

MANITOU API

Preventive Maintenance Operations - Using the service



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Description : this document provides information on how to obtain the best results of the MANITOU API service for Preventive Maintenance range of API products. This documentation is for customer IT teams to understand the service's design and know how to use its features, upon agreement signature and terms & conditions acceptance.



NOTE : changes from the previously published version of this document are marked with the "new" symbol in the margin.

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Preamble

MANITOU API is a data service in the form of APIs (Application Programming Interface) that provides the Customer access to protected resources, in coherence with the Customer's service level of subscription.

These APIs provide a wide range of features that help improve efficiency and productivity. All the features rely on the principles of RESTful APIs, which consider every accessible item as a resource with its unique id that can be used and reused, using a set of methods.

Each API serves a specific set of information, but shares common features of results paging, attribute filtering, records sorting. All these features are described with examples in this document, which is focused on one range of API products named "Preventive Maintenance Operation".

Using this documentation comes as a second step after creating an account on the MANITOU API Developer Portal.

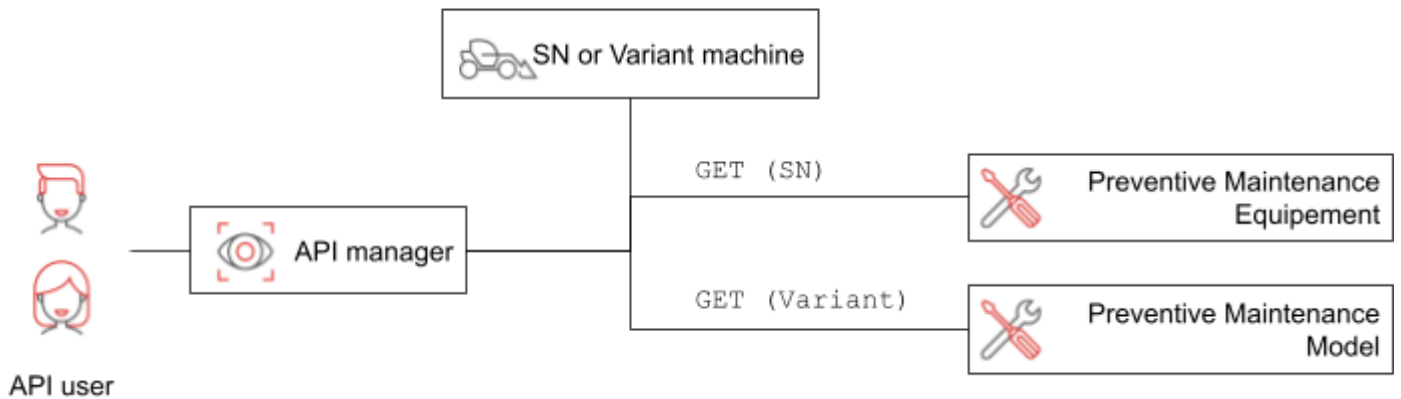
The user should already have received approval for a subscription to one of the "Preventive Maintenance Operations" products, obtained keys and a secret user token, and understood the technicalities of the MANITOU API service, as described in the "MANITOU API - How to get onboard" companion document via the URL <https://apiportal.manitou-group.com/documents>

Understand the Preventive maintenance service's design

Overview

The following schema describes the global design of MANITOU API's Preventive Maintenance service :

Preventive Maintenance Model



Security through API manager

It is necessary for the API user to **be authenticated** when performing a call to data APIs.

Please refer to the “MANITOU API - How to get onboard” documentation for more information on this process and a detailed technical explanation.



Preventive maintenance Operations Information provided

This API holds **the list of all the machines that are part of the customer fleet.**

From either the serial number of the machine or the variant of the machine, this API provides the list of advice maintenance for the machine provided by Manitou.

The machine id information (Serial Number or Variant) is the key that lets the customer retrieve fresh information about the Preventive Maintenance.



Availability of each maintenance for five languages

The maintenance will be available in five languages :

- French (localId: fr-FR)
- English (localId: en-EN)
- Italian (localId: it-IT)
- German (localId: de-DE)
- Spanish (localId: es-ES)

For this list of attributes we have the 5 languages

- Operation description
- Item designation
- Option description
- Tools name



In details : the Preventive maintenance operation API

Endpoint URLs

The API can be reached at :

<https://api.manitou-group.com/preventive-maintenance/v1/equipment/{SerialNumber}/model?include=maintenance>

<https://api.manitou-group.com/preventive-maintenance/v1/model/{Reference}?include=maintenance>

Data set examples

The following chart lists the fields exposed by the API for connected-machine resources :

Example JSON return	Description
{	
"links": {	
"self": "https://man-az-we-smartease-prd-preventive-maintenance-api.azurewebsites.net/equipment/MAN0000A01054206/model?include=maintenance"	
},	
"data": {	
"type": "model",	
"id": "52001354",	Identifier for the model
"attributes": {	
"reference": "52001354",	Machine model reference (model number)
"name": "MLT 635 130 PS D ST5 S1 "	Machine model name
},	
"relationships": {	
"maintenance": {	Related maintenance reference object
"links": {	
"self": "https://man-az-we-smartease-prd-preventive-maintenance-api.azurewebsites.net/equipment/MAN0000A01054206/model?include=maintenance"	

tes.net/model/52001354/relationships/maintenance",	
"related": "https://man-az-we-smartease-prd-preventive-maintenance-api.azurewebsites.net/model/52001354/maintenance"	
},	
"data": {	
"type": "maintenance",	
"id": "201db021-8b37-4f8a-b6c7-c4d9bdc0fed"	
}	
}	
},	
"links": {	
"self": "https://man-az-we-smartease-prd-preventive-maintenance-api.azurewebsites.net/model/52001354"	
}	
},	
"included": [List of related maintenances
{	
"type": "maintenance",	
"id": "201db021-8b37-4f8a-b6c7-c4d9bdc0fed",	Maintenance unique technical identifier
"attributes": {	
"name": "SRV-GA000001",	Name of the maintenance
"version": "A",	Version of the maintenance
"versionDate": "2019-12-08T00:00:00",	Date of the maintenance version update
"note": null,	Note of maintenance version update
"interval": [Interval list
{	
"id": "a23322f6-ab7f-434b-ada6-38769771b7fd",	Interval unique technical identifier
"name": "SRV-GA000004",	Name of the interval
"hours": 500.00,	Number of hours for the interval. If the value is 0 then initial. If the value is null, do not acknowledge hours.
"months": 12.00,	Number of months for the interval. If the value is 0 then

	initial. If the value is null, do not acknowledge months.
"duration": 3.70,	Duration of the execution of the maintenance in hours
"kits": [List of kits for this interval
{	
"id": "bf5a7eec-a6f4-4113-a12b-e329e9e77123",	Interval kit unique technical identifier
"kitId": "52798566",	Kit reference
"quantity": 1.0000	Quantity of kits for the interval
}	
],	
"operations": [List of opérations for this interval
{	
"id": "25f60ef5-12b0-4c85-8f4a-32ecc54b3c3c",	Operation unique technical identifier
"name": "SRV-OP000012",	Operation name
"duration": 0.00,	Duration of the operation in minutes
"Required": true,	Operation is required (true) or not (false)
"optionDescription": {	Operation option description
"id": "23c9b5bd-c461-4feb-a727-7505f9058df6",	Operation option description unique technical identifier
"translations": [List of translations
{	
"id": "2744e566-f074-4b47-bedf-5450181925ef",	Translation unique technical identifier in french, english, italian, german or spanish
"locale": "en-EN",	Locale BCP 47 Code for french (fr-FR), english (en-EN), italian (it-IT), german (de-DE) or spanish (es-ES)
"text": "automatic central greasing"	Translation text in french, english, italian, german or spanish
},	
{	
"id": "11fb3701-046e-4354-9c88-5495d49f2af7",	Translation unique technical

	identifier in french, english, italian, german or spanish
"locale": "es-ES",	Locale BCP 47 Code for french (fr-FR), english (en-EN), italian (it-IT), german (de-DE) or spanish (es-ES)
"text": "engrase automático centralizado"	Translation text in french, english, italian, german or spanish
}	
]	
},	
"description": {	Operation description
"id": "23c9b5bd-c461-4feb-a727-7505f9058df6",	Operation description unique technical identifier
"translations": [List of translations
{	
"id": "2744e566-f074-4b47-bedf-5450181925ef",	Translation unique technical identifier in french, english, italian, german or spanish
"locale": "en-EN",	Locale BCP 47 Code for french (fr-FR), english (en-EN), italian (it-IT), german (de-DE) or spanish (es-ES)
"text": "Replacing the filter fitting of the lubrication unit"	Translation text in french, english, italian, german or spanish
},	
{	
"id": "11fb3701-046e-4354-9c88-5495d49f2af7",	Translation unique technical identifier in french, english, italian, german or spanish
"locale": "es-ES",	Locale BCP 47 Code for french (fr-FR), english (en-EN), italian (it-IT), german (de-DE) or spanish (es-ES)
"text": "Cambiar el racor del filtro de la central de engrase"	Translation text in french, english, italian, german or spanish
}	
]	
},	

<code>"items": [</code>	List of operation items
<code>{</code>	
<code>"id": "bb58ced2-1178-4443-9aed-d9f76cddb735",</code>	Operation item unique technical identifier
<code>"quantity": 1.0000</code>	Item quantity for the operation
<code>"item": {</code>	Item object for the operation
<code>"id": "9f1c125b-2fbc-4134-8ac3-d200655cf7b6",</code>	Item unique technical identifier
<code>"name": "799966",</code>	Item code
<code>"description": {</code>	Item description
<code>"id": "a778236c-efd9-4630-8667-c564da303ccd",</code>	Item description unique technical identifier
<code>"translations": [</code>	List of translations
<code>{</code>	
<code>"id": "f8c05929-ca8a-4894-8d48-6188ad0475c4",</code>	Translation unique technical identifier in french, english, italian, german or spanish
<code>"locale": "de-DE",</code>	Locale BCP 47 Code for french (fr-FR), english (en-EN), italian (it-IT), german (de-DE) or spanish (es-ES)
<code>"text": "Filterschlüssel"</code>	Translation text in french, english, italian, german or spanish
<code>},</code>	
<code>{</code>	
<code>"id": "89e47d60-cb7e-4d0b-81ff-c4f714fcb84b",</code>	Translation unique technical identifier in french, english, italian, german or spanish
<code>"locale": "es-ES",</code>	Locale BCP 47 Code for french (fr-FR), english (en-EN), italian (it-IT), german (de-DE) or spanish (es-ES)
<code>"text": "Llave para filtros"</code>	Translation text in french, english, italian, german or spanish
<code>}</code>	
<code>]</code>	
<code>},</code>	
<code>},</code>	
<code>}</code>	

],	
"tools": [List of operation tools
{	
"id": "bcb9a69e-9c89-4466-984c-5c25de446298",	Operation tool unique technical identifier
"tool": {	Tool object for the operation
"id": "c68ba0c7-460b-4109-bd02-ba5690c3dfb0",	Tool unique technical identifier
"name": "SRV-TOOL000002",	Tool name
"description": {	Tool description
"id": "1499ee06-a266-4b59-b2a3-c371d849ef15",	Tool description unique technical identifier
"translations": [List of translations
{	
"id": "65f21293-9404-4487-a05d-4b405d350953",	Translation unique technical identifier in french, english, italian, german or spanish
"locale": "en-EN",	Locale BCP 47 Code for french (fr-FR), english (en-EN), italian (it-IT), german (de-DE) or spanish (es-ES)
"text": "Filter wrench"	Translation text in french, english, italian, german or spanish
},	
{	
"id": "b2a1f080-9024-4e39-a929-4c8ff31f7be1",	Translation unique technical identifier in french, english, italian, german or spanish
"locale": "fr-FR",	Locale BCP 47 Code for french (fr-FR), english (en-EN), italian (it-IT), german (de-DE) or spanish (es-ES)
"text": "Clé à filtre"	Translation text in french, english, italian, german or spanish
}	
]	
}	
}	
}	

]	
}	
]	
}	
]	
},	
"links": {	
"self":	
"https://man-az-we-smartease-prd-preventive-maintenance-api.azurewebsites.net/maintenance/201db021-8b37-4f8a-b6c7-c4d9bdc0fed"	Maintenance unique link
}	
}	
]	
}	

Connection via APIPortal

<https://apiportal.manitou-group.com/products>

Select preventive maintenance - v1

preventive maintenance - v1

REST

Product

Preventive Maintenance Operations

This solution provides useful information about preventive maintenance fo...

Sign Up to ask new authentication

Sign up

You want in ? Start here ! Already a member ? [Click here to get signed in.](#)

Rules for signing up :

- every information is mandatory
- enter a valid email address that matches your workgroup, rather than an individual's email address. This will let your workgroup able to keep on using the same account in case of staff shift.
- please choose a password matching the following criteria : **8 characters or more** (recommended : use letters, numbers and at least one symbol).

Then click the "Sign up" button and wait a few seconds for the account to be created. If it doesn't work, check for mistakes and typos.

Email *

Password *

Confirm password *

First name *

Last name *

User profile

Account details

Email b.devarasu@manitou-group.com
 First name Bernadette
 Last name DEVARASU
 Registration date 05/26/2023

[Change name](#) [Change password](#) [Close account](#)

Subscriptions

Use this Key to connect to API via Postman

Subscription details	Product	State	Action
Name b.devarasu@manitou-group.com Rename	Preventive Maintenance Operations	Active	Cancel
Started on 05/26/2023			
Primary key Show Regenerate			
Secondary key Show Regenerate			

API parameters

This API allows the use of the following parameters :

Parameter name	Type	Mandatory	Usage
<i>Applicable for all resources</i>			
Ocp-Apim-Subscription-Key	Header	yes	Customer subscription key (primary or secondary)

Please note that the filter parameters can be combined one with another, so one can retrieve all the machines of a given brand and for a given build year range, for example.

NOTE : as attribute values can differ from numerals to character strings, the attribute name provided to perform the sort or filter must be chosen wisely.

When performing comparisons on a character string attribute, the user must understand that even if the attribute value is expressed as a number ("1234"), it is not considered a number data type, so sorting and comparing is made through lexicographic comparison.