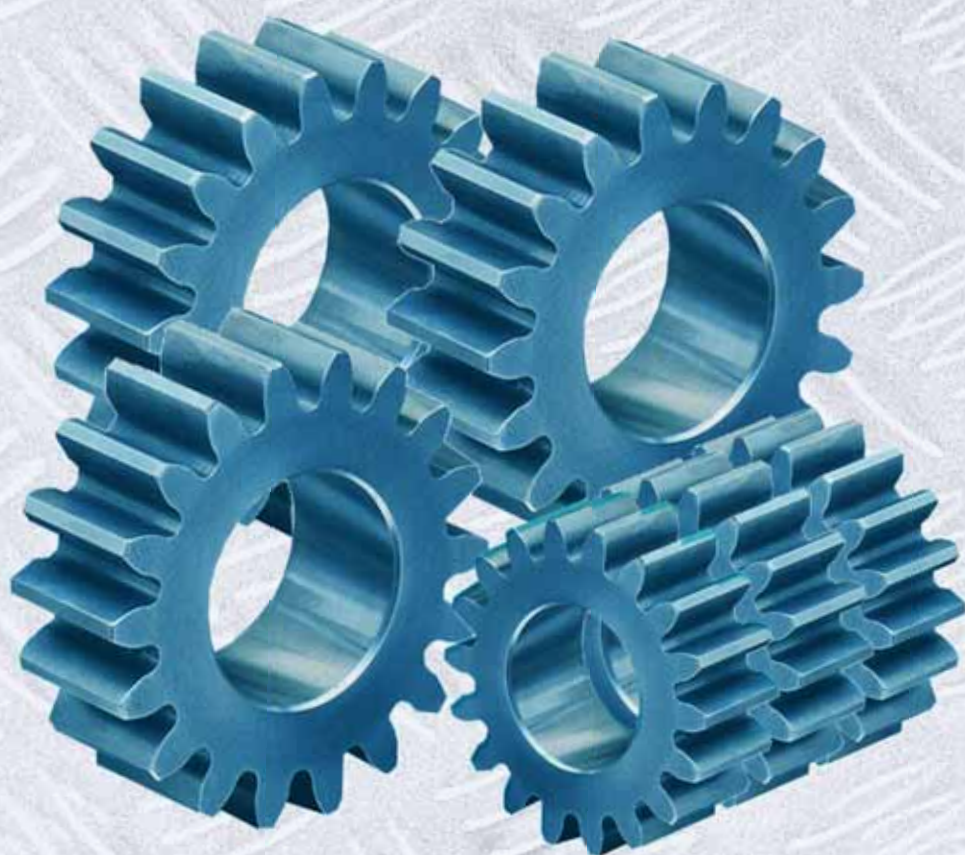


CURRICULUM OF  
PRACTICE GUIDELINES FOR  
VEHICLE MAINTENANCE WORKSHOPS

# 車輛維修工場實務指引 研習課程



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## Notes:

- The URLs quoted in this curriculum are subject to changes by the corresponding organizations.**
- The copyright and all rights of this curriculum (inclusive of its revised versions) are protected by law.**

# 1 Introduction

- 1.1 This curriculum was developed by the “Vehicle Maintenance Technical Advisory Committee”. The Committee comprises members from trade associations, professional institutions, training institutes, transport operators employing large number of vehicle mechanics, vehicle suppliers' associations, vehicle owners' association, relevant government departments, and an independent person nominated by the Home Affairs Bureau.
- 1.2 The curriculum was developed with the following principles:
  - (a) uplifting the service quality of the vehicle maintenance sector;
  - (b) vehicle maintenance workshops can gradually enhance their service standard according to their own pace; and
  - (c) minimizing the impact on business.
- 1.3 The local vehicle maintenance industry has been developing rapidly over the years. Due to the large number of vehicle maintenance workshops in the territory and the lack of a common standard, the service quality varies to a large extent. This curriculum was compiled based on the “Practice Guidelines for Vehicle Maintenance Workshop” (‘the Guidelines’), aiming to introduce the basic standards commonly agreed among the trade and the public, by means of plain language and illustrations. The curriculum encourages vehicle maintenance workshops to exercise self-regulation with reference to the standards mentioned in the Guidelines, and promotes “continuous improvement”, “integrity” and “spirit of service”.
- 1.4 The Guidelines and this curriculum set out the basic standards for workshop operations and work practice. The vehicle maintenance workshops still have to comply with all other relevant laws and regulations.
- 1.5 EMSD provides a 5-hour training workshop on the Guidelines and this curriculum to workshop owners / in-charges and registered vehicle mechanics. The training workshop is recognized as a form of continuing professional development under the Registration Scheme for Vehicle Mechanics.
- 1.6 The Guidelines have been distributed to some 2 700 local vehicle maintenance workshops and all registered vehicle mechanics by mail. The Guidelines can also be downloaded from the EMSD website:

## 2. Interpretation

Unless otherwise specified, the interpretation of clauses and terms in the Guidelines and this curriculum should follow the definitions in the related laws and regulations which are listed in Appendix A:

<b>Customer</b>	Any person including agent, internal customer (such as colleague, another worker of the trade) who has accepted or enquired about the maintenance services as mentioned later in this section.
<b>Chemical waste</b>	Refer to those chemical wastes mentioned in Section 3 of the Waste Disposal (Chemical Waste) (General) Regulation. For details, please refer to Section 4.1 of Appendix A.
<b>Dangerous goods (DG)</b>	Refer to those materials mentioned in Section 2 of the Dangerous Goods Ordinance (Cap.295). For details, please refer to Section 1.7 of Appendix A.
<b>Material Safety Data Sheet (MSDS)</b>	A data sheet detailing the hazards and safety usage of each chemical or substance. Please refer to Section 1.7 of Appendix A for the types of chemicals commonly used in vehicle maintenance workshops.
<b>Personal Protective Equipment (PPE)</b>	Protective equipment or clothes used to isolate chemicals, heat, explosion or other hazards happen in the work environment.
<b>Proprietor</b>	Owner of the vehicle maintenance workshop who is the holder of the business registration.
<b>Registered Vehicle Mechanics</b>	Workers who provide vehicle maintenance services and have been assessed by the Vehicle Maintenance Registration Unit (VMRU) of EMSD as satisfying the requirements. There are



4 services for registration:

Services□	Coverage	Code
Mechanical	This covers the repairs and servicing of all chassis systems and components including vehicle engines, transmissions, brakes, steering, air conditioning system, lubrication and tyre work, but excluding fuel system of LPG vehicles. This also covers come basic electrical work.	M
Electrical	This covers the repairs and servicing of all electrical and electronic systems as well as air conditioning system within a vehicle. Examples are installation, servicing, repairs, diagnosis, testing and commissioning of electrical and electronic equipment and devices and their wirings.	E
Body	This covers body repair and painting. This also covers some simple electrical work, which is limited to disconnection and reconnection of electrical equipment and devices.	B
Specific	This covers specific work related to vehicle maintenance but not fully fitting in the above M, E and B services.	S1 to S7

**Maintenance Services** Refer to one or more of the following activities applied on a vehicle or its parts, subsystems or body:

- |  |                              |
|--|------------------------------|
| (a) Check or assess a vehicle's condition, exhaust or performance; | (i) Body repair;             |
| (b) Fault diagnosis / inspection;                                  | (j) Body making;             |
| (c) Repair;  | (k) Body painting;           |
| (d) Disassemble & Assemble;  | (l) Install;                 |
| (e) Repair or maintain;  | (m) Testing & Certification; |
| (f) Replace / Install;   | (n) Calibration;             |
|  | (o) Test drive;              |
|  | (p) Provide advice on any    |

- (g) Tune; mechanical, electrical or body repair services as listed above.
- (h) Alter;

**Waste Collectors** Refer to the license holders or their delegates who are allowed to provide chemical waste collection or disposal services in accordance to Section 21 of the Waste Disposal Ordinance (Cap. 354).

Please refer to the list of Registered Special Waste Collectors at the EPD website:

[http://www.epd.gov.hk/epd/english/environmentinhk/waste/guide\\_ref/guide\\_ref\\_dwc.html](http://www.epd.gov.hk/epd/english/environmentinhk/waste/guide_ref/guide_ref_dwc.html)

**Workshop** Covered area for conducting vehicle maintenance services. To ensure sufficient work space and accommodate at least one vehicle for servicing, the recommended minimum covered areas are:

- 50m<sup>2</sup> for heavy vehicle maintenance
- 20m<sup>2</sup> for light vehicle maintenance

The above areas exclude offices, warehouses and rest corners. Areas covered by canvas or other non-rigid materials are not counted.

**LPG Vehicles** Vehicles powered by LPG as described in the Road Traffic Ordinance (Cap. 374).

**Workshop In Charge** A person designated by the workshop owner to take responsibilities of the workshop's daily operations.

## 3. Business Standards

**Workshop in charge should follow and ensure that the vehicle maintenance workshop complies with the following business standards.**

### 3.1 General Principles

- (a) **Keep the workshop environment safe, clean, tidy and comfortable. Comply with all local regulations including (but not restricted to) public and occupational safety, fire prevention and building safety, health, hygiene and environmental protection regulations. Please refer to Appendix A for a list of major related regulations.**

#### Objectives

1. A safe, clean and comfortable workshop is the essence of running a vehicle maintenance business. The design and operations of the workshop also need to comply with the related regulations.

#### Reasons

1. A desirable workshop has to be set up first so that the business can develop smoothly.

#### How to achieve

1. Identify a suitable and desirable business location.
2. Properly plan to meet the operational needs and legal requirements.
3. Install the required hardware.
4. Properly put up relevant signs and notices in the workshop.

#### Examples

Please refer to Appendix A: Major Related Regulations.

Browse the following URL for Safety at Work and Use of Equipment:

<http://www.labour.gov.hk/chs/public/pdf/os/D/equipment.pdf>

*(only Chinese version is available)*



A Tidy Workshop

### 3. Business Standards

#### 3.1 General Principles

(b) To provide or arrange adequate training to employees so that they properly perform their duties.

##### Objectives

1. Employers have the responsibility to provide adequate training to employees so that they can properly perform their duties.

##### Reasons

1. With the advance in vehicle technologies such as mechanical design and electronic control, vehicle mechanics possessing knowledge of traditional maintenance techniques can become helpless in some cases.
2. Appropriate training can help employees to enhance their skills, confidence, sense of belonging and concepts of proper customer servicing, which help the business development of the company.
3. To provide valid and relevant evidence of continuing professional development to fulfill the requirements of registration renewal of vehicle mechanics.

##### How to achieve

1. Employers can provide in-house training or arrange employees to attend training courses organized by training providers.
2. The content and level of the training should match employees' abilities and posts so that the knowledge learned can be applied in their daily work.
3. Technical training or information providers include:
  - vehicle manufacturers / suppliers
  - auto-parts (e.g. oil pumps, air-conditioner components, tyres, batteries, other vehicle accessories) manufacturers / suppliers
  - specialized material (e.g. vehicle body paints, lubricants, refrigerants etc.) suppliers
  - vehicle maintenance information suppliers (e.g. Thatcham, Autodata)
  - Internet
  - trade associations, unions, fellow companies
  - professional bodies such as The Institute of The Motor Industry Hong Kong (HKIMI), The Society of Operations Engineers (SOE) (Hong Kong Region)
  - Hong Kong Productivity Council (HKPC)
  - Vocational Training Council (VTC)
  - Employees Retraining Board (ERB)



### 3. Business Standards

#### 3.1 General Principles

(b) To provide or arrange adequate training to employees so that they properly perform their duties.

##### How to achieve

4. Other providers of training on personal development include:
  - manufacturers
  - trade associations and unions
  - manpower resources training consultants
  - Hong Kong Productivity Council (HKPC)
  - Vocational Training Council (VTC)
  - Employees Retraining Board (ERB)
5. Training can be in the form of: course, forum, seminar, visit to relevant organization, and product promotion events
6. The scope of training is very wide. Apart from those mentioned above, writing / language skills, customer service techniques, computer applications, legal knowledge etc. can also be considered.
7. Through “RVM Communications” by means of attempting the annual quiz or contributing article(s) to the publication.

## 3. Business Standards

### 3.1 General Principles

#### (c) Protect the health and safety of employees and all others who may be affected.

##### Objectives

1. Employers have the responsibility to protect employees from being injured at work.
2. Workshop in charge has the responsibility to properly manage the workshop environment, avoiding any dangers caused to the public.

##### Reasons

1. Industrial accident not only brings misfortune to the victim, but also significantly increases the production cost.
2. No matter the victim is an employee or a customer, the accident may cause damage to the company's reputation.
3. Take care of the long-term health of employees.

##### How to achieve

1. Develop the consciousness and culture on work safety.
2. Provide employees with personal protective equipment, such as cut resistant gloves, welding glasses / shields, duct masks, earmuffs, protective masks, etc.
3. Set up protection devices for equipment with potential hazards, e.g. saw blade protection guard for pneumatic cutting machine, fall protection lock for two-poled lift jack.
4. Set up inventory control for materials such as lighter fluid (naphtha), paint, refrigerant, etc. to avoid improper use or abuse.
5. Properly categorize and store the industrial wastes. Keep them away from the public.
6. Organize seminars or arrange employees to attend training courses on occupational safety and health.
7. Put up posters, slogans and accident clippings to arouse vigilance.

##### Examples



No admittance except on Business



Waste Collection Bin

### 3. Business Standards

#### 3.1 General Principles

- (d) All maintenance services should meet the market standard and legal requirements. In addition to achieving the targeted objectives, the service should be carried out by proper means and techniques.

##### Objectives

1. The standard of service not only needs to meet the minimum legal requirements but also should not below the average level of the industry.

##### Reasons

1. If the legal requirements are not satisfied, the vehicle cannot run on the road.
2. Merely meeting the minimum legal requirements but inferior to the average standard of the industry, the workshop will lose its competitiveness in the market.

##### How to achieve

1. Understand the minimum legal requirements.
2. Understand the industry's common practices.
3. Exchange experience with other trade associates.
4. Participate in activities organized by trade associations and professional institutes to build up personal networks, enhancing experience exchanges among trade associates.
5. Assist employees to enroll in training courses related to their duties, thus improving their servicing techniques.
6. Regularly update the hardware and software of equipment in order to maintain the quality of testing and diagnosis.
7. Provide staff trainings on the proper use of diagnosis equipment to enhance service quality.
8. For certain services related to advanced system diagnosis and maintenance, such as diesel injection system, vehicle computer system, etc., if the workshop does not possess the required equipment and techniques, assistance from component manufacturer / supplier should be sought.

### 3. Business Standards

#### 3.1 General Principles

- (e) Hire registered vehicle mechanics for maintenance services. Refer to Section 4.6 for further details.

##### Objectives

1. Hire registered vehicle mechanics to provide service to customers.

##### Reasons

1. Registered vehicle mechanics are qualified persons recognized by both the industry and the government.
2. There should be no difficulty in recruiting registered vehicle mechanics.

##### How to achieve

1. Encourage employees who possess relevant craft certificates or higher qualifications issued by local or recognized training institutes and a minimum of 5 years related working experience in recent years, to register as vehicle mechanics.
2. Encourage employees to attempt the trade tests organized by the Automobile Training Board of the Vocational Training Council. Those who pass the trade tests are eligible for registration.
3. Encourage vehicle mechanics, vehicle electricians and vehicle body service workers who have not less than 10 years of related working experience in recent years to register.
4. In addition to the above mentioned qualifications / experiences, at least 20 hours of continuous professional development records are required during the past 3 years. For details, please refer to the EMSD website.
5. Recruit registered vehicle mechanics of suitable service classes from the labour market.
6. Make use of the recruitment service provided by the Labour Department.

##### Examples



Certificate of Registered Vehicle Mechanic (Sample)



Trade Test Certificate from VTC (Sample)



### 3. Business Standards

#### 3.1 General Principles

- (f) Maintenance work taken up by non-registered workers (e.g. apprentices, assistant mechanics) should be conducted under the supervision of registered vehicle mechanics of the relevant service classes.

#### Objectives

1. Ensure that all maintenance works are handled by registered vehicle mechanics or under their supervision.
2. Workshop in charge has the responsibility to arrange registered vehicle mechanics to provide on-the-job training to apprentices and semi-skilled workers.

#### Reasons

1. Apprentices, unskilled and semi-skilled workers are not qualified to work independently. They should be under the supervision of registered vehicle mechanic.

#### How to achieve

1. A briefing on work procedures, required parts and materials should be conducted by an authorized registered vehicle mechanic to non-registered workers prior to any vehicle maintenance service. The service can then be carried out by the non-registered workers under the supervision of the registered vehicle mechanic. On completion, the staff numbers, number of hours spent on the job, work procedures, usage of parts and materials should be recorded on the job card.
2. Non-registered workers should consult the authorized registered vehicle mechanics for any doubts or uncertainty before continuing the work. Whenever necessary, the registered vehicle mechanics can demonstrate the procedures to the workers. The problems and solution should be properly recorded for training purpose.
3. A registered vehicle mechanic can coach 1 apprentice and 1 semi-skilled worker at the same time, to provide guidance to the apprentice on proper work procedures and more advanced techniques to the semi-skilled worker, enabling him to become a skilled and registered vehicle mechanic in future.



### 3. Business Standards

#### 3.1 General Principles

(g) **Provision of proper equipment and facilities.** Please refer to Appendix B on the list of recommended equipment and facilities.

##### Objectives

1. Enhance work efficiency.
2. Enhance service quality.
3. Emphasize industrial safety.
4. Uplift company's professional image.
5. Employers have the responsibility to provide proper equipment and facilities to employees.

##### Reasons

1. The better the workshop is equipped, the higher the work efficiency is.
2. Take engine tuning for an example. Incomplete combustion produces harmful gases, causes air pollution, and leads to power loss in engine output. If a 4-gas analyzer is available to analyze the engine exhausts, the registered vehicle mechanic will then be able to locate the source of the problem and perform the repair accordingly. Hence, the quality of service is uplifted.
3. Take overhaul of the transmission system as another example. The registered vehicle mechanic can fix the vehicle in position with safety lifting equipment and then take out the transmission gear box from the engine chassis with a long arm hydraulic crane, without relying on strenuous assembly and disassembly steps, thus avoid industrial accidents.
4. The refrigerant recovery/recycling/recharging system, ventilation/exhaust system, waste collection/recycling facilities mentioned in the list of recommended equipment and facilities all serve the purpose of environmental protection. Acquiring these hardware not only meets the legal requirements, but also uplift the company's image on environmental protection.
5. Take aluminum alloy vehicle body repair as yet another. Traditional oxygen/acetylene gas welding or electrical arc-welding machines are not applicable. Only workshops equipped with tungsten inert gas welding equipment and the required professional techniques can handle the service. The equipment not only brings in business but also uplifts the professional image of the company.

### 3. Business Standards

#### 3.1 General Principles

(g) Provision of proper equipment and facilities. Please refer to Appendix B on the list of recommended equipment and facilities.

##### How to achieve

1. Acquire equipment and facilities which match the company's services. For example, a vehicle body repair workshop only needs to purchase the recommended hardware listed in the Vehicle Body Repair section in Appendix B.
2. Acquire or update the equipment and facilities by phases, based on the practical needs for running the business.
3. The SME Loan Guarantee Scheme provides assistance to vehicle maintenance workshops for securing loans to buy equipment and facilities.

### 3. Business Standards

#### 3.1 General Principles

##### (h) Adopt effective measures to ensure that employees pay attention to safety at work.

##### Objectives

1. Explore effective measures to ensure the safety of employees.

##### Reasons

1. A good combination of hardware and software is required.
2. Help to build up the company's image on occupational safety, enhance employees' sense of belonging.

##### How to achieve

1. Set up the basic facilities (Hardware) :
  - Acquire safety devices to meet the local legal requirements, e.g. protective guards for abrasive wheels.
  - Ensure the workshop environment, e.g. fire protection and ventilation, meets the local legal requirements. Acquire enough fire extinguishers.
  - Acquire sufficient stock of personal safety equipment such as safety goggles, gloves, etc.
2. Establish a reward and punishment system (Software) :
  - If an employee does not wear the necessary personal protective equipment (PPE) at work, the workshop in charge should stop him/her immediately, admonishing him/her the importance of using PPE. If required, record the case as evidence for penalty.
  - At the daily morning meeting, review any unsafe acts recently found and remind employees the importance of occupational safety.
  - Review employees' performance on occupational safety in each quarter. Any employee breaking the rules repeatedly will be subject to temporarily suspended from work or immediate termination.
  - Establish an industrial safety competition, awarding those groups with the least number of industrial accidents within the past quarter / year.



### 3. Business Standards

#### 3.1 General Principles

- (i) All advertisements, terms, contracts or descriptions should not contain any unfair or unconscionable terms and conditions which eliminate or reduce the rights of customers or the product's warranty or guarantee.

##### Objectives

1. Uplift and maintain a positive company image by means of fair and conscionable acts.
2. Look for long-term interests of the business.

##### Reasons

1. Unfair terms and contracts, misleading advertisements and descriptions are against the laws of Hong Kong.
2. Nowadays, many consumers know their rights. Some even know how to make good use of the media to protect their rights on fair trades.
3. Consumers may reveal the unfair or unconscionable cases onto the internet which causes long term damage to the company's reputation.

##### How to achieve

1. Make reference to the practice of other fellow companies in the trade. Review the contracts, terms, advertisements and descriptions to avoid any unfair or misleading contents. Unless using used parts/components for the maintenance service has been agreed by both parties, a reasonable warranty period (e.g. 3 months or longer) should be provided.
2. Make reference to the information published by the Consumer Council, in particular the section on "Consumer Contracts", when drafting service terms and contracts. "Report on Unfair Terms in Standard Form Consumer Contract" is available at the following URL: [http://www.consumer.org.hk/website/ws\\_chi/competition\\_issues/model\\_code/2012040301Full.pdf](http://www.consumer.org.hk/website/ws_chi/competition_issues/model_code/2012040301Full.pdf)
3. Seek legal advice when drafting business terms and contracts in order to avoid violation of the laws.

##### Examples

1. An example: Stating "Goods sold are non-refundable" in the receipts may not be accepted by the court as a mean to escape the liability for deficiency in repairing techniques or parts/components.
2. Another example: It belongs to an unconscionable term if the contract states that "the company has the right to decide it deems appropriate at any time to install or replace parts without informing the customer".

### 3. Business Standards

#### 3.1 General Principles

- (j) Advertisements, terms and contracts should not contain any intentionally or unintentionally misleading claims or information.

##### Objectives

1. It is the company's responsibility to provide comprehensive and correct information to customers.

##### Reasons

1. Any intentionally or unintentionally misleading claims or information in advertisements, terms, contracts or descriptions can constitute an offence to the Misrepresentation Ordinance.
2. To establish long term business relationship with customers, the service provided should be consistent with the advertisements, terms, contracts and descriptions.
3. Exaggerated advertisements, terms, contracts or information will only lead to complaints from customers.

##### How to achieve

1. Act in good faith and customer-oriented. Look for win-win results. Target at long-term business development.
2. Constantly review to avoid injustice and damage to company's reputation.
3. In case of doubt, seek advice from lawyers or fellow companies in the trade.

##### Examples

1. An example: It constitutes an offence to the Misrepresentation Ordinance if pirated or parallel-imported goods are used in vehicle service, while claiming to customers that the goods are new genuine and supplied by the local agent.
2. Another example: Use exaggerated and abstract words in advertisements, claiming that the company provides the highest quality auto repair services in Hong Kong, without the support of any evidence, i.e. factual data or examples.

### 3. Business Standards

#### 3.1 General Principles

(k) Immediately or promptly take effective actions to settle complaints. If necessary, resort to arbitration under the complaint / appeal mechanism to ensure fair trade to customers.

##### Objectives

1. Promptly and effectively settle customer complaints to avoid damage to the company's reputation.

##### Reasons

1. The longer the complaint drags, the higher the impact to the company's normal operations and image.
2. If not handled properly, small complaints will turn into major complaints. For example, when a customer queries whether his/her car has been cleaned after service and the frontline staff deny without checking first, dispute may happen. If the workshop in charge does not handle the case properly, the customer may complain to the Consumer Council or the media.

