

**WIND TOOLS**

**SCORPION 300/2430 WIND TOOLS**

**DION-AG SCORPION 350 WIND TOOLS**

**Service Manual**  
**WINDTOOLS SERVICE SOFTWARE**

Manual no. F6919T011E

v1.0

## FOREWORD

This manual is for technicians servicing Scorpion 300, Scorpion 350 and 2430 Dion forage harvesters. The *Windtools* service software is used to update the machine control software and access operational data to diagnose potential problems. The software is free of charge and freely distributed, but its use requires the purchase of a mandatory service kit from the Dion-ag Parts department and it is provided to each dealer selling one of these three harvester models for the first time. The service kit is also offered to end-users wishing to service and update the controls by themselves.

Read the manual carefully to familiarize with the installation and use of the software before proceeding. The specifications and concepts of the *WindTools* are subject to change without notice and responsibility from the manufacturer.



**CAUTION:** The Windtools software does not give access to allow modification of the harvester operating parameters other than by an update with a software version provided and validated by Dion-ag. These parameters are set to provide reliability, safety and performance of the system. Any attempt to alter or modify the software is susceptible to create functional problems that can cause damage or failures that can cause injuries or death of the operator.

## SAFETY

As for any maintenance or service task, make safety a priority. Follow the safety guidelines applicable to the harvester and do not give access to anyone when updating or validating a software installation.

## APPLICABLE WARRANTY

Any maintenance or service operation requiring the *WindTools* service software is subjected to the same warranty conditions as any other normal service. Refer to the terms specific in the warranty contract.

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# REQUIREMENTS

## COMPATIBILITY

*WindTools* is compatible with Dion 2430, Scorpion 300 and Scorpion 350 harvesters. For the Scorpion 300 and Dion 2430 models, a communication controller named *Thrasher* must be connected to the machine wire harness to access the CAN network through Wifi. This controller is included in the service kit required by Dion.

See the CONNECTION section.

## SERVICE KIT

The mandatory service kit (#K31505) must be shipped and charged with the sale of the 1<sup>st</sup> Scorpion 300, 350 or Dion 2430 harvester. Contact Dion-Ag's service department if you did not receive it. This kit is used for diagnostic and its purchase is mandatory to obtain the Wifi password allowing access to the harvester software.

It contains:

- The *Thrasher* communication controller (used for Dion 2430 and Scorpion 300 only)
- Pressure gauge
- Different adaptor test ports to diagnose the hydraulic system.



## LAPTOP COMPUTER

The dealership is responsible for providing a laptop computer to the technician to use the *WindTools* service software. The computer must comply with the following specifications:

- Operating system Windows 10 or Win7/8 64bit (32bit version are not compatible)
- Working Wifi network card
- At least 200mb of hard drive free space
- Administrator permission for software installation

### OS VERSION PRIOR TO WINDOWS 10

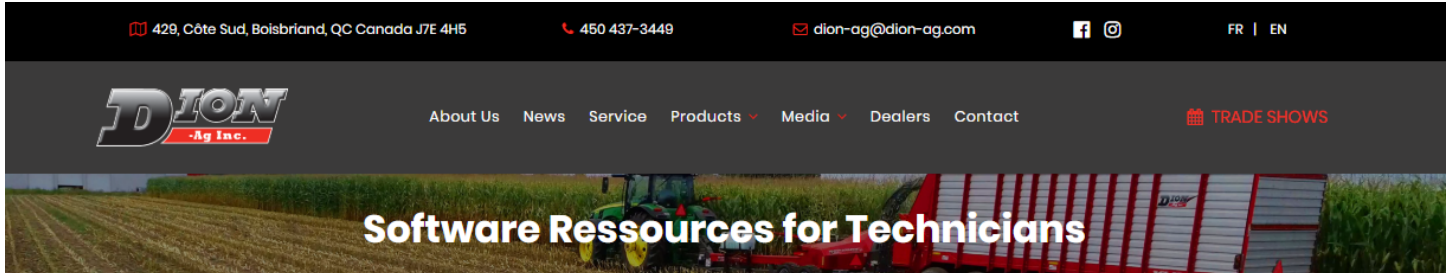
On some Windows versions prior to Win10, it is possible that .NET functionality needed for *WindTools* might be missing or require an update. If this is the case, an error message at the installation will signal the problem. (See the Troubleshooting section).

*WindTools* is not supported by Windows version anterior to Win7.

# INSTALLATION AND UPDATE

## DOWNLOADING AND INSTALLATION

The installation file for *WindTools* is available on the website [www.dion-ag.com/tech-en](http://www.dion-ag.com/tech-en). The latest version is always available for downloading.



This pages contains information and links to service machine software for field technicians.

Dealerships or customers willing to make software updates are required to purchase the service tool kit from Dion-ag. Call us for details.

Click on the file link to download the desired version of software.

---

### **Windtools Service Software** - Installation/user manual here

File

**[Windtools \(v2.0.600.19 build 76\)](#)**

Date release

April 24th 2019

Description

Official release for Scorpion 300, 350 and Dion 2430 harvesters

---

### **Scorpion 300/2430 Control Software**

File

**[Controller Software \(v1.3.200 build 27\)](#)**

Date release

April 17th 2019

Description

Spring 2019 update release. For all Scorpion 300/2430 units.

---

### **Scorpion 350 Control Software**

File

(coming early May 2019)

Date release

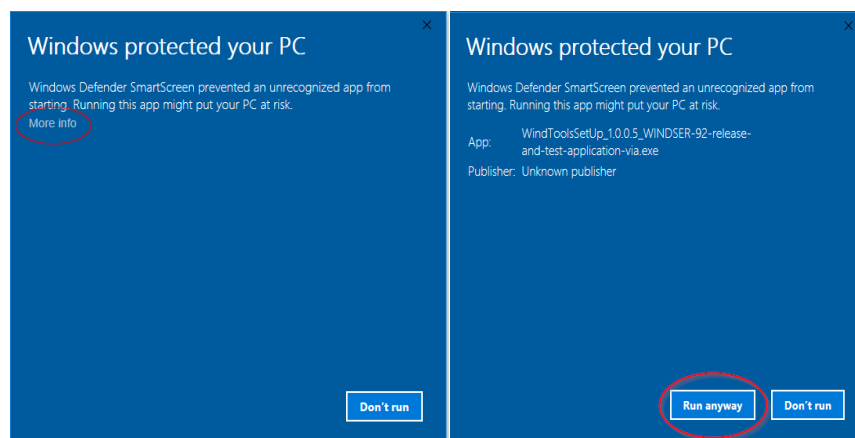
May 2019

Description

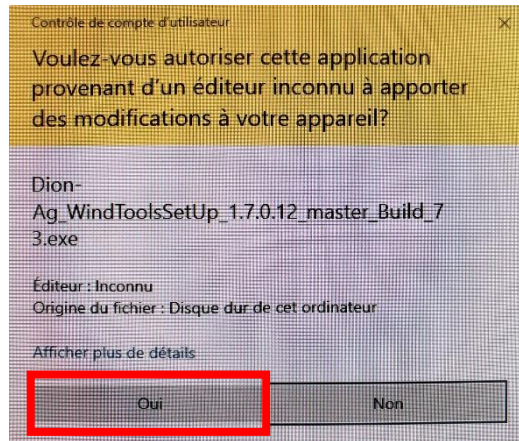
Spring 2019 update release. For all Scorpion 350 units.

**NOTE:** To upgrade to a newer version of *WindTools*, you must first uninstall the previous version on the computer. The method is explained below.

