

---

**Cestna vozila - Standardiziran dostop do informacij o popravilih in vzdrževanju avtomobilov (RMI) - 1. del: Splošne informacije in definicija primerov uporabe (ISO 18541-1:2014)**

Road vehicles - Standardized access to automotive repair and maintenance information (RMI) - Part 1: General information and use case definition (ISO 18541-1:2014)

Straßenfahrzeuge - Standardisierter Zugang zur Reparatur und Wartung - (RMI) - Teil 1: Allgemeine Informationen und Beschreibung der Anwendungsfälle (ISO 18541-1:2014)

Véhicules routiers - Standardisation des accès aux informations de réparation et de maintenance pour l'automobile (RMI) - Partie 1: Informations générales et définitions de cas d'utilisation (ISO 18541-1:2014)

**Ta slovenski standard je istoveten z: EN ISO 18541-1:2014**

---

**ICS:**

43.040.15	Avtomobilska informatika. Vgrajeni računalniški sistemi	Car informatics. On board computer systems
43.180	Diagnostična, vrževalna in preskusna oprema	Diagnostic, maintenance and test equipment

**SIST EN ISO 18541-1:2014****en**

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN ISO 18541-1:2014](#)

<https://standards.iteh.ai/catalog/standards/sist/d04d20c7-d305-4eb4-b6d2-0e0ff9cca1bb/sist-en-iso-18541-1-2014>

EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN ISO 18541-1**

September 2014

ICS 43.040.15; 43.180

English Version

**Road vehicles - Standardized access to automotive repair and maintenance information (RMI) - Part 1: General information and use case definition (ISO 18541-1:2014)**

Véhicules routiers - Normalisation de l'accès aux informations relatives à la réparation et à la maintenance pour l'automobile (RMI) - Partie 1: Informations générales et définitions de cas d'usage (ISO 18541-1:2014)

Straßenfahrzeuge - Standardisierter Zugang zur Reparatur und Wartung (RMI) - Teil 1: Allgemeine Informationen und Beschreibung der Anwendungsfälle (ISO 18541-1:2014)

This European Standard was approved by CEN on 13 March 2014.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

**Contents**

Page

Foreword.....3

**iTeh STANDARD PREVIEW  
(standards.iteh.ai)**

SIST EN ISO 18541-1:2014

<https://standards.iteh.ai/catalog/standards/sist/d04d20c7-d305-4eb4-b6d2-0e0ff9cca1bb/sist-en-iso-18541-1-2014>

## Foreword

This document (EN ISO 18541-1:2014) has been prepared by Technical Committee ISO/TC 22 “Road vehicles” in collaboration with Technical Committee CEN/TC 301 “Road vehicles” the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2015, and conflicting national standards shall be withdrawn at the latest by March 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

### Endorsement notice

The text of ISO 18541-1:2014 has been approved by CEN as EN ISO 18541-1:2014 without any modification.

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN ISO 18541-1:2014](https://standards.iteh.ai/catalog/standards/sist/d04d20c7-d305-4eb4-b6d2-0e0ff9cca1bb/sist-en-iso-18541-1-2014)

<https://standards.iteh.ai/catalog/standards/sist/d04d20c7-d305-4eb4-b6d2-0e0ff9cca1bb/sist-en-iso-18541-1-2014>

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN ISO 18541-1:2014](https://standards.iteh.ai/catalog/standards/sist/d04d20c7-d305-4eb4-b6d2-0e0ff9cca1bb/sist-en-iso-18541-1-2014)

<https://standards.iteh.ai/catalog/standards/sist/d04d20c7-d305-4eb4-b6d2-0e0ff9cca1bb/sist-en-iso-18541-1-2014>

INTERNATIONAL  
STANDARD

ISO  
18541-1

First edition  
2014-09-15

---

---

**Road vehicles — Standardized access  
to automotive repair and maintenance  
information (RMI) —**

**Part 1:  
General information and use case  
definition**

iTeh STANDARD PREVIEW

(standards.iteh.ai)  
*Véhicules routiers — Normalisation de l'accès aux informations  
relatives à la réparation et à la maintenance pour l'automobile  
(RMI) —*

SIST EN ISO 18541-1:2014

<https://standards.iteh.ai/catalog/standards/sist/007400c7-d505-4c04-b0d2-0e0ff9cca1bb/sist-en-iso-18541-1-2014>

0e0ff9cca1bb/sist-en-iso-18541-1-2014



Reference number  
ISO 18541-1:2014(E)

© ISO 2014

## iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 18541-1:2014](https://standards.iteh.ai/catalog/standards/sist/d04d20c7-d305-4eb4-b6d2-0e0ff9cca1bb/sist-en-iso-18541-1-2014)

<https://standards.iteh.ai/catalog/standards/sist/d04d20c7-d305-4eb4-b6d2-0e0ff9cca1bb/sist-en-iso-18541-1-2014>



### **COPYRIGHT PROTECTED DOCUMENT**

© ISO 2014

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.org](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Published in Switzerland



# Contents

Page

<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>v</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms, definitions, symbols and abbreviated terms</b> .....	<b>1</b>
3.1 Terms and definitions.....	1
3.2 Abbreviated terms.....	7
<b>4 Document overview and structure</b> .....	<b>7</b>
<b>5 General information</b> .....	<b>9</b>
5.1 Access to vehicle RMI.....	9
5.2 Standardized access to RMI benefit examples.....	10
<b>6 RMI use case overview and principles</b> .....	<b>11</b>
6.1 Overview of basic principles.....	11
6.2 Overview of use case clusters.....	11
<b>7 RMI use cases</b> .....	<b>14</b>
7.1 UC 1 User authentication, authorization and administration.....	14
7.2 UC 2 Payment for RMI.....	19
7.3 UC 3 Vehicle identification.....	20
7.4 UC 4 Provide selection methods for RMI.....	22
7.5 UC 5 Retrieve information packages.....	24
7.6 UC 6 Vehicle diagnostics.....	30
7.7 UC 7 Updating, replacing and tuning of modules (ECUs).....	31
7.8 UC 8 Electronic maintenance history.....	33
7.9 UC 9 Repair assistance technical support.....	33
7.10 UC 10 Request contact for specific RMI.....	33
7.11 UC 11 Courses and training information.....	38
<b>Bibliography</b> .....	<b>39</b>

## ISO 18541-1:2014(E)

## 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](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information.

ISO 18541-1:2013 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 301, *Road vehicles*, in collaboration with ISO Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 3, *Electrical and electronic equipment*, in accordance with the agreement on technical cooperation between ISO and CEN (Vienna Agreement).

ISO 18541 consists of the following parts, under the general title *Road vehicles — Standardized access to automotive repair and maintenance information (RMI)*:

- *Part 1: General information and use case definition*
- *Part 2: Technical requirements*
- *Part 3: Functional user interface requirements*
- *Part 4: Conformance test*

ISO 18542, *Road vehicles — Standardized repair and maintenance information (RMI) terminology*, is a complementary standard that defines standardized RMI terminology and consists of two parts:

- *Part 1: General information and use case definition*
- *Part 2: Standardized process implementation requirements, Registration Authority*

The standardized RMI terminology is contained in a so-called 'Digital Annex' that is maintained and published by the CEN-appointed Registration Authority.

## Introduction

This set of standards includes the requirements to be fulfilled by Repair and Maintenance Information (RMI) systems as applied by the European Commission — Enterprise and Industry Directorate-General, Consumer goods — Automotive industry EC mandate M/421[[5]], dated Brussels, 21 January 2008.

This mandate relates to the EC type-approval system for vehicles falling into the scopes of Directives 70/156/EEC (replaced by 2007/46/EC [8]), 2002/24/EC [6] and 2003/37/EC [7] and, in particular, to requirements for access to vehicle repair and maintenance information by independent operators.

