



## Shunter Safety Special Topic Report Overview

This paper provides an overview of the Shunter Safety Special Topic Report, which investigates the risks faced by shunters and discusses the underlying causes that contribute to the current risk level.

The full report is available on the Rail Safety and Standards Board (RSSB) website [www.rssb.co.uk](http://www.rssb.co.uk).

Some of the main facts arising from the analysis are:

- There have been four shunter fatalities in the past 10 years. All involved FOC shunters who were carrying out shunting duties 'on the ground'. Three of the fatalities were attributed to getting trapped in between two vehicles whilst carrying out manual coupling. This rate compares to seven shunter fatalities in the previous 10 years.
- The rates of shunter fatalities and RIDDOR-reportable injuries indicate that shunters face a high level of individual risk, compared with other railway occupations.
- There is no evidence of any significant trend in shunter incident rates in recent years.
- On average, each FOC shunter loses 0.7 days each year as a result of injuries sustained whilst working. This compares with 0.2 for TOC shunters.
- The most common cause of lost-time injuries is slips, trips or falls whilst moving around or between work areas. Strains and sprains are the most common types of injury resulting in lost-time.
- Human factors have a critical impact on shunter safety. In particular, management visibility, effective resource planning and a robust risk-based competence management system have been identified as some of the essential elements for maintaining shunter safety.
- A number of industry conferences and workshops have focused on the risk from shunting. A set of control measures were identified, including plans for effective management of staff, equipment, procedures and morale.

### How does shunter safety compare?

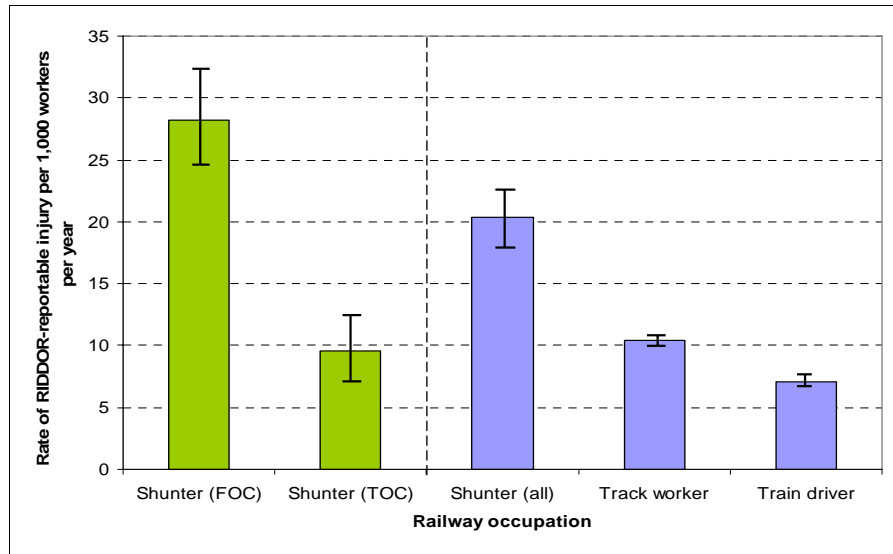
Chart 1 (overleaf) compares the rate of RIDDOR-reportable injuries for FOC and TOC shunters and the combined risk for shunters compared with other workforce groups.

The blue columns show that, overall, shunters have almost twice the rate of injuries of track workers.

The green columns show that the high overall shunter injury rate is mainly due to shunters in the freight sector, who are at a considerably higher risk than their TOC counterparts.

Indeed, in an average year, 0.7 days are lost per FOC shunter, compared with 0.2 per TOC shunter.

