

# Interface Description

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ServiceTm\_SOAP



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## Contents

### Module Details

1. ServiceTm

### ObjectModel

1. GetImageNamesForTmManualMsg
2. GetTmErrorCodeSearchHtmlMsg
3. GetTmImageMsg
4. GetTmLinkedTechnicalManualsForWorkMsg
5. GetTmLinkedTechnicalManualsMsg
6. GetTmManualHtmlMsg
7. GetTmManualListGenArtFilteredMsg
8. GetTmManualListMsg
9. GetTmManualListTextFilteredMsg
10. GetVehicleHasTmMsg
11. KindOfWorkTimeData
12. TmItemMp
13. TmMainGroup
14. TmManual
15. TmSubGroup

## Module Details

### 1. ServiceTm

#### 1.1. General Remarks

The webservice methods uses message classes as parameter value. All these classes are derived from the base class `AisService._40.Messages.BaseMsg` and contains properties for the data which are necessary for calling the web service method. To calling a method create an instance of their message class, set the necessary data to the message class properties and pass it throw the web service method.

All methods require the "**CompanyName**", "**UserName**" and "**Password**" properties, containing the application-specific access parameters.

Some methods require the `LanguageCode` properties, a 2-letter message internationalization language code as defined by ISO 639-1. All text messages will be returned in the defined language. Only language codes returned by `GetLanguages(...)` in the TecRMI common webservice are valid.

Some methods require the `CountryCode` properties, a 2-letter data internationalization country code as defined by ISO 3166-1. All application data will be returned as it is available for this country. Only county codes returned by `GetCountries(...)` in the TecRMI common webservice are valid.

Some methods require the `ConsumerId` property. To this a unique value, which identifiers the customers users which uses the TecRMI webservice by the customers application has to be passed. The length of the `ConsumerId` property value is restricted to 50 characters and is used for access control and billing.

All methods send an error message if an exception occurred or the access to the web service was denied.

All methods that are documented to return a list return an array instead.

Note: Static wiring diagrams are not available through Manual-Methods anymore but through `WManual-Methods`

#### 1.2. Prerequisites

Some of the html documents could contain graphics in the .SVG format. So the system requirements for viewing html documents are: MS Internet Explorer v. 9.0 and higher

Mozilla Firefox 15 and higher

#### 1.3. Web service URL's

web service URL:

<https://rmi-services.tecalliance.net/soap/ServiceTm.asmx>

URL of WSDL file:

<https://rmi-services.tecalliance.net/soap/ServiceTm.asmx?wsdl>

#### 1.4. Sequence Of Calls

First, check if there are any technical manuals (Tm) available for your car. To do so, call [GetVehicleHasTm](#) passing it your type id. To get all the information of technical manuals for one vehicle call [GetTmManualList](#) , which will provide a list with your requested information. To get a single manual in HTML format, call [GetTmManualHtml](#) .

## 1.5. Summary

Class ServiceTm provides the web service methods for the part technical manuals.

## 1.6. Detailed Module Documentation

### 1.6.1. Methods

- **bool** [GetVehicleHasTm](#)([GetVehicleHasTmMsg](#) input)

Checks whether the vehicle has manual data.

**Parameter**

input - Instance of the message class GetVehicleHasTmMsg.

**Returns**

true - if technical manual data exists; otherwise false.

- **List<TmMainGroup>** [GetTmManualList](#)([GetTmManualListMsg](#) input)

Delivers a country specific list to generate a manual tree for the typeId in the selected language. Use method [GetTmManualListTextFiltered](#) to filter by text. Use method [GetTmManualListGenArtFiltered](#) to filter by generic articles.

**Parameter**

input - Instance of the message class GetTmManualListMsg.

**Returns**

The topic tree for the part technical manual.

- **List<TmMainGroup>** [GetTmManualListGenArtFiltered](#)([GetTmManualListGenArtFilteredMsg](#) input)

Delivers a country specific list to generate a manual tree for the typeId in the selected language filtered by generic article.

**Parameter**

input - Instance of the message class GetTmManualListGenArtFilteredMsg.

**Returns**

The topic tree for the part technical manual.

