

Test Report

No. TDB 0764 dated 13.06.2002

for application of Annex VII Directive 71/320/EEC

RWTÜV Fahrzeug GmbH

A RWTÜV Group Company

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Chairman of the Supervisory
Board:
Elmar Legge

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

1 IDENTIFICATION

1.1 Axle

Manufacturer:

OTTO SAUER
Achsenfabrik Keilberg
D-63854 Bessenbach

Make:

SAF

Type:

SBK 2243-13S

Model:

-

Technically permissible axle load $P_e^{1)}$:

12753 daN ($\hat{=}$ 13000 kg)

1.2 Brake

Manufacturer:

See 1.1

Make:

SAF

Caliper:

- Manufacturer:

KNORR-BREMSE

- Type:

SB 7 ...

- Variant:

SN 7 ...

Note: The unspecified characters "..." in the KNORR-BREMSE part numbers specified above have no bearing on the function and effect with regard to the tests performed. (The unspecified characters "..." denote modifications and options like fitment or non fitment of wear sensors, kind of connection of the brake cylinder, mounting dimensioning of the brake for the vehicle axle, right / left version etc.)

The variant "SN7..." is added by KNORR-BREMSE to the original "SB7..." type designation and represents a version which has identical brake characteristics compared to the original one.

Brake lever: - Method of construction: Floating caliper brake (pneumatic)

- Ratio l_e / e_e :

88 mm / 5,75 mm

Technically permissible camshaft

input torque $C_{max,c}$:

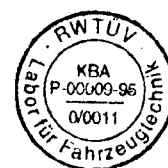
1550 Nm

(for calculation: 1260 Nm at 6,5 bar)

Automatic brake adjustment device:

Integrated

¹⁾ See sheet 4/4



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Type of axle : SBK 2243-13S

Brake disc: - Outside diameter: 430 mm
- Effective radius r_e : 173
- Thickness: 45 mm
- Mass: 33 kg
- Material: Cast iron (grey cast iron)
- Method of construction: Internally ventilated brake disc

Brake pad: - Make , -Type: JURID, JURID 539
- Identification: Type indication on brake-pad plate
- Width: 247,6 mm
- Thickness: 30 mm (incl. 9mm back plate)
- Surface area: 2 x 192 cm²
- Method of attachment: Friction material pressed on back plate

Schematic representation: See appendix 2 dated 11.06.2002

1.3 Wheel (Single)
Rim diameter D_e :
Dimensions:

571,5 mm (22,5")
See appendix 1 dated 11.06.2002

1.4 Tyres
Dynamic rolling radius R_e
at reference load P_e :

See appendix 1 dated 11.06.2002

1.5 Actuation
Brake actuator - Manufacturer:
- Type:
- Model:

KNORR-BREMSE
Diaphragm brake
actuator
30" (BS 3603)



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 : SBK 2243-13S

2 RECORD OF TEST RESULTS ²⁾

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

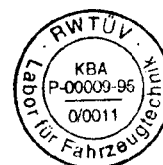
2.1 In the case of vehicles of categories O₂ and O₃

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	4,8	-	4,8
Braking time	min	-	2,55	-
Brake force developed T _e	daN	6969	899	6433
Brake efficiency T _e / P _e	-	0,55	0,07	0,50
Actuator stroke s _e	mm	44	-	38
Camshaft input torque C _e	Nm	766	-	766
C _{0,e}	Nm	9	-	9

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	5,4	-	5,4
Number of brake applications	-	-	20	-
Duration of braking cycle	s	-	60	-
Brake force developed T _e	daN	7489	3892	5749
Brake efficiency T _e / P _e	-	0,59	0,31	0,45
Actuator stroke s _e	mm	45	-	43
Camshaft input torque C _e	Nm	864	-	864
C _{0,e}	Nm	9	-	9

²⁾ See sheet 4/4



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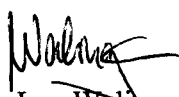
3 NAME OF TECHNICAL SERVICE CONDUCTING THE TEST

RWTÜV Fahrzeug GmbH
Technischer Dienst für Bremsanlagen
D-45307 Essen

4 DATE OF TEST: 07.03.2001

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, 13.06.2002
Wli -205 16 655-


Dipl.-Ing. Walinger



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, 27. Juni 02
i. A. Ingrid Beese



7 TEST DOCUMENTS

/ Appendix 1: Dimensions brake drum / wheel / tyre (2 sheet)
/ Appendix 2: Schematic representation of brake (1 sheet)

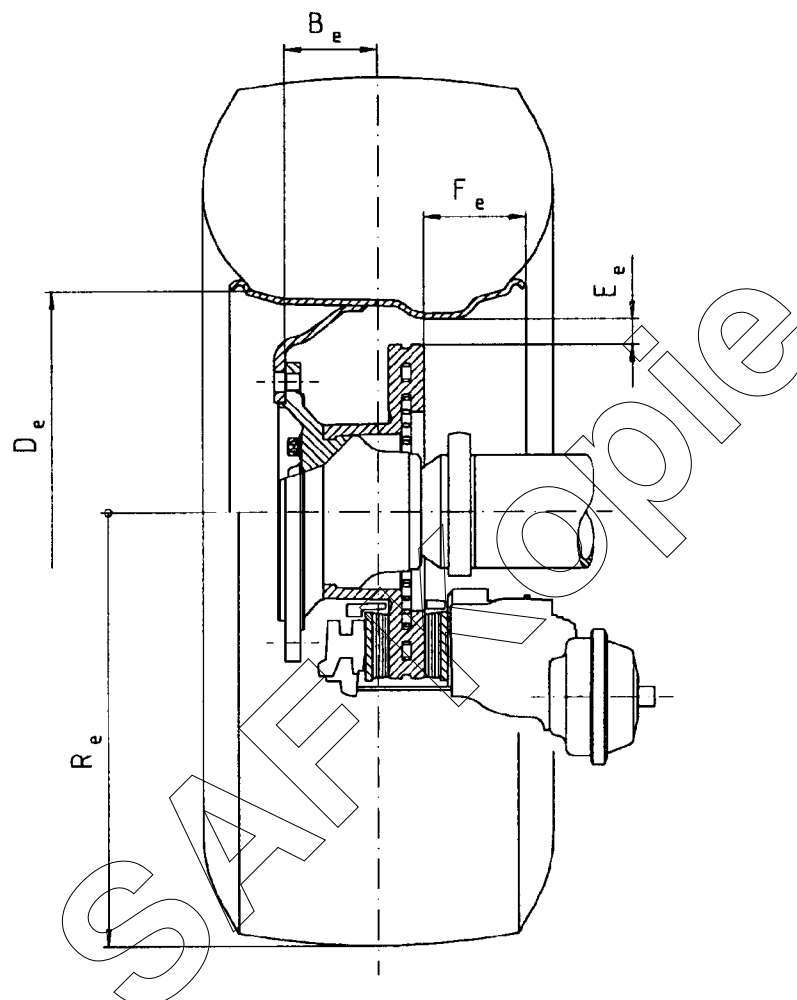
¹⁾ Calculation with $g = 9,81 \text{ m/s}^2$

²⁾ Inertia dynamometer test, brake type SB 7777, single, $R_e = 542 \text{ mm}$, $B_e = 120 \text{ mm}$

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Manufacturer : SAF
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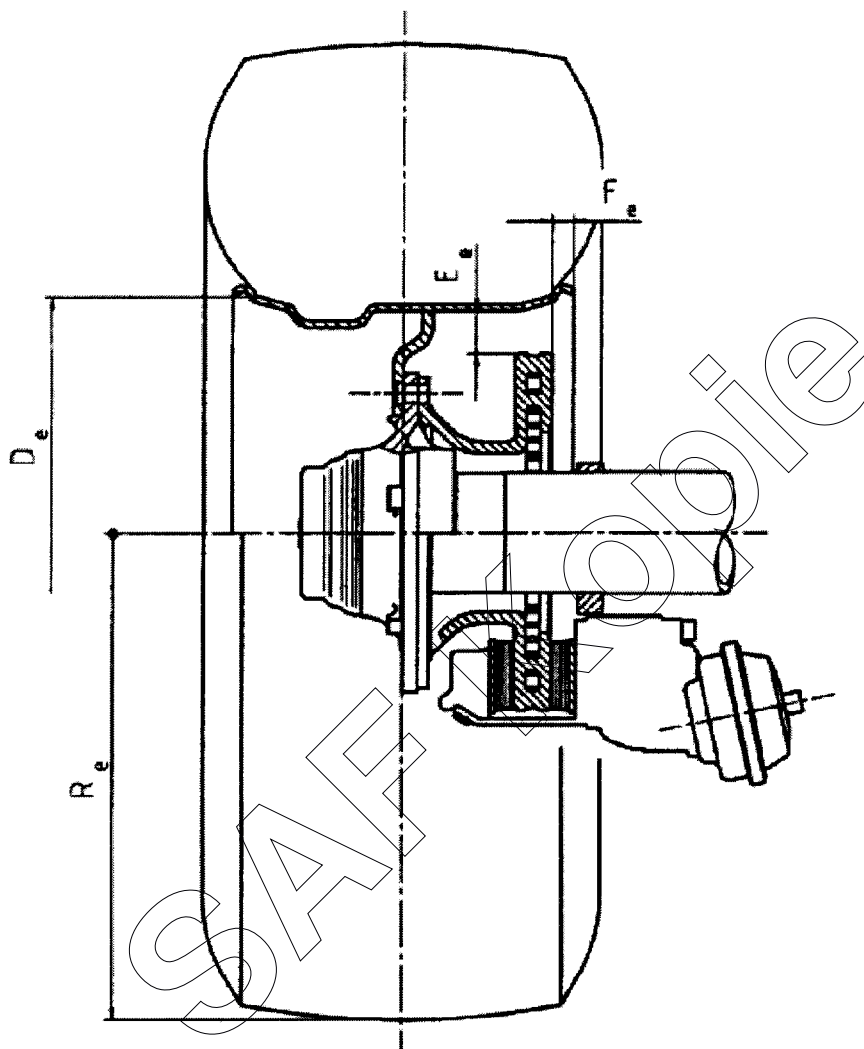
Brake disc		Axle capacity		Tyre	Rim	B _e	R _e	D _e (mm)	E _e	F _e
width X _e (mm)	mass (kg)	P _e (daN)	(kg)							
-	33	12753	13000	425/65 R22,5	22,5 x 13,00	120	542	571,5	33	-131



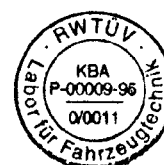
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Manufacturer : SAF
Type of axle : SBK 2243-13S



Brake disc		Axle capacity		Tyre	Rim	B _e	R _e	D _e (mm)	E _e	F _e
width X _e (mm)	mass (kg)	P _e (daN)	(kg)							
-	33	12753	13000	425/65 R22,5	22,5 x 13,00	-	542	571,5	52	-26



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Manufacturer : SAF
Type of axle : SBK 2243-13S

