



# Heavy Vehicle Specialist Certificate

Must be presented to a Transport Service Delivery Agent  
Heavy Vehicle Specialist Inspector and Inspecting Organisation

Heavy Vehicle Specialist Inspector's Name (PRINT IN CAPS)

CHRIS CLARKE

ID

CC

Vehicle Registration\*

VIN / Chassis Number

7A9D50020D1023182

Component being certified:

Chassis Modification

Load Anchorage

Log Bolsters

Towing Connection

✓ Brakes

SRT

Certification Category

PSV Stability

PSV Rollover

Swept Path

HUEK

PBS

Description of Work

CARRY OUT SET UP OF TRAKER EBS SYSTEM

ROLL STABILITY FUNCTION ACTIVATED.

Code/Standard Certified to

HUBN2 3205/2 SCHED 5

Component Load Rating(s)

42000KG

General Drawing Number(s)

N/A

Supporting Documents

BRAKE DESIGN CERTIFICATE - JH/30800

PREV EXEMPTION - REF HUB13/223

\*Special Conditions

WARNING LAMP MUST ILLUMINATE WHEN IGNITION IS SWITCHED ON THEN  
EXTINGUISH IMMEDIATELY OR WHEN VEHICLE EXCEEDS 7KPH.

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 above 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 Deed of Appointment. To the best of my knowledge the information contained in this Certificate is true and correct.

Designer's ID (if certified by a manufacturer)

Inspector's / Delegate's Signature

Delegate's/Inspector's Name (PRINT IN CAPS)

ID number

Date

01 05 2013

Number

442496

COF Vehicle Inspector ID:

COF Vehicle Inspector Signature:

Date

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

# HVBR WORKSHEET

(PROCEDURE & COMPLIANCE DOCUMENTATION SHEET)

CERTIFICATE No. JH130804

CUSTOMER NAME Domett Trailers Ltd

CUSTOMER ORDER No. 4058      DATE RECEIVED 28.06.13

VEHICLE TYPE 4 AXLE SEMI TRAILER

REG No.        CHASSIS No. 7A9D50020D1023182

## BRIEF SPECIFICATION AS CERTIFIED TO HVBR

**BRAKE CHAMBERS:**

Type: 1416HTLD64 (TSE): Max stroke = 64 mm      Lever length = 69 mm  
 Type: 14HSCLD64 (TSE): Max stroke = 64 mm      Lever length = 69 mm

**BRAKE SYSTEM: WABCO T-EBS – RSS ACTIVATED**

TEST POINTS:      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 DATA SHEET ATTACHED & SO1533808

TYRE SIZE: 355 50 R 22.5

**NOTES**

PACKING SLIP NO. SO1533808

PROCESS TIME: 1

BRAKE CALCULATION TP50861: SAF DISC BRAKE.  
 MERITOR CHAMBERS IN TP50861 ARE TSE

COMPLETION DATE : 28<sup>th</sup> July 2013

SIGNATURE




## Statement of Compliance with the New Zealand Heavy Brake Rule

Documentation required to support 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 32015/2, Schedule 5.

Date: 28<sup>th</sup> July 2013

Signed: 

### 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 32015/2, Schedule 5.

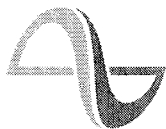
Date: \_\_\_\_\_ Signed: \_\_\_\_\_

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



NZ TRANSPORT AGENCY  
WAKA KOTAHI

**NATIONAL OFFICE**

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Wellington 6141  
New Zealand  
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Exemption: HVB13/223

**EXEMPTION FROM SPECIFIED REQUIREMENTS OF LAND TRANSPORT RULE:  
Heavy-vehicle Brakes 2006, Rule 32015**

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-vehicle Brakes 2006 (the Rule) listed in Schedule 2, subject to the conditions specified in Schedule 3.

**Schedule 1:** Vehicle Details:

Make/Model: **Domett T & T Ltd, 4 Axle Semi Trailer**  
VIN/Chassis: **7A9D50020D1023182**

**Schedule 2:** Exempted Requirement:

2.3(9) The parking brake of a vehicle, whether or not it is being operated as a combination vehicle, must be able to be applied by the driver from the normal driving position using one control only.

