

QUESTIONNAIRE FOR THE MISSION ON "DETAILED DESIGN STUDY
ON THE PROJECT FOR DEVELOPING MOTOR VEHICLE STANDARDS
AND CONFORMANCE IN THE REPUBLIC OF THE PHILIPPINES

Land Transportation Office

1. Institutional Structure

- Please refer to the power point presentation on Motor vehicle Certification and Regulations in the Philippines (presented during the Task Force Meeting on ASEAN-Japan Cooperative Program on Development of Technical Regulations and Establishment of Type Approval System for Vehicles on 3-4 August 2010).

2. Joining the 1958 Agreement on MRA for Automotive Equipment

- a. Section, personnel in-charge and managing the structure in your department
 - o For automotive parts and systems – DTI
 - o For whole vehicle – DOTC /LTO
- b. Related institutions and stakeholders
 - **Institutions** - Department of Environment and Natural Resources for emission and noise, Department of Energy for fuels, Philippine National Police for anti-theft devices, Department of Science and Technology, University of the Philippines National College for Transport Studies
 - **Stakeholders** - Motor vehicle manufacturers, assemblers, importers, dealers, Motor vehicle parts manufacturers, Private emission testing centers, Motor vehicle owners
- c. Current condition and approach / tasks that had been taken by your department toward joining the 1958 Agreement and / or motor vehicle standards and regulations
 - Conduct of experts meeting through the assistance of JASIC
 - Attended the WP29 meetings as Observer in 2006 and 2007
 - Drafting and issuance of EO 628 on the creation of the Committee on the Harmonization of Vehicle Standards and Regulations
 - Drafting and issuance of a Department Order to harmonize motor vehicle classification aligned with the UNECE Regulations

- d. Condition and approach / tasks that will be needed in the future in order to join the 1958 Agreement
 - First and foremost, it is necessary to conduct a policy impact study
- e. Current system and regulations on motor vehicle standards and regulations
 - Please refer to the power point presentation on Motor vehicle Certification and Regulations in the Philippines (presented during the Task Force Meeting on ASEAN-Japan Cooperative Program on Development of Technical Regulations and Establishment of Type Approval System for Vehicles on 3-4 August 2010).
- f. Systems and regulation that will be needed in the future in the Philippines in order to join the 1958 Agreement
 - This will depend on the outcome of the study
- g. Current situation of the utilization or availability of personnel experts in the field of motor vehicle standards and regulations in the Philippines
 - There are few people from LTO who can be utilized in the field of vehicle standards and regulations and they cannot be considered experts
- h. Personnel / experts who will be needed in the future in order to join the 1958 Agreement
 - This will depend on the result of the study (gap analysis)
- i. Advantages and disadvantages of joining the 1958 Agreement for the relevant local enterprise.
 - This will be shown in the study that will be conducted
- j. Advantage and disadvantage of joining the 1958 Agreement for the relevant foreign enterprises
 - This will be shown in the study that will be conducted

CURRENT MOTOR VEHICLE CERTIFICATION IN THE PHILIPPINES

“JICA-DOTC: Developing MV Standards
and Conformance in the Philippines”

Presented by:
ENGR. JEAN NILO-ROSETE
OIC, Air Quality Management Section
Environmental Management Bureau-DENR



Control of Air Pollution from Mobile Sources



Control of Air Pollution from Mobile Sources

- ✓ Mandatory periodic inspection: All types motor vehicles shall comply with the exhaust emission limits prior to operation in any public highway
- *TYPE APPROVAL for NEW MOTOR VEHICLES (COC)*
- **EMISSION TEST** prior to renewal of registration of **IN-USE MOTOR VEHICLE**
- ✓ Roadside inspection and apprehension

Role of EMB on MV Standards and Conformance

- Establish, review and revise emission standards for all types of motor vehicles including motorcycles and tricycles
- Issue Certificate of Conformity (COC) to brand new motor vehicles

jeepney ?

Legal Basis

- Section 21 of RA 8749 mandates the DOTC to implement the emission standards for motor vehicles set pursuant to and as provided for in the Act.
- It also provides the DENR to review, revise and publish the standards every two (2) years, or as the need arises to further improve the emission standards

Review and Revision of Standards

(Rule XXXIII, Sections 1, DAO 2000-81)

- To further improve the emission standards, the DENR thru the EMB, in coordination with DOTC/LTO, review the standards every 2 years or as the need arises;
- Where necessary to achieve substantial improvement in air quality for the health, safety and welfare of the general public, the DENR thru EMB revise the emission standards for new and in-use MVs;
- DENR shall publish the revised standards in a newspaper of national circulation or be filed in triplicate copies with the UP Law Center pursuant to Presidential MC No. 11 dated 09 October 1992

Participation of Stakeholders

- An Inter-Agency Committee composed of representatives from concerned agencies, motoring public, automotive industry, NGO and other stakeholders is created to give opportunity to participate in the formulation and revision of standards, determination of the technical feasibility and the implementation schedule of the revised standards and other related concerns

Harmonization with International Standards

- In the review and revision of emission standards, the DENR endeavors to achieve the harmonization of national emission standards with internationally-accepted standards
- Study the feasibility of adopting EURO II or III standards or other appropriate standards in the Philippines to further reduce emissions from motor vehicles

Public Consultation

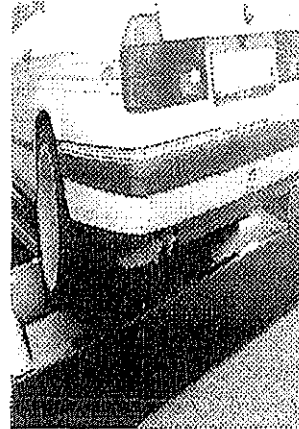
- Final draft of revised or new emission standards is subjected to a public consultation prior to endorsement by the EMB Director to the DENR Secretary for approval as “DENR Administrative Order” (DAO)

Section 22, CAA: Certificate of Conformity

Regulation for New MV

- Legal Basis

Section 22 of the CAA requires that any imported new or locally assembled new motor vehicle shall not be registered unless it complies with the emission standards set pursuant in the Act as evidenced by a Certificate of Conformity (COC) issued by the DENR



Who are required to apply for a COC (Rule XXXI, Sec. 7, DAO 2000-81)

- Any motor vehicle
 - ✓ Manufacturer
 - ✓ Assembler
 - ✓ Importer
 - ✓ Or the duly authorized representatives of the above

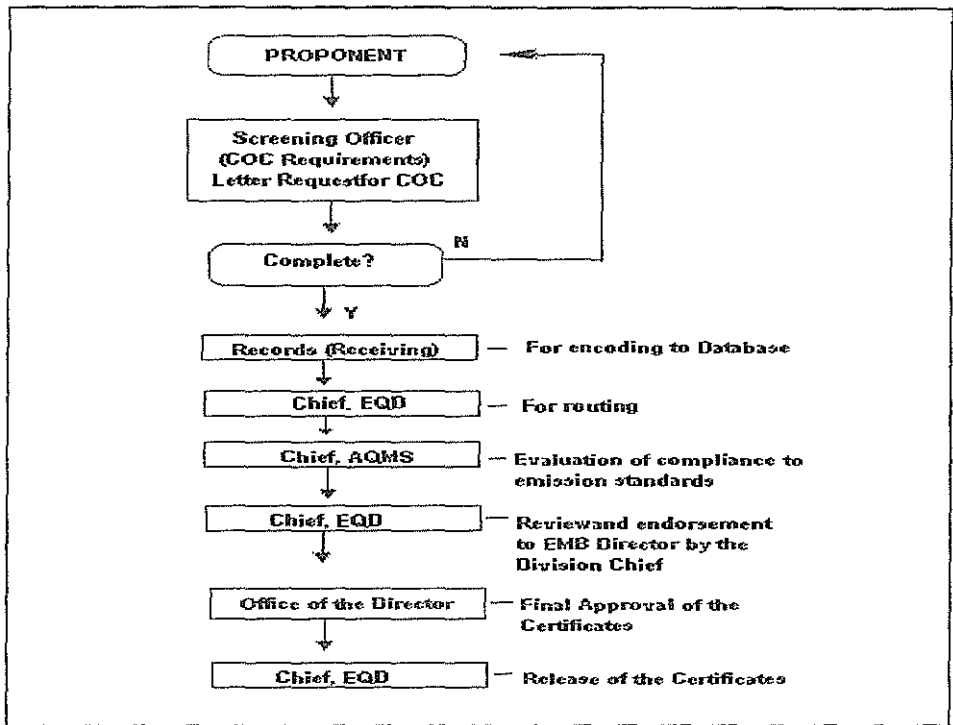
Requirements for COC issuance


(Rule XXXI, Sec. 7, DAO 2000-81)

- Complete descriptions of motor vehicle & the engine
- Description of the emission control system installed in the motor vehicle
- Details of the fuel feed system
- Previous emission test results of pre-production engine vehicle type duly certified by the manufacturer

Procedure for COC Issuance

1. Application letter for COC
 - ✓ With complete documentary requirements
 - ✓ Signed by the president/general manager
2. Review and evaluation by AQMS staff
3. Endorsement of COC to the EMB Director thru the Chief, EQD for approval
 - Processing period: 3 days after the submission of complete requirements




Department of Environment and Natural Resources
 Department Office, 6th Floor, Department Building, 688 Alibon Road, Quezon City, Philippines

Date: _____
 Page: _____

CERTIFICATE OF COMPLIANCE

This is to certify that the project titled "_____", located at _____, has been found to be in compliance with the applicable laws, rules, and regulations governing the issuance of Certificate of Compliance (COC) under the authority of the Department of Environment and Natural Resources.

Certificates of Compliance (COC) No. _____

Issued to: _____
 Address: _____
 City: _____
 Date of Issuance: _____

This certificate is valid for a period of _____ years, starting from the date of issuance, provided that the project complies with the applicable laws, rules, and regulations.

Issued by: _____
 Director, Department of Environment and Natural Resources

Issued by: _____
 Chief, EQD

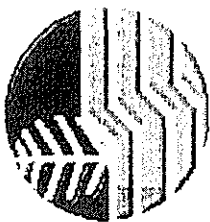
Issued by: _____
 Chief, AQMS

Issued by: _____
 Chief, EQD

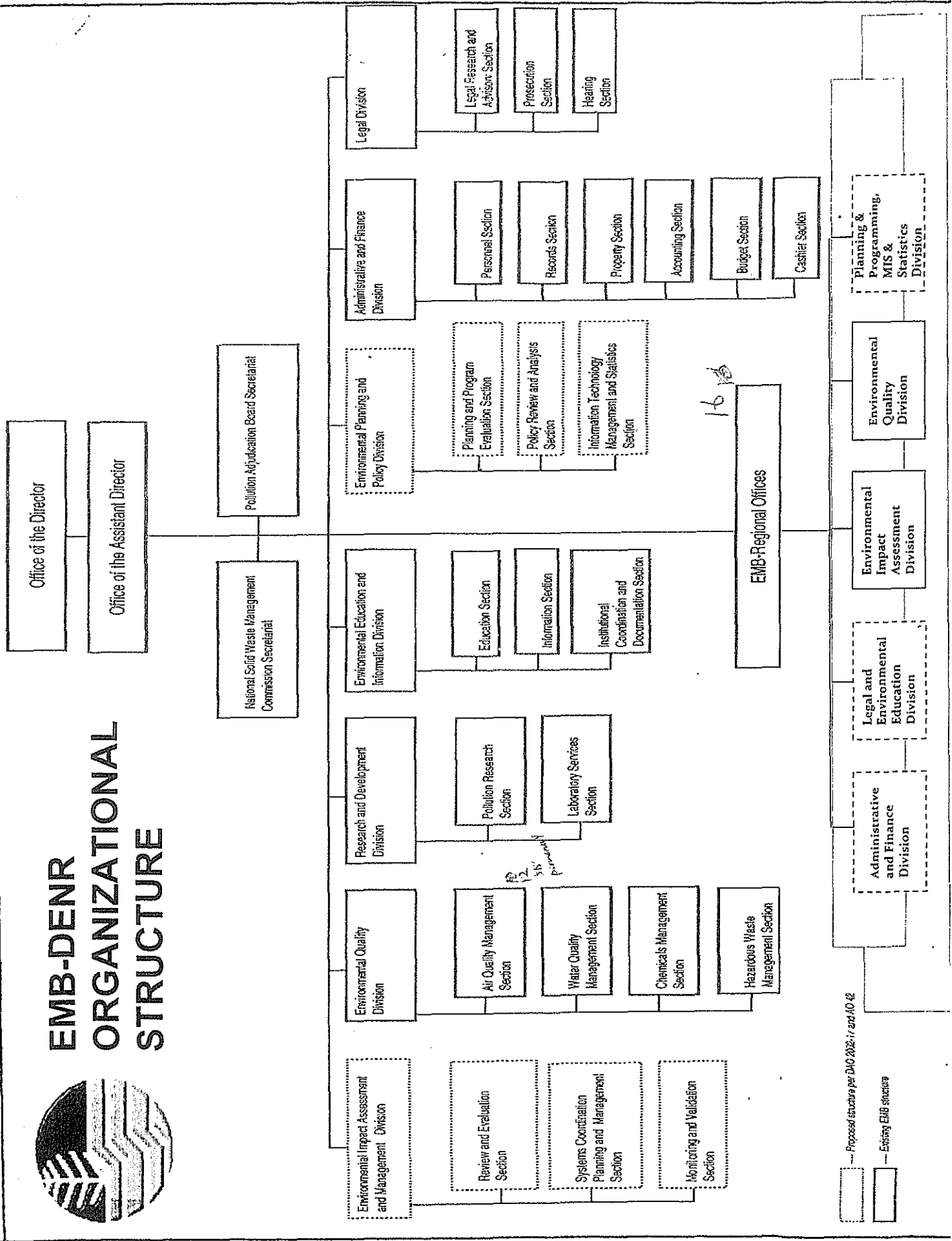
Issued by: _____
 Office of the Director

Issued by: _____
 Chief, EQD

Issued by: _____
 Chief, EQD



EMB-DENR ORGANIZATIONAL STRUCTURE



SUMMARY OF THE EXISTING POLICIES

1. DENR has the legal basis to issue COC
2. BPS has the legal bases to issue PS Marks and ICC
3. LTO's mandate is on the inspection of whole unit vehicle, not on mv parts.

Examples:**1. Safety Regulations for Window Glass**

Announcement : c/o DOTC

Technical Standards: c/o BPS

Type Approval Test Procedures: c/o BPS

Test Designation Regulation: c/o DOTC / LTO

Motor Vehicle Inspection Procedure: c/o LTO

Type Approval Testing Standards: c/o BPS

2. Emission Regulations

Announcement: c/o DENR

Technical Standards: c/o DENR

Type Approval Test Procedures: c/o DENR

Test Designation Regulation: c/o DOTC / LTO

Motor Vehicle Inspection Procedure: c/o LTO

Type Approval Testing Standards: c/o DENR

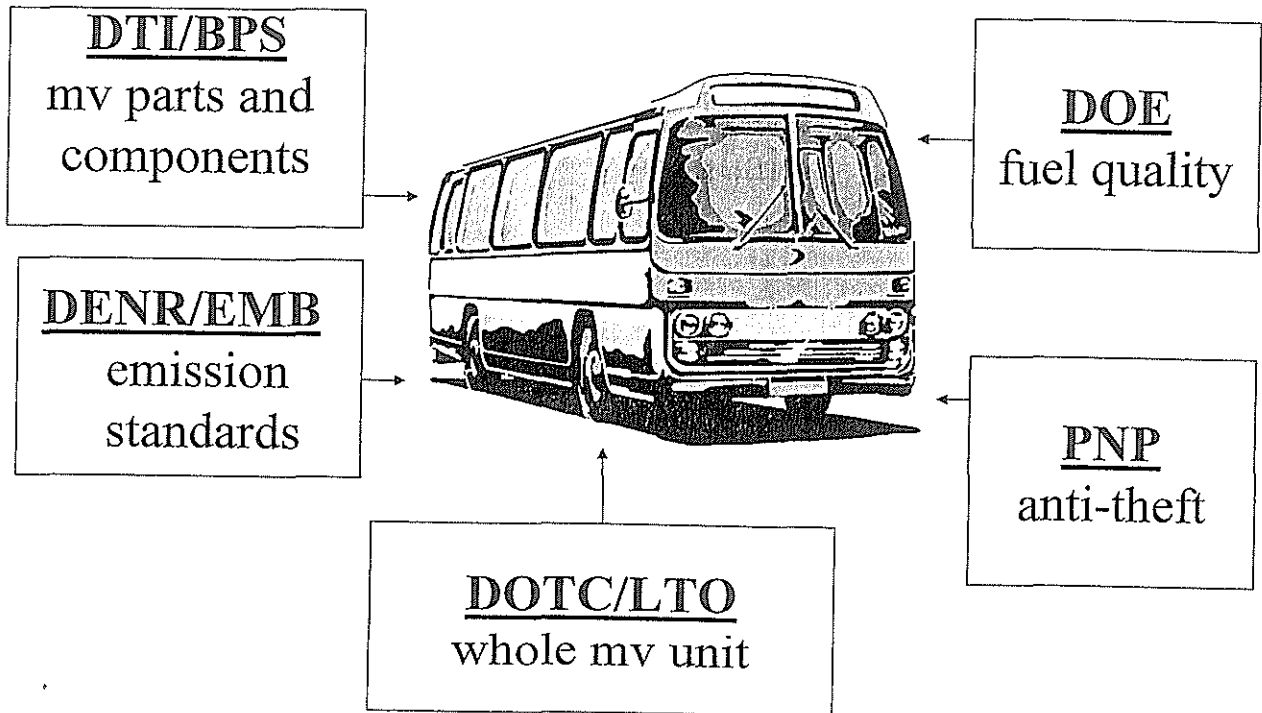
NOTE: Should it be considered that only one government office will take charge of the type approval system, testing and certification, there is a need to amend existing laws (For consideration of the Sub-committee on the Legislative agenda).

