ICS 13.040.50; 43.140 SLOVENSKÁ TECHNICKÁ NORMA Január 2023

STN	**Motocykle** **Metóda merania emisií výfukových plynov a spotreby paliva** **Časť 1: Všeobecné požiadavky na skúšky**	**STN** **ISO 6460-1** 30 0511

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

Motocycles
Méthode de mesure des émissions de gaz d'échappement et de la consommation de carburant
Partie 1: Exigences générales d'essai

Táto slovenská technická norma obsahuje anglickú verziu medzinárodnej normy ISO 6460-1: 2022 a má postavenie oficiálnej verzie.

This Slovak standard includes the English version of the International standard ISO 6460-1: 2022 and has the status of the oficial version.

Nahradenie predchádzajúcich slovenských technických noriem

Táto slovenská technická norma spolu s STN ISO 6460-2 z januára 2023 a STN ISO 6460-3 z januára 2023 nahrádza STN ISO 7860 zo septembra 2004 v celom rozsahu.

135928

Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2023
Slovenská technická norma a technická normalizačná informácia je chránená zákonom č. 60/2018 Z. z. o technickej normalizácii.

Anotácia

Tento dokument špecifikuje všeobecné skúšobné požiadavky na meranie emisií výfukových plynov z motocyklov a stanovenie spotreby paliva motocyklov ako sú definované v ISO 3833. Norma sa týka motocyklov vybavených zážihovým motorom (štvortaktný motor alebo motor s rotačným piestom).

Národný predhovor

Normatívne referenčné dokumenty

Nasledujúce dokumenty, celé alebo ich časti, sú v tomto dokumente normatívnymi odkazmi a sú nevyhnutné pri jeho používaní. Pri datovaných odkazoch sa použije len citované vydanie. Pri nedatovaných odkazoch sa použije najnovšie vydanie citovaného dokumentu (vrátane všetkých zmien).

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POZNÁMKA 2. – Aktuálne informácie o platných a zrušených STN a TNI možno získať na webovom sídle www.unms.sk.

ISO 6460-2: 2014 prijatá ako STN ISO 6460-2: 2023 Motocykle. Metóda merania emisií výfukových plynov a spotreby paliva. Časť 2: Skúšobné cykly a špecifické skúšobné podmienky (30 0511)

ISO 6460-3: 2007 prijatá ako STN ISO 6460-3: 2023 Motocykle. Metóda merania emisií výfukových plynov a spotreby paliva. Časť 3: Meranie spotreby paliva pri konštantnej rýchlosti (30 0511)

ISO 3833 dosiaľ neprijatá

ISO 11486: 2006 dosiaľ neprijatá

Vypracovanie slovenskej technickej normy

Spracovateľ: Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, Bratislava

Technická komisia: TK 33 Cestné vozidlá

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 32, *Road vehicles*, Subcommittee SC 38, *Motorcycles and mopeds*.

This second edition cancels and replaces the first edition (ISO 6460-1:2007), which has been technically revised. It also incorporates the Amendment ISO 6460-1:2007/Amd.1:2015.

The main changes are as follows:

— addition of a detailed description of a critical flow venturi (CFV) as a flow measurement principle to the CVS system;

— permission to use of the subsonic venturi (SSV) as a flow measurement principle to the CVS system;

— addition for the measurement of methane (CH_4) concentration, either a GC-FID (flame ionization detector with gas chromatograph) or an NMC-FID (flame ionization detector with non-methane cutter);

— addition of a calculation method for non-methane hydrocarbons (NMHC);

— permission to determine the ratio of hydrogen and carbon (R_{HC}) and the ratio of oxygen and carbon (R_{OC}) by the content analysis of fuel;

— addition of calculation methods for the mass of the gaseous exhaust emissions and the fuel consumption when using oxygenated fuels;

— deletion of descriptions related two-stroke engines and diesel fuel.

A list of all parts in the ISO 6460 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

For the measurement of motorcycle fuel consumption, the carbon balance method, where the fuel consumption is calculated from analysis of the carbon quantity in the exhaust emissions, is now widely used in addition to the conventional fuel flow measurement. Therefore, the measurement of exhaust emissions pollutants and fuel consumption are inseparably related to each other.

This document defines the fundamental elements such as the measurement accuracy, test motorcycle conditions and the details of the carbon balance method. The measurement of gaseous exhaust emissions and fuel consumption during test cycles can be conducted by means of this document and ISO 6460-2. Additionally with ISO 6460-3, these three documents provide details of those measurements at a constant speed.

The following revisions are mainly made in this document.

— The detailed description of a critical flow venturi (CFV), adopted by most of the manufacturers as well as a positive displacement pump (PDP), is added as a flow measurement principle to the CVS system. Also, the use of the subsonic venturi (SSV) is also permitted as a CVS flow measurement principle.

— For measurement of methane (CH_4) concentration in the diluted exhaust mixture, either a GC-FID (flame ionization detector with gas chromatograph) or an NMC-FID (flame ionization detector with non-methane cutter) shall be used as the analytical instrument. The formula for calculating non-methane hydrocarbons (NMHC) is also defined.

— Instead of obtaining the ratio of hydrogen and carbon (R_{HC}) and the ratio of oxygen and carbon (R_{OC}) from the exhaust emissions analysis, R_{HC} and R_{OC} shall be determined by the fuel analysis. In addition, when using the oxygenated fuels such as gasoline (E5) and gasoline (E10), the mass of the gaseous exhaust emissions and the fuel consumption also can be calculated.

— As there has been no need for newly development of two-stroke engines and compression ignition engines in recent years, the description regarding two-stroke engines and diesel fuel is to be deleted. If these are required, see ISO 6460-1:2007.

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INTERNATIONAL STANDARD **ISO 6460-1:2022(E)**

Motorcycles — Measurement method for gaseous exhaust emissions and fuel consumption —

Part 1: General test requirements

1 Scope

This document specifies the general test requirements for measurement of the gaseous exhaust emissions from motorcycles, and for determining the fuel consumption of motorcycles as defined in ISO 3833. It is applicable to motorcycles equipped with a spark ignition engine (four-stroke engine or rotary piston engine).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3833, *Road vehicles — Types — Terms and definitions*

ISO 6460-2:2014, *Motorcycles — Measurement method for gaseous exhaust emissions and fuel consumption — Part 2: Test cycles and specific test conditions*

ISO 6460-3:2007, *Motorcycles — Measurement method for gaseous exhaust emissions and fuel consumption — Part 3: Fuel consumption measurement at a constant speed*

ISO 11486:2006, *Motorcycles — Methods for setting running resistance on a chassis dynamometer*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN

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