

Compact Construction Equipment (CCE) Customer Classes

Skid Steer Operator Safety Familiarization

CR 10

Length: 20 hours (3 days)

Course Format: 40% ILT, 60% Lab, 0% Web

Prerequisite(s): None

Instructor: Ron Spohrer

Student Maximum: 8

Student Minimum: 4

Course Cost: Please refer to Pricing Policy on page 5

Course Description:

Students are familiarized with the functions and safe operating practices of Skid Steer and Multi-Terrain Loaders (SSL, MTL). Students are also given the opportunity to perform a walk around pre-operation and post-operation inspection of the machine.

Course Objectives:

- Recognize the requirements of OSHA Regulation 1910.178 (I)
- Exhibit an awareness of the purpose, function, and basic concepts of SSL and MTL operation
- Perform machine inspection and maintenance as required
- Understand the type of loads to be carried and the stability characteristics of such loads
- Demonstrate an ability to operate safely given site restrictions, hazards, lighting, and weather
- Judge the condition of surfaces where the machine is being operated

Telehandler Operator Safety Familiarization

CR 11

Length: 4 hours (.5 day)

Course Format: 50% ILT, 50% Lab, 0% Web

Prerequisite(s): None

Instructor(s): Ron Spohrer

Student Maximum: 8

Student Minimum: 4

Course Cost: Please refer to Pricing Policy on page 5

Course Description:

Students are familiarized with the functions and operation of a Rough Terrain Fork Lift (RTFL) to include safe operating practices. Students are given an opportunity to perform a walk-around pre-operation and post-operation inspection of the machine and shall exhibit proficiency in operating the machine.

Course Objectives:

- Be familiar with the requirements of OSHA Regulation 1910.178 (I)
- Exhibit an awareness of the purpose, function, and basic concepts of RTFL operation
- Perform machine inspection and maintenance as required
- Be aware of type of loads to be carried and the stability characteristics of such loads
- Demonstrate an ability to operate safely given site restriction, hazards, lighting, and weather
- Judge the condition of surfaces where the RTFL is being operated

Compact Construction Equipment Classes – Customer

General Troubleshooting Practices (CCE)

CR 39

Length: 8 hours (1 day)

Course Format: 50% ILT, 50% Lab, 0% Web

Prerequisite(s): None

Instructor(s): Ron Spohrer

Student Maximum: 8

Student Minimum: 4

Course Cost: Please refer to Pricing Policy on page 5

Course Description:

This course is designed to develop skill in the area of basic troubleshooting techniques. The class is designed to train the participants to accurately and logically use a troubleshooting process to achieve answers to problems. This process teaches a logical step-by-step process that can be used in a troubleshooting situation.

Course Objectives:

- Distinguish between expert and novice performance
- Describe the troubleshooting process
- Identify and use the appropriate service materials
- Work a problem from start to finish

Mini Excavator Systems

CR 130

Length: 16 hours (2 days)

Course Format: 50% ILT, 50% Lab, 0% Web

Prerequisite(s): None

Instructor(s): Ron Spohrer

Student Maximum: 8

Student Minimum: 4

Course Cost: Please refer to Pricing Policy on page 5

Course Description:

This course covers the system operation, testing, and adjusting of the hydraulic systems and power train hydraulics on the 301.5-305 CCR Mini Excavators. The fuel system operation will also be covered.

Course Objectives:

- Locate and identify components of the implement hydraulics, power train, and engine
- Test and adjust all hydraulic pressures on the excavator
- Test and adjust the power train hydraulic system
- Describe the operation of the implement hydraulic system of the excavator
- Troubleshoot the hydraulic system and power train hydraulic system
- Explain the operation of the fuel system

Skid Steer Loader Systems

CR 131

Length: 16 hours (2 days)

Course Format: 50% ILT, 50% Lab, 0% Web

Prerequisite(s): None

Instructor(s): Ron Spohrer

Student Maximum: 8

Student Minimum: 4

Course Cost: Please refer to Pricing Policy on page 5

Course Description:

This course covers the system operation, testing, and adjusting of the hydraulic systems and power train hydraulics on the 216-226 Skid Steer Loaders. The fuel system operation will also be covered.

