



NZ TRANSPORT AGENCY
WAKA KOTAHI

Heavy Vehicle Specialist Certificate

Heavy Vehicle Specialist Inspector and Inspecting Organisation

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

ID

LPC

LANCE CAWTE

Vehicle Registration*

VIN / Chassis Number

7A85N0J0298336962

8547J

Component being certified:

Chassis Modification

Load Anchorage

Log Bolsters

Certification Category

Towing Connection

X

Brakes

SRT

HVEK

Description of Work

CERTIFY TO HEAVY VEHICLE BRAKE RULE 32015/2.

Code/Standard Certified to

Component Load Rating(s)

SCHEDULE 5

N/A

General Drawing Number(s)

N/A

Supporting Documents

**BRAKE CODE CERTIFICATE LC:110915
PREV EXEMPTION REF HVB11/209**

*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)

or

Hubodometer Reading (whichever comes first)

N/A

Declaration

Designer's ID (if certified by a manufacturer)

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.

Inspector's / Delegate's Signature

*Delegate's Name (PRINT IN CAPS)

Date

Number

27-Sep-11

383005

COF Vehicle Inspector ID:

COF Vehicle Inspector Signature:

Date

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



P.O.Box 98-971

South Auckland Mail Centre

Lance Cawte (LPC)

DATE

27-Sep-11

LOAD SENSED

WABCO EBS "E"

CERT. NO.

LC110915

PREV EXEMPTION

HVB11 /209

VIN / CHASSIS

7A85NDJ0298336962 / 2546

BRAKE CHAMBERS FRONT

TSE 14

14HSCLD64

STROKE 64mm

BRAKE CHAMBERS REAR

TSE 14/16

1416HTLD64

STROKE 64mm

SLACK LENGTH FRONT

DISC

TYRE SIZE FRONT

265/70R 19.5

SLACK LENGTH REAR

DISC

TYRE SIZE REAR

265/70R 19.5

THIS VEHICLE COMPLIES WITH THE NZ

LINING MATERIAL FRONT

JURID 539


HEAVY VEHICLE BRAKE RULE 32015, SCHEDULE 5

LINING MATERIAL REAR

JURID 539

Confirmation of compliance

I confirm that the vehicle identified on page 1 and 2 of this Confirmation of Compliance complies with all relevant requirements of the current New Zealand Heavy Vehicle Brake Rule 32015, Schedule 5.

Date: 27/09/11 Signed: 

Certifier's identification

Name & ID: LANCE CAWTE (LPC)

Phone (bus): 09 9807300 Fax (bus): 09 9807306

Postal address: TRANSPORT SPECIALTIES LTD
PO BOX 98-971,
MANUKAU CITY,
MANUKAU 2241

Position: _____

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, Schedule 5.

Date: _____ Signed: _____

Certifier's identification: _____

Name: _____

Phone (bus): _____ Fax (bus): _____

Postal address: _____

Position: _____

Comments:



NZ TRANSPORT AGENCY
WAKA KOTAHI

Level 9, PSIS House
20 Ballance Street
PO Box 5084
Lambton Quay
Wellington 6145
New Zealand
T 64 4 894 5200
F 64 4 894 3305
www.nzta.govt.nz

Document: A1207999
Exemption: HVB11/209

**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, Vehicles Unit, 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:

Make/Model: **Croskery, 4 Axle Full Trailer**
VIN/CHASSIS: **7A85NOJ0298336962**

SCHEDULE 2: - Exempted Requirement

Section 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:

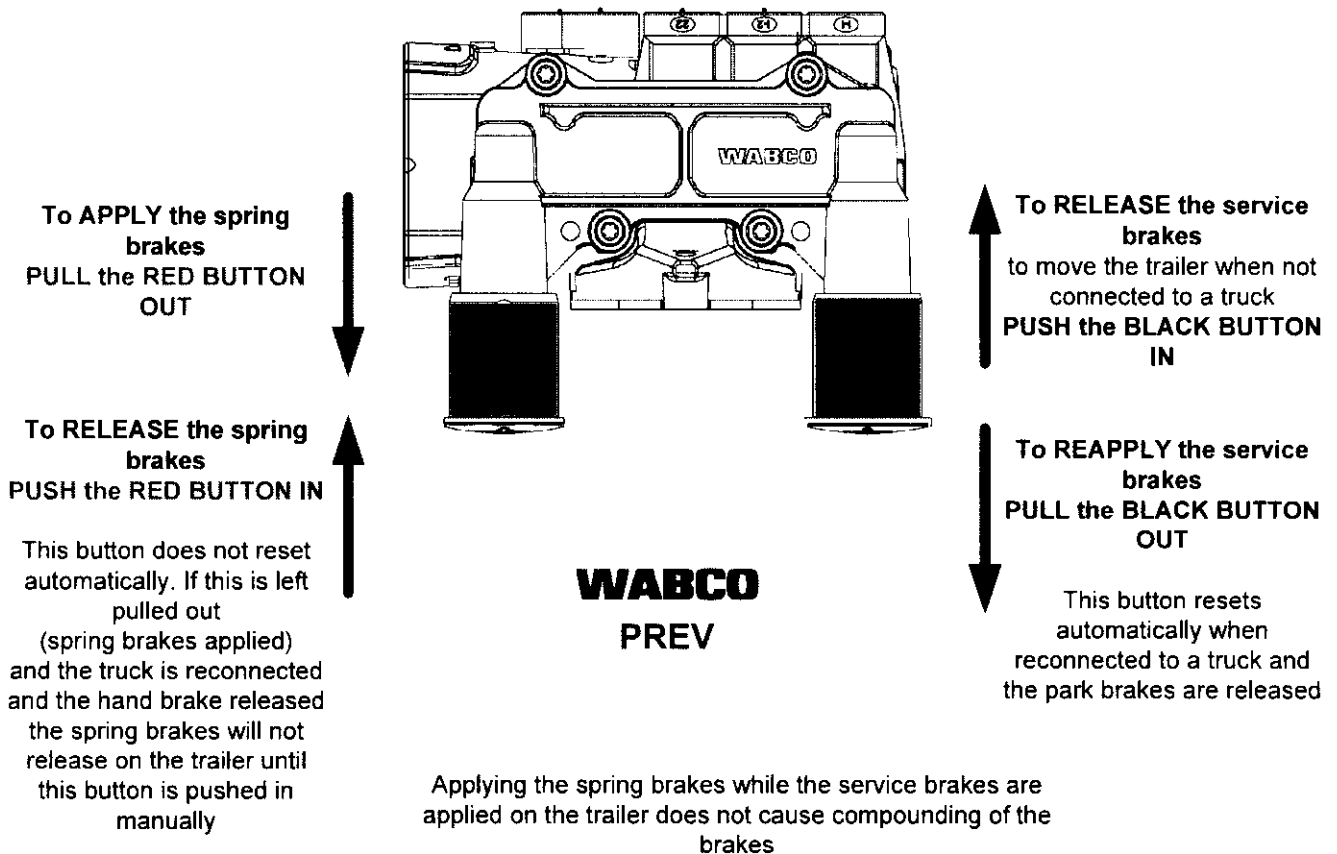
- 1) The vehicle must be fitted with a Wabco park-release emergency valve (PREV), Part Number: 971 002 900 0.
- 2) The vehicle must be fitted with the Wabco PREV name plate, Part Number 971 002 103 4, adjacent to the PREV.
- 3) The vehicle must still be fitted with a parking brake that complies with 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 Transport Specialties Limited (Transpecs) or an NZ Transport Agency appointed HVEK certifier acting on behalf of, and under instruction from, Transpecs; Transpecs must keep a written record of all approvals.
- 5) An HVEK certifier in 4) must be fully trained in end of line procedures for Wabco electronically controlled braking systems
- 6) 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 Transport Specialties Ltd.
- 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 8) 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 8th day of August 2011.

Jackie Hartley
Administrator
Vehicles Unit

PREV
Park Release Emergency Valve
Operating Instructions

When the vehicle is parked or the handbrake on the towing vehicle is applied the service (foot) brakes are applied on the trailer.
If there is a service brake air leak on the trailer the spring (Emergency) brakes automatically apply.



