

## **Guide to Private Car and Light Goods Vehicle Driving Test**

### **Amendment sheet**

**( The following revised paragraph replaces the corresponding paragraph in the printed Guide)**

p.5

With effect from 1 June 2015, candidates who apply for the private / public bus (code 9,10) or private / public light bus (code 4,5) driving test and wish to apply for a public light bus (code 5) full driving licence, apart from having passed the private / public bus (code 9,10) or private / public light bus (code 4,5) driving test, must complete the Pre-service Course for Public Light Bus Drivers as approved by this department and obtain the course certificate issued by the pre-service training school concerned. Otherwise, candidates who have passed the private / public bus (code 9,10) driving test are entitled only to apply for a full driving licence allowing them to drive private light bus (code 4), private bus (code 9) and public bus (code 10) after 7 working days (but not exceeding three years) from the date they passed the driving test.; and candidates who have passed the private / public light bus (code 4, 5) driving test are entitled to only apply for a full driving licence allowing them to drive private light bus (code 4) after 7 working days (but not exceeding three years) from the date they passed the driving test; if those candidates wish to apply for a public light bus (code 5) full driving licence, after having completed the aforesaid Pre-service Course for Public Light Bus Drivers and obtained the course certificate, can apply for the public light bus (code 5) full driving licence after 7 working days (but not exceeding 3 years) from the date that they passed their private / public bus (code 9,10) driving test and within the validity period of the course certificate or after 7 working days from the date that they passed their private / public light bus (code 4,5) driving test and within the validity period of the course certificate. The course certificate is valid for one year from the date of completion of the Pre-service course.



**運輸署**

*Transport Department*

## **DRIVING SERVICES SECTION**

# **Guide to Private / Public Light Bus and Private / Public Bus Driving Test**

### **ATTENTION FOR CANDIDATES :**

1. The content of this guide will be updated on a timely basis. For the latest version, please visit the website of Transport Department: [www.td.gov.hk](http://www.td.gov.hk) (Publications and Press Releases > Publications > Free Publications). If there is any discrepancy between the hardcopy and the online version, the online version shall prevail.
2. This guide is designed for reference purpose only, and has no legal bindings on driving test.

# ***PRIVATE / PUBLIC LIGHT BUS and PRIVATE / PUBLIC BUS***

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## **INTRODUCTION**

The Private / Public Light Bus and Private / Public Bus driving tests aim at assessing candidate's driving ability, and ensuring that in future the candidate will drive safely and properly, acquire good traffic knowledge and give due consideration to other road users.

The Driving Examiner will carry out the driving test in accordance with the contents of this Guide and will handle situations that are not described here by applying his profound experience and sound judgement in driving.

## PART I TEST VEHICLE REQUIREMENT

### Specific Requirements

Candidates who pass their driving tests with test vehicles which do not meet the specific requirements listed below will only be given, upon application, restricted full driving licences allowing them to drive vehicles of the same class or less than those of the test vehicles : –

#### Private / Public Light Bus (Codes 4 / 5)

(1) Seats : 14 seats at least (excluding driver).

(2) Dimensions :

Length	–	not less than 5.20 metres
Width	–	not less than 1.90 metres
* Wheel Span	–	not less than 2.50 metres

#### Private / Public Bus (Codes 9 / 10)

(1) Seats : 36 seats at least (excluding driver).

(2) Dimensions :

Length	–	not less than 7.10 metres
Width	–	not less than 2.35 metres
* Wheel Span	–	not less than 3.70 metres

\* Wheel Span : Distance between the centre points of the first front axle and the last rear axle.

### General Requirements

Vehicles that do not meet the following general requirements will **NOT** be accepted for the purpose of driving test: -

- (A) Right hand drive vehicle in good mechanical order with handbrake readily accessible to the examiner.
- (B) The test vehicle should be insured to cover third party risks (including driving test purpose).
- (C) With a valid vehicle licence that must be displayed on the left of the windscreen of the vehicle.
- (D) The test vehicle presented for light bus driving test should be designated for driver training and testing purposes, and should be registered in Transport Department.
- (E) The test vehicle should be equipped with both the nearside and offside mirrors.
- (F) The test vehicle should be fitted with a gearbox capable of performing at least four forward and one reversing speeds.
- (G) The structure of the seats of the test vehicle must comply with the regulations as laid down in the Road Traffic (Construction and Maintenance of Vehicle) Regulations.

