

GE/RT8000/TS9
Rule Book

Module TS9

Level crossings - signallers' instructions

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You will need this module if you carry out the duties of a signaller in an area where there are level crossings.

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Automatic half-barrier crossings (AHBC)

1.1 Equipment and operation

An AHBC has:

- half barriers and road traffic signals which are operated automatically by approaching trains
- telephones linked directly to the supervising signal box.

The signaller monitors the operation of the crossing remotely by observing the indications in the supervising signal box.

1.2 Answering the telephone

You must immediately answer any telephone call from the crossing.

1.3 Animals or large, low or slow-moving vehicles

1.3.1

Before you authorise a crossing user to take animals or a large, low or slow-moving vehicle over the crossing, you must:

- find out from the crossing user how long the movement will take
- make sure there is enough time between trains to prevent delay
- make sure that the protecting signals are placed or kept at danger and that any approaching train has passed clear of the crossing
- give the crossing user the appropriate message number and tell the user to report to you, quoting that number, when the movement has passed clear of the crossing.

1.3.2

If there is not enough time, you must tell the crossing user to wait and telephone again.

1.3.3

After you have authorised the movement, you must not resume normal working until the crossing user has reported that the movement has passed clear of the crossing.

1.3.4

If the crossing user fails to report back that the movement has cleared the crossing, you must make sure that the driver of the next train is instructed to:

- approach the crossing at caution
- not pass over it until the driver has made sure it is safe to do so
- tell you whether the crossing is safe for the passage of trains.

1.3.5

Until you receive confirmation that the crossing is safe for the passage of trains, you must make sure that the drivers of subsequent trains are similarly instructed.

1.4 Routine road maintenance

If you are told that routine road maintenance lasting only a short time is to be done near the crossing that might interfere with the flow of road traffic, you must:

- find out from the person concerned how long the work will take
- make sure there is enough time between trains to prevent delay
- make sure that the protecting signals are placed or kept at danger and that any approaching train has passed clear of the crossing
- give the person concerned the appropriate message number and tell that person to report to you, quoting that number, when the work has been finished and the crossing is clear.

Examples of routine maintenance are:

- work affecting lighting, drains, hedges or ditches
- work involving sweeping or snow clearance.

1.5 Keeping a record of telephone calls

1.5.1

You must record the following details of each telephone call from the crossing:

- the name of the crossing
- the time and nature of the request
- how long the caller says the movement or work will take
- the time you give permission for the movement or work to take place
- the time the movement is reported clear or the maintenance is completed.

1.5.2

You must record the time you caution the next train if the crossing user fails to report back.

1.5.3

You must number each entry progressively on an annual basis.

1.6 Opening and closing the signal box

1.6.1

You must place the absence switch (if provided) in the appropriate position when you open or close the signal box.

1.6.2

If you open a signal box that has no block switch and find that the telephone alarm is sounding, you must answer the telephone.

If you cannot get a reply, you must make sure that the driver of the next train is instructed to:

- approach the crossing at caution
- not pass over it until the driver has made sure it is safe to do so
- tell you whether the crossing is safe for the passage of trains.

1.6.3

Until you receive confirmation that the crossing is safe for the passage of trains, you must make sure that the drivers of subsequent trains are cautioned.

1.7 Wrong-direction movements**1.7.1**

You must not authorise a wrong-direction movement over an AHBC where there are no wrong-direction controls unless the crossing is being locally controlled by an attendant.

1.7.2

If an AHBC has wrong-direction controls, you must make sure that local control will be taken if it is not possible for the wrong-direction movement to start on the approach side of the wrong-direction speed restriction board.

1.8 Routine maintenance of crossing equipment

1.8.1

Before allowing the signalling technician to carry out routine maintenance of equipment that will interfere with the normal operation of the crossing, you must make sure:

- the protecting signals are at danger
- any approaching train has passed clear of the crossing.

1.8.2

After you have given permission, you must keep the protecting signals at danger until the technician tells you that:

- the work is finished
- the crossing is again working automatically.

1.8.3

If the signalling technician asks you to do so, you must make sure that the driver of the first train in each direction is instructed to:

- approach the crossing at caution
- not pass over it until the driver has made sure it is safe to do so.

1.9 Failure of crossing equipment or prolonged occupation of track circuits

1.9.1

You must treat the crossing equipment as failed if an alarm sounds, or you receive information, indicating that any of the following has occurred:

- The road traffic signals are not operating correctly.
- The barriers are other than fully raised or the road traffic signals are operating when no train is approaching.
- A failed train is occupying a controlling track circuit.

1.9.2

If a failed train is occupying a controlling track circuit, you must:

- remind the driver about the presence of the crossing
- get the driver's assurance that no further movement will be made unless you authorise it.

1.9.3

When any of the above circumstances occur, you must carry out the requirements of instruction 1.10 of this module.

1.9.4

You must not authorise any crossing user to pass over the crossing while the road traffic signals are lit or the barriers are lowered (or both), no matter how long the failure might last.

Instead, you must tell the crossing user to:

- wait until an attendant arrives, or
- take another route avoiding the crossing.

1.9.5 Prolonged occupation of a controlling track circuit

1.9.5.1

You may resume normal working and do not need to tell the signalling technician if:

- you are sure that the failure indication was caused by a train occupying a controlling track circuit for a long time, and
- you then receive an 'in order' indication.

1.9.5.2

If there are repeated intermittent failures, you must treat the crossing as defective and carry out the requirements of instruction 1.10 of this module.

1.9.6 Failure of any telephone at the crossing

1.9.6.1

If you become aware that a telephone at the crossing has failed, you must instruct the driver of each train to:

- approach the crossing at caution
- not pass over it until the driver has made sure it is safe to do so.

1.9.6.2

You must continue with these arrangements until the failure is put right.

