



Heavy Vehicle Specialist Certificate

Heavy Vehicle Specialist Inspector and Inspecting Organisation

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

RONALD STUART PRATT

ID

TRSP

Vehicle Registration*

VIN / Chassis Number

7A85N0J0296641252

Component being certified:

Chassis Modification

Load Anchorage

Log Bolsters

Certification Category

HVEK

Towing Connection

Brakes

SRT

Description of Work

Certify to Brake Rule 32015

Code/Standard Certified to

NZHB Rule Schedule 5

Component Load Rating(s)

General Drawing Number(s)

NA

Supporting Documents

Brake cert No RP100713

Prev Exemption HVB10/258

*Special Conditions

EBS Control - Warning light must illuminate when ignition switch on and extinguish immediately or when vehicle reaches 7kph

Certification Expiry Date (if applicable)

NA

or

Hubodometer Reading (whichever comes first)

Grid for hubodometer reading

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

RSP Pratt

*Delegate's Name (PRINT IN CAPS)

Date

27/07/2010

Number

351715

COF Vehicle Inspector ID:

COF Vehicle Inspector Signature:

Date

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



Donnett copy

Document: B1081591
Exemption: HVB10/258

**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 Eugene Girardin, Vehicles Unit Engineer, 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: **Evans Eng Ltd, 4 Axle Full Trailer**
VIN/CHASSIS: **7A85N0J0296641252**

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 area's 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 27th day of July 2010

Eugene Girardin
Engineer
Vehicles Unit

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.



R S Pratt
(TRSP HVEK 09 980 7300)

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: SCHEDULE 5.

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.*

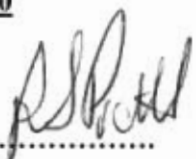
10.5 Responsibilities of manufactures and retailers

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 Land Transport Safety Authority if dissatisfied with a Compliance issue. (refer LTNZ Deed Of Appointment Para 47.4) Land Transport NZ Helpdesk 0800 699 000*


.....
R S PRATT
(TRSP HVEK)

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.13.10

distribution: Domett (EVANS REBUILD)
7A85N0J0296641252
00102 RP Dom Evans rebuild

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 (V6.09.06.08),
-the functional characteristics of our products, but not of those of other 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)
WABCOBrake V6.09.06.08 db 08.06.2009

vehicle manufacturer: Domett (EVANS REBUILD)
trailer model : 4A Full Tanker
trailer type : 4-axle-full-trailer
remarks : air / hydraulic / VA suspension
WABCO TRAILER - EBS E
TRISTOP 3+4: T.14/24
265/70 R 19,5

axle 1 + 2 + 3 + 4 : SAF, PAN 19-1 +, TDB 0749, KB 1018.0

| | | unladen | laden |
|--------------------------|----------|-------------|-------|
| total mass | P in kg | 5400 | 26000 |
| axle 1 | P1 in kg | 1450 | 6500 |
| axle 2 | P2 in kg | 1450 | 6500 |
| axle 3 | P3 in kg | 1250 | 6500 |
| axle 4 | P4 in kg | 1250 | 6500 |
| wheel base | E in mm | 4800 - 4800 | |
| centre of gravity height | h in mm | 900 | 1900 |

| | axle 1 | axle 2 | axle 3 | axle 4 |
|-----------------------------------------|----------|----------|----------|----------|
| 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.14/16 | T.14/16 |
| lever length 1Bh 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=22,5bar | 2.3 | 2.3 | 2.0 | 2.0 |
| chamber pressure(rdyn max)pH at z=22,5bar | 2.3 | 2.3 | 2.0 | 2.0 |
| chamber press.(servo)pcha at pm6,5bar bar | 6.2 | 6.2 | 4.4 | 4.4 |
| piston force ThA at pm6,5bar N | 5988 | 5988 | 4185 | 4185 |
| brake force(rdyn min)T lad. at pm6,5bar N | 45240 | 45240 | 31609 | 31609 |
| brake force(rdyn max)T lad. at pm6,5bar N | 45240 | 45240 | 31609 | 31609 |
| brake force within 1 % rolling friction proportion % | 25.0 | 25.0 | 25.0 | 25.0 |

braking rate z laden 0.603 for rdyn min
z = sum (TR)/PRmax 0.603 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
 EBS relay valve

axle 2:

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

axle 3:

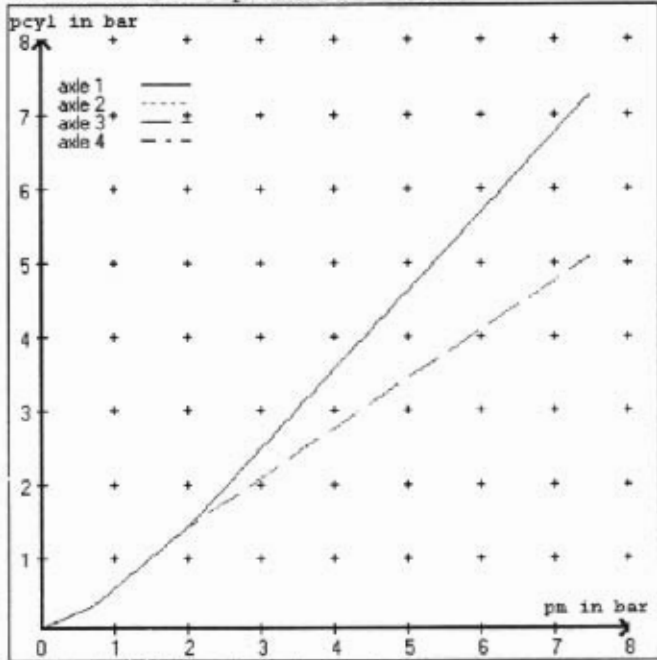
valve 1: 480 102 0.. 0 WABCO
 EBS trailer modulator

axle 4:

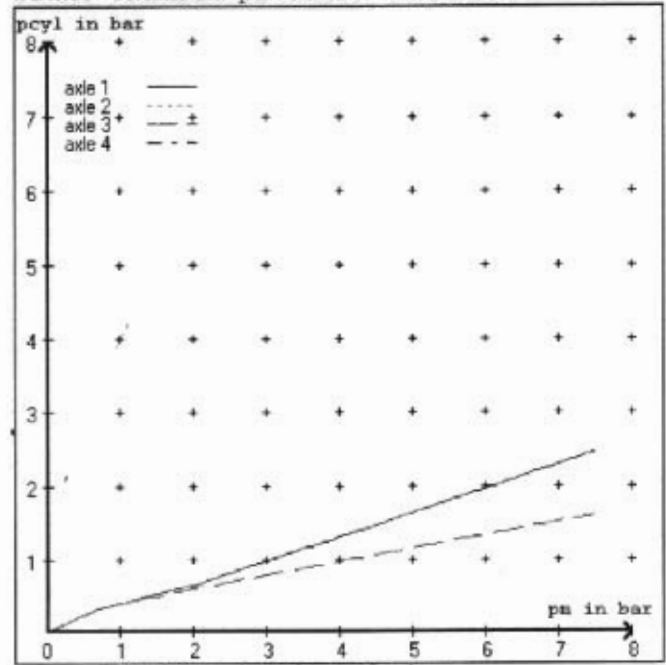
valve 1: 480 102 0.. 0 WABCO
EBS trailer modulator

| | | | | | | | |
|---------------|---------------|----------------|-------|-------|-------|-------|--|
| test type III | (zIII = 0.30) | for rdyn min : | axle1 | axle2 | axle3 | axle4 | |
| at pm | 3.6 bar => | pcha in bar : | 3.1 | 3.1 | 2.4 | 2.4 | |
| 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 | |