(DOTC Land Transportation Office)

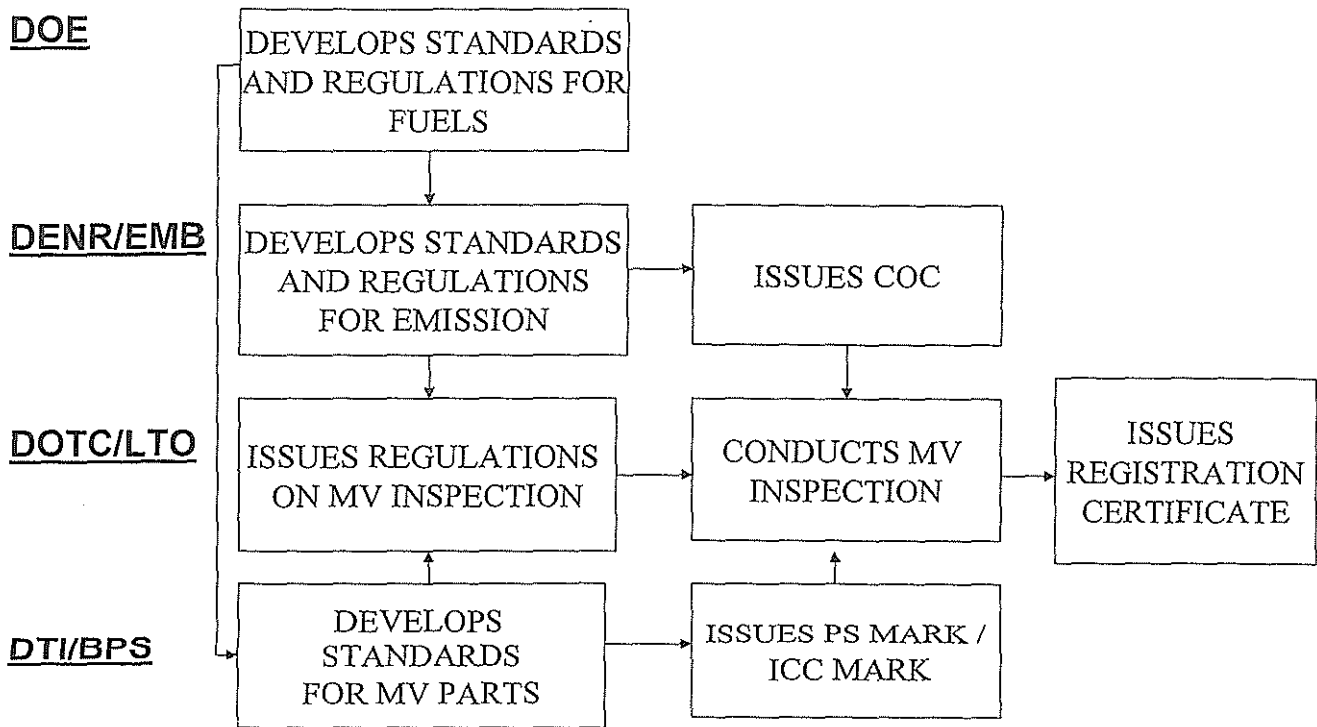
Certification Procedure

1. The issuance of Certificate of Conformity (COC) for new motor vehicles is being done by DENR.
2. The Bureau of Product Standards (BPS) is the sole government agency responsible to certify safety products which include motor vehicle parts. For mv parts, accreditation of testing laboratories and calibration is being conducted by PAO (ISO: IEC 17025)
3. Products under mandatory certification of BPS are subjected to inspection and testing of the BPS prior to distribution in the market and selling.
4. A manufacturer or importer whose product is under the mandatory product certification cannot sell or distribute without the license or clearance from BPS that issues the PS Mark or ICC Mark
5. Self certification of manufacturers for new motor vehicles with registration valid for 3 years is being accepted by LTO as a requirement for registration of motor vehicles.

Institutional Framework



Certification and Regulation Process



I. DENR ISSUANCE OF CERTIFICATE OF CONFORMITY (COC) FOR NEW MOTOR VEHICLES

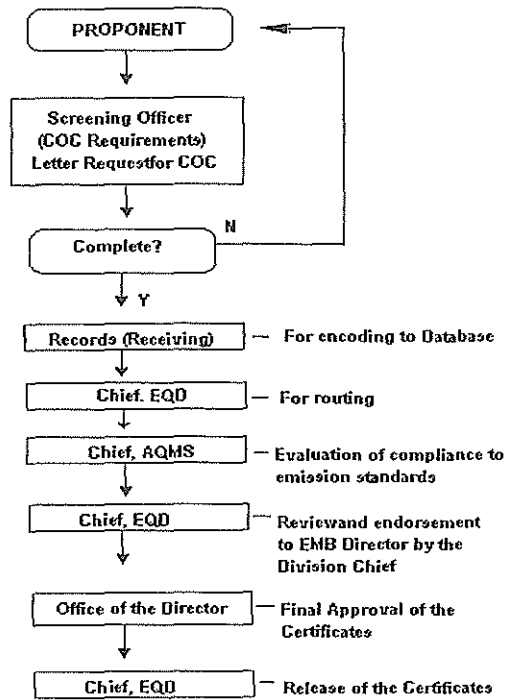
A. Legal Framework

Section 22, Article 4. Chapter II, RA 8749 - Any imported new or locally-assembled new motor vehicles shall not be registered unless it complies with the emission standards set pursuant to this Act, as evidenced by the Certificate of Conformity issued by the Department (DENR).

ISSUE: DOTC cannot take over the issuance of COC on the basis of the IRR of the Clean Air Act alone. The IRR is not above the law. Changes in the higher up management can affect the policy (For consideration/review of the Sub-committee on Legislative Agenda)

B. Procedure

DENR ISSUANCE OF CERTIFICATE OF CONFORMITY (COC) FOR NEW MOTOR VEHICLE



- * EQD – Environmental Quality Division
- * AQMS – Air Quality Management Section
- * OD – Office of the Director

Certificate of Conformity Requirements (Part IX Rule XXXI Section VII of DAO2000-81)

- Complete and detailed description of motor vehicle and the engine;
- Description of the emission control system installed in the motor vehicle;
- Details of the fuel feed system;
- Vehicle Type Approval System test result by DOTC/LTO (while the DOTC/LTO is developing inspection capability of the motor type approval system test, the previous emission test results of pre-production engine vehicle type duly authenticated by the Philippine Embassy/Consulate of the country of origin or manufacture of subject motor vehicle shall be valid sufficient); and
- Other particulars which may be required by the Department

II. BPS Certification Schemes

BPS Product Certification Schemes PS (Philippine Standard) Marks

The Bureau of Product Standards (BPS) is the sole government authority of the Philippines to certify products that affect health, life and safety of consumers.

Products under mandatory product certification are subjected to inspection and testing of the BPS prior to distribution in the market and selling.

A manufacturer or importer whose product is under mandatory product certification cannot sell or distribute without the license and clearance from BPS, authorizes to use the PS Mark or the ICC Mark.

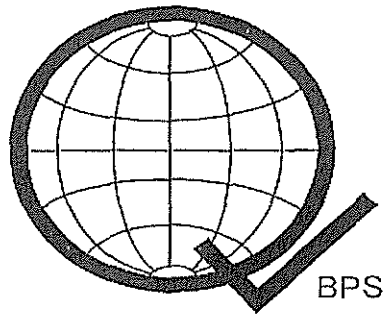
Section 7 (3) Chapter 2, Book IV of the 1987 Administrative Code, RA 4109, RA 7394, EO 133:1987, EO 101: 1976 and EO 913:1983 governing the licensing of local and foreign companies to use the Philippine Standards (PS) Quality and / or Safety Certification Mark.



BPS Product Certification

DAO 1: 1997 as amended by DAO4-2008

PS Safety and/or Quality Certification Mark



CERTIFIED
Product Safety



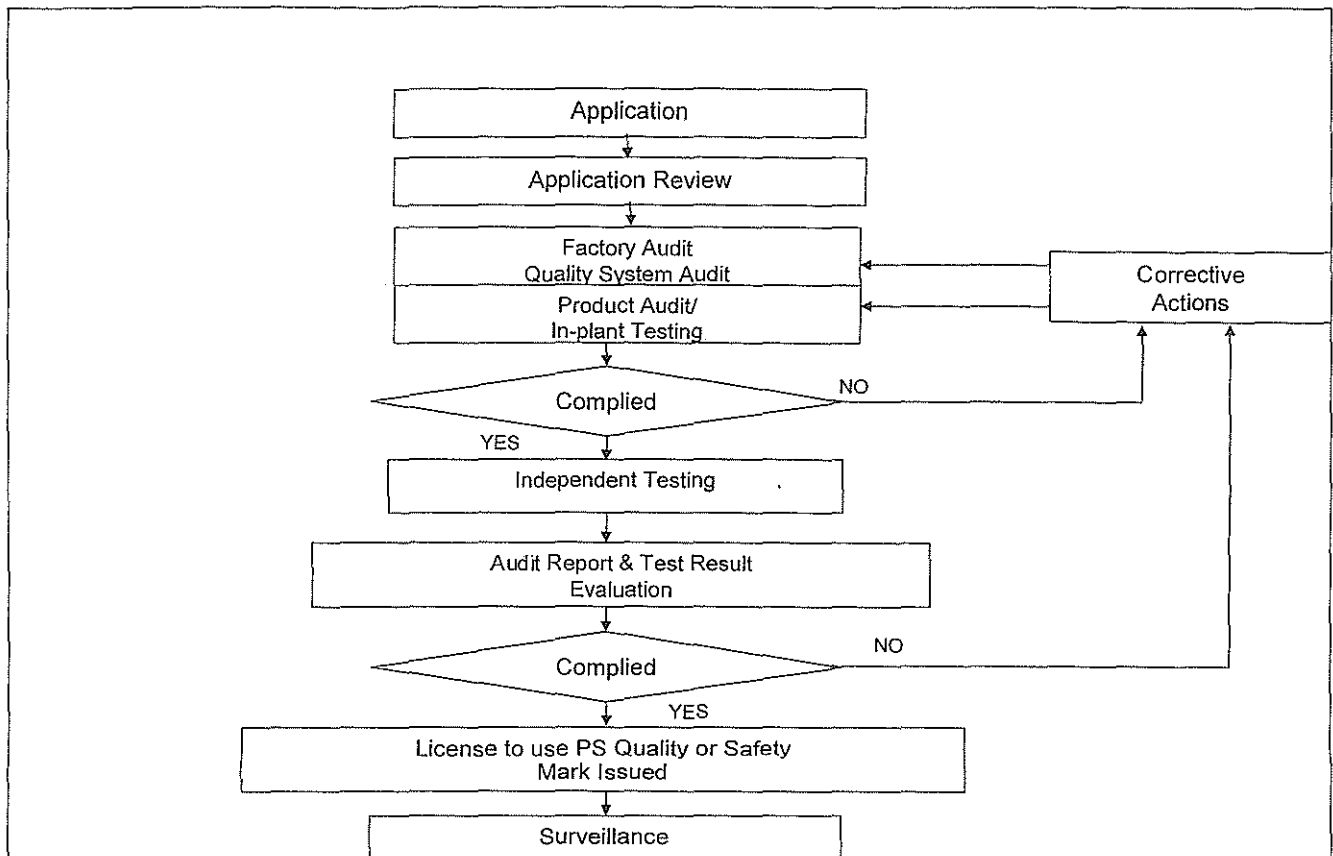
The BPS issues the Philippine Standards (PS) Marks / License to a manufacturer whose product has successfully complied the requirements of the PNS. With the license, the manufacturer affixes the PS Mark on his product or product package.

The factory audit is based on quality management system or ISO 9000

The product audit is based on the Philippine National Standards

B. Procedure

APPLICATION FOR PS CERTIFICATION SCHEME



BPS Product Certification

ICC (Import Commodity Clearance) Mark



BPS/DTI issues the ICC to an importer whose product has successfully complied the requirements of a PNS. With the clearance, the importer affixes the ICC Mark on his product or product package. (System 7: Batch testing)

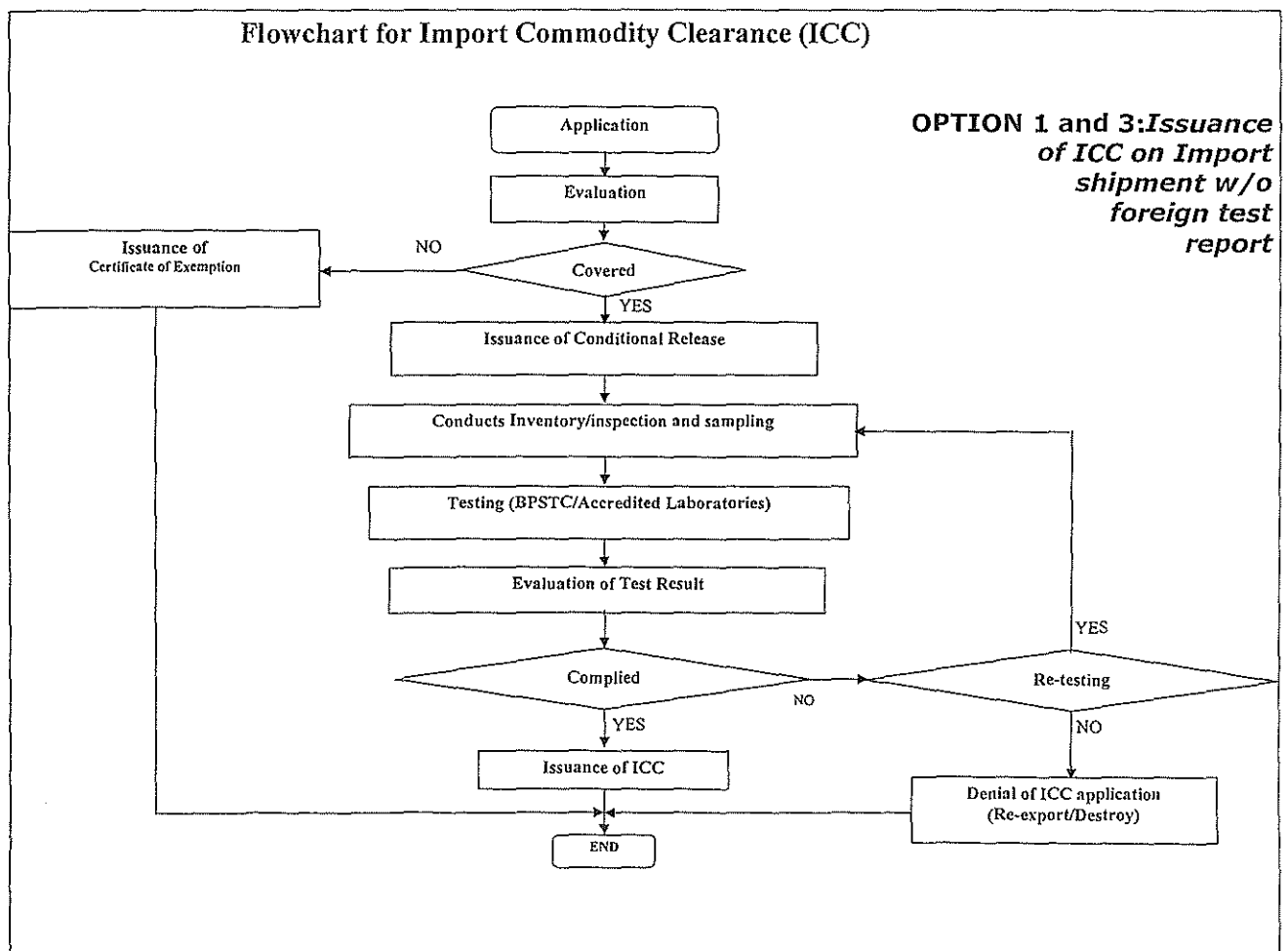
A. Legal Framework

RA 4109, RA 7394 and EO 913 governing the issuance of the Import Commodity Clearance

