Reducing risk

***Dr Will Murray** describes ways of improving reversing safety of commercial vehicles…*

Insurance claims data from many companies and research undertaken at the University of Huddersfield suggests that between a quarter to a third of all reported freight transport collision accidents arise from vehicles reversing, in some cases many more. Despite this, the vast majority of such accidents go unnoticed at the Government and company levels. As a result, there is only limited comparative data and, until recently, very few specific reversing-based reduction interventions such as vehicle mounted safety cameras have been implemented by vehicle operators, driver trainers or policy-makers.

Over 20 years ago, in 1982, the Health and Safety Executive (HSE) 'Transport Kills' document highlighted reversing as a manoeuvre responsible for a large proportion of fatal accidents in the UK. More recently, the HSE estimated that nearly 25% of all deaths involving vehicles at work occur while vehicles are reversing. The 25% figure comes from scrutiny of HSE inspectors' accident investigation reports and includes approximately 10-20 deaths per annum. Vehicle direction is not always recorded and the HSE does not investigate all accidents reported to it – so the figures are possibly an underestimate.

A typical case, which recently went through the courts in the UK, involved a fatal reversing accident at the back door of a retail store. Approximately 38% of the company's vehicle accidents occur when their vehicles are reversing. The average cost of each accident is less than £300, mainly minor damage. Many such accidents never even get into most companies' insurance records, being dealt with as routine vehicle maintenance costs, let alone official UK statistics. A range of recent research, management development and educational projects have shown that many vehicle operators keep very poor safety performance statistics, and often only take safety seriously after a major accident.

In the case of the retailer discussed above, several reduction interventions, particularly improved site procedures and training, were implemented after the event. This case, and many others like it, show the importance of a proactive approach to reversing safety – and applying a range of appropriate management (eg. analysis and review), site (eg. risk assessment), driver (eg. assessment and training) and vehicle-based (eg. reversing cameras and alarms) interventions.

Proactive approach

The starting point for taking a proactive approach is to understand the extent of the reversing risk in your organisation. The graph below shows the percentage of reversing accidents by vehicle type from a research project undertaken with over 50 companies. The black bars show that over 20% of the accidents involving artics, rigids, vans and fleets providing total vehicle data only involved reversing, although the red boxes show that there was some variance in the data – with some van and rigid fleets over 40%.

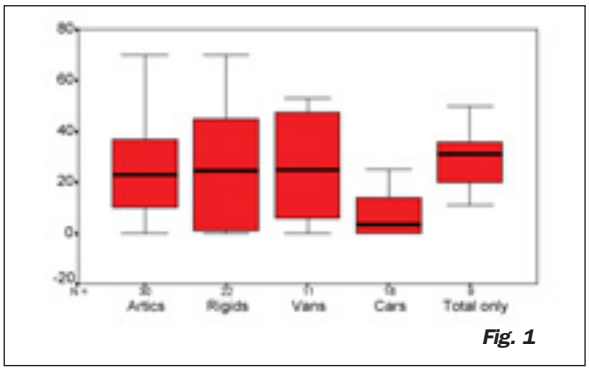


Fig. 1

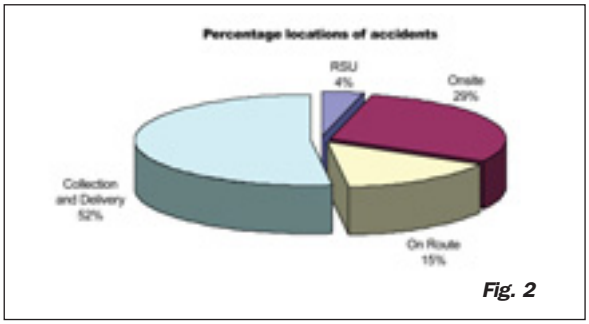


Fig. 2

The second graph shows the locations where reversing accidents tend to take place for a typical retail multi-drop operation, with over half occurring at collection and delivery points, and at the company's own depot or recycling unit (RSU).

