



Heavy Vehicle Specialist Certificate

Heavy Vehicle Specialist Inspector and Inspecting Organisation

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

ID

CHRIS CLARKE

CTC

Vehicle Registration*

VIN / Chassis Number

7A9C20026C1023033

Component being certified:

Chassis Modification

Load Anchorage

Log Bolsters

Certification Category

Towing Connection

✓ Brakes

SRT

HUEK.

Description of Work

CARRY OUT COMPLIANCE OF VEHICLE TO THEN Z HEAVY VEHICLE BRAKE RULE.

Code/Standard Certified to

Component Load Rating(s)

HUBNZ 3205/2 SCHED 5.

General Drawing Number(s)

N/A.

N/A

Supporting Documents

BRAKE DESIGN CERTIFICATE - JH120207.

PREV EXEMPTION REFERENCE - HUB12/012.

*Special Conditions

WARNING LAMP MUST ILLUMINATE WHEN IGNITION IS SWITCHED ON + THE LAMP EXTINGUISH IMMEDIATELY OR WHEN VEHICLE EXCEED 7 KPH.

Certification Expiry Date (if applicable)

or Hubodometer Reading (whichever comes first)

N/A

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 Name (PRINT IN CAPS)

Date

Number

19.03.2012.

398427

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

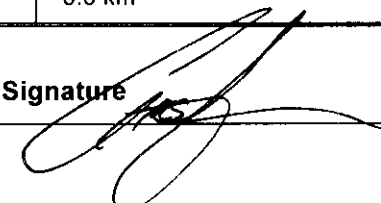
| | | | |
|---|---|-------------------|---------------|
| System | Trailer EBS-E | WABCO part number | 480 102 080 0 |
| Production date | 2011-10-01 | Serial number | 897000140100N |
| Fingerprint Customer EOL / Customer Development / Flash Program | W 041610 / 2012-03-20 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00 | | |

| | | | | | | | |
|--|--|----------------------|---|--|------|------|------|
| WABCO | | TRAILER EBS-E | | GGVS/ADR TUEH TB 2007 - 019.00 TDB 0749 ECE | | | |
| HERSTELLER MANUFACTURER CONSTRUCTEUR | DOMETT T&T | | | GIO | Pin1 | Pin3 | Pin4 |
| TYP TYPE TYPE | 3AX SEMI BR | | | 1 | --- | --- | --- |
| FAHRZEUG IDENTNR CHASSIS NUMBER NUMERO DE CHASSIS | 7A9C20026C1023033 | | | 2 | --- | --- | --- |
| BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO. | TP50591 | | | 3 | --- | --- | --- |
| POLRADZAHNEZAHL c-d e-f POLE WHEEL TEETH c-d e-f DENTS ROUE DENTÉE c-d e-f | 90 | --- | ABS-System ABS-System Système ABS | 4 | --- | --- | --- |
| RSS RSS RSS | Einachsberiefung Single Tire Monte simple | | Lenkachse Steering axle Essieu vireur | 5 | DIAG | DIAG | DIAG |
| | Zwillingsberiefung Twin Tire Monte jumelée | X | Kippritisches Fahrzeug Critical Trailer Véhicule critique | 6 | --- | --- | --- |
| Subsystems | --- | I/O | | 7 | --- | --- | --- |

| | | | | | | | | | | | | | | | |
|-------------------------|----------|-----|----------|------|-----|-----|-----|-----|-----|---|---------|-----|----------|-----|------|
| ACHSE AXLE ESSIEU | pm (bar) | 6.5 | pm (bar) | 0.7 | 2.0 | --- | 6.5 | | | | | | (bar) | | |
| | 1.0 | Pz | | | | | | | | | | | TR (daN) | | |
| 1 | 1260 | 0.6 | 1.8 | 6000 | 3.9 | 0.3 | 1.2 | --- | 4.4 | - | 14 / 16 | 64 | 69 | 487 | 2649 |
| 2 | 1260 | 0.6 | 1.8 | 6000 | 3.9 | 0.3 | 1.2 | --- | 4.4 | - | 14 / 16 | 64 | 69 | 487 | 2649 |
| 3 | 1260 | 0.6 | 1.8 | 6000 | 3.9 | 0.3 | 1.2 | --- | 4.4 | - | 14 | 64 | 69 | 487 | 2649 |
| 4 | 0 | --- | --- | 0 | --- | --- | --- | --- | --- | - | --- | --- | --- | --- | --- |
| 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 |

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

| | | | |
|--------------|--------------------------|---|-------------------|
| Manufacturer | DOMETT T&T | Vehicle ident. no | 7A9C20026C1023033 |
| Vehicle type | 3AX SEMI BR | Odometer reading | 0.0 km |
| next Service | 0 km | Trip reading | 0.0 km |
| Tested by | Chris Clarke | Signature  | |
| Date | 2012-03-20 10:19:25 a.m. | | |



Document: A1265362
Exemption: HVB12/012

**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:

Make/Model: **Domett Truck & Trailer Ltd, 3 axle- semi-trailer (B-Rear)**
VIN/CHASSIS: **7A9C20026C1023033**

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.
- 12)

Signed at Wellington this 25th day of January 2012.

Jackie Hartley
Administrator (Assessments)

Statement of Compliance with the New Zealand Heavy Brake Rule

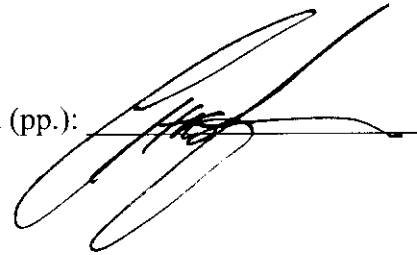
Documentation required supporting Statements of Compliance with the New Zealand Heavy Brake Rule, to be made available to the Statutory Authority on request, must include all calculations and test reports.

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 32015/2, Schedule 5.

Date: 7th Mar 2012

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 32015/2, 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

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: DOMETT T&T
7A9C20026C1023033
SODC - JH120207

please note!

This brake calculation is made under consideration of
-the legal prescriptions mentioned above in the version valid all 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: DOMETT T&T
trailer model : 3AX SEMI BR
trailer type : 3-axle-semi-trailer
remarks : air / hydraulic / VA suspension
WABCO TRAILER - EBS E
TRISTOP 1+2: T.14/24
265/70 R 19,5

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

| | | <u>unladen</u> | | <u>laden</u> | |
|--------------------------|----------|----------------|--------|--------------|---------|
| total mass | P in kg | 5000 | - 6000 | 26000 | - 26000 |
| king-pin | PS kg | 1220 | - 2220 | 8000 | - 8000 |
| axle 1 | P1 in kg | | 1260 | | 6000 |
| axle 2 | P2 in kg | | 1260 | | 6000 |
| axle 3 | P3 in kg | | 1260 | | 6000 |
| total axle mass | PR in kg | | 3780 | | 18000 |
| wheel base | E in mm | 5680 | - 5680 | | |
| centre of gravity height | h in mm | | 1130 | | 2120 |
| K-factor | | Kv min | 1.8173 | Kc min | 0.9564 |
| K-factor | | Kv max | 1.8222 | Kc max | 0.9564 |

| | | <u>axle 1</u> | <u>axle 2</u> | <u>axle 3</u> |
|-------------------------------------|----------------|---------------|---------------|---------------|
| no. of combined axles | | 1 | 1 | 1 |
| no. of brake chambers per axle line | KDZ | 2 | 2 | 2 |
| The power output corresponds to | | BZ 119.6 | BZ 119.6 | BZ 122.1 |
| brake chamber manufacturer | | Meritor | Meritor | Meritor |
| chamber size | | T.14/16 | T.14/16 | 14. |
| lever length | lBh in mm | 69 | 69 | 69 |
| brake factor | [-] | 23.03 | 23.03 | 23.03 |
| dyn. rolling radius | rdyn min in mm | 421 | 421 | 421 |
| dyn. rolling radius | rdyn max in mm | 421 | 421 | 421 |
| threshold torque | Co Nm | 6.0 | 6.0 | 6.0 |

calculation:

| | | | | |
|---|------------------------------|-------|-------|-------|
| chamber pressure (rdyn min) p _H at z=22,5%bar | | 2.0 | 2.0 | 2.0 |
| chamber pressure (rdyn max) p _H at z=22,5%bar | | 2.0 | 2.0 | 2.0 |
| chamber press. (servo) p _{cha} at p _m 6,5bar | bar | 4.4 | 4.4 | 4.4 |
| piston force | ThA at p _m 6,5bar | 4185 | 4185 | 4185 |
| brake force (rdyn min) T _{lad.} at p _m 6,5bar | N | 31560 | 31560 | 31560 |
| brake force (rdyn max) T _{lad.} at p _m 6,5bar | N | 31560 | 31560 | 31560 |
| brake force within 1 % rolling friction proportion | % | 33.3 | 33.3 | 33.3 |

braking rate z_{laden} 0.536 for rdyn min
z = sum (TR)/PRmax 0.536 for rdyn max

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

brake diagram : 841 701 101 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:

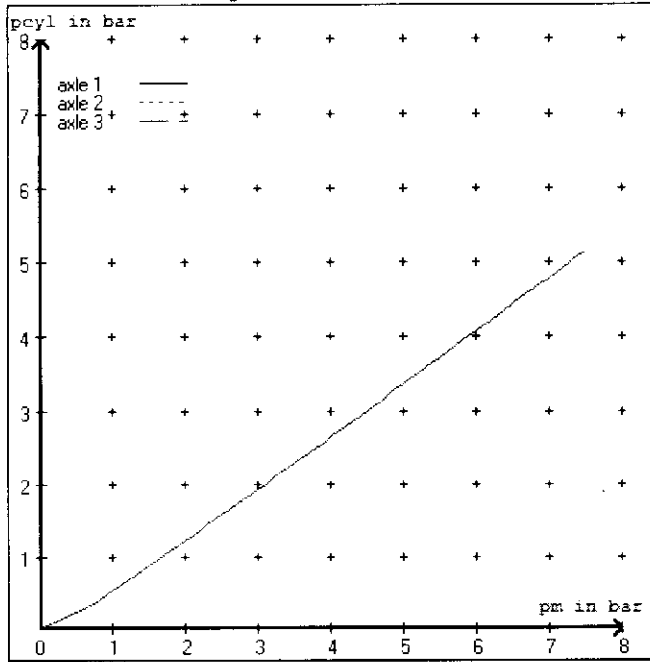
valve 1: 971 002 ... 0 WABCO
EBS emergency valve

valve 2: 480 102 ... 0 () WABCO or 480 207 0.. 0
EBS trailer modulator

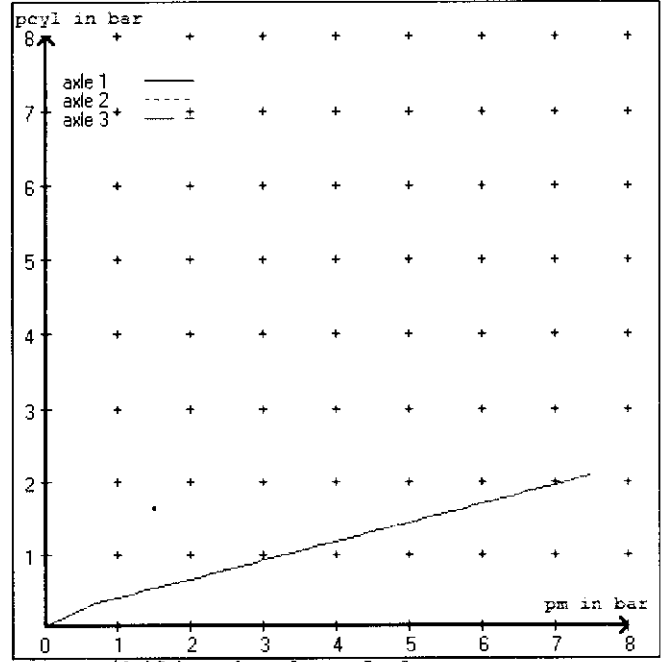
brake cylinder: Meritor 14HSCLD64

test type III (zIII = 0.30) for rdyn min : axle1 axle2 axle3
at pm 3.9 bar => pcha in bar : 2.6 2.6 2.6
test type III (zIII = 0.06) for rdyn min : axle1 axle2 axle3
at pm 1.3 bar => pcha in bar : 0.7 0.7 0.7

