

## SECTION 22    **OVERSIZE & OVERWEIGHT LOADS**

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- 22.1    Definition of Oversize & Overweight**
- 22.2    Special Transit Permits**
- 22.3    Oversize Loads**
- 22.4    Guidelines for Measuring Large Loads**
- 22.5    Guidelines for Loading Large Loads**
- 22.6    Overweight Loads**

For equivalent guidelines in respect of road transportation see Section 3 of this Manual.

### **22.1    DEFINITION OF OVERSIZE & OVERWEIGHT**

Three key elements in determining the acceptability of a load for transport by rail are:

- ➔    Is the load oversize (overlength or overgauge)?
- ➔    Is the load overweight (for the wagon or the route)?
- ➔    Does the load have an unacceptable Centre of Gravity?

The full definition of each of these terms is included in the Glossary in Section 3 of this Manual. They can be summarised by the following five points:

1.    The load extends beyond the wagon load platform at any place.
2.    Requires the concurrent use of two or more wagons.
3.    Is outside KiwiRail's Standard Loading Gauge as defined in Diagram 22.2.
4.    Load exceeds loading limits on the wagon load plate.
5.    Load exceeds axle load limits on particular routes.
5.    The Centre of Gravity is in the unacceptable regions of Diagram 22.3.
6.    Container is outside container size limitations (see Section 12 of this Manual).

Diagram 22.1 provides an oversize-overweight quick check.

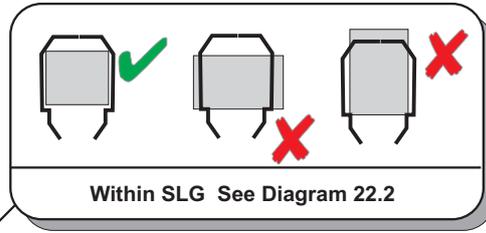
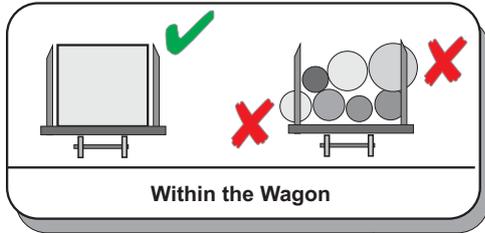
### **22.2    SPECIAL TRANSIT PERMITS**

If a load or container is oversize or overweight it may still be able to travel on rail, but only with a permit that specifies conditions under which it may be carried.

Before a permit is issued, the load must be officially measured by a trained and qualified KiwiRail Overgauge Staff Member.

To arrange for a permit, contact your nearest KiwiRail Key Account Executive (KAE) or KiwiRail Terminal Manager.

**DIAGRAM 22.1 OVERSIZE-OVERWEIGHT QUICK CHECK**



**CHECK THESE**

**Needs Permit / Authority if....**

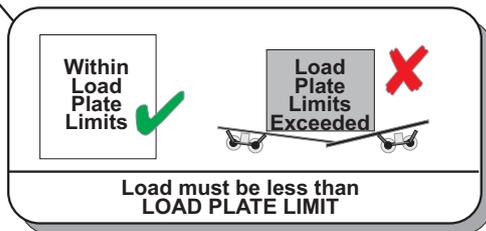
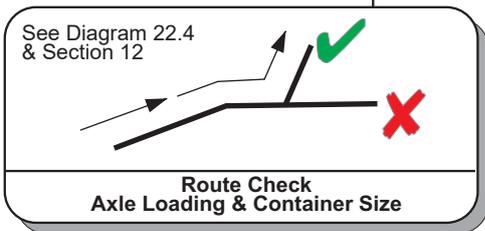
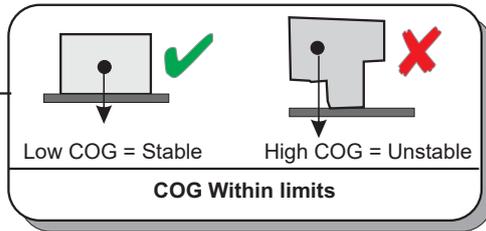
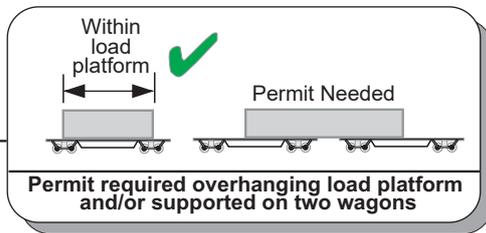
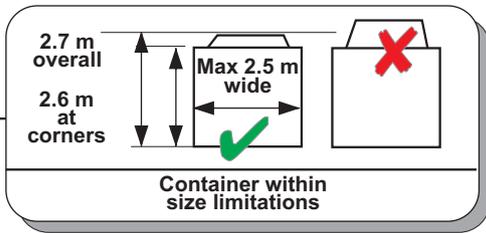
**Outside SLG or overhanging Wagon**

