

**SECTION 9**  
**OPERATION OF TRACK  
MAINTENANCE VEHICLES**

### **Introduction**

Track maintenance vehicles when operating on rail are used to carry out work on or about the infrastructure.

Track maintenance vehicles approved to operate on the *Rail Infrastructure Corporation* (RIC) network are listed in **General Instruction Pages Section 11, TRACK MAINTENANCE VEHICLE DATA**.

Track maintenance vehicles must be operated in accordance with RIC *Network Rule NWT 316 Track Vehicles*.

### **Types of track maintenance vehicles**

There is a wide variety of types of track maintenance vehicles. Some vehicles are restricted in operation to certain areas, such as in worksites only and/or, outside the electrified area. These restrictions are identified by exception in **General Instruction Pages Section 11, TRACK MAINTENANCE VEHICLE DATA**.

Types of track maintenance vehicles are:

#### **On-track repair vehicles**

*On-track vehicles* include tampers, ballast regulators, overhead wiring vehicles, rail grinders, tracklayers, ballast cleaners, etc.

These are specialised vehicles that are usually rail bound. However, some vehicles can be removed from the track by the use of special take-offs or portable turnouts.

#### **Road/rail vehicles**

A *road/rail vehicle* is a rubber tyred road vehicle fitted with retractable rail wheels. These vehicles can be readily placed on or removed from track at suitable locations.

#### **Flat top trolleys and trailers**

*Trolleys* are small non-powered vehicles used for conveying tools and equipment along the track. They can be easily removed from the track. A trolley must not be towed or pushed by other vehicles.

A trailer is similar to a trolley but is fitted with a tow bar for connecting to another vehicle.

#### **Quadricycles and trikes**

Quadricycles and trikes are small self-propelled vehicles used to conveying personnel, tools or equipment along the track. Some are manually powered, while others have engines. These vehicles can be lifted from the track.

### **Emergency equipment**

Track maintenance vehicles must carry the minimum following emergency equipment:

- Working two-way radio communication,
- *Track Occupancy Authority* forms (NRF 002)
- *Condition Affecting the Network* forms (NRF 004)
- Two red and green flags
- at least 12 detonators
- Two multicoloured hand lamps or torches
- Three (3) approved track-circuit shorting clips.

Qualified workers operating track maintenance vehicles must carry the minimum following emergency equipment:

- Watch
- SL key
- One pad of *Track Occupancy Authority* (NRF 002) forms
- One pad of *Special Proceed Authority* (SPA) forms

### **Speed of track maintenance vehicles**

The maximum permissible speed for track maintenance vehicles is listed in **General Instruction Pages Section 11, TRACK MAINTENANCE VEHICLE DATA**. If a speed is not listed, the maximum speed shall be 15 km/h for vehicles weighing up to 5 tonnes and 30 km/h for vehicles weighing over 5 tonnes.

Trailers not attached to a motorised vehicle and trolleys must travel at walking pace.

Some road/rail vehicles have speed restrictions when traversing track fitted with check rails, guard rails and level crossings. Refer to the notes in **General Instruction Pages Section 11, TRACK MAINTENANCE VEHICLE DATA**.

### **Lights**

When track maintenance vehicles are on track, an orange flashing light or hazard lights must be switched on such that they operate when conditions change, such as:

- the vehicle brakes are applied
- the horn (whistle) is operated
- the vehicle reverses,
- or as otherwise required for safety.

Refer RIC Network Rule NWT 316 Track Vehicles.

Trolleys and trailers need not display any lights during daylight. When operating at night, in heavy fog, or in tunnels, suitable front and rear lights (e.g. hand lamps) must be displayed in accordance with **NTR 406 Using train lights**.

Unless an orange flashing light is fitted to a quadricycle or trike, these vehicles have the same requirements as for trolleys.

### **Transfer of track maintenance vehicles**

#### **Vehicles marshalled in a locomotive hauled train consist**

Some track maintenance vehicles are fitted with automatic couplers and automatic *air brakes* which will allow them to be coupled to a train and transferred within a train consist. Such vehicles are identified with Note T2 in the **General Instruction Pages Section 11, TRACK MAINTENANCE VEHICLE DATA**.

When a track maintenance vehicle is marshalled within a train consist, the *draw capacity* for the vehicle must not exceed that listed in the **General Instruction Pages Section 11 TRACK MAINTENANCE VEHICLE DATA**.

The *automatic air brake* must be connected throughout the train including the track maintenance vehicle. The track maintenance vehicle must be inspected as part of the train consist.

If a track maintenance vehicle is not fitted with an external *handbrake* or spring parking brake and is marshalled as the last vehicle in the train consist, an operator must travel in the vehicle at all times. Some track maintenance vehicles are fitted with a spring parking brake and therefore do not require an operator on board.



#### **WARNING**

When track maintenance vehicles that are not approved to operate *track circuits* are attached to the rear of a train consist, the train must be operated under block working.

#### **Vehicles coupled together**

Some track maintenance vehicles can be coupled together and operated as a single unit. In this case, the operator in the leading vehicle must have full control of the air brakes for all vehicles in the consist.

** Track maintenance vehicles operating track circuits**

Some vehicles have been tested for operation of track circuits, and are approved to operate under track signals, and not under block working. However, these vehicles must operate under block working when on ***“infrequently used lines, loops or refuges”***.

***“infrequently used lines, loops or refuges”*** refers to a track circuited line, loop or refuge that has had less than six trains (each approximately equivalent to an 8 car passenger set in length) or 5000 tonnes traverse it, at or near line speed, in a 24 hour period.

** Track maintenance vehicles restricted to operation within worksites**

There a number of track maintenance vehicles that are restricted to operation only within protected worksites. These vehicles are identified with Note T14 in the TOC **General Instruction Pages Section 11, TRACK MAINTENANCE VEHICLE DATA**.

No other vehicles will be permitted to pass these vehicles on any adjacent lines until these vehicles have come to a stand and are confirmed to be clear of the adjacent line by the Protection Supervisor.

These track maintenance vehicles are not to travel on rail between worksites.

** Operation of John Holland Pony track laying machine**

This vehicle is classified as out-of-gauge.

A route clearance check will be required and the exact route specified for all movements, including working of the vehicle. All movements will be as an out of gauge vehicle under single line working conditions, with special conditions applying. A **TOC Waiver** and Special Train Notice (STN) will be required for all movements of this vehicle.

The transfer of this vehicle must be accompanied by supervising personnel.

The transfer of this vehicle must be with the vehicle in non-working mode.

This vehicle must be prepared as follows before transfer:-

- All brake gear must be clear of the actuator arm and mechanisms.
- All actuator arms and mechanisms including all guide wheels to be secured clear of track/rail head.
- Brake equipment must be fully operable.
- All packings to be removed from hornstays and above spring buckles.

Unless otherwise indicated, the maximum speed of this vehicle is 40 km/h.

The maximum trailing load and speeds:-

- Ten (10) loaded concrete sleeper wagons (approximately 680 tonnes) – maximum speed 20 km/h.
- Ten (10) sleeper wagons loaded with timber sleepers (approximately 320 tonnes) – maximum speed 30 km/h.
- Ten (10) empty sleeper wagons (approximately 200 tonnes) – maximum speed 40 km/h.

A minimum of 12 concrete sleepers must be carried on Pony over No. 3 axle during on track operations.

** Operation of Barclay Mowlem Pony Express track laying machine**

This vehicle is classified as out-of-gauge.

A route clearance check will be required and the exact route specified for all movements, including working of the vehicle. All movements will be as an out of gauge vehicle under single line working conditions, with special conditions applying. A **TOC Waiver** and Special Train Notice (STN) will be required for all movements of this vehicle.

The transfer of this vehicle must be accompanied by supervising personnel.

The transfer of this vehicle must be with the vehicle in non-working mode.

Unless otherwise indicated, the maximum speed of this vehicle is 80 km/h.

A minimum of one cover vehicle must be attached to this vehicle when ever the vehicle is stabled.

**General Instruction Pages**

**Operation of Track Maintenance Vehicles**