

DISCUSSION

The results of this survey of bus and coach drivers show that fatigue is a factor in their professional lives. More than half of the coach drivers responding to the survey reported that they experienced fatigue at least occasionally. For almost all drivers experiencing fatigue, it occurred before the 14th hour of driving revealing that the fatigue occurred well within the permissible driving hours. Furthermore most drivers reported that when they were fatigued their driving deteriorated in ways which would compromise safe performance. These findings certainly suggest that fatigue is a problem for coach and bus drivers, but they must also be juxtaposed against the finding that relatively few coach drivers reported feeling fatigued on their last trip. This suggests that fatigue is a problem, but that it is not a pervading problem for these drivers.

Comparing the fatigue experiences of bus and coach drivers with those of truck drivers in our previous survey supports this view. The frequency of bus and coach drivers reporting fatigue was considerably less than that reported by truck drivers. About one-third of truck drivers reported fatigue on most trips, compared to only about 10 percent of coach drivers. Similarly, truck drivers were much more likely to report feeling fatigue on their last trip than were coach drivers. Clearly, bus and coach drivers do not experience fatigue nearly as often as do truck drivers.

The task of truck and bus driving has a number of similarities. They appear to cover similar distances during each trip. Coach drivers did slightly longer trips on average, but about the same percentage did long trips of more than 1500 km or 30 hours or greater. Most trips for each group were in the eastern states, a similar

proportion in each sector had done long distance trips in the last week and similar proportions did night driving.

There are, however, a significant number of differences between the driving demands in the two sectors which may account for the lower fatigue reported by coach drivers. Many more bus and coach drivers reported doing short trips (less than 700 km). Most bus and coach driving started in the daylight hours, after 6am, unlike many truck drivers who started in the midnight to 6am range, a time which is well-known to promote fatigue. In addition, bus and coach drivers broke up their driving task more often with activities other than driving, so they may have been less likely to experience fatigue from very long, continuous periods of driving.

Analysis of the influences and pressures on drivers from different parts of the bus and coach sector will also shed some light on the reasons for differences between truck and bus drivers. The results for different types of driving in the bus and coach sector, touring or express showed very clear differences between the way the driving task is done. For tour bus drivers, the task involved covering very long distances, but usually spread out over a number of days. Express drivers on the other hand did not cover as much distance, but took considerably shorter time in getting there. Therefore time pressures were much more likely for express drivers. This idea is given some reinforcement by the finding that express drivers are somewhat more likely than tour drivers to find it necessary to speed. With their stricter schedules express drivers are more likely to need to make up time by travelling a little faster.

Other time influences also distinguished the two types of driving. Express drivers were more likely to start their trips at night than tour drivers and to need to drive overnight. This could also be seen in the pattern of

breaks taken by the two types of driver. Tour drivers reported more long breaks , which would be needed for overnight rest and recuperation, and fewer short breaks of less than one hour. Express drivers, on the other hand, mainly had short breaks.

Despite these differences in the way the driving task was arranged, reported fatigue was quite similar between the two groups of drivers. Roughly equal percentages of drivers reported experiencing fatigue on the last trip. This is somewhat surprising since, based on the nature of the driving task for touring drivers, they appeared to encounter far fewer time pressures than did express drivers. Other measures of fatigue provide some support for this expectation. About one in five express drivers reported fatigue as a personal problem compared to about one in eight touring drivers. Express drivers also reported experiencing fatigue slightly more frequently than tour bus drivers.

Differences in the distribution of fatigue across the 24 hour clock also reflected the different types of pressures on the two types of drivers. Express drivers were much more likely to experience their fatigue during the known "danger hours" of between midnight and 6am. Tour drivers experienced it in the early afternoon which is the other expected vulnerable time for experiencing fatigue. These findings are certainly due to differences between the groups in when the job is done.

Also consistent with the finding of slightly higher overall fatigue for express drivers is that more express drivers than tour drivers reported fatigue effects on driving performance. The driving groups also differed in the factors that contributed to fatigue. For express drivers who experienced fatigue, it occurred most frequently during dawn driving, whereas tired tour drivers reported it occurring when they had to drive

monotonous routes. This clearly reflects the driver's different experiences; the requirement on express drivers to do overnight driving and the fact that tour drivers are intermittently required to do long monotonous trips. Of interest also is the finding that express drivers reported that factors related to two-up driving were the most important contributors to fatigue. They reported two-up driving itself and poor conditions for sleeping in the bus as most important. Two-up driving was unique to the express sector, being used to reduce the pressure on individual drivers, but maintain or increase the distances covered in a trip. It is therefore extremely surprising that express drivers reported two-up as an important source of their fatigue problem.

Despite all these differences, when drivers from either group were affected by fatigue, it occurred in very similar ways. For most drivers in both groups, fatigue affected their driving by slowing reaction times, producing poorer gear changing and reducing their awareness of other traffic. This suggests that fatigue is experienced in the same way by drivers, no matter how their work is arranged.

Analysis of the task required when drivers use different driving operations, single, staged and two-up also provided some insights into the various pressures experienced by drivers. Two-up drivers did the longest hours of driving with almost three-quarters of them working for more than 72 hours. They were also more likely to do longer weekly hours, start their trips during the afternoon or evening and have less frequent, but longer breaks. Staged drivers reported the shortest trips, with most doing trips lasting less than 12 hours and working shorter hours per week. Unlike two-up drivers, they had short breaks during the trip rather than long ones. Single drivers did trips of intermediate length, took at least as long on average as two-up

drivers to do their trips, but showed a completely different distribution of trip length to two-up drivers, most doing intermediate length trips of between 12 and 30 hours. Like staged drivers, they were more likely to work shorter weekly hours. They were also more likely to start their trips in the morning and do fewer overnight trips than the other two methods of driving. Division of the single driver group into those doing tours and those doing express trips, showed that this group was composed of two quite different types of driving. Single drivers doing tours did long distances and took many hours whereas single express drivers did much shorter trips and shorter hours.

The pattern of work for these types of driving operation in the bus and coach sector resembles that found for truck drivers using the same operations, suggesting that these types of operation are implemented in similar ways within the two sectors. The only real difference between the sectors in the pattern of work was for single driving. As a group coach drivers doing single driving did trips involving relatively short distances on average, but took very long periods to complete them. For truck drivers, single trips involved similar distances to coach drivers using this method, but the time taken was much less. This difference is because the single driver group combined two very different ways of driving, tour and express, which made quite different demands on the single driver.

The patterns of work described above appear to influence the amount of fatigue reported by bus and coach drivers doing each driving operation, at least for the last trip. More coach drivers doing two-up reported experiencing fatigue on their last trip than those in the other groups, with the lowest reporting of fatigue by single drivers. This is consistent with the very high work loads

of two-up drivers, and the relatively lower time pressure, on the driving of single coach drivers.

The pattern becomes less consistent when reports of overall fatigue are examined. Staged drivers reported fatigue as a personal problem about five times as often as did the other two groups. The difference was less marked for the percentage of drivers reporting fatigue on at least half of their trips, but staged drivers were still highest and furthermore more staged drivers reported adverse effects on their driving performance when they were fatigued. This is surprising in view of the apparently lower pressure on drivers doing staged work compared to the other driving operations. It is also surprising since staged truck drivers reported the lowest work load and also the lowest fatigue in our earlier survey. Clearly something about staged driving for coach drivers has affected their judgements of the task as fatiguing.

No clues about the reason for this finding are available from the timing or contributors to fatigue. As for the truck sector and other sections of the bus and coach industry, the experience of fatigue was reported most often in the early hours of the morning for all types of driving operation and the same basic causes of fatigue were elected by all drivers.

One possible reason may be that staged drivers were characterised by different types of work pressure to the other two groups that creates chronic, rather than acute fatigue. Pressures like doing more long distance trips over the past week, having shorter breaks during the trip, and breaks that are for work reasons rather than rest may all contribute to a slow build up of fatigue such that a driver may not report it on a single trip, but find fatigue a problem overall in their job. Again, this result may signal a problem for the industry, since

staged driving, like two-up, is intended as a way of limiting the fatigue-related pressures on the driver. Since it appears to be unsuccessful in achieving this aim, the use of staged driving clearly needs to be evaluated.

