Be sure to read this page before using and after re-assembling the Hit-Air.

Thank you for using the Hit-Air.

For your safety, peace of mind and correct use of your airbag jacket, make sure that items ①～⑩ are confirmed before use as follows:

Caution
① Unless the Hit-Air is set correctly, it may not work or may cause a malfunction. Remove it from the key box without fail. Use a Hit-Air CO2 gas cartridge only. Do not use any other one.

② The size (capacity) of the cartridge varies from model to model. Make sure that the size (capacity) shown on the seal attached to the Hit-Air CO2 gas cartridge and that shown at the back of the key box cover are the same.

③ A Hit-Air CO2 gas cartridge of the right size (capacity) for the model is installed.

④ Install the Hit-Air CO2 gas cartridge properly.
- The right size (capacity) cartridge for the model is installed.
- A Hit-Air CO2 gas cartridge is tightly screwed into the key box.
- A used/empty cartridge should not be installed.

Caution
Re-assembling after the activation must be done in accordance with “Re-assembling Key Box” (see page 21 to 24).
The used cartridge must be taken out after the key ball is reset.

⑤ The red guard is lifted to the “unlocked” (up) position.

⑥ Is there any deterioration of the wire loop or the coiled wire?

⑦ A screw hole at the bottom of the key box is visible.
(The setting bolt is removed)

⑧ A coiled wire is set properly.
See “Attaching Coiled wire to Motorcycle” (page 16 to 18)

⑨ Be sure to tie a knot tightly.

⑩ Be sure to read this User’s Guide to use the Hit-Air properly. A maintenance check by an authorized dealer once a year is recommendable for your safety and peace of mind.

The size (capacity) of the cartridge varies from model to model.

① The size (capacity) shown on the seal attached to the Hit-Air CO2 gas cartridge and that shown at the back of the key box cover are the same.

② If sizes shown as above are not the same, it may cause a malfunction.

③ If the right size for the model is not clear, check it on our website, https://www.hit-air.com

④ A Hit-Air CO2 gas cartridge with no hole at its bottom is usable.

⑤ The activation while the red guard is in the “locked” (down) position may cause damage or a malfunction to the Hit-Air.

⑥ Without a knot, the wire may come off the Hit-Air at its activation and the airbag will not inflate.

⑦ A Hit-Air CO2 gas cartridge is tightly screwed into the key box.

⑧ A used/empty cartridge should not be installed.

⑨ The activation while the red guard is in the “locked” (down) position may cause damage or a malfunction to the Hit-Air.

⑩ Be sure to tie a knot tightly.

Unless the Hit-Air is set correctly, it may not work or may cause a malfunction. Once a Hit-Air CO2 gas cartridge is activated, it cannot be used again.

Caution
① If there is no hole - it is an unused cartridge to be installed in the key box for use.
② If there is a hole at its bottom, it is a used/empty one and not usable. Replace it with a new one.
③ Use a Hit-Air CO2 gas cartridge only. Do not use any other one.
④ Make sure that the size (capacity) shown on the seal attached to the Hit-Air CO2 gas cartridge and that shown at the back of the key box cover are the same.
⑤ A Hit-Air CO2 gas cartridge with a hole at its bottom is unusable.
⑥ Make sure that the red guard is not in the “locked” (down) position. The red guard is a tool to confirm that the key ball is set properly during the course of re-assembling. It should always be in the “unlocked” (up) position except during the course of re-assembling. (see page 12 in detail)
⑦ Be sure to read this User’s Guide to use the Hit-Air properly. A maintenance check by an authorized dealer once a year is recommendable for your safety and peace of mind.

Specifications, shapes and how to use may change without prior notice.
Safety Precautions

Be sure to read this User’s Guide carefully before using the Hit-Air (airbag system) for proper use and safety, please keep it in the place you can reach anytime (e.g. in the motorcycle).

The marks used in this User’s Guide denote as follows.

**WARNING** This mark denotes that if the “WARNING” is ignored, it could result in death or a serious injury to the user of this product.

**CAUTION** This mark denotes that if the “CAUTION” is ignored, it could result in a physical injury or a material damage.

**WARNING**
1. The Hit-Air is to be used for the rider’s safety when riding a motorcycle and not for any other purpose.

**WARNING**
2. The Hit-Air of the right size is to be worn as an outerwear on the upper half of the body.

**WARNING**
3. Use the Hit-Air CO2 gas cartridge of the same size and contents as before when replacing and confirm that there are no holes or tears in its seal.

**WARNING**
4. Do not take any parts of the Hit-Air apart.

**CAUTION**
5. Remove sharp or pointed objects such as pins or pens from the Hit-Air or from the underwear before wearing.
   They may damage the air cushion before or at the time of the activation and prevent the function of the Hit-Air.

**CAUTION**
6. Keep open flames and cigarettes away from the Hit-Air as holes or tears caused by them will prevent its function.
   Keep and use at temperatures below 40°C/104°F as the Hit-Air CO2 gas cartridge may burst at a high temperature.

**CAUTION**
7. Disconnect the Hit-Air from the “coiled wire” at the “one-touch release (connector)” before dismounting the motorcycle.
   Otherwise, it may cause an accidental activation.

**CAUTION**
8. Inspect the Hit-Air to determine if there is any damage prior to wearing. If there is any damage, consult with an authorized dealer.

**CAUTION**
9. To make sure the Hit-Air will function properly, take it to an authorized dealer for a maintenance check, once a year depending on frequency of use.

**CAUTION**
10. Keep the Hit-Air by hanging up on a coat hanger. Do not fold or lay anything on it.
    Avoid high temperature and high humidity.

**CAUTION**
11. To avoid any damage to the airbag, do not prick a needle or sew emblems or iron on the Hit-Air. Consult with an authorized dealer where to sew an emblem.

**CAUTION**
12. Don’t wash or launder the Hit-Air (airbag system). Improper washing may prevent the function of the Hit-Air.

**CAUTION**
13. If a fray, rust or wear is found on the “coiled wire” or the “wire loop” attached to the “key ball”, replace it immediately.
The Hit-Air (Shock-buffering Protection System) is to be worn as an outerwear when riding a motorcycle. It will be activated/inflated immediately after a distance from the rider to the motorcycle exceeds the “activation distance” (*1) when the rider falls off or thrown off the motorcycle. It will be activated at the moment the key ball is pulled out from the key box (see P12). This causes the gas cartridge to release the CO2 gas into the air cushions to inflate them immediately.

Inflated air cushions are designed to come between the rider’s body and objects against which the rider may strike after falling off or being thrown off the motorcycle. The Hit-Air will act as a buffer to absorb the shock of impact and reduce the risk of injury to the rider who wears it.

**However, this does not imply or guarantee rider’s safety.**

The key ball requires considerable strength to be pulled out and will not be released easily because of the elastic nature of the coiled wire, thus the Hit-Air will not inflate under normally anticipated riding conditions including standing on pegs.

(*1) The “activation distance” is defined as the length of the coiled wire stretched to its full length from the motorcycle to the rider’s key box on the Hit-Air without any obstacles in between.

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**Hit-Air : Name and Shape**

**Hit-Air CO2 Gas cartridge**

- Key Box
- Key Box Cover
- Key Ball
- One-touch release
- B-type
- Red Guard
- Inside waist adjustment belt (Velcro)

- Hit-Air : Name and Shape

- Key ball to be pulled out to release the gas into the airbag instantly.

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**Neck Cushion**

- Neck cushion
- Shoulder pad
- Neck cushion
- Shoulder pad

**Back / Before**

- Back / Before
- Back / After

**Back Cushion**

- Back Cushion
- Hip Cushion
- Hip/waist Cushion

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*Design and shape of model may vary.

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*2) For a belt adjustment around your waist, pass the belt through belt loops without fail. If the belt is not kept in the belt loops when the system is activated, it may come off and the function of the airbag (shock buffering) may be impaired. *Although numbers of belt loops vary with models.

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If the rider crashes or falls down together with the motorcycle, unless the “activation distance” is exceeded, the Hit-Air will not be activated.

- The Hit-Air will not protect areas where the inflated air cushion does not cover.

- If the rider wearing the Hit-Air forgets to disconnect the “one-touch release” and goes away from the motorcycle farther than the “activation distance”, a certain force (see P12) may activate and inflate the Hit-Air. Connect or disconnect the “one-touch release” while you are on the motorcycle.

- Once a Hit-Air CO2 gas cartridge is used, it cannot be used again. Buy a new one from an authorized dealer.

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4-1 Function

1. As soon as the “activation distance” is reached, the Hit-Air is activated and the CO2 gas is sent into the air cushions so that it will provide protection from the shock of impact even before it is fully inflated.

2. The Hit-Air CO2 gas cartridge and the “key box” area is covered by an ABS protector with buffer material to protect the rider’s breast from the projecting objects in case of an accident.

3. After the airbag inflated in full, the gas will leak out gradually. Depending on the amount of the pressure given to the airbag by the accident, a feeling of tightness may be felt but gradually subsides.

4. The Hit-Air may not function properly if there is a damage on the Hit-Air, fabric part, air cushion, Velcro, zipper, buckle or other parts. If so, consult with an authorized dealer. The Hit-Air may not be repairable in some cases.

5. Whenever the Hit-Air inflated, even if there is no visible damage, we recommend taking the Hit-Air to an authorized dealer for a maintenance check *1

6. If no damage is visible, there may be damages to the air cushion. Therefore, take the Hit-Air to an authorized dealer for a maintenance check to test the air cushion for leaks and inspect its parts to make sure if it will function properly in case of an accident.

4-2 Air Cushion

1. The air cushions are made of high quality strong urethane film to absorb and reduce the shock of impact as much as possible when they are swelled.

2. After the air cushion inflates fully, the air pressure inside slowly decreases as gas comes out gradually.

3. The strength against breakage depends on the material of the jacket, the material of the inner tube (urethane) and the strength of the stitch. It also depends on the degree of impact, shape or hardness of the object the rider may hit after the Hit-Air inflates.

4. The gas is sent from the “key box” to each air cushion through urethane tubing. The Hit-Air is designed to act as a shock absorber and may break depending on the “activation distance” size, shape or hardness of the object the rider may hit after the Hit-Air inflates. The Hit-Air will not be activated. This may cause an injury to the rider in case of an accident. Whenever using the Hit-Air, make sure the red guard is in the ‘locked’ (down) position, if the wire is pulled strongly, the ‘unlocked’ (up) position. (Photo 2)

5. Whenever using the Hit-Air, make sure the red guard is in the ‘locked’ (down) position, the “key ball” cannot be released from the “key box”, then the Hit-Air will not be activated. (Photo 3)

6. Even if the red guard is in the ‘locked’ position, if the wire is pulled strongly, the “key box” may activate the Hit-Air to inflate.

4-3 Key Box

1. Key Box

   - The “key ball” comes out from the “key box” when it was pulled by a certain tensile force.
   - A needle in the “key box” is activated and punctures the seal of the gas cartridge to inflate the Hit-Air instantly.
   - The “key ball” can be pulled out from any direction (Photo 1).
   - WARNING 1. Do not take the “key box” apart or remove any parts.

2. Red guard

   - Whenever using the Hit-Air, make sure the red guard is in the ‘locked’ (down) position, the “key ball” cannot be released from the “key box”, then the Hit-Air will not be activated. (Photo 2)
   - The red guard is in the ‘unlocked’ (up) position. (Photo 1)
   - To re-assemble the key box, the red guard is to be used to confirm that the key ball is properly set in the hole of the key box.
   - If the key ball is not set in the hole properly, the red guard will not come down.

   - WARNING 1. If the red guard is in the ‘locked’ position, if the wire is pulled strongly, the ‘unlocked’ (up) position.

   - Even if the red guard is in the ‘locked’ position, if the wire is pulled strongly, the “key box” may activate the Hit-Air to inflate.

4-4 Key Ball

   - The “key ball” holds a compression spring and an interlocking needle in the “key box”.
   - The system is activated, the “key ball” comes out of the “key box” and a needle in the “key box” is released and punctures the seal of the gas cartridge to inflate the Hit-Air immediately.
   - The “key ball” and the “key ring” are integrated parts.

4-5 Hit-Air structure

   - The urethane tube which is placed right behind the fabric inflates and absorbs the impact shock.

   - The “key ball” is released from the “key box”, then the Hit-Air is activated and the CO2 gas cartridge to let the gas go into each air cushion.

   - Screw the Hit-Air CO2 gas cartridge fully until it seats firmly in the key box but do not over tighten.

   - Do not reuse the Hit-Air CO2 gas cartridge once used. Change it to a new one.

   - The seal at the bottom of an used cartridge is pierced with a hole.

   - Observe the followings to avoid a burst

   - WARNING 1. Keep and use at the temperature below 40ºC/104ºF. Do not keep in the car where the temperature may go up high.

   - WARNING 2. Do not cut or puncture the gas cartridge.

   - WARNING 3. Do not heat the cartridge.

   - WARNING 4. Do not let corrosion form on the surface of the cartridge. If corrosion is noticed, replace it immediately.

   - WARNING 5. Confirm that the used gas cartridge is empty of gas before disposing.

   - WARNING 6. Do not cut or puncture the gas cartridge.

   - WARNING 7. The size (capacity) of the gas cartridge varies from model to model. Install the designated size (capacity) for the model.

   - Visit https://www.hit-air.com/ “List of replacement gas cartridge size” to find out the right size for your Hit-Air.

   - CAUTION 8. Use the gas cartridge for the Hit-Air only, and not for any other purpose.

   - CAUTION 9. Use a Hit-Air CO2 gas cartridge only. Do not use any other one.

   - CAUTION 10. Keep the gas cartridges out of the reach of children.

   - CAUTION 11. Screw the Hit-Air CO2 gas cartridge fully until it seats firmly in the key box but do not over tighten.

*Design and shape of model may vary.
Using Hit-Air

5-1 One-touch Release

Use the “one-touch release” for easy connection or disconnection of the “coiled wire” attached to the motorcycle and the “key ball” inserted in the “key box.”

CAUTION
1. The one-touch release may come in contact with and cause damage to the tank or other part of the motorcycle. If such situation is expected, putting a seal around such parts for protection is recommended.
2. Hold the female connector and insert the male one. A clicking sound will confirm that a connection is made properly. Otherwise, it may come off by itself.
3. Change the connectors if the connection is not made properly.
4. When getting off the motorcycle, make sure that the male part does not touch the hot part of the motorcycle, such as the engine or muffler, because the heat could damage the optimal shape of the male part.

WARNING
Before riding the motorcycle, make sure the red guard on the “key box” is in the ‘unlocked (up)’ position (see page 12, photo 2). If it is in the ‘locked (down)’ position, the Hit-Air will not work properly. Otherwise, the Hit-Air may not work in the event of an accident.

5-2 Connecting Coiled Wire and Hit-Air

1. Before getting off the motorcycle, press the press button of the “one-touch release” for disconnection (Photo 2).

5-3 Attaching Coiled Wire to Motorcycle

Where and how to attach the “coiled wire” to the motorcycle varies with the motorcycle. The rider’s movement when riding also varies. Taking these into consideration, decide the length of the “coiled wire” and the part of the motorcycle where it is to be attached (see page 17 to 18). Improper attaching may cause an accidental activation. Or the Hit-Air may not work in the event of an accident.

WARNING
1. The connector part or other parts of the coiled wire can be damaged or misshaped when touching high temperatures such as an engine. Please attach the coiled wire where it doesn’t interfere with control of the motorcycle.

CAUTION
2. Due to the elastic nature of the “coiled wire”, the “key ball” or the “one-touch release” may hit the fuel tank or other part of the motorcycle when the Hit-Air is activated.
3. If the “coiled wire” is not attached to the motorcycle properly, it may come off when it is stretched then the Hit-Air will not be activated.
4. Replace the “coiled wire” if any damage or change of shape is found.

*Do not use the coiled wire other than the one supplied by an authorized dealer.

Coiled Wire

A strong wire of Kevlar cord coated with urethane resin.

Loop setter

After the length of the coiled wire is adjusted and decided, put wires in the grooves of the loop setter and tighten the wing screw to fix them firmly.

1. When getting on a motorcycle, confirm that the wing screw is tightly screwed down.
2. Place a coiled wire in the grooves of the loop setter and tighten it firmly with the wing screw. Leave more than 2cm of the wire outside of the loop setter, cut any excess wire and cap the cut end.
3. After the length of the wire is adjusted, tie a knot tightly. Otherwise, a wire may come off the loop setter and the airbag will not be activated.

Protector tube

Protect a motorcycle and a coiled wire against damage.

Connect a coiled wire through a protector tube to protect the part of the wire wound round the frame or handlebar etc. of the motorcycle. Cut the excess tube depending on the part where the coiled wire is fixed.

5-4 Where and how to fix a coiled wire.

Where and how to fix a coiled wire.

1. Wind the protector tube round a frame, adjust its length and cut the excess tube.

2. Pass the coiled wire through the protector tube.

3. Temporarily fix the coiled wire in the loop setter and adjust its length.

4. Determine the length of the coiled wire by standing on the pegs to make the coiled wire fully stretched.

5. Fix the wire firmly with the loop setter and tie a knot. After that, cut the wire at 2cm from the knot and cap the cut end. (See the image below.)

6. End

How to adjust the length of a coiled wire.

Stand up on the pegs so as to make the coiled wire fully stretched.

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This may cause a malfunction of the airbag.

Scooter example 1

A wire fixed to the neck of the handle. Standing on the scooter and the wire is at full stretch.

Scooter example 2

A wire fixed to the seat. Standing on the ground and the wire is at full stretch.

Scooter example 3

A wire fixed to the rear seat for a passenger. Standing on the rear step in a half crouching position and the wire is at full stretch.

Where to adjust and fix a coiled wire may vary depending on the size and make of the motorcycle as shown above.

(Optional Accessory) Connector holder

To hold the free end of a coiled wire while it is not in use.
Attention after Activation

Pay attention when the Hit-Air inflated as follows.

1. The Hit-Air is designed to provide protection especially to the wearer’s neck, so when it is inflated, there will be some pressure around the neck, and if it is difficult to release the strap of helmet, take the Hit-Air off immediately.

2. Watching around the situation calmly, unzip or release the buckle to take off the Hit-Air.

3. If the scene of accident seems to be dangerous, go to the safe area before taking off the Hit-Air.

4. When the Hit-Air inflated, a feeling of tightness may be felt, but the gas will leak out gradually. Therefore, calm yourself even if the body with the inflated Hit-Air is pressed down by something.

5. If the air cushion is punctured when fully inflated, the gas in all the cushions will immediately escape and the cushions deflate.

CAUTION 6. If the Hit-Air inflates accidentally for some reason while riding, do not be alarmed. Look for a safe place and take an appropriate action.

To continue to ride with the inflated Hit-Air may be dangerous due to the increasing wind resistance etc. Remove it first.

CAUTION 7. If there is an external damage to the Hit-Air due to its activation, take it to an authorized dealer for a maintenance check and to replace the gas cartridge. In cases of extreme damages externally or internally, it may not be repairable.

CAUTION 8. Be aware of the points listed below when attempting to re-assemble the Hit-Air by yourself after it is activated.

- Whether it has external damages (holes, scratches, tears etc.)
- Confirm that the air bag was fully inflated when it was activated.
- Confirm that the gas cartridge to be replaced is the correct size and unused.

Go over the points listed above and if there are no problems, re-assemble the Hit-Air carefully at your own risk.

It may not work as designed if there are external or internal damages. For further details for re-assembling see Chapter 7, (pages 20 to 24).

Re-assembling Hit-Air after Activation

### 7-1 How to Re-assemble

We recommend to take the Hit-Air to an authorized dealer for a maintenance check and re-assembling after activation. It can be reused if it is re-assembled in accordance with the following procedure, but unless it is done properly, it may not work.

It cannot be re-assembled if it is damaged by the previous activation.

#### How to Re-assemble

- **Damage**: Find out whether it is reusable by an maintenance check of an authorized dealer.
- **No Damage**: Replace parts such as gas cartridge by an authorized dealer and reuse.
- **Re-assemble by yourself**: by using the setting bolt and the hexagon wrench both of which are supplied as attachments to the Hit-Air. Replace the gas cartridge.

#### Outline of re-assembling by yourself

- **Get an unused CO2 gas cartridge and tools for re-assembling ready.** See (P21) Chapter 1
- **Set a key ball in the key box by using tools** See (P21 to P22) Chapter 2 to 7
- **Unscrew the used cartridge.** See (P22) Chapter 8
- **Remove all CO2 gas from the air cushion.** See (P23) Chapter 9
- **Install an unused cartridge.** See (P24) Chapter 11
- **Zip and close the key box cover** See (P24) Chapter 12

### 7-2 Re-assembling Key Box

1. Prepare a set of the hexagon wrench and setting bolt, unused Hit-Air CO2 gas cartridge. (Photo 1) (The hexagon wrench and setting bolt are provided with the Hit-Air)

**CAUTION**

As the CO2 cartridge for the Hit-Air varies in size (capacity), Choose the right size of the cartridge for the jacket.

2. Insert the setting bolt to the bottom of the key box (Photo 2)

3. Screw the setting bolt by the hexagon wrench. The metal hole of the key box comes down accordingly. (Photo 3) As tightening the bolt, the hole for the key ball is coming down.

4. Put the key ball and its metal ring to the metal hole (Photo 4) Insert the key ball with a ring deeply into the hole of the key box.

5. Lower the red guard to check if the key ball is installed correctly. In case the red guard doesn’t come down fully, the key ball is not installed correctly (Photo 5) If the red guard is blocked by the ring and does not come down, tighten or loosen the setting bolt and press down the edge of the ring around the key ball by the fingernail until the key ball fits in the hole and the red guard comes down.

6. Unscrew the setting bolt and take it away from the bottom of the key box (Photo 6)

7. Lift the red guard to the upper position. (Photo 7)

**CAUTION**

If the system activates while the red guard is in the “locked” (down) position, it may cause the system malfunction or damage to the Hit-Air.

8. Unscrew the used gas cartridge by turning anticlockwise. (Photo 8)

**WARNING**

Remove the “setting bolt” from the “key box” without fail. Otherwise the Hit-Air will not be activated.

**CAUTION**

After unscrewing the used cartridge, please check if the needle inside of the key box is not damaged. If there is any damage on the needle, please consult with an authorized dealer.

The airbag doesn’t work nor inflate if the needle is damaged or deformed.

**P.T.O.**
1. Fabric part becomes frayed or torn. And/or the inner tube (white polyurethane film) is exposed.

2. A crack or rust is found on the “key box” or on the gas cartridge.

3. The “coiled wire” or the “wire loop” gets scraped and frayed.

4. Considerable change of color or deterioration of material is found.

If a problem listed below is found on the Hit-Air, consult with an authorized dealer to change or repair/replace.

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1. High temperature. (Under the direct sunlight, in the closed automobile, near the heater or open flames, etc.)

2. Exposure to rain or extreme moisture, including steam and high humidity

3. Storing items on top of the Hit-Air airbag system

4. Leaving Hit-Air within the reach of children, pets or other animals

5. Folded or rolled up (Being placed on a hanger is preferable.)

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9. How to Store

For longer life and safety, avoid the following conditions:

1. High temperature. (Under the direct sunlight, in the closed automobile, near the heater or open flames, etc.)

2. Exposure to rain or extreme moisture, including steam and high humidity

3. Storing items on top of the Hit-Air airbag system

4. Leaving Hit-Air within the reach of children, pets or other animals

5. Folded or rolled up (Being placed on a hanger is preferable.)

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10. Change

If a problem listed below is found on the Hit-Air, consult with an authorized dealer to change or repair/replace.

1. Fabric part becomes frayed or torn. And/or the inner tube (white polyurethane film) is exposed.

2. A crack or rust is found on the “key box” or on the gas cartridge.

3. The “coiled wire” or the “wire loop” gets scraped and frayed.

4. Considerable change of color or deterioration of material is found.

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8. Washing

1. Hit-Air airbag system should not be washed/laundered.

2. It should not be dipped in the water.

3. It should be dried in the shade if it gets wet.

How to remove stains.

- Wipe with a wet towel.
- Hang the Hit-Air (without detaching the CO2 cartridge) and spray water with a hose or shower as trying not to wet the keybox part.

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7-2 Re-assembling Key Box

9. Remove air from the Hit-Air.

(Photo 9) To remove all remaining gas from the air cushion, spread the Hit-Air, face down on a flat smooth surface. By pressing down each cushion using your hands, remove gas completely. Do not fold or roll up the Hit-Air to avoid damages inside. It may take time to release all the gas in the air cushion but it is necessary as it cannot be re-assembled if some gas is left inside of air cushion. (Photo 3)

CAUTION: If some gas is left inside of air cushion, it cannot be re-assembled.

10. Re-pack all air cushions and fasten all buttons and Velcro.

(Photo 10)