

Road vehicles - Standardized access to automotive repair and maintenance information (RMI) - Part 2: Technical requirements (ISO 18541-2:2021)

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 18541-2:2021 sisaldab Euroopa standardi EN ISO 18541-2:2021 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 18541-2:2021 consists of the English text of the European standard EN ISO 18541-2:2021.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 30.06.2021.	Date of Availability of the European standard is 30.06.2021.
Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile [standardiosakond@evs.ee](mailto:standardiosakond@evs.ee).

ICS 43.040.15, 43.180

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardimis- ja Akrediteerimiskeskusele. Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardimis- ja Akrediteerimiskeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardimis- ja Akrediteerimiskeskusega: Koduleht [www.evs.ee](http://www.evs.ee); telefon 605 5050; e-post [info@evs.ee](mailto:info@evs.ee)

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation and Accreditation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation and Accreditation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation and Accreditation:

Homepage [www.evs.ee](http://www.evs.ee); phone +372 605 5050; e-mail [info@evs.ee](mailto:info@evs.ee)

EUROPEAN STANDARD

EN ISO 18541-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2021

ICS 43.180; 43.040.15

Supersedes EN ISO 18541-2:2014

English Version

Road vehicles - Standardized access to automotive repair  
and maintenance information (RMI) - Part 2: Technical  
requirements (ISO 18541-2:2021)

Véhicules routiers - Normalisation de l'accès aux  
informations relatives à la réparation et à la  
maintenance pour l'automobile (RMI) - Partie 2 :  
Exigences techniques (ISO 18541-2:2021)

Straßenfahrzeuge - Standardisierter Zugang zu  
Reparatur- und Wartungsinformationen (RMI) - Teil 2:  
Technische Anforderungen (ISO 18541-2:2021)

This European Standard was approved by CEN on 1 June 2021.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, 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: Rue de la Science 23, B-1040 Brussels

## European foreword

This document (EN ISO 18541-2:2021) 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 December 2021, and conflicting national standards shall be withdrawn at the latest by December 2021.

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

This document supersedes EN ISO 18541-2:2014.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## Endorsement notice

The text of ISO 18541-2:2021 has been approved by CEN as EN ISO 18541-2:2021 without any modification.

# Contents

	Page
Foreword.....	v
Introduction.....	vi
<b>1 Scope.....</b>	<b>1</b>
<b>2 Normative references.....</b>	<b>1</b>
<b>3 Terms and definitions.....</b>	<b>1</b>
<b>4 Abbreviated terms.....</b>	<b>2</b>
<b>5 Requirements overview and principles.....</b>	<b>2</b>
5.1 Basic principles for requirements definition.....	2
5.2 Requirements clustering.....	3
<b>6 Requirements cluster 1 — Access-related data administration.....</b>	<b>6</b>
6.1 [TREQ-1] General access-related data administration.....	6
6.2 [TREQ-2], [TREQ-3] Administration of IO and IO employee data by the VM.....	6
6.2.1 [TREQ-2] Administration of IO data by the VM.....	6
6.2.2 [TREQ-3] Administration of IO employee data by the VM.....	7
6.3 [TREQ-4] Administration of payment data by the VM.....	7
6.4 [TREQ-5] Administration of access event data by the VM.....	8
6.5 [TREQ-6] Administration of access event data to security-related RMI by the VM.....	8
<b>7 Requirements cluster 2 — IT architecture.....</b>	<b>9</b>
7.1 [TREQ-7] Conceptual architecture.....	9
7.2 [TREQ-8] Implementation principles.....	10
<b>8 Requirements cluster 3 — External interfaces.....</b>	<b>14</b>
8.1 [TREQ-9] Vehicle communication interface (VCI).....	14
8.2 [TREQ-10] Trust centre (certificate management).....	17
8.3 [TREQ-11] Parts ordering for security-related features.....	17
8.4 [TREQ-12] Partnered accessory provider systems.....	18
<b>9 Requirements cluster 4 — Technical infrastructure.....</b>	<b>18</b>
9.1 [TREQ-13] Type of device.....	18
9.2 [TREQ-14] PC requirements.....	18
9.3 [TREQ-15] Operating systems.....	19
9.4 [TREQ-16] Web browsers.....	19
9.5 [TREQ-17] Presentation formats for information packages.....	19
9.6 [TREQ-18] Internet connection.....	20
9.7 [TREQ-19] Performance of the VM RMI system.....	20
<b>10 Requirements cluster 5 — Co-existence of VM software on IO client.....</b>	<b>20</b>
10.1 [TREQ-20] Requirements for installing VM-specific software on the IO client.....	20
10.2 [TREQ-21] Requirements for updating of installed VM data and applications on the IO client.....	21
10.3 [TREQ-22] Requirements for the operation of VM-specific software on the IO client.....	22
10.4 [TREQ-23] Requirements for the uninstalling of VM-specific software on the IO client.....	22
10.5 [TREQ-24] Requirements for restoring in case of an abnormal termination of the VM-specific software on the IO client.....	23
<b>11 Requirements cluster 6 — Operations.....</b>	<b>23</b>
11.1 [TREQ-25] VM RMI system availability time.....	23
11.2 [TREQ-26] Support for the usage of the VM RMI system.....	24
11.3 [TREQ-27] Operation of the IO PC.....	24
<b>12 Requirements cluster 7 — [TREQ-28] Functional user interface.....</b>	<b>25</b>
<b>Annex A (normative) Requirements for access to security-related RMI according to SERMI scheme.....</b>	<b>26</b>

