

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*

VIN/Chassis Number
7A9D25013C1023094

- Component being certified:
- | | | |
|--|--|---------------------------------------|
| <input type="checkbox"/> Chassis | <input type="checkbox"/> Load Anchorage | <input type="checkbox"/> Log Bolsters |
| <input type="checkbox"/> Towing Connection | <input checked="" type="checkbox"/> Brakes | <input type="checkbox"/> SRT |
| <input type="checkbox"/> PSV Stability | <input type="checkbox"/> PSV Rollover | <input type="checkbox"/> Swept Path |
| <input type="checkbox"/> PBS | | |

Certification Category
HVEK

Description of Work
CERTIFY TO SCHEDULE 5

ROLL STABILTY FUNCTION ACTIVATED

Code/Standard/Rule Certified to
HVBR 32015/3 Schedule 5

Component Load Rating(s)
28000KG

General Drawing Number(s)
N/A

Supporting Documents
BRAKE RULE CERTIFICATE - CJC153436

Special Conditions*
WARNING LAMP MUST ILLUMINATE WHEN IGNITION IS SWITCHED ON & THEN EXTINGUISH IMMEDIATELY OR WHEN VEHICLE SPEED EXCEEDS 7 KPH

Certification Expiry Date (if applicable)
N/A

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) ID Number
CHRIS CLARKE **CJC**

Date
28-Oct-15

Number
529436

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-E	WABCO part number	480 102 080 0
Production date	2012-06-11	Serial number	897000489200L
Serial number (modulator)	000000016120		
Fingerprint Customer EOL / Customer Development / Flash Program	W503643 / 2015-10-28 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00		

WABCO	TRAILER EBS-E	GGVS/ADR TUEH TB 2007 - 019.00
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HERSTELLER MANUFACTURER CONSTRUCTEUR	DOMETT TRUCKS & TRAI			GIO	Pin1	Pin3	Pin4
TYP TYPE	5AFT STOCK			1	24V-O2	---	---
FAHRZEUG IDENTIFIK. CHASSIS NUMBER NUMERO DE CHASSIS	7A9D25013C1023094			2	---	---	---
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO.	GenNZ50087A			3	ALS2	ALS2	---
POLRADZAHNZAHL 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	4	---	---	---
			4S/3M	5	DIAG	DIAG	DIAG
RSS RSS RSS	Einfachbereifung Single Tire Monte simple	Lenkachse Steering axle Essieu vireur		6	---	---	---
	Zwillingsbereifung Twin Tire Monte jumelée	Kippkritisches Fahrzeug Critical Trailer Véhicule critique		7	---	---	---
Subsystems	SB	I/O	24N				

ACHSE AXLE ESSIEU	6.5			0.7			2.0			---	6.5	TYP TYPE	(mm)	(mm)	(bar)	
	pm	6.5	pm	0.7	2.0	---	6.5	1.0	Pz							
	TR (daN)			TR (daN)			TR (daN)			TR (daN)		TR (daN)				
1	2050	0.8	2.8	8000	4.7	0.4	1.5	---	6.6	-	24	75	150	461	4325	
2	2050	0.8	2.8	8000	4.7	0.4	1.5	---	6.6	-	24	75	150	461	4325	
3	1780	0.8	2.7	5400	3.2	0.5	1.9	---	4.9	-	24 / 30	75	120	306	2385	
4	1780	0.8	2.7	5400	3.2	0.5	1.9	---	4.9	-	24 / 30	75	120	306	2385	
5	1780	0.8	2.7	5400	3.2	0.5	1.9	---	4.9	-	24 / 30	75	120	306	2385	

TEBS-E

Diagnostic memory	OK	Warning lamp control	OK
Parameter setting	carried out	Stop light power supply	Not OK
EBS pressure test	Not tested	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 check	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 TRUCKS & TRAI	Vehicle ident. no	7A9D25013C1023094
Vehicle type	5AFT STOCK	Odometer reading	156760.5 km
next Service	0 km	Trip reading	156760.5 km
Tester	Chris Clarke	Signature	
Date	2015-10-28 9:15:57 p.m.		

brake diagram :

maximum pressure: 8.5 bar

axle 1:

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

valve 2: 480 207 0.. 0 WABCO or 480 207 2.. 0
EBS relay valve

brake cylinder: BPW 05.444.15...

axle 2:

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

valve 2: 480 207 0.. 0 WABCO or 480 207 2.. 0
EBS relay valve

brake cylinder: BPW 05.444.15...

axle 3:

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

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

brake cylinder: BPW 05.444.20...

axle 4:

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

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

brake cylinder: BPW 05.444.20...

