

GE/RT8000/HB12 ERTMS
Rule Book

Handbook 12 ERTMS

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Duties of the engineering supervisor (ES) or safe work leader (SWL) in a possession on ERTMS lines where lineside signals are not provided

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1 Definitions

Driver

This includes an operator of an on-track machine.

Engineering train

This includes on-track machines but does not include on-track plant (OTP).

Machine controller (MC)

The MC is the person with overall responsibility for the safe operation of OTP and will be identified by an armlet or badge with MACHINE CONTROLLER or MC in black letters on a white background.

When the MC is also competent as a crane controller, they will instead wear an armlet or badge with CRANE CONTROLLER or CC in black letters on a white background.

Maximum speed in a possession

Depending on any lower speed that may apply the maximum speed entering, leaving or within a possession is 40 km/h (25 mph).

On-track plant (OTP)

Also known as 'in possession only rail vehicles' and includes road-rail vehicles (RRV), rail-mounted maintenance machines (RMMM) and RRV/RMMM trailers and attachments with guidance wheels.

Person in charge of loading and unloading

The person who is responsible for the movement of an engineering train while it is being loaded or unloaded within the work site.

Person in charge of the siding possession (PICOS)

The person responsible for taking and supervising a possession of a siding.

Train

This includes a light locomotive, self-propelled rail vehicle, on-track machine, an RRV in rail mode and an RMMM.

2 Competence and identification

To act as the engineering supervisor (ES) or safe work leader (SWL) you must have with you a valid certificate of competence issued by your employer.

You must wear an armlet on the left arm or a badge on the upper chest when you are carrying out the duties of the ES. The armlet or badge must have ENGINEERING SUPERVISOR in blue letters on a yellow background.

If you are the SWL the armlet or badge must have SWL in blue letters on a yellow background.

3 Setting up the work site

3.1 Arranging to set up the work site

You must contact the PICOP and state the published possession reference if there is one and then confirm:

- the line on which you will be setting up your work site
- the exact mileage or kilometres and metres of each work-site marker board (WSMB)
- whether the work site is to be taken around one or more trains
- the arrangements to be applied for every level crossing within the work site.

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

When the work site is to be taken or extended around an engineering train, before you can proceed any further with setting up or extending the work site, the PICOP must tell you when:

- every train concerned is at a stand at its specified block marker
- the possession has been taken.

You must not allow any of these trains to move again until the WSMBs are in place and all the necessary arrangements for the work site have been made.

There is no limit to the number of engineering trains the work site can be set up or extended around, as long as the details have been published in the *Weekly Operating Notice* or *Engineering Notice*.

3.3 Setting up the work site

When the PICOP authorises you to set up your work site you may allow duties relating to the isolation of AC OLE or DC CRE equipment to start and for the placing of WSMBs.

You must not allow any other work to start until the PICOP has given you permission to do so.

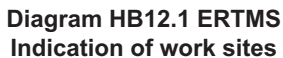
3.4 Indicating the work site (diagram HB12.1 ERTMS)

You must place a WSMB in the 'four-foot' 100 metres from each end of the work site at the agreed location.

You must record the exact location of each WSMB on the Work-site Certificate (RT3199 ERTMS).

WSMBs must be positioned so that the red lights will be visible to the driver of a train approaching the work site and the yellow lights will be visible to the driver of a train leaving the work site.

The first and last WSMBs must be positioned at least 200 metres from the protecting block markers.



3.5 When the work site is set up

You must tell the PICOP when the WSMBs at each end of your work site are in position.

The PICOP will dictate the necessary details to you.

You must record these details on your RT3199 ERTMS certificate.

The details must include the arrangements made for each level crossing within the work site.

You must read the details back to the PICOP.

When the PICOP is satisfied that all details are in order for the work to start, you will be given the PICOP's full initials and authority to allow work to start.

You must enter these details on your RT3199 ERTMS certificate.

You may now consider the work site granted.

4 Agreeing the safe system of work with each COSS/IWA

4.1 Allowing work to take place

When the work site has been granted, you may allow work to take place.

Before starting work, each COSS and each IWA must receive a work-site briefing from you.

You must agree with each COSS and each IWA:

- the limits of their site of work
- the nature of the work, and
- the safe system of work they will use.

You must enter the details of your agreement on your RT3199 ERTMS certificate and get the COSS/IWA to sign it.

