

Test 1

Brake discs/brake pads and linings



Tests carried out

Test in accordance with vehicle inspectorate regulation PV 29954 on vibrating mass test bed to determine:

- thermal deformation of brake discs
- thermal mechanical overload of brake discs
- thermal crack resistance of brake discs
- Wear of brake pads and linings

Products tested


I. Ventilated brake discs

1. Volkswagen Genuine brake disc, 256 x 22 mm, item 1Jo 615 301 D
2. NK brake disc, 256 x 22 mm, item 204 758

II. Brake pads/linings

1. Volkswagen Genuine brake pads/linings, item 1Jo 698 151 J
2. NK pads/linings, item 633 00-0 8528

Test institute

TÜV NORD Mobilität
GmbH & Co. KG 
Institute for vehicle technology
and mobility, Essen

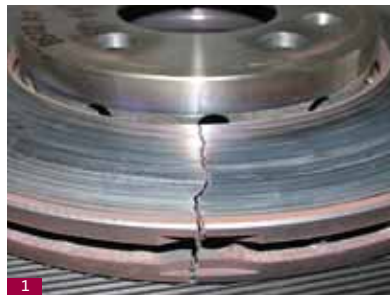
Test period

17th May 2005 to 6th July 2005

Hardly any other component in the vehicle plays such an important role in safety for the driver and other traffic users as the braking system. Its unimpaired function is of decisive importance. The brake discs have to withstand a tremendous amount of pressure in the event of an emergency braking situation without cracking or deforming. Brake pads/linings must offer long service life and optimal friction coefficient.

Summary and evaluation of test results

In all series of tests, the brake discs from NK cracked much earlier than the Volkswagen Genuine brake discs. Even the brake pads/linings from NK wore considerably faster than those from Volkswagen.



1 An NK brake disc in the second series of tests after 438 braking cycles. It is already completely cracked.



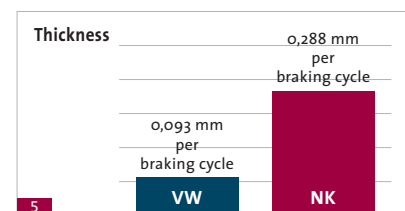
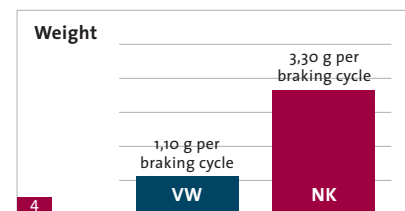
3 A Volkswagen brake disc in the last series of tests after 440 braking cycles. Only light cracks of up to 25 mm are evident.

Crack resistance of brake discs

Comparison of the average figures from 364 braking cycles with the NK brake disc (fig. 1) and 792 braking cycles with Volkswagen Genuine brake discs (fig. 2+3) showed that the Volkswagen Genuine product has a service life of more than twice that of its counterpart.

Brake pad/lining wear

The service life of Volkswagen Genuine brake pads/linings is even three times as high as the NK brake pads/linings (fig. 4+5).



5 Wear from each braking cycle calculated by measuring the weight and thickness is three times as high on the NK brake pads/linings as on the Genuine Part.

Result

Installation of the NK brake disc and installation of the NK brake pads/linings is not recommended by Volkswagen AG. Quality and reliability of the respective Volkswagen Genuine Parts® are considerably higher. The NK products tested are thus not the same with regards to quality.