

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)	ID
CHRIS CLARKE	CJC

Vehicle registration (optional)	VIN/chassis number
	7A9D10012J1023722
Make DOMETT	Component being certified:
Model (optional)	<input type="checkbox"/> Chassis
Certification category	<input type="checkbox"/> Load anchorage
HVEK	<input type="checkbox"/> Log bolsters
	<input type="checkbox"/> Towing connection
	<input type="checkbox"/> SRT
	<input type="checkbox"/> PSV stability
	<input type="checkbox"/> PSV rollover
	<input type="checkbox"/> Swept path
	<input type="checkbox"/> PBS

Description of work

CERTIFY TO HEAVY VEHICLE BRAKE RULE 32015/4.
 NEW ZEALAND HEAVY VEHICLE BRAKE SPECIFICATION.

Code/standard/rule certified to	Component load rating(s)
SCHEDULE 5	GVM 26,000 Kgs
General drawing number(s)	BRAKES 30,000 Kgs
N/A	

Supporting documents

BRAKE CODE CERTIFICATE	LC180514
SODC	LC180514

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)	or	Hubodometer reading (whichever comes first)
UNTIL MODIFIED or CHANGE OF USE		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

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 Number

11-Jun-18 639258

CoF vehicle inspector ID	CoF vehicle inspector signature	Date

All fields are mandatory unless otherwise stated.

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

distribution: DOMETT
2018 ROR 4A WPC

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 (V6.14.04.20).
 -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
 trailer model : 4A TANKER, D1001
 trailer type : 4-axle-full-trailer
 remarks : air / hydraulic / VA suspension
 WABCO TRAILER - EBS
 TRISTOP 3+4: T.16/24
 265/70 R 19,5

axle 1 + 2 + 3 + 4 : Assali Stefen, K, 361-005-16,

		<u>unladen</u>	<u>laden</u>
total mass	P in kg	5200	30000
axle 1	P1 in kg	1400	7500
axle 2	P2 in kg	1400	7500
axle 3	P3 in kg	1200	7500
axle 4	P4 in kg	1200	7500
wheel base	E in mm	5070 - 5070	
centre of gravity height	h in mm	900	1538

		<u>axle 1</u>	<u>axle 2</u>	<u>axle 3</u>	<u>axle 4</u>
no. of combined axles		manually 1	manually 1	manually 1	manually 1
no. of brake chambers per axle line	KDZ	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		20.	20.	T.16/24	T.16/24
lever length	lBh in mm	76	76	76	76
brake factor	[-]	22.37	22.37	22.37	22.37
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	6.0	6.0	6.0	6.0

calculation:

chamber pressure(rdyn min)pH at z=22,5%bar	2.1	2.1	2.1	2.1
chamber pressure(rdyn max)pH at z=22,5%bar	2.1	2.1	2.1	2.1
chamber press.(servo)pcha at pm6,5bar bar	5.5	5.5	4.6	4.6
piston force ThA at pm6,5bar N	6332	6332	4555	4555
brake force(rdyn min)T lad. at pm6,5bar N	51239	51239	36884	36884
brake force(rdyn max)T lad. at pm6,5bar N	51239	51239	36884	36884
brake force within 1 % rolling friction				
proportion %	26.7	26.7	23.3	23.3

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 or 480 207 2.. 0
EBS relay valve

brake cylinder: Meritor 20HSCLD65

axle 2:

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

brake cylinder: Meritor 20HSCLD65

axle 3:

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

brake cylinder: Meritor 1624HTLD64

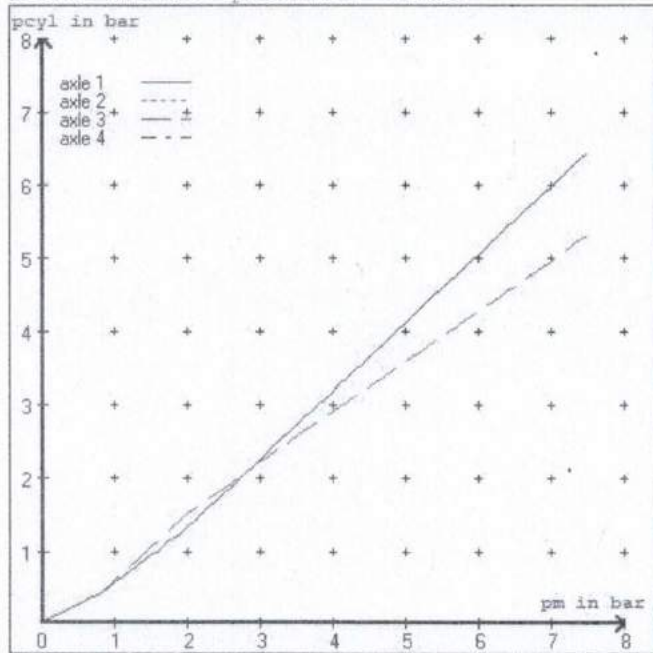
axle 4:

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

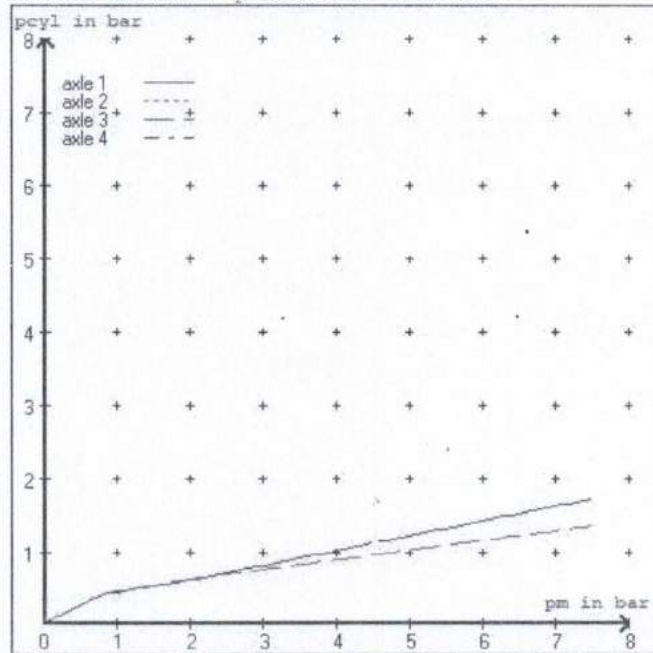
brake cylinder: Meritor 1624HTLD64

test type III (zIII = 0.30)	for rdyn min :	axle1	axle2	axle3	axle4
at pm 3.6 bar =>	pcha in bar :	2.8	2.8	2.6	2.6
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	0.9	0.9

