Train Order System

Purpose

To prescribe the rules for using the Train Order system of Safeworking in the Country Regional Network (CRN).

System Principle

The Train Order system:

- prevents rail traffic entries into occupied blocks, and
- is a bidirectional system used only on single lines outside Rail Vehicle Detection territory.

In Train Order territory, Train Orders are the only normal authorities for:

- a through-movement only, or
- shunting at a location (Shunt Order), or
- a through-movement with shunt access at a location.

If the Train Order system of Safeworking fails, a method of special working may be introduced.

Computerised Train Order working

Network Control Officers compile Train Orders and Track Occupancy Authorities (TOAs) in computerised workstations.

The system transmits Train Orders to Drivers using In Cab Equipment.

The system maintains blocking facilities against issue of Train Orders for conflicting movements and occupancies.

For each reporting location, the system generates a security code (security number).

Entry of the relevant security code into a workstation:

- removes a blocking facility, and
- releases the affected block.

For each Shunt Order at a Siding location the system generates a supplementary code.

Manual Train Order working

If the computerised system fails, manual Train Order working without security codes is introduced. Network Control Officers must:

- compile Train Orders and TOAs manually, and
- not issue authorities for conflicting movements and occupancies.

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System description

Network Control Officers must:

- provide Train Orders or TOAs and security codes to Rail Traffic Crew, Protection Officers, or Competent Workers directing shunting, and
- make sure that Train Orders and movements are recorded, in permanent form, on a Train Control diagram, and
- only issue an authority for track under their control.

Rail Traffic Crews must confirm Train Orders using the In-Cab Equipment.

If the electronic transmission of Train Orders fails, Competent Workers receiving Train Orders must:

- compile them on a Train Order form (CNRF 009), and
- confirm Train Orders and security codes by reading them back to the Network Control Officer.

Details of the Train Order for a journey must be progressively reported, fulfilled and confirmed at the locations specified in the Train Order.

TOAs must be issued:

- in accordance with Rule CNWT 304 Track Occupancy Authority, and
- on a TOA form (CNRF 002).

Security codes

Network Control Officers must:

- provide security codes to Competent Workers together with the relevant Train Order, and
- not write down security codes.

If a Train Order or a TOA is partly fulfilled, fulfilled or cancelled, Network Control Officers must not enter security codes into the system before:

- the location of rail traffic has been confirmed, and
- reporting Competent Workers have dictated back relevant security codes.

Proceed Authority

Authority to enter a block is given by a valid Train Order.

Train Orders must specify:

- departure and fulfilment locations
- if necessary, reporting, crossing and shunting locations
- any special instructions for the movement and conditions affecting the network in accordance with Rule CNGE 206 Reporting and responding to a Condition Affecting the Network (CAN).

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Proceed Authority cont.

- Rail traffic must pass indicators at STOP only in accordance with Rule CNSG 610 Passing indicators at STOP.

Issuing a proceed Authority

Limit of authority

The limit of authority for a Train Order must be:

- an entry-end YARD LIMIT sign, or
- the departure-end clearance point of a crossing location, or
- the departure-end SHUNT LIMIT sign of a siding location, or
- the END TRAIN ORDER WORKING sign at a signalled location, or
- the END TRAIN ORDER WORKING sign at a Non-Train Order location, or
- the END NETWORK CONTROL sign at a Network Control boundary location.

The limit of authority for a Shunt Order must be:

- a SHUNT LIMIT sign for a location, or
- in locations where SHUNT LIMIT signs are not provided, the YARD LIMIT signs.

Train Orders must not authorise rail traffic to proceed:

- through signalled locations, or
- beyond Network Control boundary locations, or
- beyond intended crossing locations.

If the electronic transmission of Train Orders fails, Train Orders must not authorise rail traffic to proceed beyond locations for planned changes of crew.

Moving trains

Rail Traffic Crews may confirm Train Orders using the In-Cab Equipment on moving trains.

If the electronic transmission of Train Orders fails, Train Orders:

- may be transmitted to the Rail Traffic Crews of moving trains by radio, or other form of on-board communications, and
- must not be compiled or confirmed by Rail Traffic Crew members who are operating the controls of moving trains.

Transfer of Orders

Rail Traffic Crews must confirm all Train Order details at changes of crew.

If the electronic transmission of Train Orders fails, Train Orders must not be passed between Rail Traffic Crews at changes of crew.

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Crossing and passing trains

Crossing and passing movements may be authorised at crossing and siding locations.

The Network Control Officer must:

- determine the order of movement for a crossing, and
- tell Rail Traffic Crews which routes to use.

One train in the movement must be able to stand:

- wholly between clearance points at the location, or
- clear of the main line.

The first train to arrive within yard limits must:

- come to a stand, and
- Rail Traffic Crew must report arrival to the Network Control Officer.

The Network Control Officer must not authorise the second train to enter yard limits before the first train is stationary:

- wholly between clearance points at a crossing location, or
- at a departure-end clearance point, or
- clear of the main line in a siding.

If there is a Shunt Order current at a siding location, the Network Control Officer may authorise a Train Order to other rail traffic:

- standing at the YARD LIMIT sign, and
- within shunt limits

To obtain a train order for a location where a Shunt Order is current, the Rail Traffic Crew must have:

- consulted with the holder of the Shunt Order to confirm the intended route is clear, and
- if the route is confirmed clear, obtained the supplementary security code from the holder of the Shunt Order, and
- provided the supplementary security code to the Network Control Officer.

A holder of a Shunt Order must not provide the supplementary security code to the Network Control Officer.

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Variation of Train Orders

The Network Control Officer must arrange to cancel a Train Order, and issue a new one, if the Train Order:

- needs to be varied, or
- cannot be fulfilled.

Before a Train Order may be cancelled, the affected rail traffic must be stationary at:

- a control point
- a location a Special Order will be issued to or from.

NOTE

Rail traffic that has a Train Order for a section in advance of the current authority ('next order') and is closely approaching the limit of the current authority must be brought to a stand before the next order is cancelled.

Loss of paper or electronic Train Order information

Competent Workers must report the loss of a current Train Order to the Network Control Officer as soon as possible.

If a Train Order is lost before rail traffic departs from a location, the rail traffic must not depart.

If a Train Order is lost after rail traffic departs from a location, the rail traffic must not pass the entry-end YARD LIMIT sign at the next location.

The Network Control Officer must:

- obtain a Superintendent's security code to cancel or fulfil the lost Train Order, and
- if travel is to continue, issue a new Train Order.

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Reporting

Departure

Rail Traffic Crew must report departure:

- from departure locations, and
- from reporting locations.

Departure must be reported only after the rearmost vehicle has cleared:

- a BEGIN TRAIN ORDER WORKING sign, or
- a BEGIN NETWORK CONTROL sign, or
- the YARD LIMIT sign at the departure-end of a location specified in the Train Order.

The Train Order location immediately preceding the limit of a Train Order must be specified as a reporting location.

If the electronic transmission fails, Network Control Officers must confirm with Rail Traffic Crew:

- train numbers, and
- lead locomotive numbers or track vehicle numbers, and
- departure times, and
- the limit of authority for the current Train Order.

Arrival

If a Train Order has shunt access, Rail traffic crew must report arrival at the shunting locations to the Network Control Officer when the rail traffic:

- is between SHUNT LIMIT signs, or
- where SHUNT LIMIT signs are not provided, between YARD LIMIT signs.

Fulfilment at crossing locations

At crossing locations, Rail Traffic Crew must fulfil the Train Order only if the rail traffic is:

- stationary between clearance points, or
- clear of the main line or loop.

If rail traffic is over-length, Rail Traffic Crew must fulfil the Train Order only if the rail traffic is stationary at the departure-end clearance point.

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Reporting cont.

Fulfilment at siding locations

At siding locations, Rail Traffic Crew must fulfil the Train Order only if the rail traffic is:

- stationary between SHUNT LIMIT signs, or
- clear of the main line.

If rail traffic is over-length, Rail Traffic Crew must fulfil the Train Order only if the rail traffic is stationary at the departure-end SHUNT LIMIT sign.

Fulfilment at signalled locations

At signalled locations, Rail Traffic Crew must fulfil the Train Order only if the rail traffic has completely passed the END TRAIN ORDER WORKING sign.

Fulfilment at Network Control boundary locations

At Network Control boundary locations, Rail Traffic Crew must fulfil the Train Order only if the rail traffic has completely passed the END Network control sign.

Confirming the location of rail traffic

The system confirms the location of rail traffic.

If the electronic transmission fails, the Network Control Officer must confirm the location of rail traffic from:

- the train radio workstation, or
- Rail Traffic Crew.

Communications Failure

If primary communications in rail traffic fail, Rail Traffic Crew must:

- report departure from a reporting location at the first available location, and
- if possible, report at the location immediately preceding the limit of the Train Order.

The Network Control Officer may delegate Competent Workers certified in Train Order working to relay information between Network Control and Rail Traffic Crew without communications.

Opposing rail traffic with failed primary communications must not be authorised to approach a location simultaneously.

JHR Network Procedures

CNPR 719 Operating groundframes

CNPR 721 Spoken and written communication

Effective date

October 2019