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मानक

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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 15723 (2006): Road vehicles - Compressed natural gas (CNG) fuel system components - Current limiting devices [TED 26: Automotive vehicles on NCES]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक

सड़क वाहन — संपीड़ित प्राकृतिक गैस (सीएनजी)
ईंधन प्रणाली के घटक — करंट सीमित करने वाली युक्तियाँ

Indian Standard

**ROAD VEHICLES — COMPRESSED NATURAL GAS
(CNG) FUEL SYSTEM COMPONENTS — CURRENT
LIMITING DEVICES**

ICS 43.060.40

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Automotive Vehicles Running on Non-conventional Energy Sources Sectional Committee had been approved by the Transport Engineering Division Council.

In the formulation of this standard considerable assistance has been derived from the following standards issued by the Automotive Research Association of India:

AIS 024 (Amd 4 to version 3) — Safety and procedural requirements for type approval of CNG operated vehicles

AIS-028 (Version 3) — Code of practice for use of CNG fuel in internal combustion engine vehicles

This standard is one of the series of Indian Standards published on CNG onboard fuel system components. Other standards in this series are:

<i>IS No.</i>	<i>Title</i>
15710 : 2006	Road vehicles — Compressed natural gas (CNG) fuel system components — General requirements and definitions
15711 : 2006	Road vehicles — Compressed natural gas (CNG) fuel system components — Performance and general test methods
15712 : 2006	Road vehicles — Compressed natural gas (CNG) fuel system components — Automatic valve (solenoid valve)
15713 : 2006	Road vehicles — Compressed natural gas (CNG) fuel system components — Pressure regulator
15714 : 2006	Road vehicles — Compressed natural gas (CNG) fuel system components — Gas/air mixer
15715 : 2006	Road vehicles — Compressed natural gas (CNG) fuel system components — Conduit (ventilation hose)
15716 : 2006	Road vehicles — Compressed natural gas (CNG) fuel system components — CNG high pressure fuel line (rigid) with end connections [having pressure exceeding 2.15 MPa (21.5 bar)]
15717 : 2006	Road vehicles — Compressed natural gas (CNG) fuel system components — Petrol valve (automatic/manual)
15718 : 2006	Road vehicles — Compressed natural gas (CNG) fuel system components — CNG high pressure fuel line (flexible hose) with end connections [having service pressure exceeding 2.15 MPa (21.5 bar)]
15719 : 2006	Road vehicles — Compressed natural gas (CNG) fuel system components — Electrical wiring kit
15720 : 2006	Road vehicles — Compressed natural gas (CNG) fuel system components — Compartments/sub-compartments
15721 : 2006	Road vehicles — Compressed natural gas (CNG) — Fire retardant material for seat, upholstery, roof and side lining
15722 : 2006	Road vehicles — Compressed natural gas (CNG) fuel system components — CNG low pressure flexible fuel line with end connections [CNG fuel line having pressure not exceeding 2.15 MPa (21.5 bar)]

The composition of the Committee responsible for the formulation of this standard is given in Annex A.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

AMENDMENT NO. 1 JUNE 2012
TO
IS 15723 : 2006 ROAD VEHICLES — COMPRESSED
NATURAL GAS (CNG) FUEL SYSTEM COMPONENTS —
CURRENT LIMITING DEVICES

(First cover page and page 1) — Substitute the following for the existing title:

‘भारतीय मानक

सड़क वाहन — संपीडित प्राकृतिक गैस (सीएनजी) तथा द्रवित पेट्रोलियम
गैस (एलपीजी) ईंधन प्रणाली के घटक — करंट सीमित करने वाली युक्तियां

Indian Standard

ROAD VEHICLES — COMPRESSED NATURAL GAS (CNG) AND
LIQUEFIED PETROLEUM GAS (LPG) FUEL SYSTEM
COMPONENTS — CURRENT LIMITING DEVICES’

