



WTR Endorsement Study Guide

Unit Standards 16701, 16702, 16703

Demonstrate knowledge and skills for driving on a road for endorsement

W (wheels) T (tracks) R (rollers)

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Introduction

Important, please read

This study guide provides you with the knowledge you need to complete the Wheels, Tracks and Rollers unit standard assessment. As this is a licence endorsement to drive a vehicle on the road, the theory is a closed book assessment, so study the information and complete the question starting on page 6 to help prepare for the assessment.

Special type vehicle	Class 1 Full	Class 2 Full	Class 4 Full
Rollers (R) or self-laying tracks (T)	Not more than 18,000 kg gross laden weight; (GLW)	More than 18,000 kg GLW	
Wheels (W) when driven on a road at a speed not exceeding 30kph	Not more than 18,000 kg GLW	More than 18,000 kg GLW	
Wheels (W) when driven on a road at a speed exceeding 30kph	Not more than 6,000 kg GLW	More than 6,000 kg but not more than 18,000 kg GLW	More than 18,000 kg GLW
Wheels (agricultural vehicle) special provisions available for special type wheeled vehicles that are agricultural motor vehicles and are driven on a road at a speed not exceeding 40kph	Not more than 18,000kg GLW	Not more than 18,000kg (note 1)	

Note 1.

Special type wheeled endorsement not required where class 2 full licence held and;

- a. Is also an agricultural vehicle; and
- b. Has a gross laden weight of less than 18,000kg; and
- c. Is driven at a speed not exceeding 40kph

Licence renewal

The expiry date for a W, T or R endorsement is the same as your current full licence, so it is renewed at the same time. There is no need to re-sit the test

Assessment

The assessment includes a short, **closed book** theory test, followed by a practical drive on the vehicle.

Completion of Assessment

At the successful completion of the assessments, you will receive an NZTA certificate to take to an approved licence issuing office. Your licence will be updated to show the new endorsements. The certificate is not a licence

Task 1

Describe special-type wheel/roller/track vehicles and the legal requirements relating to driving the vehicle on a road.

Wheels

The following vehicles are examples of special type wheeled vehicles; however, other types of vehicles may fall into the licence endorsement requirement.

Loader / scraper / wheeled excavator / grader / off-road dump truck /skid steer loader

Rollers

The following vehicles are examples of special type roller vehicles; however, other types of vehicles may fall into the licence endorsement requirement.

Rubber multi tyre / double steel drum vibrator / steel wheel compactor / triple-drum static / steel drum and rubber tyre combination / sheep foot

You should also be aware when operating on a gradient of **the poor traction** of a steel drum roller. The **roller must always face uphill**, with driving wheels to the **rear of the machine**

Tracks

The following vehicles are examples of special type tracked vehicles; however, other types of vehicles may fall into the licence endorsement requirement.

Excavator / bulldozer / military tank / tracked crane / compact loader (skid steer loader) / crawler loader / portable crusher

Whenever you are manoeuvring a special-type tracked vehicle on a gradient the driving axle should be at the **rear** of the machine.

Rail Control Authority (RCA)

Before driving a track vehicle over a **railway line**, a permit must be sought from the KiwiRail or their delegate. This is to ensure operations are aware of what is happening and to avoid damage to railway lines

Safe parking of special type vehicles

When parking a special type vehicle on a road it should be positioned as far as possible to the **left** side of the road and facing **forward**

When parking a special type vehicle during the hours of **darkness** the driver must ensure that the vehicle is visible by either being illuminated from;

- a) an artificial source or,
- b) light from both a **forward**-facing position lamp (or **dipped beam** headlamp) and a rearward facing position lamp fitted on the side of the vehicle that is closest to the **middle** of the road. (If two rearward facing lamps are fitted **both** must be illuminated.)

Position of attachments

When manoeuvring a special type on a gradient, any attachments like bucket and boom should be **forward** and carried **close** to the ground with the drive axle at the **rear**.

Environmental factors affecting safe driving on a road

The environment you are operating in will affect the vehicle's safe operation. The key factors to be aware of are:

- **Weather** conditions– will result in reduced friction and affect the steering and braking
- **Reduced** visibility – due to low light conditions, you need to see and be seen
- Uneven or rough **surface** – may reduce the stability of the vehicle
- Vehicle stability may be affected by the **camber** of the road or the **steepness** of the slope/gradient
- Other road users – vehicles and **pedestrians**

Precautions to reduce the risk while driving on a road

- **Hazard** lights / rotating **beacons** – to draw attention to the vehicle
- **Reduce** speed – when travelling around
- Sound the **horn** – if you think it is necessary
- Deferring travel – until the traffic is not so **busy**
- **Additional** lighting – in **low** light conditions
- **Hi-vis** – wear the correct safety clothing

Additional precautions are:

- Temporary **signs** put in place
- Have people on **traffic** control
- Position **cones** and/or **barriers** to assist with traffic control

Speed limits for special type vehicles

Speed for these vehicles is related to their suspension system and road wheels.