**COG outside limits**

**Load Supported on Two Wagons**

**Load exceeds loading limits**

**Axle loads will exceed route limitations**



## 22.3 OVERSIZE LOADS

An **oversize** load is...

- ➔ A load that extends outside the Standard Loading Gauge (SLG) or beyond the edge of the wagon deck at any place. NOTE: Special provisions apply for the Interisland Line.

A load may be oversize because

- ➔ It extends beyond the end of the wagon load platform (and overlength load) and/or
- ➔ It extends beyond the side edges of the wagon load platform and or
- ➔ It extends beyond the Standard Loading Gauge.

## OVERLENGTH LOADS

An **overlength** load is...

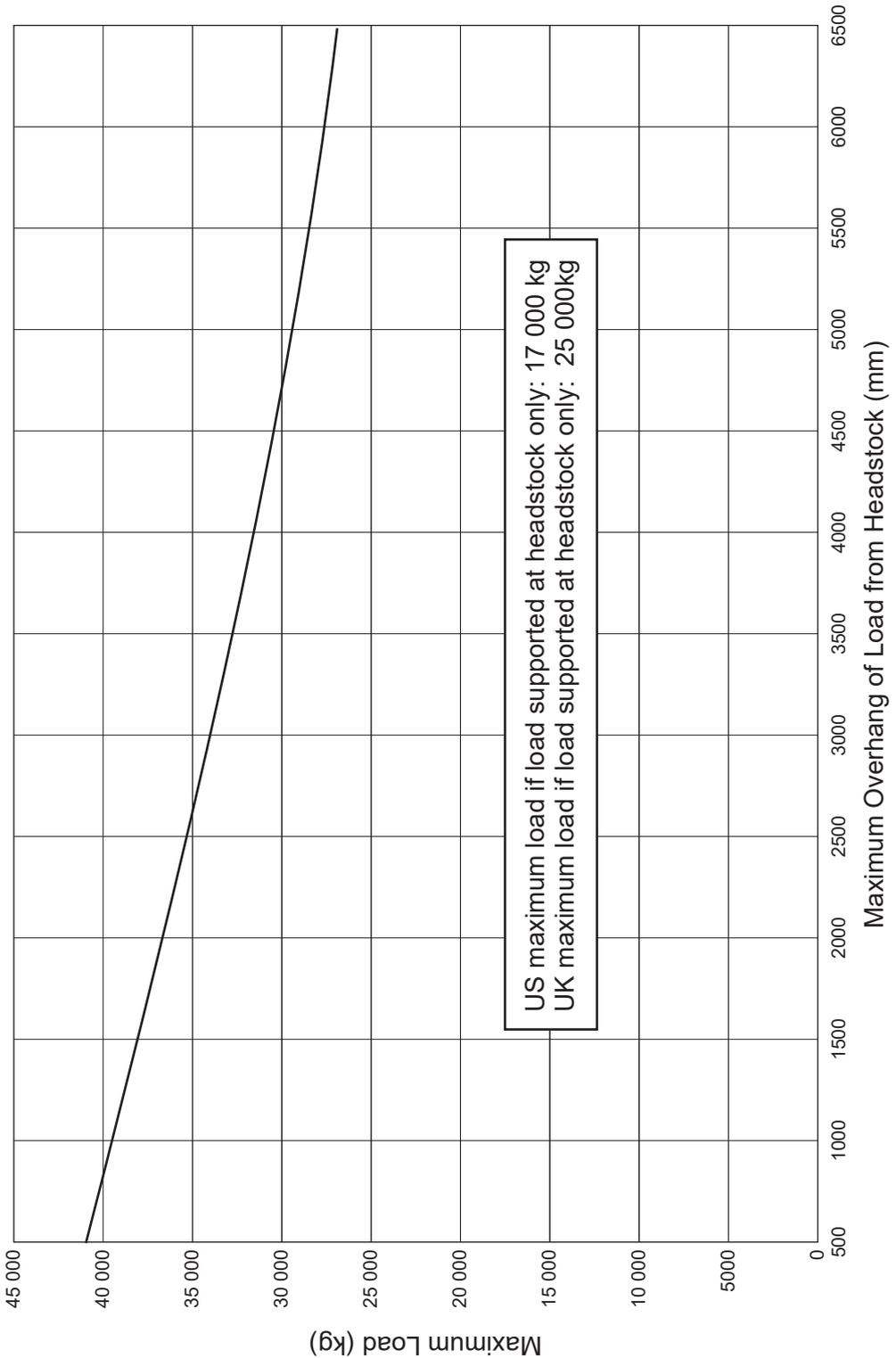
- ➔ A load that extends beyond the end of the load platform.

