

Section 5

Working of Points and Signals - Rules 1 to 12

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VIC

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1. Testing of Fixed Signals and Wires

a. Testing of Fixed Signals

At the start of duty, the Signaller must check and test the correct operation of:

1. the fixed signals and interlocked points, and
2. any signals which are automatically controlled by track circuits.

The Signaller must ensure that each signal responds correctly to the operation of the lever or electrical circuit. Undue force must not be used when operating a signal lever.

The Signaller is to check the signals are correctly operated by a train. Before the train has passed off the controlling track section the signal lever must be tested.

Non-electrically lit signals must be retested at dusk to ensure the light and signal is visible.

b. Back Lights

A back light is used on some fixed signals facing away from the signalbox. A 'white' light shows when the signal is in the normal position. This light is obscured when the signal is at 'proceed'.

c. Train Register Book Entries

The time and result of each signal test must be entered across the figure line in the Train Register Book.

d. Regulating Signal Wires

Some signal wires are provided with regulators which can be adjusted to maintain correct tension for varying conditions.

The Signaller must maintain the correct tension on signal wires.

e. Obstruction on Line

The Signaller and Ganger Site Supervisor must be immediately informed if there is any defect or danger on the line. The Signaller must maintain the fixed signals at the 'stop' position but can allow trains to pass over slowly as arranged with the Ganger Site Supervisor until the defect is repaired.

f. Defects

If any defect in the signalling, pointwork or interlocking is found, this must be immediately reported to the maintenance supervisor, Train and Network Controller and Stationmaster.

2. Fixed Signals and Pointwork**a. Distant Signals**

When a Signaller is working a distant signal positioned near to another signalbox attended by a Signaller, both Signallers in both signalboxes are responsible for the checking and correct working of the signal.

b. Facing Points

The Signaller must ensure that when a train is approaching facing points, the levers which operate the points are secured and close home to the frame and that the catch remains firmly down in the notch until the train has passed. The Signaller must ensure the points are set correctly.

Facing points not worked from a locking frame must be securely fastened or held for the duration of the train passage.

The Signaller must give approval for any points movement, related to a running line.

c. Signals Governing Facing Points

Each signal must be placed at the 'stop' position when it is passed by a train, except where:

1. a signal other than a distant signal reads 'proceed', the signal lever must not be altered until the train has completely passed or has been brought to a stand, or
2. relating to any signal governing facing points until the train has completely passed the signal and is clear of the facing points.

Mechanical or electrical appliances are sometimes provided which permit the signal to be placed at 'stop' without releasing the security of the interlocking.

If a train is brought to a stand and is partially outside the home signal, the signal must immediately be placed at the 'stop' position to protect the rear of the train.

d. Signals Controlled by Track Circuit

All fixed signals which are electrically controlled by track circuits are automatically returned to the 'stop' position immediately the train's front wheels pass the signal.

e. Shunting

Signallers must not move the points during shunting until a signal that the last vehicle is clear of the points is received from the competent worker **employee** in charge of the shunting. At night the signal must be given by a steady hand held green light.

f. Care Whilst Shunting

When shunting, the competent worker **employee** is responsible for ensuring that no vehicle has become detached and is fouling the running line.

g. Vehicles in Sidings

The Signaller must be advised by the competent worker **employee** supervising any shunting operations that the carriages or other vehicles are secure in the sidings and the running lines are clear. The Signaller can then allow trains to proceed on the running line.

3. Catch Points

The Signallers must ensure that catch points worked from the signalbox are kept open for the runaway end, but must be closed when a train has to pass. If a train has to be moved in the wrong direction on the running line, all catch points must be correctly positioned for the direction of movement of the train.

