



# Bridgestone iTrack



## **V5 Sensor Trial**

### **V5 SENSOR ASSEMBLY AND INSTALLATION GUIDE**

**February 2024**

**Version: 1.2**

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## Trial Overview

### Trial Overview

As part of ATMS Technology's commitment to product quality and innovation, we are trialling new V5 Magmount sensor assembly. The operation of the sensor remains the same.

This product development has evolved over several months of research, development, and laboratory testing. We are now at the final field trial stage, and we thank you in advance for your cooperation our field trials as this is an important part of our quality assurance process.

### Purpose

The purpose of this guide is to detail how to install and manage the V5 sensors during this field trial. The V5.0 sensor transmits temperature and pressure from within the tyre chamber. The sensor assembly is part of the iTrack II system and comprises of a pre-assembled sensor on a magnetic mount.

**Please note:** The V5 magmount is an internally fitted temperature and pressure sensor and will only detect changes in temperature and pressure within the tyre chamber and not events that do not change these measurements.

## SENSOR INSTALLATION GUIDE

### Installation Guide

**Differentiation:** The V5 sensor can be identified due to the red brass cap on the sensor. The sensor will also have a 'V5' engraving.



**Fitment:** The V5.0 sensor assembly is supplied preassembled and requires no further assembly or configuration. The Sensor will activate under pressurisation in the tyre.



**Fitment Location:** Internal. Inside the wheel and tyre assembly. The sensor magnetically attaches to the rim base or bead seat band.

**Trial Secondary Sensor:** This sensor is part of a trial and will be fitted as a secondary sensor so not to interfere with the existing iTrack system. For example, there should be already an existing approved sensor and the V5 sensor will be a secondary sensor in the wheel.

**Duration:** To remain fitted on the wheel rim for a minimum period of 26 weeks and not removed without instruction from Bridgestone / ATMS

**Removal:** Upon permission from Bridgestone / ATMS. Once removed please inspect the physical sensor for any damage and take photos of the sensor.

**Photos of the removed sensor:** Please send the photos of the removed sensor to [v5@atmstechnology.com](mailto:v5@atmstechnology.com) or your local iTrack representative. Please include any feedback on any observed damage to the sensor.

**Disposal:** The sensor contains a non-rechargeable coin-type lithium metal battery and should be disposed of according to local government battery disposal requirements.

**Enquiries:** Please contact your local iTrack representatives or email any questions to [v5@atmstechnology.com](mailto:v5@atmstechnology.com)

## Roles & Responsibilities

	Responsibility	When / frequency
Sales Co. (Service provider)	<b>Installation</b> Installation of V5 sensors as a secondary sensor.	Shortly after obtaining V5 sensors
	<b>Fitment Information:</b> Send V5 sensor fitment information to ATMS <a href="mailto:v5@atmstechnology.com">v5@atmstechnology.com</a>	Each time each V5 sensor is installed
	<b>Sensor removal:</b> Remove the V5 sensors upon instruction from ATMS and collect them for inspection.	Upon instruction from ATMS.
	<b>Sensor Inspections</b> Send pictures of the removed V5 to ATMS including any feedback of observed damage, etc. <a href="mailto:v5@atmstechnology.com">v5@atmstechnology.com</a>	Each time a removed sensor is collected
	<b>Sensor returns:</b> Ship back the V5 sensors	Only when instructed by ATMS.
ATMS (Ship & Monitor V5 status)	Sensor shipments to Sales Co and selected trial sites	at appropriate time
	Removal Instructions: Inform Sales Co. the sensor is to be removed	After 26 weeks from installation Or if an issue is observed in Webtrack

## FITTING THE SENSOR ASSEMBLY

### PARTS LIST

1 x Magmount sensor assembly V5.0

1x Sensor assembly insertion tool.

(You'll need to source your own extendable pole to suit your requirements).