In some circumstances, overlength loads may be carried, provided...

- ➔ The maximum allowable overhang is not exceeded, and
- ➔ Only one overlength load protrudes into the space between the two wagons, and
- ➔ A clearance of at least 200mm is maintained between the load and the load platform at the point at which it overhangs, and
- ➔ At the end where the load overhangs, the wagon is coupled to a 'runner' wagon with a kidney link.

Diagram 22.4 shows allowable overhang (one end only) for UK and US wagons.

DIAGRAM 22.2 US & UK MAXIMUM LOADS IF OVERHANG ONE END ONLY



## **LOADS EXTENDING BEYOND THE SIDE EDGE OF THE WAGON LOAD PLATFORM AND/OR OUTSIDE THE STANDARD LOADING GAUGE**

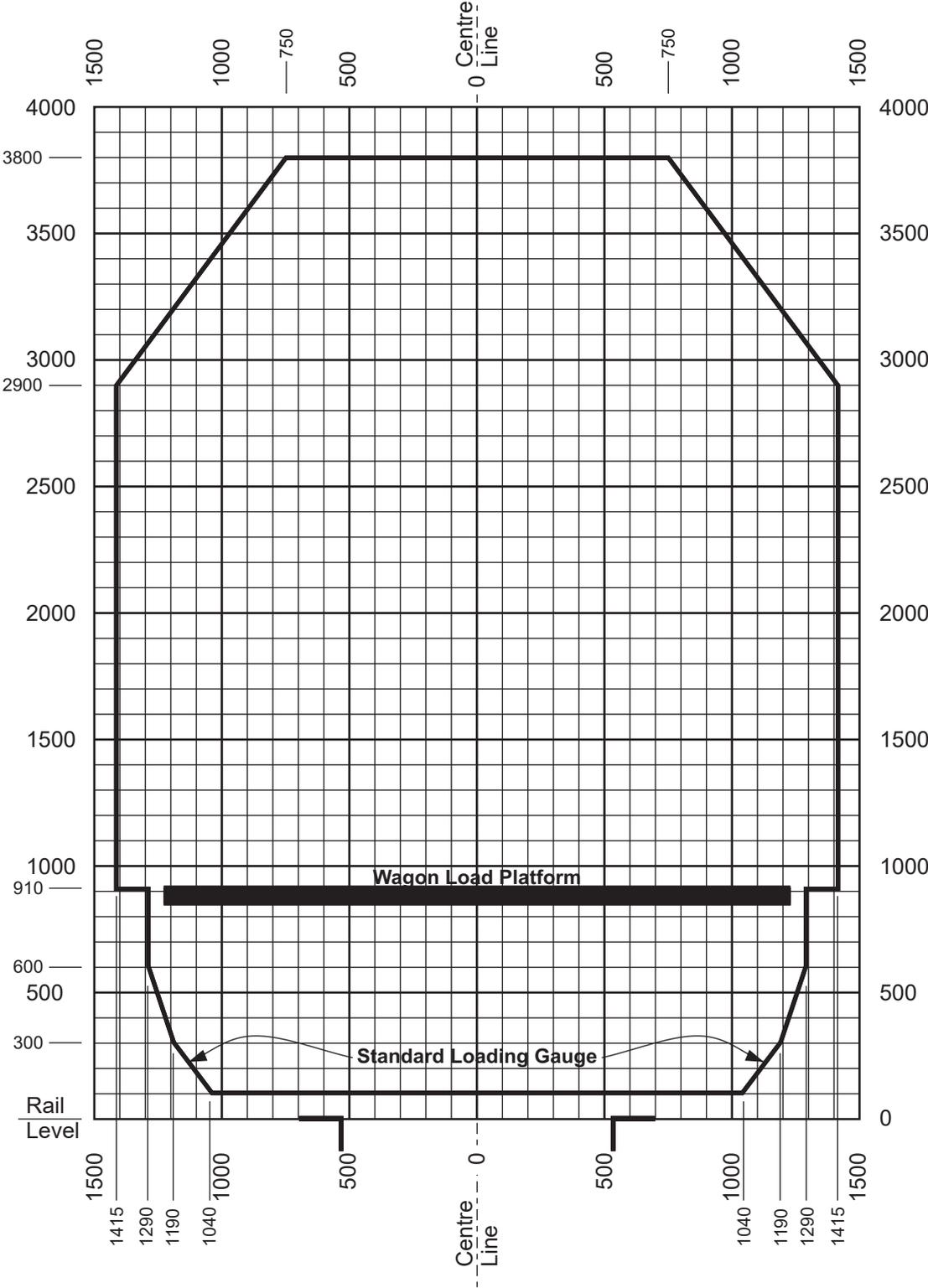
It may be possible to carry such loads on rail, provided a special permit is obtained.

An application for a permit must include an official measure by a trained and qualified KiwiRail overgauge staff member.

