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: 7A9D30019H1023673

Make: DOMETT TRAILERS

Component being certified: ☐ Chassis ☐ Load anchorage ☐ Log bolsters ☐ Towing connection ☒ 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~~ SIZE = 265 70 R 19.5

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

Component load rating(s): 28 Tonnes GVM; 32 Tonnes (Group ratings)

General drawing number(s): N/A

Supporting documents

BRAKE CODE CERTIFICATE JH171206

BRAKE CALCULATION # TP51678

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: 5-Dec-17

Number: 618161

CoF vehicle inspector ID:

CoF vehicle inspector signature:

Date:

All fields are mandatory unless otherwise stated.

WABCO START-UP LOG

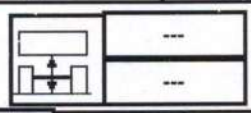
System	Trailer EBS-E	**WABCO part number**	480 102 084 0
Production date	2016-09-30	**Serial number**	437003197100K
Serial number (modulator)	000000001668		
Fingerprint Customer EOL / Customer Development / Flash Program	W503643 / 2017-12-05 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00		

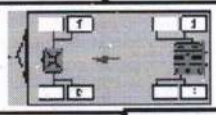
WABCO TRAILER EBS-E

GGVS/ADR TUEH TB 2007 - 019.00
361-071-04

HERSTELLER MANUFACTURER CONSTRUCTEUR	DOMETT TRAILERS
TYP TYPE TYPE	4AFT PLATFORM/TIPPER
VEHICLE IDENT. NUMBER CHASSIS NUMBER NUMERO DE CHASSIS	7A9D30019H1023673
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO.	TP51678A
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 Einfachbereifung Single Tire Monte simple	
RSS Zwillingsbereifung Twin Tire Monte jumelée	X
Lenkachse Steering axle Essieu vireur	
Kippkritisches Fahrzeug Critical Trailer Véhicule critique	
Subsystems	---
I/O	24N

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





	pm (bar)		6.5	pm (bar)		· 0.6	2.0	---	6.5		TYP TYPE	(mm)	(mm)	(bar) 1.0	Pz
ACHSE AXLE ESSIEU									pz					TR (daN)	
1	1500	0.5	2.3	8000	4.7	0.4	1.6	---	6.8	-	20	65	74	495	4897
2	1500	0.5	2.3	8000	4.7	0.4	1.6	---	6.8	-	20	65	74	495	4897
3	1250	0.4	1.6	8000	4.7	0.5	1.9	---	5.0	-	16 / 24	65	74	415	2954
4	1250	0.4	1.6	8000	4.7	0.5	1.9	---	5.0	-	16 / 24	65	74	415	2954
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**	7A9D30019H1023673
Vehicle type	4AFT PLATFORM/TIPPER	**Odometer reading**	0.0 km
next Service	0 km	**Trip reading**	0.0 km
Tester	Chris Clarke	**Signature**	
Date	2017-12-05 3:58:42 p.m.		

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

distribution: DOMETT TRAILERS
7A9D30019H1023673
SODC: JH171206
LT400: CJC 618161

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 PLATFORM/TIPPER
trailer type : 4-axle-full-trailer
remarks : air / hydraulic / VA suspension
WABCO TRAILER - EBS E
THE FRONT CHAMBERS ARE T20 HALDEX [125 200 001]
TRISTOP 3+4: 16/24
265/70 R 19,5
BRAKING RATIO (z) LOWERED TO 0.58

axle 1 + 2 + 3 + 4 : Assali Stefen, K, 361-071-04 ext01 ECE,

		unladen	laden
total mass	P in kg	5500	32000
axle 1	P1 in kg	1500	8000
axle 2	P2 in kg	1500	8000
axle 3	P3 in kg	1250	8000
axle 4	P4 in kg	1250	8000
wheel base	E in mm	5100 - 5200	
centre of gravity height	h in mm	1000	2061

		axle 1	axle 2	axle 3	axle 4
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 brake chamber manufacturer		BZ 122.1 Meritor	BZ 122.1BC Meritor	0165.0BC Haldex	0165.0 Haldex
chamber size		20.	20.	16/24	16/24
lever length	lBh in mm	74	74	74	74
brake factor	[-]	20.26	20.26	20.26	20.26
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	7.0	7.0	7.0	7.0

calculation:

chamber pressure(rdyn min)pH at z=22,5%	bar	2.6	2.6	2.5	2.5
chamber pressure(rdyn max)pH at z=22,5%	bar	2.6	2.6	2.5	2.5
chamber press.(servo)pcha at pm6,5bar	bar	6.8	6.8	5.0	5.0
piston force ThA at pm6,5bar	N	7934	7934	4779	4779
brake force(rdyn min)T lad. at pm6,5bar	N	56616	56616	34148	34148
brake force(rdyn max)T lad. at pm6,5bar	N	56616	56616	34148	34148
brake force within 1 % rolling friction proportion	%	27.3	27.3	22.7	22.7

braking rate z laden
z = sum (TR)/PRmax

0.578 for rdyn min
0.578 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

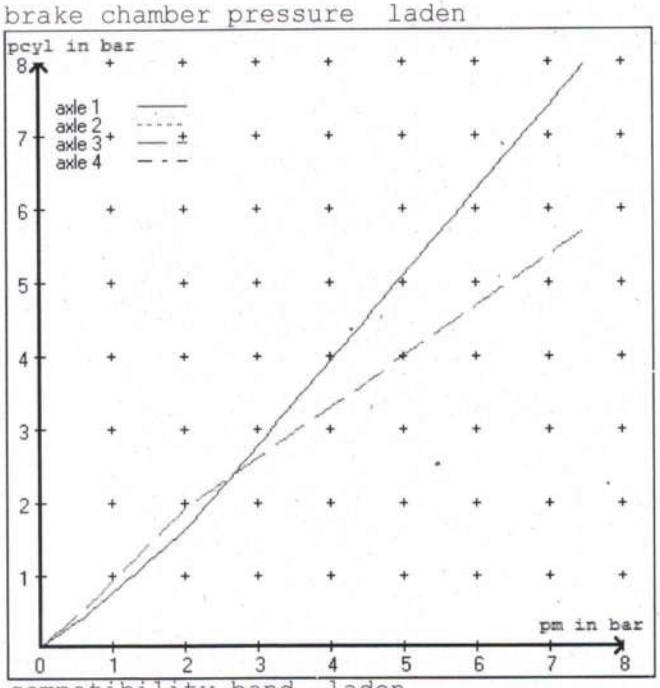
brake cylinder: Haldex 135 1624 ...

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

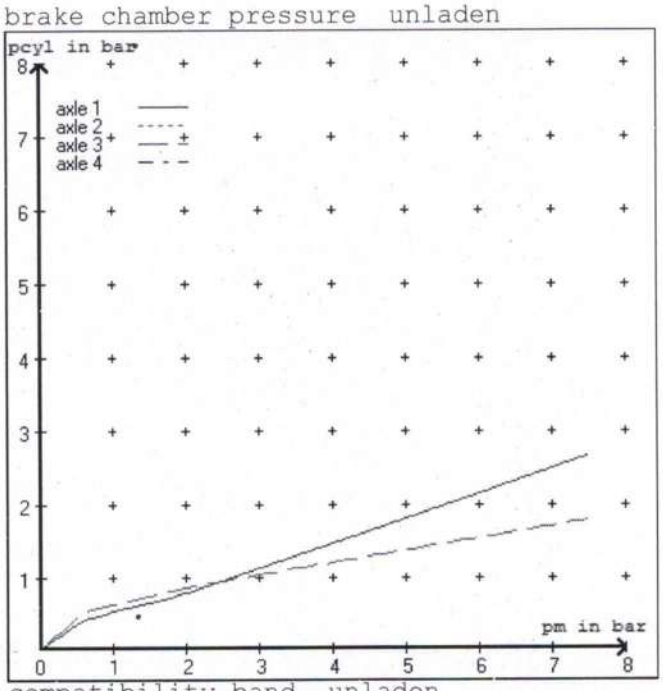
brake cylinder: Haldex. 135 1624 ...

test type III (zIII = 0.30)	for rdyn min :	axle1	axle2	axle3	axle4	
at pm 3.6 bar =>	pcha in bar :	3.5	3.5	3.0	3.0	
test type III (zIII = 0.06)	for rdyn.min :	axle1	axle2	axle3	axle4	
at pm 1.1 bar =>	pcha in bar :	0.9	0.9	1.0	1.0	