##### How to achieve

1. Provide different channels, e.g. telephone, email, facsimile etc. so that the complaint can quickly and easily reach the workshop in charge or a senior staff, without causing further delay.
2. The workshop in charge or a senior staff handles the complaint.
3. Guarantee that the complaint will be handled within a short time (e.g. 24 hours).
4. If necessary, make an appointment with the customer to better understand the case and try to look at the problem from customer's point of view.
5. Explain the findings to the customer and suggest a solution.
6. After the complaint has been settled, follow up to ensure that the problems have been completely solved.

### 3. Business Standards

#### 3.2 Before Service

##### (a) Verify that the chassis number matches the information on the vehicle license.

##### Objectives

1. Ensure that the record of the vehicle is correct.
2. Ensure that the correct parts / components will be used in the repair service.

##### Reasons

1. Keep the correct records of the vehicles to facilitate proper follow-up in future.
2. The vehicle distributor's parts/components department may require the chassis number for verification when selling genuine parts.
3. All private cars manufactured not less than 6 years before licensing are required to receive annual examinations at designated car testing centres before they can be re-licensed. The chassis numbers will be checked against the information on the vehicle licenses.

##### How to achieve

1. Workshop in charge or the service receptionist must verify the chassis number with the information on the vehicle license before providing the maintenance service.
2. When a private car of more than 6 years old requires mandatory annual examination, the workshop in charge or service receptionist should ask the customer to provide the original copy of the vehicle license to verify the chassis number before making reservation for the vehicle examination.
3. In case the chassis number does not match the information on the vehicle license, the request for service should not be entertained. Instead, the car owner should be informed to handle the problem on his own.



### 3. Business Standards

#### 3.2 Before Service

- (b) All charges for the maintenance service including labour cost and material cost should be clearly written on the quotation. Service should not begin unless the consent from customer is sought. If the customer agrees, verbal quotation can also be accepted.

##### Objectives

1. Let customers know the details and charges of the services in order to prevent arguments in future.

##### Reasons

1. Customers have the right to know which parts need to be repaired and which components need to be replaced, as well as the necessity.
2. Customers have the right to know what parts and maintenance work are included in the service charges.
3. Customers have the right to decide if the service is to be carried out, following the recommendations on the quotation.

##### How to achieve

1. Workshop in charge should instruct his staff to clearly list out the types of maintenance work and components included in the service, with detailed price breakdown on the quotation. Service should not begin until the customer has agreed and confirm by signing on the quotation.
2. If a service has already started and additional faulty parts/components are discovered during the maintenance, the responsible staff should notify the customer and issue a supplementary quotation. Again, customer's consent, i.e. signing on the supplementary quotation, is required before proceeding.  
For example, initially, the quotation included a service item of replacing the oil seal of a rear brake wheel cylinder in order to fix the oil leakage problem. After disassembling, it was found that the brake wheel cylinder had been corroded and needed to be replaced. A supplementary quotation for replacing the brake wheel cylinder should be issued to the customer.
3. Workshop in charge can authorize his staff to accept verbal consents from some old customers without getting their signatures for the quotations. Yet they have to record the details, including the name of the customer, date and time of verbal reply, the agreed service items and charges.
4. To protect both parties, all quotes should be as clear as possible.

## Examples

1. The quotation should mention whether the parts (e.g. the brake wheel cylinder) to be used in the service are new genuine, OEM or used components.
- 2.

汽車服務有限公司  
MOTOR SERVICE CENTRE LTD.

估價單  
ESTIMATE

TO: YAN,

DATE: 21-APR-20 PAGE 1 OF 1

FROM:

Kowloon Bay,  
Kowloon.  
TEL: 27682328  
FAX: 27987891

TEL:

REFERENCE:

HONDA  
STREAM 2.0 RN8 2006

ESTIMATE # 20 /S03 /SK03  
LICENCE # T/PLATE  
CHASSIS # JHMRN88407S  
ENGINE # R20A117  
POLICY # --  
MILEAGE 10,011 Kilometers

	QTY	PRICE HK\$
R/N R/RR DOOR PANEL, REPAIR R/REAR FENDER	1	4,800.00
PAINT R/REAR DOOR, PAINT R/REAR FENDER	1	7,200.00
PAINT RIGHT REAR ROAD WHEEL.	1	1,000.00N

SUB-TOTAL	13,000.00
LESS:DISCOUNT 20.00%	2,400.00
LABOUR TOTAL	10,600.00

SUPPLY NECESSARY PARTS:

QTY	UOM	PARTS DESCRIPTION	PRICE HK\$
1		PANEL COMP,R RR DR	8,032.00
1		TAPE SET R RR DOOR	348.00
SUB-TOTAL			8,380.00
LESS:DISCOUNT 10.00%			838.00
PARTS TOTAL			7,542.00
GRAND TOTAL			18,142.00

\*PARKING FEE HK\$330 PER DAY FOR PRIVATE VEHICLE;  
HK\$390 PER DAY FOR TRUCK NOT EXCEEDING 2 TONS;  
HK\$490 PER DAY FOR TRUCK EXCEEDING 2 TONS.

EST./ MSC / MSC RS301 Q98 20 14

ACCEPTED BY

Materials and parts other than mentioned are not included. Please favour us with full payment of the above cost when repair is completed. This estimate is valid for 7 days, after that a parking fee\* would be charged. Please confirm repair within 7 days after survey procedures, failing to do so a parking fee\* would be charged. 10% of the amount of this estimate would be charged for failing in agreement with the repair.

汽車服務中心有限公司  
For and on behalf of  
MOTOR SERVICE CENTRE LTD.

Date:

### A Detailed Quotation (Sample)

### 3. Business Standards

#### 3.2 Before Service

- (c) There are occasions when some disassembly and assembly works are required in order to provide a quotation to the customer. The customer should be informed in advance of any service charges incurred for the disassembly and assembly works, no matter the workshop is finally appointed to do the service or not.

##### Objectives

1. To protect the interests of both the customer and the maintenance workshop.
2. To clarify the scope of the charges.
3. To avoid any unnecessary argument.

##### Reasons

1. Customers normally do not know the structure of their vehicles and they may misunderstand that vehicle mechanics can identify the faulty parts/components at the first glance. Or, customers may think that the quotations are prepared arbitrarily and therefore should be free of charges. So, there is a necessity to inform customers any service charges incurred from disassembly and assembly works which are required to prepare the quotation.
2. A clear and detailed quotation (e.g. which parts need to be disassembled and assembled, what kinds of equipment will be used and roughly how many man-hours are required to complete the job) can help to promote the company's image.

##### How to achieve

1. A charge item for quotation service should be included in the reception slip.
2. Instruct the service receptionists that customers must be informed in advance on any quotation service charges and how the amounts are calculated.
3. Service receptionists should explain to customers on the steps, time and equipment used for preparing the quotation, indicating that the service charge is worth and reasonable.

##### Examples

1. Clearly state in the reception slip and explain to the customers that "if customers decide not to appoint our workshop to do the maintenance after receiving the quotation, a service charge of \$xxx is payable".

### 3. Business Standards

#### 3.2 Before Service

- (d) In case the actual cost for the service is significantly higher than the estimate in the quotation, the customer must be informed immediately. The work can only be resumed after getting consent from the customer.

##### Objectives

1. To avoid future dispute with the customer.
2. Let the customer decide whether to proceed with the repair work.

##### Reasons

1. Company has the responsibility to explain why the service charge exceeds the estimate in the quotation, e.g. component cost underestimated, new problems found, damage parts not exactly identified until the surrounding parts were disassembled etc.
2. Customers have the right to refuse to pay the extra amounts, seek arbitration or even take legal actions if the over-budget repair works were done without informing them.
3. If the customer spreads the over-budget case onto the internet, the company's reputation will be greatly damaged.
4. Let customers know the causes of over-budget can help to build up the company's honest image.
5. Provide sufficient information to customers and seek their consents before continuing the work. Help to build up a long term relationship between customers.

##### How to achieve

1. Before starting the job, a service receptionist should communicate with the customer on the upper limit of the service charge. Inform the customer immediately before the upper limit is exceeded.
2. Explain to the customer for the causes of over-budget. Inform him/her the potential risk or consequence if the repairing is abandoned.
3. Provide sufficient information to the customer and let him/her decide if the service should continue or not.
4. If the customer accepts the over-budget and agrees to continue the repairing work, he/she needs to sign on the supplementary quotation for confirmation.

### 3. Business Standards

#### 3.2 Before Service

##### (e) Before accepting a service request, inform the customer the methods of payment.

##### Objectives

1. Part of good business management.
2. Increase customers' confidence in the company. Avoid unnecessary disputes with customers.

##### Reasons

1. Although there are many payment methods, e.g. cash, cheque, credit card, digital money, etc., the company may choose to accept some of them only.
2. If only cash or company cheque is accepted, customers should be informed to prepare in advance.
3. Avoid disputes caused by payment methods which affect the relationship with customers.

##### How to achieve

1. The accepted payment methods should be clearly shown on the reception slip.
2. Notify the payment methods before starting the service.
3. After the maintenance has been finished, the service receptionist should inform the customer the service charge as well as the payment methods.

### 3. Business Standards

#### 3.2 Before Service

(f) To avoid potential dispute, any scratches / damages on the vehicle body or upholstery should be clearly marked on the reception slip and confirm with the customer.

##### Objectives

1. To avoid potential dispute with customers.
2. Service providers have the responsibility to protect customers' properties.

##### Reasons

1. It will spark a dispute if the customer finds unrecorded scratches / damages on his/her car after the service. The workshop may be requested to bear responsibility for the scratches / damages.
2. Customers' vehicles should be protected from scratches / damages. If the scratches / damages are caused by the workshop during service, regardless of the extent, compensations are required.
3. Customers may not fully understand the conditions of their vehicles, no matter their bodies or upholsters, and think that their cars are similar to new ones. They will blame the workshop if scratches / damages are found after the service.
4. To protect both parties and to avoid unnecessary losses or compensations, any scratches / damages found must be clearly recorded before starting the service.

##### How to achieve

1. The reception area should be equipped with adequate lighting so that the service receptionist can clearly examine the condition of the vehicle body.
2. Apart from recording the scratches / damages, the service receptionist should explain the problems found to the customer and request him/her to confirm by signing on the reception slip. The customer should be given a copy of the reception slip so as to avoid any potential dispute.

### 3. Business Standards

#### 3.2 Before Service

- (f) To avoid potential dispute, any scratches / damages on the vehicle body or upholstery should be clearly marked on the reception slip and confirm with the customer.

#### Examples

R. O. NO. 65      RECEPTION SLIP 款接紙      Company Copy

<b>Customer Detail 客戶資料</b>		<b>Vehicle Detail 車輛資料</b>	
Customer 客戶: Mr. Leung	Lic. No. 車牌: C 88	Eng. Disp. 汽缸容量: 318P	
Telephone	Make 車廠: VW	Model 型號: Golf	
Fax	Mfg. Year 製造年份: 2006	First Register Date 首次登記日期: 8/9/2006	
傳真:	Chassis No. 車身號碼: WJWZZZ1KZ7W		
Email	Date In 入廠日期: 9/6/20	Time 時間: 14:30	
電郵:	Fuel Level 油量: E	Mileage 行車哩數: 65925 Km	
J. P. Partner:			

<b>Job Description 工作項目</b>	(Engine Oil: )	<b>Amount</b>	
<input type="checkbox"/> A Oil Service 更換機油套餐 <input type="checkbox"/> B Flexi Maintenance Package 自選保養套餐 1 Inspect and top-up refrigerant 檢查冷氣系統及添加雪種 2 O-Zone treatment 車廂臭氣淨化處理 3 Clean and adjust brake 洗校迫力 4 Balance both front wheels 前輪吸味 <input type="checkbox"/> C Comprehensive Maintenance Package 全面保養套餐  車身損毀報價		檢查費 \$1000	
Expected Completion Date & Time:			Remarks: Spare Wheel: Y / N Wheel Caps: LF RF LR RR Antenna: Y / N Others:

I/We, the undersigned, being the owner/authorized agent of the above mentioned vehicle do hereby authorize the undersigned to proceed with the repairs and/or services of the above mentioned vehicle. I/We agree to pay you the parking charges of the above mentioned vehicle at current market price. I/we fail to collect the same within 24 hours after I/we have been notified that the vehicle is ready for collection.

本人/我們，即下開簽署人，為上述車輛之註冊車主/上述委託修車人註冊車主的授權代理人，謹授權 汽車維修站，進行及/或其它處理上述車輛。若 貴公司於通知本人/我們取回上述車輛後24小時內仍未取車，本人/我們同意按市價支付泊車費。

In any circumstances, our company shall not be responsible for any loss and/or damage howsoever caused to the authorized-repair vehicle whether by the misfeasances, negligence, default and or omission of our company or otherwise, including the loss or disappearance of the vehicle and/or loss of whatever articles that may be kept in the vehicle after the same has been sent to for repair. 在任何情況下，本公司無須對 貴客負責本公司是否因不適當、不小心、大意及/或造成疏忽引致受修車輛之損失及/或車輛本身之損失，並包括受修車輛內所存放的財物及任何物品的損失等責任上賠償。

Pay method: Only cash and VISA / Master Card but no bank cheque will be accepted. 付款方法：請以現金或VISA / Master信用咭付款，支票恕不接受。

取車時請出示此款接紙  
Please present this Reception Slip for collection of your vehicle  
請取回車內私人物件  
Please Collect All Your Personal Belongings

Service Advisor  
維修顧問

Signature of owner or authorized person  
車主或授權人簽署

查詢詳情/For enquiries: 汽車維修 有限公司 Motor Service Station Ltd. Website: www.motor.com.hk

<input type="checkbox"/> 觀塘站: 九龍觀塘偉業街 號彩虹工業大廈地下	G/F, Rainbow Factory Building,	Wai Yip Street, Kwun Tong, Kln.	Tel: 2172	Fax: 2172
<input type="checkbox"/> 柴灣站: 香港柴灣利翠街 號中安工業大廈地下	G/F, Chung On Industrial Building,	Lee Chung Street, Chai Wan, H.K.	Tel: 2880	Fax: 2880
<input checked="" type="checkbox"/> 長沙灣站: 九龍荔枝角青山道 號德源工業大廈地下	G/F, Tong Yuen Factory Building,	Castle Peak Road, Lai Chi Kok, Kln.	Tel: 2411	Fax: 2411
<input type="checkbox"/> 元朗站: 新界元朗宏業東街 號宏業工業中心A座地下	G/F, Unit A, Wang Yip Centre,	Wang Yip St. East, Yuen Long, N.T.	Tel: 2470	Fax: 2478
<input type="checkbox"/> 沙田站: 新界沙田大圍成運路 號成全工業大廈地下	G/F, Shing Chuen Ind. Building,	Shing Wan Road, Shatin, N.T.	Tel: 2608	Fax: 2608

A Reception Slip Recording Damages on the Vehicle (Sample)



### 3. Business Standards

#### 3.2 Before Service

(g) Take appropriate measures to protect the vehicles entrusted by customers for service. To avoid disputes in future, customers should be advised to take away any valuables belongings from their vehicles before the work starts.

##### Objectives

1. To avoid disputes, remind customers to take away valuable belongings from their cars.
2. To avoid any unnecessary liability or compensation incurred.

##### Reasons

1. Every day, there are lots of visitors entering the workshop. Customers should be reminded to take care of their belongings. Otherwise, when theft happens, customer may argue with the workshop and the company may be liable to unnecessary responsibility or compensation.

##### How to achieve

1. Put up conspicuous reminders such as “Take away valuable belongings from your car” on the reception area.
2. Instruct the service receptionists to remind customers to take away their valuable belongings from their cars before leaving them to the workshop.
3. A conspicuous note “Take away valuable belongings from your car” should be included on the reception slip as to remind customers.

### 3. Business Standards

#### 3.2 Before Service

- (h) Before starting work, related areas on the vehicle body and the passenger compartment must be covered with protective materials to avoid soil or damage. Any soil or damage caused during service should be repaired free of charge.

##### Objectives

1. Workshops have the responsibility to properly protect customers' vehicles.
2. To build up the professional image of the workshop.

##### Reasons

1. To avoid any soil or damage onto customers' vehicles which leads to compensation, related areas on the vehicle body and the passenger compartment should be covered with protective materials.
2. If customers' vehicles, both inside and outside, are not properly protected during the service, customers will complain and ask for compensation, damaging the interest and image of the company.
3. Some decorations or accessories inside the passenger compartment may be hand-made or with commemorative values, which cannot be repaired or compensated.

##### How to achieve

1. Cover the front fenders with protective tapes to avoid scratches by clothes or tools during service.
2. Cover the carpet in the passenger compartment with protective papers to avoid dirt from the shoes.
3. Cover the steering wheel with anti-fouling seal.
4. Cover with front seats with plastic bags.
5. Instruct the workers that unless for service work, entry to customers' vehicle compartments is not allowed.
6. Keep the workshop clean. Remove any oil stain on the floor.

### 3. Business Standards

#### 3.2 Before Service

- (h) Before starting work, related areas on the vehicle body and the passenger compartment must be covered with protective materials to avoid soil or damage. Any soil or damage caused during service should be repaired free of charge.

#### Examples



Cover the Front Fender with Protective Tape



Protect the Front Seat with Plastic Bag



Protect the Carpet with Protective Paper

### 3. Business Standards

#### 3.3 During Service

##### (a) Smoking is prohibited within the workshop.

##### Objectives

1. Workshop in charge has the responsibility to prevent fire by meeting the fire safety requirements.

##### Reasons

1. There are many flammable chemicals, e.g. fuel, paint, refrigerant, lighter fluid (naphtha) etc. stored in vehicle maintenance workshops so precautions against fire must be taken.

##### How to achieve

1. Smoking or even a lighted cigarette is strictly prohibited within the workshop area.
2. Anyone found smoking in the workshop will be asked to extinguish the cigarette and leave. In case of necessary, notify the workshop in charge to handle the case without causing confrontations.
3. Workshop in charge should put up "NO SMOKING" (in both Chinese and English) warning signs in conspicuous places inside the workshop.

### 3. Business Standards

#### 3.3 During Service

##### (b) Prevent people playing or loitering in the workshop or its vicinity.

###### Objectives

1. To avoid unnecessary losses suffered by the company or others.

###### Reasons

1. Vehicle traffic near the workshop causes dangers to people playing or loitering within the area.
2. Many tools used in the workshop are dangerous to people playing or loitering in the area.
3. People playing or loitering in the workshop or its vicinity constitute a risk of damage to its sophisticated and expensive electronic equipment.
4. If someone is injured in the workshop, the company will be held responsible.

###### How to achieve

1. Instruct all staff that visitors are not allowed to enter the workshop.
2. Instruct all staff that playing or loitering within the workshop area is not allowed.
3. Workshop in charge should put up "NO PLAYING" (in both Chinese and English) warning signs in conspicuous places inside the workshop.
4. All staff should help to maintain proper order within the workshop. Anybody found playing or loitering in the workshop or its vicinity should be stopped. Inform the supervisor in case of necessary.

### 3. Business Standards

#### 3.3 During Service

(c) No unauthorized entry to the workshop. Workshop in charge needs to take care of the safety of visitors.

##### Objectives

1. Workshop in charge has the responsibility to protect visitors from accidents in the workshop.

##### Reasons

1. Customers may request to enter the workshop to examine the condition of their vehicles. Workshop in charge has to take responsibility if he/she agrees.
2. Visitors may not be aware that there are vehicles entering or leaving the workshop which may causes dangers to them.
3. Visitors may not be aware of the dangerous tools used in the workshop. Inadvertently touching a machine in operation may result in cuts, electric shocks, poisoning or even explosion.
4. If an accident happened in the workshop and someone is injured, the company will be held responsible for compensation.

##### How to achieve

1. Instruct all staff that unless accompanied by workshop in charge or service receptionist, visitors are not allowed to enter the workshop area. If necessary, appropriate protective devices such as goggles should be provided.
2. Workshop in charge should put up "NO ADMITTANCE" (in both Chinese and English) warning signs in conspicuous places inside the workshop.
3. All staff should help to implement the above mentioned rules. In case a visitor violates the rules, staff should stop him/her politely and inform the workshop in charge immediately, without causing confrontations.

##### Examples



Put up Clearly Written Signs of "STAFF ONLY"

### 3. Business Standards

#### 3.3 During Service

- (d) Provide suitable maintenance equipment and manufacturers' data or compatible technical information to vehicle mechanics so as to provide the requested service to customers. After finishing the job, vehicle mechanic should write down their registration number and sign on the job card.

##### Objectives

1. Employers have the responsibility to provide maintenance equipment and technical information to their workers.
2. To ensure that the maintenance work meets professional standard.
3. Make use of manufacturers' data or compatible technical information to carry out the maintenance service.

##### Reasons

1. To build up a professional image for the company.
2. Sufficient technical information facilitates problem solving.
3. Make reference to manufacturer's data or compatible technical information when carrying out the service. Never modify the vehicle's settings arbitrarily.

##### How to achieve

1. Company should provide continuous training to registered vehicle mechanics, ensuring that they have the latest technical knowledge and know how to make use of manufacturers' data or compatible technical information in their daily work.
2. Company should invest and update the maintenance facilities regularly; provide appropriate training to employees so that they can apply the latest vehicle maintenance equipment.
3. Company should instruct registered vehicle mechanics to fill in their registration numbers and sign on the job card after completing the service.
4. Workshop in charge should check whether his/her registered vehicle mechanics follow the instruction mentioned in (3).
5. Sources of technical data matching or compatible to manufacturers' specifications:
  - Autodata
  - Glass
  - Thatcham
  - Internet
  - foreign and domestic auto repairing manuals and CD
  - servicing manuals provided by vehicle manufacturers



### 3. Business Standards

#### 3.3 During Service

(e) To take effective measures to ensure that all works are done in accordance with vehicle manufacturers' recommended (or compatible) specifications and procedures.

##### Objectives

1. Maintenance work should be conducted with reference to the original design, safety standard and performance of vehicles.

##### Reasons

1. Tampering with vehicle settings will affect road safety.
2. Tampering with vehicle settings will affect manufacturer's warranty.

##### How to achieve

1. Training or information providers of manufacturers' specified, recognized or compatible technical data:
  - vehicle manufacturers / suppliers
  - parts (e.g. diesel pumps, air conditioner parts, tires, batteries, accessories) manufacturers / suppliers
  - special material (e.g. paints, lubricants, refrigerants) suppliers
  - Maintenance information suppliers
  - vehicle maintenance technical information providers:
    - Autodata
    - Glass
    - Thatcham
  - Internet
  - foreign and domestic auto repairing manuals and CD
  - associations and unions
  - trade associates
2. Provide training, including in-house training.
3. Establish a mechanism which ensures that workers can easily access to the required technical information.
4. Establish a Q/C system.

### 3. Business Standards

#### 3.3 During Service

- (f) Provide enough natural ventilation or ventilating facilities to prevent the accumulation of exhaust or flammable gases. If the workshop provides service to LPG vehicles, please refer to EMSD's 《Guideline for LPG Fuelled Vehicles Workshop in Hong Kong》 for the design of the ventilation system.

##### Objectives

1. Employers have the responsibility to ensure the occupational health and safety of workers.
2. Provide a working environment which meets the occupational health and safety standards.

##### Reasons

1. Within a vehicle maintenance workshop, lots of dust and poison exhaust gases are generated whenever engines are started, braking systems are repaired, or volatile solvent such as lighter fluid is used to clean up parts.
2. Protect workers from excessive inhalation of carbon monoxide which leads to anoxic coma or even death. Prolonged inhalation of harmful chemicals causes irreversible damage to workers' respiratory and nervous system.
3. Too much dust, harmful chemical substances or suspended heavy metal particles in air are harmful to health and subject to prosecution under Labour Department's occupational safety and health legislation.
4. As it is heavier than air, liquefied petroleum gas (LPG) can easily accumulate in ditches and shadow corners within the workshop. A little spark will cause a violent explosion.

##### How to achieve

1. If natural ventilation is inadequate, ventilation devices should be installed in order to remove exhaust gases and harmful substances from the workshop. Bring in fresh air to maintain a healthy level of air quality.
2. When carrying out certain work procedures which generate a lot of dust, harmful chemical substances or heavy metal particles, workers should wear filtration equipment and complete the work within an area with strengthened ventilations, so as to ensure occupational health and safety.
3. Fill the hollows and cover up trenches.
4. The ON/OFF switch of ventilation device should be installed in the workshop entrance, preventing workers from inhaling excessive poison gases after long holidays.

