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: 7A9C5002XG1023551

Make: DOMETT

Component being certified:
- [ ] Chassis
- [ ] Load anchorage
- [ ] Log bolsters
- [ ] Towing connection
- [X] 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

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

Component load rating(s): 26 Tonnes GVM

General drawing number(s): N/A

Supporting documents: BRAKE CODE CERTIFICATE JH161202; BRAKE CALCULATION # TP51539

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

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: 6-Dec-16

Number: 572530

CoF vehicle inspector ID	CoF vehicle inspector signature	Date

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

distribution: DOMETT TRAILERS
7A9C5002XG1023551
SODC: JH161202
LT400: CJC 572530

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 : 3ASBTF SKELETAL
trailer type : 3-axle-semi-trailer
remarks : air / hydraulic / VA suspension
kc min + max < 0,95 =>
compatibility band laden does not have to be fulfilled.
WABCO TRAILER - EBS
TRISTOP 1+2: T.14/24 [TSE1416HTLD64 ACTUALLY USED - SEE PAGE 6 FOR PERFORMANCE DATA]
355/50 R 22,5

axle 1 + 2 + 3 : SAF, SBW 1937, TDB 0678 ECE,

		unladen	laden
total mass	P in kg	3000 - 4000	25000 - 25000
king-pin	PS kg	300 - 1300	5800 - 5800
axle 1	P1 in kg	900	6400
axle 2	P2 in kg	900	6400
axle 3	P3 in kg	900	6400
total axle mass	PR in kg	2700	19200
wheel base	E in mm	5870 - 5870	
centre of gravity height	h in mm	1000	2394
K-factor		Kv min 1.9584	Kc min 0.9322
K-factor		Kv max 1.9778	Kc max 0.9322

		axle 1	axle 2	axle 3
no. of combined axles		1	1	1
no. of brake chambers per axle line	KDZ	2	2	2
The power output corresponds to		BZ 119.6	BZ 119.6	BZ 122.1
brake chamber manufacturer		Meritor	Meritor	Meritor
chamber size		T.14/24	T.14/24	14.
lever length	lBh in mm	69	69	69
brake factor	[-]	23.03	23.03	23.03
dyn. rolling radius	rdyn min in mm	449	449	449
dyn. rolling radius	rdyn max in mm	449	449	449
threshold torque	Co Nm	6.0	6.0	6.0

calculation:

chamber pressure(rdyn min)pH at z=22,5%bar		2.2	2.2	2.2
chamber pressure(rdyn max)pH at z=22,5%bar		2.2	2.2	2.2
chamber press.(servo)pcha at pm6,5bar	bar	5.5	5.5	5.5
piston force	ThA at pm6,5bar N	5287	5287	5287
brake force(rdyn min)T lad. at pm6,5bar	N	37479	37479	37479
brake force(rdyn max)T lad. at pm6,5bar	N	37479	37479	37479
brake force within 1 % rolling friction proportion	%	33.3	33.3	33.3

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

0.597 for rdyn min
0.597 for rdyn max

Trailer may only be operated in combination with trucks/tractors with ISO 7638 supply (5 or 7 polar).

