

Network Safeworking Rules and Procedures

Protecting Disabled Rail Traffic

Rule Number: 4001

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Document History

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Table of Contents

1.	Purpose.....	3
2.	General	3
3.	Rail Traffic Protection.....	3
3.1	Disabled Rail Traffic.....	4
3.2	Adjacent Lines	5
3.2.1	Track-Circuit Shorting Out Device	6
3.2.2	Using the Rail Traffic's Motive Power Unit to Assist in Placing Protection	6
3.3	Removing In-Field Protection	6
4.	Protecting Rail Traffic That Needs Assistance	7
4.1	Assistance from the Rear	7
4.2	Assistance from the Front	8
5.	Restraint Authority.....	9
6.	References.....	9
7.	Effective Date.....	9

1. Purpose

The purpose of this rule is to outline provisions of *Protection* to *Rail Traffic* that has failed or become an *Obstruction* in the *Network*.

2. General

If an *Obstruction* is reported, the *Network Controller* responsible for the affected portion of line must act in accordance with Rule 2009 Reporting and Responding to a Condition Affecting the Network (CAN), and:

- instruct the *Rail Traffic Crew* in or approaching the affected *Block Section* to stop their *Rail Traffic* immediately; and
- apply *Blocking Facilities* to prevent entry of further *Rail Traffic* into an affected or potentially affected portion of *Track*.

3. Rail Traffic Protection



WARNING: An unexpected loss of brake pipe pressure may indicate that *Rail Traffic* has derailed, or has derailed and *Fouled Adjacent* lines.

Where *Adjacent* lines are or might be *Obstructed* those lines must be *Protected* first.

Rail Traffic requires *Protection* where:

- the *Rail Traffic* needs assistance;
- the *Rail Traffic* *Obstructs*, or might *Obstruct*, *Adjacent* lines; or
- the line is *Obstructed*.

The *Network Controller* may advise the *Rail Traffic Crew* of *Disabled Rail Traffic*, that *Protection* is not required provided:

- communications with the first approaching *Rail Traffic* has been established; and
- that *Rail Traffic Crew* is advised of the circumstances.

The *Network Controller* must make a *Permanent Record* of that advice.

3.1 Disabled Rail Traffic

The *Rail Traffic Crew of Disabled Rail Traffic* must:

- ensure their own safety;
- tell the *Network Controller*.
 - there is a failure;
 - the *Location* of the *Disabled Rail Traffic*; and
 - the nature of the failure, when this has been determined;
- if necessary, protect the *Disabled Rail Traffic*; and
- ensure that the *Rail Traffic Consist* is *Secured* to prevent rail vehicles from running away.

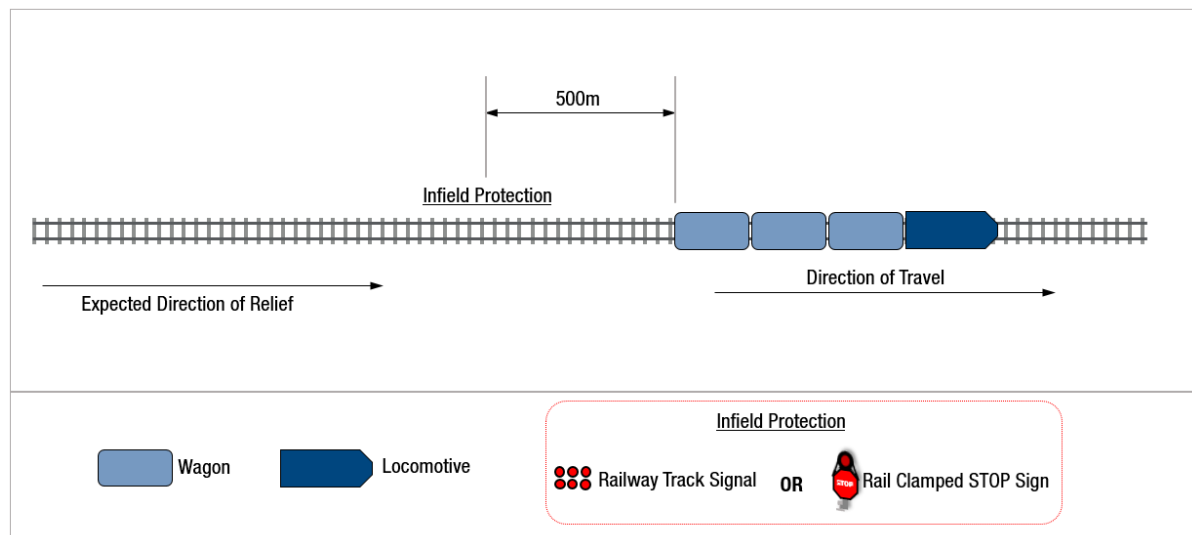
Where *Rail Traffic* is to be protected, *In-field Protection* must be placed 500 metres from the *Disabled Rail Traffic* using:

- 3 RTS on each line; or
- a Rail Clamp Stop Sign.



NOTE: Where using *Railway Track Signals (RTS)* they are to be placed on all rails of the line to be protected in accordance with [Procedure 9004 Using Railway Track Signals](#).

Figure 4001-1 *Railway Track Signal placement to Protect Rail Traffic.*



The *Network Controller* must, where necessary, prevent *Rail Traffic* from moving by the *Issue* of a *Restraint Authority* to the *Rail Traffic Crew* of:

- the Disabled *Rail Traffic*;
- approaching *Rail Traffic*; and
- applying *Blocking Facilities*.



NOTE: Where approaching *Rail Traffic* can be held at a *Controlled Absolute* signal displaying a *Stop* indication, a *Restraint Authority* is not required.

3.2 Adjacent Lines



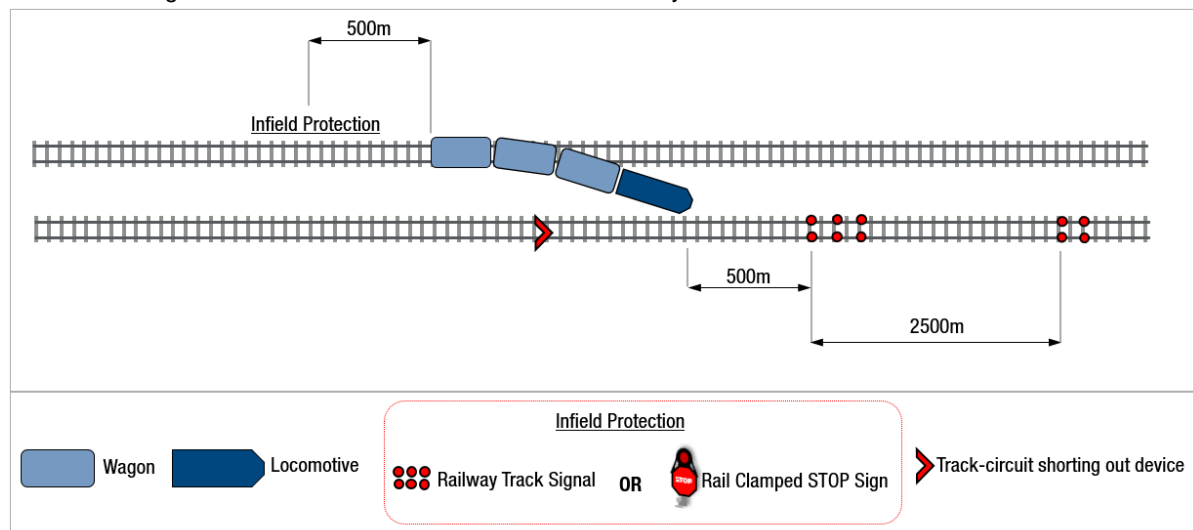
WARNING: Where the *Rail Traffic Crew* are unable to confirm that the *Adjacent* line is not *Obstructed*, they must assume that it is *Obstructed* and *Protect* that line first.

If the *Rail Traffic Crew* suspects their *Rail Traffic* has *Fouled* an *Adjacent* line, they must immediately tell the *Network Controller*.

Where the *Rail Traffic Crew* are not assured by the *Network Controller* that other *Rail Traffic* has been stopped or prevented from entering the affected *Block*, they must:

- immediately and repeatedly transmit an *Emergency* broadcast; and
- use *Rail Traffic* lights to warn any approaching *Rail Traffic* by flashing the *Headlights*.

Figure 4001-2 *Railway Track Signal* and *Track-circuit* shorting out device placement to protect an *Adjacent* line from obstructing rail traffic in *Uni-Directional* double-line territory.



On *Bi-Directional* lines where there are *Adjacent* lines, *Protection* must be applied to affected lines in both directions.

The *Rail Traffic Crew* must apply *Protection* to affected *Adjacent* lines with the priority they consider necessary.

3.2.1 Track-Circuit Shorting Out Device



WARNING: *Track-Circuit Shorting Out Devices* cannot be used unless it is determined that it is safe to do so.

The *Rail Traffic Crew* must determine that if there are any fallen overhead line wires, they are not close to or in contact with the *Rail Traffic* or rails.

In *Track-Circuited Territory* the *Rail Traffic Crew* must:

- prior to getting out of the *Rail Traffic*, determine that there are no fallen overhead line wires close to, or in contact with the *Rail Traffic*, or rails;
- once it has been determined that it is safe to do so, fasten a *Track-Circuit Shorting Out Device* to the rails of the *Adjacent Obstructed* lines; and
- if possible, confirm that *Affected Signals* show STOP.

Where the *Track Circuit Shorting Out Device* cannot be used because of the proximity of fallen overhead line wires and the *Rail Traffic Crew* cannot establish communications with *Network Control*, the *Rail Traffic Crew* must continue to:

- transmit an *Emergency* broadcast; and
- use *Rail Traffic* lights to warn any approaching *Rail Traffic* by flashing the *Headlights*.

3.2.2 Using the Rail Traffic's Motive Power Unit to Assist in Placing Protection

After *Securing* the remaining portion of the *Train*, by a full service application of the brake, the *Rail Traffic Crew* may detach a *Motive Power Unit* or *Locomotive* for use during placement of *Protection*.

The *Motive Power Unit* or *Locomotive* used for placement of *Protection* must return to the remaining portion of the *Train*.

3.3 Removing In-Field Protection

Before the *Rail Traffic* is removed from the *Section*, the *Rail Traffic Crew* must:

- ensure the three *RTS* or *Rail Clamped Stop sign* at 500 metres are cleared from the line; and
- advise the *Network Controller* the *Location* of the two *RTS* at 2500 metres, if they are still in place.

The *Network Controller* must advise the *Rail Traffic Crew* of the first *Rail Traffic* movement, of each gauge, to *Travel* through the *Section*, the *Location* of the remaining two *RTS*.

4. Protecting Rail Traffic That Needs Assistance

4.1 Assistance from the Rear

Unless the *Network Controller* advises otherwise, if there is no *Rail Traffic* standing at a signal at STOP within 500 metres behind the *Rail Traffic* that needs assistance, the *Rail Traffic Crew* must place *Protection* on the line at the nearer of:

- At least 500m behind the *Rail Traffic*, or
- the first signal at STOP behind the *Rail Traffic*.

Figure 4001-3 *Railway Track Signals* placed at least 500 metres behind the *Rail Traffic* to *Protect* it.