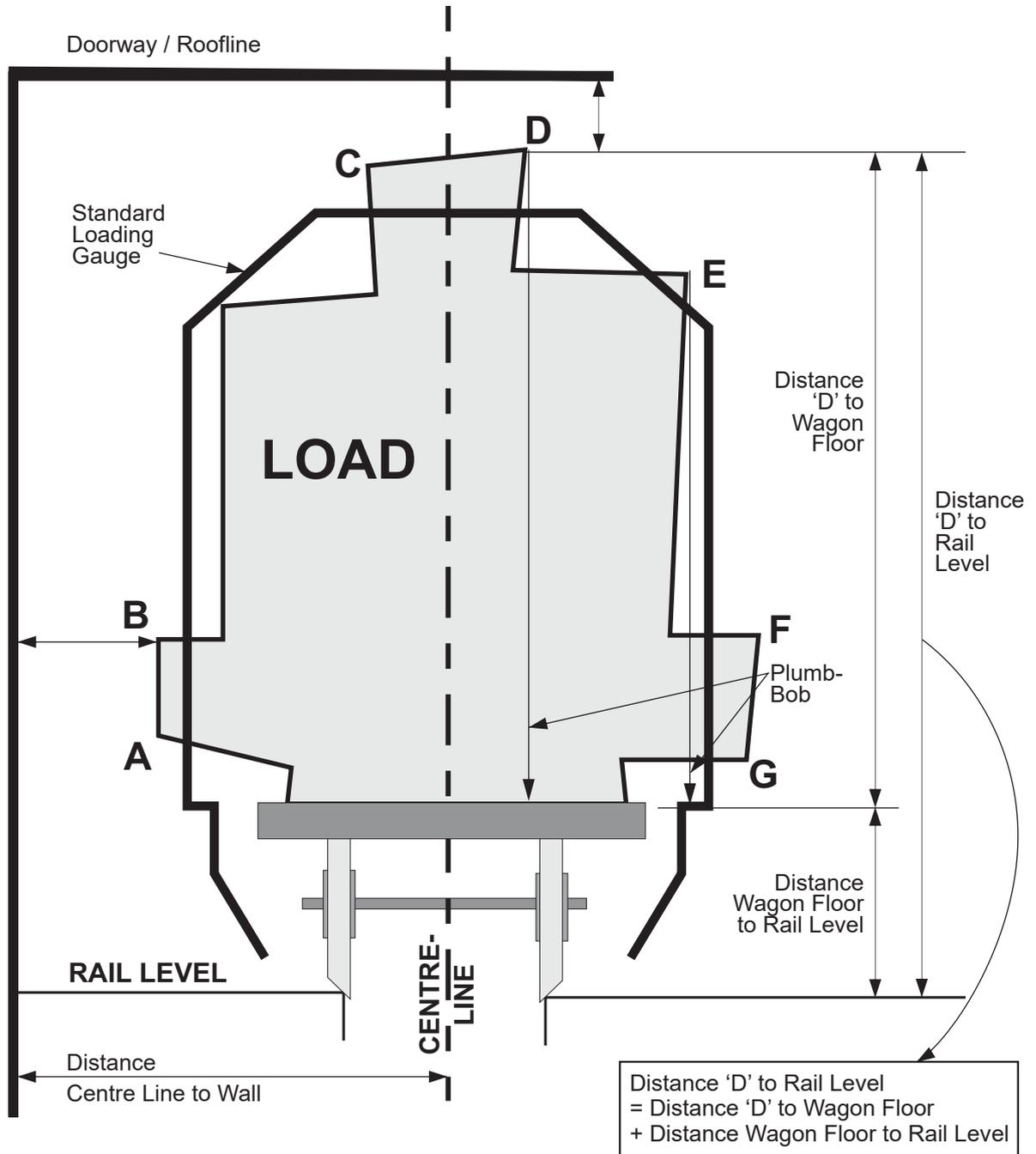
If you have a large load to be transported by rail, see 'Guidelines for loading large loads' and 'Guidelines for Measuring Large Loads' later in this Section.

**DIAGRAM 22.3 STANDARD LOADING GAUGE**

Use this plotting sheet to plot and draw the outline of your load.  
 You may copy this plotting sheet whenever you need one.  
 If your load appears to be oversize, arrange with KiwiRail for an official measure by a trained and qualified overgauge staff member.



**DIAGRAM 22.4 LOAD OUTSIDE STANDARD LOADING GAUGE**



**USING A DOORWAY:** Height at D = Height of Doorway less Distance 'D' to Roofline

**USING A SIDE WALL:** Width at B = Width from Centreline to Wall less Distance 'B' to Wall

## 22.4 GUIDELINES FOR MEASURING LARGE LOADS

Before an Overgauge Permit is issued, the load must be officially measured by a trained and qualified KiwiRail Overgauge Staff Member. However, it is worthwhile checking yourself to see if there is any doubt about the load. Diagrams 22.1 and 22.2 show the Standard Loading Gauge and an example of an oversize load. The following guidelines will help in measuring a load.

### SAFETY

#### DO...

- ✓ Ensure wagon is stationary and the handbrake engaged.
- ✓ If you do climb on the load, first ensure that it is secure. If your feet do not remain below 3 m above ground, use a cage; otherwise a ladder is satisfactory.

