

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

CHRIS CLARKE **C J C**

Vehicle registration (optional) VIN/chassis number

7 A 9 D 1 0 0 1 4 L 1 0 2 3 9 5 2

Make **DOMETT**

Model (optional)

Certification category **HVEK**

Component being certified:

Chassis Load anchorage

Log bolsters Towing connection Brakes

SRT PSV stability PSV rollover

Swept path PBS

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 LC200703

BRAKE CALCULATION # 822LPC

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)

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)

LANCE CAWTE, L P C

Inspector's signature 

Inspector's name (PRINT IN CAPS) **CHRIS CLARKE** ID number **C J C**

Date **28-Aug-20** Number **753623**

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	436050798800D
Serial number (modulator)	000000685081		
Fingerprint Customer EOL / Customer Development / Flash Program	W503643 / 2020-08-28 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00		

WABCO TRAILER EBS-E

GGVS/ADR TUEH TB 2007 - 019.00
TDB 0870

HERSTELLER MANUFACTURER CONSTRUCTEUR	DOMETT		
TYP TYPE TYPE	4A TANKER, D1001		
VEHICLE IDENT. NUMBER CHASSIS NUMBER NUMERO DE CHASSIS	7A9D10014L1023952		
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO.	822LPC, 2020SAF4AWPC		
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
RSG RSS RSS	Einfachbereifung Single Tire Monte simple	Lenkachse Steering axle Essieu vireur	
	Zwillingsbereifung Twin Tire Monte jumelée	X	Kippkritisches Fahrzeug Critical Trailer Véhicule critique
Subsystems	---	I/O	24N

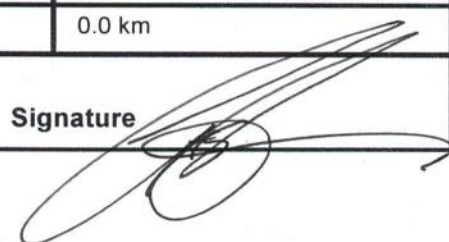
GIO	Pin1	Pin3	Pin4
1	24V-01	---	---
2	---	---	---
3	ALS2	ALS2	---
4	---	---	---
5	DIAG	DIAG	DIAG
6	---	---	---
7	---	---	---

ACHSE AXLE ESSIEU	pm (bar)			pm (bar)			pm (bar)			TYP TYPE	(mm)	(mm)	(bar)		
	1400	0.5	1.5	7500	4.7	0.4	1.3	---	5.5				1.0	Pz	
1	1400	0.5	1.5	7500	4.7	0.4	1.3	---	5.5	-	20	65	76	534	4241
2	1400	0.5	1.5	7500	4.7	0.4	1.3	---	5.5	-	20	65	76	534	4241
3	1200	0.4	1.2	7500	4.7	0.4	1.5	---	4.6	-	16 / 16	63	76	496	3115
4	1200	0.4	1.2	7500	4.7	0.4	1.5	---	4.6	-	16 / 16	63	76	496	3115
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	7A9D10014L1023952
Vehicle type	4A TANKER, D1001	Odometer reading	0.0 km
next Service	0 km	Trip reading	0.0 km
Tester	Chris Clarke	Signature 	
Date	2020-08-28 9:36:05 AM		

distribution: DOMETT
2020 SAF 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 (V6.18.07.12).
-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!
WABCO Brake 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: 16/16
265/70 R 19,5

axle 1 + 2 + 3 + 4 : SAF, SBS 1918, TDB 0870 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 K D Z	2	2	2	2
The power output corresponds to	BZ 122.1	BZ 122.1BC	0006.0BC	0006.0
brake chamber manufacturer	Meritor	Meritor	WABCO	WABCO
chamber size	20.	20.	16/16	16/16
lever length	lBh in mm	76	76	76
brake factor	[-]	22.37	22.37	22.37
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	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	4648
brake force (rdyn min) T lad. at pm6,5bar N	51239	51239	37636	37636
brake force (rdyn max) T lad. at pm6,5bar N	51239	51239	37636	37636
Brake force incl. 1 % rolling resistance proportion	%	26.5	26.5	23.5

braking rate z laden 0.604 for rdyn min
z = sum (TR)/PRmax 0.604 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

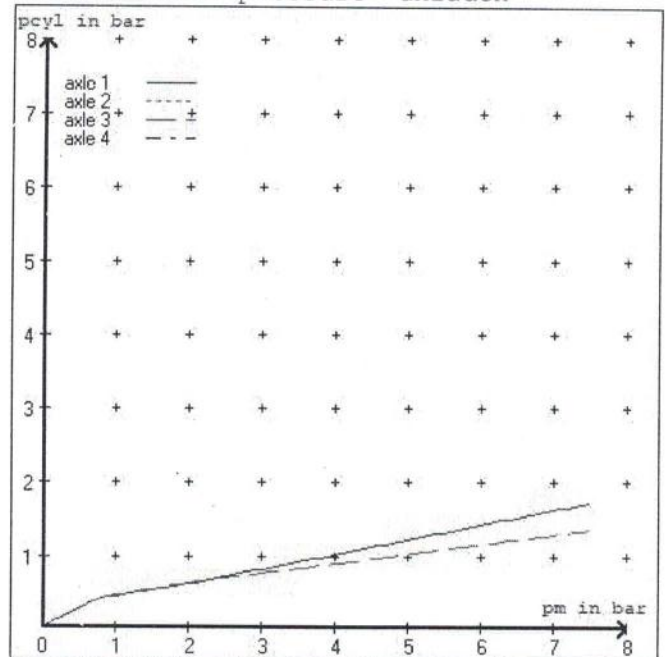
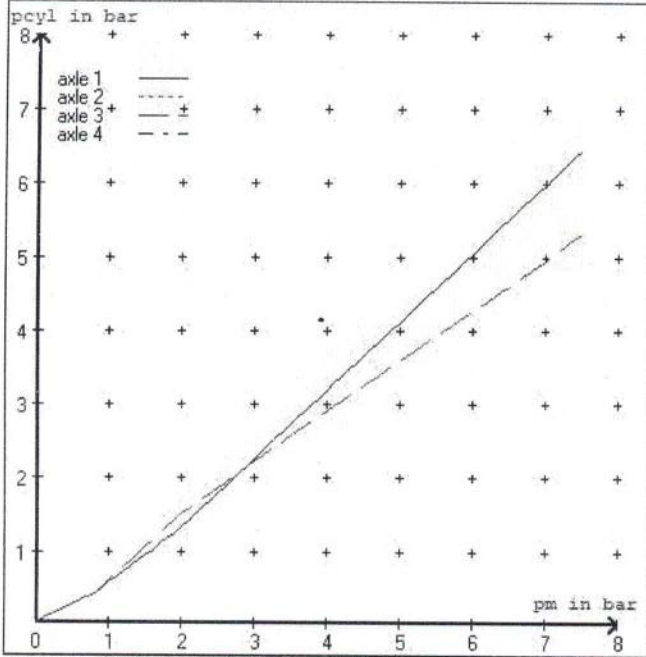
brake cylinder: WABCO 925 464 4.. 0 / 925 484 96. 0

axle 4:

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

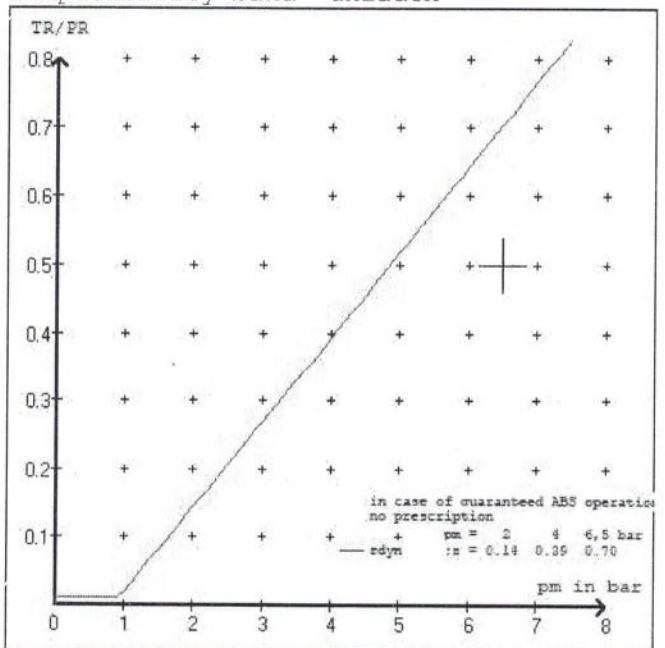
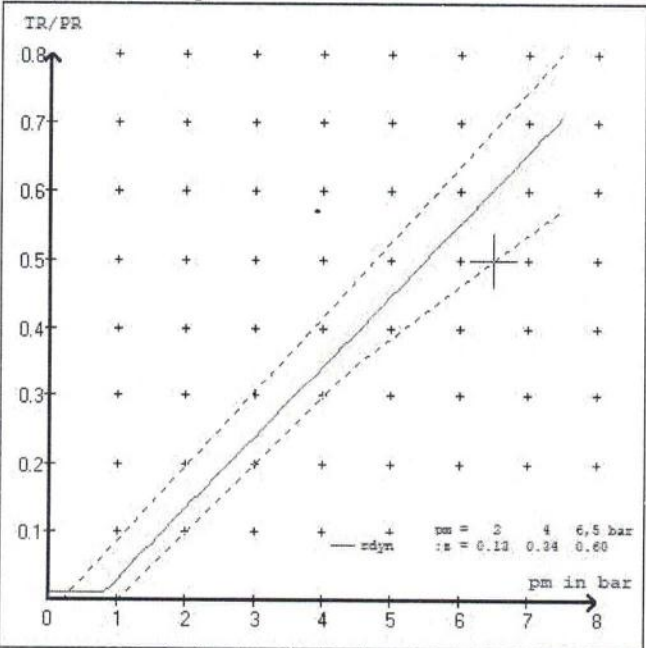
brake cylinder: WABCO 925 464 4.. 0 / 925 484 96. 0