**Chart 1 RIDDOR-reportable injuries for different railway operations**

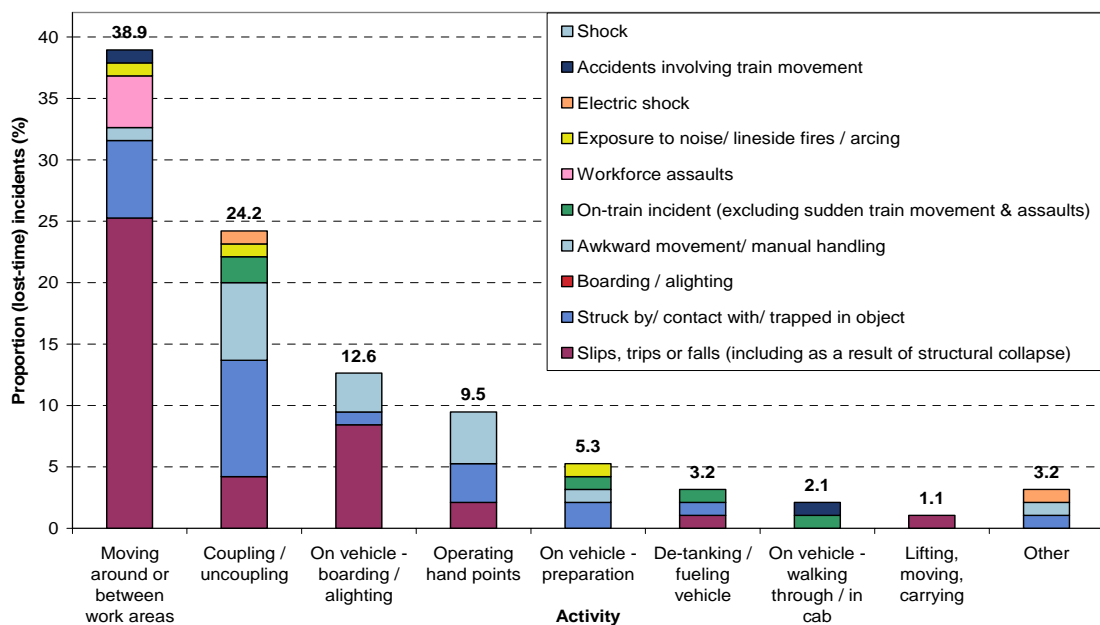


**Shunter safety analysis**

FOC shunters generally carry out traditional shunting duties ‘on the ground’, such as controlling propelling moves, operating hand points, carrying out manual coupling, communicating with the on-board driver, and so on. TOC shunters, on the other hand, are increasingly responsible for driving the vehicles as well as controlling the moves.

Chart 2 shows the specific position for TOCs. TOC shunters are most at risk when moving around and between work areas. (The situation is also true for FOC shunters). This is possibly due to environmental factors related to working on railway infrastructure, such as negotiating rails, ballast and cabling, as well as other hazards left on or about the line.

