

## Laborers Landscape and Irrigation Fitter

### Mini Excavator 1 Syllabus

**Time:** 8 hours

**Maximum Class Size:** 12

**Prerequisites:** None

**Course Description:** Working safely and efficiently is the primary focus of the LLIF Mini Excavator course. Knowledge is one of the key ingredients in developing safe work practices. Mini Excavators are used extensively in the landscape irrigation field. This course reviews the step-by-step basics of how the Mini Excavator functions. Participants will identify all components and systems of the Mini Excavators. They will then receive hands-on training in the connecting and disconnecting of attachments as well as the safe start-up, driving and shut-down of the Mini Excavator.

#### **Goals/Objectives/Student Learning Outcomes:**

- Name required Personal Protective Equipment that must be used when operating a Mini Excavator.
- Discuss the uses of the Mini Excavator in the construction industry.
- Identify all components, systems and controls of the Mini Excavator.
- Correctly perform a start-up check: Check for leaks; check oil, hydraulic fluid, water level, hoses, tension on belts and tracks.
- Identify uses for each attachment.
- Correctly change attachments.
- Identify potential safety issues on the jobsite when using a Mini Excavator.
- Start up the Mini Excavator.
- Safely drive the Mini Excavator where directed.
- Successfully maneuver forward and reverse direction through layout of cones.
- Dig a trench the depth of the bucket with it is standing on the teeth.
- Place the soil from the trench a distance of the bucket and pile the soil.
- Backfill the trench and compact it using the bucket.
- Safely park the Mini Excavator where directed.
- Perform shut down procedure.
- Properly load, secure and unload equipment using a Utility Trailer.

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#### Standards

- OSHA 29 CFR Part 1926.600, 602 (a) Subpart O-Materials Handling, Motor Vehicles & Mechanized Equipment
- OSHA 29 CFR Part 1926.1000 Subpart O-Rollover Protective Structures; Overhead Protection
- OSHA 29 CFR Part 1926 Subpart P-Excavations
- Cal/OSHA Subchapter 4, Article 10-Haulage & Earth Moving Equipment: 1590-1596

#### Classroom Rules and Procedures

- All classes begin at 6:30 am and end at 3:00 pm
- Upon entering classroom, all participants must sign in and be seated by 6:30 am
- Class will consist of a combination of lecture, video, demonstration, coached group exercises, individual exercises and assessment.
- Students are required to report to class ready to work and maintain the provided PPE

#### Textbooks/Readings/Materials

- Photographs of various types of Excavators
- Hand Signals Hand-out
- Mini Excavator Safety Hand-out
- Mini Excavator PowerPoint
- Mini Excavator System Functions Hand-out for Note Taking
- Hands-on Evaluation Form
- LIUNA: Subpart P Trench and Excavation IG/PG
- LIUNA: Utility Locating Programs IG/PG

#### Tools/Equipment/Other Materials

- Cat or New Holland Mini Excavator
- Attachments

#### Personal Protective Equipment

- 12 pairs of gloves
- 12 pairs of safety glasses
- 20 pairs of ear plugs

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- 12 hard hats

#### Course Requirements

To receive credit for the course, participants must:

- Be present for full eight hours
- Participate in all classroom exercises
- Pass a written exam
- Pass a hands-on exam

#### Course Policies

- Participants must be on-time and ready to work.
- Participants must return from breaks on-time.
- Participants must participate in each exercise and assignment
- Participants who are on “light duty” are not allowed to take this course due to the physically demanding requirements.

#### Assessment and Grading

Participants will be assessed on the following:

- All written exams must be passed with a score of 80% or above.
- All hands-on exercises are graded on performance and participation. They are pass/fail and must be passed with a score of 80% or above.

#### Safety

Failure to maintain and use PPE may result in dismissal from the course.