

Section 4

Defective Fixed Signals - Rules 1 to 6

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1. Overview

The rules and procedures describe the procedures for Stationmasters, Supervising Officers, Signallers, Gangers, related to the operation and management of the signalbox. The section also describes the daily reporting requirements and the procedures in the event of incidents, accidents, and general operating problems.

2. Defective Signals and Points: General Instructions

a. Defective Fixed Signals

If any fixed signal is defective, the Signaller will arrange and instruct a competent employee positioned at the signal. The competent employee is to be supplied with hand signals and audible track warning signals. The defective signal must be, if possible, placed at 'Stop' until the signal is repaired. Distant signals applying to this line must be kept at 'Caution' and disconnected from the lever until the repairs are completed and the signals are in working order.

Should the interlocking of a lever-frame or any facing point, bolt or bar be defective, one competent employee, or more if necessary, will receive instructions from the Signaller and must be provided with hand signals and audible track warning signals.

b. Interlocking Out of Order

When the interlocking is out of order, the facing points must be positioned so no train can cross the path of another train. The points can be set under the instruction of the Signaller to allow the passage of a single train.

c. Tramway Crossings

If tramway signals are out of order, a Hand Signaller must regulate tramway traffic at level crossings where a tramway crosses the line.

d. Position of Hand Signaller

To ensure maximum effect, the Hand Signaller must stand just outside the defective signal but in a safe position and in clear view of the Driver.

During inclement weather or if the Driver will not get a distant view of the hand signals due to obstructions, the Hand Signaller must also place in position two audible track warning signals. These should be placed ten metres apart, on one rail of the line which has the defective signal, at a sufficient distance outside the hand signal. The audible track warning signals are to remain in place until the signal has been repaired.

e. Instructions for Hand Signallers

Hand Signallers must work under the instructions of the Signaller, who must ensure that they are fully informed and competent in their designated duties. If a Hand Signaller is unavailable, the Signaller must carry out the duties of the Hand Signaller, including the examination of points.

f. Selection of Hand Signallers

Stationmasters must select competent employees from their own staff to act as Hand Signallers if possible; if not they must apply to the Road Foreman for the district or to the nearest Ganger for competent employees to act as Hand Signallers.

The Stationmaster or other responsible employee must ensure that the Hand Signallers are competent in their duties and equipped with hand signals and audible track warning signals.

g. Defective Signal Cannot be Secured at 'Stop'

If the defective signal cannot be secured at the 'Stop' position the Hand Signaller must:

1. obscure the light of the signal,
2. place two audible track warning signals ten metres apart, on one rail of the line which has the defective signal, and
3. exhibit a red hand signal to stop any train until permission is given to proceed.

h. Defective Signal Can be Secured at 'Stop'

If the defective signal can be secured at the 'Stop' position it is not necessary for the Hand Signaller to remain at the signal when a train is not expected; however, the Hand Signaller must be available at short notice to return to the defective signal position under instruction of the Signaller.

3. Defective Fixed Signals

When a failure of fixed signals, points, locking bars or gates occurs, the Signaller must immediately report the matter to the Train Controller and the proper representative of the Infrastructure or Signal Maintenance Division.

a. Defective Distant Signal: 'Caution' Position

If this signal can be secured at the 'Caution' position, it must remain so until repaired. A Hand Signaller is not required under these circumstances.

b. Defective Distant Signal: 'Proceed' Position

If this signal remains at the 'Proceed' position, the signal light must be obscured and a Hand Signaller instructed to signal in place of the distant signal until it is repaired.

If possible, the Signaller in the Signalbox to the rear must be advised that the distant signal cannot be secured in the normal position. This Signaller must stop all trains approaching the defective signal and inform the Drivers of the hazard.