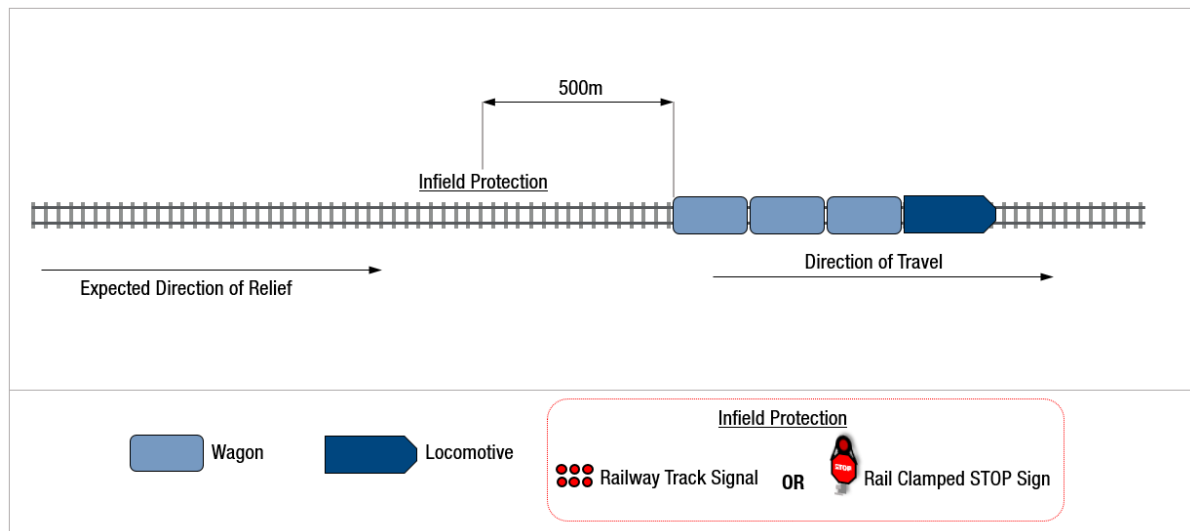
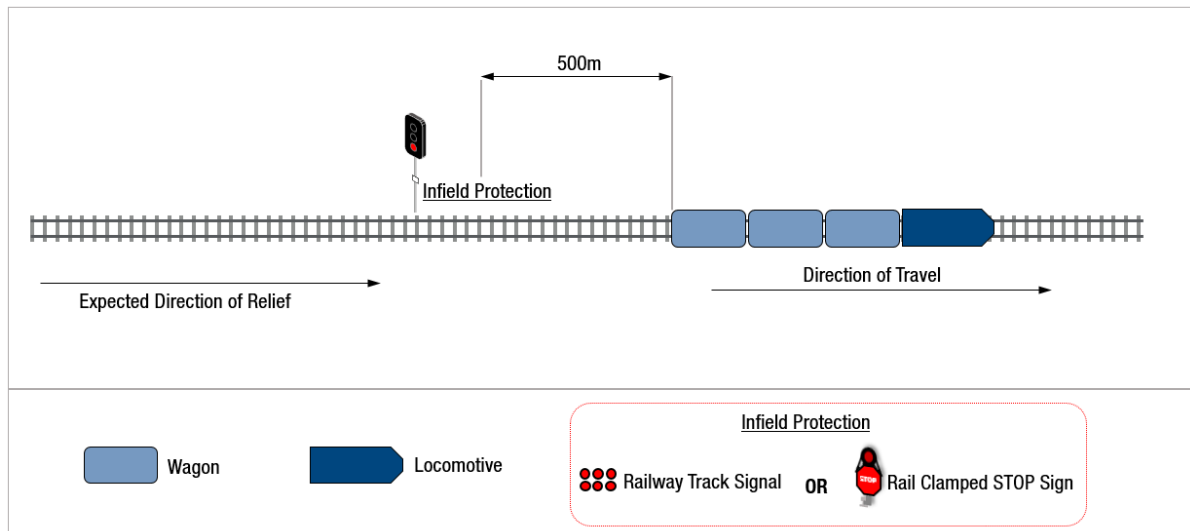


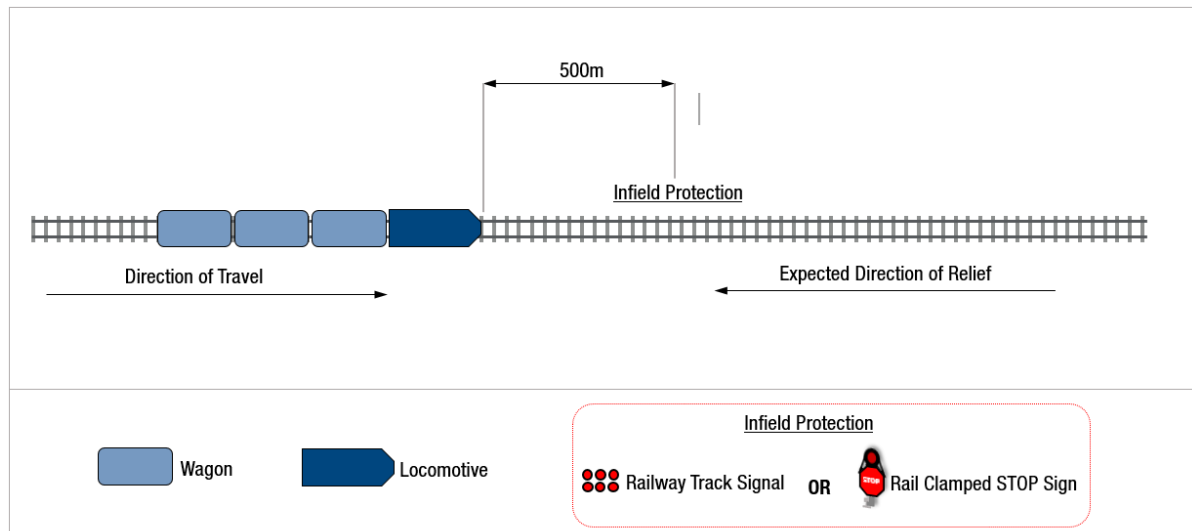
Figure 4001-4 *Railway Track Signals* placed at the first signal at STOP behind *Rail Traffic* to *Protect* it.



4.2 Assistance from the Front

If assistance is expected from the front, the *Rail Traffic Crew* must place *Protection* on the line 500 metres forward of the *Rail Traffic*.

Figure 4001-5 *Railway Track Signals* placed to protect *Rail Traffic* from assisting *Rail Traffic* approaching from the front.



If there is a signal for the opposing direction within 500 metres of the *Rail Traffic* needing assistance, the *Rail Traffic Crew* must:

- place *Protection* on the line at that signal; and
- tell the *Network Controller* the *Location* of the *Protection*.

5. Restraint Authority

Rail Traffic Crews that have been *Issued a Restraint Authority* must not allow the *Rail Traffic* to move unless:

- the *Network Controller* has *Cancelled the Restraint Authority*; or
- relief *Rail Traffic* is attached to the *Consist*.

The *Network Controller* will *Cancel a Restraint Authority* when:

- the *Restraint Authority* is no longer required; or
- the whole of the *Disabled Rail Traffic* has been removed from the *Section Complete*.

6. References

2009 Reporting and Responding to a Condition Affecting the Network (CAN)

7. Effective Date

3 February 2020

Network Safeworking Rules and Procedures

Rail Traffic Integrity

Rule Number: 4003

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Document History

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Table of Contents

1.	Purpose.....	3
2.	General	3
2.1	Testing Equipment	3
2.2	Dangerous Goods	4
3.	Brakes	4
3.1	Holding Rail Traffic Stationary	4
3.1.1	Security of Rail Traffic Left on Running Lines	4
3.2	Abnormal or Defective Brakes	5
3.3	Handbrakes and Securing Devices.....	5
4.	Rail Traffic Safety Management Systems	5
5.	Driver Supervisory Systems	5
6.	Defective Equipment	6
6.1	Speedometer Failure	6
6.2	Driver Supervisory Systems	6
7.	Defective Vehicles.....	7
7.1	Inspecting and Managing Defects.....	7
8.	References	8
9.	Effective Date	8

1. Purpose

The purpose of this rule is to provide information to *Rail Traffic Crews* about requirements for ensuring *Rail Traffic* is *Fit for Purpose* before *Accessing*, and during *Travel* in the *Network*.

2. General

Rail Traffic must be identifiable and comply with *Arc Infrastructure's* gauge outline in accordance with the W190-400-001 Standard Gauge Code of Practice Track & Civil Infrastructure and W190-400-002 Narrow Gauge Code of Practice Track & Civil Infrastructure.

Rail Traffic Crews must not, without *Authority*, bypass, disconnect or turn off any device provided for the safe operation of *Rail Traffic*.

Prior to entering the *Network*, *Rail Traffic Crews* must ensure that all necessary brake tests have been performed, in accordance with *Arc Infrastructure's* instruction Automatic Air Brake Instructions, and equipment is within specified limits.

Details of the *Rail Traffic Consist* must be provided to the *Network Controller*, by the *Operator's Representative*, prior to the *Rail Traffic* departure.

Where the *Rail Traffic Consist* changes en-route the details must be provided to the *Network Controller*, by the *Operator's Representative*, prior to the *Rail Traffic* departure from that *Location*.

Rail Traffic Integrity must be re-established whenever the *Consist* changes. *Rail Traffic Integrity* must be documented and maintained.

Loading carried on *Rail Traffic* must be *Secure* and *Restrained* safely throughout the journey.

2.1 Testing Equipment

Prior to entering the *Network*, *Rail Traffic Crews* must ensure that the following equipment is fully operational:

- Speedometer, if this can be checked;
- *Motive Power Unit* lights;
- *Motive Power Unit Whistle*;
- Communications Equipment;
- *Driver Supervisory Systems*; and
- *End of Train Marker*.

2.2 Dangerous Goods

Before *Rail Traffic Travels* in the *Network*, the classes of *Dangerous Goods* and the identification numbers of vehicles carrying *Dangerous Goods*, must be recorded in the *Consist* documentation.



NOTE: *Dangerous Goods* must be loaded, labelled and *Marshalled* in accordance with the [Australian Code for the Transport of Dangerous Goods by Road and Rail \(ADG Code\)©](#).

3. Brakes

3.1 Holding Rail Traffic Stationary

Rail Traffic braking systems must be capable of stopping and holding the *Rail Traffic* stationary in all *Network* conditions applicable to the *Route*.

3.1.1 Security of Rail Traffic Left on Running Lines

Whenever it is necessary for *Rail Traffic*, or a portion of *Rail Traffic*, to be left unattended on a *Running Line* for longer than 30 minutes, in addition to the full application of the *Automatic Brake*, *Handbrakes* must be applied as follows:

Figure 4003-1 Rail Traffic handbrake application table

Section of line	Percentage of <i>Handbrakes</i> to be applied
All NG Main Lines	100 per cent
<i>Dual gauge</i> Kwinana-Avon Yard	33 per cent
SG Avon Yard-Kalgoorlie	50 per cent
SG Kalgoorlie-Esperance	100 per cent
SG Kalgoorlie-Leonora	100 per cent
All crossing loops	33 per cent

Vehicles not provided with *Handbrakes* must, where necessary, be chocked to meet the requirements shown above.

3.2 Abnormal or Defective Brakes

If during *Travel* there is an abnormal application of brakes or the braking performance is inadequate, the *Rail Traffic Crew* must:

- bring the *Rail Traffic* to a complete Stop;
- advise the *Network Controller*;
- if necessary, apply *Protection* for the *Rail Traffic* in accordance with Rule 4001 Protecting Rail Traffic;
- if possible, determine the cause of the application or the extent of the defect;
- if possible, remedy the cause of the application or defect; and
- tell the *Network Controller* when the journey has been resumed or if the defect cannot be remedied.

3.3 Handbrakes and Securing Devices

Equipment used for *Securing* rollingstock must be tested before rollingstock is detached from a *Motive Power Unit* or a continuous brake system.

If a vehicle without working *Handbrakes* needs to be detached and *Secured* it must be coupled to a vehicle that has working *Handbrakes* and can *Secure* the combined weight of both vehicles.

4. Rail Traffic Safety Management Systems

Rail Traffic Safety Management Systems include:

- Speedometer; or
- Annett's Key System.

5. Driver Supervisory Systems

Driver Supervisory Systems include:

- Vigilance Control;
- Detonator Detector System; or
- Automatic Train Protection System.

6. Defective Equipment

Where any Safety Management System fails en-route, the *Rail Traffic Crew* must obtain the *Operator's Representative's* approval to continue.

The *Network Controller* must be advised by the *Rail Traffic Crew* of:

- the system failure; and
- the *Operator's Representative's* approval to continue.

6.1 Speedometer Failure

Where approved to continue by their *Operator's Representative*, affected *Rail Traffic Crews* must advise the *Network Controller* of the approval and ensure that permissible speeds are not exceeded and may continue to *Travel* until:

- the *Motive Power Unit* is Remarshalled at the first suitable *Location*;
- the equipment can be repaired or replaced; or
- the *Motive Power Unit* is *Worked Out of Service*.