1.9.6.3

However, you do not need to caution drivers if a person is appointed at the crossing who can contact you by using other means of communication.

1.9.7 Power failure indication

1.9.7.1

If there is an indication that the power to the crossing has failed, you must tell the signalling technician immediately.

1.9.7.2

You may allow trains to pass normally over the crossing for the first six hours of the failure. After that period, until the power supply is restored, you must make sure that the driver of each train is instructed to:

- approach the crossing at caution
- not pass over it until the driver has made sure it is safe to do so.

1.10 Local control when the operation of the crossing is immediately affected

1.10.1

You must arrange for local control to be taken at an AHBC as soon as possible if any of the following circumstances occur:

- A failure of the equipment occurs which affects the normal operation of the crossing.
- A train fails within the crossing controls.
- The normal flow of road traffic over the crossing is affected by emergency road works or a road traffic incident close to the crossing.

You must also tell Operations Control and the civil police.

1.10.2

Until an attendant has taken local control, you must instruct the driver of each train requiring to pass over the crossing to:

- approach the crossing at caution
- not pass over it until the driver has made sure it is safe to do so.

If the barriers have failed in the raised position and the road traffic signals are not working, you must not authorise a train to pass over the crossing until there is an attendant at the crossing.

1.11 Local operation under other circumstances

You must make sure that an attendant has taken local control of the AHBC before any of the following activities take place:

A) Repair work and possessions

- Planned road works which will or may affect the normal flow of road traffic.
- Crossing equipment needs repairing or renewing (other than under routine maintenance as set out in instruction 1.8 of this module and in module T1A *Work on signalling equipment*).
- A T3 possession involving the crossing needs to be taken (see instruction 1.12 of this module).

B) When a wrong-direction movement will take place

- An authorised movement needs to be made over the crossing in a direction for which there are no controls.
- Single line working is to be introduced and there are no wrong-direction controls.

C) Rail movements within the crossing controls

- A train is required to stop in the section within the crossing controls.
- A trolley is required to come within the crossing controls.
- A vehicle that cannot be relied upon to operate track circuits is required to come within the crossing controls at a crossing which has no treadles, on a double line.

1.12 Local operation during a T3 possession

1.12.1

You must make sure that an attendant has taken local control of an AHBC if a T3 possession needs to be taken which involves the crossing.

1.12.2

You must make sure the crossing is operated locally during the whole time of the possession unless any of the following circumstances apply:

- The crossing controls will not be activated by the work that is taking place.
- The only movements over the crossing will be those of engineering trains passing normally in a direction for which there are controls.
- It has been agreed with the Network Rail area operations manager that the crossing needs to be under local control only while it is affected by the work.

1.13 When an attendant is on duty at the crossing

1.13.1 Allowing an attendant to take local control

1.13.1.1

You must not permit the attendant to take local control unless the protecting signals are at danger.

1.13.1.2

You must also make sure any approaching train (other than a failed train that has passed those signals) has passed clear of the crossing unless you have already instructed the driver of that train to:

- approach the crossing at caution
- not pass over it until the driver has made sure it is safe to do so.

1.13.2 Alleged failure of the barriers to lower or alleged failure of the road traffic lights (or both)

1.13.2.1

You must instruct the attendant to take local control only when the signalling technician gives you permission to do so, unless it is confirmed that the crossing equipment has failed.

1.13.2.2

Before local control is taken, you must instruct the attendant to:

- observe the passage of trains
- tell you about any irregularities in the operation of the crossing.

1.13.2.3

You must instruct the driver of any train that is required to pass over the crossing to:

- approach the crossing at caution
- not pass over it until the driver has made sure it is safe to do so.

1.13.2.4

If it is confirmed that the barriers have failed in the raised position and the road traffic signals are not working, you must not give authority for a train to pass over the crossing until the attendant has taken local control of the crossing.

1.13.3 After local control has been taken**1.13.3.1**

After local control has been taken and before you clear the protecting signal (or before you clear the signal which controls the entrance to the single line during single line working) you must instruct the driver of each train to:

- approach the crossing at caution
- not pass over it until authorised by a green handsignal shown at the crossing.

1.13.3.2

You must tell the attendant about the approach of each train in enough time to allow the attendant to close the crossing to road traffic before the train arrives.

1.13.4 When local control is no longer necessary**1.13.4.1**

You must instruct the attendant to reset the equipment for automatic working when you are sure:

- no train is approaching the crossing, and
- any train which has passed over the crossing has also passed well clear of the crossing controls for each direction. If necessary, you must wait until the train is clear of the section.

1.13.4.2

Before you authorise the attendant to leave the crossing and normal working to be resumed, you must make sure that you have the normal indications from the crossing after it has been reset to automatic working.

1.13.5 Recording in a Train Register

You must record in the Train Register the time at which the attendant takes and gives up local control.

1.14 Joint instructions for signallers at supervising and adjacent signal boxes

1.14.1

These level crossing instructions apply if the protecting signal is controlled by another signaller.

1.14.2

If any of the circumstances described in this instruction 1 affect the signaller at an adjacent signal box, you must tell that signaller about them.

1.14.3

You must instruct the signaller at the adjacent signal box to carry out the relevant requirements of this instruction 1 whenever the following is needed:

- the protecting signal controlled from the adjacent signal box is to be maintained at danger and trains are not to be allowed to approach the crossing, or
- before the protecting signal is cleared, the driver is to be instructed to:
 - approach the crossing at caution and not pass over it until the driver has made sure that it is safe to do so, or
 - proceed on the authority of a green handsignal shown at the crossing when there is an attendant at the crossing.

1.14.4

You must tell the signaller in the adjacent signal box when normal working may be resumed.