When the Hand Signaller observes the home signal at the 'Stop' position, two audible track warning signals must be placed at a sufficient distance from the signal. A red hand signal must be exhibited to the Driver of any approaching train. Once the train has almost stopped, a green hand signal must be shown to the Driver so the train can proceed as for the distant signal at 'Caution'.

c. Defective Home Signal: 'Stop' Position

If this signal can be secured at the 'Stop' position, a Hand Signaller is not required where traffic can be worked by a calling-on or low speed signal.

d. Facing Points: Defective Home Signal at 'Stop'

The Signaller is to advise the Hand Signaller positioned at a defective home signal, which train is to be brought forward. The Hand Signaller is to inform the Signaller of the status of relevant facing points for the approaching train and ensure they are correctly set and secured.

e. Facing / Trailing Points: Defective Home Signal at 'Stop'

Signalmans Caution Orders are issued by the ARTC Network Controller as authority to pass a defective Home Signal that protects points in Automatic Block Signalling (ABS) and Train Order Working, Systems of safeworking.

Signalmans Caution orders are numbered consecutively by the issuing Network Controller, commencing with number 1 at 0001 hours each day.

Prior to issuing a Signalmans Caution Order the Network Controller must:

- ensure the affected block section is clear of rail traffic,
- ensure there is no authorised work on track occurring in the affected block section that may cause the failure,
- ensure that any opposing home signals are set to stop and blocking facilities/commands have been applied to prevent their operation.
- confirm the gauge of the intended rail movement with the Rail Traffic Crew.
- ensure that all relevant points are correctly set for the required route and gauge of the rail movement with blocking facilities/commands applied.
- ensure blocking facilities/command have been placed on the defective signal and on all points that the defective signal protects.
- ensure that there is no outstanding Signalmans Caution Orders issued applicable to the affected Block section.

Where electronic blocking is not available a formal process is used to record blocking on the Network controllers' graph.

Rail Traffic must be stationary at the defective signal prior to being issued a Signalmans Caution Order.

Rail Traffic Crews must inspect all points within the route and ensure that they are set and secured in the correct position and are set for the correct gauge of the intended rail movement prior to traversing over them.

Except as described under this Code of Practice, a second or subsequent rail traffic movement must not be issued a Signalmans Caution Order until the previous rail traffic movement has cleared complete beyond the affect block section.

Where detection has been lost on points that are protected by the defective Home signal, the dual controlled points must be placed into the hand operating position and set correctly for the passage and gauge of the rail traffic movement prior to issuing the Signalmans Caution Order.

Points that require the use of a Crank Handle require a signal fitter to be in attendance to operate them to the required position.

When Rail Traffic Crews receive a Signalmans Caution Order, the details must be recorded as received on the prescribed form and repeated back for verification of content.

The ARTC Network Controller must then endorse the Signallers Caution Order as verified along with the time of the verification.

Signalmans Caution Orders must be cancelled once the instructions contained on the Signalmans Caution Order have been completed. The Rail Traffic Crew must cancel the Signalmans Caution Order when the rail traffic movement has cleared complete of the affected block section.

When cancelling the Signalmans Caution Order, the Rail Traffic Crew must write the word 'cancelled' including the time and date across the face of the Signalmans Caution Order form.

The Rail Traffic Crew must tell the Network Controller when the Signalmans Caution Order has been cancelled.

The Network Controller must endorse the original Signalmans Caution Order with the time and date of cancellation when advised by the Rail Traffic Crew.

The cancelled Signalmans Caution Order must be handed in at the Drivers depot.

Signalmans Caution Orders may be cancelled by the Network Controller provided the Rail Traffic Crew have been contacted and have advised that the rail traffic movement is able to be brought to a stand prior to passing the defective signal.

Blocking facilities / commands may be removed once the Rail Traffic Crew have confirmed that the rail traffic movement has cleared the affected block section complete and that the Signalmans Caution Order is cancelled.

The ARTC Network Controller may authorise rail traffic to pass a defective Home Signal not protecting points by issuing verbal authority.

f. Compilation of the Signalmans Caution Order form 2377

No. – Authority number issued by Network Controller.