**Bibliography** ..... **31**

This document is a preview generated by EVS

## 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 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](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 31, *Data communication*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 301, *Road vehicles*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 18541-2:2014), which has been technically revised.

The main changes compared to the previous edition are as follows:

- security-related RMI according to SERMI scheme moved to [Annex A](#);
- previous [Annex A](#) "PC specification" has been removed; the corresponding subclauses [9.2](#) and [9.3](#) were updated accordingly;
- [Figures 2, 3](#) and [4](#) were updated (security-related RMI has been deleted);
- correction of errors and improvement of formulations in the entire document.

A list of all parts in the ISO 18541 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](http://www.iso.org/members.html).

## Introduction

The ISO 18541 series 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,<sup>[6]</sup> 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 <sup>[9]</sup>), 2002/24/EC [replaced by (EU) 168/2013 <sup>[7]</sup>] and 2003/37/EC [replaced by (EU) 167/2013 <sup>[8]</sup>] and, in particular, to requirements for access to vehicle repair and maintenance information by independent operators.

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 ISO 18541 series only covers access to automotive repair and maintenance information for light passenger and commercial vehicles [see (EC) No 715/2007 <sup>[15]</sup>, (EC) No 692/2008 <sup>[14]</sup> and (EU) No 566/2011 <sup>[11]</sup>] and heavy-duty vehicles [see (EC) No 595/2009 <sup>[13]</sup>, (EU) No 582/2011 <sup>[12]</sup> and (EU) No 64/2012 <sup>[10]</sup>] based on Directive 2007/46/EC <sup>[9]</sup> and for two-or three-wheel vehicles and quadricycles based on regulation (EU) 168/2013 <sup>[7]</sup>.

The information included in the ISO 18541 series 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.



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

## Part 2: Technical requirements

### 1 Scope

This document includes technical requirements which are related to automotive repair and maintenance information (RMI) systems in order to standardize access to RMI for independent operators.

This document specifies the minimum set of technical requirements related to a vehicle manufacturer's RMI system. These requirements will reflect the deriving needs from the use cases as specified in ISO 18541-1.

Furthermore, this document defines requirements for granting access to security-related RMI in [Annex A](#) following the SERMI scheme.

This document is applicable to light passenger and commercial vehicles as defined in regulation (EC) 715/2007 Article 2 [\[15\]](#).

### 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 18541-1, *Road vehicles — Standardized access to automotive RMI — Part 1: General information and use case definition*

ISO 18541-3, *Road vehicles — Standardized access to automotive repair and maintenance information (RMI) — Part 3: Functional user interface requirements*

ISO 22900-2, *Road vehicles — Modular vehicle communication interface (MVICI) — Part 2: Diagnostic protocol data unit application programming interface (D-PDU API)*

SAE J2534-1, *Recommended Practice for Pass-Thru Vehicle Programming*

SAE J2534-2, *Optional Pass-Thru Features*

SERMI scheme<sup>1)</sup> — *Scheme for accreditation, approval and authorization to access security-related repair and maintenance information*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 18541-1 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

---

1) Available at <https://www.vehiclesermi.eu/>.