



# Heavy Vehicle Specialist Certificate

Heavy Vehicle Specialist Inspector and Inspecting Organisation

Heavy Vehicle Specialist Inspector's Name (PRINT IN CAPS)

Ronald Stuart PRATT

ID

TRSP

Vehicle Registration\*

VIN / Chassis Number

7A9D2001690023852

Component being certified:

- Chassis Modification
- Load Anchorage
- Log Bolsters
- Towing Connection
- Brakes
- SRT

Certification Category

HVEK

Description of Work

Certify to brake Rule 32015

Code/Standard Certified to

NZ HUB Rule Schedule 5

Component Load Rating(s)

General Drawing Number(s)

NA

Supporting Documents

Brake Cert No R P091004

\*Special Conditions

EPS Control - Warning light must illuminate when ignition turned on and extinguish immediately or when vehicle reaches 7Kph

Certification Expiry Date (if applicable)

NA

or

Hubodometer Reading (whichever comes first)

## Declaration

I the undersigned, declare that I am the Heavy Vehicle Specialist Inspector identified above and I hold a current valid appointment. I certify that the above mentioned vehicle component's design, manufacture and installation, and this certification complies in all respects with the Land Transport Rule Vehicle Standards Compliance 2002 and my Deed of Appointment. To the best of my knowledge the information contained in this Certificate is true and correct.

Designer's ID (if certified by a manufacturer)

Inspector's / Delegate's Signature

Rod Pratt

\*Delegate's Name (PRINT IN CAPS)

Date

08/10/2009

Number

333606

COF Vehicle Inspector ID:

COF Vehicle Inspector Signature:

Date

All fields excluding those marked with \* must be completed before this certificate can be accepted.



**HEAVY VEHICLE BRAKE RULE  
WORKSHEET**  
(PROCEDURE DOCUMENTATION SHEET - PDS)  
**&**  
**CONFIRMATION OF COMPLIANCE**

CERTIFICATE No.

CUSTOMER NAME   
CUSTOMER ORDER No.  DATE RECEIVED   
VEHICLE TYPE   
REG No.  CHASSIS No.

**BRIEF SPECIFICATION AS CERTIFIED TO SCHEDULE 5**

**BRAKE VALVES:**

Primary Relay  
Make: Wabco Type: 480/102/014/0

Secondary Relay  
Make: Wabco Type: 480/207/001/0

Spring Brake Relay  
Make: Sealco Type: 110903

Park Brake Valve  
Make: Sealco Type: 17600B

Locked Ratio  
Make: \_\_\_\_\_ Type: \_\_\_\_\_ Setting: \_\_\_\_\_

Load Sense Valve  
Front: Make: Wabco Type: EBS Control

Settings: Laden: \_\_\_\_\_ Unladen: \_\_\_\_\_

Load Sense Valve  
Rear: Make: Wabco Type: EBS Control

Setting: Laden: \_\_\_\_\_ Unladen: \_\_\_\_\_

**Other Valves**

Make: \_\_\_\_\_ Type: \_\_\_\_\_ Setting: \_\_\_\_\_

Make: Wabco Type: line Filters Setting: - X 2

Make: \_\_\_\_\_ Type: \_\_\_\_\_ Setting: \_\_\_\_\_

Make: \_\_\_\_\_ Type: \_\_\_\_\_ Setting: -

Comments:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**BRAKE CHAMBERS:**

Front: Make Meritor Type: 14 STROKE: 64 mm

Rear: Make Meritor Type: 14/16 STROKE: 64 mm

**SLACK ADJUSTER:**

Front Length (mm) Disc \_\_\_\_\_ Rear Length (mm) Disc \_\_\_\_\_

**BRAKE CALIPERS:** Type Wabco Pan19

**FRICITION MATERIAL:**

	<u>OEM</u>	Aftermarket
(Front) Lining Brand	<u>Jurid 539</u>	Grade <u>FF</u>
(Rear) Lining Brand	<u>Jurid 539</u>	Grade <u>FF</u>

**OTHER:**

TYRES 265/70R19.5

NOTES:

PACKING SLIP NO.

PROCESS TIME:

EBS Control Warning light must illuminate when ignition switched on, and extinguish immediately OR when vehicle reaches 7kph. System must be powered up at all times.

**Confirmation of compliance**

I confirm that the vehicle identified on page 1 and 2 of this Confirmation of Compliance complies with all relevant requirements of the current New Zealand Heavy Vehicle Brake Rule 32015, Schedule 5.

Date: 08/10/2009 Signed: *R. Pratt*

**Certifier's identification**

Name & ID: RON PRATT (TRSP)

Phone (bus): 09 9807300 Fax (bus): 09 9807306

Postal address: TRANSPORT SPECIALTIES LTD  
PO BOX 98-971,  
MANUKAU CITY,  
MANUKAU 2241

Position: TRSP (HVEK)

**Confirmation of continued compliance of modification**

I confirm the brake system of the vehicle identified on page 1 of this Statement of Compliance as modified by myself, continues to comply with all the relevant requirements of the current New Zealand Heavy Vehicle Brake Rule 32015, Schedule 5.

