

Network Safeworking Rules and Procedures

Clipping and Securing Points

Rule Number: 9000

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Document History

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1. Purpose

The purpose of this procedure is to outline how *Points* are *Secured* in a normal or reversed position. *Points* clips may also be used to *Secure* expansion joints for *Wrong Running-Direction* movements.

2. General

Facing Points on *Running Lines* must be set and *Secured* for the safe passage of *Rail Traffic*.

Where the *Points* can be set and *Secured* in the *Network Control System*, the *Network Controller* must do so.

Where a *Competent Worker* requires *Blocking Facilities* to be applied to *Points*, Rule 6003 Blocking Facilities apply.

The *Points* must be clipped if it cannot be assured that the *Points* will remain in the correct position.

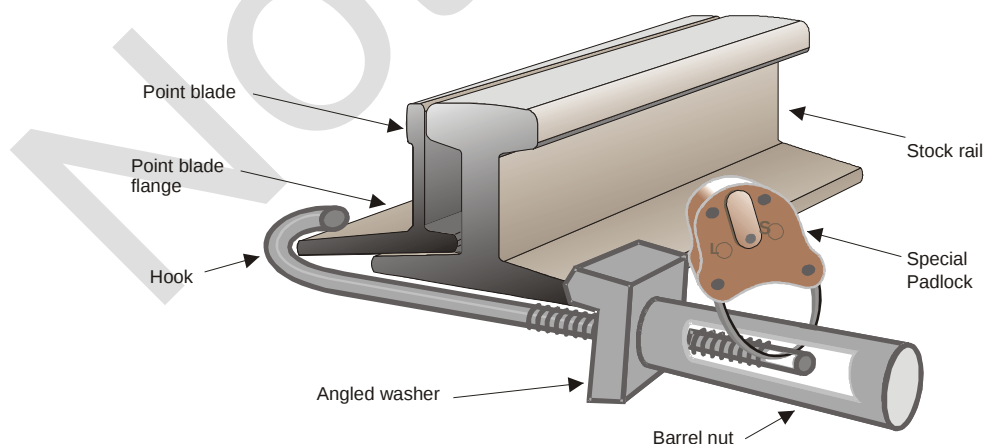
Mechanical *Points* must be set and padlocked using a *Special Padlock*.



NOTE: Where mechanical *Points* cannot be padlocked, they must be clipped.

Point clips must be padlocked using a *Special Padlock*. If the *Points* clip cannot be padlocked, the *Points* must be inspected before each *Rail Traffic* movement.

Figure 9000-1 Example of a fitted *Points* clip



3. Fitting a Points Clip

3.1 Competent Worker

Make sure that you can do the work safely.

Where necessary, get *Authority* from the *Network Controller* to clip the *Points* and an assurance the *Points* will not be operated.

Make sure that you use the correct type of *Points* clip.

Make sure that the *Points* are in the correct position.

Fit the *Points* clip at the correct position, as close to the toe of the *Point* blade as possible, for that set of *Points*.



WARNING: Over tightening the *Points* clip can cause rail roll that may lead to derailment.

Make sure that the *Points* clip is fitted:

- to the underside of the rail;
- between the sleepers;
- with the jaws of the *Points* clip positioned on the rails and tighten; and
- where practicable, use a *Special Padlock* to padlock the *Points* clip;

Where “K” blades are in use, make sure the “K” blades are aligned with the main *Points* and clip the closed “K” blade.



NOTE: In some cases, such as when connecting rods have been disconnected for maintenance, it may be necessary to clip all *Points* blades to ensure the safe passage of Rail Traffic over them.

Make sure that the *Points* are properly closed and that the *Route* is correct before allowing *Rail Traffic* to Travel.

4. References

6003 Blocking Facilities

5. Effective Date

3 February 2020

Network Safeworking Rules and Procedures

Using Railway Track Signals

Rule Number: 9004

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1. Purpose

This procedure outlines how *Railway Track Signals* are used to warn *Rail Traffic Crews*.

2. General

Railway Track Signals consist of an orange plastic disc containing a chemical composition and are sealed. A wire piece is attached and is used to *Secure* the *Railway Track Signal* to the *Track*.

When the *Rail Traffic Travels* over the *Railway Track Signal*, a chemical reaction takes place due to the pressure and a loud noise is created.

Railway Track Signals are used to protect workers, worksites and *Obstructions* on *Track* in the *Network*.

The number of *Railway Track Signal* explosions together with associated signs indicate what *Rail Traffic Crews* must do.

3. Railway Track Signal Response Table

Figure 9004-1 RTS response table.

Number of explosions	Rail Traffic Crew response
Two	Sound one long <i>Whistle</i> . Reduce to and <i>Travel</i> at <i>Restricted Speed</i> . Look for and obey any warning signals. In the absence of any warning or <i>Handsignal</i> , be prepared to stop within 2500 metres.
Three	Sound one long <i>Whistle</i> . Stop immediately. If not advised by a <i>Protection Officer</i> as to the cause, contact the <i>Network Controller</i> .

3.1 Responding to a Single Railway Track Signal

If *Rail Traffic* has not previously travelled over any *Railway Track Signals* and explodes a single *Railway Track Signal*, the *Rail Traffic Crew* must:

- sound one long *Whistle*.
- reduce to and *Travel at Restricted Speed*.
- look for and obey any warning signals.
- tell the *Network Controller*.
- be prepared to stop within 2500 metres, in the absence of any warning or *Handsignal*.

If *Rail Traffic* has already travelled over two *Railway Track Signals* and explodes a single *Railway Track Signal*, the *Rail Traffic Crew* must:

- sound one long *Whistle*.
- stop immediately.
- contact the *Network Controller*, if not advised by a *Protection Officer* as to the cause.

4. Placing Railway Track Signals



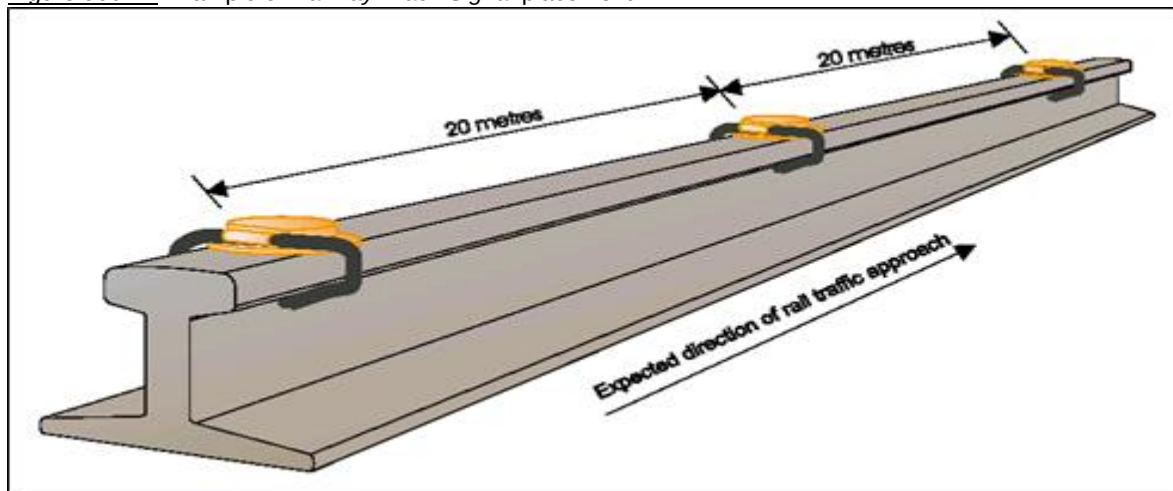
WARNING: Except in *Emergencies*, do not use *Railway Track Signals*:

- underground;
- in tunnels;
- in steep-sided cuttings;
- within 20 metres of workers; or
- where prohibited by *Arc Infrastructure*.

Competent Workers must place *Railway Track Signals*:

- on all rails of the line to be *Protected*, including all 3 rails where there are *Dual Gauge Tracks*:
 - opposite each other to ensure they explode simultaneously;
- on the departure side of *Fixed Signals*;
- on the approach side of stop signs;
- centrally on the railhead with the clasp facing towards the expected direction of *Rail Traffic* approach;
- by bending the clasps around the railhead; and
- 20 metres apart to ensure distinct and separate explosion.

Figure 9004-2 Example of Railway Track Signal placement.



5. Placing of Railway Track Signals Near Public Crossings and Platforms

Railway Track Signals must not be placed within 50 metres of any *Level Crossing* or *Platform*. Where necessary, the distance must be increased beyond the *Level Crossing* or *Platform*.

6. Removal of Unused Railway Track Signals

Where the placement of *Railway Track Signals* required for *Protection* no longer exists, all unused *Railway Track Signals* must be removed from all rails and accounted for.

7. Storing Railway Track Signals

Competent Workers must:

- return unused *Railway Track Signals* to their containers; and
- keep packed *Railway Track Signals* in a *Secure* place.

8. Dealing with Failed Railway Track Signals

If *Railway Track Signals* do not explode when run over by *Rail Traffic*:

- leave failed *Railway Track Signals* on the rail;
- report the failure immediately to a Supervisor; and
- if necessary, place new *Railway Track Signals* on the railhead.



NOTE: When dealing with failed *Railway Track Signals*, *Competent Workers* must refer to the *Manufacturer's Material Safety Data Sheet*.

9. References

Nil

10. Effective date

3 February 2020

Network Safeworking Rules and Procedures

Piloting Rail Traffic

Rule Number: 9006

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1. Purpose

This procedure details the protocols where, when required, *Pilots* accompany *Rail Traffic Crews* to direct *Rail Traffic* movements.

2. General



WARNING: *Rail Traffic Crews* are responsible for the safe operation of *Piloted Rail Traffic*.

A *Pilot* must be used when the *Rail Traffic Crew* is unfamiliar with the *Route*, the *Pilot* must be qualified for the *Route*.

A *Pilot* may be used when *Rail Traffic* is to *Travel* through a *Track Occupancy* and the *Rules* allow for *Rail Traffic* entry to the worksite.

The *Pilot* must:

- confirm with the *Network Controller*, *Possession Protection Officer* or *Protection Officer*, as required by this procedure, when and where to meet the *Rail Traffic* to be *Piloted*;
- have knowledge of the *Route*;
- give clear directions to the *Rail Traffic Crew*; and
- tell *Rail Traffic Crews* about operating restrictions and conditions in a timely manner.

3. Piloting Over an Unfamiliar Route

To *Pilot Rail Traffic* over a *Route* unfamiliar to the *Rail Traffic Crew*, the *Pilot* must:

- be *Competent* in the operation of *Rail Traffic* over the *Route*;
- ensure that the *Rail Traffic* has an *Authority to Travel* over the *Route*; and
- ensure that *Rail Traffic* is operated safely over the *Route*.

4. Piloting Rail Traffic Through Track Occupancies

The *Possession Protection Officer* or *Protection Officer* must appoint a suitably qualified worker to act as the *Pilot*.

The *Pilot* must:

- establish and maintain *Effective Communication* with the *Network Controller* and the *Possession Protection Officer* or the *Protection Officer*;
- confirm how entry into, and exit from, a Track Occupancy will be *Authorised*;
- confirm with the *Possession Protection Officer* or *Protection Officer*:
 - the *Route* to be taken;
 - the *Locations* of all worksites; and
 - the contact details of all *Protection Officers* within the *LPA* or *Work on Track Authority*.

4.1 Rail Traffic Entering a Track Occupancy



WARNING: Only Rail Traffic associated with an LPA or WoTA may enter the LPA or WoTA.

The *Pilot* must get *Authority* to enter a:

- *Local Possession Authority (LPA)* from the *Possession Protection Officer*; or
- *Work on Track Authority (WoTA)* from the *Protection Officer*.

The *Pilot* must:

- act under the direction of the *Possession Protection Officer* or *Protection Officer*;
- make sure that *Points* and *Crossovers* are set and *Secured* correctly before *Travelling* over them; and
- tell the *Rail Traffic Crew* the *Locations* of worksites.

4.2 Rail Traffic Entering a Worksite

Before making a movement within a *LPA Authority* or *Work on Track Authority*, the *Pilot* must contact the *Possession Protection Officer* or *Protection Officer* and get:

- *Authority* for the movement; and
- an assurance that the intended *Route* is *Clear* and that no conflicting movements have been, or will be, authorised.

If there is no *Competent Worker* at the *Location* of the *In-Field Protection* the *Pilot* must:

- get the *Authority* of the *Possession Protection Officer* or *Protection Officer* to remove the *Protection*;
- remove or arrange to remove the *Protection* before passing the *Location*; and
- replace or arrange to replace the *Protection* after passing the *Location*.

4.3 Rail Traffic Departing the Authority

The *Pilot* must get the *Network Controller's Authority* for *Rail Traffic* to exit a *LPA* or *Work on Track Authority*.

The *Pilot* must tell the *Network Controller* and *Possession Protection Officer* or *Protection Officer* when the *Rail Traffic* has exited the *LPA* or *Work on Track Authority*.

5. Keeping Records

The *Network Controller*, *Possession Protection Officer* and *Protection Officer* must make a *Permanent Record* of relevant details, including the details of entry into and exit from worksites and Track Occupancies.

