

Rule Book Module TW5
GERT8000-TW5
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Preparation and movement of trains: Defective or isolated vehicles and on- train equipment

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Conventions used in the Rule Book

Example

A black line in the margin indicates a change to that rule since the last printed version. The Rule Book Briefing Leaflet in the online Standards Catalogue contains more information about the changes.
Green text in the margin indicates who is responsible for carrying out the rule.

A white i in a blue box indicates that there is information provided at the bottom of the page.

A rule printed inside a red box is considered to be critical and is therefore emphasised in this way.

driver



If you do not understand anything in the Rule Book, ask your manager or supervisor to explain it to you.

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You will need this module if you carry out the duties of a:

- driver
- guard
- signaller
- train preparer.

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1

Reporting defective or isolated on-train equipment

The people responsible: driver, guard, signaller

1.1 Driver reporting a defect

a) Stopping the train immediately

You must stop your train and tell the signaller as soon as you become aware of a defect with the:

- air suspension
- automatic warning system (AWS) - if in operation on the train
- axle boxes
- brakes
- doors if they cannot be closed
- driver's safety device (DSD)
- driver's vigilance equipment
- driving cab window - broken or obscured
- driving controls
- emergency bypass switch (EBS)
- ERTMS on-train equipment - if in operation on the train
- external orange hazard lights
- headlights or tail lights
- lifeguards
- sanding equipment - if you believe you may have difficulty stopping the train if it continues in service
- selective door-opening - if you consider this may be due to defective lineside equipment
- speedometer, other than DMI displaying the incorrect units of speed

driver

driver

- track circuit actuators (TCA) - if the train cannot continue normally
- traction interlock switch (TIS)
- train protection and warning system (TPWS) - if in operation on the train
- warning horn - complete failure
- wheel slide protection - if you believe you may have difficulty stopping the train if it continues in service

If possible, you must avoid stopping the train:

- on a viaduct
- in a tunnel
- at the entrance to a station
- on or near points until the last vehicle of the train is clear
- on a level crossing
- at any other place where it might be difficult to deal with the situation.

b) Stopping the train at the first convenient opportunity

You must tell the signaller at the first convenient opportunity, stopping the train specially if necessary, when you become aware of a defect with the train radio equipment.

driver

You must stop your train at the first convenient opportunity and tell the train operators control when you become aware of a defect with the:

- automatic warning system (AWS) - if not in operation on the train
- doors unless they cannot be closed
- driver's reminder appliance
- ERTMS on-train equipment - if not in operation on the train
- on-train data recorder
- public address system on DO trains
- sanding equipment - unless you believe you may have difficulty stopping the train if it continues in service
- DMI if it is displaying the incorrect units of speed
- selective door-opening - unless you consider this may be due to defective lineside equipment
- track circuit actuators (TCA) - if the train can continue normally
- train protection and warning system (TPWS) - if not in operation on the train
- warning horn - partial failure
- wheel slide protection - unless you believe you may have difficulty stopping the train if it continues in service.

c) General

If you isolate an item of defective on-train equipment that will affect the movement of the train, you must tell the signaller immediately.

If the train stops out of course or might not be able to depart on time, you must tell the signaller immediately.

After reporting the defect you must make sure you receive instructions on how the defect is to be dealt with and the arrangements for further movement.

driver

If you receive any instructions from your train operator's control that the train is fit to continue its journey, you must not consider this as permission for the train to proceed.

You must:

driver

- tell the signaller what you have been told by your train operator's control
- not proceed on your journey until the signaller gives you permission to do so
- carry out any instructions the signaller gives you.

If reporting the defect to the train operator's control will cause delay, you must tell the signaller the reason for the delay.

You must:

signaller

- tell the Operations Control what the driver has told you
- not allow the train to proceed on its journey until Operations Control gives you permission to do so
- tell the driver about any instructions you have been given by Operations Control.

If the train has stopped in a position which prevents the movement of other trains, you may, if the circumstances allow, authorise the driver to move the train to clear points or junctions.

1.2 Guard reporting a defect

If you become aware that on-train equipment is defective and this may affect normal movement of the train, you must tell the driver immediately. **i**

guard

If you become aware that on-train equipment is defective, but this will not affect normal movement of the train, you must tell the train operator's control.

If you do not have a way to contact the train operator's control, you must ask the driver to do this.



In this module the term 'normal movement of the train' means that the train can accelerate, travel and stop in the normal way without speed restriction or special travel conditions.

1.3 Signaller receiving a report from a driver

signaller

If a driver tells you about defective or isolated on-train equipment, you must:

- if necessary take action to stop trains and protect any line affected
- tell Operations Control
- make a suitable entry in the Train Register.

1.4 Signaller receiving instructions from Operations Control

signaller

When you receive instructions from Operations Control about the action to be taken with the train, you must:

- pass the instructions to the driver immediately
- make sure the driver understands clearly what action to take
- make a suitable entry in the Train Register.

1.5 Giving instructions to the driver

signaller

You must give directly to the driver any instructions from Operations Control relating to the movement of the train.

driver

Any instruction relating to the movement of the train will be given to you directly by the signaller.

driver, signaller

In exceptional circumstances, instructions may be given to vary the conditions shown in this module. The conditions shown in this module cannot be varied for AWS, ERTMS or TPWS equipment.

2

Competent person travelling with driver

The people responsible: competent person, driver

2.1 General instructions

If the automatic warning system (AWS), train protection and warning system (TPWS), driver's safety device (DSD) or driver's vigilance equipment fails, or if the windscreen becomes broken or obscured, a competent person may be provided to travel with you.

driver

When you are accompanied by a competent person, you must tell the competent person which equipment is defective and what to do.

2.2 Defective or isolated AWS or TPWS

When approaching a signal, you must:

driver

- call out the signal aspect or indications to the competent person
- give a commentary on the speed reduction on the approach to cautionary and stop aspects.

On the approach to speed restrictions, you must tell the competent person that you are applying the brakes to observe the restriction.

You must:

competent
person

- acknowledge the driver's reaction to signal aspects, sequences or indications
- if necessary, remind the driver of a signal displaying a cautionary or stop aspect
- acknowledge the driver's reaction to speed restrictions
- if necessary, remind the driver of the speed restriction ahead.

2.3 Broken or obscured windscreen

competent
person

You must help and advise the driver with sighting signals, speed restrictions, lineside signs, stations, level crossings and anything else on the line which the driver needs to be aware of.