Date: \_\_\_\_\_ Signed: \_\_\_\_\_

Certifier's identification: \_\_\_\_\_

Name: \_\_\_\_\_

Phone (bus): \_\_\_\_\_ Fax (bus): \_\_\_\_\_

Postal address: \_\_\_\_\_  
\_\_\_\_\_

Position: \_\_\_\_\_

Comments:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## NOTICE TO VEHICLE OPERATOR

*THIS VEHICLE HAS A BRAKE SYSTEM WHICH HAS BEEN DESIGNED AND FITTED IN ACCORDANCE WITH THE NEW ZEALAND HEAVY VEHICLE BRAKE RULE.*

*IF THIS VEHICLE IS OPERATED IN CONJUNCTION WITH NON-CODED VEHICLES, THERE MAY BE OPERATIONAL FACTORS WHICH NEED TO BE TAKEN INTO CONSIDERATION.*

*PLEASE REFER TO THE CERTIFIER FOR FURTHER INFORMATION.*

### EXCERPT FROM NZ HEAVY VEHICLE BRAKE RULE

#### 3.2 CONTINUED COMPLIANCE

Continued compliance of a vehicle with the rule is the responsibility of the vehicle operator.

##### 3.2.1 Maintaining the brake system:

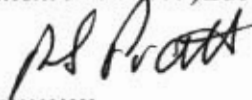
- a) The maintenance of a certified vehicle's brakes and brake system must follow good trade practice so that the vehicle's continued compliance with the rule is not compromised. Full and detailed records must be kept of the work undertaken and of the parts supplied and installed. A copy of this information must be made available to the vehicle operator.
- b) Only components which do not alter the performance and quality as originally specified by the certifier can be used when maintaining a certified brake system. Replacement brake linings must be supplied with a compliance certificate in accordance with the details on the Statement of Compliance and fitted in axle sets

##### 3.2.2 Modifications to the vehicle or the brake system:

- a) For every significant modification of the vehicle or of its braking system, the brake systems must be re-certified to ensure continued compliance with this rule, a new Statement of Compliance must be issued.

*IF YOU ARE UNSURE ABOUT YOUR RESPONSIBILITIES, PLEASE CONTACT THE VEHICLE MANUFACTURER, OR MYSELF.*

*COMPLAINTS. Complaints and Warranty issues which relate to Brake Certification will be acknowledged within 7 working days and a resolution proposed within 25 working days. Resolution of complaints and Warranty issues is subject to Transpecs Warranty policy. Customers have the right to appeal to the Land Transport Safety Authority if dissatisfied with a Compliance issue. (refer LTSA Deed Of Appointment Para 47.4) LTNZ Helpdesk 0800 699 000*



.....  
(R.S.PRATT (TRSP) (HVEK))

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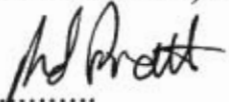
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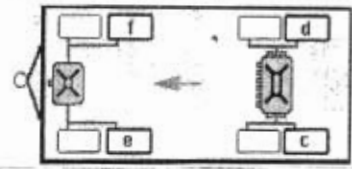
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**(R.S.PRATT (TRSP) (HVEK)**

System	Trailer EBS	WABCO part number	480 102 014 0
Production date	2008-W17	Serial number	2660324522
Fingerprint EOL areas 1;2;3	342681, 195; 342681, 195; 342681, 195		

HERSTELLER MANUFACTURER CONSTRUCTEUR	Domett;		ELEKTR. SCHALTER 1 ELECTR. SWITCH 1 COMMUTATEUR ELECTR 1	---
TYP TYPE TYPE	4A Full Tr		ISS GESCHW ISS SPEED COMMUTATEUR VITESSE	0
FAHRZEUG IDENTNR CHASSIS NUMBER NUMERO DE CHASSIS	7A9D2001690023852		ISS PIN INVERTERT ISS_PIN INVERT COMMUTATEUR INVERSE	---
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO	TP53;		10 s PULSE 10 s PULSE IMPULSION 10s	---
ABS-System ABS-System ABS-System	4S/3M		ELEKTR. SCHALTER 2 ELECTR. SWITCH 2 COMMUTATEUR ELECTR 2	---
POLRADZÄHNEZAHL c,d POLE WHEEL TEETH c,d DENTS ROUE DENTÉE c,d	90	POS. LIFTACHSEN POS. LIFTAXLE PRÉP. ESS. RELEV.	WARNLAMPE WARNING LAMP VOYANT DE SECURITE	2s
POLRADZÄHNEZAHL e,f POLE WHEEL TEETH e,f DENTS ROUE DENTÉE e,f	90	WG 1 WG 1	LIFTACHSE HEBEN V LIFTING AXLE SPEED V VITESSE ESS. RELEVABLE	0
EXT BREMSDRUCKSENS. EXT BRAKE PRESS. SENS. EXT CAPT PRES. DE FREIN.	---	RSS RSS RSS	LIFTACHSE SENKEN % LOWER LIFTING AXLE % BAISSER ESSIEU RELÉV. %	0

