NZ TRANSPORT AGENCY
WAKA KOTAHI

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: 7A9D15013J1023760

Make: DOMETT TRAILERS

Component being certified:

- [ ] Chassis
- [ ] Load anchorage
- [ ] Log bolsters
- [ ] Towing connection
- [X] Brakes
- [ ] SRT
- [ ] PSV stability
- [ ] PSV rollover
- [ ] Swept path
- [ ] PBS

Model *(optional)*:

Certification category: HVEK

Description of work

CERTIFY TO SCHEDULE 5 OF LTR 32015/4
RSS ON: TWIN TYRES / ~~SUPER SINGLES~~ TYRE SIZE = 265 70 R 19.5

Code/standard/rule certified to: LTR 32015/4

General drawing number(s): N/A

Component load rating(s): 28 Tonnes GVM
~~30 Tonnes Group ratings~~

Supporting documents

BRAKE CODE CERTIFICATE JH180513
BRAKE CALCULATION # TP51742

Special conditions *(optional)*

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 [UNLESS 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: CJC

Date: 26-Jun-18

Number: 639296

CoF vehicle inspector ID:

CoF vehicle inspector signature:

Date:

All fields are mandatory unless otherwise stated.

WABCO START-UP LOG

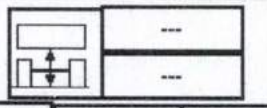
System	Trailer EBS-E	**WABCO part number**	480 102 084 0
Production date	2017-12-11	**Serial number**	437005060900M
Serial number (modulator)	000000005213		
Fingerprint Customer EOL / Customer Development / Flash Program	W503643 / 2018-07-04 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00		

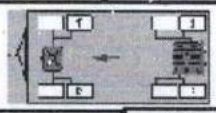
WABCO TRAILER EBS-E

GGVS/ADR TUEH TB 2007 - 019.00
TDB0459

HERSTELLER MANUFACTURER CONSTRUCTEUR	DOMETT TRAILERS
TYP TYPE TYPE	4AFT GENERAL FREIGHT
VEHICLE IDENT. NUMBER CHASSIS NUMBER NUMERO DE CHASSIS	7A9D15013J1023760
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO.	TP51742A
POLRADZÄHNEZAHL c-d | e-f POLE WHEEL TEETH c-d | e-f DENTS ROUE DENTÉE c-d | e-f	90 / 90
ABS-System ABS-System Système ABS	4S/3M
RSS RSS RSS Einfachbereifung Single Tire Monte simple	
Lenkachse Steering axle Essieu vireur	
Zwillingsbereifung Twin Tire Monte jumelée	X
Kritisches Fahrzeug Critical Trailer Véhicule critique	
Subsystems	SB / I/O / 24N

GIO	Pin1	Pin3	Pin4
1	24V-O1	---	---
2	---	---	---
3	ALS2	ALS2	---
4	---	---	---
5	DIAG	DIAG	DIAG
6	---	---	---
7	---	---	---





ACHSE AXLE ESSIEU	pm (bar)		6.5	pm (bar)		0.8	2.0	---	6.5		TYP TYPE	(mm)	(mm)	(bar) 1.0 TR (daN)	Pz
									pz						
1	1350	0.5	1.7	7500	4.7	0.5	1.6	---	6.3	-	24	67	127	476	4308
2	1350	0.5	1.7	7500	4.7	0.5	1.6	---	6.3	-	24	67	127	476	4308
3	1200	0.4	1.3	7500	4.7	0.5	1.6	---	4.6	-	24 / 30	64	127	540	3049
4	1200	0.4	1.3	7500	4.7	0.5	1.6	---	4.6	-	24 / 30	64	127	540	3049
5	0	---	---	0	---	---	---	---	---	-	---	---	---	---	---

TEBS-E

Diagnostic memory	OK	**Warning lamp control**	OK
Parameter setting	carried out	**Stop light supply**	OK
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 TRAILERS	**Vehicle ident. no**	7A9D15013J1023760
Vehicle type	4AFT GENERAL FREIGHT	**Odometer reading**	0.0 km
next Service	0 km	**Trip reading**	0.0 km
Tester	Chris Clarke		
Date	2018-07-04 12:45:36 p.m.	**Signature**	

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

distribution: DOMETT TRAILERS
7A9D15013J1023760
SODC: JH180513
LT400: CJC 639296

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 (V6.14.04.20).
-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 V6.14.04.20 db 20.04.2016

vehicle manufacturer: DOMETT TRAILERS
trailer model : 4AFT GENERAL FREIGHT
trailer type : 4-axle-full-trailer
remarks : air / hydraulic / VA suspension
WABCO TRAILER - EBS E
TRISTOP 3+4: 24/30 [TSE CHAMBERS ACTUALLY FITTED]
265/70 R 19,5

axle 1 + 2 + 3 + 4 : SAF, SNK 367x180, TDB 0459 ECE,

		unladen	laden
total mass	P in kg	5100	30000
axle 1	P1 in kg	1350	7500
axle 2	P2 in kg	1350	7500
axle 3	P3 in kg	1200	7500
axle 4	P4 in kg	1200	7500
wheel base	E in mm	6300 - 6800	
centre of gravity height	h in mm	1000	2100

		axle 1	axle 2	axle 3	axle 4
		manually	manually	manually	manually
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		BC 0069.2	BC 0069.2	BC 0051.0	BC 0051.0
brake chamber manufacturer		BPW	BPW	WABCO	WABCO
chamber size		24.	24.	24/30	24/30
lever length	lBh in mm	127	127	127	127
brake factor	[-]	9.73	9.73	9.73	9.73
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	30.0	30.0	30.0	30.0
calculation:					
chamber pressure(rdyn min)pH at z=22,5%	bar	2.3	2.3	2.0	2.0
chamber pressure(rdyn max)pH at z=22,5%	bar	2.3	2.3	2.0	2.0
chamber press.(servo)pcha at pm6,5bar	bar	6.2	6.2	4.5	4.5
piston force ThA at pm6,5bar	N	8933	8933	6355	6355
brake force(rdyn min)T lad. at pm6,5bar	N	51788	51788	36655	36655
brake force(rdyn max)T lad. at pm6,5bar	N	51788	51788	36655	36655
brake force within 1 % rolling friction proportion	%	25.1	25.1	24.9	24.9

braking rate z laden 0.601 for rdyn min
z = sum (TR)/PRmax 0.601 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 or 480 207 2.. 0
EBS relay valve

brake cylinder: BPW 05.444.15...

axle 2:
valve 1: 480 207 0.. 0 WABCO or 480 207 2.. 0
EBS relay valve

brake cylinder: BPW 05.444.15...

axle 3:
valve 1: 480 102 ... 0 WABCO
EBS trailer modulator

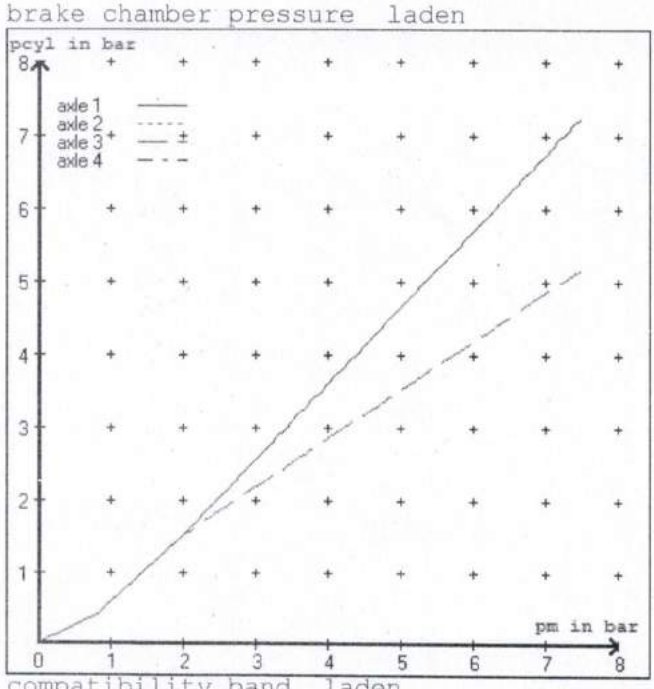
brake cylinder: WABCO 925 376 005 0 / 925 376 2.. 0

axle 4:
valve 1: 480 102 ... 0 WABCO
EBS trailer modulator

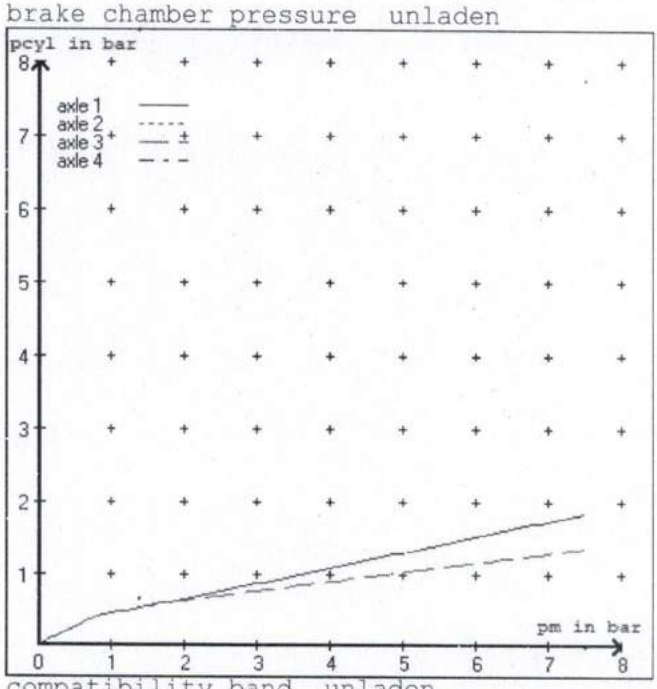
brake cylinder: WABCO 925 376 005 0 / 925 376 2.. 0

test type III (zIII = 0.30)	for rdyn min :	axle1	axle2	axle3	axle4	
at pm 3.5 bar =>	pcha in bar :	3.1	3.1	2.5	2.5	
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	

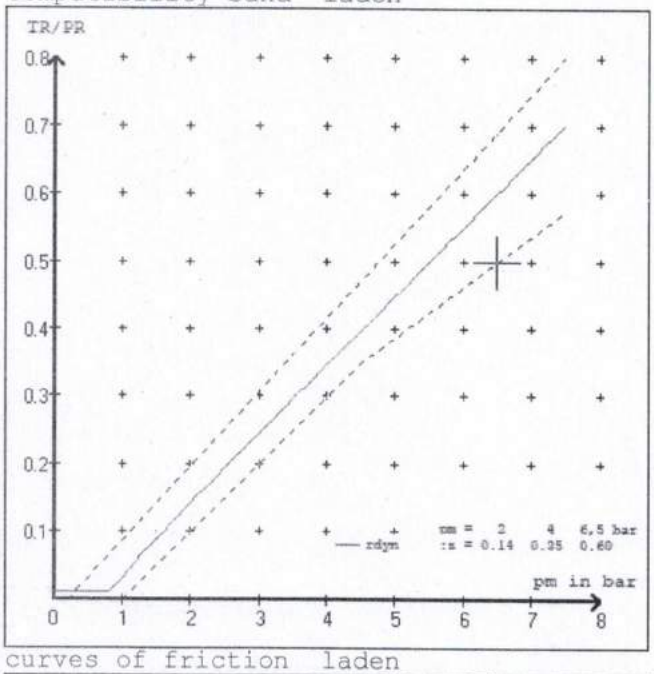
brake chamber pressure laden



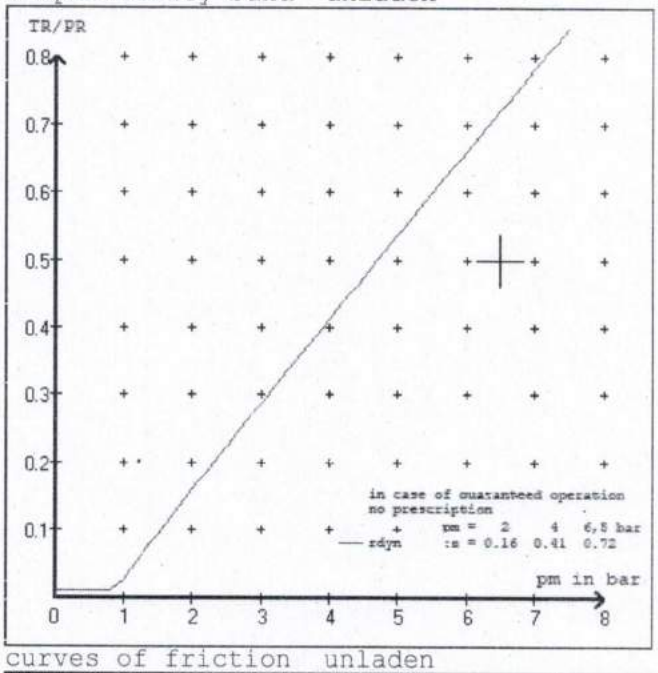
brake chamber pressure unladen



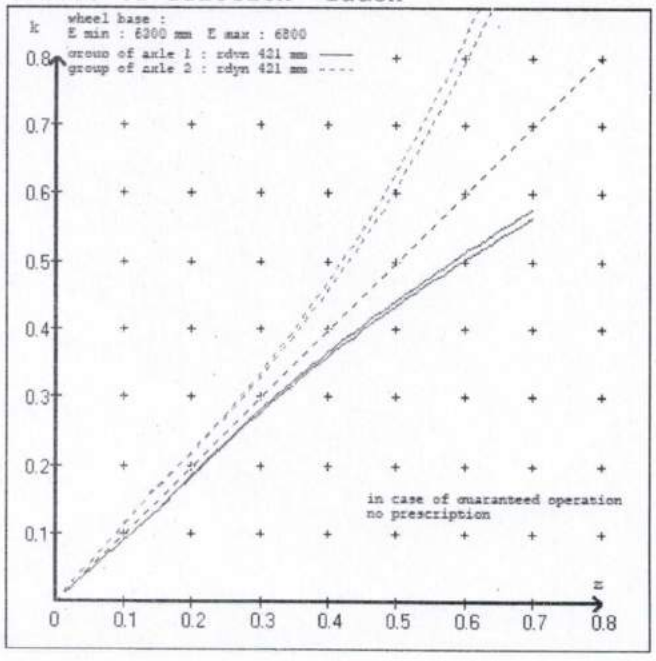
compatibility band laden



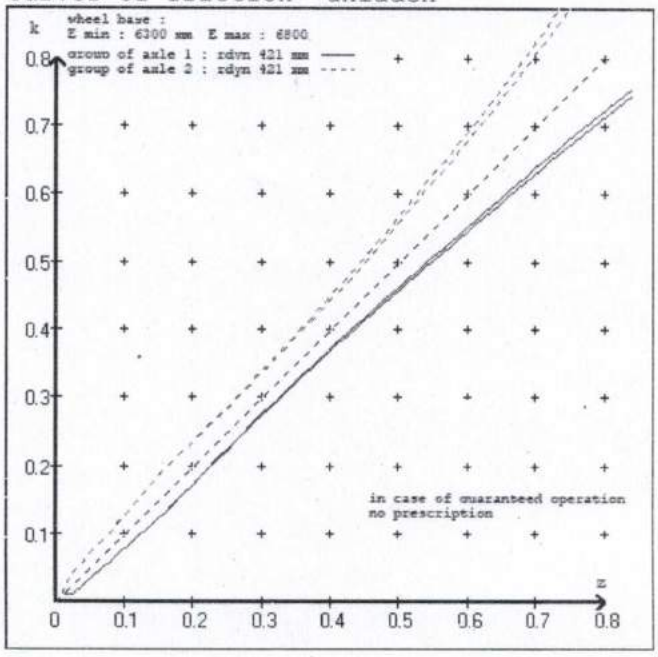
compatibility band unladen



curves of friction laden



curves of friction unladen



vehicle manufacturer: DOMETT TRAILERS
trailer model : 4AFT GENERAL FREIGHT
trailer type : 4-axle-full-trailer

brake chamber and lever length :
axle 1 : 2 x type/diameter 24. (BPW) lever length 127 mm
axle 2 : 2 x type/diameter 24. (BPW) lever length 127 mm
axle 3 : 2 x type/diameter 24/30 (WABCO) lever length 127 mm
axle 4 : 2 x type/diameter 24/30 (WABCO) lever length 127 mm

brake diagram :

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 TRAILERS
trailer model : 4AFT GENERAL FREIGHT
trailer type : 4-axle-full-trailer
brake calculation no. : TP 51742A

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

assignment pm / deceleration z: pm 0.8 bar z = 0.010
(laden condition) 2.0 bar z = 0.134
6.5 bar z = 0.600

control pressure pm			6,5	control pressure pm		0.8	2.0	6.5
axle	axle load unladen	bellow pr. unladen	brake pr. unladen	axle load laden	bellow pr. laden	brake pr. laden		
1	1350	to be entered by the vehicle manufact.	1.7	7500	to be entered by the vehicle manufact.	0.5	1.6	6.3
2	1350		1.7	7500		0.5	1.6	6.3
3	1200		1.3	7500		0.5	1.6	4.6
4	1200		1.3	7500		0.5	1.6	4.6
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
1350	1.6	1350	1.6	1200	1.2	1200	1.2
1850	2.0	1850	2.0	1700	1.5	1700	1.5
2350	2.3	2350	2.3	2200	1.7	2200	1.7
2850	2.7	2850	2.7	2700	2.0	2700	2.0
3350	3.1	3350	3.1	3200	2.2	3200	2.2
3850	3.5	3850	3.5	3700	2.5	3700	2.5
4350	3.8	4350	3.8	4200	2.8	4200	2.8
4850	4.2	4850	4.2	4700	3.0	4700	3.0
7500	6.2	7500	6.2	7500	4.5	7500	4.5

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

axle 1 :	reference axle: SAF	SNK 3718	brake lining:	BK 6386
	test report :	TDB 0459 ECE	date :	20130801 01.08.2013
axle 2 :	reference axle: SAF	SNK 3718	brake lining:	BK 6386
	test report :	TDB 0459 ECE	date :	20130801 01.08.2013
axle 3 :	reference axle: SAF	SNK 3718	brake lining:	BK 6386
	test report :	TDB 0459 ECE	date :	20130801 01.08.2013
axle 4 :	reference axle: SAF	SNK 3718	brake lining:	BK 6386
	test report :	TDB 0459 ECE	date :	20130801 01.08.2013

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 = 24.4 % Fe
axle 2	(rdyn 421 mm)	T = 24.4 % Fe
axle 3	(rdyn 421 mm)	T = 19.7 % Fe
axle 4	(rdyn 421 mm)	T = 19.7 % Fe

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

axle 1	(sp = 74 mm)	s = 54 mm
axle 2	(sp = 74 mm)	s = 54 mm
axle 3	(sp = 63 mm)	s = 54 mm
axle 4	(sp = 63 mm)	s = 54 mm

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

axle1	ThA = 8933 N
axle2	ThA = 8933 N
axle3	ThA = 6355 N
axle4	ThA = 6355 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 = 37666 N
axle 2	(rdyn 421 mm)	T = 37666 N
axle 3	(rdyn 421 mm)	T = 26743 N
axle 4	(rdyn 421 mm)	T = 26743 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)	0.60	0.44
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 = 37666 N
axle 2 (rdyn 421 mm)	T = 37666 N
axle 3 (rdyn 421 mm)	T = 26743 N
axle 4 (rdyn 421 mm)	T = 26743 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)	0.60	0.44
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
no of TRISTOP-actuators per axle line	KDZ	2	2
TRISTOP-actuator type		24/30	24/30
lever length	lBh in mm	127	127
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	6360	6360
sp.brake chamber no 925		376 005 0376 005 0	
sp.brake chamber no 925		376 2.. 0376 2.. 0	
release pressure	pLs in bar	4.9	4.9

calculation:

ratio until road		3.0816	3.0816
iFb = lBh*Eta*C*rBt/(2*rBn*rstat)			
	for rstat in mm	401	401
brake force of spring br. Tf	in N	37742	37742
Tf = (TFZ*KDZ-2*Co/lBh)*iFb			

braking rate zf laden 0.266
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 = 4552 mm for E = 6300 mm
==========
min Ef = 4875 mm for E = 6800 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	=	15000 kg	maximum bogie mass - laden
P	=	30000 kg	maximum total mass - laden
nf	=	2	no. of axle(s) with TRISTOP spring brake actuators
ng	=	2	no. of bogie axle(s)

	axle 1 + 2 + 3 + 4		
axle manufacturer	SAF		
type of brake	SNK 367x180		
type of axle	SNK 3718		
test report no.	TDB 0459 ECE		
test report of characteristic value			
adm. stat. axle load	Pstat	in kg	9000
tested axle load	Pe	in kg	10200
max. adm. tyre radius	Rezul	in mm	999
adm. cam. torque (6,5 bar)	Czul	in Nm	2250
lining area per brake	AB	in cm²	1226
no. of brake cylinder		-	2
brakefactor Bf		-	9.73
threshold torque (Co,dec)		in Nm	30
date	20130801 01.08.2013		
brake lining	BK 6386		
cam torque	Ce	in Nm	1594
brake force	TeIII	in daN	4343
stroke	seIII	in mm	59
tested tyre radius	Re	in mm	518
tested lever length	le	in mm	140
threshold torque (Co,e)		in Nm	28

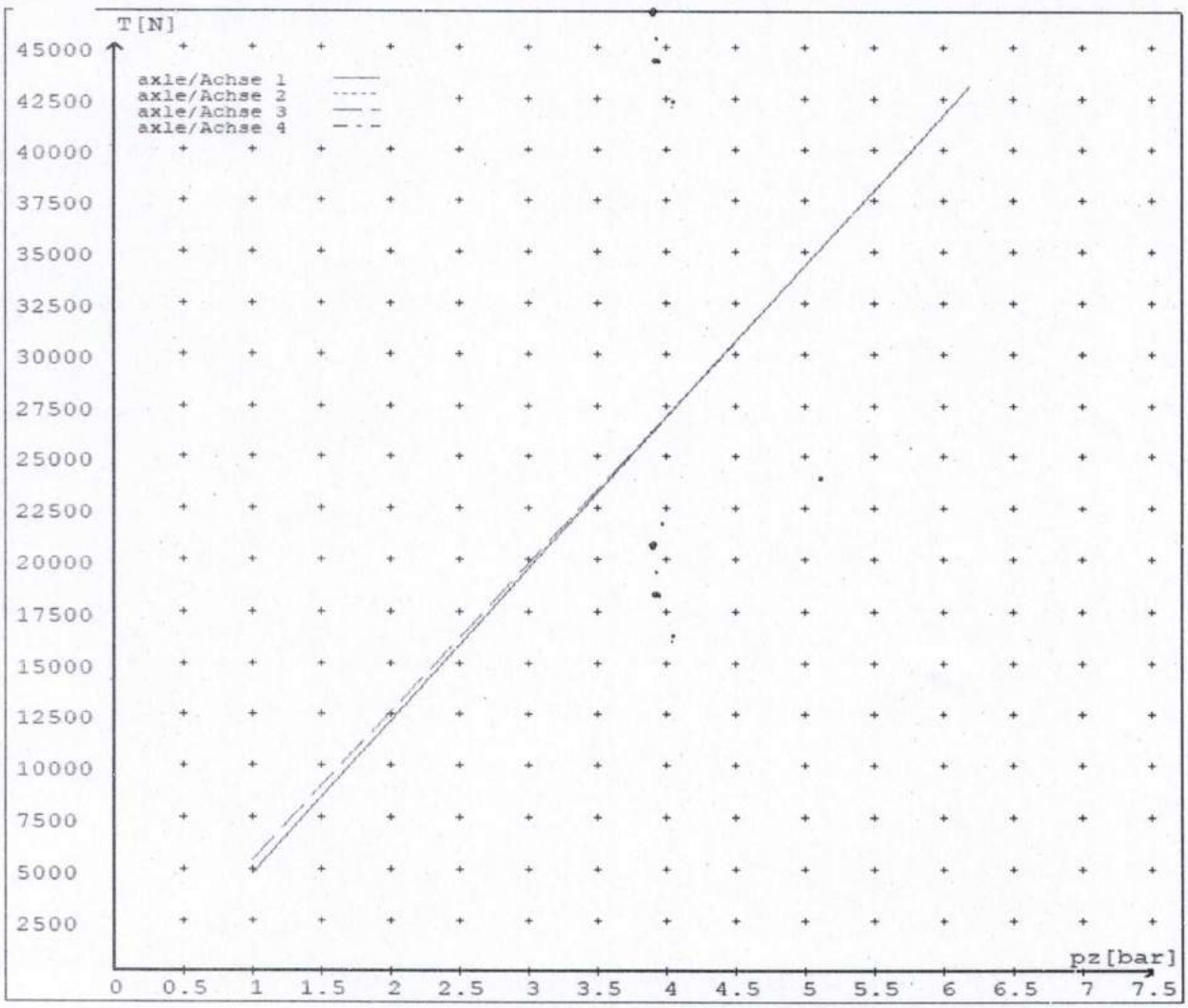
reference values

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

	pz [bar]	T [N]	T [N]
axle 1	1.0 6.2	4762 43085	
axle 2	1.0 6.2	4762 43085	
axle 3	1.0 4.5		5402 30495
axle 4	1.0 4.5		5402 30495

VIN - no.:

	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	24./	24./	24/30	24/30	/
Maximum stroke smax = ...mm maximaler Hub smax = ...mm	75	75	64	64	