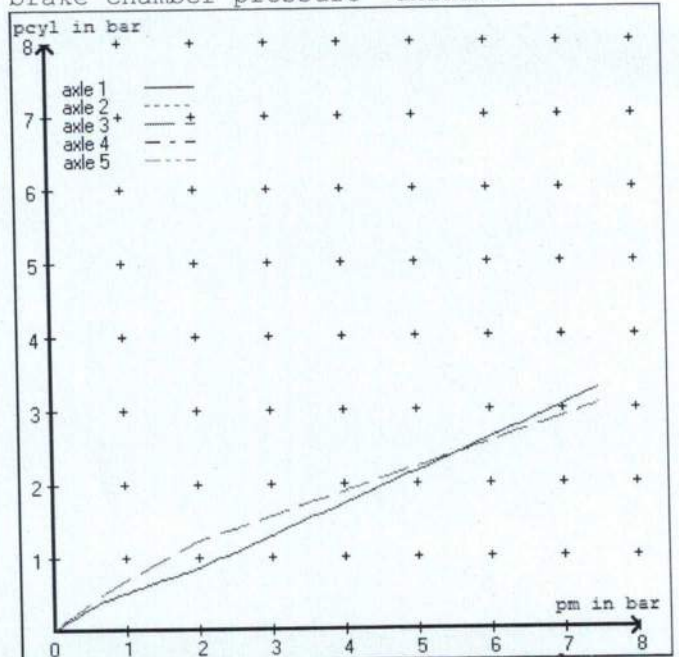
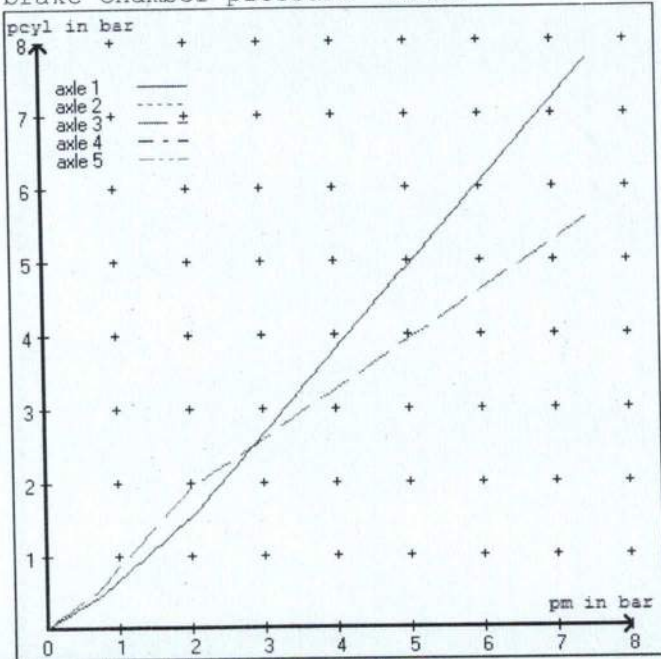
axle 5:

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

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

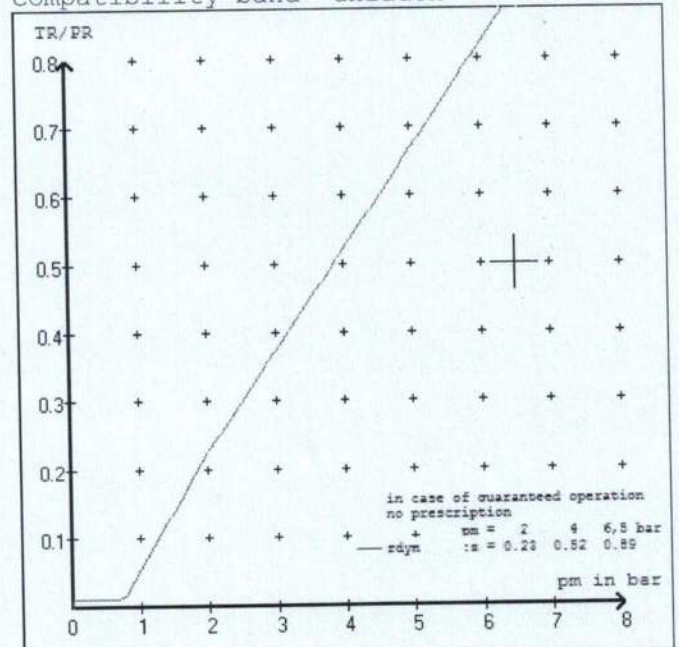
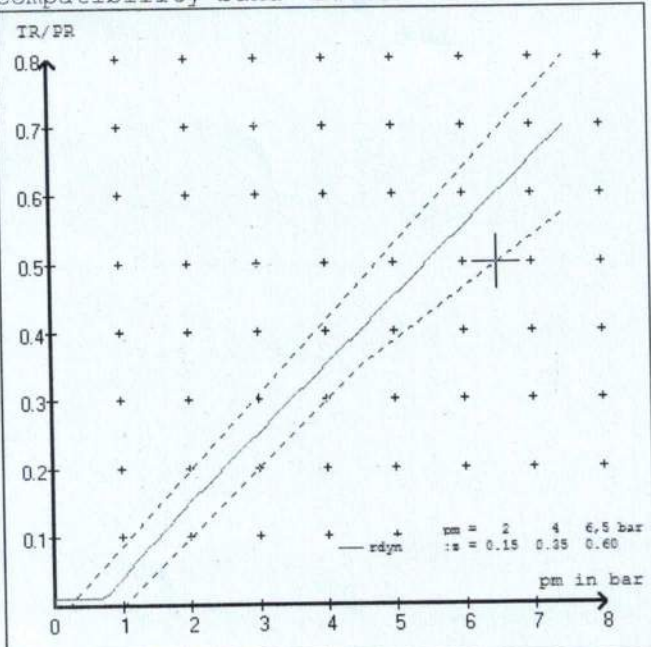
brake cylinder: BPW 05.444.20...

test type III (zIII = 0.30)	for rdyn min :	axle1	axle2	axle3	axle4	axle5	
at pm 3.5 bar =>	pcha in bar :	3.2	3.2	2.9	2.9	2.9	2.9
test type III (zIII = 0.06)	for rdyn min :	axle1	axle2	axle3	axle4	axle5	
at pm 1.2 bar =>	pcha in bar :	0.8	0.8	1.0	1.0	1.0	1.0