### 3. Business Standards

#### 3.3 During Service

- (f) Provide enough natural ventilation or ventilating facilities to prevent the accumulation of exhaust or flammable gases. If the workshop provides service to LPG vehicles, please refer to EMSD's 《Guideline for LPG Fuelled Vehicles Workshop in Hong Kong》 for the design of the ventilation system.

#### Examples

1. 《Guideline for LPG Fuelled Vehicles Workshop in Hong Kong》can be downloaded at:  
[http://www.emsd.gov.hk/emsd/c\\_download/sgi/Workshop\\_Guideline.pdf](http://www.emsd.gov.hk/emsd/c_download/sgi/Workshop_Guideline.pdf)  
( Only Chinese version is available)
- 2.



Guide the Exhaust from Vehicle to Outdoors via an Exhaust Hose

### 3. Business Standards

#### 3.3 During Service

(g) **Never use a hydraulic floor / bottle jack to support the vehicle. Use jack stands instead.**

##### Objectives

1. Make sure that workers use the right tools to support the vehicle when performing maintenance service.
2. Employers have the responsibility to provide workers with safe and suitable maintenance equipment.
3. Prevent accidents which cause casualties.

##### Reasons

1. Hydraulic jacks can only be used to lift up or lower down vehicles. They should not be used to support a car during the servicing period as their design do not have provision to prevent the car from falling. This essential point was often overlooked which resulted in many fatal accidents.
2. Supporting a vehicle with metal jack stands or wood blocks is safe and reliable.

##### How to achieve

1. Workshop should have adequate metal jack stands or wood blocks to support vehicles.
2. Workers should be educated to check the vehicle supporting tools throughout before use, to ensure that they are not damaged and safe to use.
3. Workers should be trained to place the vehicle supporting tools properly after use, to avoid damage.
4. Workers must be instructed that supporting vehicles with hydraulic jacks are strictly prohibited.
5. Workshop in charge should regularly check whether his/her workers follow the instruction.

##### Examples



Metal Jack Stands

### 3. Business Standards

#### 3.3 During Service

(h) Pay attention to the surrounding environment and movements when operating a powered lifting platform. Once the desired position has been reached, lock the platform to prevent slipping.

##### Objectives

1. Make sure that workers know how to lift and lower vehicles by means of powered lifting platform.
2. Employers have the responsibility to provide powered lifting platforms which meet the related safety standards.
3. Prevent accidents which cause casualties.

##### Reasons

1. When operating a powered lifting platform, pay attention to the surrounding environment and movements. Avoid casualties caused by collision with human or vehicles.
2. When operating a power lifting platform, pay attention to the head space. Make sure that the vehicle will not collide with the ceiling.
3. A powered lifting platform's safety lock prevents the platform from slipping and hurting the mechanic working underneath the platform. Its proper use must be mastered.

##### How to achieve

1. Company needs to appoint competent persons to inspect and certify the powered lifting platforms once per year.
2. Provide training to workers on the proper use of the powered lifting platform, avoiding accident caused by misuse.
3. If the powered lifting platform is found to be malfunctioning, stop using it and turn off the power. Put up a warning notice on the machine and notify all workers. Contact the machine supplier for repairing.

### 3. Business Standards

#### 3.3 During Service

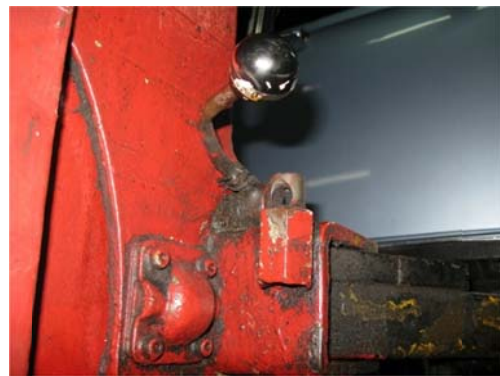
- (h) Pay attention to the surrounding environment and movements when operating a powered lifting platform. Once the desired position has been reached, lock the platform to prevent slipping.

##### Examples

1. Please refer to the Appendix A: Major Related Regulations – Factories and Industries and Undertakings Ordinance (Chapter 59)
2. Refer to the following URL for 《Guidance Notes on Inspection, Thorough Examination and Testing of Lifting Appliances and Lifting Gear》 :  
<http://www.labour.gov.hk/eng/public/os/C/gear.pdf>
3. Refer to the following URL for 《A Guide to the Factories and Industrial Undertakings (Lifting Appliances and Lifting Gear) Regulations》 :  
<http://www.oshc.org.hk/others/bookshelf/BB043E.pdf>



Hydraulic Car Lift



Locking Device on Car Lift

### 3. Business Standards

#### 3.3 During Service

##### (i) Pay attention to workers' safety related to the use of electricity.

##### Objectives

1. Avoid industrial accidents caused by electric shock.

##### Reasons

1. A major cause of electrical shock is using power tools in a moist environment, e.g. conducting electrical welding in an area filled up with stagnant water.
2. Using power tools in a messy area full of sharp metals is prone to electrical shocks as the insulation of electric wires is easily broken by metal cuts.

##### How to achieve

1. Vehicle maintenance work should be carried out in a covered workshop, avoiding the hazards of electric leakage caused by rainy weathers.
2. During the rainy season, stagnant water may appear in some heavy vehicle maintenance workshops located in the New Territories. Workshop in charge must remind the workers that power tools should never be put on ground which is moist.
3. Workshop in charge should ensure that the workplace is tidy and clean. Workers are not allowed to arbitrarily put the waste materials, causing damage to electrical facilities or electric wires which may result in leakage of electricity.
4. To prevent electric wires from being mashed by vehicles, they must not be placed on the vehicle accesses without protection. If necessary, electric wires and pipes should be covered by protection boards.

##### Examples

Please refer to the Appendix A: Major Related Regulations – Electricity Ordinance (Chapter 406) and the following related URLs:

1. Notes for Registered Electrical Workers:  
[http://www.emsd.gov.hk/emsd/eng/pps/pub\\_gng\\_rew.shtml](http://www.emsd.gov.hk/emsd/eng/pps/pub_gng_rew.shtml)
2. Code of Practice for the Electricity (Wiring) Regulations (2009 Edition):  
[http://www.emsd.gov.hk/emsd/e\\_download/pps/pub/COP\\_E.pdf](http://www.emsd.gov.hk/emsd/e_download/pps/pub/COP_E.pdf)
3. Leaflet – “Test Your Electrical Installations Periodically”:  
[http://www.emsd.gov.hk/emsd/e\\_download/pps/pub/Leaflet\\_TEIP.pdf](http://www.emsd.gov.hk/emsd/e_download/pps/pub/Leaflet_TEIP.pdf)
4. Periodic Test Certificate – Form WR2 (Sample):  
[http://www.emsd.gov.hk/emsd/chi\\_source/pps/electricity\\_new\\_11/wr2\\_sample\\_chi.pdf](http://www.emsd.gov.hk/emsd/chi_source/pps/electricity_new_11/wr2_sample_chi.pdf)



### 3. Business Standards

#### 3.3 During Service

- (i) Pay attention to workers' safety related to the use of electricity.

##### Examples



Poster: "Safe Use of Electricity"



A Neat and Tidy Workplace

### 3. Business Standards

#### 3.3 During Service

- (j) **Remind / instruct workers to pay attention to the Supplemental Restraint System (SRS). Avoid accidental activation which leads to injury.**

##### Objectives

1. Ensure that workers know how to safely handle or repair the SRS. Avoid accidental activation of the SRS which leads to injury.

##### Reasons

1. Nowadays, SRS is standard equipment of passenger cars. Whenever the system detects a car collision, explosion of gunpowder is triggered which inflates the airbag within a very short period. If SRS is wrongly handled during service, explosion of the airbag may happen which leads to industrial accident.
2. Prevent industrial accidents from happening. Otherwise, the company will bear the responsibility and compensations.

##### How to achieve

1. Teach workers the proper procedures for examining or repairing SRS. As there are variations among different car models, reference to the corresponding maintenance data should be made in order to confirm the method. For example, the typical steps are:
  - Connect a suitable vehicle diagnosis scan tool to the car interface
  - Read the trouble codes displayed and determine the cause
  - Unplug the connector of the scan tool
  - Disconnect the car battery
  - Repair or replace the malfunctioning part(s) which were identified by the trouble codes
  - Reconnect the car battery
  - Reconnect the scan tool to the car interface and clear the trouble codes
  - Disconnect the scan tool and arrange a road test
  - The repair is completed if the SRS failure warning light on the dashboard does not turn on after the road test.
  - If the SRS failure warning light turns on again after the road test, repeat the previous steps.
2. Hand over the SRS maintenance job to the vehicle manufacturer or distributor.
3. Hand over the job to another workshop which has the required equipment and expertise.

### 3. Business Standards

#### 3.3 During Service

##### (k) Use low voltage devices for auxiliary lighting.

###### Objectives

1. Significantly reduce the risk of electrical shocks.

###### Reasons

1. Using low voltage devices for auxiliary lighting can prevent employees from electric shocks.
2. LED or low voltage fluorescent lights generate much less heats, preventing burns to workers.
3. Compared to traditional incandescent light bulbs, low voltage auxiliary lighting devices are more durable and environmental friendly.

###### How to achieve

1. Replace all incandescent light bulbs in auxiliary lighting devices with low voltage energy saving light bulbs, LED, fluorescent lights or hand-held torches.
2. Gradually replace the broken incandescent light bulbs in auxiliary lighting devices with low voltage energy saving light bulbs, LED, fluorescent lights or hand-held torches.

### 3. Business Standards

#### 3.4 After Service

- (a) After completing the service, a registered vehicle mechanic or his/her supervisor should review the work in accordance with a predetermined quality control mechanism, to ensure that the quality meets the required standard. He/she should fill in his/her registration number on the job card to confirm that the quality is up to standard.

##### Objectives

1. To ensure that after service, the vehicle conforms to manufacturer's design specifications.
2. To ensure that the service is carried out by a registered vehicle mechanic or under his/her supervision.

##### Reasons

1. This is an essential procedure for quality control. A registered vehicle mechanic or his/her supervisor fill in his/her registration number on the job card means that he/she has double-checked the vehicle and confirms the quality of service.
2. Let the vehicle mechanic or his/her supervisor know he/she should ensure the service is up to professional standard and he/she is accountable to the service provided.
3. By checking the information on the job card, the service supervisor knows if there were any missing steps in the service and whether the procedures, parts and materials used were correct.

##### How to achieve

1. Company should design a job card on which a registered vehicle mechanic can fill in his/her registration number, the completed service steps, and the parts/components replaced.
2. The job card should also have an entry for the Q/C service supervisor to fill in his/her registration number.

(a) After completing the service, a registered vehicle mechanic or his/her supervisor should review the work in accordance with a predetermined quality control mechanism, to ensure that the quality meets the required standard. He/she should fill in his/her registration number on the job card to confirm that the quality is up to standard.

[illegible]

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### 3. Business Standards

#### 3.4 After Service

- (b) On the invoice, commit to customers a reasonable warranty period or mileage for service defects caused by poor workmanship, incorrect diagnosis or inferior materials.

##### Objectives

1. Show confidence in the company's service quality.

##### Reasons

1. Nowadays, more and more customers are aware of their rights. If a company cannot commit to its customers on the quality of service by means of reasonable warranties, its business development will be hindered.
2. Written, instead of verbal commitments can give more confidence to customers.

##### How to achieve

1. Suppliers of parts and components usually provide reasonable warranty periods or mileages for their products. Vehicle maintenance workshops can transfer and let their customers enjoy the warranties with little risk.
2. Purchase parts and components from reputable suppliers to reduce the risk of claims due to parts/components failure.
3. Hire registered vehicle technicians to carry out the maintenance work, ensuring that the service is up to standard.
4. Provide incentives to encourage employees to pursue continuous professional development, hence uplift their skill level.
5. Provide customers with the warranty period or mileage committed by the new parts suppliers, e.g. 3 months or 3,000 km. Normally, warranty will not be provided to used or customer-provided parts and it should be clearly explained to customers and written down on the reception slip.



### 3. Business Standards

#### 3.4 After Service

- (c) Show the replaced parts/components to customer and let him/her decide how to handle. Customers have the right to get back the replaced parts/components (except warranty claims or one-to-one replacement as stated in the quotation).

##### Objectives

1. Let customers know the damaged parts have been replaced, strengthening their confidence.
2. Customers have the right to decide how to handle the replaced parts.

##### Reasons

1. The replaced parts are customers' belongings. They can choose to let the workshop handle or get back the parts.
2. Parts replaced under warranty claims need to be returned to the manufacturer for research/analysis so as to improve the quality.
3. To avoid disputes in future, the quotation should clearly state which replaced parts belong to the workshop as an arrangement of one-to-one replacement.

##### How to achieve

1. Company should instruct the vehicle mechanics to properly save the replaced parts, awaiting customers' decision for further handling.
2. Put the replaced parts into clean paper boxes or plastic bags and if possible, store them into the vehicle's luggage compartment. When delivering the vehicle back to the customer, show him/her the replaced parts.
3. Large parts, toxic or corrosive hazardous materials should be properly stored in the workshop, labeled with the vehicle plate numbers. Suggest customers appointing the workshop to handle the parts.

##### Examples



Save the Replaced Parts for Customer's Decision



### 3. Business Standards

#### 3.4 After Service

- (d) Clearly list out the date, vehicle mileage and all performed services and used materials, with price breakdowns if necessary, on the invoice.

##### Objectives

1. Companies have the responsibility to explain the detailed charges to customers.
2. As consumers, customers have the right to know the details of the charges.

##### Reasons

1. Customers have the right to know whether the company's services deserve the charges. A neat and clear invoice is very important and can effectively uplift the company's image.
2. Clearly list out each labour / material cost so that customers can easily comprehend.
3. Record the date and mileage on the invoice so that customer can compare it with the old ones, determining whether there are some parts which require frequent replacement.

##### How to achieve

1. Make reference to other companies' invoices and adopt the correct design. Clearly list out the descriptions of all service works and materials, quantities and charges, as well as the date of service and vehicle mileage.

### 3. Business Standards

#### 3.4 After Service

- (d) Clearly list out the date, vehicle mileage and all performed services and used materials, with price breakdowns if necessary, on the invoice.

#### Examples

INVOICE					
Customer Name: MR LEUNG		Tel. No:		Invoice Date: 11.12.24	
Mobile:				Invoice No: CW-113	
Lic No.: C 88	Chassis No.: WVVZZZ1KZ7W	Make: VOLKSWAGEN	Model: GOLF N	Year: 2006	Mileage: 65,923KM
Svc Code/Parts No.	Item Description	Qty.	Price	Disc.	Net Amount
MISC999	REMOVE & REPT ELECTRICAL COMPONENTS FOR BODY WORK	1.00	1,000.00		1,000.00
BODY998C	REMOVE DAMAGE PARTS AND RESHAPE REAR END PANEL	1.00	2,000.00		2,000.00
BODY999C	REPLACE BACK DOOR PANEL, REAR BUMPER ASSEMBLIES, BUMPER SUPPORT AND RELEVANT PARTS	1.00	4,000.00		4,000.00
BODY999C	RESPRAY REAR END PANEL, BACK DOOR PANEL, REAR BUMPER ASSEMBLIES AND PARKING SENSORS	1.00	9,000.00		9,000.00
MISC999C	MISCELLANEOUS AND WORKSHOP SUPPLIES	1.00	1,500.00		1,500.00
1K6-827-025-H	BACK DOOR PANEL	1.00	6,200.00	10.00%	5,580.00
1K6-945-094-L	RHS TAIL LIGHT	1.00	1,350.00	10.00%	1,215.00
1K6-867-601-B	REAR END PANEL GARNISH COVER	1.00	2,800.00	10.00%	2,520.00
1K6-827-705-B9	TRUNK LID RUBBER STRIP	1.00	1,080.00	10.00%	972.00
1K6-807-417-A	REAR BUMPER UPPER SECTION	1.00	3,020.00	10.00%	2,718.00
1K6-807-433-C	REAR BUMPER MIDDLE SECTION R31	1.00	4,084.00	10.00%	3,675.60
1K6-807-568-9B9	REAR BUMPER LOWER SECTION	1.00	1,940.00	10.00%	1,746.00
1K0-807-305-B	REAR BUMPER SUPPORT	1.00	2,300.00	10.00%	2,070.00
1K6-807-863	BUMPER BRACKET	1.00	480.00	10.00%	432.00
300-998-275-A	PARKING SENSOR	2.00	1,420.00	10.00%	2,556.00
LJC	LICENCE PLATE	1.00	150.00	10.00%	135.00
BODYWORK-72	PAINT MATERIAL	1.00	0.00		0.00
Payment: CASH					
Remarks:					
Total Price: 41,119.60		Total Discount:		Total Amount: 41,119.60	
詳情查詢: 汽車維修有限公司			Issued by:		
For Enquiries: Motor Service Station Ltd.					
G/F., Industrial Building, Lee Chung Street, Chai Wan, H.K. Tel: (852) 2880 Fax: (852) 2880			Registered Vehicle Mechanics 註冊車輛維修技工 Name 姓名: Chan Tai Man No. 編號: 123456		

A Sample Invoice with Detailed Breakdown of Services, Materials and Charges

### 3. Business Standards

#### 3.4 After Service

- (e) Record the information about the service provided and the parts replaced. Keep the record for at least 3 years or the warranty period of the vehicle, whichever is longer.

##### Objectives

1. Keeping the service records for 3 years is the minimum standard adopted by the industry. Besides, the practice also complies with the laws to a certain extent.
2. Allow vehicle mechanics to take reference to the service history, therefore better understand the problems of the vehicle.

##### Reasons

1. Keeping clear and detailed service records is crucial to the improvement in service standard and efficiency of operations. Detailed service records can help the company to understand the common faults of each car model, and special attention required for driving or maintenance.
2. Making reference to a vehicle's service history can shorten the time spent on diagnosis. Moreover, when there is a dispute on the service, both parties can resort to the detailed service records to find out the facts and hence quell the dispute, improve customer satisfaction in the process.

##### How to achieve

1. Records can be kept in paper format. Open an individual file for each vehicle and save all records of that vehicle's services and parts replacement for at least 3 years, allowing the workshop or the customer to retrieve the records whenever necessary. It will be even better if the records can be kept for 6 years.
2. Records can also be kept in electronic format. To enhance the efficiency in daily operations and avoid data loss, it is recommended that two copies of the database be saved separately, e.g. into 2 hard disks stored in different locations.

##### N.B.

- To prepare for civil actions arose from disputes in contracts, workshop in charge should keep the service records for 6 years, as prescribed in the Limitation Ordinance (Cap. 347), in order to protect his/her rights.
- In accordance with the Inland Revenue Ordinance (Cap. 112), business records must be retained for at least 7 years from the dates of transaction.

## 4. Workplace Standards

Workshop in charge shall observe or ensure that his/her vehicle maintenance workshops meet the following Workplace Standards.

### 4.1 Housekeeping in Workshop

(a) All emergency exits are clearly identified and unblocked.

#### Objectives

1. To comply with the Fire Services Ordinance.

#### Reasons

1. The major cause of serious injury or death in fire accidents is blocked emergency exit.
2. Signposts or light boxes of "emergency exit" should be properly installed so that employees can easily find the emergency exits and evacuate from the scene as quickly as possible in case of fire.

#### How to achieve

1. All escape routes should be clearly marked with "emergency exit" signs or light boxes.
2. Workshop in charge must perform daily inspections on all escape routes, ensuring that they are unimpeded. Any obstacles, regardless of their sizes, must be removed immediately. Please refer to the Fire Safety Checklist under Appendix A: Major Related Regulations – Fire Safety (Buildings) Ordinance; which is available at the following URL:  
<http://www.hkfsd.gov.hk/eng/source/safety/efschlst.pdf>
3. Workshop in charge must educate his/her workers that emergency exits should never be obstructed.

#### Examples



Emergency Exit Light Box



Unimpeded Emergency Exit

#### 4. Workplace Standards

##### 4.1 Housekeeping in Workshop

- (b) Keep the floor flat and free from grease and danger of slippery. Waste produced from work, including metal waste, chemical waste and general refuse should be properly grouped and cleaned up frequently. Register as chemical waste producer and equipped with storage facilities for waste lubricant oils. Records of waste lubricant oil collected by licensed waste collectors should be properly kept.

##### Objectives

1. Employers have the responsibility to provide a safe working environment to their employees.
2. Reduce pollution, protect the environment and comply with the environmental legislation.

##### Reasons

1. Waste producers are required to register under the environmental legislation to facilitate the Environmental Protection Department (EPD) to trace how the wastes are disposed.
2. Oil and other refuse can easily get stuck on an uneven ground and make it become slippery, which causes hazards such as bruise and chemical burn to employees.
3. Metals, chemical waste and general refuse must be stored separately for recycling. Waste lubricant oils should be stored in waste lubricant oil tank(s) before being collected by licensed waste collector.

##### How to achieve

1. Workshop in charge should select a well-equipped working area and instruct his/her workers to carry out all metal hitting works within this particular area; so as not to damage the floor surface in the workshop. Any damage on floor surface must be repaired immediately to avoid deterioration.
2. Workshop in charge should categorize the wastes produced at work and store metal waste, chemical waste and general refuse in separated areas to facilitate collection by waste collectors.
3. All solid wastes, such as batteries, should be handled by licensed waste collectors.
4. Workshop in charge should register as chemical waste producer and acquires oil drums of sufficient capacities to store waste lubricant oils which will be handled by licensed waste collectors.
5. Waste lubricant oil collectors must be qualified (licensed) and equipped with collecting facilities for waste lubricant oils. Records of waste lubricant oil collection should be properly saved.

#### 4. Workplace Standards

##### 4.1 Housekeeping in Workshop

- (b) Keep the floor flat and free from grease and danger of slippery. Waste produced from work, including metal waste, chemical waste and general refuse should be properly grouped and cleaned up frequently. Register as chemical waste producer and equipped with storage facilities for waste lubricant oils. Records of waste lubricant oil collected by licensed waste collectors should be properly kept.

##### Examples

Please refer to Appendix A: Major Related Regulations – Waste Disposal Ordinance, and browse the following URL:

A Guide to the Registration of Chemical Waste Producers :

[http://www.epd.gov.hk/epd/english/environmentinhk/waste/guide\\_ref/guide\\_cwc\\_sub2.html](http://www.epd.gov.hk/epd/english/environmentinhk/waste/guide_ref/guide_cwc_sub2.html)

Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes :

[http://www.epd.gov.hk/epd/english/environmentinhk/waste/guide\\_ref/guide\\_cwc\\_sub3.html](http://www.epd.gov.hk/epd/english/environmentinhk/waste/guide_ref/guide_cwc_sub3.html)

Chemical Waste Collectors :

[http://www.epd.gov.hk/epd/english/environmentinhk/waste/guide\\_ref/guide\\_ref\\_dwc.html](http://www.epd.gov.hk/epd/english/environmentinhk/waste/guide_ref/guide_ref_dwc.html)



Waste lubricant oil Storage Facilities



Metal Waste Collection Area

## 4. Workplace Standards

### 4.1 Housekeeping in Workshop

(c) Provide adequate lighting (and additional local lighting wherever the work process involves potential hazards) to reduce eye fatigue and improve alertness.

#### Objectives

1. Employers have the responsibility to provide good lighting within the working environment. The law stipulates different illumination requirements for different work environments.
2. Avoid industrial accidents, lowered efficiency or quality due to insufficient lighting.

#### Reasons

1. Providing employees with clear visions can reduce industrial accidents and eyestrain, thus improve work efficiency.
2. Some potentially hazardous processes, e.g. the use of floor-mounted drilling machines, are particularly dangerous under low-light condition. The worker may need to lean close to the machine in order to locate the holes position precisely. His/her hairs or clothes may then be caught by the drill bit and cause accident.

#### How to achieve

1. Provide adequate and balanced lighting in the workshop. The brightness should be sufficient to enable workers clearly deal with their tasks at hand while conscious of any changes in the surrounding environment.
2. Normally, the light color should be white, especially for the painting workshop. White light tends to make workers feel comfortable, reduce eye fatigue and improve alertness.
3. In those workshop areas where potentially hazardous processes are conducted, workshop in charge should provide additional local lighting, ensuring that his/her workers have a clear view on the processed items from a reasonable distance, thus reducing the risk of accidents.

#### Examples



Adequate Lighting Equipment



#### 4. Workplace Standards

##### 4.1 Housekeeping in Workshop

(d) Refer to 《Codes of Practice for Minimum Fire Service Installations and Equipment and Inspection, Testing and Maintenance of Installations and Equipment》 for the setup and maintenance of firefighting apparatus and equipment.

