KiwiRail

Signalling Operations

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SO01 Responding to Signals

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 8** - Safe separation must be maintained between people, plant, and rail vehicles.

2. Purpose

To prescribe the rules for responding to signals in the network.

3. General

Rail Personnel

If a signal is imperfectly displayed, you must act in accordance with **SO04 Defective Signals**.

CAUTION

The absence of a signal at a place and time where and when a signal is ordinarily shown, or a signal imperfectly exhibited, or the exhibition of a white light at a place where a green, yellow, purple, or red light should be seen, must be regarded as a stop signal.

DANGER

Unusual or irregular signals or the hands waved violently denote danger and the necessity for stopping immediately.

NOTE

A description of signals, indicators and boards are in the **Network Signals, Indicators and Boards Manual**.

IMPORTANT
All signals must be complied with unless it is unsafe, or in the case of a fixed signal displaying a proceed indication, it is obvious the route has been incorrectly set. In addition, should an Operator consider an indication an unusual signal, they must contact the Signaller.

3.1 Rail Vehicle Movements

Rail Personnel
A proceed signal must be used for all train and MTMV movements unless affected by the following operating conditions:

- the line is occupied, or
- the signal is faulty, or
- the movement is into a siding or another non-signalled territory.

Operator
When operating trains you must observe and respond to all signal indications and boards.

When you cannot observe a signal indication or board, you must confirm the signal aspect or board instruction with the Signaller.

When a signal is placed at proceed, you must be satisfied that it refers to your rail vehicle and the line it is on and must understand the authorised movement.

When a signal applies to the exit from more than one siding, you must only move towards the signal when you have received verbal instructions from the Rail Operator or Officer in Charge.

3.2 Signals in Connection with Starting of Trains

Operator
You must only start trains when the authority to proceed has been received verbally or by a signal.

You must also obtain authority from the Train Manager on passenger trains to start the train from passenger stops.

You must obtain confirmation verbally or by the correct signal that the Train Crew have joined the train.

You must acknowledge the confirmation.

At unattended stations, you must be satisfied that all is safe for the train to proceed.

NOTE
When a passenger train is scheduled to stop, the train may proceed without stopping on receipt of advice from the Train Manager.

Officer in Charge
Where no fixed signals control the departure of trains and points are operated from a Signal Box, you must ensure the points are correctly set.

3.3 Changing Signal Indications

Signaller
Under normal conditions, if a rail vehicle is standing at or approaching a signal, you must only change the signal indication to a more restrictive aspect when the Operator:

- has been told, and
- can respond to the altered indication before passing the signal.

You must only change the route or give a signal for a conflicting movement when it is confirmed that the signal given initially will not be taken.

When signals need to be put to stop in an emergency, you must act in accordance with **GR06 Conditions Affecting the Network**.

WARNING
Restoring a signal in these circumstances may delay clearing the same or conflicting routes.

Operator
If the rail vehicle passes the changed signal at stop, you must act in accordance with **SO03 Exceedance of Authority**.

4. Signal Indications

4.1 Placing Signals at Proceed

Signaller
When placing a signal to proceed for rail vehicle movements:

- ensure the points are correctly set and secured
- ensure it is safe for the rail vehicle to proceed
- avoid delaying the rail vehicle
- ensure signals have returned to stop as soon as the rail vehicle has passed the signal.

4.2 Stopping at Signals

Operator
When it is necessary to stop the rail vehicle at a signal:

- ensure the signal is kept in view if required to move closer
- do not allow any part of the rail vehicle to pass the signal.

WARNING
Avoid stopping trains on bridges, tunnels, or over level crossings where possible.

4.3 Authorising Passing of Signals at Stop

Signaller

You must only authorise a signal at stop or a limit of authority to be passed in accordance with the signalling requirements:

- **SO02 Automatic Signalling Rules**, or
- **SO08 Track Warrant Control.**

You must not give verbal or written instructions when a fixed signal can be used for the movement.

NOTE
Except for a departure or intermediate signal, any signal may be passed at stop on instruction from the Signaller, who directly controls that signal.

IMPORTANT
If a signal other than a departure or intermediate signal has been passed at stop, it must be managed in accordance with **SO03 Exceedance of Authority**.

NOTE
For an approach signal, this instruction is given by the Signaller, who controls the absolute signal in advance.

You must only authorise a rail vehicle to pass a signal at stop when:

- the rail vehicle is stopped at the signal
- all points are correctly set and secure for the intended movement
- the route is cleared up to the next fixed signal in advance unless into a track warrant control area
- another rail vehicle has not encroached onto the section of track
- a conflicting movement has not been signalled or authorised in accordance with **RP18 Using Points, 2.2 Motor Points Distant from a Signal**.
- If an obstruction exists:
  - check that it is safe for the proposed movement, and
  - the Operator is briefed.

You must operate the lever or computer command to clear the signal.

IMPORTANT
A lever must be left in the clear position until the authorised movement has cleared the points. This prevents opposing signals from being cleared and activates level crossing alarms near the signal.

5. Signals Obscured

Rail Personnel
You must report any signal that is obscured to the Signaller.

Signaller
You must:

- tell the affected Operators
- arrange for a Signals Maintenance Representative to attend
- if possible, only allow trains to move towards the signal when it displays a proceed aspect.

Operator
You must remain alert and have your train under such control to enable you to stop, before passing a signal of which the indication is not known..

6. Signals Not in Use

Signals Maintenance Representative
When an existing signal is not in use, you must:

- arrange to have the power supply removed from the signal so that it is not lit, and
- place a cover that completely conceals the signal indications over the signal, or
- arrange to have a white 'X' sign placed over the signal to define that it is not in use, or
- turn the signal head away from the view of the Operator, and
- request a bulletin to advertise that the signal is not in use.

Operator
You must not acknowledge any existing signal that is not in use.

7. Boards

Operator
You must comply with the meaning of the instruction detailed on boards displayed in the network.

SO02 Automatic Signalling

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 Automatic Signalling Rules in the network.

3. General

Rail Personnel

You must apply the correct authority for safe working.

NOTE

A description of signals, indicators and boards are in the **Network Signals, Indicators and Boards Manual**.

IMPORTANT

If the automatic signalling system fails or is otherwise compromised (e.g., disabled train), a special safe working method will be applied, as outlined in these rules.

3.1 Levels of Authority

Rail Personnel

You must only use the approved levels of authority below:

- Written: is issued via a form known as a safe working authority (SWA).
- Verbal: is issued verbally.
- Self-Authorisation: the Operator can act after completing the prescribed actions.

IMPORTANT
Each movement mentioned in these rules will require a separate authority, except for a SWA-03.

3.2 Issue of Authority

Train Controller
If an error is detected during the transmission of an authority, you must:

- cease issuing the authority, and
- issue a new authority.

You must only cancel an authority in accordance with **Train Control and Signal Box Manual, 9. Safe Working Authority** if:

- all instructions contained within an authority have been carried out, or
- it was not possible to carry out all the instructions contained within an authority.

Operator
When required by the Train Controller, you must confirm your understanding of the limit of authority.

4. Block Section Entry Authority

NOTE
At some locations, entry into the block section is not governed by starting signals, departure signals or block entry boards. These locations and signals will be listed in the **Local Network Instructions.**

Train Controller
You must provide written authority for the rail vehicle movement where no signal is provided to control entry into the block section.

4.1 Starting Signal Movement Authority

Rail Personnel
When the rail vehicle movement is at the starting signal, you must only use the authorities in Table 1.

Table 1: Starting Signal Movement Authority

#	Starting Signals (Absolute)	Movement Authority
1a	To pass when failed or displaying an imperfectly displayed aspect.	Verbal from Signaller.
1b	To pass when failed or displaying an imperfectly displayed aspect with a Restricted Speed aspect.	R aspect illuminated, Proceed (must ascertain the reason for 'R' light)
2	Shunting movement and cannot set back within the signal.	Verbal from the Signaller to depart.
3	Enter the wrong line.	SWA-01 from the Train Controller.

