



GUIDELINES

APPLICATION FOR MOTORCYCLES EXHAUST EMISSION AND NOISE EMISSION TYPE APPROVAL

JULY 2016

DEPARTMENT OF ENVIRONMENT MALAYSIA

All motorcycles seeking first registration in Malaysia will have to comply with the requirements of the exhaust emission and noise emission standards;

GASEOUS POLLUTANT EMISSION LIMITS FOR NEW MODEL OF MOTORCYCLE

(ON OR AFTER 1st JANUARY 2016)

The emission of Carbon Monoxide (CO), Hydrocarbon (HC) and Nitrogen Oxides (NOx) shall not exceed the following emission limits as measured by:

- A) The European Economic Committee (“EEC”) Council Directive 97/24/EC Chapter 5 ANNEX II sec. 2.2.1.1.5. amendments 2006/72/EC of 18 August 2006:

Category	Class	CO (g/km)	HC (g/km)	NOx (g/km)
Two Wheel	<150 cm ³	2.0	0.8	0.15
	≥ 150 cm ³	2.0	0.3	0.15
Three Wheel	All	7.0	1.5	0.4

; or

- B) World motorcycle emission test cycle “WMTC” under the European Economic Committee (“EEC”) Council Directive 2006/72/EC of 18 August 2006:

Category	Class	CO (g/km)	HC (g/km)	NOx (g/km)
Two Wheel	($V_{max} < 130 \text{ km/h}$)	2.62	0.75	0.17
	($V_{max} \geq 130 \text{ km/h}$)	2.62	0.33	0.22

(ON OR AFTER 1st JANUARY 2020)

The emission of Carbon Monoxide (CO), Hydrocarbon (HC) and Nitrogen Oxides (NOx) shall not exceed the following limits as measured under the Worldwide Harmonized Motorcycle Test Cycle (WMTC) following the United Nations Economic Commission for Europe (UNECE) Global Technical Regulation 2 (GTR-2):

Category	Class	CO (g/km)	HC (g/km)	NOx (g/km)
Two or Three Wheels	($V_{max} < 130 \text{ km/h}$)	1.14	0.38	0.07
	($V_{max} \geq 130 \text{ km/h}$)	1.14	0.17	0.09

NOISE EMISSION LIMITS FOR NEW MODEL OF MOTORCYCLES WITH TWO-WHEELED**(ON OR AFTER 1st JANUARY 2016)**

Category	Maximum Sound Level dB (A)
cc ≤ 80	75
80 < cc ≤ 175	77
cc > 175	80

(ON OR AFTER 1st JANUARY 2020)

Category	Maximum Sound Level dB (A)	
	L _{urban}	L _{wot}
PMR ≤ 25	73	-
25 < PMR ≤ 50	74	79
PMR > 50	77	82

Note:

- i. PMR = Power-to-mass ratio index;
- ii. L_{wot} = Sound pressure level with a full throttle acceleration test;
- iii. L_{urban} = Sound pressure level with a weighted combination of constant speed test and a full throttle acceleration test;

NOISE EMISSION LIMITS FOR NEW MODEL OF MOTORCYCLES WITH THREE-WHEELED**(ON OR AFTER 1st JANUARY 2016)**

Engine Capacity	Maximum Sound Level dB (A)
Motorcycle with three-wheeled and engine capacity >50cc or > 50km/h	80



APPLICATION FOR MOTORCYCLE EXHAUST AND NOISE EMISSION TYPE APPROVAL
(Exhaust and noise emission type approval for pure electric motorcycles is not required)

1. Application form

The application form consists of **PART I**, **PART II** and **PART III**. **PART I** is the applicant's information, **PART II** is information about the motorcycle model and **PART III** is the Emission and Noise test results for which type approval is sought. Please note that both exhaust and noise emission type approval for pure electric motorcycles is not required. The applicant's should complete relevant items and provide all necessary information in supporting your application, including original emission and noise test report from technical service.

2. Authorized signature

The application form must have authorized signatures of the motorcycle manufacturer to certify that the information about the motorcycle model under application is correct and complete.

3. Checklist

The information in the checklist is essential for your application. The applicant's may provide other information to support your application.

4. Submission of Application

The completed application form together with all supporting documents can be submitted via online, by post or in person to:

Department of Environment Malaysia
Level 4, Podium 2 & 3
Wisma Sumber Asli
No. 25, Persiaran Perdana, Presint 4
62574 PUTRAJAYA
Tel : +603-8871 2000/ 8871 2200
Fax : +603-8888 4151



**APPLICATION FORM FOR MOTORCYCLE EXHAUST EMISSION AND NOISE EMISSION
TYPE APPROVAL**

**PART I
DETAILS OF APPLICANT**

1. Name of Applicant (an Individual or a Company) : _____

2. Address : _____

3. Contact Person :

i. Name : _____ ii. Position: _____

4. Telephone Number : _____ 5. Fax Number : _____

6. H/P Number : _____ 7. Email : _____

Declaration:

I hereby declare that the information given in this application form and the submitted documents is correct and true to the best of my knowledge and belief.

Signature of Applicant: _____ Application Date : _____

Company Stamp :

For Official Use Only

Ref. Number : _____

Application Form Verified by: _____

Position : _____

Date : _____

Stamp :

PART II

INFORMATION OF THE MOTORCYCLE MODEL FOR TYPE APPROVAL
(Details of the Motorcycle, Engine, Air-Intake, Exhaust and Emission Control Systems)

DESCRIPTION OF MOTORCYCLE

Make : _____ Model (Sales Designation): _____

Model Code: _____ Variant : _____ Version : _____

Number of wheels: Front : _____, Rear: _____ Number of Exhaust: Left: _____, Right: _____

Mass of motorcycle in running order : _____ kg, Max. speed: _____
 km/h,

Manufacturer's Address : _____

Manufacturer's Representative : _____

Tyre Specifications:-

Manufacturer: _____

Tyre Dimensions : Front : _____ Rear : _____

DESCRIPTION OF ENGINE

Make : _____

Model / Code: _____ Variant : _____ Version : _____

Rated Maximum Engine Power Output : _____ kW at _____ (rpm)

Displacement : _____ cc, Transmission : _____

Power-to-mass ratio index (PMR): _____ Fuel Type : _____, Euro: _____

Cycle : Four Stroke / Two Stroke / Others* (please specify) : _____

Manufacturer's address : _____

Manufacturer's Representative : _____

DESCRIPTION AND DRAWINGS OF THE AIR-INTAKE AND EXHAUST CONTROL SYSTEM**1. Air-Intake System**

Description and drawings or photos (showing in a plan view and a lateral view) of the air-intake system indicating the location of the intake silencer(s) and the air filter(s)

2. Exhaust Control System

Description and drawings or photos (showing in a plan view and a lateral view) of the exhaust system indicating the location of the muffler(s), the catalytic converter(s) and the oxygen sensor(s) and description of the :

- i) Device for Recycle Crankcase Gases
- ii) Exhaust Gas Recirculation
- iii) Air Injection
- iv) Other Anti-Pollution Devices
- v) Description and Diagram of Motorcycle with Overall Dimensions

Note : Attach separate sheet(s) showing a plan view, a front view and a lateral (side) view

3. Noise Label Marking

- i) According to UNR requirement (UNR 41.03/04)
- ii) Identify location of the label

Note:

* delete as appropriate

PART III

TEST RESULTS

Please provide third party (recognised Authority or Technical Service) emission & noise test report or Type Approval Certificates and necessary supporting information for verifying the emission & noise test results

EXHAUST EMISSION TEST RESULTS

1. Test report No. : _____

2. Name and Address of Test Laboratory: _____

4. Test / Witness by (recognised Authority or Technical Service): _____

Type I Test (Average Tailpipe Emissions in a Congested Urban Area)

	CO g/km	HCg/km	NOx g/km
Emitted Mass			
Limits			

Roadworthiness Test / Type II Test

	CO Value (% Vol.)	Engine Speed (min-1)	Engine Oil Temperature (°C)
Normal Idle Test			
High Idle Test			

Note : * Delete as appropriate

NOISE TEST RESULTS

The noise of the motorcycle submitted for approval shall be measured by the two methods
(motorcycle in motion and stationary)

1. Test report No. : _____
2. Name and Address of the Approved Test Track: _____

3. Test Track Approved by : (Name and Address of National or recognised Authority):

4. Test / Witness by (recognised Authority or Technical Service):

NOISE LEVELS OF MOVING MOTORCYCLE

- i) Ambient Noise : _____ dB(A)
- ii) Wind Speed : _____ m/s
- iii) Test result : _____ dB(A)

NOISE LEVEL OF STATIONARY MOTORCYCLE

- i) Ambient Noise : _____ dB(A)
- ii) Wind Speed : _____ m/s
- iii) Test result : _____ dB(A) at _____ min⁻¹

DECLARATION BY APPLICANT

I CERTIFY THAT

- (a) the Information of the Motorcycle Model for Type Approval is the correct description of the motorcycle or engine model under the application;
- (b) adequate arrangements and prepared documented quality control plans with certification to international standard such as EN ISO 9002, or EN ISO 9001 or an equivalent standard acceptable by the Department of Environment Malaysia has been set up to ensure all vehicles and engines produced and offered for Malaysia market comply with the exhaust emission and noise standards; and
- (c) at least 1% of Type II Emission & Stationary Noise (or % as agreed with the Department of Environment Malaysia) of the total production per year of the motorcycles or engines of the model for which emission type approval is sought, and destined for Malaysia will be sampled randomly for exhaust emission and noise test to confirm the motorcycle complies with the emission and noise requirements as stated in the VTA.

Authorised Homologation Staff (Signature) : _____

Name and Position : _____

Company Name: _____

Date : _____

Company Stamp :

CHECKLIST

Please tick the relevant boxes	
	One copies of PART I – Applicant’s information
	One copy of PART II – Information of the Motorcycle Model for Type Approval
	Description of motorcycle
	Description of engine
	Description and drawings of the air-intake and exhaust or emission and noise
	Photo or drawing of the location noise label marking (position at which it is to be fitted to the vehicle)
	One copy of PART III – Information of the Emission and Noise Test Result
	Emission and noise Test result summary
	One hard or soft copy (sent via online/email/post/by hand) of third party Test report (TR) for exhaust emission
	One hard or soft copy (sent via online/email/post/by hand) of third party Test report (TR) for noise emission
	Other supporting documents, please specify

**CARTA ALIR PERMOHONAN
KELULUSAN JENIS KENDERAAN/
VEHICLE TYPE APPROVAL (VTA)
JABATAN ALAM SEKITAR MALAYSIA**

