

Test Report

No. TDB 0624 dated 30.11.98

for application of Annex VII Directive 71/320/EEC

1 IDENTIFICATION

1.1 Axle

Manufacturer: BPW Bergische Achsen
Kommanditgesellschaft
D-51674 Wiehl

Make: BPW
Type: GS 100
Model: -
Technically permissible axle load P_e ¹⁾: 11000 daN

1.2 Brake

Manufacturer: See 1.1
Make: BPW
Type: FL 4118
Model: -
Technically permissible camshaft
input torque $C_{max,e}$: 3700 Nm
(for calculation: 2800 Nm at 6,5 bar)

Brake drum - Internal diameter: 410 mm
- Mass: 47,5 kg
- Material: Cast iron (grey cast iron)

Brake lining - Manufacturer: BBA Friction GmbH
D-51375 Leverkusen
- Make: Textar
- Type: T 090
- Identification: Type indication at front
- Width: 180 mm
- Thickness: 8,5...12 mm (sickle-shaped)
- Surface area: 1331 cm²
- Method of attachment: Rivited

Brake geometry: See appendix 1 dated 30.10.98
See appendix 2 dated 24.07.98

1.3 Wheel (Single)

Rim diameter D_e : See appendix 1 dated 30.10.98
Dimensions: See appendix 1 dated 30.10.98

¹⁾ See sheet 3/3



Test Report No. : TDB 0624
 Sheet : 2 / 3
 Date : 30.11.98

Manufacturer : BPW
 Type of axle : GS 100

1.4 Tyres

Dynamic rolling radius R_e
 at reference load P_e : 640...800 mm

1.5 Actuation

Brake actuator -Manufacturer: GRAU
 - Type: Diaphragm brake actuator
 - Model: 30 (120 361 101)
 Lever length l_e : 180 mm

2 RECORD OF TEST RESULTS ²⁾

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

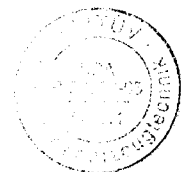
2.1 In the case of vehicles of categories O₂ and O₃

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	6,5	-	6,5
Braking time	min	-	2,55	-
Brake force developed T_e	daN	6611	919	4921
Brake efficiency T_e/P_e	-	0,60	0,08	0,45
Actuator stroke s_e	mm	43	-	57
Camshaft input torque C_e	Nm	2223	-	2223
	$C_{o,e}$ 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	6,5	-	6,5
Number of brake applications	-	-	20	-
Duration of braking cycle	s	-	60	-
Brake force developed T_e	daN	6723	4019	4446
Brake efficiency T_e/P_e	-	0,61	0,37	0,40
Actuator stroke s_e	mm	45	-	59
Camshaft input torque C_e	Nm	2223	-	2223
	$C_{o,e}$ Nm	30	-	30

²⁾ See sheet 3/3



Test Report No. : TDB 0624
Sheet : 3 / 3
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Manufacturer : BPW
Type of axle : GS 100

3 NAME OF TECHNICAL SERVICE CONDUCTING THE TEST

RWTÜV Fahrzeug GmbH
Technischer Dienst für Bremsanlagen
D-45307 Essen

4 DATE OF TEST: 18.11.98**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, 30.11.98

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, 27. JAN. 1999

i. A. *Peter-Heinz Lenz*

**7 TEST DOCUMENTS**

- / Appendix 1: Dimensions brake drum/wheel/tyre (5 sheet)
- / Appendix 2: Brake geometry

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

2) Inertia dynamometer test; $R_e = 653 \text{ mm}$