USER GUIDE

TECH-AIR® OFF-ROAD

IMPORTANT - READ THIS MANUAL
CRITICAL SAFETY INFORMATION INSIDE

v. 1.0

Please read the following important WARNING and LIMITATION of use notice carefully:

Motorcycling is an inherently dangerous activity and an ultra-hazardous sport, which may result in serious personal injury, including death. Each individual motorcycle rider must be familiar with motorcycling, recognize the wide range of foreseeable hazards and decide whether to assume the risks inherent in such an activity with the knowledge of the dangers involved and accept any and all risks of injury, including death. While all motorcycle riders should utilize appropriate protective equipment, each rider should exercise extreme care for safety while riding and understand that no product can offer complete protection from injury including death or damage to individuals and property in case of fall, collision, impact, loss of control or otherwise. Riders should ensure that safety products are correctly fitted and used. DO NOT use any product that is worn out, modified or damaged.

Alpinestars makes no guarantees or representations, express or implied, regarding the fitness of its products for any particular purpose.

Alpinestars makes no guarantees or representations, express or implied, regarding the extent to which its products protect individuals or property from injury, death or damage.

ALPINESTARS DISCLAIMS ANY RESPONSIBILITY FOR INJURIES INCURRED WHILE WEARING ANY OF ITS PRODUCTS.

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0. Preliminary Notes

In this user manual the following four presentation styles are used to provide information:

WARNING! Provides critical information which, if not followed, may cause injury, death, System malfunction or non-function, and/or an exaggerated expectation of the Tech-Air® Off-Road System's abilities.

IMPORTANT! Provides important information regarding the limitations of the System.

Tip: Provides useful advice regarding the Tech-Air® Off-Road System.

Provides information related to the Tech-Air® App optional functionalities.

1. Introduction

Dear User, thank you for choosing an Alpinestars Product!

The Tech-Air® Off-Road System (hereinafter referred to as "System" and/or "Tech-Air® Off-Road System") is an active safety system for sport and recreational motorcycling, which offers protection to a motorcycle user. In the event of an accident or other triggering event, the System provides protection to the user's upper body as it covers chest, back and, only covers the users shoulders and elbows with a passive protector.

The Tech-Air® Off-Road System is specifically designed and dedicated for off-road use, within the conditions and limitations indicated in this User Manual. The Tech-Air® Off-Road System is supplied with an Enduro Mode and a Rally Mode to be used only when riding off-road, according to the characteristics reported in Section 3 for each of the two Riding Modes. The System can also be switched to a Street Mode when the System is used on public street roads.

The Tech-Air® Off-Road System consists of a standalone Airbag System contained within a Base Layer (5), and provides additional protection from impacts occurring during a motorcycle accident, to motorcycle users. The System does not provide any protection against possible abrasion during an accident, therefore, the System must be always used in combination with an outer protective garment, that has enough room to accommodate the inflation of the airbag in the event of a crash (for further information see Section 12).

WARNING! **The Tech-Air® Off-Road System does offer a Dual Charge Concept. Once the Airbag has deployed, there is an additional Airbag Gas Inflator available for inflation. After the second deployment, the User of the System will be without any further Airbag protection until the System is serviced, and the Airbag Gas Inflators (17) are replaced. For further detailed instructions, see Section 18 "Actions in the event of an Accident."**

WARNING! **The Tech-Air® Off-Road System takes 30s to be active and protective again after a deployment of the airbag. Once the airbag has deployed, the Airbag System will take 30s to be active and protective again after a deployment, if there is a second Airbag Gas Inflator available.**

WARNING! **The System, including its components, are technologically advanced pieces of motorcycling safety equipment and should not be treated like a normal motorcycle garment. Similar to one's motorcycle, the System and its components must be cared for, serviced and maintained, so that they may function correctly.**

WARNING! **The System MUST be used in combination with a protective outer garment, compatible with the System (see Section 12).**

WARNING! **It is essential to read this User Manual carefully, to understand it completely and to follow the advice and warnings illustrated in this User Manual. If you have any questions regarding the equipment, contact Tech-Air® Support (see Section 21).**

WARNING! **Without any additional notice, Alpinestars reserves all rights to, from time to time, update the software and/or the electronic components of the System. Accordingly, it is important that users register on the Tech-Air® App to ensure that they will receive all the instant notifications and updates.**

2. Principles of Operation

The System consists of an Airbag Control Unit (8) (with built-in sensors) integrated into a set of protectors (Figure 1). The cluster of sensors of the Airbag Control Unit (8) consists of 1 tri-axial accelerometer and 1 tri-axial gyroscope positioned inside the back protector (11). These sensors monitor the user's body for shocks or unexpected movements. In the event the user's body is subject to a high and/or sudden amount of energy, the System will deploy. This may occur when the motorcycle is involved in an accident, such as when the motorcycle collides with another vehicle or with an object, when the rider loses control or when the rider falls off the motorcycle.

The System is equipped with a Bluetooth Low Energy (BLE) device located in the Electronic Control Unit (ECU). The BLE allows the System to connect directly to a mobile phone in order to receive important information from the System, while also permitting the users to access a number of other functions (for further information see "Tech-Air® App" in Section 10). The System does NOT need to be connected to the Tech-Air® App for the System to work, it functions independently of the Tech-Air® App.

To connect the System to the mobile phone via Bluetooth, remember to activate the Bluetooth module within your phone and to download the Tech-Air® App available at the Android Play Store or at the Apple App Store.

User must always ensure via the App that the System is running the most up to date software release. When a new software update will be released, the User will receive a Tech-Air® App notification.

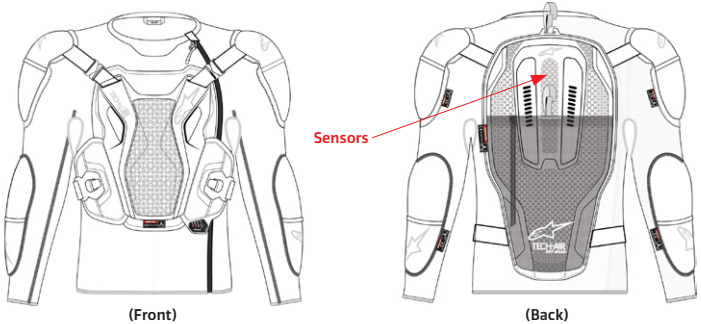


Figure 1 – Sensor Location

The Tech-Air® Off-Road System comes with three different Riding Modes that permit the use of the System on both off-road tracks ("Enduro Mode" and "Rally Mode") and on public roads ("Street Mode") Users can easily move between these three Riding Modes by clicking the System Button (4a) or using the Tech-Air® App.

WARNING! As Street Mode operation differs from Enduro Mode and Rally Mode and vice versa, always make sure to select the Street Mode when riding on public roads. Only use Enduro and Rally Modes for off-road use.

3. Tech-Air® Envelope of Protection

The "Envelope of Protection" is a term used to generally describe situations and/or circumstances where the System may provide protection, denoted as "inside the Envelope", and those where it will not provide protection, denoted as "outside the Envelope".

WARNING! No product can provide complete protection from injury (or death), or damage to persons or property in the event of a fall, accident, collision, impact, loss of control or other event.

The System provides impact protection for those areas where airbag coverage is shown in Figure 2, to the user wearing the System in the event of an accident or other triggering events. There are limitations to the protection it can provide as explained later in this user manual (see Section 4 "Limitations of Use").

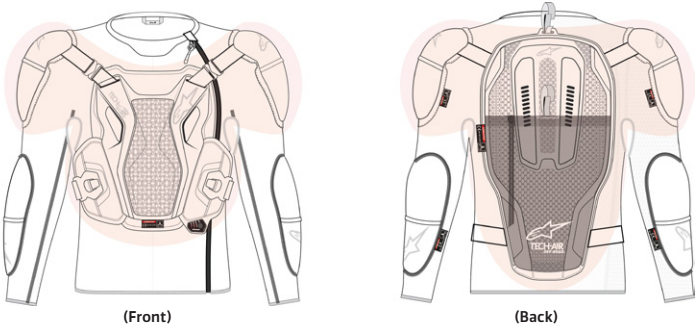


Figure 2: Area of Airbag coverage

The Envelope of Protection for both Rally, Enduro and Street Modes includes crashes against obstacles and loss of control falls (commonly referred to as 'low-side' and 'high-side' type falls).

In Street Mode the Envelope of Protection also includes situations in which the rider's motorcycle is hit by another vehicle while stationary.

Table 1 summarizes the Envelope of Protection for Rally, Enduro and Street Modes.

IMPORTANT! Unless explicitly stated, in this manual the "contact" and/or the "impact" with other objects must always be referred to as the area of airbag coverage.

WARNING! The System provides only limited impact protection against forces in the areas of airbag coverage as depicted in Figure 2. No guarantee is given that the System will prevent injuries (including severe or fatal injuries) inside and/or outside the areas of Airbag coverage or the Envelope of Protection.

WARNING! The System cannot prevent accidents or injuries to the User.

WARNING! No protective device, including the System, can provide protection against all possible sources of injury and therefore cannot provide complete protection against injuries.

WARNING! Wearing the System is not a substitute for wearing other protective motorcycling clothing and gear. To provide full potential protection, the System must always be worn in conjunction with suitable motorcycling gear. Complementary PPE garments could be: jackets or trousers (in accordance with EN 17092 parts 2, 3, 4 and 5), other impact protectors, boots (in accordance with EN 13634) and gloves (in accordance with EN 13594) and visibility clothing (in accordance with EN 1150) or high visibility accessories (in accordance with EN 13356).

Incident Type			Enduro Mode	Rally Mode	Street Mode
Crashes	Crashes against Obstacles		✓	✓	✓
	Stationary Crashes		X	X	✓
Loss Of Control	Low-Side Type Falls		✓	✓	✓
	High-Side Type Falls		✓	✓	✓

Table 1: Summary of the Envelope of Protection for Enduro, Rally and Street Modes.

3.1 Envelope of Protection for STREET MODE

In Street Mode, the Tech-Air® Off-Road System becomes active after detecting approximately 10 seconds of continuous riding. Once activated, the System remains active even if the rider stops, and until the System is manually switched off, to offer protection also in a stationary condition, when the motorcycle is hit by a vehicle, as described in the Envelope of Protection conditions (see Section 3.1.2).

As summarized in Table 1, in Street Mode the Envelope of Protection includes:

- Crashes against Obstacles
- Stationary Crashes
- Low-Side Type Falls
- High-Side Type Falls

3.1.1 STREET MODE: Envelope of Protection for Crashes against Obstacles

The Tech-Air® Off-Road System is expected to inflate and protect within 200 milliseconds from the beginning of the crash, in Crashes Where a Motorcycle strikes a Vehicle or Obstacle (Figure 3) in these conditions:

Relative Arrival Speed	From 25km/h (15mph) to 50km/h (31mph)
Impact Angle (Fig 3)	From 45° to 135°

Table 2: crash conditions

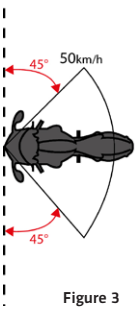


Figure 3

IMPORTANT! Figure 3 outlines the Envelope of Protection where the Tech-Air® Off-Road System is expected to inflate and protect within 200 milliseconds from the beginning of the crash. At speeds above 50km/h (31 mph) or outside the declared angle, the System is expected to deploy as well, however, outside the Envelope of Protection the System may not be fully inflated before there is contact between the obstacle and the user.

IMPORTANT! The beginning of the crash is defined as the instant of time when the motorcycle first contacts the opposing vehicle or obstacles in the conditions described above.

WARNING! Outside the conditions of Table 2, the System may not deploy before the first impact, but may deploy if the rider suddenly falls from the motorcycle after the impact, regardless of the impact angle.

3.1.2 STREET MODE: Envelope of Protection for Stationary Crashes

In Street Mode ONLY, the Tech-Air® Off-Road System is designed to activate in Crashes Where a Vehicle Strikes a Stationary Motorcycle (Figure 4) in these conditions:

Vehicle Arrival Speed	From 25km/h (15mph)
Impact Angle	From 45° to 135°, rear/front

Table 3: Stationary Crash Conditions

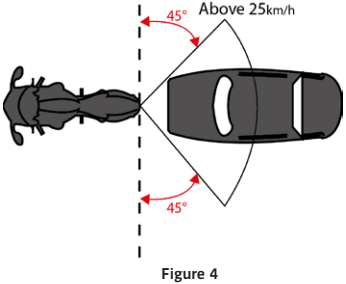


Figure 4

IMPORTANT! If the speed between the Motorcycle or the vehicle (in case of crashes against a stationary motorcycle) is less than 25km/h (15 mph) during the impact, the System may not deploy at the time of the collision/crash, but may deploy if the rider suddenly falls from the motorcycle after the impact.

3.1.3 STREET MODE: Envelope of Protection for Loss of Control Falls

Loss of Control Falls (Low-Side and High-Side Falls) often result in the motorcycle falling over during riding, without necessarily being involved in a crash with other vehicles or obstacles. This commonly happens when tire grip on the roadway is lost during a turn or heavy braking.

WARNING! During Low-Side Falls, the System may not deploy before the first impact with the ground, but may deploy during the following sliding phase, if present.

WARNING! Due to shocks, movement and/or other input detected and/or received by the System while in use, although unlikely, the System may deploy even though there is no dangerous situation or crash event. Please be advised that the following actions, not limited to but including for example a pat on the back, a tight hug, abrupt movements, not disarming the System before dismounting the motorycycle, leaving the Airbag on the bike where it slides off and falls to the ground, are all actions that may trigger the deployment of the Tech-Air® Airbag System.

3.2 Envelope of Protection: ENDURO AND RALLY MODES

When riding on off-road tracks, that may include a variety of terrain and obstacles, the User can choose between two modes: Enduro or Rally Mode. Based on the User's choice, the System adapts its functioning specifically for the selected Riding Mode. Each of the two modes are optimized based on riding and crash data collected from typical Enduro and Rally riding sessions and competitions.

