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# Counterbalance truck study guide

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Learn the principles.  
Practise with your instructor.  
Build safe working habits.



With Little Cody



**FREE STUDY GUIDE - SUPPORTS SUPERVISED TRAINING**

Seated industrial counterbalance trucks | Great Britain

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START HERE

# Your learning companion

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Use this booklet alongside demonstrations and supervised practice. It is not a licence, assessment certificate or permission to operate a truck.

## SCOPE

Follow the instructions for your actual truck and attachment, your workplace safe system and your instructor. If anything is unclear or conflicts, stop and ask before operating.

This guide covers seated industrial counterbalance trucks. It does not train you to use reach trucks, articulated trucks, telehandlers or other equipment.

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## STUDY NOTES

# Training comes first

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Safe operation depends on training, supervision and permission to use the actual equipment.

**Three stages.** Basic training develops core skills. Specific job training covers the truck, loads and workplace tasks. Familiarisation puts those skills into practice on the job under close supervision.

**Permission to operate.** Complete the necessary training and testing, then obtain your employer's authorisation for the truck and work. A certificate alone is not workplace authorisation.

**Your responsibility.** Follow instructions, protect others and report unsafe conditions. Tell your supervisor if illness, fatigue, medication or another concern could affect safe operation.

**Keep skills current.** Further training may be needed after unsafe practice, an incident, a long break or changes to equipment or work. There is no single legally fixed refresher interval for every operator.

## LITTLE CODY'S REMINDER

Do not teach yourself a different truck or attachment.  
Ask about conversion training.



## STUDY NOTES

# Know your truck

Identify these parts on your training truck. Controls differ between models.



Cody illustration - stylised, not a truck-specific technical drawing.

**Lifting parts.** Find the forks, locks, carriage, chains and any load backrest. Keep clear of pinch points.

**Controls.** Identify the restraint, brakes, steering, direction, hydraulic and emergency controls.

**Information.** Locate the capacity plate and handbook.

## LITTLE CODY'S REMINDER

Keep out of the mast and from beneath raised forks.



Source: L117, features and Appendix 1.

## STUDY NOTES

# Pre-use inspection: before each shift

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Use the truck-specific pre-use checklist and record the result at the beginning of each shift.

**Walk around safely.** Look for leaks, damage, loose parts and obstructions. Inspect tyres, wheels and visible wheel fixings without attempting repairs.

**Inspect the lifting parts.** Check visible fork damage, fork positioning locks, chains, hoses, guards and the load backrest where fitted. Stay outside the mast and pinch points.

**Check the operator area.** Check the seat, restraint, steps, handholds, mirrors, lights, warning devices and legible capacity information.

**Check the power source.** Follow the handbook for levels, battery security and fuel checks. A charge lead must be disconnected and safely stored before use.

## LITTLE CODY'S REMINDER

A safety-critical defect means do not use the truck.  
Report it and follow the site isolation procedure. Never  
sign a check you have not done.



**Discuss:** Where will you record and report a defect?

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## STUDY NOTES

# Get ready to move

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After the visual checks, carry out the functional checks your instructor demonstrates in a clear, safe test area.

**Mount carefully.** Face the truck and use the provided steps and handholds with three points of contact. Keep footwear and steps clean. Do not jump or use controls as handholds.

**Set up your position.** Adjust the seat and mirrors, fasten the fitted restraint and identify the controls before starting. Keep your body within the operator space.

**Test under control.** Check steering, service and parking brakes, horn and lifting functions as specified in the handbook. Use a safe speed and keep people clear.

**Look before moving.** Check all around, including the direction of travel and rear swing area. Move only when the route is clear.

**Remember GOBO:**

**G** = Gear; **O** = Observation;

**B** = Brake; **O** = Observation.

Here, Brake means releasing the parking brake. Use the moving-off procedure demonstrated for your truck; keep it controlled and make a final observation before moving.

## LITTLE CODY'S REMINDER

Stop if a control behaves unexpectedly. Do not bypass seat switches, restraints or other safety devices.



## STUDY NOTES

# Read the capacity plate

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The truck's actual lifting capacity depends on the stated conditions. A large-looking truck is not proof that a load is safe.

**Match all the details.** Check the load weight, load centre, required lift height and the approved attachment or configuration against the plate or chart.

