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