1.14.5 Failure of all communication on absolute block lines

If you are the signaller at an adjacent signal box and there is a complete failure of all communication and a train is permitted to enter the section as shown in absolute block regulation 8.4, you must before authorising a driver to pass the protecting signal at danger, instruct the driver to:

- approach each AHBC crossing at caution
- not pass over it until the driver has made sure it is safe to do so.

1.14.6 Wrong-direction movements from an adjacent signal box

Before you authorise a movement to approach in a direction for which there are no controls, you must confirm with the signaller at the supervising signal box that the crossing is being operated locally.

2

Automatic crossings locally monitored (ABCL and AOCL)

2.1 Equipment and operation

2.1.1 Types

There are two types of automatic crossing that are locally monitored:

- Automatic barrier crossing locally monitored (ABCL).
- Automatic open crossing locally monitored (AOCL).

2.1.2 Equipment

An ABCL has:

- half barriers
- road traffic signals
- a telephone linked to the signal box.

An AOCL has only road traffic signals.

Some AOCLs have a telephone linked to the signal box.

2.1.3 Operation

2.1.3.1

The equipment at both types of crossing is operated:

- automatically by approaching trains, or
- by a driver's plunger or other equipment.

The driver locally monitors the road traffic signals (and the half barriers at an ABCL) by observing a white flashing light that indicates the equipment is operating correctly.

A train must not be propelled over these types of crossing unless the movement is authorised by the Network Rail area operations manager.

2.1.3.2

If the road traffic signals operate or the half barriers stay down for an unusually long time, the white flashing light will go out.

Soon afterwards:

- the road traffic signals will go out, and
- at an ABCL, the half barriers will rise.

At an ABCL and some AOCLs, another light next to the crossing flashes red when the white light is not lit.

2.2 Answering the telephone

You must immediately answer any telephone call from the crossing.

2.3 Animals or large, low or slow-moving vehicles

2.3.1

Before you authorise a crossing user to take animals or a large, low or slow-moving vehicle over the crossing, you must:

- find out from the crossing user how long the movement will take
- make sure there is enough time between trains to prevent delay
- make sure that the protecting signals are placed or kept at danger and that any approaching train has passed clear of the crossing
- give the crossing user the appropriate message number and tell the user to report to you, quoting that number, when the movement has passed clear of the crossing.

2.3.2

If there is not enough time, you must tell the crossing user to wait and telephone again.

2.3.3

After you have authorised the movement, you must not resume normal working until the crossing user has reported that the movement has passed clear of the crossing.

2.3.4

If the crossing user does not report back that the movement has cleared the crossing, you must make sure that the driver of the next train is instructed to:

- approach the crossing at caution
- not pass over it until the driver has made sure it is safe to do so
- tell you whether the crossing is safe for the passage of trains.

2.3.5

Until you receive confirmation that the crossing is safe for the passage of trains, you must make sure that the drivers of subsequent trains are similarly instructed.

2.4 Engineering work or road works affecting the crossing

2.4.1

If engineering work is likely to cause the crossing equipment to be operated, or the normal flow of traffic over the crossing is likely to be affected by road works close to the crossing, you must make sure that arrangements are made for:

- the road traffic signals to be switched off
- the barriers to be left in the raised position at an ABCL.

2.4.2

You must:

- tell the driver of each train involved about these arrangements, and
- instruct each driver to treat the crossing as having failed.

2.5 Keeping a record of telephone calls

2.5.1

You must record the following details of each telephone call from the crossing:

- the name of the crossing
- the time and nature of the request
- how long the caller says the movement or work will take
- the time you give permission for the movement or work to take place
- the time the movement is reported clear or the maintenance is completed.

2.5.2

You must record the time you caution the next train if the crossing user fails to report back.

2.5.3

You must number each entry progressively on an annual basis.

2.6 Failure of crossing equipment

2.6.1

If you are told that the road traffic signals at an AOCL or ABCL have failed, or the barriers have also failed at the ABCL, you must tell:

- the signalling technician, and
- Operations Control.

2.6.2

Until normal working is resumed, you must instruct the driver of each train to:

- stop at the crossing
- not pass over the crossing until the driver has made sure it is safe to do so, if necessary by operating the driver's emergency plunger.

2.6.3

Where necessary, you must tell the signaller at the other end of the section.

2.7 Failure of equipment and the passage of trains during darkness

2.7.1

During darkness, you must not allow a train to pass over the crossing unless one of the following conditions applies:

- The train is a passenger or empty coaching stock (ECS) train with the interior lights lit.
- Arrangements have been made for the crossing to be closed to road traffic.
- There is an attendant at the crossing who has arranged for a red light to be shown on each road approach to stop road traffic using the crossing when a train is required to pass over it.

2.7.2

However, you do not need to carry out the above instructions at an ABCL if:

- the barriers have failed in the lowered position, and
- the lights on the barriers are lit.

3

Level crossings with full barriers worked by the signaller

3.1 Description

These instructions apply to the following types of level crossing that have full barriers and are:

- located at signal boxes and worked by the signaller
- worked by the signaller using remote control (RC)
- worked by the signaller using closed-circuit television (CCTV) surveillance.

The normal position of the barriers is raised, and they must be operated without delaying trains.

3.2 Making sure the crossing is clear

3.2.1 Using the 'crossing-clear' button

You must press the 'crossing-clear' button when:

- the barriers are fully lowered, and
- you are sure that the crossing is clear.

3.2.2 If there is no 'crossing-clear' button

You must not clear the protecting signals until:

- the barriers are fully lowered, and
- you are sure that the crossing is clear.

3.3 Lowering the barriers

You must place the auto-lower switch (if provided) in the 'manual' position and lower the barriers by using the 'lower' button watching the whole of the lowering sequence if any of the following occurs:

- at least one pair of the road traffic signals has failed
- you become aware that there is road traffic congestion at the crossing
- a track circuit controlling the auto-lower facility fails.

