Network Safeworking Rules and Procedures

Rail Traffic Lights and Markers

Rule Number: 4005

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1. Purpose

The purpose of this rule is to describe how *Rail Traffic* lights and markers are used to:

- indicate the normal direction of *Travel*;

- indicate *Completeness* of *Rail Traffic*; and

- enhance the visibility of *Rail Traffic*.

NOTE: Lights and markers for *Track* Vehicles, refer to Rule 3019 Track Vehicles

2. General

Rail Traffic must not enter the *Network* unless the *Rail Traffic* lights and *Marker Lights* are working correctly.

Headlights must be set on full at the front of all moving *Rail Traffic* unless required to be dimmed or turned off as prescribed within this rule.

An approved *End-of-Train Marker* or at least one approved red light must be displayed at the rear of *Rail Traffic*.

3. Headlight Use

⚠️ **WARNING**: **When approaching *Level Crossings*, *Headlights* must remain on full unless opposing *Rail Traffic* is simultaneously approaching. In this case, *Rail Traffic Crew* are permitted to dim the *Headlights*.**

Rail Traffic Crews are permitted to dim or turn off *Headlights* when *Visibility Lights* are operating under the following conditions:

- When approaching, standing or working at *Locations* where *Shunting* is being performed.

Figure 4005-1 Approaching, standing or working at *Locations* where *Shunting* is being performed.
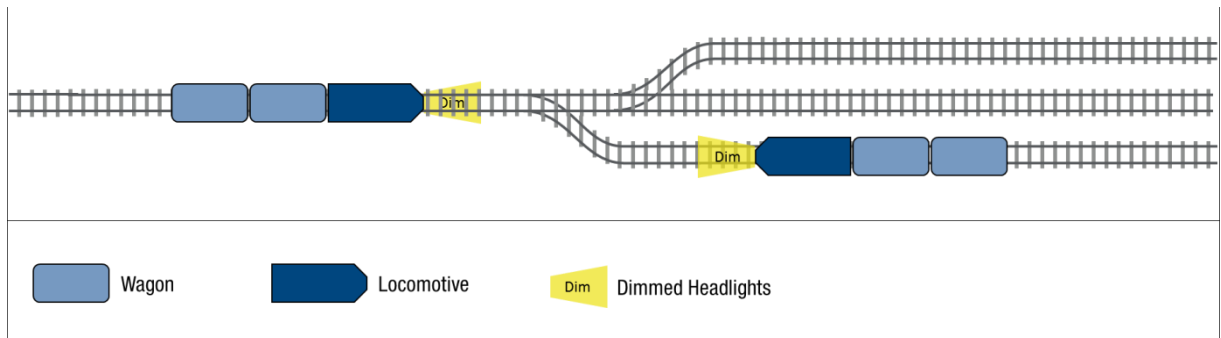
- When approaching or stopped behind other *Rail Traffic*.

Figure 4005-2 Approaching or stopped behind other *Rail Traffic*.
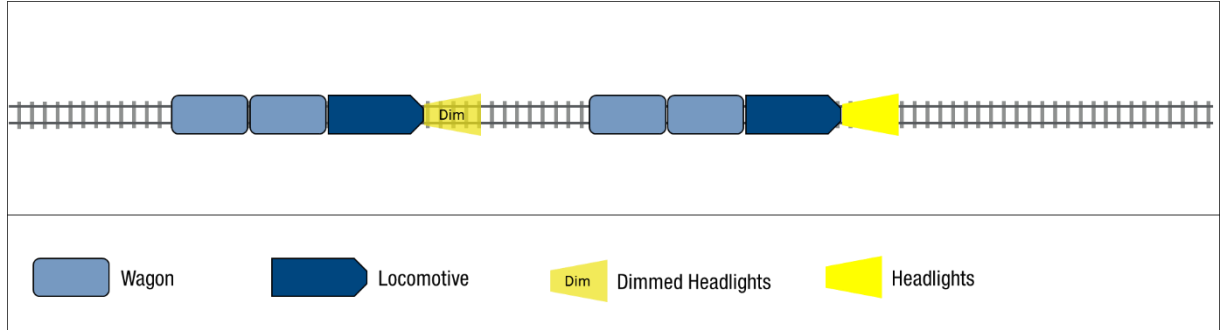
- When approaching and Crossing the lead end of opposing Rail Traffic.