#### Before you begin:

Make sure you note the sensor serial number and the wheel position it will be fitted in for your records and use later. The sensor serial number is the large, middle five-digit number. Use the log provided in Appendix A. This information needs to be added to WebTrack. For more details, refer to Step 3. Complete the installation and register each sensor to Webtrack.

Unique serial number (ID)



Follow all PPE and safety standards as per your mine's requirements to complete this procedure. It is recommended that you complete a risk assessment prior to commencing the installation.

You can use the [Appendix A - iTrack II Sensor Fitment Detail](#) to help you keep records of the installation.

## Horizontally mounting the sensor assembly on the bead seat band.

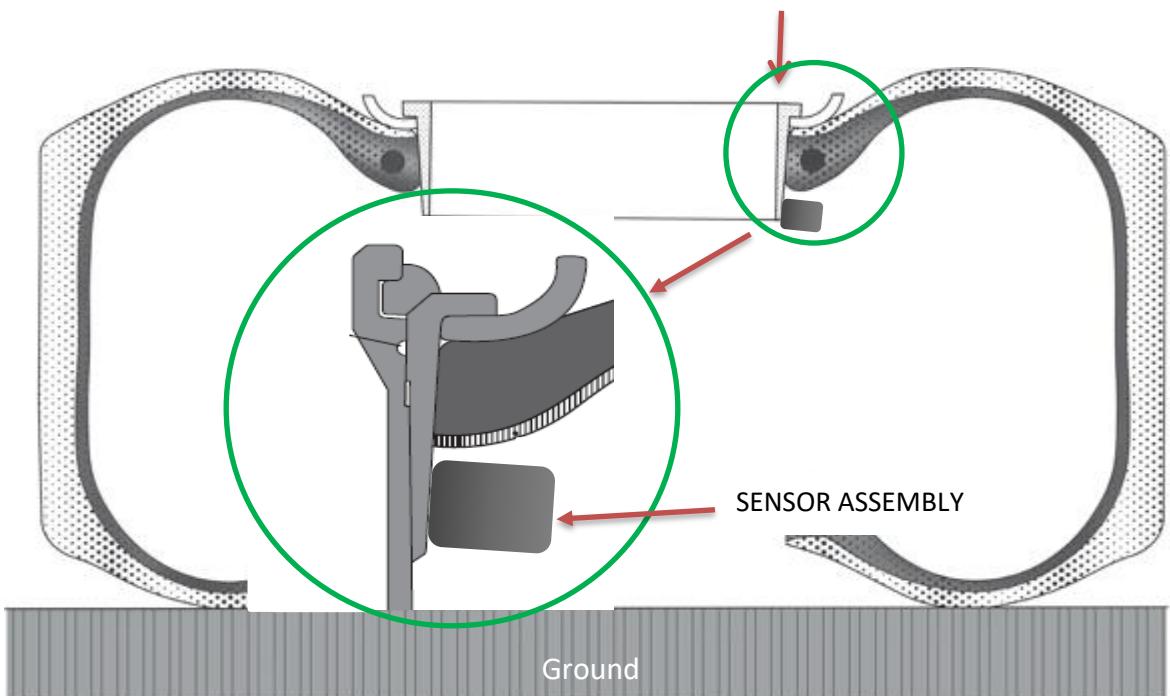
NOTE: This procedure should take place BEFORE mounting the tyre.

Fit the bead seat band and the outer flange assembly to the tyre in the horizontal position.

Attach the sensor assembly to the inside edge of the bead seat band, orientated with direction of travel.

NOTE: Choose a flat clean, metal surface along the bead seat band and an area that does not move during the mounting of the tyre. A ladder may be required to access the inner tyre area and if so, follow your site's standard safety procedures for using a ladder to go in and out of a horizontal tyre. Once the sensor assembly is mounted to the bead seat band fit the rim components make up the wheel.

### BEAD SEAT BAND



With tyres that have a much larger bead, you cannot mount the sensor on the bead seat band. To install a sensor on a vertically mounted tyre, you must follow your Safe Working Practice (SWP) outlined by your site or tyre service provider.