Course Objectives:

- Locate and identify components of the hydraulics, power train, and engine
- Test and adjust all hydraulic pressures on the skid steer loader
- Test and adjust the power train hydraulic system
- Describe the operation of the implement hydraulic system of the skid steer loader
- Troubleshoot the hydraulic system and power train of the skid steer loader
- Explain the operation of the fuel system for the skid steer loader

Compact Construction Equipment Classes – Customer

C-Series Skid Steer Loader Systems

CR 132

Length: 16 hours (2 days)

Course Format: 50% ILT, 50% Lab, 0% Web

Prerequisite(s): None

Instructor(s): Ron Spohrer

Student Maximum: 8

Student Minimum: 4

Course Cost: Please refer to Pricing Policy on page 5

Course Description:

This course covers the system operation, testing, and adjusting of the hydraulic systems and power train hydraulic on the C-Series Skid Steer Loaders. The fuel system operation is also covered.

Course Objectives:

- Locate and identify components of the hydraulics, power train, and engine
- Test and adjust all hydraulic pressures on the skid steer loader
- Test and adjust the power train hydraulic system
- Describe the operation of the implement hydraulic system of the skid steer loader
- Troubleshoot the hydraulic system and power train of the skid steer loader
- Explain the operation of the fuel system for the skid steer loader

Hand Tools and Maintenance

Procedures (CCE)

CR 137

Length: 8 hours (1 day)

Course Format: 50% ILT, 50% Lab, 0% Web

Prerequisite(s): None

Instructor(s): Ron Spohrer

Student Maximum: 8

Student Minimum: 4

Course Cost: Please refer to Pricing Policy on page 5

Course Description:

This class familiarizes participants with the many precision parts of our hand tools. It is imperative to know how to remove, measure, move or lift with great accuracy and safety.

Course Objectives:

- Identify and explain the use of hand and power tools
- Perform general maintenance on these tools
- Perform basic functions in the shop using power tools
- Use precision measuring devices with accuracy
- Utilize both hydraulic and mechanical pullers used in our industry
- Perform basic lifts with hydraulic and mechanical jacks and hoists

Hydrostatic Drive Systems (CCE)

CR 138

Length: 4 hours (.5 day)

Course Format: 100% ILT, 0% Lab, 0% Web

Prerequisite(s): None

Instructor(s): Ron Spohrer

Student Maximum: 8

Student Minimum: 4

Course Cost: Please refer to Pricing Policy on page 5

Course Description:

This class covers basic hydrostatic drive systems and drive system controls.

Course Objectives:

- Identify the differences between open-loop and closed-loop hydrostatic drive systems
- Identify the differences between fixed and variable pumps and motors, and the difference between mono-directional and bi-directional pumps and motors
- Identify all components in a single hydrostatic system and using the procedures in the service manual, test and adjust the hydrostatic drive system
- Identify all shared control components in a dual hydrostatic drive system
- Trace the oil flow through each of the various systems in each hydrostatic drive operation mode

Compact Construction Equipment Classes – Customer

Hoses, Seals, Fasteners, and Bearings (CCE)

CR 139

Length: 8 hours (1 day)

Course Format: 90% ILT, 10% Lab, 0% Web

Prerequisite(s): None

Instructor(s): Ron Spohrer

Student Maximum: 8

Student Minimum: 4

Course Cost: Please refer to Pricing Policy on page 5

Course Description:

This class covers the type of hoses, seals, fasteners, and bearings that are used on Compact Construction Equipment. Students are familiarized with most products used in the shop environment.

Course Objectives:

- Identify the different types of fasteners used in the industry
- Distinguish between the different types of seals used in the industry
- Identify the different types of bearings used in the industry
- Identify the different hoses and fittings used in the industry

Power Train I (CCE)

CR 140

Length: 8 hours (1 day)

Course Format: 90% ILT, 10% Lab, 0% Web

Prerequisite(s): None

Instructor(s): Ron Spohrer

Student Maximum: 8

Student Minimum: 4

Course Cost: Please refer to Pricing Policy on page 5

Course Description:

This course discusses the basic components and operation of power train systems used in Caterpillar machines. Included are basic components, clutches, torque converters, manual shift transmissions, and power shift transmissions.