**** It is recommended that when the trailer is detached from the towing **
vehicle that the RED button is pulled out to apply the spring brakes**

trailer (full, semi-, centre-axle) with air brake system acc. to 71/320/EEC, last amended by 98/12/EC and 2006/96/EC or UN/ECE-R.13.11

distribution: EVENS
 CHASSIS # 2546
 CALC #LC110915
 LT400 # 383005

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 (V6.10.05.21),
 -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 V6.10.05.21 db 26.05.2010

vehicle manufacturer: EVENS
 trailer model : 4AB
 trailer type : 4-axle-full-trailer
 remarks : air / hydraulic / VA suspension
 WABCO TRAILER - EBS
 TRISTOP 3+4: T.14/24
 265/70 R 19,5

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

		<u>unladen</u>	<u>laden</u>
total mass	P in kg	5000	28000
axle 1	P1 in kg	1400	7000
axle 2	P2 in kg	1400	7000
axle 3	P3 in kg	1100	7000
axle 4	P4 in kg	1100	7000
wheel base	E in mm	4800 - 4800	
centre of gravity height	h in mm	1200	1800

		<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 122.1	BZ 122.1	BZ 119.6	BZ 119.6
brake chamber manufacturer		Meritor	Meritor	Meritor	Meritor
chamber size		14.	14.	T.14/24	T.14/24
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	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		2.4	2.4	2.1	2.1
chamber pressure(rdyn max)pH at z=22,5%bar		2.4	2.4	2.1	2.1
chamber press.(servo)pcha at pm6,5bar bar		5.8	5.8	4.6	4.6
piston force	ThA at pm6,5bar N	5588	5588	4385	4385
brake force(rdyn min)T lad. at pm6,5bar N		42260	42260	33173	33173
brake force(rdyn max)T lad. at pm6,5bar N		42260	42260	33173	33173
brake force within 1 % rolling friction proportion	%	25.0	25.0	25.0	25.0

braking rate z laden 0.549 for rdyn min
 z = sum (TR)/PRmax 0.549 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
EBS relay valve

brake cylinder: Meritor 14HSCLD64

axle 2:

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

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

brake cylinder: Meritor 14HSCLD64

axle 3:

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

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

brake cylinder: Meritor 1424HTLD64

axle 4:

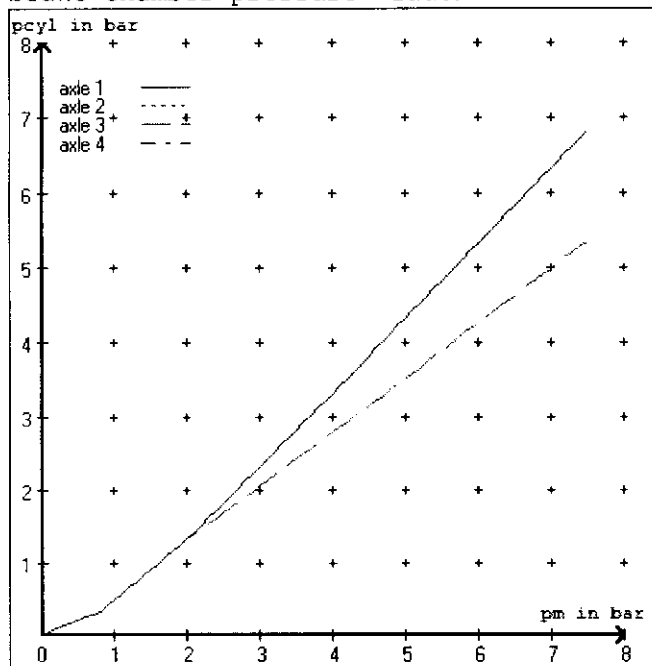
valve 1: 971 002 ... 0 WABCO
EBS emergency valve