4. Reversing of Signals**a. Signals at "Proceed" not be placed to stop**

When the Fixed Signals have been placed to proceed for a train to pass, the Fixed Signals must not be placed to stop until the train has passed, except in cases of accident, danger or obstruction.

b. 'Proceed' Changes to 'Stop'

If the 'Proceed' signal is displayed at a fixed signal for the train to leave a station or siding and the signal is reversed to 'Stop':

1. The Signaller must, if practicable, advise the Driver that the signal has been changed to the 'Stop' position.
2. The Driver is responsible to observe all signal changes.
3. The Driver must ensure that the correct signal of 'Proceed' is displayed before continuing.

c. Converging Trains

When more than one train is converging at a junction or location station and it is necessary to alter the order of the approaching trains, all signals must be placed at the 'Stop' position to ensure all trains come to a stand. The Signaller can then permit the designated train to proceed.

d. Overhead Sectioning

The Signallers must personally deal with any communications regarding overhead sectioning. Communication responses are to be prompt. The Signallers must be familiar with any special instructions concerning section switches.

5. Signals Not in Use

Black crosses are placed over signals to show they are not in use. when not commissioned or booked out of use and decommissioned to be removed from the Network. The signal lamps must not be lit when the signal is not in use. The signals that may be so marked are:

a. Semaphore Signals

Semaphore signals not in use are distinguished by a black cross on the semaphore arm.



b. Light Signals

Light signals not in use are distinguished by a black cross on the front of the lights. The lamps are not to be lit.

**c. Disc or Dwarf Signals**

Disc or dwarf signals not in use are distinguished by a black cross on the disc or on the target of dwarf signals.



The Signaller or competent worker **employee** must remove the cross when the signal is returned to service and are responsible to replace the cross when the signal is not operational.

The black crosses must not be left at an operational signal and must be taken away immediately and stored in the signalbox.

6. Lever Sleeves

Signallers must use lever sleeves freely as a reminder that precautions are required when operating levers.

a. Description of Lever Sleeves

Lever sleeves act as prompts to Signallers that tracks are either occupied or fouled. Lever sleeves bring to the attention of Signallers that precautionary steps have to be taken when operating levers.

b. Disconnection Between Levers and Points

This Code of Practice must be strictly adhered to when any disconnection of points and levers, bars or signals is made. The Signaller must also sleeve the levers working facing points for straight running on main lines.

The Signaller in control of a train movement must return the levers to normal after a train has passed and re-apply any removed sleeves.

c. Duties of Maintenance Worker Employee

This Code of Practice must be strictly adhered to by maintenance workers employees when disarranging any locking or disconnecting any lever. The maintenance worker employee must ensure that all levers have been correctly sleeved.

Special sleeves supplied must be used when disarranging any locking or disconnecting any lever and must not be removed without the consent of the maintenance worker employee.

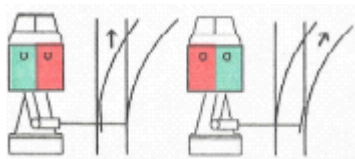
Signallers must comply to the instructions regarding disarrangement of interlocking.

7. POINT INDICATORS

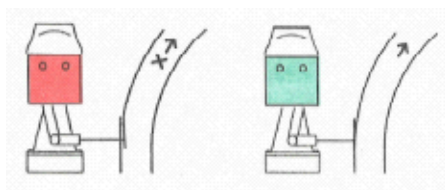
Two types of point indicators are in use:

a. Coloured Point Indicator

1. The colour point indicator is connected to and works with a set of points. The indicator has a two-coloured face; red and green by day and coloured lights at night.
2. Drivers must, before crossing over points, ensure that the green indicator is showing on the correct side of the Line and therefore the points are set in the correct direction.



3. When the indicator works in conjunction with the catch points or with a detail block set in the derail position, it shows a red face by day and two red lights at night. A Driver must not allow the train to pass this indicator.
4. When the derail block is removed or catch points are set in a position for movements, the indicator shows a green face by day and two green lights by night.



b. Plunger Locked Indicator

This point indicator consists of a disc and is connected to and operates in conjunction with the plunger. The disc face shows green when the plunger is in for facing movements, and white for trailing movements. When the plunger is withdrawn, the disc is turned off.

8. Point Detectors**a. Correct Setting of Facing Points**

Point detectors are provided to:

1. ensure the correct setting of facing points where the levers working the points and signals are interlocked, and
2. ensure the correct setting of facing points where the points are fitted with plunger locking at locations stations on single lines.

If, for any reason, the point rods, connections or levers should become inoperative, the point detector will prevent the working of the signal. The Signaller must examine the points to ensure correct positioning before allowing trains to pass, and arrangements must be made for maintenance to be carried out as soon as possible.

b. Regulating Signal Wires

Proper regulation of tension of signal wires between the lever, detector and signal must be maintained by adjustment to the screws.

c. Signal Applies to More Than One Route

Interlocked points with mechanical detectors should be reversed and each signal tested, but this is not necessary in the case of electric detectors.

Where a signal applies to more than one route, the signal must be tested in each direction. During test, the points should be reversed to ensure that the wire is clear of the detector-bar attached to the points.

Signals must be tested and adjusted at dusk to ensure correct working during the night.

9. Automatic Train Stops

The provision of a train stop does not in any way relieve the Driver of responsibility for strict observance of this Code of Practice or other instructions relating to fixed signals.

a. Description of Automatic Train Stops

An automatic train stop consists of a pivoted lever arm fixed outside the left-hand rail of the running line. When the signal shows 'Stop' the train stop lever is elevated. If the train should overrun the signal when at 'Stop', the train stop lever will operate a trip valve connected to the train pipe and the air brake is operated.

b. Trip Valve

The trip valve operates when the valve is set and the handle is pointing downward. The leading left-hand trip valve on a train must be cut in and all other trip valves on the train must be cut out, unless otherwise authorised.

The Driver of an electric train must personally ensure that the leading left-hand trip valve is cut in before leaving a terminal or station or if any alteration to the configuration of the train has been made.

c. Multiple Trip Valves Cut In

When a Driver is authorised by these Rules to pass a fixed signal showing 'Stop', the train stop will be in the raised position and application of the brake will be unavoidable.

If it is necessary for multiple trip valves to be cut in on an electric train, application of the brake will be effected at a signal even though the signal is at the 'Warning' or 'Proceed' position. The leading wheels of the train will reverse the signal and train stop before the second trip valve has cleared the train stop.

The trip valve will have to be reset after the train has been brought to a stand.

d. Trip Valve Irregularly Operated

If the train has been brought to a stand, following a trip valve being irregularly operated, the Driver must:

3. reset the trip valve,
4. advise the Train Controller, and
5. proceed with extreme caution, with the train under control.

The Driver must stop at the first station or signalbox to arrange with the Stationmaster or Signaller for the responsible supervisors to immediately be informed of where the irregular operation took place and the possible cause. The Driver must report the number of the motor car for which the trip valve operated

The Stationmaster or Signaller must promptly inform the responsible Supervisors.

e. Trip Valve Operated Close to a Home Signal

The Driver must bring the train to a stand immediately a trip valve is operated close to a home signal and inform the Train Controller. The Driver must not proceed until instructed by the Stationmaster, Signaller or by a competent employee if single line working is in operation.

f. Defective Train Stop

If a defective train stop is located, this must be reported to the Stationmaster at the next station. The Stationmaster must ensure that the Stationmaster or Signaller at the rear of the defect stops each train approaching the defective train stop. The Drivers must be informed of the circumstance.

The Stationmaster receiving the first report must arrange for maintenance personnel to attend.

g. Assistance for Driver; Defective Trip Valve

The Train Controller must be informed if the leading 'trip valve on an electric train has to be cut out of action, owing to a defect. The Train Controller must arrange for a competent employee to accompany and assist the Driver and to obey all instructions from the Driver. The services of a Competent Employee will only be required where the train to be run is not modified for 'Driver only' operation.

The competent employee must keep a good lookout and operate the control governor switch.

The defect must be rectified as soon as possible. The Driver is responsible for advising the Depot Station that the train should be taken out of operation for repair.

10. Fixing, Removing, Altering or Repairing Signals or Apparatus for Working Points and Signals

a. Advance Notice for Alteration Work

The relevant managers of the Infrastructure Maintenance Division must give a minimum of 10 clear days' notice to the Operations Manager Superintendent Safeworking for any alterations proposed to be undertaken on points and signals.

The Operations Manager Superintendent Safeworking will issue official notices to Stationmasters and Signallers advising authorised work to be undertaken to ensure safe working on the line.

Ordinary working of the locking and signals can only be altered by previous arrangement and official notice of the Operations Manager Superintendent Safeworking or in an emergency when specifically authorised by the Operations Manager Superintendent Safeworking .

b. Alteration to Signalling

No alteration whatsoever to any signalling arrangement either existing or new, is to be made without authority from the Operations Manager Superintendent Safeworking.

c. Special Point Clip During Alterations

A person authorised by the Officer in Charge of Works is to secure a special point clip by signalling safety padlock before:

1. points are disconnected and to be removed from use later,
2. points are to be connected or disconnected from an interlocking or signal control panel, or
3. points are to be spiked and plated for safety reasons.

The point clip is only to be removed by an Authorised Officer after

1. consultation and agreement of the Operations Manager Superintendent Safeworking, and
2. the authority of the Manager, Signalling. and Communications Maintenance Department or other authorised manager.

d. Disarrangement of Interlocking

Before authorised work is commenced, the Signaller must be informed by the employee in charge of the work of the intended:

1. disarrangement of interlocking apparatus, pneumatic or electric control, or
2. disconnection of any signal, point, facing point bar or lock, fouling bar, detector, bridge bolt, turntable bolt or level crossing protection equipment.

The Signaller must enter the numbers of the levers affected in the Train Register Book or special book and write the words 'locking disarranged'. The Signaller must communicate the entry to the employee in charge of work as required in Rule 10(e) and, when confirmation that the employee in charge of the work has understood is received, sign the entry.

e. Train Register Book and Voice Recording Facilities

It is not necessary for the employee worker in charge of the work to go to the signalbox to sign the Train Register Book if voice recording facilities are provided or where interlocking is remotely controlled from a signalbox.

The employee worker in charge of the work must give the Signaller or Train Network Controller the numbers of points or signals affected and a description of the work to be undertaken.

f. Lever Sleeves or Blocking Commands/Jacks / Blocking Facilities to Affected Points or Signals

The Signaller or Train Network Controller must apply lever sleeves or blocking commands/jacks /blocking facilities to the affected points or signals and note the details in the Train Register Book or other book provided. The Signaller or Train Network Controller and employee worker in charge of the work must exchange names for recording purposes.

g. Distant Signals Disconnected

The employee in charge of the work must disconnect the distant signals and fix at 'Caution' if any disarrangement of interlocking is to be undertaken.

h. Hand Signaller

A Hand Signaller working under the instructions of the Signaller must be provided. The employee worker in charge of the work must ensure the work is carried out in accordance with this Code of Practice and that the Hand Signaller understands the instructions and is in position.

i. Multiple Points Disconnected

It is the responsibility of the Signaller to advise any employee worker placed at one or more sets of points of their duties, if points have been disconnected from the signalbox.

When a train is to pass, the Hand Signaller must inform the employees workers attending the sets of points. The Hand Signaller must check that the points are correctly secured for the passage of the train. The Hand Signaller will advise the employees workers when the operation is completed.

The points must not be altered without instructions from the Hand Signaller.

j. Movement of Points

The Hand Signaller may authorise that the points may be moved as required to suit the employee worker working at them; but no train will be cleared for passage without authority being given by the Hand Signaller.

k. Dual Control Motor Operated Points

Before commencing repairs to points operated by dual control, the employee worker in charge of work must:

1. move the selector lever from the 'motor operating' position to the 'hand operating' position, and
2. lock the selector lever in position until the work is completed.

l. Interlocked Level Crossing Gates

The employee in charge of work involving interlocked level crossing gates being disconnected from the interlocking, must disconnect the distant signals and fix at 'Caution'. A Hand Signaller must be provided to oversee the working of the gates and protection of the crossing.

m. Electro-hydraulic Dual Control Points

Before commencing repairs, the employee in charge of work must position the 'power/manual' switch to 'manual' for points operated by electro-hydraulic dual control point machines.

n. Disconnected Points

The Signaller or Train Controller must inform the Hand Signaller and the employee in charge of work when a train is to pass over the disconnected points. Assurance must be received from the Hand Signaller and the employee in charge of the work that all points are correctly positioned for the passage of the train.

o. Hand Signaller for Repairs at Level Crossings

If necessary, a Hand Signaller must regulate tramway traffic at level crossings where a tramway crosses the line.

11. Returning Working Points and Signals to Service

a. Restoring Locking

After receiving an assurance work is completed, the Signaller must test and ensure locking is operative and enter the numbers of the points and signals affected in the Train Register or special book and write the words 'locking restored'.

An Infrastructure Maintenance representative must certify in writing when the line, points and signals are operational if the permanent way has been damaged.

b. Voice Recording Facilities

Where voice recording facilities are provided, it is not necessary for the employee worker in charge of the work to go to the signalbox to sign the Train Register Book or special book. The Signaller or Train Network Controller must test the locking to ensure it is operative and report the results of the test to the person in charge of the work.

The Signaller or Train Network Controller and employee worker in charge of the work must exchange names for recording purposes.

c. Interlocking Remote from Signalbox

Where the interlocking is remote from the signalbox, the employee in charge of the work must report to the signalbox as soon as possible. The employee in charge of the work must sign the Train Register or special book after being informed by the Signaller that the interlocking is operative.

d. Security of Interlocking

When a fixed signal or points are not operational but the interlocking of the signal lever or points are functional, the Signaller must ensure security of the interlocking by using the relevant lever as if the signal or points were operating.

Where required, the signal and counter balance weight must be disconnected from the lever by the employee in charge of the work.

12. Certificate of Testing

Certificate of Testing (Form No. 2422) must be completed once the mechanical, electrical or computerised locking at a Signalbox/Signal Control Room has been restored. The following details must be included on the **Certificate of Testing**.

- The Time, Date, Location and Circular Number — (where a Circular has been issued),
- The time at which the interlocking was disarranged,
- A full description of the works which have been undertaken,
- The time at which the interlocking was restored,
- The relevant numbers of the Signals and Points which have been tested,
- The Signature of the Signaller and the Work Group Supervisor.

A **Certificate of Testing** is only required to be completed where the locking has been disarranged for the purposes of repairs or major maintenance.

It is not necessary for a **Certificate of Testing** to be completed where a **Certificate of Signalling** or a **Conditional Certification of Signalling** has been issued as part of a commissioning process

Where a location is remotely controlled, it will not be necessary for the Work Group Supervisor to proceed to the Signalbox/Control Centre in order to complete the Certificate of Testing. The Supervisor must however provide the Signaller with their name upon the relevant testing being completed. This information must be given to the Signaller via a recorded telephone.

Copies of the Certificate of Testing — (Form No. 2422) must be kept available for use at each Signalbox/Signal Control Room when required.

Upon completion, the form must be immediately forwarded to the Safeworking Department.

SAFEWORKING DEPARTMENT FORM: 2422
CERTIFICATE OF TESTING

Date Time:

Signalbox: Circular No:.....

Interlocking disarranged at.....for purpose of

.....
(enter full description)

Interlocking restored at:

Signals Tested:
(enter numbers)

Points Tested:.....
(enter numbers)

WE CERTIFY THAT THE SIGNALS AND POINTS LISTED ABOVE HAVE BEEN TESTED IN ACCORDANCE WITH THE RULES AND OPERATING PROCEDURES AND WERE OBSERVED TO BE OPERATING CORRECTLY

.....
SIGNALLER

.....
WORK GROUP SUPERVISOR

Print Name: Print Name:

This Certificate is to be forwarded to the Safeworking Department immediately upon completion