2.4 Defective or isolated DSD or driver's vigilance equipment

driver

If necessary you must point out and explain to the competent person the relevant equipment needed for stopping the train in an emergency and how to contact the signaller.

competent
person

You must confirm to the driver that you understand how to stop the train in an emergency and contact the signaller.

If the driver becomes unable to drive, you must stop the train immediately and tell the signaller, by using the train radio if possible.

3

Air suspension

The people responsible: driver, train preparer

3.1 Starting a journey from a maintenance depot

You must not allow a train to start a journey if the air suspension is not inflated on any bogie.

driver,
train
preparer

3.2 Starting a journey from somewhere other than a maintenance depot

If the air suspension is not inflated on any bogie, you must tell the train operator's control.

driver,
train
preparer

If the train operator's control gives authority to start a journey, you must comply with any speed or route restrictions given. You must make sure that the signaller is aware of these restrictions.

3.3 During a journey

If the air suspension becomes deflated on any bogie, you must:

driver

- stop your train immediately
- tell the signaller
- not move the train until instructed to do so
- carry out the instructions given.

4

Automatic warning system (AWS)

The people responsible: driver, train preparer

4.1 Starting a journey from a maintenance depot

driver,
train
preparer

You must not allow a train to start a journey if the AWS is defective in any cab which is required to be driven from when AWS is required to be in operation.

4.2 Starting a journey from somewhere other than a maintenance depot

driver,
train
preparer

You can allow a train to start a journey with the AWS defective or isolated in the cab to be driven from, as long as AWS will not be required to be in operation during the journey.

You must:

- tell the train operator's control at the first convenient opportunity
- carry out any instructions given.

You can allow a train to start a journey (but not carrying passengers) with AWS defective or isolated in the cab to be driven from, when AWS is required to be in operation, to travel to a maintenance depot for repair as long as you:

- tell the signaller
- get permission for the train to start a journey in this condition.

4.3 If the AWS becomes defective during a journey

If you become aware that the AWS has become defective when it is required to be in operation, you must:

driver

- stop your train immediately
- tell the signaller
- not move the train until instructed to do so
- carry out the instructions given.

If you become aware that the AWS has become defective when it is not required to be in operation, you must:

- tell the train operator's control at the first convenient opportunity
- carry out any instructions given.

4.4 Isolating the AWS during a journey

You may isolate the AWS when it is required to be in operation only when:

driver

- cancelling the AWS warning indication does not stop the horn sounding or the brakes applying
- successive or intermittent failures suggest that the AWS equipment is defective
- the train stops directly over the track equipment.

If the AWS has been isolated because the train stopped with the receiver directly over the track equipment, you must, if possible, make sure the AWS is made operative again immediately when restarting the train.

If it becomes necessary to isolate the AWS, you must:

- stop your train immediately
- tell the signaller
- not move the train until instructed to do so
- carry out the instructions given.

driver

You do not have to carry out these instructions if it is necessary to isolate the AWS on an on-track machine before it can work in a protection zone.

4.5 If the AWS is defective or isolated

driver

If permission is given for a train to start a journey or proceed after the AWS has become defective or been isolated, you must follow the conditions in the table below during any part of the journey where AWS would normally be in operation.

Competent person not provided	Competent person is provided
Freight trains and OTMs can proceed at a speed not exceeding 50 mph (80 km/h) all other trains can proceed at a speed not exceeding 60 mph (95 km/h), or any lower permissible speed that may apply, to the location where a competent person is to be provided. During poor visibility, the train must not exceed 40 mph (65 km/h).	Proceed at normal permissible speed. During poor visibility, the train must not exceed 40 mph (65 km/h).

5

Brake defects

The people responsible: **driver, guard**

5.1 Brake not working correctly

If you suspect that the automatic brake is not working correctly, you must:

driver

- if necessary, stop the train
- report the circumstances to the signaller immediately
- carry out the instructions given
- if permission is given to proceed, travel at reduced speed as necessary to maintain full control of the train
- if the train is operating under ERTMS, adjust train data to the revised brake force and speed.

5.2 Brake-pipe parting

If the train comes to a stand because the brake-pipe coupling heads separate, you must try to recouple them if they are undamaged.

driver

If this can be done, you may continue normally as long as you:

- tell the signaller
- carry out a brake continuity test.

5.3 Coaching stock train with brakes no longer operating on more vehicles than is allowed

If the brakes are no longer operating on more vehicles than is allowed, as shown in module TW1, section 4.4, if the train is to continue, you must travel at a speed which will allow you to keep full control of the train.

driver

5.4 Brake no longer operating on the leading vehicle of a passenger train

driver

If the brake is no longer operating on the leading vehicle, you must tell the signaller immediately and carry out the instructions given.

The train must be assisted from the front unless one of the following applies.

- The line ahead is rising.
- The leading vehicle is fitted with a parking brake which can be applied in an emergency, in which case the movement must not exceed 5 mph (10 km/h).
- The leading vehicle is coupled by a bar coupling to the next vehicle, and the brake is operating normally on that vehicle.

driver of a
DO train,
guard

You must transfer passengers to a vehicle on which the brake is operating unless:

- this is not possible, or
- the vehicle is coupled by a bar coupling to the next vehicle, and the brake is operating on that vehicle.

guard

You must travel in other than the leading vehicle to secure the train in an emergency unless:

- the train is being assisted from the front
- the leading vehicle is coupled by a bar coupling to the next vehicle, and the brake is operating normally on that vehicle.

driver

On a DO train a competent person must be provided to travel in a vehicle other than the leading vehicle to secure the train in an emergency unless:

- the train is being assisted from the front
- the leading vehicle is coupled by a bar coupling to the next vehicle, and the brake is operating normally on that vehicle.

Loss of brake continuity

If control of the automatic brake is no longer continuous throughout the train, you must drive the train from a cab where you have control of the automatic brake. You must apply the instructions shown in section 11 of this module, making sure that:

- the leading cab, in which a competent person must ride, has a hand or parking brake operating on the first vehicle
- the train does not exceed 5 mph (10 km/h).

driver of a
DO train,
guard

5.5 Brake no longer operating on the last vehicle

If the brake is no longer operating on the last vehicle, you must tell the signaller immediately and carry out the instructions given.

driver

The train must be assisted in rear unless one of the following applies.

- The line ahead is level or falling.
- The last vehicle is provided with a hand or parking brake operating on that vehicle.
- The last vehicle is coupled by a bar coupling to the next vehicle, and the brake is operating normally on that vehicle.

