KiwiRail

Train Operations

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TO01 Train Movements

1. Principles

This rule unit is aligned with the following KiwiRail Fundamental Operating Principles:

- **Principle 1** - Rail personnel must take all possible steps to ensure their activities are carried out in a safe manner.
- **Principle 3** - Before any rail vehicle moves, it must have an authority to move that clearly indicates the limits of that authority.
- **Principle 6** - Rail vehicles must be prevented from moving if their integrity or compatibility is unsafe or suspected to be in an unsafe state.
- **Principle 7** - Rail vehicles must only be authorised to operate where the rail vehicle is compatible with the railway infrastructure.
- **Principle 8** - Safe separation must be maintained between people, plant, and rail vehicles.

2. Purpose

To prescribe the rules for the safe movement of trains in the network.

3. General

3.1 Train Control Cooperation

Rail Personnel

You must cooperate with the Train Controller to obtain the safest outcomes for train operations and carry out any directions issued by the Train Controller unless you believe the directions to be unsafe.

NOTE

For degraded or emergency train operations, refer to the **Emergency Procedures Manual**.

3.2 Riding on the Outside of Rail Vehicles

Rail Personnel

You must only ride on the outside of a rail vehicle if it is required as part of your duty and the rail vehicle:

- is approved for the task
- is designed for this purpose
- has an approved safe location on which to ride.

3.3 Rail Vehicle Safety Devices

Rail Personnel

You must only bypass, disconnect, or turn off any device provided for the safe operation of a rail vehicle when authority has been provided.

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3.4 Work of Trains Instructions

Rail Personnel

You must only change or amend instructions affecting the control of rail vehicles and work of trains with the authority of the Train Controller or the Network Control Manager.

3.5 Recording of Operational Incidents

Train Controller

You must report any operating irregularities to the Network Control Manager and record such incidents in the Access Provider's Incident Reporting System.

3.6 Approved Rail Vehicles

Rail Personnel

You must only operate rail vehicles in the network for which running rights have been granted by the Access Provider.

3.7 Operation of Trains

Operator

To be able to operate a train in the network, you must:

- be assessed as competent:
  - for the routes over which you operate
  - in the signalling system for that route
  - in the traction type you operate.

When operating the train, you must:

- always maintain complete control
- comply with any special instructions and signals controlling the movement.

IMPORTANT

The Operator may command the assistance of any Rail Personnel at any time.

Train Crew

You must obey the Operator's instructions as to the working of the train.

Rail Personnel

You must only operate rail vehicles if you are:

- competent, and
- certified, or
- a Trainee Operator under supervision, or
- authorised as a Competent Worker within the limits of a depot.

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IMPORTANT
Trainee Operators must always be supervised when operating rail vehicles.

3.8 Network Line Speeds

Operator
You must not exceed the maximum allocated network line speed in accordance with **TO10 Network Line Speeds** for the type of train being operated.

4. Motive Power Unit Cabs

4.1 Travelling in Cabs

Rail Personnel
You must only travel in the active cab of motive power units when:

- carrying out your duty, or
- you have been authorised.

You must only travel in the non-active cab of a motive power unit if no other authorised location is available.

You must not touch or move equipment or systems when travelling in a non-active cab.

4.2 Operator Distraction

Rail Personnel
If you are authorised to access the driving cab, you must ensure you do not distract the Operator when:

- listening to or using the radio, or
- approaching any of the following:
  - signals
  - level crossings
  - worksites
  - temporary speed restrictions.

You must switch off entertainment radios when piloting from the cab.

Operator
You must not initiate or participate in any conversation in a driving cab when it is unsafe.

You must tell other driving cab occupants to stop the conversation if it is inappropriate or could impact the safe operation of the train.

IMPORTANT
Conversations must be brief and confined to essential or urgent operating matters.

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4.3 Mobile Device Use

Rail Personnel

You must only use an authorised mobile device in the presence of an Operator or a Pilot when moving a rail vehicle after:

- a safety briefing has been completed, and
- the Operator or Pilot agrees that it is safe.

5. Changing Train Crew

Train Crew

When changing with another Train Crew, you must:

- bring the train to a stand
- only access or egress the train when it is safe
- provide the relieving Train Crew with all relevant information to support the safe operation of the train.

6. Preparation of Trains

Operator

Before entering the network, you must ensure the train has been prepared for safe operation.

6.1 Train Inspections

Operator

Before commencing, and at any stage during a journey, you must confirm that:

- the train is:
  - properly marshalled
  - coupled correctly
  - complete with an end of train signal.
- all wagons are correctly loaded, lashed, and sheeted
- the required number of train brakes in the consist are working
- the carriage gangways, together with wagon and container doors, are in place and secured in the closed position
- the train is in a safe condition for operation.

6.2 Rail Vehicle Loads

Operator

You must examine the loading of all rail vehicles attached during the journey.

You must arrange to have the load adjusted or the vehicle removed from the train, if:

- any vehicle is unsafe through improper loading, or
- has become unsafe through the shifting of the load, or
- any other cause.

6.3 Testing Equipment

Operator

In accordance with the **Access Provider Interoperability Standard**, you must:

- ensure safety-critical equipment or systems are working before entering the network, and
- immediately report any safety-critical equipment or systems that are defective or isolated.

6.4 Train Cab Equipment

Operator

Before entering the network, you must ensure the mandated train cab equipment is available and operational in each driving cab that will be used in accordance with the **Rail Operating Company's Operating Code**.

6.5 Windscreen

Operator

You must not allow a train to enter or operate in the network if you cannot view the track and/or signals through any train cab windscreen.

7. Train Consists

Rail Personnel

DANGER

Dangerous goods emergencies must be managed in accordance with Rail Operating Code, 2.0 Conveyance of Dangerous Goods.

You must ensure that dangerous goods are loaded, labelled, and marshalled in accordance with Rail Operating Code, 2.0 Conveyance of Dangerous Goods.

You must ensure that all wagons conveying dangerous goods:

- have a dangerous goods declaration, and
- are placarded.

IMPORTANT

Dangerous Goods are classified according to the predominant type of risk involved. The class definitions conform to the requirements of New Zealand Legislation, which concern the transportation of hazardous substances by rail.

7.1 Dangerous Goods

Locomotive Engineer

Before trains carrying dangerous goods enters the rail network, you must obtain a record of the following train information:

- the class and type of dangerous goods
- the rail vehicle location on the train where the dangerous goods are being conveyed

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- destination of the rail vehicles conveying the dangerous goods.

You must ensure that dangerous goods declarations for those wagons conveying dangerous goods are attached to the train work order.

Rail Personnel
In a dangerous goods emergency, you must immediately tell the Train Controller.

Locomotive Engineer
In a dangerous goods emergency, you must:

- tell the Train Controller
- assist the emergency services, if possible
- act in accordance with Rail Operating Code, 2.0 Conveyance of Dangerous Goods.

Train Controller
You must:

- call Emergency Services
- tell the Network Control Manager
- follow the Dangerous Goods Emergency Procedures.

7.2 Out of Gauge

Rail Personnel
You must ensure that rail vehicles are correctly loaded. The loading must be secured in accordance with the Freight Handling Code.

During train operations, you must inspect out-of-gauge loading for any movement.

Train Controller
When told of a rail vehicle reduction, you must tell the Rail Operating Company's Service Manager requesting them to make arrangements to rectify the problem.

7.3 Runner Wagons

Rail Personnel
Where runners are required between locomotives, you must only use bogie freight wagons with a minimum gross weight of 20 tonnes, subject to any restrictions in the **Rail Operating Code**.

7.4 Load Unsecure or Moved in Transit

Train Crew
Should you discover or be told that a rail vehicle on your train has an unsecure load, or the load has moved while in transit, you must:

- reduce the rail vehicle at the first available station
- confirm the details of the reduction with the Train Controller.

Train Controller
When told of a rail vehicle reduction, you must tell the Operator's Customer Service Centre requesting them to make arrangements to rectify the problem.

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7.5 Rail Vehicles Not Authorised for Route

Train Crew

Should you discover or be told that a rail vehicle on your train is not authorised for the route, you must:

- reduce the rail vehicle at the first available station
- confirm the details of the reduction with the Train Controller.

Train Controller

When told of a rail vehicle reduction, you must tell the Rail Operating Company's Service Manager requesting them to make arrangements to rectify the problem.

8. Train Movements

8.1 Entering the Network

Train Controller

Before freight and passenger trains enter the network from a depot, yard, or siding, you must obtain the following information:

- the number and class of locomotive
- the overall train length and the gross tonnage
- any rail vehicles to be loaded, unloaded, attached, or detached along the route.

Officer in Charge

At intermediate stations, you must tell the Train Controller about the work to be undertaken before the arrival of freight trains.

8.2 Dispatch of Non-Passenger Trains

Officer in Charge/Signaller

You must only dispatch non-passenger trains from a station into a controlled area after gaining authority from the Train Controller.

You must obtain the authority of the Train Controller before allowing a train to enter the main line from an intermediate switched-out Signal Box.

Rail Personnel

When it is known that a train cannot be dispatched on time, you must immediately tell the Train Controller:

- the reason for the delay
- the probable time at which the train should be ready for dispatch.

Should it become apparent later that further delays are likely, you must promptly tell the Train Controller.

You must seek the advice of the Train Controller regarding immediate or prospective train movements, including approaching trains, so that all concerned may be ready to expedite the movement.

Train Controller

You must tell any affected Signaller about the train movement.

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8.3 Operator Incapacitated

Train Crew

If the Operator becomes incapacitated, you must stop the train immediately.

8.4 Direction of Travel

Operator

When a motive power unit is a single unit, you must operate it from the leading cab in the direction of travel.

NOTE

Refer to the **Rail Operating Company's Operating Code** for instances where locomotives are not required to operate from the leading cab in the direction of travel.

NOTE

In an emergency or when shunting in station yards, you must operate in accordance with **TO09 Setting Back and Propelling**.

8.5 Receiving Instructions and Authorities

Operator

When completing written operating instructions and authorities, you must ensure the rail vehicle is stationary.

You must confirm:

- instructions from the Train Controller are written in full and not abbreviated
- verbal or written authority to pass a signal at stop may only be given at the signal concerned unless otherwise specified in **SO01 Responding to Signals**
- authorities are correctly repeated back to the issuer using the correct protocols in accordance with **GR02 Network Communications**.

IMPORTANT

The Operator may only complete the addressee, location, and date portions of the written authority before communicating with the Train Controller.

8.6 Terminating the Train Movement

Operator

If a train is to be sidetracked at any intermediate switch-out Signal Box before advice is provided, you must arrange with the Train Controller to tell the Signaller in advance.

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Train Controller

Tell the Signaller in advance that the train has been sidetracked at the previous Signal Box.