Network Control – The Network Control Centre, i.e. Adelaide.

Date – Date of issue.

Time – Time of issue.

The points for *Standard / *Broad gauge are correctly set for the rail traffic movement, as indicated on the Network Controllers display?

Strike through the gauge not applicable to the rail traffic movement, i.e.

*Standard / *~~Broad~~.

- Place a 'Y' in the check box if the Network Controller has confirmed the gauge and the route is set correctly as indicated on the Network Controllers display
- Place an 'N' in the check box if the Network Controller cannot confirm the gauge and route is set correctly by observing the Network Controller display.

Note: If an N' is placed in the check box, the next item must have a 'Y' placed in it.

The Rail Traffic Crew has been advised to manual operate and set the points for the *Standard / *Broad gauge train movement?

Strike through the gauge not applicable to the train movement, i.e.

*~~Standard~~ / *Broad.

- Place a 'Y' in the check box if the Rail Traffic Crew has been advised to manually operate and set the points for the correct gauge of the rail traffic movement
- Place an 'N' in the check box if the Rail Traffic Crew has not been advised to set the points for the correct gauge of the rail traffic movement.

The Rail Traffic Crew has confirmed with the Network Controller that the route is correctly set for the *Standard / *Broad gauge rail traffic movement?

Strike through the gauge not applicable to the train movement, i.e.

*Standard / *Broad.

- Place a 'Y' in the check box when the Rail Traffic Crew confirms the gauge and the points for the route have been correctly set for the rail traffic movement.
- Place an 'N' in the check box if the Rail Traffic Crew is not required to manually set the gauge and the points for the route.

The Signal Maintenance Representative has confirmed that the dual controlled points that require the use of a crank handle are correctly set for the *Standard / *Broad gauge rail traffic movement.

Strike through the gauge not applicable to the train movement, i.e. *Standard / *Broad.

- Place a 'Y' in the check box when the Signal Maintenance Representative confirms the gauge and the points for the route have been correctly set for the rail traffic movement *Standard / *Broad i.e. *Standard / *Broad.
- Place an 'N' in the check box if the Signal Maintenance Representative has not confirmed the gauge and the points for the route have been correctly set for the rail traffic movement.
- Place a 'X' in the check box when the Signal Maintenance Representative is not required to operate a crank handle to set the points.

Note: This item must have a 'Y' 'N' or 'X' placed in it prior to issue of the authority.

The Rail Traffic Crew has been advised to confirm the points for the *Standard / *Broad gauge rail traffic movement are correctly set prior to passing over them?

Strike through the gauge not applicable to the train movement, i.e.

*Standard / *Broad.

- Place a 'Y' in the check box, when the Rail Traffic Crew has been advised to confirm the points are correctly set prior for the rail traffic movement passing over them.

Note: This item must have a 'Y' placed in it prior to issue of the authority.

You are authorised to pass Signal Post No:

– Record the Signal Post number being authorised to be passed at the Stop position and proceed with extreme caution as far as the next Fixed Signal.

Signed – Sign for applicable position held

Network Controller Rail Traffic Crew Name

Verified by Rail Traffic Crew correctly at hrs – Network Controller to record the time of correct repeat back of content.

g. Signalmans Caution Order Form 2377

Form No. 2377

SIGNALMANS CAUTION ORDER FOR DRIVER TO PASS A HOME SIGNAL AT THE 'STOP' POSITION

No:

Network Control: Date: Time: hrs

Mark each check box in this section either Y (YES) N (NO) or X Not Applicable

The points for *Standard / *Broad gauge are correctly set for the rail traffic movement, as indicated on the Network Controllers display.

The Rail Traffic Crew has been advised to manually operate and set the points for the *Standard / *Broad gauge rail traffic movement.