Applications for the Import Commodity Clearance (ICC) shall be processed through any of the following four options available to the importer:

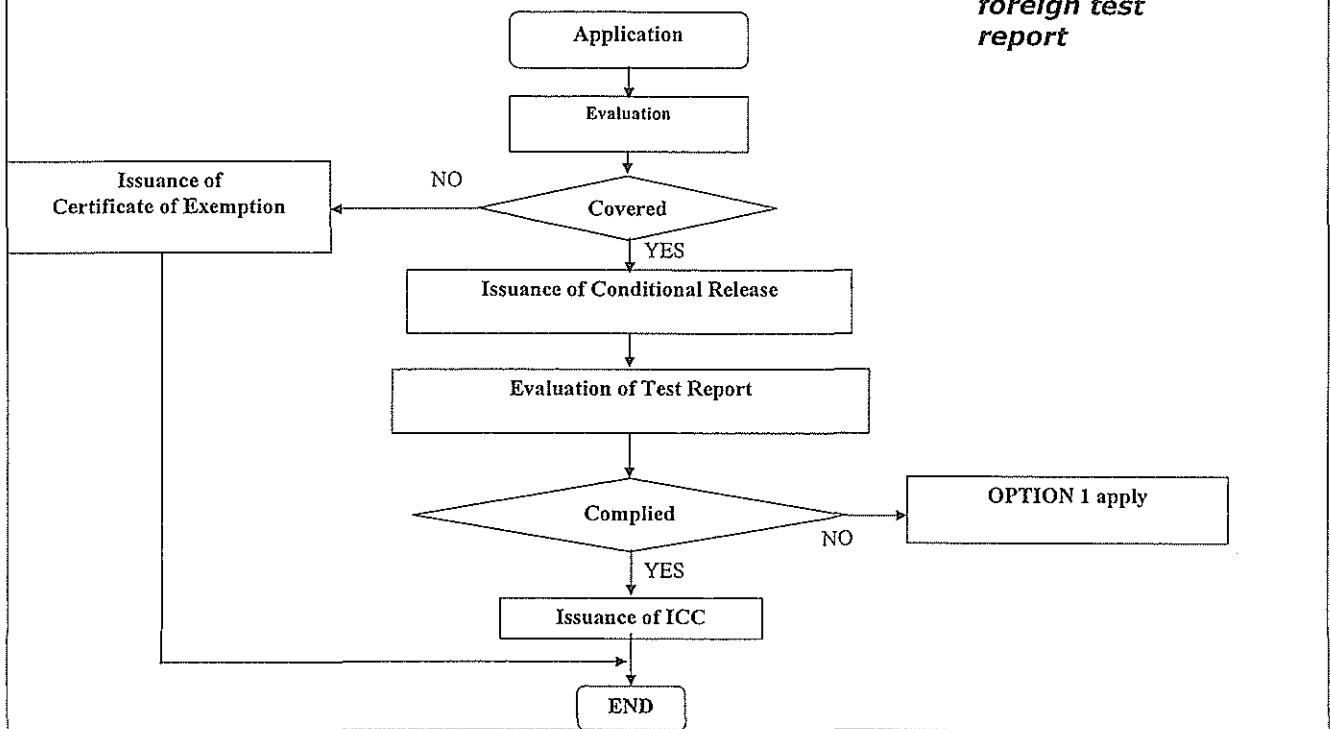
1. Import shipment with QMS without Product Test Report
2. Import shipment with QMS and with Product Test Report
3. Import shipment without QMS without product Test Report
4. Import shipment with Philippine Standard (PS) Quality and / or Safety Certification Mark

In order for an importer to avail of options 2 and 3, a Memorandum of Understanding (MOU) and / or Mutual recognition Arrangement (MRA) shall first be entered into by the BPS and its counterpart National Standards Body (NSB) / Regulatory Body of the exporting country.



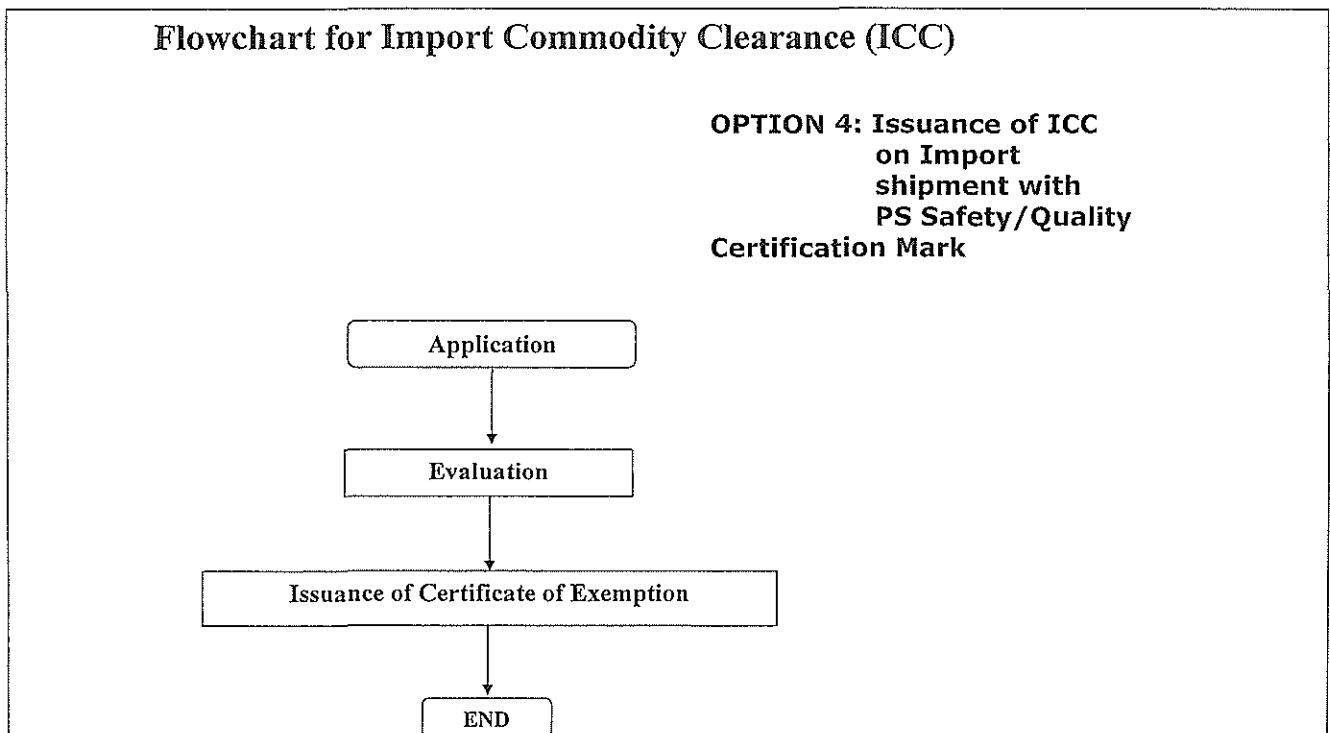
Flowchart for Import Commodity Clearance (ICC)

OPTION 2: Issuance of ICC on Import shipment with foreign test report



Flowchart for Import Commodity Clearance (ICC)

OPTION 4: Issuance of ICC on Import shipment with PS Safety/Quality Certification Mark



ISSUE: Issuance of the PS Mark and ICC is a mandate of the BPS, DTI

III. LTO's Inspection of Motor Vehicles

A. Legal Framework

1. RA 4136

- To prescribe the minimum standards and specifications including allowable gross vehicle weight, allowable length, width, and height of mvs, distribution of loads, allowable loads on tires, change of tire sizes, body design, or carrying capacity subsequent to registration and all other special cases which may arise for which no specific provision is otherwise made in this Act.
- To refuse registration if on inspection any motor vehicle is found to be unsightly, unsafe, overloaded, improperly marked or equipped, or otherwise unfit to be operated, or capable of causing excessive damage to the highways and not conforming to minimum standards and specifications
- For uniformity of registration fees and classification, all manufacturers and / or assemblers of motor vehicle, prior to introduction of the new model shall submit the specifications of the said model to LTO which shall determine under what schedule of registration fees the said model should fall.

2. Act 3992

Provides that motor vehicles prior to registration shall be brought for ocular inspection of the serial and motor numbers, seating capacity, and incase of motor trucks and jitney, measurement of width, length, height and other data.

3. RA 8749

- The DOTC shall enforce compliance with the emission standards for motor vehicles set DENR.

4. RA 8750- Seat belt Act

5. LOI 229 – EWD

6. BP 344 – Accessibility Law

7. RA 8794 – MVUC Law

- LTO shall submit any recommendation for any change in the classification of motor vehicles for approval of the Secretary of DOTC. All manufacturers and / or assemblers of the motor vehicles shall, not later than three (3) months prior to the introduction of any new model of motor vehicle in the market, submit the specifications of such new model to the LTO which shall recommend for approval by the Secretary, the proper classification of the new model and the rate of MVUC fee under which the new model shall fall. The LTO shall release the proper classification of said new motor vehicles model on or before the scheduled release of such new model in the market but in no case later than 3 months after its receipt of the new mv classification.

LTO ORGANIZATIONAL CHART

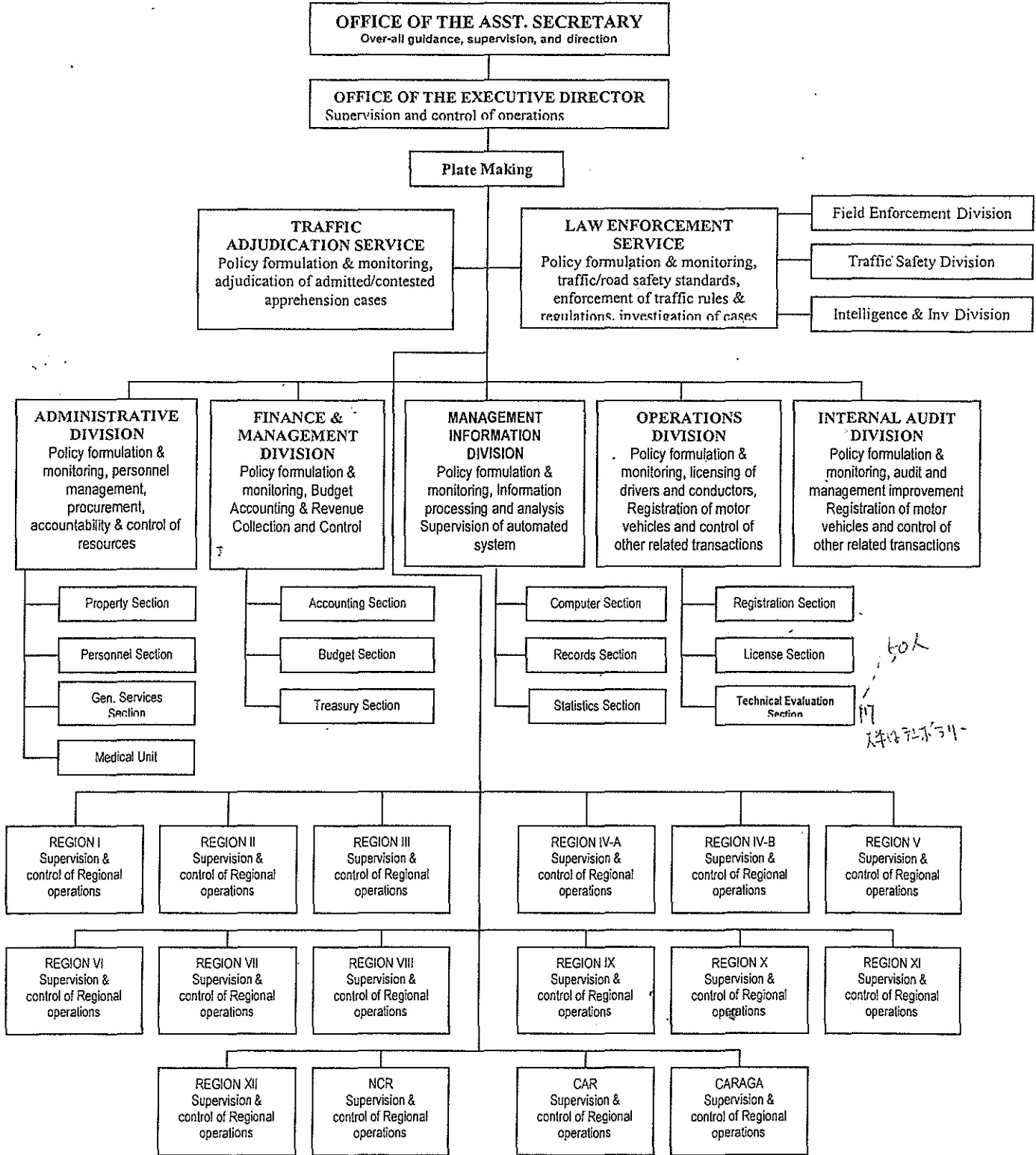


FIGURE 1

LTO REGION ORGANIZATIONAL CHART

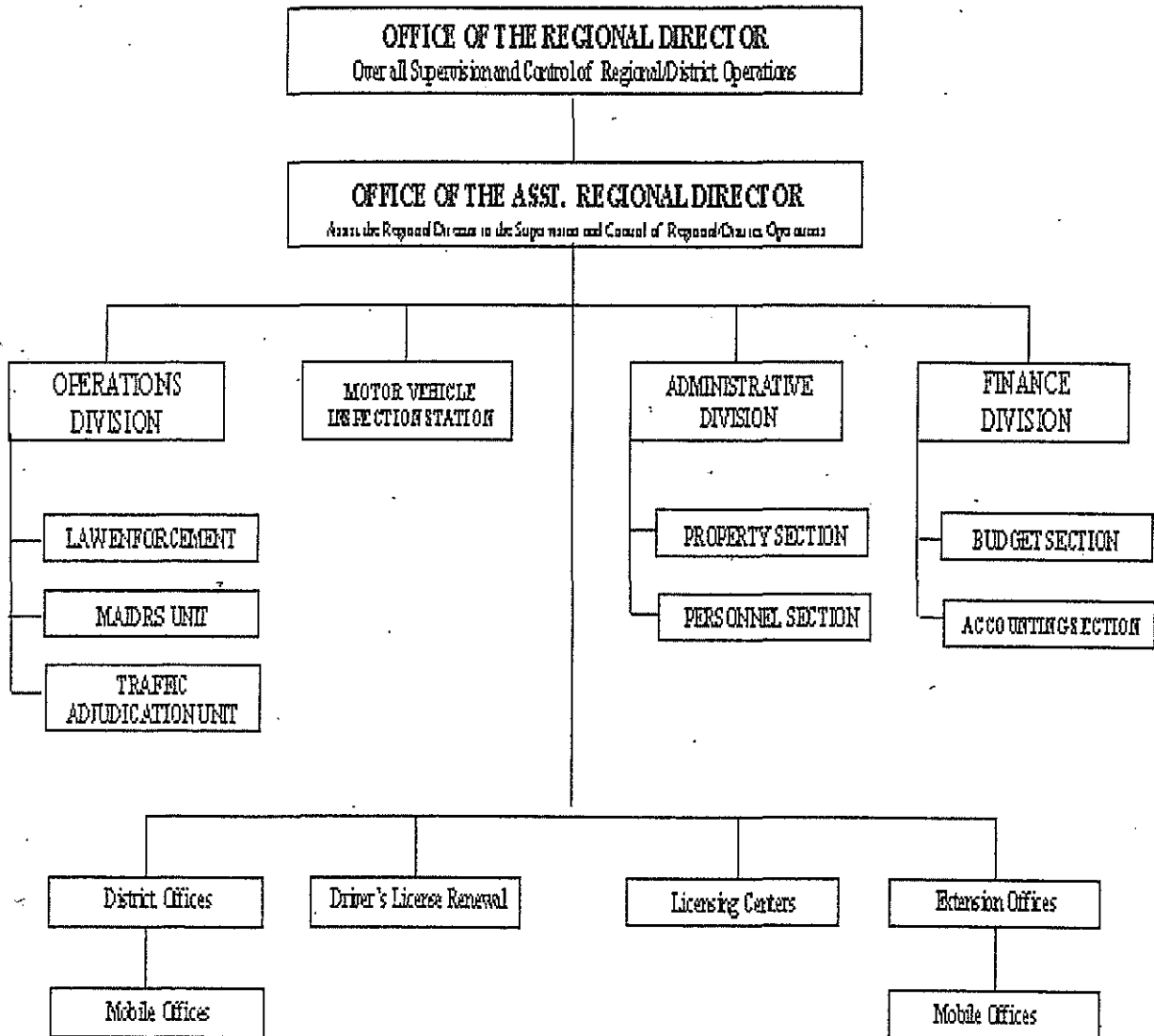


FIGURE 2

LTO District/Extension Office Organizational/Functional Chart

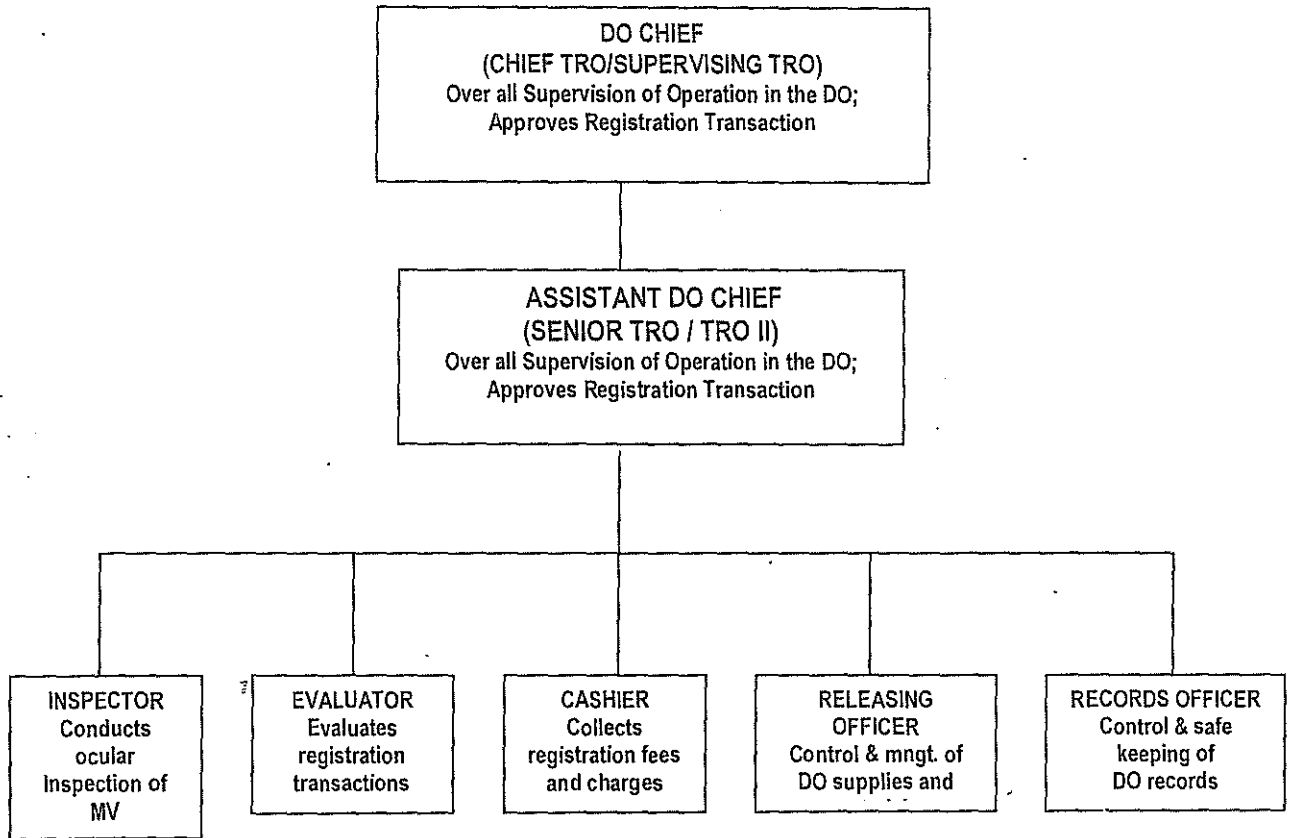


FIGURE 3



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF TRANSPORTATION & COMMUNICATIONS
LAND TRANSPORTATION OFFICE

East Avenue, Quezon City

E-mail Address: lto@lto.gov.ph • Website: www.lto.gov.ph

RECEIVED
LTO
OFFICE OF THE DIRECTOR
LAND TRANSPORTATION OFFICE
QUEZON CITY

ADMINISTRATIVE ORDER NO. AO 300-018

SUBJECT: REVISED ADMINISTRATIVE ORDER ON THE NEW MOTOR VEHICLE INSPECTION SYSTEM AND PROMULGATING THE RULES AND REGULATIONS IN THE IMPLEMENTATION THEREOF

Pursuant to Republic Act No. 4136 (Land Transportation and Traffic Code of the Philippines), Republic Act No. 8749 (Philippine Clean Air Act of 1999), Republic Act No. 8750 (Seat Belt Use Act) and other related laws, the following rules and regulations governing the inspection of motor vehicles in the Land Transportation Office's (LTO) Motor Vehicle Inspection Centers are hereby promulgated for the guidance and observance of all concerned:

Section 1. OBJECTIVES

- 1.1 To provide a systematic, reliable and effective testing of motor vehicles through computerization and automation for compliance to safety and emission requirements
- 1.2 To comply with existing motor vehicle standards, provision of national laws and international agreements
- 1.3 To ensure compliance to safety and emission standards
- 1.4 To integrate all motor vehicle inspection reports into a central motor vehicle database.

Section 2. COVERAGE

This order prescribes the rules and regulations in the inspection of all motor vehicles as a requirement in the motor vehicle registration, modification (change body design/configuration) and miscellaneous motor vehicle registration transactions such as but not limited to change ownership, change chassis and/or engine, and other related matters in the LTO.

Section 3. DEFINITION OF TERMS

- 3.1 Certificate of Motor Vehicle Inspection System Compliance (CMVISC) refers to the certificate issued by LTO-Motor Vehicle Inspection Center to a vehicle owner certifying that a particular motor vehicle passed the inspection process of MVIS.

- 3.2 **Compression-ignition engine** - means an internal combustion engine in which atomized fuel temperature is raised through compression, resulting in ignition, e.g. diesel engines.
- 3.3 **Emission** - means any measurable air contaminant, pollutant, gas stream or unwanted sound from a known source which is passed into the atmosphere.
- 3.4 **Electric Vehicle (EV)** - vehicles that are propelled by an electric motor(s) and are powered by fuel cells (e. g. electric cars, electric buses)
- 3.5 **Light Electric Vehicle (LEV)** - shall be defined as two-wheeled or three-wheeled electric vehicle.
- 3.6 **Low Speed Vehicle (LSV)** - shall be defined as four-wheeled motor vehicle (other than ATVs, trucks, buses and those that are excluded from the term "motor vehicle" under Republic Act 4136) which use alternative fuels like electricity and whose maximum speed capability is not more than 40 kilometers per hour
- 3.7 **Motor Vehicle** - shall mean any vehicle propelled by any power other than muscular power using the public highways, but excepting road rollers, trolley cars, street-sweepers, sprinklers, lawn mowers, bulldozers, graders, fork lifters, amphibian trucks and cranes, if not used on public highways and vehicles run only on rail or tracks and tractors, trailers and traction engines of all kinds used exclusively for agricultural purposes.
- 3.8 **Miscellaneous Motor Vehicle Registration Transactions** - shall refer to transactions by which the DOTC / LTO collects fees and charges, other than for motor vehicle registration.
- 3.9 **Motor Vehicle Modification** - shall refer to the allowable alteration / changes that can be done in the motor vehicle's body design and configuration which shall be subject to the inspection by the MVIC.
- 3.10 **MVIC - LTO Motor Vehicle Inspection Center** wherein all activities of MVIS are being done.
- 3.11 **MVIS - LTO Motor Vehicle Inspection System** which uses an automated and fully computerized test equipment for roadworthiness and smoke emission of motor vehicles.
- 3.12 **Motor Vehicle Inspection System Report (MVISR)** - shall mean an inspection report issued by LTO-MVIC to all motor vehicles that failed the inspection process of MVIS.
- 3.13 **Spark Ignition Engine** - means an internal combustion engine in which the air/fuel mixture is ignited by spark plug
- 3.14 **Driving Beam (Main Beam) Headlamp** - means the lamp used to illuminate the road over a long distance ahead of the vehicle.

- 3.15 **Passing Beam (Dipped Beam) Headlamp** – means the lamp used to illuminate the road ahead of the vehicle without causing undue dazzle or discomfort to incoming drivers and other road users.
- 3.16 **Direction-Indicator Lamp** – means the lamp used to indicate to other road users that the driver intends to change direction to the left or to the right.
- 3.17 **End-outline marker lamp** - means the lamp fitted near to the extreme outer edge and the top of the vehicle and intended to indicate clearly the vehicles overall width.
- 3.18 **Reversing lamp** - means the lamp used to illuminate the road to the rear of the vehicle and to warn other road users that the vehicle is reversing or about to reverse.
- 3.19 **Sound Level Meter** - measures sound pressure level and commonly used in noise pollution for quantification of industrial and environmental noise.
- 3.20 **Handheld Web/PC Camera** – a web camera used for uploading of picture of all motor vehicle at Repository Server in a real-time/on-line basis.
- 3.21 **Side-Marker Lamp** – means a lamp used to indicate the presence of the vehicle when viewed from the side. The color of the lamp shall be amber.
- 3.22 **Stop Lamp** – means the lamp used to indicate to other road users to the rear of the vehicle that the driver is applying the service brake.
- 3.23 **Retro-Reflectors** – means a device used to indicate the presence of a vehicle by the reflection of the light emanating from a light source not connected to the vehicle, the observer being situated near the source.
- 3.24 **Front fog lamp**- means the lamp used to improve the illumination of the road in case of thick fog, falling snow, heavy rain or similar conditions.
- 3.25 **Rear fog lamp** -means the lamp used to make the vehicle more visible for the rear in case of thick fog, falling snow, heavy rain or similar conditions.

Section 4. VENUE OF INSPECTION

Motor Vehicle Inspection shall be conducted in any LTO Motor Vehicle Inspection Center. The registration of private motor vehicles maybe conducted in any LTO District Office provided that a Certificate of Motor Vehicle Inspection System Compliance (CMVISC) from MVIC is presented together with other documentary requirements. However, registration of public utility vehicles shall be in the District Office specified in their franchise or subsequent Order approved by the Land Transportation Franchising and Regulatory Board (LTFRB).

Section 5. INSPECTION PERIOD

5.1 Schedule of Inspection

Except for motor vehicles covered by Administrative Order No. 010-2005 (*Re: Initial Registration Scheme for Brand New Motor Vehicles valid for three [3] years*) and LTO Memorandum Circular No. 575-2005 (*Re: Implementing Rules and Regulations of Administrative Order No. 010-2005 on the Initial Registration Scheme for Brand New Motor Vehicles valid for three [3] years*), inspection of motor vehicles may be conducted within a period of sixty (60) days prior to registration.

For motor vehicles which passed the inspection, a corresponding CMVISC shall be issued which shall be valid for a period of sixty (60) days from date of actual inspection. Within the same period, the CMVISC shall be presented to the LTO District Office as part of the documentary requirement for initial or renewal registration, modification, and miscellaneous transactions, of motor vehicle, as the case may be. An MVISR shall be issued for motor vehicles which did not pass the inspection.

5.2 Frequency of Inspection

Type of Motor Vehicle	Initial Inspection	Renewal Inspection	Others
1. Private Vehicle			
a. Brand New	Exempted	After three (3) years, and annually thereafter	
b. Rebuilt and In-Use Imported	Before initial registration	Annually	
2. Government			
a. Brand New	Exempted	After three (3) years, and annually thereafter	
b. Rebuilt and In-Use Imported	Before initial registration	Annually	
3. Diplomatic	Exempted	After three (3) years, and annually thereafter	
4. Franchised Vehicle	Before initial registration	Annually	Semi-Annually after five-years*

*1st inspection shall be before the registration of the motor vehicle; 2nd inspection shall be determined by the LTRFB.

Section 6. INSPECTION FEES

For every motor vehicle inspected a corresponding fee shall be collected, to wit:

Type of Motor Vehicle	Inspection Fee	Re-Inspection Fee*
1. Motor Vehicle with GVW =< 4500 kg	P 300.00	P 150.00
2. Motor Vehicle with GVW > 4500 kg	P 300.00	P 150.00
3. MC/TC	P 150.00	P 75.00

An inspection fee of Php 600.00 shall be collected for MV modification (change body design/configuration) and miscellaneous transactions such as change engine/chassis, change color, revision of Gross Vehicle Weight, re-stamping of engine and similar transactions, and recovered carnapped vehicle.

*Note: Re-inspection fee is collected when a motor vehicle fails the first inspection. Re-inspection of the vehicle shall cover the stage where it previously failed.

Section 7. MOTOR VEHICLE INSPECTION SYSTEM

7.1 PURPOSES OF INSPECTION

- 7.1.1 To establish the identity, classification and ownership of the motor vehicle
- 7.1.2 To determine the conformity of the motor vehicle to the prescribed minimum and maximum dimension and weight, and required safety and emission standards
- 7.1.3 To identify illegally modified vehicles
- 7.1.4 To encourage appropriate maintenance by vehicle owners.

7.2 CATEGORIES OF MOTOR VEHICLE INSPECTION

- 7.2.1 Initial Inspection – inspection for newly operating vehicle, excluding brand new ones
- 7.2.2 Renewal Inspection – inspection for renewal of registration
- 7.2.3 Modification Inspection – inspection of motor vehicles with modifications in dimensions, structures and changes in engine/chassis, color, and related transactions
- 7.2.4 Corrective Measures Inspection – inspection of motor vehicles which are subject of roadside apprehension due to non-compliance to safety and emission standards

7.3 STAGES OF INSPECTION

Inspection of motor vehicles under MVIS shall cover the following four (4) stages, namely:

- Stage I – Confirmation of Identity of the Vehicle
- Stage II – Above Carriage Inspection
- Stage III – Under Carriage Inspection
- Stage IV – Issuance of Inspection Certificate

7.4 STANDARDS AND METHODS OF INSPECTION

7.4.1 STAGE I - Confirmation of Identity of Vehicle

At this stage, vehicle information and specifications are encoded in the computer manually and/or scanned electronically. Each motor vehicle shall be issued a barcode ID sticker for easy uploading of vehicle record during subsequent registration/transaction.

7.4.1.1 Inspection Standards

7.4.1.1.1 Chassis¹ and engine/motor number are not tampered and does not show sign of tampering.

7.4.1.1.2 Chassis number is the same as the chassis number in the current Original Certificate of Registration except in case of motor vehicles covered by Administrative Order No. 010-2005 and LTO Memorandum Circular No. 575-2005.

7.4.1.1.3 The engine/motor number is the same as the engine/motor number appearing in the current Original Certificate of Registration except in case of motor vehicles covered by Administrative Order No. 010-2005 and LTO Memorandum Circular No. 575-2005.

7.4.1.1.4 The make/type, model, plate number and sticker of the motor vehicle presented for inspection are the same as the information reflected in the current Original Official Receipt/Certificate of Registration.

7.4.2 STAGE II - Above Carriage Inspection

7.4.2.1 Body and Frame Structure

7.4.2.1.1 Length, Width, Height and Axle Weight – The maximum dimensions and axle weight of an MV shall not exceed the following measurements:

7.4.2.1.1.1 Maximum length

- Freight vehicles w/ two axles – 10 meters
- Passenger vehicle w/ two axles -11 meters
- Vehicle w/ 3 or more axles -14 meters

7.4.2.1.1.2 Maximum Width -2.5 meters

7.4.2.1.1.3 Maximum Height – 4.0 meters

7.4.2.1.1.4 Maximum Axle Weight – 13,500 kgs

7.4.2.1.2 Frame and Body

The frame of a motor vehicle consist of two (2) pieces of long metal, one on each side running through the length thereof, and joined at the front and rear by cross members. Frames vary in type and construction depending on the make of the vehicle. There are vehicles where the frame is a part of the floorboard of the body. In this case, there is usually a short stub frame at the extreme front and back of the vehicle to support the suspension. The latter is called the integral frame and body construction.

7.4.2.1.2.1 The frame and body shall be capable to fully withstand the operation of the vehicle.

7.4.2.1.2.2 The body shall be firmly secured to the frame to withstand vibration and impact.

7.4.2.1.2.3 The shape/external contours of the body shall be free from any sharp edge or rotating protrusion.

7.4.2.1.3 Riding Accommodation – Motor vehicles provided with passenger compartment shall comply with the following requirements:

7.4.2.1.3.1 The passenger compartment shall be constructed in a manner that shall ensure safe boarding and not cause the passengers to fall off or stumble because of vibration, impact, etc.