#	Starting Signals (Absolute)	Movement Authority
4	MTMV / Work Train to enter a Protected Work Area using: • Mis.60 • Blocking • Lockout Zones	SWA-01 or SWA-03 from the Train Controller, followed by verbal authority from the Rail Protection Officer.
5	MTMV / Work Train to pass a signal within a Protected Work Area that has failed or displaying an imperfectly displayed signal, or cannot be cleared using: • Mis.60 • Blocking • Lockout Zones	SWA-01 or SWA-03 from the Train Controller, followed by verbal authority from the Rail Protection Officer.

4.2 Departure Signal and Block Entry Board Movement Authority

Rail Personnel

When the rail vehicle movement is at the departure signal or a block entry board, you must only use the authorities in Table 2.

Table 2: Departure Signal and Block Entry Board Movement Authority

#	Departure Signal & Block Entry Board (Absolute)	Movement Authority
1	To pass a departure signal: • when failed, or • displaying an imperfectly displayed aspect	SWA-01 from the Train Controller
2	To pass a failed, or displaying an imperfectly displayed departure signal with a Restricted Speed aspect	R aspect illuminated, Proceed (must ascertain the reason for 'R' light) R aspect not illuminated, SWA-01 from the Train Controller
3	Shunting movement and cannot set back within the signal	Verbal from the Train Controller (provided the initial movement passed the signal at proceed or SWA-01 to proceed is held) If a SWA-01 for shunting purposes has been issued, opposing trains must be advised before giving verbal authority
4	MTMV / Work Train to enter or pass within a Protected Work Area using: • Mis.60 • Blocking • Lockout Zones	SWA-01 or SWA-03 from the Train Controller, followed by verbal authority from the Rail Protection Officer.
5	MTMV / Work Train to pass a signal within a Protected Work Area that has failed, or is displaying an imperfectly displayed signal, or cannot be cleared using: • Mis.60 • Blocking • Lockout zones	SWA-01 or SWA-03 from the Train Controller, followed by verbal authority from the Rail Protection Officer.
6	Block Entry board	SWA-01 from the Train Controller

4.3 Following Movements

Train Controller

Before issuing an authority for a following movement into a block section, you must ensure the rail vehicle ahead has:

- cleared the intermediate signal in advance, or
- called clear and complete of the signal / board for the entry into the Protected Work Area to allow authorisation of a following infrastructure movement.

NOTE
May be either a signal (departure, starting or intermediate), or a board (block entry or compulsory stop) used to indicate the limits which requires the Rail Protection Officer's permission to pass, in addition to the Train Controller's authority.

IMPORTANT
This rule does not apply when wrong line running is in place.

4.4 Advising Signaller

Train Controller
You must provide a copy of the SWA to the affected Signaller for a departure signal, starting signal, and block entry board.

4.5 Authority of Rail Protection Officer

Train Controller
You must receive verbal authority from the Rail Protection Officer when allowing entry into a protected work area.

You must ensure the ‘RPO Authority Also Required’ is included in the following sections when issuing the following:

- Clause 8 of a SWA-01, or
- Clause 7 of a SWA-03.

4.6 Mobile Track Maintenance Vehicles Not Coupled

Train Controller
When the Operator requests, you must issue a SWA-01 or SWA-03, which will apply to all MTMVs in the group at the signal.

Operator
You must ensure:

- the movement of track vehicles is safe
- all track vehicles move closely together
- you tell the Train Controller when the complete group has passed the signal and no longer occupies station limits.

5. Setting Back in a Block Section Authority

Rail Personnel
When the rail vehicle movement is to set back in a block section, you must only use the authorities in Table 3.

Table 3: Setting Back in Block Section Authority

#	Setting Back	Movement Authority
1	When proceeding through the block section and completely clear of station limits	SWA-01 from the Train Controller
2	Setting back is required after entering station limits if the movement has not cleared the block section for repositioning movement	SWA-01 from the Train Controller
3	Movement travelling to a switch-locked siding on a SWA-01 (to enter) and is to return to the station in the rear immediately	SWA-01 from the Train Controller (an SWA-01 authority will be issued incorporating authority to enter the section and then set back)
4	Shunting or repositioning movement has entered a block section and requires setting back within station limits	Movements in accordance with fixed signals
5	Train divided, the location of the rear portion has been established, and it is necessary to set the front portion back to recouple the train	Self-authorisation, shunting movement under the direction of the Train Crew
6	Work train or mechanical test train is divided because of the nature of the work, and it is necessary to set the front portion back to recouple the train	Verbal authority from the Person in Charge (Engineering or Mechanical), with the movement under the direction of the Train Crew
7	The locomotive was taken forward to establish protection on an adjacent line and must return and couple onto the train to re-secure it	Verbal authority from the Rail Incident Controller (if established) required. If the Rail Incident Controller is not established, self-authorisation

5.1 Multiple Setting Back Movements

Train Controller

When more than one setting back movement is required, you must arrange for:

- the trains to be coupled together, where practicable, for the setting back movements, or
- individual trains to set back on separate authorities.

You must only issue another SWA-01 when the previously authorised movement is clear and complete of the block section.

When a setting back movement is required, and the following train is in the block section, you must:

- instruct the following train to stop a safe distance short of a specified terminating limit for the setting back movement
- confirm the train is stopped and instruct the Operator of the following rail vehicle to only move when authorised before issuing the SWA-01 for the setting back movement.

NOTE
A specified terminating limit may include a signal, intermediate station, meterage peg, or clearly defined point.

5.2 Switch Lock Sidings

Train Controller

You may verbally authorise movements to work in either direction for shunting of switch lock sidings.

When another movement or work has been authorised for any part of the line, you must not verbally authorise any movements to work in either direction for shunting switch lock sidings.

Operator

You must be aware that level crossing warning devices may fail to operate when shunting, or working in either direction.

6. Passing Intermediate Signals at Stop

Rail Personnel

When the rail vehicle movement is to pass an intermediate signal at stop, you must only use the authorities detailed in Table 4.

Table 4: Passing an Intermediate Signal at Stop Authority

#	Passing an Intermediate Signal at Stop	Movement Authority
1	Absolute signals not fitted with 'A' light	Verbal authority from the Train Controller
2a	Absolute signal with 'A' light fitted but not illuminated	Verbal authority from the Train Controller
2b	Absolute signal with 'A' light fitted but not illuminated and MTMV / Work Train to enter a Protected Work Area using: • Mis.60 • Blocking	SWA-01 or SWA-03 from the Train Controller followed by a verbal authority from the Rail Protection Officer
3	All absolute intermediate signals within a Protected Work Area	After the Train Controller has communicated with the Rail Protection Officer - Verbal authority or SWA-03 from the Train Controller
4	Absolute signal protecting a switch-locked siding: 'A' light fitted but not illuminated	Verbal authority from Train Controller (provided it has been confirmed there is no conflicting movement at the siding). Once authorised, the Operator must ensure that: • when approaching the siding, check for any rail vehicles that may have moved foul of the main line • the switch lock door is examined and confirmed closed • the points are checked to ensure they are correct set before passing over them
5	Permissive signals	Self-authorisation by the Operator provided the movement is stopped at the signal for 10 seconds.

IMPORTANT

'A' lights may automatically illuminate if signal communication is lost with the Train Control Centre.

7. Disabled Trains

Rail Personnel

You must only use the authorities in Table 5 for relief rail vehicle movements in a block section.

Table 5: Relief Train Authority

#	Relief Rail Vehicle	Movement Authority
1	Pass departure, starting or absolute intermediate signal when displaying a stop indication to recover a disabled rail vehicle	SWA-02 from the Train Controller
2	Pass a starting signal or block entry board to run on the 'wrong line' to recover a disabled rail vehicle	SWA-02 from the Train Controller
3	Pass a departure signal displaying a block entry Restricted Speed aspect to recover a disabled rail vehicle	'R' aspect illuminated – Proceed. If not illuminated, SWA-02 from the Train Controller

#	Relief Rail Vehicle	Movement Authority
4	Pass a permissive Intermediate signal at stop to recover a disabled rail vehicle	Self-authorisation by the Operator provided the movement is stopped at the signal for 10 seconds
5	Set back in a block section when recovering a disabled rail vehicle	SWA-02 from the Train Controller

7.1 Issuing of Authorities

Train Controller

When a movement is authorised to re-enter a block section, you must issue a separate authority.

NOTE

The SWA-02 may include all authorisations and instructions to enter the block section, reach the train, and remove it from the block section at the time of issue.

7.2 Following Trains

Train Controller

When other trains need to be set back clear of the block section beforehand, you must authorise these movements by issuing a SWA-01 which must be completed before the SWA-02 is issued.

8. Interlocked Stations

Rail Personnel

You must only use the authorities detailed in Table 6 for interlocked station entry and setting back movements.

Table 6: Interlocked Stations Movement Authority

#	Movement	Movement Authority
1	Pass any absolute signal protecting entry to sections of track within station limits	Verbal from Signaller
2	Pass an approach signal, which may be outside station limits but works with a signal controlled by the Signaller (absolute)	Verbal from Signaller
3	Pass station entry boards (absolute)	Verbal from Signaller
4	Set back within station limits (this includes movements that have not completely cleared station limits)	Verbal from Signaller
5	Pass an absolute signal at a switched out station, and the ‘A’ light is not illuminated	Verbal authority from the Train Controller provided it is confirmed that the signal box has been switched out
6	Pass any signal or station entry board governing entry to sections of track within station limits temporarily closed by: • a Track and Time (Mis.60) Permit, or • Blocking (signal blocked at stop), or • Lockout Zones	Verbal authority from the Signaller provided the Signaller has communicated with the Rail Protection Officer, or SWA-03 from the Train Controller (for multiple movements), followed by verbal authority from the Rail Protection Officer
7	To pass a failed low speed or arrow indicator (fitted to loop departure signal) for movements not proceeding to the block section	Verbal from Signaller (after confirming the points are set for the intended movement and the Train Controller advised)

9. Movement into a Backshunt

Train Controller

You must not use a departure signal to authorise a movement into a backshunt.

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

- The movement must be authorised in accordance with **SO04 Defective Signals**
- Motor points must be isolated and hand-operated, except when local instructions authorise the Signaller to accept the illuminated ‘N’ or ‘R’ light displayed on the signal panel as proof that motorised points are safe for rail movements.

IMPORTANT
Where a signal is not provided, a special bulletin must authorise the movement.

10. Protected Work Area use of SWA-03

Train Controller

When using a SWA-03 for an MTMV or a work train to enter and/or work within a protected work area and must pass absolute signals at stop, you must:

- tell the Rail Protection Officer
- obtain safety assurances from the Signaller for the area concerned, and
- set the route
- apply signal blocking
- issue a SWA-03.

You must only issue a SWA-03 for movements entering and/or within the protected work area in accordance with **RP21 Applying a Safe Working Authority 03, 3. Safe Working Authority 03**.

IMPORTANT
If the route secured under the current SWA-03 needs to be changed, you must cancel the SWA-03 and reset the route before issuing a further SWA-03.

NOTE
A SWA-03 issued by the Train Controller will convert the signals/boards listed from absolute to permissive.

NOTE
The SWA-03 can be used multiple times until the Train Controller has cancelled the authority.

11. Advice of Wrong Line Running

Train Controller
You must tell the affected Signaller and Operators when it is intended to initiate wrong line running over a block section that only allows movements in one direction.

IMPORTANT
For a planned activity, the working of wrong line running will be advised by a bulletin.

12. Conflicting Movements

Train Controller/Signaller
You must complete the prescribed checks and safeguards to ensure no conflicting movements or authorised track occupancies before authorising any movement.

For disabled train arrangements, you must first ensure the prescribed protection arrangements are in accordance with **TO05 Damaged and Disabled Rail Vehicles**.

13. Issue of Authority

Operator
You must repeat the authority details to the Train Controller and confirm that the details are correct.

You must cross-check the details of the authority with any other Competent Worker riding in the rail vehicle cab.

13.1 Setting of Points

Signaller
When issuing an authority, you must tell the Operator the status of points beyond the signal, block entry or station entry board before the movement occurs. This includes the points allowing entry into any intermediate siding.

Operator
You must check that all points are set correctly, unless they are confirmed correctly set by the Signaller.

14. Change of Conditions

Operator
If a signal clears to proceed after the authority has been issued, you must tell the Signaller.

Signaller
You must either:

- tell the Operator to continue the movement on the authority, or
- withdraw the authority to enable the movement to continue in accordance with the signal indication.

NOTE
When required, written authorities are to be endorsed ‘Withdrawn At (add time)’ on both the original and duplicate copies and then the top copy can be destroyed.

14.1 Setting Back

Signaller
You must withdraw the authority if a train is no longer required to set back after the authority has been issued.

14.2 Disabled Rail Vehicle

Train Controller
You must withdraw the written authority if a previously disabled train no longer requires assistance, provided the relief train has been prevented from entering the block section.

15. Speed of Movement

15.1 Passing a Limit of Authority

Operator
After passing a signal at stop or when travelling on a written authority, you must:

- travel at Restricted Speed to the next signal in advance being prepared to find and stop short of an obstruction, a displaced rail, or defective level crossing warning equipment
- stop short of each set of points to be checked, including switch locks, to ensure they are correctly set and secured to enable the movement to pass safely over them
- continue to travel at Restricted Speed if you see level crossing automatic warning devices are operating, or
  - if you cannot see that the automatic warning devices are operating:
    - reduce speed on the approach to 10 km/h,
    - stop on the approach track circuit, and
    - not proceed until the warning devices are operating.
- remain vigilant until you reach the next signal, and always be prepared to stop clear of any obstructions even if the next signal displays a proceed indication
- proceed in accordance with the indications displayed on the next signal once the whole movement has passed the signal.

In the case of a permissive signal or an absolute signal with the ‘A’ light illuminated, you must be prepared to stop a safe distance behind a stationary train in the section.

If the train ahead is moving, you may follow at Restricted Speed.

15.2 Setting Back or Wrong Line Running

Operator
When setting back or running on the wrong line, including relief rail vehicles recovering a disabled train, you must:

- ensure the prescribed requirements for propelling trains on the main line are complied with when setting back in accordance with **TO09 Setting Back and Propelling**

- make frequent use of the motive power unit horn, particularly approaching level crossings
- observe the automatic warning devices operating; if they are not operating, reduce speed to 10 km/h approaching the level crossing and stop on the approach track circuit. You must not proceed until the warning devices are operating because:
  - road vehicles may not expect trains travelling in the opposite direction, and
  - the level crossing approach track circuit may not activate if the system does not expect a train to travel in the reverse direction.

15.3 Authority To Run at Normal Speed

Signals Maintenance Representative

Where signalling has been damaged, you must arrange for a bulletin to be issued by the Network Access Planner to approve normal line speed in a block section.

IMPORTANT

The bulletin must include arrangements to secure points in the affected section and will authorise the Train Controller to write ‘Travel at Normal Speed’ in Clause 8 Other Instructions when issuing the SWA-01.

16. Clearance of Limits of Authority

Train Controller

When issuing a SWA-01, you must specify the requirements for when the movement is clear of the limits of the authority.

Operator

You must tell the Train Controller when the movement is clear and complete for:

- proceed movements:
  - the next interlocked station that governs entry for opposing movements into the same block section. The call must be made when the movement is completely past the departure or starting signal, or block entry board to authorise an opposing or following movement, or
  - when completely past the next intermediate signal beyond the location where the authority is issued, to allow authorisation of the following movement, or
  - called clear and complete of the signal / board for the entry into or within the Protected Work Area to allow authorisation of a following infrastructure movement.
- setting back movements:
  - setting back clear of the block section. The call must be made when the movement is completely past the departure or starting signal, or block entry board to authorise an opposing or following movement, or
  - setting back short distances when the setting back movement has confirmed arrived at the setting back destination.

16.1 Disabled Train

Operator

When a disabled train is being cleared from a block section under a SWA-02, you must tell the Train Controller that it is clear and complete when it has been completely cleared of the section.

IMPORTANT
Clear of the block section is past the departure, starting signal or block entry board at the entry into the block section.

16.2 Top Copy of the SWA

Operator
You must remove and destroy the top copy of the SWA-01 or SWA-02 after confirming that the movement is clear and complete of the limits of the authority.

17. Midland Line

Rail Personnel
You must undertake signalling in the Midland Line area in accordance with the **Local Network Instructions**.

Train Controller
If automatic signalling on the Midland Line is suspended, you must issue a bulletin to specify the affected areas.

IMPORTANT
Signalling may only be suspended in the Midland Line automatic signalling area, as specified in the **Local Network Instructions**.

NOTE
Only one bulletin may be in effect at any one time. If another bulletin is already in effect and a second area is required, the initial bulletin must be cancelled and details transferred to the new bulletin.

SO03 Exceedance of Authority

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 8** - Safe separation must be maintained between people, plant, and rail vehicles.

2. Purpose

To prescribe the rules for when rail vehicles exceed their authority in the network.

3. General

Operator

You must not pass the Limit of Authority for the movement of rail vehicles, which includes:

- a signal at stop without authority, or
- a stop board or sign without authority, or
- a board that indicates a limit of authority, or
- the limit of verbal or written authority.

You must respond to signals at stop in accordance with **SO01 Responding to Signals**.

4. Exceeding the Authority

Operator

If any authority is exceeded, you must immediately:

- stop the rail vehicle
- tell the Train Controller, and where applicable, the Signaller
- remain stationary until otherwise instructed

Train Controller

If you have been informed that a rail vehicle has exceeded a Limit of Authority, you must immediately:

- arrange to stop the rail vehicle that has exceeded its authority if the rail vehicle has not already stopped
- arrange to stop and prevent other rail vehicle movements that are at risk
- tell:
  - the Network Control Manager immediately
  - any Rail Protection Officers at affected worksites
  - affected Operators to wait for further instructions
  - other affected Train Controllers or Signallers.
- manage the incident in accordance with **RP20 Managing Authorities Exceeded**.

Operator
If initial communication with the Train Controller is not available, you must:

- not move the rail vehicle until contact is made, and
- try to make contact by any means.

Train Controller
If a signal is overrun, you must arrange for a Signals Maintenance Representative to attend to the signal.

Signals Maintenance Representative
You must tell the Train Controller when testing has been completed:

- if the signal is operational, or
- if the signal is required to be taken out of service.

4.1 Authority For Rail Vehicle to Continue

Train Controller
If the rail vehicle that has exceeded its authority is to continue forward, you must authorise the rail vehicle in accordance with relevant signalling operations:

- **SO02 Automatic Signalling Rules**, or
- **SO08 Track Warrant Control**.

Operator
You must:

- not move the rail vehicle until you have authority from the Train Controller
- follow the instruction of the Train Controller
- obey any signal, sign, or board in addition to the appropriate authority.

When the rail vehicle that has exceeded its authority is to set back, you must authorise the movement in accordance with the **TO09 Setting Back and Propelling**.

5. Signals Reverted to Stop

Operator
When a signal reverts to stop as you approach it, you must:

- stop immediately and report to the Train Controller if you pass any signal at stop
- not move the rail vehicle until you have authority from the Train Controller
- follow the instruction of the Train Controller.

Train Controller
When a signal reverts to stop because of a signal failure and has been passed at stop, you must:

- check to assess if the Operator is fit to continue
- act in accordance with **SO02 Automatic Signal Authorities**
- arrange for a Signals Maintenance Representative to attend to the faulty signal
- enter the details in the Access Provider’s Incident Reporting System.

IMPORTANT
If the rail vehicle has not stopped, the Train Controller must arrange to stop the rail vehicle as soon as reasonably practical.

6. Signal Placed to Stop in an Emergency

Signaller

When a signal is placed to stop due to an emergency or error, and the rail vehicle is unable to stop before passing the signal, you must:

- tell the Operator the reason for the signal reversion
- check to assess if the Operator is fit to continue
- enter the details in the Access Provider’s Incident Reporting System.

Operator

You must act in accordance with the instructions provided by the Signaller.

7. Stop Boards

Operator

You must stop and report to the Signaller if you pass any stop boards without authority.

SO04 Defective Signals

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 5** - Rail vehicles must be prevented from entering or moving if the railway infrastructure integrity is suspected of being in an unsafe state and/or the line obstructed.
- **Principle 8** - Safe separation must be maintained between people, plant, and rail vehicles.

2. Purpose

To prescribe the rules for defective signals in the network.

3. General

3.1 Automatic Signalling Failures

Signaller

If the automatic signalling fails, you must arrange to provide alternative methods for:

- rail vehicle movements, and
- train crossings.

When the automatic signalling fails, and repairs are being undertaken, trains may move beyond signals at stop in accordance with **SO02 Automatic Signalling Rules**.

4. Imperfectly Displayed Signals

4.1 Reporting Imperfectly Displayed Signals

Rail Personnel

Unless a signal is not in use, you must report the condition to the Train Controller or the Network Control Manager:

- the absence of a signal at a place where a signal is ordinarily shown, or
- a signal imperfectly displayed.

IMPORTANT

The absence of a signal at a place and time where and when a signal is ordinarily shown, or a signal imperfectly exhibited, or the exhibition of a white light at a place where a green, yellow, purple, or red light should be seen, must be regarded as a stop signal.

Operator

If you observe an imperfectly displayed signal, you must:

- stop before an imperfectly displayed signal, if possible,
- tell the Signaller the condition of the signal
- report to your manager on a Mis.346 Infrastructure Maintenance Notification Form in accordance with **RP19 Reporting Faulty Signals.**

IMPORTANT
If it is not possible to stop before the signal, stop as soon as possible and report the imperfectly displayed signal.

4.2 Responding to Imperfectly Displayed Signals

Operator

You must treat any imperfectly displayed signal as a stop signal and report the imperfectly displayed signal to the Signaller.

Signaller

If you receive a report of an imperfectly displayed signal, you must:

- tell the Operator of approaching trains of the imperfectly displayed signal
- set the imperfectly displayed signal to stop and apply signal blocking to protect the signal section
- tell a Signals Maintenance Representative
- if required, issue the appropriate authority for passing a signal at stop in accordance with **SO02 Automatic Signalling Rules.**
- enter the details in the Access Provider's Incident Reporting System.

NOTE
The circumstances must also be noted in the Signal Box Signals, Points and Power Register at attended Signal Boxes.

IMPORTANT
You must not use any affected signals to provide a proceed indication until the signal has been confirmed operational by a Signals Maintenance Representative.

4.3 Marker Light

Operator

You must tell the Train Controller of the condition of the marker light if it is:

- extinguished
- damaged
- missing.

If the marker light is extinguished, but the main signal indicates:

- a relevant proceed indication - you must accept this indication.
- a stop indication - you must only pass the signal in accordance with **SO02 Automatic Signalling Rules**.

IMPORTANT
If the marker light is missing or damaged, you must complete a cross-check with an S&I diagram to confirm the signal class.

5. Defective Signal

5.1 Reports of Defective Signals

Rail Personnel

You must tell the Signaller if you observe a defective signal in accordance with **RP19 Reporting Faulty Signals**. These may be:

- an imperfectly displayed signal
- a signalling failure
- a damaged signal
- a missing signal.

Signaller

When signalling has become defective you must:

- immediately tell the Signals Maintenance Representative
- immediately tell the Train Controller, when you are not also the Train Controller
- enter the details in the Access Provider’s Incident Reporting System

As a result of defective signalling, you must manage defective points such as interlocked frame lever and switch stand operated points in accordance with **GR05 Operation of Points**.

IMPORTANT
The circumstances must also be noted in the Signal Box Signals, Points and Power Register at attended Signal Boxes.

5.2 Arrangements

Signaller

Before authorising the Handsignaller to signal any trains to pass the defective signal, you must arrange for:

- motorised points power to be isolated
- the points to be hand operated.

