

Heavy vehicle specialist inspector's or manufacturing inspecting organisation's name (*PRINT IN CAPS*)

CHRIS CLARKE

ID

C J C

Vehicle registration (*optional*)

VIN/chassis number

7A9D1001XL1023955

Make

DOMETT

Model (*optional*)

Certification category

HVEK

Description of work

CERTIFY TO SCHEDULE 5 OF LTR 32015/5
NEW ZEALAND HEAVY VEHICLE BRAKE SPECIFICATION.
4A TANKER

Code/standard/rule certified to

LTR 32015/5

Component load rating(s)

26 Tonnes GVM

General drawing number(s)

N/A**30 Tonnes (Group ratings)****RSS TWIN TYRES**

Supporting documents

BRAKE RULE CERTIFICATE LC200409

BRAKE CALCULATION # 823LPC

Special conditions (*optional*)

**WARNING LAMP MUST ILLUMINATE WHEN IGNITION IS SWITCHED ON & THEN
EXTINGUISH IMMEDIATELY OR WHEN VEHICLE SPEED EXCEEDS 7 KM/H**

Certification expiry date (*if applicable*)

N/A [UNLESS MODIFIED]**or**
 Hubodometer reading (*whichever comes first*)

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 Designer's ID (*if different from inspector below*)

--

Inspector's signature


--

 Inspector's name (*PRINT IN CAPS*)
CHRIS CLARKE

ID number

C J C

Date

03-Jul-20

Number

748071

CoF vehicle inspector ID (*if applicable*)

CoF vehicle inspector signature (*if applicable*)

Date

All fields are mandatory unless otherwise stated.

WABCO

START-UP LOG

System	Trailer EBS-E	WABCO part number	480 102 064 0
Production date	2018-08-14	Serial number	436050760500J
Serial number (modulator)	000000685078		
Fingerprint Customer EOL / Customer Development / Flash Program	W503643 / 2020-07-03 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00		

WABCO

TRAILER EBS-E

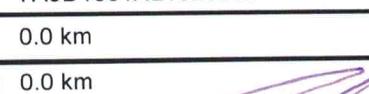
GGVS/ADR TUEH TB 2007 - 019.00
361-005-16

HERSTELLER MANUFACTUREUR CONSTRUCTEUR	DOMETT														
TYP TYPE TYPE	4A TANKER, D1001														
VEHICLE IDENT. NUMBER CHASSIS NUMBER NUMERO DE CHASSIS	7A9D1001XL1023955														
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO.	823LPC, 2020ROR4AWPC														
POLRADZAHNEZAHL c-d e-f POLE WHEEL TEETH c-d e-f DENTS ROUE DENTÉE c-d e-f	90	90	ABS-System Anti-System Système ABS												
RSS RSS RSS	Einfachbereifung Single Tire Monte simple	Lenkachse Steering axle Essieu vireur													
	Zwillingsbereifung Twin Tire Monte jumelée	X	Zwillingsfahrzeug Critical Trailer Véhicule critique												
Subsystems	---	I/O	24N												
	pm (bar)	6.5	pm (bar)	0.8	2.0	---	6.5	pz	TYP TYPE	(mm)	(mm)	(bar)	1.0	Pz	
ACHSE AXLE ESSIEU															
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	7A9D1001XL1023955
Vehicle type	4A TANKER, D1001	Odometer reading	0.0 km
next Service	0 km	Trip reading	0.0 km
Tester	Chris Clarke	Signature	
Date	2020-07-03 9:45:12 AM		

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

distribution: DOMETT
2020.1 ROR 4A WPCplease 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 (V6.18.07.12).
 -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 V6.18.07.12 db 31.08.2018