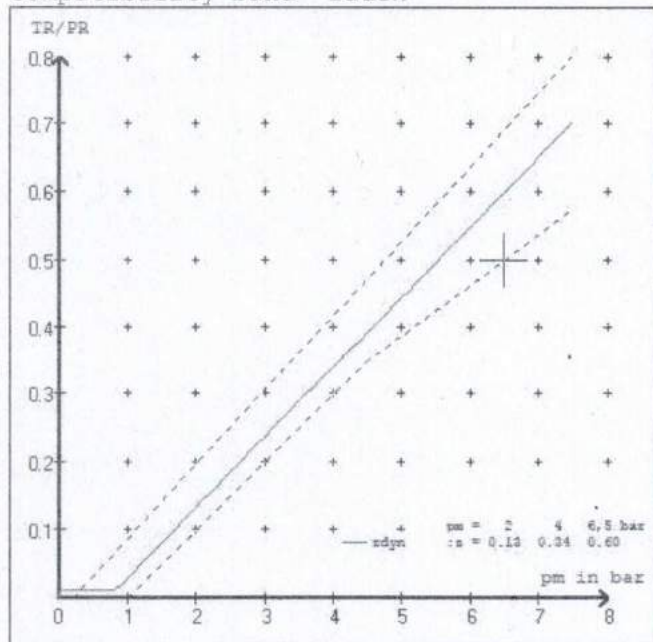
brake chamber pressure laden



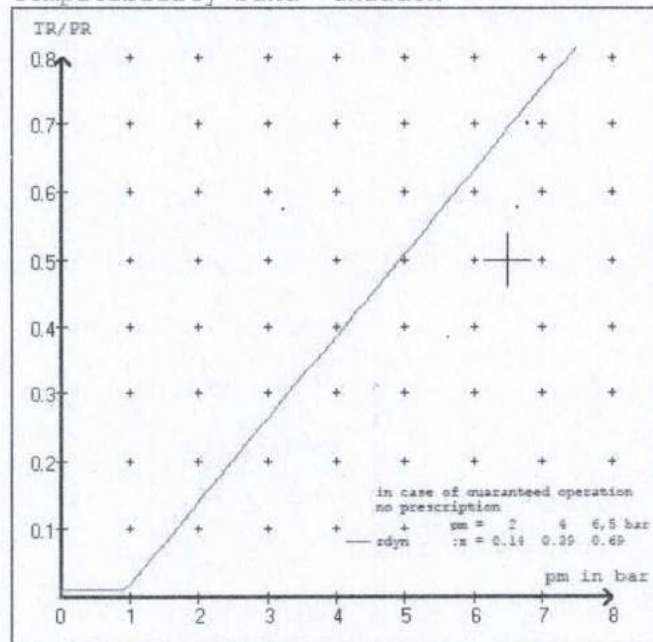
brake chamber pressure unladen



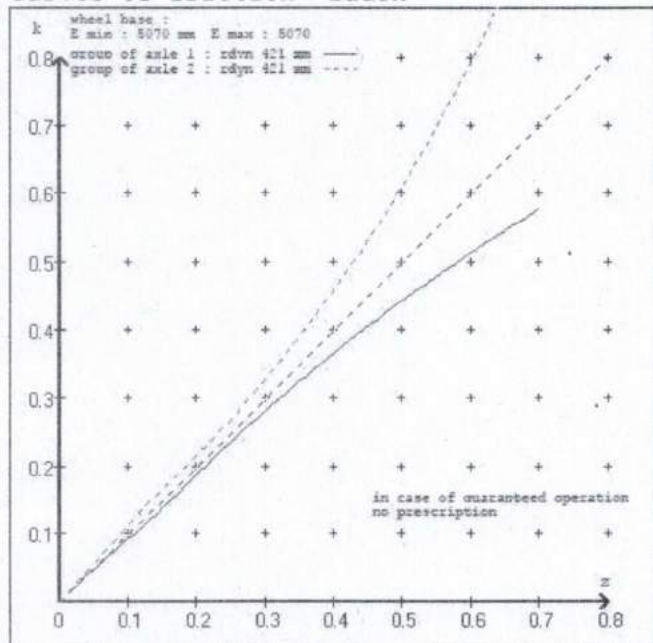
compatibility band laden



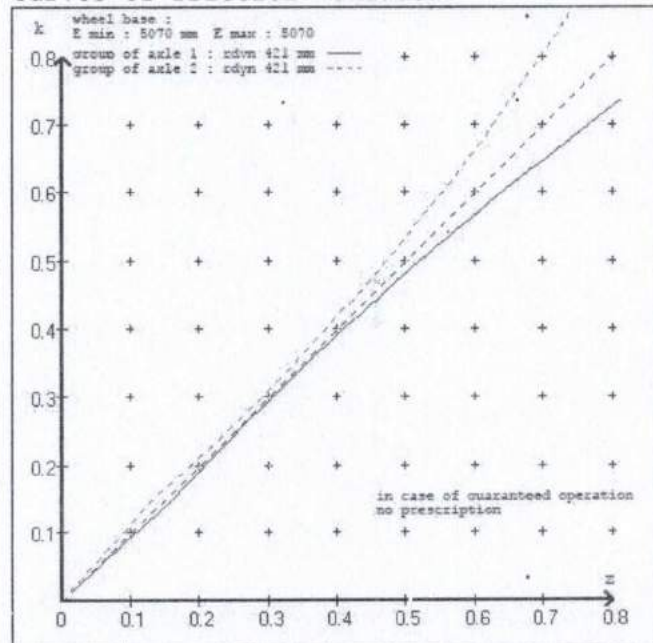
compatibility band unladen



curves of friction laden



curves of friction unladen



vehicle manufacturer: DOMETT
 trailer model : 4A TANKER, D1001
 trailer type : 4-axle-full-trailer

brake chamber and lever length :

axle 1 : 2 x type/diameter 20. (Meritor) lever length 76 mm
 axle 2 : 2 x type/diameter 20. (Meritor) lever length 76 mm
 axle 3 : 2 x type/diameter T.16/24 (Meritor) lever length 76 mm
 axle 4 : 2 x type/diameter T.16/24 (Meritor) lever length 76 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
 trailer model : 4A TANKER, D1001
 trailer type : 4-axle-full-trailer
 brake calculation no. : TP 2018A

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	1400	to be	1.5	7500	to be	0.4	1.3	5.5
2	1400	entered by	1.5	7500	entered by	0.4	1.3	5.5
3	1200	the vehicle	1.2	7500	the vehicle	0.4	1.5	4.6
4	1200	manufact.	1.2	7500	manufact.	0.4	1.5	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
1400 1.5	1400 1.5	1200 1.2	1200 1.2
1900 1.8	1900 1.8	1700 1.5	1700 1.5
2400 2.2	2400 2.2	2200 1.7	2200 1.7
2900 2.5	2900 2.5	2700 2.0	2700 2.0
3400 2.8	3400 2.8	3200 2.3	3200 2.3
3900 3.1	3900 3.1	3700 2.5	3700 2.5
4400 3.5	4400 3.5	4200 2.8	4200 2.8
4900 3.8	4900 3.8	4700 3.1	4700 3.1
7500 5.5	7500 5.5	7500 4.6	7500 4.6

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

axle 1 : reference axle: Assali SteflM or LC or TMen	brake lining: FER 5200-215
test report : 361-005-16	date : 09-02-2016
axle 2 : reference axle: Assali SteflM or LC or TMen	brake lining: FER 5200-215
test report : 361-005-16	date : 09-02-2016
axle 3 : reference axle: Assali SteflM or LC or TMen	brake lining: FER 5200-215
test report : 361-005-16	date : 09-02-2016
axle 4 : reference axle: Assali SteflM or LC or TMen	brake lining: FER 5200-215
test report : 361-005-16	date : 09-02-2016

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 = 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 = 58 mm)	s = 37 mm
axle 2 (sp = 58 mm)	s = 37 mm
axle 3 (sp = 57 mm)	s = 37 mm
axle 4 (sp = 57 mm)	s = 37 mm

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

axle1	ThA = 6332 N
axle2	ThA = 6332 N
axle3	ThA = 4555 N
axle4	ThA = 4555 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 = 49452 N
axle 2 (rdyn 421 mm)	T = 49452 N
axle 3 (rdyn 421 mm)	T = 35608 N
axle 4 (rdyn 421 mm)	T = 35608 N

	basic test	type III
	of subject	(calculated)
braking rate of the vehicle	trailer (E)	residual
(item 4.3.2 to appendix 2 to annex 11)	0.60	(hot)braking
		0.58

required braking rate
(items 1.5.3 and 1.7.2 to annex 11) $\geq 0,4$ and $\geq 0,6 * E (0.36)$

axle 1 (rdyn 421 mm)	T = 49452 N
axle 2 (rdyn 421 mm)	T = 49452 N
axle 3 (rdyn 421 mm)	T = 35608 N
axle 4 (rdyn 421 mm)	T = 35608 N

	basic test	type III
	of subject	(calculated)
braking rate of the vehicle	trailer (E)	residual
(item 4.3.2 to appendix 2 to annex 11)	0.60	(hot)braking
		0.58

required braking rate
(items 1.5.3 and 1.7.2 to annex 11) $\geq 0,4$ and $\geq 0,6 * E (0.36)$

spring parking brake

	axle 3	axle 4
no of TRISTOP-actuators per axle line KDZ	2	2
TRISTOP-actuator type	T.16/24	T.16/24
lever length lBh in mm	76	76
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	4.2397	4.2397
$iF_b = lB_h \cdot \eta \cdot C \cdot r_{Bt} / (r_{Bn} \cdot r_{stat})$ for rstat in mm	401	401
brake force of spring br. Tf in N $T_f = (TFZ \cdot KDZ - 2 \cdot C_o / lB_h) \cdot iF_b$	63816	63816
braking rate zf laden	0.444	
$z_f = \text{sum}(T_f) / P + 0,01$		

Test of the frictional connection required by the parking brake

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

$$\min E_f = E \cdot (1 - PR/P + z_{ferf} \cdot h/E) / (1 - z_{ferf} / (f_{zul} \cdot n_f/n_g))$$

$$\min E_f = 3628 \text{ mm} \quad \text{for } E = 5070 \text{ mm}$$

$$\min E_f = 3628 \text{ mm} \quad \text{for } E = 5070 \text{ mm}$$

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 = 1538 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 manufacturer	axle 1 + 2 + 3 + 4
type of brake	Assali Stefen
type of axle	K
	LM or LC or TM
	361-005-16
test report of characteristic value	
adm. stat. axle load	Pstat in kg 11000
tested axle load	Pe in kg 10200
max. adm. tyre radius	Rezul in mm 999
adm. cam. torque (6,5 bar)	Czul in Nm 940
lining area per brake	AB in cm ² 304
no. of brake cylinder	- 2
brakefactor (SB) Bf	- 22.37
brakefactor (PB) Bf	- 22.37
threshold torque (Co,dec)	Mo in Nm 6
date	09-02-2016
brake lining	FER 5200-215
cam torque	Ce in Nm 638
brake force	TeIII in daN 5366
stroke	seIII in mm 37
tested tyre radius	Re in mm 518
tested lever length	le in mm 76
threshold torque (Co,e)	in Nm 6

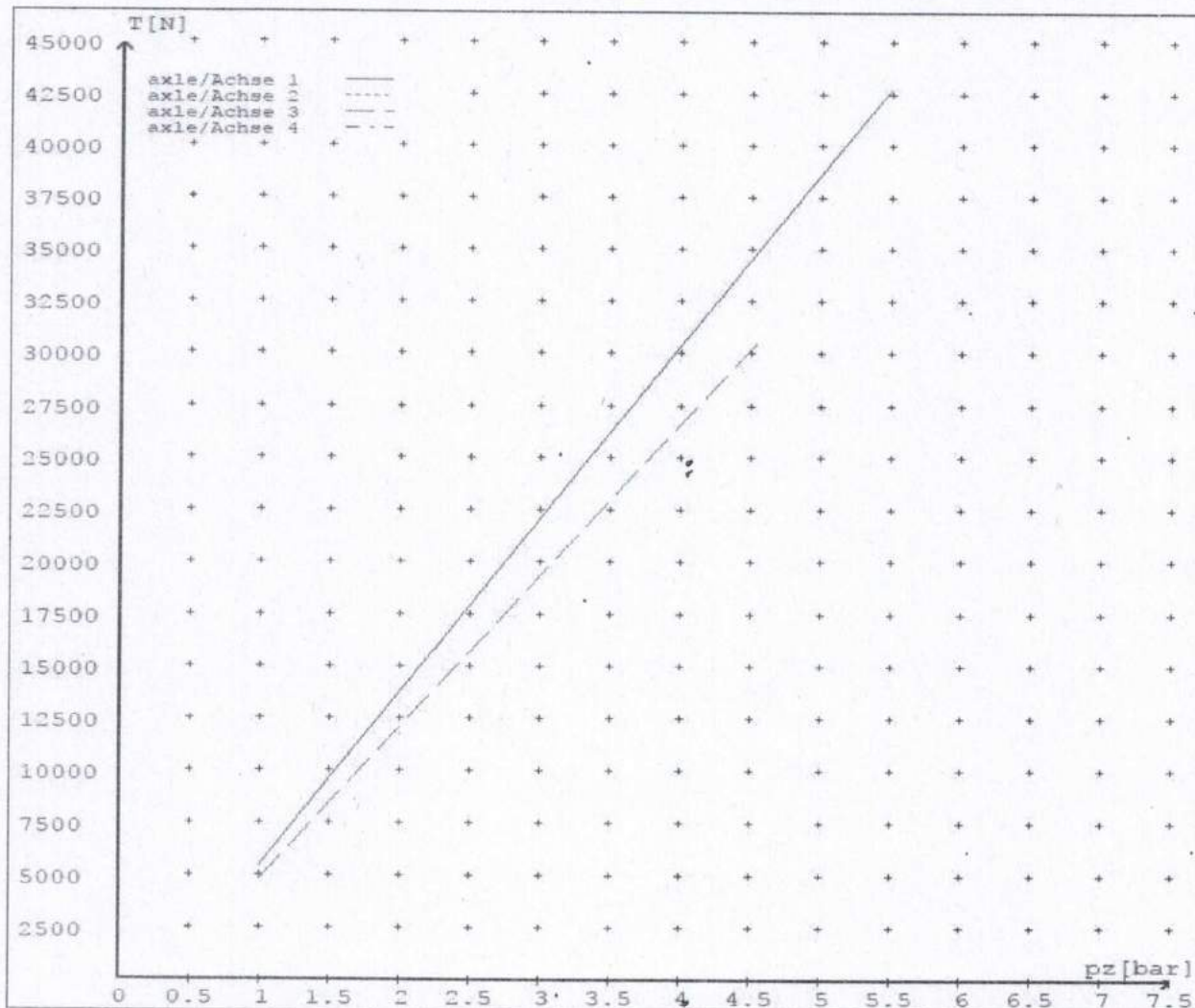
reference values

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

	pz [bar]	T [N]	T [N]
axle 1	1.0	5394	
	5.5	42770	
axle 2	1.0	5394	
	5.5	42770	
axle 3	1.0		4794
	4.6		30788
axle 4	1.0		4794
	4.6		30788

VIN - no.:

	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	20./	20./	T.16/24	T.16/24	/
Maximum stroke smax = ...mm maximaler Hub smax =mm	65	65	64	64	
Lever length =mm Hebellänge =mm	76	76	76	76	



reference values for $z = 0.5$

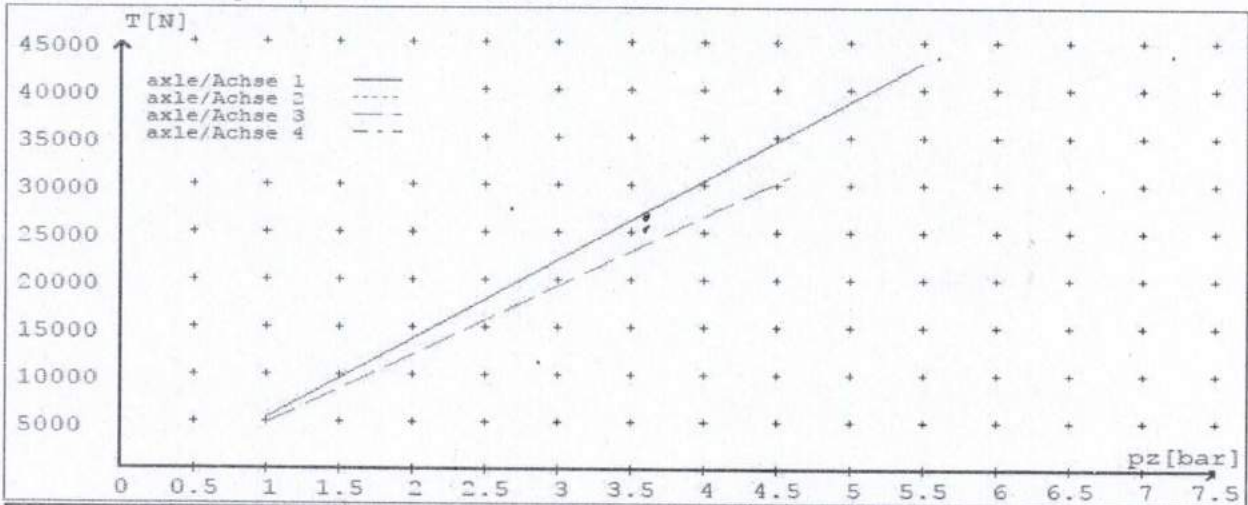
Angabe der Referenzwerte für $z = 0.5$

for max rdyn: 421 mm

für max rdyn: 421 mm

brake calculation no: TP 2018A date 20.03.2018

Bremsberechnung Nr: TP 2018A vom 20.03.2018



	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	20./	20./	T.16/24	T.16/24	/
Maximum stroke $s_{max} = \dots$ mm maximaler Hub $s_{max} = \dots$ mm	65	65	64	64	
Lever length = \dots mm Hebellänge = \dots mm	76	76	76	76	

GOUGH*Transpecs*

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

CERTIFICATE NO:	<input type="text" value="LC180514"/>		
CUSTOMER NAME:	<input type="text" value="DOMETT TRAILERS"/>		
CUSTOMER ORDER NO:	<input type="text" value="5313"/>	DATE RECEIVED:	<input type="text" value="16/03/2018"/>
VEHICLE TYPE:	<input type="text" value="FULL TANKER"/>		
VIN / CHASSIS NO:	<input type="text" value="7A9D10012J1023722"/>		

BRIEF SPECIFICATION AS CERTIFIED TO SCHEDULE 5

BRAKE VALVES:	MAKE	TYPE
PRIMARY RELAY:	WABCO	<input type="text" value="480 102 064 0"/>
SECONDARY RELAY:	WABCO	<input type="text" value="480 207 C01 0"/>
SPRING BRAKE RELAY:	SEALCO	<input type="text" value="110701"/>
PARK BRAKE VALVE:	SEALCO	<input type="text" value="17600B"/>
LOCKED RATIO:	<input type="text"/>	
MAKE:	<input type="text"/>	
SETTING:	<input type="text"/>	

OTHER VALVES

OTHER VALVES

MAKE:	<input type="text"/>	TYPE	<input type="text"/>	SETTING	<input type="text"/>
MAKE:	<input type="text"/>	TYPE	<input type="text"/>	SETTING	<input type="text"/>
MAKE:	<input type="text"/>	TYPE	<input type="text"/>	SETTING	<input type="text"/>
MAKE:	<input type="text"/>	TYPE	<input type="text"/>	SETTING	<input type="text"/>

BRAKE CHAMBERS

	FRONT	REAR	5TH
MAKE:	HALDEX	BERTOCCO	0
SIZE:	20, 125-200-001	1624	0
STROKE: MM	62mm	57mm	0
SLACK LENGTH: MM	DISC, 76mm	DISC, 76mm	0

BRAKE CALIPERS

BRAKE CALIPERS: HALDEX

FRICITION MATERIAL: OEM Aftermarket**LINING BRAND****LINING BRAND****FRONT****REAR**

MAT 5200-215

MAT 5200-215

OTHERS**TYRES:****FRONT****REAR**

265/70R 19.5

265/70R 19.5

COMMENTS

EBS, SPECIAL CONDITIONS APPLY. SEE INSTRUCTIONS ON LT400 #

0**NOTES:**

PACKING SLIP NO. _____

PROCESS TIME _____

CONFIRMATION OF COMPLIANCE

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

DATE: 11/06/2018 **SIGNED:** 

NAME & ID: LANCE CAWTE (LPC)

PHONE (BUS): 09 980 7300 **FAX (BUS):** 03 3083277

POSTAL ADDRESS: TRANSPORT SPECIALTIES LTD
PO BOX 98-971,
MANUKAU CITY,
AUCKLAND 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 RELEVANT REQUIREMENTS OF THE CURRENT NEW ZEALAND HEAVY BRAKE RULE 32015/4 SCHEDULE 5.

DATE: _____ **SIGNED:** _____

NAME: _____

CERTIFIERS ID: _____ **POSITION:** _____

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

COMMENTS: _____

WABCO START-UP LOG

System	Trailer EBS-E	WABCO part number	480,102 064 0
Production date	2018-01-10	Serial number	436042299100D
Serial number (modulator)	000000166914		
Fingerprint Customer EOL / Customer Development / Flash Program	W503643 / 2018-07-17 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00		

WABCO				TRAILER EBS-E				GGVS/ADR TUeH TB 2007 - 019.00 361-005-16											
HERSTELLER MANUFACTURER CONSTRUCTEUR DOMETT				GIO				Pin1				Pin3				Pin4			
TYP TYPE TYPE 4A TANKER, D1001				1				24V-01				---				---			
VEHICLE IDENT. NUMBER CHASSIS NUMBER NUMERO DE CHASSIS 7A9D10012J1023722				2				---				---				---			
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL. DE FREINAGE NO. TP2018ROR				3				ALS2				ALS2				---			
POLRADZÄHNZAHN c-d e-f POLE WHEEL TEETH c-d e-f DENTS ROUE DENTÉE c-d e-f 90 90				4				---				---				---			
ABS-System ABS-System Système ABS 4S/3M				5				DIAG				DIAG				DIAG			
Einfachbereifung Single Tire Monte simple				6				---				---				---			
Zwillingsbereifung Twin Tire Monte jumele				7				---				---				---			
Subsystems				SB				I/O				24N							
ACHSE AXLE ESSIEU				pm (bar)				6.5				pm (bar)				0.8 2.0 --- 6.5			
1				1400 0.4 1.5				7500 4.4 0.4 1.3				---				5.5 - 20 65 76 539 4277			
2				1400 0.4 1.5				7500 4.4 0.4 1.3				---				5.5 - 20 65 76 539 4277			
3				1200 0.3 1.2				7500 4.4 0.4 1.5				---				4.6 - 16 / 24 64 76 479 3078			
4				1200 0.3 1.2				7500 4.4 0.4 1.5				---				4.6 - 16 / 24 64 76 479 3078			
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	Vehicle ident. no	7A9D10012J1023722
Vehicle type	4A TANKER, D1001	Odometer reading	15.6 km
next Service	0 km	Trip reading	15.6 km
Tester	Chris Clarke	Signature	
Date	2018-07-17 10:20:36 a.m.		