



BACK PROTECTORS

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»In the lab«

BACK PROTECTORS

You know what they are for but which one does the best job?
We go through the testing process to find out

Words Dilly Crick Pictures Mark Manning



PRODUCT TEST



How we did it

It's fairly obvious what a back protector should do - absorb the force of an impact. There are European safety standards on how much force it should absorb and we have adopted a similar procedure for our testing.

Each protector was placed over an anvil containing sensors that measure how much force is transmitted to it. A striker is dropped onto the protector from a pre-determined height and the sensors in the anvil record how much force is transmitted through it. We impacted each protector seven times, in five predetermined positions and in two positions identified by the tester as possibly weaker than the remainder of the protector.

There are two levels of performance in the European standard, with an 18kN or less force transfer qualifying as level one, and (better) protectors transferring 9kN or less being rated as level two. We scored protectors out of 20 on a sliding scale. We've included the average force transfer figure in the text relating to each product.

But impact absorption is only part of the story as it has to be practical and comfortable for use. If it isn't, the rider won't wear it. To check its usefulness on the bike, we put hundreds of miles on each back protector on the road and also the track, with a testing session at Rockingham circuit. Each tester was asked to comment on the protector's comfort, and note any particular problems. These assessments contribute to the road testing element of the scores, with each protector scored out of ten.

RIDE triangles are awarded to the cream of our crop. A product has to excel to collect a Recommended triangle and has to be a brilliant combination of excellence and value for money to collect the Best Buy tag.



The impact zones: Strikes 1-5 are at spots used by the European standard. Impacts six and seven varied by protector, depending on where the tester, Dr Roderick Woods, assessed a zone that was potentially weaker than the rest.



1= Forcefield Pro L2

Price £80-£90
Weight 1032g

Contact 01993 410818
www.daviesodell.co.uk

Tester's notes

Road testers found the Forcefield extremely reassuring and comfortable because it moulds to the contours of your back as it gathers heat escaping the body and feels as if it would absorb impacts well. The feeling is supported by the protection tests, with high levels of impact absorption, achieved consistently across the protective area with no weak areas. Because it is relatively slim, getting leathers over it is easy too. The average force transfer across the seven impacts was 5.6kN, comfortably under the 9kN limit for Europe's higher Level Two standard. Price is £80 from a dealer or £90 direct from Forcefield.



RIDE
MAGAZINE
BEST BUY

Protection	<div style="width: 100%; height: 10px; background-color: red;"></div>	20/20
Road test	<div style="width: 90%; height: 10px; background-color: red;"></div>	9/10
Total	<div style="width: 95%; height: 10px; background-color: red;"></div>	29/30

1= Halvarsson's Track

Price £80
Weight 992g

Contact www.iofama.se

Tester's notes

This back protector is made by Forcefield for Halvarsson's, with a different shape to the protection pad and a slightly smaller overall size than Forcefield's own protector. But it shares their excellent impact absorption and consistency across the protector. It was rated highly by the road tester, who praised the way it moulds to the body's shape and also its high comfort levels. The average force transfer was 5.7kN, almost identical to the Forcefield.



RIDE
MAGAZINE
RECOMMENDED

Protection	<div style="width: 100%; height: 10px; background-color: red;"></div>	20/20
Road test	<div style="width: 90%; height: 10px; background-color: red;"></div>	9/10
Total	<div style="width: 95%; height: 10px; background-color: red;"></div>	29/30

1= Held Redia

Price £115.50
Weight 775g

Contact 01283 820508
www.held-biker-fashion.de

Tester's notes

This zip-up vest-type protector, which has a thick waistband for extra security, gave brilliant impact absorption with good consistency all over. It was rated as very comfortable, though the tail piece sometimes folds up annoyingly when getting into tight leathers. It has additional pads on the collarbone and rib areas for further reassurance. Average force transfer, at 4.9kN, was lower than the Forcefield protector, but it misses the Best Buy triangle because of the additional price. The Redia is the women's model, but the Salvo is the men's version and costs £120.20.



RIDE
MAGAZINE
RECOMMENDED

Protection	<div style="width: 100%; height: 10px; background-color: red;"></div>	20/20
Road test	<div style="width: 90%; height: 10px; background-color: red;"></div>	9/10
Total	<div style="width: 95%; height: 10px; background-color: red;"></div>	29/30

PRODUCT TEST

4 Oxford Max Protection

Price £50-£80
Weight 1003g

Contact 01993 862300
www.oxprod.com

Tester's notes

The highest-scoring hard-coated back protector on our test. The articulated hard plastic backing is held comfortably onto your back with a comfortable foam rubber layer. It's fairly thick in the centre but tapers out towards the edges, meaning getting leathers over is reasonably simple. It scored well for impact absorption, its mean force transfer of 8.6kN or making it one of five protectors that absorbed enough in our test for Level Two performance. It's not marked as meeting a standard, when it should be. The price varies by protector size.



5 BMW back protector 2

Price £95
Weight 933g

Contact 0800 777155
www.worldofbmw.com

Tester's notes

This gave good impact protection in most areas with an average of 9.1kN, but a high force transfer at one impact spot reduces its score. We also found it to be too narrow at scapular and lumbar areas to meet the claim on the protector's label. The road tester found the additional collarbone protectors bulky but said they found a better shape with time. This protector is constructed from a hard plastic outer and foam inner padding.



6 Alpinestars Bionic

Price £90
Weight 809g

Contact www.alpinestars.com

Tester's notes

This protector has an articulated hard plastic outer with foam inner and it offers impact protection that we found to be comfortably within the requirements for level one performance and just shy of the higher performing level, at a mean of 10.8kN. The road tester was reasonably happy with its performance, but said the hard edges of the protector could dig into the ribs as this protector is very solid and the straps have a habit of pulling on the arms.



7 Knox Gilet Fastback

Price £60
Weight 949g

Contact 01900 825825
www.planet-knox.com

Tester's notes

This vest-style protector is flexible and reassuring, but the holes for arms were slightly too tight for our tester and T-shirt sleeves bunched under leathers. Otherwise it's easy to get on and off and gives a simple fit under leathers. The impact absorption result, at an average of 10.6kN was reasonable, but just outside the zone required for top marks.



7= Knox Contour

Price £100
Weight 695g

Contact 01900 825825
www.planet-knox.com

Tester's notes
Fairly thick, broad and stiff protector, but the road tester found it difficult to get under well-fitting leathers. It feels reassuringly solid and is comfortable once in place, but the protective material is too narrow in scapular region when compared to the size given on the attached label. It gives reasonable impact protection results, but a high force transfer at one impact zone raises the average force transfer to 10.9kN.



9 Knox Ricochet

Price £50-£90
Weight 1172g

Contact 01900 825825
www.planet-knox.com

Tester's notes
Comfortable flexible foam padding with a hard, articulated plastic outer construction. Shoulder strap adjusters worked loose and dug into road tester's skin. Reasonable impact absorption and reasonable consistency throughout too. Ours wasn't labelled with the correct size. Average force transfer was 10.4kN. Price varies by size of protector.



10= Knox Stowaway

Price £60
Weight 589g

Contact 01900 825825
www.planet-knox.com

Tester's notes
This protector performed well enough in our test to meet the first, lower level within the European standard. But its average force transfer of 17.6kN is the worst here, transmitting more than three times the force of the winners in this test. The protective material across the scapular region was too narrow when compared to the size given on the protector's label. It's constructed from articulated blocks of foam with soft padding on the inside and the road testing found it to be comfortable.



10= Hein Gericke Hiprotec Back Protector

Price £60
Weight 665g

Contact 03800 165165
www.hein-gericke.co.uk

Tester's notes
This is the same product as the Held Solid, just badged as Hein Gericke instead. It's not particularly flexible and suffers identical impact consistency problems to the held protector, with two bad individual tests lowering the average score of 11.2kN from what would otherwise have been a good result. Its thickness varies over its length - and its impact performance is thickness-related. Force transfer at the lumbar region is higher than elsewhere.



10= Held Solid

Price £67.50
Weight 615g

Contact 01293 820508
www.held-biker-fashion.de

Tester's notes

Our road tester found this protector to be solid and reassuring but the stiff plastic base dug into his lower back when worn under leathers. It would have scored more highly for protection had the performance been more consistent - its average absorption is reasonable at 10.5kN, but high force transfers were recorded on two impact zones. The thickness of the padding varies over its length and this thickness affects the impact absorption levels. Lumbar region has higher force transfer than other areas on the protector.



10= Dainese Wave

Price £100
Weight 663g

Contact www.dainese.com

Tester's notes

Dainese's protector consists of an articulated solid plastic outer and foam padding inner. Inconsistency in impact performance costs it dear, and this is mainly caused by the outer shell plates rotating apart on impact in the lumbar region. Road testing found it to be light and comfortable, but narrower than other protectors here. The protective material was too narrow in the scapular region when compared to the recommendations for the size given on the label, the average force transfer was 13.8kN, but one impact point recorded 27kN, which is higher than would be allowed in a full CE test.



! THE VERDICT



The Forcefield Pro L2 is a great performing back protector and is awarded RIDE Best Buy over the very similar Halvarssons back protector (also made by Forcefield) and the Held Recla. This is mostly down to price. The latter two are both recommended for their great all-round performance.

But note that most serious back injuries result from violent twisting of the spine and back protectors don't stop that. A good one will reduce the impact of a direct blow, decrease the amount of bruising and may stop you breaking a rib or shoulder blade. It'll also offer increased abrasion protection if your leathers abrade through.

➔ NEXT MONTH

In July it's more stuff for your back, with our rucksacks test. Which ones will lighten the load of a trip on a bike, and which will leave you vulnerable to severe backache? Our comprehensive test will tell you.