

Network Safeworking Rules and Procedures

Fixed Signals

Rule Number: 6005

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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 rule is to outline the protocols for using *Fixed Signals* to *Authorise* and regulate the movement of *Rail Traffic*.

2. General

Fixed Signals are used to:

- separate and regulate *Rail Traffic*;
- indicate to *Rail Traffic Crews* and other *Competent Workers* the status of the line ahead; and
- show which *Route* is set.

Rail Traffic Crews and *Competent Workers* directing *Shunting* and *Propelling* movements must obey the indications and instructions displayed by signals.

Fixed Signals must be located:

- where they enable *Rail Traffic Crews* to see and respond in sufficient time, in order to safely control *Rail Traffic* movements;
- where they provide a sufficient safe overlap; and
- as far as is practicable:
 - on the left hand side *Adjacent* to; or
 - directly over the *Track* to which they apply.



NOTE: Only in circumstances where it is not safe, or not practical, to place signals on the left hand side or above the *Track* to which they apply, the signals may be placed on the right hand side.

Fixed Signal indications are displayed by coloured lights.

Fixed Signals may be fitted with marker plates for identification.

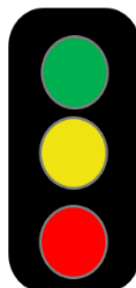
3. Indications of Fixed Signals

The indications of *Fixed Signals* are:

CLEAR indicated by a green light

CAUTION indicated by a yellow light

STOP indicated by a red light



CAUTION and CLEAR are PROCEED Aspects and give the *Rail Traffic Crew* the Authority to proceed.

3.1 STOP

Rail Traffic must stop before a signal displaying a STOP Aspect.

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

3.2 PROCEED

A PROCEED Aspect shows that:

- *Interlocked Points* protected by the signal are set in the correct position for the movement;
- no conflicting *Route* has been set; and
- where *Interlocked, Active Control Level Crossing* equipment is operational.

A PROCEED Aspect by a *Running Signal* and a CLEAR Aspect on a *Shunt* signal shows that the *Block* ahead is unoccupied.

A CAUTION Aspect by a *Shunting* signal does **not** indicate that the *Block* ahead is unoccupied.



NOTE: PROCEED Aspects on signals prove Route integrity.

4. Types of Fixed Signals

Fixed Signals are of two types:

- Running, and
- *Shunting*.

4.1 Running Signals

There are two categories of *Running Signals*:

- *Controlled Absolute*; and
- *Absolute*.

4.2 Controlled Absolute Signals



WARNING: *Absolute Signals* must not be passed at STOP without the Authority of the Network Controller.

A *Controlled Absolute Signal* is:

- controlled by the *Network Controller* and the passage of *Rail Traffic*; and
- identified by a white reflectorised marker plate located on the centre of the mast, or more than one signal on the same mast, showing a signal number as shown on the diagram of signalling.

The normal indication of a *Controlled Absolute Signal* is STOP; A *Controlled Absolute Signal* must be maintained at STOP until it is necessary to place it to PROCEED.

4.2.1 Departure Signals

Departure Signals are placed at the entrance to all single line *Block Sections* in *Automatic Signalling Territory* to facilitate *Single Line Working*, and to prevent *Rail Traffic* from meeting head on in a *Section*.

Departure Signals at each end of a *Single Line Automatic Signalling Section* work in conjunction with each other to ensure only one *Departure Signal* can display a PROCEED Aspect at the same time. The opposing *Departure Signal* will not show a PROCEED Aspect until *Rail Traffic* has passed out of the *Section*.

4.3 Absolute Signals

4.3.1 Intermediate Signals

An *Intermediate Signal* is used to divide the *Section* between *Controlled Locations* to facilitate the movement of following *Rail Traffic* and is:

- controlled only by the passage of *Rail Traffic*; and
- identified by a square white reflectorised marker plate located diagonally below and to the right of the signal head. It displays the signal number based on the kilometreage preceded by the letter "D" for Down signal and "U" for Up signal.

The normal indication of an *Intermediate Signal* is *Proceed* (Caution or Clear).

4.3.2 Approach Signals

Approach Signals are *Absolute Signals* that do not divide the *Section*.

Approach Signals are identified by a triangular white reflectorised marker plate located diagonally below and to the right of the signal head and displays the signal number based on the kilometreage preceded by the letter "D" for Down signal and "U" for Up signal.

The purpose of Approach signals is to provide an indication to *Rail Traffic Crews* that they are approaching a *Controlled Location*.



NOTE: Not all *Controlled Locations* have Approach Signals. Where Approach Signals are not provided, an approach to *Controlled Location* sign will be provided.

4.4 Shunting Signals



WARNING: A *Shunting* signal must not be used as the *Authority for Rail Traffic to pass through a Section*.

A *Shunting* Signal authorises a movement at *Restricted Speed* past that signal.



WARNING: *Shunting* signals can be *Cleared* if the line beyond the signal is occupied. *Rail Traffic Crews* must Proceed as if the line is *Occupied*.

A *PROCEED* Aspect by a *Shunting* signal is an *Authority to Proceed* up to, and not beyond, the first of the following limits reached:

- as far as the line ahead is *Clear*;
- a Limit of *Shunt* sign;
- a set of non-interlocked *Points*;
- an indicator showing that *Points* are not set;
- open *Catch Points*;
- a *Derailing Device* on the rail;
- a signal for the direction of *Travel*; or
- a shorter distance defined by the *Network Controller*.

5. Changing Signal Indications

Under normal conditions, if *Rail Traffic* is standing at or approaching a signal, the *Network Controller* must not change the indication of that signal to a more restrictive *Aspect* unless the *Rail Traffic Crew*:

- has been told; and
- is able to respond to the altered indication.

5.1 Responding to a Condition Affecting the Network

If there is a *Condition Affecting the Network (CAN)* and *Rail Traffic* is standing at or *Closely Approaching* a signal, the *Network Controller* may change the indication of the signal to a more restrictive *Aspect*.

The *Network Controller* must tell the *Rail Traffic Crew* about the altered signal *Aspect*:

- prior to altering the signal; or
- as soon as possible after altering the signal.

6. Irregular Signal Indications

A *Fixed Signal* indication must be treated as STOP if:

- it is an illegal signal indication;
- there is no indication;
- there is no indication other than the Junction indicator; or
- it is not understood.

Competent Workers must report irregular signal indications to the *Network Controller*.

The *Network Controller* must tell a *Signals Maintenance Representative* about irregular signal indications.

The *Network Controller* must set affected controlled signals to STOP with *Blocking Facilities* applied, and if the signals do not display a STOP indication, *Issue* the *Rail Traffic* with a *Restraint Authority*.

The *Network Controller* must then *Authorise* signals to be passed at STOP only in accordance with Rule 6013 Passing Fixed Signals at STOP.

If *Absolute Signals* maintain a STOP indication, these signals may be passed at STOP only in accordance with Rule 6013 Passing Fixed Signals at STOP.

If affected *Absolute Signals* maintain a *Clear* indication, the *Network Controller* must implement Rule 5023 Manual Block Working.

Affected Signals must not be used to provide PROCEED indications before they have been *Certified* back into use.

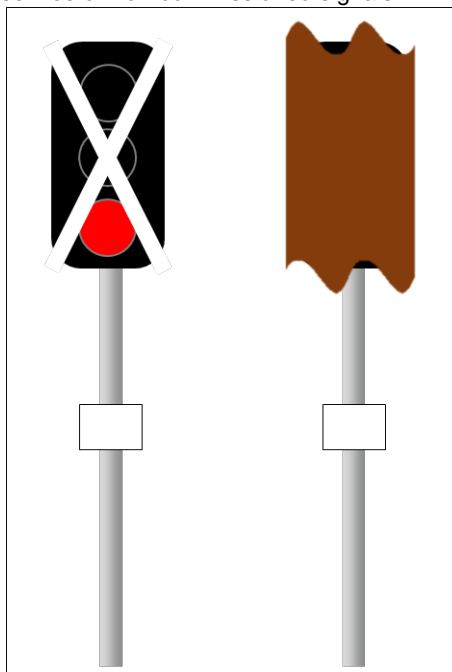
7. Out of Service or Non-Commissioned Signals

Signals may be put in place prior to commissioning, or may remain in place after being taken out of service.

These are identified by:

- an obscuring cover over the signal;
- a white cross affixed to the front of the signal; or
- where next to a functioning signal, having the signal head covered or turned away from the line.

Figure 6005-1 Examples of out-of-service or non-commissioned signals.



8. Testing Signals

A signal must not be tested if:







- *Rail Traffic* is *Closely Approaching*; and
- the testing could change the signal indication.


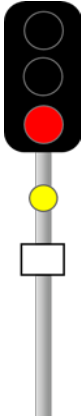
If *Rail Traffic* is standing at a signal at STOP, the *Network Controller* must:

- before testing the signal, tell the *Rail Traffic Crew* that signal testing is about to commence and that their *Rail Traffic* must not move unless instructed to do so; and
- after testing the signal, tell the *Rail Traffic Crew* that the testing has been completed, and if required, give an *Authority to Proceed*.

The *Network Controller* and *Competent Worker* must make a *Permanent Record* of the signal test.









9. Signal Indications and their Meanings

Signal			
Controlled Absolute	Absolute	Meaning	Required Action
		The <i>Block</i> ahead of the signal is <i>Occupied</i> or for any reason that the <i>Rail Traffic</i> has to be stopped.	<i>Rail Traffic</i> must be stopped before reaching the signal.
		The <i>Block</i> ahead of the signal is <i>Clear</i> but the next signal is at STOP.	<i>Rail Traffic</i> is to Proceed at <i>Normal Speed</i> for the <i>Section</i> but be prepared to stop at the next signal.
		The <i>Block</i> ahead of the signal is <i>Clear</i> and the next signal is either at CAUTION or <i>CLEAR</i> .	<i>Rail Traffic</i> is to Proceed at <i>Normal Speed</i> for the <i>Section</i> .

Signal	Type of Signal	Meaning	Action Required
	<i>Controlled Absolute Signal with a Single Aspect Shunt</i> signal on the same mast.	The <i>Block</i> ahead of the signal is <i>Occupied</i> or for any reason the <i>Rail Traffic</i> has to be stopped.	<i>Rail Traffic</i> must be stopped before reaching the signal.
	<i>Controlled Absolute Signal with a Single Aspect Shunt</i> signal on the same mast set at Proceed.	The <i>Route</i> is set but the <i>Block</i> ahead of the signal may be <i>Occupied</i> and movements are to be at <i>Restricted Speed</i> .	<i>Rail Traffic</i> is to Proceed with caution but be prepared to stop short of any <i>Obstruction</i> .

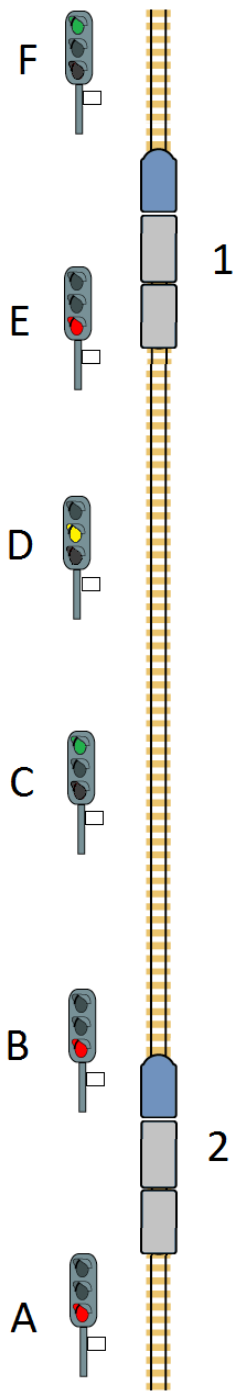


NOTE: At some *Locations*, *Running Signals* will be at a reduced height due to there being insufficient room to fit a signal at its normal height.

Ground Shunt Signals				
Single Aspect	Two Aspect	Three Aspect	Meaning	Action Required
			The <i>Route</i> for the signal is not set.	<i>Rail Traffic</i> must be stopped before reaching the signal.
			The <i>Points</i> are set correctly for the <i>Route</i> .	<i>Rail Traffic</i> is to Proceed at <i>Restricted Speed</i> but be prepared to stop short of any <i>Obstruction</i> .
	Not applicable		The <i>Points</i> are set correctly and the line is <i>Clear</i> to the next signal, which is showing caution, or <i>Clear</i> .	<i>Rail Traffic</i> is to Proceed to the next signal, which is showing caution, or <i>Clear</i> .

10. Three Colour Light Signalling Operation

This diagram represents a series of *Blocks* and how the signals operate as *Trains* move along the *Track*.



Signal F displays a “Clear” (green) *Aspect* as there is no *Train* in the *Block* in advance of the signal.

Train No. 1 will hold Signal E at “STOP” until it has passed *Clear* of the overlap *Track* of signal F.

Signal D displays a “Caution” (yellow) *Aspect* indicating that the next signal, signal E is at STOP.

Signal C displays a “Clear” (green) *Aspect* indicating that the next signal is displaying a “Proceed” *Aspect*.

Signal B displays a “STOP” *Aspect* as Train No. 2 is passing the signal.

Signal A will remain at “STOP” until Train No. 2 has cleared the overlap passed signal B.

11. Repeater Signals

Repeater signals are provided to give *Rail Traffic Crew* advanced information of the indications of the main *Fixed Signal*.

Repeaters are used where the *Fixed Signal* that is to be repeated is *Located* in a position where *Rail Traffic Crews* cannot respond in sufficient time to control *Rail Traffic*.

12. References

5023 Manual Block Working

6013 Passing Fixed Signals at STOP

13. Effective Date

3 February 2020