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

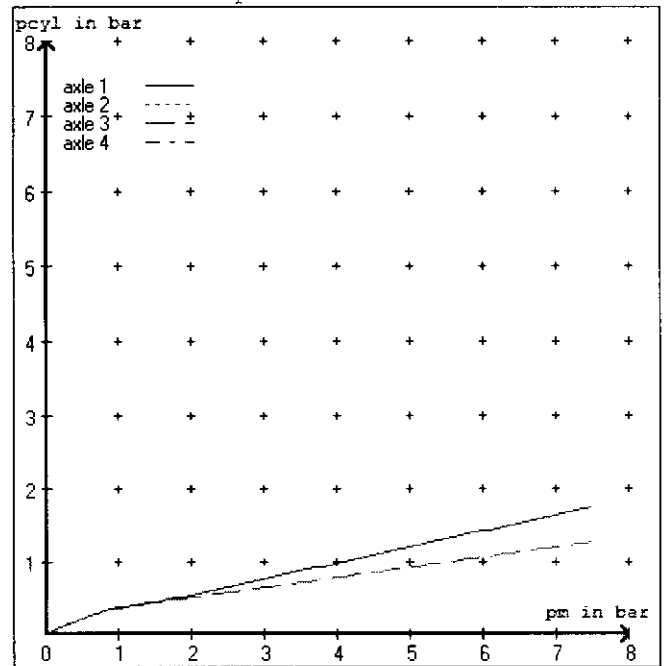
brake cylinder: Meritor 1424HTLD64

test type III (zIII = 0.30)	for rdyn min :	axle1	axle2	axle3	axle4
at pm 3.9 bar =>	pcha in bar :	3.2	3.2	2.7	2.7
test type III (zIII = 0.06)	for rdyn min :	axle1	axle2	axle3	axle4
at pm 1.3 bar =>	pcha in bar :	0.8	0.8	0.8	0.8