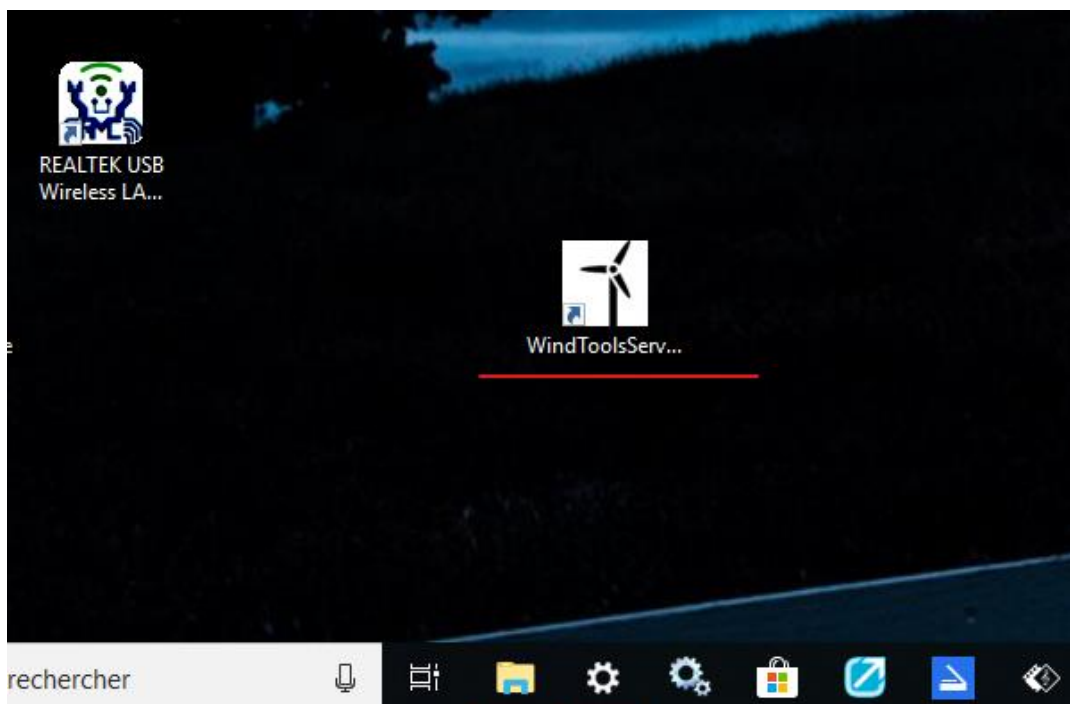
To start the installation, click on the link and download the installer, then execute. You may have a safety notice from Windows to authorize the installation. Click « run anyway ».



## INSTALLATION AND UPDATE



A shortcut will be added to the desktop, double click to open.



## UPDATE AND UNINSTALL

To obtain the latest version of *WindTools* or the harvester control software go to: [www.dion-ag.com/tech-en](http://www.dion-ag.com/tech-en).

Before installing a new version, check the version installed on the computer. Open the *WindTools* app and compare with the published version on the website. The *WindTools* version is shown at the bottom right of the screen. On the website, the version is shown on the download link (see below).

## INSTALLATION AND UPDATE

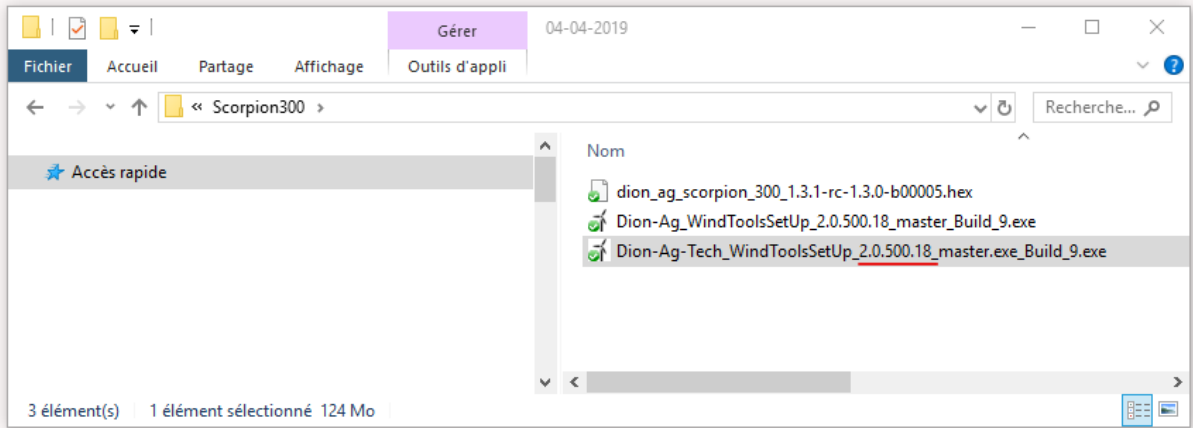
# DION-AG SCORPION 350 WIND TOOLS

Filter Results:

| TYPE | HARDWARE PLATFORM | HARDWARE REVISION | SOFTWARE PART NUMBER | SOFTWARE VERSION  | LAST RECEIVED DATA |
|------|-------------------|-------------------|----------------------|-------------------|--------------------|
|      | Falcon            | C                 | 81000003             | 0.39.1-wip+b00034 | 2019-04-19 5:30 PM |

**BULK UPDATE**

WindTools\_2.0.500 V2.0.500.18



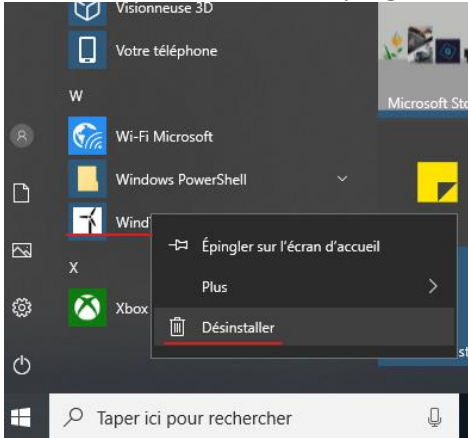
A service bulletin will be published each time a new version of the windtools or havester control software is available. The type of update (mandatory or optional) will also be displayed on the website. To install the new WindTools version, first remove the installed version on the computer using one of these methods.

- A. From the *Start* menu, locate the *WindToolsService* folder and click "*Uninstall WindToolsService*".