brake diagram : 841 701 101 0

maximum pressure: 8.5 bar

axle 1:
valve 1: 971 002 ... 0 WABCO
EBS emergency valve

valve 2: 480 102 ... 0 WABCO
EBS trailer modulator

brake cylinder: Meritor 1424HTLD64

axle 2:
valve 1: 971 002 ... 0 WABCO
EBS emergency valve

valve 2: 480 102 ... 0 WABCO
EBS trailer modulator

brake cylinder: Meritor 1424HTLD64

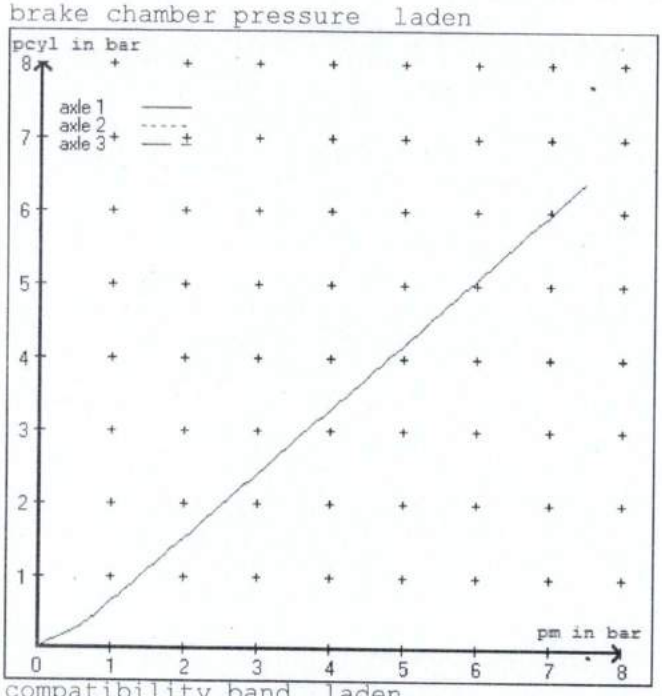
axle 3:
valve 1: 971 002 ... 0 WABCO
EBS emergency valve

valve 2: 480 102 ... 0 () WABCO or 480 207 0.. 0 / 2.. 0
EBS trailer modulator

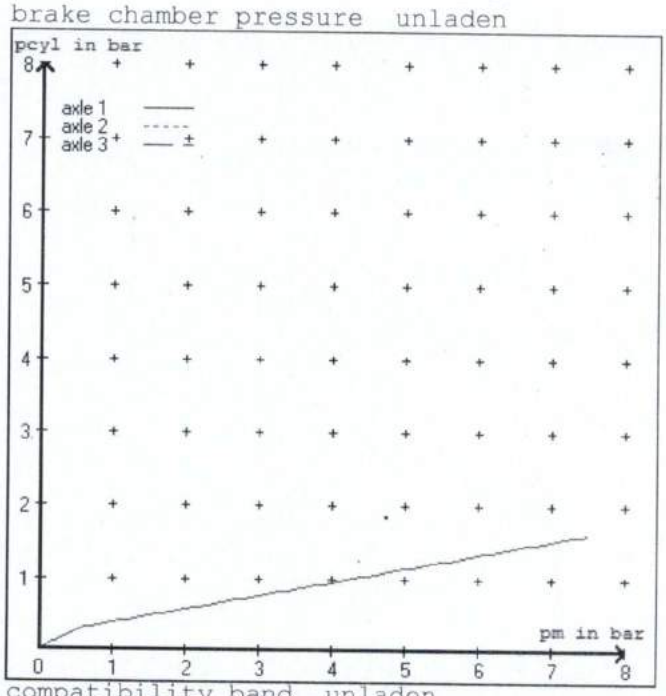
brake cylinder: Meritor 14HSCLD64

test type III (zIII = 0.30)	for rdyn min :	axle1	axle2	axle3
at pm 3.5 bar =>	pcha in bar :	2.9	2.9	2.9
test type III (zIII = 0.06)	for rdyn min :	axle1	axle2	axle3
at pm 1.1 bar =>	pcha in bar :	0.8	0.8	0.8