**Schedule 3:** Conditions of this Exemption:

- 1) The vehicle must be fitted with a Wabco park-release emergency valve (PREV), Part Number: 971 002 900 0.
- 2) The vehicle must be fitted with the Wabco PREV name plate, Part Number 971 002 103 4, adjacent to the PREV.
- 3) The vehicle must still be fitted with a parking brake that complies with all parking brake requirements in the Rule other than the requirement in Clause 2.3(9) of the Rule.
- 4) The installation of the PREV must be approved in writing by Gough Transpecs or an NZ Transport Agency appointed HVEK certifier acting on behalf of, and under instruction from, Gough Transpecs; Gough Transpecs must keep a written record of all approvals.
- 5) The HVEK certifier in 4) must be fully trained in end of line procedures for Wabco electronically controlled braking systems.
- 6) Gough Transpecs must provide full operator training in the use of the PREV and furnish the operator with full written operating instructions for the PREV.
- 7) The vehicle must not be modified in any way while operating under this exemption.
- 8) This original exemption must be kept by Gough Transpecs.
- 9) A copy of this exemption (printed on a silver WABCO sticker) must be affixed to the exempted vehicle as close to the WABCO PREV as possible.
- 10) The sticker in 9) must be legible and include all printed areas of this original exemption letter.
- 11) This exemption can be revoked at any time in writing by the NZ Transport Agency.

Signed at Wellington this 2nd day of July 2013

Jackie Hartley  
Administrator (Assessments)

# WABCO

## START-UP PROTOCOL

System	Trailer EBS-E	WABCO part number	480 102 080 0
Production date	2013-04-12	Serial number	897001343000A
Serial number (modulator)	000000021249		
Fingerprint Customer EOL / Customer Development / Flash Program	W503643 / 2013-08-01 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00		

<b>WABCO</b>	<b>TRAILER EBS-E</b>	GGVS/ADR TUEH TB 2007 - 019.00 TDB0749
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HERSTELLER MANUFACTURER CONSTRUCTEUR	<b>DOMETT T&amp;T</b>			GIO	Pin1	Pin3	Pin4
TYP TYPE TYPE	<b>4AS SKELLY</b>			1	---	---	---
FAHRZEUG IDENTNR. CHASSIS NUMBER NUMERO DE CHASSIS	<b>7A9D50020D1023182</b>			2	---	---	---
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO.	<b>TP50861S</b>			3	---	---	---
POLRADZÄHNEZAHL c-d   e-f POLE WHEEL TEETH c-d   e-f DENTS ROUE DENTÉE c-d   e-f	<b>90</b>	<b>90</b>	ABS-System ABS-System Système ABS	4	---	---	---
			<b>4S/3M</b>	5	<b>DIAG</b>	<b>DIAG</b>	<b>DIAG</b>
RSS RSS RSS	Einfachbereifung Single Tyre Monte simple	X	Lenkachse Steering axle Essieu vireur	6	---	---	---
	Zwillingsbereifung Twin Tyre Monte jumelée		Kippkritisches Fahrzeug Critical Trailer Véhicule critique	7	---	---	---
Subsystems	---	I/O	24N				

ACHSE AXLE ESSIEU	pm (bar)		6.5		pm (bar)		0.7		2.0		---		6.5		TYP TYPE	(mm)	(mm)	(bar)	
	+	-	+	-	+	-	+	-	+	-	+	-	1.0	Pz					
1	1100	0.4	1.7	6000	3.9	0.3	1.4	---	5.0	-	14 / 16	64	69	428	2647				
2	1100	0.4	1.7	6000	3.9	0.3	1.4	---	5.0	-	14 / 16	64	69	428	2647				
3	1100	0.4	1.7	6000	3.9	0.3	1.4	---	5.0	-	14	64	69	428	2647				
4	1100	0.4	1.7	6000	3.9	0.3	1.4	---	5.0	-	14	64	69	428	2647				
5	0	---	---	0	---	---	---	---	---	-	---	---	---	---	---				

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 distance sensor calibration	Not tested
ABS sensor assignment	OK	Distance sensor Axle load calibr	Not tested
RTR check	Not tested	Leak test	Not tested
Immobilizer test	Not tested	Signal outputs TEBS	Not tested
Signal inputs	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	7A9D50020D1023182
Vehicle type	4AS SKELLY	Odometer reading	0.0 km
next Service	0 km	Trip reading	0.0 km
Tested by	Chris Clarke	Signature	
Date	2013-08-01 3:00:59 p.m.		

