

RVM Newsletter (5th issue)

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From the Editor

How to Make the Registration Scheme Add More Value?

The registration scheme for vehicle maintenance currently consists of the Voluntary Registration Scheme for Vehicle Mechanics and the Vehicle Maintenance Workshops Charter Scheme. These are targeted at the vehicle mechanics and the workshop managers (usually the workshop proprietors) respectively, with the common aim of enhancing both the service standards and the professional status of the trade. The improvement of service standards will eventually ensure that the vehicles on our roads are safer, more reliable, environmentally friendly and fuel efficient. The enhancement of professional status will not only be an incentive to the existing trade practitioners,

but also attract more young people to join their ranks. This will help solve the problems of manpower shortage and aging within the trade

The Voluntary Registration Scheme for Vehicle Mechanics already has a value-adding requirement. All registered vehicle mechanics, before registration renewal, must engage in not less than 20 hours of continuous professional development (CPD) over the past three years to make sure that they can keep abreast of new knowledge and skills through lifelong learning. The Vehicle Maintenance Workshops Charter Scheme is restricted to workshops which have employed registered mechanics and is therefore already a value-adding sequel to the Voluntary Registration Scheme for Vehicle Mechanics. The Electrical and Mechanical Services Department has earlier distributed a personal stamp to all registered mechanics and encouraged the workshop managers to use these personal stamps extensively in the documents involved in the vehicle maintenance process (e.g. price quotation and work cards) in order to add value to the Voluntary Registration Scheme for Vehicle Mechanics.

The Vehicle Maintenance Technical Advisory Committee has plans to tighten the registration requirements for vehicle mechanics. Currently, trade practitioners only need to have proof of being in the trade for the past ten years and having accumulated a given number of CPD hours to meet the registration requirement. This rather generous rule may soon be abolished. The registration requirement will be more stringent as trade practitioners will need to complete a recognised apprenticeship course or pass the examination or technical skills assessment designated by the trade before they can become registered mechanics. Tightening the registration requirements at a suitable time should hopefully add value to the Voluntary Registration Scheme for Vehicle Mechanics.

The appropriate promotion of the registration schemes will strengthen their public awareness. It must be borne in mind, however, that a good promotion campaign will make quality products and services more readily acceptable to the public while eliminating the products and services of a poor quality. Promotion and publicity activities therefore will not necessarily add value to the registration schemes. It all depends on whether the registration schemes are capable of bringing real benefits to the public and positive development.

The best way to add value to the two registration schemes therefore is make sure that registered vehicle mechanics and the workshop managers who have signed up to the charter will work together and complement each other in providing maintenance service in a professional manner to meet the expectations of their customers. The improvement of vehicle maintenance standards will consolidate the professional status of the registered mechanics as well as enhancing the social recognition of the signatory workshops.

As the Voluntary Registration Scheme for Vehicle Mechanics and the Workshops Charter Scheme gain their public recognition in due course, then it will be opportune for the voluntary schemes to become mandatory, and this will be the greatest value added to the registration schemes.

WONG Teck-sun

Chief Editor

Sharing

Some Thoughts on the Vehicle Maintenance Workshops Charter Launching Ceremony

A launching ceremony for the Vehicle Maintenance Workshops Charter Scheme was held at EMSD Kowloon Bay Headquarters in the afternoon of 10 January 2013.

It was well-attended by most of the signatory workshop owners and many vehicle maintenance mechanics. I was impressed by the positive recognition of the Vehicle Maintenance Workshops Charter Scheme and the Voluntary Registration Scheme for Vehicle Mechanics by both the employers and employees in the trade and confident that these two schemes can complement each other.

The presence of the Permanent Secretary for Transport and Housing (Transport) Mr. Joseph LAI Yee-tak, JP as the officiating guest of honour at the Vehicle Maintenance Workshops Charter Launching Ceremony was encouraging too. This shows that the government department with close contacts with the auto industry also values and supports the move to improve the service standards of the vehicle maintenance trade.