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, R, 361-005-16 ECE,

		<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	700	1534

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

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

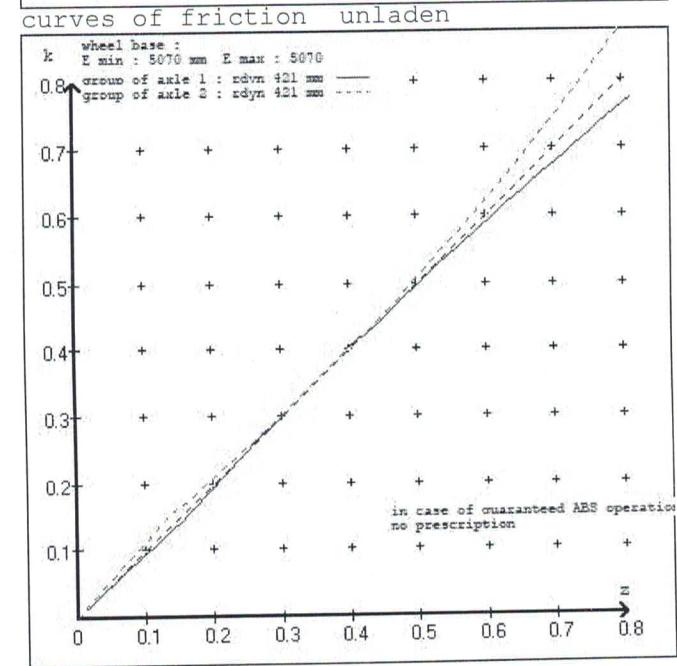
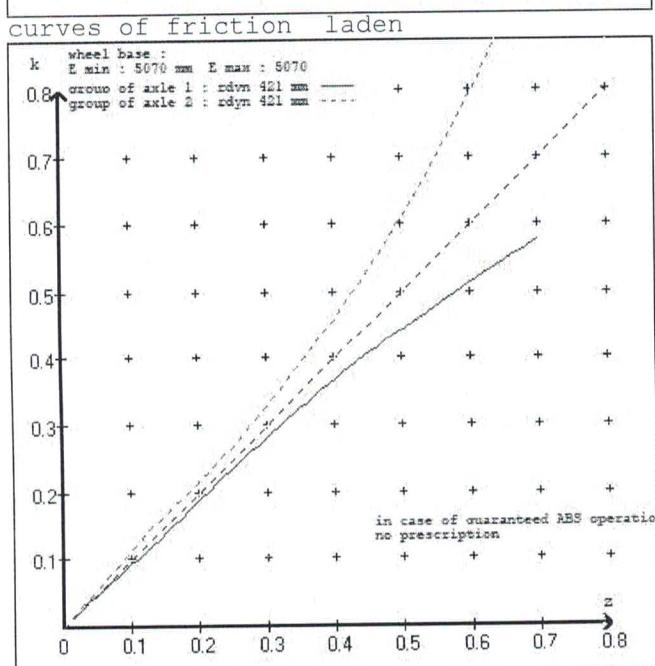
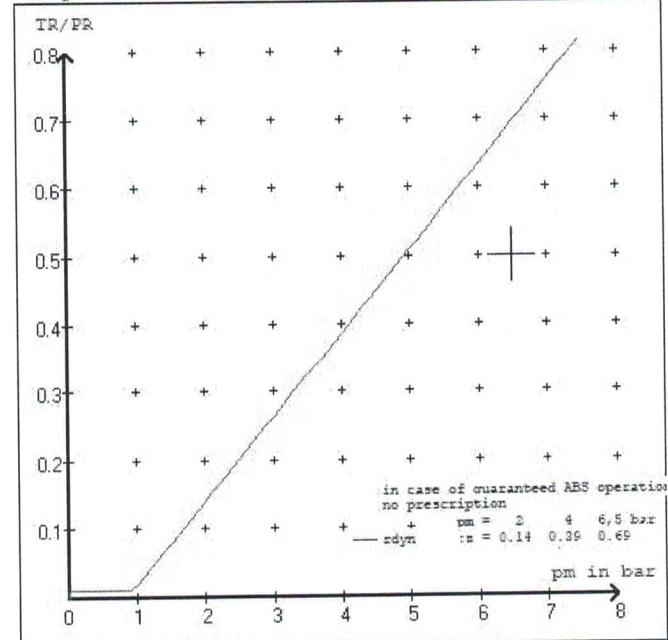
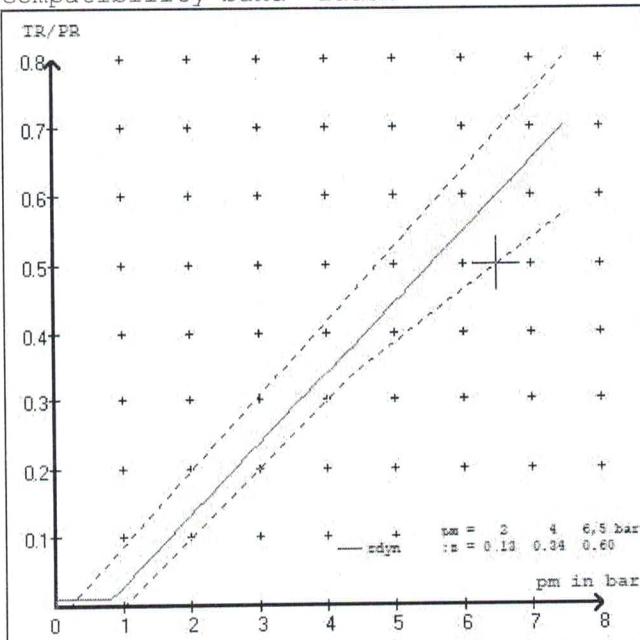
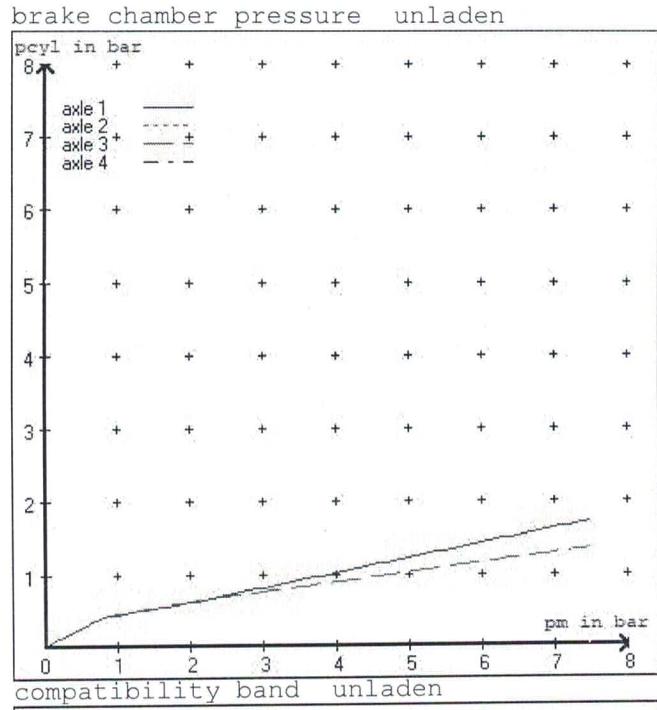
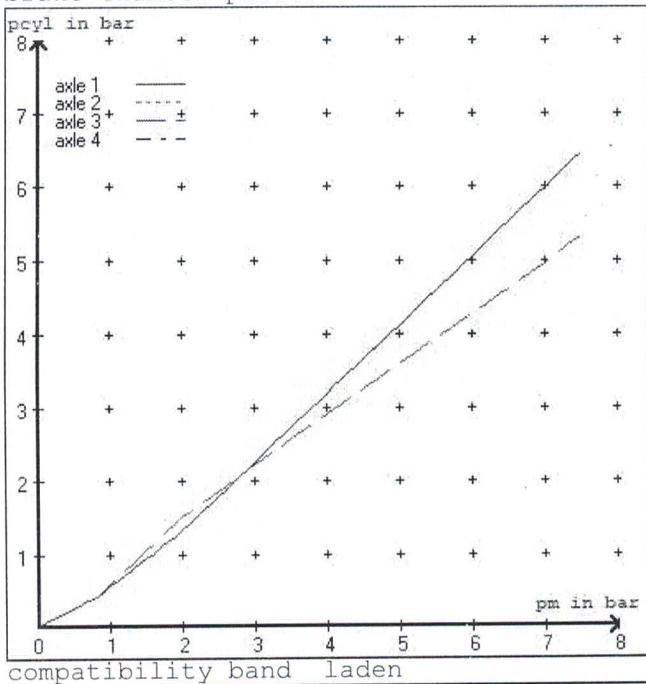
brake cylinder: Meritor 1624HTLD64