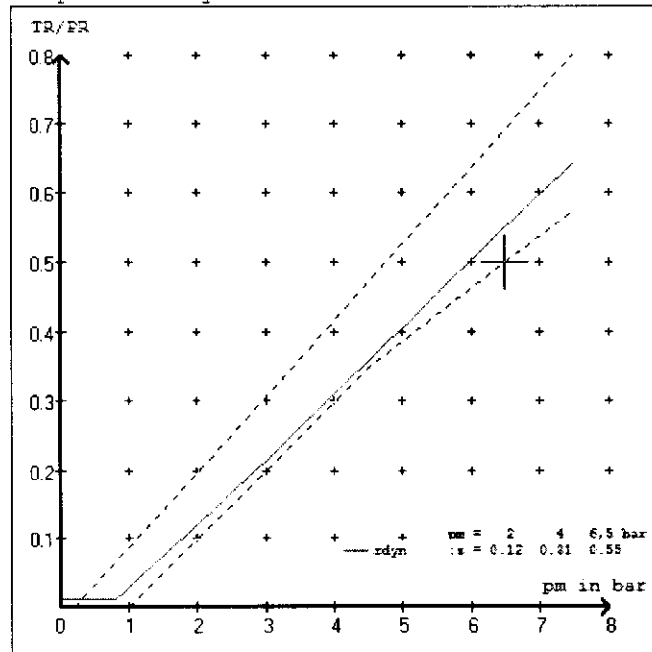
brake chamber pressure laden



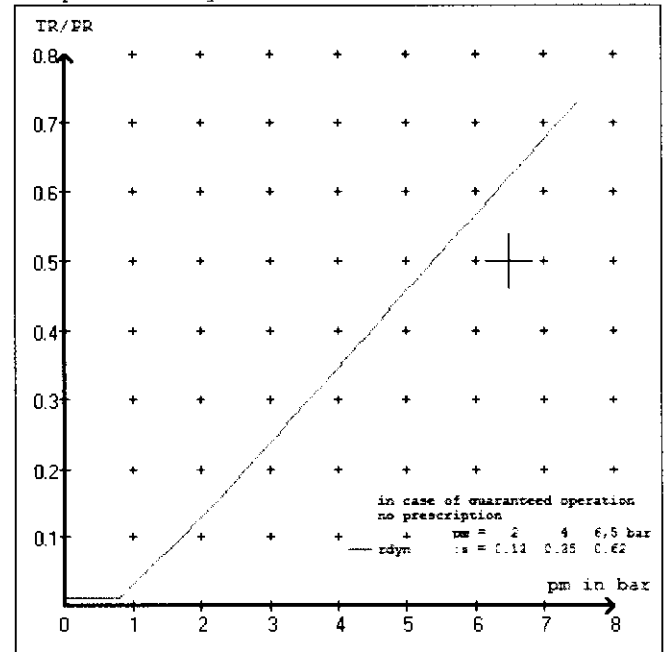
brake chamber pressure unladen



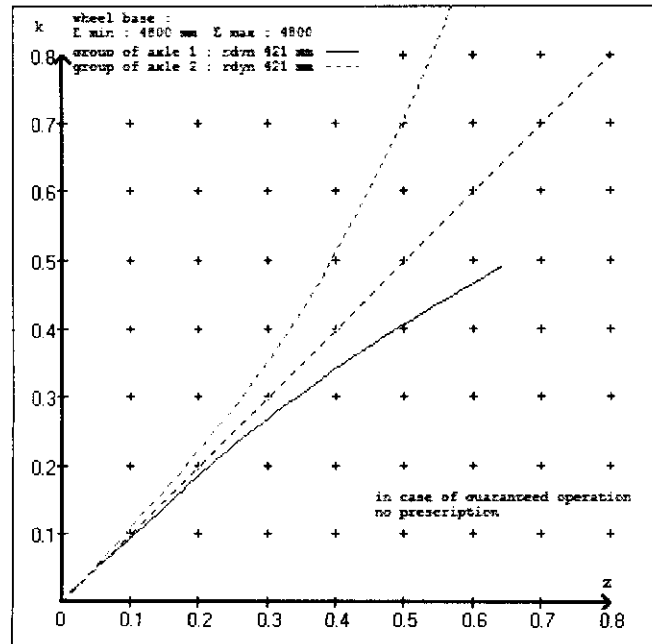
compatibility band laden



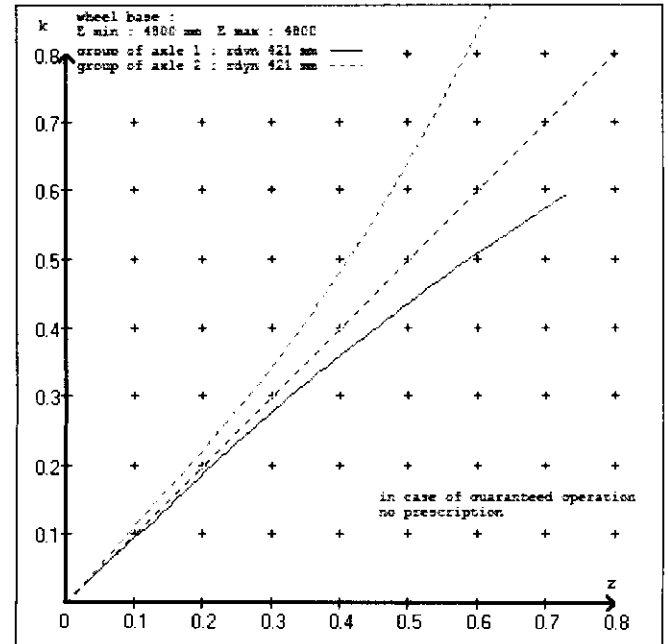
compatibility band unladen



curves of friction laden



curves of friction unladen



vehicle manufacturer: EVENS
 trailer model : 4AB
 trailer type : 4-axle-full-trailer

brake chamber and lever length :

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

brake diagram :

valve :

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

EBS input data

=====

vehicle manufacturer: EVENS
 trailer model : 4AB
 trailer type : 4-axle-full-trailer
 brake calculation no. : TP 193A

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 = 0.000
 (laden condition) 2.0 bar z = 0.116
 6.5 bar z = 0.550

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	1400	to be	1.5	7000	to be	0.3	1.3	5.8
2	1400	entered by	1.5	7000	entered by	0.3	1.3	5.8
3	1100	the vehicle	1.1	7000	the vehicle	0.3	1.3	4.6
4	1100	manufact.	1.1	7000	manufact.	0.3	1.3	4.6
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
1400 1.5	1400 1.5	1100 1.1	1100 1.1
1900 1.9	1900 1.9	1600 1.4	1600 1.4
2400 2.3	2400 2.3	2100 1.7	2100 1.7
2900 2.7	2900 2.7	2600 2.0	2600 2.0
3400 3.0	3400 3.0	3100 2.3	3100 2.3
3900 3.4	3900 3.4	3600 2.6	3600 2.6
4400 3.8	4400 3.8	4100 2.9	4100 2.9
4900 4.2	4900 4.2	4600 3.2	4600 3.2
7000 5.8	7000 5.8	7000 4.6	7000 4.6

