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Draft for Public Comment

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Part 1: General information and use case definition.

Supersession information: If you are aware of a current national standard which may be affected, please notify the secretary (contact details below).

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The British Standards which implement International or European publications referred to in this draft may be found via the British Standards Online Service on the BSI web site **http://www.bsigroup.com.**

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Introduction

This draft standard is based on European discussions in which the UK has taken an active part. Your comments on this draft are welcome and will assist in the preparation of the consequent British Standard. Comment is particularly welcome on national, legislative or similar deviations that may be necessary.

Even if this draft standard is not approved by the UK, if it receives the necessary support in Europe, the UK will be obliged to publish the official English Language text unchanged as a British Standard and to withdraw any conflicting standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with reasons) or positive vote on this draft.

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- The guidance given below is intended to ensure that all comments receive efficient and appropriate attention by the responsible BSI committee. **Annotated drafts are not acceptable and will be rejected.**

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Date: xx/xx/20xx	Document: **ISO/DIS xxxx**

1	2	(3)	4	5	(6)	(7)
MB	**Clause No./ Subclause No./Annex** (e.g. 3.1)	**Paragraph/ Figure/ Table/Note**	**Type of comment**	**Commend (justification for change) by the MB**	**Proposed change by the MB**	**Secretariat observations on each comment submitted**
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '…so that the mains connector to which no connection…'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	

DRAFT INTERNATIONAL STANDARD ISO/DIS 18541-1

ISO/TC **22**/SC **3** Secretariat: **DIN**

Voting begins on **2011-01-20** Voting terminates on **2011-06-20**

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

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

Part 1:
General information and use case definition

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

ICS 43.040.15; 43.180

ISO/CEN PARALLEL PROCESSING

This draft has been developed within the European Committee for Standardization (CEN), and processed under the **CEN-lead** mode of collaboration as defined in the Vienna Agreement.

This draft is hereby submitted to the ISO member bodies and to the CEN member bodies for a parallel five-month enquiry.

Should this draft be accepted, a final draft, established on the basis of comments received, will be submitted to a parallel two-month approval vote in ISO and formal vote in CEN.

In accordance with the provisions of Council Resolution 15/1993 this document is circulated in the English language only.

Conformément aux dispositions de la Résolution du Conseil 15/1993, ce document est distribué en version anglaise seulement.

To expedite distribution, this document is circulated as received from the committee secretariat. ISO Central Secretariat work of editing and text composition will be undertaken at publication stage.

Pour accélérer la distribution, le présent document est distribué tel qu'il est parvenu du secrétariat du comité. Le travail de rédaction et de composition de texte sera effectué au Secrétariat central de l'ISO au stade de publication.

Contents

Page

Foreword

This document (TC 301 WI 301023.7) has been prepared by Technical Committee CEN/TC 301 “Road vehicles”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EC Directive(s).

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 [1]

"MANDATE TO THE EUROPEAN STANDARDIZATION ORGANISATIONS FOR STANDARDIZATION IN THE FIELD OF VEHICLE OBD, REPAIR AND MAINTENANCE INFORMATION"

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 [1], 2002/24/EC [2] and 2003/37/EC [3] and, in particular, to requirements for access to vehicle repair and maintenance information by independent operators.

This standard only covers the access to Automotive repair and maintenance information[1)] based on Directive 70/156/EEC [1]. The Directive 70/156/EEC [1] is replaced by 2007/46/EC [4].

The purpose of the EC Mandate M/421 [1] is to develop a standard or set of standards which specify the requirements to provide "standardized access to repair and maintenance information (RMI)" for independent operators.

The information included in this part of the standard derives from the legislative requirements on European level in the field of repair and maintenance information and related security requirements.

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 [5] 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 [6].

1 Scope

This part of the standard includes "General Information" which provides a general overview and structure about each part of the standard. It also specifies "Use Cases" related to Repair and Maintenance Information (RMI) systems in order to standardize the access to RMI for independent operators.

The TC 301 WI 301023.7 standard is structured into four parts:

— Part 1: General information and use case definition

— Part 2: Technical requirements

— Part 3: Functional user interface requirements

— Part 4: Conformance test

This part of the standard describes the use cases applicable to the standardized access to RMI. The use cases address real world scenarios when e.g. servicing vehicles in regard to information access necessary to perform vehicle roadside assistance, inspection, diagnostic symptom analysis, repair and maintenance, including re-programming and re-calibration 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);

— a diagnostic system, which provides the capability to access the status of the vehicle's electronic systems with diagnosis capability and to assist in customer's vehicle symptom analysis and repair. This equipment may be comprised of a PC-compatible diagnostic application, a VCI which connects the vehicle electronic systems with the PC;

— a security framework to protect access to security related RMI;

Reading part 1 of this standard will provide an overview about the entire standard and how it applies to the automotive industry.

This part of TC 301 WI 301023.7 is applicable to light passenger and commercial vehicles (EURO 5 and EURO 6) as defined in regulation (EC) 715 /2007. Art. 2 [5].

2 Normative references

The following referenced documents are indispensable for the application 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 15031-6, *Road vehicles — Communication between vehicle and external test equipment for emissions-related diagnostics — Part 6: Diagnostic Trouble Code Definitions*

ISO 22900 (all parts), *Road vehicles — Modular vehicle communication interface (MVCI)*

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

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

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 levels
at least two levels in the VM RMI system are provided: relevant, and not relevant, to security.

3.1.2
Alternate fuels retrofit systems
are retrofit systems which use materials or substances that can be used as fuels, other than conventional fuels. Conventional fuels include: fossil fuels (petroleum (oil), coal, propane, and natural gas). Some well-known alternative fuels include biodiesel, bioalcohol (methanol, ethanol, and butanol), electricity chemically stored (batteries) or created (fuel cells), hydrogen, non-fossil methane, non-fossil natural gas, vegetable oil and other biomass sources.

3.1.3
Alternative fuels system manufacturer
manufacturers of fuel systems designed to be capable of running on at least one type of fuel that is either gaseous at atmospheric temperature and pressure, or substantially non-mineral oil derived.

3.1.4
Appropriate software level
the required software version for the individual vehicle.

3.1.5
Authorized Repairer
AR
is part of the distribution and service network of a vehicle manufacturer.

3.1.6
Certificate
contains a user´s digital identity information.

3.1.7
Converted vehicle
is a 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.

3.1.8
Diagnostic information
a 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 AR.

3.1.9
Diagnostic trouble code
DTC
an alphanumeric identifier for a fault condition identified by the On-Board Diagnostic system. There are other words in use for this term, e.g. fault codes, error codes.

3.1.10
Direct re-publisher
//TODO: definition to be submitted as public enquiry voting comment by Independent Operators.

3.1.11
Electronic service history
is a digital information package according to the VM's schedule with virtual stamps to confirm the execution of the prescribed maintenance actions.

3.1.12
Global technical regulation
GTR
is the World-Wide Harmonized On-Board Diagnostics Global Technical Regulation.

3.1.13
Independent Operator
IO
means undertakings other than authorized dealers and repairers which are directly or indirectly involved in the repair and maintenance of motor vehicles, in particular 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.

3.1.14
Information package
is a collection of information provided by the VM RMI system in response to a specific request.

3.1.15
Information type
different information categories like technical data, repair descriptions, workshop procedures, service information, required special tools, wiring diagrams.

3.1.16
Integrated diagnostics
the VM RMI system interprets via an integrated application the memory content of ECUs and gives a diagnostic and repair recommendation. Diagnostic application and VM RMI system cooperate online, so technical information is provided during the diagnostics process and used for the diagnostic steps

3.1.17
OBD
on-board diagnostics system means a system in the vehicle which has the capability of identifying the likely area of malfunction by means of fault codes stored in a computer memory. The OBD system is not restricted to emissions-related components and systems but covers all aspects of a vehicle subject to type-approval within the scope of the Regulations 715/2007 [5] and 692/2008 [6].

3.1.18
Partnered accessories
accessories which have been tested, quality assured and certified by the VM and for which the VM assumes product liability.

3.1.19
Potential repair descriptions
a list of potential causes and possible actions recommended to fix a problem.

3.1.20
Precise diagnosis
the VM system gives a detailed diagnostic to identify potential problem causes. This can be done through many steps, whereby the user may be requested to perform test actions on the vehicle or to enter symptoms.

3.1.21
Product features
features of a specific vehicle e.g. type of gearbox, air conditioning etc. May be used for navigation through the VM RMI system.

3.1.22
Product structure
the vehicle is divided in units like engine or chassis. These units are further sub-divided into units like engine block, oil pan, etc. The product structure is VM-specific and the navigation follows these divisions.

3.1.23
P-code
standardized DTC for powertrain errors according to ISO 15031-6.

3.1.24
Periodic Technical Inspection service
PTI service
procedure for testing a vehicle within the scope of a PTI (e.g. test of the brake lights).

3.1.25
Recall
takes place when a VM notifies all owners of a specific vehicle of a condition or defect that could affect safety or safe operation of the vehicle. Work dictated by a recall is completed at no charge for the vehicle owner.

3.1.26
Re-distributor
IO offering RMI within their own internal (closed) network e.g. RAC, ADAC, garage networks.

3.1.27
Remanufacturing
a process of overhauling an engine, major assembly or component, to return the engine, major assembly or component to the VM original specification.

3.1.28
Re-publisher
an IO offering RMI in an external (open) network.

3.1.29
Security framework
the set of processes, roles and technical devices for access to security-related RMI recommended by the EC Forum on Vehicle RMI to the EC as mandated in the Regulations 715/2007 [5] and 692/2008 [6]. The framework is based on the approval and authorization of independent operators by certified entities to access security related RMI at the VM RMI system. The physical access to the VM RMI system for security related RMI is bound to a digital certificate.

3.1.30
Security related
referring to components of the vehicle dealing with theft protection, access to the vehicle, vehicle parameters and emissions.

3.1.31
Selection methods
the user could for instance request for a term in document titles of a single type or select information by document ID or other criteria.

3.1.32
Service history
the service history allows a repairer to track the executed prescribed actions for servicing a vehicle e.g. oil changes and other periodic maintenance.

3.1.33
Service schedule
a prescribed sequence of maintenance actions for a vehicle following the requirements of the manufacturer.

3.1.34
Standardized non-proprietary VCI functionality
current standards for communication with a vehicle: SAE J2534-1/-2, ISO 22900-2.

3.1.35
Technical Service Bulletin
TSB
a bulletin issued by the manufacturer detailing a fix for a known concern; the bulletin is for informational purposes only.

3.1.36
Temporary fix
is a temporary solution to a problem that is usually made available to roadside services, e.g. close the roof of a convertible.

3.1.37
Temporary repair procedure
Equivalent to temporary fix.

3.1.38
Vehicle Identification Number
VIN
a unique 17 characters serial number, given by the VM to identify individual motor vehicles.

3.1.39
Vehicle Communication Interface functionality
VCI functionality
set of functions to provide communication between vehicle systems and a software application for diagnostics or re-programming complying with SAE J2534-1 / -2 (using a device known as PTT, Pass-thru-Tool) or ISO 22900-2 (using a MVCI, Modular Vehicle Communication Interface).

3.1.40
Vehicle Manufacturer
VM
means the person or body who is responsible to the approval authority for all aspects of the type approval or authorization process and for ensuring conformity of production of a vehicle. It is not essential that the person or body be directly involved in all stages of the construction of the vehicle, system, component or separate technical unit which is the subject of the approval process (according to Directive 2007/46/EC [4]).

3.1.41
Vehicle Manufacturer Repair and Maintenance Information system
VM RMI system
Website provided by the VM offering access to vehicle repair and maintenance information to independent operators.

3.1.42
Workshop procedure
information provided by a VM describing a specific repair and maintenance, e.g. repair procedures, working advices or other instructions.

3.2 Abbreviated terms

AR	Authorized Repairer
DRP	Direct Re-Publisher
DTC	Diagnostic Trouble Code
ECU	Electronic Control Unit
GTR	Global Technical Regulations
GUI	Graphical User Interface
HMI	Human Machine Interface
IO	Independent Operator
IR	Independent Repairer
MI	Malfunction Indicator
OBD	On-Board Diagnostic
PTI	Periodic Technical Inspection
PTT	Pass-Thru Tool
RMI	Repair and Maintenance Information
TSB	Technical Service Bulletin
VCI	Vehicle Communication Interface
VIN	Vehicle Identification Number
VM	Vehicle Manufacturer

4 Document overview and structure

The TC 301 WI 301023.7 document set provides an implementer with all documents and references required to support the implementation of the requirements related to standardized access to automotive repair and maintenance information in accordance with the requirements set forth in EC mandate M/421 [1].

— TC 301 WI 301023.7-1: General information and use case definitions

This part provides an overview of the document set and structure along with the use case definitions and a common set of resources (definitions, references) for use by all subsequent parts. The standardized access to Automotive RMI shall be implemented by the VMs in their RMI systems.

— TC 301 WI 301023.7-2: Technical requirements

This part specifies all technical requirements related to a VM RMI system. These requirements will reflect the deriving needs from the use cases as specified in part 1.