Vehicles fitted with springs or other effective suspension systems must not exceed **90km/h** or the posted speed limit, whichever is lower

Vehicles not fitted with springs or other effective suspension systems must not exceed **45km/h** or the posted speed limit, whichever is the lower

Preventing damage to roads, bridges or culverts

Special-type vehicles, including those fitted with self-laying tracks, a vehicle fitted with a metal tyre or other non-pneumatic tyre, or with a tyre with studs, cleats, lugs or other gripping devices that may cause damage to roads, bridges or culverts cannot be operated on a road unless either:

The tyre is fitted with temporary **gripping** devices used in appropriate conditions, or **permission** has been obtained from the road controlling authority.

Practical Assessment

For the practical assessment, you must inspect the vehicle to ensure that it is safe and legal to drive on a road. You must inspect the following:

- Condition of rollers/tyres/tracks
- Rollover protection system
- Seat belts and seat adjustment
- Mirrors
- Clear vision through windscreen
- Lights where fitted
- Cracks in boom
- Oil leaks
- Vandalism
- Others

You will then be required to conduct a function test of the vehicle's hydraulics, steering and brakes before you complete the drive.

You will also be assessed on the way you mount and dismount the vehicle.

GOOD LUCK

Complete the following questions as final preparation for your theory assessment

1. Name 3 different special types of WHEELED vehicles

a.	
b.	
c.	

2. A special-type wheeled vehicle (that is also an agricultural motor vehicle) can be driven on a full class 1 licence and with a "W" endorsement when the GLW is not more than _____ kg and is not driven at a speed exceeding _____ kph.

A special-type wheeled vehicle (that **is not** an agricultural motor vehicle) can be driven on a full class 1 licence and with a "W" endorsement when the GLW is not more than _____ kg, at speeds exceeding _____ kph.

A special-type wheeled vehicle (that **is not** an agricultural motor vehicle) can be driven on a full class 2 licence and with a "W" endorsement when the GLW that is more than _____ kg, if driven at a speed not exceeding _____ kph.

A special-type wheeled vehicle (that **is not** an agricultural motor vehicle) with a GLW of more than 18,000kg and driven at a speed exceeding 30kph must be driven on a Full Class _____ licence and with a "W" endorsement.

3. Name 3 different special type TRACKED vehicles

a.	
b.	
c.	

4. When operating a steel drum roller on gradient, the most important safety factors to remember are; (CIRCLE TWO)

- a. The work will take longer
- b. They have poor traction
- c. The roller must always face uphill, with driving wheels to the rear
- d. They are very noisy

5. Name 3 different special type ROLLER vehicles

a.	
b.	
c.	

6. Before driving a tracked vehicle over a _____ a permit must be obtained from KiwiRail or their delegate authority.

7. A full class ____ licence and appropriate endorsement will allow you to drive a special-type roller or tracked vehicle with a GLW **not more** than 18,000kg.

8. A full class ____ licence and appropriate endorsement will allow you to drive a special-type roller or tracked vehicle with a GLW **of more than** 18,000kg.

9. When is a W, R o T endorsement renewed?

10. When parking a special type vehicle on a road it should be positioned as far as possible to the _____ side of the road and facing _____ .

When parking a special type vehicle during the hours of _____ the driver must ensure that the vehicle is visible by either being illuminated from;

a) an artificial source or,

b) light from both a _____ facing position lamp (or _____ headlamp) and a rearward facing position lamp fitted on the side of the vehicle that is closest to the _____ of the road. (if 2 rearward facing lamps are fitted _____ must be illuminated.

11. What are the speed limits for a heavy special type wheel, roller, or track vehicle?

Fitted with springs or other effective suspension systems:

_____kph or the posted speed limit, whichever is lower.

Not fitted with springs or other effective suspension systems:

_____kph or the posted speed limit, whichever is lower.

12. Vehicles fitted with wheels, tracks, or rollers that may damage the road must either:

Be fitted with _____ gripping devices, for use in _____
_____or _____ must be obtained from the road
controlling authority.

13. The driving axle should be at the _____ and attachments
_____ and _____ to the ground when manoeuvring a
special type vehicle on a gradient.

14. Environmental factors that may affect the safe driving of a special type vehicle are:

- a. Conditions such as reduced friction due to wet surface affecting steering and braking is caused by the _____
- b. low light conditions can _____ visibility
- c. vehicle's stability may reduce on uneven or rough _____

- d. The _____ of the road may affect vehicle stability or the _____ of the slope/gradient
 - e. Other road users, vehicles and _____
15. Precautions taken by an operator to reduce the risk of accidents when driving a special type vehicle on a road are:
- a. Use of _____ lights and rotating _____
 - b. Travel at a _____ speed
 - c. Sound the _____
 - d. If the road is _____ defer travel
 - e. In _____ light conditions have _____ lighting
 - f. Wear _____ - _____ clothing
16. Additional precautions that may be taken to reduce the risk of an accident when operating on a road are:
- a. Temporary _____ put in place
 - b. Have people on _____ control
 - c. To assist with traffic control position _____ and _____

Please bring this handout to the course
You must have steel cap boots for the practical component