Figure 4005-3 Approaching and crossing the lead end of opposing *Rail Traffic*.
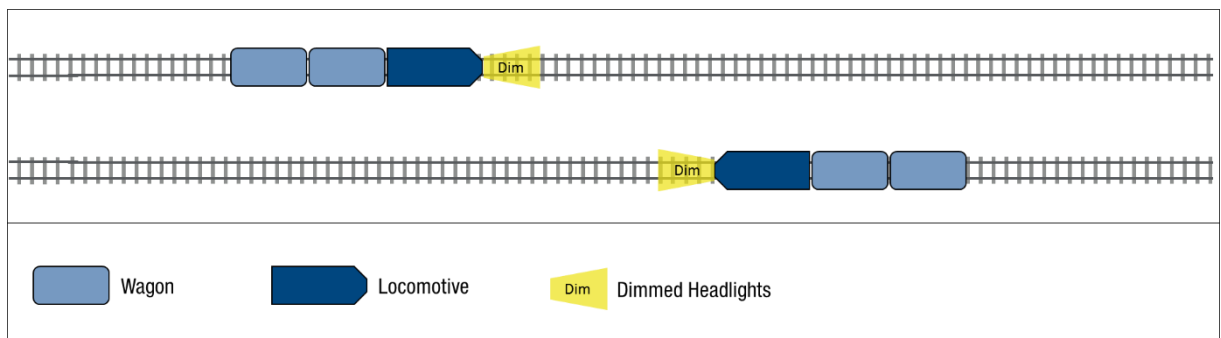
- When approaching people or workers on or about the *Track*.

When approaching people or workers on or about the *Track*.
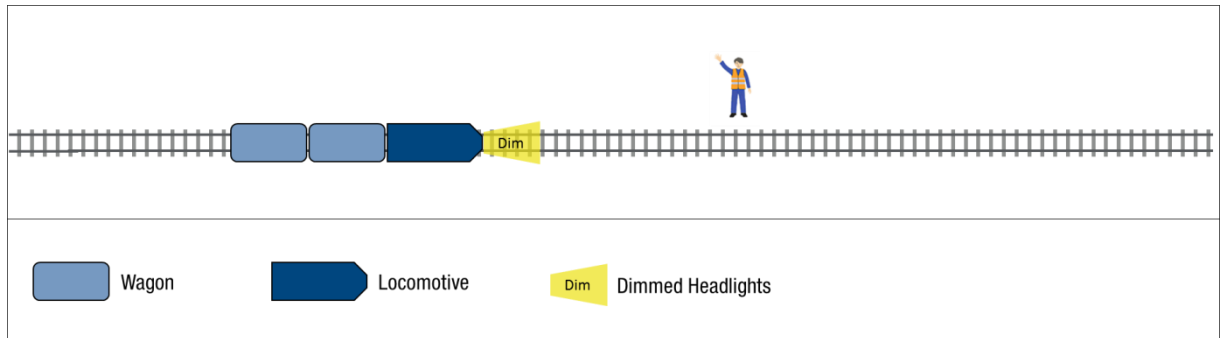
- When *Rail Traffic* is approaching road traffic on *Adjacent* roadways.

Rail Traffic is approaching road traffic on *Adjacent* roadways.

- In weather conditions where *Headlights* may reflect back and affect the *Rail Traffic Crew*'s vision.

3.1 Operating with Headlights Off

> ⚠️ **WARNING**: *Headlights* **must not be turned off unless** *Marker Lights* **or** *Visibility Lights* **are turned on.**

The *Headlights* must be turned off when *Rail Traffic* has stopped *Clear* at a *Crossing Location*, waiting for opposing *Rail Traffic* to *Cross*.