**Know the load.** Use reliable weight information. Include the pallet or container and any other material lifted. Do not guess from appearance.

**Allow for attachments.** Attachments can reduce available capacity and change stability. Use the correct capacity information for the fitted attachment.

**Missing or unclear information?** Do not lift until a competent person has confirmed the correct information. Do not make your own replacement capacity calculation.

## LITTLE CODY'S REMINDER

Never test a doubtful load by lifting it to see whether the rear wheels rise.



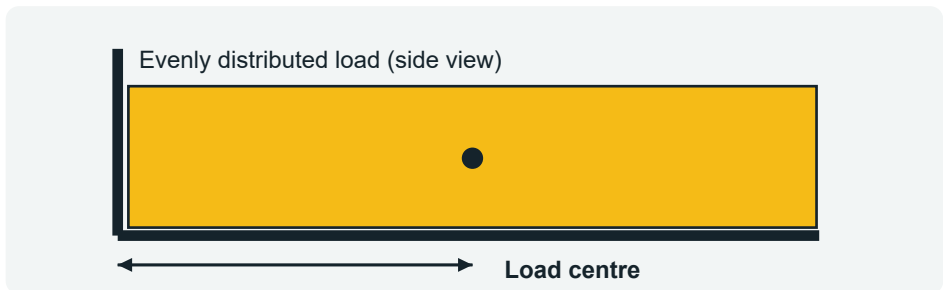
**Discuss:** Which four details must match before this lift?

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## STUDY NOTES

# Understand load centre

Load centre is the horizontal distance from the vertical face of the forks to the load's centre of gravity.



Measured from the vertical fork face to the load centre of gravity.

**Uniform loads.** An evenly distributed rectangular load, 1,200 mm deep and against the fork face, has a 600 mm load centre: halfway along its depth.

**Uneven loads.** The centre may not be halfway along. Packaging does not tell you where the weight is concentrated.

**Further out means more leverage.** A longer load or gap from the fork face increases the tipping effect. Check the actual capacity plate.

## LITTLE CODY'S REMINDER

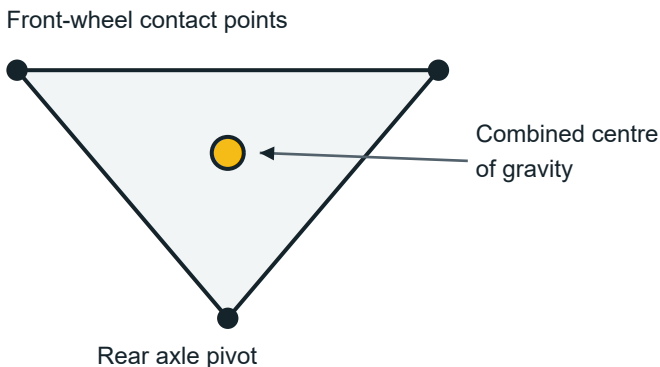
The 600 mm example explains a distance only. It does not authorise any load weight.



## STUDY NOTES

# Keep the truck stable

Truck and load act as one system. Their combined centre of gravity changes as the load moves.



Simplified top view for a conventional pivoting rear axle.

**A learning model.** This triangle explains stability; it is not a capacity chart or operating target.

**Overturn risks.** Turning, sudden braking, uneven ground, forward tilt and raised loads affect stability. An unloaded truck can overturn too.

**Protect the design.** Do not add counterweights or fit an unapproved battery or attachment.

## LITTLE CODY'S REMINDER

Keep the load low; drive smoothly. Slow before turns.



## STUDY NOTES

# People come first

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Separation is the main protection. A horn, flashing light or high-visibility vest cannot make an unsafe route safe.

**Use designated routes.** Follow the site traffic plan, barriers, crossing points and exclusion zones. Keep pedestrians out of loading and stacking areas.

**Stop for uncertainty.** If someone enters the danger area or you cannot tell where they are, stop safely. Continue only when separation is restored.

**Allow for rear swing.** On a rear-steering counterbalance truck the back of the truck swings out during a turn. Watch both the load and the rear end.

**Blind spots.** Approach doors and crossings cautiously. Use the horn as instructed, but do not assume anyone has heard it or will stop.

## LITTLE CODY'S REMINDER

Do not let anyone stand between the truck or load and a fixed object. Never allow anyone beneath raised forks or a raised load.



**Discuss:** Where are pedestrians separated on your site?

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## STUDY NOTES

# Travel with control

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The posted speed limit is a maximum, not a target. Choose a speed that allows a safe stop in the clear distance you can see.

**Keep a clear view.** Look in the direction of travel. If the load blocks the forward view on level ground, use the trained safe method, which may be travelling in reverse. Do not reverse blindly.

**Keep the load low.** Use the travel height and tilt taught for the actual truck and load. Do not travel with an elevated load or raise it to see underneath.

**Allow space.** Leave stopping room, watch overhead clearance and avoid sharp turns, harsh braking and sudden direction changes.

**If visibility is still inadequate.** Stop and obtain a safe plan. Use a trained banksman only where the risk assessment requires one; stop immediately if communication or sight is lost.

## LITTLE CODY'S REMINDER

No phone use or distractions while driving. Carry no passengers unless the truck is specifically designed and authorised for them.



## STUDY NOTES

# Slopes need a plan

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Use only routes and gradients permitted for your truck, load and surface. Avoid slopes wherever possible.

**Loaded truck.** Keep the forks and load facing uphill when travelling up or down the slope.

**Unloaded truck.** Keep the forks facing downhill when travelling up or down the slope.

**Keep straight.** Do not turn on a slope or travel across it. Use a low, controlled speed and smooth movements.

**Visibility matters too.** If keeping the load uphill prevents a safe view, stop and seek an agreed safe method. Do not solve the problem by reversing the required load orientation.

## LITTLE CODY'S REMINDER

Never exceed the manufacturer's gradient limits. Wet, damaged or loose surfaces may make an otherwise permitted route unsafe.



**Discuss:** What is the approved slope procedure for this truck?

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## STUDY NOTES

# Pick up a load safely

This is a revision sequence for ordinary pallet handling, not a substitute for the truck-specific demonstration.

- 1. Plan and inspect.** Confirm capacity, weight, load centre, destination and route. Check that the pallet and load are sound, stable and suitable for the forks.
- 2. Set up squarely.** Approach under control. Position and secure the forks to support the load properly, following your training.
- 3. Engage carefully.** Level and align the forks with the pallet openings. Insert them as far as the load and pallet require, without damaging anything behind.
- 4. Lift only enough to clear.** Apply the necessary stabilising tilt as instructed. Check the load is supported. Look around before withdrawing, then set the correct low travel position.

## LITTLE CODY'S REMINDER

If the pallet breaks, the load shifts or the truck behaves unexpectedly, stop. Lower safely if possible and get help; never have someone hold a load in place.



## STUDY NOTES

# Place a load in racking

Use the method demonstrated for your truck, pallet and racking. Know the rack and location capacity before approaching.

**Check the location.** Inspect the pallet position and visible racking condition. Confirm clear height, support and space. Keep people out of the area.

**Align before lifting.** Approach squarely and stop in the taught position. Use the brake and hydraulic-control sequence demonstrated by your instructor.

**Raise and position smoothly.** Raise only as required and keep clear of beams, sprinklers and other loads. Limit movement with an elevated load to necessary positioning.

**Set down and withdraw.** Level as required, lower onto the intended supports and confirm the load is stable. Release it fully and check behind before reversing. Keep your main attention in the direction of travel, with brief checks that the forks are clearing the pallet without dragging or catching it. Stop if you cannot maintain safe observation.

## LITTLE CODY'S REMINDER

Once clear, lower to the travel position before travelling or turning. Do not use the forks to push damaged racking or force a load into a tight space.



## STUDY NOTES

# Retrieve a stacked load

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Assess the load before lifting it. Do not remove one that is damaged, leaning, trapped or unsupported without a safe plan.

**Inspect and align.** Confirm capacity at that height and load centre. Check that the pallet, racking and load above or beside it will remain secure.

**Engage the pallet.** Raise and align the forks as trained. Enter carefully and provide adequate support without striking the racking or goods behind.

**Lift clear.** Lift just enough to clear the supports. Use only the tilt needed for safe handling in line with the truck instructions.

**Withdraw and lower.** Check behind and around you. Withdraw straight until the load clears the rack, then lower to the correct travel position before turning or proceeding.

## LITTLE CODY'S REMINDER

Before using the hydraulics, stop, apply the handbrake (parking brake) and select neutral, following the truck instructions.

Never allow someone to reach into racking or beneath the load to guide the forks. Stop if the load snags or becomes unstable.



**Discuss:** What would make you stop this retrieval?

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## STUDY NOTES

# Docks, trailers and edges

Loading a vehicle introduces different risks. Follow the agreed loading plan; do not enter a trailer simply because a bridge plate is present.

**Prevent unexpected movement.** Confirm the vehicle and trailer parking brakes are applied and the trailer wheels are chocked, or an approved restraint is secured under the site procedure. The driver must be in the designated safe waiting place and hand the keys to the person in charge under the agreed key-control procedure. Key handover alone does not secure the trailer.

**Confirm strength and support.** The trailer floor, bridge plate and dock equipment must support the truck and load. Check damage, securing and rated capacities.

**Check trailer stability.** A disconnected trailer may need extra support. Confirm the landing-leg and support arrangements before entering.

**Watch the environment.** Check edges, overhead clearance, lighting and surface grip. Keep a safe distance from drops and follow the agreed loading sequence.

## LITTLE CODY'S REMINDER

If a vehicle moves, the floor looks damaged or capacity is uncertain: stop and report. Never improvise a bridge or support.



Source: L117, paras 154-159; HSE loading and site-based movement controls.

## STUDY NOTES

# Park and leave safely

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Park in the designated place on suitable level ground, away from traffic and escape routes.

**Make the truck safe.** Bring it to a controlled stop. Follow the truck's parking sequence: select neutral, apply the parking brake and fully lower the forks or attachment safely.

**Switch off and secure.** Shut down as instructed. Remove and secure the key, or disable access through the fitted system. Do not leave an energised truck available to others.

**Dismount carefully.** Use the steps and handholds, facing the truck with three points of contact. Check for passing vehicles before stepping into the area.

**Hand over concerns.** Record defects, damage and other problems. For LPG shutdown or charging, follow the trained procedure for that equipment.

## LITTLE CODY'S REMINDER

Do not block fire exits, firefighting equipment, walkways or electrical access. Do not leave forks projecting into a route.



**Discuss:** Where are the keys kept at your workplace?

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## STUDY NOTES

# Fuel and battery safety

Refuel, charge or change batteries only if trained and authorised. Follow the equipment instructions and site emergency procedure.

**Use the right area.** Use the designated area and specified PPE. Control ignition sources and ensure the required ventilation. Keep escape routes clear.

**Battery type matters.** Lead-acid systems can present acid and hydrogen hazards. Use the specified charger. Do not apply lead-acid topping-up procedures to lithium-ion or other sealed batteries.

**LPG and fuel.** Shut down before refuelling. LPG can collect in low areas. Follow the safe cylinder-change procedure away from pits, drains and ignition sources.

**An LPG truck will not start?** Do not keep cranking or repeat starting attempts. Do not use starting sprays. Secure it, isolate the gas supply as trained when safe, and report it for competent maintenance.

## LITTLE CODY'S REMINDER

A leak, damaged battery, unusual heat, smoke or smell means stop and follow the site emergency plan. Do not attempt an untrained repair or firefighting response.



## STUDY NOTES

# When something goes wrong

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Know the emergency procedure before operating: who to contact, how to raise the alarm and where to go.

**Defect or unsafe load.** Stop safely, secure the truck and keep people away. Report the problem. For a defective truck, display a clear **V.O.R. - Vehicle Off Road - DO NOT USE** sign and follow the site isolation procedure. Keep unsafe loads isolated and clearly identified. Prevent reuse until an authorised competent person confirms it is safe.

**Collision or near miss.** Stop and report promptly, even if nobody appears hurt. Damaged racking or equipment may have hidden weaknesses. Do not continue or straighten it yourself.

**Overturn risk.** Always use the fitted restraint. For the seated counterbalance trucks covered here, do not try to jump from an overturning truck. Learn the exact brace and restraint procedure from your instructor and the truck handbook.

**Injury or emergency.** Raise the alarm and obtain trained help. Do not enter a crushing zone or put yourself in danger. Follow the site procedure for emergency services.