The Government first launched the Voluntary Registration Scheme for Vehicle Mechanics in 2007. To date, more than 80% of all vehicle maintenance mechanics have joined the scheme. Nevertheless, achieving improved service standards and professional image for the vehicle maintenance trade depends as much on the support of vehicle maintenance owners as the know-how and expertise of vehicle maintenance mechanics. The Vehicle Maintenance Workshops Charter is launched to support this objective.

According to the Practice Guidelines for Vehicle Maintenance Workshops, a vehicle maintenance workshop should not only have suitable repairing equipment and tools related to its business, but should also meet the requirements in occupational safety, fire safety, environmental protection. They should also maintain vehicle maintenance records properly and employ registered vehicle maintenance mechanics. Resources and time should also be provided for the mechanics to pursue their continuing studies to enhance their professional competence. This will improve the know-how about vehicle maintenance, the quality of customer services and safety awareness on the part of the mechanics as well as raise the level of corporate responsibilities of the owner. The workshop will operate more efficiently, boosting its sales revenue and increasing the confidence of the customers. It will be a triple-win situation for the vehicle maintenance workshops, the mechanics and the customers.

Enhancing service quality and professional expertise is the key to success for every industry. The Vehicle Maintenance Workshops Charter Scheme is still in the early stage of development. There is still a long way to go before the scheme can run smoothly and effectively, and continuous support by the trade is required before the ultimate goal is achieved. We hope that the vehicle maintenance workshop owners and the mechanics can support each other and work together to enhance the competitive edge and professional image of the trade. This is vital for its further development and winning the public respect and recognition for its professional status.

MAN Yuen-ling

Latest Developments of the Registration Scheme

- 1 To date, EMSD has received applications for joining the charter scheme from over 300 vehicle maintenance workshops, and 220 workshops have successfully become signatories of the charter. In addition, Vehicle Maintenance Workshops Charter certificates and logos have been distributed to the participating vehicle maintenance workshops for display in the workshops and easy identification by customers.

(Certificate)	(Logo)
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Charter Certificate and Logo

- 2 Signatories of the Vehicle Maintenance Workshops Charter are listed on the EMSD website for public information together with information such as the service classes they provide.
(About the Charter: http://www.emsd.gov.hk/emsd/eng/sgi/vlntry_vmrs_chrtr.shtml)
(Charter Subscriber List: http://www.emsd.gov.hk/emsd/e_download/sgi/CharterWorkshop.pdf)
- 3 With effect from 1 January 2013, all registered vehicle mechanics applying for renewal of registration must submit copies of their Continuing Professional Development (CPD) training records (e.g. attendance certificates or in-house training records) together with the application form. To facilitate the recording of training information by the registered mechanics, a Record of Continuing Professional Development is available at the EMSD website for downloading. The completed and signed record form will suffice as documentary proof.
(The Record of Continuing Professional Development can be downloaded from http://www.emsd.gov.hk/emsd/e_download/sgi/CPD_record_form.pdf)
- 4 The annual test was published in the RVM Newsletter Special Issue in April this year. Interested parties may refer to our previous issues for the areas covered in this test. Registered mechanics who provide four to six correct answers will earn one hour worth of CPD, while those who provide seven or more correct answers will earn two-hour worth of CPD. The CPD test, published in the Special Issue, may be downloaded from the following EMSD web page: http://www.emsd.gov.hk/emsd/eng/sgi/vmrs_pub_news.shtml.

(Gentle reminder: the deadline is 31 December 2013)
- 5 EMSD is going to hold a CPD Seminar at Tsuen Wan Town Hall from 7:00 p.m. to 9:30 p.m. on 24 July. The talk is targetted at vehicle mechanics who have not yet renewed their registration in order to assist them in renewing their registration. It covers the requirements, options and

content of CPD, tips on using the Record of Continuing Professional Development, as well as an overview of the vehicle maintenance technology and development in Hong Kong and the Mainland.