**NOTE:** We can advise your Health and Safety department on how best to fit the procedure into the site SWP. Ask your ITrack representative for more details.

**WARNING:** This action should be performed by an experienced tyre handler operator and tyre fitter and must follow all health and safety regulations of your mine. If this procedure is in breach of those regulations, DO NOT perform this step. Contact your ITrack representative for more assistance.

### Tyre Handler Operator:

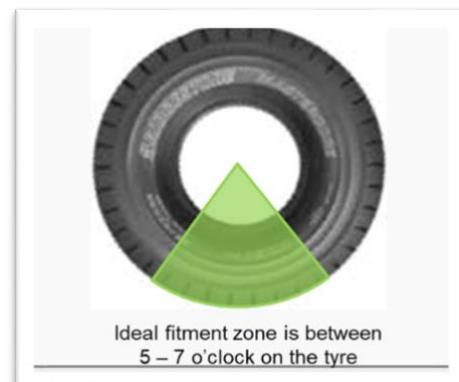
- Using the tyre handler, place the first bead of the tyre no more than 80% on the rim.
- Hold the tyre in place, supported by the tyre handler.
- Turn off the tyre handler, lock it out and add wheel chocks to prevent the tyre handler from moving.

## Tyre Fitter

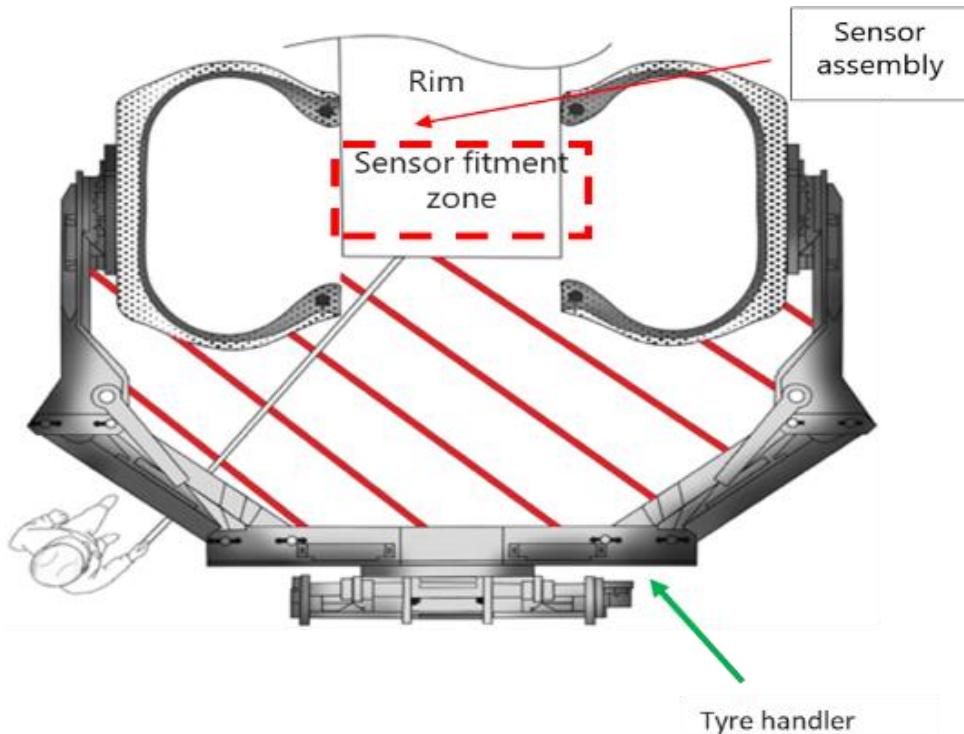


Place the sensor assembly in between the fork section of the mounting tool provided. As shown in images below.

The fitment should be fitted between 5 & 7 o'clock positions on the tyre to prevent the sensor from falling out of the fitment tool during fitment.



**WARNING:** The tyre fitter should NOT move in between the tyre handlers' arms and the tyre. If the mine has a safety procedure to enter this area, you follow that procedure at your own risk. Make sure you have a pole long enough to reach the inside of the tyre from outside the line of fire, marked in red.



## Sensor Fitment

- Attach the mag mount to the under the inside edge of the rim.
- Fit the sensor in line with the rotation so that the base flexes to fit with rim curvature.
- Move to a safe location away from the tyre handler and the tyre so the installation of the tyre can proceed safely.

### Result:

The tyre handler operator may proceed with the tyre installation once the tyre fitter has moved to a safe space.



**NOTE: The sensor assembly must be orientated side on to the direction of wheel rotation as shown below.**

## Webtrack

**Complete the installation and register each sensor to Webtrack.**

1. Clean the work area and remove all tools.
2. Once the sensor is installed, record the fitment details that include at least the following:
  - a. Name of the truck
  - b. The position of the sensor(s) (1, 2, 3, 4, 5 or 6) that are installed.
  - c. Date and time of installation.
  - d. Name of the person who performed the installation.
3. See the example record sheet below (Appendix A)
3. Send this log information to the technician responsible for configuring the sensors to WebTrack, the web tool of the iTrack system.

### Important Points:

- V5 sensor status will not appear on the client's Webtrack during the field trial. (Only ATMS can monitor the status)

## **Tyre Rotation and Replacement**

We kindly request that upon tyre rotation or replacements that the trial sensor is replaced into the same position and it should not be moved to stock or another position at a later stage. This is to avoid confusion with other V4 sensors in stock and to ensure it remains active in a wheel for the full duration of the trial.

## APPENDIX A: INSTALLATION DETAILS

<b>Sensor Type:</b>	V5.0
<b>Customer/Site</b>	
<b>Vehicle ID/Registration</b>	
<b>Vehicle Type</b>	
<b>iTrack II Hub ID</b>	
<b>Fitment Date</b>	
<b>Odometer (km/hrs)</b>	

### Sensor Fitment

Front tyres recommended cold inflation \_\_\_\_\_ psi/kpa

POSITION #		POSITION #	
SENSOR #		SENSOR #	
SENSOR #		SENSOR #	
TYRE #		TYRE #	
Size		Size	
Wet/Dry		Wet/Dry	

Rear tyres recommended cold inflation \_\_\_\_\_ psi/kpa

POSITION #		POSITION #		POSITION #		POSITION #	
SENSOR #		SENSOR #		SENSOR #		SENSOR #	
SENSOR #		SENSOR #		SENSOR #		SENSOR #	
TYRE #		TYRE #		TYRE #		TYRE #	
Size		Size		Size		Size	
Wet/Dry		Wet/Dry		Wet/Dry		Wet/Dry	

Installed by: \_\_\_\_\_ Signed: \_\_\_\_\_ Date: \_\_\_\_\_

## APPENDIX B: REGIONAL APPROVALS

### FCC Compliance

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The antennas used for this transmitter must be installed to provide a separation distance of at least 20cm from all persons and must not be located or operating in conjunction with any other antenna or transmitter.

### ISED Compliance

This device complies with ISED licence-exempt RSS standard(s).

Operation is subject to the following two conditions:

- (1) This device may not cause interference, and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

The antennas used for this transmitter must be installed to provide a separation distance of at least 20cm from all persons and must not be located or operating in conjunction with any other antenna or transmitter.

#### Francais:

Cet appareil est conforme aux normes RSS exemptes de licence d'ISDE.

Le fonctionnement est soumis aux deux conditions suivantes :

- (1) Cet appareil ne doit pas causer d'interférences, et
- (2) Cet appareil doit accepter toute interférence, y compris les interférences susceptibles d'entraîner un fonctionnement indésirable de l'appareil.

Les antennes utilisées pour cet émetteur doivent être installées de manière à fournir une distance de séparation d'au moins 20 cm de toutes les personnes et ne doivent pas être situées ou fonctionner en conjonction avec une autre antenne ou un autre émetteur.