

TECH-aIR Inflator Replacement Kit



TECH-aIR Inflator Replacement Kit User Guide

[Home](#) » [TECH-aIR](#) » TECH-aIR Inflator Replacement Kit User Guide 

Contents

- [1 TECH-aIR Inflator Replacement Kit](#)
- [2 Specifications](#)
- [3 Product Usage Instructions](#)
- [4 Introduction](#)
- [5 Products Overview](#)
- [6 Handling of Gas Inflators](#)
- [7 Gas Inflator Replacement Instructions](#)
- [8 Airbag Integrity Test](#)
- [9 Safety & Storage](#)
- [10 Transportation](#)
- [11 Tech-Air® Support](#)
- [12 FAQ](#)
- [13 Documents / Resources](#)
 - [13.1 References](#)
- [14 Related Posts](#)



TECH-aIR Inflator Replacement Kit



Specifications

- **Product Name:** Inflator Replacement Kit
- **Product Code:** 6507123 6508524
- **Gas Inflator Category:** P1
- **Certification:** EU Directive 2013/29

Product Usage Instructions

Handling of Gas Inflators

Before handling the Gas Inflator, ensure that you are not electrically charged. Avoid touching metallic surfaces such as bike parts, radiators, working stations, or any grounded metal body. Do not mishandle, tamper with, throw, puncture, or incinerate the Gas Inflator.

Gas Inflator Replacement Instructions

To replace an empty Gas Inflator, follow these steps:

1. If both Gas Inflators need replacement, red LEDs will blink on both. Refer to the system for guidance.
2. Insert only one Gas Inflator into the system. Remove and detach the other Gas Inflator completely from the system and SquibConnector.
3. Connect the Squib Connector on the left side with the GasInflator on the left side of the system, and do the same for the right side. Do not mix up Squib Connectors.
4. After removing the empty Gas Inflator, mark it with an X using a permanent marker for identification.

Open the Airbag Control Unit

To access the Gas Inflators, place the system on a flat surface with the back protector facing upwards. Remove

the cover by pulling down the Puller located below.

IMPORTANT READ THIS MANUAL. SAFETY CRITICAL INFORMATION INSIDE.

Leaflet User Guide Legend

In this document, the following presentation icons are used to provide information:

WARNING: Provides critical information which, if not followed, may cause personal injury or property damage.

IMPORTANT! Provides important information regarding the Tech-Air® Gas Inflators

Tip: Provides useful advice regarding the Tech-Air® Systems or the Tech-Air® Gas Inflator.

Introduction

The Tech-Air® Gas Inflator Kit is a box containing a single high-pressure pyrotechnic Gas Inflator of non-flammable argon and helium gas, which is activated by electronic means when installed specifically in the following Tech-Air® Airbag Systems:

Tech-Air® Model	Product Code
Tech-Air® Off-Road System	6507123
Tech-Air® 7x System	6508524

WARNING!

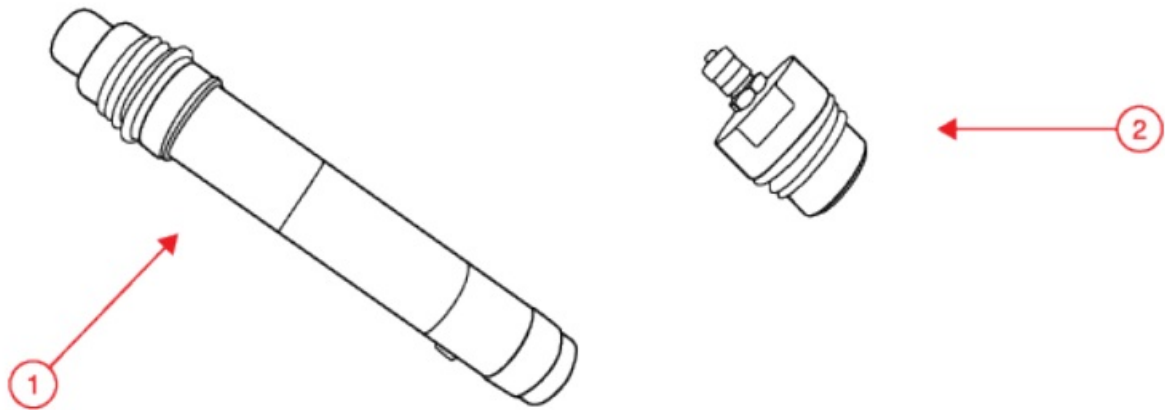
- IT IS ESSENTIAL TO READ THIS INSTRUCTION LEAFLET CAREFULLY, TO UNDERSTAND IT COMPLETELY, AND TO FOLLOW THE SAFETY ADVICE AND WARNINGS BEFORE PROCEEDING TO CHANGE THE GAS INFLATOR. IF YOU HAVE
- ANY QUESTIONS, CONTACT TECH-AIR® SUPPORT (SEE SECTION 9 BELOW).
- DO NOT TRY TO FIT A GAS INFLATOR OTHER THAN THE TYPE(S) INDICATED AS SUITABLE BY ALPINESTARS FOR THE SPECIFIC TECH-AIR® AIRBAG SYSTEM.
- THIS GAS INFLATOR MUST BE USED ONLY IN THE TECH-AIR® AIRBAG SYSTEMS INDICATED ABOVE. DO NOT USE THE GAS INFLATOR OTHER THAN FOR ITS INTENDED USE. MISUSE OF THE GAS INFLATOR MAY RESULT IN PERSONAL
- INJURY AND/OR PROPERTY DAMAGE.
- THE GAS INFLATOR IS A PYROTECHNIC ARTICLE AND MUST NOT BE HANDLED BY ANYONE UNDER THE AGE OF 18.

IMPORTANT!

- Do not use the Gas Inflator for any other purpose, other than installation into THE Tech-Air® Airbag Systems indicated above. In case of any questions regarding the suitability of the Gas Inflator for the System undergoing servicing, please contact Alpinestars
- Tech-Air® Support (as indicated in Section 9 below).
- The Gas Inflators are tested and certified according to EN 16263 (which is the Euro-pean safety standard for "Other Pyrotechnic Articles").

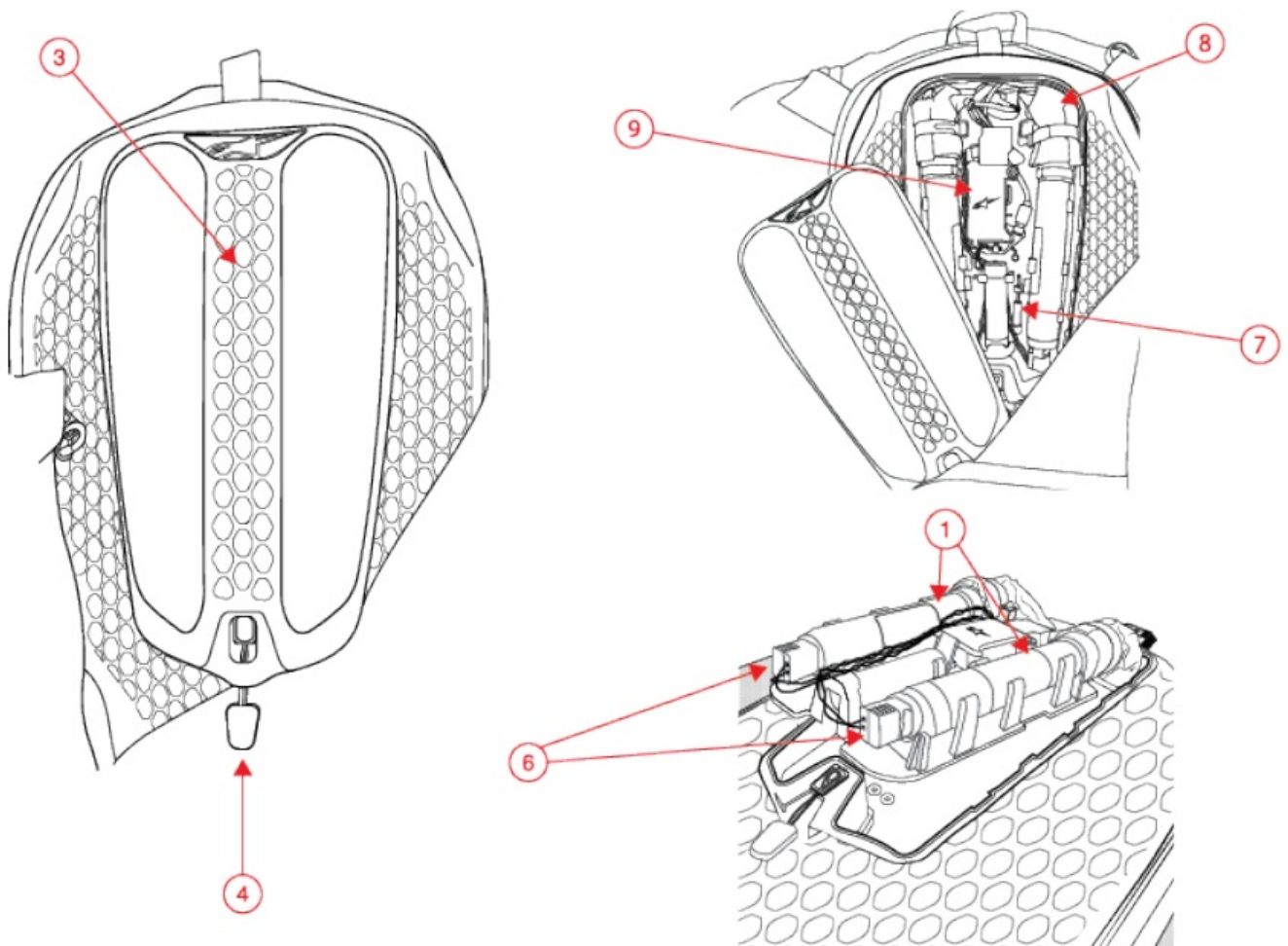
- The Gas Inflators (1) are considered as an “AIRBAG GAS GENERATORS” Category P1 and are certified according to the EU Directive 2013/29.

Products Overview



1. Gas Inflator
2. Adapter Valve for Airbag Integrity Test

Figure 1: Gas Inflator and Adapter Valve for Airbag Integrity Test



3. Airbag Control Unit
4. Puller

5. Gas Inflator Housing
6. Squib Connector
7. Screwdriver
8. Airbag
9. Electronic Control Unit

Figure 2: System Overview

Handling of Gas Inflators

- When performing the replacement of the Gas Inflator (1) in the Tech-Air® System, please ensure that you strictly follow the instructions provided herein.
- When handling the Gas Inflator (1), ensure you are wearing proper clothes and shoes to avoid any possibility of fire propagation (i.e. do not wear synthetic clothes) and electroshock (i.e. don't wear non-isolating shoes). Alpinestars recommends that Personal
- Protective Equipment (PPE) be used when servicing Tech-Air® Systems and/or handling Gas Inflators (1), such as safety goggles or visors for eye/face protection, gloves, and working clothes (made from cotton material) for hand/skin protection.

Before handling the Gas Inflator (1), be sure not to be electrically charged, i.e. avoid touching the metal part of the bike, a radiator, the working station (if metallic), or any metallic body connected to the ground.

- DO NOT mishandle the Gas Inflator (1).
- DO NOT tamper with the Gas Inflator (1) in any way.
- DO NOT throw the Gas Inflator (1) or cause it to fall.
- DO NOT attempt to puncture or incinerate the Gas Inflator (1).

During the servicing of a Tech-Air® System:

- it is strongly recommended that anti-spark tools are used.
- ensure that there are no electronic devices (such as a mobile phone, radio transmitters, electronic cigarettes, laptops with active radio transmitters like WiFi or Bluetooth, etc.) on the working station or close to the Gas Inflator (1).

If a metallic workstation is used for servicing, always keep the working desk grounded to prevent electric shock.

Gas Inflator Replacement Instructions

To replace an empty Gas Inflator (1), the User must strictly follow the instructions below.

WARNING

- The Tech-Air® Systems mentioned at the beginning of this Instructional Leaflet provide self-serviceable Gas Inflator (1) replacement, but ONLY for those Users that are located in the countries authorized for Gas Inflators (1) handling and replacement. For the complete list of the authorized countries see the Documents Section in

the Tech-Air® App.

- THE TECH-AIR® OFF-ROAD and TECH-AIR® 7x Airbag Systems must always be used with 2 Gas Inflators (1) installed in the System. If you remove a Gas Inflator and fail to replace it and ride with only 1 Gas Inflator (1), the System may not function properly and may not protect in the event of an accident. ALWAYS RIDE WITH 2 GAS INFLATORS (1) INSTALLED IN YOUR TECH-AIR® OFF-ROAD OR TECH-AIR® 7X SYSTEM.

Empty Gas Inflator Check

Before proceeding with the Gas Inflator (1) replacement, it is necessary to first correctly identify the empty Gas Inflator (1). Depending on the type of Tech-Air® System you own, it is possible to proceed with the following methods:

Tech-Air® Off-Road System

To identify the empty Gas Inflator (1) that needs to be replaced, proceed by opening the Airbag Control Unit (3) and checking the LEDs present on the top of the Electronic Control Unit (9). The empty Gas Inflator (1) is indicated by a blinking red LED as shown in Figure 9.

IMPORTANT! In the case in which it is necessary to replace both Gas Inflators (1), both LEDs will be blinking red LEDs.