You must also carry out this instruction if any of the following types of movement is required to pass over the crossing:

- a trolley, or any vehicle that cannot be relied upon to operate track circuits
- an unsignalled movement, or any movement for which the auto-lower facility does not apply.

3.4 Raising the barriers

3.4.1

You must not raise the barriers until:

- any approaching train has passed clear of the crossing
- the protecting signals are at danger
- no route has been set beyond the protecting signals.

3.4.2

You must place the auto-raise switch (if provided) in the 'manual' position before you press the 'crossing-clear' button if any of the following circumstances applies:

- You need to clear a signal for a second train on the same or another line immediately after the first train has reached the crossing.
- You are required to authorise a driver to pass a protecting signal at danger.
- The barriers have failed in the lowered position and a train is required to pass over the crossing.

3.4.3

You must also carry out this instruction if any of the following types of movement is required to pass over the crossing:

- a trolley, or any vehicle that cannot be relied upon to operate track circuits
- a shunting movement
- an unsignalled movement, or any movement for which the auto-raise facility does not apply.

3.5 Opening and closing the signal box

You must place the absence switch (if provided) in the appropriate position when you open or close the signal box.

3.6 Failure of equipment - all crossings

3.6.1 Failure of road traffic signals

3.6.1.1

If the road signals indicator does not light up after you have pressed the 'lower' button, you must:

- treat the red road traffic signals as having failed
- immediately stop the lowering sequence, if possible.

3.6.1.2

If you have managed to stop the lowering sequence, you must then:

- lower the barriers enough to show your intention to road users, and
- after a short pause, continue to lower the barriers until they are fully lowered. At an RC or CCTV crossing, the barriers must stay in this position for the duration of the failure.

3.6.2 Instructing the driver

3.6.2.1

If you can clear the protecting signal, you must first instruct the driver to:

- approach the crossing at caution
- not pass over it until the driver has made sure it is safe to do so.

3.6.2.2

If you cannot clear the protecting signal, you must instruct the driver to pass the signal at danger as shown in instruction 3.9 of this module.

3.7 Failure of equipment - other than at RC or CCTV crossings

3.7.1 Barriers failing to rise

3.7.1.1

If a barrier fails to rise, you must:

- immediately stop the raising sequence
- lower the barriers as soon as you are sure it is safe to do so.

You must then raise the defective barrier manually.

3.7.1.2

When you operate the barriers manually, you must make sure the road traffic signals are lit by:

- pressing the 'lower' button, or
- lowering a nearside barrier enough to activate the red road traffic signals before the pump handles are restored to the 'normal' position.

3.7.1.3

If only the raise function has failed, you can raise the barriers manually. You can lower them by pressing the 'lower' button.

If there are nearside and offside barriers, you must lower the barriers that are on the nearside of the road before you lower the offside barriers.

You must raise the offside barriers before you raise the barriers that are on the nearside of the road.

3.7.1.4

You must make sure the barriers are not left unattended during a failure unless:

- they are secured to prevent them lowering
- the door of the local control unit is closed
- the doors of the barrier machines are closed.

3.7.2 Failure of road traffic signals

If the road traffic signals fail, you need to send for an attendant only if you need help operating the barriers safely and without undue delay.

3.7.3 Failure or occupation of a track circuit controlling the barriers

If there is a sealed release that allows you to raise the barriers when a track circuit controlling the barriers fails or is occupied by a failed train, you must make sure, before you operate the release, that:

- the protecting signals are at danger
- the signal levers are in the normal position
- any approaching train has passed clear of the crossing
- if a failed train is occupying the track circuit, you get the driver's assurance that no further movement will be made unless you authorise it
- the auto-raise switch, if provided, is in the 'manual' position.

3.8 Failure of equipment - RC and CCTV crossings

3.8.1 Barrier alarm

If a barrier is displaced or does not rise within the normal time, the barrier alarm will sound, and if this happens you must:

- immediately check the crossing
- take whatever action is necessary.

3.8.2 Failure of the power supply

If the main power supply fails and the failure is likely to last for an extended period:

- you must get the advice of the signalling technician
- if necessary, send for an attendant.

3.8.3 Failing to get a satisfactory view or picture of the crossing

3.8.3.1

If your view or picture of the crossing is unsatisfactory, you must send for the assistance of an attendant.

3.8.3.2

Until the attendant arrives, you must authorise the driver of each train to pass the protecting signal at danger as shown in instruction 3.9 of this module.

3.8.3.3

Before you lower the barriers when the attendant is on duty, you must tell this person that you are about to do so.

3.8.3.4

Before you clear the protecting signals, you must confirm with the attendant that:

- the barriers are fully lowered
- the crossing is clear.

3.8.4 Failure or occupation of a track circuit controlling the barriers

3.8.4.1

You must treat the barriers as having failed in the lowered position and carry out the requirements of instruction 3.8.5 of this module if they are held in that position because a track circuit between the protecting signal and the crossing:

- has failed, or
- is occupied by a failed train.

3.8.4.2

If a failed train is occupying such a track circuit, you must:

- tell the driver that the train is occupying a controlling track circuit for the crossing
- get the driver's assurance that no further movement will be made unless you authorise it.

3.8.4.3

If a track circuit fails when the barriers are in the raised position, you must:

- lower the barriers, and
- carry out the requirements of instruction 3.8.5 of this module.

3.8.5 Failure of barriers in the lowered position**3.8.5.1**

If the barriers fail in the lowered position, you must place and keep the auto-raise switch in the 'manual' position until the failure has been put right.

3.8.5.2

If the red road traffic signals are working, you may allow trains to proceed over the crossing normally.

