Memorandum

U.S. Department
of Transportation

**Federal Railroad
Administration**

Date: SEP 7 1995 Reply to Attn of: T-95-9

Subject: Non-Class Specific Track Conditions

From: Edward R. English WBT's for
Director, Office of Safety Enforcement

To: All Regional Administrators, Deputy Regional Administrators, Supervisory Railroad Safety Specialists (Track), and Federal and State Track Inspectors

Background:

In 1994, the Track Technical Resolution Committee (TRC) recommended that a technical bulletin be issued concerning the proper remedial action for loose or missing frog bolts. Since frog bolts are in the general category of defects where the remedial action is not printed in the pertinent section of the Track Safety Standards, the scope of this bulletin is expanded to consider all non-class specific defects.

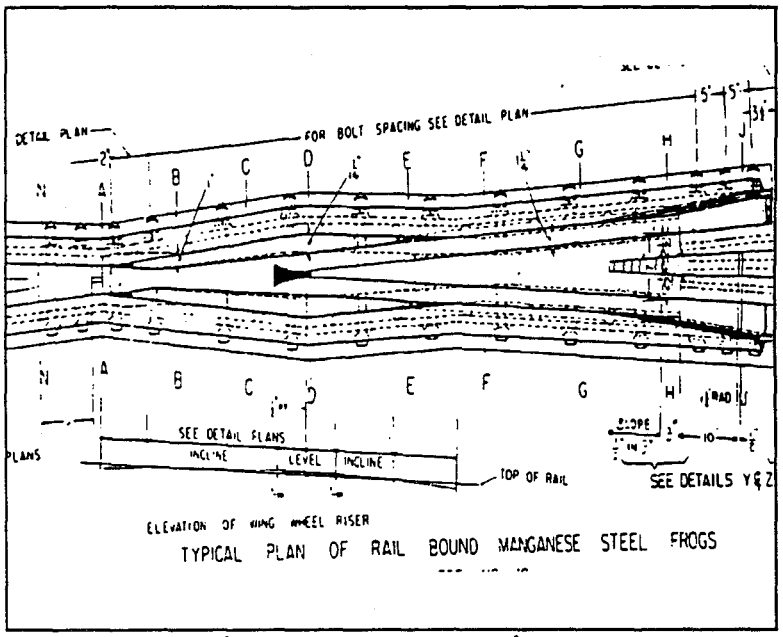

Figure 1 Frog with 14 frog bolts

Remedial Actions for Non-class Specific Defects:

For class specific defects, it is explicitly apparent to the track owner that he or she has the option of reclassifying the track to a lower class to bring the track into compliance. For example, Section 213.121, Rail joints, states that "if a

joint bar on classes 3 through 6 track is cracked, broken, or because of wear allows vertical movement of either rail when all bolts are tight, it must be replaced." Obviously, one of the remedial actions available to the carrier would be to place a speed restriction and reclassify the track to class 1 or 2. For other defects in the standards, specific classes or remedial actions are not printed in the appropriate section. These defects are categorized as non-class specific defects.

Track owners often have questions regarding the remedial actions available when inspectors discover and record turnout defects such as missing or loose frog bolts (Figure 1). The carrier will not find the required remedial action in Section 213.133. Because turnouts are designed with certain redundancies, some maintenance personnel suggest that loose or missing components should not always be considered defects unless they present an immediate hazard. However, it is also recognized that these conditions will only deteriorate if left un-repaired.

One loose frog bolt out of several would seldom constitute an immediate hazard, provided that the frog was otherwise secure. On the other hand, a missing cotter pin in a critical location such as in a connecting rod could have serious consequences.

A partial list of non-class specific defects are shown in Table 1.

Defect Code	Section Title	Examples
213.37	Vegetation	Vegetation obstructs visibility of railroad signs; excessive vegetation prevents employees from visually inspecting moving equipment; vegetation brushing sides of rolling stock.
213.103	Ballast; general.	Fouled ballast; insufficient ballast.
213.121	Rail joints.	Rail joint not of proper design; loose joint bars.
213.133	Turnouts and track crossings generally.	Loose switch clip; missing clip bolt; worn connecting rod; loose switch rod bolts; loose adjustable braces; missing frog bolts; loose switch point stops, loose guard rail bolts.
213.135	Switches.	Stock rail not securely seated in switch plates; stock rail canted; outer edge of wheel contacting gage side of stock rail; excessive vertical movement of switch point
213.139	Spring rail frogs.	Toe of wing rail not fully bolted and tight, insufficient tension in spring; excessive clearance between hold down housing and horn.

Table 1 - Examples of Non-class Specific Defects

Consider the example of loose or missing rail braces. Figures 2 and 3 show an example of one common design. One or two loose braces are usually not considered to be an immediate hazard, provided that the other braces are in acceptable functional condition to support the stock rail. On the other hand, several consecutively loose braces, especially in the higher track classes, could be much more serious.