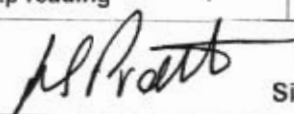


BREMSENPRUFNUMMER BRAKE TEST NUMBER NUMERO D'ESSAI DE FREIN	
GGVS/ADR	TPN 1203/04
ANFAHRHILFE GESCHW. TRACTION HELP V VITESSE AIDE DEMARRAGE	0
ANFAHRHILFE DRUCK TRACTION HELP PRESS. PRES. AIDE DEMARRAGE	0.0

	STEUERDRUCK PM (BAR) CONTROL PRESSURE (BAR) PRESSION DE SERVICE PM (BAR)			6.5	STEUERDRUCK PM (BAR) CONTROL PRESSURE (BAR) PRESSION DE SERVICE PM (BAR)			0.7	2.0	6.5
ACHSE AXLE ESSIEU	ACHSLAST LEER AXLE LOAD UNLADEN CHARGE ESSIEU A VIDE (KG)	BALGDRUCK LEER SUSP. PRESS. UNLADEN PRESS. SUSP. A VIDE (BAR)	BREMSDRUCK LEER BRAKE PRESS. UNLADEN PRESS. DE FREIN. A VIDE (BAR)	ACHSLAST BELADEN AXLE LOAD LADEN CHARGE ESSIEU EN CHARGE (KG)	BALGDRUCK BELADEN SUSP. PRESS. LADEN PRESS. SUSP. EN CHARGE (BAR)	BREMSDRUCK BELADEN BRAKE PRESS. LADEN PRESS. DE FREIN. A CHARGE (BAR)				
1	1600	0.6	2.2	7000	4.2	0.3	1.4	6.4		
2	1600	0.6	2.2	7000	4.2	0.3	1.4	6.4		
3	1500	0.5	1.7	7000	4.2	0.3	1.4	4.9		
4	1500	0.5	1.7	7000	4.2	0.3	1.4	4.9		
5	---	---	---	---	---	---	---	---		

Test report number						
Axle		1	2	3	4	5
Actuator type	Service brake					
	Spring brake					
Max. actuator stroke (mm)						
Lever length (mm)						

Diagnostic memory	OK	Warning lamp control	OK
Parameter setting	carried out	Stop light power supply	Not tested
EBS pressure test	OK	Lifting axle test	Not tested
Redundancy test	OK		
ABS sensor assignment	OK		

Manufacturer	Domett;	Vehicle ident. no	7A9D2001690023852
Vehicle type	4A Full Tr	Odometer reading	0.0 km
next Service	30000 km	Trip reading	0 km
Tested by	Ron Pratt	 Signature	
Date	2009-10-08 8:37:18 AM		







P.O.Box 98-971

South Auckland Mail Centre

Ronald Stuart Pratt (TRSP)

DATE	8-Oct-09	TYPE APPROVED	NO
CERTIFICATE No	RP091004		SAF4FTEBS
VIN No	7A9D2001690023852		
BRAKE CHAMBERS FRONT	14 TSE 62mm		
BRAKE CHAMBERS REAR	14/16TSE 64mm	LOAD SENSED	Yes EBS Control
SLACK LENGTH FRONT	Disc	TYRE SIZE FRONT	265/70R19.5
SLACK LENGTH REAR	Disc	TYRE SIZE REAR	265/70R19.5
THIS VEHICLE COMPLIES W		.N.Z.H.V.B.R	
32015 SCHEDULE 5		LINING MATERIALFRONT	
		LINING MATERIAL REAR	
		Jurid539 FF	
		Jurid539 FF	

trailer (full, semi-, centre-axle) with air brake system acc. to 71/320/EEC, last amended by 98/12/EC and 2006/96/EC or UN/ECE-R.13.10

distribution: Domett  
0023852-3309  
00053RP

please note!