- \* (H) The test vehicle presented for bus driving test should be fitted with air braking system.
  - \* (I) The test vehicle should contain only one single compartment both for driver and passengers.
- \* Only applicable to those vehicles registered on or after 1.1.2016

### **Others**

**(A)** Vehicles fitted with automatic transmission (including automatic clutch and pre-selected gearbox types) may also be accepted for the test. However, candidates having passed their driving tests with automatic transmission vehicles will be given, upon application, restricted driving licences allowing them to drive automatic transmission vehicles of the same class as the test vehicles used by them.

**(B)** Handicapped candidates: such as those with impaired hearing, missing or defective limbs, or with walking difficulties, have to be referred by medical officers and to successfully pass a physical test conducted by the Transport Department, before they are allowed to apply for a driving test. For enquiries, please call Driving Services Section at **2713 7262**.

## Part II TESTING PROCEDURES & OBSERVATIONS

### Basic Requirements of the Test

(I) Candidates applying for Private / Public Light Bus or Private / Public Bus driving test must be either a holder of a valid full driving licence for private car or light goods vehicle for at least 3 years immediately preceding their applications (if your full driving licence was obtained without undergoing a probationary driving period); or had completed a 12 months probationary driving period of private car or light goods vehicle plus holder of a valid full driving licence for private car or light goods vehicle for at least 2 years immediately preceding their applications. In addition, candidates must not be convicted of an offence under Section 36 (Causing death by dangerous driving), Section 36A (Causing grievous bodily harm by dangerous driving), Section 39 (Driving a motor vehicle under the influence of drink), Section 39A (Driving, attempting to drive or being in charge of a motor vehicle with alcohol concentration above prescribed limit), Section 39B (Screening breath tests) and Section 39C (Provision of specimens for alcohol analysis), Section 39J (Driving motor vehicle without proper control under influence of specified illicit drug), Section 39K (Driving motor vehicle with any concentration of specified illicit drug), Section 39L (Driving motor vehicle without proper control under influence of drug other than specified illicit drug), Section 39O(1) (Failure to undergo preliminary drug test), Section 39S (Failure to provide specimen of blood or urine) of the Road Traffic Ordinance (Cap. 374) during the 5 years immediately preceding their applications.

With effect from 1 June 2015, candidates who apply for the private / public bus (code 9,10) or private / public light bus (code 4,5) driving test and wish to apply for a public light bus (code 5) full driving licence, apart from having passed the private / public bus (code 9,10) or private / public light bus (code 4,5) driving test, must complete the Pre-service Course for Public Light Bus Drivers as approved by this department and obtain the course certificate issued by the pre-service training school concerned. Otherwise, candidates who have passed the private / public bus (code 9,10) driving test are entitled to apply for a full driving licence allowing them to drive private light bus (code 4) at the same time only and candidates who have passed the private / public light bus (code 4, 5) driving test are entitled to apply for a full driving licence allowing them to drive private light bus (code 4) only. Candidates who wish to apply for a public light bus (code 5) full driving licence, after having completed the aforesaid Pre-service Course for Public Light Bus Drivers and obtained the course certificate, can apply for the public light bus (code 5) full driving licence after 7 working days (but not exceeding 3 years) from the date that they passed their private / public bus (code 9,10) or private / public light bus (code 4,5) driving test and within the validity period of the course certificate. The course certificate is valid for one year from the date of completion of the course.

According to Sections 11 and 15 of the Road Traffic (Driving Licences) Regulations Cap.374B, applicant for a full driving licence with commercial vehicle classes must be the holder of a Hong Kong Permanent Identity Card; or the holder of a Hong Kong Identity Card (other than a Hong Kong Permanent Identity Card) and is not subject to any condition of stay other than a limit of stay as defined in section 2(1) of the Immigration Ordinance (Cap.115). For persons who are not of the above residence status, but are required to perform cross border driving duties, please contact Transport Department's Cross Boundary Unit or Licensing Offices for details.

