

Functional Design

Use case-131: VHINS Retrieve Vehicle Insurance information

Belongs to EUCARIS Web Client

Version No: 1.0.5
Version Date: 23-2-2023

Revision history

| Version Nr | Version Date | Author(s) | Description |
|-------------------|---------------------|------------------|---|
| 1.0.5 | 23-2-2023 | Alie Hoekstra | Updated screen added DataQualityReplyMessageVariable, changed length of email to 130. In case of multiple replies insurance will be collapsed(section 2.2). |
| 1.0.4 | 22-11-2022 | Alie Hoekstra | Added new screen for found, xml was made more generic |
| 1.0.3 | 21-11-2022 | Alie Hoekstra | Processed reviewcomments change Country to Member state, replaced license by licence (britisch) |
| 1.0.2 | 17-11-2022 | Alie Hoekstra | Added new found screen, new is categorycode and country |
| 1.0.1 | 15-11-2022 | Alie Hoekstra | Added alternative flow multiple responses, added menu option. Some textual changes |
| 1.0.0 | 8-11-2022 | Alie Hoekstra | Processed review comments. |
| 0.0.1 | 21-10-2022 | Alie Hoekstra | First draft. |

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1 Scope

1.1 Goal

On the basis of a licence number retrieve vehicle insurance information.
The search will be directed to one specific member state.

1.2 Context

This use case is available via the Eucaris Web Client, in which it is offered as a standalone business process.

1.3 Related documentation

| ID | Version | Date | Name |
|---------|---------|-----------|--|
| [DOC-1] | 1.0.0 | 8-11-2022 | EUCARIS XML Message Specification VHINS(Insurance) |
| [DOC-2] | 1.0.15 | 18-7-2022 | EUCARIS 8.0 XML Message Specification EUCARIS Envelope |
| [DOC-3] | 1.0.0 | 2-4-2021 | EUCARIS Web Client IM-91 Codes and matching descriptions |

1.4 Trigger

In a certain investigation, covered by Council Directive 2009/103/EC and Directive (EU) 2021/2118, it is required to retrieve vehicle insurance information, either the current data or the data at a specified moment in time (reference date).

1.5 Actors

Primary actor:

A police officer or employee of a competent authority handling a case covered by Council Directive 2009/103/EC and Directive (EU) 2021/2118.

Secondary actors:

The EUCARIS message service (specifically, the 'Vehicle Insurance' MessageService).

As a secondary actor, the EUCARIS message service receives a request from system, processes it, and returns a response to the request.

1.6 Non-functional requirements

To this use case, the following overall Eucaris web client requirements apply:

- Actor can choose a preferred language. The default language is English.
- Screen items and labels will be shown in the preferred language.
- Message content will be shown in the preferred language, using coded attributes to provide translations.
- If no translation is available for screen items or message content, the default language is used.
- The format of date elements is configurable. During installation of the EUCARIS web client, the format to use is set.

1.7 Design decisions

1.7.1 Menus and user groups

This use case is part of Insurance. The functionality is available to users that are part of the user group “Insurance Users”.

2 Functional description

2.1 Preconditions

Before starting this use case, the following conditions are satisfied:

- Actor is authorised to use the EUCARIS web client.
- Actor is authorised to use the Insurance services.

2.2 Basic flow

2.3 Description

The member state that the actor is representing, is denoted as home member state. The EUCARIS system of this member state will receive the search request, and send it to its destination.

Step 01: Actor chooses one specific member state from the member state list. The list shown contains all countries matching the following criteria:

- The member state supports the VHINS service and the method Search by Licence Number.
- The home member state is authorised to make queries to the member state.

Step 02: If the actor has chosen the member state 'DE-Germany', system shows the licence number edit field as two separate parts.¹

Step 02: Actor provides the licence number of the vehicle of which the data should be retrieved. For licence plate numbers from Germany, the first part of the licence plate number is populated with the district code, the second part with the rest of the licence plate number-

Step 03: Actor either provides a reference date and time (if he is interested in information about a specific date/time in the past) or not (if he is interested in the current information).

