



JUL 31 2007

ADMINISTRATIVE ORDER
NO. 2007 - 27

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

Section 1. Legal Basis

Pursuant to Section 21 of the Republic Act No. 8749, Philippine Clean Air Act of 1999, and Rule XXXIII, Section I and Section 3, Part VIII of DAO 2000-81, the DENR hereby promulgates the following exhaust emission standards for new, in-use, rebuilt and imported second hand motor vehicles.

Section 2. Purpose and Scope

The purpose of this Administrative Order is to 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 vehicles through a Certificate of Conformity (COC) issued by the Environmental Management Bureau (EMB) and a Certificate of Compliance to Emission Standard (CCES) issued by the DOTC for imported used/second-hand vehicles.

Section 3. Definition of Terms

Certificate of Conformity - refers to the Certificate issued by the Department 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;

Compression Ignition Engine - means an internal combustion engine in which atomized fuel temperature is raised through compression, resulting in ignition, e.g. diesel engines;

Emissions - means any measurable air contaminant, pollutant, gas stream or unwanted sound from a known source which is passed into the atmosphere;

European Emission Standards - are sets 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.

EURO I - refers to the sets 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.

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EURO 2 – refers to the set of requirements defining the acceptable limits for exhaust emissions of new vehicles as provided in EC96 and Directives 94/12/EC or 96/69/EC.

Imported Used/Second-Hand Vehicle - means any imported used or second-hand motor vehicle allowed by law .

In-Use Vehicle - means any motor vehicle duly registered with the LTO;

Light Duty Vehicles - are motor vehicles whose gross vehicle weight is equal to or less than 3,500 kgs, in accordance with the definition contained in Philippine National Standards (PNS) 1891. This also refers to "Light Commercial Vehicles";

Medium/Heavy Duty Vehicles - refers to motor vehicles whose gross vehicle weight is greater than 3,500 kgs, in accordance with the definition contained in PNS 1891;

Motor Vehicle - means 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 persons or the transportation of goods;

Motor Vehicle Registration - refers to 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 Act, including the pre-evaluation of the documents/requirements pursuant to Section 5 of Republic Act No. 4136, as amended, otherwise known as the Land Transportation Code;

New Motor Vehicle - means 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;

Passenger Car - refers to a four-wheeled motor vehicle used for the carriage of not more than six passengers including the driver and having a gross vehicle mass not exceeding 2,500 kgs in accordance with the definition contained in PNS 1891;

Rebuilt Vehicles - refers to locally assembled vehicles using new or used engine, major parts or components;

Spark Ignition Engine - means an internal combustion engine in which the air/fuel mixture is ignited by a spark plug, e.g., a gasoline engine;

Type Approval - refers to the official ratification of the compliance of a vehicle type with applicable national or international regulations;

Vehicle Type - means 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.

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Section 4. Emission Limits for Type Approval of New Motor Vehicles

As a condition to issuance of the Certificate of Conformity (COC), all new motor vehicle types to be introduced in the market beginning January 01, 2008 shall comply with the EURO 2 Emission Limits as indicated under Table 1; Provided, however, that the Department can issue a COC under Euro 2 for the compliant new motor vehicle type to be introduced in the market upon effectivity of this Order.

Table 1
Type Approval Emission Limits for Passenger/Light Commercial Vehicles
(Directive 96/69/EC)

Type of Engine	Class of vehicle	CO (g/km)	HC + NOx (g/km)	PM (g/km)	
Spark-ignition	Category M1 (Light Passenger Vehicles) (≤ 2,500 kg)	2.2	0.50	-	
Spark-ignition	Category N1 (Light Commercial Vehicles) Class 1 (< 1,305 kg)	2.2	0.50	-	
	Category N1 (Light Commercial Vehicles) Class II(1305-1760 kg)	4.0	0.65	-	
	Category N1 (Light Commercial Vehicles) Class III (> 1760 kg)	5.0	0.80	-	
Compression-ignition	Category M1 (Light Passenger Vehicles) (≤ 2,500 kg) Euro 2, IDI Euro 2, DI	1.0 1.0	0.70 0.90	0.08 0.10	
	Category N1 (Light Commercial Vehicles) Class 1 (≤ 1,305 kg) Euro 2, IDI Euro 2, DI	1.0 1.0	0.70 0.90	0.08 0.10	
	Category N1 (Light Commercial Vehicles) Class II (1,305 – 1,760 kg) Euro 2, IDI Euro 2, DI	1.25 1.25	1.0 1.30	0.12 0.14	
	Category N1 (Light Commercial Vehicles) Class III (> 1760) Euro 2, IDI Euro 2, DI	1.5 1.5	1.20 1.60	0.17 0.20	

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Table 2

**Emission Limits for Heavy Duty Vehicle Type Approval
(Directive 88/77/EEC)**

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 (less than 700 cc per cylinder and with a rated power speed greater than 3000 RPM may comply with a limit of 0.25 g/kWh

Section 5. Test Procedure to Determine Exhaust Emissions

The primary test procedures for determining compliance with the above emission standards shall be:

- a) For light-duty vehicles, the emission test procedures specified in European - Union Directive 96/69/EC and;
- b) For heavy-duty engines, the 13-mode test procedure specified in European Community Directive 88/77/EEC.

Section 6. 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 on or before December 31, 2002	4.5	800

*at idle

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 increased in elevation)

* using the free acceleration test

Section 7. Emission Standards for Rebuilt and Imported Used Vehicles*

No rebuilt or second hand-completely built-up (CBU) imported into the country or pre-registered vehicles retrofitted with second hand engines shall be allowed registration or renewal of registration without valid Certificate of Compliance to Emission Standard (CCES) issued by the DOTC.

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

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

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

^b Figure in brackets relate to turbocharged vehicles**Section 8. 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 B and C of DAO 2000-81 shall be used in the determination of k value, CO and HC respectively.

Section 9. Validity of Certificate of Conformity (COC)

For purposes of vehicle registration, all COCs issued under EURO I type approval shall be valid until December 31, 2009; *fyu*

Section 10. Separability Clause

All Orders, Circulars and Instructions inconsistent herewith are hereby repealed or amended accordingly.

Section 11. Effectivity

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



ANGELO T. REYES
Secretary



Republic of the Philippines
DEPARTMENT OF ENVIRONMENT
AND NATURAL RESOURCES

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