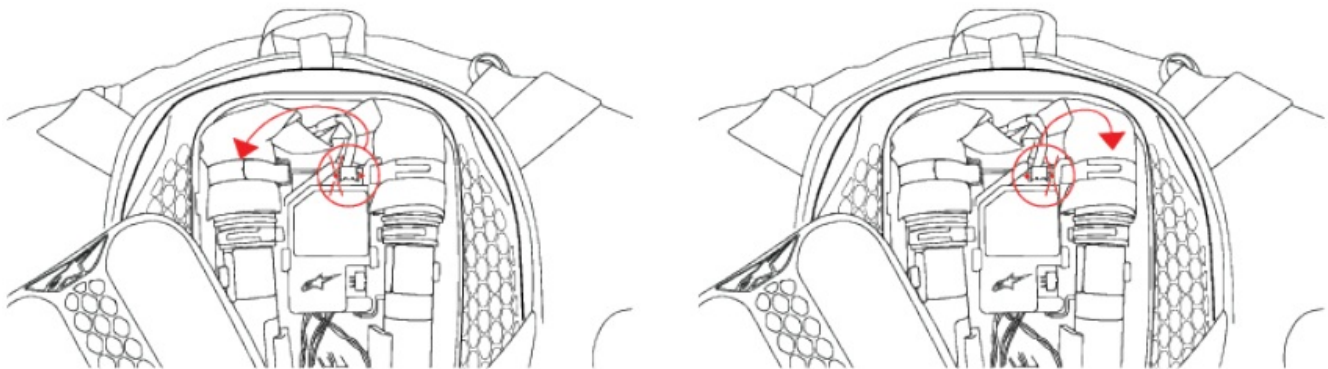


Figure 3: How to check which Gas Inflator (1) need to be replaced.

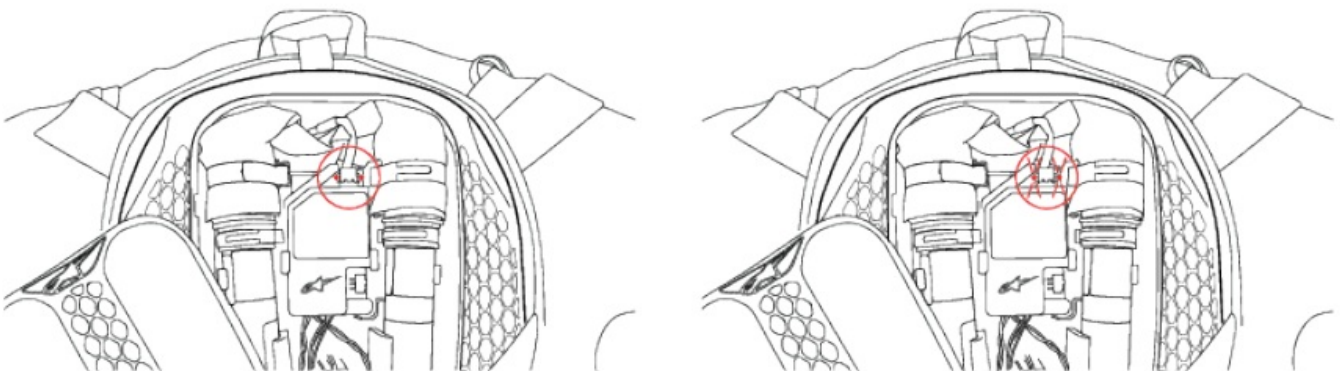


Figure 4: LEDs indications in case the Gas Inflators (1) are both available (left picture) or both empty (right picture)

Check Gas Inflators Status LED (ONLY for Tech-Air® Off-Road System): the empty Gas inflator (1) is indicated by the blinking red LED on the top of the Electronic Control Unit (9) located on the Gas Inflator Housing (5). For more details, see the instructions reported in the next Section.

IMPORTANT! After removing the empty Gas Inflator (1), mark it with a permanent marker in order to distinguish it from the full Gas Inflator (1);

Tech-Air® 7X System

First, proceed by opening the Airbag Control Unit (3) using the Puller (4) (see Section 4.1).

Now you need to Check the Gas Inflators to determine which Gas Inflator (1) is empty. It is necessary to check one Gas Inflator (1) at a time. First, you must completely remove only one Gas Inflator (1) by disconnecting the Squib Connector (6) from the Gas Inflator (1) as described in Section

Remove the Gas Inflator Squib Connector”.

One Gas Inflator (1) should remain connected to the Squib Connector as shown in Figure 5 below.

WARNING

YOU MUST ONLY CHECK ONE GAS INFLATOR (1) AT A TIME, THIS MEANS THAT ONLY ONE GAS INFLATOR (1) SHOULD BE INSERTED INTO THE SYSTEM AND THE OTHER GAS INFLATOR (1) MUST BE COMPLETELY REMOVED FROM THE SYSTEM AND DETACHED FROM THE SQUIB CONNECTOR (6), as shown in Figure 5 below.

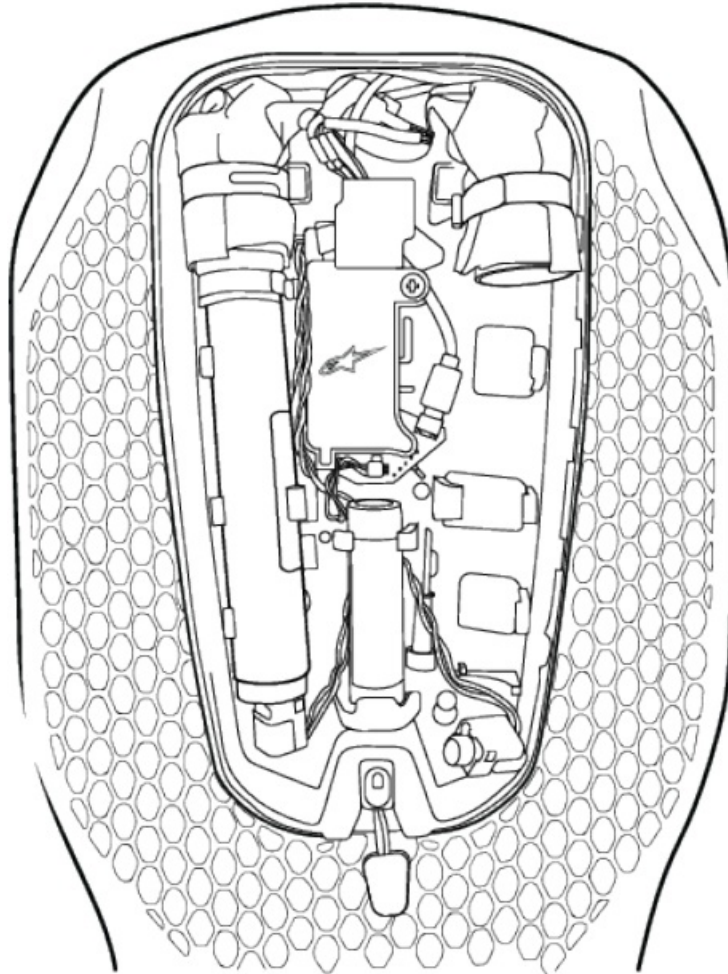


Figure 5: Check the Gas Inflator (1) availability: connect only one Gas Inflator (1) and check the System LEDs.

Close the Airbag Control Unit (3). Turn on the System, and check the color of the LED Display on the Tech-Air® 7x System. If the LED indicator is SOLID red, then this indicates that the Gas Inflator (1) is empty or used, and needs to be replaced. If the LED indicator is NOT SOLID red, you MUST repeat this procedure for the other Gas Inflator (1). So first, disconnect the Gas Inflator (1) that you just tested from the Squib Connector, and then remove the Gas Inflator (1) as shown in Section 4.4 “Gas Inflators Removal”. Now pick up the other Gas Inflator (1), install it by screwing it into the System in a clockwise direction as described in Section 4.5 “Gas Inflators Installation” and reattach the Squib Connector (6). Close the Airbag Control Unit (3). Turn on the System, and check the color of the LED Display on the Tech-Air® 7x System. When the LED indicator is SOLID red, the User must replace the Gas Inflator (1) by disconnecting it from the Squib Connector (6), marking it with an X, and inserting a new Gas Inflator (1), as described in the procedures 4.2 to 4.5 below.

WARNING: ALWAYS BE SURE TO CONNECT THE SQUIB CONNECTOR (6) ON THE LEFT SIDE WITH THE

GAS INFLATOR (1) ON THE LEFT SIDE OF THE SYSTEM AND TO CONNECT THE SQUIB CONNECTOR (6) ON THE RIGHT SIDE OF THE SYSTEM WITH THE GAS INFLATOR (1) ON THE RIGHT SIDE OF THE SYSTEM. DO NOT MIX UP THE SQUIB CONNECTORS (6).

IMPORTANT

- After removing the empty Gas Inflator (1), mark it with an X using a permanent marker, to distinguish it from the full Gas Inflator (1);
- In case you are not able to identify the empty Gas Inflator the User MUST contact Alpinestars Tech-Air® Support (see section 9 below). and/or an Authorized Alpine-stars' Dealer or Service Center before using the System to check it.

Open the Airbag Control Unit (3)

First of all, to access the Gas Inflators (1), the User must place the System on a flat surface (like a table) with the back protector facing upwards. Next, to access the contents of the Airbag Control Unit (3), the User must remove the cover by pulling down the Puller (4) present in the area below, as shown in Figure (6).

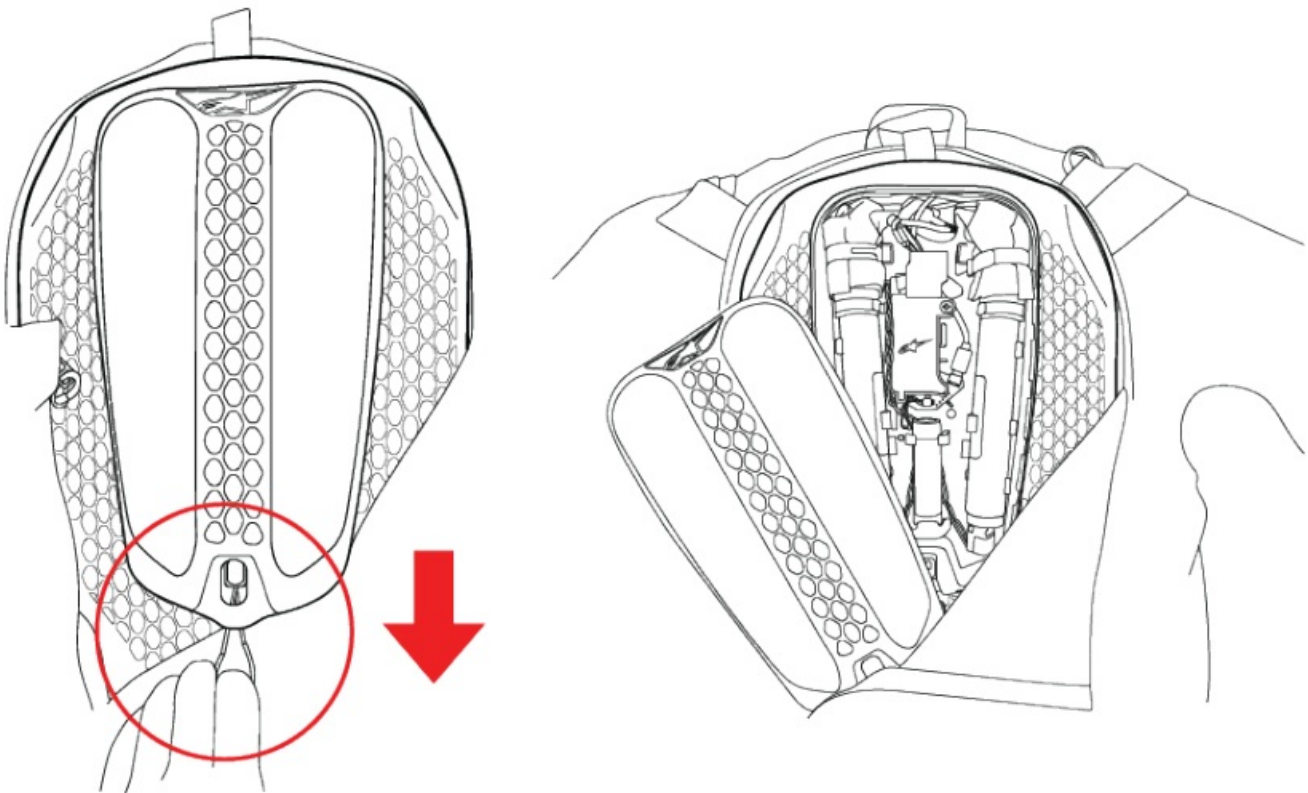


Figure 6: How to access the Airbag Control Unit (3).

Remove the Gas Inflator Squib Connector

To proceed with the replacement, remove the empty Gas Inflator (1) from its housing inside the Gas Inflator Housing (5). To understand how to correctly identify the empty Gas Inflator (1), see Section 4.1 "Empty Gas Inflator Check". Proceed by opening the Squib Connector (6), using the Screwdriver (7) supplied with the System, as shown in Figure 7. Once opened, the Squib Connector (6) can be completely detached from the Gas Inflator (1).

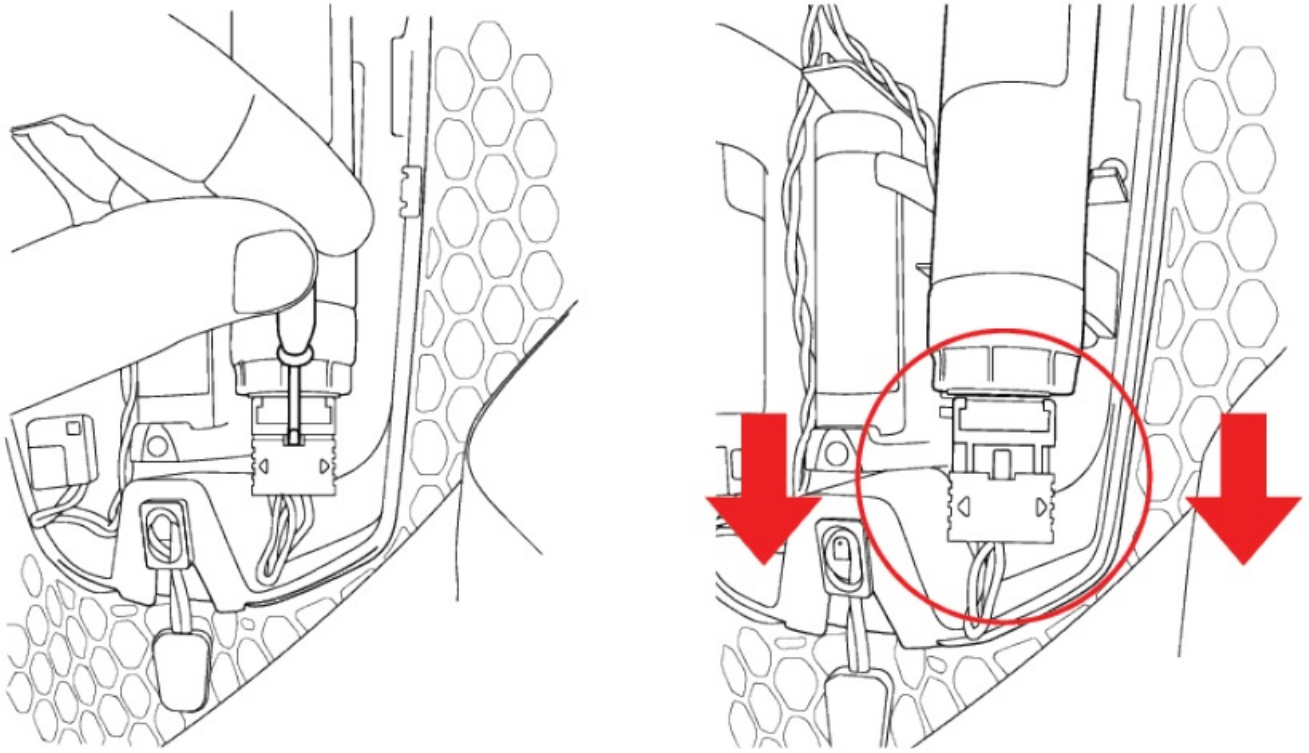


Figure 7: How to detach the Squib Connector (6) from the Gas Inflator (1)

Gas Inflators Removal

After disconnecting the Squib Connector (6), proceed to remove the Gas Inflator (1) from the Gas Inflator Housing (5). Next, unscrew the Gas Inflator (1) in the counterclockwise direction, as shown in Figure 8, and separate it from the Airbag (8).

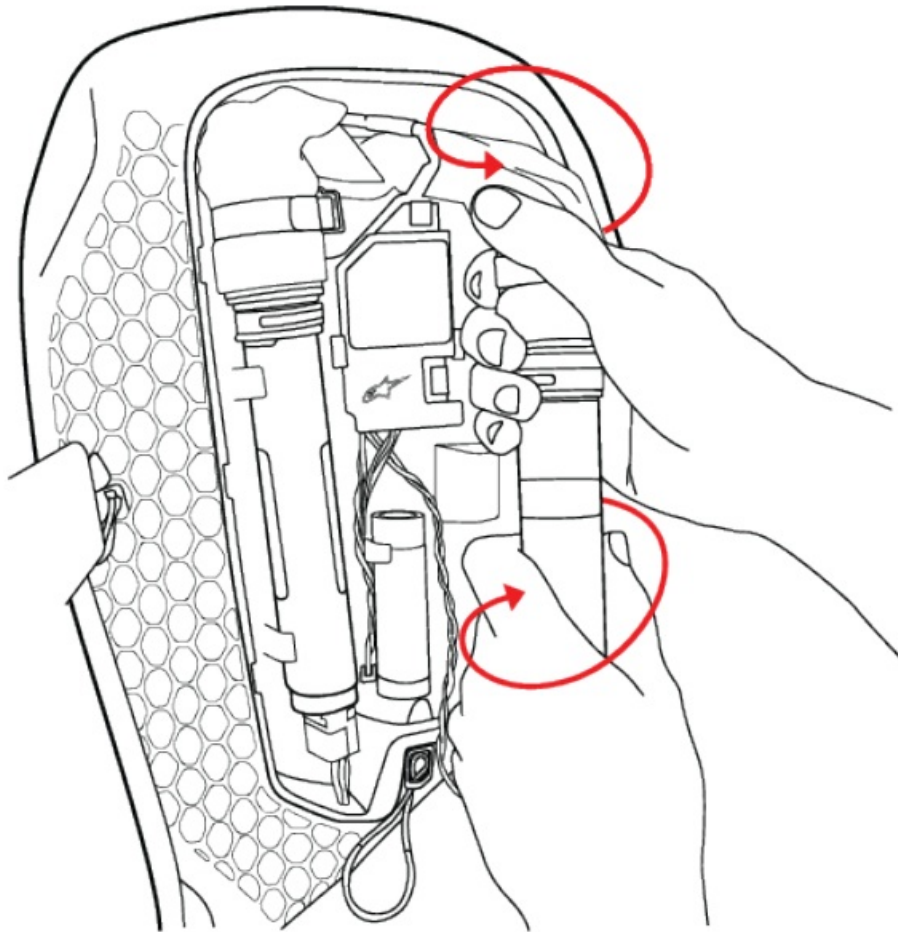


Figure 8: How to remove the Gas Inflator (1);.

IMPORTANT! After removing the empty Gas Inflator (1), mark it with an x using a permanent marker, to distinguish it from the full Gas Inflator (1).

Gas Inflators Installation

After you have removed the empty Gas Inflator (1) and checked that the Airbag integrity is intact, the User can now proceed with the installation of the Gas Inflator(s) (1).

1. Screw in the Gas Inflator (1) into the Airbag (8)

Proceed by carefully screwing the Gas Inflator (1) into its corresponding seat in the clockwise direction, reconnecting it to the Airbag (8). For correct installation, check that the Gas Inflator (1) is COMPLETELY screwed in and that the blue-collar present on the Gas Inflator (1) is flush with its seat on the Airbag (8), and that no visible gap is present, as shown in Figure 9.

WARNING: If the protrusions do not fit perfectly within the space provided in the Gas Inflator Housing (5), check that the Gas Inflator (1) has been correctly screwed in and/or possibly repeat the procedures described above.

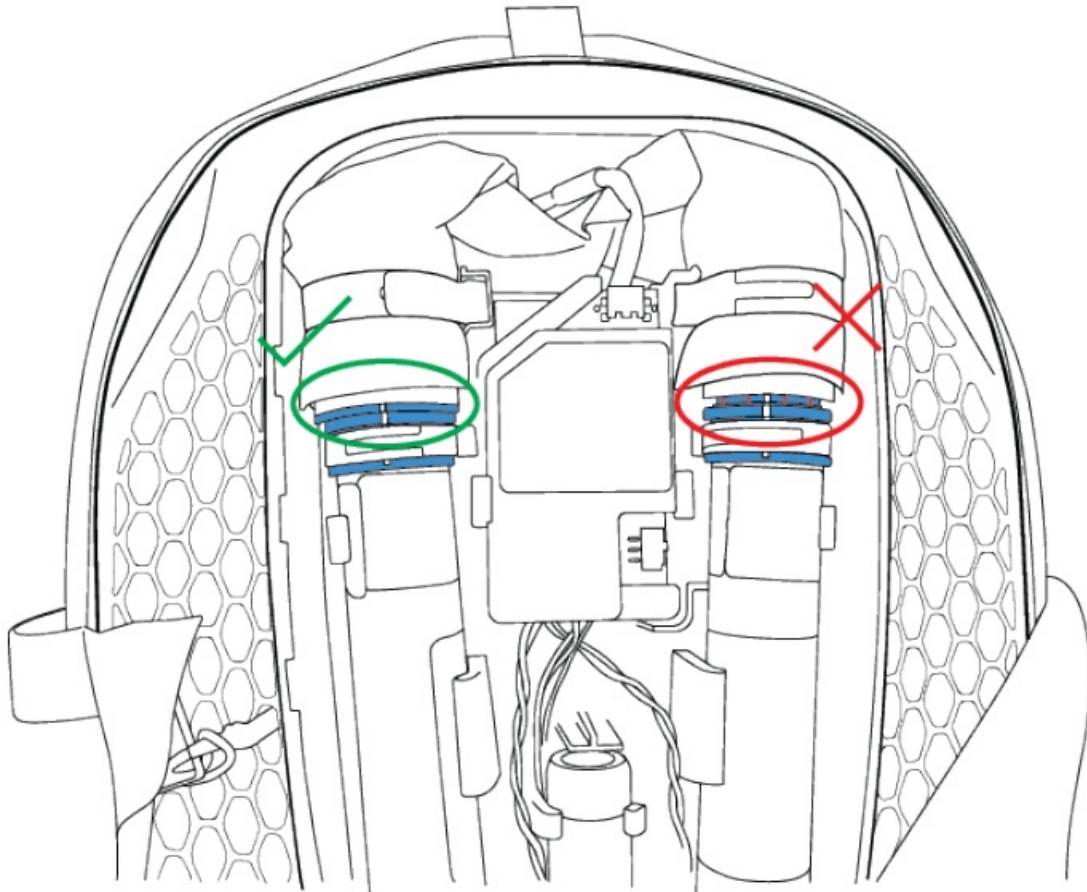
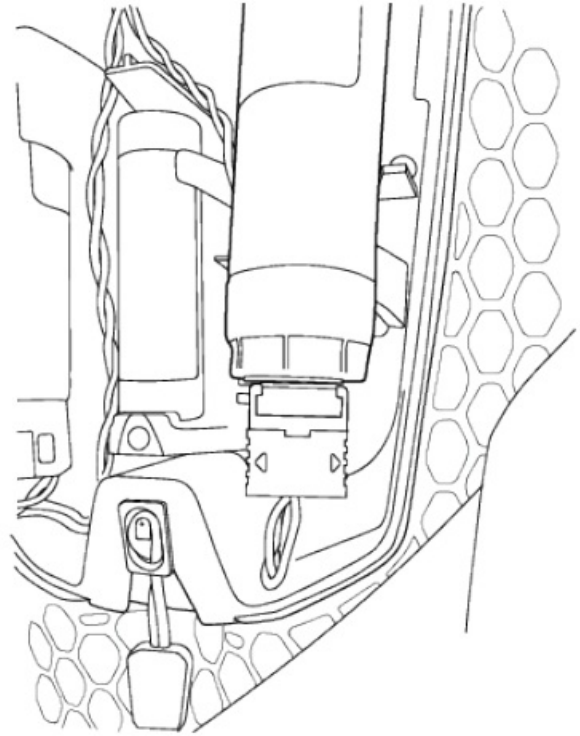
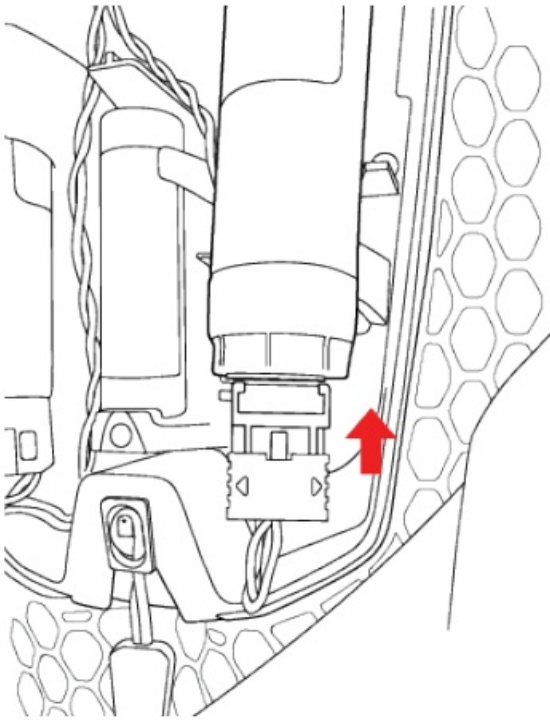


Figure 10: Correct Installation of the Gas Inflator (1) on the Gas Inflator Housing (5).

Connect the Squib Connector (6) to the Gas Inflator (1)

Once the Gas Inflator (1) has been correctly positioned inside the Gas Inflator Housing (5), the User can proceed to reconnect the Squib Connector (6) to the Gas Inflator (1). Plug the Squib Connector (6) into the bottom of the Gas Inflator (1) and close the orange part to securely lock the Squib Connector (6) to the Gas Inflator (1) as shown in Figure 11.

WARNING: Always make sure to insert the orange safety lock on the Squib Connector (6). Failure to lock the Squib Connector (6) may prevent the Gas Inflator (1) from functioning properly in the event of an accident.



Close the Cover of the Airbag Control Unit (3) and Perform the Final Check

Proceed with a general inspection to ensure that each item is correctly positioned inside the Gas Inflator Housing (5). Proceed to close the Airbag Control Unit (3) by inserting the cover at an angle first into the upper part and then by closing the cover completely by pushing down on the lower part of the cover until it clicks. Make sure the cover is completely closed by checking that there are no gaps around the perimeter of the cover.

WARNING: Make sure the Airbag Control Unit (3) is completely closed. Incorrect closing of the Airbag Control Unit (3) could cause the cover to detach, preventing the System from functioning correctly in the event of an accident.

IMPORTANT: Finally, turn on the System and verify that the System is functioning correctly by checking the status of the LED Display as described in the User Manual supplied with the System. If the System does not function as expected, please repeat the instructions reported above and/or contact Tech-Air® Support.

GAS INFLATOR REPLACEMENT – QUICK GUIDE:

1. Identify the Empty Gas Inflator;
2. Remove the Squib Connector (6) of the Empty Gas Inflator;
3. Remove the Empty Gas Inflator;
4. Screw the new Gas Inflator into the Airbag (8);
5. Place the new Gas Inflator on the Gas Inflator Housing (5);
6. Connect the Squib Connector (6) to the new Gas Inflator;
7. Close the Cover of the Airbag Control Unit (3);
8. Check the correct functioning of the System;

IMPORTANT: After removing the empty Gas Inflator (1), mark it with an X using a permanent marker, to distinguish it from the full Gas Inflator (1);

Airbag Integrity Test

WARNING: After EACH Airbag (8) deployment/inflation, before replacing an empty Gas Inflator (1), the User MUST perform the Airbag Integrity Test on the Tech-Air® System according to the instruction provided in the present Section 5. In case you are not able to perform the Airbag Integrity Test DO NOT replace the Gas Inflator

(1) on your own and the User MUST contact Alpinestars Tech-Air® Sup-port (see section 9 below). and/or an Authorized Alpinestars' Dealer or Service Center.

To perform the Airbag Integrity Test the User needs the Adapter Valve for the Airbag Integrity Test (2) reported in Figure 12, which is provided by Alpinestars either with the System or with the Gas Inflator Replacement Kit as additional equipment.

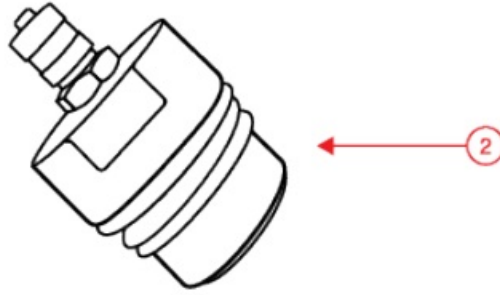


Figure 12: Adapter Valve for Airbag Integrity Test

The additional equipment needed to perform the Airbag Integrity test which is NOT included with the System or with the Airbag Integrity Test Kit is either an air compressor, or a bicycle pump), a Schrader valve, and a manometer that can measure between 0.1 and 1 bar.

To recap, to perform the Airbag Integrity Test you need the following items:

1. Tech-Air ® Airbag System
2. Air compressor or a bicycle pump
3. A manometer that can measure between 0.1 and 1 bar
4. Adapter Valve (Schrader valve) for Airbag Integrity Test (comes in the box with your Tech-Air® System)

Airbag Integrity Test Instructions

To perform the Airbag Integrity Test, the User must complete the following procedure:

1. **close the Airbag Deflation Valve**

First of all, the User must make sure to close the Deflation Valve positioned on the Airbag (to know the positioning of the Deflation Valve, refer to the "Deflation Valve Area" indicated in the User Manual supplied with the System). To close the Deflation Valve, it is necessary to unscrew the Cap from the Adapter Valve for the Airbag Integrity Test (2) and screw it directly onto the Deflation Valve to prevent air from escaping during the test (Figure 13).

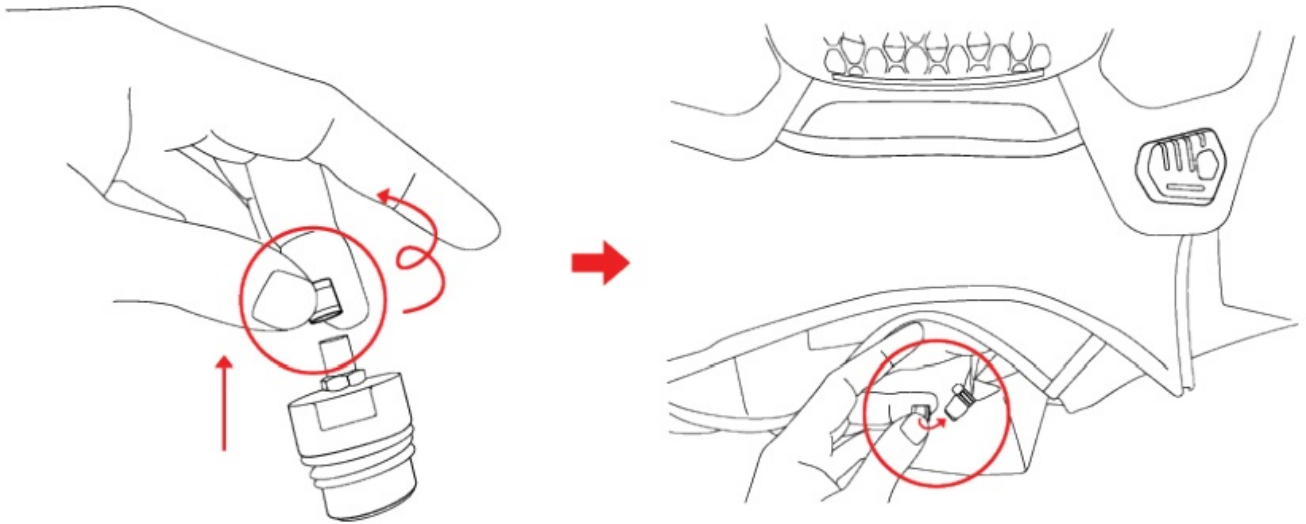


Figure 13: How to close the Deflation Valve.

2. Screw the Adapter Valve (2) on the corresponding Empty Gas Inflator Cap and connect it to the air source.

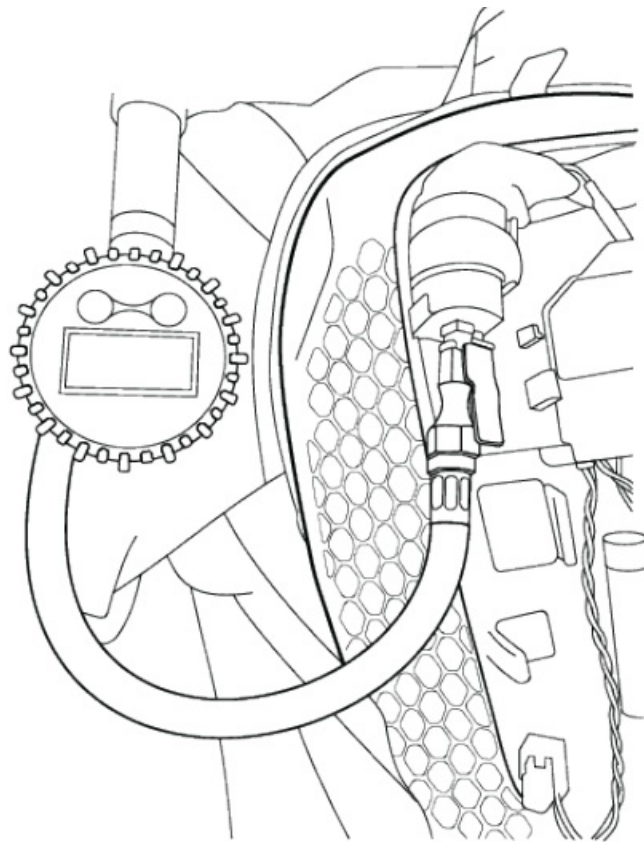


Figure 14: Airbag Integrity Test configuration.

3. Perform the test as shown below:

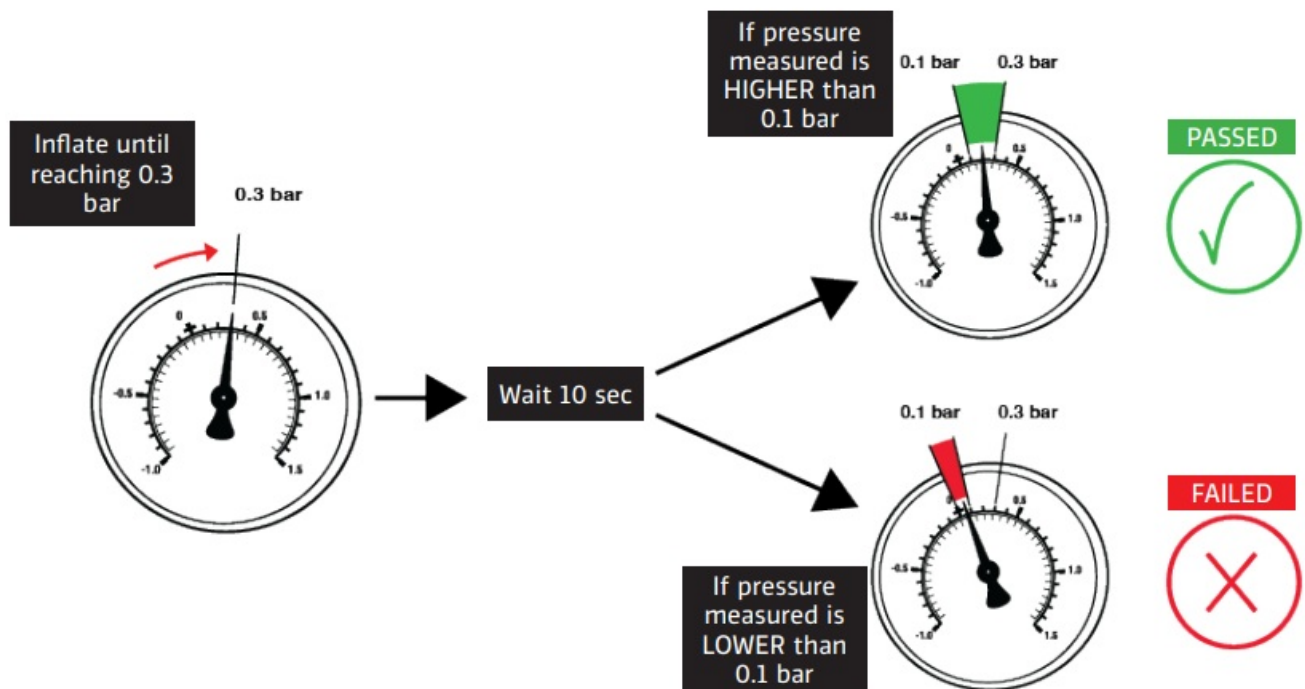


Figure 15: Airbag Integrity Test reference values.

4. If the test result successfully passes the Airbag Integrity Test, remove the Adapter Valve (2) and install a new Gas Inflator (1).

warning: In case the test fails, the Airbag has to be replaced by an authorized service center, and do NOT use the System.

IMPORTANT: In case of doubts during the test result, refer to an authorized service center or contact Alpinestars Tech-Air® Support (see section 9 below).

Safety & Storage

The Gas Inflator (1) is classified as a dangerous good. Therefore, the highest level of care must be used when handling a Gas Inflator (1).

Before use, the Gas Inflator (1) should be inspected for dents, punctures, or other damage. If the Gas Inflator (1) is damaged in any manner, do NOT use the Gas Inflator (1) and contact Alpinestars Tech-Air® Support.

IMPORTANT: Never store Gas Inflator(s) (1) together with batteries (any type and chemistry).

Storage Temperature: from -20° to +60°

WARNING: STORE GAS INFLATOR(S) (1) IN A COOL PLACE WITH DRY CONDITIONS. EXPOSURE TO HEAT WILL CAUSE THE PRESSURE IN THE GAS INFLATOR (1) TO RISE. NEVER STORE GAS INFLATORS (1) IN PLACES WHERE THEY MAY GET CLOSE TO FLAMES, LIGHTED CIGARETTES, ANY KIND OF HEAT SOURCE, OR FLAMMABLE SOLID OR LIQUID SUBSTANCES, E.G. PAINTS, ALCOHOL, FUEL, ETC.) OR GAS.

IMPORTANT: Leave the Gas Inflator(s) (1) inside the original packaging until needed for the service.

Transportation

- The Gas Inflator (1) is classified as:
- Identification number UN3268
- Hazard Classification Class 9

- Proper shipping name Safety Device, Electrically Initiated
- Any transportation by air, road, or sea must be done in compliance with the above classification.

Disposal

WARNING: The Gas Inflator (1) is considered special waste and **MUST** be disposed of by local regulations or returned to Alpinestars.

Tech-Air® Support

In case of questions, contact Alpinestars:

E-mail: techairsupport@alpinestars.com

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

FAQ

- **Q: Can anyone handle the Gas Inflator?**
 - A: No, the Gas Inflator is a pyrotechnic article and must not be handled by anyone under the age of 18.
- **Q: What certification standards do the Gas Inflators meet?**
 - A: The Gas Inflators are tested and certified according to EN 16263 and EU Directive 2013/29.

Documents / Resources

	<p>TECH-aIR Inflator Replacement Kit [pdf] User Guide 6507123, 6508524, Inflator Replacement Kit, Replacement Kit, Kit</p>
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References

- [User Manual](#)

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