7.4.2.1.3.2 The driver's and passenger's compartment shall be so constructed as to allow necessary and sufficient ventilation.

7.4.2.1.3.3 Seats shall be provided for riding accommodation and should be upholstered for passenger comfort.

7.4.2.1.3.4 The driver's seat shall be constructed that the driver shall have a full view necessary for driving, and that he can control the operation of the vehicle without being hindered by passengers or loaded goods.

7.4.2.1.3.5 The passenger compartment shall be equipped with bright white colored light.

7.4.2.1.3.6 The floorboard shall be in such condition as not to cause the passenger to fall down from the motor vehicle and cause the dust, water and dirt to get into the passenger compartment.

7.4.2.1.3.7 The compartment for driver and passengers shall have an entrance that can be securely closed and opened easily.

7.4.2.1.4 Goods-loading accommodation - The goods-loading accommodation of a motor vehicle shall be secured and constructed that it shall enable safe and reliable loading of goods.

7.4.2.2 Seatbelts and Anchorage

All motor vehicles shall be equipped with seatbelts in accordance with RA 8750 and its implementing rules and regulations and other existing laws, rules and regulations.

7.4.2.3 Parking Lamp

All motor vehicles shall be provided with parking lamps on each side at both the front and rear of the vehicle.

7.4.2.3.1 The parking lamps shall be wired that all of them will be lit simultaneously.

7.4.2.3.2 The parking lamps shall be wired that they may be turned on while the engine is not in operation.

7.4.2.3.3 The color of the front parking lamps shall either be white, yellow or amber

7.4.2.3.4 The rear parking lamps shall be colored red.

7.4.2.4 End-Outline Marker Lamp

All trucks, trailers, buses and other heavy duty vehicles shall be provided with end-outline marker lamp mounted on the extreme edges of the roof to show the maximum height and width of the vehicle.

7.4.2.4.1 The color of the end-outline marker lamp shall be white, light yellow or amber.

7.4.2.4.2 End-outline marker lamp shall be mounted symmetrically on the left and right portion of the vehicle.

7.4.2.5 Driving Beam (Main Beam) Headlamp and Passing Beam (Dipped Beam) Headlamp

7.4.2.5.1 Motor vehicle shall be equipped in each side of the front with an even number of white or selective-yellow light capable of adequately illuminating the road at night in clear weather.

7.4.2.5.2 When all lamps are lit at the same time, the headlamps shall have such intensity that the driver may discern any obstacle on the road.

7.4.2.5.3 They shall be mounted symmetrically on the left and right portion of the vehicle.

7.4.2.5.4 The dimmed or dipped beam shall have, when all of them are lit at the same time, such intensity that the driver may discern any obstacle on the road.

7.4.2.5.5 The main photometric axis of the beam of a headlamp shall be directed downward or shall be capable of being directed downward by a headlamp aim.

7.4.2.5.6 The lamps shall be mounted so that the aim may not be readily disturbed by vibration and shocks

7.4.2.6 Direction-Indicator Lamp

7.4.2.6.1 All vehicles shall be equipped with direction-indicator lamp at the right and left side of the vehicle and at the front and rear of the vehicle.

7.4.2.6.2 The color of the front direction-indicator lamp shall be yellow or amber; rear direction indicator lamp shall be red, yellow or amber when in operation.

7.4.2.6.3 The lamps mounted on each side of the vehicle shall be wired so that they may flash in time with hazard warning lamps.

7.4.2.7 Reversing Lamp

Motor vehicles shall be provided with reversing lamps except 2-wheeled motor vehicles with or without side lamp.

7.4.2.7.1 Reversing lamps shall be wired that they may be turned on only when the transmission system is in reverse gear.

7.4.2.7.2 The number of reversing lamps of a motor vehicle shall be two or less.

7.4.2.7.3 The color of the light of a reversing lamp shall be white.

7.4.2.7.4 The main axis of a reversing lamp for illuminating mainly the rear shall be directed downwards and shall not strike the level of the road.

7.4.2.7.5 No reversing lamps shall cause undue inconvenience or glare to the other road users.

7.4.2.8 Number Plate Lights

7.4.2.8.1 Motor vehicle shall be provided with two (2) white number plate lights at the rear to illuminate such.

7.4.2.8.2 The number plate light shall be wired that it may not be put off from the driver's seat or that it will

be turned on whenever the headlamps or parking lamps are turned on.

- 7.4.2.8.3 The light shall render the plate number clearly visible at night.

7.4.2.9 Hazard Warning Lamp

- 7.4.2.9.1 Hazard warning lamps shall be wired so that all of them operate simultaneously and shall be colored amber.

- 7.4.2.9.2 Hazard warning lamps shall be mounted symmetrically to the longitudinal plane of vehicles.

7.4.2.10 Tail Lamp

- 7.4.2.10.1 The rear of the vehicle shall be provided with tail lamps on both sides visible at night.

- 7.4.2.10.2 The color of the tail lamps shall be red.

7.4.2.11 Stop Lamp

- 7.4.2.11.1 All motor vehicles shall be provided with stop lamp on each side at the rear except 2 or 3 wheeled motor vehicle where only one will suffice.

- 7.4.2.11.2 Stop lamps shall be wired that it may be turned on only when the brake system of a vehicle is applied.

- 7.4.2.11.3 The color of the light of the stop lamps shall be red.

- 7.4.2.11.4 The stop lamps in combination with a tail lamp shall be wired that its luminous intensity may increase 5 times or stronger than that of the tail lamp only when the brake system is operated.

7.4.2.12 Windshield/Window Glass

- 7.4.2.12.1 Windshield/window glass shall be made of a substance whose transparency does not deteriorate; these shall be such that they do not cause any appreciable distortion of object seen through the windscreen and that in case of breakage, the driver still has a sufficient clear view of the road.

7.4.2.13 Wiper/Washer

7.4.2.13.1 Motor vehicles shall have an automatic windshield wiper or wipers and windshield washing system, where two or more wipers are provided, they shall operate together.

7.4.2.13.2 The windshield washing system shall be constructed that may eject an adequate amount of cleansing liquid to ensure a view in the immediate front of the windshield, when the outside surface of the windshield is soiled.

7.4.2.13.3 The windshield washing system shall not be likely damaged nor actuated as a result of vibration, impact, and other similar situation while running.

7.4.2.14 Horn

7.4.2.14.1 The horn shall not be siren or bell.

7.4.2.14.2 The sound of the horn shall be continuous and the sound level and tone quality thereof shall be unchangeable.

7.4.2.14.3 The sound level of the horn of a motor vehicle (if two or more horns are operating simultaneously, the mixed sound level of all horns) shall be 90 dB @ or more and 115 dB @ or less (for horns of a motor vehicle with a maximum speed of less than 20 kph a proper sound level 115 dB @ or less) measured at a distance of 2 m to the front.

7.4.2.15 Retro-Reflectors

7.4.2.15.1 Motor vehicle (including trailers & three-wheeled vehicle) shall be provided with retro-reflectors on each side of the rear and visible at night.

7.4.2.15.2 Retro reflectors shall reflect red.

7.4.2.16 Number Plates

7.4.2.16.1 Motor vehicle shall display number plates at the designated location, one in front and one at the rear, except for two or three - wheeled motor

vehicles which shall have one number plate at the rear

7.4.2.16.2 The number plate shall be kept clean and cared for and firmly affixed to the vehicle in such a manner as will make it entirely visible, readable and legible.

7.4.2.16.3 The number plate shall not be covered by colored or tinted plastic / glass casing or any other number plates.

7.4.2.17 Interior Light

7.4.2.17.1 Motor vehicle shall be equipped with at least one bright white light, minimum of 10 watts.

7.4.2.17.2 Buses shall have at least 4 bright white lights with a minimum of 10 watts each.

7.4.2.18 Floor Board

The floorboard of the motor vehicle shall be free from dust, water, and dirt and shall not cause the passenger to tumble / fall in and from the vehicle.

7.4.2.19 Rear View/Side Mirror

7.4.2.19.1 All motor vehicles shall be provided with rear view/side mirror on both sides of the vehicle, adjusted to give the driver when seated a clear view of the traffic to the rear of the vehicle and the traffic conditions near the right side of the motor vehicle itself except the area which the driver in his seat may directly confirm.

7.4.2.19.2 Rear view mirrors should enable a driver to recognize clearly the traffic conditions at each side of the left and right of a 2-wheeled motor vehicle with or without sidecar.

7.4.2.20 Panel Gauges

7.4.2.20.1 The temperature, fuel, oil, speedometer, odometer and tachometer gauges shall be lamper resistant and constructed in a manner that the driver will easily verify the readings in these instruments while driving.

7.4.2.20.2 The panel gauges shall at all times be in working condition and shall be provided with a lighting device or shall be luminous.

7.4.2.21 Brake System/Parking Brake

7.4.2.21.1 The brake system shall consist of at least 2 separate lines, which can function independently.

7.4.2.21.2 The braking system shall be secured that it shall fully withstand the operation and shall be fixed that it may not be damaged, by vibration, impact and similar condition.

7.4.2.21.3 The braking system shall be constructed so that its performance does not interfere with the steering system.

7.4.2.21.4 There shall be no welding or welded connection in any of the brake piping, brake lines or in any part of its hydraulic or pneumatic piping system.

7.4.2.21.5 The service brake system shall have the brake performance provided for in the following table according to the maximum speed of the motor vehicle on a level, dry, paved road under an application force of 90 kgs or less in the case of the foot-operated type, or 30 kgs or less in case of hand-operated type.

Maximum Speed of Motor Vehicle	Initial Speed (km / hr)	Stopping Distance (meters)
80 or more	50	22 or less
35 to 79	35	14 or less
20 to 34	20	5 or less
Less than 20	Maximum speed	5 or less

7.4.2.21.6 The service brake system shall be so constructed that even if a part of the brake piping (except the part of the piping which serves two or more wheels) is damaged, the

brake may still be applied to at least two wheels. This provision shall not apply to the service brake system of a motor vehicle provided with an emergency brake system (which means the brake system capable of applying the brakes to at least two wheels while running in case of a service brake system failure.)

7.4.2.21.7 The brake fluid shall not impair the function of the service brake systems due to brake pipe corrosion caused by the brake fluid or because of bubble formation caused by the heat.

7.4.2.21.8 The brake performance shall conform to the following requirements under an application of force of 90 kgs or less for the foot-operated type and 30 kgs or less in the case of hand-operated type.

7.4.2.21.9 The parking brake shall be operated mechanically and capable of holding the motor vehicle stationary on a dry paved road.

7.4.2.22 Clutch System

The clutch shall be capable of being engaged without slippage or shuddering.

7.4.2.23 Steering System

7.4.2.23.1 All parts and components of the steering wheel shall be well secured for the safe and efficient operation of the vehicle.

7.4.2.23.2 The steering wheel shall be constructed that it may be operated easily and safely by the driver in his normal driving position.

7.4.2.23.3 The steering wheel or any moving part of the steering linkages shall not make contact with any part of the motor vehicle such as chassis, frame, and fenders

7.4.2.23.4 The ratio of turning angle of the steering wheel to the left or right shall be of no considerable difference to the steering angle of the tire.

7.4.2.23.5 The clearance of the steering wheel should not be more than 45° degrees when turned to the left or right position.

7.4.2.23.6 There shall be no considerable difference between the steering forces to the left or right.

7.4.2.24 Driver and Passenger Seat

Seat for one passenger is at minimum of 35 cm wide and 60 cm long. The distance of one (1) end of the seat to the backseat (leg room) shall be 20 cm at minimum.

7.4.2.25 Tires/Wheels

7.4.2.25.1 Tires shall be mounted in the wheel rim and inflated with compressor air.

7.4.2.25.2 Tires shall be free from any significant damages such as cracks and base cords.

7.4.2.25.3 Must conform to the BPS-PNS 25 for tires and wheels.

7.4.2.26 Wheel Bolts / Nuts

The wheel stud bolts and nuts must be complete.

7.4.2.27 Fuel Tank/Fuel Tank Cap

7.4.2.27.1 The fuel tank and its pipings shall be secured to prevent damaged due to vibration or impact.

7.4.2.27.2 The fuel tank and its pipings shall be constructed so that the fuel may unlikely leak significantly in the event of collision.

7.4.2.27.3 All fuel tanks shall be fitted with fuel tank cap

7.4.2.28 Fuel System

7.4.2.28.1 In the case of motor vehicles carrying passengers, the fuel tank and its pipings shall be constructed in such a way that the fuel will not leak remarkably in case of impact due to collision;

7.4.2.28.2 Regular steel shall be used for fuel tank. Under no circumstance shall plastic containers be used as fuel tank;

7.4.2.28.3 The filler and gas vent of a fuel tank shall be constructed in such a way that it shall be free from fuel leakage when the vehicle is jolted;

7.4.2.28.4 The filler and gas vent of the fuel shall not be located in the opening direction of the exhaust pipe and shall be located not less than 30 centimeters away from the discharge opening thereof;

7.4.2.28.5 The filler and gas vent of a fuel tank shall not open into the inside of any passenger compartment.

7.4.2.28.6 The filler and gas vent of a fuel tank shall be located 20 centimeters or more away from any exposed electric terminal or switch.

7.4.2.29 Auxiliary Headlamp

In the presence of any auxiliary headlamp, the following requirements should be observed:

7.4.2.29.1 Each auxiliary headlamp should be wired independently and have separate switches.

7.4.2.29.2 The main beam of the auxiliary headlamp shall be directed downward but in no case towards the left side of the vehicle.

7.4.2.29.3 The color of the auxiliary headlamp shall be white.

7.4.2.29.4 The auxiliary headlamp shall be mounted in such a way that its aim will not be disturbed by vibration or shocks.

7.4.2.30 Fog Lamp

Fog lamps are optional on motor vehicles. However, should they be installed or fitted, the following should be strictly observed:

7.4.2.30.1 Lamps may be lighted only during instances of thick fog, falling snow, heavy rain or similar conditions. However, front fog lamps may be used as substitute for passing lamps.

7.4.2.30.2 Only two front fog lamps shall be allowed and should emit either white or selective-yellow light. However, in the case of motorcycles, only one front fog lamp shall be allowed.

7.4.2.30.3. Front fog lamps shall be fitted or installed below the passing lamps and in such a way that no

point illuminated by the fog lamps shall come into contact with any point illuminated by the passing lamps.

7.4.2.30.4 Rear fog lamps should emit only red light.

7.4.2.30.5 Fog lamps are prohibited on trailers.

7.4.2.30.6 The front fog lamps should have their own switches, independent from the main beam headlamps or dipped-beam headlamps or a combination of both.

7.4.2.31 Electrical System

7.4.2.31.1 The electrical wiring located inside the compartment and in the place where the gas container for liquefied petroleum gas (LPG)/CNG with a partition wall (such as the boot) is located shall be covered with an insulator and fixed to the body.

7.4.2.31.2 The electrical terminal switch and other electrical systems located inside the vehicle compartment, which are likely to spark shall be suitably covered.

7.4.2.31.3 The battery should be fixed and should not be damaged by vibration, shock or similar incidents

7.4.2.32 Control System

7.4.2.32.1 The control devices for engine and power train (such as the starter switch hand brake system, headlamps, direction indicator lamps, windshield wipers, emergency flasher and other vehicle control devices) including the operating position for each gear or range of transmission should be properly constructed and installed in a manner that they could be identified and recognized by the driver from his seat.

7.4.2.32.2 In case the turn signal control device (lever) is constructed as part of the steering column and steering wheel mechanism, said device should be located on the left side of the steering column.

7.4.2.33 Muffler System

7.4.2.33.1 All motor vehicles should have an exhaust/muffler system. The muffler/exhaust system is composed of engine, primary muffler or the silencer, secondary muffler and catalytic converter (if any).

7.4.2.33.2 The exhaust pipe should be secured, fixed, and free from any defects or leakage.

7.4.2.34 Motor Vehicle Air Conditioning (MAC) System

The MAC of all motor vehicles shall be inspected in accordance with DENR AO 2004 – 08 (*Re: Revised Chemical Control Order for Ozone Depleting Substances*) and its implementing rules and regulations.

All motor vehicles with MAC System shall not be registered unless the following standards are complied with:

7.4.2.34.1 All motor vehicle model 1998 and below are allowed to use refrigerant type R12.

7.4.2.34.2 All motor vehicle model 1999 and above shall use refrigerant type R134A or other refrigerant type which are compliant to the Chlorofluorocarbon (CFC) phase out plan.

7.4.2.35 Side Slip Test

Automated Test Equipment (ATE) Sideslip Tester shall be used. The design of sideslip of the wheels shall be measured by running the motor vehicle on the platform of the tester.

The standard is (+) or (-) 7mm when running one meter.

7.4.2.36 Suspension Test

Automated Test Equipment (ATE) Suspension Tester shall be used. The suspension test measures the adhesion of light duty vehicle suspension system to the road surface. It measures the effectiveness of the shock absorbers on each wheel of the vehicle, checking the absolute damping levels and comparing the relative damping balance between the left and right side of each axle.

The adhesion measurement shall not be less than 21% of the minimum load over the static weight.

7.4.2.37 Roller Brake Test

Automated Test Equipment (ATE) roller brake tester shall be used.

7.4.2.37.1 The sum of the braking forces of the left and right wheels shall not be less than 50% of the axle weight.

7.4.2.37.2 The difference between the braking forces of the left and right wheel shall not exceed 10% of the axle weight.

7.4.2.38 Speedometer Test

Automated Test Equipment (ATE) Speedometer Tester shall be used. The tester shall check the actual speed of the motor vehicle and the accuracy of the vehicle speedometer reading.

7.4.2.38.1 The speedometer should be located at a place where the driver can easily check the speed while the motor vehicle is running.

7.4.2.38.2 The speedometer should have a lighting device or luminous dial plate with pointer.

7.4.2.38.3 The speedometer should be glare-proof.

7.4.2.39 Exhaust Emission Test

The standards and test procedure for smoke emission shall be in accordance with RA 8749 (Clean Air Act) and its implementing rules and regulations.

7.4.2.39.1 Gasoline-Fed Motor Vehicle

Automated Test Equipment (ATE) 5 gas exhaust emission analyzer shall be used (HC, CO, CO₂, Nox, O₂). The test is for the determination of the concentration of carbon monoxide (CO) and hydrocarbon (HC) emission from in-use motor vehicle running at idle speed consistent with the Clean Air Act of 1999 (RA 8749).

Emission Standards for Vehicles with Spark-Ignition Engines (Gasoline)*		
Vehicle Registration	CO (% by Volume)	HC (ppm as Hexane)
Registered for the first time after December 31, 2007	0.5	250
Registered for the first time on or after January 1, 2003 but before January 1, 2008	3.5	600
Registered for the first time on or before December 31, 2002	4.5	800
For Motorcycles	4.5	7500 for Metro Manila and 10000 for rural areas

* at idle

7.4.2.39.2 Diesel-Fuel Motor Vehicle

Automated Test Equipment (ATE) smoke opacimeter shall be used. The test is a smoke opacity measurement for in use motor vehicle using the free acceleration method.

Emission Standards for Vehicles with Compression-Ignition Engines (Diesel)* (light absorption coefficient, m^{-1}), k	
Vehicle Registration	Light absorption coefficient, m^{-1} , k
Registered for the first time after December 31, 2007	2.0
Registered for the first time on or after January 1, 2003 but before January 1, 2008	2.5
Registered for the first time on or before December 31, 2002	2.5 3.5 (turbocharged) 4.5 (1,000m increased in elevation)

* using the free acceleration test

Emission Standards for Rebuilt and Imported Used Vehicles*			
Vehicle Registration	CO* (% by Volume)	HC** (ppm as Hexane)	Light absorption coefficient, m ⁻¹ , k (turbo charged)***
Registered for the first time after December 31, 2007	0.5	250	2.0

* for spark-ignition (gasoline) motor vehicles

** for compression-ignition (diesel) motor vehicles

*** figure in brackets relate to turbocharged vehicle

7.4.2.39.3 Exhaust Pipe Standards

7.4.2.39.3.1 The exhaust pipe of motor vehicle shall not have its opening towards the plate nor shall it be directed towards the compartment.

7.4.2.39.3.2 The exhaust pipe shall be located in a place where it will not cause fire to the motor vehicle nor obstruct the function of the other systems of the vehicle such as the braking system or the electrical system.

7.4.2.40 Headlight Test

Automated Test Equipment (ATE) headlight tester shall be used. The test is for the measurement of luminous intensity and the photometric axis or optical axis deviation of the vehicles headlight.

The standards are as follows:

7.4.2.40.1 Luminous intensity

4-lamp type:	10,000 cd or more
2-lamp type:	10,000 cdl or more

7.4.2.40.2 Deviation of optic axis direction at 10m forward:

Right Headlight	Left Headlight
Up – 0	Up – 0
Down – 20 cm	Down – 20 cm
Left – 20 cm	Left – 10 cm
Right – 20 cm or less	Right – 20 cm or less

7.4.2.41 Sound Level Meter

Sound Level Meter measures sound pressure level and is commonly used in noise pollution for quantification of industrial and environmental noise.

The sound level of the motor vehicle for horn and muffler shall not exceed 115 dB measured at a distance of 2 m from the source.

7.4.2.42 Early Warning Device

A motor vehicle must be equipped with an Early Warning Device which must conform with the provisions of LOI 229 (*Re: Directing the Installation of Early Warning Device on Motor Vehicles*).

7.4.3 STAGE III - Under Carriage Inspection

A 2.50-meter deep pit is used for underbody inspection of the motor vehicle to determine the condition of the following parts of the vehicle through visual inspection.

7.4.3.1 Joint Play Test - The joint play tester is for visual inspection of the mechanical condition of axle components, stub axles, steering pivot joints and bearing of a vehicle

7.4.3.2 Radiator - shall be free from any water leakage and shall be fitted with a radiator cap.

7.4.3.3 Engine/brake mounting - shall be free from rust in the areas.

7.4.3.4 Engine - shall be free from oil leakage

7.4.3.5 Transmission - shall be free from oil leakage

7.4.3.6 Steering balls joints - shall be tight and free from damages

7.4.3.7 Steering linkages/box mounting - shall be tight and free from damages

7.4.3.8 Steering idler/sector shaft - shall be tight and free from damages

- 7.4.3.9 Front/rear shackle eyes/pins/bushes – shall have no visible cracks
- 7.4.3.10 Stabilizer/bushes – shall be free from rust
- 7.4.3.11 King pins and bearings – shall be tight
- 7.4.3.12 Front/rear suspension joints bushes – shall have no deformed bushings
- 7.4.3.13 Rear linkages – shall be tight and have no cracks or deformed bushings
- 7.4.3.14 Fuel hose/pipes – shall be secured, fixed and free from leaks
- 7.4.3.15 Spring clips – shall have clip bolts
- 7.4.3.16 Shock absorber – shall have complete mounting bolts and with no sign of oil leakage and deformation
- 7.4.3.17 Drive shaft bolts/nut – shall have complete bolts, be tight, and with no sign of deformation
- 7.4.3.18 Differential – shall be free from any oil leakages
- 7.4.3.19 Propeller shaft coupling – shall be tight
- 7.4.3.20 Exhaust pipe and silencer – shall be free from damages
- 7.4.3.21 Chassis frame – shall be free from cut and weld connection, damages, corrosion, and deformation
- 7.4.3.22 Chassis cross member – shall be free from damages, corrosion and deformation
- 7.4.3.23 Body Floor Board – shall be free from holes, cracks and rust
- 7.4.3.24 Power steering – shall be tight and with no sign of leakage
- 7.4.3.25 Parking brake wire – shall be functional and properly installed.
- 7.4.3.26 Brake hoses/pipes/cylinders – shall be free from leakage, damage and welding
- 7.4.3.27 Spring U bolts/nuts – shall be complete and tight

7.4.4 STAGE IV - Issuance of Inspection Certificate

7.4.4.1 A Certificate of Motor Vehicle Inspection System Compliance (CMVISC) shall be issued by LTO-Motor Vehicle Inspection Center to a vehicle owner certifying that a particular motor vehicle passed the inspection process of MVIS. The format is shown as Annex I.

7.4.4.2 Motor Vehicle Inspection System Report (MVISR) shall be issued by LTO-MVIC to all motor vehicles that failed the inspection process of MVIS. The format is shown as Annex II.

The CMVISC and the MVISR shall be color-coded as follows:

- Private - green
- Diplomatic - blue
- Government - red
- Franchised Vehicles - yellow

Section 8. ADDITIONAL REQUIREMENTS FOR SPECIAL TYPE OF VEHICLES AND RELATED VEHICLE INSPECTION GUIDELINES

8.1 OTHER INSPECTIONS

The Assistant Secretary for Land Transportation Office may deem it necessary to conduct additional inspections relevant to the motor vehicle safety. These inspections may include, but not limited to inclination angle measuring inspection and others.

8.2 LIGHT ELECTRIC VEHICLES (LEV)

All Light Electric Vehicles (LEV) shall be inspected in accordance with AO 2006-01 (*Re: Guidelines in the Registration of Light Vehicles [LEV]*) and its implementing rules and regulations.

All motor vehicles that are powered or run solely by battery or electricity shall be exempted from the requirement of smoke emission testing in accordance with MC RIB 2007-852 (*Re: Exemption of Light Vehicles from Smoke Emission Test*).

8.3 AUTO-LIQUIFIED PETROLEUM GAS (LPG)

All vehicles fueled solely or alternately by LPG or Auto-LPG shall be inspected in accordance with Memorandum Circular RIB-2007-891 (*Re: Implementing Rules and Regulations in the Initial Registration of Auto LPG Motor Vehicles*).

The fill valve should be located outside the vehicle compartment and isolated from the auto-LPG container.

An appropriate sticker marked "LPG" should be posted on the fill valve cover for each unit installed and on the upper-left corner of the vehicle's windshield. The sticker posted on the windshield (aside from the "LPG" marking) should also bear a warning message that says "not allowed to park on an enclosed parking space."

8.4 LOW SPEED VEHICLES (LSV)

All low speed vehicles shall be inspected in accordance with AO AHS 2008-14 (*Re: Guidelines in the Registration of Low Speed Vehicles*) and its implementing rules and regulations.

8.5 MOTORCYCLES (MC)

All motorcycles shall be inspected in accordance with MC AHS 2008-01 (*Re: Revised Rules and Regulations for the Use of Motorcycles on Highways*).

8.6. FRANCHISED VEHICLES

All franchised vehicles shall likewise be inspected in conjunction with LTFRB Memorandum Circulars and other related issuances.

Section 9. INSPECTION SECURITY AND SAFETY MEASURES

The following shall be observed in order to ensure security and safety in the inspection process:

- 9.1 Real-time transfer of inspection in every stage through the interfacing of MVIS with MVRS;
- 9.2 The assignment of a unique username and password for each inspector will be required before every inspection; and
- 9.3 All inspectors shall be required to wear proper safety gears like helmet, gloves, masks and safety shoes while in the MVIC.

Section 10. MAINTENANCE AND CALIBRATION OF TESTING EQUIPMENT

- 10.1 Each MVIC shall maintain the upkeep of the equipment as required and establish a Preventive Maintenance Program of test equipment in accordance with the manufacturer's standards.
- 10.2 Instruments and equipment requiring calibration or adjustment shall be calibrated and adjusted every three (3) months or earlier in accordance with the manufacturer's standards and of the Philippines National Standards (PNS), whichever becomes applicable.
- 10.3 Maintenance report shall be generated for every calibration, and logged in the individual test equipment maintenance ledger.

Section 11. RECORDS KEEPING AND REPORTING

The Motor Vehicle Inspection Centers shall maintain and keep the records and data of all motor vehicles inspected. All inspection data shall be integrated to the LTO-MVIS database.

The Chief of MVIC shall submit a report of all inspected motor vehicles at the end of each month to the LTO Management Information Division; copy furnished the Office of the LTO Assistant Secretary and the Office of the Undersecretary for Road Transport.

Section 12. POST-INSPECTION PROCEDURES

12.1 Handling of Clients Complaints

To ensure that the complaints / feedbacks from the customers are recorded, monitored, analyzed and reported to the top management, a procedure which defined the actions and responsibilities of officials and personnel concerned is documented in PM-OAS 011 of the Quality Management System Procedure Manual. The Customers' Complaints / Feedbacks Management in PM-OAS 011 shall be observed in handling clients' complaints relative to the implementation of the MVIS.

12.2 ADMINISTRATIVE LIABILITY

Any official or employee who, after due notice and hearing, is found guilty of committing any of the following acts, either willfully or through negligence, shall be administratively liable for offense(s) defined under the Civil Service laws, rules and regulations:

12.2.1 Registering or causing the registration of a motor vehicle in violation of any of the provisions of this Administrative Order;

12.2.2 Reporting or certifying that a motor vehicle passed the standards set under the MVIS when, in truth and in fact, such is not the case;

12.2.3 Conspiring and/or assisting in the commission of any of the foregoing acts; and

12.2.4 Violating or preventing, by his act or omission, the enforcement or implementation of any of the provisions of this Administrative Order.

Section 13. QUALIFICATION REQUIREMENTS OF MVIC CHIEF AND INSPECTORS

13.1 The Chief of the MVIC should have a baccalaureate degree in engineering with at least five (5) years relevant or equivalent experience and other Civil Service requirements.

13.2 MV Inspectors should have a baccalaureate degree in engineering with at least two (2) years relevant or equivalent experience and other Civil Service requirements.

13.3 Those who are presently conducting motor vehicle inspection should undergo at least 40 hours of training under the new MVIS before being allowed to use any of the new testing equipment.

Section 14. REPEALING CLAUSE

All circulars, orders, memoranda, rules and regulations, or issuances in conflict herewith are deemed repealed or modified accordingly.

Section 15. SEPARABILITY CLAUSE

Should any part hereof be declared unconstitutional or in violation of any existing law, the provision not so affected shall remain valid and in full force and effect.

Section 16. ANNUAL REVIEW

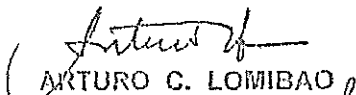
DOTC/LTO shall undertake an annual review of this IRR for the purpose of modifications or amendments thereto as may be deemed proper and necessary. Any amendments and/or modifications shall be subjected to public consultation.

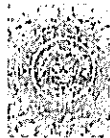
Section 17. TRANSITORY PROVISION

For LTO Regional Offices without existing Motor Vehicle Inspection Center, inspection shall be undertaken at the nearest MVIC.

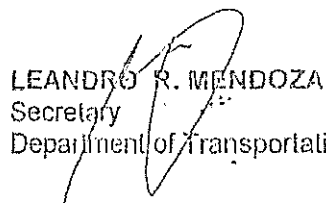
Section 18. EFFECTIVITY


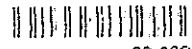
This Order shall take effect fifteen (15) days after publication in two newspapers of general circulation and after receipt of a copy thereof by the Office of the National Registry of the UP Law Center, Diliman, Quezon City.


ARTURO C. LOMIBAO
Assistant Secretary
Land Transportation Office



APPROVED:


LEANDRO R. MENDOZA
Secretary
Department of Transportation and Communications

 
DOTC DO NOT OUTRADING 09-002414

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Republic of the Philippines
Department of Transportation and Communications
LAND TRANSPORTATION OFFICE
MOTOR VEHICLE INSPECTION CENTER

CERTIFICATE OF MVIS COMPLIANCE

CMVISC No. _____

This is to certify that the motor vehicle hereunder described
as follows:

Name of Registered Owner: _____

Address: _____

Plate No.: _____

Chassis No.: _____

Engine No.: _____

has passed the MVIS test conducted by this MVIC pursuant to the
provisions of Republic Act 4136, 8749 & 8750.

Purpose: _____

MVIS Test Conducted by: _____

Date Tested: _____

First registration after manufacture conducted by: _____

Date of first registration after manufacture _____

The vehicle has to undergo its next inspection not later than _____

Chief - MVIC

ARTURO C. LOMIBAO
Assistant Secretary



MVIC _____

MOTOR VEHICLE INSPECTION SYSTEM REPORT

ANNEX II

MVISR No.		Date Issued		Purpose of Inspection	
Name of Operator/Owner				Address	
Plate No.	Chassis No.	Motor No.	File No.		
Classification	Denomination	Type of Body	Make/Series		
Gross Wt.	Net Wt.	Color	Year Model	No. of Cylinder/Axle	
Type of Fuel	<input type="checkbox"/> Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Auto-LPG <input type="checkbox"/> CNG <input type="checkbox"/> Electric <input type="checkbox"/> Others				

ABOVE CARRIAGE	Result	UNDER CARRIAGE	Result	SIDE SLIP TEST	Result
Body Appearance		Radiator		BRAKE TEST	Result
Chassis		Engine Bracket/Mounting			
Engine		Engine Oil Leakage		Sum	Diff.
Handle Bars		Transmission Oil Leakage			
Wiper/Washer		Steering Ball Joints		FB	
Windshield/Window Glass		Steering Leakages/Gear box Mounting		RB1	
Headlights		Steering Kicker/Sector Shaft		PB1	
Signal Lights (front)		Front Shackle Eye/Pin/Bushes		RB2	
Signal Lights (rear)		Stabilizers/Bushes		PB2	
Parking Lights (front)		King Pins and Bearings		RB3	
Parking Lights (rear)		Front Suspension Joints/Bushes		PB3	
Brake Lights		Rear Suspension Joint/Bushes			
Back-up Lights		Rear Linkages			
Clearance Lights		Brake Hoses/Pipes/Cylinders			
Number Plate/Lights		Fuel Hoses/Pipes			
Hazard Lights		Spring U Bolts/Nuts			
Reflectors		Spring Clips			
Interior Lights		Shock Absorbers			
Top Light (Taxi)		Rear Shackle Eye/Pin/Bushes		SPEEDOMETER TEST	Result
Seat Bolts		Drive Shaft Bolts/Nut			
Horn		Differential Oil Leakage		SUSPENSION TEST	Result
Door/Hinges		Propeller Shaft Coupling			
Floor Board		Exhaust Pipes and Silencer			
Side Mirror/Rear View		Chassis Frame		HEAD LIGHT TEST	Result
Clutch System		Chassis Cross Member		Lum.	L/R
Brake System		Body Floor Board			U/D
Driver's/Passenger's Seat		Power Steering		LH	
Steering		Parking Brake Wire		RH	
Tires/Wheels		MAC			
Wheel Bolts/Nuts		Others			
Fuel Tank/Cap				SOUND LEVEL TEST	Result
Panel Gauges					
EWD				EMISSION TEST	Result
Others				Opacity	

MVIS Test Conducted By: _____

Approved
 Disapproved

Chief-MVIC



HC _____

CO _____

REMARKS _____

BPS answers on DOTC questionnaire

1. Institutional structure and role

The BPS is the National Standards Body of the Philippines established by Republic Act (RA) No. 4109, otherwise known as the Philippine Standardization Law, and Executive Order (EO) No. 133.

As the National Standards Body, BPS is mandated to develop, implement, and coordinate standardization activities in the Philippines. It is primarily involved in standards development, product certification, and standards implementation/promotion to raise the quality and global competitiveness of Philippine products at the same time to protect the interests of consumers and businesses.

2. Structure in the context of joining the 1958 Agreement

a. Person in charge and managing structure

Cirila S. Botor
 Officer-in-Charge
 Bureau of Product Standards
 Department of Trade and Industry
 361 Sen. Gil. J. Puyat Avenue
 Makati City 1200

b. Related institutions

- DOTC-Safety and roadworthiness of vehicles (**lead agency for joining the 1958 Vienna Agreement**)
- DENR-Emissions
- DOE-Fuel quality
- Automotive industry associations/ stakeholders

c. DOTC under the Committee on Harmonization of Vehicle Standards and Regulations leads activities of International Participation in the 1958 Vienna Agreement

BPS participates actively in the discussions and through its standardization activities submits updates on harmonization of standards to UNECE regulations

d. The Philippines needs to study thoroughly and weigh the overall benefits of participation to the country.

e. BPS requires mandatory product certification to the following automotive products:

- Safety glass
- Pneumatic tires
- Safety belts
- Lead-acid Automotive batteries
- Autolpg/cng parts and conversions
- Helmets for motorcycles

- f. BPS needs to establish Product Certification scheme for automotive parts(type approval and conformity of production), the resources, infrastructure and expertise needed for its implementation
- g. BPS has 2 part time personnel for development of automotive standards and the implementation of the corresponding product certification scheme.
- h. BPS needs development of expertise in the implementation of UNECE regulations
- i. Local manufacturers of automotive parts may benefit if they are exporting to foreign markets but may be at a disadvantage if not with the opening of markets and stiffer competition.
- j. Importers of automotive parts will be required to be certified under the 1958 Agreement. It will be an advantage if already implementing UNECE regulations and may be a disadvantage for the requirement of UNECE regulations.



DENR ADMINISTRATIVE ORDER
 No. 2010- 23

SEP 07 2010

SUBJECT: Revised Emission Standards for Motor Vehicles Equipped with Compression-Ignition and Spark-Ignition Engines

Pursuant to Section 21 of Republic Act 8749, otherwise known as the "Philippine Clean Air Act of 1999", Rule XXXIII, Section 1 and Section 3, Part VIII of DENR Administrative Order No. 2000-81, and DENR Administrative Order No. 2007-27, the following guidelines for the revised emission standards for motor vehicles equipped with compression-ignition and spark-ignition engines are hereby prescribed for the guidance and compliance of all concerned.

Section 1. Basic Policy. It is the policy of the State to:

- a) protect and advance the right of people to a balanced and healthful ecology in accord with the rhythm and harmony of nature;
- b) attain and maintain a balance between development and environmental protection; and
- c) maintain a quality of air that protects human health and welfare.

Sec. 2. Scope and Coverage. These emission limits and standards shall apply to all new and in-use motor vehicles equipped with spark-ignition and compression-ignition engines for purposes of registration.

Sec. 3. Objectives. This Order aims to:

- a) revise the emission standards of in-use, rebuilt and imported used motor vehicles equipped with spark-ignition and compression-ignition engines, and to update the emission limits for new motor vehicles through a Certificate of Conformity (COC) issued by the Environmental Management Bureau (EMB) to achieve substantial improvement on air quality for the health, safety and welfare of the general public; and,
- b) give manufacturers of new motor vehicle and local oil companies a lead time to comply with the required emission standards for purposes of planning/design.

Sec. 4. Definition of Terms. The following terms as used in this Order shall be defined as follows:

- a) Certificate of Conformity (COC)- the Certificate issued by the DENR through the EMB to a vehicle manufacturer/assembler or importer certifying that a particular new vehicle or vehicle type meets the requirements provided under RA 8749 and its Implementing Rules and Regulations;
- b) Certificate of Compliance to Emission Standards - the Certificate issued by the Department of Transportation and Communication through the Land Transportation Office to a vehicle importer or owner certifying that a particular imported second-hand or used motor vehicle meets the requirements provided under RA 8749 and its Implementing Rules and Regulations;
- c) Compression Ignition Engine - an internal combustion engine in which atomized fuel temperature is raised through compression, resulting to an ignition, e.g. diesel engines;
- d) Emissions - any measurable air contaminant, pollutant, gas stream or unwanted sound from a known source which is passed into the atmosphere;

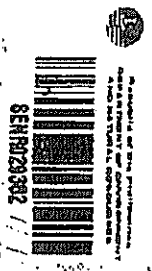
Let's Go Green



REPUBLIC OF THE PHILIPPINES
 DEPARTMENT OF ENVIRONMENT
 AND NATURAL RESOURCES



- e) European Emission Standards – set of requirements defining the acceptable limits for exhaust emissions of new vehicles sold in EU member states. The standards are defined in a series of European Union Directives staging the progressive introduction of increasingly stringent standards;
- f) Euro 1 – the set of requirements defining the acceptable limits for exhaust emissions of new vehicles as provided in EC93 and Directives 91/441/EEC or 93/59/EEC;
- g) Euro 2 – the set of requirements defining the acceptable limits for exhaust emissions of new vehicles as provided in either UNECE R 83-03 (Directives 70/220/EEC, as amended by Directive 94/12/EC or 96/44/EC) or UNECE R 83-04 (Directives 70/220/EEC, as amended by 96/69/EC);
- h) EURO I – the set of requirements defining the acceptable limits for exhaust emissions of new vehicles as provided in Directives 88/77/EEC as amended by Directives 91/542/EEC;
- i) EURO II – the set of requirements defining the acceptable limits for exhaust emissions of new vehicles as provided in Directives 88/77/EEC as amended by Directives 91/542/EEC;
- j) Imported Used Vehicle - any imported used motor vehicle allowed by law;
- k) In-Use Vehicle - any motor vehicle previously registered with the LTO;
- l) M/Passenger vehicle - motor vehicles with at least four wheels designed and constructed for the carriage of passengers. M1 refers to the vehicles used for the carriage of passengers and comprising not more than eight (8) seats in addition to the driver's seat;
- m) M2, M3, N2, N3/Heavy Duty Vehicles – motor vehicles whose gross vehicle weights are greater than 3,500 kilograms;
- n) N/Light Duty Vehicle - motor vehicles with at least four wheels designed and constructed for the carriage of goods;
- o) N1/Light Duty Vehicles - motor vehicles whose gross vehicle weights are equal to or less than 3,500 kgs. This also refers to "Light Commercial Vehicles";
- p) Motor Vehicle - any vehicle propelled by a gasoline or diesel engine or by any means other than human or animal power constructed and operated principally for the conveyance of a person or the transportation of goods;
- q) Motor Vehicle Registration - the official recording of a motor vehicle by the Land Transportation Office (LTO) subject to the conformance of the vehicle to the safety and emission standards provided under Section 21 of the Clean Air Act, including the pre-evaluation of the documents requirements pursuant to Section 5 of Republic Act 4136, as amended, otherwise known as the Land Transportation Code;
- r) New Motor Vehicle - a vehicle constructed entirely from new parts that has never been sold or registered with the DOTC or with the appropriate agency or authority, and operated on the highways of the Philippines, any foreign state or country;
- s) Rebuilt Vehicles - locally assembled vehicles using new or used engine, major parts or components as allowed by law;
- t) Reference Mass (RW) - the mass of the vehicle in running order less the uniform mass of the driver of 75 kg and increased by a uniform mass of 100 kg.;
- u) Spark Ignition Engine - an internal combustion engine in which the air/fuel mixture is ignited by a spark plug, e.g., a gasoline engine;
- v) Type Approval - the official ratification of the compliance of a vehicle type with applicable national or international regulations;



- w) Vehicle Type - a category of power driven vehicles which does not differ in such essentials as reference mass or weight, engine type, number of cylinders, body configuration, and manner of transmission, fuel used and similar characteristics.

Sec. 5. Emission Limits for Type Approval of New Motor Vehicles

5.1 All new motor vehicles types introduced in the market from January 01, 2008 shall comply with the EURO 2 & II Emission Limits as indicated under Table 1 and Table 2; provided, however, that the DENR can issue a COC under more stringent standards for compliant new motor vehicle type to be introduced in the market upon effectivity of this Order.

Table 1
Type Approval Emission Limits for Passenger Vehicles (M) and Light Duty Vehicles (N1), (Euro 2)

Category/Class of Vehicle **		Limit Values					
		Reference Mass RW (kg)	Mass of Carbon Monoxide L ₁ (g/km)		Combined Mass of Hydrocarbons and Oxides of Nitrogen L ₂ (g/km)		Mass of Particulates L ₃ (g/km)
Category	Class		Petrol	Diesel	Petrol	Diesel ⁽¹⁾	Diesel ⁽¹⁾
M ⁽²⁾	-	all	2.2	1.0	0.5	0.7	0.08
N ₁ ⁽³⁾	I	RW ≤ 1,250	2.2	1.0	0.5	0.7	0.08
	II	1,250 < RW ≤ 1,700	4.0	1.25	0.6	1.0	0.12
	III	1,700 < RW	5.0	1.5	0.7	1.2	0.17

⁽¹⁾ Until 1 January 2011, for vehicles fitted with diesel engines of the direct injection type, the limit values L₂ and L₃ are the following:

	L ₂	L ₃
- category M ⁽²⁾ and N ₁ ⁽³⁾ class I :	0.9	0.10
- category N ₁ ⁽³⁾ class II :	1.3	0.14
- category N ₁ ⁽³⁾ class III :	1.6	0.20

⁽²⁾ Except:

- vehicles designed to carry more than six occupants including the driver.
- vehicles whose maximum mass exceed 2,500 kg.

⁽³⁾ And those category M vehicles which are specified in footnote ⁽²⁾.

** For purposes of this DAO, "vehicle category" refers to a classification of power-driven vehicles in accordance with PNS 1891.

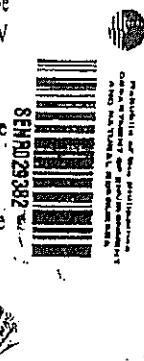
Table 2
Emission Limits for Heavy Duty Vehicle Type Approval (Euro II)

Type of engine	Class of Vehicle	CO (g/kWh)	HC (g/kWh)	NOx (g/kWh)	PM (g/kWh)
Compression-ignition	Heavy Duty Vehicles	4.0	1.10	7.0	0.15

5.2 Starting January 01, 2016, all new passenger and light duty motor vehicle types to be introduced in the market shall comply with EURO 4 emission limits subject to EURO IV fuel availability.

Sec. 6. Determination of the Exhaust Emissions. In determining compliance with the above emission standards, the following test procedures shall be followed:

- For light-duty vehicles, the emission test procedures specified in European Union Directive 70/220/EEC as amended by Directives 94/12/EC and 96/69/EC;
- For heavy-duty engines, the 13-mode test procedure specified in European Community Directive 88/77/EEC as amended by Directives 91/542/EEC.



However, while the DOTC/LTO is developing inspection capability of the motor vehicle type approval system test, the previous emission test results of pre-production engine vehicle type duly certified by the manufacturer of subject motor vehicle shall be valid and sufficient.

Sec. 7. Issuance of Certificate of Conformity (COC). A Certificate of Conformity (COC) certifying that a motor vehicle type complies with the emission standards shall be issued by the DENR through EMB.

The application for a COC shall be submitted to the EMB by the motor vehicle manufacturer, assembler, importer or their duly authorized representatives. It shall be accompanied by the following particulars in triplicate:

- a. Complete and detailed description of motor vehicle and the engine;
- b. Description of the emission control system installed in the motor vehicle;
- c. Details of the fuel feed system;
- d. Vehicle Type Approval System test result by DOTC/LTO (while the DOTC/LTO is developing inspection capability of the motor vehicle type approval system test, the previous emission test results of pre-production engine vehicle type duly certified by the manufacturer of subject motor vehicle shall be valid and sufficient; and
- e. Other particulars which may be required by the Department.

Sec. 8. Validity of COC. For purposes of vehicle registration, the COC issued as a compliance with the above-mentioned emission limits shall be valid for six (6) years from the date of issue unless otherwise revoked or suspended. In case of suspension, the 6-year validity period shall not be extended by the period of suspension.

Sec. 9. Emission Standards for In-Use Motor Vehicles. All in-use motor vehicles registered for the first time on dates indicated below shall comply with the following emission standards:

Table 3
Emission Standards for Vehicles with Spark-Ignition Engines (Gasoline)*, **
Except motorcycles

Vehicle Registration	CO (% by Volume)	HC (ppm as Hexane)
Registered for the first time after December 31, 2007	0.5	250
Registered for the first time on or after January 1, 2003 but before January 1, 2008	3.5	600
Registered for the first time prior to December 31, 2002	4.5	800

*at idle

** Subject to Sec.8, Validity of COC

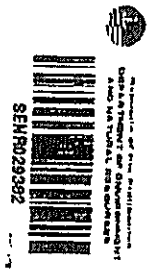
Table 4
Emission Standards for Vehicles with Compression-Ignition Engines (Diesel)*, **
(Light absorption coefficient, m-1), k

Vehicle Registration	Light absorption coefficient, m-1, k
Registered for the first time after December 31, 2007	2.0
Registered for the first time on or after January 1, 2003 but before January 1, 2008	2.5
Registered for the first time on or before December 31, 2002	2.5 3.5 (turbocharged) 4.5 (1,000m increase in elevation)

using th

eleration test

** Subject to Sec.8, Validity of COC



Sec. 10. Emission Standards for Rebuilt and Imported Used Vehicles. All rebuilt vehicles, imported used vehicles or pre-registered vehicles retrofitted with used engines shall comply with the following emission standards:

Table 5
Emission Standards for Rebuilt and Imported Used Vehicles*

Vehicle Registration	CO ^a (% by Volume)	HC ^a (ppm as Hexane)	Light absorption coefficient, m-1, k (turbo charged) ^b
Registered for the first time after December 31, 2007	0.5	250	2.0

a – for spark-ignition (gasoline) motor vehicles

b – for compression-ignition (diesel) motor vehicles

* – applicable only to vehicles listed in Sec 3.1.1 – 3.1.5 of Executive Order 156

All rebuilt vehicles, imported used vehicles or pre-registered vehicles retrofitted with used engines as defined herein shall only be allowed registration or renewal of registration upon submission of a valid Certificate of Compliance to Emission Standard (CCES) issued by DOTC-LTO.

As a requirement for the issuance of a CCES by DOTC for imported second hand vehicles, a Certificate of Emission Compliance from the country of origin shall be valid and sufficient. The DOTC may however, seek verification through actual testing at the Motor Vehicle Inspection Station (MVIS).

In the case of rebuilt vehicles, a CCES issued by the DOTC-LTO on the basis of an inspection by the DOTC Vehicle Type Approval System if available, or initially by LTO MVIS, is required.

Sec. 11. Test Procedures for Measurement of Exhaust Emissions of In-Use Motor Vehicles. The emission test procedures for registered in-use motor vehicles equipped with compression-ignition and spark ignition engines as prescribed in Annexes A and B of this Order shall be used in determination of the k value, CO and HC respectively.

Sec. 12. Repealing Clause. All Orders, Circulars and Instructions inconsistent herewith are hereby repealed or amended accordingly.

Sec. 13. Effectivity. This Order shall take effect fifteen (15) days after its publication in a newspaper of general circulation and acknowledgement by the Office of the National Administrative Registry (ONAR).


RAMON J.P. PAJE
Acting Secretary



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF ENVIRONMENT
AND NATURAL RESOURCES



SENRO29382

Publication: The Philippine Star
September 14, 2010

Acknowledgement: ONAR, U.P. Law Center
Sept. 14, 2010

ANNEX "B"
**EMISSION TEST PROCEDURE FOR REGISTERED OR IN-USE MOTOR VEHICLES EQUIPPED
 WITH SPARK-IGNITION ENGINES**

1. Scope

The test procedure is for the determination of the concentration of exhaust carbon monoxide (CO) and hydrocarbon (HC) emissions from in-use motor vehicles equipped with spark-ignition engines running at idle speed.

2. Test Equipment (Reference: ISO - 3930)

- a. Carbon monoxide analyzer - a NDIR (Non-dispersive Infrared) CO exhaust gas analyzer.
- b. Hydrocarbon analyzer - a NDIR HC exhaust gas analyzer, HC as hexane (C₆H₁₄).
- c. Tachometer - An easily installed and operated tachometer to measure engine speed (RPM).

3. Vehicle Preparation

- d. Set the vehicle transmission at neutral with the hand-brake engaged.
- e. Ensure that the idling speed or the engine rpm with the accelerator in the rest position, conforms with the vehicle manufacturer's recommendation.
- f. All accessories like rear window heating, air conditioning system, air fan and other equipment necessary for the vehicle operation at idle should be switched-off.
- g. Check that the temperature of the engine is at least 70°C; otherwise, run the vehicle for at least 15 minutes on a normal road before testing.
- h. Ensure that the vehicle exhaust system is reasonably leakproof and will allow the insertion of the sampling probe by at least 30 cm. from the tailpipe outlet. If this is not possible due to tailpipe configuration, use the appropriate correction factor.

4. Measurement

- a. Immediately preceding the measurement, adjust the instrument to zero and accelerate the engine to about 2,500 rpm, using the tachometer, if available. Maintain this speed from ten (10) to fifteen (15) seconds, then release the pedal to return the engine at idle speed.
- b. While the engine idles, insert the sampling probe into the exhaust pipe as deeply as possible which shall not be less than thirty (30) cm. Wait for twenty (20) seconds and take the CO/HC reading.
- c. If the vehicle has multiple exhaust outlets the arithmetic average of the CO/HC readings in each exhaust outlet is taken as the final result.

5. Instrument Calibration, Adjustments (Reference: ISO 3929)

- (a) Prepare, use and maintain the analyzer following the directions given in the instrument manufacturer's operation manual and service the instrument at such intervals as to ensure accuracy.
- (b) Carry out a span and zero calibration within a period of four (4) hours before the instrument is moved or transferred to a new location. The calibration shall be performed well away from the exhaust of motor vehicles whose engines are running.

If the instrument is not self-compensated for non-standard conditions of altitude and ambient temperature or not equipped with a manually controlled system of compensation, the scale calibration shall be performed using calibration gas.

(c) If the sample handling system is not integral with the analyzer, make certain that the effectiveness of the gas sampling system are leakproof. Check that filters are clean, that filter holders are fitted with their gaskets and that these are all in good condition.

- (d) Ensure that the sample handling line and probe are free from contaminants.

ANNEX "C"
FREE ACCELERATION TEST FOR IN-USE COMPRESSION-IGNITION MOTOR VEHICLES

1. Scope

The test is a smoke opacity measurement for in-use motor vehicles equipped with compression-ignition (diesel) engines, using the free acceleration from low idle speed method.

2. Motor Vehicle Test Condition

a. The test shall be carried out on a stationary vehicle and the engine shall be first brought to normal operating conditions during a road run or dynamic test. In particular, cooling water and oil should be at normal temperature.

b. The combustion chamber should not have been cooled or fouled due to a prolonged period of idling preceding the test.

c. The exhaust system shall not have any orifice or leaks wherein the gases emitted by the engine might be diluted.

3. Test Equipment

The light-absorption coefficient of the exhaust gases shall be measured with an opacimeter satisfying the conditions laid down in ECE Regulation No. 24, Revision 2E/ECE/TRANS 505, Rev Add 23 Rev 2, Annex 8: Characteristics of Opacimeter.

4. Test Procedures and Smoke Opacity Measurement

a. Follow the opacimeter manufacturer's instruction for on the proper installation, operation/use and checking the accuracy and calibration before and after each test.

b. Set the vehicle gear-change control in the neutral position and the hand-brake effectively engaged.

c. Start the engine and warm it up to its normal operating temperature.

d. Accelerate the engine two to three times (2-3) prior to smoke sampling in order to remove deposits of soot and other carbon particles in the tail pipe.

e. With the engine idling, depress the accelerator quickly, but not violently, to obtain maximum delivery from the injection pump. Maintain this position until maximum engine speed is reached for about two (2) to four (4) seconds and the governor comes into action. As soon as this speed is reached, release the accelerator until the engine resumes its idling speed. Record the maximum reading of the smoke meter.

f. The operation described in paragraph (4)(e) shall be repeated not less than six (6) times in order to clear the exhaust system and to allow for any necessary adjustment of the apparatus. The maximum opacity values read in each successive acceleration shall be noted until stabilized values are obtained. The values read shall be regarded as stabilized when four (4) consecutive readings are within a band width of 0.25 m⁻¹ and do not form a decreasing sequence. The arithmetic mean of the four stabilized values shall be the test result for the concerned vehicle.

g. For motor vehicles designed with several exhaust outlets that are individually connected from paired exhaust ports, the free acceleration test shall be carried out on each outlet. In this case, the values used for calculating the correction to the absorption coefficient shall be arithmetical mean values recorded at each outlet and the test shall be valid only if the extreme values measured do not differ by more than 0.15m⁻¹. For motor vehicles designed with several exhaust outlets connected from one exhaust pipe coming from the engine's exhaust manifold collector, the free acceleration test shall be carried out only on one exhaust outlet, the other outlets effectively blocked to prevent leaks.

h. Seal the full load screw of the injection pump/delivery system of the motor vehicle after a pass-test to prevent tampering.



SEP 27 2010

DENR ADMINISTRATIVE ORDER
 NO. 2010-²⁴_____

Subject: Revised Emission Limits/Standards for Motorcycles/Tricycles and Mopeds

Pursuant to Section 25 of the Republic Act 8749 otherwise known as the "Philippine Clean Air Act (PCAA) of 1999", Part IX, Rule XXXIII, Section 1 of the DENR Administrative Order (DAO) No. 2000-81 also known as the "Implementing Rules and Regulations of the PCAA", and DAO 2003-25 the following the revised emission limits/standards for motorcycles/tricycles and mopeds are hereby promulgated.

Section 1. Basic Policy

1. It is the policy of the State to protect and advance the right of people to a balanced and healthful ecology in accord with the rhythm and harmony of nature;
2. It is also the policy of the State to attain and maintain a balance between development and environmental protection; and
3. It is the policy of the State to maintain a quality of air that protects human health and welfare.

Sec. 2. Scope and Coverage. These emission limits and standards shall apply to all new and in-use motorcycles/tricycles and mopeds for purposes of registration.

Sec. 3. Objectives.

- 1) To revise the exhaust emission standards and to update the emission limits for in-use and new motorcycles/tricycles and mopeds, respectively, to achieve substantial improvement in air quality for the health, safety and welfare of the general public; and
- 2) To give a lead time to manufacturers of new motorcycles/tricycles and mopeds for purposes of planning/design.

Sec. 4. Definition of Terms. The following terms as used in this Order shall be defined as follows:

- 1) Certificate of Conformity - the Certificate issued by the DENR to a vehicle manufacturer/assembler or importer certifying that a particular new vehicle or vehicle type meets the requirements provided under RA 8749 and its Implementing Rules and Regulations (IRR);
- 2) Conformity of Production -the verification of the production units' conformity with the requirements of the PCAA and its IRR.
- 3) Emission -any measurable air contaminant, pollutant, gas STREAM, or unwanted sound from known source which passed into the atmosphere;
- 4) In-use motorcycle/tricycle/moped -any two- or three-wheeled motor vehicle duly registered with the Land Transportation Office (LTO);
- 5) Moped (L1) -a two-wheeled vehicle with an engine cylinder capacity in the case of a thermic engine not exceeding 50 cubic centimeter and whatever the means of propulsion a maximum design speed not exceeding 50 km/h.;



- 6) Motorcycle (L3) –a two-wheeled vehicle with an engine cylinder capacity in the case of a thermic engine exceeding 50 cubic centimeter or whatever the means of propulsion a maximum design speed exceeding 50 km/h.;
- 7) Motorcycle (L4) –a vehicle with three wheels asymmetrically arranged in relation to the longitudinal media plane with an engine cylinder capacity in the case of a thermic engine exceeding 50 cubic centimeter or whatever the means of propulsion a maximum design speed exceeding 50 km/h. (motorcycles with side cars or tricycles);
- 8) Motor Vehicle –any vehicle propelled by a gasoline or diesel engine or by any other than human or animal power, constructed and operated principally for the conveyance of persons or the transportation of property or goods in a public highway or street open to public use;
- 9) New motorcycle/moped –any motor vehicle constructed entirely from new parts that has never been sold or registered with the LTO or with appropriate agency or authority, and operated on the highways of the Philippines, any foreign state or country;
- 10) Type Approval –the official ratification of the compliance of a vehicle type with applicable national or international regulations;
- 11) Vehicle Type –a category of power-driven vehicles which do not differ in such essentials as reference mass or weight, engine type, number of cylinders, body configuration, manner of transmission, fuel used and similar characteristics.

Sec. 5. Emission Limits for Type Approval of New Motorcycle and Moped

As a condition to issuance of the Certificate of Conformity (COC), all new motorcycle and moped types to be introduced in the market two (2) years after the approval of this Order shall comply with Tables 1, 1A, 2 and 3. [Ref: European Economic Community (EEC) Directive 97/24/EC(European Community)]

Table 1
Emission Limits for Motorcycle (L3)
Level 1 with effectivity two (2) years after the approval date of this Administrative Order

Class (cc)	Emission Limits (g/km) for Type Approval and Conformity of Production		
	Carbon Monoxide (CO)	Hydrocarbons (HC)	Oxides of Nitrogen (NOx)
<150	5.5	1.2	0.3
> 150	5.5	1.0	0.3

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Table 1A
Emission Limits for Motorcycle/Tricycle (L4)

Class	Emission Limits (g/km) for Type Approval and Conformity of Production		
	Carbon Monoxide (CO)	Hydrocarbons (HC)	Oxides of Nitrogen (NOx)
All	7.0	1.5	0.4

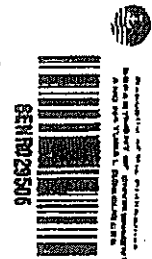


Table 2
Emission Limits for Motorcycle (L3)
Level 2 with effectivity three years after effectivity of Level 1

Class (cc)	Emission Limits (g/km)		
	Carbon Monoxide (CO)	Hydrocarbons (HC)	Oxides of Nitrogen (NOx)
<150 (UDC cold)[1]	2.0	0.8	0.15
> 150 (UDC + EUD cold) [2]	2.0	0.3	0.15

[1] Test cycle: ECE* R40 (emission measured for all six modes – sampling starts at T=0)

[2] Test cycle: ECE* R40 + EUDC** (emissions measured from all modes – sampling starts at T=0, with the maximum speed of 120 km/h)

*Economic Commission for Europe

**Extra Urban Driving Cycle

Table 3
Emission Limits for Moped (L1)

Effectivity	Emission Limits (g/km) for Type Approval and Conformity of Production	
	Carbon Monoxide (CO)	Hydrocarbons + Oxides of Nitrogen (HC + NOx)
Level 1 – Two (2) years after the approval of this DAO	6 (1)	3 (1)
Level 2 – Three (3) years after the implementation of Level 1	1 (2)	1.2

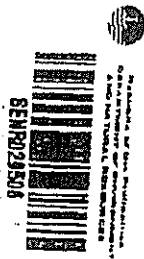
(1) The limit values for the masses of CO and HC+NOx are multiplied by a factor of 2 in the case of three-wheel mopeds;

(2) The limit for the mass of CO must be 3.5 g/km in case of three-wheel mopeds

The compliance of the above emission limits shall be determined using the test procedures laid down in European Community Directive ECE 40 as evidenced by a COC issued by the DENR.

Sec. 6. Issuance of Certificate of Conformity (COC). The application for a COC shall be submitted to the Environmental Management Bureau (EMB) by the motor vehicle manufacturer, assembler, importer or their duly authorized representatives. It shall be accompanied by the following particulars in triplicate:

- a. Complete and detailed description of motor vehicle and the engine;
- b. Description of the emission control system installed in the motor vehicle;
- c. Details of the fuel feed system;
- d. Vehicle Type Approval System test result by DOTC/LTO (while the DOTC/LTO is developing inspection capability of the motor vehicle type approval system test, the previous emission test results of pre-production engine vehicle type duly certified by the manufacturer of subject motorcycle/tricycle and moped shall be valid and sufficient; and
- e. Other particulars which may be required by DENR.



Sec. 7. Validity of COC. For purposes of vehicle registration, the COC issued as a compliance with the above-mentioned emission limits shall be valid for six (6) years from the date of issue unless sooner revoked or suspended. In case of suspension, the 6-year validity period shall not be extended by the period of suspension. However, for those COCs issued under ECE Regulation 40.01 type approval standards shall be valid until December 31, 2013.

Sec. 8. Emission Standards for In-Use Motorcycle/Tricycle and Moped. All in-use motorcycles/tricycles and mopeds registered on the dates indicated below shall comply with the following emission standards:

**Table 5
Emission Standards for In-Use Motorcycle/Tricycle and Moped**

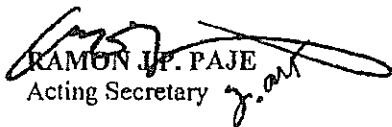
Vehicle Registration Date	Emission Standards		
	Carbon Monoxide (% by vol.)	Hydrocarbon (ppm)	White smoke (% opacity)
Registered for the first time prior to January 1, 2003	6.0	6,500	30
Registered for the first time from January 1, 2003 up to December 31, 2011	4.5	6,500	30
Registered for the first time on or after January 1, 2012	3.5	4,500	30

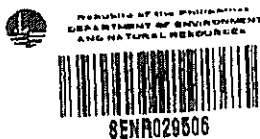
Sec. 9. Test Procedures for Measurement of Exhaust Emissions for In-use Motorcycle/Tricycle and Moped

Parameter	Reference
Hydrocarbon and Carbon Monoxide	At idle per Annex ^B C of DENR Administrative Order 2000-81
White smoke	Opacity at ¾ maximum RPM or based on manufacturer's manual. Test procedure based on free acceleration.

Sec. 10. Separability Clause. This Order supersedes DENR Adm. Or. No. 2003-25. All other orders, circulars and instructions inconsistent herewith are hereby repealed or amended accordingly.

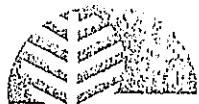
Sec. 11. Effectivity. This Order shall take effect fifteen (15) days from its publication in a newspaper of general circulation and submission to the Office of the National Administrative Registry (ONAR).


RAMON J. PAJE
 Acting Secretary



Publication: The Philippine Star
 October 1, 2010

Acknowledgement: ONAR, UP Law Center
 October 5, 2010



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30 March 2011

MR. ROLANDO F. CRUZ

Chairman, Technical Committee

Motorcycle Development Program Participants Ass'n, Inc.

Suite 302 Jollibee Center Condominium

San Miguel Ave., Ortigas Center

Pasig City

Dear **Mr. Cruz**:

This is in reference to your letter dated 28 March 2011 requesting for revision on DAO 2010-24 "Revised Emission Limits/Standards for Motocycles/Tricycles and Mopeds". Please be informed that we agree on your proposal to put an asterisk (*) after the phrase "Registered for the first time on or after 01 January 2012" to clarify that the 3.5% CO emission limit for in-use MC/TC is applicable only for motorcycle models certified under Level 1 and Level 2 (Tables 1 and 2, respectively) and for models certified under ECE R40-01, the CO limit is 4.5%. Relative to your proposed second revision, we regret to inform you that meantime that harmonized regulation is still under discussion within the region, Tables 1 and 2 remain unchanged.

Thank you very much for your support in this undertaking.

Very truly yours,



ATTY. JUAN MIGUEL T. CUNA

OIC-Director



paid by
4/28/11