6.2 Driver Supervisory Systems

If Driver Supervisory Systems in the leading *Motive Power Unit* is faulty and needs to be isolated during *Travel*, the *Rail Traffic Crew* and the *Network Controller* must confer to determine what actions are required to ensure safety of the *Rail Traffic* and *Workers*.



NOTE: Actions to ensure safety of the *Rail Traffic* may include:

- getting a second crew member for driver only operation;
- reduction of speed; or
- *Travel at Restricted Speed*.

If the affected *Motive Power Unit* cannot continue to *Travel* safely, it must be:

- remarshalled at the first suitable *Location*; or
- *Worked Out of Service*.

7. Defective Vehicles



WARNING: Where there is a risk of being struck by *Rail Traffic* on *Adjacent* lines, the *Rail Traffic Crew* must arrange *Protection* in accordance with Procedure 9010 Protecting Work from Rail Traffic on Adjacent Lines.



WARNING: *Adjacent* lines may be under the control of different *Network Controllers* or *Access Providers*.

If the *Rail Traffic Crew* becomes aware that one or more of their vehicles may be defective, the crew must:

- stop if necessary;
- tell the *Network Controller*;
- *Protect* the *Rail Traffic*, if required; and
- inspect *Rail Traffic* for fault or failure, or if this is not possible, arrange for inspection.

7.1 Inspecting and Managing Defects



WARNING: If the *Rail Traffic Crew* suspect that a vehicle defect may have caused damage to *Infrastructure* the *Rail Traffic Crew* must tell the *Network Controller*.

If the inspection confirms that there is a defect, the *Rail Traffic Crew* must tell the *Network Controller*:

- the nature of the defect; and
- if the defect can be remedied on site.

If the *Rail Traffic Crew* considers that the defective vehicle cannot *Travel* normally, the *Rail Traffic Crew* or *Operator's Representative* must determine:

- the vehicle's fitness for *Travel*;
- any restrictions to be placed on the vehicle for *Travel*; or
- the proposed plan for removing the vehicle from *Running Lines*.

If the defective vehicle is able to *Travel*, the *Rail Traffic Crew* must tell the *Network Controller* about operating restrictions that apply.

If the vehicle is to be detached, the *Rail Traffic Crew* must:

- advise the *Network Controller* of the details of the vehicle including any *Dangerous Goods* and their defects;
- jointly agree with the *Network Controller*, as to the *Location* of where the vehicle is to be detached;
- *Secure* the vehicle at the agreed *Location*; and
- place red NOT TO GO cards on the vehicle.

Any equipment that has been detached from a vehicle must be moved to a position where it cannot be struck by *Rail Traffic*.

The *Network Controller* must be advised of any detached equipment, and if the detached equipment cannot be moved *Clear* of the line.

8. References

4001 Protecting Disabled Rail Traffic

9010 Protecting Work from Rail Traffic on Adjacent Lines

W190-400-001 Standard Gauge Code of Practice Track & Civil Infrastructure

W190-400-002 Narrow Gauge Code of Practice Track & Civil Infrastructure

Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code) ©

Automatic Air Brake Instructions

9. Effective Date

3 February 2020

Network Safeworking Rules and Procedures

Rail Traffic Lights and Markers

Rule Number: 4005

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Table of Contents

1.	Purpose.....	3
2.	General	3
3.	Headlight Use.....	4
3.1	Operating with Headlights Off.....	6
4.	Displaying Visibility Lights	6
5.	Using Lights for Warning	7
6.	Failed Headlights	7
6.1	Total Headlight Failure and Visibility Lights Are Not Available	7
6.2	Total Headlight Failure and Visibility Lights Are Available.....	7
7.	Failed Headlights and Whistle	8
7.1	Headlights and Whistle Failed, and Visibility Lights Not Available.....	8
7.2	Headlights and Whistle Failed, and Visibility Lights Available	8
8.	Rail Traffic Markers	9
8.1	Front of Rail Traffic.....	9
8.2	Rear of Rail Traffic	9
8.3	Motive Power Unit is Rear Vehicle.....	9
8.4	Inspection of End-of-Train Marker	9
8.5	Failed End-of-Train Marker.....	10
8.6	Missing End-of-Train Markers.....	10
8.7	Shunting Marker Lights.....	10
8.8	Identifying Number	11
8.9	Other Lights.....	11
9.	References.....	11
10.	Effective Date.....	11

1. Purpose

The purpose of this rule is to describe how *Rail Traffic* lights and markers are used to:

- indicate the normal direction of *Travel*;
- indicate *Completeness* of *Rail Traffic*; and
- enhance the visibility of *Rail Traffic*.



NOTE: Lights and markers for *Track Vehicles*, refer to Rule [3019 Track Vehicles](#)

2. General

Rail Traffic must not enter the *Network* unless the *Rail Traffic* lights and *Markers Lights* are working correctly.

Headlights must be set on full at the front of all moving *Rail Traffic* unless required to be dimmed or turned off as prescribed within this rule.

An approved *End-of-Train Marker* or at least one approved red light must be displayed at the rear of *Rail Traffic*.

3. Headlight Use

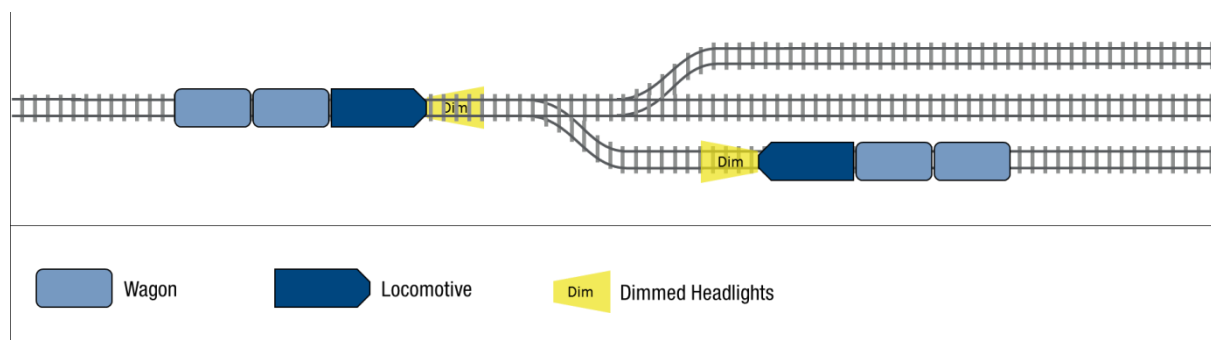


WARNING: When approaching *Level Crossings*, *Headlights* must remain on full unless opposing *Rail Traffic* is simultaneously approaching. In this case, *Rail Traffic Crew* are permitted to dim the *Headlights*.

Rail Traffic Crews are permitted to dim or turn off *Headlights* when *Visibility Lights* are operating under the following conditions:

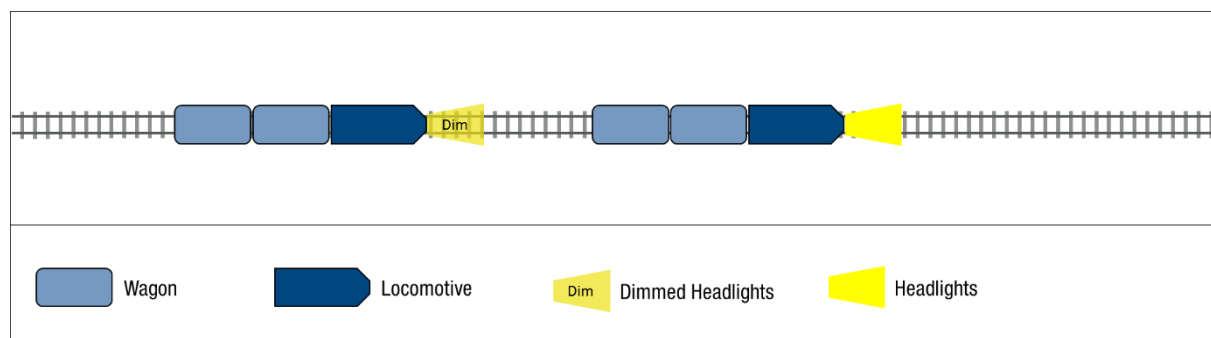
- When approaching, standing or working at *Locations* where *Shunting* is being performed.

Figure 4005-1 Approaching, standing or working at *Locations* where *Shunting* is being performed.



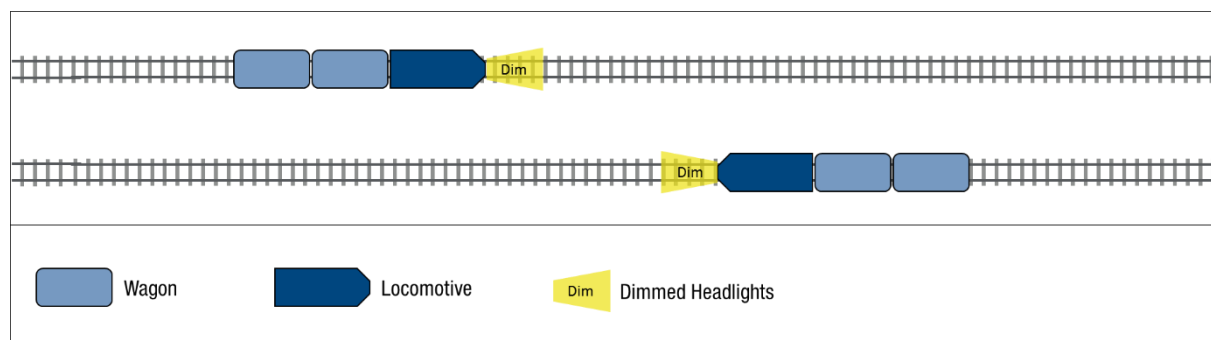
- When approaching or stopped behind other *Rail Traffic*.

Figure 4005-2 Approaching or stopped behind other *Rail Traffic*.



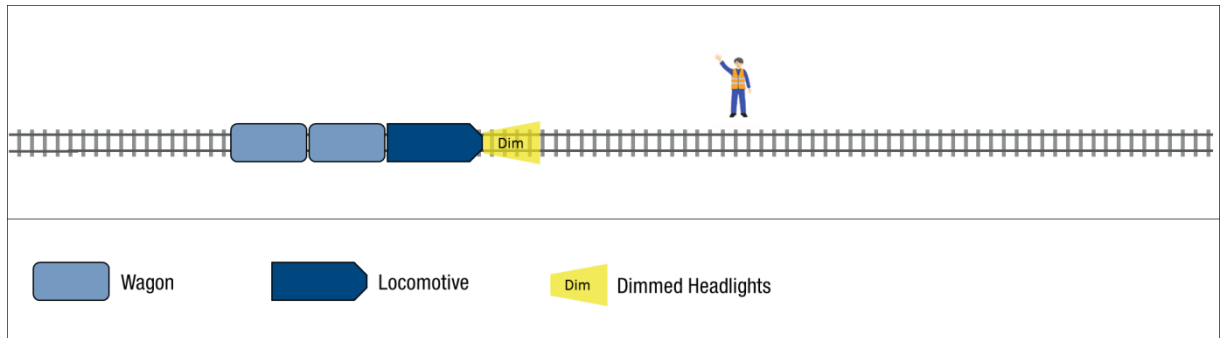
- When approaching and Crossing the lead end of opposing *Rail Traffic*.

Figure 4005-3 Approaching and crossing the lead end of opposing *Rail Traffic*.



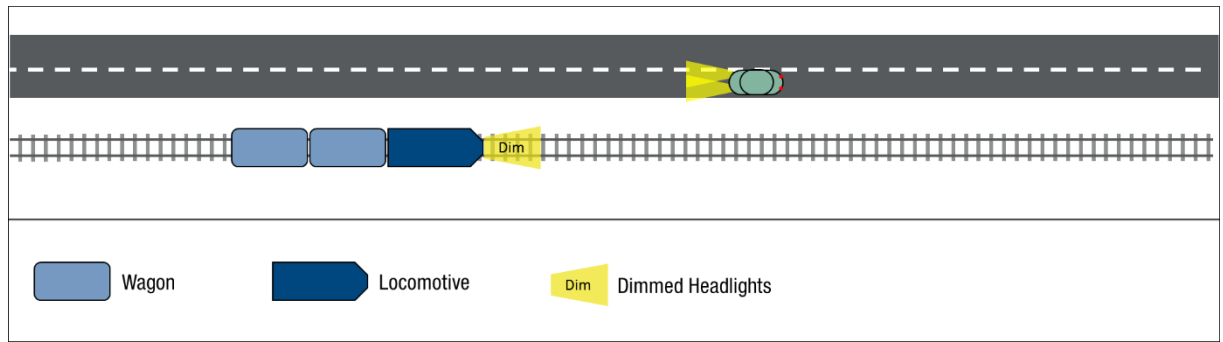
- When approaching people or workers on or about the *Track*.

Figure 4005-4 When approaching people or workers on or about the *Track*.



- When *Rail Traffic* is approaching road traffic on *Adjacent* roadways.

Figure 4005-5 *Rail Traffic* is approaching road traffic on *Adjacent* roadways.



- In weather conditions where *Headlights* may reflect back and affect the *Rail Traffic Crew's* vision.

3.1 Operating with Headlights Off



WARNING: *Headlights must not be turned off unless Marker Lights or Visibility Lights are turned on.*

The *Headlights* must be turned off when *Rail Traffic* has stopped *Clear* at a *Crossing Location*, waiting for opposing *Rail Traffic* to *Cross*.

The waiting *Rail Traffic* must display a white *Marker Light* on the side of the *Motive Power Unit* nearest the *Clear Running Line* and a red *Marker Light* on the side of the *Motive Power Unit* furthest from the *Clear Running Line*.

Figure 4005-6 *Rail Traffic* standing on the Loop for a crossing.

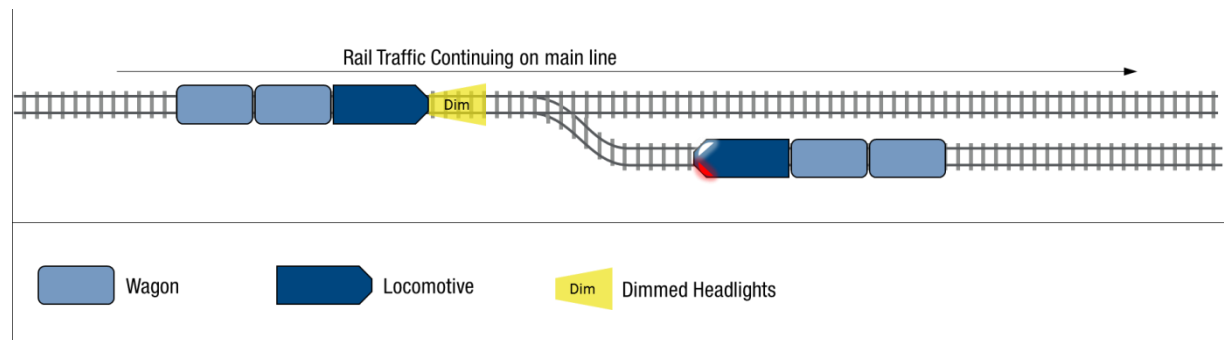
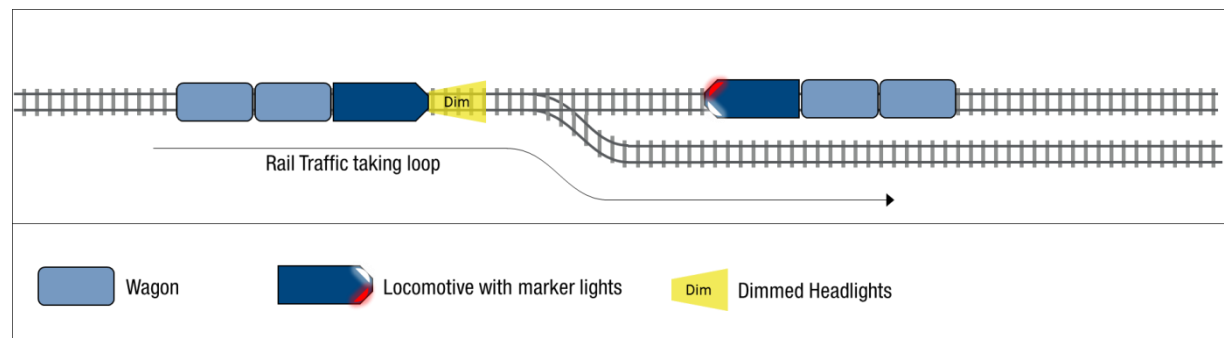


Figure 4005-7 *Rail Traffic* standing on the Main for a crossing.



NOTE: The *Headlight* must be set on full once the lead end of the *Motive Power Unit* has past;

- the opposing *Rail Traffic*;
- road traffic on *Adjacent* road way; or
- the worker.

4. Displaying Visibility Lights

If provided, *Rail Traffic Visibility Lights* must be turned on when the *Rail Traffic* is moving on *Running Lines*.

If *Visibility Lights* fail, *Rail Traffic* may continue normally provided *Headlights* are turned on.

5. Using Lights for Warning

If necessary, *Rail Traffic Crew* may flash *Headlights* or change the colour of *Marker Lights* displayed from white to red to give a warning.

6. Failed Headlights

All cases of total *Headlight* failure must be reported to the *Network Controller*.

The *Network Controller* and the *Rail Traffic Crew* must make arrangements to:

- effect repairs;
- remarshal the *Motive Power Units*; or
- replace the lead *Motive Power Unit*.

If this is not possible, the *Rail Traffic* may proceed to the next repair facility.



WARNING: Where *Headlights* have failed, *Rail Traffic Crew* must make additional use of the *Whistle* to compensate for the lack of visual warning.

6.1 Total Headlight Failure and Visibility Lights Are Not Available

If visibility is good, *Rail Traffic* must *Travel* at *Controlled Speed*.

During periods of *Low Visibility*, *Rail Traffic* must;

- *Travel* at *Restricted Speed* and may only *Clear* the *Section*; and
- in *Train Order Territory*, stop before *Travelling* over *Points* where mechanical *Points Indicators* exist and ensure *Points* are correctly set before proceeding.

When approaching *Level Crossings*, *Rail Traffic* must *Travel* at *Restricted Speed* prepared to stop and not proceed over the *Level Crossing*, until:

- *Active Control Level Crossing* warning equipment is operating; or
- road or pedestrian traffic is not approaching or has stopped at the crossing.

When approaching *Locations* where the *Rail Traffic Crew* is aware or can see workers or other personnel present on the ground, *Rail Traffic* must *Travel* at *Restricted Speed*.

6.2 Total Headlight Failure and Visibility Lights Are Available

If the *Headlights* have failed and *Visibility Lights* are available, *Rail Traffic* may *Travel* at *Normal Speed*.

7. Failed Headlights and Whistle

7.1 Headlights and Whistle Failed, and Visibility Lights Not Available

If the *Headlights* and *Whistles* fail and *Visibility Lights* are not available and no other *Motive Power Unit* can be used as the lead unit, the *Rail Traffic Crew* must carry out instructions for operating with total *Headlight* failure when *Visibility Lights* not available in accordance with Section 6.1.

During periods of *Low Visibility* the *Rail Traffic* must be treated as *Disabled* in accordance with Rule 4009 Disabled Rail Traffic.

7.2 Headlights and Whistle Failed, and Visibility Lights Available

If the *Headlights* and *Whistles* fail and *Visibility Lights* are available, the *Rail Traffic Crew* must:

- continue the movement with the *Visibility Lights* turned on and *Travel* at:
 - *Controlled Speed* if visibility is good; or
 - *Restricted Speed* during periods of *Low Visibility*;
- slow to *Restricted Speed* before each *Level Crossing*, prepared to stop if road or pedestrian traffic is approaching;
- not proceed over the *Level Crossing*, unless:
 - at an *Active Control Level Crossing*, equipment is operating; or
 - at a *Passive Control Level Crossings*, it is *Clear* or road and pedestrian traffic has been stopped;
- slow to *Restricted Speed* approaching other *Rail Traffic* and where workers may be present on the ground;
- slow to *Restricted Speed* approaching people on or about the *Track*; and
- slow or stop as necessary, if the approach of the *Rail Traffic* is not attracting the appropriate attention.

8. Rail Traffic Markers

8.1 Front of Rail Traffic

The front of *Rail Traffic* must be identified by *Headlights*, *Visibility Lights* or *Marker Lights*.

If *Marker Lights* become defective they must be repaired or replaced as soon as practical.

8.2 Rear of Rail Traffic

The rear of *Rail Traffic* must be identified by:

- an *End-of-Train Marker*;
- one or more clearly visible, steady or flashing red lights;
- an *End-of-Train Monitor*; or
- a combination of the above.

End-of-Train Markers and *Monitors* must have at least one red light that is illuminated during the hours of darkness or when visibility is low.

8.3 Motive Power Unit is Rear Vehicle

When a *Motive Power Unit* is operating without vehicles or is at the rear of the *Rail Traffic Consist*, one of the following must be displayed:

- one or more red *Tail Lights*; or
- an *End-of-Train Marker*.

8.4 Inspection of End-of-Train Marker

The operation of an *End-of-Train Marker* must be checked before departure and where possible en-route by:

- direct observation of the marker; or
- using telemetry in the cab of the *Rail Traffic*.

8.5 Failed End-of-Train Marker

If the rear *End-of-Train Marker* fails en-route:

- the *Network Controller* must be told;
- a red reflector, red flag or red light may be used as an alternative rear marker; and
- *Rail Traffic* may *Travel* only as far as the next *Location* where the marker can be repaired or replaced.

8.6 Missing End-of-Train Markers

If *Rail Traffic* is detected with no *End-of-Train Marker* the *Network Controller* must be told.

Rail Traffic may *Travel* at the discretion of the *Network Controller* only as far as the next *Location* where the marker can be replaced.

In *Centralised Traffic Control (CTC) Territory*, *Rail Traffic* must be worked in accordance with Rule 5023 Manual Block Working until the *End-of-Train Marker* has been replaced.

The *Network Controller* must confirm that:

- the *Rail Traffic* is *Complete*; or
- the *Sections* to the rear of the *Rail Traffic* are *Clear*.

If the *Rail Traffic* is unable to be confirmed as *Complete*, affected *Sections* must be treated as *Obstructed* in accordance with Rule 2009 Reporting and Responding to Conditions Affecting the Network.

Until it can be established that the *Section* is *Clear*, the *Network Controller* must:

- apply *Blocking Facilities* to prevent other *Rail Traffic* from entering the affected *Section*;
- tell *Rail Traffic Crews* within the affected *Section* to stop their *Rail Traffic*; and
- warn *Rail Traffic* on *Adjacent* lines.

8.7 Shunting Marker Lights

Locomotives Shunting within yards must display two red *Marker Lights* at each end.



NOTE: The *Marker Lights* of *Shunting Locomotives* do not indicate direction of *Travel*.

8.8 Identifying Number

Where provided, number lights must be illuminated on the leading *Motive Power Unit*.

8.9 Other Lights

Step and other lights may be illuminated on all units to improve visibility of *Rail Traffic* at night.

9. References

2009 Reporting and Responding to Conditions Affecting the Network

4009 Removing Disabled Rail Traffic

5023 Manual Block Working

10. Effective Date

3 February 2020

Network Safeworking Rules and Procedures

Rail Traffic Whistles

Rule Number: 4007

Arc Infrastructure maintains the master for this document and publishes the current version on the Arc Infrastructure website. All changes and updates to the Network Safeworking Rules and Procedures are authorised by the Arc Infrastructure Rule Book Committee. This document is uncontrolled when printed.

Document History

Version	Effective Date	Pages updated	Reasons for change
2.0	03 02 2020	All	Major Review

Table of Contents

1.	Purpose.....	3
2.	General	3
2.1	Whistle Codes	4
2.2	Failure to Acknowledge a Rail Traffic Whistle	4
3.	Failed Whistle.....	4
3.1	Response to a Failure	4
3.2	Running with a Failed Whistle	5
4.	References.....	5
5.	Effective Date.....	5

1. Purpose

The purpose of this rule is to describe how *Rail Traffic Whistles* are used to give audible warning or acknowledge *Handsignals*.

