

TECHNICAL INSTRUCTION

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Issue 1
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NETWORK RAIL - SIGNAL ENGINEERING

General Instruction - Damaged Signalling Equipment

Relevant Standard: NR/L2/SIG/10064 New Section B004

Background

Confusion over Rule Book requirements when signalling equipment is damaged, but not necessarily removed from service, has been identified. A new section is required in the General Instructions to supplement the Rule Book entries, providing guidance, and where necessary instruction, on how signalling technicians treat damaged signalling equipment.

Abbreviations & Definitions

FPL Facing Point Lock

NR/GI/B004 Damaged Signalling Equipment

1. Principles

When the signalling technician becomes aware of signalling equipment that has suffered damage, the first consideration is to make the operational railway "safe." The technician may become aware of the damage by being informed (by signaller or control), or may find the damage during normal work activities. Damage may have caused a signalling failure, in which case the failure will eventually be rectified in accordance with established practices and techniques by authorised staff. Alternatively, the damage may not initially be classified as a failure, or may have no apparent effect on train running or performance.

Once aware of the damage, the technician shall assess its effect on trains and their safety, and the safety of the infrastructure and persons working upon it. If the technician has any concerns for the safety of the railway, the signaller shall be informed to stop traffic. If the situation is considered sufficiently serious, the technician shall stop the trains in accordance with the Rule Book immediately, and then inform the signaller. If the damage is cosmetic, and unlikely to have any effect on trains, the signaller shall be informed but advised that trains can continue to run.

Actual permanent repair of damaged equipment is covered in instructions elsewhere, and beyond the scope of this standard. However, where the equipment is not immediately repaired, it shall be made safe (which might include temporary repair) before being restored to service.

Originator's Details:-

David Marriott

Network Rail

david.marriott@networkrail.co.uk

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2. Making Damaged Equipment Safe

In all cases, damaged equipment shall be made safe. This may include securing the damaged equipment, to prevent passing trains suffering damage, disconnecting protecting signals, or having the signaller prevent rail traffic approaching the damaged equipment. The list is not exhaustive. The methods used will depend upon the damage caused. The Rule Book and the General Instructions NR/SP/SIG/10064 *General Instructions to Staff Working on S&T Equipment* contain instructions for use in some situations. By their very nature, all the different modes of damage are large in number and vary in complexity. For example, a location case could have its doors ripped off through vandalism. The location case could continue to operate, although the security and weather protection of the location needs to be restored by the signalling technician. Alternatively, a signal might be knocked over by road-rail plant. The signaller needs to be told immediately so that necessary warnings can be given to approaching trains.

3. Temporary Repair

Should a permanent repair not be immediately possible, it is essential that any temporary repair (or making damage safe) is fit for purpose and itself presents no risk to rail traffic. As an example, loose mechanical signalling equipment needs to be secured in an appropriate fashion. A broken mechanical FPL casting is subject to severe dynamic forces when trains pass over it. The points require to be clipped and scotched in accordance with the Rule Book, but the FPL requires to be held down also (as it might foul a passing train). A "Zippy" tie is totally inadequate for a temporary repair holding the broken FPL casting in place. Instead, a metallic strap (or straps), or similar device(s) shall be used to secure the FPL equipment in place to parts that are fixed down. In this example, it might be possible to take the damaged equipment away, another method of rendering it safe.

Temporary repairs shall be logged in the defect management system and permanently repaired in accordance with any time limits given in NR/L2/SIG/19807 *Prioritisation of Signal Engineering Equipment Defects*. Where the damage repair timescale is not covered by standards, effort shall be made to complete a permanent repair, and not leave the temporary repair in place for an extended period.

Where a temporary repair has been completed, it is essential that the signaller is informed of the nature of the repair and any restrictions or disconnections necessary. The signaller's occurrence book and '3187' form shall be used where appropriate.