

**Progress in implementing  
key recommendations of the  
1996 Transport Committee  
inquiry into truck crashes**

**March 2005**

*This is the report of an audit we carried out under  
section 16 of the Public Audit Act 2001.*

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## Foreword

All New Zealanders should be concerned about truck safety. Truck crashes currently account for about 20% of all road deaths and 7.5% of all road injuries. Truck drivers are not at fault in two-thirds of these crashes, but their impact can be more severe than other types of crashes, so it is important that trucks operate within acceptable speed limits and in a safe condition.

In 1996, as a result of public and industry concern, Parliament's Transport Committee investigated the causes of fatal truck crashes in this country, and made 67 recommendations on ways to improve truck safety. Seven of those recommendations, it said, did not require any extra resources or legislative changes and should be implemented immediately.

This report assesses how quickly and effectively the 3 Government agencies responsible – the Police, the Ministry of Transport, and the Department of Labour – implemented those 7 recommendations. Although solid progress has now been made, I am disappointed by the long delay in implementing 2 of those recommendations.

Truck safety, however, is improving, and the rate of fatal truck crashes is falling, mainly because of the combined efforts of the Police, the Land Transport Safety Authority, the Ministry of Transport, and the trucking industry. But there is no room for complacency – the number of trucks on our roads is increasing, as well as total kilometres travelled, and the standard of truck brakes throughout the country is poor. Truck safety will continue to demand close attention.

I wish to thank the staff of all the agencies involved for their co-operation and assistance during our audit.

A handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke, positioned above the printed name.

K B Brady  
Controller and Auditor-General

7 March 2005

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## Summary

In 1996, Parliament's Transport Committee (the Committee) conducted an inquiry into the causes of fatal truck crashes on New Zealand roads. We assisted with the Committee's 1996 report, and later indicated our intention to undertake a follow-up audit of progress in implementing the Committee's recommendations.

The Committee's report made 67 recommendations to improve truck safety, and said that 7 should be implemented immediately. Five of the 7 recommendations were the responsibility of the Police, and one each the responsibility of the Ministry of Transport (the Ministry), and the Department of Labour.

Our follow-up audit found that 5 of the 7 recommendations were implemented in a timely manner and 2 were not, although substantial progress has now been made. Those 2 recommendations were that:

- the Police should take immediate action to reduce truck speeds to their legal limits; and
- the Health and Safety in Employment Act 1992 should be applied immediately to the trucking industry.

## Truck speed limits

In 1996, the Committee concluded that truck speed limits had not been enforced effectively. It said that truck speeds must be reduced to their legal limits, and recommended that the Police give priority to enforcing them. In our view, the Police did not give the matter the priority recommended by the Committee. Very few speeding offence notices were issued, and truck speeds did not begin to fall until the Highway Patrol Unit was formed 4 years after the Committee's report was released.

Before May 2004, different types of trucks had different speed limits, and this complicated enforcement. Truck speeds were standardised in May 2004, and this has simplified enforcement, although it is too early to assess the results of the change. In recent times, the Police have been more active in enforcing truck speeds, and mean truck speeds are now below the legal speed limit.

## Workplace safety

The Committee also concluded that the Health and Safety in Employment Act 1992 (the Act) could be more effectively enforced in the trucking industry if police were appointed as inspectors under the Act. The Committee described examples of employees working on the rear decks of moving trucks, and delivery schedules that required drivers to travel at excessive speeds and work excessive hours. It considered these to be harmful employment practices that came within the ambit of the Act.

The Department of Labour told us that concerns about accountability delayed any action until November 2003, when it finally agreed that police could be appointed safety inspectors under

the Act. Eighty police staff are now qualified to be appointed inspectors, and 71 have received their warrants. This means that police can now take the enforcement action recommended by the Committee.

## Other issues

Our audit also followed up on the action taken on some of the Committee's other recommendations, and we report on those. We were disappointed at how slowly some of those recommendations were acted upon.

The encouraging news is that the number of fatal truck crashes is declining. In our view, this can be attributed to the range of safety initiatives taken by government agencies and the trucking industry. However, truck travel is increasing, and continued attention will need to be paid to truck safety.

One area still causing concern is heavy vehicle brakes. In April 2003, a Land Transport Safety Authority (LTSA)<sup>1</sup> survey of heavy vehicle brakes found that 65% of heavy vehicles failed the minimum brake performance requirements. We believe that significant enforcement action is now required to improve heavy vehicle brakes.

## Our recommendations

After the Committee's 1996 report, the Ministry provided the Committee with updates in 1997, 2000 and 2001 on progress in implementing its recommendations. These updates stopped in September 2001.

We have 2 recommendations from our follow-up audit:

1. We recommend that the Transport and Industrial Relations Committee ask the Ministry of Transport to resume its regular progress reports, and that the reports cover:
  - trends in fatal truck crashes;
  - trends in mean speeds of all truck types, by police district;
  - police enforcement data on truck speeds, by police district;
  - progress in applying the Health and Safety in Employment Act to transport operations;
  - trends in the number of truck rollover crashes;
  - progress with the operator safety rating system (OSRS); and
  - the results of truck brake enforcement and testing.

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<sup>1</sup> Now Land Transport New Zealand, since the merger of LTSA and Transfund New Zealand on 1 December 2004.

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2. For completeness, we recommend that the Transport and Industrial Relations Committee ask the Ministry of Transport to report on the action taken to implement the other 60 recommendations from the 1996 Transport Committee report.

# Part 1 – Background

## Introduction

- 1.1 In 1996, Parliament’s Transport Committee (the Committee) conducted an inquiry into the causes of fatal truck crashes on New Zealand roads. The Committee’s inquiry resulted from public and industry concern at the growing number of fatal truck crashes on New Zealand roads at a time when deaths from car accidents were declining significantly. In 1995, 118 people died in 105 fatal crashes involving at least one truck. As a percentage of all road fatalities, truck crash deaths were then at their highest level for 25 years.
- 1.2 We assisted with the Committee’s 1996 report,<sup>1</sup> and in our *Annual Plan 2003-04*<sup>2</sup> we signalled our intention to undertake a follow-up audit of progress in implementing the Committee’s recommendations.
- 1.3 Our follow-up audit looked at:
- the extent to which Government agencies have implemented the 7 recommendations in the 1996 report aimed at improving truck safety, which the Transport Committee believed could be quickly implemented;
  - the action taken on other truck safety initiatives; and
  - whether the number of fatal truck crashes has fallen since 1996.
- 1.4 When we refer in this report to a truck, we mean a heavy motor vehicle with an unladen weight of more than 3.5 tonnes. There are currently more than 85,000 trucks on New Zealand’s roads.

## How we carried out our audit

- 1.5 Our audit involved:
- seeking the comments of relevant Government agencies on the action taken since 1996 to implement the Committee’s recommendations; and
  - obtaining accident trend and enforcement statistics from the LTSA and the Police; and
  - analysing the information obtained to show the extent to which the Committee’s recommendations had been implemented and truck crash statistics improved.

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<sup>1</sup> *Report of the Transport Committee on the Inquiry Into Truck Crashes*, parliamentary paper I. 13B.

<sup>2</sup> B.28AP(03), page 56.



## What the Committee found in 1996

- 1.6 The Committee identified a number of underlying causes for the high number of truck crashes, including:
1. A widespread level of offending by truck drivers and trucking companies. A survey of 300 trucks stopped at random and checked for faults showed that an estimated 30% were being operated unsafely. High among the safety risks were:
    - inadequate brakes;
    - steering faults;
    - worn tyres; and
    - driver fatigue.
  2. The poor attitude to road safety of some trucking companies. Bad practices included:
    - signing up owner-drivers to contracts that effectively required them to set work schedules that encouraged driving at excessive speeds; and
    - requiring drivers to work excessive hours.
  3. Inadequate enforcement of laws designed to ensure greater safety on the roads; in particular:
    - lack of police enforcement of truck speed limits;
    - lack of specialist police to effectively enforce laws to prevent overloading and ensure mechanical safety; and
    - lack of enforcement within the trucking industry of legal provisions designed to improve workplace safety.
- 1.7 The Committee made 67 recommendations on ways to improve the safety of trucking operations, naming 7 to be implemented immediately. These recommendations are listed in Figure 1 on the next page. The Committee asked the Ministry of Transport to co-ordinate action on the recommendations. The Ministry reported 3 times to the Committee, and relevant extracts from the 3 reports have been included in our report.

Figure 1  
The 1996 Transport Committee's 7 key recommendations

|   |
|---|
| <p><b>Recommendation 1</b></p> <p><i>Truck speeds must be reduced to their legal limits.</i> We have found that, currently, there is effectively no enforcement of the truck speed limits. The Police must give priority to enforcing truck speeds. The Police have taken delivery of new laser speed guns and, as part of the Police Speed Control Project, need to direct more of these resources into enforcing truck speeds.</p>  |
| <p><b>Recommendation 2</b></p> <p><i>The Police should place less emphasis on issuing offence notices and instead should make more use of their existing powers to order the removal of trucks from the road that are a risk to safety of other road users.</i> The Commissioner of Police should issue a directive to staff reminding them of the need to take such action.</p>  |
| <p><b>Recommendation 3</b></p> <p><i>The roadside weigh stations operated by the Police to check trucks should on occasion be operated for 24-hour periods rather than the current average of 6 to 7 hours.</i> The current opening times of weigh stations mean that not all trucks can be checked.</p>  |
| <p><b>Recommendation 4</b></p> <p><i>The Commercial Vehicle Investigation Unit (CVIU) should be allocated a substantial proportion of the truck enforcement hours that have been allocated to the other Police staff, but which are not being used on a routine basis.</i> This unused resource, if allocated to the CVIU, currently equates to 4.7 extra staff for the first eight months of the year. This is the equivalent of seven extra staff per annum, who could be used to provide additional enforcement in particular problem areas, such as the Auckland motorway system.</p> |
| <p><b>Recommendation 5</b></p> <p><i>The Commercial Vehicle Investigation Unit should operate on the basis of being one national unit to enhance co-ordination of staff and improve enforcement.</i></p>  |
| <p><b>Recommendation 6</b></p> <p><i>The Ministry of Transport should oversee our recommendations and develop an action plan for considering and implementing the recommendations. There should be a review at the end of six months on what short-term recommendations have been implemented and on the action plan for the other recommendations.</i></p>   |
| <p><b>Recommendation 7</b></p> <p><i>The Health and Safety in Employment Act 1992 should be applied immediately to truck operations by the Occupational Safety and Health Service, in conjunction with the Police, especially for serious offending where the full force of the Act is justifiable.</i></p>   |

## Part 2 – Response to the Committee’s 7 key recommendations

### Recommendation 1: Enforcement of speed limits

**Truck speeds must be reduced to their legal limits.** We have found that, currently, there is effectively no enforcement of the truck speed limits. The Police must give priority to enforcing truck speeds. The Police have taken delivery of new laser speed guns and, as part of the Police Speed Control Project, need to direct more of these resources into enforcing truck speeds.

- 2.1 The Committee found that trucks were regularly exceeding the speed limits, and that the Police were doing very little to enforce those limits. Its conclusions were based on data supplied by the LTSA and the Police.
- 2.2 The data in Figure 2 below is taken from the 1996 Transport Committee report, and shows that most trucks and truck combinations were exceeding legal speed limits. Truck-trailer units, which had a speed limit of 80km/h, had a mean speed of 92.7km/h, and 66% of such vehicles were exceeding the speed limit by more than 10km/h.

*Figure 2  
Truck speeds reported by the Transport Committee in 1996\**

| Truck type**   | Speed limit (km/h) | Mean speed (km/h) | Percentage exceeding speed limit by 10km/h or more |
|----------------|--------------------|-------------------|--|
| Truck-trailers | 80                 | 92.7              | 66   |
| Trucks         | 90                 | 91.4              | 16   |
| Semi-trailers  | 90                 | 94.5              | 25   |
| B-trains       | 90                 | 97.0              | 29   |
| A-trains       | 80                 | 92.1              | 58   |

\* Data was collected in 1994.

\*\* Truck types are illustrated in the Appendix on pages 32-33.

- 2.3 In 1994-95, the Police issued a total of 64,395 non-speed-camera speeding offence notices for all motor vehicles. Figure 3 on the next page shows that, of these, only 417 (or 0.65%) were issued for speeding trucks. The Committee concluded from this data that the Police were not enforcing speed limits on trucks.

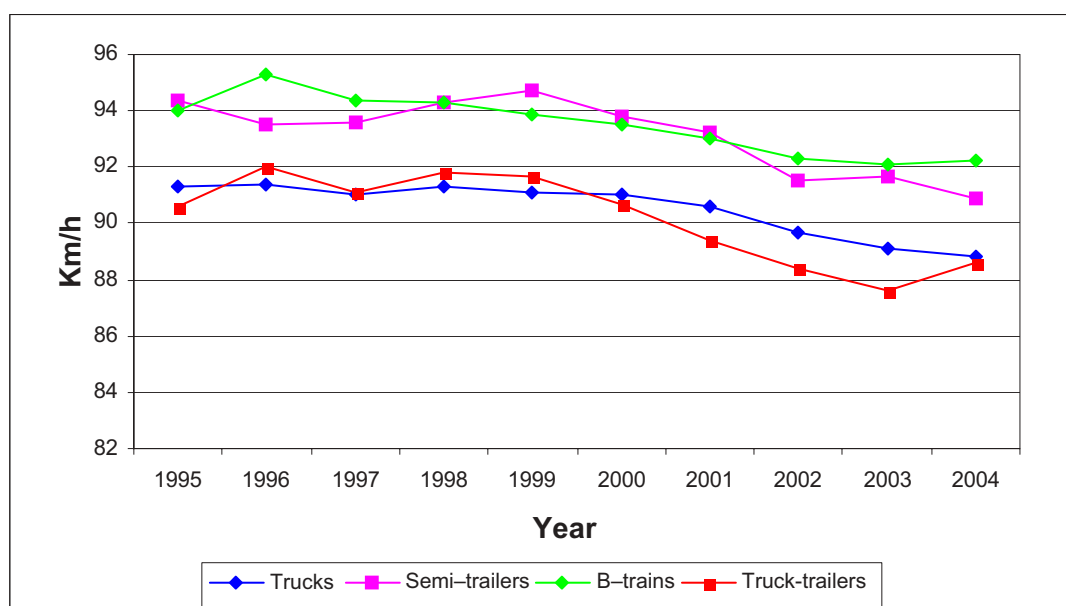
Figure 3  
Speeding offence notices issued for heavy motor vehicles 1994-95

| Offence for which speeding offence notices issued           | Number issued | Percentage of all speeding offence notices issued |
|---|---------------|---|
| Heavy motor vehicle towing a trailer, exceeding 80km/h      | 208           | 0.32  |
| Articulated heavy motor vehicle exceeding 90km/h            | 73            | 0.11  |
| Heavy motor vehicle (not towing a trailer) exceeding 90km/h | 136           | 0.22  |
| <b>Total</b>  | <b>417</b>    | <b>0.65</b>                                       |

2.4 Figure 4 below shows the mean open road speed for all truck types from 1995 to 2004, and demonstrates that speeds did not start to fall to any extent until 2000.