2. General

Before *Rail Traffic* enters the *Network*, *Rail Traffic Whistles* must be working correctly.

Rail Traffic Whistles must not be sounded unless a valid reason exists.

Rail Traffic Whistles must be sounded with appropriate intensity, length and repetition for the circumstances.

Unless otherwise prohibited, *Rail Traffic Whistles* must be sounded:

- when approaching *Level Crossings*;
- where necessary for safety;
- before *Rail Traffic* is moved;
- if *Railway Track Signals (RTS)* are activated;
- where *WHISTLE* signs are placed;
- where people or animals are on or near the *Track*;
- when approaching *Locations* where *Shunting* is being performed on *Adjacent Tracks*;
- to acknowledge *Handsignals*; and
- as otherwise required by the *Network Safeworking Rules and Procedures*.

Where *Rail Traffic* movements are likely to simultaneously approach a *Level Crossing*, the *Rail Traffic Crews* must repeatedly sound the *Whistle* until *Rail Traffic* has reached the *Level Crossing*.

The *Rail Traffic Crew* must sound the *Whistle* when approaching *Locations* where there is limited *Sighting Distance* when the *Rail Traffic* movement is:

- run at short notice;
- running in advance of timetable;
- running late; or
- *Travelling in the Wrong Running-Direction on a Uni-Directional Track.*

2.1 Whistle Codes

Rail Traffic Crews must use the following *Whistle* codes:

Figure 4007-1 *Whistle* code table.

Code	Meaning
One long whistle.	Warning, challenge or approaching a level crossing.
One short whistle.	Acknowledgment or moving off.
Two short whistles.	Setting back.
Three short whistles.	Danger-Stop.
Continuous whistling.	Assistance required.

2.2 Failure to Acknowledge a Rail Traffic Whistle

If an expected response or acknowledgment to the *Rail Traffic Whistle* is not received, the *Rail Traffic Crew* must continue to sound the *Whistle* and, if required, attempt to Stop the *Rail Traffic*.

3. Failed Whistle

The *Rail Traffic Crew* must report all cases of *Whistle* failure to the *Network Controller* and to the *Operator's Representative*.

3.1 Response to a Failure

The *Rail Traffic Crew* and the *Network Controller* must make arrangements to:

- effect repairs;
- re-Marshall the *Motive Power Units*; or
- replace the lead *Motive Power Unit*.

3.2 Running with a Failed Whistle

If the *Whistle* fails and cannot be repaired and no other *Motive Power Unit* can be used as the lead unit, the *Rail Traffic Crew* must:

- continue the movement and *Travel* at;
 - Controlled Speed if visibility is good; or
 - Restricted Speed during periods of Low Visibility;
- flash the *Headlights* and other *Visibility Lights* to attract attention where necessary;
- slow to *Restricted Speed* before each *Level Crossing*, prepared to stop if road or pedestrian traffic is approaching;
- not proceed over the *Level Crossing*, unless;
 - at an *Active Control Level Crossing*, equipment is operating; or
 - at a *Passive Control Level Crossing*, it is *Clear* or road and pedestrian traffic has stopped;
- slow to *Restricted Speed* approaching other *Rail Traffic* where workers may be present on the ground;
- slow to *Restricted Speed* approaching people on or about the *Track*; and
- slow or stop as necessary, if the approach of the *Rail Traffic* is not attracting the appropriate attention.

If the *Whistle* and *Headlights* fail and no other *Motive Power Unit* can be used as the lead unit, act in accordance with Rule 4005 Rail Traffic Lights and Markers.

4. References

4005 Rail Traffic Lights and Markers

5. Effective Date

3 February 2020

Network Safeworking Rules and Procedures

Removing Disabled Rail Traffic

Rule Number: 4009

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Document History

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2.02	14 03 2022	5,	Restraint Authority in Train Order Territory

Table of Contents

1.	Purpose.....	4
2.	General	4
3.	Disabled Rail Traffic	4
3.1	The Disabled Rail Traffic Crew	4
3.2	Network Controller.....	5
4.	Authorities	5
4.1	Relief Rail Traffic to Enter the Section from the Rear.....	5
4.2	Relief Rail Traffic to Enter the Section from the front	6
5.	Removing Disabled Rail Traffic	6
5.1	Coupling to the Disabled Rail Traffic.....	6
5.2	Relief from the Rear and Propelling the Disabled Rail Traffic to the front.....	6
5.3	Double Line Automatic Signalling	7
5.3.1	Where relief has been provided from the rear and is to remove the disabled rail traffic to the rear	7
5.3.2	Where relief has been provided from the front and is to remove the disabled rail traffic to the front.....	7
5.3.3	Where relief has been provided from the front and is to remove the disabled rail traffic to the rear	7
5.4	Single Line Automatic Signalling and Train Order Territory	8
5.4.1	Where relief has been provided from the rear and is to remove the disabled rail traffic to the rear	8
5.4.2	Relief from the front and removing the disabled rail traffic to the front	8
5.4.3	Where relief has been provided from the front and is to remove the disabled rail traffic to the rear	9
6.	Rail Traffic Can Be Divided to Clear the Section	9
6.1	Securing and Protecting the Divided Rail Traffic.....	10
6.2	Arriving at the Controlled Location in Advance	10
6.2.1	Train Order Territory	10
6.3	Returning for the Rear Portion	10
7.	Parted Rail Traffic	11
8.	Parted Rail Traffic and Rail Traffic Crew Unaware	11
9.	Cancelling an RRTA.....	12
10.	Fulfilling an RRTA	12
11.	Keeping Records.....	12

12.	References.....	12
13.	Effective Date.....	12

1. Purpose

The purpose of this rule is to provide instructions to *Network Controllers* and *Rail Traffic Crew*, for the removal of *Disabled Rail Traffic* from *Running Lines* in the *Network*.



NOTE: For the removal of *Disabled Track Vehicles*, refer to Rule [3019 Track Vehicles](#).

2. General

The *Network Controller* must determine the method of removing the *Disabled Rail Traffic*.

If the normal *Proceed Authority* permitted by the existing *System of Safeworking* is not available, and the *Rail Traffic* movement cannot be actioned in accordance with Rule [6013 Passing Fixed Signals at STOP](#), the *Rail Traffic* movement must be authorised using an appropriate *Authority*.

3. Disabled Rail Traffic

3.1 The Disabled Rail Traffic Crew

The *Rail Traffic Crew* of the *Disabled Rail Traffic* must:

- ensure their own safety;
- tell the *Network Controller*:
 - there is a failure;
 - the *Location* of the failed *Rail Traffic*;
 - the nature of the failure, when this has been determined; and
- *Protect* the *Disabled Rail Traffic* in accordance with Rule [4001 Protecting Rail Traffic](#).



WARNING: An unexpected loss of brake pipe pressure may indicate that *Rail Traffic* has derailed or has derailed and *Fouled Adjacent* lines.

Until otherwise confirmed, *Rail Traffic Crews* must always act on the presumption that *Adjacent* lines have been *Fouled*.

If the *Rail Traffic Crew* suspect their *Rail Traffic* has *Obstructed* an *Adjacent* line, they must protect against approaching *Rail Traffic* in accordance with Rule [4001 Protecting Rail Traffic](#).

3.2 Network Controller

The *Network Controller* responsible for the affected portions of line must:

- *Issue Restraint Authorities* in accordance with Rule 4001 Protecting Rail Traffic;
- be assured by the *Rail Traffic Crew* that the *Disabled Rail Traffic*, if required, has been *Protected*; and
- in *Train Order Territory*, *Cancel* the *Train Order* held by the *Rail Traffic Crew* of the *Disabled Rail Traffic* at the *Location* given by the *Rail Traffic Crew*.

4. Authorities

The *Network Controller* must:

- advise affected *Competent Workers* of the intended movement;
- tell the crew of the *Disabled Rail Traffic* about details of relief to be provided; and
- tell the crew of the relief *Rail Traffic* about the details of the *Disabled Rail Traffic* and where the *Disabled Rail Traffic* is to be taken:
 - *Relief Rail Traffic Authority (RRTA)* are issued on *Alternative Movement Authority* forms.

Where the *RRTA* is not being created within the control system and is to be issued manually by the *Network Controller*, *Blocking Facilities* must be applied where available.



NOTE: The *Network Controller* must tell the relief *Rail Traffic Crew* the kilometre *Location* of the end of the *Disabled Rail Traffic* in the direction that relief is being provided, and the *Protection* details.

4.1 Relief Rail Traffic to Enter the Section from the Rear

The authority for the relief *Rail Traffic* to enter the *Section* from the rear is:

- in all safeworking systems, a *Relief Rail Traffic Authority (RRTA)*, issued on an *Alternative Movement Authority* form; and:
 - in Centralised Train Control (CTC) areas, the normal *Proceed Aspect* on the signal, where available; or
 - verbal authority from the *Network Controller* when the *Proceed Aspect* is unavailable.

4.2 Relief Rail Traffic to Enter the Section from the front

The authority for the relief *Rail Traffic* to enter the *Section* from the front is a *RRTA* and verbal *Authority* from the *Network Controller*.

5. Removing Disabled Rail Traffic

The *Rail Traffic Crew* required to remove *Disabled Rail Traffic* must:

- establish communications with the crew of the *Disabled Rail Traffic*;
- slow to *Restricted Speed* when:
 - 3000 metres from the *Disabled Rail Traffic*; or
 - entering the *Block Section* where the *Disabled Rail Traffic* is located within 3000 metres from the *Protecting Signal*;
- stop 500 metres from the *Disabled Rail Traffic*;
- be *Piloted* to the *Disabled Rail Traffic*; and
- remove the *Disabled Rail Traffic* as authorised by the *Network Controller*.

5.1 Coupling to the Disabled Rail Traffic

The *Rail Traffic Crew* of the *Disabled Rail Traffic* will *Handsignal* or verbally direct the assisting *Rail Traffic Crew* to couple to the *Disabled Rail Traffic*.

The *Rail Traffic Crew* of the relief *Rail Traffic* will, where communications are available, advise the *Network Controller* when ready to move the *Disabled Rail Traffic*.

5.2 Relief from the Rear and Propelling the Disabled Rail Traffic to the front

The *Rail Traffic Crew* of the relief *Rail Traffic* will ensure the crew of the *Disabled Rail Traffic* are able to assist in the braking and safety of the *Propelling* movement.

Prior to allowing the *Disabled Rail Traffic* to be *Propelled*, the *Rail Traffic Crew* of the *Disabled Rail Traffic* will ensure *Effective Communications* are available between *Rail Traffic Crews*, and:

- the *Rail Traffic* brake is operational from the *Motive Power Unit* of the *Disabled Rail Traffic*; or
- the *Propelling* movement is made in accordance with Rule 4015 Setting Back or Propelling on Running Lines.

5.3 Double Line Automatic Signalling

5.3.1 Where relief has been provided from the rear and is to remove the disabled rail traffic to the rear

Before permitting the relief *Rail Traffic* to remove the *Disabled Rail Traffic* in the *Wrong Running Direction* the *Network Controller* must:

- ensure no *Rail Traffic* has entered the *Section* behind the relief *Rail Traffic*;
- place the *Fixed Signal* controlling the entry to the *Section* at Stop; and
- ensure a *RRTA* has been *Issued* for the *Wrong Running Direction* movement to the *Rail Traffic Crew* of the relief *Rail Traffic*.

The crew of the relief *Rail Traffic* must:

- before moving to the rear, be in possession of a *RRTA* for the *Wrong Running Direction* movement;
- return to the rear *Location* as directed by the *Network Controller*;
- on arrival at *Station Limits* for the rear *Location*, obtain permission from the *Network Controller* to enter the *Location*; and
- advise the *Network Controller* when the *Section* is *Clear*.

5.3.2 Where relief has been provided from the front and is to remove the disabled rail traffic to the front

The *Rail Traffic Crew* of the relief *Rail Traffic*;

- removes the *Disabled Rail Traffic* as *Authorised* by the *Network Controller*; and
- advises the *Network Controller* when the *Section* is *Clear*.

5.3.3 Where relief has been provided from the front and is to remove the disabled rail traffic to the rear

Before permitting the relief *Rail Traffic* to remove the *Disabled Rail Traffic* in the *Wrong Running Direction*, the *Network Controller* must:

- ensure no *Rail Traffic* has entered the *Section* behind the *Disabled Rail Traffic*;
- place the *Fixed Signal* controlling the entry to the *Section* at Stop; and
- ensure a *RRTA* has been *Issued* for the *Wrong Running Direction* movement to the *Rail Traffic Crew* of the relief *Rail Traffic*.

The *Rail Traffic Crew* of the relief *Rail Traffic* must:

- before moving to the rear, be in possession of a *RRTA* for the *Wrong Running Direction* movement;
- on arrival at *Station Limits* for the rear *Location*, obtain permission from the *Network Controller* to enter;
- advise the *Network Controller* the *Section* is *Clear*; and
- ensure the *Propelling* movement is made in accordance with Rule 4015 Setting Back or Propelling on Running Lines.



NOTE: The crew of the *Disabled Rail Traffic* must assist with the *Propelling* movement as required.

5.4 Single Line Automatic Signalling and Train Order Territory

5.4.1 Where relief has been provided from the rear and is to remove the disabled rail traffic to the rear

Before permitting the relief *Rail Traffic* to remove the *Disabled Rail Traffic* to the *Location* in the rear, the *Network Controller* must:

- where provided, place the *Fixed Signal* controlling the entry to the *Section* at *Stop*; and
- ensure the *Rail Traffic Crew* of the relief *Rail Traffic* are in possession of a *RRTA* for the movement.

The relief *Rail Traffic Crew* must:

- before moving to the rear, be in possession of a *RRTA* for the movement;
- on arrival at *Station Limits* for the rear *Location*, obtain permission from the *Network Controller* to enter; and
- advise the *Network Controller* when the *Section* is *Clear*.

5.4.2 Relief from the front and removing the disabled rail traffic to the front

The *Rail Traffic Crew* of the relief *Rail Traffic* must:

- before removing the *Disabled Rail Traffic* to the front, be in possession of a *RRTA* for the movement;
- remove the *Disabled Rail Traffic* as *Authorised* by the *Network Controller*; and
- advise the *Network Controller* when the *Section* is *Clear*.

5.4.3 Where relief has been provided from the front and is to remove the disabled rail traffic to the rear

Before permitting the relief *Rail Traffic* to remove the *Disabled Rail Traffic* to the *Location* in the rear, the *Network Controller* must:

- ensure no *Rail Traffic* has entered the *Section* behind the *Disabled Rail Traffic*;
- place the *Fixed Signal* controlling the entry to the *Section* at Stop; and
- ensure the *Rail Traffic Crew* of the relief *Rail Traffic* are in possession of a *RRTA* for the movement.

The relief *Rail Traffic Crew* must:

- before moving to the rear, be in possession of a *RRTA* for the movement;
- on arrival at *Station Limits* for the rear *Location*, obtain permission from the *Network Controller* to enter; and
- advise the *Network Controller* when the *Section* is *Clear*.

6. Rail Traffic Can Be Divided to Clear the Section

If it is necessary to divide *Rail Traffic* into portions for removal, the *Network Controller* must determine a suitable *Location* to where any divided portion can be moved.

The *Network Controller* must tell the *Rail Traffic Crew* the determined *Location* to take any divided portion.

Before each portion is removed, the *Rail Traffic Crew* must complete a continuity test on the portion to be removed.

If the removed portion of the *Rail Traffic* will *Travel* beyond the next *Controlled Location*:

- *Tail Lights* or an *End-of-Train Marker* must be attached to the rear-most vehicle before departing that *Location*; or
- *Rail Traffic* must be *Block* worked, in accordance with Rule 5023 Manual Block Working.

6.1 Securing and Protecting the Divided Rail Traffic

The portion of the *Rail Traffic* to remain must be:

- *Secured*, in accordance with Rule 4003 Rail Traffic Integrity, and Protected; in accordance with Rule 4001 Protecting Rail Traffic, and
- during darkness or in conditions of *Low Visibility*, fitted with a light on the leading vehicle:
 - in areas where there are *Adjacent* lines, a white light; or
 - on single lines, a red light.

The *Rail Traffic Crew* must:

- take a written note of the last vehicle of the front portion;
- move the front portion forward 500 metres; and
- place 3 Railway Track Signals (RTS) on all rails 20 metres apart in accordance with Procedure 9004 Railway Track Signals, or a Rail Clamp Stop Sign to the head of the rail.

6.2 Arriving at the Controlled Location in Advance

On arrival at the *Controlled Location* in advance the *Rail Traffic Crew* must:

- confirm the portion is *Complete*; and
- stow the portion as directed by the *Network Controller*.

6.2.1 Train Order Territory

On arrival at the *Location*, where a *Crossing* is to take place and the other *Rail Traffic* is met, the *Rail Traffic Crew* must:

- stop at the *Facing Points*; and
- inform the *Rail Traffic Crew* of the circumstances.

6.3 Returning for the Rear Portion

The *Rail Traffic Crew* must get permission from the *Network Controller* before returning for the remaining portion.

The *Rail Traffic Crew* must advise the *Network Controller* when all of the *Rail Traffic* is *Clear* from the *Section*.

7. Parted Rail Traffic



WARNING: Before stopping the forward portion of *Parted Rail Traffic*, *Rail Traffic Crews* must consider the risk of it being struck by the detached portion of the *Rail Traffic*.

Rail Traffic Crews who become aware that their *Rail Traffic* has *Parted* must:

- stop the *Rail Traffic*; and
- tell the *Network Controller* about the *Parting* and, if possible, the *Location* of the detached portion.

The *Network Controller* must determine whether the *Proceed Authority* for the movement back to the detached portion:

- is available under the existing *System of Safeworking*; or
- must be *Authorised* using an *RTA*.

The *Rail Traffic Crew* must not *Set Back* the forward portion of the *Rail Traffic* to the *Location* of the detached portion unless:

- the detached portion is *Secured*; and
- the *Setting Back* movement is made in accordance with Rule 4015 Setting Back or Propelling on Running Lines.

8. Parted Rail Traffic and Rail Traffic Crew Unaware

The *Network Controller* must, if necessary:

- arrange to locate the detached portions of the *Rail Traffic*;
- arrange to warn *Rail Traffic Crews* approaching the affected portions of line;
- arrange to prevent *Rail Traffic* from approaching the affected portions of line;
- apply *Blocking Facilities*; and
- arrange for recovery of the detached portion.

Competent Workers who find detached vehicles must:

- if possible, *Secure* them and arrange for their *Protection*; and
- tell the *Network Controller*.

9. Cancelling an RRTA

The *RRTA* may be *Cancelled* only if the *Network Controller* is assured that the *Authorised* movement has not started or has not been completed.

The *Network Controller* must tell affected *Competent Workers* that the *RRTA* has been *Cancelled*.

10. Fulfilling an RRTA

The *RRTA* must be *Fulfilled* only when the *Rail Traffic Crew* assures the *Network Controller* that the *Authorised* movements have been completed and the *Block Section* is *Clear*.



NOTE: The *Restraint Authority* Issued to the *Rail Traffic Crew* of the *Disabled Rail Traffic* must be *Cancelled* when the whole of the *Disabled Rail Traffic* has been removed *Complete* from the *Block Section* in accordance with Rule 4001 Protecting Rail Traffic.

11. Keeping Records

Network Controllers must keep a *Permanent Record* of:

- the *Issue* of the *RRTA*; and
- details of affected *Competent Workers* told about the *Authorised* movements.

Rail Traffic Crews and other *Competent Workers* must keep a *Permanent Record* of the *Issue* of the *RRTA*.

12. References

4001 Protecting Disabled Rail Traffic

4003 Rail Traffic Integrity

4015 Setting Back or Propelling on Running Lines

5017 Train Order Working

5023 Manual Block Working

6013 Passing Fixed Signals at STOP

9004 Railway Track signals

13. Effective Date

14 March 2022

Network Safeworking Rules and Procedures

Station Limits

Rule Number: 4011

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Document History

Version	Effective Date	Pages updated	Reasons for change
2.0	03 02 2020	All	Major Review

Table of Contents

1.	Purpose.....	3
2.	General	3
3.	Station Limits.....	4
3.1	Centralised Traffic Control Territory	4
3.1.1	Double-line	4
3.1.2	Bi-Directional single-line	5
3.2	Train Order Territory	6
4.	Station Working	7
4.1	Running Lines	7
4.2	Unsignalled Movements	7
5.	References.....	7
6.	Effective Date	7

1. Purpose

The objective of this rule is to provide instructions on how *Station Limits* are defined, and how *Rail Traffic* movements are controlled, within *Station Limits*.

2. General

Station Limits define the limits of *Controlled Locations*.

If *Fixed Signals* are not available, *Network Controllers* must give verbal *Authority* for movements within *Station Limits*.

Network Controllers must make sure they do not *Authorise* conflicting movements.

3. Station Limits

Depending on their availability at a *Location*, signs or signals determine arrival end and departure end of *Station Limits*.

A *Station Limit* is defined by a:

- specified *Controlled Absolute Signal*; or
- *Station Limit* sign.



NOTE: *Controlled Absolute Signals* are identified by a white reflectorised marker plate located on the centre of the mast in accordance with Rule [6005 Fixed Signals](#), with the signal number displayed.

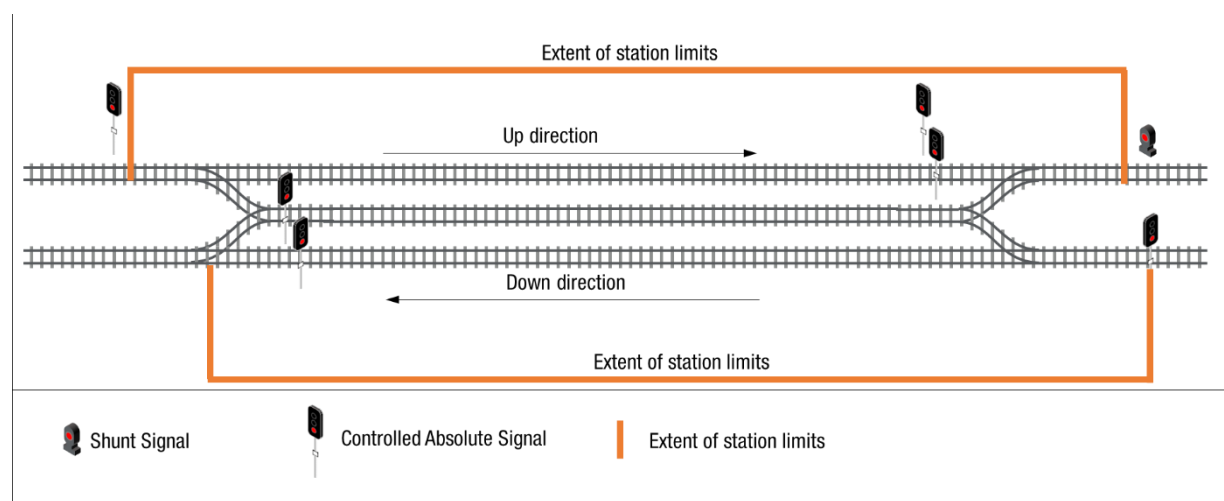
3.1 Centralised Traffic Control Territory

3.1.1 Double-line

Station Limits in *Double Line Centralised Traffic Control (CTC) Territory* are determined by:

	Limit
From	the first <i>Controlled Absolute Signal</i> at that <i>Double Line CTC Station</i> .
To	the last <i>Controlled Absolute Signal</i> at that <i>Double Line CTC Station</i> ; or <i>Facing or Trailing Points</i> beyond that <i>Fixed Signal</i> ; or <i>Shunt Set Back</i> signal beyond that <i>Fixed Signal</i> .

Figure: 4011-1 Example of *Station Limits* in *Double Line CTC Territory*.