data sheet to EC/ECE vehicle type-approval certificate concerning braking equipment: according to 98/12/EC annex IX 2.7.4 / 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. verif. of residual (hot) braking force type III
(item 4.2 of appendix I to annex VII)

axle 1	(rdyn 421 mm)	T = 22.5 % Fe
axle 2	(rdyn 421 mm)	T = 22.5 % Fe
axle 3	(rdyn 421 mm)	T = 18.7 % Fe
axle 4	(rdyn 421 mm)	T = 18.7 % Fe

calculated actuator stroke in mm
(item 4.3.1.1 of appendix I to annex VII)

axle 1	(sp = 57 mm)	s = 39 mm
axle 2	(sp = 57 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 = 5588 N
axle2	ThA = 5588 N
axle3	ThA = 4385 N
axle4	ThA = 4385 N

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

axle 1	(rdyn 421 mm)	T = 33284 N
axle 2	(rdyn 421 mm)	T = 33284 N
axle 3	(rdyn 421 mm)	T = 26161 N
axle 4	(rdyn 421 mm)	T = 26161 N

	basic test	type III
	of subject	(calculated)
	trailer (z)	residual
braking rate of the vehicle		(hot)braking
(item 4.3.2 to appendix I to annex VII)	0.55	0.43

required braking rate	>= 0,4 and
(items 1.3.3 and 1.6.2 to annex II)	>= 0,6*z (0.33)

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

axle 1	(rdyn 421 mm)	T = 33284 N
axle 2	(rdyn 421 mm)	T = 33284 N
axle 3	(rdyn 421 mm)	T = 26161 N
axle 4	(rdyn 421 mm)	T = 26161 N

	basic test	type III
	of subject	(calculated)
	trailer (z)	residual
braking rate of the vehicle		(hot)braking
(item 4.3.2 to appendix I to annex VII)	0.55	0.43

required braking rate	>= 0,4 and
(items 1.3.3 and 1.6.2 to annex II)	>= 0,6*z (0.33)