6. References

Nil

7. Effective Date

3 February 2020

Network Safeworking Rules and Procedures

Protecting Work from Rail Traffic on Adjacent Lines

Rule Number: 9010

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1. Purpose

The object of this procedure is to provide instruction for the *Protection* of workers from *Rail Traffic* on *Adjacent* lines in the *Network*.

2. General



WARNING: *Adjacent* lines may be under the control of a different *Network Controller* or *Rail Infrastructure Manager*.

Rail Traffic on lines *Adjacent* to *Track Occupancy* is a danger to workers. Workers must be *Protected* from all *Rail Traffic*.

Where there is an *Adjacent* line, appropriate *Authority*, including required *In-field Protection* and *Blocking Facilities*, must be used on the *Adjacent* line.

An *Authority* for the *Adjacent* line is not required where a *Safety Management Plan*, approved by the *Approved Operations* or *Infrastructure Delegate*, has controls in place to prevent intrusion of workers or plant and equipment into the *Adjacent* line's *Danger Zone*.

Excluding *Rail Traffic* from *Adjacent* lines gives the highest level of *Protection*.

During the *Safety Assessment* for the work, and as *Protection* requirements change, the *Possession Protection Officer* or the *Protection Officer* must decide on the best means to reduce the risk from *Rail Traffic* on *Adjacent* lines.



NOTE: Where *Lookout Working* is being used and there is an *Adjacent* line an appropriate *Protection* method must be used for the *Adjacent* line.

3. Means of Risk Reduction

If the *Safety Assessment* indicates that workers need to be *Protected* from *Rail Traffic* on *Adjacent* lines, the *Possession Protection Officer* or the *Protection Officer* must choose one or more of the following means to reduce risk.

3.1 Local Possession Authority

A *Local Possession Authority (LPA)*, in accordance with Rule 3001 Local Possession Authority (LPA), may be taken out over *Adjacent* lines to exclude *Rail Traffic*.

3.2 Work on Track Authority

A *Work on Track Authority (WoTA)*, in accordance with Rule 3005 Work on Track Authority (WoTA), may be taken out over *Adjacent* lines to exclude *Rail Traffic*.

3.3 Lookout Working

Lookout Working may be used, in accordance with Rule 3013 Lookout Working, to provide warning of approaching *Rail Traffic* on *Adjacent* lines.



NOTE: The use of Rule 3025 Temporary Speed Restriction may be used to reduce the speed of approaching *Rail Traffic* on the *Adjacent* line to ensure correct *Sighting Distance* for *Lookout Working*.

3.4 Using Demarcation Fencing

Demarcation Fencing may be used to define:

- a boundary;
- a *Safe Place*; or
- an exclusion area.

The *Protection Officer* must:

- Put appropriate *Protection* or safety measures in place to *Protect* workers installing *Demarcation Fencing*.
- Make sure that the *Demarcation Fencing* is installed before starting other work.
- Make sure that the *Demarcation Fencing* can withstand disturbances caused by passing *Rail Traffic*.
- Keep workers and equipment on the safe side of the *Demarcation Fencing*.
- If necessary, place *Competent Workers* to make sure that workers stay within the *Demarcation Fencing*.
- Make sure that the *Demarcation Fencing* is kept in good condition throughout the work.
- Make sure that nothing is stacked or placed against the *Demarcation Fence*.

3.4.1 Demarcation Fencing



WARNING: *Demarcation Fencing* is only a warning that a boundary exists. It may not stop workers from entering a *Danger Zone* on an *Adjacent* line and may not indicate a *Safe Place*.

Demarcation Fencing is an easily seen, continuous boundary marker, placed between a worksite and an *Adjacent* line.

Demarcation Fencing used within the *Network* must be of a type approved by *Arc Infrastructure*.

4. References

3001 Local Possession Authority (LPA)

3005 Work on Track Authority (WoTA)

3013 Lookout Working

3025 Temporary Speed Restriction

5. Effective Date

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Network Safeworking Rules and Procedures

Operation of Points

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1. Purpose

The purpose of this procedure is to provide instructions for operating and managing *Points* in the *Network*.

2. General

The normal position of *Points* will be indicated by the diagram of signalling in *Centralised Traffic Control (CTC) Territory* and the *Station* sketch in *Train Order Territory*.

Points on *Running Lines* over which *Rail Traffic* is to pass must be *Secured* for the safe passage of *Rail Traffic*.

Points may be operated by electric motors or mechanically by the use of a hand lever.

Electric motor operated *Points* in *CTC Territory* are remotely operated by the *Network Controller*.

The different types of motors in use are:

- Type "D84M".
- Type "X".
- Type "Y".
- Type "Modified Y".
- Type "W".
- Type "Z".

Should one or more of the motors fail to operate or if electronic detection of the *Points* is lost, an indication will be displayed in *Network Control*. Signals controlling *Routes* over *Points* with no detection will only display a STOP indication.

When a *Points* failure or loss of detection occurs, the *Points* may be required to be manually operated by a crank handle or manual lever attached to the electric *Points* motor. The crank handle is kept in a cabinet close to the electric *Points* motor.

Locally operated *Points* are provided in yards, depots and *Train Order Territory*, for the setting of *Routes* for *Rail Traffic* movements, these *Points* can be either electrically or mechanically operated by a *Competent Worker*.

Locally operated *Points* are:

- *Self-Restoring Points (SRP)*;
- Little david levers;
- Rigid levers (May be a D84M);
- Cheese knobs;
- Racor levers.

Non moveable *Points* include:

- Transposition of common rail;
- Gauntlets.

Points giving Access to CTC Territory may be Secured by a Switchlock. Refer to Procedure 9024 Operation of Switchlocks.

3. Setting Points

3.1 Indications of Points Setting

The setting of *Points* must be communicated to *Rail Traffic Crews*, by:

- Signal indication;
- *Points Indicators*;
- Direct observation of the *Points*; or
- Other *Competent Workers*.

Points that are operated by hand must be examined to ensure that the *Points* are set for the intended *Route*.

Points on *Running Lines* must be Secured to prevent *Points* blade movement or unintended operation.

3.2 Hand Operated Points

The *Network Controller* must Authorise the operation of *Points* on *Running Lines* for *Shunting* or maintenance purposes.

3.3 Restoration of Points



WARNING: At approved junctions and other approved Locations, Points may be left set for the last movement and not restored.

Rail Traffic Crews must be prepared to find the Points incorrectly set at these Locations.

Points and locking mechanisms on *Running Lines* must be restored to their normal position after use unless otherwise instructed by the *Network Controller*.

In *Train Order Territory*, other than *Self-Restoring Points (SRP)*, *Rail Traffic Crews* must advise the *Network Controller* that the *Siding is Secured* and the *Annett's Key Is On The Locomotive (AKOL)*.

4. Movement Over Points



WARNING: *Points* must not be operated while *Rail Traffic* is moving over or standing on the *Points*.

4.1 Rail Traffic

Rail Traffic must remain *Clear* of the *Points* until they are correctly set for the movement.

4.2 Competent Workers

Competent Workers must stand in a *Safe Place*, well *Clear* of *Points* and operating mechanisms, when *Rail Traffic* is passing through *Points*.

4.3 Trailing Points

Rail Traffic must not run through *Trailing Points* that are not correctly set for the movement.



WARNING: *Points* must not be operated while *Rail Traffic* is moving over or standing on the *Points*. *Rail Traffic Crews* must not *Set Back* after *Points* have been run through until the *Points* have been inspected and declared safe.

If *Rail Traffic* runs through a set of *Trailing Points*, the *Infrastructure Representative* must be advised and:

- the movement must continue in the same direction; and
- the *Points* must be inspected by a *Competent Worker* before another movement is made over them.

5. Damaged Points



WARNING: *Competent Workers* required to inspect or hand operate *Points* must make sure that:

- safety measures are in place before starting work in the *Danger Zone*; and
- there is an easily reached *Safe Place* near the *Points*.

If *Points* are found to be defective or damaged, the *Network Controller* must be advised and the *Points* must not be used until:

- the *Points* are inspected by a *Competent Worker* and found safe for the intended movement;
- a *Competent Worker* makes the *Route* safe for the *Rail Traffic* movement by clipping or *Securing* the *Points* in accordance with Procedure 9000 Clipping and Securing Points; or
- the *Points* are inspected and repaired by a *Infrastructure Representative*.

6. Failed Electrically Operated Points

If the electrically operated *Points* are unable to be operated correctly, the *Points* must be:

- placed into the hand operated mode;
- isolated by the removal of the crank handle; or
- set and clipped for the intended *Route*, in accordance with Procedure 9000 Clipping and Securing Points.

7. Manual Operation of Electric Points

7.1 Network Controller Responsibilities

When *Points* fail or have lost detection, the *Network Controller* must:

- make further attempts to operate the *Points* and if they still do not work correctly, arrange for a *Competent Worker* to attend the *Points*.
- advise the *Infrastructure Representative* and record on the *Network Control Diagram*:
 - the number of the defective *Points*; and
 - when repairs have been completed.
- electronically lock the *Points*. This will ensure that the *Points* cannot move should the power be reinstated.
- instruct the *Competent Worker* to visually check the *Points* for *Obstructions*. If an *Obstruction* is found, instruct the *Competent Worker* to safely remove the *Obstruction*.
- give permission to remove the crank handle and manually operate the *Points* into either the normal or reverse position, if no *Obstruction* is found.
- instruct the *Competent Worker* not to replace the crank handle until *Authorised* to do so.
- *Authorise* the *Rail Traffic Crew* to pass the relevant signal at STOP in accordance with Rule 6013 Passing Fixed Signals at STOP, when advised by the *Competent Worker* that the *Points* are in the required position.
- advise the *Rail Traffic Crew* to ensure that the *Points* are set correctly before *Travelling* over them.

7.2 Competent Worker Responsibilities



- **WARNING:** When removing an *Obstruction* from *Points* mechanisms do not place hands between or near parts that can move

The *Competent Worker*, when instructed to manually crank *Points* must:

- have *Communications Equipment* and, during periods of darkness and *Low Visibility*, a torch;
- visually check the *Points* for any *Obstruction* that may be preventing the blades from closing. If an *Obstruction* is found, contact the *Network Controller*, then safely remove the *Obstruction*;
- liaise with the *Network Controller* who will advise which sets of *Points* are to be cranked, and the position (normal or reverse) if the failure of the *Points* is not due to an *Obstruction*;
- obtain permission from the *Network Controller* before removing the crank handle from the switch in the cabinet;
- not replace the crank handle until *Rail Traffic* has passed completely over the *Points*, and then only when instructed to do so by the *Network Controller*;
- ensure all *Points* with the same number and K Blades, if present, have been cranked to the position nominated by the *Network Controller*;
- check that all the *Points* are set correctly for the passage of the *Rail Traffic* once the *Points* have been cranked to the required position; and
- advise the *Network Controller* that the *Points* are set correctly.

7.3 Responsibilities of the Rail Traffic Crew

Where no *Competent Worker* is present and the *Rail Traffic Crew* are instructed to pass a signal at STOP, the *Rail Traffic Crew* must, before moving across each set of *Points*, stop and examine the *Points* to ensure that they are set for the safe passage of the *Rail Traffic*.

7.4 Resumption of Normal Working

When normal working is to resume, the *Network Controller* will instruct the *Competent Worker* to return the crank handle to its switch.

When the crank handle has been returned to its switch the *Network Controller* must be advised.



NOTE: *Points* are to be tested after the crank handle is restored to the switch.

8. Points Motors

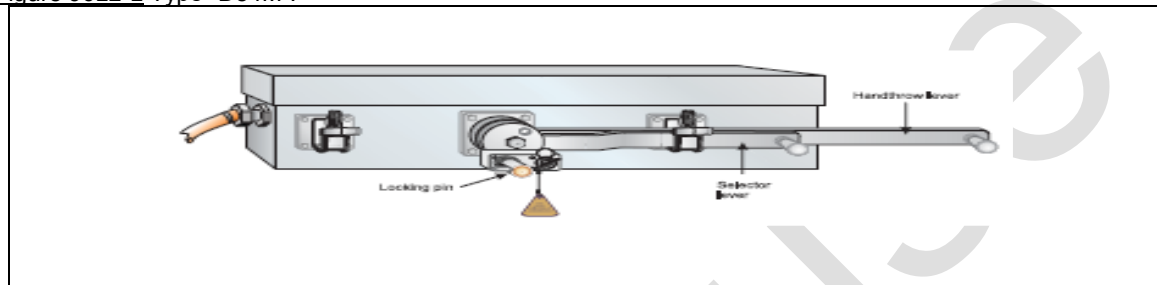
8.1 Type “D84M”



WARNING: Where D84M type *Points* motor is to be set and Secured using *Points* clips to prevent normal operation, they must be placed in Hand mode prior to Securing.

The following instructions are to be followed when using a Type “D84M” *Points* motor.

Figure 9012-1 Type “D84M”.



