

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 <small>(PRINT IN CAPS)</small>	ID
Chris Clarke	CJC

Vehicle Registration*	VIN/Chassis Number
	7A9E35017F1023332

Component being certified:	<input type="checkbox"/> Chassis Modification	<input type="checkbox"/> Load Anchorage	<input type="checkbox"/> Log Bolsters
	<input type="checkbox"/> Towing Connection	<input checked="" type="checkbox"/> Brakes	<input type="checkbox"/> SRT
	<input type="checkbox"/> PSV Stability	<input type="checkbox"/> PSV Rollover	<input type="checkbox"/> Swept Path
	<input type="checkbox"/> PBS		
	Certification Category	HVEK	

Description of Work
CERTIFY TO SCHEDULE 5
ROLL STABILTY FUNCTION ACTIVATED

Code/Standard/Rule Certified to	Component Load Rating(s)
HVBR 32015/3 Schedule 5	32000KG
General Drawing Number(s)	
N/A	

Supporting Documents
BRAKE RULE CERTIFICATE - JH141238

Special Conditions*
WARNING LAMP MUST ILLUMINATE WHEN IGNITION IS SWITCHED ON & THEN EXTINGUISH IMMEDIATELY <u>OR</u> WHEN VEHICLE SPEED EXCEEDS 7 KPH

Certification Expiry Date <small>(if applicable)</small>	or	Hubodometer Reading <small>(whichever comes first)</small>
N/A		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

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 <small>(if different from inspector below)</small>	
Inspector's Signature	
Inspector's Name <small>(PRINT IN CAPS)</small>	ID Number
CHRIS CLARKE	CJC
Date	Number
23-Dec-14	499956

CoF Vehicle Inspector ID	CoF Vehicle Inspector Signature	Date

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

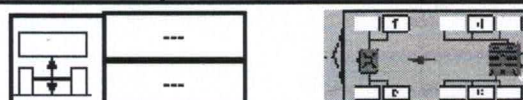
WABCO

START-UP PROTOCOL

System	Trailer EBS-E	WABCO part number	480 102 080 0
Production date	2014-07-30	Serial number	437000746200L
Serial number (modulator)	000000032929		
Fingerprint Customer EOL / Customer Development / Flash Program	W503643 / 2014-12-23 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00		

WABCO	TRAILER EBS-E	GGVS/ADR TUEH TB 2007 - 019.00 TDB0749
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HERSTELLER MANUFACTURER CONSTRUCTEUR	DOMETT			GIO	Pin1	Pin3	Pin4
TYP TYPE TYPE	5AFT TIPPER			1	---	---	---
FAHRZEUG IDENTNR. CHASSIS NUMBER NUMERO DE CHASSIS	7A9E35017F1023332			2	---	---	---
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO.	TP51202A			3	ALS2	ALS2	---
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	4	---	---	---
RSS RSS RSS	Einfachbereifung Single Tire Monte simple	Lenkachse Steering axle Essieu vireur	4S/3M	5	DIAG	DIAG	DIAG
	Zwillingsbereifung Twin Tire Monte jumelée	Kippkritisches Fahrzeug Critical Trailer Véhicule critique		6	---	---	---
Subsystems	SB	I/O	24N	7	---	---	---



ACHSE AXLE ESSIEU	pm (bar)		6.5		pm (bar)		0.6	2.0	---	6.5	TYP TYPE	(mm)	(mm)	(bar)	
	1.0	Pz													
	TR (daN)														
1	1600	0.7	2.2	7250	4.6	0.4	1.4	---	6.5	-	18	65	69	491	4395
2	1600	0.7	2.2	7250	4.6	0.4	1.4	---	6.5	-	18	65	69	491	4395
3	1100	0.3	1.3	6000	3.7	0.3	1.5	---	4.0	-	14 / 16	64	69	485	2381
4	1100	0.3	1.3	6000	3.7	0.3	1.5	---	4.0	-	14 / 16	64	69	485	2381
5	1100	0.3	1.3	6000	3.7	0.3	1.5	---	4.0	-	14	64	69	485	2381

Diagnostic memory	OK	Warning lamp control	OK
Parameter setting	carried out	Stop light power supply	Not tested
EBS pressure test	Not tested	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	Vehicle ident. no	7A9E35017F1023332
Vehicle type	5AFT TIPPER	Odometer reading	0.0 km
next Service	0 km	Trip reading	0.0 km
Tester	Chris Clarke	Signature 	
Date	2014-12-23 7:31:44 a.m.		

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

distribution: DOMETT
7A9E35017F1023332
SODC: JH141238

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 commend to do a braking harmonisation!
WABCOBrake V6.14.04.20 db 08.07.2014

vehicle manufacturer: DOMETT
trailer model : 5AFT TIPPER
trailer type : 5-axle-full-trailer
remarks : air / hydraulic / VA suspension
WABCO TRAILER - EBS E
TRISTOP 3+4: T.14/16
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	6500	32500
axle 1	P1 in kg	1600	7250
axle 2	P2 in kg	1600	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	5300 - 5300	
centre of gravity height	h in mm	1200	2156

	<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	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	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
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	2.3	2.3	1.9	1.9	1.9
chamber pressure(rdyn max)pH at z=22,5%bar	2.3	2.3	1.9	1.9	1.9
chamber press.(servo)pcha at pm6,5bar	6.5	6.5	4.0	4.0	4.0
piston force	6960	6960	3784	3784	3784
brake force(rdyn min)T lad. at pm6,5bar	52653	52653	28531	28531	28531
brake force(rdyn max)T lad. at pm6,5bar	52653	52653	28531	28531	28531
brake force within 1 % rolling friction proportion	21.2	21.2	19.2	19.2	19.2

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: 971 002 ... 0 WABCO
 EBS emergency valve

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

brake cylinder: Meritor 18HSCLD64

axle 2:

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

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

brake cylinder: Meritor 18HSCLD64

axle 3:

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

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

brake cylinder: Meritor 1424HTLD64

axle 4:

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

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

brake cylinder: Meritor 1424HTLD64

axle 5:

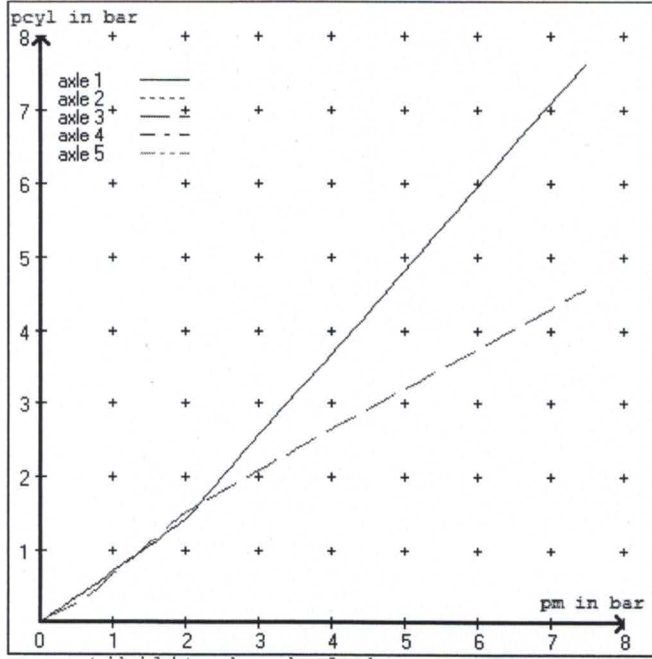
valve 1: 971 002 ... 0 WABCO
EBS emergency valve

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

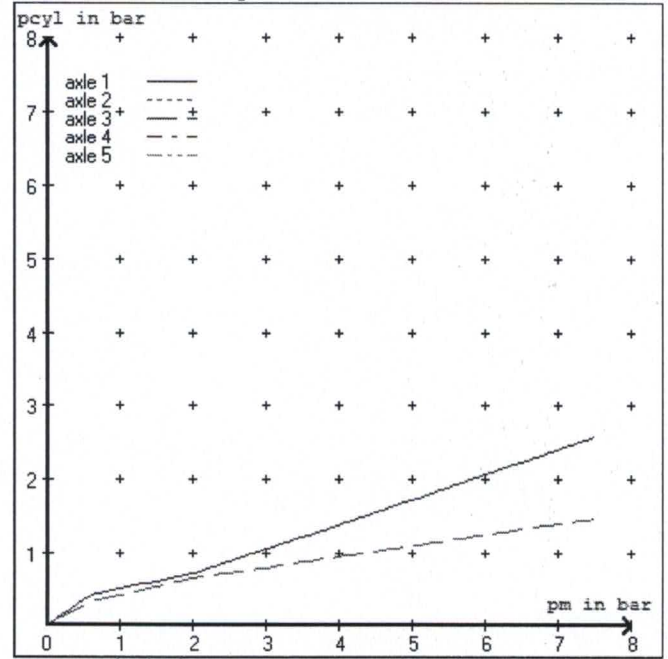
brake cylinder: Meritor 14HSCLD64

test type III (zIII = 0.30)	for rdyn min :	axle1	axle2	axle3	axle4	axle5	
at pm 3.5 bar =>	pcha in bar :	3.1	3.1	2.3	2.3	2.3	2.3
test type III (zIII = 0.06)	for rdyn min :	axle1	axle2	axle3	axle4	axle5	
at pm 1.1 bar =>	pcha in bar :	0.8	0.8	0.7	0.7	0.7	0.7

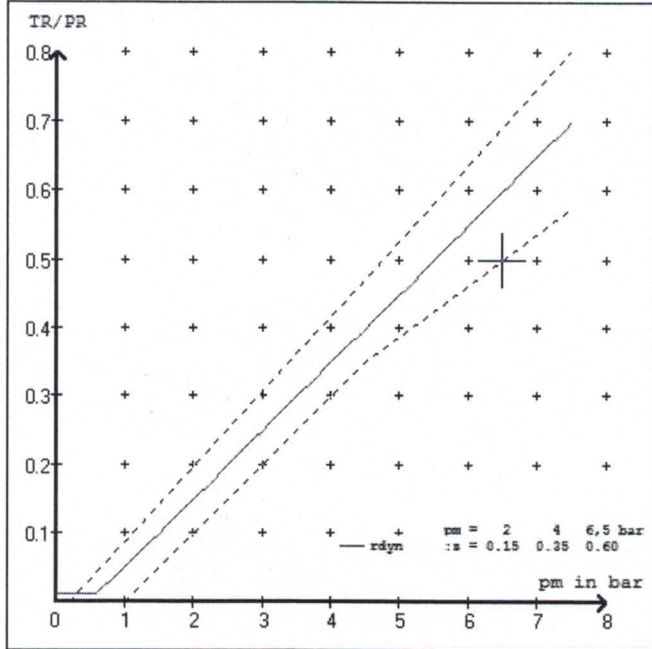
brake chamber pressure laden



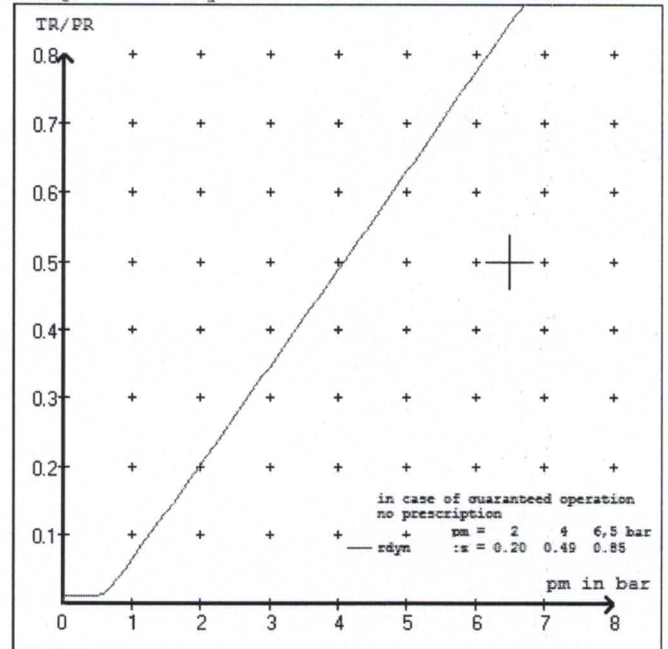
brake chamber pressure unladen



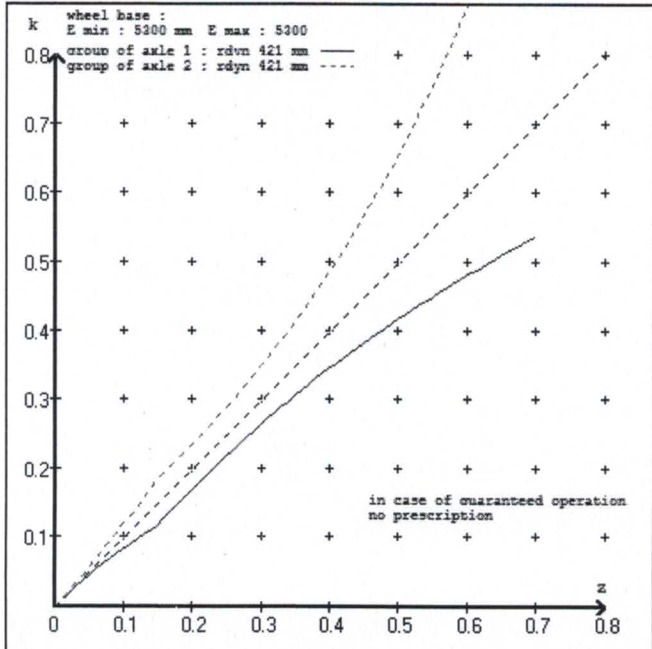
compatibility band laden



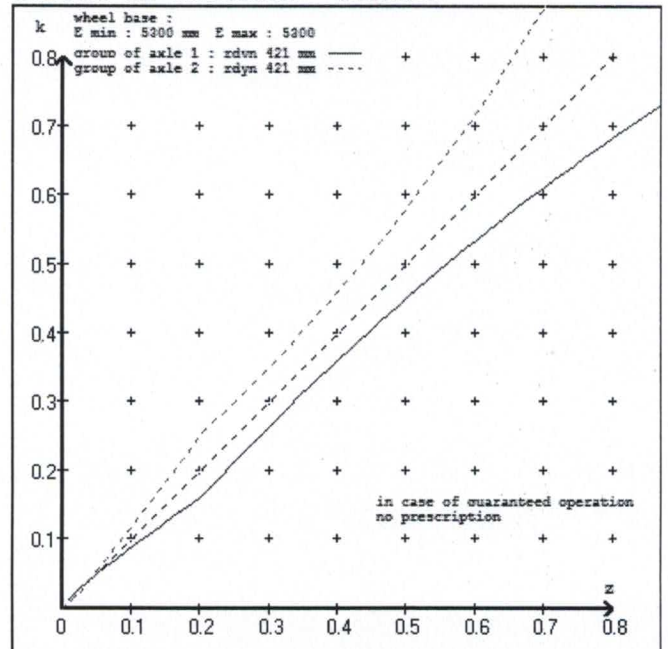
compatibility band unladen



curves of friction laden



curves of friction unladen



vehicle manufacturer: DOMETT
 trailer model : 5AFT TIPPER
 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 :
 971 002 ... 0 WABCO EBS emergency valve
 480 207 0.. 0 WABCO EBS relay valve or 480 207 2.. 0
 480 102 ... 0 WABCO EBS trailer modulator

EBS input data

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vehicle manufacturer: DOMETT
 trailer model : 5AFT TIPPER
 trailer type : 5-axle-full-trailer
 brake calculation no. : TP 51202A

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 = 0.150
 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	1600	to be	2.2	7250	to be	0.4	1.4	6.5	
2	1600	entered by	2.2	7250	entered by	0.4	1.4	6.5	
3	1100	the vehicle	1.3	6000	the vehicle	0.3	1.5	4.0	
4	1100	manufact.	1.3	6000	manufact.	0.3	1.5	4.0	
5	1100		1.3	6000		0.3	1.5	4.0	

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.

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axle 1	axle 2	axle 3	axle 4	axle 5
axle load p cyl	axle load p cyl	axle load p cyl	axle load p cyl	axle load p cyl
1600 2.2	1600 2.2	1100 1.3	1100 1.3	1100 1.3
2100 2.6	2100 2.6	1600 1.6	1600 1.6	1600 1.6
2600 3.0	2600 3.0	2100 1.9	2100 1.9	2100 1.9
3100 3.3	3100 3.3	2600 2.1	2600 2.1	2600 2.1
3600 3.7	3600 3.7	3100 2.4	3100 2.4	3100 2.4
4100 4.1	4100 4.1	3600 2.7	3600 2.7	3600 2.7
4600 4.5	4600 4.5	4100 3.0	4100 3.0	4100 3.0
5100 4.9	5100 4.9	4600 3.2	4600 3.2	4600 3.2
7250 6.5	7250 6.5	6000 4.0	6000 4.0	6000 4.0

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

axle 1	(rdyn 421 mm)	T = 23.9 % Fe
axle 2	(rdyn 421 mm)	T = 23.9 % Fe
axle 3	(rdyn 421 mm)	T = 16.0 % Fe
axle 4	(rdyn 421 mm)	T = 16.0 % Fe
axle 5	(rdyn 421 mm)	T = 16.0 % 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 = 55 mm)	s = 39 mm
axle 4	(sp = 55 mm)	s = 39 mm
axle 5	(sp = 55 mm)	s = 39 mm

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

axle1	ThA = 6960 N
axle2	ThA = 6960 N
axle3	ThA = 3784 N
axle4	ThA = 3784 N
axle5	ThA = 3784 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 = 41107 N
axle 2	(rdyn 421 mm)	T = 41107 N
axle 3	(rdyn 421 mm)	T = 22363 N
axle 4	(rdyn 421 mm)	T = 22363 N
axle 5	(rdyn 421 mm)	T = 22363 N

braking rate of the vehicle (item 4.3.2 to appendix 2 to annex 11)	basic test	type III
	of subject trailer (E)	(calculated) residual (hot)braking
	0.60	0.47

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

axle 1	(rdyn 421 mm)	T = 41107 N
axle 2	(rdyn 421 mm)	T = 41107 N
axle 3	(rdyn 421 mm)	T = 22363 N
axle 4	(rdyn 421 mm)	T = 22363 N
axle 5	(rdyn 421 mm)	T = 22363 N

braking rate of the vehicle (item 4.3.2 to appendix 2 to annex 11)	basic test	type III
	of subject trailer (E)	(calculated) residual (hot)braking
	0.60	0.47

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

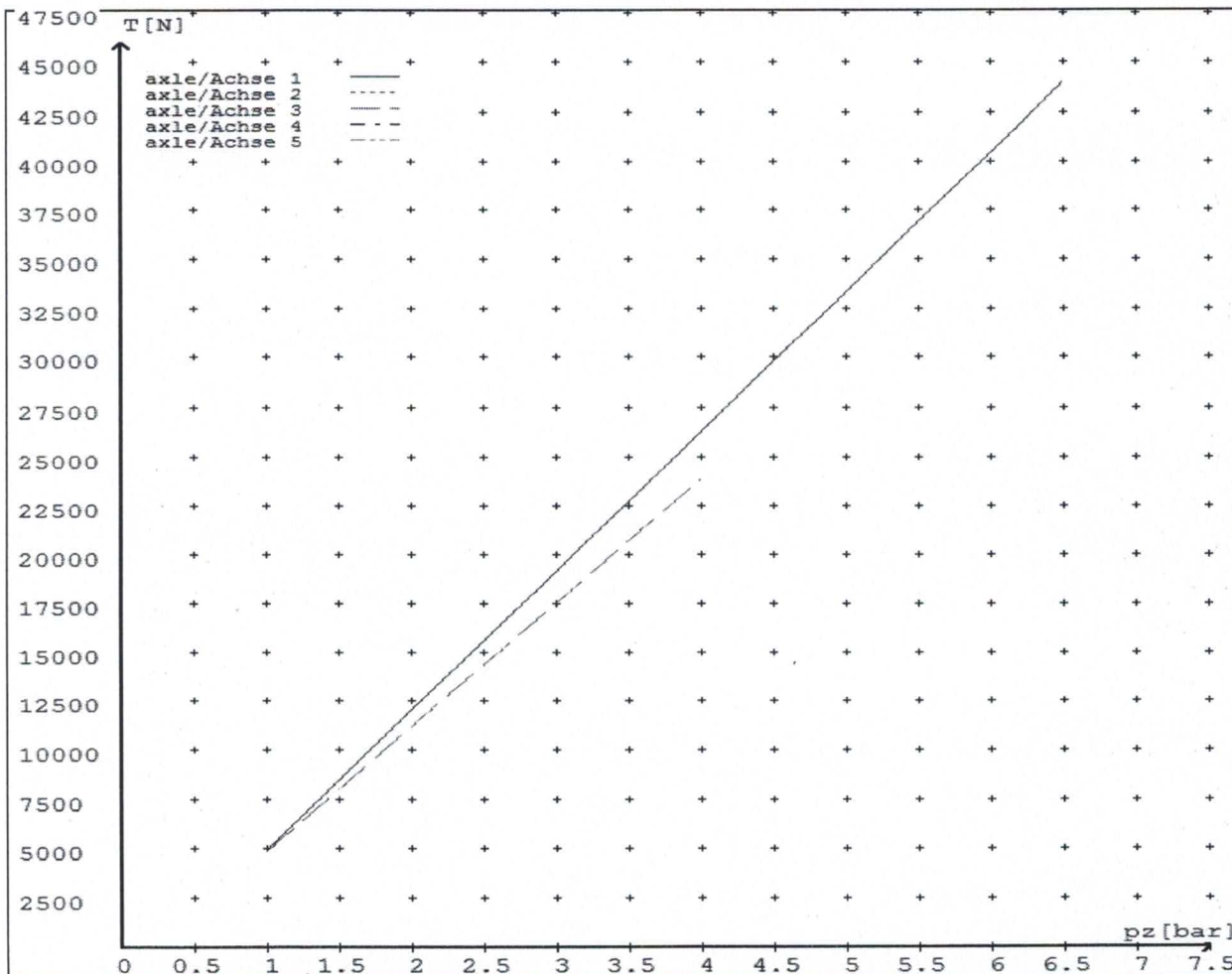
reference values

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

	pz [bar]	T [N]	T [N]
axle 1	1.0	4916	
	6.5	43951	
axle 2	1.0	4916	
	6.5	43951	
axle 3	1.0		4852
	4.0		23815
axle 4	1.0		4852
	4.0		23815
axle 5	1.0		4852
	4.0		23815

VIN - no.:

	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	18./	18./	T.14/16	T.14/16	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. JH141238

CUSTOMER NAME DOMETT TRAILERS LTD

CUSTOMER ORDER No. 4337 DATE RECEIVED November 14

VEHICLE TYPE 5 AXLE FULL TRAILER

REG No. CHASSIS No. 7A9E35017F1023332

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 SYSTEM: WABCO EBS : RSS ACTIVATED
TEST POINTS FITTED: 3 4 5 7

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

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

VALVES: AS PER BRAKE CALCULATION TP51202 & SO1568748


TYRE SIZE: 265 70 R 19.5

NOTES

PACKING SLIP NO. SO1568748 PROCESS TIME: 1

BRAKE CALC #TP51202. THE MERITOR CHAMBERS ARE THE TSE VARIANT. THE 1424HTLD64 IN THE CALC ARE USED TO DETERMINE THE SERVICE BRAKE PERFORMANCE. 1616HTLD64 ARE USED TO DETERMINE THE PARK BRAKE PERFORMANCE.

COMPLETION DATE : 20th Dec 2014

SIGNATURE (pp.): 

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: 20th Dec 2014

Signed (pp.):



Certifier's identification

Name: J E Hirst

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: JEH

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: JEH

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