#### DO NOT...

- ✗ DO NOT climb on the load unless this is really necessary.

### EQUIPMENT NEEDED

Measuring tape, spirit level, plumbob, chalk, plotting sheet (Diagram 22.1), pen or pencil.

### GUIDELINES

1. Make sure the wagon is on straight level track.
2. Make all height measurements from the rail level. However, if the load is odd shaped or very high, a doorway, ceiling of something similar may greatly assist in measuring the load.
3. Make all width measurements from the centreline. If the load is odd shaped, a wall may help. Convert all measurements back so that they relate to the track and wagon centreline.
4. Make sure measurements include all tiedowns, lashings etc.
5. Plot your measurements on the Plotting Sheet (Diagram 22.1).

## 22.5 GUIDELINES FOR LOADING LARGE LOADS

### WHICH WAGON?

To decide the best wagon:

- ✓ Measure the load on the ground, then...
- ✓ Refer to the KiwiRail Engineering Services Equipment Information Catalogue for wagon details, and/or talk to your KiwiRail Key Account Executive (KAE). They will also be able to assist with the necessary permits. In all cases ground measurements should be rechecked after loading.

### DO...

- ✓ If the load is regular in shape, load as close as possible to the centre line.
- ✓ If the load is odd-shaped, consult your KiwiRail Key Account Executive (KAE).
- ✓ Spread the load as evenly as possible.
- ✓ If necessary, support the load on 'pigsties' of sleepers, securely nailed, so that any overhang over the end of the wagon is kept 25 mm clear of the wagon.
- ✓ Arrange supports as near as possible to the bogie or axle centres.
- ✓ Remember to check the extremities.
- ✓ Ensure everything is well dunnaged and lashed down.
- ✓ Paint with dazzle the parts of the load that extend beyond the wagon load platform. (If the customer finds this unacceptable, mark it in some other way.)

## 22.6 OVERWEIGHT LOADS

### WAGON OR CONTAINER LOAD PLATE LIMITATIONS

Most KiwiRail wagons and containers have a load plate on their side.

This displays the loading limit or capacity for that wagon or container. An example load plate is shown in Diagram 22.5.

If in doubt, the load limit for any wagon or container can be obtained from KiwiRail's Fleet Information Catalogue.

### AXLE LOAD LIMITATIONS ON CERTAIN ROUTES

The load may be within the limits stated on the wagon or container load plate, but the route itself may also impose axle load limitations. These are shown in Diagram 22.6. (See Section 12 of this Manual container loading restrictions on certain routes.)

### IF LOADING EXCEEDS ANY OF THESE LIMITS

For any load that will exceed any of these limits **you must contact** your KiwiRail Key Account Executive (KAE) or your nearest KiwiRail Terminal Manager.

### YOUR RESPONSIBILITY

**You are reminded that our General Conditions of Carriage (see Section 4 of this Manual) sets out specific responsibilities for the loading of wagons and containers, and that penalties exist for damage which results from incorrect loading and/or overloading.**