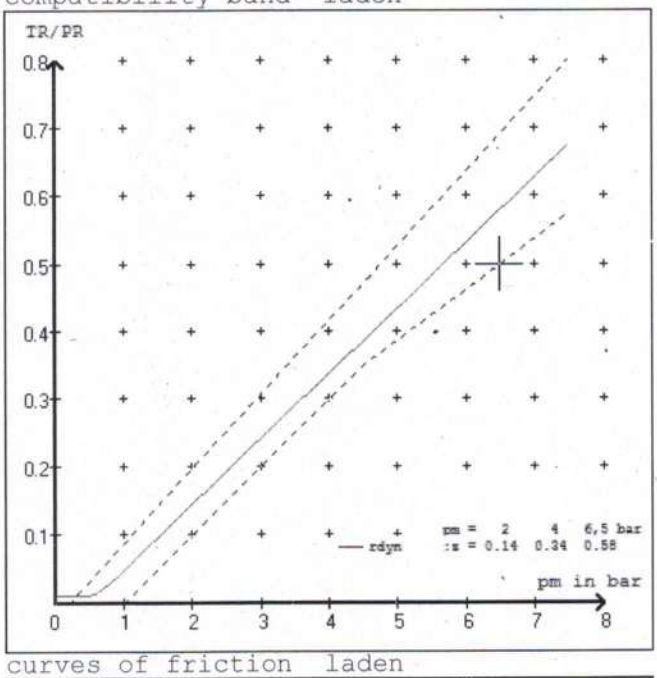
brake chamber pressure laden



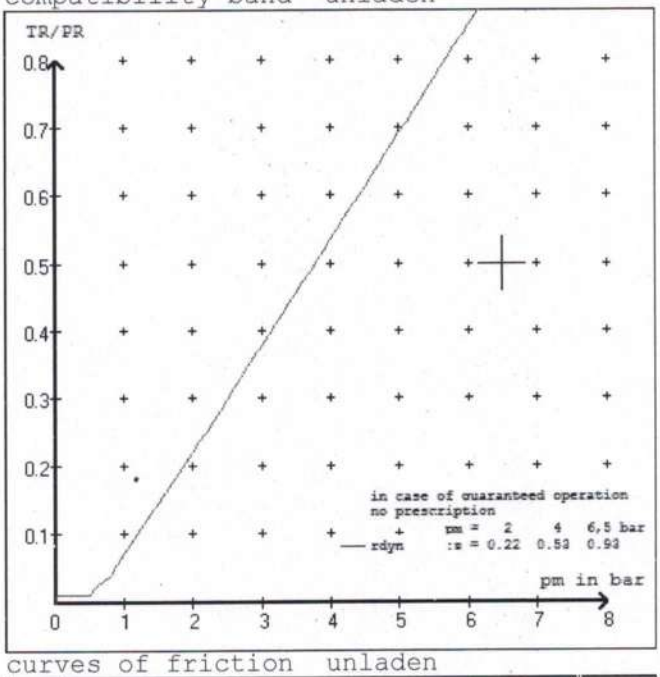
brake chamber pressure unladen



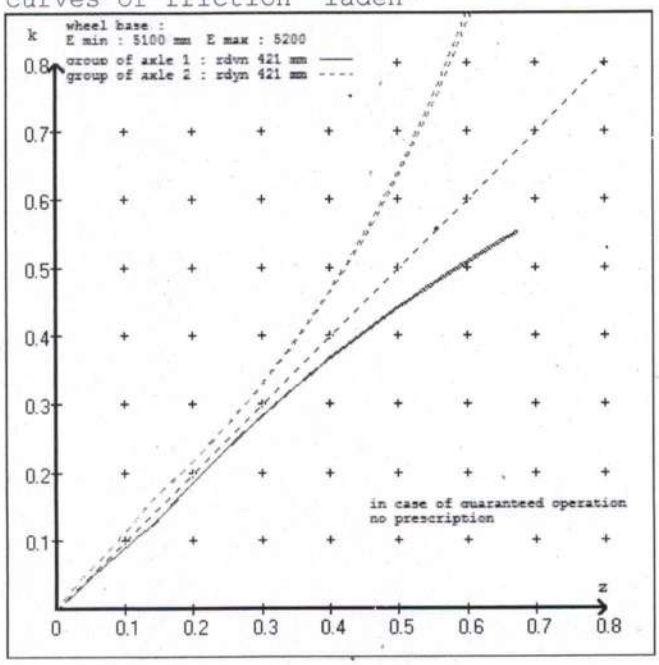
compatibility band laden



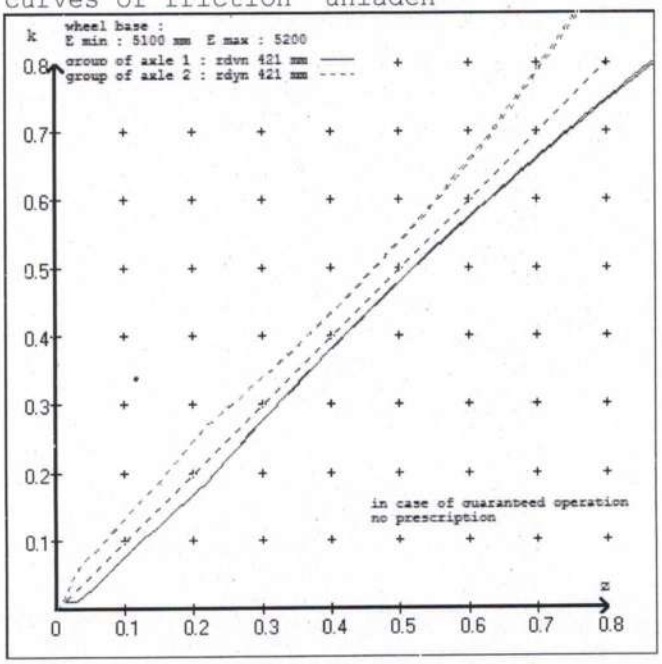
compatibility band unladen



curves of friction laden



curves of friction unladen



vehicle manufacturer: DOMETT TRAILERS
trailer model : 4AFT PLATFORM/TIPPER
trailer type : 4-axle-full-trailer

brake chamber and lever length :
axle 1 : 2 x type/diameter 20. (Meritor) lever length 74 mm
axle 2 : 2 x type/diameter 20. (Meritor) lever length 74 mm
axle 3 : 2 x type/diameter 16/24 (Haldex) lever length 74 mm
axle 4 : 2 x type/diameter 16/24 (Haldex) lever length 74 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 PLATFORM/TIPPER
trailer type : 4-axle-full-trailer
brake calculation no. : TP 51678A

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

assignment pm / deceleration z: pm 0.6 bar z = 0.010
(laden condition) 2.0 bar z = 0.145
6.5 bar z = 0.580

control pressure pm			6,5	control pressure pm		0.6	2.0	6.5
axle	axle load unladen	bellow pr. unladen	brake pr. unladen	axle load laden	bellow pr. laden	brake pr. laden		
1	1500	to be entered by the vehicle manufact.	2.3	8000	to be entered by the vehicle manufact.	0.4	1.6	6.8
2	1500		2.3	8000		0.4	1.6	6.8