Based on the above discussion and data, it appears that reversing safety should be addressed by a range of groups,

Operational analysis and statistics	% Yes
1. Do you know your total number of vehicle accidents and % of accidents involving reversing by vehicle type?	83
2. Do you know the total number of reversing accidents at collection and delivery points, your own company sites and on the road?	70
3. Have you undertaken detailed data analysis on previous reversing accidents to identify causes?	48
4. Do you know the average cost of your reversing accidents?	46
5. Do you track the trend of reversing accidents by the categories shown in 1-4 above?	33
6. Have you identified all reversing operations?	72
7. Have you reduced the need for reversing wherever possible?	80
8. Have you minimised reversing distances?	43
9. Have you done reversing black spot analysis and risk assessments?	50
Site procedures and operations	
10. Have you undertaken site visits to improve delivery/collection points?	41
11. Have you made the delivery/collection points aware of the identified improvements?	28
12. Do you regularly consult employees (eg. drivers) in the process of developing the layout of new sites?	50
13. Do you have a mechanism to allow drivers to make suggestions for improvements to existing sites?	80
14. Have you implemented procedures and safe systems of work?	87
15. Do your have a reversing checklist and procedures for new sites?	33
16. Do your sites clearly identify your reversing/people areas?	37
17. Have you assessed the quality of your lighting, visibility and mirrors?	78
18. Do you regularly improve yard and road layouts?	61
19. Do you regularly review the safety of yard 'furniture' (eg. posts and pillars)?	76
20. Do you have one-way traffic systems at your sites?	50
21. Have you installed traffic light systems?	9
22. Have you implemented time bans to separate people and vehicles?	4
Vehicles	
23. Have you fitted/specified vehicle proximity devices?	89
24. Have you fitted/specified improved vehicle mirrors?	24
25. Have you fitted/specified auto reversing brakes/bumpers?	41
26. Have you fitted/specified flashing reversing lights?	28
27. Have you fitted/specified reversing bleepers/alarms?	9
28. Have you fitted/specified reversing cameras?	46
29. Have you fitted/specified any other reversing aids?	26
People	
30. Have you identified all people likely to be affected?	65
31. Do all your staff involved with vehicles reversing receive a copy of the HSE's 'Reversing Vehicles' publication (11/95 ind (G) i48l c350 (free by calling 01787 881165)?	24
32. Are all drivers and banksmen properly assessed, trained and regularly re-assessed (eg. seminars, video, data analysis feedback, poster campaigns, CD-ROM)?	41
33. Do you exclude people from reversing areas?	72
34. Is a simple, agreed and clearly visible system of signalling and communication in place?	57
35. Do you regularly audit the management/supervision of reversing areas?	43
36. Do you issue fluorescent clothing to all relevant staff?	87
37. Do your drivers always check that their mirrors are clean and correctly aligned, and make sure that the reversing area is free of pedestrians?	98
38. Have you developed safe procedures/work instructions for all relevant staff?	87
39. Have you developed safe reversing procedures/work instructions for drivers?	48
40. Do you provide simple, but detailed, collection/delivery point details for drivers?	15
41. Do you provide guidelines/work instructions that visiting drivers must sign for and agree to adhere to when they arrive at your site?	35
42. Do you employ dedicated people as yard shunters/banksmen?	30
43. Do your banksmen receive and sign for a set of written procedures to which they must adhere?	76
44. Are your banksmen empowered to undertake regular risk assessments, and feed the results back to their managers and supervisors?	74
Total (Of 44)	

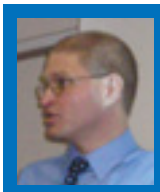
including: vehicle operators, policy-makers, researchers, health and safety specialists, and driver trainers. Reversing safety improvements can be made in four main areas: management analysis, site procedures and operations, vehicles and people.

Performance review and improvement

We have recently developed a 'where are we now gap analysis' or audit as the starting point to address the reversing safety issue. This provides a thorough understanding of the problem and allows decisions to be made on the most appropriate actions to take. The audit is reproduced in full above. The higher your score, the more safe systems of work you have in place for vehicle reversing. The lower your score, the more exposed you are to major reversing safety accidents, high costs and legal issues. It should be applied to the design of all new sites and operations, and at existing sites on an annual basis.

The audit falls into four areas: operational analysis and statistics; site procedures and operations; vehicles and people. For each item you have in place, participants are asked to tick Yes. The percentage figures show how many of the first 50 participants had implemented each of the countermeasures, suggesting that some scope remains for the participants to improve their reversing safety performance.

More details about the audit, and an electronic copy, are available free from the author.



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