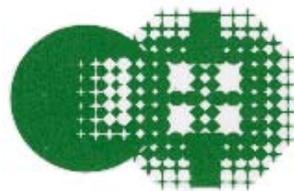


**DIRECT INVESTIGATION REPORT**

**TRANSPORT DEPARTMENT ACTIONS  
FOR SAFE OPERATION  
OF PUBLIC LIGHT BUSES**

December 2010



**Office of The Ombudsman  
Hong Kong**

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# **EXECUTIVE SUMMARY**

## **Direct Investigation Transport Department Actions for Safe Operation of Public Light Buses**

### **Background**

Road safety is paramount. The Transport Department (“TD”) has the undeniable responsibility for proactively enhancing the safety standard of our public transport services.

2. Public Light Buses (“PLBs”) are one of the most popular modes of public transport in Hong Kong. The number of PLBs has been frozen at 4,350 since 1976. Statistics show that the incidence of accidents involving PLBs is significantly higher than that of other classes of motor vehicles (**Annexes I and II** of the report).

3. In 2000, after several fatal accidents involving PLBs, TD undertook to examine and develop safety enhancement measures for PLBs. However, little progress was made in the following nine years, reflecting neither due diligence nor sense of urgency on the part on TD. Study and implementation of the installation of speed limiter and vehicle monitoring system (commonly know as “blackbox”) on PLBs were only accelerated after two major fatal accidents involving PLBs in June and July 2009. The Ombudsman, therefore, initiated this direct investigation in January 2010.

### **Enhanced Safety Measures Already Introduced**

4. Major safety enhancement measures for PLBs introduced by TD before January 2010 include:

- enhanced monitoring and training of PLB drivers;
- mandatory installation of Speed Display Device on all PLBs; and
- mandatory installation of passenger seat belts and high back seats on all PLBs registered on or after 1 August 2004.

## Passenger Seat Belts and High Back Seats

5. As at 30 September 2010, 2,415 out of 4,350 PLBs (i.e. 55.5%) are equipped with passenger seat belts and high back seats, in contrast to TD's prediction in mid-2006 that over 60% of all PLBs would be equipped with such equipment by mid-2008. Responding to this investigation, TD states that it is now unable to give an estimate on when all PLBs will be fitted with the equipment. Details of the PLBs with such retro-fitment are indicated below.

<i>Registration Year</i>	<i>Number of PLBs</i>	<i>PLBs with Passenger Seat Belts and High Back Seats</i>
On or after 1 August 2004	2,074	2,074 (100%)
Before 1 August 2004	2,276	341 (15%)
<b>Total</b>	<b>4,350</b>	<b>2,415 (55.5%)</b>

Age distribution of the 2,276 PLBs registered before 1 August 2004 and still running on road as at 30 September 2010 is shown in **Table 3** of the report.

6. As at 30 September 2010, 50% of the 2,093 PLBs having been scrapped by owners since August 2004 were aged from 11 to 14 years, and 86% of all the PLBs replaced were aged below 15 years. Yet, the oldest one replaced was aged 20. **Table 4** of the report indicates the age distribution of these 2,093 PLBs.

## Speed Limiter

7. TD intends to submit legislative amendments in 2010/11 to make it a statutory requirement to install speed limiter on all PLBs. The related events are summarised below.

<i>Date</i>	<i>Event</i>
October 2003	TD enquired of the major Japanese manufacturers of PLBs operating in Hong Kong about the application of speed limiter regulations in Japan.
17 November 2005*	TD asked the two major manufacturers specifically about: (a) the lead time required for provision of speed limiter on their PLBs; and (b) the possibility of retrofitting a speed limiter on current models.  On (a), one manufacturer indicated that a lead time of two to five years would be required for different types of PLBs. On (b), both manufacturers claimed that it was not possible.
19 December 2005 & 23 June 2006	Based on the above responses, TD explained to the Legislative Council Panel on Transport ("LegCo Panel") the difficulties of stipulating the installation of speed limiters on PLBs.

November 2006 & May 2008	TD enquired of the PLB manufacturers on the latest development of the issue. The manufacturers gave similar responses as above in January 2007 and June 2008 respectively.
17 June 2009 <sup>#</sup>	TD communicated with the two major manufacturers on the issue again. While pointing out, for the first time, on 18 and 23 June 2009 the availability of certain standalone speed limiters in local market, the manufacturers maintained that it would need a few years to provide built-in speed limiter.
26 June 2009	At the LegCo Panel meeting, the Administration maintained that there were difficulties to stipulate the installation of such device on PLBs.
27 July 2009 <sup>@</sup>	TD announced its intention of introducing compulsory installation of speed limiter on PLBs.
30 July 2009	The two major manufacturers confirmed with TD that they had no objection to fit external devices on their PLBs.
24 August 2009	TD released the specification of speed limiter for reference by all potential device suppliers.
By November 2009	TD approved 6 models from 3 local suppliers.
5 March 2010	TD notified all PLB owners and licence holders of addition of a new licence condition that, with effect from 7 June 2010, a PLB would be required to be installed, within three months from the date of issue or renewal of licence, with a speed limiter.  Given that the validity of a vehicle licence is one year, all PLBs are expected to be installed with speed limiters by September 2011.

\* 4 days after an accident in Sheung Shui involving a PLB, resulted in 2 deaths and 5 injuries

# 5 days after an accident in Mongkok involving a PLB, resulted in 2 deaths and 8 injuries

@ 2 days after an accident in Yuen Long involving a PLB, resulted in 4 deaths and 17 injuries

8. Prior to July 2009, TD had not commissioned, or been involved in, any trial on speed limiters. Some device suppliers revealed to this Office that various models of speed limiter and blackbox had been introduced to Hong Kong for at least five years. Over the years, at least one supplier and one PLB operator had tried out a speed limiter in 2006 and 2007, and had verbally informed TD frontline staff of such trials. However, TD indicated to us that it only knew of such trial through media reports in early August 2009.

## **Blackbox**

9. TD informed the LegCo Panel as early as December 2003 that it would conduct trials on the use of blackboxes on PLBs. However, instead of commissioning trials by itself, TD facilitated blackbox suppliers to run three trials from 2004 to mid-2009. All were found unsuccessful. In February 2007, in response to TD's enquiry, the Hong Kong Productivity Council ("HKPC") made

a face-to-face presentation to TD on HKPC's proposed in-vehicle monitoring system tailor-made for PLBs. HKPC informed TD in writing in March 2007 that system development and trial on road, each needed about six months, would cost around \$2 million. TD did not follow up the matter. It explained that it had received no formal proposal from HKPC since then.

10. In August 2009, having regard to technological maturity in blackbox design and manufacturing and experiences in Europe and Mainland China, TD proposed to mandate the installation of blackbox on new PLBs. It intends to submit the necessary legislative amendments in 2010/11.

### **Mandatory Pre-Service Training for PLB Drivers**

11. TD first informed the LegCo Panel in June 2006 that the PLB trade was generally supportive of the proposal of requiring applicants for a PLB driving licence to attend pre-service training courses that focus on driving behaviour and attitude. Having discussed with the Police and the Department of Justice since July 2008, TD now plans to introduce the necessary legislative amendments in 2010/11.

12. As regards the reasons for taking over four years for the preparatory work, TD explains that it needs to develop a detailed legislative proposal, to formulate content and assessment criteria for the training programme, to stipulate qualifications for course providers and trainers, to put in place arrangements for ensuring authenticity of attendance records and certificates issued, and to enhance the related computer system.

### **Observations and Opinions**

#### ***Lacking Due Diligence and Sense of Urgency***

13. Evidence indicates that at least for the measures listed below, there had been a lack of due diligence and sense of urgency in TD to explore their feasibility until mid-2009, when two fatal accidents involving PLBs happened on 12 June and 25 July 2009.

