

ISO 6460-1:2007-08 (E)

Motorcycles - Measurement method for gaseous exhaust emissions and fuel consumption - Part 1: General test requirements

Contents		Page
Foreword		v
Introduction		vi
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Symbols	2
5	Standard reference conditions	4
6	Tests	5
6.1	Measurement of gaseous exhaust emissions	5
6.2	Measurement of fuel consumption	5
7	Measurement equipment	5
7.1	Chassis dynamometer	5
7.2	Gas-collection equipment	5
7.3	Analytical equipment	6
7.4	Cooling equipment	7
7.5	Fuel consumption measurement	7
7.6	Accuracy of instruments and measurements	8
8	Preparing the test	8
8.1	Engine fuel and lubricants	8
8.2	Description of the test motorcycle	8
8.3	Conditioning/preparation of the test motorcycle	8
8.4	Adjustment of the analytical apparatus	9
9	System check procedure	9
9.1	Accuracy of the CVS system	9
9.2	Metering a constant flow of pure gas (CO or C ₃ H ₈) using a critical flow orifice	9
9.3	Metering a limited quantity of pure gas (CO or C ₃ H ₈) by means of a gravimetric technique	9
10	Procedure for sampling, analysing and measuring the volume of gaseous exhaust emissions	10
10.1	Operations to be carried out before the motorcycle start up	10
10.2	Beginning of sampling and volume measurement	12
10.3	End of sampling and volume measurement	12
10.4	Analysis	12
10.5	Measuring the driving distance	12
10.6	Open type CVS system	13
11	Determination of the quantity of gaseous exhaust emissions	13
11.1	Total diluted exhaust mixture volume corrected to the standard reference conditions	13
11.2	Exhaust gas sampling and the dilution factor	14
11.3	Mass of the gaseous exhaust emissions	15
12	Determination of the fuel consumption	17

12.1	Carbon balance method	17
12.2	Fuel flow measurement method	17
12.3	Calculation of results in litres per 100 km	18
12.4	Criteria of the statistical accuracy for the fuel consumption measurements	18
Annex A	(normative) Method and equipment for measuring fuel consumption by the fuel flow measurement method	19
Annex B	(informative) Example for record form of test fuel specifications	29
Annex C	(informative) Exhaust gas leakage check procedure for the open type CVS system	30
Annex D	(informative) Determination of the dilution factor	35
Annex E	(informative) Principle of the carbon balance method	42
Annex F	(informative) Simplified determination method of the atom number ratio of hydrogen and carbon, and that of oxygen and carbon in gasoline and diesel fuel	45
Annex G	(normative) Fuel consumption for two-stroke engines	47
Annex H	(informative) Criteria of the statistical accuracy for the fuel consumption measurements ..	49
Bibliography	51