Number of vehicle mechanics in the vehicle servicing sector in 2012	9,420¹
Note 1 2012 Manpower Survey Report by Automobile Training Board	
Number of registered vehicle mechanics (as of December 2012)	7,373

6. Workshops Charter Slogan

Look out for this logo for quality assurance in vehicle maintenance

RVM Chatroom

Backdrop: (dialogue between Master Wong [MW] and Ming Junior [MJ])

MW: Hi, Ming Junior, what do you think you are doing? Stop it!

MJ: Hi, Master Wong, did you say we are going to change the transformer for this car? I am preparing to remove its battery wire.

MW: Don't mess up. It's lucky that I am here so you don't get into a greater mess.

MJ: [feeling wronged] I am just trying to help. What's the big deal?

MW: I appreciate your initiative. But this car is different. You can't dismantle it just like that. See it has a danger label on.

MJ: I see the label alright. But you always say that the car battery is only 12V. It's nothing really.

MW: You must not take it literally. This is an electric car. The bundle of batteries has a voltage of well over 500V, even higher than that of alternating current. You may get electrocuted. It's very dangerous and you must take full precautions before dismantling it.

MJ: How can I tell the difference between high voltage and low voltage?

MW: Look, there is this warning label, and see these bright orange wires. The colour code is a requirement of UNECE of EU and SAE of USA for automotive wire. You must be extra careful when you handle this. Moreover, some special cars like golf carts may not follow the colour code. When you see four batteries or more bundled together, its voltage may well be over 48V. You must not touch them.

MJ: Master Wong, you are a true master. That's why I always say I have so much to learn from you. What should I do now?

MW: I don't need your flattery. Let me teach you the tricks one by one.

Contributions, views and suggestions from trade members are welcome.

A Few Tips on Controlling the Pollution Caused by Tail Pipe Emission of Diesel Vehicles (I)

Introduction

Environmental protection has been a subject of hot debate worldwide over the past 20 years. In addition to stationary sources of pollution like power plants, there are mobile sources of pollution, like the tail pipe emission of vehicles, which significantly affect roadside air quality.

Constant efforts are made by vehicle manufacturers to develop different kinds of technologies to reduce the pollutant concentration of exhaust gas, in terms of meeting the ever-tightening emission standards. In examining how the legal requirements for diesel vehicle emission have evolved, we observe that particulate matters (PM) and nitrogen oxides (NOX) are the main targets of regulation (Table 1).

Year of Implementation	Euro Standard	Particulate Matters [g/kWh]	Oxides		Notes
			[g/kWh]	[particulate/kWh]	
1992	I	0.612	8.0	-	>85KW
		0.36	8.0	-	>85KW
1996	II	0.25	7.0	-	
1998		0.15	7.0	-	
2000	III	0.10	5.0	-	
2005	IV	0.02	3.5	-	
2008	V	0.02	2.0	-	
2013	VI	0.01	0.4	8×10^{11}	

Table 1: Euro emission standard for diesel heavy vehicles

Impact of PM and NOX on health and the environment

The harmful effects of PM are relative to their sizes. PM of smaller size can penetrate into lung tissue more deeply and cause more serious health problems. PM of larger size will sink and accumulate on the ground more quickly. As nasal hair also acts as a filter, larger PM are a lesser health hazard, but they will affect visibility more seriously. PM with a diameter of less than 10 micrometers (PM₁₀) will stay in bronchi and lungs after they are inhaled, and are therefore harmful to health. PM with a diameter of less than 2.5 micrometers (PM_{2.5}) can infiltrate the gas exchange area of lungs, whereas PM of even smaller size (<100nm) can permeate a cell membrane. PM concentration is also an important factor contributing to the formation of smog in the atmosphere. NOX in the atmosphere are basically colourless and odourless. They are highly concentrated, have an irritating smell sometimes, and may lead to aggravation of asthma. NOX dissolve in water to form nitric acid. When they dissolve in atmospheric water vapours, they become acid rain, which causes damage to trees and forest ecosystem.

Conflict between different pollutant control methods

The formation of PM is mainly due to unsatisfactory burning conditions and low-quality fuel. Nitrogen oxides form because of high burning temperature and long burning time. Fuel-burning efficiency may basically be enhanced by high pressure fuel injection, executed with precision and appropriate timing. Higher burning temperature significantly reduces the size and quantity of PM. However, when an engine's power output increases, more NOX will be produced. As these two kinds of pollutants form under opposite conditions, vehicles must be equipped with different devices to handle these two kinds of pollutants separately.

FUNG Man-keung

Prize Quiz

1. The Vehicle Maintenance Technical Advisory Committee has plans to tighten the registration requirements for vehicle mechanics. Which of the following registration requirement(s) will probably become obsolete in the near future for new registration under the Mechanical Services [M], Electrical Services [E] and Body Services [B]?
 - A. A minimum of 10 years recent relevant working experience
 - B. Relevant craft certificates or above + a minimum of 5 years recent relevant working experience
 - C. Pass in the trade test organised by the Automobile Training Board
 - D. (A) and (B)

2. Which of the following is the slogan for the Vehicle Maintenance Workshops Charter?
 - A. Look out for this logo for hassle-free service
 - B. Look out for this logo for quality assurance in vehicle maintenance
 - C. Quality car repair is assured at workshops displaying this logo
 - D. Strict adherence to charter provides quality assurance and the best choice for motorists

3. EMSD is going to hold a CPD Seminar at Tsuen Wan Town Hall from 7:00 p.m. to 9:30 p.m. on _____.
 - A. 14 August
 - B. 24 August
 - C. 14 July
 - D. 24 July

4. According to Euro V emission standard, the emission limit for particulate matters (PM) of heavy vehicles is:
 - A. 0.25 g/kWh
 - B. 0.10 g/kWh
 - C. 0.02 g/kWh
 - D. 0.01 g/kWh

5. According to the standards set down by UNECE of EU and SAE of USA, what colour should be adopted for high voltage wires in electric cars?

- A. Red
- B. Orange
- C. Yellow
- D. Green

How to participate?

Please complete the form below, circle the correct answers, and send it to the Vehicle Maintenance Registration Unit by fax or email (fax: 3521 1565 or email: vmru@emsd.gov.hk). Deadline: 10 August 2013.

Question	Answer
1	A. B. C. D.
2	A. B. C. D.
3	A. B. C. D.
4	A. B. C. D.
5	A. B. C. D.

Name: _____ Vehicle Mechanic Registration No.: **VM** _____

Email Address: _____ Contact Telephone No.: _____

Each winner will receive a souvenir. As there are ten souvenirs in all, the winners will be decided by lottery if more than 10 participants give correct answers to all the questions.

- 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 answers will be final.
- The correct answers and list of prize winners will be announced in the next issue of the RVM Newsletter. Prize winners will also be notified by the Vehicle Maintenance Registration Unit individually.

Result of the prize quiz in RVM Newsletter Issue No. 4

The answers of the prize quiz in RVM Newsletter Issue No.4 are as follows:

Question	1	2	3	4	5
Answer	B	C	D	B	D

The ten winners who gave correct answers to all the questions and drawn by lottery are:

LEE Fuk Kin (VM0023268),

LEE Chi Keung (VM0014753),

WONG Chun Ho Ken (VM0038391),

CHOW Ping Tong (VM0089259),

SHAM Kwok Chiu (VM0007111),

LEUNG Kwai Kai (VM0093742),

CHOW Chi Keung (VM0033459),




WONG Chi Wai (VM0099633),

MOK Chun Ting (VM0103199),

PUN Kin Fan (VM0037182).

Some of the Training Institutes Providing Continuing Professional Development Courses for Vehicle

Mechanics (in random order)

Name of training institute	Website	Enquiry Tel. No.	
Traffic Services Employees Association	http://www.facebook.com/tseahk Courses for August and September 2013 are now open for enrolment. Topics covered: operation of the power system of environment-friendly electric vehicles, operation of the full pneumatic brake system, evolution of gearbox and application of new maintenance techniques, basic operating principles of Euro-IV and Euro-V power systems, conducting research online for new information on vehicle maintenance techniques, and basic operating principles of the intelligent brake system. For details, please visit the above website or call the enquiry telephone number.	2575 5544	
Pro-Act Training and Development Centre (Automobile)	http://www.vtc.edu.hk/vtc/web/template/yc_course.jsp?fldr_id=458&lang=tw	2449 1310	
The Institute of the Motor Industry Hong Kong	http://www.hkimi.org.hk The Institute is organising a series of automotive e-Learning courses in conjunction with the Electude Company of the Netherlands. Enrolments will be called for every month. Online guidance and	2625 5903	

assessments are available during the learning period. Participants will receive a CPD certificate on completion of a course. For details, please visit the above website or call the enquiry telephone number.