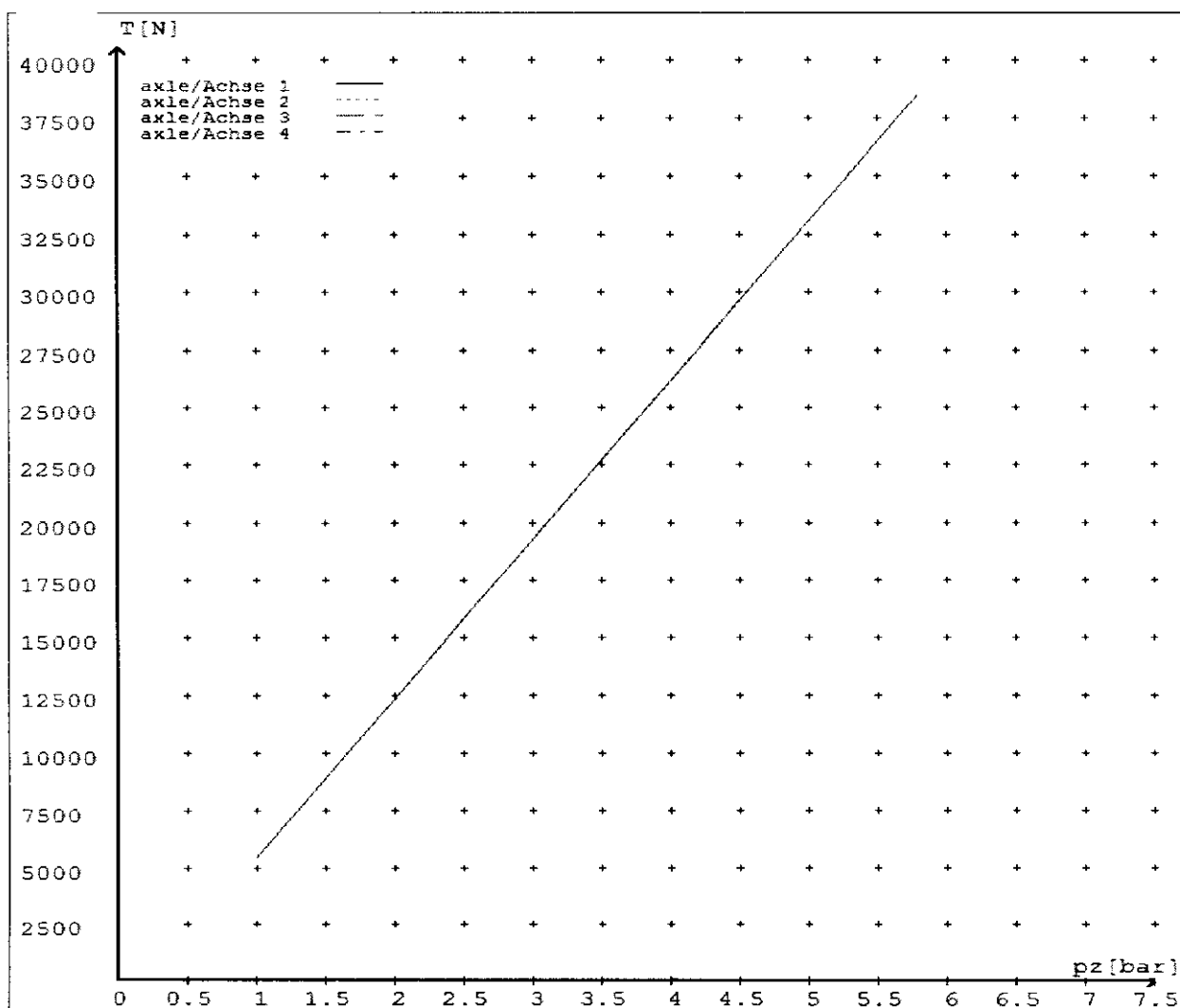
reference values

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

	pz [bar]	T [N]	T [N]
axle 1	1.0	5383	
	5.8	38488	
axle 2	1.0	5383	
	5.8	38488	
axle 3	1.0		5383
	4.6		30212
axle 4	1.0		5383
	4.6		30212

VIN - no.:

	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	14./	14./	T.14/24	T.14/24	/
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	



reference values for $z = 0.5$

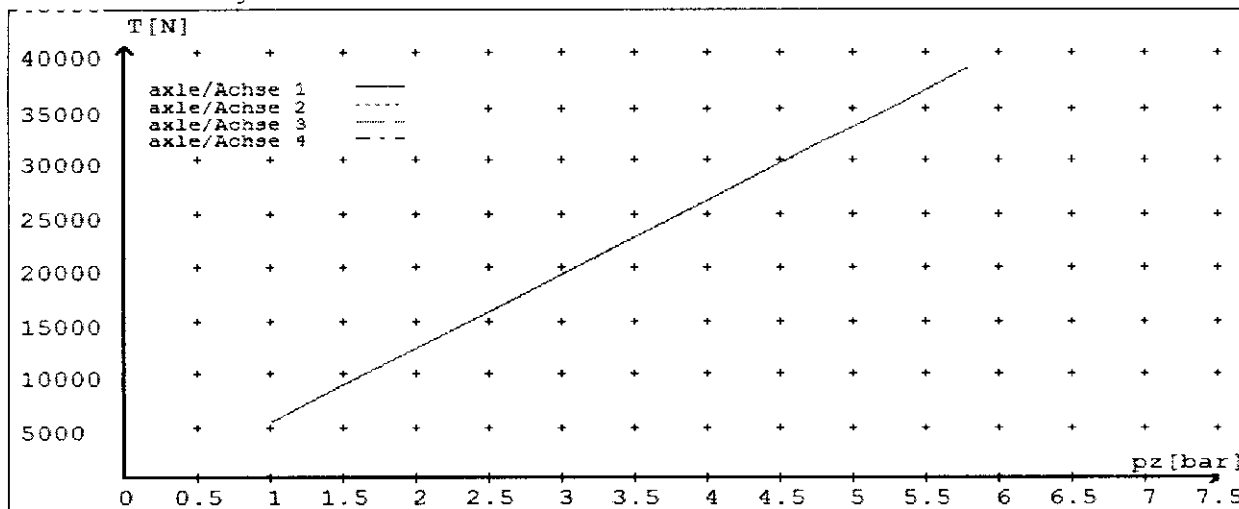
Angabe der Referenzwerte für $z = 0.5$

for max rdyn: 421 mm

für max rdyn: 421 mm

brake calculation no: TP 193A date 27.09.2011

Bremsberechnung Nr: TP 193A vom 27.09.2011



	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	14./	14./	T.14/24	T.14/24	/
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	

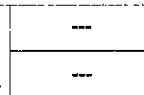
WABCO

TRAILER EBS-E

GGVS/ADR TUEH TB 2007 - 019.00
TDB 0749 ECE

HERSTELLER MANUFACTURER CONSTRUCTEUR	EVENS			
TYP TYPE TYPE	LC110915			
FAHRZEUG IDENTNR. CHASSIS NUMBER NUMERO DE CHASSIS	7A85N0J0298336962			
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO.	193LPC			
POLRADZÄHNEZAHL c-d e-f POLE WHEEL TEETH c-d e-f DENTS ROUE DÉVIÉE c-d e-f	90	90	ABS-System ABS-System Système ABS	4S/3M
RSS RSS RSS	Einfa ch ber e it u ng Single Tire Monte simple		Lenk ach se Steering axle Essieu vireur	
	Zwillingsber e it u ng Twin Tire Monte jum e el e	X	Kippk e itliches Fahrzeug Critical Trailer V e hicule critique	
Subsystems	---	I/O	24N	

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



ACHSE AXLE ESSIEU	pm (bar)			6.5			pm (bar)			0.8			2.0			---			6.5			TYP TYPE	(mm)	(mm)	(bar)		TR (daN)
	(kg)																										
1	1400	0.6	1.5	7000	4.5	0.3	1.3	---	5.8	-	14	64	69	538	3848												
2	1400	0.6	1.5	7000	4.5	0.3	1.3	---	5.8	-	14	64	69	538	3848												
3	1200	0.5	1.2	7000	4.5	0.3	1.3	---	4.6	-	14 / 24	64	69	538	3021												
4	1200	0.5	1.2	7000	4.5	0.3	1.3	---	4.6	-	14 / 24	64	69	538	3021												
5	0	---	---	0	---	---	---	---	---	-	---	---	---	---	---												

NOTICE TO VEHICLE OPERATOR

THIS VEHICLE HAS A BRAKE SYSTEM WHICH HAS BEEN DESIGNED AND FITTED IN ACCORDANCE WITH THE NEW ZEALAND HEAVY VEHICLE BRAKE RULE 32015: SCHEDULES.

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

PLEASE REFER TO THE CERTIFIER FOR FURTHER INFORMATION.

EXCERPT FROM NZ HEAVY VEHICLE BRAKE RULE 32015

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 the rule: and*
- (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 a person or organisation appointed to carry out specialist inspection and certification of heavy vehicle brakes.*

10.5 Responsibilities of manufactures and retailers


A person may manufacture, stock, or offer for sale a brake or its components. Intended for fitting to a vehicle to be used on New Zealand roads, only if that brake or component:

- (a) complies with this Rule: and*
- (b) does not prevent a repair to a vehicle, its structure, systems, components and equipment from complying with this Rule.*

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 NZ Transport Agency if dissatisfied with a Compliance issue. (refer NZTA Deed Of Appointment Para 47.4)

NZ Transport Agency Helpdesk 0800 699 000


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**L.P CAWTE
(LPC HVEK)**

NOTICE TO VEHICLE OPERATOR

This trailer is equipped with an Electronic Brake System.

To comply with the New Zealand Heavy Vehicle Brake Rule, 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.

NB:

If this vehicle is fitted with mechanical (spring) suspension, the load sense valving has been adjusted to suit exactly the performance of the original springs. In event of replacement being required, original equipment springs **must** be fitted to ensure correct ongoing operation. Fitment of non genuine springs can affect operation and therefore, compliance.

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



L P CAWTE
(LPC HVEK)
(09 980 7300)