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



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 2020A

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 entered by the vehicle manufact.	1.5	7500	to be entered by the vehicle manufact.	0.4	1.3	5.5
2	1400		1.5	7500		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.

The above unlabelled axis labels may be

axle 1		axle 2		axle 3	
axle load	pcyl	axle load	pcyl	axle load	pcyl
1400	1.5	1400	1.5	1200	1.2
1900	1.8	1900	1.8	1700	1.5
2400	2.2	2400	2.2	2200	1.7
2900	2.5	2900	2.5	2700	2.0
3400	2.8	3400	2.8	3200	2.3
3900	3.1	3900	3.1	3700	2.5
4400	3.5	4400	3.5	4200	2.8
4900	3.8	4900	3.8	4700	3.1
7500	5.5	7500	5.5	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
 test report : 361-005-16 ECE
 axle 2 : reference axle: Assali StefLM or LC or TMen
 test report : 361-005-16 ECE
 axle 3 : reference axle: Assali StefLM or LC or TMen
 test report : 361-005-16 ECE
 axle 4 : reference axle: Assali StefLM or LC or TMen
 test report : 361-005-16 ECE

brake lining: MAT 5200-215
 date : HL090216 09.02.2016
 brake lining: MAT 5200-215
 date : HL090216 09.02.2016
 brake lining: MAT 5200-215
 date : HL090216 09.02.2016
 brake lining: MAT 5200-215
 date : HL090216 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 = 42 mm
axle 2	(sp = 58 mm)	s = 42 mm
axle 3	(sp = 57 mm)	s = 42 mm
axle 4	(sp = 57 mm)	s = 42 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 = 37175 N
axle 2	(rdyn 421 mm)	T = 37175 N
axle 3	(rdyn 421 mm)	T = 26822 N
axle 4	(rdyn 421 mm)	T = 26822 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 0.43

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)
 axle 2 (rdyn 421 mm)
 axle 3 (rdyn 421 mm)
 axle 4 (rdyn 421 mm)

T = 37175 N
 T = 37175 N
 T = 26822 N
 T = 26822 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 0.43

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		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*Eta*C*rBt/(rBn*rstat)			
for rstat in mm		401	401
brake force of spring br. Tf in N		63816	63816
Tf = (TFZ*KDZ-2*Co/lBh)*iFb			
braking rate	zf laden	0.444	
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

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

$$\begin{aligned} \text{min Ef} &= 3627 \text{ mm} & \text{for } E &= 5070 \text{ mm} \\ \hline \text{min Ef} &= 3627 \text{ mm} & \text{for } E &= 5070 \text{ mm} \end{aligned}$$

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 = 1534 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)