You must transfer passengers to a vehicle on which the brake is operating unless:

driver of a
DO train,
guard

- this is not possible, or
- the vehicle is coupled by a bar coupling to the next vehicle, and the brake is operating normally on that vehicle.

You must travel in the rear vehicle to apply the hand or parking brake in an emergency unless:

guard

- the train is being assisted from the rear
- the rear vehicle is coupled by a bar coupling to the next vehicle, and the brake is operating normally on that vehicle.

and comes into force on 06/12/2025

- the train is being assisted from the rear
- the rear vehicle is coupled by a bar coupling to the next vehicle, and the brake is operating normally on that vehicle.

If control of the automatic brake is no longer continuous throughout the train, you must not exceed 5 mph (10 km/h).

You must make sure, as often as possible, that the train is still complete.

6

Door defects on passenger vehicles

The people responsible: driver, guard, signaller, train preparer

6.1 Starting a journey

You must not allow a train to start a journey with a bodyside door that is defective and cannot be used, unless the train operator's control has given authority to do so. You must carry out any instructions given.

driver,
guard,
train
preparer

6.2 Arrangements for defective doors

You must make sure that any bodyside door which is defective is locked or made inoperative and that there is a label or indication that it is out of use.

driver,
guard,
train
preparer

You must also do this to any door which is not locking or releasing correctly (including by the central door locking).

In an emergency, if the door can still be opened by passengers inside the vehicle then the label or indication must show this.

6.3 Vehicles which passengers must not travel in

If a bodyside door is defective and has been locked or made inoperative, it may also be necessary to move passengers to another part of the train or to place the vehicle out of passenger use.

driver,
guard,
train
preparer

You must carry out any instructions given by your train operator's control.

6.4 If the doors on one or both sides cannot be released

driver

If all the doors on one or both sides cannot be released, you must:

- report the circumstances to the signaller immediately
- carry out the instructions given.

6.5 If the train has to be worked forward with a door open

driver of a
DO train,
guard

If the train has to be worked forward with a door open, it must be taken out of passenger service.

If the train is not at a station, you must:

- transfer passengers to another vehicle
- close and lock the vestibule doors on the affected vehicle.

If you are not able to do both of these, passengers must be kept as far away from the open door as possible. If a guard or other competent person is available, they must travel in the affected vehicle. The train must be taken out of passenger service at the next station. Exceptionally if the next station cannot deal with the detained passengers, or during severe weather, the train operator can give permission for the train to continue to a more suitable station.

driver

You must tell the signaller that the door cannot be closed and get permission to make a movement with the door open. If the open door increases the width of the train, you must tell the signaller.

signaller

If the open door increases the width of the train, you must make sure that you do not allow the train to pass, or be passed by, any moving train on a line adjacent to the open door.

guard

When it is safe for the train to start, you must give the **'ready-to-start'** signal to the driver after the doors have been checked.

If the bell or buzzer communication does not work, you must give the **'ready-to-start'** signal to the driver by either:

- handsignal, or
- by speaking to the driver to reach a clear understanding.

After receiving the **'ready-to-start'** signal, you must proceed at caution and take special care when passing any structure or vehicle where clearance with the open door is limited.

guard

driver

7 | Driver machine interface (DMI)

driver,
train
preparer

7.1 Starting a journey

You must not allow a train to start a journey if the DMI is defective in any cab which is required to be driven from when the DMI is required to be in operation.

driver

7.2 During a journey

If the DMI becomes defective during a journey when required to be in operation and there are no alternative controls, you must:

- stop the train immediately
- tell the signaller
- not move your train until instructed to do so
- carry out the instructions given.

8

Driver's reminder appliance (DRA)

The people responsible: driver, train preparer

8.1 Starting a journey from a maintenance depot

You must not allow a train to start a journey if you are aware that the DRA is defective in any cab that is required to be driven from when the DRA is required to be in use.

driver,
train
preparer

8.2 Starting a journey from somewhere other than a maintenance depot

If you are aware that the DRA is defective in any cab that is required to be driven from when the DRA is required to be used, you must tell the train operator's control.

driver

If the train operator's control gives authority to start a journey, you must carry out any instructions given.

8.3 During a journey

If the DRA becomes defective on a train during a journey, you must:

- tell the train operator's control at the first convenient opportunity
- carry out the instructions given.

driver

9.4 During a journey

If the DSD becomes defective, or you need to isolate the vigilance equipment, you must:

- stop the train immediately
- tell the signaller
- not move the train until instructed to do so
- carry out the instructions given.

If permission is given for the train to proceed, you must apply the conditions in the following table.

	Competent person not provided	Competent person provided
Passenger train	60 mph (95 km/h)	Normal permissible speed
Freight or OTM	50 mph (80 km/h)	Normal permissible speed

If the DSD becomes defective at the same time as an AWS, TPWS or ERTMS failure, you must apply the conditions for that failure.

If the DSD becomes defective when neither AWS nor TPWS are operating when required, you must not make any movement until a competent person is provided.

driver

10

Driving cab windows or side glazing - broken or obscured

The people responsible: driver, train preparer

10.1 Starting a journey from a maintenance depot

driver,
train
preparer

You must not allow a train to start a journey if you do not have a clear view of:

- the line ahead, or
- train dispatch equipment through any window or side glazing which may need to be used.

10.2 Starting a journey from somewhere other than a maintenance depot or during a journey

driver

If you do not have a clear view of the line ahead because the windscreen is broken or obscured, you must take appropriate action. This may include reducing speed and using the warning horn (both tones if available) as necessary to make sure that the train, or anyone on or near the line, is not placed in any danger.

If the train cannot proceed safely, you must:

- stop the train immediately
- tell the signaller
- if necessary, ask for a competent person to assist you
- not move the train until instructed to do so
- carry out the instructions given.

If you do not have a clear view of the train dispatch equipment through any window or side glazing which may need to be used, you must:

- tell the train operator's control at the first convenient opportunity
- carry out the instructions given.

driver

11 | Driving controls defective

The people responsible: competent person, driver

| 11.1 During a journey

driver

If the driving controls become defective in the leading cab, you must:

- stop the train immediately
- tell the signaller
- not move the train until instructed to do so
- carry out the instructions given.

A competent person must be provided to ride in the leading cab, if permission is given for the train to proceed, driven from another cab, which must be forward-facing if one is available.