##### Objectives

1. Enterprises have the responsibility to provide adequate and effective firefighting apparatus and equipment in the workplace.
2. Enterprises have the responsibility to properly maintain the firefighting apparatus and equipment in the workplace.
3. Employers have the responsibility to comply with the Codes of Practice for Minimum Fire Service Installations (Session 4.26 applies to vehicle maintenance workshops) and Equipment and Inspection, Testing and Maintenance of Installations and Equipment, published by the Fire Services Department.

##### Reasons

1. Adequate and effective firefighting apparatus and equipment can extinguish fire as quickly as possible before it spreads.
2. Adequate emergency lighting and evacuation instructions can help workers to evacuate as quickly as possible.

##### How to achieve

1. The employer should assess the practical need of his/her workshop and acquire adequate and appropriate firefighting equipment.
2. Appoint a registered Fire Service Installations Contractor to conduct annual inspection and maintenance.
3. If the firefighting equipment is found to be damaged, do not attempt to fix it by unqualified persons. Appoint a registered Fire Service Installations Contractor to repair.
4. To avoid damage to the firefighting equipment, do not use the fire hoses for floor cleaning or car washing. Immediately stop him/her or call the police if anybody is found abusing the equipment.
5. If deliberate damage or theft of the firefighting equipment is found, call the police immediately.



#### 4. Workplace Standards

##### 4.1 Housekeeping in Workshop

- (d) Refer to 《Codes of Practice for Minimum Fire Service Installations and Equipment and Inspection, Testing and Maintenance of Installations and Equipment》 for the setup and maintenance of firefighting apparatus and equipment.

##### Examples

Please refer to Appendix A: Major Related Regulations – Fire Services Ordinance, and browse the following URL:

Fire Safety at Workplaces :

<http://www.oshc.org.hk/others/bookshelf/CB166e.pdf>

Minimum Fire Service Installations and Equipment and Inspection, Testing and Maintenance of Installations and Equipment [April 2012] :

<http://www.hkfsd.gov.hk/eng/source/safety/File2012.pdf>

Fire Safety Checklist :

<http://www.hkfsd.gov.hk/eng/source/safety/efschlst.pdf>



Carbon Dioxide (CO<sub>2</sub>) Fire Extinguisher and Sand Buckets

## 4. Workplace Standards

### 4.1 Housekeeping in Workshop

#### (e) Equipped with the proper first aid equipment.

##### Objectives

1. Employers have the responsibility to provide appropriate first aid equipment in their workshops.
2. Required by the law which is enforced by the Labour Department.

##### Reasons

1. The tools, materials and processes used in vehicle maintenance workshops carry certain risks therefore proper first aid supplies and equipment should be prepared.
2. Proper first aid procedures can relieve the pain suffered by the injured and increase the chance of recovery.
3. Current occupational safety and health regulations require that at least one employee within an establishment of more than 150 workers, has received training on first aid.

##### How to achieve

1. To prepare for any contingency, employers should subsidize their employees for training on first aid such that they know the first aid procedures and the proper use of the related equipment.
2. All first aid equipment should be placed in the first aid box to facilitate easy access.
3. The first aid box should be installed in a place which is convenient to the workers.
4. Adequate supplies of first aid equipment should be stored, in accordance with the requirements stipulated by the Labour Department.
5. Institutions providing first aid training include:
  - Hong Kong St. John Ambulance Brigade
  - Hong Kong Red Cross

##### Examples

Please refer to Appendix A: Major Related Regulations – Occupational Safety and Health Ordinance and browse the following URL for hints on first aid:

<http://www.labour.gov.hk/tc/public/pdf/oh/HintsOnFirstAid.pdf>



First Aid Box

#### 4. Workplace Standards

##### 4.1 Housekeeping in Workshop

##### (f) Put up “NO SMOKING” signs and posters on industrial safety.

###### Objectives

1. Workshops have the responsibility to remind employees and customers that they are standing in a place with high risk of fire.

###### Reasons

1. There are many flammable items in the garage so smoking is strictly prohibited.
2. Many fire accidents are caused by lighted cigarettes.

###### How to achieve

1. Put up “NO SMOKING” signs in customer waiting area.
2. Put up “NO SMOKING” signs and posters on industrial safety in all corners of the workshop.

###### Examples



“NO SMOKING” in Customer Waiting Area



“NO SMOKING” in Workshop Area

#### 4. Workplace Standards

##### 4.1 Housekeeping in Workshop

- (g) Provide appropriate skin protection, e.g. gloves, to employees who work with potentially hazardous materials or processes. Sanitation facilities should also be available for hand/body washing after repair/maintenance work.

##### Objectives

1. Employers have the responsibility to provide occupational safety and protective equipment to employees.
2. It is also the responsibility of employers to provide sanitation facilities to workers.
3. Protect employees from inhaling harmful substances through mouth, respiratory system or skin which affects health.

##### Reasons

1. Vehicle mechanics and body repairers should wear gloves during work, to prevent cuts or touching toxic heavy metal.
2. Welders should wear protective gloves to prevent burns during work.
3. Some vehicle maintenance works use chemicals such as volatile solvent or paint which causes potential hazards to workers. Chemical resistant gloves and clothes prevent workers from directly contacting the chemicals.
4. Workers of vehicle maintenance workshops easily get their hands or other parts of the body soiled during work. Cleaning immediately after work can avoid inhalation of toxic metals or chemicals.

##### How to achieve

1. Provide workers with sufficient amount of protective gloves and clothes to prevent injury or direct contact with chemicals.
2. Provide workers with suitable cleaning solution to safely clean their hands or other parts of the body after work.
3. Provide clean water and adequate sanitation facilities.
4. Make workers get used to wear protective clothes through training, notifications and inspections.

#### 4. Workplace Standards

##### 4.1 Housekeeping in Workshop

- (g) Provide appropriate skin protection, e.g. gloves, to employees who work with potentially hazardous materials or processes. Sanitation facilities should also be available for hand/body washing after repair/maintenance work.

##### Examples



Work Gloves



Welding Gloves



Sanitation Facilities

#### 4. Workplace Standards

##### 4.1 Housekeeping in Workshop

(h) In accordance with applicable regulations / guidelines, provide effective personal protective equipment, such as goggles to workers.

##### Objectives

1. Employers have the responsibility to provide workers with appropriate occupational safety and protective equipment.
2. Allow workers safely perform their duties.

##### Reasons

1. There are varieties of industrial hazards and specific personal protective equipment is required.

##### How to achieve

1. Based on the nature of work, provide suitable and adequate personal protective equipment to workers and force them to use in order to avoid injury by accident.
2. Provide training to workers on the use of personal protective equipment, ensuring that they know how to properly use the equipment.
3. At daily morning meeting, workshop in charge should remind workers that they should pay attention to industrial safety and make use of the personal protective equipment.
4. When performing daily inspection in the workshop, monitor whether workers use personal protective equipment or not. Stop and correct any violations. Take discipline action in case a worker repeatedly breaches the rule.

##### Examples



Respiratory Mask



Goggles



Safety Shoes



Earplugs



Welding Goggles



Overall



## 4. Workplace Standards

### 4.1 Housekeeping in Workshop

#### (i) Prevent all unnecessary interference to electrical switch/meter rooms.

##### Objectives

1. Workshop in charge is responsible for preventing electrical facilities from interference.
2. Protect electrical facilities from damage.
3. Prevent illegal modifications to electrical facilities.

##### Reasons

1. Many maintenance tools are powered by electricity. Damage of electrical facilities causes serious impacts on production.
2. Modification of electrical facilities by un-registered electrical workers is not only illegal but also prone to accidents. Browse the following URL for more information of Registered Electrical Workers:  
[http://www.1823.gov.hk/eng/FAQ/008001/ans\\_01.shtml](http://www.1823.gov.hk/eng/FAQ/008001/ans_01.shtml) )
3. To avoid electric shock, unauthorized persons are prohibited from entering electrical switch/meter rooms.

##### How to achieve

1. The doors of electrical switch/meter rooms should be made of sturdy metal to ensure sufficient protection.
2. The doors of electrical switch/meter rooms must be locked to prevent electrical facilities from human interference.
3. The door keys should be kept by the workshop in charge.
4. Consent and authorization from the workshop in charge must be sought before entering into the electrical switch/meter.

##### Examples



Meter Room



Locked Meter Room

## 4. Workplace Standards

### 4.1 Housekeeping in Workshop

- (j) Choose machinery facilities and work processes with lower noise levels. Ensure that workers wear suitable ear defenders in high noise working areas.

#### Objectives

1. Employers have the responsibility to acquire machinery and equipment with low noise levels.
2. Employers have the responsibility to provide workers with hearing protective equipment.

#### Reasons

1. Vehicle body repairing and engine testing are major causes of strong noises.
2. Employers are liable for compensations if employees suffer from occupational deafness.
3. Occupational deafness belongs to lifelong impairment therefore employees must be provided with hearing protective equipment.

#### How to achieve

1. Provide workers with earmuffs / earplugs to avoid hearing impaired.
2. Teach staff on the correct use of the protective devices.
3. If necessary, employ professionals to carry out noise assessment.

#### Examples

Please refer to Appendix A: Major Related Regulations – Noise Control Ordinance, Factories and Industrial Undertakings (Noise at Work) Regulation and browse the following URL:

[http://www.labour.gov.hk/eng/public/os/A/RM\\_Factories.pdf](http://www.labour.gov.hk/eng/public/os/A/RM_Factories.pdf)



Ear Defender



Earplugs



## 4. Workplace Standards

### 4.2 Handling of Potentially Dangerous Goods and Toxic Substances

(a) All potentially dangerous goods should be handled in accordance with the regulations.

#### Objectives

1. Employers have the responsibility to help employees to recognize all potentially dangerous goods.
2. Provide facilities to protect employees from injuries.
3. Provide training to employees to avoid work-related injuries.

#### Reasons

1. Many tools used in workshops have potential dangers, e.g. oxy-acetylene welding tools, grinding machineries etc.
2. Certain materials have potential hazards as well, such as those used in painting work, petrol, thinner etc.

#### How to achieve

1. Employers should follow the regulations of the Labour Department – not to store excess amount of potentially hazardous goods such as acetylene, oxygen, gas, oil, LPG and thinners, which cause danger to employees. Refer to the relevant legislations for the permitted storage capacity and storage methods.
2. Appoint qualified persons to conduct regular inspections on potentially dangerous tools, e.g. grinding sand wheels, acetylene and oxygen feeding hoses, compressed air cylinders, powered lifting platforms etc. Please refer to the relevant regulations for details.
3. Provide safety training to employees. Equip them with the knowledge of relevant regulations and code of safe operations.
4. Put up Labour Department's posters in conspicuous places within the workshop, reminding employees to pay attention to industrial safety.
5. Institutions providing safety training include:
  - Occupational Safety and Health Training Center
  - Occupational Safety and Health Council (OSHC)
  - Construction Industry Council Training Academy (CICTA)

#### Examples

Please refer to Appendix A: Major Related Regulations – Dangerous Goods Ordinance.

Browse the following URL for the maximum storage of dangerous goods:

[http://www.hkfsd.gov.hk/eng/source/notices/fire\\_protection\\_notice\\_no\\_4.pdf](http://www.hkfsd.gov.hk/eng/source/notices/fire_protection_notice_no_4.pdf)

## 4. Workplace Standards

### 4.2 Handling of Potentially Dangerous Goods and Toxic Substances

(a) All potentially dangerous goods should be handled in accordance with the regulations.

#### Examples

1. In accordance with the Dangerous Goods (Application & Exemption) Regulations under the Law of Hong Kong, Chapter 295: Dangerous Goods Ordinance, the amounts of dangerous goods that can be used, stored and transported without licenses are as below:

危險品	危險倉	免除入危險倉量
Acetylene (乙炔)	Cat. 2 Class 3	2 Cylinders
Argon (氬氣)	Cat. 2 Class 1	1 Cylinder
Battery Electrolyte (< 50% by weight) (硫酸)	Cat. 3	25 Lit.
Compressed Air (壓縮空氣)	Cat. 2 Class 1	2 Cylinders
Diesel (柴油)	Cat. 5 Class 3	2500 Lit.
Kerosene (火水)	Cat. 5 Class 2	20 Lit.
LPG (石油氣)	Cat. 2 Class 2	50Kg
Paint (油漆)	Cat. 5	250 Lit.
Petrol (電油)	Cat. 5 Class 1	20 Lit.
Thinner (天拿水)	Cat. 5 Class 1	20 Lit.

Storage Limits of Dangerous Goods

2. In accordance to the Law of Hong Kong, Chapter 59: Factories and Industrial Undertakings Ordinance, flammable goods such as thinner and petrol should be stored in sealed metal containers which are placed in a cabinet or box made of steel plates or other appropriate fireproof materials. In case the total capacity exceeds 35 litres, the dangerous goods should be stored in a warehouse approval by the Director of Fire Services.

#### 4. Workplace Standards

##### 4.2 Handling of Potentially Dangerous Goods and Toxic Substances

- (a) All potentially dangerous goods should be handled in accordance with the regulations.

##### Examples

**Gas Welding and Flame Cutting Work**

**Worker should hold valid certificate to perform the Work**

**Certificate for Gas Welding Safety Training Course**  
Factories and Industrial Undertakings (Gas Welding and Flame Cutting) Regulation

Holder's Name  
English: Hoo On Zuen  
Chinese: 好安全

Reference No: 0312xxx  
Date of issue: xx-FEB-2002  
Valid till: xx-FEB-2007

Issued by (recognized organisation)

**Effective date of the Regulation : 1 March 2004**

**ENQUIRY ☎ 2559 2297**

Occupational Safety and Health Branch  
Labour Department  
<http://www.labour.gov.hk>

OCCUPATIONAL SAFETY & HEALTH COUNCIL

Occupational Safety Poster – Gas Welding and Flame Cutting Work

#### 4. Workplace Standards

##### 4.2 Handling of Potentially Dangerous Goods and Toxic Substances

###### (b) Keep the workshop properly ventilated.

###### Objectives

1. Employers have the responsibility to ensure that employees are free from the impact of toxic substances.
2. Let employees work in a healthy environment.

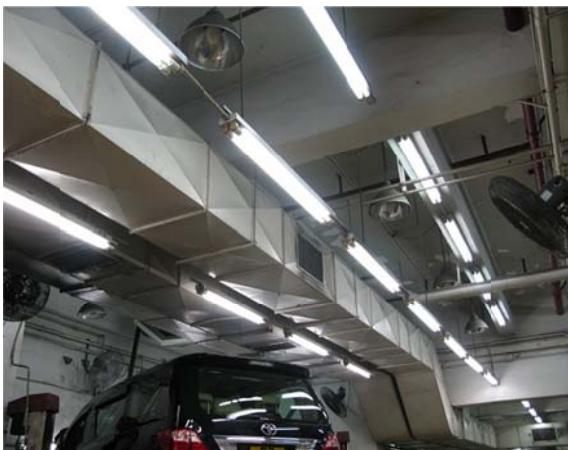
###### Reasons

1. Good ventilation in vehicle maintenance workshop prevents excess accumulation of poison gases evaporated from LPG, thinner and petrol; as well as carbon monoxide exhausted from engines which make people feel uncomfortable or even unconscious.
2. Strengthen the ventilation in workshop prevents excess accumulation of suspended particles (dusts, harmful chemical substances and metal powders) produced during maintenance of braking system.

###### How to achieve

1. Ventilation facilities can take away the exhaust and hazardous substances and bring in fresh air to the workshop, thus maintain the air quality at a healthy level.
2. Work processes that create large amount of dusts and harmful chemical or heavy metal substances should be carried out in areas equipped with filtering facilities and strong ventilations.
3. Install ventilation devices in concealed corners of the workplace to prevent accumulation of harmful substances.

###### Examples



Adequate Fans in Workshop



Blower

## 4. Workplace Standards

### 4.2 Handling of Potentially Dangerous Goods and Toxic Substances

#### (c) No naked flames (except for body welding or grinding work).

##### Objectives

1. Measures to prevent fire must be strictly implemented.

##### Reasons

1. Many flammable dangerous items such as oxy-acetylene, thinner and petrol are stored in workshop. Making naked flames is prohibiting so that fire accident is effectively prevented.
2. Making naked flames in a paint workshop has a high risk of catching fire as the paints and solvents are highly flammable.
3. Making naked flames in a vehicle maintenance workshop is dangerous to the vehicles parked there.

##### How to achieve

1. Pile up of unwanted items in workshop and fire escapes are strictly prohibited.
2. Workshop in charge should decree to all workers that except for vehicle body welding and grinding, no naked flames are allowed in workshop, including cooking, smoking and worship.
3. Put up “NO SMOKING” in conspicuous places inside the workshop, reminding employees to pay attention to fire safety.
4. Put up fire prevention posters in painting workshop.

##### Examples



“No Naked Flames” Sign



#### 4. Workplace Standards

##### 4.2 Handling of Potentially Dangerous Goods and Toxic Substances

- (d) Containers for paints and solvents must be tightly sealed to prevent leakage of gas. In case paints or solvent spills, clean up with absorptive materials.
- (e) Petrol must be stored in sealed containers which meet the specifications.

##### Objectives

1. Workshop in charge has the responsibility to prevent any fire hazards in the workplace and maintain the air quality for the sake of employees' occupational health.

##### Reasons

1. Gas evaporated from paints and other volatile solvents are toxic and flammable. Therefore, the containers must be properly covered and sealed to avoid gas leakage.
2. When there is spill of paint or solvent, toxic and flammable gas will spread into air. The spill must be cleaned up as quickly as possible by means of absorptive materials as to prevent workers from being poisoned, and the danger of fire.
3. Petrol belongs to dangerous flammable items therefore must be stored in suitable containers.
4. To prevent petrol or other type of flammable liquid spill out when the container is knocked over, the container must be properly covered and sealed.

##### How to achieve

1. Paints and solvents must be stored centrally in a locked cupboard. Keys should be kept by the workshop in charge or the delegated person as to prevent unauthorized use of the materials.
2. Workshop in charge should educate his/her workers on the danger of chemicals and their proper handling methods, as well as the cleanup measures to be taken when leakage happens.
3. To prevent spread of harmful gases, absorptive materials filled with paints or solvents should be kept in a covered storage box.
4. Petrol should be stored in metal containers, instead of plastic or glass containers.
5. To prevent spills, metal containers for petrol should be tightly sealed with screw caps.
6. Metal containers storing petrol should be kept away from welding workshop, flames or direct sunlight.
7. In accordance with the regulation, not more than 20 litres of petrol can be stored in a workshop. Otherwise, a licensed warehouse for dangerous goods will need to be set up.

#### 4. Workplace Standards

##### 4.2 Handling of Potentially Dangerous Goods and Toxic Substances

- (d) Containers for paints and solvents must be tightly sealed to prevent leakage of gas. In case paints or solvent spills, clean up with absorptive materials.
- (e) Petrol must be stored in sealed containers which meet the specifications.

##### Examples



Sealed Paint Containers



Sealed Solvent Container

#### 4. Workplace Standards

##### 4.2 Handling of Potentially Dangerous Goods and Toxic Substances

(f) To avoid direct contact with lubricant or electrolyte which causes skin diseases, instruct workers to wear personal protective equipment whenever necessary.

##### Objectives

1. Workshop in charge has the responsibility to prevent any fire hazards in the workplace and maintain the air quality for the sake of employees' occupational health.

##### Reasons

1. Educate employees that chemical wastes such as used lubricant can be the cause of cancer so workers should learn the use of personal protective equipment
2. Educate employees that electrolyte contains corrosive sulfuric acid which is harmful to the eyes, respiratory system and skin.
3. Hydrogen is created when batteries are charged. After mixing with oxygen in air, a tiny spark will lead to a huge explosion.
4. Educate employees on the applications of personal protective equipment, e.g. safety shoes when walking on slippery floors, protective mask when working with lubricant or electrolyte, chemical resistant gloves when working with chemical wastes.

##### How to achieve

1. Employers should provide suitable personal protective equipment to workers, according to their duties and potential hazards encountered.
2. In response to the advance in technologies, employers should acquire the most effective personal protective equipment provide training to employees and request them to make use of the equipment whenever needs.
3. Put up posters about safety at work in conspicuous places within the workplace, reminding workers to pay attention to industrial safety.
4. Strengthen ventilation in battery charging area so as to avoid accumulation of excess hydrogen.
5. Waste batteries and lubricant should be separately stored and collected by licensed waste collectors.



#### 4. Workplace Standards

##### 4.2 Handling of Potentially Dangerous Goods and Toxic Substances

- (f) To avoid direct contact with lubricant or electrolyte which causes skin diseases, instruct workers to wear personal protective equipment whenever necessary.

##### Examples

Guidance Notes on Personal Protective Equipment (PPE) for Use and Handling of Chemicals :

[www.labour.gov.hk/eng/public/os/C/equipment.pdf](http://www.labour.gov.hk/eng/public/os/C/equipment.pdf)

Poster on Occupational Safety :

<http://www.labour.gov.hk/tc/public/pdf/os/E/hkl.pdf>



#### 4. Workplace Standards

##### 4.3 Maintenance of Equipment and Tools

(a) Provide all necessary equipment and facilities required for the workshop's services (see Appendix B) and keep in good working condition.

##### Objectives

1. Employers have the responsibility to provide employees with adequate and appropriate equipment and facilities.
2. Employers have the responsibility to properly maintain the equipment so that they can perform their best functions.

##### Reasons

1. With the advance in vehicle technologies, traditional manual repairing methods and simple inspection of electrical devices are no longer enough. Vehicle maintenance workshops must be equipped with adequate and suitable equipment and facilities in order to provide full range of services.
2. Advanced diagnostic equipment such as electronic analyzer, decelerometer, four gas analyzer etc. require proper maintenance in order to provide reliable information to the mechanics.
3. Even mechanical equipment need to be properly maintained in order to perform accurately and safely.

##### How to achieve

1. Workshops should consider their scope of services (mechanical services or vehicle body repairs etc.) when acquiring equipment and facilities.
2. If a workshop wants to develop a full range of maintenance services, most of the commonly used equipment will need to be acquired.
3. Workshops may not be able to afford some expensive equipment such as electronic analyzers for engine diagnosis, within a short period. They may consider borrowing from other workshops or outsourcing.
4. Formulate maintenance policies (e.g. responsible person, record keeping etc.) for equipment and facilities.
5. If necessary, verified by a certification body.

#### 4. Workplace Standards

##### 4.3 Maintenance of Equipment and Tools

###### (b) Clearly define where the equipment and tools are stored.

###### Objectives

1. To form a habit among workers on properly placing the tools.

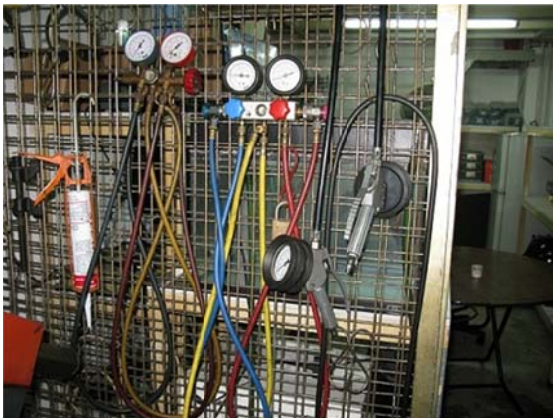
###### Reasons

1. Categorize the tools by means of their functions and store them separately to allow easy access and check, as well as reduce the chance of loss.
2. Well-defined storage locations not only facilitate easy access, but also let workers know where to put back the tools after use.
3. All the arrangements are in vain if there is lack of monitoring.

###### How to achieve

1. Set up a tools store room and paint marks on the storage boards so that it becomes easy to identify which tools have been borrowed out.
2. Each registered vehicle mechanic is provided with a set of tools. The mechanic is responsible for keeping track of the tools.
3. Expensive equipment such as four gas analyzer and computer-aided diagnostic equipment should be kept in the tools store room. Check-out and return records should be properly maintained.

###### Examples



Tools for Air Conditioning Service



Tools for Mechanical Service

#### 4. Workplace Standards

##### 4.3 Maintenance of Equipment and Tools

(c) Properly plan the placement of hand tools. To avoid hazard, all sharp edges and tips should face down or put into protective sleeves.

###### Objectives

1. Prevent industrial accident.
2. Easily accessed by workers and hence improve work efficiency.

###### Reasons

1. Workers may easily get stabbed or cut by hand tools' sharp edges or tips if they are placed arbitrarily.
2. If the storage orientation of hand tools is properly planned, the chance of injury will be reduced and at the same time, improve the work efficiency.

###### How to achieve

1. Employers should provide facilities to safely store hand tools.
2. Workshop in charge needs to pay attention to how the workers handle the hand tools. Stop workers from forming a habit of arbitrarily placing the sharp edges and tips of hand tools.
3. Workshop in charge should review any incorrect practice with the workers at the daily morning meeting.

###### Examples



Hand Tools' Sharp Edges and Tips Should Face Down

## 4. Workplace Standards

### 4.3 Maintenance of Equipment and Tools

#### (d) Powered lifting platforms, pneumatic tools and devices should be properly stored and maintained.

##### Objectives

1. Employers have the responsibility to properly store and maintain powered lifting platforms, pneumatic tools and devices in order to avoid industrial accidents and minimize damage.

##### Reasons

1. A powered lifting platform placed in open area or uneven grounds are prone to tilting and accidents, injuring workers.
2. Pneumatic tools and pipes may crack and cause accidents if they are not used or maintained properly. For example, storage tanks of compressed gas may get corrosion and crack if they are placed in a moist environment. Hoses of pneumatic tools, if being pulled excessively within an untidy workshop, may be cut by sharp edges of debris. The compressed air ejected will cause danger to both workers and workshop facilities.

##### How to achieve

1. Because of the potential dangers that pneumatic tools and devices can cause, maintenance is compulsory and the tools and devices must be annually examined by competent examiners. Never attempt to repair pneumatic tools or devices for convenience's sake.
2. Powered lift platforms and air compressors must be examined and certified by competent examiners on annual basis.

##### Examples

1. Fill up any depressions or holes on the ground to avoid lifting device accidentally falling when being operated. In September 2010, when a mechanic was working underneath a vehicle at a garage in Kam Tin, Yuen Long, the simple car jack used to elevate the vehicle suddenly overturned. The vehicle with a weight of more than one ton slipped and pressed the mechanic. He was killed in the accident.
2. Remind workers to stop the work immediately if the powered lifting platform is found to be unstable. In July 2011, when the proprietor of a garage at Pat Heung, Yuen Long, was examining the bottom of a 7-seat salon, the salon suddenly fall down due to a suspected instability of the lifting platform. He could not dodge but was pressed by the vehicle of over one ton of weight. He was in coma condition when later rescued by the firemen. The victim was certified dead at the hospital.



## 4. Workplace Standards

### 4.3 Maintenance of Equipment and Tools

- (d) Lifting equipment, pneumatic tools and devices should be properly stored and maintained.

#### Examples

FORM 5  
表格五

[reg 5(1)]  
[規例第 5(1)條]

Name of owner  
擁有人姓名 Service Station Ltd.

Address of installation  
安裝地址 .....

Factories and Industrial Undertakings (Lifting Appliances and Lifting Gear) Regulations  
LIFTING APPLIANCES  
CERTIFICATE OF RESULTS OF THOROUGH  
EXAMINATIONS IN THE PRECEDING TWELVE MONTHS  
*Form approved by the Commissioner for Labour for the purposes of regulation 5(1) of the  
Factories and Industrial Undertakings (Lifting Appliances and Lifting Gear) Regulations*  
工廠及工業經營(起重機械及起重裝置)規例  
起重機械在過往十二個月內進行的徹底檢驗結果證明書  
本表格乃由勞工處處長就工廠及工業經營(起重機械及起重裝置)規例第 5(1)條的需要而認可

Cert. No.: MM-T-

Description of appliance, e.g. type, identification marks, maximum safe working load, etc. 該機械的說明，例如：類別、識別標誌、最高安全操作負荷等 (1)	Date of examination 檢驗日期 (2)	Result of examination Enter details of repairs required or defects. If none enter "None" and state whether in safe working order. 檢驗結果，註明所需進行的修理或毛病的詳情 如無不妥，則填「無」字並註明是否處於安全操作狀態 (3)
2 Post Car Lift	25-08-2011	"None"
Maker : Lift Maker		"In safe working order"
Model : STA 242M Serial No. : 1354		Remarks: Refer to Cert. No. <del>MM-T-111111</del> Dated 17-11-2007
Capacity : 3500Kg		for the last load test applied (form 4)
Year : 1993		
Max. safe working load : 3500Kg		

I hereby certify that the appliances described in this certificate was thoroughly examined by me on 25/08/2011 and that the above particulars are correct.  
茲證明本人曾於 年 月 日 徹底檢驗本證明書所述的起重機，且上述各項均屬確實無訛。

Signature of Registered Professional Engineer  
註冊專業工程師簽署

Qualification  
註冊資格 R.E.P.C. Eng., MHKIE

Date of certificate  
簽發日期 25/08/2011

Discipline  
註冊類別 Mechanical Engineering

Any competent examiner or competent person who delivers to an owner a certificate or makes a report which is to his knowledge false as to a material particular shall be guilty of an offence and shall be liable on conviction to a fine of \$200,000 and to imprisonment for 12 months.  
任何合資格檢驗員或合資格的人，如向擁有人交付他明知有任何要項屬虛假的證明書或作出他明知有任何要項屬虛假的報告，即屬犯罪：一經定罪，可處罰款二十萬元及監禁十二個月。

Certificate of Examinations for Powered Lifting Platform (Sample)

#### 4. Workplace Standards

##### 4.3 Maintenance of Equipment and Tools

(e) All analysis equipment and testing instruments must follow manufacturer's instructions for maintenance and regular calibration.

##### Objectives

1. Accurate analysis equipment and testing instruments provide the foundation of quality service standards.

##### Reasons

1. Accuracy of analysis equipment and testing instruments may be interfered by environmental factors. For example, after repeated uses, the accuracy of a four-gas analyzer will be affected by the gas particles.
2. Accuracy of analysis equipment and testing instruments is also affected by wears. For example, after repeated uses, the accuracy of a decelerometer may be affected by wears inside the instrument.

##### How to achieve

1. Workshop in charge should regularly appoint qualified persons to conduct maintenance and calibrations for the analysis equipment and testing instruments, in accordance with manufacturers' specifications – so as to ensure that the equipment and instruments can provide accurate data to the service mechanics.

## 4. Workplace Standards

### 4.3 Maintenance of Equipment and Tools

- (f) Workshops employing 20 or more staff should have one Safety Supervisor who assists the workshop in charge to ensure workshop safety, as well as responsible for routine maintenance and adjustment of equipment and facilities.

#### Objectives

1. Assist the workshop in charge to effectively comply with the laws of Occupational Safety and Health.

#### Reasons

1. In accordance to the Occupational Safety and Health Ordinance (Chapter 509) and the Factories and Industrial Undertakings Ordinance (Chapter 59), the employer of a workshop with 20 or more staff is required to employ a safety supervisor.
2. Safety supervisors possess professional knowledge of occupational safety therefore they can suggest and implement measures for occupational safety, assisting employers in workshop safety.
3. Safety supervisors can also take up the duties of routine maintenance and adjustment for equipment and facilities.

#### How to achieve

1. Workshop in charge should request the Safety Supervisor to inspect the workshop and submit a safety report, identifying inadequate areas and proposing measures for improvement.
2. Safety Officers should conduct daily inspection in the workshop, stop any violation of industrial safety, report the problems to the workshop in charge and provide solutions for improvement.
3. Follow up the progress of the improvement program on a regular basis as to avoid empty talk.

#### Examples

汽車服務（香港）有限公司

設備 / 事故記錄表

記錄人: 陳 日期: 13/7/2010

時間	涉及同事	事故內容	傷者	處理方法
9:15	明	忘記蓋好天拿水蓋	✓	口头警告
12:43	忠	通知公司1號油桶積漏油	✓	暫停使用(檢修)
14:20	方	通知4號桶氣筒失靈	✓	暫停使用(檢修)

Record of Incidents (Sample)



## 4. Workplace Standards

### 4.4 Document Records

(a) Properly keep and update all technical reference materials and maintenance records of workshop equipment and customers' vehicles. Allow easy access by workers.

#### Objectives

1. Employers of vehicle maintenance workshops have the responsibility to provide and update technical reference materials to their employees.
2. Vehicle maintenance workshops need to update their workshop facilities and technical reference materials in order to be competitive.

#### Reasons

1. Properly keep and update the vehicle service reference materials allows mechanics to carry out their work in accordance with data compatible to manufacturer's specifications, thus ensure that the performance of the repaired component / system meets the requirements of the manufacturer.
2. With the advance in vehicle technologies, traditional maintenance equipment and technical reference materials can easily become outdated. To maintain competitiveness, workshops need to update the above mentioned items regularly.

#### How to achieve

1. Save the data in computer format to allow quick search of useful materials.
2. Build up a database of vehicle service reference materials, categorizing the data by vehicle types, models and parts to facilitate quick search.
3. Update maintenance equipment and technical reference materials.
4. Sources of technical reference data for vehicle service :
  - Autodata
  - Mitchell
  - Glass
  - Thatcham
  - manufacturers' service / parts manuals
  - reference books published in Mainland, Taiwan and overseas

**4. Workplace Standards****4.4 Document Records****(b) Promptly record and update all customer complaints and their handling methods.****Objectives**

1. Improve the company image on quality customer service.
2. Establish handling mechanism for customer complaints.

**Reasons**

1. Nowadays, a strategy to win market share is to provide quality customer service.
2. Maintain records of customer complaints and handling methods can help the company to build up its contingency plans.

**How to achieve**

1. Appoint a designated staff to collect customer feedback on workshop's service by means of questionnaires sent by mail or email; handle complaints and follow up.
2. Record company's approach to the complaints. Systematically follow up the progress. Update customers' responses and comments. Build up contingency plans which staff can follow.
3. Categorize customer complaints and their solutions and upload the information onto the intranet. Let staff know the causes of complaints and how to avoid them to reoccur, hence improve the quality of service.
4. All garages, regardless of their sizes, should promptly record and update their customer complaints and solutions, for later reference.

## 4. Workplace Standards

### 4.4 Document Records

#### (b) Promptly record and update all customer complaints and their handling progress.

##### Examples

ABC		汽車零件及維修服務問卷																																														
ABC		PARTS AND SERVICE SURVEY																																														
請於適當的位置內○填上“✓”號或於空位內填寫答案。 Please indicate your answer by putting a“✓”in the ○ or state the details in the spaces provided.																																																
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Customer Feedback Questionnaire (Sample)

## 4. Workplace Standards

### 4.4 Document Records

(c) Promptly record and update all staff feedbacks and responses, following the established mechanism.

#### Objectives

1. Establish a fixed and unimpeded channel for employees to reflect their views to the management. Continuously record and update the records, including management's responses to the cases. The above mentioned practice helps management to better understand the needs of employees and hence make improvements.

#### Reasons

1. Employees are important assets of the company so their views should be taken seriously.
2. Hence boost staff morale and raise the standard of service.

#### How to achieve

1. Provide a mail box and/or e-mail address for internal communication. Appoint a designated staff to collect the views from employees and deal with the cases.
2. Record all staff feedbacks and management's responses. Post those suggestions which can improve staff morale, productivity and quality of service onto the company intranet or bulletin board. Reward those staff who put forward suggestions for improvement.

## 4. Workplace Standards

### 4.5 Staff Training

- (a) Vehicle mechanics should be fully aware of the risks involved at work and master the professional knowledge, skills and related safety measures.

#### Objectives

1. Employers have the responsibility to ensure occupational safety.

#### Reasons

1. Receive training on occupational safety. Master the proper use of tools in order to safely carry out the vehicle service works.

#### How to achieve

1. Employers shall provide adequate and proper safety training for employees so that employees can master the professional knowledge and skills of occupational safety and health, as well as related safety hazards and the corresponding precautionary measures.
2. At the daily morning meeting, workshop in charge or team leader shall brief the potential risks encountered that day and the precautionary measures.

#### Examples



Certificate on Occupational Safety and Health (Sample)

#### 4. Workplace Standards

##### 4.5 Staff Training

##### (b) Provide training on emergency procedures, e.g. fire drill.

###### Objectives

1. Increase employees' awareness on fire risks and to familiarize them with the evacuation arrangements.

###### Reasons

1. Many flammable goods are stored in vehicle maintenance workshops. Therefore, employees must be familiar with fire prevention and common knowledge on evacuation.
2. Adequate training on emergency procedures such as fire drills, enable employees to evacuate from the scene quickly in case of fire, hence reduce casualties.

###### How to achieve

1. Put up posters on fire prevention so as to raise employees' awareness.
2. Conduct fire drill every 6 months, familiarizing employees with the emergency procedures.
3. Put up emergency evacuation maps.
4. Inspect fire facilities on regular basis.

#### 4. Workplace Standards

##### 4.5 Staff Training

(c) Encourage and arrange staff to receive relevant continuing professional development and training, and provide records of proof.

##### Objectives

1. Provide continuing professional education and training to employees so as to effectively enhance the quality and competitiveness of the workforce.
2. Strengthen employees' sense of belonging to the company.

##### Reasons

1. Registered vehicle mechanics who have received appropriate training, master the use of tools and professional knowledge and skills, can safely and properly perform their duties.
2. With the continuous development of automotive technologies, employees must continuously receive adequate and appropriate training in order to have the ability and confidence to perform their duties.
3. To provide training records to employees not only recognize their abilities, but also facilitate registered vehicle mechanics to renew registrations.

##### How to achieve

1. Employers shall provide convenience to employees in working hours so that employees can pursue continuous development in order to get abreast of the latest professional knowledge and skills.
2. Employees shall keep track of employees' training records. To encourage continuous professional development, the records can be taken as reference when considering employees' promotion and/or salary increment.



## 4. Workplace Standards

### 4.5 Staff Training

- (c) Encourage and arrange staff to receive relevant continuing professional development and training, and provide records of proof.

#### Examples



Certificate of Training (Sample)

#### 4. Workplace Standards

##### 4.6 Employing Registered Vehicle Mechanics and Competent Persons

- (a) For each category of service provided, employ a reasonable number or at least one vehicle mechanic registered in that service class. If a vehicle mechanic registers in more than one classes of service, he/she can be allowed to look after all these service areas, under a reasonable workload.

##### Objectives

1. Employ registered vehicle mechanics of relevant classes to provide services.

##### Reasons

1. All categories of vehicle maintenance and repairing services should be carried out by competent persons or under their supervision. Otherwise, in case of accidents, employers will have difficulties to defend and thus subject to liabilities.
2. Registered vehicle mechanics can train up craft trainees.

##### How to achieve

1. Indicate in promotional materials and recruitment advertisements that the company employs registered vehicle mechanics to provide services.
2. Stamp the registered vehicle mechanic's chop onto the invoices.
3. Whenever there are customer inquiries on the maintenance service, the registered vehicle mechanic responsible for the job should show his/her registration card before explaining to the customers.
4. Ideally, a registered vehicle mechanic can help to supervise an apprentice plus one semi-skilled worker, enhancing the quality of work as well as assisting in staff training.

## 4. Workplace Standards

### 4.6 Employing Registered Vehicle Mechanics and Competent Persons

- (a) For each category of service provided, employ a reasonable number or at least one vehicle mechanic registered in that service class. If a vehicle mechanic registers in more than one classes of service, he/she can be allowed to look after all these service areas, under a reasonable workload.

#### Examples



Registration Certificate for Vehicle Mechanic (Sample)



Registration Card for Vehicle Mechanics (Sample)

#### 4. Workplace Standards

##### 4.6 Employing Registered Vehicle Mechanics and Competent Persons

- (b) For services related to the fuel system of LPG vehicles, the registered vehicle mechanic should also be a Competent Person (Class 6) as specified in EMSD's 《Guideline for LPG Fuelled Vehicles Workshop in Hong Kong》.

##### Objectives

1. Hire competent persons to provide LPG vehicle repair services, in order to constitute a reasonable defend in case of accidents.

##### Reasons

1. According to Regulation 6B of the Gas Safety (Gas Supply) Regulations (Cap. 51B), workshop in charge of LPG vehicle maintenance workshop has the responsibility to ensure that his/her workshop facilities are operated and maintained safely, and there are sufficient number of competent persons to carry out the LPG fuel system maintenance works..
2. According to the Gas Safety (Gas Supply) Regulations (Cap. 51B), only competent persons who have received appropriate training and have enough practical experience, are allowed to carry out maintenance work on the fuel supply system of LPG vehicles.

##### How to achieve

1. Employers shall hire Competent Persons (Class 6) as specified in EMSD's 《Guideline for LPG Fuelled Vehicles Workshop in Hong Kong》 to carry out LPG fuel system maintenance work.
2. As required by the Ordinance, service records of LPG vehicles must be properly saved and readily available for inspection by the Electrical and Mechanical Services Department (EMSD).

##### Examples

For application to become a competent person under the Gas Safety Regulations (Cap. 51), please refer to the following URL:

[http://www.emsd.gov.hk/emsd/e\\_download/form/gas/Form101.pdf](http://www.emsd.gov.hk/emsd/e_download/form/gas/Form101.pdf)

#### 4. Workplace Standards

##### 4.6 Employing Registered Vehicle Mechanics and Competent Persons

(c) The above requirements are also applicable to outsourced contractors for vehicle maintenance.

##### Objectives

1. Ensure that the quality of the outsourced contractors meets professional standards.
2. Avoid damage to company's reputation.

##### Reasons

1. If the outsourced contractors employ registered vehicle mechanics whose technical knowledge and workmanship meets professional standards, the quality of work is guaranteed.
2. The establishment of goodwill does not happen overnight but it can be destroyed suddenly.
3. Any fault in the maintenance service, no matter the work is outsourced or not, are borne by the workshop proprietor.

##### How to achieve

1. Request the outsourced contractor to provide information on the number of registered vehicle mechanics employed and their service classes, thus ensuring that the workforce of the contractor has the required knowledge and skills to take up the job.
2. Request the outsourced contractor to provide information such as names, registration numbers and service classes of their mechanics in the quotation document.
3. After providing the service, the outsourced contractor should include the following information on the invoice for verification: the name of registered vehicle mechanic responsible for the job, his/her signature, registration number, service class and stamp.

#### Note:

The URLs quoted in this curriculum are subject to changes by the corresponding organizations.

# Appendix A - Major Related Regulations

## 1. Safety & Health

### 1.1 Chapter 509 《Occupational Safety & Health Ordinance》

The Occupational Safety and Health Ordinance provides for the safety and health protection to employees in workplaces, both industrial and non-industrial. It is basically an enabling ordinance setting out requirements in general terms.

#### The Coverage

This ordinance covers almost all workplaces - places where employees work. In addition to factories, construction sites and catering establishments, other places, such as offices, laboratories, shopping arcades, educational institutions also come under the ambit of the law. However, there are a few exception, namely

- an aircraft or vessel in a public place;
- the place occupied by the driver of a land transport vehicle when it is in a public place (but other employees working in the vehicle are covered);
- domestic premises at which only domestic servants are employed; and
- places where only self-employed persons work.

#### Key Points

- 1) No technical details on health and safety listed;
- 2) Describe the responsibilities of employers and employees in general terms;
- 3) Applicable to works not covered by other regulations;
- 4) Supplement the deficiencies of other regulations on health and safety.

#### The Roles of the Dutyholders

Under this ordinance, everyone has a role to play in creating a safe and healthy workplace.

- a. **Employers** should contribute to safety and health in their workplaces by:

## Appendix A - Major Related Regulations

- ✓ providing and maintaining plant and work systems that do not endanger safety or health;
- ✓ making arrangement for ensuring safety and health in connection with the use, handling, storage or transport of plant or substances;
- ✓ providing all necessary information, instruction, training, and supervision for ensuring safety and health;
- ✓ providing and maintaining safe access to and egress from the workplaces; and
- ✓ providing and maintaining a safe and healthy work environment

b. **Occupiers** of premises should take responsibility for ensuring that

- ✓ the premises;
- ✓ the means of access to and egress from the premises; and
- ✓ any plant or substance kept at the premises are safe and without risks to health to any person working on the premises, even if they do not directly employ that person on the premises.

c. **Employees** should also contribute to safety and health in the workplaces by :

- ✓ taking care for the safety and health of persons at the workplace; and
- ✓ using any equipment or following any system or work practices provided by their employers.

The above introduction has been presented in plain English for the sake of simplicity. In case of any discrepancies, the original text of the ordinances and guidelines from relevant government departments shall prevail.

Please refer to the following URLs for the full information and requirements of the ordinances, as well as the related forms:

**Chapter 509 《Occupational Safety & Health Ordinance》 :**

<http://www.labour.gov.hk/eng/legislat/contentB3.htm>

**Introduction to OSHO:** <http://www.oshc.org.hk/others/bookshelf/BL110167E.pdf>

**Introduction to OSHR:** <http://www.labour.gov.hk/eng/public/os/A/OSHR.pdf>

**Guidance Notes on Manual Handling Operations & Manual Handling Operation Assessment Forms:**

<http://www.oshc.org.hk/others/bookshelf/BB129E.pdf>



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**A Health Guide on Working with Display Screen Equipment:**

<http://www.oshc.org.hk/others/bookshelf/BB356E.pdf>

**Risk Assessment on Working with Display Screen Equipment (Chinese version only):**

<http://www.oshc.org.hk/others/bookshelf/CT109137C.pdf>

## Appendix A - Major Related Regulations

### 1.2 Chapter 59 《Factories & Industrial Undertaking Ordinance》

The Factories and Industrial Undertakings Ordinance provides for the safety and health protection to workers in the industrial sector.

#### **The Coverage**

This ordinance applies to industrial undertakings, i.e. factories, construction sites, catering establishments, cargo and container handling undertakings, repair workshops and other industrial workplaces.

#### **Notification of Workplaces**

- A person having the management and control of a factory or other industrial establishment (but excluding a construction site) should notify the Commissioner for Labour in a prescribed form (obtainable from various district offices of the Occupational Safety Operations Division) before commencement of operation.
- Any subsequent changes in the particulars of the workplace, e.g. its name, location or the industrial processes, should also be notified to the Commissioner for Labour in a prescribed form (obtainable from various district offices of the Occupational Safety Operations Division).

#### **General Duties**

This ordinance imposes general duties on proprietors and persons employed at industrial undertakings to ensure safety and health at work.

1. Every proprietor should take care of the safety and health at work of all persons employed by him at an industrial undertaking by:
  - ✓ providing and maintaining plant and work systems that do not endanger safety or health;
  - ✓ making arrangement for ensuring safety and health in connection with the use, handling, storage or transport of plant or substances;
  - ✓ providing all necessary information, instruction, training, and supervision for ensuring safety and health;

## Appendix A - Major Related Regulations

- ✓ providing and maintaining safe access to and egress from the workplaces; and
  - ✓ providing and maintaining a safe and healthy work environment.
2. Every person employed at an industrial undertaking should also contribute to safety and health at work by:
- ✓ taking care for the safety and health of himself and other persons at the workplace; and
  - ✓ using any equipment or following any system or work practices provided by the proprietor.

### **Subsidiary Legislation**

Under the Factories and Industrial Undertakings Ordinance, there are 30 sets of subsidiary regulations covering various aspects of hazardous work activities in factories, building and engineering construction sites, catering establishments, cargo and container handling undertakings and other industrial workplaces. The subsidiary regulations prescribe detailed safety and health standards on work situations, plant and machinery, processes and substances.

