



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

7A9D2501790023856

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

NZ4UB Rule Schedule 5

Component Load Rating(s)

General Drawing Number(s)

NA

Supporting Documents

Brake cert No R69100

*Special Conditions

ABS Control, Warning light must illuminate when ignition-switched on and extinguish immediately or when vehicle reaches 7KPH

Certification Expiry Date (if applicable)

NA

OR

Hubodometer Reading (whichever comes first)

[Empty boxes for hubodometer reading]

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

*Delegate's Name (PRINT IN CAPS)

Date

23/10/2009 ✓

Number

333612

COF Vehicle Inspector ID:

COF Vehicle Inspector Signature:

Date

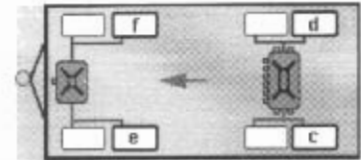
All fields excluding those marked with * must be completed before this certificate can be accepted.

WABCO

START-UP PROTOCOL

System	Trailer EBS	WABCO part number	480 102 014 0
Production date	2008-W25	Serial number	2660338346
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		IBS GESCHW IBS SPEED COMMUTATEUR VITESSE		0		
FAHRZEUG IDENTNR CHASSIS NUMBER NUMERO DE CHASSIS		7A9D2501790023856		ISS PIN INVERTIERT ISS_PIN INVERT COMMUTATEUR INVERSE		---		
BREMSBERECHNUNGS-NR BRAKE CALCULATION NO. CALCUL DE FREINAGE NO		TP57;		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 e,f POLE WHEEL TEETH e,f DENTS ROUE DENTÉE e,f		90		WARNLAMPE WARNING LAMP VOYANT DE SECURITE		2s		
POLRADZÄHNEZAHL e,f POLE WHEEL TEETH e,f DENTS ROUE DENTÉE e,f		90		LIFTACHSE HEBEN % LIFTING AXLE SPEED % VITESSE ESS RELEVABLE		0		
EXT BREMSDRUCKSENS EXT BRAKE PRESS. SENS EXT. CAPT. PRES. DE FREIN		---		LIFTACHSE SENKEN % LOWER LIFTING AXLE % BAISSER ESSIEU RELEV. %		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	ADHBLAST LEER AXLE LOAD UNLADEN CHARGE ESSIEU A VIDE (KG)	BALGD RUCK 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)	BALGD RUCK BELADEN SUSP. PRESS LADEN PRESS. SUSP. EN CHARGE (BAR)	BREMSDRUCK BELADEN BRAKE PRESS LADEN PRESS. DE FREIN. A CHARGE (BAR)		
1	1300	0.4	1.8	7000	4.2	0.3	1.3	6.3
2	1300	0.4	1.8	7000	4.2	0.3	1.3	6.3
3	1100	0.3	1.3	7000	4.2	0.3	1.3	5.0
4	1100	0.3	1.3	7000	4.2	0.3	1.3	5.0
5	---	---	---	---	---	---	---	---



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

Test report number					
Axle		1	2	3	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	7A9D2501790023856
Vehicle type	4A Full Tr	Odometer reading	0.0 km
next Service	30000 km	Trip reading	0 km
Tested by	Ron Pratt		
Date	2009-10-23 10:22:19 AM	Signature	

WABCO

HERSTELLER
MANUFACTURER
CONSTRUCTEUR

Domett;

Typ
Type

4A Full Tr

FAHRZEUG IDENTIF.
CHASSIS NUMBER
NUMERO DE CHASSIS

7A9D2501790023856

BREMSENRECHNUNGSS-NR.
BRAKE CALCULATION NO.
CALCUL DE FREINAGE NO.

TP57;

ABS System
ABS System

4S/3M

POLRADZÄHNZAHNUNG 2.2
POLE WHEEL TEETH 2.2
DENTS ROUE DENTÉE 2.2

90

POS. LIFTACHSEN
POS. LIFT AXLE
PROP. ABS AXLES

POLRADZÄHNZAHNUNG 2.7
POLE WHEEL TEETH 2.7
DENTS ROUE DENTÉE 2.7

90

10 +
10 +
10 +

EXT. BREMSDRUCKSENS.
EXT. BRAKE PRESS. SENS.
EXT. CAPT. PRES. DE FREIN.

