

THIS DOCUMENT HAS BEEN PREPARED FOR CONSULTATION AND DOES  
NOT REPRESENT GOVERNMENT POLICY

**DRIVING HOURS &  
LOGBOOKS REVIEW  
LTSA Preferred  
Policy Proposal**



Prepared by the  
Land Transport Safety Authority

December 2000

ISBN 0478 - 20699 - 2

## Contents

	<b>Page</b>
<b>Introduction</b>	3
<b>Executive summary</b>	5
<b>Part A: Driving Hours</b>	
PP (Proposed Policy) 1 Retention of restrictions	7
PP2 New definitions	12
PP3 New requirements	13
PP4 Who will be subject	17
PP5 Approval of Alternative schemes	19
<b>Part B: Logbooks</b>	
PP6 Format	21
PP7 Which drivers must use them	22
PP8 Approval of logbook alternatives	24
PP9 Retention of records	25
<b>Part C: Penalties</b>	
PP10 Grading offences	26
PP11 Extend liability to other parties	28
<b>Part D: Exemptions</b>	
PP12 Exemptions	29
<b>Appendix 1</b>	33
<b>Appendix 2</b>	35
<b>Appendix 3</b>	37
<b>Appendix 4</b>	39
<b>Appendix 5</b>	40

## **DRIVING HOURS &**

## **LOGBOOKS REVIEW**

### **LTSA Preferred Policy Proposal**

#### **Introduction**

The role of driver fatigue as a road safety risk factor is well recognised. Amongst drivers as a whole, commercial vehicles drivers have been identified as a particular risk group, due, in part, to commercial expectations to work as many hours as possible to maximise financial benefit.

The review has arisen from a number of factors. First, there is an expectation from the commercial road industry that the current provisions should be reformed to simplify them as they are considered unnecessarily complex – particularly for those who use them. In addition, the 1996 Parliamentary select committee inquiry into truck safety (the truck crash inquiry) recommended that the driving hours and logbook rules be reviewed.

The aim of the review has been, taking into account the Land Transport Safety Authority's (LTSA) requirement to promote safety at reasonable cost, to:

- determine whether the State should continue to intervene to regulate driving hours, and
- determine the most appropriate form such intervention should take;

The review's underlying intentions have been to:

- review the current driving hour and logbook provisions in the light of available scientific evidence on driver fatigue;
- consider whether the current scope of the provisions adequately targets "at risk driver groups"; and
- simplify the current provisions where possible (to assist both users and enforcers).

This document outlines the preferred policy proposals of the Land Transport Safety Authority (LTSA) arising from its review of the current driving hours and logbooks regime. The first stage of this review was the release in December 1998 of a discussion document outlining various options for both driving hours and logbooks. Submissions on the discussion document were received from 24 individuals and organisations. The LTSA is grateful to all submitters for their responses and all submissions were taken into account before the LTSA's preferred policy was finalised.

A summary of submissions has been included with this document for those who made submissions. For those who didn't, a copy may be obtained by requesting one from the address listed below.

The policy proposals contained in this document are the views of the LTSA only and must not be regarded as Government policy on the matter. Neither should it be presumed that any eventual law changes will adopt all, or indeed any, of the proposals.

These proposals are being publicly released to allow interested parties to comment on them. The release is the next stage in the review. All submissions received will be considered before any final policy recommendations are put forward to Government in mid 2001.

You are encouraged to make submissions on any part of these proposals. Should you choose to do so, we ask that you clearly identify which proposed policy you are making submissions on.

Submissions may be made in writing to:

Driving Hours and Logbook Review

Land Transport Safety Authority

PO Box 2840

WELLINGTON

by fax to (04) 494 8608,

Or by e-mail to [info@ltsa.govt.nz](mailto:info@ltsa.govt.nz)

Please note that the close off date for submissions is:

**Monday 19 March 2001**

Please include your name and contact address and, if applicable, title and organisation name with your submission.

<p>Please note that all submissions received by the LTSA will be retained as official records, and will only be used for the purposes of the driving hours and logbooks review - including the development of any subsequent legislation, if that is required. A summary of submissions received will be prepared and could be made publicly available. The summary will, unless you specifically request us not to do so, identify each submitter and their position on each policy proposal, if one is given.</p> <p>Please also note that any submissions you make may be the subject of a request under the Official Information Act 1982. The withholding of particular submissions on the grounds of privacy, or for any other reason, will be determined in accordance with that Act.</p>
--

## Executive Summary

While it is recognised that driving hours are not the only means to manage the risk of driver fatigue, it is considered that many of the alternatives are largely untested, or are too complicated. Rather, than risk implementing new possibly more complicated systems, the LTSA is recommending that driving hours be retained as a base and alternatives be made available as a replacement to prescribed driving hours for good operators and drivers.

### Driving Hours

The LTSA review recommends the following proposals:

1. A continuation of the regulation of the number of hours commercial drivers may drive and work. The LTSA is, however, proposing that the current driving hour system be altered so that the current differentiation between driving and on-duty is removed, and these are combined into “work time”. Rest time would continue to be used.
2. That within a 24 hour period a driver be allowed to work a maximum of 13 hours and must have at least 11 hours rest (10 of which must be continuous).
3. That the calculation of a 24 hour period be altered so that it is measured forward from the end of a minimum 10 hour continuous rest period.
4. To retain the need for a minimum continuous 24 hour rest, which will be necessary after 66 hours work time have been accumulated.
5. No great change be made to the vehicle types, the drivers of which would be subject to driving hours, beyond aligning the vehicle weight threshold with that applying to driver licensing classes.

### Logbooks

The LTSA recognised that the current driving hour logbooks have some limitations. The greatest concern is that it is very easy to falsify a logbook entry. It is not known how many drivers may be falsely completing logbooks, although a recent Transport Engineering Research New Zealand (TERNZ) study suggested that about 1/3<sup>rd</sup> of drivers surveyed were exceeding regulated hours for the day they were surveyed. It would be reasonable to suppose that this group would also have been falsely completing their logbooks to conceal their driving hour breaches.

The LTSA estimates that the current logbook system imposes annual compliance costs on the industry of some \$7.5 million. However it is considered that an important part of any driving hours system is that

compliance with hours can be checked. This benefit can not be readily quantified.

Consideration was given to propose the mandating of electronic logbooks, however this was discounted on the grounds of extra and unjustified compliance costs (some 3 to 6 times the costs of a paper logbook system).

It is proposed that:

1. Driving hour logbook use be continued.
2. The threshold for the use of logbooks be altered from the current level, so as to exempt drivers of all goods service and vehicle recovery service vehicles operating within a 50km radius of the vehicle's business location.
3. The Director will be given the power to require any goods service, or vehicle recovery service driver excluded under point 2 above, to be required to maintain a logbook, if blatant breaches of driving hours occur.
4. The ability to approve alternatives to logbooks will continue.

## **Penalties**

In the field of penalties, a quite radical departure from the existing system is being proposed. A graduated system of four distinct offence types is envisaged with the first two (relating to logbook use) being dealt with by the issue of infringement notices and driver demerit points, but no licence disqualification or the need for a court appearance as at present. The other two offence types relate to driving hour breaches and will continue to need to be heard before a Court. However, unlike the current system only the top tier of driving hour offending (representing a serious level of offending) would incur automatic licence disqualification.

## **Exemptions**

Finally, it is proposed that a system of exemptions will continue to be used but with fewer exemptions than at present.

A table listing these proposals and comparing them with the current provisions is attached as appendix 1.

## **A. DRIVING HOURS**

### **Proposed Policy (PP) 1 Driving Hours – Retention of restrictions**

**Retain the restrictions applying to driving, on-duty and rest times, but with changes as set out in this document.**

#### **Current Requirements**

New Zealand has a system of regulating driving hours - the amount of time drivers can spend working and driving, and providing for minimum rest periods. The first driving hours were set in place in the late 1930s and have remained largely unchanged up to the present. In 1987, as a means of assisting enforcement staff check compliance with driving hours, drivers were required to maintain logbooks and produce them when required.

#### **Why retain the current driving hours regime? - Research**

It is clear, from scientific research, that fatigue impacts on a driver's ability to drive safely by interfering with their ability to concentrate on the driving task.

#### **CAUSES**

The primary causes of driver fatigue are lack of quality sleep, circadian factors and time on task. For the driving hours regime to be effective and practical at minimising the risk of a fatigue-related crash it should allow adequate time for sleep and an upper safe limit for time spent driving.