NOTE

Trains may be required to terminate their run or sidetrack at a switch-out Signal Box. This information must be given verbally at the time.

8.7 Overdue Rail Vehicles

Train Controller

If a rail vehicle is overdue in the section by 15 minutes or more and the Operator has yet to be in contact, you must attempt to contact the Operator.

If you are unable to contact the Operator, you must:

- stop any rail movement(s) on adjacent lines
- tell the Operator of the rail vehicle on the adjacent line to proceed at Restricted Speed and attempt to contact the overdue train to determine the reason for the delay
- act in accordance with the information provided by the Operator of the rail vehicle on the adjacent line.

8.8 Fouling the Crossing Loop

Train Controller

You must obtain authority from the Network Control Manager when a crossing loop is used for:

- the loading/unloading of wagons, or
- other rail vehicles for a specific purpose.

Network Control Manager

You must arrange for the type of protection to be used when it is necessary to use the crossing loop at a station to accommodate wagons for:

- loading/unloading purposes, or
- accommodating other rail vehicles for specific purposes.

You must issue a bulletin and ensure it includes the:

- protection arrangements required in consultation with Signals and Track Maintenance Representatives
- requirements for adequately securing rail vehicles to prevent movement.

CAUTION

In TWC areas, the facing points indicator may indicate that the associated main line points are reversed when a rail vehicle(s) are left on the crossing loop. In these situations, the movement must be stopped at the indicator, and the points reset for the main line.

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IMPORTANT
In TWC areas, special arrangements may have to be made for modification of the operation of the points indicators.

8.9 Trains Standing at Points and Crossings

Operator

When a train has passed a home signal and is detained on the main line or any other line normally used for train movements, you must tell the Signaller of the train's location.

When a train is brought to a stand at/or near points or crossings, you must not:

- allow the MPU to stand foul of another line
- move the train until assured that the points are correctly set for the safe movement of the train.

8.10 Fouling of Lines within Station Limits

Rail Personnel

You must not foul or obstruct any:

- lines within station limits, or
- lines outside home signals over which shunting or other movements are controlled by a Signaller, unless:
  - authorised by the Signaller, and
  - protection has been provided by the exhibition of the correct signals.

IMPORTANT
The Signaller must authorise every movement on fouled lines.

Signaller

You must come to a complete understanding with the Person in Charge of shunting movements and what movements will take place before the movements commence.

IMPORTANT
Where fixed signals are not provided, hand signals must be used, or verbal or written instructions given.

IMPORTANT
Trains and shunting movements which are wholly within the home and, where provided, outer home signals at a station and are within the signalled area must not reverse direction except on the authority of the Signaller.

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8.11 Movements Disabled in Station Limits

Signaller

Where a proceed signal indication cannot be obtained to authorise a relief movement onto the main line in station limits, you must:

- obtain from the Operator the exact location of the disabled movement (the point where relief is to be attached)
- instruct the Operator of the disabled movement not to move until the relief locomotive has been attached
- endorse these particulars in Signal Box Train Register.

NOTE
The train control diagram must be endorsed when the Train Controller is the Signaller.

- talk with the Operator of the disabled movement and relief locomotive and come to a clear understanding of how the line will be cleared
- give authority to the Operator of the relief locomotive to pass the signal concerned at stop only when all requirements have been completed.

9. Stabling Rail Vehicles

Rail Personnel

When a rail vehicle(s) is stabled on the main line or crossing loop, you must ensure the rail vehicle(s):

- is authorised by the Train Controller
- motive power unit cab is secured against unauthorised access
- is secured against unintended movement
- is protected.

Train Controller

You must:

- issue a bulletin when authorising a rail vehicle(s) to be left unattended on main lines or crossing loops
- confirm the rail vehicle(s) have been secured.

9.1 Authorising Crossing Loops for Stabling Rail Vehicles

Manager/Supervisor

Before unattended rail vehicles are authorised to be stabled at a crossing loop in **Local Network Instructions** without requiring the issue of a bulletin, you must complete a site-specific risk assessment for the crossing loop.

You must involve infrastructure and train control representatives in the risk assessment and consider the suitability of the location, including:

- frequency and duration of occupation,
- scheduled train crossings,
- gradient, and
- accessibility to the public.

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10. Securing Motive Power Units

Rail Personnel

You must only leave motive power units unattended when:

- they are secured at depots or other authorised locations, or
- when authorised by bulletin, or
- when required for the operation of trains.

WARNING
You must secure the motive power unit cab from unauthorised entry and the train against any movement before leaving the train unattended.

11. Tunnel Safety

NOTE
This section does not apply to EMU operations.

11.1 Tunnel Operation Competency

Rail Personnel

You must ensure you have completed and retained the Tunnel Operations Competency before undertaking tasks in tunnels.

NOTE
Tunnel Operation Competency includes:

- All locomotive Train Crew, Locomotive Engineers, Remote Control Operators and Rail Operators who operate through tunnels.
- On Board Passenger Personnel who work on diesel or steam-hauled passenger trains.
- Rail Personnel who obtain a cab pass to ride in the locomotive cab that will transit through tunnels.

NOTE
Refer to the **Emergency Procedures - Tunnels Manual** or **Emergency Procedures - Otira Tunnel Manual** for information on the requirements for tunnel emergencies.

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11.2 The Number of Persons in Tunnels

Rail Personnel

To assist with a tunnel emergency recovery, you must

- tell the Emergency Services the number of people in the tunnel, and
- respond to any emergency in a tunnel in accordance with the **Emergency Procedures - Tunnels Manual**.

11.3 Persons on Freight Trains

Operator

When you are travelling with any other Rail Personnel in the locomotive cab, you must tell the Train Controller the number of persons travelling before entering a tunnel.

NOTE
This only needs to be updated if the number of Rail Personnel changes en route in the Train Control area or when entering another Train Control area.

Train Controller

You must record any variation of Rail Personnel on the train control diagram.

11.4 Persons on Passengers Trains

Operator

You must tell the Train Controller the total number of passengers and Train Crew on the train after departing the platform and before entering the next tunnel.

NOTE
This does not apply to EMU passenger services, as the maximum loading number will be used. The **Local Network Instructions** may also identify trains where the maximum loading number is to be used.

Train Controller

You must record any variation of Rail Personnel on the train control diagram.

11.5 Respiratory Protective Equipment

Train Crew

When operating through tunnels, you must have the following respiratory protective equipment:

- mask and filter, and
- Self-Contained Self Rescue (SCSR) unit (when required by the Rail Operating Company).

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IMPORTANT
The above requirements may be amended for specific tunnels (i.e., Otira tunnel). They will be documented in the relevant **Local Network Instructions**.

IMPORTANT
You must wear your mask and filter before going to the ground in a tunnel when exiting a diesel or steam-hauled train.

11.6 Gas Monitor Requirements for Train Crew

Train Crew

You must ensure you have a gas monitor for tunnel transits.

You must place the gas monitor in a suitable area close to where you are breathing and not covered to observe any alarms easily.

Before entering a tunnel, you must ensure all gas monitors:

- have completed and passed a bump test
- are turned on and fresh air calibrated.

11.7 Locomotive Precautions

Train Crew

Before a locomotive enters a tunnel, you must ensure:

- all windows, doors and ventilators are closed and will be kept closed until the locomotive is clear of the tunnel
- you are in the lead cab of the first locomotive, except when:
  - in a trailing heritage diesel locomotive to monitor systems such as fire suppression, or
  - in a trailing steam locomotive cab to ensure the locomotive is operated in accordance with **Passenger Vehicle Operations Manual, 7.13 Steam Locomotives Towed in Light Steam.**

IMPORTANT
Locomotive hauled passenger trains operating through tunnels must only use locomotives that have operating fire suppression systems.

11.8 Running Long Hood Leading Restrictions

Rail Personnel

Locomotives may run long hood leading through the following tunnels:

- Purewa (NIMT)

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- Parnell (Auckland - Newmarket Line)
- Hamilton (ECMT)
- Lyttelton (MSL)
- Blanket Bay (MSL)
- Caversham (MSL)
- Wingatui (MSL)
- Mussel Bay (Port Chalmers Branch)
- Tawhai (SNL)

Locomotive Engineer

You must ensure that locomotives running long hood are only done at locations detailed in the **Rail Operating Company's Operating Code**.

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TO02 Train Brakes

1. Principles

This rule unit is aligned with the following KiwiRail Fundamental Operating Principles:

- **Principle 1** - Rail personnel must take all possible steps to ensure their activities are carried out in a safe manner.
- **Principle 6** - Rail vehicles must be prevented from moving if their integrity or compatibility is unsafe or suspected to be in an unsafe state.
- **Principle 7** - Rail vehicles must only be authorised to operate where the rail vehicle is compatible with the railway infrastructure.
- **Principle 8** - Safe separation must be maintained between people, plant, and rail vehicles.

2. Purpose

To prescribe the rules for operating and testing train brakes in the network.

3. General

Operator

You must ensure the train brakes are operational before allowing your train to operate in the network.

IMPORTANT
The air brake must be in operation throughout the train.

3.1 Securing Trains

Rail Personnel

You must always apply the brakes and park brakes when stabling trains to ensure the rail vehicles are secure from movement.

You must use your **Rail Operating Company's Operating Code** to secure rail vehicles to determine the number of park brakes to apply.

Train Crew

You must use your **Rail Operating Company's Operating Code** to determine the number of park brakes to apply when securing rail vehicles.

3.2 Detaching Motive Power Units and Rail Vehicles

Rail Personnel

You must apply air brakes and park brakes to secure the train before detaching the motive power unit or other rail vehicles.

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CAUTION
Air brakes must not be relied upon to secure a train or any portion of a train when the motive power unit is detached.

3.3 Stabling Motive Power Units

Operator
When stabling motive power units, you must ensure the motive power unit is secured from any unplanned movement.

Rail Personnel
If a motive power unit is to be stabled and the park brake is defective, you must ensure to secure the motive power unit:

- with chocks, or
- by attaching it to other rail vehicles with fully functional park brakes.

You must report the defective park brake to a Rolling Stock Representative for attention.

Operator
Before moving any stabled motive power unit, you must:

- release park brakes
- conduct a visual inspection to ensure the park brake(s) have been released and the brake blocks are released from the wheels
- remove any chocks used to secure the motive power unit.

4. Air Brake Tests

Rail Personnel
When testing the air brake, you must only use the following approved tests:

- Motive Power Unit Test
- Terminal Test
- Intermediate Test
- Brake Pipe Leakage Test

4.1 Motive Power Unit Test

Operator
Before taking any motive power unit into service, you must carry out the test of the operating efficiency of the brakes.

4.2 Terminal Test

Locomotive Engineer
You must carry out a terminal test:

- before a train commences its journey
- after any locomotive-hauled train is made up
- when any vehicles are added to a train

- when unit freight trains wagons have been coupled together for more than 24 hours with or without locomotives attached. When due, the terminal test must be carried out before departing the starting station for the next trip
- en route if the air brake is not performing as it should when in service.