**(II)** Candidates applying for the above test must reach the stipulated standard required by the Transport Department including : –

- (A) Candidates must be fully conversant with the "Road Users' Code";
- (B) Candidates should be familiar with the functions and safe manoeuvring of the control of the vehicle;
- (C) Candidates should be able to master the following manoeuvres : –
  - (i) The proper use of gears and accelerator to meet various traffic conditions;
  - (ii) The proper judgement of timing, speed and car distance to meet various traffic conditions;
- (D) Candidates should also be able to master the following specified manoeuvres : –
  - (i) Starting the engine of the vehicle;
  - (ii) Moving off straight ahead or at an angle;
  - (iii) Keeping an appropriate distance from the vehicle ahead;
  - (iv) Overtaking vehicles and selecting the appropriate traffic lane to meet the traffic conditions;
  - (v) Turning left and right;
  - (vi) Reversing and parking;
  - (vii) Turnabout in a narrow road;
  - (viii) Stopping and starting on a slope;
  - (ix) Giving correct signals under appropriate conditions;
  - (x) Responding promptly and correctly to people controlling traffic, other road users, traffic signs and traffic lights.

### **Documents and Papers Presented for the Test**

Candidates should present the following documents and papers for inspection by Driving Test Centre Officer and Driving Examiner when attending a test : –

- (a) test appointment letter;
- (b) Hong Kong Identity Card or an alternative identity document e.g. passport (previously registered in the Transport Department)\*;
- (c) learner's driving licence and valid full driving licence (if applicable) ;
- (d) letter of approval for disabled persons (if applicable);
- (e) valid Third Party Risks Insurance Certificate in respect of the test vehicle (should also cover driving test purpose)\*; and
- (f) driving instructor's licence.

\* not be accepted if defaced or expired.

### **Vision Test**

Candidates are required to read at a distance of 23 metres in good daylight (with the aid of spectacles or other corrective lenses, if worn) a motor vehicle registration mark. A candidate who fails his / her vision test will not be allowed to take the test and his / her test form will be invalidated. If he / she wants to take the driving test again, he / she will have to purchase a new test form.



## **PART III DRIVING OBSERVATIONS FOR CANDIDATES**

### **Preparation before Moving Off**

Before starting the engine, candidates should check that the handbrake is secured, the gearshift is in the neutral position and the mirrors are adjusted. Adjust the seat and put on the seat belt (only applicable to those private / public light buses manufactured after 1.1.1984). Before moving off, check against the readings on the panel, check that there is sufficient air pressure in the storage tanks (only applicable to vehicles fitted with air-brake system). Check against the surrounding traffic conditions, give appropriate signal and move off under safe condition.

### **Driving Manoeuvres and Control of Speed**

Candidates should be fully conversant with the use of various controls of the vehicle in order to handle various road conditions, such as going up and down of slopes, approaching road junctions and roundabouts. Maintain proper coordination of steering wheel, clutch, accelerator and footbrake so as to avoid rolling forwards or backwards during moving off and stopping.

Care should be taken in the control of the speed of the vehicle with the use of proper gear so as to suit the ever-changing traffic conditions. Do not drive too fast when approaching junctions, zebra crossings, pedestrians and objects or when cornering. Under normal traffic conditions, candidates should not dwell in low gears (first or second gear) or drive only at low speed during the test; otherwise, examiners will regard these as serious mistakes and it would eventually lead to a failure. If the road condition ahead is clear and safe, candidates should make use of the proper gear to reach a reasonable speed, but not exceeding the speed limit. However, if the road condition does not permit so doing, candidates should adopt low gear instead and reduce speed for the sake of safety.

### **Judging Car Distance**

Candidates should always keep a safe distance from the car ahead, and bear in mind the 2-second rule. Avoid driving in parallel with other motorists in dual or multiple lanes, try to keep a safe distance from other vehicles or objects when overtaking or stopping.

