

Heavy vehicle specialist certificate

Must be presented to a CoF (heavy) inspecting organisation
Heavy vehicle specialist inspector and inspecting organisation

Heavy vehicle specialist inspector's or manufacturing inspecting organisation's name (PRINT IN CAPS)

Chris Clarke

ID

CJC

Vehicle registration (optional)

VIN/chassis number

7A9C20020B1023009

Make **DOMETT**

Component being certified:

Chassis

Load anchorage

Model (optional)

Log bolsters

Towing connection

Brakes

Certification category

HVEK

SRT

PSV stability

PSV rollover

Swept path

PBS

Description of work

CARRY OUT COMPLIANCE TO LTR 32015 FOLLOWING WHEEL BASE MODIFICATION TO 6190 MM

Code/standard/rule certified to

HVBR 32015/4 Schedule 5

Component load rating(s)

26000KG

General drawing number(s)

N/A

Supporting documents

BRAKE RULE CERTIFICATE - CJC184963

Special conditions (optional)

N/A

Certification expiry date (if applicable)

NIL UNTIL MODIFIED

or

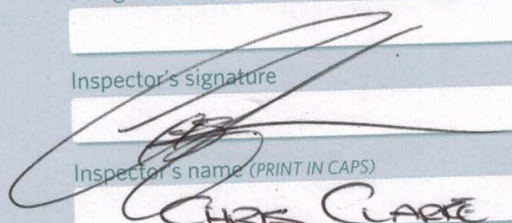
Hubodometer reading (whichever comes first)

Declaration

I the undersigned, declare that I am the heavy vehicle specialist inspector identified 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 appointment. To the best of my knowledge the information contained in the certificate is true and correct.

Designer's ID (if different from inspector below)

Inspector's signature



Inspector's name (PRINT IN CAPS)

CHRIS CLARKE

ID number

Date

17-May-18

Number

639213

CoF vehicle inspector ID

CoF vehicle inspector signature

Date

All fields are mandatory unless otherwise stated.

WABCO START-UP LOG

System	Trailer EBS-E	WABCO part number	480 102 080 0
Production date	2011-05-30	Serial number	897000084800F
Serial number (modulator)	000000000000		
Fingerprint Customer EOL / Customer Development / Flash Program	W033868 / 2012-08-04 ; 00000000 / 0000-00-00 ; W033868 / 2012-08-04		

