

Test Report

No. TDB 0548 dated 12.09.2002
for application of Annex VII Directive 71/320/EEC

RWTÜV Fahrzeug GmbH

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Board:
Elmar Legge

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Prof. Dr. Claus Wolff (Vors.)
Friedo Schäfer

1 IDENTIFICATION

1.1 Axle

Manufacturer:

OTTO SAUER

Achsenfabrik Keilberg

D-63854 Bessenbach

SAF

Make:

Type:

SNK 3715-9,5 S

Model:

-

Technically permissible axle load P_e ¹⁾: 9319,5 daN (≈ 9500 kg)

1.2 Brake

Manufacturer:

See 1.1

Make:

SAF

Type:

SNK 367 x 150

Model:

-

Technically permissible camshaft
input torque $C_{max,e}$:

2500 Nm

(for calculation: 2000 Nm at 6,5 bar)

Brake drum - Internal diameter:

367 mm

- Mass:

35 kg

- Material:

Cast iron (grey cast iron)

Brake lining - Manufacturer:

BREMSKERL-Reibbelagwerke

Emmerling & Co.KG

D-31629 Estorf

- Make, - Type:

BREMSKERL;6386

- Identification:

Type indication at front

- Width:

150 mm

- Thickness:

12,2...20,2 mm (sickle-shaped)

- Surface area:

1007 cm²

- Method of attachment:

Rivited

Brake geometry:

See appendix 1 dated 12.09.2002

See appendix 2 dated 12.09.2002

1.3 Wheel (Single)

Rim diameter D_e :

See appendix 1 dated 12.09.2002

Dimensions:

See appendix 1 dated 12.09.2002

1) See sheet 3/3



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Manufacturer : SAF
 Type of axle : SNK 3715-9,5 S

1.4 Tyres

Dynamic rolling radius R_e
 at reference load P_e :

See appendix 1 dated 12.09.2002

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 $\hat{=} 0,01 P_e$)

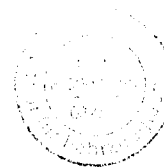
2.1 In the case of vehicles of categories O₂ and O₃

Test type:		0	I	
Annex VII, Appendix 1, point:		3.5.1.2	3.5.2.2/3	3.5.2.4
Test speed	km/h	40	40	40
Brake actuator pressure p_e	bar	5,3	-	5,3
Braking time	min	-	2,55	-
Brake force developed T_e	daN	5157	652	3741
Brake efficiency T_e / P_e	-	0,55	0,07	0,40
Actuator stroke s_e	mm	45	-	65
Camshaft input torque C_e	Nm	1520	-	1520
$C_{0,e}$	Nm	30	-	30

2.2 In the case of vehicles of category O₄

Test type:		0	III	
Annex VII, Appendix 1, point:		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	5,5	-	5,5
Number of brake applications	-	-	20	-
Duration of braking cycle	s	-	60	-
Brake force developed T_e	daN	5166	3093	3884
Brake efficiency T_e / P_e	-	0,55	0,33	0,42
Actuator stroke s_e	mm	51	-	57
Camshaft input torque C_e	Nm	1579	-	1579
$C_{0,e}$	Nm	30	-	30

²⁾ See sheet 3/3



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Manufacturer : SAF
Type of axle : SNK 3715-9,5 S

3 NAME OF TECHNICAL SERVICE CONDUCTING THE TEST

RWTÜV Fahrzeug GmbH
Technischer Dienst für Bremsanlagen
D-45307 Essen

4 DATE OF TEST: 14.05.2002 and 15.05.2002

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, 12.09.2002
B6-20535925-

Dipl.-Ing. Böker



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, 02. Okt. 02

i. A. *Ursula Beise*



7 TEST DOCUMENTS

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

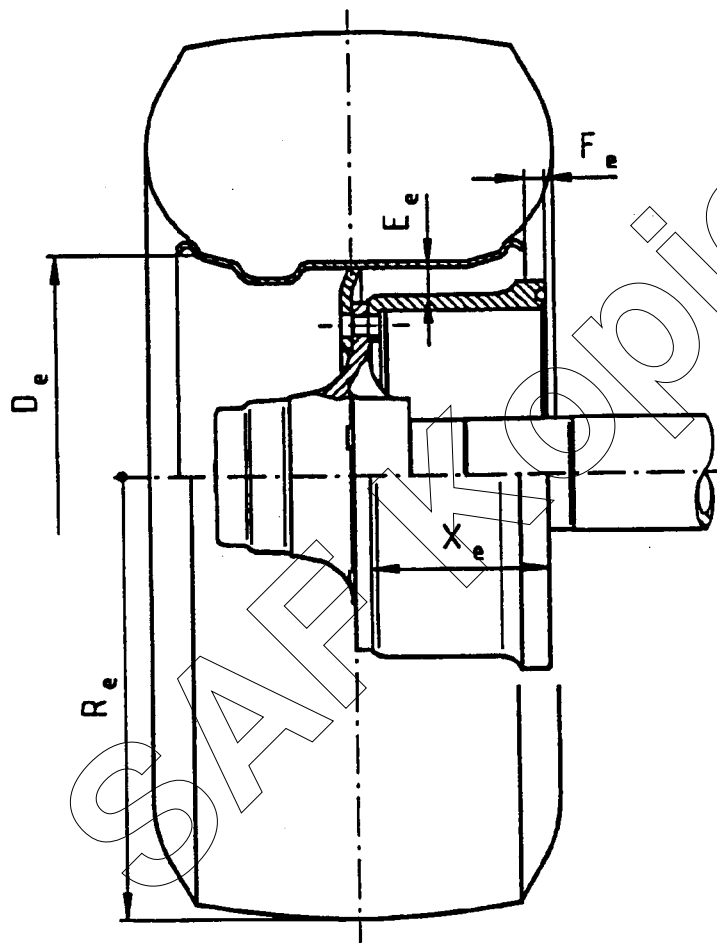
- 1) Calculation with $g = 9,81 \text{ m/s}^2$
- 2) inertia dynamometer test, single wheel (19,5") $R_e = 520 \text{ mm}$

RWTÜV Fahrzeug GmbH - Institute for Vehicle Technology, Adlerstr. 7, D - 45307 Essen
The Testing Laboratory is accredited by the Accreditation Body of the German Federal Motor Transport Authority (KBA) to conduct inspections according to ECE, EG-TypV (EEC), StVZO and FzTV (KBA-P 00009-95).

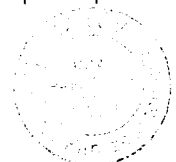
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Manufacturer : SAF
Type of axle : SNK 3715-9,5 S



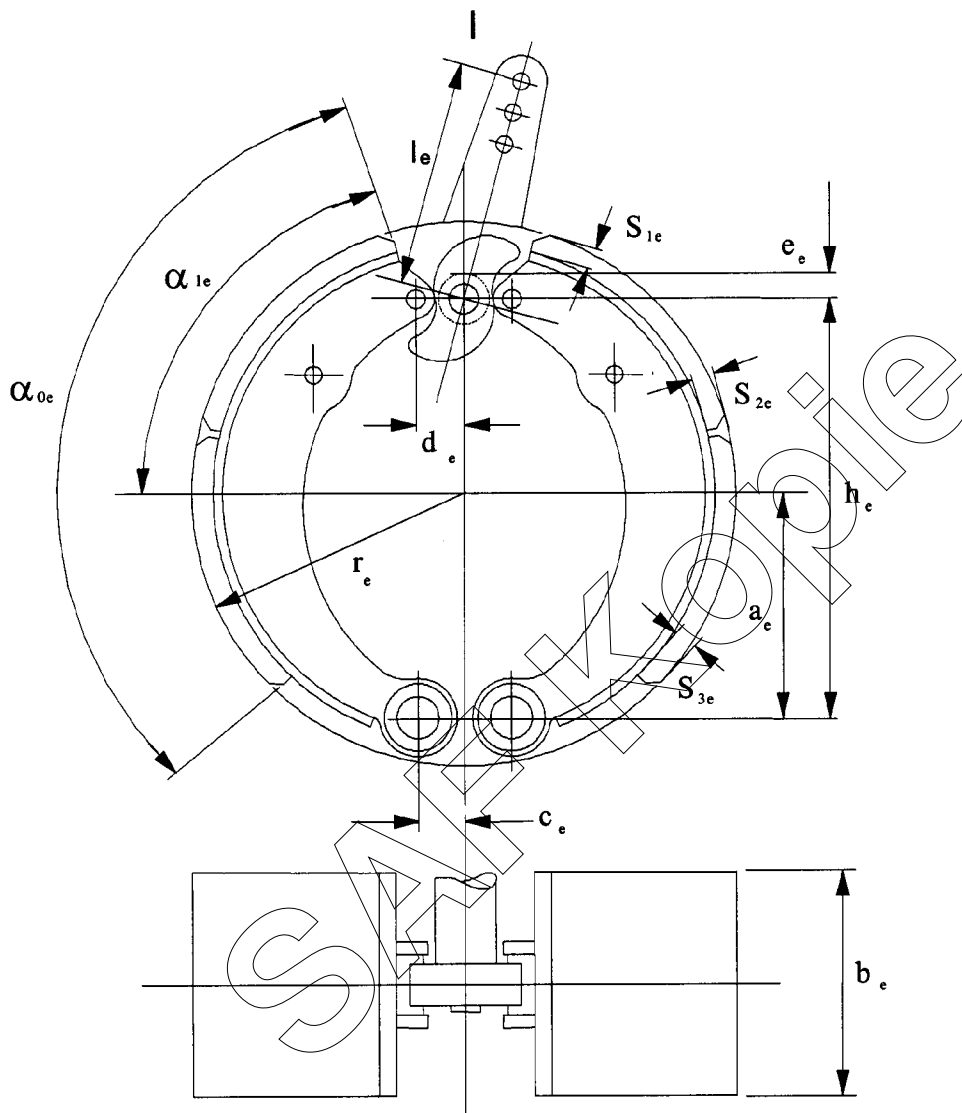
Brake drum		Axle load P_e		Tyre	Rim	B_e	R_e	D_e	E_e	F_e
width X_e	mass	daN	kg							
mm	kg							mm		
195	35	9319,5	9500	425/55 R 19,5	19,5 x 13,00	-	467	495,3	24	29,5
195	35	9319,5	9500	385/65 R 22,5	22,5 x 11,75	-	520	571,5	62	37



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- All dimensions - except α_{0e} , α_{1e} et F_e - in mm
- b_e = brake lining width
- F_e = braking surface per brake in cm^2
- l_e see test report, no. 1.5

Brake	a_e	h_e	c_e	d_e	e_e	α_{0e}	α_{1e}	b_e	r_e	F_e	s_{1e}	s_{2e}	s_{3e}
SNK 367x150	145	273	31,75	36	13,2	104°30'	57°	150	183,5	1007	17,2	20,2	12,2