**The above introduction has been presented in plain English for the sake of simplicity. In case of any discrepancies, the original text of the ordinances and guidelines from relevant government departments shall prevail.**

**Please refer to the following URLs for the full information and requirements of the ordinances, as well as the related forms:**

#### **Chapter 59 《Factories & Industrial Undertaking Ordinance》 :**

<http://www.labour.gov.hk/eng/legislat/contentB3.htm>

#### **A Guide to the Factories and Industrial Undertakings Ordinance (Sections 6A & 6B) - Know your General Duties:**

<http://www.labour.gov.hk/eng/public/os/A/GD6AB.pdf>

#### **Notification of Workplace and Notification of Construction Work:**

<http://www.oshc.org.hk/others/bookshelf/BL110059E.pdf>

#### **Reporting Workplace Accidents and Dangerous Occurrences:**

<http://www.oshc.org.hk/others/bookshelf/BB110176E.pdf>

#### **A Guide to the Factories and Industrial Undertakings (Fire Precautions in Notifiable Workplaces) Regulations:**

<http://www.oshc.org.hk/others/bookshelf/BB110119E.pdf>

## Appendix A - Major Related Regulations

### Chapter 59J 《F&IU (Lifting Appliances & Lifting Gear) Regulations》 :

- Guidance Notes on Inspection, Thorough Examination and Testing of Lifting Appliances and Lifting Gear:  
<http://www.oshc.org.hk/others/bookshelf/BB256E.pdf>
- Guide to Safety Regulations on Lifting Appliances and Gear:  
<http://www.oshc.org.hk/others/bookshelf/BB603E.pdf>

### Chapter 59L 《F&IU (Abrasive Wheel) Regulations》 :

- Safety in the Use of Abrasive Wheels:  
<http://www.labour.gov.hk/eng/public/os/D/AbrasiveWheels.pdf>
- Warning Notice when using Abrasive Wheels:  
<http://www.oshc.org.hk/others/bookshelf/BP110245B.pdf>

### Chapter 59N 《F&IU (Spraying of Flammable Liquids) Regulations》 :

- A Guide to the Factories and Industrial Undertakings (Spraying of Flammable Liquids) Regulations:  
<http://www.oshc.org.hk/others/bookshelf/BB110065E.pdf>

### Chapter 59Q 《F&IU (Guarding & Operation of Machinery) Regulations》 :

- Guidelines on Guarding & Operation of Machinery:  
<http://www.oshc.org.hk/others/bookshelf/BB476B.pdf>

### Chapter 59S 《F&IU (Protection of Eyes) Regulations》 :

- A Guide to the Factories and Industrial Undertakings (Protection of Eyes) Regulations:  
<http://www.labour.gov.hk/eng/public/os/PE.pdf>

### Chapter 59T 《F&IU (Noise at Work) Regulations》 :

- A Guide to the Factories and Industrial Undertakings (Noise at Work) Regulation:  
<http://www.labour.gov.hk/eng/public/os/A/NR.pdf>

### Chapter 59W 《F&IU (Electricity) Regulations》 :

- A Guide to the Factories and Industrial Undertakings (Electricity) Regulation:  
<http://www.labour.gov.hk/eng/public/os/A/Electricity.pdf>

### Chapter 59AB 《F&IU (Dangerous Substances) Regulations》 :

- A Guide to the Factories and Industrial Undertakings (Dangerous Substances) Regulation:

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<http://www.oshc.org.hk/others/bookshelf/BB110097E.pdf>

### Chapter 59AF 《F&IU (Safety Management) Regulations》 :

- A Guide to the Factories and Industrial Undertakings (Safety Management)

Regulation:

<http://www.labour.gov.hk/eng/public/os/smr/index.html>

- Code of Practice on Safety Management:

<http://www.oshc.org.hk/others/bookshelf/BB934E.pdf>

### Chapter 59AG 《F&IU (Loadshifting Machinery) Regulations》

- A Guide to the Factories and Industrial Undertakings (Loadshifting Machine)

Regulation:

<http://www.labour.gov.hk/eng/public/os/A/gfiulmr.pdf>

### Chapter 59AI 《F&IU (Gas Welding & Flame Cutting) Regulations》 :

- A Guide to the Factories and Industrial Undertakings (Gas Welding & Flame Cutting) Regulation:

<http://www.oshc.org.hk/others/bookshelf/BL110170E.pdf>

- Code of Practice: Safety & Health of Gas Welding and Flame Cutting Work:

<http://www.oshc.org.hk/others/bookshelf/BB194E.pdf>

## Appendix A - Major Related Regulations

### 1.3 Chapter 406 《Electricity Ordinance》

《Electricity Ordinance》 provide for the registration of electrical workers, contractors and generating facilities, to provide safety requirements for electricity supply, electrical wiring and products, to provide powers for electricity suppliers and the Government respecting electrical accidents and enforcement of this Ordinance, and to provide for measures designed to ensure that activities carried out in the vicinity of electricity supply lines do not prejudice safety or the continuity of the electricity supply.

#### **Inspection After Electrical Accident**

- Within 2 weeks after the occurrence of an electrical accident that involves or affects a fixed electrical installation, the owner of the installation shall have the affected part of the installation inspected by a registered electrical worker.
- Except in the case of a life threatening emergency the owner of the electrical installation shall not use or knowingly allow the use of the affected part of the installation until he has been given a certificate prepared and signed by a registered electrical worker in a form required by the Director certifying that the affected part of the owner's installation complies with this Ordinance.
- Within 2 weeks after the date of the certificate the owner shall give a copy of it to the Director.

#### **Prevention of Electrical Accident**

- An owner of an electrical installation shall not connect to his installation anything that he knows or ought reasonably to know is likely to cause an electrical accident.
- Proof that a defendant connected something to his electrical installation that was likely to cause an electrical accident is, in the absence of evidence to the contrary, proof that the defendant knew or ought reasonably to have known that his connection of the thing was likely to cause an electrical accident.
- If an owner knows that the condition of his electrical installation is likely to cause an electrical accident he shall immediately have it

## **Appendix A - Major Related Regulations**

rectified.

### **Electrical Worker Registration**

- In addition to the electrical work that a registered electrical worker is entitled to do within the grade for which he is registered, the worker is entitled to do any other type of electrical work, or work on any type of electrical installation or premises, that the Director specifies on his certificate of registration.
- The Director may specify on a registered electrical worker's certificate of registration that the worker is only entitled to do electrical work on a particular installation, type of installation or type of premises for a specified period of time, notwithstanding the term of his registration.
- A registered electrical worker shall have his registration certificate with him or available at his workplace while doing electrical work.

### **Registered Electrical Contractor Required**

- No person shall employ a person other than a registered electrical contractor to carry out electrical work.
- An owner of an electrical installation may employ a registered electrical worker of the appropriate grade on a full time basis at a regular wage or salary to do electrical work on that installation.

### **1.3.1 Chapter 406 D 《Electricity (Registration) Regulations》**

All contractors engaged in electrical work on fixed electrical installations must be registered with the Electrical and Mechanical Services Department (EMSD). The purpose is to ensure that such work is carried out only by qualified electrical workers through qualified electrical contractors.

### **Grades of Electrical Work & Qualification of Electrical Workers**

#### **Grade A Electrical Work**

- Grade A electrical work is electrical work on that part of a low voltage fixed electrical installation that has a maximum demand not exceeding 400 A, single or three phase.



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### **Grade B Electrical Work**

- Grade B electrical work is electrical work on that part of a low voltage fixed electrical installation that has a maximum demand not exceeding 2500 A, single or three phase.

### **Grade C Electrical Work**

- Grade C electrical work is electrical work on a low voltage fixed electrical installation of any capacity.

### **Grade H Electrical Work**

- Grade H electrical work is electrical work on a high voltage electrical installation.

### **Grade R Electrical Work**

- Grade R electrical work may include one or more of the following-
  1. electrical work on a neon sign installation;
  2. electrical work on an air-conditioning installation;
  3. electrical work on a generating facility installation; and
  4. any other type of electrical work, or work on any type of electrical installation or premises, that the Director, under section 30(3), specifies on a registered electrical worker's certificate of registration.

**The above introduction has been presented in plain English for the sake of simplicity. In case of any discrepancies, the original text of the ordinances and guidelines from relevant government departments shall prevail.**

**Please refer to the following URLs for the full information and requirements of the ordinances, as well as the related forms:**

**Notes for Registered Electrical Workers:**

[http://www.emsd.gov.hk/emsd/eng/pps/pub\\_gng\\_rew.shtml](http://www.emsd.gov.hk/emsd/eng/pps/pub_gng_rew.shtml)

### **1.3.2 Chapter 406 E 《Electricity (Wiring) Regulations》**

The regulation applies to all low or high voltage FIXED electrical installations in buildings and premises including those of domestic and commercial

## Appendix A - Major Related Regulations

buildings, factories and industrial undertakings, except fixed electrical installations which are:

- exempted by the Director; or
- in mobile units such as aircrafts, motor vehicles and sea-going vessels.

Gantry and tower cranes, hoists, conveyors, traction equipment and ropeways that are permanently connected to low or high voltage electricity supply are considered as fixed electrical installations. The wiring of such equipment is required to comply with the Wiring Regulations applies to them

**The above introduction has been presented in plain English for the sake of simplicity. In case of any discrepancies, the original text of the ordinances and guidelines from relevant government departments shall prevail.**

**Please refer to the following URLs for the full information and requirements of the ordinances, as well as the related forms:**

**Code of Practice for the Electricity (Wiring) Regulations:**

<http://www.oshc.org.hk/others/bookshelf/EB108062E.pdf>

**Ensure Safety of Your Electrical Installations – Conduct Periodic Inspection Every 5 Years:**

[http://www.emsd.gov.hk/emsd/e\\_download/pps/fei.pdf](http://www.emsd.gov.hk/emsd/e_download/pps/fei.pdf)

**Certificate of Periodic Inspection (Sample):**

[http://www.emsd.gov.hk/emsd/chi\\_source/pps/electricity\\_new\\_11/wr2\\_sample\\_chi.pdf](http://www.emsd.gov.hk/emsd/chi_source/pps/electricity_new_11/wr2_sample_chi.pdf)

## Appendix A - Major Related Regulations

### 1.4 Chapter 282 《Employee Compensation Ordinance》

The Employees' Compensation Ordinance establishes a no-fault, non-contributory employee compensation system for work injuries.

#### **Application**

An employer is liable to pay compensation in respect of injuries sustained by his employees as a result of an accident arising out of and in the course of employment; or in respect of occupational diseases specified in the Ordinance suffered by the employees. The Ordinance in general applies to employees who are employed under a contract of service or apprenticeship. Employees who are injured while working outside Hong Kong are also covered if they are employed in Hong Kong by local employers.

#### **Notification of Accident**

##### **Responsibility of the employee**

The injured employee should notify the employer as soon as possible if he sustains a work injury or contracts an occupational disease prescribed in the Employees' Compensation Ordinance. Notice may be given orally or in writing (such as on Form 1 or Form 1A, as the case may be) to the employer or the employee's supervisor. The employer is presumed to have had notice of the accident or the prescribed occupational disease if the employee dies on or near the employer's premises or at the place where he was working.

##### **Responsibility of the employer**

An employer must notify the Commissioner for Labour of any accident or prescribed occupational disease in the following manners, irrespective of whether the accident or the occupational disease gives rise to any liability to pay compensation:

## Appendix A - Major Related Regulations

Resulting in	Notice Period	Form
Occupational accident causing incapacity for <b>less than 3 days</b>	Within 14 days	2B
Occupational accident causing incapacity for <b>more than 3 days</b>	Within 14 days	2
Occupational accident causing <b>death</b>	Within 7 days	
Occupational disease causing <b>incapacity</b>	Within 14 days	2A
Occupational disease causing <b>death</b>	Within 7 days	

The above introduction has been presented in plain English for the sake of simplicity. In case of any discrepancies, the original text of the ordinances and guidelines from relevant government departments shall prevail.

Please refer to the following URLs for the full information and requirements of the ordinances, as well as the related forms:

**Government website of Employee Compensation:**

[http://www.labour.gov.hk/eng/public/content2\\_7.htm](http://www.labour.gov.hk/eng/public/content2_7.htm)

**《Employee Compensation Ordinance》 Guidelines and Q&A:**

<http://www.labour.gov.hk/eng/public/ecd/pco360.pdf>

**How to Apply for Employees' Compensation for Death:**

[http://www.labour.gov.hk/eng/public/ecd/HowToApplyECforDeath\\_Eng.pdf](http://www.labour.gov.hk/eng/public/ecd/HowToApplyECforDeath_Eng.pdf)

**Guidelines for Employee Compensation Insurance:**

<http://www.labour.gov.hk/eng/public/ecd/geci.pdf>

## Appendix A - Major Related Regulations

### 1.5 Chapter 95 《Fire Services Ordinance》

This ordinance is to make better provision as to the constitution, duties and powers of the Fire Services Department and as to the discipline of members thereof and to make provision for the prevention of fire hazards, for the investigation into matters relating to a fire and for a welfare fund; and to regulate the registration of fire service installation contractors and to provide for the control of the sale, supply, installation, repair, maintenance and inspection of fire service installations or equipment; and for purposes connected with the matters aforesaid.

**The above introduction has been presented in plain English for the sake of simplicity. In case of any discrepancies, the original text of the ordinances and guidelines from relevant government departments shall prevail.**

**Please refer to the following URLs for the full information and requirements of the ordinances, as well as the related forms:**

**Fire Safety at Workplaces**

<http://www.oshc.org.hk/others/bookshelf/CB166E.pdf>

#### **Chapter 95 B 《Fire Services (Installation & Equipment) Regulations》**

Whenever a registered contractor installs, maintains, repairs or inspects any fire service installation or equipment in any premises, he shall within 14 days after completion of the work issue to the person on whose instructions the work was undertaken a certificate and forward a copy thereof to the Director.

The owners of any fire service installations or equipment which is installed in any premises shall keep such fire service installations or equipment in efficient working order at all times; have such fire service installation or equipment inspected by a registered contractor at least once in every 12 months.

#### **Chapter 95 F 《Fire Services (Fire Hazard Abatement) Regulations》**

The Fire Services (Fire Hazard Abatement) Regulations aim to authorize members of the Fire Services Department to more effectively enforce the law,

## **Appendix A - Major Related Regulations**

hence combat illegal activities and eliminate different types of fire hazards.

### **Controlling the Stowage or Conveyance of Vehicle Parts containing or stained with Fuel**

A person using enclosed container to stow or convey vehicle parts containing or stained with fuel commits an offence and shall be subject to direct prosecution.

Members of the Fire Services Department may :

- stop, board and search a motor vehicle or container for investigation
- seize, remove and detain anything carried on it

### **Combating Illegal Refuelling Activities**

A person who, possesses any Cat. 5 dangerous goods for the purpose of a business of supplying such dangerous goods for transferring to the fuel tank of a motor vehicle in any premises where there is without a valid Dangerous Goods Licence, commits an offence and shall be subject to direct prosecution.

Any charges of illegal refuelling activities will be registered in the Land Registry and the fact of conviction will be published in local newspapers. A closure order will be made by the Court to effect complete closure of those premises repeatedly used for illegal refuelling activities for six months. The closure order will also be registered in the Land Registry.

### **Demand for Instant Production of Personal Particulars**

To enable the taking of immediate enforcement action against fire hazards, e.g. obstruction to means of escape, locking of means of escape, fire service installations not in efficient working order, etc., members of the Fire Services Department are empowered to demand instant production of a person's proof of identity.

A person who fails to produce the proof of his/her identity as soon as reasonably practicable or knowingly furnishes false particulars commits an offence and shall be subject to direct prosecution.

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### 1.6 Chapter 572 《Fire Services (Buildings) Ordinance》

The purpose of the Fire Safety (Buildings) Ordinance (the Ordinance) is to provide better protection from the risk of fire for occupants and users of, and visitors to, certain kinds of composite buildings and domestic buildings.

**The above introduction has been presented in plain English for the sake of simplicity. In case of any discrepancies, the original text of the ordinances and guidelines from relevant government departments shall prevail.**

**Please refer to the following URLs for the full information and requirements of the ordinances, as well as the related forms:**

**Code of Practice for Minimum Fire Service Installations and Equipment:**

[http://www.hkfsd.gov.hk/eng/source/safety/installation\\_2004.pdf](http://www.hkfsd.gov.hk/eng/source/safety/installation_2004.pdf)

**Code of Practice for Inspection, Testing and Maintenance of Installations and Equipment & Appendices:**

[http://www.hkfsd.gov.hk/eng/source/safety/testing\\_2004.pdf](http://www.hkfsd.gov.hk/eng/source/safety/testing_2004.pdf)

[http://www.hkfsd.gov.hk/eng/source/safety/appendices\\_2004.pdf](http://www.hkfsd.gov.hk/eng/source/safety/appendices_2004.pdf)

#### **Fire Safety Checklist**

The purpose of this Checklist is to facilitate building owners/occupiers to carry out routine inspections on fire safety provisions of their own buildings, and to rectify minor irregularities identified. This would enhance their awareness on fire safety, and is the most effective and immediate means to protect their lives and properties. The Checklist is devised for the general use of building owners/occupiers. The items for inspection are common but essential on fire safety. The Checklist serves as a general guidance only, it is always a good practice to appoint a professional to check the building conditions regularly

**The above introduction has been presented in plain English for the sake of simplicity. In case of any discrepancies, the original text of the ordinances and guidelines from relevant government departments shall prevail.**

**Please refer to the following URLs for the full information and requirements of the ordinances, as well as the related forms:**

**Fire Safety Checklist:**

<http://www.hkfsd.gov.hk/eng/source/safety/efschlst.pdf>



## Appendix A - Major Related Regulations

### 1.7 Chapter 295 《Dangerous Goods Ordinance》

The ordinance defines about 450 dangerous goods, including explosives, compressed gases, poisonous substances, corrosive substances, substances liable to spontaneous combustion and flammable substances. The legislation classifies dangerous goods, and regulates the manufacture, use, storage and transport of dangerous goods.

Exemption storage quantities of DG commonly used in vehicle maintenance workshops:

DG	Category	Exemption quantity
Acetylene	2	2 bottles
Argon gas	2	1 bottle
Sulfuric acid (Battery Electrolyte)	3	25 liters
Compressed air	2	2 bottles
Diesel	5	2,500 liters
Petrol	5	20 liters
kerosene	5	20 liters
LPG	2	50 liters
Paint	5	250 liters
Thinner	5	20 liters
Cotton material	9A	100 liters
Rubber tyre	9A	50 nos.

The above introduction has been presented in plain English for the sake of simplicity. In case of any discrepancies, the original text of the ordinances and guidelines from relevant government departments shall prevail.

Please refer to the following URLs for the full information and requirements of the ordinances, as well as the related forms:

**Dangerous Goods:**

[http://www.hkfsd.gov.hk/chi/source/notices/fire\\_protection\\_notice\\_no\\_4.pdf](http://www.hkfsd.gov.hk/chi/source/notices/fire_protection_notice_no_4.pdf)

**Licence Application for Dangerous Goods and Relevant Information:**

<http://www.hkfsd.gov.hk/eng/source/licensing/premises.htm#d1>

## Appendix A - Major Related Regulations

### 2. Air

#### 2.1 Chapter 311 《Air Pollution Control Ordinance》

This ordinance empowers the Environmental Protection Department (EPD) to control air pollution from industry, commercial operations and construction work. [Motor vehicle emissions are controlled under the Road Traffic Ordinance and the EPD also helps to control these].

This ordinance prohibits the use of high sulphur and leaded fuels and the open burning of construction waste, tyres and cables for metal salvage.

Abatement notices are usually issued to anyone causing air pollution from a process or machinery and they will be asked to reduce or stop their emissions, or face prosecution. Some events are prosecuted on the spot, such as construction dust or black smoke emissions.

**The above introduction has been presented in plain English for the sake of simplicity. In case of any discrepancies, the original text of the ordinances and guidelines from relevant government departments shall prevail.**

**Please refer to the following URLs for the full information and requirements of the ordinances, as well as the related forms:**

**Exhaust Emission Test for Petrol and Liquefied Petroleum Gas (LPG) Vehicles:**

[http://www.epd.gov.hk/epd/tc\\_chi/environmentinhk/air/guide\\_ref/files/exhau-emission.pdf](http://www.epd.gov.hk/epd/tc_chi/environmentinhk/air/guide_ref/files/exhau-emission.pdf)

#### **Chapter 311W 《Air Pollution Control (Volatile Organic Compounds) Regulation》**

The Regulation prohibits import into Hong Kong and manufacture in Hong Kong regulated products with volatile organic compounds content exceeding the prescribed limits for local sale or use. The regulated products include architectural paints, vehicle refinishing paints, vessel paints, pleasure craft paints, adhesives, sealants, printing inks and six categories of consumer products (namely air fresheners, hairsprays, multi-purpose lubricants, floor wax strippers, insecticides, and insect repellents).

**The above introduction has been presented in plain English for the sake of simplicity. In case of any discrepancies, the original text of the ordinances and guidelines from relevant**

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government departments shall prevail.

Please refer to the following URLs for the full information and requirements of the ordinances, as well as the related forms:

**Guidelines for Air Pollution Control (Volatile Organic Compounds) Regulations:**

[http://www.epd.gov.hk/epd/english/environmentinhk/air/prob\\_solutions/files/voc\\_reg\\_guide.pdf](http://www.epd.gov.hk/epd/english/environmentinhk/air/prob_solutions/files/voc_reg_guide.pdf)

## Appendix A - Major Related Regulations

### 2.2 Chapter 403 《Ozone Layer Protection Ordinance》

Under the provisions of the Ozone Layer Protection (Controlled Refrigerants) Regulation, any person who recovers or recycles a controlled refrigerant must use equipment approved by the Director of Environmental Protection (DEP) and operate the equipment according to the instructions issued by the equipment's manufacturer.

The above introduction has been presented in plain English for the sake of simplicity. In case of any discrepancies, the original text of the ordinances and guidelines from relevant government departments shall prevail.

Please refer to the following URLs for the full information and requirements of the ordinances, as well as the related forms:

**List of Approved Equipment for Recovering and Recycling Controlled Refrigerants:**

[http://www.epd.gov.hk/epd/english/environmentinhk/air/ozone\\_layer\\_protection/wn6\\_info\\_equipment.html#b](http://www.epd.gov.hk/epd/english/environmentinhk/air/ozone_layer_protection/wn6_info_equipment.html#b)

Any person who wants to apply for approval of refrigerant recycling equipment should write to DEP at the following address:

**Air Policy Group, Environmental Protection Department  
33/F, Revenue Tower, 5 Gloucester Road, Wan Chai, Hong Kong.**

**For Enquiry:**

**Tel No.: 2594 6261**

**Fax No.: 2827 8040**

**Email : [enquiry@epd.gov.hk](mailto:enquiry@epd.gov.hk)**

Information provided should be of sufficient details to demonstrate the technical capacity of the equipment to perform as refrigerant recycling equipment. The submission should comprise a completed application form and supporting information about the equipment under the application. It should include manufacturer's literatures showing the equipment specifications, working principles, design, safety features, and operational procedures. There is no charge imposed on the application, and it will normally be processed in two weeks.

The above introduction has been presented in plain English for the sake of simplicity. In

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case of any discrepancies, the original text of the ordinances and guidelines from relevant government departments shall prevail.

Please refer to the following URLs for the full information and requirements of the ordinances, as well as the related forms:

**Application form samples:**

[http://www.epd.gov.hk/epd/english/environmentinhk/air/ozone\\_layer\\_protection/files/ref\\_equ\\_app\\_spec.pdf](http://www.epd.gov.hk/epd/english/environmentinhk/air/ozone_layer_protection/files/ref_equ_app_spec.pdf)

**Application for Approval of Refrigerant Recycling Equipment:**

[http://www.epd.gov.hk/epd/english/environmentinhk/air/ozone\\_layer\\_protection/files/cr\\_eaf.pdf](http://www.epd.gov.hk/epd/english/environmentinhk/air/ozone_layer_protection/files/cr_eaf.pdf)

Applicants will be notified of the result of application in writing. All equipment approved will be compiled in a list of equipment approved by DEP for the recovering and recycling of controlled refrigerants.

The above introduction has been presented in plain English for the sake of simplicity. In case of any discrepancies, the original text of the ordinances and guidelines from relevant government departments shall prevail.

Please refer to the following URLs for the full information and requirements of the ordinances, as well as the related forms:

**Scheduled Substances under Ozone Layer Protection Ordinance**

[http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/wn6\\_licen1\\_1.html](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/wn6_licen1_1.html)

**A Concise Guide to Ozone Layer Protection Ordinance**

[http://www.epd.gov.hk/epd/english/environmentinhk/air/ozone\\_layer\\_protection/files/cgto\\_olpo\\_eng.pdf](http://www.epd.gov.hk/epd/english/environmentinhk/air/ozone_layer_protection/files/cgto_olpo_eng.pdf)

**A Concise Guide to Ozone Layer Protection (Controlled Refrigerants) Regulation**

[http://www.epd.gov.hk/epd/english/environmentinhk/air/ozone\\_layer\\_protection/files/cgt\\_olp\\_cr\\_eng.pdf](http://www.epd.gov.hk/epd/english/environmentinhk/air/ozone_layer_protection/files/cgt_olp_cr_eng.pdf)

## Appendix A - Major Related Regulations

### 3. Noise

#### 3.1 Chapter 400 《Noise Control Ordinance》

Neighbourhood noise and noise from construction, industrial and commercial activities are controlled by the Noise Control Ordinance. Neighbourhood noise in the context of providing quick relief to the public is generally controlled by the police.

##### **Industrial and Commercial Noise:**

Industrial and commercial noise must comply with statutory limits specified in the Technical Memorandum. Operators who fail to do so will be issued with a Noise Abatement Notice asking them to reduce their noise or face prosecution for failing to comply with the conditions in the Notice.

**The above introduction has been presented in plain English for the sake of simplicity. In case of any discrepancies, the original text of the ordinances and guidelines from relevant government departments shall prevail.**

**Please refer to the following URLs for the full information and requirements of the ordinances, as well as the related forms:**

##### **A Concise Guide to the Noise Control Ordinance**

[http://www.epd.gov.hk/epd/english/environmentinhk/noise/guide\\_ref/files/CG\\_E-06n.pdf](http://www.epd.gov.hk/epd/english/environmentinhk/noise/guide_ref/files/CG_E-06n.pdf)

##### **Technical Memorandum for the Assessment of Noise from Places Other Than Domestic Premises, Public Places or Construction Sites**

[http://www.epd.gov.hk/epd/english/environmentinhk/noise/guide\\_ref/files/tm\\_nondomestic.pdf](http://www.epd.gov.hk/epd/english/environmentinhk/noise/guide_ref/files/tm_nondomestic.pdf)

##### **“Good Vehicle Maintenance Practices Reduce Vehicle Noise Emission” Booklet**

[http://www.epd.gov.hk/epd/english/environmentinhk/noise/guide\\_ref/noise\\_guidelines.html](http://www.epd.gov.hk/epd/english/environmentinhk/noise/guide_ref/noise_guidelines.html)

## Appendix A - Major Related Regulations

### 4. Waste

#### 4.1 Chapter 354 《Waste Disposal Ordinance》

It is prohibited to dump waste in public places or on Government land, or on private premises without the consent of the owner or occupier.

##### **Waste Disposal (Chemical Waste) (General) Regulation:**

Chemical wastes are liquid, semi-solid and solid wastes which are hazardous in nature or constitute a risk of pollution to the environment. Indiscriminate disposal of chemical waste has very serious health, safety and environmental consequences. Release into coastal waters causes damage to local marine life and accumulation of toxins in sea-food generally creates a serious health hazard to the community. Uncontrolled disposal at municipal waste facilities and into sewerage systems and sewage treatment facilities threatens the health and safety of the operatives. It also results in costly repairs and replacement of these facilities as well as disruption to their operation.

Anyone who produces chemical waste or causes it to be produced has to register as a chemical waste producer. The waste must be packaged, labelled and stored properly before disposal. Only a licensed collector can transport the waste to a licensed chemical waste disposal site for disposal. Chemical waste producers also need to keep records of their chemical waste disposal for inspection by EPD staff.

**The above introduction has been presented in plain English for the sake of simplicity. In case of any discrepancies, the original text of the ordinances and guidelines from relevant government departments shall prevail.**

**Please refer to the following URLs for the full information and requirements of the ordinances, as well as the related forms:**

##### **Registration for Waste Producer:**

[http://www.epd.gov.hk/epd/english/environmentinhk/waste/guide\\_ref/guide\\_cwc\\_sub2.html](http://www.epd.gov.hk/epd/english/environmentinhk/waste/guide_ref/guide_cwc_sub2.html)

##### **Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes:**

[http://www.epd.gov.hk/epd/english/environmentinhk/waste/guide\\_ref/guide\\_cwc\\_sub3.html](http://www.epd.gov.hk/epd/english/environmentinhk/waste/guide_ref/guide_cwc_sub3.html)

##### **Special Waste Collectors**

[http://www.epd.gov.hk/epd/english/environmentinhk/waste/guide\\_ref/guide\\_ref\\_dwc.html](http://www.epd.gov.hk/epd/english/environmentinhk/waste/guide_ref/guide_ref_dwc.html)



## Appendix A - Major Related Regulations

### 4.2 Chapter 132 《Public Health & Municipal Services Ordinance》

The Ordinance provides for prevention and control of waste. It also provides for removal of litter or waste from any places.

**The above introduction has been presented in plain English for the sake of simplicity. In case of any discrepancies, the original text of the ordinances and guidelines from relevant government departments shall prevail.**

**Please refer to the following URLs for the full information and requirements of the ordinances, as well as the related forms:**

**Fixed Penalty for Littering- \$1,500 :**

[http://www.fehd.gov.hk/tc\\_chi/pleasant\\_environment/library/1500/1500\\_littering.pdf](http://www.fehd.gov.hk/tc_chi/pleasant_environment/library/1500/1500_littering.pdf)

**Stay Clean, Stay Healthy:**

[http://www.fehd.gov.hk/tc\\_chi/pleasant\\_environment/library/booklet/keep\\_clean\\_by\\_healthy.pdf](http://www.fehd.gov.hk/tc_chi/pleasant_environment/library/booklet/keep_clean_by_healthy.pdf)

## Appendix A - Major Related Regulations

### 5. Water

#### 5.1 Chapter 358 《Water Pollution Control Ordinance》

All discharges, other than domestic sewage to a foul sewer or unpolluted water to a storm drain, must be covered by an effluent discharge licence. The licence specifies the permitted physical, chemical and microbial quality of the effluent and the general guidelines are that the effluent does not damage sewers or pollute inland or inshore marine waters.

Disposal of waste lubricating oil into sewers, storm drains causes disruption to their normal operation. It also results in costly repairs and replacement of these facilities. Release into coastal waters causes serious pollution and hazard to the environment.

**The above introduction has been presented in plain English for the sake of simplicity. In case of any discrepancies, the original text of the ordinances and guidelines from relevant government departments shall prevail.**

**Please refer to the following URLs for the full information and requirements of the ordinances, as well as the related forms:**

##### **A Concise Guide to the Water Pollution Control Ordinance**

[http://www.epd.gov.hk/epd/english/environmentinhk/water/guide\\_ref/guide\\_wpc\\_wpc.html](http://www.epd.gov.hk/epd/english/environmentinhk/water/guide_ref/guide_wpc_wpc.html)

## Appendix A - Major Related Regulations

### 6. Vehicle Performance

#### 6.1 Chapter 374 《Road Traffic Ordinance》

##### **Chapter 374A 《Road Traffic (Construction & Maintenance of Vehicles) Ordinance》**

This ordinance provides requirements of measurements, sizes, weights, systems and other parts of vehicles regarding to the design, structure and maintenance.

The above introduction has been presented in plain English for the sake of simplicity. In case of any discrepancies, the original text of the ordinances and guidelines from relevant government departments shall prevail.

Please refer to the following URLs for the full information and requirements of the ordinances, as well as the related forms:

**Vehicle Inspection:**

[http://www.td.gov.hk/en/public\\_services/vehicle\\_examination/vehicle\\_examination/index.html](http://www.td.gov.hk/en/public_services/vehicle_examination/vehicle_examination/index.html)

**“Dos & Don’ts on Vehicle Modification”**

[http://www.td.gov.hk/filemanager/en/content\\_1178/dondont.pdf](http://www.td.gov.hk/filemanager/en/content_1178/dondont.pdf)

## Appendix A - Major Related Regulations

### 7. Gas Safety

#### 7.1 Chapter 51 《Gas Safety Ordinance》

Liquefied petroleum gas (LPG) and town gas are the two main types of fuel gas widely used throughout Hong Kong, and they are under the control of the Gas Safety Ordinance. As Hong Kong's Gas Authority, the Director of EMSD is responsible for the enforcement of the Gas Safety Ordinance and acts as Hong Kong's regulator on gas safety. The Gas Safety Advisory Committee was also established for the purpose of advising the Authority upon any matters relevant to the importation, manufacture, storage, transport, supply or use of gas. The Gas Standards Office (GasSO) of EMSD is responsible for administering a register of gas supply companies, gas contractors and installers, monitoring their performance, and enforcing safety measures as necessary; monitoring the operation of all gas installations and associated facilities, and inspecting and approving the construction of new notifiable gas installations; preparing and approving codes of practice, conducting regular inspections of gas installations, and approving domestic gas appliances, and conducting gas safety education programmes for the trade and the public via the media and GasSO publications, and leveraging events and competitions.

**The above introduction has been presented in plain English for the sake of simplicity. In case of any discrepancies, the original text of the ordinances and guidelines from relevant government departments shall prevail.**

**Please refer to the following URLs for the full information and requirements of the ordinances, as well as the related forms:**

**Safe Use of LPG Vehicles:**

[http://www.emsd.gov.hk/emsd/e\\_download/pps/gas/Safe\\_Use\\_of\\_LPG\\_Vehicles\\_Leaflet.pdf](http://www.emsd.gov.hk/emsd/e_download/pps/gas/Safe_Use_of_LPG_Vehicles_Leaflet.pdf)

**List of Approved LPG Vehicle Workshops:**

[http://www.emsd.gov.hk/emsd/eng/sgi/gas\\_reg\\_lpg.shtml](http://www.emsd.gov.hk/emsd/eng/sgi/gas_reg_lpg.shtml)

**Leaflet on Dos and Don'ts for Drivers of LPG Vehicles (Chinese version only):**

[http://www.emsd.gov.hk/emsd/c\\_download/sgi/Leaflet\\_LPG\\_Vehicles\\_Drivers.pdf](http://www.emsd.gov.hk/emsd/c_download/sgi/Leaflet_LPG_Vehicles_Drivers.pdf)

**Leaflet on LPG Vehicle Fuel Tank 5-Yearly Revalidation**

[http://www.emsd.gov.hk/emsd/e\\_download/pps/gas/LPG\\_Vehicle\\_Fuel\\_Tank\\_5-Yearly\\_Revalidation\\_Leaflet.pdf](http://www.emsd.gov.hk/emsd/e_download/pps/gas/LPG_Vehicle_Fuel_Tank_5-Yearly_Revalidation_Leaflet.pdf)

## Appendix A - Major Related Regulations

### **List of the Notifiable Gas Installation Sites for LPG Vehicle Fuel Tank Purging / Revalidation Processes**

[http://www.emsd.gov.hk/emsd/eng/sgi/lpg\\_tank\\_loc.shtml](http://www.emsd.gov.hk/emsd/eng/sgi/lpg_tank_loc.shtml)

### **Notice for LPG Vehicle Owners - Disposal of LPG Vehicle Fuel Tanks (Chinese version only)**

[http://www.emsd.gov.hk/emsd/c\\_download/sgi/Notice\\_for\\_LPG\\_Vehicle\\_Owners.pdf](http://www.emsd.gov.hk/emsd/c_download/sgi/Notice_for_LPG_Vehicle_Owners.pdf)

### **Properly Dispose of Unwanted LPG Fuel Tank Leaflet**

[http://www.emsd.gov.hk/emsd/e\\_download/sgi/LPGtank\\_leaflet.pdf](http://www.emsd.gov.hk/emsd/e_download/sgi/LPGtank_leaflet.pdf)

### **Annual Inspection of Liquefied Petroleum Gas Installations Leaflet**

[http://www.emsd.gov.hk/emsd/e\\_download/pps/gas/annual\\_inspection\\_of\\_lpg\\_installations.pdf](http://www.emsd.gov.hk/emsd/e_download/pps/gas/annual_inspection_of_lpg_installations.pdf)

### **Guideline for Setting Up of Liquefied Petroleum Gas Cylinder Store**

[http://www.emsd.gov.hk/emsd/e\\_download/pps/gas/LPG\\_Storage\\_Leaflet\\_Web.pdf](http://www.emsd.gov.hk/emsd/e_download/pps/gas/LPG_Storage_Leaflet_Web.pdf)

### **Information on AutoLPG (Chinese version only)**

[http://www.emsd.gov.hk/emsd/c\\_download/sgi/AutoLPG\\_Information.pdf](http://www.emsd.gov.hk/emsd/c_download/sgi/AutoLPG_Information.pdf)

### **AutoLPG Specification (Chinese version only)**

[http://www.emsd.gov.hk/emsd/c\\_download/sgi/AutoLPG\\_Specification.pdf](http://www.emsd.gov.hk/emsd/c_download/sgi/AutoLPG_Specification.pdf)

## **Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>**

### **Mechanical Services**

Full Set of Hand Tools  
 Chemical Waste Collection Facilities  
 Decelerometer (fixed or portable types, for measurement of brake performance) \*  
 Transmission Jack  
 Four Gas Analyzer \*  
 Refrigerant recovery / recycling / recharging Machine \*  
 Wheel Aligner \*  
 Tyre Balancer (excluding workshops serving commercial vehicles)  
 Tachometer  
 Torque Wrench  
 Air Compressor  
 Hydraulic Jacks  
 Safe Supporting Devices for Vehicles( e.g. jack stands, wood blocks )  
 Vehicle Maintenance Lifting Platform or Pit \*  
 Long Arm Hydraulic Crane  
 Ventilation & Exhaust System

### **Electrical Services**

Battery Charger  
 Battery Maintenance / Charging Area (with ventilation facility)  
 Belt Tension Gauge  
 Battery Load Tester

### **Electrical Services (cont)**

Electronic Analyzer (e.g. oscilloscope, thermometer, ...) \*  
 Tachometer  
 Multimeter

### **Body Repair**

Vehicle Frame Alignment Bench or Compatible Facility  
 Transmission Jack  
 Oxy-acetylene Welding Machine  
 Tungsten Inert Gas (TIG) Welding Machine  
 Metal Inert Gas (MIG) Welding Machine  
 Electrical Arc-welding machine  
 Long Arm Hydraulic Crane  
 Hydraulic Jacks  
 Ventilation & Exhaust System

### **Body Painting**

Paint Mixing Machine \*  
 Spray Guns  
 Spray Booth or Compatible Installation (with air filtering & heating facilities) \*  
 Spray Gun Cleaner \*  
 Hydraulic Jacks  
 Ventilation & Exhaust System

**# Workshops providing service to LPG Vehicles** must comply with the requirements prescribed in EMSD's 《Guideline for LPG Fuelled Vehicles Workshop in Hong Kong》.

\* These equipment / facilities are not compulsory but are recommended as to improve the service standard. If a workshop does not own the equipment / facilities, it can still provide the service to customers by means of outsourcing. The Workshop in charge should ensure that the outsourced contractor employs registered vehicle mechanics and meets the requirements stated in 3.3(d) to 3.3(e). The workshop in charge shall be directly responsible for the quality of the final service outcomes.

## **Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>**

### **Motorcycle Maintenance**

Full Set of Hand Tools  
Motorcycle Lifting Bench  
Motorcycle Tyre Changer\*  
Motorcycle Tyre Balancer\*  
Front Fork Compressor Tool\*

### **Tyre Work**

Full Set of Hand Tools  
Labour Gloves  
Hydraulic Jacks  
Jack Stands  
Torque Wrench  
Air Compressor  
Air Screwdrivers  
Tyre Changer\*  
Tyre Balancer\*  
Waste Tyre Storage and Recycling Facility and Records

### **Battery Work**

Full Set of Hand Tools  
Battery Work Protective Wear  
Gloves and Goggles (for adjusting / refilling battery liquid)  
Battery Charger  
Battery Maintenance / Charging Area (with ventilation facility)  
Battery Load Tester  
Multimeter  
Waste Battery Storage and Recycling Facility and Records  
Warning Signs and Notices about Chemicals

### **Lubrication Work**

Full Set of Hand Tools  
Measuring Cups  
Protective Wear and Gloves

### **Lubrication Work (cont)**

Waste Lubricant Oil Storage and Recycling Facility and Records  
Waste Lubricant Filter Storage and Recycling Facility and Records  
Brake Fluid Tester\*

### **Car Accessories Work**

Full Set of Hand Tools  
Necessary Tools for Work (depending on the job)

### **Air Conditioning Work**

Full Set of Hand Tools  
Protective Wear and Gloves  
Refrigerant recovery / recycling / recharging Machine\*  
Refrigerant Gauge Manifold Set  
Refrigerant Leakage Detector  
Dial Thermometers  
Thermometer  
Humidity Meter  
Swager Machine\*

### **Body Building Work**

Full Set of Hand Tools  
Protective Wear and Gloves  
Sheet Metal Bending / Roll Forming / Cutting Machines\*  
Jack Stands  
Oxy-acetylene Welding Machine  
Tungsten Inert Gas (TIG) Welding Machine  
Metal Inert Gas (MIG) Welding Machine  
Electrical Arc-welding machine  
Long Arm Hydraulic Crane  
Hydraulic Jacks  
Ventilation & Exhaust System

## **Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>**

### **Mechanical Services**

#### **Full Set of Hand Tools**

Tools include:

- |                                    |                             |
|------------------------------------|-----------------------------|
| ( i )    Phillips screwdrivers     | ( viii ) Needle nose pliers |
| ( ii )    Flat-bladed screwdrivers | ( ix )    Socket set        |
| ( iii )    Feeler gauges           | ( x )    Wrenches           |
| ( iv )    Star keys                | ( xi )    Rags              |
| ( v )    Hex keys                  | ( xii )    Mill files       |
| ( vi )    Pliers                   | ( xiii )    Spanners        |
| (vii )    Crescent wrench          | ( xiv )    Cutting pliers   |



Ratchet Drivers and Sockets Set



Feeler Gauges



## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Mechanical Services

#### Chemical Waste Collection Facilities

Facilities include:

- ( i ) Waste lubricant oil collection bin
- ( ii ) Chemical waste collection bin

Function:

- ( i ) Store waste lubricant oils, vehicle liquid wastes and chemical detergents, awaiting collection by licensed waste collectors.
- ( ii ) Store used lubricant oil filters, lubricant oil cans and other chemical wastes.



Waste Lubricants Oil Collection Bin



Chemical Waste Collection Bin



Waste Dropped into the Chemical Waste Collection Bin

## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Mechanical Services

Decelerometer (fixed or portable types, for measurement of brake performance)\*

A. Decelerometer (fixed type, also known as Roller Brake Tester)

Function:

- ( i ) Drive the vehicle onto the tester.
- ( ii ) Position the two wheels of the same axle onto the rollers. When the tester turns on, the rollers run which also drive the wheels of the vehicle. Then, the vehicle examiner pushes the brake pedal, the wheels decelerate and the brake efficiency is measured by the tester.
- (iii) The required braking efficiencies stipulated by the Transport Department are: service brake  $\geq 50\%$ , parking brake  $\geq 16\%$ , imbalance of any brakes on the same axle  $\leq 30\%$ . Nevertheless, to ensure safety when the vehicle runs at high speed or with heavy loads, higher performance should be demanded.



The Rollers of a Decelerometer

## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Mechanical Services

Decelerometer (fixed type):



Position the front/rear wheels in the rollers



Brake Performance Shown on the Display of a Roller Brake Tester

B. Decelerometer (portable type, for preliminary test)





## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Mechanical Services

#### Transmission Jack



Telescopic Transmission Jack



Load Rating

## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Mechanical Services

#### Four Gas Analyzer\*

Function:

- ( i ) Analyze the exhaust by measuring the different electrical resistance of carbon monoxide (CO), hydrocarbon (HC), oxygen (O<sub>2</sub>) and carbon dioxide (CO<sub>2</sub>)
- ( ii ) By determining the density of the 4 gases, the engine's combustion status is known.  
High CO value: incomplete combustion due to too much fuel, not enough air. The fuel or air supply system needs to be checked.  
High HC value: incomplete combustion. The ignition and fuel injection systems need to be checked.  
High O<sub>2</sub> value: indicate a poor mixture (too much air, not enough fuel). Should check if the pressure of the fuel supply system is too low or there is a leakage in the EGR (Exhaust Gas Recirculation) valve.  
Low CO<sub>2</sub> value: indicate a combustion fault, an exhaust system leak or a sample dilution.



Four Gas Analyzer

## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Mechanical Services

Refrigerant recovery / recycling / recharging Machine\*

Function:

- ( i ) Refrigerant refilling, collecting and replacing while avoiding leakage of HFC-134a (i.e. R-134a).
- ( ii ) Connect to vehicle's air conditioning system via hoses.
- ( iii ) R-134a refrigerant has zero ozone depleting potential.



Refrigerant recovery / recycling / recharging  
Machine



Real View

## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Mechanical Services

#### Wheel Aligner\*

Function:

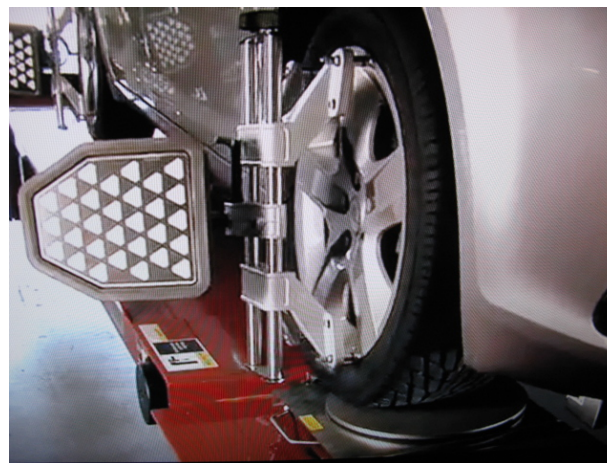
- ( i ) Measures the toe-in, toe-out and chamber angles of the vehicle under test. Provide manufacturers' settings to vehicle mechanics for easy reference.
- ( ii ) Attach the measuring heads to the wheels. The toe-in, toe-out and chamber angles of the vehicle will be detected by electronics and transmitted wirelessly to the wheel aligner.
- ( iii ) The adjustment platform facilities vehicle mechanics to fine tune the wheel alignments based on manufactures' settings or customers' requirements for different driving performance.



Wheel Aligner



Adjustment Platform



Measuring Heads



## **Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>**

### **Mechanical Services**

Tyre Balancer (excluding workshops serving commercial vehicles)

Function:

- ( i ) After spinning for a dozen seconds, the tyre balancer will detect any imbalance on the wheel under test and suggest the weight to apply on the inside and/or outside rims.
- ( ii ) Rims and tyres deform after prolonged uses. Besides, tyres may suffer from uneven wears. All these result in a shift of the wheel's centre of gravity off the vehicle axle, causing vibrations when the wheel spins. To restore perfect alignment, wheel weights can be attached on the rims at proper positions. Tyre balancing is also required for new tyres in order to match the old rims for smooth rotation.



Tyre Balancer



## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Mechanical Services

#### Tachometer



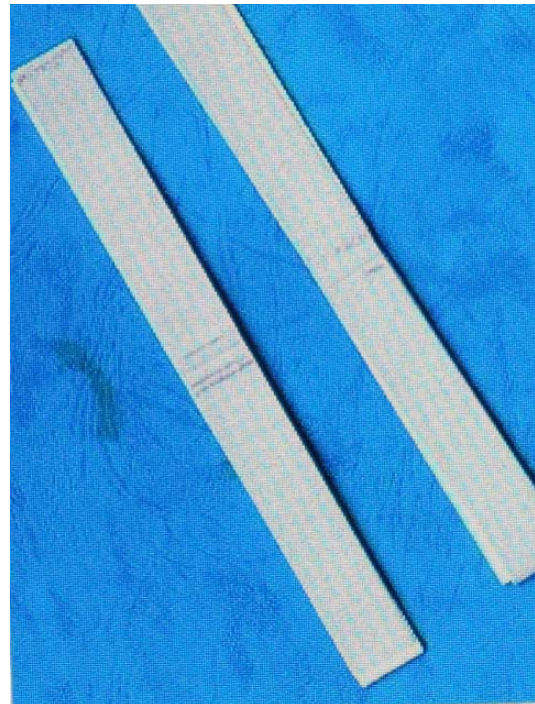
Vibrating Reed Tachometer



Inductive Tachometer



Reflective Tachometer



Reflective Tape

## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Mechanical Services

#### Torque Wrench

##### Function:

When a mechanic is tightening bolts and nuts, appropriate amount of torque should be applied to ensure that the bolts and nuts are sufficiently fastened but not over-tightened which causes deform or damage to the components. Torque wrench is the tool to do the job precisely.

Upon reaching the preset torque value, the wrench will “click”, meaning that the bolt or nut has been fastened sufficiently according to the specification.