WABCO		TRAILER EBS-E		GGVS/ADR TUEH TB 2007 - 019.00																																																																																							
HERSTELLER MANUFACTURER CONSTRUCTEUR	Domett																																																																																										
TYP TYPE TYPE	3A B Rear																																																																																										
VEHICLE IDENT. NUMBER CHASSIS NUMBER NUMERO DE CHASSIS	7A9C20020B1023009																																																																																										
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL. DE FREINAGE NO.	TP50548																																																																																										
POLRADZAHNEZAHL c-d e-f POLE WHEEL TEETH c-d e-f DENTS ROUE DENTEE c-d e-f	80	80	ABS-System ABS-System Système ABS	4S/2M																																																																																							
RSS RSS RSS	Einfachbereifung Single Tire Monte simple		Lenkachse Steering axle Essieu avant																																																																																								
	X	Zwillingsbereifung Twin Tire Monte jumelée		Rippkritisches Fahrzeug Critical Trailer Véhicule critique																																																																																							
Subsystems	SB	I/O																																																																																									
<table border="1"> <thead> <tr> <th rowspan="2">ACHSE AXLE ESSIEU</th> <th colspan="3">pm (bar)</th> <th colspan="3">pm (bar)</th> <th rowspan="2">pZ</th> <th rowspan="2">TYP TYPE</th> <th rowspan="2">(mm)</th> <th rowspan="2">(mm)</th> <th colspan="2">(bar)</th> </tr> <tr> <th>1.0</th> <th>6.5</th> <th>6.5</th> <th>0.7</th> <th>2.0</th> <th>6.5</th> <th>1.0</th> <th>Pz</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1400</td> <td>0.6</td> <td>2.3</td> <td>7000</td> <td>4.5</td> <td>0.5</td> <td>1.8</td> <td>---</td> <td>6.1</td> <td>---</td> <td>---</td> <td>---</td> </tr> <tr> <td>2</td> <td>1400</td> <td>0.6</td> <td>2.3</td> <td>7000</td> <td>4.5</td> <td>0.5</td> <td>1.8</td> <td>---</td> <td>6.1</td> <td>---</td> <td>---</td> <td>---</td> </tr> <tr> <td>3</td> <td>1400</td> <td>0.6</td> <td>2.3</td> <td>7000</td> <td>4.5</td> <td>0.5</td> <td>1.8</td> <td>---</td> <td>6.1</td> <td>---</td> <td>---</td> <td>---</td> </tr> <tr> <td>4</td> <td>0</td> <td>---</td> <td>---</td> <td>0</td> <td>---</td> <td>---</td> <td>---</td> <td>---</td> <td>---</td> <td>---</td> <td>---</td> <td>---</td> </tr> <tr> <td>5</td> <td>0</td> <td>---</td> <td>---</td> <td>0</td> <td>---</td> <td>---</td> <td>---</td> <td>---</td> <td>---</td> <td>---</td> <td>---</td> <td>---</td> </tr> </tbody> </table>						ACHSE AXLE ESSIEU	pm (bar)			pm (bar)			pZ	TYP TYPE	(mm)	(mm)	(bar)		1.0	6.5	6.5	0.7	2.0	6.5	1.0	Pz	1	1400	0.6	2.3	7000	4.5	0.5	1.8	---	6.1	---	---	---	2	1400	0.6	2.3	7000	4.5	0.5	1.8	---	6.1	---	---	---	3	1400	0.6	2.3	7000	4.5	0.5	1.8	---	6.1	---	---	---	4	0	---	---	0	---	---	---	---	---	---	---	---	5	0	---	---	0	---	---	---	---	---	---	---	---
ACHSE AXLE ESSIEU	pm (bar)			pm (bar)			pZ	TYP TYPE	(mm)	(mm)	(bar)																																																																																
	1.0	6.5	6.5	0.7	2.0	6.5					1.0	Pz																																																																															
1	1400	0.6	2.3	7000	4.5	0.5	1.8	---	6.1	---	---	---																																																																															
2	1400	0.6	2.3	7000	4.5	0.5	1.8	---	6.1	---	---	---																																																																															
3	1400	0.6	2.3	7000	4.5	0.5	1.8	---	6.1	---	---	---																																																																															
4	0	---	---	0	---	---	---	---	---	---	---	---																																																																															
5	0	---	---	0	---	---	---	---	---	---	---	---																																																																															

TEBS-E			
Diagnostic memory	OK	Warning lamp control	OK
Parameter setting	not carried out	Stop light supply	Not tested
EBS pressure test	OK	Lifting axle test	Not tested
Redundancy test	OK	ECAS height sensor calibration	Not tested
ABS sensor assignment	OK	Height sensor axle load	Not tested
RTR test	Not tested	Leak test	Not tested
Immobilizer test	Not tested	Signal outputs	Not tested
Signal inputs	Not tested	Tag axle test	Not tested

Electronic Extension Module			
Diagnostic memory	Not tested	Signal outputs	Not tested
TailGUARDlight	Not tested	TailGUARD	Not tested
Manufacturer	Domett	Vehicle ident. no	7A9C20020B1023009
Vehicle type	3A B Rear	Odometer reading	756104.9 km
next Service	0 km	Trip reading	756104.9 km
Tester	Chris Clarke	Signature	
Date	2018-05-17 12:14:08 p.m.		

Transport Special. -brake calculation no: TP 50548S date 17.05.2018
 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.13.11

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 (V6.10.05.21).
 -the functional characteristics of our products
 as well as the data of the brake out of the test
 approvals of the axle 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).
 In any case we commend to do a braking harmonisation!
 WABCO Brake V6.10.05.21 db 26.05.2010

distribution: DOMETT
 7A9C20020B1023009.
 CJC184963

vehicle manufacturer: DOMETT
 trailer model : 3A B REAR
 trailer type : 3-axle-semi-trailer
 remarks : air / hydraulic / VA suspension
 WABCO TRAILER - EBS
 TRISTOP 1+2: 14/24
 265/70 R 19,5

axle 1 + 2 + 3 : BPW, TSB 3709, 361-041-08 ECE,

		<u>unladen</u>		<u>laden</u>	
total mass	P in kg	6000	- 6500	26000	- 26000
king-pin	PS in kg	1800	- 2300	5000	- 5000
axle 1	P1 in kg		1400		7000
axle 2	P2 in kg		1400		7000
axle 3	P3 in kg		1400		7000
total axle mass	PR in kg		4200		21000
wheel base	E in mm		6190		
centre of gravity height	h in mm		1160		2100
K-factor		Kv min	1.8062	Kc min	0.9927
K-factor		Kv max	1.8079	Kc max	0.9933

