

Virtual Reality Sample Workshop



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For enquiries

機電工程署
EMSD



Scheme Tunes Up Auto Trade

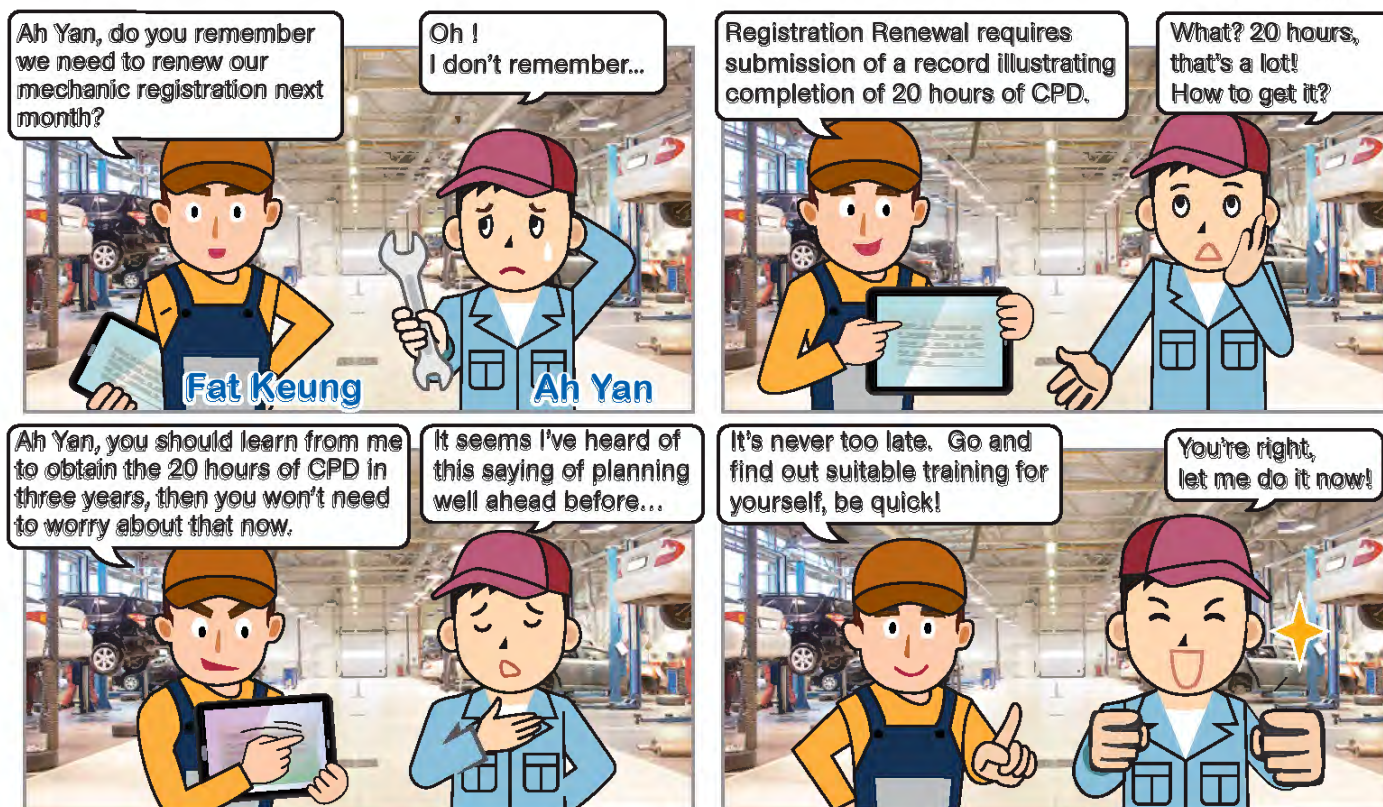
To step up publicity of the two voluntary registration schemes for vehicle maintenance, the Vehicle Maintenance Registration Unit (VMRU) of the Electrical and Mechanical Services Department (EMSD) has recently collaborated with the Information Services Department (ISD) to produce a short video clip named "Scheme Tunes Up Auto Trade", approximately five minutes in length. Apart from introducing the contents of the registration schemes, the video also features interviews with Mr Chan, owner of a registered vehicle maintenance workshop, and Mr Yu, a registered vehicle mechanic, who shares how the voluntary registration schemes have brought about positive impact on their careers.

Mr Yu, with more than ten years of experience in the trade, has become a registered mechanic since 2015. In the interview, Mr Yu shares his views on the changes of the vehicle maintenance trade and continuing development. Technology is getting more advanced. In the old days, vehicles were just machines, but today, most of them are equipped with computers which perform a wide range of computer-controlled functions. We must keep up with the times and pursue continuing learning. His opinions are in line with the objectives of the Voluntary Registration Scheme for Vehicle Mechanics, i.e. to encourage mechanics to pursue continuing education and upgrade their skills and knowledge. According to the VMRU's records, it is estimated that more than 3 000 applications for renewal of registration from vehicle mechanics are to be processed in 2019. When filing renewal applications, mechanics are required to submit a record of at least 20 hours of continuing professional development (CPD) in the recent three years. To avoid delay in the application for renewal of registration due to inadequacy of CPD hours, I hereby appeal to registered mechanics to make early preparation.

Besides, the VMRU and the Vocational Training Council (VTC) have joined hands to produce a sample workshop with the latest virtual reality (VR) technology, introducing registered workshops to the trade and members of the public, as well as explaining the registration requirements for workshops, requirements on basic facilities and occupational safety and health measures, etc. Illustrating the requirements for registered workshops with the use of new VR technology helps attract young people to join the trade. The production of the VR sample workshop was completed early this year and will be open to the public later.

The video of interview has been uploaded to the ISD website, Facebook and YouTube. Interested parties may view the video at

https://www.news.gov.hk/eng/2019/03/20190321/20190321_153032_193.html



Mr YIP Sui-pong, Ponthey Chief Editor

1 The Steering Group on Approval of Special Applications received a total of three applications which were not submitted before the deadline or processed due to special reasons in the third quarter of 2018 and the first quarter of 2019. Consolidating the experience gained from the three cases, the Steering Group would like to remind registered vehicle maintenance workshops and mechanics to take note of the following:

- When posting the application form or supplementary documents, please ensure that the mail item **bears sufficient postage and a return address has been written** to enable smooth delivery. If the postage is insufficient, Hong Kong Post will return the mail item to the sender. Mail items with no return address will be disposed of without opening.
- If there is any change in the information of the vehicle maintenance workshop (such as name of the workshop, registration number of the workshop, address, contact number and business registration certificate, etc.) or alteration in the type of workshop being registered, the person-in-charge of the workshop must, **within 14 working days** from such change, notify the VMRU in writing of the change and submit the relevant documents for processing.
- Registered vehicle mechanics who wish to change their personal particulars (such as correspondence address or contact number) should **notify the VMRU by e-mail or fax** of their name, vehicle mechanic registration number as well as new and old personal addresses or contact number, etc.

2 The VMRU will, upon receipt of new applications for registration or applications for renewal of registration submitted by vehicle mechanics or owners of vehicle maintenance workshops, issue reply slips to acknowledge receipt of such applications. If an applicant has not received a reply from the VMRU within 30 days after submitting the form, please contact the VMRU immediately.



Information on the Voluntary Registration Scheme for Vehicle Mechanics:

Total number of vehicle mechanics	10 382 <small>Note 1</small>
Number of registered vehicle mechanics (as at end-March 2019)	9 333

Information on the Voluntary Registration Scheme for Vehicle Maintenance Workshops:

Total number of vehicle maintenance workshops	2 822 <small>Note 2</small>
Number of registered workshops (as at end-March 2019)	2 073

Note 1: 2016 Manpower Survey Report (updated on 25 August 2017) by the Vocational Training Council and the Automobile Training Board.

Note 2: Database of the Registration Unit (updated on 5 July 2018).

If you wish to help protect our environment by receiving the electronic version of RVM Newsletters and leaflets, please send us the completed reply slip by e-mail: **vmru@emsd.gov.hk** or WhatsApp: **9016 3185**. We will contact you by means of e-mail or mobile communication as far as possible.

Reply Slip

I/My company would like to receive the RVM Newsletters and other information leaflets by

☐ e-mail / ☐ WhatsApp.

Please provide the relevant contact details based on the above selected means of communication:

E-mail address: _____ WhatsApp: _____

The electronic version of RVM Newsletters is also available at the EMSD website:

https://www.emsd.gov.hk/en/supporting_government_initiatives/registration_scheme_for_vehicle_maintenance/publications_and_circulars/rvm_newsletter/index.html



Virtual Reality Sample Workshop

Built by the VMRU at the EMSD Headquarters in 2017, the temporary vehicle maintenance sample workshop showcases the basic facilities to be installed in a registered workshop with real workshop set-up, and presents the key points of the Practice Guidelines for Vehicle Maintenance Workshops (Practice Guidelines) under the voluntary registration scheme. Visits to the sample workshop saw enthusiastic response and active participation from trade members, and were well-received by the trade.

However, due to site constraints, the VMRU could not permanently display a physical sample workshop for visits by the trade. In view of this, the VMRU has decided to collaborate with the VTC to build a VR vehicle maintenance sample workshop (hereinafter referred to as “VR sample workshop”) with the most advanced VR technology available, enabling trade members to experience the feeling of being in a workshop as well as gaining a better understanding of the laws in relation to vehicle maintenance workshops and the requirements stipulated in the Practice Guidelines.

Design of the VR Sample Workshop

In order to allow trade members to be fully engaged in the VR sample workshop, visits will be held in the form of games. Upon start of the game, visitors can choose to enter Type Two or Type Three workshop to obtain relevant information by selecting different objects or devices in the workshop with the controller so that they can further understand the laws in relation to the workshops or the Practice Guidelines.

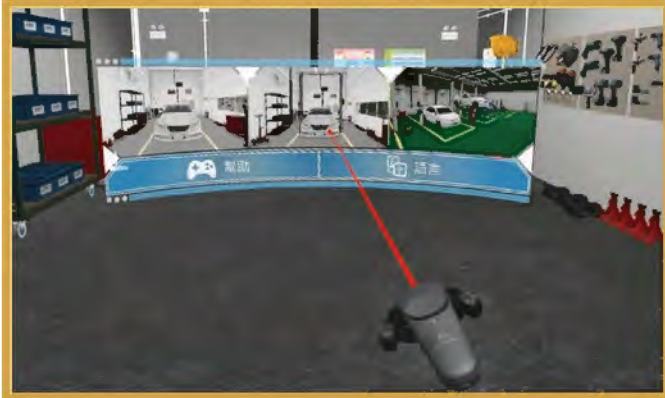
Extending the Areas of Application of the VR Sample Workshop

The application of the VR sample workshop can be extended to other areas too. Visitors can try to use vehicle lifting platforms to lift and lower a vehicle for discharging engine oil in the VR world. Looking ahead, vehicle maintenance apprentices can receive training in the VR setting, through which they learn about the safety risks in the maintenance of various vehicles (e.g., high voltage risk assessment must be completed with safety measures taken when repairing electric vehicles), thereby reducing the chance of accidents happened to apprentices in their work in real life scenarios.

Merits of Applying the VR Sample Workshop

Compared with the sample workshop with real set-up, the building of the VR sample workshop only requires a space of about 3.5 metres times 3.5 metres and a small amount of equipment, which greatly enhances the mobility of the sample workshop and facilitates carrying by VMRU staff to different places for organising relevant activities. Moreover, construction materials are not required for the building of the VR sample workshop, which is indeed an environment-friendly sample workshop. The VMRU has organised a number of visits earlier using the trial version of the VR sample workshop, which met with enthusiastic response. The VR design can also attract young people to learn about the vehicle maintenance trade, thereby enhancing their interest in vehicle maintenance and injecting new blood into the industry.





Visitors can choose to play in the type 2 or type 3 workshop



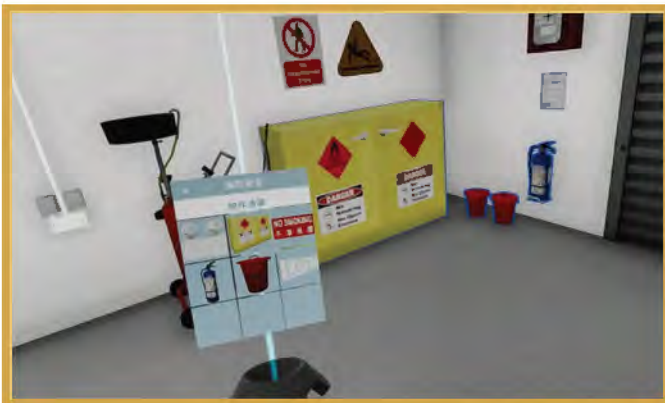
Type 2 VR vehicle maintenance sample workshop



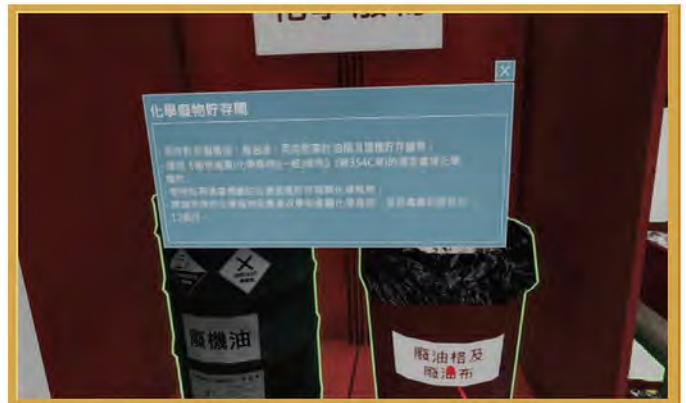
Type 3 VR vehicle maintenance sample workshop



Enter the game layout



Looking for a list of objects



Click on an object or a device to display the requirements of relevant legislation/practice guidelines



Visitors can learn the proper ways to use the vehicle lifting platform in the virtual world



Receive training on engine oil discharge

As mentioned in the last issue, upon disuse of the criterion of “ten-year work experience” as the means for vehicle mechanics to obtain registration, serving vehicle mechanics who have yet to obtain registration or renew their registration may choose to take the trade test to fulfill the basic qualification requirement for applying as registered vehicle mechanics. In this issue, Mr Wong Ka-ming will continue to share the tips for passing the trade test.



Q: What are the questions of the practical test (workshop) and the frequent mistakes made by candidates?

A: A week before the practical test (workshop), the Trade Test Registry will invite candidates to attend a briefing on the trade test at the VTC Kwai Chung Complex. Candidates can then get to know the contents of the test, pay on-site visit to the test workshop, and get a glimpse of the tools to be used in the test. Besides, as safety is of great importance in the work of vehicle maintenance, the assessment will focus on whether candidates have prepared suitable working clothes and personal protective equipment (such as safety shoes) for the test, whether they use the tools properly/make reference to the manufacturer’s manual, and whether their level of craftsmanship is up to standard, etc.

Q: Some consider that the current trade test is out of line with the major work (such as assembly, removal and replacement of parts) of a general garage. What do you think?

A: The trade test mainly assesses a mechanic’s ability to determine the problem of vehicle breakdown instead of the ability to assemble, remove or replace parts. The practical test (workshop) places great emphasis on whether the entire repair process and steps are correct. For instance, when a vehicle’s battery is running low or the car engine won’t start, some candidates will immediately measure the battery voltage and have it recorded if the voltage is insufficient. In fact, there are still a lot to be done by a mechanic in a proper maintenance process. For example, has the mechanic measured the output of the generator? Is the proportion of battery fluid in the battery measured? Is the earth wire poorly connected? This is the process to be assessed in a practical test. As for other questions, such as measuring engine parts, garages nowadays rarely carry out measurement procedures but usually replace the parts directly. Very often mechanics are at a loss when they are required to use some professional tools such as “plastigage”, “calipers” and “dial indicators” for measurement in the test.

Q: Lastly, are there any other tips that you would like to share with vehicle mechanics, Mr Wong?

A: It is indeed not very difficult to cope with the trade test. Mechanics may consider enrolling in relevant courses to prepare and practice in advance, and they will be able to attempt the test with ease. For example, the Pro-Act Training and Development Centre of VTC organises evening courses such as the Refresher Course for Vehicle Mechanics (course code: AU5106390) and the Vehicle Electric Systems (course code: AU5106360), which are suitable for enrollment by candidates of the trade test.

Those who are interested in taking the trade test or relevant courses may obtain detailed information at the VTC websites below:

<http://ttr.vtc.edu.hk/en/guideline.html>

<http://www.proact.edu.hk/proact/html/en/centres-and-programmes/automobile/information/index.html>



At present, there are about 140 LPG vehicle fuel system maintenance workshops in Hong Kong, which provide maintenance services for LPG vehicle fuel systems. Apart from regular inspections and publicity work to ensure that vehicle maintenance workshops comply with the safety requirements on the maintenance of LPG vehicles, the EMSD has also introduced the following measures to enhance the gas safety of LPG vehicle maintenance.

Identification Signage for LPG Vehicle Fuel System Maintenance Workshops

Starting from August 2015, the EMSD has issued red (can store an aggregated nominal water capacity of more than 130 litres of LPG) or blue (no more than 130 litres of LPG) identification signage to qualified workshops (commonly known as red or blue signage workshops). The identification signage should be exhibited in a conspicuous position at the workshop, so as to make it easier for LPG vehicle owners, drivers, members of the public and trade practitioners to identify LPG vehicle fuel system maintenance workshops. Workshops issued with identification signage are equipped with (i) detectors for detection of LPG leakage; (ii) purging equipment for fuel pipe of LPG vehicles; (iii) adequate ventilation; and (iv) the repair and maintenance of LPG vehicle fuel systems should be conducted by a Competent Person (Class 6) (CP6) approved by the EMSD.



Identification Signage for LPG Vehicle Fuel System Maintenance Workshop



Security Labels for LPG Vehicle Fuel Tanks

Security Label System for LPG Vehicle Fuel Tanks

The EMSD introduced the Code of Practice on Security Label System for LPG Vehicle Fuel Tanks in January 2017. The security label system for LPG vehicle fuel tanks is applicable to LPG vehicle fuel tanks equipped with an internal fuel pump, with a view to ensuring that revalidation or replacement of internal or external components of a fuel tank is carried out by a Competent Person at the LPG fuel tank workshop of a registered gas supply company. Red security labels are to be affixed by registered gas supply companies at LPG fuel tank workshops; blue ones are to be affixed by the EMSD or importers of LPG vehicles. At present, all LPG vehicles equipped with an internal fuel pump in Hong Kong are affixed with security labels.



Certificate of Class 6 Competent Person

CP6 Certificate and Identification Card

The EMSD introduced "gold" and "silver" CP6 certificates and identification cards in May 2018 which are valid for three years. CP6 with gold cards or silver cards possess the qualification of repairing and maintaining LPG vehicles, while only those with gold cards are qualified to repair and maintain LPG vehicle fuel systems equipped with an internal fuel pump.



Identification Card for Class 6 Competent Person

The Voluntary Registration Scheme for Vehicle Maintenance Smart Vehicle Mechanic Quiz Competition was successfully held last December. The Competition attracted participation from over 90 registered vehicle mechanics and 13 prize winners, including the champion, 1st runner-up, 2nd runner-up and ten merit prize winners, were announced.

The prize presentation ceremony was held at the EMSD Headquarters Building on 7 March 2019, on which Mr Alfred SIT, Director of Electrical and Mechanical Services, Mr TANG Wing-hong, Chairman of the Subcommittee on Management and Review of the Vehicle Maintenance Technical Advisory Committee (VMTAC), and Mr YIP Sui-pong, Chairman of the Subcommittee on Research and Development of the VMTAC were invited to present the prizes. The winners had a fruitful and rewarding experience as they were arranged to take an InnoTour of the EMSD to experience the VR sample workshop and learn about the application of other innovative technologies in the EMSD.



Champion
Dah Chong Hong
(Motor Service Centre) Limited
Mr CHAN Chung Man



1st Runner-up
Power Moto Services Limited
Mr YIP Lai Hing



2nd Runner-up
Sime Darby Motor Services Limited
Mr PUN Kin Fan



Merit Prize
Hong Kong Fire Services Department
(Kowloon Engineering Department)
Mr CHEUNG Siu Ting



Merit Prize
Hong Kong Fire Services Department
(Kowloon Engineering Department)
Mr CHAN Cho Kin