RSS
RSS
RSS

2AL

RSS-D

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
ESSEL

ACHSLAST LEER
AXLE LOAD UNLOADED
CHARGE ESSEL A VIDE
(KG)

BALDRUCK LEER
SUSP. PRESS. UNLOADED
PRESS. SUSP. A VIDE
(BAR)

BREMSPDRUCK LEER
BRAKE PRESS. UNLOADED
PRESS. DE FREIN A VIDE
(BAR)

ACHSLAST BELADEN
AXLE LOAD LOADED
CHARGE ESSEL EN CHARGE
(KG)

BALDRUCK BELADEN
SUSP. PRESS. LOADED
PRESS. SUSP. EN CHARGE
(BAR)

BREMSPDRUCK BELADEN
BRAKE PRESS. LOADED
PRESS. DE FREIN A CHARGE
(BAR)

ACHSE AXLE ESSEL	ACHSLAST LEER AXLE LOAD UNLOADED CHARGE ESSEL A VIDE (KG)	BALDRUCK LEER SUSP. PRESS. UNLOADED PRESS. SUSP. A VIDE (BAR)	BREMSPDRUCK LEER BRAKE PRESS. UNLOADED PRESS. DE FREIN A VIDE (BAR)	ACHSLAST BELADEN AXLE LOAD LOADED CHARGE ESSEL EN CHARGE (KG)	BALDRUCK BELADEN SUSP. PRESS. LOADED PRESS. SUSP. EN CHARGE (BAR)	BREMSPDRUCK BELADEN BRAKE PRESS. LOADED PRESS. DE FREIN A CHARGE (BAR)		
1	1300	0.4	1.8	7000	4.2	0.3	1.3	6.3
2	1300	0.4	1.8	7000	4.2	0.3	1.3	6.3
3	1100	0.3	1.3	7000	4.2	0.3	1.3	5.0
4	1100	0.3	1.3	7000	4.2	0.3	1.3	5.0
5	---	---	---	---	---	---	---	---

TRAILER EBS

ELEKTR. SCHALTER 1
ELECTR. SWITCH 1
COMMUTATEUR ELECTRI 1

SS GESCHW.
SS SPEED
COMMUTATEUR VITESSE

0

SS-PIN INVERTIERT
SS, PIN INVERT
COMMUTATEUR INVERSE

10 + PLUS
10 + PLUS
SIGNAL SON 10+

ELEKTR. SCHALTER 2
ELECTR. SWITCH 2
COMMUTATEUR ELECTRI 2

WARNSLAMPE
WARNING LAMP
VOYANT DE SECURITE

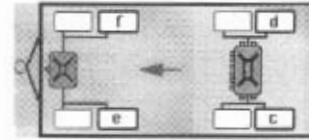
2s

LIFTACHSE HEBEN V.
LIFTING AXLE SPEED V.
VITESSE ESS. RELIEVABLE

0

LIFTACHSE SENKEN V.
LOWERING AXLE V.
BAISSER ESSEL RELIEV. V.

0



BREMSENTRUFNUMMER
BRAKE TEST NUMBER
NUMERO D'ESSAI DE FREIN

GGVSIADR

TPN 1203/04

ANFAHRTHELFE DESCHN.
TRACTION HELP V.
VITESSE AIDE DEMARRAGE

0

ANFAHRTHELFE DRUCK
TRACTION HELP PRESS.
PRES. AIDE DEMARRAGE

0.0



P.O.Box 98-971

South Auckland Mail Centre

Ronald Stuart Pratt (TRSP)

DATE	23/10/2009	TYPE APPROVED	NO
CERTIFICATE No	RP091010		SAF4FTEBS
VIN No	7A9D2501790023856		
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	Jurid539 FF
		LINING MATERIAL REAR	Jurid539 FF

NOTICE TO VEHICLE OPERATOR

This trailer is equipped with an Electronic Brake System.

To comply with the New Zealand Heavy Vehicle Brake RULE, it must be used only in conjunction with a truck/tractor equipped with a 5 or 7 pin ABS/EBS power supply socket.