- **List<TmMainGroup> GetTmManualListTextFiltered(GetTmManualListTextFilteredMsg input)**  
Delivers a country specific list to generate a manual tree for the typeld in the selected language filtered by text.

**Parameter**

input - Instance of the message class GetTmManualListTextFilteredMsg.

**Returns**

The topic tree for the part technical manual.

- **string GetTmManualHtml(GetTmManualHtmlMsg input)**

Delivers a string which contains HTML-code from which a HTML-file for the manual can be generated.

**Remarks**

Link elements (hrefs) in the HTML code are enclosed in 'P' (U+00DE LATIN CAPITAL LETTER THORN) characters and consists of a letter followed by an item mount position id (itemMpld), e. g. Pi8683P. Those can be evaluated on the web server before the HTML is sent to the client, or handled in an embedded browser control using the relevant navigation events. Following letters where possible: i - indicates a link to 0..\* other technical manual(s) followed by an item mount position id (itemMpld). To resolve the itemMpld and typeld combination to a set of manual ids call. GetTmLinkedTechnicalManuals.  
t - indicates a link to a vehicle type, followed by the TecRMI type id..

**Parameter**

input - Instance of the message class GetTmManualHtmlMsg.

**Returns**

A string which contains the whole HTML file.

- **string GetTmManualHtml\_LinkedOeNo(GetTmManualHtmlMsg input)**

Delivers a string which contains HTML-code from which a HTML-file for the manual can be generated.

Included OE spare part numbers will be displayed as link in case of parameter "printView" is set to "false".

**Parameter**

input - Instance of the message class GetTmManualHtmlMsg.

**Returns**

A string which contains the whole HTML file.

- **List<String> GetImageNamesForTmManual(GetImageNamesForTmManualMsg input)**

Delivers a collection of strings which contains the image names necessary for the manual.

**Parameter**

input - Instance of the message class GetImageNamesForTmManualMsg

**Returns**

A collection of image names for the manual.

**- Byte[] GetTmImage(GetTmImageMsg input)**

Returns a byte array which contains the requested technical manual image.

**Parameter**

input - Instance of the message class GetTmImageMsg.

**Returns**

An array which contains the image.

**- TmItemMp GetTmLinkedTechnicalManuals(GetTmLinkedTechnicalManualsMsg input)**

The result of an m-link is an item number. This method checks whether none, one or more manuals are available for the given country.

**Parameter**

input - Instance of the message class GetTmLinkedTechnicalManualsMsg.

**Returns**

The linked technical manuals.

**- TmItemMp GetTmLinkedTechnicalManualsForWork(GetTmLinkedTechnicalManualsForWorkMsg input)**

The result of an m-link is an item number. This method checks whether none, one or more manuals are available for the given country.

**Parameter**

input - Instance of the message class GetTmLinkedTechnicalManualsForWorkMsg.

**Returns**

The linked manuals for the selected work.

**- string GetTmErrorCodeSearchHtml(GetTmErrorCodeSearchHtmlMsg input)**

Generates an HTML-string containing the filtered error codes for the given vehicle.

**Remarks**

Link elements (hrefs) in the HTML code are enclosed in 'þ' (U+00DE LATIN CAPITAL LETTER THORN) characters and consists of a letter followed by an item mount position id (itemMpld), e. g. þi8683þ. Those can be evaluated on the web server before the HTML is sent to the client, or handled in an embedded browser control using the relevant navigation events. Following letters where possible: i - indicates a link to 0..\* other

technical manual(s) followed by an item mount position id (itemMpld). To resolve the itemMpld and typeId combination to a set of manual ids call. GetTmLinkedTechnicalManuals.

t - indicates a link to a vehicle type, followed by the TecRMI type id..

**Parameter**

input - Instance of the message class GetTmErrorCodeSearchHtmlMsg.

**Returns**

A string which contains the whole HTML file.

## Object Model

### 1. GetImageNamesForTmManualMsg

#### 1.1. Summary

Class [AisService.\\_40.Messages.Tm.GetImageNamesForTmManualMsg](#) contains the properties which are necessary to call web service methods [GetImageNamesForTmManual](#) or

#### 1.2. See also

[ServiceTm.GetImageNamesForTmManual\(...\)](#)

#### 1.3. Detailed Module Documentation

##### 1.3.1. Properties

- **string CompanyName**

Gets or sets the name of the company.

**Property-Value**

The name of the company.

- **string Password**

Gets or sets the password.

**Property-Value**

The password.

- **int ManualId**

Gets or sets the TecRMI manual id.

The id can be fetched by using the topic tree methods from the respective modules.

**Property-Value**

The manual id.

- **string UserName**

Gets or sets the name of the user.

**Property-Value**

The name of the user.

### 2. GetTmErrorCodeSearchHtmlMsg

#### 2.1. Summary

Class [AisService.\\_40.Messages.Tm.GetTmErrorCodeSearchHtmlMsg](#) contains the properties which are necessary to call web service method [GetTmErrorCodeSearchHtml](#) .

## 2.2. See also

[ServiceTm.GetTmErrorCodeSearchHtml\(...\)](#)

## 2.3. Detailed Module Documentation

### 2.3.1. Properties

- **string** **CompanyName**

Gets or sets the name of the company.

**Property-Value**

The name of the company.

- **string** **ConsumerId**

Unique identifier for end user which receive the called data.

**Property-Value**

Unique end user identifier.

- **string** **CountryCode**

Gets or sets the 2-letter international country code as defined by ISO 3166-1.

**Property-Value**

The ISO country code.

- **string** **ErrorCode**

Gets or sets the error code to search for.

**Property-Value**

The error code.

- **string** **LanguageCode**

Gets or sets the 2-letter international language code as defined by ISO 639-1.

**Property-Value**

The ISO language code.

- **string** **LinkURL**

Gets or sets the link url. The actual link information is going to be added at the end of this url.

It is used where documents contains links to other and are shown in custom application.

**Property-Value**

The link url.

#### Example

```
LinkURL = "http://localhost/" // -> Generated link in documents:  
http://localhost/Ⓟ1234Ⓟ;
```

**- string Password**

Gets or sets the password.

**Property-Value**

The password.

**- string UserName**

Gets or sets the name of the user.

**Property-Value**

The name of the user.

**- int TypeID**

Gets or sets the TecRMI type id which identifies a vehicle unique.

The id can be fetched by using the ServiceVt web service.

**Property-Value**

The TecRMI type id.

### 3. GetTmImageMsg

#### 3.1. Summary

Class [AisService.\\_40.Messages.Tm.GetTmImageMsg](#) contains the properties which are necessary to call the web service methods [GetTmImage](#) .

#### 3.2. See also

[ServiceTm.GetTmImage\(...\)](#)

#### 3.3. Detailed Module Documentation

##### 3.3.1. Properties

**- string CompanyName**

Gets or sets the name of the company.

**Property-Value**

The name of the company.

**- string ImageName**

Gets or sets the name of the requested image.

**Property-Value**

The name of the image.

**- string Password**

Gets or sets the password.

**Property-Value**

The password.

**- string UserName**

Gets or sets the name of the user.

**Property-Value**

The name of the user.

## 4. GetTmLinkedTechnicalManualsForWorkMsg

### 4.1. Summary

Class [AisService.\\_40.Messages.Tm.GetTmLinkedTechnicalManualsForWorkMsg](#) contains the properties which are necessary to call web service method [GetTmLinkedTechnicalManualsForWork](#) .

### 4.2. See also

[ServiceTm.GetTmLinkedTechnicalManualsForWork\(...\)](#)

### 4.3. Detailed Module Documentation

#### 4.3.1. Properties

**- string CompanyName**

Gets or sets the name of the company.

**Property-Value**

The name of the company.

**- string CountryCode**

Gets or sets the 2-letter international country code as defined by ISO 3166-1.

**Property-Value**

The ISO country code.

**- string LanguageCode**

Gets or sets the 2-letter international language code as defined by ISO 639-1.

**Property-Value**

The ISO language code.

**- string Password**

Gets or sets the password.

**Property-Value**

The password.

**- int WorkId**

Gets or sets the TecRMI work id which identifies a work position unique.

The id can be fetched by using the topic tree methods from the respective modules.

**Property-Value**

The work id.

**- string UserName**

Gets or sets the name of the user.

**Property-Value**

The name of the user.

## 5. GetTmLinkedTechnicalManualsMsg

### 5.1. Summary

Class [AisService.\\_40.Messages.Tm.GetTmLinkedTechnicalManualsMsg](#) contains the properties which are necessary to call web service method [GetTmLinkedTechnicalManuals](#) .

### 5.2. See also

[ServiceTm.GetTmLinkedTechnicalManuals\(...\)](#)

### 5.3. Detailed Module Documentation

#### 5.3.1. Properties

**- string CompanyName**

Gets or sets the name of the company.

**Property-Value**

The name of the company.

**- string CountryCode**

Gets or sets the 2-letter international country code as defined by ISO 3166-1.

**Property-Value**

The ISO country code.

**- string LanguageCode**

Gets or sets the 2-letter international language code as defined by ISO 639-1.

**Property-Value**

The ISO language code.

**- string Password**

Gets or sets the password.

**Property-Value**

The password.

**- int ItemMpld**

Gets or sets the TecRMI item mount position id.

The id can be fetched by using the topic tree methods from the respective modules.

**Property-Value**

The item mount position id.

- **string UserName**

Gets or sets the name of the user.

**Property-Value**

The name of the user.

- **int TypeID**

Gets or sets the TecRMI type id which identifies a vehicle unique.

The id can be fetched by using the ServiceVt web service.

**Property-Value**

The TecRMI type id.

## 6. GetTmManualHtmlMsg

### 6.1. Summary

Class [AisService.\\_40.Messages.Tm.GetTmManualHtmlMsg](#) contains the properties which are necessary to call web service method [GetTmManualHtml](#) .

### 6.2. See also

[ServiceTm.GetTmManualHtml\(...\)](#)

### 6.3. Detailed Module Documentation

#### 6.3.1. Properties

- **string CompanyName**

Gets or sets the name of the company.

**Property-Value**

The name of the company.

- **string ConsumerId**

Unique identifier for end user which receive the called data.

**Property-Value**

Unique end user identifier.

- **string CountryCode**

Gets or sets the 2-letter international country code as defined by ISO 3166-1.

**Property-Value**

The ISO country code.

**- KindOfWorkTimeData KindOfWorkTime**

Gets or sets an enum value indicates which unit the work time in the result should have.

**Property-Value**

The kind of unit of the work time.

**- string LanguageCode**

Gets or sets the 2-letter international language code as defined by ISO 639-1.

**Property-Value**

The ISO language code.

**- string LinkURL**

Gets or sets the link url. The actual link information is going to be added at the end of this url.

It is used where documents contains links to other and are shown in custom application.

**Property-Value**

The link url.

**Example**

```
LinkURL = "http://localhost/" // -> Generated link in documents:  
http://localhost/12345;
```

**- string Password**

Gets or sets the password.

**Property-Value**

The password.

**- bool PrintView**

Determines whether a document for printing or the normal document should be created.

**Property-Value**

true if optimised for printing; otherwise, false.

**- int ManualId**

Gets or sets the TecRMI manual id.

The id can be fetched by using the topic tree methods from the respective modules.

**Property-Value**

The manual id.

**- string UserName**

Gets or sets the name of the user.

**Property-Value**

The name of the user.

- **int TypeId**

Gets or sets the TecRMI type id which identifies a vehicle unique.

The id can be fetched by using the ServiceVt web service.

**Property-Value**

The TecRMI type id.

## 7. GetTmManualListGenArtFilteredMsg

### 7.1. Summary

Class [AisService.\\_40.Messages.Tm.GetTmManualListMsg](#) contains the properties which are necessary to call web service method [GetTmManualListGenArtFiltered](#) .

### 7.2. See also

[ServiceTm.GetTmManualListGenArtFiltered\(...\)](#)

### 7.3. Detailed Module Documentation

#### 7.3.1. Properties

- **string CompanyName**

Gets or sets the name of the company.

**Property-Value**

The name of the company.

- **string CountryCode**

Gets or sets the 2-letter international country code as defined by ISO 3166-1.

**Property-Value**

The ISO country code.

- **int GenArtNo**

Filters the TM manual list by the given generic article number.

**Property-Value**

The generic article number.

- **Nullable<Int32> GenCritNo**

Filters the TM manual list by the given generic criterion number (Optional).

**Property-Value**

The generic criterion number.

- **string GenCritValue**

Filters the TM manual list by the given generic criterion value (Optional).

**Property-Value**

The generic criterion value.

**- string LanguageCode**

Gets or sets the 2-letter international language code as defined by ISO 639-1.

**Property-Value**

The ISO language code.

**- string Password**

Gets or sets the password.

**Property-Value**

The password.

**- string UserName**

Gets or sets the name of the user.

**Property-Value**

The name of the user.

**- int TypeID**

Gets or sets the TecRMI type id which identifies a vehicle unique.

The id can be fetched by using the ServiceVt web service.

**Property-Value**

The TecRMI type id.

## 8. GetTmManualListMsg

### 8.1. Summary

Class [AisService.\\_40.Messages.Tm.GetTmManualListMsg](#) contains the properties which are necessary to call web service method [GetTmManualList](#) .

### 8.2. See also

[ServiceTm.GetTmManualList\(...\)](#)

### 8.3. Detailed Module Documentation

#### 8.3.1. Properties

**- string CompanyName**

Gets or sets the name of the company.

**Property-Value**

The name of the company.

**- string CountryCode**

Gets or sets the 2-letter international country code as defined by ISO 3166-1.

**Property-Value**

The ISO country code.

**- string LanguageCode**

Gets or sets the 2-letter international language code as defined by ISO 639-1.

**Property-Value**

The ISO language code.

**- string Password**

Gets or sets the password.

**Property-Value**

The password.

**- string UserName**

Gets or sets the name of the user.

**Property-Value**

The name of the user.

**- int TypeID**

Gets or sets the TecRMI type id which identifies a vehicle unique.

The id can be fetched by using the ServiceVt web service.

**Property-Value**

The TecRMI type id.

## 9. GetTmManualListTextFilteredMsg

### 9.1. Summary

Class [AisService.\\_40.Messages.Tm.GetTmManualListMsg](#) contains the properties which are necessary to call web service method [GetTmManualListTextFiltered](#) .

### 9.2. See also

[ServiceTm.GetTmManualListTextFiltered\(...\)](#)

### 9.3. Detailed Module Documentation

#### 9.3.1. Properties

**- string CompanyName**

Gets or sets the name of the company.

**Property-Value**

The name of the company.

**- string CountryCode**

Gets or sets the 2-letter international country code as defined by ISO 3166-1.

**Property-Value**

The ISO country code.

**- string LanguageCode**

Gets or sets the 2-letter international language code as defined by ISO 639-1.

**Property-Value**

The ISO language code.

**- string Password**

Gets or sets the password.

**Property-Value**

The password.

**- string SearchText**

Filters the TM manual list by the given search text value.

**Property-Value**

The search text.

**- string UserName**

Gets or sets the name of the user.

**Property-Value**

The name of the user.

**- int TypeID**

Gets or sets the TecRMI type id which identifies a vehicle unique.

The id can be fetched by using the ServiceVt web service.

**Property-Value**

The TecRMI type id.

## 10. GetVehicleHasTmMsg

### 10.1. Summary

Class [AisService.\\_40.Messages.Tm.GetVehicleHasTmMsg](#) contains the properties which are necessary to call the web service module check method [ServiceTm.GetVehicleHasTm](#) .

### 10.2. See also

[ServiceTm.GetVehicleHasTm\(...\)](#)

## 10.3. Detailed Module Documentation

### 10.3.1. Properties

- **string CompanyName**

Gets or sets the name of the company.

**Property-Value**

The name of the company.

- **string CountryCode**

Gets or sets the 2-letter international country code as defined by ISO 3166-1.

**Property-Value**

The ISO country code.

- **string Password**

Gets or sets the password.

**Property-Value**

The password.

- **string UserName**

Gets or sets the name of the user.

**Property-Value**

The name of the user.

- **int TypeId**

Gets or sets the TecRMI type id which identifies a vehicle unique.

The id can be fetched by using the ServiceVt web service.

**Property-Value**

The TecRMI type id.

## 11. KindOfWorkTimeData

### 11.1. Summary

Enum **KindOfWorkTimeData** specifies the kinds of work time data. In other words this enumeration determines the unit a work time has.

### 11.2. Detailed Module Documentation

#### 11.2.1. Enums

- **DecimalWorkHours**

The work time is displayed in decimal work hours.

- **ManufacturerWorkPositions**

The work time is displayed in manufacturer work time units.

## 12. TmItemMp

### 12.1. Summary

Represents an item mount position for the technical manual topic tree. In the topic tree hierarchy, item mount positions are children of sub groups. The same item mount position might also be a child of several different sub groups making the topic tree rather a directed acyclic graph than a tree.

## 12.2. Detailed Module Documentation

### 12.2.1. Properties

- **bool InfoDataExists**

Gets or sets a value indicating whether there are information data existing for this item mount position.

The portal database must be available to provide information data.

**Property-Value**

true if info data exists; otherwise, false.

- **bool IsLocked**

Gets or sets a value indicating whether access to this item mount position is denied.

**Property-Value**

true if this item mount position is locked; otherwise, false.

- **int ItemMplId**

Gets or sets the id of the item mount position.

**Property-Value**

The item mount position id.

- **string ItemMplImageName**

Gets or sets the name of the item mount position image.

**Property-Value**

The the item mount position image name.

- **string ItemMpText**

Gets or sets the text of the item mount position.

**Property-Value**

The item mount position text.

- **List<TmManual> Manuals**

Gets or sets a collection of manuals which belongs to the topic item mount position.

**Property-Value**

The manuals.

**- int SortOrder**

Gets or sets the order number of this topic item mount position. A collection of topic item mount position will be sorted against this number.

**Property-Value**

The sort order.

## 13. TmMainGroup

### 13.1. Summary

Represents a main group for technical manuals. In the topic tree hierarchy, main groups are on the topmost level. Each main group may have several sub groups as children.

### 13.2. Detailed Module Documentation

#### 13.2.1. Properties

**- bool InfoDataExists**

Gets or sets a value indicating whether there are information data existing for this main group. The portal database must be available to provide information data.

**Property-Value**

true if info data exists; otherwise, false.

**- int MainGroupId**

Gets or sets the id of the main group.

**Property-Value**

The main group id.

**- string MainGroupImage**

Gets or sets the image of the main group.

**Property-Value**

The main group image.

**- string MainGroupName**

Gets or sets the name of the main group.

**Property-Value**

The the main group name.

**- int SortOrder**

Gets or sets the order number of this main group. A collection of main groups will be sorted against this number.

**Property-Value**

The sort order.

- **List<TmSubGroup> SubGroups**

Gets or sets a collection of sub groups which belongs to this main group.

**Property-Value**

The sub groups.

## 14. TmManual

### 14.1. Summary

Represents a technical manual in the field of technical manual. A manual belongs to an item mount position.

### 14.2. Detailed Module Documentation

#### 14.2.1. Properties

- **int ManualId**

Gets or sets the id of the manual.

**Property-Value**

The manual id.

- **int QualColId**

Gets or sets the id of the qualifier collection.

**Property-Value**

The qualifier collection id.

- **string QualColText**

Gets or sets the qualifier collection text.

**Property-Value**

The qualifier collection text.

## 15. TmSubGroup

### 15.1. Summary

Represents a sub group for technical manuals. In the topic tree hierarchy, sub groups are children of main groups.

The same sub group might also be a child of several different main groups making the topic tree rather a directed acyclic graph than a tree. Each sub group may have several item mount positions as children.

### 15.2. Detailed Module Documentation

#### 15.2.1. Properties

- **bool InfoDataExists**

Gets or sets a value indicating whether there are information data existing for this sub group. The portal database must be available to provide information data.

**Property-Value**

true if info data exists; otherwise, false.

- **List<TmItemMp> ItemMps**

Gets or sets a collection of item mount positions which belongs to this sub group.

**Property-Value**

The item mount positions.

- **int SortOrder**

Gets or sets the order number of this sub group. A collection of sub groups will be sorted against this number.

**Property-Value**

The sort order.

- **int SubGroupId**

Gets or sets the id of the sub group.

**Property-Value**

The sub group id.

- **string SubGroupImage**

Gets or sets the sub group image.

**Property-Value**

The sub group image.

- **string SubGroupName**

Gets or sets the name of the sub group.

**Property-Value**

The sub group name.