If the automatic brake cannot be applied by the competent person because only a hand or parking brake is available in the leading cab, the train must not exceed 5 mph (10 km/h).

| 11.2 Duties of the competent person

competent person

If you are to travel in the leading driving cab in which the driving controls are defective and the train is being driven from another cab you must:

- keep a good lookout
- use the warning horn as necessary
- observe all signals and block markers.

You must give instructions to the driver as necessary by:

- cab-to-cab telephone
- driver-guard communication equipment
- radio
- bell or buzzer
- handsignal.

competent
person

You must be prepared to stop the movement in an emergency.

12 | Emergency bypass switch (EBS)

The people responsible: competent person, driver, guard, signaller, train preparer

12.1 Starting a journey from a maintenance depot

driver,
train
preparer

You must not allow a train to start a journey if the EBS has been operated in any driving cab.

12.2 Starting a journey from somewhere other than a maintenance depot

driver

A train can start a journey (but not carrying passengers) if the EBS has been operated in any driving cab to travel to a maintenance depot for repair as long as you:

- tell the signaller
- get permission for the train to start a journey in this condition
- tell the guard, if there is one, about the circumstances.

If the train is formed of more than one unit and is to travel over a line that is not signalled by TCB or ERTMS, a guard or competent person must be provided.

guard

You must travel in the rear unit.

competent
person

You must travel in the rear unit and, if necessary, carry out the instructions in Rule Book module M1 *Dealing with a train accident or train evacuation*.

signaller

If a track circuit remains occupied after the passage of a train on which the EBS has been operated, you must immediately contact the driver to find out if the train is complete.

12.3 Operating the EBS during a journey

If you need to operate the EBS, you must:

- tell the signaller immediately
- not move the train until instructed to do so
- carry out the instructions given.

If the train is to be moved, you must tell the guard, if there is one, about the circumstances.

If the train is formed of more than one multiple unit you must:

- transfer all passengers to the leading unit, if it is possible
- lock the remaining units out of use.

You must travel in the rear unit.

If a guard is not able to travel in the rear unit, if possible you must arrange for a competent person to travel in the rear unit.

You must travel in the rear unit and, if necessary, carry out the instructions in Rule Book module M1 *Dealing with a train accident or train evacuation*.

If a track circuit remains occupied after the passage of a train on which the EBS has been operated, you must immediately contact the driver to find out if the train is complete.

driver

driver of a
DO train,
guard

guard

driver

competent
person

signaller

13 | ERTMS onboard equipment

The people responsible: driver, signaller, train preparer

13.1 Starting a journey from a maintenance depot

driver,
train
preparer

You must not allow a train to start a journey if the ERTMS onboard equipment is defective in any cab which is required to be driven from at any time during its planned workings with ERTMS in operation.

13.2 Starting a journey from somewhere other than a maintenance depot

driver,
train
preparer

a) On a line where ERTMS is not required to be in operation

You can allow a train to start a journey with defective ERTMS onboard equipment in the cab to be driven from, as long as ERTMS will not be required to be in operation during the journey.

You must:

- tell the train operator's control at the first convenient opportunity
- carry out any instructions given.

b) On an ERTMS line with signals

You can allow a train to start a journey from other than a maintenance depot with defective ERTMS onboard equipment in the cab to be driven from, as long as AWS and TPWS are operating.

You must:

- tell the train operator's control at the first convenient opportunity
- carry out any instructions given.

c) On an ERTMS line without signals

You can allow a train to start a journey from other than a maintenance depot with defective ERTMS onboard equipment in the cab to be driven from to travel (not carrying passengers) to a maintenance depot for repair.

You must:

- tell the signaller what the fault is
- get permission for the train to start a journey in this condition.

You must:

- tell the train operator's control what the driver has told you
- tell the driver about any instructions you have been given by the train operator's control.

If permission is given for the train to start a journey, you must tell the driver of the train with defective ERTMS onboard equipment not to proceed beyond the EoA on the approach to the EoA that protects any conflicting or converging movements ahead of it.

You must tell the next signaller who is to signal the train that the ERTMS onboard equipment is not in operation on the train.

If you are authorised to proceed, the signaller will authorise you to pass each end of authority without a movement authority, as shown in module S5 'Passing a signal at danger or an end of authority (EoA) without a movement authority (MA)'.

If the train is to be assisted, you must not proceed until:

- the assisting train has been coupled
- the ERTMS is confirmed to be working correctly
- the signaller has given permission for the journey to start.

driver,
train
preparer

signaller

driver

13.3 During a journey

a) On a line where ERTMS is not required to be in operation

If the ERTMS onboard equipment becomes defective when it is not required to be in operation, you must:

- tell the train operator's control at the first convenient opportunity
- carry out any instructions given.

b) On an ERTMS line

If the ERTMS onboard equipment becomes defective when it is required to be in operation, the train may be allowed to proceed under the conditions in section 13.2.

You must:

- stop your train immediately
- tell the signaller
- not move the train until instructed to do so
- carry out the instructions given.

13.4 If a train fails to transition to ERTMS

When entering an ERTMS area where signals are provided, if your train fails to transition automatically when expected to transition, as long as AWS and TPWS are operating, you may proceed at normal permissible speed, obeying all signals.

You must:

- tell the signaller at the first convenient opportunity, unless you have already been told that the train will not transition
- tell the train operator's control at the first convenient opportunity
- carry out any instructions given.

You must signal the train normally as though it is a train on which ERTMS is not operating.

You must tell the next signaller who is to signal the train that the ERTMS onboard equipment is not in operation on the train.

14

External orange hazard lights

The people responsible: driver, guard, signaller

14.1 Signaller becoming aware of an illuminated orange hazard light

You must arrange for the driver to be told if you become aware of a train with an illuminated orange hazard light and you have not been told the reason.

signaller

You must not stop the train specially unless you notice anything else unusual affecting the train.

14.2 Guard becoming aware of an illuminated orange hazard light

If you become aware that an external orange hazard light is irregularly illuminated on your train, you must tell the driver.

guard

14.3 Train starting or continuing a journey

If the train is to start or continue a journey with an orange hazard light illuminated, you must tell the signaller immediately.

driver

On receiving advice from the driver about the circumstances, you must tell Operations Control immediately and arrange for any other signaller concerned to be told.

signaller

15

Headlights, marker lights and tail lamps

The people responsible: driver, signaller, train preparer

15.1 Starting a journey from a maintenance depot

driver,
train
preparer

You must not allow a train to start a journey if any headlight, tail lamp or marker light is defective on any vehicle that is required to be at the front or rear of a train.

