

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*

VIN/Chassis Number

7A9E10014F1023359

Component being certified:

Chassis

Load Anchorage

Log Bolsters

Towing Connection

Brakes

SRT

PSV Stability

PSV Rollover

Swept Path

PBS

Certification Category

HVEK

Description of Work

CERTIFY TO SCHEDULE 5

ROLL STABILITY FUNCTION ACTIVATED

Code/Standard/Rule Certified to

HVBR 32015/3 Schedule 5

Component Load Rating(s)

30000KG

General Drawing Number(s)

N/A

Supporting Documents

BRAKE RULE CERTIFICATE - LC150515

OPTI-TURN EXEMPTION REF: HMRE15/034

Special Conditions*

**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.

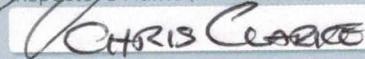
Designer's ID (if different from inspector below)



Inspector's Signature



Inspector's Name (PRINT IN CAPS)


 CHRIS CLARKE

ID Number

CJC

Date

10-Jun-15

Number

513745

CoF Vehicle Inspector ID

CoF Vehicle Inspector Signature

Date

All fields excluding those marked with * must be completed before this certificate can be accepted.

Exemption: HMRE15/034

**EXEMPTION FROM SPECIFIED REQUIREMENTS OF LAND TRANSPORT RULE:
Heavy Vehicles 2004 and Vehicle Dimensions and Mass 2002**

Pursuant to Section 166(1) of the Land Transport Act 1998, and pursuant to the powers delegated to me, I Jackie Hartley, Administrator (Assessments) hereby exempt the motor vehicle specified in Schedule 1 hereto from the section of Land Transport Rule: Heavy Vehicles 2004 and Vehicle Dimensions and Mass 2002 listed in Schedule 2, subject to the conditions specified in Schedule 3.

SCHEDULE 1:

Make/Model: Domett Truck & Trailer, 5 Axle Tanker
VIN/CHASSIS: 7A9E10014F1023359

SCHEDULE 2: - Exempted Requirement

Heavy Vehicles 2004

- Clause 3.5(2)

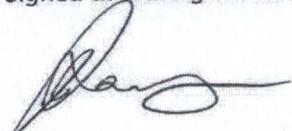
Vehicle Dimensions and Mass 2002

- Clause 4.2(7)

SCHEDULE 3: - Conditions of this exemption:

- 1) The Wabco OptiTurn function of the TEBS-E system is to be activated.
- 2) The vehicle must not be modified in any way while operating under this exemption.
- 3) This original exemption must be kept by Gough Transpecs.
- 4) A copy of this exemption including the OptiTurn function (printed on a silver WABCO Sticker) must be affixed to the exempted vehicle.
- 5) The sticker in 4) must be legible and include all printed areas of this original exemption letter.
- 6) This exemption can be revoked at any time in writing by the NZ Transport Agency.

Signed at Wellington this 5th day of March 2015.



Jackie Hartley
Administrator (Assessments)

WABCO**START-UP PROTOCOL**

System	Trailer EBS-E	WABCO part number	480 102 064 0
Production date	2014-12-18	Serial number	436007948000D
Serial number (modulator)	000000098326		
Fingerprint Customer EOL / Customer Development / Flash Program	W503643 / 2015-06-10 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00		

WABCO **TRAILER EBS-E** GGVS/ADR TUEH TB 2007 - 019.00
TDB0749

HERSTELLER MANUFACTURER CONSTRUCTEUR	DOMETT T&T			GIO	Pin1	Pin3	Pin4								
TYP TYPE	5AFT TANKER			1	ILS1	---	ILS1								
FAHRZEUG IDENTNR. CHASSIS NUMBER NUMERO DE CHASSIS	7A9E10014F1023359			2	eTASC	---	eTASC								
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO.	TP2015A			3	ALS2	ALS2	---								
POLRADZAHNEZAHL 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	4	---	MH	LS1								
RSS RSS RSS	Einfachbereifung Single Tire Monte simple	Lenkachse Steering axle Essieu virant	5	DIAG	DIAG	DIAG	DIAG								
Zwillingsbereifung Twin Tire Monte jumelée	X	Kippkrüftiges Fahrzeug Critical Trailer Véhicule critique	6	---	---	---	---								
Subsystems	---	I/O	24N	7	---	---	---								
	pm (bar)	6.5	pm (bar)	0.8	2.0	---	6.5		1.0	Pz					
ACHSE AXLE ESSIEU								TYP TYPE	(mm)	(mm)	TR (daN)				
1	1500	0.6	1.7	7250	4.5	0.4	1.3	---	5.8	-	18	65	69	506	3799
2	1500	0.6	1.7	7250	4.5	0.4	1.3	---	5.8	-	18	65	69	506	3799
3	1100	0.3	1.2	6000	3.7	0.3	1.4	---	4.5	-	14 / 16	64	69	500	2781
4	1100	0.3	1.2	6000	3.7	0.3	1.4	---	4.5	-	14 / 16	64	69	500	2781
5	1100	0.3	1.2	6000	3.7	0.3	1.4	---	4.5	1	14	64	69	500	2781

Diagnostic memory	OK	Warning lamp control	OK
Parameter setting	carried out	Stop light power supply	Not tested
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 check	Not tested	Leak test	Not tested
Immobilizer test	Not tested	Signal outputs TEBS	Not tested
Signal inputs	Not tested	Tag axle test	Not tested

Diagnostic memory ELEX	Not tested	Signal outputs ELEX	Not tested
TailGUARDlight	Not tested	TailGUARD	Not tested

Manufacturer	DOMETT T&T	Vehicle ident. no	7A9E10014F1023359
Vehicle type	5AFT TANKER	Odometer reading	0.0 km
next Service	0 km	Trip reading	0.0 km
Tester	Chris Clarke		
Date	2015-06-10 4:04:33 p.m.	Signature	

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

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 recommend to do a braking harmonisation!
 WABCOWBrake V6.14.04.20 db 08.07.2014

distribution: DOMETTS
 2015, 5A, SAF, TANKER
 7A9E10014F1023359
 LC150515
 CJC LT400 513745

vehicle manufacturer: DOMETTS

trailer model : 2015 5A TANKER, E1001

trailer type : 5-axle-full-trailer

remarks : air / hydraulic / VA suspension
 WABCOWTRAILER - EBS E
 TRISTOP 3+4: T.14/24
 265/70 R 19,5

axle 1 + 2 + 3 + 4 + 5 : SAF, SBW 1937, TDB 0749 ECE,

		<u>unladen</u>	<u>laden</u>
total mass	P in kg	6300	32500
axle 1	P1 in kg	1500	7250
axle 2	P2 in kg	1500	7250
axle 3	P3 in kg	1100	6000
axle 4	P4 in kg	1100	6000
axle 5	P5 in kg	1100	6000
wheel base	E in mm	5695 - 5695	
centre of gravity height	h in mm	1000	1582

		<u>axle 1</u>	<u>axle 2</u>	<u>axle 3</u>	<u>axle 4</u>	<u>axle 5</u>
no. of combined axles		1	1	1	1	1
no. of brake chambers per axle line	KDZ	2	2	2	2	2
The power output corresponds to		BZ 122.1	BZ 122.1	BZ 119.6	BZ 119.6	BZ 122.1
brake chamber manufacturer		Meritor	Meritor	Meritor	Meritor	Meritor
chamber size		18.	18.	T.14/24	T.14/24	14.
lever length	LBH in mm	69	69	69	69	69
brake factor	[-]	23.03	23.03	23.03	23.03	23.03
dyn. rolling radius	rdyn min in mm	421	421	421	421	421
dyn. rolling radius	rdyn max in mm	421	421	421	421	421
threshold torque	Co Nm	6.0	6.0	6.0	6.0	6.0

calculation:

chamber pressure(rdyn min)pH at z=22,5%bar	2.2	2.2	2.0	2.0	2.0
chamber pressure(rdyn max)pH at z=22,5%bar	2.2	2.2	2.0	2.0	2.0
chamber press.(servo)pcha at pm6,5bar bar	5.8	5.8	4.5	4.5	4.5
piston force ThA at pm6,5bar N	6172	6172	4285	4285	4285
brake force(rdyn min)T lad. at pm6,5bar N	46701	46701	32317	32317	32317
brake force(rdyn max)T lad. at pm6,5bar N	46701	46701	32317	32317	32317
brake force within 1 % rolling friction proportion	%	21.2	21.2	19.2	19.2

braking rate z laden 0.597 for rdyn min
 z = sum (TR)/PRmax 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 :

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 18HSCLD64

axle 2:

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

brake cylinder: Meritor 18HSCLD64

axle 3:

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

brake cylinder: Meritor 1424HTLD64

axle 4:

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

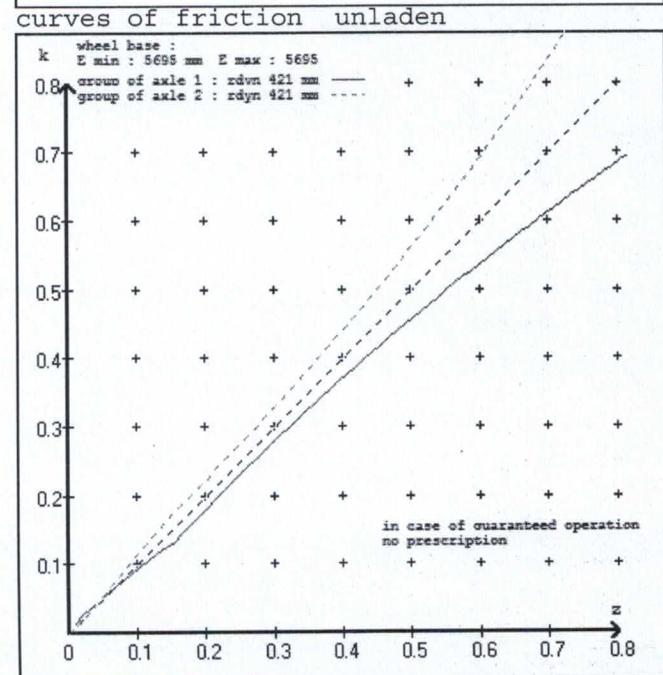
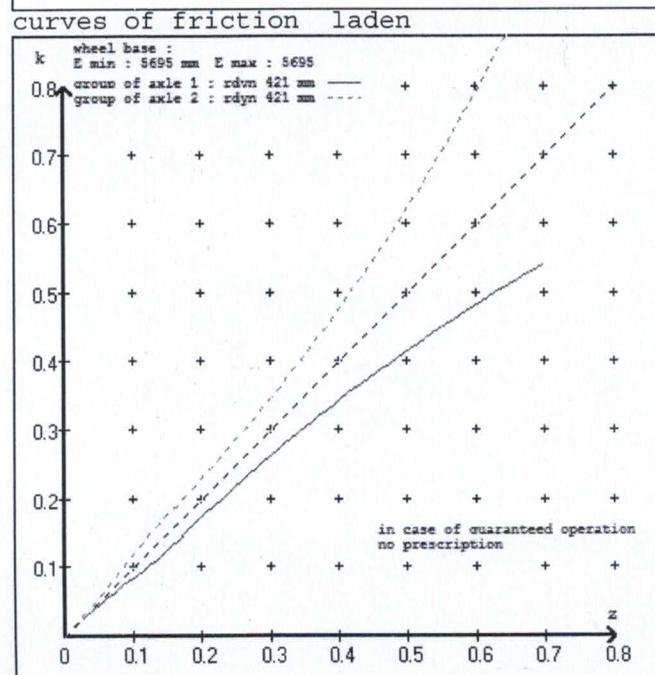
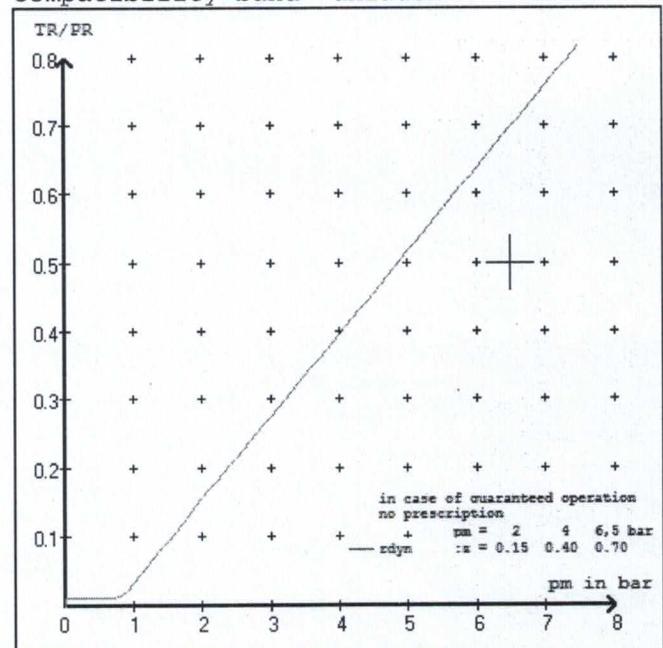
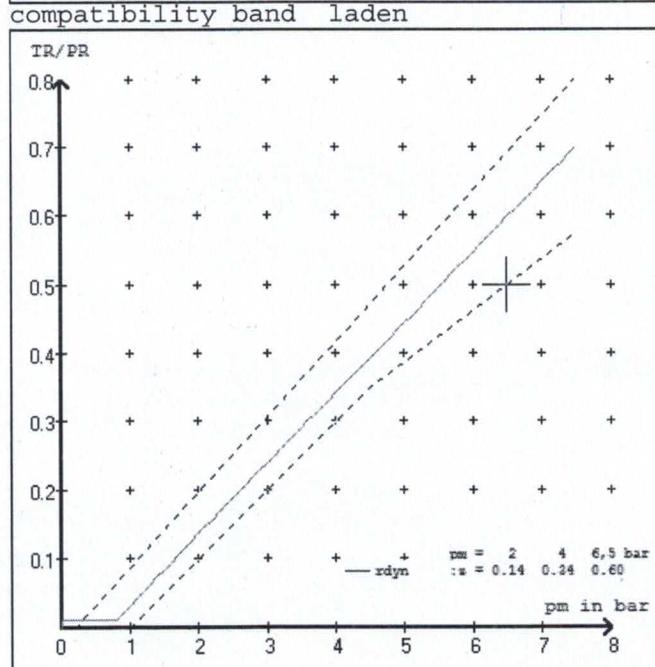
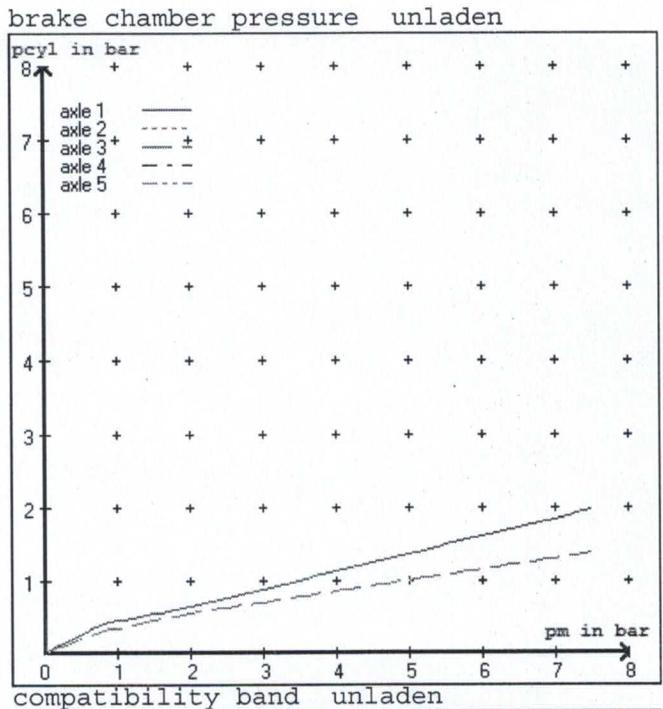
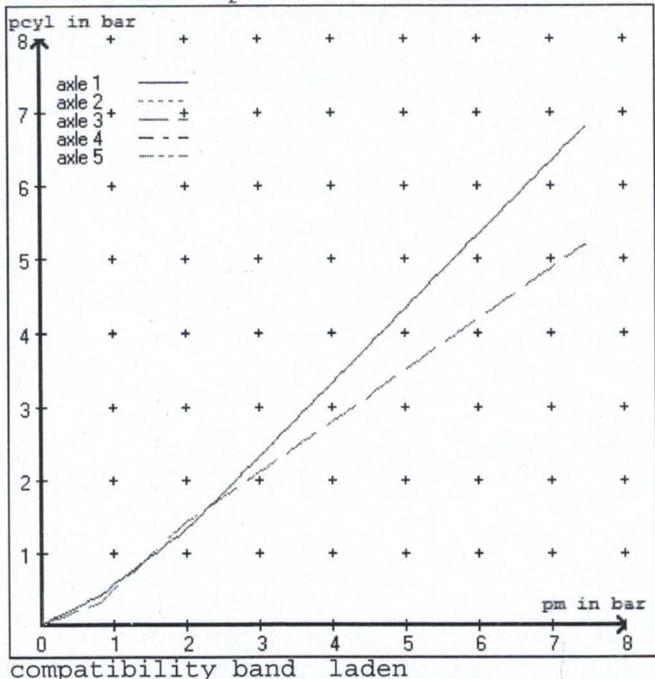
brake cylinder: Meritor 1424HTLD64

axle 5:

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

brake cylinder: Meritor 14HSCLD64

test type III (zIII = 0.30) for rdyn min : axle1 axle2 axle3 axle4 axle5
at pm 3.6 bar => pcha in bar : 2.9 2.9 2.5 2.5 2.5
test type III (zIII = 0.06) for rdyn min : axle1 axle2 axle3 axle4 axle5
at pm 1.3 bar => pcha in bar : 0.8 0.8 0.7 0.7 0.7



vehicle manufacturer: DOMETTS
 trailer model : 2015 5A TANKER, E1001
 trailer type : 5-axle-full-trailer

brake chamber and lever length :

axle 1 :	2 x type/diameter	18.	(Meritor)	lever length 69 mm
axle 2 :	2 x type/diameter	18.	(Meritor)	lever length 69 mm
axle 3 :	2 x type/diameter	T.14/24	(Meritor)	lever length 69 mm
axle 4 :	2 x type/diameter	T.14/24	(Meritor)	lever length 69 mm
axle 5 :	2 x type/diameter	14.	(Meritor)	lever length 69 mm

brake diagram :

valve :

480 207 0..0	WABCO EBS relay valve	or 480 207 2..0
480 102 0..0	WABCO EBS trailer modulator	

EBS input data

=====

vehicle manufacturer: DOMETTS
 trailer model : 2015 5A TANKER, E1001
 trailer type : 5-axle-full-trailer
 brake calculation no. : TP 2015A

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	1500	to be entered by the vehicle manufact.	1.7	7250	to be entered by the vehicle manufact.	0.4	1.3	5.8
2	1500		1.7	7250		0.4	1.3	5.8
3	1100		1.2	6000		0.3	1.4	4.5
4	1100		1.2	6000		0.3	1.4	4.5
5	1100		1.2	6000		0.3	1.4	4.5

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 5
axle load pcyl				
1500	1.7	1500	1.7	1100
2000	2.1	2000	2.1	1600
2500	2.4	2500	2.4	2100
3000	2.8	3000	2.8	2600
3500	3.1	3500	3.1	3100
4000	3.5	4000	3.5	3600
4500	3.8	4500	3.8	4100
5000	4.2	5000	4.2	4600
7250	5.8	7250	5.8	6000

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 0749 ECE	date : 20130930 30.09.2013
axle 2 : reference axle: SAF	SBW 1937	brake lining: Jurid 539
test report :	TDB 0749 ECE	date : 20130930 30.09.2013
axle 3 : reference axle: SAF	SBW 1937	brake lining: Jurid 539
test report :	TDB 0749 ECE	date : 20130930 30.09.2013
axle 4 : reference axle: SAF	SBW 1937	brake lining: Jurid 539
test report :	TDB 0749 ECE	date : 20130930 30.09.2013
axle 5 : reference axle: SAF	SBW 1937	brake lining: Jurid 539
test report :	TDB 0749 ECE	date : 20130930 30.09.2013

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

axle 1 (rdyn 431 mm)

axle 1	(rdyn 421 mm)	T = 22.0 % Fe
axle 2	(rdyn 421 mm)	T = 22.0 % Fe
axle 3	(rdyn 421 mm)	T = 17.2 % Fe
axle 4	(rdyn 421 mm)	T = 17.2 % Fe
axle 5	(rdyn 421 mm)	T = 17.2 % Fe

calculated actuator stroke in mm

(item 4.3.1.1 of appendix 2 to annex 11)

axle 1	(sp = 58 mm)	s = 39 mm
axle 2	(sp = 58 mm)	s = 39 mm
axle 3	(sp = 56 mm)	s = 39 mm
axle 4	(sp = 56 mm)	s = 39 mm
axle 5	(sp = 56 mm)	s = 39 mm

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

axle1	ThA = 6172 N
axle2	ThA = 6172 N
axle3	ThA = 4285 N
axle4	ThA = 4285 N
axle5	ThA = 4285 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 = 36490 N
axle 2	(rdyn 421 mm)	T = 36490 N
axle 3	(rdyn 421 mm)	T = 25301 N
axle 4	(rdyn 421 mm)	T = 25301 N
axle 5	(rdyn 421 mm)	T = 25301 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 0.47

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

axle 1	(rdyn 421 mm)	T = 36490 N
axle 2	(rdyn 421 mm)	T = 36490 N
axle 3	(rdyn 421 mm)	T = 25301 N
axle 4	(rdyn 421 mm)	T = 25301 N
axle 5	(rdyn 421 mm)	T = 25301 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 0.47

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

spring parking brake

		axle 3	axle 4
no of TRISTOP-actuators per axle line KDZ		2	2
TRISTOP-actuator type		T.14/24	T.14/24
lever length	lBh in mm	69	69
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		3.9674	3.9674
iFb = lBh*Eta*C*rBt/(rBn*rstat)		401	401
for rstat in mm		59654	59654
brake force of spring br. Tf in N		59654	59654
Tf = (TFZ*KDZ-2*Co/lBh)*iFb			
braking rate	zf laden	0.384	
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

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

$$\text{min Ef} = 4265 \text{ mm} \quad \text{for } E = 5695 \text{ mm}$$

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$$\text{min Ef} = 4265 \text{ mm} \quad \text{for } E = 5695 \text{ mm}$$

=====

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 = 1582 mm height of center of gravity - laden
PR = 18000 kg maximum bogie mass - laden
P = 32500 kg maximum total mass - laden
nf = 2 no. of axle(s) with TRISTOP spring brake actuators
ng = 3 no. of bogie axle(s)

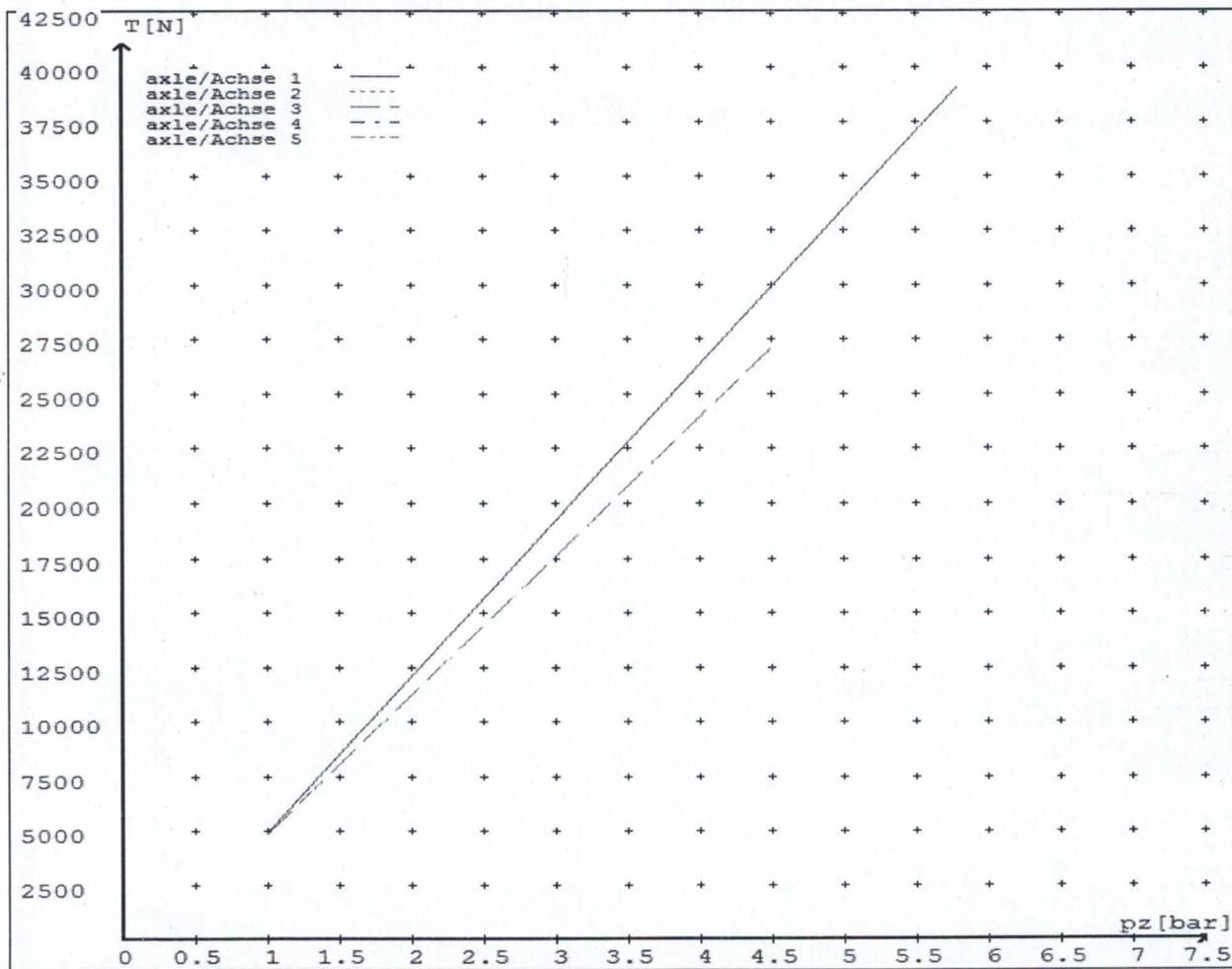
reference values

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

	pz [bar]	T [N]	T [N]
axle 1	1.0	4932	
	5.8	39113	
axle 2	1.0	4932	
	5.8	39113	
axle 3	1.0		4868
	4.5		27066
axle 4	1.0		4868
	4.5		27066
axle 5	1.0		4868
	4.5		27066

VIN - no.:

	Axe(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	18./	18./	T.14/24	T.14/24	14./
Maximum stroke smax = ...mm maximaler Hub smax = ...mm	64	64	64	64	64
Lever length =mm Hebellänge =mm	69.08	69.08	69.08	69.08	69.08



reference values for z = 0.5

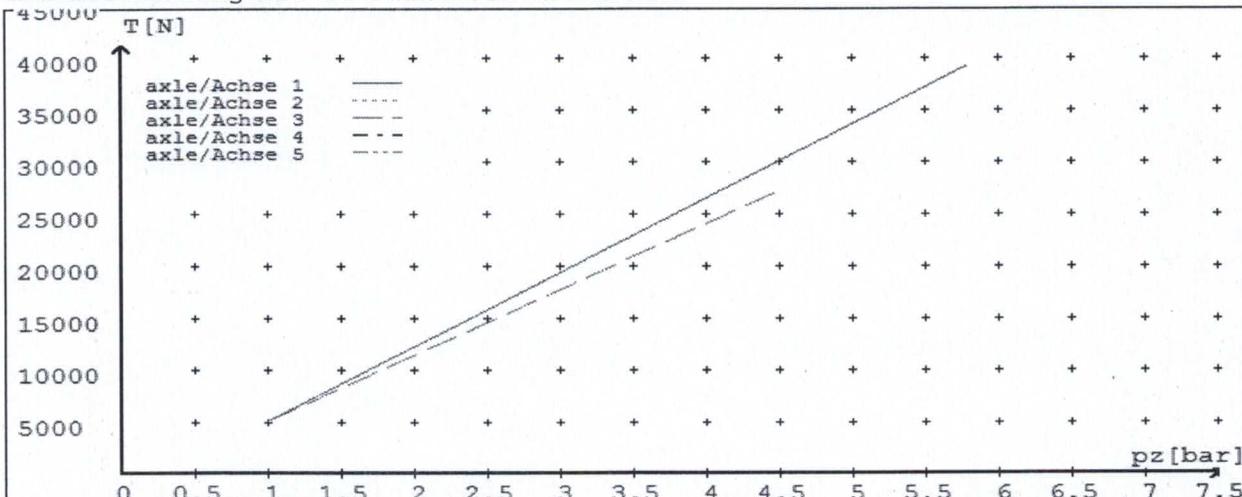
Angabe der Referenzwerte für z = 0.5

brake calculation no: TP 2015A date 19.04.2015

Bremsberechnung Nr: TP 2015A vom 19.04.2015

for max rdyn: 421 mm

für max rdyn: 421 mm



Axe(s) / Achse(n)

brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	18./	18./	T.14/24	T.14/24	14./
Maximum stroke smax = ...mm maximaler Hub smax = ...mm	64	64	64	64	64
Lever length = ...mm Hebellänge = ...mm	69.08	69.08	69.08	69.08	69.08

HVBR WORKSHEET
(PROCEDURE & COMPLIANCE DOCUMENTATION SHEET)

CERTIFICATE No. LC150515

CUSTOMER NAME

DOMETT TRAILERS

CUSTOMER ORDER No.

DATE RECEIVED 10.06.15

VEHICLE TYPE

5 AXLE FULL TRAILER

REG No.

CHASSIS No. 7A9E10014F1023359

BRIEF SPECIFICATION AS CERTIFIED TO HVBR

BRAKE CHAMBERS:

<u>Ax #</u>	<u>Make/model</u>	<u>Max stroke</u>	<u>Lever length</u>
1,2:	TSE/18HSCLD65	65 mm	69 mm
3&4:	TSE/1416HTLD64	64 mm	69 mm
5:	TSE/14HSCLD64	64 mm	69 mm

BRAKE VALVES: Ratio Valve Setting: EBS CONTROL
 Test Points: 3 4 5 7

FRICTION LINING: OEM Aftermarket
(All) Lining Brand JURID 539

EBS CONTROL: IF SPECIAL CONDITIONS APPLY – SEE INSTRUCTION ON LT400

VALVES: AS PER BRAKE CALCULATION TP 2015A & SO1550738

TYRE SIZE: 265 70 R 19.5

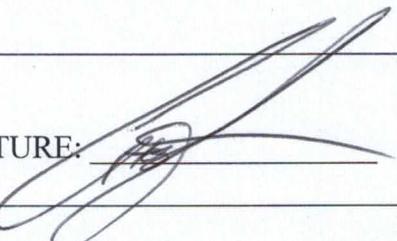
NOTES

PACKING SLIP NO.

PROCESS TIME: 1

BRAKE CALC #TP2015A – THE MERITOR CHAMBERS ARE THE TSE VARIANT.

COMPLETION DATE : 10th June 2015

SIGNATURE: 

Statement of Compliance with the New Zealand Heavy Brake Rule

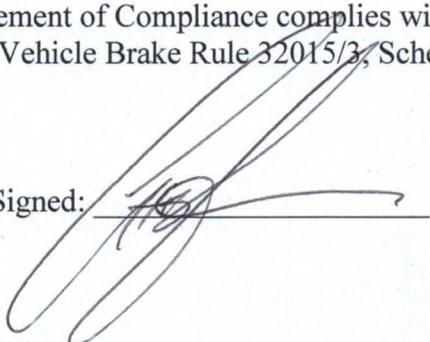
Documentation required supporting Statements of Compliance with the New Zealand Heavy Brake Rule, to be made available to the Statutory Authority on request, must include all calculations and test reports.

Confirmation of compliance

I confirm that the vehicle identified on page 1 of this Statement of Compliance complies with all relevant requirements of the current New Zealand Heavy Vehicle Brake Rule 32015/3, Schedule 5.

Date: 10th June 2015

Signed:



Certifier's identification

Name: C J Clarke

Phone (bus): (09) 980 7300 Fax (bus): (09) 980 7306

Postal address: Transport Specialties, Cnr Kerrs & Ash Roads
Wiri, Auckland, PO Box 98 971 Manukau City 2241

Position: CJC

Confirmation of continued compliance of modification

I confirm the brake system of the vehicle identified on 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 Vehicle Brake Rule 32015/3, Schedule 5.

Date: _____

Signed: _____

Certifier's identification: CJC

Name:

Phone (bus): (09) 980 7300 Fax (bus): (09) 980 7306

Postal address: Transport Specialties Ltd

Cnr Kerrs & Ash Roads, Wiri, Auckland

PO Box 98 971, Manukau City 2241