
TRAINER GUIDE

Trainer Guide: RIIHAN201E Operate a forklift

RIIHAN201E · Operate a forklift

Unit overview

This section provides a summary of the unit of competency.

- Code: RIIHAN201E
- Title: Operate a forklift
- Application: This unit describes the skills and knowledge required to operate a forklift truck safely in a variety of operational settings. It involves planning the work, conducting routine checks, shifting loads in a safe manner, and shutting down and securing the equipment after use.
- Prerequisites: There are no formal prerequisite units for this unit of competency.
- Licensing/Regulatory Information: Operation of a forklift requires a High Risk Work Licence (HRWL) class LF. This unit of competency provides the formal training component required before a candidate can undertake the mandated national assessment instrument for the licence. The final licensing assessment must be conducted by an accredited assessor working for a Registered Training Organisation (RTO) that has been approved by the relevant state or territory Work Health and Safety (WHS) regulator.

How to use this guide

This guide is designed for qualified trainers and assessors delivering RIIHAN201E. It provides a structured framework for delivery, ensuring all aspects of the unit are covered consistently and to the required standard.

A person delivering training under the supervision of a qualified trainer may use this guide to facilitate learning sessions and gather formative evidence. However, in line with Standard 3.2 of the Standards for RTOs 2025, a person working under direction is not permitted to make any assessment judgements regarding a learner's competence. All summative assessment decisions must be made by a qualified assessor.

Delivery sequence

The following sequence is recommended to build learner knowledge and skills logically, from foundational theory to complex practical application. This sequence should be supported by the detailed Session Plan.

- Session 1: Introduction to Forklift Operations. Covers WHS legislation, the High Risk Work Licensing framework, hazard identification, risk control, and interpreting workplace documentation (SWMS, JSAs). (Covers Element 1)
- Session 2: Forklift Characteristics & Stability. Focuses on types of forklifts, main components, and the principles of stability, including the stability triangle, load centres, and interpreting data plates/load charts. (Covers Element 1 & Knowledge Evidence)
- Session 3: Pre-Operational Checks. A detailed, hands-on session covering how to conduct pre-start and post-start checks using a systematic approach and a workplace checklist. Includes fault identification and reporting procedures. (Covers Element 2)
- Session 4: Basic Manoeuvring. Practical session focused on operating the forklift without a load. Covers starting, stopping, steering (forward and reverse), navigating a simple course, and developing spatial awareness of the machine's footprint and tail swing. (Covers Element 2)
- Session 5: Load Handling Operations. Practical session on lifting, transferring, and placing standard palletised loads. Covers approaching the load, correct fork height and tilt, travelling with a load, and stacking/destacking at various heights. (Covers Element 2)
- Session 6: Attachments and Advanced Tasks. Practical session on selecting, fitting, using, and removing at least two different approved forklift attachments (e.g., slippers, jib). Includes understanding how attachments de-rate the forklift's capacity. (Covers Element 2)
- Session 7: Shutdown, Housekeeping & Final Review. Covers correct parking and shutdown procedures, post-operational checks, refuelling/recharging, cleaning the work area, and completing required documentation like logbooks. (Covers Elements 2 & 3)

Facilitation notes by topic

This section provides detailed guidance for facilitating each topic within the delivery sequence.

Topic 1: WHS, Legislation & Planning

- Introduction: Begin by emphasising that a forklift is a high-risk piece of equipment and that safety is the number one priority. Explain the legal framework, including the WHS Act/Regulations and the requirement for a High Risk Work Licence (HRWL).
- Discussion Prompts: "Why is a forklift considered 'high risk'?", "What are the consequences of operating without a licence?", "Where would you find the rules for forklift safety in your workplace?", "What is the purpose of a SWMS?"
- Demonstrations: Show examples of a SWMS, a hazard report form, and a forklift data plate. Walk through how to interpret the information on each document.
- Activity: In small groups, provide learners with a picture or video of a warehouse environment. Ask them to identify as many potential hazards as possible (e.g., pedestrians, blind corners, uneven surfaces, overhead powerlines).
- Debrief: As a group, list the identified hazards on a whiteboard. For each hazard, discuss potential control measures using the hierarchy of controls (elimination, substitution, engineering, admin, PPE).
- Common Misconceptions: Correct the idea that a licence is not needed on private property, or that a car licence is sufficient.
- Unit Mapping: E1.1, E1.2, E1.3, E1.4, E1.6, PE7, PE8, KE1.

Topic 2: Forklift Components & Stability

- Introduction: Introduce the main components of a counterbalance forklift (mast, forks, carriage, overhead guard, counterweight, etc.). Explain the concept of the 'stability triangle' and how the combined centre of gravity (forklift + load) must remain within it to prevent tip-overs.
- Discussion Prompts: "What is the purpose of the counterweight?", "What happens to the centre of gravity when you raise a load?", "What is a 'load centre' and why is it important?"
- Demonstrations: Use a diagram or a small model to visually demonstrate the stability triangle. Show how the centre of gravity shifts when a load is lifted or tilted. Point out all key components on the actual training forklift.
- Activity: Provide learners with a blank diagram of a forklift and ask them to label the key parts. Then, provide a sample load chart and ask them to determine the safe lifting capacity at a specific height and load centre.
- Debrief: Review the labelled diagram. Go through the load chart calculation step-by-step, ensuring all learners understand how to read it.

- Common Misconceptions: Learners often underestimate how quickly a forklift can become unstable, especially when turning with a raised load.
- Unit Mapping: E1.5, KE2, KE3, FS2.

Topic 3: Pre-Operational Checks

- Introduction: Stress that the pre-start check is a non-negotiable part of every shift and is the operator's first line of defence against accidents caused by equipment failure.
- Discussion Prompts: "What are some of the things that could go wrong if you don't do a pre-start check?", "Who is responsible for fixing a fault you find?", "What is the difference between a pre-start and a post-start check?"
- Demonstrations: Perform a full, systematic pre-start check on the forklift, following a checklist. Verbalise every step, explaining what you are looking for (e.g., "I'm checking the tyres for correct pressure, cuts, and embedded objects"). Demonstrate the post-start checks (e.g., testing brakes, hydraulics, steering).
- Activity: Under close supervision, have each learner use a checklist to conduct their own pre-start check on the machine. The trainer can 'plant' a minor, safe fault (e.g., a loose mirror, a disconnected light) for them to find.
- Debrief: Discuss what learners found. If a fault was planted, discuss the correct procedure: Is it within their scope to fix? If not, what is the process for tagging out the equipment and reporting the fault?
- Common Misconceptions: Thinking the check is just a 'tick and flick' exercise. Emphasise it's a physical and visual inspection.
- Unit Mapping: E2.1, E2.2, PE2, PE11.

Topic 4: Load Handling Operations

- Introduction: Explain the key principles for safely lifting, moving, and placing a load: keep the load low, travel at a safe speed, and maintain stability at all times.
- Discussion Prompts: "Why must you approach a pallet squarely?", "How high off the ground should the load be when travelling?", "What are the dangers of travelling with the load raised high?"
- Demonstrations: Demonstrate the full sequence for picking up a pallet from racking: approach, stop, level forks, drive in, lift, tilt back slightly, reverse out, lower to travel height. Then demonstrate placing the load.

- **Activity:** Set up a simple task, such as moving a pallet from Point A to a designated square at Point B. Have learners practice one at a time, providing specific feedback on their technique (e.g., "Your approach was a little angled, try to straighten up before you enter the pallet"). Gradually increase complexity to stacking pallets.
- **Debrief:** After each learner's turn, provide constructive feedback. Highlight good examples of smooth operation and constant observation.
- **Common Misconceptions:** Rushing the process; not tilting the mast back before travelling; travelling with forks too high.
- **Unit Mapping:** E2.4, E2.5, E2.6, E2.7, E2.8, PE3, PE4, PE9, PE10, PE12, PE14.