Competent Worker

If a train is made up of several portions, you must undertake:

- a separate terminal test and train inspection for each portion, and
- an intermediate brake test and brake pipe leakage test using the train locomotive before the train departs.

NOTE
A terminal test may be carried out:

- before the train locomotive is attached using another locomotive, or
- when a Rolling Stock Representative uses an air compressor.

IMPORTANT
A signed test completion certificate must be available for the Locomotive Engineer in both cases.

4.3 Intermediate Test

Locomotive Engineer

You must only use an intermediate test when:

- any locomotive or rail vehicle is added or detached, or
- coupling hoses have been replaced or uncoupled, or
- the terminal test was completed before the locomotive was attached, or
- the terminal test has been completed before the Locomotive Engineer has joined the train, or
- a unit freight train has stood unattended en route with or without locomotives attached for less than 24 hours.

IMPORTANT
When a train has been standing over, the Competent Worker undertaking the test must also visually examine the train to ensure it is safe to run.

5. Emergency Brake Application

Operator, Train Crew

When there is danger, you must:

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- apply the Emergency Brake, and
- not proceed until you have completed the post-emergency brake application actions

in accordance with your Rail Operating Company's procedures.

6. Defective Brakes in Service

Operator

If an unplanned application of brakes or a reduction in braking performance is identified in service, you must:

- bring the train to a complete stop, and
- tell the Train Controller.

If the air brake on a locomotive or rail vehicle fails in service, you must assess the defect and, if possible, attempt to rectify the defect.

If the defect cannot be rectified, you must isolate it and only move the train at Restricted Speed to a crossing station if it is safe.

WARNING
The minimum braking limit must be available to control the train in accordance with the **Rail Operating Company's Operating Code**.

WARNING
You must marshal rail vehicles with defective brakes between rail vehicles with operating brakes as detailed in the **Rail Operating Company's Operating Code**.

6.1 Information for the Train Controller

Operator

When brakes in service have been identified as defective, you must provide the following information to the Train Controller:

- number of the train
- number of the locomotive working the train
- nature of the failure
- number and class of the rail vehicle on which the fault developed
- the location of the rail vehicle on the train.

Train Controller

You must tell the Network Control Manager about the circumstances.

Network Control Manager

You must liaise with the Rail Operating Company's Service Manager to determine further action.

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6.2 Defective Park Brake in Service

Competent Worker

When a park brake becomes defective on the main line, you must:

- tell the Train Controller
- act in accordance with the **Rail Operating Company's Operating Code**
- if required, further secure the rail vehicles by applying chocks.

Train Controller

You must report the defect to the Rail Operating Company's Service Manager to arrange the repair.

6.3 Cutting Out Air Brakes

Operator

When it is necessary to cut out air brakes, you must:

- secure the train against unintended movement
- cut out the air brake on the defective rail vehicle
- not exceed the allowable number of rail vehicles with cut-out brakes on trains in accordance with the **Rail Operating Company's Operating Code**.

7. Rail Vehicles

7.1 Unbraked or Unpiped Rail Vehicles

Rail Personnel

When there are unbraked rail vehicles in the consist of the train, you must ensure:

- the train can still stop within the required braking distance
- in the event of a pull-apart, each portion of the train will stop within the required braking distance

IMPORTANT

There must be enough braked rail vehicles at the rear of a train so that the rear portion of a pull-apart has adequate braking, even if it includes unbraked vehicle(s).

- rail vehicles with defective brakes are marshalled between rail vehicles with operating brakes as detailed in the **Rail Operating Company's Operating Code**
- unbraked rail vehicles must be placed within the train so that pinch-offs will not occur
- rail vehicles with a brake pipe only must be treated as unbraked vehicles and be stencilled as such
- a bulletin must be issued to cover the running of rail vehicles that have been damaged and have a temporary brake pipe fitted
- the Operator must be given written advice of any brakes cut out.

NOTE

When authorised by a Rolling Stock Representative, a passenger train with a brake fault may run at least one return journey provided all other provisions of the **Rail Operating Rules** are complied with.

IMPORTANT
The Rail Operating Company must document the maximum number of unbraked vehicles permitted and how they must be placed within a train to ensure compliance with this rule.

7.2 Unpiped Rail Vehicles

Competent Worker

When possible, you must ensure the brake pipe pressure is continuous through to the rear coupling cock of the last rail vehicle on a train using a temporary brake pipe.

If a temporary brake pipe cannot be fitted, you must:

- place the rail vehicles at the rear of the train, and
- secure by a coupling link/automatic coupler to minimise the possibility of a breakaway.

IMPORTANT
Unpiped rail vehicles or any rail vehicle on which the brake pipe is non-functional may only be conveyed if a bulletin authorising the movement and advising of any restrictions has been issued.

8. Runaway Rail Vehicle

Rail Personnel

If you observe a runaway rail vehicle, you must:

- make an emergency call on radio channel 1
- make an emergency call to the Train Controller on the Train Control channel
- take the necessary action to protect Rail Personnel and the public without increasing the risk to yourself or others.
- setting a route clear of potential conflict with other rail vehicles and warn approaching rail vehicles or Rail Personnel of the situation, or
- setting signals to proceed to ensure level crossing alarms operate correctly, or
- stopping the runaway by directing it into safety points, sidings, or other effective locations.

Train Controller

If a runaway rail vehicle is reported or suspected, you must immediately prevent conflicting movements and attempt to stop the rail vehicle.

When required, you must apply the appropriate action as follows:

IMPORTANT
You must ensure that any Rail Personnel or the public are protected from the consequence of derailment or collision.

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In taking the above actions, you must consider:

- gradient profiles and the likely extent/direction of the runaway
- that a runaway may change direction when reaching an ascending grade
- using Police or Rail Personnel to protect at-risk level crossings.

9. Train Parting

Operator

If a train should break into two or more portions, you must apply the park brakes to secure the separate portions.

If the train has parted entirely and cannot be reconnected, you must arrange for a Competent Worker to assist in removing the rear portion from the section.

You must:

- tell the Train Controller you have stopped, the location of the train and are investigating the cause
- check the reason for the parting
- ensure that sufficient brakes are applied on the rear portion of the train
- ensure the whole train is inspected for load shift, damage and derailment
- tell the Train Controller the details of the problem and either:
  - wait at that location for assistance to reconnect the train, or
  - take the front portion forward and wait for assistance.

CAUTION
After recoupling the train, the whole train must be inspected for damage, load shift or derailment before moving.

Train Controller

If the Operator is to move the train, you must send a Competent Worker to assist.

Operator

When the train is recoupled, you must perform an intermediate brake test and release all park brakes after each portion is coupled.

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TO03 Train Lights

1. Principles

This rule unit is aligned with the following KiwiRail Fundamental Operating Principles:

- **Principle 1** - Rail personnel must take all possible steps to ensure their activities are carried out in a safe manner.
- **Principle 4** - Rail vehicles and other transport modes must be separated or the interface managed.
- **Principle 6** - Rail vehicles must be prevented from moving if their integrity or compatibility is unsafe or suspected to be in an unsafe state.
- **Principle 7** - Rail vehicles must only be authorised to operate where the rail vehicle is compatible with the railway infrastructure.
- **Principle 8** - Safe separation must be maintained between people, plant, and rail vehicles.

2. Purpose

To prescribe the rules for using train lights in the network.

3. General

Operator

You must ensure the train lights are operational before allowing your train to operate in the network.

You must ensure all trains always display the following lights:

- headlights (white light)
- end of train signal
- other lights as required in the **Rail Operating Rules**.

NOTE

Detachable taillights do not need to be illuminated in the daytime.

3.1 Responsibility for Train Lights

Rail Personnel

You must ensure that the correct train lights are displayed.

Operator

You must ensure that the train lights are always operational.

IMPORTANT

On a light locomotive or when two or more light locomotives are coupled, the Operator must confirm that the correct train lights are exhibited.

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4. Front of Train Lights

4.1 Headlights

Operator
You must ensure that headlights are always illuminated on full in the direction of travel on the main line.

4.2 Ditch Lights

Operator
Where fitted, you must ensure that ditch lights are always illuminated on full in the direction of travel on the main line.

If one or more ditch lights are not operational, you must ensure the headlight is functional.

You must report any defective ditch lights to the Train Controller and record details of the defect in accordance with the relevant Rail Operating Company's procedures.

4.3 Dimming Front of Train Lights

Operator
Headlights and ditch lights

You must only dim headlights and ditch lights when it is safe in accordance with the following conditions:

- within yards or depots
- at night, when adjacent to public roads, where there exists a risk of motorists being blinded from the headlights being on full
- when approaching another rail vehicle on an adjacent line, provided you can see that the line ahead is clear and no level crossings intervene
- when crossing with other rail vehicles.

Headlights only

You must only dim headlights at day and night in accordance with the following conditions:

- when approaching another rail vehicle on an adjacent line, provided you can see the line ahead is clear and no level crossings intervene
- when trains are standing at a station
- when approaching stations where they are timed to stop, provided the train is entering the station on a signal which indicates that the line ahead is unoccupied.

4.4 Train Crossings

Locomotive Engineer
If you are the first train to berth, you must only extinguish headlights and ditch lights when safe for the following conditions:

- ASR Areas:
  - only after contact has been established with the opposing Locomotive Engineer, either verbally or visually.
- TWC/Midland Line Areas:
  - only after contact has been established with the opposing train and both Locomotive Engineers agree to the berthing arrangements.

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Once the motive power units have passed, you must immediately illuminate the headlights and ditch lights to inspect the opposing trains.

4.5 Remote Controlled Shunt Locomotive

Operator

When operating a remote controlled shunt locomotive, you must:

- only have the headlight illuminated in the direction of travel when operating under remote control
- ensure the headlights are illuminated in both directions when in manual mode.

NOTE
Headlights on locomotives employed exclusively on shunting will usually be on dim.

5. Defective Headlights or Ditch Lights

5.1 In Depot

Operator

If a failure of headlights or ditch lights occurs before entering service, you must:

- use another motive power unit if available, or
- repair the defect before the motive power unit is allowed to enter service.

5.2 In Service

Operator

You must report all defective headlights or ditch lights to the Train Controller and record details of the defect in accordance with the relevant Rail Operating Company's procedures.

Train Controller

You must:

- tell the Rail Operating Company’s Service Manager about the defective headlight or ditch light, and
- arrange for the motive power unit to be repaired or replaced at the next terminal/depot.

Operator

If the headlight or ditch light is defective and cannot be repaired and no other motive power unit can be used as the lead unit, you must act in accordance with **TO06 Defective Train Equipment**.