Merit Prize
MTR Corporation Limited (Tai Po)
Mr KWONG Kam Lam



Merit Prize
Hyundai Hong Kong Company Limited
Mr MOK Ka Ki



Merit Prize
Chung Loung Garage
Mr LEE Kun Ho



Merit Prize
MTR Corporation Limited (Tai Po)
Mr TSANG Fat Wang



Merit Prize
Hong Kong Exhaust Emission
Laboratory Limited
Mr LEUNG Chung Fai



Merit Prize
Hong Kong Exhaust Emission
Laboratory Limited
Mr WEI Chi Holt Norman





Merit Prize
Hong Kong Exhaust Emission
Laboratory Limited
Mr WONG Ming Cheung



Merit Prize
Wan Luen Company
Mr NG Yue Kei



Photo of award presenters with Champion, 1st Runner-up and 2nd Runner-up



Group photo taken after the Awards Presentation Ceremony

As inflation of tyres of heavy mechanical vehicles is very common in the relevant industries, workers tend to regard them as simple operations. However, improper handling and inflation of tyres may cause a blowout and an explosion of wheel components, leading to very serious consequences.

In recent years, a number of accidents occurred in Hong Kong in which workers were struck when tyres suddenly burst, resulting in serious injuries or even death. To prevent similar accidents, the proprietor or employer should provide and maintain a safe system of work to prevent workers or employees from being endangered by the sudden blowout of tyres in the course of inflation. The system should include, but not be limited to, the following:

- appoint a competent person to conduct task-specific risk assessments to identify all potential hazards associated with the inflation of tyres, taking into account the working environment, ground conditions, the plant or equipment for the inflation work, possible trajectory of any flying wheel components and characteristics of tyres to be inflated (e.g. configuration of the rim components, pressure of tyres recommended by the manufacturers);
- formulate safe work methods and procedures for inflation of tyres with due regard to the results of the risk assessments and manufacturer's specifications or instructions, with the consideration of the requirements of safety legislation and relevant safety guidelines;
- check all wheel components prior to tyre inflation to ensure that they are compatible, serviceable and correctly assembled;
- provide and ensure the proper use of suitable safety restraining devices, such as safety cages and frames, and ensure that no worker is allowed to lean any part of his body on or against the restraining device during tyre inflation;
- where it is not reasonably practicable to fit a wheel into a restraining device, adopt the following safety precautions:
 - restrain the wheel securely (e.g. by suitable mechanical means) prior to the commencement of inflation;
 - set a safe control area (e.g. by embankment or barriers) to contain the effects of any blowout and explosion of wheel components; and
 - take adequate and effective steps to keep all workers out of the trajectory danger zone (e.g. stay apart and use an air hose of sufficient length);
- ensure that the inflating pressure of tyres is limited to the recommended pressure provided in the manufacturer's manual;
- ensure that a tyre is not re-inflated when there is obvious or suspected damage to the wheel components;
- ensure that the pressure system (including pressure regulator, gauge, valve, etc.) is examined by a competent examiner before it is used for the first time and at regular intervals thereafter to prevent over-inflation of tyres;
- give all workers or employees necessary safety information, instructions and training, and ensure that they are familiar with the safe work procedures and relevant safety measures; and
- establish and implement an effective control system to ensure all safety measures are strictly followed.

The Labour Department (LD) has published the Guidance Notes on Safety at Work for Demounting, Mounting and Inflation of Tyres of Heavy Mechanical Vehicles, which provide essential guidelines on safety at work for demounting, mounting and inflation of tyres of heavy mechanical vehicles to prevent accidents. The publication can be obtained free of charge from offices of the Occupational Safety and Health Branch of the LD or downloaded from the LD's website at

https://www.labour.gov.hk/eng/public/content2_8c.htm



Labour
Department



- Q1** When was the Code of Practice on Security Label System for LPG Vehicle Fuel Tanks introduced?
- A** August 2018 **B** August 2017
C January 2017 **D** March 2019
- Q2** Which of the following two types of workshops are available for selection in the game of VR vehicle maintenance sample workshop?
- A** Type One and Type Two **B** Type Two and Type Three
C Type Three and Type Four **D** Type One and Type Four
- Q3** Which of the following shall a workshop issued with the identification signage for LPG vehicle fuel system maintenance workshops by the EMSD be equipped with?
- A** Detectors for detection of LPG leakage **B** Purging equipment for fuel pipe of LPG vehicles
C Adequate ventilation **D** All of the above
- Q4** When did the EMSD introduce the “gold” and “silver” CP6 certificates and identification cards?
- A** May 2018 **B** September 2018
C November 2018 **D** January 2019
- Q5** Which of the following government departments published the Guidance Notes on Safety at Work for Demounting, Mounting and Inflation of Tyres of Heavy Mechanical Vehicles?
- A** Civil Engineering and Development Department **B** Customs and Excise Department
C Labour Department **D** Fire Services Department

How to participate? (Issue No. 25) Please complete the form below, circle the correct answers, and send it to the VMRU by fax or email (fax: 3521 1565 or e-mail: vmru@emsd.gov.hk).

Deadline: 21 June 2019

Question	Answer			
Q1	A	B	C	D
Q2	A	B	C	D
Q3	A	B	C	D
Q4	A	B	C	D
Q5	A	B	C	D

Name: _____

Vehicle Mechanic Registration No.: VM _____

E-mail Address: _____






Contact Tel. No.: _____

- Each winner will receive a souvenir. As there are ten souvenirs in all, the winners will be decided by lottery if more than ten participants answer all the questions correctly.
- Only registered vehicle mechanics with valid registration may participate, each not more than once in each quiz.
- The decision of the Vehicle Maintenance Registration Unit on the quiz will be final.
- The correct answers and list of prize winners will be announced in the next issue of RVM Newsletter. Prize winners will also be notified by the Vehicle Maintenance Registration Unit individually.

Answers of the 2018 Continuing Professional Development Quiz are as follow:

Question	1	2	3	4	5	6	7	8	9	10
Answer	C	A	C	D	D	A	D	B	B	D

Providing Continuing Professional Development Courses for Vehicle Mechanics (in random order)

Name of Training Institute	Website/Contents	Enquiry Tel. No.	QR Code
Traffic Services Employees Association	https://www.facebook.com/tseahk	2575 5544	
Pro-Act Training and Development Centre (Automobile)	http://www.proact.edu.hk/proact/html/en/centres-and-programmes/automobile/about/index.html The Certificate in Vehicle Mechanical Repair programme# run by the Pro-Act Training and Development Centre (Automobile) may serve as another means for qualifying as registered vehicle mechanics. Mechanics who are interested in enrolling in the above programme may visit the Centre's website. # For details and latest developments of the programme, the information issued by the Pro-Act Training and Development Centre shall prevail.	2449 1310	
The Institute of the Motor Industry Hong Kong	http://www.hkimi.org.hk/en/ The Institute of the Motor Industry Hong Kong (IMIHK), formerly known as the Institute of the Motor Industry (IMI) - Hong Kong Branch, brings the mission and vision of the IMI to the Hong Kong automobile industry. After the handover in 1997, the IMI - Hong Kong Branch applied to be renamed the IMIHK in Hong Kong. Eligible members of the trade are welcome to join the IMIHK or enrol in its courses or talks.	2625 5903	
Hong Kong Vehicle Repair Merchants Association Limited	https://www.facebook.com/HKVRMA/	2399 7977	
Hong Kong Vehicle Repairing Industry Employee General Union	http://www.vrunion.hk	2393 9955	
Occupational Safety and Health Council	http://www.oshc.org.hk/eng/main/index.html	2311 3322	
The Society of Operations Engineers (Hong Kong Region)	http://www.soe.org.hk/ The Institute of Road Transport Engineers (a professional sector under the Society of Operations Engineers) is organising a symposium entitled "Green Overlord on Road" at Lecture Theatre N001 of the Hong Kong Polytechnic University on the evening of 14 June 2019. Guest speakers from relevant professional fields will discuss the technology, regulations and ancillary facilities of commercial electric vehicles. Besides, the EMSD will share with the trade the latest updates on registered vehicle mechanics and workshops. Interested parties may visit the Society's website for more information.	2617 0311	
Qualifications Framework recognised courses	http://www.hkqr.gov.hk	2836 1700	

Gentle Reminder

The contents in each issue help you catch up on the development of the registration schemes and enhance the quality of service. Please stay tuned!

Each issue can be downloaded from the EMSD website at:

https://www.emsd.gov.hk/en/supporting_government_initiatives/registration_scheme_for_vehicle_maintenance/publications_and_circulars/rvm_newsletter/index.html



For enquiries on the contents of the RVM Newsletter, please contact the VMRU of the EMSD.

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