

## **Marine Department Notice No. 46 of 2008**

(Miscellaneous Information)

### **Implementation of the Merchant Shipping (Prevention of Air Pollution) Regulation, on Local Vessels**

#### **Background**

**Annex VI of the International Convention for the prevention of Pollution from Ships 1973, as modified by the Protocols of 1978 and 1997**, (MARPOL Annex VI), which stipulates the requirements for controlling emissions from ships, has entered into force internationally on 19 May 2005. To give effect to the requirements of MARPOL Annex VI in Hong Kong, a new piece of legislation, namely the Merchant Shipping (Prevention of Air Pollution) Regulation (“the Regulation”), was gazetted on 6 July 2007 and it is anticipated to enter into force **on 1 June 2008**. This Regulation is applicable to all Hong Kong registered ships, foreign ships within Hong Kong waters, as well as “local vessels” as defined in the Merchant Shipping (Local Vessels) Ordinance, Cap. 548, including locally licensed vessels, Hong Kong registered river trade vessels and PRC coastal/river trade vessels trading to Hong Kong.

2. This notice advises owners, operators, masters and agents of “local vessels” the specific requirements of the new Regulation applicable to local vessels, and provides guidance on the implementation of these requirements.

#### **Main Requirements of the Regulation**

3. The main requirements of the Regulation that local vessels need to comply with are as follows:

(a) **Prohibition of deliberate emission of ozone depleting substances:**

Ozone depleting substances, such as halons and chlorofluorocarbons (CFCs), had been used in shipboard fire-fighting appliances, air conditioning and refrigeration systems. The Regulation prohibits the deliberate emission of ozone depleting substances into the atmosphere from vessels. Also, new installation containing ozone-depleting substances will be prohibited on local vessels. However, new installations containing hydro-chlorofluorocarbons (HCFCs) may be allowed until 1 January 2020. Owners or management companies of local vessels with installation(s) containing ozone depleting substances are required to provide guidance to the crew for the proper handling of such substances on board. Appropriate management guidelines shall be exhibited in conspicuous position on board such local vessels and any handling of ozone depleting substances shall be clearly recorded and the records kept on board. A sample of management guidelines on the subject is given at Annex I to this notice for reference.

(b) Emission of sulphur oxides (SO<sub>x</sub>), fuel quality, bunkering records and fuel oil sample:

- (i) To control the emission of SO<sub>x</sub>, the sulphur content of fuel oil used on board local vessels shall not exceed 4.5 % m/m.
- (ii) For local vessels of 400 gross tonnage or above, bunker delivery notes shall be kept on board for a minimum period of six months. Whereas for local vessels of less than 400 gross tonnage, the keeping of bunker delivery notes on board is not required.
- (iii) Irrespective of the gross tonnage, a local vessel using heavy grade fuel oil\* for combustion purposes is required to obtain sample of the fuel oil delivered to the vessel. The sample shall be kept on board until the fuel oil is consumed but in no case shorter than one year from the day on which the fuel oil is delivered to the vessel.
- (iv) Under special conditions/situations, the bunkering record and fuel oil sample requirements may be exempted upon application to the Marine Department (MD).

\*heavy grade oil means fuel oils having either a density higher than 900 kg/m<sup>3</sup> at 15°C or a kinematic viscosity higher than 180 mm<sup>2</sup>/s at 50°C.

(c) Shipboard Incineration:

Shipboard incineration within Hong Kong waters will only be allowed if the incinerator is of IMO approved type and the operation, manual and training follows the requirement of the Regulation. Incinerators other than IMO approved type are strictly prohibited to operate in Hong Kong.

(d) Volatile organic compounds (VOC):

Since no operation of large scale loading of crude oil, petroleum products and chemicals from terminals to ships is in Hong Kong, there is no requirement on the control of VOC from ships in Hong Kong waters under the Regulation.