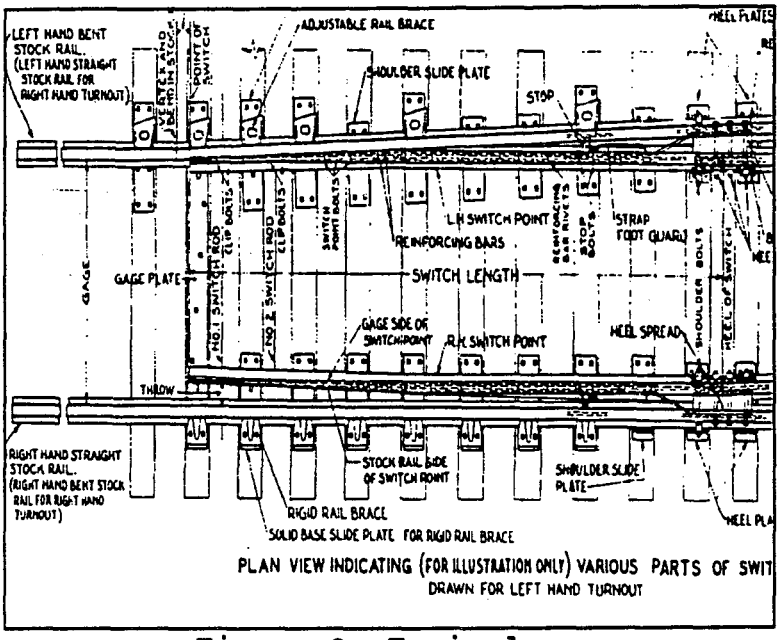

Figure 2 Typical switch components

Intermittent patches of vegetation that brush the sides of rolling stock may not be an immediate hazard, but more severe vegetation might have the potential of contributing to the injury of an employee who is riding on the side of a car or looking out locomotive cab windows.

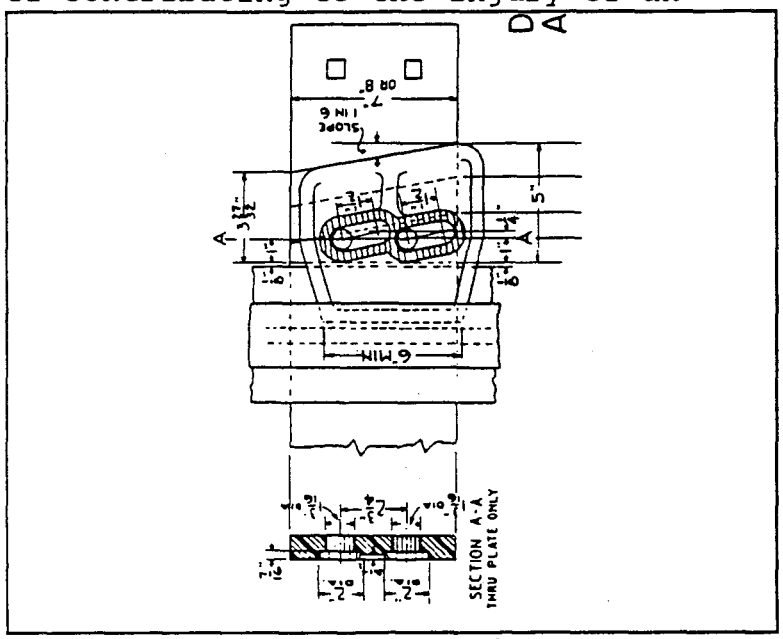

Figure 3 Example of an adjustable brace

As the above examples illustrate, non-class specific defects must be considered in the <u>context of the specific circumstances involved</u>. The existence of a non-class specific defect under one set of circumstances may not be serious while the identical condition under other circumstances may constitute a serious safety concern.

Although some non-class specific defects may not present an immediate hazard, these conditions will only degrade under train traffic. Therefore, it is important for carrier and FRA inspectors to record these defects so that they will not be left un-repaired.

Conclusions:

1. FRA inspectors should record all non-complying conditions, including non-class specific defects such as loose or missing frog bolts or switch braces. Inspectors are encouraged to refer to Chapter 6 of the Track Enforcement Manual which states that "care must be taken to conduct a thorough inspection, recording the location, type and size of each defect discovered."

2. The FRA inspector should evaluate the remedial action taken by the carrier. If an inspector becomes aware that the remedial action, or lack thereof, for a non-class specific defect is not sufficient based on the circumstances, the inspector should seek a more appropriate action from the carrier. For a non-class specific defect which is an imminent hazard such as a missing nut on a connecting rod, the inspector should immediately inquire as to the remedial action planned by the carrier.

3. If the railroad does not institute an appropriate remedial action, the inspector should consider recommending a violation. If the railroad has been advised that a violation has been recommended and has not initiated appropriate remedial action, the inspector should be prepared to issue a Special Notice for Repairs, under the guidelines described in Chapter 6 of the Track Enforcement Manual.

4. In the case of a non-class specific defect that did not pose an immediate hazard when the defect was recorded, if the inspector discovers that no action was taken within a reasonable time frame after the carrier had knowledge of the defect, the inspector should consider the enforcement options described in item 3 above. In any case, if no appropriate action was taken within a 30-day period, the inspector should consider the enforcement tools outlined above.

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