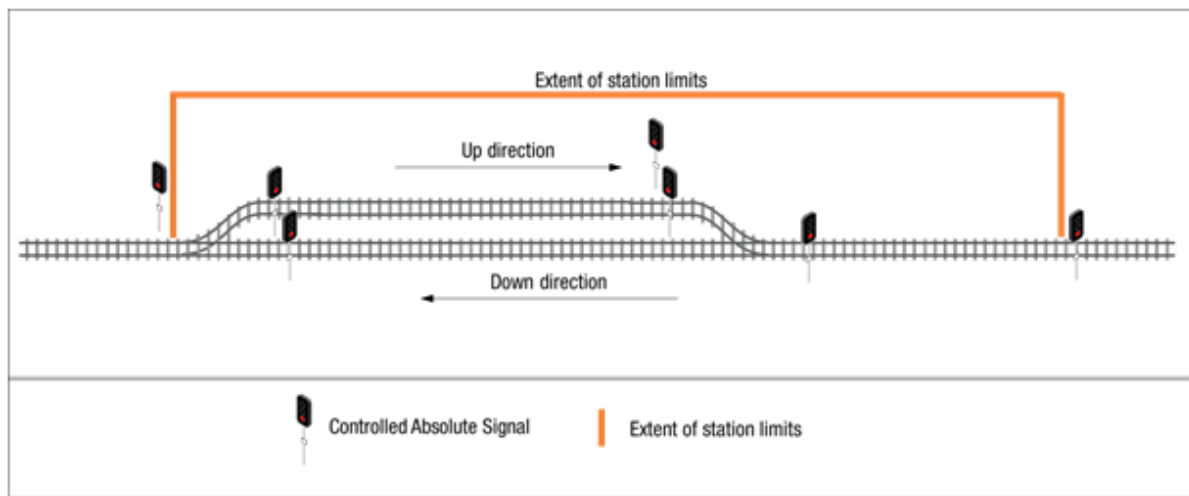


3.1.2 Bi-Directional single-line

Station Limits in Bi-Directional Single Line Centralised Traffic Control (CTC) Territory are determined by:

	Limit
From	The first <i>Controlled Absolute Signal</i> at that <i>Single Line CTC Station</i> .
To	The first <i>Controlled Absolute Signal</i> in the opposing direction, at that <i>Single Line CTC Station</i> .

Figure 4011-2 Example of *Station Limits* in *Bidirectional Single-line CTC Territory*.



3.2 Train Order Territory

Station Limits at Train Order Locations are determined by *STATION LIMITS* signs.

Figure 4011-3 *Station Limits at Train Order Locations*.

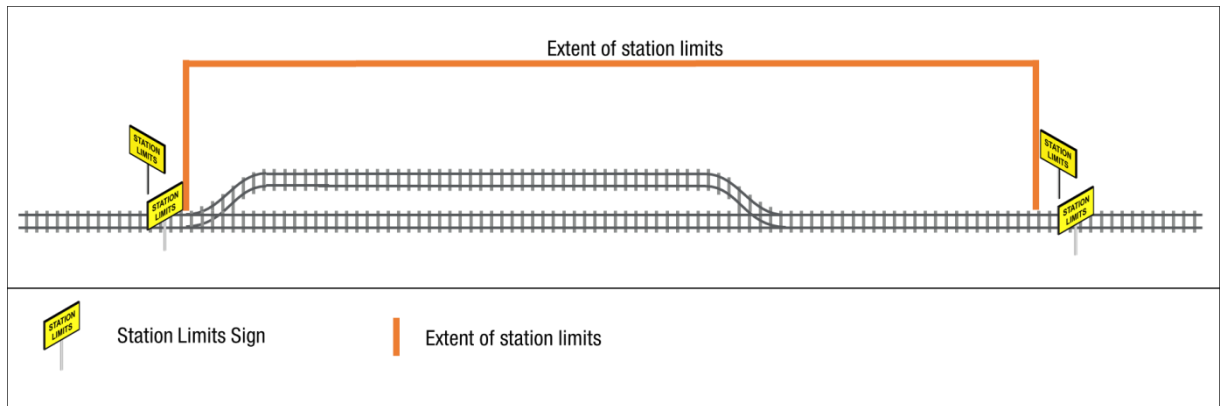
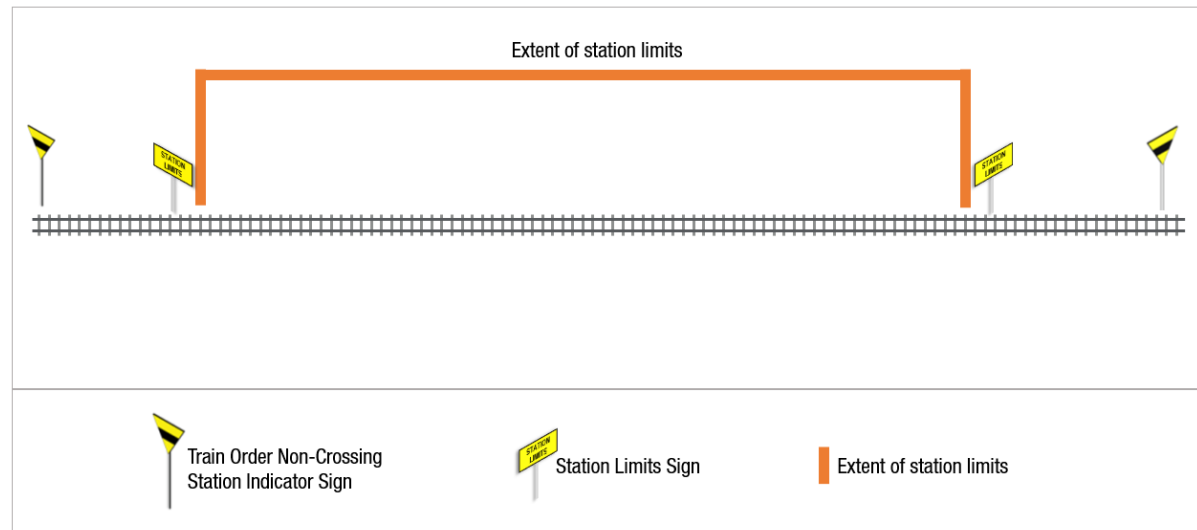


Figure 4011-4 *Station Limits at Train Order Locations*.



4. Station Working

4.1 Running Lines

Rail Traffic movements on *Running Lines* within *Station Limits* must be *Authorised* by the *Network Controller*.

If available, *Fixed Signals* must be used to *Authorise* movements.

Fixed Signals at STOP must be passed only in accordance with Rule 6013 Passing Fixed Signals at STOP.

4.2 Unsignalled Movements

Unsignalled movements within *Station Limits* must not exceed *Restricted Speed*.

Before *Authorising* an unsignalled movement that opposes other *Rail Traffic*, the *Network Controller* must make sure that at least one unoccupied *Block* is maintained between the movements.

The *Block* between the opposing movements must remain unoccupied until one of the approaching *Rail Traffic* movements is brought to a Stop.

The *Network Controller* must tell the *Rail Traffic Crew* involved in the unsignalled movement not to Proceed beyond the relevant *Station Limits*.

5. References

6005 Fixed Signals

6013 Passing Fixed Signals at STOP

6. Effective Date

3 February 2020

Network Safeworking Rules and Procedures

Shunting and Marshalling

Rule Number: 4013

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Table of Contents

1.	Purpose.....	3
2.	General	3
2.1	Shunting.....	3
2.2	Marshalling.....	3
3.	Planning Shunting	4
3.1	Shunting Over Points.....	4
4.	Directing Shunting.....	5
5.	Running Lines	5
6.	Level Crossings.....	5
6.1	Loading or unloading under power	6
7.	Attaching Locomotive	6
8.	Detached Rail Vehicles	6
9.	Vehicles Under Repair	6
10.	Stabling Rail Traffic	7
10.1	On Running Lines.....	7
10.2	In Station Limits.....	7
10.3	In Sections	7
11.	Marshalling Irregularity	7
12.	Restoring Equipment.....	7
13.	References.....	8
14.	Effective Date.....	8

1. Purpose

The purpose of this rule is to prescribe the rules for safe *Shunting* and *Marshalling* in the *Network*.

2. General

Vehicles must not be *Shunted* in the *Network* without a *Motive Power Unit* attached (i.e. loose-*Shunted*).

2.1 Shunting

Shunting is moving *Rail Traffic*:

- to arrange or rearrange vehicle order in a *Consist*;
- to attach or detach vehicles from a *Consist*;
- to move vehicles in a yard or terminal; or
- to or from *Running Lines*, except for through *Rail Traffic* movements.

Shunting must be performed at a speed not exceeding *Restricted Speed*.

When performing *Shunting*, *Rail Traffic* may only be moved with the *Authority* of the *Competent Worker* directing the *Shunting* operations.

Workers not involved in *Shunting* must stay *Clear* of moving vehicles.

2.2 Marshalling

Vehicles carrying *Dangerous Goods* must be *Marshalled* in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code)©.

3. Planning Shunting



WARNING: If there are narrow *Track* clearances, *Competent Workers* performing *Shunting* must keep at least 2 metres between themselves and moving vehicles.

When planning *Shunting* the *Competent Worker* directing *Shunting* operations must:

- confer with the *Network Controller* and agree about planned movements;
- confer with the *Rail Traffic Crew* and other *Competent Workers* and agree about planned movements; and
- warn other *Competent Workers* of hazards presented by narrow *Track* clearances, such as:
 - gates and fences;
 - buildings;
 - *Platforms*; and
 - rail vehicles on *Adjacent* lines.

Competent Workers during *Shunting* operations must:

- if necessary, arrange for clearance of *Fixed Signals*;
- make sure that *Routes* are correctly set and safe for movements; and
- make sure that it is safe to *Shunt*.

Competent Workers must tell the *Network Controller* when *Shunting* within their area of control has been completed.

3.1 Shunting Over Points

If the *Competent Worker* directing *Shunting* is not assured that the *Points* will hold their set positions, the *Points* must be *Secured* for the intended *Route*.

4. Directing Shunting

A *Competent Worker* directing *Shunting* must:

- make use of radio, light or *Hand Signals* to *Communicate Effectively* with the worker at the controls of the *Motive Power Unit*;
- be in a position where the safe progress of the movement and the line ahead can be seen; and
- closely accompany or ride in or on the leading vehicle in a position designated as safe by the operator and approved by *Arc Infrastructure*.

Rail Traffic Crews and *Competent Workers* directing *Shunting* must communicate at agreed intervals.

If communication between a *Competent Worker* directing *Shunting* and the *Rail Traffic Crew* is interrupted, the *Rail Traffic Crew* must stop the movement immediately.

5. Running Lines

Rail Traffic must be loaded or unloaded on *Main* lines and *Loops* only with the approval from Approved Operations *Delegate*.

Shunting on *Running Lines* must be *Authorised* by the *Network Controller*.

On *Running Lines*, vehicles being *Shunted* must be equipped with an operating continuous Airbrake.

Vehicles with defective brakes must be *Shunted* in accordance with *Arc Infrastructure's* specific instructions (refer Rule 4003 Rail Traffic Integrity).

6. Level Crossings

A *Shunting* movement over a *Level Crossing* must:

- be directed by a *Competent Worker*;
- not be commenced unless the *Level Crossing* is *Clear*, or road and pedestrian traffic has stopped; and
- not be commenced before it is safe to do so.

Where provided, *Active Control Level Crossing* equipment must be operated.

Shunted vehicles *Hauled* or *Propelled* across a *Level Crossing* must have the continuous Airbrake throughout the *Consist*.



NOTE: The *Consist* of vehicles being *Shunted* must comply with *Arc Infrastructure's* Automatic Air Brake Instructions.

6.1 Loading or unloading under power

Rail Traffic loading and unloading under power may foul level crossings only if approved by *Arc Infrastructure's* Operations *Delegate* and where prior advice has been given to and approved by the Local Authority and the person in charge of the loading/unloading facility ensures that appropriate road traffic management is in place.

7. Attaching Locomotive

After attaching a *Locomotive* to stationary vehicles, the *Rail Traffic Crew* must fully pressurise the brake pipe before releasing *Handbrakes*.