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

distribution: DOMETT T&T  
 7A9D50020D1023182  
 SODC: JH130804  
 PREV: HVB13/223

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 (V6.13.06.12).  
 -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!  
 WABCOBrake V6.13.06.12 db 12.06.2013

vehicle manufacturer: DOMETT T&T  
 trailer model : 4AS SKELLY  
 trailer type : 4-axle-semi-trailer  
 remarks : air / hydraulic / VA suspension  
 kc < 0,95 => new kc = 0,95  
 WABCO TRAILER - EBS  
 TRISTOP 1+2: T.14/16  
 355/50 R 22,5

axle 1 + 2 + 3 + 4 : SAF, PAN 19-1, TDB 0749 ECE,

		<u>unladen</u>		<u>laden</u>	
total mass	P in kg	5000	- 6000	42000	- 42000
king-pin	PS kg	600	- 1600	18000	- 18000
axle 1	P1 in kg		1100		6000
axle 2	P2 in kg		1100		6000
axle 3	P3 in kg		1100		6000
axle 4	P4 in kg		1100		6000
total axle mass	PR in kg		4400		24000
wheel base	E in mm	7910	- 7910		
centre of gravity height	h in mm		1350		2626
K-factor		Kv min	1.7777	Kc min	0.9500
K-factor		Kv max	1.7842	Kc max	0.9500

		<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	KDZ	2	2	2	2
The power output corresponds to		BZ 119.6	BZ 119.6	BZ 122.1	BZ 122.1
brake chamber manufacturer		Meritor	Meritor	Meritor	Meritor
chamber size		T.14/16	T.14/16	14.	14.
lever length	lBh in mm	69	69	69	69
brake factor	[-]	23.03	23.03	23.03	23.03
dyn. rolling radius	rdyn min in mm	449	449	449	449
dyn. rolling radius	rdyn max in mm	449	449	449	449
threshold torque	Co Nm	6.0	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	5.0	5.0	5.0	5.0
piston force ThA at pm6,5bar	N	4786	4786	4786	4786
brake force (rdyn min) T lad. at pm6,5bar	N	33889	33889	33889	33889
brake force (rdyn max) T lad. at pm6,5bar	N	33889	33889	33889	33889
brake force within 1 % rolling friction proportion	%	25.0	25.0	25.0	25.0

braking rate z laden 0.576 for rdyn min  
 z = sum (TR)/PRmax 0.576 for rdyn max

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

brake diagram : 841 701 050 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 1416HTLD64

axle 2:

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

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

brake cylinder: Meritor 1416HTLD64

axle 3:

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

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

brake cylinder: Meritor 14HSCLD64

axle 4:

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

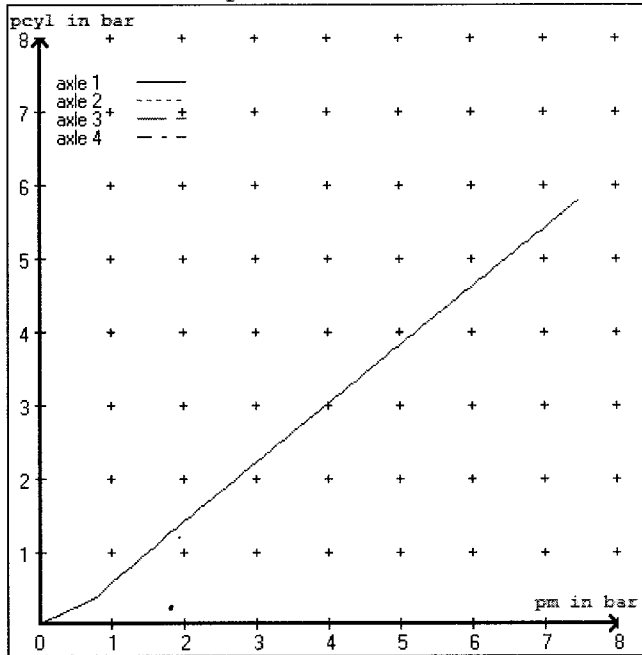
valve 2: 480 207 0.. 0 WABCO or 480 207 2.. 0  
EBS relay valve

brake cylinder: Meritor 14HSCLD64

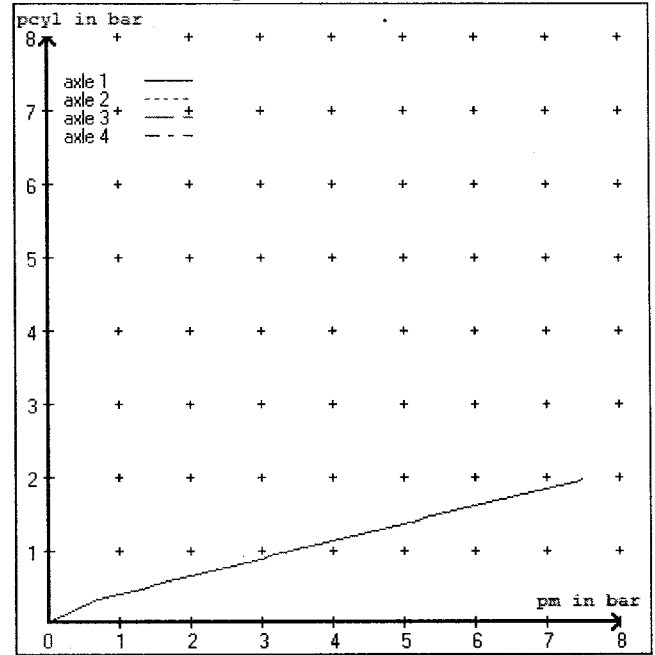
test type III (zIII = 0.30) for rdyn min : axle1 axle2 axle3 axle4  
at pm 3.6 bar => pcha in bar : 2.7 2.7 2.7 2.7  
test type III (zIII = 0.06) for rdyn min : axle1 axle2 axle3 axle4  
at pm 1.2 bar => pcha in bar : 0.7 0.7 0.7 0.7



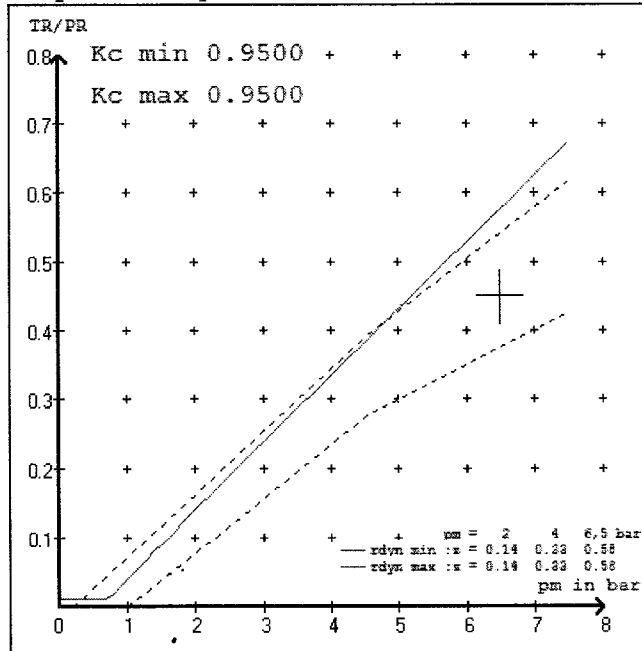
brake chamber pressure laden



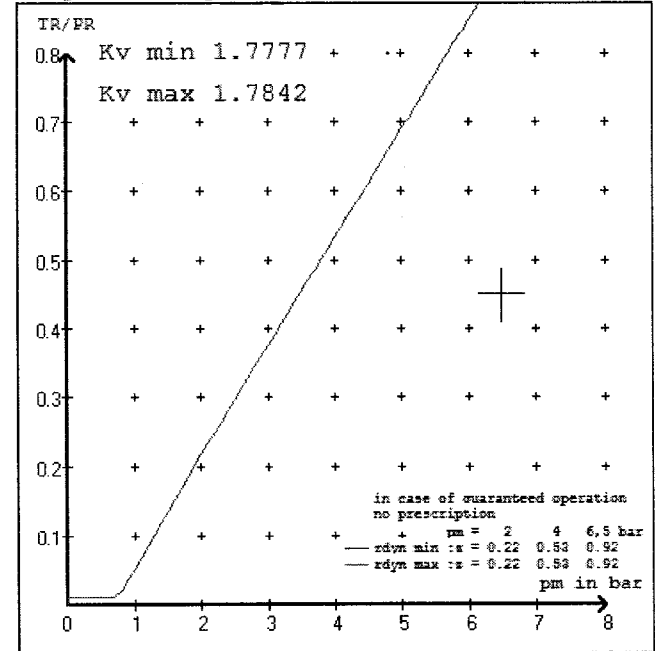
brake chamber pressure unladen



compatibility band laden



compatibility band unladen



vehicle manufacturer: DOMETT T&T  
 trailer model : 4AS SKELLY  
 trailer type : 4-axle-semi-trailer