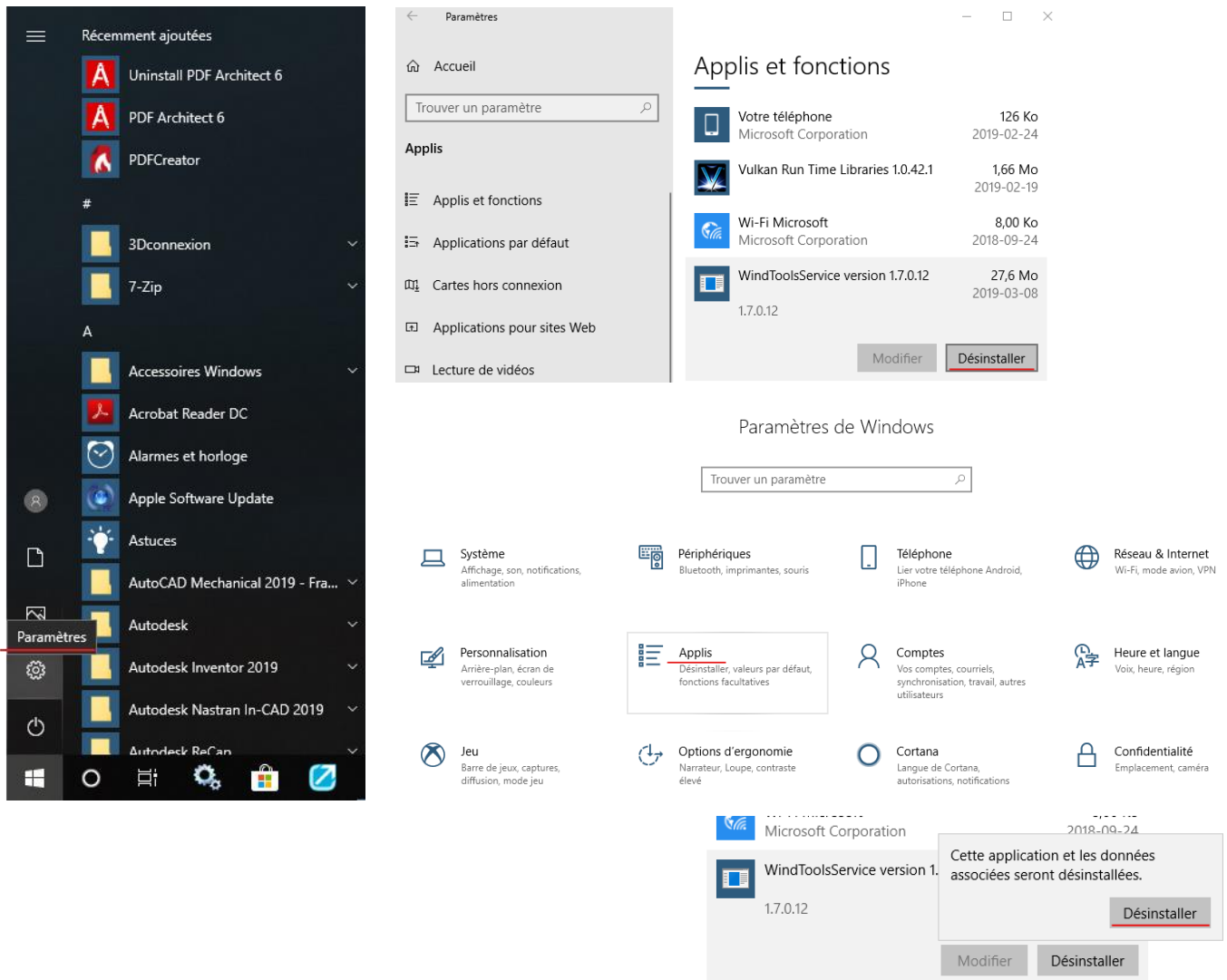


# INSTALLATION AND UPDATE

- B. From the *Start* menu, locate the *WindToolsService* application and right click to select the Uninstall option. This method will lead to the program uninstall menu. Locate *WindToolsService* and uninstall.



- C. From the *Start* menu, find the Windows parameters and choose the *Application* menu or *Install/Uninstall* menu. Select *WindToolsService* and uninstall





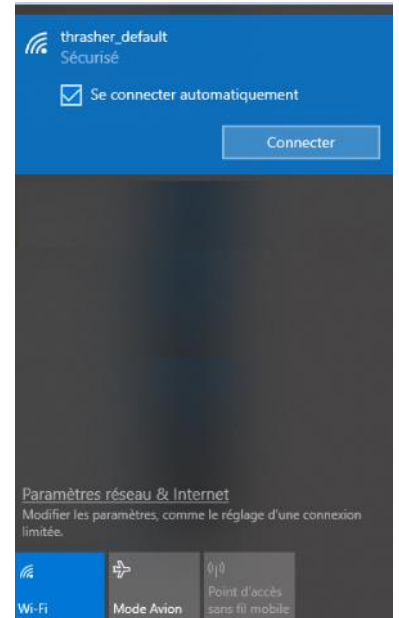
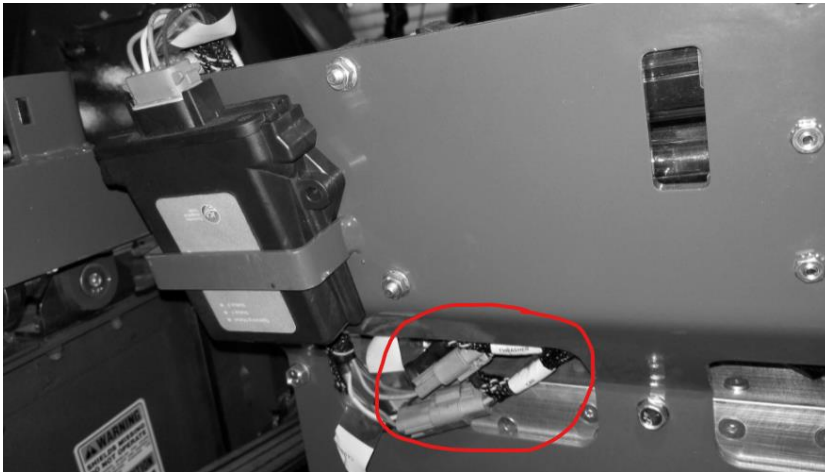
# USING WINDTOOLS

## CONNECTION

### SCORPION 300 / DION 2430

To access the CAN network and controller on the **Scorpion 300** or **Dion 2430** harvester through *WiFi*, first connect the *Thrasher* controller (provided with the service toolkit) to the harvester harness.

- Connect to the « TRASHER-PWR » and « CAN » connectors located close the valves on the control panel. Then insert the controller on the bracket behind the panel.



- Turn on the harvester control box, then locate the *Thrasher* controller in the *Wifi* networks list. A password will be required to access the network (Provided with the purchase of the service toolkit, contact Dion-Ag if necessary).

**IMPORTANT:** It is recommended to select the « connect automatically » option when connecting to avoid losing communication, especially when updating the controller software.

- Start *WindTools* on the laptop computer.

| DEVICE NAME      | SERIAL NUMBER   | CONTROLLER INDEX | MASTER / SLAVE | CONNECTION TYPE | HARDWARE PLATFORM | HARDWARE REVISION | SOFTWARE PART NUMBER | SOFTWARE VERSION | LAST RECEIVED DATA  |
|------------------|-----------------|------------------|----------------|-----------------|-------------------|-------------------|----------------------|------------------|---------------------|
| ♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦ | JCA-001-103-342 | 0                | Master         | TCP             | Thrasher          | B                 | 16006                | 0.1.14           | 2019-04-25 10:47 AM |
| scorpion_300     | JCA-001-108-549 | 1                | Slave          | TCP             | Oriole            | D                 | 81002006             | 1.3.200          | 2019-04-25 10:47 AM |

When connected, the harvester controllers will be displayed on the **Systems** tab, including the *Thrasher* controller.

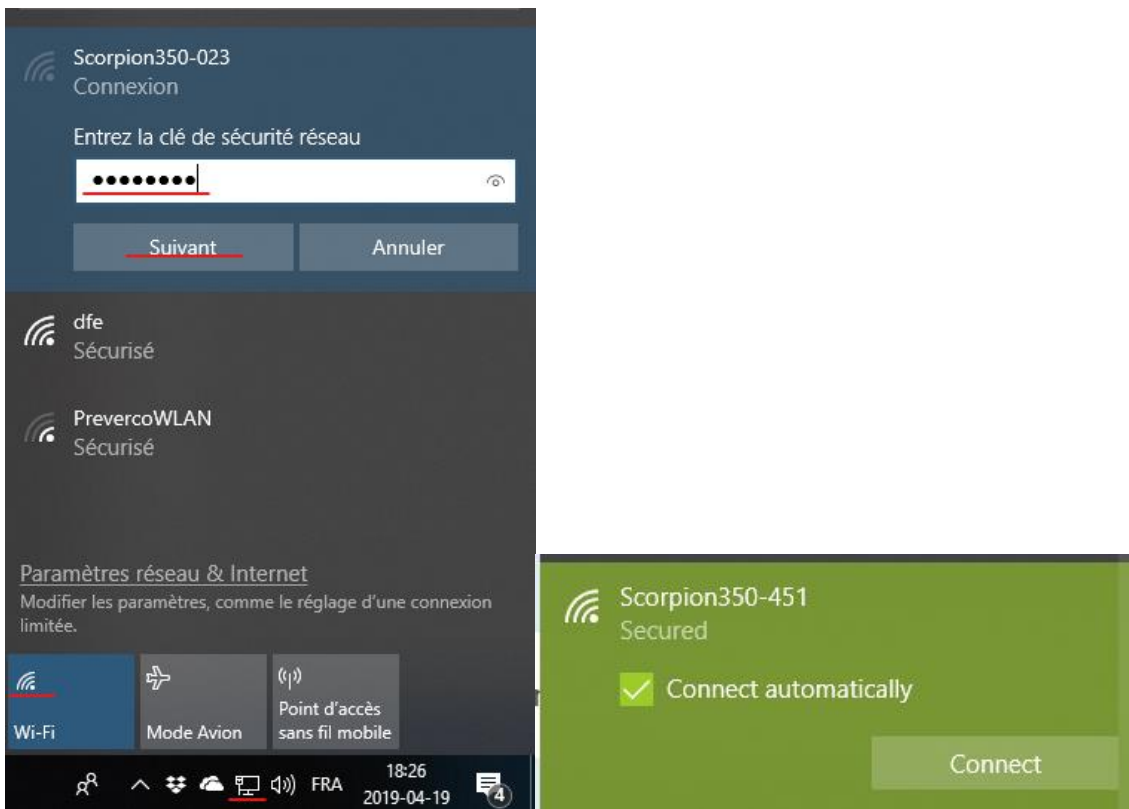
## USING WINDTOOLS

### SCORPION 350

The CAN network of the **Scorpion 350** is accessible without the need for an extra controller. The Wifi network is managed by the onboard *Falcon* controller.

- To connect, make sure the controllers are ON (tractor ignition ON) and locate the *Scorpion 350* Wifi network. A password will be required to access the network (Provided with the purchase of the service toolkit, contact Dion-ag if necessary).

**IMPORTANT:** It is recommended to select the « connect automatically » option when connecting to avoid losing communication, especially when updating the controller software.



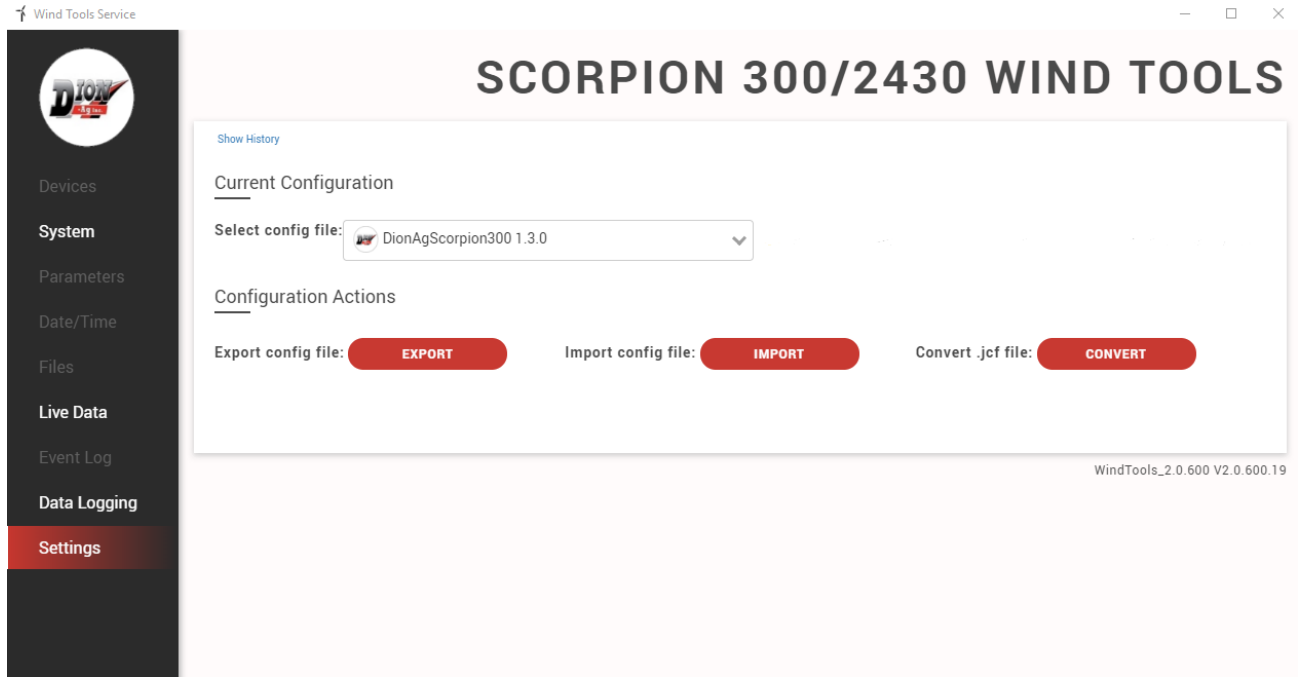
# USING WINDTOOLS

## SELECT THE HARVESTER MODEL

Before using any of the app functions, make sure the right configuration is selected. In the **Settings** tab of *WindTools*, select the appropriate configuration file.

For **Scorpion 300** and **Dion 2430** models, select DionAgScorpion300.

For **Scorpion 350** models, select DionAgScorpion350.



# USING WINDTOOLS

## USING WINDTOOLS

The current harvester software version is visible in the **System** tab as shown below. To validate that the latest version is installed, compare with the latest version available on the technical resource web page (or file already downloaded).

Wind Tools Service

### DION-AG SCORPION 350 WIND TOOLS

Filter Results:

Show History ✓

| DEVICE NAME | SERIAL NUMBER   | CONTROLLER INDEX | MASTER / SLAVE | CONNECTION TYPE | HARDWARE PLATFORM | HARDWARE REVISION | SOFTWARE PART NUMBER | SOFTWARE VERSION  | LAST RECEIVED DATA |
|-------------|-----------------|------------------|----------------|-----------------|-------------------|-------------------|----------------------|-------------------|--------------------|
| Falcon      | JCA-001-108-023 | 0                | Master         | TCP             | Falcon            | C                 | 81000003             | 0.39.1-wip+b00034 | 2019-04-19 6:40 PM |

**BULK UPDATE**

WindTools\_2.0.500 V2.0.500.18

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**TRADE SHOWS**

## Software Ressources for Technicians

This pages contains information and links to service machine software for field technicians.

Dealerships or customers willing to make software updates are required to purchase the service tool kit from Dion-ag. Call us for details.

Click on the file link to download the desired version of software.

