

## Dealer Zone API



## Document Change Record

Revision	Date	Owner	Details
0.1	31 <sup>st</sup> Mar 2022	James Scott-Evans	Initial Draft
0.2	16 <sup>th</sup> Nov 2023	James Scott-Evans	Add digipostpro menu unlock code
1.0	9 <sup>th</sup> May 2024	James Scott-Evans	Modem lookup

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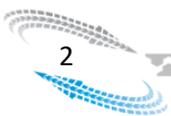
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## 1. Introduction

In May 2006, digital tachographs became mandatory for use in new vehicles. Then in 2009 remote download of tachographs started to be possible. With this, the ability to easily check the compatibility of tachographs to perform remote download was required. From the beginning, Tachosys made a website available to check the numerous VDO tachograph part numbers and indicate the options available on each tachograph type.

Over time this webpage has grown into a whole site, now called Dealer Zone, that offers a central site for checking latest Tachosys software and device firmware; technical bulletins, including subscription service; and the original VDO tachograph part number lookup service.

Some of the services are available through a web service and the purpose of this document is to outline the use of the Dealer Zone API.

## 2. References

### 2.1. Joint Research Centre

The website of the European Commission – Joint Research Centre for Digital Tachographs has a lot of information regarding both Digital Tachographs and Smart Tachographs and the related equipment:-

<https://dtd.jrc.ec.europa.eu/index.php>

### 2.2. Annex 1B

The legislation that introduced the digital tachograph:-

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32002R1360>

### 2.3. Annex 1C

The new legislation for Smart Tachographs:-

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02016R0799-20230821>



### 3. API

The API has been implemented as a secure REST service with a base address of:-  
<https://dealerzone.tachosys.com/api/>.

A content type of `application/json; charset=utf-8` will be used throughout.

### 4. Error status codes

Status code	Use
200	OK – Success
400	Bad Request – Format of requested data was incorrect.
401	Unauthorised – Login failed; Missing Bearer Authorization; Token has expired.
403	Forbidden –Request quota has been reached.
500	Internal Server Error – Error occurred.

### 5. Token

The API uses JSON Web Tokens (JWT) bearer authentication to validate user access. To get the token to access the API the client application first needs to make a POST request with the below body to the URI of `token`.

```
{
  "Username": "<username>",
  "Password": "<password>"
}
```

The username and password will be provided for a per application use implementation.

The response will be in the following form:-

```
{
  "token": "<token>",
  "expiresIn": <minutes>
}
```

The client must send this token in the Authorization header when making requests to the protected resources of the API:-

Authorization: Bearer <token>

The token will expire after the number of minutes indicated, at which point the client will need to re-authenticate.



## 6. Tachograph Lookup

The VDO tachograph is available in many forms often specific to vehicle manufacturers. Therefore, it can be difficult to know whether the tachograph will support Remote Download or VDO Counter. Tachosys attempts to keep a list of all the serial numbers of VDO tachographs and their matching vehicle manufacturer and capabilities. This list can be queried by using a POST request with the below body to the URI of `tachograph/lookup`.

```
{
  "serialNumbers": [
    "<vuPartNumber>",
    "<vuPartNumber>", ...
  ]
}
```

`<vuPartNumber>` The `vuPartNumber` is the VDO serial number e.g., 1381-1081000007. The separator character in the `vuPartNumber` can be either "-" or "." but will be returned with "-".

The response will be in the following form:-

```
[
  {
    "serialnumber": "<vuPartNumber>",
    "vehicleManufacturer": "<vehicleManufacturer>",
    "modelTypes": "<modelTypes>",
    "tachographVersion": "<version>",
    "isUnknown": <isUnknown>,
    "isRemoteDownloadCompatible": <isRemoteDownloadCompatible>,
    "isFrontPortRequired": <isFrontPortRequired>,
    "isProgrammerRequired": <isProgrammerRequired>,
    "isDDSAvailable": <isDDSAvailable>,
    "isWorkshopUpgradeRequired": <isWorkshopUpgradeRequired>,
    "isUpdateCardRequired": <isUpdateCardRequired>,
    "notInVDODocuments": <notInVDODocuments>,
    "isDocumentationInDoubt": <isDocumentationInDoubt>
  }, ...
]
```

`<isUnknown>` - true when the `vuPartNumber` is not in our lookup tables.

`<isRemoteDownloadCompatible>` - true when Remote download is possible.

`<isFrontPortRequired>` - true when Remote download is only available through the front port. A VDO unlock card is required.

`<isProgrammerRequired>` - true when CAN-C needs to be activated via CTC II programmer.

`<isDDSAvailable>` - true when Driver Decision Support (VDO Counter) is available.

`<isWorkshopUpgradeRequired>` - true when upgrade of the tachograph to 2.1 is possible via workshop.

`<isUpdateCardRequired>` - true when the VDO Counter must be activated by an Update card.

`<notInVDODocuments>` - true when serial number was not listed in VDO documents.

`<isDocumentationInDoubt>` - Information shown is in doubt. Contact VDO directly.



If the response is 400 – Bad Request, this indicates that the `vuPartNumber` was not formatted correctly.  
If the response is 403 – Forbidden, this indicates that the lookup quota has been reached.

## 7. Register Sale

When Tachosys ships product to our distributors we log the serial number, build/production date, and manufacturing batch number. We will offer our warranty period starting from the build date. Our Dealer Zone site allows our distributors to check whether products are still within the warranty period. We understand that some distributors would like to also hold the date when they sell the product to their customer alongside this data and this can be achieved by using a POST request with the below body to the URI of `registersale`.

```
{
  "serialNumber": "<serialNumber>",
  "updatedBy": "<updatedBy>"
}
```

`<serialNumber>` This is the serial number of the product.

`<updatedBy>` This is the user that will be held as the one who has made this update.

The date on which this call has been made will be held as the Sale Date. Subsequent calls with the same serial number will not change the date.

The response will be in the following form:-

```
{
  "isSuccess": <isSuccess>,
  "hasWarnings": <hasWarnings>,
  "serialNumber": "<serialNumber>",
  "buildDate": "<buildDate>",
  "deviceDescription": "<deviceDescription>",
  "productCode": "<productCode>",
  "productSaleDate": "<productSaleDate>",
  "updatedBy": "<updatedBy>",
  "warnings": [ "<warning>", ... ]
}
```

`<isSuccess>` - true when the device serial number has been found.

`<hasWarnings>` - true when an error has occurred. See `<warnings>` for further details.

`<serialNumber>` - serial number of the device. Will match the serial number of the request.

`<buildDate>` - Build/production date for the device.

`<deviceDescription>` - Friendly descriptor for the device.

`<productCode>` - The product code applicable to the device when it was built.

`<productSaleDate>` - Date held for when the product was sold to the customer.

`<updatedBy>` - The name (usually email address) of the person who set the Product Sale date.

`<warning>` - The text of any errors that occurred when making the Register Sale call.

Dates will be returned in the format of `dd/mm/yyyy`.

## 8. Warranty Check

When Tachosys ships product to our distributors we log the serial number, build/production date, and manufacturing batch number. We will offer our warranty period starting from the build date. Our Dealer Zone site allows our distributors to check whether products are still within the warranty period. This can be done using a GET request to the URI of `warrantycheck?searchText=<serialNumber>`.

The response will be in the following form:-

```
{
  "isSuccess": <isSuccess>,
  "hasWarnings": <hasWarnings>,
  "serialNumber": "<serialNumber>",
  "buildDate": "<buildDate>",
  "deviceDescription": "<deviceDescription>",
  "productCode": "<productCode>",
  "productSaleDate": "<productSaleDate>",
  "inWarranty": false,
  "inWarrantySale": false,
  "warnings": [ "<warning>", ...]
}
```

<isSuccess> - true when the device serial number has been found.

<hasWarnings> - true when an error has occurred. See <warnings> for further details.

<serialNumber> - serial number of the device. Will match the serial number of the request.

<buildDate> - Build/production date for the device.

<deviceDescription> - Friendly descriptor for the device.

<productCode> - The product code applicable to the device when it was built.

<productSaleDate> - Date held for when the product was sold to the customer.

<inWarranty> - true when the product is still within the manufacturer's warranty.

<inWarrantySale> - true when the product is still within the warranty period starting from the Product Sale date.

<warning> - The text of any errors that occurred when making the Warranty Check call.

Dates will be returned in the format of dd/mm/yyyy.

Any warranty indicated by this API call should be confirmed with the Tachosys support team by phone or email.

## 9. Modem Lookup

As mobile network providers start the process of turning off 2G and 3G networks, it has become necessary to identify the make and model of the modem inside of devices. Our devices send back the IMEI number that holds details about the modem and this is stored in digiCentral against the device. We have built a list of the type of modems used in our products and the IMEI number can be cross checked against this and the modem identified. This can be done using a GET request to the URI of `modemlookup?searchText=<IMEI number>`.



The response will be in the following form:-

```
{
  "isSuccess": <isSuccess>,
  "hasWarnings": <hasWarnings>,
  "imeiNumber": "<imeiNumber>",
  "modem": "<modem>",
  "generation": <generation>,
  "warnings": [ "<warning>", ...]
}
```

<isSuccess> - true when the device serial number has been found.

<hasWarnings> - true when an error has occurred. See <warnings> for further details.

<imeiNumber> - IMEI number of the modem. Will match the IMEI number used in the request.

<modem> - The make and model of the modem identified from the IMEI number.

<generation> - The maximum generation of network supported by the modem. Int value - 5, 4, 3, or 2.

<warning> - The text of any errors that occurred when making the Modem Lookup call.

All our modems are capable of dropping down to a lower network – so a 4G compatible modem will be able to connect via 3G and 2G. But the SIM used with the modem also needs to support this.

## 10. digipostpro Menu Unlock Code

To stop unauthorised access of the settings on the digipostpro, a user needs to enter a code to unlock the navigation menu. To gain the time limited code, a user needs to contact their dealer who can lookup the code via our Dealer Zone page. This can be done using a GET request to the URI of `configcode?searchText=<serialNumber>`.

The response will be in the following form:-

```
{
  "isSuccess": <isSuccess>,
  "hasWarnings": <hasWarnings>,
  "unlockCode": "<unLockCode>",
  "warnings": [ "<warning>", ...]
}
```

<isSuccess> - true when the device serial number has been found.

<hasWarnings> - true when an error has occurred. See <warnings> for further details.

<unLockCode> - The time limited unlock code to gain access to the digipostpro navigation menu.

<warning> - The text of any errors that occurred when making the digipostpro Menu Unlock Code call.