Topic 5: Attachments

- **Introduction:** Explain that attachments are used for non-standard loads but they significantly alter the forklift's performance. Emphasise that only approved, certified attachments can be used and they de-rate the forklift's lifting capacity.
- **Discussion Prompts:** "Where would you find the new lifting capacity after fitting an attachment?", "What extra checks are needed when fitting an attachment?"
- **Demonstrations:** Show the attachment's data plate and the forklift's de-rated plate. Demonstrate the correct, safe procedure for fitting and securing two different attachments (e.g., fork slippers and a lifting jib). Perform a function test.
- **Activity:** Supervise learners as they practice fitting and removing the attachments. Have them perform a simple lift with each attachment (e.g., moving a long object with slippers, lifting a slung load with a jib) to feel how it changes the machine's handling.
- **Debrief:** Discuss the differences in stability and control with each attachment. Reinforce the importance of checking the de-rated capacity before any lift.
- **Common Misconceptions:** Assuming the original capacity still applies; thinking any attachment can be used.
- **Unit Mapping:** E1.5, E2.3, PE6.

Topic 6: Shutdown & Housekeeping

- Introduction: Explain that the job is not complete until the forklift is safely secured, any issues are reported, and the work area is clean and safe for the next person.
- Discussion Prompts: "Why is it important to park on a level surface?", "Why must the forks be lowered to the ground?", "What information should you record in the logbook?"
- Demonstrations: Demonstrate the correct shutdown procedure: park in designated area, apply park brake, lower forks fully, place controls in neutral, turn off engine/power, remove key. Complete a post-operational check and fill out a logbook entry.
- Activity: Have each learner perform the full shutdown and securing procedure. Provide them with a scenario (e.g., "During your shift, you noticed the brakes felt soft") and have them complete the logbook/report form accordingly.
- Debrief: Review the completed logbook entries for clarity and completeness. Discuss the importance of leaving the area clean and tidy.
- Unit Mapping: E2.9, E3.1, E3.2, E3.3, PE5, PE13.

Formative activities & model answers

These activities are for formative use only, to check understanding during the training. They must not be used for summative assessment.

- Activity 1: Hazard Identification. (Knowledge Check)
- Question: "List five potential hazards you might encounter when operating a forklift in a warehouse."
- Model Answer: Pedestrians, other vehicles, blind corners, wet or oily floors, unstable racking, poorly stacked loads, overhead obstructions, noise, fumes.
- Activity 2: Load Chart Interpretation. (Numeracy Check)
- Scenario: "Your forklift is rated to lift 2000kg at a 500mm load centre. The load chart shows that if you lift to a height of 4 metres, the capacity is reduced by 20%. What is the maximum weight you can safely lift to 4 metres?"
- Model Answer: $2000\text{kg} \times 20\% = 400\text{kg}$ reduction. $2000\text{kg} - 400\text{kg} = 1600\text{kg}$. The maximum safe load is 1600kg.
- Activity 3: Pre-start Check Knowledge. (Knowledge Check)

- Question: "You are conducting a pre-start check and discover a small hydraulic fluid leak from one of the mast hoses. What three actions must you take?"
- Model Answer: 1. Do not operate the forklift. 2. Apply a 'Do Not Operate' or 'Out of Service' tag to the steering wheel or ignition. 3. Report the fault to your supervisor or the maintenance department immediately, following workplace procedures.
- Integrity Guidance: Trainers must ensure learners complete all summative assessment tasks in their own words. These model answers are for formative learning and debriefing only. Under no circumstances should trainers provide learners with answers to summative assessment questions.

Resources & equipment checklist

The following resources are required for the delivery of this unit.

- Facilities: A designated practical training area, isolated from other operational activities, with sufficient space for manoeuvring, a flat surface, and racking or designated stacking areas. A classroom for theory delivery.
- Equipment:
 - One commercially serviceable counterbalance forklift, compliant with Australian Standards.
 - At least two different certified and approved forklift attachments (e.g., fork slippers, lifting jib, rotator).
 - A variety of loads, including standard pallets with secured goods.
 - Traffic cones or barriers for setting up manoeuvring courses.
 - Battery charger or fuel for the forklift.
 - Fire extinguisher (appropriate type for the forklift).
 - First aid kit.
 - Personal Protective Equipment (PPE):
 - Hi-visibility vests/shirts for all participants.
 - Steel-capped safety boots.
 - Safety glasses (as per site requirements).
 - Documentation & Consumables:
 - Learner Guides.