DANGER
Frequent use of the motive power unit horn must be made approaching level crossings, worksites and other known hazard areas when headlights have failed.

Table: Failure During Daylight Hours

Failure: Daylight Hours			
	One Headlight or Ditch light Fails	**Both Headlights, or both Ditch lights Fail, or 3 of the 4 lights Fail**	**All Lights Fail**
Action	Proceed at normal speed to next terminal / depot** for repairs or replacement	Proceed at normal speed to next terminal / depot* for repairs or replacement	Proceed at Restricted Speed to next terminal / depot* for repairs or replacement
Speed Level Crossings	Normal speed	40 km/h max	• 10 km/h max • May resume Restricted Speed once crossing is fouled

Table: Failure During the Hours of Darkness

Failure: Hours of Darkness			
	One Headlight or Ditch light Fails	**Both Headlights, or both Ditch lights Fail, or 3 of the 4 lights Fail**	**All Lights Fail**
Actions	Proceed at normal speed to next terminal / depot** for repairs or replacement	Proceed at Restricted Speed to next terminal / depot* for repairs or replacement	• Proceed at Restricted Speed to next crossing loop / siding • Wait for a replacement motive power unit
Speed Level Crossings	Normal speed	40 km/h max	• Stop at crossing, then proceed (max speed 10 km/h) • May resume Restricted Speed once crossing is fouled

NOTE

* Metro services may run to destination

** Metro services may run up to a maximum of 2 return trips during peak

6. End of Train Signal

Rail Personnel

You must ensure that an end of train signal is displayed at the rear of the last rail vehicle by either:

- a train end monitor, or
- a taillight, or
- an end of train marker.

You must use the following methods to confirm that the train is complete:

- a train end monitor is fitted, and the locomotive head end display indicates normal brake pipe pressure
- the end of train signal is on the rear rail vehicle
- the rear rail vehicle to which the end of train signal is attached is confirmed as being present by the Train Crew
- inspection of the stopped train confirms that the end of train signal is at the rear of the train.

If the end of train signal is missing, you must check the number of the last wagon against the train work order to confirm that the train is complete.

NOTE
The end of train signal at the rear of the last rail vehicle indicates to Rail Personnel that the train is complete.

NOTE
End of train markers must be:

- red,
- reflectorised,
- circular, and
- 200 mm minimum diameter.

and may also be used by day and night on:

- work trains
- non ATC freight trains
- non ATC shunting services
- carriage trains in an emergency

6.1 Failed or Missing End of Train Signal

Rail Personnel
If a train is observed with no end of train signal, you must tell the Train Controller.

Train Controller
When it is identified that the end of train signal has failed or is missing, you must arrange for the train to be inspected at the next safe location to confirm the rear vehicle listed on the train work order is attached to the train.

When the train is confirmed as complete, you must only allow the train to travel as far as the next location where the end of train signal can be replaced. In Automatic Signalling areas track circuiting may be relied on.

When the train cannot be confirmed as complete, you must treat the affected track section as obstructed in accordance with **GR06 Damaged and Obstructed Lines.**

Operator
You must have authority from the Train Controller to move the train on the main line when the end of the train signal is missing.

Locomotive Engineer
You must only report limits of a track warrant clear when you have confirmed that the train is complete.

In track warrant areas, you must only report the main line clear when the Operator of an opposing rail vehicle confirms that the rear vehicle listed on the train work order is attached to the train.

Where there is no opposing rail vehicle, you must report limits of a track warrant clear, by:

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- stopping and walking the train
- asking lineside Rail Personnel to confirm the rear vehicle
- confirming the rear vehicle at destination.

6.2 Train Passed or Arrived

Rail Personnel

You must only confirm a train is clear and complete once the rail vehicle displaying the end of train signal attached to the train is observed.

6.3 Train Assisting in Rear

Operator

When a locomotive is assisting in the rear, you must ensure:

- that the taillight is displayed at the rear of the locomotive, and
- the vehicle in front of the assisting locomotive is not displaying a taillight unless the Officer Controlling Train Running issues instructions.

7. Defective End of Train Signal

Operator

If the end of train signal becomes defective when operating on the main line, you must report the defect to the Train Controller and record details of the defect in accordance with the relevant Rail Operating Company's procedures.

Train Controller

When a defective end of train signal is reported, you must:

- tell the Rail Operating Company’s Service Manager about the defective end of train signals, and
- arrange for the end of train signal to be repaired or replaced at the next terminal/depot.

8. Light Locomotives

Operator

You must ensure:

- a single light locomotive displays a taillight, or
- two or more coupled light locomotives display the taillight on the rear locomotive.

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TO04 Motive Power Unit Horn

1. Principles

This rule unit is aligned with the following KiwiRail Fundamental Operating Principles:

- **Principle 1** - Rail personnel must take all possible steps to ensure their activities are carried out in a safe manner.
- **Principle 4** - Rail vehicles and other transport modes must be separated or the interface managed.
- **Principle 6** - Rail vehicles must be prevented from moving if their integrity or compatibility is unsafe or suspected to be in an unsafe state.
- **Principle 7** - Rail vehicles must only be authorised to operate where the rail vehicle is compatible with the railway infrastructure.
- **Principle 8** - Safe separation must be maintained between people, plant, and rail vehicles.

2. Purpose

To prescribe the rules for using the motive power unit horn (horn) in the network.

3. General

Operator

You must ensure the horn is operational before a motive power unit enters the network.

3.1 Horn Signals

Operator

You must only use the approved horn signals for the following time:

- Short: sound for about one second.
- Long: sound for about two seconds.
- Continuous: sound for the time necessary to gain attention.

3.2 Sounding the Horn

Operator

Unless **3.3 Quiet Hours** applies, you must only use the horn as described in the following Table.

Table: Horn Use

Horn Use	Signal Type
When starting after being detained at a compulsory stop board	**Short**
When moving forward after being stopped within a protected work area	
To acknowledge hand signals	
When setting back on the main line or crossing the loop	**Two Short**
If a fire or dangerous goods leak occurs (in a rail vehicle, on railway premises or the railway corridor)	**Six Short**
When danger exists or is anticipated. All rail movements must immediately stop	**Three Short or Continuous**
Where required by safe working instructions	**Long**
At all whistle boards	
Approaching compulsory stop protection inner warning boards	
When there is reason to believe the line may be obstructed	

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Horn Use	Signal Type
When two rail vehicles in multi-line areas approach a level crossing simultaneously	**Continuous until on the crossing**

IMPORTANT
The sound of the horn must be distinct, with intensity, duration or repetition proportionate to the distance at which the warning is required to be heard and the circumstances under which it is being used.

3.3 Quiet Hours

Operator
You must not sound the horn from 22:30hrs to 07:00hrs unless there is a safety requirement.

4. Response and Acknowledgement

Operator
When Rail Personnel acknowledges a horn, you must sound the horn in response.

If an expected response or acknowledgement to the horn is not received, you must sound the horn again and, if required, stop your rail vehicle.

5. Defective Horn in Service

Operator
You must report all defective horns to the Train Controller and record details of the defect in accordance with the relevant Rail Operating Company's procedures.

You must apply the following speed restrictions:

- approaching level crossings and whistle board sites - 10 km/h
- approaching and passing through work sites and known hazard areas - Restricted Speed
- when you believe a lower speed is required.

NOTE
You may resume line speed once the MPU occupies the level crossing or whistle board site.

Train Controller
You must:

- tell the Rail Operating Company’s Service Manager about the defective horn, and
- arrange for the motive power unit to be repaired or replaced at the next terminal/depot, or
- act in accordance with the Rail Operating Company’s Minimum Operating Standard

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NOTE
Metro passenger services may run to destination.

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TO05 Damaged and Disabled Rail Vehicles

1. Principles

This rule unit is aligned with the following KiwiRail Fundamental Operating Principles:

- **Principle 1** - Rail personnel must take all possible steps to ensure their activities are carried out in a safe manner.
- **Principle 2** - Rail vehicles must maintain safe separation via an appropriate method of signalling and/or operation.
- **Principle 3** - Before any rail vehicle moves, it must have an authority to move that clearly indicates the limits of that authority.
- **Principle 6** - Rail vehicles must be prevented from moving if their integrity or compatibility is unsafe or suspected to be in an unsafe state.
- **Principle 8** - Safe separation must be maintained between people, plant, and rail vehicles.

2. Purpose

To prescribe the rules for trains confirmed as disabled in the network.

3. General

Rail Personnel

Train protection is required when:

- the train needs assistance, and there are no features between the train and the relief train, or
- the train obstructs or might obstruct any adjacent line within multi-line areas.

3.1 Reporting Damaged or Disabled Trains

Train Crew

If you confirm that your train is damaged or disabled, you must tell the Train Controller as soon as practicable.

DANGER
If the Train Crew cannot confirm that the train obstructs an adjacent line, the Train Controller must stop all movements on all adjacent lines until the adjacent lines are confirmed clear.

Train Controller

You must:

- tell the Rail Operating Company's Service Manager
- make the necessary arrangements for the operation of other affected trains.

Operator

You must have authority from the Train Controller before moving your disabled train.

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4. Damaged or Derailed Rail Vehicles

Train Controller

You must tell the Rail Operating Company's Service Manager of all rail vehicles which have been reported as:

- damaged, or
- derailed, or
- suffered mechanical failure.

Before authorising movement, you must ensure all rail vehicles are inspected and certified safe to run by a Rolling Stock Representative.

You must ensure that any rail vehicles either involved in the derailment or attached to the derailed rail vehicles are held for inspection.

Officer in Charge

You must:

- mark the rail vehicles concerned 'Not to Run'
- tell the Train Controller the location and status of all bad ordered/derailed rail vehicle(s) at unattended stations.

4.1 Not to Run

Officer in Charge

You must stop any rail vehicles marked 'Not to Run' from continuing. If necessary, the load must be moved to another rail vehicle for transport.

4.2 Repairs When Empty

Rail Personnel

You must ensure that a Rolling Stock Representative corrects the fault before the rail vehicle is reloaded.

You must only forward the rail vehicle to a repair depot when directed by an authorised Rolling Stock Representative.

NOTE

Only rail vehicles marked 'Repairs When Empty' or 'Bad Ordered Run to Destination' may continue their current journey.

4.3 Marked Up - Not to Run or Repair When Empty

Rolling Stock Representative

When a rail vehicle marked up 'Not to Run' has been inspected and certified as safe to run, you must:

- remove the mark ups, and
- arrange for the 'Bad Order' status to be cleared.

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WARNING
Only the Rolling Stock Representative must remove a 'Mark Up' or a 'Bad Order' status.

5. Obstruction of an Adjacent Line

Train Crew

In multi-line areas and your train has obstructed an adjacent line(s), you must:

- immediately and repeatedly transmit an emergency broadcast on radio channel 1
- tell the Train Controller about the circumstances
- if necessary, warn any approaching trains by
  - sounding the motive power unit horn, or
  - displaying an emergency hand signal.

