FORKLIFT TRUCK LEARNER WORKBOOK

TLILIC0003
Licence to operate a forklift truck

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Learner name:

Student number: Date:

Contents

Learning and Practical Tasks

If you can, have your students train with other learners. Learning is more powerful when you and your learners share ideas and experiences. Below is a brief explanation of how you can use the training tasks in this workbook. Please advise your students if they are to fill in tasks on their own at home or wait until they are in the training room with you.

Theory training tasks

These tasks help the learner understand the underpinning knowledge to safely operate a forklift. To help them complete these tasks the learner can use the Information Book and speak to other learners and you, the licensed operator/trainer.

Thinking questions

Thinking questions train your learner to think for themselves. For example, the Information Book does not directly state the answer.

Practical training tasks

These tasks help the learner acquire the practical skills to safely operate a forklift. The tasks use high-risk equipment or machinery. Only a licensed operator/trainer can supervise the learner's practical training tasks.

Review

At the end of each element in the workbook, the learner gets to review their training. The review gives the learner a chance to talk with classmates and you about what they learned. Sharing their learning experiences with others helps them learn.

Review questions

You'll find the review questions on the Trainer's Resource CD. Give the questions to the learner toward the end of training to determine if they understand the information they have covered. You can ask your learner to fill in these questions alone or as a group.

Review—practical tasks

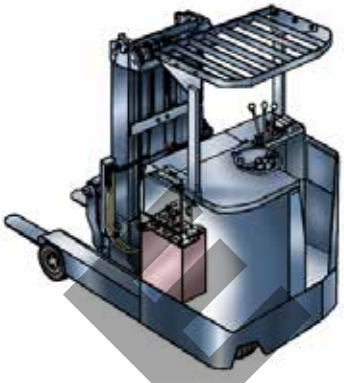
The practical tasks handout is on the Trainer's Resource CD. There is one task for each element and the learner should do all tasks under your supervision.

What is a forklift truck?

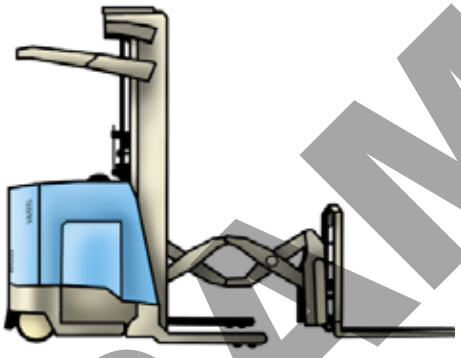
A forklift is a powered industrial truck used to lift and move loads. It has a mast and an elevating load carriage with a pair of fork arms or other load-holding parts.

As you can see below, there are different types of forklifts. The most common forklift is the counterbalance truck.

Counterbalance forklift truck



Reach truck (non-counterbalance) forklift



Double-deep reach truck

Truck mounted forklift truck

Rough terrain forklift truck

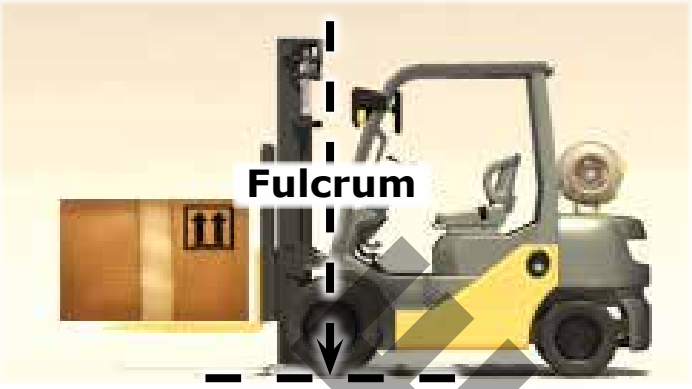
Articulated narrow aisle forklift truck

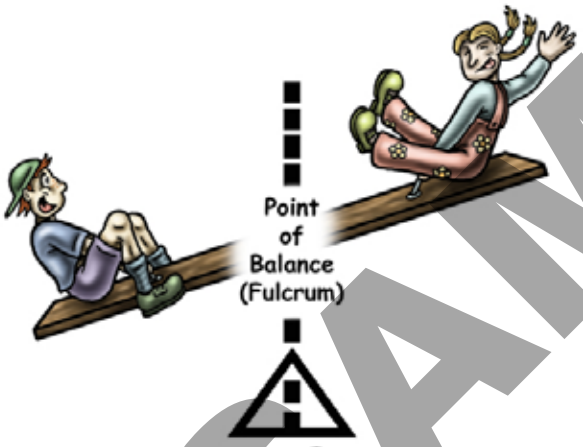
Point of balance (fulcrum)

The most common forklift is the counterbalance type.

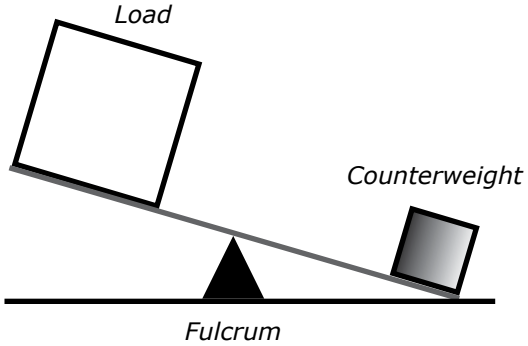
This means they carry the load on the front mounted tynes and use all the weight behind the front wheels to counterbalance the load.

The point of balance on a forklift is called the fulcrum. Think of it as a vertical line through the axle of the front wheel, where the line meets the ground.





Think of a counterbalance forklift truck as being like a see-saw. If you put too much weight on one end it tips over.



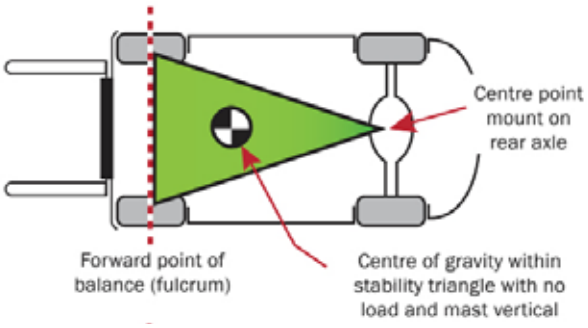
All the weight behind the point of balance acts as a counterweight.

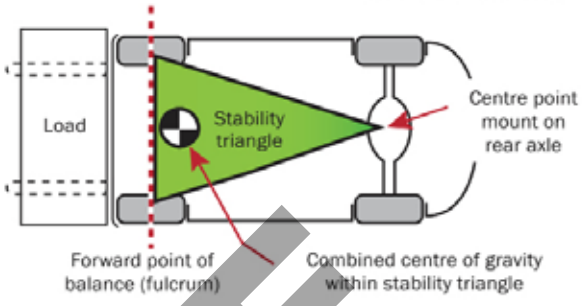
The stability triangle

A forklift has a three-point suspension that is called the **stability triangle**.

The stability triangle is formed by the front axle (drive wheels touching the ground) and the centre point mount in the middle of the rear (steering axle).

The forklift centre of gravity must stay within the stability triangle

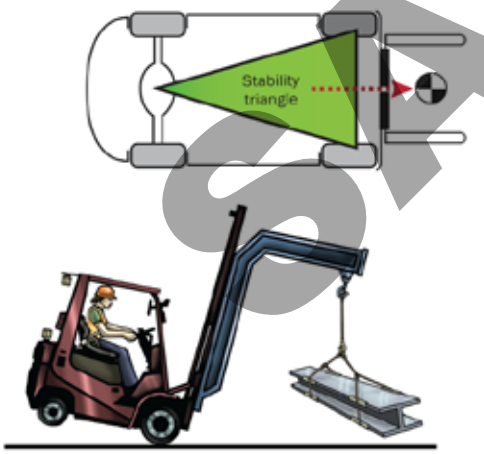




ALWAYS KEEP THE CENTRE OF GRAVITY INSIDE THE STABILITY TRIANGLE

The centre of gravity in the stability triangle is like a ball floating in water and can easily move. The centre of gravity moves by the driver lifting, lowering, tilting, turning, accelerating, braking, and driving over uneven ground. Any of these movements done too quickly can send the centre of gravity **outside the stability triangle.**

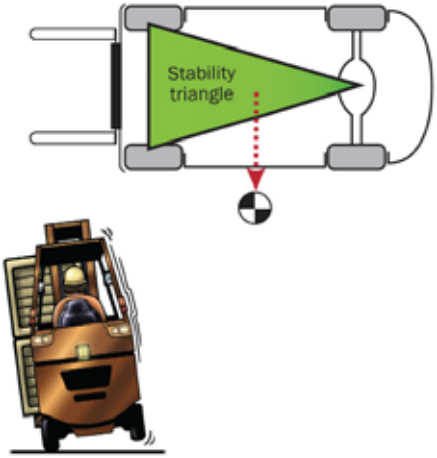
If the centre of gravity goes outside the fulcrum (forward point of balance) then the forklift will tip lengthways (longitudinal tipping).



Some causes include:

- Overloading the forklift
- Braking too hard
- Sudden tilting forward of a high load
- Shifting load centre.

If the centre of gravity goes outside either side of the triangle the forklift will tip over sideways (lateral tipping).

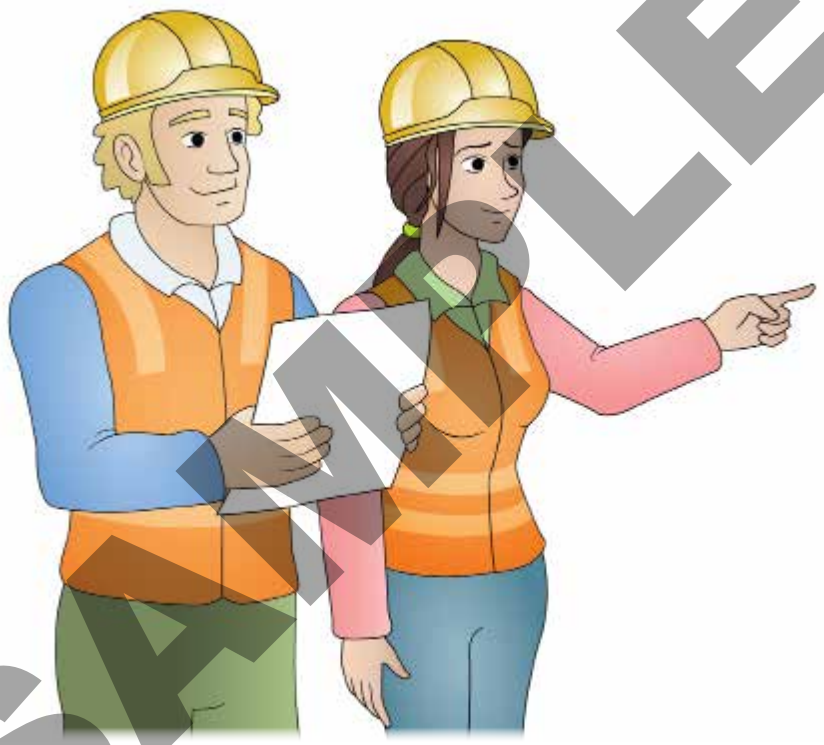


Some causes include:

- Driving too fast (especially without a load)
- Turning too fast
- Turning on an incline
- Travelling with a raised load.

Chapter 1

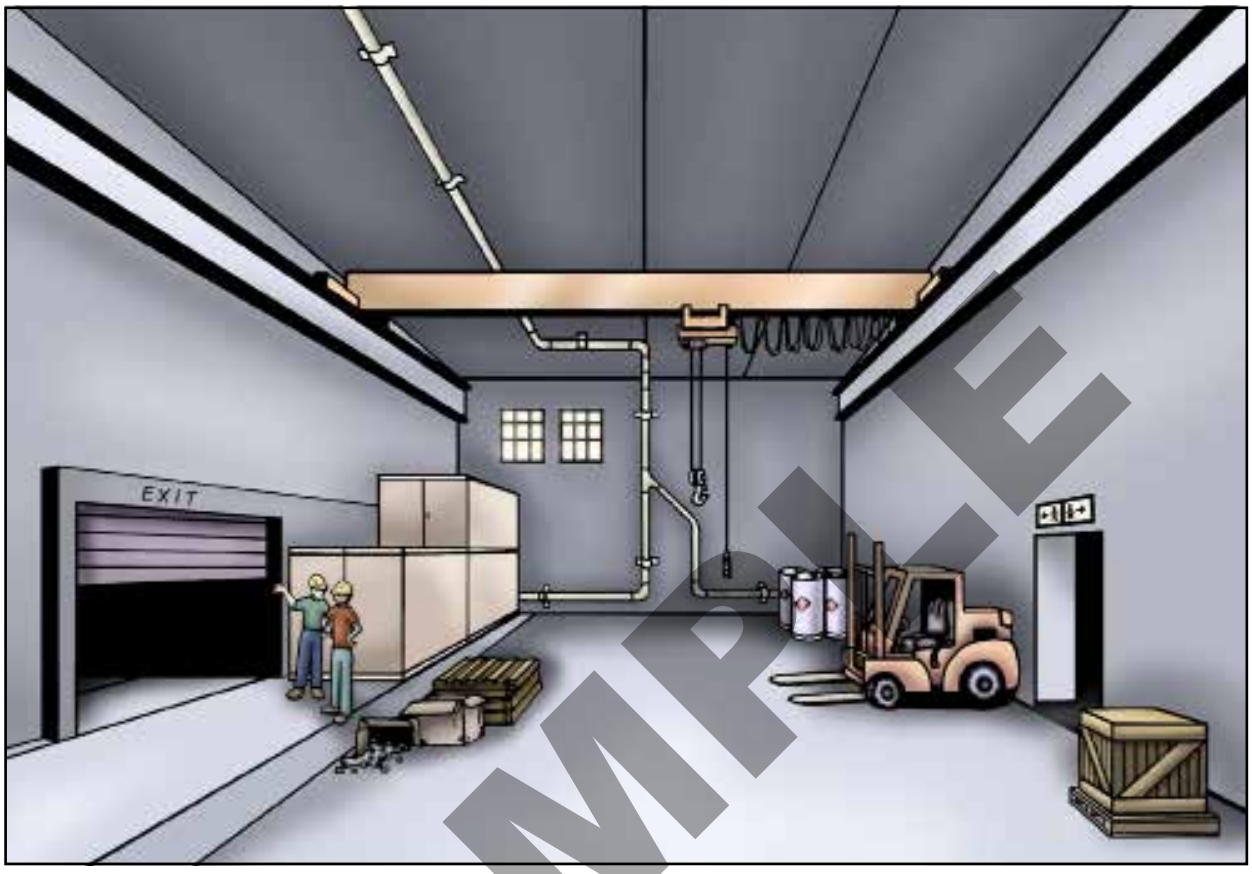
Plan Work



Theory Training Task 2

Performance Criterion: 1.5

a) Circle all the hazards (dangers) you can find in the picture below.



b) How could the people in this picture be a hazard if you were using a forklift near them?

c) Can you think of ways to ensure these people do not get in the way of the forklift?

Theory Training Task 5

Performance Criterion: 1.5

a) What is rear-end swing?

b) Who do you think is most at risk from forklift rear-end swing?

Theory Training Task 6

Performance Criterion: 1.5

a) Circle which would be considered an enclosed or poorly-ventilated area.

freezer carpark

shed cold storage room

b) Why do you think you shouldn't use a petrol forklift truck in a small freezer room?

Theory Training Task 7

Performance Criterion: 1.5, 2.3

Check the safe working distances for powerlines in your state or territory. How many metres is the NO GO zone for distribution lines on poles in your state or territory?

The NO GO zone for

..... (state/territory)

is ..... metres.

Performance Criterion: 1.7

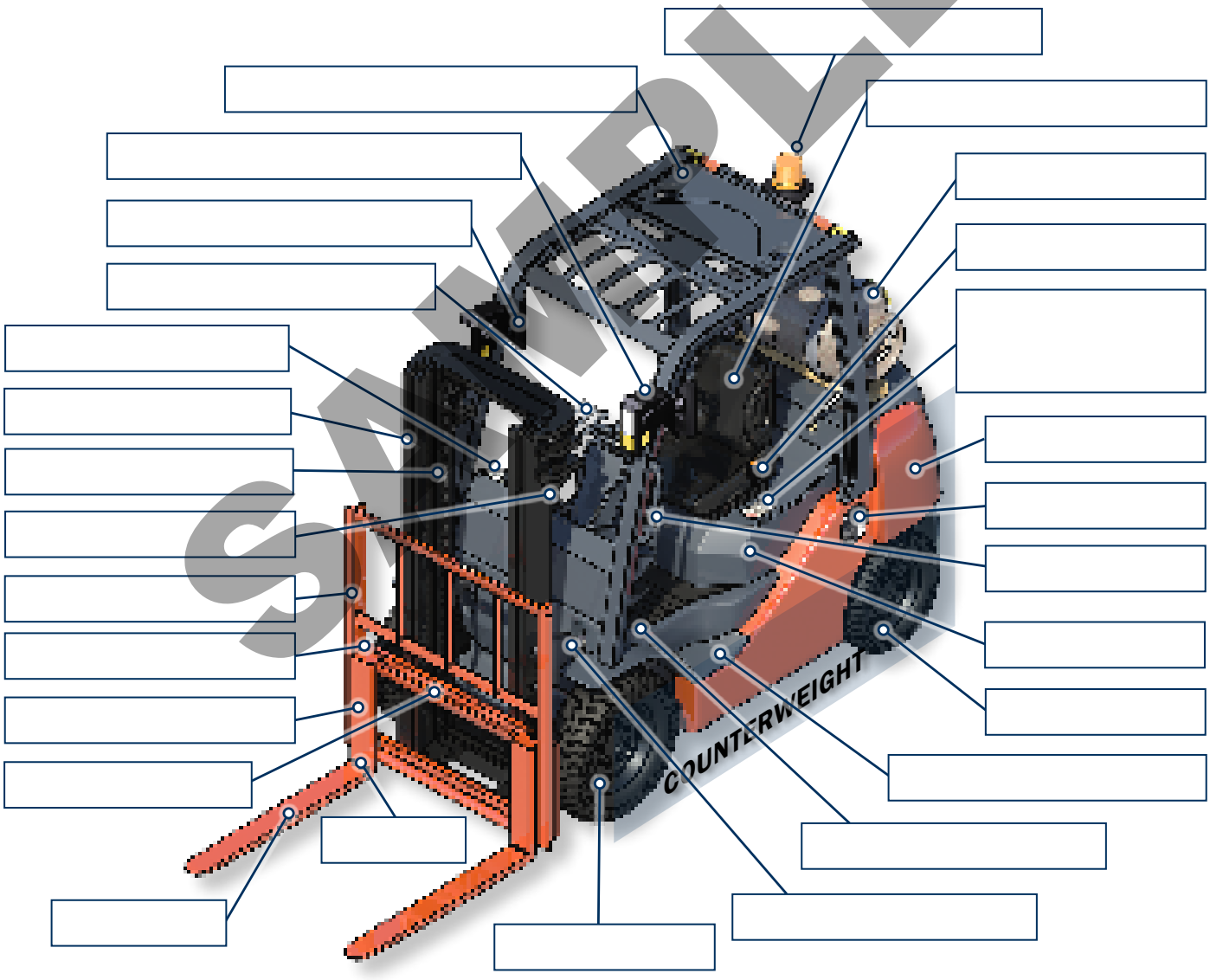
Choose the right forklift truck

There are different types of forklift trucks. Depending on the job and the work area you may need to use a certain type of forklift truck. It's important to use the right type of forklift truck.

Theory Training Task 17

Performance Criterion: 1.7

Label the common parts shown on the diagram below of a counterbalance forklift truck.

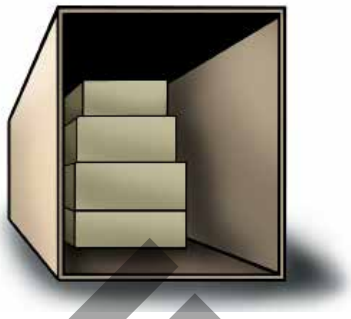


Theory Training Task 20

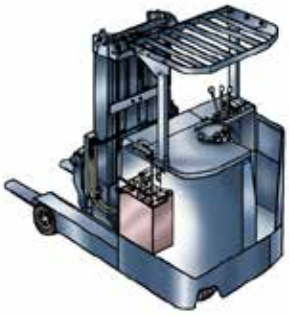
Performance Criterion: 1.2, 1.3

a) Draw a line to match the forklift truck with the work area you think it is best suited for.

A four wheel drive (4WD) forklift



Enclosed space



A battery (electric) powered forklift

Elevated load destination

LPG powered forklift

Indoor work area

Telehandler or reach truck

Rough terrain

Performance Criterion: 1.4

Plan your path of movement

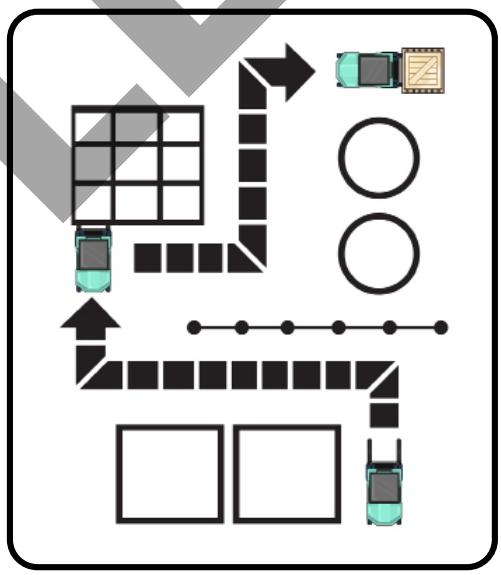
Before you start the job, look at the work area and plan the path you will take. This helps lower the chance of injuring workmates or damaging equipment and property.

Theory Training Task 22

Performance Criterion: 1.4

a) Why is it important to decide on an agreed travel plan/path before moving a load?

b) Give an example of something you need to think about when planning your travel path. Explain your answer.



Theory Training Task 23

Performance Criterion: 1.5

List some steps you can take to reduce risk to other people, machinery and equipment.

Theory Training Task 24

Performance Criterion: 1.1, 1.4

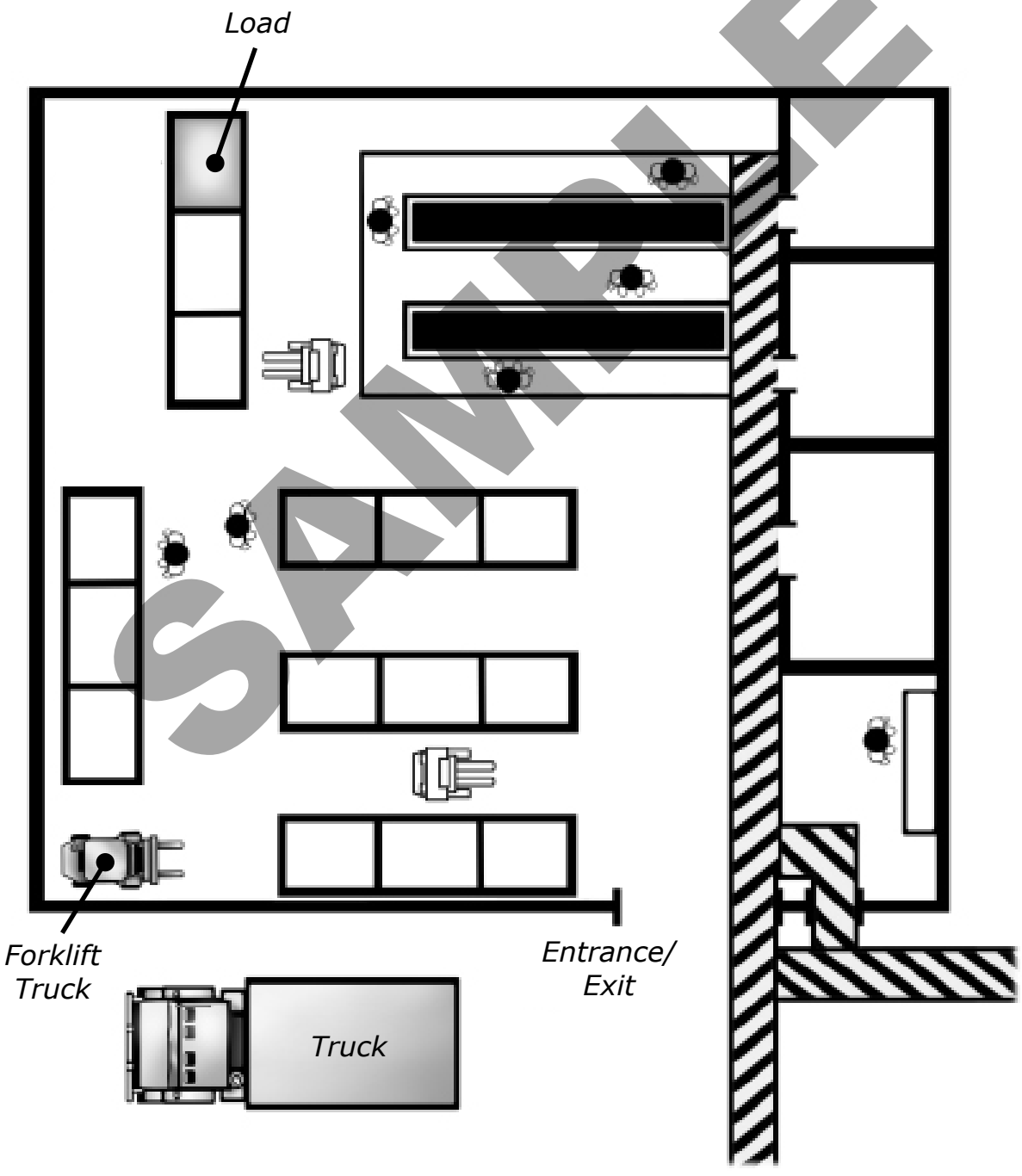
Inspect the picture below.

a. Draw a line to show a safe path for you to drive the forklift truck to the load.

b. Draw another line to show how you would move the load to the truck.

c. Place a small circle where you might use your horn to warn people of your approach.

Key	
	Other equipment
	Racking/Shelving
	People
	Pedestrian walkway



Theory Training Task 26

Performance Criterion: 1.7

When would you use hand signals to communicate?

Theory Training Task 27

Performance Criterion: 1.7

a) Who is the first person you should speak to when an unsafe incident occurs?

b) Where can you find information about what you should do when an incident occurs?

Theory Training Task 28

Performance Criterion: 1.7, 3.4

a) Where can you find your worksite's emergency procedures?

b) In an emergency, such as a fire, what are the general steps you might take?

Theory Training Task 29

Performance Criterion: 1.7

What do these safety signs mean? Draw lines to the matching information.

Emergency information sign. Tells you where to find exits, first aid facilities and equipment. First aid.

Regulatory sign – mandatory. You must do this. Wear the appropriate PPE.

Danger sign. Warns you of hazards that can harm you. Talk to the electricity company and ask them to isolate the electricity.

Fire sign. Used for putting out fires.

Regulatory sign – restriction. Speed limit is 50 km/h.

Hazard sign. Warns you of dangerous materials. Read the MSDS for the material.

Chapter 2

Conduct Routine Checks

Theory Training Task 34

Performance Criterion: 2.6

Look at the safety devices below. List what you would check for when inspecting these parts.

Windscreen and wipers

Check for:

.....

.....

.....

Load backrest guard

Check for:

.....

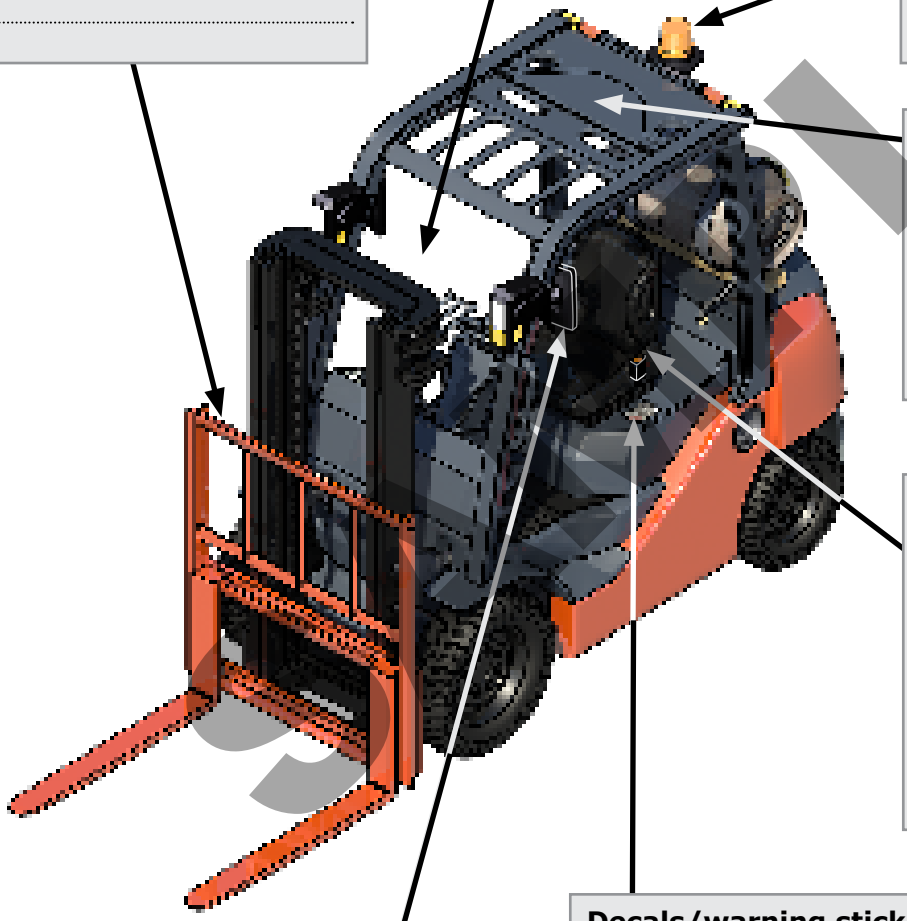
.....

Warning light

Check for:

.....

.....



Overhead guard

Check for:

.....

.....

Seat and seatbelt

Check for:

.....

.....

.....

Mirrors

Check for:

.....

.....

.....

Decals/warning stickers

Check for:

.....

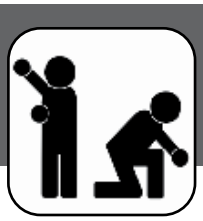
.....

.....

.....

Practical Training Task 3

Element 2 — Conduct Routine Checks - Performance Criterion 2.6, 2.8



Trainers: Please advise your leaners that this section MUST be performed under either your supervision or that of a licensed operator.

Some students may be able to complete this section within their own workplace if properly supervised.

Complete a pre-start up check. See if you can find faults or damage on the forklift truck and mark the column on the right with the following symbols:

[✓] = OK [✗] = Action needed [NA] = Not applicable

Check load-capacity plate is fitted, legible and correct.	
Inspect forks for any signs of damage.	
Check tyres, belts and look for any leaks under the truck.	
Check mast and hydraulic cylinders, look for any leaks.	
Check all fluids: oil, transmission, hydraulics, battery, fuel, coolant...	
Gas bottle (if app) security, hose connections and gauge.	
Check condition and adjustment of seat and belt.	

Now start up the forklift truck.

Check all pedals and controls for smooth operation.	
Check brakes and parking brake for proper operation.	
Check lights, horn and reversing beeper.	
Any other visible damage or defects. List details:	

Chapter 2: Competent ☐ **Not yet competent** ☐

Signature (licensed operator/trainer) ..... Date .....

Chapter 3

Shift Load

c) Calculate the total weight for each of the loads shown below.

There is a load to be moved. It is drums full of water, on a pallet.

- Each empty drum weighs 13 kg (kilograms)
- Each drum can hold 200 L (litres)
- Water = 1 kg per litre
- The pallet weighs 35 kg

What is the weight of three (3) drums of water, and the pallet?

Give your final answer in tonnes.

You have to move a load of 44 bags of flour on a pallet.

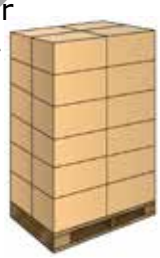
- Each bag weighs 25 kg
- Pallet weighs 35 kg

What is the total weight of the load?

Show how you worked it out.

There is a load to be moved. The load is stacked cartons on a pallet.

- Four (4) cartons per layer
- Six (6) layers
- One (1) carton = 25 kg
- Pallet = 35 kg



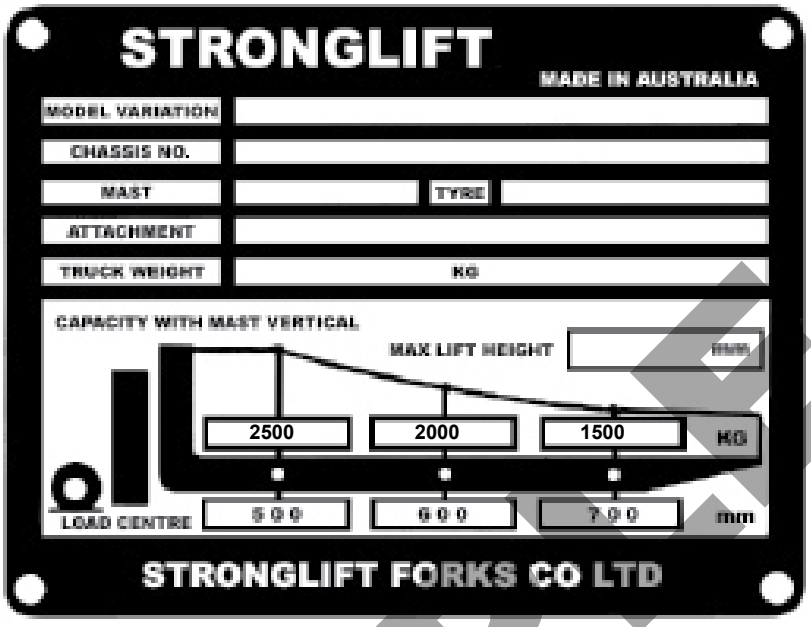
What is the total weight?

Show your working out.

6 Planks of wood
Weight of each plank = 185 kg

Theory Training Task 61

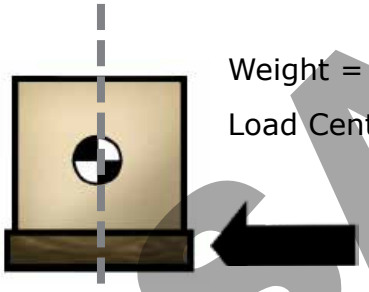
Performance Criterion: 1.3, 3.1



Data plate

Look at the data plate picture above.

Work out if the four loads shown below can be lifted.



Weight = 1800 kg

Load Centre = 600 mm

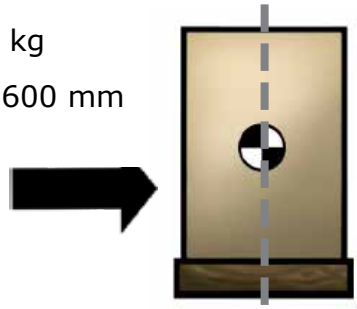
Direction of Approach

1. .....

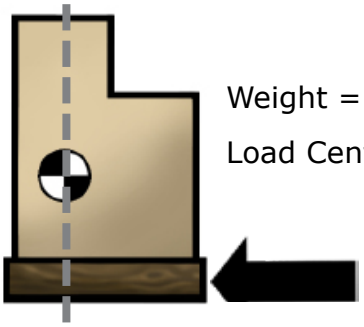
Weight = 2200 kg

Load Centre = 600 mm

Direction of Approach



2. .....



Weight = 1900 kg

Load Centre = 700 mm

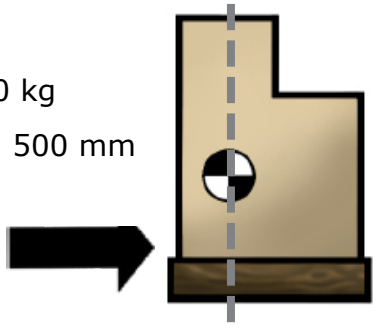
Direction of Approach

3. .....

Weight = 1900 kg

Load Centre = 500 mm

Direction of Approach



4. .....

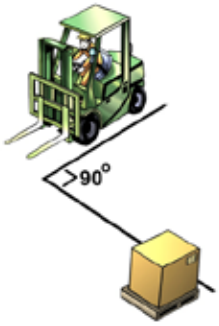
Practical Training Task 4

Chapter 3 — Shift Load - Performance Criterion 3.2, 3.5

Learners: This task must be done under the supervision of a licensed operator.

Please wait for your trainer to advise you before attempting this task.
Make sure all operations are done at a safe speed.

1. Your trainer/licensed operator will provide you with a forklift parked at a right-angle to a load that has been placed on a pallet.



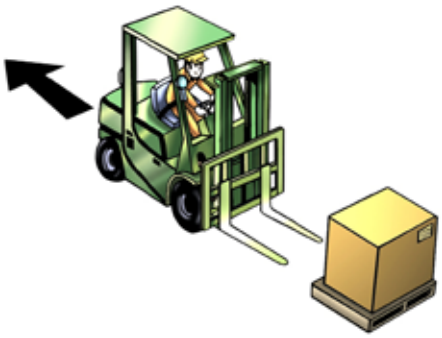
2. Turn and position the forklift truck.

3. Lower the forks and enter the pallet.

4. Raise the load so the forks are at a safe travel height for that particular load.

5. Lower the load to the ground.

6. Check behind you then exit pallet.



Element 3: Competent ☐ **Not yet competent** ☐

Signature (licensed operator/trainer) ..... Date .....