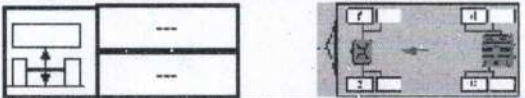


WABCO START-UP LOG

System	Trailer EBS-E	WABCO part number	480 102 064 0
Production date	2017-11-17	Serial number	436040807600H
Serial number (modulator)	000000161261		
Fingerprint Customer EOL / Customer Development / Flash Program	W502664 / 2018-06-06 ; 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	4A TANKER, D1001			1	24V-O1	---	---								
VEHICLE IDENT. NUMBER CHASSIS NUMBER NUMERO DE CHASSIS	7A9D10010J1023721			2	---	---	---								
BREMSBERECHNUNG/NO. NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO.	TP2018ROR			3	ALS2	ALS2	---								
POLRADZAHNEZAHL c-d e-f POLE WHEEL TEETH c-d e-f DENTS ROUE DENTEE c-d e-f	90	90	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 jumelle	X	Kippkritisches Fahrzeug Critical Trailer Vehicule critique	7	---	---	---								
Subsystems	SB	I/O	24N												
ACHSE AXLE ESSEU	pm (bar)		6.5	pm (bar)		0.8	2.0	---	6.5						

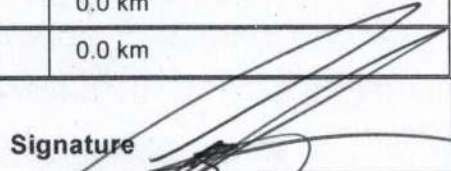
1	1400	0.4	1.5	7500	4.4	0.4	1.3	---	5.5	-	20	65	76	539	4277
2	1400	0.4	1.5	7500	4.4	0.4	1.3	---	5.5	-	20	65	76	539	4277
3	1200	0.3	1.2	7500	4.4	0.4	1.5	---	4.6	-	16 / 24	64	76	479	3078
4	1200	0.3	1.2	7500	4.4	0.4	1.5	---	4.6	-	16 / 24	64	76	479	3078
5	0	---	---	0	---	---	---	---	---	-	---	---	---	---	---

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	7A9D10010J1023721
Vehicle type	4A TANKER, D1001	Odometer reading	0.0 km
next Service	0 km	Trip reading	0.0 km
Tester	Chris Clarke		
Date	2018-06-06 1:08:21 p.m.		

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		1	1	1	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 20HŞCLD65

axle 2:

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

brake cylinder: Meritor 20HŞCLD65

axle 3:

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

brake cylinder: Meritor 1624HTLD64

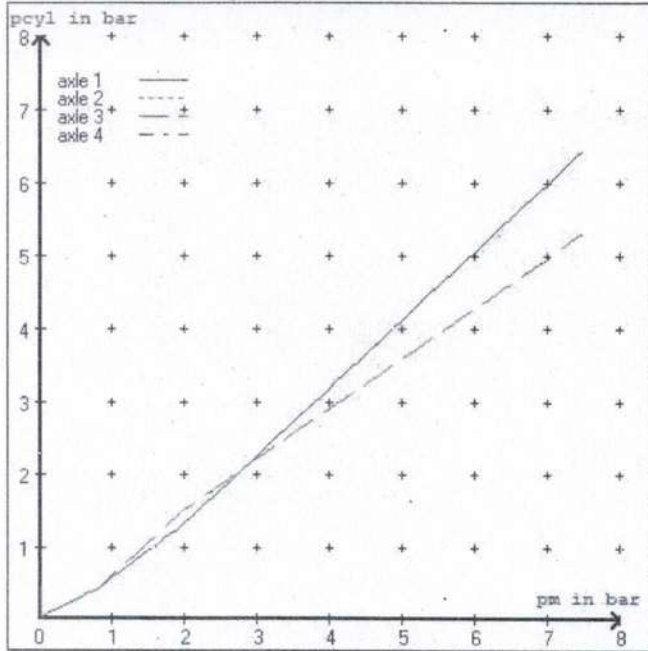
axle 4:

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

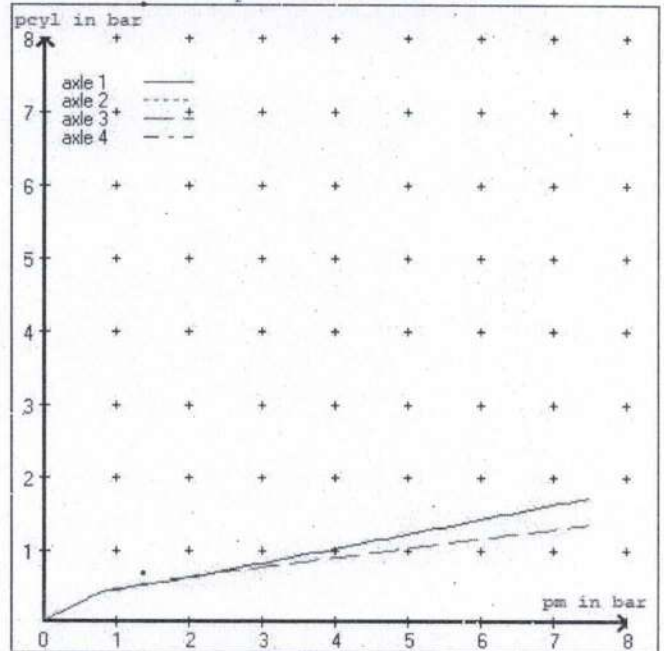
brake cylinder: Meritor 1624HTLD64

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	

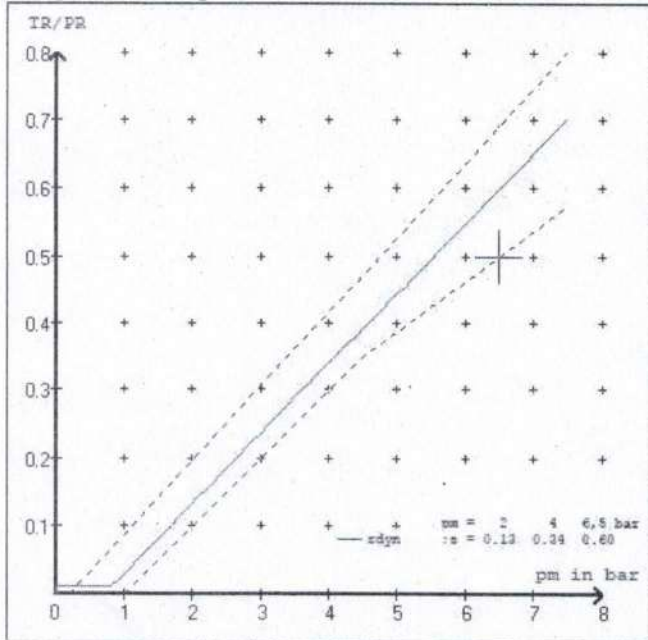
brake chamber pressure laden



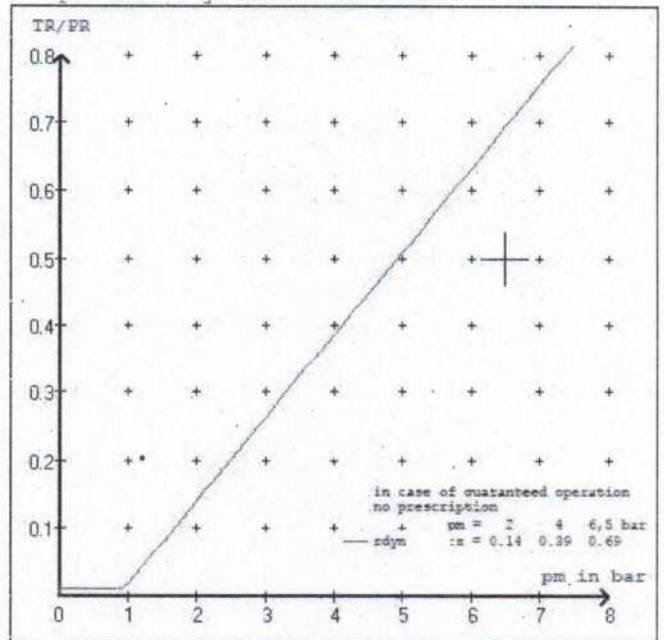
brake chamber pressure unladen



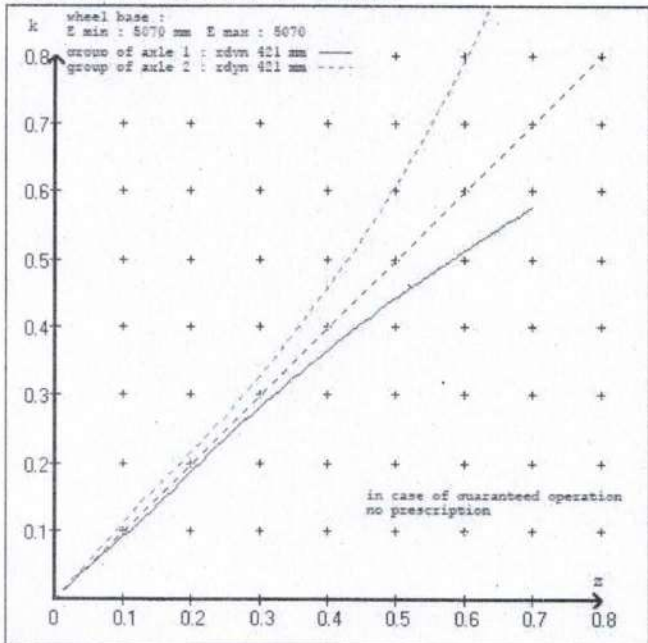
compatibility band laden



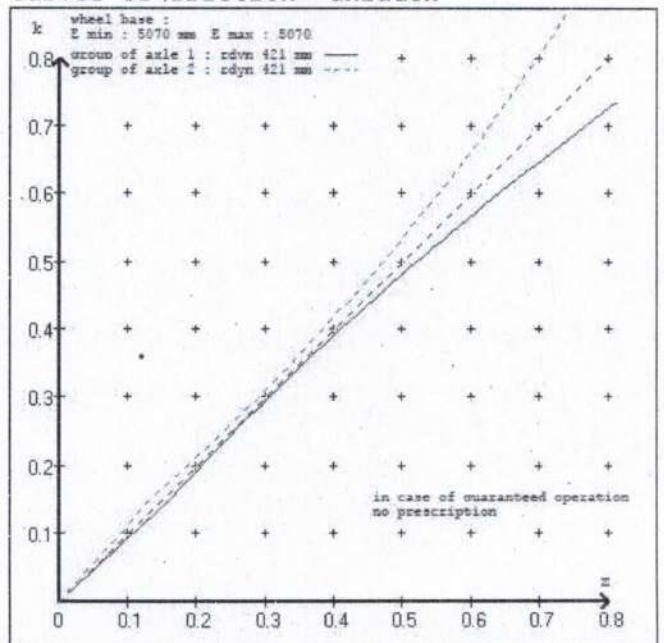
compatibility band unladen



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 the vehicle manufact.	1.5	7500	entered by the vehicle manufact.	0.4	1.3	5.5
3	1200		1.2	7500		0.4	1.5	4.6
4	1200		1.2	7500		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
1900	1.8	1900	1.8
2400	2.2	2400	2.2
2900	2.5	2900	2.5
3400	2.8	3400	2.8
3900	3.1	3900	3.1
4400	3.5	4400	3.5
4900	3.8	4900	3.8
7500	5.5	7500	5.5

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. 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 = 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)
trailer (E)	residual

braking rate of the vehicle (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)	>= 0,4 and >= 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)
trailer (E)	residual

braking rate of the vehicle (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)	>= 0,4 and >= 0,6*E (0.36)
--	-------------------------------

	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
$iFb = lBh \cdot \eta \cdot C \cdot rBt / (rBn \cdot rstat)$ for rstat in mm	401	401
brake force of spring br. Tf in N $Tf = (TFZ \cdot KDZ - 2 \cdot Co / lBh) \cdot iFb$	63816	63816
braking rate zf laden	0.444	
$zf = \text{sum}(Tf) / P + 0,01$		

Test of the frictional connection required by the parking brake

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

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

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

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

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 = 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

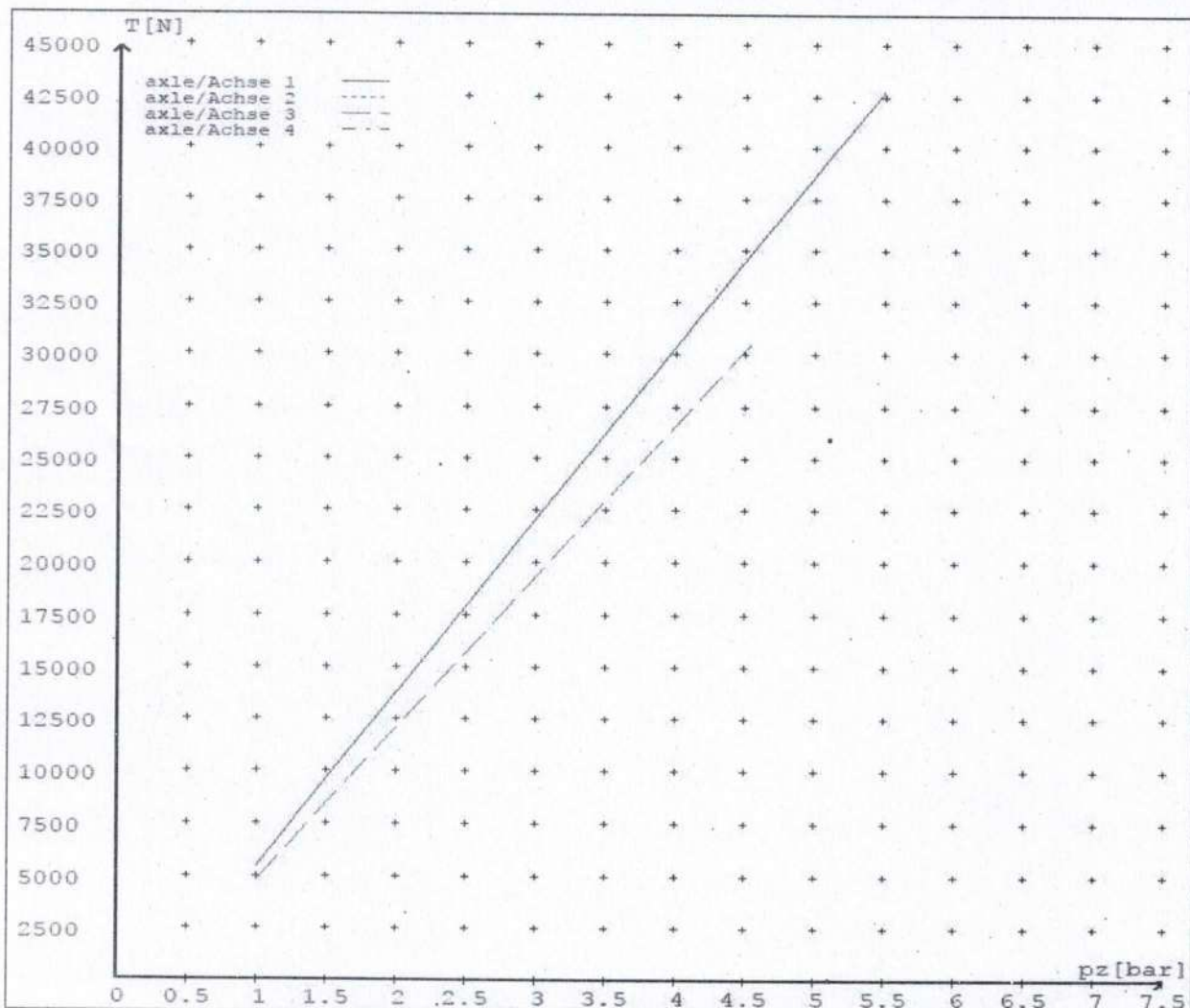
reference values

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 $z = 0.5$

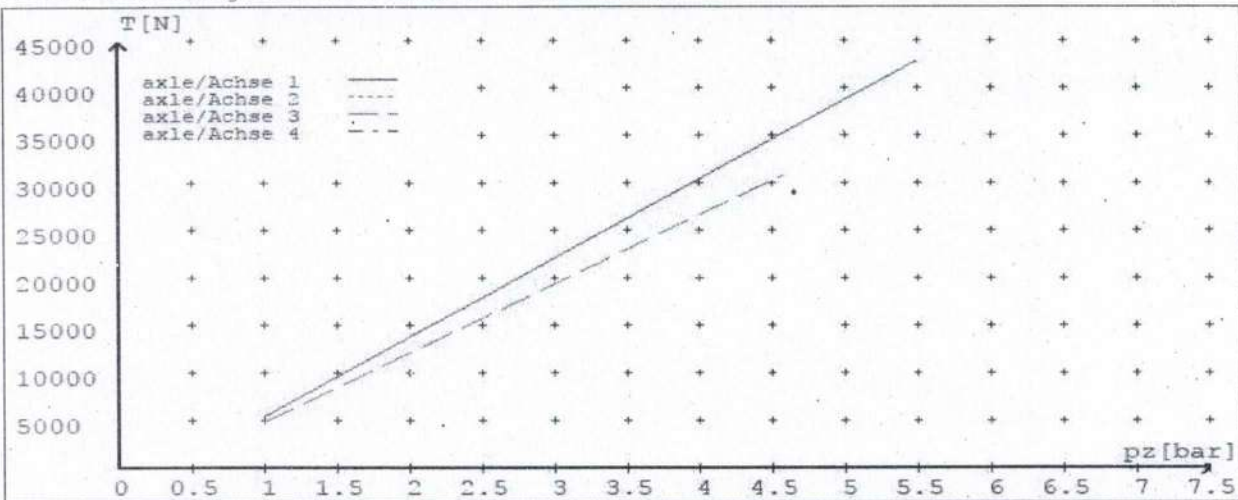
for max rdyn: 421 mm

Angabe der Referenzwerte für $z = 0.5$

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:

LC180418

CUSTOMER NAME:

DOMETT TRAILERS

CUSTOMER ORDER NO:

5312

DATE RECEIVED:

16/03/2018

VEHICLE TYPE:

FULL TANKER

VIN / CHASSIS NO:

7A9D10010J1023721

BRIEF SPECIFICATION AS CERTIFIED TO SCHEDULE 5

BRAKE VALVES:

MAKE

TYPE

PRIMARY RELAY:

WABCO

480 102 064 0

SECONDARY RELAY:

WABCO

480 207 001 0

SPRING BRAKE RELAY:

SEALCO

110701

PARK BRAKE VALVE:

SEALCO

17600B

LOCKED RATIO:

MAKE:

SETTING:

OTHER VALVES

OTHER VALVES

MAKE:

TYPE

SETTING

MAKE:

TYPE

SETTING

MAKE:

TYPE

SETTING

MAKE:

TYPE

SETTING

BRAKE CHAMBERS

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

BRAKE CALIPERS

BRAKE CALIPERS: HALDEX

FRICTION 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: 6/06/2018 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: _____