This brake calculation is made under consideration of  
-the legal prescriptions mentioned above in the version valid at the time of making the program (V6.09.06.06),  
-the functional characteristics of our products, but not of those of other manufacturers, and  
-the other vehicle data included in the brake calculation.  
Please check whether these data correspond to the actual vehicle data  
Our conditions of delivery apply (particularly section 9.0)  
WABCOBrake V6.09.06.08 db.08.06.2009

vehicle manufacturer: Domett  
trailer model : 4A Full Trailer  
trailer type : 4-axle-full-trailer  
remarks : air / hydraulic / VA suspension  
WABCO T-EBS: D or D PLUS (PREV)  
TRISTOP 3+4: T.14/24  
265/70 R 19,5

axle 1 + 2 + 3 + 4 : SAF, PAN 19-1, TDB 0749 ECE,

		unladen	laden
total mass	P in kg	6200	28000
axle 1	P1 in kg	1600	7000
axle 2	P2 in kg	1600	7000
axle 3	P3 in kg	1500	7000
axle 4	P4 in kg	1500	7000
wheel base	E in mm	6120 - 6120	
centre of gravity height	h in mm	1090	2078

	axle 1	axle 2	axle 3	axle 4
no. of combined axles	1	1	1	1
no. of brake chambers per axle line KDZ	2	2	2	2
The power output corresponds to	BZ 122.1	BZ 122.1	BZ 119.6	BZ 119.6
brake chamber manufacturer	Meritor	Meritor	Meritor	Meritor
chamber size	14.	14.	T.14/24	T.14/24
lever length lBh in mm	69	69	69	69
brake factor [-]	23.03	23.03	23.03	23.03
dyn. rolling radius rdyn min in mm	421	421	421	421
dyn. rolling radius rdyn max in mm	421	421	421	421
threshold torque Co Nm	6.0	6.0	6.0	6.0

calculation:

chamber pressure (rdyn min) p <sub>H</sub> at z=22,5%bar	2.4	2.4	2.1	2.1
chamber pressure (rdyn max) p <sub>H</sub> at z=22,5%bar	2.4	2.4	2.1	2.1
chamber press. (servo) p <sub>cha</sub> at p <sub>m</sub> 6,5bar bar	6.4	6.4	4.9	4.9
piston force Th <sub>A</sub> at p <sub>m</sub> 6,5bar N	6189	6189	4686	4686
brake force (rdyn min) T lad. at p <sub>m</sub> 6,5bar N	46804	46804	35445	35445
brake force (rdyn max) T lad. at p <sub>m</sub> 6,5bar N	46804	46804	35445	35445
brake force within 1 % rolling friction proportion %	25.0	25.0	25.0	25.0

braking rate z laden 0.599 for rdyn min  
z = sum (TR)/PRmax 0+599 for rdyn max

Trailer may only be operated in combination with trucks/tractors with ISO 7638 supply (5 or 7 polar).

brake diagram :

maximum pressure: 6.5 bar

axle 1:

valve 1: 480 207 0.. 0                   WABCO  
EBS relay valve

axle 2:

valve 1: 480 207 0.. 0                   WABCO  
EBS relay valve

axle 3:

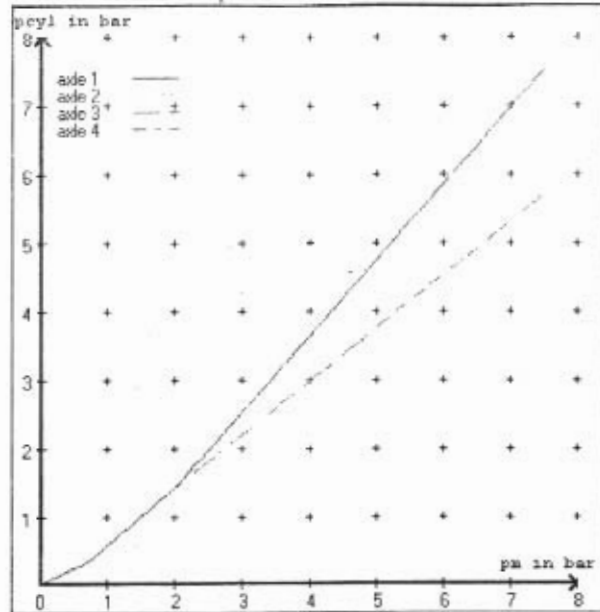
valve 1: 480 102 0.. 0                   WABCO  
EBS trailer modulator

axle 4:

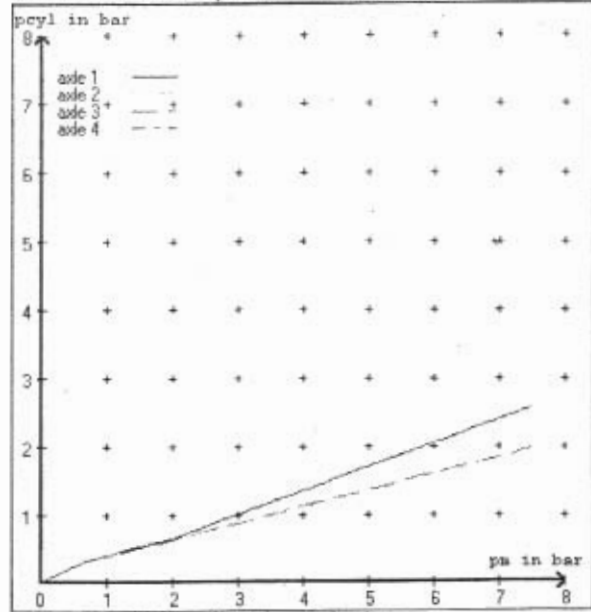
valve 1: 480 102 0.. 0                   WABCO  
EBS trailer modulator

test type III	(zIII = 0.30)	for rdyn min :	axle1	axle2	axle3	axle4	
at pm	3.6 bar =>	pcha in bar :	3.2	3.2	2.7	2.7	
test type III	(zIII = 0.06)	for rdyn min :	axle1	axle2	axle3	axle4	
at pm	1.2 bar =>	pcha in bar :	0.8	0.8	0.8	0.8	