(Second cover page, Foreword) — Add the following at the end of second para:

‘AIS 025: Safety and procedural requirements for type approval of LPG operated vehicles

AIS 026: Code of practice for the use of LPG fuel in internal combustion engine to power 4 wheeled vehicles and heavy motor vehicles

AIS 027: Code of practice for the use of LPG fuel in internal combustion engine to power 2 and 3 wheeled vehicles’

(Page 1, clause 1.1) — Substitute ‘CNG/LPG’ for ‘CNG’

(Page 1, clause 1.1.1) — Substitute ‘CNG/LPG’ for ‘CNG’ and ‘compressed natural gas/liquefied petroleum gas’ for ‘compressed natural gas’.

Amend No. 1 IS 15723 : 2006

[Page 1, clause 1.1.2(d)] — Substitute ‘CNG/LPG’ for ‘CNG’.

(Page 1, clause 4.1) — Substitute ‘CNG/LPG’ for ‘CNG’.

(Page 1, clause 5.1) — Substitute the following for the existing:

‘5.1 Each current limiting device shall be legibly and indelibly marked with the following:

- a) Manufacturer’s name, initial or trade-mark; and
- b) Rated current.

[Page 2 clause 6(g)] — Substitute the following for the existing:

‘Drawings with relevant dimensions and materials.’

(TED 26)

Reprography Unit, BIS, New Delhi, India

Indian Standard

ROAD VEHICLES — COMPRESSED NATURAL GAS (CNG) FUEL SYSTEM COMPONENTS — CURRENT LIMITING DEVICES

1 SCOPE

1.1 This standard specifies definitions, test methods and requirements of current limiting devices (fuse), of CNG onboard fuel system component intended for use on motor vehicles defined in IS 14272 (Part 1), two wheelers and construction equipment vehicles (CEV).

1.1.1 This standard is applicable to CNG fuel system components intended to use on vehicles using compressed natural gas (mono-fuel or bi-fuel applications).

1.1.2 It is not applicable to the following:

- a) Liquefied natural gas (LNG) fuel system components located upstream of, and including, the vapourizer;
- b) Fuel containers;
- c) Stationary gas engines; and
- d) CNG fuel systems components for the propulsion of marine craft.

2 REFERENCES

The following standards contain provisions, which through reference in this text, constitute provisions of this standard. At the time of publication the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

<i>IS No.</i>	<i>Title</i>
14272 (Part 1) : 1995	Automotive vehicles — Types — Terminology: Part 1 Three and four wheelers
15710 : 2006	Road vehicles — Compressed natural gas (CNG) fuel system components — General requirements and definitions

3 DEFINITIONS

For the purpose of this standard definitions given in IS 15710 shall apply.

4 TYPE TEST (TYPE APPROVAL)

4.1 The current limiting devices or fuses used in the

electrical systems of CNG operated vehicles shall comply with the following requirements:

4.1.1 Current limiting device (fuse) shall not blow within 60 min when 110 percent of rated current of the circuit is supplied.

4.1.2 Current limiting device (fuse) shall blow within 60 s when 135 percent of the rated current is supplied.

5 MARKING

5.1 Current limiting device or fuse shall be permanently marked with the following markings:

- a) Manufacturers name, initial or trade-mark,
- b) Rated current, and
- c) Rated voltage.

5.1.1 Each package containing current limiting device shall be marked with:

- a) Manufacturer's name, initial or trade-mark,
- b) Rated current and voltage,
- c) Batch No. or date of manufacturing,
- d) IS No. of this standard, and
- e) Part No. or unique identification mark.

5.2 BIS Certification Marking

Each current limiting device or fuse may also be marked with the Standard Mark.

5.2.1 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

6 TECHNICAL INFORMATION TO BE SUBMITTED BY THE COMPONENT MANUFACTURER

Technical information to be submitted by the component manufacturer for component type approval/type test shall contain at least following information:

- a) Name of the manufacturer;
- b) Manufacturing plant address;

- c) Part number;
- d) Type of the current limiting device (for example, blade type or glass tube type etc.);
- e) Rated voltage of the current limiting device;
- f) Rated current of the current limiting device; and
- g) *Drawings*: Detailed dimensional drawing in

A4 size in duplicate containing information like drawing number, Rev. No., Part No., details of the marking with proper authentication.

7 NUMBER OF SAMPLES FOR TESTING

Minimum 4 numbers of current limiting devices (fuse) shall be submitted to the test agency for testing.

ANNEX A

(Foreword)

COMMITTEE COMPOSITION

Automotive Vehicles Running on Non-conventional Energy Sources Sectional Committee, TED 26

<i>Organization</i>	<i>Representative(s)</i>
In personal capacity (D-35, Hauz Khas, New Delhi 110016)	SHRI B. BHANOT (<i>Chairman</i>)
Automotive Research Association of India, Pune	SHRI M. K. CHOUDHARI SHRI A. B. KOMAWAR (<i>Alternate</i>)
Ashok Leyland Ltd, Chennai	SHRI NIRMAL KUMAR SHRI G. VISWANATHAN (<i>Alternate</i>)
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Bharat Heavy Electricals Ltd, Bangalore	SHRI J. B. D'SOUZA SHRI P. S. CHOPRA (<i>Alternate</i>)
Bharat Petroleum Corporation Ltd, Mumbai	SHRI R. N. DAS SHRI N. DASGUPTA (<i>Alternate</i>)
Bombay Environmental Action Group, Mumbai	SHRI DEBI GOENKA
Central Institute of Road Transport, Pune	SHRI G. K. SHARMA SHRI D. P. SASTE (<i>Alternate</i>)
Central Pollution Control Board, Delhi	SHRI T. VENUGOPAL SHRI RAJESH DEBROY (<i>Alternate</i>)
Centre for Science and Environment, New Delhi	SHRIMATI ANUMITA ROY SHRI CHIRAG SHAH (<i>Alternate</i>)
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Gujarat Gas Company Limited, Surat	SHRI M. I. VAKHARWALA SHRI B. D. JOSHI (<i>Alternate</i>)
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Mahanagar Gas Ltd, Mumbai	SHRI R. S. PRABHU SHRI A. UDEY KIRAN (<i>Alternate</i>)

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Ministry of Non-conventional Energy Sources, New Delhi	DIRECTOR
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Rutu Auto Gas Pvt Ltd, Ahmedabad	SHRI RAJESH KOTHARI
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Vehicle Research & Development Establishment, Ahmednagar	SHRI K. KAMRAJ SHRI K. S. JAIN (<i>Alternate</i>)
In personal capacity (D-606, Vashi Plaza, Sector 17, Vashi, Navi Mumbai 400705)	SHRI ALOK CHANDRA GUPTA
BIS Directorate General	SHRI P. C. JOSHI, Scientist 'E' and Head (TED) [Representing Director General (<i>Ex-officio</i>)]

Member Secretary
SHRI P. S. MUJRAL
Scientist 'E' (TED), BIS

Bureau of Indian Standards

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Amendments Issued Since Publication

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BUREAU OF INDIAN STANDARDS

Headquarters :

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110 002
Telephones : 2323 01 31, 2323 33 75, 2323 94 02

Telegrams : Manaksanstha
(Common to all offices)

Regional Offices :

	Telephone
Central : Manak Bhavan, 9 Bahadur Shah Zafar Marg NEW DELHI 110 002	{ 2323 76 17 2323 38 41
Eastern : 1/14 C.I.T. Scheme VII M, V. I. P. Road, Kankurgachi KOLKATA 700 054	{ 2337 84 99, 2337 85 61 2337 86 26, 2337 91 20
Northern : SCO 335-336, Sector 34-A, CHANDIGARH 160 022	{ 260 38 43 260 92 85
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