

ISO 18541-5:2018 (E)

Road vehicles — Standardized access to automotive repair and maintenance information (RMI) — Part 5: Heavy duty specific provision

Contents

	Foreword
	Introduction
1	Scope
2	Normative references
3	Terms, definitions and abbreviated terms
4	Document overview and structure
5	General information
5.1	Overview
5.2	Multi stage and RMI
6	Basic principles, use case and requirement overview
6.1	Basic principles
6.2	Basic principles for use case definition
6.3	Basic principles for requirements definition
6.4	Basic principles for functional user interface requirements definition
6.5	Basic principles for conformance test case definition
6.6	Use case clusters
6.7	Requirements clusters
6.8	Functional user interface requirements clusters
6.9	Main conformance test case clusters
7	Use cases
7.1	UC 1 User authentication, authorization and administration
7.1.1	UC 1.1 Register IO for use of the VM RMI system
7.1.2	UC 1.2 Register IO employee for use of the VM RMI system
7.1.3	UC 1.3 Maintain IO status
7.1.4	UC 1.4 Maintain user status
7.1.5	UC 1.5 Request to de-register IO employee
7.1.6	UC 1.6 Login to VM RMI system
7.1.7	UC 1.7 Grant access to security-related RMI
7.2	UC 2 Payment for RMI
7.3	UC 3 Vehicle identification
7.3.1	UC 3.1 Vehicle identification through use of the VIN
7.3.2	UC 3.2 Vehicle type identification via product features
7.3.3	UC 3.3 Vehicle identification through product identifier
7.3.4	UC 3.4 Unequivocal engine identification
7.3.5	UC 3.5 Engine type identification via engine features
7.4	UC 4 Provide selection methods for RMI
7.4.1	UC 4.1 Select information type
7.4.2	UC 4.2 Search by standardized terms
7.4.3	UC 4.3 Navigate using product structure
7.4.4	UC 4.4 Select by document identifier
7.5	UC 5 Retrieve information packages
7.5.1	UC 5.1 Workshop procedures
7.5.1.1	UC 5.1.1 General workshop procedures
7.5.1.2	UC 5.1.2 Body repair procedures
7.5.1.3	UC 5.1.3 Temporary repair procedures

- 7.5.1.4 UC 5.1.4 Preparation for PTI
- 7.5.2 UC 5.2 Wiring diagrams
- 7.5.3 UC 5.3 Technical service bulletin
- 7.5.4 UC 5.4 Recall information
- 7.5.5 UC 5.5 Maintenance schedule
- 7.5.6 UC 5.6 Spare parts
- 7.5.6.1 UC 5.6.1 Spare parts (identification)
- 7.5.6.2 UC 5.6.2 Spare parts (access)
- 7.5.7 UC 5.7 Accessories
- 7.5.7.1 UC 5.7.1 Accessory information factory fitted (included in general RMI)
- 7.5.7.2 UC 5.7.2 Accessory information partnered with a VM part number
- 7.5.7.3 UC 5.7.3 Fitting information for accessories with no VM part number
- 7.5.8 UC 5.8 Labour times
- 7.5.9 UC 5.9 Converted vehicles
- 7.5.10 UC 5.10 Special tools
- 7.5.11 UC 5.11 Type-approval related information
- 7.6 UC 6 Vehicle diagnostics
- 7.6.1 UC 6.1 DTC resolution
- 7.6.2 UC 6.2 VM symptom resolution
- 7.6.3 UC 6.3 Integrated diagnostics
- 7.7 UC 7 Updating, replacing and tuning of modules (ECUs)
- 7.7.1 UC 7.1 Updating and replacing modules
- 7.7.2 UC 7.2 Tuning kit
- 7.8 UC 8 Electronic maintenance history
- 7.9 UC 9 Repair assistance technical support
- 7.10 UC 10 Request contact for specific RMI
- 7.10.1 UC 10.1 Electronic tool information (Diagnostic, Reprogramming, VCI)
- 7.10.2 UC 10.2 Test equipment and diagnostic tool manufacturers
- 7.10.3 UC 10.3 Training material (delegate information)
- 7.10.4 UC 10.4 Redistributors
- 7.10.5 UC 10.5 Republishers
- 7.10.6 UC 10.6 Inspection and testing services
- 7.10.7 UC 10.7 Alternative fuels retrofit systems
- 7.10.8 UC 10.8 Engine and components remanufacturing
- 7.10.9 UC 10.9 Component and parts manufacturers
- 7.10.10 UC 10.10 Validation of independently developed non-proprietary VCIs
- 7.11 UC 11 Courses and training information

8 Technical requirements

- 8.1 Requirements cluster — Access-related data administration
 - 8.1.1 [TREQ-1] General access-related data administration
 - 8.1.2 [TREQ-2] Administration of IO data by the VM
 - 8.1.3 [TREQ-3] Administration of IO employee data by the VM
 - 8.1.4 [TREQ-4] Administration of payment data by the VM
 - 8.1.5 [TREQ-5] Administration of access event data by the VM
 - 8.1.6 [TREQ-6] Administration of access event data to security-related RMI by the VM
- 8.2 Requirements cluster — IT architecture
 - 8.2.1 [TREQ-7] Conceptual architecture
 - 8.2.2 [TREQ-8] Implementation principles
- 8.3 Requirements cluster — External interfaces
 - 8.3.1 [TREQ- 9] Vehicle communication interface (VCI)
 - 8.3.2 [TREQ-10] Trust centre (certificate management)
 - 8.3.3 [TREQ-11] Parts ordering for security-related features
 - 8.3.4 [TREQ-12] Partnered accessory provider systems
- 8.4 Requirements cluster — Technical infrastructure
 - 8.4.1 [TREQ-13] Type of device
 - 8.4.2 [TREQ-14] Hardware features
 - 8.4.3 [TREQ-15] Operating systems
 - 8.4.4 [TREQ-16] Web browsers
 - 8.4.5 [TREQ-17] Presentation formats for information packages
 - 8.4.6 [TREQ-18] Internet connection
 - 8.4.7 [TREQ-19] Performance of the VM RMI system
- 8.5 Requirements cluster — Co-existence of VM software installed on IO client
 - 8.5.1 [TREQ-20] Requirements for installing VM-specific software on the IO client

- 8.5.2 [TREQ-21] Requirements for updating of installed VM data and applications on the IO client
 - 8.5.3 [TREQ-22] Requirements for the operation of VM-specific software on the IO client
 - 8.5.4 [TREQ-23] Requirements for the uninstalling of VM-specific software on the IO client
 - 8.5.5 [TREQ-24] Requirements for restoring in case of an abnormal termination of the VM-specific software on the IO client
 - 8.6 Requirements cluster — Operations
 - 8.6.1 [TREQ-25] VM RMI system availability time
 - 8.6.2 [TREQ-26] Support for the usage of the VM RMI system
 - 8.6.3 [TREQ-27] Operation of the IO PC
 - 8.6.4 [TREQ-28] Requirements cluster "functional user interface"
 - 8.7 ISO 18541-2:2014, Annex A
- 9 Functional user interface requirements
- 9.1 Requirements cluster 1 — Standardized access mode
 - 9.1.1 VM RMI system standardized navigation
 - 9.1.2 [FREQ-1] RMI access mode
 - 9.1.3 [FREQ-2] Registration and login support
 - 9.2 Requirements cluster 2 — Use cases map
 - 9.2.1 [FREQ-3] VM RMI system implemented use cases map
 - 9.2.2 [FREQ-4] Download area
 - 9.3 Requirements cluster 3 — Navigational pathway
 - 9.3.1 [FREQ-5] Navigational pathway
- 10 Conformance test cases
- 10.1 CT cluster 1 — Test technical infrastructure
 - 10.1.1 [RMI-CT_TREQ-13, 14, 15, 16, 18, Annex A] Test client configuration
 - 10.1.2 [RMI-CT_TREQ-17] Test presentation formats for information packages
 - 10.2 CT cluster 2 — Test client's external interfaces
 - 10.2.1 [RMI-CT_TREQ-9] Test vehicle communication interface
 - 10.2.2 [RMI-CT_TREQ-11] Test parts ordering for security-related features
 - 10.2.3 [RMI-CT_TREQ-12] Test partnered accessory provider systems
 - 10.3 CT cluster 3 — Test user authentication, authorization and administration
 - 10.3.1 [RMI-CT_UC1.1] Test to register IO for use of the VM RMI system
 - 10.3.2 [RMI-CT_UC1.2_A] Test to register IO employee for use of the VM RMI system — Scenario A
 - 10.3.3 [RMI-CT_UC1.2_B] Test to register IO employee for use of the VM RMI system — Scenario B
 - 10.3.4 [RMI-CT_UC1.3] Test to maintain IO status
 - 10.3.5 [RMI-CT_UC1.4] Test to maintain user status
 - 10.3.6 [RMI-CT_UC1.5] Test to de-register an IO employee
 - 10.3.7 [RMI-CT_UC1.6] Test login to VM RMI system
 - 10.3.8 [RMI-CT_UC1.7] Test for granting access to security-related RMI
 - 10.4 CT cluster 4 – Test functional user interface implementation
 - 10.4.1 [RMI-CT_FREQ-1] Test for RMI access mode
 - 10.4.2 [RMI-CT_FREQ-2] Test for registration and login support
 - 10.4.3 [RMI-CT_FREQ-3] Test for implemented use cases map
 - 10.4.4 [RMI-CT_FREQ-4] Test for download area
 - 10.4.5 [RMI-CT_FREQ-5] Test for navigational pathway
 - 10.5 CT cluster 5 – Test payment for RMI
 - 10.5.1 [RMI-CT_UC2] Test payment for RMI
 - 10.6 CT cluster 6 –Test for vehicle identification
 - 10.6.1 [RMI-CT_UC3.1] Test vehicle identification through use of VIN
 - 10.6.2 [RMI-CT_UC3.2] Test vehicle identification via product features
 - 10.6.3 [RMI-CT_UC3.3] Test vehicle identification through product identifier
 - 10.6.3.1 Overview
 - 10.6.3.2 Test purpose
 - 10.6.3.3 Configuration
 - 10.6.3.4 Preamble (setup state)
 - 10.6.3.5 Test execution
 - 10.6.3.6 Postamble
 - 10.6.4 [RMI-CT_UC3.4] Test unequivocal engine identification
 - 10.6.4.1 Overview
 - 10.6.4.2 Test purpose

- 10.6.4.3 Configuration
- 10.6.4.4 Preamble (setup state)
- 10.6.4.5 Test execution
- 10.6.4.6 Postamble
- 10.6.5 [RMI-CT_UC3.5] Test engine type identification via engine features
- 10.6.5.1 Overview
- 10.6.5.2 Test purpose
- 10.6.5.3 Configuration
- 10.6.5.4 Preamble (setup state)
- 10.6.5.5 Test execution
- 10.6.5.6 Postamble
- 10.7 CT cluster 7 — Test selection methods for RMI
- 10.7.1 [RMI-CT_UC4.1] Test selection of information type
- 10.7.2 [RMI-CT_UC4.2] Test search by standardized terms
- 10.7.3 [RMI-CT_UC4.3] Test navigation using product structure
- 10.7.4 [RMI-CT_UC4.4] Test selection by document identifier
- 10.8 CT cluster 8 – Test retrieval of information packages
- 10.8.1 [RMI-CT_UC5.1.1] Test retrieval of general workshop procedures
- 10.8.2 [RMI-CT_UC5.1.2] Test retrieval of body repair procedures
- 10.8.3 [RMI-CT_UC5.1.3] Test retrieval of temporary repair procedures
- 10.8.4 [RMI-CT_UC5.1.4] Test retrieval of preparation for PTI
- 10.8.5 [RMI-CT_UC5.2] Test retrieval of wiring diagrams
- 10.8.6 [RMI-CT_UC5.3] Test retrieval of technical service bulletin
- 10.8.7 [RMI-CT_UC5.4] Test retrieval of recall information
- 10.8.8 [RMI-CT_UC5.5] Test retrieval of maintenance schedule
- 10.8.9 [RMI-CT_UC5.6.1] Test retrieval of spare parts (identification)
- 10.8.10 [RMI-CT_UC5.6.2] Test retrieval of spare parts (access)
- 10.8.11 [RMI-CT_UC5.7.1] Test retrieval of accessory information factory fitted (included in general RMI)
- 10.8.12 [RMI-CT_UC5.7.2] Test retrieval of accessory information partnered with a VM part number
- 10.8.13 [RMI-CT_UC5.7.3] Test retrieval of fitting information for accessories with no VM part number
- 10.8.14 [RMI-CT_UC5.8] Test retrieval of labour times
- 10.8.15 [RMI-CT_UC5.9] Test retrieval of converted vehicle information
- 10.8.16 [RMI-CT_UC5.10] Test retrieval of special tool information
- 10.8.17 [RMI-CT_UC5.11] Test type-approval related information
- 10.8.17.1 Overview
- 10.8.17.2 Test purpose
- 10.8.17.3 Configuration
- 10.8.17.4 Preamble (setup state)
- 10.8.17.5 Test execution
- 10.8.17.6 Postamble
- 10.9 CT cluster 9 — Test vehicle diagnostics
- 10.9.1 [RMI-CT_UC6.1] Test DTC resolution
- 10.9.2 [RMI-CT_UC6.2] Test VM symptom resolution
- 10.9.3 [RMI-CT_UC6.3] Test integrated diagnostics
- 10.10 CT cluster 10 — Test updating, replacing and tuning of modules (ECUs)
- 10.10.1 [RMI-CT_UC7.1] Test updating and replacing modules information
- 10.10.2 [RMI-CT_UC7.2] Test tuning kit
- 10.11 CT cluster 11 — Test electronic maintenance history
- 10.11.1 [RMI-CT_UC8] Test electronic maintenance history information
- 10.12 CT cluster 12 — Test repair assistance, technical support
- 10.12.1 [RMI-CT_UC9] Test repair assistance technical support information
- 10.13 CT cluster 13 — Test request for contact information
- 10.13.1 [RMI-CT_UC10.1] Test for retrieval of electronic tool information (Diagnostic, Reprogramming, VCI)
- 10.13.2 [RMI-CT_UC10.2] Test for retrieval of test equipment and diagnostic tool manufacturers information
- 10.13.3 [RMI-CT_UC10.3] Test for retrieval of training material (delegate information)
- 10.13.4 [RMI-CT_UC10.4] Test for retrieval of redistributor contact information
- 10.13.5 [RMI-CT_UC10.5] Test for retrieval of republisher contact information
- 10.13.6 [RMI-CT_UC10.6] Test for retrieval of inspection and testing services information
- 10.13.7 [RMI-CT_UC10.7] Test for retrieval of alternative fuels retrofit system information

- 10.13.8 [RMI-CT_UC10.8] Test for retrieval of engine and components remanufacturing information
- 10.13.9 [RMI-CT_UC10.9] Test for retrieval of component and parts manufacturer information
- 10.13.10 [RMI-CT_UC10.10] Test for retrieval of validation of independently developed non-proprietary VCI information
- 10.14 CT cluster 14 — Test courses and training information
- 10.14.1 [RMI-CT_UC11] Test for courses and training information
- 10.15 CT cluster 15 — Test data administration requirements
- 10.15.1 [RMI-CT_TREQ-1] Test general access-related data administration
- 10.15.2 [RMI-CT_TREQ-2] Test administration of IO data by the VM
- 10.15.3 [RMI-CT_TREQ-3] Test administration of IO employee data by the VM
- 10.15.4 [RMI-CT_TREQ-4] Test administration of payment data by VM
- 10.15.5 [RMI-CT_TREQ-5] Test administration of access event data by VM
- 10.15.6 [RMI-CT_TREQ-6] Test administration of access event data to security-related RMI by VM
- 10.16 CT cluster 16— Test VM software installation on the IO client
- 10.16.1 [RMI-CT_TREQ-20] Test for requirements for installing VM-specific software on the IO client
- 10.16.2 [RMI-CT_TREQ-21] Test for requirements for updating of installed VM data and applications on the IO client
- 10.16.3 [RMI-CT_TREQ-22] Test for requirements for the operation of VM-specific software on the IO client
- 10.16.4 [RMI-CT_TREQ-23] Test for requirements for the uninstalling of VM-specific software on the IO client
- 10.16.5 [RMI-CT_TREQ-24] Test for requirements for restoring in case of an abnormal termination of the VM specific software on the IO client
- 10.17 CT cluster 17 — Test VM RMI operations
- 10.17.1 [RMI-CT_TREQ-25] Test for VM RMI system availability time
- 10.17.2 [RMI-CT_TREQ-26] Test for support for the usage of the VM RMI system
- 10.18 CT cluster 18 — Test trust centre (certificate management)
- 10.18.1 [RMI-CT_TREQ-10] Test for trust centre (certificate management)

Page count: 45