15.2 Starting a journey from somewhere other than a maintenance depot

driver,
train
preparer

You must not allow a train to start a journey without a working headlight or tail lamp on any vehicle which is required to be at the front or rear of a train.

If the headlight has failed and there is no other headlight, the train can start a journey if a portable headlight is provided and the speed of the train is restricted to 75 mph (120 km/h).

A train can start a journey with a defective tail lamp if the train is fitted with two built-in tail lamps, one of which is working, or a portable tail lamp is provided.

15.3 During a journey

If you become aware that a train is proceeding without a headlight illuminated on the front, you must arrange for the driver to be told in the quickest way possible.

If the train has to be stopped specially to tell the driver, but you cannot do this without stopping it suddenly, you must tell the next signaller.

You must deal with any headlight or tail lamp failure as shown in the following table.

signaller

driver

Type of failure	Action the driver must take
A failure of one headlight beam	• Use the other day or night beam • Report the circumstances to the train operator's control at the first convenient opportunity • The train may proceed normally
The headlight has completely failed	• Stop the train immediately • Arrange for a white light to be displayed at the front of the train (An operative marker light can be treated as a white light) • Tell the signaller • Not move the train until instructed to do so • Carry out the instructions given • Not allow the speed of the train to exceed 20 mph (30 km/h) • Sound the warning horn (both tones if available) as necessary to warn anyone on or near the line • If a portable headlight is provided, you must not allow the speed of the train to exceed 75 mph (120 km/h)
Complete failure of tail lamp	• Report the circumstances to the signaller immediately • Arrange for a handlamp with a red aspect to be displayed at the rear of the train • Report the circumstances to the train operator's control at the first convenient opportunity
Failure of one tail lamp where two built-in lamps are provided	• Report the circumstances to the train operator's control at the first convenient opportunity • The train may proceed normally

16

Hot axlebox detectors (HABD) and axle bearings

The people responsible: driver, guard, signaller, train preparer

16.1 Starting a journey

You must not allow a train or vehicle to start a journey with a hot axlebox, a defective axle bearing or a defective onboard detection system.

driver,
train
preparer

16.2 Vehicle developing a hot axlebox

If you become aware that a vehicle on your train has developed a hot axlebox, you must:

driver

- stop the train immediately
- tell the signaller
- if your train is carrying dangerous goods, tell the signaller
- not move the train until instructed to do so
- carry out the instructions given.

You must, if possible, arrange for passengers to be transferred from the affected vehicle.

driver of a
DO train,
guard

If you have any doubt about whether the movement can be made safely, you must get the authority of a rolling stock technician.

driver

During the movement, you must not allow the speed of the train to exceed:

- 10 mph (15 km/h)
- 5 mph (10 km/h) over any points or crossings.

You must stop all trains on the adjacent line or lines before giving the driver authority for the movement to be made.

signaller

16.3 Vehicle activating a lineside hot axlebox detector or receiving a report of a hot axlebox from another source

a) When the alarm operates

signaller

When the alarm operates in the signal box, or you receive a report of a hot axlebox detection from another source, you must:

- stop the train concerned immediately
- stop any trains on the adjacent line or lines
- advise Operations Control.

b) After the train has been stopped

When the train has been stopped, you must tell the driver:

- which axlebox is affected by identifying the axle number (counting from the front of the train including the locomotive where appropriate)
- on which side of the train (in the direction of travel) the affected axlebox is
- to examine the vehicle concerned.

If you do not know which axlebox is affected, you must:

- give the driver as much information as possible
- tell the driver the approximate location of the defective vehicle
- tell the driver to examine the whole train if necessary.

You must also ask the driver to tell you if the adjacent line or lines are obstructed.

If the driver tells you that the adjacent line or lines are clear, you can allow any other train which has been stopped to proceed.

c) Delay in carrying out an examination

driver

If you are unable to carry out the examination within 10 minutes of stopping, you must:

- tell the signaller
- carry out the instructions given
- if the train is to be moved, proceed at no more than 20 mph (30 km/h).

16.4 Checking for evidence of overheating

If a rolling stock technician is not available immediately to carry out the examination, you must examine the vehicle concerned for evidence of overheating.

driver

After examining the axlebox concerned, if there is no evidence of overheating, you must continue to check the other axleboxes to see if they are at similar temperatures, as follows.

- All axleboxes on both sides of the vehicle concerned.
- All the axleboxes on the vehicles on either side of the vehicle concerned.

When you have examined the affected vehicle, you must tell the signaller if you have found any defects.

| 16.5 No evidence of overheating

driver

If the examination reveals no evidence of overheating to any axlebox and all the vehicles examined have roller bearings, the train can proceed normally.

If the train is stopped because of another hot axlebox detector activation within 50 miles (80 kilometres), or any of the vehicles examined have other than roller bearings you must:

- not move the train until instructed to do so
- carry out the instructions given
- if the train is to be moved, proceed at no more than 20 mph (30 km/h).

| 16.6 If there is evidence of overheating

driver

If an axlebox is obviously hot, or hotter than those on the same vehicle or on a vehicle on either side, you can move the train to the next location where it can be dealt with.

If you have any doubt about whether the movement can be made safely, you must get the authority of a rolling stock technician.

If the train is to be moved, you must get authority from the signaller for the movement to be made.

**driver of a
DO train,
guard**

You must, if possible, arrange for passengers to be transferred from the affected vehicle.

driver

During the movement, you must not allow the speed of the train to exceed:

- 10 mph (15 km/h)
- 5 mph (10 km/h) over any points and crossings.

signaller

You must stop all trains on the adjacent lines before giving the driver authority for the movement to be made.

16.7 Activation of an onboard detection system

When an onboard detection system is activated or becomes defective during a journey, you must:

- tell the signaller immediately
- unless a rolling stock technician is immediately available, examine the axlebox concerned to check whether it is overheated.

If the train is to be moved, you must get authority from the signaller.

If you have any doubt about whether the movement can be made safely, you must get the authority of a rolling stock technician.

You must, if possible, arrange for passengers to be transferred from the affected vehicle.

During the movement, you must not allow the speed of the train to exceed:

- 10 mph (15 km/h)
- 5 mph (10 km/h) over any points and crossings.

You must stop all trains on the adjacent lines before giving the driver authority for the movement to be made.

16.8 No evidence of overheating after an onboard detection system activation

If the examination reveals no evidence of overheating, the train can proceed normally.

driver

driver of a
DO train,
guard

driver

signaller

driver

driver

If the train is stopped because of a second activation of the same onboard detection system, or a lineside activation occurs, you must:

- not move the train until instructed to do so
- carry out the instructions given
- if the train is to be moved, proceed at no more than 20 mph (30 km/h).

17

Lifeguards

The people responsible: driver, train preparer

17.1 Starting a journey

You must not allow a train to start a journey with a loose or damaged lifeguard.

driver,
train
preparer

You must not allow a train to start a journey with a missing lifeguard at any cab which is required to be used.

17.2 During a journey

If you become aware that a lifeguard is missing, loose or damaged, you must:

driver

- tell the signaller immediately
- not move until instructed to do so
- carry out the instructions given.

If you have any doubts about whether the movement can be made safely, you must get the authority of a rolling stock technician.

18 | On-train data recorder (OTDR)

The people responsible: driver, train preparer

Note: OTDR includes the Juridical Recording Unit (JRU), the recorder legally required on trains on which ERTMS is in operation.

18.1 Starting a journey from a maintenance depot

driver,
train
preparer

You must not allow a train to start a journey if you are aware that the OTDR that records activity of the leading cab is defective.

18.2 Starting a journey from somewhere other than a maintenance depot or during a journey

driver

If you become aware of an OTDR becoming defective on a train when starting a journey from somewhere other than a maintenance depot or during a journey, you must:

- tell your train operator's control at the first convenient opportunity
- carry out the instructions given.

19

Public address system on DO trains |

The people responsible: driver, train preparer

19.1 Starting a journey |

On a DO train, passengers must not be allowed to travel in vehicles on which the public address system is not working.

driver,
train
preparer

Before starting a journey, you must place any of these vehicles out of passenger use by:

- locking or making the external doors inoperative and making sure that there is a label or indication that they are out of use
- closing and locking the vestibule doors leading to any of these vehicles.

19.2 During a journey |

If you become aware that the public address system is not working on a vehicle, you must:

driver

- tell the train operator's control at the first convenient opportunity
- carry out the instructions given
- if possible move the passengers to an unaffected vehicle and lock and label any defective vehicle out of use.

20

Sanding equipment to assist train braking

The people responsible: driver, train preparer

20.1 Starting a journey from a maintenance depot

driver,
train
preparer

You must not allow a train to start a journey if:

- any sanding equipment that will be the leading set at any time during the planned workings is defective
- there is no sand in one or more of the operative sand boxes.

If the train is fitted with multiple sanders and any sanding equipment that will be the leading set at any time during the planned workings is defective, you must:

- contact your train operator's control
- carry out the instructions given.

20.2 Starting a journey from somewhere other than a maintenance depot or during a journey

driver

You must carry out these instructions if you become aware of either of the following.

- Any sanding equipment that will be the leading set at any time during the planned workings of the train is defective or becomes defective.
- There is no sand in one or more of the operative sand boxes.

You must:

driver

- tell the train operator's control at the first convenient opportunity
- carry out the instructions given.

However, if you believe you may have difficulty stopping the train, you must:

- tell the signaller immediately
- not move the train until instructed to do so
- carry out the instructions given.

21 | Selective door operation

The people responsible: driver, signaller

driver

If selective door operation does not operate correctly and you consider that this may be due to defective lineside equipment, you must tell the signaller immediately.

signaller

If you become aware of the failure of lineside equipment provided for selective door operation, you must:

- tell operations control
- tell the driver of any following train which would use the equipment, about the circumstances.

22

Speedometer

The people responsible: driver, train preparer

22.1 Starting a journey

You must not allow a train to start a journey with a defective speedometer in any cab which is required to be driven from.

driver,
train
preparer

22.2 During a journey

If a speedometer becomes defective and there is no alternative speedometer in the cab, you must:

driver

- tell the signaller immediately
- not move the train until instructed to do so
- carry out the instructions given.

If the train is to be moved, you must proceed at a speed that will make sure you are keeping to all speed restrictions.

When operating in ERTMS, if the speedometer fails to display the correct units of speed and has not corrected itself before the next block marker you must tell the signaller at the first convenient opportunity.

You must proceed at a speed that will make sure you are keeping to all speed restrictions.

23 | Track circuit actuators (TCA)

The people responsible: driver, signaller, train preparer

Note: The instructions in this section do not apply to an on-track machine (OTM) which is being hauled dead.

23.1 Starting a journey from a maintenance depot

driver,
train
preparer

You must not allow a train to start a journey if the TCA:

- is isolated on any vehicle
- isolating switch is unsealed
- warning light indicates a system fault.

23.2 Starting a journey from somewhere other than a maintenance depot

driver,
train
preparer

You can allow a train to start a journey with one or more defective or isolated TCAs, as long as:

- for a train formed of one or two vehicles, there is at least one TCA working on the train
- for a train formed of three or more vehicles, there is at least one TCA working on either of the first two vehicles and at least one TCA working on either of the last two vehicles.

You must first tell the train operator's control.

You may also allow a train that does not meet the requirements shown in this section to enter service as long as:

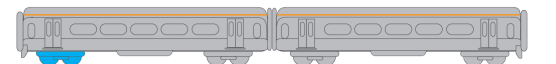
- there is at least one working TCA on the train
- you have received authority to do so from the train operator's control.

The following are some examples of some possible arrangements.

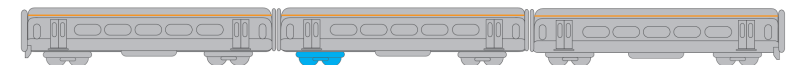
driver,
train
preparer



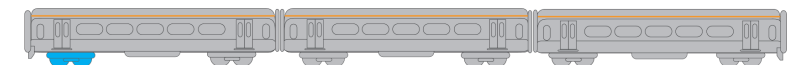
TCA working



Train can continue normally



Train can continue normally



Train can continue with authority



Train cannot continue normally

You can allow an OTM to start a journey with a defective TCA but only to:

driver,
train
preparer

- travel to a maintenance depot for repair, or
- travel directly, to or return from, an engineering possession.

You must tell the signaller that the OTM cannot be relied upon to operate track circuits.

| 23.3 During a journey

driver

a) When the train can continue normally

You can allow the train to proceed normally if one or more TCAs become defective during a journey, as long as:

- for a train formed of one or two vehicles, there is at least one TCA working on the train
- for a train formed of three or more vehicles, there is at least one TCA working on either of the first two vehicles and at least one TCA working on either of the last two vehicles.