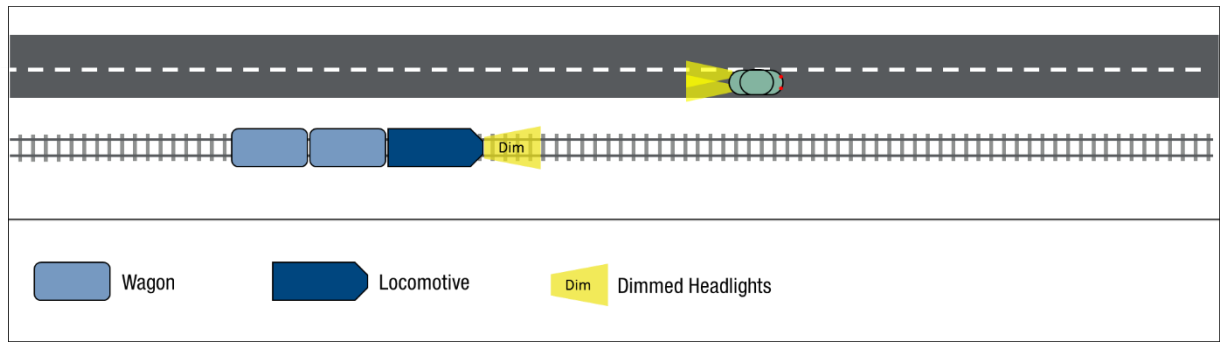The waiting *Rail Traffic* must display a white *Marker Light* on the side of the *Motive Power Unit* nearest the *Clear Running Line* and a red *Marker Light* on the side of the *Motive Power Unit* furthest from the *Clear Running Line*.

Figure 4005-6 *Rail Traffic* standing on the Loop for a crossing.
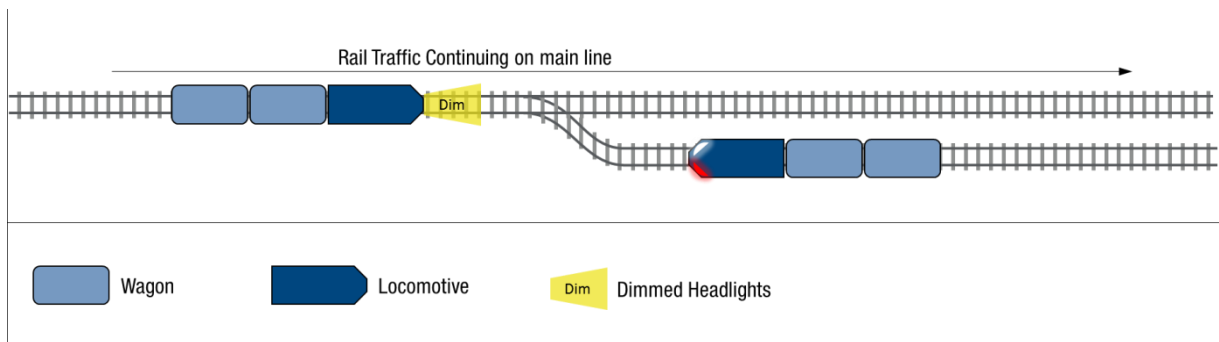
Figure 4005-7 *Rail Traffic* standing on the *Main* for a crossing.
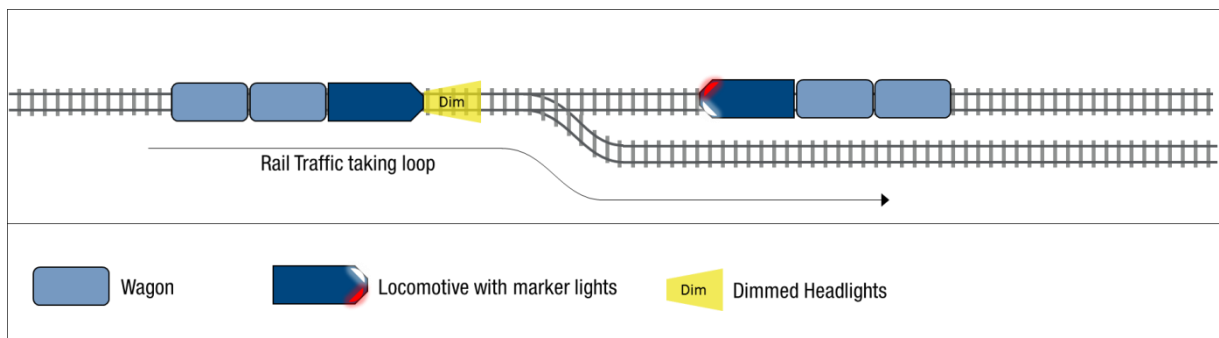
> 📋 **NOTE: The** *Headlight* **must be set on full once the lead end of the** *Motive Power Unit* **has past;**
>
> •   **the opposing** *Rail Traffic*;
> •   **road traffic on** *Adjacent* **road way; or**
> •   **the worker.**