3.8.5.3

If the red road traffic signals are not working, you must authorise the driver of each train to pass the protecting signal at danger as shown in instruction 3.9 of this module.

3.8.5.4

You must report the failure of the barriers to Operations Control and the civil police.

3.8.6 Failure of barriers in the raised position

3.8.6.1

Before you authorise any driver to pass the protecting signal at danger as shown in instruction 3.9 of this module, you must:

- press the 'lower' button
- make sure the road signals indicator is lit.

3.8.6.2

If the road traffic signals are not working, you must not authorise any train to pass over the crossing until an attendant has taken up duty at the crossing.

3.9 Movement required to pass a protecting signal at danger

3.9.1

Before you authorise a driver to pass at danger a signal protecting the crossing, you must:

- place or keep the auto-raise switch, if provided, in the 'manual' position and place a reminder appliance over the switch
- lower the barriers, if possible
- get confirmation, if possible, that the crossing is clear. (If it is, press the 'crossing-clear' button, if provided)
- instruct the driver to approach the crossing at caution and pass over it only if it is safe to do so
- carry out the appropriate requirements of Part A of module S5 *Passing a signal at danger*.

3.9.2

You must keep the reminder appliance on the auto-raise switch:

- for as long as the signal is required to be passed at danger, and
- during the passage of a train over the crossing on an unaffected line under clear signals.

3.9.3

You must also keep a reminder appliance over the 'raise' button throughout this time, and remove the appliance only if you need to raise the barriers, after which you must immediately place it over the 'raise' button again.

3.10 Wrong-direction movements over crossings other than RC or CCTV crossings

3.10.1

Before you authorise a driver to pass over a crossing in a direction for which there is no signal, you must:

- carry out the appropriate requirements of module TW7
Wrong-direction movements
- make sure that the barriers are fully lowered and the crossing is clear.

3.10.2

You must then authorise the driver to proceed by showing a green handsignal.

3.11 Wrong-direction movements over RC and CCTV crossings

3.11.1 All occasions when an attendant is at the crossing

3.11.1.1

If an attendant has taken duty at the crossing (whether or not it is under local control), you may authorise the driver to approach the crossing without stopping opposite the protecting signal on the other line.

3.11.1.2

You must instruct the driver not to pass over the crossing until authorised by a green handsignal shown at the crossing.

3.11.1.3

Unless the attendant has taken local control, you must:

- make sure the barriers are fully lowered
- make sure the crossing is clear, and then
- instruct the attendant to show a green handsignal to authorise the driver to pass over the crossing.

3.11.2 If there is no attendant at the crossing (other than during single line working)

3.11.2.1

You must instruct the driver to stop opposite the protecting signal on the other line.

3.11.2.2

Before you then authorise the driver to proceed, you must:

- carry out the appropriate requirements of module TW7
Wrong-direction movements
- make sure the barriers are fully lowered
- make sure the crossing is clear.

3.11.3 If there is no attendant at the crossing during single line working

Before you authorise the driver of each train to proceed over the single line in the wrong direction where no attendant is needed (as authorised in the *Signal Box Special Instructions*), you must:

- make sure the barriers are fully lowered
- make sure the crossing is clear
- place the auto-raise switch in the 'manual' position.

3.12 Appointing an attendant at an RC or CCTV crossing

Unless it has been prearranged, you must call for an attendant if any of the following circumstances applies:

- a) You cannot get a satisfactory view or picture of the crossing and a pedestrian might not easily be seen when walking between the barriers.
- b) The barriers fail to respond to the controls.
- c) A track circuit between the protecting signals and the crossing fails, or is disconnected or is occupied by a failed train.
- d) The main power supply fails and the failure is likely to last for an extended period.
- e) Before you grant possession of one or more lines if work will be carried out that:
 - might cause track circuits to be activated within 200 metres (approximately 200 yards) on either side of the crossing, or within the protecting signal if it is more than that distance from the crossing, or
 - an engineering train will be required to work within either of the above distances.

You must make sure that an attendant takes duty before you grant possession unless the Network Rail area operations manager has agreed that the attendant need only be provided during the times when the crossing is affected by the work.

- f) Single line working is to be introduced over the crossing (you must make sure that the attendant has taken duty before you allow the first train in the wrong direction to pass over the crossing).

Exception: You do not need to carry out the requirements of 3.12 f) if the *Signal Box Special Instructions* give authority not to provide an attendant for single line working.

3.13 When an attendant is on duty at an RC or CCTV crossing

3.13.1 Instructing the attendant

You must take into account the volume of road and rail movements that is likely during the time the attendant is on duty. You must then decide:

- whether the local control should be continuous, or
- if the barriers should be kept lowered and local control taken only when road traffic is required to pass.

Whichever you decide, you must instruct the attendant accordingly.

3.13.2 Before allowing local control to be taken

3.13.2.1

You must not permit the attendant to take local control unless:

- any approaching train has passed clear of the crossing
- the protecting signals are at danger
- no route has been set beyond the protecting signals.

3.13.2.2

However, you may permit the attendant to take local control if:

- a train fails between the protecting signal and the crossing and you have instructed the driver to make no further movement without your authority, or
- on a line under possession, there is an engineering train between the protecting signal and the crossing.

3.13.3 When the crossing is on local control

3.13.3.1

When the crossing is on local control, you must:

- advise the attendant of each approaching train
- instruct the attendant to lower the barriers.

3.13.3.2

Before you authorise the driver to pass the protecting signal at danger, you must check with the attendant that:

- the barriers are lowered
- the crossing is clear.

3.13.3.3

However, you must instruct the attendant to authorise the driver to proceed over the crossing by displaying a green handsignal, when the attendant is sure it is safe to do so, if:

- the movement is in a direction for which there is no signal, or
- the movement (in either direction) is on a line under possession.

