

**Legislative Council Panel on Transport**  
**Progress on Measures to Enhance Safety of Franchised Bus Operation**

**PURPOSE**

This paper updates Members on the progress in the pursuit of measures to further enhance safety of franchised bus operation.

**BACKGROUND**

2. The Legislative Council Panel on Transport (“the Panel”) was briefed on 24 October 2006 (LC Paper No. CB(1)110/06-07(03)) and 2 March 2007 (LC Paper No. CB(1)783/06-07(01)) on measures to enhance the safety of franchised bus operation. The Administration was asked to update the Panel on the progress of the following actions –

- (a) review of installation of seat belts on buses and the design of buses;
- (b) review of the employment of bus captains under contract terms;
- (c) review of the working schedule of bus captains; and
- (d) investigation on three bus accidents.

**BUS SAFETY**

3. The Transport Department (“TD”) monitors the operation of franchised bus services and maintenance of the buses in accordance with the Public Bus Services Ordinance (“PBSO”), Cap. 230, the Road Traffic Ordinance, Cap. 374, and their Regulations. Safety is one of the major areas that TD has particular concern. TD’s analysis on the accidents involving franchised buses is set out in paragraphs 4 and 5 below.

4. The franchised bus accident rate per million vehicle-kilometre in 2006 was 3.23. This represents a drop of 21% as compared with the accident rate of 4.09 in 1997. Details of the franchised bus accident rate from 1997 to 2006 is shown at **Annex I**. The severity of the accidents involving franchised buses also reduced over the same period, with fatal accidents reduced by 39% and serious accidents reduced by 4%, though the number of slight accidents<sup>1</sup> increased by 25%. These records show that there has been marked

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<sup>1</sup> A slight accident is one in which one or more persons are injured but not to the extent that detention in hospital is required for more than 12 hours. A serious accident involves injury to any person who is hospitalised for more than 12 hours. A fatal accident is one which causes death to any person within 30 days.

improvement in the safety of franchised bus operation as reflected in the reduction in both the accident rate and the seriousness of the accidents.

5. In spite of the reduction in the accidents rate and the severity of bus accidents, TD noted the increase in slight accidents. About one-third of the slight accidents were cases in which passengers fell on buses. To promote passenger safety awareness, TD produced television and radio announcements in the public interest (“API”) and other publicity materials in 2001, 2004 and 2006. Another API is being produced for broadcasting shortly to remind passengers to travel safely on buses.

## **LATEST DEVELOPMENT**

### ***(a) Installation of seat belts on buses and review of the design of buses***

6. We have collected information from overseas countries on the requirements of fitting and wearing of seat belts on buses. As far as we know, so far no country has imposed legal requirements for fitting or wearing of seat belts on passenger seats of buses designed for urban use with standing passengers.

7. In the light of the public’s concern on the safety of passengers particularly those sitting in exposed seats, the bus companies have agreed to install seat belts at these seats on their new buses<sup>2</sup>.

8. For existing buses, the Kowloon Motor Bus Company (1933) Limited (“KMB”), Citybus Limited (“CTB”) and New World First Bus Services Limited (“NWFB”) have jointly appointed a major bus manufacturer which supply most of the franchised buses in Hong Kong to conduct a feasibility study on the installation/retrofitting of seat belts on existing buses. The study will examine the technical feasibility and financial implication of installation/retrofitting of seat belts at the exposed seats. The study is expected to complete in three months’ time.

9. In respect of compulsory wearing of seat belt, there are practical difficulties for imposing such requirement on buses which are deployed on urban bus routes or buses that allow standing passengers. The enforcement of such requirement by the Police on franchised buses is much more difficult than on public light buses since passengers can stand or move around in a bus even when the bus is in motion. As such, we consider it is more effective to remind the public to wear seat belt on buses through education and publicity rather than through legislation. We are producing publicity materials for release shortly to

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<sup>2</sup> As at December 2006, out of 5852 franchised buses, 2127 buses have seat belts at their exposed seats.

remind passengers to use bus services safely, including the wearing of seat belts where provided. We are also discussing with the bus companies on means to further enhance publicity in this respect. We will review the effectiveness of the publicity programme and consider further steps if necessary.

10. At present, nearly all buses of New Lantao Bus Company (1973) Limited, Long Win Bus Company Limited (“LW”) and CTB (Lantau and Airport network) which operate on expressways have seat belts. The fleet of the other bus companies, i.e., KMB, CTB (Hong Kong Island and cross-harbour network) and NWFB contains a mixture of buses of different ages and about half of their buses which operate on expressways have seat belts in exposed seats.

11. The majority of buses with seat belts are relatively newer buses which are more environmentally friendly and accessible to wheel chairs. The current deployment of different types of buses, including buses with seat belts, on the various bus routes has taken account of a number of factors. These include passenger demand, the objective of deploying more environmentally friendly buses on busy corridors to reduce roadside emission and the need to cater for the wheel-chair bound passengers<sup>3</sup>, etc. The percentage of buses with seat belt operating via expressway will gradually increase as older buses are phased out and more new buses with seat belts are put into service.

12. All buses registered for use in Hong Kong must comply with the requirements set out in the Road Traffic (Construction and Maintenance of Vehicles) Regulations, Cap. 374A, in respect of body strength, safety and stability requirements including passing the stringent 28-degree tilt test. All double deck buses currently operating in Hong Kong were imported from Europe and comply with the European requirements. The major bus manufacturers have confirmed that the body structure of franchised buses in Hong Kong is the same as those supplied to other countries such as the United Kingdom, the USA and Singapore. The major double deck bus body supplier also confirmed that the use of aluminum alloy on bus body has been an international trend in recent years. The supplier explains that the use of material stronger than aluminum may not be good during accidents as it may cause other types of casualties. In fact, the rigidity of the structure relies mainly on the design. The body strength has been designed based on safety, reliability and stability considerations for a life span of 20 years in arduous operating conditions. Optimum design using computerised analysis can achieve strength, reliability and stability. TD and the bus companies will discuss with the major bus body suppliers to further improve the body design to enhance safety.

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<sup>3</sup> To better serve the wheel-chair bound passengers, the current deployment of wheel-chair accessible buses is determined through regular discussions among TD, representatives of people with disabilities and the bus companies.

***(b) Review of the employment of bus captains under contract terms***

13. KMB/LW and CTB/NWFB started to employ new bus captains on contract terms since 2000 and 2003 respectively. The Information Paper LC Paper No. CB(1)783/06-07(01)), which Members considered at the meeting on 2 March 2007, presented the findings of a previous analysis on the accident rates of bus captains employed under non-contract and contract terms. The previous analysis concluded that there was no evidence to show that bus captains employed under contract terms had a higher accident rate than those under non-contract terms.

14. In view of Members' concern, another analysis using KMB's latest accident data in 2005 and 2006 was carried out. The analysis compared accident data of KMB bus captains with more than 24 months bus driving experience in 2005 and 2006. The comparison found that the accident rates of the two groups of bus captains were similar. It reaffirms the previous conclusion that there is no evidence to show that bus captains employed under contract terms have a higher accident rate than those employed under non-contract terms. The findings of the latest analysis are summarised as follows -

<b>KMB</b>	<b>Bus captains employed under non-contract terms</b>		<b>Bus captains employed under contract terms</b>	
	<b>2005</b>	<b>2006</b>	<b>2005</b>	<b>2006</b>
<b>Year</b>				
(a) No. of accidents involving bus captains with experience more than 24 months	809	795	168	171
(b) Average no. of bus captains with experience more than 24 months	6,575	6,182	1,176	1,351
(c) Accident rate per bus captain with experience more than 24 months (a/b)	0.12	0.13	0.14	0.13

***(c) Review of working schedule of bus captains***

15. The franchised bus companies fully comply with the "Guidelines on Working Schedule for Franchised Bus Drivers" ("the Guidelines") issued by TD to schedule the working and rest time of bus captains. The scheduling arrangement has evolved through continuous adjustments and improvements, balancing the operational requirements for meeting passenger demand as well as the bus captains' need for rest between trips and between working days. The bus companies also consult the bus captain unions and review the schedule arrangements from time to time. Members would note from Information Paper

No. CB(1)783/06-07(01)) considered at the meeting on 2 March 2007 that -

- (a) the bus companies normally provide longer rest-breaks between trips for routes with longer journey time, and will spread out the rest-breaks throughout the day as evenly as practicable;
- (b) in practice, the length of rest-break is set at around 10% of the scheduled journey time of a bus route;
- (c) the companies would deploy extra buses to cater for serious traffic congestions, special traffic incidents and ad hoc break-down of buses so as to maintain the scheduled service timetable and allow the bus captains to have reasonable rest time between trips; and
- (d) the three major bus companies, i.e. KMB, CTB and NWFB, operate about 64,000 bus trips daily. Recent surveys conducted by the three companies found that -
  - (i) rest time between trips for 72% of the trips (i.e. 46,000 trips) are five minutes or more;
  - (ii) rest time between trips for 18% of the trips (i.e. 11,800 trips) are two to less than five minutes; and
  - (iii) rest time between trips for 10% of the trips (i.e. 6,400 trips) are less than two minutes.

16. Further analysis of the survey findings found that most of the trips with short rest-break are short-distance routes with relatively short journey time. Usually, the bus companies would make up for the lost, if any, as soon as practicable, mostly at the end of the round trip. Often, the total actual rest-break time of a bus captain in a working shift is greater than the total scheduled rest-break time. For instance, an analysis of KMB's data found that on the survey day, the actual total rest times were 13% and 25% above the scheduled rest times for the peak and off peak periods respectively.

17. The actual journey times of bus trips vary with traffic condition and are outside the control of the bus captains or the bus companies. The bus companies would review and adjust the scheduled journey time of a bus route if its actual journey time frequently exceeds the scheduled journey time under the actual operating environment. For instance, in 2006, KMB obtained approval from TD to increase the scheduled journey time of 32 bus routes on 33 occasions (one of the bus routes increased the scheduled journey time twice). Such adjustment allows bus captains of the concerned routes to complete the journey in line with a more practical schedule and to enjoy between-trip rest according to the schedule.

18. We are currently reviewing the Guidelines with the bus companies

to see what practical improvements could be arranged in scheduling the rest-time of bus captains. The bus companies would also consult the bus captain unions and take into account their views before making any change which might affect the working patterns of the bus captains.

***(d) Investigation on three bus accidents***

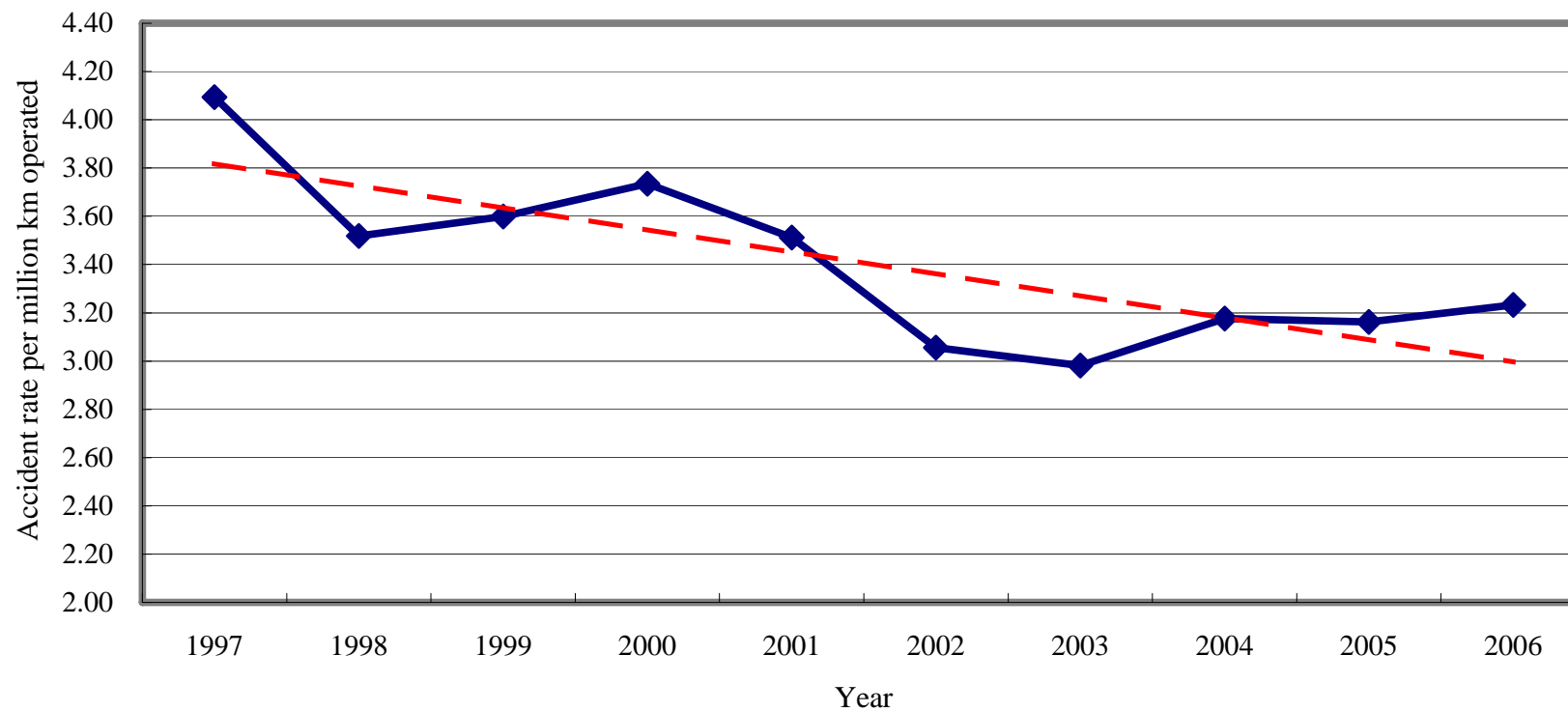
19. Members were concerned about the causes of three accidents which involved franchised buses at Kwai Chung Road on 17 July 2006, at Waterloo Road on 17 October 2006 and at Tsing Long Highway on 17 February 2007. As all these cases are either under legal process or investigation, it is not appropriate to discuss the causes of these accidents at this stage. With regard to remedial and preventive actions, both the TD and the bus operators have continued to introduce measures to further enhance the safety of franchised bus operation.

**ADVICE SOUGHT**

20. Members are invited to note this paper.

Environment, Transport and Works Bureau  
Transport Department  
March 2007

**Accident Rate Per Million KM Operated on Franchised Bus**  
**(1997 - 2006)**



—◆— Accident rate per million km operated  
- - - Trend (accident rate per million km operated)