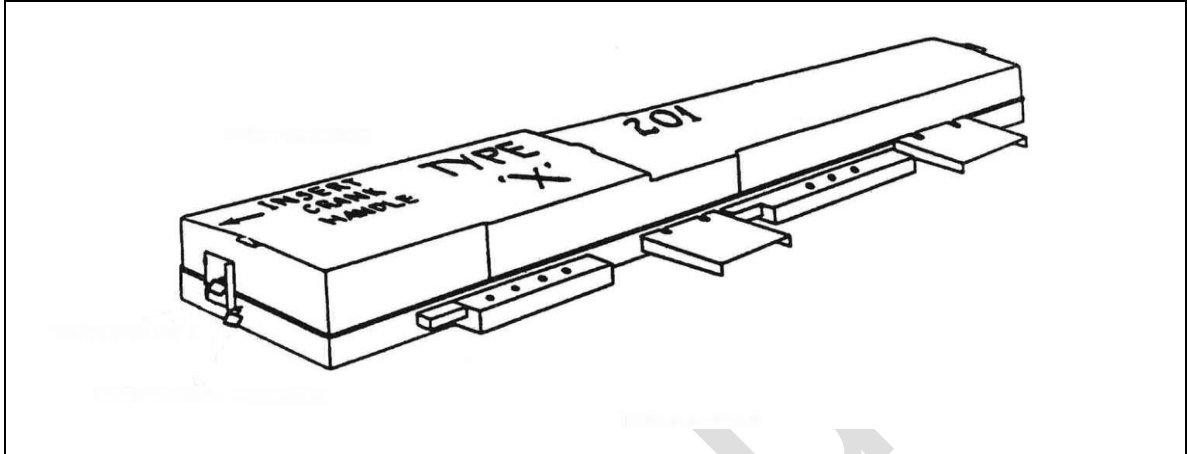
- Obtain the *Network Controller's* permission to operate the *Points* machine.
- Find the correct *Emergency Operating Lock (EOL)* cabinet for the *Points*.
- Unlock the cabinet with a Traffic Standard key.
- If there are instructions in the cabinet to help you operate the *Points*, read and follow them.
- Turn the EOL keys from LOCKED to UNLOCKED. Take them from the cabinet in the correct order; removing them will cause *Network Control* to lose detection of the *Points*.
- Check the key labels to make sure they are the correct keys.
- Unlock the Traffic Standard lock securing both the handthrow and the selector levers.
- Turn the EOL key in the EOL lock on the *Points* machine. The lock captures the key.
- Pull out the locking pin to allow the levers to be moved.
- Lift the catch holding the selector lever.
- Move the selector lever from MOTOR to HAND. Keep the lever in place with the catch.
- Lift the catch holding the handthrow lever.
- Move the handthrow lever to move the *Points* to the required position.
- Make sure that the switch rail is hard against the stock rail.
- *Secure* the handthrow lever with the Traffic Standard lock.

Keep the handthrow lever in place with the catch. If it is not held by the catch when the switch rail is hard against the stock rail, tell the *Network Controller*.

8.2 Type “X”

The following instructions are to be followed when using a Type “X” *Points* motor.

Figure 9012-2 Type “X”.

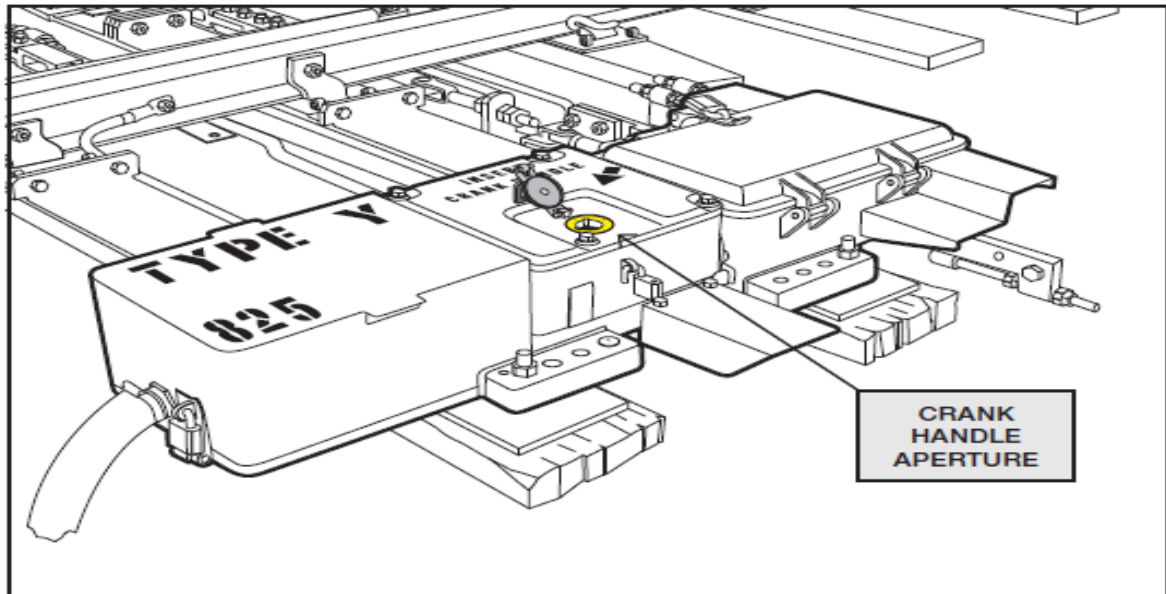


- Unlock the Traffic Standard lock and open the hinged cover plate at the end of the machine above ground level.
- Insert the crank handle through the slotted guide plate, lift the plate with the handle against the spring and then push crank handle through guides.
- Rotate slowly to locate the nibs in the slotted guide plate and push them home to engage the motor shaft.
- The crank handle must be wound until it will go no further.
- Check all the *Points* to ensure that they are set correctly and then contact the *Network Controller*.
- Follow the instructions from the *Network Controller*.
- When the *Network Controller* advises normal working is to resume, remove the crank handle and then close and padlock the cover plate.
- Replace the crank handle into the crank handle switch.
- Contact the *Network Controller* before leaving the area and ensure that the crank handle cabinet is locked.

8.3 Type “Y” and “Modified Y”

The following instructions are to be followed when using Type “Y” and “Modified Y” *Points* motors.

Figure 9012-3 Type “Y” and “Modified Y”.

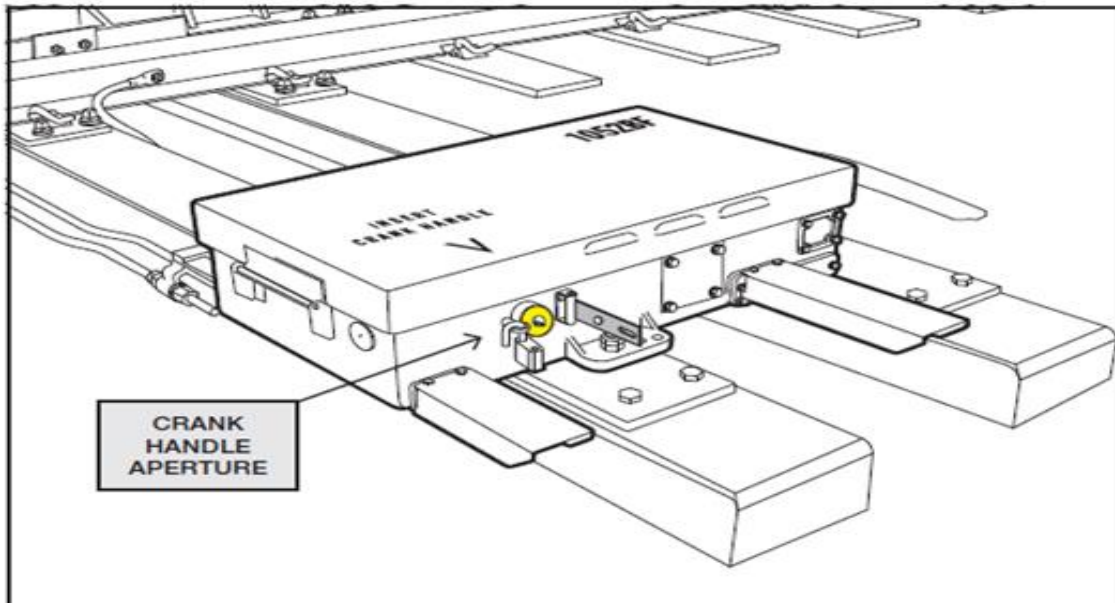


- Unlock the Traffic Standard lock and open the crank handle aperture cover by exerting downward pressure on the hasp to release it.
- On the type “Y”, remove the plug under the aperture cover using the crank handle.
- Insert the crank handle into the motor.
- Locate the indicator which shows the position of the *Points*.
- The crank handle must be wound until it will go no further and the indicator shows the required position.
- Check all the *Points* to ensure that they are set correctly and then contact the *Network Controller*.
- Follow the instructions from the *Network Controller*.
- When the *Network Controller* advises normal working is to resume, remove the crank handle, and replace and padlock the hasp.
- On the type “Y”, replace the plug under the aperture cover.
- Replace the crank handle into the crank handle switch.
- Contact the *Network Controller* before leaving the area and ensure that the crank handle cabinet is locked.

8.4 Type “W”

The following instructions are to be followed when using a Type “W” *Points* motor.

Figure 9012-4 Type “W”.



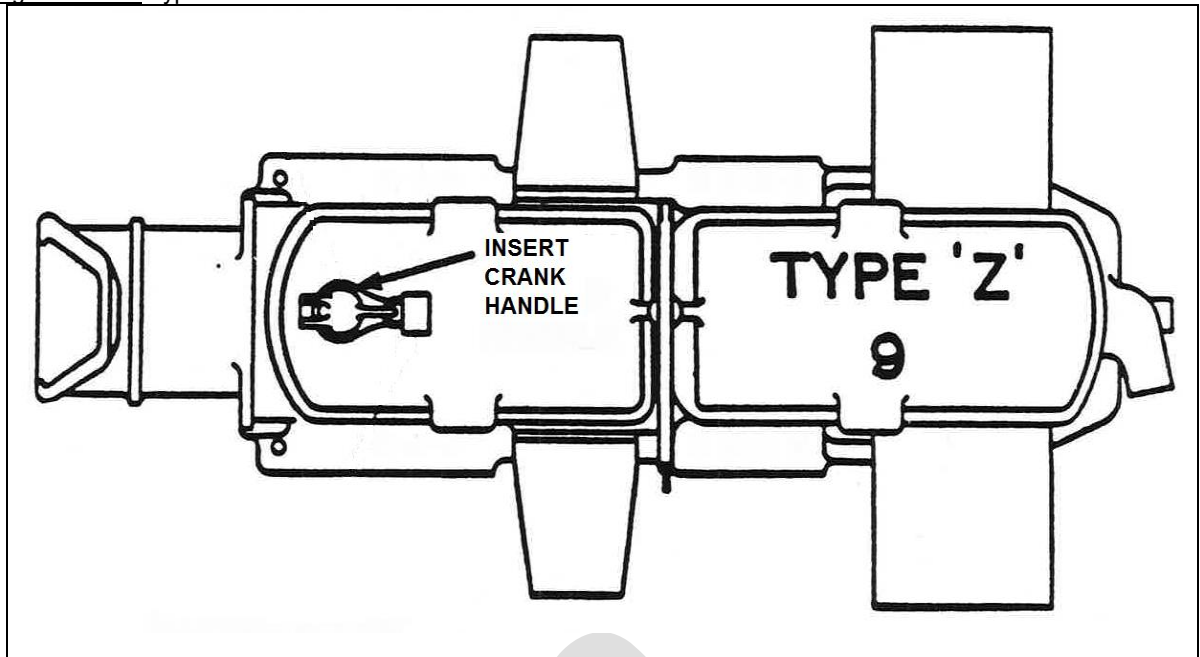
WARNING: Care should be taken when turning the crank handle (as instructed below) to ensure that the operator's hands are not damaged by the heads of the bolts in the sleeper. It is recommended that gloves be worn.

- Unlock the Traffic Standard lock and open the hinged cover plate on the side of the machine.
- Insert the crank handle into the circular hole behind the cover plate.
- Wind the crank handle until there is an audible “click”, at which point the indicator will show the required position of the *Points*. (Note: continue to crank even after the point where the blade appears to be flush with the rail).
- Follow the instructions from the *Network Controller*.
- When the *Network Controller* advises normal working is to resume, remove the crank handle and then close and padlock the cover plate.
- Replace the crank handle into the crank handle switch.
- Contact the *Network Controller* before leaving the area and ensure that the crank handle cabinet is locked.

8.5 Type “Z”

The following instructions are to be followed when using a Type “Z” *Points* motor.

Figure 9012-5 Type “Z”.



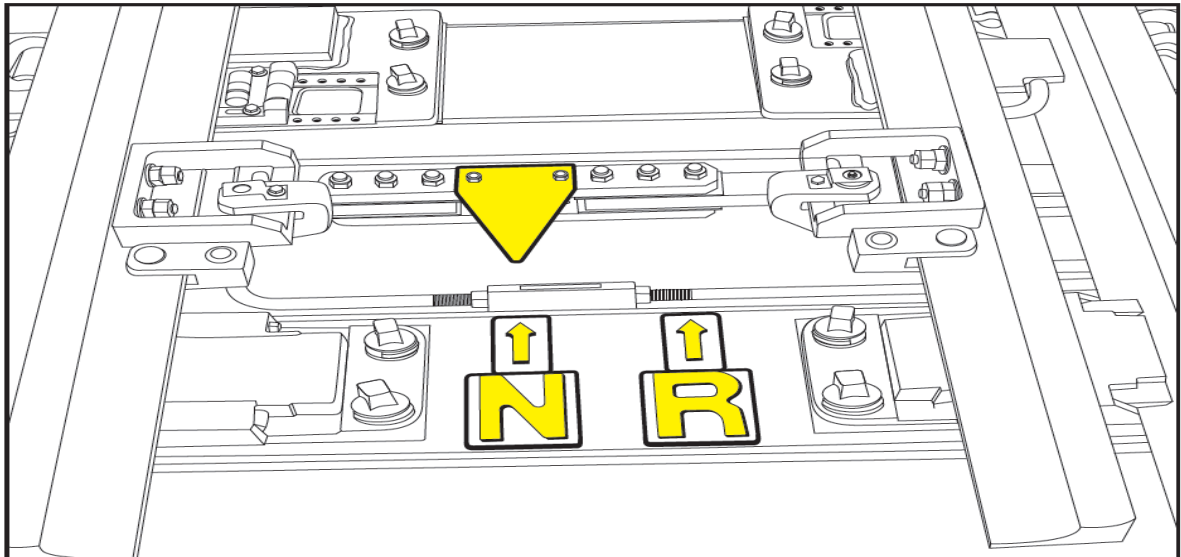
- Unlock the Traffic Standard lock and open the crank handle aperture cover.
- Move the slide directly over the crank handle socket and insert the crank handle into the motor.
- The crank handle must be wound until it will go no further and the indicator shows the required position.
- Check all the *Points* to ensure that they are set correctly and then contact the *Network Controller*.
- Follow the instructions from the *Network Controller*.
- When the *Network Controller* advises normal working is to resume, remove the crank handle, ensure the slide has moved aside to the fullest extent possible and replace and padlock the hasp.
- Replace the crank handle into the crank handle switch.
- Contact the *Network Controller* before leaving the area and ensure that the crank handle cabinet is locked.

9. Additional Information

9.1 Normal or Reverse Indicators

To indicate the normal and reverse setting of the *Points*, metal letters are provided, fixed on the sleeper at the toe of each blade. “N” indicates the *Points* are set normal; “R” indicates the *Points* are set for reverse.

Figure 9012-6 Normal or Reverse indicator.



9.2 K Blades

At some *Dual Gauge* turnouts where a conflict of gauge occurs, the *Points* may be provided with K Blades. For this reason it is necessary to thoroughly examine the *Points* before *Rail Traffic* is permitted to *Travel* over them.

Figure 9012-7 K Blades.

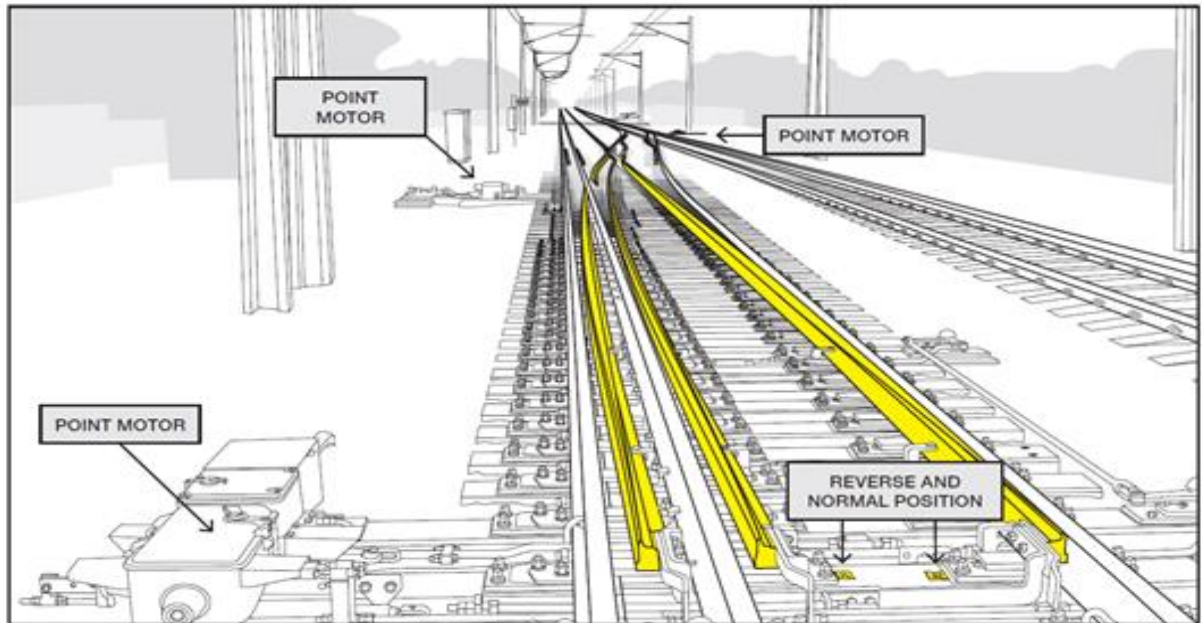
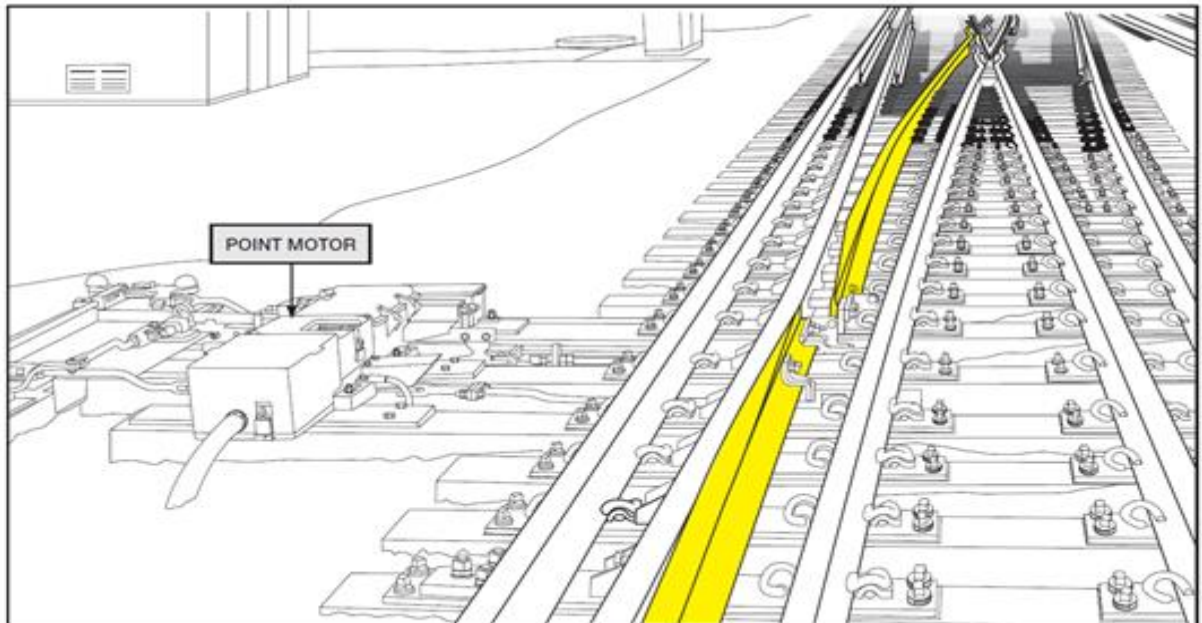


Figure 9012-8 K Blades.



9.3 Catch Points

Catch Points are *Points* placed at depots and *Sidings*. The purpose of these *Points* is to derail any vehicle which might run out onto a *Running Line* and become a danger to *Rail Traffic* movements on that line.

Usually they are a single blade that will lead the *Rail Traffic* away from the *Main Line*. These single blades can be controlled by any of the types of *Point* motors that have been described already in this instruction.

Figure 9012-9 Single Blade Catch Point.



10. Clipping and Securing Points

If it cannot be assured that the *Facing Points* on *Running Lines* will remain in the correct position, the *Points* are to be *Secured* in accordance with Procedure 9000 Clipping and Securing Points.

11. Permanent Record

The *Network Controller* and the *Infrastructure Representative* must keep a *Permanent Record* of the *Points* failure.

12. References

6013 Passing Fixed Signals at STOP

9000 Clipping and Securing Points

9024 Operation of Switchlocks

13. Effective Date

3 February 2020

Not in Use

Network Safeworking Rules and Procedures

Authorities and Forms

Rule Number: 9016

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

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1. Purpose

This procedure describes how to compile, *Issue*, *Cancel* and *Fulfil Authorities* and forms used in the *Network*.

2. General

Authorities and forms are used:

- in *Systems of Safeworking* in certain circumstances; and
- to make sure Safeworking instructions and information are *Clear*, *Complete* and *Issued* in a consistent way.

Rail Traffic Crews and *Competent Workers* must establish *Effective Communication* with the *Network Controller*.

Authorities and forms may be:

- transmitted using voice communication and recorded in writing in accordance with Rule 2007 Network Communications; or
- sent electronically.

All *Cancelled* and *Fulfilled Written Authorities* and forms must be retained for at least 3 months and forwarded to the approved Operations *Delegate* if requested.

3. Forms Used

3.1 Rail Traffic Authorities

Authorities and Safeworking instructions are Issued to Rail Traffic Crews on one of the following forms.

- Movement *Authority* which includes:
 - Train Order;
- Alternative Movement *Authority* which includes
 - *Relief Rail Traffic Authority; and*
 - *Single Line Working.*
- *Restraint Authority.*

3.2 Authorities for Track Occupancies

Work on Track Authority forms is used for Local Possession Authority or Work on Track Authority and Safeworking instructions are Issued to Protection Officers.

3.3 Other Safeworking Forms

Other forms that may be required in relation to Safeworking for *Rail Traffic Crews* and other workers are:

- *Worksite Protection Plan;*
- *Infrastructure Booking Advice (IBA);*
- *Rail Traffic Working Advice; and*
- *Condition Affecting the Network (CAN).*

3.4 No Safeworking Forms

In the event there are no safe working forms available, the *Competent Worker* may write out the form and the information required to be captured (text only) on a blank sheet of paper. In that event, the *Competent Worker* must confirm all information is captured as required by section 5.4 of this rule.

4. Issuing Authorities

4.1 Preparation of an Authority

Authorities Issued by the Network Controller, must:

- be uniquely identified;
- contain only information or instructions essential to the specific task;
- be filled out and recorded in an approved format;
- be filled out and recorded without deletions, alterations, or additions;
- not contain any letters, words or numerals surrounded by circles, brackets or other characters; and
- contain only *Authorised* abbreviations.

4.2 Assurances

Before preparing an *Authority*, the *Network Controller* must ensure all information is up to date relating to:

- *Rail Traffic* identification;
- *Authorities* currently in effect;
- the *Location of Rail Traffic* affected by, or having an effect on, the *Authority*;
- the *Location of worksites* affected by, or having an effect on, the *Authority*;
- the integrity of the *Route*;
- *Track* conditions; and
- any *Temporary Speed Restrictions (TSRs)* or other warnings for which advice is required.

4.3 Authority Format

The following information must be recorded in the spaces provided on the *Authority* form:

- for electronic transmission
 - *Authority* ID
 - status
 - *Limit of Authority (Blocking)*
- for manual transmission
 - *Authority* ID
 - status
 - *Limit of Authority (Blocking)*
 - name of *PO* or *RTC*
 - contact details of *PO*
 - name of control desk
 - date
 - time

4.4 Manual Transmission

When dictating an *Authority*, the *Network Controller* must dictate at a speed that allows the recipient to record it during transmission.

The *Network Controller* must:

- clearly pronounce all information;
- pronounce each digit individually (e.g. ONE – SIX – TWO);
- spell *Location* names immediately after they are spoken (e.g. ALPHA, A-L-P-H-A); and
- pause if conditions do not allow the transmission to continue clearly.

Voice communications are to be carried out in accordance with Rule 2007 Network Communications.

4.5 Error During Manual Transmission

If an error is detected during transmission of the *Authority*, the *Network Controller* must:

- cease *Issuing* the *Authority*;
- tell the recipient to endorse “NOT ISSUED” in upper case block letters with the date, time, recipient name and signature diagonally across the face of each copy of the partially prepared form; and
- *Issue* a new *Authority*.



NOTE: Where the system allows it, the new *Authority* may be *Issued* with the same number as the one marked NOT ISSUED.

5. Receipt of Manual Authority

During transmission the recipient must legibly record:

- the *Authority* as it is being transmitted;
- *Location* names in upper case block letters; and
- details as they are being transmitted, not from memory, presumption or notes.

5.1 Challenging Errors

If an error or inconsistency is identified or suspected during transmission of an *Authority*, the recipient must:

- challenge the *Authority*; and
- seek clarification.