**Chart 2 TOC: Proportion of hazardous events per activity**



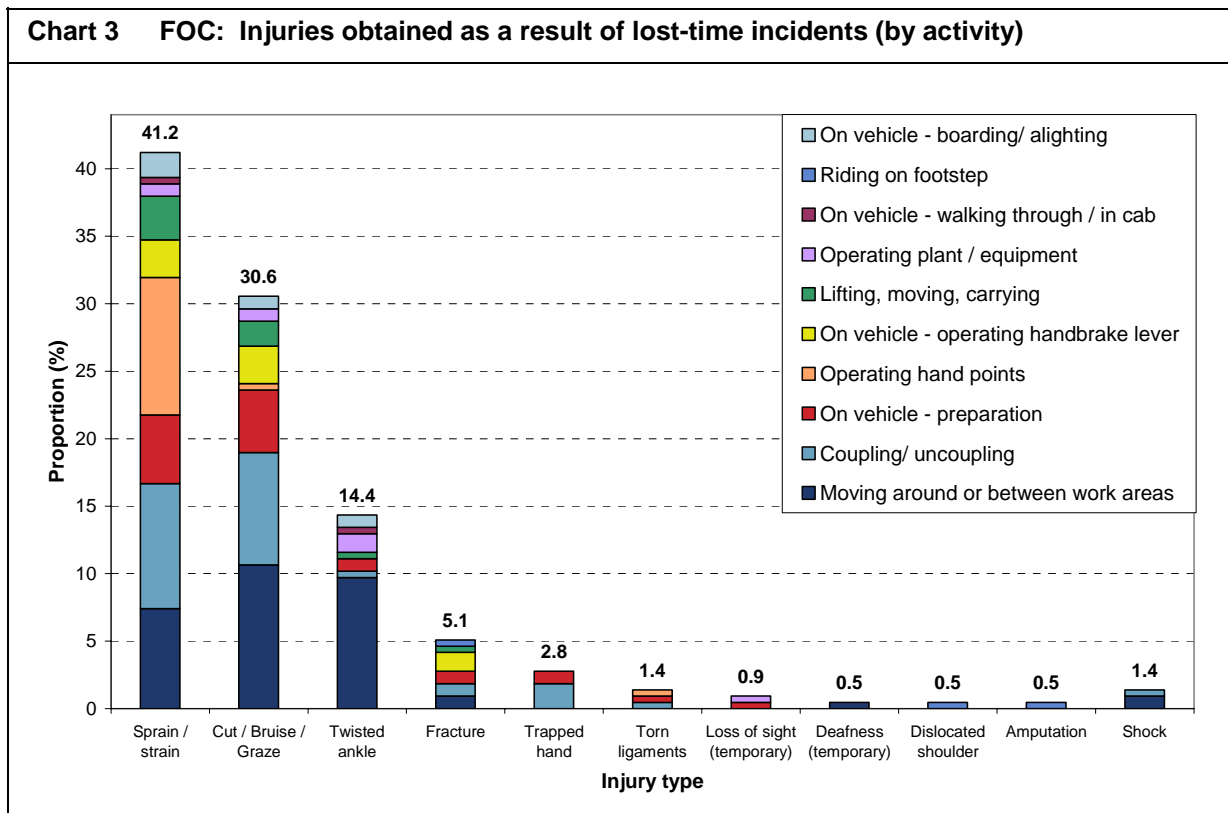
Coupling and uncoupling are, collectively, the next most common activities to cause injury. The most frequent accidents involve getting struck by or trapped in the coupling assembly (particularly where vehicles with manual coupling arrangements are operated). For TOC shunters, however, the number of injuries has fallen in recent years, as units with manual coupling arrangements have been progressively phased out.



Accidents involving train movement contribute a small proportion of the number of lost-time injuries. For TOC shunters, these accidents may occur either on-board trains, or whilst moving around or between work areas. FOC shunters, on the other hand, are more exposed to moving vehicles on the ground. Despite the low frequency of such hazardous events, their consequences can be great. Indeed, all FOC shunter fatalities over the past ten years lie within this category.

Chart 3 shows that the highest occurring injury types for FOC shunters are sprain or strain and cuts, bruises or grazes. There is no one overriding activity that leads to either of these injury types. They can occur during many shunting duties. For TOC shunters, the proportions are very similar.

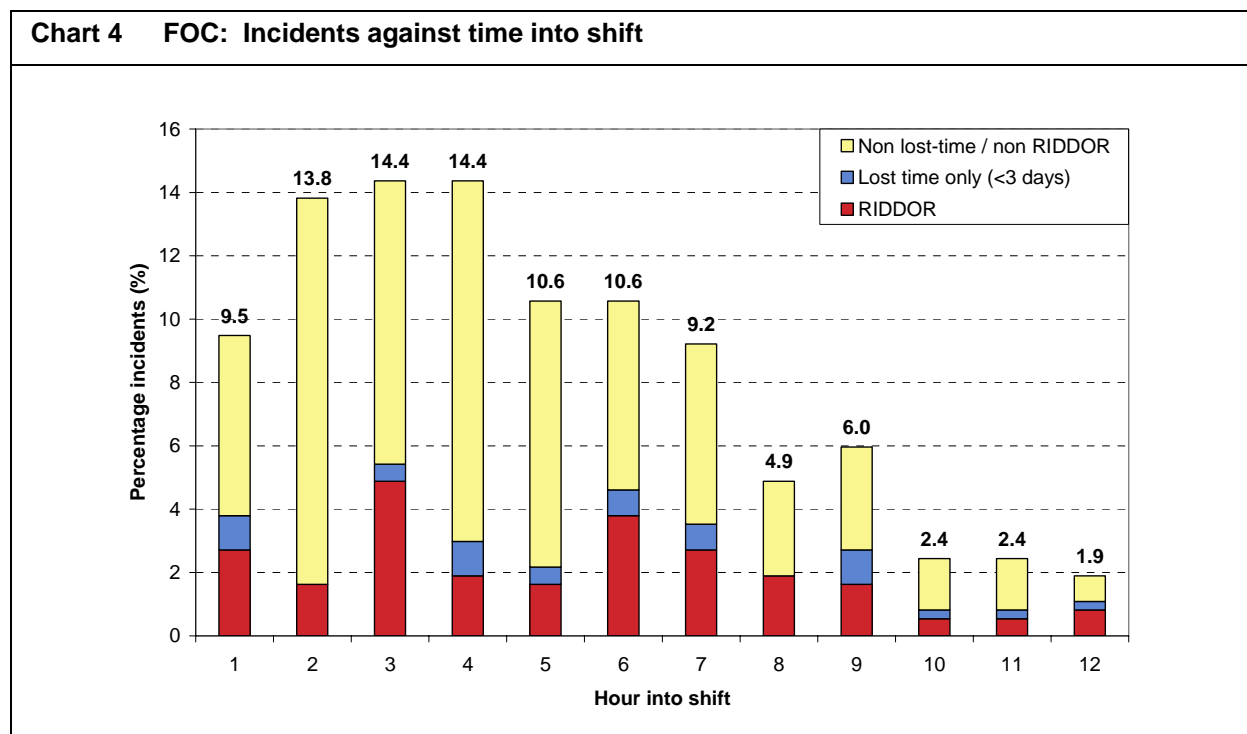
The most severe injuries, particularly for FOC shunters, have arisen when coupling or uncoupling (involving train movements) and when riding on footsteps. Indeed, serious injuries have occurred as a result of riding on footsteps (including an amputation).



Though moving around or between work areas is a high-frequency, relatively low-consequence activity, it is worth noting that an uneven path may have contributed to the fatality at Dagenham Dock.<sup>1</sup>

Chart 4 provides information about incidents based on the time into shift. The highest proportion of RIDDOR-reportable incidents occurs in the third hour into the shift, followed by the sixth hour.

It is difficult to draw conclusions from the chart, but the patterns seen may be associated with the timing of adequate breaks, peaks in workload, or even the types of food consumed during the day.



## Human factors

More than ever before, the industry is putting emphasis on human factors as a means of understanding what causes incidents. Discussions at recent conferences and workshops identified visible management and effective briefings as key ways of making shunters part of a wider team, and also stressed the need to address some of the environmental and cultural issues that shunters face.

There is a feeling that knowledge of the Rules is not generally an issue, and the greater problem is ensuring that Rules and good practice methods are adhered to day-to-day.

The main report includes much more detail on this topic, along with some of the initiatives that are being put in place to help minimise the risk to this group.

### Further information:

The shunter safety special topic report can be downloaded from our website: [www.rssb.co.uk](http://www.rssb.co.uk).

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***There is a feedback form on the Rail Safety and Standards Board website; we would appreciate your comments on all our outputs.***

<sup>1</sup> Note that a breakdown of all recent shunter fatalities, along with notes on lessons learnt from the accidents, is provided in section 3.1 of the main report.