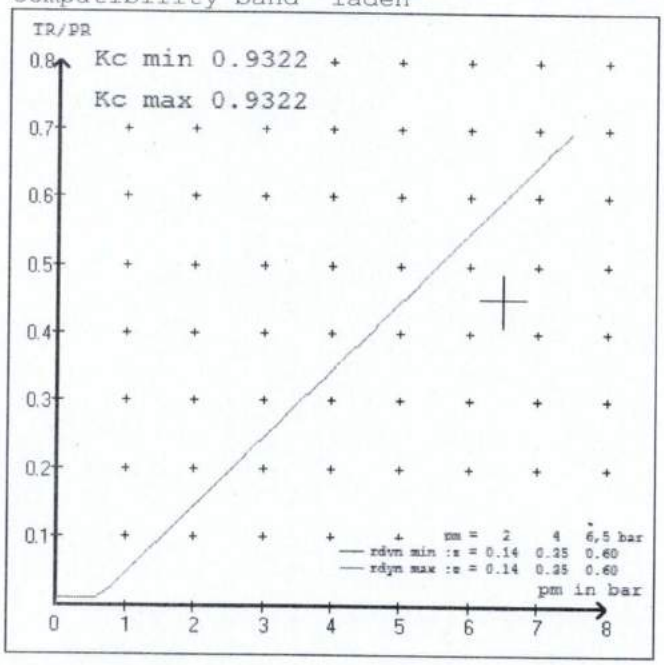
brake chamber pressure laden



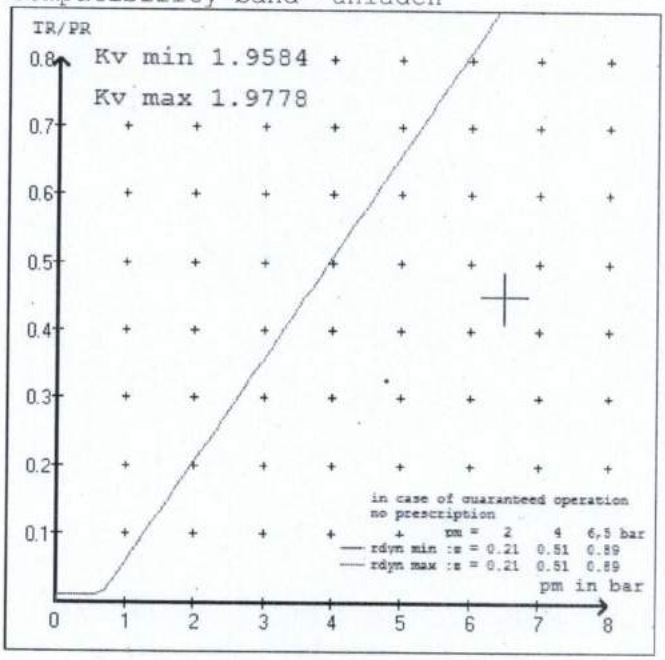
brake chamber pressure unladen



compatibility band laden



compatibility band unladen



vehicle manufacturer: DOMETT TRAILERS
trailer model : 3ASBTF SKELETAL
trailer type : 3-axle-semi-trailer

brake chamber and lever length :
axle 1 : 2 x type/diameter T.14/24 (Meritor) lever length 69 mm
axle 2 : 2 x type/diameter T.14/24 (Meritor) lever length 69 mm
axle 3 : 2 x type/diameter 14. (Meritor) lever length 69 mm

brake diagram : 841 701 101 0

valve :
971 002 ... 0 WABCO EBS emergency valve
480 102 ... 0 WABCO EBS trailer modulator
480 102 ... 0 WABCO EBS trailer modulator or 480 207 0.. 0 / 2.. 0

EBS input data
==========
vehicle manufacturer: DOMETT TRAILERS
trailer model : 3ASBTF SKELETAL
trailer type : 3-axle-semi-trailer
brake calculation no. : TP 51539S

tire circumference main axle : 2825 for rdyn max
tire circumference auxiliary axle : 2825 for rdyn max

assignment pm / deceleration z: pm 0.6 bar z = 0.010
(laden condition) 2.0 bar z = 0.150
6.5 bar z = 0.600

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	900	to be entered by the vehicle manufact.	1.4	6400	to be entered by the vehicle manufact.	0.3	1.5	5.5
2	900		1.4	6400		0.3	1.5	5.5
3	900		1.4	6400		0.3	1.5	5.5
4	0		0,0	0		0,0	0,0	0,0
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 load	pcyl	axle load	pcyl	axle load	pcyl
900	1.4	900	1.4	900	1.4
1400	1.8	1400	1.8	1400	1.8
1900	2.1	1900	2.1	1900	2.1
2400	2.5	2400	2.5	2400	2.5
2900	2.9	2900	2.9	2900	2.9
3400	3.3	3400	3.3	3400	3.3
3900	3.6	3900	3.6	3900	3.6
4400	4.0	4400	4.0	4400	4.0
6400	5.5	6400	5.5	6400	5.5