4. Displaying Visibility Lights

If provided, *Rail Traffic Visibility Lights* must be turned on when the *Rail Traffic* is moving on *Running Lines*.

If *Visibility Lights* fail, *Rail Traffic* may continue normally provided *Headlights* are turned on.

5. Using Lights for Warning

If necessary, *Rail Traffic Crew* may flash *Headlights* or change the colour of *Marker Lights* displayed from white to red to give a warning.

6. Failed Headlights

All cases of total *Headlight* failure must be reported to the *Network Controller*.

The *Network Controller* and the *Rail Traffic Crew* must make arrangements to:

- effect repairs;

- re-*Marshal* the *Motive Power Units*; or

- replace the lead *Motive Power Unit*.

If this is not possible, the *Rail Traffic* may proceed to the next repair facility.

> ⚠️ **WARNING: Where *Headlights* have failed, *Rail Traffic Crew* must make additional use of the *Whistle* to compensate for the lack of visual warning.**

6.1 Total Headlight Failure and Visibility Lights Are Not Available

If visibility is good, *Rail Traffic* must *Travel* at *Controlled Speed*.

During periods of *Low Visibility*, *Rail Traffic* must;

- *Travel* at *Restricted Speed* and may only *Clear* the *Section*; and

- in *Train Order Territory*, stop before *Travelling* over *Points* where mechanical *Points Indicators* exist and ensure *Points* are correctly set before proceeding.

When approaching *Level Crossings*, *Rail Traffic* must *Travel* at *Restricted Speed* prepared to stop and not proceed over the *Level Crossing*, until:

- *Active Control Level Crossing* warning equipment is operating; or

- road or pedestrian traffic is not approaching or has stopped at the crossing.

When approaching *Locations* where the *Rail Traffic Crew* is aware or can see workers or other personnel present on the ground, *Rail Traffic* must *Travel* at *Restricted Speed*.

6.2 Total Headlight Failure and Visibility Lights Are Available

If the *Headlights* have failed and *Visibility Lights* are available, *Rail Traffic* may *Travel* at *Normal Speed*.

7. Failed Headlights and Whistle

7.1 Headlights and Whistle Failed, and Visibility Lights Not Available

If the *Headlights* and *Whistles* fail and *Visibility Lights* are not available and no other *Motive Power Unit* can be used as the lead unit, the *Rail Traffic Crew* must carry out instructions for operating with total *Headlight* failure when *Visibility Lights* not available in accordance with Section 6.1.

During periods of *Low Visibility* the *Rail Traffic* must be treated as *Disabled* in accordance with Rule 4009 Disabled Rail Traffic.

7.2 Headlights and Whistle Failed, and Visibility Lights Available

If the *Headlights* and *Whistles* fail and *Visibility Lights* are available, the *Rail Traffic Crew* must:

- continue the movement with the *Visibility Lights* turned on and *Travel* at:

    - *Controlled Speed* if visibility is good; or

    - *Restricted Speed* during periods of *Low Visibility*;

- slow to *Restricted Speed* before each *Level Crossing*, prepared to stop if road or pedestrian traffic is approaching;

- not proceed over the *Level Crossing*, unless:

    - at an *Active Control Level Crossing*, equipment is operating; or

    - at a *Passive Control Level Crossings*, it is *Clear* or road and pedestrian traffic has been stopped;

- slow to *Restricted Speed* approaching other *Rail Traffic* and where workers may be present on the ground;

- slow to *Restricted Speed* approaching people on or about the *Track*; and

- slow or stop as necessary, if the approach of the *Rail Traffic* is not attracting the appropriate attention.

8.   Rail Traffic Markers

8.1 Front of Rail Traffic

The front of *Rail Traffic* must be identified by *Headlights*, *Visibility Lights* or *Marker Lights*.

If *Marker Lights* become defective they must be repaired or replaced as soon as practical.

8.2 Rear of Rail Traffic

The rear of *Rail Traffic* must be identified by:

- an *End-of-Train Marker*;

- one or more clearly visible, steady or flashing red lights;

- an *End-of-Train Monitor*; or

- a combination of the above.

End-of-Train Markers and *Monitors* must have at least one red light that is illuminated during the hours of darkness or when visibility is low.

8.3 Motive Power Unit is Rear Vehicle

When a *Motive Power Unit* is operating without vehicles or is at the rear of the *Rail Traffic Consist*, one of the following must be displayed:

- one or more red *Tail Lights*; or
- an *End-of-Train Marker*.

8.4 Inspection of End-of-Train Marker

The operation of an *End-of-Train Marker* must be checked before departure and where possible en-route by:

- direct observation of the marker; or

- using telemetry in the cab of the *Rail Traffic*.

8.5 Failed End-of-Train Marker

If the rear *End-of-Train Marker* fails en-route:

- the *Network Controller* must be told;

- a red reflector, red flag or red light may be used as an alternative rear marker; and

- *Rail Traffic* may *Travel* only as far as the next *Location* where the marker can be repaired or replaced.

8.6 Missing End-of-Train Markers

If *Rail Traffic* is detected with no *End-of-Train Marker* the *Network Controller* must be told.

Rail Traffic may *Travel* at the discretion of the *Network Controller* only as far as the next *Location* where the marker can be replaced.

In *Centralised Traffic Control (CTC) Territory*, *Rail Traffic* must be worked in accordance with Rule 5023 Manual Block Working until the *End-of-Train Marker* has been replaced.

The *Network Controller* must confirm that:

- the *Rail Traffic* is *Complete*; or

- the *Sections* to the rear of the *Rail Traffic* are *Clear*.

If the *Rail Traffic* is unable to be confirmed as *Complete*, affected *Sections* must be treated as *Obstructed* in accordance with Rule 2009 Reporting and Responding to Conditions Affecting the Network.

Until it can be established that the *Section* is *Clear*, the *Network Controller* must:

- apply *Blocking Facilities* to prevent other *Rail Traffic* from entering the affected *Section*;

- tell *Rail Traffic Crews* within the affected *Section* to stop their *Rail Traffic*; and

- warn *Rail Traffic* on *Adjacent* lines.

8.7 Shunting Marker Lights

Locomotives Shunting within yards must display two red *Marker Lights* at each end.

> NOTE: The *Marker Lights* of *Shunting Locomotives* do not indicate direction of *Travel.*

8.8 Identifying Number

Where provided, number lights must be illuminated on the leading *Motive Power Unit*.

8.9 Other Lights

Step and other lights may be illuminated on all units to improve visibility of *Rail Traffic* at night.

9. References

2009 Reporting and Responding to Conditions Affecting the Network

4009 Removing Disabled Rail Traffic

5023 Manual Block Working

10. Effective Date

21 November 2022