	<u>axle 1</u>	<u>axle 2</u>	<u>axle 3</u>
no. of combined axles	1	1	1
no. of brake chambers per axle line	2	2	2
The power output corresponds to	BZ 107.0	BZ 107.0	BZ 106.0
brake chamber manufacturer	BPW	BPW	BPW
chamber size	14/24	14/24	14
lever length	80	80	80
brake factor	20.50	20.50	20.50
dyn. rolling radius	421	421	421
dyn. rolling radius	421	421	421
threshold torque	12.0	12.0	12.0

calculation:			
chamber pressure (rdyn min) pH at z=22,5%bar	2.7	2.7	2.7
chamber pressure (rdyn max) pH at z=22,5%bar	2.7	2.7	2.7
chamber press. (servo) pcha at pm6,5bar	6.1	6.1	6.1
piston force ThA at pm6,5bar	4987	4987	4987
brake force (rdyn min) T lad. at pm6,5bar	38368	38368	38368
brake force (rdyn max) T lad. at pm6,5bar	38368	38368	38368
brake force within 1 % rolling friction proportion	33.3	33.3	33.3

braking rate z laden 0.559 for rdyn min
 z = sum (TR)/PRmax 0.559 for rdyn max

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

brake diagram : 841 701 101 0

maximum pressure: 8.5 bar

axle 1:

valve 1: 971 002 ... 0 WABCO
EBS emergency valve

valve 2: 480 102 ... 0 WABCO
EBS trailer modulator

brake cylinder: BPW 05.444.38.....

axle 2:

valve 1: 971 002 ... 0 WABCO
EBS emergency valve

valve 2: 480 102 ... 0 WABCO
EBS trailer modulator

brake cylinder: BPW 05.444.38.....

axle 3:

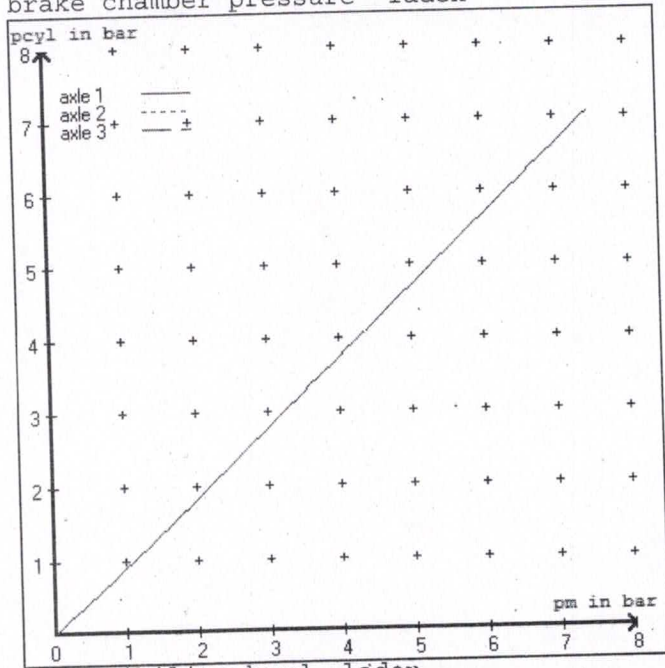
valve 1: 971 002 ... 0 WABCO
EBS emergency valve