Torque Wrench



Torque Wrench



Unlock the Wrench



Set the Wrench by Turning the Handle



Target Torque Shown on the Display

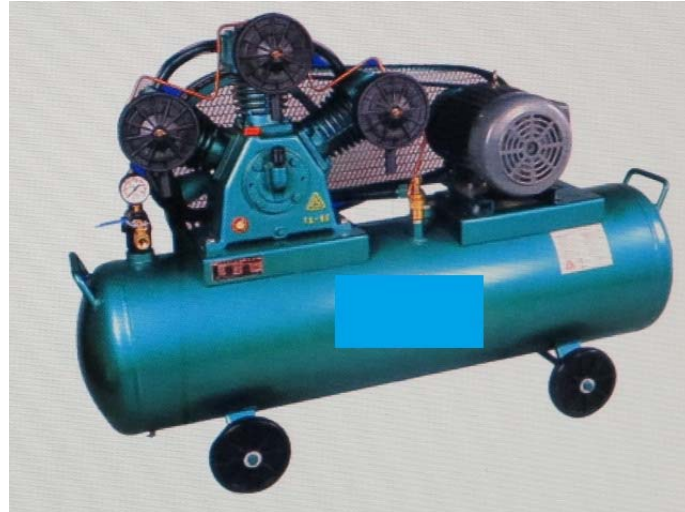


Lock the Wrench

## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Mechanical Services

#### Air Compressor



Air Compressor



Compressed Air Hose



Pneumatic Tool



## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Mechanical Services

#### Hydraulic Jacks



Floor Jack



Bottle Jack

## **Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>**

### **Mechanical Services**

Safe Supporting Devices for Vehicles ( e.g. jack stands, wood blocks )

Function:

- ( i ) Support the vehicle to a certain height.
- ( ii ) Position the jack stands under the sub-frame structure of the vehicle, preventing it from falling.
- ( iii ) Prevent the vehicle from sliding forward or backward.



Jack Stands



Jack Stands



Wood Block

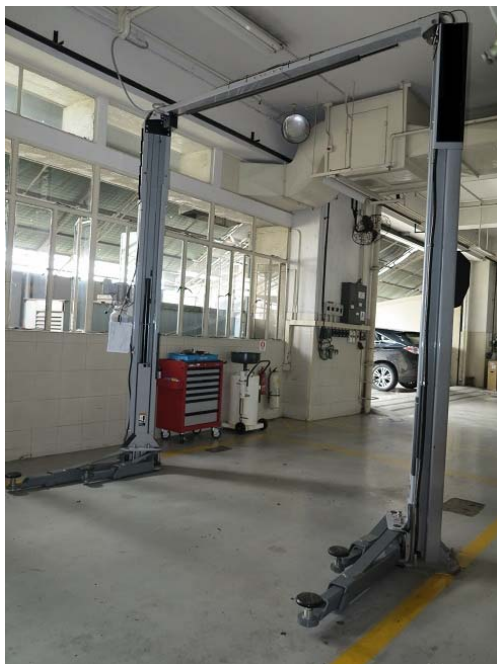
## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Mechanical Services

Vehicle Maintenance Lifting Platform or Pit\*



Vehicle Maintenance Lifting Platform



Vehicle Maintenance Lifting Platform



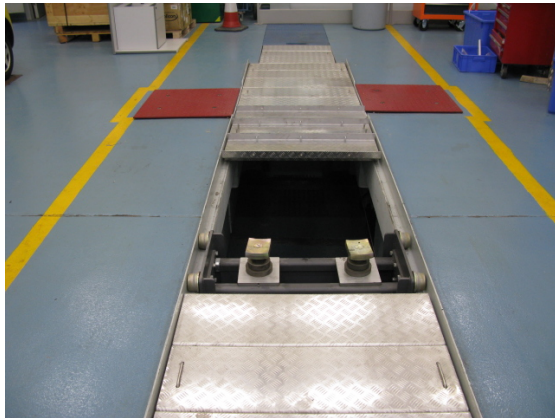
Safety Locks



## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Mechanical Services

Vehicle Maintenance Lifting Platform or Pit\*



### Mechanical Services

Long Arm Hydraulic Crane





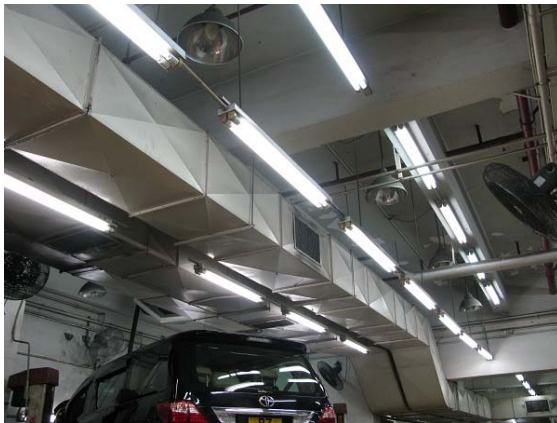
## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Mechanical Services

#### Ventilation & Exhaust System



Guide the Exhaust from Vehicle to Outdoors via an Exhaust Hose



Ventilation Duct



Ventilation Fan

## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Electrical Services

#### Battery Charger



### Electrical Services

#### Battery Maintenance / Charging Area (with ventilation facility)

### Electrical Services

#### Belt Tension Gauge

Function: Measure the tension of the belt.



## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Electrical Services

#### Battery Load Tester

Function: Check battery condition.



### Electrical Services

#### Electronic Analyzer (e.g. oscilloscope, thermometer, ...)\*

Function:

- ( i ) Test engine condition.
- ( ii ) System failure diagnosis.



## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Electrical Services

Tachometer (refer to the “Mechanical Services” section)

Function: Assess engine’s rotational speed.

### Electrical Services

Multimeter

Function: Measure electrical voltage, current and resistance.





## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Body Repair

Vehicle Frame Alignment Bench or Compatible Facility



Vehicle Frame Alignment Bench



Hydraulic Vehicle Body  
Straightener



Vehicle Body Straightening Work Area



Hydraulic Vehicle Body Straightener

### Body Repair

Transmission Jack (refer to the “Mechanical Services” section)

## **Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>**

### **Body Repair**

#### **Oxy-acetylene Welding Machine**

Tools include:

- ( i ) Oxygen (black cylinder)
- ( ii ) Acetylene (brown cylinder)
- ( iii ) Air hoses
- ( iv ) Welding tip



Oxy-acetylene Welding Machine



Welding Tip

## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Body Repair

#### Tungsten Inert Gas (TIG) Welding Machine

Tools include:

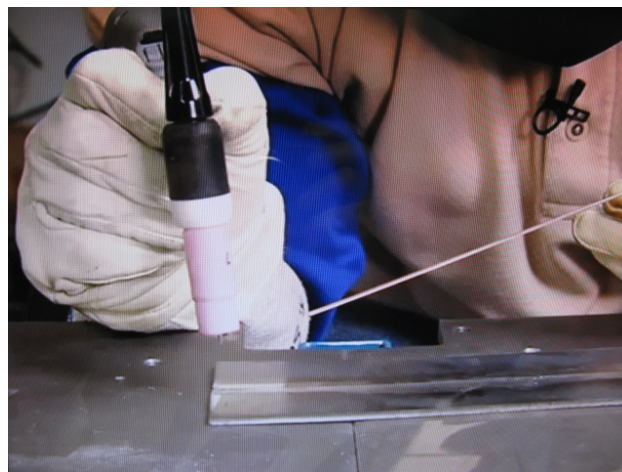
- ( i ) Shielding gas, e.g. Argon (blue cylinder)
- ( ii ) Tungsten electrode
- ( iii ) Filler rod

Function:

- ( i ) Prevent pollution by using Argon as the shielding gas.
- ( ii ) The filler rod is melted by the Tungsten electrode via electric arc.
- ( iii ) Welding is carried out by means of the molten puddle



Tungsten Inert Gas (TIG) Welding Machine



Non-consumable Tungsten Electrode and Filler Rod



## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Body Repair

#### Metal Inert Gas (MIG) Welding Machine

Tools include :

- ( i ) Shielding gas, e.g. Argon (blue cylinder)
- ( ii ) Welding gun
- ( iii ) Continuously fed welding wire

Function:

- ( i ) Protect the welding spot by means of inert gas.
- ( ii ) The continuously fed metal wire serves both as electrode and filler.



Metal Inert Gas (MIG) Welding Machine



Welding Gun



Roll Wire Feeder

## **Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>**

### **Body Repair**

Electrical Arc Welding Machine

Tools include :

- ( i ) Electrode
- ( ii ) Ground clamp
- ( iii ) Electrical arc welding machine



Electrode and Ground Clamp



Electrical Arc Welding Machine

### **Body Repair**

Long Arm Hydraulic Crane (refer to the “Mechanical Services” section)

### **Body Repair**

Hydraulic Jacks (refer to the “Mechanical Services” section)

### **Body Repair**

Ventilation & Exhaust System (refer to the “Mechanical Services” section)

Function:

- ( i ) Exhaust harmful gases to outdoors.
- ( ii ) Bring in fresh air.

## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Body Painting

#### Paint Mixing Machine✱

Including:

- ( i ) Color mixing formula
- ( ii ) Paints
- ( iii ) Electronic weight

Function:

- ( i ) Provide mixing formula of colour paints, in accordance to vehicle manufacturers' specifications for different vehicle models.
- ( ii ) Locate the required paints.
- ( iii ) Make use of the electron weight to mix the proper amount of paints, in accordance to the mixing formula.



Paint Mixing Machine

## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Body Painting

#### Spray Guns



Spray Cup



Spray Gun

### Body Painting

#### Spray Booth or Compatible Installation (with air filtering & heating facilities)\*

Including :

- ( i ) Spray booth
- ( ii ) Infrared heating device

Function:

- ( i ) Provide a clean environment with the suitable temperature, humidity for vehicle body painting.
- ( ii ) Heat up the air so that the paint can dry up quickly with a shiny finishing.



Spray Room (External)



Spraying Room (internal)



## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>



Infrared Heating Device

### Body Painting

#### Spray Gun Cleaner\*

Function: Clean the spray guns after use.



### Body Painting

Hydraulic Jacks (refer to the “Mechanical Services” section)

## **Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>**

### **Body Painting**

#### **Ventilation & Exhaust System**

Including:

- ( i ) Exhaust facility
- ( ii ) Filter facility

Function:

- ( i ) Bring fresh air into the spraying room.
- ( ii ) Filter dusts so as to maintain the quality of painting.





## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Motorcycle Maintenance

Full Set of Hand Tools

### Motorcycle Maintenance

Motorcycle Lifting Bench

Function:

- ( i ) Lift a motorcycle for maintenance.
- ( ii ) Avoid scratches on the motorcycle body.

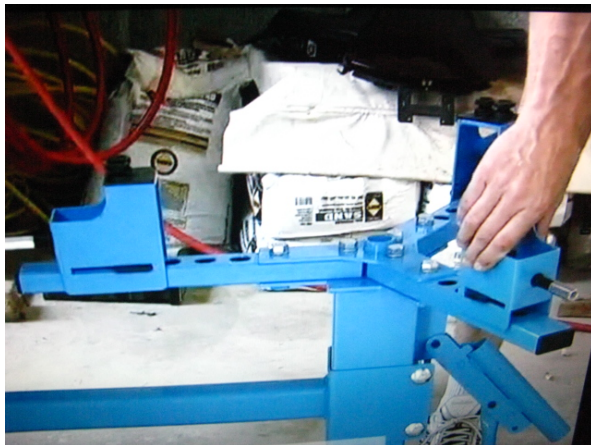


## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Motorcycle Maintenance

#### Motorcycle Tyre Changer\*

Function: Dismantle and install tyres for motorcycles.



Source: webBikeWorld Reviews



## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Motorcycle Maintenance

#### Motorcycle Tyre Balancer✱



Source: FASEP

### Motorcycle Maintenance

#### Front Fork Compressor Tool

Function: Clamp onto the motorcycle fork and compress it, pushing it down to the desired dimensions.



## **Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>**

### **Tyre Work**

Full Set of Hand Tools

Labour Gloves

Hydraulic Jacks (refer to the “Mechanical Services” section)

Jack Stands (refer to the “Mechanical Services” section)

Torque Wrench (refer to the “Mechanical Services” section)

Air Compressor (refer to the “Mechanical Services” section)

Tyre Balancer✱(refer to the “Mechanical Services” section)

### **Tyre Work**

Air Screwdrivers



## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Tyre Work

#### Tyre Changer \*

Function: Dismantle and install tyres.





## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Tyre Work

#### Waste Tyre Storage and Recycling Facility and Records

Function:

- (i) Trace the waste producer.
- (ii) Record the type and quantity of waste produced.

Environmental Protection Department 環境保護署 Waste Disposal Ordinance (Chapter 354) 香港法例第354章廢物處置條例 Waste Disposal (Chemical Waste) (General) Regulation 廢物處置(化學廢物)(一般)規例				Waste Producer's Copy 廢物產生者存根						
ASTE Import 入口 <input type="checkbox"/> Part A 甲類 <input type="checkbox"/> Declaration: 廢物聲明: Export 出口 <input type="checkbox"/> Part B 乙類 <input checked="" type="checkbox"/> Part A Waste Identification Reference No. 甲類化學廢物知書編號: _____ Ticket Number (運載紀錄編號): _____				<b>TRIP TICKET</b> 運載紀錄						
<b>A. WASTE PRODUCER (廢物產生者)</b> Full Name 全名: 車房 Address 地址: 大埔汀角路 Contact Person 聯絡人姓名: 車主 Capacity 職位: 2665 Tel. No. 電話: _____ Waste Producer Number 廢物產生者編號: 1313				I certify in my best knowledge and belief that the information given in the Waste Declaration, A, D(I), and E(I) sections is correct and the waste described in D(I) has been properly labelled and consigned to the waste collector at B. 據本人所知及所信，在廢物聲明、A、D(I)及E(I)欄內填報的資料，全屬真實無訛，而D(I)欄內填報的廢物是已作適當的標籤及寄往B欄的廢物收集者付運。此證。 Signed 簽名: [Signature] Co. Chop 公司印鑑: [Stamp] Name 姓名: [Name] Date 日期: 8-8-07 Time 時間: 16						
<b>B. WASTE COLLECTOR (廢物收集者)</b> Company Name 公司名稱: KWUN Address 地址: PAT TSZ WOO TSUEN, FO TAN SHATIN Waste Collection Licence Number 廢物收集牌照編號: 9210-753- Intended Disposal Site 擬運往的處置設施: _____ Operator 運載員姓名: Chung Kim Tel. No. 電話: 2411 Vehicle Registration or Vessel Licence No. 車輛登記編號或船隻牌照編號: HCT11				(* State the appropriate one 選擇適用者) I certify in my best knowledge and belief that I have checked and then collected the waste set out in D(I) and the information given in B, D(II), and E(II) is correct. 據本人所知及所信，本人經核對後已收集在D(I)欄載列的廢物，而B、D(II)及E(II)欄內填報的資料，全屬真實無訛。此證。 Signed 簽名: [Signature] Co. Chop 公司印鑑: [Stamp] Name 姓名: [Name] Date 日期: 8-8-07 Time 時間: 11						
<b>C. RECEPTION POINT (廢物收集處)</b> Company Name 公司名稱: _____ Address 地址: _____ Contact Person 聯絡人姓名: _____ Capacity 職位: _____ Tel. No. 電話: _____ Waste Disposal Licence Number 廢物處置牌照編號: _____				I (Reception Point Manager) certify that the waste set out in D(I) has been received by this reception point and the information given in C, D(II) and E(II) is correct. 本人(收集處經理)證實本收集處已接收在D(I)欄載列的廢物，而C、D(II)及E(II)欄內填報的資料，全屬真實無訛。此證。 Signed 簽名: _____ Co. Chop 公司印鑑: _____ Name 姓名: _____ Date 日期: _____ Time 時間: _____						
<b>D. WASTE DESCRIPTION (廢物資料)</b> (* State the appropriate one 選擇適用者)										
Item 廢物項目	(I) Waste Type/Chemical Name 廢物種類/化學名稱	Waste Identification 廢物鑑定	Physical Form* 廢物形態	Containers 容器			Quantity Quantity Quantity		(II) Quantity Quantity Quantity	(III) Quantity Quantity Quantity
				Waste Code 廢物代號	Dangerous Goods (Category) 危險物品(類別) (if applicable) (如適用者)	Solid 固體 Liquid 液體 Sludge 污泥 Others 其他	No. 數目	Type 種類		
1.	Tire	692	Solid				L 升	L 升	L 升	L 升
							kg 公斤	kg 公斤	kg 公斤	kg 公斤
2.							L 升	L 升	L 升	L 升
							kg 公斤	kg 公斤	kg 公斤	kg 公斤
3.							L 升	L 升	L 升	L 升
							kg 公斤	kg 公斤	kg 公斤	kg 公斤
4.							L 升	L 升	L 升	L 升
							kg 公斤	kg 公斤	kg 公斤	kg 公斤
<b>E. REMARKS (註釋)</b> (Include any additional information necessary for safe handling of the waste.) (包括確保廢物安全處理的其他附加資料。) (I) Waste Producer 廢物產生者: _____ (II) Waste Collector 廢物收集者: _____ (III) Reception Point 廢物收集處: _____ handling Part A chemical waste, Waste Producer, Waste Collector and Reception Point must strictly follow the Directions for Disposal issued by the Director of Environmental Protection under Section 17 of the Waste Disposal Ordinance. 物產生者、廢物收集者及廢物收集處在處理甲類化學廢物時，必須遵守環境保護署署長根據廢物處置條例第17條所簽發的指令。 <b>WARNING:</b> Any person(s) who knowingly or recklessly provide incorrect or misleading information or omit material particulars or information or knowingly or recklessly certify as correct anything which is incorrect, in relation to any requirement in the Regulation, commits an offence punishable with a maximum fine of \$200,000 and imprisonment for 6 months.										



## **Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>**

### **Battery Work**

Full Set of Hand Tools (refer to the “Mechanical Services” section)

Battery Charger (refer to the “Electrical Services” section)

Battery Maintenance / Charging Area (with ventilation facility)

Battery Load Tester (refer to the “Electrical Services” section)

Multimeter (refer to the “Electrical Services” section)

Warning Signs and Notices about Chemicals

### **Battery Work**

Battery Work Protective Wear

Function: Prevent body injured by spills of sulfuric acid.



Plastic Apron

### **Battery Work**

Gloves and Goggles (for adjusting / refilling battery liquid)



## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Battery Work

Waste Battery Storage and Recycling Facility and Records (refer to the “Tyre Work” section.

The form can be used for waste lubricant oils, waste batteries and waste tyres.)




Function:

- ( i ) Trace the producer of the waste batteries.
- ( ii ) Record the quantity of the waste batteries.

### Battery Work

Warning Signs and Notices about Chemicals

Function: Remind staff the hazards of chemicals.

危險分類 Classification	符號 Symbols
有害 Harmful	
腐蝕性 Corrosive	
刺激性 Irritant	

## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Lubrication Work

#### Full Set of Hand Tools

Including:



Oil Filter Wrench

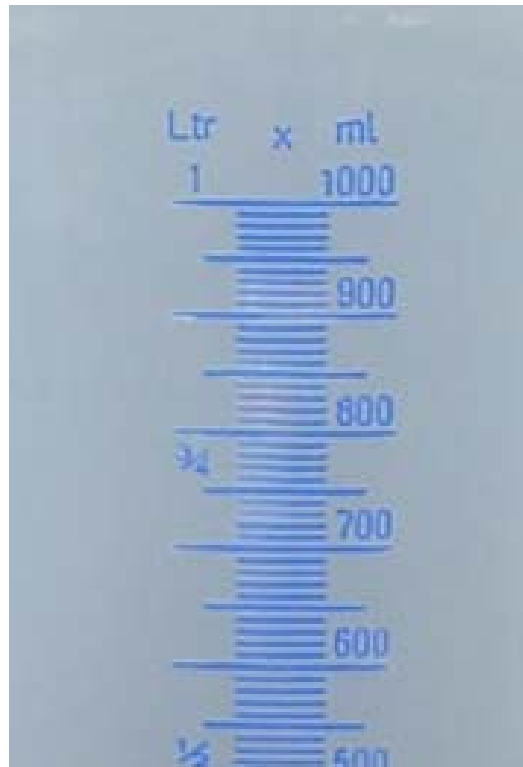


Oil Funnel

### Lubrication Work

#### Measuring Cups

e.g.



## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Lubrication Work

#### Protective Wear and Gloves

Including:

- ( i ) Mechanic coverall
- ( ii ) Chemical resistant gloves
- ( iii ) Oil resistant safety shoes

Function:

- ( i ) Prevent oil spilling onto worker's body.
- ( ii ) Prevent illness or injury after touching waste lubricant oils.
- ( iii ) prevent injury due to slip.



Mechanic Coverall



Mechanic Coverall



Oil Resistant Safety Shoes



Chemical Resistant Gloves

## **Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>**

### **Lubrication Work**

Waste Lubricant Oil Storage and Recycling Facility and Records

Waste Lubricant Filter Storage and Recycling Facility and Records

Refer to the “Tyre Work” section. The form is also applicable to waste lubricant oils and filters.

Function:

- ( i ) Trace the producer of the waste lubricant oils and/or filters.
- ( ii ) Record the quantity of the waste lubricant oils and/or filters.

### **Lubrication Work**

Brake Fluid Tester \*

Function: Test the moist content in the brake liquid.



## **Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>**

### **Car Accessories Work**

Full Set of Hand Tools

### **Car Accessories Work**

Necessary Tools for Work (depending on the job)

e.g.



Air Saw



## **Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>**

### **Air Conditioning Work**

Full Set of Hand Tools

Protective Wear and Gloves (refer to the “Lubrication Work” section)

### **Air Conditioning Work**

Refrigerant recovery / recycling / recharging Machine\*

Function:

- (i) Remove any remaining refrigerant in the air conditioning system.
- (ii) Vacuum the air condition system to remove any moist.
- (iii) Recharge the air conditioning system with refrigerant.



R-134a Refrigerant



Refrigerant recovery / recycling / recharging Machine

## **Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>**

### **Air Conditioning Work**

#### **Refrigerant Gauge Manifold Set**

Function: Measure the pressure in the high side (red) and low side (blue) of an air conditioning system.



### **Air Conditioning Work**

#### **Refrigerant Leakage Detector**

Function: Detect leaks of refrigerant.



## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Air Conditioning Work

#### Dial Thermometers

Function: Measure the temperature in the A/C vents.



### Air Conditioning Work

#### Thermometer

#### Humidity Meter

Function: Measure the temperature and humidity inside the car compartment.



## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>

### Body Building Work

#### Full Set of Hand Tools

Including :

- |         |                           |          |                      |
|---------|---------------------------|----------|----------------------|
| ( i )   | Metal and plastic hammers | ( vi )   | Flexible ruler       |
| ( ii )  | Combination clamp         | ( vii )  | Pencil               |
| ( iii ) | Wrenches / Socket set     | ( viii ) | Car body seam sealer |
| ( iV )  | Screwdrivers              | ( ix )   | Air drill            |
| ( v )   | Electrical cutter         | ( x )    | Air saw              |



Car Body Seam Sealer



Electrical cutter



Air Saw



Air Drill

### Body Building Work

#### Protective Wear and Gloves

Function: Protect worker's body and hands from injuries.



## Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>



Welding Gloves



Welding Mask

### Body Building Work

Sheet Metal Bending / Roll Forming / Cutting Machines \*

Including:

- (i) Bending Machine
- (ii) Roll Forming Machine
- (iii) Cutting Machine

Function:

- (i) Fold metal piece at an angle and form the desired shape.
- (ii) Bend metal piece into the desired cross-section profile.
- (iii) Cut metal piece into the required sizes.



Sheet Metal Bending Machine



Sheet Metal Roll Forming Machine



Sheet Metal Cutting Machine

## **Appendix B - List of Equipment and Facilities for Vehicle Maintenance Workshops<sup>#</sup>**

### **Body Building Work**

Jack Stands (refer to the “Mechanical Services” section)

Oxy-acetylene Welding Machine (refer to the “Body Repair” section)

Tungsten Inert Gas (TIG) Welding Machine (refer to the “Body Repair” section)

Metal Inert Gas (MIG) Welding Machine (refer to the “Body Repair” section)

Electrical Arc-welding machine (refer to the “Body Repair” section)

Long Arm Hydraulic Crane (refer to the “Mechanical Services” section)

Hydraulic Jacks (refer to the “Mechanical Services” section)

Ventilation & Exhaust System (refer to the “Mechanical Services” section)

- **End** -



一般法例



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