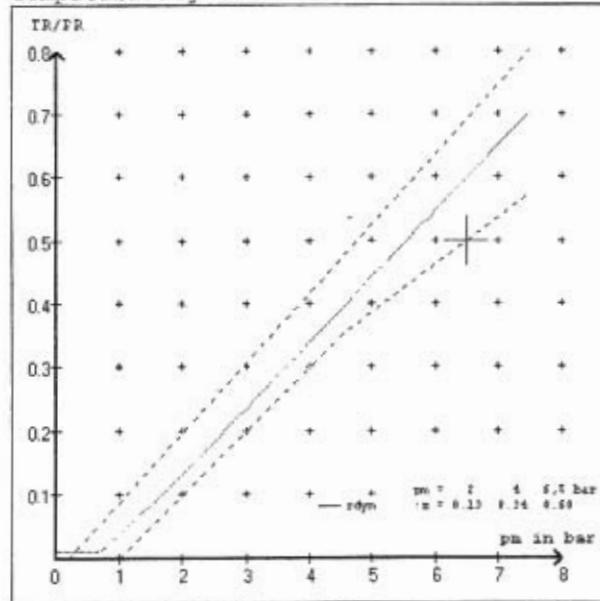
brake chamber pressure laden



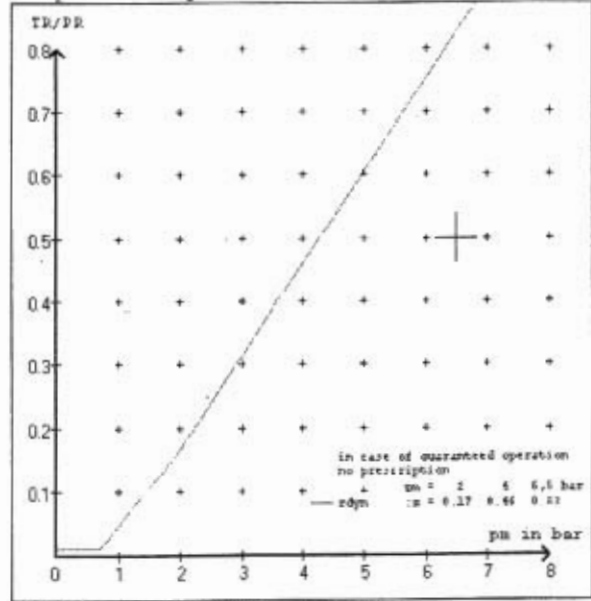
brake chamber pressure unladen



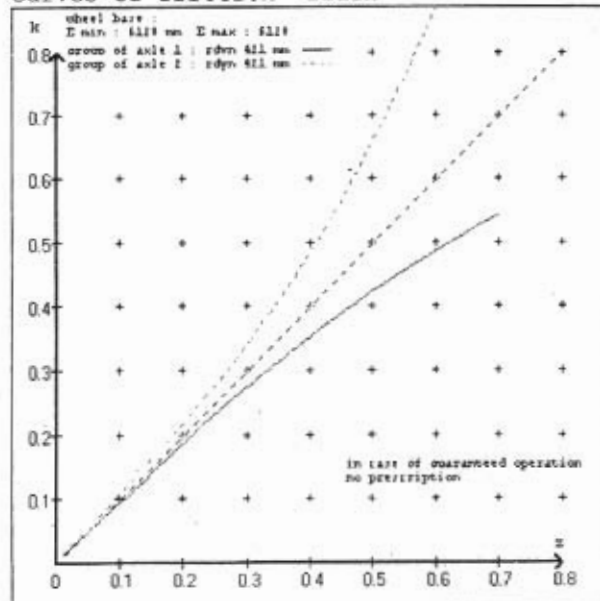
compatibility band laden



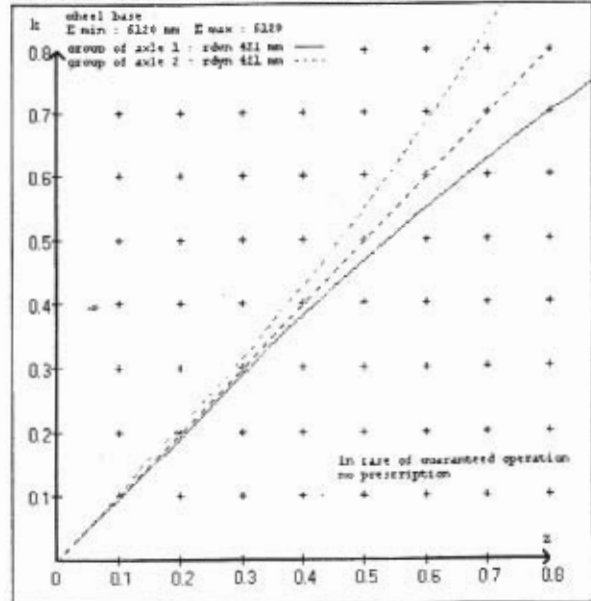
compatibility band unladen



curves of friction laden



curves of friction unladen



vehicle manufacturer: Domett  
 trailer model : 4A Full Trailer  
 trailer type : 4-axle-full-trailer

brake chamber and lever length :

axle 1 : 2 x type/diameter 14. (Meritor) lever length 69 mm  
 axle 2 : 2 x type/diameter 14. (Meritor) lever length 69 mm  
 axle 3 : 2 x type/diameter T.14/24 (Meritor) lever length 69 mm  
 axle 4 : 2 x type/diameter T.14/24 (Meritor) lever length 69 mm

brake diagram :

valve :  
 480 207 0.. 0 WABCO EBS relay valve  
 480 102 0.. 0 WABCO EBS trailer modulator

EBS input data

vehicle manufacturer: Domett  
 trailer model : 4A Full Trailer  
 trailer type : 4-axle-full-trailer  
 brake calculation no. : TP 53A

tire circumference main axle : 2650 for rdyn max  
 tire circumference auxiliary axle : 2650 for rdyn max

assignment pm / deceleration z: pm 0.7 bar z = 0.000  
 (laden condition) 2.0 bar z = 0.134  
 6.5 bar z = 0.600

axle	control pressure pm 6,5			control pressure pm 0.7 2.0 6.5		
	axle load unladen	bellow pr. unladen	brake pr. unladen	axle load laden	bellow pr. laden	brake pr. laden
1	1600	to be	2.2	7000	to be	0.3 1.4 6.4
2	1600	entered by	2.2	7000	entered by	0.3 1.4 6.4
3	1500	the vehicle	1.7	7000	the vehicle	0.3 1.4 4.9
4	1500	manufact.	1.7	7000	manufact.	0.3 1.4 4.9
5	0		0,0	0		0,0 0,0 0,0