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

axle 1 :	reference axle: SAF	SBW 1937	brake lining:	Jurid 539
	test report :	TDB 0678 ECE	date :	20130927 27.09.2013
axle 2 :	reference axle: SAF	SBW 1937	brake lining:	Jurid 539
	test report :	TDB 0678 ECE	date :	20130927 27.09.2013
axle 3 :	reference axle: SAF	SBW 1937	brake lining:	Jurid 539
	test report :	TDB 0678 ECE	date :	20130927 27.09.2013

calc. verif. of residual (hot) braking force type III
(item 4.2.1 of appendix 2 to annex 11)

axle 1	(rdyn 449 mm)	T = 18.8 % Fe
axle 2	(rdyn 449 mm)	T = 18.8 % Fe
axle 3	(rdyn 449 mm)	T = 18.8 % Fe

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

axle 1	(sp = 56 mm)	s = 48 mm
axle 2	(sp = 56 mm)	s = 48 mm
axle 3	(sp = 56 mm)	s = 48 mm

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

axle1	ThA = 5287 N
axle2	ThA = 5287 N
axle3	ThA = 5287 N

calc. residual (hot) braking force in N
(item 4.3.1.4 of appendix 2 to annex 11)

axle 1	(rdyn 449 mm)	T = 30655 N
axle 2	(rdyn 449 mm)	T = 30655 N
axle 3	(rdyn 449 mm)	T = 30655 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)	0.60	0.49	
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 449 mm)	T = 30655 N
axle 2	(rdyn 449 mm)	T = 30655 N
axle 3	(rdyn 449 mm)	T = 30655 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)	0.60	0.49	
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 1	axle 2
no of TRISTOP-actuators per axle line	KDZ	2	2
TRISTOP-actuator type		T.14/16	T.14/16
lever length	lBh in mm	69	69
stat. tyre radius	rstat max in mm	432	432
at a stroke of	s in mm	30	30
min. force of spring brake	TFZ in N	6200	6200
sp.brake chamber no Meritor.....		4	4
release pressure	pLs in bar	4.5	4.5

calculation:

ratio until road iFb = lBh*Eta*C*rBt/(rBn*rstat)		3.6827	3.6827
	for rstat in mm	432	432
brake force of spring br. Tf Tf = (TFZ*KDZ-2*Co/lBh)*iFb	in N	44730	44730
braking rate zf = sum (Tf)/P + 0,01	zf laden	0.485	

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 = 2706 mm for E = 5870 mm
==========
min Ef = 2706 mm for E = 5870 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	=	2394 mm	height of center of gravity - laden
PR	=	19200 kg	maximum bogie mass - laden
P	=	25000 kg	maximum total mass - laden
nf	=	2	no. of axle(s) with TRISTOP spring brake actuators
ng	=	3	no. of bogie axle(s)

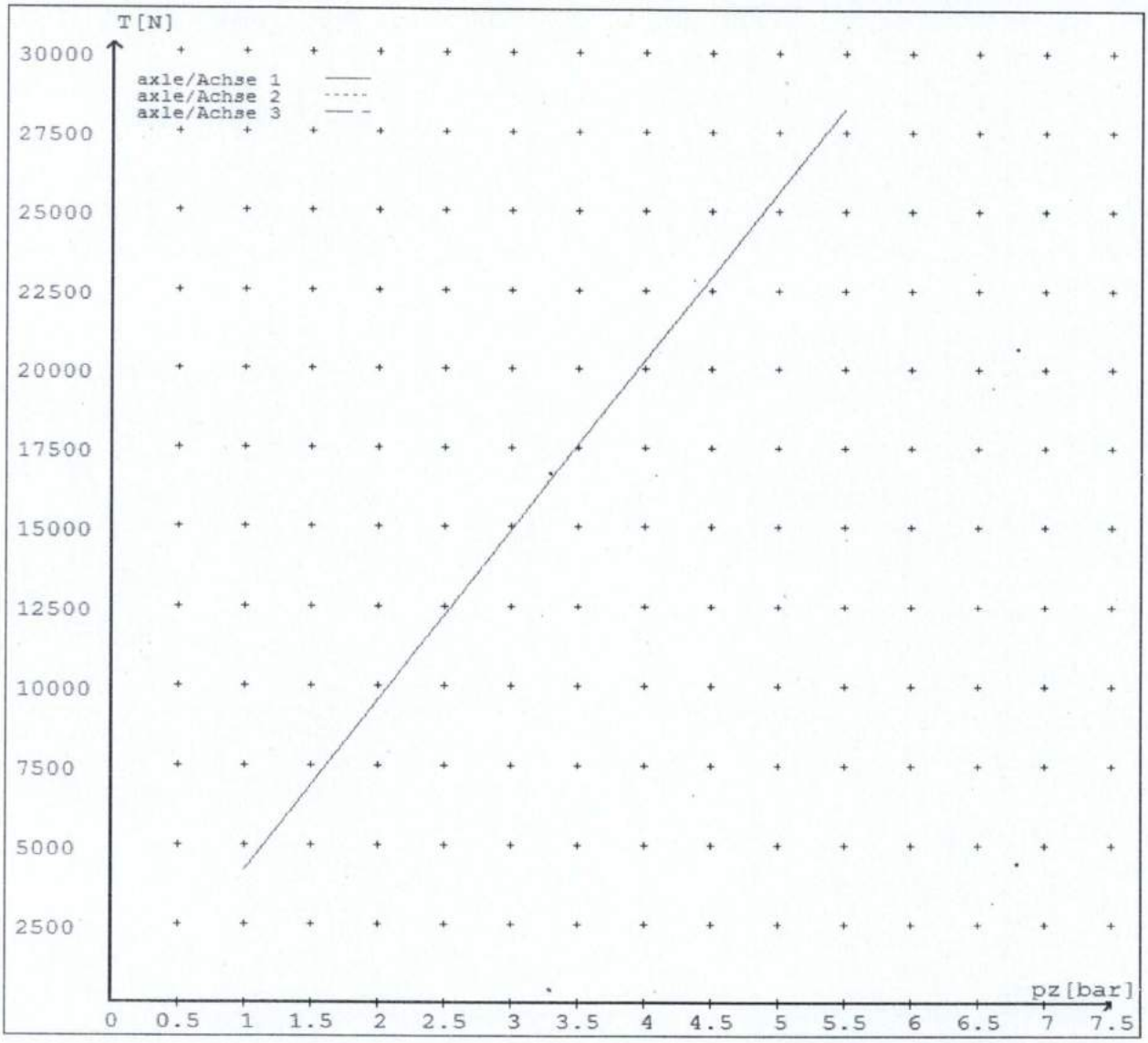
reference values

reference values for z = 45% for max rdyn: 449 mm

	pz [bar]	T [N]	T [N]
axle 1	1.0 5.5		4165 28250
axle 2	1.0 5.5		4165 28250
axle 3	1.0 5.5		4165 28250

VIN - no.:

	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	T.14/24	T.14/24	14./	/	/
Maximum stroke smax = ...mm maximaler Hub smax = ...mm	64	64	64		
Lever length = ...mm Hebellänge = ...mm	69.08	69.08	69.08		

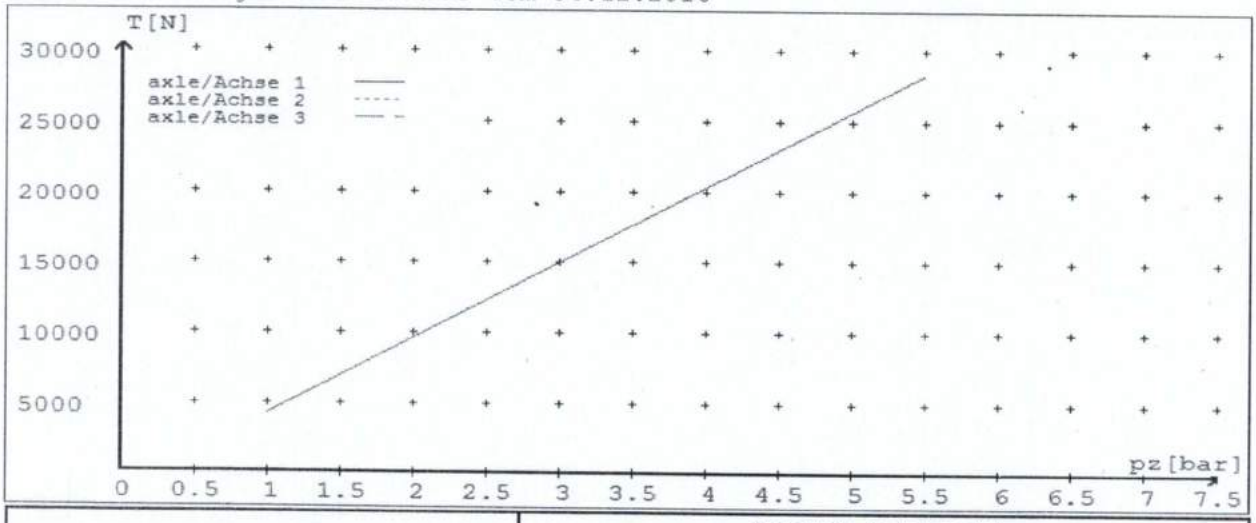


Print on WABCO no. 899 200 922 4 (only possible with laser printers!)

reference values for z = 0.45
Angabe der Referenzwerte für z = 0.45

for max rdyn: 449 mm
für max rdyn: 449 mm

brake calculation no: TP 51539S date 04.12.2016
Bremsberechnung Nr: TP 51539S vom 04.12.2016



	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	T.14/24	T.14/24	14./	/	/
Maximum stroke smax = ...mm maximaler Hub smax = ...mm	64	64	64		
Lever length = ...mm Hebellänge = ...mm	69.08	69.08	69.08		

GOUGH Transpecs

NOTICE TO VEHICLE OPERATOR

THIS VEHICLE HAS A BRAKE SYSTEM WHICH HAS BEEN DESIGNED AND FITTED IN ACCORDANCE WITH THE LAND TRANSPORT HEAVY VEHICLE BRAKE RULE 32015/4.

IF THIS VEHICLE IS OPERATED IN CONJUNCTION WITH NON-CERTIFIED VEHICLES, THERE MAY BE OPERATIONAL FACTORS WHICH NEED TO BE TAKEN INTO CONSIDERATION.

PLEASE REFER TO THE CERTIFIER FOR FURTHER INFORMATION.

EXCERPT FROM LAND TRANSPORT RULE; HEAVY-VEHICLE BRAKES RULE 32015/4. SECTION 10,

10.1 RESPONSIBILITIES OF OPERATORS

A person who operates a vehicle must ensure that the vehicle complies with this rule.

10.2 RESPONSIBILITIES OF REPAIRERS

A person who repairs or adjusts a brake must ensure that the repair or adjustment:

a) does not prevent the vehicle from complying with this rule;

b) complies with Land Transport Rule: Vehicle Repair 1998.

10.3 RESPONSIBILITIES OF MODIFIERS

A person who modifies a vehicle so as to affect the braking performance of the vehicle must:

a) ensure that the modification does not prevent the vehicle from complying with this Rule; and

b) notify the operator that the vehicle must be inspected and, if necessary, certified by person or organisation appointed to carry out specialist inspection and certification of heavy vehicle brakes.

IF YOU ARE UNSURE ABOUT YOUR RESPONSIBILITIES, PLEASE CONTACT THE VEHICLE MANUFACTURER, OR MYSELF.

COMPLAINTS. Complaints and Warranty issues which relate to Brake Certification will be acknowledged within 7 working days and a resolution proposed within 25 working days. Resolution of complaints and Warranty issues is subject to Transpecs Warranty policy. Customers have the right to appeal to the New Zealand Transport Authority if dissatisfied with a Compliance issue. (Refer NZTA Deed Of Appointment Para 47.4) **NZTA Helpdesk 0800 699 000**

(p.p.).....
(J.Hirst (JEH) HVEK)

GOUGH Transpecs

NOTICE TO VEHICLE OPERATOR

This trailer is equipped with an **E**lectronic **B**rake **S**ystem.

To comply with the New Zealand Heavy Vehicle Brake Rule 32015/4, it must be used only in conjunction with a truck/tractor equipped with a 5 or 7 pin ABS/EBS power supply socket.
Failure to connect to such supply invalidates Brake Rule compliance.

The trailer ABS/EBS warning light on the towing vehicle dashboard must illuminate when the ignition is switched on and extinguish when the vehicle is in motion.
If the light does not illuminate when ignition is switched on, the system must be checked. If the light remains illuminated when the vehicle is in motion, Brake Rule compliance is compromised. Repairs must be made as soon as possible.

If you are unsure of your responsibilities and/or obligations, please contact either the vehicle manufacturer or myself.

(p.p.)
J E Hirst
(JEH_HVEK)
(09 980 7300)

GOUGH Transpecs

NOTICE TO VEHICLE OPERATOR

WABCO Park Release Emergency Valve (PREV)

This trailer is equipped with a WABCO PREV
Part # 971 002 900 0

Application of the park brake via the cab control valve will actuate and apply all service brakes on the trailer. In the event of a leak in the service brake system the Spring Brakes will automatically override and hold the vehicle in compliance to Land Transport Rule: Heavy-vehicle Brakes Rule 32015/4.

When the vehicle is presented for COF the trailer park brake system is tested by pulling the red actuation knob on the PREV, situated mid way down the chassis rail. The cab control in the prime mover does not have to be applied for this test procedure.

If you are unsure of any aspect relating to this instruction please contact either the vehicle manufacturer or myself.

(p.p.)
J E Hirst
(JEH HVEK)
(09 980 7300)

GOUGH Transpecs

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

CERTIFICATE NO.	JH161202
CUSOMER NAME	DOMETT TRAILERS
CUSTOMER ORDER NO.	4681
DATE RECEIVED	6-Dec-16
VEHICLE TYPE	CURTAINSIDE [BTR]
~~VIN~~/ CHASSIS NO.	7A9C5002XG1023551

BRIEF SPECIFICATION AS CERTIFIED TO SCHEDULE 5

BRAKE VALVES	MAKE	TYPE
PRIMARY RELAY	WABCO	480 102 080 0
SECONDARY RELAY	N/A	N/A
YARD RELEASE VALVE	WABCO	971 002 900 0
PARK BRAKE VALVE	WABCO	971 002 900 0

SUSP. VALVES [WABCO]	FRONT	REAR
CONTROL	N/A	N/A
HEIGHT SENSOR	N/A	464 008 011 0

OTHER VALVES:

MAKE:	~~WABCO~~	TYPE:	~~446 192 110 0~~	SETTING:	~~SMARTBOARD~~
MAKE:	WABCO	TYPE:	461 513 002 0	SETTING:	PPV @ 5.5Bar
MAKE:		TYPE:		SETTING:	
MAKE:		TYPE:		SETTING:	

BRAKE CHAMBERS:	AXLE 1 & 2	AXLE 3	AXLE 4
MAKE	TSE	TSE	N/A
SIZE	1416HTLD64	14HSCLD64	N/A
MAX STROKE (mm)	64	64	N/A
SLACK LENGTH (mm)	69	69	N/A
DRUM TYPE:	N/A	N/A	N/A
BRAKE CALIPER:	SBW1937	OR SBW1937	N/A

FRICTION MATERIAL: ☑ OEM ☐ AFTERMARKET

LINING BRAND	AXLE 1 & 2	AXLE 3	AXLE 4
	JURID 539	JURID 539	N/A

OTHERS:

TYRES:

FRONT	REAR
N/A	355 50 R 22.5

BRAKE CALCULATION #: TP51539

COMMENTS:

EBS, SPECIAL CONDITIONS APPLY. SEE INSTRUCTIONS ON LT400 #

SALES ORDER #: SO625110 **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:

BRAKE CALCULATION **TP51539** USES THE TSE1424HTLD TO DETERMINE THE SERVICE BRAKE PERFORMANCE & THE TSE1616HTLD64 TO MEASURE THE PARK BRAKE PERFORMANCE OF AXLES 1 & 2. THE ACTUAL CHAMBER USED (TSE1416HTLD64) IS NOT AVAILABLE IN THE WABCO BRAKE CALCULATOR.

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: 6-Dec-16 **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: