TRANSPORT AGENCY

Heavy Vehicle Specialist Certificate

Must be presented to a Transport Serv... ...
Heavy Vehicle Specialist Inspector and Inspecting Organisation

...Name... ID

CHRIS CLARKE CJC

VIN / Chassis Number

7A9C200240102319 3

Chassis Modification | Load Anchorage | Log Bolsters
Towing Connection | ✓ Brakes | SRT
PSV Stability | PSV Rollover | Swept Path
PBS

HUEF.

CARRY OUT SET UP OF TRAILER EBS SYSTEM.

ROLL STABILITY FUNCTION (RSS) ACTIVATED.

Code/Standard ...

HUBNZ 32015/2 SCHED 5.

Component Load Rating(s)

30000 KG.

General ...

N/A.

Supporting Documents

BRAKE DESIGN CERTIFICATE - RJH130922.
PREV EXEMPTION REF HUB 13/255.

Specific Conditions

WARNING LAMP MUST ILLUMINATE WHEN IGNITION IS SWITCHED ON + THEN EXTINGUISH IMMEDIATELY OR WHEN VEHICLE EXCEED 7 KPH.

... or Hubodometer Reading ...

N/A

Declaration

... the Heavy Vehicle ... and I hold a current ... above mentioned ... and installation ... with the Land Transport ... 2002 and ... ledge the information ... and correct.

Designer's ...

Inspector's / Designer's Signature

Delegate ... Name ...

Date: 26.09.2013 Number: 447136

... Date

... these marked ... must be completed ... certificate can be ...

WABCO START-UP PROTOCOL

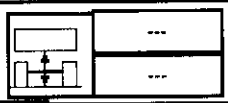
System	Trailer EBS-E	**WABCO part number**	480 102 080 0
Production date	2013-04-12	**Serial number**	897001340200L
Serial number (modulator)	000000021251		
Fingerprint Customer EOL / Customer Development / Flash Program	W503643 / 2013-09-26 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00		

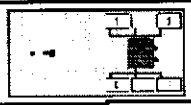
WABCO TRAILER EBS-E

GGVS/ADR TUEH TB 2007 - 019.00
TDB 0749

HERSTELLER MANUFACTURER CONSTRUCTEUR	DOMETT T&T
TYP TYPE TYPE	3AS B Rear
FAHRZEUG IDENTNR. CHASSIS NUMBER NUMERO DE CHASSIS	7A9C20024D1023193
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO CALCUL DE FREINAGE NO	TP50904S
POLRADZAHNEZAHL / POLE WHEEL TEETH / DENTS ROUE DENTÉE	90 / 90
ABS-System / ABS-System / Système ABS	4S/2M
RSS / RSS / RSS — Einfachbereifung / Single Tyre / Monte simple	
Lenkachse / Steering axle / Essieu viteur	
Zwillingsbereifung / Twin Tyre / Monte jumelee — X	
Kippkritisches Fahrzeug / Critical Trailer / Vehicule critique	
Subsystems — I/O	

GIO	Pin1	Pin3	Pin4
1	---	---	---
2	---	---	---
3	---	---	---
4	---	---	---
5	DIAG	DIAG	DIAG
6	---	---	---
7	---	---	---





	pm (bar)		6.5	pm (bar)		0.7	2.0	---	6.5		TYP TYPE	(mm)	(mm)	(bar) 1.0	(bar) Pz
ACHSE AXLE ESSIEU									pz					TR (daN)	
1	1300	0.6	1.9	6600	4.3	0.4	1.4	---	5.4	-	14 / 16	64	69	436	2915
2	1300	0.6	1.9	6600	4.3	0.4	1.4	---	5.4	-	14 / 16	64	69	436	2915
3	1300	0.6	1.9	6600	4.3	0.4	1.4	---	5.4	-	14	64	69	436	2915
4	0	---	---	0	---	---	---	---	---	-	---	---	---	---	---
5	0	---	---	0	---	---	---	---	---	-	---	---	---	---	---

Diagnostic memory	OK	**Warning lamp control**	OK
Parameter setting	carried out	**Stop light power supply**	Not tested
EBS pressure test	Not tested	**Lifting axle test**	Not tested
Redundancy test	OK	**ECAS distance sensor calibration**	Not tested
ABS sensor assignment	OK	**Distance sensor Axle load calibr**	Not tested
RTR check	Not tested	**Leak test**	Not tested
Immobilizer test	Not tested	**Signal outputs TEBS**	Not tested
Signal inputs	Not tested		

Diagnostic memory ELEX	Not tested	**Signal outputs ELEX**	Not tested
TailGUARDlight	Not tested	**TailGUARD**	Not tested

Manufacturer	DOMETT T&T	**Vehicle ident. no**	7A9C20024D1023193
Vehicle type	3AS B Rear	**Odometer reading**	0.0 km
next Service	0 km	**Trip reading**	0.0 km
Tested by	Chris Clarke	**Signature**	
Date	2013-09-26 11:01:32 a.m.		

NZ TRANSPORT AGENCY
WAKA KOTAHI

NATIONAL OFFICE
50 Victoria St East
Private Bag 6995
Wellington 6141
New Zealand
T 64 4 894 5400
F 64 4 894 6100
www.nzta.govt.nz

Exemption: HVB13/255

EXEMPTION FROM SPECIFIED REQUIREMENTS OF LAND TRANSPORT RULE: Heavy-vehicle Brakes 2006, Rule 32015

Pursuant to Section 166(1) of the Land Transport Act 1998, and pursuant to the powers delegated to me, I, Jackie Hartley, Administrator (Assessments) hereby exempt the motor vehicle specified in Schedule 1 hereto from the section of Land Transport Rule: Heavy-vehicle Brakes 2006 (the Rule) listed in Schedule 2, subject to the conditions specified in Schedule 3.

Schedule 1: Vehicle Details:

Make/Model: **Domett T & T Ltd, 3 Axle Semi (B Rear)**
VIN/Chassis: **7A9C20024D1023193**

Schedule 2: Exempted Requirement:

2.3(9) The parking brake of a vehicle, whether or not it is being operated as a combination vehicle, must be able to be applied by the driver from the normal driving postion using one control only.

Schedule 3: Conditions of this Exemption:

1) The vehicle must be fitted with a Wabco park-release emergency valve (PREV), Part Number: 971 002 900 0.

2) The vehicle must be fitted with the Wabco PREV name plate, Part Number 971 002 103 4, adjacent to the PREV.

3) The vehicle must still be fitted with a parking brake that complies with all parking brake requirements in the Rule other than the requirement in Clause 2.3(9) of the Rule.

4) The installation of the PREV must be approved in writing by Gough Transpecs or an NZ Transport Agency appointed HVEK certifier acting on behalf of, and under instruction from, Gough Transpecs; Gough Transpecs must keep a written record of all approvals.

5) The HVEK certifier in 4) must be fully trained in end of line procedures for Wabco electronically controlled braking systems.

6) Gough Transpecs must provide full operator training in the use of the PREV and furnish the operator with full written operating instructions for the PREV.

7) The vehicle must not be modified in any way while operating under this exemption.

8) This original exemption must be kept by Gough Transpecs.

9) A copy of this exemption (printed on a silver WABCO sticker) must be affixed to the exempted vehicle as close to the WABCO PREV as possible.

10) The sticker in 9) must be legible and include all printed areas of this original exemption letter.

11) This exemption can be revoked at any time in writing by the NZ Transport Agency.

Signed at Wellington this 23rd day of July 2013

Jackie Hartley
Administrator (Assessments)

trailer (full, semi-, centre-axle) with air brake system acc. to UN/ECE-R.13.11

distribution: DOMETT T&T
7A9C20024D1023193
SCDC: JH130922
PREV: HVB13/255

please note

This brake calculation is made under consideration of
-the legal precriptions mentioned above in the version valid at the time of making the program (V6.13.06.12).
-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!
WABCOBrake V6.13.06.12 db 12.06.2013

vehicle manufacturer: DOMETT T&T

trailer model : 3AS B Rear

trailer type : 3-axle-semi-trailer

remarks : air / hydraulic / VA suspension
WABCO TRAILER - EBS
TRISTOP 1+2: T.14/16
265/70 R 19,5

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

		unladen	laden
total mass	P in kg	5000 - 6000	26000 - 30000
king-pin	PS kg	1100 - 2100	6200 - 10200
axle 1	P1 in kg	1300	6600
axle 2	P2 in kg	1300	6600
axle 3	P3 in kg	1300	6600
total axle mass	PR in kg	3900	19800
wheel base	E in mm	6475 - 6475	
centre of gravity height	h in mm	1150	2121
K-factor		Kv min 1.8439	Kc min 0.9948
K-factor		Kv max 1.8469	Kc max 1.0224

		axle 1	axle 2	axle 3
no. of combined axles		1	1	1
no. of brake chambers per axle line	KDZ	2	2	2
The power output corresponds to		BZ 119.6	BZ 119.6	BZ 122.1
brake chamber manufacturer		Meritor	Meritor	Meritor
chamber size		T.14/16	T.14/16	14.
lever length	lBh 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	2.1	2.1	2.1
chamber pressure(rdyn max)	pH at z=22,5%bar	2.1	2.1	2.1
chamber press.(servo)	pcha at pm6,5bar bar	5.4	5.4	5.4
piston force	ThA at pm6,5bar N	5187	5187	5187
brake force(rdyn min)	T lad. at pm6,5bar N	39192	39192	39192
brake force(rdyn max)	T lad. at pm6,5bar N	39192	39192	39192
brake force within 1 % rolling friction proportion	%	33.3	33.3	33.3

braking rate z laden	0.605	for rdyn min
z = sum (TR)/PRmax	0.605	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: Meritor 1416HTLD64

axle 2:
valve 1: 971 002 ... 0 WABCO
EBS emergency valve

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

brake cylinder: Meritor 1416HTLD64

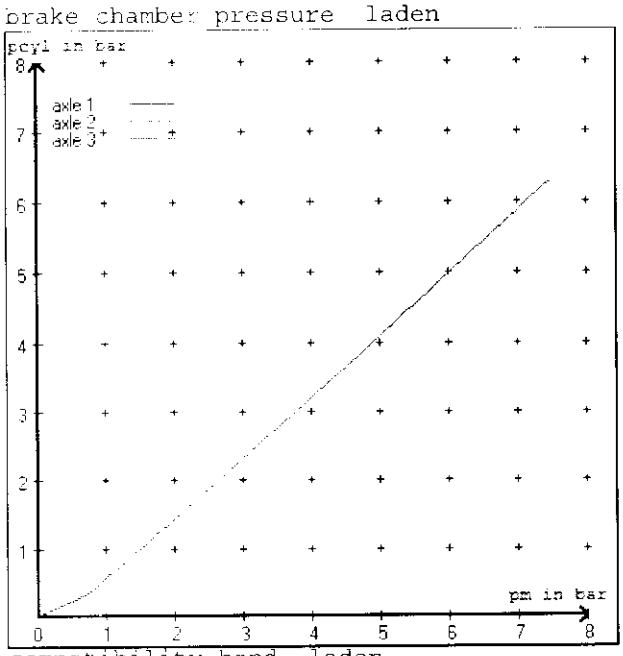
axle 3:
valve 1: 971 002 ... 0 WABCO
EBS emergency valve

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

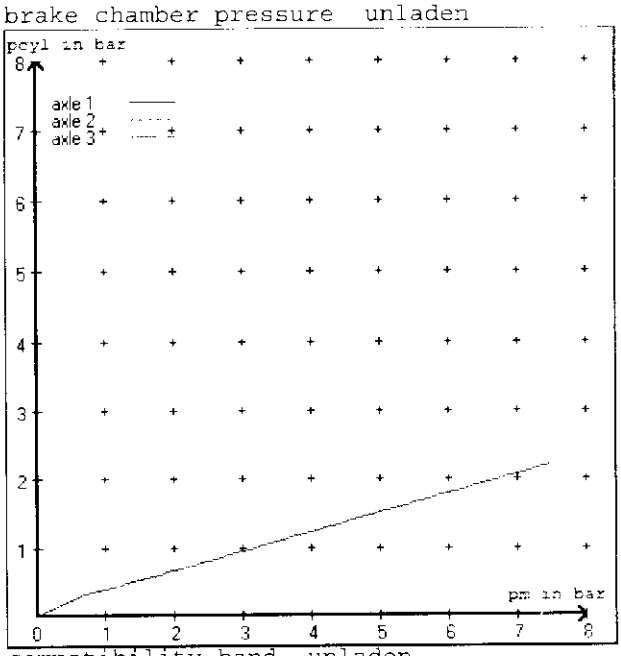
brake cylinder: Meritor 14HSCLD64

test type III (zIII = 0.30)	for rdyn min :	axle1	axle2	axle3
at pm 3.6 bar =>	pcha in bar :	2.8	2.8	2.8
test type III (zIII = 0.06)	for rdyn min :	axle1	axle2	axle3
at pm 1.2 bar =>	pcha in bar :	0.7	0.7	0.7

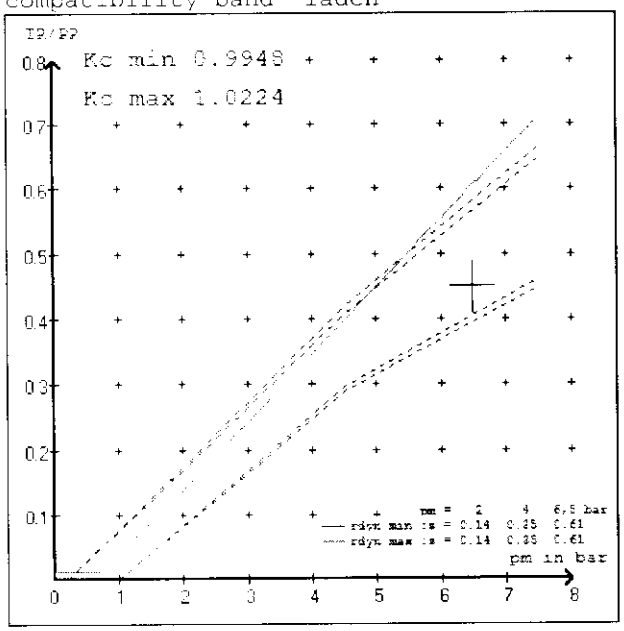
brake chamber pressure laden



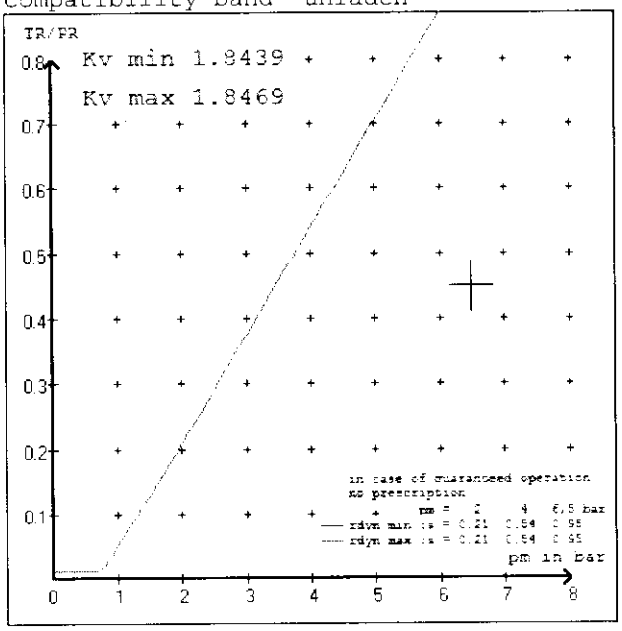
brake chamber pressure unladen



compatibility band laden



compatibility band unladen



vehicle manufacturer: DOMETT T&T
trailer model : 3AS B Rear
trailer type : 3-axle-semi-trailer

brake chamber and lever length :
axle 1 : 2 x type/diameter T.14/16 (Meritor) lever length 69 mm
axle 2 : 2 x type/diameter T.14/16 (Meritor) lever length 69 mm
axle 3 : 2 x type/diameter 14. (Meritor) lever length 69 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 / 2.. 0

EBS input data
vehicle manufacturer: DOMETT T&T
trailer model : 3AS B Rear
trailer type : 3-axle-semi-trailer
brake calculation no. : TP 50904S

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 = 0.142
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	1300	to be entered by the vehicle manufact.	1.9	6600	to be entered by the vehicle manufact.	0.4	1.4	5.4
2	1300		1.9	6600		0.4	1.4	5.4
3	1300		1.9	6600		0.4	1.4	5.4
4	0		0,0	0		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
1300	1.9	1300	1.9	1300	1.9
1800	2.2	1800	2.2	1800	2.2
2300	2.6	2300	2.6	2300	2.6
2800	2.9	2800	2.9	2800	2.9
3300	3.2	3300	3.2	3300	3.2
3800	3.6	3800	3.6	3800	3.6
4300	3.9	4300	3.9	4300	3.9
4800	4.2	4800	4.2	4800	4.2
6600	5.4	6600	5.4	6600	5.4

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

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

axle 1	(rdyn 421 mm)	T = 19.4 % Fe
axle 2	(rdyn 421 mm)	T = 19.4 % Fe
axle 3	(rdyn 421 mm)	T = 19.4 % Fe

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

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

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

axle1	ThA = 5187 N
axle2	ThA = 5187 N
axle3	ThA = 5187 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 = 30870 N
axle 2	(rdyn 421 mm)	T = 30870 N
axle 3	(rdyn 421 mm)	T = 30870 N

	basic test of subject trailer (E)	type III (calculated) residual (hot)braking
braking rate of the vehicle (item 4.3.2 to appendix 2 to annex 11)	0.61	0.48
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 = 30870 N
axle 2	(rdyn 421 mm)	T = 30870 N
axle 3	(rdyn 421 mm)	T = 30870 N

	basic test of subject trailer (E)	type III (calculated) residual (hot)braking
braking rate of the vehicle (item 4.3.2 to appendix 2 to annex 11)	0.61	0.48
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 1	axle 2
no of TRISTOP-actuators per axle line	KDZ	2	2
TRISTOP-actuator type		T.14/16	T.14/16
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	6160	6160
sp.brake chamber no Meritor.....		4	4
release pressure	pLs in bar	4.5	4.5

calculation:

ratio until road		3.9674	3.9674
iFb - lBh*Eta*C*rBt/(rBn*rstat)			
	for rstat in mm	401	401
brake force of spring br. Tf	in N	48188	48188
Tf - (TFZ*KDZ-2*Co/lBh)*iFb			
braking rate	zf laden	0.506	

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 = 3899 mm for E = 6475 mm
min Ef = 3899 mm for E = 6475 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	=	0.16	maximum required braking ratio of the parking brake
h	=	2127 mm	height of center of gravity - laden
PR	=	19800 kg	maximum bogie mass - laden
P	=	30000 kg	maximum total mass - laden
nf	=	2	no. of axle(s) with TRISTOP spring brake actuators
ng	=	3	no. of bogie axle(s)

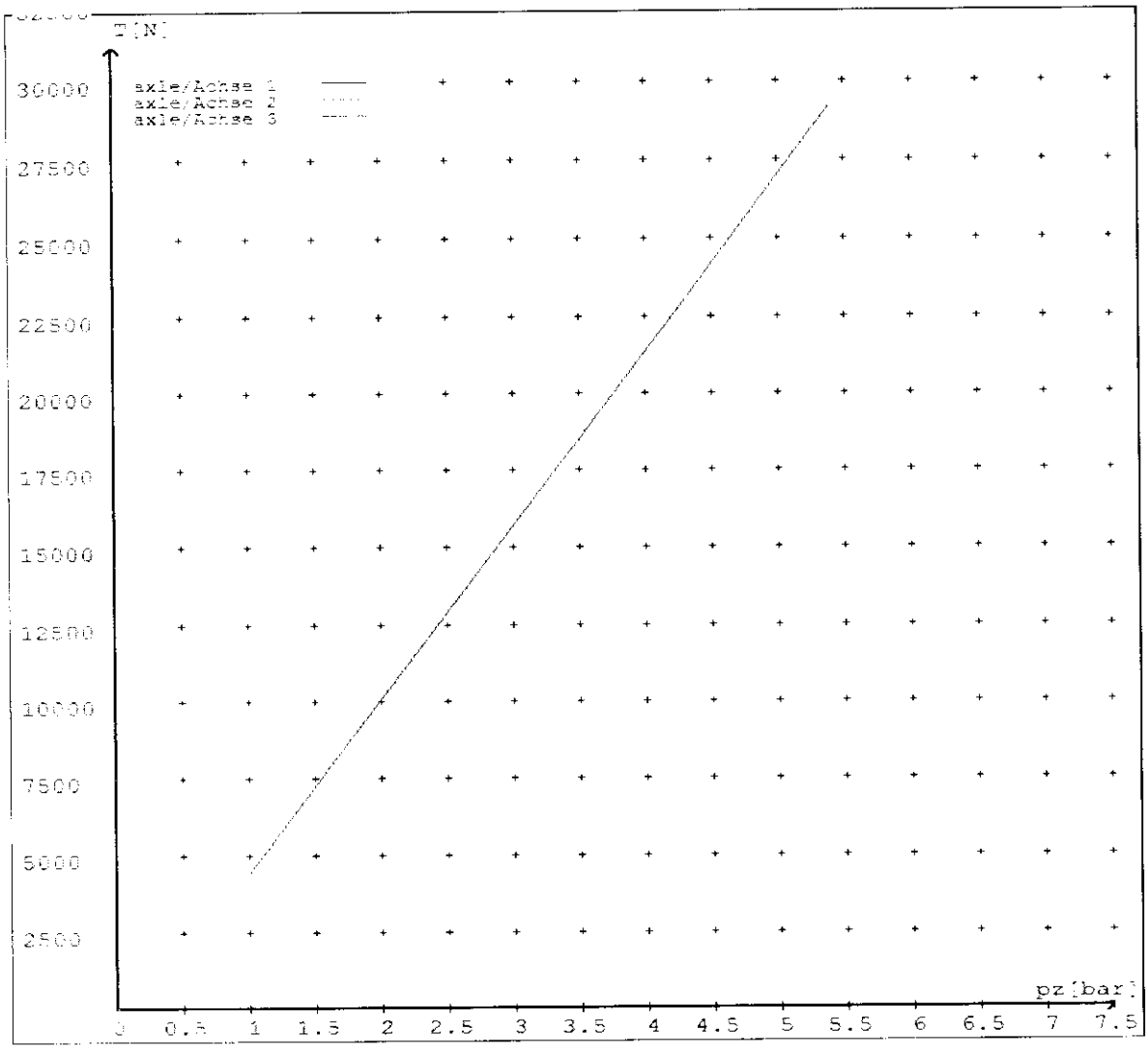
reference values

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

	pz [bar]	T [N]	T [N]
axle 1	1.0 5.4		4367 29151
axle 2	1.0 5.4		4367 29151
axle 3	1.0 5.4		4367 29151

VIN - no.:

	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	T.14/16	T.14/16	14./	/	/
Maximum stroke smax = ...mm maximaler Hub smax = ...mm	64	64	64		
Lever length = ...mm Hebellänge = ...mm	69.08	69.08	69.08		

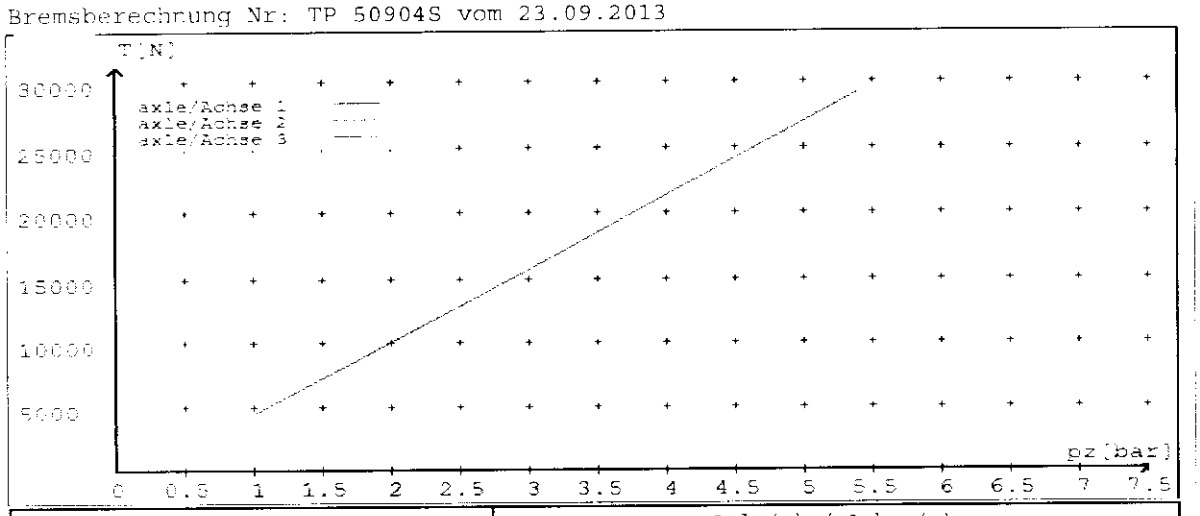


Print on WABCO no. 899 200 922 4 (only possible with laser printers!)

reference values for z = 0.45
Angabe der Referenzwerte für z = 0.45

for max rdyn: 421 mm
für max rdyn: 421 mm

brake calculation no: TP 50904S date 23.09.2013
Bremsberechnung Nr: TP 50904S vom 23.09.2013



	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	T.14/16	T.14/16	14./	/	/
Maximum stroke smax ...mm maximaler Hub smax ...mm	64	64	64		
Lever length ...mm Hebellänge ...mm	69.08	69.08	69.08		

HVBR WORKSHEET

(PROCEDURE & COMPLIANCE DOCUMENTATION SHEET)

CERTIFICATE No. JH130922

CUSTOMER NAME: DOMETT T&T

CUSTOMER ORDER No.: 4072 DATE RECEIVED: July 2013

VEHICLE TYPE: 3 AXLE SEMI TRAILER (B REAR)

REG No.: CHASSIS No.: 7A9C20024D1023193

BRIEF SPECIFICATION AS CERTIFIED TO HVBR

BRAKE CHAMBERS:
Type: 1416HTLD64 (TSE) : Max stroke = 64 mm Lever length = 69 mm
Type: 14HSCLD64 (TSE) : Max stroke = 64 mm Lever length = 69 mm

BRAKE VALVES: Ratio Valve Setting: EBS CONTROL
Test Points: 3 4 5 7

FRICTION LINING: OEM Aftermarket
(All) Lining Brand JURID 539

EBS CONTROL: IF SPECIAL CONDITIONS APPLY – SEE INSTRUCTION ON LT400

VALVES: AS PER BRAKE CALCULATION# TP50904 & SO1535785

TYRE SIZE: 265 70 R 19.5

NOTES
PACKING SLIP NO. SO1535785 PROCESS TIME: 1

MERITOR CHAMBERS IN BRAKE CALC TP50904 ARE TSE

COMPLETION DATE : 23rd Sept 2013 SIGNATURE (pp.):

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: 23rd Sept 2013 Signed (pp.):

Certifier's identification

Name: J E Hirst

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: JEH

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