## LITTLE CODY'S REMINDER

Never lift a person on a pallet or bare forks. Lifting people requires separately planned, suitable equipment and trained, authorised use.



Sources: L117; HSE Overturning guidance ([link](#)); truck handbook.

## SELF-CHECK

# Revision questions 1-6

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Use your own words. These are revision questions, not the supervised assessment. Answers are on page 22.

**1.** You have passed basic training. Can you operate any employer's truck immediately?

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**2.** You find a safety-critical defect during a pre-use check. What next?

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**3.** Which information must match the capacity plate before a lift?

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**4.** A uniform load is 1,200 mm deep and against the fork face. What is its load centre?

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**5.** Is an unloaded counterbalance truck unable to overturn?

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**6.** A pedestrian steps into your operating area. What should you do?

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## SELF-CHECK

# Revision questions 7-12

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Use your own words. These are revision questions, not the supervised assessment. Answers are on page 22.

**7.** Your load blocks your view on level ground. Should you lift it higher to see?

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**8.** Which way should the forks face on a permitted slope, loaded and unloaded?

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**9.** You have withdrawn a load from racking. What must happen before travelling or turning?

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**10.** What must be confirmed before driving into a trailer?

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**11.** An LPG truck does not start normally. Should you keep trying?

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**12.** May a colleague stand on a pallet raised by your forks?

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## CHECK YOUR UNDERSTANDING

# Answer guide

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- 1.** No. You still need the relevant specific job and familiarisation training and employer authorisation. See page 3.
- 2.** Do not use the truck. Report, record and follow the site isolation procedure. See page 5.
- 3.** Load weight, load centre, lift height and the approved attachment/configuration. See page 7.
- 4.** 600 mm. This distance alone does not establish the permitted load weight. See page 8.
- 5.** No. Turning, speed, slopes and uneven ground can overturn an unloaded truck too. See page 9.
- 6.** Stop safely. Continue only when the danger area is clear and separation is restored. See page 10.
- 7.** No. Use a trained safe travel method, or stop and obtain a safe plan. See page 11.
- 8.** Loaded: uphill. Unloaded: downhill. Do not turn or travel across the slope. See page 12.
- 9.** Clear the racking and lower the load to the correct travel position. See page 15.
- 10.** Movement controls, floor/bridge capacity and security, trailer support, clearance and a safe loading plan. See page 16.
- 11.** No. Stop attempts, secure it, isolate as trained when safe, and report for competent maintenance. See page 18.
- 12.** No. Never lift people on a pallet or bare forks. See page 19.

MAKE IT SPECIFIC

# Your truck and workplace

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Complete these notes with your instructor or supervisor. They are learning notes, not a formal authorisation or pre-use inspection record.

**Truck make/model and attachment:**

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**Where I find the correct capacity information:**

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**Approved travel height and slope procedure:**

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**Defect reporting contact and isolation method:**

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**Pedestrian routes and loading exclusion areas:**

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**Emergency contact, alarm and assembly point:**

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## KEEP LEARNING

# Practice. Ask. Review.

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Ask your instructor about anything you do not understand. Safe habits come from explanation, supervised practice and feedback.

**Free theory practice**

[fltacademy.co.uk/practice-test.html](https://fltacademy.co.uk/practice-test.html)

Practice scores do not replace a supervised assessment.

**Sources and further reading****HSE L117 - Rider-operated lift trucks (2013)**

[hse.gov.uk/pubns/priced/l117.pdf](https://hse.gov.uk/pubns/priced/l117.pdf)

**HSE - Lift-truck training**

HSE website: Workplace transport / Lift-truck training

**HSE HSG136 - Workplace transport safety**

[hse.gov.uk/pubns/priced/hsg136.pdf](https://hse.gov.uk/pubns/priced/hsg136.pdf)

**HSE EPD02-2023 - LPG forklift truck fire risk**

[hse.gov.uk/safetybulletins/forklift-fires.htm](https://hse.gov.uk/safetybulletins/forklift-fires.htm)

References checked 21 September 2026. HSE guidance informs this original study aid; it is not an HSE-approved or RTITB-approved publication. No third-party handbook text or artwork has been reproduced.

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