5.2 Error During Receipt

If the recipient makes an error during receipt of the *Authority* the recipient must:

- cease recording the *Authority*;
- advise the *Network Controller* that an error has been made;
- when advised to do so, endorse “NOT ISSUED” in upper case block letters with the date, time, and recipient’s name and signature diagonally across the face of the recipient’s copy of the partially prepared form; and
- prepare to receive another *Authority*.

5.3 Forms Transmitted Electronically

If an *Authority* or form is delivered electronically, the recipient must make sure that the *Authority* or form is legible and contains no omissions.

5.4 Read Back of Authorities or Forms

The recipient must read back their copy of the *Authority* or form to the *Network Controller*.

The *Network Controller* must:

- during the read back, verify that the *Authority* or form matches the *Authority* or form that has been transmitted;
- review all fields in the form and confirm all details match; and tell the recipient the time at which the read back is confirmed as correct.

5.5 Error During Manual Read Back

If an error is detected during read back of the *Authority* or form, the *Network Controller* must:

- ask for that portion of the *Authority* or form to be read back again;
- if it is confirmed that the *Authority* or form contains an error:
 - tell the recipient of the error;
 - if manually issued, tell the recipient to endorse “NOT ISSUED” in upper case block letters with the date, time, and recipient’s name and signature diagonally across the face of each copy of the form; and
 - re-Issue the *Authority* or form.

5.6 Authority In-Effect

An *Authority* is deemed to be *In-Effect* at the time of confirmation of the correct read back.

An *Authority* remains *In-Effect* until it is:

- *Fulfilled*, or
- *Cancelled*.

When an *Authority* is *In-Effect* it must not be altered or rewritten.

6. Fulfilling an Authority

An *Authority* is *Fulfilled* after all instructions contained within it, have been carried out.

When an *Authority* is *Fulfilled*, the *Rail Traffic Crew*, *Possession Protection Officer* or *Protection Officer* must advise the *Network Controller* of the time that the *Authority* was *Fulfilled* and for manually issued *Authorities*;

- endorse “*FULFILLED*” in upper case block letters with the date, time, and recipient’s name and signature diagonally across the face of each copy; and
- the *Network Controller* must *Fulfil* the *Authorities Issued* in *Network Control System*.

When an *Authority* that was manually prepared is *Fulfilled*, the *Network Controller* must endorse “*FULFILLED*” in upper case block letters with the date, the time the *Authority* is *Fulfilled*, the *Network Controller’s* name and signature diagonally across the face of their copy.

7. Cancelling an Authority

If it is not possible to carry out all of the instructions contained within an *Authority*, the *Authority* must be *Cancelled*.

The *Authority* currently *In-Effect* must be *Cancelled* before a replacement *Authority* containing altered instructions can be *Issued*.

The manner of *Cancellation* and the type of a replacement *Authority* is determined by the *System of Safeworking* in use.

When an *Authority* is *Cancelled* the *Network Controller* must:

- tell the recipient to endorse “*CANCELLED*” in upper case block letters with the date, time, and recipient’s name and signature diagonally across the face of each copy; and
- if manually prepared, endorse “*CANCELLED*” in upper case block letters with the date, time, *Network Controller’s* name and signature diagonally across the face of the *Network Controller’s* copy.

8. References

2007 Network Communications

9. Effective Date

3 February 2020

Network Safeworking Rules and Procedures

Using Track Closed Warning Devices and Rail Clamped STOP Signs

Rule Number: 9018

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

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1. Purpose

The purpose of this procedure is to detail the protocols for using *Track Closed Warning Devices* and Rail Clamped Stop sign. These devices are used to warn *Rail Traffic Crews* that the *Track* beyond the device is closed to *Rail Traffic*.

2. General



WARNING: Where *Rail Traffic* passes over a *Track Closed Warning Device* or Rail Clamped Stop sign the *Rail Traffic Crew* must **STOP** and act in accordance with Rule 6001 Overrun Limit of Authority.

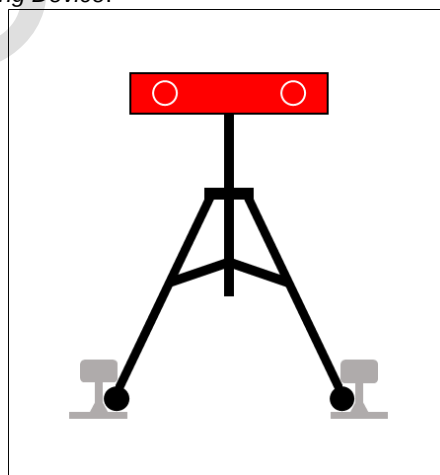
2.1 Track Closed Warning Device

A *Track Closed Warning Device* must:

- be of metal construction;
- facilitate the locking of the legs into different gauge *Tracks*;
- be placed inside the rail gauge with the leg supports under the rail head;
- be locked into position using a *Special Padlock*;
- include a headboard which must be approved by *Arc Infrastructure*; and
- be insulated so as not to activate:
 - signals; or
 - *Protection for Level Crossings*.

Rail Traffic must be brought to a stand before reaching the *Track Closed Warning Device*.

Figure 9018-1 *Track Closed Warning Device*.



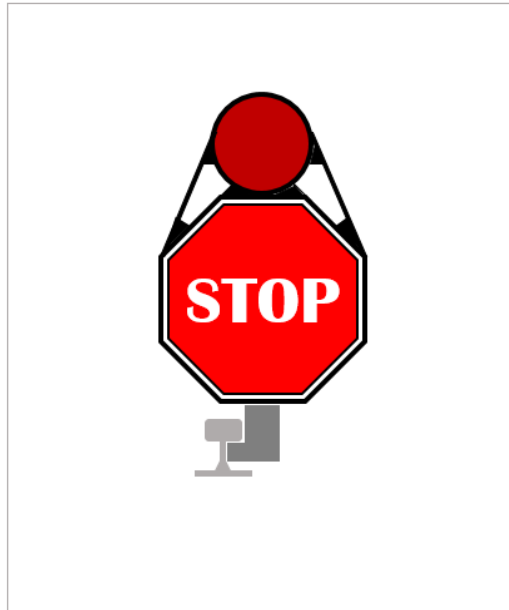
2.2 Rail Clamped STOP Sign

A Rail Clamped STOP Sign must be type approved by *Arc Infrastructure*:

- be clamped to the head of the rail;
- be locked into position using a *Special Padlock*;

Rail Traffic must be brought to a stand before reaching the Rail Clamp STOP sign.

Figure 9018-2 Rail Clamped STOP Sign



3. Placing a Track Closed Warning Device or Rail Clamp STOP Sign

The *Protection Officer* must ensure that the *Track Closed Warning Device* or Rail Clamp STOP Sign is *Fit for Purpose* and:

- that the lights are working correctly; and
- spare batteries and globes are available.

The *Protection Officer* must place the *Track Closed Warning Device* or Rail Clamp STOP Sign:

- in accordance with the *In-Field Protection* requirements of the *LPA* or *Work on Track Authority*;
- in such a position that any *Rail Traffic* entering the affected *Section* must pass over it; and
- where located at a signal, on the departure side of *Fixed Signals*.

The *Competent Worker* must not place the *Track Closed Warning Device* or Rail Clamp Stop Sign on fish plates or within *Points* or *Crossovers*:

Figure 9018-3 Example of the position of the *Track Closed Warning Device* when only one *Main Line* is *Obstructed*.

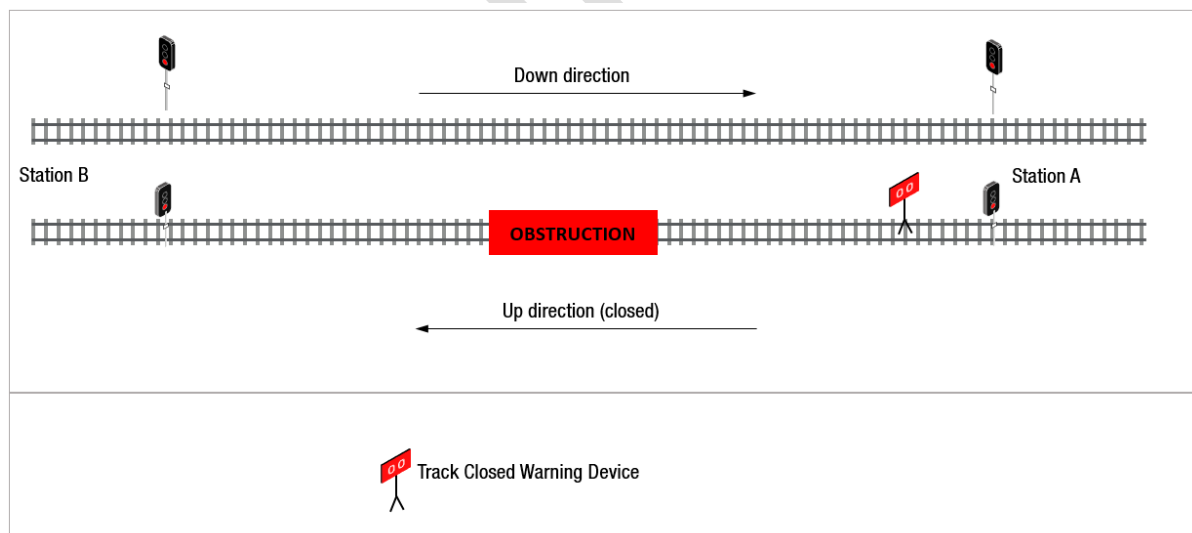


Figure 9018-4 Example of the position of the *Track Closed Warning Device* when placed at limit of *Shunt* board and a *Crossover*.

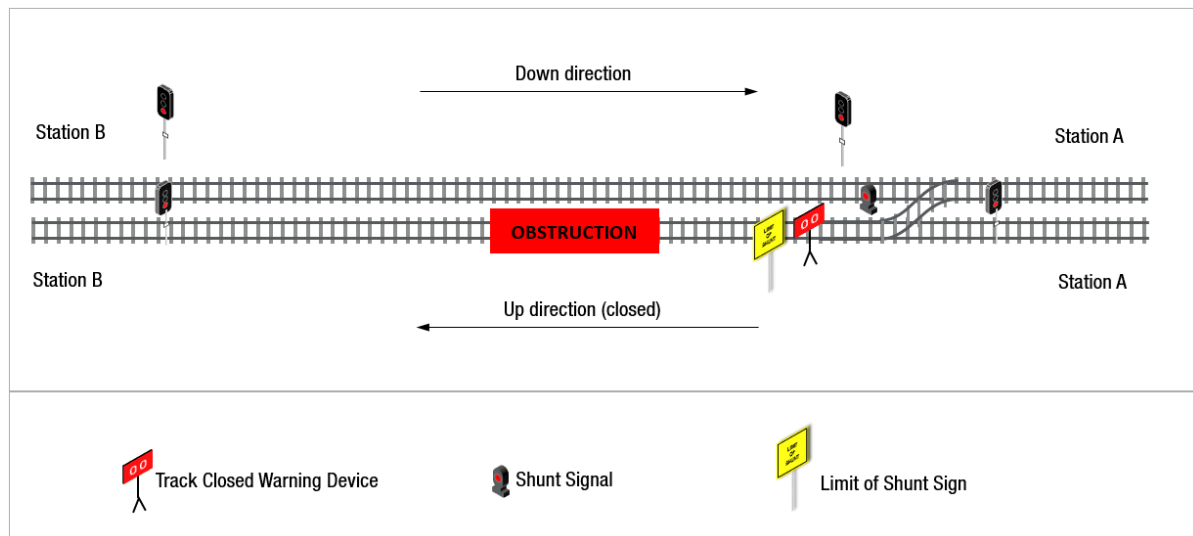
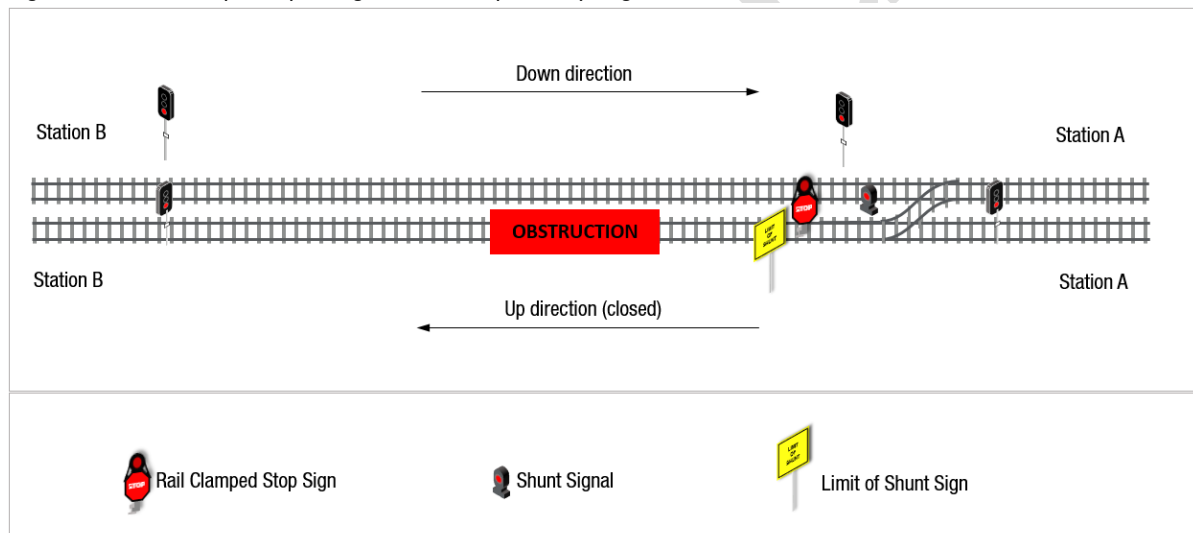


Figure 9018-5 Example of placing a Rail Clamped Stop Sign.



4. References

Rule 6001 Overrun Limit of Authority

5. Effective date

3 February 2020

Network Safeworking Rules and Procedures

Using Standing Rail Traffic for Protection

Rule Number: 9020

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

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1. Purpose

The object of this procedure is to detail how this method is used to provide a *Safe Place* for workers in the *Danger Zone*, by stopping *Rail Traffic* on the *Main Line*. In addition, it allows *Rail Traffic* to transport workers to a worksite.

2. General

Some areas of the *Network* are not able to be reached safely; many *Locations* have no *Safe Place* for workers and repair work may need to be carried out on rail vehicles or the *Track* under the standing *Rail Traffic*.

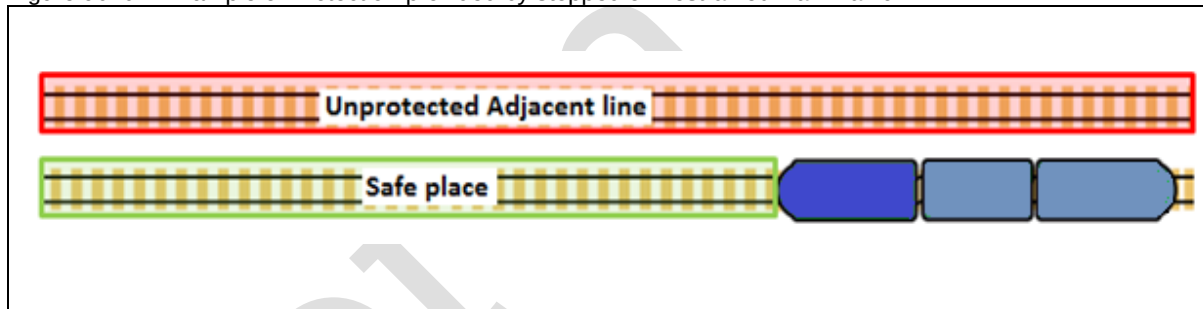
To enable minor work to be carried out, this procedure may be applied.

Using *Rail Traffic* to provide *Protection* should only be used in circumstances where it is not reasonably practicable to use a *Protection* method as prescribed in Rule 3000 Planning Work in the Rail Corridor.



WARNING: The *Safe Place* created by the *Rail Traffic* prevented from moving does not apply to any *Adjacent line*.

Figure 9020-1 Example of *Protection* provided by stopped or *Restrained Rail Traffic*.



3. Communication with Network Control

The *Protection Officer* must contact the *Network Controller* and give the following details:

- their name;
- their *Track* access permit number;
- the type of work that is going to be carried out;
- the *Location* of the work; and
- the anticipated time for completion of the task.

4. Using Rail Traffic to Provide a Position of Safety



WARNING: *Rail Traffic* being used to provide a position of safety must reliably activate *Track-Circuits*, or the *Rail Traffic Crew* is in possession of an *Authority for the Section*.

4.1 The Network Controller

The *Network Controller* must:

- give permission before this method of *Protection* is used;
- advise the *Protection Officer* which *Rail Traffic* is to *Travel* to the worksite;
- agree with the *Protection Officer*, the time required to do the work;
- tell the *Rail Traffic Crew* the *Location* of the worksite; and
- advise *Rail Traffic* on the line, that workers will be working using *Rail Traffic* to provide a *Safe Place*.

4.2 Rail Traffic Crew

The *Rail Traffic Crew* must:

- stop 20 metres short of the worksite, to enable the workers to detrain and move forward to the worksite;
- advise the *Network Controller* on their arrival at the worksite; and
- place the *Rail Traffic* into neutral and apply a full application of the *Automatic Brakes*.

4.3 Protection Officer



WARNING: The workers shall remain on the *Track* which is *Protected* by the stationary *Rail Traffic*. They are not permitted to walk across to the *Adjacent* line or let equipment or tools *Foul* the *Adjacent* line unless the workers are *Protected* in accordance with Procedure 9010 Protecting Work from Rail Traffic on Adjacent Lines.

The *Protection Officer* must ensure that the *Rail Traffic Crew*:

- places the *Rail Traffic* into neutral; and
- makes a full application of the *Automatic Brakes*.

4.4 Extending the Time for Work

Where the work is likely to overrun the anticipated time, the *Network Controller* must be advised and a decision made to continue, or to make the area safe and finish the work at a later time.

4.5 Departing the Worksite

Once work is completed, the *Protection Officer* will return to the *Rail Traffic*.

The *Rail Traffic Crew* shall contact the *Network Controller* and advise that they are leaving the worksite.



NOTE: If work is being carried out beyond a *Platform*, and the positioning of the railcar would mean that the railcar is partially *Platformed*, then the whole of the railcar is to remain at the *Platform*.

5. Working Under Standing Rail Traffic

Using standing *Rail Traffic* for *Protection* is permitted for repairs to failed *Infrastructure* and rail vehicles where it would be unsafe for *Rail Traffic* to continue until the necessary repairs are carried out.



NOTE: Failed *Infrastructure* may be a broken rail that is under the *Rail Traffic Consist*.

Where possible, and it is safe to do so, the *Rail Traffic Consist* should be divided and *Secured*, in accordance with Rule 4003 Rail Traffic Integrity, to enable the work to be carried out without a rail vehicle standing over the failed *Infrastructure*, or the rail vehicle requiring work should be isolated from the remainder of the *Consist*.

The *Competent Worker* carrying out the repairs must advise the *Network Controller* that:

- Standing *Rail Traffic Protection* is required;
- the reasons why; and
- the anticipated duration of the work.

The *Network Controller* must *Issue* a *Restraint Authority*, in accordance with Rule 4001 Protecting Disabled Rail Traffic, to the *Rail Traffic Crew*.



NOTE: Where the *Rail Traffic* is to be divided for the work, the *Restraint Authority* must not be *Issued* until the *Rail Traffic Consist* has been divided and is again stationary.

After the *Rail Traffic Crew* is in possession of the *Restraint Authority*, the *Competent Worker* carrying out the repairs must request the *Rail Traffic Crew* to apply three step *Protection* to the *Rail Traffic*.

Three step *Protection* is:

- a full application of the *Automatic Brakes*;
- the controller placed in neutral; and
- the generator field switch turned off.

Where the *Rail Traffic* is a railcar set without a generator field switch, three step *Protection* is:

- a full application of the *Automatic Brakes*;
- the controller placed in neutral; and
- the park brake on.

Work must not start until confirmation from the *Rail Traffic Crew* that the three step *Protection* has been applied.

5.1 Rail Traffic to Continue

The *Competent Worker* must advise the *Network Controller* when the *Infrastructure* or rail vehicle has been repaired sufficiently for the *Rail Traffic* to continue safely.

The *Network Controller* will then *Cancel* the *Restraint Authority* held by the *Rail Traffic Crew*.

The *Competent Worker* will advise the *Rail Traffic Crew* when it is safe to remove the three step *Protection*.

Where the *Consist* was divided for the repairs, the *Consist* must be recoupled and *Rail Traffic Integrity* re-established before the *Rail Traffic* continues.

6. Using the Rail Traffic for Accessing Worksites

6.1 Rail Traffic Crew

The *Rail Traffic Crew* must:

- stop 20 metres short of the worksite, to enable the *Competent Worker* to detrain and move forward to the worksite; and
- advise the *Network Controller* on arrival at the worksite.

The *Rail Traffic Crew* can depart the worksite only after receiving a *Handsignal* from the *Protection Officer*.

6.2 Protection Officer

Where a *Competent Worker* is working alone, that *Competent Worker* will be the *Protection Officer*.

The *Protection Officer* must:

- complete a radio check with the *Network Controller*; and
- when ready, give an “all clear” *Handsignal* to the *Rail Traffic Crew*.

The *Protection Officer* shall agree with the *Network Controller* on the time to be picked up if the communications fail.

The *Protection Officer* must not move from the position of safety until the nominated *Rail Traffic* has stopped, to take them from the worksite.

6.3 Departing the worksite

Once work has been completed, the *Protection Officer* shall contact the *Network Controller* and advise that the work is complete.

The *Network Controller* will arrange for the *Protection Officer* to be picked up by the next available *Rail Traffic*.

The *Rail Traffic Crew* who will pick up the *Protection Officer* from the worksite, shall stop 20 metres short of the worksite and advise the *Network Controller*.

Once the *Protection Officer* is on the *Rail Traffic*, the crew shall contact the *Network Controller* and advise that they are leaving the worksite, and the *Network Controller* will make a notation on the *Network Control Diagram*.

7. Keeping Records

The *Network Controller* and the *Protection Officer* must make a *Permanent Record* of the *Protection* arrangements.

8. References

3000 Planning work in the rail corridor

4001 Protecting Disabled Rail Traffic

4003 Rail Traffic Integrity

9010 Protecting Work from Rail Traffic on Adjacent Lines

9. Effective Date

3 February 2020

Network Safeworking Rules and Procedures

Operation of Self Restoring Points

Rule Number: 9022

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Document History

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1. Purpose

The purpose of this procedure is to describe *Self Restoring Points (SRP)* and outline the means by which they are used to control the access of *Rail Traffic* to and from *Crossing Locations*, *Sidings* or junctions.

2. General

SRP:

- are electrically operated *Points*;
- are installed at various *Stations* and *Sidings* in *Train Order Territory*; and
- when reversed, under certain conditions and subject to a time delay, will automatically restore to their normal position after the passage of *Rail Traffic*.



NOTE: Automatic restoration of *SRP* is determined from *Sequential Track-Circuit Occupation* and therefore does not occur for *Rail Traffic* with *insulated Axles*.

SRP systems provide:

- an indication that *Points* are locked for through movements of *Rail Traffic* in either the normal or reverse positions;
- electrical operation by:
 - remote operation from the *Rail Traffic* cabin; or
 - by local push button.

2.1 Associated Equipment

Equipment associated with *SRP* include:

- electric *Points* motor
- illuminated triangular shaped *Points Indicators*
- flashing *Points* free indicator (coloured light type)
- push button and crank handle case
- *Track-Circuits*
- white wayside indicator posts “A” to “F”
- remote UHF radio receiver

2.2 Types of SRP

The two types of *SRP* are:

- White light; and
- Coloured light (white, yellow, red).

SRP Points Indicators consist of upper and lower triangular shaped indicators. The upper indicator applies to approaching *Rail Traffic* in the *Facing* direction and the lower indicator applies to *Rail Traffic* approaching in the *Trailing* direction.

3. White Light Type

3.1 Through Movements



WARNING: Normally SRP are left set in the normal position; however *Rail Traffic Crews* should be prepared to stop short of the *Points* in the event they have been left in the reverse position or have lost detection.

If not already illuminated, approaching *Rail Traffic* may see the upper *Points Indicator* illuminate. The *Points Indicator* will display two white lights in a vertical alignment if the *Points* are set, locked and detected in the normal position.

Figure 9022-1 Typical SRP Layout – white light type



The same indication will be displayed on the lower *Points Indicator* if *Rail Traffic* is approaching from the *Trailing* direction.

As the last vehicle of the departing *Rail Traffic* Clears the *Track-Circuits* of the SRP, the *Points Indicator* lights may extinguish.

Where the *Rail Traffic Crew* approaches the SRP and observes the *Points Indicators* are flashing or due to a system failure they are not illuminated, the approaching *Rail Traffic* must be brought to a stand *Clear* of the *Points* and confirm the *Points* are correctly set and locked before traversing the *Points*.

All faults or failures of the SRP must be reported in accordance with Rule 2009 Reporting and Responding to Condition Affecting the Network (CAN).

Points Indicators will flash to indicate either:

- loss of detection; or
- for a predetermined time:
 - when the door for the manual operation button is first opened; and
 - when the *Points* are requested to move, before movement of the *Points* begins.

3.2 Reversing Points

3.2.1 Remote radio operation

Where remote control is provided, the on board radio equipment may be used by the *Rail Traffic Crew* to move *Points* to reverse. The control equipment will only accept a call for the *Points* to move after the *Rail Traffic* has been detected as being stationary on one of the approaches to the *Points*.

Radio operation requires the *Rail Traffic Crew* to enter the 3 digit code displayed on the radio code sign into their radio on UHF channel 50.

This code ensures that where there are more than one set of *SRP* in any area, only the correct set will respond.



Figure 9022-2 *SRP* radio code sign

The *Rail Traffic Crew* can either send the 3 digit code by selecting the appropriate command on the *Locomotive* touch screen display or by entering the code on their portable UHF radio handset.



NOTE: The code varies from site to site and is displayed on a sign located alongside the *Points*.

No in cab indications are provided, the *Rail Traffic Crew* must check the indicators to confirm the *Points* setting.

When the *Points* are set in the reverse position, the two white lights on the upper and lower *Points Indicator* will be illuminated at 45 degrees, indicating the *Points* are set for reverse.

When the *Points* are moved to reverse or normal, they remain time locked for 30 seconds. After this time it is possible to move the *Points*.

3.2.2 Manual operation

A manual “PRESS TO OPERATE POINTS” button is provided in the crank handle case to give manual operation of *Points* in the event that radio operation is not working.

Provided the *Track-Circuit* is *Occupied*, an indicator in the push button case will display “*Points free*” after 30 seconds.

When the push button is operated, the *Points Indicator* lights will extinguish and the *Points* will move to reverse. After the *Points* are set into reverse and become locked and detected, the *Points Indicator* will illuminate to correspond with the lie of the *Points*.



Figure 9022-3 Local control panel/crank handle case

At some *SRP* the *Points free* indicator may remain lit until the *Points* are set and detected, at which time the *Points locked* indicator will illuminate.

At other *SRP Locations* the *Points free* indicator will be extinguished when the button is pushed, followed by a delay before the *Points* move to reverse. During this time the *Points Indicator* lights will flash until the *Points* are set and detected.

The *Points locked* indicator will only illuminate at some *Locations* when they are locked by *Track* locking as the *Rail Traffic* traverses the *Points* or after the *Points* are called to move whilst the *Points Indicators* are flashing.

3.2.3 Shunt movements

For *Shunt* movements from the *Main Line* to the loop or junction, the *Points Indicator* will illuminate, if not already illuminated, when *Rail Traffic* comes to a stand at a predetermined distance from the *Points*.

The indicator will display two white lights in a vertical alignment indicating the *Points* are set in the normal position.

The *Rail Traffic Crew* may then operate the *Points* using either the remote or manual operation methods.

3.3 Points Restoration

After any *Rail Traffic* movement where the *Points* have been set to reverse and the last vehicle of the *Rail Traffic* has *Cleared* the *SRP Track-Circuits*, the *Points Indicator* may extinguish after a predetermined period and the *Points* will automatically move back to the normal position.

4. Coloured Light Type

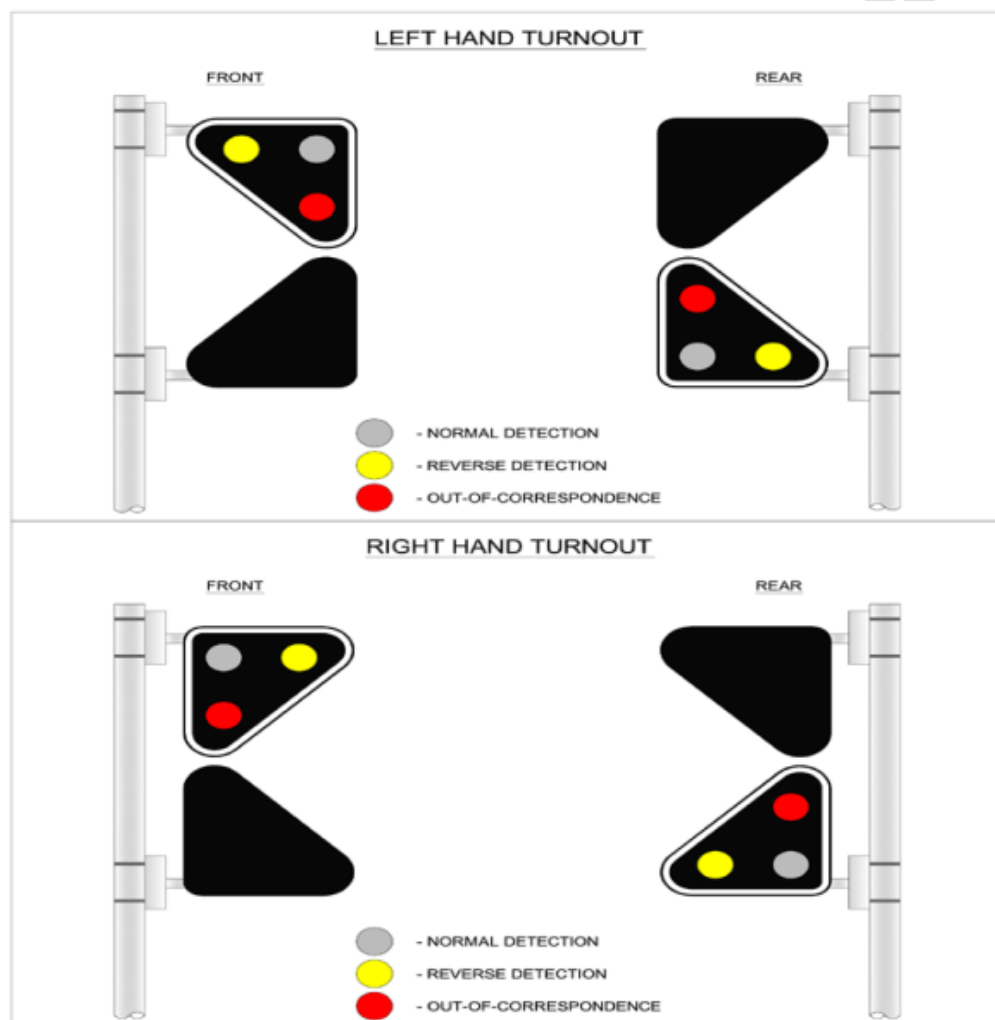
There are three LED lights (white, yellow, red).

- White – indicates the *Points* are set and detected in the normal position.
- Yellow – indicates the *Points* are set and detected in the reverse position.
- Red – indicates the *Points* are not detected or, are about to move.



NOTE: A coloured light type *SRP Points Indicator* is continually illuminated.

Figure 9022-4 Typical *SRP Points Indicators* layout – coloured light type



4.1 Through Movements



WARNING: Usually SRP are left set in the normal position; however *Rail Traffic Crews* should be prepared to stop short of the *Points* in the event they have been left in the reverse position or have lost detection.

When *Rail Traffic* approaches the SRP in the *Facing* direction, the top indicator should be illuminated with a white light provided the *Points* are set, locked and detected in the normal position.

If *Rail Traffic* is to pass through the *Points* on the *Main Line* in the normal position, there is no requirement to stop provided there is a white light displayed on the *Points Indicator*.

The same indication will be displayed on the lower *Points Indicator* if *Rail Traffic* is approaching from the *Trailing* direction.

Where the *Rail Traffic Crew* are approaching SRP, and the *Points Indicator* is at red or due to electrical failure the *Points Indicator* is not illuminated, *Rail Traffic* must:

- be brought to a stand *Clear* of the *Points*; and
- confirm the *Points* are correctly set and locked before traversing the *Points*.

All faults or failures of the SRP must be reported in accordance with Rule 2009 Reporting and Responding to Condition Affecting the Network (CAN).

4.2 Reversing Points

4.2.1 Remote radio operation

Where remote control is provided, on board radio equipment may be used by the *Rail Traffic Crew* to move the *Points* to reverse.

Radio operation requires the *Rail Traffic Crew* to enter the 3 digit code displayed on the radio code sign into their radio on UHF channel 50. This code ensures that where there are more than one set of SRP in any area, only the correct set will respond.

The control equipment will only accept a call for the *Points* to move after the *Rail Traffic* has been detected as being stationary on one of the approaches to the *Points*. Approaches are indicated by wayside white posts in both the *Facing* and *Trailing* directions.

Once the *Rail Traffic* has been detected as stationary a blue flashing light will illuminate and the 3 digit code can be used to call the *Points*.

The *Rail Traffic Crew* either sends the 3 digit code by selecting the appropriate command on the *Locomotive* touch screen display or by entering the code on their portable UHF radio handset.

If the code is accepted, the blue flashing light will extinguish and the *Points Indicator* will change to red. After 30 seconds the *Points* will move and the indicator will display a white or yellow indication once the *Points* are detected in the required position. The *Points* will lock for 2 minutes before becoming free again.

If the *Points* fail to be detected in the called position, they will immediately become free again to allow them to be returned to their original position.

The *Points* will re-lock and the blue flashing indicator light will extinguish if the *Points* are not called within 5 minutes of becoming free.

For *Rail Traffic* departing in the *Trailing* direction and waiting for a passing movement, the *Points* will become free for a further 5 minutes once the incoming *Rail Traffic* has passed over the *Points*.

4.2.2 Manual operation



WARNING: Rail Traffic Crews must close the crank handle case door before leaving the SRP site.

A manual push button switch is provided in the crank handle case to give manual operation of *Points* in the event that radio operation is not working or the *Points* have re-locked.

Once the crank handle case has been opened, the *Points* free indicator light will illuminate and the *Points* can be called by using the push button.

If the call has been accepted the *Points* will activate in the same way as using the remote radio procedure.

The *Points* will remain free as long as the crank handle case door is left open.

4.2.3 Shunting movements

Rail Traffic Shunting to or from the *Main Line* to the loop, *Siding* or branch line via the *Points* being in reverse, must stop at the *SRP* and operate the *Points* to the reverse position using either the remote or manual operation methods.

When the *Points* are set in reverse, the indicator will display a yellow light.

4.2.4 Points restoration

After any *Rail Traffic* movement where the *Points* have been set to reverse and the last vehicle of the *Rail Traffic* has *Cleared* the *SRP Track-Circuits*, the *Points Indicator* will change from yellow to red, and after a predetermined period, the *Points* will automatically move back to the normal position.

5. Signage

The maximum permissible speed approaching SRP is 40 Km/h, which applies 400m either side of the Points. “40 SRP” speed restriction signs are provided at all *Locations*.

“NO STANDING BEYOND THIS POINT” signs are provided on the approach to the Points Indicator.

6. Electrical Failures



WARNING: SRP that have been moved manually must be returned to their designated normal position.

A crank handle is provided for manual operation of the *Points* during electrical failures. Once the crank handle is removed, *Point* detection is lost and power to the *Points* machine is removed.

When manually working *Rail Traffic* through a set of *SRP*, the crank handle must be kept out of the crank handle case until all of the *Rail Traffic* has passed over the *Points*.

6.1 Restoring SRP to Normal

When crank handle operation has been used, the *Points* must be returned to their normal position after the *Rail Traffic* movement and the *Network Controller* advised.

To avoid undue delays to *Rail Traffic*, the *Network Controller* may give permission for the *Rail Traffic Crew* to leave the *Points* in the reverse position and the crank handle out of the crank handle switch.

The *Network Controller* must:

- record on the *Network Control Diagram* the position of the *Points* and that the crank handle is out of the crank handle switch;
- *Issue* a warning in accordance with Rule 2009 Reporting and responding to a Condition Affecting the Network (CAN) to the *Rail Traffic Crew* of *Rail Traffic* approaching that *Location*;
- continue to *Issue* warnings until the *SRP* has been restored to normal and the crank handle restored to the crank handle switch.

The *Network Controller* can arrange for the next *Rail Traffic Crew* or other *Competent Worker* to restore the *SRP* and crank handle to normal.

7. Use by Track Vehicles

When *Track Vehicles*, that do not reliably activate *Track-Circuits*, are required to traverse over *SRP*, the *Points* must be operated using the manual operation method.

The *Points* must be manually restored to normal when the *Track Vehicle* has moved *Clear* of the *Points*.

8. References

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

9. Effective Date

3 February 2020

Network Safeworking Rules and Procedures

Operation of Switchlocks

Rule Number: 9024

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Document History

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1. Purpose

The purpose of this procedure is to provide instruction in the operation of *Switchlocks* in *Centralised Traffic Control (CTC) Territory* within the *Network*.

2. General

A *Switchlock* is a device used to lock a *Points* lever. The *Switchlock* must be initially released by the *Network Controller* or by the positioning of the *Rail Traffic* prior to a *Competent Worker* operating a lever.

Switchlocks are usually found on *Points* leading to or from an *Intermediate Siding* or non-signalled portions of yards in *CTC Territory*.

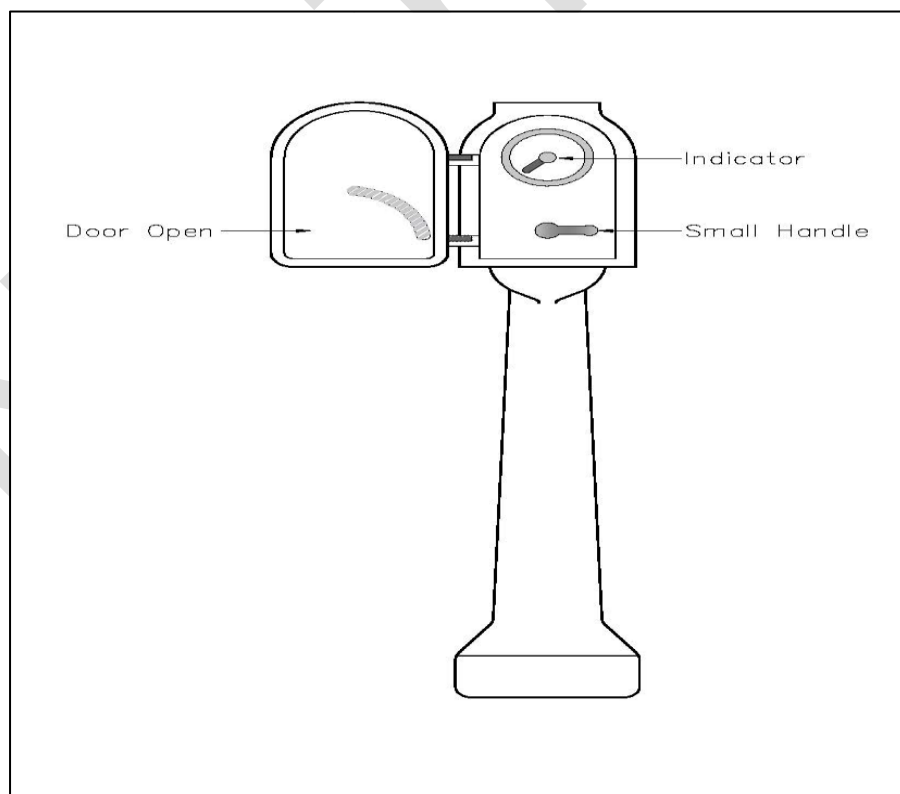
In *CTC Territory*, the *Points* leading into *Intermediate* and *Interlocked Sidings* are controlled by electric *Switchlocks*.

Switchlocks at *Interlocked Sidings* are controlled by the *Network Controller*.

Switchlocks contain an indicator to indicate the condition of the lock, a small handle to lock the *Points* and a door which is normally kept closed and locked.

Refer to local instructions as *Switchlock* procedures vary at some *Locations*.

Figure 9024-1 Typical *Switchlock*.



3. Operation

3.1 Interlocked Sidings

When it is necessary to operate a *Switchlock* at an *Interlocked Siding*, the *Rail Traffic Crew* or *Competent Worker* must:

- contact the *Network Controller* for permission and release of the *Switchlock*;
- open the *Switchlock* door, and once the free indication is displayed;
 - turn the small handle to the left position;
 - set the *Points* to the required direction; return the small handle to the right;
 - close and *Secure* the *Switchlock* door; and.
- advise the *Network Controller*.

The *Network Controller* can then return the *Switchlock* to the locked position and confirm with the *Rail Traffic Crew* or *Competent Worker* that the *Switchlock* is normal.

3.2 Rail Traffic Acceptance Buttons (TAB)



WARNING: The TAB button must be depressed until the *Rail Traffic* has passed the corresponding *Shunt* signal at Proceed.

A *Rail Traffic Acceptance Button (TAB)* is provided on the side wall of the *Switchlock* which, when pressed will permit a *Proceed* indication to be exhibited on the corresponding signal, provided the *Network Controller* has set the signal for the movement.

When the movement of *Rail Traffic* is *Clear* of the *Points* the *Rail Traffic Crew* or *Competent Worker* must:

- open the *Switchlock* door;
- turn the small handle to the left;
- restore the *Points* to their normal position;
- return the small handle to the right to the normal position;
- close and *Secure* the *Switchlock* door; and
- advise the *Network Controller*.

The *Network Controller* can then return the *Switchlock* to the locked position.

The *Rail Traffic Crew* or *Competent Worker* must then depress and hold the TAB to allow the signal to display a *PROCEED Aspect*.



NOTE: The *Network Controller* must be advised that the *Points* have been restored to normal and the *Switchlock* is Secured.

3.3 Emergency Release

At some *Locations*, the *Switchlock* has been fitted with an *Emergency* release to allow the *Switchlock* to be operated during a signalling failure.

The *Network Controller* must ensure there are no conflicting *Rail Traffic* movements approaching the *Switchlock* and it is safe to use the *Emergency* release.

The *Competent Worker* operating the *Switchlock* during a signalling failure must:

- contact the *Network Controller* to obtain permission to use the *Emergency* release;
- break the seal and push the *Emergency* release down as far as it will move;
- hold the *Emergency* release down and move the small handle to the left; and
- operate the *Switchlock* as required.

The *Emergency* release can only be restored by a *Signalling Maintenance Representative*.



NOTE: The *Fixed Signals* affected by the *Switchlock* will remain at STOP until the *Signalling Maintenance Representative* has restored the *Emergency* release.

3.4 Intermediate Sidings

Small white posts marked “A”, “B” and “C” are provided alongside the line near the *Points* to indicate the limits of the *Track-Circuit*.



NOTE: *Rail Traffic Crews* are required to contact the *Network Controller* for permission to operate *Switchlocks*.

3.4.1 Shunting rail traffic and leaving a portion standing on the main line

When it is necessary to release a *Switchlock* so that a *Siding* can be *Shunted*, the *Rail Traffic Crew* must:

- contact the *Network Controller*;
- stop the *Rail Traffic*;
- detach the portion to be left standing on the *Main Line Track-Circuit* opposite the *Siding* on the approach side of post “C”, and *Clear* of the *Points* to be *Shunted* through.

The front portion of the *Rail Traffic* to be *Shunted* must be moved forward and the rear wheels of the last vehicle must be standing on the *Track-Circuit* beyond the *Points*, and between posts “A” and “B”. Then, with permission from the *Network Controller*, the *Rail Traffic Crew* must:

- open the *Switchlock* door; and
- turn the small handle over to the left.

The *Points* may then be operated to the required position by means of the *Points* lever, in accordance with Procedure 9012 Operation of Points.



WARNING: At *Intermediate Sidings* where a portion of *Rail Traffic* is left standing on the *Main Line*, if the *Points* are reset and the *Switchlock* handle has been returned to the normal position, the *Switchlock* will fail to release again and an *Infrastructure Representative* will need to be advised and attend.

At *Intermediate Sidings* when the small handle has been turned to the left, it must not be restored until:

- *Shunting* has been completed;
- the *Points* have been reset for the *Main Line*; and
- the *Points* lever has been *Secured*.

When all *Shunting* has been completed, the *Points* have been reset for the *Main Line* and, the *Points* lever has been *Secured*, the *Rail Traffic Crew* must:

- turn the small handle back over to the right, to its normal position;
- close and lock the *Switchlock* door; and
- advise the *Network Controller*.

3.4.2 Shunting Rail Traffic clear of the main line

When required to *Shunt Rail Traffic Clear* of the *Main Line*, the *Rail Traffic Crew* must position the *Rail Traffic* so that the wheels of the first or last vehicle of the *Rail Traffic* are standing on the short *Track-Circuit* between posts “A” and “B”, the *Rail Traffic Crew* may then operate the *Switchlock*.

When the *Rail Traffic* is *Clear* of the *Main Line* and the *Fouling* point, indicated by post “C”, the *Rail Traffic Crew* can restore the *Points* and *Switchlock* to their normal positions, then advise the *Network Controller*.

Before leaving the area the *Rail Traffic Crew* must be satisfied that it is all *Clear* and safe for the passage of other *Rail Traffic*.

Where *Rail Traffic* is to resume its journey, the *Rail Traffic Crew* must:

- obtain permission from the *Network Controller* to open the *Switchlock* door;
- observe the indicator and if displaying “Free”, set the *Points* to the required position, in accordance with Rule 9012 Operation of Points; and
- *Handsignal* the *Rail Traffic* onto the *Main Line*, in accordance with Rule 2003 Handsignals and Verbal Commands.

When the *Rail Traffic* is *Clear* of the *Points* onto the *Main Line*, the *Rail Traffic Crew* may restore the *Points* and *Switchlock* to their normal positions and advise the *Network Controller* before proceeding.



NOTE: On some types of *Switchlocks*, if the hasp that *Secures* the door is not tightly closed, the signal in the rear of the *Siding* will be held in the *Stop* position.

3.4.3 Returning to the originating station



WARNING: *Rail Traffic* must restore the *Points* to their normal position and be locked away inside a *Switchlocked Intermediate Siding*, before returning to a *Station* in the rear to prove no following *Rail Traffic* has entered the *Section*.

Where it is necessary on *Single Line*, for *Rail Traffic* to depart a *Station*, *Shunt* an *Intermediate Switchlocked Siding* and return to that *Station*, the *Rail Traffic Crew* before returning to the *Station* must:

- place the whole of the *Rail Traffic* into the *Siding*, completely *Clear* of the *Main Line*;
- restore the *Points* to normal; and
- close the door of the *Switchlock*.

This must be done to prove that any following *Rail Traffic* has not entered the *Section* from the *Station* in the rear.

The *Rail Traffic* can then operate the *Switchlock* as described in 3.1 when ready to return to its originating *Station*.

4. Reporting Faults

When a fault or failure of a *Switchlock* at an *Interlocked Siding* occurs, the *Network Controller* must advise an *Infrastructure Representative* to repair the fault.

All faults or failures must be reported in accordance with Rule 2009 Reporting and Responding to a Condition Affecting the Network (CAN).

5. References

2003 Handsignals and Verbal Commands

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

9012 Operation of Points

6. Effective Date

3 February 2020

Not in Use

Network Safeworking Rules and Procedures

Annett's Keys

Rule Number: 9026

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Document History

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2.0	03 02 2020	All	Major Review

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1. Purpose

This procedure details the protocols for using Annett's keys, which provide access to *Crossing Locations* or *Sidings* in *Train Order Territory* that are *Secured* by Annett's locks.

2. General

Annett's locks *Securing Main Line Points* at *Crossing Locations* and *Sidings* in *Train Order Territory* can only be unlocked by means of an Annett's key. The Annett's key can only be removed from the lock when the *Points* have been returned to their normal position and *Securely* locked.

Except where otherwise *Authorised*, Annett's locks are not attached to *Main Line Points* at *Terminal Stations* or on *Main Line Crossovers* at *Junction Stations*.

Annett's keys are *Issued* in accordance with W110-200-032 Procedure for the Issue and Control of Annett's Keys.

All *Locomotives* operating in *Train Order Territory* are provided with an Annett's key that is branded with the *Locomotive* number.

Rail Traffic Crews must ensure the Annett's key is in its receptacle on the *Rail Traffic* at all times when not in use.

3. Shunting and Crossing Rail Traffic

On completion of *Shunting* a *Siding* or *Crossing Rail Traffic* at a *Crossing Location* that is *Protected* with an Annett's lock, the *Rail Traffic Crew*, including *Track Vehicles* must advise the *Network Controller* that;

- the *Points* have been restored to normal "*Siding Secured*" (SS); and
- the Annett's key is in their possession, or the Annett's key is on the *Locomotive*. (AKOL)

The *Network Controller* must endorse the *Network Control Diagram* "AKOL" and "SS" once confirmed with the *Rail Traffic Crew* or *Competent Worker*.

When required to *Shunt* a *Siding* using two Annett's keys the *Network Controller* must confirm with the *Rail Traffic Crew* that both keys are in their possession or on the *Locomotive*, and endorse the *Network Control Diagram* "2AKOL".

4. Fulfilling Train Orders

Upon arrival at a *Station* where a *Train Order* is to be *Fulfilled*, the *Rail Traffic Crew* must:

- confirm the Annett's key is on the *Locomotive* (AKOL);
- endorse the *Train Order* "FULFILLED" and "AKOL"; and
- advise the *Network Controller*; who will endorse their copy of the *Train Order*.

The *Network Controller* must also endorse the *Network Control Diagram* "FULFILLED" and "AKOL".



NOTE: If a *Train Order* is to be "FULFILLED" where two Annett's keys have been used, the *Train Order* and the *Network Control Diagram* must be endorsed "2AKOL".

5. Missing Annett's Keys

If the Annett's key is missing from the *Rail Traffic*, the *Network Controller* must:

- initiate action to recover the missing Annett's key; and
- advise the *Rail Traffic Crew* of the next *Rail Traffic* movement to check the *Points* at the preceding *Station* before traversing them.

If the key is not recovered before the next *Rail Traffic* approaches a *Siding* that has been previously *Shunted* by means of an Annett's key prior to the *Train Order* being *Fulfilled*, or is required to proceed through the *Section*, the *Rail Traffic Crew* must be warned, in accordance with Rule 2009 Reporting and Responding to a Condition Affecting the Network (CAN).



NOTE: If the Annett's key is not on the *Locomotive*, the *Network Controller* must be advised.

6. Faults

If an Annett's key becomes jammed in a lock, the *Rail Traffic Crew* must advise the *Network Controller* who will report the fault to the relevant *Infrastructure Representative*. The *Network Controller* must also warn any *Rail Traffic* entering the *Section* towards the *Siding*, in accordance with Rule 2009 Reporting and Responding to a Condition Affecting the Network (CAN).

7. Lost Annett's Keys

If an Annett's key becomes lost and cannot be found, arrangements must be made for a replacement key to be provided.

If an Annett's key becomes lost, refer to W110-200-032 the Procedure for the Issue and Control of Annett's Keys.



NOTE: If the original Annett's key is subsequently found, it must be returned to *Arc Infrastructure*.

8. References

2009 Reporting and Responding to a Condition Affecting the Network.

W110-200-032 Procedure for the Issue and Control of Annett's Keys.

9. Effective Date

3 February 2020