Suspension components.

Product	The advantages for your customers	The advantages for you	Practical hint
Shock absorbers. Tangible safety and ride comfort: Mercedes-Benz genuine shock absorbers. 	• Mercedes-Benz genuine shock absorbers can withstand and absorb even hard shocks thanks to their robust and high-quality material. • Shorter stopping distance thanks to optimal roadholding. • Reliable cornering stability and precise steering characteristics. • Exceptionally economical thanks to long lifetime. • Optimum tuning of all components prevents uneven tyre wear and unnecessary repair costs on other suspension components.	• Very wide range of different variants for precise match to any vehicle and desired ride comfort.	• Worn shock absorbers could lengthen the stopping distance. • Mercedes-Benz genuine shock absorbers meet all the requirements for assisting the dynamic safety functions of systems such as ABS, ASR or ESP.
Suspension struts, air suspension. The perfect solution for performance-enhancing ride comfort and refined sportiness. 	• Developed and tested specifically for the particular vehicle. • Ideally tuned to the vehicle's vibration characteristics. • Interact perfectly with all electrical safety systems, e.g. ABS, ESP etc.	• High-quality and rigorously tested genuine parts quality. • Ideally tuned to the vehicle variants.	• The genuine air suspension system works together perfectly with the sensors on all wheels and other electrical safety components, allowing the vehicle level to be adjusted automatically with no trouble at all. • Also available as Mercedes-Benz genuine remanufactured suspension strut.
Suspension parts, links. Mercedes-Benz suspension parts are configured for safety and maximum longevity. 	• Long lifetime and long-lasting corrosion protection. • The genuine ball joint ensures high resistance to temperature and wear thanks to outstanding anti-friction and sealing properties.	• Precise fit shortens the installation time.	

Products bearing this symbol were subject to a competitive comparison. A selection of the test results can be found on the following pages.

* depending on vehicle model.

Competitive comparison: shock absorbers.

Original vs. competitor.

Different manufacturers offer shock absorbers of varying quality. Even when new, their behaviour can differ severely from the desired target characteristics of the genuine shock absorbers. Tests carried out by the vehicle technology testing centre at Dresden's Technical University also showed this. On behalf of Mercedes-Benz Group AG, Mercedes-Benz genuine shock absorbers (A 204 323 26 00 for the front axle of the 204 model series C-Class) were tested against three comparable competitor products on a test rig as well as on a Mercedes-Benz C 180 Kompressor from 2009. The test was staged from November 2016 to February 2017.

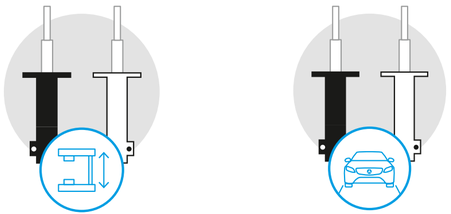
Here you will find an excerpt from the tests:

COMPONENT TEST RIG

- Resistance to wear and tear

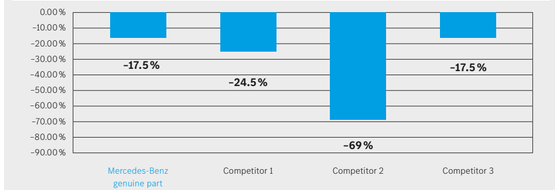
TEST DRIVE

- Braking distance evaluation



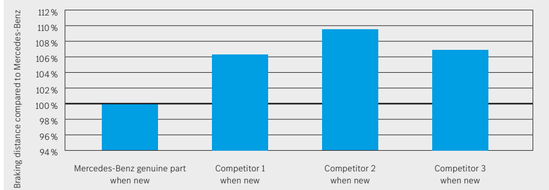
Resistance to wear and tear: In order to evaluate this, conditioned shock absorbers (artifically aged by means of controlled and reproducible wear and tear) were compared against new shock absorbers. Here, the differences in compression and rebound forces at the maximum VDA90 speed were adopted from the force-velocity diagram for the shock absorbers in new condition and for the worst-conditioned shock absorbers. The mean values were then derived from these. The test showed that the Mercedes-Benz genuine shock absorber, together with one of the competitor products, had the lowest damping force loss.
There was barely any functional impairment following conditioning. The only loss of force was in compression stage damping at high speeds. Thus making this shock absorber the best in the test.

Average loss of damping force following conditioning

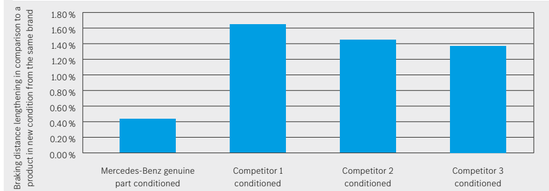


Braking distance evaluation: This investigated which shock absorbers produce the shortest braking distance at identical speed conditions when new. In addition to this, the effect of conditioning* on the braking distance was also ascertained for the four test products. The starting speed for the braking tests was 80 km/h. The evaluation was carried out based on the DIN 70028 standard.
To do this, the mean deceleration from 75 km/h to 10 km/h was calculated from the measurement data for each braking manoeuvre.

Braking distance comparison in new condition



Braking distance lengthening following conditioning



Advantages of the Mercedes-Benz genuine shock absorber:

- Excellent economy thanks to long service life (approx. 300,000 km).
- Comfortable set-up.
- Precision fit.
- High resistance to wear and tear.
- High level of braking safety.
- Optimum roadholding, steering safety, cornering stability.

Disadvantages resulting from deficient shock absorbers:

- Longer braking distance.
- Reduced effect of ABS, ASR, ESP.
- Higher risk when driving in crosswinds.
- Increased risk of aquaplaning (ultimately resulting in complete loss of vehicle control).
- Poor cornering characteristics (breaking out, understeer).
- Restricted suspension comfort.

* Conditioning of the shock absorbers by means of controlled and reproducible wear. Simulation of the effect when mounting kerbs or driving over potholes at speed.