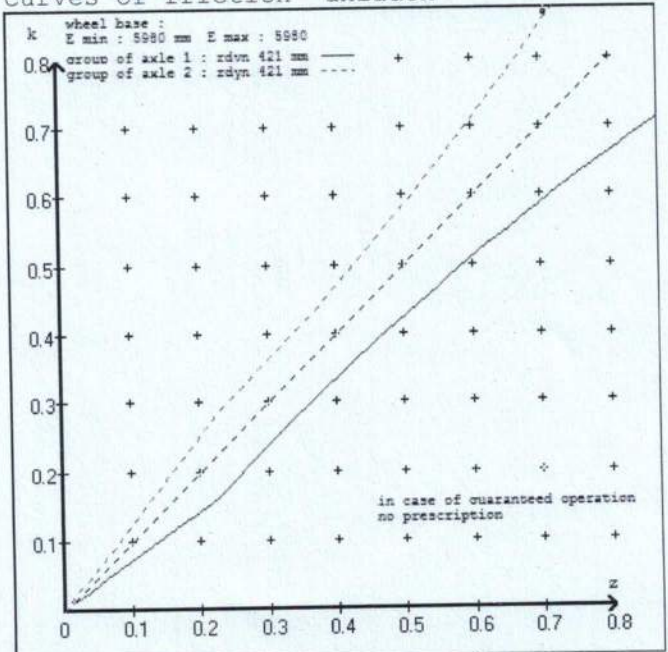
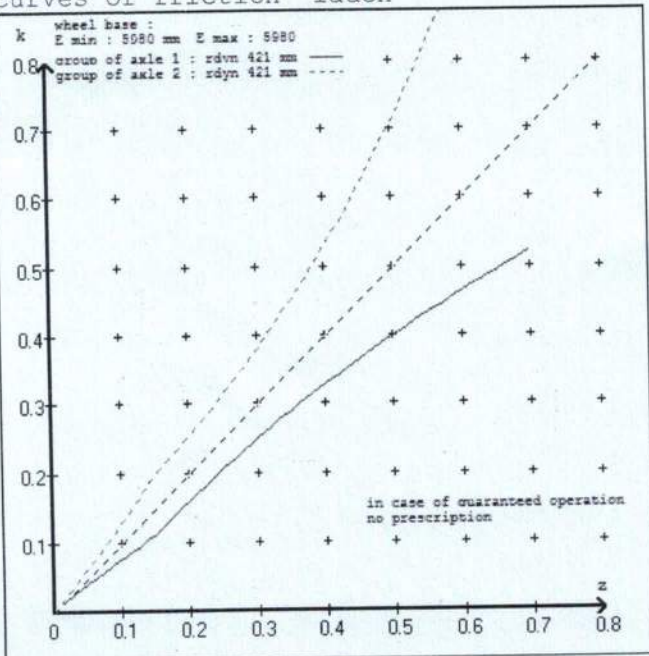
compatibility band laden

compatibility band unladen



curves of friction laden

curves of friction unladen



vehicle manufacturer: DOMETT TRUCKS & TRAILERS
 trailer model : 5AFT STOCK
 trailer type : 5-axle-full-trailer

brake chamber and lever length :

axle 1 : 2 x type/diameter 24. (BPW) lever length 150 mm
 axle 2 : 2 x type/diameter 24. (BPW) lever length 150 mm
 axle 3 : 2 x type/diameter 2430 (BPW) lever length 120 mm
 axle 4 : 2 x type/diameter 2430 (BPW) lever length 120 mm
 axle 5 : 2 x type/diameter 2430 (BPW) lever length 120 mm

brake diagram :

valve :
 971 002 ... 0 WABCO EBS emergency valve
 480 207 0.. 0 WABCO EBS relay valve or 480 207 2.. 0
 480 102 ... 0 WABCO EBS trailer modulator

EBS input data

vehicle manufacturer: DOMETT TRUCKS & TRAILERS
 trailer model : 5AFT STOCK
 trailer type : 5-axle-full-trailer
 brake calculation no. : GenNZ 50087A

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 = 0.010
 (laden condition) 2.0 bar z = 0.146
 6.5 bar z = 0.600

control pressure pm			6,5	control pressure pm			0.7	2.0	6.5
axle	axle load unladen	bellow pr. unladen	brake pr. unladen	axle load laden	bellow pr. laden	brake pr. laden			
1	2050	to be	2.8	8000	to be	0.4	1.5	6.6	
2	2050	entered by the vehicle manufact.	2.8	8000	entered by the vehicle manufact.	0.4	1.5	6.6	
3	1780		2.7	5400		0.5	1.9	4.9	
4	1780		2.7	5400		0.5	1.9	4.9	
5	1780		2.7	5400		0.5	1.9	4.9	

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 5	
axle load	pcyl	axle load	pcyl	axle load	pcyl	axle load	pcyl	axle load	pcyl
2050	2.8	2050	2.8	1780	2.7	1780	2.7	1780	2.7
2550	3.1	2550	3.1	2280	3.0	2280	3.0	2280	3.0
3050	3.4	3050	3.4	2780	3.3	2780	3.3	2780	3.3
3550	3.8	3550	3.8	3280	3.6	3280	3.6	3280	3.6
4050	4.1	4050	4.1	3780	3.9	3780	3.9	3780	3.9
4550	4.4	4550	4.4	4280	4.2	4280	4.2	4280	4.2
5050	4.7	5050	4.7	4780	4.5	4780	4.5	4780	4.5
5550	5.0	5550	5.0	5280	4.8	5280	4.8	5280	4.8
8000	6.6	8000	6.6	5400	4.9	5400	4.9	5400	4.9

data sheet to ECE vehicle type-approval certificate concerning braking equipment: according to ECE R13 annex 11

axle 1 : reference axle: BPW	ZK 130	brake lining: Textar T090
test report :	TDB 0325	date : 29.09.2000
axle 2 : reference axle: BPW	ZK 130	brake lining: Textar T090
test report :	TDB 0325	date : 29.09.2000
axle 3 : reference axle: BPW	ZK 130	brake lining: Textar T090
test report :	TDB 0325	date : 29.09.2000
axle 4 : reference axle: BPW	ZK 130	brake lining: Textar T090
test report :	TDB 0325	date : 29.09.2000
axle 5 : reference axle: BPW	ZK 130	brake lining: Textar T090
test report :	TDB 0325	date : 29.09.2000

calc. verific. of residual (hot) braking force type III
(item 4.2.1 of appendix 2 to annex 11)

axle 1	(rdyn 421 mm)	T = 17.9 % Fe
axle 2	(rdyn 421 mm)	T = 17.9 % Fe
axle 3	(rdyn 421 mm)	T = 11.9 % Fe
axle 4	(rdyn 421 mm)	T = 11.9 % Fe
axle 5	(rdyn 421 mm)	T = 11.9 % Fe

calculated actuator stroke in mm
(item 4.3.1.1 of appendix 2 to annex 11)

axle 1	(sp = 74 mm)	s = 51 mm
axle 2	(sp = 74 mm)	s = 51 mm
axle 3	(sp = 73 mm)	s = 41 mm
axle 4	(sp = 73 mm)	s = 41 mm
axle 5	(sp = 73 mm)	s = 41 mm

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

axle1	ThA = 9536 N
axle2	ThA = 9536 N
axle3	ThA = 6675 N
axle4	ThA = 6675 N
axle5	ThA = 6675 N

calc. residual (hot) braking force in N
(item 4.3.1.4 of appendix 2 to annex 11)

axle 1	(rdyn 421 mm)	T = 39573 N
axle 2	(rdyn 421 mm)	T = 39573 N
axle 3	(rdyn 421 mm)	T = 22096 N
axle 4	(rdyn 421 mm)	T = 22096 N
axle 5	(rdyn 421 mm)	T = 22096 N

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

braking rate of the vehicle (item 4.3.2 to appendix 2 to annex 11)	0.60	0.46
required braking rate (items 1.5.3 and 1.7.2 to annex 11)		>= 0,4 and >= 0,6*E (0.36)

axle 1	(rdyn 421 mm)	T = 39573 N
axle 2	(rdyn 421 mm)	T = 39573 N
axle 3	(rdyn 421 mm)	T = 22096 N
axle 4	(rdyn 421 mm)	T = 22096 N
axle 5	(rdyn 421 mm)	T = 22096 N

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

braking rate of the vehicle (item 4.3.2 to appendix 2 to annex 11)	0.60	0.46
required braking rate (items 1.5.3 and 1.7.2 to annex 11)		>= 0,4 and >= 0,6*E (0.36)

spring parking brake

	axle 3	axle 4	axle 5
no of TRISTOP-actuators per axle line KDZ	2	2	2
TRISTOP-actuator type	2430	2430	2430
lever length lBh in mm	120	120	120
stat. tyre radius rstat max in mm	401	401	401
at a stroke of s in mm	30	30	30
min. force of spring brake TFZ in N	6735	6735	6735
sp.brake chamber no BPW	05.444.2005.444.2005.444.20		
release pressure pLs in bar	4.7	4.7	4.7

calculation:

ratio until road	2.3042	2.3042	2.3042
$iFb = lBh * \eta * C * rBt / (2 * rBn * rstat)$ for rstat in mm	401	401	401
brake force of spring br. Tf in N	29771	29771	29771
$Tf = (TFZ * KDZ - 2 * Co / lBh) * iFb$			
braking rate zf laden	0.293		
$zf = \text{sum}(Tf) / P + 0,01$			

Test of the frictional connection required by the parking brake

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

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

min Ef =	4326 mm	for E =	5980 mm
=====			
min Ef =	4326 mm	for E =	5980 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 =	2120 mm	height of center of gravity - laden
PR =	16200 kg	maximum bogie mass - laden
P =	32200 kg	maximum total mass - laden
nf =	3	no. of axle(s) with TRISTOP spring brake actuators
ng =	3	no. of bogie axle(s)

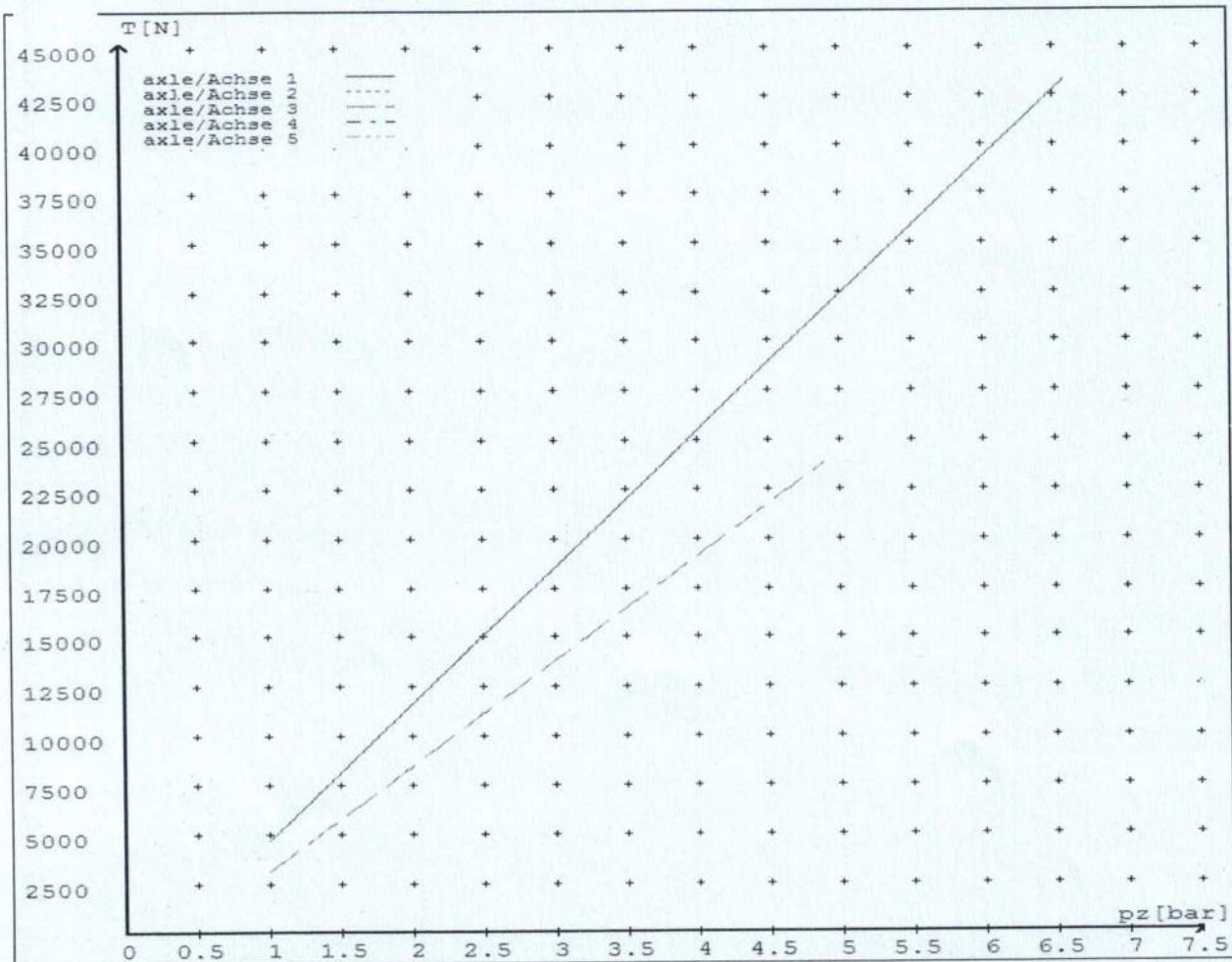
reference values

reference values for z = 50% for max rdyn: 421 mm

	pz [bar]	T [N]	T [N]
axle 1	1.0	4614	
	6.6	43253	
axle 2	1.0	4614	
	6.6	43253	
axle 3	1.0		3068
	4.9		23853
axle 4	1.0		3068
	4.9		23853
axle 5	1.0		3068
	4.9		23853

VIN - no.:

	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	24./	24./	24/30	24/30	24/30
Maximum stroke smax = ...mm maximaler Hub smax =mm	75	75	75	75	75
Lever length =mm Hebellänge =mm	150	150	120	120	120



reference values for $z = 0.5$

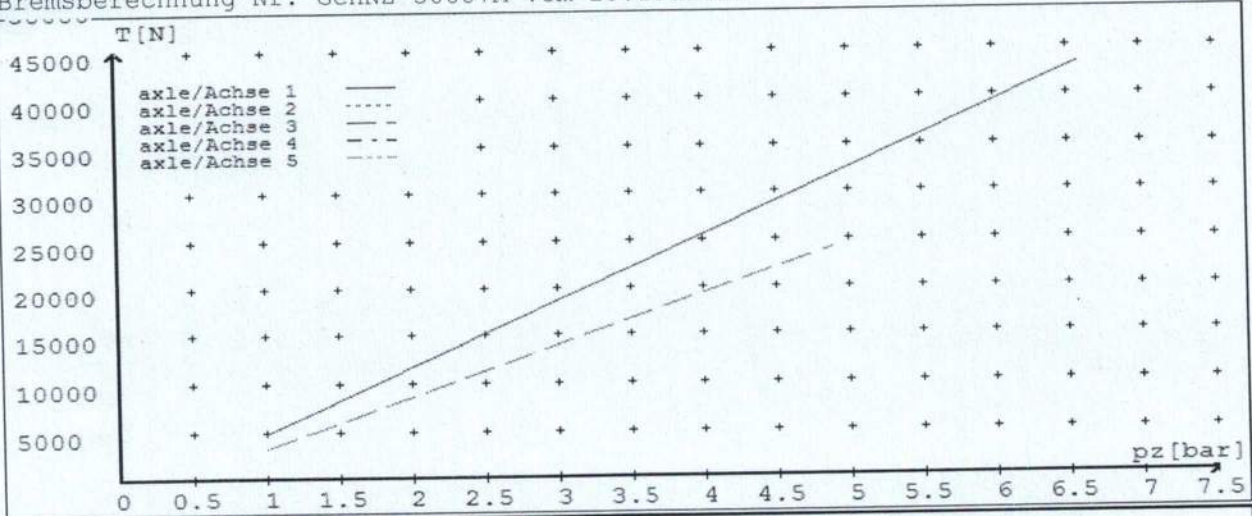
Angabe der Referenzwerte für $z = 0.5$

for max rdyn: 421 mm

für max rdyn: 421 mm

brake calculation no: GenNZ 50087A date 28.10.2015

Bremsberechnung Nr: GenNZ 50087A vom 28.10.2015



	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	24./	24./	24/30	24/30	24/30
Maximum stroke $s_{max} = \dots$ mm maximaler Hub $s_{max} = \dots$ mm	75	75	75	75	75
Lever length = \dots mm Hebellänge = \dots mm	150	150	120	120	120