14. **Speed Limiter.** TD's enquiries with the major Japanese manufacturers of PLBs regarding the installation of speed limiters only started in November 2005, four days after a fatal PLB-related accident had happened. Thereafter, TD's follow-up enquiries with the manufacturers in November 2006 and May 2008 were no more than routine requests for update. Again, it was not until another fatal PLB-related accident had happened did TD follow up the issue with the

manufacturers again in June 2009. TD has been taking prompt follow-up actions since then. Nevertheless, the issue had been put on the back burner for some four years.

15. **Blackbox.** TD did not directly commission trial on the use of blackbox on PLBs, but only facilitated three trials volunteered by suppliers. Owing to its passive role, TD had no control over the timing and direction of the trials.

16. TD did ask HKPC for advice in early 2007. However, subsequent to HKPC's elaboration on its proposed trial, TD did not pursue the matter further, leaving the task simply untouched. TD's explanation for not following up the matter (**para. 9**) is hardly convincing.

17. **Training of PLB Drivers.** The government-subsidised PLB driver training courses have been introduced for more than six years. However, up to end of 2009, only 1,138 drivers had attended such courses, representing only about 10% of the 11,000 to 12,000 active PLB drivers. The promotion efforts of TD, particularly those targeting PLB drivers directly, have been minimal.

18. TD's explanation for taking more than four years to prepare the mandatory pre-service training for PLB drivers (**para. 12**) is again unacceptable. Most of the details of the scheme have been readily available, given that the training content, assessment criteria, trainer qualifications and other administrative arrangements are to be modeled on existing similar programmes mentioned above.

### ***Want of Timely Review***

19. As at 30 September 2010, there were still 1,935 PLBs registered before 1 August 2004 running on the road without passenger seat belts. If we rely solely on attrition of the "pre-August 2004" PLBs to be replaced, it may well take at least eight years for all PLBs to be equipped with such equipment. By any estimation, five years later, by the end of 2015, it is very likely that there will still be about 1,000 PLBs running on the road without such safety equipment. This is only a rough estimation based on the statistics of PLBs replaced in the past six years (**Table 4** of the report) versus the age distribution of the existing PLBs (**Table 3** in report). Thus, passengers will continue to face a higher risk posed by these PLBs for at least another eight years. This is unacceptable. With the mandatory scheme introduced for six years now, we consider it important for TD to review the issue and resolve the problem without delay. The feasibility of setting a time table or cut-off date for mandatory installation of the equipment on all "pre-August 2004" PLBs should be considered.

20. There are concerns over the technical feasibility and the cost burden borne by the trade if mandatory installation is to be extended. However, only about 20 existing PLBs aged over 15 years cannot be retrofitted with such equipment, and they are all approaching the end of their service life. While the cost of retro-fitment must be considered, the Administration should also give public safety due consideration in the overall assessment.

### ***Consultation Spectrum Too Narrow***

21. Prior to June 2009, TD relied mainly on its consultation with the major PLB suppliers and manufacturers to determine the technical feasibility of installation of speed limiter. On the technical aspect of installing blackboxes on PLBs, throughout all these years, TD had only consulted HKPC but had taken no follow-up action on HKPC's proposal. On the apparent sluggishness, TD repeatedly cited the need for suppliers and manufacturers to confirm that retrofitment of such equipment would not affect the product guarantee and technical support they offered.

22. TD should have adopted a broader approach by contacting other resourceful players in the field, such as academic and professional bodies, and acquiring more independent opinions. Such opinions are essential in making a thorough and balanced assessment on whether, when and how to proceed with the introduction of safety enhancement measures. While product guarantee is a valid concern, over emphasising its importance may impose unnecessary constraints in exploring alternative solutions or even become an excuse for inactivity.

### ***Inertness towards Market Information and Overseas Experiences***

23. TD was apparently inert to the availability of various models of speed limiter and blackbox in the local market. Neither was it sensitive enough to pick up relevant intelligence, such as trials on speed limiters voluntarily conducted by members in the trade (**para. 8**).

24. Shortly after TD had published its tailor-made specifications for speed limiters in August 2009, at least three local suppliers had submitted applications – with six of their product models approved quickly afterwards. Such prompt response clearly showed the maturity of the technologies and immediate availability of such products in the local market.

25. Moreover, under the regulations of the European Community and the United Kingdom on installation of speed limiter, vehicles similar to PLBs in Hong Kong were required to retrofit speed limiter in phases between January 2005 and January 2008. This shows that retrofitment of external device is technically feasible, at least for certain types of passenger vehicles. Hong Kong has undeniably lagged behind other advanced countries in introducing this safety enhancement measure.

### ***Tampering of Device***

26. TD has the responsibility to ensure compliance with the regulation on installation of speed limiter and blackbox and to deter mis-use or tampering of the devices. Besides relying on the annual examination of the vehicles at TD's centres, we consider that TD should take more monitoring measures such as conducting surprise and random checks.

### ***Blackbox Data Use***

27. Installation of blackbox can help deterring the driver from improper driving. However, other than for accident investigation, the Administration should consider enabling relevant Government experts to access, use and analyse such data under justifiable circumstances or conditions. The data collected from individual vehicles can be used in the monitoring of its operation. Statistics generated from the data of different vehicles may also be useful for reviewing the effectiveness of various safety measures, and for forward planning.

### **Recommendations**

28. Road safety is about human lives. However, prior to June 2009, there had been a lack of due diligence in TD in fulfilling its responsibility to enhance safety of PLB operation proactively. From our findings, The Ombudsman makes the following recommendations to the Commissioner for Transport:

#### ***For Safe Operation of PLBs***

- (1) to review and consider whether the requirement for installation of passenger seat belts and high back seats should be extended to PLBs registered before 1 August 2004, so as to reduce significantly the number of PLBs not retrofitted with such equipment within a reasonable timeframe;
- (2) to work out specific measures against tampering of speed limiter and blackbox installed, including surprise check or random check of vehicles;
- (3) to consider the use of data stored in blackboxes for the purposes of monitoring driving behaviour, as well as for reviewing and planning of various safety enhancement measures;

### *For Road Safety Initiatives in General*

- (4) to set out work plans, with time schedule, for monitoring progress of each and every safety measure under study, instead of merely reacting to outburst of public pressure following each tragic traffic accident;
- (5) to consider seeking assistance from academic or professional institutions/bodies, where necessary, in assessing the feasibility of safety enhancement measures to be introduced, and in regularly reviewing the effectiveness of the measures after their implementation; and
- (6) to set up and maintain an intelligence network with relevant trades and sectors, so as to keep abreast of the latest developments of technology, regulatory mechanism and market information in and outside Hong Kong.

29. TD has accepted recommendations (2) to (6). As to recommendation (1), TD's response is not forthcoming. TD agrees only to discuss with the PLB trade and PLB suppliers on possible and viable ways to speed up the replacement progress as far as practicable.

30. We maintain the view that the slow progress over the past six years on retrofitting PLBs with passenger seat belts and high back seats has shown that TD's prediction in mid-2006 that over 60% of PLBs would be equipped with such safety equipment by mid-2008 is over-optimistic and the voluntary retrofitment scheme has been less than effective. Without more vigorous measures, it would take at least eight years for all PLBs to be equipped with passenger seat belts; and there would still be about 1,000 PLBs running on the road without such equipment by the end of 2015. We should not put more lives of PLB passengers at risk. We strongly urge the Administration to reconsider our recommendation.

**Office of The Ombudsman**  
**December 2010**

# *1*

## *INTRODUCTION*

### **BACKGROUND**

**1.1** Road safety is paramount. The Transport Department (“TD”) has the undeniable responsibility for proactively enhancing the safety standard of our public transport services.