Lever length = ...mm Hebellänge = ...mm	127	127	127	127	

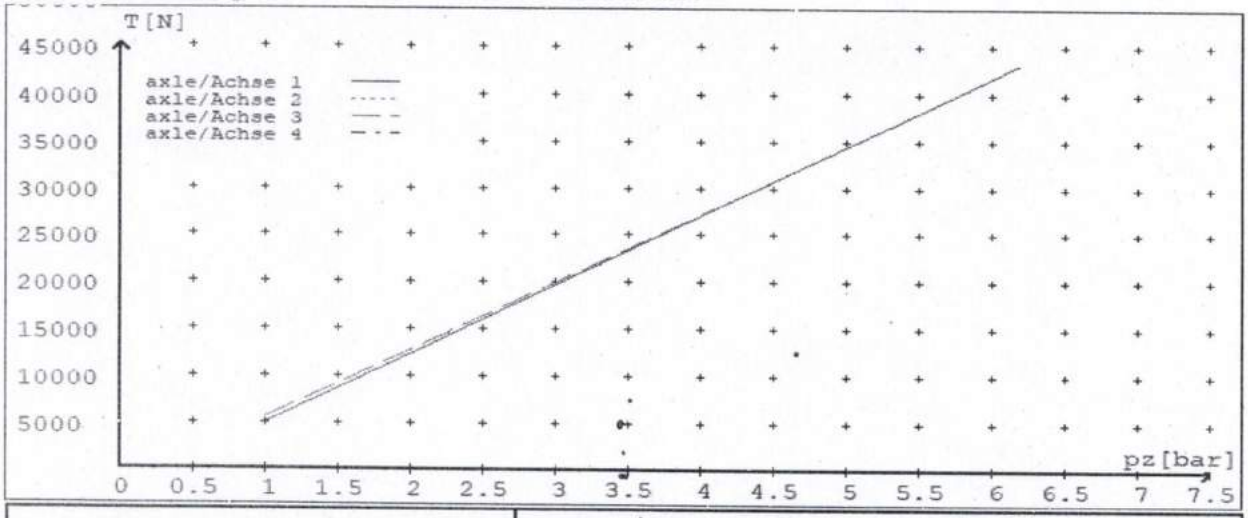


Print on WABCO no. 899 200 922 4 (only possible with laser printers!)

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: TP 51742A date 27.06.2018
Bremsberechnung Nr: TP 51742A vom 27.06.2018



	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	24./	24./	24/30	24/30	/
Maximum stroke smax = ...mm maximaler Hub smax = ...mm	75	75	64	64	
Lever length = ...mm Hebellänge = ...mm	127	127	127	127	

GOUGH Transpecs

HEAVY VEHICLE BRAKE RULE
32015/4 WORKSHEET
(PROCEDURE DOCUMENTATION SHEET-PDS)
&
CONFIRMATION OF COMPLIANCE

CERTIFICATE NO.	JH180513		
CUSTOMER NAME	DOMETT TRAILERS		
CUSTOMER ORDER NO.	5412	DATE RECEIVED	26-Jun-18
VEHICLE TYPE	GENERAL FREIGHT		
VIN/ CHASSIS NO.	7A9D15013J1023760		

BRIEF SPECIFICATION AS CERTIFIED TO SCHEDULE 5

BRAKE VALVES	MAKE	TYPE
PRIMARY RELAY	WABCO	480 102 08. 0
SECONDARY RELAY	WABCO	480 207 202 0
YARD RELEASE VALVE	SEALCO	17600B
PARK BRAKE VALVE	SEALCO	110701