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



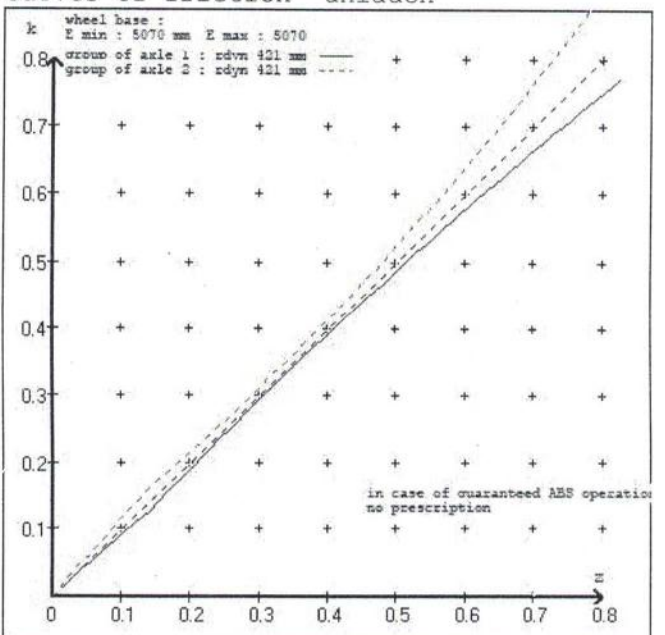
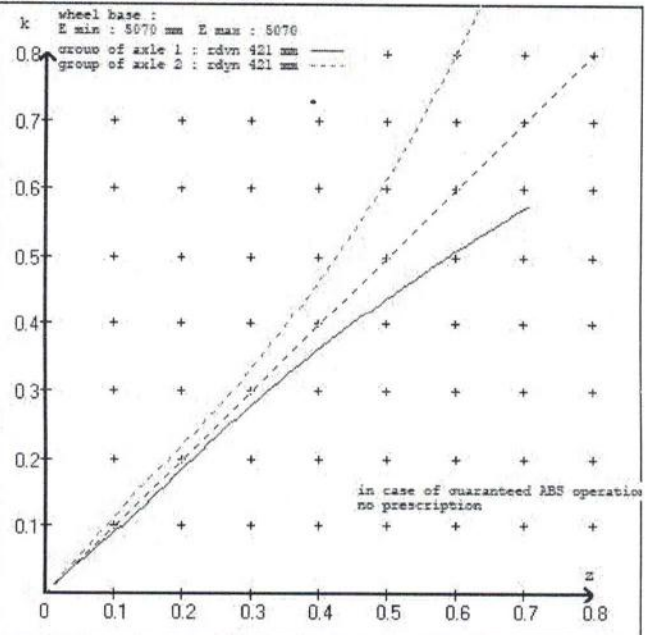
compatibility band laden

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 16/16 (WABCO) lever length 76 mm
 axle 4 : 2 x type/diameter 16/16 (WABCO) 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	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: SAF	SBS 1937	brake lining: SAF 437
test report :	TDB 0870 ECE	date : 20131111
axle 2 : reference axle: SAF	SBS 1937	brake lining: SAF 437
test report :	TDB 0870 ECE	date : 20131111
axle 3 : reference axle: SAF	SBS 1937	brake lining: SAF 437
test report :	TDB 0870 ECE	date : 20131111
axle 4 : reference axle: SAF	SBS 1937	brake lining: SAF 437
test report :	TDB 0870 ECE	date : 20131111

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 = 24.1 % Fe
axle 2	(rdyn 421 mm)	T = 24.1 % Fe
axle 3	(rdyn 421 mm)	T = 20.0 % Fe
axle 4	(rdyn 421 mm)	T = 20.0 % Fe

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

axle 1	(sp = 58 mm)	s = 47 mm
axle 2	(sp = 58 mm)	s = 47 mm
axle 3	(sp = 50 mm)	s = 47 mm
axle 4	(sp = 50 mm)	s = 47 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 = 4648 N
axle4	ThA = 4648 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 = 38993 N
axle 2	(rdyn 421 mm)	T = 38993 N
axle 3	(rdyn 421 mm)	T = 28649 N
axle 4	(rdyn 421 mm)	T = 28649 N

	basic test	type III
	of subject	(calculated)
	trailer (E)	residual
braking rate of the vehicle		(hot)braking
(item 4.3.2 to appendix 2 to annex 11)	0.60	0.46

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

axle 1	(rdyn 421 mm)	T = 38993 N
axle 2	(rdyn 421 mm)	T = 38993 N
axle 3	(rdyn 421 mm)	T = 28649 N
axle 4	(rdyn 421 mm)	T = 28649 N

	basic test	type III
	of subject	(calculated)
	trailer (E)	residual
braking rate of the vehicle		(hot)braking
(item 4.3.2 to appendix 2 to annex 11)	0.60	0.46

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

spring parking brake

		<u>axle 3</u>	<u>axle 4</u>
no of TRISTOP-actuators per axle line KDZ		2	2
TRISTOP-actuator type		16/16	16/16
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	6282	6282
sp.brake chamber no 925		464 4.. 0464	4.. 0
sp.brake chamber no 925		484 96. 0484	96. 0
release pressure	pLs in bar	5.0	5.0

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		52598	52598
Tf = (TFZ*KDZ-2*Co/lBh)*iFb			
braking rate	zf laden	0.367	
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

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

$$\min Ef = 3627 \text{ mm} \quad \text{for } E = 5070 \text{ mm}$$

$$\min Ef = 3627 \text{ mm} \quad \text{for } E = 5070 \text{ mm}$$

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 = 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)

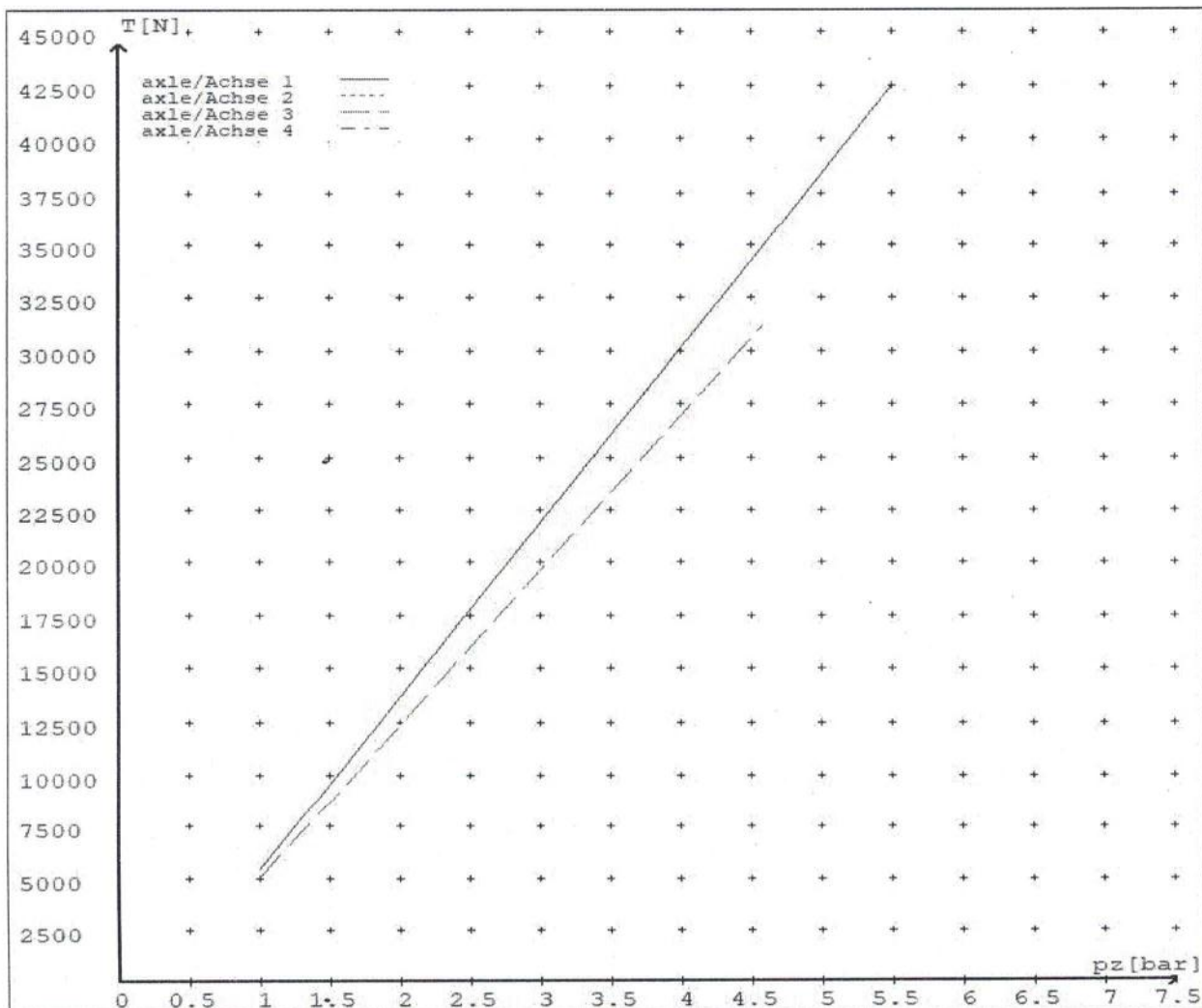
reference values

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

	pz [bar]	T [N]	T [N]
axle 1	1.0	5350	
	5.5	42416	
axle 2	1.0	5350	
	5.5	42416	
axle 3	1.0		4969
	4.6		31156
axle 4	1.0		4969
	4.6		31156

VIN - no.:

	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	20./	20./	16/16	16/16	/
Maximum stroke smax = ...mm maximaler Hub smax =mm	65	65	63	63	
Lever length =mm Hebellänge =mm	76	76	76	76	



reference values for $z = 0.5$

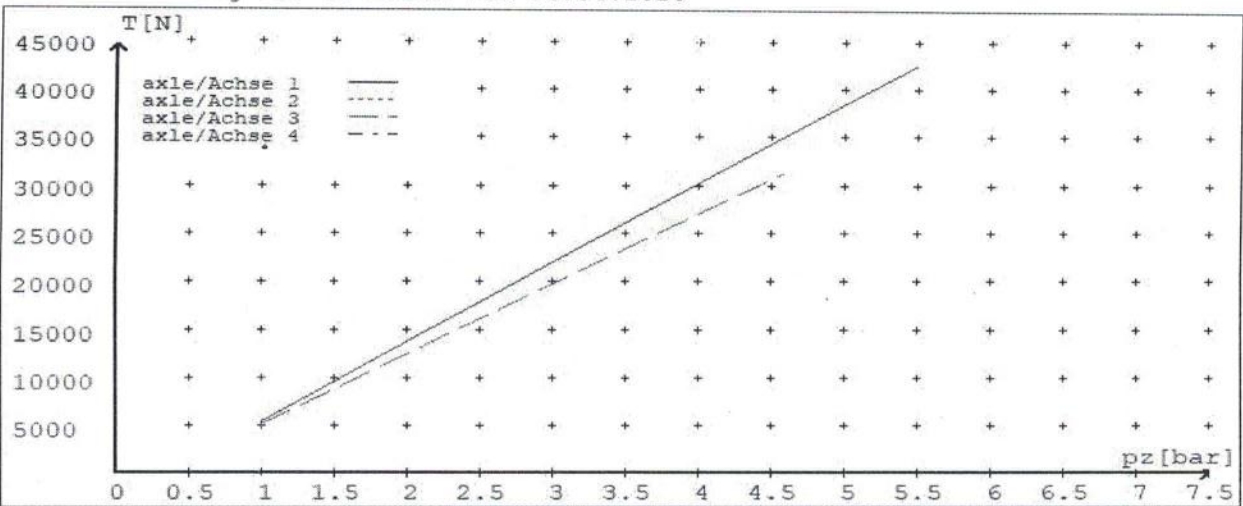
for max rdyn: 421 mm

Angabe der Referenzwerte für $z = 0.5$

für max rdyn: 421 mm

brake calculation no: TP 2020A date 16.04.2020

Bremsberechnung Nr: TP 2020A vom 16.04.2020



	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	20./	20./	16/16	16/16	/
Maximum stroke $s_{max} = \dots mm$ maximaler Hub $s_{max} = \dots mm$	65	65	63	63	
Lever length = $\dots mm$ Hebellänge = $\dots mm$	76	76	76	76	

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

CLIENT

MANUFACTURER:	DOMETT TRUCK & TRAILERS
ADDRESS:	Taurikura Drive, Tauranga 3110
FLEET:	FONTERRA

VEHICLE DETAILS

VEHICLE TYPE:	4A TANKER	CERT #:	LC200703
YEAR:	2020	CALCULATION #:	822LPC
MAKE:	DOMETT	REGO:	
MODEL:	D1001	LT400 #:	753623
CHASSIS #:	1952	ORDER NUMBER:	7150
VIN #:	7A9D10014L1023952		
GVM: TONNES	26	PRIME MOVER:	EBS / EUROPEAN
LOAD CONFIGURATION:	UNIFORM DENSITY		
GROUP RATINGS: TONNES	FRONT	REAR	
	15	15	
WHEEL BASE: METRES	5.07		
	UNLADEN COG	MAX HEIGHT	HEIGHT DECK
	0.7	2.485	1
COG: METRES	1.534		
	FRONT	REAR	TOTAL
TARE: TONNES	2.8	2.4	5.2
	FRONT	REAR	
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

AXLE:	MAKE	MODEL	TEST REPORT
	SAF	SAF-ZI9S	TDB0870
POLE WHEEL FRONT:	90	POLE WHEEL REAR:	90
LINING MATERIAL:	SAF 607	BRAKE FACTOR:	22.37
SENSED AXLES:	1 & 3	NOTES:	
SERIAL NUMBERS:	1		IU
	2		IU
	3		IU
	4		IU

CHAMBER AND VALVING DETAILS

CHAMBERS:	AXLE 1 & 2	AXLE 3 & 4	
BRAND:	TSE_CHAMBERS	WABCO_CHAMBERS	
SIZE:	20HSCLD	1616 (925/464/461/0)	
STROKE: MILLIMETRES	65	59	
TEST REPORT #:	BC 0041.0 Jul '07	BC 0006.0	
SPRINGBRAKE FORCE: kN	N/A	6.28	
HOLDOFF PRESSURE: kPa	N/A	5	
FOUNDATION BRAKE:	SAF SBS1918	SAF SBS1918	
LEVER LENGTH: MILLIMETRES	76	76	
BRAKE VALVES:	MAKE:	PART NUMBER:	PM PRESS. kPa
ECU PART #:	WABCO	480 102 064 0 (24V)	80 kPa
3RD MODULATOR #:	WABCO	480 207 001 0 (24V)	80 kPa
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**SUSPENSION**

	FRONT	REAR
SUSPENSION TYPE:	PNEUMATIC	PNEUMATIC
MAKE:	SAF_AIRSPRING	SAF_AIRSPRING
MODEL:	SAF_INTRA	SAF_INTRA
BELLOW SIZE:	2619, 300mm	2619, 300mm
HEIGHT CONTROL VALVE:	464 008 011 0	464 008 011 0
OTHER VALVES:	N/A	N/A
RIDE HEIGHT <small>MM</small>:	250	250
HANGER HEIGHT <small>MM</small>:	200	200
PEDESTAL HEIGHT <small>MM</small>:	NIL	NIL
LIFTAXLE:		N/A
DUMP SWITCH:		PNEUMATIC
LIFTAXLE VALVE:		N/A
PRESSURE LIMITING:		N/A

AIR TANKS

AIR TANKS STANDARD:	SAE J10A / EN286-2	
	FRONT	REAR
BRAKE TANK SIZE: <small>L</small>	12113P, 46L	12113P, 46L
AUXILLARY TANK SIZE: <small>L</small>		12113P, 46L
PRESSURE PROTECTION:	WABCO PEM: 461 513 002 0	

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	275	325

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: 28/08/2020

SIGNED:

CERTIFIER NAME & ID:

CHRIS CLARKE

CJC

SODC BY:

LANCE CAWTE

LPC

PHONE (BUS):

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