Step 04: Actor submits the query.

Step 05: System validates the user input (for details see 2.4). **Alternate flow 1** if the input is not valid.

Step 06: System creates a request message *RequestByRegistrationNumber* on the basis of the user input of the licence number query, i.e. the input given in steps 03 through 04 of basic flow. For details see Chapter 3.1.

Step 07: System sends the request message to secondary actor EUCARIS Insurance of its home member state.

Step 08: Secondary actor EUCARIS Insurance processes the request message (For details see [DOC-1]), sending it to the member state specified by the actor in Step 01.

Step 09: Secondary actor EUCARIS Insurance waits until the member state has responded or when the time out set for responding, has elapsed.

Step 10: Secondary actor EUCARIS Insurance receives the response message *VHINSResponse*.

Step 12: Secondary actor EUCARIS Insurance sends a response message *VHINSResponse* to system.

Step 13: System calculates the insurance status, as follows:

- If the node *InsuranceReplies* is present, the insurance status is "Found".
- If the node *InsuranceReplies* is not present, and the node *InformationResponseMessages* contains a *InformationResponseMessage* then the insurance status is "Not found".
- If the response is an Errornotification, then the insurance status is "Error".

Step 14: (See also screenshot and details Ch 4.3.1) System shows the insurance status. If the insurance status has status found and there is one reply the details of the insurance are shown. In case of multiple replies first a reply needs to be selected before showing the insurance information.

Step 15: The use case ends when the actor starts a new query, or leaves the VHINS menu option, or closes the EUCARIS Web client, or closes the browser session..

End of use case.

2.3.1 Postconditions basic flow

The results of this use case are:

- Vehicle insurance information has been retrieved in one specific member state.
- The results of the check have been presented to the actor.

¹ In Germany, it is necessary to split up the licence plate number to make it a unique identifier. E.g., it is possible to have M-A123 (a plate from Munich), but also MA-123 (a plate from Mannheim).

2.4 Alternate flow 1: Validation error on request data

This alternate flow applies when the input for the request is not valid (step 05 of the basic flow).

Step 01: System displays an error message explaining to the actor why his input is incorrect. Possible situations are:

| Situation | Message | Variable |
|---|---|----------|
| Actor does not select a member state | The member state is not filled in or not Authorised | |
| Search by licence number | | |
| Actor does not provide a licence number (one part available) | The licence number is not filled in | |
| Actor provides an invalid date | Invalid date error | |
| Actor provides an invalid time | Invalid time error | |
| Actor provides a date time in the future | Invalid date + time error | |
| Actor does not provide licence number part 2 (when this is available) | Licencenumber part 2 is mandatory | |
| Actor does not provide licence number part 1 (when part 2 is available) | Licencenumber part 1 is mandatory | |

System prevents the actor to provide a search criterium that is too long, i.e. a licence plate number longer than 15 positions.

There is no validation on non-alphabetic characters, these are allowed.

Step 02: The actor makes changes

Step 03: The actor resubmits the query.

Step 04: Continue basic flow at step 06

End of alternate flow.

2.5 Alternate flow 2: No response received

This alternate flow applies if EUCARIS does not return a response, before time out elapses.

Step 01: System displays a 'time-out' result, i.e. a InformationResponseMessageCode corresponding to a time-out situation, with description 'Timeout occurred'.

| Screen Item | Message element | Remarks |
|---------------|-----------------|------------------------|
| Result status | --- | '4 – Timeout occurred' |

Step 02: The use case ends when the actor starts a new query, or invokes another menu option in the EUCARIS web client, or closes the current browser window, or closes the browser entirely.

End of use case.

2.5.1 Postconditions alternate flow 2

The results of this use case are:

- A check if insurance information on a licence plate has failed for technical reasons.
- The actor has been informed of the failure

2.6 Alternate flow 3: Error notification received

This alternate flow applies if the result of the search consists of an error notification.

There are two variants:

Variant 1: The envelope with the error notification, contains a WorkflowId. This means that the request message, sent by system, has been accepted. However, execution of the workflow has run into error, and was aborted.