SUSP. VALVES [WABCO]	FRONT	REAR
CONTROL	441 044 101 0	N/A
HEIGHT SENSOR	464 008 011 0	464 008 011 0

OTHER VALVES:

MAKE:	WABCO	TYPE:	434 014 000 0	SETTING:	CHECK VALVE
MAKE:		TYPE:		SETTING:	
MAKE:		TYPE:		SETTING:	
MAKE:		TYPE:		SETTING:	
MAKE:		TYPE:		SETTING:	

BRAKE CHAMBERS:	AXLE 1 & 2	AXLE 3 & 4	N/A
MAKE	TSE	TSE	N/A
SIZE	24S-TSE	2430GC-TSE	N/A
MAX STROKE (mm)	67	64	N/A
SLACK LENGTH (mm)	127	127	N/A
DRUM TYPE:	370x180	370x180	N/A
		OR	
BRAKE CALIPER:	N/A	N/A	N/A

FRICTION MATERIAL: ☑ OEM ☐ AFTERMARKET

LINING BRAND	AXLE 1 & 2	AXLE 3 & 4	N/A
	BK 6386	BK 6386	N/A

OTHERS:

TYRES:	FRONT	REAR
	265 70 R 19.5	265 70 R 19.5

BRAKE CALCULATION #: TP51742

COMMENTS:

EBS, SPECIAL CONDITIONS APPLY. SEE INSTRUCTIONS ON LT400 #

SALES ORDER #: SO1188218 **PROCESS TIME:** 1 HOUR

TRAILERS EQUIPPED WITH PREV: ~~THE PARK BRAKE PERFORMANCE **MUST** BE MEASURED BY PULLING THE RED ACTUATION KNOB ON THE PREV VALVE WHEN THE AXLES - EQUIPPED WITH SPRING BRAKES - ARE IN THE BRAKE ROLLERS. THE PARK BRAKE IN THE CAB **MUST NOT** BE APPLIED.~~

NOTES:

CHAMBERS & PARK BRAKE PERFORMANCE:

BRAKE CALCULATION No: **TP51742**

PARK BRAKE z = .266 @ 75483N FOR 30000 Kgs GVM

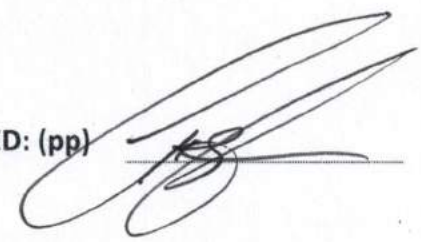
FRONT FRICTION @ 6.5 BAR = .5μ

Px VALUE IN TP51742 IS 0.1 BAR LOWER THAN PRACTICAL TESTS SUGGEST. THE ECU FILE HAS BEEN ADJUSTED TO REFLECT THIS.

CONFORMATION OF COMPLIANCE

I CONFIRM THAT THE VEHICLE IDENTIFIED IN PAGES 1 AND 2 OF THIS CONFORMATION OF COMPLIANCE COMPLIES WITH ALL RELEVANT REQUIREMENTS OF THE CURRENT NEW ZEALAND HEAVY VEHICLE BRAKE RULE 32015/4, SCHEDULE 5.

DATE: **26-Jun-18** **SIGNED: (pp)**



NAME & ID: J HIRST (JEH)

PHONE (BUS): 09 980 7300 **FAX (BUS)** 09 980 7306

POSTAL ADDRESS:

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

POSITION: BRAKE CERTIFIER HVEK

I CONFIRM THE BRAKE SYSTEM OF THE VEHICLE IDENTIFIED IN PAGE 1 OF THIS STATEMENT OF COMPLIANCE AS MODIFIED BY MYSELF, CONTINUES TO COMPLY WITH ALL THE RELIVANT REQUIREMENTS OF THE CURRENT NEW ZEALAND HEAVY BRAKE RULE 32015/4 SCHEDULE 5.

DATE: **SIGNED:**

NAME:

CERTIFIERS ID: **POSITION:**

PHONE (BUS): **FAX (BUS):**

COMMENTS: