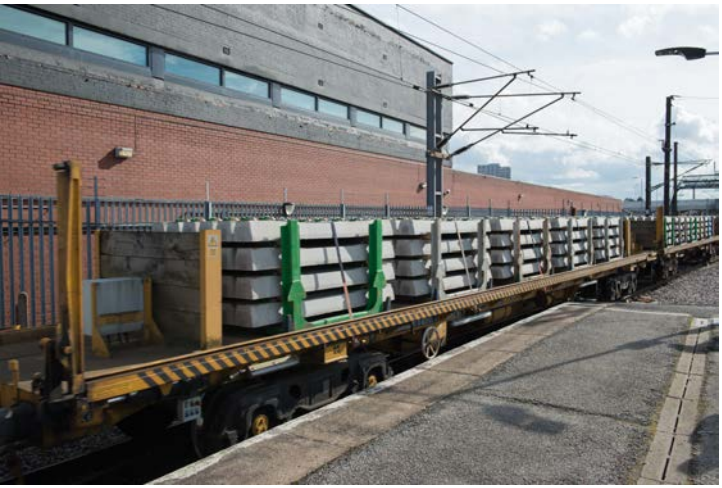
Rule Book Briefing Leaflet

Issue 34.1



This issue contains changes to the Rule Book published in the Periodical Operating Notice (PON) on 05/12/2020

December 2020

The following modules and handbooks will be re-issued and come into force on 05 December 2020:

Handbook 1 General duties and track safety for track workers. Also includes updates included in the December 2020 Periodical Operating Notice.

Handbook 6 General duties of an individual working alone (IWA)

Handbook 7 General duties of a controller of site safety (COSS)

Handbook 11 Duties of the person in charge of the possession (PICOP)

Handbook 12 Duties of the engineering supervisor (ES) or safe work leader (SWL) in a possession

Handbook 19 Work on signalling equipment - duties of the signalling technician

Handbook 20 General duties of a safe work leader (SWL) working outside a possession

Module AC AC electrified lines

Module G1 General safety responsibilities and personal track safety for non-track workers. Also includes updates published in the December 2020 Periodical Operating Notice.

Module M1 Dealing with a train accident or train evacuation

Module M3 Managing incidents, floods and snow. Also includes updates published in the December 2020 Periodical Operating Notice.

M**odule OTM** Working of on-track machines (OTM)

Module S5 Passing a signal at danger or an end of authority (EoA) without a movement authority (MA)

Module T3 Possession of a running line for engineering work

Module TS1 General signalling regulations

Module TS11 Failure of, or work on, signalling equipment - signallers' regulations

Module TW1 Preparation and movement of trains. Also includes updates published in the December 2020 Periodical Operating Notice.

Module TW5 Preparation and movement of trains: Defective or isolated vehicles and on-train equipment

Module TW7 Wrong-direction movements

RS521 Signals, Handsignals, Indicators and Signs handbook

Handbook 1 General duties and track safety for track workers

KEY CHANGES

Section 2.4 Travelling in driving cabs has been expanded to include new arrangements that have been introduced for cab pass holders and drivers. Anyone with a cab pass wishing to travel in the cab of a freight train that contains high consequence dangerous goods will also have to have additional written permission from the train operating company to travel in the cab.

Clearer instructions have been introduced for dealing with damage to structures or earthworks, and any unusual flows or pools of water that could cause damage. These have been published in the December 2020 Periodical Operating Notice and are described below.

A new section 7.5 has been introduced that requires any unusual flows or pools of water that cause damage to be reported immediately to the signaller or Operations Control. Existing sections 7.5 and 7.6 have been renumbered 7.6 and 7.7 but their contents are not changed.

Section 8.1 has been changed to include damage to structures or earthworks above or below the line in the list of hazards that might put approaching trains in danger.

DETAIL OF CHANGES
Section headings in bold relate to issue 4 of Handbook 1.

2 General instructions

2.4 Travelling in driving cabs
This section has been expanded to include new arrangements that have been introduced for cab pass holders and drivers. A cab pass holder wishing to travel in the cab with the driver is to tell the driver the reason why this is necessary.

If the cab pass indicates that the holder has a personal track safety competence but the holder does not have all the necessary equipment to go on or near the line, the driver must be told this when entering the cab.

A cab pass holder wishing to travel in the cab of a freight train that contains high consequence dangerous goods must also have additional written permission from the train operating company to travel in the cab.

A cab pass holder must check with the driver whether any mobile electronic devices require to be switched off before entering the cab.

7 Preventing hazards

7.5 Flowing or pooling water that might affect structures or earthworks

A new section 7.5 has been introduced that requires any unusual flows or pools of water that cause damage to be reported immediately to the signaller or Operations Control.

7.5 If you see something wrong with a train

The existing section 7.5 has been renumbered 7.6, but its contents are not changed.

7.6 Overhead power lines

The existing section 7.6 has been renumbered 7.7, but its contents are not changed.

8 Stopping trains in an emergency

8.1 Hazards that might put trains in danger

This section has been changed to include damage to structures or earthworks above or below the line in the list of hazards that might put approaching trains in danger .

Handbook 6 General duties of an individual working alone (IWA)

KEY CHANGES

A new section 2.5 has been introduced as a result of introduction of a new crossing the line procedure. When an IWA wishes to cross no more than four running lines or pass by a structure that limits clearance, this provides a simpler alternative to a line blockage. This can only be used at locations that have been approved and details provided to the signaller, and by individuals permitted to use it whose names have been supplied to the signaller. Communication must be by mobile phone. Signals are not placed to danger and permission can be given only if there is enough time for the line to be crossed before a train will approach. The person requesting use of the procedure remains in contact with the signaller until the line has been crossed or the structure passed by.

As a result of the introduction of protection zones (PZ), another method of blocking the line is that the IWA's site of work is within a PZ, and a safe system of work has been agreed by the IWA with the engineering supervisor (ES) or safe work leader (SWL) who has set up the PZ. This is referred to in section 3.2.

DETAIL OF CHANGES

Section headings in bold relate to issue 5 of Handbook 6.

2 Work that you can do without the line being blocked

2.5 Crossing the line procedure

This is a new section that describes this new procedure so far as an IWA is concerned.

3 Work that needs the line to be blocked

3.2 Before starting work that affects the safety of the line

This section has been changed to include the site of work being within a PZ as an additional means of being able to consider a line as being blocked.

Handbook 7 General duties of a controller of site safety (COSS)

KEY CHANGES

A new section 2.3 has been introduced as a result of introduction of a new crossing the line procedure. When a COSS working alone or with a group wishes to cross no more than four running lines or pass by a structure that limits clearance, this provides a simpler alternative to a line blockage. This can only be used at locations that have been approved and details provided to the signaller, and by individuals permitted to use it whose names have been supplied to the signaller. Communication must be by mobile phone. Signals are not placed to danger and permission can be given only if there is enough time for the line to be crossed before a train will approach. The person requesting use of the procedure remains in contact with the signaller until the line has been crossed or the structure passed by.

As a result of the introduction of protection zones (PZ), another method of blocking the line is that the COSS's site of work is within a PZ, and a safe system of work has been agreed by the COSS with the engineering supervisor (ES) or safe work leader (SWL) who has set up the PZ. This is referred to in sections 3.2 and 4.4.

DETAIL OF CHANGES
Section headings in bold relate to issue 6 of Handbook 7.

2 Work that you can do without the line being blocked

2.3 Crossing the line procedure
This is a new section that describes this new procedure so far as a COSS is concerned.

3 Work that needs the line to be blocked

3.3 Before starting work
This section has been changed to include the site of work being within a PZ as an additional means of being able to consider a line as being blocked.

4 Working with a group

4.4 Blocking the line
This section has been changed to include the site of work being within a PZ as an additional means of being able to consider a line as being blocked.

Handbook 11 Duties of the person in charge of the possession (PICOP)

KEY CHANGES

When a possession is taken around an engineering train or on-track machine (OTM), the train can be standing at a flexible train arrival point (FTAP) marked by a lineside sign. This allows a train to be positioned closer to the site of work than it would be at the nearest signal or block marker. Section 4.2 has been changed to refer to this.

The rules have been changed to allow an engineering supervisor (ES) or safe work leader (SWL) to give up a work site whilst an engineering train or OTM is standing within the work site at the signal or block marker where it is planned to be when the possession is given up around it. The ES or SWL will tell the driver what is happening and the driver will tell the signaller when the train or OTM is at the signal or block marker. After this, the present rules are unchanged, and the PICOP will tell the driver when the possession is given up, after which the train or OTM cannot move until the signaller gives permission. Section 12.1 has been changed. By adopting this new rule, it is possible to reduce the movements that have to be made on a line that is still under possession.

DETAIL OF CHANGES
Section headings in bold relate to issue 7 of Handbook 11.

4 Taking the possession

4.2 Taking possession around one or more engineering trains

This section has been changed to allow the train concerned to be standing at a FTAP as an alternative to a signal or block marker.

12 Giving up the possession

12.1 Making sure the work is complete

This section has been changed to allow a train to be standing within a work site when the work site is given up.

Handbook 12 Duties of the engineering supervisor (ES) or safe work leader (SWL) in a possession

KEY CHANGES

When a work site is set up or extended around an engineering train or on-track machine (OTM), the train can be standing at a flexible train arrival point (FTAP) marked by a lineside sign. This allows a train to be positioned closer to the site of work than it would be at the nearest signal or block marker. Section 3.2 has been changed to refer to this.

The rules have been changed to allow an engineering supervisor (ES) or safe work leader (SWL) to give up a work site whilst an engineering train or OTM is standing within the work site at the signal or block marker where it is planned to be when the possession is given up around it. The ES or SWL will tell the driver what is happening and the driver will tell the signaller when the train or OTM is at the signal or block marker. After this, the present rules are unchanged, and the PICOP will tell the driver when the possession is given up, after which the train or OTM cannot move until the signaller gives permission. Section 10.3 has been changed to refer to this. By adopting this new rule, it is possible to reduce the movements that have to be made on a line that is still under possession.

New rules have been introduced in a new section 11 to describe how an ES or SWL can set up a protection zone (PZ) as an alternative to a possession when no more than one engineering train and one OTM are required to carry out work. This only applies when the details have previously been published in the *Weekly Operating Notice or Engineering Notice* and only to certain types of train. The ES or SWL sets up the PZ with the signaller, a protecting signal is kept at danger, with additional protection by means of a track circuit operating device (T-COD) or disconnection. An exit signal beyond the PZ will be kept at danger. The PZ can be taken round an engineering train, which can be standing at an FTAP, or the engineering train or OTM can be allowed to pass the protecting signal at danger after the PZ is set up. When necessary, signals within the PZ can be passed at danger, or wrong-direction movements made, as long as this has been agreed with the signaller when the PZ is set up. An OTM can subsequently be allowed to enter the PZ. The ES or SWL will authorise movements within the PZ. When an engineering train or OTM is to leave the PZ, the driver will be instructed to move to the end of the PZ and contact the signaller, who will give the driver permission to proceed. These arrangements allow a quicker transition from 'open railway' to 'work site' or the reverse with fewer safety-critical communications, and less need for employees to be trackside to place and remove protection.

DETAIL OF CHANGES

Section headings in bold relate to issue 7 of Handbook 12.

3 Setting up the work site

3.2 Setting up or extending the work site around one or more engineering trains

This section has been changed to allow the train concerned to be standing at a FTAP as an alternative to a signal or block marker.

10 Giving up the work site

10.3 When every COSS or IWA no longer needs protection

This section has been changed to allow a train to be standing within a work site when the work site is given up.

11 Protection zones

This is a new section containing the rules that apply when an ES or SWL sets up a PZ.

Handbook 19 Work on signalling equipment - duties of the signalling technician

KEY CHANGE

As a result of the introduction of protection zones (PZ), that the work will be carried out within a PZ is now another situation in which a Form RT3187 does not have to be completed.

DETAIL OF CHANGE
Section headings in bold relate to issue 3 of Handbook 19.

1 General

1.5 Using a Signal Engineering Work form (RT3187)
This rule has been changed to include work within a PZ as another situation in which it is not necessary to complete Form RT3187.

Handbook 20 General duties of a safe work leader (SWL) working outside a possession

KEY CHANGE

A new section 2.3 has been introduced as a result of introduction of a new crossing the line procedure. When an SWL working alone or with a group wishes to cross no more than four running lines or pass by a structure that limits clearance, this provides a simpler alternative to a line blockage. This can only be used at locations that have been approved and details provided to the signaller, and by individuals permitted to use it whose names have been supplied to the signaller. Communication must be by approved equipment. Signals are not placed to danger and permission can be given only if there is enough time for the line to be crossed before a train will approach. The person requesting use of the procedure remains in contact with the signaller until the line has been crossed or the structure passed by.

DETAIL OF CHANGES
Section headings in bold relate to issue 2 of Handbook 20.

2 Work that you can do without the line being blocked

2.3 Crossing the line procedure
This is a new section that describes this new procedure so far as an SWL is concerned.

Module AC AC electrified lines

KEY CHANGES

The instructions for drivers and signallers on the actions following loss of line light, ADD operation, tripping or damage to the overhead line equipment (OLE) have been reviewed to reduce the impact of incidents and exposure of drivers to electrical and trackside risks. Some changes have been made to express more accurately the intention of the rule.

If an ADD operation occurs on a train with more than one pantograph raised, but the line light does not go out, meaning that at least one other pantograph is still drawing power, the train may continue to a location where it can more easily be dealt with to avoid stranding in a location difficult to access.

A driver does not have to leave the train to examine for damage to the train or OLE if this can be done by observation, including use of any on-train cameras, or if someone else can inspect for damage.

A switch-off is not required except during darkness, or when visibility of the pantograph or OLE might be affected by conditions such as fog or bright sunlight. A switch-off is not necessary when it is already known there is no OLE damage.

A switch-off will also be taken if necessary when someone apart from the driver is to inspect for OLE damage on foot.

Where possible, other trains will be cleared from the affected area, or brought into stations before a switch-off is taken, to reduce delay and avoid stranding trains in inconvenient locations.

DETAIL OF CHANGES
Section headings in bold relate to issue 5 of module AC.

3 Dangers of the system

3.3 Reporting objects and defects to the ECO

The section has been changed to state more correctly that anyone who does not normally speak directly to the ECO will report what has happened to the signaller.

Bonds that used to be coloured red are not now always marked in this way, and the instruction has been changed to state that no bonds must be touched.

12 Driver's instructions following a loss of line light, ADD operation, tripping or damage to the OLE

12.1 When an electric or bi-mode train operating in electric mode must be stopped as soon as possible

The section has been renamed, as the wording has been changed to state that it applies to any train on which a pantograph is raised.

The instruction concerning damage to the OLE has been reworded so that it explains more accurately what must be reported.

It is not necessary to stop as soon as possible if an ADD operation occurs on a train with more than one pantograph raised if the line light has not gone out, indicating that at least one other pantograph is still taking power.

12.2 When a train can coast to a stand

This section has been changed to allow a train with more than one pantograph raised which has had an ADD operation, but without the line light going out, to continue to reach a more suitable location to be dealt with.

The title of the section has been changed, as that train would not be coasting.

12.4 Sequential tripping

This section has been renamed 'Sequential tripping or tripping' and section 12.5 Tripping' has been combined with it, as with minor changes to wording the same rules can apply to both.

The driver is only required to visually examine the train and OLE for damage when this cannot be done by other means. This includes the driver being able to tell the signaller that there is damage by using any on-train cameras.

If it is necessary for the driver to leave the train, the signaller must be told whether the driver considers conditions to be darkness or whether visibility is such that it will be difficult to get a clear view of the pantograph or OLE. In this case, the OLE will be switched off.

The signaller will tell the driver when the driver can leave the train.

Before leaving the train, the driver must make sure that there is no damaged OLE in the vicinity of the door by which the driver will exit. If there is, the driver must tell the signaller and stay in the cab.