NOTE
Panel indications can be used as proof that the points are set and secured if **Local Network Instructions** allow.

IMPORTANT
The furthest set of points from the intended movement must be isolated first, and all concerned points must remain isolated while trains pass over them.

5.3 Defective Signal Cannot Be Set to Stop

Signaller

When a fixed signal becomes defective and cannot be secured at stop, you must:

- arrange for the aspect of the signal to be extinguished or obscured, and
- tell any other affected Train Controller or Signaller, and
- arrange for a Signals Maintenance Representative to set the aspect of the previous signal as a caution or stop aspect.

You must tell affected Operators of all trains proceeding toward any defective signal.

5.4 Defective Signal Can Be Set to Stop

Signaller

When a fixed signal is defective but can be placed at stop, you must secure the signal at stop.

NOTE
A Signaller may appoint the Handsignaller to assist with rail vehicle movements if available.

When a rail vehicle is required to pass the signal, you must:

- authorise a Handsignaller to display an all clear hand signal at the defective signal to the Operator as the authority to pass the signal at stop
- authorise passing the signal at stop in accordance with:
  - **SO02 Automatic Signalling Rules**, or
  - **SO08 Track Warrant Control**.

When a signal has failed, and a proceed indication cannot be obtained, you must:

- place the lever controlling the signal in the proceed position before authorising a rail vehicle or shunting movement to pass the signal at stop, or
- attempt to clear the signal for the intended movement using the signal control function in accordance with the **Local Network Instructions**.

When the rail vehicle has passed the signal, you must return the signal lever to the normal position.

5.5 Wrong-Side Failure

Signaller

If a wrong-side failure is identified, you must:

- warn any affected Operators by emergency call if required
- stop rail vehicles at the preceding signal, where possible
- immediately tell a Signals Maintenance Representative and the Network Control Manager
- act in accordance with **GR06 Conditions Affecting the Network**.

IMPORTANT
This should generally require issuing a bulletin to take the affected signalling out of use until it has been tested and safe.

6. Switch Locked Sidings

6.1 Shunting Switch Locked Siding

Operator

When your train enters a block section on a SWA-01 and you are required to shunt a switch lock siding, you must leave the switch lock in the release position until the train has returned to the main line.

6.2 Rail Vehicle in Switch Locked Siding

Signaller

Before you issue a SWA-01 to the rail vehicle passing through the section, you must tell the Operator of the rail vehicle in the siding:

- of the circumstances
- that the main line must not be obstructed
- to restore the main line points to normal
- to return control of the switch lock to the Train Controller
- to cancel the SWA-01 clear of the block section
- not to operate the switch lock again until authorised.

If the equipment fails when the rail vehicle enters the switch lock siding, you must confirm with the Operator of the rail vehicle passing through the section that no other rail vehicle is occupying the section or will enter the section.

You must ensure that the signals which protect the movement are:

- at stop, and
- a label or collar is attached, or

- a signal blocking command/or control tag has been placed on the levers/buttons controlling those signals at the station concerned.

Operator
When passing through the section, you must travel at Restricted Speed.

6.3 Switch Lock Unable to be Released

Signaller
You must only authorise Signals Maintenance Representative to open the switch lock as provided in accordance with **RP14 Operating Switch Lock Sidings**.

You must obtain verbal certification from the Signals Maintenance Representative that the switch lock points have been secured for main line running after the shunt has returned to the main line and endorse the train control diagram.

You must ensure the rail vehicle has cleared the section before normal working is resumed in accordance with **SO02 Automatic Signalling Rules**.

SO05 Faulty Track Circuits

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 5** - Rail vehicles must be prevented from entering or moving if the railway infrastructure integrity is suspected of being in an unsafe state and/or line obstructed.
- **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 responding to faulty track circuit operations in the network.

3. General

Rail Personnel

Any of the following circumstances occurring on a section will prevent the automatic running signal or signals controlling the entrance to the section being placed at proceed:

- a train occupying the section of line
- any metallic or other conducting substance placed to form a connection between the rails
- a broken or displaced rail
- any bond wire becoming detached or broken
- points not correctly set
- switch lock and releasing switch doors not closed
- signal lockout key removed or incorrectly replaced
- a rail vehicle in a siding is fouling the track circuit

NOTE

This list provides the most common examples but is not exhaustive. There are additional circumstances that will also prevent a signal from being placed to proceed.

You must report track circuits suspected of being faulty to the Train Controller.

Train Controller

You must treat the operation of the reported faulty track circuits as unreliable and manage the occurrence in accordance with this rule and **GR06 Conditions Affecting the Network**.

4. Failure of Track Circuits

4.1 Track Remains Occupied

Train Controller

When a track circuit remains occupied after the passing of trains or becomes occupied when it should be clear, you must:

- confirm the previous rail vehicle is complete before allowing any other rail vehicle into the section
- follow any axle counter reset procedure where specified in the **Local Network Instructions**
- issue the correct authority for the signal concerned to the Operator
- tell the Signals Maintenance Representative of the issue.

Operator

You must:

- only proceed when authorised by the Train Controller, and
- report back to the Train Controller once you have cleared or stopped in the section.

4.2 Rail Vehicle Detection Failure

Train Controller

IMPORTANT
Track circuits must be treated as failed and unsafe when the signalling system fails to detect rail vehicles that can operate track circuits.

If you become aware that the track circuit detection of a rail vehicle(s) has failed, you must:

- set the signal allowing entry to the affected section of line at stop and apply signal blocking
- arrange for a Signals Maintenance Representative to be told of the fault
- arrange to have the affected section of line to be inspected for any conditions that may affect operational safety
- not authorise trains onto the section of line until it has been verified as safe for operations
- do not use the signalling equipment until it is tested and confirmed by the Signals Maintenance Representative to work correctly.

4.3 Rusty Rail

Network Access Planner

You must issue a bulletin when rusty rail conditions on the main line may cause unreliable operation of signalling track circuits due to:

- re-railing operations,
- turnout replacements, or
- rust build-up following periods of no rail vehicle activity (e.g., line closures)

in accordance with **Train Running and Timetabling Manual, 9. Re-laying and Re-railing Track** and **9.1 Extensive Cessation of Services.**

NOTE
When delegated, a Network Control Manager or Train Controller must issue a bulletin to advise of the rusty rail conditions.

Signals Maintenance Representative

When level crossing alarms can be relied upon to operate normally, you must advise the Network Access Planner to specify on the bulletin that normal line speed applies to the specified level crossings.

Operator

When notified of rusty rail conditions, you must:

- obtain permission from the Train Controller before entering the affected block section(s).
- observe normal line speed within the affected area(s) unless a lower speed is specified on the bulletin.
- apply a 10 km/h speed restriction over all level crossings within the affected block section(s).

NOTE
The bulletin will advise if a 10 km/h speed restriction over specified level crossings is not required.

Train Controller

You must record the rusty rail particulars on the train control diagram.

You must:

- prevent the following train from entering the affected block section until you confirm that the train running ahead is clear and complete of the block section, or the next controlled intermediate signal
- endorse this clearance on the train control diagram
- for train movements on the Midland Line, endorse the Mis.50 Operating Instruction with 'Rusty Rail Conditions Apply Between *Station A* and *Station B*'.

4.4 Safe for Operations

Signals Maintenance Representative

You must advise the Train Controller when normal operations for signalling and any affected level crossing alarms can resume.

Train Controller

You must only resume normal working when the Signals Maintenance Representative confirms all equipment works correctly.

You must endorse the clearance on the train control diagram.

5. Interference with Track Circuits

Operator

If sand, ballast, or other material prevents the wheels from contacting the rails, you must:

- stop the rail vehicle, and
- tell the Train Controller immediately of the location of the rail vehicle.

IMPORTANT
In automatic signalling areas, the use of ballast by the Train Crew to provide extra adhesion between rail vehicles and rail is prohibited.

Train Controller
You must tell the Network Control Manager about the situation.

Rail Personnel
To minimise the interference with track circuits, you must not:

- make contact between one rail and the other with metal bars or any continuous metallic object, or
- use metallic gauges or trolleys without insulation in automatic signalling areas or where track circuits are installed.

6. Working Near Track Circuits

Rail Personnel
If you observe anything unusual that may affect the operation of track circuits, you must tell the Train Controller immediately.

When working on or near track circuits, you must:

- use care to prevent damage to the bond wires
- ensure that ballast is kept clear of bond wires
- tell a Signals Maintenance Representative of any damage to bond wires.

SO06 Repairing and Testing of Signals

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 5** - Rail vehicles must be prevented from entering or moving if the railway infrastructure integrity is suspected of being in an unsafe state and/or line obstructed.
- **Principle 8** - Safe separation must be maintained between people, plant, and rail vehicles.

2. Purpose

To prescribe the rules for testing and working on signalling equipment in the network.

3. General

Signals Maintenance Representative

When carrying out repairs on or testing a signal that will affect trains, you must tell the Train Controller about:

- the condition of the signal
- the effects on other safety devices
- the length of time until repairs or testing are completed.

You must:

- obtain authority from the Train Controller to start work on the signal
- After repairs or testing has been done, tell the Train Controller of the condition of the signal.

4. Work on Signalling Equipment

4.1 Testing Signal Indications

Train Controller

You must not test a signal if:

- a rail vehicle is approaching
- the testing could change the signal indication.

Before testing the signal, if the rail vehicle is standing at a signal at stop, you must:

- tell the Operator that signal testing is about to commence
- instruct the Operator not to move.

After testing the signal, you must tell the Operator that the testing has been completed and authorise to proceed if required.

4.2 Points Protecting a Protected Work Area

Train Controller

If you are requested to have points released for inspection or testing, and they are the points protecting a protected work area, you must:

- contact the Rail Protection Officer holding the protected work area
- gain their permission to operate the points.

Rail Protection Officer

You must ensure that trains within the protected work area are prevented from approaching the points when not clamped or unsecured.

4.3 Recording Test Results

Train Controller

You must record all testing of signals on the train control diagram.

4.4 Work Involving Safety of the Line

Signals Maintenance Representative

Before commencing any work on signalling and interlocking equipment that may interfere with the safe working of the line, you must:

- request permission from the Train Controller to undertake the work, and
- for planned work, have a bulletin authorising the activity.

Train Controller

If trains are to be disrupted, you must tell the affected Operators about the work.

4.5 Servicing of Unattended Sidings

Rail Personnel

When protection has been established at an unattended siding, you must not:

- move or perform any work on the facing points, or
- hand operate the points into a setting allowing trains entry into the siding.

5. Advice of Disconnection of Signalling

5.1 Before the Work Commences

Signals Maintenance Representative

Before commencing any work that may affect normal signalling operations or result in the disconnection of signalling equipment, you must tell the Signaller about the work that is to occur and the impact on signalling operations.

Signaller

You must detail in the Signal Box Signals, Points and Power Register or on the train control diagram the following information:

- the words ‘Signalling Disconnected’
- the number of levers or signal controls that will be affected
- the time of the start and completion of the work

- details of the Signals Maintenance Representative
- sign the recorded entry.

NOTE
A Handsignaller may be appointed to work under the instructions of the Signaller if required.

Signals Maintenance Representative

Before commencing any work that may affect normal signalling operations or disconnecting the signalling equipment, you must:

- tell the Signaller of the signals that will be secured at stop, and
- secure the fixed signals applicable to the affected line at stop.

5.2 Working Trains During Repairs

Signaller

On each occasion when a rail vehicle is required to pass over the points when signalling equipment is not operating normally or disconnected, you must:

- tell the Handsignaller (when appointed)
- tell the Signals Maintenance Representative
- not allow the trains to proceed until you gain assurance that all the points are correctly set and secured for the intended movement.

5.3 Operation of Points

Signals Maintenance Representative

You must arrange for a Points Operator to be located at each set of points or attend multiple points when required.

Signaller

You must tell the Points Operator:

- when a rail vehicle is required to pass over points which they are responsible for
- to set and secure the points for the line on which the rail vehicle is to pass.

Points Operator

You must only alter the setting of the points once the Signaller has told you that the rail vehicle movement has been completed.

5.4 Disconnection of Crossing Alarms

Signals Maintenance Representative

When the alarms or barriers at a level crossing are disconnected, you must:

- secure any fixed signals applicable to the crossing at stop, and
- arrange for level crossing protection in accordance with **GR04 Level Crossings**.

5.5 Completion of Work

Signaller

You must only commence normal operations when the Signals Maintenance Representative has certified that the signalling has been tested and restored to normal working order.

You must detail in the Signal Box Signals, Points and Power Register or train control diagram:

- the words ‘Signalling Restored’
- sign and time record the entry.

5.6 Levers and Controls During Repairs

Signals Maintenance Representative

When the equipment associated with any signal or points is being repaired, altered, or cleaned, you must only move levers or operate controls for testing purposes when the Signaller provides permission.

Signaller

You must:

- obtain permission from the Signals Maintenance Representative before moving any lever or operating any control connected with signals or points that are being worked on, and
- ensure that levers/controls are tagged/blocked or collared in accordance with the applicable **Local Network Instructions**.

SO07 Signal Blocking

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 5** - Rail vehicles must be prevented from entering or moving if the railway infrastructure integrity is suspected of being in an unsafe state and/or line obstructed.
- **Principle 8** - Safe separation must be maintained between people, plant, and rail vehicles.

2. Purpose

To prescribe the rules for using Signal Blocking in the network.

3. General

Signaller / Train Controller

Signal blocking must be used to prevent:

- unintended issue of proceed authorities, or
- operation of signalling and points equipment.

You must apply signal blocking by:

- putting signals at stop
- securing the signal with a control tag, or
- control tagging points to prevent:
  - the setting of certain signal routes
  - the operation of points

3.1 Applying Signal Blocking

Signaller / Train Controller

Before applying signal blocking, you must ensure the relevant points are correctly set and secured:

- for the rail vehicle movement, or
- to protect the section of line that is blocked.

3.2 Removing Signal Blocking

Signaller / Train Controller

You must only remove signal blocking when you have confirmed that the conditions that required their application no longer exist.

Before removing signal blocking, you must confirm that:

- all workers are in a safe area
- the section of line is not obstructed.

You must record the application and removal of signal blocking on the train control diagram in accordance with the **Train Control and Signal Box Manual.**

SO08 Track Warrant Control

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 operating in Track Warrant Control (TWC) areas in the network.

3. General

Rail Personnel

When operating in a TWC area, you must:

- only apply a track warrant authority to the main line
- ensure trains do not enter or foul any part of the main line, including within station limits, without a current track warrant authority
- not unlock main line points operated by a hand lever until a track warrant to occupy or work on that part of the main line is obtained.

NOTE
Using compulsory stop protection, track vehicles operating within a protected work area do not require a track warrant authority.

NOTICE
Using compulsory stop protection, operation of main line points do not require a track warrant authority.

When you are issued with a track warrant, you must ensure:

- the information and instructions are understood
- you comply with the instructions and remain within the limits of the track warrant.

4. Issuing a Track Warrant

Train Controller

You may issue a track warrant to allow work on or alongside the main line without other protection.

When issuing a track warrant for other than a train movement, you must address the track warrant to the person responsible for safe working.

IMPORTANT
Using compulsory stop protection, track vehicles operating within a protected work area do not require a track warrant authority.

NOTE
When there is more than one HRV in a worksite, this signifies 'multiple HRVs'.

When a train crosses or overtakes another train at a station, you must issue separate track warrants to, and from that station.

Operator/Driver

You must repeat back to the Train Controller all instructions issued to you.

IMPORTANT
The correct radio procedures must be complied with when a radio is used to transmit track warrants.

IMPORTANT
Track warrants must not be transmitted while the recipient operates a moving rail vehicle or track machine.

4.1 Proceed Warrant

Train Controller

You must not give a proceed authority for any part of the line where another movement or work has already been authorised unless a Foul Time occupancy exists.

Before authorising any setting back movements on a proceed warrant, you must confirm level crossings are protected.

Operator / Driver

When a track warrant authorises a movement to proceed, you must proceed in the direction specified unless verbally authorised by the Train Controller for shunting at a station or siding.

When authorised to set back by the Train Controller, you must:

- not set back into territory where the limits have been reported clear
- ensure warning devices are operating for protection of the crossing

Driver

You may set back HRVs up to 100 metres within the limits of the track warrant.

4.2 Work Between Warrant

NOTE

When a track warrant authorises a movement to work between, the movement may work in either direction between the locations specified.

Operator

You must only enter a station or siding which is a limit of the track warrant when authorised to do so.

After the initial movement over level crossings with automatic alarms, you must not exceed 10 km/h for all remaining movements over those level crossings.

IMPORTANT

At stations or sidings where shunting movements are being carried out, and a change of direction of travel is necessary, the alarms must be controlled by the start/cancel push buttons where provided.

4.3 Through Warrant

Train Controller

You may issue a track warrant through a station that already has a rail vehicle standing clear of the main line.

When the first rail vehicle occupies the loop, you must tell the Operator or Driver of the second rail vehicle that the first rail vehicle is ‘sidetracked at *location.*’

If a train is locked in a main line siding, you must issue any further warrants for the main line with advice that *'train number* is locked in the siding at *siding name.'*

IMPORTANT

A separate track warrant is not required to be issued to and from that station, as prescribed in **4. Issuing a Track Warrant**.

4.4 Conditional – All Cases

IMPORTANT
It is not permissible for a train to be issued with a track warrant conditional upon the arrival or departure of an MTMV or HRV.

Train Controller

You must only issue a track warrant which specifies that a movement or work, is authorised after a movement when:

- the Addressee is at the location at which the train is to arrive at or depart from
- the movement after which the movement is to take place has been authorised to proceed in one direction only
- the movement is due at that location within the next 15 minutes.

You must only issue a track warrant conditional after the arrival/departure of a rail vehicle for Track Maintenance Representatives, HRVs, and Trolley Users once you have verified that the rail vehicle has passed clear of:

- the next intermediate board,
- TW siding,
- section of line clear of the on-tracking location (next crossing station), or
- station limits.

Addressee

When more than one HRV is authorised in Clause 12 of the track warrant, you must verify to the Train Controller that all vehicles are clear of:

- the next intermediate board,
- TW siding,
- section of line clear of the on-tracking location (next crossing station), or
- station limits.

When two or more HRVs are included in a track warrant conditional after the arrival/departure of any rail vehicle you must ensure all vehicles are at the ‘at’ location of the track warrant.

4.5 Conditional – After Arrival

Addressee

When your movement is to be carried out after the arrival of another movement, you must confirm the movement specified has arrived before carrying out your movement or work authorised.

4.6 Conditional – After Departure

Addressee

When your movement is to be carried out after the departure of a train, you must confirm that the departing train has cleared the area far enough ahead to safely perform your movement or work.

4.7 Errors During Transmission

Train Controller

If an error is detected during transmission of the authority, you must:

- cease issuing the authority
- tell the Addressee to non-issue the warrant.

4.8 TWACS Not in Use

Train Controller

When TWACS is not in use, all details in a track warrant must be prepared with a pen and not altered. If an error is made in preparing the track warrant, it must be non-issued, and a new track warrant must be prepared.

IMPORTANT
Abbreviations of station names must not be used.

Manually Issued Numbering

Numbering sequence when manually issued by the Train Controller	
1. Manual	M
2. Desk Number	01, 02, 03, 04, 05
3. Track Warrant Number	01 – 99

IMPORTANT
When TWACS is not in use, all Mis.87 forms must be cross-checked and initialled for correctness by a second TWC-qualified Train Controller to signify that the track warrant has been prepared before being issued.

IMPORTANT
When cancelling track warrants, you must write the word ‘Cancelled’ across the face of the track warrant.

5. Track Warrant Use

5.1 Warrant In Effect Once Issued

Rail Personnel

When you have been issued with a track warrant, it remains in effect until either:

- you have reported clear of the limits of the track warrant, or
- a further track warrant has cancelled it.

You must not alter a track warrant once it has been issued and is in effect.

Train Controller
When changing limits or instructions on a track warrant is necessary, you must issue a new track warrant with ‘Track Warrant Number (add number) is Cancelled’ stated in Clause 1.

5.2 Handover of Track Warrants

Operator
You must hand any track warrants still in effect to the relieving Operator.

When you are the relieving Operator, you must obtain a new track warrant before the train departs from that location.

After the changeover at a station and when authorised on the existing track warrant, you may proceed up to the trailing indicator, signal or fouling point at the station for crossing purposes.

Train Controller
If track warrants are to be handed over to Rail Personnel other than an Operator, you must reissue the track warrant when it has been issued to an Addressee being relieved.

- The Addressee must relay the track warrant details to the relieving Competent Worker
- The Competent Worker must then repeat the track warrant back to you to complete the issue process.

When a Rail Protection Officer is detailed on the bulletin by an RPO call sign ID, you must ensure the track warrant:

- remains in effect, and
- is handed over to the relieving Rail Protection Officer.

Rail Protection Officer
When you are the relieving Rail Protection Officer, you must read and sign the back of the track warrant to acknowledge the details and endorse the TS94 Handover Book.

5.3 Calling Train Control En Route

Addressee
When Clause 10 of a track warrant specifies that a call is to be made at a location, you must:

- ensure that all rail vehicles are clear of that location, and
- contact the Train Controller and advise the location from where the call is being made, and
- upon acknowledgement from the Train Controller, confirm the location and terminating limit of the track warrant held.

NOTE
The Addressee is not required to stop for all three actions above.

5.4 Calling Limits Clear

Addressee

If you are issued with a track warrant, you must only report limits clear or portion of the limits clear of a track warrant when it has been confirmed:

- the main line hand points are locked in normal
- the train is complete
- all trains have cleared the limits being released.

5.5 Use of SWA-03

Train Controller

When an MTMV is required to work within a protected work area and pass absolute signals at an interlocked station within the limits of the track warrant multiple times, you may issue a SWA-03.

You must communicate with the Rail Protection Officer and only issue the SWA-03 when:

- the Rail Protection Officer or Operator has a track warrant for the limits of the area being covered by the SWA-03
- all routes are correctly set, and
- signal blocking is applied.

The SWA-03 can be used multiple times until you cancel the authority in conjunction with the Operator.

If the secured route under the SWA-03 needs to be changed, you must cancel the SWA-03 and reset the route before issuing a further SWA-03.

5.6 Mandatory Calling of Limits

Addressee

You must call on radio channel 1 and provide track warrant details in the following circumstances:

- at the beginning of a TWC area when a track warrant is held
- after a new track warrant has been issued en route
- when approaching the following locations:
  - a station warning board (including approaching a station at the end of TWC)
  - a distant signal
  - an intermediate signal.

At these locations, you must provide the following details:

- the train or rail vehicle number
- the number of the track warrant being held
- the location being approached or departing
- the terminating limit of the track warrant held.

Driver Or Track Vehicle Operator

You must provide the following details:

- the train number if MTMVs are travelling as a train, or
- the vehicle identification number for HRVs, and MTMVs if not operating as a train.

IMPORTANT
When calling on the radio, ensure there are no other transmissions on channel 1, or your transmission may not be heard correctly.

5.7 Approach to a Warrant Station

Operator or Driver or Track Vehicle Operator
You must have the rail vehicle under control:

- after passing a station warning board to ensure the rail vehicle stops before the arrival signal or facing points indicator
- before reaching the marker post to ensure the rail vehicle stops before the arrival signal or points indicators
- to ensure the rail vehicle stops before the starting signal or trailing points indicator.

5.8 Cancelling Track Warrants

Addressee
In accordance with **RP02 Using Track Warrant Control**, you must only cancel an authority if:

- all instructions contained within an authority have been carried out, or
- it was impossible to carry out all the instructions within an authority.

After reporting clear of the limits, you must not act on the authority of the cancelled track warrant.

5.9 Clear Time

Addressee
If a time by which the main line is to be clear is shown on the track warrant, you must clear the limits by the time specified unless another track warrant has been obtained.

6. Occupying the Same Limits

6.1 Single Track Warrant – Multiple Activities

Train Controller
When multiple activities are authorised on a single track warrant, you may issue a single track warrant to the Rail Protection Officer of the worksite.

Rail Protection Officer
You must tell all Operators and Drivers within your worksite the track warrant number and other details specified on the track warrant.

6.2 HRVs Travelling Together

Train Controller
Where two or more HRVs are travelling together, you must issue a single track warrant to the Person in Charge of the convoy.

Person in Charge
You must tell the other HRV Drivers the number and the details on the track warrant.

6.3 Multiple Track Warrants – Common Limits

Train Controller

You must only issue a track warrant for any section of line for which another track warrant is still in effect when:

- the portion of the line common to both track warrants is within the ‘work between’ limits of each warrant, and
- the Addressees of the track warrants are aware of the shared section of line.

IMPORTANT
If necessary, specific instructions for safe working must be issued to both track warrant Addressees.

- a rail vehicle movement is following another which is authorised to only proceed in one direction and either:
  - the movement in front has reported clear of a station, siding or intermediate board beyond the location which the following movement is authorised, or
  - the movement in front has reported clear of a station in advance which the following movement is authorised up to or into that station, or
  - the movement in front has been reported to be complete and in clear on the main line at a station in advance, and the following movement is authorised up to or into the loop at that station.
- The second track warrant authorises a movement 'after the arrival' of a movement whose track warrant is still in effect.
- the second track warrant authorises shunting or other work on or foul of the main line after the departure of a movement whose track warrant is still in effect.

7. Limits of a Track Warrant

Train Controller

You must ensure that the limits of a track warrant are clearly defined by being between a combination of the following:

- stations
- sidings
- intermediate boards
- signals
- points indicators
- points
- track meterage pegs.

You must issue a train a work between warrant if the limits of the warrant are:

- track meterage pegs, or
- the rear of signals and points indicators.

NOTE
When the limits of a warrant are a transition point between a proceed and work or work and proceed warrant, the rear of signals and points indicators may be used.

IMPORTANT
Only Track Maintenance Representatives may use specific meterages to designate limits of track warrants.

7.1 Authority of a Track Warrant

Rail Personnel

You must ensure that the authority of a track warrant that commences at a station or siding will extend from the locations detailed in Table 1.

Commencement of Authority

#	Location	Commencement of Authority
1	At an interlocked station	The last main line to loop points met when leaving the station, or if there is no loop, the last main line points. When a signal controls the movement over these points, the authority will extend from that signal
2	At a warrant station	The last main line to loop points met when leaving the station, or if there is no loop, the last main line points. When these points are equipped with a points indicator, in this case, the authority will extend from the points indicator
3	At a siding	The last main line points met, leaving the siding
4	At a TWC begins board	The TWC begins board

You must ensure that the authority of a track warrant that terminates at a station or siding will extend to the location in Table 2.

Termination of Authority

#	Location	Termination of Authority
1	At a station	The station limits at the entrance to the station
2	At a siding	The first main line points met approaching the siding
3	At a TWC ends board	The TWC ends board

NOTE
When a track warrant instructs the movement to enter the main line, the authority will extend to the last main line to loop points or, if there is no loop, to the last main line points leaving the station. When these points are equipped with a signal or points indicator which applies to the movement, the authority will end at that signal or points indicator.

NOTE
When the track warrant instructs the movement to enter the loop or siding, the authority will extend to and include the first facing points, which give access to the loop or siding.

WARNING
The movement must not stand foul of points when these are the limits of the track warrant.

7.2 Signals Controlled by the Signaller

Operator
Upon receiving verbal or written instruction from the Signaller who controls the protecting signal, you may pass any signal at stop, provided a track warrant is held for the line after the protecting signal.

Signaller
You must not give verbal or written instructions when a fixed signal can be used for the movement.

You must only authorise controlled signals to be passed at stop provided a track warrant is held for the line after that signal.

NOTE
Any signal may be passed at stop on receiving verbal or written instructions from the Signaller who controls that signal.

7.3 Issuing Track Warrants to Intermediate Boards

Train Controller

WARNING
The advancing of trains on ‘proceed’ or ‘work between’ track warrants to intermediate boards is prohibited.

You must only use intermediate boards for trains when:

- used as a divider for ‘work and proceed’ or ‘proceed and work’ when trains have a ‘work in either direction’ requirement, or
- used as a ‘work between’ limit when a train requires headroom for shunting (e.g., locomotive reduced at Wharanui), or
- used as a 'work between' limit when a work train is to work short of the intermediate board and return to the starting station, or
- authorised in the **Local Network Instructions**.

8. Clearing Controlled Signals

Train Controller

For any movement requiring the authority of a track warrant, you must issue the track warrant before setting a controlled signal for the movement to proceed.

9. Fouling the Loop in TWC Territory

Train Controller

You must provide verbal permission to Rail Personnel when aware that the work or movement will foul or encroach on a crossing loop in TWC territory.

You must endorse the train control diagram when you authorise the fouling of the loop.

Rail Personnel

You must only foul a crossing loop in TWC territory when the Train Controller has granted verbal permission.

NOTE

When a loop is known to be occupied, and a track warrant is issued, passing trains will be told as detailed in Clause 12 of the track warrant.

NOTE

If a through or berthing movement has been issued, follow the procedure set out in **RP02 Using Track Warrant Control, 5. Fouling the Loop**.

10. Crossing Trains at Warrant Stations

10.1 Before Entering the Station

Operator

When crossing movements are required, you must establish the whereabouts of the other trains involved in the crossing movement before entering the station by calling on radio channel 1.

When radio contact cannot be established:

- if you are the first train to arrive and are required to stop significantly short of the trailing points on the main line, you must only enter station limits when the Operator of the opposing train has:
  - been contacted,
  - acknowledged that the first train stopped short on the main line,
  - acknowledged that the main line points will not be set for the diverging route, otherwise
- entry into the station may occur after you can see it is safe, or
- ask the Train Controller to confirm and tell the location of the opposing train.

IMPORTANT
In all situations, a clear understanding of the crossing movement arrangements must be confirmed to prevent both movements from entering the station simultaneously.

10.2 Stopping Clear on the Main Line

Locomotive Engineer
If you are the first train to arrive and stop on the main line, you must:

- set the route for the opposing train to enter the loop
- where arrival signals or points indicators are not provided, hand signal the train into the loop.

10.3 Hand Points

Competent Worker
You must ensure that main line points equipped with a hand lever are secured with a TW lever lock and an AS padlock when specified in the **Local Network Instructions**.

You must ensure hand points are restored to normal and locked after use.

NOTE
When a TW lever lock is provided when the lever is unlocked, the key will be impounded. It can only be removed once the lever is secured in normal.

NOTE
Where authorised by **Local Network Instructions**, high column switch stand points may be left locked in reverse.

10.4 Sidetracked Rail Vehicles

Operator / Driver
When the Train Controller sidetracks your rail vehicle, you must berth clear of signals, points indicators or the fouling point before advising the Train Controller that your rail vehicle has arrived.

11. Track Warrant Control Keys

Rail Personnel
After each shift, you must ensure the TWC key is in your possession.

IMPORTANT
Where TWC keys have not been issued personally, they will be issued to Rail Personnel and signed for at the commencement of the shift and signed back in on the completion of the shift.

Officer in Charge
You must conduct a daily audit of the TWC keys at terminals and depots to ensure that no missing keys.

IMPORTANT
A register of all TWC keys must be in place at terminals and depots.

12. Trains Divided or Stalled

Rail Personnel
When trains divide or stall in TWC territory, you must act in accordance with **RP02 Using Track Warrant Control**.

IMPORTANT
You must not allow an end of train marker to be displayed on the locomotive or last vehicle of the front portion of the train while in a TWC area. If the locomotive or front portion of the train must pass out of a TWC area, you must then display an end of train marker on the rear.

