
Cestna vozila - Standardizirani dostop do informacij o popravilih in vzdrževanju avtomobilov (RMI) - 6. del: Posebni primeri uporabe RMI in zahteve za vozila kategorije L (ISO 18541-6:2018)

Road vehicles - Standardized access to automotive repair and maintenance information (RMI) - Part 6: L-Category vehicle specific RMI use cases and requirements (ISO 18541-6:2018)

Straßenfahrzeuge - Standardisierter Zugang zur Reparatur und Wartung (RMI) - Teil 6: Spezifische RMI Anwendungsfälle und Anforderungen für L-Kategorie Fahrzeuge (ISO 18541-6:2018)

Véhicules routiers - Normalisation de l'accès aux informations relatives à la réparation et à la maintenance pour l'automobile (RMI) - Partie 6: Exigences et cas d'usage RMI spécifiques aux véhicules de catégorie L (ISO 18541-6:2018)

Ta slovenski standard je istoveten z: EN ISO 18541-6:2018

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 18541-6:2018**en**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Full standard:
<https://standards.iteh.ai/catalog/standards/sist/7b936bdc-50cd-4e36-ac03-030ee301398/sist-en-iso-18541-6-2018>

EUROPEAN STANDARD

EN ISO 18541-6

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2018

ICS 43.040.15; 43.180

English Version

Road vehicles - Standardized access to automotive repair and maintenance information (RMI) - Part 6: L-Category vehicle specific RMI use cases and requirements (ISO 18541-6:2018)

Véhicules routiers - Normalisation de l'accès aux informations relatives à la réparation et à la maintenance pour l'automobile (RMI) - Partie 6: Exigences et cas d'usage RMI spécifiques aux véhicules de catégorie L (ISO 18541-6:2018)

Straßenfahrzeuge - Standardisierter Zugang zur Reparatur und Wartungsinformationen (RMI) - Teil 6: Spezifische RMI Anwendungsfälle und Anforderungen für L-Kategorie Fahrzeuge (ISO 18541-6:2018)

This European Standard was approved by CEN on 14 December 2016.

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, 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

Contents	Page
European foreword.....	3

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
<https://standards.iteh.ai/catalog/standards/sist/7b936bdc-50cd-4e36-ac03-030ee301398/sist-en-iso-18541-6-2018>

European foreword

This document (EN ISO 18541-6:2018) 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 August 2018, and conflicting national standards shall be withdrawn at the latest by August 2018.

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

Endorsement notice

The text of ISO 18541-6:2018 has been approved by CEN as EN ISO 18541-6:2018 without any modification.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Full standard:
<https://standards.iteh.ai/catalog/standards/sist/7b936bdc-50cd-4e36-ac03-030ee301398/sist-en-iso-18541-6-2018>

INTERNATIONAL
STANDARDISO
18541-6First edition
2018-02

**Road vehicles — Standardized access
to automotive repair and maintenance
information (RMI) —****Part 6:
L-Category vehicle specific RMI use
cases and requirements**

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

*Partie 6. Exigences et cas d'usage RMI spécifiques aux véhicules de
catégorie L*

Reference number
ISO 18541-6:2018(E)

© ISO 2018

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
<https://standards.iteh.ai/catalog/standards/sist/7b936bdc-50cd-4e36-ac03-030ee1301398/sist-en-iso-18541-6-2018>

**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2018

All rights reserved. Unless otherwise specified, or required in the context of its implementation, 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
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Published in Switzerland

Contents

Page

Foreword	viii
Introduction	ix
1 Scope	1
2 Normative references	1
3 Terms, definitions and abbreviated terms	2
3.1 Terms and definitions.....	2
3.2 Abbreviated terms.....	8
4 Document overview and structure	10
5 General information	11
5.1 Access to vehicle RMI.....	11
5.2 Standardized access to RMI benefit examples.....	12
5.2.1 Independent operators.....	12
5.2.2 Vehicle manufacturers.....	13
5.3 L-Category and subcategories.....	13
5.4 Multi stage and RMI.....	13
6 Basic principles, use case and requirement overview	14
6.1 Basic principles.....	14
6.1.1 Basic principles for use case definition.....	14
6.1.2 Basic principles for requirements definition.....	15
6.1.3 Basic principles for functional user interface requirements definition.....	15
6.1.4 Basic principles for conformance test definition.....	15
6.2 Use case clusters.....	16
6.3 Requirements clusters.....	19
6.4 Functional user interface requirements clusters.....	22
6.5 Conformance test clustering.....	24
6.5.1 General.....	24
6.5.2 Main conformance test case clusters.....	24
7 Use cases	30
7.1 UC 1 User authentication, authorization and administration.....	30
7.1.1 UC 1.1 Register IO for use of the VM RMI system.....	30
7.1.2 UC 1.2 Register IO employee for use of the VM RMI system.....	31
7.1.3 UC 1.3 Maintain IO status.....	32
7.1.4 UC 1.4 Maintain user status.....	32
7.1.5 UC 1.5 Request to de-register IO employee.....	32
7.1.6 UC 1.6 Login to VM RMI system.....	33
7.1.7 UC 1.7 Grant access to security-related RMI.....	33
7.2 UC 2 Payment for RMI.....	34
7.3 UC 3 Vehicle identification.....	34
7.3.1 UC 3.1 Vehicle identification through product identifier.....	34
7.3.2 UC 3.2 Vehicle type identification via product features.....	35
7.4 UC 4 Provide selection methods for RMI.....	37
7.4.1 UC 4.1 Select information type.....	37
7.4.2 UC 4.2 Search by standardized terms.....	38
7.4.3 UC 4.3 Navigate using product structure.....	38
7.4.4 UC 4.4 Select by document identifier.....	38
7.5 UC 5 Retrieve information packages.....	39
7.5.1 UC 5.1 Workshop procedures.....	39
7.5.2 UC 5.2 Wiring diagrams.....	40
7.5.3 UC 5.3 Technical service bulletin.....	40
7.5.4 UC 5.4 Recall information.....	41
7.5.5 UC 5.5 Maintenance schedule.....	41
7.5.6 UC 5.6 Spare parts.....	42

ISO 18541-6:2018(E)

7.5.7	UC 5.7 Accessories	42
7.5.8	UC 5.8 Labour times	43
7.5.9	UC 5.9 Special tools	44
7.5.10	UC 5.10 Type-approval related information	44
7.6	UC 6 Vehicle diagnostics	44
7.6.1	UC 6.1 DTC resolution	44
7.6.2	UC 6.2 VM symptom resolution	45
7.6.3	UC 6.3 Integrated diagnostics	45
7.7	UC 7 Updating and replacing modules (ECUs)	46
7.8	UC 8 Electronic Maintenance history	47
7.9	UC 9 Repair assistance technical support	47
7.10	UC 10 Request contact for specific RMI	47
7.10.1	UC 10.1 Electronic tool information (Diagnostic, Reprogramming, VCI)	47
7.10.2	UC 10.2 Test equipment and diagnostic tool manufacturers	48
7.10.3	UC 10.3 Training material (delegate information)	48
7.10.4	UC 10.4 Redistributors	49
7.10.5	UC 10.5 Republishers	49
7.10.6	UC 10.6 Inspection and testing services	50
7.10.7	UC 10.7 Alternative fuels retrofit systems	50
7.10.8	UC 10.8 Engine and components remanufacturing	50
7.10.9	UC 10.9 Component and parts manufacturers	51
7.10.10	UC 10.10 Validation of independently developed non-proprietary VCIs	51
7.11	UC 11 Courses and training information	52
8	Technical requirements	53
8.1	Requirements cluster 1 — Access-related data administration	53
8.1.1	[TREQ-1] General access-related data administration	53
8.1.2	Administration of IO and IO employee data by the VM	53
8.1.3	[TREQ-4] Administration of payment data by the VM	54
8.1.4	[TREQ-5] Administration of access event data by the VM	55
8.1.5	[TREQ-6] Administration of access event data to security-related RMI by the VM	55
8.2	Requirements cluster 2 – IT architecture	56
8.2.1	[TREQ-7] Conceptual architecture	56
8.2.2	[TREQ-8] Implementation principles	57
8.3	Requirements cluster 3 – External interfaces	60
8.3.1	[TREQ-9] Vehicle communication interface (VCI)	60
8.3.2	[TREQ-10] Trust centre (certificate management)	63
8.3.3	[TREQ-11] Parts ordering for security-related features	64
8.3.4	[TREQ-12] Partnered accessory provider systems	64
8.4	Requirements cluster 4 — Technical infrastructure	64
8.4.1	[TREQ-13] Type of device	64
8.4.2	[TREQ-14] Hardware features	65
8.4.3	[TREQ-15] Operating systems	65
8.4.4	[TREQ-16] Web browsers	65
8.4.5	[TREQ-17] Presentation formats for information packages	66
8.4.6	[TREQ-18] Internet connection	66
8.4.7	[TREQ-19] Performance of the VM RMI system	66
8.5	Requirements cluster 5 – Co-existence of VM software on IO client	67
8.5.1	[TREQ-20] Requirements for installing VM-specific software on the IO client	67
8.5.2	[TREQ-21] Requirements for updating of installed VM data and applications on the IO client	68
8.5.3	[TREQ-22] Requirements for the operation of VM-specific software on the IO client	68
8.5.4	[TREQ-23] Requirements for the uninstalling of VM-specific software on the IO client	69
8.5.5	[TREQ-24] Requirements for restoring in case of an abnormal termination of the VM-specific software on the IO client	69
8.6	Requirements cluster 6 – Operations	70

8.6.1	[TREQ-25] VM RMI system availability time	70
8.6.2	[TREQ-26] Support for the usage of the VM RMI system	70
8.6.3	[TREQ-27] Operation of the IO PC	71
8.7	[TREQ-28] Requirements cluster 7 – Functional user interface	71
9	Functional user interface requirements	72
9.1	General description	72
9.1.1	Navigational pathway from standardized use cases to VM-specific navigation position	72
9.1.2	VM RMI system standardised navigation	73
9.2	Requirements cluster 8 — Standardized access mode	75
9.2.1	[FREQ-1] RMI access mode	75
9.2.2	[FREQ-2] Registration and login support	76
9.3	Requirements cluster 9 — Use cases map	76
9.3.1	[FREQ-3] VM RMI system implemented use cases map	76
9.3.2	[FREQ-4] Download area	78
9.4	Requirements cluster 10 – Navigational pathway	78
9.4.1	[FREQ-5] Navigational pathway	78
10	Conformance test cases	79
10.1	Conformance test case — General structure	79
10.1.1	Overview	79
10.1.2	Test case reference number and title [RMI-CT_...] [title]	79
10.1.3	Test purpose	79
10.1.4	Configuration	79
10.1.5	Preamble (setup state)	79
10.1.6	Test execution	79
10.1.7	Postamble	80
10.1.8	Result criteria	80
10.2	CT cluster 1 – Access-related data administration	80
10.2.1	[RMI-CT_TREQ-13, 14, 15, 16, 18, Annex B] Test client configuration	80
10.2.2	[RMI-CT_TREQ-17] Test presentation formats for information packages	81
10.3	CT cluster 2 — Test client’s external interfaces	82
10.3.1	[RMI-CT_TREQ-9] Test vehicle communication interface (VCI)	82
10.3.2	[RMI-CT_TREQ-11] Test parts ordering for security-related features	83
10.3.3	[RMI-CT_TREQ-12] Test partnered accessory provider systems	83
10.4	CT cluster 3 — Test user authentication, authorization and administration	84
10.4.1	[RMI-CT_UC1.1] Test to register IO for use of the VM RMI system	84
10.4.2	[RMI-CT_UC1.2_A] Test to register IO employee for use of the VM RMI system — Scenario A	85
10.4.3	[RMI-CT_UC1.2_B] Test to register IO employee for use of the VM RMI system — Scenario B	86
10.4.4	[RMI-CT_UC1.3] Test to maintain IO status	87
10.4.5	[RMI-CT_UC1.4] Test to maintain user status	88
10.4.6	[RMI-CT_UC1.5] Test to de-register an IO employee	89
10.4.7	[RMI-CT_UC1.6] Test login to VM RMI system	90
10.4.8	[RMI-CT_UC1.7] Test for granting access to security-related RMI	91
10.5	CT cluster 4 — Test functional user interface implementation	92
10.5.1	[RMI-CT_FREQ-1] Test for RMI access mode	92
10.5.2	[RMI-CT_FREQ-2] Test for registration and login support	92
10.5.3	[RMI-CT_FREQ-3] Test for implemented use cases map	93
10.5.4	[RMI-CT_FREQ-4] Test for download area	94
10.5.5	[RMI-CT_FREQ-5] Test for navigational pathway	95
10.6	CT cluster 5 — Test payment for RMI	96
10.6.1	[RMI-CT_UC2] Test payment for RMI	96
10.7	CT cluster 6 — Test for vehicle identification	97
10.7.1	[RMI-CT_UC3.1] Test vehicle identification through product identifier	97
10.7.2	[RMI-CT_UC3.2] Test vehicle identification via product features	98
10.8	CT cluster 7 — Test selection methods for RMI	99

ISO 18541-6:2018(E)

10.8.1	[RMI-CT_UC4.1] Test selection of information type	99
10.8.2	[RMI-CT_UC4.2] Test search by standardized terms	100
10.8.3	[RMI-CT_UC4.3] Test navigation using product structure	101
10.8.4	[RMI-CT_UC4.4] Test selection by document identifier	102
10.9	CT cluster 8 — Test retrieval of information packages	103
10.9.1	[RMI-CT_UC5.1.1] Test retrieval of general workshop procedures	103
10.9.2	[RMI-CT_UC5.1.2] Test retrieval of body repair procedures	103
10.9.3	[RMI-CT_UC5.1.3] Test retrieval of temporary repair procedures	104
10.9.4	[RMI-CT_UC5.1.4] Test retrieval of preparation for PTI	105
10.9.5	[RMI-CT_UC5.2] Test retrieval of wiring diagrams	106
10.9.6	[RMI-CT_UC5.3] Test retrieval of technical service bulletin	107
10.9.7	[RMI-CT_UC5.4] Test retrieval of recall information	108
10.9.8	[RMI-CT_UC5.5] Test retrieval of maintenance schedule	109
10.9.9	[RMI-CT_UC5.6.1] Test retrieval of spare parts (identification)	110
10.9.10	[RMI-CT_UC5.6.2] Test retrieval of spare parts (access)	111
10.9.11	[RMI-CT_UC5.7.1] Test retrieval of accessory information factory fitted (included in general RMI)	111
10.9.12	[RMI-CT_UC5.7.2] Test retrieval of accessory information partnered with a VM part number	112
10.9.13	[RMI-CT_UC5.7.3] Test retrieval of fitting information for accessories with no VM part number	113
10.9.14	[RMI-CT_UC5.8] Test retrieval of labour times	114
10.9.15	[RMI-CT_UC5.9] Test retrieval of special tool information	115
10.9.16	[RMI-CT_UC5.10] Test retrieval of type approval information	116
10.10	CT cluster 9 — Test vehicle diagnostics	116
10.10.1	[RMI-CT_UC6.1] Test DTC resolution	116
10.10.2	[RMI-CT_UC6.2] Test VM symptom resolution	117
10.10.3	[RMI-CT_UC6.3] Test integrated diagnostics	118
10.11	CT cluster 10 — Test updating and replacing of modules (ECUs)	119
10.11.1	[RMI-CT_UC7] Test updating and replacing modules information	119
10.12	CT cluster 11 — Test electronic maintenance history	120
10.12.1	[RMI-CT_UC8] Test electronic maintenance history	120
10.13	CT cluster 12 — Test repair assistance, technical support	121
10.13.1	[RMI-CT_UC9] Test repair assistance technical support	121
10.14	CT cluster 13 — Test request for contact information	122
10.14.1	[RMI-CT_UC10.1] Test for retrieval of electronic tool information (Diagnostic, Reprogramming, VCI)	122
10.14.2	[RMI-CT_UC10.2] Test for retrieval of test equipment and diagnostic tool manufacturers information	123
10.14.3	[RMI-CT_UC10.3] Test for retrieval of training material (delegate information)	124
10.14.4	[RMI-CT_UC10.4] Test for retrieval of redistributor contact information	125
10.14.5	[RMI-CT_UC10.5] Test for retrieval of republisher information	125
10.14.6	[RMI-CT_UC10.6] Test for retrieval of inspection and testing services information	126
10.14.7	[RMI-CT_UC10.7] Test for retrieval of alternative fuels retrofit system information	127
10.14.8	[RMI-CT_UC10.8] Test for retrieval of engine and components remanufacturing information	128
10.14.9	[RMI-CT_UC10.9] Test for retrieval of component and parts manufacturer information	129
10.14.10	[RMI-CT_UC10.10] Test for retrieval of validation of independently developed non-proprietary VCI information	130
10.15	CT cluster 14 — Test courses and training information	131
10.15.1	[RMI-CT_UC11] Test for courses and training information	131
10.16	CT cluster 15 — Test data administration requirements	132
10.16.1	[RMI-CT_TREQ-1] Test general access-related data administration	132

10.16.2	[RMI-CT_TREQ-2] Test administration of IO data by the VM.....	132
10.16.3	[RMI-CT_TREQ-3] Test administration of IO employee data by the VM.....	133
10.16.4	[RMI-CT_TREQ-4] Test administration of payment data by VM.....	134
10.16.5	[RMI-CT_TREQ-5] Test administration of access event data by VM.....	134
10.16.6	[RMI-CT_TREQ-6] Test administration of access event data to security-related RMI by VM.....	135
10.17	CT cluster 16 — Test VM software installation on the IO client.....	135
10.17.1	[RMI-CT_TREQ-20] Test for requirements for installing VM-specific software on the IO client.....	135
10.17.2	[RMI-CT_TREQ-21] Test for requirements for updating of installed VM data and applications on the IO client.....	136
10.17.3	[RMI-CT_TREQ-22] Test for requirements for the operation of VM-specific software on the IO client.....	137
10.17.4	[RMI-CT_TREQ-23] Test for requirements for the uninstalling of VM-specific software on the IO client.....	138
10.17.5	[RMI-CT_TREQ-24] Test for requirements for restoring in case of an abnormal termination of the VM specific software on the IO client.....	139
10.18	CT cluster 17 — Test VM RMI operations.....	140
10.18.1	[RMI-CT_TREQ-25] Test for VM RMI system availability time.....	140
10.18.2	[RMI-CT_TREQ-26] Test for support for the usage of the VM RMI system.....	140
10.19	CT cluster 18 — Test trust centre (certificate management).....	141
10.19.1	[RMI-CT_TREQ-10] Test for trust centre (certificate management).....	141
Annex A (normative) Adopted elements from ISO 18541-1, ISO 18541-2, ISO 18541-3 and ISO 18541-4		143
Annex B (informative) PC specification		154
Bibliography		155