VOLKSWAGEN AG	**Rear axle stabilizer** Strength requirements	**TL 822 66**
Konzernnorm		

Preface

This TL standard was developed from test guideline EG 2-040.

Changes

The following changes have been made as compared to the November 1991 issue:

- completely revised
- stabilizer for Quattro rear axles added

Previous issues

First issue: 09.90 Last change: 11.91

1 Scope

Rear axle stabilizers for B-, C-, and D-series front-wheel and four-wheel drive and their mounting points and securing parts

2 Basic supply requirements

Approval of first supply and changes acc. to VW 011 55.

Avoidance of hazardous substances according to VW 911 01.

Type acc. to drawing; deviating requirements called out in drawings take precedence over this TL standard (Technical Supply Specification).

3 Test setup

3.1 Stabilizer for torsion crank axle

The stabilizer is originally mounted in the series cross member. The complete cross member is hinge-mounted on its axle pivot mountings. One side is mounted rigid against twisting. On the other side, an alternating torsional moment $\pm \psi°$ without radial stress is introduced.

Alternatively, the test can be performed without a cross member if the stabilizer mounting is the same as in the cross member and is proven to achieve analogous results.

Continued on page 2

Fachverantwortung/Responsibility	Normung/Standards
I/EG–32	I/EK–P Dr. Helm

3.2 Stabilizer for semi-independent suspension

The stabilizer is tested in the rear axle ASSY. For this purpose, the axle is installed in an axle stand, complete with stud axles, wheel hubs and possibly with suspension struts. The axle is raised by H_m with respect to the original design position by the stud axles on both sides and then alternately compressed and allowed to rebound by S_z.

H_m and S_z are measured at the wheel center.

The gusset plates between the side members and the V profile must be separated out for the test on the stabilizers of the B/C platform rear axle. The V profile must not be cut open.

3.3 Stabilizer for Quattro rear axles

The stabilizer is mounted in an original subframe, original cross member or a rigid frame, which simulates the mounting points.

The force is applied sinusoidally in the direction of compression (Z direction), opposing on both sides, by means of the original connecting link with a stroke of $\pm S_z$.

4 Testing

Test angle $\pm \psi°$ or test stroke $\pm S_z$ and H_m are specified in the component drawing.
The test frequency is based on the limits specified by the design of the test stands and by the rubber mountings.

5 Test requirements

The test is required for quality assurance.
For the development releases, the required number of load cycles is increased by a factor of 1.5. Different or additional tests may also be required.

The following applies to all stabilizers, unless otherwise noted in the drawing:

Mean number of cycles	$\overline{N} \geq 200{,}000$
Max. permissible variation	$s \log \leq 0.15$
Number of specimens	$n \geq 4$
Failure criteria	starter cracks or breakage

6 Referenced standards

VW 011 55	Vehicle supply parts - general
VW 911 01	Environmental standard for vehicles, vehicle parts, materials, operating fluids, avoidance of hazardous substances