iPRESS
User manual

PLS-932		
Revision	**Date**	**Details**
00	Apr. 11th, 2023	Version released for entry into service
01	June 12th, 2023	Disclaimer, App. Screenshots & magnet location updated
02	July 7th, 2023	Figures updated, minor changes in the text

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DISCLAIMER

The individual tire pressure displayed in this application must be cross-checked quarterly by means approved by the aircraft and/or tire manufacturer(s).

Regardless of iPRESS, tire pressure checks must be accomplished according to the applicable regulations and aircraft and/or tire manufacturer procedures.

Parker-Meggitt decline all responsibilities in case of failure to comply with the above.

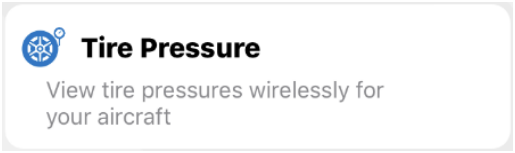
Table of Contents

1. Foreword

Congratulations, you are now using the most modern and convenient means to check your aircraft tire pressures! This manual will help you make the most of iPRESS.
This manual is intended for end users of iPRESS, once the system is installed on aircraft. Maintenance staff looking for installation and maintenance instructions should refer to the installation manual (document ref. PLS-401) or the maintenance manual (document ref. PLS-402). Please refer to chapter 12 of this manual for contact details.

Using iPRESS requires a smartphone (or tablet, or any other compatible device – collectively called "smartphone" in this manual) running the *Textron Aviation Service* mobile application, specifically the 'Tire Pressure' functionality (called "App" in this manual).
This application can be downloaded from the *App Store* for Apple devices or *Google Play* for Android devices. Please liaise with Textron Aviation for details on App availabilities.

Once the App is installed, enter the iPRESS menu by tapping on the Tire Pressure icon:



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This manual is purely about iPRESS and its interaction with the App. Issues with your smartphone or the App itself are not dealt within this manual. For any issues with your smartphone or the App, liaise with your smartphone manufacturer or Textron Aviation respectively.

Screenshots in this document come from Textron Aviation Service App version 7.2 for Apple iOS. Details may vary in other versions.

2. iPRESS facts

iPRESS uses **Bluetooth®** Low Energy. Your smartphone must be compatible and the Bluetooth® must be enabled.

iPRESS is intended for use on ground only, on a parked aircraft. It is not intended for use in flight or on a moving aircraft.
iPRESS operates between -20°C and +70°C (-4°F and +158°F). Outside this range, iPRESS does not transmit over Bluetooth® in order to preserve its battery.

Tire servicing must be accomplished according to the aircraft and/or tire manufacturer procedures. Specifically, iPRESS must not be used during tire inflation or deflation. The pressure gauge of the inflation equipment must be used.

An important message is displayed on the App at first use. iPRESS can only be used if this message is read, understood and agreed.

WARNING: Failure to read, understand and comply with this message may lead to unsafe aircraft operation.

iPRESS is designed for a two-year service life. It is powered by a non-rechargeable battery.

3. Applicability

This document applies to the following part number(s):

- 423-420-099-022

The part number of a sensor is engraved on its front face (see Figure 1) and can be displayed on the App (see chapter 7.2).