DIAGRAM 22.5 TYPICAL LOAD PLATE

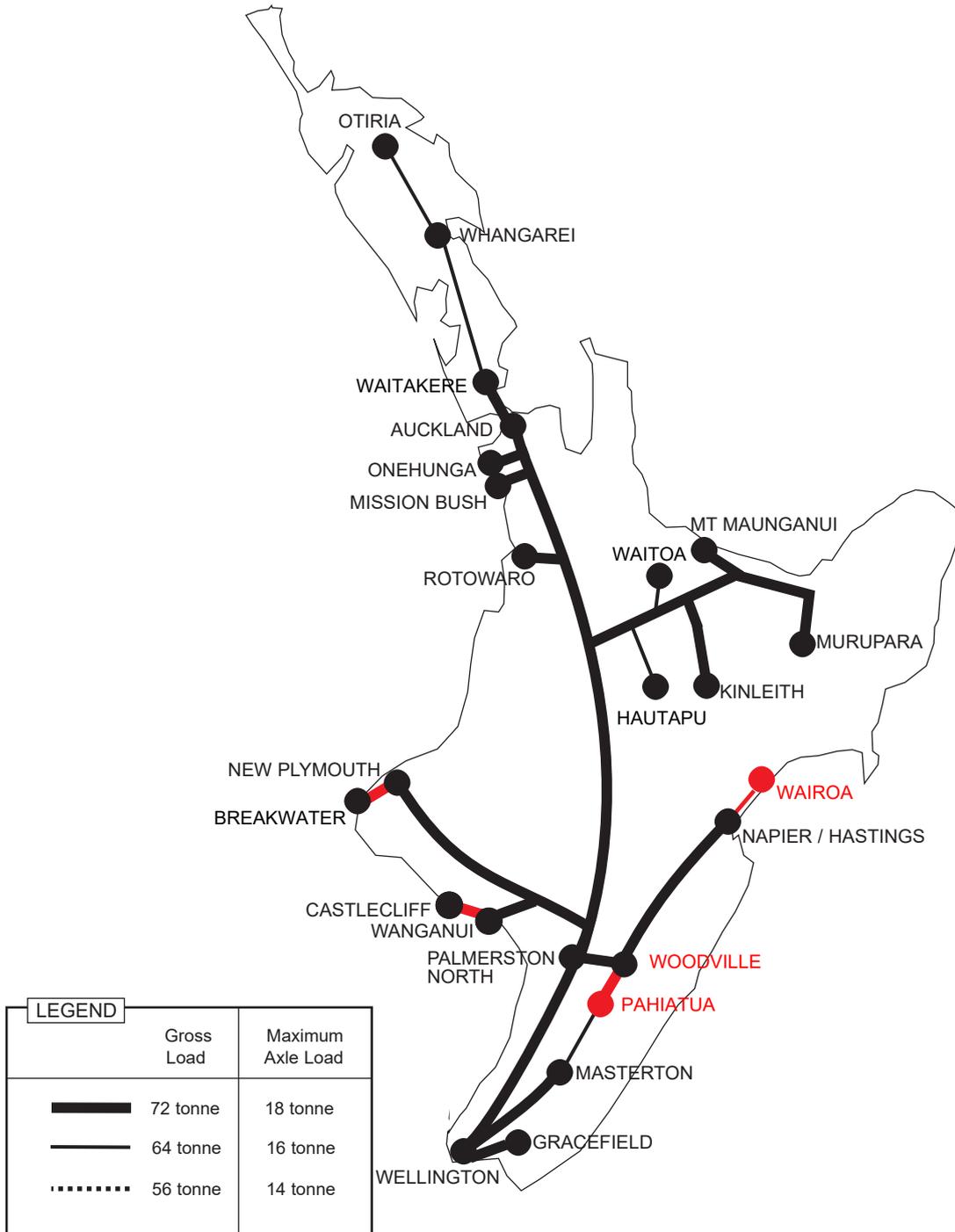
## LOAD KILOGRAMS

DISTRIBUTED OVER FULL LENGTH	61000kg
DISTRIBUTED OVER WELL	61000kg
CONCENTRATED OVER CENTRAL 3 METRES	61000kg

MAXIMUM SPEED IF LOAD EXCEEDS 40000kg is 25 km/h

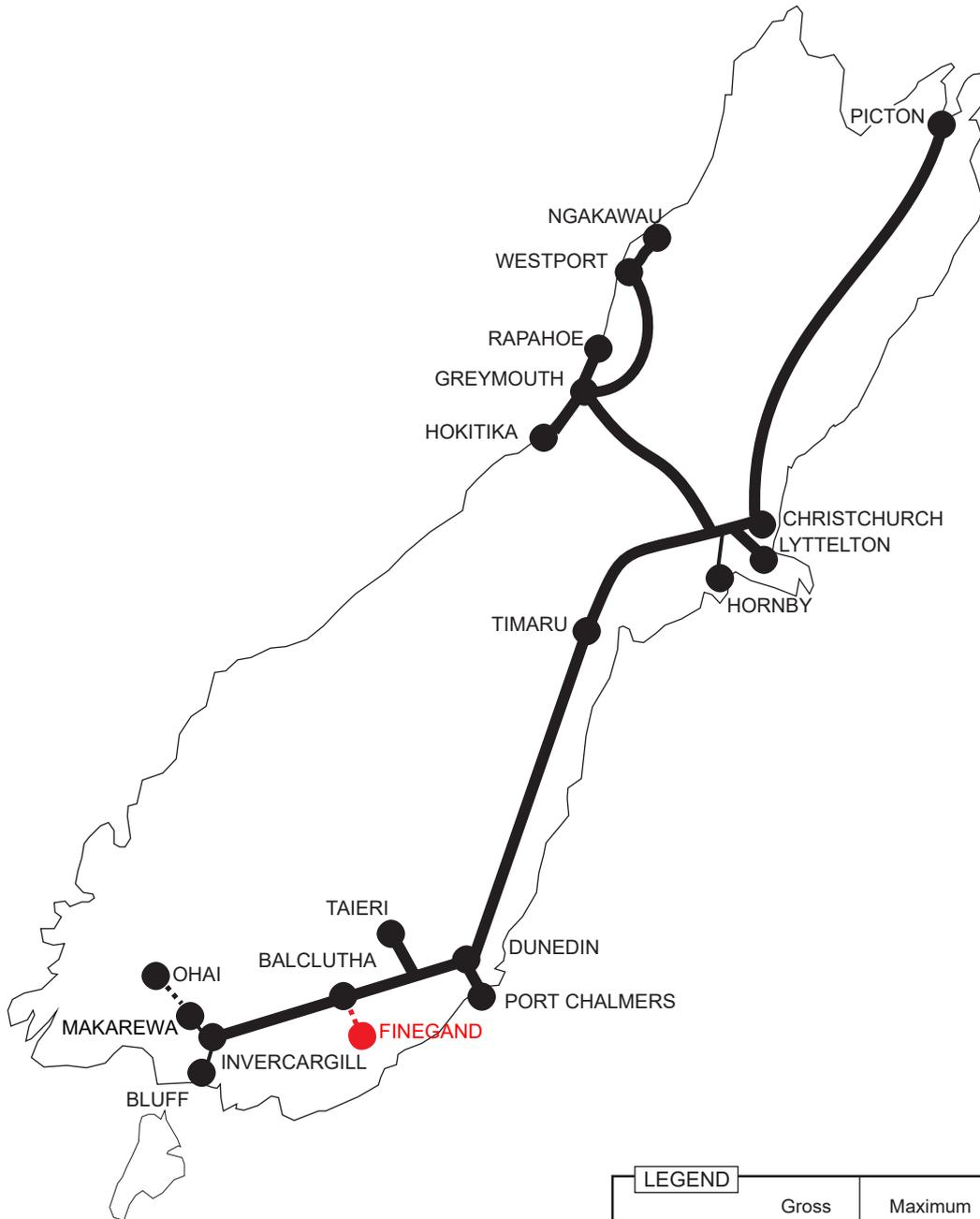
**DIAGRAM 22.6 AXLE LOAD LIMITATIONS:  
NORTH ISLAND**

NOTE: This is a general guide. For further information contact your KiwiRail Key Account Executive (KAE).



**DIAGRAM 22.6 AXLE LOAD LIMITATIONS:  
SOUTH ISLAND**

NOTE: This is a general guide. For further information contact your KiwiRail Key Account Executive (KAE).



LEGEND		Gross Load	Maximum Axle Load
	72 tonne	18 tonne	
	64 tonne	16 tonne	
	56 tonne	14 tonne	