(e) Emission of nitrogen oxides (NO<sub>x</sub>):

Diesel engines of over 130kW output power installed on local vessels and not for emergency purposes shall comply with the following the NO<sub>x</sub> emission requirements:

	Rated Engine Speed (n) [crankshaft revolutions per minute (rpm)]	Maximum allowable NO <sub>x</sub> emissions (g/kWh)
(A)	n < 130	17
(B)	130 ≤ n < 2000	45 n <sup>-0.2</sup>
(C)	n ≥ 2000	9.8

## **Exclusion of existing diesel engines installed on existing local vessels from the application of the NOx emission requirements**

4. Existing diesel engines installed on board existing local vessels will be excluded from the application of the NOx emission requirements mentioned in para. 3(e) above. As far as the said exclusion is concerned, “existing local vessels” and “existing diesel engines” have the following meaning:

- (a) “Existing Local Vessels” include -
  - (i) any local vessel that has been issued with an operating licence by MD or a Permit for Trading to Hong Kong/Macau by a relevant PRC Authority before the commencement date of the Regulation; or
  - (ii) any new local vessel having its operating licence issued after the commencement date of the Regulation, but the keel of which was laid within 12 months before the commencement date of the Regulation and the shipowner has notified MD to that effect.
- (b) “Existing Diesel Engines” include -
  - (i) any diesel engine installed on board an existing local vessel as defined in (a) above (other than the PRC vessel), and its engine particulars have been submitted to MD before the commencement date of the Regulation;
  - (ii) any diesel engine used as a spare engine for an existing local vessel (other than the PRC vessel), and has been registered\*\* with MD before the commencement date of the Regulation,

but exclude any existing diesel engine that has undergone a major alteration after the commencement date of the Regulation, which increases its output power by 10% or more than what is recorded in its initial safety certificate.

\*\*The registration procedures and format are given in Annexes II and III of this notice

## **Survey for Compliance, Endorsement on Safety Certificate and NAPP/HKAPP Certificate**

5. After the date of commencement of the Regulation, all local vessels are required to be surveyed concurrently with their annual safety survey by MD officers, authorized surveyors or the relevant PRC Authorities for the compliance of the Regulation. For a self propelled local vessel of below 400 gross tonnage or a non-self propelled local vessel of any gross tonnage, upon satisfactory completion of the survey the Safety Certificate of the vessel will be endorsed by the surveying Authority to certify compliance. For a self propelled local vessel of 400 gross tonnage or above, a National Air Pollution Prevention Certificate (for PRC vessels) or a Hong Kong Air Pollution Prevention Certificate (for Hong Kong licensed vessels) will be issued instead of endorsement on the Safety Certificate. The endorsement on Safety Certificate or the NAPP/HKAPP Certificate of a local vessel will be subject to random check/inspection by MD officers in waters of Hong Kong after the date of commencement of the Regulation.

## **Enquiries**

6. For enquires, please contact Local Vessels Safety Section, 23/F Harbour Building, 38 Pier Road, Central, Hong Kong, telephone number 2852 4431 or facsimile number 2542 4679.
7. Marine Department Notice No. 71 of 2005 is hereby revoked.

R.F. Tupper  
Director of Marine

Marine Department  
Government of the HKSAR  
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Action file ref.: SD/S 800/3/1

**Merchant Shipping (Prevention of Air Pollution) Regulation (Chapter 413 sub-leg)  
Guidance on Management and Handling of Ozone Depleting Substances  
for coastal/river trade vessels visiting Hong Kong**

- 1. Ozone depleting substance** means any controlled substance defined in the article of the Montreal Protocol, 1987; such as
  - Halon (1211, 1301, 2402 or 114B2 and others)
  - Chlorofluorocarbons (CFCs) (Freon-11, -12, -113, -114 and -115 etc.)
  - Hydrochlorofluorocarbons (HCFCs) (-22, 141b and 142b etc.)
  
- 2. New Installation**
  - 2.1. New installation on all ships are prohibited to contain ozone depleting substances, including new portable or fixed fire-extinguishing units, insulation, or other material, but does not include the repair or recharge of previously installed systems, equipment, insulation, or other material, or recharge of portable fire-extinguishing units, installed before the commencement of the Merchant Shipping (Prevention of air pollution) Regulation.
  - 2.2. However, new installation containing hydrochlorofluorocarbons (HCFCs) are permitted until 1 January 2020. Relevant installation of new installation must be carried out by competent contractor.
  