#### Windtools Service Software - Installation/user manual here

| File   | Date release    | Description   |
|--|-----------------|---|
| <a href="#">Windtools (v2.0.600.19 build 76)</a> | April 24th 2019 | Official release for Scorpion 300, 350 and Dion 2430 harvesters |

#### Scorpion 300/2430 Control Software

| File  | Date release    | Description  |
|---|-----------------|--|
| <a href="#">Controller Software (v1.3.200 build 27)</a> | April 17th 2019 | Spring 2019 update release. For all Scorpion 300/2430 units. |

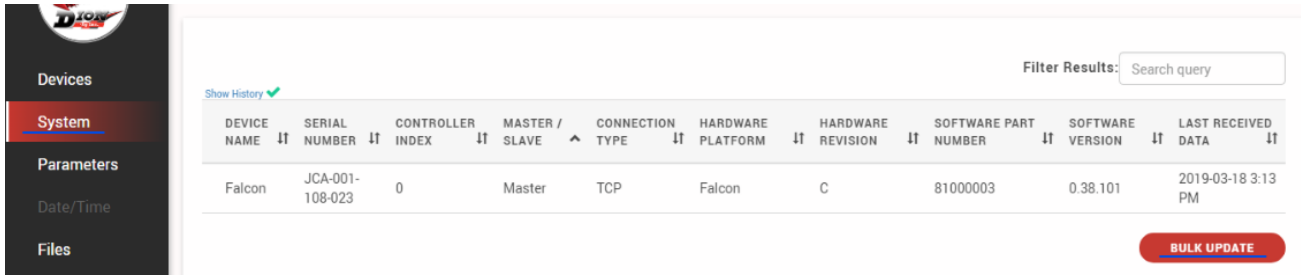
#### Scorpion 350 Control Software

| File                    | Date release | Description   |
|-------------------------|--------------|---|
| (coming early May 2019) | May 2019     | Spring 2019 update release. For all Scorpion 350 units. |

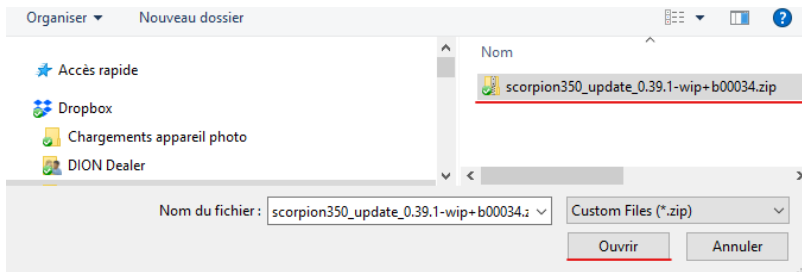
# USING WINDTOOLS

## SYSTEM UPDATE

This method is the same for all harvester models (Scorpion 300/2430 and Scorpion 350). In the **System** tab, click on the "BULK UPDATE" button.



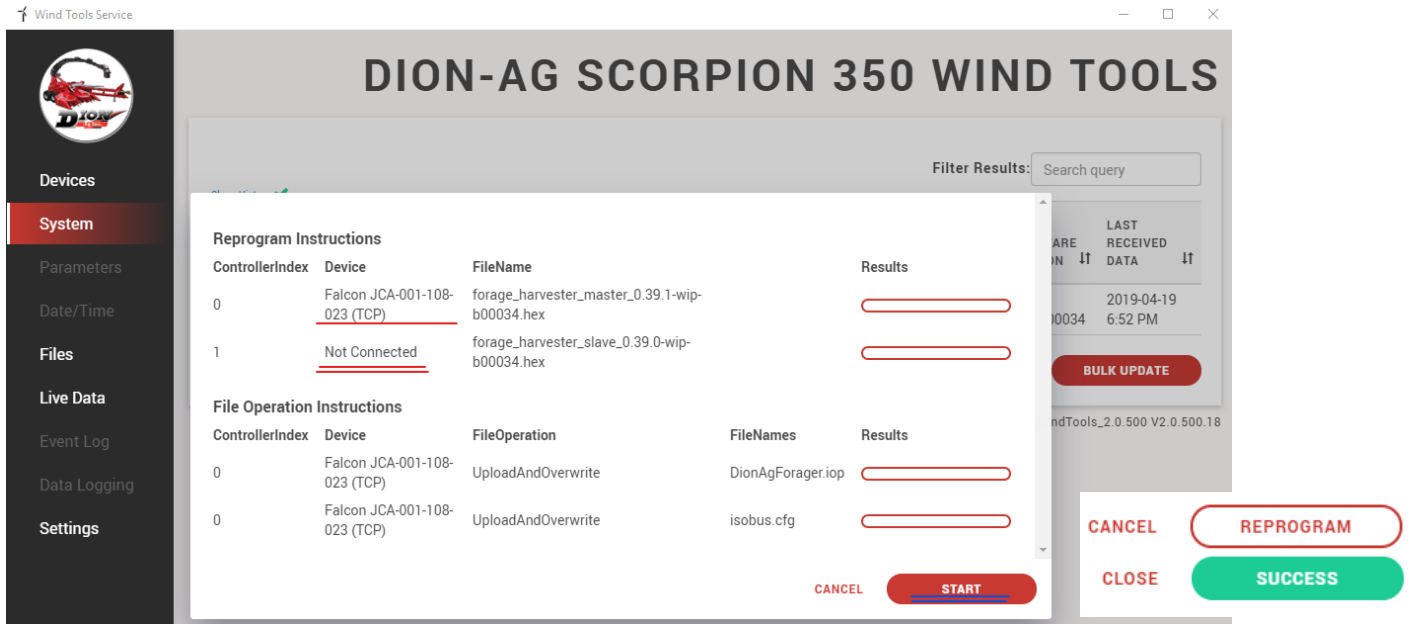
In the pop-up window appearing, locate the proper ".zip" file to install.



A pop-up window will open in WindTools and the state of the controllers will be displayed.

**IMPORTANT:** For the Scorpion 350, the two controllers (*Falcon* and *Oriole*) must be visible and connected before updating. In the example below the *Oriole* controller is not connected and the update will not be completed.

Start the update by clicking "START" which will become "REPROGRAM". Click again. In case of an error during the installation, restart the procedure. When completed, the button will change for "SUCCESS" highlighted green.



**IMPORTANT:** The *Falcon* controller is rebooted automatically during the updated. If the Wifi is not automatically reconnecting reconnect it manually. (Scorpion 350 only)

# USING WINDTOOLS

## LIVE DATA

The **Live Data** tab shows the state of the harvester and its sensors in real time, including the metal detector and other systems. It is the preferred tool for diagnostic and servicing. *WindTools* can display the harvester live data in real time in the field having the laptop computer in the tractor cab. Refer to the service manual for more diagnostic procedure details.

**DION-AG SCORPION 350 WIND TOOLS**

Filter Results: Search query

Show History

LIVE DATA

GENERAL PARAMETERS

|   |         |   |         |
|---|---------|---|---------|
| <input type="checkbox"/> 2001 Controller Sensor Reference Voltage | 5,195 v | <input type="checkbox"/> 2003 Slave Controller Status | OFFLINE |
| <input type="checkbox"/> 1062 Stinger Model                       | TRUE    |   |         |

HARVESTER DRIVE MODE CONTROL

|   |      |  |     |
|---|------|--|-----|
| <input type="checkbox"/> 2070 Current State     | Lock | <input type="checkbox"/> 2080 Work Light State               | OFF |
| <input type="checkbox"/> 2090 Spout Light State | OFF  | <input type="checkbox"/> 2100 Reverse to Clear Pulse Counter | 0   |
| <input type="checkbox"/> 2100 Quick Stop State  | STOP |  |     |

QUICK STOP CONTROL

|  |      |   |      |
|--|------|---|------|
| <input type="checkbox"/> 2100 Quick Stop State | STOP | <input type="checkbox"/> 2101 Quick Stop Output Error State | None |
|--|------|---|------|

FEEDROLL SETTINGS AND STATUS

|  |     |   |     |
|--|-----|---|-----|
| <input type="checkbox"/> 1075 Top Feedroll PPR | 304 | <input type="checkbox"/> 1076 Bottom Feedroll PPR | 229 |
|--|-----|---|-----|

GRAPH

WindTools\_1.7.0 V1.7.0.12

## DISPLAY LIVE DATE

It is possible to display the live data on a graph. Select the data you want to display and click the "GRAPH" button. For best results, use data that has similar units, but up to 2 different scales on the same graph are possible. See the example below.

**DION-AG SCORPION 350 WIND TOOLS**

Filter Results: Search query

Show History

LIVE DATA

OUTPUT ERROR STATES

|  |      |  |      |
|--|------|--|------|
| <input type="checkbox"/> 2089 Spout Light Output Error State | None | <input type="checkbox"/> 2173 Inoculant Output Error State | None |
| <input type="checkbox"/> 2290 Hitch Output Error State       | None |  |      |

PRESSURE SENSOR

|  |           |   |         |
|--|-----------|---|---------|
| <input type="checkbox"/> 1053 Maximum Pressure Level     | 15000 psi | <input type="checkbox"/> 1054 Maximum Raw Voltage Level | 5000 mV |
| <input checked="" type="checkbox"/> 2140 Pressure Port B | 15 psi    | <input type="checkbox"/> 2141 Raw Voltage (Port B)      | 5 mV    |
| <input checked="" type="checkbox"/> 2142 Pressure Port A | 6 psi     | <input type="checkbox"/> 2143 Raw Voltage (Port A)      | 2 mV    |

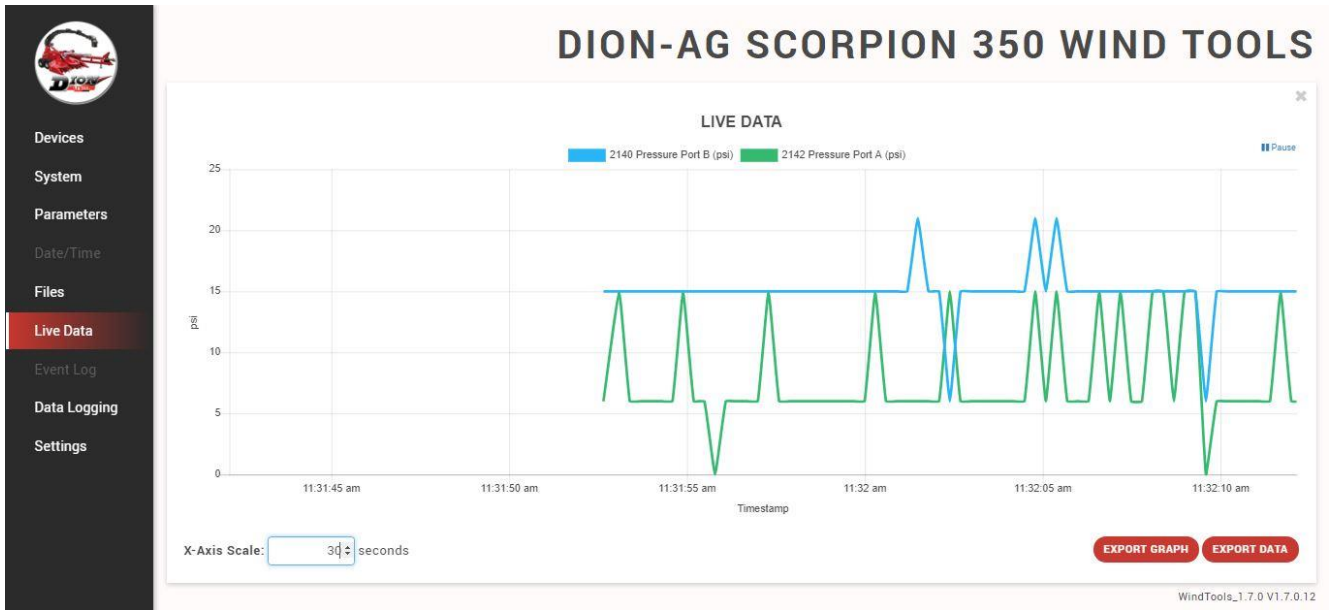
VT SOUND

|  |          |   |      |
|--|----------|---|------|
| <input type="checkbox"/> 2187 Status                   | DISABLED | <input type="checkbox"/> 2185 Multiple Frequency Output | NO   |
| <input type="checkbox"/> 2184 Adjustable Volume Output | NO       | <input type="checkbox"/> 2183 Last Played Audio Type    | None |
| <input type="checkbox"/> 2186 Last Error Status        | None     |   |      |

GRAPH (2)

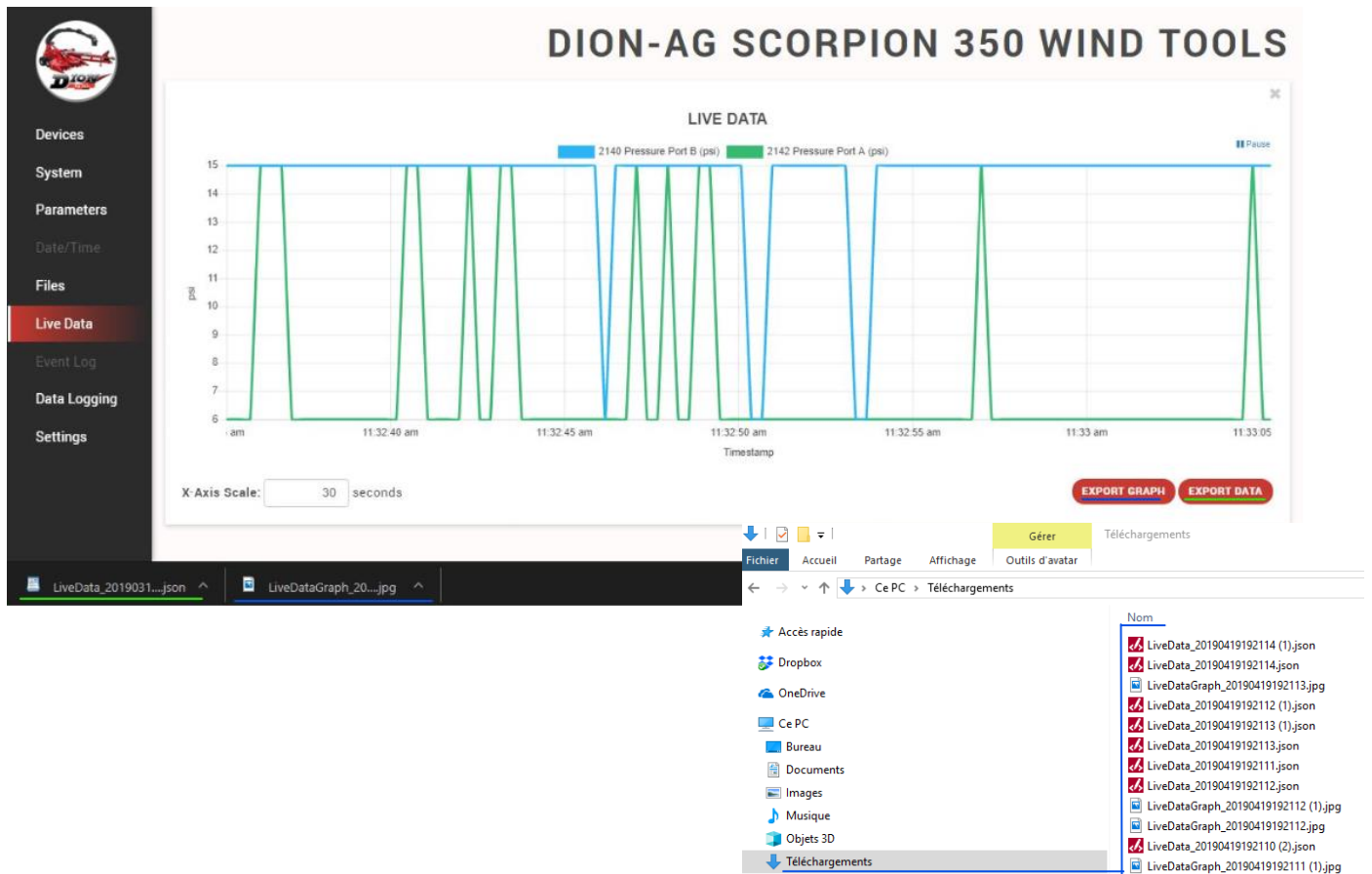
WindTools\_1.7.0 V1.7.0.12

# USING WINDTOOLS



## DOWNLOAD THE DATA

When a graph is obtained, it is possible to export it by clicking "EXPORT GRAPH" or "EXPORT DATA" buttons. The graph displayed will be automatically download in the **Downloads** folder of the Laptop computer. These files can be emailed or a picture of the screen can be sent to the Dion-Ag service department for support on an issue.



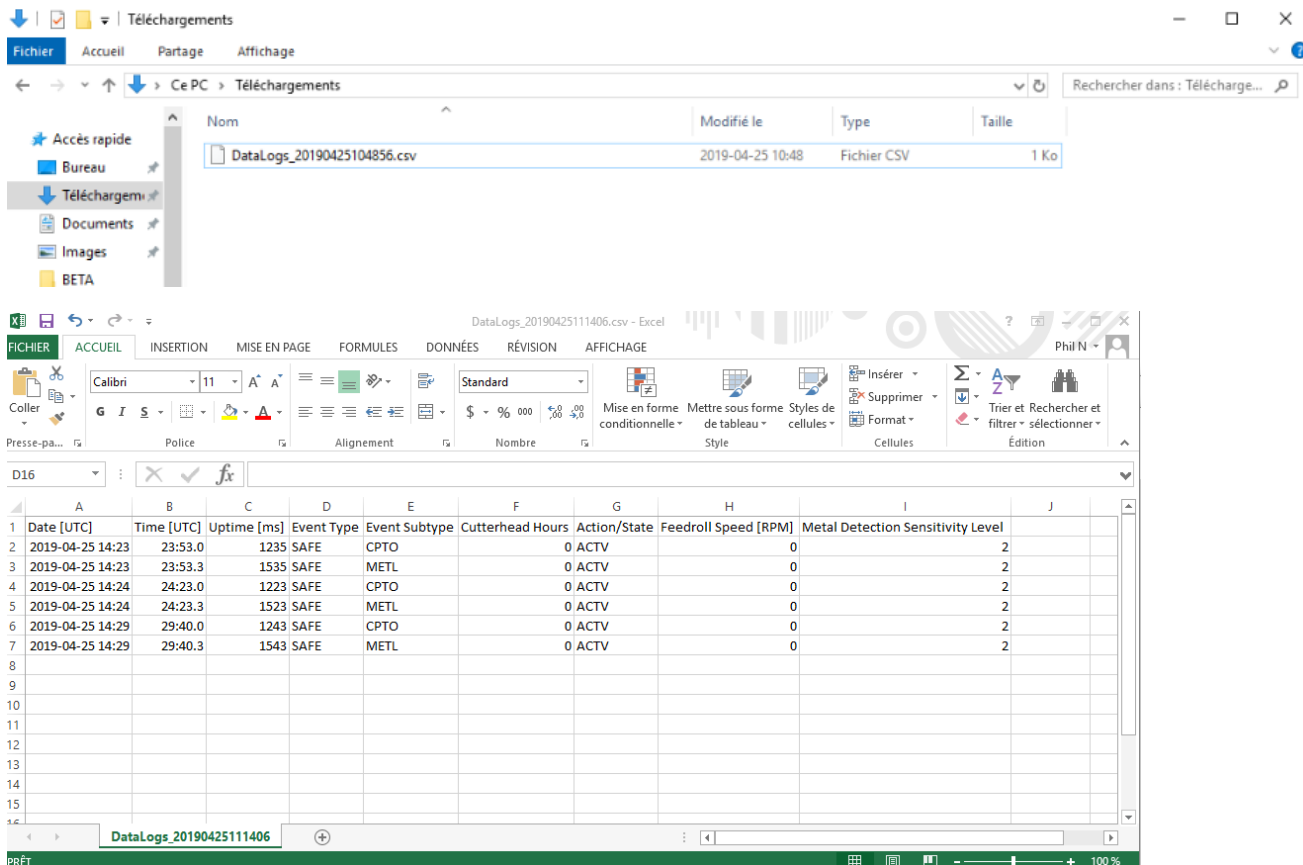
## DOWNLOAD THE EVENT LOG

To access the datalogs on the harvester, select « Data Logging » tab in WindTools. The data file can be downloaded and can be used for diagnostic or warranty claim analysis.

Select the file and click the download icon. Then select the “DOWNLOAD » button. The file will be automatically downloaded in the **Downloads** folder of the Laptop computer in the format “DataLogs\_YEARMMDDTIME.csv”.



The file can be emailed to the Dion-Ag service department ([service@dion-ag.com](mailto:service@dion-ag.com)) for support or open directly in a spreadsheet software such as *Microsoft Excel* to display the content.





# TROUBLESHOOTING

In the case the *Windtools* installation or operation fails, check the following possible causes.

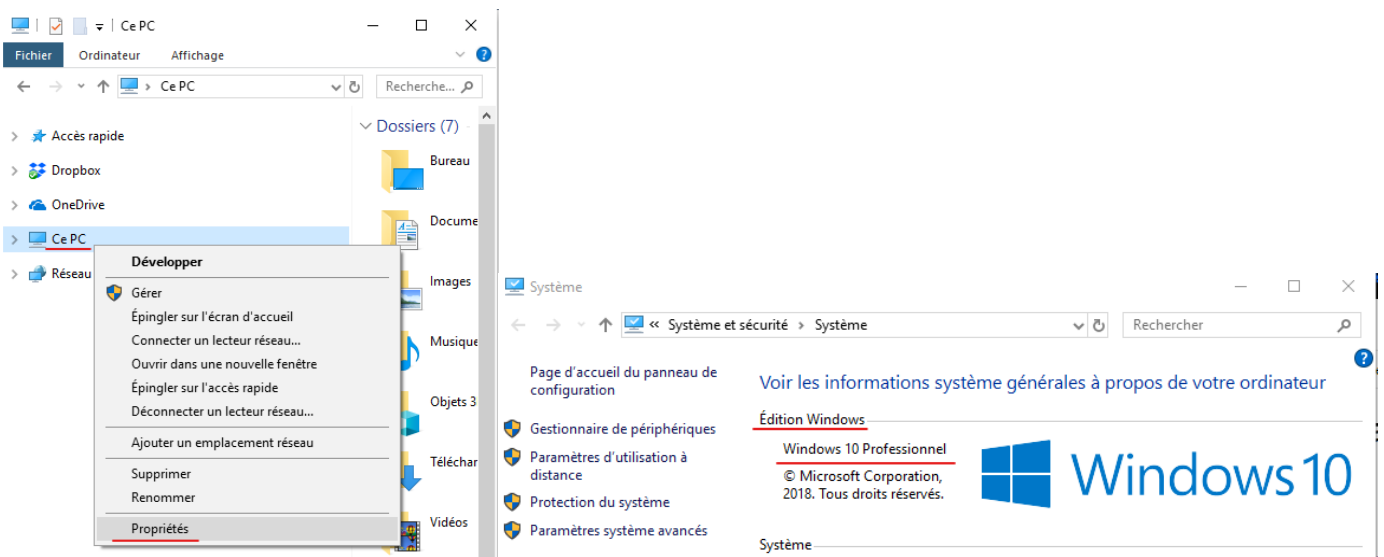
## .NET FRAMEWORK ISSUE

On *Windows* versions prior to *Windows 10*, it is possible that *.NET* functionality required by *WindTools* might be missing or require an update. In this case, an error message will be displayed when installing *WindTools*, signaling the *.NET framework* issue.

**IMPORTANT:** *WindTools* is not supported by *Windows* version prior to *Windows 7*.

## CHECKING THE WINDOWS VERSION INSTALLED

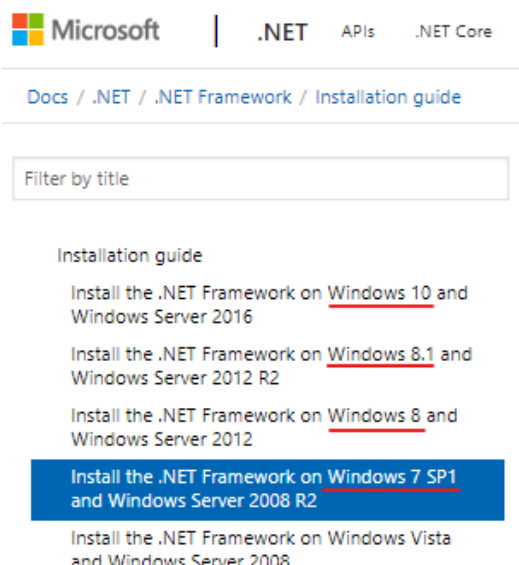
This information is available by right-clicking on « This PC » in the file explorer, and then selecting « propriétés ».



## INSTALL THE LATEST .NET FRAMEWORK ON WINDOWS 7 OR WINDOWS 8

To download the latest update go to: <https://docs.microsoft.com/en-us/dotnet/framework/install/on-windows-7>.

To install select the right *Windows* version installed on the laptop.



Then follow the installation procedure.

Microsoft | .NET | API | .NET Core | .NET Framework | ASP.NET | Xamarin | Azure

Docs / .NET / .NET Framework / Installation guide Feedback Edit

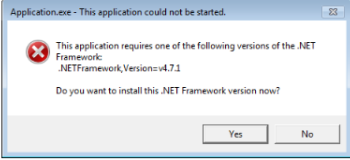
Filter by title

- Installation guide
- Install the .NET Framework on [Windows 10](#) and [Windows Server 2016](#)
- Install the .NET Framework on [Windows 8.1](#) and [Windows Server 2012 R2](#)
- Install the .NET Framework on [Windows 8](#) and [Windows Server 2012](#)
- Install the .NET Framework on [Windows 7 SP1](#) and [Windows Server 2008 R2](#)**
- Install the .NET Framework on [Windows Vista](#) and [Windows Server 2008](#)
- Install the .NET Framework on [Windows XP](#) and [Windows Server 2003](#)
- Installation guide for developers
- Repair the .NET Framework
- Troubleshoot blocked .NET Framework installations and uninstallations
- Install the .NET Framework 3.5 on [Windows 10](#), [Windows 8.1](#), and [Windows 8](#)
- Run .NET Framework 1.1 apps on [Windows 8](#), [Windows 8.1](#), or [Windows 10](#)

## Install the .NET Framework on Windows 7 SP1 and Windows Server 2008 R2

04/09/2018 • 2 minutes to read • Contributors all

The .NET Framework is required to run many applications on Windows. You can use the following instructions to install it. You may have arrived on this page after trying to run an application and seeing the following dialog on your machine.



These instructions will help you install the .NET Framework versions you need. The [.NET Framework 4.7.2](#) is the latest version. It is supported on [Windows 7 SP1](#) and [Windows Server 2008 R2](#) and is included with [Windows 10 October 2018 Update](#) and the [Windows 10 April 2018 Update](#).

### .NET Framework 4.7.2

[Download .NET Framework 4.7.2](#)

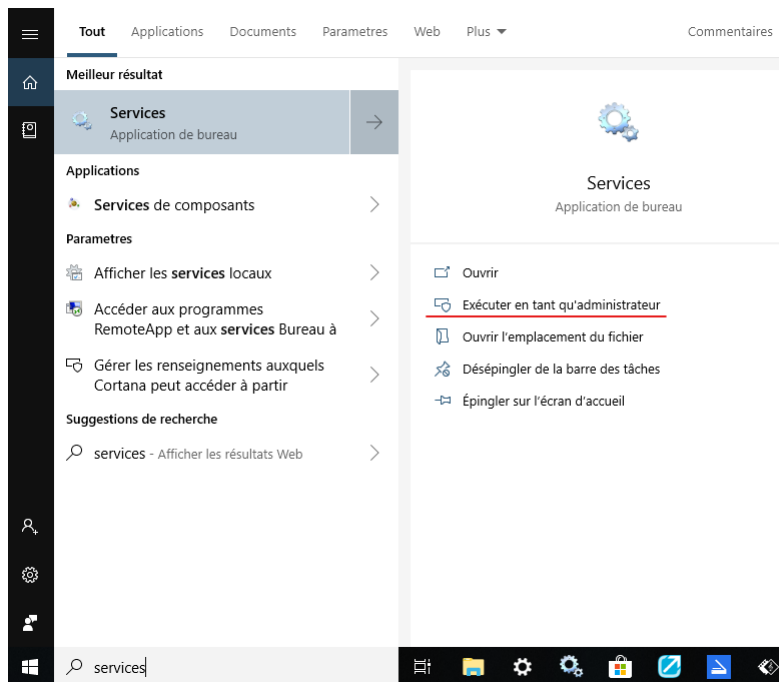
The [.NET Framework 4.7.2](#) can be used to run applications built for .NET Framework 4.0 or later.

## CHECKING/ACTIVATING WINDOWS SERVICES

It is possible that the *Windows Service* associated with *WindTools* crashes or fails. Restart the Windtools if the app crashes during usage. If the problem repeats itself, two solutions are possible:

1. Uninstall *WindTools* and reinstall.
2. Manually restart the *Windows Services*. To do so, follow this procedure:

With the *Windtools* open, type "*Services*" in the search bar, Select the *Services* app in the results and click "Run as administrator".



The following window will appear. Locate the « *WindToolsService* » in the list. Right-click and select “Start” or “Restart”  
The service is now active and *WindTools* will reconnect to the harvester.