If the driver considers it has now become dark, or visibility has deteriorated, the signaller must be told, so that the OLE can be switched off.

12.5 Tripping

This section has been combined with section 12.4 'Sequential tripping', as with minor changes to wording the same rules can apply to both.

12.6 Telling the signaller about problems or incidents with the OLE

A driver only has to tell the signaller the number of the nearest OLE structure number if able to do so without leaving the train.

The driver is only required to visually examine the train and OLE for damage when this cannot be done by other means. This includes the driver being able to tell the signaller that there is damage by using any on-train cameras.

If it is necessary for the driver to leave the train, the signaller must be told whether the driver considers conditions to be darkness or whether visibility is such that it will be difficult to get a clear view of the pantograph or OLE. In this case, the OLE will be switched off.

The signaller will tell the driver when the driver can leave the train.

Before leaving the train, the driver must make sure that there is no damaged OLE in the vicinity of the door by which the driver will exit. If there is, the driver must tell the signaller and stay in the train.

If during the examination the driver considers it has become dark or visibility has deteriorated, the signaller must be told.

The reference to leaving the train in an emergency has been removed, as the reasons for treating an incident as an emergency were not in relation to examining the train or the OLE.

This section has been renumbered 12.5.

12.7 Examining the train or OLE

This section has been changed so that it applies only when it has been necessary to leave the train.

Sections 12.7, 12.8 and 12.9 have been renumbered 12.6, 12.7 and 12.8 respectively.

13 Signaller's instructions following a report of a defect or a tripping of the OLE

13.1 If tripping has taken place

This section and the previous section 13.2 have been combined and renamed as the same rules apply in all the situations described.

In the interests of clarity, the instructions concerning visual examination of the train and OLE are now shown in a revised section 13.2, and those for arranging a switch-off are now shown in a revised section 13.3.

The driver is only required to visually examine the train and OLE for damage when this cannot be done by other means. This includes the driver being able to tell the signaller that there is damage without leaving the train, or someone else carrying out an inspection.

If it is necessary for the driver to leave the train, or for someone else to inspect on foot, the signaller must find out whether the person considers conditions to be darkness or whether visibility is such that it will be difficult to get a clear view of the pantograph or OLE. The signaller will tell the driver or other person when to carry out the examination.

Permission must not be given until the OLE has been switched off, unless it is daylight and visibility will not make it difficult to get a clear view of the pantograph or OLE, when it has already been confirmed there is no damage to the OLE, or when both of these apply.

The signaller can ask the driver of a train on an adjacent line to report whether there is any OLE damage.

13.2 Examining the train or OLE

This is a renamed section concerning visual examination of the train and OLE in any of the circumstances referred to in the previous sections 13.1 and 13.2. The changes from the present rules are as follows.

In the interests of clarity, the instructions concerning visual examination of the train and OLE are now shown in a revised section 13.2, those for arranging a switch-off are now shown in a revised section 13.3, and those that apply after the visual examination has taken place are in a revised section 13.4.

The driver is only required to visually examine the train and OLE for damage when this cannot be done by other means. This includes the driver being able to tell the signaller that there is damage without leaving the train, or someone else carrying out an inspection.

If it is necessary for the driver to leave the train, or for someone else to inspect on foot, the signaller must find out told whether the person considers conditions to be darkness or visibility may make it difficult to get a clear view of the pantograph or OLE because of conditions such as fog or bright sunshine. The signaller will tell the driver or other person when to carry out the examination.

Permission must not be given until the OLE has been switched off, unless it is daylight and visibility will not make it difficult to get a clear view of the pantograph or OLE, when it has already been confirmed there is no damage to the OLE, or when both of these apply.

If the driver tells the signaller before leaving the train that there is damaged OLE in the vicinity of the door by which the driver will exit, the driver will tell the signaller and stay in the cab.

13.3 Arranging a switch-off

Section 13.3 has been renamed as above.

Permission for the train or OLE to be examined must not be given until the OLE has been switched off, unless it is daylight and visibility will not prevent getting a good view of the pantograph or OLE, when it has already been confirmed there is no damage to the OLE, or when both of these apply.

If a switch-off is necessary, the signaller must have confirmed the area affected and agreed with Operations Control when the switch-off can take place, taking into account the ability to clear trains from the area or hold them in stations when they would otherwise become stranded.

The previous section 13.3 has been renumbered as 13.5.

13.4 Resuming normal working

Some of the content of this section and section 13.1 has been moved to a revised section 13.4 (After the train and pantographs have been examined), as this follows the sequence of events better. The rest of the instructions have been renumbered as section 13.6.

Section 13.5 has been renumbered as 13.7.

Module G1 General safety responsibilities and personal track safety for non-track workers

KEY CHANGES

Section 1.4 Travelling in driving cabs has been expanded to include new arrangements that have been introduced for cab pass holders and drivers. Anyone with a cab pass wishing to travel in the cab of a freight train that contains high consequence dangerous goods will also have to have additional written permission from the train operating company to travel in the cab.

Clearer instructions have been introduced for dealing with damage to structures or earthworks, and any unusual flows or pools of water that could cause damage. These have been published in the December 2020 Periodical Operating Notice and are described below.

A new section 1.8 has been introduced that requires any unusual flows or pools of water that cause damage to be reported immediately to the signaller or Operations Control.

Existing sections 1.8, 1.9 and 1.10 have been renumbered 1.9, 1.10 and 1.11 but their contents are not changed.