- 3. Existing Installation**
  - 3.1. In the course of maintaining, servicing, repairing or disposing of all shipboard systems or equipment containing ozone depleting substances, deliberate emissions of ozone depleting substances are prohibited. Reception of ozone depleting substance must be received by competent reception facility/contractor.
  - 3.2. Systems or equipment containing ozone depleting substances must be regularly tested for leakage to ensure no leakage of ozone depleting substance.
  - 3.3. In case of a suspected leakage, report immediately according to procedure and carry out maintenance as earliest as possible, detail of maintenance must be recorded in the record book.
  
- 4. Record**
  - 4.1. Record covering all shipboard systems or equipment containing ozone depleting substances, including maintenance, inspection, repair, dispose, gas recharge, reception and leak test, etc shall be established.
  - 4.2. All records (if any) must be properly maintained and kept in order.
  
- 5. Guidance practice**

Fixed or portable fire-extinguishing units, fridge and air condition system:  
In order to prevent the act of deliberate emission of ozone depleting substance, relevant operator must obey the following practice:

  - 5.1. During operation:
    - (a) regularly conduct leak test inspection on system and spare bottle;
    - (b) ensure the cooling water system and high pressure cutout work properly on fridge and air conditioning system;
    - (c) before carrying out any system maintenance, confirm that the maintenance port has the reception facilities of ozone depleting substance;
  - 5.2. System dismantle:

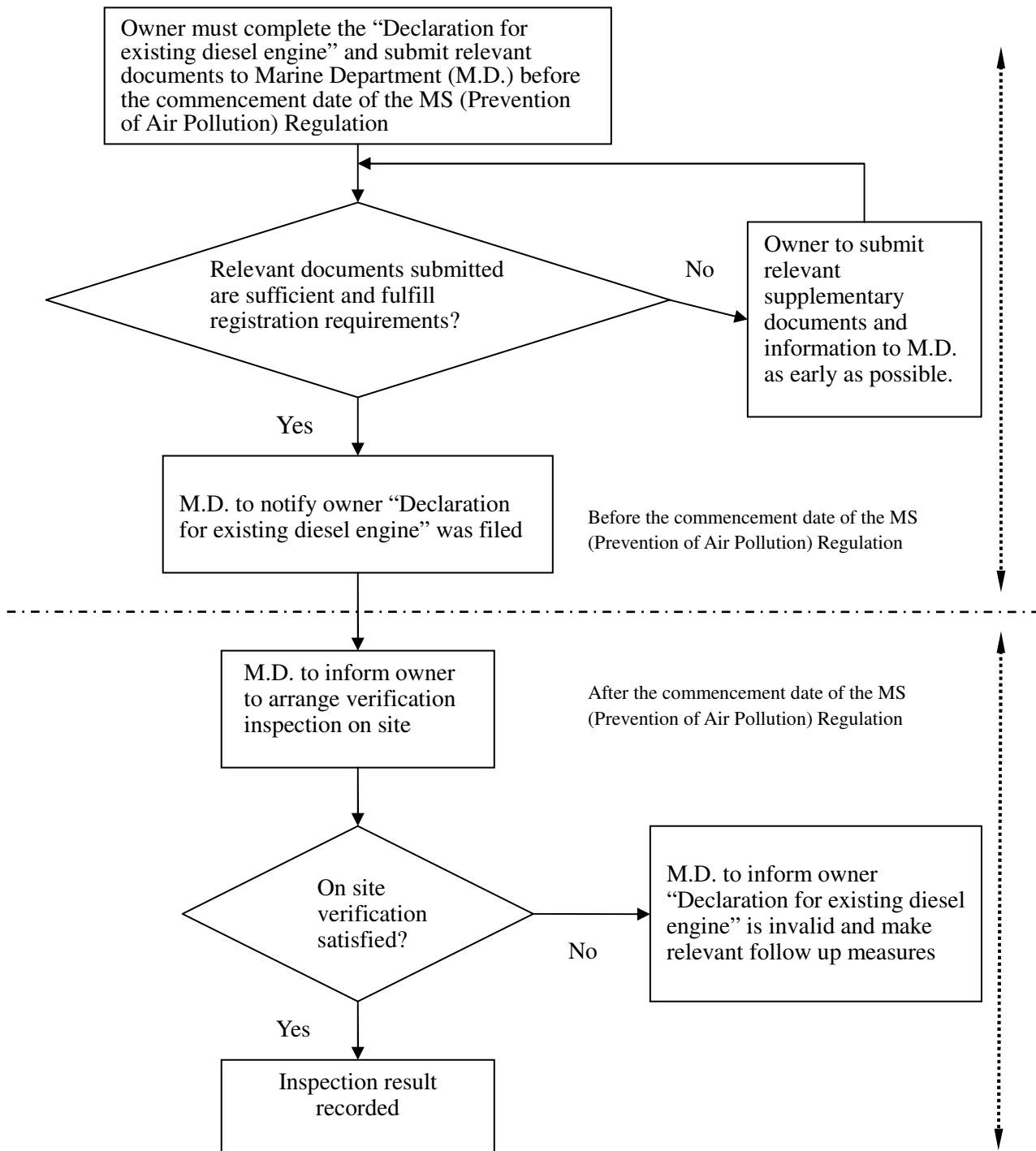
Before dismantle, ozone depleting substance in the system must be collected and removed from the vessel, and delivered to reception station for disposal.