8. Detached Rail Vehicles

Vehicles must not be detached from a *Motive Power Unit*, or a continuous brake system, until they are Secured against unintended movement by the use of sufficient effective *Handbrakes* or other devices, in accordance with Rule 4001 Rail Traffic Integrity.

Detached vehicles must be *Secured*:

- where necessary, *Clear of Adjacent* lines;
- *Clear of Level Crossings*; and
- inside *Catch Points* or *Derail Devices* provided to prevent vehicles entering *Running Lines*.

The *Rail Traffic Crew* must advise the *Network Controller* of vehicles detached en-route.

9. Vehicles Under Repair

Vehicles with warning signs, flags or lights must not be moved or *Shunted* against or have other vehicles attached to them unless:

- the warning signs, flag or lights are removed by the workers who put them there;
- no work is being done on or near the vehicles; and
- it is safe to move the vehicles.

10. Stabling Rail Traffic

10.1 On Running Lines

Rail Traffic may be *Stabled* on *Running Lines* only if:

- *Derailing Devices* are available;
- where *Derailing Devices* are not available, it has been *Authorised* by the Approved Operations *Delegate*;
- *Advertised*, when required;
- Unauthorised access to *Motive Power Unit* controls are prevented, and
- it is *Secured* against unintended movement.

10.2 In Station Limits

Where possible, when *Rail Traffic* is *Stabled* on a *Running Line* within *Station Limits*, the *Points* must be set to divert other *Rail Traffic* around the *Stabled Rail Traffic*.

10.3 In Sections

If the *Rail Traffic* is *Stabled* on the *Main Line* within a *Section*, the *Rail Traffic* must be treated as an *Obstruction* and *Protected* in accordance with Rule 4001 Protecting Disabled Rail Traffic.

11. Marshalling Irregularity

If a *Marshalling Irregularity* is identified, the *Network Controller* and the *Rail Traffic Crew* must jointly arrange for the irregularity to be corrected.

12. Restoring Equipment

After completion of *Shunting*, a *Competent Worker* must restore *Points*, signals and other equipment to their normal position.

The *Competent Worker* must report to the *Network Controller* that equipment has been restored.

13. References

4001 Protecting Disabled Rail Traffic

4003 Rail Traffic Integrity

Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code)©

Automatic Air Brake Instructions

14. Effective Date

3 February 2020

Network Safeworking Rules and Procedures

Setting Back or Propelling on Running Lines

Rule Number: 4015

Arc Infrastructure maintains the master for this document and publishes the current version on the Arc Infrastructure website. All changes and updates to the Network Safeworking Rules and Procedures are authorised by the Arc Infrastructure Rule Book Committee. This document is uncontrolled when printed.

Document History

Version	Effective Date	Pages updated	Reasons for change
2.0	03 02 2020	All	Major Review

Table of Contents

1.	Purpose.....	3
2.	General	3
3.	Authorities	3
3.1	Setting back to Attach a Portion of Parted Rail Traffic	3
3.2	Setting Back – Unable to Proceed in the Normal Direction	3
3.2.1	Automatic Signalling sections	3
3.2.2	Train Order Territory	3
3.3	Setting Back at Stopping Places.....	4
3.4	Propelling During Shunting.....	4
4.	Assurances	4
4.1	Authority Details	4
5.	Conditions for Setting Back or Propelling	5
5.1	Rail Traffic Crew.....	5
5.2	Level Crossings.....	6
6.	References.....	6
7.	Effective Date.....	6

1. Purpose

The objective of this rule is to describe how *Rail Traffic* is managed when it is required to *Set Back* or *Propel* on *Running Lines* in the *Network*.

2. General

Rail Traffic may need to *Set Back* or *Propel* if:

- the forward portion of *Rail Traffic* is *Set Back* or *Propelled* towards a stationary portion of *Rail Traffic*;
- a *Limit of Authority* is overrun;
- it cannot continue in the forward direction;
- a *Stopping Place* has been partially or completely overrun and it is necessary to return to the *Stopping Place*;
- an unsafe condition is encountered; or
- *Shunting* operations are required on *Running Lines*.

3. Authorities

Signals, if available, must be used to give Proceed *Authorities*.

3.1 Setting back to Attach a Portion of Parted Rail Traffic



WARNING: An appropriate *Authority* is required if the rear portion is beyond a *Controlled Location*.

The verbal authority of the *Network Controller* is required before *Setting Back* on a *Running Line* if the forward portion of *Rail Traffic* is to *Set Back* towards a stationary portion of the *Rail Traffic*.

3.2 Setting Back – Unable to Proceed in the Normal Direction

Rail Traffic may need to be *Set Back* if it cannot continue in the forward direction.

3.2.1 Automatic Signalling sections

In *Automatic Signalling Sections* the movement back is authorised by the *Network Controller* by the issue of a *Relief Rail Traffic Authority (RRTA)* on an *Alternative Movement Authority Form* and where possible signal indication.

3.2.2 Train Order Territory

In *Train Order Territory* the movement back is permitted where the *Rail Traffic Crew* are in possession of a *Train Order* and verbal permission from the *Network Controller* is obtained. The movement must not exceed the limits of the *Train Order*.

3.3 Setting Back at Stopping Places

Rail Traffic may need to be *Set Back* if an overrun of a *Stopping Place* occurs.

The verbal *Authority* of the *Network Controller* must be obtained to *Set Back* and a *Competent Worker* must be in attendance to ensure the move is safe.

3.4 Propelling During Shunting

Propelling during *Shunting* on *Running Lines* requires an appropriate *Authority* from the *Network Controller*.



NOTE: In *Train Order Territory* the *Rail Traffic Crew* must be in possession of a *Train Order* for movements outside *Station Limits* or beyond the *Limit of Shunt* signs where provided.

4. Assurances

Before *Authorising* the movement, the *Network Controller* must:

- ensure the portion of *Track* into which the movement is to *Proceed* is *Clear* of *Rail Traffic*;
- where available, apply *Blocking Facilities*; and
- ensure current *Track Occupancies* or methods in affected *Sections* are *Fulfilled* or worksites are *Protected*.

4.1 Authority Details

An *Authority Issued* to *Rail Traffic* for a *Set Back* or *Propelling* movement must specify the *Location* to which *Travel* is *Authorised*.

5. Conditions for Setting Back or Propelling

Rail Traffic must *Set Back* or *Propel* only:

- if it is not practicable to *Haul* the *Rail Traffic*; and
- as far as the *Authority* to *Propel* allows.

Where practicable the *Rail Traffic Crew* must drive from the leading end of *Rail Traffic*.

The *Competent Worker* directing the *Set Back* or *Propelling* movement must:

- closely accompany or precede the leading vehicle; or
- ride in the leading vehicle in a position designated as safe by the operator and approved by *Arc Infrastructure*.

Effective Communication must be in place between the *Competent Worker* and the *Rail Traffic Crew*.

Where verbal commands are used to direct *Rail Traffic* movements, the *Competent Worker* directing the movement and the *Rail Traffic Crew* must communicate at agreed intervals.

If communication between the *Rail Traffic Crew* and the *Competent Worker* directing the movement is interrupted, the crew must stop the *Rail Traffic* immediately.

5.1 Rail Traffic Crew

The *Rail Traffic Crew* must:

- ensure that the movement is *Authorised*;
- if available, ensure the *Automatic Brake* connection is continuous throughout the *Rail Traffic Consist* and that the brakes on the leading vehicle are operating;
- make sure that the movement does not exceed its *Limit of Authority*; and
- not exceed *Restricted Speed*.

5.2 Level Crossings

At *Active Control Level Crossings*, a *Setting Back* or *Propelling* movement must not proceed unless the warning equipment is operating or *Level Crossing Protection* is in place.

At *Passive Control Level Crossings*, a *Setting Back* or *Propelling* movement must not proceed unless the *Crossing* is *Clear*, or road and pedestrian traffic has stopped.

A movement over the *Crossing* must:

- be directed by a *Competent Worker*;
- not *Proceed* before it is safe to do so; and
- not exceed 10 km/h before the leading vehicle has *Cleared* the *Level Crossing*.

6. References

Nil

7. Effective Date

3 February 2020

Network Safeworking Rules and Procedures

Overdue Occupancies

Rule Number: 4017

Arc Infrastructure maintains the master for this document and publishes the current version on the Arc Infrastructure website. All changes and updates to the Network Safeworking Rules and Procedures are authorised by the Arc Infrastructure Rule Book Committee. This document is uncontrolled when printed.

Document History

Version	Effective Date	Pages updated	Reasons for change
2.0	03 02 2020	All	Major Review

Table of Contents

1.	Purpose.....	3
2.	General	3
3.	Stopped Rail Traffic.....	4
4.	Inspecting Stopped Rail Traffic	4
5.	Disabled Rail Traffic	5
6.	Overdue Track Occupancy.....	5
7.	References.....	5
8.	Effective Date.....	5

1. Purpose

The purpose of this rule is to provide instructions for dealing with overdue *Occupancies* in the *Network*.

2. General

Where the agreed or expected reporting, *Clearance* or *Section* running times are exceeded by 15 minutes, the *Network Controller* must act in accordance with Rule 2029 Responsibilities of Network Controller; and

- contact the *Competent Worker* in charge of the *Track Occupancy* activities; or
- contact the *Rail Traffic Crew*.

If this contact cannot be made, the *Network Controller* must advise the *Track Workers'* or *Rail Traffic Crews'* organisation and alert them to the circumstances.

The requirements of Rule 2009 Reporting and Responding to a Condition Affecting the Network (CAN) must be observed if the *Network Controller* cannot communicate with the crew of an overdue *Rail Traffic* movement.

The crew of overdue *Rail Traffic* must act in accordance with Rule 2027 Responsibilities of Rail Traffic Crews.

If the *Track Worker's* or *Rail Traffic Crew's* safety cannot be established, the *Network Controller* must initiate *Emergency* procedures.

3. Stopped Rail Traffic

If *Rail Traffic* is delayed due to an unscheduled stop the *Rail Traffic Crew* must immediately advise the *Network Controller*,

- the *Location* of the stopped *Rail Traffic*;
- the reason why the *Rail Traffic* has stopped; and
- the expected duration of the stoppage.

If a *Rail Traffic* stoppage is or will become extended, the *Rail Traffic Crew* must:

- tell the *Network Controller* the reason why the *Rail Traffic* stoppage is extended;
- *Secure* the *Rail Traffic* in accordance with Rule 4003 Rail Traffic Integrity; and
- provide *Protection* for the *Rail Traffic* in accordance with Rule 4001 Protecting Disabled Rail Traffic.

4. Inspecting Stopped Rail Traffic



WARNING: Where there is a risk of being struck by *Rail Traffic* on *Adjacent* lines, the *Rail Traffic Crew* must arrange to implement safety measures in accordance with Procedure 9010 Protecting Work from Rail Traffic on Adjacent Lines.



WARNING: *Adjacent* lines may be under the control of different *Network Controllers* or *Access Providers*.

If it is necessary to inspect their *Rail Traffic* the *Rail Traffic Crew* must:

- make sure that they are *Protected* against *Rail Traffic* on *Adjacent* lines in accordance with Procedure 9010 Protecting Work from Rail Traffic on Adjacent Lines; and
- tell the *Network Controller* the result of the inspection.

5. Disabled Rail Traffic

If the *Rail Traffic Crew* reports overdue *Rail Traffic* as *Disabled*, the *Network Controller* must act in accordance with Rule 4009 Removing Disabled Rail Traffic.

6. Overdue Track Occupancy

If a *Track Occupancy* is overdue, the Possession Protection Officer or *Protection Officer* must tell the *Network Controller*:

- the reason why the *Authority* is overdue; and
- the *Location*, if assistance is required.

7. References

2009 Reporting and Responding to a Condition Affecting the Network (CAN)

2027 Responsibilities of Rail Traffic Crews

2029 Responsibilities of Network Controllers

4001 Protecting Disabled Rail Traffic

4003 Rail Traffic Integrity

4009 Removing Disabled Rail Traffic

9010 Protecting Work from Rail Traffic on Adjacent Lines

8. Effective Date

3 February 2020