The unladen values indicated in the above table are values for the basic parameter set. Higher unladen axle loads and liftaxles are automatically recognized and do not require separate adjustment. The above unladen axle loads must not be fallen below.

axle 1	axle 2	axle 3	axle 4
axle load pcy1	axle load pcy1	axle load pcy1	axle load pcy1
1600	2.2	1600	2.2
2100	2.2	2100	2.2
2600	2.6	2600	2.6
3100	3.1	3100	3.1
3600	3.5	3600	3.5
4100	3.9	4100	3.9
4600	4.4	4600	4.4
5100	4.8	5100	4.8
7000	6.4	7000	6.4

data sheet to EC/ECE vehicle type-approval certificate concerning braking equipment: according to 98/12/EC annex IX 2.7.4 / ECE R13 annex 11

axle 1	: reference axle: SAF	SEW 1937-...	brake lining: Jurid 539
	test report :	TDB 0749 ECE	date : 13.10.2008
axle 2	: reference axle: SAF	SEW 1937-...	brake lining: Jurid 539
	test report :	TDB 0749 ECE	date : 13.10.2008
axle 3	: reference axle: SAF	SBW 1937-...	brake lining: Jurid 539
	test report :	TDB 0749 ECE	date : 13.10.2008
axle 4	: reference axle: SAF	SBW 1937-...	brake lining: Jurid 539
	test report :	TDB 0749 ECE	date : 13.10.2008

calc. verif. of residual (hot) braking force type III  
(item 4.2 of appendix I to annex VII)

axle 1	(rdyn 421 mm)	T = 22.6 % Pe
axle 2	(rdyn 421 mm)	T = 22.6 % Pe
axle 3	(rdyn 421 mm)	T = 18.5 % Pe
axle 4	(rdyn 421 mm)	T = 18.5 % Pe

calculated actuator stroke in mm  
(item 4.3.1.1 of appendix I to annex VII)

axle 1	(sp = 57 mm)	s = 39 mm
axle 2	(sp = 57 mm)	s = 39 mm
axle 3	(sp = 56 mm)	s = 39 mm
axle 4	(sp = 56 mm)	s = 39 mm

average thrust output in N at pm = 6,5 bar (however max. pcha = 7,0 bar)