Section 3 has been changed to include damage to structures or earthworks above or below the line in the list of hazards that might put approaching trains in danger that the signaller must immediately be told about, and actions taken to stop approaching trains.

DETAIL OF CHANGES

Section headings in bold relate to issue 6 of module G1.

1 General instructions

1.4 Travelling in driving cabs

This section has been expanded to include new arrangements that have been introduced for cab pass holders and drivers. A cab pass holder wishing to travel in the cab with the driver is to tell the driver the reason why this is necessary.

If the cab pass indicates that the holder has a personal track safety competence but the holder does not have all the necessary equipment to go on or near the line, the driver must be told this when entering the cab.

A cab pass holder wishing to travel in the cab of a freight train that contains high consequence dangerous goods must also have additional written permission from the train operating company to travel in the cab.

A cab pass holder must check with the driver whether any mobile electronic devices require to be switched off before entering the cab.

1.8 Flowing or pooling water that might affect structures or earthworks

A new section 1.8 has been introduced that requires any unusual flows or pools of water that cause damage to be reported immediately to the signaller or Operations Control.

1.8 Defective rail vehicles

The existing section 1.8 has been renumbered 1.9, but its contents have not been changed.

1.9 Overhead power lines, which belong to an electricity company, collapsing

The existing section 1.9 has been renumbered 1.10, but its contents are not changed.

1.10 Detonators

The existing section 1.10 has been renumbered 1.11, but its contents are not changed.

3 Stopping a train in an emergency

This section 3 has been changed to include damage to structures or earthworks above or below the line in the list of hazards that might put approaching trains in danger.

Module M1 Dealing with a train accident or train evacuation

KEY CHANGE

As it is important that the signaller is told about the accident as soon as possible so that it can be protected and the traction current switched off, the rule has been changed so that the driver must do this before finding out which lines are obstructed.

DETAIL OF CHANGE

Section headings in bold relate to issue 5 of module M1.

2 What to do after a train accident

2.1 Driver's actions

The rule has been changed so that the driver must now tell the signaller about the accident and whether the electric traction current needs to be switched off, before finding out which lines are obstructed.

Module M3 Managing incidents, floods and snow

KEY CHANGES

Following an accident in which a train struck bridge debris and was allowed to go forward without full consideration of any restrictions that should be applied, the rules following this type of accident have been changed.

The driver must speak to the train operator's control if it is possible that there may have been damage that would affect any further safe movement of the train, or that damage may have increased the height or width of the train.

The driver will then be told either that the train can proceed, possibly subject to restrictions, or that the train must not proceed until a rolling stock technician has examined the vehicle affected and given permission for the train to proceed, together with any restrictions that must be applied.

The driver must tell the signaller, including whether any restrictions such as a maximum speed will apply.

The driver must not take this as permission to proceed until after the signaller has spoken to Operations Control, who have given permission for the movement to take place, and the signaller gives the driver permission, including any instructions from Operations Control.

Clearer instructions have been introduced for dealing with damage to structures or earthworks, and any unusual flows or pools of water that could cause damage.

A new section 7 has been introduced containing instructions to drivers and signallers for reporting and dealing with these types of incident.

DETAIL OF CHANGE

Section headings in bold relate to issue 2 of module M3.

2 Derailments, collisions and heavy impacts

2.3 Trains colliding with obstructions on the line

The rule has been changed so that the driver must not allow the train to proceed until given permission, which may include restrictions such as a maximum speed.

7 Damage to structures or earthworks above or below the line

This is a new section giving instructions following reports of damage to structures or earthworks, flowing or pooling water, or extreme weather.

7.1 Reporting procedure

This new section contains instructions for drivers reporting damage to structures or earthworks above or below the line, or flowing or pooling water that might affect structures or earthworks.

7.2 Train running when damage to structures or earthworks is reported

This new section contains instructions for signallers following a report of damage to structures or earthworks above or below the line.

7.3 Train running when flowing or pooling water that might affect structures or earthworks is reported

This new section contains instructions for signallers following a report of flowing or pooling water that might affect structures or earthworks above or below the line.

7.4 Report of extreme weather from Operations Control

This new section contains instructions for signallers when told by Operations Control about extreme weather within the area of control.

Module OTM Working of on-track machines (OTM)

KEY CHANGES

New rules have been introduced to allow an engineering supervisor (ES) or safe work leader (SWL) to set up a protection zone (PZ) when engineering work is to be carried out.

Section 4.1 has been changed to include working in a PZ as another situation in which the rules in module OTM would not apply to an OTM working outside a possession, as the rules concerning a PZ would apply instead.

Section 4.3 has been changed to include working in a PZ as another situation in which an OTM working outside a possession can be allowed to make wrong-direction movements.

DETAIL OF CHANGES
Section headings in bold relate to issue 8 of module OTM.

4 Working outside a possession

4.1 Conditions for working outside a possession

The rule has been changed so that working in a PZ is another situation in which this rule would not apply, because the rules for a PZ would apply instead.

4.3 Wrong-direction movements

The rule has been changed so that working in a PZ is another situation in which an OTM working outside a possession can make wrong-direction movements towards the start of the site of work.

Module S5 Passing a signal at danger or an end of authority (EoA) without a movement authority (MA)

KEY CHANGES

New rules have been introduced elsewhere in the Rule Book to allow an engineering supervisor (ES) or safe work leader (SWL) to set up a protection zone (PZ) when engineering work is to be carried out. An additional situation has been added to the rule on when a driver can be authorised to pass a signal at danger on the signaller's authority, to allow an engineering train to move towards a PZ.

A new rule has been added to explain that when a driver is authorised to pass a signal at danger, the authority is to proceed as far as the next main aspect stop signal, ignoring the aspects of any intervening ground position-light signals. If a driver is only being authorised to proceed as far as a ground position-light signal the signaller will state this. There have been cases in which this has not be made clear, and a train has proceeded further than intended.

Section 4.4 has been changed to allow a driver to increase speed as appropriate from the reduced speed after sighting a proceed aspect at the signal after the one passed with authority, unless the signaller has specified a need to continue at caution as far as that signal. The present rule refers to the possibility of another train being within the signal section and is based on hazards associated with procedures and equipment that no longer apply.

There is a new section 7 describing a new procedure under which a signaller can authorise a driver at the same time to pass at danger two successive main aspect stop signals on a TCB double line. This only applies when both signals are being held at danger by the same fault, or the first is at danger and the second one not displaying any aspect. The next signal ahead must be displaying a proceed aspect, and trains may procced at a maximum speed up to 50 mph (80 km/h) until the next signal ahead is sighted. This procedure is designed to reduce the number of safety-critical conversations required, and to allow trains to pass through the affected portion of line more quickly, reducing reactionary delay. At the same time it avoids a 'blank' signal being passed at danger when the driver fails to locate it.

The authority for a driver to pass at danger an intermediate block home signal when unable to contact the signaller has been withdrawn. With GSM-R radio available throughout the network and being of proven reliability, it is much less likely that the driver would be unable to contact the signaller by any means than in former years.

The last change to the rules concerning a signaller's actions after a signal has been passed at danger without authority had the effect of removing the previous ability to move the train clear of a junction or station approach, and the rules have been reviewed so that this is again allowed, so avoiding other trains being unnecessarily detained.

DETAIL OF CHANGES

Section headings in bold relate to issue 8 of module S5.

1 When a signal can be passed at danger or an EoA passed without an MA

1.1 Signaller's authority

The rule has been changed to include the additional situation of an engineering train moving towards a PZ.

1.3 Authorising a driver to pass two or more consecutive signals at danger on a TCB line

The section has now been incorporated into the new section 7.

3 Authorising the movement

3.1 Instructions from the signaller

The section has been changed to require the signaller to tell the driver when the authority to proceed applies only as far as a specified ground position-light signal before reaching the next main aspect stop signal.

The signaller is also required to tell the driver whether to travel at a reduced speed until sighting a proceed aspect at the next main aspect stop signal, or to continue at the reduced speed until reaching that signal.

Being authorised to pass two successive main aspect stop signals at danger has been added to the occasions when it is not necessary to proceed at caution.

4 During the movement

4.2 Train speed

Being authorised to pass two successive main aspect stop signals at danger has been added to the occasions when a maximum speed is 50 mph (80 km/h) is permitted.

4.4 Next stop signal ahead

This section has been changed to allow a driver to increase speed as appropriate to the aspect displayed by the signal, unless told to continue at reduced speed up to that signal.

4.6 Ground position light signals

This is a new section to explain that the authority to pass a signal at danger applies up to the next stop signal ahead, ignoring the aspect of any intervening ground position-light signals, unless the signaller tells the driver that the authority applies only as far as a specified ground position light signal, which the train must not be allowed to proceed beyond. This has not been explained previously.

7 Passing an intermediate block home signal at danger

These instructions are no longer considered necessary with improved driver to signaller communication and the complete section has been withdrawn.

7 Passing two main aspect stop signals at danger

This new section includes the content of section 1.3, and has been expanded to contain the instructions for signallers and drivers when a train can be authorised at the same time to pass two successive main aspect stop signals at danger on a TCB double line.

9 Driver passing a signal at danger or an EoA without authority

9.3 Signaller's actions

This section has been changed to allow the train concerned to be moved to a more convenient location to avoid obstructing other trains. This flexibility was removed as a result of the last change to this section.

Module T3 Possession of a running line for engineering work

KEY CHANGES

When a possession is taken around an engineering train or on-track machine (OTM), the train can be standing at a flexible train arrival point (FTAP) marked by a lineside sign. This allows a train to be positioned closer to the site of work than it would be at the nearest signal.

The rules have been changed to allow an engineering supervisor (ES) or safe work leader (SWL) to give up a work site whilst an engineering train or OTM is standing within the work site at the signal or block marker where it is planned to be when the possession is given up around it. The ES or SWL will tell the driver what is happening and the driver will tell the signaller when the train or OTM is at the signal or block marker. After this, the present rules are unchanged, and the PICOP will tell the driver when the possession is given up, after which the train or OTM cannot move until the signaller gives permission. By adopting this new rule, it is possible to reduce the movements that have to be made on a line that is still under possession.

New rules have been introduced in a new section 10 to describe how an ES or SWL can set up a protection zone (PZ) as an alternative to a possession when no more than one engineering train and one OTM are required to carry out work. This only applies when the details have previously been published in the *Weekly Operating Notice or Engineering Notice* and only to certain types of train. The ES or SWL sets up the PZ with the signaller, a protecting signal is kept at danger, with additional protection by means of a track circuit operating device (T-COD) or disconnection. An exit signal beyond the PZ will be kept at danger. The PZ can be taken round an engineering train, which can be standing at an FTAP, or the engineering train or OTM can be allowed to pass the protecting signal at danger after the PZ is set up. When necessary, signals within the PZ can be passed at danger, or wrong-direction movements made, as long as this has been agreed with the signaller when the PZ is set up. An OTM can subsequently be allowed to enter the PZ. The ES or SWL will authorise movements within the PZ. When an engineering train or OTM is to leave the PZ, the driver will be instructed to move to the end of the PZ and contact the signaller, who will give the driver permission to proceed. These arrangements allow a quicker transition from 'open railway' to 'work site' or the reverse with fewer safety-critical communications, and less need for employees to be trackside to place and remove protection.

DETAIL OF CHANGES
Section headings in bold relate to issue 8 of module T3.

2 Taking the possession

2.2 Taking possession around one or more engineering trains
This section has been changed to allow the train concerned to be standing at a FTAP as an alternative to a signal or block marker.

9 Driver's duties

9.7 When a possession is to be taken around one or more engineering trains
This section has been changed to allow the train concerned to be standing at a FTAP as an alternative to a signal or block marker.

9.8 When a possession is to be given up around engineering trains
This section has been changed to allow a train to be standing within a work site when the work site is given up.

10 Protection zones

This is a new section containing the rules that apply when an ES or SWL sets up a PZ.

Module TS1 General signalling regulations

KEY CHANGES

As a result of the introduction of protection zones (PZ), the ES or SWL who has set up a PZ can ask for an adjacent line to be blocked for the protection of staff working or walking.

Regulation 13.2.2 has been changed to make it clear that a line blockage can only be granted by the signaller who controls the protecting signal, even when the portion of line to be blocked is in the area of another signaller.

Regulation 13.2.4 has been changed to state more correctly that the person requesting a line blockage may have to ask the signaller to provide additional protection, when only a signaller can arrange this.

Regulation 13.3 now includes a requirement to find out whether points will be secured or the point machine isolated to prevent injury when they are being worked on. A clarification has been added that this regulation does not apply when a line blockage has already been taken.

A new regulation 13.7 has been introduced as a result of introduction of a new crossing the line procedure. When an individual or group wishes to cross no more than four running lines or pass by a structure that limits clearance, this provides a simpler alternative to a line blockage. This can only be used at locations that have been approved and details provided to the signaller, and by individuals permitted to use it whose names have been supplied to the signaller. Communication must be by mobile phone. Signals are not placed to danger and permission can be given only if there is enough time for the line to be crossed before a train will approach. The person requesting use of the procedure remains in contact with the signaller until the line has been crossed or the structure passed by.

Regulation 18 has been changed with all instructions relating to trespassers now shown in regulation 18.1. Drivers are now required to provide as much information as possible about any trespassers to allow signallers to understand the appropriate actions to be taken. The circumstances in which trains are not required to be cautioned are now defined as when trespassers are on the lineside and not seen to be moving towards the line. The requirement to caution trains which previously applied to those in danger from trains, now applies when trespassers are on or near the line, or who are on the lineside and moving towards the line.

There are no other changes to the signaller's instructions for dealing with each category of trespasser.

DETAIL OF CHANGES
Section headings in bold relate to issue 13 of module TS1.

13 Safety of personnel

13.1 Personnel asking for trains to be stopped
Regulation 13.1.1 has been changed to allow this procedure to be used also by an ES or SWL who has set up a PZ.

13.2.2 Agreeing the arrangements
A clarification has been added that a line blockage can only be granted by the signaller who controls the protecting signal.

13.2.4 Additional protection
The regulation has been changed to state more correctly that in some cases the signaller must be requested to arrange the additional protection.

13.3 Personnel working on or near points
This regulation has been changed to refer to finding out whether the points have been secured or the point machine isolated, as well as to explain that the requirements do not apply when a line blockage has been taken and the passage of trains has already been stopped.

13.7 Crossing the line procedure

A new regulation has been introduced to include the arrangements for this procedure.

18 Trespassers, animals or minor obstacles on the line

18.1 Trespassers

This regulation now includes all the instructions concerning trespassers.

18.2 Animals, trespassers who may endanger trains and minor obstacles

This regulation has been renamed, as the instructions concerning trespassers who may endanger trains are now included in regulation 18.1.

Module TS11 Failure of, or work on, signalling equipment, signaller's regulations

KEY CHANGE

As a result of the introduction of protection zones (PZ), that the work will be carried out within a PZ is now another situation in which a Form RT3187 does not have to be completed.

DETAIL OF CHANGE

Section headings in bold relate to issue 4 of module TS11.

1 General

1.5 Using a Signal Engineering Work form (RT3187)

This regulation has been changed to include work within a PZ as another situation in which it is not necessary to complete Form RT3187.

Module TW1 Preparation and movement of trains

KEY CHANGES

New instructions have been introduced on the reporting of track defects, so as to provide the signaller with as much information as possible to help to decide on the necessary action. The signaller should be told whether a definite defect has been seen, requiring trains to be stopped, or what has been heard or felt, using standard terms, that require trains to be cautioned. In addition, if a driver experiences an apparent deterioration of ride quality from that previously experienced, but this is not obviously a track defect, the signaller does not have to be told, but the train operator's control should be told at the first convenient opportunity.

A train that is to stop at a flexible train arrival point (FTAP) before working in a protection zone (PZ) or possession is a new reason which a driver must tell the signaller about when a train is required to stop in section.

