Train Working

NTR 434 Automatic train protection (ATP) onboard equipment

Description

This document describes the requirements for using Automatic Train Protection (ATP) onboard equipment.

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Purpose

To prescribe the rules for using Automatic Train Protection (ATP) onboard equipment.

Principle

This Network Rule applies only to:

- trains approved to operate in the Network with operating ATP equipment
- Drivers qualified to operate the ATP equipment.

ATP onboard equipment fitted to the leading cab of a train must be operating in accordance with the *Train Operating Conditions (TOC) manual* before the train may enter the Sydney Trains Network.

Drivers must report faults in ATP onboard equipment to the Signaller.

> **Warning**
>
> The maximum speeds allowed by ATP do not imply that it is safe to travel at those speeds.

Isolating ATP equipment

The ATP equipment in an active Drivers cab may be isolated only if a fault cannot be remedied by the Train Crew, and the fault prevents travel.

If the ATP equipment in an active Drivers cab is isolated, the Driver must tell the Signaller.

ATP levels

Automatic level transitions

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ATP level transitions are announced by a balise group before each level boundary.

On running lines, level transitions should automatically occur at the boundary between the areas with different ATP levels.

Missed level transitions

If a level transition does not occur at a signposted location, the Driver must:

- treat the inconsistency as a Condition Affecting the Network (CAN)
- stop and manually change the ATP level in the active cab.

> **Note**
>
> If a train crosses a level transition border in Shunting mode, the level transition will not occur until Shunting mode is exited.

Manually selecting an ATP level

When required by the system, Drivers must select the correct ATP level for their current location.

Activating modes

Shunting (SH) mode

Shunting (SH) mode must be activated by the Driver:

- to make authorised propelling movements, or
- to divide a train or amalgamate trains, or
- to shunt within shunting yards and sidings.

Shunting (SH) mode must be exited before a non-propelling through movement is commenced.

Non leading (NL) mode

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Non-Leading (NL) mode may be activated in a cab only with the authority of the Network Controller.

Non-Leading (NL) mode must be exited after the movements for which it has been authorised have been completed.

Wrong running-direction movements

For wrong running-direction movements on unidirectional lines in ATP level 1 areas, the ATP system will enforce:

- a 40km/h maximum speed
- 15km/h maximum speed on the approach to active control level crossings.

Using the override function

Drivers may activate the ATP override function only if they receive an ATP message requiring them to do so.

Setting train data

Drivers must accurately confirm or enter the ATP level, the train length and airbrake cutout information into the onboard system:

- when required by the system
- if the data change.

Interventions

Drivers must tell the Signaller if there is an ATP emergency brake intervention.

Trackside faults

Drivers must treat a suspected fault in trackside ATP equipment as a Condition Affecting the Network (CAN).

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> **Note**
>
> ATP onboard equipment can display messages that relate to trackside faults.

If a CAN about trackside ATP equipment is reported, the Signaller must tell the Driver of the next ATP-fitted train to report if an error message is received at the affected location.

If the Driver of the following ATP-fitted train also reports the equipment as faulty, the Signaller must:

- arrange for a Signals Maintenance Representative to attend
- give a CAN warning to Drivers of ATP-fitted trains.

Precautions for people under trains

Train Crews must disconnect power to a vehicle's ATP antenna:

- before any person goes beneath the vehicle, or
- if anyone is struck by the train.

The ATP antennas must not be re-powered until people are no longer beneath the vehicle.

> **Warning**
>
> ATP antennas generate electromagnetic radiation that can be harmful to people underneath them.

ATP messages

Messages shown on the Driver machine interface (DMI) must be read and understood by Drivers before they act upon them.

If a message begins with 'Report Balise fault', Drivers must tell the Signaller.