

Guide to Medium Goods Vehicle and Heavy Goods Vehicle Driving Test Amendment sheet

(The following revised paragraphs replace the corresponding paragraphs in the printed Guide)

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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 Permanent Identity Card / Hong Kong Identity Card / an alternative identity document 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); and
- (e) valid Third Party Risks Insurance Certificate in respect of the test vehicle (should also cover driving test purpose).

Candidates should remind the driving instructor who accompanies them to attend driving test (if any) to provide the Driving Examiner conducting the test with his / her private driving instructor's licence (only applicable to candidates receiving driving training from private driving instructors).

Vision Test

Candidates must 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. If a candidate needs to wear spectacles or other corrective lenses to read the vehicle registration number at a distance of 23 metres, he / she must wear the spectacles or other corrective lenses throughout the entire driving test. If a candidate fails the vision test or refuses to wear the spectacles or other corrective lenses after the vision test, they will not be allowed to participate in the driving test, and his / her driving test form will become invalid. If he / she intends to take the driving test again, he / she must purchase a new driving test form.

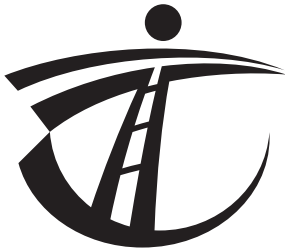
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Reversing and Parking Manoeuvres

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 conditions of the test venue. In the course of reversing, the vehicle should not touch the marker cones or the kerb. After parking, **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 entire extreme rear of the vehicle should stay within the 1- metre yellow stopping area. If the parking space is comparatively shorter than the vehicle, the front part of it is allowed to overhang the front white line. Candidates should take note that repeated steering at rest will NOT be accepted during the reversing and parking. Driving Examiners will regard this as a serious mistake which may eventually lead to a failure.

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Revised in May 2024



運輸署

Transport Department

DRIVING SERVICES SECTION

Guide to Medium Goods Vehicle and Heavy Goods Vehicle Driving Test

FOR CANDIDATES ATTENTION:

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

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INTRODUCTION

The medium goods vehicle and heavy goods vehicle driving tests aim at assessing candidate's driving ability, and help the candidate acquire good traffic knowledge, establish a safe driving attitude and give due consideration to other road users in future.

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 judgment in driving.

PART I TEST VEHICLE REQUIREMENTS

Specific Requirements

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

Medium Goods Vehicle (Code 18)

- (A) It should have a permitted gross vehicle weight of not less than 9 tonnes.
- (B) Dimensions:

Length	–	not less than 5.30 metres
Width	–	not less than 2.00 metres
*Wheel Span	–	not less than 3.20 metres

- (C) The seating capacity should be not less than 2-seater (excluding driver)

Heavy Goods Vehicle (Code 19)

- (A) It should have a permitted gross vehicle weight of not less than 30 tonnes.
- (B) Dimensions:

Length	–	not less than 8.30 metres
Width	–	not less than 2.40 metres
*Wheel Span	–	not less than 6.30 metres

- (C) The seating capacity should be not less than 2-seater (excluding driver)

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

General Requirements

Vehicles also have to meet the following general requirements, otherwise, it will **NOT** be accepted for the purpose of driving test: –

- (A) The test vehicle must be in good mechanical order with a braking system readily accessible to the Driving Examiner.
- (B) The test vehicle must be insured to cover third party risks (including driving test purpose).
- (C) The test vehicle must have a valid vehicle licence that must be displayed on the left of the windscreen of the vehicle.
- (D) The test vehicle must carry a simulated load in such a manner that the total weight of the vehicle including the required loading should be equivalent to at least two third of the permitted gross weight of the test vehicle.
- (E) Side mirrors must be fitted on both sides of the test vehicle.
- (F) The test vehicle must be fitted with a gearbox capable of performing at least four forward and one reversing speeds.
- (G) The test vehicle must be fitted with a reverse warning buzzer.
- * (H) The test vehicle must be fitted with an air braking system.

*Only applicable to those vehicles registered on or after 1.1.2016.

Others

- (A)** Candidate can use vehicles fitted with automatic transmission (including automatic clutch and pre-selected gearbox types) for the driving test. However, candidates who have 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, including those with impaired hearing, missing or defective limbs, or with walking difficulties, have to be referred by medical officers and have to successfully pass a physical test conducted by the Transport Department, before they are allowed to apply for a driving test. For enquiries, please contact the Driving Services Section at **2713 7262**.

Part II TESTING PROCEDURES & INFORMATION TO NOTE

Basic Requirements of the Test

(I) Candidates applying for a medium or heavy goods vehicle driving test must be either a holder of a valid full driving licence for private car or light goods vehicle for at least 1 year immediately preceding their applications (if their full driving licences were obtained without undergoing a probationary driving period); or have completed a probationary driving period of private car or light goods vehicle of at least 1 year and are holding a valid full driving licence for private car or light goods vehicle on the date of application. 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), 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) or 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. Candidates who have passed the heavy goods vehicle driving test will be issued with a full driving licence to drive both a medium goods vehicle and a heavy goods vehicle (codes 18 and 19). However, candidates who have passed the medium goods vehicle driving test will only be issued with a full driving licence to drive a medium goods vehicle (code 18).

According to Regulations 11 and 15 of the Road Traffic (Driving Licences) Regulations (Cap. 374B), an 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 the Transport Department's Cross Boundary Unit or Licensing Offices for details.

(II) Candidates applying for the above test must reach the stipulated standards 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 judgment of timing, speed and car distance to meet various traffic conditions.
- (D) Candidates should 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 Permanent Identity Card / Hong Kong Identity Card / an alternative identity document 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.

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 the vision test will not be allowed to take the test and his / her test form will be invalidated. If the candidates wishes to take the driving test again, he / she will have to purchase a new test form.

PART III POINTS TO NOTE ON DRIVING FOR CANDIDATES

Preparation before Moving Off

Before starting the engine, candidates should check that the handbrake is secured, the gearshift is in the neutral or parking position and the mirrors are adjusted. Adjust the seat and put on the seat belt (only applicable to vehicles manufactured after 1.1.1989 and registered on or after 1.1.1990). Before moving off, candidates should 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). Candidates should also check against the surrounding traffic conditions, give appropriate signal and move off under safe conditions.

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 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 frequently use low gears (first or second gear) or drive only at low speed during the test; otherwise, Driving Examiners will regard these as serious mistakes which may eventually lead to a failure. If the road conditions ahead are clear and safe, candidates should make use of the proper gear to accelerate to a reasonable speed as soon as possible, but not exceeding the speed limit. However, if the road conditions do 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 during driving. Avoid driving in parallel with other motorists in dual or multiple lanes, and try to keep a safe distance from other vehicles or objects when overtaking or stopping.

Overtaking

Candidates should observe the traffic situation as early as possible to prepare for the overtaking. If the traffic situation is safe, avoid stopping behind any stationary vehicle or obstacles prior to overtaking. 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 overtaking process, care should be taken to keep a safe distance from objects ahead and control the speed of the vehicle properly, and should also make use of mirrors to check around for any rear following vehicle. After overtaking, make full use of mirrors before moving in to ensure safety. Candidates should return to the original lane if situation permits and make use of mirrors for observing the traffic. Care should be taken not to cut in sharply in front of other vehicles. The above steps in overtaking should also apply when candidates adjust the position of their vehicles in a driving lane that is larger than standard lane in width.

Hazard Recognition

Candidates should constantly observe the road conditions, so as to respond 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 pay attention to warning, regulatory and informatory traffic signs and act accordingly. 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. After ensuring traffic conditions are safe, candidates should drive into the junction as early as possible, and should avoid hesitation as otherwise they will miss the chance. Constant observation of traffic conditions from both sides is necessary when passing the road junction and to remain in the right course. Maintain reasonable speed and avoid driving too slow which cause traffic congestion or reducing traffic flow. Care should be taken to keep the vehicle inside the proper track when cornering, i.e. should not be far away from the kerb or pavement, should avoid occupying another driving lane. The vehicle must not be allowed to touch the kerb or drive on the pavement. In addition, the vehicle should be kept at a proper speed when driving around corners. Premature / late steering or returning the steering wheel would lead to right corner cut or deviating from the proper track which may result in the vehicle occupying another driving lane.

Traffic Signs / Traffic Lights / Directions of Authorized Traffic Controllers

Candidates should be familiar with and obey the traffic signs, and 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. When the green light is on and is not changing to amber, candidates should not accelerate and should keep on driving with average speed to drive through the junction carefully. They should not deliberately slow down the vehicle if there is sufficient time to cross the junction before the green light changes to amber. If the traffic lights change from green to amber and that the vehicle has passed the stop line, candidates may continue to move on. However, if it has already changed to amber and that the vehicle has not yet reached the stop line, candidates should stop the vehicle. If bringing 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 conditions and to signal properly in good time before changing lanes. When the traffic situation is safe, you should not stop on the lane before changing lanes. Mirrors checking must be performed prior to steering in order to ensure safety. Candidates should also check the mirror for safety when changing their driving position. When driving on a wide road without a line dividing traffic lanes, candidates should also make full use of the mirrors to check traffic conditions before and during a change of driving position.

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 / any appropriate location. 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 proper 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 conditions of the test venue. In the course of reversing, the vehicle should not touch the marker cones or the kerb. After parking, **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. If the parking space is comparatively shorter than the vehicle, the front part of it is allowed to overhang the front white line. Candidates should take note that repeated steering at rest will not be accepted during the reversing and parking. Driving Examiners will regard this as a serious mistake which may eventually lead to a failure.

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 ensure that the vehicle does not touch any object, e.g. the railing or kerb. Candidates should take note that repeated steering at rest will not be accepted during the turnabout in a narrow road. Driving Examiners will regard this as a serious mistake which may eventually lead to a failure.

Oral Test Relating to Safe Driving

Candidates will be required to answer questions on relevant commercial vehicles type relating to safe driving and to demonstrate the operation of relevant equipment to the Driving 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, Driving 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 prove himself / herself to be in a state of inadequate control over the vehicle, the test may be terminated by the Driving Examiner.

In case of an emergency which may endanger other road users or lead to traffic accidents, the Driving 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 electronic test form by shaded box against the appropriate item: –

Minor Mistakes

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

Serious Mistakes

Serious mistakes are those which would cause imminent or direct danger, as well as a candidate's driving technique or basic control not being up to the stipulated standard of the Transport Department. The driving test system being strict and fair, if a candidate commits one or more serious mistakes in a driving test, he/she will be considered to have failed in the test.

If a candidate commits minor mistakes against a certain item for **three** times or more, these mistakes will accumulated to form a *serious mistake* and he/she will be considered to have failed in the test.

Test Form and Record of Result

After the test, the duty Driving Test Centre Officer will give the candidate the Driving Test Form (TD 553), 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 undertook the test during the period his / her licence was suspended by the Court, the "Pass" result 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 Regulations 11 and 15 of the Road Traffic (Driving Licences) Regulations (Cap. 374B), an 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 the Transport Department's Cross Boundary Unit or Licensing Offices for details.

Successful candidates may approach one of the Licensing Offices of this department after 4 working days (but not exceeding 3 years) from the date of passing the driving test to apply for the issue of driving licence, or for an endorsement of the relevant driving entitlements as the case may be. They should bring along 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); and
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.); and
4. The duly completed Application for Full Driving Licence (TD 557); and
5. The required fee for the issue of a full driving licence (not applicable for driving licence endorsement); and
6. Medical Examination Certificate (TD 256) duly completed by a registered medical practitioner (applicable to applicants aged 70 or above).

According to the Road Traffic (Driving Licences) Regulations (Cap. 374B), any candidate who applies for the issue of driving licence to drive a medium or heavy goods vehicle after 3 years from the date that the candidate passed his / her test will not be entertained by the Transport Department.

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

2. Unsuccessful Candidates

Unsuccessful candidates can apply to re-take the medium goods vehicle or heavy goods vehicle driving test 4 working days after the date of their test through the following ways: –

- Online booking for medium goods vehicle or heavy goods vehicle driving test by visiting the [GovHK website](http://www.gov.hk/en/residents/transport/drivinglicense/roadtest.htm) (<http://www.gov.hk/en/residents/transport/drivinglicense/roadtest.htm>). Candidates may apply for an end-of-list driving test appointment or a repeater early test appointment (Note: Applicants who would like to apply for an end-of-list driving test appointment online must possess a valid personal digital certificate issued by recognized Certification Authorities or ‘iAM Smart’ account with digital signing function (i.e. “iAM Smart+”) for authentication; and a credit card (Visa, MasterCard, UnionPay or JCB), a FPS or a PPS account for online payment.). Please contact the Driving Test Appointment Office at 2771 7723 for enquiries.
- Submit the application together with the necessary documents listed below by post to “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 Permanent Identity Card / Hong Kong Identity Card / an alternative identity document previously registered in the Transport Department;
 2. Copy of Full Driving Licence;
 3. The duly completed 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);
 5. Medical Examination Certificate (TD 256) duly completed by a registered medical practitioner (applicable to applicants aged 70 or above).

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 will be invited to the Driving Services Section for the purpose of updating the test result.

Appendix – Braking System and Safe Driving

Introduction

Drivers of medium / heavy goods vehicles should ensure road safety and safety of other road users when driving.

To ensure safety of other road users, drivers should conduct daily check on important parts of the vehicles before work, for example, engine operation, braking, tyres, etc. Drivers of medium / heavy goods vehicle should also ensure that mud or water thrown up by the rotation of the wheels can be caught by the mudguards. Driver shall not drive a vehicle with a total width in excess of 2.5 m or a height in excess of 4.6 m without a permit. The load should be evenly distributed throughout the vehicle so that it would not affect control of the vehicle. Any load must be carried so that it does not endanger other road users. It must be securely stowed within the size and weight limits for the vehicles. The load should also be securely stowed so that it would not move or fall from the vehicle when cornering or braking. For details, please refer to the “Code of Practice for the Loading of Vehicles” published by Transport Department. According to the Road Traffic Ordinance, the maximum speed of medium / heavy goods vehicle on expressway is 70 km/hr.

Braking System

The braking system can slow down or stop a moving vehicle 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 slope for a long distance, or the brakes are applied frequently within a short period of time, the efficiency of the brake 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 a driver is driving, the driver must pull up the 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, the driver should build up the air pressure to the highest value, and with the engine turning off, find someone to depress the brake for him / her 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 with idling rotations of an engine.

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 downslope due to 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 depends 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 the vehicle 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.