3	1250		1.6	8000		0.5	1.9	5.0
4	1250		1.6	8000		0.5	1.9	5.0
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
1500	2.3	1500	2.3	1250	1.6	1250	1.6
2000	2.6	2000	2.6	1750	1.9	1750	1.9
2500	3.0	2500	3.0	2250	2.1	2250	2.1
3000	3.3	3000	3.3	2750	2.4	2750	2.4
3500	3.7	3500	3.7	3250	2.6	3250	2.6
4000	4.0	4000	4.0	3750	2.9	3750	2.9
4500	4.4	4500	4.4	4250	3.1	4250	3.1
5000	4.7	5000	4.7	4750	3.4	4750	3.4
8000	6.8	8000	6.8	8000	5.0	8000	5.0

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

axle 1 :	reference axle: Assali StefTM or LM or LCen	brake lining:	ROR8616AF(M13)
	test report : 361-071-04 ext01 ECE	date :	GA140710 01.07.2014
axle 2 :	reference axle: Assali StefTM or LM or LCen	brake lining:	ROR8616AF(M13)
	test report : 361-071-04 ext01 ECE	date :	GA140710 01.07.2014
axle 3 :	reference axle: Assali StefTM or LM or LCen	brake lining:	ROR8616AF(M13)
	test report : 361-071-04 ext01 ECE	date :	GA140710 01.07.2014
axle 4 :	reference axle: Assali StefTM or LM or LCen	brake lining:	ROR8616AF(M13)
	test report : 361-071-04 ext01 ECE	date :	GA140710 01.07.2014

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 = 25.5 % Fe
axle 2	(rdyn 421 mm)	T = 25.5 % Fe
axle 3	(rdyn 421 mm)	T = 18.2 % Fe
axle 4	(rdyn 421 mm)	T = 18.2 % 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 = 51 mm)	s = 37 mm
axle 4	(sp = 51 mm)	s = 37 mm

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

axle1	ThA = 7934 N
axle2	ThA = 7934 N
axle3	ThA = 4779 N
axle4	ThA = 4779 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 = 60251 N
axle 2	(rdyn 421 mm)	T = 60251 N
axle 3	(rdyn 421 mm)	T = 36326 N
axle 4	(rdyn 421 mm)	T = 36326 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)	0.58	0.62
required braking rate (items 1.5.3 and 1.7.2 to annex 11)		>= 0,4 and >= 0,6*E (0.35)

axle 1	(rdyn 421 mm)	T = 60251 N
axle 2	(rdyn 421 mm)	T = 60251 N
axle 3	(rdyn 421 mm)	T = 36326 N
axle 4	(rdyn 421 mm)	T = 36326 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)	0.58	0.62
required braking rate (items 1.5.3 and 1.7.2 to annex 11)		>= 0,4 and >= 0,6*E (0.35)

spring parking brake

		axle 3	axle 4
no of TRISTOP-actuators per axle line	KDZ	2	2
TRISTOP-actuator type		16/24	16/24
lever length	lBh in mm	74	74
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	6003	6003
sp.brake chamber no Haldex		135 162	135 162
release pressure	pLs in bar	5.2	5.2

calculation:

ratio until road		3.7388	3.7388
iFb = lBh*Eta*C*rBt/(rBn*rstat)			
for rstat	in mm	401	401
brake force of spring br. Tf	in N	44180	44180
Tf = (TFZ*KDZ-2*Co/lBh)*iFb			
braking rate	zf laden	0.291	
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 = 3769 mm for E = 5100 mm
==========
min Ef = 3834 mm for E = 5200 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	=	2061 mm	height of center of gravity - laden
PR	=	16000 kg	maximum bogie mass - laden
P	=	32000 kg	maximum total mass - laden
nf	=	2	no. of axle(s) with TRISTOP spring brake actuators
ng	=	2	no. of bogie axle(s)

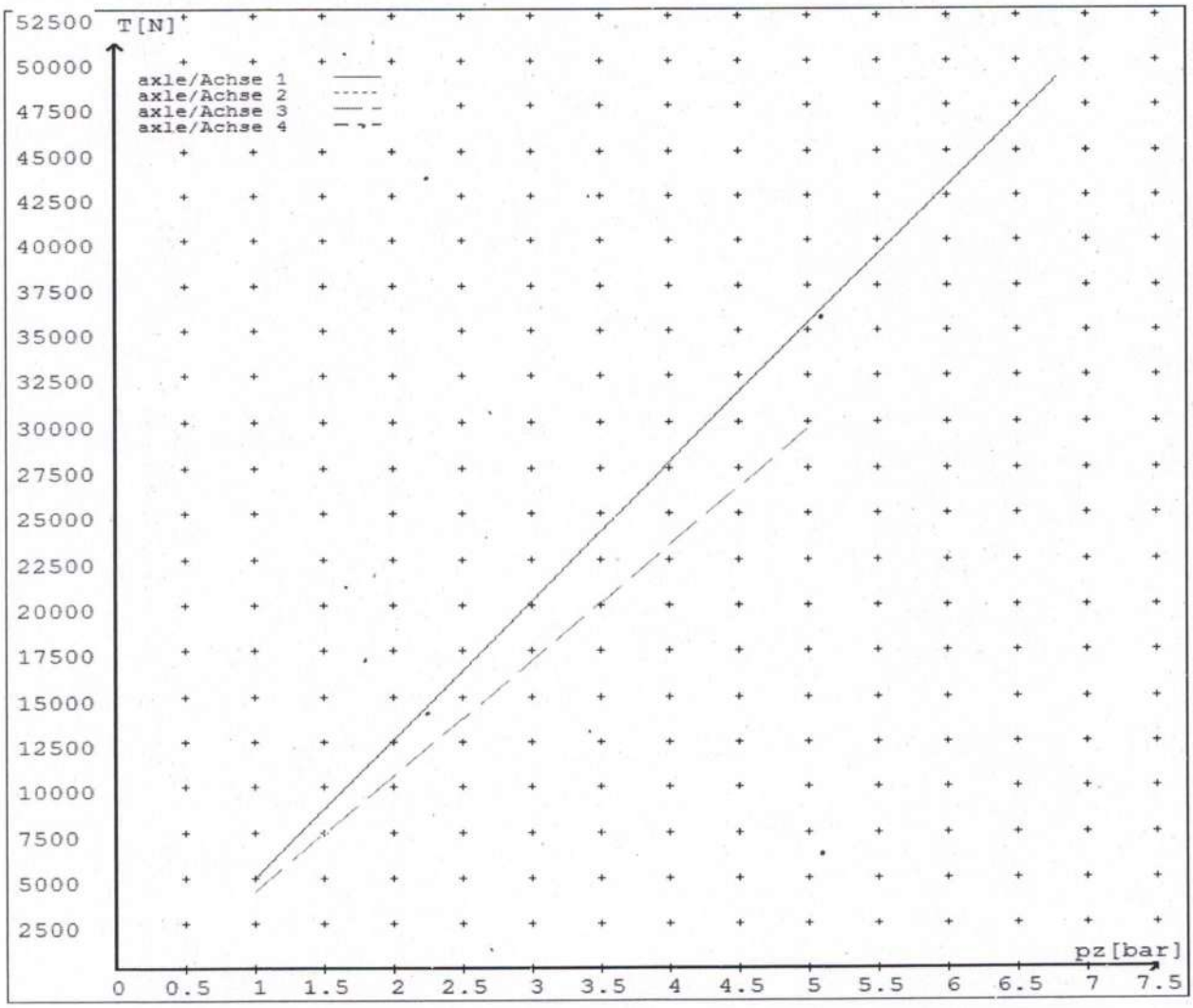
reference values

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

	pz [bar]	T [N]	T [N]
axle 1	1.0 6.8	4951 48976	
axle 2	1.0 6.8	4951 48976	
axle 3	1.0 5.0		4156 29540
axle 4	1.0 5.0		4156 29540

VIN - no.:

	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	20./	20./	16/24	16/24	/
Maximum stroke smax = ...mm maximaler Hub smax = ...mm	65	65	65	65	
Lever length = ...mm Hebellänge = ...mm	74	74	74	74	



GOUGH Transpecs

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

CERTIFICATE NO.	JH171206		
CUSTOMER NAME	DOMETT TRAILERS LTD		
CUSTOMER ORDER NO.	4949	**DATE RECEIVED**	5-Dec-17
VEHICLE TYPE	PLATFORM/TIPPER		
VIN/ CHASSIS NO.	7A9D30019H1023673		

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
DISTANCE SENSOR	464 008 011 0	464 008 011 0

OTHER VALVES:

MAKE:	WABCO	**TYPE:**	461 513 002 0	**SETTING:**	5.5 Bar
MAKE:	WABCO	**TYPE:**	446 192 110 0	**SETTING:**	SMARTBOARD
MAKE:		**TYPE:**		**SETTING:**	
MAKE:		**TYPE:**		**SETTING:**	

BRAKE CHAMBERS:	AXLE 1 & 2	AXLE 3 & 4	AXLE 5
MAKE	HALDEX	HALDEX	N/A
SIZE	20 [125 200 001]	1624 [135 1624..]	N/A
MAX STROKE (mm)	66	65	N/A
SLACK LENGTH (mm)	74	74	N/A
DRUM TYPE:	N/A	N/A	N/A
		OR	
BRAKE CALIPER:	KMXA	KMXA	N/A

FRICTION MATERIAL: ☑ OEM ☐ AFTERMARKET

LINING BRAND	AXLE 1 & 2	AXLE 3 & 4	AXLE 5
	ROR8616AF	ROR8616AF	N/A

OTHERS:

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

BRAKE CALCULATION #: TP51678

COMMENTS:

EBS, SPECIAL CONDITIONS APPLY. SEE INSTRUCTIONS ON LT400 #

SALES ORDER #: S0932916 **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:

REFER TO BRAKE CALC; **TP51678**

PARK BRAKE (z) = 0.291 @ 88360 N FOR 32,000 KGS

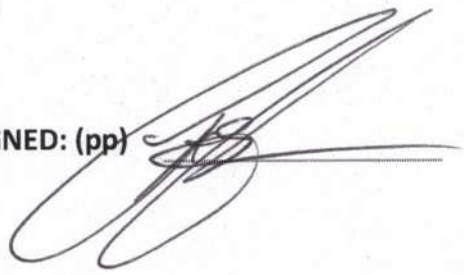
FRONT FRICTION (μ) = 0.49

FRONT CHAMBERS: HALDEX/GRAU 20 [125 200 001] SHARE THE SAME PERFORMANCE CHARACTERISTIC AS THE TSE 20HSCLD65.

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: 5-Dec-17 **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: