



**PAGID**

BRAKE SYSTEMS

**BRAKE TEST**

**TEST  
YOUR  
SAFETY.**

**RELIANCE. TRUST. PERFORMANCE.**

# 300,000 TEST KILOMETERS WORLDWIDE – WITH NO IFS AND BUTS.

Gravel, sand, water and of course a lot of asphalt – Hella Pagid products guarantee functional safety and perfection under all conditions. Prior to any brake pad leaving our company, our own research and development centre has ensured that our products meet or, even better, exceed our own demands and that of our customers.

We conduct our tests not merely according to car manufacturer regulations, but follow firmly defined standards and concrete specifications guaranteeing optimal safety and maximum comfort.

At the end of the last quality check, our brake pads will have run for  
**300,000 test kilometers** and for more than **1,000 hours**  
in order to obtain the last required release for serial production.

Safety, reliability and performance – this is  
the quality that you can expect from all  
Hella Pagid products.



## WHAT WE HAVE TESTED

| Pedal feeling throughout entire run

| Wear and coefficient of friction at over 700°C  
brake disc temperature, while maintaining  
equal delay at increased pedal pressure.



## PEDAL PRESSURE

The competitive comparison with reputable OE brands shows a clear advantage to Hella Pagid products. At only 40 Newton pedal pressure during an extreme Alpine descent, the test driver with HPBS product used significantly less force. In everyday traffic situations, this is an advantage especially during sudden dangerous situations at the end of a traffic jam for example.

## NEWTON (N)

HPBS **40**

Competitor 1 **50**

Competitor 2 **45**

10 20 30 40 50



Watch video:  
[www.hella-pagid.com/stilfserjoch](http://www.hella-pagid.com/stilfserjoch)

## FRICION COEFFICIENT TEST

The coefficient of friction was determined according to the downhill test by performing an additional braking action with cooled brake system. This allowed determining the exact performance of the brake pad after the extreme descent. A high coefficient of friction

thus requires less pedal force when braking. This means that low coefficients of friction can increase the braking distance significantly in case of panicked braking, since the reactivity of the brake is worse and more pedal pressure is required.

In this test, Hella Pagid also performed significantly better than the comparative products, at 0.46  $\mu$  compared to 0.39  $\mu$  on



## HOT WEAR

Hot-wear results are remarkable and give a clear advantage to Hella Pagid. Results from two descents were analysed. Despite the extreme braking temperatures, Hella Pagid shines at only 0.74 mm wear. The average comparative value was significantly above 1.50 mm

## WEAR (mm)

**HPBS 0,74**

Competitor 1 **2,18**

Competitor 2 **1,68**

0,5 1 1,5 2 2,5

## FRICITION COEFFICIENT ( $\mu$ )

**HPBS 0,46**

Competitor 1 **0,33**

Competitor 2 **0,38**

0,1 0,2 0,3 0,4 0,5

## SUMMARY

Pedal feel, coefficient of friction and wear – Hella Pagid takes it home in all three categories and leaves other, well-known original equipment manufacturers behind. Beyond OE quality standards, our products meet the highest demands regarding safety, quality and sustainability – for we favour the strong performance of "Made in Europe", e.g. at our company's plants in Germany, France and England.

average. The greater coefficient of friction of Hella Pagid brake pads makes all the difference. While the competition is still rolling, the Hella Pagid test vehicle is already standing still. And we continue to evolve – Hella Pagid brake pads may even increase their coefficient of friction (hot value) during strong braking actions, so that the driver has an ever better safety feeling thanks to lower pedal pressure.

# ALPINE RUN STILFSER JOCH

DREAM DESTINATION FOR CAR AFICIONADOS  
AND HELLA PAGID TEST RUN.

Lab tests are important and a matter of course with Hella Pagid. We test at state-of-the-art test stands according to the latest knowledge – but the lab can never replace road testing.

However, we don't just speak of any road but the second-highest Alpine asphalt mountain pass – the Stilfser Joch. Great height, extreme curves and up to 15% gradients are a great challenge to both humans and equipment. We have accepted the comparison with two renowned original equipment manufacturers of brake pads in order to test pedal pressure, coefficients of friction and wear. Our test pilots master the 18 kilometers of winding road with bravado. Yet not only the technical conditions make the road the most suitable candidate for our test. Car journalists Jeremy Clarkson, Richard Hammond and James May called the Stilfser Joch "the world's most magnificent road" several years ago in the most successful car television show in the world (Top Gear\*).

Mountain roads generally pose the strongest and most enduring strain for brake pads. Especially a sporty driving style will require at times constant braking on the serpentine. A too long braking distance can be fatal here.

\*Watch now: :The Grand Tour" on Amazon Prime Video.

## TEST PARAMETER

LOCATION: **STILFSER JOCH, SOUTH TYROL, ITALY**

DRIVERS: **CERTIFIED TEST PILOTS**

GROUND SURFACE: **ASPHALT ROAD**

TIME FACTOR: **SPORTY STYLE  
IN UNDER 22 MINUTES**

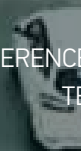
TRACK DISTANCE/LAYOUT: **18 KM, 48 CURVES,  
MAX. 15 % GRADIENT**

HEIGHT DIFFERENCE: **FROM 2,750 M TO 1,270 M**

TEST VEHICLE: **BMW 5ER SERIES**

BRAKES: **FN-AL60 / FN-AL42**

BRAKE DISCS: **Ø 310X24 / Ø 320X20**



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FOR  
SAF







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FOR YOUR  
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