Hong Kong Vehicle Repair
Merchants Association
Limited

<http://www.hkvrma.com.hk/training/index.html>

2399 7977



Hong Kong Vehicle
Repairing Industry Employee
General Union

<http://www.VrUnion.hk>

2393 9955



25/8 : Electrical safety measures
for hybrid and electric
vehicles

13-14/10 : Measurement and test
for automotive electronic
parts and components

Integrated Vocational
Development Centre

<http://ivdc.vtc.edu.hk/public/SusCoursesList.aspx>

3907 6789



(Transport and Supporting
Services)

Courses are now open for enrolment. Topics covered: application of engine testing equipment, servicing of LPG fuel injection system, structure and basic application of motor vehicles and components, application of automotive electronics, partial vehicle body repairing (sheet metal, painting) techniques and basic automotive electricity knowledge. For details, please visit the above website or call the enquiry telephone number.

The Society of Operations
Engineers

<http://www.soe.org.hk/events.asp>

3188 0062



Gentle Reminder

Please watch out for each issue: it helps you catch up on the development of the registration scheme, acquire hours of continuing professional development, and enhance the quality of service.

Each issue can be downloaded from the EMSD website at:

http://www.emsd.gov.hk/emsd/eng/sgi/vmrs_pub_news.shtml

For enquiries, please contact the EMSD Vehicle Maintenance Registration Unit

(Fax: 3521 1565; Email: vmru@emsd.gov.hk; Tel: 2808 3867 or Government Hotline: 1823)

Editorial Board Members:

Mr WONG Teck-sun (Chief Editor), Mr FUNG Ming-kong, Mr LAI Chi-wah, Mr LIU Tat-ming, Mr WONG Yiu-kwong, Miss MAN Yuen-ling, Mr TAI Tak-chung and Mr LAW Ko-ming.

Lapel / Sleeve Badge Design Competition

Special Announcement

The Vehicle Maintenance Technical Advisory Committee has resolved to hold a Lapel / Sleeve Badge Design Competition for registered vehicle mechanics.

Objective

To design a distinctive lapel / sleeve badge to enable easy identification of registered vehicle mechanics by the public, enhance the professional image of vehicle mechanics and create added value for the registration scheme.

Entry Method

A colour design drawing of A4 size must be submitted by each contestant together with his/her name, Vehicle Mechanic Registration Number and contact telephone number by email or by post to the Vehicle Maintenance Registration Unit on or before 30 August 2013.

(Email: vmru@emsd.gov.hk Address: Electrical and Mechanical Services Department Headquarters, 3 Kai Shing Street, Kowloon, Hong Kong)

Eligibility

Contestants must be registered vehicle mechanics.

Assessment and Results

All entries will be evaluated by an adjudicating panel formed by the Vehicle Maintenance Technical Advisory Committee. The results are expected to be announced in the next issue of the RVM Newsletter. The adjudicating panel will own the copyright of all winning entries and will have the right to modify the design of any of the winning entries without consulting or obtaining the prior approval of the contestant. The adjudicating panel reserves the right to use or not to use any of the winning entries for publicity purpose.

Awards

One Champion (HK\$3,000 coupon)

One first runner-up (HK\$2,000 coupon)

One second runner-up (HK\$1,000 coupon)

10 merit awards (HK\$300 coupon each)

Enquiries

Telephone: 2808 3867 / 3155 4527

(Participation in the competition earns the credit of three Continuing Professional Development (CPD) hours for the contestants.)