4. Part presentation

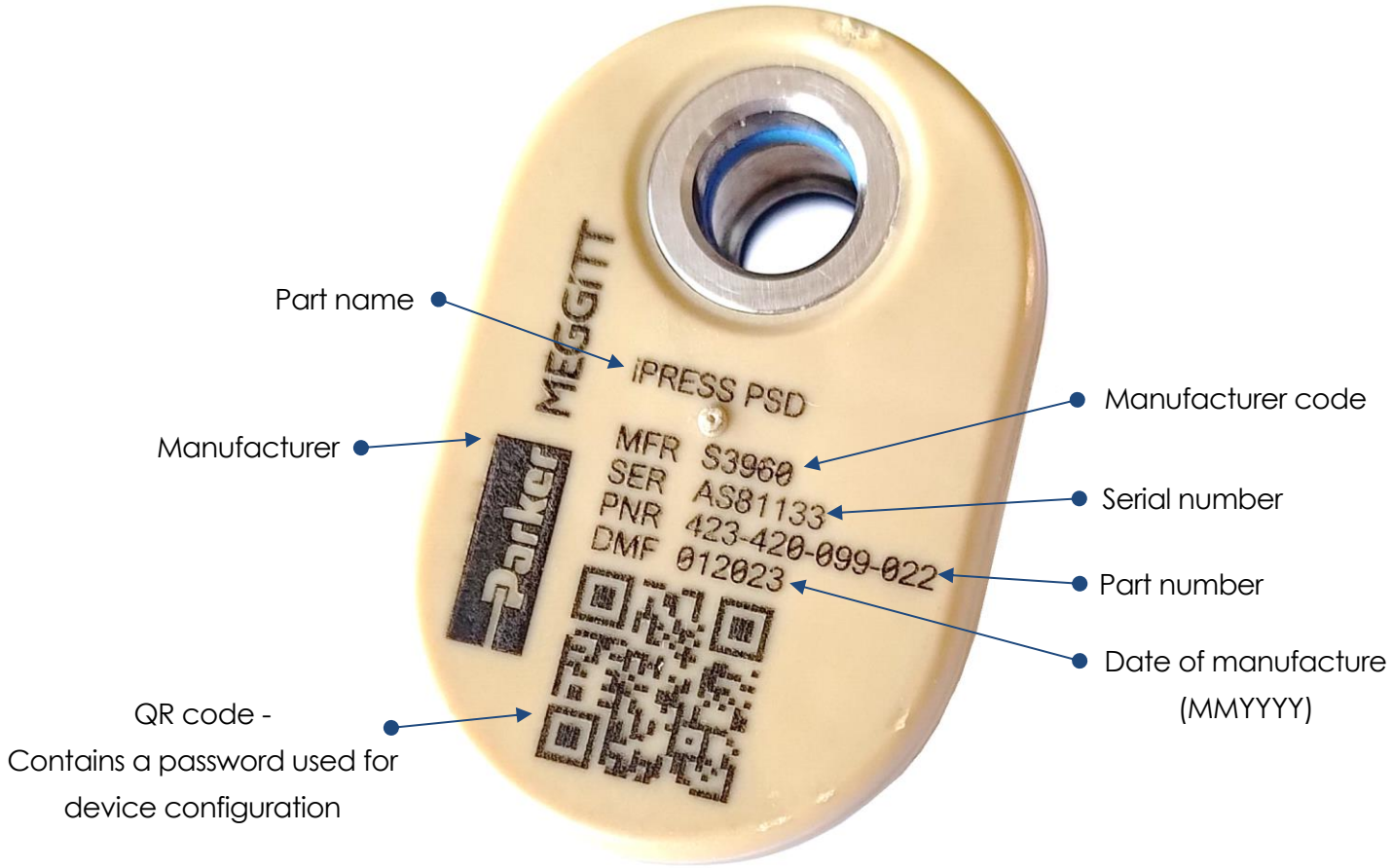

Figure 1

5. iPRESS configuration

iPRESS needs to be configured before first use. The configuration consists in setting the aircraft tail number, the number of wheels and the position of each sensor.
The configuration must be performed once all sensors are installed on the aircraft. It must be repeated every time a sensor is moved from one wheel to another or from one aircraft to another.
The configuration is performed via the App.

a) Tap on 'Configure' at the bottom left of the screen.

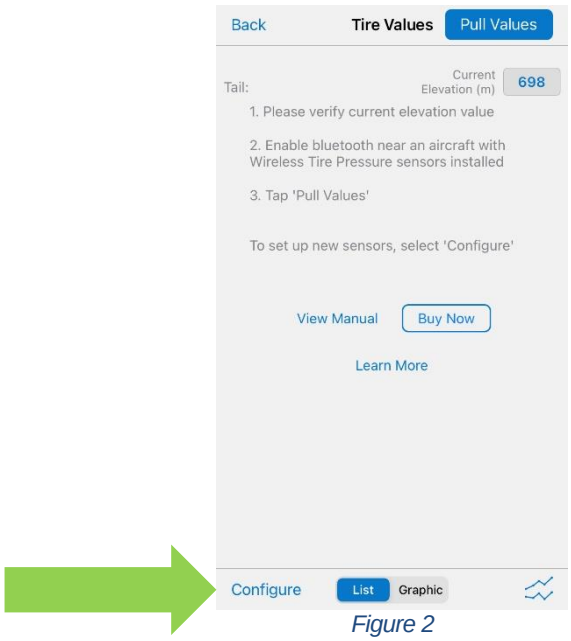

Figure 2

b) Select the sensor(s) that you want to configure among the sensors detected by your smartphone. The sensors are identified with their serial number. The serial number of a sensor is engraved on its front face (see Figure 1).

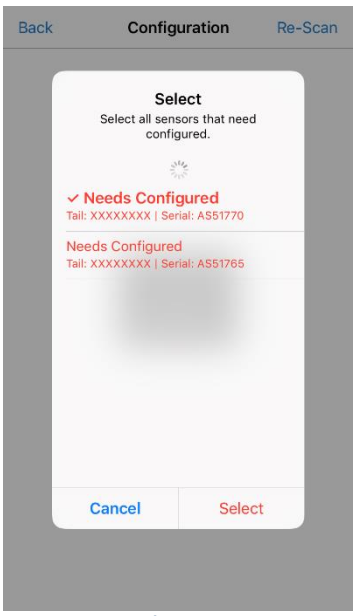

Figure 3

c) Type in the registration number of your aircraft in the 'Aircraft Tail Number' field (up to 8 characters). This will be used to identify your aircraft in case there are several aircraft fitted with iPRESS nearby.

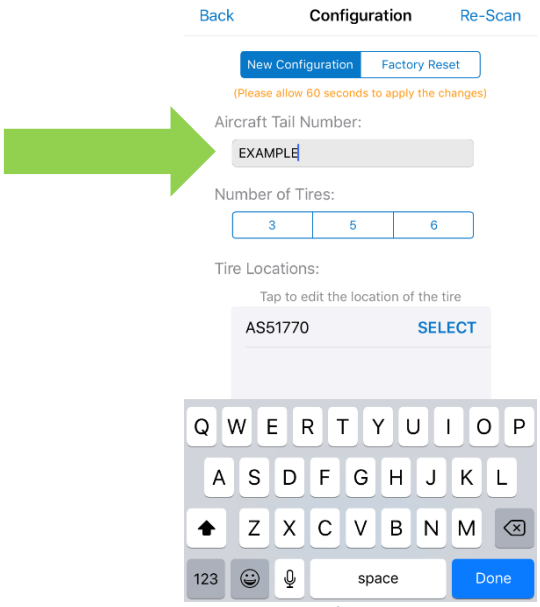

Figure 4

d) Select the number of wheels of your aircraft.

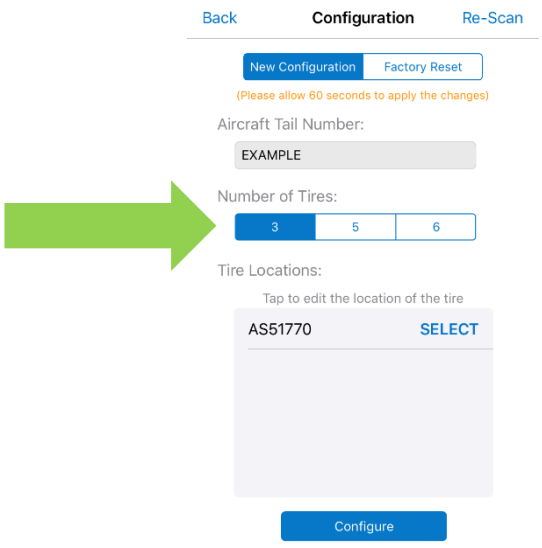

Figure 5

e) After having selected the number of wheels of your aircraft, select the position of each sensor (i.e. on which wheel it is installed).

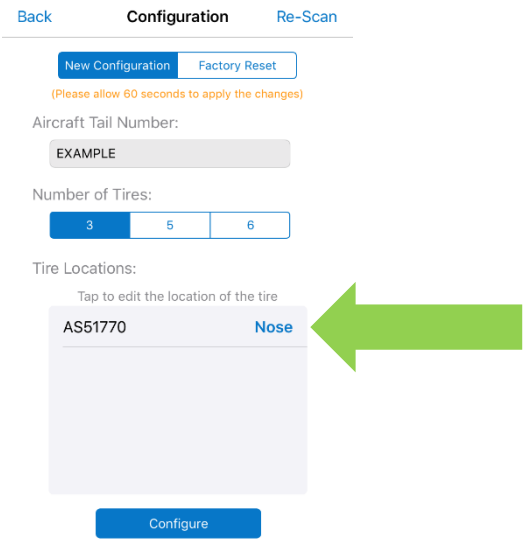

Figure 6

WARNING: For safety reasons, extra care must be taken to set the proper configuration of each sensor.

f) Tap on 'Configure'.

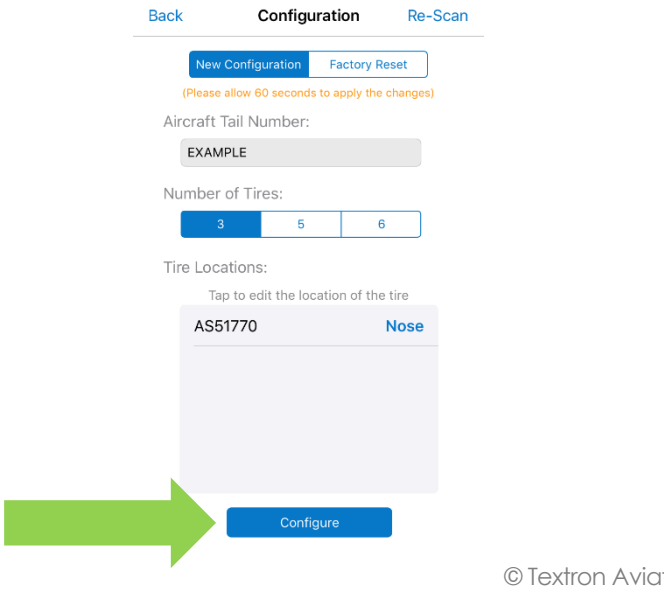

Figure 7

g) If this is the first time you are configuring the sensor, or if you did not save the password in a previous configuration, you are requested to enter a password. This is a security feature. This password is unique to each sensor and is contained in the QR-code engraved on the sensor. To enter the password, you must scan the QR-code of the sensor with your smartphone.

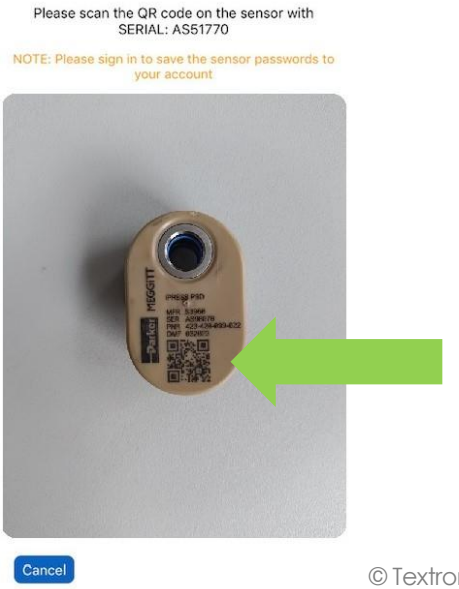

Figure 8

NOTE: The password of that sensor is recorded by the App so that you do not need to re-scan the QR-code if you re-configure this sensor in the future.

h) Double-check and confirm that the configuration you are about to set is correct.

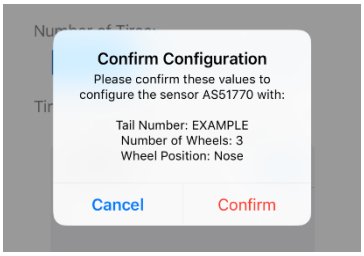

Figure 9

WARNING: For safety reasons, extra care must be taken to set the proper configuration of each sensor.

The configuration details are stored in the sensor's memory. The sensor will be ready to use a few seconds after that.

6. Elevation setting

WARNING: Failure to set the proper elevation may result in inaccurate tire pressure values and may lead to unsafe aircraft operation.

The App displays gauge pressures, like a standard pressure gauge. For the pressure to be accurate, the elevation at your location must be set. The elevation is used to compute the local atmospheric pressure. The elevation can be set in two ways: It can be manually typed in or it can be automatically fed from your smartphone GPS function.

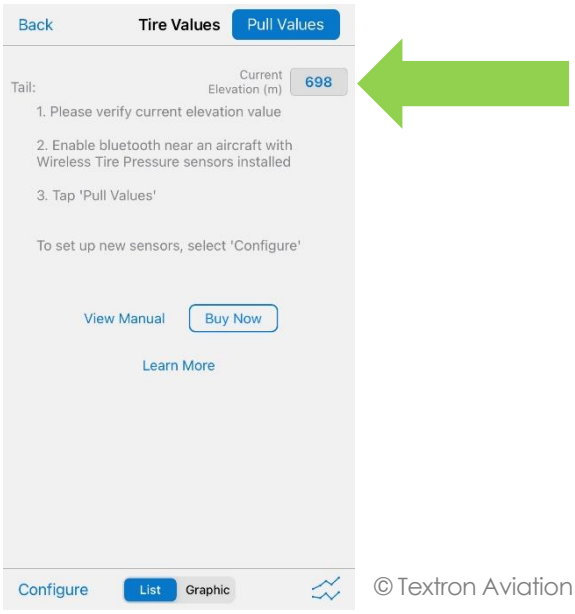

Figure 10

To set the current elevation, tap on the Current elevation field on the main display.

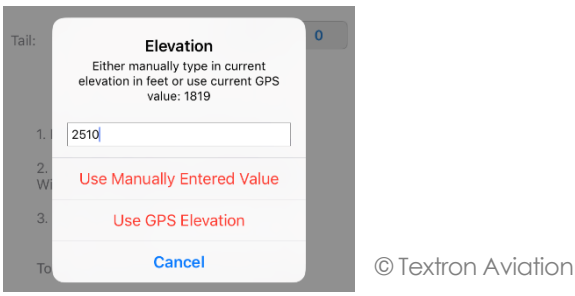

Figure 11

In order to use the elevation from the GPS, the GPS function of your smartphone must be enabled and access to GPS data must be granted to the App. Then tap on 'Use GPS Elevation'.
In order to use a manually set value, type in your current elevation and tap on 'Use Manually Entered Value'.

NOTE: When entering an elevation value manually, the elevation is limited to a maximum of 15.000ft / 4572m.

7. iPRESS usage

7.1. Pre-requisite

Prior to read tire pressures, the following are required:

- Make sure to use a smartphone (or similar device) compatible with Bluetooth®.
- Make sure that the Bluetooth® communication is enabled.
- Make sure that Textron Aviation Service Application is installed and working.
- Make sure that all your sensors are configured (refer to chapter 5).
- Make sure that the elevation is set

The App displays gauge pressures, like a standard pressure gauge. For pressures to be accurate, the elevation at your location must be set. Refer to chapter 6.

WARNING: Failure to set the proper elevation may result in inaccurate tire pressure values and may lead to unsafe aircraft operation.

7.2. Normal operation

To read tire pressures, tap on 'Pull Values' on the top right of the screen.

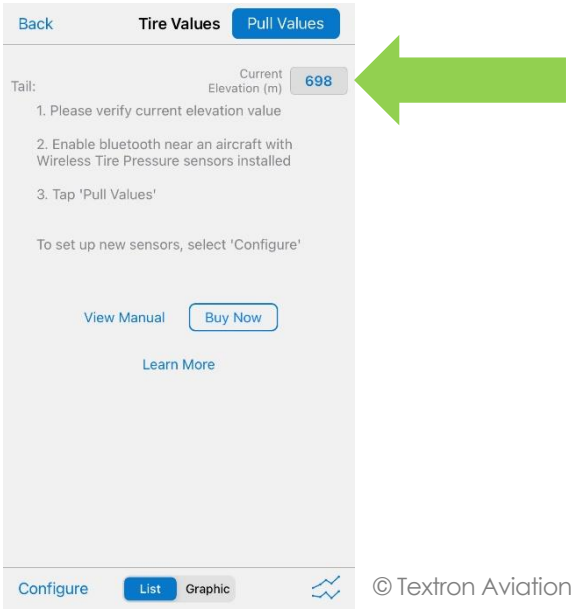

Figure 12

Select your aircraft among the ones detected by your smartphone. Aircraft are identified with their tail number (i.e. registration number).

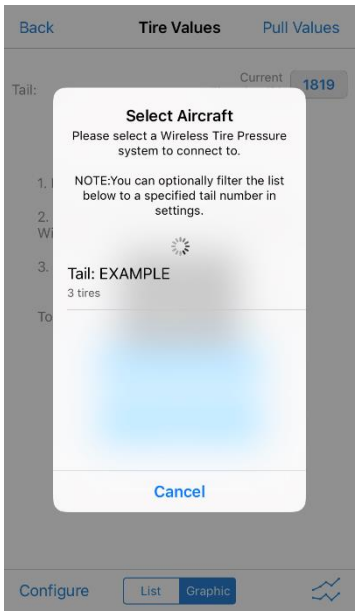

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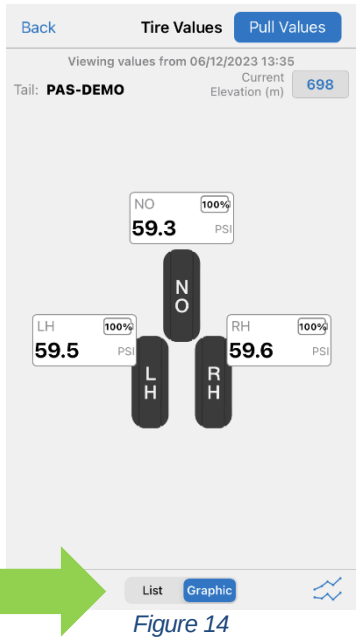
Figure 13

WARNING: You must check that the elevation is correct prior to read the tire pressures.

Tire pressures are then displayed. You can choose between a graphic display and a list display. All screenshots below show the default graphic display.



© Textron Aviation

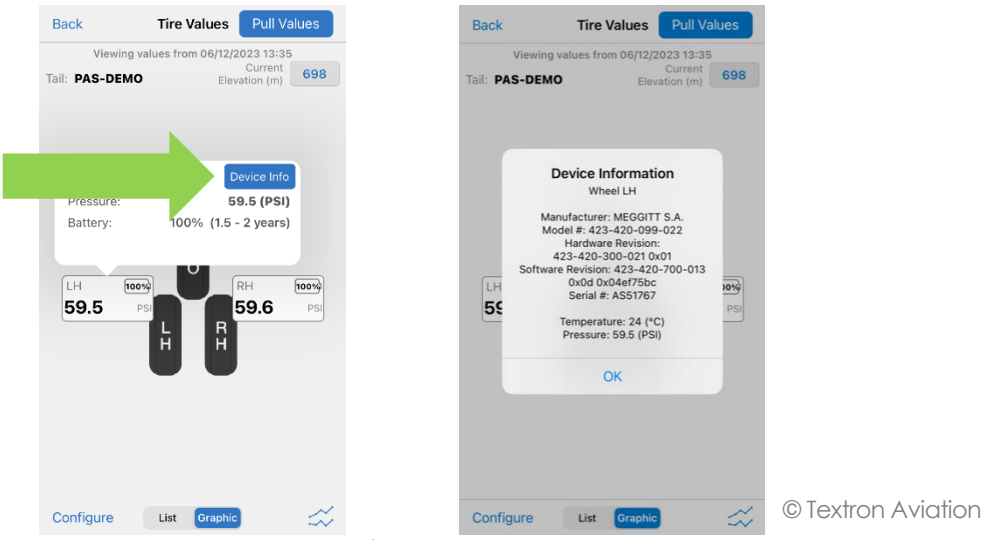
Figure 14

For each sensor found on that aircraft, the remaining battery life is also displayed.

© Textron Aviation

Figure 15

More information on a sensor can be obtained by a tap on it and then on 'Device Info'.



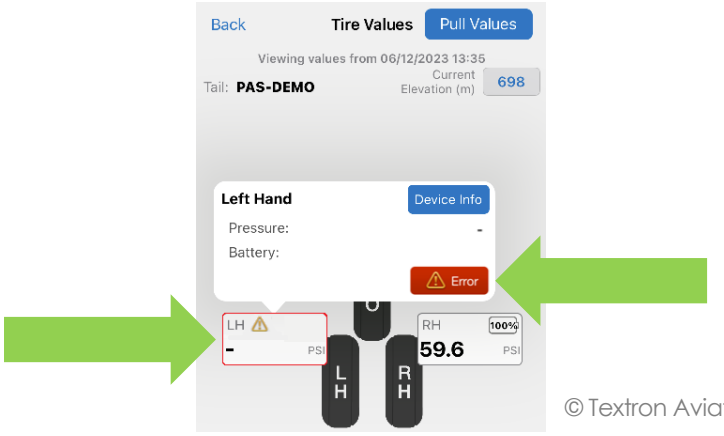
© Textron Aviation

Figure 16

Then detailed information about this sensor are provided (manufacturer data, part numbers, serial number, etc). The temperature of the sensor is also provided.

NOTE: For energy saving reasons, the "Device info" functionality should not be accessed too often. To ensure a long service life of the battery-powered sensor, the number of accesses to the "Device info" functionality is limited to 16 times per hour. A sensor will decline access to the "Device info" functionality for 1h if this number of accesses is reached within a 1h period.

In case of a problem with a sensor, the following indications may also be displayed:

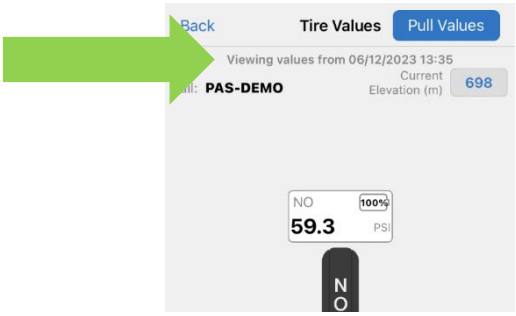


© Textron Aviation

Figure 17

Troubleshooting information are provided in chapter 8.

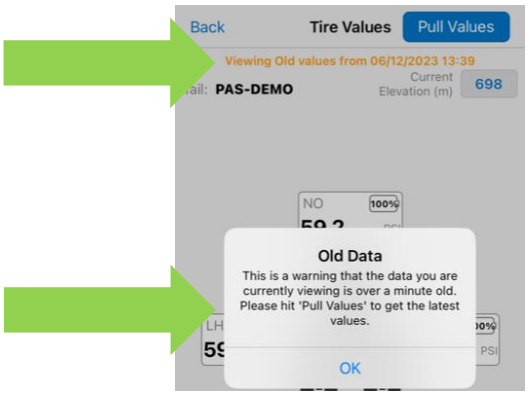
iPRESS measures the tire pressure every 2 minutes. Therefore the pressure displayed may be up to 2 minutes old. The time at which the displayed values were received is shown on top of the screen.



© Textron Aviation

Figure 18

When pressures remain displayed for a long time, a pop-up message warns the user that these values may not be up to date. From that point, the time at which the displayed values were received turns yellow.



© Textron Aviation

Figure 19

The pressure measurement can be refreshed by tapping on 'Pull Values' or by tapping on 'Device Info'. This forces a new pressure measurement to be performed, on top of the periodic one performed every 2 minutes.

7.3. Settings

NOTE: The Settings menu is only available to logged-in users.

The App allows the following settings:

- Units (for altitude, pressure and temperature)
- Filter (to only see a specific aircraft tail number and ignore other iPRESS-equipped aircraft that may be around)

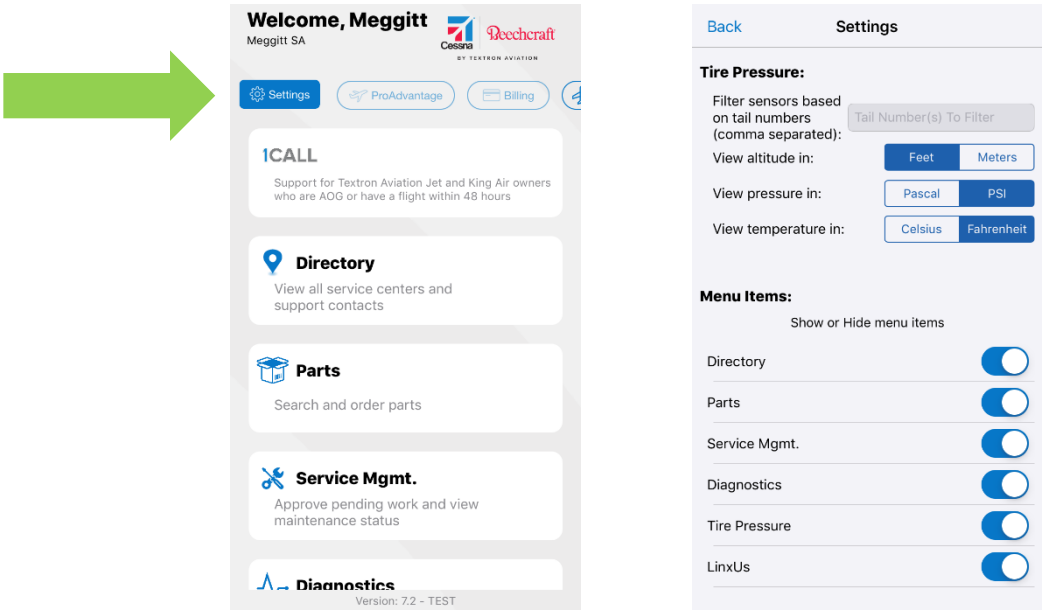


Figure 20

8. Troubleshooting

8.1. Sensor not found

When checking your tires pressure, one or several sensors may not be detected by your smartphone. This can be caused by the following reasons, in order of likelihood:

1. Sensor out of range
   A sensor installed on your aircraft may be out of the range of the Bluetooth® communication function of your smartphone. This may happen for example in case of excessive distance or radio wave blocking obstacles. Try getting closer to that sensor (within a few feet / meters), in direct line of sight (i.e. no obstacle between the sensor and your smartphone) and facing the sensor.

2. Sensor out of operating temperature range
   iPRESS operates between -20°C and +70°C (-4°F and +158°F). Outside this range, iPRESS cannot reliably provide tire pressures. It may happen that a sensor is momentarily out of the operating temperature range (e.g. after a severe braking), in which case it does not communicate over Bluetooth®. Wait for the sensor to come back within its operating temperature range.

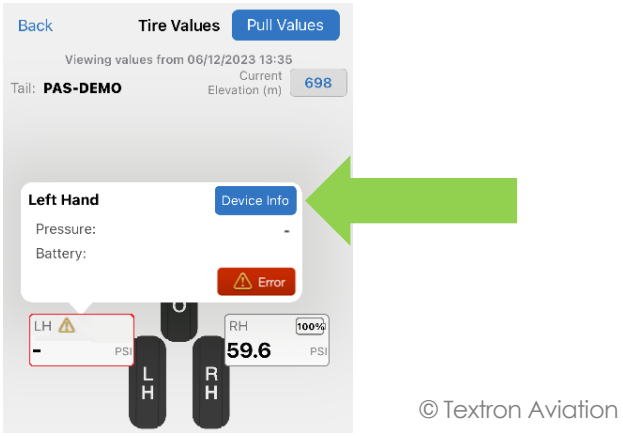
NOTE: iPRESS can withstand a much wider temperature range, however it only provides pressure between -20°C and +70°C (-4°F and +158°F).

3. Empty battery
   iPRESS sensors are powered by a battery. When the battery is flat, the sensor stops functioning. iPRESS provides a remaining battery life information, however depending on the actual usage the battery can run out more quickly than expected. In case of a flat battery, liaise with your maintenance provider to replace the sensor.

NOTE: The remaining battery life information is an estimation only. Its accuracy depends on the actual usage of the sensor and the environmental constraints it has been subjected to. Parker-Meggitt accept no responsibility for inaccurate remaining battery life information.

8.2. Pressure not provided

When checking tires pressure, one or several pressures may not be displayed as expected. This may be caused by several reasons. The App provides some clues on the problem by tapping on 'Device Info'.



© Textron Aviation

Figure 21

One of the following indications may be shown:

- ***"FAILURE: Pressure out of range"***
  iPRESS performs an internal validation of the pressure value, for extra safety. If the measured pressure is outside a certain validity range, iPRESS assumes an error has occurred and the pressure is flagged as invalid.
  In case of a "*Pressure out of range*" error, check the tire pressure with an independent, calibrated and suitably accurate means of measurement (approved by the aircraft and/or tire manufacturer(s)). If the pressure provided by the independent means of measurement is consistent with the nominal tire pressure, liaise with your maintenance provider for appropriate actions on iPRESS.

- ***"FAILURE: Temperature out of range"***
  iPRESS performs an internal validation of the temperature, for extra safety. If the measured temperature is outside a certain validity range, iPRESS assumes an error has occurred and the pressure is flagged as invalid.
  In case of a "*Temperature out of range*" error, wait for iPRESS to cool down (e.g. after a braking) or warm up (in cold weather) and try again. If the error persists, liaise with your maintenance provider for appropriate actions on iPRESS.

- ***"FAILURE: Please wait for 60 seconds to pull data"***
  The sensor resets periodically for safety reasons. It may happen that the pressure is requested during this reset. In that case, wait for 60 seconds and try again.

- ***"FAILURE: A fault has occurred"***
  iPRESS performs a validation of its internal parameters, for extra safety. If an anomaly is detected, iPRESS assumes an error has occurred and the pressure is flagged as invalid.
  In case of "*A fault has occurred*" error, liaise with your maintenance provider for appropriate actions on iPRESS.

8.3. "Device info" functionality not accessible

Difficulties in accessing the "Device info" functionality can be caused by the following reasons, in order of likelihood:

1. Sensor out of range
   One sensor installed on your aircraft wheels may be out of the range of the Bluetooth® communication function of your smartphone. This may happen for example in case of excessive distance or radio wave blocking obstacles. Try getting closer to that sensor (within a few feet / meters), in direct line of sight (i.e. no obstacle between the sensor and your smartphone).

2. Excessive number of accesses
   To ensure the long service life of the battery-powered sensor, the number of accesses to the "Device info" functionality is limited to 16 times per hour. A sensor will decline access to the "Device info" functionality for 1h if this number of accesses is reached within a 1h period. Wait 1h and try again.

9. Periodic checks

The individual tire pressure displayed in this application must be cross-checked quarterly by means approved by the aircraft and/or tire manufacturer(s). This independent means of pressure measurement must be calibrated and suitably accurate.
If the difference between the pressure provided by the independent means (duly calibrated) and the pressure provided by iPRESS is greater than 3 PSI, it may be that iPRESS is defective. In that situation, liaise with your maintenance provider for appropriate actions. In the meantime, DO NOT USE THIS SENSOR.

10. Storage mode

If you want to store your sensor(s) for a long period of time off your aircraft, it is advised to put the sensor(s) in storage mode. The storage mode reduces the power consumption of the sensor, and allows you to make the most of the battery capacity.
To set a sensor in storage mode, you must first erase the configuration of the sensor. To do that, tap on 'Configure' at the bottom left of the screen.

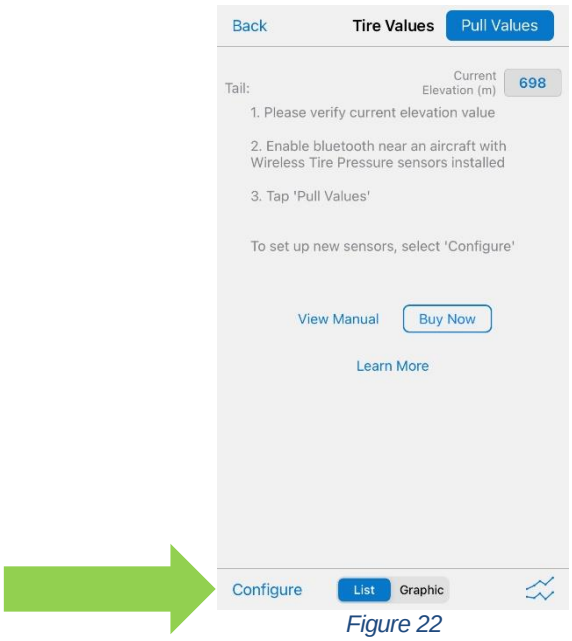


Figure 22

Select the sensor(s) that you want to store among the sensors detected by your smartphone.

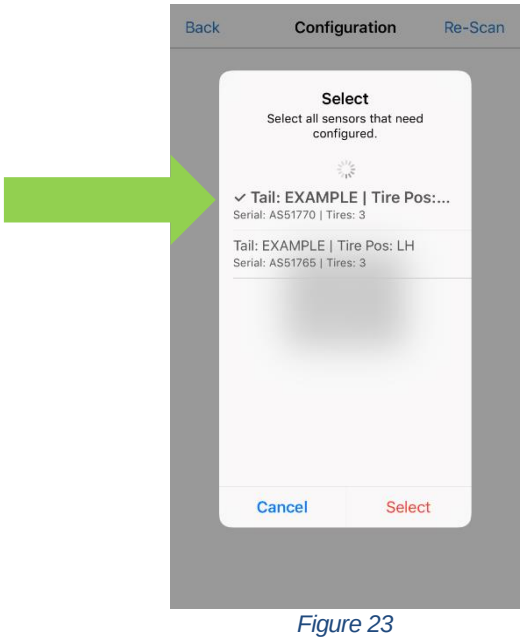


Figure 23

Select ‘Factory reset’ on the top of the screen and tap on ‘Factory Reset’ at the bottom.

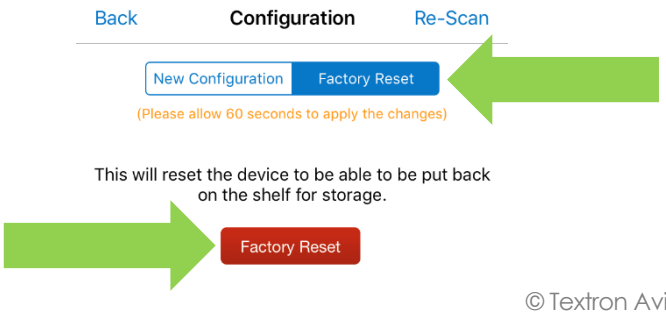


Figure 24

Confirm whether the right sensor is selected (see chapter 4 to find the serial number on the sensor).

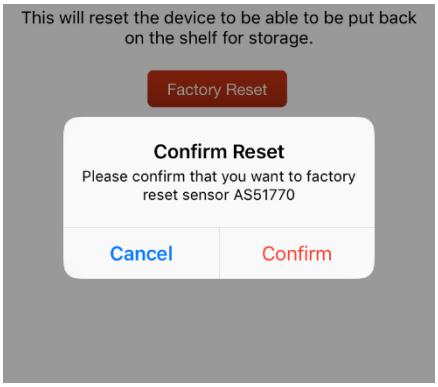


Figure 25

Once the configuration is erased, the sensor can be put in storage mode by operating its internal magnetic switch. This switch is operated by placing a specific magnet on the installation hole, on the front face.
Refer to the maintenance manual (document ref. PLS-402) for the magnet reference.

Magnet for storage mode

Figure 26

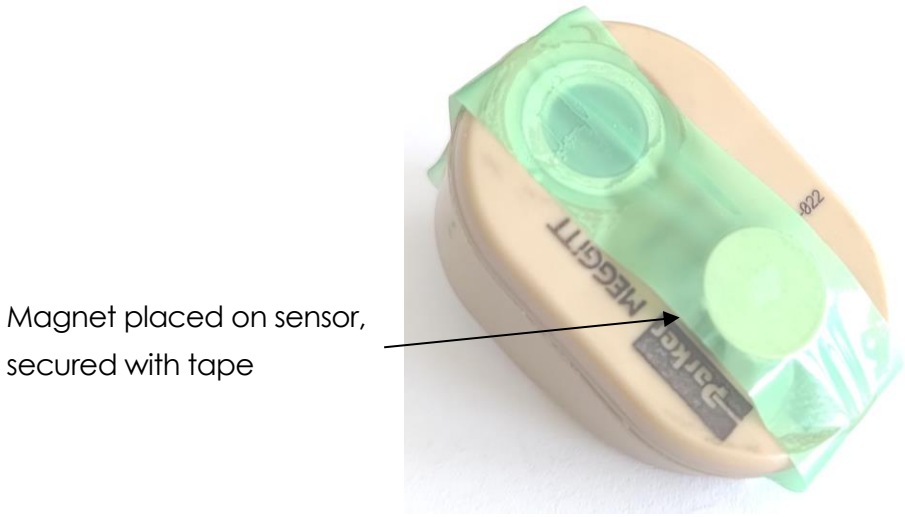


Figure 27

The magnet that was delivered with the sensor should be used. Another magnet could be too weak (and not operate the magnetic switch properly) or too powerful (and damage the magnetic switch). A few seconds after the appropriate magnet is in place, the sensor stops emitting over Bluetooth®.

During storage, the installation hole of the sensor must be covered with tape on both sides in order to prevent from contamination in the pressure inlet. The sensor must be stored between 0°C and +30°C (+32°F and +86°F), in a clean dry place protected from direct sunlight. Refer to the maintenance manual (document ref. PLS-402) for precautions required during storage.

NOTE: A sensor that has been used in service should not be stored for more than 6 months.

11. Sensor disposal

The iPRESS sensor contains a battery and electronic circuitry. At the end of its service life, the iPRESS sensor should be recycled. Battery-powered devices must be recycled or disposed of separately from conventional waste. Dispose of batteries according to your local regulations.

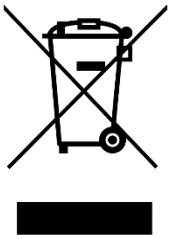


Figure 28

12. Contact

For any question, comment or feedback on iPRESS, please contact: support@ch.meggitt.com

13. Regulatory information

This section contains information related to regulatory approvals for radio equipment.

Canada
IC product reference: 29973-423420
HVIN: 423-420-099-022
A French version of this manual can be provided to Canadian customers on request.
This device complies with Industry Canada license-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.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

(1) L'appareil ne doit pas produire de brouillage, et

(2) L'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

European Union & Switzerland
Frequency band: 2400 MHz to 2483.5 Mhz
Maximum power transmitted in this frequency band: -20.10 dBm

USA
FCC ID: 2A83B423420
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 manufacturer could void the user's authority to operate the equipment.

General
Operating voltage: 3.0 V maximum
Operating current: 10 mA maximum
Operating power: 30 mW maximum
Suitable for indoor and outdoor use.
Withstands altitude up to 55.000 ft / 16.764 m.
Suitable for use in pollution degree IV (outdoor use).