### **Overtaking**

Candidates should make full use of mirrors before overtaking, observe the rear following vehicles, and / or those vehicles from opposite directions, and signal properly. Make use of the mirrors especially before moving out. During the process of overtaking, care should be taken to keep a safe distance from the objects ahead and control the speed of the vehicle properly. After overtaking, candidates should return to the original lane if situation permits. Care should be taken not to cut in sharply in front of other vehicles.

## **Hazard Recognition**

Candidates should constantly observe the road conditions, so as to act appropriately to road signs, vehicles parked at roadside, pedestrians, junctions, change of road conditions and emergencies.

## **Roundabouts and Junctions**

Before entering or leaving roundabouts or junctions, candidates should signal properly, adopt the appropriate speed and correct traffic lane. Observe the "Give Way" and "Stop" signs and yield right to vehicles having the right of way.

Candidates, before reaching the junctions, should control the vehicle properly and to act according to warning, regulatory and informative traffic signs. Select the appropriate lane beforehand, signal properly and make use of the mirrors. Before driving into the junction, candidates may stop at an appropriate position to check traffic conditions from the right, then left and then right again. Only after ensuring a safe traffic condition should candidates drive into the junction. Constant observation of traffic condition from both sides is necessary when passing the road junction and to remain in the right course. Care should be taken to keep the vehicle inside the proper track when cornering. In turning left, the vehicle must not be allowed to touch the kerb or drive on the pavement. In turning right, premature / late steering or returning the steering wheel would lead to right corner cut or deviating from the proper track.

## **Traffic Signs / Traffic Lights / Directions of Authorized Traffic Controllers**

Candidates should be familiar with and to obey the traffic signs, and to follow the directions of traffic controllers (including policemen, traffic wardens and members of school traffic safety team). Candidates should also observe the change of traffic lights. If the traffic lights change from green to amber and that the vehicle has passed the stop line, candidates may continue to move on. But if it has already changed to amber and that the vehicle has not yet reached the stop line, candidates should stop the vehicle. However, if the bringing of the vehicle to a sudden standstill would lead to a traffic accident, candidates should carefully continue with their way.

## **Traffic Lanes**

Candidates should always keep in left lane. Before reaching a road junction, they should select the appropriate lane for left turning, right turning or going straight ahead. Make full use of the mirrors to check traffic condition and to signal properly in good time before changing lanes. Mirrors checking must be performed prior to steering in order to ensure safety.

## **The Stopping Rule**

Before stopping, candidates should make use of the mirrors to check traffic conditions, signal properly and then pull up near the left side kerb. After stopping, the handbrake should be secured; the gearshift should be moved to neutral position. Before leaving the vehicle, make sure to switch off the engine and engage first or reverse gear as appropriate.

## **Reversing and Parking Manoeuvres**

Candidates have to reverse the vehicle into a designated parking space in one attempt. The parking space may be in the form of "S" or "L" shape, depending on the surrounding condition of the test venue. In the course of reversing, the vehicle should not touch the marker cones or the kerb. After parking, the entire vehicle should be brought within the boundary of the parking space, any part of the test vehicle should not overhang any white line or the kerb; furthermore, the wheels should not touch any white line or the kerb. Apart from the above requirements, the extreme rear of the vehicle should stay within the 1-metre yellow stopping area. For L-shape parking, if the parking space is comparatively shorter than the vehicle, the front part of it is allowed to overhang the front white line.

## **Turnabout in a Narrow Road**

Candidates will be required to demonstrate the turnabout in a narrow road manoeuvre by means of 3-point turns (two-forward and one-backward) or 5-point turns (three-forward and two-backward) as the case may be. In the course of the turnabout manoeuvre, candidates have to check traffic conditions, signal properly and the vehicle not to touch any object, e.g. the railing or kerb.

## **Oral Test relating to Safe Driving**

Candidates will be required to answer questions for relevant commercial vehicle type relating to safe driving and to demonstrate the operation of relevant equipment to the Examiner when requested. For the scope of questions on safe driving, please refer to the Appendix to this Guide.

