# The ProAir2/MC Lite body protector is manufactured by Point Two Limited and distributed by:

Point Two Ltd Unit 10, Jayes Park Courtyard Ockley Dorking Surrey RH5 5RR

Tel: +44 (0)1306 621368 Email: info@point-two.co.uk

Web: www.point-two.co.uk



#### **PROAIR2/MC LITE USER GUIDE**

#### **Products covered by this information:**

- Point Two ProAir2/MC Super Lite/S with buckle and Velcro strap adjustment
- Point Two ProAir2/ MC Super Lite/Z with front zip fastening and elasticated side body panels

Point Two's ProAir2 inflatable body protector features the proven Point Two advanced inflatable airbag system to produce truly innovative and superior levels of protection for motorcyclists.

#### Testing and approval of the ProAir2/MC Super Lite body protector

This body protector has been tested at SATRA Technology Centre, Kettering, UK against the manufacturer's specifications. It conforms to the SATRA technical specification for airbag systems "SATRA M38: July 2012" and EN 16231-2:2003 "Motorcyclists' protective clothing against mechanical impact – Part 2: Motorcyclists' back protectors - Requirements and test methods."

EC Type-Examination certification has been issued by Ricotest; Notified Body number 0498. This body protector is CE marked to denote compliance with the EU Personal Protective Equipment Directive 89/686/EEC.

#### Protection provided by the ProAir2/MC Super Lite body protector

The integrated back protector meets the requirements of European Standard EN 1621-2, which specifies two performance levels as follows:

**Level 1** protectors are impacted at 50 Joules and the mean transmitted force recorded by the apparatus is required to be below 18 kN with no single value above 24 kN. This is the lowest performance class recognised by EN 1621-2:2003.

**Level 2** protectors are impacted at 50 Joules and the mean transmitted force recorded by the apparatus is required to be below 9 kN with no single value above 12 kN. This is the highest performance class recognised by EN 1621-2:2003. In order to provide higher impact protection, Level 2 products may be heavier and or thicker than Level 1 products.

It is important that you choose the level of protection most suitable for your riding activities.

# The ProAir2/MC Super Lite integrated back protector has been tested and approved toLevel 2 when the airbag is not inflated.

When the airbags are fully inflated, the ProAir2/MC Super Lite provides additional protection to the back and torso from impacts resulting from a fall from a motorcycle. Impacts may be against soft or hard ground, or objects such as trees, vehicles, posts or rails.

- Products meeting the requirements of the technical specifications are intended to reduce the severity or incidence of soft tissue injuries such as bruising, contusions, cuts and abrasions.
- Products meeting the requirements of the technical specifications may reduce the severity and/or incidence of some more serious injuries such as minor fractures.
- •Products meeting the requirements of the technical specifications cannot significantly mitigate against major injuries, such as serious fractures resulting from extreme impact forces or

Torsion/flexion/bending/crushing injuries and neurological spinal injuries. Currently available materials and technology do not allow this level of protection to be attained in products which would be acceptable to wear and which would allow physical activities to be conducted and completed satisfactorily.

WARNING: Injuries cannot be entirely prevented by this body protector, but should be reduced in severity. Injuries cannot be prevented in accidents involving severe torsion, flexion, extension or crushing of the body. Protection from neurological spinal injury is not guaranteed, although testing at the Transport Research Laboratory has shown that skeletal spinal injuries may be reduced in severity or prevented. When inflated, the ProAir2/MC Super Lite's airbag system offers the collar of the neck and trunk more support, thus reducing the risk of over bending the spinal column. The ProAir2/MC Super Lite body protector cannot guarantee the rider absolute safety and does not protect the rider from all injuries.

#### **Fitting**

To benefit from the protection offered by your ProAir2, you should ensure that it covers the areas that it is designed to protect, that no discomfort is caused by the garment when you are in a riding position and that you are able to maintain a full range of movements. When correctly worn and inflated, the ProAir2 should cover the following areas of the body:

- •The bottom edge should be not less than 25mm below the ribcage anteriorly, and should reach the pelvis laterally
- •Posteriorly, the edge should be not less than 15cm below the level of the top of the pelvis on an average adult
- •The top of the back of the protector should just reach the level of the seventh cervical vertebra (the prominent bone at the base of the neck)
- •The front of the protector should reach the top of the sternum

#### **Location and adjustment**

The ProAir2/MC Super Lite is intended to be worn as the outermost layer of motorcyclists' clothing. Remove any pointed objects such as pens, pins, glasses and mobile phones from your clothing before putting on the ProAir2/MC Super Lite vest. Unfasten the buckles or main zip and put on the ProAir2 vest. Refasten the buckles or zip. Put your hands inside the side opening and, turning them sideways so your hand is at 90 degrees to your body, you can easily run your hand from your chest to the bottom of the jacket without experiencing any tight spots, ensuring that there is at least a 7.5 cm/3" gap between your body and the lining of the vest. On the /S model, if necessary use the buckle and Velcro fastened straps, to adjust the fit (The /Z model features zip-front fastening and elasticated side panels).

**WARNING:** It is important that the ProAir2/MC Super Lite vest is not fastened snugly to the body, as the airbags require space in which to inflate. If, when inflated, the /S model vest is too snug, it may be necessary to adjust the straps or, in the case of the /Z model, try a larger size.

If, despite following the above instructions, you are unable to obtain a comfortable, secure fit, an alternative size may be required. Consult the retailer if in any doubt.

#### Size range

Take measurements according to the pictogram (see right - size Adult Large described) and select the appropriate size from the size chart.

#### ProAir2/MC Lite/S

Size	Height	Chest	Waist	Waist to shoulder
Adult S	154-164	90-100	85-95	82-92
Adult M	162-172	95-105	90-100	88-98
Adult L	170-180	100-110	95-105	94-104
Adult XL	178-188	105-115	100-110	100-110
Adult XXL	185-195	110-120	105-115	105-115

#### ProAir2/MC Lite/Z

Size	Height	Chest	Waist	Waist to shoulder
Adult S	150-160	85-95	80-90	80-90
Adult M	158-172	90-100	85-95	85-95
Adult L	166-176	95-105	90-100	90-100
Adult XL	174-184	100-110	95-105	95-105

# **Material content and cleaning**

Outer cover: 100% Polyester. Lining: 100% Polyester. Impact Wipe clean with lukewarm water only and place on a hanger in a well-ventilated space to dry. Do not machine wash, use bleach, tumble dry or iron.



The materials from which this body protector is manufactured are not known to cause allergic reactions generally.

# **Storage and transportation**

Place on a clothes-hanger, and store in a dry, well-ventilated environment away from direct sunlight and extremes of temperature. Do not place heavy objects on top of the garment, as these may cause damage to the airbag system. Do not sew or stick anything onto the body protector as it could pierce the airbags and prevent them from working properly.

#### **Maintenance and obsolescence**

Frequent visual inspection should be made for signs of obvious wear, especially after any accident. In particular, check all areas are in good condition where the airbag system is present, ie no rips or tears, before each use. In the rare instance that the airbag does not inflate, a severe fall can result in some cell damage of the foam, obvious signs of which would be reduced thickness (indentations) or a change in the feel of the foam. The garment should be replaced if in any doubt. Cleaned and maintained in accordance with these instructions, the service life of the body protector in normal conditions should be up to three years.

# Use with additional personal protective equipment

Back protectors are components of motorcyclists' clothing (jacket, one-piece or two-piece suit) and are designed to be used with the following, additional PPE:

- A safety helmet, with fitted or separate eye protection where applicable
- Other, compatible items of PPE giving protection to body areas of the wearer not protected by the products in this application alone (where applicable); including any one or more items of the following:
- Limb protectors meeting the requirements of EN 1621-1.
- Outer clothing providing protection from other risks which may occur during the activity, such as cuts, grazes and abrasions.
- Sturdy boots and gloves

#### **Product Labelling**

The following information is included on your ProAir/MC Lite body protector:

Product information label: The "B" and "2" denote that the product is a full back protector meeting the highest, Level 2 requirements of EN 1621-2:2003

Material content, cleaning instructions and year of manufacture





#### Special instructions for the Point Two airbag system



IMPORTANT: Please read these special instructions carefully in order to ensure optimum protection is provided by the Point Two airbag system, which is designed to keep the spinal column supported and absorb shock. Failure to follow the instruction could lead to your body protector malfunctioning or reduce its effectiveness.

The ProAir2/MC Lite is worn like any other conventional outer garment when riding. The wearer attaches a lanyard to the ring of the adjustable saddle attachment once fitted securely to the motorcycle and, when they fall or are thrown from their motorcycle, the lanyard linking them to the machine tightens and forces out the key ball bearing from the trigger mechanism which in turn disengages the release pin. The  $CO_2$  is then discharged into the airbags until they reach full inflation. Approximately 15 seconds after inflation, the  $CO_2$  begins to automatically discharge through a decompression valve in the body protector.

Point Two requires its retailers to provide every purchaser of a ProAir2/MC Lite body protector with the opportunity to experience a test inflation of their new garment. It is highly recommended that you take advantage of this, as you will then know what to expect when the system is activated in response to a real incident and how the body protector feels when inflated. You may experience a feeling of slight restriction for a few seconds, but as the gas is released, the pressure gradually decreases. Most wearers do not find this troublesome, particularly if they have experienced the test inflation, and those who still feel particularly restricted can release the main zip in order to ease the pressure, which we recommend is also done as part of the test inflation process.

# The Point Two airbag system

## The airbags

The airbags are made of high-quality resistant polyurethane sheaths, which provide the best possible shock absorption. It is possible for the airbags to be ripped or damaged in an accident if they hit any pointed or sharp objects.



CAUTION: The sheaths must not be exposed to temperatures above 50C.

#### The release pin

A force, applied to the connecting lanyard, is required to eject the ball bearing from its compartment. This releases a spring which forces a needle to perforate the cartridge, releasing the gas into the airbags. The key ball bearing can be released from its compartment in any direction.



WARNING: For your own safety, do not dismantle the release pin or remove any parts.

#### The gas canister (CO<sub>2</sub>)

When replacing the gas canister, use only genuine Point Two canister of the correct size (cartridges may be marked with either company's name). Capacity of  $CO_2$  is stamped on the canister on the  $CO_2$  line. Replacement gas  $(CO_2)$  canister can be obtained from Point Two Ltd. Please call (+44) (0)1306 621368.

Type: CO<sup>2</sup>

Canister volume: 60cc

Weight: 45g ± 3g

Container: cast steel; welded tap Reference: LS-6013-ew-Cn3L-45



#### **IMPORTANT:**

- The canister should be stored and used in temperatures below 45C.
- The canister must be used at a temperature over 0C. If stored under 0C, warm up before use or replace with a cartridge which has been warmed in an indoor environment.
- Do not expose full canisters to naked flames.
- Do not leave full canisters in the car in high temperatures.
- If rust or other corrosive marks appear on the outer surface of the canister, change it immediately and dispose of the corroded canister in a safe an environmentally-friendly manner.
- Ensure that a spent canister is completely empty before removing it from the trigger system.
- Only install genuine Point Two gas canisters of the same size sold with the ProAir2/MC Lite body protector.
- Once the gas canister is installed do not unscrew or remove it.
- Please ensure spare CO<sub>2</sub> canisters are kept out of children's reach at all times.
- Do not remove any part of the airbag trigger system
- The  $CO_2$  canister is not re-usable. Once used, it must be replaced with a fresh canister of the same capacity.
- Check the weight of the canister yearly. It should not differ by more than 3g from the weight engraved on the canister.

#### The adjustable saddle attachment

Attaching the adjustable saddle attachment

- (1) Remove the seat of the motorcycle.
- (2) Identify a suitable bolt situated centrally towards the front of the saddle (such as the rear mounting bolt for the fuel tank), to which the attachment can be rigidly fixed. Do not attach to any bolts which are holding electrical components or any part of the fuel system in position.
- (3) Replace the saddle.
- (4) The lanyard strap should be long enough to permit the D ring to protrude not less than 2.5 centimetres and not more than 5 centimetres from above the point where the front of the saddle and the fuel tank meet.
- (5) Remove the saddle, adjust the attachment and refit the saddle until the correct free length for the lanyard is achieved.



CAUTION: Make sure that the lanyard cannot wrap itself around any part of the motorcycle when riding. Shorten it accordingly and check that it does not restrict the rider's movements and that the chosen fixing point is sturdy enough.

#### Attaching the lanyard to the attachment

The individual user is responsible for ensuring that they have the correct length of lanyard and attaching the lanyard to the adjustable saddle attachment.

The lanyard has a clip at the end, which simply clips onto the central ring of the adjustable attachment on the saddle. The lanyard must be securely clipped on to the ring otherwise your jacket will not inflate in the event of a fall.

Considerable force is required to activate the trigger mechanism, so the airbag system should not be activated during normal use. Should the lanyard linking the saddle to the release pin catch on any obstruction, accidental activation could occur. If the motorcycle falls to the ground and the rider stays in the saddle, the airbag system cannot be activated until the activation distance (full stretch of the lanyard) and activation force are both reached.

Always detach the lanyard from the saddle before dismounting to avoid accidentally inflating the airbag system. Forgetting to unfasten the lanyard before dismounting when the lanyard is too long or not enough force is exerted will mean the wearer will still be attached to the saddle.

#### Precautions after activation

Pay attention to the following points when the airbag is inflated:

- Make sure you are out of danger before removing the ProAir2/MC Lite.
- The airbag will remain inflated for 15 20 seconds. The gas will then escape gradually through the decompression valve on the rear of the jacket.
- If the cushions are punctured when the airbag is inflated, all the chambers will empty and the jacket will deflate.
- Do not block the decompression valve, which is located on the rear of the jacket.
- If any external damage to the body protector is caused during deployment, take it to an authorised dealer, or phone Point Two Ltd on (+44) (0)1306 621368, for servicing and replacement of the canister.
- In the event of serious damage to either the interior or exterior of the body protector, it may not be possible to repair it.

# Resetting the trigger system and replacing the CO<sub>2</sub> canister

If after reading the following instructions you remain unsure of the correct procedure to reset your ProAir2/MC Lite body protector's airbag system, we recommend you take it to an authorised dealer for resetting. The ProAir2/MC Lite body protector can be reused if it is reset according to the following procedure, but if it is not reset correctly there could be a malfunction. Using the ProAir2/MC Lite body protector without a correctly set airbag trigger system could deprive the wearer of the additional protection provided by the airbags.

# Resetting the trigger system



IMPORTANT: These steps must be followed in sequence before removing a spent cartridge to avoid damaging the release pin. We recommend that an adult resets the jacket after activation or contact 01306 621368 for advice.



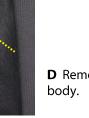
A This is how the trigger looks after activation. The release pin and lanyard have detached, the piston has slid towards the cartridge and the spring (marked with a yellow arrow) is visible.



**B** Unlock the empty cartridge by applying slight downward pressure and turning it anticlockwise to the right in the trigger body.



**C** When the retention lug on the bayonet fitting reaches the right hand side of the location slot (shown by the yellow arrow in the picture), you will feel the cartridge loosen in the trigger body.



**D** Remove the empty CO<sub>2</sub> cartridge upwards away from the trigger



## Replacing the CO<sub>2</sub> cartridge and resetting the trigger mechanism

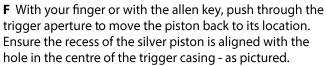


IMPORTANT: Please pay particular attention to the following points when reassembling the trigger system of your ProAir2/MC Lite body protector:

- Check for visible external damage (holes, rips, etc.) in the fabric of the outer garment and the airbags (if visible);
- Ensure that the airbags have completely deflated;
- Always ensure the replacement cartridge is a genuine, approved Point Two part of the correct size, which is 60cc for adult sizes.



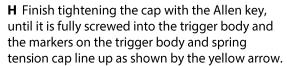
**E** Loosen the spring tension cap with the Allen key provided, turning it in the direction shown by the arrow, until the spring drops out of sight below the bottom of the release pin aperture of the trigger body.







**G** Insert the release pin into the aperture, making sure it is fully pushed into the recess in the piston. Hold it in place with one hand and begin tightening the spring tension cap with the other hand.







I To insert a new CO₂ cartridge; first ensure it has the correct bayonet fitting. It is not possible to use screw-fitting cartridges in the Point Two trigger system. Line up the location lug on the bayonet fitting (highlighted by the top arrow in the picture) with the slot on the trigger body (highlighted by the bottom arrow in the picture).

J Insert the CO<sub>2</sub> cartridge into the trigger body. If you encounter resistance, ensure you have correctly aligned the location lug on the bayonet fitting with the insertion slot on the trigger body.





**K** Using light downward pressure, twist the CO<sub>2</sub> cartridge clockwise to the left, as shown by the direction of the top yellow arrow in the picture, until the location lug on the bayonet fitting is in the left side of the location slot.

**L** Provides a close up of the correct final position for the location lug in the trigger body location slot.





**M** Close the zip on the  $CO_2$  cartridge cover.

**Conclusion:** Check again to ensure accurate reassembly of the airbag trigger system bearing in mind your own safety. Any exterior or interior damage could cause a malfunction.

Thoroughly following these instructions will ensure your ProAir2/MC Lite body protectors' airbag system is properly reset. If, however, you remain unsure about the resetting procedure, or are not confident of your understanding of these instructions, please visit the Point Two website to view the instructional video, or for one-to-one assistance, speak with the supplying retailer, or contact Point Two direct.

**Conclusion** Check again to ensure accurate reassembly of the airbag trigger system bearing in mind your own safety. Any exterior or interior damage could cause a malfunction.



#### **IMPORTANT**

- No body protector can prevent death or serious injury in certain accidents
- Point Two Ltd will be held in no way responsible for any bodily injury or death, and/or property damage that may occur whilst using any Point Two product
- Unauthorised modification or misuse could lead to malfunction. Point Two Ltd accept no responsibility or liability for any improper installation and usage of any of its products
- Point Two Ltd recommend that the ProAir2/MC Lite body protector should NOT be used by anyone who is pregnant by 18 weeks or more
- All ProAir2/MC Lite body protectors are subjected to rigorous quality assurance testing by the manufacturer. Each one is inflated to double the pressure attained when inflated through the trigger system, however we cannot guarantee the airbag will inflate every time or be held responsible should it not inflate.
- Point Two recommend that ProAir2/MC Lite body protectors are serviced annually or after every six inflations, whichever occurs first, by one of the manufacturer's appointed technicians
- No other garments or backpacks should be worn over the ProAir2/MC Lite body protector.
- Always ensure the lanyard and motorcycle attachment are fitted securely as detailed in the user manual
- Point Two is unable to guarantee an air jacket will inflate in all circumstances
- This garment is fitted with an automatic deflation valve and can also be deflated by the removal of the gas canister
- Always replace the canister after each inflation