This International Standard only covers access to automotive repair and maintenance information for light passenger and commercial vehicles (see NOTE 1) and heavy duty vehicles (see NOTE 2) based on Directive 70/156/EEC (replaced by 2007/46/EC [8]).

The purpose of the EC Mandate M/421 is to develop a standard or set of standards which specify the requirements to provide standardized access to automotive repair and maintenance information (RMI) for independent operators.

The information included in this part of ISO 18541 derives from the legislative requirements on European level in the field of RMI and related security requirements and can be referenced by legislation in other countries.

NOTE 1 Regulation (EC) No 715/2007 of the European Parliament and of the Council of 20 June 2007 on type-approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information and Commission Regulation (EC) No 692/2008 of 18 July 2008 implementing and amending Regulation (EC) No 715/2007 of the European Parliament and of the Council on type-approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information and amending Commission Regulation (EU) No 566/2011 of 8 June 2011 amending Regulation (EC) No 715/2007 of the European Parliament and of the Council and Commission Regulation (EC) No 692/2008 as regards access to vehicle repair and maintenance information.

<https://standards.iteh.ai/catalog/standards/sist/d04d20c7-d305-4eb4-b6d2-0e08bcca11bb/sist-en-iso-18541-1-2014>

NOTE 2 Regulation (EC) No 595/2009 of the European Parliament and of the Council of 18 June 2009 on type-approval of motor vehicles with respect to emissions from heavy duty vehicles (Euro VI) and on access to vehicle repair and maintenance information, Commission Regulation (EU) No 582/2011 of 25 May 2011 implementing and amending Regulation (EC) No 595/2009 of the European Parliament and of the Council with respect to emissions from heavy duty vehicles (Euro VI), and Commission Regulation (EU) No 64/2012 of 23 January 2012 amending Regulation (EU) No 582/2011 implementing and amending Regulation (EC) No 595/2009 of the European Parliament and of the Council with respect to emissions from heavy duty vehicles (Euro VI).

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN ISO 18541-1:2014](#)

<https://standards.iteh.ai/catalog/standards/sist/d04d20c7-d305-4eb4-b6d2-0e0ff9cca1bb/sist-en-iso-18541-1-2014>

# Road vehicles — Standardized access to automotive repair and maintenance information (RMI) —

## Part 1: General information and use case definition

### 1 Scope

This part of ISO 18541 provides a general overview and structure of each part of ISO 18541. It also specifies use cases related to repair and maintenance information (RMI) systems in order to standardize the access to RMI for independent operators.

This part of ISO 18541 also describes the use cases applicable to the standardized access to automotive RMI. The use cases address real world scenarios (e.g. servicing vehicles) in regard to the information access necessary to perform vehicle roadside assistance, inspection, diagnosis, repair and maintenance, including the updating and replacement of Electronic Control Units (ECU).

The RMI systems used by personnel to perform the services consist of:

- a Web-based system, which provides access to RMI needed to perform the service(s);
- contact information for specific RMI;
- a security framework to protect access to security related RMI.

This part of ISO 18541 provides an overview of the entire standard and how it applies to the automotive industry.

This part of ISO 18541 is applicable to light passenger and commercial vehicles as defined in regulation (EC) 715/2007 Article 2.<sup>[15]</sup>

### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 18541-2, *Road vehicles — Standardized access to automotive repair and maintenance information (RMI) — Part 2: Technical requirements*

### 3 Terms, definitions, symbols and abbreviated terms

#### 3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

##### 3.1.1

##### access level

level of access to RMI which is either relevant to security or not relevant to security

EXAMPLE One might consider an access to RMI relevant to security and another one to RMI not relevant to security. They represent two different access levels.

**ISO 18541-1:2014(E)****3.1.2****accessories**

supplementary features and components selected by a vehicle owner to enhance safety, performance, comfort, etc. and whose fitting does not impact on the vehicle approval

**3.1.3****alternate fuel**

type of fuel that is either gaseous at atmospheric temperature and pressure or substantially non-mineral oil derived

Note 1 to entry: Adopted from Regulation (EC) 715/2007.<sup>[15]</sup>

**3.1.4****alternate fuels retrofit systems**

engine systems mounted on an already registered vehicle for the purpose of operation with alternative fuels

**3.1.5****alternative fuels system manufacturer**

manufacturer of an engine system operating with an alternative fuel

**3.1.6****appropriate software level**

applicable software version for the individual vehicle

**3.1.7****authorized repairer**

provider of repair and maintenance services for motor vehicles operating within the distribution system set up by a supplier of motor vehicles

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN ISO 18541-1:2014

Note 1 to entry: See Regulation (EC) 461/2010 Article 1(1)(c).<sup>[10]</sup>  
<https://standards.iteh.ai/catalog/standards/sist/en-iso-18541-1-2014>

**3.1.8****certificate**

electronic document which uses a digital signature to bind a public key with an identity

**3.1.9****converted vehicle**

factory-produced vehicle which has been altered by the addition, deletion, substitution or modification of the body, chassis or essential parts that resembles, but is no longer identical to, the original vehicle for a special purpose e.g. to act as rescue vehicle or taxicab

**3.1.10****detailed diagnosis**

diagnostic process that identifies, with precision, potential malfunction causes

Note 1 to entry: A precise diagnosis can be achieved in several steps, whereby the user might be requested to perform test actions on the vehicle or to enter symptoms.

**3.1.11****diagnostic information**

description of an error or symptom and a list of potential causes or hints for further investigation to the same level and content as provided to the AR

**3.1.12****diagnostic trouble code****DTC**

numeric or alphanumeric identifier which identifies or labels a malfunction

Note 1 to entry: Adopted from United Nations Global Technical Regulation No.°5.<sup>[16]</sup>

**3.1.13****electronic maintenance history**

digital information package with virtual stamps that confirms the execution of the prescribed maintenance actions according to the VM's schedule

**3.1.14****global technical regulation****GTR**

World-Wide Harmonized On-Board Diagnostics Global Technical Regulation No.°5

Note 1 to entry: See Reference.[16]

**3.1.15****independent operator****IO**

company or legal entity other than authorized dealers and repairers who is directly or indirectly involved in the repair and maintenance of motor vehicles

**EXAMPLE** Repairers, manufacturers or distributors of repair equipment, tools or spare parts, publishers of technical information, automobile clubs, roadside assistance operators, operators offering inspection and testing services, operators offering training for installers, manufacturers and repairers of equipment for alternative fuel vehicles.

**3.1.16****IO approval**

process by which, upon payment of a reasonable and proportionate fee, the CAB sanctions or approves a legitimate commercial enterprise to engage in security-related RMI activities

**3.1.17****IO authorization**

process by which, upon payment of a reasonable and proportionate fee, the CAB assesses that an individual employee of an approved IO complies with the requirements specified in this part of ISO 18541 and is entitled to be given access to security-related RMI-1-2014

Note 1 to entry: As part of this authorization, the individual employee will be allocated, upon payment of a reasonable and proportionate fee, a secure hardware token containing a personal digital certificate and a PIN that will be supplied by the Trust Centre

**3.1.18****IO legal representative**

natural person empowered to legally represent the IO in all aspects of the access to vehicle RMI

**3.1.19****information package**

collection of information provided by the VM's RMI system in response to a specific request

**3.1.20****information type**

category, group or set of information

**EXAMPLE** Workshop procedures (for body repair, temporary repair, periodic technical inspection), wiring diagrams, technical service bulletins, recall information and maintenance information.

**3.1.21****integrated diagnostics**

process which interprets via an integrated application the memory content of ECUs and provides a diagnostic and repair recommendation

Note 1 to entry: Diagnostic application and VM RMI systems cooperate online, so technical information is provided during the diagnostics process and used for the diagnostic steps.