## Part IV OTHERS

### Test Routes

Under normal conditions, examiners would conduct the test according to the standard test routes designed by the Driving Services Section of the Transport Department. However, in case of road repairs, traffic jam or emergency, test routes may be deviated to meet the traffic conditions.

### Dangerous Driving / Inadequate Control

Should a candidate perform any dangerous act, which may endanger other road users during the course of the test, or should he / she prove himself / herself to be in a state of inadequate control over the vehicle, the test may be terminated by the examiner.

In case of emergency, which may endanger other road users or lead to traffic accidents, an examiner may exercise his discretion to stop the test vehicle.

### Methods of Recording Driving Errors

The mistakes committed by candidates will be divided into minor and serious ones and recorded on the test form by means of a tick (☑) against the appropriate item :

#### *Minor Mistakes*

Minor mistakes refer to those driving faults committed by candidates, they would not endanger other road users or even cause inconvenience to them. Such driving faults would not lead to a fail in the test.

#### *Serious Mistakes*

Serious mistakes are those which would cause imminent or direct danger; including the driving technique or basic control not up to the stipulated standard of the Transport Department. The driving test system being strict and fair, and if a candidate commits one or more serious mistakes in a driving test, it will be regarded as a fail.

If a candidate commits minor mistakes against a certain item for three times or more, these mistakes will be accumulated to form a *serious mistake* and the test will be regarded as a fail.

## **Test Form and Record of Result**

After the test, the original of the Driving Test Form will be endorsed and kept by the duty Driving Test Centre Officer, who will give to the candidate the duplicate of the test form (also known as the "yellow copy"), on which all the mistakes committed by the candidate during the test as well as the test result are recorded.

The result of the candidate will become final only after it has been verified by the Transport Department. However, if the candidate's licence has been suspended by the court during the period of his / her test, the "Pass" result he / she has obtained will be rescinded and the fees paid will not be refunded.

## **Application for Driving Licence by Successful Candidates and Application for a Second Test by Unsuccessful Candidates**

### **1. Successful Candidates**

According to Sections 11 and 15 of the Road Traffic (Driving Licences) Regulations Cap.374B, applicant for a full driving licence with commercial vehicle classes must be the holder of a Hong Kong Permanent Identity Card; or the holder of a Hong Kong Identity Card (other than a Hong Kong Permanent Identity Card) and is not subject to any condition of stay other than a limit of stay as defined in section 2(1) of the Immigration Ordinance (Cap.115). For persons who are not of the above residence status, but are required to perform cross border driving duties, please contact Transport Department's Cross Boundary Unit or Licensing Offices for details.

Successful candidates please approach one of the Licensing Offices of this department after 7 working days (but not exceeding 3 years), from the date of your test to apply for the issue of a full driving licence, or for an endorsement of the relevant driving entitlements as the case may be. Please bring along with you the following documents : –

1. Hong Kong Permanent Identity Card (original or photocopy); or
2. Hong Kong Identity Card (original or photocopy) and a valid travel document (original and photocopy) to show that you are not subject to any condition of stay other than a limit of stay as defined in section 2(1) of the Immigration Ordinance (Cap. 115);
3. Original or photocopy of present address proof (residential address and correspondence address) issued within the last 3 months (e.g. utility or telecommunication bills, correspondence from banks, insurance companies, government departments, local universities, local or international charitable organization etc.);
4. The “yellow copy” of test form TD553;
5. The duly completed application form: Application for Full Driving Licence (TD 557);
6. The required fee for the issue of a full driving licence (not applicable for driving licence endorsement);
7. Medical examination report form TD256 duly completed by a registered medical practitioner (applicable to a person aged 70 or above); and
8. Original of valid course certificate of the Pre-service Course for Public Light Bus Drivers with a date of completion proving that the course is completed within one year preceding the date of application for the full driving licence (applicable to candidates who apply for the private / public bus (code 9,10) or private / public light bus (code 4,5) driving test on or after 1 June 2015 and wish to apply for a public light bus (code 5) full driving licence after passing the driving test(s)).

According to the Road Traffic (Driving Licences) Regulations (Chapter 374B), any candidate who applies for the issue of a full driving licence after 3 years from the date that he / she passed his / her test will not be entertained by the Transport Department.

<b>Licensing Offices</b>	<b>Tel. No.</b>
Hong Kong Licensing Office: 3/F, United Centre, 95 Queensway, Hong Kong.	<b>2804 2636</b>
Kowloon Licensing Office: 2/F, Cheung Sha Wan Government Offices, 303 Cheung Sha Wan Road, Kowloon.	<b>2150 7728</b>
Kwun Tong Licensing Office: 5/F, East Kowloon Government Offices, 12 Lei Yue Mun Road, Kwun Tong, Kowloon.	<b>2775 6835</b>
Shatin Licensing Office: 2/F, Shatin Government Offices, 1 Sheung Wo Che Road, Sha Tin, N.T.	<b>2606 1468</b>

## **2. Unsuccessful Candidates**

Unsuccessful candidates can apply to re-take the private / public light bus or private / public bus driving test 7 working days after the date of their test through the following ways:

- Online Booking for private / public light bus or private / public bus driving test by visiting the GovHK website ([www.gov.hk/en/residents/transport/drivinglicense/roadtest.htm](http://www.gov.hk/en/residents/transport/drivinglicense/roadtest.htm)). You may apply for an end-of-list driving test appointment or a repeater early test appointment. (Note: Applicant of end-of-list Driving Test Appointment Booking must possess a valid personal digital certificate issued by recognised Certification Authorities for authentication; and with a credit card (Visa or MasterCard) or a PPS account number and Internet password for payment.) Please contact the Driving Test Appointment Office at 2771 7723 for enquiries
- Submit your application together with the following documents by post to “Shatin Licensing Office, Transport Department, P.O. Box No. 79, Shatin Central Post Office” and mark 《Application for Driving Test (Commercial Vehicle)》 on envelope : –
  1. Copy of Hong Kong Identity Card or an alternative identity document;
  2. Copy of Full Driving Licence;
  3. The duly completed application form: Application for a Driving Test (Commercial Vehicle) (TD 321); and
  4. The required fee for the purchase of the relevant driving test form (please pay by crossed cheque or cashier order, payable to “The Government of the Hong Kong Special Administrative Region”, do not send in cash).

### **Pay Sufficient Postage for Mails**

Underpaid mail items are subject to surcharge by Hongkong Post. This department will not accept underpaid mail items, which will be returned to the sender (with return address) or disposed of (without return address) by the Hongkong Post. For proper delivery of your mail items to the department, and to avoid unnecessary delivery delay or unsuccessful delivery, please ensure your mail items bear sufficient postage with return address before posting. Please note details about postage and pay attention to the latest effective New Postage Structure.

## **3. Result of Driving Test**

The result of the driving test as shown on the copy of the test form is subject to final verification by this Department. Should an amendment of the verdict be found necessary in the course of verification, the candidate will receive by post a notice to this effect and he / she will be invited to our office for the purpose of updating the test result.

## **Appendix - Braking System and Safe Driving**

### **Introduction**

The drivers of light buses/buses should ensure road safety as well as safety of passengers and other road users when driving.

Drivers of light buses/buses should take care of passengers while boarding and alighting, including to wait patiently for passengers with disability, small children, the elderly or passengers with hand baggage; do not close the door until the boarding / alighting passengers are clear of the door (for example, make sure that they have left the vehicle safely and all their personal belongings and clothes are clear with the vehicle before closing the door and moving off the vehicle); and do not start driving until the boarding passengers have taken their seats properly. He/she should know exactly the location of the fire extinguisher inside the vehicle and know how to operate it. He/she should also know the position of emergency exit of the vehicle and know how to open it. If the bus is equipped with the Door Closing Warning Buzzer and the buzzer is still activated before moving off, the driver should keep the vehicle at a standstill and check to ensure that all doors are completely and securely closed; otherwise, the vehicle must not be moved off again.

The Road Traffic Ordinance stipulates a maximum speed limit of 80 km per hour and 70 km per hour for light buses and buses respectively when travelling on roads. In other words, any person who drives a light bus or bus on roads with a higher speed limit imposed is still subject to the said maximum speed limit of the vehicle. However, if a light bus or bus is travelling on any road with a speed limit lower than the said maximum speed limit (e.g. a speed limit of 50 km per hour), the driver of the concerned light bus or bus is still subject to the maximum speed limit imposed on that road section.

### **Braking System**

The braking system can slow down or stop a vehicle while in running or to keep the vehicle at a standstill when parked on slopes.

The braking force is generated by friction between components which transform the kinetic energy into heat energy and disperse into air. Upon applying the brake, the brake shoes are activated and rubbed against the brake drums and this action generates heat energy which heats up the two braking components. However, when the temperature of the brake shoes rises, the braking efficiency is reduced. Hence, if the brake is applied when the vehicle is running at high speed, or running down a slope for a long distance, or the brakes are applied frequently in a short period of time, the braking efficiency drops. This phenomenon is called brake fade.

### **Power-assisted Braking System**

When the driver depresses the footbrake, the compressed air is sent to the brake pumps and the braking system is activated. There are different types of warning devices for the low pressure of the compressed air. When the pressure of the compressed air drops (normally less than 4 bars or 60 psi), such warning device will be activated and give warning signals to the driver.

If the warning device is activated when you are driving, you must pull up your vehicle as soon as possible at a safe place and check against the braking system until the situation is rectified; otherwise, the vehicle must not be moved off again.

To check for air leakage, you should build up the air pressure to the highest value, and with the engine turning off, find someone to depress the brake for you and then listen for the air leaking noise.



To avoid corrosion of the air tanks as well as to maintain sufficient air pressure in the tanks, the driver must drain the tanks frequently.

### **Safety Precaution**

Before moving off, the driver must ensure that there are sufficient air pressure in the tanks (normally the minimum safety operation pressure is **not** less than 4 bars or 60 psi).

When driving down slopes, a driver should select a suitable low gear so that the vehicle is driven with the engine brake. **Never** select neutral and let the vehicle coast down the slope because there will be a loss of speed control and the air pressure cannot be built up at an idling engine rotations.

### **The Use of Parking Brake (Handbrake)**

The parking brake should only be used after the vehicle is parked or in the case of emergency braking when the footbrake is not functioning well. If leakage occurs in the footbrake system resulting in the brake failure, drivers should be able to make use of the parking brake to stop the vehicle, the reason being that the parking brake system is separated from the footbrake system.

### **Running Down Slopes**

The vehicle will automatically accelerate when running down slope due to the gravitational force, resulting in loss of control of the vehicle; the situation becomes exceptionally awkward when the vehicle is fully loaded. Brake-fade will occur due to overheating of brake-shoes if retardation is depended solely on footbrake, therefore, when running down slopes, especially the long ones, drivers should first decelerate, engage the exhaust brake (applicable to those vehicles equipped with this function), and engage low gears to ensure maximum safety.

### **Use of Exhaust Brake**

This is a supplementary engine braking system, which controls the flow of exhaust gases to reduce vehicle's speed by retarding revolution of the engine. It can relieve partially the burden of the footbrake to avoid brake fade due to overheating. Generally speaking, when running on level ground or uphill, it is not necessary to activate this brake. However, when running downslopes for a long distance, this brake is quite effective in particular when the vehicle is driven in low gears.

### **Hydraulic Retarder**

Hydraulic retarder is a kind of supplementary braking system which has been commonly used among franchised buses. When the hydraulic retarder is activated, fluid (oil or water) flows into the retarder chamber to produce a torque that counteracts the rotation of the rotor, and the braking torque is transferred back to the transmission output to decelerate the vehicle.

### **Liquefied Petroleum Gas (LPG) Light Bus**

LPG light buses are replacing diesel light buses in operation in Hong Kong. Since LPG is more flammable material, the safety procedures for operating LPG storage tank valves before refilling a LPG PLB should be strictly followed. Before refilling a LPG PLB, driver should turn the red discharge valve clockwise to shut down the storage tank; and then turn the grey input valve anti-clockwise to open it for LPG refilling.