Section 41 has been changed by including a new requirement for the driver to tell the signaller, if possible, that the train is only making slow progress and may come to a standstill, because of reasons such as conductor rail icing, rail adhesion conditions or insufficient traction power. The signaller's instructions have been enhanced so that when told that a train has stopped out of course, or is moving so slowly that it may come to a standstill, any action must be taken that will prevent other trains approaching that location, including telling other signallers and Operations Control. This follows an incident in which the situation was not fully appreciated, and trains became stranded for long periods in poor conditions.

Clearer instructions have been introduced for dealing with damage to structures or earthworks, and any unusual flows or pools of water that could cause damage. As a result, section 43.1 has been changed to include damage to structures or earthworks above or below the line in the list of hazards that might put other trains in danger.

A new section 44 has been introduced on trespassers. This describes the information which if reported by a driver will help the signaller to understand what action should be taken. This includes the location concerned, the whereabouts of the trespassers, in terms of being on the lineside or on or near the line, whether trespassers are moving and in what direction, whether they appear likely to endanger trains, and any distinguishing features such as age and clothing. This section also explains to drivers the instructions the signallers will give to drivers when trespassers have been reported on or near the line, or when they appear likely to endanger trains. Subsequent sections of the module have been renumbered.

As a result of the introduction of the procedures to set up a PZ, there is a new situation under which a driver can ask for an adjacent line to be blocked for staff protection, by arranging this with the signaller through the ES or SWL when within a PZ.

DETAIL OF CHANGES
Section headings in bold relate to issue 14 of module TW1.

5 Broken rails and bridge strikes

This section has been renamed 'Broken rails, bridge strikes and track defects'.

5.3 Track defects

This is a new section describing the arrangements for reporting track defects.

40 Train requiring to stop in section

40.1 General

This section has been changed to include also a train requiring to stop at a flexible train arrival point (FTAP) location.

41 Train stopped out of course

This section has been renamed 'Train stopped out of course or unable to make normal progress'. It has been changed to include instructions to the driver about a train failing to make normal progress, and new instructions for the signaller in both situations.

43 Trains put in danger

43.1 When other trains are put in danger

This section has been changed to include damage to structures or earthworks above or below the line in the list of hazards that might put other trains in danger.

44 Trespassers

This is a new section containing instructions to drivers for reporting trespassers and describing instructions that signallers may give following a report of trespassers.

44 Vehicles labelled for repair or with a NOT TO BE MOVED board attached

This section has been renumbered section 45.

44.1 Trains or vehicles with a NOT TO BE MOVED board attached

This section has been renumbered as section 45.1.

44.2 Vehicles labelled for repair
This section has been renumbered as section 45.2.

45 Warning horn

This section has been renumbered section 46.

45.1 General
This section has been renumbered as section 46.1.

45.2 Warning tones to use
This section has been renumbered as section 46.2.

45.3 Sounding the horn as a warning
This section has been renumbered as section 46.3.

46 Working on the outside of a train

This section has been renumbered section 47 and now includes an additional situation when a train is within a PZ.

Module TW5 Preparation and movement of trains: Defective or isolated vehicles and on-train equipment

KEY CHANGE

This module has been changed as a result of the introduction of protection zones (PZ) set up by an engineering supervisor (ES) or safe work leader (SWL). It is not necessary to carry out the instructions shown in this module in relation to isolation during a journey of AWS or TCA, when the equipment concerned must be isolated before an on-track machine can work within a PZ.

DETAIL OF CHANGES
Section headings in bold relate to issue 9 of module TW5.

4 Automatic warning system (AWS)

4.4 Isolating the AWS during a journey
This section has been changed as it does not apply if the AWS has to be isolated before an on-track machine can work within a PZ.

22 Track circuit actuators (TCA)

22.3 During a journey
This section has been changed as it does not apply if the TCA has to be isolated before an on-track machine can work in a PZ.

Module TW7 Wrong-direction movements

KEY CHANGE

This module has been changed as a result of the introduction of protection zones (PZ) set up by an engineering supervisor (ES) or safe work leader (SWL). Wrong-direction movements can be made towards the start of the PZ, as long as the ES or SWL agrees this with the signaller when the PZ is being set up, and can then instruct the driver to make any necessary movements.

DETAIL OF CHANGES

Section headings in bold relate to issue 7 of module TW7.

1 When a wrong-direction movement can be made

1.1 Authority for a wrong-direction movement

This section has been changed to include movements made by an engineering train or on-track machine within a PZ.

1.2 Driver getting authority

This section has been changed as within a PZ, the ES or SWL can authorise a driver to make a wrong-direction movement, as long as the signaller had agreed when the PZ was set up that wrong-direction movements could be made.

RS521 Signals, Handsignals, Indicators and Signs handbook

KEY CHANGE

New rules have been introduced elsewhere in the Rule Book to allow an engineering train or an on-track machine to procced as far as a location specified as a flexible train arrival point (FTAP), where the train will remain until it is time for work to start within a possession or a protection zone.

To guide drivers of these trains, three successive countdown markers are provided on the approach to the location specified as an FTAP. A sign is provided at that location to show the driver where the train is to stop.

These signs have no significance to the driver of any other train.

An illustration of each of these new signs has been included in this handbook to explain their appearance and meaning.

DETAIL OF CHANGE
Section headings in bold relate to issue 5 of handbook RS521.

12 Other lineside signs

A new section 12.13 has been included concerning FTAP signs.

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