**1.2** Over the years, the incidence of accidents involving Public Light Buses (“PLBs”) is significantly higher than that of other classes of motor vehicle. Serious traffic accidents involving PLBs in recent times have heightened public concern over the safe operation of PLBs.

**1.3** In 2000, PLBs were involved in several fatal accidents. TD then undertook to examine and develop safety enhancement measures for PLBs. However, the progress since reflected neither due diligence nor sense of urgency on the part of TD. For instance, TD’s decision on mandatory installation of speed limiter and vehicle monitoring system (commonly known as “blackbox”) was only made in July 2009, after two major fatal accidents involving PLBs in June and July in the year.

**1.4** The Ombudsman, therefore, decided to initiate a direct investigation into TD actions to enhance the safety of PLB operations pursuant to section 7(1)(a)(ii) of The Ombudsman Ordinance, Cap. 397. He made a public announcement of this direct investigation on 21 January 2010.

## **PURPOSE AND AMBIT**

**1.5** This direct investigation examines:

- (a) the factors taken into account by TD in deciding on what safety enhancement measures are to be taken, how and when to implement them;
- (b) the mechanisms for monitoring the effectiveness of the safety enhancement measures to be introduced; and
- (c) any areas for improvement.

**1.6** Our investigation examines the administrative aspects of TD's endeavours in considering and implementing measures for enhancing safe operation of PLBs. Enforcement actions against traffic offences taken by the Police and technical issues such as standards of devices, technologies used in the installation and maintenance of devices and qualifications for the personnel responsible for the tasks are outside the ambit of our investigation.

## **METHODOLOGY**

**1.7** We have studied records, statistics and correspondence provided by TD, as well as media reports, relating to the issue. We have also obtained information and views from the insurance trade, PLB operators and vehicle device suppliers. Members of the public were invited to give comments and suggestions between 21 January and 22 February 2010. We received no submission.

## **INVESTIGATION REPORT**

**1.8** We sent a draft investigation report to the Commissioner for Transport for comments on 9 August 2010. This final report, incorporating TD's comments as appropriate, was issued on 17 December 2010.

# 2

## ***BACKGROUND***

### **GOVERNMENT POLICY ON PUBLIC LIGHT BUSES**

**2.1** PLBs were introduced in 1969 to regulate the minibus operation existing illegally at that time. Under the current system, minibuses providing public transport services are classified as PLBs and must operate under a passenger service licence (“PSL”) issued by TD in accordance with the Road Traffic Ordinance, Cap. 374. While PSLs issued by TD authorise the licensees to operate PLB service, each vehicle requires a PSL certificate to run on the roads, subject to the annual roadworthiness examination.

**2.2** It is Government transport policy to encourage the provision of public transport services by mass carriers comprising railways and franchised buses, while PLBs perform a supplementary role. The PLB fleet has, therefore, been frozen at 4,350 since 1976, by an order of the Executive Council. The effective period of the order has since been extended repeatedly through resolutions passed by the Legislative Council (“LegCo”). The prevailing extension, for a period of five years, is up to 20 June 2011.

**2.3** There are two types of PLBs – Red Minibuses (“RMBs”) and Green Minibuses (“GMBs”). RMBs operate on non-scheduled routes and their frequency and fare levels are not subject to TD regulation. GMBs were introduced in 1972 through the conversion of RMBs. They operate scheduled services on fixed routes, with routings, frequency and fares approved and monitored by TD. As at 30 September 2010, there were 3,003 GMBs operating a total of 353 routes.

**2.4** To enhance the regulation of PLBs, Government has taken measures to encourage the conversion of RMBs to GMBs. TD continually identifies new GMB

routes and groups them into packages based on geography and viability for application by PLB operators. At the same time, RMBs are restricted to operate within certain service areas, but not in new towns or new housing developments.

## **POPULARITY OF PLBS**

**2.5** PLBs are one of the most popular modes of public transport in Hong Kong, following railways and franchised buses. In 2009, PLBs carried 1,853,100 passenger-journeys daily on average, over 676 million for the whole year, representing 16.3% of passenger-journeys carried by all kinds of public transport.

**2.6** Although the number of PLBs has been frozen at 4,350, with the continuous growth in usage of public transport, the overall volume of PLB passengers has also been growing over the years. The 2009 figure represented an increase of some 5.3% compared to that of 2005.

## **TRAFFIC ACCIDENT INVOLVING PLBS**

**2.7** The incidence of traffic accidents involving PLBs is significantly higher than that of other classes of motor vehicle. In 2009, as shown in **Annex I**, 1,110 PLBs were involved in accidents, leading to 1,669 casualties including 21 dead and 187 seriously injured. These represented over 5% of all motor vehicles involved in traffic accidents and over 9% of the total number of casualties for that year, whereas the number of PLBs accounted for only 0.76% of all classes of motor vehicle.

**2.8** In terms of the number of vehicles involved in traffic accidents per 1,000 vehicles in 2009, the involvement rate for PLBs is 255.2, as compared to 34.1 for all classes of motor vehicle. If counting the number of vehicles involved in traffic accidents per million vehicle-kilometre, the rate is 2.94 for PLBs, versus 1.66 for all classes of motor vehicle. **Annex II** provides a detailed comparison of the accident rates of four types of commercial vehicles versus all motor vehicles in the past decade.

# 3

## ***ENHANCED SAFETY MEASURES INTRODUCED***

**3.1** Following the occurrence of a number of fatal accidents involving PLBs in the early months of 2000, TD undertook to examine and develop safety enhancement measures for PLBs. A number of such measures have since been put in place.

**3.2** The major measures introduced prior to the declaration of this investigation in January 2010 mainly fall into two categories:

- monitoring and training of drivers; and
- improving vehicle safety.

### **MONITORING AND TRAINING OF DRIVERS**

**3.3** Three measures have been introduced to monitor PLB drivers, as indicated in **Table 1**.

**Table 1. Measures Introduced on Monitoring of PLB Drivers**

	<i>Measures</i>	<i>Effective Date</i>
1	All GMB operators are to directly employ their drivers	1 June 2003
2	All PLB drivers are to display their identity plates	1 June 2003
3	All PLBs are to display the telephone number of the Transport Complaints Unit Hotline	31 October 2005

**3.4** On training, from February 2000 up to December 2009, more than 4,500 PLB drivers (about 40% of the 11,000 to 12,000 active PLB drivers) had attended seminars, workshops, talks or training courses on road safety organised by TD, the Police and PLB trade associations. **Table 2** gives some of the on-going measures taken to enhance the training and awareness of safe driving of PLB drivers.

**Table 2. On-going Measures to Enhance Awareness of Safe Driving**

	<i>Measures</i>	<i>Date of Introduction</i>	<i>Latest Status (up to December 2009)</i>
1	Seminars, workshops and talks on road safety	February 2000	About 3,400 PLB drivers attended
2	TD publishes PLB Newsletter to disseminate messages or new regulations on road and driving safety	2001	Published about twice annually
3	PLB Driver Training Course	August 2003	783 PLB drivers attended
4	Advanced PLB Driver Training Course	April 2004	355 PLB drivers attended
5	Voluntary guidelines on working hours of GMB drivers	April 2000	Adopted by all GMB operators

**3.5** In 2003, TD appointed three driving schools to provide PLB driver training courses according to TD requirements to enhance PLB drivers' awareness of safe driving. In 2004, TD cooperated with the Vocational Training Council in providing advanced training courses under the Skill Upgrading Scheme. Participants of various courses under this Scheme, which operated since 2001, can have 70% of the course fee subsidised by the Labour and Welfare Bureau. If an operator of GMB services has committed to send or has sent his drivers to attend such training, TD would give additional marks to that operator if he applies for the operation of new GMB routes, and in the mid-term appraisal of his performance in the operation of the existing GMB routes. TD publicised details of the courses in the PLB Newsletter (published about twice a year), and appealed to the PLB trade associations for participation at conferences and via notification letters and phone calls to the associations.

**3.6** Up to the end of 2009, the advanced courses had attracted only 355 participants, with declining attendance. There were 194 participants in 2004 when the course started, but recorded zero attendance for three years, in 2005, 2007 and 2009.

## IMPROVING VEHICLE SAFETY

### *Passenger Seat Belts and High Back Seats*

**3.7** From 1 August 2004, all newly registered PLBs are required by law to be equipped with passenger seat belts and high back seats. PLB passengers are also required to wear seat belts, if available. The gross weight limit of light buses was relaxed from 4 tonnes to 5.5 tonnes to accommodate the installation of these passenger protection equipment.

**3.8** For PLBs registered before 1 August 2004, TD does not intend to introduce mandatory installation of passenger seat belts and high back seats. TD considers the retrofitment technically fraught with difficulties, requiring a complete assessment on the condition of the vehicle body framework, structural reinforcement and modification to meet technical requirements such as huge impact stress and pull test. The cost for retrofitment is another crucial factor for consideration. Furthermore, the retrofitment, including post-modification testing, may take at least two to three weeks to complete, thus substantially affecting the income of PLB owners and drivers. Nevertheless, TD has approved in September 2006 four sets of retrofitting design plans that meet safety requirements and has been encouraging the trade to retrofit on a voluntary basis. These design plans can be applied to all PLBs registered before 1 August 2004, except about 20 of them aged over 15 years as at 30 September 2010.

**3.9** As at 30 September 2010, only 341 out of the 2,276 PLBs registered before 1 August 2004 and still in operation had such retro-fitment. **Table 3** below indicates the age distribution of these 2,276 PLBs.

**Table 3. Age Distribution of Existing PLBs registered before 1 August 2004  
(as at 30 September 2010)**

<i>Age</i>	<i>Number of PLBs</i>	<i>Percentage</i>
6 to < 7 years	674	29.6%
7 to < 8 years	446	19.6%
8 to < 9 years	239	10.5%
9 to < 10 years	188	8.3%
10 to < 11 years	132	5.8%
11 to < 12 years	177	7.8%
12 to < 13 years	130	5.7%
13 to < 14 years	133	5.8%

14 to < 15 years	72	3.2%
Over 15 years	85	3.7%
<b>Total</b>	<b>2,276</b>	<b>100%</b>

**3.10** TD organised a briefing for PLB trade members in September 2006 on the retrofitting plans it issued earlier in that year. It also allowed GMB operators to amortise the retrofitting expenditure over a three-year period. The two schemes operated by the Environmental Protection Department (“EPD”) to subsidise replacement of older models of diesel commercial vehicles would also induce PLB owners to replace their old vehicles with new ones<sup>1</sup>.

**3.11** As at 30 September 2010, 2,415 out of 4,350 PLBs (i.e. 55.5%) are equipped with passenger seat belts and high back seats, in contrast to TD’s prediction in mid-2006 that over 60% of the PLBs would be equipped with such facilities by mid-2008. In response to this investigation, TD states that it is now unable to give an estimate on when all PLBs would be fitted with the facilities, as progress will be affected by various factors, including the life expectancy and maintenance standards of vehicles, receptiveness of new types of vehicles and financial capacity of PLB operators.

**3.12** Statistics as at 30 September 2010 showed that 50% of the 2,093 PLBs replaced by owners since August 2004 were aged from 11 to 14 years, and 86% of all the PLBs replaced were aged below 15 years. Yet, the oldest one scrapped was aged 20. The age distribution of these 2,093 PLBs is indicated in **Table 4** below.

**Table 4. Age Distribution of PLBs Replaced  
from 1 August 2004 to 30 September 2010**

<i>Age</i>	<i>Number of PLBs</i>	<i>Percentage</i>
Under 10 years	291	13.9%
10 to < 11 years	216	10.3%
11 to < 12 years	349	16.7%
12 to < 13 years	339	16.2%
13 to < 14 years	350	16.7%
14 to < 15 years	252	12.0%
Over 15 years	296	14.2%
<b>Total</b>	<b>2,093</b>	<b>100%</b>

<sup>1</sup> *The Incentive Scheme for replacing Pre-Euro and Euro I Diesel Commercial Vehicles by New Commercial Vehicles operated from 1 April 2007 to 31 March 2010. Out of the 850 PLBs eligible then, 328 were replaced under the scheme. EPD launched another scheme on 1 July 2010 to encourage, via provision of one-off subsidy, early replacement of Euro II diesel commercial vehicles with new ones. About 560 PLBs are eligible for the scheme.*

### *Speed Display Device*

**3.13** TD conducted trials on Speed Display Device on PLBs from 2000 to 2004. From April 2005 onwards, installation of the device was made mandatory as a vehicle licensing condition for all PLBs. The device displays the speed of the vehicle on screen and gives out warning sound when the speed exceeds the preset limit. It alerts the driver whenever he speeds and enables passengers to keep an eye on such driving behaviour and, if they so wish, lodge a complaint with TD or the Police.

**3.14** Effective from 1 May 2008, such installation is mandated by law, and tampering with the device is an offence.

### **OTHER SAFETY MEASURES**

**3.15** Since 1997, the Government has been working on installing more Speed Enforcement Cameras and Red Light Cameras to combat speeding and red light jumping generally.

**3.16** In the past few years, legislative amendments have been made to increase the maximum penalties (increase in fine, imprisonment term and driving-offence points) for traffic offences including speeding, failure to comply with traffic signals, drink driving and dangerous driving causing death.

**3.17** These general road safety measures target all drivers.

# 4

## ***SAFETY MEASURES TO BE INTRODUCED***

**4.1** On 27 July 2009, two days after a fatal accident involving a GMB, TD announced its intention of introducing compulsory installation of speed limiter and vehicle monitoring system (“blackbox”) on PLBs, as well as mandatory pre-service training for PLB drivers.

### **SPEED LIMITER**

#### ***Maximum Speed Limit***

**4.2** The idea of installing speed limiters on PLBs was first mooted in 2000. At a meeting of the LegCo Panel on Transport (“LegCo Panel”) in April 2000, the then Transport Bureau pledged that it was examining a number of measures to tackle speeding of PLBs, including “the feasibility of imposing a maximum speed limit” on PLBs irrespective of the speed limit of the road.

**4.3** In a progress update to the LegCo Panel on 19 January 2001, the Bureau stated that analysis of accident statistics on PLBs then gave no clear evidence on the effectiveness of imposing a maximum speed limit in alleviating speeding activities of PLBs. The Bureau took the view that the problem of speeding should be tackled primarily by taking more stringent law enforcement actions, and imposing the requirement arbitrarily would be unfair to those law-abiding PLB drivers. While not seeing any immediate need to impose the requirement then, the Administration promised to consult the trade further on this aspect in view of public concern over

PLB drivers' driving behaviour.

**4.4** TD started collecting information about installation of speed limiter on PLBs in late 2003. When reporting to the LegCo Panel in November 2004, the Administration stated that installing such device was technically feasible. However, it needed to further examine in greater detail the more fundamental question of whether PLBs should be subject to a maximum speed limit, given its implications on the overall operation of the PLB trade such as cost of installation, its application on different road sections with different speed limits and the impact on the traffic flow in the territory.

#### *Consultation with Manufacturers*

**4.5** Correspondence between TD and the major Japanese manufacturers of PLBs operating in Hong Kong revealed that TD had enquired about the application of speed limiter regulations in Japan in October 2003. However, it was not until 17 November 2005, four days after a fatal accident in Sheung Shui involving a GMB that resulted in two deaths and five injuries, did TD ask the two major manufacturers specifically about the lead time required for provision of speed limiter on their PLBs; and the possibility of retrofitting a speed limiter on current models.

**4.6** The manufacturers indicated that retrofitting non-original external standalone speed limiter onto current models was not possible. For providing built-in speed limiter in new PLBs, one manufacturer indicated that a lead time of two years and five years would be required for diesel-type and liquefied petroleum gas-type vehicles respectively. Based on these responses from the manufacturers, TD explained to the LegCo Panel on 19 December 2005 and 23 June 2006 the difficulties of stipulating the installation of speed limiters on PLBs. Similar responses were given by the manufacturers in January 2007 and June 2008 to TD's enquiries in November 2006 and May 2008 on the latest development of the issue.

**4.7** TD communicated with the two major manufacturers on the issue again on 17 June 2009, five days after a fatal accident in Mongkok involving a GMB that resulted in two deaths and eight injuries. While pointing out, for the first time, on 18 and 23 June 2009 respectively the availability of certain standalone speed limiters in local market, the manufacturers maintained that it would need a few years to provide built-in speed limiter. The Transport and Housing Bureau and TD thus maintained the stance that there were difficulties to stipulate the installation of such

device on PLBs at the LegCo Panel meeting on 26 June 2009. On 25 July 2009, another GMB involved in an accident in Yuen Long that resulted in four deaths and 17 injuries.

### ***Mandatory Installation of Speed Limiter***

**4.8** Following subsequent communication and meetings with TD, the two major manufacturers confirmed in a meeting with TD on 30 July 2009 that they had no objection to fit external devices on their PLBs. TD thus commissioned a local speed limiter supplier to assess the feasibility of retrofitting standalone speed limiters on PLBs and then worked on the details of its plan for mandating installation of speed limiters on PLBs. On 3 August 2009, that speed limiter supplier provided TD the technical documentations and certificates of its products, manufactured to European standards, and requested TD for approval.

**4.9** On 24 August 2009, TD released on its website the finalised specification of speed limiter for local PLBs for reference by all potential device suppliers in the PLB trade. It also approved on the same day the products submitted by that speed limiter supplier on 3 August 2009 (**para. 4.8**). The applications from another two suppliers were approved on 26 August and 26 November 2009 respectively. Up to early October 2010, 11 models of speed limiters have been approved, and publicised together with the corresponding authorised installers.

**4.10** TD continued to consult major stakeholders in the PLB trade, the Transport Advisory Committee and the LegCo Panel in October and November 2009 on mandatory installation of speed limiters on PLBs. The plan eventually gained their support. On 5 March 2010, TD notified all PLB owners and PSL holders in writing of addition of a new licence condition that, with effect from 7 June 2010, a PLB would be required to be installed, within three months from the date of issue or renewal of licence, with a speed limiter in compliance with TD's specified requirements and with a preset maximum speed of 80 km per hour. For GMBs running on expressways, the operators concerned may apply to the Commissioner for Transport for setting a higher maximum speed. At present, there are 10, out of the 353 GMB routes, authorised to operate on expressways with a speed limit of 100 km per hour.

**4.11** As the validity of a vehicle licence is one year, and a PLB owner would be given three-month grace period from the effective date of the first issue or first renewal of a licence to install the speed limiter, all PLBs are expected to be installed with speed limiters latest by September 2011.

### ***Local Trials***

**4.12** Prior to July 2009 (**para. 4.8**), TD had not commissioned, or been involved in, any trial on speed limiters. In response to this investigation, TD expressed that as far as it knew, the major PLB suppliers in Hong Kong had not conducted any such trial.

**4.13** Some device suppliers revealed to this Office that various models of speed limiter and blackbox had been introduced to Hong Kong for at least five years. Over the years, at least one supplier and one PLB operator had tried out a speed limiter in 2006 and 2007, and had verbally informed TD frontline staff of such trials. However, in response to this investigation, TD indicated that it only knew of such trial through media reports in early August 2009.

### ***Overseas Regulations***

**4.14** The Directive of the European Community (“EC”) adopted in November 2002<sup>2</sup> extended the requirement of installing speed limiters from heavy vehicles (passenger vehicles and goods vehicles with maximum weight exceeding 10 and 12 tonnes respectively) to, among others, passenger carriers with more than eight passenger seats. The speed limit was required to set at 100 km per hour. The major items applicable to vehicles similar to PLBs in Hong Kong<sup>3</sup> are listed in **Table 5**.

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<sup>2</sup> *Directive 2002/85/EC of The European Parliament and of The Council of 5 November 2002 amending Council Directive 92/6/EEC on the installation and use of speed limitation devices for certain categories of motor vehicles in the Community*

<sup>3</sup> *In Hong Kong, a PLB has 16 passenger seats. Taking effect from 1 August 2004, the gross weight limit of a PLB has been relaxed from 4 tonnes to 5.5 tonnes. Most existing PLBs weigh around 4.8 to 4.99 tonnes.*

**Table 5. EC Regulations on Installation of Speed Limiter**

Maximum gross weight of vehicle (tonnes)	Date of first registration	Date that speed limiter is required
<i>Vehicles travelling across EC nations</i>		
not exceeding 10	01.01.2005 & after	01.01.2005
	01.10.2001 – 31.12.2004	01.01.2006
<i>Vehicles travelling solely in one nation</i>		
not exceeding 5	01.01.2005 & after	01.01.2008
not exceeding 10	01.10.2001 – 31.12.2004	01.01.2007

**4.15** Based largely on the EC directive, the United Kingdom (“UK”) extended its stipulated requirements on installation of speed limiter on different categories of vehicles with effect from 1 January 2005. **Table 6** below lists the major items relating to passenger carriers with more than eight passenger seats. The speed limit was set at 100 km per hour. Related regulations are also amended to prohibit passenger vehicles not exceeding 7.5 tonnes from using right-hand or off-side lane of three-or-more-lane motorways when they become liable to be fitted with speed limiter.

**Table 6. UK Regulations on Installation of Speed Limiter**

Maximum gross weight of vehicle (tonnes)	Date of first registration	Date that speed limiter is required
not exceeding 5	01.01.2005 & after	01.01.2008
	01.10.2001 – 31.12.2004	01.01.2007
more than 5 – not exceeding 7.5	01.01.2005 & after	01.01.2005
	01.10.2001 – 31.12.2004	01.01.2007

Note: Passenger vehicles exempted from the installation:  
 (a) those registered before 1.10.2001; and  
 (b) vehicles of Euro II or earlier engine registered from 01.10.2001 – 31.12.2004.

**4.16** TD was aware of the above overseas regulations around the time when they came into force, i.e. 2002/03 and 2005 respectively. It took note of the move in the UK and thus sought advice from the major PLB manufacturers on the availability of built-in or external speed limiter for PLBs (**para. 4.5**).

### *Anti-tampering Measures*

**4.17** Only TD's approved installers (who are, at present, either PLB suppliers or suppliers of the approved speed limiters) are authorised to install speed limiters on PLBs. After the installation, they are required to provide the PLB owner concerned with an Installation Certificate, send a copy to TD and keep one copy for themselves. The owner of the PLB will then have to arrange with TD's vehicle examination centres for assessing the device and the preset speed limit. Upon passing of the examination, the speed limiter will be sealed by TD officials. The device, together with the seal, is subject to subsequent annual examination at TD's vehicle examination centres.

**4.18** Should there be damage of a speed limiter or its seal, thus requiring replacement, the authorised installer who conducts the repair or replacement is required to report to TD, and the PLB owner is required to go through the whole process of examination and sealing before putting the vehicle to run on the road again. TD is also empowered to call up a PLB for examination if the vehicle's speed limiter is suspected to have been altered or upon receiving a complaint.

**4.19** TD intends to submit legislative amendments in 2010/11 to make it a statutory requirement to install speed limiter on all PLBs and to make any misuse, malfunctioning and tampering of the device an offence. Until the amendments take effect, non-compliance with the requirement of speed limiter installation – which is one of the conditions for vehicle and passenger service licences – is only a breach of licence conditions, which may lead to suspension or cancellation of licence, but does not constitute a criminal offence.

### **BLACKBOX**

**4.20** TD informed the LegCo Panel as early as December 2003 that it would conduct trials on the use of blackboxes on PLBs so as to assist its consideration of whether to require PLBs to install blackboxes. Instead of commissioning trials by itself, TD facilitated blackbox suppliers to run three trials from 2004 to mid-2009. All were found unsuccessful, mainly due to inaccuracy, loss of data, or vulnerability to damage to the installation.

**4.21** In February 2007, in response to TD's enquiry, the Hong Kong Productivity Council ("HKPC") made a face-to-face presentation to TD on HKPC's proposed in-vehicle monitoring system tailor-made for PLBs. HKPC informed TD in writing in March 2007 that system development and field trial on road, each needed about six months, would cost around \$2 million. TD did not follow up the matter. In response to our investigation, TD explained that it had received no formal proposal from HKPC since then.

**4.22** TD considered results of the previous trials to have reflected that there was no readily available blackboxes in the market that would suit the operational needs and environment of PLBs in Hong Kong and that such blackboxes had to be tailor-made. However, in view of technological maturity in blackbox design and manufacturing which result in better reliability and anti-tampering of a blackbox, as well as drawing reference to experiences in Europe and Mainland China, TD proposed in August 2009 to mandate the installation on new PLBs of a blackbox that meets TD specification. Since September 2009, TD has consulted the Police and local blackbox suppliers on its draft blackbox specifications and engaged stakeholders concerned to finalise the specifications and installation protocol. The approval process, similar to that for speed limiters, will be conducted later. TD intends to submit legislative amendments in 2010/11 to make it a statutory requirement to install blackboxes on all newly registered PLBs.

### *The Way Forward*

**4.23** At the initial stage of implementing mandatory installation of blackboxes, TD has no plan to make it a requirement for existing PLBs. It explains that, as there are over 15 existing models of PLB in Hong Kong, it is technically difficult to ensure that the blackboxes approved by TD could fit all models. Requiring retrofitting of blackboxes on all PLBs will, therefore, need longer lead time to allow for the production of a wide range of blackboxes for the entire PLB fleet, and hence delay the implementation of this requirement.

**4.24** Meanwhile, TD has lined up a major PLB supplier and some blackbox suppliers to assess further the issue of retrofitting of blackbox on some of the existing models. It will consider extending this requirement to cover these models in future, subject to technical and financial feasibility and views of the community.

**4.25** TD intends to implement mandatory sealing of the main unit of the blackbox. It will further examine the detailed arrangements and other anti-tampering measures in consultation with the Police, PLB suppliers and blackbox suppliers.

**4.26** Under the existing plan, the data to be stored in the blackbox include running data of the vehicle, such as speed recorded against date and time, harsh acceleration and deceleration, over-speeding events, pre-incident data such as speed and operational status of lighting signals, as well as records of power switching on/off, data retrieval and faults. While the Police may use the data stored in the blackbox for investigation of traffic accidents, TD considers that owners and operators of PLBs should also have a legitimate right to access the data. TD is consulting relevant stakeholders on whether other interested parties, such as Government authorities, should also have access to the data under certain specified circumstances.

## **MANDATORY PRE-SERVICE TRAINING FOR PLB DRIVERS**

**4.27** TD first informed the LegCo Panel in June 2006 that the PLB trade was generally supportive of the proposal of requiring applicants for a PLB driving licence<sup>4</sup> to attend pre-service training courses that focus on driving behaviour and attitude. It was working out the details then and would submit legislative proposals to LegCo in due course.

**4.28** Internal discussions within TD were held to map out the course content and implementation details. TD has been discussing the necessary legislative amendments with the Police and the Department of Justice since July 2008, and now plans to introduce the amendments in the 2010/11 legislative session. According to TD, the pre-service training programme will be provided by the Driving Improvement Schools<sup>5</sup>. The tailor-made course content will take reference of those of the Advanced PLB Driver Training Course (**paras. 3.4 – 3.5**) and the Driving Improvement Course. Its assessment criteria, qualifications of trainers and

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<sup>4</sup> Existing requirements for obtaining a Driving Licence for Commercial Vehicles (including PLBs) include: (a) age 21 or above; (b) holding a valid full driving licence to drive a private car or light goods vehicle for at least 3 years; (c) holding a valid full driving licence issued after the completion of probationary driving period to drive a private car or light goods vehicle for at least 2 years; (d) with no conviction related to dangerous driving, or driving under the influence of drink or drugs during the 5 years preceding application.

<sup>5</sup> At present, there are four Driving Improvement Schools designated by TD to provide Driving Improvement Course. Launched in 2002, such courses have been made mandatory since 9 February 2009 for: (a) offenders having been convicted of serious traffic offences, such as dangerous driving and drink driving; or (b) offenders who have accumulated 10 Driving-offence Points within two years.

administrative requirements will likely to be modeled on those under the latter course.

**4.29** TD has taken considerable time (over four years) for the preparatory work. It explains that developing such a mandatory training programme is not straightforward. It involves the need to develop a detailed legislative proposal, to formulate appropriate content and assessment criteria for the training programme, to stipulate qualifications for course providers and trainers, to put in place effective and efficient arrangements to ensure the authenticity of attendance records and certificates issued, and to enhance the computer system of driving licences. Moreover, as the measure implies a change in qualification requirements for professional drivers, TD has to proceed with caution.

# 5

## ***OBSERVATIONS AND OPINIONS***

### **LACKING DUE DILIGENCE AND SENSE OF URGENCY**

**5.1** TD has made efforts in studying a wide range of measures for enhancing the safe operation of PLBs. However, evidence indicates that at least for the measures listed below, there had been a lack of due diligence and sense of urgency in TD to explore their feasibility until mid-2009, when two fatal accidents involving PLBs happened on 12 June and 25 July 2009.

#### ***Speed Limiter***

**5.2** Although EC and UK regulations relating to certain types of passenger vehicles have taken effect since 1 January 2005 (**paras. 4.14 – 4.15**), TD's enquiries with the major Japanese manufacturers of PLBs regarding the installation of speed limiters only started in November 2005, four days after a fatal PLB-related accident had happened. Thereafter, TD's follow-up enquiries with the manufacturers in November 2006 and May 2008 were no more than routine requests for update. Again, it was not until another fatal PLB-related accident had happened did TD follow up the issue with the manufacturers again in June 2009 (**paras. 4.5 – 4.7**).

**5.3** TD has been taking prompt follow-up actions since then. Nevertheless, the issue had been put on the back burner for some four years.

## ***Blackbox***

**5.4** TD did not directly commission trial on the use of blackbox on PLBs but facilitated three trials, from 2004 to 2009, volunteered by blackbox suppliers by providing assistance to match the suppliers with PLB operators in arranging their vehicles for installing the device for road trial (**para. 4.20**). Owing to its passive role, TD had no control over various aspects, such as the models of PLB and types of blackbox involved, the timing and length of trial, and the kinds of data to record.

**5.5** TD did ask HKPC for advice in early 2007. However, subsequent to HKPC's face-to-face presentation on a proposed tailor-made system and follow-up letter on the estimated time span and cost required, TD did not pursue the matter further, leaving the task simply untouched. TD's explanation for not following up the matter is hardly convincing (**para. 4.21**).

## ***Training of PLB Drivers***

**5.6** The PLB driver training courses and advanced driver training courses have been introduced for more than six years. However, up to end of 2009, only 1,138 drivers had attended these courses, representing only about 10% of the 11,000 to 12,000 active PLB drivers. The promotion efforts of TD, particularly those targeting PLB drivers directly, have been minimal (**paras. 3.4 – 3.6**).

**5.7** TD took more than four years to prepare the mandatory pre-service training for PLB drivers. Its explanation for the time taken (**para. 4.29**) is again unacceptable, since most of the details of the scheme have been readily available, given that the training content, assessment criteria, qualifications of course providers and trainers, and other administrative arrangements are to be modeled on the existing similar programmes (**para. 4.28**).

## **WANT OF TIMELY REVIEW**

**5.8** To help PLBs registered before 1 August 2004 to retrofit passenger seat belts and high back seats, TD published four sets of design plans in September 2006 and encouraged the trade to retrofit voluntarily. However, as at 30 September 2010, only 341 (i.e. about 15% of 2,276) PLBs registered before 1 August 2004 were retrofitted with the equipment. There are still 1,935 PLBs running on the road

without such protection (**paras. 3.9 and 3.11**).

**5.9** Should the existing mandatory scheme remain unchanged, relying solely on attrition of the “pre-August 2004” PLBs to be replaced, it may well take at least eight years for all PLBs operating then to be equipped with the safety equipment. By any estimation, five years later, by the end of 2015, it is very likely that there will still be about 1,000 PLBs running on the road without such seat belts and high back seats to protect passengers. This is only a rough estimation based on the statistics of PLBs replaced in the past six years (**para. 3.12 and Table 4**) versus the age distribution of the existing PLBs (**para. 3.9 and Table 3**). Thus, passengers will continue to face a higher risk posed by these PLBs for at least another eight years. This is unacceptable. With the mandatory scheme introduced for six years now, we consider it important for TD to review the issue and resolve the problem without delay. The feasibility of setting a time table or cut-off date for mandatory installation of the equipment on all “pre-August 2004” PLBs should be considered.

**5.10** It is noted that concerns have been raised from time to time, especially among the PLB operators, over the technical feasibility and the cost burden borne by the trade if mandatory installation is to be extended to “pre-August 2004” PLBs. However, only about 20 existing PLBs aged over 15 years cannot be retrofitted with such equipment, and they are all approaching the end of their service life (**para. 3.8**). While the cost of retrofitment, particularly for some very old and obsolete models, must be considered, the Administration should also give public safety due consideration in the overall assessment.

**5.11** In planning for stipulating installation of blackboxes in newly registered PLBs, TD has indicated that it would consider extending the requirement to some existing PLBs in future (**para. 4.24**). TD should take a similar approach in respect of the other existing safety measures.

## **CONSULTATION SPECTRUM TOO NARROW**

**5.12** TD has relied mainly on its consultation with the major PLB suppliers and manufacturers to determine the technical feasibility of installation of speed limiter (**paras. 4.5 – 4.7**). TD stressed repeatedly that the matter could not be pursued without confirmation that retrofitting the equipment would not affect the product guarantee and technical support offered by the suppliers and manufacturers.

**5.13** On the technical aspect of installing blackboxes on PLBs, throughout all these years, TD has only consulted HKPC but taken no follow-up action on HKPC's proposal (**para. 4.21**). It took a very passive role in the testing of the local application of blackbox, relying only on the trials volunteered by three device suppliers and thus having no control over the timing and directions of the trials (**paras. 4.20 and 5.4**). TD again cited the concern about product guarantee as the reason for this apparent sluggishness.

**5.14** It was not until June 2009 when TD started to solicit proactively the assistance of motor vehicle device suppliers or manufacturers, as well as academic or professional bodies, in gathering update information on devices available in local market and in testing their application to local environment.

**5.15** TD's consultation with the major PLB suppliers and manufacturers is indisputably a crucial and responsible move. However, TD should have adopted a broader approach by contacting other resourceful players in the field, such as academic and professional bodies, and acquiring more independent opinions. Such opinions are essential in making a thorough and balanced assessment on whether, when and how to proceed with the introduction of safety enhancement measures. While product guarantee is a valid concern, over emphasising its importance may impose unnecessary constraints in exploring alternative solutions or even become an excuse for inactivity.

## **INERTNESS TOWARDS MARKET INFORMATION AND OVERSEAS EXPERIENCES**

**5.16** TD was apparently inert to the availability of various models of speed limiter and blackbox having been introduced to local market. Neither was it sensitive enough to pick up certain relevant intelligence, such as trials on speed limiters voluntarily conducted by members in the trade (**paras. 4.12 – 4.13**).

**5.17** Shortly after TD had published its tailor-made specifications for speed limiters in August 2009, at least three local suppliers had responded and submitted applications – with six of their product models approved quickly afterwards (**para. 4.9**). Such prompt response of local suppliers clearly showed the maturity of the technologies and immediate availability of such products in the local market.

**5.18** Moreover, under the EC and UK regulations on installation of speed limiter (**paras. 4.14 – 4.15**), different categories of passenger vehicles – covering vehicles similar to PLBs in Hong Kong – were required to retrofit speed limiter in phases between 1 January 2005 and 1 January 2008. This shows that retrofitment of external device is technically feasible, at least for certain types of passenger vehicles. Hong Kong has undeniably lagged behind other advanced countries in introducing this safety enhancement measure.

## **TAMPERING OF DEVICE**

**5.19** All PLBs are expected to be installed with speed limiters by September 2011. The device, together with the seal, will then be examined in subsequent annual vehicle examination (**paras. 4.17 – 4.18**). However, detailed arrangements for sealing and preventing tampering of blackboxes have yet to be finalised (**para. 4.25**).

**5.20** To ensure compliance and to deter mis-use or tampering of these devices, TD should consider taking monitoring measures such as conducting surprise and random checks.

## **BLACKBOX DATA USE**

**5.21** Experience in overseas and Mainland China has suggested that the data stored in a blackbox can be used for accident investigation, fleet management, surveillance of vehicle conditions, and monitoring of drivers' driving behaviour as well as working hours. Installation of blackbox can, therefore, serve the purpose of deterring the driver from improper driving.

**5.22** It is important for TD, in its current study on the subject, to work out detailed measures to prevent tampering of devices. It is equally important for TD to be forward-looking in its study and look into the feasibility of using these data for making improvement measures in future. Other than for accident investigation, the Administration should consider enabling TD or relevant Government experts to access, use and analyse such data under justifiable circumstances or conditions. The data collected from individual vehicles can be used in the monitoring of its operation. Furthermore, statistics generated from the data of different vehicles may also be

useful for reviewing the effectiveness of various safety measures, and for forward planning (**para. 4.26**).

# 6

## *RECOMMENDATIONS*

**6.1** Road safety is about human lives. TD should be commended for having accelerated its study and implementation of the installation of speed limiter and blackbox on PLBs since June 2009. However, prior to that, there had been a lack of due diligence in TD in fulfilling its responsibility to enhance safety of PLB operation proactively.

### **RECOMMENDATIONS**

**6.2** Based on our findings and observations, The Ombudsman makes the following recommendations to the Commissioner for Transport:

#### *For safe operation of PLBs*

- (1) to review and consider whether the requirement for installation of passenger seat belts and high back seats should be extended to PLBs registered before 1 August 2004, so as to reduce significantly the number of PLBs not retrofitted with such equipment within a reasonable timeframe (**paras. 5.8 – 5.11**);
- (2) to work out specific measures against tampering of speed limiter and blackbox installed, including surprise check or random check of vehicles (**paras. 5.19 – 5.20**);
- (3) to consider the use of data stored in blackboxes for the purposes of monitoring driving behaviour, as well as for reviewing and planning of various safety enhancement measures (**paras.**

**5.21 – 5.22);**

*For road safety initiatives in general*

- (4) to set out work plans, with time schedule, for monitoring progress of each and every safety measure under study, instead of merely reacting to outburst of public pressure following each tragic traffic accident (**paras. 5.1 – 5.11**);
- (5) to consider seeking assistance from academic or professional institutions/bodies, where necessary, in assessing the feasibility of safety enhancement measures to be introduced, and in regularly reviewing the effectiveness of the measures after their implementation (**paras. 5.12 – 5.15**); and
- (6) to set up and maintain an intelligence network with relevant trades and sectors, so as to keep abreast of the latest developments of technology, regulatory mechanism and market information in and outside Hong Kong (**paras. 5.16 – 5.18**).

**FINAL REMARKS**

**6.3** TD has accepted the recommendations mentioned in paragraphs **6.2 (2)** to **6.2 (6)**.

**6.4** As to the recommendation mentioned in paragraph **6.2 (1)**, TD's response is not forthcoming. TD emphasises that the Government's proposal at the time of introducing the seat belt legislation was that there would be no retrofitting request for PLBs registered before 1 August 2004. TD now agrees only to discuss with the PLB trade and PLB suppliers on possible and viable ways to speed up the replacement progress as far as practicable.

**6.5** We maintain the view that the slow progress over the past six years on retrofitting PLBs with passenger seat belts and high back seats has shown that TD's prediction in mid-2006 that over 60% of PLBs would be equipped with such safety equipment by mid-2008 is over-optimistic (**para. 3.11**) and the voluntary retrofitment scheme has been less than effective. Without more vigorous measures, it would take

at least eight years for all PLBs to be equipped with passenger seat belts; and there would still be about 1,000 PLBs running on the road without such safety equipment by the end of 2015 (**para. 5.9**). We should not put more lives of PLB passengers at risk. We strongly urge the Administration to reconsider our recommendation.

**6.6** The Ombudsman thanks the Commissioner for Transport and his staff for their cooperation throughout this investigation.

**Office of The Ombudsman**

**Ref. OMB/DI/206**

**December 2010**

**Road Traffic Accident Statistics by Class of Vehicle 2009**

Class of vehicle	No. of accidents <sup>*</sup>	No. of involvements	No. of casualties <sup>#</sup>			
			Killed	Serious	Slight	Total
Motor cycle	2,508	2,556	14	392	2,388	2,794
Private car	4,994	6,085	31	625	6,307	6,963
<b>PUBLIC LIGHT BUS</b>	<b>1,068</b>	<b>1,110</b>	<b>21</b>	<b>187</b>	<b>1,461</b>	<b>1,669</b>
Light goods vehicle	2,246	2,527	26	332	2,684	3,042
Medium goods vehicle	738	840	22	139	954	1,115
Heavy goods vehicle	63	67	5	8	96	109
Public bus	2,229	2,322	22	305	2,818	3,145
Taxi	3,342	3,801	24	428	4,138	4,590
Bicycle	1,793	1,882	10	229	1,629	1,868
Tram	72	76	0	9	92	101
Light rail vehicle	8	8	2	3	8	13
Private light bus	75	76	1	11	103	115
Private bus	23	23	0	7	46	53
Handcart	47	47	3	6	39	48
Trailer	12	15	2	4	15	21
Village vehicle	1	1	0	1	0	1
Special purpose vehicle	3	4	0	1	3	4
Golf-cart	6	6	1	3	6	10
Others <sup>@</sup>	220	235	0	38	236	274
All classes of vehicles	14,316	21,681	139	2,096	15,903	18,138

Notes : <sup>\*</sup> In a single accident, there may be more than one class of vehicle involved.

<sup>#</sup> Casualties include pedestrians and vehicle occupants of other vehicle class involved. Hence, the sum of casualties for individual class of vehicle will be larger than the overall number of casualties.

<sup>@</sup> Including unknown vehicle types.

Source: Transport Department

**Annex II**  
**(para. 2.8)**

**Road Traffic Accident Involvements and Involvement Rates**  
**by Selected Class of Motor Vehicle (1999 - 2009)**

Class of motor vehicle	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>PUBLIC LIGHT BUS</b>											
No. involved in accident	1,049	1,055	1,040	1,098	1,008	1,154	1,132	1,069	1,173	1,080	1,110
No. licensed (mid-year)	4,343	4,339	4,341	4,342	4,338	4,331	4,334	4,347	4,349	4,346	4,349
Annual veh-km (in millions)	341	373	365	366	350	356	364	378	387	380	377
Invol rate : per 1,000 vehicles	241.5	243.1	239.6	252.9	232.4	266.5	261.2	245.9	269.7	248.5	255.2
per million veh-km	3.08	2.83	2.85	3.00	2.88	3.25	3.11	2.83	3.03	2.84	2.94
<b>Medium &amp; heavy goods vehicles</b>											
No. involved in accident	1,235	1,217	1,185	1,249	1,108	1,197	1,180	1,155	1,081	1,045	907
No. licensed (mid-year)	39,245	41,390	42,036	41,725	41,761	42,106	42,549	42,261	41,659	40,857	39,079
Annual veh-km (in millions)	2,366	1,365	1,349	1,457	1,398	1,344	1,333	1,347	1,323	1,311	1,191
Invol rate : per 1,000 vehicles	31.5	29.4	28.2	29.9	26.5	28.4	27.7	27.3	25.9	25.6	23.2
per million veh-km	0.52	0.89	0.88	0.86	0.79	0.89	0.89	0.86	0.82	0.80	0.76
<b>Public bus*</b>											
No. involved in accident	2,265	2,288	2,445	2,380	2,219	2,407	2,379	2,393	2,649	2,463	2,322
No. licensed (mid-year)	11,533	11,836	12,322	12,724	12,875	12,867	12,812	12,796	12,803	12,803	12,757
Annual veh-km (in millions)	646	769	818	853	838	836	846	872	878	876	857
Invol rate : per 1,000 vehicles	196.4	193.3	198.4	187.0	172.3	187.1	185.7	187.0	206.9	192.4	182.0
per million veh-km	3.51	2.98	2.99	2.79	2.65	2.88	2.81	2.74	3.02	2.81	2.71
<b>Taxi</b>											
No. involved in accident	3,101	3,274	3,706	3,617	3,397	3,457	3,752	3,744	4,004	3,926	3,801
No. licensed (mid-year)	18,030	17,997	18,074	18,054	17,997	18,108	17,961	18,026	18,045	18,084	18,126
Annual veh-km (in millions)	1,757	1,843	1,822	1,793	1,719	1,797	1,880	1,991	2,102	2,135	2,130
Invol rate : per 1,000 vehicles	172	181.9	205	200.3	188.8	190.9	208.9	207.7	221.9	217.1	209.7
per million veh-km	1.76	1.78	2.03	2.02	1.98	1.92	2.00	1.88	1.91	1.84	1.78
<b>All motor vehicles<sup>#</sup></b>											
No. involved in accident	20,842	21,530	22,057	21,967	19,743	20,355	20,850	20,540	21,517	20,132	19,608
No. licensed (mid-year)	499,380	511,460	522,125	525,111	522,912	528,172	537,124	546,409	555,861	572,231	575,686
Annual veh-km (in millions)	11,040	11,639	11,509	11,576	11,190	11,109	11,193	11,521	11,973	11,969	11,785
Invol rate : per 1,000 vehicles	41.7	42.1	42.2	41.8	37.8	38.5	38.8	37.6	38.7	35.2	34.1
per million veh-km	1.89	1.85	1.92	1.90	1.76	1.83	1.86	1.78	1.80	1.68	1.66

Notes: \* Public buses include franchised public bus & non-franchised public bus.

# The figures for "All motor vehicles" include trailer, special purpose vehicle, private light bus, golf cart and illage vehicle which are not separately shown.

Source: Transport Department