

## **Legislative Council Panel on Transport Safety of Franchised Bus Operations**

### **Purpose**

This paper briefs Members on the measures to enhance safety of franchised bus operations.

### **Bus Safety**

2. The total number of accidents which involved franchised buses slightly decreased from 1,772 in 2004 to 1,735 in 2005. This implies a decrease in the number of fatal and serious accidents from 311 to 264 and an increase of slight accidents<sup>1</sup> from 1,461 to 1,471. Whilst franchised buses run high mileage daily, the accident rate per million vehicle-kilometre decreased slightly from 3.162 in 2004 to 3.158 in 2005.

3. There were recent incidents such as broken window glasses and traffic accidents involving franchised buses which arouse public concerns on bus safety and bus maintenance requirement. Concerns such as better protection for passengers from broken window glasses and installation of seat belts have been raised.

### **Measures to Enhance Bus Safety**

4. 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, and the Road Traffic Ordinance, Cap.374, and their Regulations. Safety is one of the major areas that TD would have particular concern.

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<sup>1</sup> A slight accident is one in which one or more persons is injured but not to the extent that detention in hospital is required for more than 12 hours. Serious accident involves injury to any person who is hospitalized for more than 12 hours. Fatal accidents refer to an accident causing death to any person within 30 days.

5. Measures to ensure the safety of franchised bus operation have been developed over the years and proved to be effective in ensuring bus safety. These measures are outlined from paragraphs 6 to 14 below.

A. Vehicle inspection and examination

6. The Road Traffic (Construction and Maintenance of Vehicles) Regulations, Cap. 374A, stipulates the requirement of design and construction of franchised bus. Every new model of franchised bus has to undergo a type approval process by TD to ensure that its design and construction comply with the requirements before the buses can be registered and licensed for use on the road. The type approval includes a tilt test to ensure stability of the bus.

7. Under PBSO, Cap. 230, the franchised bus operators are required to carry out maintenance and repair as the Commissioner for Transport may specify. Every franchised bus has to undergo annual examination to ensure its safety and roadworthiness. TD also conducts random spot checks on franchised buses to monitor the proper maintenance of the buses. TD closely monitors the franchised bus operators' maintenance programmes and hold regular meetings with them to discuss bus examination results and, where appropriate, to formulate actions to enhance bus safety.

B. Safety equipment and facilities

8. The franchised bus operators are encouraged to introduce new safety technology on their buses including speed limiter and blackbox<sup>2</sup>. About 3,000 franchised buses (or 51% of the total number of franchised buses) are equipped with blackboxes and the bus operators have agreed to retrofit the equipment to the existing and new buses. About 5,800 franchised buses (or 99% of the total number of franchised buses) are equipped with speed limiting devices and all bus companies have agreed to

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<sup>2</sup> Electronic tachograph installed on vehicles is commonly known as "black box". It records the operation data of the vehicle, such as journey speed, journey time, distance travelled, bus tilting angle, acceleration and deceleration, door opening, etc. It can be used for monitoring the drivers' performance and accident investigation.

include the device as standard equipment for buses to be purchased.

9. All the 5,883 franchised buses are equipped with handholds for seated and standing passengers. Majority of the fleet is also equipped with other facilities and equipment to enhance passenger safety such as high back seat and non-slippery floor. About 2,000 franchised buses (or 34% of the total number of franchised buses) are equipped with seatbelt at the exposed seats<sup>3</sup>.

### C. Bus driver training and safety education

10. Franchised bus operators provide various trainings to their drivers, including basic training for new drivers and annual refresher and enhancement courses to serving drivers to enhance their safety awareness:

- (a) Basic trainings for new drivers range from a few days to a few weeks – the programmes cover classroom and on-the-road training which include company rules and code of practice, bus and facilities operation, bus driving techniques such as maneuvering and driving responses and manner on road, and route training and driving practices.
- (b) Refresher and enhancement courses for serving drivers are provided to -
  - (i) strengthen their driving skills and manners (including defensive driving);
  - (ii) help them to understand the potential risks of the routes they serve, e.g. the location of accident black spots and the appropriate reaction including emergency situation handling; and
  - (iii) introduce safety tips.

(c) Franchised bus companies also remind their drivers on safe

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<sup>3</sup> Exposed seats are forward facing seats in a franchised bus which are not immediately behind another forward-facing seat or an internal partition/panel. There are usually 14 exposed seats in a double deck bus: 5 seats at last row on lower deck, 4 seats at third row facing backward-facing seats on lower deck, 4 seats at first row on upper deck and the middle seat at last row on upper deck

driving through regular issue of circulars, notices and in-house magazines.

11. Since 2002, TD has conducted at least four “Road Safety Seminars” for franchised bus drivers per year since 2002 in collaboration with the Police. Road safety experts are invited to highlight tips on safe driving, analyze major accident spots and common contributory factors of bus accidents to share with the bus drivers so as to promote their road safety awareness and proper driving behavior.

12. TD also organizes “Road Safety Forum for Franchised Bus” regularly with all franchised bus operators and the Police to examine the trend of bus accidents, identify major problem areas and formulate improvement measures.

13. To ensure that bus drivers have sufficient rest time, TD reviewed with the franchised bus companies the working schedule of their drivers and issued a set of guidelines on working schedule for bus drivers to franchised bus operators. The guidelines specify the maximum duty length, the maximum driving duty duration as well as the breaks to be provided to drivers during their duty shift and between working days. The franchised bus operators fully comply with the Guidelines according to their quarterly reports to TD.

#### D. Publicity on passenger safety

14. More than 50% of franchised bus accidents involved passengers being injured even the buses had not collided with any other vehicles, objects or pedestrians. Many of these accidents could have been avoided if passengers held tight the handrail while standing or sat properly. To remind passengers to be careful when using bus services, franchised bus operators have put in place publicity programmes through bus body advertisements and on-bus televisions. TD also produces television and radio announcements in the public interest (“APIs”) to promote passenger safety awareness with a view to helping reduce bus accidents. For instance, API was produced in 2001 and 2004 to remind passenger safety

precautions inside a franchised bus. A publicity programme was launched in June 2006. This includes broadcasting of APIs on television, radio and on-bus television, and display of notices and stickers at bus passenger shelters, bus customer service centres and inside bus compartments to remind passengers to hold handrail tightly inside moving buses.

## **Bus Windows**

15. Reg. 28 of the Road Traffic (Construction and Maintenance of Vehicles) Regulations, Cap. 374A, stipulates that glass or transparent material used in all windscreens, windows and partitions of a motor vehicle shall be safety glass or safety glazing and of a type approved by the Commissioner for Transport. The standards of windscreens and windows, are specified in the Specification of Safety Glass Notice, Cap. 374H. The two basic types of automotive glass commonly used on franchised buses are laminated safety glass<sup>4</sup> and toughened (tempered) safety glass<sup>5</sup>, both of which can reduce injury when being broken.

16. The driver's windscreens on franchised buses in Hong Kong are laminated glass to prevent the driver's vision from being seriously affected when the glass is broken. Side windows are usually constructed with toughened glass which can be broken to allow passengers to escape in case of accident or emergence.

17. In view of the recent incidents involving broken window glasses on franchised buses, TD in conjunction with bus operators are conducting feasibility study of adhering an anti-shatter protective film on the upper deck windscreen made of toughened glass to give better protection to passengers in case the glasses are broken.

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<sup>4</sup> Laminated glass has a plastic interlayer in between 2 glass layers, and is designed to retain the fragments when the glass is shattered.

<sup>5</sup> Toughened glass is glass that has been heat-treated to increase its strength, and to allow it to fracture into small pieces when broken

## **Seatbelt on Franchised Bus**

18. Under Road Traffic (Safety Equipment) Regulations , Cap.374 F, it is a mandatory requirement to provide seat belt for the driver of a franchised bus. As regards the passenger seats, about 34% of franchised buses have been equipped with seatbelt at exposed seats. These seatbelts had been installed by the bus manufacturers as standard equipment when the buses were purchased. All franchised bus operators have committed that new buses to be purchased by them will have seatbelts installed at the exposed seats. In the light of recent traffic accidents, TD has been reviewing with the franchised bus operators on retrofitting of seat belts on the existing buses, taking into account of the technical difficulties such as the structural strength of the seats, adequate anchorage points and design of the bus, etc.

19. We have conducted a research on overseas practices regarding the fitting and wearing of seat belts in buses. A summary of the corresponding seat belt requirements is at Annex. It can be seen that no overseas country requires fitting of seat belts in passenger seats of buses designed for urban use or for carrying standing passengers. Studies conducted in Australia and Canada indicated that the additional safety benefit of installing seat belt on all seats in a bus might not be as great as envisaged and that it is very difficult to ensure that all passengers will use seatbelts.

20. In view of the above, we consider that it is not appropriate to introduce mandatory requirements for installation and wearing of passenger seat belts for franchised buses. However, we will continue to work with the franchised bus operators to identify measures for better protection of passenger safety.

21. TD will, together with the franchised bus operators, continue to closely monitor the accident statistics, analyse causes and trends of bus accidents, and explore improvement measures to enhance bus safety.

**Advice Sought**

22. Members are invited to note and give comments on the paper.

Environment, Transport and Works Bureau  
Transport Department  
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**Summary of Seat Belt Requirements for Buses in Overseas Countries**

<b>Countries</b>	<b>Fitting of Seat Belts in Passenger Seats</b>	<b>Wearing of Seat Belts by Passengers</b>	<b>Remarks</b>
USA	No	N/A	
Canada	No	N/A	
United Kingdom	3-point/ lap-belt <sup>(1)</sup>	Mandatory	Fitting requirements are not applicable to buses first used before 1.10.2001 or buses designed for urban use with standing passengers.
Australia (Victoria)	Lap-belt <sup>(2)(3)</sup>	Mandatory	Fitting requirements not applicable to buses specially designed with spaces for standing passengers.
New Zealand	No	N/A	
Netherlands	Lap-belt <sup>(3)</sup>	Mandatory	Fitting requirements not applicable to public transport buses.
Singapore	No	N/A	

**Notes :** (1) Lap belts may only be fitted in forward facing non-exposed seats where an appropriate energy absorbing seat or surface is present in front.

(2) Seat belts are to be provided for exposed seats.

(3) Lap-belt is the minimum requirement.