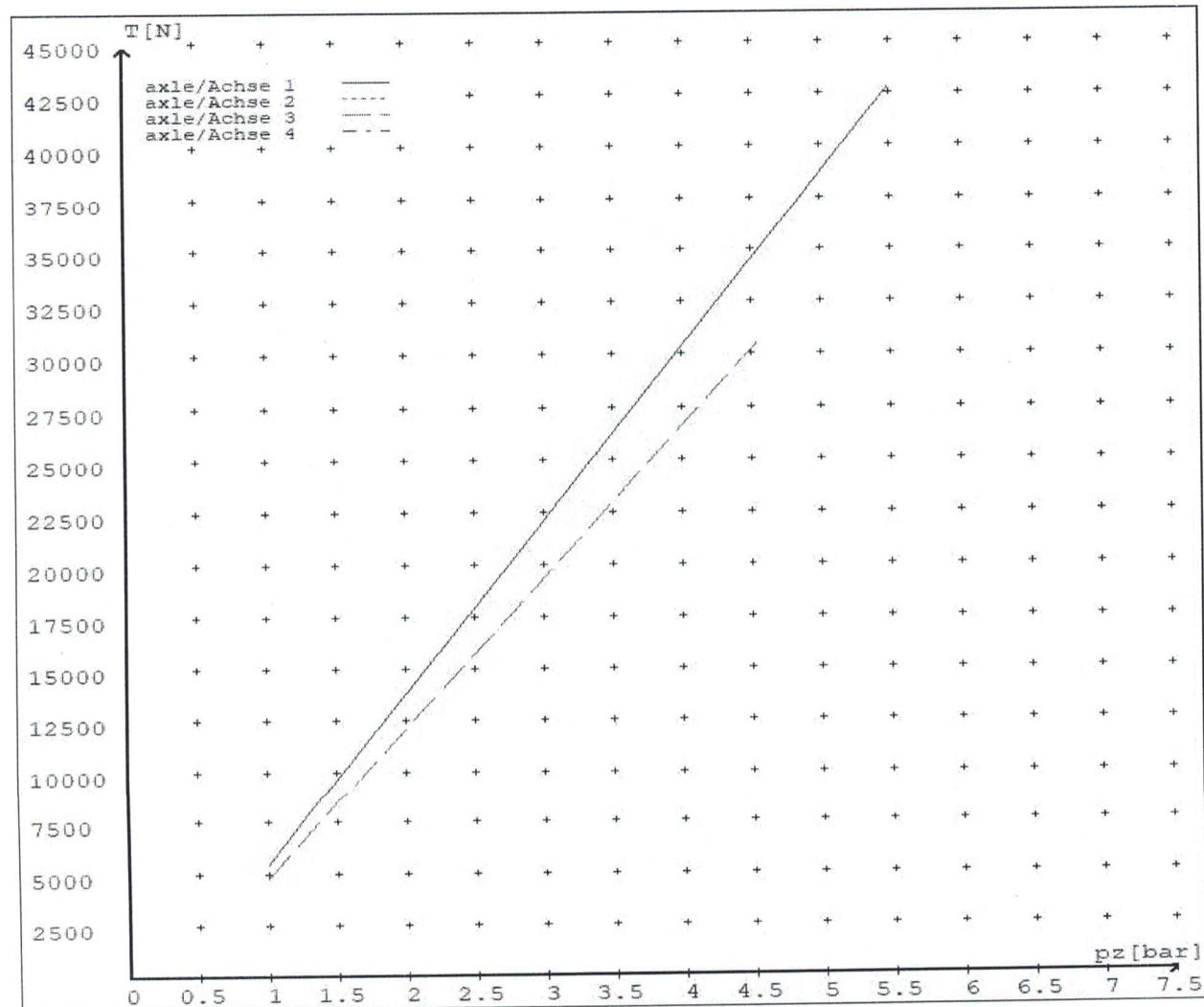
reference values

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.:

	Axe(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

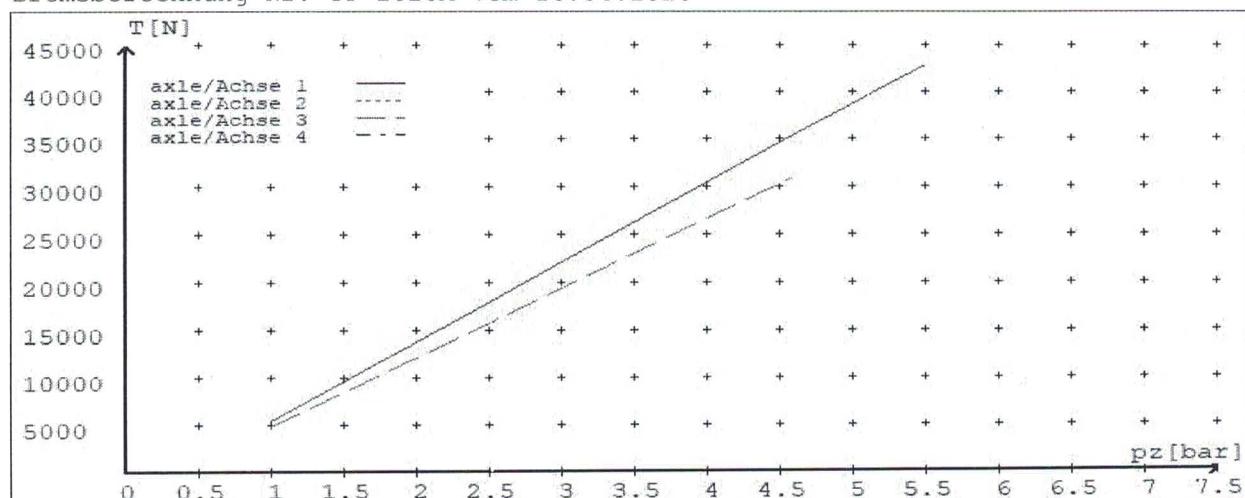
Angabe der Referenzwerte für z = 0.5

for max rdyn: 421 mm

für max rdyn: 421 mm

brake calculation no: TP 2020A date 16.04.2020

Bremsberechnung Nr: TP 2020A vom 16.04.2020



	Axe(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	

**NEW ZEALAND HEAVY VEHICLE BRAKE RULE 32015-5
WORKSHEET, PROCEDURE DOCUMENTATION SHEET
& CONFIRMATION OF COMPLIANCE**

CLIENT**MANUFACTURER:**

DOMETT TRUCK and TRAILERS

ADDRESS:

Taurikura Drive, Tauranga 3110

FLEET:

FONTERA

VEHICLE DETAILS**VEHICLE TYPE:**

4A TANKER

CERT #:

LC200409

YEAR:

2020

CALCULATION #:

823LPC

MAKE:

DOMETT

REGO:**MODEL:**

D1001

LT400 #:

748071

CHASSIS #:

1955

ORDER NUMBER:

7153

VIN #:

7A9D1001XL1023955

GVM: TONNES

26

PRIME MOVER:

EBS / EUROPEAN

LOAD CONFIGURATION:

UNIFORM DENSITY

GROUP RATINGS: TONNES**FRONT****REAR**

15

15

WHEEL BASE: METRES

5.07

COG: METRES

1.534

UNLADEN COG	MAX HEIGHT	HEIGHT DECK
0.7	2.485	1

TARE: TONNES

2.8

REAR**TOTAL**

2.4

5.2

TYRE SIZE:

265 70 R19.5

265 70 R19.5

ROLLING CIRCUMFERENCE: MM

2645

2645

AXLE SPACING: METRES

1.3

1.3

BRAKE & AXLE DETAILS

	MAKE	MODEL	TEST REPORT
AXLE:	ROR_ASSALI_STEFEN	ROR-SL9 LRC DISC	361-005-16
POLE WHEEL FRONT:	90	POLE WHEEL REAR:	90
LINING MATERIAL:	MAT 5200-215	Brake Factor:	22.37
SENSED AXLES:	2 + 4		NOTES:
SERIAL NUMBERS:	1		
	2		
	3		
	4		

CHAMBER AND VALVING DETAILS

	AXLE 1 & 2	AXLE 3 & 4
CHAMBERS:		
BRAND:	HALDEX_CHAMBERS	HALDEX_BERTOCCO
SIZE:	20, (125 200)	1624 (C476 16 5)
STROKE: MILLIMETRES	66	57
TEST REPORT #:	BC0175.0	BZ 130.0
SPRINGBRAKE FORCE: kN	N/A	7.66
HOLDOFF PRESSURE: kPa	N/A	5
FOUNDATION BRAKE:	HALDEX	HALDEX
LEVER LENGTH: MILLIMETRES	76	76
BRAKE VALVES:	MAKE:	PART NUMBER:
ECU PART #:	WABCO	480 102 064 0 (24V)
3RD MODULATOR #:	WABCO	480 207 001 0 (24V)
ANTI-COMPOUNDING:	YES	
SPRING BRAKE RELAY:	SEALCO_SBR	110701
YARD RELEASE VALVE:	SEALCO_YR	17600B
INLINE RELAY FITTED:	N/A	N/A
ECU DIRECTION:	<input checked="" type="checkbox"/> FRONT <input type="checkbox"/> REAR	FRONT FRICTION: μ
		0.51

SMARTBOARD/OPTILINK: SMARTBOARD OPTI-LINK**ELEX:** ELEX 446 122 070 0 TAILGUARD

Page 2

SUSPENSION**SUSPENSION TYPE:**

FRONT	REAR
PNEUMATIC	PNEUMATIC
ROR_AIRSPRING	ROR_AIRSPRING
ROR_INTRA	ROR_INTRA
SL9 LRC	SL9 LRC
464 008 011 0	464 008 011 0
N/A	N/A
250	250
LIFTAXLE:	N/A
DUMP SWITCH:	PNEUMATIC
LIFTAXLE VALVE:	N/A
PRESSURE LIMITING:	N/A

AIR TANKS**AIR TANKS STANDARD:**

SAE J10A / EN286-2

BRAKE TANK SIZE: L

FRONT	REAR
12113P, 46L	12113P, 46L
	12113P, 46L
SEALCO 1300	

AUXILLARY TANK SIZE: L**PRESSURE PROTECTION:****AIR LINES****TEST POINTS:****CONTROL LINE:**

FILTER X 1

TANK:

ECU X 1

REAR CHAMBER:

ECU X 2

FRONT CHAMBER:

LEFT 1st X 1

TRIOMATIC COLOUR CODED:

YES

ELECTRONIC HEIGHT SENSOR CALIBRATION

	TIMER TICKS [F/R]	MILLIMETRE [F / R]
UPPER LEVEL:	N/A	N/A
NORMAL LEVEL:	N/A	N/A
LOWER LEVEL:	N/A	N/A

CHECKS AT COMMISSION OF VEHICLE

CHAMBER BUNGS REMOVED: **VALVE MOUNTING:**

ECU BLANKING PLUGS CHECKED:

RESPONSE TIME:	MODULATOR 2.1	MODULATOR 2.2	RELAY VALVE
ms:	265	270	310

NOTES AND SPECIAL CONDITIONS

SUSPENSION DUMP VALVE 3042402 3/2 way manual valve

REASON FOR CERTIFICATION: NEW TRAILER

I UNDERSTAND AND DECLARE THAT I AM THE CERTIFIER IDENTIFIED BELOW AND HOLD A CURRENT VALID APPOINTMENT. I CERTIFY THAT AT THE TIME OF INSPECTION THE ABOVE MENTIONED VEHICLE COMPONENT DESIGN AND THIS CERTIFICATION COMPLIES IN ALL RESPECTS WITH THE LAND TRANSPORT RULE VEHICLE STANDARDS COMPLIANCE 2002 AND MY DEED OF APPOINTMENT. TO THE BEST OF MY KNOWLEDGE THE INFORMATION CONTAINED IN THIS CERTIFICATE IS TRUE AND CORRECT.

NEW ZEALAND HEAVY VEHICLE BRAKE RULE 32015/5, SCHEDULE 5.

DATE: 3/07/2020

SIGNED:

CERTIFIER NAME & ID: LANCE CAWTE **LPC**

SODC BY: CHRIS CLARKE **CJC**

PHONE (BUS): 09-980-7300

FAX:

POSTAL ADDRESS: P.O. Box 98-971, Manukau 2241
New Zealand