Other factors that can cause driver fatigue are:

- Length of, and nature of work.
- Driving long hours.
- Loading work.
- Over tight delivery schedules/commercial pressures.
- Irregular schedules.
- Sleep disorders.

Numerous studies have found that the average person needs about 8 hours of sleep to sustain alertness (Roehrs et al., 1989). If the required amount of sleep is not obtained alertness and performance levels are reduced (Roth, Roehrs, Carskadon & Dement, 1994). In addition to the quantity of sleep obtained, alertness levels are also related to the quality of sleep obtained. Poor quality sleep such as fragmented sleep is related to daytime sleepiness (Roth et al, 1994).

The quantity and quality of sleep is therefore very important in minimising the risk of a fatigue crash. Evidence of the relationship between quantity of sleep and driving was demonstrated by Stutts, Wilkins & Vaughan (1999). Stutts et al (1999) found that persons averaging six to seven hours of sleep were at twice the risk of a sleep related crash. Persons with five to six hours sleep were at three times the risk.

A study of single-vehicle night time crashes in which the truck driver survived by the US National Transportation Safety Board (1995) also found that the factors related to whether a crash was fatigued-related or not was: the duration of the most recent sleep period, the amount of sleep in the past 24 hours, and split sleep patterns.

In summary, therefore, it is important that the driving hours regime includes adequate time to obtain continuous sleep.

## EFFECT

In another study, fatigue (measured by the length of time the person has been awake) was observed to have similar detrimental effects on performance as drinking alcohol. Specifically, remaining awake for 17 hours was the same as performance with a Blood Alcohol Concentration (BAC) of 50mg/100 ml (the legal driving limit in many Western countries), and 24 hours of wakefulness equated with a BAC of 100mg/100 ml (above the New Zealand limit for drivers over 20 years which is 80mg/100ml) (Dawson & Reid 1997).

## **Fatigue as a Crash Factor**

### **Traffic Crash Reports**

In terms of driver fatigue as a crash risk, according to the crash database maintained by the Land Transport Safety Authority (LTSA), fatigue is listed as a crash factor for 4.6% of truck drivers deemed to be at fault in injury crashes.

### **Truck Drivers**

Between 1989 and 1999, 8550 truck drivers were involved in crashes involving injury or loss of life. Of these 8550 truck drivers, 3869 (45%) were recorded as being at fault. Of these at fault truck drivers, 179 drivers (4.6%) were recorded as being involved in a crash with fatigue as a factor.

### **Other Commercial Drivers**

In the period 1989 to 1999, according to LTSA crash records, 1399 taxi and shuttle drivers were involved in reported crashes involving injury or loss of life. Approximately 560 drivers (40%) were deemed at fault. Of these at fault drivers, 22 drivers (4%) were reported as being fatigued. Three-quarters of the

crashes involving fatigued and at fault taxi and shuttle drivers occurred between Thursday morning and Sunday morning and two-thirds of these crashes occurred between 4am and 7am.

In the period 1989 to 1999, 1194 drivers involved in reported crashes involving injury or loss of life were identified as bus drivers. Approximately 454 drivers (38%) were deemed at fault. Of these at fault drivers, only two drivers were involved in a crash where fatigue was recorded as a crash factor. In the same period, there were 44 drivers who were identified as tow truck drivers, involved in a reported crash involving injury or loss of life. No driver had fatigue recorded as a crash cause.

### Other LTSA Crash Records

Since 1996, the Police Commercial Vehicle Investigation Unit (CVIU) have assisted the LTSA in maintaining a truck crash database listing all crashes that the CVIU attend. Between 1 July 1996 and 31 December 1999 the CVIU attended 1395 crashes involving a truck, or bus of which 71 (5%) had fatigue for the truck or bus driver listed as a suspected crash cause. Not all crashes involving truck or bus drivers were attended by CVIU officers and they also reported crashes that did not involve injury and are therefore not included on the main LTSA Traffic crash database.

Both databases provide an insight as to the role of fatigue as a causal factor in commercial driver road crashes.

### Overseas Comparisons

International estimates of commercial driver fatigue as a crash cause are greater than the reported figures for New Zealand. A selection of these are as follows:

**Table 1: International estimates of Driver fatigue as crash contributor**

Jurisdiction	Estimate of fatigue as crash cause	Year(s), of estimate
West Australia (State)	25% of fatal truck crashes	1997
Victoria (State)	Between 9.1% - 19.9% of fatal truck crashes	1984-1986 (Haworth, Heffernan & Horne (1989))
USA(National Highway Transportation Safety Administration)	Probably not higher than 20%, and maybe less than 10%	1995
USA (United States National Transportation Safety Board)	41% of heavy truck crashes fatigue primary and/or probable cause.	1995

The United States National Transportation Safety Board went on to determine that “fatigue is the number one truck safety issue”.

There is a significant disparity between New Zealand’s fatigue related crash figure (of 4 – 5%), and overseas estimates. Possible explanations for this are:

- The figure for fatigue as a crash cause in New Zealand is underestimated, perhaps due to under-reporting of fatigue as a crash cause, resulting from the difficulty the attending Police officer has in determining whether fatigue was a crash cause in the absence of a conclusive objective measure. The officer is therefore largely dependent on an analysis of the driver’s logbook or an interview with the driver, or
- New Zealand’s driver fatigue figures reflects the true situation because of:
  - the characteristics of New Zealand’s road network and types of road transport work. Characterised by short distances (for example, a one way trip between Auckland and Wellington takes around 10 hours), and the existence of a network of reasonably priced motels for overnight stays, and roadside rest areas for drivers to take a break, and
  - the possible effectiveness of the current driving hours system in managing driver fatigue: The current mix of driving hours, logbooks and enforcement serves to keep the incidence of fatigue in check.

Internationally, commercial driver fatigue is recognised as a specific road safety issue.

Driver fatigue is a road safety factor that causes crashes and it is therefore a factor requiring some measure of management. A driving hours system is the most widely applied means of addressing this risk, and is used by a number of jurisdictions. The following table identifies some of these jurisdictions and outlines the main characteristics of their systems, and compares these with the current system operating in New Zealand.

**TABLE 2: Overseas Jurisdictions and New Zealand Comparison: Driving hours/logbooks.**

Jurisdictions (see note 1) (all figures are expressed as hours, or part thereof)

Hours (see note 2)	AUS	USA	CAN	UK GS	EU PS and GS	UK PS	NZ
A. Max. single cont. drive period	5	Not applicable (N/a)	N/a	N/a	4.5	5.5	5.5
B. Min. rest time after A.	0.5; or 2 x 0.25	N/a	N/a	N/a	0.75, or 3 x 0.25	0.5	0.5
C. Max. drive time 24 hrs	12	10	13	10	9 (10 twice a week)	10	11
D. Max. On duty time, 24 hrs	14	15	15	11	N/a	N/a	14
E. Min. rest period, 24 hrs	10; at least 6 hrs to be cont.	8 – 6 cont.	8 – 6 cont.	13	11 cont. (reduce to 9, 3 times per week)	10 cont.	9 cont.
F. Min rest period, 7 days	84, at least 24 to be cont.	48	N/a		45, can be 36, or 24	#	@
G. Max. drive time total 7 days	72	60 , or 70 in 8 days	60		56 (max 90 each 2 wks)	70	@
H. Max. on duty time, total 7 days	84	N/a	N/a		N/a	N/a	@
I. Recording of hours driven/worked	Yes, log-books for GV 12 tonnes or more, Bus drivers	Yes, Log-books For GSV 11.7 tonnes or more, Buses	Same as US	Yes, Tacho-graphs	Yes Tacho-graphs PSV 9+ seats outside 50km all GSV 3.5t +	Yes, Tacho-graphs	Yes, logbooks PSV, GSVs

## Notes

- Jurisdictions. AUS - Australia, please note that this scheme does not operate in the State of West Australia and the Northern Territory.  
USA – United States of America  
Can – Canada  
UK GS – United Kingdom rules for goods service vehicle drivers (operates only in Great Britain, instead of EC rules)  
EU GS and PS– European Union rules for goods service vehicle and passenger service vehicle drivers  
UK PS – United Kingdom rules for passenger service vehicle drivers (operates only in Great Britain, instead of EU rules)  
NZ – New Zealand
- Hours. # UK PS requires a minimum 24 hours off duty continuous period in any 2 week period.  
@ NZ requires a minimum 24 hour continuous rest period when 66 hours driving, or 70 hours on-duty have accumulated; whichever occurs first and measured from the end of the last min. continuous 24 hour rest period.

In continuing with a system of regulating driving hours, New Zealand would therefore be applying world best practice. A recent study (McCartt et al (1999)) also concluded that limiting driver's hours was an effective countermeasure for driver fatigue. The road transport industry does not oppose the continuation of a driving hours system in some form, provided it is directed towards 'at risk' drivers.

## **PP 2 Driving Hours – New Definitions**

**To retain the current definitions of 'driving' and 'on-duty' but to combine these into a single term – *work*. Rest time will be retained.**

### **Why is this change being proposed?**

The current driving hours system differentiates between time spent driving and time spent on-duty. New Zealand and the European Union include employment other than driving or loading and loading in the definition of 'on-duty'.

Combining 'driving' and 'on-duty' time into a single term – *work*, should simplify the current system. Drivers would only need to determine whether they are at work, or at rest. This will also overcome difficulties for enforcement and in particular driver comprehension of the current driving and on-duty times. These difficulties in comprehension were demonstrated in *Police v. Wairarapa Transport* (4/9/97, McGechan J, HC Wellington, AP232/97).

### **Industry View**

Those members of the transport industry who made submissions on the discussion document generally supported the concept of combining 'on-duty' time and 'driving' time. However, both StageCoach and Federated Farmers support the retention of the separation between driving and on-duty times.

### PP 3 Driving Hours – New Requirements

The following new provisions would apply:

The current requirement of “*any 24 hour period*” be abolished and replaced with a new definition “*a 24 hour period*”. The new period would be 24 hours measured forward in time from the end of the last minimum continuous rest period of at least 10 hours.

In a 24 hour period a person subject to driving hours must:

work no more than 6 hours in a single period without a minimum ½ hour rest break.

not exceed 13 hours work, and

have a minimum continuous rest break of 10 hours, in addition to the minimum ½ hour rest breaks.

After having accumulated 66 hours work, must have a minimum continuous 24 hour rest. The accumulated total is to be counted from the end of the last minimum continuous 24 hour rest.

### What has changed? Why is the change proposed?

#### 1. Maximum Work limits

The major change in these proposals is the setting of the upper limit for work at 13 hours and the minimum continuous rest period being set at 10 hours (effectively a 13 hour work, 11 hour rest split, when the two ½ hour breaks are taken into account).

The proposal will impact on drivers and operators who base their daily operation on a 14 hour work day, 11 hours of which are spent driving. The extra three hours are used to deal with work down-time (such as loading stock). Assuming a driver is working the maximum legal on-duty and drive hours, then, over a year, they will have their maximum work time reduced from a possible 4284 hours, of which 3366 can be used for driving, to 3762 work hours (an overall reduction by 522 work hours, or 12%). Conversely, A driver working to the current legally allowed driving hours has 3520 driving hours available a year. Under this proposal their total available work hours would increase to 3762 hours (an increase by 242 work hours, or 7%).

## 2. Definition of 24 Hour period

The next change proposed would be to the definition of the 24 hour period within which the majority of driving hour and rest period calculations are made. The current definition of the 24 hour period is “any 24 hours”. This can be measured backwards, or possibly forward from any point in time. The only restriction is that it can-not start during a rest period. This has created difficulty for drivers because the current maximum driving period (11 hours) and minimum rest period (9 hours) do not equal 24 hours. The result has been that drivers who comply with the maximum driving hour and minimum rest periods are inadvertently committing serious driving hour offences, because when they recommence driving after the minimum required rest they are still within a 24 hour period of assessment. Any additional driving for the next two and a half hours will make them exceed the permitted 11 hour maximum. It is not known how many drivers have been affected by this provision, however, the industry is concerned by the provision as it currently stands.

This can be illustrated by the following two examples –

*Driver A is engaged in line haul work, on Day 1 the driver starts work at 7am and drives continuously for 5 ½ hours until 12.30pm. The driver rests between 12.30pm and 1pm and then drives for a continuous period of 5 ½ hours until 6.30pm. The driver then goes off duty for a continuous period of 11 hours (2 hours more than the required minimum), recommencing driving on Day 2 at 5.30am. The driver then drives continuously for 5 ½ hours until 11am.*

*Driver B is driving on a long distance timetabled bus route. On day 1 the driver starts work at 7.00 am and spends the next 30 minutes, until 7.30am loading passengers and freight. The driver leaves the depot at 7.30 and drives for a 4 ½ hour period until 12 pm. The driver then has a ½ hour rest break, before recommencing driving at 12.30pm and driving a further 5 ½ hours, to 6pm. The Driver concludes day 1 with ½ an hour on duty, getting passengers and freight off the vehicle and cleaning the vehicle, finishing the day at 6.30pm. The driver then has a 10 hour continuous rest until starting the next day at 4.30am, when ½ an hour is spent on duty, again loading freight and passengers. The driver then drives 4 ½ hours until 9.30 am.*

*In these examples, both driver A and B have committed a driving hours breach. For driver A, in the 24 hour period between 7am on day 1 and 7am on day 2, the driver has driven for a total of 12 ½ hours, 1 ½ hours more than the allowed maximum.*

*For driver B, in the same 24 hour period, the driver has driven for 12 hours, 1 hour more than the allowed maximum.*

In both examples, neither driver has exceeded the restrictions on continuous drive period and both have had, and indeed exceeded, the minimum statutory continuous off duty requirements. The reason for their respective breach of the law is that 24 hour period is regarded as any period, subject to the requirement that it does not commence during a continuous off duty period, and does not restart after a minimum continuous off duty period.

By measuring the 24 hour period forward from the minimum rest period the difficulty illustrated in the two examples will be overcome. It will provide certainty for a driver that once they have observed the minimum continuous required 10 hour rest, they cannot inadvertently breach driving hours. The proposal should also not increase any fatigue risk as the proposed 10 hour minimum continuous rest should provide adequate opportunity for a driver to obtain necessary recuperative sleep. Measuring the 24 hour period from the end of a minimum rest break is used in the European Community's driving hour system.

### 3. Taking of ½ hour rest periods

The next major proposed change has been to when the minimum ½ hour rest times must be taken. These short duration breaks are not designed for sleep but as 'time-out' to break the stress and monotony of driving. Research shows that these types of breaks provide some degree of recuperation (Rodgers 1997). We are proposing that some flexibility be allowed for drivers as to when they need to take the rest. It is proposed that a driver work no more than 6 hours of work without having a ½ rest period. It is accepted that this will add a degree of complexity to the driving hours system, however the alternative is to specify the precise time such breaks must be taken. This reduces driver flexibility.

### 4. Minimum 24 Hour rest

The upper limit of 66 hours accumulated work before a minimum 24 hour rest period must be observed will remain the current upper limit for driving hours. There is no evidence to suggest that this limit is unsafe. It allows drivers to continue to drive 11 hours per day over six days, or work the maximum work hours over a five day period.

## **Research**

Several studies have examined the relationship between duration of driving and crash risk. For example, in a case-control study of tractor-trailers on the

Interstate system in Washington state, Jones and Stein (1987) found that drivers who drove more than eight hours on end were at an increased crash risk. In a similar study in New Zealand, Frith (1995) found that crash involvement increased significantly after approximately 8 driving hours worked from the last 10 hour rest period.

A study in France examined crashes amongst French truck drivers and found that the crash risk was slightly higher than average at the beginning of a daily duty period (Hamelin, 1987; cited in Brown, 1994). The risk then remained fairly stable for duty periods of up to about 12 hours and then rose to a high peak for duty periods exceeding 12 hours. A study in the USA of truck operators found a similar pattern of a high crash risk during the first hour of driving then a lower crash risk until the ninth and tenth hour of driving (Kaneko & Jovanis, 1990; cited in Pearson & Ogden, 1991).

Also in the USA Lin, Joavanis & Yang (1993; cited in Frith, 1995) modelled the effect of American heavy freight driver service hours on crash risk using time dependent logistic regression. They found crash risk increased slightly from the fourth hour of driving, and by the eight hour of driving had increased dramatically.

More recently in the USA researchers at the University of Michigan Transportation Research Institute (cited in Department of Transportation Federal Motor Carrier Safety Administration 49 CFR Parts 350, et al, 2000) have examined fatal truck crashes where fatigue was coded as a factor. They found that the risk of a fatigue crash increases with time driven. Furthermore they found that “approximately 20 percent of fatal crashes per year where fatigue is coded as a factor involve the driver being behind the wheel for 13 hours or more” (page 25546).

In general these findings indicate that the risk of crashing increases significantly after approximately eight hours driving, and in particular the risk of a fatigue related crash increases after twelve hours of driving.

However, it should be noted that the Canadians currently allow a 13 hour driving period and the North American Driver Fatigue and Alertness study (Wylie et al (1996)) noted little difference in observable fatigue between drivers driving 10 hours and those driving 13 hours.

These studies indicate that the proposed 13 hour allowed work time can be seen as the upper safe limit for driving/working.

On-going work is being conducted by the Transport Engineering Research New Zealand Limited (TERNZ), to complete the analysis of a fatigue survey of 600 truck drivers recently undertaken in 1998/99.

## **What effect should these changes have on drivers?**

The proposed changes would benefit drivers who do not depend on 'on-duty' time. The additional two hours of driving permitted under these proposals should provide more time to these drivers to complete their current schedules, and so may indirectly assist in reducing truck speeds.

The changes will disadvantage drivers who require the 14 hours on-duty period to complete their journeys, particularly drivers who use the on-duty time to load and unload goods. It is estimated that the proposals to move to 13 work hours should benefit about 60%-70% of the total number of drivers, because they do not currently utilise their on-duty time in their current shifts.

## **PP 4 Driving Hours –Who will be subject to driving hours**

**Drivers of the following vehicle classes would be subject to Driving Hours:**

- i. All drivers of Passenger Service Vehicles, or**
- ii. All drivers of Vehicle Recovery Service Vehicles, or**
- iii. All drivers of Goods Service Vehicles, except for GSV that can be driven on a class 2 licence operated within a 50km radius of the vehicle's business location and not being operated for hire or reward, or**
- iv. any other vehicle which requires a driver licence of class 2, 3, 4 or 5 to drive it, except for vehicles that can be driven on a class 2 licence operated within a 50km radius of the vehicle's business location and not being operated for hire or reward.**

## **What has changed? Why?**

The major change has been to align the vehicle weight limit threshold for driving hours to that at which a class 2 licence is required. This means an increase of the driving hours threshold from the current 3501 kg gross vehicle weight to more than 4500 kg GLW, or GCW.

This should lead to easier interpretation for drivers as to when they need concern themselves with driving hours.

It should be noted that the current independent driver licensing review of costs and management is looking at the current licence classes. The current requirements (including the weight thresholds for each licence class) could change if the review was to recommend this, and Government accepted them. In addition, the LTSA is reviewing the transport services licensing system.

This includes reviewing what vehicle types would need to be operated under a transport service licence.

Despite the possible future impact of the reviews, it is considered that the advantages of simplifying the system through linking it to driver licence classes outweighs any possible, future inconvenience of having to re-evaluate these should the licence weight thresholds be altered.

The exemption from driving hours provided for drivers of vehicles, requiring a class 2 licence, not being operated for hire or reward, and used within a 50 kilometre radius of the vehicle's business location is very similar to the existing exemption provision contained in the Transport Act 1962. This provides an exemption from driving hours for drivers in the following situation:

“...any goods service vehicle fitted with 2 axles and having a manufacturer's gross laden weight of less than 14 tonnes that—

- (a) Is used within a radius of 50 kilometres of—
  - (i) The business location of the operator of the vehicle; or
  - (ii) The normal base of operation for the vehicle; but
- (b) Is not used for hire or reward...”

It is considered that there is no compelling evidence to revoke this provision, in addition drivers covered by the exemption provision would be driving lighter vehicles, generally in close proximity to their homes (with a consequent better ability to obtain good quality sleep) and would be subject to less commercial pressure to drive excess hours.

It is proposed that vehicle recovery service drivers would also be included under the driving hours regime, as they are subject to commercial pressures, and as a result would often drive at night time – a risk time for driver fatigue.

### **Why are taxi drivers not exempt from driving hours restrictions?**

It has been argued that taxi drivers should be exempt from driving hours restrictions in light of the nature of their operation. Taxis are generally operated in a busy urban environment with higher traffic levels resulting in frequent stops while in traffic and to let passengers off, or stopping at taxi stands for long periods of time while waiting for passengers. It has been submitted by the taxi industry that compared to truck driving, taxi driving imposes less fatigue on drivers and as such any restrictions placed on these drivers on safety grounds are unnecessary and counter-productive. However, there is no strong empirical evidence to support this assumption. A study conducted into fatigue levels of Sydney taxi drivers by Job and Dalzeil concluded that amongst the survey group of drivers, fatigue did not appear to be an issue. However, there is a need for caution about applying the results of this study to New Zealand, particularly in light of the TERNZ/RST fatigue study that found high rates of failure amongst short-haul drivers tested on a driving simulator, probably as a result of fatigue (refer to comments on this study under PP3). Moreover, there has been no evidence presented as to

how the taxi industry could self-regulate itself to ensure that taxi driver fatigue levels do not become unsafe.

It is acknowledged that few international jurisdictions regulate taxi driving hours. New South Wales does, as part of the State's driver authorisation process, provide advice to drivers to have at least 9 hours rest away from the taxi every 24 hours, to reduce the risk of driver fatigue contributing to a road accident.

It should be noted that dial-a-drivers do not drive passenger service vehicles so are not subject to driving hours. This issue will be resolved in the Operator Licensing review. If that review recommends that such drivers are to be regarded as PSV drivers then they will become subject to driving hours.

### **Why apply driving hours restrictions to drivers of motor vehicles with a GLW or GCW of more than 4500kg?**

- Reduces confusion by aligning vehicle weights to minimum required where a class 2 driver licence is needed;
- more severe impact of crashes involving heavy motor vehicles;
- higher demands of driving heavy motor vehicles; and
- public concern about truck safety on New Zealand roads

### **PP 5 Driving Hours – Approval of alternative schemes**

**Retain the current provision for the Director to approve any alternative driving hour scheme, subject to the Director being satisfied that any such approved scheme would not increase the risk to road safety.**

### **Why is this being retained?**

Prescribed driving hours are considered to be a traditional, albeit relatively inflexible, means of managing driver fatigue.

However, it is recognised that they are not the only means by which the risk can be managed. The Queensland Fatigue Management Programme (FMP), currently being trialled, is an example of an alternative to a prescribed hours system. The Queensland model approaches driver fatigue from a more 'holistic' viewpoint. It draws together driver training on fatigue, driver health issues relating to fatigue (such as diet), training for despatch staff along with scrutiny and approval of driver schedules. Drivers still work to approved schedules. Operators in the trial are subjected to regular, on-going audits paid for by the operator, rather than enforcement. The Queensland Transport Department maintains final control over the scheme and can, if deemed

necessary, cancel an operator's FMP and revert them to a prescriptive driving hours regime.

Retaining a general provision for the Director to approve alternatives will continue to allow drivers and operators to develop their own alternative programmes, provided that measures are in place to address the risks of fatigue and safety.

Alternative schemes do not need to be as complicated, or as detailed as a full FMP. The provision for approval of alternatives should be kept as general as possible to allow the development of limited schemes, that could sit midway between the prescribed hours and a FMP. This would provide operators and drivers with the choice of managing fatigue according to their own operating environment through one of three driving hours systems:

Level 1: comply with prescribed driving hour requirements.

Level 2: comply with most of the prescribed driving hours, with approved variations and conditions attached to these variations.

Level 3: exempt from prescribed driving hours, but adopt a FMP.

It is envisaged that where a driver, or operator is operating in level two, they will be subject to standard enforcement, with limited audits to ensure that the exempted part of their operations are complying with any conditions. If the conditions of an exemption are breached the driver, or operator would lose the privilege of the exemption and be required to comply with legislated prescribed driving hours.

A driver, or operator, in a FMP will not be subject to roadside enforcement of driving hours, but will undertake routine audit to ensure compliance with the FMP approved schedules. Breaches of the FMP will lead to increased levels of audit and if there was no improvement in compliance the FMP would be revoked and the operator required to comply with the legislated hours.

The LTSA is currently considering developing a safety rating scheme system, which would assign a safety rating, based on standard objective measures, to operators. Operators rated as good or superior under this proposed scheme would be eligible for entry into FMP (level 3) and a variation scheme (level 2) as a reward for safe performance. The variations can either be specified in a table, or the provision could be made to allow the Director to approve variations based on ratings. Such a rating system will be formally developed as part of the Operator Licensing Review.

## **B. LOGBOOKS**

### **PP 6 Logbooks - Format**

<b>Retain the current provisions relating to logbook approval, format, and use; with changes to reflect the new regime.</b>
---

#### **Why retain the current provisions?**

If a prescribed driving hours system is to be effectively enforced, sufficient records need to be maintained in a form that can be easily produced and checked to ensure driving hour requirements have been complied with. Such records could be held in an office (such as wage records, and work rosters) or held by a driver in their vehicle (such as the current paper logbooks, electronic logbooks, or tachographs).

#### **Advantages of paper logbook**

A paper logbook has a low unit cost (ranging between \$4.50-\$11 per book). A standard paper logbook has 50 pages and a full time driver can expect a logbook to record around 2 months worth of driving. A paper logbook is also easier for an enforcement officer to use as all the officer needs to do to obtain a permanent record, is remove the carbon copy provided as an enforcement copy. In addition, logbooks can readily record non-driving work, and are transportable between trucks.

#### **Risks of paper logbook**

Logbooks are only as effective as the information the driver records in them. It is relatively easy for a driver to obtain additional logbooks and, illegally, maintain more than one at the same time and in so doing mask their actual driving and on duty times. Alternatively, a driver can use one logbook but delay completing it, until several hours of driving has elapsed, again masking their actual start time.

It is not known how many drivers may be falsely completing logbooks, although the Road Safety Trust funded TERNZ study suggested that about 1/3<sup>rd</sup> of drivers surveyed were exceeding regulated hours for the day they were surveyed. While not all the drivers surveyed were required to complete logbooks, it is unlikely that of the others many would have been correctly recording their work/drive hours.

#### **Logbook Costs**

The annual industry compliance cost for logbook use is estimated at \$7.5m. This comprises an actual cost of logbook purchases of \$1.79m, and an

assessed cost of \$5.74m, being the cost of driver and employers carrying out their legal responsibilities in relation to the logbook (more detailed costings are attached as appendix 2).

### **Alternatives**

An alternative would be to dispense with logbooks entirely and instead rely on on-road surveillance and audits of wage records – the pre-1987 situation, or; replace logbooks with electronic recording devices, (as is currently proposed in the United States of America).

The LTSA has estimated that electronic on-board recorders, including the new generation of electronic tachographs to be introduced in the European Union, would cost between \$160 to \$325 more per vehicle, per annum compared to paper logbooks (more detailed costings are attached as appendix 3).

Dispensing with time recording would produce immediate savings. However, it would have additional longer term costs resulting from:

- Increased compliance costs as enforcement staff would be required to attend at most driver depots to check through wage and other records.
- Increased risks of non-compliance with driving hours. As enforcement staff would be required to go to considerable lengths to check even one driver, the likelihood is that less time would be directed to the matter. Less enforcement, and particularly a perception that less enforcement is being applied, will lead to an increase in non-compliance.

### **PP 7 Logbooks – Which drivers must use them**

**Logbook use would be required for drivers of:**

- Passenger service vehicles, or**
- Goods service vehicles requiring a class 2 licence or more to drive it, but only where the driving occurs outside a 50km radius of the operator's business location, or**
- Vehicle recovery service vehicles, but only where the driving occurs outside a 50km radius of the operator's business location.**
- Regardless of the logbook exclusions provided in ii, and iii above, any goods service or vehicle recovery service driver can be required by the Director to maintain a logbook.**

## **Why require these drivers to use logbooks?**

Logbooks should be required of drivers who have enhanced road safety risks (those carrying passengers, towing vehicles or driving heavy motor vehicles). This would also ensure that enforcement staff can readily ascertain whether these drivers are complying with driving hours.

- I. Drivers of passenger service vehicles are included in the group requiring logbooks because they are carrying passengers. A fatigue related crash would therefore have serious consequences. Compliance with driving hours is therefore very important. Given the competitive nature of the industry, LTSA would require compelling evidence that alternative mechanisms could reasonably ensure compliance before an exemption could be seriously considered. This is a continuation of the current system.
- II. It is proposed that drivers of goods service vehicles that are driven on a class 2 licence or more and vehicle recovery service drivers will be required to use logbooks. This is a continuation of the current situation. However, a new provision is proposed - any goods service or vehicle recovery service drivers who drive within a 50km radius of the vehicle's business location, would be excluded from the need for a logbook. It is considered that as these drivers are operating in and around their local area they will be able to obtain sleep in their usual home environment. Further, there is less likelihood of such drivers operating during higher risk late night/early morning periods. Therefore they are less likely to breach driving hours. In addition, the relative proximity to their base of operations means that other wage and time records that will demonstrate whether a driver is complying with driving hours are more readily available. It is considered unlikely, on economic grounds, that large trucks, and truck and trailer units would be used purely for round town delivery work. Accordingly, the drivers of such vehicles would very likely continue to be subject to logbooks. In respect to tow truck drivers, it is considered that evidence of compliance with driving hours can be obtained by checking tow authorities. Tow authorities are required under law and show driver details, pick up and set down times and location. It must be noted that Police have concerns about enforceability in respect to this proposal, in that wage records (which would need to be produced instead of logbooks) can be misleading if drivers are on fixed wages, or are paid a flat salary. LTSA acknowledges this as a valid concern, but considers that this can be offset by PP9, which requires adequate records detailing hours of work to be kept by employers of such drivers. If wage records are not sufficient (say for a self-employed operator) then additional records will

need to be maintained. The relative proximity of such drivers to their base, and hence their hours of work records, will allow for auditing within a reasonable time period. It is considered that the benefit of simplifying when logbooks are required using licence classes and distance is preferable to basing this on a specified vehicle weight that cuts across the licence class. The 50 kilometre radius is a criterion currently being used for logbook exemptions. It appears to operate well without any substantial safety concerns requiring its reduction. This proposal would also remove the need for almost all logbook exemptions (refer PP 12). It is considered that the benefit under this proposal, to industry, would be savings of about \$1.3 million (please refer to appendix 4 for more detailed costings). We do not know what extra cost, if any would be required in respect to maintaining time and wage records.

- III. It is proposed that the Director can, in effect, revoke the logbook exclusion for goods service, or vehicle recovery service drivers operating within a 50km radius, and that such drivers can be required to use logbooks. This is a reserved power and would be used to require drivers who blatantly take advantage of the logbook exclusion to disguise driving hour breaches, or whose employers fail to maintain adequate time records, under PP9, to use logbooks as their means of showing compliance with driving hours. This should serve to maintain enforceability.

We do not intend to extend the logbook requirement to heavy motor vehicles other than goods service vehicles. Doing so would draw in groups of drivers (including campervans) that are currently excluded from logbooks and for which there is no apparent justification to do so.

### **PP 8 Logbooks - Approval of logbook alternatives**

<b>Retain the current provision for the Director to approve logbook alternatives.</b>
---

### **Why retain these provisions?**

While logbooks are the LTSA's preferred mandatory recording device, it is recognised that they have limitations and that due to technological advances, there are a number of increasingly viable alternatives. Foremost amongst these are intelligent transport systems (ITS), such as electronic on-board computers (electronic logbooks), or electronic tachographs. These can provide information to an enforcement officer either by download at the roadside, or via the operator at their depot. There is also potential for

information to be downloaded via satellites through an approved telecommunications service provider who could provide exception reports on non-compliance to an enforcement authority.

While the USA is proposing that the fitting and use of electronic logbooks become mandatory for long distance drivers, this is a course that the LTSA does not wish to pursue at this stage on cost grounds. Inquiries with private industry have disclosed that installation and servicing costs for fitting ITS equipment such as electronic logbooks to the whole fleet would be between \$90 and \$110 million over 10 years. It would also take between two and five years to retrofit units into the current fleet. The LTSA would prefer to see the use of electronic logbooks encouraged via the provision of incentives, as part of a wider approach to the management of vehicle and operator safety.

Satellite ITS equipment is currently being trialled in Tasmania, and the LTSA will monitor this trial as to the cost and practical impacts.

#### **PP 9 Logbooks – Retention of records**

**Retain the current record keeping requirements, but add a new requirement for the maintenance of records detailing hours of work for goods service and vehicle recovery service drivers excluded from having logbooks.**

The need to maintain adequate logbook records and wage or other records to validate the driver's logbook is a necessary to allow enforcement staff to conduct audits to check compliance with driving hours. This is particularly important if the logbook provisions are relaxed, as proposed in PP7.

## C. PENALTIES

### PP 10 Penalties – Grading offences

#### **Proposed Graduated offences/penalties**

**Grade 1: Single logbook omission, or an illegible logbook with no apparent attempt to mask a breach of driving hours. To be dealt with by an infringement notice with associated driver demerit points.**

**Proposed fine: \$200 and 10 driver demerit points**

**Grade 2: Multiple logbook omissions, a failure to produce a logbook, or logbook record keeping breach, with no apparent attempt to mask a driving hours breach. To be dealt with by an infringement notice with associated driver demerit points.**

**Proposed fine: \$350 and 20 driver demerit points.**

**Grade 3: Driving hours breach less than 1 hour, or failing to have minimum ½ hour breaks. To be dealt with by an offence notice, with a Court determined fine and possible licence disqualification.**

**Proposed penalty: maximum fine \$2000, one month minimum licence disqualification, at Court's discretion.**

**Grade 4: Driving hour breach more than 1 hour, and any logbook offence/record keeping offence attempt to disguise a driving hour breach. To be dealt with by an offence notice, with a Court determined fine and mandatory licence disqualification.**

**Proposed penalty: maximum fine \$3500, mandatory one month minimum licence disqualification.**

#### **What are the changes? Why?**

The most common industry criticism of the driving hours and logbooks system has been the harsh nature of the penalty system, particularly as it applies to logbook omissions.

It is considered that the current all encompassing logbook omission penalty that includes possible licence disqualification does not sufficiently differentiate between offenders who make a genuine mistake, or are forgetful, and those who act willfully.

Where required behaviour is prescribed, it is necessary to have some sanctions in place to deal with those who fail to comply, or choose not to comply. However, the sanctions should, where possible, ensure that the

penalty incurred is in proportion to the intent and nature of the offence. By seeking to graduate penalties, we are attempting to allow the penalty to more adequately reflect the gravity of the non-compliance.

The lowest form of offending would be clerical errors or where there is no other evidence to suggest that the act has been deliberately done in order to mask a driving hour breach (which is a serious road safety matter). Such a breach would be dealt with by way of an infringement notice. In order to discourage continued offending of this nature, the notice will also attract driver demerit points. It would be proposed that the demerits would be accumulated within the current demerit points system. This would mean that these demerit points would accumulate along with speeding infringements. Where a driver incurs 100 demerit points over a two year period then their licence is suspended for a three month period. The other alternative is to set up a special system for drivers and provide for a one month licence disqualification where 3 or more infringements are incurred within a 12 month period (“three strikes and you’re out”).

The advantage of this approach is that first, even if paid, the driver does not have a traffic conviction entered against them and second an infringement notice incurs less cost for the enforcement authority. A driver who considers that they are not guilty of the offence still has the right to have the matter heard in a Court.

The second level of offending would be a higher level of forgetfulness or poor record keeping. This would be dealt with again by an infringement notice (set at a higher level of fee) and higher driver demerit points.

A LTSA survey of fines imposed by the Courts (excluding any licence disqualification, or court costs) shows that the average fine imposed for single logbook omissions was \$250, while the average fine for multiple omissions was \$208. The lower level of fine for the multiple offending is partly explained by the fact that 61% of offences involving multiple logbook omissions resulted in a licence disqualification, while only 45% of offences involving single omissions attracted this additional penalty.

The next level of offending would involve driving hour breaches. This would encompass any offending where the prescribed maximum of work hours is exceeded by no more than one hour, where the minimum rest period is less than 10 hours but no less than 9 hours, or where the minimum ½ hour breaks are not observed. One hour has been chosen as the upper limit as this equates to the current minimum rest time and maximum on duty times. Currently, these limits are regarded as adequate for road safety and accordingly should not trigger the harsher penalty in our proposed regime.

The matters would be dealt with by Traffic Offence Notice, as at present. This would require a court appearance and involve the possible creation of a traffic conviction history. The Court can deal with the offence by way of fine and, at the Court's discretion, a licence disqualification.

The highest level of offending would be exceeding driving hours by more than one hour or any attempt to alter required records to mask any driving hour breach. This level of offending would be dealt with by way of fine and a mandatory licence disqualification – to reflect the seriousness of this level of offending. Record keeping breaches that are done to mask any driving hour breach are treated in the same manner, because it is important that records required to be maintained are genuine.

By way of comparison, in the UK, such fraudulent activity attracts a maximum penalty of a two year jail term, and in the USA is regarded as a felony (serious) offence, again with a penalty of imprisonment. We are not advocating such an approach to offending in New Zealand, as we do not consider we have a position similar to that in the UK, or USA. It should be noted that we are continuing to intend that serious breaches be dealt with before the Courts.

#### **PP 11 Penalties - Extend liability to other parties**

**Extend liability for driving hour breaches to any person, other than drivers or their employers, where that person knowingly requires the driving hour breach**

#### **Why is this extension being proposed?**

It is clear that drivers ultimately are responsible for ensuring their own compliance with driving hours. However, they are sometimes subject to unfair pressure to breach driving hours, sometimes from their employers (including dispatchers) or sometimes from their customers.

While the offence provisions have always included employers, they have made no provision to extend liability beyond the driver, or employer.

It is proposed that provision be made to enable this to occur. Essentially, this provision will extend to any person who knowingly requires the driving hour breach to occur. Such a concept is termed "chain of responsibility", and has been recently introduced into Australian transport law, including driving hour offences.

### **What is its likely effect?**

This provision would include company officials (such as dispatchers, or freight forwarders who insist upon unrealistic schedules), and it may require anyone engaging a driver to be aware of their responsibilities in this regard. It is not proposed that the offence be one of absolute, or strict liability. This means it would be necessary for any prosecuting agency to show that a person, or company charged under this provision knew that they were requiring a driver to break the law.

Either the other party will be charged in addition to the driver, or the driver may be able to escape liability in total, with the liability transferring to the party that required the driving hours breach.

It is recognised by Australian jurisdictions that application of the chain of responsibility will nearly always be more difficult for enforcement agencies than simply targeting the driver. Therefore, they do not expect that the chain of responsibility will be followed up on every occasion. However, it is considered that if enforcement agencies obtain a single successful prosecution of a party high in the transport chain then this will have a demonstration effect and may be a more powerful agent of change than a large number of actions against drivers.

It is difficult to gauge the likely effect of this provision as no prosecutions have yet been brought in Australia. It is probable however, that prosecutions of this sort will be more difficult to take due to the indirect link between the third party and the unsafe behaviour. Nevertheless, the chain of responsibility is viewed in Australia as best practice.

The 1996 parliamentary truck crash inquiry also recommended that chain of responsibility be legislation be introduced, and this type of concept is being increasingly used in OSH work-place prosecutions.

## **D. EXEMPTIONS**

### **PP 12 Exemptions**

<p><b>Retain a list of exemptions along with very restricted power for Director to issue exemptions. Requirement for Gazette notice, or special order listing exemptions will be removed.</b></p>
---

### **Why are exemptions being retained?**

The driving hours regime we are proposing is a “one size fits all”. This has a significant advantage over the alternative of creating a number of legislated

complementary driving hour regimes to apply to different operations. However, it also means that the system may not be appropriate for every driver. This creates a need for exemptions from the regime. It is intended that provision for exemptions continue, and that they will be either stated in the body of the driving hours and logbook rule, or issued to particular drivers, by way of special notice. This will allow for the exemption of particular types of drivers (e.g. emergency service vehicle drivers), or for exemptions relating to particular types of approved schemes (e.g. tour drivers' agreement, ferry exemption, or fatigue management programmes).

Currently, exemptions are provided for in the main body of the Transport Act, by a notice in the gazette, and by individual exemptions issued to operators, or drivers.

### Driving Hours

It is intended that the list of special exemptions from driving hours could contain:

- Emergency service drivers (Fire Fighters and Ambulance officers).
- Drivers engaged in assisting with Civil defence emergencies.

In addition, it is intended that the special driving hour exemptions - "tour drivers" and "ferry exemption" - would continue to be available from the LTSA.

### Logbooks

Given the wide ranging proposal to exclude all goods service, and vehicle recovery service vehicle drivers from the need for a logbook, when operating within a 50km radius almost all the current logbook exemptions will no longer be necessary.

The following logbook exemptions could continue to apply:

- Any service operated by the Armed Forces, any ambulance service, any firefighting service, or the Police.
- Operated by a passenger service operator whose drivers are working approved rosters of timetabled services (being rosters approved by the Secretary) over distances no greater than 100 kilometres from terminus to terminus and subject to the operator of such a driver maintaining adequate time and rostering records for inspection by an enforcement officer.
- Any service operated by any person recognised by the Director as a person who suffers from a medical condition that results in a physical inability to keep logbooks.

THIS DOCUMENT HAS BEEN PREPARED FOR CONSULTATION AND DOES NOT  
REPRESENT GOVERNMENT POLICY

- Every transport service operated on Chatham Island, Great Barrier Island and Stewart Island.

Attached as appendix 5 is a list of existing provisions that would be abolished. Almost all these provisions would be made obsolete by PP7.

## References

- Brown, I. D. (1994). Driver fatigue. *Human Factors*, **36(2)**, 298-314.
- Department of Transportation Federal Motor Carrier Safety Administration 49 DFR Parts 350, et al (2000). Hours of Service of Drivers; Driver Rest and Sleep for Safe Operations; Proposed Rule, p25546, May 2000.
- Frith, W. J. A case control study of heavy vehicle drivers' working time and safety. *Proceedings 17<sup>th</sup> ARRB Conference, Part 5*.
- Jones, I. S. & Stein, H. S. (1990). Vehicle and driver factors in relation to crash involvement of heavy trucks. *Proceedings of Strategic Highway Research Program and Traffic Safety on Two Continents* in Gothenburg, Sweden, 27-29 September, 1989.
- Nilsson, T., Nelson, T. M. & Carlson, D. (1997). Development of fatigue symptoms during simulated driving. *Accident Analysis and Prevention*, **29(4)**, 479-488.
- Pearson, R. A. & Ogden, K. W. (1991). Review of issues relating to drivers, and enforcement: Australian truck safety study task 3. *Australian Road Research Board, Research Report 203*.
- Roth, T., Roehrs, T. A., Carskadon, M. A. & Dement, W. C. (1994). Daytime Sleepiness and Alertness. In M. H. Kryger, T. Roth, & W. C. Dement (Eds), *Principles and Practice of Sleep Medicine*. Philadelphia: W B Saunders Company.

## Appendix 1

**TABLE 1: Comparison between Current NZ System and Proposed NZ System.**

Provision	Current system	Proposed
<b>Driving Hours</b>	<p>A driver must:</p> <ul style="list-style-type: none"> <li>• Not drive for any continuous period exceeding 5 ½ hours,</li> <li>• After a continuous period of 5 ½ hours driving have at least a ½ hour rest before undertaking any further driving.</li> <li>• Not exceed 11 hours driving in any 24-hour period.</li> <li>• Not exceed 14 hours on duty in any 24-hour period.</li> <li>• Have a minimum continuous off duty period of at least 9 hours in any 24-hour period.</li> </ul> <p><b>In addition</b>, a driver must have a minimum continuous off duty period of at least 24 hours after having totalled:</p> <ul style="list-style-type: none"> <li>• 66 hours driving, or</li> <li>• 70 hours on-duty.</li> </ul> <p>The accumulated total to be counted from the last minimum 24 hour of duty period.</p> <p>Who is subject to driving hours: Drivers of the following vehicle types, unless exempted:</p> <p>Any heavy motor vehicle (that is a vehicle with a gross laden weight of 3501 kg, or more), or Any vehicle being used in a transport service (other than a rental service, except where the rented vehicle is also a heavy motor vehicle).</p> <p><b>NB</b> the driver of a goods service vehicle with two axles, a MGLW of 14 tonnes or less, not operating for hire or reward, and within a 50km radius of the truck's business location is exempt from driving hours.</p>	<p>A driver must:</p> <ul style="list-style-type: none"> <li>• Have at least ½ hour rest after every 6 hours work.</li> <li>• Not exceed 13 hours work in a 24 hour period (measured forward from the end of a minimum 10 hour continuous rest period).</li> <li>• Have a minimum continuous off duty period of at least 10 hours in a 24-hour period.</li> </ul> <p><b>In addition</b>, a driver must have a minimum continuous off duty period of at least 24 hours after having totalled: 66 hours work. The accumulated total to be counted from the last minimum 24 hour of duty period.</p> <p>Who is subject to Driving hours: Drivers of the following vehicles, unless exempted:</p> <ul style="list-style-type: none"> <li>i. All passenger service vehicles, or</li> <li>ii. All vehicle recovery service vehicles, or</li> <li>iii. All goods service vehicles, or</li> <li>iv. any vehicle which requires a licence class 2, 3, 4 or 5 to drive it – except where the driving is of a vehicle requiring a class 2 driver licence within a 50km radius of the vehicle's business location and it is not being operated for hire or reward .</li> </ul>
<b>Logbook usage</b>	<p>Any driver who is driving:</p> <ul style="list-style-type: none"> <li>• a passenger service vehicle,</li> <li>• a goods service vehicle that has more than 2 axles, or has a gross laden weight of 3501</li> </ul>	<p>Any driver who is driving:</p> <ul style="list-style-type: none"> <li>i. A passenger service vehicle.</li> <li>ii. Goods service vehicles for which a class 2 licence or above is required, but not where the driving occurs</li> </ul>

THIS DOCUMENT HAS BEEN PREPARED FOR CONSULTATION AND DOES NOT  
REPRESENT GOVERNMENT POLICY

	<ul style="list-style-type: none"> <li>• kg or more, or a vehicle recovery service vehicle, <b>and</b> is not otherwise exempted from using a logbook.</li> </ul>	<p>within a 50km radius of the vehicle's business location.</p> <p>iii. Any vehicle recovery service vehicle, but not where the driving occurs within a 50km radius of the vehicle's business location.</p> <p>iv. The Director may require a driver exempted under ii, or iii to maintain a logbook.</p>
<b>Penalties</b>	<p>Logbook/record keeping offence: Max fine - \$2000. Min. one month licence disqualification, unless special reasons.</p> <p>Driving Hour Offence: Max Fine - \$2000. Min one month licence disqualification mandatory.</p>	<p>Logbook/record keeping offence: Grade 1: \$200 infringement and 10 driver demerit points. Grade 2: \$350 infringement and 20 driver demerit points.</p> <p>Driving Hour Offence: Grade 3: Fine \$2000. Min. one month licence disqualification, at Court's discretion. Grade 4 (incl. Logbook record keeping offence): Fine \$3500. Min one month licence disqualification mandatory.</p>
<b>Exemptions</b>	<p>Provided for in Transport Act 1962, Gazette Notice 1990, and individual exemptions</p>	<p>Provided for in written form and limited individual exemptions.</p>

## Appendix 2:

**Table 2: Logbooks Annual Compliance Costs**

### Assumptions

	<b>SPSV (P endorsement holders)</b>	Others (truck, bus and vehicle recovery)
<b>Drivers</b>		
1 Total number of drivers affected	20,915	33,330
2 Percentage of drivers working full time	40%	80%
3 Working hours for a part-time driver as a percentage of that for a full time driver	50%	50%
<i>Logbooks</i>		
4 Number of pages per logbook	50	50
5 Number of logbook per full time driver per year	6	6
6 Unit cost per logbook	\$6	\$7
<i>Time loss</i>		
7 Value of time per hour		
For commercial drivers	\$19.25	\$19.25
For the employers	\$19.25	\$19.25
8 Additional time taken for drivers to fill in details on logbooks (seconds per page)	30 (Note 1)	60 (Note 2)
9 Time taken for employers to check details on logbooks (seconds per page)	30	30

**Notes:**

*This is net of the time a driver would have taken if a driver was required by the employer to fill in a time record sheet instead.*

*Time include additional time taken to check hubodometer readings.*

### Estimates of annual Compliance cost

	<b>(SPSV) P endorsement holders</b>	Others (truck, bus and vehicle recovery)
<b>Logbooks costs</b>		
Total full time equivalent drivers	14,640	30,000
Total logbooks used per year for the industry	87,840	180,000
Total logbook costs per year for the industry	\$527,040	\$1,260,000
<b>Time costs</b>		
Total time loss per year for the industry (hours)		
Drivers' time	36,600	150,000
Employers' time	36,600	75,000
Total time costs per year for the industry		
Drivers' time	\$704,550	\$2,887,500
Employers' time	\$704,550	\$1,443,750
Total time costs per year for the industry	\$1,409,100	\$4,331,250
<b>Total compliance costs</b>	<b>\$1,936,140</b>	<b>\$5,591,250</b>

### Conclusion

**Thus, the total compliance cost for the affected 44,640 full time equivalent drivers is estimated at \$7.53 million. This cost includes \$1.79 million total costs for logbooks, \$3.59 million time cost for drivers and \$2.15 million time cost for employers.**

## Appendix 3

**Table 3: Comparison of costs for Electronic On-Board Recorders with paper logbooks**

**Major assumptions as in appendix 1, except the following.**

**Time costs**

1. There is no time gain (for drivers) for using Digital Tachograph or Brand B Electronic On-board Recorders as the design of these EORs would still require the same amount of time to fill in the required details. However, there is a time gain of 10 seconds of driver's time (per page) for using Brand A EORs as they allow easy touch screen operations.
2. There is a time gain of 20 seconds of employers' time (per page) using EORs as filing and data downloading will be a lot easier and quicker.

**Other assumptions**

3. Discount rate = 10%.
4. There is an average of two drivers jointly operating the same vehicle.

Paper Logbooks	SPSV	Others
Total logbooks used per vehicle per year	12	12
Unit cost per logbook	\$6	\$7
Costs of paper logbooks per vehicle over 10 years, at present value	\$442	\$516
Time cost over 10 years, at present value		
Drivers' time	\$591.5	\$1,183
Employers' time	\$591.5	\$591.5
<b>Total costs of paper logbooks per vehicle over 10 years</b>	<b>\$1,625</b>	<b>\$2,290</b>

<b>Electronic On-Board Recorder (EOR)</b>			
	Electronic Tachograph	Brand A	Brand B (Note 1)
Expected life per unit	10 years	10 years	10 years
Estimated total cost per unit:	\$	\$	\$
<i>Cost per unit</i>	1,800	2,200	1,500
<i>Installation cost</i>	-	210	210
<i>Expected total annual servicing cost at present value over the lifetime of an EOR</i>	286	614	181
<b>Total</b>	<b>2,086</b>	<b>3,024</b>	<b>1,891</b>
Add: Time cost over 10 years			
<b>For SPSV drivers</b>			
Drivers' time	591	394	591
Employers' time	197	197	197
<b>Total costs at present value</b>	<b>2,874</b>	<b>3,616</b>	<b>2,680</b>
<b>For truck, bus and vehicle recovery drivers</b>			
Drivers' time	1,183	986	1,183
Employers' time	197	197	197
<b>Total costs at present value</b>	<b>3,466</b>	<b>4,207</b>	<b>3,271</b>

1: Annual servicing costs shown in this column have been adjusted for the probability of servicing required. The probability of servicing required for a Brand B electronic logbook is 15% for the first year and this probability is expected to gradually increase to 50% by year 10.

### **Conclusion**

The total costs of operating an electronic on-board recorder over its 10 years life would be approximately \$1,000 to \$2,000 higher than the total costs of using paper logbooks over 10 years for both types of vehicles.

## Appendix 4

### Estimated compliance cost savings derived from logbook proposal

---

	Estimated savings
<b>Logbooks costs</b>	
Total full time equivalent drivers	7,000
Total logbooks used per year for the industry	42,000
Total logbook costs per year for the industry	\$294,000
<b>Time costs</b>	
Total time loss per year for the industry (hours)	
Drivers' time	35,000
Employers' time	17,500
Total time costs per year for the industry	
Drivers' time	\$673,750
Employers' time	\$336,875
Total time costs per year for the industry	\$1,010,625
<b>Total compliance costs</b>	<b>\$1,304,625</b>

---

## Appendix 5

### Current logbook exemption provisions that are proposed to be abolished

#### 1. Transport Act 1962

- Any service owned and operated by a local authority while the vehicle is being used in a rubbish collection service

#### 2. Transport (Driver Logbooks Exemption) Notice 1990

- Every vehicle (other than a passenger service vehicle) owned and operated by a territorial authority, a telecommunication authority, an electrical supply authority, or an energy supply authority, and driven by an employee for whom driving is secondary to their principal employment.
- Every harvesting machine travelling between harvesting sites a distance not exceeding 10 kilometres.
- Every vehicle owned by the owner or manager of a farm and used in an agricultural operation related directly to the management of that farm within a 50 kilometre radius of that farm; including a vehicle used on a road to transport farm products, farm implements, stock or farm requisites of any kind within such a distance.
- Every vehicle driven for the purpose of obtaining a certificate of fitness, warrant of fitness or a permit under section 79(3) of the Act, when the vehicle is being driven to the nearest place at which such a certificate, warrant or permit is obtainable; and every vehicle driven from that place to the operator's normal business location.
- Every goods service vehicle that has 2 axles and is towing a trailer having more than 1 axle, where, on journeys not exceeding 100 kilometres, the total combined gross laden weight of the vehicle and trailer does not exceed 3,500 kilograms.
- Every logstacker, forklift, and straddle carrier used exclusively in off road areas to which the public does not have access as of right.
- Every aircraft refuelling vehicle operating within a 3 kilometre radius of the control tower of the international airport at Auckland or Wellington or Christchurch.
- Every vehicle operated by any person recognised by the Secretary for Transport as a person whose principal employment does not involve the driving of vehicles to which section 70B of the Act applies used within a 50 kilometre radius of that person's principal place of work.

- Every vehicle operated by any person operating solely as a domestic rubbish collection service on contract to a local authority for collections between 0500 hours and 1900 hours Monday to Friday.
- Every goods service vehicle with a manufacturer's gross vehicle weight of 6,000 kilograms or less operated within a 50 kilometre radius of the owner's business location.
- Every goods service vehicle operated on a service within a 50 kilometre radius of the operator's business location where the timetable and driver roster has been approved by the Secretary for Transport.
- Every service not being a vehicle recovery service licensee engaged solely in the manufacture, mechanical repair, road testing, sales, servicing or demonstration of new or used vehicles within a 50 kilometre radius of the service organisation's business location.
- Every vehicle recovery service, in as much as the recovery of vehicles is carried out solely by a vehicle that is, apart from the fitting of a tow hitch or ringfeeder, not otherwise adapted to lift or carry a disabled vehicle, and where the vehicle under tow is in a roadworthy condition apart from a mechanical or electrical defect and when the towing takes place between 0700 and 1800 hours.
- Every service engaged solely in the refuelling and reloading of agricultural aircraft when operating from an airfield or airstrip, but not whilst operating on the public highway.

### 3. Transport (Driver Logbooks Exemption) Notice 1988

#### Part A

- Every vehicle owned and operated by a local authority, a telecommunication authority, an electrical supply authority, or an energy supply authority, and driven by an employee who does not usually drive a vehicle in the course of his or her duties.
- Every harvesting machine travelling between harvesting sites a distance not exceeding 10 kilometres.
- Every vehicle owned by the owner or manager of a farm and used in an agricultural operation related directly to the management of that farm; including a vehicle used on a road to transport farm products, farm implements, stock, or farm requisites of any kind
  - (a) From one part of a farm to another part of that farm; or
  - (b) From one farm to an adjoining farm, where both farms are owned or managed by the same person; or
  - (c) From one farm to another farm, where—
    - (i) Both farms are owned or managed by the same person; and
    - (ii) The vehicle carrying the goods does not, on any trip, travel in excess of 20 kilometres.
- Every vehicle driven for the purpose of obtaining a warrant of fitness, a certificate of fitness, or a permit under section 79(1B) of the Act, if the

vehicle is being driven to the nearest place at which such a warrant or certificate or permit is obtainable; and every vehicle driven from that place to the driver's usual place of residence, after having failed to obtain such a warrant or certificate or permit.

- Every goods service vehicle that has 2 axles and is towing a trailer having more than 1 axle, where, on journeys not exceeding 100 kilometres, the total combined tare weight of the vehicle and trailer does not exceed 5,500 kilograms.
- Every logstacker, forklift, and straddle carrier used exclusively in off-road areas to which the public does not have access as of right.
- Every aircraft refuelling vehicle operating within a 3 kilometre radius of the control tower of the international airport at Auckland or Wellington or Christchurch.
- Every vehicle operated by any person recognised by the Secretary for Transport as a person who suffers from a medical condition that results in a physical inability to keep logbooks.

#### Part B

- Every time-tabled passenger service operating to or from or within any city, borough, district, or community having a population of at least 3,000, except—
  - (a) Any contract passenger service or sightseeing passenger service or tour passenger service; and
  - (b) Any passenger service that is free of charge or in respect of which no individual fares are charged; and
  - (c) Any school bus service operated under contract with the Department of Education; and
  - (d) Any passenger service involving a journey exceeding 50 kilometres; and
  - (e) Any passenger service that is unavailable to the public generally, or is operated wholly on private roads.
- Every service engaged solely in the manufacture, mechanical repair, road testing, sales, servicing, demonstration, or delivery of new or used vehicles within a 15 kilometre radius of the service organisation's workshop.