Failure to connect to such supply invalidates Brake Rule compliance.

The trailer ABS/EBS warning light on the towing vehicle dashboard must illuminate when the ignition is switched on and extinguish when the vehicle is in motion.

If the light does not illuminate when ignition is switched on, the system must be checked. If the light remains illuminated when the vehicle is in motion, Brake Rule compliance is compromised. Repairs must be made as soon as possible.

NB:

If this vehicle is fitted with mechanical (spring) suspension, the load sense valving has been adjusted to suit exactly the performance of the original springs. In event of replacement being required, original equipment springs **must** be fitted to ensure correct ongoing operation. Fitment of non genuine springs can affect operation and therefore, compliance.

If you are unsure of your responsibilities and/or obligations, please contact either the vehicle manufacturer or myself.



R S Pratt
(TRSP HVEK 09 980 7300)

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


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

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
00057RP
Dom 3137-856

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 (V8 09.06.08).
-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).
WABCO Brake V8.09.06.08 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	4800	28000
axle 1	P1 in kg	1300	7000
axle 2	P2 in kg	1300	7000
axle 3	P3 in kg	1100	7000
axle 4	P4 in kg	1100	7000
wheel base	E in mm	6075 - 6075	
centre of gravity height	h in mm	1070	2134

	axle 1	axle 2	axle 3	axle 4
no. of combined axles	1	1	1	1
no. of brake chambers per axle line	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.14/16	T.14/16
lever length	1Bh in mm	69	69	69
brake factor	[-]	23.03	23.03	23.03
dyn. rolling radius	rdyn min in mm	421	421	421
dyn. rolling radius	rdyn max in mm	421	421	421
threshold torque	Co Nm	6.0	6.0	6.0

calculation:

chamber pressure(rdyn min)pH at z=22,5%bar	2.4	2.4	2.1	2.1
chamber pressure(rdyn max)pH at z=22,5%bar	2.4	2.4	2.1	2.1
chamber press.(servo)pcha at pm6,5bar bar	6.3	6.3	5.0	5.0
piston force ThA at pm6,5bar N	6089	6089	4786	4786
brake force(rdyn min)T lad. at pm6,5bar N	46047	46047	36202	36202
brake force(rdyn max)T lad. at pm6,5bar N	46047	46047	36202	36202
brake force within 1 % rolling friction proportion	%	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: 8.5 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:

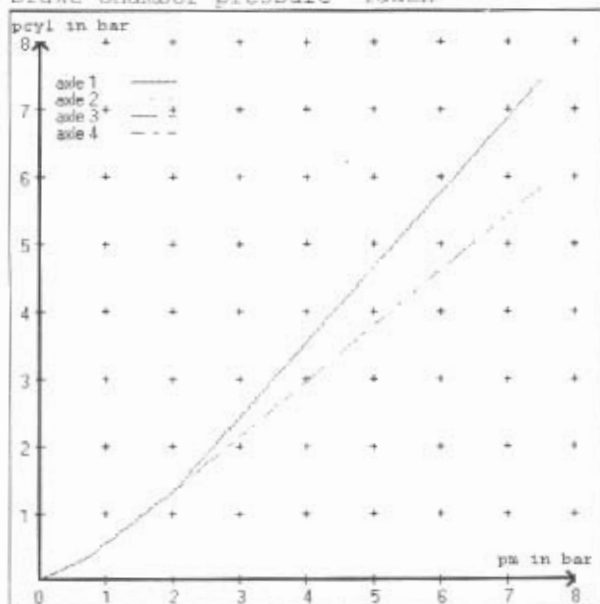
valve 1: 480 102 0.. 0 WABCO
 EBS trailer modulator

axle 4:

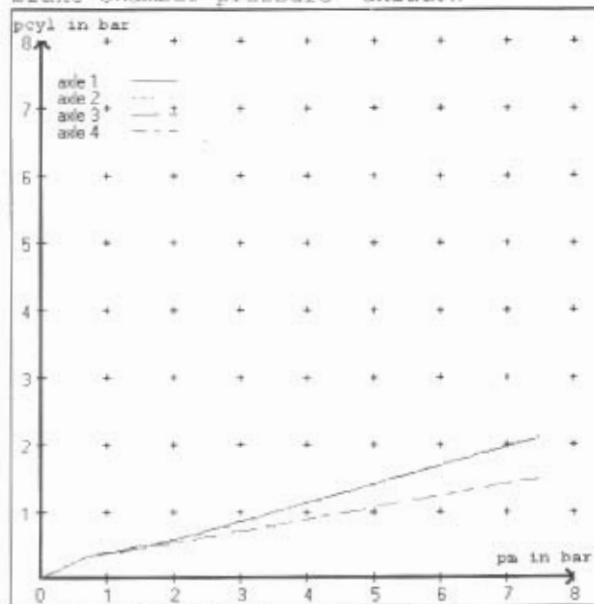
valve 1: 480 102 0.. 0 WABCO
 EBS trailer modulator

test type III (zIII = 0.30)	for rdyn min :	axle1	axle2	axle3	axle4
at pm 3.7 bar =>	pcha in bar :	3.7	3.2	2.7	2.7
test type III (zIII = 0.06)	for rdyn min :	axle1	axle2	axle3	axle4
at pm 1.3 bar =>	pcha in bar :	0.8	0.8	0.8	0.8

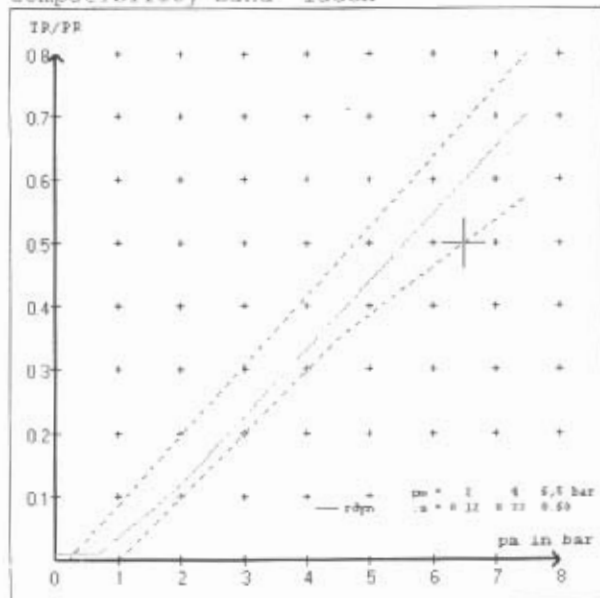
brake chamber pressure laden



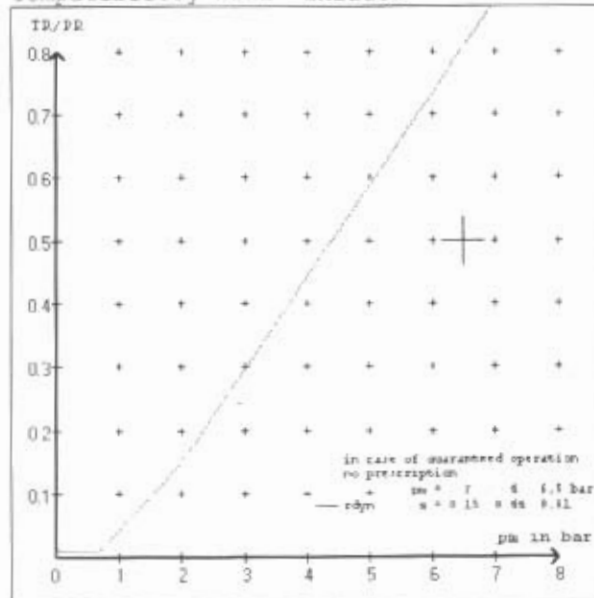
brake chamber pressure unladen



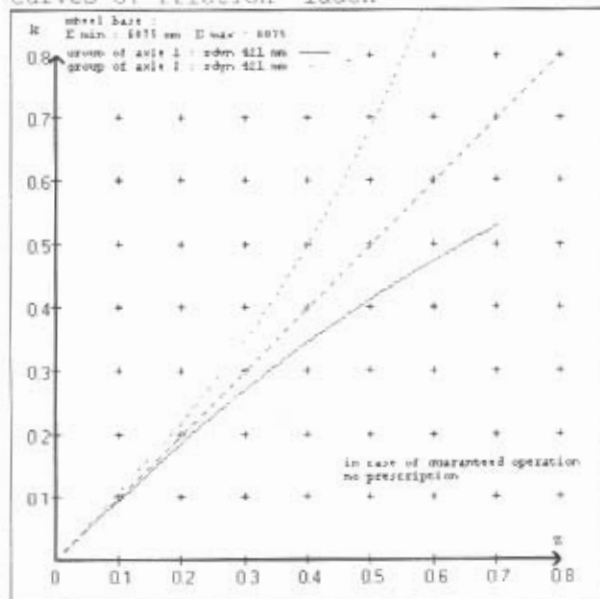
compatibility band laden



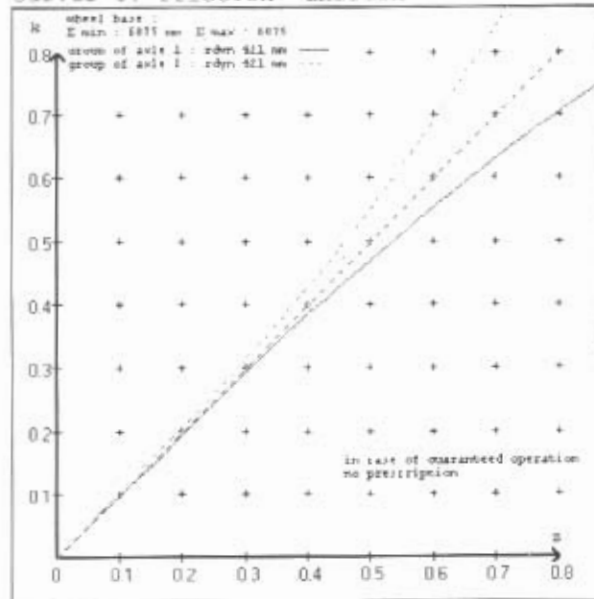
compatibility band unladen



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 57A

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 = 0.123
 6.5 bar z = 0.600

axle	axle load unladen	control pressure pm 6,5		control pressure pm 0.7 2.0 6.5				
		bellow pr. unladen	brake pr. unladen	axle load laden	bellow pr. laden	brake pr. laden		
1	1300	to be	1.8	7000	to be	0.3	1.3	6.3
2	1300	entered by	1.8	7000	entered by	0.3	1.3	6.3
3	1100	the vehicle	1.3	7000	the vehicle	0.3	1.3	5.0
4	1100	manufact.	1.3	7000	manufact.	0.3	1.3	5.0
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	pcyl	axle load	pcyl	axle load	pcyl	axle load	pcyl
1300	1.8	1300	1.8	1100	1.3	1100	1.3
1800	1.9	1800	1.9	1600	1.4	1600	1.4
2300	2.3	2300	2.3	2100	1.8	2100	1.8
2800	2.8	2800	2.8	2600	2.1	2600	2.1
3300	3.2	3300	3.2	3100	2.4	3100	2.4
3800	3.6	3800	3.6	3600	2.8	3600	2.8
4300	4.0	4300	4.0	4100	3.1	4100	3.1
4800	4.5	4800	4.5	4600	3.4	4600	3.4
7000	6.3	7000	6.3	7000	5.0	7000	5.0

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	SBW 1937-...	brake lining: Jurid 539
	test report :	TDB 0749 ECE	date : 13.10.2008
axle 2	: reference axle: SAF	SBW 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 = 22.4 % Pe
axle 2	(rdyn 421 mm)	T = 22.4 % Pe
axle 3	(rdyn 421 mm)	T = 18.7 % Pe
axle 4	(rdyn 421 mm)	T = 18.7 % 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 = 6089 N
axle2	ThA = 6089 N
axle3	ThA = 4786 N
axle4	ThA = 4786 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 = 36252 N
axle 2	(rdyn 421 mm)	T = 36252 N
axle 3	(rdyn 421 mm)	T = 28536 N
axle 4	(rdyn 421 mm)	T = 28536 N

basic test	type III
of subject	(calculated)
trailer (z)	residual

braking rate of the vehicle (item 4.3.2 to appendix I to annex VII)	0.60	(hot)braking 0.47
--	------	----------------------

required braking rate (items 1.3.3 and 1.6.2 to annex II)	>= 0,4 and >= 0,6*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 = 36252 N
axle 2	(rdyn 421 mm)	T = 36252 N
axle 3	(rdyn 421 mm)	T = 28536 N
axle 4	(rdyn 421 mm)	T = 28536 N

basic test	type III
of subject	(calculated)
trailer (z)	residual

braking rate of the vehicle (item 4.3.2 to appendix I to annex VII)	0.60	(hot)braking 0.47
--	------	----------------------

required braking rate (items 1.3.3 and 1.6.2 to annex II)	>= 0,4 and >= 0,6*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
$iFb = lBh \cdot \eta \cdot C \cdot rBl / (rBn \cdot rstat)$ for rstat in mm	401	401
brake force of spring br. Tf in N	59654	59654
$T\ddot{=} = (TFZ \cdot KDZ - 2 \cdot Co / lBh) \cdot iFb$		
braking rate zf laden	0.444	
$zf = \text{sum } \langle Tf \rangle / P + 0,01$		

Test of the frictional connection required by the parking brake

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

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

min Ef = 4415 mm for E = 6075 mm

min Ef = 4415 mm for E = 6075 mm

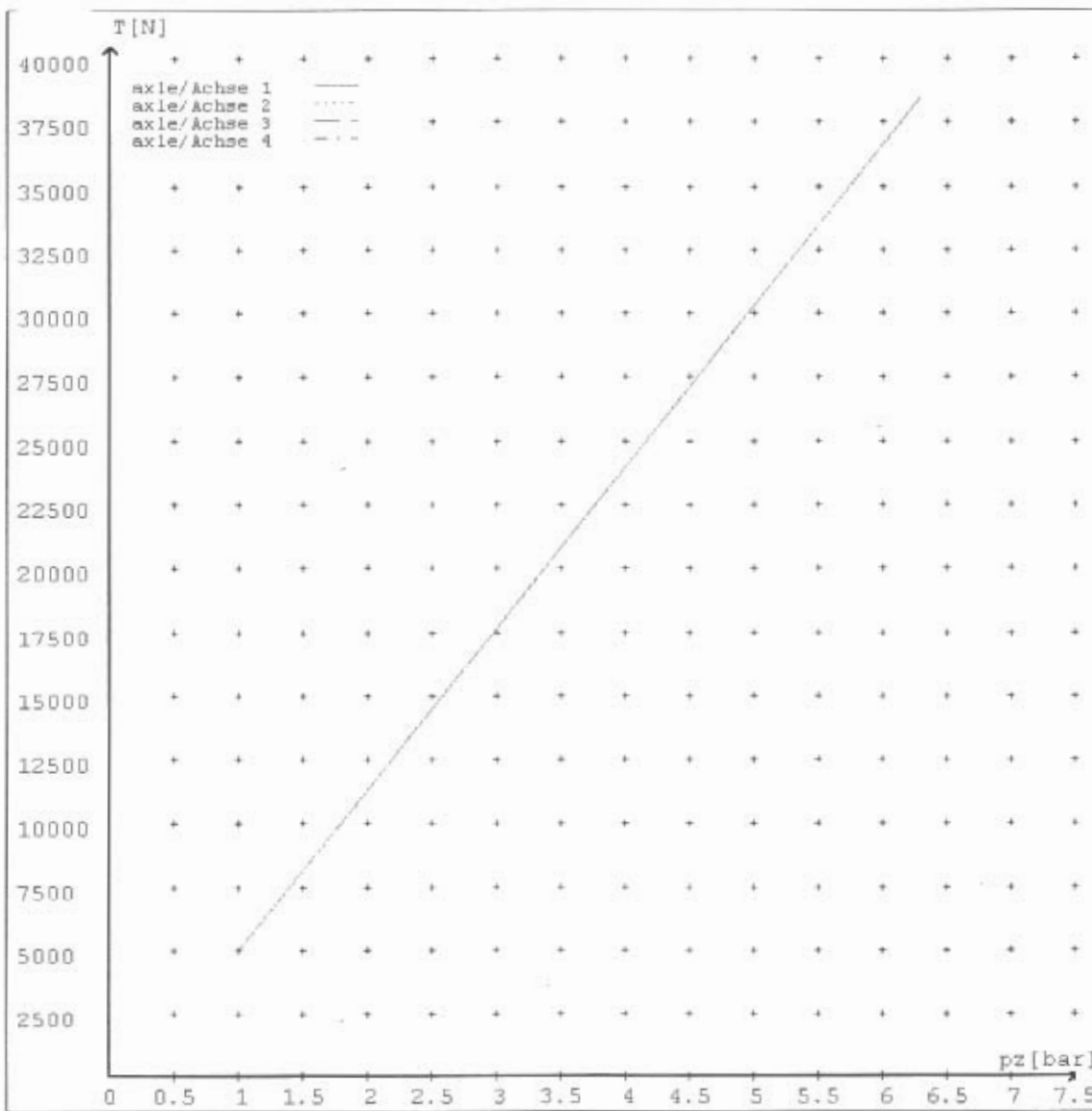
min Ef = minimum distance between front axle(s) (trailer) or support (semitrailer) and the rear axle(s) (resultant of the bogie)
 E = wheel base
 fzul = 0.80 maximum permissible frictional connection required
 zferf = 0.18 maximum required braking ratio of the parking brake
 h = 2134 mm height of center 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	
	6.3	38436	
axle 2	1.0	4933	
	6.3	38436	
axle 3	1.0		4933
	5.0		30219
axle 4	1.0		4933
	5.0		30219

VIN - no.:

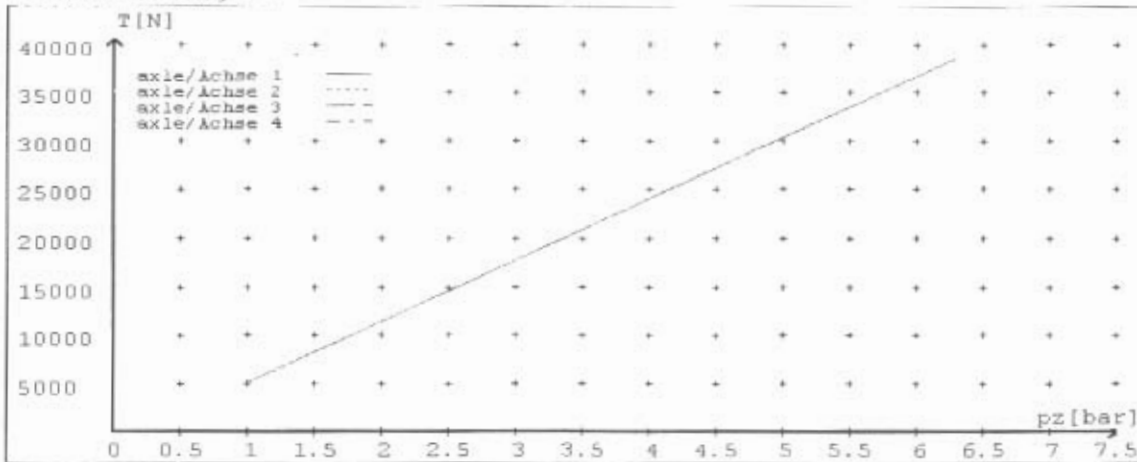


reference values for $z = 0.5$

Angabe der Referenzwerte für $z = 0.5$

brake calculation no: TP 57A date 21.10.2009

Bremsberechnung Nr: TP 57A vom 21.10.2009



	Achse (s) / Achse (n)				
disk cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	14./	14./	T.14/24	T.14/24	/
Maximum stroke s _{max} = ...mm maximaler Hub s _{max} = ...mm	64	64	64	64	
Travel length = ...mm Rebellänge = ...mm	69.08	69.08	69.08	69.08	