axle1	ThA = 6189 N
axle2	ThA = 6189 N
axle3	ThA = 4686 N
axle4	ThA = 4686 N

calc. residual (hot) braking force in N  
(item 4.3.1.4 of appendix I to annex VII)

axle 1	(rdyn 421 mm)	T = 36845 N
axle 2	(rdyn 421 mm)	T = 36845 N
axle 3	(rdyn 421 mm)	T = 27942 N
axle 4	(rdyn 421 mm)	T = 27942 N

	basic test	type III
	of subject	(calculated)
braking rate of the vehicle	trailer (z)	residual
(item 4.3.2 to appendix I to annex VII)	0.60	(hot)braking
		0.47

required braking rate  $\geq 0,4$  and  $\geq 0,6 \cdot z$  (0.36)

calc. residual (hot) braking force in N  
(item 4.3.1.4 of appendix I to annex VII)

axle 1	(rdyn 421 mm)	T = 36845 N
axle 2	(rdyn 421 mm)	T = 36845 N
axle 3	(rdyn 421 mm)	T = 27942 N
axle 4	(rdyn 421 mm)	T = 27942 N

	basic test	type III
	of subject	(calculated)
braking rate of the vehicle	trailer (z)	residual
(item 4.3.2 to appendix I to annex VII)	0.60	(hot)braking
		0.47

required braking rate  $\geq 0,4$  and  $\geq 0,6 \cdot z$  (0.36)

spring parking brake

		axle 3	axle 4
no of TRISTOP-actuators per axle line KDZ		2	2
TRISTOP-actuator type		T.14/24	T.14/24
lever length	lBh in mm	69	69
stat. tyre radius	rstat max in mm	401	401
at a stroke of	s in mm	30	30
min. force of spring brake	TFZ in N	7605	7605
sp.brake chamber no Meritor.....		4	4
release pressure	pLs in bar	4.8	4.8

calculation:

ratio until road		3.9674	3.9674
$iFb = lBh \cdot \eta \cdot C \cdot rBt / (rBn \cdot rstat)$			
	for rstat in mm	401	401
brake force of spring br. Tf in N		59654	59654
$Tf = (TFZ \cdot KDZ - 2 \cdot Co / lBh) \cdot iFb$			
braking rate	zf laden	0.444	
$zf = \text{sum}(Tf) / P + 0,01$			

Test of the frictional connection required by the parking brake

minimum wheelbase/minimum supporting width min Ef necessary to fulfil the regulations

$$\min Ef = E \cdot (1 - PR/P + zferf \cdot h/E) / (1 - zferf / (fzul \cdot nf/ng))$$

min Ef = 4431 mm for E = 6120 mm

min Ef = 4431 mm for E = 6120 mm

- min Ef = minimum distance between front axle(s) (trailer) or support (semitrailer) and the rear axle(s) (resultant of the bogie)
- E = wheel base
- fzul = 0.80 maximum permissible frictional connection required
- zferf = 0.18 maximum required braking ratio of the parking brake
- h = 2078 mm height of center of gravity - laden
- PR = 14000 kg maximum bogie mass - laden
- P = 28000 kg maximum total mass - laden
- nf = 2 no. of axle(s) with TRISTOP spring brake actuators
- ng = 2 no. of bogie axle(s)

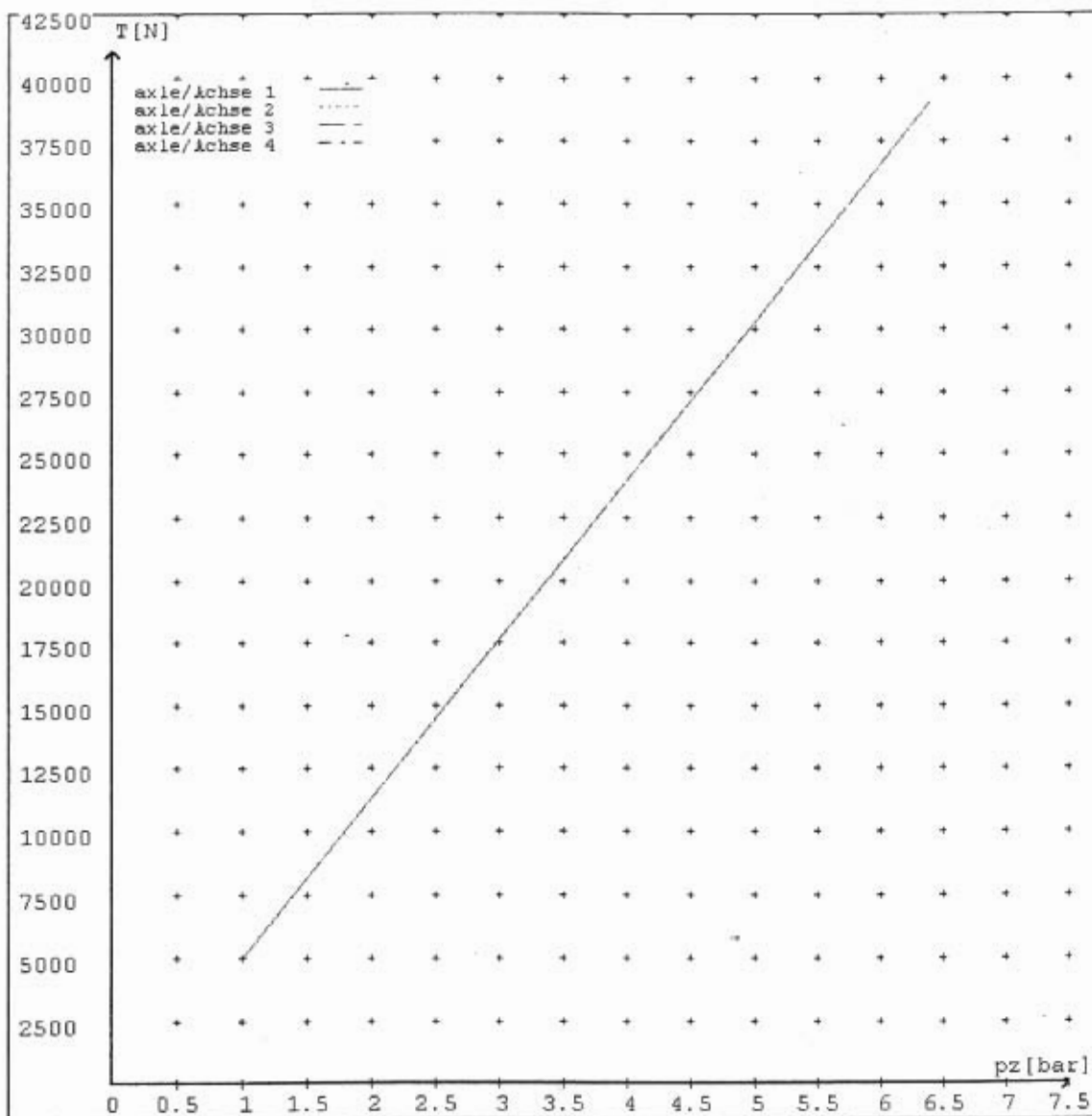


**reference values**

reference values for z = 50%

	pz [bar]	T [N]	T [N]
axle 1	1.0	4933	
	6.4	39068	
axle 2	1.0	4933	
	6.4	39068	
axle 3	1.0		4933
	4.9		29586
axle 4	1.0		4933
	4.9		29586

VIN - no.:

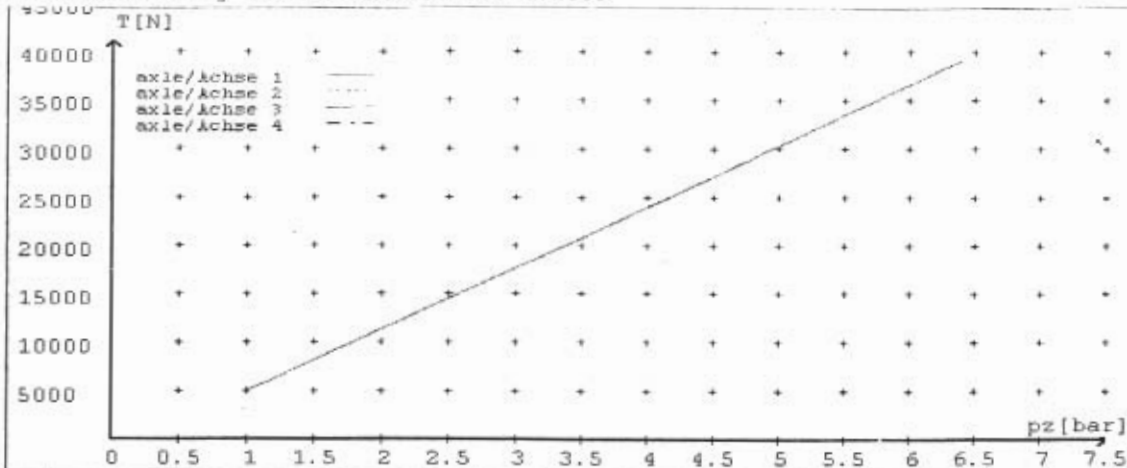


reference values for  $z = 0.5$

Angabe der Referenzwerte für  $z = 0.5$

brake calculation no: TP 53A date 07.10.2009

Bremsberechnung Nr: TP 53A vom 07.10.2009



	Achse(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	14./	14./	T.14/24	T.14/24	/
Maximum stroke smax = ...mm maximaler Hub smax = ...mm	64	64	64	64	
Lever length = ...mm Hebellänge = ...mm	69.08	69.08	69.08	69.08	