You must:

- tell the train operator's control at the first convenient opportunity
- carry out the instructions given.

You do not have to carry out any of the instructions in this section if it is necessary to isolate the TCA on an on-track machine before it can work in a protection zone.

driver

b) When the train can continue normally with authority

If one or more TCAs become defective during a journey, and the train does not meet the requirements of section 23.3 a), you must:

- tell the signaller immediately which vehicle is defective
- not move the train until instructed to do so
- carry out the instructions given.

You can allow the train to continue its journey as long as:

- there is at least one working TCA on the train
- you are told that the train operator's control has given permission.

c) When the train cannot continue normally

You must carry out these instructions if a TCA becomes defective on any vehicle which does not meet the requirements of section 23.3 a) and cannot be given authority to continue its journey as shown in section 23.3 b).

signaller

You must:

driver

- not move the train until instructed to do so
- carry out the instructions given.

When you are told about the defective TCA, you must make sure the signal protecting the train is at danger or, on an ERTMS line, you keep the route closed to protect the train.

signaller

You must signal the train as shown in regulation 12 of Rule Book module TS1 *General signalling regulations*.

Except for an automatic half-barrier crossing (AHBC) provided with treadles, you must instruct the driver to approach at caution and not pass over until sure it is safe to do so, any:

- automatic level crossing
- barrow or foot crossing with white light indications.

When given authority to proceed, you can do so at normal speed.

driver

If you are told to approach any level crossing at caution, you must sound the warning horn continuously, from the location you start to travel at caution until the front of the train is on the crossing.

24 | Traction interlock switch (TIS)

The people responsible: driver, guard, train preparer

24.1 Starting a journey from a maintenance depot

driver,
train
preparer

You must not allow a train to start a journey if the TIS has been operated or is unsealed in any cab.

24.2 Starting a journey from somewhere other than a maintenance depot

driver,
train
preparer

You must not allow a train to start a journey conveying passengers if the TIS has been operated.

24.3 Operating the TIS

driver

If it becomes necessary to operate the TIS, you must only do this:

- when the train is at a stand
- when you cannot get traction power
- after you have checked that all the doors on both sides of the train are securely closed.

When you have operated the TIS, you must:

- tell the signaller immediately
- not move the train until instructed to do so
- tell the guard
- carry out the instructions given.

24.4 Before the movement begins

Before the movement begins, you must check all doors on both sides of the train to make sure they are securely closed.

On each occasion that the doors are released, you must check all doors on that side of the train to make sure they are securely closed.

driver of a
DO train,
guard

24.5 When the journey is over

You must restore the TIS to the normal position before shutting down the driving controls when the train is:

- stabled
- reversed
- coupled to another train and you are driving the train from another cab.

You must not leave a switch in the isolate position in any driving cab other than the cab from which the train is being driven.

This does not apply to a TIS which can only be restored by a rolling stock technician.

driver

25

Train protection and warning system (TPWS)

The people responsible: driver, signaller, train preparer

25.1 Starting a journey from a maintenance depot

driver,
train
preparer

You must not allow a train to start a journey if the TPWS is defective in any cab which is required to be driven from when TPWS is required to be in operation.

25.2 Starting a journey from somewhere other than a maintenance depot

driver,
train
preparer

You can allow a train to start a journey with the TPWS defective in the cab to be driven from, as long as TPWS will not be required to be in operation during the journey.

You must:

- tell the train operator's control at the first convenient opportunity
- carry out any instructions given.

You can allow a train to start a journey (but not carrying passengers) with TPWS defective in the cab to be driven from when TPWS is required to be in operation to travel to a maintenance depot for repair as long as you:

- tell the signaller
- get permission for the train to start a journey in this condition.

25.3 During a journey

If the TPWS becomes defective when it should be in operation, you must:

driver

- stop your train immediately
- tell the signaller
- not move the train until instructed to do so
- carry out the instructions given.

If the TPWS becomes defective when it is not required to be in operation, you must:

- tell the train operator's control at the first convenient opportunity
- carry out any instructions given.

25.4 Failure to activate

If you become aware that TPWS has failed to activate when it should have done, you must:

driver

- stop your train immediately
- tell the signaller
- not move the train until instructed to do so
- carry out the instructions given.

25.5 If the TPWS is defective

If permission is given for a train to start a journey or proceed after the TPWS has become defective, you must follow the conditions in the table below during any part of the journey where TPWS would normally be in operation.

driver

driver

Competent person not provided	Competent person is provided
Freight trains and OTMs can proceed at a speed not exceeding 50 mph (80km/h) all other trains can proceed at a speed not exceeding 60 mph (95 km/h), or any lower permissible speed that may apply, to the location where a competent person is to be provided	Proceed at normal permissible speed

signaller

You must tell the next signaller who is to signal the train about the defective TPWS.

If permission is given for the train to proceed, you must apply the following signalling conditions.

a) On a track circuit block (TCB) line or an ERTMS line where lineside signals are provided

You must make sure that there are at least two controlled signals which are being kept at danger between the train with defective TPWS and any conflicting or converging movements ahead of it.

b) On an absolute block (AB) line

You must not accept a train with defective TPWS until the line is clear to your section signal.

If your home signal is also the section signal, you must not accept a train with defective TPWS until it has been accepted by the next signal box.

c) On a non-TCB single line

signaller

You must not allow a train with defective TPWS to approach a crossing loop if a train is approaching the crossing loop in the opposite direction.

At a junction you must not allow a train with defective TPWS to approach if any conflicting or converging movements are taking place.

26 | Train voice radio equipment

The people responsible: driver, train preparer

26.1 Starting a journey from a maintenance depot

driver,
train
preparer

You must not allow a train to start a journey with a defective radio in any cab which is required to be driven from at any time during its planned working.

26.2 Starting a journey from somewhere other than a maintenance depot

driver,
train
preparer

You must not allow a train to start a journey with a defective radio in any cab which is required to be driven from unless one of the following applies:

- Operative transportable or portable GSM-R radio equipment has been provided in the cab to be driven from.
- You have been given permission to start a journey and proceed to a location where operative transportable or portable GSM-R radio equipment will be provided in the cab to be driven from.
- A competent person has been provided in an alternative cab with an operative radio (as long as a direct means of communication is available between the driver and the competent person).
- You have been given permission to start a journey and proceed to a location where a competent person will be provided in an alternative cab.
- You have been given permission to start a journey and complete the journey without an operative radio in the cab to be driven from.
- The defective radio is not in the cab from which the train is to be driven from during the current journey.
- You have been told that there is a radio network failure.

If you are told that there is a radio network failure, you may be told not to allow the speed of your train to exceed 100 mph (160 km/h) or 60 mph (100 km/h) while passing through the area affected by the failure. You must control the speed of your train to no more than the speed that you have been told.

driver,
train
preparer

26.3 During a journey

If the radio in the cab which the train is being driven from becomes defective during a journey, you must:

- tell the signaller as soon as possible, stopping the train specially if necessary
- not move the train until instructed to do so
- carry out the instructions given.

The train can continue its journey as long as one of the following applies.

- Operative transportable or portable GSM-R radio equipment has been provided in the cab to be driven from.
- You have been given permission to proceed as far as a location where operative transportable or portable GSM-R radio equipment will be provided in the cab to be driven from.
- A competent person has been provided in an alternative cab with an operative radio (as long as a direct means of communication is available between you and the competent person).
- You have been given permission to proceed as far as a location where a competent person will be provided in an alternative cab.
- You have been given permission to complete the journey without an operative radio in the cab the train is being driven from.
- You have been told that there is a radio network failure.

If you are told that there is a radio network failure, you may be told not to allow the speed of your train to exceed 100 mph (160 km/h) or 60 mph (100 km/h) while passing through the area affected by the failure. You must control the speed of your train to no more than the speed that you have been told.

driver

27

Vehicles with locked wheels, wheel flats, shifted tyres or dragging brakes

The people responsible: driver, guard, signaller, train preparer

27.1 Starting a journey

You must not allow a train or vehicle to start a journey if you become aware of any of the following.

- Locked wheels.
- Shifted tyres.
- Dragging brakes.
- Obvious damage to the wheels (as shown in section 27.2 c) of this module).

27.2 During a journey

a) Dragging brakes

If you believe that the brakes on a vehicle may be dragging, you must:

- attempt to release the brakes on the vehicle locally
- examine the brakes, tyres and wheels for evidence of damage or overheating.

If the brakes cannot be fully released, they must be isolated.

You must check to see that the wheels rotate freely before you proceed.

If there is evidence of damage to the wheels, you must carry out the instructions shown in section 27.2 c) of this module.

driver,
train
preparer

driver,
guard

driver

If the brakes are still not fully released, you must not allow the speed of the train to exceed:

driver

- 10 mph (15 km/h)
- 5 mph (10 km/h) over points and crossings.

b) Checking for wheel rotation

After freeing locked wheels, you must make sure that the wheels will rotate freely before you proceed.

driver,
guard

c) Checking for damage to the wheels

After checking for locked or hot wheels, you must continue only as shown in the following table.

driver

Can wheels be freed?	Condition of wheels	Action to be taken
Yes	No evidence of damage	• The train can proceed normally • Tell your train operator's control at the first convenient opportunity
Yes	Obvious damage-flats approximately 60 - 100 mm	• Report the circumstances to the signaller immediately • Not move the train until instructed to do so by the signaller • Carry out the instructions given • If the train is to be moved, proceed at no more than 20 mph (30 km/h) unless instructed otherwise by a rolling stock technician
Yes	Serious damage such as: • a flat longer than 100 mm • a flat that has formed a flange on the outside of the wheel • suspicion that a tyre may have shifted	• Report the circumstances to the signaller immediately • Not move the train until it has been examined by a rolling stock technician • Not move the train until instructed to do so by the signaller • Carry out the instructions given

Can wheels be freed?	Condition of wheels	Action to be taken
No	Any condition	• Report the circumstances to the signaller immediately • Not move the train until it has been examined by a rolling stock technician • Not move the train until instructed to do so by the signaller • Carry out the instructions given

d) If there is doubt the train can proceed safely

You must:

- tell the signaller immediately
- not move the train until it has been examined by a rolling stock technician.

driver

e) If the damage to the vehicle is obvious

You must tell the signaller immediately.

If operations control tells you that the portion of line needs to be examined by an engineer, you must instruct the driver of each subsequent train to proceed at caution until it is safe to resume normal working.

driver
signaller

27.3 Detaching the defective vehicle

driver,
guard

If the damage to the wheels or brake gear is such that the brakes may not adequately secure the vehicle, you must:

- not detach the vehicle from the train until the vehicle has been properly secured
- let the signaller or person in charge of that location know the condition of the vehicle and where the vehicle is located.

27.4 Moving vehicles with wheelskates

driver,
signaller

Before the movement starts, you must find out the conditions of travel.

driver

If fitting the wheelskate results in 50% or more of the brake force of the vehicle being unavailable, you must treat the vehicle as being piped only.

You must only move a traction unit fitted with a wheelskate under its own power if at least 50% of the brake force of the traction unit is available and the parking brake is fully operative. On trains where ERTMS train data is in use, you must adjust the data to the revised brake force and speed.

28

Warning horn

The people responsible: driver, train preparer

28.1 Starting a journey from a maintenance depot

You must not allow a train to start a journey if you are aware the warning horn is defective in any cab that is required to be driven from.

driver,
train
preparer

28.2 Starting a journey from somewhere other than a maintenance depot

A train can start a journey if the warning horn is partially defective (for example, one tone not working) in a cab to be driven from, as long as you:

- tell the train operator's control at the first convenient opportunity
- carry out the instructions given.

driver,
train
preparer

28.3 During a journey

a) Complete failure

driver

If the warning horn becomes completely defective on a train, you must:

- stop the train immediately
- tell the signaller
- not move the train until instructed to do so
- carry out the instructions given.

If permission is given to proceed, you must:

- proceed at caution
- not exceed a speed of 20 mph (30 km/h).

b) Partial failure

driver

If the warning horn becomes partially defective (for example, one tone not working) on a train, you must:

- tell the train operator's control at the first convenient opportunity
- carry out the instructions given.

29

Wheel slide protection (WSP) equipment

The people responsible: driver, train preparer

29.1 Starting a journey from a maintenance depot

You must not allow a train to start a journey if you are aware the WSP equipment is defective.

driver,
train
preparer

29.2 Starting a journey from somewhere other than a maintenance depot or during a journey

If the WSP equipment is defective or becomes defective on a train, you must:

driver

- tell the train operator's control at the first convenient opportunity
- carry out the instructions given.

However, if you believe you may have difficulty in stopping the train, you must:

- tell the signaller immediately
- not move the train until instructed to do so
- carry out the instructions given.

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