brake chamber and lever length :

axle 1 : 2 x type/diameter T.14/16 (Meritor) lever length 69 mm  
 axle 2 : 2 x type/diameter T.14/16 (Meritor) lever length 69 mm  
 axle 3 : 2 x type/diameter 14. (Meritor) lever length 69 mm  
 axle 4 : 2 x type/diameter 14. (Meritor) lever length 69 mm

brake diagram : 841 701 050 0

valve :

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

EBS input data

=====

vehicle manufacturer: DOMETT T&T  
 trailer model : 4AS SKELLY  
 trailer type : 4-axle-semi-trailer  
 brake calculation no. : TP 50861S

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

assignment pm / deceleration z: pm 0.7 bar z = 0.010  
 (laden condition) 2.0 bar z = 0.138  
 6.5 bar z = 0.580

control pressure pm		6,5		control pressure pm		0.7	2.0	6.5
axle	axle load unladen	bellow pr. unladen	brake pr. unladen	axle load laden	bellow pr. laden	brake pr. laden		
1	1100	to be	1.7	6000	to be	0.3	1.4	5.0
2	1100	entered by the vehicle manufact.	1.7	6000	entered by the vehicle manufact.	0.3	1.4	5.0
3	1100		1.7	6000		0.3	1.4	5.0
4	1100		1.7	6000		0.3	1.4	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
1100	1.7	1100	1.7
1600	2.0	1600	2.0
2100	2.4	2100	2.4
2600	2.7	2600	2.7
3100	3.0	3100	3.0
3600	3.4	3600	3.4
4100	3.7	4100	3.7
4600	4.1	4600	4.1
6000	5.0	6000	5.0

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 : 13.10.2008
axle 2	: reference axle: SAF	SBW 1937-...	brake lining: Jurid 539
	test report :	TDB 0749 ECE	date : 13.10.2008
axle 3	: reference axle: SAF	SBW 1937-...	brake lining: Jurid 539
	test report :	TDB 0749 ECE	date : 13.10.2008
axle 4	: reference axle: SAF	SBW 1937-...	brake lining: Jurid 539
	test report :	TDB 0749 ECE	date : 13.10.2008

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

axle 1	(rdyn 449 mm)	T = 17.6 % Fe
axle 2	(rdyn 449 mm)	T = 17.6 % Fe
axle 3	(rdyn 449 mm)	T = 17.6 % Fe
axle 4	(rdyn 449 mm)	T = 17.6 % Fe

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

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

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

axle1	ThA = 4786 N
axle2	ThA = 4786 N
axle3	ThA = 4786 N
axle4	ThA = 4786 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 = 26700 N
axle 2	(rdyn 449 mm)	T = 26700 N
axle 3	(rdyn 449 mm)	T = 26700 N
axle 4	(rdyn 449 mm)	T = 26700 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)	0.58	0.45

required braking rate	>= 0,4 and
(items 1.5.3 and 1.7.2 to annex 11)	>= 0,6*E (0.35)

axle 1	(rdyn 449 mm)	T = 26700 N
axle 2	(rdyn 449 mm)	T = 26700 N
axle 3	(rdyn 449 mm)	T = 26700 N
axle 4	(rdyn 449 mm)	T = 26700 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)	0.58	0.45

required braking rate	>= 0,4 and
(items 1.5.3 and 1.7.2 to annex 11)	>= 0,6*E (0.35)



reference values

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

	pz [bar]	T [N]	T [N]
axle 1	1.0	4286	
	5.0	26476	
axle 2	1.0	4286	
	5.0	26476	
axle 3	1.0	4286	
	5.0	26476	
axle 4	1.0		4286
	5.0		26476

VIN - no.:

	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	T.14/16	T.14/16	14./	14./	/
Maximum stroke smax = ...mm maximaler Hub smax = ....mm	64	64	64	64	
Lever length = ....mm Hebellänge = ....mm	69.08	69.08	69.08	69.08	