In these two modes, the System has been used by over 150 professional World Rally Raid

Championship riders since 2020, and worn by professional athletes during extreme racing conditions and in dangerous situtations and not in typical off-road riding conditions that included jumps, obstacles, multiple bumps, riding when standing or pushing the motorcycle.

WARNING! Due to shocks, movement and/or other input detected and/or received by the System while in use, although unlikely, the System may deploy even though there is no dangerous situation or crash event.

In Enduro and Rally Mode, the Tech-Air® Off-Road System becomes active after approximately 10 seconds of continuous riding. The System automatically deactivates when no more active riding is detected for about 20-30 seconds.
As summarized in Table 1, in Enduro and Rally Modes the envelope of protection includes:
- Crashes against Obstacles
- Low-Side Type Falls
- High-Side Type Falls

The System function for Enduro Mode and Rally Mode is accurately optimized based on riding, falls and crash data coming from the two disciplines. In order to experience a correct functioning of the System, it is strongly recommended that the User choose the appropriate Riding Mode, based on the different riding style of the two disciplines, as indicated below:

• Enduro MODE: recommended for trails where the User rides on unpaved surfaces like gravel, riverbeds, mud and other natural terrain. Typically, these riding scenarios include several changes in riding directions, tackling obstacles and hills at lower speeds or when pushing the motorcycle;

• Rally MODE: recommended for scenarios that are characterized by longer straight sections with multiple bumps and different types of terrain crossed at higher speeds, unlikely encountered in typical Enduro competitions. Typical environments where these riding scenarios occur are mainly characterized by desert terrains (with dunes and sandy ground), gravel and open countryside settings; a perfect usage scenario would be similar to the World Rally Raid Championship that includes the famous Dakar Rally).

In Enduro and Rally Modes the Envelope of Protection does not include situations in which the rider's motorcycle is hit by another vehicle while stationary.

3.2.1 ENDURO and RALLY MODES: Envelope of Protection for Crashes against Obstacles

In Enduro and Rally Modes, the Tech-Air® Off-Road System is expected to inflate and protect in Crashes where a Motorcycle Strikes a Vehicle or Obstacle in the same conditions as outlined in Section 3.1.1 for the Street Mode with the following modifications:

- Impact angle is limited to a frontal 90° impact;

- The Tech-Air® Off-Road System is expected to inflate and protect within 200 milliseconds from the beginning of the crash, in Crashes Where a Motorcycle strikes a Vehicle or Obstacle (Figure 3) and the User is riding in seated position;

- The Tech-Air® Off-Road System is expected to inflate and protect within 300 milliseconds from the beginning of the crash, in Crashes Where a Motorcycle strikes a Vehicle or Obstacle (Figure 3) and the User is riding in standing position;

WARNING! When Enduro and Rally Modes are selected, the System may not deploy before the first impact even inside the conditions of Table 2, but may deploy if the rider suddenly falls from the motorcycle after the impact, regardless of the impact angle.

3.2.2 ENDURO and RALLY MODES: Envelope of Protection for Loss of Control Crashes

In Enduro and Rally Modes, the Tech-Air® Off-Road System is expected to inflate and protect in the same situations as outlined in Section 3.1.3 for Street Mode. However, as previously stated, the System is designed and tested to recognize typical off-road situations that, in the context of public streets riding are unusual, whereas during off-road sessions are frequent, not dangerous and not categorized as "loss of controls". These situations may include:

- Jumps;
- Obstacles (tree trunks, roots, gravel);
- Sudden turns or direction changes;
- Pushing the Motorbike;
- Doing a Wheelie;
- Frequent and rapid jump;
- Multiple bumps;
- Riding the motorcycle standing up;

WARNING! Due to shocks, movement and/or other input detected and/or received by the System while in use, although unlikely, the System may deploy even though there are the previously reported non-dangerous situations.

3.3 Envelopes of Protection: Limitation of use

There are some limitations to the deployment of the Tech-Air® Off-Road System even inside the Envelopes of Protection, when, in general, the environmental conditions prevent the System from measuring acceleration and/or angular speed sufficiently to activate the System.

WARNING! If the crash conditions are outside the Envelope of Protection described above, the System may not deploy if the acceleration and angular speed measured by the System are not sufficient to activate the Tech-Air® Off-Road System.

WARNING! Always make sure to select Street Mode when riding on roads. Use Rally and Enduro Modes only for off-road tracks.

WARNING! The user does not need to be involved in a crash for the System to deploy. For example, the System will deploy if the user falls while wearing the System, such as when dismounting from the motorcycle. These types of "non-riding" deployments are not failures of the System.

4. Limitations of Use

WARNING! Since the System is sensitive to sudden body movements and shocks, the System is to be used ONLY for motorcycling within the conditions and limitations delineated above. The System is NOT to be used for:

a. **Road Racing, Flat-Track, Motocross or Supermoto events;**

b. **Motorcycle stunts;**

c. **Skidding, wheelies, etc.;**

d. **ANY non-motorcycling activities.**

WARNING! Due to shocks, movement and/or other input detected and/or received by the System while in use, although unlikely, the System may deploy even though there is no crash event.

WARNING! We cannot guarantee that the System will deploy before the user collides with parts of the motorcycle or other objects, regardless of the type of motorcycle they are riding, and especially for scooters or racing trials motorcycles.

WARNING! Wearing the System is not a substitute for wearing other protective motorcycling clothing and gear. To offer maximum protection the System must always be worn in conjunction with suitable motorcycling gear and apparel that covers the rider from head to toe, including a helmet, protective jackets, protectors, boots, gloves and other appropriate protective equipment.

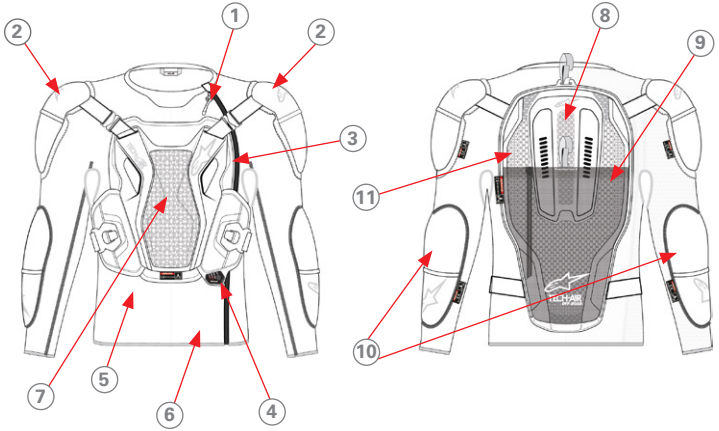
WARNING! The System's working temperature is between -20° and +50° (-4°F to 122°F).

WARNING! Do not use the System 4,000 meters above sea level as low pressure may not guarantee a correct level of protection for the System.

5. System Overview

The diagrams below illustrate the different parts of the Tech-Air® Off-Road System. The numbered parts are used to guide you through this user manual.

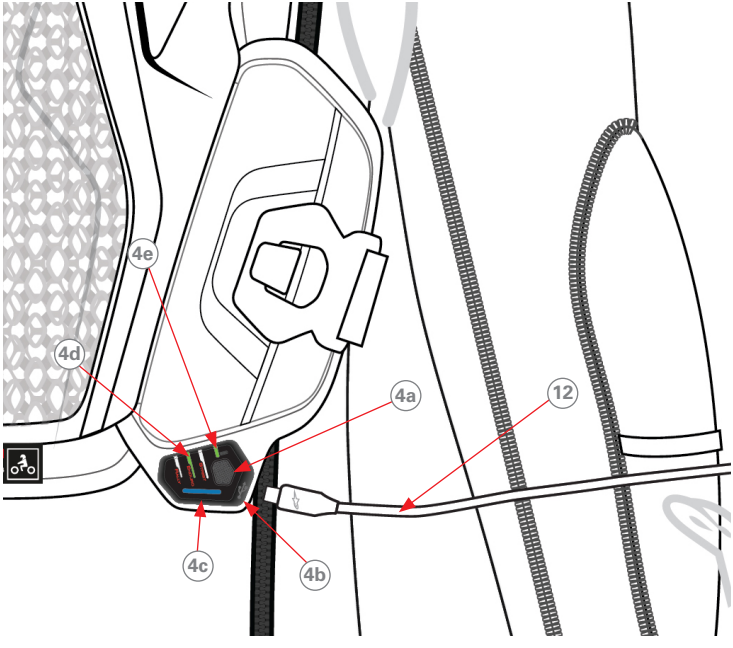
TECH-AIR® OFF-ROAD SYSTEM



1. Activation Zip
2. Shoulder Protectors
3. Haptic Vibration Area
4. LED Display
5. Base Layer
6. Deflation Valve Area
7. Chest Protector
8. Airbag Control Unit
9. Hydration Bag Container
10. Elbow Protectors
11. Back Protector

Figure 5: System Components

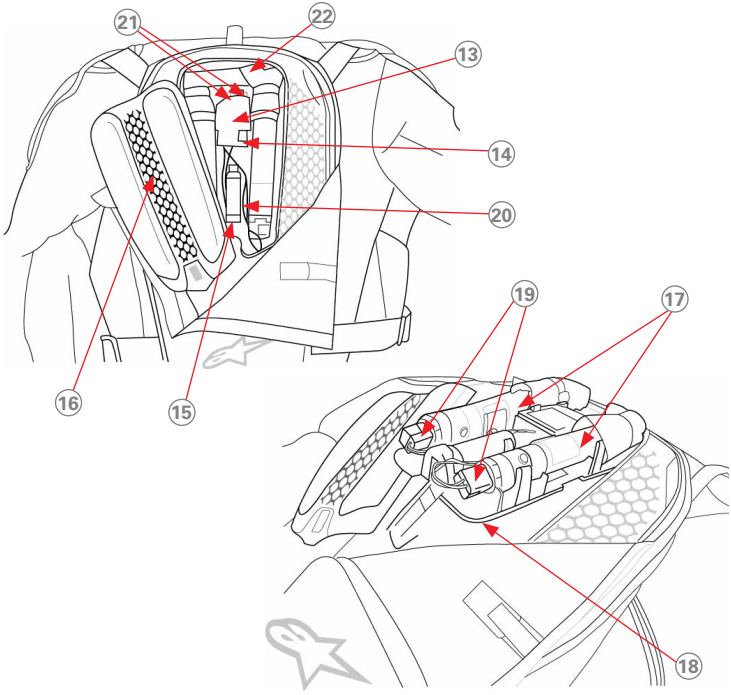
TECH-AIR® OFF-ROAD LED DISPLAY AND CHARGING SYSTEM



4a. System Button
4b. Type C USB Recharge Port
4c. Status LED
4d. Riding Mode LED
4e. Battery Led
12. Type C USB Charging cable

Figure 6: LED Display and Charging System Components

AIRBAG CONTROL UNIT (8)



13. Electronic Control Unit
14. Shipping Mode Switch
15. System Battery
16. Electronic Case
17. Gas Inflators
18. Removable Inflators Housing
19. Squib Connectors
20. Screwdriver
21. Gas Inflators Status LED
22. Electronic Connector Plug

Figure 7: Airbag Control Unit Components

6. System Operation

In this Section the principal operations to use the Tech-Air Off-Road will be described

6.1 Switching on the System

To use the Tech-Air® Off-Road System, the User has to simply put on/wear the System and close the Activation Zip (1) from the bottom to the top (Figure 8).

An internal sensor automatically detects that the Activation Zip (1) has been closed and the System will start to turn on.

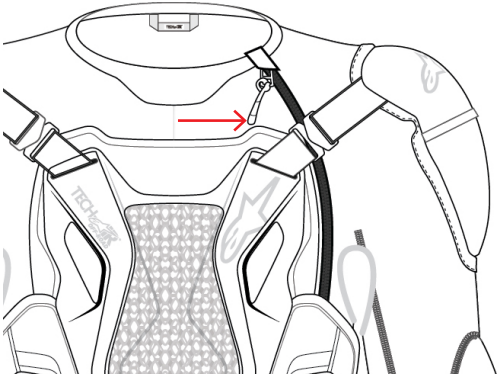


Figure 8: System switch on with the closure of the Activation Zip (1)

WARNING! It is imperative that the System is fitted correctly in order to provide the maximum potential protection in the event of an accident.

WARNING! The System MUST be used in combination with an outer garment. When choosing an outer garment be sure to follow the instructions reported in Section 12 "Compatible Outer Garment". If the outer garments are too small, they will cause severe discomfort when the System is inflated. In case of doubt or questions regarding proper fit, please seek advice from an authorized Alpinestars' Dealer.

WARNING! In order to activate the Tech-Air® Off-Road System, the Activation Zip (1) MUST be correctly closed, taking care that the System is positioned correctly on the shoulders, chest and back area.

WARNING! Always ensure that the Activation Zip (1) remains open and unzipped when the Tech-Air® Off-Road System is not worn by the User; check the LEDs to verify that the System is not turned on or manually switch off the System using the System Button (4a) (see instructions reported in Section 6.4 "Switching off the System").

Once the Activation Zip (1) has been correctly closed, the System starts to turn on and the User MUST check the correct System functioning verifying that the following steps are performed:

1) LED Check: during this phase the System will check if all the available LEDs are correctly functioning. The User will see that all the available LEDs (4c, 4d, 4e) will turn on SOLID GREEN for approximately one second and then will turn off (Figure 9);

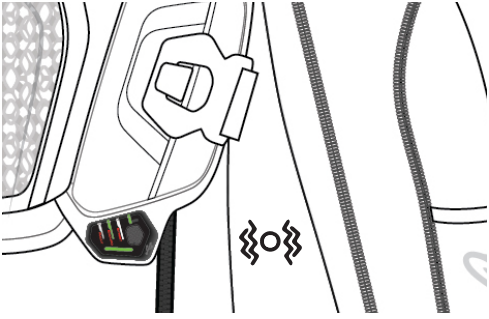


Figure 9: LED check phase

2) After the LED Check phase, the System will automatically activate and the Status LED (4c) will turn SOLID BLUE (Figure 10). In this condition, the User can also check the selected Riding Mode (checking the Riding Mode LED [4d]) and the System battery level (using the Battery LED [4e]) (see Figure 6 above).

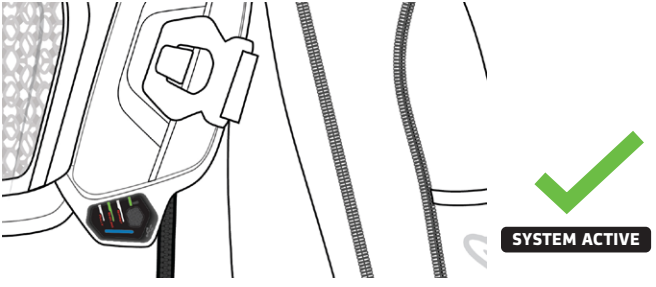


Figure 10: System active and correctly working;

WARNING! If the Status LED (4c) turns SOLID RED and the System performs a long vibration (~ 3 seconds), a fault is present (Figure 11), and the System is NOT working and NOT ready to protect the User (see Section 19 "Troubleshooting" for more information);

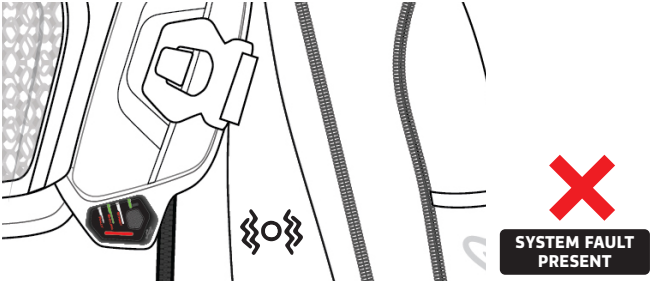


Figure 11: System NOT WORKING: the Status LED (4c) turns SOLID RED and the System performs a long vibration (~ 3 seconds);

After System activation, the User can also check the System battery level by looking at the Battery LED (4e).

WARNING! The User MUST ALWAYS check the LED Display (4) after the LED Check to confirm that the SOLID BLUE Status LED (4c) is turned on before starting to ride/use the Tech-Air® System. The System will NOT deploy if the SOLID BLUE Status LED (4c) indicator is NOT present.

Tip: If the System does not switch on (i.e. if there are no LEDs showing on the LED Display [4]) check that the Activation Zip (1) has been correctly closed. In addition, check that the Tech-Air® Off-Road System has a sufficient charge. If the problem persists, contact Tech-Air Support (see Section 21 "Tech-Air® Support").

The battery and the status of the Tech-Air® System can also be checked by connecting the System to the Tech-Air® App. When the System is active, the Tech-Air® App will display the LED light indication "System On".

Tip: The User can put the System in Transportation Mode (Section 16.4) by holding down the System Button (4a) for at least 5 seconds, forcing the System to switch off. The user can switch on the System by simply opening and closing the Activation Zip (1) again.

6.2 Changing the Riding Mode

As previously stated, the Tech-Air® Off-Road System offers three possible Riding Modes: Enduro, Rally and Street. After the System has been correctly switched on, the User can easily switch between the three different Riding Modes by pressing the System Button (4a) for 2 seconds. A SOLID GREEN LED will appear on the Riding Mode LED (4d) indicating which Riding Mode is currently running (Figure 12).

WARNING! After the first System activation or any System Software update, the ENDURO Mode will be selected as the DEFAULT Riding Mode. In all other cases, after the System is switched on, the System will run the LAST SELECTED Riding Mode.

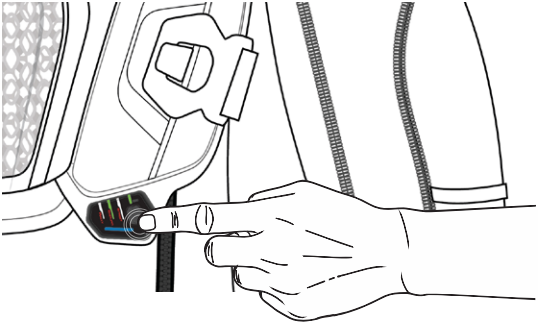


Figure 12: Press the System Button (4a) to change the Riding Mode

6.3 Checking the Status of the Gas Inflators

The User can verify the status of the Gas Inflators (17) by checking the Riding Mode LED (4d): when both the Gas Inflators (17) are available, the Riding Mode LED (4d) will display a SOLID GREEN light; in case only one Gas Inflator (17) is still available, the Riding Mode LED (4d) will start blinking, as indicated in the Figure 13.

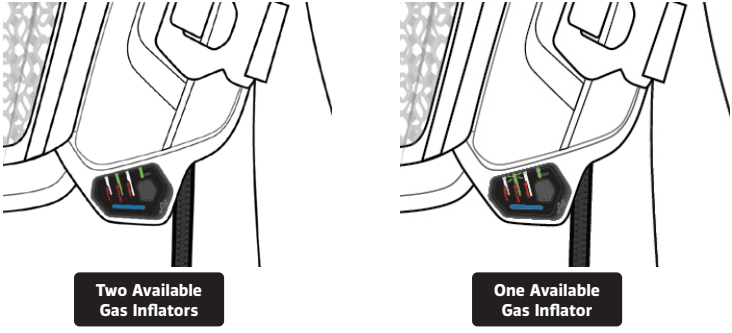


Figure 13: How to check the number of Gas Inflators (17) available: if the Riding Mode LED (4d) is SOLID GREEN, TWO Gas Inflators (17) are available; if the Riding Mode LED (4d) is BLINKING, only ONE of the two Gas Inflators (17) is still available

WARNING! In case the User belongs to those countries approved for autonomous handling and management of Gas Inflators, please refer to Section 18 "Actions in the Event of an Accident".

6.4 Switching off the System

The User can easily turn the System off by opening the Activation Zip (1). The System will shut down after approximately 3 seconds.
Alternatively, the User can manually switch off the System pressing the System Button (4a) for approximately 5 seconds. A long vibration (~3 seconds) of the System in the Haptic Feedback Area (3) will confirm that the System is no longer activated.

The User can check that the System is switched off by checking that all available LEDs are switched off.
To keep the System switched off, keep the Activation Zip (1) open and unzipped as shown in Figure 14.

Figure 14: System switch off via opening of Activation Zip (1)

WARNING! ALWAYS switch the System off by unzipping (opening) the Activation Zip (1) or pressing the System Button (4a) for 5 seconds when you are not riding a motorcycle, even if you continue to wear the System. Although the System has been evaluated for a number of non-riding activities, keeping the System switched on and/or active increases the possibility of unwanted deployment and drains the battery. So as a rule, when not riding, always open the Activation Zip (1).

WARNING! When being stored, transported, or shipped, the User MUST follow the instructions reported in Section 16 "Cleaning, Storage and Transportation."

IMPORTANT! Even if the System is switched on, the System will automatically switch off if the System detects a position incompatible with the normal usage of the System or no movements for more than 10 minutes. Only when STREET Mode is selected, the System will automatically switch off immediately after you have just put the System on, after a shorter waiting period of approximately 30 seconds.
When either of the above situations occur, open (unzip) and close the Activation Zip (1) to restart the System and perform a new System Check.

7. Battery Charging

The Tech-Air® Off-Road System is supplied with a Type C Charging Cable (12). To charge the System, the User must connect the supplied standard Type C USB Charging Cable (12) to the Type C USB Recharge Port (4b) present on the LED Display (4). Once on charge, the LED Display (4) will show different blinking colours in the Battery LED (4e) (Figure 15), according to the description provided in "LED Indications Summary" (see Section 8). Fully charge the System before its first use.

IMPORTANT! While charging, always be sure that the USB Charger is connected to a power source sufficiently close to the Tech-Air® Off-Road System, and be sure that the power source is always easily accessible.

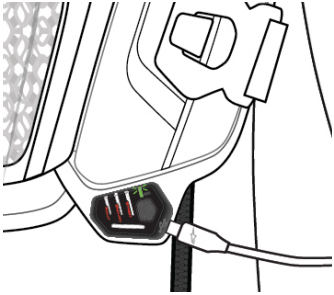


Figure 15: Battery LED (4e) blinking during System recharge (see more LED colour indications in "LED Indications Summary" Section 8)

IMPORTANT! The battery will only recharge when the ambient temperature is between 0°C and 40°C (32°F – 104°F).

IMPORTANT! If the battery is not periodically charged, it may take longer to fully charge it.

WARNING! Do not leave the System unattended while charging the battery. Charge only in a dry location with a temperature range of 0°C to 40°C (32°F – 104°F).

7.1 Charging and Use Times

Approximately 4 hours are required to recharge a discharged battery depending on the USB Charger used, with the exception of the first battery charge which may require a longer time (approx. 12 hours). A fully charged battery will provide approximately 30 hours of use. If limited time is available, charging the battery for approximately 1 hour will provide approximately 8 hours of use.

Tip: The System may be charged by connecting it to a computer, or to an alternative USB Charger. However, if the current output is under 1 Ampere, the charging times will be longer than those stated above.

8. LED Display Indications Summary

8.1 LED Indications During Normal Use

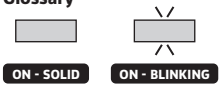
Glossary

IMPORTANT! The SOLID BLUE Status LED (4c) indicates that the System is on and properly working.

WARNING! Any LED indication different from the solid blue LED (4c) indicates that the System is NOT active and accordingly will NOT deploy in a crash.

8.2 LED Indications During Battery Recharge

Glossary



8.2.1 Indications during battery charging

When the Tech-Air® Off-Road is charging, the Battery LED (4e) will show continuous blinking as indicated in the diagram "LED Indications during Battery Recharge" above When the battery is fully charged, the Battery LED (4e) will remain illuminated.

9. Airbag Deflation Valve to Assist with the Deflation of the Airbag after an Airbag Inflation

The Airbag Deflation Valve assists in deflating the Airbag following an Airbag inflation.

IMPORTANT! Do NOT remove, alter, or put tape or any materials on the deflation valve, as it could inhibit the proper functioning of the valve.

10. Tech-Air® App

The Tech-Air® Off-Road System is equipped with a Bluetooth Low Energy (BLE) device which allows users to directly connect their mobile phone to the System, in order to obtain certain information from the System and have access to several functions, such as:

- monitoring the status of the System;

- verifying the installed software version and, eventually, performing the latest software updates;

- sending feedback related to the System and its performance;

WARNING! Alpinestars is not responsible for reporting possible accidents or for providing any assistance to those involved. The User agrees that Alpinestars has no duty or responsibility to report any accidents or the possibility of any accidents based on the data transmitted to Alpinestars. The User assumes the risk of any accidents or injuries whether or not data is being transmitted to Alpinestars.

The Tech-Air® App is available for download in the Android Play Store and in the Apple App Store.

IMPORTANT! The Tech-Air® Off-Road System will protect the User as described within this User manual, even if Tech-Air® App is not installed and even if the Tech-Air® App is not running on the user's mobile phone. The Tech-Air® Off-Road System does NOT need to be connected to the Tech-Air® App to work.

10.1 User Registration

To have access to the Tech-Air® App, the user must for the first time sign up and subsequently log in to the App. In order to configure the Tech-Air® App, the user must turn on Bluetooth from the User's mobile phone settings.

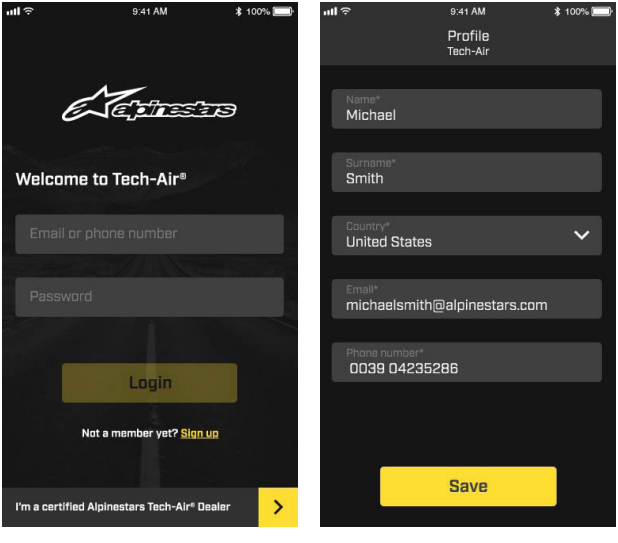


Figure 16: User login

10.2 Pairing the System

Once the Bluetooth is turned on, the App will automatically attempt to establish a connection with an available Tech-Air® System, if the App has already paired with the System. If no Tech-Air® System has already been paired to the App, the System can be easily paired to the App by scanning the QR code present on the tag found on the System' s internal liner located on the lower inside back of the liner. Once the System has been correctly paired with the App, it will be possible to visualize the overall status of the System, such as Battery Level and installed software, and users will be able to enable or disable some of the functions provided by the App.

When the Tech-Air® Off-Road System turns off, the Bluetooth® connection will stay active to allow for the dialogue between the System and the mobile phone, provided that the System is in the vicinity of the phone. The LED Display (4) will definitively turn off when the System doesn't detect any connection with the App.

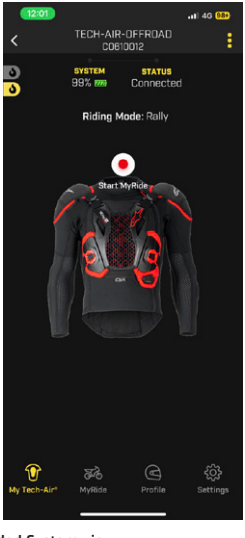


Figure 17: QR code scan and added System view

10.3 Monitoring the System's Status

The App provides information about the actual operating mode of the System, verifying if the System is functioning correctly or not. The indication "System On" displayed on the screen indicates that the System is turned on.

While riding, "System On" mode is active and accordingly, for safety reasons, the User cannot access most of the App functions.

In case of Airbag deployment, the App will show the relevant status with the wording "SYSTEM DEPLOYED" as depicted in Figure 18.

WARNING! On every such notification the System must be serviced by sending it to an authorized Alpinestars Tech-Air® Service Center, as described in Section 18 "Actions in the Event of an Accident".

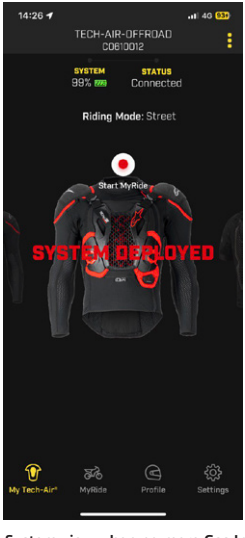


Figure 18: Tech-Air® App System view when no more Gas Inflators (17) are available

As indicated in Section 18, the System's Airbag is certified for up to 4 inflations, after which the Airbag needs to be changed during the servicing. The App will inform the user, showing a message that the Airbag has one deployment left. Once the Airbag has deployed for the fourth time, the Airbag will be replaced together with the Gas Inflators during the servicing of the System.

10.4 Enjoy the Ride with MyRide

The Tech-Air® App contains the MyRide functionality which displays information about the ride, such as duration, distance, and route related to the ride. MyRide can also be used to send feedback regarding any events that occurred during the use of the System, during a specific ride (see Figure 19).

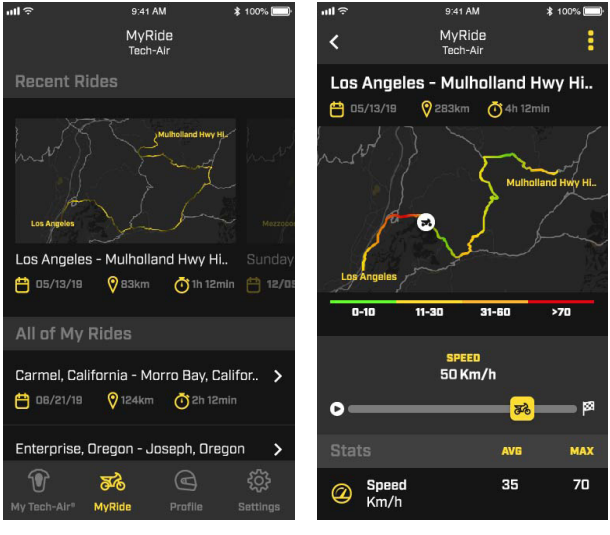


Figure 19: MyRide Functionality

11. Sizing

The System is available in sizes ranging from S to 2XL. Each size is characterized by a specific waist-to-shoulder length of the User (Figure 20). Waist to Shoulder length (WSL) is an important parameter for the choice of the right size of back protector: The User should always be sure to use a protector with a WSL that matches his/her measurements.

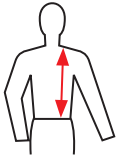


Figure 20: The Waist to Shoulder (WSL) measurement

Refer to Section 21 "Certification Information" for the details on the WSL for each Tech-Air® Off-Road size.

It is imperative that the System is fitted correctly, in order to provide the maximum potential protection in the event of an accident. To help with the choice of the right size, the User may refer to Table 4 below, that provides the reference measurements of the body for each System's size, and the following 11.1 "Body Measurement Locations" Section. Notice that these measurements are provided as general suggestions and references based on Men's general sizes without any discriminatory intention, and has to be properly adapted to the individual User's specific measurements.

SIZE	S		M		L		XL		XXL	
A. CHEST (CM)	89	94.5	94.5	100	100	105.5	105.5	111	111	116.5
B. WAIST (CM)	75	81	81	87	87	92	92	97	97	102
F. OUTER ARM (CM)	59	60.5	60.5	62	62	63.5	64	65.5	65.5	67
G. HEIGHT (CM)	169	174	175	179	180	184	185	189	190	194
A. CHEST (IN)	35	37	37	39 1/7	39 3/8	41 1/2	41 1/2	43 2/3	43 2/3	45 7/8
B. WAIST (IN)	29 1/5	31 1/3	31 1/5	34	34 1/4	36 2/9	36 2/9	38 1/5	38 1/5	40 1/6
F. OUTER ARM (IN)	23	23 1/3	23 1/3	24 1/6	24 2/5	25	25 1/5	25 4/5	25 4/5	26 3/8
G. HEIGHT (IN)	66 1/5	68 1/5	68 1/3	70 1/5	70 7/8	72 7/16	72 5/6	74 2/5	74 4/5	76 3/8

Table 4: Men's Size Guides Tech-Air® Off-Road System

11.1 BODY MEASUREMENT LOCATIONS

A. Chest
Measure around the fullest part, under the armpits, keeping the tape horizontal.

B. Waist
Measure around the natural waist line, inline with the navel, keeping the tape horizontal.

C. Hip
Measure around the fullest part of your hips, about 20cm below waist line, keeping the tape horizontal.

D. Thigh
Measure around the thigh just below the crotch, keeping the tape horizontal.

E. Inner Leg
Stand against a wall, ask someone else to measure from the crotch to the bottom of your leg.

F. Outer Arm
Measure from shoulder (Humerus) to wrist.

G. Height
Stand against a wall, ask someone else to measure from the floor to the top of your head, keeping the tape vertical.

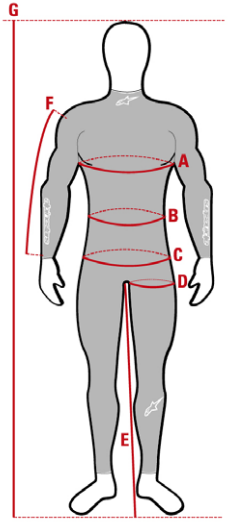


Figure 21: Body Measurement Locations

12. Compatible Outer Garment

It is highly recommended to use the Tech-Air® Off-Road System with a protective outer garment, as the System is NOT abrasion resistant. The user should choose a protective outer garment that, when worn over the Tech-Air® Off-Road System, does not cause discomfort and does not prevent the correct functioning or inflation of the System.

The System can be used with any protective garment that covers the upper body and that is designed for motorcycle riding, provided that the garment has sufficient space to allow for the expansion of the airbag after the deployment.

In case of any doubt, follow the procedure described below to check if your outer garment is compatible with the System. Remember to ensure that you select an outer garment that has the proper fit and should any protectors be present on such outer garment, that the protectors are correctly positioned. If the outer garment you have chosen is made of leather or any different, non-stretchable material, it must have stretch panels to accommodate the inflated airbag after deployment; if it does not have stretch panels then you should NOT wear it and instead choose another garment that fits the criteria and will be able to expand to accommodate the inflation of the airbag in the event of a deployment. Upon inflation, the Tech-Air® Off-Road System's Airbag covers shoulders, chest, and full back areas, accordingly, the System must not be used inside a protective garment, if such garment has insufficient space to accommodate the inflation of the Airbag, in order to prevent discomfort in case of deployment. Here are some guidelines on how to check if your outer garment is compatible with the Tech-Air® Off-Road System:

WARNING! Tech-Air® Off-Road shall be worn with any outer garment that meets the following criteria: measure the circumference of the chest (A) and the garment width on the chest region (A1). The garment is compatible with Tech-Air® Off-Road System if A1 is greater than A divided by 2 plus 16 cm (A1 > 0.5 x A + 16 cm or A1 > 0.5 x A + 6,30 in) (see Figure 22 below).

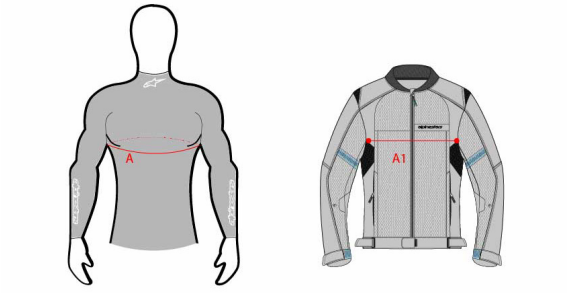


Figure 22: References for the chest circumference (A) and the garment chest width (A1) locations

WARNING! The Tech-Air® Off-Road System must ALWAYS be used with a properly fitting outer garment to the User's appropriate body size. Use of the System inside an incorrectly sized outer garment, or with an outer garment that is not compliant with the size check recommendations above, may result in the System malfunctioning or failure and injury, including severe injury and/or death.

13. Transportation of Objects Inside the Outer Garment

When using an outer garment, particular consideration needs to be given to the objects which may be placed inside the pockets. For example:

- Sharp or pointed objects placed in pockets may pierce the airbag and will compromise the inflation of the airbag.

- Bulky objects may limit the airbag expansion after deployment, potentially reducing the effectiveness of the airbag and/or making the System feel much tighter when inflated, thereby increasing discomfort or causing distraction or injury.

IMPORTANT! Particular attention should also be paid to the contents of the outer garment's internal breast pocket. ONLY flat objects such as a wallet or a mobile phone should be stored within the outer garment's internal breast pocket.

WARNING! Provided that they fit comfortably inside the pockets, only blunt objects should be transported in an outer garment's pockets. Under NO circumstances should a user attempt to transport objects of ANY size or shape, including sharp or pointed objects, that will be tightly stuffed inside an outer garment's pockets, as such objects will cause injury to the user and/ or damage to the airbag when the System becomes inflated.

WARNING! During the Airbag inflation the objects contained in the pockets may be subject to sudden stress. Therefore, always be sure to avoid placing fragile objects in pockets that may be damaged during deployment. In addition, do NOT place sharp ojects in the pockets as they could puncture or damage the System.

14. Incompatibility with Neck Protectors

IMPORTANT! Neck protectors are not compatible with Airbag Systems, accordingly the Tech-Air® Off-Road System is NOT compatible with the use of Alpinestars' Bionic Neck Support (BNS) nor any other Alpinestars' and/or third party neck protections.

Figure 23: Incompatible Neck protectors

15. Health and Age Restrictions

IMPORTANT! In Europe the Pyrotechnic Directive EU 2013/29 prohibits the sale of pyrotechnic articles to anyone under the age of 18.

WARNING! The System must not be handled by children at any time.

WARNING! In the event of a crash, inflation of the System will cause sudden pressure across the back and torso. This can cause discomfort and/or pain and/or complications to users in poor health.

WARNING! The System must not be used by persons with a history of heart problems, or other diseases, conditions, afflictions, or illnesses which may weaken the heart.

WARNING! The System must not be used by persons fitted with a pacemaker or other implanted electronic medical devices.

WARNING! The System must not be used by persons with neck or back problems.

WARNING! The System must not be used by women during pregnancy.

WARNING! The System must not be used by women with artificial breast implants.

WARNING! Any body piercings which coincide with the airbag coverage area should be removed before electing to use the System, as inflation of the Airbag into and against the body piercings may cause discomfort and/or injury.

Allergy Advice

Persons with certain skin allergies to synthetic, rubber or plastic materials, should carefully monitor their skin each time the System is worn. If any irritation of the skin occurs, immediately stop wearing the System and seek medical advice and/or attention.

16.Cleaning, Storage and Transportation

16.1 SYSTEM CLEANING

TECH-AIR OFF ROAD SYSTEM (FULLY ASSEMBLED VEST)

• After each use it is recommended that dirt and flies are removed by wiping the garment with a damp cloth and dry the garment afterwards using a towel. Do not use hot water or any other type of cleaner or solvent.

• In the event the garment does get wet, allow it to dry naturally, do not attempt to wring it out or place it in direct sunlight or next to any direct heat source over 40°C.

See below the care label:

Do not wash with water / Do not bleach / Do not tumble dry / Do not iron / Do not dry clean

16.2 BASE LAYER CLEANING

The base layer is defined as the Tech-Air OFF-ROAD system WITHOUT Electronics Wiring, Control unit, LED Display, Gas Inflators, Airbag chamber and limbs protectors

• After each use it is recommended that dirt and flies are removed by wiping with a damp cloth or wet sponge.

Base layer care warning label:

WARNING! Under NO circumstances should the System (BOTH fully assembled and disassembled) be washed in a washing machine, tumble dried or ironed. This may cause permanent damage to the System and cause malfunctioning of the System.

Before washing, it is necessary to remove some parts of the System, including the System's removable protection, electronic components and/or other components of the System.

In order to clean the System, the User MUST follow these steps:

16.2.1 REMOVAL OF LIMB PROTECTION

Before washing the System, the User shall remove the limb protection, which includes the shoulder (2) and elbow (10) protectors. The User can easily remove these components from their respective pockets, which are located as indicated in the "System Overview" Section 5 (Figure 5).

These components can be washed separately or along with System's washable components following the instructions reported in Section 16.2.3.

16.2.2 REMOVAL OF NON-WASHABLE COMPONENTS

The second step that the User MUST follow is the removal of non-washable components, which include: Airbag, Gas Inflators (17) and ALL Electronic components, including the LED Display (4). This operation can be done following these indications:

1. First place the System with the back facing down on a flat surface, preferably a workbench or table. Detach the Airbag from the Base Layer (5) by opening all the connection clips arranged as shown in Figure 28. The User can access these connections via the Base Layer (5) openings indicated in Figure 28. There are a total of 10 Airbag clips which are distributed and numbered as indicated in Figure 28: 3 clips on the Left Shoulder area (clips 3-4-5), 2 clips on the Right Shoulder area (6-10), 3 clips for the Chest area (7-8-9) and 2 clips for the Back Area (1-2). It is suggested to detach these clips in sequential order, beginning with clips located on the lower back (1-2), then moving to the clips on the shoulders(3-4-5, and 6), then to the clips on the chest (7-8-9) and finally to the last clip number-10 on shoulder) (see Figure 28).

2. Once all the Airbag clips have been detached, first turn the System with the backprotector facing upwards, open the lower zip of the Hydration Bag Container (9) and the Electronic Case (16) positioned in the back area of the System by pulling down on the red pull tab with your right hand and lifting up the Electronic Case with your left hand simultaneously.

3. Once the Electronic Case (16) has been lifted up, the User can detach all the Electronics components (13-15-19) along with the Gas Inflators (17) by simply pushing up the Removable Inflators Housing (18) (see Figure 25). The User can do this by putting their two thumbs at the bottom of the little black box which contains the Electronic Control Unit that it located at the top of the Housing, and pushing firmly upwards until it clicks, and then the User can easily lift it up out of the Removable Inflators Housing (18).

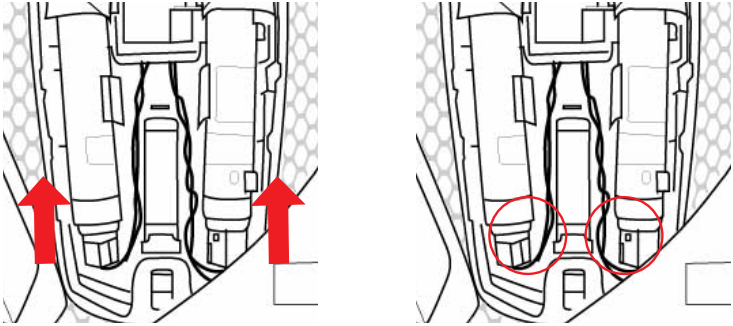


Figure 25: How to detach the Removable Inflators Housing (18) from the System by pulling it up

Now it's time to remove all the non-washable and electronic components as reported in Figure 26 .

First, we need to open the Electronic Connector Plug (22) by holding the lower part of the plug connected to the ECU and gently pushing on the tiny square button, with your right hand, while simultaneously with your left hand the User needs to pull so that the connector opens. Now the User will be able to completely remove the Airbag from the System, as the clips have already been detached. The User can do this by extracting the Airbag together with the Gas Inflators (17) and all the Electronic components (13-15-19) from the upper opening of the back protector).

The User may start to gently pull the entire Airbag out of the Tech-Air® System, until it is completely removed. Next, the User must remove the LED Display (4) from its location. Now, turn the System on its back with the back protector facing downwards. Put your hand into the System from the opening under the inner lining on the left chest of the System. Bring your hand up to the loop on the right shoulder and remove the Electronic Connector cable plug by pulling it out through the loop. Next open the Velcro pocket on the left chest so you can access the Haptic Vibration Area (3). The User must now remove the Activation Zip Sensor from the pocket. Next, the User must pull the cable down through the Haptic Vibration Area (3) access hole on the left side until the entire cable has been removed (see reference in Figure 28). Next the User must open the Velcro found on the left wing of the chest protector and remove the LED Display (4). At this point, all of the Electronic components (13-15-19) should have now been completely removed from the System.

At this stage, the User will now be able to safely clean the System following the indications reported in Section 16.2.3 below.

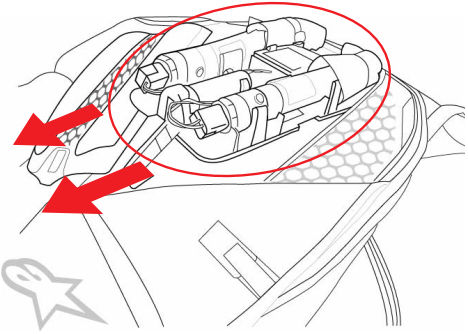


Figure 26: How to remove all the non-washable System's components from the back of the System

16.2.3 CLEAN WASHABLE COMPONENTS

After ALL the steps indicated in Sections 16.2.1 and 16.2.2 above have been performed, the User MUST now have ONLY the washable parts attached to the System which include: the fabric Base Layer (5) along with the Chest (7) and Back Protectors (11). At this point the User MUST have ONLY fabric and plastic parts still hooked up to the System.

The User can now clean the remaining washable parts by ONLY HAND-WASHING them (30 °C). Under NO circumstances should the User put the remaining washable components into a washing machine. Under NO circumstances completely submerge all the remaining parts in water. The User can submerge in water and soap ONLY the textile parts and cannot use any chemical solvent or cleaner. Use only a damp cloth with soap and dry the garment afterwards using a towel or allow it to dry naturally.

WARNING! Only detach the Airbag to wash the Base Layer (5). The Airbag is a very critical safety part of Tech-Air® Off-Road System. Always use extreme caution when handling the Airbag. Any scratches, holes, or damage to the Airbag will lead to the System's malfunction, accordingly, if you see any such damage to the Airbag do not use the System and send the System to Alpinestars or to an authorized Alpinestars' Tech-Air® Service Center for service.

16.2.4 REASSEMBLY OF THE SYSTEM

After cleaning the washable components, the User MUST proceed with the correct reassembly of the System following the instructions below:

1. First, place the System with the Back Protector facing up. The User must reinsert the Airbag through the opening in the Back Protector, taking care to position the Airbag correctly (it is critical that the User avoid twisting or creating folds of the Airbag). Insert the Airbag inside the System with the utmost attention to ensure that each clip is meticulously matched by color and number to the exact corresponding Connection Clip inside the System. The User MUST anchor the Airbag on ALL 10 of the Connection Clips as shown in Figure 28. It is suggested to do this operation with the Gas Inflators (17) positioned in the corresponding Removable Inflators Housing (18). In order to attach the Airbag to the corresponding Connection clips, the User should use the front Base Layer (5) openings by matching the numbered and coloured labels on both the Airbag and on the System's Base Layer (5), (see Figure 28). Please notice that Connection Clips 4 and 10 have double coloured blue and red labels, (make sure when attaching the Connection Clips that the red side is matched to the red side and the blue side is matched to the blue side), in order to help the User to attach the Airbag in the correct orientation.

WARNING! The lower Back Clips (1 and 2) have to be attached in a criss-cross fashion, as reported in the figure 24 below, making an x on the back of the Airbag, this ensures that the Airbag is well anchored. The lower Back Clips (1 and 2) will therefore be attached to the opposite clips with respect to the back view, and as a result the Users should see a slightly folding of the bottom borders of the Airbag. Referring to the frontal view, clip 1 MUST be attached to the left clip and clip 2 MUST be attached to the right clip, as reported in Figure 28.

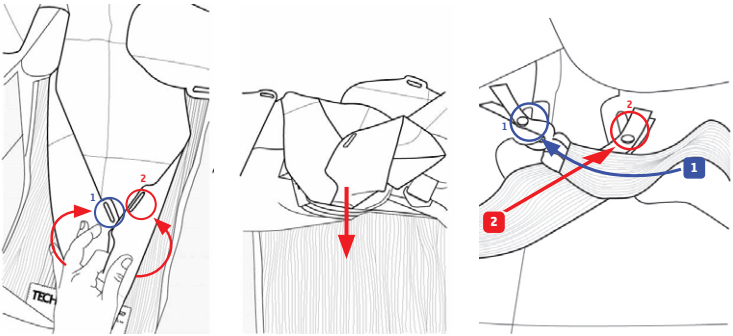


Figure 24

2. Now the User should take some minutes to make sure that the Airbag properly flattened inside the System. The User should check that the Airbag is flat and smooth, by inserting their hand into the front chest areas on both sides, the shoulder areas and the back to verify that there is no twisting or folding of the Airbag, if any twisting or folding is noticed, the User must ensure to remove it and to smooth out any folds. Next the User may reposition the Removable Inflators Housing (18), along with ALL the available Gas Inflators (17) and the Electronic components. All of these components MUST be correctly positioned in their corresponding housings. Once the Removable Inflators Housing (18) has been correctly positioned, the User must push down vertically to anchor it to the Base Layer (5) following the procedure which is shown in Figure 27).

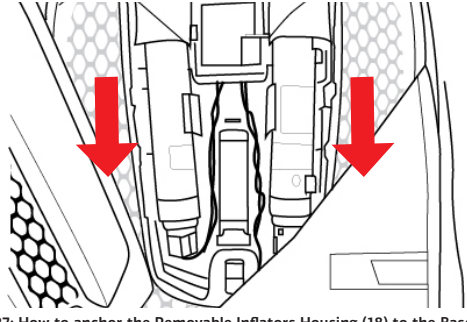


Figure 27: How to anchor the Removable Inflators Housing (18) to the Base Layer (5)

WARNING! Under NO circumstances can the User reposition the Removable Gas Inflator Housing with only ONE Gas Inflator, but always with BOTH the Gas Inflators, as indicated in Section 18 "Actions in the Event of an Accident".

3. Close the back of the System by reattaching the Electronic Case (16) and close the Hydration Bag Container (9) using the corresponding zip.

IMPORTANT! Particular attention must be paid during the insertion of the sectionof the Airbag that protects the chest area to avoid twisting the narrower part of the Airbag as it is passed through to the right shoulder. Any obstruction of this channel could compromise the correct inflation and therefore the protection of the Airbag in the chest area. The User must ensure that the Airbag is flat, and properly positioned within the garment, any twisting in the upper right shoulder or folds in the Airbag may cause the Airbag to not deploy properly and compromise the safety of the rider.

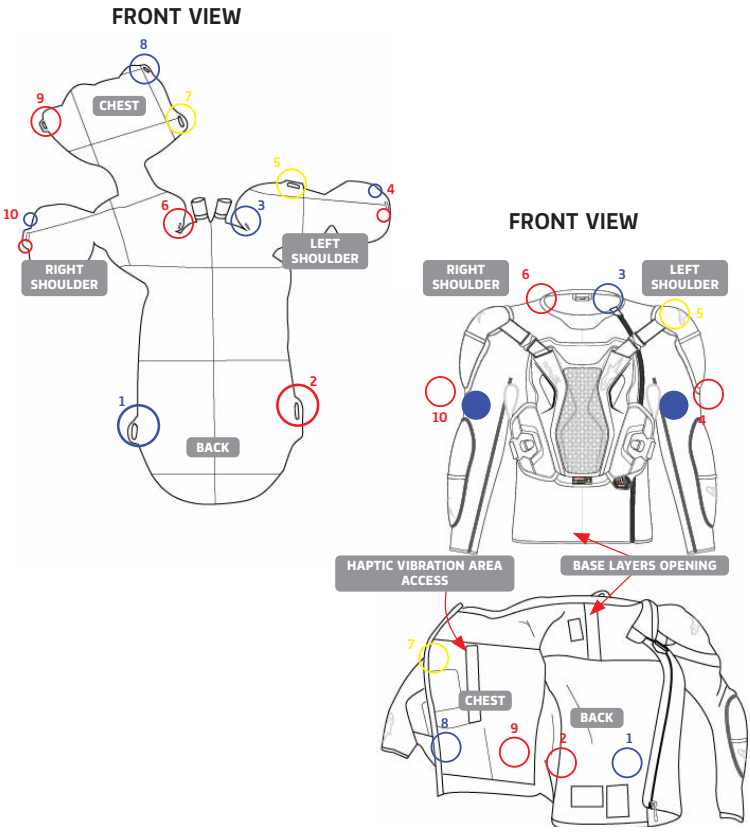


Figure 28: Clip locations on the Airbag (left) and on the System's Base Layer (5) (right)

WARNING! Always check that all the connection clips are properly closed after the reassembly of the Airbag on the Base Layer (5).

16.3 Storage

When not in use, it is recommended that Users store the System in its original packaging. It may be stored flat provided that no heavy or sharp objects are placed on top of it. The System can also be stored hung up on a hanger. The System should always be stored in a cool, dry place, out of direct sunlight.

The battery of the System slowly self-discharges, even if the System is not turned on, especially if the System is stored in a warm environment. It is thus recommended that even while in storage, the System be periodically recharged (at least once every 18 months) to prevent battery drainage and shortening of the battery life.

IMPORTANT! If the battery becomes fully drained, the System may require a longer time to recharge. It is thus recommended that the System be periodically recharged as indicated.

WARNING! Do NOT leave the System in direct sunlight inside a closed car, or otherwise exposed to high temperatures. High temperatures will damage the battery as well as possibly damage the electronic components of the unit.

WARNING! Zipping up the Base Layer (5) and closing the Activation Zip (1) will cause the System to turn on. To prevent this, it is essential that the Activation Zip (1) is opened, in order to prevent accidental activations of the System. Alternatively, the System can be turned off with a long press (~ 5 seconds) of the System Button (4a). Failure to do so will cause the System to turn on, which will cause the battery to drain. When storing the System remember to check that there are no indicator lights illuminated on the LED Display (4).

WARNING! The System's storage temperature must be between -20°C and +60°C (-4°F to 140°F). Exposure to a temperature lower than -20°C (-4°F) may cause permanent damage to the battery.

16.4 Transportation

When not in use, it is recommended that Users store the System in its original packaging. Users should be aware that the Tech-Air® Off-Road is classified as a Life-Saving, self-inflating Jacket, UN class 2990; under the European Pyrotechnic Directive (2013/29/EC) the Tech-Air® Off-Road System is certified safe for transportation, including by air. Detailed instructions for its transportation can be found in the Safety Data Sheet (SDS) related to the Tech-Air®

Off-Road System available in the Documentation Section of the Tech-Air® App.

If the User wants to personally transport the System, the User MUST put the System in Transportation Mode with a long press of the System Button (4a) (Figure 29), in the "LED Display Indications Summary" Section.

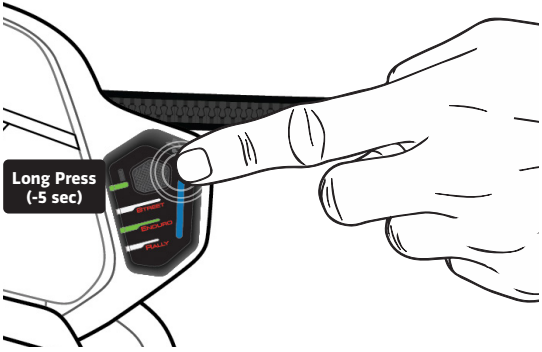


Figure 29: How to put the System in Transportation Mode

Tip: The user can also take advantage of this feature to switch the System off and on in other situations where it may be useful, such as a quick pit- stop or break from riding, instead of using the Activation Zip (1)

17. Shipping

When shipping the System, the User MUST put the System in SHIPPING MODE. In order to do so, the User has to access the System's Electronics by opening the Electronic Case (16) and using the Shipping Mode Switch (14), located as indicated in Figure 30. After setting the Shipping Mode to ON, by sliding the white button up, the User can ship the System. In order to return to the normal System functioning, the User has to set the Shipping Mode to OFF, by sliding the white button down towards the bottom of the back.

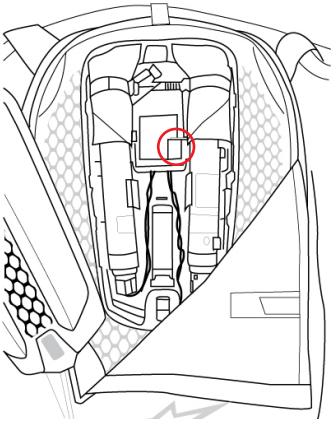


Figure 30: Shipping Mode switch location

WARNING! Whenever the System has experienced any type of crash or accidental impact (with both lower or higher severity), the User MUST remove the System Battery (15) before shipping it to an Alpinestars' Tech-Air® Service Center. To remove the battery, you must first remove the Electronic Cover and lift up the Gas Inflator Housing (18). You can put your hand underneath the battery and push up to detach it from the canister housing. After lifting up the battery, you will need to disconnect the cable that is attached to the ECU by gently pulling away from the tiny plug.

Moreover, the User is strongly recommended to download and print a copy of the Safety Data Sheet (SDS) in case they are questioned about the Airbag System by airport staff. See also Section 10 for the SDS download from the Tech-Air® App.

Note: Not all countries permit the import of pyrotechnic devices. Prior to traveling, Users should check with the appropriate authorities of countries through which and to which they will be traveling to determine if the System will be permitted entry or not.

The Safety Data Sheet (SDS) can be downloaded using the Tech-Air® App from the App Documents section.

18. Actions in the Event of an Accident

Whenever the System deploys, a service must be undertaken by an authorized Alpinestars' Tech-Air® Service Center that will check the status of the System and consequently advise on the type of service needed.

The Tech-Air® Off-Road System features an Airbag that, if intact and undamaged, is certified for up to four inflations. Moreover, since each crash is an unpredictable event, Alpinestars certifies the Airbag for the first crash, NOT for the first deployment.

After each deployment, when the System is received for service, the authorized Alpinestars' Tech-Air® Service Center will perform an Airbag Integrity Test on the Airbag to check if the Airbag has been damaged during the deployment.

a. If such inflation test is passed, confirming that the Airbag was not damaged during the deployment, the service will involve only the replacement of the Gas Inflators.

b. If such inflation test is not passed, it means . the Airbag was damaged during the deployment and, accordingly, the System will undergo the full service that will involve the replacement of the Gas Inflators and the Airbag.

At the fourth deployment, the System will mandatorily undergo a full service as indicated in point 18.b. above, with the Gas Inflators (17) and Airbag being replaced.

IMPORTANT! The Tech-Air® Off-Road Electronic Control Unit (13) records the number of deployments. After the fourth deployment, the System will permanently indicate a System Fault (displaying a solid red light on the Status LED (4c)). The System will remain locked until a full service is performed by an authorized Alpinestars' Tech-Air® Service Center.

The Tech-Air® App displays a warning indicating that the Airbag needs to be replaced at the next deployment. In addition, the App displays the warning when, after the System deployment, it is necessary to replace the Airbag.

WARNING! Alpinestars STRONGLY RECOMMENDS to perform a System check by an authorized Alpinestars' Service Center after EACH inflation and/ or after any events that could have potentially damaged the Airbag.

In case of deployment, in a situation where the User believes the System should not have deployed, the System should also be returned to an Alpinestars' Tech-Air® Dealer along with a detailed report of the event (including photos, if possible).

WARNING! The Tech-Air® Off-Road System does offer the autonomous Gas Inflator replacement, but ONLY for those Users that are located in the countries authorized for Gas Inflators handling and replacement. For the complete list of the authorized countries see the Documents Section in the Tech-Air® App. For the complete description of the Gas Inflators replacement, check the Gas Inflator instruction leaflet that is provided with the Gas Inflators Replacement Kit, or visit the Product Manuals section found online at: https://www.alpinestars.com/pages/product-manuals.

Accident WITHOUT Deployment

In the case of minor, low energy and/or low speed accidents, such as those involving speeds below those described in Section 3 (the "Tech-Air® Envelope of Protection"), it is likely that the System will not deploy. Nonetheless, a thorough inspection of the System should be made to ensure that there is no significant damage (tears, holes, etc.) which could compromise the functioning of the System, as per the maintenance check outlined in Section 19.

In case of situations where the User believes that the System should have deployed, feedback can be sent to Alpinestars through the Tech-Air® App and/or given to Alpinestars directly by contacting Tech-Air® Support. If the System is returned to an authorized Alpinestars' Tech-Air® Service Center for an inspection, a detailed description of the event (including photos where possible) must be included.

The user can provide any feedback related to deployment events to Alpinestars through the Tech-Air® App and/or by contacting Tech-Air® Support (see Section 21).

19. Maintenance, Servicing, Lifespan and Disposal

Garments with electronically activated Airbags are critical safety systems which must be maintained in good working order to ensure their correct function. If not, they may not function properly or at all.

19.1 Maintenance

Prior to each use, the User should conduct a check of the System, looking for any signs of wear (loose threads, holes, marks) or damage of the System in all its parts (Airbag included). If any signs of wear are found, the System should be inspected further by an authorized Alpinestars' Tech-Air® Service Center.

19.2 Servicing

Alpinestars recommends that the System be routinely inspected at least every 2 years or after 500 hours of functioning, whichever comes first, by Alpinestars or an authorized Alpinestars' Tech-Air® Service Center. During the inspection service, the Airbag and the unit's components will be examined. Inspection can be requested directly at an Alpinestars' Tech-

Air® Dealer. The following work is undertaken as part of the routine service:

- All components are removed from the System and the Base Layer (5) is washed.
- The diagnostics of the Electronic Control Unit (13) are checked (and firmware upgraded, if applicable).
- The expiration date of the high pressure Gas Inflators (17) is checked, and if needed the Gas Inflator is/are replaced.
- The Airbag is inspected for any sign of wear and/or damage.
- The System is reassembled into the Base Layer (5) and checked for proper functionality.

Tip: Two years or 500 hours of functioning is the maximum recommended period between inspections.

WARNING! If no service or recharge operation has been conducted after two years or 500 hours of functioning from the purchase date, there is the possibility that the System will not function inside the Envelope of Protection.

WARNING! There are NO user serviceable parts inside the System. Under no circumstances should users attempt to open, service, disassemble or modify the System. Do not remove or change the internal battery. Any and all work performed on the System must be done by Alpinestars or an authorized Alpinestars' Tech-Air® Service Center. Severe injury or damage may result otherwise.

19.3 Lifespan and disposal

The materials and components used by Alpinestars in the System are selected to maximize durability.

Properly caring for, including regularly servicing and updating of your System, will help ensure the longest possible lifespan.

Notwithstanding in the long run the System, similar to any product, has a limited lifespan as it is subject to natural degradation and breakdown of materials and/or components through factors such as use, wear and tear, improper care of your System, incorrect storage and/or common environmental conditions – all of which affects the practical lifespan of products.

For safety issues and to ensure that the above factors have not reduced the integrity or product performance levels, Alpinestars strongly recommend replacing your System 10 years from the date it was first worn.

WARNING! The internal high pressure Gas Inflators (17) have a limited duration, and must be changed before the Gas Inflator (17) expiration date shown on the label of the Gas Inflator (17). Gas Inflators (17) normally have a life expectancy of approximately 4 years. Before the use and during the periodic inspection service, the expiration date must be verified and in case the Gas Inflator (17) is over 4 years old, it must be substituted.

As written in this manual, always before any use, check the System for any damage to any part of the product. Regardless of the age of the product, do not use any product if you notice any damage.

19.4 Disposal of the System at the end of life span

19.4.1 Deployed System

IMPORTANT! The System contains electronic components, accordingly, at the end of its working life, the System must be disposed of following the European Directive 2012/19/EU requirements. The symbol of the crossed bin displayed on the System indicates the electronic parts of the System which, at the end of its life span, must be separately disposed of from other waste, for appropriate waste processing and recycling. The user must therefore take the Electronic Control Unit (13), Charging Cable (12) and all other electronic parts marked with the crossed bin, to those sites assigned for the disposal of electrical and electronic waste or return the System to an Alpinestars' Tech-Air® Dealer for disposal in accordance with the local waste requirements.

Disposing of the System according to the local waste allows for a correct and environmentally-friendly recycling, processing and disposal of the System itself, thus avoiding the dispersion of dangerous substances and any negative effects on the environment and health and favouring the reuse and/or recycle of the materials from which the System is made of. The unauthorized disposal of the System on behalf of the user, entails application of fines pursuant to the current law. We urge you to check the current legislation and the measures adopted by the public services operating in your territory.

Tip: To check if your System has deployed, please note that a deployed Airbag can be confirmed by turning on the System and looking at the LED of the System (4c) (see Section 6) or checking the System status using the Tech-Air® App (see Section 10).

19.4.2 Undeployed System

WARNING! An undeployed System still contains live pyrotechnic charges and thus must NOT be disposed of in household waste or incinerated.

An undeployed System must be returned to an Alpinestars' Tech-Air® Dealer for subsequent return to Alpinestars who will handle the disposal. This service is free of charge.

20. Troubleshooting

Problem	Possible Cause	Possible Solutions
LED Display (4) does not switch on when Activation Zip (1) is closed	System Battery fully discharged	Recharge battery (see Section 7) and check the correct LED (4) behaviour during the recharge. If the battery is very low, the System may not activate the LED Display (4), until a proper charge level has been reached.
	Activation Zip (1) not correctly positioned	Check the correct positioning of the Activation Zip (1).
SOLID red LED on the System LED (4c)	Both Gas Inflators empty and/or Airbag must be replaced	After a second deployment, the Gas Inflators must be replaced. Until such replacing, the System will not work even though the battery is charged and the LED Display (4) will show the red light until the Gas Inflators are replaced. If the same Airbag has deployed 4 times, the red LED (4c) will indicate a System fault even after the replacement of the Gas Inflators. In this case, the Airbag itself must be replaced and the System reactivated by an Authorized Tech-Air® Service Center.
	System Error	If Gas Inflators are not empty (double check this using the Tech-Air® App), The System may have an internal error. Contact an Authorized Alpinestars' Tech-Air® Service Center to check the System.
Blinking red BATTERY LED (4e)	Battery Low	Remaining battery level is lower than 4 hours. Recharge the battery as soon as possible as reported in Section 7.

21. Tech-Air® Support

In case of questions or should users need further information, they may contact the Tech-Air® Dealer where they purchased the System or Alpinestars directly:

E-mail: techairsupport@alpinestars.com

Tel: +39 0423 5286 (asking for Tech-Air® Support)

22. Certification Information

The Tech-Air® Off-Road System is manufactured by:

Alpinestars SpA

5, Viale Fermi – Asolo (TV) 31011 Italy

And it is covered by a number of certifications.

Personal Protective Equipment

The Tech-Air® Off-Road System - ABSOR23 and all the included protective parts are a Category II certified PPE (Personal Protective Equipment) under European Regulation (UE) 2016/425. This product is in compliance also under the corresponding UK legislation (Regulation 2016/425 on personal protective equipment as it applies in GB).

For each PPE included in the Tech-Air® Off-Road System and itself, the notified bodies and certifications information contained in the product markings are reported in the Annex I of this manual.

EU declaration of conformity & UKCA declaration of conformity

The EU Declaration of Conformity of this PPE can be downloaded at:

eudeclaration.alpinestars.com

The UK Declaration of Conformity of this PPE can be downloaded at:

ukdeclaration.alpinestars.com

Protective garments for motorcycle riders

The degree of risk or hazard that a motorcyclist will face is closely linked to the type of riding and the nature of the accident. Riders are cautioned to carefully choose motorcyclists' protective garments that match their riding activity and risks. Other garments or garment combinations certified according to the EN 17092 series of standards may provide more appropriate protection than this garment but there may be weight or ergonomic or heat stress penalties associated with their use, that may be less appropriate for some riders

The Technical Standard EN 17092:2020 requires that motorcycle protective garments must fulfill with mechanical requirements according to the relevant class of protection set

forth by the Technical Standard EN 17092:2020. EN 17092 series is comprised of 6 parts (Part 1 describes some of methods for testing, from Part 2 to Part 6 are specified general requirements for each single class of garments included into EN 17092 standard).

The Tech-Air® Off-Road System - ABSOR23 is a Class C undergarment certified in accordance to EN 17092-6:2020. Class C garments are specialized non-shell, impact protector ensemble garments, designed only to hold one or more impact protectors in place, as an undergarment. EN 17092-6:2020 garments are designed to impact protection for areas covered by the impact protector(s) only. This garment is designed to provide impact protection for the areas covered by the impact protector(s). It does not offer minimum abrasion protection.

WARNING! EN 17092-6:2020 garment DO NOT offer minimum abrasion protection and DO NOT offer minimum impact protection. As such Class C garments are intended to be worn with and supplement the protection offered by either Class AAA or AA or A or B garments.

The following requirements are established for the most exposed areas (i.e. shoulders, elbows, hips, knees) as follows:

CLASS OF PROTECTION						
TEST PERFORMED	Class AAA garments EN 17092-2:2020	Class AA garments EN 17092-3:2020	Class A garments EN 17092-4:2020	Class B garments EN 17092-5:2020	Class C overgarment garments EN 17092-6:2020	Class C undergarment garments EN 17092-6:2020
Impact abrasion resistance	120 km/h – 75 mph	70 km/h – 43 mph	45 km/h – 28 mph	45 km/h – 28 mph	45 km/h – 28 mph	Not applicable
Tear strength	50 N	40 N	35 N	35 N	35 N	10 N
Seam strength	12 N/mm	8 N/mm	6 N/mm	6 N/mm	6 N/mm	4 N/mm

Wearing the System is not a substitute for wearing other protective motorcycling clothing and gear. To provide full potential protection, the System must always be worn in conjunction with suitable motorcycling gear. Complementary PPE garments could be: jackets or trousers (in accordance with EN 17092 parts 2, 3, 4 and 5), other impact protectors, boots (in accordance with EN 13634) and gloves (in accordance with EN 13594) and visibility clothing (in accordance with EN 1150) or high visibility accessories (in accordance with EN 13356).

WARNING! No PPE or combination of PPE can offer full protection against injury;

WARNING! In order to provide the certified level of protection it is important that the garment is appropriate to your size and fits correctly. Selecting the correct size is important.

WARNING! Using the garment without protector(s) is at your own risk and peril.

Inflatable Impact Protector with electronic activation

To certify the Tech-Air® Off-Road System - ABSOR23 as a motorcyclist inflatable protector has been achieved considering the following standard:

• EN 1621-4:2013 Motorcyclists' protective clothing against mechanical impact – Part 4: Motorcyclists' inflatable protectors – Requirements and test methods.

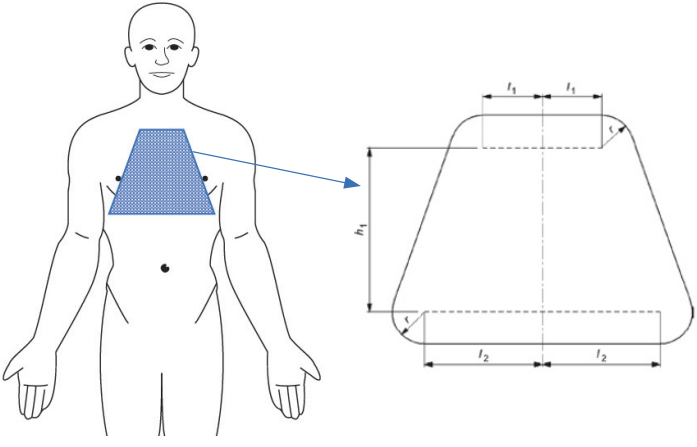
Any characteristics of the Device that could not be evaluated through the standard mentioned above were analysed in consultation with the Notified Body.

The following table summarizes and explains the performance level reported on the product marking as an inflatable impact protector:

Tested Area	Standard Used for tests method applied in tests	Temperature	Force Transmitted with Impact Energy of 50 Joule Value Average/ Maximum	Level Level 1 requirements: average value ≤ 4.5kN; No impact above 6kN Level 2 requirements: average value ≤ 2.5kN; No impacts above 3kN
Full Chest	EN 1621-3:2018	23°C, -10°C, 40°C	Average ≤ 4.5kN Peak ≤ 6kN	Level 1
Full Back	EN 1621-2:2014	23°C, -10°C, 40°C	Average ≤ 4.5kN Peak ≤ 6kN	Level 1

Please note that the level 1 requirement for each tested area is only guaranteed in combination with the passive chest protector ABSOR23 and the back protector ABSOR23.

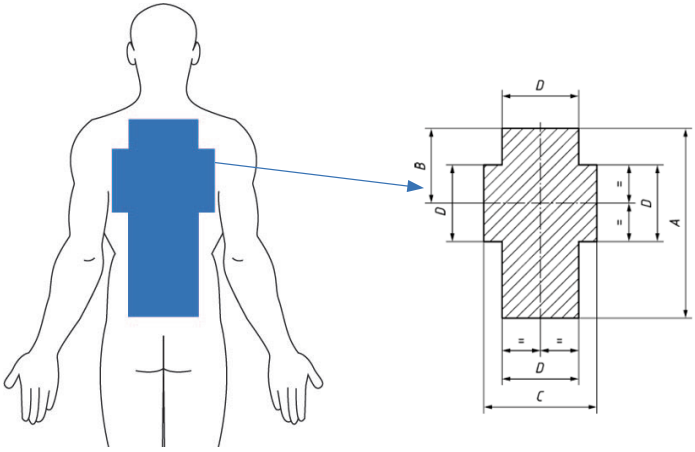
Description of Full Chest Protected Area



Type	Dimensions in mm			
	r	l_1	l_2	h_1
A	25	42	84	118
B	30	50	100	140

Base Layer Size	International Size MAN	Chest protector size
S	42-44	Type A
M	46-48	Type A
L	50-52	Type A
XL	54-56	Type B
2XL	58-60	Type B

Description of Full Back Protected Area:



Dimensions					
A	B	C	D	E	F
72 %	29 %	44 %	29 %	32 %	25 %
NOTE: All dimensions refer to the waist to shoulder lenght (100%) of the biggest user					

Sizing & fitting info regards the inflatable protector integrated onto the System

The base layer size is directly linked to the 'Waist to Shoulder length,' as this gives the best representation of back length. Waist-to-shoulder length is the length measured on the back from the waistline to the junction of the shoulder to the neck at the highest point. Table 5 below lists the sizes of the System, the waist-to-shoulder length, and a suggested person height to assist with the selection. For the waist to shoulder length of the bigger user, refer to the upper value in the third column of Table 5 for each size.

WARNING! The indicated international size is based on MAN size and is only for reference. Always check the correct waist-to-shoulder length before choosing the size of the System, along with the User's body measurements.

Table 5 – Tech-Air® Off-Road Sizes in centimeters and inches

Base Layer Size	International Size MAN	User's Waist to Shoulder length	Suggested Height Range
S	42-44	41 (16.1") to 46cm (18.1")	Up to 175cm (68.9")
M	46-48	41 (16.1") to 46cm (18.1")	Up to 182cm (71.8")
L	50-52	41 (16.1") to 46cm (18.1")	Up to 190cm (74.8")
XL	54-56	46 (18.1") to 51cm (20.1")	Up to 190cm (74.8")
2XL	58-60	46 (18.1") to 51cm (20.1")	Up to 202cm (79.3")

Motorcyclists' protective clothing against mechanical impact

Part 1: Motorcyclists' Limb Joint protectors

The Tech-Air® Off-Road System, is equipped with removable passive limb joint protectors certified as a Personal Protective Equipment Category II, under the Regulation EU 2016/425, according to the EN 1621-1:2012 standard. These products are in compliance also under the corresponding UK legislation (Regulation 2016/425 on personal protective equipment as it applies in GB).

The EN 1621-1:2012 provides two performance level of protection: Level 1 and Level 2.

Level 1 for protectors designed to give protection whilst having low ergonomic penalties associated with its use and Level 2 for protectors providing an increased protection with respect to Level 1. There may be, however, weight and restriction penalties associated with Level 2 protection.

The protectors integrated into the System are Level 1 elbow and shoulder passive protectors.

The following table summarizes and explains the performance level reported on the product marking as a passive impact protector:

Tested Area	Standard Used for Tests method applied in tests	Temperature	Force Transmitted with Impact Energy of 50 Joule Value Average/ Maximum	**Level** Level 1 requirements: average value ≤ 35kN; No impact above 35kN (Zone A), 50kN (Zone B and C) Level 2 requirements: average value ≤ 20kN; No impacts above 20kN (Zone A), 30kN (Zone B and C)
Elbow	EN 1621-1:2012	23°	Average ≤ 35kN Peak ≤ 35kN (Zone A) Peak ≤ 50kN (Zone B and C)	Level 1
Shoulder	EN 1621-1:2012	23°	Average ≤ 35kN Peak ≤ 35kN (Zone A) Peak ≤ 50kN (Zone B and C)	Level 1

Sizing & fitting info regards the limb joint protectors integrated onto the System

There are two protector types – Type A and Type B, these refer to the size. Type B protectors are larger than Type A protectors. Where the protector is located within a garment, the most suitable type of protector has already been selected for that garment style and size.

In the case of the Tech-Air® Off-Road System the elbow and shoulder protectors' type that better fits with the chosen size are selected by Alpinestars.

The following table explains and summarizes the passive elbow and shoulders protectors sizes already installed in your vest:

Base Layer Size	International Size MAN	Elbow protector size	Shoulder protector size
S	42-44	Type B	Type B
M	46-48	Type B	Type B
L	50-52	Type B	Type B
XL	54-56	Type B	Type B
2XL	58-60	Type B	Type B

WARNING! NEVER USE THE PRODUCT WITHOUT THE REMOVALBLE PROTECTORS.

Part 2: Motorcyclists' back protectors

The Tech-Air® Off-Road System, is equipped with a non-removable passive back protector that provides protection to the back area even if the System should not deploy. This back protector is certified as a Personal Protective Equipment Category II, under the Regulation EU 2016/425, according to the EN 1621-2:2014 standard. This product is in compliance also under the corresponding UK legislation (Regulation 2016/425 on personal protective equipment as it applies in GB).

The following information will help you to understand which type of passive back protector (among different types of back protectors) is installed inside your Tech-Air® Off-Road.

Figure 1 opposite illustrates the three different types of back protector contained in this new standard. These are:

FB = Full Back protector, which provides protection to the central back and scapulae

CB = Central Back protector, which provides protection to the central back

LB = Lower Back protector, which provides protection to the Lumbar area only

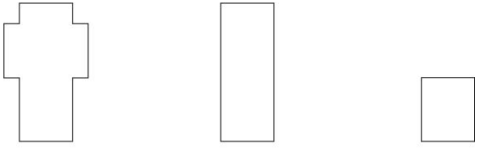
EN 1621-2:2014 provides two performance levels of protection: Level 1 and Level 2.

Level 1 protectors have a lower performance protection level, however are more lightweight.

Level 2 protectors have superior performance protection level, however may be thicker and heavier.

You should choose protectors which provides the best performance level of protection suitable for the type of riding you will do.

FIGURE 1 – Protector Types and their respective certified protective areas (Zones of Protection).



WARNING! Central Back Protector does not provide scapulae protection.

WARNING! Lumber protector does not provide protection to the upper back.

WARNING! Users should be aware that no back protector will provide complete protection against spinal injury and no guarantees, warranties (express or implied) are made regarding the protector's ability to avoid risk of spinal injury.

The protector integrated into the System is a Level 1 passive full back protector.

The following table summarizes and explains the performance level reported on the product marking as a passive impact protector:

Tested Area	Standard Used for Tests method applied in tests	Temperature	Force Transmitted with Impact Energy of 50 Joule Value Average/ Maximum	**Level** Level 1 requirements: average value ≤ 18kN; No impact above 24kN Level 2 requirements: average value ≤ 9kN; No impacts above 12kN
Full Back	EN 1621-2:2014	23°, -10°, 40°	Average ≤ 18kN Peak ≤ 24kN	Level 1

WARNING! Always before any use, check the back protector for any damage to any part of it. Regardless of the age, do not use the system if you notice any damage and/or degradation of the back protector.

WARNING! Any contamination, alteration of the back protector or improper use can dangerously reduce the performance of the back protector.

Sizing & fitting information regarding the back protector integrated onto the System

Back protectors are certified to EN 1621-2:2014 are sized by 'Waist to Shoulder length,' as this gives the best representation of back length. Waist-to-shoulder length is the length measured on the back from the waistline to the junction of the shoulder to the neck at the highest point, as shown in the protective equipment pictogram.

The System is equipped with an integrated back protector that is not removable from the airbag vest nor may the back protector be modified.

The size of the back protector has been selected by Alpinestars based on the sizing and function of the System. Notwithstanding one single size back protector cannot fit all body dimensions (height and shape). Accordingly, when selecting the System check that the System's integrated back protector is correctly fitting. A correctly fitting back protector

must not be touching your neck when you tilt your head backward. If the back protector of the System touches your neck when you tilt your head backward, this is a sign that the back protector of the System is too big and may interfere with the helmet, resulting in a dangerous riding condition. If this is the case the System is unsuitable for you and must not be used by you.

The following table explains and summarize passive back protectors sizes already installed in your vest:

Base Layer Size	International Size MAN	User's Waist to Shoulder length
S	42-44	41 (16.1") to 46cm (18.1")
M	46-48	41 (17.3") to 46cm (18.9")
L	50-52	41 (18.1") to 46cm (19.7")
XL	54-56	46 (18.1") to 51cm (19.7")
2XL	58-60	46 (18.9") to 51cm (20.9")

Part 3: Motorcyclists' chest protectors

The Tech-Air® Off-Road System, is equipped with a non-removable passive chest protector that provides protection to the upper chest including the sternum even if the System should not deploy. This chest protector is certified as Personal Protective Equipment Category II, under the Regulation EU 2016/425, according to the EN 1621-3:2018 standard. This product is in compliance also under the corresponding UK legislation (Regulation 2016/425 on personal protective equipment as it applies in GB).

The following information will help you to understand which type of passive chest protector (among different types of chest protectors) is installed inside your Tech-Air® Off-Road.

This standard permits two different kinds of Chest Protectors:

C = Full Chest Protector, which is a single piece chest protector. This provides protection to the upper chest including the sternum.

DC = Divided Chest Protector, which is a two-piece chest protector. This provides protection to the upper chest only.

The increased coverage of a Full Chest Protector may provide greater protection compared to a Divided Chest Protector.

Research published by the European funded APROSYS study has shown that the distribution of an impact load over the chest is of greater importance than the amount of energy absorbed by a chest protector. As such EN 1621-3:2018 provides for two levels of protection, Level 1 and Level 2. Level 2 protectors have been subjected to a force distribution test, as a result these protectors will be more rigid than Level 1 protectors.

The protector integrated into the System is a Level 2 passive full chest protector.

The following table summarizes and explains the performance level reported on the product marking as a passive impact protector:

Tested Area	Standard Used for Tests method applied in tests	Temperature	Force Transmitted (impact test)	Force Transmitted (distribution test)	**Level** Impact force Level 1 and 2 Average value ≤ 18kN Peak value ≤ 24kN Distribution force only Level 2 Average value ≤ 15kN Peak value ≤ 20kN
Full Chest	EN 1621-3:2018	23°, 40°	Average ≤ 18kN Peak ≤ 24kN	Average ≤ 15kN Peak ≤20kN	Level 2

WARNING! The divided chest protector should not be used in a garment which allows a gap greater than 40 mm between the two halves.

WARNING! Always before any use, check the chest protector for any damage to any part of it. Regardless of the age, do not use the system if you notice any damage and/or degradation of the chest protector.

WARNING! Users should be aware that no chest protector will provide complete protection against injury and no guarantees, warranties (express or implied) are made regarding this chest protector's ability to avoid risk injury.

Sizing & fitting information regarding the chest protector integrated onto the System

Chest Protectors are available in two different sizes, Type A or Type B. Type B Chest Protectors are larger than Type A Chest Protectors. In the case of the ABSOR23 – Tech-Air® Off-Road System the chest protector type that better fits with the chosen size is selected by Alpinestars, and in no way removable from the airbag garment. A properly fitted Chest Protector should not inhibit your mobility and allow your body to follow the movement of your specific riding style. If the Chest Protector is too large, it will move away from your

body providing discomfort whilst riding and limiting the effectiveness of wearing a Chest Protector. If the Chest Protector is too small, it will move inside the protector pocket(s) not ensuring a sufficient protection of your chest area. Check that the Tech-Air® Off-Road System and its integrated chest protector is positioned correctly on the upper portion of your chest and not stomach. The chest protector should not be so wide so as to affect your arm movements when in your normal riding posture.

The following table explains and summarize passive chest protectors sizes already installed in your vest:

Base Layer Size	International Size MAN	Chest protector size
S	42-44	Type A
M	46-48	Type A
L	50-52	Type A
XL	54-56	Type B
2XL	58-60	Type B

Motorcyclists' protective clothing against mechanical impact general information

CARE & STORAGE

The protectors can be cleaned with a damp cloth and soapy water. Do not submerge the protectors in water. Never clean the protector with strong cleaning agents or solvents as these could weaken the materials or damage the integrity of the protector. Care must be taken to avoid bending the protectors, particularly during storage. Store the protectors in a dry ventilated area away from direct heat sources, including direct sunlight. Do not place heavy objects on top of the protectors. Extract the protectors from the garment to facilitate cleaning. Make sure that all of the removable protectors have been reinserted into the garment before riding with the garment again. DO NOT USE the garment if the removable protectors have not been reinserted into the garment or are missing. Using the garment without the removable protectors will render the CE and UKCA certification invalid and moreover provide no protection against impacts.

WARNING! Remember that for sensible motorcycling the full body must be protected and as such the protector should be worn with correctly CE and UKCA certified and fitting motorcycle clothing, boots, gloves and an homologated helmet.

MAINTENANCE

The protectors should be periodically inspected for wear and tear. Depending on the location of the protectors in the garment, this may require that the protectors be removed from

the garment first. If the protectors are degraded, cracked, chipped or delaminated then the protector must be replaced. The protectors should also be replaced if they have been subject to a severe impact, particularly if the plastic has lightened in color at the impact point. In lesser impacts the protectors should be checked by an authorized Alpinestars' Dealer before further use. A protector should only be reused if it is in perfect condition with no visible damage. Under no circumstances attempt to repair, alter or modify the protector, this includes the application of paints, stickers or dyes which will compromise the material integrity of the protector.

LIFESPAN

The materials used by Alpinestars in its products are selected to maximize durability.

Properly caring for your Alpinestars products will also help ensure the longest possible lifespan. Notwithstanding all products have a limited lifespan and are subject to degradation and natural breakdown of materials in the long term, through factors such as use, wear and tear caused by your riding style, accidents, abrasions, how well you care for your product and storage and/or common environmental conditions - all of which effects the practical lifespan of products.

Protectors having plastic parts has a limited lifespan due to stresses of riding and/or the elements such heat or sun light exposures.

For safety issues and to ensure that the above factors have not reduced the integrity or product

performance levels, Alpinestars strongly recommends replacing your removable protectors every 5 years under normal use conditions and to refer to the System regular mantainance recommendation for the non-removable protectors (see Section 19).

As written in this booklet, always before any use, check the product for any damage to any parts of the product. Regardless of the age of the product, do not use any product if you notice any damage, cracking, deformity and/or the inside padding is deteriorating or if the product no longer fits correctly or is lacking its structural integrity.

DISPOSAL

At the end of its life the product must be disposed of in accordance with local refuse regulations. There are no hazardous materials used in the manufacture of the product.

ALLERGY ADVICE

Persons who have skin allergies to synthetic, rubber or plastic materials, should monitor carefully their skin each time the product is used. In the event any irritation of the skin occurs, immediately stop using the product, and seek medical advice.

LIMITATIONS ON USE

This product is for use ONLY while motorcycling and will ONLY provide limited protection against impacts in the event of an accident or fall.

WARNING! Users should be aware that no product (including protector/s) will provide complete protection against injury and no guarantees, warranties (express or implied) are made regarding the product's (including protector/s) ability to avoid risk injury.

WARNING! Users should be aware that different environmental conditions including high or low temperatures can influence the characteristics of the protector and may reduce the performance of the protector, even if the T+ and/or T- are present in the pictogram. (I need to know the specifications that will implement).

Pyrotechnic Articles

The Tech-Air® Off-Road System contains two pyrotechnically activated cold Gas Inflators, and as such, the whole item is considered as an "AIRBAG MODULE" category P1 under EU Directive 2013/29. As such a EU Type Examination (Module B) has been conducted on the design of the System. An EU Type Examination and Audit (Module E) has been conducted on the Manufacturing Site of the System.

The EU Type Examination and Audit have been conducted by Notified Body #0080, Ineris, Parc Technologique ALATA BP2, Verneuil-en-Halatte, 60550, France.

The CE label on TechAir® Off-Road System reports the relevant information regarding the pyrotechnic certification:

Code of INERIS, the notified body that certified the TechAir® Off-Road System

Certification Code:
- 0080: code of the notified body (INERIS)
- P1: category of the Pyrotechnic article contained in the TechAir® Off-Road System
- 22.0001: unique code of the certification

Electromagnetic Stability

The Electronic Control Unit (13) of the Tech-Air® Off-Road System has been tested according to different regulations for electronic and radio devices.

FCC compliance Statement:

The System has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.

• Increase the separation between the equipment and receiver.

• Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.

• Consult the dealer or an experienced radio/TV technician for help.

WARNING! Changes or modifications not expressly approved by Alpinestars could void the User's authority to operate the equipment. (Part. 15.21).

FCC ID: YCP – STM32WB5M001

Canadian Compliance Statement:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to RSS-210 of the IC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for help.

WARNING! Changes or modifications not expressly approved by the party responsible for compliance could void the User's authority to operate the equipment. (RSS-210)

IC: 8976A-STM32WB5M01

EU compliance Statement:
The Tech-Air® Off-Road System contains a Bluetooth Low Energy Radio Module, with the following characteristics:

Frequency Band	2402÷2480 Mhz
Rated Output Power	0.00313 Watts

Alpinestars SpA hereby declares that this wireless device is in compliance with the Directive 2014/53/EU. A copy of the EU Declaration of Conformity is available at: eudeclaration.alpinestars.com

23. WARNING - Important Information for Users!

The Tech-Air® Off-Road System is an active safety protection system that is different from normal motorcycle clothing and as a result requires additional care and precautions. You must read and understand this user manual fully before using the System, as well as pay close attention to the following warnings:

• The System can only provide a limited amount of protection in an accident or event. As such, there always remains a possibility that a serious or fatal injury could occur even when using the System.

• Certain types of movement could be interpreted as a crash by the System and cause a deployment though no crash has occurred.

• The System has been designed to deploy in crashes above a minimum energy threshold. This is to prevent wasteful use of the charges in situations where protection typically would not be needed. Thus, in low speed/low energy crashes it is likely and reasonable that the System will not deploy.

• Do not attempt to make any modifications or adjustments to the electronics and to the System.

• The System must only be used for motorcycle street riding when in Street Mode, and for off-road use when in Enduro or Rally Mode. This System is NOT to be used for any other purpose, motorcycle-related or otherwise. This includes: Road Racing, Flat-Track competitions, Supermoto, performing stunts and any type of non-motorcycling activity. Wearing the System during any non- intended activity (with the unit switched on) may cause the System to deploy and cause injury or death to you or others and may cause damage to property. Alpinestars does not accept any claims for malfunctions of the System used outside the environments for which its use is intended.

• When not in use and being stored, transported the System must be turned off by keeping the Activation Zip (1) open and unzipped.

• When shipped by air, the System must be turned off and put in Shipping Mode, as reported in Section 17.

• Prior to each use, the System should be inspected for any signs of wear or damage. Additionally, when turned on, the LED Display (4) must be checked. In the event of a System fault (denoted by the Status LED (4c) showing a red LED or the absence of any indicators), Users should stop using the System immediately and refer to the user manual.

• Prior to each use, the Activation zip (1) has to be properly closed when worn and the Status LED light (4c) has to be blue. Before each ride always be sure to check that the electronic case (16) is tightly closed.

• Whenever the LED Display (4) gives a low battery indication, the System MUST be recharged as soon as possible.

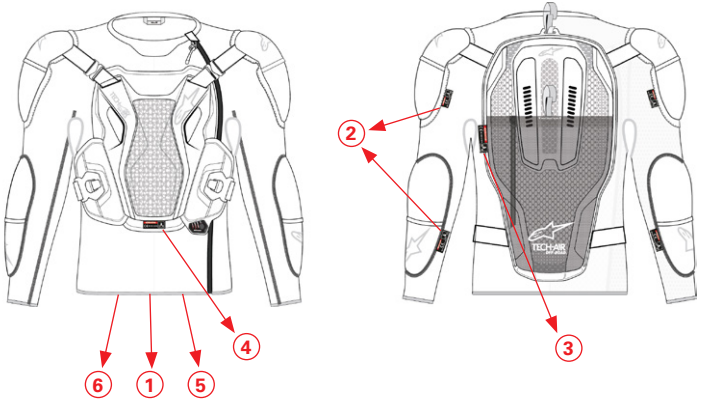
• The System must never be machine washed, submerged in water, tumble dried or ironed, except for the sole washable components as described in Section 16.

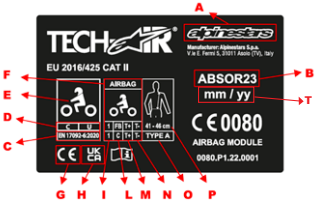
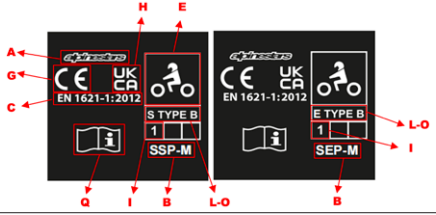
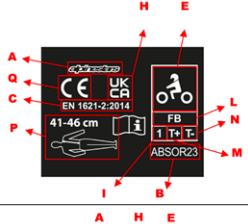
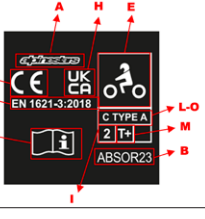
• After a deployment, the System must be returned to either an Alpinestars' Tech-Air® Dealer which can arrange for the System to be recharged or directly to an Alpinestars' Tech-Air® Service Center.

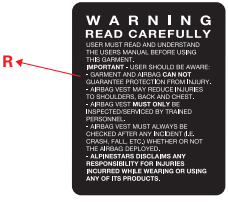
• Even if the System has not been used, or the Airbag has never fired, it is important that the System be serviced at least once every two years or 500 hours of functioning. This can be arranged through an Alpinestars' Tech-Air® Dealer or directly by an Alpinestars' Tech-Air® Service Center.

ANNEX 1

Example of marking in accordance with the various standards and the EU regulation



1	 A TECH AIR alpinestars Manufacturer: Alpinestars S.p.A. EU 2016/425 CAT II F E D C AIRBAG ABSOR23 mm / yy B T 0080 AIRBAG MODULE 0080.P1.22.0001 G H I L M N O P
2	 H E A G C EN 1621-1:2012 S TYPE B SSP-M Q I B L-O EN 1621-1:2012 E TYPE B SEP-M L-O I B
3	 H E A Q C EN 1621-2:2014 P 41-46 cm FB L N M ABSOR23 I B
4	 A H E G C EN 1621-3:2018 Q C TYPE A L-O M B ABSOR23 I

5	 R WARNING READ CAREFULLY USER MUST READ AND UNDERSTAND THE USERS MANUAL BEFORE USING THIS GARMENT. IMPORTANT - USER SHOULD BE AWARE: • GARMENT AND AIRBAG CAN NOT GUARANTEE PROTECTION FROM INJURY. • AIRBAG VEST MAY REDUCE INJURIES TO SHOULDERS, BACK AND CHEST. • AIRBAG VEST MUST ONLY BE INSPECTED/SERVICED BY TRAINED PERSONNEL. • AIRBAG VEST MUST ALWAYS BE CHECKED AFTER ANY INCIDENT (I.E. CRASH, FALL, ETC.) WHETHER OR NOT THE AIRBAG DEPLOYED. • ALPINESTARS DISCLAIMS ANY RESPONSIBILITY FOR INJURIES INCURRED WHILE WEARING OR USING ANY OF ITS PRODUCTS.
6	 S TECH-AIR® CHASSIS NUMBER: 000000 0 L

1	Protective garments for motorcycle riders and Inflatable Impact Protector with electronic activation: Notified Body #2008: DOLOMITICERT S.C.A.R.L. Z.I. Villanova, 32013 Longarone (BL) – Italy
2	Motorcyclists' protective clothing against mechanical impact Motorcyclists' Limb Joint protectors. Notified Body #0498: Ricotest, Via Tione 9, Pastrengo (VR), 37010 – Italy
3	Motorcyclists' back protectors. Notified Body #2008: DOLOMITICERT S.C.A.R.L. Z.I. Villanova, 32013 Longarone (BL) – Italy
4	Motorcyclists' chest protectors. Notified Body #2008: DOLOMITICERT S.C.A.R.L. Z.I. Villanova, 32013 Longarone (BL) – Italy
A	Name of the manufacturer
B	Product identification code
C	Applied Standard
D	Impact Protector Garment (C), Use as Under garment (U)
E	Indicates this product is intended for motorcycle use
F	Indicates that an inflatable protector is installed
G	CE marking
H	UKCA marking
I	Indicates the overall level of protection achieved
L	Area of the body the protector is designed to cover
M	Optional hot conditions test passed (Otherwise vacant)
N	Optional cold conditions test passed (Otherwise vacant)
O	Protector Type
P	Waist to Shoulder Measurement
Q	Read the instructions before use
R	Generic warning label
S	System size and Chassis number
T	Month (mm) and Year (yy)

GUIDE UTILISATEUR

TECH-AIR® OFF-ROAD

IMPORTANT - LIRE LE PRESENT MANUEL.
INFORMATIONS CRITIQUES DE SÉCURITÉ À L'INTÉRIEUR.

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