Train Controller

CAUTION
If the Train Crew cannot confirm that the train obstructs the adjacent line, the Train Controller must stop all movements on the adjacent line until the adjacent line is confirmed clear.

If an obstruction has been reported, you must:

- act in accordance with **GR06 Conditions Affecting the Network**
- instruct any Operator approaching the affected section of line to stop their train immediately
- prevent the entry of other trains into the affected section of line
- protect any affected adjacent lines
- protect the disabled train in accordance with **RP16 Disabled Train Recovery**.
- tell the Network Control Manager.

Train Crew

If the Train Controller cannot be contacted or approaching trains cannot be stopped, you must:

- move to a safe place, and
- make every effort to warn approaching trains.

Network Control Manager

You must liaise with the Rail Operating Company’s Service Manager to determine further action.

6. Disabled Trains

6.1 Providing Protection

Operator

You must apply train protection in accordance with RP16 Disabled Train Recovery.

IMPORTANT
Train Crew or Rail Personnel must assist with the protection of the train as directed by the Operator.

IMPORTANT
On passenger trains, the Train Manager is also responsible for protecting the train.

If a second train arrives before the obstruction is removed, the Operator of the second train must arrange for the protection of their train as directed above. The Operator of the first train, having been assured that the second train is protected, may arrange for the protection to be lifted and the personnel to re-join the train.

6.2 Relief Options

Operator

To recover a disabled train, you must use one of these options:

- double bank
- detach the locomotive and proceed to the next station to attach a relief locomotive
- send a relief locomotive or train into the section to assist.
- load skates.

Train Controller

You must talk with the Operator Disabled Train and agree on the recovery method for the disabled train and tell the Operator Relief Train of the recovery method.

CAUTION
Operators of the relief and disabled trains must maintain regular radio communications once the relief train proceeds.

6.3 Disabled Train Not to Be Moved

Train Controller

You must instruct the Operator Disabled Train not to move until:

- after the relief train has arrived, or
- a bulletin has been issued prescribing the use of load skates.

Operator

When you are the Operator Disabled Train, you must not move the train until:

- the relief train has arrived, or
- a bulletin has been issued prescribing the use of load skates.

If circumstances change and assistance is no longer required, you must tell the Train Controller.

Train Controller

You must ensure the instruction remains until after the relief train has arrived, or a bulletin issued, or if circumstances change and relief is no longer required, until:

- the relief train has been prevented from entering the section, or
- the relief train has been stopped and cleared from the section, and
- the relevant authority is withdrawn or cancelled.

6.4 Relief Train Approaches

Operator

When you are the Operator Relief Train, you must have a movement authority for a relief movement in accordance with:

- SO02 Automatic Signalling Rules, or
- SO08 Track Warrant Control, and
- RP02 Using Track Warrant Control.

You must stop at any protection placed to protect the disabled train and wait for the protection to be removed before proceeding.

When you are the Operator Disabled Train, you must arrange for your protection to be removed when the relief train approaches your disabled train.

6.5 Detaching Motive Power Unit

Operator

You must ensure that the relief locomotive or train is not detached from the disabled train until the movement has reached the station specified in the relevant authority.

6.6 Confirmation Clear of Section

Operator

When you are the Operator Disabled Train and double banking, you must check the class and number of the rear vehicle of the disabled train with the train work order before the portion moves forward.

When you are the Operator Relief Train, you must take control of the train movement, and when the coupled trains have completely cleared the section, you must tell the Train Controller.

6.7 Load Skates

Rolling Stock Representative

Before using load skates, you must apply RP16 Disabled Train Recovery, 2.3 Using Load Skates and must ensure the load skates are:

- proven suitable and rated for the class of vehicles being used on
- maintained in accordance with manufacturers' instructions
- tested for physical compatibility.

In conjunction with the Rail Operating Company's Service Manager, you must also ensure:

- Rail Personnel concerned have been instructed in their safe use
- the vehicle being rescued is suitable and adequately prepared for towing with appropriate risks assessed and mitigated; e.g., to manage changes to brake performance and clearances

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- multiple skates are only used under a bogie or vehicle provided use is in accordance with manufacturers' instructions.

7. Dividing Trains on the Main Line

Rail Personnel

You must only divide a train on the main line when it has:

- become disabled, or
- insufficient locomotive power, or
- become uncoupled.

Train Controller

When it is necessary to divide a train to clear the section, you must establish a suitable location for the divided front portion of the train to be moved.

You must tell the Locomotive Engineer of the location to take the front portion of the train.

Locomotive Engineer

Before the front portion is removed, you must complete a brake test in accordance with **TO02 Train Brakes**.

Before the front portion of the train travels beyond the next location, the end of train signal must be attached to the rear rail vehicle.

You must ensure that the remaining rail vehicles are secured, protected, and fitted with a taillight on the last rail vehicle during darkness or in low visibility conditions.

8. Detaching a Defective Rail Vehicle

Locomotive Engineer

Before a defective rail vehicle is detached from the train, you must:

- tell the Train Controller the details of the rail vehicle and its defect, and
- jointly agree with the Train Controller where the rail vehicle is to be detached, and
- secure the rail vehicle at the agreed location.

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TO06 Defective Train Equipment

1. Principles

This rule unit is aligned with the following KiwiRail Fundamental Operating Principles:

- **Principle 1** - Rail personnel must take all possible steps to ensure their activities are carried out in a safe manner.
- **Principle 6** - Rail vehicles must be prevented from moving if their integrity or compatibility is unsafe or suspected to be in an unsafe state.

2. Purpose

To prescribe the rules for managing trains with defective equipment in the network.

3. General

Operator

When defective train equipment has been identified, you must:

- if possible, determine the extent of the defect
- tell the Train Controller about the defect
- if possible, remedy the defect.

If the train cannot proceed normally, you must tell the Train Controller:

- if the train can continue in operation
- any restrictions on the train for movement
- if the train is confirmed disabled.

If the train cannot move or safely operate, you must declare it disabled in accordance with **TO05 Damaged and Disabled Rail Vehicles**.

Train Controller

If the train can continue in operation, you must tell the:

- Operator about operating restrictions that apply, and
- the Operator's Service Manager of the defect.

4. Detached Train Equipment

Operator

You must tell the Train Controller about equipment detached from the train and if the equipment cannot be moved clear of the track.

IMPORTANT

If the train equipment has caused damage to the infrastructure, you must tell the Train Controller.

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5. Isolating Safety Systems

Operator

You must tell the Train Controller if a defective safety-critical system needs to be isolated during travel in accordance with the **Rail Operating Company's Operating Code**.

Train Controller

You must consult with the Operator to make alternative safe train operation arrangements.

6. Dragging Equipment

IMPORTANT

Immediate action is required if dragging gear or bond chains are suspected of causing trackside problems or loss of points detection. At selected sites, dragging equipment detectors are provided. These send an automated message to Train Control and, at some locations, all radio users near the detector when activated. These sites are listed in **Meterages of Rail Infrastructure and Locations**.

Operator

When a dragging equipment alarm is activated or dragging equipment is suspected, you must:

- stop the train immediately, and
- examine the train consist for possible dragging equipment.

7. Motive Power Unit Defects

7.1 Fuel Leak

When a fuel leak occurs on a diesel locomotive, the consequences of a fire being ignited become very serious.

Train Crew

When a fuel leak has been discovered on your train, you must:

- tell the Train Controller immediately
- record the leak in the Operating Company's defect book
- attempt to fix the leak using the tools provided, except where this exposes Train Crew to personal risk.

IMPORTANT

A fuel tank leak resulting from damage (such as collision with a line side object or a level crossing collision) may be able to be plugged with a tapered wooden bung supplied in the tool bag, but if not, it will become an environmental issue.

Give consideration to stopping at a location where the leakage will not enter a waterway and calling the Regional Council for assistance pumping out the tank to avoid further discharge.

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Train Controller

When told of an MPU fuel leak, you must consult with the Network Control Manager.

Network Control Manager

You must consider if the locomotive should be detached or shut down and run to the destination.

NOTE

Detaching other rail vehicles may be necessary.

Rail Personnel

When a fuel leak has been discovered at a depot or terminal, you must:

- ensure the motive power unit does not to run
- report the leak to a Rolling Stock Representative
- record the leak in the Operating Company's defect book.

7.2 Speedometer Failure

Operator

Should the MPU speedometer fail, you must use this table as a reference to determine its speed:

Speed	Time of performing				Speed	Time of performing				Speed	Time of performing			
Km/h	0.5 km		1 km		Km/h	0.5 km		1 km		Km/h	0.5 km		1 km	
	Min	Sec	Min	Sec		Min	Sec	Min	Sec		Min	Sec	Min	Sec
10	3	00	6	00	**37**	0	49	1	37	**64**	0	28	0	56
11	2	44	5	27	**38**	0	47	1	35	**65**	0	28	0	55
12	2	30	5	00	**39**	0	46	1	32	**66**	0	27	0	55
13	2	18	4	37	**40**	0	45	1	30	**67**	0	27	0	54
14	2	09	4	17	**41**	0	44	1	28	**68**	0	26	0	53
15	2	00	4	00	**42**	0	43	1	26	**69**	0	26	0	52
16	1	53	3	45	**43**	0	42	1	24	**70**	0	26	0	51
17	1	46	3	32	**44**	0	41	1	22	**71**	0	25	0	51
18	1	40	3	20	**45**	0	40	1	20	**72**	0	25	0	50
19	1	35	3	09	**46**	0	39	1	18	**73**	0	25	0	49
20	1	30	3	00	**47**	0	38	1	17	**74**	0	24	0	49
21	1	26	2	51	**48**	0	38	1	15	**75**	0	24	0	48

Speed	Time of performing				Speed	Time of performing				Speed	Time of performing			
22	1	22	2	44	**49**	0	37	1	13	**76**	0	24	0	47
23	1	18	2	37	**50**	0	36	1	12	**77**	0	23	0	47
24	1	15	2	30	**51**	0	35	1	11	**78**	0	23	0	46
25	1	12	2	24	**52**	0	35	1	09	**79**	0	23	0	46
26	1	09	2	18	**53**	0	34	1	08	**80**	0	23	0	45
27	1	07	2	13	**54**	0	33	1	07	**82**	0	22	0	44
28	1	04	2	09	**55**	0	33	1	05	**84**	0	21	0	43
29	1	02	2	04	**56**	0	32	1	04	**86**	0	21	0	42
30	1	00	2	00	**57**	0	32	1	03	**88**	0	20	0	41
31	0	58	1	56	**58**	0	31	1	02	**90**	0	20	0	40
32	0	56	1	53	**59**	0	31	1	01	**92**	0	20	0	39
33	0	55	1	49	**60**	0	30	1	00	**94**	0	19	0	38
34	0	53	1	46	**61**	0	30	0	59	**96**	0	19	0	38
35	0	51	1	43	**62**	0	29	0	58	**98**	0	18	0	37
36	0	50	1	40	**63**	0	29	0	57	**100**	0	18	0	36

NOTE

The following is a simple formula for ascertaining the speed of trains:

Seconds taken to travel between distance posts 0.5 km apart divided into 1800 gives the speeding kilometres per hour e.g., a train taking 40 seconds to travel 0.5 km (1800 divided 40) is travelling at 45 km/h.

TO07 Working on Rail Vehicles

1. Principles

This rule unit is aligned with the following KiwiRail Fundamental Operating Principles:

- **Principle 1** - Rail personnel must take all possible steps to ensure their activities are carried out in a safe manner.
- **Principle 2** - Rail vehicles must maintain safe separation via an appropriate method of signalling and/or operation.
- **Principle 3** - Before any rail vehicle moves, it must have an authority to move that clearly indicates the limits of that authority.
- **Principle 6** - Rail vehicles must be prevented from moving if their integrity or compatibility is unsafe or suspected to be in an unsafe state.
- **Principle 8** - Safe separation must be maintained between people, plant, and rail vehicles.

2. Purpose

To prescribe the rules for working on rail vehicles in the network.

3. Planning

Competent Worker

NOTE

Working on rail vehicles includes:

- maintenance work, or
- repair work, or
- servicing.

Before work is to take place on a rail vehicle, you must ensure:

- authorisation is obtained before working in the area, and you and any Rail Personnel working have been inducted where required
- all affected Rail Personnel are briefed about the arrangements for their safety
- protection of the rail vehicle is in place so that no other rail vehicles can collide with it
- protection from rail vehicles on any adjacent lines is applied where needed
- all workers apply personal protection, where required
- the rail vehicle is secured against any movement.

CAUTION

Even if deemed a Competent Worker, you must only climb on top of rail vehicles in overhead electrified line locations if authorised.

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4. Moving Rail Vehicles

Competent Worker

You must only move a rail vehicle, or allow any other rail vehicle to contact it, if it is required as part of your work.

If there is a requirement to move a rail vehicle, you must first ensure:

- the rail vehicle is safe to be moved
- everyone who is affected by the movement is advised
- everyone who is affected by the movement is in a safe place.

5. Main Line Inspections and Repairs

Competent Worker

You must only carry out inspections or work on rail vehicles on the main line when entry into the section where you are working is protected in accordance with **TO05 Damaged and Disabled Rail Vehicles**.

5.1 Planning

Competent Worker

If you need to access or work on a rail vehicle on the main line, you must tell the Train Controller before accessing the rail vehicle.

Before inspecting or working on rail vehicles on the main line, you must undertake a safety assessment to determine the potential of encroaching into the:

- danger area, or
- adjacent line, and
- identify and mitigate any hazards.

If the safety assessment identifies that you require protection, you must tell the Train Controller.

5.2 Protection of Work

Competent Worker

When contacting the Train Controller to arrange protection, you must:

- identify your location in accordance with **RP13 Identification and Verification of Location**
- confirm the line on which the protection is required
- nominate the work location.

5.3 Protection of Motive Power Unit and Personnel Performing Maintenance

Rolling Stock Representative

You must prevent an uncontrolled movement of a motive power unit when:

- working on a motive power unit, or
- working on a rail vehicle attached to a motive power unit, or
- Track Maintenance Representatives are working on or fouling a road on which a motive power unit is standing.

You must apply the following controls before commencing work:

- isolate / lock-out energy sources,

- take possession of the reverser handle / remote control key, and
- attach the warning sign shown below on the Operator's console.

Warning Sign

Rail Personnel

When entering a motive power unit, you must check the motive power unit's console(s) for the warning sign.

If the warning sign is present, you must not remove these controls, nor attempt to enliven, start or move the motive power unit until

- the work has been completed on the motive power unit,
- all maintenance personnel are clear, and
- you are authorised by the Person in Charge specified on the warning sign.

Rail Protection Officer

Before authorising any work to commence, you must have a completed Site Safety Permit and the relevant protection applied.

5.4 Completion of Work

Competent Worker

You must tell the Train Controller:

- when work is complete and any restrictions that apply
- when workers and their equipment are clear of the danger area.

Operator

You must confirm that all workers are in a safe place before any rail vehicle movement proceeds.

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6. Maintenance Depots and Yards

Rolling Stock Representative

When working in maintenance depots and yards, you must prevent an uncontrolled movement of a motive power unit when:

- working on a motive power unit, or
- working on a rail vehicle attached to a motive power unit, or
- Track Maintenance Representatives are working on or fouling a road on which a motive power unit is standing

by applying **5.3 Protection of Motive Power Unit and Personnel Performing Maintenance.**

6.1 Suspending or Completing Work

Rolling Stock Representative

When you have suspended or completed work on the rail vehicle, you must ensure:

- all workers have removed their personal protection
- all workers are in a safe place
- your personal protection is removed from the rail vehicle
- the Person in Charge is told that the work has been completed.

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TO08 Shunting

1. Principles

This rule unit is aligned with the following KiwiRail Fundamental Operating Principles:

- **Principle 1** - Rail personnel must take all possible steps to ensure their activities are carried out in a safe manner.
- **Principle 2** - Rail vehicles must maintain safe separation via an appropriate method of signalling and/or operation.
- **Principle 3** - Before any rail vehicle moves, it must have an authority to move that clearly indicates the limits of that authority.
- **Principle 4** - Rail vehicles and other transport modes must be separated or the interface managed.
- **Principle 6** - Rail vehicles must be prevented from moving if their integrity or compatibility is unsafe or suspected to be in an unsafe state.
- **Principle 8** - Safe separation must be maintained between people, plant, and rail vehicles.

2. Purpose

To prescribe the rules for shunting trains in the network.

3. General

Rail Operator

When undertaking shunting activities, you must:

- conduct shunting operations safely
- be in a safe place before shunting commences.

Operator

You must have the authority to shunt past a signal.

DANGER

Loose or gravitational shunting of any rail vehicles is prohibited.

The operation of points must be undertaken in accordance with **GR05 Operation of Points**.

3.1 Range of Vision

Rail Operator

If your range of vision cannot be maintained or the view of the intended route becomes obstructed, you must stop the shunt movement.

You must ensure that **Local Network Instructions** are reviewed for site-specific information to ensure your range of vision can be maintained while shunting activities are in operation.

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NOTE
Range of vision will be influenced by weather, buildings, track gradient or geometry and time of day and may require significant movement to maintain range of vision.

4. Planning and Controlling Shunting

Rail Operator

When planning a shunting movement, you must:

- consult with the Train Controller and agree on the planned move
- consult with the Operator and other affected workers and decide on the planned move
- warn the Operator and other affected workers of identified hazards.

Rail Personnel

When you are involved in the shunt movement, you must confirm:

- the identity of the Competent Worker directing the movement
- the direction and limits of the movement
- any special conditions for the movement.

4.1 Communications During Shunting

Rail Operator

You must communicate in accordance with **RP01 Applying Network Communications** when undertaking shunting activities and ensure that radios are:

- available
- tested to be functioning correctly
- used when undertaking shunting movements

IMPORTANT
Should radio communication become restricted or unavailable, shunting may only continue using authorised hand signals during daylight hours.

5. Directing Shunting

Rail Operator

You must be in a safe place before shunting movements commence.

You must ensure the points have been correctly set for the intended movement.

When directing shunting, you must:

- use a radio or hand signals to communicate with the Operator of the rail vehicle
- not access or egress a rail vehicle when it is moving
- be aware of track hazards and conditions

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- be able to ensure the track ahead of the proposed movement is not obstructed
- provide regular distance updates to the Operator at the controls of the rail vehicle.

Operator
If communication is interrupted, lost, or there is doubt about the meaning, you must stop the movement immediately.

6. Movement Authority

Rail Operator
You must have the authority to undertake a shunting movement.

6.1 Authorising Movement into a Backshunt

Rail Operator
Where a shunting signal is provided and it fails to operate:

- the movement must be authorised, and
- motor points must be isolated and hand-operated unless alternative instructions are provided in the **Local Network Instructions**.

Where a signal is not provided, the movement must only be authorised by a bulletin.

6.2 Propelling

Rail Operator
When the shunting movement is a propelling movement, you must carry out the movement in accordance with **TO09 Setting Back and Propelling**.

CAUTION
No other rail vehicle movements are to be authorised for the section of line where the shunting movement is taking place.

7. Undertaking Shunt Movements

Rail Personnel
You must undertake shunt movements in accordance with the **Rail Operating Rules**.

CAUTION
All possible care must be exercised when shunting to minimise the risk of injury to Rail Personnel, collisions, derailments and other incidents.

7.1 Active Level Crossing

Operator

When undertaking a shunting movement over an active level crossing, you must:

- be directed by a Competent Worker, and
- not pass over the active level crossing unless:
  - the level crossing equipment is operating correctly, and
  - the level crossing is clear and confirmed as safe for the movement.
- act in accordance with **TO09 Setting Back and Propelling** if setting back over the active level crossing.

If the active level crossing equipment is not operating or the crossing is not clear, you must:

- stop the movement, and
- proceed only when it's safe.

DANGER

There is a risk of collision with road vehicles when shunting over a level crossing. Rail Personnel must only ride on front of a leading rail vehicle over level crossings if the crossing has been protected or automatic level crossing alarms are working.

CAUTION

At level crossings where automatic alarms are not provided or are inoperative, the speed of shunting movements approaching and onto the level crossing must be kept at a walking pace.

7.2 Shunting at Unattended Station or Sidings

Locomotive Engineer

You must tell the Train Controller the expected time of departure of your train when a shunt at unattended stations or sidings is to be carried out.

If the expected shunt does not occur, you must tell the Train Controller before the train is allowed to depart.

You must tell the Train Controller if your train:

- is delayed or will cause a delay to other trains, or
- is delayed by the fixed signal indications at an unattended station.

You must ensure that all rail vehicles being stabled at unattended stations and sidings are correctly secured and protected.

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7.3 Standing at Stations

Rail Operator

You must place rail vehicles in a siding clear of movements on adjoining lines and ensure the brakes are applied.

Unless authorised, you must ensure that rail vehicles detached from a train do not remain on or foul of the:

- main line, or
- crossing loop

You must report any rail vehicle fouling a crossing loop, siding, or adjoining line to the Train Controller.

In automatic signalling areas, you must ensure the rail vehicles are clear of fouling the track circuits.

IMPORTANT
Where derailers are provided, vehicles must be placed within them and the derailers correctly secured.

Train Controller

You must:

- obtain authority from the Network Control Manager to allow rail vehicles to remain standing at any crossing loop
- protect any rail vehicles fouling a crossing loop, siding, or adjoining line
- record the details on the train control diagram.

Network Control Manager

You must arrange for the main line or crossing loop protection to be applied and a bulletin to be issued.

7.4 Standing Foul Inside Station Limits

Rail Operator

You must tell the Signaller the location of rail vehicles when they have been shunted from a siding and are detained:

- on the main line, or
- on any other line normally used for train movements.

7.5 Rail Vehicles in Sidings on a Grade

Rail Operator

In a siding on a gradient, you must place rail vehicles close to the buffer stop or trap points at the lower end of the siding.

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7.6 Shunting on a Rising Gradient Siding

Rail Operator
You must ensure that the number of rail vehicles shunted by a locomotive into a siding on a rising gradient does not exceed the maximum allowed to be propelled in accordance with the **Rail Operating Company's Operating Code**.

7.7 Passenger Rail Vehicles Through Yards

Train Controller
You must ensure that rail vehicles containing passengers do not proceed through freight yards or container transfer sites:

- without the authority of the Officer in Control of Train Running, and
- a bulletin is issued for the movement.

7.8 Fastening Wagon/Carriage Doors

Rail Personnel
Before moving any wagon/carriage, you must ensure the doors are secured in the closed position.

If carriage doors cannot be secured in the closed position, the carriage must be empty, and no Rail Personnel or passengers are in the carriage.

8. Marshalling

Rail Operator
You must marshal rail vehicles in the correct location within the train consist.

You must provide the Train Controller with the train consist information.

8.1 Marshalling Irregularity

Rail Operator
You must tell the Train Controller of any identified marshalling irregularity.

Train Controller
If a marshalling irregularity is identified, you must agree on the plan with the Operator to correct the irregularity.

9. Attaching Locomotives to Rail Vehicles

Competent Worker
After attaching a locomotive to stationary rail vehicles, you must ensure they are correctly coupled.

CAUTION
Before coupling, you must ensure that rail vehicles are secured by park brake, air brake, chocks, or other approved methods.

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IMPORTANT
The Rail Operator or Train Manager must correctly couple the locomotive to a train at the starting station and at stations where the locomotive is uncoupled for locomotive purposes.

Operator
You must ensure the brake system is fully functional before releasing park brakes or removing other devices.

If there is no Rail Operator or Train Manager, you must ensure that the coupling between the locomotive and the rail vehicles has been correctly performed.

9.1 Assisting Motive Power Units

Operator
When a motive power unit is required to assist your rail vehicle from the rear, you must ensure it is coupled to the rail vehicle before moving.

When the assisting motive power unit is detached, you must ensure the air brake is coupled between the rail vehicle and the motive power unit(s).

IMPORTANT
Assisting motive power units must only be uncoupled from a rail vehicle at a station unless otherwise authorised in the **Local Network Instructions**.

10. Detaching Rail Vehicles

Rail Personnel
You must not detach rail vehicles from a locomotive, or a continuous brake system, until:

- the rail vehicles are secured against unintended movement by exhausting all the brake pipe air from the rail vehicles
- the park brakes are applied to hold the rail vehicles from moving.

You must apply chocks to prevent movement if the park brakes cannot hold the rail vehicles.

10.1 Securing Detached Rail Vehicles

Rail Personnel
Detached rail vehicles must be secured:

- clear of adjacent lines
- clear of level crossings
- where possible, inside derailer devices or points provided to prevent rail vehicles from entering running lines.

11. Defective Rail Vehicles

Rail Personnel

You must not move, shunt against, or attach rail vehicles to any defective rail vehicle without authorisation from the Rolling Stock Representative.

Before any movement occurs, you must:

- arrange for the chocks or other safety devices to be removed by the Competent Worker who put them there
- confirm that no work is being undertaken on or near the rail vehicles
- confirm it is safe to move the rail vehicles.

Train Crew

If a defective vehicle is to be stabled on a crossing loop, you must ensure the rail vehicle can be adequately secured to prevent it from moving, provided:

- it has been authorised by bulletin, and
- the location is at a station with only a main line and a crossing loop.

12. Derailers

Rail Operator

Where derailers are provided, you must:

- place rail vehicles within the derailers
- ensure the derailers are correctly secured.

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TO09 Setting Back and Propelling

1. Principles

This rule unit is aligned with the following KiwiRail Fundamental Operating Principles:

- **Principle 1** - Rail personnel must take all possible steps to ensure their activities are carried out in a safe manner.
- **Principle 2** - Rail vehicles must maintain safe separation via an appropriate method of signalling and/or operation.
- **Principle 3** - Before any rail vehicle moves, it must have an authority to move that clearly indicates the limits of that authority.
- **Principle 4** - Rail vehicles and other transport modes must be separated or the interface managed.
- **Principle 6** - Rail vehicles must be prevented from moving if their integrity or compatibility is unsafe or suspected to be in an unsafe state.
- **Principle 8** - Safe separation must be maintained between people, plant, and rail vehicles.

2. Purpose

To prescribe the rules for setting back or propelling on the main line.

3. General

Operator

You must ensure that you have received the appropriate authority from the Signaller / Train Controller before setting back or propelling on the main line in accordance with RP17 Setting Back and Propelling Movements.

Signaller, Train Controller

Before authorising a setting back or propelling movement, you must plan the movement in accordance with RP17 Setting Back and Propelling Movements, 1.1 Planning and ensure:

- the Operator is aware of the limits of the movement, and
- unless the movement is for shunting and attaching purposes, the track section into which the movement is to proceed is clear of rail vehicles.

4. Pilot Requirements

4.1 Pilot Required to Accompany Train

Pilot

You must only use approved riding positions when available.

When approved riding positions are not available and access to the rear of the train is deemed impracticable, you must walk, or travel by road vehicle.

When piloting the movement, you must:

- pilot the movement from a safe location
- ensure all points are correctly set before signalling the movement
- maintain Range of Vision
- stop the movement if the Range of Vision cannot be maintained
- maintain effective communication with the Operator at 10-second intervals, and in accordance with RP01 Applying Network Communications

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- immediately tell the Operator to stop if the communication does not occur at the agreed intervals or is interrupted.

4.2 Pilot Required to Protect a Feature

Pilot

When you are required to protect a railway feature, you must do so in accordance with RP17 Setting Back and Propelling Movements, 3.2 Protecting a Feature.

4.3 Pilot not Required

Signaller / Train Controller

You must only authorise a setting back or propelling movement without a Pilot when no features require protection during the setting back movement.

You do not need to arrange a Pilot for signals, sidings, turnouts and tunnels when you can confirm the line is clear by:

- setting signals/points and/or seeing their status, and/or
- issuing a safe working authority, track warrant or bulletin for the movement that encompasses intermediate signals.

5. Propelling Hazards and Controls

The following details the controls that must be applied for the identified hazards.

5.1 Collision with Stock or Trespasser

Operator

You must:

- propel up to a maximum speed of 25 km/h
- frequently sound the motive power unit horn
- display lights on the leading vehicle in accordance with TO09 Setting Back and Propelling, 8. Authorised Propelling Movements.

5.2 Collision with a Person on a Platform

Pilot

When piloting a freight train, you must:

- tell the Operator to stop the movement before the platform, and
- check that people are clear before calling the movement past the platform.

Operator

You must stop the movement before the platform when advised by the Pilot.

5.3 Tunnel Gases

Pilot

Before entering any tunnel, you must:

- hold a current and relevant LTO for entering the tunnel
- stop the movement
- fit a gas mask

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- check that the gas mask has a correct seal
- radio a ‘gas mask sealed’ confirmation to the Locomotive Engineer.

If you don't hold a current and relevant LTO to enter the tunnel, you must walk or travel by road vehicle around the tunnel.

5.4 Unable to Communicate Directly by Radio

Pilot, Operator

When the Pilot and Operator cannot communicate directly by radio, you must use the Train Control radio channel.

> **CAUTION**
> Permission must be obtained to use the Train Control radio channel.

When using the Train Control radio channel, you must:

- retain exclusive use while the train is moving, and
- ensure no other communications are permitted.

Should an emergency call interrupt the piloting movement, you must bring the movement to a stop and not recommence movements until authorised by the Train Controller.

5.5 Restricted Visibility

Pilot

When accompanying the train, you must:

- maintain a range of vision, and
- communicate with the Operator by radio at 10-second intervals, and
- only use hand signals when the radio is not available.

Operator

You must frequently use the motive power unit horn when entering locations with restricted visibility.

5.6 Inoperative Train Brakes

Operator

While operating the propelling motive power unit, you must ensure the train brake is operative on the vehicles involved.

6. Movements

Operator

When undertaking a setting back or propelling movement on a running line, you must ensure:

- the Pilot is stationed in accordance with 4. Pilot Requirements:
  - at the leading end of the movement, or
  - at the first feature requiring protection
- communication and agreed protocols have been established

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- the movement is authorised by the Train Controller or Signaller
- the movement does not exceed its limit of authority
- the speed of the setting back movement does not exceed:
  - 25 km/h when propelling, or
  - Restricted Speed when driving from the cab of the leading unit facing in the direction of travel

7. Level Crossings

Pilot

When required to pilot a rail vehicle over a level crossing, you must do so in accordance with RP17 Setting Back and Propelling Movements, 4. Level Crossings.

Pilot, Operator

At an active level crossing, you must ensure a setting back or propelling movement does not proceed unless:

- warning equipment is operating correctly, or
- a Competent Worker is in place to protect the crossing.

Operator

When being directed over an active level crossing by a Pilot, you must:

- reduce speed on the approach to 10 km/h
- stop on the approach track circuit and do not proceed until the warning devices are operating
- not exceed 10 km/h until advised that the leading rail vehicle has cleared the level crossing.

When propelling towards level crossings where automatic alarms are either not provided or are inoperative, you must keep the speed of the movement to walking pace being prepared to stop until the movement is completely fouling the level crossing.

CAUTION

You must ensure a setting back or propelling movement only proceeds over passive level crossings if the crossing is clear, or level crossing protection is in place.

8. Authorised Propelling Movements

The following describes authorised propelling movements on the main line and the lights required to be displayed.

Operator

You must display a red light on the front of the leading rail vehicle when you propel on the main line with a locomotive when:

- a train is stalled and must be set back
- the line is blocked, and trains are being worked to the points of obstruction on both sides
- working work trains between a siding and a point of loading or discharge
- authorised by an Officer Controlling Train Running.

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NOTE
When shunting within station limits on the main line, a red light is not required to be displayed on the front of the leading rail vehicle. The white lights on a leading shunter's refuge wagon may be illuminated instead.

