DRIVER TRAINING

TR GROUP LTD

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Class 2 and Class 4 Study Guide

Unit Standard 17574 and 17576

Operate a rigid vehicle to meet the requirements for a full class 2 or class 4 driver licence

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Introduction

Welcome to your class 2 and class 4 study guide designed to help you successfully pass your closed book theory assessment. This guide is your essential resource to give you the confidence needed to help pass the written theory on the day.

Please read this carefully as you are not allowed to reference any material during the theory assessment, it is a closed book assessment, and you will be required to answer all the questions in one session. Completing the pre-course study will set you up for success.

Making the Most of the Practice Quiz

At the end of this guide, you'll find a targeted quiz that serves as checkpoint for your learning. These will help you:

- Reinforce your understanding through active recall
- Identify knowledge gaps before they become problems on assessment day
- Train your brain to retrieve information under conditions like the actual assessment

Once you have completed the questions and checked your answers, have someone verbally ask you the questions and try to answer these without referencing the study guide This is a great checkpoint to see if you have retained the knowledge. Do this as many times as possible

Let's begin your journey towards assessment success!

Purpose and scope

This study guide covers some essential learning outcomes that you must be able to competently demonstrate for Unit Standards 17574 and 17576. Operate a rigid vehicle to meet the requirements for a full class 2/4 driver licence.

1. Identify and explain driving hazards and describe measures to minimise risk
2. Describe the requirements relating to safe loading of a rigid vehicle and the driving techniques that minimise the adverse effects of a high centre of gravity

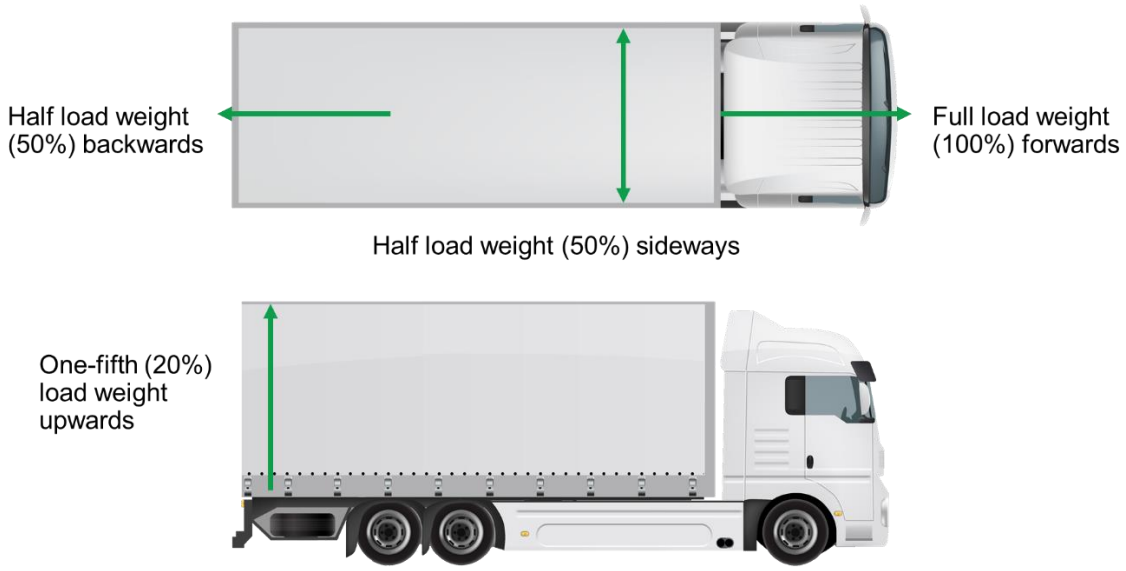
Other outcomes you will be required to achieve not covered in this study guide are

1. Carry out a pre inspection of a rigid vehicle
2. Drive a rigid vehicle efficiently in different traffic and road conditions
3. Manoeuvre a rigid vehicle in reverse
4. Park, shut down and secure a rigid vehicle

Load security

Any load carried on a vehicle must be sufficiently restrained to prevent movement caused by the forces that arise from the vehicle passing over road undulations, when it changes direction, or as being braked or accelerated.

The Truck Loading Code sets out the minimum standards for safely restraining (holding) a load under normal operating conditions.



It requires much more force to stop a load that has started moving than it does to prevent the movement in the first place. It is essential that the vehicle is loaded and restrained so no part of the load can freely move in any direction.

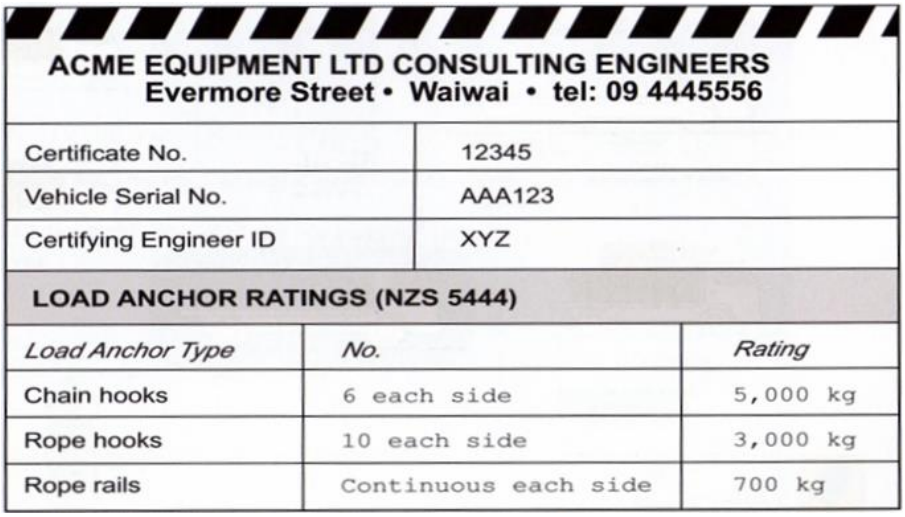
The skill is not only in the driving of the truck but also the safe securement of the load. Correct restraint on a load will prevent:

- The load being lost of the vehicle
- The load being damaged
- The vehicle being damaged
- The load moving creating an unstable vehicle
- Injury to drivers and the public

Anchor Points

Each anchor point must have a strength rating at least equal (not less) to the rated strength of the lashing secured. An example of this would be to attach a 2500kg load binder to a rope rail that had a rating of only 700kg. the value of the restraint would then be only 700kg. this is what we call the weakest link.

Another way to look at it, is the same 2500kg load binder secured to a 3000kg rope hook or dropper. While the anchor point is rated at 3000kg, the rating of the load binder is only 2500kg so now the load binder is the weakest link. A load anchor plate provides load anchor point ratings to assist you on what load restraint to use and could also have a factor on where you position the load to achieve the correct restraint strength.



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Certificate No.	12345
Vehicle Serial No.	AAA123
Certifying Engineer ID	XYZ

LOAD ANCHOR RATINGS (NZS 5444)

Load Anchor Type	*No.*	*Rating*
Chain hooks	6 each side	5,000 kg
Rope hooks	10 each side	3,000 kg
Rope rails	Continuous each side	700 kg

Securing rigid loads

When packets are loaded against a headboard and the top packet is supported by at least 150mm of headboard, the securing devices must have a combined rated strength of at least the weight of the load.

When packets are loaded so the lower packet is supported by the headboard, but the upper packets are not (either away from headboard or support is less than 150mm), the securing devices must have a combined rated strength of at least 1.5 times the weight of the load.

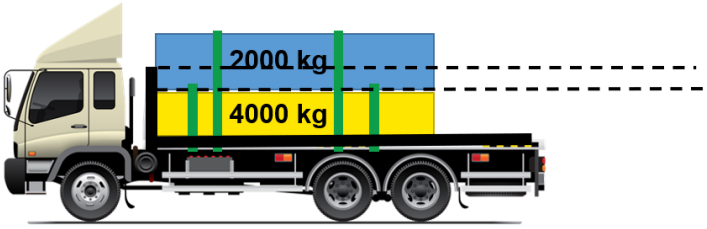
When the load has no headboard support, the securing devices must have a combined rated strength of at least twice the weight of the load.

This is to help increase the friction between the load and the deck of the vehicle, and to stop movement of the load as there is no support.

Against headboard: weight of the load (4000 kg) restraint

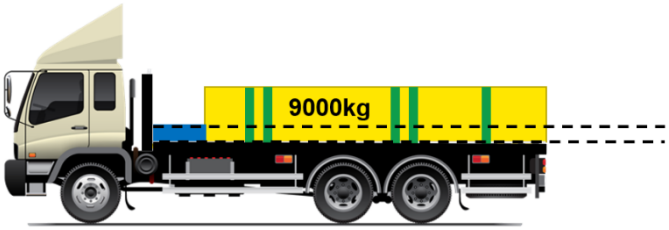
Partially against headboard: 1.5x weight of load (9000 kg) restraint

Not against headboard: twice the weight of the load (8000 kg) restraint



Headboard height of 150mm or more, 1 x weight of the load

If less than 150mm, 1.5 x weight of the load is required

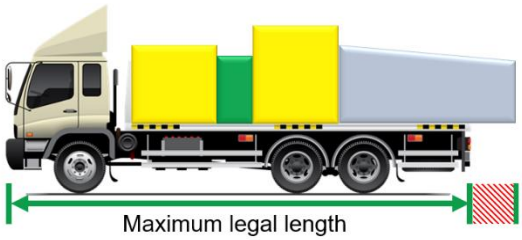


Baulking height of 150mm or more, 1 x weight of the load

If less than 150mm, 2 x weight of the load is required

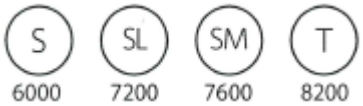
Load distribution and arrangement on vehicles

The priority with any load is to keep within the maximum legal weight limits and vehicle dimensions. The load should be spread to keep the centre of gravity as low as possible and as near as possible to the centre line to maintain lateral stability.



Stay within legal vehicle size limits

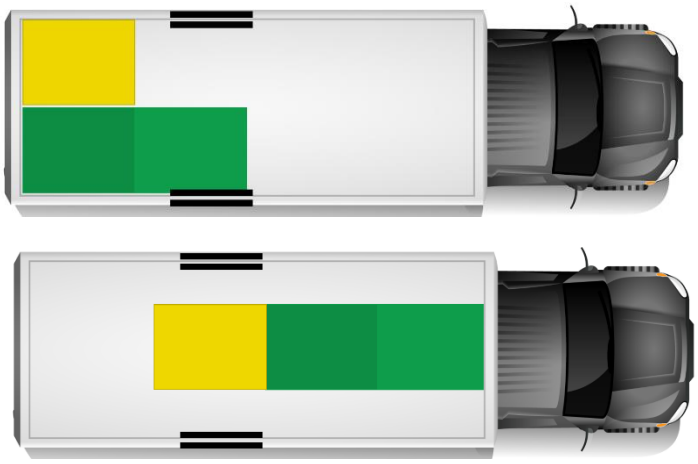
Load for correct axle weight distribution



Stay within NZTA legal axle weight limits

Heavy load low, light load high
Keep the CoG as low as possible

After unloading some of your load, Reposition the load if required



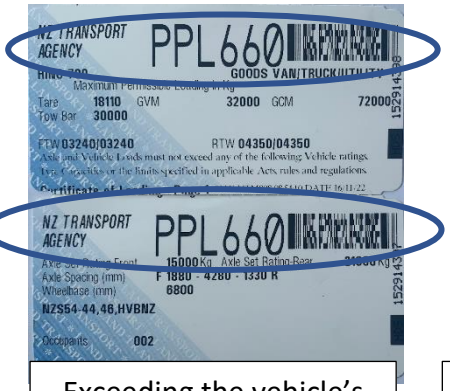
The vehicle will handle better, be safer and safer and easier to control

The weight is even on the deck and even axle loading

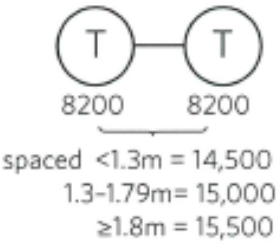
The load is against the headboard so load security is improved reducing risk of load movement that could affect the stability of the vehicle.

Loading errors that could result in fine

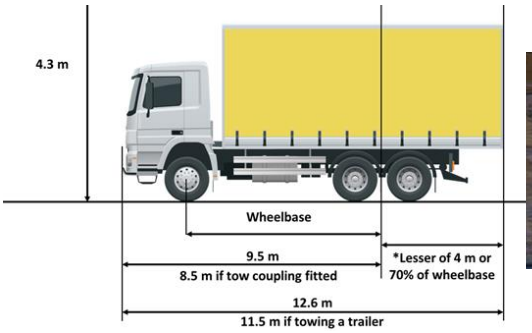
Exceeding legal axle weights



Exceeding the vehicle's COL weights



Exceeding group axle weight limits



Exceeding legal vehicle dimensions

Unrestrained load

Uncovered or uncontained load that could fall from the

Driving hazards

As a professional driver you will always be confronted with hazards, and you need to recognise them and apply techniques to reduce your risk. The key is to be proactive rather than reactive when identifying hazards.

- Identify the risk
- Predict what may happen
- Decide on what action to take
- Act on that decision

Some hazards could be

Hazards	Possible risk	Reduce risk
Winter road areas under shade	• Lose control of the vehicle • Loss of traction	• Slowdown read the road • Drive to the conditions • Maintain or increase safety margins from other vehicles
Driving on a gravel road	• Traction and stability issue • Uneven surface, dust, low visibility • On coming traffic	• Increase following distances • Correct speed for the road conditions • Adjust speed approaching tight/blind corner
Other vehicles on the road	• Other vehicles not allowing enough space • Distracted or slow drivers • Aggressive drivers speeding and impatient	• Scan all around you • Look well ahead • Check blind spots • Have safe following distances
Merging	• Vehicle speeding up to pass • Not enough gap to merge	• Check mirrors and blind spots to monitor traffic • Adjust speed to merge • Indicate direction of the mergre at least 3 seconds prior • Merge like a zip
High winds	• Vehicle being blown around out of lane • Vehicle being blown over	• Slow down to reduce wind resistance • Pull over and park up somewhere safe • Tie curtains back to reduce the wind force on the side of the vehicle

Sharp bend	• Weight shifting to the outside of the corner • Truck rolling over • Load movement	• Set your speed and correct before the corner • Have a smooth cornering line and target 10k below the speed advisory sign

High centre of gravity vehicles

Not all loads or vehicles are created equal, so it is not always possible to keep the centre of gravity low. You need to apply driving techniques when operating these vehicles to reduce the risk of an incident or, worse, a vehicle rollover like the concrete truck below.

- Use correct cornering technique, correct speed, correct gear, smooth steering
- Look well ahead, scan as far as possible so you don't need to react suddenly with a change in direction
- Increase your following distances for smooth braking
- Take care on roads with steep camber
- Avoid lifting a wheel over kerbs or dropping into gutters

Class 2 and class 4 knowledge quiz

1. If the load is against the headboard, the load restraint system must be able to handle _____% weight of the load in a forward direction

2. The load restraint system must be able to take _____% the weight of the load in a sideways and rearward direction

3. If the load of 2000kg is not against the headboard you would require how much load restraint? _____kg

4. During a roadside inspection, what can you be fined for? (tick that applies)

   - ☐ Exceeding your vehicle GVM/COL weights
   - ☐ Being late for work
   - ☐ Exceeding your group axle set legal weights
   - ☐ Exceeding NZTA legal axle weights
   - ☐ Having an uncontained load that could fall from the vehicle
   - ☐ Forgetting to eat breakfast
   - ☐ Exceeding legal vehicle dimensions
   - ☐ Having an unsecure load

5. How would you load your vehicle to have good vehicle control and weight distribution?

   a. _____

   b. _____

   c. _____

   d. _____

6. What must you do to the load if you don't want
   - the load to be damaged,
   - the load to fall from the vehicle,
   - the load to damage the vehicle or,
   - the load to make the vehicle unstable

   answer_____

7. Have a look at the hazards below.

_ A corner with a speed advisory sign _ A narrow bridge with oncoming traffic _ Driving on a gravel road _ Other vehicles on the road _ Driving in high winds	_ A roundabout _ An intersection with a tight corner _ Merging from 2 lanes to 1 lane _ Vehicle blind spots _ Wet roads

From the above, pick 3 hazards and note them as 1,2 and 3.
Explain what could happen and how to prevent it happening:

1.**What could happen**_____

_____

Prevention_____

2**. What could happen**_____

_____

Prevention _____

3. **What could happen**_____

Prevention_____

8. Driving a top-heavy container truck, what three techniques would you use to maintain stability?

1._____

2._____

3._____

Quiz answers

Q1	100% (full weight of the load)
Q2	50% (half the weight of the load)
Q3	4000kg (twice the weight of the load)
Q4	☐ Exceeding your vehicle GVM/COL ☐ Exceeding group axle set weight ☐ Exceeding legal axle weights ☐ Having an uncontained or uncovered load ☐ Exceeding legal vehicle dimensions ☐ Having an unsecured load
Q5	Keep the centre of gravity down the centre of the vehicle deck Load the vehicle so it has even weight distribution Keep the load weight as low as possible. Low centre of gravity **Other answers are possible. See page 7**
Q6	Secure the load
Q7	**Hazard** Merging **What could happen** Not enough gap to merge **Prevention** Indicate at least 3 seconds, check mirrors, adjust speed to suit **Hazard** High winds **What could happen** Vehicle being blown around in lane or tipping over **Prevention** Slow down to reduce wind resistance. Tie curtains back if empty. Pull over somewhere safe and wait for the wind to die down **Hazard** Wet weather/road **What could happen** Lose of traction. **Prevention** Slow down to a speed suitable for the conditions. Increase following distances **Other answers are possible. Answer must identify a clear night hazard, identify what could happen and a prevention.**
Q8	1. Look well ahead, scan as far as possible so you don't need to react suddenly with a change in direction 2. Increase your following distances for smooth braking 3. Take care on roads with steep camber