The Rail Traffic Crew has confirmed with the Network Controller that the route is correctly set for the *Standard / *Broad gauge rail traffic movement.

The Signal Maintenance Representative has confirmed that the dual controlled points that require the use of a crank handle are correctly set for the *Standard / *Broad gauge rail traffic movement.

The Rail Traffic Crew has been advised to confirm the points for the *Standard / *Broad gauge rail traffic movement are correctly set prior to passing over them.

To the Rail Traffic Crew of rail traffic movement No: at
..... Location

You are authorised to pass Signal Post No:
at the Stop position, and proceed with extreme caution as far as the next Fixed Signal.

Signed
Network Controller
Rail Traffic Crew Name

Verified by Rail Traffic Crew correctly at hrs

* Delete item not used.

h. Trailing Points: Defective Home Signal at 'Stop'

The Hand Signaller must ensure the trailing points are in the correct position for the approaching train.

If the defective Home Signal governs facing or trailing points or the fouling point of a crossover, the Signaller must give the Driver a Caution Order as authority for the train to pass the defective Home Signal.

The Signaller must not issue more than one Caution Order for the same Signal at a time, and before issuing another Caution Order, must wait until the:

- track section ahead is clear, or
- in the case of a Home Signal leading to a Block Section,
 - not until that Block Section is clear, or
 - where there are two or more track sections within the CTC Single Line Section and at least one movement in the same running-direction will follow, the Signaller must confirm with the Driver of the preceding train, that the train is clear and complete beyond the second signal in advance of the home departure signal.

i. Defective Home Signal: 'Proceed' Position

If the home signal becomes defective at the 'Proceed' position, the signal light must be obscured. A hand signaller must be instructed to signal in place of the defective signal until it has been repaired.

If possible, the Signaller at the signalbox in the rear must be advised that the signal cannot be kept at the 'Stop' position. This Signaller must stop all trains approaching the defective signal to inform the Drivers of the hazard.

j. Defective Starting Signal: 'Stop' Position

If the starting signal becomes defective at the 'Stop' or 'Proceed' position, the Signaller must:

1. stop each train at the signal,
2. inform the Drivers of the circumstances, and
3. not allow the train to proceed into the section in advance until line clear has been received.

The Driver must not allow the train to pass the signal at "Stop" until authorised by the Signaller to proceed into the section in advance.

The Signaller must not allow a train to proceed to a defective Starting signal in an advance position until the train can progress into the section ahead.

An exception is made for station work.

k. Defective Starting Signal: 'Proceed' Position

If the starting signal cannot be kept at the 'Stop' position, the signal light must be obscured. The hand signaller must:

1. place two audible track warning signals on one rail of the line to which the signal applies, and
2. exhibit a red hand signal at the defective signal to stop any approaching train until permission can be given for the train to proceed.

The audible track warning signals should be placed 10 metres apart at a sufficient distance from the defective Starting Signal.

l. Defective Repeating Signal: 'Warning' Position

A repeating signal which becomes defective, and which can be kept at the 'Warning' position, must remain so until repaired. A hand signaller is not required under these circumstances.

m. Defective Repeating Signal: 'Proceed' Position

When the repeating signal becomes defective at the 'Proceed' position, the top signal light must be obscured. A hand signaller must be instructed to signal in place of the defective signal until it has been repaired.

If possible, the Signaller at the signalbox in the rear must be advised that the signal cannot be kept at the normal position. This Signaller must stop all trains approaching the defective signal and advise the Drivers of the hazard.

The hand signaller must:

1. place two audible track warning signals a sufficient distance from the signal, and stop each train at the signal by exhibiting a 'Red' hand signal, and
2. advise the Driver to proceed with extreme caution towards the next fixed signal.

n. Defective Automatic Signal: 'Stop' Position

If an automatic signal becomes defective at the 'Stop' position, a hand signaller is not required under these circumstances.

o. Defective Automatic Signal: 'Proceed' Position

When the automatic signal becomes defective at the 'Proceed' position, the signal light must be obscured. A hand signaller must be instructed to signal in place of the defective signal until it has been repaired.