You must display a white light on the front of the leading rail vehicle when you propel on the main line with a locomotive when:

- under special instructions when assisting up gradients
- a locomotive is disabled, and the following locomotive is propelling it to the next station, siding, or crossover road
- required to assist in starting a train from a station
- using a shunter's refuge wagon as the lead vehicle.

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TO10 Network Line Speeds

1. Principles

This rule unit is aligned with the following KiwiRail Fundamental Operating Principles:

- **Principle 1** - Rail personnel must take all possible steps to ensure their activities are carried out in a safe manner.
- **Principle 7** - Rail vehicles must only be authorised to operate where the rail vehicle is compatible with the railway infrastructure.

2. Purpose

To prescribe the rules for safely controlling the speed of rail vehicles in the network.

3. General

Operator

You must ensure your rail vehicle does not exceed any allocated permanent or temporary line speed.

NOTE

For maximum line speeds, refer to the **Local Network Instructions**.

4. Line Speeds

4.1 Permanent Speeds

Operator

Where permissible speeds are differential, you must control the speed to no more than the maximum speed that applies to the rail vehicle.

4.2 Curves

Operator

You must not exceed the maximum speed displayed on the curve board, unless the EMU ETCS indicates a higher speed.

Although a curve board may show a higher speed, you must not exceed the line speed authorised for the type of rail vehicle.

4.3 Turnouts

Operator

You must only exceed 25 km/h through the curved roads of turnouts when:

- a speed board authorising a higher speed is exhibited, or
- the EMU ETCS authorises a higher speed, or

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- a higher speed is shown in the schedule of maximum speeds.

4.4 Lines other than Main and Branch Lines

Operator
You must not exceed 25 km/h for all movements. If necessary the speed of the movement must be so regulated that it can be stopped in half the clear distance seen ahead.

5. Temporary Speed Restrictions

Competent Worker
You must impose temporary speed restrictions whenever work or conditions affect track or structures to the extent that the maximum line speed must be reduced.

Train Controller
You must:

- tell the Operators of all trains and MTMVs which will pass over the defective line about the restriction until printed advice is provided, and
- record the temporary speed restriction information on the train control diagram and in the Access Provider's Speed Restriction System.

Where temporary speed boards cannot be placed, you must tell the affected Operators and Rail Personnel about the speed restrictions and arrange a bulletin.

Operator
You must ensure that the train does not exceed the temporary speed restriction displayed until the entire consist has passed beyond the restriction.

NOTE
For defective warning devices at level crossings, normal speed may be resumed once the rail vehicle is on the crossing.

5.1 Temporary Speed Restriction Boards Placement

Competent Worker
You must place temporary speed boards in accordance with **RP15 Implementing Temporary Speed Restrictions**.

IMPORTANT
The boards must be erected on the day and at the time nominated by the Access Providers Speed Restriction System or bulletin. The reverse applies when a speed restriction is to end.

CAUTION
Boards must not be covered.

5.2 Restriction Advice

Operator
You must:

- ensure you have the current speed restriction information before commencing a journey and departing intermediate terminals
- when told of a temporary restriction by the Train Controller, endorse the printed speed restriction information on the train work order or Metro Operators worksheet.

IMPORTANT
Unplanned line closures must be notified by bulletin.

6. Defective or Missing Speed Board

Operator
You must tell the Train Controller immediately if you see that a speed board is:

- missing, or
- in a different place from the one advertised, or
- is other than advertised.

Train Controller
You must:

- tell the Track Maintenance Representative, and
- tell affected Operators, and
- arrange for a bulletin to be issued.

7. Temporary Heat Restrictions

IMPORTANT
The following instructions will operate during summer heat seasons only.

The commencement and termination dates of each heat season will be notified by Alert.

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Any track at risk for possible misalignment during the summer months will have a 40 km/h speed restriction imposed when heat alarm areas are active and will be included in the Access Provider's Speed Restriction System.

NOTE
During the heat season, the daily heat sheets can be accessed:

- on the KiwiRail Sharepoint site and can be accessed here, or
- in Shield Support Documents - Issues and Amendments, 3. Daily Heat Sheets.

7.1 Implementation of Temporary Heat Restrictions

Competent Worker

You must place temporary heat boards in accordance with **RP15 Implementing Temporary Speed Restrictions, 7.1 Implementing Temporary Heat Restriction Boards.**

Track Maintenance Representative

You must provide a list to the Train Controller of all temporary heat restrictions for affected sections of track.

Train Controller

You must input all temporary heat restrictions provided by the Track Maintenance Representative into the Access Provider's Speed Restriction System.

7.2 Activation of Heat Areas

Train Controller

When a heat alarm area is activated or you are told of high rail temperature by an inspecting Track Maintenance Representative, you must apply **RP15 Implementing Temporary Speed Restrictions, 7.2 Application of Heat Restrictions**.

NOTE
When the heat alarm activates for an area where there are no temporary heat restriction sites, you must still tell the Operations Support Representative. You are not required to tell Operators unless the inspecting Track Maintenance Representative directs otherwise.

Operations Support Representative

When you are told that a heat alarm area has been activated, you must contact the Track Maintenance Representative responsible for inspecting the applicable heat area.

If you cannot contact the Track Maintenance Representative for the affected heat alarm area and it has been 60 minutes since the activation of the alarm, you must escalate this to the Field Production Manager or Asset Engineer, as detailed in **7.3 Track Clearance Criteria, Option B**.

Track Maintenance Representative

When you are told that a heat alarm area has been activated, you must arrange a time with the Train Controller to inspect the track.

You must tell the Train Controller of the requirements and the criteria for lifting the heat speed restrictions.

NOTE
Where possible, you must inspect the track at the hottest time of the day to look for disturbance and take temperature readings at known risk sites.

NOTE
Where practicable, you must carry out the inspection before the passage of trains and prioritise inspections on lines where passenger trains are scheduled to run on the day.

Operator

You must call the Train Controller to request advice of active heat alarm areas:

- when on a train at 10:00 hours, or
- when departing from origin between 10:00 and 20:00 hours (except where Local Network Instructions apply), or
- after a crew change between 10:00 and 20:00 hours daily.

IMPORTANT
When you are told by the Train Controller of an affected heat alarm area, you must ensure that the train does not exceed the heat restriction displayed until the entire consist has passed beyond the restriction. This includes heat restrictions partly or wholly within the locations specified for the heat alarm area.

NOTE
Temporary heat restrictions will be listed on the Speed Restriction Advice and Train Work Orders.

7.3 Track Clearance Criteria

Track Maintenance Representative / Train Controller

There are two options for lifting heat alarm areas.

Option A - Following the activation of a heat alarm area, the heat alarm area can be lifted once:

- the Track Maintenance Representative has completed a track inspection or advised the Train Controller of their requirement,
- the heat sensor displays a normal indication,
- the first rail vehicle has passed through the heat sensor area or the track inspection is completed after the sensor has returned to normal, and
- no track faults are reported by the Operator or Driver.

NOTE
When additional track assessments are necessary, the Track Maintenance Representative must contact the Train Controller at a nominated time to advise the action to be taken.

Option B - When the requirements of Option A are unable to be met, the Production Manager or Asset Engineer will approve the lifting of the heat alarm area when:

- the heat sensor displays a normal indication, and
- the first rail vehicle has passed through the heat alarm area with no track faults reported by the Operator or Driver.

NOTE
The Production Manager or Asset Engineer must tell the Train Controller or Operations Support Representative of this action.

Operator / Driver

You must tell the Train Controller of any track faults encountered en route in accordance with **GR06 Conditions Affecting the Network**.

Track Maintenance Representative

You must inspect the track as per special requirements in **T200 Engineering Handbook Instructions 480 – 485** and **GR06 Conditions Affecting the Network, 10. Weather Conditions**.

IMPORTANT
Protection of HRVs must be applied in accordance with **TS12 Hi-Rail Vehicles, 4. Protection Requirements.**

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TO11 Passenger Train Operations

1. Principles

This rule unit is aligned with the following KiwiRail Fundamental Operating Principles:

- **Principle 1** - Rail personnel must take all possible steps to ensure their activities are carried out in a safe manner.
- **Principle 8** - Safe separation must be maintained between people, plant, and rail vehicles.

2. Purpose

To prescribe the rules for the operation of passenger trains in the network.

3. General

Rail Personnel

You must apply these rules in accordance with the other related **Rail Operating Rules** where necessary.

3.1 Train Manager Responsibilities

Train Manager

You must assist the Operator:

- in protecting the train
- resuming normal operations when requested.

You must ensure you understand any special instructions for emergency working on that section of the line.

3.2 Running and Loading of Passenger Trains

Officer in Charge

You must:

- monitor the running and loading of passenger trains
- tell the Train Controller of any running or loading issues.

Train Controller

You must act in accordance with any information received on the running or loading of passenger trains.

4. Driving Cab Access

Train Crew

You must prevent passengers from riding in the driving cab on multiple units with direct access.

Operator

You must not allow any Rail Personnel into the driving cab except on matters relating to the running of the train or where the cab entry may be required to perform an emergency track inspection.

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5. Advice of Delays

5.1 Dispatching Trains

Officer In Charge, Signaller

You must dispatch passenger trains on schedule unless the Train Controller provides alternative instructions.

Rail Personnel

When a train cannot be dispatched on time, you must tell the Train Controller:

- of the delay
- the probable time the train will be ready for dispatch
- of any further information regarding the detention.

You must continue to liaise with the Train Controller for:

- clarification of the impending train movement
- the intended movement of approaching trains to expedite the movement.

5.2 Delays to Passenger Trains

Train Crew

When there are delays to your train, you must tell:

- the Train Controller
- the passengers, the cause of the delay, and the action being taken.

Train Controller

When there are reports of passenger train delays, you must act in accordance with the relevant Access Agreements and Train Control Instructions.

NOTE

The notification of delays to long-distance and suburban trains is critical to enable Passenger Business Managers to provide timely and accurate information to customers.

6. Leaving the Train

Train Crew

When leaving the train, you must ensure the train is secured against unintended movement and the cab is secured from unauthorised access.

7. Stopping in Tunnels and on Bridges

Operator

If a passenger train comes to an unplanned stop in a tunnel, you must restart the movement and clear the tunnel as soon as possible.

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You must not stop a passenger train on a bridge that is not completely decked and provided with footwalks on both sides of the line.

You must stop the train short of the bridge if it cannot cross before coming to a stand.

8. Overrunning or Stopping Short

Train Crew

If a passenger train overruns or stops short of the platform at an attended station, you must consult with the Officer in Charge to ensure it is safe to move the train onto the platform.

If the train is to be moved to the platform at any station, you must:

- tell the passengers before the train is moved
- ensure that passengers have not exited the train or attempted to exit the train whilst it is moving.

Any setting back movement must be carried out in accordance with **TO09 Setting Back and Propelling**.

Officer in Charge

You must instruct the Operator to move the train by using a radio or providing hand signals.

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