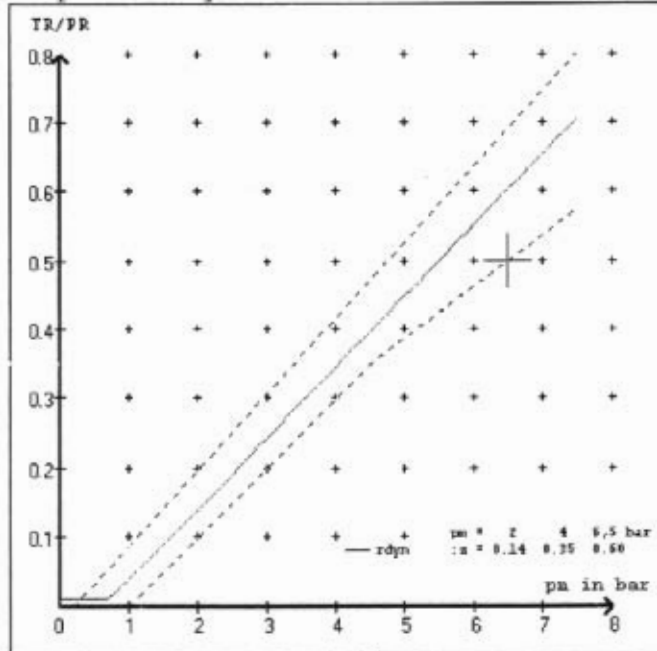
brake chamber pressure laden



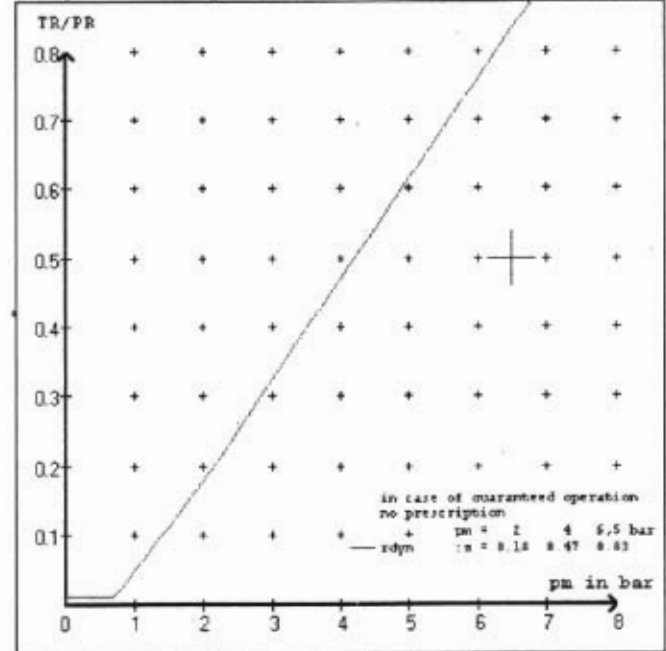
brake chamber pressure unladen



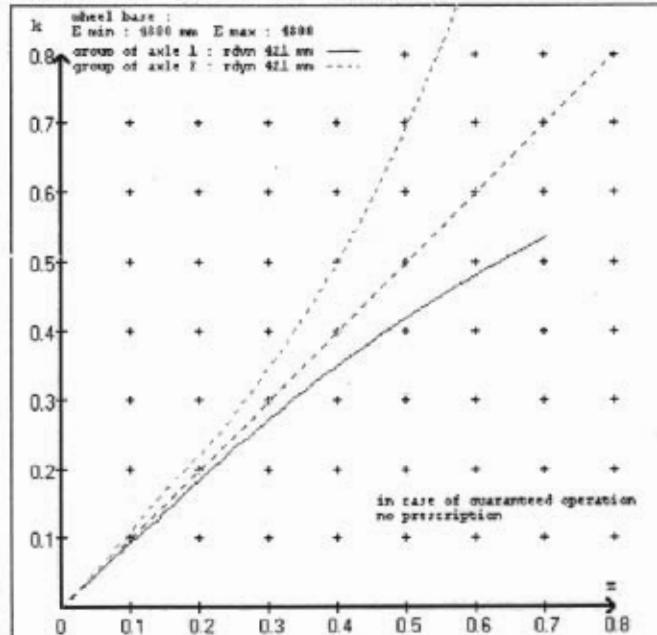
compatibility band laden



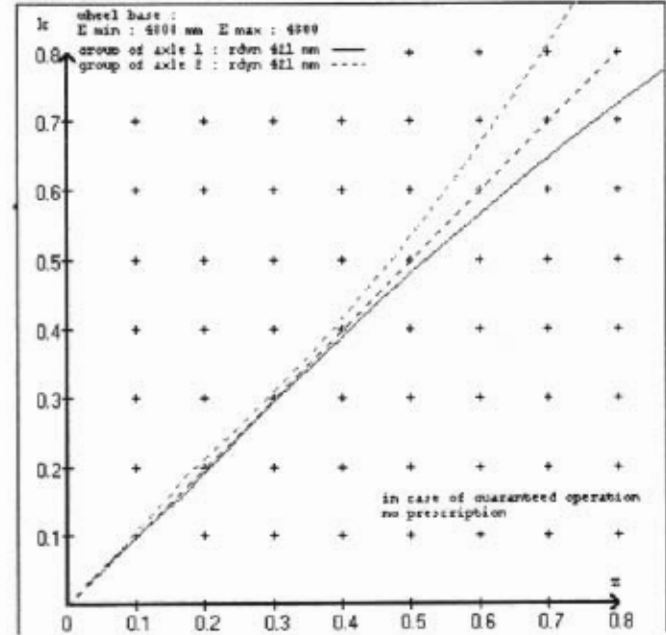
compatibility band unladen



curves of friction laden



curves of friction unladen



vehicle manufacturer: Domett (EVANS REBUILD)
 trailer model : 4A Full Tanker
 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.14/16 (Meritor) lever length 69 mm
 axle 4 : 2 x type/diameter T.14/16 (Meritor) lever length 69 mm

brake diagram :

valve :

480 207 0.. 0 WABCO EBS relay valve
 480 102 0.. 0 WABCO EBS trailer modulator,

EBS input data

vehicle manufacturer: Domett (EVANS REBUILD)
 trailer model : 4A Full Tanker
 trailer type : 4-axle-full-trailer
 brake calculation no. : TP 102A

tire circumference main axle : 2650 for rdyn max
 tire circumference auxiliary axle : 2650 for rdyn max

assignment pm / deceleration z: pm 0.7 bar z = 0.000
 (laden condition) 2.0 bar z = 0.134
 6.5 bar z = 0.600

| 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 | 1450 | to be | 2.1 | 6500 | to be | 0.3 | 1.4 | 6.2 | |
| 2 | 1450 | entered by | 2.1 | 6500 | entered by | 0.3 | 1.4 | 6.2 | |
| 3 | 1250 | the vehicle | 1.4 | 6500 | the vehicle | 0.3 | 1.4 | 4.4 | |
| 4 | 1250 | manufact. | 1.4 | 6500 | manufact. | 0.3 | 1.4 | 4.4 | |
| 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 pcy1 | axle load pcy1 | axle load pcy1 | axle load pcy1 |
| 1450 2.1 | 1450 2.1 | 1250 1.4 | 1250 1.4 |
| 1950 2.5 | 1950 2.5 | 1750 1.7 | 1750 1.7 |
| 2450 2.9 | 2450 2.9 | 2250 2.0 | 2250 2.0 |
| 2950 3.3 | 2950 3.3 | 2750 2.3 | 2750 2.3 |
| 3450 3.7 | 3450 3.7 | 3250 2.5 | 3250 2.5 |
| 3950 4.1 | 3950 4.1 | 3750 2.8 | 3750 2.8 |
| 4450 4.5 | 4450 4.5 | 4250 3.1 | 4250 3.1 |
| 4950 4.9 | 4950 4.9 | 4750 3.4 | 4750 3.4 |
| 6500 6.2 | 6500 6.2 | 6500 4.4 | 6500 4.4 |

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 1937-10 Z brake lining: Jurid 539 |
| test report : | TDB 0749 date : 15.05.2002 |
| axle 2 : reference axle: SAF | SBW 1937-10 Z brake lining: Jurid 539 |
| test report : | TDB 0749 date : 15.05.2002 |
| axle 3 : reference axle: SAF | SBW 1937-10 Z brake lining: Jurid 539 |
| test report : | TDB 0749 date : 15.05.2002 |
| axle 4 : reference axle: SAF | SBW 1937-10 Z brake lining: Jurid 539 |
| test report : | TDB 0749 date : 15.05.2002 |

calc. verific. of residual (hot) braking force type III
(item 4.2 of appendix I to annex VII)

| | | |
|--------|---------------|---------------|
| axle 1 | (rdyn 421 mm) | T = 18.3 % Pe |
| axle 2 | (rdyn 421 mm) | T = 18.3 % Pe |
| axle 3 | (rdyn 421 mm) | T = 14.2 % Pe |
| axle 4 | (rdyn 421 mm) | T = 14.2 % Pe |

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

| | | |
|--------|--------------|-----------|
| axle 1 | (sp = 57 mm) | s = 42 mm |
| axle 2 | (sp = 57 mm) | s = 42 mm |
| axle 3 | (sp = 56 mm) | s = 42 mm |
| axle 4 | (sp = 56 mm) | s = 42 mm |

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

| | |
|-------|--------------|
| axle1 | ThA = 5988 N |
| axle2 | ThA = 5988 N |
| axle3 | ThA = 4185 N |
| axle4 | ThA = 4185 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 = 30293 N |
| axle 2 | (rdyn 421 mm) | T = 30293 N |
| axle 3 | (rdyn 421 mm) | T = 21234 N |
| axle 4 | (rdyn 421 mm) | T = 21234 N |

| | |
|-------------|--------------|
| basic test | type III |
| of subject | (calculated) |
| trailer (z) | residual |

| | | |
|------------------------------------------------------------------------|------|----------------------|
| braking rate of the vehicle (item 4.3.2 to appendix I to annex VII) | 0.60 | (hot)braking 0.40 |
|------------------------------------------------------------------------|------|----------------------|

| | |
|--------------------------------------------------------------|-------------------------------|
| required braking rate (items 1.3.3 and 1.6.2 to annex II) | >= 0,4 and >= 0,6*z (0.36) |
|--------------------------------------------------------------|-------------------------------|

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

| | | |
|--------|---------------|-------------|
| axle 1 | (rdyn 421 mm) | T = 30293 N |
| axle 2 | (rdyn 421 mm) | T = 30293 N |
| axle 3 | (rdyn 421 mm) | T = 21234 N |
| axle 4 | (rdyn 421 mm) | T = 21234 N |

| | |
|-------------|--------------|
| basic test | type III |
| of subject | (calculated) |
| trailer (z) | residual |

| | | |
|------------------------------------------------------------------------|------|----------------------|
| braking rate of the vehicle (item 4.3.2 to appendix I to annex VII) | 0.60 | (hot)braking 0.40 |
|------------------------------------------------------------------------|------|----------------------|

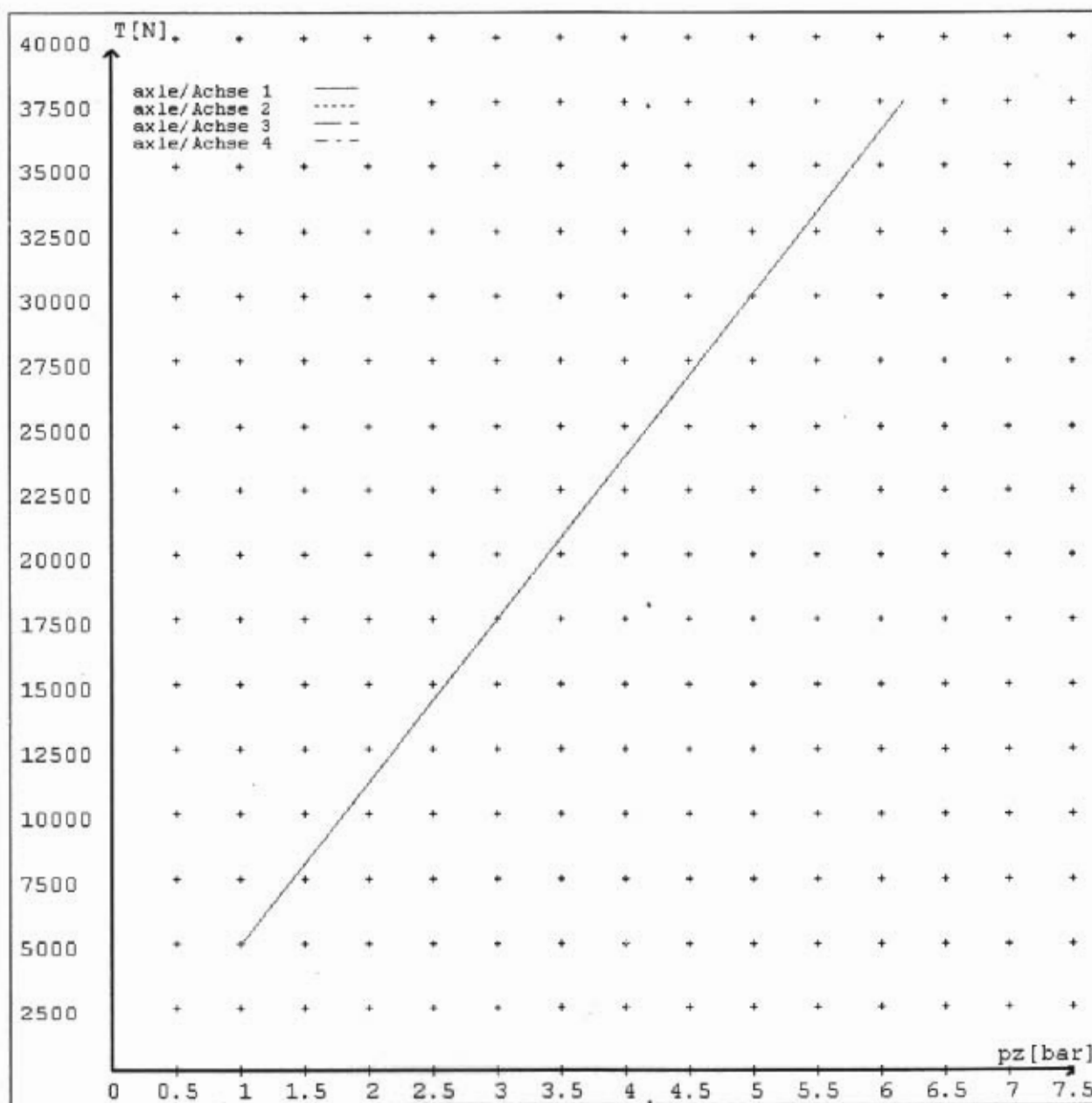
| | |
|--------------------------------------------------------------|-------------------------------|
| required braking rate (items 1.3.3 and 1.6.2 to annex II) | >= 0,4 and >= 0,6*z (0.36) |
|--------------------------------------------------------------|-------------------------------|

reference values

reference values for z = 50%

| | pz [bar] | T [N] | T [N] |
|--------|----------|-------|-------|
| axle 1 | 1.0 | 4860 | |
| | 6.2 | 37513 | |
| axle 2 | 1.0 | 4860 | |
| | 6.2 | 37513 | |
| axle 3 | 1.0 | | 4860 |
| | 4.4 | | 26210 |
| axle 4 | 1.0 | | 4860 |
| | 4.4 | | 26210 |

VIN - no.:

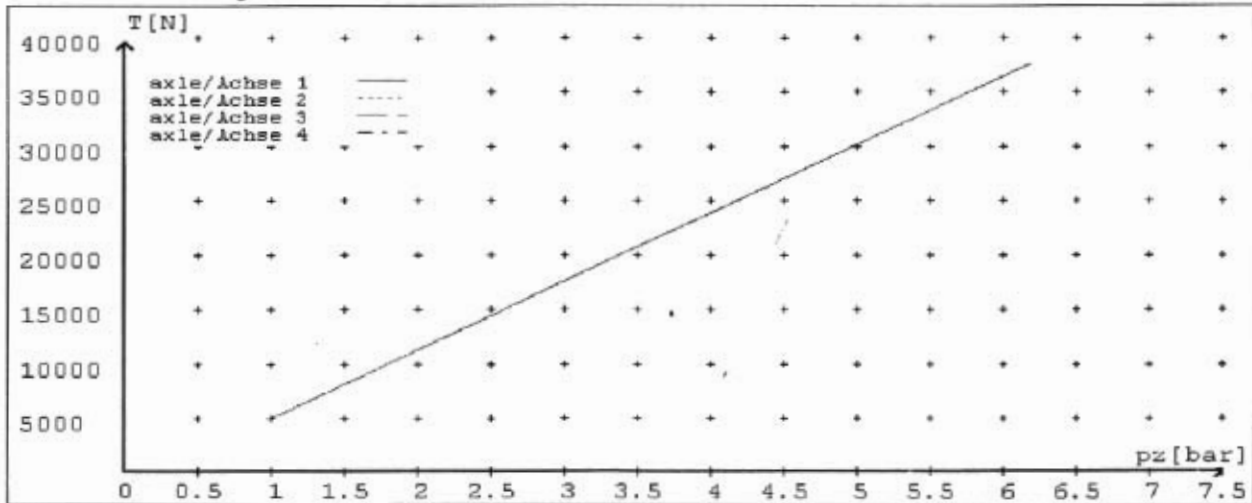


reference values for z = 0.5

Angabe der Referenzwerte für z = 0.5

brake calculation no: TP 102A date 20.07.2010

Bremsberechnung Nr: TP 102A vom 20.07.2010



| | Axle(s) / Achse(n) | | | | |
|-------------------------------------------------------------------------------------|--------------------|-------|---------|---------|---|
| brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest) | 14./ | 14./ | T.14/24 | T.14/24 | / |
| Maximum stroke s _{max} =mm maximaler Hub s _{max} =mm | 64 | 64 | 64 | 64 | |
| lever length =mm Hebellänge =mm | 69.08 | 69.08 | 69.08 | 69.08 | |



P.O.Box 98-971

South Auckland Mail Centre

Ronald Stuart Pratt (TRSP)

DATE 27/07/2010 TYPE APPROVED NO

CERTIFICATE No RP100713 4AFTSAFEB5-Edisc

VIN No 7A85N0J0296641252

BRAKE CHAMBERS FRONT -14TSE 64mm

BRAKE CHAMBERS REAR 14/16TSE 64mm LOAD SENSED Yes EBS Control

SLACK LENGTH FRONT Disc TYRE SIZE FRONT 265/70R19.5

SLACK LENGTH REAR Disc TYRE SIZE REAR 265/70R19.5

THIS VEHICLE COMPLIES WITH N.Z.H.V.B.R. LINING MATERIAL FRONT Jurid 539 AF

32015 SCHEDULE 5 LINING MATERIAL REAR Jurid 539 AF