The hand signaller must place two audible track warning signals a sufficient distance from the defective signal and:

1. exhibit a red hand signal to stop any approaching train, and
2. inform the Driver of the circumstances and give instructions to proceed with extreme caution towards the next fixed signal.

p. Defective Disc or Dwarf Signal: 'Stop' Position

The competent employee in charge of any train movement governed by a defective disc or dwarf signal, must communicate verbally with the Signaller to ensure the points are properly set as authorised by the Signaller. Alternatively, a hand signaller must signal for the defective signal.

q. Defective Disc or Dwarf Signal: 'Proceed' Position

When the disc or dwarf signal becomes defective at the 'Proceed' position, the signal light must be obscured. A hand signaller must be instructed by the Signaller to signal in place of the defective signal until it has been repaired.

4. Disconnection of Track Circuiting During Trackwork Operations

a. Disconnection of Track Circuiting

The road foreman or other employee in charge of any trackwork or re-laying operations undertaken within track circuited areas, must organise with the signal maintenance supervisor for all fixed signals in the relevant section of line to be secured at the 'Stop' position.

b. Requirements Prior to Rail Being Broken

The following actions have to be completed before the rail is broken:

1. a hand signaller is to warn of the hazard and protect the line in accordance with this Code of Practice, and
2. the signal maintenance supervisor must confirm in writing that all fixed signals for the relevant section of line have been secured at the 'Stop' position.

The Signaller must make a note to this effect in the Train Register Book.

c. Track Circuiting: Prior to the Issue of Certificates

When the road foreman has issued a certificate confirming that the line has been repaired before the signal maintenance supervisor has issued a certificate confirming the fixed signals are in working order, the Signaller must appoint a hand signaller to signal for the defective signals.

d. Issue of Certificates

After testing of the fixed signals, the signal maintenance supervisor must issue the road foreman with a certificate confirming that track circuit protection has been restored to the affected signals.

The Signaller must make a note to this effect in the Train Register Book.

5. Security of Interlocking**a. Obtaining Security of Interlocking**

When any interlocked signal is out of order, but the interlocked point and signal levers are working properly, to obtain the security of the interlocking the Signaller must:

1. use the relevant signal lever as if the signal was operating, and
2. if necessary, have the counter-balance weight disconnected from the lever by the proper representative of the Infrastructure Maintenance Division.

6. Failure of Signal Lights**a. Light of Home or Distant Signal Defective**

If the light of a home or distant signal is extinguished at night or during inclement weather, arrangements must immediately be made to:

1. prevent any train leaving a block post or signalbox in the rear until the signal has been re-lit, or
2. inform the Driver of the description and location of the defective signal.

b. Light of Two Position Semaphore Signal Defective

If a train is stopped at a two position semaphore signal where no light is showing, the Driver must immediately go forward and observe the position of the semaphore arm, at any station which is:

1. not a block post station,
2. not a staff station, or

3. is a staff station where the staff exchange box is to be used.

The exception being at stations where a Signaller is required to operate level crossing gates or at level crossings where the signals are controlled by a gatekeeper.

If the semaphore arm is at the 'Proceed' position, the train may pass the signal.

c. Incorrectly Displayed Signals

The following incorrectly displayed signals must be considered a Stop' signal:

1. absence of a signal when usually present,
2. a signal imperfectly displayed,
3. presence of a white light where a red, purple, yellow or green light should be seen,
4. exhibition of two signals to proceed where only one such signal should be displayed, and
5. conflicting aspects exhibited by co-acting signals.

Any signal shown incorrectly must be reported to the Stationmaster or Signaller.

Any other signal displaying any indication or combination of indications not specified in this Code of Practice and other instructions must be considered to be an incorrectly displayed signal.