3.13.3.4

You must not give the attendant permission to raise the barriers if another train has been, or is about to be, authorised to pass over the crossing.

3.13.4 When the attendant is on duty but the crossing is not on local control

You may signal trains normally over the crossing.

However, if the movement is in a direction for which there is no signal, or the movement (in either direction) is on a line under possession, you must:

- make sure that the barriers are fully lowered
- make sure the crossing is clear, and then
- instruct the attendant to authorise the driver to pass over the crossing by displaying a green handsignal.

3.13.5 When local control is no longer necessary

3.13.5.1

You must instruct the attendant to:

- lower the barriers
- reset the crossing for normal working.

3.13.5.2

Before you authorise the attendant to leave, you must make sure that the barriers respond correctly when you operate them from your signal box.

3.13.6 Recording in the Train Register

You must record in the Train Register the times at which the attendant:

- takes duty at the crossing
- takes local control
- gives up local control
- is authorised to leave the crossing.

4

Crossings with red and green warning lights (R/G)

4.1 Equipment and operation

4.1.1

This type of crossing has:

- red and green warning lights operated by approaching trains for the guidance of crossing users
- user-worked barriers or gates.

4.1.2

At some crossings used by road vehicles, there are telephones linked directly with the signal box controlling that portion of the line.

4.1.3

At R/G level crossings used by road vehicles, the normal position of the barriers or gates is across the roadway.

4.2 Answering the telephone

You must immediately answer any telephone call from the crossing.

4.3 Animals or large, low or slow-moving vehicles

4.3.1

Before you authorise the crossing user to take animals or a large, low or slow-moving vehicle over the crossing, you must:

- find out from the crossing user how long the movement will take
- make sure there is enough time between trains to prevent delay
- make sure that the protecting signals are placed or kept at danger and that any approaching train has passed clear of the crossing
- tell the crossing user to report to you when the movement has passed clear of the crossing.

4.3.2

If there is not enough time, you must tell the crossing user to wait and telephone again.

4.3.3

After you have authorised the movement, you must not resume normal working until the crossing user has reported that the movement has passed clear of the crossing.

4.3.4

If the crossing user fails to report back that the movement has cleared the crossing, you must make sure that the driver of the next train is instructed to:

- approach the crossing at caution
- not pass over it until the driver has made sure it is safe to do so
- tell you whether the crossing is safe for the passage of trains.

4.3.5

Until you receive confirmation that the crossing is safe for the passage of trains, you must make sure that drivers of subsequent trains are similarly instructed.

4.3.6 Protecting signal controlled by another signaller

4.3.6.1

Where another signaller controls a protecting signal, you must tell that signaller about the circumstances.

4.3.6.2

You must instruct that other signaller to carry out the requirements of instructions 4.3.1 to 4.3.5 of this module:

- whenever the protecting signal must be kept at danger, or
- when the driver is required to be cautioned.

4.4 Keeping a record of telephone calls

4.4.1

You must record the following details of each telephone call from the crossing:

- the name of the crossing
- the time and reason for the request
- how long the caller says the movement will take
- the time you give permission for the movement to take place
- the time the movement is reported clear of the crossing.

4.4.2

You must record the time you caution the next train if the crossing user fails to report back.

4.5 Failure of the crossing lights

4.5.1

If the lights fail at a crossing which has a telephone, the crossing user is required to telephone you before taking any vehicles or animals over the crossing.

4.5.2

In these circumstances you must:

- carry out instruction 4.3.1 to 4.3.6 of this module
- tell the signalling technician about the failure.

4.6 Failure of any telephone at the crossing

4.6.1

If you become aware that a telephone at a crossing has failed, you must instruct the driver of each train to:

- approach the crossing at caution
- not to pass over it until the driver has made sure it is safe to do so.

4.6.2

You must continue with these arrangements until the failure is put right.

4.6.3

However, you do not need to caution drivers if:

- there is another way of communicating that allows the crossing to be used safely, or
- the crossing is temporarily secured and locked out of use.

4.7 Wrong-direction movements

4.7.1

Before you authorise a wrong-direction movement, you must instruct the driver to:

- approach the crossing at caution
- stop short of the crossing
- sound the horn
- pass over the crossing only if it safe to do so.

4.7.2

If there are wrong-direction controls, you do not need to carry out this instruction unless the movement starts between the wrong-direction speed board and the crossing.

4.8 Vehicle gates left open**4.8.1**

If you become aware that the vehicle gates at the crossing have been left open, you must arrange for them to be closed.

If the next train is ready to pass over the crossing before you are told that the gates have been closed, you must make sure the driver of the next train is instructed to:

- approach the crossing at caution
- not pass over the crossing until the driver has made sure it is safe to do so
- tell you whether the vehicle gates are closed.

If necessary, you must also ask the driver to close the gates.

4.8.2

Until you are told that the gates are closed, you must make sure the drivers of subsequent trains are similarly instructed.

4.8.3

When another signaller controls a protecting signal, you must tell that signaller that the vehicle gates at the crossing have been left open.

5

Level crossings with gates worked by a signaller

5.1 Operation

5.1.1

The gates are normally kept closed to road traffic.

5.1.2

Where authority is given in the Signal Box Special Instructions for the gates to be normally open for road traffic, you must operate them without delaying trains.

5.1.3

Unless it is safe to do so, you must not:

- open the gates for road traffic
- release wicket gates for pedestrians.

5.1.4

You must make sure that the lamps on the gates are lit during darkness, fog or falling snow.

5.2 If the gates fail or are damaged

5.2.1

During a failure of the gates or when they are damaged, you may clear the protecting signal for a train when you are sure it is safe for the train to proceed.

5.2.2

However, you must not clear the signal until the train is close to it.