- Forklift operator's manual.
- Workplace pre-start checklists.
- Forklift logbooks or reporting forms.
- Sample SWMS/JSAs.
- Whiteboard and markers.
- Projector and screen.

WHS & risk guidance

Safety is paramount during all practical training activities. The following controls must be implemented:

- Supervision: A low trainer-to-learner ratio must be maintained during practical sessions (e.g., maximum 1:4 when learners are operating machines).
- Exclusion Zones: Clearly demarcate the practical training area. Non-participants must remain outside this zone at all times.
- Spotting: The trainer must act as a spotter for all learner operations, maintaining clear communication and a universal 'all-stop' signal.
- Speed Limit: A low speed limit (walking pace) must be enforced within the training area.
- Pre-use Checks: The trainer must conduct a full pre-start check on the training forklift at the beginning of each day, before learners use it.
- Emergency Procedures: All participants must be briefed on emergency procedures, including the location of the first aid kit, fire extinguisher, and emergency assembly point.
- Work Placements: Where work placements are used, the RTO must have a formal agreement with the host employer. A documented risk assessment of the workplace must be conducted by the RTO prior to the placement to ensure a safe environment and the provision of adequate supervision by a licensed operator.

Learner support, LLN & reasonable adjustment

Trainers must be vigilant for learners who may require additional support.

- LLN & Digital Literacy Watch-Points:
- Reading (FS1): Difficulty interpreting the operator's manual, load charts, or written safety procedures.
- Numeracy (FS2): Challenges with calculating load weights, understanding percentages on load charts, or interpreting gauges.
- Writing: Difficulty completing logbooks or hazard reports legibly and clearly.
- Oral Communication: Hesitancy in communicating with the trainer/spotter or asking clarifying questions.
- Reasonable Adjustment Options:
- Provide verbal explanations and demonstrations to supplement written materials.
- Use visual aids, diagrams, and models to explain complex concepts like the stability triangle.
- For formative knowledge checks, allow verbal answers and scribe for the learner if necessary.
- Provide additional one-on-one practice time for practical skills, away from the pressure of the group.
- Note: Adjustments must not compromise the integrity of the unit. For example, a learner must still be able to demonstrate that they can read and interpret a load chart, even if the trainer provides support in explaining how the chart works.
- Support Touchpoints: Learners identified as needing significant support should be referred to the RTO's Student Support Officer in a confidential and supportive manner, in line with Standard 2.3 and 2.4.

Contextualisation notes

To make training relevant, trainers should contextualise scenarios and examples.

- Cohorts: For a cohort from the logistics industry, use examples involving warehouse racking and loading/unloading trucks. For a construction cohort, use scenarios involving uneven ground and moving building materials like pallets of bricks or timber.
- Loads: Use a variety of loads relevant to the target industry, ensuring they are safe and stable for training purposes.

- Documentation: Use sample SWMS, policies, and checklists from different industries to show learners how documentation can vary between workplaces while still meeting the same WHS requirements.
- Important: Contextualisation must not alter the core requirements of the unit. All performance criteria must be met, and all activities must comply with the national standards for high-risk work and relevant WHS legislation.

Version control & review

- Version: 1.0
- Date of Issue: 24 October 2023
- Review Date: 23 October 2024
- Review Cycle: This guide is reviewed annually, or as required in response to changes in the RII Training Package, WHS legislation, or industry best practice.
- Continuous Improvement: Trainers and assessors are encouraged to provide feedback for the continuous improvement of this guide. Feedback should be submitted via the RTO's 'Continuous Improvement Form'. All feedback is reviewed quarterly by the training manager and lead trainer to ensure our resources remain current and effective, in line with Standard 4.4.