Name of vessel : \_\_\_\_\_ Company stamp : \_\_\_\_\_

**Registration Procedure for “Existing Diesel Engine”**

This registration procedure for “Existing Diesel Engine” is applicable to local vessels licensed before the implementation of the Merchant Shipping (Prevention of Air Pollution) Regulation.

1. Marine Department will cease to accept any “Declaration for existing diesel engine” on or after the commencement date of the Merchant Shipping (Prevention of Air Pollution) Regulation;
2. One diesel engine (more than 130 kW and not for emergency use) already fitted onboard, a maximum of one spare engine of the same brand, model, revolution direction and power can be registered;
3. If owner of the vessel intends to apply for registration of “existing diesel engine” (including diesel engines already fitted onboard and spare engines) of his vessel, he shall apply to Marine Department according to the following procedure. For enquiries, please contact telephone number 2852 4444, fax number 2542 4679.



**Declaration for Existing Diesel Engine**

## 1. Particulars of locally licensed vessel:

Certificate of Ownership Number..... Name of Owner.....

Name of vessel..... Class..... Type..... Category.....

## 2. I declare that the above mentioned vessel,

- (a) before completing this declaration, the vessel had already installed with the following diesel engine(s) (more than 130 kW):

Item	Brand	Model	Serial number	Power (kW)	RPM
1.					
2.					
3.					
4.					
5.					

- (b) the vessel had already had the following spare diesel engine (more than 130kW) (relevant document shall be attached such as repair record, invoice etc.; and photos that can clearly show the brand, model, serial number and the complete diesel engine):

Item	Brand	Model	Serial number	Power (kW)	RPM	Date of purchase	Stored at (Shipyard, engine workshop, godown)	Address, contact person and telephone number of shipyard, engine workshop, godown
1.								
2.								
3.								
4.								
5.								

3. Name of owner \_\_\_\_\_ Contact telephone or fax number \_\_\_\_\_  
Address \_\_\_\_\_

This is to declare that:

- I am the owner of the above mentioned vessel;
- All information submitted in this "Declaration" is true and inerrable;
- I understand that making false statement in any circumstance in this "Declaration" may lead to legal liability; and
- I agree Marine Department to check the above information. Under the Marine Department request, I will provide other documents, coordinate and arrange Marine Department to verify or carry out inspection for any related matter.

Signature of owner: \_\_\_\_\_ Date: \_\_\_\_\_