4.2 Agreeing the arrangements before the work site is granted

Note: this arrangement is only permitted where it has been planned and published in advance and you and the COSS or IWA are aware of what is to happen.

You may give the work-site briefing, reach the agreement specified in section 4.1 with each COSS or IWA and get their signature on your RT3199 ERTMS certificate before the work site is granted.

You must not allow work to start until you have told each COSS or IWA that the work site has been granted.

You must then give each COSS or IWA an authority number.

You must record the authority number on your RT3199 ERTMS certificate.

4.3 Safe system of work where all lines are blocked (Safeguarded)

Before the COSS/IWA can treat their safe system of work as safeguarded, they must agree with you that:

- there will be no engineering train or OTP movements at their site of work, or
- if there are engineering train or OTP movements, they will be made at caution and at no greater than 10 km/h (5 mph).

4.4 Safe system of work using a safety barrier (Fenced)

Before the COSS/IWA can treat their safe system of work as fenced, there must be a safety barrier as shown in handbook 6 or handbook 7 between their site of work and any open line.

They must agree with you that:

- there will be no engineering train or OTP movements at their site of work, or
- if there are engineering train or OTP movements, they will be made at caution and at no greater than 10 km/h (5 mph).

4.5 Safe system of work using site wardens (Site warden protected)

Before the COSS can treat their safe system of work as 'site warden protected', they must agree with you that:

- there will be no engineering train or OTP movements at their site of work, or
- if there are engineering train or OTP movements, they will be made at caution and at no greater than 10 km/h (5 mph).

A person acting as an IWA cannot use this safe system of work in your work site.

4.6 Safe system of work using equipment warning

The COSS/IWA can use equipment warning for the lines open to traffic as long as it will provide an adequate warning of each train approaching on the line or lines concerned.

Equipment warning must not be used on any line within the work site.

4.7 Safe system of work using lookouts (Lookout warning)

The COSS may use lookout warning as shown in handbook 7 for any line within the work site.

During darkness, poor visibility, or when in or near a tunnel, the COSS may only use lookout warning if:

- you agree that all movements within the work site will be made at a speed no greater than 30 km/h (20 mph)
- the maximum speed of trains on any open line is no greater than 30 km/h (20 mph)
- only site lookouts are needed to achieve the required sighting distance.

A person acting as an IWA cannot use this safe system of work in your work site.

5 Arrangements for level crossings

5.1 General

You must not allow any engineering train or OTP movement to take place, or any work to be carried out, that will affect the operation of any level crossing unless the PICOP has made the necessary arrangements for that level crossing.

The PICOP will tell you what arrangements have been made for each level crossing within your work site as shown in section 5.2, 5.3 and 5.4.

You must record these details on your RT3199 ERTMS certificate.

5.2 Automatic half-barrier crossing (AHBC)

The PICOP will make sure an attendant has been appointed and local control taken at each AHBC throughout the time the possession is in place.

Exceptions

The PICOP will not do this if:

- the crossing controls will not be activated by the work
- the only movements over the crossing will be engineering trains passing normally in a direction provided with controls
- it is shown in the notices that the AHBC need be on local control only while it is affected by the work or train movements.

5.3 Automatic barrier crossing locally monitored (ABCL) and automatic open crossing locally monitored (AOCL)

The PICOP will make sure the road-traffic signals are switched off and the audible warnings disconnected at each ABCL and AOCL throughout the time the possession is in place.

The PICOP will also make sure the barriers are kept in the raised position at each ABCL.

Exceptions

The PICOP will not do this if:

- the crossing controls will not be activated by the work
- the only movements over the crossing will be engineering trains passing normally in a direction provided with controls.

5.4 Barrier crossing with closed-circuit television (CCTV), barrier crossing with obstacle detection (OD) or remotely controlled crossing with barriers (RC)

The PICOP will make sure an attendant has been appointed at each CCTV, OD or RC crossing throughout the time the possession is in place.

Exceptions

The PICOP will not do this if:

- the crossing controls will not be activated by the work
- the only movements over the crossing will be trains passing normally in the right direction
- it is shown in the notices that a crossing attendant need be at the CCTV, OD or RC crossing only while it is affected by the work or train movements.

6 Train movements

6.1 General

Points within the work site

Before you authorise any movement, you must make sure that any points in the route are in the correct position.

If the MC with an item of OTP tells you that the OTP cannot be relied upon to operate train-operated points, you must make sure any such points are correctly secured before authorising the OTP to pass over them in the trailing position.

