EUROPEAN UNION AGENCY FOR RAILWAYS

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User Manual - NSA User

ERATV

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1 Introduction

The current document forms the user manual for the European Registry of Authorised Types of railway Vehicles (**ERATV**) system. The ERATV system allows entering and managing the Vehicle Types (**VT**) and Authorisations for these Vehicle Types that are registered in the Member States (**MS**) of the European Union (**EU**). The National Safety Authority (**NSA**) of each MS is responsible for maintaining the Vehicle Type authorisations for that MS.

A Vehicle Type provides the technical and authorisation information concerning that type of vehicle and can be allocated to a vehicle through the vehicle register in order to describe its abilities.

For Vehicle types created under **Directive 2008/57/EC** (registration regimes "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode") a Vehicle Type can be registered and initially authorised by one NSA. Once published, other NSAs may 'reuse' the Vehicle Type by granting additional authorisations for the Vehicle Type. In this case the NSAs need only to provide information persistent with the authorisation of that Vehicle Type to their MS.

For Vehicle types created under **Directive (EU) 2016/797** (registration regimes "Directive (EU) 2016/797" and "Directive (EU) 2016/797 – Exceptional Mode"), a Vehicle Type is authorised and registered by an authorising entity. If the authorising entity is the European Union Agency for Railways (**ERA**) (from now on, and only for the purpose of this manual, also referred as NSA (EU)), the User has the opportunity to register an authorised Vehicle Type that covers an area of use of multiple Member States. Once published, other NSAs cannot 'reuse' the Vehicle Type by granting additional authorisations for this Vehicle Type. Only the authorising entity can modify the authorisation.

All registrations or modifications to a Vehicle Type or an authorisation need to be submitted to ERA for publication within a predetermined period of time, according to the ERATV Decision[1]. An ERA user may also request clarifications or corrections to be made on the provided data before publishing the data. Once the data have been published it becomes visible to the general public.

The access rights of the user depend on the role that is assigned to the user. Different permissions can be assigned/revoked to/from a role. A default role is assigned to all the public users who access the ERATV web site without credentials. In addition, the logged-in user can manage entities (Vehicle Types, Authorisations) that belong to their own Member State.

The process of creating roles, assigning permissions to them, and afterwards creating users and assigning roles to them is described in "*3. Administration, Operation and Maintenance Manual*".

[1] Commission Implementing Decision 2011/665/EU on the European register of authorised types of railway vehicles as amended by Commission Implementing Regulation (EU) 2019/776 of 16 May 2019 amending Commission Regulations (EU) No 321/2013, (EU) No 1299/2014, (EU) No 1301/2014, (EU) No 1302/2014, (EU) No 1303/2014 and (EU) 2016/919 and Commission Implementing Decision 2011/665/EU as regards the alignment with Directive (EU) 2016/797 of the European Parliament and of the Council and the implementation of specific objectives set out in Commission Delegated Decision (EU) 2017/1474

1.1 Definitions, Acronyms, and Abbreviations

- **ERA**: European Union Agency for Railways
- **ERATV**: European Registry of Authorised Types of railway Vehicles
- **VT**: Vehicle Type
- **EU**: European Union
- **NSA**: National Safety Authority
- **MS**: Member State
- **ECVVR**: European Centralised Virtual Vehicle Register
- **EVR**: European Vehicle Register
- **PDF**: Portable Document Format
- **XLS**: Excel Document format
- **CSV**: Comma separated document
- **Home NSA**: The NSA organisation that a user belongs to.
- **Home MS**: The Member State country that an NSA or User belong to.
- **UI**: User Interface
- **TSI**: Technical Specification for Interoperability

2 ERATV user manual

2.1 User experience (system navigation and page composition)

The ERATV system comprises a web-based user interface and is accessible from any computer with an internet browser and network accessibility. The system functionality is presented in a series of web pages which follow a standard template.

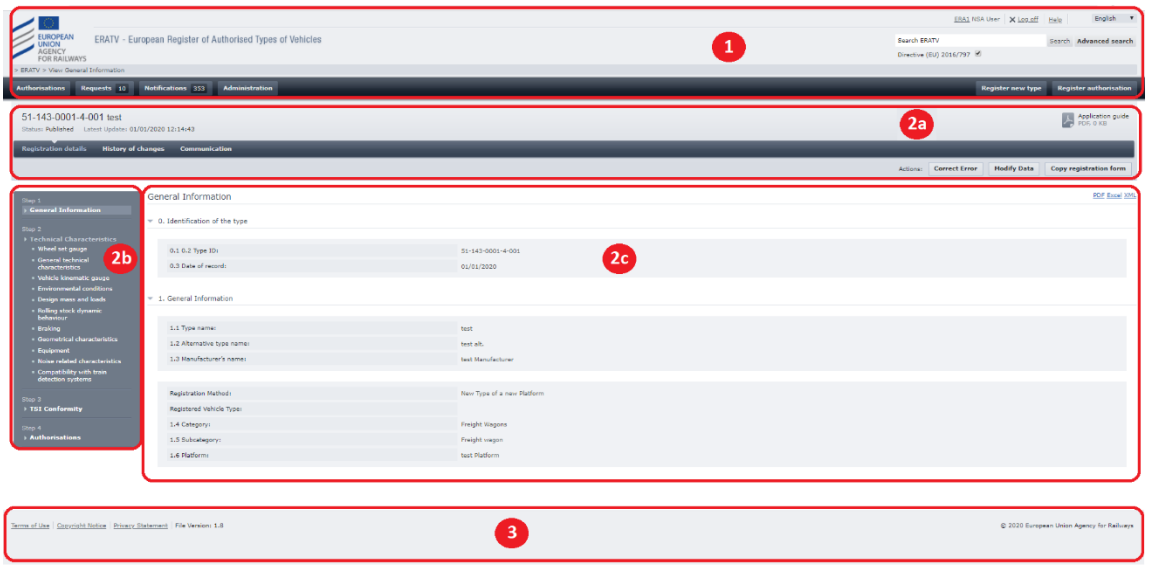

Figure 1: ERATV Page. Page sections and sub sections

Each web page contains the following sections (see Figure 1: ERATV Page.):

1. Header. This section is always visible and contains functionality that should always be available to the user, such as login, logout, and help options. A breadcrumb control and the main navigational options are also presented in this section. Additionally, a language control allows the user to change the User Interface language.
2. Content. This section contains the main content page. The content page can also be broken down to the sub-sections seen in Figure 1. These are:
    a. A content sub section that contains the title of the current content, the status of the Vehicle Type, the Latest Update date which displays the most recent date that there was a change in the Vehicle Type's status or data or accessible authorisations' status (except for "Cancelled") or accessible authorisations' data. Additionally, this sub section contains the available actions on this content.
    b. A navigation bar that allows quick navigation between the sections of a Vehicle Type registration form. This sub-section only appears for complex content pages.
    c. The main content area.
3. Footer. This section contains static legal links such as “Terms of Use” and “Privacy Statement”.

2.1.1 Searching

The user has the ability to perform searches at several locations within the ERATV system. When performing a search, the user must fill a search pattern which is then compared with the value stored in the ERATV system, to provide a hit.

All search fields that accept text input use an exact operator to perform the comparison. For example, if the user provides the search pattern “Jon” then the ERATV system will return records that only contain the string “Jon” in the appropriate field.

It is possible to expand the search by using the wildcard character, which is an asterisk (*). In the previous example, the search pattern “Jon*” would return hits in records such as “Jon”, “John”, “Jonas”, “Jonathan”, and so on. The asterisk can be user at any location within the search pattern. For example, the string “*ill*” would return results like “Bill”, “Gill”, “Gillian” and so on.

This functionality is available to all users.

2.2 Access the ERATV system

2.2.1 User Roles

All published ERATV content is available for the general public. In order to submit draft content to be considered for publication or to perform additional administrative actions, a user account must be used to access the system with a specific user role. Hence, the available user roles are:

- Public user. Can access all published content and may not alter any aspect of the data in the registry.
- NSA Users. Users that may enter new content for their home MS and submit it to ERA for approval and publication. They also need to approve modifications made to VTs for which their home NSA has provided Authorisation. Finally, these users can provide access to an Auxiliary User (see below) to fill in details of a Vehicle Type.
- ERA Users. Users that log in on behalf of the European Union Agency for Railways and can publish content, or request clarifications / corrections of submitted content.
- ERATV Administrators. Users that can alter parameters of the ERATV system. These users have neither access to unpublished content nor submission / approval functionality. For the functionality available to these users, please see “*3. Administration, Operation and Maintenance Manual*”.
- Auxiliary Users. Users that may only enter data on specific Vehicle Types. They can only enter data in Vehicle Types they have been given access to by NSA users and only on specific areas of the registration form.
- Author. The user that created the draft record in ERATV. Please see 2.5.6.3 and 2.5.6.4
- Correspondent. The user that submitted the record for publication or the user that published the record. Please see 2.5.6.3 and 2.5.6.4
- Registering correspondent. The appointed representative of all the NSA Users for a given country authorising entity. Please see 2.6.1.

2.2.2 Public access

To access the application the user has to type the URL of the ERATV system in a web browser. Then the ERATV web site (public web site) is displayed, as the following figure illustrates.

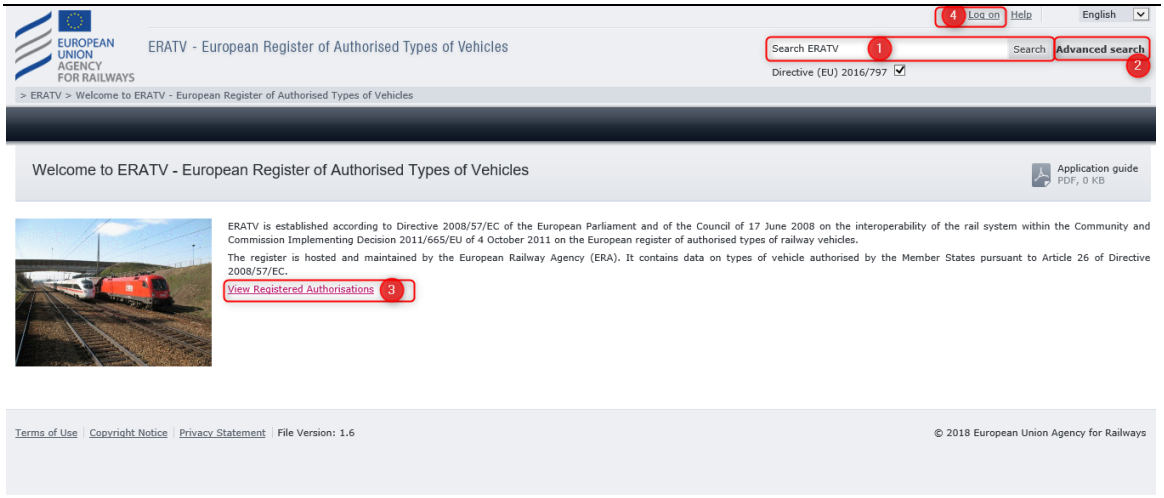

Figure 2: ERATV (public) web site

The displayed options depend on the access rights that have been assigned to the default role that is automatically granted to all public users.
The public user may access a list of all published authorisations by performing the following actions highlighted in Figure 2::

1) Perform a quick search as described in 2.5.1.
2) Perform an advanced search as described in 2.5.2.
3) View a list of all the published authorisations as described in 2.5.4.
4) Access the system as a registered user by selecting the “Login” link as described in 2.2.3.

2.2.3 Login

In order to login, the user has to click on the “Log In” option available at the header of the public web site. Afterwards, the Login Page is presented (see Figure 3:).

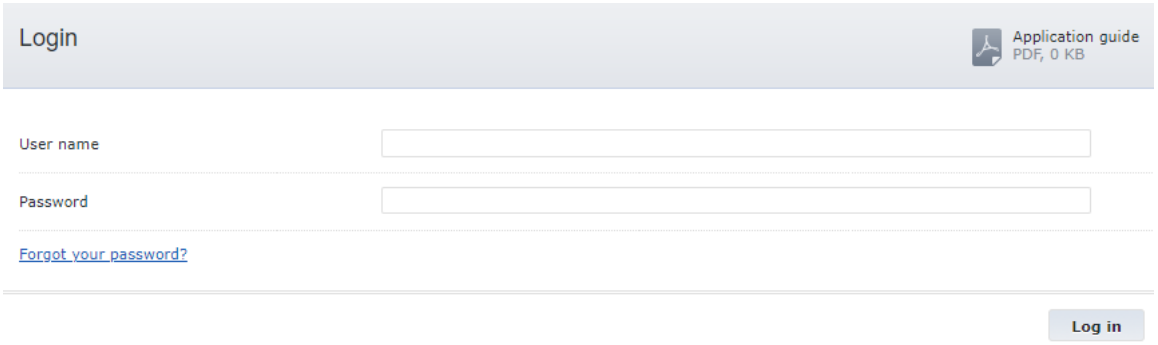

Figure 3: ERATV Login form

In the Login Page, the user should follow the next steps:

1. Fill-in the “User name” text field.
2. Fill-in the “Password” text field.
3. Click on the “Log in” button.

Once the user logs in successfully, the home page of the ERATV system will be presented (see Figure 4).

Once logged-in, the user can also see the names of other users (e.g. authors), who created the draft record in ERATV. The same information is displayed in the *History of changes* section and in the *Communication* section (which user did each action and when). The purpose is to keep the traceability of data creation, submission and publication and to be able to contact a user in case of any need.

Responsibilities for the records submitters are described in the ERATV Terms of Use, section 3.

As shown in the figure below, the registered user has these additional options in the ERATV system:

1. Header section:
    a. Account Settings – allows the user to view the user profile as described in 2.2.6
    b. Logout – allows the user to log out from the ERATV system as described in 2.2.5
2. Navigation Bar:
    a. Authorisations – for accessing the authorisations held by the NSA of the current user (Home NSA) as described in 2.5.4
    b. Requests – for viewing the requests made to the home NSA (see 2.4.1)
    c. Notifications – for viewing the notifications dispatched to the home NSA (see 2.4.3)
    d. Events – for viewing events registered by the ERATV system. This option is visible by only specific user roles. For details on the events functionality see "*3. Administration, Operation and Maintenance Manual*".
    e. Administration – for managing various aspects of the ERATV system. The contents of this section depend on the user role (see 2.6).

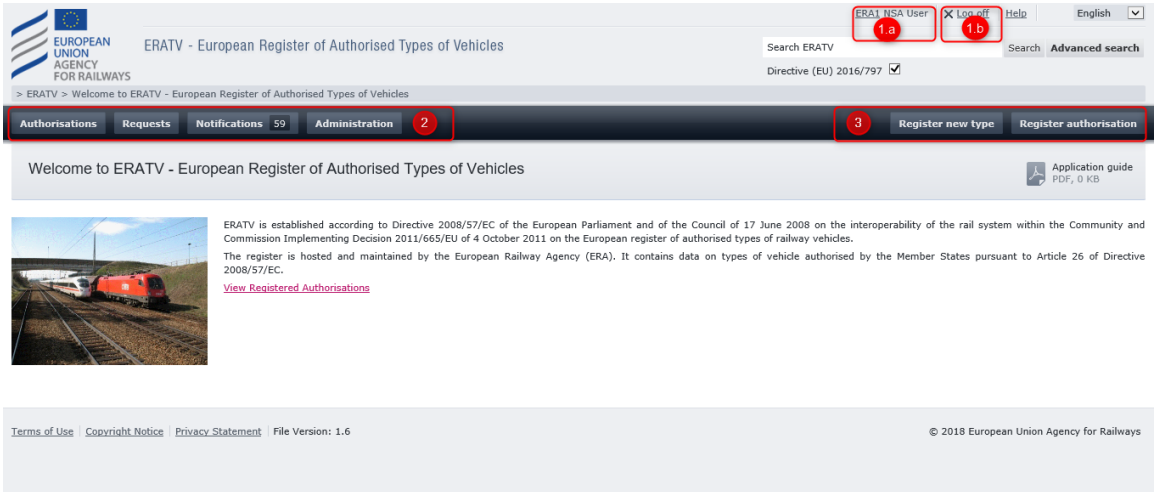

Figure 4: ERATV Registered User home page

3. Global Actions
    a. Register new type - allows the user to register a new Vehicle Type for the home NSA (see 2.3.2)
    b. Register Authorisation – for registering a new authorisation for a published Vehicle Type (see 2.3.3).

In the following sections, the above options are described in detail.

2.2.4 Forgot password

In case the user has forgotten their password, they can click on the “Forgot Password” link available at the Login page (see Figure 3:). A form will be displayed (see Figure 5:) in which the user should provide the username and email of the user account.

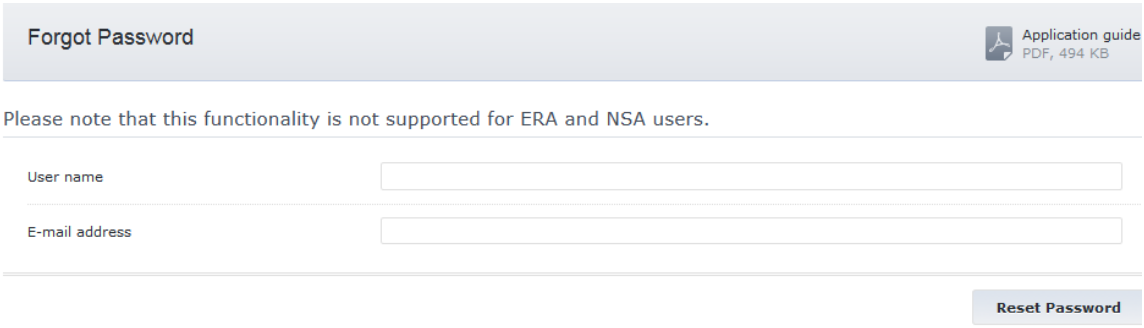

Figure 5: Forgot password form

An email will be dispatched to the registered email of the provided user account with details of a new password.

As seen in Figure 5:, this functionality is only available to specific user roles due to the Authorisation and Authentication mechanism (Active Directory). Users that cannot retrieve their password through this form should contact their system administrator to retrieve the user account credentials.

2.2.5 Logout

The user may close the session by clicking on the “Log off” link in the header section.

2.2.6 Account settings

The user can view the settings of his/her account by clicking on the “Account settings” link available on the header section (see Figure 4). Then, the profile information page is displayed as shown in Figure 6.

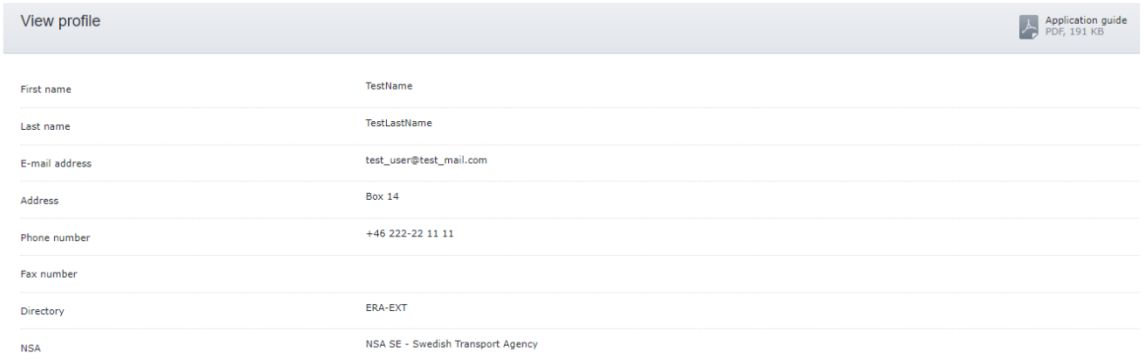

Figure 6: Account Profile

Auxiliary Users may also use this page to alter the password provided by NSAs.

2.3 Vehicle Type Authorisations

2.3.1 Introduction

2.3.1.1 Vehicle Type Contents

A vehicle type record contains all the technical details of a Vehicle Type organised in sections. In summary the sections are:

- Section 1: General Information. This contains the general information about the Vehicle Type.
- Section 2: Technical Characteristics. These are the technical details of the Vehicle Type. Due to the large number of technical details, this section is split to sub-sections. The technical parameters that are available for filling in, optionally or mandatory, are set by the parameter applicabilities which depend on several values specified in section 1. For more information see 2.3.1.4.
- Section 3: Conformity with TSI. This section contains details of the conformity of the Vehicle Type to predefined TSIs and the scope of that conformity (full/ partial).
- Section 4: Authorisation Details. This section contains details of the authorisation granted to the Vehicle Type for usage within a Member State. For VTs registered under “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes, this section may be repeated once per MS that authorises the VT. For VTs registered under "Directive (EU) 2016/797” and “Directive (EU) 2016/797 – Exceptional Mode” registration modes, the authorisation regards only the MS that created the VT. Only the NSA (EU) has the opportunity to add multiple MSs to an authorisation.

The information in sections 1, 2, & 4 are provided once per Vehicle Type.

For VTs registered under “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes, the information in section 3 is repeated for each authorisation registered for the specific VT. In effect it is repeated once per authorising MS. For VTs registered under "Directive (EU) 2016/797” and “Directive (EU) 2016/797 – Exceptional Mode” registration modes, the information in section 3 is provided once per VT and can regard one or more Member States.

Due to complex associations between the data in the above sections, the order of inserting data into the ERATV system differs from the above. The steps to enter the data as shown in Figure 14 are:

- Step 1: General Information
- Step 2: Technical Details
- Step 3: Conformity with TSIs
- Step 4: Authorisation Details

2.3.1.2 Vehicle Type Lifecycle

The lifecycle of a Vehicle Type and of an authorisation requires a workflow to ensure that the published data contain no errors and have been approved by the required parties.

A Vehicle Type cannot exist without an authorisation and vice versa. In effect, the user registers authorisations with the added restriction that for the authorisation of a Vehicle Type, the data of that Vehicle Type need to be provided as well.

The possible VT data statuses are the following: Draft, Submitted, Published, and Cancelled. Figure 7: shows the possible actions that lead from one status to the other.

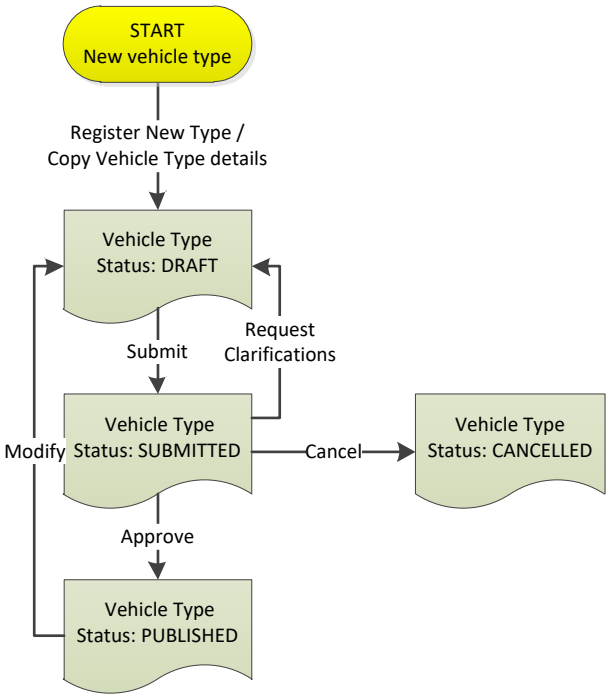

Figure 7: Vehicle Type Lifecycle

2.3.1.3 Authorisation Lifecycle

The authorisation of a Vehicle Type can have the following statuses:

"Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes	"Directive (EU) 2016/797" and "Directive (EU) 2016/797 – Exceptional Mode" registration modes
Active	Valid
Suspended	Suspended
Withdrawn	Revoked
	To be Renewed
Expired	Expired

The possible actions leading from one status to the other are presented in Figure 8 and Figure 9.

The actions described in Figure 8 and Figure 9 are performed through an additional workflow similar to the one described in Figure 7:. For example, in order to suspend an Active Authorisation, the NSA User must create a Draft suspension and submit it to ERA for approval. Upon ERA approval, the suspension is published and hence the Authorisation status becomes Suspended.

All actions presented in Figure 8 and Figure 9 must be approved by ERA, with the exception of the Expiry action which is automatic.

Additionally, when a Vehicle Type is already published and authorised by a number of NSAs, then any subsequent modifications need to be authorised by all NSAs that have authorised it (involved parties), except the originator of the modification. Then and only then, the Vehicle Type

modifications will be presented to ERA for approval. This is applied only to “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes.

Corrections do not follow that rule. Corrections are considered typographical errors and not a modification to the issued vehicle type authorisation. Therefore, corrections are directly submitted for ERA approval without the need to be approved by involved parties.

For VTs created under to “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes, all modifications or corrections of data of a Vehicle Type that has been authorised by multiple NSAs will be communicated to all the MS through the notification mechanism (see section 2.4 for more details).

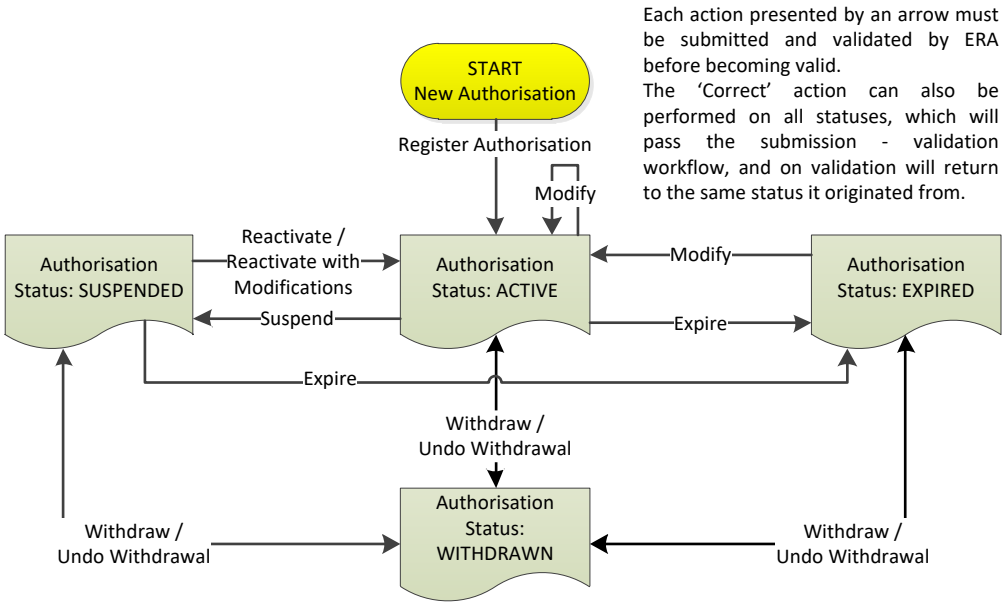

Figure 8: Authorisation Status Lifecycle for VT created under “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes

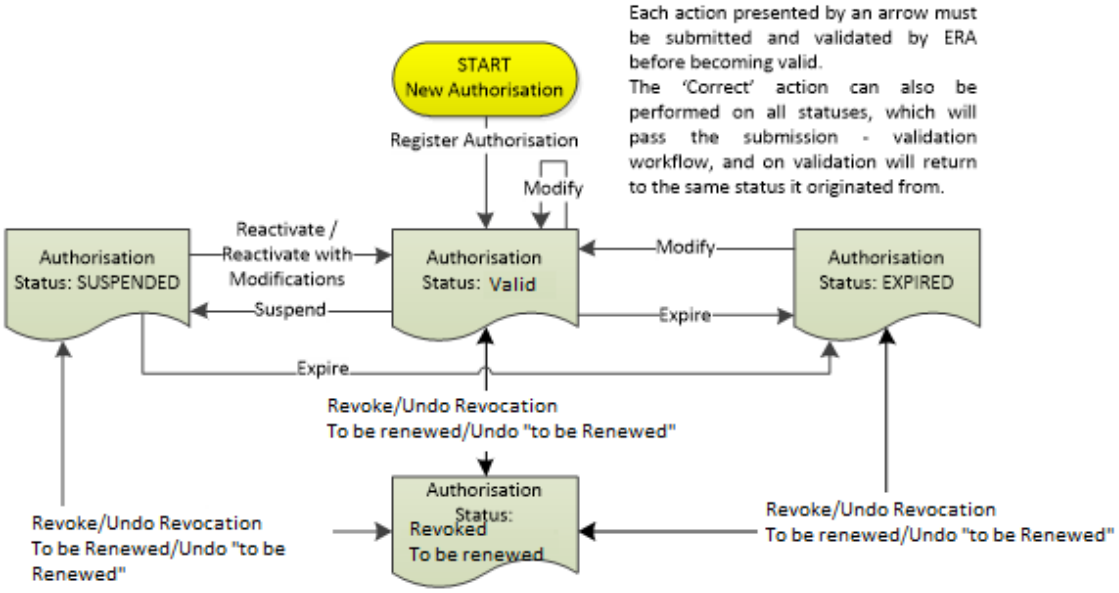

Figure 9: Authorisation Status Lifecycle for VT created under "Directive (EU) 2016/797" and "Directive (EU) 2016/797 – Exceptional Mode" registration modes

2.3.1.4 Parameter applicabilities

The ERATV system contains numerous technical characteristics in order to cover all the different types of vehicles. Not all of these characteristics are necessary for each Vehicle Type. Some characteristics might not apply for certain categories whereas for others the same characteristics might be mandatory. The ERATV system administrator is responsible for setting the parameter applicabilities. Once set, the ERATV system will present a mandatory flag by means of an asterisk * next to the characteristics that a user has to fill in in order to continue. Optional characteristics will be visible to the user but without the mandatory flag, while non-applicable characteristics will not be visible to the user.

2.3.1.5 Vehicle Type configurations

Some parameters in a Vehicle Type may depend on the specified values of other Parameters. For example, parameter '4.10.2 Maximum Power' depends on the values selected for parameter '4.10.1 Energy Supply system', as different supply systems will output different amounts of power.

There are 3 main parameters on which other parameters depend and hence they can cause multiple values for the other characteristics. These main parameters are:

- '4.1.3 Wheel Set Gauge'
- '4.10.1 Energy Supply System'
- CCS on board which is a combination of values from '4.13.1.1 ETCS equipment on-board and its level' and '4.13.1.5 Class B or other train protection, control and warning systems installed'

The parameters that depend on any combination of the 3 main parameters may contain multiple values. These parameters in "General technical characteristics" and "Authorisations" section are displayed ordered by "4.1.3 Wheel set gauge" value, then by "4.10.1 Energy supply system" and finally by "4.13.1.1 ETCS equipment on-board and its level" (system and if applicable version) and

"4.13.1.5 Class B or other train protection control and warning systems installed" in ascending order. A value may be entered for each combination of the selected values for the main parameters (configuration). The configurations for each parameter are determined based on the dependencies of that parameter (example is provided further below).

2.3.2 Registering a new Vehicle Type

In order to register a new Vehicle type, the user must click the "Register new type" button highlighted in point 3 of Figure 4. The new Vehicle type form will be presented to the user as seen in Figure 15. The Vehicle Type registration will take place in four steps as seen on the left side of the figure. These are:

Step 1. General Information (see 2.3.2.1)
Step 2. Technical Characteristics (see 2.3.2.2)
Step 3. TSI Conformity (see 2.3.2.3)
Step 4. Authorisations (see 2.3.2.4)

The user must fill in at least all the mandatory fields, which are highlighted in yellow colour, in all the steps before submitting the form to ERA for validation as described in 2.3.2.6. Additionally, the user is able to perform the following actions during the vehicle type registration (Figure 10 and Figure 11)

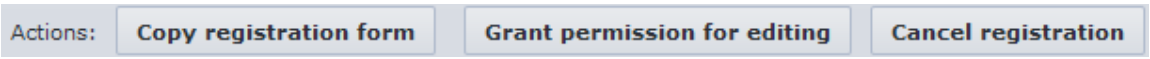

Figure 10: Vehicle Type Registration Record Actions

- Copy Registration form. This button creates a new Vehicle Type which is a direct copy of the current one. Any fields that contain values are copied across to the new Vehicle Type. For more details see section 2.3.15.
- Grant permission for editing. An NSA user may grant access to an Auxiliary User for editing the current Vehicle Type by using this button. For more details about Auxiliary Users see section 2.3.17.
- Cancel Registration / Cancel Authorisation. This option allows the user to completely cancel the registration or authorisation. For more details see section 2.3.15.

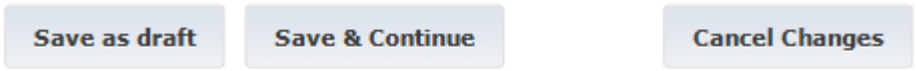

Figure 11: Vehicle Type Registration Session Actions

- Save as Draft. Selecting this option allows the user to store the information into the ERATV repository for accessing at a later stage. There is no validation that takes place when this button is pressed except during step 1 of the registration process. Once clicked, the data is stored and the form is reloaded.
- Save and Continue. This option is similar to 'Save as draft' with the exception that the data provided in the form are validated before continuing to the next form.
- Cancel Changes. This option allows the user to cancel the pending changes. Clicking the button will reload the form without performing a new save.

In order to retrieve the previously stored Vehicle Type, the user should view the VT details as described in section 2.5.6 or search for the VT as described in sections 2.5.1 and 2.5.2.

To reduce the risk of incorrect data input, the ERATV system will validate the entered data at several points during the registration. If a validation fails at any point, then an informative message will appear to the user either next to the problematic field (see Figure 12) or at the top of the form (see Figure 13).

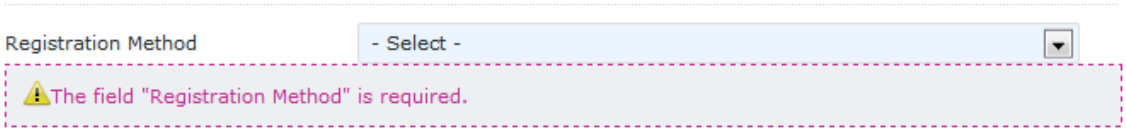

Figure 12: Failed validation – Inline error

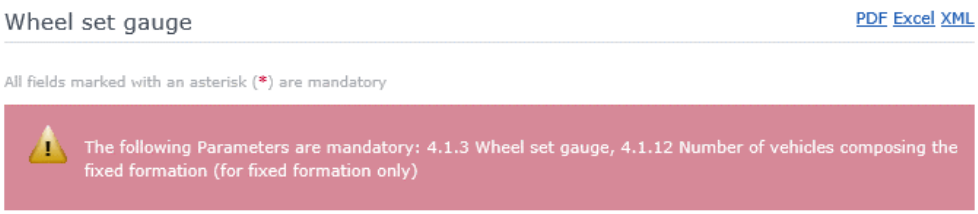

Figure 13: Failed Validation – Top of page error

The validation points during the registration are:

1. End of Step 1
2. End of the 3rd Technical Characteristics form (configuration parameter specification)
3. Submission of Vehicle Type

When these points are reached, the user must select the option “Save and continue” to initiate the validation.

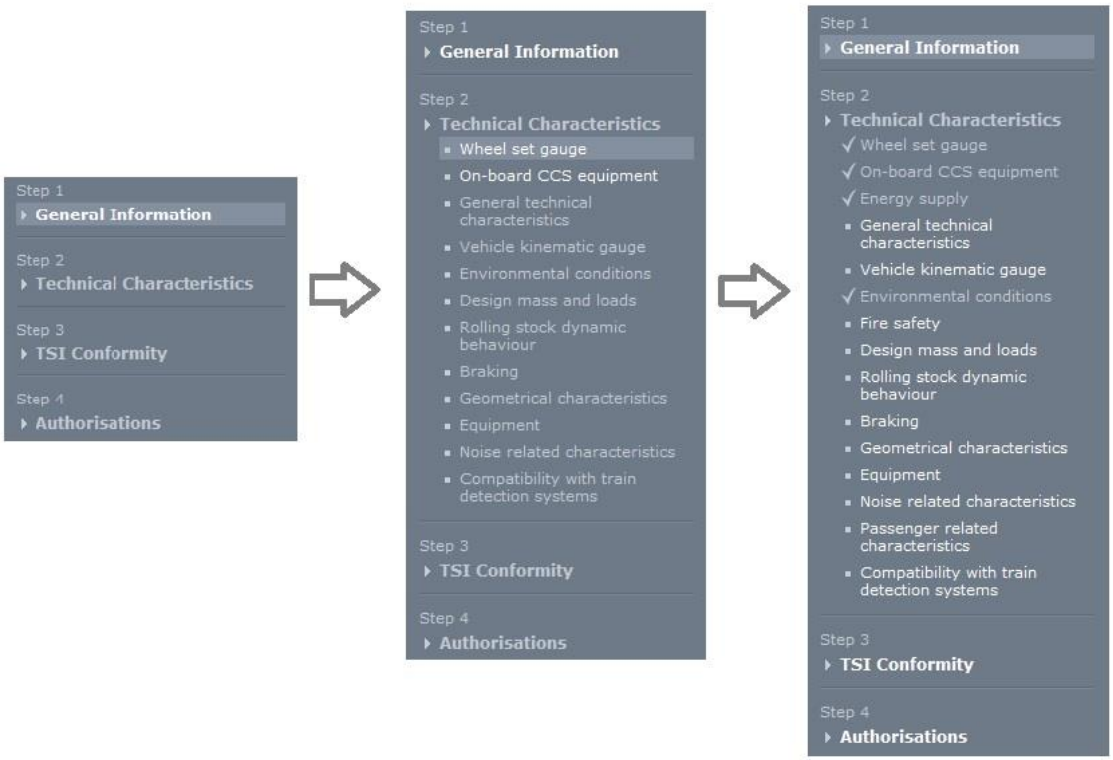

Figure 14: Navigation links during the registration progress

The user may also navigate between the steps of a registration by clicking the quick links from the left hand menu, provided that these are available. The links will become available progressively as soon as each validation point has been performed successfully (see Figure 14).

Additionally, validated steps will be indicated as complete. This will allow the users to quickly view the outstanding steps in the process. An example of validated steps can be seen in the 3rd menu of Figure 14, where a visual indication of completed and validated steps is provided.

Important Note: Navigating back and altering data in previous steps of the registration process might invalidate data that has been provided later in the registration process. When this occurs, a confirmation message will appear informing that data loss might occur. To continue the user must acknowledge the message and press continue. At this point, all affected data will be removed from the system without the possibility to undo this action.

2.3.2.1 Step 1 – General Vehicle Type information

The first step of the registration progress contains parameters that specify the type and category of the Vehicle Type. These details are used to dynamically determine the behaviour of later steps. Making changes to stored values of this step will most likely remove invalid data from the next steps.

This form (Figure 15) contains the following fields:

- Registration Regime: (mandatory) this option denotes under which registration regime (Directive 2008/57/EC, represented by options (“Directive 2008/57/EC” and “Directive 2008/57/EC Exceptional Mode”) or Directive (EU) 2016/797, represented by options

("Directive (EU) 2016/797" and "Directive (EU) 2016/797-Exceptional Mode") the Vehicle Type was originally registered. This field affects the applicability of technical parameters for the Vehicle Type. This field has the following options:
    - Directive 2008/57/EC
    - Directive 2008/57/EC - Exceptional Mode
    - Directive (EU) 2016/797
    - Directive (EU) 2016/797 - Exceptional Mode
- Country: (mandatory) automatically set to the MS of the home NSA
- Organisation: (mandatory) automatically set to the home NSA
- Correspondent: (mandatory) automatically set to the correspondent specified for the home NSA
- Type ID: (optional) this is the ID of the Vehicle Type. It can be reserved at this point. Alternatively, a Type ID will be allocated on publication. More details for the Type ID are presented in section 2.3.2.1.1.
- Exceptional mode: (mandatory depending on configuration) this field is presented only when the "Directive 2008/57/EC Exceptional" and "Directive (EU) 2016/797 - Exceptional Mode" option from the previous field is selected. The user must select one value from the list of available values.
- Registration Method: (mandatory) this is the main method to register the Vehicle Type. This field, along with Registered vehicle type, is presented to the current User in all Vehicle Types regardless the respective Data status (e.g., draft, submitted, published). For more information see section 2.3.2.1.2.
- Registered Vehicle Type: this is a pre-existing vehicle type which will be used to copy its details into this new Vehicle Type. Vehicle Types of any status may be used for this action. This field is either active and mandatory or disabled, depending on the selected registration method. Additionally, this field, along with Registration method, is presented to the current User in all Vehicle Types regardless the respective Data status (e.g., draft, submitted, published). For more information see section 2.3.2.1.2.

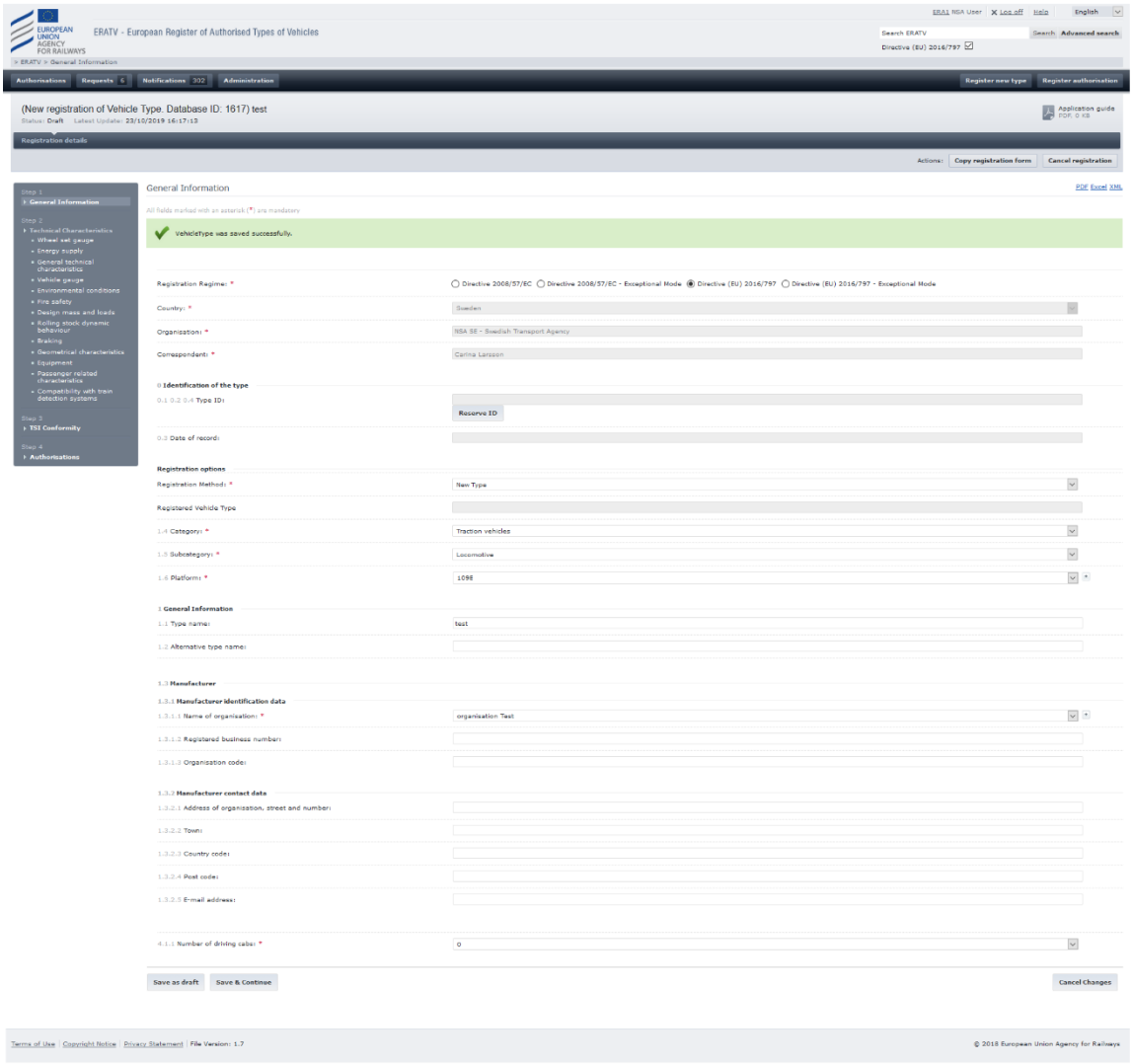

Figure 15: Step 1 – Vehicle Type General Information form

- Category: this is the category of the Vehicle Type. Setting this option will filter the available options in the subcategory field. This field is either active and mandatory or disabled, depending on the selected registration method. For more information see section 2.3.2.1.2. The available options are:
    - Traction Vehicles
    - Hauled Passenger Vehicles
    - Freight wagons
    - Special wagons
- Subcategory: this is the subcategory of the registered Vehicle Type. This field is used to calculate the applicability of technical parameters of the Vehicle Type as well as to determine the available platforms. This field is either active and mandatory or disabled, depending on the selected registration method. For more information see section 2.3.2.1.2. The options are:
    - Traction Vehicles
        - Locomotive
        - Self-propelled passenger Trainset (incl. rail buses)

        - Self-propelled freight Trainset
        - Shunter
        - Other (tramways, light rail vehicles, etc.)
    - Hauled Passenger Vehicles
        - Passenger coach (incl. sleeping cars, restaurant, etc.)
        - Van
        - Car carrier
        - Vehicle for services (e.g. kitchen)
        - Fixed rake of coaches
        - Other
    - Freight Wagons
        - Freight wagon
        - Fixed rake of freight wagons
    - Special Wagons
        - Self-propelled special vehicle
        - Hauled special vehicle

- Platform: the platform of the new vehicle. Select a predefined value or click the plus ( ) icon to create a new one. This field is either active and mandatory or disabled, depending on the selected registration method. For more information see section 2.3.2.1.2.
- Type name: (optional) this is the name of the Vehicle Type.
- Alternative type name: (optional) this is an alternative name of the Vehicle Type.
- Name of organisation (applied only to "Directive (EU) 2016/797" and "Directive (EU) 2016/797 – Exceptional Mode" registration regimes): (mandatory) this field is the manufacturer of this Vehicle Type. Selection from a predefined list of manufacturers or insertion of a new manufacturer by clicking on the button, filling in the new name, the Registered business number, the Organisation code, the Address of organisation, street and number, the Town, the Country code, the Post code, and the E-mail address in the popup that appears and clicking on the "Save" button to store the data and close the popup.
    - Once the Manufacturer's details will be incorporated in a VT, those will not be linked with the respective list of administration panel. Those details will be "copied" to the VT itself. Any alteration in the respective values of the administration panel, will not affect the aforementioned VT regardless its Data status (e.g., published, submitted, draft). Hence, Manufacturer's details may differ from the ones mentioned in the respective section of administration panel. Modifying the respective VT (after its publication) will maintain the existing values of Manufacturer, but triggering the respective list will present the new values (from administration panel) in the VT.
- Manufacturer (applied only to "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration regimes): (mandatory) this field is the manufacturer of this Vehicle Type. Selection from a predefined list of manufacturers or insertion of a new manufacturer by clicking on the button, filling in the new name in the popup that appears and clicking on the "Save" button to store the name and close the popup.

    - This field adopts the same behavior as the one mentioned in the Name of organisation applied to "Directive (EU) 2016/797" and "Directive (EU) 2016/797 – Exceptional Mode" registration regimes.
- Registered business number*
- Organisation code*
- Address of organisation, street and number*
- Town*
- Country code*
- Post code*
- E-mail address*
- Number of Driving Cabs: (mandatory) this field specifies the number of driving cabs a Vehicle Type contains and is used to determine the applicability of the technical parameters of the Vehicle Type.
  (The abovementioned fields marked with asterisk (*) are applied only to "Directive (EU) 2016/797" and "Directive (EU) 2016/797 – Exceptional Mode" registration modes)

The user may perform any of the following actions from this form:

1. "Save As Draft": this button stores the provided information in the ERATV database. Especially for this step, this option also performs limited validation on the form. Any validation failures will appear inline next to the problematic fields as shown in Figure 12.
2. "Save and Continue": stores and fully validates the provided information. The next step in the registration progress is 'unlocked' and presented to the user as shown in Figure 14.
3. "Cancel Changes": this option cancels any outstanding changes and reloads the same form with the most recently saved data.
4. "Copy Registration": this button allows the user to copy all the provided information to a new Vehicle Type. It becomes visible if the user has stored the Vehicle Type at least once. For more information see section 2.3.15.
5. "Grant Permission for editing": by clicking this button the user may grant access to the current Vehicle Type for an Auxiliary User registered with the home NSA. The Auxiliary User will be able to login and fill the technical details section for this Vehicle Type. For more information see section 2.6.3.
6. Cancel Registration: this action cancels the registration. The registration status will be changed to 'Cancelled' and will be locked for editing.

The data provided in Step 1 are required to determine how to proceed and what to display in the remaining steps of the registration process. As such, a validation must take place before proceeding to the next step.

2.3.2.1.1 Type ID

Each Vehicle Type in the ERATV system is identified by a unique identifier called the Type ID. This identifier is allocated during VT creation and cannot be altered at any point after the VT is published.

The Type ID identifier depends on some of the VT characteristics. The characteristics are:

- Category
- Subcategory

- Platform
- Registration method: any alteration of its value has direct effect on the previous fields. This field, as previously mentioned, is presented to the current User in all Vehicle Types regardless the respective Data status (e.g., draft, submitted, published).

Once the Type ID has been allocated, then the above characteristics cannot change. If a change is required on the above characteristics, then a new record should be created.

The user may request to reserve a Type ID as soon as the VT is created, or one will be automatically allocated at the time of publication.

The reservation of a Type ID is achieved by using the button “Reserve ID”, which is under Section 1: General Information (see 2.3.1.1).

Figure 16 - Type ID reservation

The button will only appear after Section 1: General Information has been saved for the first time.

When reserving a Type ID, a confirmation message is displayed. The user must confirm the reservation before it is performed by the system. If the Type ID has been reserved, then the ERATV system will present an informative message with the newly allocated Type ID as seen in Figure 17

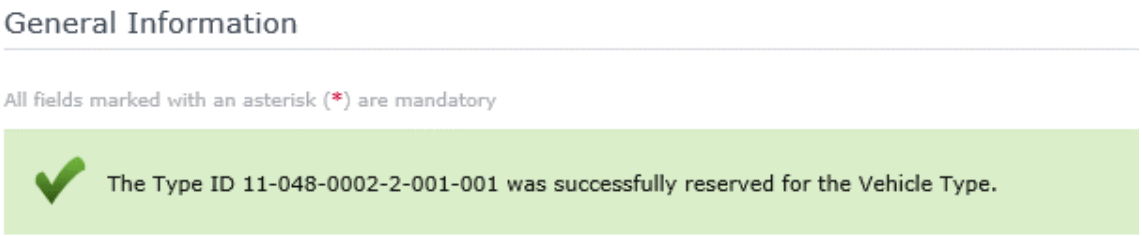

Figure 17: Step 1 – Type ID allocation

2.3.2.1.2 Registration methods under Directive 2008/57/EC - “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode

There are four different registration methods for a new Vehicle Type. In summary these are:

1) New registration of new platform
2) New registration of registered platform
3) New version of registered type
4) New configuration/mode of a registered version

New registration of a new platform

This registration method allows a registration of a new Vehicle Type on a platform that has not been used before in the ERATV system. When selecting this option, the following alterations occur in the form of step 1:

- The fields “Category” and Subcategory” are enabled. “Platform” is disabled.

- On selecting a valid “Category” and “Subcategory” the “Platform” field is enabled. The dropdown list is populated with defined Platforms that have not been used in any other Vehicle Types in the ERATV system and are connected with the selected “Category” / “Subcategory” combination. On any change of the “Category” or “Subcategory” fields the “Platform” field is reset and repopulated.
- A plus ( ) button appears next to the platform selection control. This allows the user to enter a new platform which will be connected to the selected “Category” / “Subcategory”.
- The field “Registered Type” is disabled throughout the above process. If the field contains a value, this is removed.
- On saving the Step 1 form, any pre-existing data in the subsequent steps are removed.

New registration of an existing platform

This registration method allows the user to register a new Vehicle Type on a platform that was previously used in another vehicle registration in the ERATV system. The following take place when this registration method is selected:

- The fields “Category” and Subcategory” are enabled. “Platform” is disabled.
- On selecting a valid “Category” and “Subcategory” the “Platform” field is enabled and populated with defined Platforms that have been used in other Vehicle Types in the ERATV system and are connected with the selected “Category” and “Subcategory”. On any change of the “Category” or “Subcategory” fields the “Platform” field is reset and repopulated.
- The field “Registered Type” is disabled. If the field contains a value, then this is removed.
- On saving the Step 1 form, any pre-existing data in the subsequent steps are removed.

New version of registered type

This registration method is used for registering a new version for a pre-existing Vehicle Type. The advantage of this registration method is that it reduces the time needed to fill-in the full registration form as it copies the data from another VT and the user only alters the parameters with different values that signify the new version. On selecting this registration method, the following take place in the step 1 form:

- The fields “Category”, “Subcategory” and “Platform” are cleared (if they contain values) and disabled.
- The field “Registered Type” is enabled. The user clicks on the button and a popup appears. The user can search through the search criteria and select any desired registered Vehicle Type with a reserved Type/Version ID number as shown below:

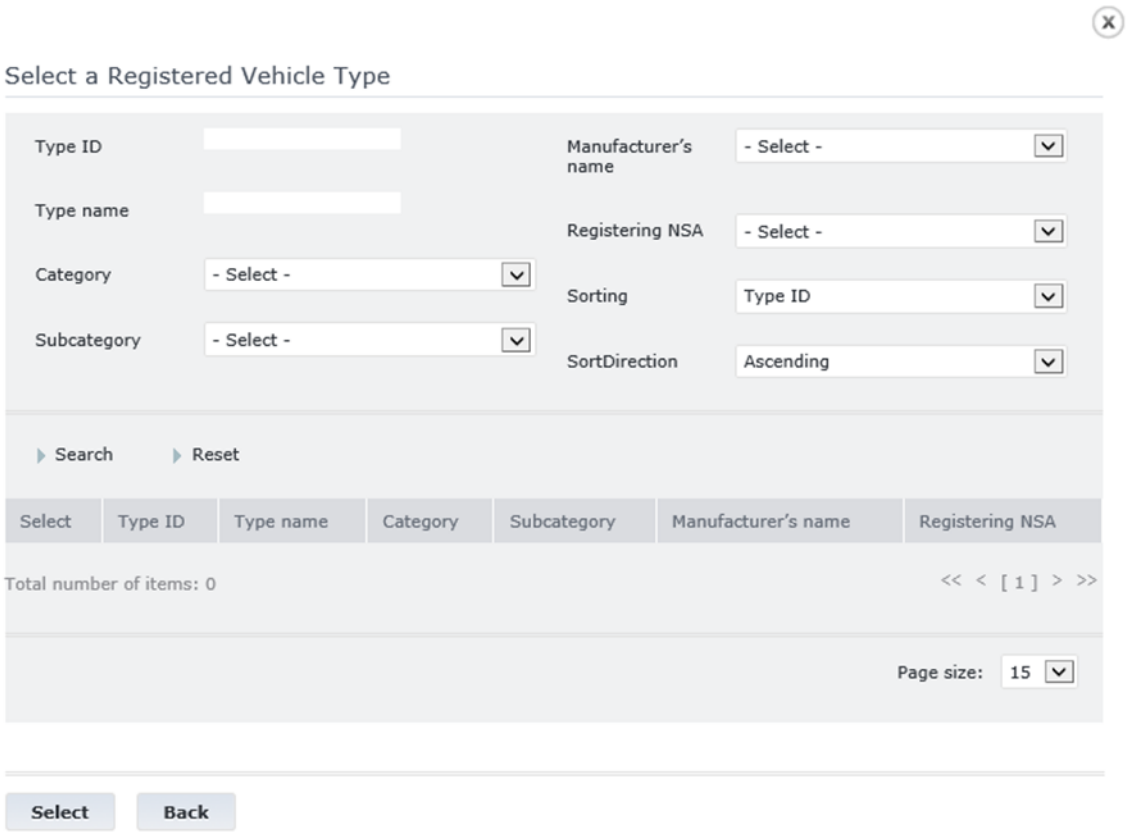

Figure 18: Selection of Registered Vehicle Types popup

- By clicking on the "Select" button, the popup closes and all fields are updated with the stored values in the corresponding fields of the selected Vehicle Type.
- The system automatically renames the new version as "new version of <type name> ". This information is displayed under "0.1 General Information" in the field "Type name".
- On saving the Step 1 form, any pre-existing data in the subsequent steps are removed and the data of the selected VT are copied into this VT.

New configuration/mode of registered version

This method allows the user to specify a new mode of a Vehicle Type from a previously registered version. On selecting this registration method, the following take place:

- The fields "Category", "Subcategory" and "Platform" are cleared (if they contain values) and disabled.
- The field "Registered Type" is enabled. The user clicks on the button and the same popup as shown in Figure 18 appears. The user can again search through the search criteria and select any desired registered Vehicle Type with a reserved Type/Version ID number.
- By clicking on the "Select" button, the popup closes and all fields of Step 1 of the current record are updated with the stored values of the selected Vehicle Type.
- The system automatically renames the new version as "new version of <type name> ". This information is displayed under "0.1 General Information" in the field "Type name".

- On saving the Vehicle Type, the data from the next steps of the selected Vehicle Type are also copied into the current one.

2.3.2.1.3 Registration methods under Directive (EU) 2016/797 - "Directive (EU) 2016/797" and "Directive (EU) 2016/797 – Exceptional Mode"

There are six different registration methods for a new Vehicle Type. In summary these are:

1) New Type
2) New variant of a registered type
3) New version of a registered variant
4) New version of a registered type
5) New variant of a registered type Directive 2008/57/EC
6) New version of a registered type Directive 2008/57/EC

New Type

This registration method allows the registration of a new Vehicle Type that has not been used before in the ERATV system. When selecting this option, the following alterations occur in the form of step 1:

- The fields "Category", "Subcategory" and "Platform" are enabled consecutively.
- A plus ( ) button appears next to the platform selection control. This allows the user to enter a new platform.
- The field "Registered Type" is disabled throughout the above process. If the field contains a value, this is removed.
- By clicking on "Save and continue" the ERATV application validates that all mandatory fields are filled with proper values before allowing the User to continue with the application

New variant of a registered type

This registration method allows the user to register a new variant of an existing Vehicle Type. The following take place when this registration method is selected:

- The fields "Category", "Subcategory" and "Platform" are cleared (if they contain values) and disabled.
- The field "Registered Type" is enabled. The user clicks on the button and a popup appears. The user can search through the search criteria and select any desired registered Vehicle Type with a reserved Type ID number as shown on Figure 18: Selection of Registered Vehicle Types popup.
- By selecting an already existing Vehicle type, the popup closes and all fields are updated with the stored values in the corresponding fields of the selected Vehicle Type.
- The ERATV application copies the General Information data of the selected type to this new variant. The authorisation part is not copied from the registered Type. It needs to be filled in completely by the user. The system automatically names the new version as "new variant of <type name>". Only the type name and not the type id is used for auto naming.

New version of a registered variant

This registration method allows the user to register a new version of an existing variant of a Vehicle Type. The following take place when this registration method is selected:

- The fields “Category”, “Subcategory” and “Platform” are cleared (if they contain values) and disabled.
- The field “Registered Type” is enabled. The user clicks on the button and a popup appears. The user can search through the search criteria and select any desired registered Vehicle Type with a reserved Type ID number as shown on Figure 18: Selection of Registered Vehicle Types popup.
- By selecting an already existing Vehicle type, the popup closes and all fields are updated with the stored values in the corresponding fields of the selected Vehicle Type.
- The ERATV application copies the General Information data of the selected type to this new version. The authorisation part is copied from the registered type but it remains possible to be modified by the user. The system automatically names the new mode as “new version of <type name>”. Only the type name and not the type id is used for auto naming.

New version of a registered type

This method allows the user to specify a new version of a Vehicle Type from a previously registered version. On selecting this registration method, the following take place:

- The fields “Category”, “Subcategory” and “Platform” are cleared (if they contain values) and disabled.
- The field “Registered Type” is enabled. The user clicks on the button and a popup appears. The user can search through the search criteria and select any desired registered Vehicle Type with a reserved Type ID number as shown on Figure 18: Selection of Registered Vehicle Types popup.
- By selecting an already existing Vehicle type, the ERATV application copies the General Information data of the selected type to this new version. The authorisation part is copied from the registered type but it remains possible to be modified by the user. The system automatically names the new version as “new version of <type name>”. Only the type name and not the type id is used for auto naming.

New variant of a registered type Directive 2008/57/EC

This method allows the user to specify a new variant of a Vehicle Type from another registration regime ("Directive 2008/57/EC" and "Directive 2008/57/EC - Exceptional Mode"). On selecting this registration method, the following take place:

- The fields “Category”, “Subcategory” and “Platform” are cleared (if they contain values) and disabled.
- The field “Registered Type” is enabled. The user clicks on the button and a popup appears. The user can search through the search criteria and select any desired registered Vehicle Type with a reserved Type ID number as shown on Figure 18: Selection of Registered Vehicle Types popup.
- The ERATV application automatically names the new mode as “new variant of <type name>”. Only the type name and not the type id is used for auto naming. The ERATV

application also copies the remaining details of the selected “Registered Vehicle Type” to the current Vehicle Type to the values of the fields below:

- Registered Vehicle Type
- Category
- Subcategory
- Platform
- Type name
- Alternative type name
- Number of driving cabs

New version of a registered type Directive 2008/57/EC

This method allows the user to specify a new version of a Vehicle Type from another registration regime ("Directive 2008/57/EC" and "Directive 2008/57/EC - Exceptional Mode"). On selecting this registration method, the following take place:

- The fields “Category”, “Subcategory” and “Platform” are cleared (if they contain values) and disabled.

- The field “Registered Type” is enabled. The user clicks on the button and a popup appears. The user can search through the search criteria and select any desired registered Vehicle Type with a reserved Type ID number as shown on Figure 18: Selection of Registered Vehicle Types popup.
- The ERATV application automatically names the new mode as “new version of <type name>”. Only the type name and not the type id is used for auto naming. The ERATV application also copies the remaining details of the selected “Registered Vehicle Type” to the current Vehicle Type to the values of the fields below:

  - Registered Vehicle Type
  - Category
  - Subcategory
  - Platform
  - Subcategory
  - Type name
  - Alternative type name
- Number of driving cabs

2.3.2.2 Step 2 – Technical characteristics

The technical characteristics step of the registration process contains numerous data fields that need to be populated. To ease the fill-in process, these are divided in several section forms as seen in the left-hand menu shown in Figure 14. The section forms are:

1. Wheel Set Gauge
2. On-Board CCS Equipment
3. Energy Supply
4. General technical Characteristics
5. Vehicle Kinematic Gauge
6. Environmental Conditions
7. Fire Safety

8. Design mass and Loads
9. Rolling Stock Dynamic Behaviour
10. Braking
11. Geometrical Characteristics
12. Equipment
13. Noise related characteristics
14. Passenger related characteristics
15. Compatibility with Train Detection Systems

The sections are related to the registration regime that the User selects under general information. Each technical characteristics' form contains the parameters applicable to the section and several actions.

Each parameter row contains the following items (Figure 19: Step 2.):

1. The parameter number and label.
2. The mandatory flag: this flag denotes whether the parameter is mandatory. The applicability of the parameter is calculated dynamically as described in 2.3.1.4.
3. A help text icon: clicking this icon will display a popup help text window.
4. Field with values: this is the parameter field pre-populated with the selected/ entered values. There are different controls that appear at this point according to the type of the parameter. The possible controls are:
   - Simple Text box for text or numeric value: for example, a parameter using this type is "4.1.2.1 Maximum design speed". The numeric value might use a masked input for the data. In that case the user will see the mask on selecting the control. An example of a text box with an input mask can be seen in "4.7.5 Emergency brake : Stopping distance and deceleration profile for each load condition per design maximum speed a: Load condition: working order b: Load condition: normal payload c: Load condition: exceptional payload".
   - Three state drop down for Boolean fields: possible values are True/False/Not Specified. An example is parameter "4.10.11 Automatic dropping device (ADD) fitted".
   - Single selection from a drop-down list: example parameter of this type is "4.13.1.1 ETCS equipment on-board and the set of specifications from CCS TSI Annex A".
   - Single selection from a drop-down list with large number of options or the option to specify a value ("Other (Specify)"): this will be displayed as a selection dialog box as seen in Figure 20. Example parameter is "4.6.5 Rail inclination".
   - Multiple selections from a list with a small number of options: this will be displayed as a list of checkboxes through which the user makes one or more selections. Example parameter is "4.1.3 Wheel set gauge".
   - Multiple selections from a list with a large number of options and /or the option for the user to specify a value ("Other (Specify)"): this will be displayed as a selection dialog box as seen in Figure 20. Example parameter is "4.10.10 Material of pantograph contact strip".
   - Single or multiple selections from a selection dialog box with the option of providing additional data and / or the option for the user to specify a value ("Other (Specify)"):

this will be displayed as a selection dialog box as seen in Figure 20. Example parameter is “4 4.9.1 Type of end coupling”.

5. Action Icon: if the user is able to perform an action on the record, then an appropriate button will appear next to the field. The possible actions are:
   - Add a new value in case the field accepts multiple values: this is denoted with a plus button ( ).
   - Open the selection dialog box as shown in Figure 20: this can be achieved by clicking the arrow button ( ).

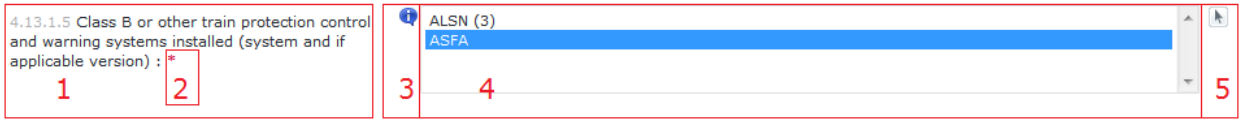

Figure 19: Step 2. Technical Characteristics – Parameter record layout

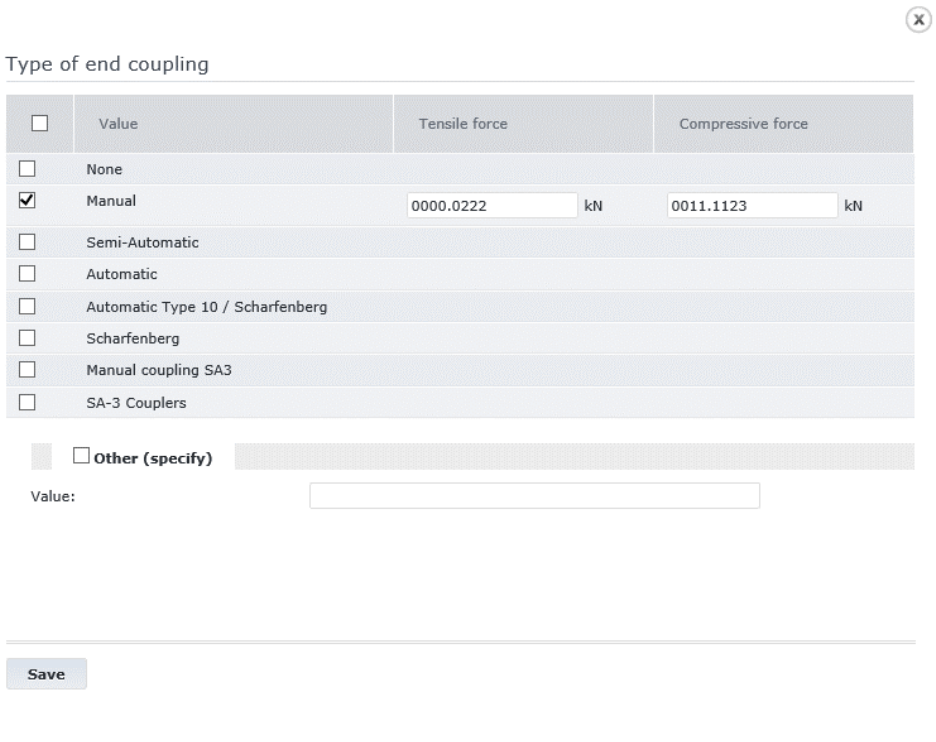

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Figure 20: Step 2 – Selection Dialog Box

The actions that are available to the user are:

1. “Save As Draft”: this button stores the provided information in the repository. No validation is performed.
2. “Save and Continue”: stores and fully validates the data in this form. The next section in the registration progress is presented to the user.
3. “Cancel Changes”: this option cancels any outstanding changes and reloads the same form with the most recently saved data.
4. “Copy Registration”: this button allows the user to copy all the saved information to a new Vehicle Type. For more information see section 2.3.15.

5. “Grant Permission for editing”: by clicking this button, the user may grant access to the current Vehicle Type for an Auxiliary User registered with the home NSA. The Auxiliary User will be able to login and fill the technical details section for this Vehicle Type. For more information see section 2.6.3.
6. Cancel Registration: this action cancels the registration. The registration status will be changed to ‘Cancelled’ and will be locked for editing.

2.3.2.2.1 Wheel set gauge

In this form (Figure 21 and Figure 22), the user must define the wheel set gauge details of the Vehicle Type. The form contains the following fields:

1. “4.1.3 Wheel set gauge”: the user must select from predefined values. It is possible to select more than one value.
   a. “4.1.3.b Wheel Set Gauge – Transformation Method”: this option appears if more than one value has been selected for parameter “4.1.3 Wheel Set Gauge”. Only one value is permitted (applied only to “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes).
   b. “4.1.11 Wheelset gauge Changeover facility”: this option appears if more than one value has been selected for parameter “4.1.3 Wheel Set Gauge” (applied only to "Directive (EU) 2016/797” and “Directive (EU) 2016/797 – Exceptional Mode” registration modes).
2. “4.1.12 Number of vehicles composing the fixed formation (for fixed formation only)”: [The User must enter a number in the respective field. The value is mandatory for all vehicle categories. If the vehicle is composed of only one car, the indicated value shall be “1” (applied only to "Directive (EU) 2016/797” and “Directive (EU) 2016/797 – Exceptional Mode” registration modes).

The selected values in field 4.1.3 are used for determining the available configurations for the Vehicle Type.

If parameter 4.1.3 has already preselected values (from a previous session or by copying data from another registered Vehicle Type), making alterations to these might invalidate data further down the registration process. A warning message will be presented to the user when an alteration to these values is performed.

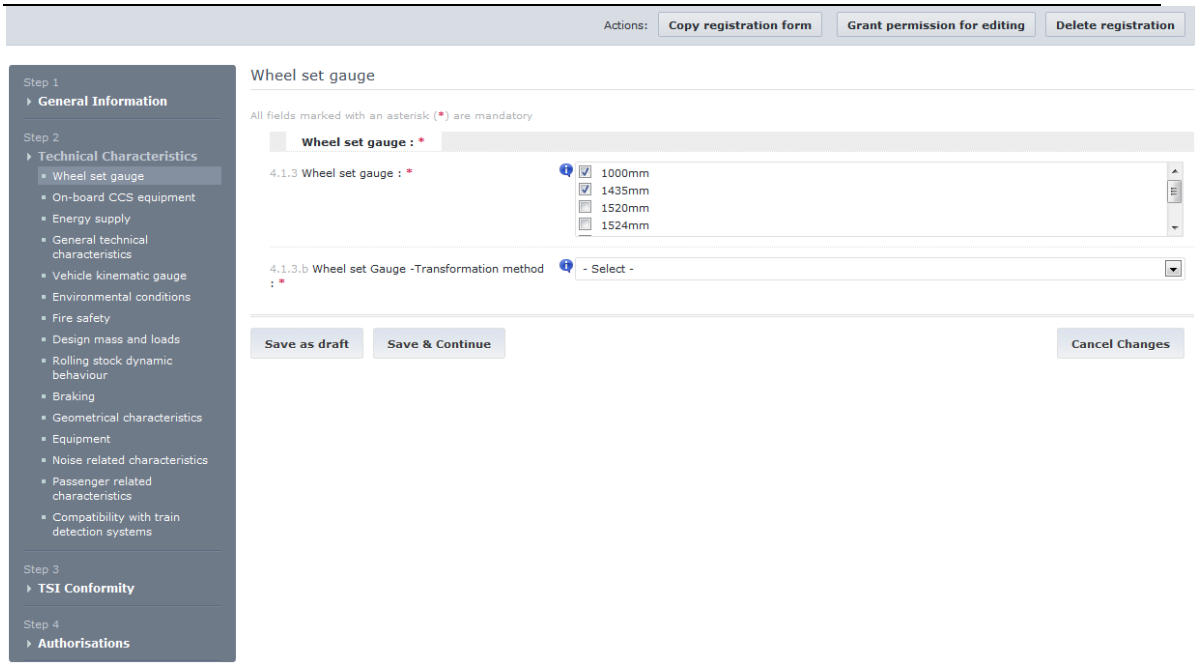


Figure 21: Technical Characteristics – Wheel Set Gauge section form – Directive 2008/57/EC registration regimes

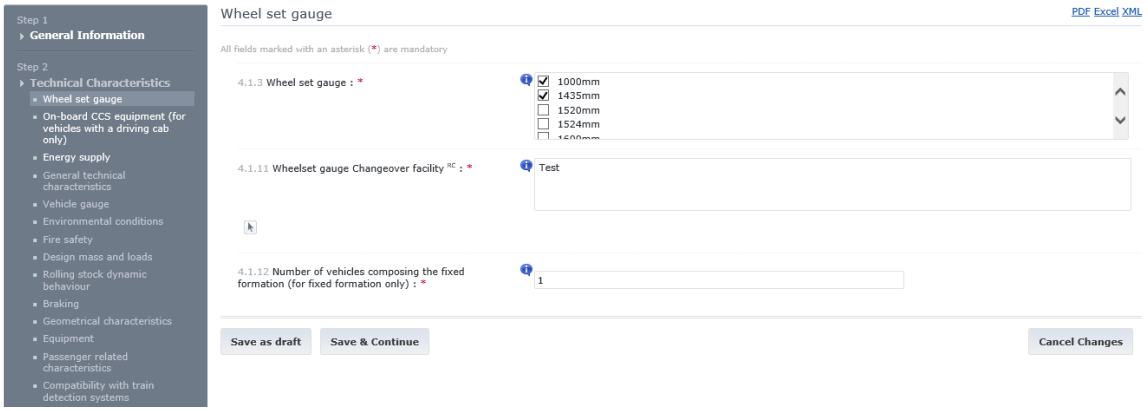


Figure 22: Technical Characteristics – Wheel Set Gauge section form – Directive (EU) 2016/797

2.3.2.2.2 On-board CCS equipment

This section form contains information about the Command and Control Systems (CCS) on board the Vehicle Type.

1. "4.13.1 Signalling"
   a. "4.13.1.1 ETCS equipment on-board and its level": the user must select a single value from predefined list shown on selection. If the value is set to "None", then parameters 4.13.1.2, 4.13.1.3 & 4.13.1.4 are cleared and disabled and the value is not used to generate configurations for the Vehicle Type (applied to "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes).
   "4.13.1.1 ETCS equipment on-board and the set of specifications from CCS TSI Annex A": the user must select a single value from predefined list shown on selection. If the value is set to "None", then parameters 4.13.1.7 & 4.13.1.9 are cleared and disabled (applied to "Directive (EU) 2016/797" and "Directive (EU) 2016/797 – Exceptional Mode" registration modes).

b. “4.13.1.2 ETCS baseline.version (x.y)”: the user must select a single value from a predefined list. Additionally, the user may provide a version as additional data applied to “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes.
c. “4.13.1.3 ETCS on-board equipment for reception of infill-function information via loop or GSM-R”: the user must select a single value from a predefined list applied to “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes.
d. “4.13.1.4 ETCS national applications implemented (NID_XUSER of Packet 44)”: the user may select multiple values from a predefined list applied to “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes.
e. “4.13.1.5 Class B or other train protection, control and warning systems installed”: the user may select multiple values from a predefined list and optionally enter a version where applicable, except when selecting the value “None” which can only be selected exclusively.
f. “4.13.1.6 Special conditions implemented on-board to switch over between different train protection, control and warning systems”: the predefined list of available values is generated dynamically based on the selected values of parameters 4.13.1.1 & 4.13.1.5. The user has the option to check multiple values except when selecting the value “None” which can only be selected exclusively (applied to “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes).
g. “4.13.1.7 ETCS on-board implementation”: a free text field
h. “4.13.1.8 ETCS System Compatibility”: the user must select from predefined list. It is possible to select more than one value.
i. “4.13.1.9 Managing information about the completeness of the train: the user can select a Boolean value (True / False).

2. “4.13.2 Radio”
   a. “4.13.2.1 GSM-R equipment on board and its version (FRS and SRS)”: the user must select a single value from a predefined list. Selecting the value “None” will cause parameters 4.13.2.2 to be cleared and disabled (applied only to “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes).
   “4.13.2.1 GSM-R Radio voice on board and its Baseline”: the user must select a single value from a predefined list. Selecting the value “None” will cause parameters 4.13.2.6, 4.13.2.10 & 4.13.2.12 to be cleared and disabled (applied only to "Directive (EU) 2016/797” and “Directive (EU) 2016/797 – Exceptional Mode” registration modes).
   b. “4.13.2.2 Number of GSM-R mobile sets in driving cab for data transmission”: the user may select a single value from a predefined list (applied only to “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes).
   c. “4.13.2.3 Class B or other radio systems installed (system and, if applicable, version)”: the user may select multiple values from a predefined list and optionally enter a Version number for each selected value, except when selecting the value “None” which can only be selected exclusively.
   d. “4.13.2.4 Special conditions implemented on-board to switch over between different radio systems”: the predefined list of available values is generated dynamically based on the selected values of parameters 4.13.2.1 and 4.13.2.3. The user has the option to

select multiple values except when selecting the value “None” which can only be selected exclusively (applied only to “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes).

e. “4.13.2.5 Radio Voice System Compatibility”: the user must select from predefined list. It is possible to select more than one value (applied only to "Directive (EU) 2016/797” and “Directive (EU) 2016/797 – Exceptional Mode” registration modes).
f. “4.13.2.6 Voice and operational communication implementation”: this parameter accepts character sting values (applied only to "Directive (EU) 2016/797” and “Directive (EU) 2016/797 – Exceptional Mode” registration modes).
g. “4.13.2.7 GSM-R Radio Data communication on board and its Baseline” ”: the user must select a single value from a predefined list. In case the selected value for "4.13.2.7" is “None”, the ERATV application disables "4.13.2.9" & "4.13.2.11". “None” value can only be selected exclusively and not in combination with any other value (applied only to "Directive (EU) 2016/797” and “Directive (EU) 2016/797 – Exceptional Mode” registration modes).
h. “4.13.2.8 Radio Data System Compatibility” the user may select multiple values from a predefined list (applied only to "Directive (EU) 2016/797” and “Directive (EU) 2016/797 – Exceptional Mode” registration modes).
i. “4.13.2.9 Data communication application for ETCS implementation”: this parameter accepts character sting values (applied only to "Directive (EU) 2016/797” and “Directive (EU) 2016/797 – Exceptional Mode” registration modes).
j. “4.13.2.10 Voice SIM Card GSM-R Home Network”: the user must select a single value from predefined list (applied only to "Directive (EU) 2016/797” and “Directive (EU) 2016/797 – Exceptional Mode” registration modes).
k. “4.13.2.11 Data SIM Card GSM-R Home Network” the user must select a single value from predefined list (applied to "Directive (EU) 2016/797” and “Directive (EU) 2016/797 – Exceptional Mode” registration modes).
l. “4.13.2.12 Voice SIM Card support of Group ID 555”: the user must select a Boolean value (True / False) (applied to "Directive (EU) 2016/797” and “Directive (EU) 2016/797 – Exceptional Mode” registration modes).

The selected values for parameters 4.13.1.1 and 4.13.1.5 are used to determine the second Configuration setting parameter (CCS on board). Making alterations to either of these parameters might cause data loss further down the registration process. A warning message will be presented to the user when an alteration to these values is performed.

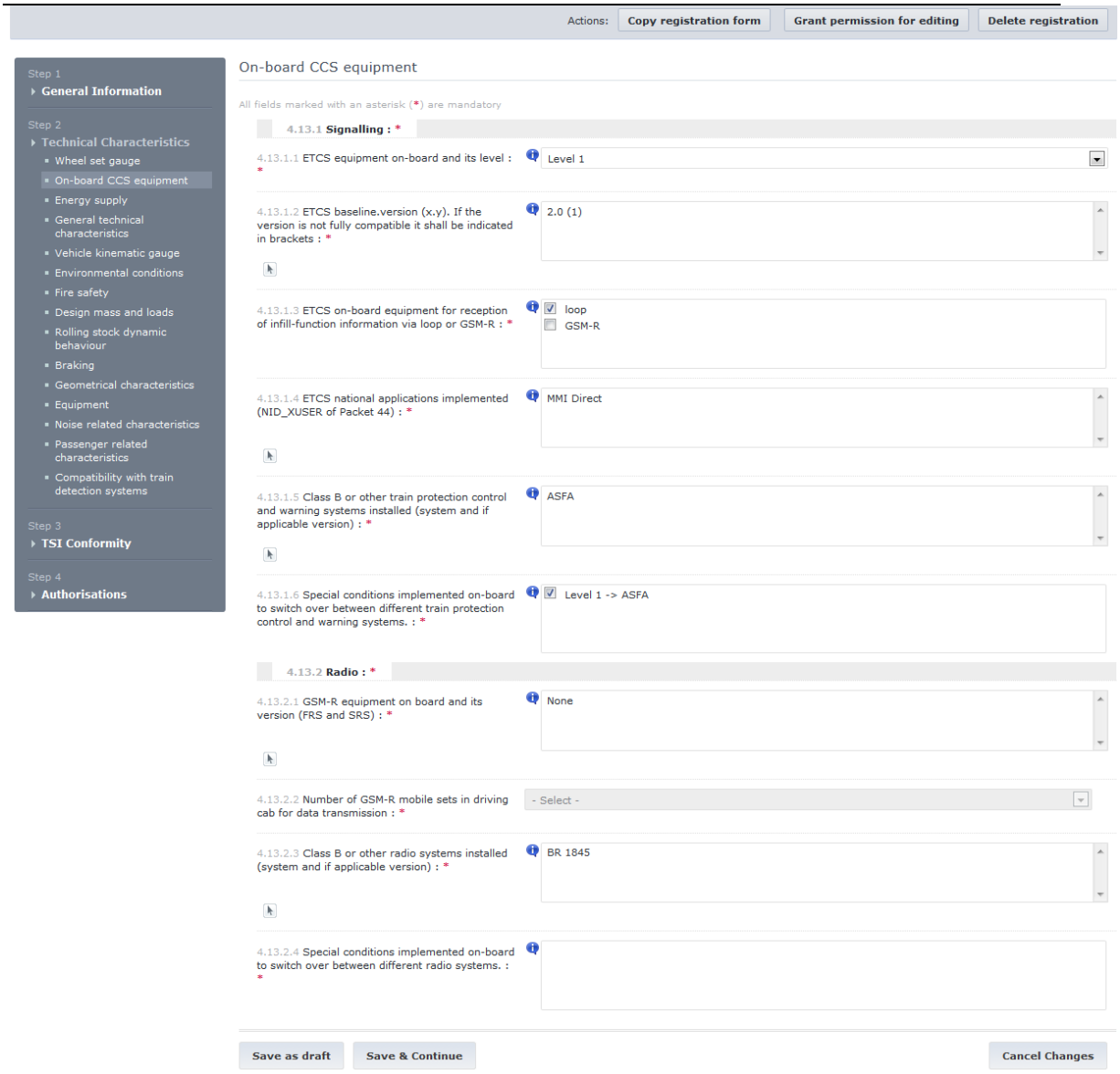


Figure 23: Technical Characteristics – On Board CCS equipment section form – Directive 2008/57/EC registration regimes

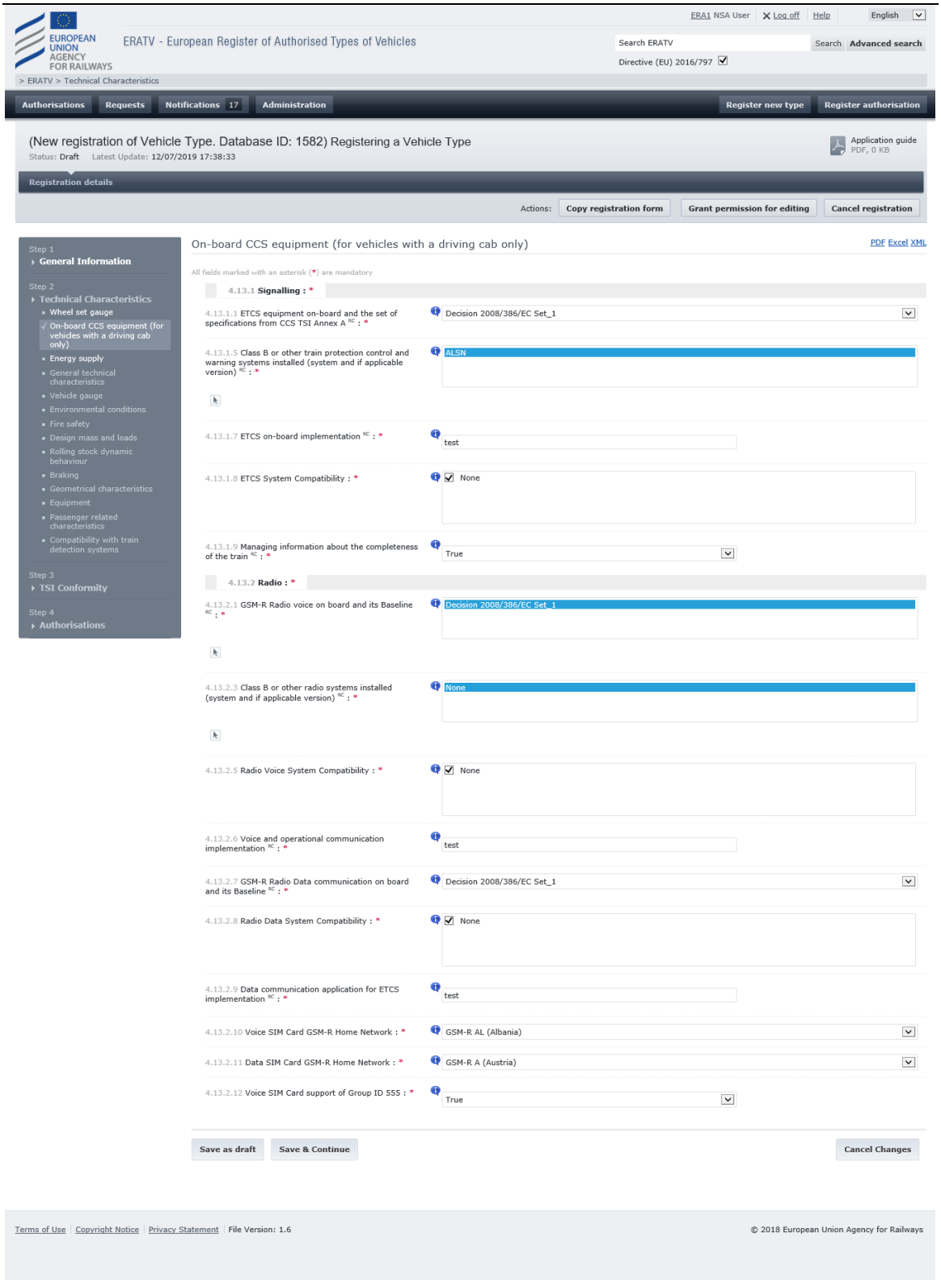


Figure 24: Technical Characteristics – On Board CCS equipment section form - Directive (EU) 2016/797

2.3.2.2.3 Energy supply

This section form contains information about the energy supplies the Vehicle Type can support. It must be filled in two steps:

a) Specify the supported energy supplies and save the form (either “Save as draft” or “Save and continue”).
b) Specify technical characteristics for each of the selected energy supplies.

The following parameters are available in this section form:

1. “4.10.1 Energy Supply system (voltage and frequency)*”: the user must select multiple values from a predefined list, with the option to specify a value (Option “Other (Specify)”).
   * “4.10.1 Energy Supply system” is the parameter name under “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes and “4.10.1 Energy Supply system (voltage and frequency)” the name under "Directive (EU) 2016/797” and “Directive (EU) 2016/797 – Exceptional Mode” registration modes.

   This parameter contains these additional validation rules:
   a. If the predefined value “None” is selected, then it is not possible to select any other values for this parameter and the remaining parameters for the form are inactive and not presented.
   b. If the predefined value “Autonomous” is selected, then it is possible to select additional values for this parameter. The remaining energy supply parameters, apart from “4.10.2 Maximum power (to be indicated for each energy supply system the vehicle is equipped for)”, are set to inactive and cannot take values for the “Autonomous” energy supply.
   c. If the predefined value “Other (Specify)” is selected, then the user must specify the characteristics of the Other Energy Supply source as well as the type of the current supplied (DC or AC)
2. “4.10.2 Maximum power”: the user must enter one value for the parameter per energy supply configuration other than “None” (applied to “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes).
3. “4.10.3 Maximum rated current from the catenary”: the user must enter one value for the parameter per energy supply configuration other than “None” and “Autonomous” (applied to “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes).
4. “4.10.4 Maximum current at standstill per pantograph (to be indicated for each DC systems the vehicle is equipped for)”: the user must enter a value for the parameter for each energy supply configuration other than “None” and “Autonomous” which denotes Direct Current (DC) energy supply. This parameter is not applicable for Alternating Current (AC) Energy Supply sources.
5. “4.10.5 Height of interaction of pantograph with contact wires (over top of rail) (to be indicated for each energy supply system the vehicle is equipped for)”: the user must use the masked input to provide one value for each energy supply configuration other than “None” and “Autonomous”.
6. “4.10.6 Pantograph head geometry (to be indicated for each energy supply system the vehicle is equipped for)*”: the user must select one or more values from a predefined list with the option to also specify a custom value by using the “Other (Specify)” option. This must be performed for each energy supply configuration other than “None” and “Autonomous”.
   *Name under “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes: “4.10.6 Pantograph head (to be indicated for each energy supply system the vehicle is equipped for)”

Name under "Directive (EU) 2016/797" and "Directive (EU) 2016/797 – Exceptional Mode" registration modes: "4.10.6 Pantograph head geometry (to be indicated for each energy supply system the vehicle is equipped for)"

7. "4.10.7 Number of pantographs in contact with the overhead contact line (OCL) (to be indicated for each energy supply system the vehicle is equipped for)": the user must provide a numeric value for each energy supply configuration other than "None" and "Autonomous". If the value specified is one (1) or zero (0), then parameter "4.10.8 Shortest distance between two pantographs in contact with the OCL" for the same energy configuration is cleared and disabled.
8. "4.10.8 Shortest distance between two pantographs in contact with the OCL (to be indicated for each energy supply system the vehicle is equipped for; to be indicated for single and if applicable multiple operation) (only if number of raised pantographs is more than 1)": the user must provide a numeric value for each energy supply configuration other than "None" and "Autonomous".
9. "4.10.9 Type of OCL used for the test of current collection performance": the user must select one or more values from the provided list. This must be repeated once per energy supply configuration other than "None" and "Autonomous" (applied to "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes).
10. "4.10.10 Material of pantograph contact strip the vehicle may be equipped with (to be indicated for each energy supply system the vehicle is equipped for)": the user must select one or more values or can specify a custom value for each configuration other than "None" and "Autonomous".
11. "4.10.11 Automatic dropping device (ADD) fitted (to be indicated for each energy supply system the vehicle is equipped for)": the user must choose a valid value (True or False) from the drop-down list for each configuration other than "None" and "Autonomous".
12. "4.10.12 TSI conform energy meter for billing purposes installed on board": the user must choose a valid value (True or False) from the drop-down list for each configuration other than "None" and "Autonomous" (applied to "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes).
13. "4.10.14 Electric units equipped with power or current limitation function": the user can select a Boolean value (True / False) for each configuration other than "None" and "Autonomous" (applied to "Directive (EU) 2016/797" and "Directive (EU) 2016/797 – Exceptional Mode" registration modes).
14. "4.10.15 Mean contact force": the user must provide a numeric value for each energy supply configuration other than "None" and "Autonomous" (applied to "Directive (EU) 2016/797" and "Directive (EU) 2016/797 – Exceptional Mode" registration modes).

The selected values in field 4.10.1 are used for determining the available configurations for the Vehicle Type.

If parameter 4.10.1 has already preselected values (from a previous session or by copying data from another registered Vehicle Type), making alterations to these might invalidate data further down the registration process. A warning message will be presented to the user when an alteration to these values is performed.

A validation must succeed at this point before the remaining section forms are 'unlocked'.

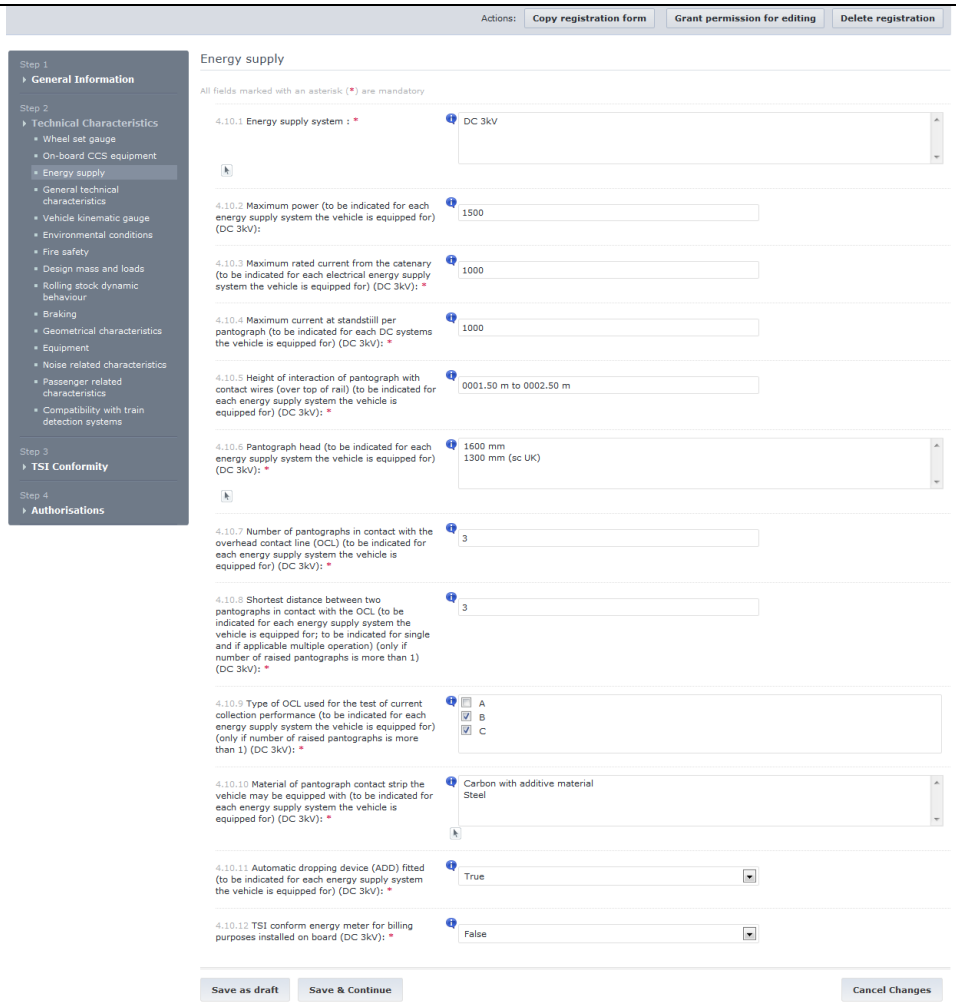


Figure 25: Technical Characteristics – Energy Supply section form - Directive 2008/57/EC registration regimes

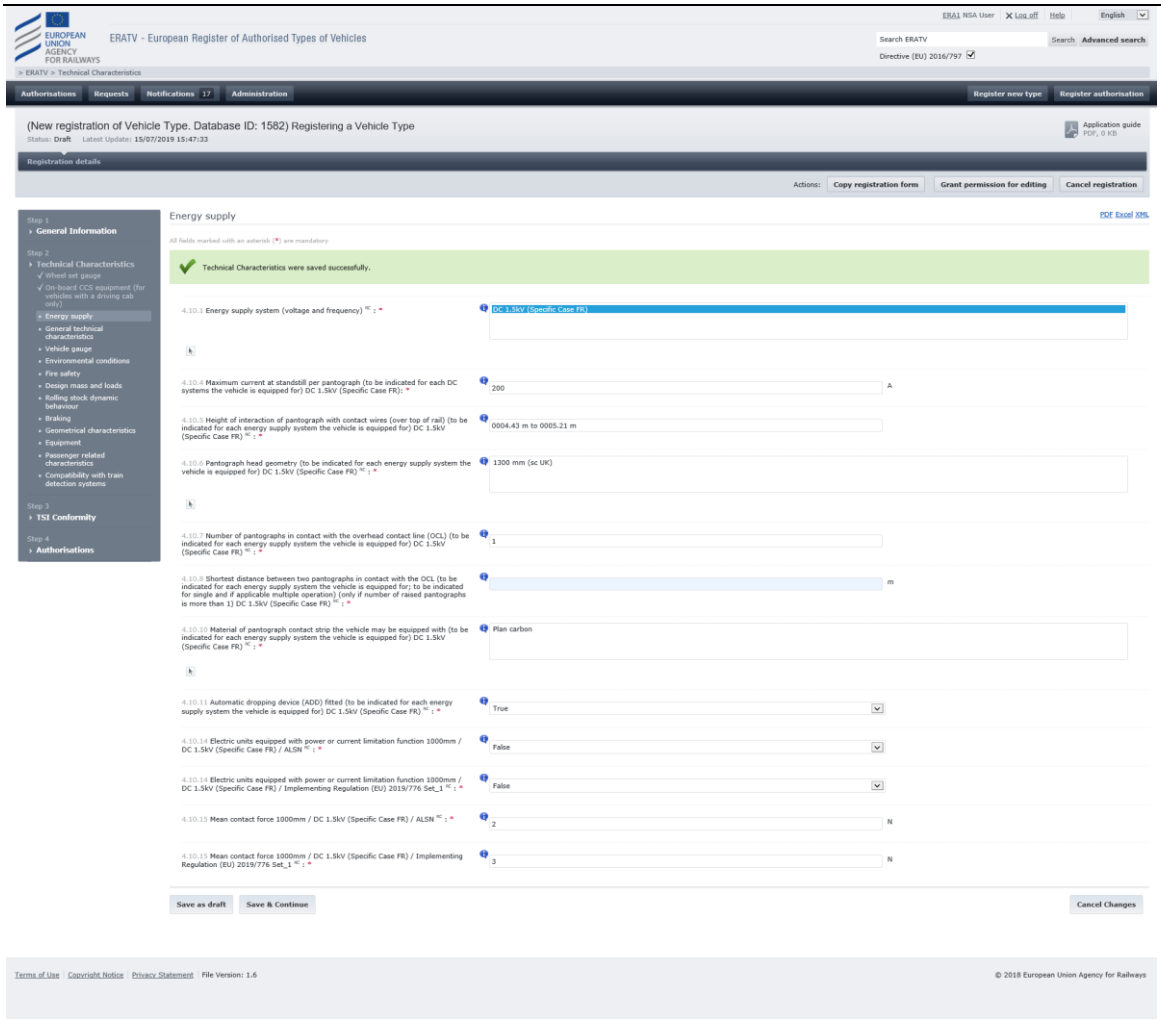


Figure 26: Technical Characteristics – Energy Supply section form - Directive (EU) 2016/797

2.3.2.2.4 General technical characteristics

This section form (Figure 27 and Figure 28) contains the general technical characteristics of the Vehicle Type. The following parameters are available in this form depending on the calculated applicability:

1. "4.1.2 Speed"
    a. "4.1.2.1 Maximum design speed": the user can enter a numeric value for each configuration.
    b. "4.1.2.2 Maximum speed when empty": the user can enter a numeric value.
2. "4.1.4 Conditions of use regarding train formation": the user can select a value from a predefined list (applied only to "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes).
3. "4.1.5 Maximum number of trainsets or locomotives coupled together in multiple operation": the user may enter a numeric value for each configuration.
4. "4.1.6 Number of elements in the rake of freight wagons": the user can enter a numeric value (applied only to "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes).

5. “4.1.7 Letter marking”: the user can enter a string value (applied only to “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes).
6. “4.1.8 Type meets the requirements necessary for validity of the vehicle authorisation granted by one Member State in other MSs”: the user can select a value from a predefined list (applied only to “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes).
7. “4.1.9 Dangerous goods for which the vehicle is suitable”: the user can select multiple values from a predefined list or provide a custom value (applied only to “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes).
8. “4.1.10 Structural category”: the user can select a single value from the predefined list or provide a custom value (applied only to “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes).

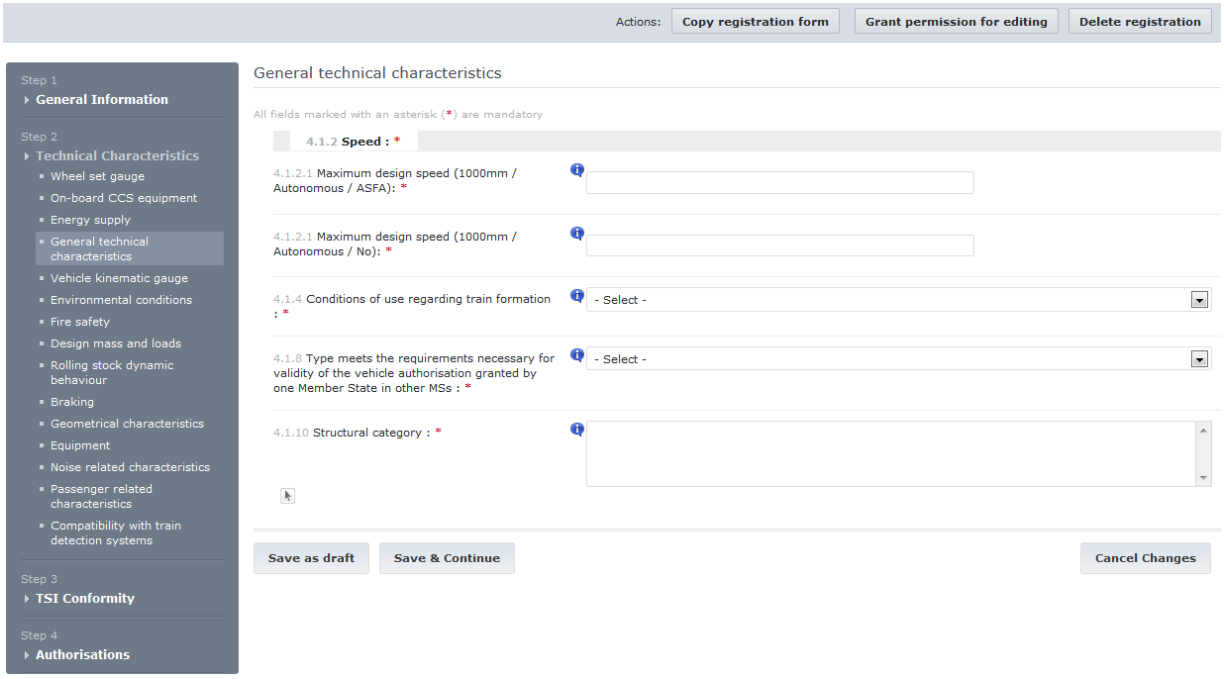


Figure 27: Technical Characteristics – General Technical Characteristics form - Directive 2008/57/EC registration regimes

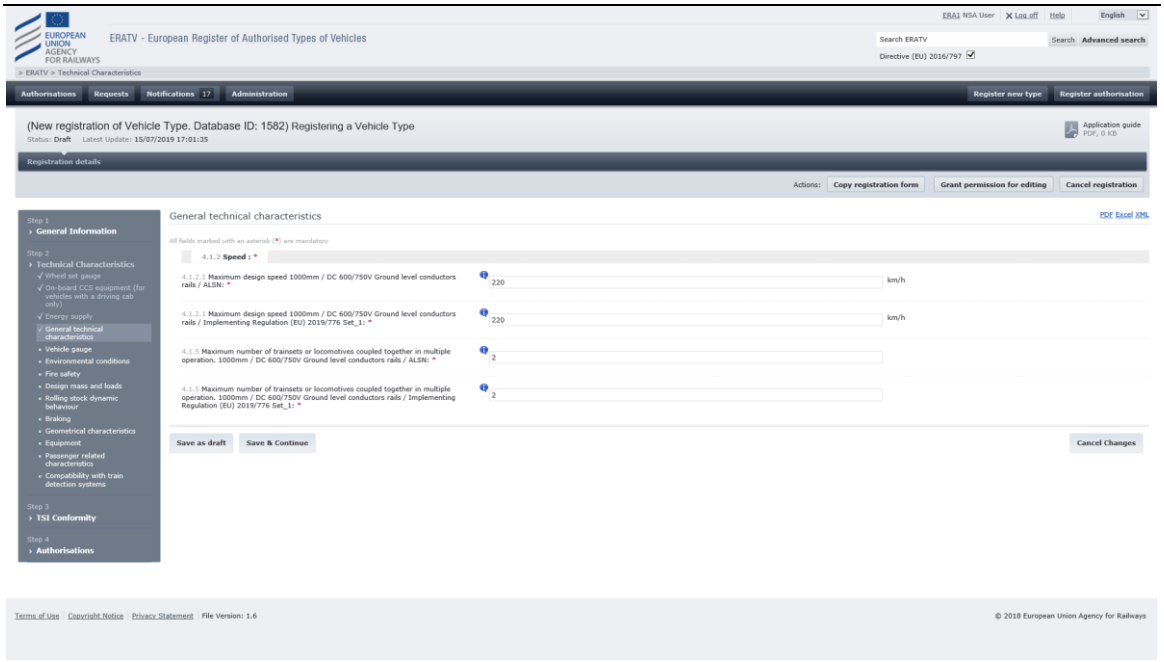


Figure 28: Technical Characteristics – General Technical Characteristics form - Directive (EU) 2016/797

2.3.2.2.5 Vehicle kinematic gauge

This section form (Figure 29) contains the parameters related to the Vehicle Kinematic Gauge. The form contains the following parameters:

1. "4.2.1 Vehicle kinematic gauge": the user can select multiple values from a predefined list.
2. "4.2.2 Vehicle kinematic gauge": the user can select multiple values from a predefined list (applied only to "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes).

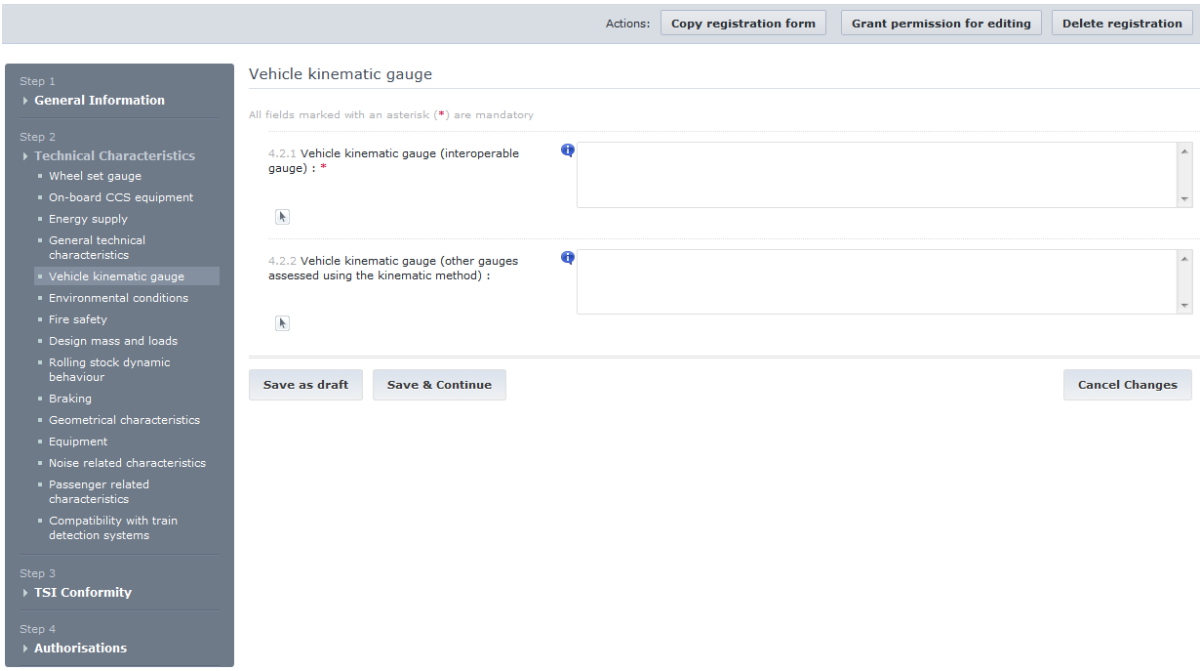


Figure 29: Technical Characteristics – Vehicle Kinematic Gauge Section Form

2.3.2.2.6 Environmental conditions

This section form (Figure 30) contains the parameters related to the Vehicle Type environmental conditions. The form contains the following parameters:

1. "4.3.1 Temperature range": the user can select multiple values from a predefined list. Additionally, the user can provide custom values by clicking the option "Other (Specify)".
2. "4.3.2 Altitude range": the user can select a single value from a predefined list. If the value "AX" is selected, then parameter "4.3.2.1 Altitude range detail" is presented:
    a. "4.3.2.1 Altitude range detail": the user can enter a numeric value

    Both parameters 4.3.2 and 4.3.2.1 are applied only to "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes

3. "4.3.3 Snow, ice and hail conditions": the user can select multiple values from a predefined list. Additionally, the user can provide custom values by clicking the option "Other (Specify)".

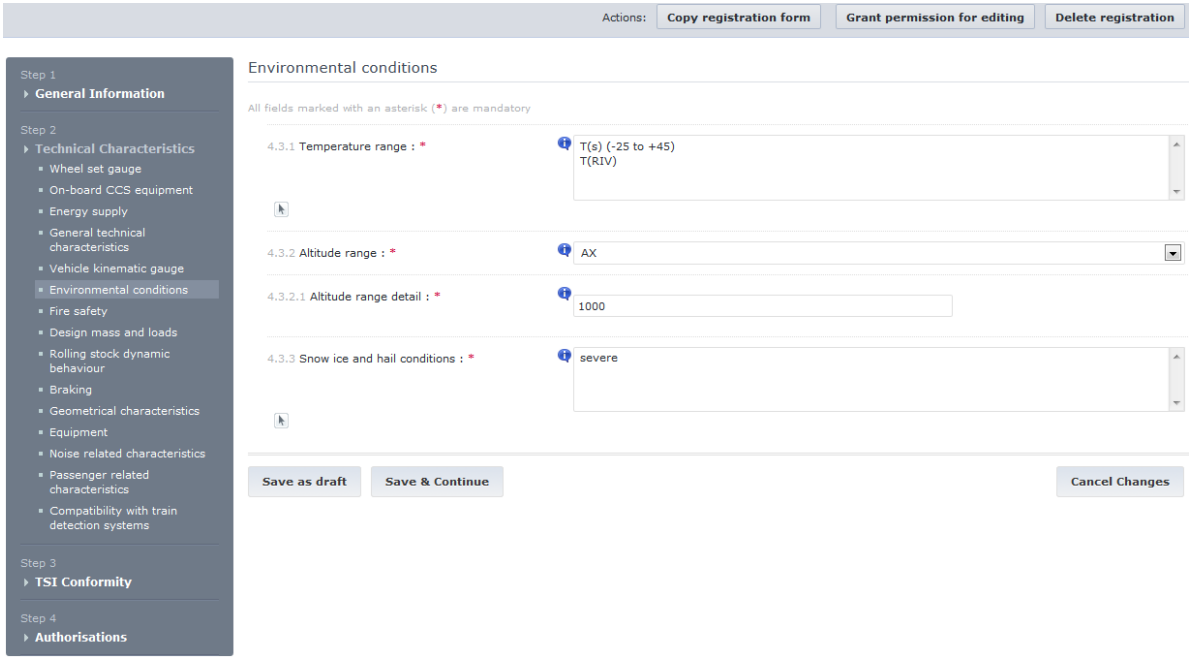


Figure 30: Technical Characteristics – Environmental Conditions Form

2.3.2.2.7 Fire Safety

This form (Figure 31) contains the parameters related to the Vehicle Type fire safety. The only parameter provided is parameter “4.4.1 Fire Safety Category”. The user can select a value from the predefined list of values.

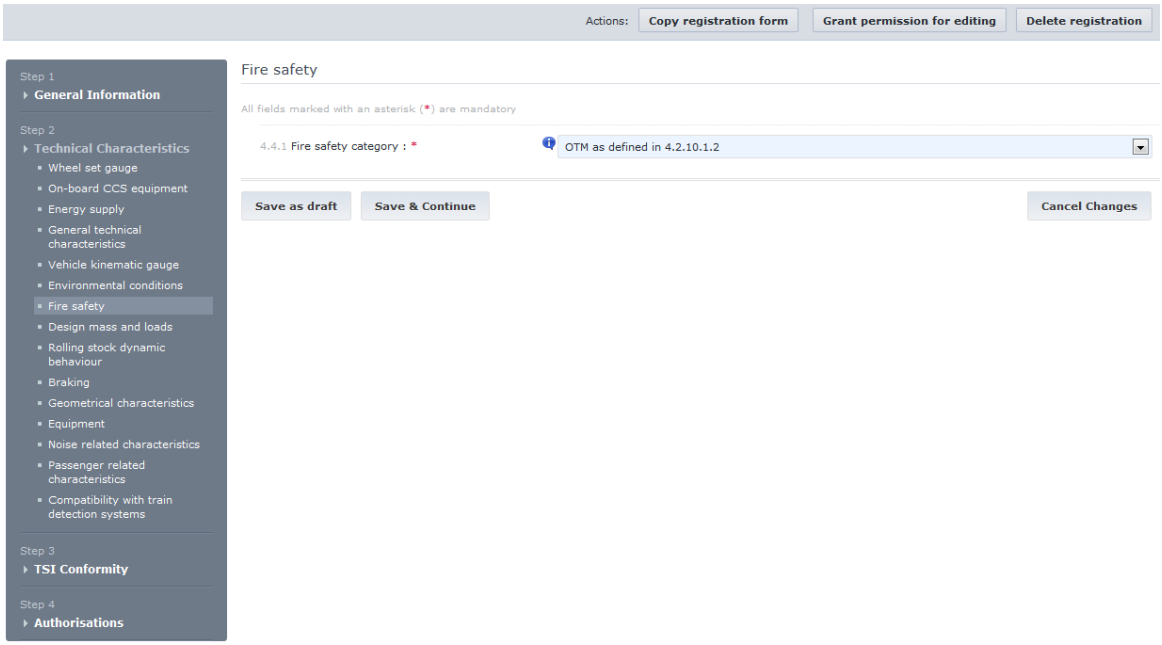


Figure 31: Technical Characteristics – Fire Safety Form

2.3.2.2.8 Design mass and loads

This form (Figure 32) contains the parameters related to the Vehicle Type design mass and loads. The form contains the following parameters:

1. “4.5.1 Permissible payload for different line categories”: the user can select a line category from a reference list and then enter a number for each selected line. There can be one numeric value per line category selected and multiple line categories may be selected each with its own numeric value. The numeric value is mandatory for each line category.
2. “4.5.2 Design mass”
   a. “4.5.2.1 Design mass in working order”: the user can enter a numeric value.
   b. “4.5.2.2 Design mass under normal payload”: the user can enter a numeric value.
   c. “4.5.2.3 Design mass under exceptional payload”: the user can enter a numeric value.
3. “4.5.3 Static axle load”
   a. “4.5.3.1 Static axle load in working order”: the user can enter a numeric value.
   b. “4.5.3.2 Static axle load under normal payload/ maximum payload for freight wagons”: the user can enter a numeric value.
   c. “4.5.3.3 Static axle load under exceptional payload”: the user can enter a numeric value.
   d. “4.5.3.4 Position of the axles along the unit (axle spacing) :
      Main value:
      a: Distance between axles
      b: Distance from end axle to the end of the nearest coupling plane
      c: distance between two inside axles”:

the user must use the masked input to provide one value for each distance option (applied only to "Directive (EU) 2016/797" and "Directive (EU) 2016/797 – Exceptional Mode" registration modes).

Additional value (Explanations): the user can provide a text as explanations.

Multiple values: the user can use the "+" button to add multiple set of values. Use the "x" button to remove a set of values.

Both main and additional values are mandatory; The validation will fail if there is a main value without additional one, or an additional value without a main one.

4. "4.5.4 Quasi-static guiding force": the user can enter a numeric value for each configuration based on the wheel set gauge (applied only to "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes).
5. "4.5.5 Total vehicle mass (for each vehicle of the unit)": the user must provide a numeric value (applied only to "Directive (EU) 2016/797" and "Directive (EU) 2016/797 – Exceptional Mode" registration modes).
6. "4.5.6 Mass per wheel": the user must provide a numeric value (applied only to "Directive (EU) 2016/797" and "Directive (EU) 2016/797 – Exceptional Mode" registration modes).

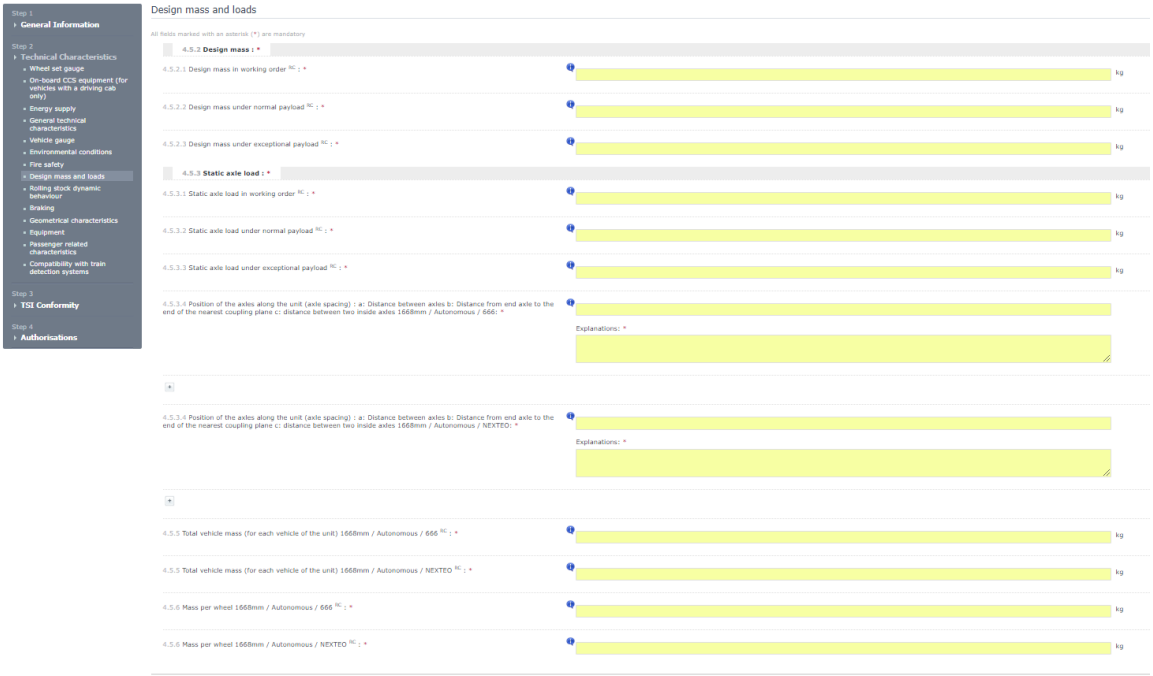


Figure 32: Technical Characteristics – Design Mass and loads form - Directive (EU) 2016/797 registration regimes

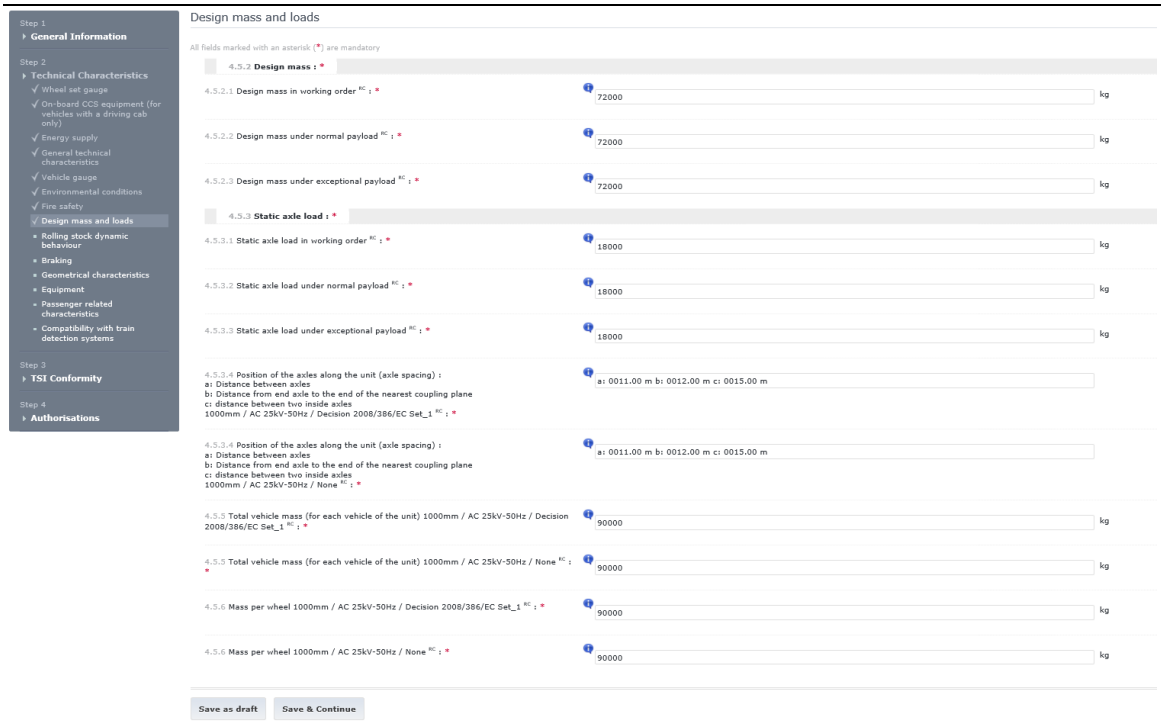


Figure 33: Technical Characteristics – Design Mass and loads form - Directive (EU) 2016/797

2.3.2.2.9 Rolling stock dynamic behaviour

This form (Figure 34) contains the parameters related to the Vehicle Type design mass and loads. The form contains the following parameters:

a. “4.6.1 Cant deficiency”: the user can enter multiple numeric values for each configuration based on the wheel set gauge (applied only to “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes).
b. “4.6.2 Vehicle equipped with a cant deficiency compensation system”: the user can select either True or False value (applied only to “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes).
c. “4.6.4 Combination of maximum speed and maximum cant deficiency for which the vehicle was assessed”: the user must use the masked input to insert numeric values (applied only to "Directive (EU) 2016/797” and “Directive (EU) 2016/797 – Exceptional Mode” registration modes).
d. “4.6.5 Rail inclination”: the user must select a single value from predefined list (applied only to "Directive (EU) 2016/797” and “Directive (EU) 2016/797 – Exceptional Mode” registration modes).

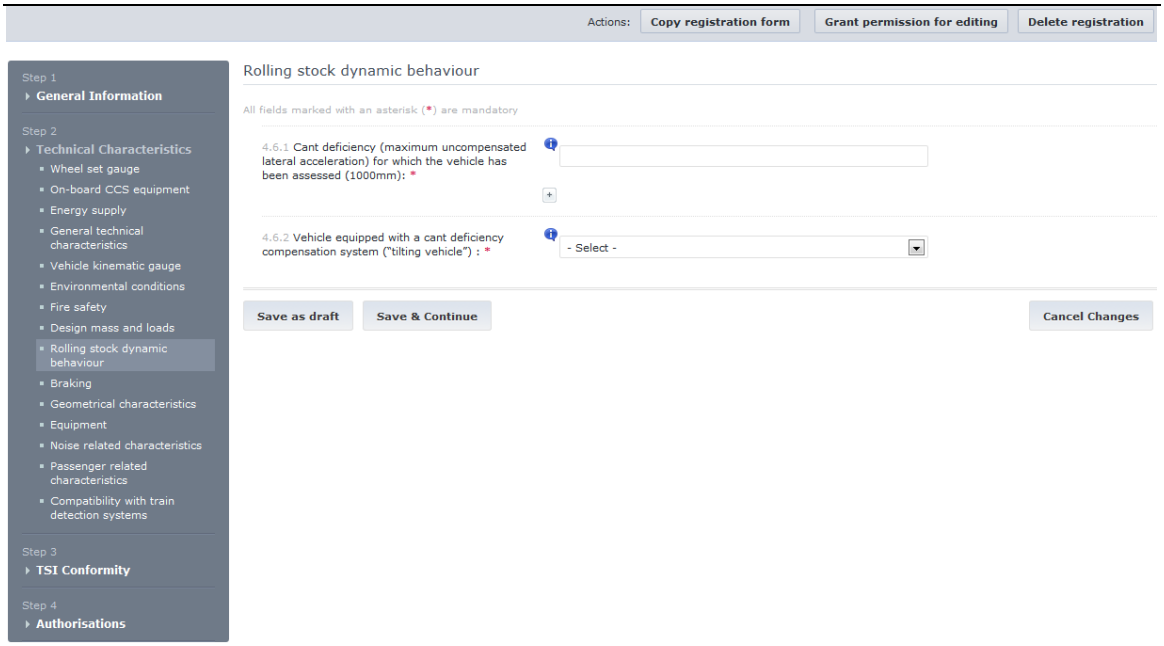


Figure 34: Technical Characteristics – Rolling Stock Dynamic behaviour form - Directive 2008/57/EC registration regimes

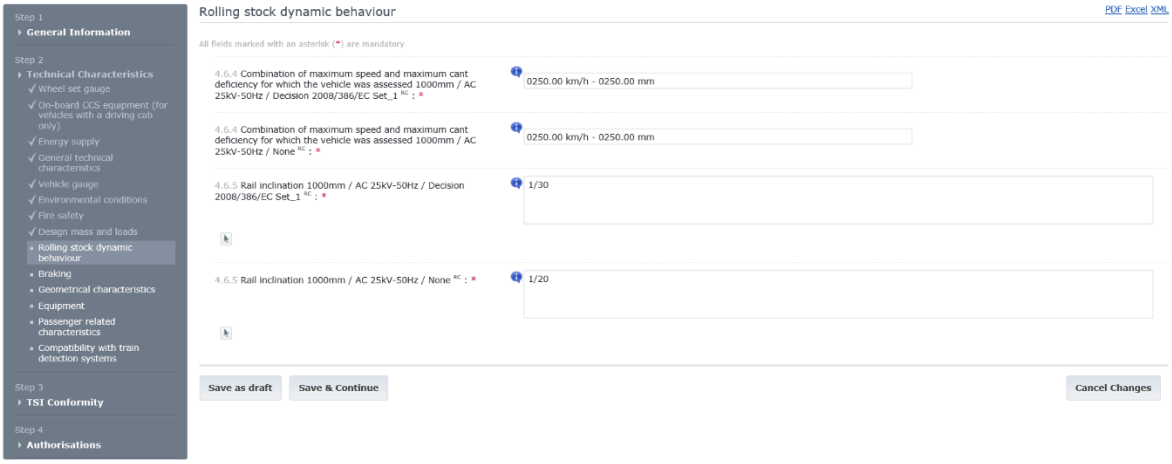


Figure 35: Technical Characteristics – Rolling Stock Dynamic behaviour form - - Directive (EU) 2016/797

2.3.2.2.10 Braking

This form (Figure 37) contains the parameters related to the breaking characteristics of the Vehicle Type. The form contains the following parameters:

1. "4.7.1 Maximum average deceleration *": the user can enter a single numeric value.

   *Name under "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes: "Maximum train deceleration"

   Name under "Directive (EU) 2016/797" and "Directive (EU) 2016/797 – Exceptional Mode" registration modes: "Maximum average deceleration"
2. "4.7.2 Service braking"
   a. "4.7.2.1 Brake performance on steep gradients with normal payload"
      i. "4.7.2.1.1 Reference case of TSI": the user can select a value from the predefined list or remove a previously entered value by selecting the option "-Select-". If a value is selected, then parameters 4.7.2.1.2 to 4.7.2.1.5 are disabled. If the value is removed, then the parameters are re-enabled.
      ii. "4.7.2.1.2 Speed (if no reference case is indicated)": the user can enter a single numeric value.
      iii. "4.7.2.1.3 Gradient (if no reference case is indicated)": the user can enter a single numeric value.
      iv. "4.7.2.1.4 Distance (if no reference case is indicated)": the user can enter a single numeric value. If this parameter has a value, then parameter "4.7.2.1.5 Time" is disabled.
      v. "4.7.2.1.5 Time (if distance is not indicated) (if no reference case is indicated)": the user can enter a single numeric value. If this parameter has a value, then parameter "4.7.2.1.4 Distance" is disabled.
      vi. "4.7.2.1.6 Maximum brake thermal energy capacity": the user must provide a numeric value (expressed in kJ instead of kW).
3. "4.7.3 Parking brake"
   a. "4.7.3.1 All vehicles of this type must be equipped with a parking brake": the user can select between values True & False (applied only to "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes).
   b. "4.7.3.2 Parking brake type": the user can select a value from a predefined list. If value "None" is selected, then Parameter "4.7.3.3 Maximum gradient on which the

unit is kept immobilized by the parking brake alone" is cleared and disabled. For any other value the parameter is enabled (applied only to "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes).

c. "4.7.3.3 Maximum gradient on which the unit is kept immobilized by the parking brake alone": the user can enter a numeric value.

d. "4.7.3.4 Parking brake": the user can select a Boolean value (True / False) (applied only to "Directive (EU) 2016/797" and "Directive (EU) 2016/797 – Exceptional Mode" registration modes).

4. "4.7.4 Braking systems fitted on the vehicle "

a. "4.7.4.1 Eddy current brake"

i. "4.7.4.1.1 Eddy current track brake fitted": the user can select between values True & False. If the value is set to False, then parameter "4.7.4.1.2 Possibility of preventing the use of the eddy current brake" is cleared and disabled.

*Name under "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes: "Eddy current brake fitted"

Name under "Directive (EU) 2016/797" and "Directive (EU) 2016/797 – Exceptional Mode" registration modes: "Eddy current track brake fitted"

ii. "4.7.4.1.2 "Possibility of preventing the use of the eddy current track brake (only if fitted with eddy current track brake)": the user can select between values True & False.

*Name under "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes: "Possibility of preventing the use of the eddy current brake (only if fitted with eddy current track brake)"

Name under "Directive (EU) 2016/797" and "Directive (EU) 2016/797 – Exceptional Mode" registration modes: "Possibility of preventing the use of the eddy current track brake (only if fitted with eddy current track brake)"

b. "4.7.4.2 Magnetic brake"

i. "4.7.4.2.1 Magnetic track brake fitted": the user can select between values True & False. If the value is set to False, then parameter "4.7.4.2.2 Possibility of preventing the use of the magnetic brake" is cleared and disabled.

*Name under "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes: "Magnetic brake fitted"

Name under "Directive (EU) 2016/797" and "Directive (EU) 2016/797 – Exceptional Mode" registration modes: "Magnetic track brake fitted"

ii. "4.7.4.2.2 Possibility of preventing the use of the magnetic track brake (only if fitted with magnetic brake)". The user can select between values True & False.

*Name under "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes: "Possibility of preventing the use of the magnetic brake (only if fitted with magnetic brake)"

Name under "Directive (EU) 2016/797" and "Directive (EU) 2016/797 – Exceptional Mode" registration modes: "Possibility of preventing the use of the magnetic track brake (only if fitted with magnetic brake)"

c. "4.7.4.3 Regenerative brake (only for vehicles with electrical traction)"

i. "4.7.4.3.1 Regenerative brake fitted": the user can select between True & False for each Energy Supply specified configuration. If the value False is selected, then parameter "4.7.4.3.2 Possibility of preventing the use of the regenerative brake" is cleared and disabled.

ii. "4.7.4.3.2 Possibility of preventing the use of the regenerative brake (only if fitted with regenerative brake)": the user can select between values True

& False for each Energy supply dependent configuration. This parameter is not available for the Energy Supply “Autonomous” or “None” (see 2.3.2.2.3).

5. “4.7.5 Emergency brake : Stopping distance and deceleration profile for each load condition per design maximum speed a: Load condition: working order b: Load condition: normal payload c: Load condition: exceptional payload“; the user must use the masked input to insert numeric values (mandatory fields applied to "Directive (EU) 2016/797” and “Directive (EU) 2016/797 – Exceptional Mode” registration modes). Due to the Transition from single-row value to three row-values, the existing single-row value is copied to the "Working order" value while the other two values ("Normal payload" and "Exceptional payload") are filled with zeroes, if needed.
6. “4.7.6 For general operation : Brake weight percentage (lambda) or Braked mass”; the user must use the masked input to insert numeric values. The User can add either a percentage (lambda allows a percentage value higher than 100% - up to 999.99%) or the number of tonnes or both values. In order to add only the tonnes, the User shall click on the field and navigate with the keyboard arrows to the desired position. Figure 36 shows the preview of all available modes of the respective parameter (applied to "Directive (EU) 2016/797” and “Directive (EU) 2016/797 – Exceptional Mode” registration regimes).
7. “4.7.7 Service brake: At maximum service brake:
   Stopping distance, Maximum deceleration, for the load condition ‘design mass under normal payload’ at the design maximum speed.”: the user must use the masked input to insert numeric values (applied only to "Directive (EU) 2016/797” and “Directive (EU) 2016/797 – Exceptional Mode” registration modes).
8. “4.7.8 Wheel slide protection system”: the user can select a Boolean value (True / False) (applied only to "Directive (EU) 2016/797” and “Directive (EU) 2016/797 – Exceptional Mode” registration modes).

Figure 36: Preview of available modes for parameter 4.7.6

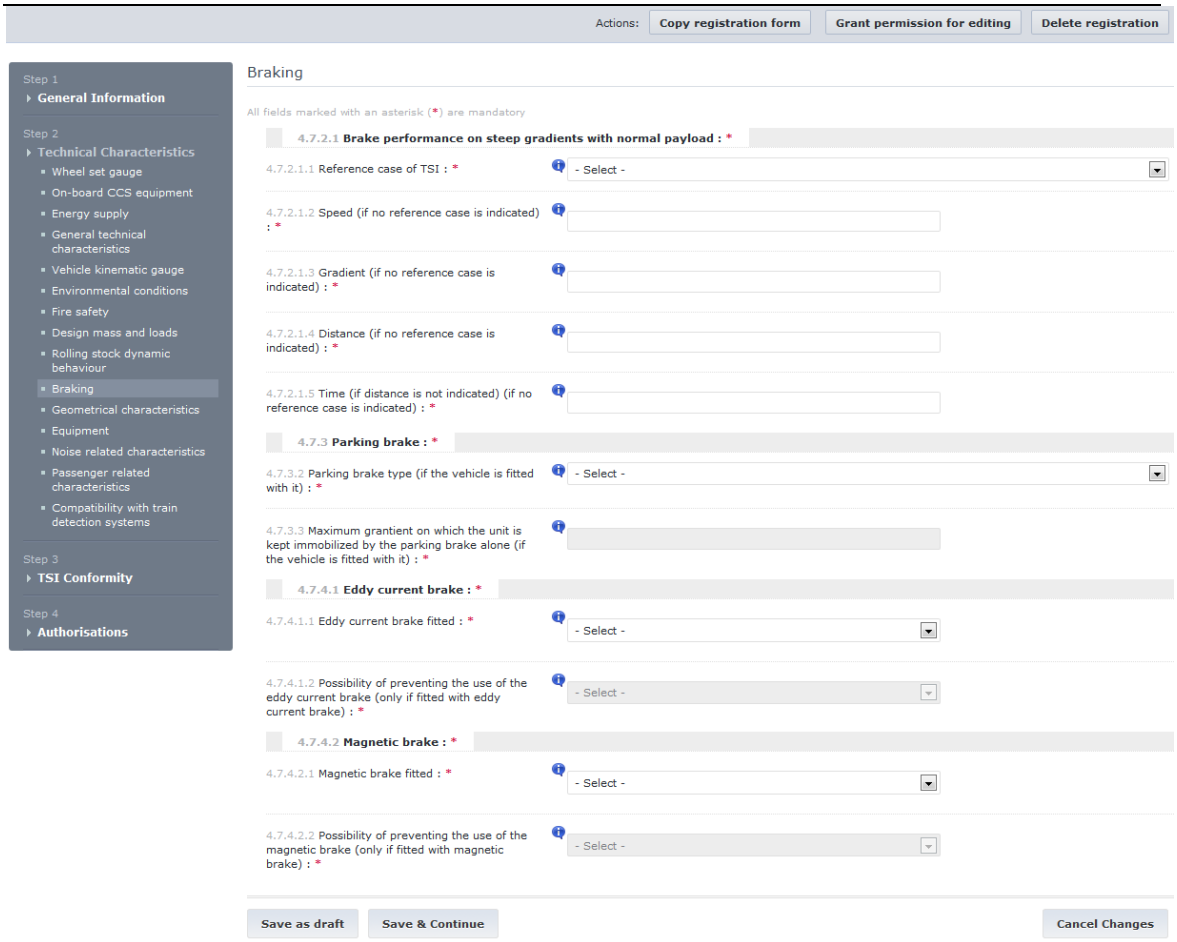


Figure 37: Technical Characteristics – Braking form - Directive 2008/57/EC registration regimes

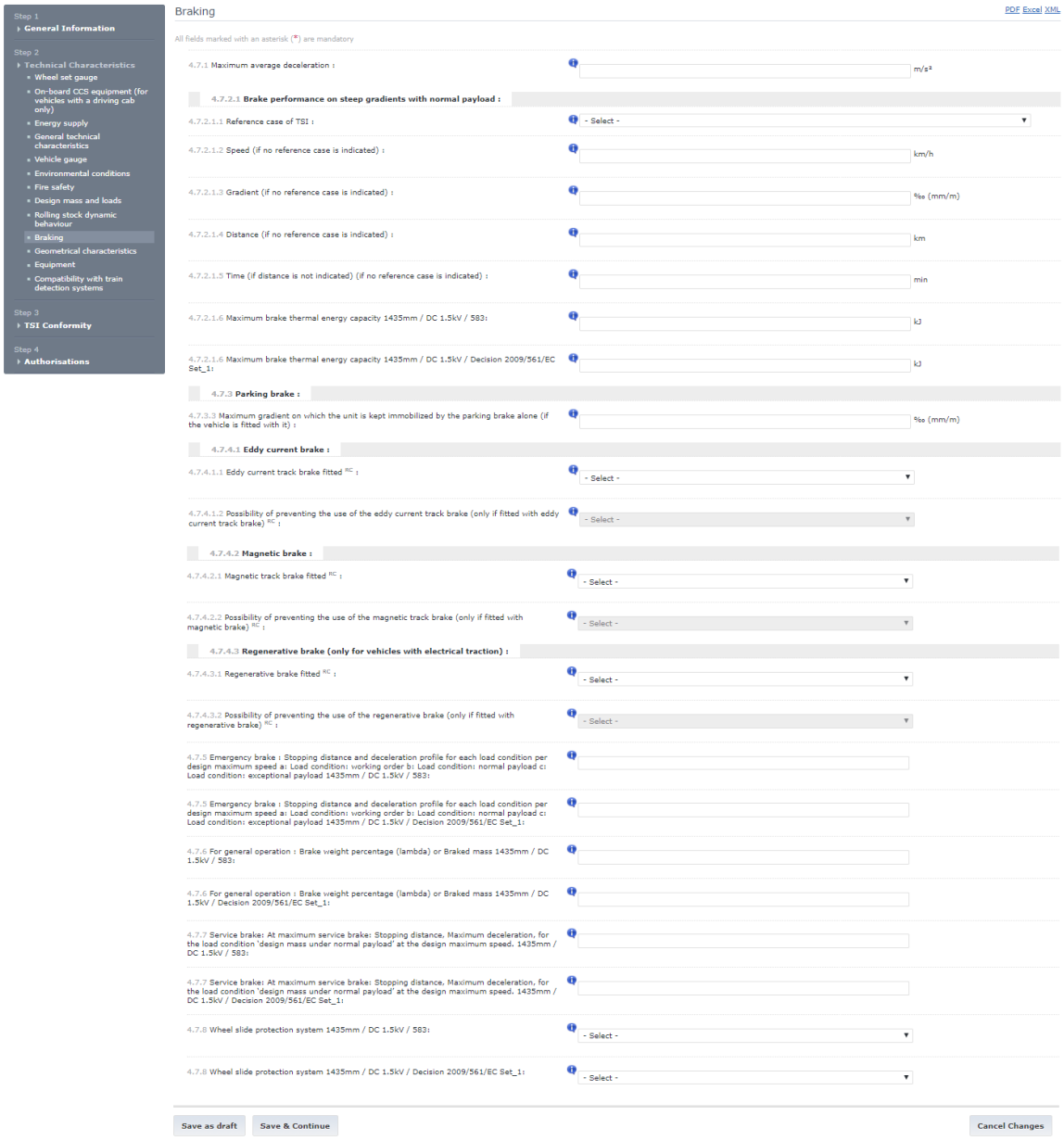


Figure 38: Technical Characteristics – Braking form - Directive (EU) 2016/797

2.3.2.2.11 Geometrical characteristics

This form (Figure 39 and Figure 40) contains the parameters related to the geometrical characteristics of the Vehicle Type. The form contains the following parameters:

1. "4.8.1 Vehicle length": the user can enter a single numeric value.
2. "4.8.2 Minimum in-service wheel diameter": the user can enter a single numeric value, which also automatically fills in the field 4.14.2.6.
3. "4.8.3 Shunting restrictions": the user can select between values True & False (applied only to "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes).
4. "4.8.4 Minimum horizontal curve radius capability": the user can enter a single numeric value.

5. “4.8.5 Minimum vertical convex curve radius capability”: the user can enter a single numeric value.
6. “4.8.6 Minimum vertical concave curve radius capability”: the user can enter a single numeric value.
7. “4.8.7 Height of loading platform”: the user can enter a single numeric value (applied only to “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes).
8. “4.8.8 Suitability for transport on ferries”: the user can select between values True & False (applied only to “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes).

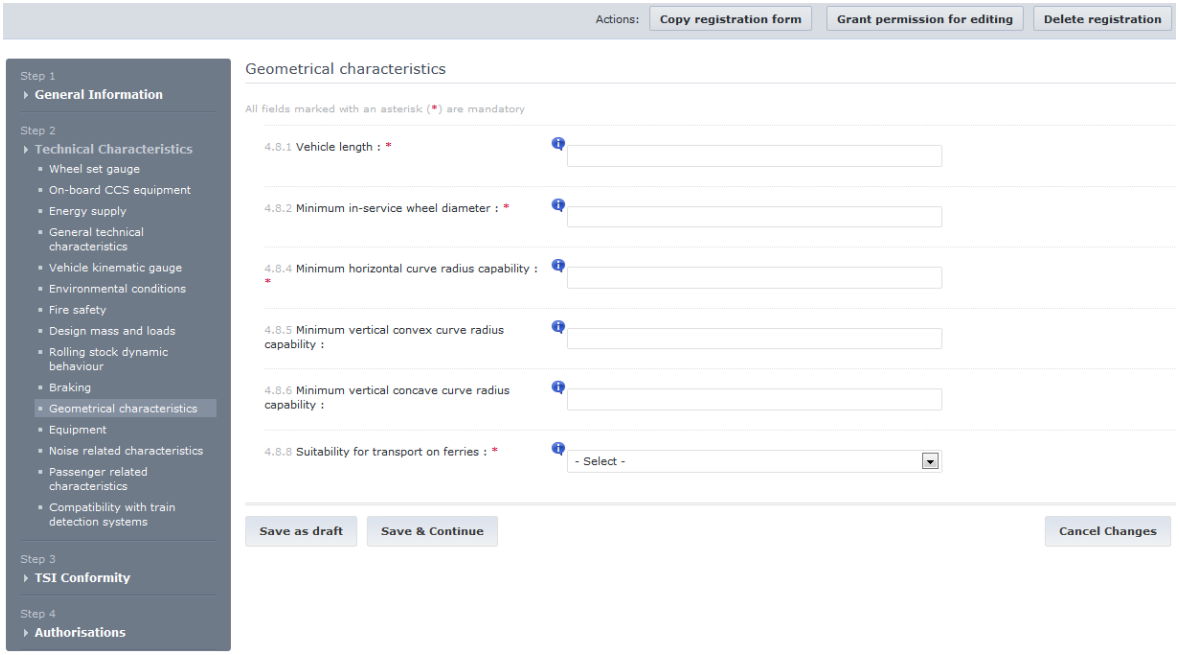


Figure 39: Technical Characteristics – Geometrical Characteristics form - Directive 2008/57/EC registration regimes

Figure 40: Technical Characteristics – Geometrical Characteristics form - Directive (EU) 2016/797

2.3.2.2.12 Equipment

This section form (Figure 42 and Figure 43) contains the parameters related to the Vehicle Type's equipment. The form contains the following parameters:

1. "4.9.1 Type of end coupling": the user can select multiple values from a predefined list or supply custom values by selecting option "Other (Specify)".
   By selecting any value (except "None" value), the user may provide for each one, two complementary values: "Tensile forces" & "Compressive forces" in decimal number format within the range [0.0001 , 9999.9999] expressed in kN (Figure 41:).
2. "4.9.2 Axle bearing condition monitoring (hot axles box detection)": the user can select multiple values from a predefined list or supply custom values by selecting option "Other (Specify)".
3. "4.9.3 Flange lubrication" (applied only to "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes)
   a. "4.9.3.1 Flange lubrication fitted": the user can select between values True & False. If the value False is selected, then parameter "4.9.3.2 Possibility of preventing the use of the lubrication device" is cleared and disabled.
   b. "4.9.3.2 Possibility of preventing the use of the lubrication device": the user can select between values True & False.

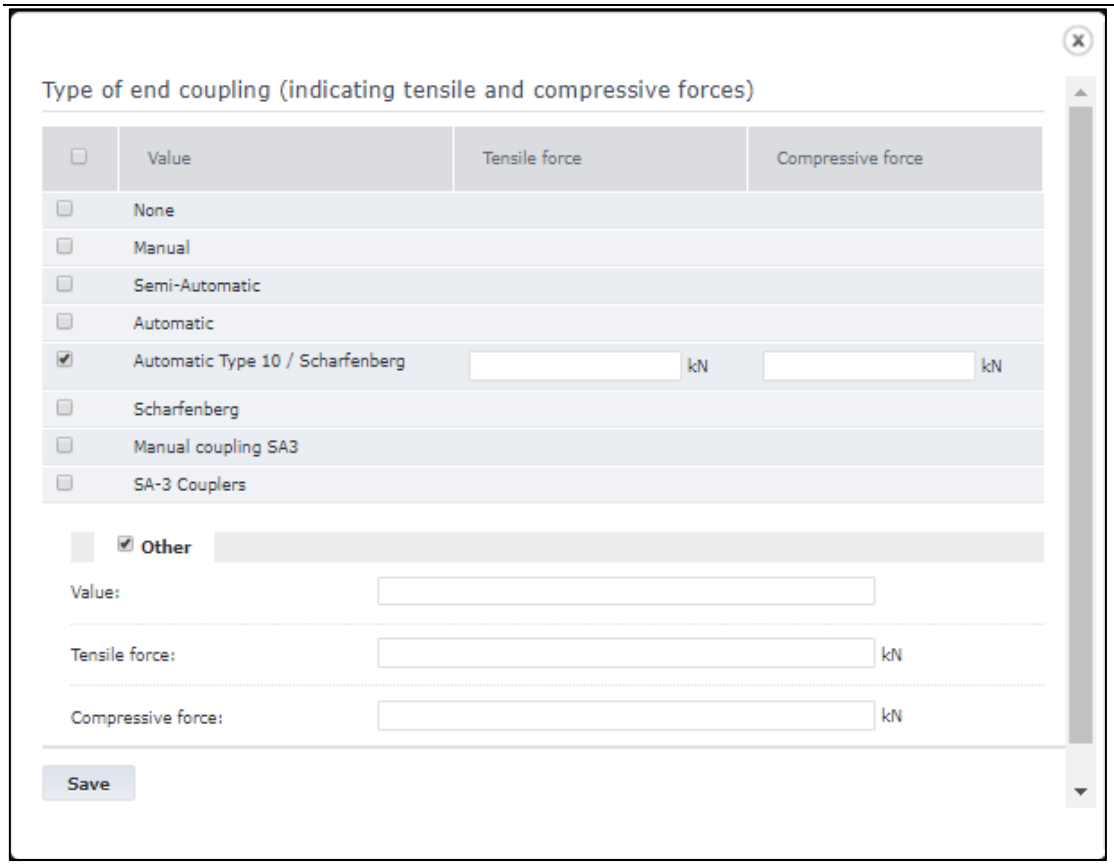


Figure 41: Type of end coupling

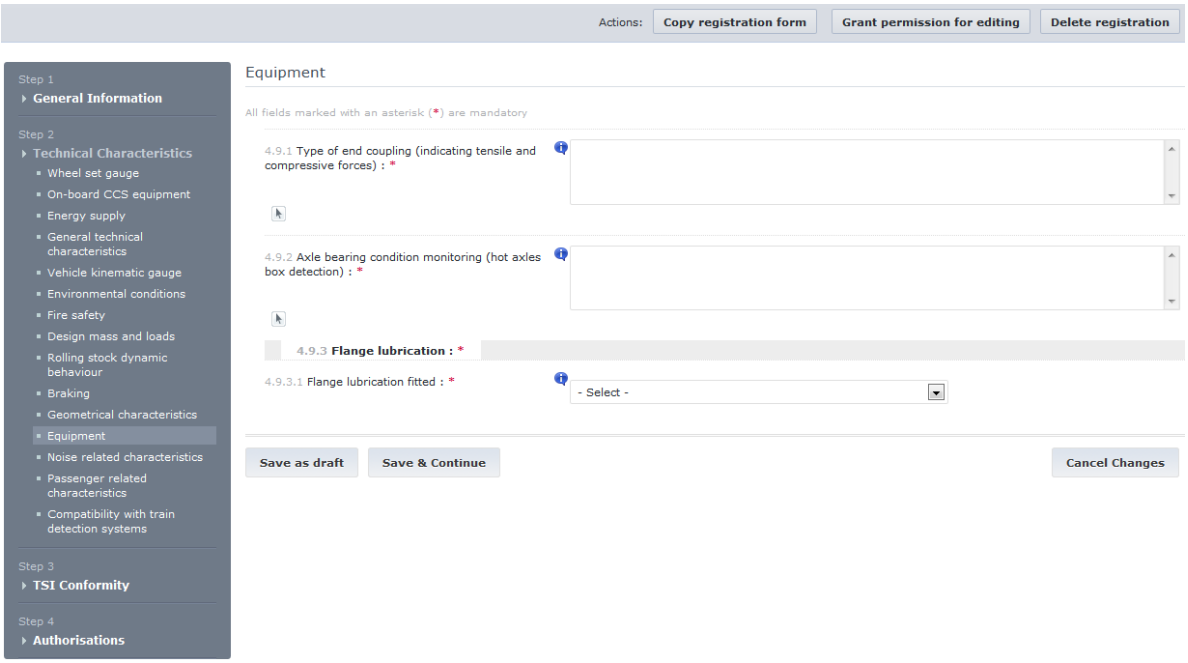


Figure 42: Technical Characteristics – Equipment form - Directive 2008/57/EC registration regimes

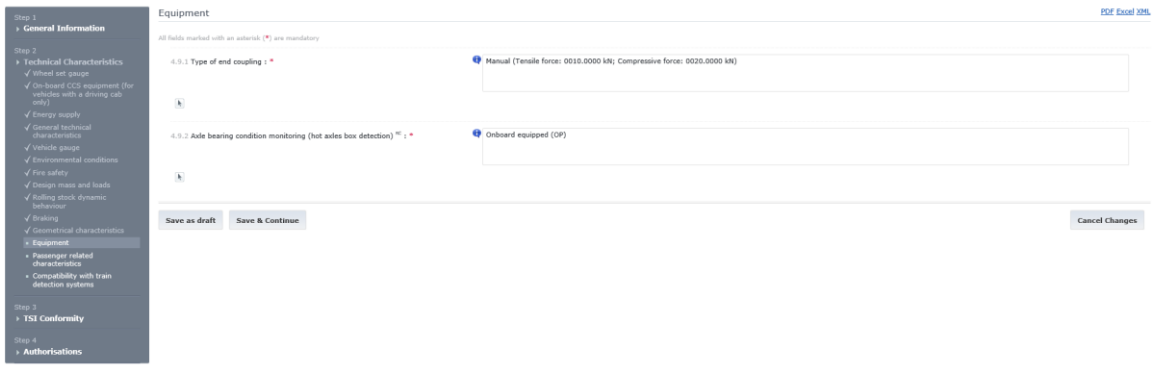


Figure 43: Technical Characteristics – Equipment form - Directive (EU) 2016/797

2.3.2.2.13 Noise related characteristics

This form is applied only to "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes.

This form (Figure 44) contains the parameters related to the noise related characteristics of the Vehicle Type. The form contains the following parameters:

1. "4.11.1 Pass-by noise level (dB(A))": the user can enter a single numeric value.
2. "4.11.2 Pass-by noise level was measured under reference conditions": the user can select between values True & False.
3. "4.11.3 Stationary noise level (dB(A))": the user can enter a single numeric value.
4. "4.11.4 Starting noise level (dB(A))": the user can enter a single numeric value.

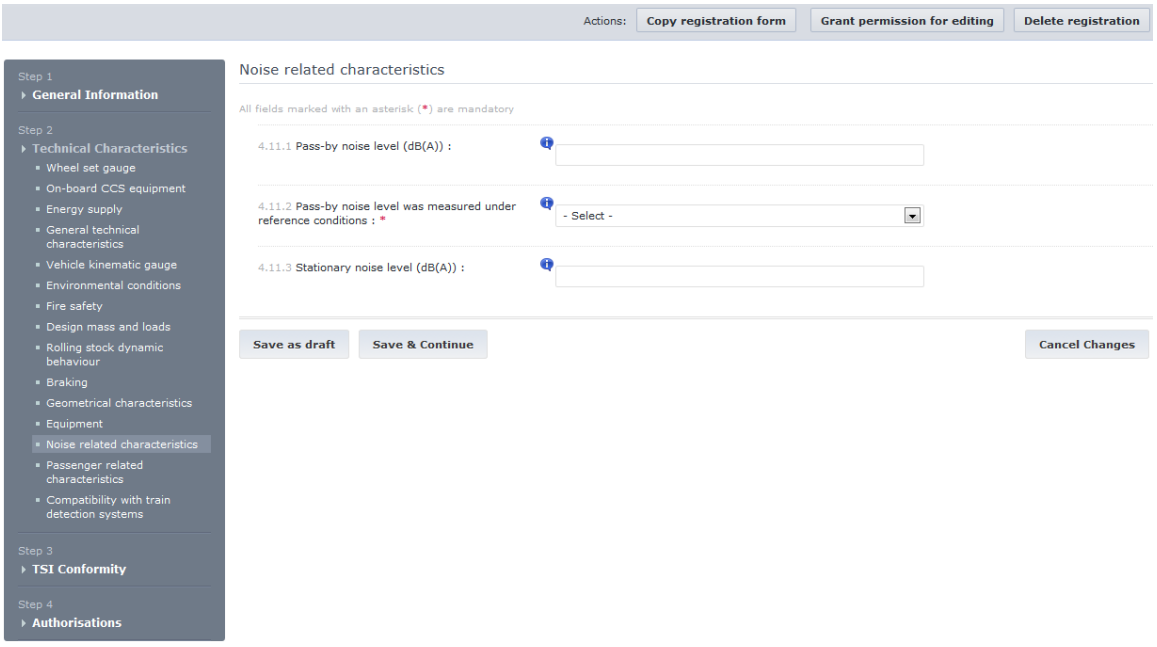


Figure 44: Technical Characteristics – Noise Related Characteristics form

2.3.2.2.14 Passenger related characteristics

This form (Figure 45 and Figure 46) contains the parameters related to the Passenger related characteristics for the Vehicle Type's equipment. The form contains the following parameters:

1. "4.12.1 General passenger related characteristics" (applied only to "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes)
   a. "4.12.1.1 Number of fixed seats": the user can enter a range of numeric values in the format "From [Number] To [Number]".
   b. "4.12.1.2 Number of toilets": the user can enter a single numeric value.
   c. "4.12.1.3 Number of sleeping places ": the user can enter a range of numeric values in the format "From [Number] To [Number]".
2. "4.12.2 PRM related characteristics" (applied only to "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes)
   a. "4.12.2.1 Number of priority seats": the user can enter a range of numeric values in the format "From [Number] To [Number]".
   b. "4.12.2.2 Number of wheelchair spaces": the user can enter masked numeric values in the format "From [Number] To [Number]".
   c. "4.12.2.3 Number of PRM accessible toilets": the user can enter a single numeric value.
   d. 4.12.2.4 Number of wheelchair accessible sleeping places": the user can enter a range of numeric values in the format "From [Number] To [Number]".
3. 4.12.3 Passenger access and egress"
   a. "4.12.3.1 Platform heights for which the vehicle is designed": the user can select multiple values from a predefined list or specify custom values by selecting the "Other (Specify)" value.
   b. "4.12.3.2 Description of any integrated boarding aids": the user can select multiple values from a predefined list of values (applied only to "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes).
   c. "4.12.3.3 Description of any portable boarding aids if considered in the design of the vehicle for meeting the PRM TSI requirements": the user can select multiple values from a predefined list or specify custom values by selecting the "Other (Specify)" value (applied only to "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes).

For the parameters with "From [Number] To [Number]" format a validation is applied in case "To[number]" field is less than "From[number]" field.

Message example: "4.12.1.1 Number of fixed seats value in "To" field must be greater than or equal to the value in "From" field"

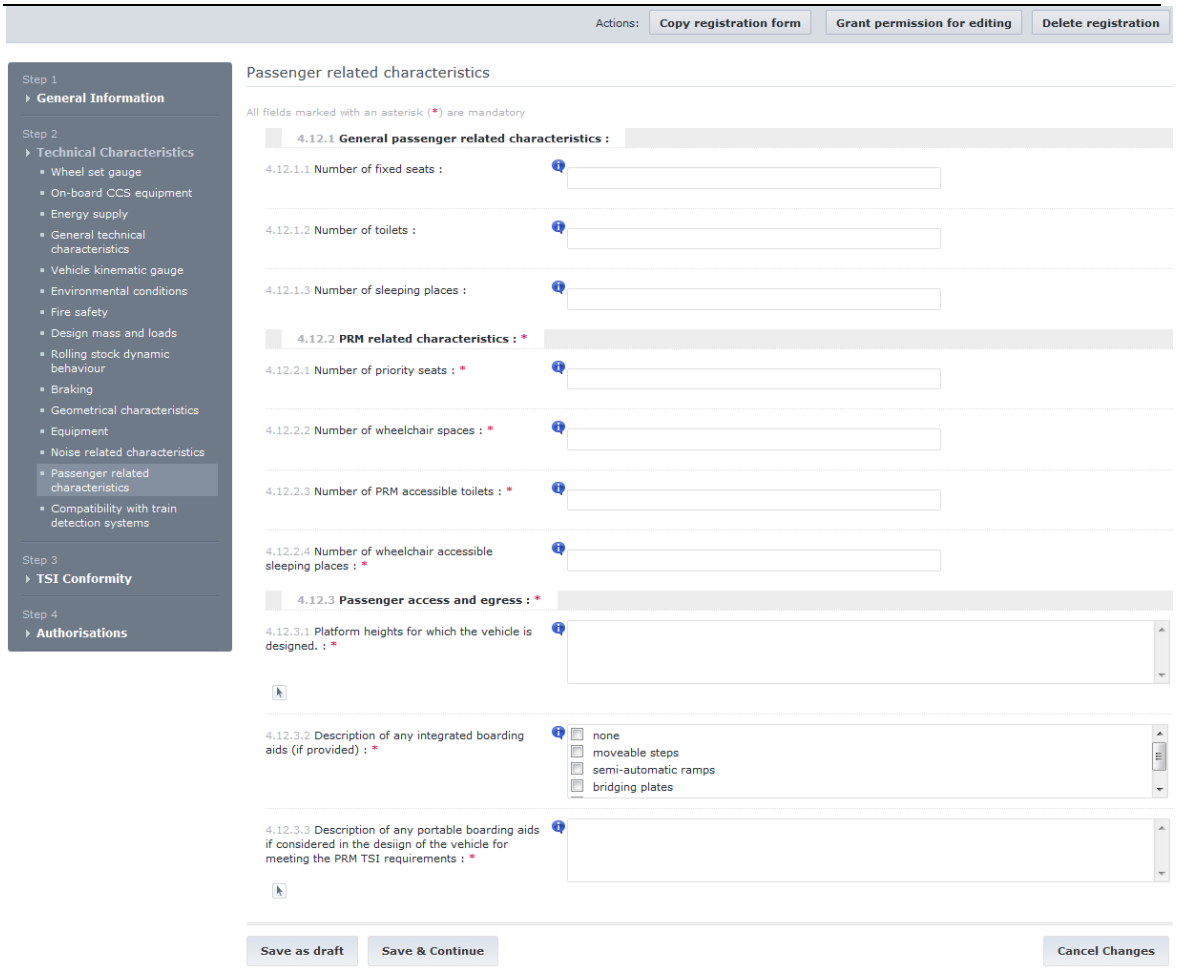


Figure 45: Technical Characteristics – Passenger related characteristics form - Directive 2008/57/EC registration regimes

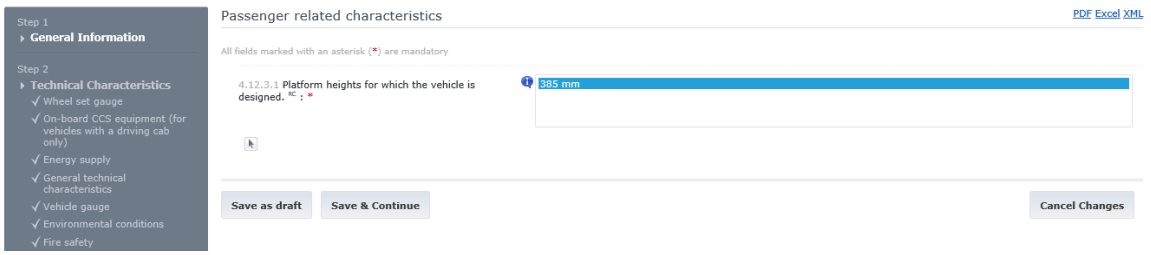


Figure 46: Technical Characteristics – Passenger related characteristics form - Directive (EU) 2016/797

2.3.2.2.15 Compatibility with train detection systems

This section form (Figure 47 and Figure 48) contains the parameters related to the Vehicle Type's compatibility with train detection systems. The form contains the following parameters:

1. "4.14.1 Type of train detection systems for which the vehicle has been designed and assessed": the user can select multiple values from a predefined list of values.
2. "4.14.2 Detailed vehicle characteristics related to compatibility with train detection systems" (applied only to "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes)

a. “4.14.2.1 Maximum distance between consecutive axles”: the user can enter a numeric value.
b. “4.14.2.2 Minimum distance between consecutive axles”: the user can enter a numeric value.
c. “4.14.2.3 Distance between the first and the last axle”: the user can enter a numeric value.
d. “4.14.2.4 Maximum length of the vehicle nose”: the user can enter a numeric value.
e. “4.14.2.5 Minimum wheel rim width”: the user can enter a numeric value.
f. “4.14.2.6 Minimum wheel diameter”: read-only field automatically filled in with the value of field 4.8.2.
g. “4.14.2.7 Minimum flange thickness”: the user can enter a numeric value.
h. “4.14.2.8 Minimum flange height”: the user can enter a numeric value.
i. “4.14.2.9 Maximum flange height”: the user can enter a numeric value.
j. “4.14.2.10 Minimum axle load”: the user can enter a numeric value.
k. “4.14.2.11 Metal and inductive components-free space between wheels”: the user can select a boolean value (True / False).
l. “4.14.2.12 Wheel material is ferromagnetic”: the user can select a boolean value (True / False).
m. “4.14.2.13 Maximum sanding output (x per y)”: the user can enter a numeric value in a masked text box.
n. “4.14.2.14 Possibility of preventing the use of sanding”: the user can select a boolean value (True / False).
o. “4.14.2.15 Vehicle metal mass”: the user can enter a numeric value.
p. “4.14.2.16 Maximum impedance between opposite wheels of a wheel set”: the user can enter a numeric value in a masked text box with 6 decimal digits precision.
q. “4.14.2.17 Minimum vehicle impedance”: the user can enter a numeric value in a masked text box with 6 decimal digits precision for each of the following Energy Supplies if these were selected. The allowable Energy Supplies are:
    i. “DC 3KV”
    ii. "DC 1.5 KV”
    iii. “DC 1.5KV (Specific Case FR)
r. “4.14.2.18 Electromagnetic interferences caused by return current in the rails”: the user can enter a numeric value for each Energy Supply dependent configuration.
s. “4.14.2.19 Electromagnetic emission of the train with respect to compatibility with train detection systems”: the user can enter a numeric value for each Energy Supply dependent configuration.

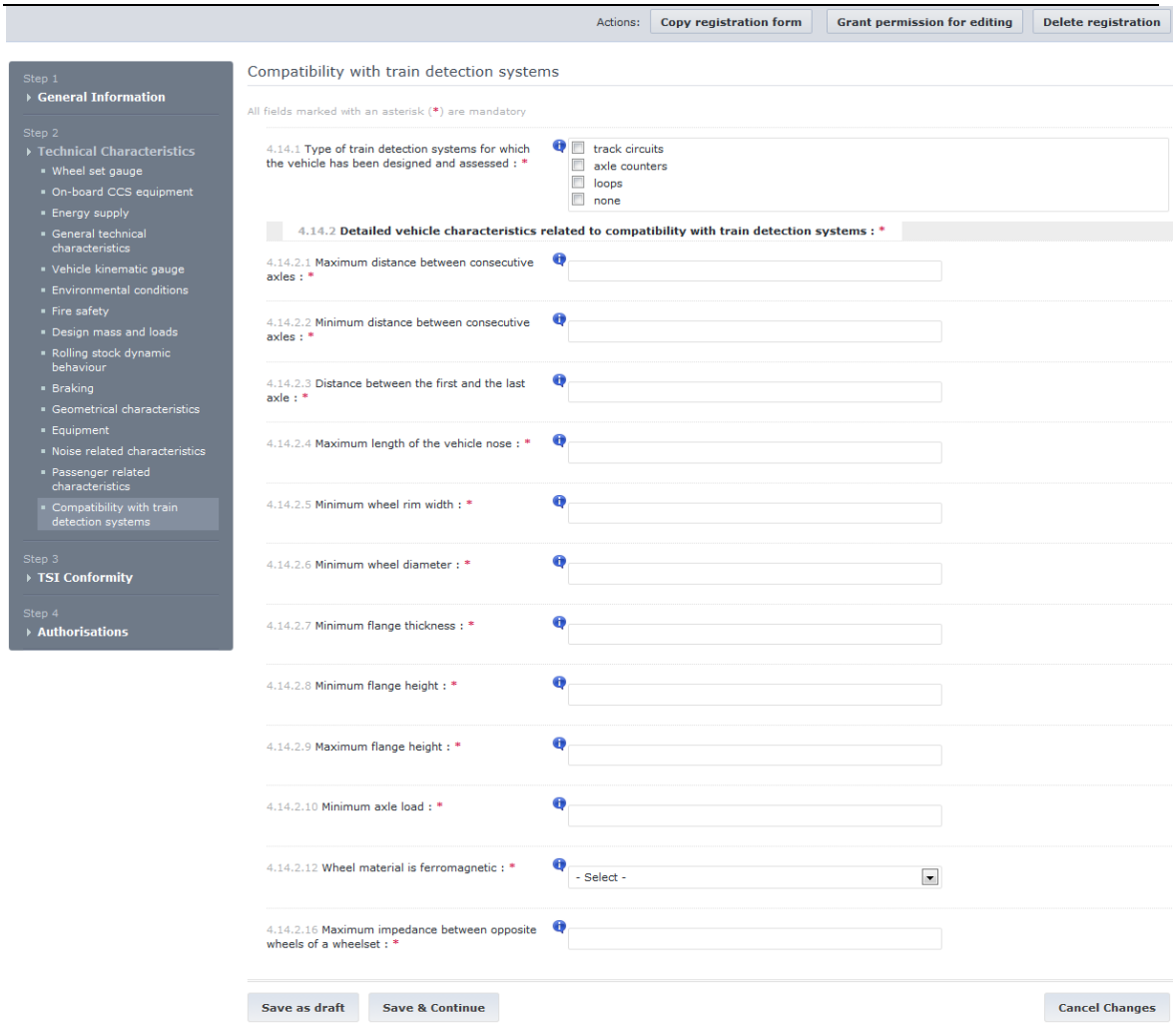


Figure 47: Technical Characteristics – Compatibility with train detection systems form - Directive 2008/57/EC registration regimes

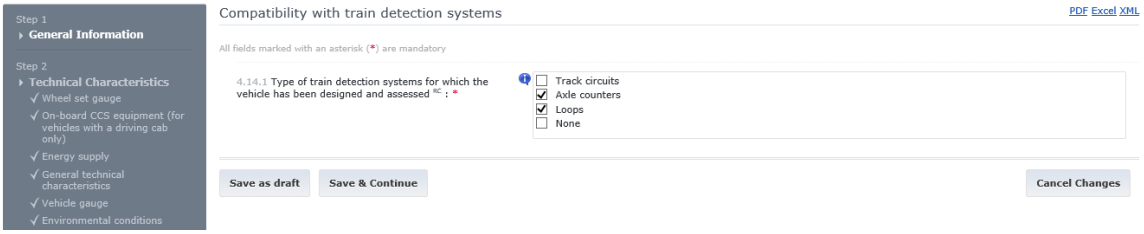


Figure 48: Technical Characteristics – Compatibility with train detection systems form - Directive (EU) 2016/797

2.3.2.3 Step 3 – TSI conformity

The details entered during this step specify the conformity of this Vehicle Type to existing TSIs. Any number of TSIs may be registered for each of the Vehicle Type's configurations (see 2.3.1.5). The available parameters are:

1. "2.1 Conformity with TSI": this parameter is filled by clicking the arrow button ( ) for the required configuration. The TSI selection dialog displayed in Figure 52 is displayed.
   The user can select multiple TSIs from the list of available TSIs for the selected configuration. The list of available TSIs (see Figure 51 & highlighted point 3 of Figure 52) is dynamically updated according to the selected subcategory of the Vehicle Type. For example, TSI "CR WAG (Dec 2006/861/EC)" is not available for a Vehicle Type with a Passenger subcategory but is available for Freight Wagons subcategories.
   Once a TSI entry has been fully specified for this configuration, it is possible to add additional TSI entries by clicking the 'Add' button ( ) as highlighted in point 1 of Figure 52. Similarly, a specified TSI entry may be removed by clicking the 'Remove' button ( ) highlighted in point 2 of Figure 52.
   For each selected TSI entry, the following additional data must be provided.
   a. Conformity Scope: this mandatory field (highlighted point 4 of Figure 52) denotes if the Vehicle Type conforms with the TSI fully or partially. If the value "Partial" is selected, then Parameter "2.4 Sections not complied with" is also presented. The field does not appear if the user selects "Not conform to any TSI" in "2.1 Conformity with TSI" menu.
   b. "2.4 Sections not complied with": this field (highlighted point 5 of Figure 52) specifies the sections of the TSI that this Vehicle Type does not comply with. It is visible and mandatory only when the Conformity with the TSI is partial.

   After all the TSI entries for the selected configuration have been specified, the user must click the "Update" button to store the alterations and close the TSI selection dialog. To reduce the time needed to fill-in additional configurations, it is possible to 'copy' the specified TSIs to other configurations by clicking the "Apply to subsequent" button ( ). This will copy all the TSI details to all subsequent configurations under the selected one.

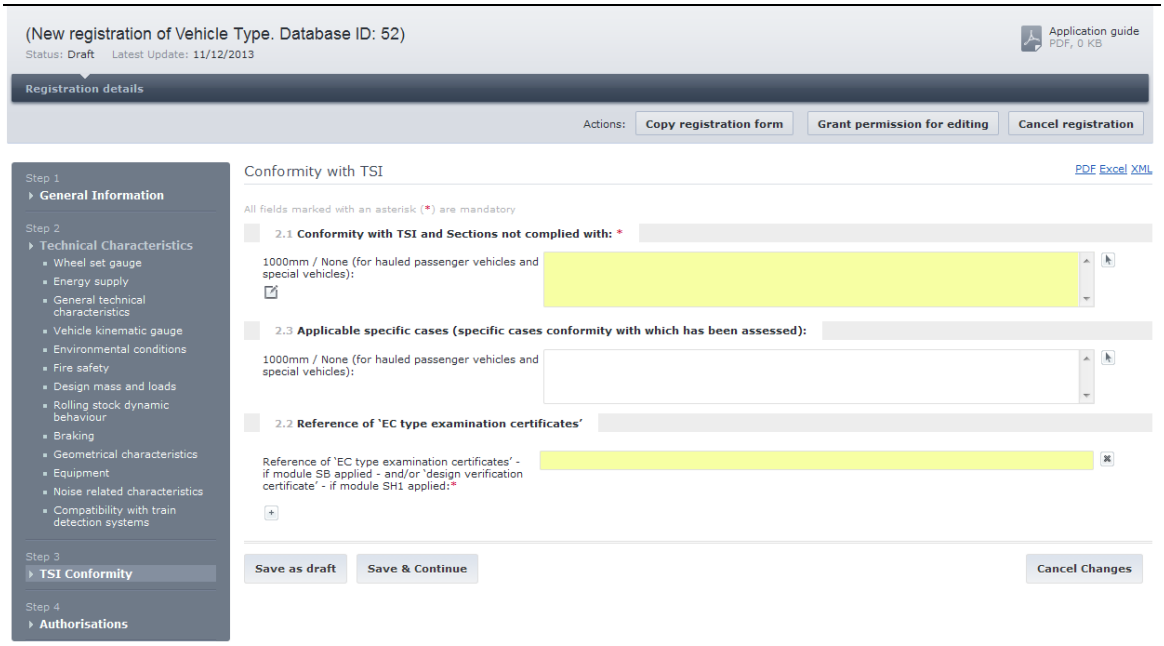


Figure 49: Step 3. Conformity with TSIs form - Directive 2008/57/EC registration regimes

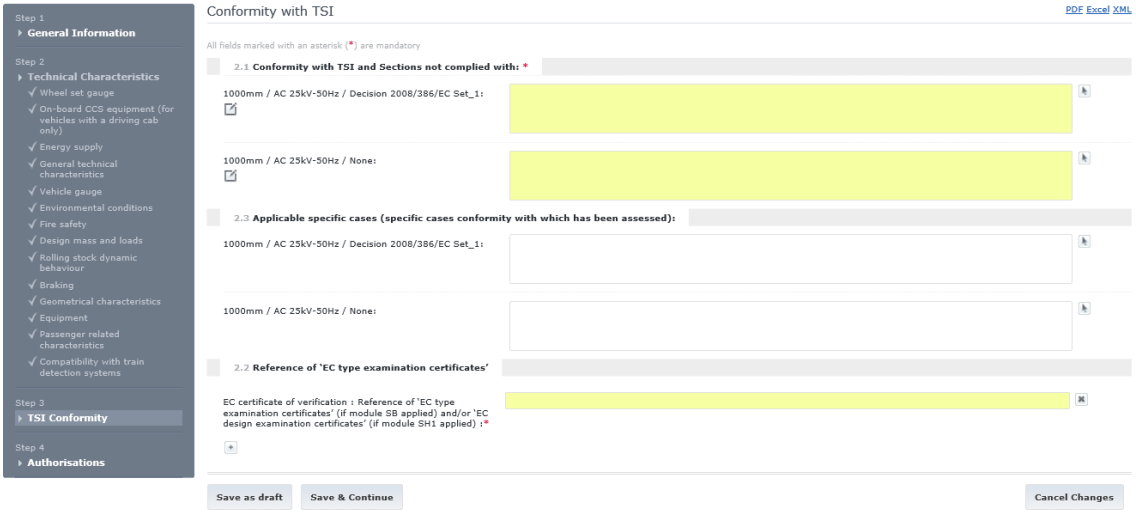


Figure 50: Step 3. Conformity with TSIs form - Directive (EU) 2016/797

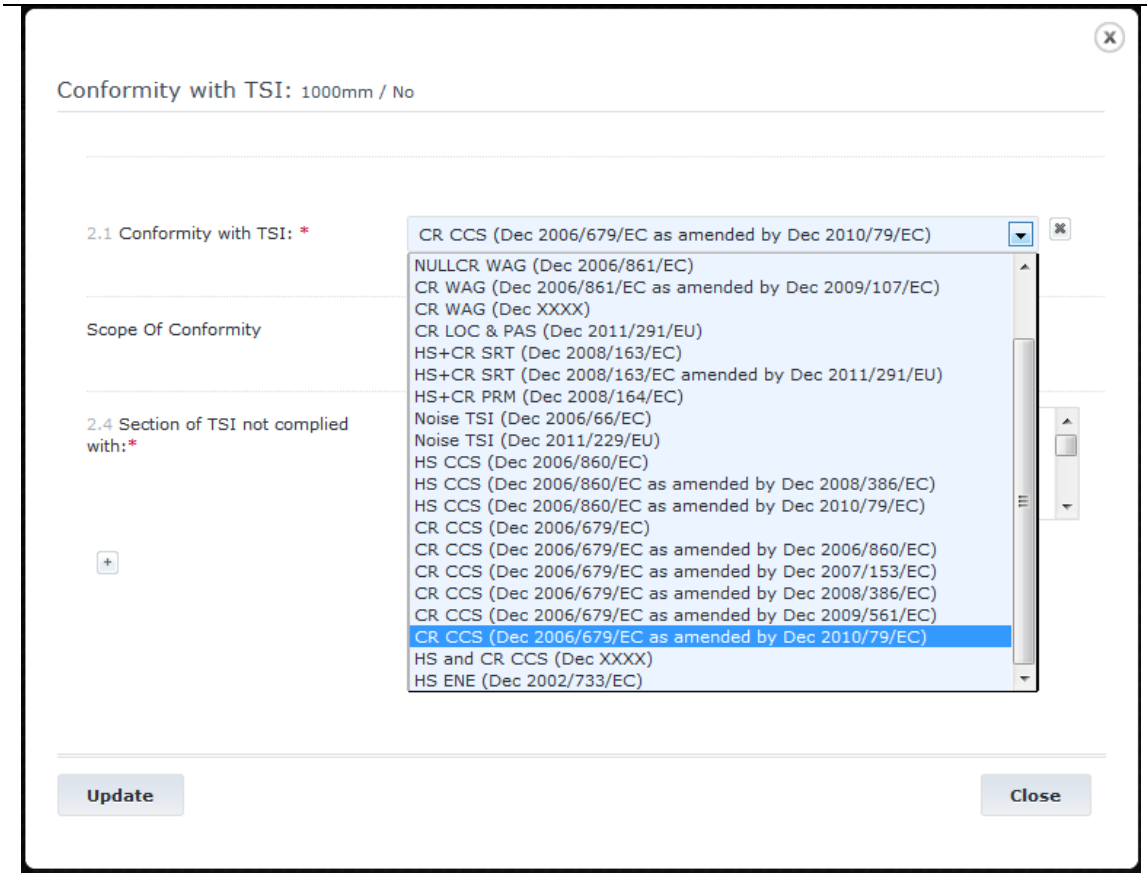


Figure 51: Step 3 – Available TSIs for specific configuration

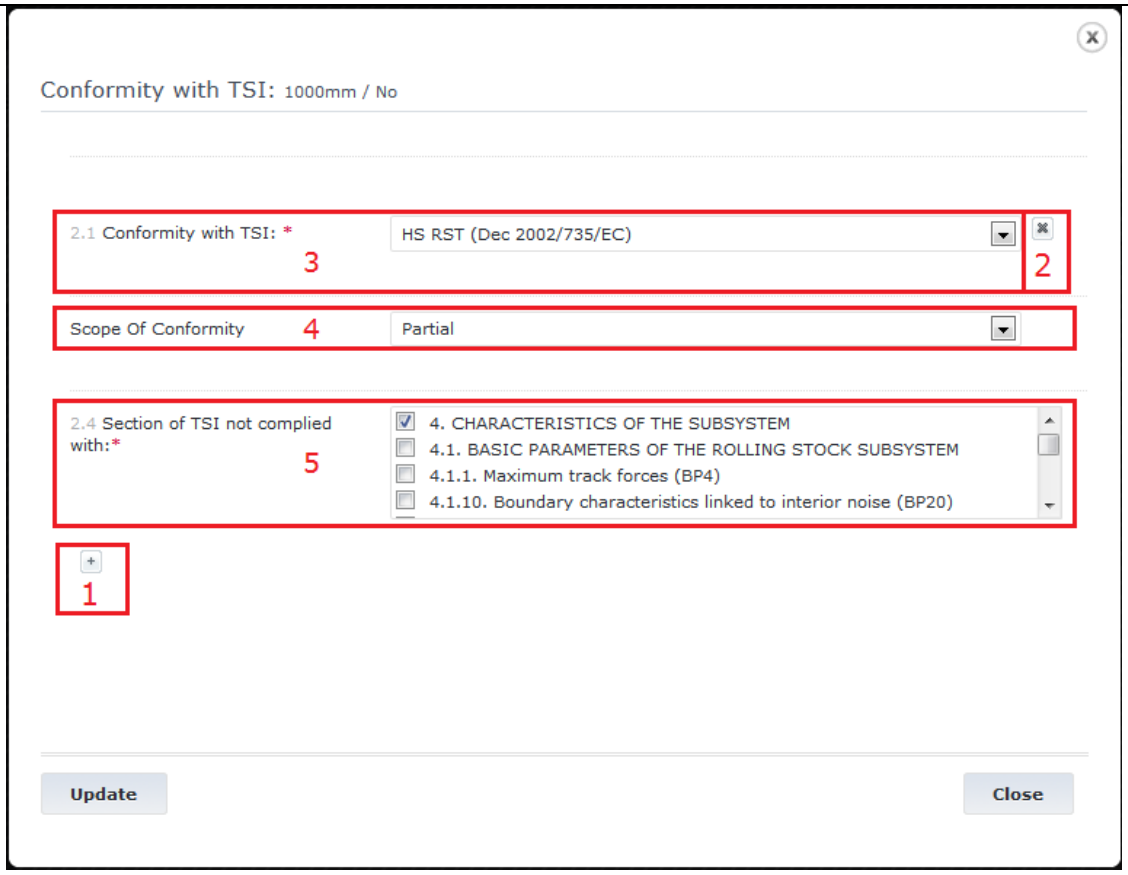


Figure 52: Step 3. TSI popup controls

2. "2.3 Applicable specific Cases": this field contains the applicable specific cases for the selected TSIs (per configuration), conformity with which has been assessed. These cases must be specified per TSI specified in "2.1 Conformity with TSI". When selecting a TSI for the "2.1 Conformity with TSI" field in a specific configuration, then the same TSI will also be added into the appropriate configuration for this field. It is then possible to specify the applicable cases for that TSI. This is achieved by clicking the arrow button ( ) which will open the "Applicable Specific Cases" popup form (Figure 52). The popup will contain a selection list for each of the selected TSIs of this configuration. The user may select any number of applicable cases for each TSI. The list of applicable cases for each TSI depends on the TSI value. If the user selects "Not conform to any TSI" in "2.1 Conformity with TSI" menu, the parameter "2.3 Applicable specific cases" is automatically field with the value "Not Conform to Any TSI" and is not editable.
   The data are stored and the popup is removed by clicking the "Update" Button. At that point the list of "2.3 Applicable specific Cases" will be updated to reflect the changes as shown in Figure 53. Similarly to previous functionality, it is possible to 'copy' the selected values to the subsequent TSIs by clicking the "Apply to all" button ( ).

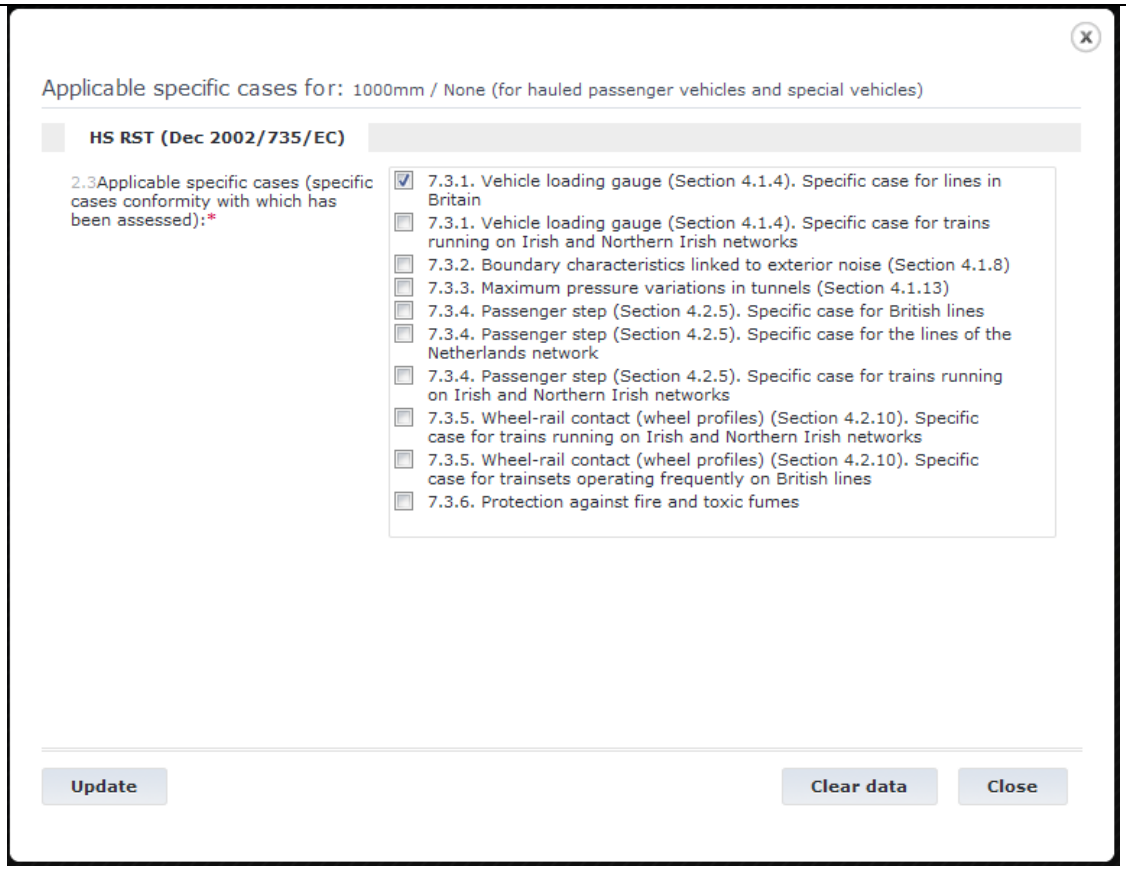


Figure 53: Step 3 – Applicable specific cases

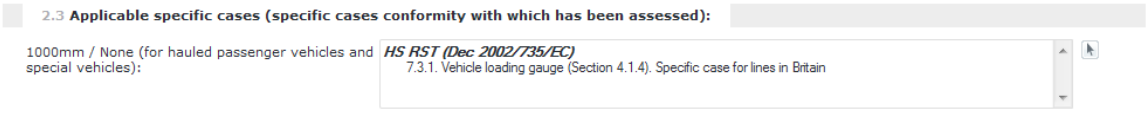


Figure 54: Step 3 – Specified Applicable cases

3. "2.2 EC certificate of verification: Reference of 'EC type examination certificates' (if module SB applied) and/or 'EC design examination certificates' (if module SH1 applied)": this parameter can take multiple string values (as described earlier by using the 'Add' + or 'Remove' ✖ buttons). It contains the certificate reference IDs of EC type examination certificates this Vehicle Type has successfully achieved.

*Name under "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes: "2Reference of 'EC type examination certificates' - if module SB applied - and/or 'design verification certificate' - if module SH1 applied"
Name under "Directive (EU) 2016/797" and "Directive (EU) 2016/797 – Exceptional Mode" registration modes: "EC certificate of verification: Reference of 'EC type examination certificates' (if module SB applied) and/or 'EC design examination certificates' (if module SH1 applied)"

2.3.2.4 Step 4 – Authorisations - Directive 2008/57/EC registration regimes

The most important information held for a Vehicle Type is the authorisations it has been granted for each Member State. During the first registration of the Vehicle Type, it is also authorised for the home NSA. After publication, additional NSAs may authorise the Vehicle Type for usage in their Member States. Each authorisation is presented in 'Tabs' in the content page displayed and sorted by country code as shown in Figure 55. The selected authorisation is highlighted as shown in the figure for 'Greece'.

The fields of the Authorisations form follow a dynamic numbering scheme which is explained in 2.3.2.4.1.

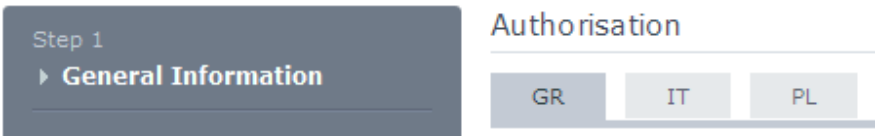


Figure 55: Step 4 – Vehicle Type with multiple Authorisations

Each authorisation form (Figure 56) contains the following fields:

1. "Authorising country": this is the MS name of the country this authorisation is about. This is repeated on the Tab's title.
2. "Authorisation Status": this is the current status of the authorisation. It cannot be altered by editing the field but can be changed by performing actions on the authorisation (i.e. suspend, reactivate etc.).
3. "Validity of Authorisation (until)": this date signifies the date until which the current authorisation is valid. After this date, an active or suspended authorisation status will be automatically changed to 'Expired'. The date can be entered manually or by selecting a date from the calendar control that appears if the calendar button ( ) is pressed. On the date of expiration and x=3 months before expiration, the relevant NSA receives an email informing him/her about the upcoming expiry date. The value "x" is configurable and can be defined in app.config (more information can be found in *2. Installation, Configuration and Deployment Manual.docx, § 6.1.2.3.1 Automatic Notifications Dispatching).* If there is no validity time (indefinite authorisation), then check the 'N/A' checkbox that clears the field and disables the calendar button.
4. "Coded Restrictions": these are the coded restrictions that apply to this authorisation. For more information on setting the coded restrictions see section 2.3.2.4.2. Each authorisation may have any number of coded restrictions specified for each of the available configurations.
5. "Non Coded Restrictions": these are the non-coded restrictions that apply to this authorisation. These are entered through the Non Coded restrictions popup which appears when the arrow ( ) button is pressed. It is possible to add more non-coded restrictions by clicking the 'Add' button ( ) or remove existing ones by clicking the 'Remove' button ( ). On clicking the 'Update' button, the popup disappears and the specified non-coded restrictions appear in the appropriate configuration non-coded restrictions list. Each authorisation may have any number of non-coded restrictions specified for each of the available configurations.

6. “Date of original authorisation”: this is the date this authorisation went into effect for the first time. The date can be entered manually or by selecting a date from the calendar control that appears if the calendar button ( ) is pressed.
7. “Authorisation holder”: this is the organisation that registered the Authorisation. The value must be selected from a drop down list or inserted manually by clicking on the button, filling in the new name in the popup that appears and clicking on the “Save” button to store the name and close the popup.
    - Once the Authorisation Holder's details will be incorporated in a VT, those will not be linked with the respective list of administration panel. Those details will be “copied” to the VT itself. Any alteration in the respective values of the administration panel, will not affect the aforementioned VT regardless its Data status (e.g., published, submitted, draft). Hence, Authorisation Holder's details may differ from the ones mentioned in the respective section of administration panel. Modifying the respective VT (after its publication) will maintain the existing values of Authorisation Holder, but triggering the respective list will present the new values (from administration panel) in the VT.
8. “Authorisation document reference”: this is the reference of the authorisation document.

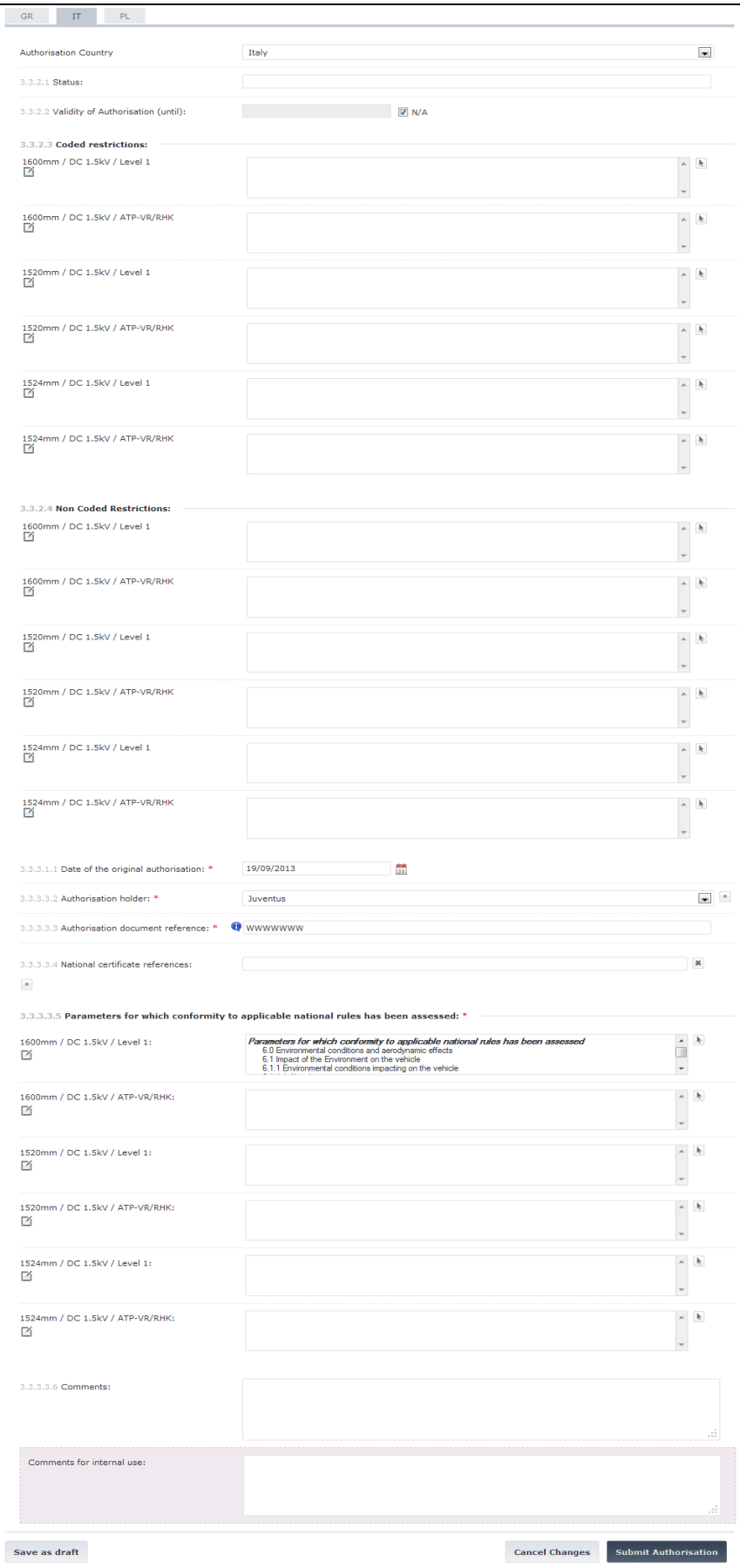


Figure 56: Step 4 – Vehicle Type Authorisations form - Directive 2008/57/EC registration regimes

9. “National Certificates References”: these references are the national certificate reference numbers. Multiple values can be inserted by clicking the ‘Add’ ( ) or ‘Remove’ ( ) buttons.
10. “Parameters for which conformity to applicable national rules has been assessed”: these can be selected for each configuration through the popup (Figure 57) which appears when the arrow button ( ) is clicked. The popup contains a drop down selection, a tree view of the Parameters allowing multiple selections and a “None” option which can be only selected exclusively. Selecting a parent node of the tree will also select all the child nodes as demonstrated in the figure. By clicking on the drop-down menu, a list of national rules is displayed, prepared by ERA Administrator or other NSA users from the same NSA organisation. The NSA user can choose the most appropriate. Once the user clicks on the corresponding selection, they can view only the list of parameters contained to the respective parameter Set. By selecting one of the available lists and clicking on “Create Set”, the NSA user can save a new list, which is an exact copy of the initial list. The NSA user can give a new name and select the preferred parameters. Then after clicking on “OK”, the system saves the list, which is now viewable in the drop-down list. This filter is viewable, editable and can be deleted by all NSA users who belong to the corresponding NSA organisation.
    Clicking the ‘Update’ button will update the appropriate control. The user has the option to ‘copy’ the selected parameters for a configuration to the subsequent configurations by clicking the ‘Apply to all’ button ( ).

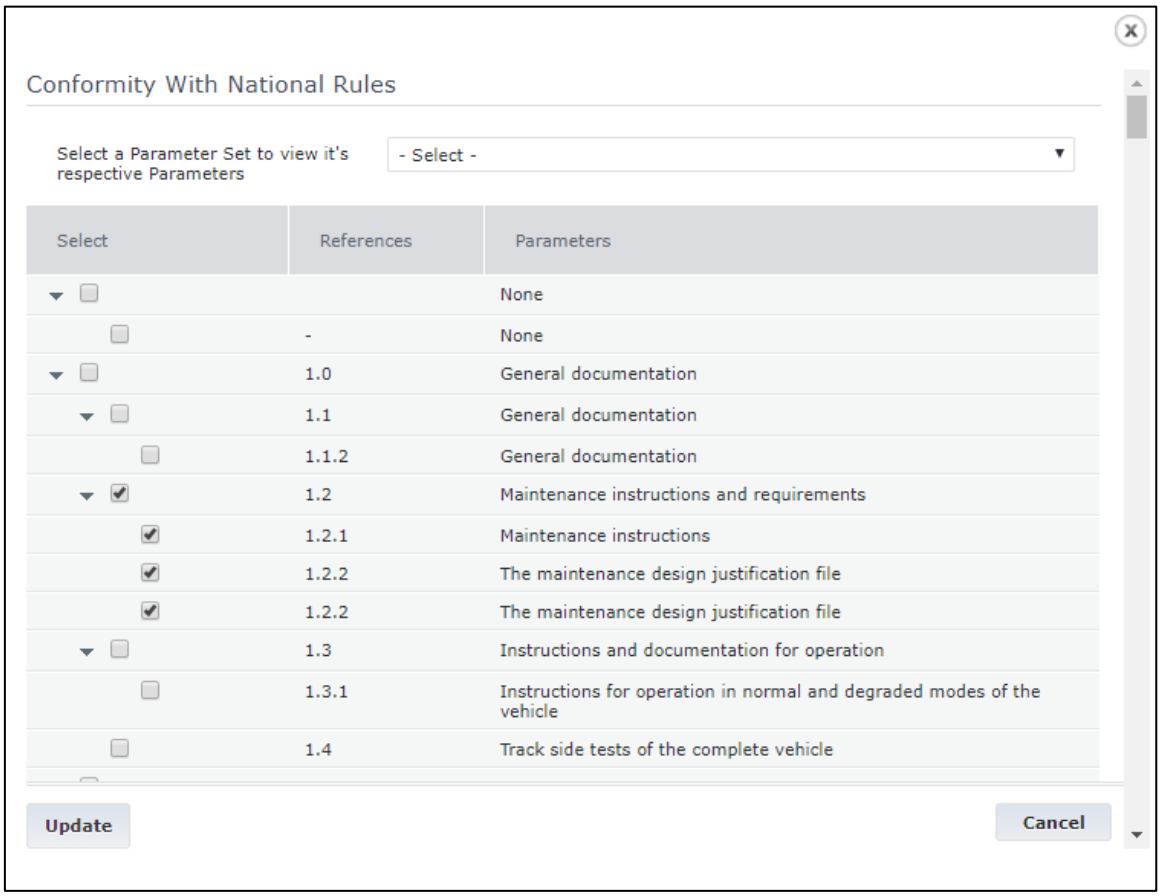


Figure 57: Step 4 – Conformity with National Rules popup - Directive 2008/57/EC registration regimes

11. “Comments”: these are comments about the Authorisation. On publication of the authorisation these comments will be visible to the public.
12. “Comments for internal use”: these comments are only visible to users of the authorisation’s home NSA.

2.3.2.4.1 Authorisation Parameter numbering scheme

The fields of Step 4 forms follow a dynamic numbering scheme. Each digit in the number displayed specifies some information about this filed. In summary a number will look like:

3.3.3.1.1

Each digit denotes the following information:

Digit 1: this is always set to 3. It denotes that this information is in the ‘Authorisation’ section of the vehicle type

Digit 2: this digit denotes the current authorisation number of the Vehicle Type. For example, for a Vehicle Type the first authorisation (registered at the time of VT registration) will contain value 1. The second authorisation granted to the same VT will have the number 2 and so on. For the example in Figure 56 there would be 3.1 for Greece, 3.2 for Italy and 3.3 for Poland.
For the remainder of this chapter this digit will be represented by X.

Digit 3: this denotes the section of the information of the field. The following values apply:

1. Specifies the Member State name of the authorisation. For example the value of field 3.1.1 for Figure 56 is ‘Greece’.
2. Specifies the Current Authorisation Status. This denotes a section and does not hold any data directly but contains further fields.
3. Specifies the Historical entries of the authorisation. This denotes a section and does not contain any data, but contains historical entries.

Digit 4: the meaning of this digit depends on the current section. The following values apply for the current Authorisation Status:

3.X.2.1 : Current Authorisation Status
3.X.2.2 : Current Authorisation Validity Date
3.X.2.3 : Currently active Coded Restrictions
3.X.2.4 : Currently active Non Coded Restrictions

In the historical section of the authorisation, the 4th digit denotes the historical entry section. The original authorisation registration is numbered as 1 and any subsequent change of the authorisation retrieves the next number. For example, an authorisation with a registration and suspension and a reactivation would have the following numbering

3.X.3.1 : This is the Authorisation Original registration record
3.X.3.2 : This is the suspension record
3.X.3.3 : This is the reactivation record

Digit 5: this denotes the field of the historical entry. The number depends on the type of the historical entry. Each historical entry will hold the information displayed in the following table:

Field		Explanation
3.X.3.1	**Original authorisation**	***Heading***
3.X.3.1.1	Date of the original authorisation	As introduced when the type authorisation is registered for the first time
	Original validity of authorisation	As above
	Coded restrictions	As above
	Non-coded restrictions	As above
3.X.3.1.2	Authorisation holder	As above
3.X.3.1.3	Authorisation documents references	As above
3.X.3.1.4	National certificate references	As above
3.X.3.1.5	Parameters for which conformity to applicable national rules has been assessed	As above
3.X.3.1.6	Comments	As above
3.X.3.2 **3.X.3.2.1**	**Suspension of authorisation**	***Heading including indication of type of modification***
3.X.3.2.2	Date	Date the suspension came into effect
3.X.3.3 **3.X.3.3.1**	**Reactivation of authorisation**	***Heading including indication of type of modification***
3.X.3.3.2	Date	Date the reactivation came into effect
	Validity of authorisation	If modified
	Coded restrictions	If modified
	Non-coded restrictions	If modified
3.X.3.3.3	Authorisation holder	If modified
3.X.3.3.4	Authorisation documents references	If modified
3.X.3.3.5	National certificate references	If modified
3.X.3.3.6	Parameters for which conformity to applicable national rules has been assessed	If modified
3.X.3.3.7	Comments	If modified
3.X.3.4 **3.X.3.4.1**	**Modification of authorisation**	***Heading including indication of type of modification***
3.X.3.4.2	Date	Date modification came into effect
	Validity of authorisation	If modified
	Coded restrictions	If modified
	Non-coded restrictions	If modified
3.X.3.4.3	Authorisation holder	If modified
3.X.3.4.4	Authorisation documents references	If modified
3.X.3.4.5	National certificate references	If modified
3.X.3.4.6	Parameters for which conformity to applicable national rules has been assessed	If modified
3.X.3.4.7	Comments	If modified
3.X.3.5 **3.X.3.5.1**	**Withdrawal of authorisation**	***Heading including indication of type of modification***

3.X.3.5.2	Date	Date withdrawal came into effect

Table 1: Step 4 – Authorisation Historical Entry details

2.3.2.4.2 Coded Restrictions

In order to unify the method of representing restrictions between Member States and in order to avoid language and localisation issues, ERA has performed a codification of restrictions and of the values that these restrictions can take.

A full explanation of the process and possible values can be found within the document "*List of harmonised and national restriction codes*" published at the ERA Webpage (See 4 References).

In the authorisation section, it is possible to set the coded restrictions and their values per configuration through the Coded Restrictions popup (Figure 58). This appears by clicking the arrow button ( ) next to the selected configuration.

It is possible to then specify or select values for each of the displayed Coded restrictions.

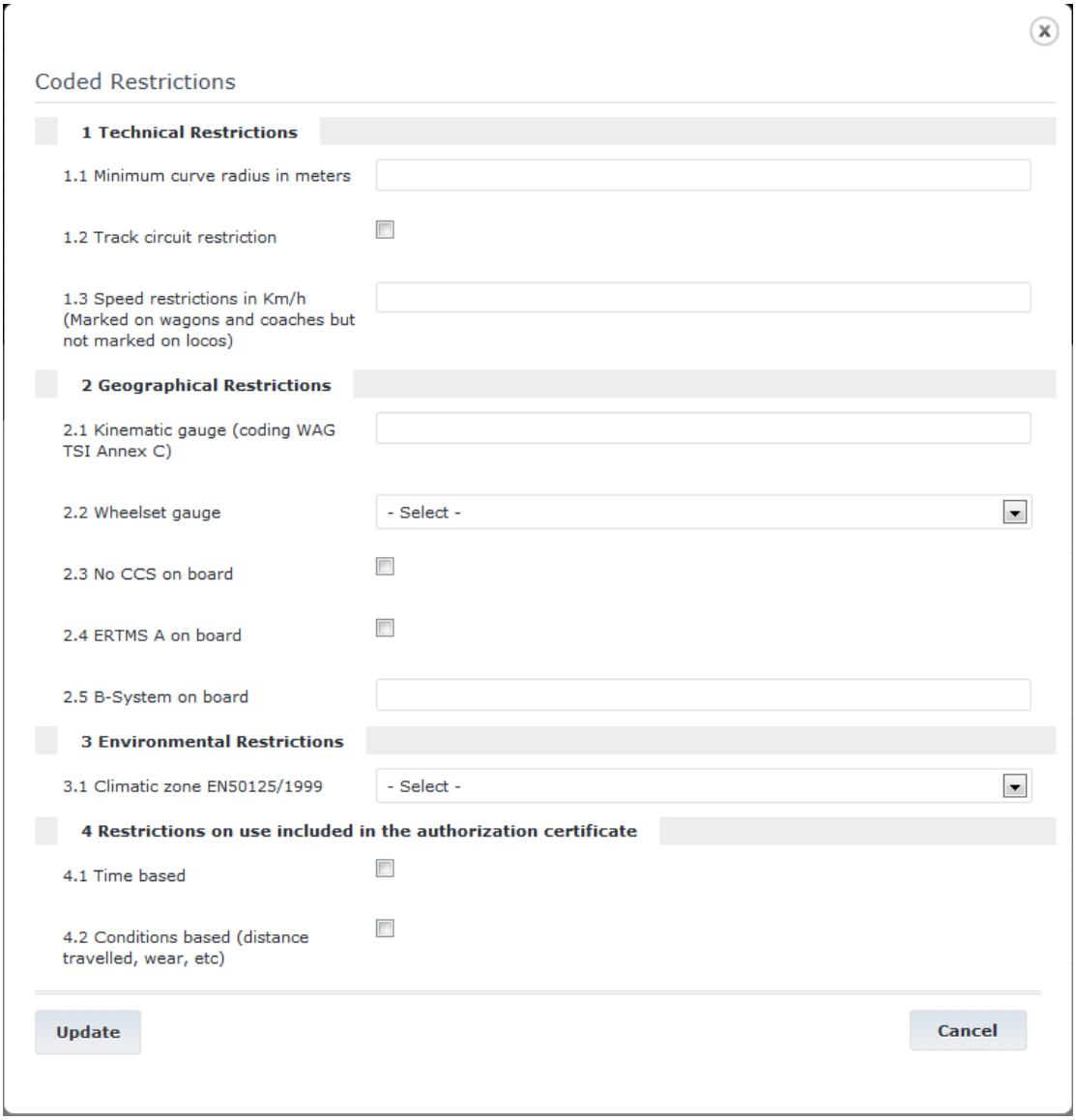


Figure 58: Step 4 – Coded Restrictions Popup

2.3.2.5 Step 4 – Authorisations - Directive (EU) 2016/797

The most important information held for a Vehicle Type is the authorisation it has been granted. During the registration of the Vehicle Type, an authorisation needs to be completed. After publication, no one can add authorisations to the Vehicle Type. Each authorisation regards only one Member State, except from the case that NSA (EU) creates a Vehicle Type. Only in this occasion, NSA (EU) can add multiple Member States to the created Vehicle Type.

The fields of the Authorisations form follow a dynamic numbering scheme which is explained in 2.3.2.5.1

Each authorisation form (Figure 61) contains the following fields:

1. "3.0 Area of use": the user must select multiple values from the Networks' predefined list and optionally enter neighbouring station(s). If the creator of the VT is the NSA (EU), then they are allowed to add multiple Member States to the authorisation and thereinafter the respective Networks and neighbouring stations. The neighbouring stations are to be introduced with the following format:

   MemberStateA(NeighbourStation1,NeighbourStation2,...)+MemberStateB(NeighbourStation3)…

   Example: FR(Valenciennes, Lille)+DE(Aachen)

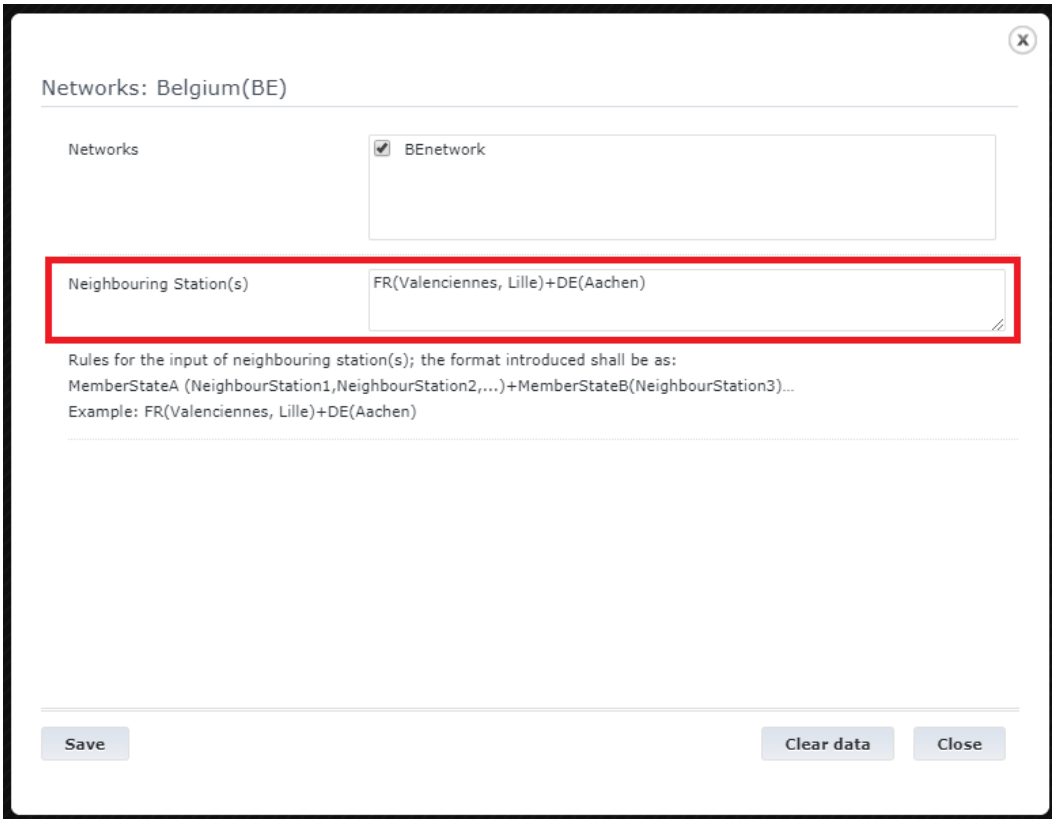


Figure 59 - Network selection and neighbouring station(s) record

The format of the area of use is:

MS1(Network1,Network2,…)+MS2(NeighbourStation1,NeighbourStation2,…)+MS3(NeighbourStation3)+…,MS4(Network3,Network4,…)+MS5(NeighbourStation4)+MS6(NeighbourStation5)+…,MS5(Network5)

Legend:

+ will introduce neighbouring stations

, will separate MSs/Networks/Neighbouring Stations included in the area of use

() will contain the possible networks of a MS or the names of the neighbouring station, separated by comma.

For the above example, the area of use would result in:

BE(BEnetwork)+FR(Valenciennes, Lille)+DE(Aachen)

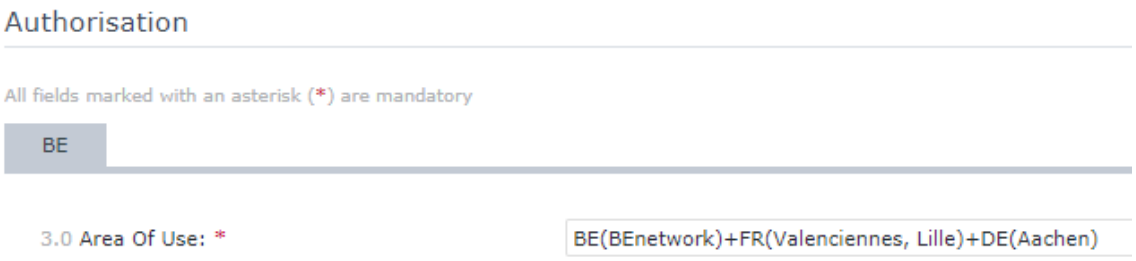


Figure 60 - Area of use

2. "3.1.1 Member State of Authorisation": Read only field which is filled automatically from the Member State of the logged in NSA User. If the creator is the NSA (EU) then this field is filled from the Member States of "3.0 Area of use".
3. "3.1.2.1 Status": this is the current status of the authorisation. It cannot be altered by editing the field but can be changed by performing actions on the authorisation (i.e. suspend, reactivate etc.).
4. "3.1.2.2 Validity of Authorisation (until)": this date signifies the date until which the current authorisation is valid. After this date, a valid or suspended authorisation status will be automatically changed to 'Expired'. The date can be entered manually or by selecting a date from the calendar control that appears if the calendar button (31) is pressed. On the date of expiration and x=3 months before expiration, the relevant NSA receives an email informing him/her about the upcoming expiry date. The value "x" is configurable and can be defined in app.config (more information can be found in *2. Installation, Configuration and Deployment Manual.docx, § 6.1.2.3.1 Automatic Notifications Dispatching).* If there is no validity time (indefinite authorisation), then check the 'N/A' checkbox that clears the field and disables the calendar button.
5. "3.1.2.3 Coded conditions for use and other restrictions": these are the coded restrictions that apply to this authorisation. For more information on setting the coded restrictions see section 2.3.2.5.2. Each authorisation may have any number of coded restrictions specified for each of the available configurations.

6. “3.1.2.4 Non-coded conditions for use and other restrictions”: these are the non-coded restrictions that apply to this authorisation. These are entered through the Non-Coded restrictions popup which appears when the arrow ( ) button is pressed. It is possible to add more non-coded restrictions by clicking the ‘Add’ button ( ) or remove existing ones by clicking the ‘Remove’ button ( ). On clicking the ‘Update’ button, the popup disappears and the specified non-coded restrictions appear in the appropriate configuration non-coded restrictions list. Each authorisation may have any number of non-coded restrictions specified for each of the available configurations.
7. “3.1.3.1.1. Date of original authorisation”: this is the date this authorisation went into effect for the first time. The date can be entered manually or by selecting a date from the calendar control that appears if the calendar button ( ) is pressed.
8. “3.1.3.1.2 Authorisation holder”: this is the organisation that registered the Authorisation. The value must be selected from a drop-down list or inserted manually by clicking on the button, filling in:
    a. “3.1.3.1.2.1.1 Name of organisation”: a free text field
    b. “3.1.3.1.2.1.2 Registered business number”: a free text field
    c. “3.1.3.1.2.1.3 Organisation code”: alphanumeric code
    d. “3.1.3.1.2.2.1 Address of organisation, street and number”: a free text field
    e. “3.1.3.1.2.2.2 Town”: a free text field
    f. “3.1.3.1.2.2.3 Country code”: Code as in EC interinstitutional Style Guide
    g. “3.1.3.1.2.2.4 Post code”: alphanumeric code
    h. “3.1.3.1.2.2.5 E-mail address”: Email

    and clicking on the “Save” button to store the name and close the popup.
9. “3.1.3.1.3 Authorisation document reference”: this is the reference of the authorisation document.
10. “3.1.3.1.4 Certificate of verification: Reference of type examination or design examination type”: the User enters a value and is able to select the option ‘Add’ to add multiple values for this parameter or remove existing ones by clicking the ‘Remove’ button ( ).

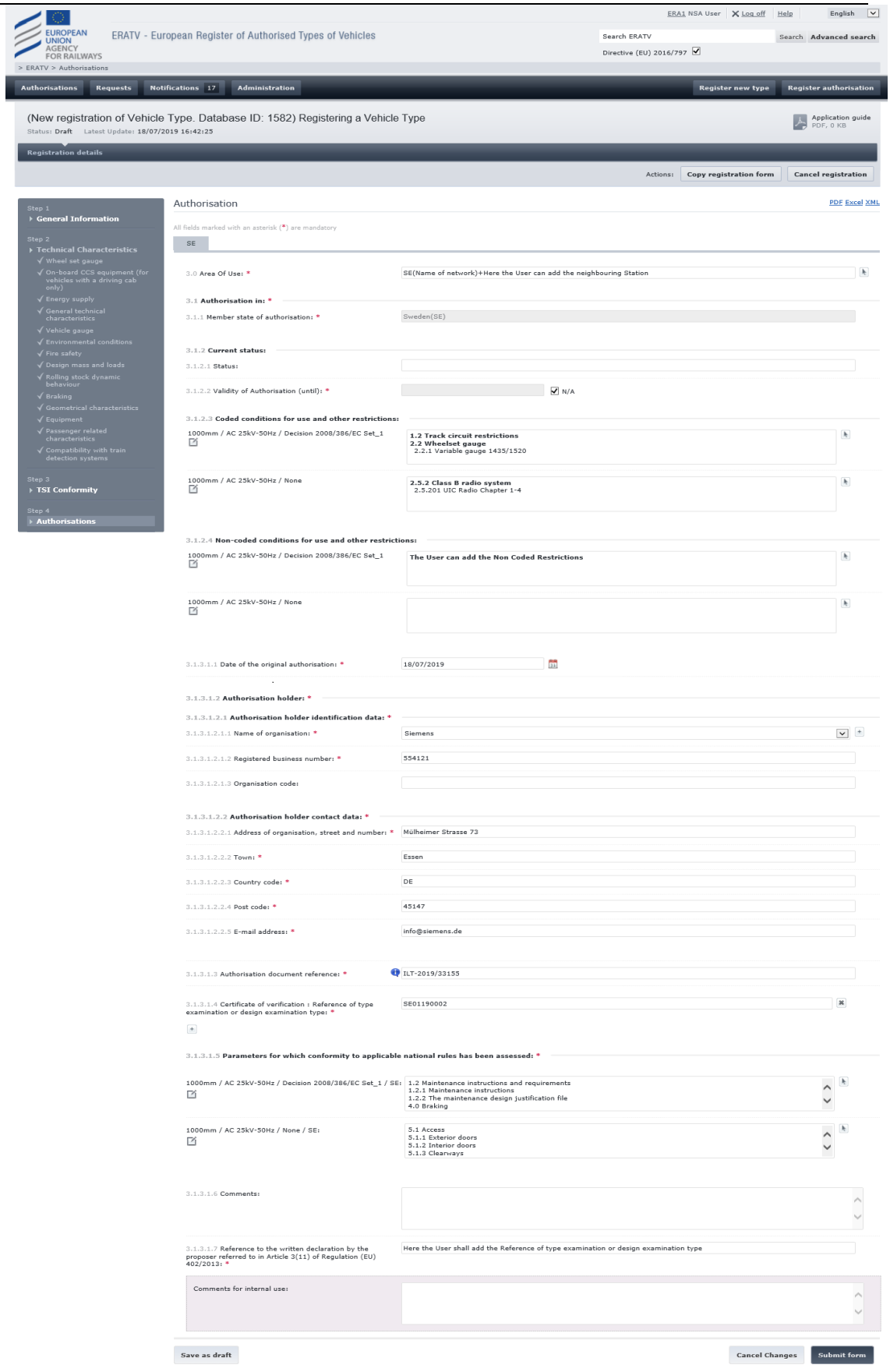


Figure 61: Vehicle Type Authorisations form - Directive (EU) 2016/797

11. “3.1.3.1.5 Parameters for which conformity to applicable national rules has been assessed”: these can be selected for each configuration and each Member State through the popup (Figure 62) which appears when the arrow button ( ) is clicked. The popup contains a drop-down selection, a tree view of the Parameters allowing multiple selections and a “None” option which can be only selected exclusively. Selecting a parent node of the tree will also select all the child nodes as demonstrated in the figure. By clicking on the drop-down menu, a list of national rules is displayed, prepared by ERA Administrator or other NSA users from the same NSA organisation. The NSA user can choose the most appropriate. Once the user clicks on the corresponding selection, they can view only the list of parameters contained to the respective parameter Set. By selecting one of the available lists and clicking on “Create Set”, the NSA user can save a new list, which is an exact copy of the initial list. The NSA user can give a new name and select the preferred parameters. Then after clicking on “OK”, the system saves the list, which is now viewable in the drop-down list. This filter is viewable, editable and can be deleted by all NSA users who belong to the corresponding NSA organisation.
    Clicking the ‘Update’ button will update the appropriate control. The user has the option to ‘copy’ the selected parameters for a configuration to the subsequent configurations by clicking the ‘Apply to all’ button ( ).

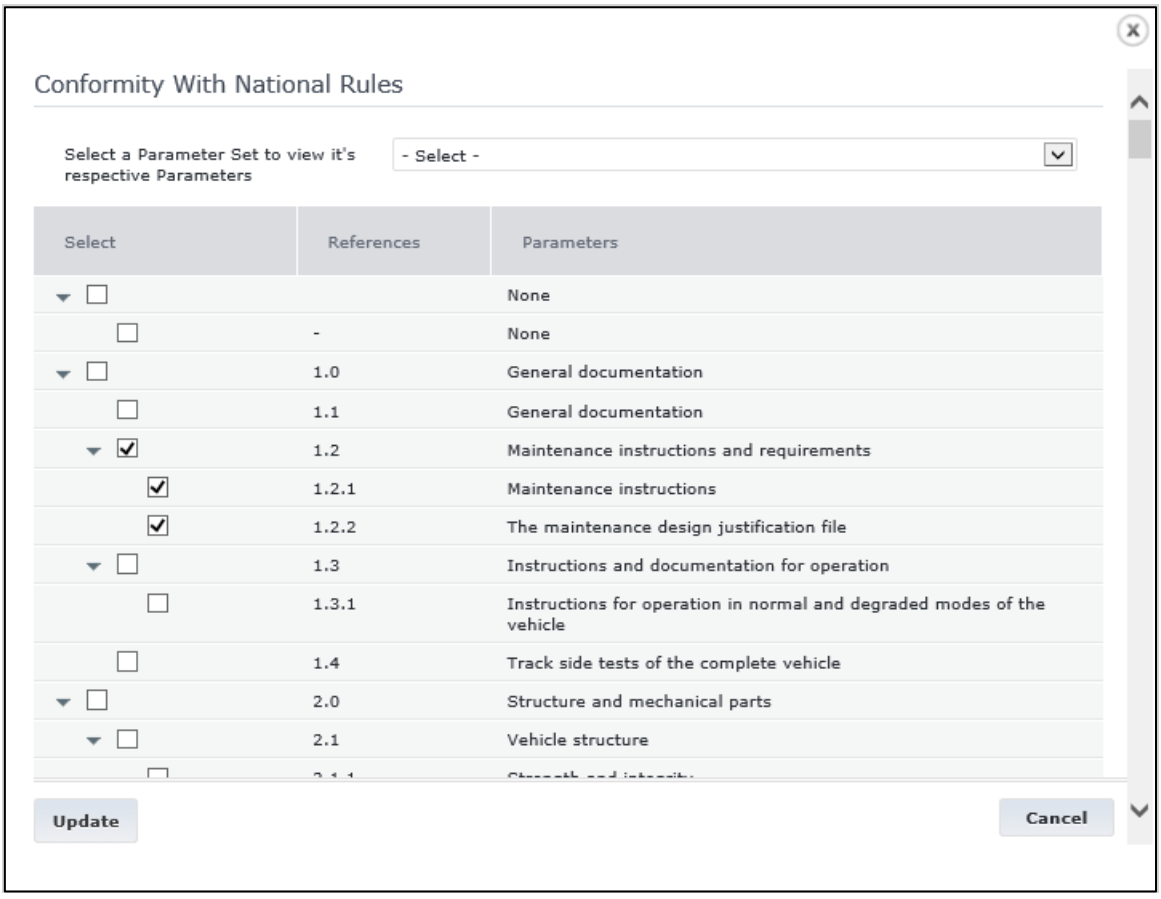


Figure 62: Conformity with National Rules popup - Directive (EU) 2016/797

12. “3.1.3.1.6 Comments”: these are comments about the Authorisation. On publication of the authorisation these comments will be visible to the public

13. “3.1.3.1.7 Reference to the written declaration by the proposer referred to in Article 3(11) of Regulation (EU) 402/2013”: a free text field
14. “Comments for internal use”: these comments are only visible to users of the authorisation’s home NSA.

2.3.2.5.1 Authorisation Parameter numbering scheme

The fields of Step 4 forms follow a dynamic numbering scheme. Each digit in the number displayed specifies some information about this filed. In summary a number will look like:

3.1.3.1.1

Each digit denotes the following information:

Digit 1: this is always set to 3. It denotes that this information is in the ‘Authorisation’ section of the vehicle type

Digit 2: this digit denotes the current authorisation number of the Vehicle Type. For Vehicle Types created under "Directive (EU) 2016/797” and “Directive (EU) 2016/797 – Exceptional Mode” registration modes, this digit is 1.

Digit 3: this denotes the section of the information of the field. The following values apply:

1. Specifies the Current Authorisation Status. This denotes a section and does not hold any data directly but contains further fields.
2. Specifies the Historical entries of the authorisation. This denotes a section and does not contain any data, but contains historical entries.

Digit 4: the meaning of this digit depends on the current section. The following values apply for the current Authorisation Status:

3.1.2.1 : Current Authorisation Status
3.1.2.2 : Current Authorisation Validity Date
3.1.2.3 : Currently active Coded Restrictions
3.1.2.4 : Currently active Non Coded Restrictions

In the historical section of the authorisation, the 4th digit denotes the historical entry section. The original authorisation registration is numbered as 1 and any subsequent change of the authorisation retrieves the next number. For example, an authorisation with a registration and suspension and a reactivation would have the following numbering

3.1.3.1 : This is the Authorisation Original registration record
3.1.3.2 : This is the suspension record
3.1.3.3 : This is the reactivation record

Digit 5: this denotes the field of the historical entry. The number depends on the type of the historical entry.

2.3.2.5.2 Coded Restrictions

In order to unify the method of representing restrictions between Member States and in order to avoid language and localisation issues, ERA has performed a codification of restrictions and of the values that these restrictions can take.

A full explanation of the process and possible values can be found within the document "*List of harmonised and national restriction codes*" published at the ERA Webpage (See 4 References).

In the authorisation section, it is possible to set the coded restrictions and their values per configuration through the Coded Restrictions popup (Figure 63). This appears by clicking the arrow button ( ) next to the selected configuration.

It is possible to then specify or select values for each of the displayed Coded restrictions.

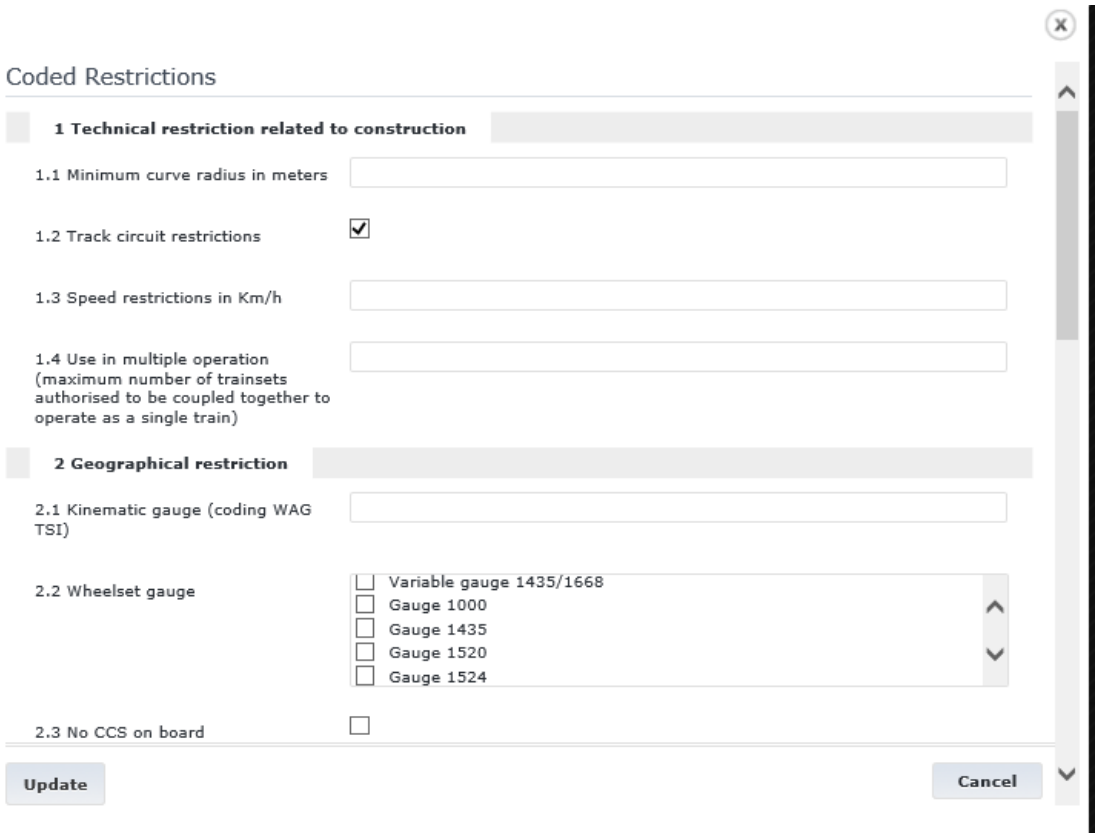
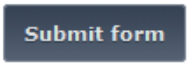


Figure 63: Step 4 – Coded Restrictions Popup - Directive (EU) 2016/797

2.3.2.6 Submission of registration form

Submission of a registration can only be performed from the final step by clicking the "Submit form" button shown here.



At the time of submission, the following take place:

- Validation of the entire form: if validation fails, then an error will appear as shown in 2.3.2.
- Search through the registered Vehicle Types for duplicate records.
  The comparison for duplication will take place with all other Submitted or Published registrations of types initially for Category, Sub-Category, Number of driving cabs, Area

of Use (only for “Directive (EU) 2016/797” and “Directive (EU) 2016/797 – Exceptional Mode” registration regimes), and Member State of authorisation (only for “Directive (EU) 2016/797” and “Directive (EU) 2016/797 – Exceptional Mode” registration regimes) fields. If these fields have the same values, then all fields of section 4 (Technical Characteristics) are compared.

For the comparison to be performed, both Vehicle Types must contain a value for the compared parameter and in the same configuration if those are used. If only one of the two Vehicle Types contains a value, then this parameter is ignored in the comparison. If at least one parameter has a different value, then the comparison does not return a match. If all the comparisons (that are not ignored) return a match, then the Vehicle Type is considered a duplicate.

When a duplicate Vehicle Type is detected, the ERATV system displays a warning message to the user (Figure 64). The user has the option to either ignore the duplication and continue with the submission or return to the draft Vehicle Type and alter the data. Also, the user can click on the links to access the possible duplicates and review their data. In case the possible duplicate is in draft mode from another NSA, the user may not have access to it, in which case no link will be available (only the ERATV Type ID as plain text).

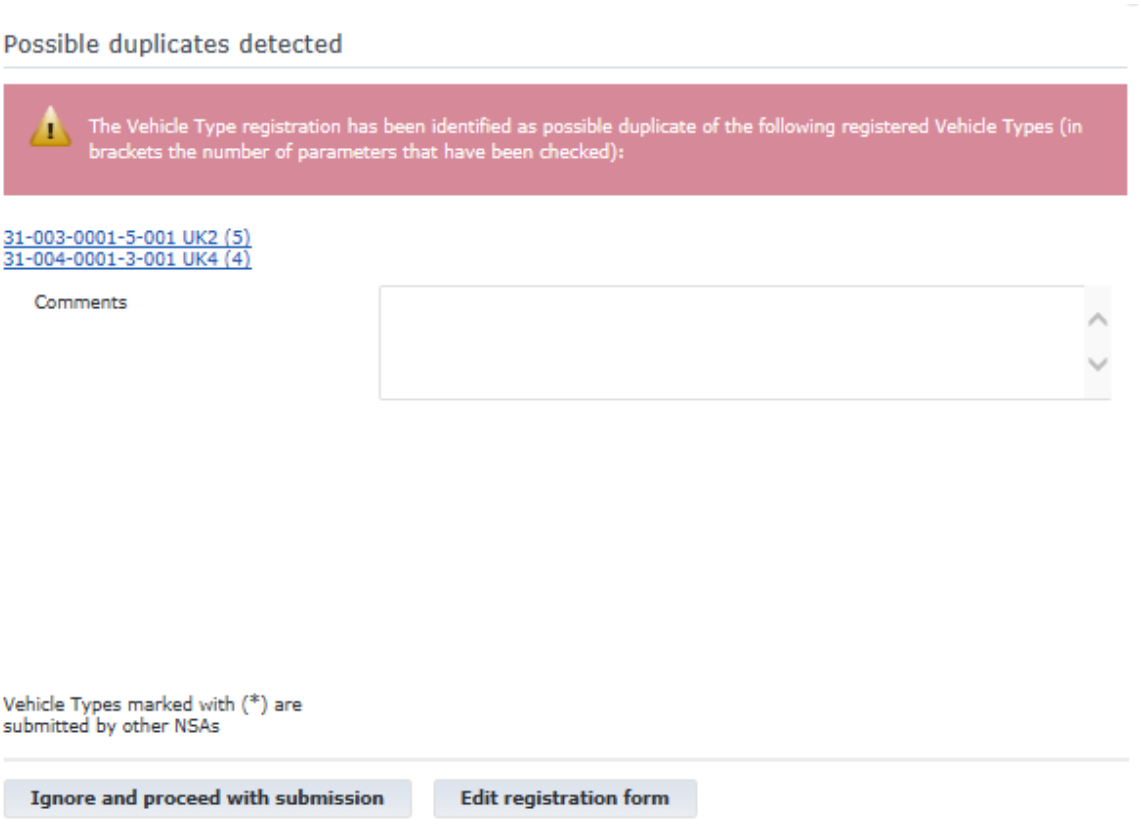


Figure 64: Vehicle Type Registration – Indication of duplication

- If both previous actions complete successfully, then a Validation request and email are dispatched to ERA to validate the submitted Vehicle Type. The Vehicle Type is now non-editable. Additionally the Vehicle Type Details form now allows the user to view further information about the Vehicle Type, such as the history of changes (see 2.5.6.3) and or

the communication records exchanged regarding this Vehicle Type (see 2.5.6.4) by presenting several tabs in the Vehicle type header as shown in Figure 65)

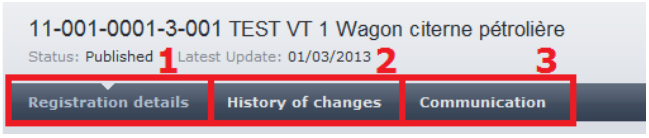


Figure 65: View Vehicle Type Details - Types of Details

In case the URL contains the Vehicle Type as a parameter, the user has the ability to modify this parameter and get a list with all the Vehicle Types starting with the value of parameter (Figure 66).

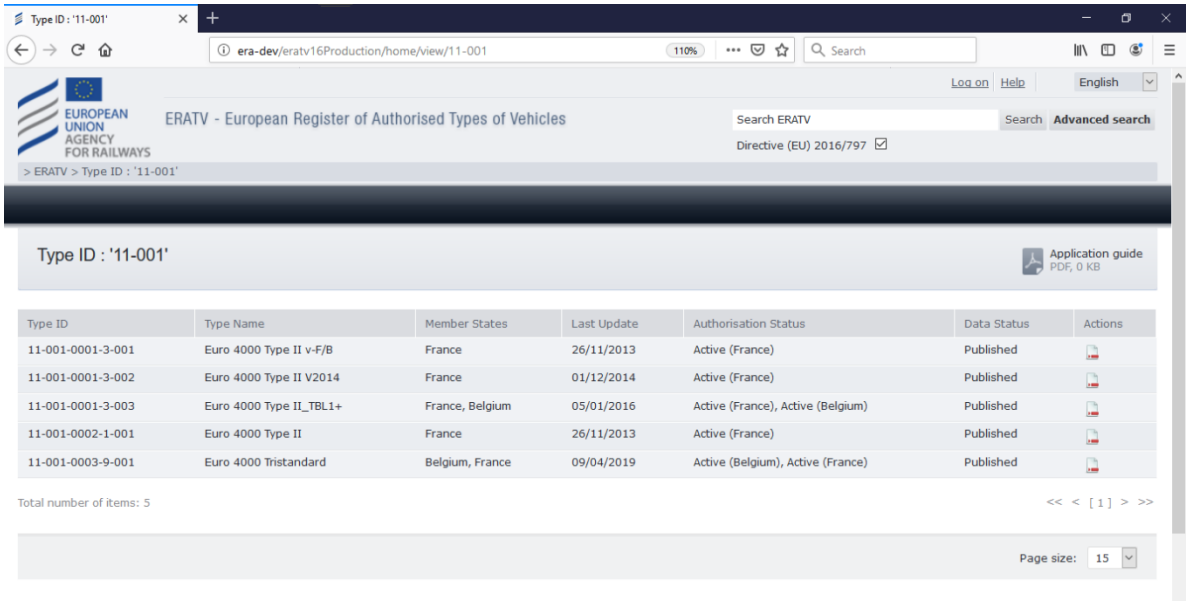


Figure 66: List of Vehicle types starting with parameter

2.3.3 Register a new authorisation

This section regards only “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes.

Any NSA is able to authorise a registered Vehicle Type for use in the NSA’s home Member State.

Once an authorisation is registered for a Vehicle Type for a specific Member State, it is not possible to create a new authorisation. In this case, the existing authorisation must be altered to reflect the latest details.

As specified in 2.3.1.2, each authorisation has a finite number of states it can go through during its lifecycle. The possible statuses and workflow between them are shown in Figure 67.

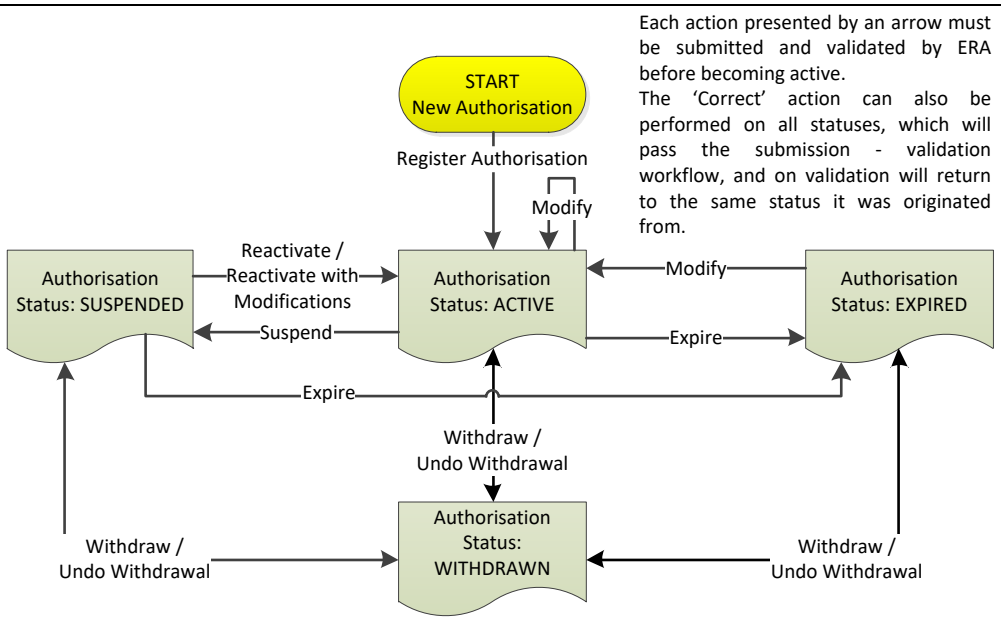


Figure 67: Register Authorisation – Authorisation Status Workflow

In order to register a new authorisation, an NSA user must click the 'Register Authorisation' button visible in the navigation bar of the header (as seen in Figure 1: ERATV Page.).

The next step in the process is locating the Vehicle Type that will be authorised. The "Register Authorisation to a Registered Type/Version" form appears as shown in Figure 68. This form allows the user to perform a search for a Vehicle Type that user's home NSA has not previously authorised.

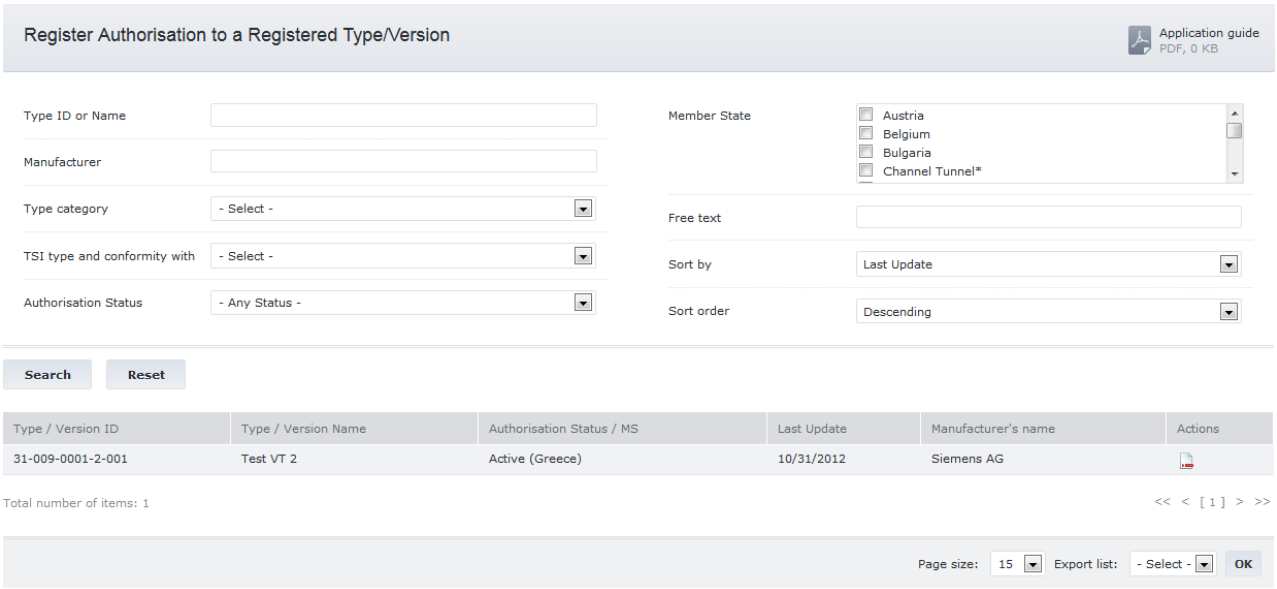


Figure 68: Register Authorisation – Select Registered Vehicle Type

The form contains a search criteria section and a results section. The user performs a search and then selects one of the Vehicle Types returned in the results to authorise.

The search can be performed without specifying any search criteria. In that case, all available for authorisation Vehicle Types will be returned. Alternatively, it is possible to specify the search criteria by using the provided controls. For text search patterns, the wildcard character (*) can be used.

The section contains the following search criteria:

- Type ID or Name: a string search pattern that searches in the Vehicle Type's Type/Version ID number or name for an exact match (unless wildcards are used).
- Manufacturer: a string search pattern that searches in the Vehicle Type's manufacturer name.
- Vehicle Type's Category: selection from the list of available categories
- TSI Type: selection from list of TSIs that the resulting Vehicle Types must conform with (partially or fully)
- Authorisation Status: this is the status of any of the authorisations this Vehicle Type contains. This criterion is usually used in conjunction with the next one.
- Member State: the Member State(s) by which the Vehicle Types have been authorised.
- Free Text: this is a free-text field that searches for the provided string similar to the Simple Search pattern described in 2.5.1.

Additionally, the results sort field and order may be specified. The available sort order is ascending and descending. The available sort fields are:

- Last Updated
- Type/Version ID
- Type Name

Once the required search criteria values have been specified, the search action is initiated by clicking the 'Search' button. If more than one search criteria have been specified, then these will be combined and the resulting Vehicle Type(s) will need to satisfy all of them.

It is possible to reset the search action by clicking the 'Reset' button which clears the search criteria section of the form but not the results section.

The results section contains a grid with the results and navigation buttons that allow the user to navigate between the result pages, should the number of results be greater than the Page size specified. Additionally, the user has the option to export the search results as described in 2.5.5.

To continue the authorisation process the user must select one of the Vehicle Types presented in the results section and click the action icon. At this point, the new authorisation form will be presented to the user. The form must be filled-in as described in 2.3.2.4 and saved before its submission.

The new authorisation record will be created at the time of first save of the authorisation form as shown in Figure 69. It is possible to continue filling the authorisation details in multiple sessions. At any point, the user may click the 'Cancel' button to disregard the latest changes (since the last save) performed on the authorisation and return the data to the previously saved status. Alternatively, the user may click 'Cancel Authorisation' button to cancel the authorisation registration altogether. This will change the authorisation status to 'Cancelled' and change the

record to read-only. No further additions to that authorisation can be made unless a new authorisation is registered for the same Vehicle Type for the users home NSA.

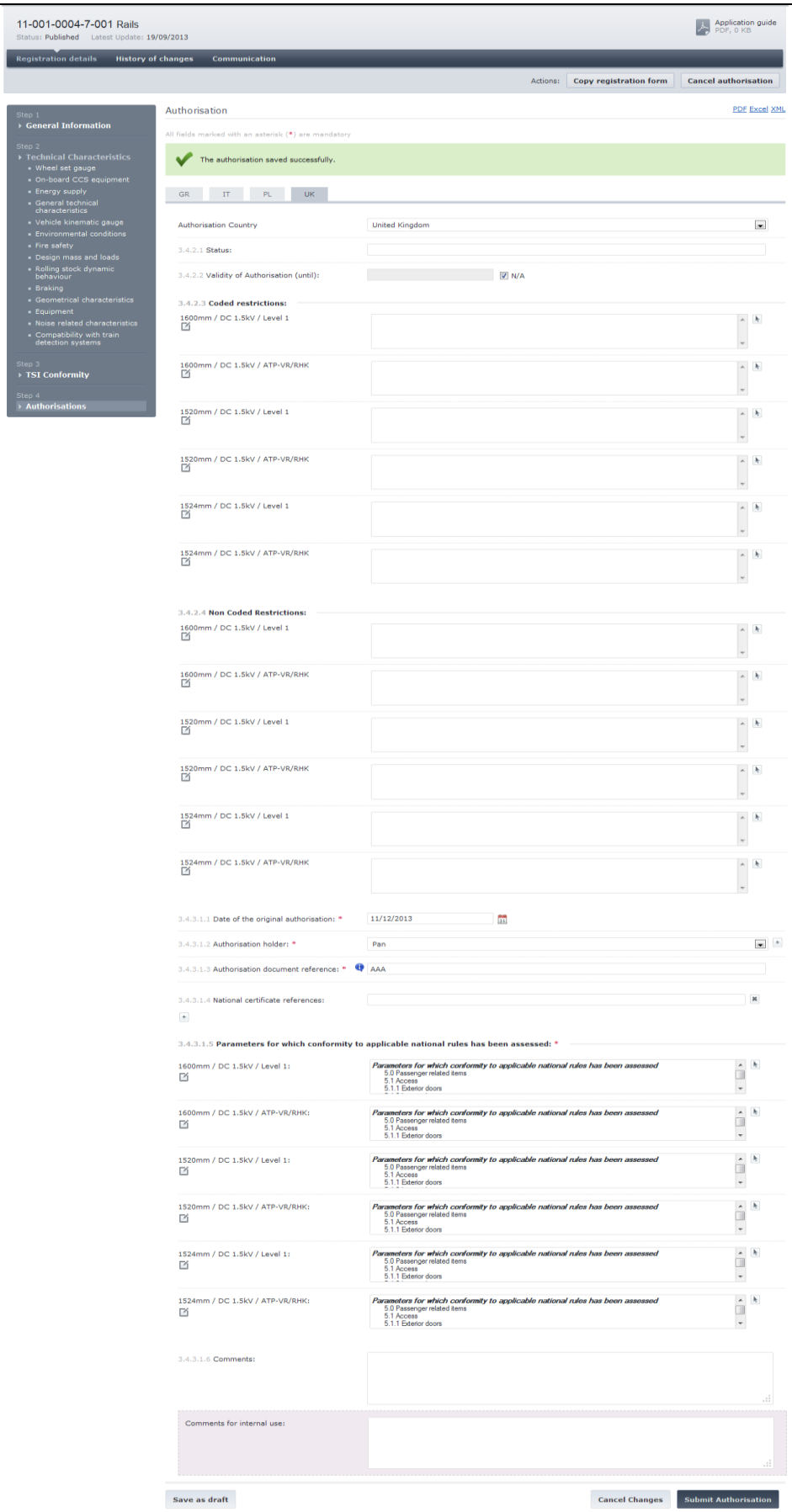
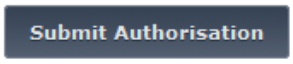


Figure 69: Register Authorisation – Authorisation Saved

When the user has finished filling-in the authorisation details, the form needs to be submitted for validation by clicking the 'Submit' button. This will cause the authorisation to become read-only and will dispatch a request and email to ERA with the validation request.



ERA has the ability to request additional clarifications for the authorisation in which case a 'Request for clarifications' will be sent to the NSA user and the authorisation record will be returned to 'Draft' status and be editable by the NSA.

If no further clarifications are needed, ERA validates the authorisation and a notification is sent to all NSA organisations that are involved with this Vehicle Type, informing them of the new authorisation. Also the record will be accessible from the public after publication.

2.3.4 Modify an existing Vehicle Type / Authorisation

At some point during the Vehicle Type's lifecycle, there might be the need to modify the record. The ERATV system allows the modification to a Vehicle Type after it has been published.

For vehicle types created under "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes, the fact that a Vehicle Type might has been authorised by a number of Member States complicates the modification process. All NSAs which have authorised a Vehicle Type must first approve any proposed modifications before these are passed to ERA for validation.

In order to initiate the modification process, the user must navigate to the Vehicle Type's details. The form shown in Figure 70 highlights the allowable actions that an involved NSA may perform on the Vehicle Type. The user must select the 'Modify Data' Button.

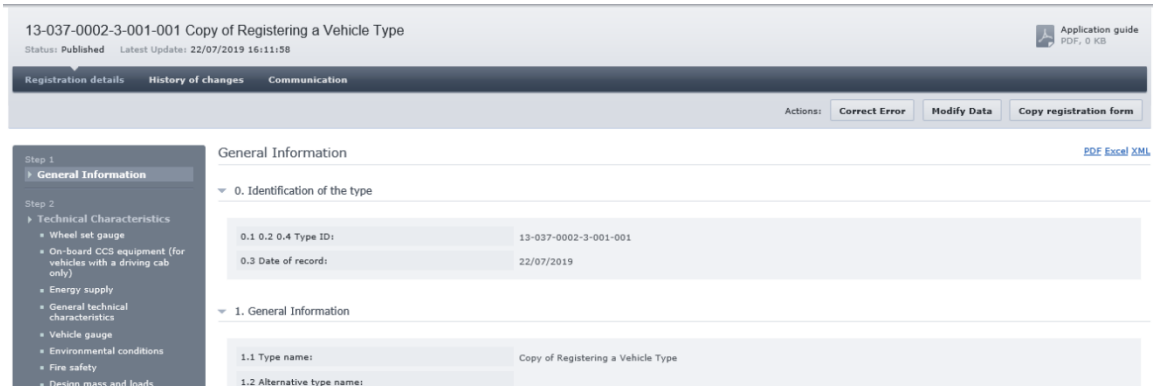


Figure 70: Published Vehicle Type – Allowed actions

The ERATV system will then create a new modification record for the Vehicle Type in 'Draft' status and present that to the user. The user can then proceed with modifying the Vehicle Type's data. When the modifications are completed, the user must click the 'Submit' button and the bottom of the Step 4 form seen in Figure 56 and Figure 61.

At this point (for vehicle types created under "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes), a request and email will be dispatched to all the remaining involved NSAs that have published an authorisation for this Vehicle Type, regardless of the authorisation's status at the time of modification. All NSAs must approve these modifications. Once all approvals have been granted (and for vehicle types created under "Directive (EU)

2016/797" and "Directive (EU) 2016/797 – Exceptional Mode" registration modes after the submission), a request and email will be dispatched to ERA to validate the modifications within an appropriate timeframe. The modified data will come into effect and will be published after ERA has validated the modification request. A notification message will be dispatched to all involved parties at that point, informing them that the data are now published.

2.3.5 Correct an existing Vehicle Type / Authorisation

It is also possible to correct the details of a Vehicle Type or an authorisation in case these were introduced into the system by error. Corrections to a Vehicle Type's data follow the same principles as the modification actions but do not require approval by all involved NSAs (for vehicle types created under "Directive (EU) 2016/797" and "Directive (EU) 2016/797 – Exceptional Mode" registration modes). Instead, one of the involved parties can press the 'Correct Error' button displayed in Figure 70 or the 'Correct Authorisation Error' button shown in Figure 71 and Figure 72.

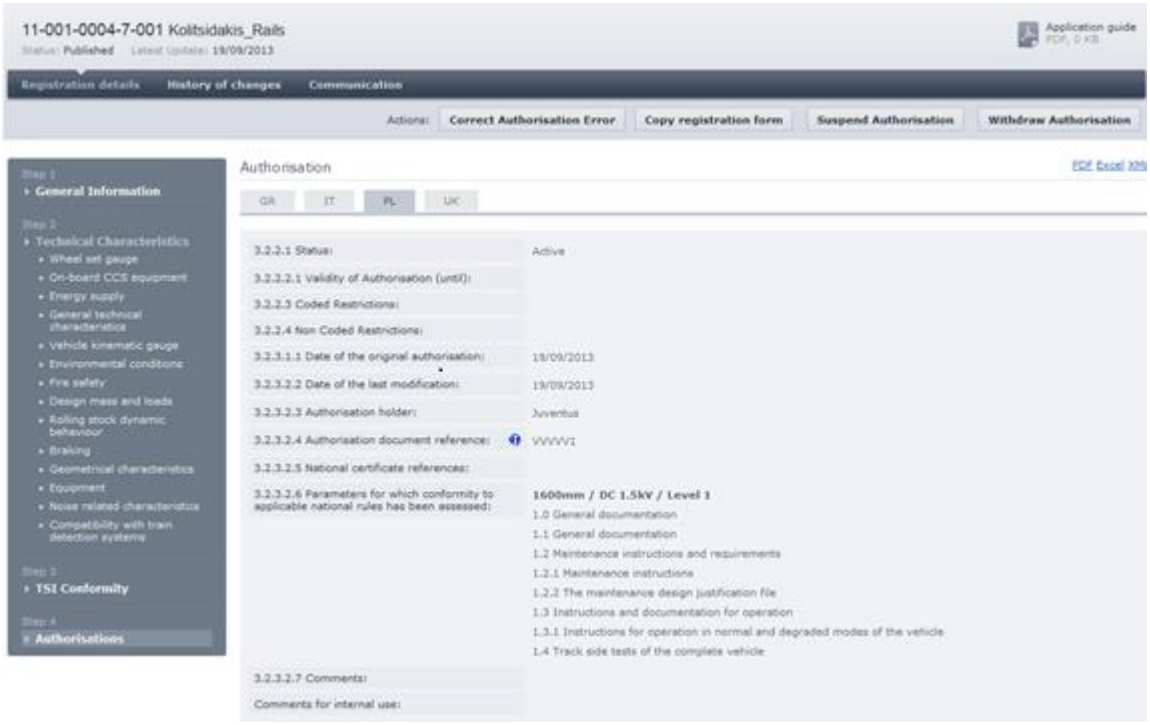


Figure 71: Correct Authorisation – Authorisation actions - Directive 2008/57/EC registration regimes

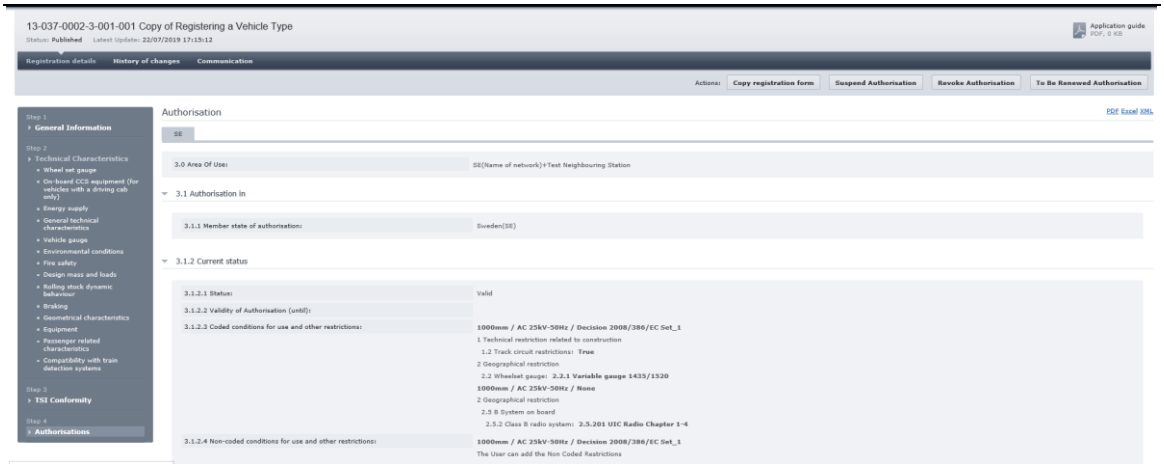


Figure 72: Correct Authorisation – Authorisation actions - Directive (EU) 2016/797

A draft record of the Vehicle Type /Authorisation is created and presented to the user. The user can then proceed with correcting the Vehicle Type's data. When the corrections are completed, the user must click the 'Submit' button at the bottom of the Step 4 form seen in Figure 56 and Figure 61. The corrections are then dispatched to ERA for validation. Once validated, the corrections come into effect and are published. Additionally, a notification message is dispatched to all involved parties, informing them about the alterations of the record's data.

2.3.6 Suspend an Authorisation

An NSA has the option to temporary suspend an Authorisation that was granted to a Vehicle Type. Only active/valid Authorisations can be suspended. This can be achieved by clicking the 'Suspend Authorisation' button that is available from the actions of an Authorisation record shown in Figure 71 and Figure 72.

A popup similar to the one at Figure 73 will appear. The user must provide the date that the suspension is active from and some optional comments. The date can be provided either manually or by using the calendar that appears by clicking the calendar icon ( )

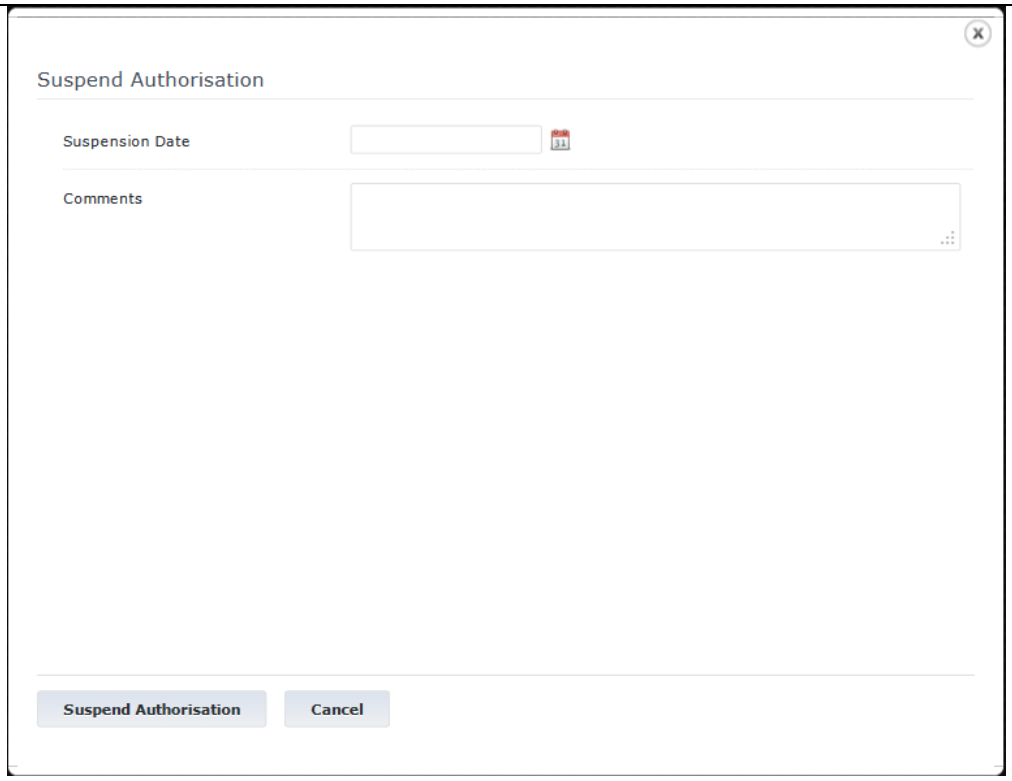


Figure 73: Suspend Authorisation – Popup

The suspension date must be equal or larger than the Authorisation activation date of the Authorisation being suspended.

Once the user clicks the 'Suspend Authorisation' button available in the suspension popup, a request and email will be dispatched to ERA for approval. If approved, the Authorisation in question will be suspended effective as of the provided date.

2.3.7 Withdraw an authorisation

The withdrawal of an authorisation regards only Vehicle types created under "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes.

Similarly to the suspension functionality, an NSA user has the ability to withdraw an Authorisation. This causes the Authorisation to be withdrawn but still be visible to the public. A withdrawal can occur on Authorisations of any status (active, suspended and expired).

In order to withdraw an authorisation on a Vehicle Type, the user must click the 'Withdraw Authorisation' button as seen in Figure 71. The withdrawal popup will appear (Figure 74). The user must provide a withdrawal date and an optional comment and click the 'Withdraw Authorisations' button. The date can be entered manually or selected by clicking on the calendar icon ( ).

The withdrawal date must be the same or later than the effective date of the previous action on the Authorisation. For example, if a suspended Authorisation is to be withdrawn and the suspension effective date is 1st Oct. 2012, then the Withdrawal date must be 1st Oct. 2012 or later.

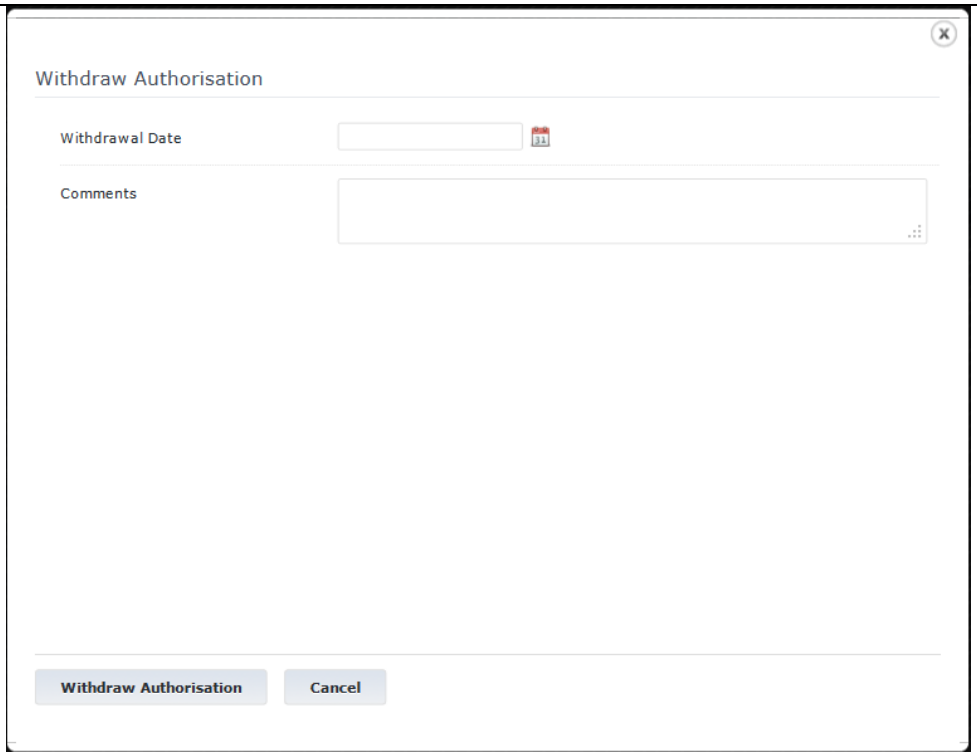


Figure 74: Withdraw Authorisation – Popup

Once the 'Withdraw Authorisation' button in the withdrawal popup is clicked, then a new Authorisation withdrawal record will be created and submitted to ERA for approval. On approval, a notification will be dispatched to all involved parties informing them of the Withdrawal.

2.3.8 Revoke an Authorisation

The revocation of an authorisation regards only Vehicle types created under "Directive (EU) 2016/797" and "Directive (EU) 2016/797 – Exceptional Mode" registration modes.

An NSA has the option to temporary revoke an Authorisation that was granted to a Vehicle Type. This can be achieved by clicking the 'Revoke Authorisation' button that is available from the actions of an Authorisation record shown in Figure 71 and Figure 72.

A popup similar to the one at Figure 75 will appear. The user must provide the date that the revocation is active from and some optional comments. The date can be provided either manually or by using the calendar that appears by clicking the calendar icon ( ).

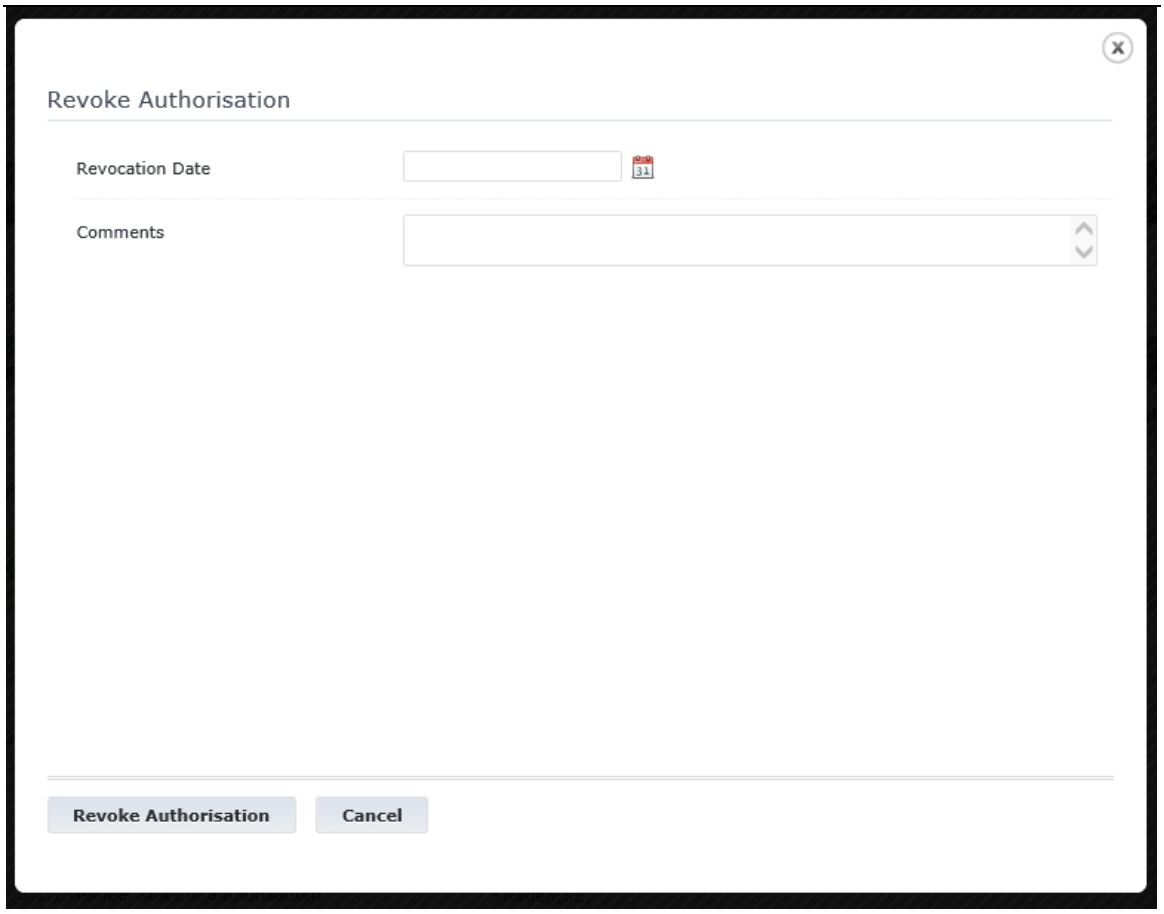


Figure 75: Revoke Authorisation – Popup

The revocation date must be equal or larger than the Authorisation activation date of the Authorisation being revoked.

Once the user clicks the 'Revoke Authorisation' button available in the revocation popup, a request and email will be dispatched to ERA for approval. If approved, the Authorisation in question will be revoked effective as of the provided date.

2.3.9 Authorisation "to be renewed"

The action "to be renewed" of an authorisation regards only Vehicle types created under "Directive (EU) 2016/797" and "Directive (EU) 2016/797 – Exceptional Mode" registration modes.

An NSA has the option to temporary set the status "to be renewed" to an Authorisation that was granted to a Vehicle Type. This can be achieved by clicking the 'To Be Renewed Authorisation' button that is available from the actions of an Authorisation record shown in Figure 71 and Figure 72.

A popup similar to the one at Figure 76 will appear. The user must provide the date that the "to be renewed" action is active from and some optional comments. The date can be provided either manually or by using the calendar that appears by clicking the calendar icon ( ).

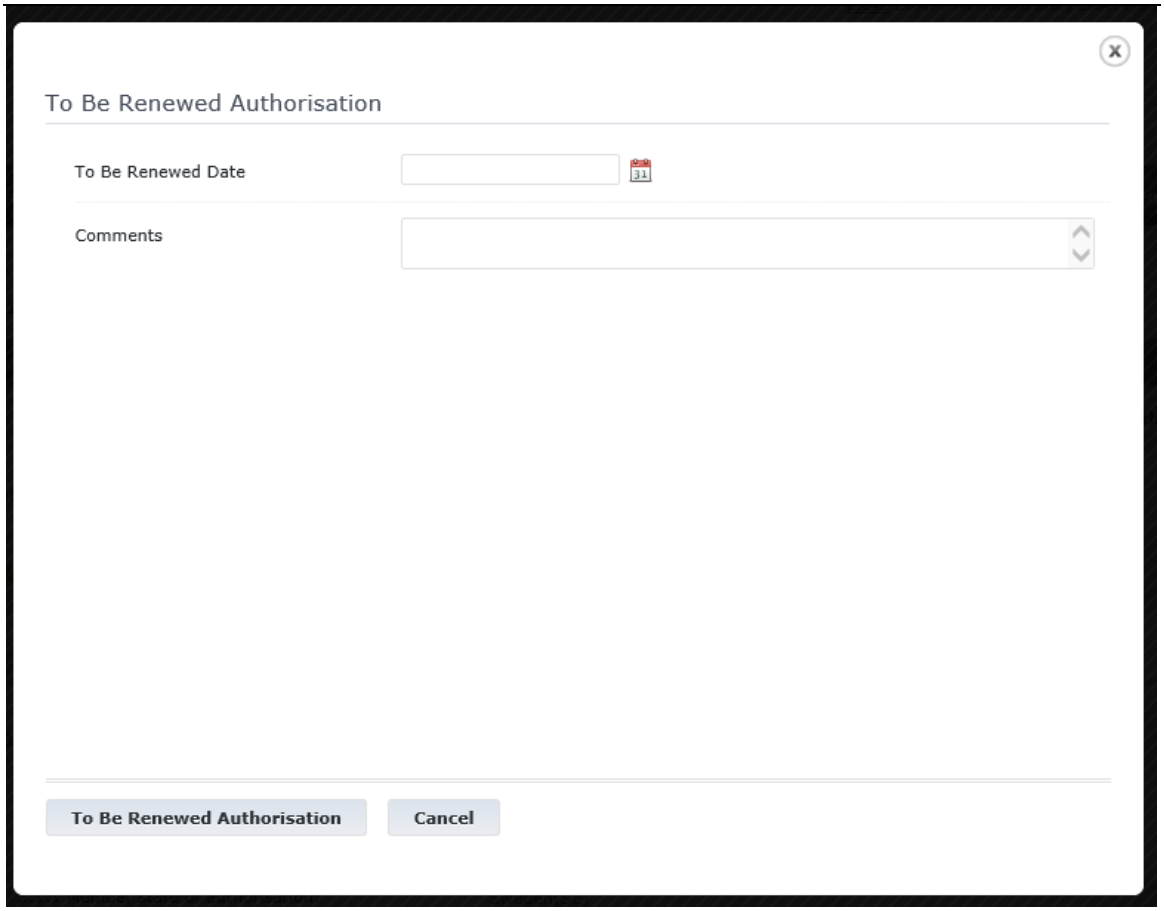


Figure 76: "To be renewed" Authorisation – Popup

The "to be renewed" date must be equal or larger than the Authorisation activation date of the Authorisation being renewed.

Once the user clicks the 'To Be Renewed Authorisation' button available in the popup, a request and email will be dispatched to ERA for approval. If approved, the Authorisation in question will be renewed effective as of the provided date.

2.3.10 Reactivate an Authorisation

A suspended Authorisation can be reactivated by the NSA user. The user accesses the suspended Authorisation record as shown in Figure 77 and Figure 78 and selects the 'Reactivate Authorisation' button. This will cause a 'Reactivation authorisation' popup to appear as shown in Figure 79.

The user must enter the effective date of the reactivation and an optional comment. The date should be the same or later than the effective date of the Authorisation suspension. It can be entered manually or by clicking the calendar icon ( ).

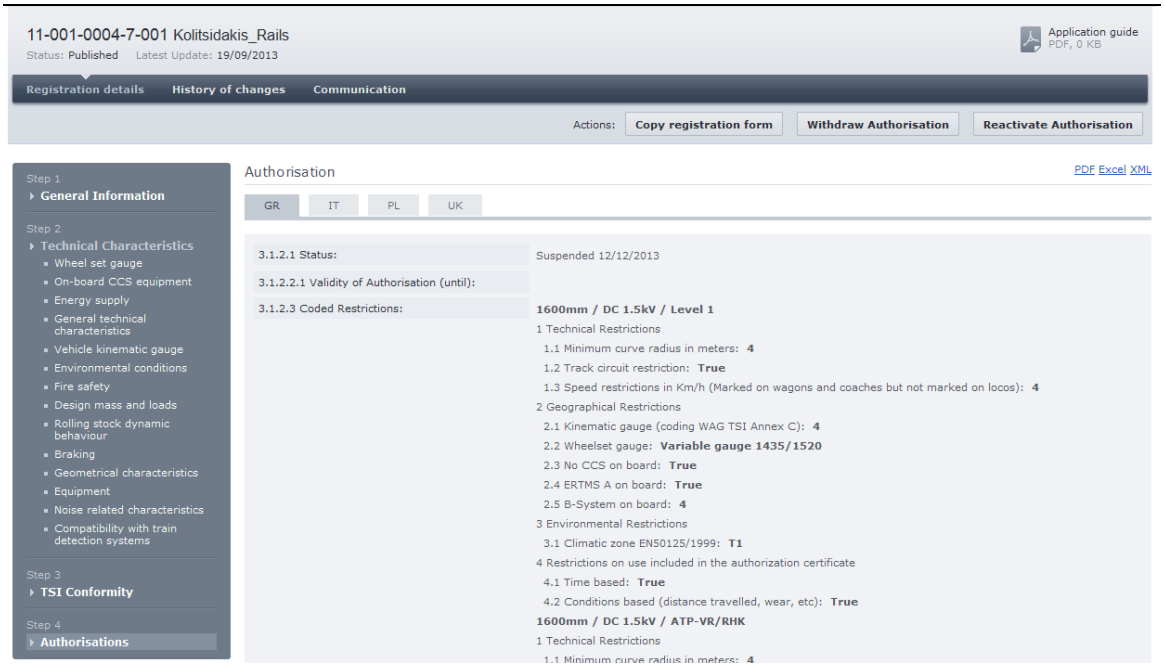


Figure 77: Suspended Authorisation record actions - Directive 2008/57/EC registration regimes

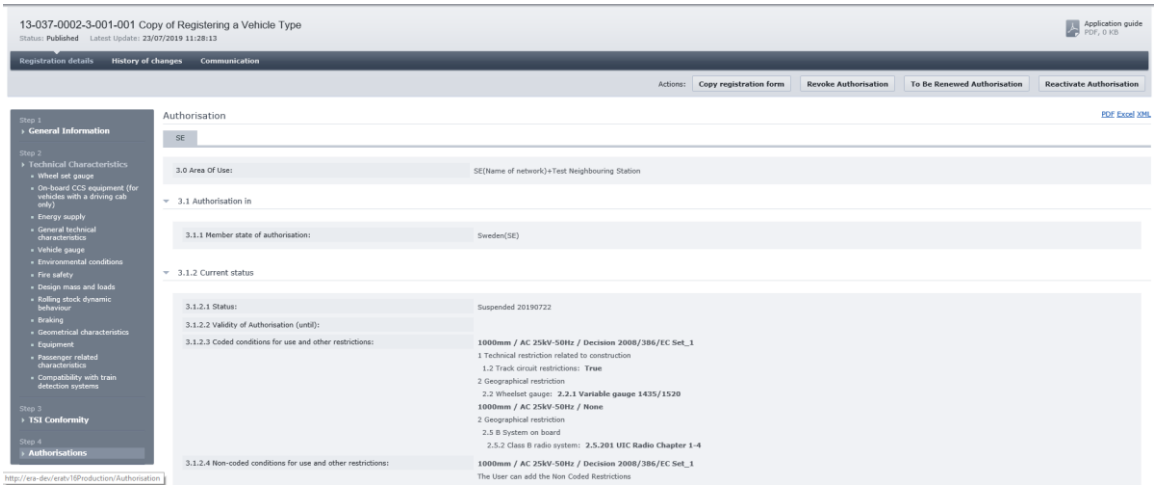


Figure 78: Suspended Authorisation record actions - Directive (EU) 2016/797

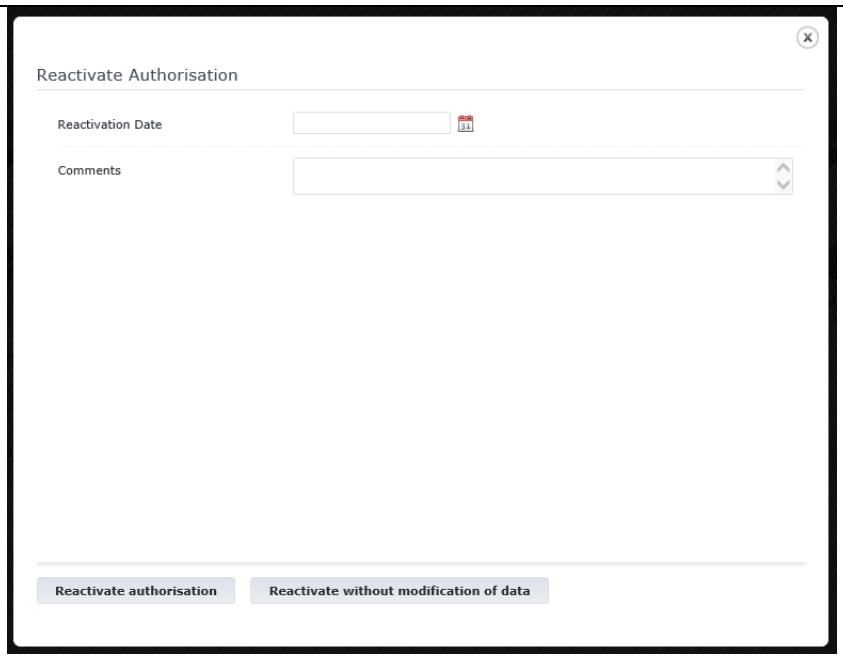


Figure 79: Reactivation Authorisation popup

Once the effective date and comment are filled-in, the user must select one of the following actions:

- Reactivate authorisation: this causes a reactivation of the authorisation combined with modifications to the Vehicle Type data. On selecting this option, the Vehicle Type will be opened in modification mode as described in 2.3.4. The user may make modifications to any section of the Vehicle Type registration. On submission by the NSA user, a request and email are sent to all involved parties, if more than one involved party (NSA), to approve the modifications (only applicable for Vehicle Types created under "Directive 2008/57/EC" and "Directive 2008/57/EC – Exceptional Mode" registration regimes). The request and email are only sent to ERA afterwards, when all involved NSAs have approved the modifications.
- Reactivate without modification of data: this option creates a reactivation request accompanied with an email and submits it automatically to ERA for approval. The date specified in Figure 79 is used as the "Effective From" date of the reactivation request. No further approvals or actions are required by any NSA users.

2.3.11 Undo Authorisation Withdrawal

The Undo Authorisation withdrawal of an authorisation regards only Vehicle types created under "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes.

As specified earlier, an NSA may only have one Authorisation per Vehicle Type. Due to this rule, and also in order to be able to rectify possible erroneous withdrawals, the user must have the option to undo an Authorisation withdrawal. The action to undo a withdrawal should return the Authorisation to the status it had before it was withdrawn. To undo an Authorisation withdrawal, the user must select the 'Undo Withdrawal' button as seen in Figure 80.

Once the 'Undo Withdrawal' button is clicked, the 'Undo Withdrawal' popup appears as shown in Figure 81. The user must enter the date that the Withdrawal revocation will be effective from,

as well as any additional comments. The date provided must be equal or later than the withdrawal date of the Authorisation and can be entered manually or selected after clicking the calendar icon ( ).

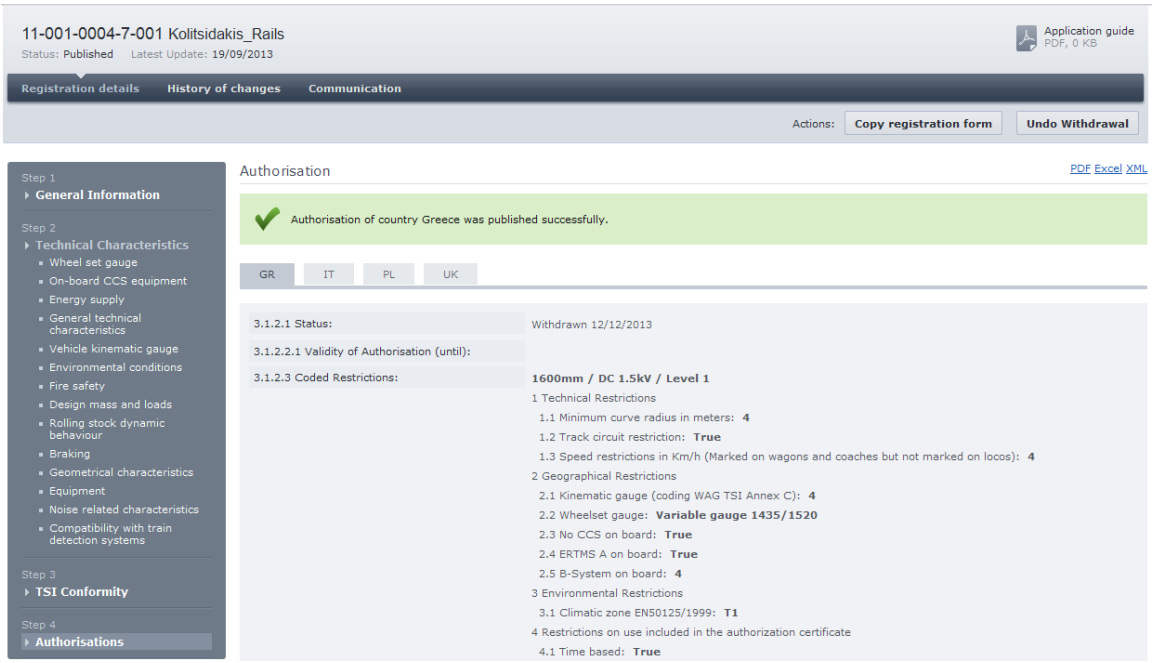


Figure 80: Undo Authorisation Withdrawal. Allowable actions

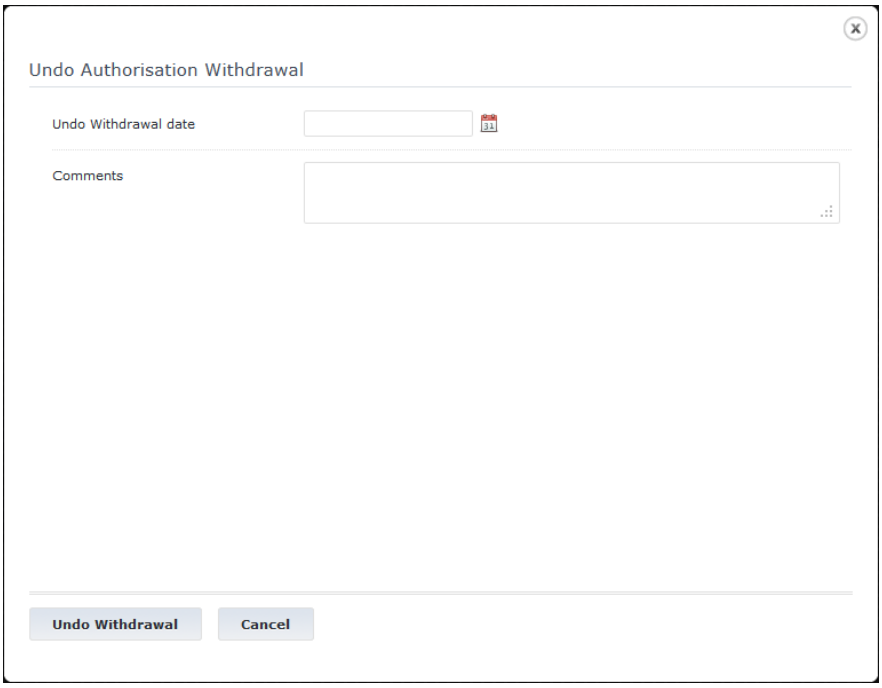


Figure 81: Undo Authorisation Withdrawal. Popup

Once the popup fields have been populated, the user must click the 'Undo Withdrawal' button to submit the record for authorisation by ERA.

2.3.12 Undo Authorisation Revocation

The “Undo Authorisation Revocation” action regards only Vehicle types created under "Directive (EU) 2016/797” and “Directive (EU) 2016/797 – Exceptional Mode” registration modes.

A revoked Authorisation can be undone by the NSA user. The user accesses the revoked Authorisation record as shown in Figure 82 and selects the ‘Undo Revocation’ button. This will cause a ‘Undo Authorisation Revocation’ popup to appear as shown in Figure 83.

The user must enter the effective date of the “revocation undone” and an optional comment. The date should be the same or later than the effective date of the Authorisation revocation. It can be entered manually or by clicking the calendar icon ( ).

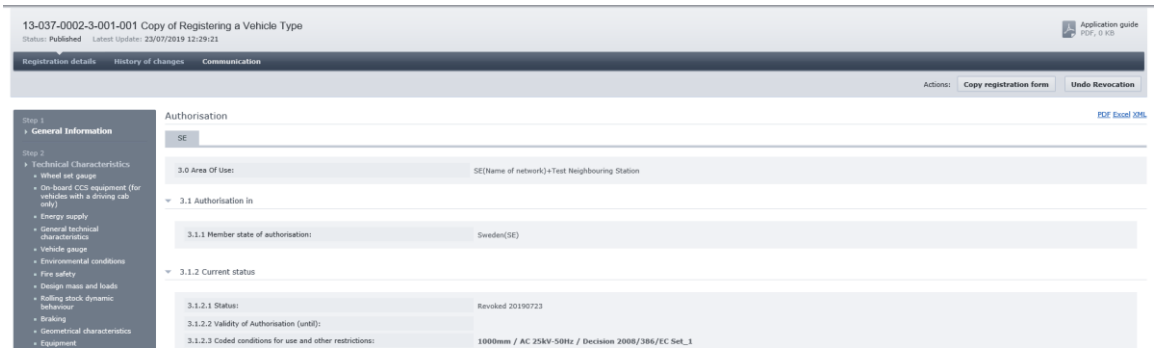


Figure 82: Revoked Authorisation record actions

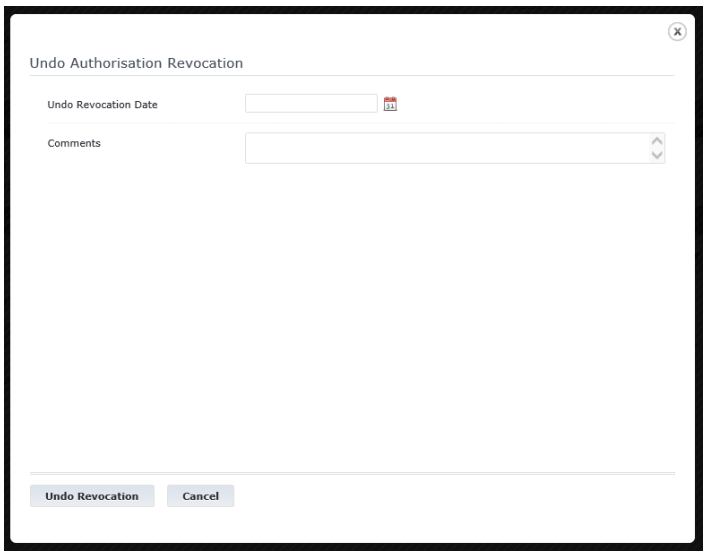


Figure 83: Undo Authorisation Revocation – Popup

Once the popup fields have been populated, the user must click the ‘Undo Revocation’ button to submit the record for authorisation by ERA.

2.3.13 Undo Authorisation "To Be Renewed"

The Undo Authorisation "To Be Renewed” action regards only Vehicle types created under "Directive (EU) 2016/797” and “Directive (EU) 2016/797 – Exceptional Mode” registration modes.

A “to be renewed” Authorisation can be undone by the NSA user. The user accesses the “to be renewed” Authorisation record as shown in Figure 84 and selects the ‘Undo “To Be Renewed”’ button. This will cause a ‘Undo Authorisation “to be renewed”’ popup to appear as shown in Figure 85.

The user must enter the effective date of the ‘“to be renewed” undone’ action and an optional comment. The date should be the same or later than the effective date of the Authorisation “to be renewed”. It can be entered manually or by clicking the calendar icon ( ).

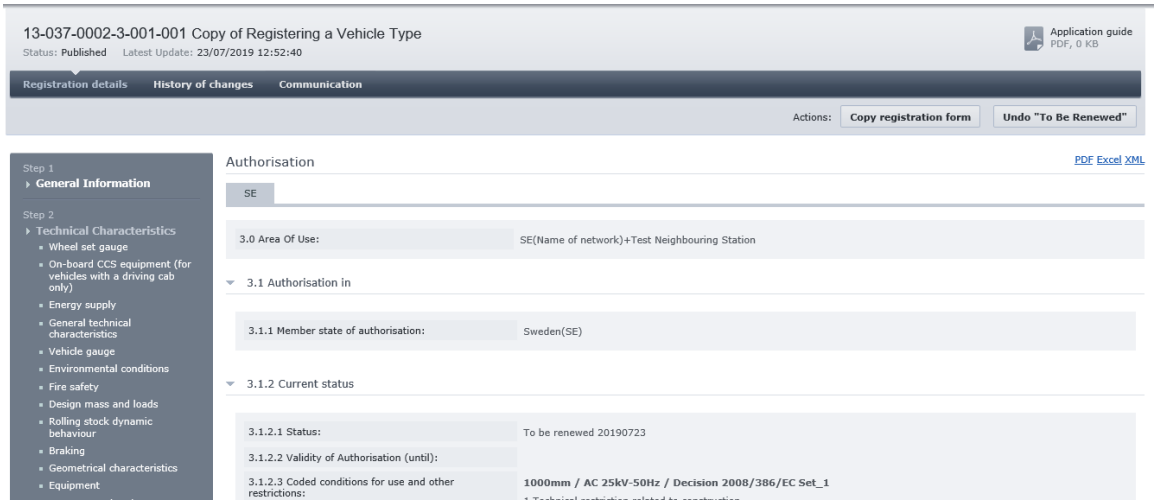


Figure 84: Undo Authorisation "To Be Renewed” - Allowable actions

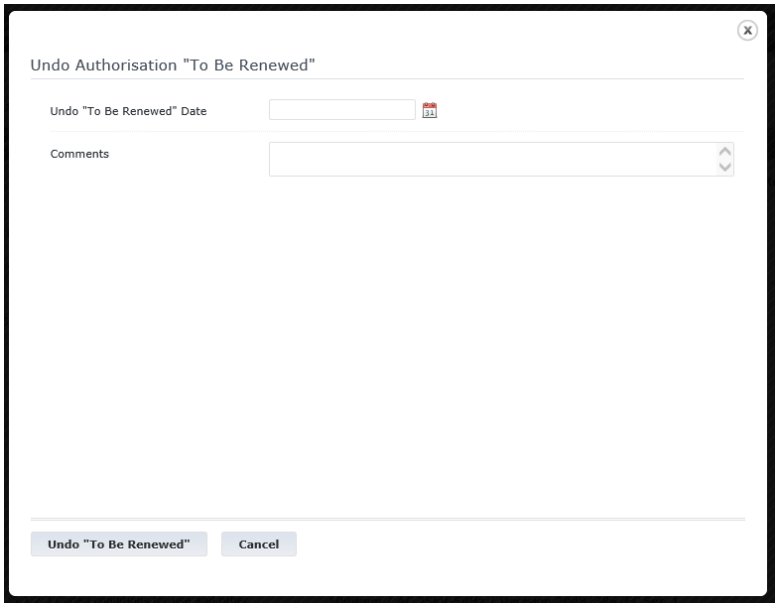


Figure 85: Undo Authorisation "To Be Renewed” popup

Once the popup fields have been populated, the user must click the ‘Undo “to be renewed” button to submit the record for authorisation by ERA.

2.3.14 History of changes in authorisations section

Below the section “Comments for internal use” the user can view the history of authorisation changes. When the User sends an authorisation to the Agency for review, the “Submission of

Initial Registration" caption is created. After the validation of the authorisation by the ERATV User, a second caption appears, named "Initial Registration" containing all authorisation parameters of the newly created authorisation, which are also displayed in the "Submission of Initial Registration" caption.

If the User proceeds with a modification of an authorisation, the "Submission of Modification" caption will be created, containing only the changes regarding the authorisation parameters. If a parameter was filled in with data before the modification and afterwards remained empty, no change will be displayed under "Submission of Modification". After the validation of the authorisation by the ERATV User, a new caption will be appeared named "Modification", containing the information which is also displayed under "Submission of modification". The same approach is followed to all actions concerning changes in authorisation parameters. Public users are not able to view the "Submission of …" captions.

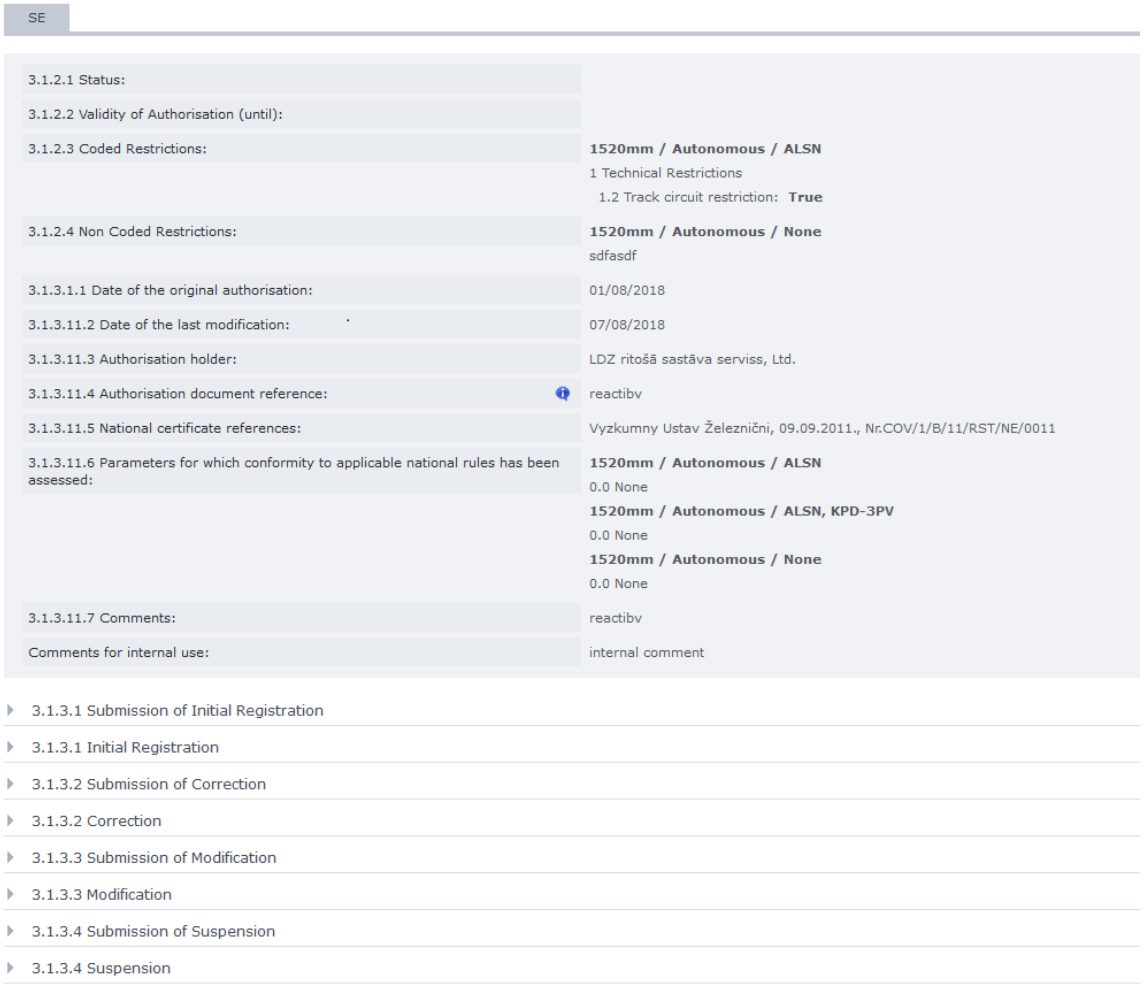


Figure 86: History of changes in authorisation - Directive 2008/57/EC registration regimes

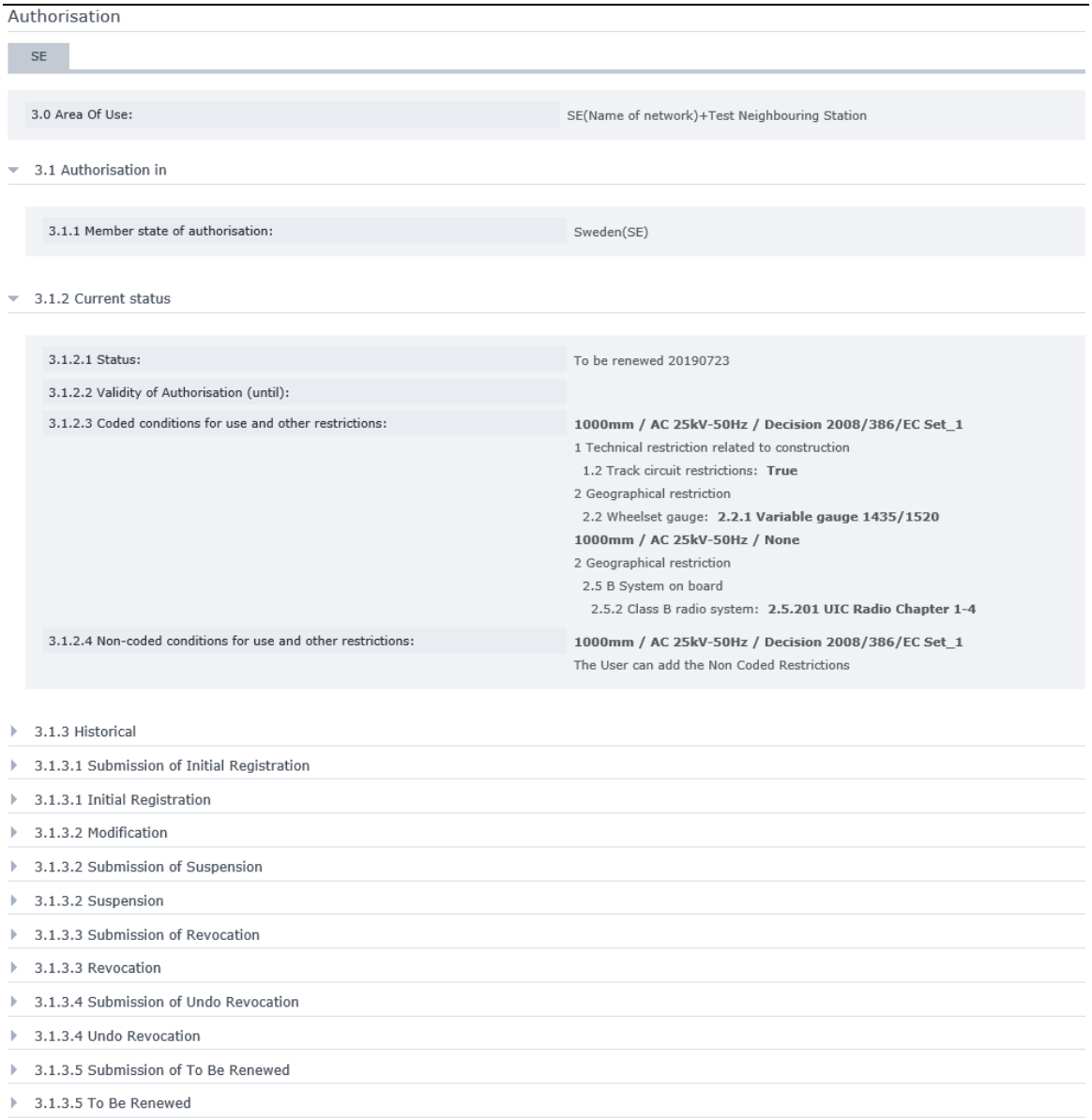
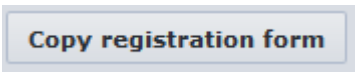


Figure 87: History of changes in authorisation - Directive (EU) 2016/797

2.3.15 Copy Registration Form

In order to reduce the time needed for registering a new Vehicle Type, the user may perform a 'copy' from an existing record. This functionality is available from any Vehicle Type regardless its status. It is not possible to perform the copy action to Authorisation records individually, only to whole Vehicle Type records.

To copy the registration data of a Vehicle Type, the user must click the 'Copy registration' button that appears in the content header (see Figure 1: ERATV Page. sub section 2.a). Immediately, a new draft Vehicle Type will be created and the data from the current record will be copied into it. All fields are copied except the following:



- General Information Step:

- Country: the country of the current NSA user will be automatically entered in this field.
- Organisation: the organisation of the currently logged-in user will be automatically entered in this field.
- Correspondent: the default correspondent of the selected organisation will be automatically entered in this field.
- Type ID: this number is unique per Vehicle Type and will not be copied. A new one must be reserved as described in 2.3.2.1.1.
- Date of record: this is the date of the first publication of the Vehicle Type. This will be set automatically when the VT is published.
- Type Name. This will hold a new value with the format “Copy of <Original Vehicle Type Name>”.

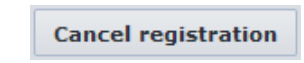
- Authorisation Step:
  - Date of original authorisation
  - Status (read-only, automatically set to ‘draft’ by the system)
  - Authorisation Document Reference

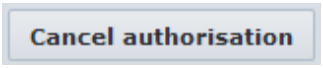
Once the record details have been copied, the text “Copy of” is added in the Vehicle Type’s name in order to be indicated that it has been copied from another Vehicle Type. The user may then submit the new Vehicle Type or modify it as described in 2.3.2

2.3.16 Cancel a Vehicle Type registration / authorisation

The user may cancel any draft registration or Authorisation if it is no longer needed. The cancelled application will receive the status ‘Cancelled’ and will not be available for edit. A cancelled Vehicle Type registration will appear in the list of authorisations for NSA users and ERA. The public users cannot see a ‘cancelled’ authorisation.

For a Vehicle Type this functionality is accessible by clicking the ‘Cancel Registration’ button that appears in the content header of the record (see Figure 1: ERATV Page. sub section 2.a). To cancel an Authorisation record, the user must click on the ‘Cancel Authorisation’ button that appears on the same location, when viewing the Authorisation request.





2.3.17 Auxiliary Users

To assist with the registration process of a new Vehicle Type, the NSA user may allow additional users to log into the ERATV system and edit/insert a Vehicle Type’s technical characteristics details. These ‘auxiliary’ users are defined by the NSA user as described in the Administration section of the current manual (see section 2.6.2).

The NSA user is in position to selectively grant access for an Auxiliary User to a particular section of any Vehicle Type registered in their home MS. The following sections of a Vehicle Type are accessible by Auxiliary Users:

- Technical Characteristics
- Conformity with TSI
- Both of above

The users cannot perform any other actions on the ERATV system. Once an Auxiliary User account has been registered by a NSA user, then it can access only Vehicle Types of the registering NSA. Also a Vehicle Type can be associated with only one Auxiliary User, but an Auxiliary User can be granted permission to many Vehicle Types.

2.3.17.1 Grant permission for editing

An Auxiliary User can access a Vehicle Type for editing using one of two different methods:

2.3.17.1.1 Grant permission through Vehicle Type registration

From steps 2 and 3 of the Vehicle Type registration form: the NSA user must click the 'Grant permission for editing' button which will cause the popup shown in Figure 88 to appear. The NSA user must then select one of the Auxiliary Users from the list (the list contains the Auxiliary Users created by all NSAs), specify his/her Access Rights from the list and click the 'Save' button to grant the permission. If an Auxiliary User is already associated with this Vehicle Type, then the Auxiliary User list will have the account preselected. Finally, by clicking the 'Cancel' button the process is cancelled and the popup disappears.

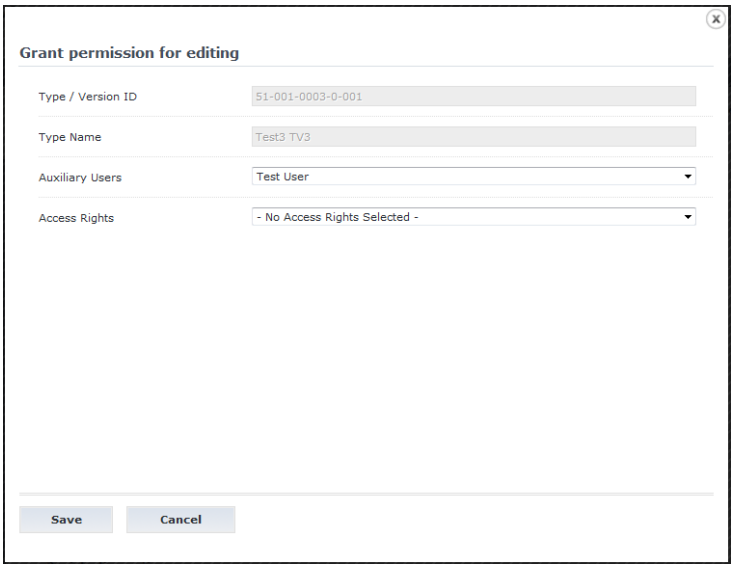


Figure 88: Grant permission for editing

2.3.17.1.2 Grant permission through Auxiliary User Administration

From the Auxiliary User administration page: the NSA user can click the '*Add/Remove Association to Vehicle Type'* link that appears in the Auxiliary User Edit screen (see Figure 121) which will cause the 'Add/ Remove Association to Vehicle Type' page to appear as shown in Figure 89. If the respective Auxiliary User account is not associated with any Vehicle Types, a visual indication 'The user account is not associated with any Vehicle Type' appears.

From this page, the NSA user may define the Auxiliary User's access rights for one or more of the available Vehicle Types and then click 'Save'. A confirmation message will appear at the top of the page. The NSA user may also disassociate Vehicle Types by unchecking the desired access right of the respective Vehicle Type and clicking 'Save'. Again, a confirmation message will appear. Finally, clicking 'Back' will return the user to Auxiliary User Edit screen (see Figure 121).

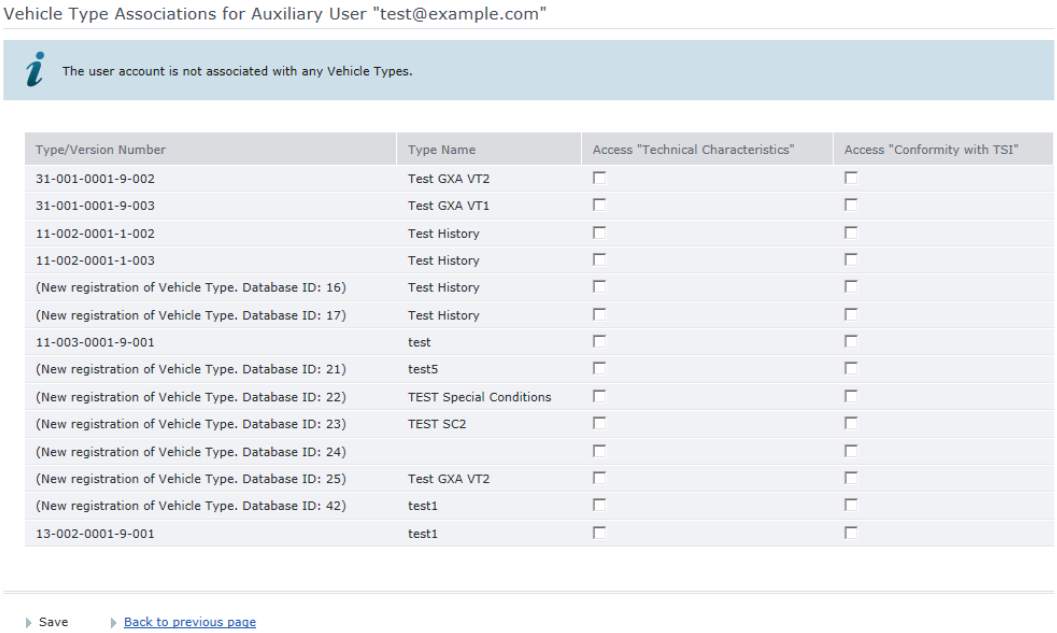


Figure 89: Auxiliary User – Vehicle Type Associations

2.3.17.2 Auxiliary User access

Auxiliary Users can access the system in the same manner as all other registered users by using the Login page described in 2.2.3. The user credentials of the user are provided by the NSA user who is also responsible for the maintenance of the Auxiliary User account as described in 2.6.2.

Once an Auxiliary User has successfully logged in, the welcome screen is presented along with the available actions as seen in Figure 90:.

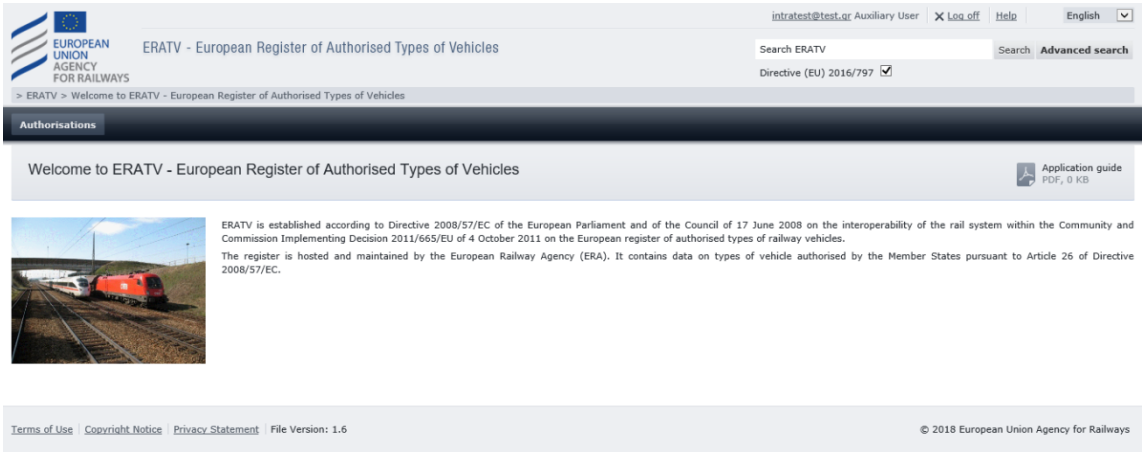


Figure 90: Auxiliary User access

To access the Vehicle Types for which permission to edit was granted, the Auxiliary User must select the 'Authorisations' button shown above. ERATV system will then display the 'List of own Authorisations' for the country the Auxiliary User is registered for, as displayed in Figure 91. The list will contain all currently published Authorisations and the draft Authorisations to which the user was granted permission. For example, in Figure 91 the Auxiliary User can view the details of 2 valid, 1 to be renewed, and 1 revoked authorisation. Clicking the actions icon ( ) of a draft

authorisation will open that record in Step 2 of the registration process (Figure 92). The data for Steps 1 and 3 are also provided but in a read-only mode for reference. No Authorisation data (step 4) are presented at any point. The user must fill in the Step 2 data and save the Vehicle Type by clicking the 'Save as Draft' or 'Save and continue' buttons. The NSA user is then responsible to provide the final information about the Authorisation data (Step 4) and submit the Vehicle Type for validation to ERA. Once the Vehicle Type is submitted, then it will no longer be visible for the Auxiliary User.

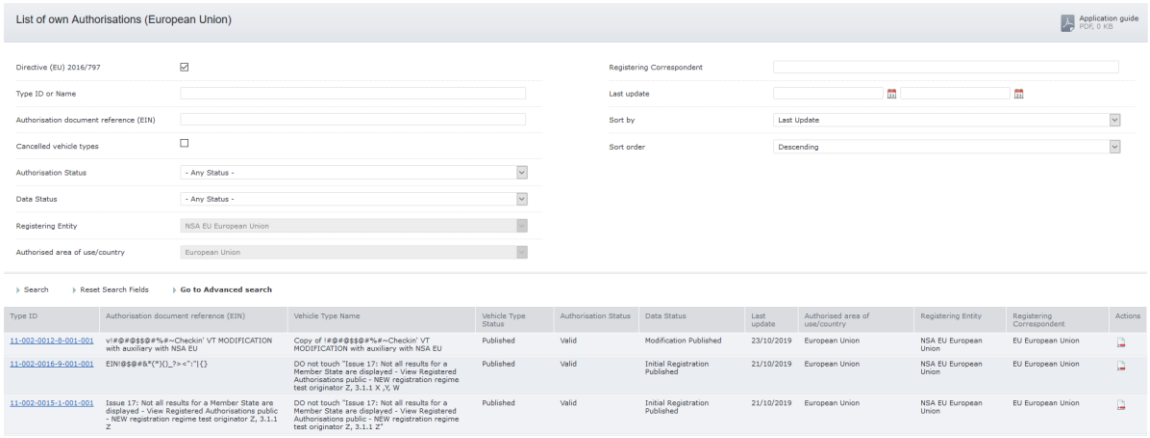


Figure 91: Auxiliary user – List of Authorisations

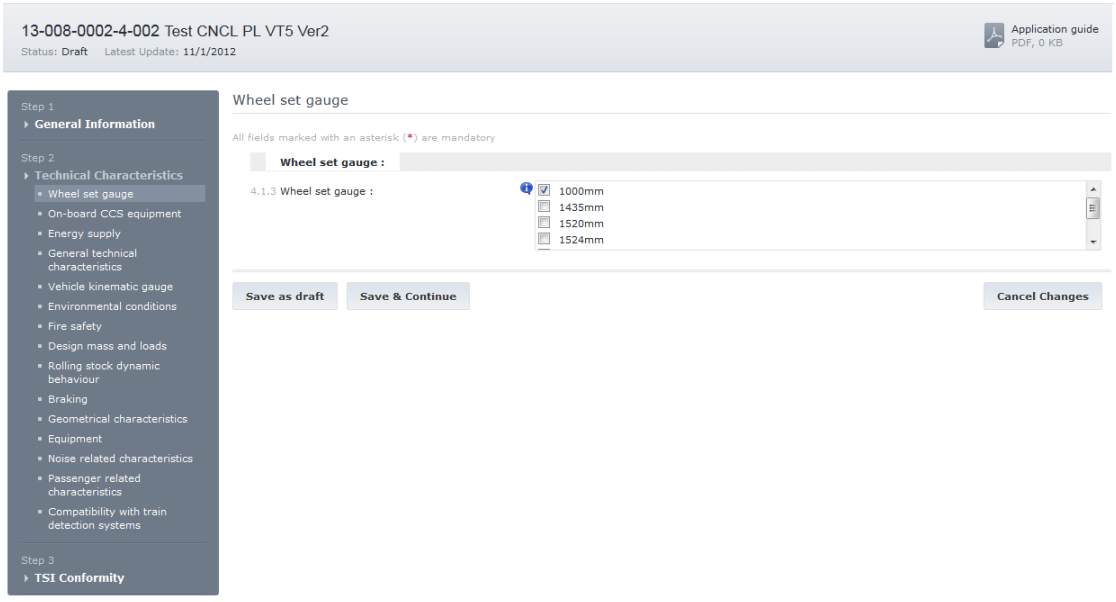


Figure 92: Auxiliary User – Edit step 2

2.4 Requests / Notifications

The ERATV system must support the communication between users in order to facilitate the required workflow. Communication is performed by using Requests and Notifications messages.

Requests are messages that are dispatched by the ERATV system automatically when a user performs an action to a recipient NSA. Requests require the recipient to perform an action within a specific time frame.

Notifications are messages that are dispatched in a similar manner, but no action is required by the recipient NSA.

These messages are dispatched to organisations rather than individual users. To that effect, a request dispatched to an NSA will be viewable by all user accounts registered to that NSA. The messages are characterised by Read / Unread status. Once a user from the recipient organisation views the message, then this is considered 'Read'. In case of requests, an additional status of "Answered/Unanswered" is available. "Answered" are the requests for which the actions have been performed whereas "Unanswered" are those for which the actions are pending. Finally, all messages have a type as described in 2.4.2.

When a message is dispatched, then it appears within the ERATV system and simultaneously is dispatched through email to all the user accounts of the recipient NSA. To access the messages from within the ERATV system, the user must select the appropriate action button as shown in Figure 93. The number within the Requests or Notifications button denotes the number of unread messages that are present. Clicking these buttons will present the corresponding list as described in 2.4.1 and 2.4.3.

Figure 93: Requests and notifications access buttons

The following example further illustrates the workflow of requests and notification (only for "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes).

- A published Vehicle Type with 3 authorisations is modified by one of the authorising NSAs. The NSA user makes the required modifications to the Vehicle Type data and submits the VT for approval and publication.
- The ERATV system will then create and dispatch one request of type "ModificationsApprovalRequest" to the two remaining involved parties, in order for them to view and approve the proposed modifications.
- When an NSA approves the modifications, a Notification message is dispatched to all the involved parties.
- When the last approval is performed, then an additional Request of type "ModificationValidationRequest" is dispatched to ERA in order to view and validate the modifications.
- Once the modifications are published then a "ModificationPublished" notification is dispatched to all involved parties.

All requests and notifications are accompanied with emails. All email notifications contain the Type ID (or if It is not available the internal ID) both in subject and body. Specifically, the body of the email contains a link to the corresponding type (e.g. http://eratv.era.europa.eu/ERATV/GeneralInfo/View/460).

2.4.1 View list of requests

The List of requests form contains two main sections (Figure 94):

1. The search and filtering criteria section
2. The results section

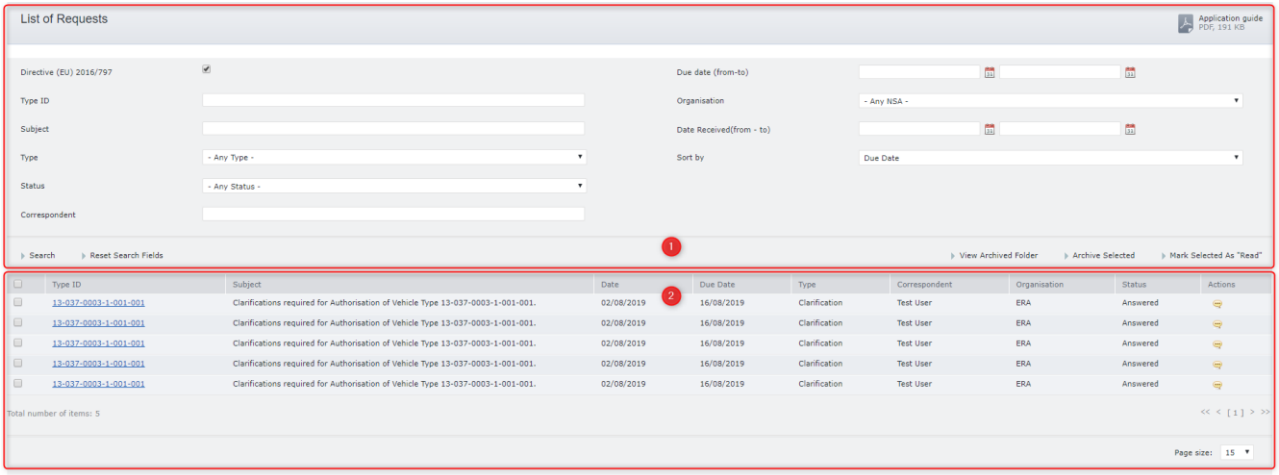


Figure 94: Requests. List of requests

The search and filtering criteria section has a number of criteria that can be used to filter the list of available results. The user must provide some criteria and click the “Search” option to filter the results displayed in the results section. Clicking the “Reset” link will reset the search criteria to the default values as shown in Figure 94. Performing a search using the default search criteria will return all available requests sorted by the due date of the request.

The available search criteria are:

- Directive (EU) 2016/797 checkbox
- Type ID: the ID of the Vehicle Type for which the request was dispatched.
- Subject: the subject of the request
- Type: the type of the request. A list of available types is presented in 2.4.2
- Status: the status of the request. Available values are “Answered” / “Unanswered”.
- Correspondent: the correspondent (user) that first dispatched the request
- Due Date: the due date of the request. This criterion can take 2 values (from – to) to specify a period.
- Organisation: the organisation that dispatched the request
- Date Received: the date the request was received. This criterion can take 2 values (from – to) to specify a period.
- Sort order: this field allows the user to sort the results that are returned by the search action. The available sort options are:
    - Date of Request
    - Due Date (default sort order)

- Type ID
- Type of request
- Status of request (Answered / Unanswered)

The results section contains a grid with the results and navigational controls for moving through the result pages. Also, it is possible to specify the number of results pre results page through the “Page Size” drop down list.

Each request record holds the following information:

- Type ID. The user may click on the active link to view the Vehicle Type details.
- Subject (of Request)
- Date (of request registration)
- Due Date (of request)
- Type (of request)
- (Registering) Correspondent (User)
- (Registering) Organisation
- Status (of request)
- Actions (Icon). This icon will prompt the user to view the request details (or depending on Status of Request) as shown in Figure 94. Clicking this icon, the Request details will be presented as described in the following section (2.4.2).

At this point the unread requests remain in bold in the search results.
Each request record has a checkbox on its left. The user may select any desired requests and click on the “Archive Selected” link to put them in the List of Archived Requests or click on the “Mark Selected as Read” to change their style from bold (Unread) to normal (Read). The List of Archived Requests has the same format as the List of Requests described in this section and contains only the archived requests. The user can access it by clicking on the “View Archived Folder” link.

2.4.2 View Request Details

The Request details form provides more details about the request to the user as shown in Figure 95:. Depending on the type of the request, different information is displayed. For the clarification request the following items are included in the Request details popup:

- Type
- Clarification question
- Clarification Text

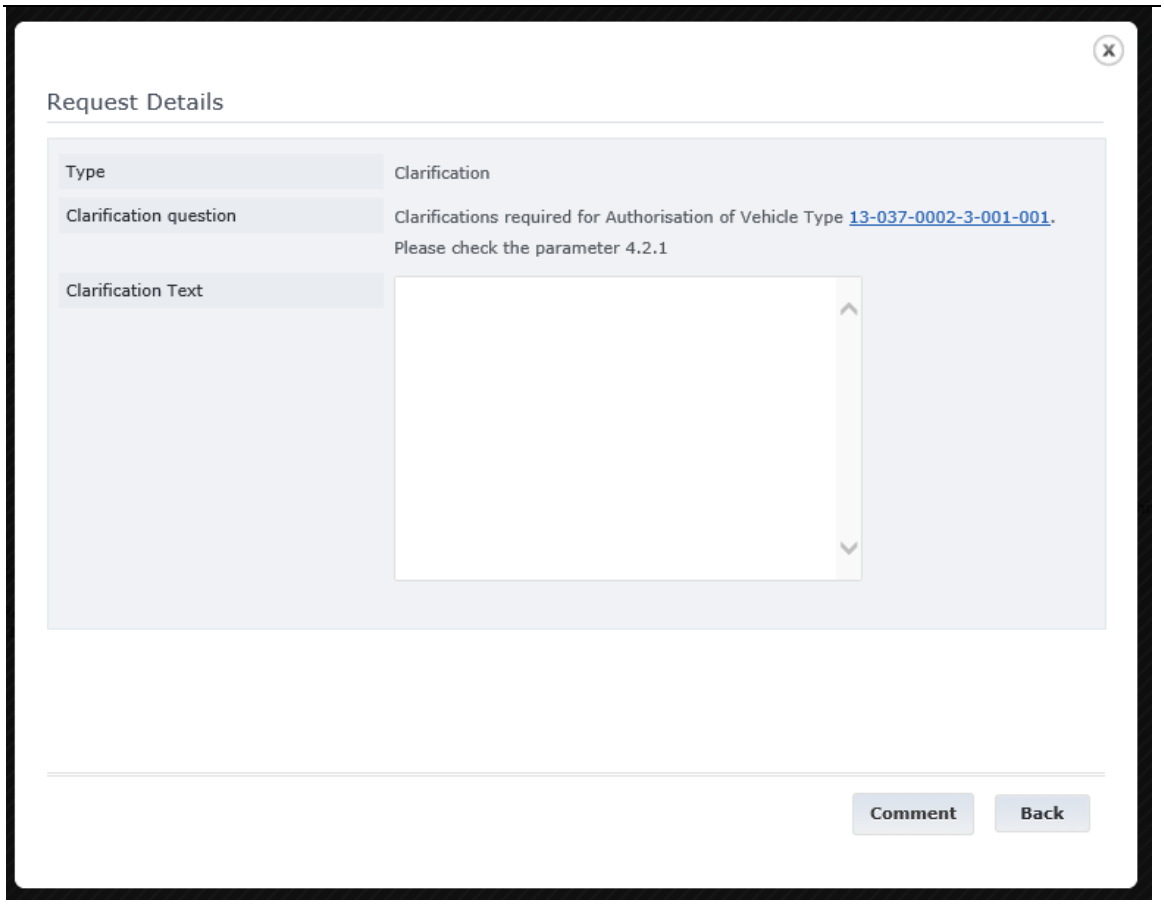


Figure 95: Requests – Details

Additionally, the user has the option to perform an action from the request details popup. The available actions depend on the type of the request viewed and the security role granted to the user. The available actions for NSA users are presented in the following table (Table 2).

Request type	Allowable actions
Modification approval	The user can press the Approve button and provide an approval comment, to approve the modification made to the Vehicle Type (applied only to "Directive 2008/57/EC, and "Directive 2008/57/EC – exceptional mode" registration modes).
Clarification	The user enters the response to the clarification request and presses the Comment button.
ReactivationModificationApprovalRequest	Same as modification approval but this time it's for the reactivation. The user can press the Approve button (also add a comment for the approval) to approve the modification made to the Vehicle Type (applied only to "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes).

Table 2: Requests – Allowed actions per request type

2.4.3 View List of Notifications

The list of notifications follows a similar approach as the list of requests with 2 sections presented in the page (see Figure 96).

The first section contains some filtering options that allow the user to reduce the number of notifications presented in the list. The available search criteria are:

- Directive (EU) 2016/797 checkbox
- Type ID: the ID of the Vehicle Type for which the notification was sent.
- Notification Type: the type of the notification. For a list of available notification types.
- Organisation: the authorising Organisation name.
- Correspondent: the correspondent user.
- Date Period (from – to): a time period within which the notification was registered. If only the "from" date is provided, then the ERATV system will return results that were registered from that date until today. Similarly, if only the "To" date is provided then the system will return all notifications registered up until the date specified.
- Sort by: this is the field that the notifications will be sorted by. The available options are:
    - Date
    - Status (Read / Unread)
    - Type ID Number
    - Notification Type
    - NSA
    - Correspondent

The user may specify the search criteria and click the "Search" button to initiate the search action. Alternatively, the user may click the "Reset" button to clear the search criteria section. Any already presented results will not be affected by the reset action.

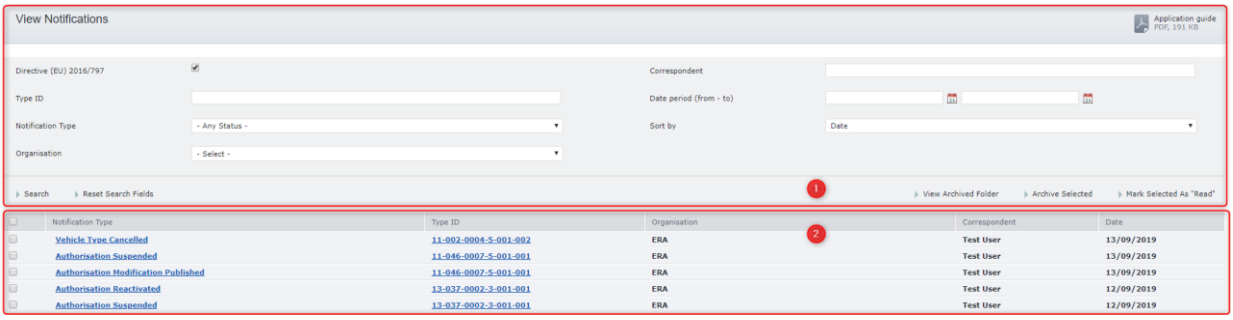


Figure 96: Notifications – List of notifications

The results section (point 2 at Figure 96) contains all the notifications that satisfy the search criteria. By default, all the notifications are presented when the list is accessed and the default search criteria are specified. Records in the results grid that are indicated with bold are notifications that have not been read by any user in the particular NSA.

The grid contains the following columns:

- Notification Type: the type of notification.
- Type ID: the ID of the vehicle type. The user may click on the active link to view the Vehicle Type details.

- Organisation: the authorising Organisation name
- Correspondent: the correspondent user
- (Notification) Date: the date the notification was dispatched

The user has the option to click on the link presented in the notification type column. This will present the notification record details in a popup window as described in 2.4.4. Once a notification has been read, it will not remain in bold in the search results.

Each notification record has a checkbox on its left. The user may select any desired notifications and click on the “Archive Selected” link to put them in the List of Archived Notifications or click on the “Mark Selected as Read” to change their style from bold (Unread) to normal (Read). The List of Archived Notifications has the same format as the List of Notifications described in this section and contains only the archived notifications. The user can access it by clicking on the “View Archived Folder” link.

2.4.4 View Notification Details

The notification details popup window contains all the details of a received notification as shown in Figure 97. The contents of each notification record depend on the type of the notification.

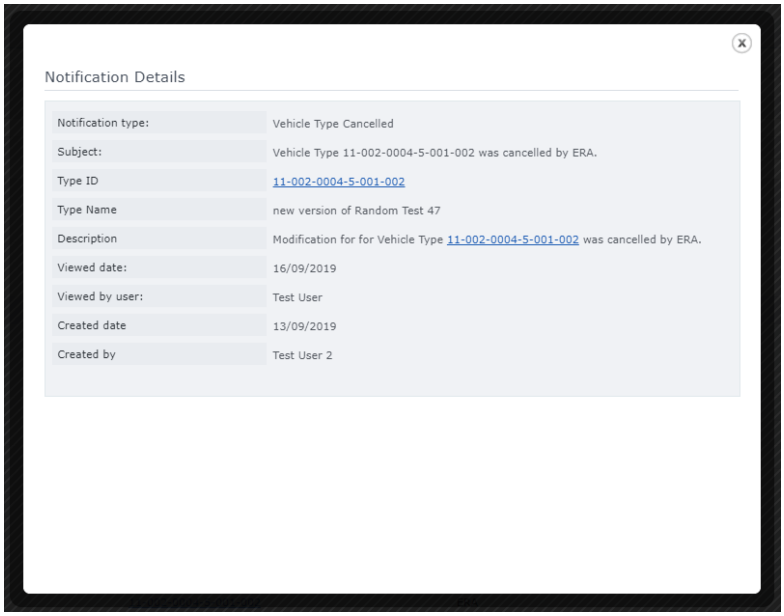


Figure 97: Notifications – Notification Details popup

The following information is available:

- Notification Type: this is the type of the Notification
- Subject. If available, the subject will be presented in the language selected for the user interface.
- Type ID: this is the ID of the Vehicle Type of the authorisation. The user may click on the active link to view the Vehicle Type details.
- (Vehicle) Type Name
- Description: a small description of the notification. If available, the description will be presented in the language selected for the user interface.

- Viewed Date: this is the date that the notification was viewed for the first time by one registered user of the current NSA
- Viewed by user: this is the user that viewed the notification for the first time
- Created Date: this is the date the notification was created
- Created By: this is the user that performed the action that triggered the notification

2.5 Access Vehicle Types / Authorisations

An NSA user is able to view the details of Vehicle Types and Authorisations by using a number of different methods.

2.5.1 Quick search

To perform a quick search the user must provide a search pattern in the Quick Search Text box highlighted in point 1 of Figure 98: Quick Search. The search pattern will be compared with the following fields of the authorisations:

- Type ID
- Type Name
- Manufacturer Name
- Comments
    - External comments in the Authorisation section
    - Internal comments only if the home NSA of the user is authorisation originator

Figure 98: Quick Search

If the User wants to search only for Vehicle Types created under “Directive 2008/57/EC” and “Directive 2008/57/EC – exceptional mode” registration modes, the checkbox “Directive (EU) 2016/797” shown in Figure 98 step 4 must be unchecked. Otherwise, the system will return results only for Vehicle Types created under "Directive (EU) 2016/797” and “Directive (EU) 2016/797 – Exceptional Mode” registration modes.

When the search pattern is provided, the user will click the “Search” button (point 2 in Figure 98: Quick Search) to initiate the search action.

At this point the ERATV system will display the Advanced Search form and display the results in the results section (highlighted as section 2 in Figure 99) with the functionality described in 2.5.2.2.

2.5.2 Advanced Search

The advanced search form allows any user to perform a complex search on the Authorisations repository.

As an alternative of simple search, the user can click on “Advanced search” button (point 3 of Figure 98) in the header of ERATV application. The advanced search form is divided into 2 main sections as shown in Figure 99:

1. The search criteria section
2. The results section

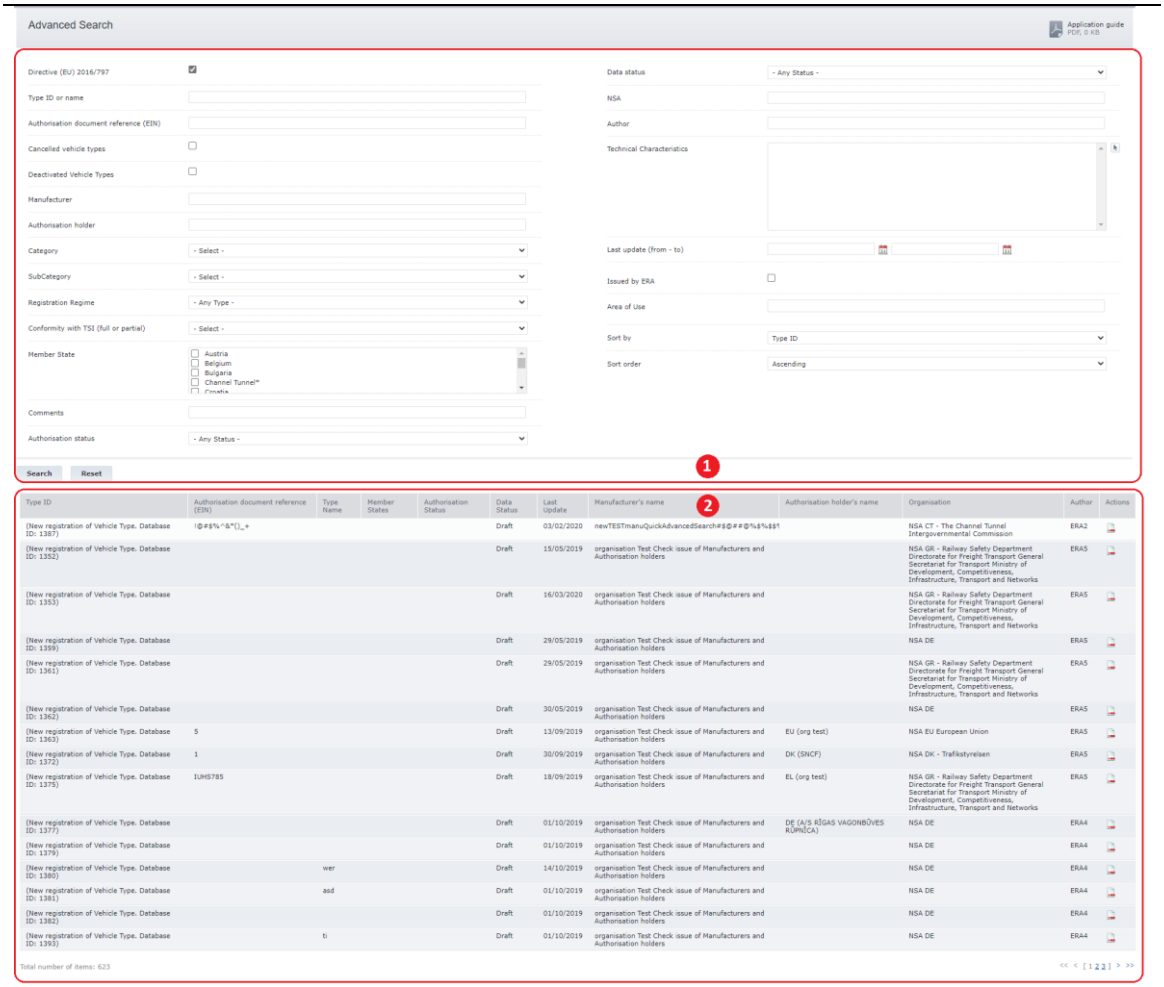


Figure 99: Advance Search – Search form sections

2.5.2.1 Search Criteria section

This section contains all the criteria that a user may populate to perform a search. The following criteria are available (see Figure 100):

- Directive (EU) 2016/797 checkbox: if it is checked, it displays all the Vehicle Types created under "Directive (EU) 2016/797" and "Directive (EU) 2016/797 – Exceptional Mode" registration modes. If it is not checked it displays all the Vehicle Types created under "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes.
- Type ID or name: the Type ID or the name of the Vehicle Type or the Alternative Type Name or the Platform Name
- Authorisation document reference (EIN): text field; this search field of parameter "3.1.3.1.3 Authorisation document reference" should be flexible, allowing wildcards and not expecting an exact match.
- Cancelled Vehicle Types: this checkbox filter displays all the cancelled vehicle types registrations only.
- Deactivated Vehicle Types: this checkbox filter displays all the deactivated vehicle types only
- Manufacturer: free text; searches all VTs' Manufacturers that contain the provided text

- Authorisation holder: free text; searches all VTs' Authorisation holders that contain the provided text
- Category: the category of the Vehicle Type
- Subcategory
- Registration Regime: this can take one of the type version values:
    - If the "Directive (EU) 2016/797" checkbox is unchecked:
        - Directive 2008/57/EC
        - Directive 2008/57/EC Exceptional
    - If the "Directive (EU) 2016/797" checkbox is checked:
        - Directive (EU) 2016/797
        - Directive (EU) 2016/797 – Exceptional Mode
- Exceptional Mode: only visible if the Registration Regime is set one of the exceptional modes options.
- Conformity with TSI (full or partial): selection from the list of available TSIs. The conformity of the TSI (full or partial) is not taken under consideration.
- Member States: the Member States where this Vehicle Type was registered. If more than one are selected, then the search will look for Vehicle Types that are registered in any of the selected Member States.
- Comments: External or Internal for all Authorisations for the same Member State as registered in the home NSA
- Authorisation Status: the current status of the Authorisations (expired, suspended etc.). The values of this drop-down list depend on the Directive (EU) 2016/797 checkbox. If a Vehicle Type contains one Authorisation with the specified status, then it will be returned by the search.
- Data Status: the status of the record (draft, submitted, published, cancelled)
- NSA: the Authorising NSA name
- Author: the user that registered the Authorisation (the user that created the *draft* record)
- Technical characteristics: a list of technical characteristics and their values (see 2.5.2.1.1)
- Last Updated (from – to): a time period within which this Authorisation was last modified. Providing only the "from" date will return Authorisations that were updated after the specified date. Similarly specifying the "to" date will return Vehicle Types that were updated up until that date.
- Issued by ERA: if this checkbox is checked, then the application will only search within the types issued by ERA
- Area of Use: this field can be used to search all authorisations' Area of Use that contains the provided text.
- Sort by: this is the field that the results will be ordered by. Possible values are:
    - Type/Version ID
    - Type Name
    - Last Updated
    - Author
    - Publication Status
    - Manufacturer
    - NSA

- Sort order: the sort order that will be applied to the sort field. Available values are ascending and descending.

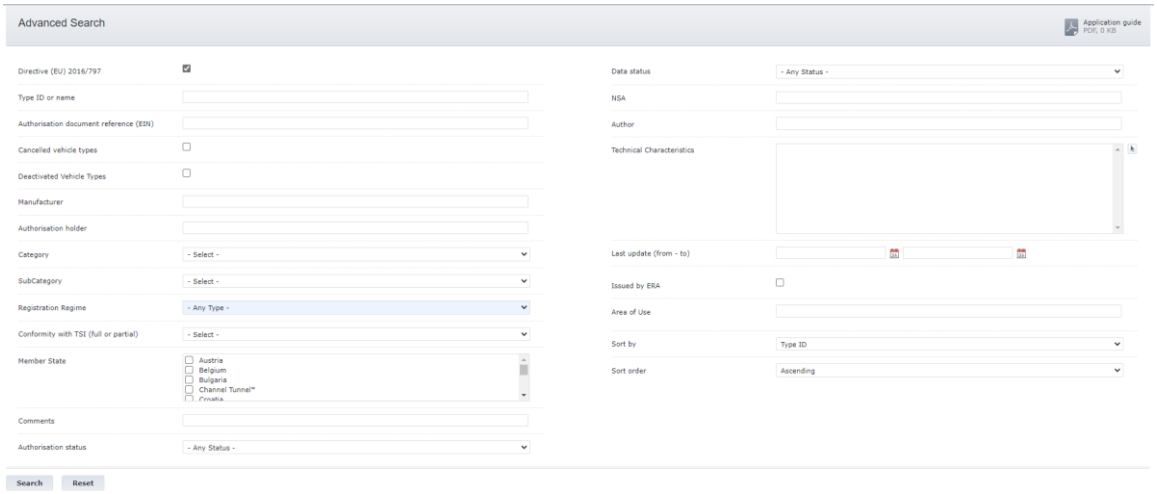


Figure 100: Advanced Search – Search criteria section

The user can set any number of search criteria. When more than one of the criteria are specified, the search action will return Authorisations that satisfy all the specified criteria.

After the search criteria have been set, the user may initiate the search action by clicking the “Search” button. Alternatively, clicking the “Reset” button will cause the search criteria section to be reverted to the default status i.e. all the search criteria values will be removed. Clicking the “Reset” button will not affect the results section.

2.5.2.1.1 Specifying Technical characteristics search criteria

The technical characteristics criterion can contain value comparisons for any of the technical characteristics. To set the criterion the user must click the arrow icon ( ) next to the criterion (shown in Figure 100). The popup that appears (shown in Figure 101) allows the user to specify technical characteristics and their values to search for. If more than one technical characteristics are represented, the system will look for Vehicle Types that satisfy at least one of the technical characteristics search criteria provided.

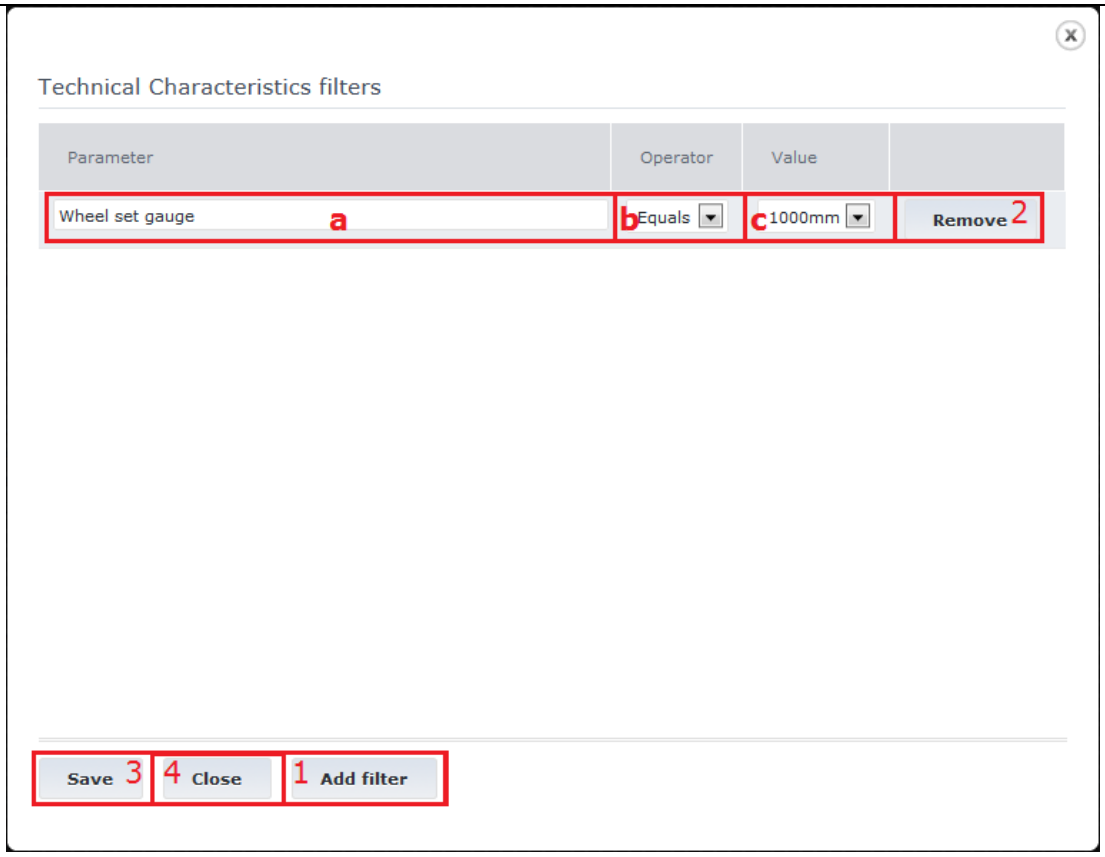


Figure 101: Advance Search – Technical Characteristics specification popup

The user may perform the following actions on this pop up:

1. Add a filter.
2. Remove a filter.
3. Save the currently specified filters and continue the search specification.
4. Close the Technical Characteristics filters popup, without updating the technical characteristics criterion.

When adding a filter, the user must specify the following information:

a. Specify the Technical characteristic to search for: this is performed by typing the name of the characteristics. The ERATV system will display recommendations that the user may select from, as shown in Figure 102.

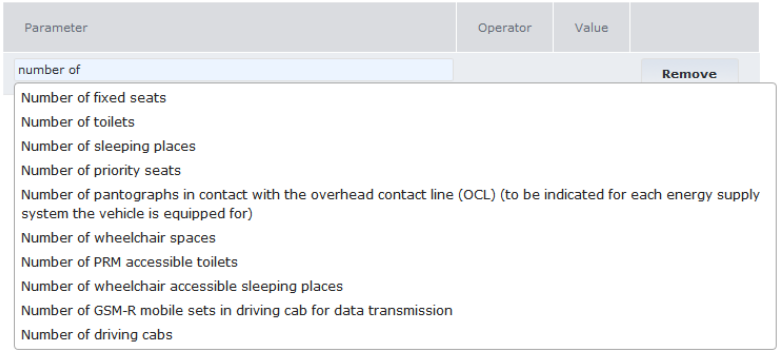


Figure 102: Advanced Search – Technical Characteristics suggestions

b. Specify the comparison operator to be applied: the available operators for each technical characteristic depend on the type of the selected technical characteristic. The operators are:
   i. Equals: an exact match is required.
   ii. Greater than: a number that the value is greater than
   iii. Greater or equal than: a number that the value is greater or equal than
   iv. Less than: a number that the value is less than
   v. Less or equal than: a number that the value is less or equal than
   vi. In range (From – To): two numbers that the value is between
   vii. Contains: a string of characters that is contained within the value
c. Specify the value to compare against: if the selected operator was the "In range", then two values need to be specified.
   If the Parameter is "Type of end coupling" and the value is other than "None", the user may provide for each one, two complementary values: "Tensile forces" & "Compressive forces", in decimal number format within the range [0.0001 , 9999.9999] expressed in kPa (Figure 103: Technical Characteristics filters).

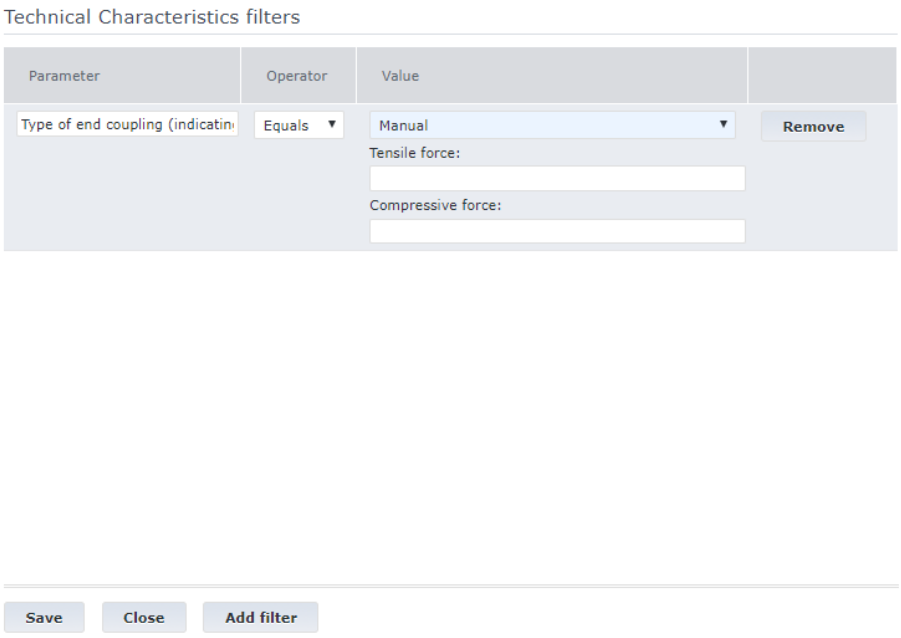


Figure 103: Technical Characteristics filters

An example of specified technical characteristics can be seen in the next figure.

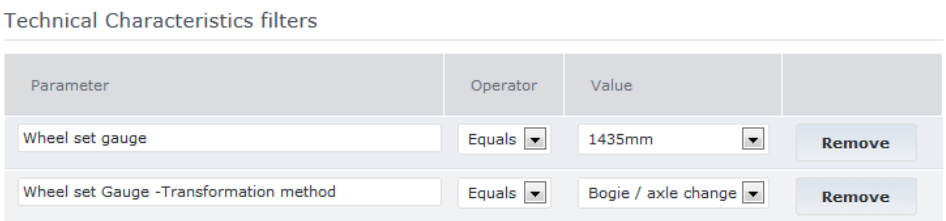


Figure 104: Advance Search – Technical characteristics example

2.5.2.2 Results Section

The results of the search actions are presented in the results section shown in Figure 105. The results are presented in a table grid. The grid contains the following columns:

- Type ID: this is the type ID of the Vehicle Type. If one is not allocated, then the internal ID will be presented instead. This is shown in the first line of Figure 105.
- Authorisation document reference (EIN). As it concerns the old registration regimes (Directive 2008/57/EC and Directive 2008/57/EC - Exceptional Mode) and the fact that one Vehicle type could have more than one authorisation with different EIN codes, the preview of the EIN codes will be the concatenation of all the available EIN codes of the Vehicle Type for each authorisation separated by comma.
- Type Name: the name provided to the Vehicle Type
- Member States: the Member States that have provided an Authorisation for this VT
- Authorisation Status: the status of each Authorisation provided to the VT
- Data status: the data status of the VT
- Last update: the latest update of the VT. This date displays the most recent date that there was a change in the Vehicle Type's status or data or accessible authorisations' status (except for "Cancelled") or accessible authorisations' data.

Figure 105: Advance Search – Results section and actions

- Manufacturer's name: the name of the manufacturer that was provided when the VT was registered
- Authorisation holder's name: the name(s) of the authorisation holder(s) for each member state authorisation
- Organisation: the organisation that registered the VT
- Author: The User that registered the Vehicle Type (the user that created the *draft* record)
- Actions: the actions button ( ) allows the user to enter into the VT details as described in 2.5.6.

Additionally, the user may perform the following actions on the search results:

1. Alter the page size: this will refresh the results grid and the number of pages will be adjusted accordingly.
2. Export the results into a file: for more information see chapter 2.5.5.
3. Navigate through the results pages.
4. Navigate to the Vehicle Types' details by hitting on the "Action" link.
    a. In case the user is public, the "Action" link points to the view mode of the published Vehicle Type. The URL contains the ID of the Vehicle Type.
    b. In case the user is authenticated and not authorized to edit the Vehicle Type, the "Action" link points to the view mode of the Vehicle Type, along with the navigation pane and allowing further actions.

c. In case the user is authenticated and authorized to edit the Vehicle Type, the "Action" link points to edit mode of the Vehicle Type.

2.5.3 View List of Registered Authorisations

If the user clicks on "View Registered Authorisations" link in the home page, as displayed in the Figure 2: ERATV (public) web site, the system displays a page like in Figure 106. In this page, only authorisations of published Vehicle Types are displayed in the list.

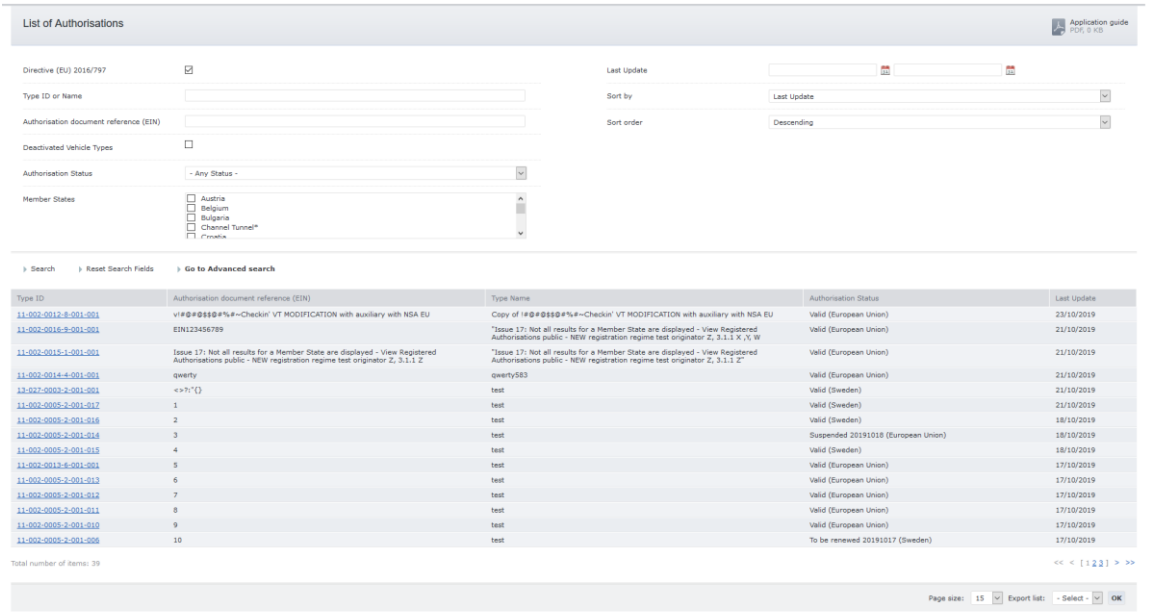


Figure 106 – List of registered authorisations form

By default, when first opened, the search section will not have any search criteria specified (except from "Directive (EU) 2016/797" checkbox – it will be checked) and the results section form will contain all the registered Authorisations of the published Vehicle Types.

The user may be redirected to the details of the Vehicle Type and the respective authorisation in view mode. The URL has the format:

<<base URL>>/Home/View/<<ID>> like in Figure 107.

Figure 107- List of registered authorisations, URL

The user may also restrict the results of the authorisations displayed, by defining one or more search criteria and click on "Search" link.

Additionally, the user can reset the already defined search criteria by clicking on "Reset Search Fields" and begin a new search.

The user can navigate to the "Advanced search" page by clicking the link "Go to advanced search" (Figure 106).

The grid contains the following information about each authorisation record:

1. Type ID: the id of the Vehicle Type. The user may click on the active link to view the Vehicle Type details.
2. Authorisation document reference (EIN).
3. Type Name: this is the name of the Vehicle Type.
4. Member States: the Member States that have provided an Authorisation for this VT
5. Authorisation Status: this is the status of the Authorisation.
6. Last update: this is the most recent date that there was a publication of the Vehicle Type or a validation of an authorisation.
7. Manufacturer's name: the name of the manufacturer that was provided when the VT was registered.
8. Actions: this column is not available for public users.

2.5.4 View List of Authorisations

The "List of own Authorisations" page contains all the Authorisation records (regardless of status) that an MS holds. The form contains 2 sections as seen in Figure 108:

1. The search criteria section
2. The results section

By default, when first opened, the search section will not have any search criteria specified and the results section form will contain all the registered Authorisations of the home NSA.

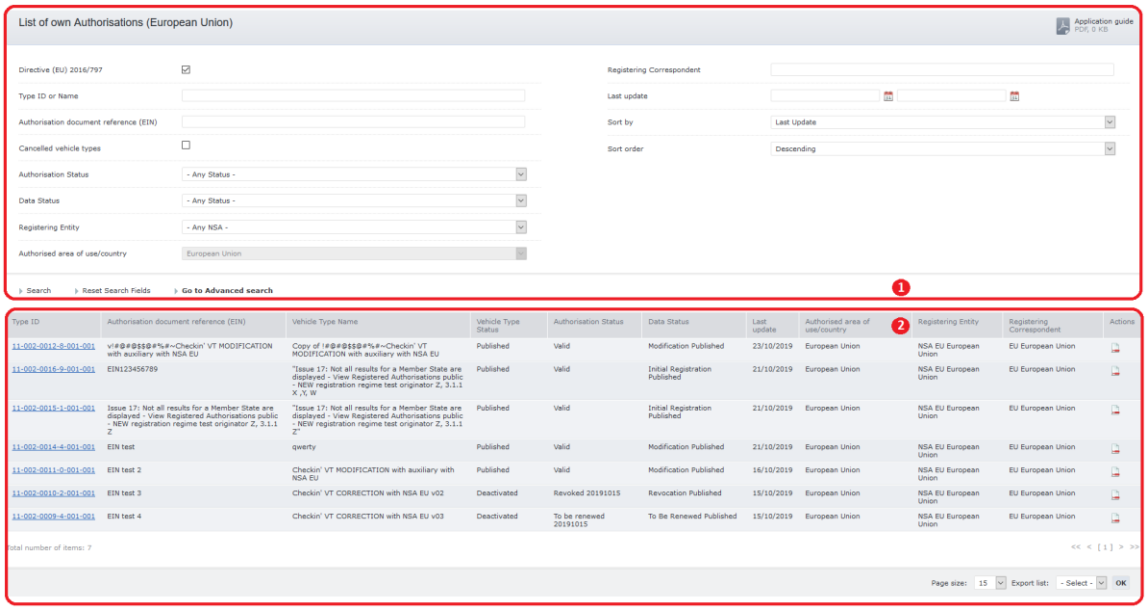


Figure 108: Authorisations – List of own authorisations form

The search criteria section contains the following filters:

1. Directive (EU) 2016/797 checkbox: if it is checked, it displays all the Vehicle Types created under "Directive (EU) 2016/797" and "Directive (EU) 2016/797 – Exceptional Mode" registration modes. If the checkbox is not checked it displays all the Vehicle Types created under "Directive 2008/57/EC" and "Directive 2008/57/EC – exceptional mode" registration modes.

2. Type ID or Name: the ID or the name of the Vehicle Type. This filter will only look through allocated Type / Version IDs.
3. Authorisation document reference (EIN): text field; this search field of parameter "3.1.3.1.3 Authorisation document reference" should be flexible, allowing wildcards and not expecting an exact match.
4. Cancelled Vehicle Types: this checkbox filter displays all the cancelled vehicle types registrations only.
5. Authorisation Status: the current status of the Authorisations (expired, suspended etc.). The values of this drop-down list depend on the Directive (EU) 2016/797 checkbox. If a Vehicle Type contains one Authorisation with the specified status, then it will be returned by the search.
6. The data status: selection from the following list:
    a. Draft
    b. Submitted
    c. Published
    d. Cancelled
    e. Deactivated
7. Registering NSA / organisation: the NSA that registered the Vehicle Type originally
8. Authorised area of use/country: the country which has provided the Authorisations. This is fixed to the home country of the user account.
9. Registering correspondent: the user representing the country authorising entity that registered the Authorisation
10. Last update Date from – to: the period within which the Authorisation was last modified. If the only the "from" date is provided, then the search will return authorisations from that date until today. If only the "to" date is provided, then the search will return Authorisations until the date specified.
11. Sort By: the field which will be used to sort the results. Selection from the following list:
    a. Type ID
    b. Type Name
    c. Authorisation Status
    d. Data Status
    e. Last Update
    f. Correspondent
12. Sort Order: the order of sorting in combination with the Sort By field. Available values are "Ascending" and "Descending". Descending is the default value.

The administrator may provide any combination of the above search criteria and click the "Search" button. Alternatively, clicking the "Reset" button will return the search criteria to their default values. Clicking on "Go to advanced search", the user is navigated to the advanced search page.

The results section contains a grid that holds the Authorisations returned from the search action. Additionally, there are navigation controls to move between the results pages and a selection to specify the size of each result page.

The grid contains the following information about each authorisation record:

1. Type ID: the id of the Vehicle Type. If a Type ID is not yet allocated on the Vehicle Type, then the internal database ID is displayed to distinguish between the different records. The user may click on the active link to view the Vehicle Type details.
2. Authorisation document reference (EIN). As it concerns the old registration regimes (Directive 2008/57/EC and Directive 2008/57/EC - Exceptional Mode), one Vehicle type could have more than one authorisation depending on different Member States and/or different Statuses. As it concerns the new registration regimes ("Directive (EU) 2016/797" and "Directive (EU) 2016/797 - Exceptional Mode"), one Vehicle type could have more than one authorisation with different EIN code depending on the different Statuses. Regardless the selected registration regime, each authorisation will be presented in one new row in the list of (own) Authorisations along with its respective EIN code.
3. Vehicle Type Name: this is the name of the Vehicle Type.
4. Vehicle Type Status: this is the general data status of the registration record.
5. Authorisation Status: this is the status of the Authorisation.
6. Data Status: this is the detailed data status of the registration record.
7. Last update: this is the most recent date that there was a change in the Vehicle Type's status or data or accessible authorisations' status (except for "Cancelled") or accessible authorisations' data.
8. Authorised area of use/country: the country of the Authorisation. This should be set to the home MS.
9. Registering NSA / Organisation: this is the organisation that registered the Vehicle Type originally.
10. Registering Correspondent: the user representing the country authorising entity that registered the Vehicle Type originally.
11. Actions: the possible actions on the Authorisation record. The actions depend on the current status of the Authorisation.

It is also possible to export the list of Authorisations in the results grid. The user must first select the export format from the available list (CSV, XML or XLSX) and then click the "OK" button to initiate the export process. The exported file contains all the available results and not only the page's that the user was viewing at the time the export got initiated.

2.5.5 Export Search results

The search results section allows the user to export the records returned from the search action as demonstrated in Figure 105 point 2. Search results can be exported also while viewing the list of registered authorisations (see 2.5.3) or while viewing the list of own authorisations (see 2.5.4)

Once the search has been performed and the results section contains at least one record, the user needs to perform the following steps to export the results along with the corresponding criteria, if any.

1. Select an export file format from the appropriate drop-down list shown in point 2 in Figure 105. The available format options are:
    a. CSV (comma separated file)
    b. XML
    c. XLSX (Excel File)

2. Click the OK button.

The ERATV system will prompt the user to open or save a file using the standard dialog of the internet browser. The file contains all the available results and not only the page's that the user was viewing at the time the export got initiated.

2.5.6 View Vehicle Type / Authorisation details

The User may request different type of information to view about the Vehicle Type as shown in Figure 65.

2.5.6.1 Smart URLs for View Vehicle Type

The User may review the list of all the Vehicle Types whose ID begins with a specific value by typing the following URL:

<<base URL>>/Home/View/<<part of Version number ID>>

For example, if the User enters the URL *<<base URL>>/Home/View/11-001-0001*, the ERATV will display the following list of Vehicle types (see Figure 109).

Figure 109 Smart Url - View Vehicle Types

The User may click on the “Action” Link of each element of the list, in order to be navigated to the details of the Vehicle Type for the selected parameter.

a) In case the user is public, the “Action” link points to the view mode of the published Vehicle Type. The URL contains the ID of the Vehicle Type.

b) In case the user is authenticated and not authorized to edit the Vehicle Type, the “Action” link points to the view mode of the Vehicle Type, along with the navigation pane and allowing further actions.

c) In case the user is authenticated and authorized to edit the Vehicle Type, the “Action” link points to edit mode of the Vehicle Type.

2.5.6.2 Registration Details

When accessing the Vehicle Type details in view mode, the ERATV system will display the same forms as the ones used during the registration of a Vehicle Type which were described in 2.3.2.1, 2.3.2.2, 2.3.2.3 and 2.3.2.4.

The Vehicle Type details are presented in a read-only mode and no changes to the data are possible. Empty fields will not be presented in order to reduce complexity of the Vehicle Type details forms.

2.5.6.2.1 Allowable Actions

The user can perform the following actions from a Vehicle Type / Authorisation details form (as shown in Figure 110, Figure 111 & Figure 112):

- Correct an Error in the Vehicle Type data (see 2.3.5);
- Modify the Vehicle Type data (see 2.3.4);
- Copy the Vehicle Type data to a new Vehicle Type (see 2.3.15);
- Deactivate a Vehicle Type. This option is only available in withdrawn and/or cancelled authorisations;

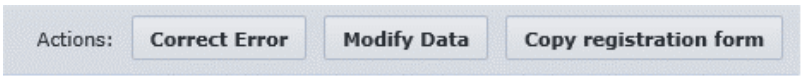


Figure 110: View Vehicle Type Details – allowed actions steps 1-3

- Correct an error in the Authorisation data (see 2.3.5);
- Modify data (see 2.3.4);
- Suspend an Authorisation (see 2.3.6);
- Withdraw an Authorisation (see 2.3.7);
- Revoke Authorisation (see 2.3.8);
- To Be Renewed Authorisation (see 2.3.9);
- Reactivate an Authorisation with or without modifications to the Vehicle Type data (see 2.3.10);
- Undo an Authorisation withdrawal (see 2.3.11);
- Undo Authorisation Revocation (see 2.3.12);
- Undo Authorisation "To Be Renewed" (see 2.3.13).

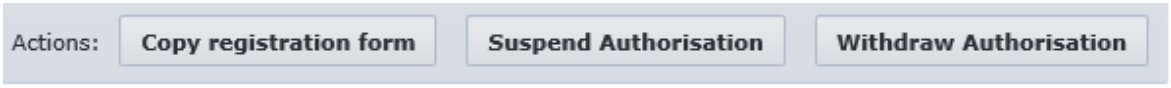


Figure 111: View Vehicle Type details – Allowed actions step 4 - Directive 2008/57/EC registration regimes

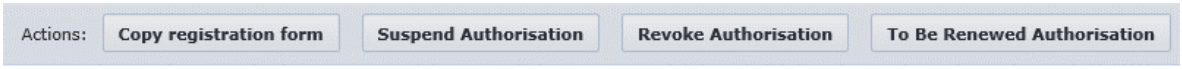


Figure 112: View Vehicle Type details – Allowed actions step 4 - Directive (EU) 2016/797

Additionally, in the view Vehicle Type details form, an indication will appear when there is a duplicate Vehicle Type as shown in Figure 113 (see 2.3.2.6).

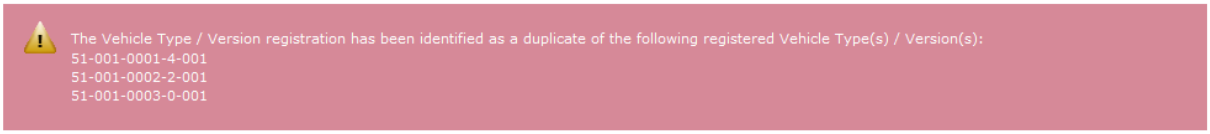


Figure 113: View Vehicle Details – Indication of duplicate types

The user has the option to view helpful information about the technical characteristics of the Vehicle Type by clicking the help icon ( ) that is available next to each technical parameter.

2.5.6.2.2 Print Vehicle Type details

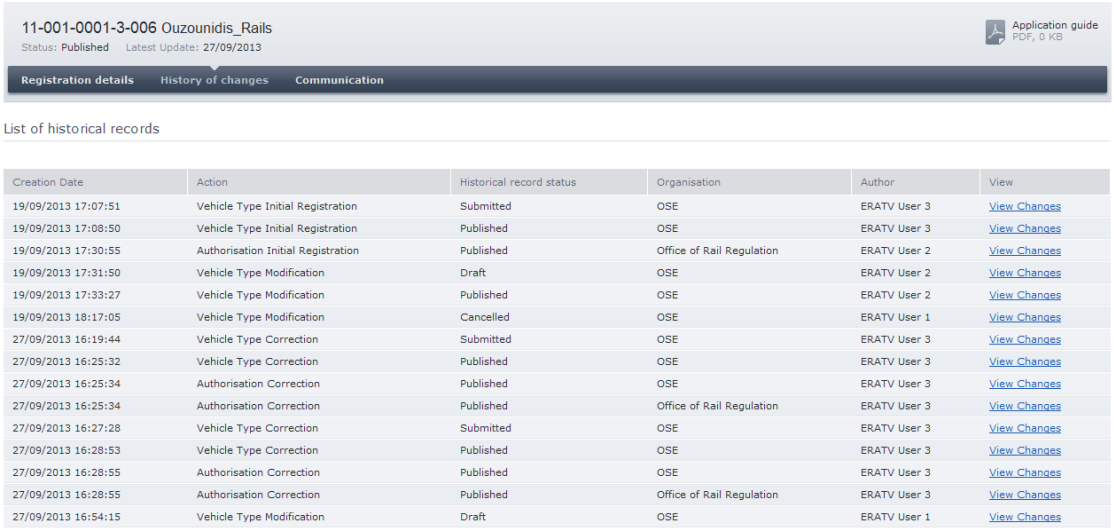
The user is able to print the Vehicle Type details by using the standard print functionality of the internet browser.

2.5.6.2.3 Export Registration Details

The user may export the Vehicle Type registration details in a single page format from any of the four sections of the registration form by clicking on any of the three PDF Excel XML links, depending on the desired export format. A standard Windows dialog opens and the user clicks on the "OK" button to initiate the export process. For the numeric parameters with unit of measurement (e.g. m, km, kg), the value and the unit appear in separate columns (for PDF and XLSX) or in separate tag (for XML). The name of the file contains the Type ID and the status, i.e. DRAFT, SUBMITTED etc. The format of the file name is like below: "VehicleType_<Type/Version ID>_<Type Status>.<file extension>"

2.5.6.3 View History of Changes

This tab presents a history of all changes that have been applied to the Vehicle Type.



Creation Date	Action	Historical record status	Organisation	Author	View
19/09/2013 17:07:51	Vehicle Type Initial Registration	Submitted	OSE	ERATV User 3	View Changes
19/09/2013 17:08:50	Vehicle Type Initial Registration	Published	OSE	ERATV User 3	View Changes
19/09/2013 17:30:55	Authorisation Initial Registration	Published	Office of Rail Regulation	ERATV User 2	View Changes
19/09/2013 17:31:50	Vehicle Type Modification	Draft	OSE	ERATV User 2	View Changes
19/09/2013 17:33:27	Vehicle Type Modification	Published	OSE	ERATV User 2	View Changes
19/09/2013 18:17:05	Vehicle Type Modification	Cancelled	OSE	ERATV User 1	View Changes
27/09/2013 16:19:44	Vehicle Type Correction	Submitted	OSE	ERATV User 3	View Changes
27/09/2013 16:25:32	Vehicle Type Correction	Published	OSE	ERATV User 3	View Changes
27/09/2013 16:25:34	Authorisation Correction	Published	OSE	ERATV User 3	View Changes
27/09/2013 16:25:34	Authorisation Correction	Published	Office of Rail Regulation	ERATV User 3	View Changes
27/09/2013 16:27:28	Vehicle Type Correction	Submitted	OSE	ERATV User 3	View Changes
27/09/2013 16:28:53	Vehicle Type Correction	Published	OSE	ERATV User 3	View Changes
27/09/2013 16:28:55	Authorisation Correction	Published	OSE	ERATV User 3	View Changes
27/09/2013 16:28:55	Authorisation Correction	Published	Office of Rail Regulation	ERATV User 3	View Changes
27/09/2013 16:54:15	Vehicle Type Modification	Draft	OSE	ERATV User 1	View Changes

Figure 114: View Vehicle Details - History of changes

Figure 114 displays the list of historical records of the specific Vehicle Type. The information presented is:

- Creation Date and time of the historical record
- Action that triggered the historical record to be created
- Historical record status
- Organisation
- Author (the user that created the draft record)
- Actions Column (View historical record details)

The user that created the record (“Author”) may be different from the user that submitted the record and from the user that validated and published the record. The information about the latest is included within the tab “Communication” (see 2.5.6.4).

By clicking on the ‘View Changes’, the ‘Historical Record Details’ form is presented as shown in Figure 115.

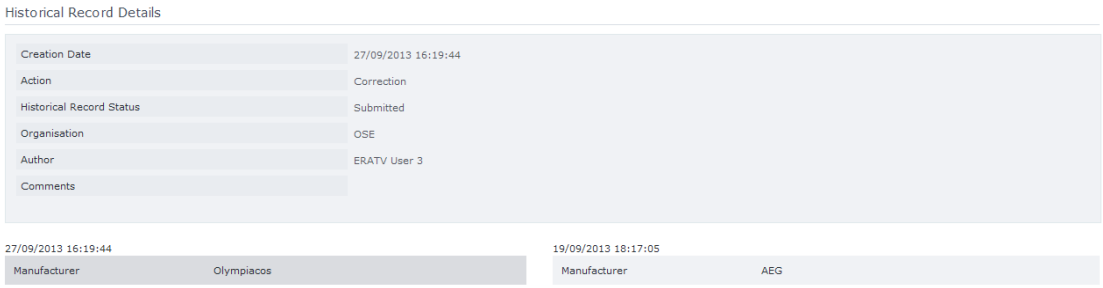


Figure 115: View Vehicle Details - Historical Record Details

The Vehicle Type Historical record details form contains the following information:

- Creation Date
- Action
- Historical Record Status
- Organisation
- Author (the user that created the draft record)
- Comments

At the bottom of the *’Historical Record Details’* page, the altered parameters and the fulfilled correction activities are presented, grouped by the creation date. Therefore, the user is informed about the accomplished modifications related to the specific Vehicle Type.

Note: For published vehicle types, the system displays all the changes in parameters related to Technical Characteristics and TSI Conformity, as occurs for submitted vehicle types.

2.5.6.4 View Communication

This form presents the history of the communication records that have been fulfilled for the current Vehicle Type. The displayed information is sorted by date/time.

This page indicates, under “Correspondent”, who was the user that submitted and published the record, which may differ from the “Author” (the user that originally created the draft record). The “Author” user is indicated within the tab “History of changes” (see 2.5.6.3)

Figure 116: View Vehicle Details – Communication

The form may contain multiple communication records as shown in Figure 116. Each record contains the following information:

- Subject/ Description: is a short description of the communication record.
- Communication record Date
- Organisation
- Correspondent: the user that realised the action that triggered the communication, e.g. submit a record, publish a record, etc. It may be a different user from the "Author", who is the user who created originally the draft record.
- Historical records: is the date and time of the communication record. Once the user clicks on the date and time link, the respective '*Historical Record Details*' page as shown in Figure 115 will open.

By clicking on any record, the selected record expands displaying a more detailed description. Especially for "Vehicle Type Modification submitted for approval" communication records, the detailed description includes a summary screen of all approvals already granted by NSAs.

2.6 Administration

The administration section allows the NSA user to administer the ERATV system. The administrative options that are available to the NSA user are shown in Figure 117 are:

- NSA
- Auxiliary Users
- Auxiliary Users Permissions

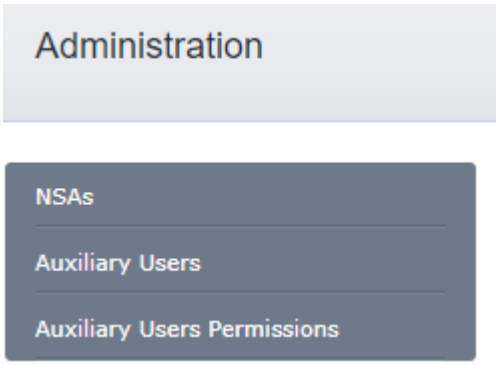


Figure 117: Administration – NSA User Options

2.6.1 NSA maintenance

The NSA user has read only access to the List of NSAs, for reference purposes. Once the user clicks the NSAs option from Figure 117, the list of Registered NSAs appears as shown in Figure 118.
The users indicated in this list are the appointed representatives for each country authorising entity. They are referred to also as “Registered correspondent” for each country authorising entity.

Each NSA record in the list contains the following information:

- Country: the country of the NSA record
- Organisation: the name of the NSA organisation
- Contact Person: the main contact person in the NSA
- E-mail: the email that the NSA should be contacted at (not necessarily the email of the contact person)
- Phone: the telephone number that the NSA should be contacted at (not necessarily the telephone number of the contact person)
- Status: Active or Inactive

Figure 118: Administration – List of NSAs

The NSA user has no actions on this list.

2.6.2 Auxiliary Users maintenance

Each NSA may define Auxiliary Users in order to assist with the registration process. Normally the Auxiliary User accounts are assigned to employees of the manufacturing companies of the Vehicle Types. The List of Auxiliary users is accessible by clicking the “Auxiliary Users” link from the left-hand menu as shown in Figure 117. The list is then presented as shown in Figure 119.

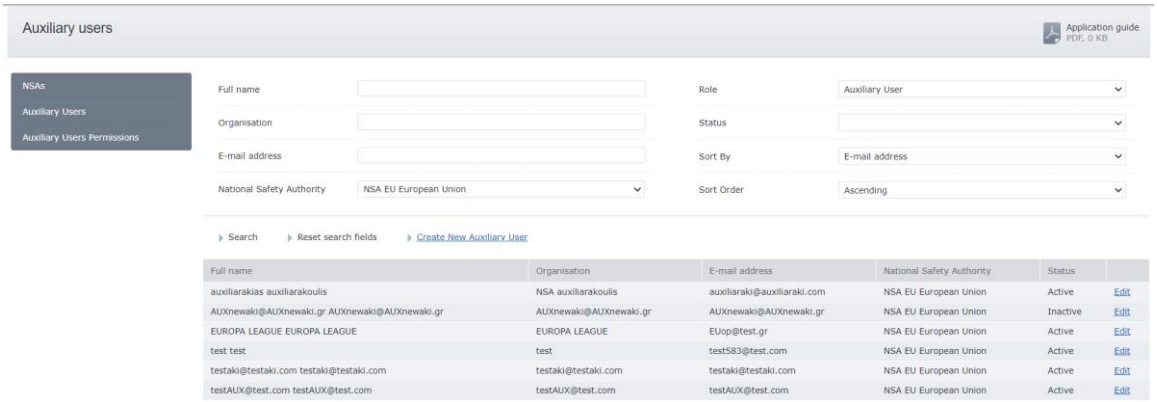


Figure 119: Auxiliary Users – List of Auxiliary Users

The list contains a search criteria section and a results section. The user may define search criteria to filter the list of users or simply select the search action without defining any search criteria. In that case all Auxiliary Users registered to the home NSA will be displayed.

The search criteria that are available in the criteria sections are:

- Full Name: the full name of the Auxiliary User
- Organisation: the organisation of the Auxiliary User. Please note that this is not the current NSA, but rather the company the Auxiliary User is employed at.
- E-mail address: the email address of the Auxiliary User
- National Safety Authority: this is the NSA the user is registered at. The value is defaulted to the NSA of the currently logged-in user account and cannot be altered. Each user can search only for Auxiliary Users in the same NSA.
- Role: the role is set by default and fixed to the value ‘Auxiliary User’.
- Status: the status of the Auxiliary User account. This can take the values:
    - Active: the account is active.
    - Inactive: the account was disabled.
    - Inactive through NSA: the account is active but the NSA it was registered for is inactive. As a result, the user cannot access the ERATV system either.
- Sort By: the field that will be used to sort the results. The following options are available:
    - E-Mail address
    - Full Name
    - Organisation
    - Status
- Sort Order: Possible values are ascending and descending.

The NSA user may perform the following actions in this form.

1. Search: perform a search action based on the inserted search criteria. A search without any search criteria will return all Auxiliary Users for the home NSA.
2. Reset: reset the search criteria to the default values.
3. Create new auxiliary user: clicking this link allows the NSA user to create a new Auxiliary User account as specified in 2.6.3.
4. Edit Auxiliary User account: this link allows the NSA user to edit an Auxiliary User account through the Edit Auxiliary screen as described in 2.6.4.

2.6.3 Create new Auxiliary Users

In order to create a new Auxiliary User, the NSA user must click the appropriate link from the List of Auxiliary Users as presented in Figure 119 and fill-in the following form (Figure 120)

Figure 120: Auxiliary Users – Create user

The required information is:

- E-mail address: the email will also be used as the Auxiliary User account name and it should be provided every time the user attempts to logon into the ERATV system. The e-mail address must be unique in the ERATV system.
- Password / Password Confirmation: this is the password of the Auxiliary User account and must be provided in order to log into the ERATV system.
- First Name: the first name of the Auxiliary user
- Last Name: the last name of the auxiliary user
- Organisation: this is the company the Auxiliary User is employed at. Usually this refers to the name of a manufacturer organisation.
- Address: this is the correspondence address that the Auxiliary User can be contacted at.
- Phone: this is the telephone number that the Auxiliary User can be contacted at.
- Fax: this is a fax number that the Auxiliary User can be contacted at.
- Status: this is the status of the new Auxiliary User. An Auxiliary User can be created with status inactive and at a later stage be enabled for access to the ERATV system

All of the above fields with the exception of the fax number are mandatory. Upon providing the required information the user should click the ‘Save’ option. The new Auxiliary User will be created and the user will be returned to the List of Auxiliary Users.

2.6.4 Edit Auxiliary Users

The NSA user may alter any of the details of an Auxiliary User account. The information that can be altered is (see Figure 121):

- E-mail address: this is provided only as reference and cannot be altered.
- Password / Password Confirmation: this is the password of the Auxiliary User account and must be provided in order to log into the ERATV system.
- First Name: the first name of the Auxiliary User
- Last Name: the last name of the Auxiliary User
- Organisation: this is the company the Auxiliary User is employed at. Usually this refers to the name of a manufacturer organisation.
- Address: this is the correspondence address that the Auxiliary User can be contacted at.
- Phone: this is the telephone number that the Auxiliary User can be contacted at.
- Fax: this is a fax number that the Auxiliary User can be contacted at.
- Status: this is the status of the new Auxiliary User. An Auxiliary User can be created with status inactive and at a later stage be enabled for access to the ERATV system

To save the new details the NSA user must click the “Save” link.

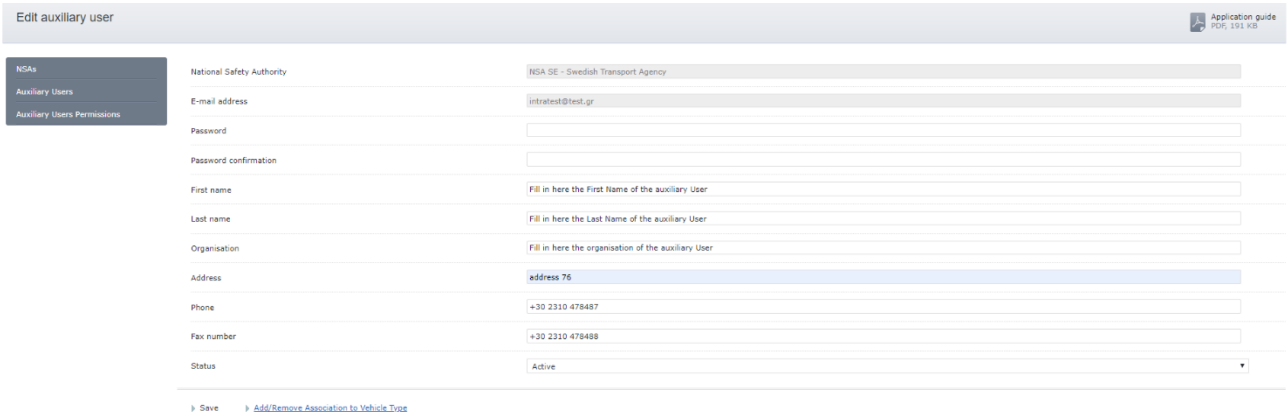


Figure 121: Auxiliary Users – Edit User

Additionally, the NSA user may associate Auxiliary Users to draft Vehicle Types by clicking the “Add/Remove Association to a Vehicle Type”. The association screen will then be presented and the NSA user will be able to manage the associations to this Auxiliary User as described in section 2.3.17.1.

2.6.5 Auxiliary Users Permissions

The NSA user clicks on “Administration” button and then visits the “Auxiliary Users Permissions” page from the navigation pane on the left of the main screen (Figure 117). By default, the table shows the “Auxiliary user to vehicle types” screen. The application displays a table showing all the available auxiliary users and their association (if exists) with a draft vehicle type created by an NSA user from the same NSA organisation as the User.(Figure 122: Auxiliary users to Vehicle Types)). The table is sorted by the Last Name of the auxiliary user.

Information of every row in the table:

1. Full name of the auxiliary user

2. Email address of the auxiliary user
3. NSA which created the auxiliary user
4. Organisation that the auxiliary user belongs to
5. Vehicle Type Number
6. Vehicle Type Name
7. Status of the auxiliary user
8. Access “Technical Characteristics”: A tick indicates that the auxiliary user can access the Technical Characteristics of the Vehicle Type, Editable
9. Access “Conformity with TSI”: A tick indicates that the auxiliary user can access the Conformity with TSI section of the Vehicle Type, Editable.
10. “Grant Permission” Link to insert association with a Vehicle Type
11. Activate/Deactivate Auxiliary User account.
12. Unlock user. This link will appear only if an auxiliary user is locked out. The link appears at the right, after “Grant Permission” and “Activate/Deactivate”.

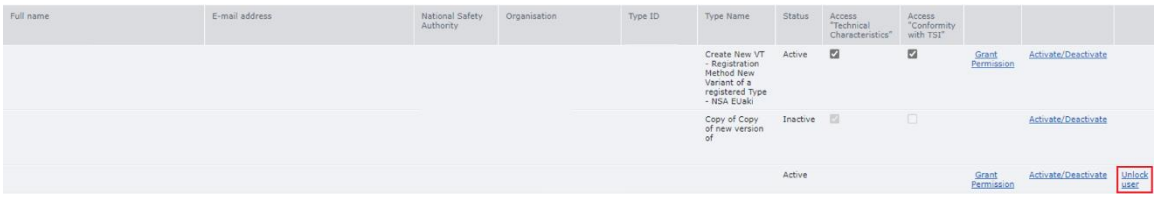


Figure 122: Auxiliary users to Vehicle Types

Apart from associating auxiliary users to Vehicle Types, the NSA user may perform the following actions in this form.

1. Activate/Deactivate Auxiliary User account. This link will activate (if deactivated) or deactivate (if actived) an Auxiliary User account. Clicking the link changes the status of the corresponding user account and updates the list to present the altered user account status.
2. Unlock user. This link will appear if an auxiliary user is locked out after five failed attempts to log in. Clicking the link unlocks the user, so that is made possible to log back in right after. The link then disappears.

To associate an auxiliary user with a new Vehicle Type, click on “Grant Permission”. A pop-up window opens (Figure 123). The auxiliary user’s information is not editable. Select a Vehicle Type from the respective dropdown list and the access rights for the selected Vehicle Type and click on Save (Figure 124). The pop-up closes and a new row is inserted in the table. Every row of the table displays association of an auxiliary user with a single vehicle type.

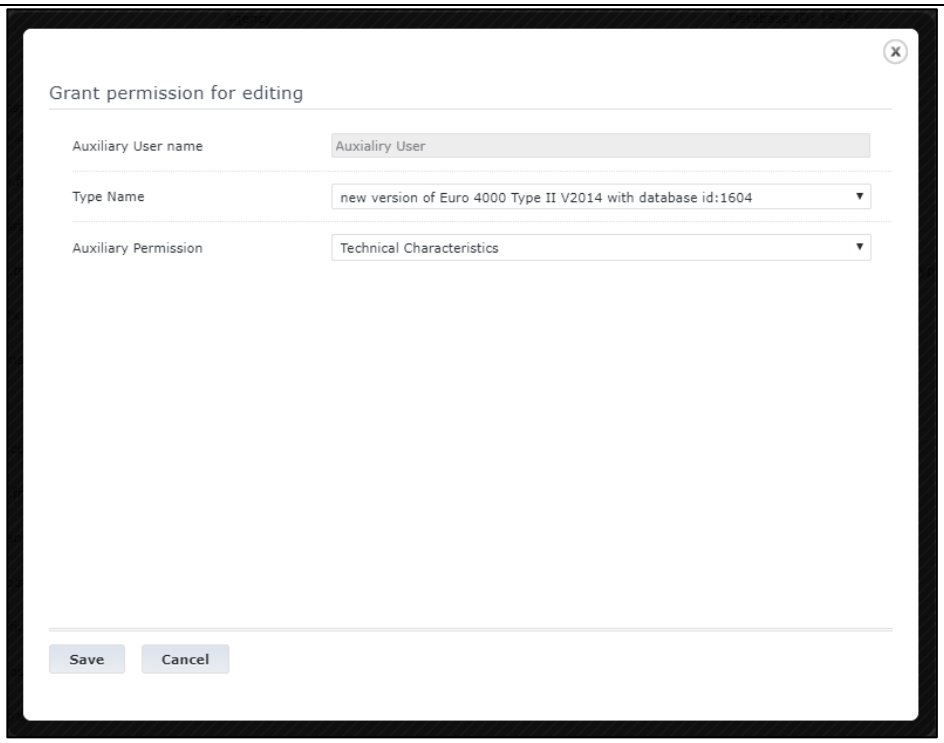


Figure 123: Grant permission for editing – Main

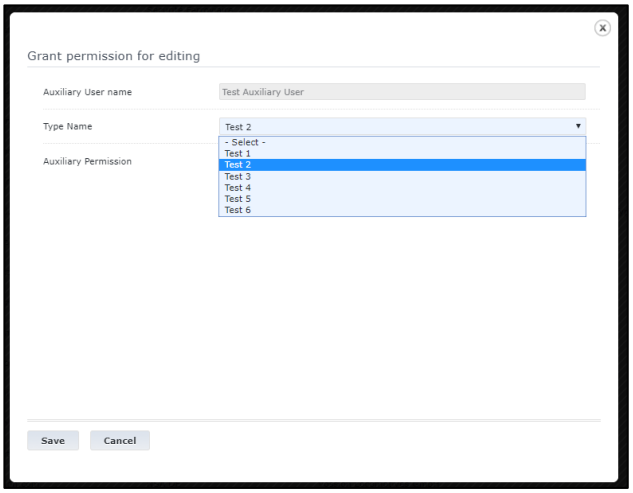


Figure 124: Grant permission for editing – Access Rights

At the bottom of the page of Figure 122 , the user clicks on the link “Vehicle Types to auxiliary users” and the application displays a table showing the draft Vehicle Types, created by the NSA organization of the authenticated user, and the potential association with auxiliary user (Figure 125).

Information of every row in the table:

1. Type ID
2. Type Name
3. Full name of the auxiliary user
4. Email address of the auxiliary user

5. NSA which created the auxiliary user
6. Organisation that the auxiliary user belongs to
7. Access “Technical Characteristics”: A tick indicates that the auxiliary user can access the Technical Characteristics of the Vehicle Type, Editable.
8. Access “Conformity with TSI”: A tick indicates that the auxiliary user can access the Conformity with TSI section of the Vehicle Type, Editable.
9. “Grant Permission” Link to change the associated auxiliary user.

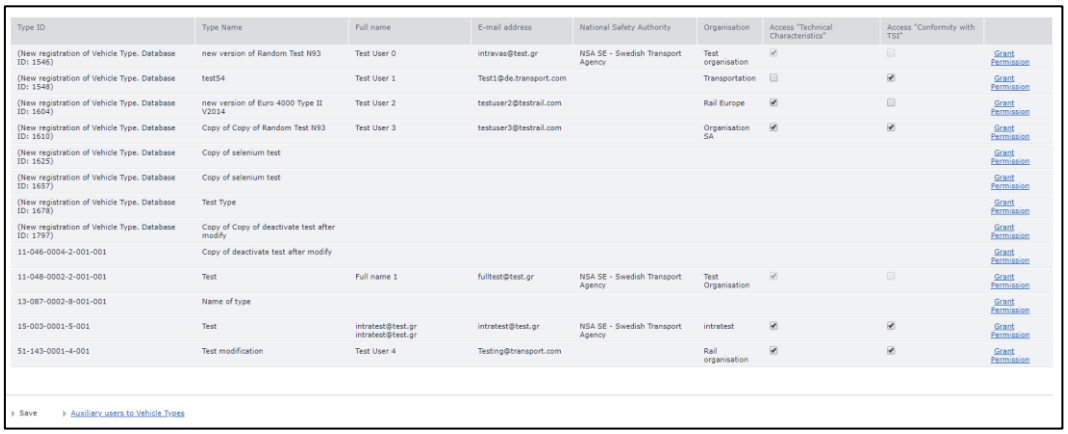


Figure 125: Vehicle Types to Auxiliary users

If the user clicks on this link, a pop-up opens like Figure 126. The Vehicle Type ID and Name are not editable.

The NSA user reviews the list of auxiliary users. Only the auxiliary users created by the NSA that the authenticated user belongs to, are displayed in the table. The list is ordered by Last Name. Every row in the list contains the Full name and the Organisation of the auxiliary user. If the user places the cursor over a row, a pop-up shows: Full name, email, organization, Country, NSA that created the auxiliary user.

Afterwards, they choose an auxiliary user from the list and specifies the access rights, ie “Technical Characteristics” and/or “Conformity with TSI”. Finally, they presse Save and the table is updated with the new information.

An identical pop up window opens when an NSA user clicks on “Grant Permission for editing” while editing a Vehicle Type.

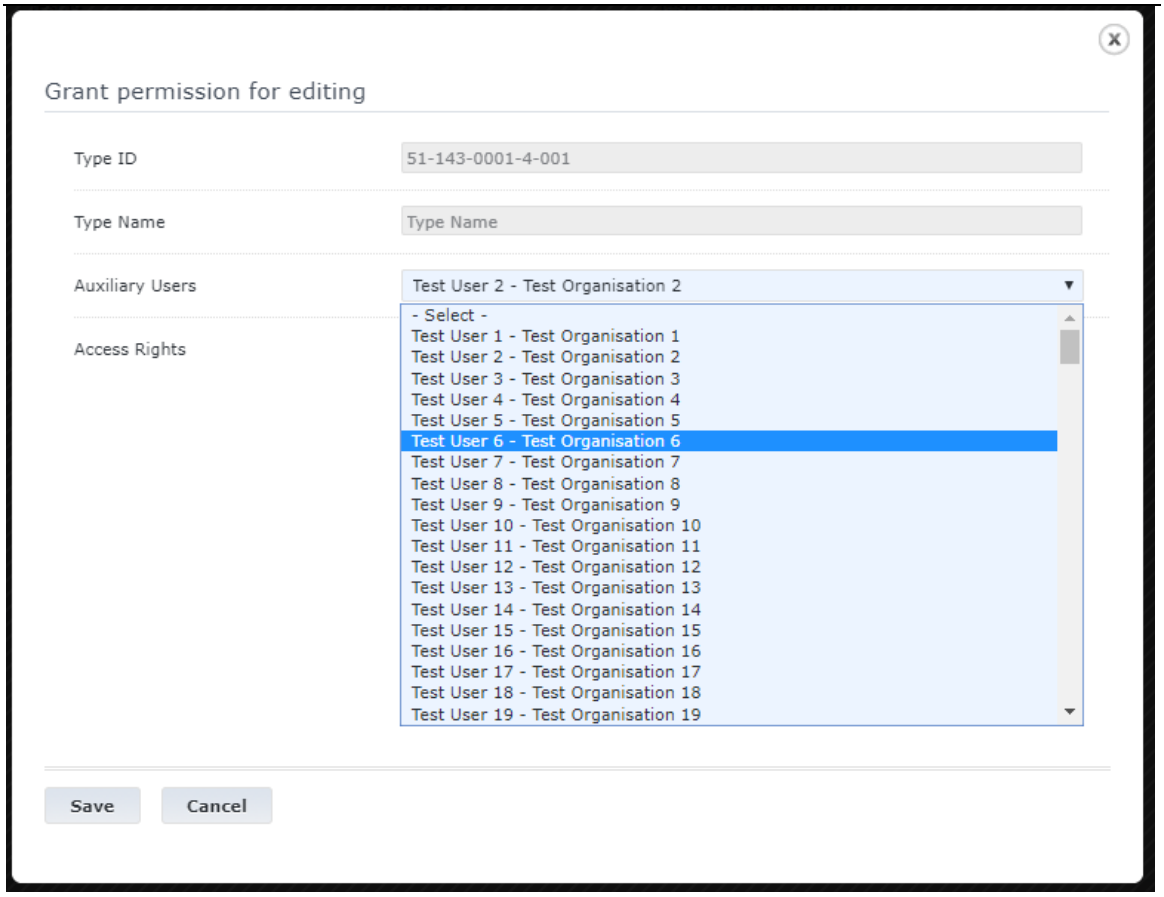


Figure 126: Grant permission for editing – select auxiliary user

2.7 Help

The complexity of the ERATV system makes imperative the existence of different methods to get access to help. A user may access help with any of the following methods:

- Through the Application Guide
- Through the online context-sensitive help pages
- Through the help clauses that appear within the technical parameters

2.7.1 Application Guide

The Application Guide is a PDF document that is created and can be updated at regular intervals by the ERATV Administrator. The generation of the Application Guide document can be performed within the ERATV system and it incorporates the help text clauses from the technical characteristics. The Application Guide will be created in the selected language, provided that a version for that language has been generated by the Administrator.

To download the Application Guide document, the user clicks the appropriate button that is available at all times in the ERATV system as highlighted in Figure 127.

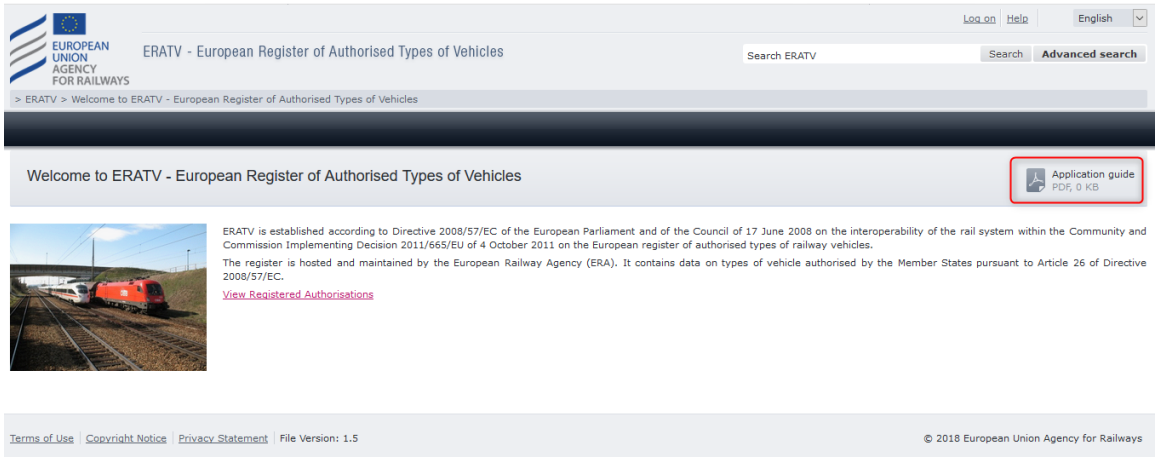


Figure 127: Help – Application Guide Download Icon

2.7.2 Context-sensitive help

The context-sensitive help pages are available at all times in the ERATV system by clicking the help link as presented in Figure 128.

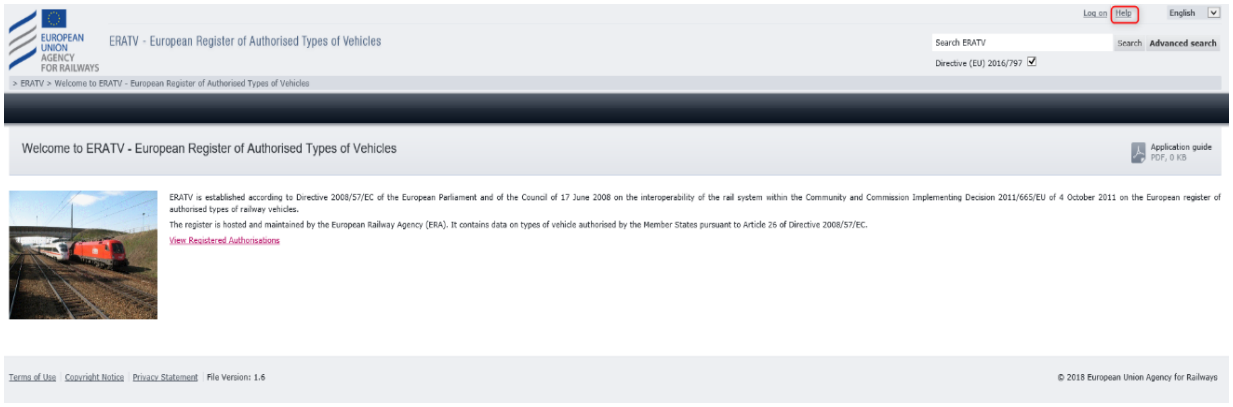


Figure 128: Help – Context sensitive help link

Upon clicking the link, a popup help page will appear with information on the currently displayed page and on the actions the user may perform. The help text will be provided in the language of the user interface of the ERATV system if available, otherwise by default in the English language.

2.7.3 Technical Parameters help

To assist during the registration process, a help icon ( ) is available next to each technical characteristic as shown in Figure 129:. The user is able to quickly view the help text for a specific parameter while in the process of filling in its value. The help text will be presented in a popup window inline. If available, the help text will be presented in the language selected for the user interface.

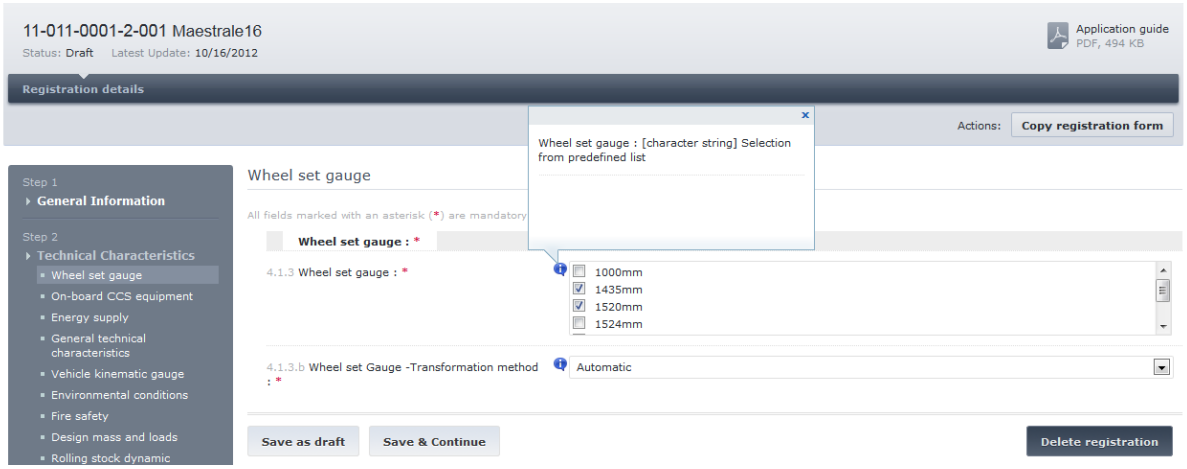


Figure 129: Help – Inline help text

Similarly, when viewing the details of a Vehicle Type the same icon ( ) will be available as shown in Figure 130.

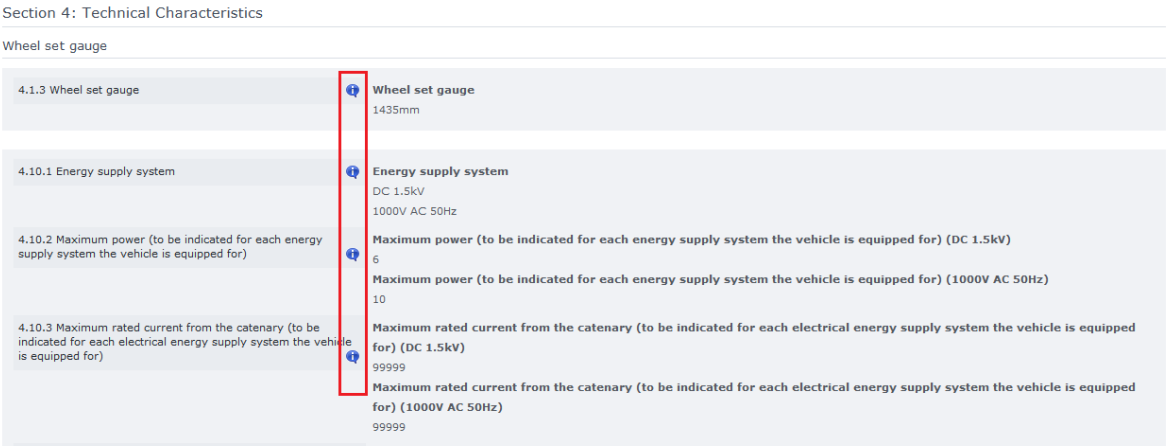


Figure 130: Help – Inline help text on published content

3 Troubleshooting

Not applicable.

4 References

- COMMISSION IMPLEMENTING DECISION of 4 October 2011 on the European register of authorised types of railway vehicles (notified under document C(2011) 6974) 8/10/2011 http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2011.264.01.0032.01.ENG
- Commission Implementing Regulation (EU) 2019/776 of 16 May 2019 (Official Journal L139I, page 108 of date 27 May 2019 http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2011.264.01.0032.01.ENG
- List of harmonised and national restriction codes: https://www.era.europa.eu/sites/default/files/registers/docs/list_harmonised_national_restriction_codes_en.pdf
- ERATV Administration, Operation and Maintenance Manual