

# Network Safeworking Rules and Procedures

## Operation of Switchlocks

Procedure Number: 9024



**Brookfield**  
Rail

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# Glossary for this Procedure

<i>Aspect</i>	The displayed pattern or position of lights used to give a signal indication.
<i>Centralised Traffic Control (CTC) Territory</i>	The portions of line where the Centralised Traffic Control system of Safeworking is used.
<i>Clear</i>	A proceed indication displayed by a signal.  In reference to a track circuit, block, section or signal route, the absence of rail traffic.  In reference to track workers being clear of track.
<i>Competent Worker</i>	A worker certified as competent to carry out a relevant task.
<i>Emergency</i>	Incident requiring urgent action. The incident might involve death or serious injury, health or safety effects, significant damage to property or infrastructure.
<i>Fixed Signal</i>	A signal that is located permanently near the line.
<i>Infrastructure Representative</i>	An authorised Brookfield Rail employee or an organisation contracted to Brookfield Rail, responsible for maintaining Network infrastructure.
<i>Interlocking</i>	Interaction of interconnected locking equipment controlling points and/or signals to prevent conflicting movements to make sure routes are set correctly.
<i>Intermediate Siding</i>	A siding located within a section, generally used for purposes other than crossing or passing of rail traffic.
<i>Location</i>	A place in the Network with a designated name, identification number, or signalling reference.
<i>Main Line</i>	The running line (not including Loops) normally used for running rail traffic through and between locations
<i>Network</i>	A combination of track and other associated infrastructure controlled by Brookfield Rail.
<i>Network Controller</i>	A Competent Worker who authorises and issues Occupancy Authorities, and works points, signals and other signalling equipment to manage routes for safe and efficient transit of rail traffic in the Network.
<i>Points</i>	A track component consisting of paired pieces of tapered rail (blades) that can be moved and set to allow tracks to diverge or converge.
<i>Rail Traffic</i>	Trains and track vehicle or vehicles travelling on the Network.
<i>Rail Traffic Crew</i>	Competent Workers responsible for the operation of the Motive Power Unit.
<i>Section</i>	The line between the departure end station limit of one location and the arrival end station limit of another location. A section consists of one or more blocks.

<i>Secure</i>	To safeguard against accidental or unauthorised access or movement.
<i>Shunt</i>	To move rail traffic, rakes of vehicles, or vehicles on lines for purposes other than through movement.
<i>Siding</i>	A portion of track where vehicles can be placed clear of the running lines.  Also see intermediate siding.
<i>Signals Maintenance Representative</i>	A competent and authorised signals maintenance worker.
<i>Station</i>	A system of tracks within station limits at the beginning or end of a section at which rail traffic may cross, pass or run around.
<i>Switchlocks</i>	A device used to lock a points lever. The device must be initially released by the Network Controller or by the positioning of the rail traffic prior to a Competent Worker operating a lever.  Usually found on points leading to or from an intermediate siding or non-signalled portions of yards in CTC territory.
<i>Track-Circuit</i>	An electric circuit where current is carried through the rails and used to detect the presence of trains. Track-circuits are used in the operation and control of points, signalling and level crossing equipment.

# 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*.

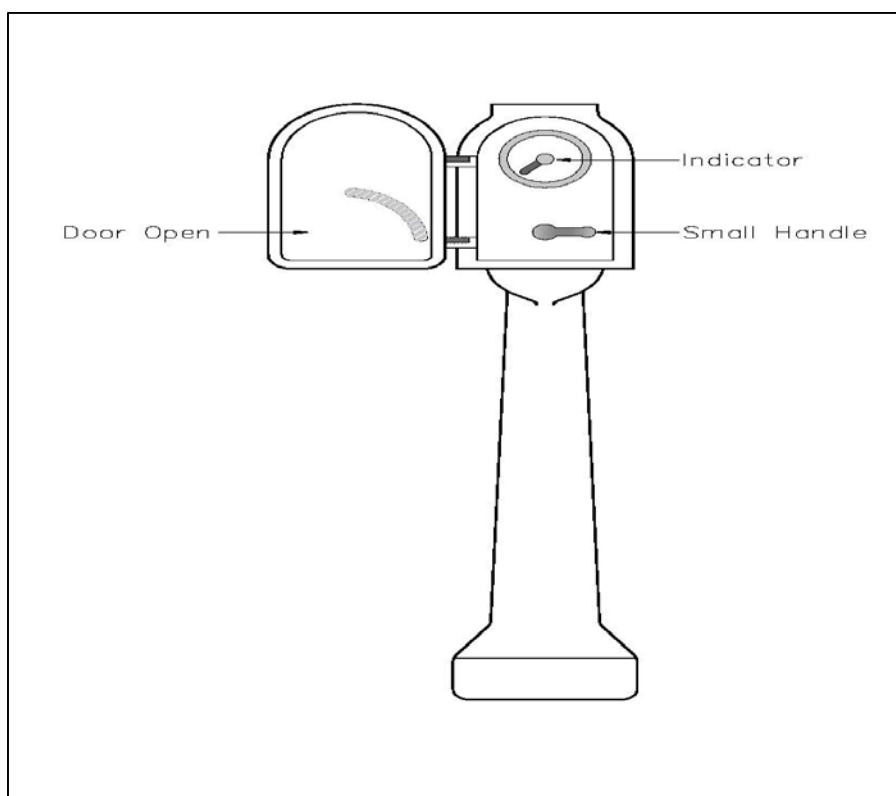
In *CTC Territory*, the *Points* leading into *Intermediate* and *Interlocked Sidings* are controlled by electric *Switchlocks*.

*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; and
  - close and *Secure* the *Switchlock* door.
- 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
- hand signal 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.



**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*.

### 3.4.3 Returning to the originating station

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 3.3.2 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

4 May 2016