The following are examples (not a complete list):

— Vehicle Identification requirements,

- Product Information Structure and Navigational Pathway requirements,
- Diagnostic Configuration Scenarios and Communication Interface requirements,
- Security Access related requirements,
- Re-programming requirements,

— TC 301 WI 301023.7-3: Functional user interface requirements
This part specifies all functional user interface requirements related to a VM RMI system. These requirements will reflect the deriving needs from the use cases as specified in part 1.

The following are examples (not a complete list):

- How a user performs login and authenticates himself,
- How a user specifies the vehicle make, vehicle model, model year, etc. This can be achieved by VIN entry or optionally selection of product features,
- How a user navigates through the product information structure,
- How a user specifies RMI search criteria from a list of standardized terms across all vehicle manufacturers;

— TC 301 WI 301023.7-4: Conformance test
This part specifies conformance test cases for a self-conformance test by the provider of the VM RMI system. The conformance test cases will follow the use case definition of part 1 as well as the requirements stated in parts 2 and 3.
The purpose of this part of the standard is to provide information to the VM RMI system provider to build and test the VM RMI system against the conformance test cases. This final step in the development process of the VM RMI system is an enabler for all providers that their VM RMI system meets a high degree of functional requirements expected by the end user.

Figure 1 illustrates the document structure of the "Standardized access to Automotive RMI" standard and the reference to the "Standardized RMI Terminology" standard.

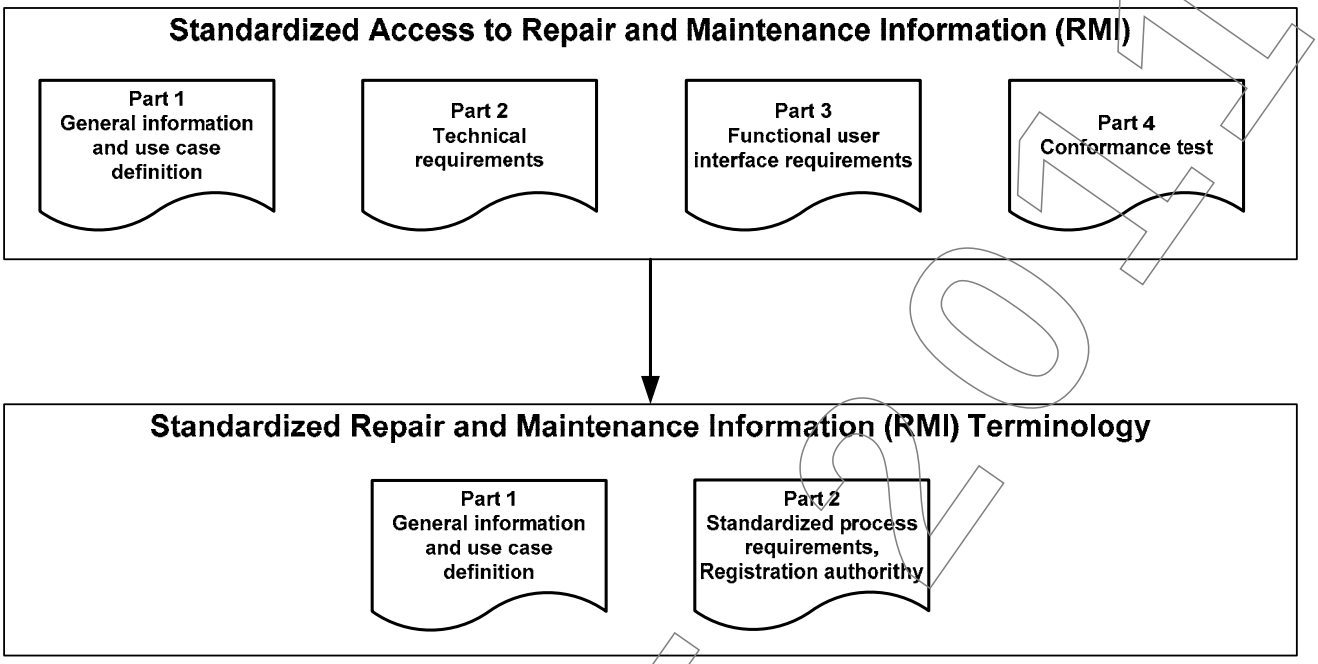


Figure 1 — Document structure

5 General information

5.1 Access to vehicle RMI

This standard specifies use cases and requirements to be supported by VM RMI systems.

Figure 2 illustrates a VM RMI, Diagnostics and Flash Programming Web based server environment. The Independent Operators use RMI clients which shall have access to the Internet.

Multiple VM RMI system configuration scenarios related to the server and client software architecture are possible. It is the VM's responsibility to support an RMI system configuration scenario which meets the requirements and objective of "Standardized Access to Automotive RMI" from a user' point of view.

The following VM RMI system configuration scenarios are examples and should not be considered a complete list of possible configurations to satisfy the use cases and requirements:

— Configuration scenario #1 describes the following server and client installation:

  — Server(s): VM RMI Web system, VM Diagnostic software and configuration data for download by all clients, VM Flash Programming software and ECU files for download by all clients,

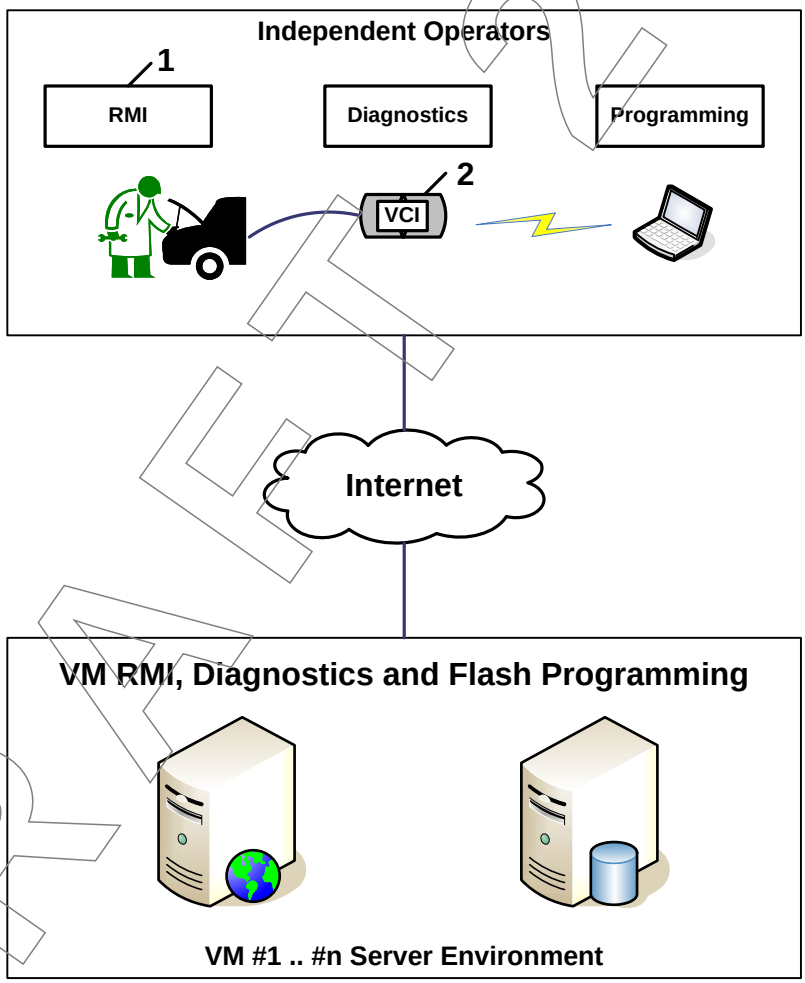
  — Client(s): Browser capable computing hardware platform, Diagnostic software installation downloaded from the server, Flash Programming software installation downloaded from the server, VCI connected to vehicle and computing hardware platform with vehicle communication protocol support to retrieve data from the vehicle through the diagnostic connector, Diagnostics and Flash Programming executed on the client computing hardware platform;

— Configuration scenario #2 describes the following server and client installation:

  — Server(s): VM RMI Web system, VM Diagnostic software and configuration data for download by all clients, VM Flash Programming software and ECU files for download by all clients, Diagnostics and Flash Programming executed on the server for all clients;

  — Client(s): Browser capable computing hardware platform, Diagnostic software installation downloaded from the server, Flash Programming software installation downloaded from the server, VCI connected to vehicle and computing hardware platform with vehicle communication protocol support to retrieve data from the vehicle through the diagnostic connector, the Diagnostics and Flash Programming user interface is separated from the server applications and executed on the client computing hardware platform;

Figure 2 depicts the access to vehicle RMI.



Key
1 Repair and Maintenance Information
2 Vehicle Communication Interface

Figure 2 — Access to vehicle RMI

5.2 Standardized access to RMI benefit examples

5.2.1 Independent Operators

The following benefits are applicable to the independent repairers:

— Similar functional GUI for all vehicle brands,

— Same functional RMI search terminology,

— Functionally equivalent RMI navigational pathway,

— Single PC connected to Internet to access RMI of all vehicle brands;

5.3 VMs

The following benefits are applicable to the vehicle manufacturer service department and repair shops:

— Improved sales of RMI to Independent Operators,

— Streamlines access to RMI to a single method,

— The standard may simplify RMI future system development,

— The standard may provide a consistent interface between RMI, diagnostics and other information;

6 RMI use case overview and principles

6.1 Overview

6.1.1 Basic principles for use case definition

Basic principles have been established as a guideline to define the RMI use cases:

— RMI use cases describe the interaction between an independent operator and the VM websites for RMI access.

— The use cases in the RMI Standard define a common way to organize VM websites for RMI access.

— The content of the technical information provided by the VM website for RMI and the quality of the access implementation is the responsibility of the VM.

— Actors for the use cases are independent operators as defined in the regulation EC 715/2007 [5], VM RMI system and VM.

— Security use cases are a subset of RMI use cases.

— The purpose of the RMI standard is to support the existing relevant legislation for access to RMI.

— The VM is required to provide for the purposes of repair and maintenance the same information that it provides to its authorized repairers in a non-discriminatory manner.

— The VM is only expected to provide the VM RMI system and information in the languages as provided to its authorized repairers.

Special roles for specific use cases may be defined and explained in 3.1.

6.1.2 Use case clusters

Table 1 provides an overview of the main RMI use cases. A main RMI use case cluster may have one or more use case definition.

Table 1 — Main use case clusters

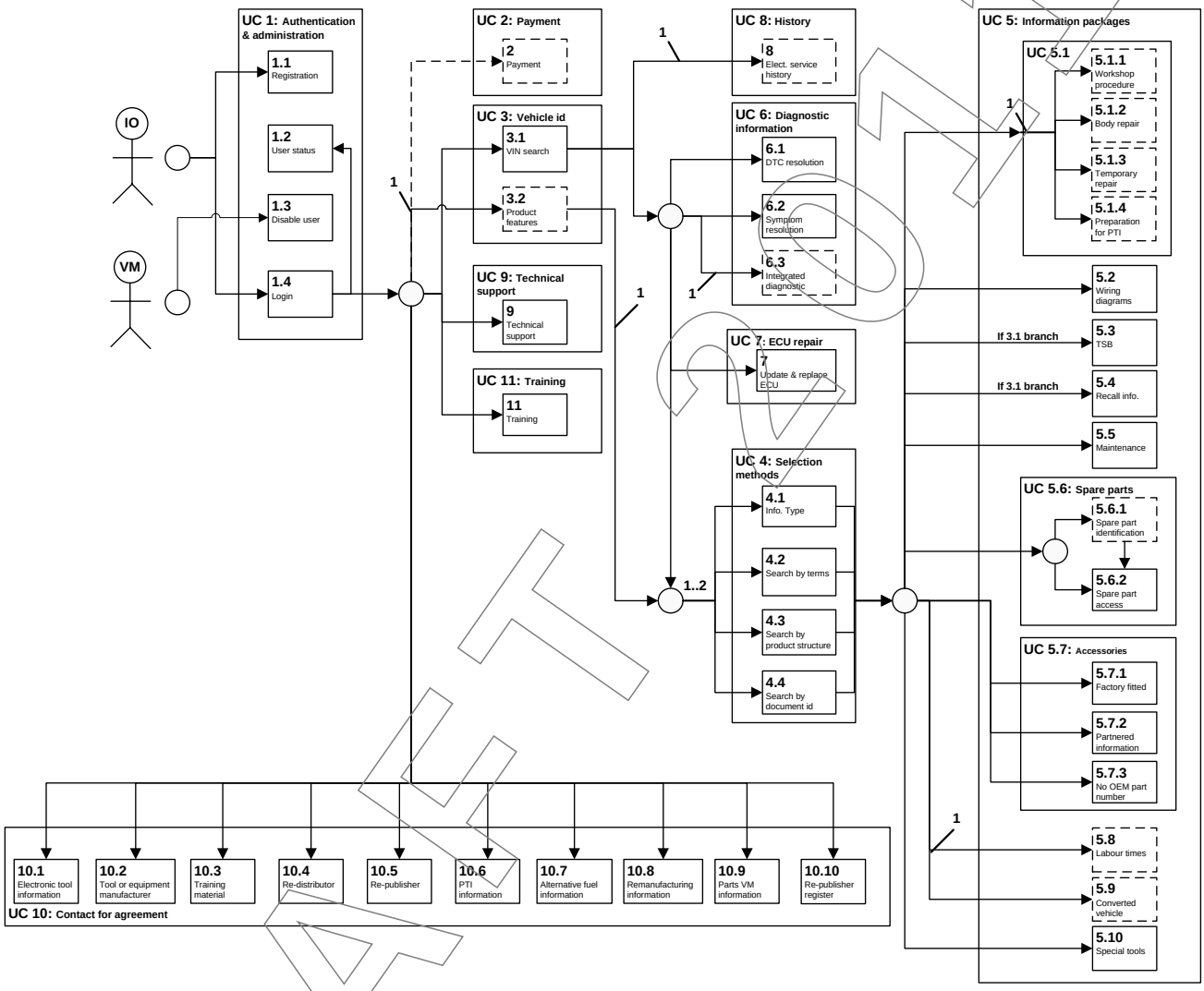
#	Main title of use case cluster	Brief description
1	User authentication, authorization and administration	The use cases belonging to this cluster describe how to obtain a license to use the VM RMI system, keep user data and access level up to date, protect RMI against misuse and how to get access to the VM RMI system.
2	Payment for RMI	The use cases belonging to this cluster describe the handling of payments.
3	Identify vehicle and product structure	The use cases belonging to this cluster describe how to identify a specific vehicle, vehicle summary and type of vehicle. The identification methods are: — by VIN search and/or — product structure.
4	Provide selection methods for RMI	The use cases belonging to this cluster describe how to choose the preferred method to locate and select information. The VM RMI system presents a list of all selection methods supported by the system. A combination of methods shall be possible. The user can for instance request for a term in document titles of a single type. The different access methods are alternative ways to find the same documents in the VM system. The purpose of these use cases is to enable the user to find the required information. There shall be ways to find this information by at least one of the predefined selection methods (see 7.3). The selection methods supported are: — by information types, — by standardized terms, — by product structure and — by document identifier.
5	Retrieve information packages	The use cases belonging to this cluster describe the retrieval of selected repair and maintenance information packages. The user selects one of many documents in the search result list. The VM RMI system displays the selected package of information which are: — workshop procedures (for body repair, temporary repair, periodic technical inspection), — wiring diagrams, — technical service bulletins, — recall information and — maintenance information.

Table 1 — *(continued)*

#	Main title of use case cluster	Brief description
6	Vehicle diagnostics	The use cases belonging to this cluster describe the support for: — DTC resolution, — symptom resolution and — integrated diagnostics.
7	Updating and replacing modules (ECUs)	The use cases belonging to this cluster describe the support of the legitimate update or replacement of vehicle modules/ECUs to return to an operational state after repair with a VM application using approved and known VCIs which meet the standards required by legislation.
8	Electronic service history	The use cases belonging to this cluster describe how to get access and updates about the history of VM prescribed service actions.
9	Repair Assistance, Technical Support	The use cases belonging to this cluster describe how to get advice from the VM if repair assistance or technical support is needed.
10	Request contact information	The use cases belonging to this cluster describe how to request contact information in order to receive information about: — electronic tool, — diagnostics, — VCI, — training material, — etc.
11	Courses and training information	The use cases belonging to this cluster describe how to get information regarding training course availability (online or Web based training).

Figure 3 illustrates all use case clusters and associated use cases. The arrows indicate the dependencies and workflow between the use cases.

The detailed definition of each use case is defined in clause 7.



Key

1 path to optional use cases

--------- optional

Figure 3 — Use case workflow and dependencies

7 RMI use case definition

7.1 UC 1 User authentication, authorization and administration

7.1.1 UC 1.1 Register for use of the VM RMI system

Figure 4 depicts the UC 1.1 Register for use of the VM RMI system.

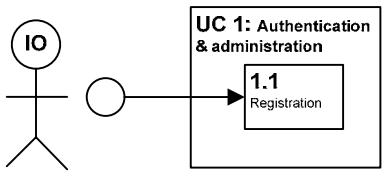


Figure 4 — UC 1.1 Register for use of the VM RMI system

Table 2 specifies the applicable use case to meet the requirements.

Table 2 — UC 1.1 Register for use of the VM RMI system

Actor	Independent Operator
Goal	Obtain a license to use the VM RMI system
Use case input	User data, (common practice actually: — first name, family name — email-address, — company name, — postal address, — country, — inter-community VAT No., — preferred language, — agreement to Terms and Conditions, — and if required username and password) Further input may be required due to local legislation or to enable a higher level of service and optionally a digital certificate for security related RMI.
Use case output	Contract agreement between IO and VM. Independent operator´s employee registered as an authorized user in the VM RMI system. Access level and permissions are granted according to presented certificates.
Brief description	The VM validates the identity, the legitimacy of the requester and optionally the certificate of the independent operator. Independent Operator´s employee formally agrees with the terms and conditions for VM RMI system use. The VM accepts IO´s employee as a user and determines the access level and communicates this to the user. The VM RMI system asks the user to choose a user id and assigns a first password to the user. VM may charge a registration fee to the IO. The VM determines the subject of registration permitted on its site i.e. whether it handles users as individuals or as dealerships. The authentication mechanism is VM specific. Pre-requisites for registration shall be defined, agreed and used by each VM.

7.1.2 UC 1.2 Maintain user status

Figure 5 depicts the UC 1.2 Maintain user status.

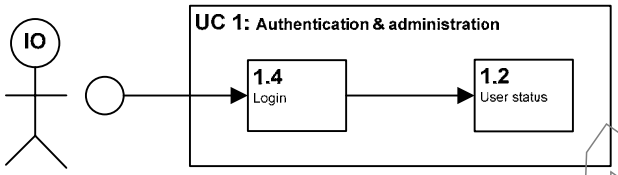


Figure 5 — UC 1.2 Maintain user status

Table 3 specifies the applicable use case to meet the requirements.

Table 3 — UC 1.2 Maintain user status

Actor	Independent Operator
Goal	Keep user data and access level up to date.
Use case input	Request to change user data or access level.
Use case output	Updated user data or access level.
Brief description	The VM RMI system or the VM administrator updates the user data, validates the request for access to security related RMI and upgrades the access level or rejects the request, if the user does not have a valid certificate and authorization. Finally the VM RMI system or the VM administrator communicates the result to the user.

7.1.3 UC 1.3 Disable user

Figure 6 depicts the UC 1.3 Disable user.

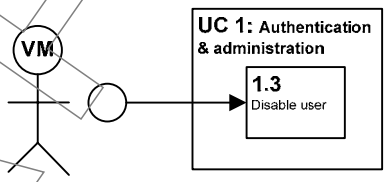


Figure 6 — UC 1.3 Disable user

Table 4 specifies the applicable use case to meet the requirements.

Table 4 — UC 1.3 Disable user

Actor	Vehicle Manufacturer
Goal	Protect RMI against misuse.
Use case input	VM request to withdraw user rights.
Use case output	User account locked for user access.
Brief description	The VM can withdraw/block the access rights for a user in case of misuse of VM RMI system content and functions. This is not limited only to security related functionality.. For example user rights can be cancelled by the VM: — upon request of the user or of the user's company, — misuse, e.g. breach of terms and conditions, — missing payment, — loss of approval/authorization, — VM RMI system unpaid and not used for a pre-defined time period, at least one year; In any case a clear policy statement on this is reflected in the Terms and Conditions on the VM RMI system.

7.1.4 UC 1.4 Login to VM RMI system

Figure 7 depicts the UC 1.4 Login to VM RMI system.

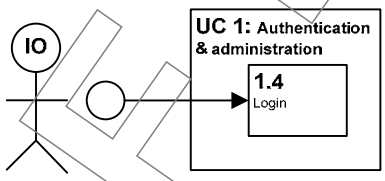


Figure 7 — UC 1.4 Login to VM RMI system

Table 5 specifies the applicable use case to meet the requirements.

Table 5 — UC 1.4 Login to VM RMI system

Actor	Independent Operator
Goal	Access to the VM RMI system.
Use case input	— Username; — Password;
Use case output	Successful login into the VM RMI system.
Brief description	The VM RMI system offers the possibility to enter user name and password. After a successful authentication the first user-specific navigation level is displayed. Access to security-related information and operations requires an appropriate access level, which is bound to a certificate.

7.2 UC 2 Payment for RMI

Figure 8 depicts the UC 2 Payment for RMI.

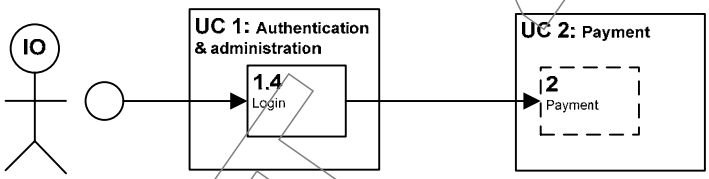


Figure 8 — UC 2 Payment for RMI

NOTE UC 2 should also be accessible after other use cases. For example, the VIN search can be free of charge but the access to a TSB requires a payment. If the payment is not effective, the user will not have access to the TSB information but to the UC 2.

Table 6 specifies the applicable use case to meet the requirements.

Table 6 — UC 2 Payment for RMI

Actor	Independent Operator
Goal	Handling of payments.
Use case input	— Select subscription; — Select payment arrangement; — Payment-relevant user data;
Use case output	— Subscription activated; — Receipt; — User can start using the VM RMI system;
Brief description	The VM RMI system displays a page showing all valid subscriptions (hourly, daily, weekly, monthly and yearly access to the different access levels and transactional access for special use cases) and the VM-supported payment arrangements. All payment must be in accordance with the terms and conditions for the VM RMI system. The user selects the desired subscription and the preferred payment arrangement. The VM RMI system requests the user to enter the necessary data to process the payment arrangement. The VM RMI system validates the input, activates the corresponding subscription and issues a receipt.

7.3 UC 3 Identify vehicle and product structure

7.3.1 UC 3.1 Vehicle identification through use of the VIN

Figure 9 depicts the UC 3.1 Vehicle identification through use of the VIN.

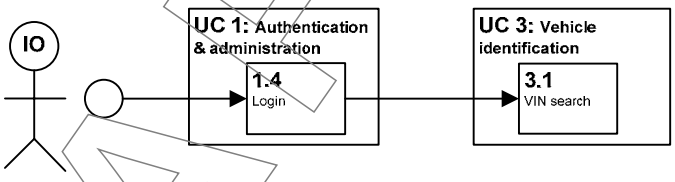


Figure 9 — UC 3.1 Vehicle identification through use of the VIN

Table 7 specifies the applicable use case to meet the requirements.

Table 7 — UC 3.1 Vehicle identification through use of the VIN

Actor	Independent Operator
Goal	Identification of a specific vehicle and vehicle summary.
Use case input	VIN
Use case output	— Vehicle type, — product features, — high level product structure, — factory fitted feature e.g. power steering, brakes, SRS, EPS, EBS, ABS, headlight type, information; — type approval number of the vehicle model.
Brief description	The VM RMI system presents a vehicle summary (factory fitted) major and minor features and available information related to that VIN as provided to the VM´s AR and the type approval number of the vehicle model.

7.3.2 UC 3.2 Vehicle identification through product features

Figure 10 depicts the UC 3.2 Vehicle identification through product features.

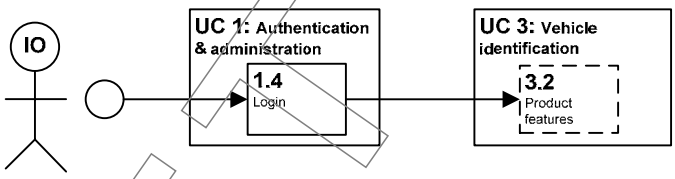


Figure 10 — UC 3.2 Vehicle identification through product features

Table 8 specifies the applicable use case to meet the requirements.

Table 8 — UC 3.2 Vehicle identification via product features

Actor	Independent Operator
Goal	Identification of a vehicle type.
Use case input	Product features, e.g. series, model, year of manufacture.
Use case output	Vehicle information
Brief description	This use case is optional but mandatory if provided to the VM´s AR. The VM RMI system presents available information related to the entered features (e.g. model, type, version, engine code, ...) as provided to the VM´s AR.

7.4 UC 4 Provide selection methods for RMI

7.4.1 UC 4.1 Select information type

Figure 11 depicts the UC 4.1 Select information type.

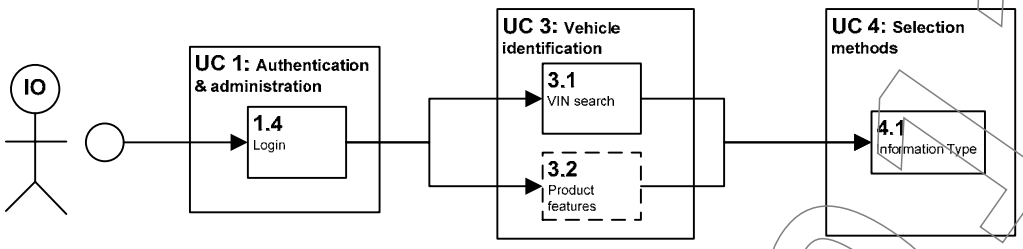


Figure 11 — UC 4.1 Select information type

Table 9 specifies the applicable use case to meet the requirements.

Table 9 — UC 4.1 Select information type

Actor	Independent Operator
Goal	Select relevant information types for the request.
Use case input	Ask for information types.
Use case output	Different information types, e.g.: — technical data, — repair description, — service Information, — required special tools, — wiring diagrams, — temporary fixes;
Brief description	The VM RMI system issues a list of information types. This list varies by VM but is the same list as the VM offers to the AR.

7.4.2 UC 4.2 Search by (standardized RMI terminology) terms

Figure 12 depicts the UC 4.2 Search by (standardized RMI terminology) terms.

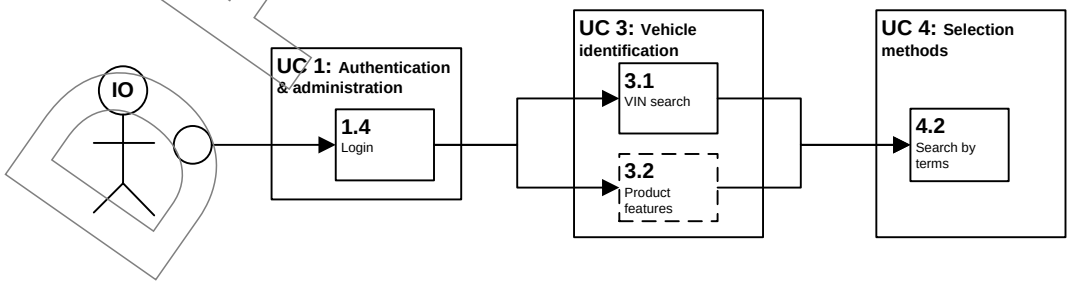


Figure 12 — UC 4.2 Search by (standardized RMI terminology) terms

Table 10 specifies the applicable use case to meet the requirements.

Table 10 — UC 4.2 Selection method – Search by (standardized RMI terminology) terms

Actor	Independent Operator
Goal	Find information to a given term.
Use case input	One term or a combination of terms.
Use case output	All Information package containing the term(s) in the title or in the tags.
Brief description	The VM RMI system searches all information packages titles and tags and not within documents for the requested terms and finally displays a list of all matching documents.

7.4.3 UC 4.3 Navigate using product structure

Figure 13 depicts the UC 4.3 Navigate using product structure.

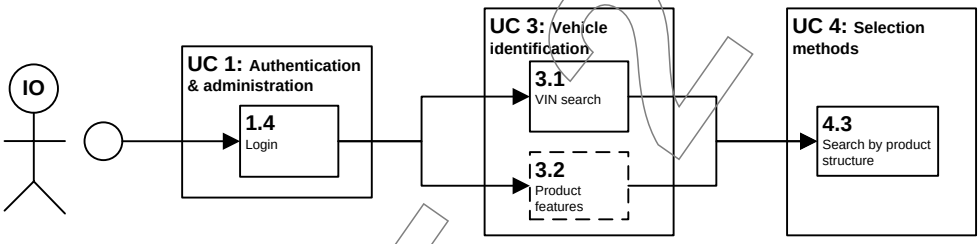


Figure 13 — UC 4.3 Navigate using product structure

Table 11 specifies the applicable use case to meet the requirements.

Table 11 — UC 4.3 Navigate using product structure

Actor	Independent Operator
Goal	Find information by navigating through the product structure.
Use case input	Select the items in the presented product structure.
Use case output	Either a next detail level in the product structure or finally a list of available information for the chosen component.
Brief description	The VM RMI system displays the different levels in the same product structure offered to the VM´s AR and finally displays a list of existing information packages for the finally selected item.

7.4.4 UC 4.4 Select by document ID

Figure 14 depicts the UC 4.4 Select by document ID.

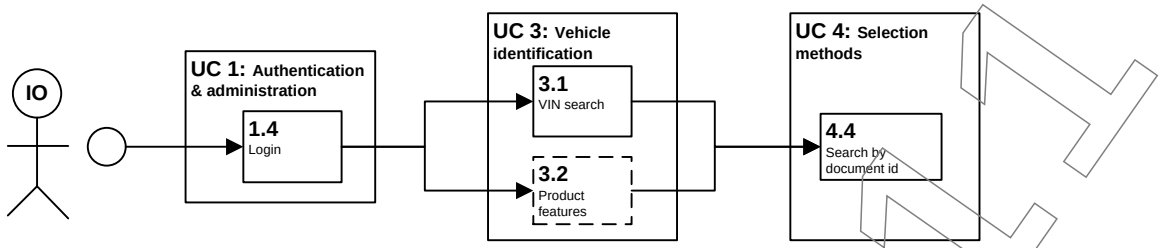


Figure 14 — UC 4.4 Select by document ID

Table 12 specifies the applicable use case to meet the requirements.

Table 12 — UC 4.4 Select by document ID

Actor	Independent Operator
Goal	Find information by document ID.
Use case input	Exact document ID.
Use case output	Display document.
Brief description	This use case is optional but mandatory if provided to the VM´s AR. The VM RMI system displays the requested document.

7.5 UC 5 Retrieve information packages

7.5.1 UC 5.1 Information packages - Workshop procedures

7.5.1.1 UC 5.1.1 General workshop procedures

Figure 15 depicts the UC 5.1.1 General workshop procedures.

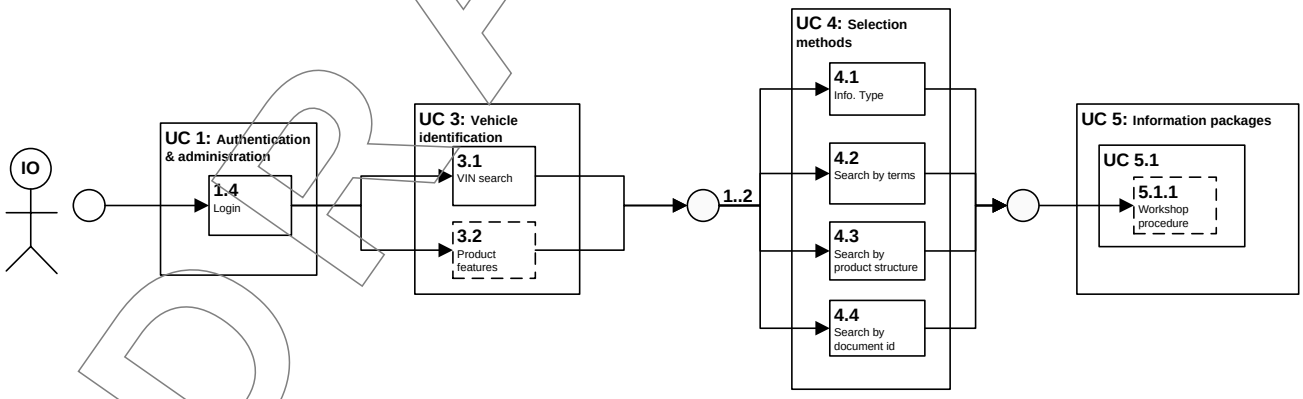


Figure 15 — UC 5.1.1 General workshop procedures

Table 13 specifies the applicable use case to meet the requirements.

Table 13 — UC 5.1.1 General workshop procedures.

Actor	Independent Operator
Goal	Access to the workshop procedures
Use case input	Select the title of one of the workshop procedures:
Use case output	Display the selected workshop procedures:
Brief description	The user selects one of many workshop procedures in the search result list. The VM RMI system displays the selected package of information.

7.5.1.2 UC 5.1.2 Body repair procedures

Figure 16 depicts the UC 5.1.2 Body Repair procedures.

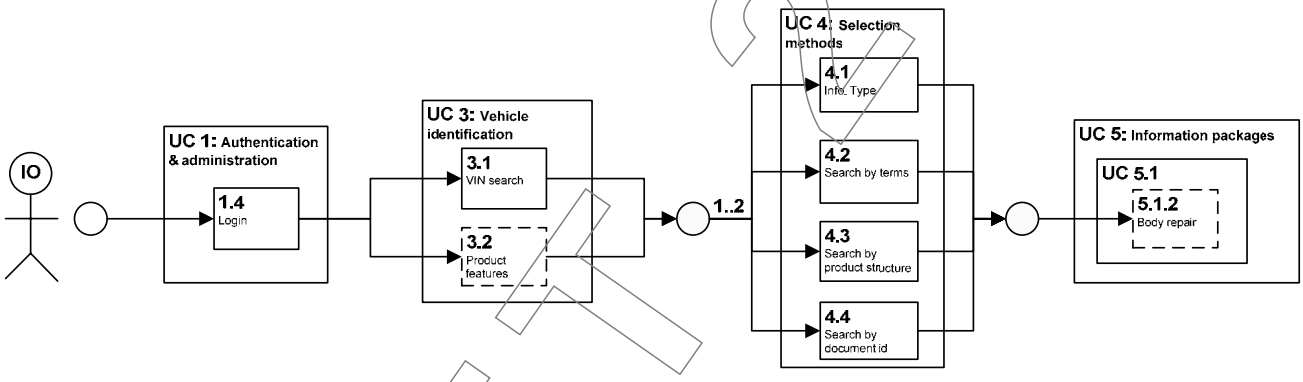


Figure 16 — UC 5.1.2 Body repair procedures

Table 14 specifies the applicable use case to meet the requirements.

Table 14 — UC 5.1.2 Body repair procedures

Actor	Independent Operator
Goal	Access to body repair procedures.
Use case input	Select the title of one of the body repair procedures.
Use case output	Display the selected body repair procedure. Examples: — Information on correct removal of parts and systems, — Information on correct procedures for field replacement of parts including welding, and, chemical and mechanical bonding, — Information for re-alignment, — Information on reinstatement of corrosion resistance process;
Brief description	This use case is optional but mandatory if provided to the VM´s AR. The VM is free to choose the place in the VM RMI system, where to provide this information. The user selects one of many body repair procedures in the search result list. The VM RMI system displays the selected package of information.

7.5.1.3 UC 5.1.3 Temporary repair procedures

Figure 17 depicts the UC 5.1.3 Temporary repair procedures.

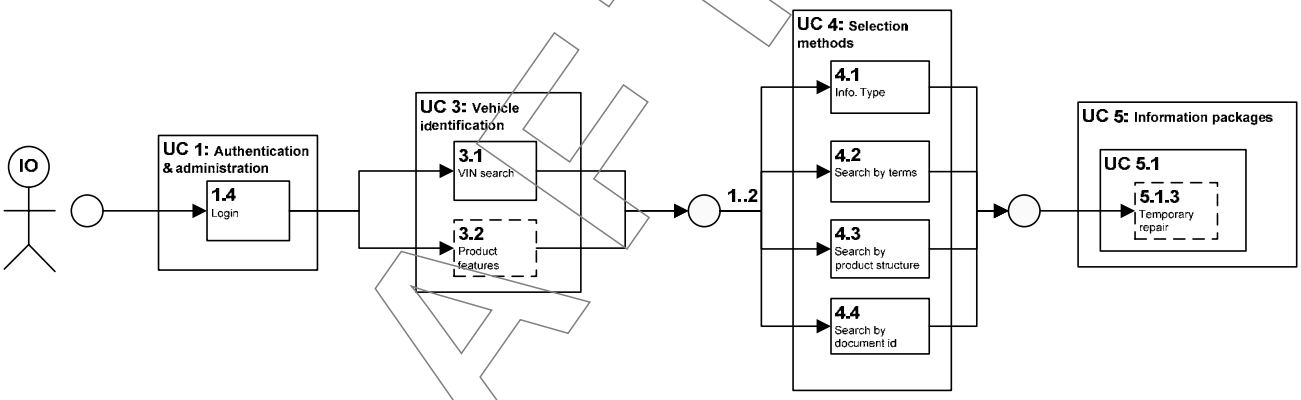


Figure 17 — UC 5.1.3 Temporary repair procedures

Table 15 specifies the applicable use case to meet the requirements.

Table 15 — UC 5.1.3 Temporary repair procedures

Actor	Independent Operator
Goal	Effect a temporary fix to alleviate the customer's problem pending full repair.
Use case input	— Vehicle identification, — Symptom, — Complaint as above;
Use case output	Instructions to effect temporary fix or remote activation.
Brief description	This use case is optional but mandatory if provided to the VM´s AR. The VM is free to choose the place in the VM RMI system, where to provide this information. The user selects one of many temporary repair procedures in the search result list. The VM RMI system displays the selected package of information.

7.5.1.4 UC 5.1.4 Preparation for PTI

Figure 18 depicts the UC 5.1.4 Preparation for PTI.

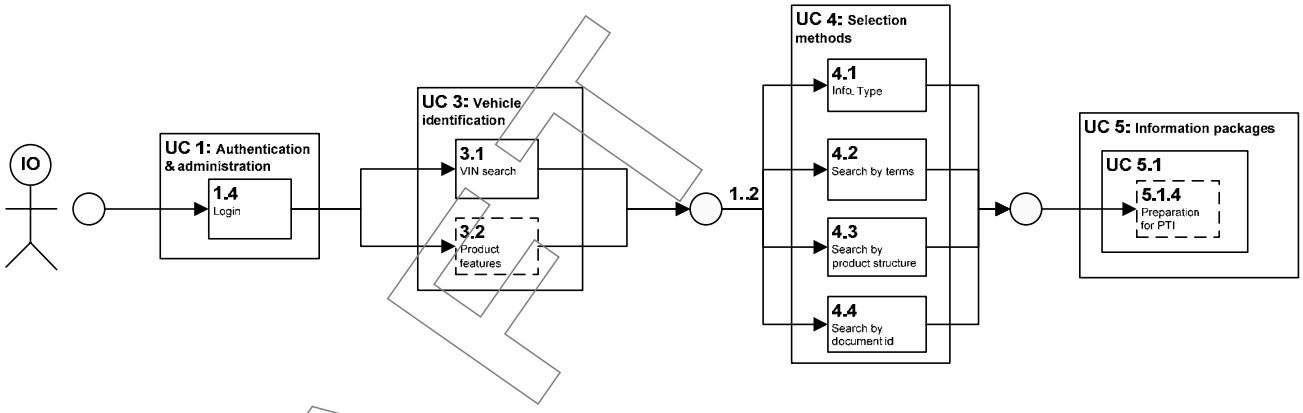


Figure 18 — UC 5.1.4 Preparation for PTI

Table 16 specifies the applicable use case to meet the requirements.

Table 16 — UC 5.1.4 Preparation for PTI

Actor	Independent Operator
Goal	To obtain information to prepare a PTI according to current legislation.
Use case input	Request for information for preparation of a PTI according to current legislation.
Use case output	Country-specific PTI information according to current legislation.
Brief description	This use case is mandatory if provided to the VM´s AR. The Independent operator requests information for the preparation of a PTI according to country-specific legislation. The VM RMI system displays the requested information or offers access to PTI services.

7.5.2 UC 5.2 Wiring diagrams

Figure 19 depicts the UC 5.2 Wiring diagrams.

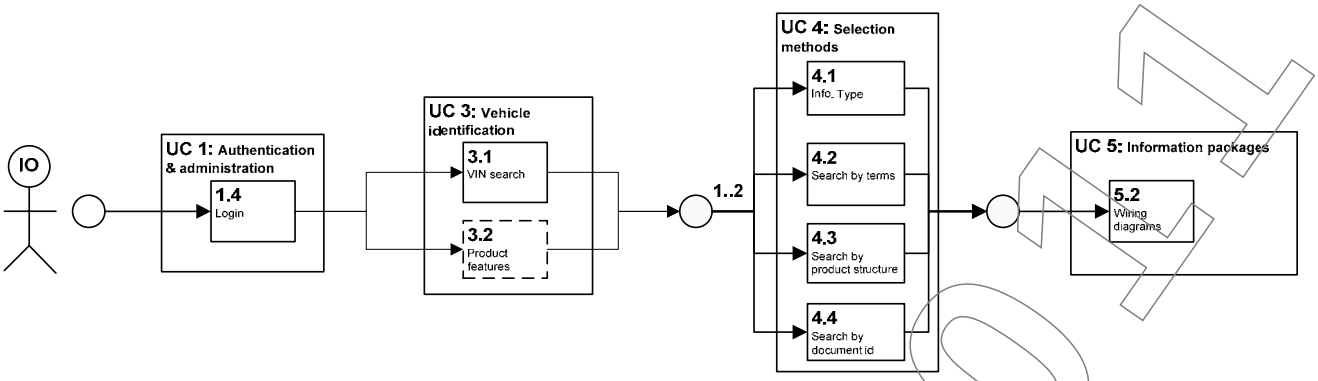


Figure 19 — UC 5.2 Wiring diagrams

Table 17 specifies the applicable use case to meet the requirements.

Table 17 — UC 5.2 Wiring diagrams

Actor	Independent Operator
Goal	Access to the wiring diagrams.
Use case input	Select the title of one of the wiring diagrams.
Use case output	Display the selected wiring diagrams.
Brief description	The user selects one of many wiring diagrams in the search result list. The VM RMI system displays the selected package of information.

7.5.3 UC 5.3 Technical service bulletin

Figure 20 depicts the UC 5.3 Technical service bulletin.

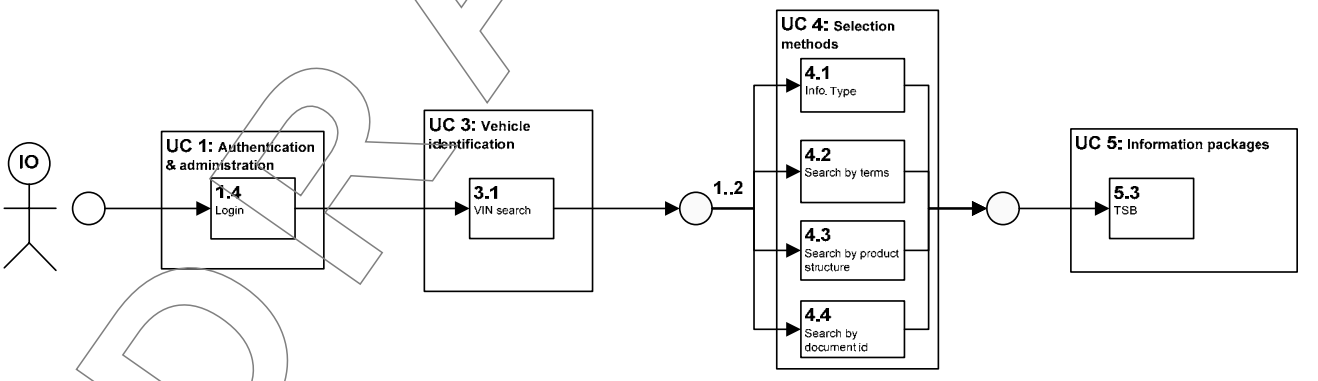


Figure 20 — UC 5.3 Technical service bulletin

Table 18 specifies the applicable use case to meet the requirements.

Table 18 — UC 5.3 Technical service bulletin

Actor	Independent Operator
Goal	Access to the technical service bulletins.
Use case input	Select the title of one of the technical service bulletins. Might only be accessible with a VIN selection.
Use case output	Display the selected technical service bulletin.
Brief description	The user selects one of many technical service bulletins in the search result list. The VM RMI system displays the selected package of information.

7.5.4 UC 5.4 Recall information

Figure 21 depicts the UC 5.4 Recall information.

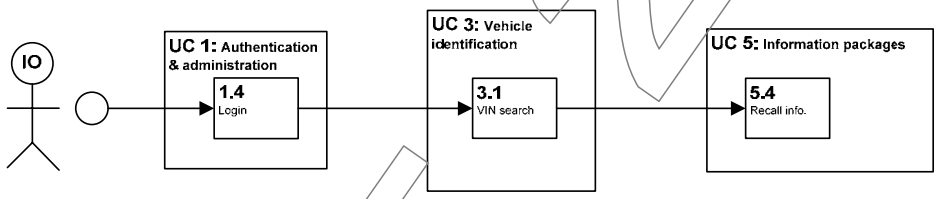


Figure 21 — UC 5.4 Recall information

Table 19 specifies the applicable use case to meet the requirements.

Table 19 — UC 5.4 Recall information

Actor	Independent Operator
Goal	Identify if a recall is required on a vehicle.
Use case input	— VIN selection; — Select the corresponding icon (e.g. alert or process icon) in the VM RMI system;
Use case output	Title of the recall and a message. Indication for the IO that the VM would provide a free of charge repair through their authorized network.
Brief description	The VM RMI system displays an alert after a VIN selection. The VM RMI system displays the title of the recall and a message. The message includes the brief description as provided to VM´s AR. The VM RMI system informs the IO that the VM would provide a free of charge repair through their authorized network.

7.5.5 UC 5.5 Service schedule

Figure 22 depicts the UC 5.5 Service schedule.

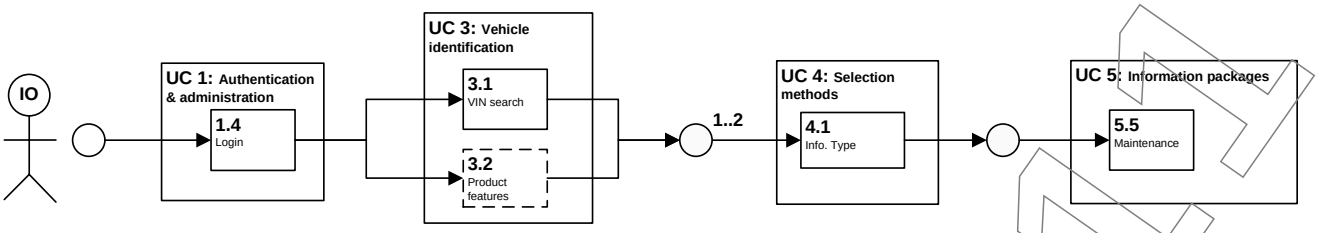


Figure 22 — UC 5.5 Service schedule

Table 20 specifies the applicable use case to meet the requirements.

Table 20 — UC 5.5 Service schedule

Actor	Independent Operator
Goal	Access to service schedule for the vehicle.
Use case input	Vehicle identification: — VIN, or — product features;
Use case output	Service schedule for the vehicle.
Brief description	The VM RMI system provides programs and descriptions for the selected vehicle. The link between service schedule and relevant procedures is optional but mandatory if provided to the VM´s AR.

7.5.6 UC 5.6 Spare parts

7.5.6.1 UC 5.6.1 Spare parts (identification)

Figure 23 depicts the UC 5.6.1 Spare parts (identification).

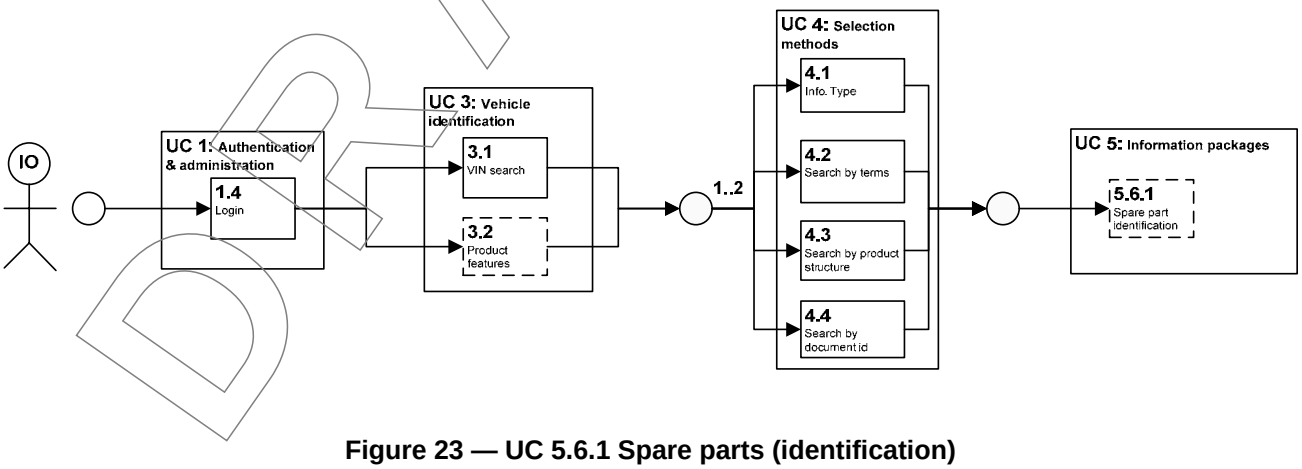


Figure 23 — UC 5.6.1 Spare parts (identification)

Table 21 specifies the applicable use case to meet the requirements.

Table 21 — UC 5.6.1 Spare parts identification

Actor	Independent Operator
Goal	Locate the required spare part information.
Use case input	— select the content of one of the information packages, or — locate link to spare parts catalogue;
Use case output	— display the selected document, or — provide an access path to a spare parts catalogue;
Brief description	The VM RMI system either provides spare parts information or routes the user to the spare parts information system. The VM RMI system may offer access to spare part information also through the repair information packages. The spare part information shall include specific part number and version (if applicable) in the spare parts catalogue.

7.5.6.2 UC 5.6.2 Spare parts (access)

Figure 24 depicts the UC 5.6.2 Spare parts (access).

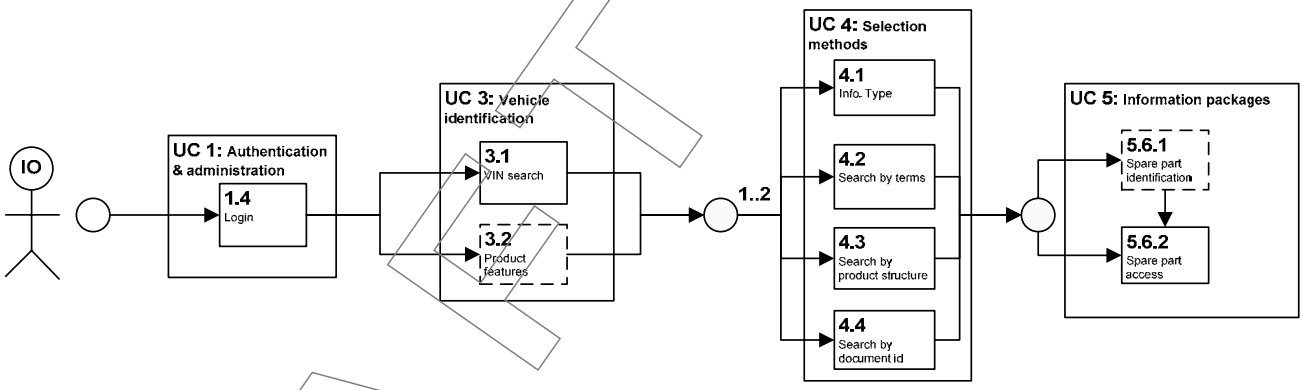


Figure 24 — UC 5.6.2 Spare parts (access)

Table 22 specifies the applicable use case to meet the requirements.

Table 22 — UC 5.6.2 Spare parts (access)

Actor	Independent Operator
Goal	Spare part Information.
Use case input	Access spare parts catalogue direct.
Use case output	Display spare parts catalogue.
Brief description	Displays spare parts catalogue home page. For a particular part the specific part number and version (if applicable) shall be displayed in the spare parts catalogue. This may be in the form of a link from the VM RMI system to an independent catalogue.

7.5.7 UC 5.7 Accessories

7.5.7.1 UC 5.7.1 Accessory information factory fitted (included in general RMI)

Figure 25 depicts the UC 5.7.1 Accessory information factory fitted.

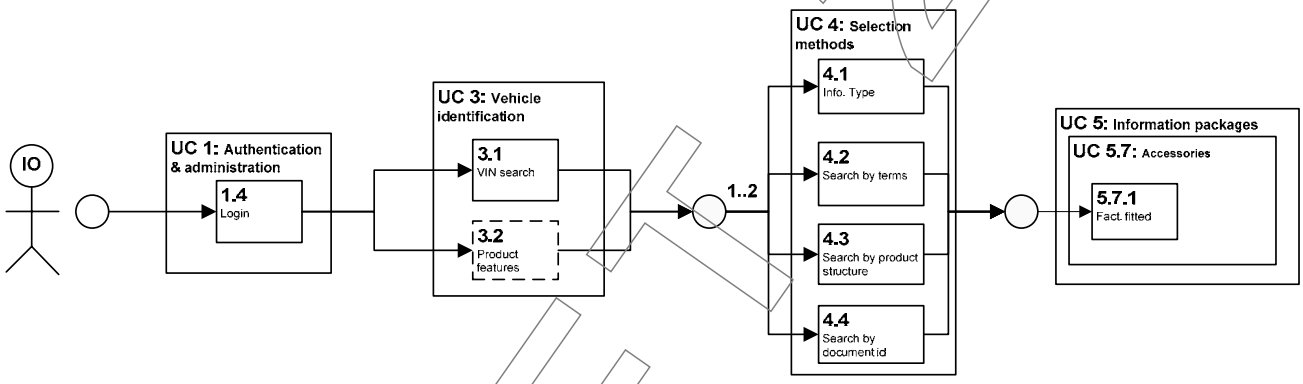


Figure 25 — UC 5.7.1 Accessory information factory fitted

Table 23 specifies the applicable use case to meet the requirements.

Table 23 — UC 5.7.1 Accessory information factory fitted (included in general RMI)

Actor	Independent Operator
Goal	Repair information.
Use case input	Select the information package.
Use case output	Display repair Information.
Brief description	The VM RMI system provides accessory information for VM built-in accessories.

7.5.7.2 UC 5.7.2 Accessory information partnered with a VM part number

Figure 26 depicts the UC 5.7.2 Accessory Information partnered with a VM part number.

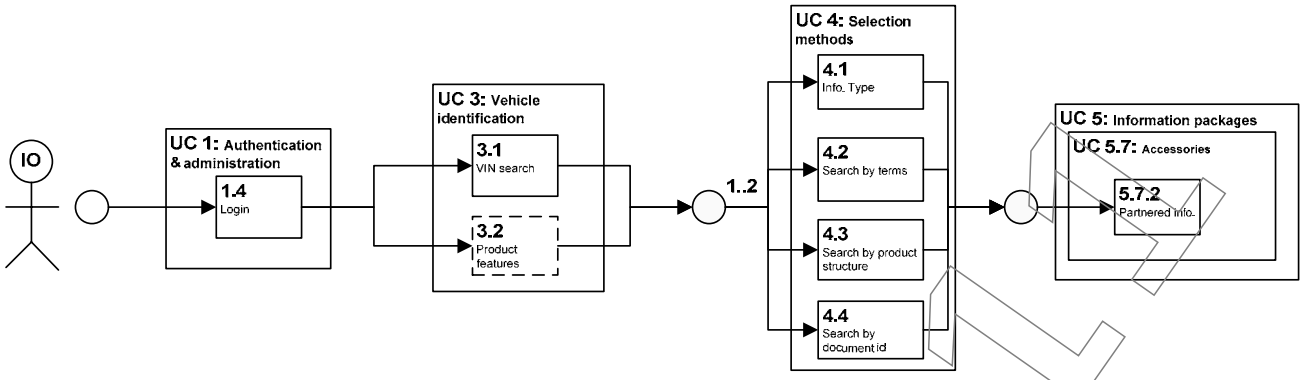


Figure 26 — UC 5.7.2 Accessory Information partnered with a VM part number

Table 24 specifies the applicable use case to meet the requirements.

Table 24 — UC 5.7.2 Accessory information partnered with a VM part number

Actor	Independent Operator
Goal	Fitting and/or repair information.
Use case input	Select the information package.
Use case output	Display fitting and/or repair information.
Brief description	The VM RMI system either provides accessory information or routes the user to accessory information system for partnered accessories. The user is at least redirected to the third party responsible for the accessory.

7.5.7.3 UC 5.7.3 Fitting information for accessories with no VM part number

Figure 27 depicts the UC 5.7.3 Fitting information for accessories with no VM part number.

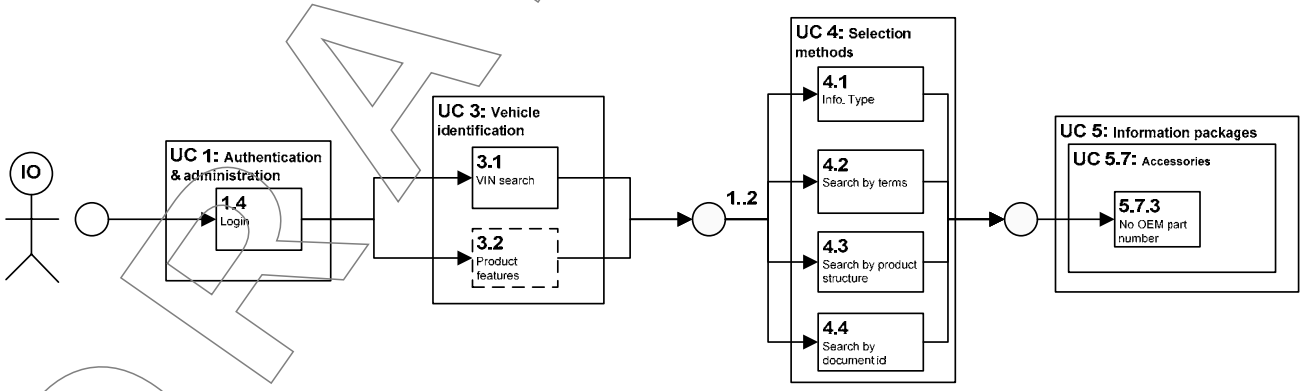


Figure 27 — UC 5.7.3 Fitting information for accessories with no VM part number

Table 25 specifies the applicable use case to meet the requirements.

Table 25 — UC 5.7.3 Fitting information for accessories with no VM part number

Actor	Independent Operator
Goal	Information on fitting Interfaces (mechanical, electrical or electronic).
Use case input	Request information on fitting interfaces.
Use case output	Display information for fitting interfaces.
Brief description	The VM only provides information on published (service manual) or AR available interfaces (mechanical, electrical or electronic) that can be used by an accessory provider. Whenever additional information is available to AR it shall be provided to the IO.

7.5.8 UC 5.8 Labour times

Figure 28 depicts the UC 5.8 Labour times.

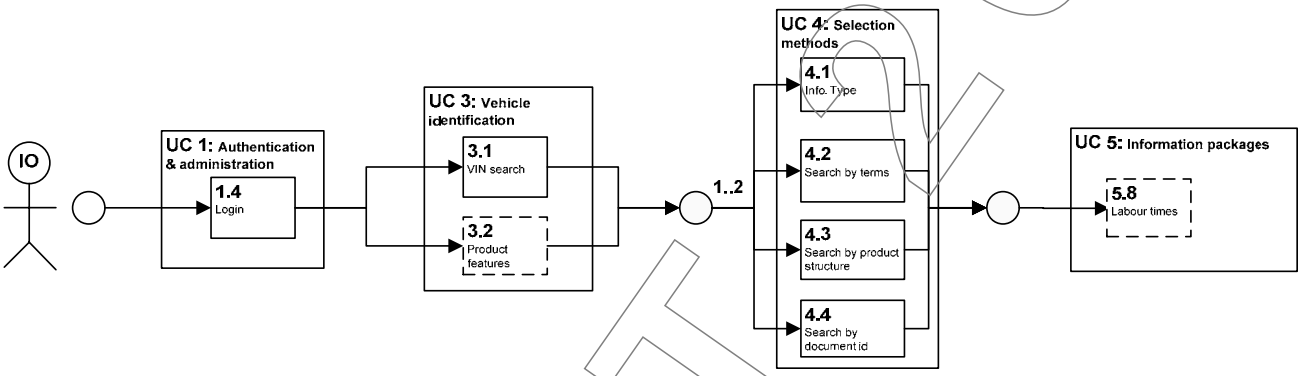


Figure 28 — UC 5.8 Labour times

NOTE UC 5.8 is pending on the decision of the EC legislation.

Table 26 specifies the applicable use case to meet the requirements.

Table 26 — UC 5.8 Labour times

Actor	Independent Operator
Goal	Identify vehicle specific labour times.
Use case input	Select specific labour times.
Use case output	Display the selected labour times.
Brief description	The VM RMI system provides labour times.

7.5.9 UC 5.9 Converted vehicles

Figure 29 depicts the UC 5.9 Converted vehicles.

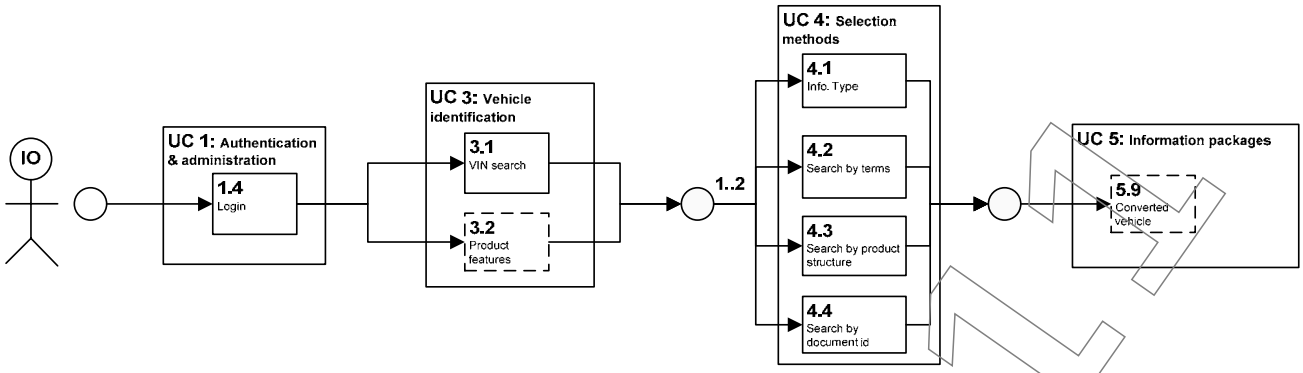


Figure 29 — UC 5.9 Converted vehicles

Table 27 specifies the applicable use case to meet the requirements.

Table 27 — UC 5.9 Converted vehicles

Actor	Independent Operator
Goal	To obtain repair and maintenance information for converted vehicles.
Use case input	VIN or product feature.
Use case output	RMI information on VM components and information on interfaces.
Brief description	The VM RMI system provides RMI on VM components of the converted vehicle and RMI on published or AR available interfaces.

7.5.10 UC 5.10 Special tools

Figure 30 depicts the UC 5.10 Special tools.

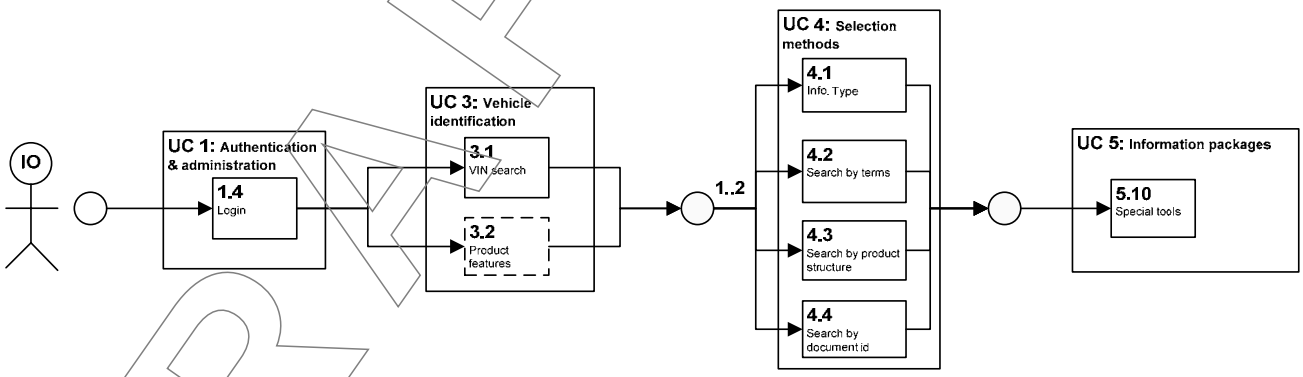


Figure 30 — UC 5.10 Special tools

Table 28 specifies the applicable use case to meet the requirements.

Table 28 — UC 5.10 Special tools

Actor	Independent Operator
Goal	Access to the special tool information.
Use case input	Select the title of one of the information packages e.g. identification of tool, picture and instructions.
Use case output	Display the selected information package.
Brief description	The VM RMI system enables easy identification of special tools. The VM RMI system offers access to special tool information either identification of tool and/or through the repair information package.

7.6 UC 6 Vehicle diagnostics

7.6.1 UC 6.1 DTC resolution

Figure 31 depicts the UC 6.1 DTC resolution.

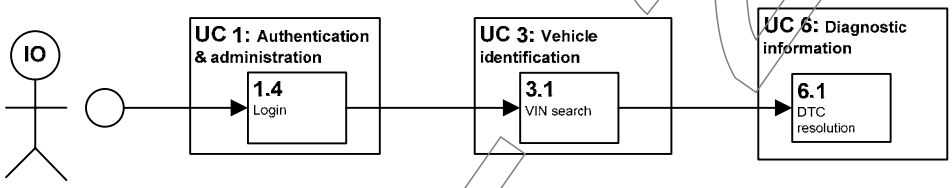


Figure 31 — UC 6.1 DTC resolution

Table 29 specifies the applicable use case to meet the requirements.

Table 29 — UC 6.1 DTC resolution

Actor	Independent Operator
Goal	Provide DTC information.
Use case input	— DTC, — vehicle identification, and — potentially a module;
Use case output	Diagnostic information related to the entered DTC if it is relevant to the vehicle and module.
Brief description	The VM RMI system provides a description of the DTC (including P-Codes) if it is relevant to the vehicle and module. The VM RMI system delivers a list of potential causes or hints for further investigation, to the same level and content as provided to AR.

7.6.2 UC 6.2 VM symptom resolution

Figure 32 depicts the UC 6.2 VM symptom resolution.

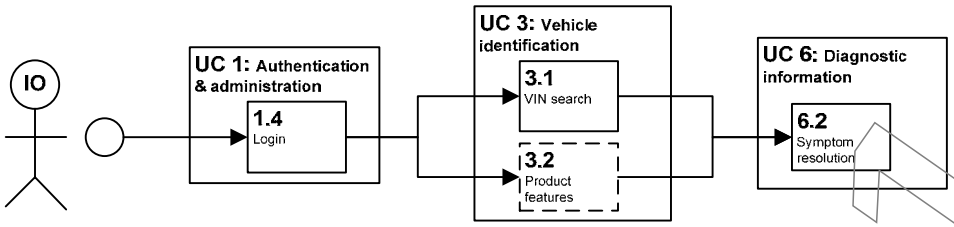


Figure 32 — UC 6.2 VM symptom resolution

Table 30 specifies the applicable use case to meet the requirements.

Table 30 — UC 6.2 VM symptom resolution

Actor	Independent Operator
Goal	Provide diagnosis and repair requirements.
Use case input	— symptoms; — vehicle identification;
Use case output	— diagnostic information; — potential repair descriptions;
Brief description	The user enters or selects a VM symptom as found by reading the published technical documentation. The VM RMI system delivers a list of potential causes or hints for further investigation, to the same level and content as provided to AR.

7.6.3 UC 6.3 Integrated diagnostics

Figure 33 depicts the UC 6.3 Integrated diagnostics.

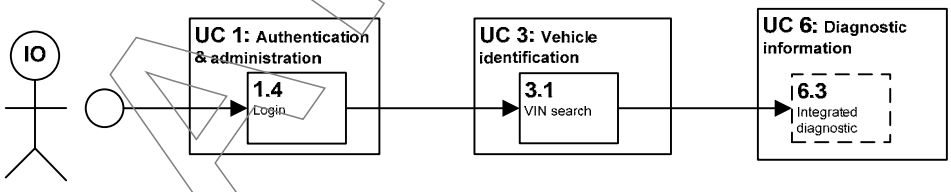


Figure 33 — UC 6.3 Integrated diagnostics

Table 31 specifies the applicable use case to meet the requirements.

Table 31 — UC 6.3 Integrated diagnostics

Actor	Independent Operator
Goal	Provide precise diagnosis and repair requirements.
Use case input	Vehicle linked via standardized non proprietary VCI functionality to VM RMI system. VIN selection.
Use case output	— precise diagnostics results; — repair description;
Brief description	This use case is optional; however, if provided to AR then it shall be provided at the same level to IO (as defined in TC 301 WI 301023.7-2). The user links the vehicle via standardized non-proprietary VCI functionality to VM RMI system using a non-proprietary front end. The VM RMI system interprets via an integrated application the memory contents of ECUs and gives a diagnostic and repair recommendation. This can be done through many steps, whereby the user may be requested to perform test actions on the vehicle or to enter symptoms. The diagnostic application may run on a local device or on a central device accessed via web. Mixed solutions with co-operating local and central components are also possible.

7.7 UC 7 Updating and replacing modules

Figure 34 depicts the UC 7 Updating and replacing modules.

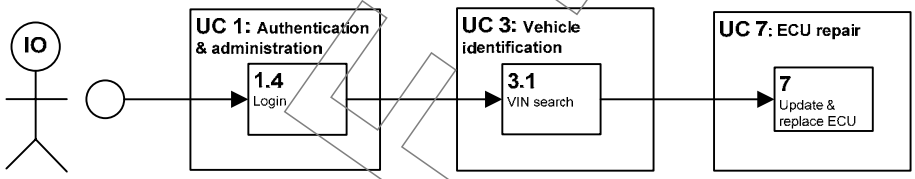


Figure 34 — UC 7 Updating and replacing modules

Table 32 specifies the applicable use case to meet the requirements.

Table 32 — UC 7 Updating and replacing modules

Actor	Independent Operator
Goal	Support the legitimate update or replacement of vehicle modules to return to an operational state after repair, with a VM application using approved and known VCIs.
Use case input	— VIN selection. — User selects necessary action for re-programming single ECUs or the full vehicle. — User selects necessary actions to configure or enable replaced modules.
Use case output	Vehicle updated to the appropriate software level and functional or service parts correctly programmed and configured.
Brief description	The user links the vehicle to the VM RMI system via standardized non proprietary VCI functionality (as defined in TC 301 WI 301023.7-2). The user requests the necessary action for updating or replacing modules. Security measures, i.e. approval/authorization to protect against vehicle theft or tampering may be required. The VM RMI system identifies the required software versions for the individual vehicle. Update the ECU software according to the valid configuration. Electronic preparation, validation and verification of the vehicle before and after the re-programming shall be done according to the VM RMI system instructions. The system logs all re-programming tasks performed during the session. Only independent service parts that have the same functional performance and durability as VM service parts shall be allowed and updated. The updating and replacing of modules using VM service parts and VM validated VCI solutions will be supported (first line and subsequent second line) by the VM. The VM shall provide a list on the VM RMI system validated VCI solutions.

7.8 UC 8 Electronic service history

Figure 35 depicts the UC 8 Electronic service history.

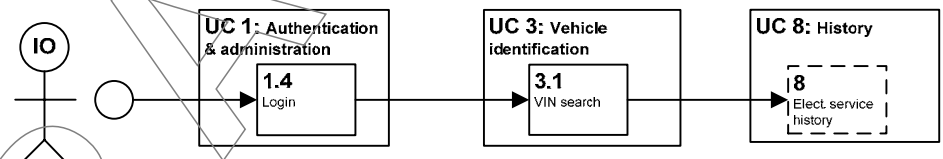


Figure 35 — UC 8 Electronic service history

Table 33 specifies the applicable use case to meet the requirements.

Table 33 — UC 8 Electronic service history

Actor	Independent Operator
Goal	Access and update the history of VM prescribed service actions.
Use case input	— VIN selection; — select the icon in the VM RMI system;
Use case output	Vehicle history of VM prescribed service actions.
Brief description	This use case is optional but mandatory if provided as the only documentation of the service to the customer and to AR. The VM RMI system provides the vehicle history of VM prescribed services. The user provides the requested parameters, acknowledges after performing the service and is able to view and print out the entire service history on request of the customer.

7.9 UC 9 Repair assistance technical support

Figure 36 depicts the UC 9 Repair assistance technical support.

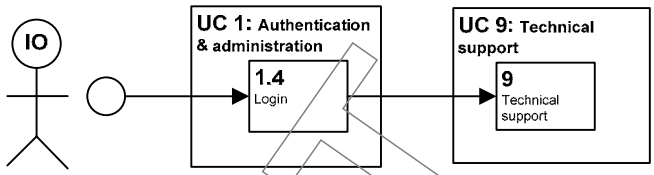


Figure 36 — UC 9 Repair assistance technical support

Table 34 specifies the applicable use case to meet the requirements.

Table 34 — UC 9 Repair assistance technical support

Actor	Independent Operator
Goal	Get advice from VM experts.
Use case input	Request for repair assistance and technical support.
Use case output	Request accepted and routed to the VM experts.
Brief description	The VM RMI system presents contact data. The level of service and the mechanism to deliver the service will also be determined by the VM (telephone, e-mail …) in a non discriminatory manner.

7.10 UC 10 Request contact for specific RMI

7.10.1 UC 10.1 Electronic tool information (Diagnostic, Re-programming, VCI)

Figure 37 depicts the UC 10.1 Electronic tool information.

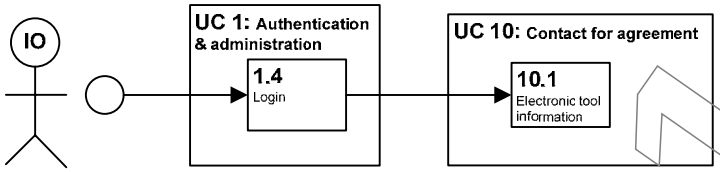


Figure 37 — UC 10.1 Electronic tool information

Table 35 specifies the applicable use case to meet the requirements.

Table 35 — UC 10.1 Electronic tool information (Diagnostic, Re-programming, VCI)

Actor	Independent Operator
Goal	Collect information on how to obtain manufacturer's diagnostic tool, re-programming tool and VCI.
Use case input	Ask for information.
Use case output	— description of manufacturer's diagnostic tool and — VCI available list of contacts (country by country) where diagnostic tools and VCI can be purchased;
Brief description	The independent operator requests information about the VM's diagnostic tool and VCI. The VM RMI system either displays information about the VM's diagnostic tool and VCI and relevant ordering information or links the user to the VM tool supplier website containing the information about the VM's diagnostic tool and VCI and relevant ordering information. This can be contact information to a supplier.

7.10.2 UC 10.2 Test equipment and diagnostic tool manufacturers

Figure 38 depicts the UC 10.2 test equipment and diagnostic tool manufacturers.

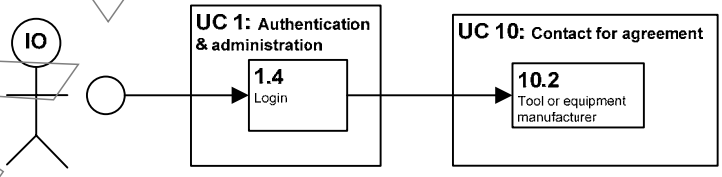


Figure 38 — UC 10.2 Test equipment and diagnostic tool manufacturers

Table 36 specifies the applicable use case to meet the requirements.

Table 36 — UC 10.2 Test equipment and diagnostic tool manufacturers

Actor	Test equipment and diagnostic tool manufacturers
Goal	Find necessary OBD-related and vehicle repair and maintenance information to design and manufacture test equipment or diagnostic tools.
Use case input	Request for information about test equipment and diagnostic tools for the requested vehicle types.
Use case output	Manufacturer's contact information and process for test equipment and diagnostic tool manufacturers.
Brief description	The test equipment or diagnostic tool manufacturer requests information to enable the development of tools. The VM RMI system displays contact data and process information on how to obtain the requested information. This is an individual agreement between test equipment or diagnostic tool manufacturers and VM.

7.10.3 UC 10.3 Training material (delegate information)

Figure 39 depicts the UC 10.3 Training material (delegate information).

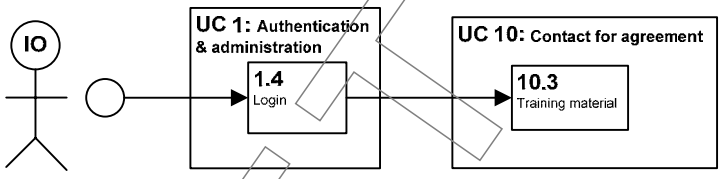


Figure 39 — UC 10.3 Training material (delegate information)

Table 37 specifies the applicable use case to meet the requirements.

Table 37 — UC 10.3 Training material (delegate information)

Actor	Independent training provider
Goal	Training material (delegate information).
Use case input	Request information on training materials.
Use case output	Training material contact.
Brief description	The VM RMI system provides the relevant contact for training materials. The contact may be market specific. Provision of material is subject to individual contractual agreement between the independent training provider and the VM.

7.10.4 UC 10.4 Re-distributors

Figure 40 depicts the UC 10.4 Access and information for re-distributors.

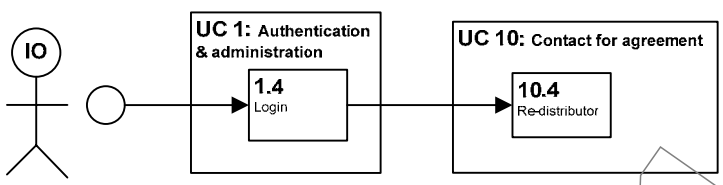


Figure 40 — UC 10.4 Access and information for re-distributors

Table 38 specifies the applicable use case to meet the requirements.

Table 38 — UC 10.4 Access and information for re-distributors

Actor	Re-distributor
Goal	To obtain RMI for re-distribution within their own closed network e.g. RAC, ADAC, garage networks.
Use case input	Identification of desired information and request for re-distribution.
Use case output	— Information package relating to the selected options provided; — Agreement to re-distribute on a contractual agreement;
Brief description	The VM RMI system provides the relevant contact for re-distribution. The contact may be market specific. Provision of material is subject to individual contractual agreement between the re-distributor and the VM.

7.10.5 UC 10.5 Re-publishers

Figure 41 depicts the UC 10.5 Access and information for re-publishers.

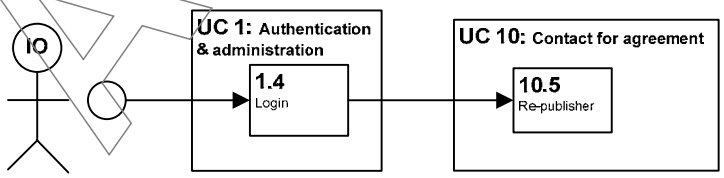


Figure 41 — UC 10.5 Access and information for re-publishers

Table 39 specifies the applicable use case to meet the requirements.

Table 39 — UC 10.5 Access and information for re-publishers

Actor	Re-publishers
Goal	To obtain permission for re-publication and distribution of RMI to an external network.
Use case input	Identification of desired information and request for re-publishing.
Use case output	— Information package relating to the selected options provided; — Agreement to re-publish on a contractual agreement;
Brief description	The VM RMI system provides the relevant contact for re-publishing. The contact may be market specific. Provision of material is subject to individual contractual agreement between the re-publisher and the VM.

7.10.6 UC 10.6 Inspection and testing services

Figure 42 depicts the UC 10.6 Inspection and testing services.

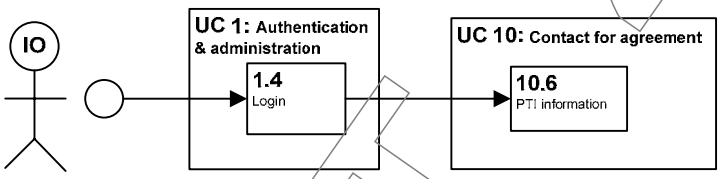


Figure 42 — UC 10.6 Inspection and testing services

Table 40 specifies the applicable use case to meet the requirements.

Table 40 — UC 10.6 Inspection and testing services

Actor	Operator offering inspection and testing services
Goal	Find necessary OBD-related and repair and maintenance information to create inspection and testing services according to country-specific legislation.
Use case input	Request for information to create inspection and testing services.
Use case output	Manufacturer's contact information and process for operators offering inspection and testing services. This may be country specific.
Brief description	The operator offering inspection and testing services officially / formally mandated by a Member State requests information to enable the development of services for an inspection according to country-specific legislation. The VM RMI system displays contact data and the process on how to obtain the requested information. This is an individual agreement between operators offering inspection and testing services and VM.

7.10.7 UC 10.7 Alternative fuels retrofit systems

Figure 43 depicts the UC 10.7 Alternative fuels retrofit systems.

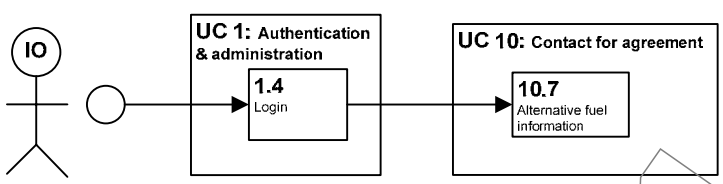


Figure 43 — UC 10.7 Alternative fuels retrofit systems

Table 41 specifies the applicable use case to meet the requirements.

Table 41 — UC 10.7 Alternative fuels retrofit systems

Actor	Alternative fuels system manufacturer
Goal	To obtain OBD-related and repair and maintenance information to properly manufacture or design alternative fuels retrofit systems.
Use case input	Request OBD-related and repair and maintenance information for building alternative fuels system.
Use case output	OBD-related and repair and maintenance information for building alternative fuels system.
Brief description	This use case is only mandatory if the VM allows such an alternative fuel system and if this information is not otherwise available in the VM RMI system. The VM RMI system provides the relevant contact data for OBD-related and repair and maintenance information concerning alternative fuels retrofit systems.

7.10.8 UC 10.8 Engine and components remanufacturing

Figure 44 depicts the UC 10.8 Engine and components remanufacturing.

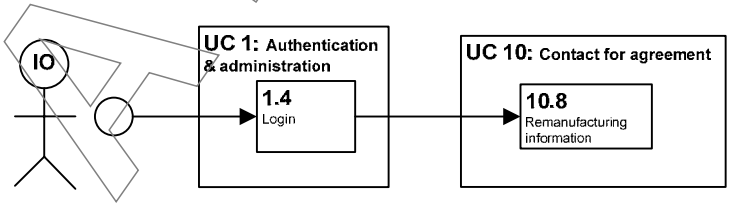


Figure 44 — UC 10.8 Engine and components remanufacturing

Table 42 specifies the applicable use case to meet the requirements.

Table 42 — UC 10.8 Engine and components remanufacturing

Actor	Re-manufacturer
Goal	To obtain engine and component re-manufacturing OBD-related and repair and maintenance information.
Use case input	Request specific engine or component OBD-related and repair and maintenance information necessary for re-manufacturing purposes.
Use case output	Manufacturer's contact for engine or component OBD-related and repair and maintenance information for remanufacturing.
Brief description	This UC is mandatory only if the manufacturers allows remanufacturing and if this information is not otherwise available in the VM RMI system. The VM RMI system provides the relevant contact for engine or component OBD-related and repair and maintenance information for remanufacturing.

7.10.9 UC 10.9 Component and parts manufacturers

Figure 45 depicts the UC 10.9 Component and parts manufacturers.

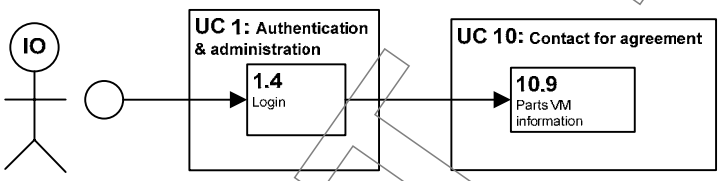


Figure 45 — UC 10.9 Component and parts manufacturers

Table 43 specifies the applicable use case to meet the requirements.

Table 43 — UC 10.9 Information for component and parts manufacturers

Actor	Component and parts manufacturers.
Goal	To obtain information for the manufacturing or design of on-board diagnostic (OBD) system-relevant alternative components and replacement parts.
Use case input	Request information for manufacturing or designing of on-board diagnostic (OBD) system-relevant alternative parts and components.
Use case output	Information for building on-board diagnostic (OBD) system-relevant alternative parts and components. Including any parameterisation information and/or interfaces in order for the part to operate correctly.
Brief description	The component or parts manufacturer requests information to enable the development of on-board diagnostic (OBD) system-relevant alternative parts and components. The VM RMI system displays contact data and process information on how to obtain the requested information. This is an individual agreement between component and parts manufacturer and VM.

7.10.10 UC 10.10 Register and log in through a re-publisher

Figure 46 depicts the UC 10.10 Register and log in through a re-publisher.

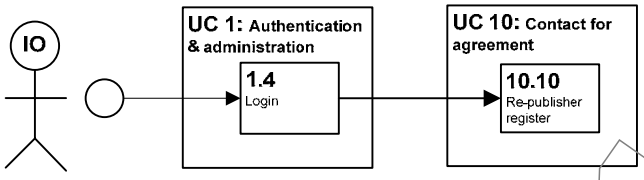


Figure 46 — UC 10.10 Register and log in through a re-publisher

NOTE VM manufacturers do not agree with this use case. VM only accepted to include the use case in the document in order to not delay the beginning of the public inquiry stage.

Table 44 specifies the applicable use case to meet the requirements.

Table 44 — UC 10.10 Register and log in through a re-publisher

Actor	Re-publisher
Goal	To obtain permission to republish RMI on the basis of a real-time direct access to a VM website.
Use case input	Input from DRP (Direct Re-publisher) to VM for registration: — DRP's company name, — legal representative, — postal address, — country, — inter-community VAT No., — preferred language, — agreement to terms and conditions, — if required creation of multiple unique usernames and passwords; — For Login of DRP to VM's site as per 7.1.4.
Use case output	Output from VM to DRP: — For registration: Contract agreement between DRP and VM. — DRP registered as authorized user(s) in the VM database. — Access level and permissions according to presented certificates are documented. — For Log in: Successful login into the VM RMI system
Brief description	This use case is an option for the IO. Registration: The VM validates legitimacy, credentials and acceptance of liability of the DRP. DRP formally agrees with the terms and conditions for VM RMI system use. DRP is a legal entity which declares liability to VM and assures a corresponding liability by the independent operators willing to use its services. It is the DRP's responsibility to ensure a full traceability of the performed transaction between an IO and a VM. The VM accepts DRP as user(s) determines the access level and communicates it to the DRP for each accepted user (s). The authentication mechanism is VM specific. After a successful authentication the first user-specific navigation level is displayed.

7.11 UC 11 Courses and training information

Figure 47 depicts the UC 11 Courses and training information.

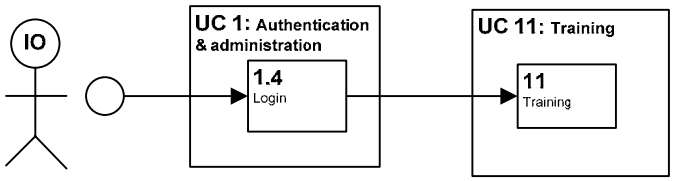


Figure 47 — UC 11 Courses and training information

Table 45 specifies the applicable use case to meet the requirements.

Table 45 — UC 11 Courses and training information

Actor	Independent Operator
Goal	Get information regarding training courses availability and/or online or web based training.
Use case input	Request for training courses information and/or online or web based training.
Use case output	Training contact information for each market and provision of online or web based training under the same terms and conditions as the ARs.
Brief description	The VM RMI system provides a list of relevant contacts (e.g.: e-mail, phone / fax number) for the specific user market area. The IO gets the wanted information and individual or group booking options by contacting the selected address. Additionally, where online or web based training is available, the user shall be able to access the courses under the same terms and conditions as ARs.

Bibliography

[1] EC Mandate M/421: MANDATE TO THE EUROPEAN STANDARDIZATION ORGANISATIONS FOR STANDARDIZATION IN THE FIELD OF VEHICLE OBD, REPAIR AND MAINTENANCE INFORMATION; Directive 70/156/EEC Light- and Heavy-Duty motor Vehicles of 6 February 1970 on the approximation of the laws of the Member States relating to the type-approval of motor vehicles and their trailers, replaced by Directive 2007/46/EC [8];
source: http://eur-lex.europa.eu/

[2] Directive 2002/24/EC Motorbikes (consolidated version of Council Directive 2006/96/EC);
source: http://eur-lex.europa.eu/

[3] Directive 2003/37/EC agricultural or forestry tractors (consolidated version of Council Directive 2006/96/EC);
source: http://eur-lex.europa.eu/

[4] Directive 2007/46/EC of the European Parliament and of the Council of 5 September 2007 establishing a framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles (Framework Directive);
source: http://eur-lex.europa.eu/

[5] 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;
source: http://eur-lex.europa.eu/

[6] 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;
source: http://eur-lex.europa.eu/