Instructions to drivers and machine controllers

Only you can authorise a movement to enter the work site or a movement to be made within the work site.

You must instruct the driver of each train, or the MC of each item of OTP, to make each rail movement.

You must give the exact location the movement is to proceed to.

You must check the driver or MC clearly understands the location the movement is to proceed to.

Competent person passing on your instructions

If you use someone else to give your instructions to the driver or MC, you must make sure the person:

- is competent to do so
- fully understands the instructions to pass on
- does not travel in the driving cab with the driver.

Train speed within the work site

Movements within the work site may run at any speed up to 40 km/h (25 mph). However, the actual speed will depend on:

- how far the driver or operator can see to be clear
- the distance needed to stop short of any obstruction or handsignal
- the instructions you give the driver or MC.

You must include instructions to the driver or MC on what speed to make the movement. This will depend on any agreement you have made with IWAs or COSSs working in your work site as shown in section 4.

If you have agreed that movements will only be made at caution, you must tell the driver or MC that the movement must be made at caution and at no greater speed than 10 km/h (5 mph) through the site of work.

If you have agreed that the COSS will use lookout warning, during darkness or where the site of work is in or near a tunnel, you must instruct the driver or MC that the movement must be made at no greater speed than 30 km/h (20 mph) through the site of work.

You must tell the driver or machine controller the location of any permissible speed or temporary speed restriction lower than 30 km/h (20 mph) on the portion of line concerned.

Block markers within the work site

Drivers and MCs will not pass a block marker without verbal authority.

You are responsible for giving this authority within the work site.

Recording details of movements

You must record the time you authorise each movement. You must also record the time you are told when a movement has been completed.

6.2 Entering a work site

You must not allow the WSMB to be removed until the movement has stopped at it.

When the movement has entered the work site, you must make sure the WSMB is immediately replaced.

When the WSMB has been replaced you must tell the PICOP.

6.3 Entering the work site at an intermediate point

Before the PICOP gives the signaller permission to let an engineering train proceed from the protecting block marker towards the possession, the PICOP will make sure:

- you, or a competent person sent by you, is positioned at the intermediate point to give the instructions to the driver
- you have not authorised a conflicting movement to take place.

Once the engineering train has entered the work site and is clear of the points or crossings, you must tell the PICOP.

The signaller will then return the points to the position agreed with the PICOP.

6.4 Entering the work site from an adjacent siding under possession

If a movement is to enter your work site from an adjacent siding under possession, you must first agree with the PICOP and the PICOS how this is to be done.

The PICOP will make sure that you, or a competent person you have sent, is positioned at the exit from the siding to give instructions to the driver.

You must make sure that you have not authorised a conflicting movement to take place.

6.5 Not used

6.6 Movements leaving the work site

When a movement is ready to leave the work site, you must tell the PICOP.

You must not remove the WSMB until the movement is at a stand at it and the PICOP has given the driver or MC the necessary instructions.

6.7 Engineering train leaving the work site at an intermediate point

If an engineering train is to leave the work site at an intermediate point, the signaller will give the driver the necessary instructions.

You must tell the PICOP when the movement has passed clear of the points or crossings.

The signaller will then return the points to the position agreed with the PICOP.

6.8 Leaving the work site directly into a siding under possession

If a movement is to leave your work site directly into an adjacent siding under possession, you must first agree with the PICOP and the PICOS how this is to be done.

7 Movements over level crossings

7.1 Before making a movement

Before authorising any movement that will pass over a level crossing, you must first make sure any instructions in this section for the type of level crossing concerned are carried out.

Before the movement takes place, you must give details of the movement to those personnel operating:

- any CCTV, OD or RC level crossing
- other level crossings, if possible.

7.2 AHBC locally controlled

You must tell the driver or MC that the movement must not pass over the crossing unless the crossing attendant is displaying a green handsignal.

7.3 AHBC that is not being locally controlled

OTP must not pass over the level crossing.

You may allow an engineering train that is to pass normally over the level crossing to proceed in a direction for which there are controls.

You must first get permission from the signaller for the movement over the crossing and then tell the driver not to stop specially before passing over the crossing.

7.4 CCTV, OD or RC locally controlled

You must tell the driver or MC that the movement must not pass over the crossing unless the crossing attendant is displaying a green handsignal.

7.5 CCTV, OD or RC that is not locally controlled

You must not allow any movement in the wrong direction to pass over the level crossing.

For other movements, you must not authorise the driver or MC to pass the block marker protecting the level crossing until the signaller has told you that the barriers have been lowered for the movement.

You must then tell the driver or MC not to stop specially at the level crossing.

7.6 AOCL or ABCL not switched off

If the crossing has not been switched off as shown in section 5.3, the following must apply.

You must instruct the driver of an engineering train that is to pass over the crossing normally, to proceed over the crossing only when it is safe to do so.

For any engineering train movements not passing normally over the crossing and for all items of OTP, you must only allow the movement to take place if:

- the crossing has been closed to road traffic, or
- a competent person is positioned at the crossing and has stopped road traffic by displaying a red handsignal on both sides of the crossing.

You must instruct the driver or MC to stop at the crossing, sound the horn and then pass over the crossing only when it is safe to do so.

7.7 AOCL or ABCL that has been switched off

If the crossing has been switched off as shown in section 5.3, the following must apply.

During daylight

You must instruct the driver of an engineering train that is to pass over the crossing to stop the train at the crossing, sound the horn and then pass over the crossing only when it is safe to do so.

The movement of OTP over the crossing must not take place unless:

- the crossing has been closed to road traffic, or
- a competent person is positioned at the crossing and has stopped road traffic by displaying a red handsignal on both sides of the crossing.

You must instruct the MC to stop at the crossing, sound the horn and then pass over the crossing only when it is safe to do so.

During darkness

The movement of an engineering train or OTP over the crossing must not take place unless:

- the crossing has been closed to road traffic, or
- a competent person is positioned at the crossing and has stopped road traffic by displaying a red handsignal on both sides of the level crossing.

You must instruct the driver or MC to stop at the crossing, sound the horn and then pass over the crossing only when it is safe to do so.

7.8 Manned level crossing

You must instruct the driver or MC to pass over the level crossing only if the level crossing barriers or gates are closed to road traffic.

If it is a traincrew-operated (TMO) crossing, you must make sure that a competent person is available to operate the level crossing, before authorising the driver or MC to proceed.

7.9 Crossing with red and green lights (R/G)

You must instruct the driver or MC to stop at the crossing, sound the horn and then pass over the crossing only when it is safe to do so.

7.10 Barrow or foot crossing with white light indicators

You must instruct the driver or MC to pass over the crossing only when it is safe to do so.

8 Change of personnel

8.1 Change of ES or SWL

If you are going off duty, you must:

- tell the new ES or SWL about the work-site arrangements
- hand your RT3199 ERTMS certificate to the new ES or SWL
- tell the PICOP the name of the new ES or SWL.

If you are the new ES or SWL, you must sign the RT3199 ERTMS certificate.

8.2 Change of COSS

If there is a change of COSS, the new COSS must sign your RT3199 ERTMS certificate when taking duty. You must give the new COSS a work-site briefing.

9 Suspending the work site

If you are to suspend the work site, you must:

- leave the WSMBs in place
- tell the PICOP the work site has been suspended
- record the details on your RT3199 ERTMS certificate.

10 Giving up the work site

10.1 Normal arrangements

When each COSS/IWA no longer needs to be on or near the line, or they are sure the work may safely continue without the protection provided by you, the COSS/IWA will tell you and sign your RT3199 ERTMS certificate.

10.2 Arrangements where the COSS or IWA is to telephone the ES or SWLs

Note: this arrangement is only permitted where it has been planned and published in advance and you and the COSS or IWA are aware of what is to happen.

When each COSS or IWA no longer needs to be on or near the line, or they are sure the work may safely continue without the protection provided by you, the COSS or IWA will tell you:

- their name
- the location of their work
- their authority number
- that they no longer need protection.

You must record the details on your RT3199 ERTMS certificate.

10.3 When every COSS or IWA no longer needs protection

You must contact the PICOP and ask for permission to remove your WSMBs when the line is clear of all engineering trains or OTP and every COSS or IWA has stated that they no longer need your protection and:

- has signed your RT3199 ERTMS certificate, as shown in section 10.1, or
- has telephoned you, giving their authority number, as shown in section 10.2.

When you have removed all of the WSMBs, you must tell the PICOP that, as far as you are concerned, the line is safe and clear, and your work site is given up.

You must record the details on your RT3199 ERTMS certificate.

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