2.5 In the case of truck-trailer units (which had a speed limit of 80km/h until 3 May 2004), the mean speed fell from 90.7km/h in 2000 to 88.6km/h in 2004.

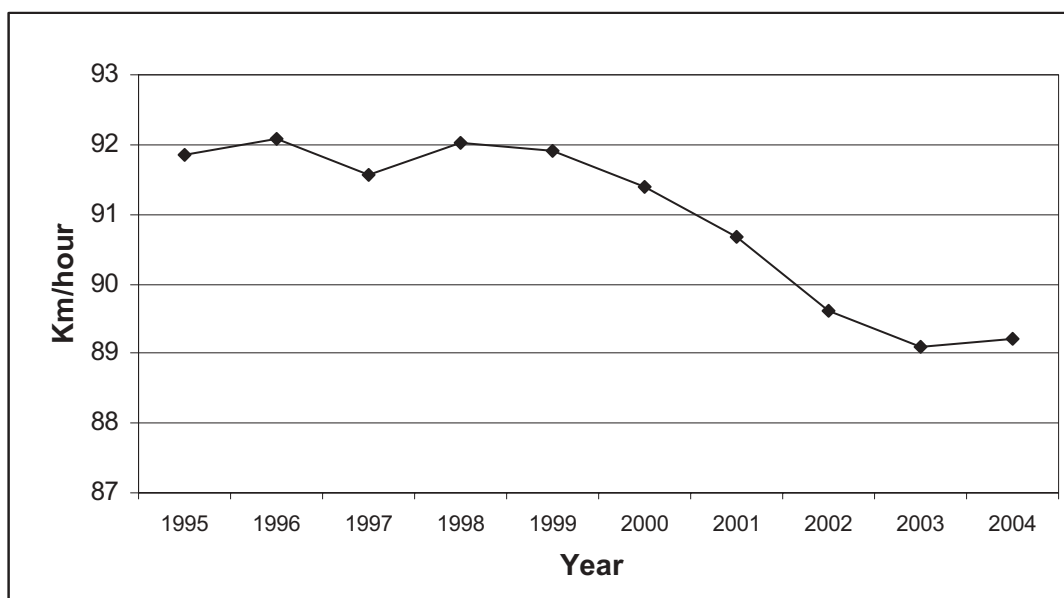
Figure 4  
Mean open road speeds of each truck type 1995-2004



Mean speeds for A-trains are excluded because of small sample size.  
Source: LTSA data.

2.6 Figure 5 below shows again that mean speeds did not fall to any extent until 2000. There was no significant change from 2003 to 2004 (89.2km/h in 2004).

*Figure 5*  
*Mean speeds of all trucks 1995-2004*



Source: OAG analysis of LTSA data

2.7 The Committee’s report also covered the percentage of trucks that had exceeded the speed limit by 10km/h or more. Figure 6 on the next page updates this information, and shows that the percentage of truck-trailers exceeding the speed limit by 10km/h declined sharply from 2000.<sup>3</sup>

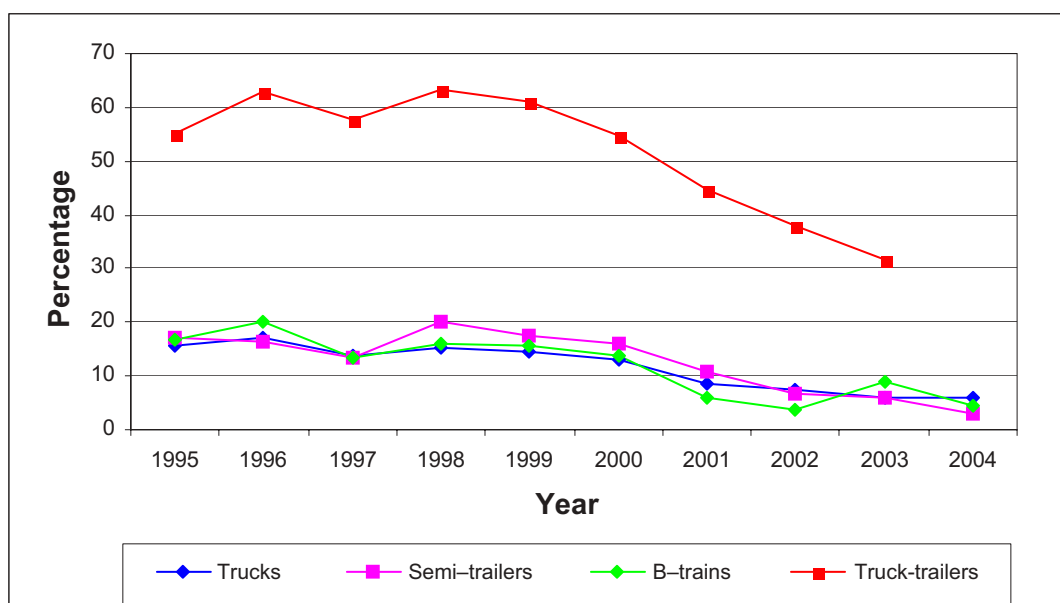
### *The Police response*

2.8 The Committee recommended that the Police give priority to enforcing truck speed limits. The Committee noted: “The Police have taken delivery of new laser speed guns and, as part of the Police Speed Control Project, need to direct more of these resources into enforcing truck speeds.”

2.9 To see whether the Police gave priority to this recommendation, we looked at the number of speeding offence notices issued for heavy motor vehicles since the Committee’s report, the results of a police initiative to detect speeding trucks with mobile speed cameras, and the formation of the Highway Patrol Unit.

<sup>3</sup> The speed value for truck-trailers for 2004 is not included, as the speed limit for these vehicles was raised to 90km/h just before the survey was undertaken.

Figure 6  
Heavy motor vehicles exceeding speed limit by 10km/h or more  
1995-2004



Source: LTSA data

- 2.10 Figure 7 on the opposite page shows that the level of enforcement has been increasing, but is still low. In 1994-95, only 417 speeding offence notices were issued to the drivers of trucks – just 0.65% of all speeding offence notices (excluding speed camera notices, but including offences detected by the use of speed guns and other enforcement methods). In the years after the Committee’s report, the number of notices issued, as a percentage of all speeding offence notices, fell well below 0.65%. Not until 2000-01 did the percentage rise above the 0.65% level.<sup>4</sup>

### Speed cameras

- 2.11 The Committee’s report concluded that one reason for the high number of trucks exceeding the speed limit was, paradoxically, the introduction of speed cameras –

*Speed cameras are triggered when vehicles exceed approximately 110km/h and do not distinguish between trucks and cars. Because of the very limited amount of other speed surveillance, speed camera detection settings have become the de facto speed limit.*

<sup>4</sup> The data in Figure 7 compares speeding offence notices issued to drivers of heavy trucks for exceeding open road speed limits with those issued to vehicles exceeding the limits in all speed zones. It is not a strict “like for like” comparison because of the difficulty the Committee had in limiting that data to only vehicles exceeding open road speed limits. We have obtained data that compares the percentage of heavy trucks exceeding open road speeds with other vehicles doing the same. The figures are: 2000-01 2.4%; 2001-02 2.4%; 2002-03 2.6% (source: Police data).

Figure 7  
Non-speed-camera offences\* 1997-2004

| Year       | Truck-trailer units | Trucks | B-trains and semi-trailers | Total: All trucks | All vehicle speeding offence notices | Truck speeding offence notices as percentage of all speeding offence notices |
|------------|---------------------|--------|----------------------------|-------------------|--------------------------------------|--|
| 1997-98    | 285                 | 141    | 146                        | 572               | 107,245                              | 0.53   |
| 1998-99    | 354                 | 216    | 158                        | 728               | 129,623                              | 0.56   |
| 1999-2000  | 384                 | 195    | 134                        | 713               | 121,530                              | 0.59   |
| 2000-01    | 1086                | 426    | 468                        | 1980              | 179,219                              | 1.10   |
| 2001-02    | 1808                | 817    | 623                        | 3248              | 252,508                              | 1.28   |
| 2002-03    | 2289                | 1151   | 695                        | 4135              | 357,095                              | 1.15   |
| 2003-04**  | 1581                | 975    | 461                        | 3017              | 339,406                              | 0.89   |
| 2003-04*** | -                   | 1164   | -                          | 1164              | 62,217                               | 1.87   |

\* Offences detected other than by speed cameras.

\*\* 1 July 2003 to 2 May 2004.

\*\*\* 3 May 2004 to 30 June 2004. The standard speed limit for trucks came into force on 3 May 2004.

Source: Police data.

- 2.12 In an attempt to detect speeding trucks more effectively, the Police introduced a manual over-ride system for mobile speed cameras in early-2001. This allowed the operator to trigger the camera and record the speed of the next vehicle to enter the radar beam. Developed photographs were then sent to the Commercial Vehicle Investigation Unit (CVIU) in Wellington, and photographs of any vehicles that had exceeded the speed limit by more than 10km/h were sent on to the Police Infringement Bureau.
- 2.13 Figure 8 on the next page shows that the use of mobile speed cameras resulted in only 130 speeding offence notices being issued in the year 2001-02 (about 10,000 photos of speeding trucks are taken each year), which suggests that the procedure has been ineffective in enforcing truck speed limits. Staff who analysed the photographs also found it difficult to distinguish between the different truck combinations, which in 2001-02 operated under different legal speed limits. For example, a B-train, which had a speed limit of 90km/h, looked very much the same from front on as a truck-trailer, which had a speed limit of 80km/h.

*Figure 8  
Speed-camera offences\* 2001-02*

| <b>Speeding Offence</b>                                       | <b>Number</b> |
|---|---------------|
| Heavy motor vehicle with articulated trailer exceeding 90km/h | 9             |
| Heavy motor vehicle with trailer exceeding 80km/h             | 12            |
| Heavy motor vehicle exceeding 90km/h                          | 109           |
| <b>Total</b>  | <b>130</b>    |

\* Offences detected by mobile speed cameras only.

Source: Police data.

### *Formation of Highway Patrol Unit*

- 2.14 At the end of 2000, the Police set up the Highway Patrol Unit to provide a highly visible and dedicated police presence on New Zealand's State highways. Since the Unit was established:
- the mean speeds of trucks have declined; and
  - the number of offence notices issued for speeding trucks has increased sharply.

### *New speed limit introduced*

- 2.15 At the time of the Committee's report in 1996, different legal speed limits applied, depending on the type of truck. Because they were considered unsafe at higher speeds, truck-trailer units (and A-trains) had a speed limit of 80km/h. Other types had a speed limit of 90km/h (see the Appendix on pages 32-33). This made effective speed enforcement difficult, and was the main reason why truck-trailers recorded mean speeds well above their legal limit of 80km/h. The Committee was told that 7-axle truck-trailer combinations were unstable at speeds of more than 90km/h. The Committee concluded that, in the interests of safety, the speed limit for truck-trailers should remain at 80km/h.
- 2.16 In July 2002, the LTSA issued a new rule, called the Vehicle Dimension and Mass Rule, to improve the stability of truck-trailers and A-trains. The technical assessment was that, when truck-trailers and A-trains met the requirements of this rule, they would be as stable as other truck combinations. It would also mean that all truck combinations could safely travel at 90km/h.
- 2.17 In a paper to Cabinet in November 2003, the Ministry outlined the advantages of a standard speed limit for trucks. They included:
- simpler and more effective police enforcement;
  - a probable decrease in mean speeds, which could be expected to reduce the number of truck crashes; and



- more efficient traffic flow, because all vehicles would be travelling at similar speeds.
- 2.18 On 3 May 2004, a new standard speed limit of 90km/h for all heavy motor vehicles came into force. The Police have told us that they will now take action against the driver of any truck found to be travelling more than 5km/h (previously 10km/h) above the limit in any speed zone.

## Our findings

- 2.19 The Police Commissioner followed up the Committee's recommendation by instructing his region and district commanders to take immediate steps to enforce the limits on truck speeds. This instruction, issued in late-1996, appeared to have resulted in some reduction in mean speeds in 1997, but speeds increased again in 1998, and the number of speeding offence notices issued for trucks, as a percentage of all notices issued, fell below the figure that the Committee considered represented little enforcement.
- 2.20 The Committee also referred to the delivery of new laser speed guns to the Police. However, we have seen no evidence that special efforts were made to use these guns to enforce truck speeds.
- 2.21 The Highway Patrol Unit was formed in late-2000, and mean speeds have been falling. Mean speeds of trucks are now below the legal speed limit of 90km/h.

## Recommendation 2: Removal of trucks from the road

***The Police should place less emphasis on issuing offence notices and instead should make more use of their existing powers to order the removal of trucks from the road that are a risk to safety of other road users.*** The Commissioner of Police should issue a directive to staff reminding them of the need to take such action.

- 2.22 The Committee considered that the relatively small fines imposed on the operators and drivers of unsafe trucks were not a sufficient deterrent. It said that greater compliance with the law could be expected if, for specified offences, vehicles could simply be taken off the road –

*Putting a truck out of service requires immediate action by the operator to remedy the fault. This has a far greater deterrent effect than the possibility of receiving a small fine many months later. By ordering a vehicle or driver off the road, the operator is also affected through delayed deliveries and loss of earnings.*

- 2.23 Figure 9 on the next page illustrates the very large increase in the number of commercial vehicles (including trucks) ordered off the road since 1998-99, in the main for defective brakes, defective lighting, and expired certificates of fitness. The reasons for this sharp increase include:

- training for all CVIU staff on how to carry out detailed vehicle safety inspections;
- the appointment of 4 specialist vehicle safety inspection officers to the CVIU;
- national standards that put strong emphasis on ordering unsafe vehicles off the road; and
- the CVIU operating on a national basis since July 1999.

**Figure 9**  
*Commercial vehicles ordered off the road since 1998-99*

| Reporting period | Orders issued        |                                       |       |
|------------------|----------------------|---------------------------------------|-------|
|                  | By Police Constables | By Vehicle Safety Inspection Officers | Total |
| 1998-99          | 17                   | -                                     | 17    |
| 1999-2000        | 1407                 | -                                     | 1407  |
| 2000-01          | 2262                 | -                                     | 2262  |
| 2001-02          | 2435                 | -                                     | 2435  |
| 2002-03          | 2933                 | 645                                   | 3578  |
| 2003-04          | 4122                 | 1979                                  | 6101  |

*Source: Police data*

## **Our findings**

2.24 The Police were unable to give immediate effect to the Committee’s recommendation that unsafe trucks should be ordered off the road, until the CVIU was able to operate on a national basis and had acquired the necessary skills and training for detailed vehicle safety inspections. Greater numbers of unsafe commercial vehicles are now being ordered off the road.

## **Recommendation 3: Weigh station operating times**

***The roadside weigh stations (weighbridges) operated by the Police to check trucks should on occasion be operated for 24-hour periods rather than the current average of 6 to 7 hours.*** The current opening times of weigh stations mean that not all trucks can be checked.

2.25 The Committee considered that, if weighbridges were open for periods of 6 to 7 hours only, it was relatively easy for trucks to avoid them –

*When it becomes known that a weighbridge is open, trucks may delay the trip or take a longer route knowing that on the return trip the weighbridge will have*

*closed. They can then travel back on the usual route without losing too much time.*

- 2.26 If weighbridges could be opened for 24-hour periods at selected times, the Committee argued, a much larger percentage of trucks could be checked. CVIU staff could also patrol alternative routes to stop trucks bypassing these weighbridges. Since the report, the CVIU has at times operated weighbridges for 24-hour periods. Other methods of making weighbridge operations more effective have also been implemented (for example, by increasing the level of inspection at weighbridges).
- 2.27 In 1998, a working party<sup>5</sup> set up as a result of an initiative of the Road Transport Forum concluded that, while fixed weighbridges were an effective deterrent, the CVIU also needed to be able to patrol back roads with mobile equipment, weighing trucks that had bypassed the weighbridges. In 2000-01, the Government approved additional funding to enable the CVIU to purchase 5 additional vehicles and equipment for this purpose.
- 2.28 Currently, the Police enforce the law through:
- mobile patrols, where CVIU staff stop and weigh trucks at the roadside;
  - fixed weighbridges, which allow large numbers of trucks to be weighed; and
  - a combination of mobile patrols and weighbridges.
- 2.29 Figure 10 on the next page shows the number of offences<sup>6</sup> detected compared with the number of trucks stopped at weighbridges. In 2003-04, for example, an offence was detected for every 8.3 trucks checked at a fixed weighbridge. For mobile patrols, the figure was an offence detected for every 4.1 trucks checked (the difference reflects the nature of covert versus overt policing). While weighbridges detect fewer defects per vehicle stopped, they have an important deterrent effect because of their ability to inspect greater numbers of vehicles at lower cost.
- 2.30 The Ministry's 2000 update to the Committee commented that, if enforcement and other initiatives were having a positive effect on safety, the ratio of detected trucks to the number of trucks checked should be expected to drop. However, Figure 10 shows that there has been no significant change in the figure for mobile patrols, and for fixed weighbridges the defect rate has increased. The increase in the number of offences detected is likely to be due to the increased level of inspection that the CVIU has applied, particularly for roadworthiness.

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<sup>5</sup> With representation from the Road Transport Forum (a group representing road transport users), the Ministry of Transport, LTSA, and the Police.

<sup>6</sup> Roadside and weighbridge enforcement can include checks of:

- road-user charges;
- truck registration;
- Certificates of Fitness;
- vehicle weight;
- driver logbooks;
- security of loads; and
- roadworthiness.

Figure 10  
Ratio of detected truck offences to number of trucks checked

| Reporting period | Mobile patrols | Fixed weighbridges | Combination of mobile patrols and weighbridges |
|------------------|----------------|--------------------|--|
| 2000-01          | 1:3.8          | 1:1.5              | 1:5.1  |
| 2001-02          | 1:4.3          | 1:1.1              | 1:6.1  |
| 2002-03          | 1:3.9          | 1:1.2              | 1:6.6  |
| 2003-04          | 1:4.1          | 1:8.3              | 1:6.2  |

Source: Police data

- 2.31 In July 2004, the LTSA published a “Categorisation of Defects” guideline – a system for classifying truck defects based on the risk to the safe operation of the vehicle. The LTSA says its intention is to provide consistent and improved guidelines for detecting truck defects during audits and roadside/weighbridge inspections, and that the industry has sought such guidance. The guidelines categorise defects as dangerous, serious, or moderate, depending on the safety risk. The guidelines are also for the use of truck operators, who can check their vehicles themselves and have faults fixed before going on the road.

## Our findings

- 2.32 The CVIU has implemented the Committee’s recommendation, in that weighbridges have been operated for much longer periods, and other ways of making them more effective have been implemented (for example, by increasing the level of inspection at weighbridges).
- 2.33 The LTSA has issued guidelines for classifying truck defects during an audit or a roadside or weighbridge inspection. Such standardised check systems are likely to increase compliance levels, as all parties know what is expected of them. We see real merit in such a transparent and consistent approach.

## Recommendations 4 and 5: Operation of the Commercial Vehicle Investigation Unit

The Committee made two recommendations on the operation of the CVIU. The first was that the unit should be allocated a substantial proportion of the truck enforcement hours earmarked for other police staff. The second was that the CVIU should operate as one national unit “to enhance co-ordination of staff and improve enforcement.”

- 2.34 In 1996, the CVIU had a staff of 44, spread throughout 5 police regions and reporting to regional police commanders. This resulted in co-ordination problems that made it difficult to target truck operators who flouted the law. The Committee commented –

*For example, to take effective enforcement action against operators who allow their drivers to breach driving hour restrictions may require the combined action of CVIU staff in more than one Police region. This is because trucks travel through more than one Police region and any surveillance work to detect breaches of driving hours requires the combined effort of staff from other regions. Such action is difficult when Police Commanders place restrictions on their staff working in other regions.*

- 2.35 However, the Committee found the CVIU to be far more effective than other police units in enforcing the law governing the operation of trucks, and recommended that the Unit be allocated a big slice of the truck enforcement hours then earmarked for other police staff.
- 2.36 In 1996-97, the CVIU was allocated 83,325 hours, and for the 2004-05 year 166,770 hours. The unit now has a total staff of 109, including 4 vehicle safety officers who run visual safety checks on tyres, brakes, lights, suspensions, and towing connections. From 1 October 2003 to 30 June 2004, these officers inspected 7888 trucks and 6990 heavy trailers. The results of these inspections showed that 31% of trucks and 47% of heavy trailers had faults.
- 2.37 The Police have acted on the Committee's recommendation, and the CVIU is now a national service under the control of a national manager. In September 2001, the Ministry told the Committee that the Unit was continuing to operate very successfully.

## **Our findings**

- 2.38 The Police have effectively implemented the recommendations of the Committee on the operation of the CVIU. Enforcement hours have been substantially increased, the unit now has more than twice the staff it had in 1996, and it is now able to target offenders without worrying about police boundaries. The unit is also putting more emphasis on vehicle safety and has taken on staff to check that trucks meet mechanical safety standards. All CVIU staff have now been trained in vehicle safety inspection.

## **Recommendation 6: Ministry of Transport action plan**

***The Ministry of Transport should oversee our recommendations and develop an action plan for considering and implementing the recommendations. There should be a review at the end of six months on what short-term recommendations have been implemented and on the action plan for the other recommendations.***

2.39 Since 1997, the Ministry has reported on the progress that Government agencies have made in implementing the Committee's recommendations. Reports were made in 1997 and 2000, with the latest in September 2001. They were comprehensive, and covered all recommendations in the Committee's report, together with a summary of the action taken by the relevant agencies.

## Our findings and recommendations

2.40 After the report of the Committee in 1996, the Ministry provided updates to the Committee on progress in implementing its recommendations. These updates stopped several years ago. In our view, it would be useful if these updates were to be continued, as they provided a comprehensive picture of truck safety issues.

### Recommendation 1

We recommend that the Transport and Industrial Relations Committee ask the Ministry of Transport to resume its regular progress reports, and that the reports cover:

- trends in fatal truck crashes;
- trends in mean speeds of all truck types, by police district;
- police enforcement data on truck speeds, by police district;
- progress in applying the Health and Safety in Employment Act to transport operations;
- trends in the number of truck rollover crashes;
- progress with the operator safety rating system (OSRS); and
- the results of truck brake enforcement and testing.

### Recommendation 2

For completeness, we recommend that the Transport and Industrial Relations Committee ask the Ministry of Transport to report on the action taken to implement the other 60 recommendations from the 1996 Transport Committee report.

## Recommendation 7: Applying the Health and Safety in Employment Act

*The Health and Safety in Employment Act 1992 should be applied immediately to truck operations by the Occupational Safety and Health Service, in conjunction with the Police, especially for serious offending where the full force of the Act is justifiable.*

- 2.41 The Committee's report cited examples of trucking company managers encouraging their employees to work in dangerous situations. These included:
- An Auckland employer of contracted delivery drivers who operated a financial incentive system that encouraged contractors to compete with each other for extra delivery work. Staff worked on the rear decks of moving trucks, sorting loads in preparation for a fast turnaround at each delivery site. A worker was killed when he fell from the back of a truck travelling down a main street.
  - A national trucking company operating between Auckland to Wellington that required its drivers to maintain average speeds of between 95km/h and 100.6km/h for the entire trip – well above the legal speed of 90km/h. The LTSA pointed out that, because the highway network runs through so many towns, where speed limits of 50km/h or less would apply, average point-to-point truck speeds should be no more than 75km/h.
  - Contracts under which drivers were expected to exceed legal requirements governing the number of hours they could work each day.
- 2.42 In September 2001, the Ministry told the Committee – as part of its reporting on implementation of the Committee's recommendations – that the road transport industry stood out as having made a relatively high number of accident compensation claims, and that the Occupational Safety and Health Service (OSH) had targeted the industry for workplace visits and information programmes. This involved basic information on the requirements of the Health and Safety in Employment Act 1992 (the Act), and an assessment of operators' systems for managing hazards.
- 2.43 It is important to keep in mind that there were two parts to the Committee's recommendation. The first was that OSH and the Police should work together to address significant work safety issues. This did not happen. The workplace visits carried out by OSH would have given transport industry workers some useful information, but fell well short of the Committee's recommendation.
- 2.44 The Committee also recommended that the Police be appointed inspectors under the Act. The Committee believed that, because of their day-to-day contact with drivers and driving situations, police were best placed to investigate breaches of the Act in relation to trucking. Until recently, the Department of Labour (the Department) has taken little action on this recommendation.
- 2.45 According to the Department, there were two reasons for that. The first was the uncertainty about whether the Act applied to situations where workers, such as truck drivers, were mobile in the course of their employment. In its 1996 report, the

Committee took the view that a truck was a workplace within the meaning of the Act. This was also the view of the Department, but Court decisions<sup>7</sup> created some uncertainty about whether, and to what extent, the Act applied to situations where workers were mobile.

- 2.46 Any doubt over this point was removed in 2002 by statutory amendments which clarified that a vehicle could constitute a “place of work” for the purposes of the Act, and that a person could still be in a “place of work” while mobile. Thus, that issue should no longer be – if it ever was – an impediment to enforcing the Act in this field.
- 2.47 According to the Department, the second reason why it took little immediate action on the Committee’s recommendation was because of past concerns about the Secretary of Labour’s accountability for non-departmental staff involved in compliance activities. The December 2002 amendment to the Act also inserted a new section 28A, which allows the Prime Minister to designate other agencies to administer the Act for a particular industry, sector, or type of work.
- 2.48 The Department told us that the new section had been used to empower the Maritime Safety Authority and the Civil Aviation Authority to administer the Act for ships and aircraft respectively. In the Department’s view, this resolved the issue of accountability, because it made the chief executive of a designated agency accountable, rather than the Secretary of Labour.
- 2.49 After the Act was amended, the Department considered recommending that police be designated to administer the Act under section 28A, but decided that it was not feasible, given the spread of policy, education, and enforcement functions throughout the various land transport agencies. Instead, it has decided to work with the Police to manage accountability issues.
- 2.50 The Department is now training and warranting members of the CVIU under the section of the Act that allows the Secretary of Labour to appoint any person with the prescribed qualifications to the position of Health and Safety Inspector. Eighty CVIU staff are now qualified to be appointed inspectors under section 29(1) of the Act and 71 have received their warrants. This means that the Police can now take the enforcement action recommended by the Committee.

## Our findings

- 2.51 In our view, the Department of Labour should have signalled its concerns about accountability to the Committee. Progress reports made no mention of the Department’s intention not to act on the Committee’s recommendation for the legislation to be immediately applied to the trucking industry until accountability issues had been resolved. We are pleased that real progress has been made in implementing this recommendation.

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<sup>7</sup> *Department of Labour v Berryman* (1996) DCR 121. Also *Department of Labour v Diveco Ltd* (Court of Appeal CA98/04 [8 November 2004]).



## Part 3 – Other truck safety initiatives

- 3.1 Several other important initiatives have been taken in response to the Committee’s recommendations that have either reduced truck crashes or have the potential to significantly improve the safety of trucking operations.

### Reducing truck rollover crashes

- 3.2 In 1996, the Committee’s report drew attention to the number of crashes where trucks had rolled and recommended that priority be given to stability-related issues. We found that considerable work has been done to reduce the number of truck rollover crashes. The LTSA, for example, introduced a minimum vehicle stability requirement, which was a world-first of its type. As part of that introduction, drivers and operators were given driver training, along with information about vehicle stability that stressed the need to slow down, especially around curves.

- 3.3 The Committee’s report singled out the log transport sector, which responded by forming the Log Transport Safety Council, which includes transport operators, forest owners, equipment manufacturers, TERNZ<sup>8</sup> and the LTSA. The combined efforts of the Council, Government agencies, and the Police have reduced logging truck rollover crashes (per 100,000 km) to about one-third of what they were in late-2000. The factors responsible for the reduction include:

- major improvements in trailer design to improve stability;
- the introduction of longer and lower logging trucks to reduce load height;
- maximum height restrictions;
- more emphasis on driver training;
- improvements in operator safety management systems;
- an 0800 “compliments and complaints” system;
- increased enforcement; and
- a range of other measures.

- 3.4 The initiatives taken by the logging industry are a good illustration of the road safety benefits that can accrue when government agencies and industry work together. However, rollover crashes for all trucks continue to be a problem. In 2003, 37.5% of truck crashes reported to the CVIU involved a rollover. The figures appear to be increasing, which indicates that this area of truck safety will need continued attention.

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<sup>8</sup> Traffic Engineering Research New Zealand.

## Responsible operator programme

- 3.5 The Committee's 1996 report recommended that the LTSA set up a task force of transport organisations and relevant government agencies to establish a "responsible operator programme". The programme would mirror an Australian scheme that aimed to have transport operators, regulatory authorities, and enforcement agencies "working in a spirit of co-operation rather than potential conflict." The Australian scheme required transport operators to put safety systems in place that could be audited to check their compliance with the law.
- 3.6 The Committee envisaged that transport operators participating in the New Zealand programme (who would be more likely to be complying with legal requirements anyway) would not be subject to the same level of enforcement as other operators. To help target irresponsible operators, it also recommended that a database be set up to record information from roadside inspections, speed enforcement, and accident investigations.
- 3.7 However, a responsible operator programme did not appear to be a high priority for the LTSA at the time. The Ministry's 1997 progress report noted that the LTSA did not consider it necessary to set up a specific task force to look at such a programme, as it was already reviewing the licensing regime for ways to make truck drivers and operators more responsible for safety on the roads. The LTSA pointed out that an operator database already existed, although it would need to be upgraded before it could be used to target irresponsible operators.
- 3.8 In September 2000, the Road Transport Forum urged the Minister of Transport to set up a comprehensive operator safety-rating scheme. The Forum said the greatest overall influence on safety was the management of the businesses controlling trucking operations –
- Management controls driver selection, driver training, safety culture, driving schedules as well as vehicle selection and maintenance. In addition, there is strong international evidence which shows that the demands made on drivers, as a result of management accepting unrealistic delivery schedules and contract conditions, are significant contributors to truck crashes.*
- 3.9 The Forum argued that the deregulated transport model had delivered substantial efficiency gains to the New Zealand economy, but that it should be accompanied by effective, targeted enforcement, and a system that made transport operators fully accountable for their policies and actions. The failure of government transport policy to provide those elements, it said, had played a significant part "in giving economic advantages to delinquent transport operators who have deliberately compromised safety and operated illegally".
- 3.10 The safety rating scheme that the Forum wanted set up was similar to the one recommended in the Committee's 1996 report. Operators would be rated by their compliance with safety systems, which would allow enforcement to be targeted at habitual offenders. It would also allow operators with high safety standards to be rewarded through less intensive on-road enforcement, and to receive other benefits as a means of encouraging others to improve.

- 3.11 The LTSA is now devising an operator safety rating scheme (OSRS) that is enforcement-based. It will use the results of offence notices and Certificate of Fitness inspections from the previous 24 months to identify and target irresponsible operators. However, this is only one aspect of what the Committee envisaged for the responsible operator programme. For example, it wanted procedures put in place that demonstrated that trucking companies were operating safely, and for these procedures to be audited.
- 3.12 The LTSA told us that a similar safety rating scheme now in use in Ontario, Canada, took 10 years to implement, which suggests that it could be several years before the new scheme is in force in this country. Had the LTSA given this project higher priority in 1997, it is likely that a responsible operator programme, or something similar, would have been at an advanced stage now.

## **Improving truck braking**

- 3.13 The Committee recommended that urgent attention be given to improving the braking of all heavy vehicles. As a first step, it called for a review to identify any deficiencies in the Brake Code. The code is a set of standards developed by the LTSA and the trucking industry to improve the standard of braking for fully-laden heavy vehicle combinations (it is mandatory for all heavy vehicle combinations over 39 tonnes).
- 3.14 The Committee also recommended that urgent attention be given to the braking of all trucks. As a first step, roadworthiness checks needed to be improved and new braking technologies reviewed.
- 3.15 An LTSA brake survey in 1998 found that about half of the 1064 trucks and trailers tested had defective brake systems and did not comply with braking requirements. The survey also found that trailers were 3 times more likely to be ordered off the road for defective brakes than trucks. The LTSA followed up with a “road show” to raise industry awareness that basic maintenance – for example, adjusting slack adjusters and draining water from air tanks – could dramatically improve braking performance.
- 3.16 In April 2003, a smaller LTSA survey of heavy vehicle brakes found that 65% of heavy vehicles failed the minimum brake performance requirement. The survey also found that 87% of semi-trailers and 79% of fully-laden trailers failed the roadside roller brake test.
- 3.17 In June 2004, the LTSA released a draft of the Heavy Vehicle Brake Rule, which aims to reduce the number of truck crashes caused by brake defects by improving testing procedures and requiring the use of advanced technology. The new rule contains a number of important provisions, including:
- Certificate of Fitness inspections to test the brakes of heavy vehicles that are laden or carrying a simulated load. At present, these brakes are tested when the vehicles are unladen.

- Updated, more specific performance requirements for the brakes of all heavy vehicles first registered or modified in New Zealand after 1 May 2006 that are used in combination (for example, a truck towing a trailer). To meet the requirement, such truck-trailer combinations are likely to have to be fitted with load-sensing valves or anti-lock braking systems.<sup>9</sup>
- 3.18 The LTSA plans to carry out a national heavy vehicle brake survey as part of its 2004-05 work programme. This will give a more complete picture of the standard of heavy vehicle brakes throughout the country. It should also allow identification of parts of the country with greater compliance problems.
- 3.19 The Police have now prepared a business case to employ 5 more vehicle safety officers based in Auckland, Hamilton, Wellington, and Christchurch. These officers will have enforcement powers, and 4 will be equipped with roller brake testing equipment to allow for random and targeted roadside testing. The equipment will be on a trailer, towed by a van, which will allow the officers to conduct accurate brake tests at any location.

## Our findings

- 3.20 LTSA surveys indicate that the standard of heavy vehicle brakes throughout the country is poor. This was known at the time of the 1996 inquiry, and it appears that little has changed since then, despite the Committee's recommendation that improving truck brakes should be given urgency.
- 3.21 Making improvements to truck braking requires an integrated approach which includes improvements to Certificate of Fitness brake testing, the proposed Brake Rule, and use of the LTSA "Categorisation of Defects" guideline. It is also the Police view (a view we agree with) that significant enforcement action is now required. Their case for more vehicle safety officers and brake-test equipment makes sense, but needs to be considered as part of an integrated package of measures. Brake testing must be credible if it is to be effective, particularly as overseas studies have highlighted the errors that can occur if brake-testing equipment is used incorrectly.

## Fatigue management

- 3.22 The Committee made several recommendations about how to reduce truck driver fatigue. Specifically, it recommended simplifying the laws relating to the number of hours that truck drivers can work, and that the LTSA consider allowing onboard computers as a substitute for logbooks. The LTSA has now approved 2 types of electronic logbook for truck driver use, but the uptake of such systems has so far been limited.

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<sup>9</sup> Load-sensing valves automatically apportion the braking effort of heavy vehicles according to the mass of the load being carried by each axle set. Anti-lock braking systems reduce the brake force on a wheel if it starts to lock up, so that directional control is maintained.

- 3.23 The Land Transport Amendment Bill, introduced in June 2004, aims to simplify the driving hours and logbook system, introduces a simpler definition of work time, and makes a number of changes to the penalties for breaches of the logbook rules and other record-keeping offences. The Bill also introduces a new “chain of responsibility offence” to ensure that employers and other industry participants are held accountable if they knowingly allow or cause breaches of the driving-hour rules.
- 3.24 Specific research has also been done on truck driver fatigue. In 2003, a study by the Sleep/Wake Research Centre of Massey University (funded by the Road Safety Trust)<sup>10</sup> piloted a new method for investigating the role of fatigue in truck crashes. The study estimated that fatigue was involved in up to 17.6% of all truck crashes on New Zealand roads. The study also found that truck crash reports could be underestimating the role of driver fatigue by a factor of between 1.7 and 3.5, which means that between 41% and 71% of fatigue-related truck crashes are not identified as such.
- 3.25 The report of the Sleep/Wake Research Centre recommended that 4 questions be added to the CVIU crash report form<sup>11</sup> to improve fatigue assessment in all crashes, and the CVIU has done so. Researchers from the Centre have also visited CVIU staff to provide additional fatigue-related training.

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<sup>10</sup> The Road Safety Trust is a Crown entity which funds research, community safety initiatives, and training that will improve road safety.

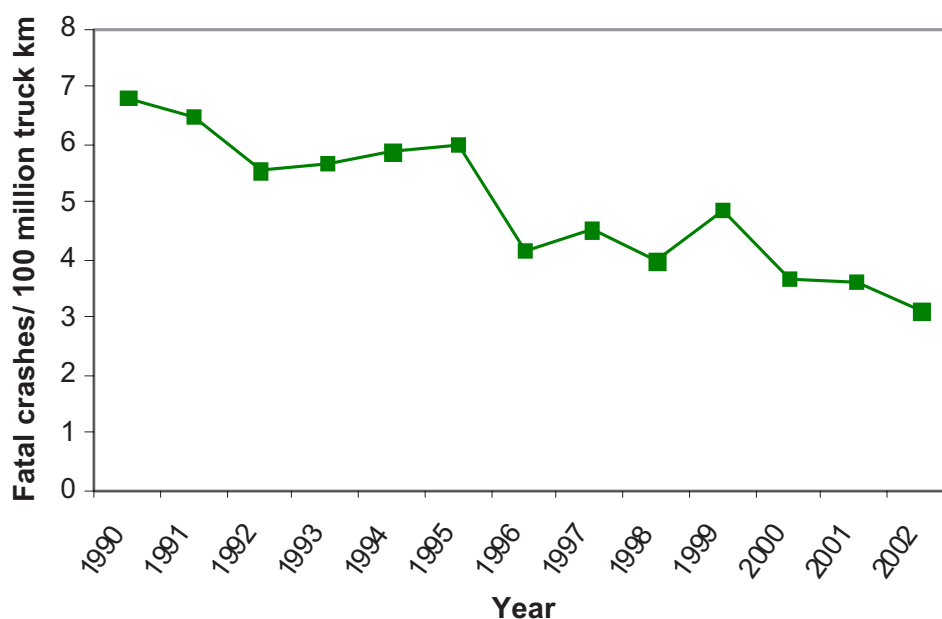
<sup>11</sup> The CVIU complete this form after attending a truck or bus crash.

## Part 4 – Trends in fatal truck crashes

4.1 The Police have been given additional resources to put the Committee’s recommendations into action, and have restructured their operations to provide more effective enforcement. Safety agencies have taken other initiatives to improve truck safety. So, has the number of fatal truck crashes fallen since 1996?

4.2 Figure 11 shows that fatal truck crashes per 100 million kilometres travelled dropped significantly in 1996, rose again in 1997 and 1999, and has declined since then. Overall, there appears to be a significant downward trend since 1990.

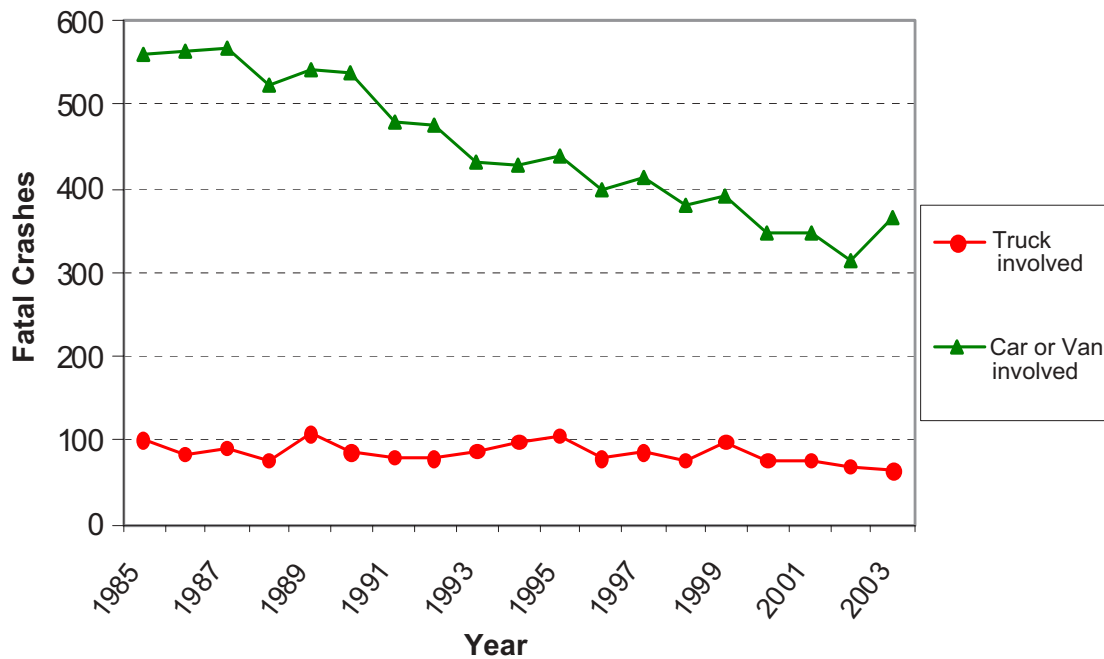
Figure 11  
Fatal truck crashes per 100 million kilometres travelled



Source: LTSA

4.3 Figure 12 on the opposite page shows that the number of fatal truck crashes has fallen since 1985, but not as sharply as the number of fatal car or van crashes. A report prepared for the LTSA in 2003 noted that truck crashes in New Zealand accounted for about 20% of all road fatalities and 7.5% of all injuries. Truck travel was then increasing at about 6% annually, compared with 3% for other vehicles. According to the authors, this made the task of reducing truck crash fatalities “even more difficult.”

Figure 12  
Fatal motor vehicle crashes since 1985



Source: LTSA

## Our findings

- 4.4 The data shows a reduction in fatal truck crashes since 1985, which can probably be attributed to the greater emphasis that safety agencies and the road transport industry are putting on truck safety. However, truck travel is increasing at a faster rate than travel by other vehicles. These facts suggest that continued attention must be given to ways of reducing truck crashes.

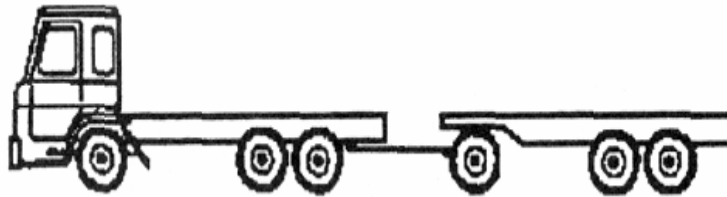
## Appendix – Types of heavy motor vehicles

### *Rigid truck*



*Rigid trucks account for about 58% of the total distance travelled by all heavy vehicles. These vehicles have always had a speed limit of 90km/h.*

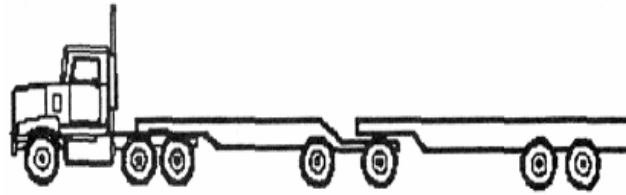
### *Truck-trailer*



*Truck-trailers account for about 21% of the total distance travelled by all heavy vehicles. Before May 2004, these vehicles had a speed limit of 80km/h. It is now 90km/h.*



### *B-train*



*B-trains account for about 4.2% of the total distance travelled by all heavy vehicles. These vehicles have always had a speed limit of 90km/h.*

### *Semi-trailer*



*Semi-trailers account for about 15% of the total distance travelled by all heavy vehicles. These vehicles have always had a speed limit of 90km/h.*

### *A-train*



*A-trains account for about 1.2% of the total distance travelled by all heavy vehicles. Before May 2004, they had a speed limit of 80km/h. It is now 90km/h.*