Course Objectives:

- Identify basic components and component functions
- Explain how the components relate to the operation of various power train systems
- Trace fluid and mechanical flows through components

Power Train II (CCE)

CR 141

Length: 16 hours (2 days)

Course Format: 80% ILT, 20% Lab, 0% Web

Prerequisite(s): None

Instructor(s): Ron Spohrer

Student Maximum: 8

Student Minimum: 4

Course Cost: Please refer to Pricing Policy on page 5

Course Description:

This course introduces methods for transferring power through the mechanical powertrain and covers differentials, brakes, final drives, and undercarriage. Torque converters and transmissions are not part of this course and were covered in the Power Train I class. The content of this course should be treated as general information for power train components in all Caterpillar machines.

Course Objectives:

- Demonstrate a working knowledge of the power train components that are included in this course
- Use reference materials to disassemble, assemble, and adjust various power train components

Fuel Systems (CCE)

CR 142

Length: 8 hours (1 day)

Course Format: 80% ILT, 20% Lab, 0% Web

Prerequisite(s): None

Instructor(s): Ron Spohrer

Student Maximum: 8

Student Minimum: 4

Course Cost: Please refer to Pricing Policy on page 5

Course Description:

This course covers the system operation of the fuel systems used in Compact Construction Equipment.

Course Objectives:

- Locate and identify components of the various fuel systems used in CCE products
- Explain the conservation practices and physical properties of fuel
- Explain the operation of the Caterpillar 3054E & 3056E electronically controlled engine

Compact Construction Equipment Classes – Customer

TL642/943 Series Telehandler CR 143

Length: 16 hours (2 days)

Course Format: 50% ILT, 50% Lab, 0% Web

Prerequisite(s): None

Instructor(s): Ron Spohrer

Student Maximum: 8

Student Minimum: 4

Course Cost: Please refer to Pricing Policy on page 5

Course Description:

This class covers the machine specifications, drive train, hydraulic system, operator cab, boom assembly, and maintenance criteria of the TL642/943 Series Telehandlers.

Course Objectives:

- Identify the major components of the machine
- Identify, test, and adjust the hydraulic system
- Identify and explain the components of the operator station
- Identify and adjust the boom assembly
- Explain the maintenance and inspection criteria

TL1055/1255 Series Telehandler CR 144

Length: 16 hours (2 days)

Course Format: 50% ILT, 50% Lab, 0% Web

Prerequisite(s): None

Instructor(s): Ron Spohrer

Student Maximum: 8

Student Minimum: 4

Course Cost: Please refer to Pricing Policy on page 5

Course Description:

This class covers the machine specifications, drive train, hydraulic system, operator cab, boom assembly, and maintenance criteria of the TL 1055/1255 Series Telehandlers.

Course Objectives:

- Identify the major components of the machine
- Identify, test, and adjust the hydraulic system
- Identify and explain the components of the operator station
- Identify and adjust the boom assembly
- Explain the maintenance and inspection criteria

B-Series Telehandler Systems CR 145

Length: 16 hours (2 days)

Course Format: 80% ILT, 20% Lab, 0% Web

Prerequisite(s): None

Instructor(s): Ron Spohrer

Student Maximum: 8

Student Minimum: 4

Course Cost: Please refer to Pricing Policy on page 5

Course Description:

This course provides information on the machine components and system operation of the B-Series Telehandlers.

Course Objectives:

- Locate and identify the components on the B-Series telehandler
- Be familiar with the required preventive maintenance
- Explain the operation of the transmission systems
- Explain the basic operation of the hydraulic system components
- Trace the flow of oil throughout the systems
- Test and adjust the hydraulic systems pressures

Compact Construction Equipment Classes – Customer

Pre & Post Operation Inspections (CCE)

CR 146

Length: 8 hours (1 day)

Course Format: 50% ILT, 50% Lab, 0% Web

Prerequisite(s): None

Instructor(s): Ron Spohrer

Student Maximum: 8

Student Minimum: 4

Course Cost: Please refer to Pricing Policy on page 5

Course Description:

This class is designed for all levels of technicians and provides participants with the skills and knowledge to complete a thorough walk-around of any and all equipment used in the rental service area. Participants learn how to effectively inspect the machine before and after the machine is sent out for rent. Participants also learn how to report problems, fill out reports, and use proper terminology to insure prevention of major down-time and future issues.

Course Objectives:

- Conduct a thorough, complete walk-around inspection
- Identify components of the machine and look for signs of loose or missing parts
- Identify abnormal wear of the undercarriage or drive train
- Identify Ground Engagement Tools (GET), wear, and service life
- Perform report functions to include correct terminology
- Locate information in Operator Maintenance & Manuals (OM&M) and Service Manuals