident from occurring.
Commercial Motor Vehicle Awareness	This course is designed to cover requirements of commercial motor vehicles (CMV) and CMV drivers to comply with Federal Motor Carrier Safety Regulations. Participants will be educated on the current standards and best practices. It will also look at rules & exceptions for compliance with the hours-of-service rules.
Midway Inspections	Inspectors may be called to look at more than amusement rides & devices on a location. Many incidents happen before or immediately after the guests get on a ride. This class will provide instruction on what to look for on a fairground's midway or permanent location walkways outside of the rides. They include but are not limited to patron walkways, trip & fall hazards, proper safety equipment, etc. The instructor will look at what codes/standards govern these midways.

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Fiberglass Repair *	Class will consist of instruction of proper fiberglass repair common on most amusement rides & devices. It will include simple cosmetic repairs to repairing structural damage.
Understanding Requirements for Codes & Standards	The ASTM F24 standards form the backbone of amusement ride safety, but knowing which standard applies, and what it actually requires, isn't always straightforward. This session breaks down how the key F24 standards fit together across design, manufacture, operation, maintenance, and inspection, and how they interact with manufacturer instructions and local jurisdictional rules.
Drone Use for High Level Inspections	This class will center on the use of Drones to perform visual inspections at high elevations. It will look at the type of equipment necessary to perform the inspections as well as being aware of government regulations on flying the devices.
Majestic Manufacturing (2 hours)	Ride representatives will discuss bulletins and issues related to their rides.
Facility Inspections	For those individuals whose job responsibilities include inspecting this type of facility, this class will provide direction in where to start. This will include the codes & standards that are applicable to this type of structure including but not limited ASTM, NEC, Life Safety Code, and National Fire Protection. Instructor will emphasize documentation and procedures.
Wire Rope *	A review of basic wire rope information will start this class but it will delve deeper into the wire rope manufacturing, inspection techniques, and causes of wire rope damage. Class discussion will be encouraged to identify any specific issues students have encountered in the field.
Fasteners	Understanding the schematics of fasteners will help promote knowledge of their uses and care. This class will explore the manufacturing processes as well as how to differentiate between strength, size, and metal content of a fastener. Students will also hear about how to maintain the integrity of a fastener and how to spot issues.
Bearings *	This class will look at bearings within amusement rides and devices. Instructor will look at the purposes of bearings and their common failures along with why they occur.
ARM Manufacturing (2 hours)	Ride representatives will discuss bulletins and issues related to their rides.
Steel Coasters (2 hours) *	Information will be provided on how to conduct an inspection on a steel coaster and its trains. Including where to begin, methods of inspections, what potential problems you may encounter, and what to do if a defect is detected.
Eli Bridge (2 hours) *	Ride representatives will discuss bulletins and issues related to their rides.
Using Technology for Maintenance & Inspection	Tablets, digital checklists, NDT tools, sensors, and cloud-based records are changing how rides are maintained and inspected. This session looks at practical tools already in use in the field, how they improve consistency and traceability.

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Electric Motor Troubleshooting	This course is designed to teach how to safely and effectively troubleshoot electrical motors and control circuits in amusement rides, with a focus on identifying faults, applying logical diagnostic steps, and documenting results.
AHJ Round Table	Course is designed to have supervising inspectors from various states discuss their program rules and answer participant questions related to the amusement laws and rules in their states.
Walk Throughs and Dark Rides *	These attractions, while not regulated in some states, are commonly found in both permanent parks and/or fairground midways. This class will identify the differences between these devices as well as discuss the inspection process and the codes/standards that govern them. It will also focus on a myriad of safety issues found in the operation of dark rides, walk-through fun houses, and glass houses.
Active Shooter	As a result of the increased number of Active Shooter situations, this class was developed to help provide information on what to do and where to look for help in developing an Active Shooter plan. The instructor provides the definition of what different law enforcement agencies call an Active Shooter situation. Students learn some steps to develop a response plan, how to identify & report warning signs, how to respond during a situation, and how to survive. They are encouraged to explore different companies that will access their exposure & help develop a step-by-step plan should this situation happen at their location.
Lubrication *	Understanding the importance of proper lubrication for amusement rides and devices is imperative. Not enough and your device will stop, too much lubrication and it becomes very messy. This class will define the different lubrication substances. It will stress the importance of knowing the manufacturer's recommendation for a lubrication schedule and which lubricant fits that purpose.
Go Karts & Track Inspection/Maintenance/Operations (2 hours)	An overview of the proper technique for inspection of Go Kart Tracks will be provided. This overview will include but not be limited to information on applicable codes governing this part of the attraction along with where to find said information. Instructor will also offer best practices on operational procedures to ensure safety for both employees and patrons.
Wooden Coasters (2 hours) *	Understanding the nuances of wooden coasters is important to the inspection process. This class will go over the basic inspection techniques for various wooden coasters. It will include a definition of the different components along with the common issues found on these devices. He will touch on establishing a preventive maintenance program to help avoid issues in the future.
Chance Rides (2 hours)	Ride representatives will discuss bulletins and issues related to their rides.
Inspection Tools *	Being properly prepared to perform amusement ride Inspections and/or investigations includes having the tools available to complete the process. This class will review typical tools helpful during these

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	procedures. Discussion will include how to properly use, maintain, and calibrate them.
QSI Update	A representative from the CA QSI Program will address any program changes and answer any questions regarding the program from students.
Round Table for Mobile Industry	Open forum discussions on concerns and challenges in the mobile industry.