

Test Report

No. TDB 0209 dated 21.11.2000**for application of Annex VII Directive 71/320/EEC**

1 IDENTIFICATION

1.1 Axle

Manufacturer: OTTO SAUER Achsenfabrik Keilberg
D-63854 Bessenbach

Make: SAF

Type: SN 3020-13Z

Model: -

Technically permissible axle load P_e ¹⁾: 13000 daN

1.2 Brake

Manufacturer: See 1.1

Make: SAF

Type: SN 300x200

Model: -

Technically permissible camshaft
input torque $C_{max,c}$: 2500 Nm
(for calculation: 2000 Nm at 6,5 bar)

Brake drum - Internal diameter: 300 mm

- Mass: 43 kg

- Material: Cast iron (grey cast iron)

Brake lining - Manufacturer: Federal-Mogul Friction Products GmbH
D-51709 Marienheide

- Type: 1561

- Identification: Type indication at front

- Width: 200 mm

- Thickness: 8,5...16 mm (sickle-shaped)

- Surface area: 1025 cm²

- Method of attachment: Rivited

Brake geometry: See appendix 1 dated 23.08.2000
See appendix 2 dated 30.03.1987

1.3 Wheel (Twin)

Rim diameter D_e : 381 mm (15")

Dimensions: See appendix 1 dated 23.08.2000

¹⁾ See sheet 3/3

Test Report No. : TDB 0209
Sheet : 2 / 3
Date : 21.11.2000

Manufacturer : SAF
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1.4 Tyres

Dynamic rolling radius R_e
at reference load P_e : 407 mm

1.5 Actuation

Brake actuator - Manufacturer: GRAU
- Type: Diaphragm brake actuator
- Model: 30 (120 361 101)
Lever length l_e : 152 mm

2 RECORD OF TEST RESULTS ²⁾

(corrected to take account of rolling resistance $\hat{=} 0,01P_e$)

2.1 In the case of vehicles of categories O₂ and O₃:

Not applicable

2.2 In the case of vehicles of category O₄

Test type:

Annex VII, Appendix 1, point:

		0	III	
		3.5.1.2	3.5.3.1.2	3.5.3.2
Test speed				
initial	km/h	60	60	60
final	km/h	0	30	0
Brake actuator pressure p_e	bar	6,4	-	6,4
Number of brake applications	-	-	20	-
Duration of braking cycle	s	-	60	-
Brake force developed T_e	daN	7736	3900	5765
Brake efficiency T_e/P_e	-	0,60	0,30	0,44
Actuator stroke s_e	mm	55	-	68
Camshaft input torque	C_e Nm	1847	-	1847
	$C_{o,e}$ Nm	30	-	30

3 NAME OF TECHNICAL SERVICE CONDUCTING THE TEST

RWTÜV Fahrzeug GmbH
Technischer Dienst für Bremsanlagen
D-45307 Essen

4 DATE OF TEST:

23.08.2000

²⁾ See sheet 3/3

Test Report No. : TDB 0209
Sheet : 3 / 3
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RWTÜV

Manufacturer : SAF
Type of axle : SN 3020-13Z

5 This test has been carried out and the result reported in accordance with Directive 71/320/EEC as last amended by Directive 98/12/EC and Annex VII, Appendix 1.

Essen, 21.11.2000



Dipl.-Ing. Kaesler



LABORATORY FOR VEHICLE TECHNOLOGY
Testing Laboratory for Braking Systems
according to Directive 71/320/EEC in the
version of Directive 98/12/EC

6 **APPROVAL AUTHORITY, if different from the technical service**

Flensburg, 28 NOV. 2000

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7 **TEST DOCUMENTS**

- / Appendix 1: Dimensions brake drum/wheel/tyre
- / Appendix 2: Brake geometry

SAF KOPIE

1) Calculation with $g = 10 \text{ m/s}^2$
2) Inertia dynamometer test