valve 2: 480 102 ... 0 () WABCO or 480 207 0.. 0
EBS trailer modulator

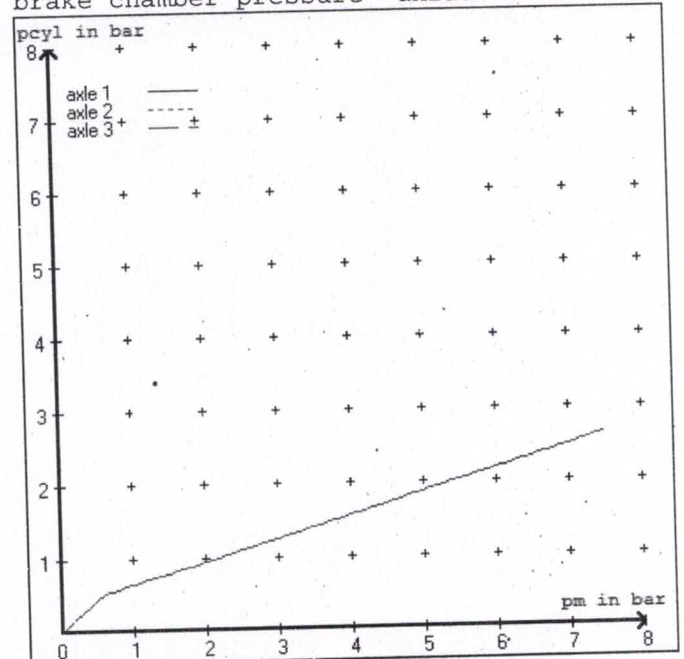
brake cylinder: BPW 05.444.30.....

test type III (zIII = 0.30)	for rdyn min :	axle1	axle2	axle3
at pm 3.7 bar =>	pcha in bar :	3.5	3.5	3.5
test type III (zIII = 0.06)	for rdyn min :	axle1	axle2	axle3
at pm 1.2 bar =>	pcha in bar :	1.0	1.0	1.0

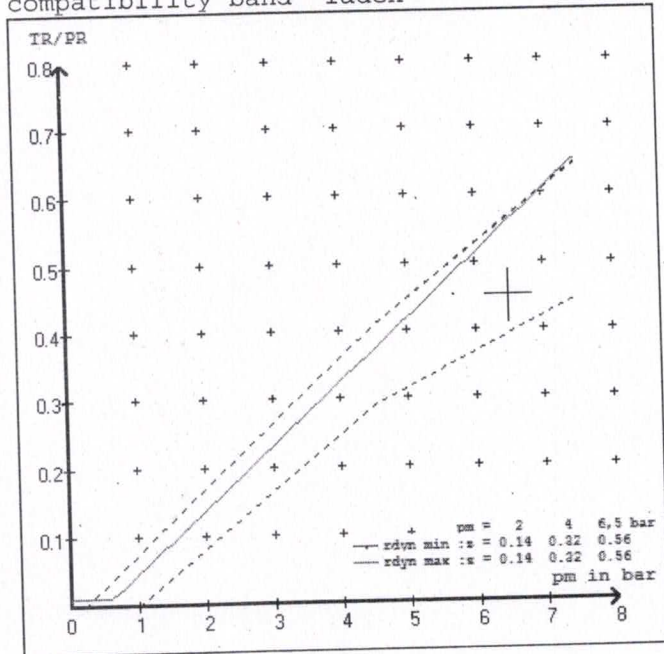
brake chamber pressure laden



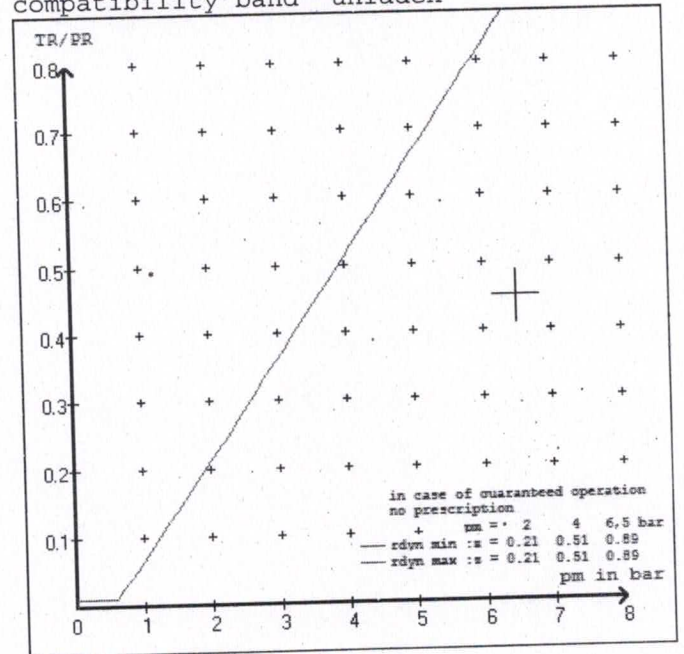
brake chamber pressure unladen



compatibility band laden



compatibility band unladen



vehicle manufacturer: DOMETT
 trailer model : 3A B REAR
 trailer type : 3-axle-semi-trailer

brake chamber and lever length :
 axle 1 : 2 x type/diameter 14/24 (BPW) lever length 80 mm
 axle 2 : 2 x type/diameter 14/24 (BPW) lever length 80 mm
 axle 3 : 2 x type/diameter 14 (BPW) lever length 80 mm

brake diagram : 841 701 101 0

valve :
 971 002 ... 0 WABCO EBS emergency valve
 480 102 ... 0 WABCO EBS trailer modulator
 480 102 ... 0 WABCO EBS trailer modulator or 480 207 0.. 0

EBS input data

=====

vehicle manufacturer: DOMETT
 trailer model : 3A B REAR
 trailer type : 3-axle-semi-trailer
 brake calculation no. : TP 50548S

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

assignment pm / deceleration z: pm 0.6 bar z = 0.000
 (laden condition) 2.0 bar z = 0.134
 6.5 bar z = 0.560

control pressure pm			6,5	control pressure pm		0.6	2.0	6.5
axle	axle load unladen	bellow pr. unladen	brake pr. unladen	axle load laden	bellow pr. laden	brake pr. laden		
1	1400	to be	2.3	7000	to be	0.5	1.8	6.1
2	1400	entered by	2.3	7000	entered by	0.5	1.8	6.1
3	1400	the vehicle	2.3	7000	the vehicle	0.5	1.8	6.1
4	0	manufact.	0,0	0	manufact.	0,0	0,0	0,0
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 load pcyl	axle load pcyl	axle load pcyl
1400	2.3	1400
1900	2.6	1900
2400	3.0	2400
2900	3.3	2900
3400	3.7	3400
3900	4.0	3900
4400	4.3	4400
4900	4.7	4900
7000	6.1	7000

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: BPW.	D 115-2	brake lining: BPW 8200
test report :	361-041-08	EC date : 28.04.2009
axle 2 : reference axle: BPW	D 115-2	brake lining: BPW 8200
test report :	361-041-08	EC date : 28.04.2009
axle 3 : reference axle: BPW	D 115-2	brake lining: BPW 8200
test report :	361-041-08	EC date : 28.04.2009

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

axle 1	(rdyn 421 mm)	T = 18.3 % Fe
axle 2	(rdyn 421 mm)	T = 18.3 % Fe
axle 3	(rdyn 421 mm)	T = 18.3 % Fe

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

axle 1	(sp = 51 mm)	s = 47 mm
axle 2	(sp = 51 mm)	s = 47 mm
axle 3	(sp = 55 mm)	s = 47 mm

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

axle1	ThA = 4987 N
axle2	ThA = 4987 N
axle3	ThA = 4987 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 = 36126 N
axle 2	(rdyn 421 mm)	T = 36126 N
axle 3	(rdyn 421 mm)	T = 36126 N

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

braking rate of the vehicle
(item 4.3.2 to appendix I to annex VII)

0.56 0.53

required braking rate
(items 1.3.3 and 1.6.2 to annex II)

>= 0,4 and
>= 0,6*z (0.34)

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

axle 1	(rdyn 421 mm)	T = 36126 N
axle 2	(rdyn 421 mm)	T = 36126 N
axle 3	(rdyn 421 mm)	T = 36126 N

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

braking rate of the vehicle
(item 4.3.2 to appendix I to annex VII)

0.56 0.53

required braking rate
(items 1.3.3 and 1.6.2 to annex II)

>= 0,4 and
>= 0,6*z (0.34)

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: BPW	D 115-2	brake lining: BPW 8101
test report :	361-041-08 EC date	: 16.03.2009
axle 2 : reference axle: BPW	D 115-2	brake lining: BPW 8101
test report :	361-041-08 EC date	: 16.03.2009
axle 3 : reference axle: BPW	D 115-2	brake lining: BPW 8101
test report :	361-041-08 EC date	: 16.03.2009

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

axle 1	(rdyn 421 mm)	T = 18.3 % Fe
axle 2	(rdyn 421 mm)	T = 18.3 % Fe
axle 3	(rdyn 421 mm)	T = 18.3 % Fe

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

axle 1	(sp = 51 mm)	s = 48 mm
axle 2	(sp = 51 mm)	s = 48 mm
axle 3	(sp = 55 mm)	s = 48 mm

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

axle1	ThA = 4987 N
axle2	ThA = 4987 N
axle3	ThA = 4987 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 = 34780 N
axle 2	(rdyn 421 mm)	T = 34780 N
axle 3	(rdyn 421 mm)	T = 34780 N

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

braking rate of the vehicle (item 4.3.2 to appendix I to annex VII)	0.56	0.51
--	------	------

required braking rate (items 1.3.3 and 1.6.2 to annex II)		>= 0,4 and >= 0,6*z (0.34)
--	--	-------------------------------

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

axle 1	(rdyn 421 mm)	T = 34780 N
axle 2	(rdyn 421 mm)	T = 34780 N
axle 3	(rdyn 421 mm)	T = 34780 N

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

braking rate of the vehicle (item 4.3.2 to appendix I to annex VII)	0.56	0.51
--	------	------

required braking rate (items 1.3.3 and 1.6.2 to annex II)		>= 0,4 and >= 0,6*z (0.34)
--	--	-------------------------------

spring parking brake

	axle 1	axle 2
no of TRISTOP-actuators per axle line KDZ	2	2
TRISTOP-actuator type	14/24	14/24
lever length	80	80
stat. tyre radius	401	401
at a stroke of	30	30
min. force of spring brake	5809.	5809
sp.brake chamber no BPW	05.444.3805.	444.38
release pressure	4.9	4.9

calculation:

ratio until road	4.0898	4.0898
$iFb = lBh * \eta * C * rBt / (rBn * rstat)$		
for rstat in mm	401	401
brake force of spring br. Tf in N	46288	46288
$Tf = (TFZ * KDZ - 2 * Co / lBh) * iFb$		
braking rate	0.373	
zf = 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

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

min Ef = 2219 mm for E = 5680 mm

min Ef = 2222 mm for E = 5690 mm

min Ef = minimum distance between front axle(s) (trailer) or support (semitraile) 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 = 2100 mm height of center of gravity - laden

PR = 21000 kg maximum bogie mass - laden

P = 26000 kg maximum total mass - laden

nf = 2 no. of axle(s) with TRISTOP spring brake actuators

ng = 3 no. of bogie axle(s)

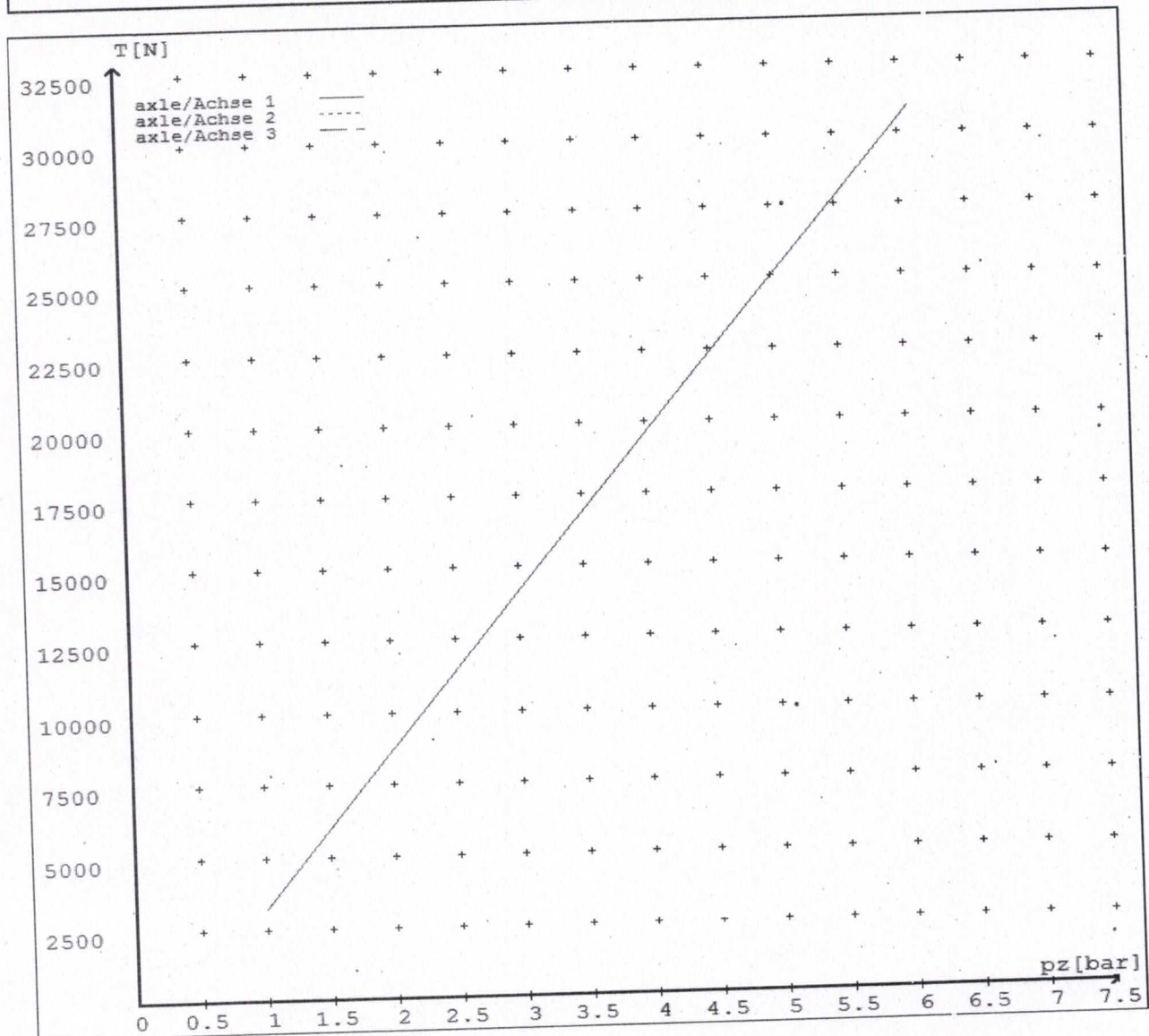
reference values

reference values for z = 45% for max rdyn: 421 mm

	pz [bar]	T [N]	T [N]
axle 1	1.0		3218
	6.1		30886
axle 2	1.0		3218
	6.1		30886
axle 3	1.0		3218
	6.1		30886

VIN - no.:

	Axle(s) / Achse(n)				
	14/24	14/24	14/	/	/
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)					
Maximum stroke smax = ...mm maximaler Hub smax =mm	57	57	60		
Lever length =mm Hebellänge =mm	80	80	80		



Statement of Compliance with the New Zealand Heavy Brake Rule

Documentation required supporting Statements of Compliance with the New Zealand Heavy Brake Rule, to be made available to the Statutory Authority on request, must include all calculations and test reports.

Confirmation of compliance

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

Date: 17 May 2018

Signed (pp.): _____

Certifier's identification

Name: C Clarke

Phone (bus): (09) 980 7300 Fax (bus): (09) 980 7306

Postal address: Transport Specialties, Cnr Kerrs & Ash Roads
Wiri, Auckland, PO Box 98 971 Manukau City 2241

Position: CJC

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 32015/2, Schedule 5.

Date: _____

Signed: _____

Certifier's identification: JEH

Name:

Phone (bus): (09) 980 7300 Fax (bus): (09) 980 7306

Postal address: Transport Specialties Ltd

Cnr Kerrs & Ash Roads, Wiri, Auckland

PO Box 98 971, Manukau City 2241

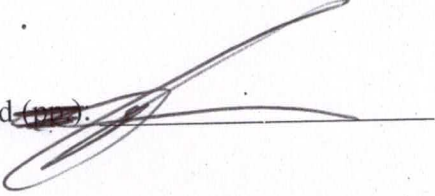
Statement of Compliance with the New Zealand Heavy Brake Rule

Documentation required supporting Statements of Compliance with the New Zealand Heavy Brake Rule, to be made available to the Statutory Authority on request, must include all calculations and test reports.

Confirmation of compliance

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

Date: 17 May 2018

Signed: 

Certifier's identification

Name: C Clarke

Phone (bus): (09) 980 7300 Fax (bus): (09) 980 7306

Postal address: Transport Specialties, Cnr Kerrs & Ash Roads
Wiri, Auckland, PO Box 98 971 Manukau City 2241

Position: CJC

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 32015/2, Schedule 5.

Date: _____

Signed: _____

Certifier's identification: JEH

Name:

Phone (bus): (09) 980 7300 Fax (bus): (09) 980 7306

Postal address: Transport Specialties Ltd

Cnr Kerrs & Ash Roads, Wiri, Auckland

PO Box 98 971, Manukau City 2241