Variant 2: The envelope with the error notification, contains no *WorkflowId*. This means that the request message, sent by system, did not pass validation by EUCARIS, **and was not accepted**. In other words, the system sent a message **that does not comply to the specifications**.

Step 01: System displays the contents of the error notification received.

Screen shot:

| Screen Item | Message element | Remarks |
|---------------|---|---|
| Result status | InformationMessageCode / InformationMessageVariable | Format <i>InformationMessageCode</i> + ' - ' + matching description + ' ' + <i>InformationMessageVariable</i> If there is more than occurrence of <i>InformationResponseMessage</i> , show each occurrence on separate lines |

Step 02: If the error notification does not contain a *WorkflowId* (i.e. the system itself is responsible for causing the error), system records the error received in the event log.

Step 03: The use case ends when the actor starts a new query, or invokes another menu option in the EUCARIS web client, or closes the current browser window, or closes the browser entirely.

End of use case.

2.6.1 Postconditions alternate flow 3

The results of this use case are:

- A check if insurance information on a licence plate has failed for technical reasons.
- The actor has been informed of the failure

2.7 Alternate flow 4: Multiple responses

If the vehicle has not been identified unique by the licence plate two response are possible:

- Or return for all vehicles the insurance information
- or give an error message that the vehicle can't be identified uniquely, message 103(too many records). In that case also provide a contact (via message 509) via which the Insurance authority/police can resolve the issue in a non-automated way (i.e., identify the vehicle uniquely, and receive the insurance information , of that vehicle)

In case of an error it will be handled as a normal error situation, alternate flow 3(2.6)

Step 01: For all vehicles vehicle information is shown, signals and insurance information are shown collapsed.
The user is able uncollapse it, to see the detail information.

End of use case

2.7.1 Postconditions alternate flow 4

The results of this use case are:

- All found vehicles are shown.

2.8 Alternate flow 5: Reset

Reset means that all input and output data from the current inquiry are erased, to start all over with the use case.

Step 01: System erases all search input and all search results.

Step 02: Resume basic flow, step 02

2.9 Alternate flow 6: Cancel

If the actor cancels execution of the inquiry, data of the current session is lost.

Step 01: The actor cancels execution of the use case, by invoking another menu option in the EUCARIS web client, or close the current browser window, or close the browser entirely
End of use case.

3 Messages

3.1 Create request message

System creates a EUCARIS envelope, containing a message *RequestByRegistrationNumber*.

| Nesting-Level | Item | Occ | Screen item | Remarks |
|---------------|---|-----|------------------------------------|---|
| 1 | <i>EucarisEnvelope</i> | | | |
| 2 | (version) | 1 | | 1.0 |
| 2 | <i>Header</i> | 1 | | The header section contains routing info |
| 3 | RecipientMemberStateCode | 1 | Member State | ISO 3166-1 alpha-2 code of the Member State selected by the actor |
| 3 | SenderMemberStateCode | 1 | --- | ISO 3166-1 alpha-2 code of the Member State represented by the actor |
| 2 | <i>Workflow</i> | 1 | | The workflow section contains the metadata of the workflow |
| 3 | <i>Info</i> | 1 | | |
| 4 | ExternalWorkflowId | 1 | --- | Generate a UUID. |
| 4 | MessageService | 1 | --- | 'VHINS' |
| 4 | ServiceExecutionReasonCode | 1 | --- | 0: Not specified |
| 4 | InitiatingOrganisationCode | 1 | --- | Derived from the user profile of the actor, check XMLspecs for possible values. |
| 4 | InitiatingOrganisationName | 1 | --- | Derived from the user profile of the actor (name of the organisation the actor represents) |
| 4 | InitiatingSenderName | 1 | --- | Derived from the user name of the actor – alias if available, otherwise user name itself |
| 4 | InitiatingDateTime | 1 | DT | Current date and time in UTC |
| 4 | PriorityCode | 1 | --- | 1 ('Synchronous'), to indicate synchronous processing. |
| 4 | SupportedResponseVersion | 1 | --- | 1.0 |
| 2 | <i>Body</i> | | | The body section contains one request message, including message metadata. |
| 3 | <i>Messages</i> | 1 | --- | |
| 4 | (type) | 1 | --- | 'RequestByRegistrationNumber' |
| 4 | (version) | 1 | --- | 1.0 |
| 4 | <i>Message</i> | 1 | --- | One occurrence |
| 5 | ExternalMessageId | 1 | Business case id | User input or system generated. |
| 6 | <i>Content</i> | 1 | --- | In this node, provide the actual request message. |
| 7 | <i>RequestByRegistrationNumber</i> | 1 | | |
| 8 | <i>RequestData</i> | 1 | | |
| 9 | <i>VehRegistrationNumberReq</i> | 0-1 | | |
| 10 | VehRegistrationNumber-Part1Req | 1 | Licence number | The first part of the licence number or the complete licence number if the licence number has no parts. |
| 10 | VehRegistrationNumber-Part2Req | 0 | Licence number part 2 | Leave out of the message if not populated. |
| 9 | ReferenceDateTimeReq | 0 | Reference date plus reference time | Format CCYY-MM-DDThh:mm±<local time offset to UTC> |

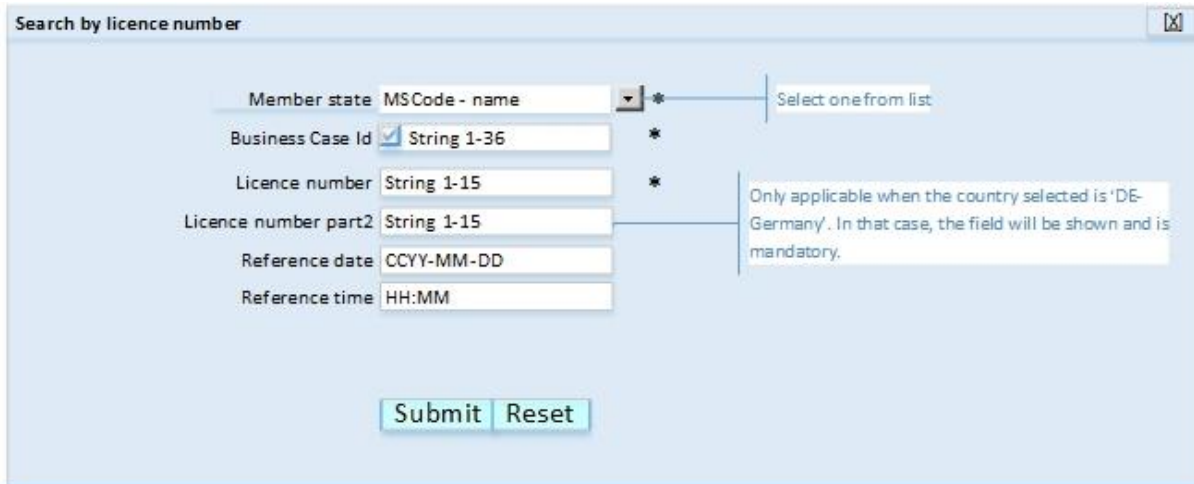
| Nesting-Level | Item | Occ | Screen item | Remarks |
|---------------|------|-----|-------------|---|
| | | | | Leave out of the message if the user did not provide a date-time. |

4 Screen shots

4.1 Menu option



4.2 Initial presentation

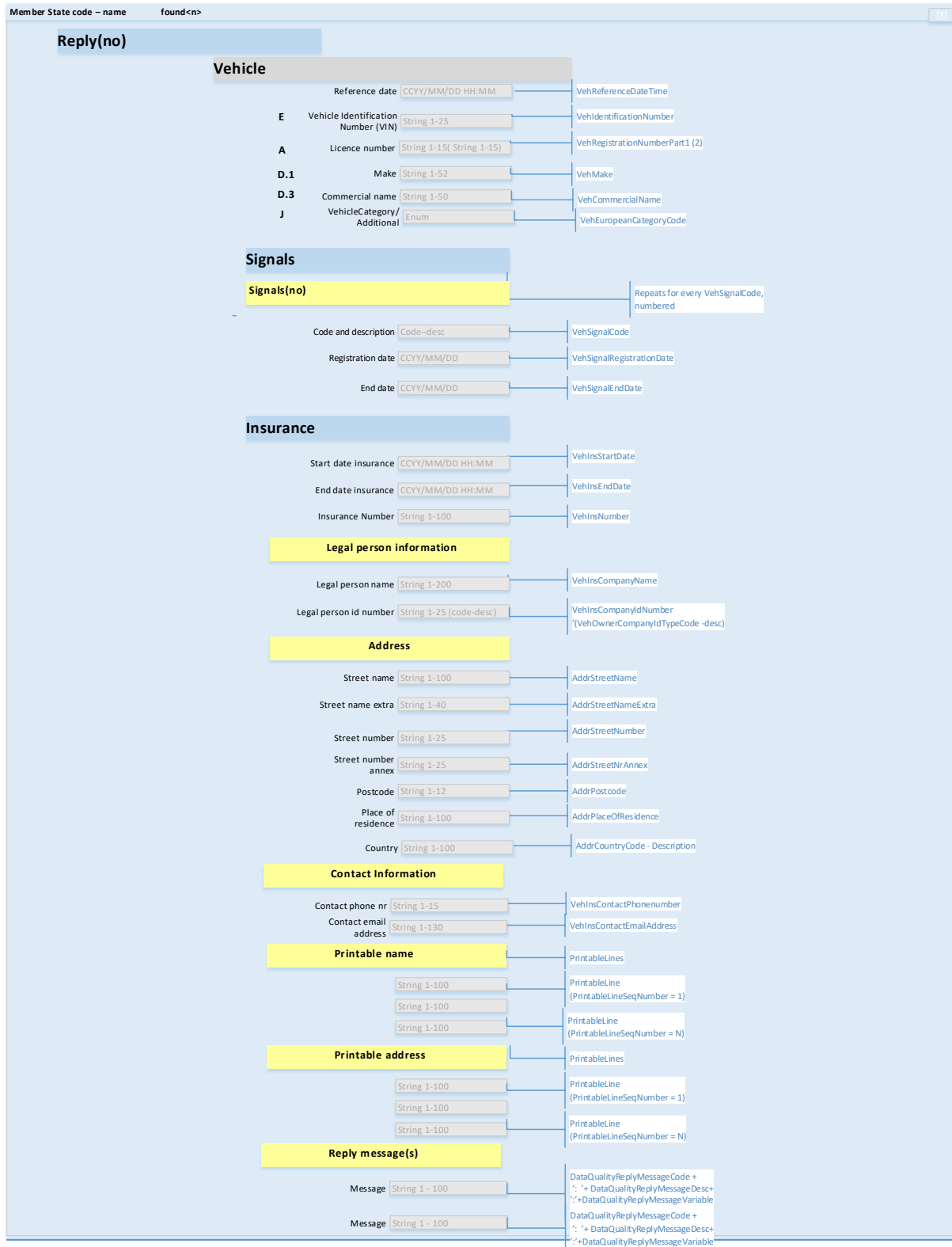


Search by licence number

| | | | |
|----------------------|---|---|--|
| Member state | MSCode - name | * | Select one from list |
| Business Case Id | <input checked="" type="checkbox"/> String 1-36 | * | |
| Licence number | String 1-15 | * | Only applicable when the country selected is 'DE-Germany'. In that case, the field will be shown and is mandatory. |
| Licence number part2 | String 1-15 | | |
| Reference date | CCYY-MM-DD | | |
| Reference time | HH:MM | | |

4.3 Response overview

4.3.1 Found



4.3.2 Not found

| | | |
|---------|---------------------------|--------------------------------------|
| NL | Not found | b5ee9e51-d75e-4355-8b99-7c05ab688eef |
| Message | 101: No information found | |

4.3.3 Error

| NL | Not found | a3bbf687-4784-4ea2-a7de-cf60ef11f6a8 |
|---------|--------------------------------|--------------------------------------|
| Message | 111: Information not disclosed | |