6

Level crossings worked by a crossing keeper

6.1 Crossing keeper not reporting for duty

If the crossing keeper does not report for duty when the line opens for traffic, you must arrange for a person:

- to be sent to the crossing to find out the circumstances, and
- if necessary, to operate the crossing.

6.2 An emergency affecting the crossing

If any emergency is likely to affect the crossing, you must:

- if possible, tell the crossing keeper about the emergency
- give the crossing keeper any necessary instructions.

6.3 Failure of equipment

6.3.1 If the protecting signal cannot display a caution or danger aspect, as appropriate

6.3.1.1

If the protecting signal is a semi-automatic signal or is controlled from your signal box, you must get the crossing keeper's assurance that the crossing is closed to road traffic before you authorise the driver to pass that signal.

6.3.1.2

You must also instruct each driver to:

- approach the level crossing at caution
- not pass over it until the driver has made sure it is safe to do so.

6.3.2 Failure of equipment requiring the protecting signal to be passed at danger

6.3.2.1

If the protecting signal is a semi-automatic, or is controlled from your signal box, you must get the crossing keeper's assurance that the crossing is closed to road traffic before you authorise the driver to pass that signal, as shown in Part A of module S5 *Passing a signal at danger*.

6.3.2.2

You must also instruct each driver to:

- approach the level crossing at caution
- not pass over it until the driver has made sure it is safe to do so.

6.3.2.3

You must not allow trains to pass over an RC or CCTV crossing until an attendant has taken up duty if:

- the barriers have failed in the raised position, and
- the road traffic signals are not working.

6.3.3 Failure of equipment requiring drivers to be cautioned before the protecting signal is cleared

You must instruct each driver, that when the signal is cleared, to:

- approach the level crossing at caution
- not pass over it until the driver has made sure it is safe to do so.

Each time you caution a driver under these circumstances, you must also tell the crossing keeper, where necessary.

6.3.4 If the barriers or gates cannot be properly closed to road traffic at a crossing not protected by signals

If the barriers or gates cannot be properly closed to road traffic at a crossing not protected by signals, you must instruct each driver to:

- approach the crossing at caution
- not pass over it until the driver has made sure it is safe to do so.

6.3.5 Unsatisfactory view or picture of the crossing

If the crossing keeper cannot get a satisfactory view or picture of the crossing, you must instruct each driver to:

- approach the level crossing at caution
- not pass over it until the driver has made sure it is safe to do so.

6.4 Crossing to be clear before the protecting signal is passed at danger

Before you authorise a driver to pass at danger a signal which also protects a level crossing operated by a crossing keeper, you must get confirmation from the crossing keeper that the crossing:

- is closed to road traffic
- is clear and safe for the train movement.

6.5 Wrong-direction movements over crossings other than RC or CCTV crossings

Before you authorise a wrong-direction movement to pass over a level crossing that is operated by a crossing keeper and protected by signals, you must make sure that the driver is instructed to approach the crossing at caution and:

- not pass over the crossing until authorised by a green handsignal shown by the crossing keeper, or
- if the normal position of the barriers or gates is across the roadway, not pass over it until the driver has made sure it is safe to do so.

6.6 Wrong-direction movements over RC or CCTV crossings

6.6.1 If an attendant is at the crossing

If you have been told by the crossing keeper that an attendant has taken duty at the crossing, you may authorise the driver to approach the crossing without stopping opposite the protecting signal on the other line.

You must instruct the driver not to pass over the crossing until authorised by a green handsignal shown at the crossing.

6.6.2 If there is no attendant at the crossing (other than during single line working)**6.6.2.1**

You must instruct the driver to stop opposite the protecting signal on the other line.

6.6.2.2

Before you authorise the driver to proceed, you must get confirmation from the crossing keeper that:

- the barriers are fully lowered
- the crossing is clear and safe for the train movement.

6.6.3 If there is no attendant at the crossing during single line working

Before you authorise the driver of each train to proceed over the single line in the wrong direction if no attendant is required at the crossing (as authorised in the *Signal Box Special Instructions*), you must get confirmation from the crossing keeper that:

- the barriers are fully lowered
- the crossing is clear
- the auto-raise switch is in the 'manual' position.

6.7 Attendant taking duty at an RC or CCTV crossing supervised by a crossing keeper

6.7.1 Recording the details

You must record in your Train Register the times at which the attendant:

- takes duty at the crossing
- takes local control
- gives up local control
- leaves the crossing.

You must ask the crossing keeper for these times.

6.7.2 During single line working

Before you allow the first train in the wrong direction to pass over the crossing during single line working, you must get confirmation from the crossing keeper that an attendant has taken duty at the crossing.

6.7.3 Granting a T3 possession

You must make sure that an attendant has taken duty at the crossing before you grant possession if:

- work will be carried out that might cause track circuits to be activated within 200 metres (approximately 200 yards) on either side of the crossing, or within the protecting signal if it is more than that distance from the crossing, or
- engineering trains will be required to work within either of the above distances.

6.8 Vehicles that cannot be relied upon to operate track circuits on a track circuit block (TCB) line

If the barriers or gates at a crossing are normally open to road traffic, you must tell the crossing keeper about the approach of any vehicle that cannot be relied upon to operate track circuits.

6.9 If a train is required to stop in the section

If a train is required to stop before passing over a level crossing operated by a crossing keeper, you must tell the crossing keeper, if possible.

6.10 Train failing between the protecting signal and the level crossing

If a train fails between the protecting signal and a crossing operated by a crossing keeper, you must instruct the driver to make no further movement without your authority.

Before you give the driver this authority, you must get confirmation from the crossing keeper that the crossing is closed to road traffic.

6.11 Animals or large, low or slow-moving vehicles

At a crossing that is not protected by signals, the crossing keeper will tell you when animals or a large, low or slow-moving vehicle is to pass over a crossing.

You must then carry out the applicable parts of instruction 4.3 of this module with the help of the crossing keeper as necessary.

7

Occupation and accommodation (including bridleway) level crossings

7.1 Equipment and operation

These crossings have user-worked gates or barriers.

Some have a telephone provided for the crossing user to telephone the signaller before animals or vehicles are taken over the crossing.

Note: These instructions also apply to occupation and accommodation (including bridleway) level crossings that are not provided with a fixed telephone at the crossing. For example, the crossing user may use a mobile telephone.

7.2 Signaller receiving a telephone call

7.2.1

When you receive a telephone call from the crossing, you must find out:

- which crossing the user is phoning from
- what is required to pass over the crossing
- how long it will take.

7.2.2

If there is enough time for the crossing to be used before the next train passes over it, you must tell the user to use the crossing immediately.

If there is not enough time, you must tell the user to wait and telephone again.

7.3 Animals or large, low or slow-moving vehicles

7.3.1

Before you authorise the crossing user to take animals or a large, low or slow-moving vehicle over the crossing, you must:

- find out from the road user how long the movement will take
- make sure there is enough time between trains to prevent delay
- make sure that any approaching train has passed clear of the crossing
- make sure that the protecting signals are placed or kept at danger
- tell the user to report to you when the movement has passed clear of the crossing.

7.3.2

After you have authorised the movement, you must not resume normal working until the crossing user has reported that the movement has passed clear of the crossing.

7.3.3

If the crossing user fails to report back that the movement has cleared the crossing, you must make sure that the driver of the next train is instructed to:

- approach the crossing at caution
- not pass over it until the driver has made sure it is safe to do so
- tell you whether the crossing is safe for the passage of trains.

7.3.4

Until you are told that the crossing is clear, you must make sure that the drivers of subsequent trains are similarly instructed.

7.3.5 Protecting signal controlled by another signaller

7.3.5.1

Where another signaller controls a protecting signal, you must tell this person about the circumstances.

7.3.5.2

You must instruct that other signaller to carry out the requirements of instruction 7.3.1 to 7.3.4 of this module:

- whenever this signal must be kept at danger, or
- when the driver is required to be cautioned.

7.4 Keeping a record of telephone calls

7.4.1

You must record the following details of each telephone call from the crossing:

- the name of the crossing
- the time and reason for the request
- how long the caller says the movement will take
- the time you give permission for the movement to take place
- the time the movement is reported clear of the crossing.

7.4.2

You must record the time you caution the next train if the crossing user does not report when a movement involving animals or large, low or slow-moving vehicles is clear of the crossing.

7.5 Failure of a telephone

7.5.1

If you become aware that any telephone at the crossing has failed, you must instruct the driver of each train:

- to approach the crossing at caution
- not to pass over the crossing until the driver has made sure it is safe to do so.

7.5.2

You must continue with these arrangements until the telephone failure is put right.

However, you do not need to caution drivers if:

- there is another way of communicating that allows the crossing to be used safely
- the crossing is temporarily secured and locked out of use.

7.6 Vehicle gates left open

7.6.1

If you become aware that the vehicle gates at the crossing have been left open, you must arrange for them to be closed.

If the next train is ready to pass over the crossing before you are told the gates are closed, you must make sure the driver of the next train is instructed to:

- approach the crossing at caution
- not pass over the crossing until the driver has made sure it is safe to do so
- tell you whether the vehicle gates are closed.

If necessary, you must also ask the driver to close the gates.

7.6.2

Until you are told that the gates are closed, you must make sure the drivers of subsequent trains are similarly instructed.

7.6.3

When another signaller controls a protecting signal, you must tell that signaller that the vehicle gates at the crossing have been left open.

8

Barrow or foot crossings with white light indicators

8.1 Equipment and operation

Some barrow or foot crossings have white light indicators.

When lit, the white lights indicate to the user that it is safe to cross.

8.2 Wrong-direction movements

Before you authorise a wrong-direction movement, you must remind the driver about the presence of the crossing.

You must then instruct the driver to:

- approach the crossing at caution
- not pass over it until the driver has made sure it is safe to do so.

You do not need to carry out this instruction if the crossing has wrong-direction controls.

8.3 Movements of small-wheeled trolleys

8.3.1

Because its wheels might become trapped, the crossing user is required to contact you before taking a small-wheeled trolley over a barrow crossing, even if there are warning lights at the crossing.

8.3.2

Before you authorise the crossing user to take a small wheeled trolley over the crossing, you must:

- find out from the crossing user how long the movement will take
- make sure there is enough time between trains to prevent delay
- make sure that any approaching train has passed clear of the crossing
- make sure that the protecting signals are placed or kept at danger
- tell the user to report to you when the movement has passed clear of the crossing.

8.3.3

After you have authorised the movement, you must not resume normal working until the crossing user has reported that the movement has passed clear of the crossing.

8.3.4

If the user fails to report when the movement is clear of the line, you must try to contact the crossing user to get this assurance.

8.3.5

If you cannot do this, you must make sure the driver of the next train is instructed to:

- approach the crossing at caution
- not pass over it until the driver has made sure it is safe to do so
- tell you whether the crossing is safe for the passage of trains.

8.3.6

You must record the following details of each request to use the crossing, whether by telephone or other means, in the Train Register:

- the name of the crossing
- the time and reason for the request
- how long the crossing user says the movement will take
- the time you give permission for the movement to take place
- the time the movement is reported clear of the crossing.

9

Police officer attending during failure of level crossing equipment

During a failure of equipment, a police officer may arrive at the crossing before an attendant or technician.

If a police officer contacts you from a level crossing where equipment has failed, you must tell the officer about the arrangements made for:

- an attendant or technician to attend
- passing trains over the crossing during the period of failure.



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