Apart from the type of driving operation, there are a number of other pressures in coach driving that may moderate their fatigue relative to that of truck drivers. The method of payment could be a moderator since incentive type payments will increase the pressure on all drivers to push themselves for longer in order to earn more money. For this reason, Nel (1988) cautioned against the use of this form of remuneration. Truck drivers were mostly on this type of payment system, that is payment in terms of the kilometres covered. Coach drivers were also paid an incentive form of payment, but in terms of hours worked rather than distance covered. Just like truck drivers, very few were paid a weekly salary with or without overtime. This is somewhat surprising since all coach drivers were employed by companies, unlike many truck drivers. In any case, however, it clearly would not cause the reported difference in fatigue between the two sectors.

Access to breaks may also moderate fatigue. Truck drivers appear to have greater access to breaks for rest and to breaks when they feel they need them than coach drivers. Thus coach drivers have as many breaks as truck drivers, due to their passenger responsibilities, but they were scheduled rather than ad hoc and usually involved work. This is more likely to increase the amount fatigue in coach drivers, rather than reduce it.

A notable finding in this survey is that the pattern of experiencing fatigue is very similar across drivers from both industry sectors and within the bus and coach sector. All drivers were most likely to experience

fatigue in the early hours of the morning and in the early afternoon and the majority of all types of drivers experienced fatigue before the 14th hour of driving. A similar group of factors are likely to promote fatigue for all drivers and they are likely to use many of the same strategies to help themselves overcome the effects of fatigue.

Importantly, the driving performance of all types of coach drivers and truck drivers was affected by fatigue in the same fundamental ways. First, most drivers doing both types of driving report effects of fatigue on their driving performance. It seems that slowed reaction time, poorer gear changing and poor awareness of signs and other traffic are characteristics of all tired long distance drivers (Nel, 1988). All of these changes will reduce the driver's ability to produce safe performance. These performance effects are most likely to be the mechanism for the role of fatigue in heavy vehicle accidents. Since surveys have suggested that at least 20 percent of heavy vehicle accidents are caused by fatigue (Sweatman, Ogden, Haworth, Vulcan and Pearson, 1990), it is clear that these sorts of effects on driving performance should be avoided if at all possible.

The universality of the experience of fatigue is clear in the findings of this study. It seems that when fatigue occurs it does so in very predictable ways that are more to do with biological influences on drivers than to any of the various other pressures that might influence drivers. Consequently all drivers are most likely to experience fatigue at times coinciding with the dips in the circadian rhythm (Folkard and Monk, 1985) and to succumb to the effects of long periods of work at a monotonous task (Holding, 1983).

If the experience of fatigue is similar for drivers from different sectors, it is reasonable to predict that the

strategies to overcome fatigue will also be the same. The results of this study suggest that to some extent this prediction is upheld but the influence of other pressures is also evident. Most coach drivers doing both tour and express and doing all methods of driving reported using music or the radio, caffeine-containing beverages, eating while driving, talking to another person and adjusting ventilation as ways of overcoming fatigue. They reported the most helpful strategies as talking on the CB, resting and eating while driving. Truck drivers reported a similar list of strategies that they used at least sometimes, however more than three-quarters of them included sleep in the list compared to only a very small percentage of coach drivers. In addition, the most helpful strategies for truck drivers were drugs and sleep, two strategies that were hardly mentioned by coach drivers.

These findings are almost certainly due to different pressures experienced by drivers in the two sectors. On the basis that sleep and rest are the only effective ways of overcoming fatigue in the longer term, the strategies used by coach drivers were all temporary solutions to the problem. It is likely that bus and coach drivers use temporary strategies as they are the best they have available. Coach drivers are not as free as truck drivers to stop when they feel they need to or to stop for as long as they might need, and therefore strategies like sleep are simply not possible. For virtually all coach drivers their work is scheduled by someone else and not just for the trip start and finish times. Express drivers, in particular had many scheduled stops throughout their trips. This is mainly due to the fact that coach drivers carry passengers who are collected at different points in the trip and who have expectations that schedules will be kept. Truck drivers, in contrast, carry freight for which the need to keep to time is not nearly as demanding.

Many more truck drivers were able to play a role in scheduling their own trips, especially independent owner-drivers. On this characteristic, coach drivers experience the same pressures as employee truck drivers in that they also are not really able to use their own body state to help guide their work pattern. The issue of flexibility of scheduling was identified as a problem for truck drivers in the previous survey and it may well apply equally to bus and coach drivers. Truck drivers who were able to organise their work-rest schedules themselves seemed to fare better with respect to fatigue than did drivers for whom time demands were specified. A similar argument could be advanced for tour drivers who appeared to experience less time pressure.

The difference between truck and coach drivers in their use of stay awake drugs may be due to a number of reasons. The previous survey of truck drivers revealed that a significant proportion of truck drivers reported using stay awake drugs to assist them to do their job. In contrast, hardly any coach drivers reported using drugs. This difference could be simply reflecting the finding that coach drivers were not as fatigued as truck drivers and therefore did not need stay awake drugs. This explanation is not entirely satisfactory, however, as a significant number of coach drivers did report fatigue on most trips, but their reported drug use was virtually absent. It is also possible that this very low reporting occurred because coach drivers did not feel comfortable about reporting drug-use in the context of this survey. In view of the apparently unrestrained reporting by truck drivers using very much the same methodology as for this survey, this possibility seems not very likely. Alternatively it may be that coach drivers do not take drugs because it may be detected by their passengers or because of a general ethic in the sector of not condoning drug use. It is likely that coach drivers are aware of

their passenger safety and public liability responsibilities.

There were a few notable differences between coach and truck drivers in their views about the potential fatigue-management strategies that could be introduced. Just as reported by truck drivers, improving roads was viewed as both a very helpful strategy to reduce fatigue and among the most helpful of all strategies by the highest number of bus and coach drivers. Coach drivers also reported easing of tight schedules and increasing the flexibility of working hours as among the most helpful strategies, which is consistent with those reported by truck drivers. The two groups differed, though, since more than half of the coach drivers reported policing of drugs and staged driving as very helpful strategies, whereas truck drivers reported these two strategies very rarely. In addition, a significant proportion of truck drivers reported making stay awake drugs available by prescription as a most useful strategy. Only a very small number of coach drivers included this strategy among those reported as very helpful for reducing their fatigue. This last finding supports the suggestion above that coach drivers do not report and/or use stay-awake drugs because there is a prevailing anti-drug ethic in this industry sector. This consistency of results on coach drivers' attitudes to drug-use make it unlikely that they are under-reporting on this issue. A similar conclusion was formed about the reporting of drug-use by truck drivers. In that survey, as in this one, it was felt that drivers reported their views openly.

This conclusion is also supported by analysis of the two methods of administration of the survey. As for the truck survey, the findings were very similar between the two methods, interview or self-administration. There did not appear to be any pattern of under-reporting with one method or the other. Like the truck survey, however, in

this survey staged drivers were under-represented in the interview group. This is because they are harder to contact for interview.

These findings of the current survey again suggest some strategies that are common to both sectors, namely roads, flexible hours and easing of tight schedules, but also point out some that reflect separate pressures. Apart from pressures promoting drug use, truck and coach drivers obviously differed in pressures on staged drivers. More than half of the coach drivers reported staged driving as very helpful for reducing fatigue.

Examination of the views of the different sections of the bus and coach sector shows that there are a few preferences that distinguish them. Staged driving was judged by express, single and staged drivers as a very helpful strategy for managing fatigue. It was not, however, judged to be a most helpful strategy by any group. Two-up driving on the other hand was seen as very helpful only by two-up drivers, but as among the most helpful by express drivers, particularly single drivers doing single driving. Two-up drivers instead reported that regulating work time and more efficient use of breaks were most important strategies.

Coach drivers' experience and views of staged and two-up driving as work practices for managing fatigue was an important part of this study, just as for the truck driver study. The results were very similar to those for truck drivers. Two-up driving was again preferred by relatively few coach drivers. Drivers who preferred it were particularly those who were currently doing it and who had most recent experience of it. This showed that again two-up drivers seemed to be a self-selected group. Those who were not doing it at the moment, viewed it negatively with respect to the amount of fatigue it caused them. Just as for truck drivers, staged driving

was seen favourably by most coach drivers, again particularly if they have recent experience of it. It should be remembered, however, that staged driving may not be a useful strategy for coach drivers because of the problem of a build up of fatigue.

In summary, bus and coach drivers do seem to be better off than truck drivers with respect to fatigue due to lesser work pressures. Each section of the sector appears to have offsets against the fatigue experience which do not eliminate it entirely. The results of both surveys show that is very unlikely that fatigue can ever be eliminated. Nevertheless, there appear to be offsets against fatigue in coach driving that serve to reduce it with respect to the truck driving sector of the industry. Probably best-off are tour drivers for whom pressures are reduced because they take long periods of time to complete their trips. Express drivers, who were more likely to experience fatigue had fewer offsets against it. They did not travel so far, but were more likely to experience work pressure due to tighter schedules, overnight driving and limited access to breaks when they need them. They were also more likely to do two-up and staged driving, both of which were identified in this survey as needing further investigation as effective strategies for managing fatigue.

These results, in combination with those of the truck survey, lead to the conclusion that the most successful strategies for reducing fatigue include improving roads, easing tight schedules, allowing flexible hours and, for a selected group of drivers, staged driving and two-up. While it is beyond the power of this research group to do anything about the first two strategies, the others will be the subject of evaluation in the second stage of the study.

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APPENDIX 1

**Table a. Industry representatives consulted in
questionnaire development**

Person contacted	Organization	Mode of response
David Bennett	BCA N.T.	Verbal & written
John Burton	ABCA	Verbal
Jim Gables	BCA Qld	Verbal & written
Robert Hertogs	ABCA	Verbal
Barry Macdonald	ABCA	-
Ken McGrath	Federal TWU	Verbal
Kevin Norris	ABCA	Verbal & written
Trevor Small	ICOA	Verbal & written

John Collis from FORS was also consulted

**Table b. Bus Proprietors' Association (VIC) Inc
Membership and Licence Details**

Licence category	% total	No. of members	% total	No. of licences
1 - 5 (vehicles)	79.3	578	21.4	919
6 - 10	7.0	51	9.5	406
11 - 15	4.4	32	9.5	408
16 - 20	1.4	10	4.1	176
20 - 30	3.8	28	15.9	683
31 - 50	2.5	18	16.2	697
51 - 100	1.4	10	16.4	706
100 +	0.2	2	7.0	300
Totals	100.0	729	100.0	4295



APPENDIX 2



WORKSAFE AUSTRALIA
NATIONAL OCCUPATIONAL
HEALTH & SAFETY
COMMISSION

Driver Fatigue In Long-Distance Road Transport

SURVEY

PROJECT TEAM
Dr Ann Williamson
Dr Anne-Marie Feyer
Dr Christine Coumarelos
Mr Tony Jenkins

ABOUT THE QUESTIONNAIRE

A lot has been said about fatigue among long-distance bus and coach drivers. We at Worksafe Australia are interested in getting the FACTS from DRIVERS about fatigue.

We want to know whether you think fatigue is a problem, how you experience fatigue on the job and what you think can be done to help.

At the end of this study we will be making recommendations about how driver fatigue can be managed in your industry. THIS IS YOUR CHANCE TO HAVE YOUR SAY AND TO INFLUENCE YOUR FUTURE WORKING CONDITIONS.

Everything you tell us will be kept **CONFIDENTIAL**.

We are NOT even asking for your name.

The questionnaire will take about 30 minutes to complete. Please answer **all** questions in sections 1, 2 and 8, and question 22, as well as **all** the questions in the other sections which relate to you and the type of long distance driving you do (ie. whether you drive tours or express, whether you have driven in two-up or staged driving operations).

When you have completed the questionnaire, please put it in the postage paid envelope supplied and send it back to us.

If you have any queries about the questionnaire or the study, please feel free to call Worksafe Australia on:

008 25 2226 (toll free)

and ask for either **Rebekah Jenkin** or **Tony Jenkins**

SECTION 1: DRIVER AND VEHICLE INFORMATION

In this section we ask some questions about yourself and the bus/coach you drive. Please remember that all information you supply is confidential.

Please fill in today's date _____

1. What sex are you?

Male ()

Female ()

2. How old are you? _____ years

3. Which best describes you?

Single ()

In a defacto
relationship ()

Married ()

Separated ()

Divorced ()

Widowed ()

4. Do you have any children?

Yes ()

No ()

If you do have children:

How many? _____

Please list their ages: _____

5. Are you an employee driver?

Yes ()

No ()

If yes, how many buses/coaches does the company you drive for operate?

Fewer than 5 ()

Between 5 and 10 ()

Between 11 and 50 ()

More than 50 ()

How long have you driven a bus/coach for this company ?

_____years _____months

6. How long have you been driving heavy vehicles for a living?

_____years

7. How long have you been driving a bus or coach for a living?

_____years

8. Where is your home base?

(suburb/town/state)

9. What are the MAIN types driving you usually do ?

You may tick more
than one option

Express ()

Interstate ()

Day tours ()

Longer tours ()

Other (please describe) _____

10. Have you ever done overnight driving
(by overnight driving we mean driving between
the hours of midnight and 5:00 am) ?

Yes ()

No ()

11. Does your job currently involve overnight driving ?

Yes ()

No ()

12. How are you usually paid?

Hourly rate ()

Flat day rate ()

Day rate with overtime ()

Flat weekly rate ()

Weekly rate with overtime ()

Rate for each trip
based on kms travelled
and/or type of trip ()

Other (please describe) _____

13. At what rate are you usually paid?

Award rate ()

Less than the award rate ()

More than the award rate ()

Don't know ()

14. What sort of vehicle do you USUALLY drive?

Two axle, single decker
bus/coach ()

Two axle, double decker
bus/coach ()

Three axle, single decker
bus/coach ()

Three axle, double decker
bus/coach ()

Other (please describe) _____

15. How many passengers do you usually carry?

Twelve or less ()

Twelve to thirty ()

More than thirty ()

SECTION 2: FATIGUE

The following questions are about fatigue you may experience when driving.

* By FATIGUE we don't ONLY mean feeling DROWSY OR SLEEPY.
We ALSO mean being TIRED, LETHARGIC, BORED, UNABLE TO CONCENTRATE,
UNABLE TO SUSTAIN ATTENTION and being MENTALLY SLOWED.

16. In your opinion how much of a problem is fatigue in the long-distance bus and coach industry ?
- | | |
|-----------------------|--------|
| A major problem | () |
| A substantial problem | () |
| A minor problem | () |
| Not a problem at all | () |
17. How much of a problem is fatigue to YOU PERSONALLY in your job?
- | | |
|-----------------------|--------|
| A major problem | () |
| A substantial problem | () |
| A minor problem | () |
| Not a problem at all | () |
18. In general, does fatigue make your driving worse ?
- | | |
|-----|--------|
| Yes | () |
| No | () |
- If yes, HOW is it worse? You may tick more than one option
- | | |
|--|--------|
| Slower to react | () |
| Poorer steering (eg. crossing lane lines, over/under steering) | () |
| Poorer braking | () |
| Poorer gear changing | () |
| Poorer overtaking | () |
| Speeding | () |
| Driving too slowly | () |
| Poorer signalling | () |
| Poorer attention to traffic signs | () |
| Poorer awareness of other traffic | () |
| Other (please describe) _____ | |

19. In this question we are interested in your opinions about strategies that COULD BE USED to deal with driver fatigue in the long-distance bus and coach industry.

Please rate how HELPFUL you would find each strategy in dealing with YOUR driver fatigue by TICKING one of the options next to each strategy.

Space is also provided for comments on each strategy IF you have any.

Make more information/ training available on what causes and reduces driver fatigue	Not helpful ()	Somewhat helpful ()	Very helpful ()	Comments: _____ _____ _____ _____
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Strict policing to prevent the use of stay awake drugs	Not helpful ()	Somewhat helpful ()	Very helpful ()	Comments: _____ _____ _____ _____
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Permitting the use of stay awake drugs by prescription only	Not helpful ()	Somewhat helpful ()	Very helpful ()	Comments: _____ _____ _____ _____
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Introduction of stricter driving hour regulations (eg. shorter driving periods, longer rest breaks)	Not helpful ()	Somewhat helpful ()	Very helpful ()	Comments: _____ _____ _____ _____
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Stricter enforcement of current driving hours regulations	Not helpful ()	Somewhat helpful ()	Very helpful ()	Comments: _____ _____ _____ _____
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**Regulation of
work time not
just driving
hours (eg.
including breaks)**

Not
helpful

()

Somewhat
helpful

()

Very
helpful

()

Comments: _____

**Having driving
and/or work
regulations set
by industry
people not by
government
people**

Not
helpful

()

Somewhat
helpful

()

Very
helpful

()

Comments: _____

**Banning driving
during the
"danger hours"
(eg. between
2am and 6am)**

Not
helpful

()

Somewhat
helpful

()

Very
helpful

()

Comments: _____

**More effective
use of breaks
(eg. scheduling,
duration,
activities)**

Not
helpful

()

Somewhat
helpful

()

Very
helpful

()

Comments: _____

Two-up driving

Not
helpful

()

Somewhat
helpful

()

Very
helpful

()

Comments: _____

Staged driving
(ie, driving
part of the trip
then handing the
bus over to
a fresh driver
who has been
waiting at some
meeting point)

Not helpful	Somewhat helpful	Very helpful
()	()	()

Comments: _____

Easing
schedules

Not helpful	Somewhat helpful	Very helpful
()	()	()

Comments: _____

Tightening
schedules

Not helpful	Somewhat helpful	Very helpful
()	()	()

Comments: _____

Better bus/
coach design
(eg. lighter
steering and
braking, better
ventilation, seats,
less vibration)

Not helpful	Somewhat helpful	Very helpful
()	()	()

Comments: _____

Use of fatigue
monitors by
drivers (eg.
using devices
that alert the
driver before
he falls asleep)

Not helpful	Somewhat helpful	Very helpful
()	()	()

Comments: _____

**Better off
road rest
facilities**

Not
helpful

()

Somewhat
helpful

()

Very
helpful

()

Comments: _____

**Greater
flexibility in
driving hours
regulations
(eg. driving
beyond the usual
maximum to allow
return home,
taking breaks
when needed
rather than
to regulation)**

Not
helpful

()

Somewhat
helpful

()

Very
helpful

()

Comments: _____

**Improvements to
the roads (eg.
better surfaces,
rumble strips,
chatter bars)**

Not
helpful

()

Somewhat
helpful

()

Very
helpful

()

Comments: _____

20. Of the strategies listed above that you thought would be helpful in dealing with YOUR driver fatigue, which do you think would be MOST helpful?

21. If you have any other ideas about strategies that may be useful in dealing with driver fatigue in the long-distance bus and coach industry, please describe them below.

SECTION 3: DETAILS OF YOUR LAST LONG DISTANCE TRIP

These questions are about your LAST LONG DISTANCE TRIP.

* LONG DISTANCE means at least 300kms.

22. Was your last long distance trip part of a tour ?

Yes () go to PAGE 24

No () go to the NEXT question
on the NEXT page (page 13)

Only answer these questions if your last trip was NOT a tour

23. Where did the trip start ?
(ie. where did you start driving the bus/coach ?)

(suburb/town/state)

24. What date did your last long-distance trip start? _____

If you can't remember the starting date, was it

Within the last 24 hours	()
About a few days ago	()
About a week ago	()
About a few weeks ago	()
About a month ago	()
About a few months ago	()

25. What time did you start work for the trip ?
(please record signing on time)

_____ am/pm

26. Where did the trip finish ?
(ie. where did you finish driving the bus/coach ?)

(suburb/town/state)

27. What day and time did work for the trip finish ?
(please record signing off time)

_____ (day) _____ am/pm

Only answer these questions if your last trip was NOT a tour

28. Approximately how many kilometres did you travel?

_____ kms

29. What sort of driving operation was it?

One driver (point to point) ()

Two-up ()

Staged ()

30. Who devised the schedule for your last long distance trip?

You ()

Your employer ()

Other (please describe) ()

31. Did you keep to the schedule ?

Yes ()

Mostly ()

Sometimes ()

No ()

Only answer these questions if your last trip was NOT a tour

32. Please describe YOUR LAST TRIP,

Please complete the table below for
EACH BREAK THAT WAS 15 MINUTES OR LONGER ON YOUR LAST TRIP.

	WHERE DID YOU STOP?	WHAT TIME DID YOU STOP? (Include am or pm)	HOW LONG WAS THE BREAK? (In mins or hrs)	WHAT WAS THE REASON FOR THE BREAK? 1. Sleep 2. Rest 3. Work eg. scheduled stops 4. Personal comfort eg. food, toilet 5. Combination of reasons INCLUDING work 6. Combination of reasons but NOT work
1ST BREAK				
2ND BREAK				
3RD BREAK				
4TH BREAK				
5TH BREAK				
6TH BREAK				
7TH BREAK				

Only answer these questions if your last trip was NOT a tour

33. We would now like to find out more about the activities other than driving you completed on your last trip. Please tell us about activities at your STARTING POINT, DURING THE TRIP and at your FINISHING POINT.

	DID YOU HANDLE ANY OF THE LUGGAGE, TICKETING OR OR PASSENGER CHECKING ? (Please tick "yes" or "no")	HOW LONG DID IT TAKE TO DO THIS ? (In mins or hrs)
AT STARTING POINT	Yes () No ()	
AT FINISHING POINT	Yes () No ()	
DURING THE TRIP	Yes () No ()	

34. Please list any OTHER activities with which you were involved before/during or after the trip (eg. cleaning bus, refueling) and roughly how long they took (minutes/hours)

35. What was your cruising speed on the OPEN ROAD?

Below the speed limit	()
At the speed limit	()
Less than 15 km/hr above the speed limit	()
15 to 30 km/hr above the speed limit	()
At least 30 km/hr above the speed limit	()

Only answer these questions if your last trip was NOT a tour

38. How often do you become fatigued while driving?

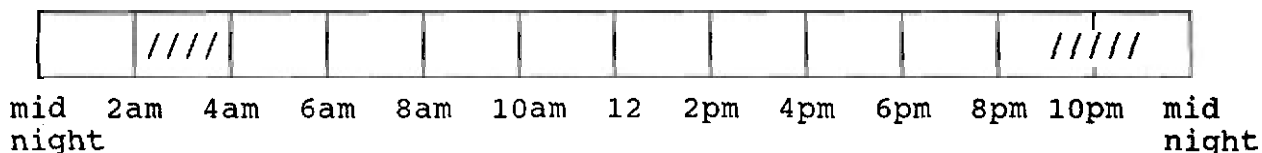
- On every trip ()
- On most trips ()
- On about half your trips ()
- Occasionally ()
- Very rarely ()
- Never (please tell us why) ()

39. If you ever get fatigued, how many hours after STARTING WORK do you usually BEGIN to feel fatigued? (calculate from time when you signed on)

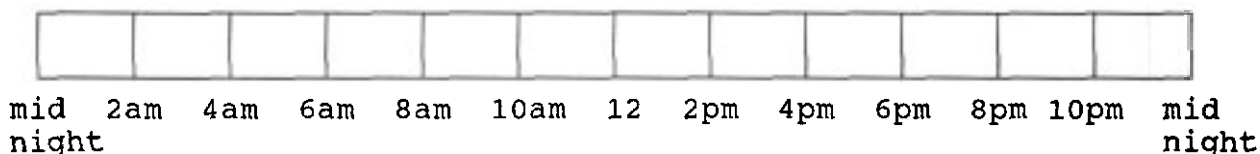
_____ hours

40. If you ever get fatigued, at what times of the day or night are you most likely to feel fatigued WHILE WORKING?

LOOK AT THIS EXAMPLE: Let's say that, while working, a driver is most likely to be fatigued from 2am to 4am and from 9pm to 11pm. This driver would shade like this:



NOW YOU GO AHEAD and shade in those times when YOU are most fatigued WHILE WORKING.



Only answer these questions if your last trip was NOT a tour

41. IF YOU EVER GET FATIGUED, DO THE FOLLOWING CONTRIBUTE
TO YOUR FATIGUE WHILE DRIVING ?

* Firstly, TICK your selections, then CIRCLE the ones which are
important in contributing to YOUR driver fatigue.

You may tick more
than one option

Long driving hours	()
Insufficient rest breaks	()
Scheduled stops	()
Checking tickets/baggage	()
Irregular or inadequate meals during trips	()
Dealing with passengers	()
Driving two-up	()
Irregular or inadequate exercise during trips	()
Inadequate sleep before trips	()
Driving at night	()
Driving at dawn	()
Driving at dusk	()
Poor road conditions	()
Uninteresting/monotonous driving route	()
Heavy highway traffic	()
Heavy city traffic	()
Poor weather conditions (eg. fog)	()
Poor bus facilities (eg. small sleep bunk, uncomfortable seat)	()
Poor bus ventilation	()
Bus vibration	()
Family problems	()
Poor diet/irregular eating	()
After-effects of using stay-awake drugs	()
Use of alcohol	()

Other (please describe)

Only answer these questions if your last trip was NOT a tour

42. If you ever get fatigued, please indicate how often you use the strategies listed below to deal with YOUR driver fatigue during trips.

Do this by TICKING one of the options next to each strategy.

Then CIRCLE those strategies you find MOST helpful.

	<u>Often</u>	<u>Sometimes</u>	<u>Rarely</u>	<u>Never</u>
Stopping to sleep	()	()	()	()
Stopping to rest	()	()	()	()
Stopping for a meal	()	()	()	()
Eating while driving (eg. lollies, gum, fruit)	()	()	()	()
Having a drink containing caffeine (eg, coffee, tea, Coca-cola)	()	()	()	()
Having a non-caffeine drink	()	()	()	()
Smoking (even in breaks)	()	()	()	()
Taking stay-awake drugs	()	()	()	()
Exercise (in breaks)	()	()	()	()
Taking a shower	()	()	()	()
Talking to another person (eg. hostess, co-driver)	()	()	()	()
Listening to music/radio	()	()	()	()
Using the CB radio	()	()	()	()
Singing	()	()	()	()
Adjusting the ventilation (eg, windows, air conditioning, heater)	()	()	()	()
Other (please describe)				

Only answer these questions if your last trip was NOT a tour

SECTION 4: COMPARISON OF YOUR LAST TRIP WITH OTHER TRIPS

43. Was your LAST TRIP similar to the trip you do most often?

Yes ()

No ()

If no, HOW was your last trip different?

You may tick MORE
than one option

DIFFERENT route driven ? ()

DIFFERENT distance driven ? ()

MORE stops made than usual ? ()

FEWER stops made than usual ? ()

Stops were LONGER than usual ? ()

Stops were SHORTER than usual ? ()

I usually drive tours ()

Other (please describe)

Only answer these questions if your last trip was NOT a tour

SECTION 5: WEEKLY WORK/REST SCHEDULE

In this section we want to find out about your work in the SEVEN DAYS
IMMEDIATELY BEFORE THE LAST TRIP you just described.

44. Was your working WEEK before your last trip similar to your usual working week?

Yes ()

No ()

If no, HOW was your last working week different?

You may tick MORE
than one option

LONGER driving hours involved ? ()

SHORTER driving hours involved ? ()

MORE trips driven ? ()

FEWER trips driven ? ()

MORE time spent away from homebase ? ()

LESS time spent away from homebase? ()

Other (please describe) _____

45. In the last week, how many times did you work overnight (anytime between midnight and 5:00 am) ?

46. Did you make any long-distance trips in the WEEK before your last trip?

Yes () go to the NEXT question on the NEXT page

No () go to PAGE 24

Only answer these questions if your last trip was NOT a tour

47. We are interested in ALL the long-distance trips you made in the SEVEN days prior to your last trip.

Start with the first trip you made in this period.
(Record signing ON/OFF time)

	FROM	DAY AND TIME TRIP STARTED (Include am/pm)	TO	DAY AND TIME TRIP FINISHED (Include am/pm)
1ST TRIP IN 7 DAYS BEFORE LAST TRIP	_____	_____	_____	_____
2ND TRIP IN 7 DAYS BEFORE LAST TRIP	_____	_____	_____	_____
3RD TRIP IN 7 DAYS BEFORE LAST TRIP	_____	_____	_____	_____
4TH TRIP IN 7 DAYS BEFORE LAST TRIP	_____	_____	_____	_____
5TH TRIP IN 7 DAYS BEFORE LAST TRIP	_____	_____	_____	_____
6TH TRIP IN 7 DAYS BEFORE LAST TRIP	_____	_____	_____	_____
7TH TRIP IN 7 DAYS BEFORE LAST TRIP	_____	_____	_____	_____

TOUR BUS DRIVERS ONLY COMPLETE THE FOLLOWING QUESTIONS

If you are NOT a TOUR bus driver
DO NOT complete these questions,
but go to question 79, page 39

Answer these questions only if your last trip WAS a tour

If you have a copy of the schedule or itinerary for the last tour you completed, please attach it to this questionnaire.
(you may black out any identifying labels/titles if you so wish)

48. Where did the trip start ?
(ie. where did you start driving the bus/coach ?)

(suburb/town/state)

49. What date did your last long-distance trip start? _____

If you can't remember the starting date, was it:

Within the last 24 hours	()
About a few days ago	()
About a week ago	()
About a few weeks ago	()
About a month ago	()
About a few months ago	()

50. What time did you start work for the trip?
(please record signing on time)

_____ am/pm

51. Where did the trip finish ?
(ie. Where did you finish driving the bus/coach ?)

(suburb/town/state)

52. What day and time did work for the trip finish ?
(please record signing off time)

_____ (day) _____ am/pm

Answer these questions only if your last trip WAS a tour

53. How long (days/hours) was the last tour you completed ?

_____ days / hours

54. Approximately how many kilometres did you travel?

in total

on the longest day

on the shortest day

55. How many hours did you work ?

(record from signing on time to signing off time)

in total

on the longest day

on the shortest day

56. How many hours did you drive ?

in total

on the longest day

on the shortest day

57. How long was the longest period of continuous driving you completed ?

_____ in hours

_____ in kilometres

Answer these questions only if your last trip WAS a tour

58. What sort of driving operation was it?

One driver (point to point) ()

Two-up ()

Staged ()

Other (please describe) ()

59. Who devised the schedule or itinerary for the tour ?

You ()

Your employer ()

Other (please describe) ()

60. Did you keep to the schedule ?

Yes ()

Mostly ()

Sometimes ()

No ()

Answer these questions only if your last trip WAS a tour

61. Please complete the table below for EACH BREAK THAT WAS 15 MINUTES OR LONGER ON THE LONGEST DAY OF YOUR LAST TRIP.

If all days were of a similar length, please fill in this table for a TYPICAL day on your last tour.

	WHERE DID YOU STOP?	WHAT TIME DID YOU STOP? Include am or pm	HOW LONG WAS THE BREAK? In mins or hrs)	WHAT WAS THE REASON FOR THE BREAK? 1. Sleep 2. Rest 3. Work eg. scheduled stop 4. Personal comfort eg. food, toilet 5. Combination of reasons INCLUDING work 6. Combination of reasons but NOT work
1ST BREAK				
2ND BREAK				
3RD BREAK				
4TH BREAK				
5TH BREAK				
6TH BREAK				
7TH BREAK				

Answer these questions only if your last trip WAS a tour

62. Please complete the table below for EACH BREAK THAT WAS 15 MINUTES OR LONGER ON THE SHORTEST DAY OF YOUR LAST TRIP.

If you filled in the previous table for a TYPICAL day on your last tour, DO NOT fill in this table, go to the NEXT question

	WHERE DID YOU STOP?	WHAT TIME DID YOU STOP? (Include am or pm)	HOW LONG WAS THE BREAK? (In mins or hrs)	WHAT WAS THE REASON FOR THE BREAK? 1. Sleep 2. Rest 3. Work eg. scheduled stops 4. Personal comfort eg. food, toilet 5. Combination of reasons INCLUDING work 6. Combination of reason but NOT work You may list MORE than one option
1ST BREAK				
2ND BREAK				
3RD BREAK				
4TH BREAK				
5TH BREAK				
6TH BREAK				
7TH BREAK				

Answer these questions only if your last trip WAS a tour

63. We would now like to find out more about the activities other than driving you completed on your last trip. Please tell us about activities at your STARTING POINT, DURING THE TRIP and at your FINISHING POINT.

	DID YOU HANDLE ANY OF THE LUGGAGE, TICKETING OR OR PASSENGER CHECKING ? (Please tick "yes" or "no")	HOW LONG DID IT TAKE TO DO THIS ? (In mins or hrs)
AT STARTING POINT	Yes () No ()	
AT FINISHING POINT	Yes () No ()	
PER DAY DURING THE TRIP	Yes () No ()	

64. List any OTHER activities with which you were involved before/during and after your trip (eg. cleaning bus, refueling) and roughly estimate how long they took.

65. What was your cruising speed on the OPEN ROAD?

Below the speed limit	()
At the speed limit	()
Less than 15 km/hr above the speed limit	()
15 to 30 km/hr above the speed limit	()
At least 30 km/hr above the speed limit	()

Answer these questions only if your last trip WAS a tour

66. In the 10 hours before your last trip, roughly how much time did you spend on each of the following activities?

Sleeping	_____	hours
Resting/relaxing but not sleeping	_____	hours
Checking/repairing bus/coach	_____	hours
Driving bus/coach	_____	hours
Driving a light vehicle	_____	hours
Other work	_____	hours
Other	_____	hours
(please describe)	_____	

67. Did you feel fatigued at any stage during your last trip?

Yes ()

No ()

If yes, shade in the times you felt fatigued below. Use ONLY the "DAY 1 OF TRIP" boxes if your trip lasted one day. If your trip lasted two days, use "DAY 1" and "DAY 2" boxes, etc.

	mid night	2 am	4 am	6 am	8 am	10 am	12	2 pm	4 pm	6 pm	8 pm	10 pm	mid night
DAY 1 OF TRIP													
DAY 2 OF TRIP													
DAY 3 OF TRIP													
DAY 4 OF TRIP													
DAY 5 OF TRIP													
DAY 6 OF TRIP													
DAY 7 OF TRIP													
DAY 8 OF TRIP													
DAY 9 OF TRIP													
DAY 10 OF TRIP													

If your last trip was longer than 10 days complete the table on page 154

Answer these questions only if your last trip WAS a tour

68. How often do you become fatigued while driving on a tour?

- On every trip ()
- On most trips ()
- On about half your trips ()
- Occasionally ()
- Very rarely ()
- Never (please tell us why) ()

69. If you ever get fatigued on a tour, how many hours after STARTING WORK do you usually BEGIN to feel fatigued? (calculate from time when you signed on)

_____ hours

70. If you ever get fatigued, at what times of the day or night are you most likely to feel fatigued WHILE WORKING on a tour?

LOOK AT THIS EXAMPLE: Let's say that, while working, a driver is most likely to be fatigued from 2am to 4am and from 9pm to 11pm. This driver would shade like this:



mid 2am 4am 6am 8am 10am 12 2pm 4pm 6pm 8pm 10pm mid
night night

NOW YOU GO AHEAD and shade in those times when YOU are most fatigued WHILE WORKING.



mid 2am 4am 6am 8am 10am 12 2pm 4pm 6pm 8pm 10pm mid
night night

Answer these questions only if your last trip WAS a tour

71. IF YOU EVER GET FATIGUED, DO THE FOLLOWING CONTRIBUTE TO YOUR FATIGUE WHILE DRIVING ON A TOUR?

* Firstly, TICK your selections, then CIRCLE the ones which are most important in contributing to YOUR driver fatigue.

You may tick more than one option

Long driving hours	()
Insufficient rest breaks	()
Scheduled stops	()
Checking tickets/baggage	()
Irregular or inadequate meals during trips	()
Dealing with passengers	()
Driving two-up	()
Irregular or inadequate exercise during trips	()
Inadequate sleep before trips	()
Driving at night	()
Driving at dawn	()
Driving at dusk	()
Poor road conditions	()
Uninteresting/monotonous driving route	()
Heavy highway traffic	()
Heavy city traffic	()
Poor weather conditions (eg. fog)	()
Poor bus facilities (eg. small sleep bunk, uncomfortable seat)	()
Poor bus ventilation	()
Bus vibration	()
Family problems	()
Poor diet/irregular eating	()
After-effects of using stay-awake drugs	()
Use of alcohol	()
Other (please describe)	

Answer these questions only if your last trip WAS a tour

72. If you ever get fatigued, please indicate how often you use the strategies listed below to deal with YOUR driver fatigue during tours.

Do this by TICKING one of the options next to each strategy.

Then CIRCLE those strategies you find MOST helpful.

	<u>Often</u>	<u>Sometimes</u>	<u>Rarely</u>	<u>Never</u>
Stopping to sleep	()	()	()	()
Stopping to rest	()	()	()	()
Stopping for a meal	()	()	()	()
Eating while driving (eg. lollies, gum, fruit)	()	()	()	()
Having a drink containing caffeine (eg, coffee, tea, Coca-cola)	()	()	()	()
Having a non-caffeine drink	()	()	()	()
Smoking (even in breaks)	()	()	()	()
Taking stay-awake drugs	()	()	()	()
Exercise (in breaks)	()	()	()	()
Taking a shower	()	()	()	()
Talking to another person (eg. hostess, co-driver)	()	()	()	()
Listening to music/radio	()	()	()	()
Using the CB radio	()	()	()	()
Singing	()	()	()	()
Adjusting the ventilation (eg, windows, air conditioning, heater)	()	()	()	()
Other (please describe)				

Answer these questions only if your last trip WAS a tour

SECTION 4: COMPARISON OF LAST TRIP WITH YOUR OTHER TRIPS

73. Was your LAST TRIP similar to the trip you do most often?

Yes ()

No ()

If no, HOW was your last trip different?

You may tick MORE
than one option

DIFFERENT route driven ? ()

DIFFERENT distance driven ? ()

MORE stops made than usual ? ()

FEWER stops made than usual ? ()

Stops were LONGER than usual ? ()

Stops were SHORTER than usual ? ()

I don't usually drive tours ()

Other (please describe) _____

Answer these questions only if your last trip WAS a tour

SECTION 5: WEEKLY WORK/REST SCHEDULE

In this section we want to find out about your work in the SEVEN DAYS IMMEDIATELY BEFORE THE LAST TRIP you just described.

74. Was your working WEEK before your last trip similar to your usual working week?

Yes ()

No ()

If no, HOW was your last working week different?

You may tick MORE
than one option

LONGER driving hours were involved ? ()

SHORTER driving hours were involved ? ()

MORE trips driven ? ()

FEWER trips driven ? ()

MORE time spent away from homebase ? ()

LESS time spent away from homebase ? ()

Other (please describe)

Answer these questions only if your last trip WAS a tour

75. Please fill in the following table about how you spent the WEEK before your last tour. If you can't remember exactly, please indicate roughly how much time you spent working, resting and driving each day for the seven days before the trip you have just described.

	HOW MANY HOURS DID YOU SPEND WORKING ?	HOW MANY HOURS DID YOU SPEND DRIVING ?	HOW MANY HOURS DID YOU SPEND RESTING/SLEEPING ?
DAY 1 WEEK BEFORE			
DAY 2 WEEK BEFORE			
DAY 3 WEEK BEFORE			
DAY 4 WEEK BEFORE			
DAY 5 WEEK BEFORE			
DAY 6 WEEK BEFORE			
DAY 7 WEEK BEFORE			

76. In the last week, how many times did you work overnight (between midnight and 5:00 am) ?

77. Did you make any long-distance trips in the WEEK before your last trip?

Yes

() go to the NEXT question

No

() go to QUESTION 79, PAGE 39

Answer these questions only if your last trip WAS a tour

78. We are interested in ALL the long-distance trips you made in the SEVEN days prior to your last trip.

Start with the first trip you made in this period.
(Record signing ON/OFF time)

	FROM	DAY AND TIME TRIP STARTED (Include am/pm)	TO	DAY AND TIME TRIP FINISHED (Include am/pm)
1ST TRIP IN 7 DAYS BEFORE LAST TRIP	_____	_____	_____	_____
2ND TRIP IN 7 DAYS BEFORE LAST TRIP	_____	_____	_____	_____
3RD TRIP IN 7 DAYS BEFORE LAST TRIP	_____	_____	_____	_____
4TH TRIP IN 7 DAYS BEFORE LAST TRIP	_____	_____	_____	_____
5TH TRIP IN 7 DAYS BEFORE LAST TRIP	_____	_____	_____	_____
6TH TRIP IN 7 DAYS BEFORE LAST TRIP	_____	_____	_____	_____
7TH TRIP IN 7 DAYS BEFORE LAST TRIP	_____	_____	_____	_____

SECTION 6: TWO-UP DRIVING

PLEASE ANSWER THIS SECTION ONLY IF YOU HAVE DRIVEN TWO-UP.

IF YOU HAVE NOT DRIVEN TWO-UP, GO TO PAGE 45

79. How often have you driven two-up?

Fewer than 5 times	()
Between 5 and 20 times	()
Between 21 and 50 times	()
More than 50 times	()

80. When did you last drive two-up?

Within the last week	()
Within the last month	()
Within the last year	()
Within the last 5 years	()
More than 5 years ago	()

81. Which do you prefer?

Working two-up	()
Working as a single driver	()
Do not prefer one over the other	()

Why? _____

Only complete this section if you HAVE driven two-up

82. When you have driven two-up:

How many hours OR days did a typical trip last
(without at least an eight (8) hour break) ?

_____ hours/days

How many hours did you USUALLY work in any one week?
(Calculate from signing on to signing off time and include
breaks spent working)

_____ hours

How many hours out of 24 were you USUALLY driving
(exclude meal breaks) ?

_____ hours

How many hours out of 24 did you spend loading/unloading,
ticketing passengers ?

_____ hours

How many hours out of 24 did you spend in the bunk ?

_____ hours

How many hours did you USUALLY drive before changing
drivers?

_____ hours

How long was your USUAL break from driving while the other
driver was at the wheel?

_____ hours

How many hours did you USUALLY sleep in each break from
driving? (DO NOT include time spent TRYING to fall asleep)

_____ hours

83. How often do you become fatigued while driving two-up?

On every trip ()

On most trips ()

On about half your trips ()

Occasionally ()

Very rarely ()

Never (please tell us why) ()

Only complete this section if you HAVE driven two-up

84. Which do you usually find is MORE fatiguing?

Working two-up ()

Working as a single driver ()

They are about the same ()

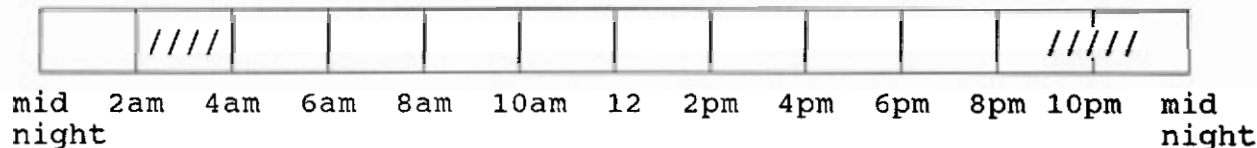
Why?

85. If you ever get fatigued while driving two-up, how many hours after STARTING WORK do you usually BEGIN to feel fatigued? (calculate from time when you signed on)

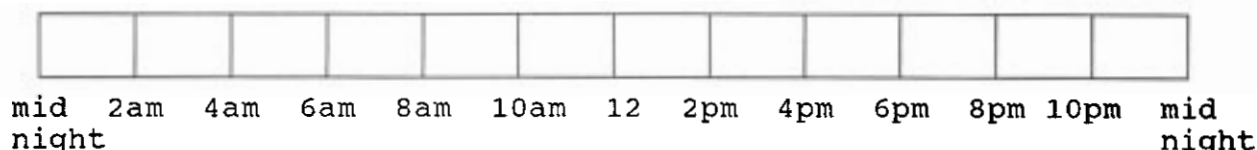
_____ hours

86. If you ever get fatigued, at what times of the day or night are you most likely to feel fatigued WHILE DRIVING TWO-UP?

LOOK AT THIS EXAMPLE: Let's say that, while working, a driver is most likely to be fatigued from 2am to 4am and from 9pm to 11pm. This driver would shade like this:



NOW YOU GO AHEAD and shade in those times when YOU are most fatigued WHILE WORKING.



Only complete this section if you HAVE driven two-up

87. IF YOU EVER GET FATIGUED, DO THE FOLLOWING CONTRIBUTE TO YOUR FATIGUE WHILE DRIVING TWO-UP?

*** Firstly, TICK your selections, then CIRCLE the ones which are most important in contributing to YOUR driver fatigue.**

You may tick more
than one option

Long driving hours	()
Insufficient rest breaks	()
Scheduled stops	()
Checking tickets/baggage	()
Irregular or inadequate meals during trips	()
Dealing with passengers	()
Driving two-up	()
Irregular or inadequate exercise during trips	()
Inadequate sleep before trips	()
Driving at night	()
Driving at dawn	()
Driving at dusk	()
Poor road conditions	()
Uninteresting/monotonous driving route	()
Heavy highway traffic	()
Heavy city traffic	()
Poor weather conditions (eg. fog)	()
Poor bus facilities (eg. small sleep bunk, uncomfortable seat)	()
Poor bus ventilation	()
Bus vibration	()
Family problems	()
Poor diet/irregular eating	()
After-effects of using stay-awake drugs	()
Use of alcohol	()

Other (please describe)

Only complete this section if you HAVE driven two-up

88. If you ever get fatigued, please indicate how often you use the strategies listed below to deal with YOUR driver fatigue during TWO-UP trips.

Do this by TICKING one of the options next to each strategy.

Then CIRCLE those strategies you find MOST helpful.

	<u>Often</u>	<u>Sometimes</u>	<u>Rarely</u>	<u>Never</u>
Stopping to sleep	()	()	()	()
Stopping to rest	()	()	()	()
Stopping for a meal	()	()	()	()
Eating while driving (eg. lollies, gum, fruit)	()	()	()	()
Having a drink containing caffeine (eg, coffee, tea, Coca-cola)	()	()	()	()
Having a non-caffeine drink	()	()	()	()
Smoking (even in breaks)	()	()	()	()
Taking stay-awake drugs	()	()	()	()
Exercise (in breaks)	()	()	()	()
Taking a shower	()	()	()	()
Talking to another person (eg. hostess, co-driver)	()	()	()	()
Listening to music/radio	()	()	()	()
Using the CB radio	()	()	()	()
Singing	()	()	()	()
Adjusting the ventilation (eg, windows, air conditioning, heater)	()	()	()	()
Other (please describe)				

SECTION 7: STAGED DRIVING

NOTE: By staged driving we mean where you drive for only part of the trip before getting out of the bus/coach and handing over to a fresh driver who has been waiting at some meeting point.

PLEASE ANSWER THIS SECTION ONLY IF YOU HAVE DRIVEN
IN A STAGED DRIVING OPERATION.

IF YOU HAVE NOT DRIVEN IN A STAGED DRIVING OPERATION, GO TO PAGE 51

Only answer these questions if you HAVE driven as a staged driver

89. How often have you driven in a staged operation?

Fewer than 5 times ()

Between 5 and 20 times ()

Between 21 and 50 times ()

More than 50 times ()

90. When did you last drive in a staged operation?

Within the last week ()

Within the last month ()

Within the last year ()

Within the last 5 years ()

More than 5 years ago ()

91. Which do you prefer?

Working as a staged driver ()

Working as a single driver (point to point) ()

Do not prefer one over the other ()

Why?

Only answer these questions if you HAVE driven as a staged driver

92. When you have driven in a staged operation:

How many hours OR days did a typical trip last
(without at least a ten (10) hour break) ?

_____ hours/days

How many hours did you USUALLY work in any one week?
(Calculate from signing on to signing off and include breaks
spent working)

_____ hours

How many hours did you USUALLY work in any 24 hour period?
(Calculate from signing on to signing off time and include
breaks spent working)

_____ hours

How many hours did you usually drive in any one week ?

_____ hours

How many hours did you usually drive in any 24 hour period?

_____ hours

How many hours did you USUALLY drive before changing
drivers?

_____ hours

After finishing one stage, how long was it USUALLY before
you started driving the next stage?

_____ hours

93. How often do you become fatigued while driving as a staged driver?

On every trip ()

On most trips ()

On about half your trips ()

Occasionally ()

Very rarely ()

Never (please tell us why) ()

Only complete this section if you HAVE driven as a staged driver

94. Which do you usually find is more fatiguing?

Working as a staged driver ()

Working as a single driver (point to point) ()

They are about the same ()

Why?

95. If you ever get fatigued, how many hours after STARTING WORK as a STAGED DRIVER do you usually BEGIN to feel fatigued?
(calculate from time when you signed on)

_____ hours

96. If you ever get fatigued, at what times of the day or night are you most likely to feel fatigued WHILE DRIVING AS A STAGED DRIVER?

LOOK AT THIS EXAMPLE: Let's say that, while working, a driver is most likely to be fatigued from 2am to 4am and from 9pm to 11pm. This driver would shade like this:



mid 2am 4am 6am 8am 10am 12 2pm 4pm 6pm 8pm 10pm mid
night night

NOW YOU GO AHEAD and shade in those times when YOU are most fatigued WHILE WORKING.



mid 2am 4am 6am 8am 10am 12 2pm 4pm 6pm 8pm 10pm mid
night night

Only answer these questions if you HAVE driven as a staged driver

97. IF YOU EVER GET FATIGUED, DO THE FOLLOWING CONTRIBUTE TO YOUR FATIGUE WHILE DRIVING AS A STAGED DRIVER?

*** Firstly, TICK your selections, then CIRCLE the ones which are most important in contributing to YOUR driver fatigue.**

You may tick more
than one option

Long driving hours	()
Insufficient rest breaks	()
Scheduled stops	()
Checking tickets/baggage	()
Irregular or inadequate meals during trips	()
Dealing with passengers	()
Driving two-up	()
Irregular or inadequate exercise during trips	()
Inadequate sleep before trips	()
Driving at night	()
Driving at dawn	()
Driving at dusk	()
Poor road conditions	()
Uninteresting/monotonous driving route	()
Heavy highway traffic	()
Heavy city traffic	()
Poor weather conditions (eg. fog)	()
Poor bus facilities (eg. small sleep bunk, uncomfortable seat)	()
Poor bus ventilation	()
Bus vibration	()
Family problems	()
Poor diet/irregular eating	()
After-effects of using stay-awake drugs	()
Use of alcohol	()

Other (please describe)

Only answer these questions if you HAVE driven as a staged driver

98. If you ever get fatigued, please indicate how often you use the strategies listed below to deal with YOUR driver fatigue during trips where you work as a STAGED DRIVER.

Do this by TICKING one of the options next to each strategy.

Then CIRCLE those strategies you find MOST helpful.

	<u>Often</u>	<u>Sometimes</u>	<u>Rarely</u>	<u>Never</u>
Stopping to sleep	()	()	()	()
Stopping to rest	()	()	()	()
Stopping for a meal	()	()	()	()
Eating while driving (eg. lollies, gum, fruit)	()	()	()	()
Having a drink containing caffeine (eg, coffee, tea, Coca-cola)	()	()	()	()
Having a non-caffeine drink	()	()	()	()
Smoking (even in breaks)	()	()	()	()
Taking stay-awake drugs	()	()	()	()
Exercise (in breaks)	()	()	()	()
Taking a shower	()	()	()	()
Talking to another person (eg. hostess, co-driver)	()	()	()	()
Listening to music/radio	()	()	()	()
Using the CB radio	()	()	()	()
Singing	()	()	()	()
Adjusting the ventilation (eg, windows, air conditioning, heater)	()	()	()	()
Other (please describe)				

All drivers complete this section

SECTION 8. BREAKING THE RULES**99. Do you know the work hour regulations that apply to your job ?**

Yes	()
No	()
Not sure	()

**100. How often do you work contrary to the work hour regulations?
(eg. working more hours than permitted, taking fewer rest breaks than permitted)**

On every trip	()
On most trips	()
On about half your trips	()
Occasionally	()
Very rarely	()
Never	()

If you do work contrary to the hours regulations, why do you?You may tick more
than one option

Because of a tight schedule/itinerary	()
Because of rewards or penalties associated with arriving early or late	()
To get in early for the next trip	()
In order to do enough trips to earn a living	()
In order to return home	()
In order to reach adequate rest facilities	()
Longer than expected spent at rest stops	()
Personal reasons and illness	()
Breakdowns	()
Late service connections	()
Passenger problems	()
Other (please describe) _____	

<i>All drivers complete this section</i>
--

101. How often do you drive contrary to the road rules?
 (eg. speeding, illegal overtaking, crossing unbroken lines,
 disobeying traffic signs)

- | | |
|--------------------------|--------|
| On every trip | () |
| On most trips | () |
| On about half your trips | () |
| Occasionally | () |
| Very rarely | () |
| Never | () |

If you drive contrary to the road rules, why do you?

You may tick more
 than one option

- | | |
|--|--------|
| Because of a tight
schedule/itinerary | () |
| Because of rewards or
penalties associated with
arriving early or late | () |
| To get in early for
the next trip | () |
| In order to do enough
trips to earn a living | () |
| In order to reach home | () |
| In order to reach adequate
rest facilities | () |
| Because you are fatigued | () |
| Because of the effects
of alcohol | () |
| Because of the after
effects of using
stay-awake drugs | () |
| Longer than expected spent at
rest stops | () |
| Personal reasons and illness | () |
| Breakdowns | () |
| Late service connections | () |
| Passenger problems | () |
| Other (please describe) _____ | |
| _____ | |

All drivers please feel free to comment

COMMENTS

We're interested in any other comments or suggestions you may have about bus and coach driver fatigue that haven't been covered by the questionnaire.

Please write any comments or suggestions below.

***THANK YOU VERY MUCH FOR YOUR
CO-OPERATION***

Bus and Coach Driver Survey

ORIGIN OF STUDY

Worksafe Australia was recently commissioned by the Federal Office of Road Safety to conduct a research study on driver fatigue in the long distance road transport industry in Australia. Long distance truck drivers were surveyed last year (1991). This year long distance bus and coach drivers will be surveyed.

AIM

The major aim of the study is to identify possible strategies for the management of driver fatigue in the Australian industry. In particular, the study will attempt to identify fatigue management strategies that can be applied within the realm of work practices.

SURVEY

The current survey of driver fatigue is being used to obtain the opinions of long distance bus and coach drivers Australia-wide on fatigue and its management. It follows the completion of a similar survey of long distance truck drivers last year.

The survey asks drivers' opinions on fatigue (eg. how big a problem is fatigue ?) and on potential countermeasures for fatigue (eg. how helpful are various strategies for dealing with fatigue ?). The survey also asks drivers about their current work practices in order to determine work factors that contribute to fatigue and to identify strategies that drivers currently use to combat fatigue. Questions about typical journeys, working weeks and conditions are also asked so that a full picture of the work of long distance bus and coach drivers can be obtained.

The information gathered from Australian bus and coach drivers and from other sources will be used to develop a list of strategies which are likely to be both effective in the management of driver fatigue and acceptable to drivers and other groups within the Australian road transport industry.

All information gained will be kept confidential and anonymous.

All enquiries or queries concerning this survey should be directed to:

Rebekah Jenkin (02) 565 9392



WORKSAFE AUSTRALIA
NATIONAL OCCUPATIONAL HEALTH & SAFETY COMMISSION

**NATIONAL INSTITUTE OF
OCCUPATIONAL HEALTH & SAFETY**

TO THE QUESTIONNAIRE DISTRIBUTOR

- * Please distribute the questionnaire (with envelope and leaflet attached) to ALL bus and coach drivers who complete long distance journeys (ie. journeys of at least 300 km) regardless of the type of trip

- * Please tell each driver to:

COMPLETE the questionnaire
SEAL it in the **ENVELOPE PROVIDED**
and to either **MAIL** it himself OR to
return it **TO YOU** for mailing

N.B. The envelopes do NOT require stamps

- * Surveys should be returned to you **ALREADY** sealed to ensure anonymity and confidentiality
- * Please **KEEP** all unused questionnaires. We will make arrangements for them to be returned to us.
- * If you have any queries concerning the questionnaire or its distribution, please contact either:

Rebekah Jenkin (02) 565 9392

THANK YOU FOR YOUR ASSISTANCE



WORKSAFE AUSTRALIA
NATIONAL OCCUPATIONAL
HEALTH & SAFETY
COMMISSION

ARE YOU A LONG DISTANCE BUS OR COACH DRIVER ?

THIS IS YOUR CHANCE TO CONTRIBUTE TO THE TRANSPORT INDUSTRY

**TELL US WHAT YOU THINK ABOUT DRIVER FATIGUE
BY COMPLETING THIS SURVEY**

Do you experience fatigue on the job ? If you do, we are interested in whether it affects how you do your work. In particular, we are interested in finding out more about the sorts of factors which make driving more difficult and about what drivers think could be done to improve the situation. We would like to know:-

- * is fatigue a problem for long distance bus and coach drivers ?
- * is driver fatigue a problem for you ?
- * what do you think can be done to deal with driver fatigue ?

WHY SHOULD YOU FILL OUT THIS SURVEY ?

- * We want the government to know what **DRIVERS LIKE YOURSELF** think about fatigue **BEFORE** it decides to act
- * **THIS IS YOUR CHANCE TO CONTRIBUTE TO IMPROVING CONDITIONS IN THE INDUSTRY**

We know that the survey looks long, but you don't have to answer all the questions, just those that relate to the type of driving you do. **It is important that you answer all the questions that apply to you**, and that you think carefully about your answers because it is only then that we will get useful and accurate information from the survey.

WE WANT YOU TO COMPLETE THIS SURVEY EVEN IF YOU ONLY DRIVE LONG-DISTANCES OCCASIONALLY.

Your answers to the survey **WILL** make a difference. This is the biggest survey on driver fatigue ever to be conducted in Australia.

Everything you tell us will be kept **CONFIDENTIAL**.
We do not ask for your name or the name of your employer.

92 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
GPO BOX 58, SYDNEY NSW 2001
TELEPHONE (02) 565 9555 FAX (02) 565 9202 TELEX 177243