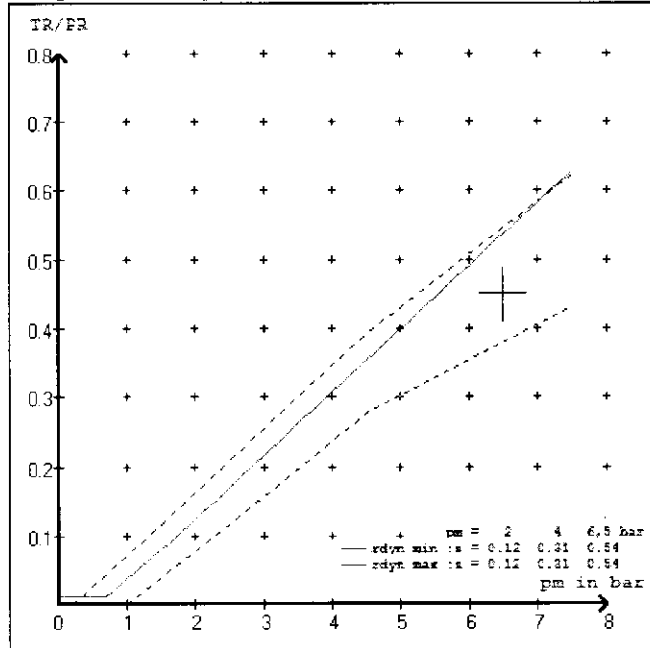
brake chamber pressure laden



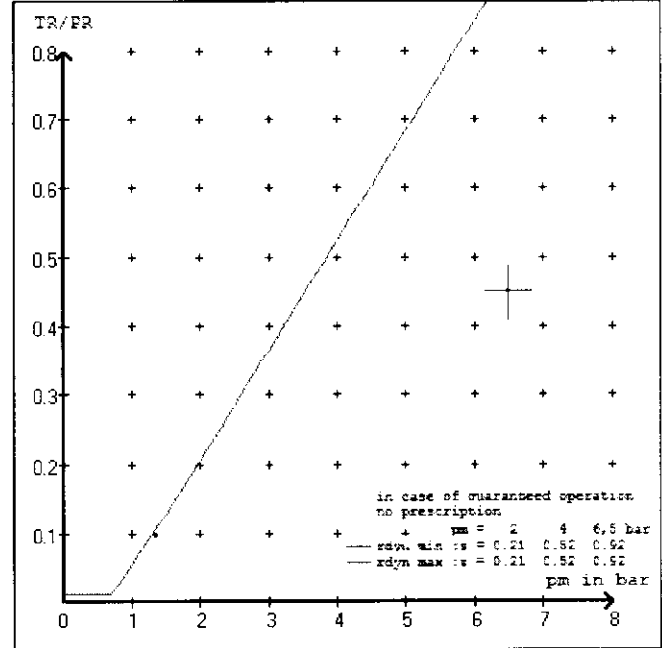
brake chamber pressure unladen



compatibility band laden



compatibility band unladen



vehicle manufacturer: DOMETT T&T
 trailer model : 3AX SEMI BR
 trailer type : 3-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

brake diagram : 841 701 101 0

valve :

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

EBS input data

=====

vehicle manufacturer: DOMETT T&T
 trailer model : 3AX SEMI BR
 trailer type : 3-axle-semi-trailer
 brake calculation no. : TP 50591S

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 = 0.130
 6.5 bar z = 0.540

| 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 | 1260 | to be | 1.8 | 6000 | to be | 0.3 | 1.2 | 4.4 | |
| 2 | 1260 | entered by | 1.8 | 6000 | entered by | 0.3 | 1.2 | 4.4 | |
| 3 | 1260 | the vehicle | 1.8 | 6000 | the vehicle | 0.3 | 1.2 | 4.4 | |
| 4 | 0 | manufact. | 0,0 | 0 | manufact. | 0,0 | 0,0 | 0,0 | |
| 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 load pcy1 | axle load pcy1 | axle load pcy1 |
| 1260 | 1.8 | 1260 |
| 1760 | 2.1 | 1760 |
| 2260 | 2.3 | 2260 |
| 2760 | 2.6 | 2760 |
| 3260 | 2.9 | 3260 |
| 3760 | 3.2 | 3760 |
| 4260 | 3.4 | 4260 |
| 4760 | 3.7 | 4760 |
| 6000 | 4.4 | 6000 |

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 |

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

| | | |
|--------|---------------|---------------|
| axle 1 | (rdyn 421 mm) | T = 17.6 % Fe |
| axle 2 | (rdyn 421 mm) | T = 17.6 % Fe |
| axle 3 | (rdyn 421 mm) | T = 17.6 % Fe |

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

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

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

| | |
|-------|--------------|
| axle1 | ThA = 4185 N |
| axle2 | ThA = 4185 N |
| axle3 | 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 = 24874 N |
| axle 2 | (rdyn 421 mm) | T = 24874 N |
| axle 3 | (rdyn 421 mm) | T = 24874 N |

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

braking rate of the vehicle
(item 4.3.2 to appendix I to annex VII)

| | |
|------|------|
| 0.54 | 0.42 |
|------|------|

required braking rate
(items 1.3.3 and 1.6.2 to annex II)

| |
|-----------------|
| >= 0,4 and |
| >= 0,6*z (0.32) |

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

| | | |
|--------|---------------|-------------|
| axle 1 | (rdyn 421 mm) | T = 24874 N |
| axle 2 | (rdyn 421 mm) | T = 24874 N |
| axle 3 | (rdyn 421 mm) | T = 24874 N |

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

braking rate of the vehicle
(item 4.3.2 to appendix I to annex VII)

| | |
|------|------|
| 0.54 | 0.42 |
|------|------|

required braking rate
(items 1.3.3 and 1.6.2 to annex II)

| |
|-----------------|
| >= 0,4 and |
| >= 0,6*z (0.32) |

sf g f s f o d f ! w o r n v f t

reference values for z = 45% for max r dyn: 421 mm

| | pz [bar] | T [N] | T [N] |
|--------|----------|-------|-------|
| axle 1 | 1.0 | | 4880 |
| | 4.4 | | 26496 |
| axle 2 | 1.0 | | 4880 |
| | 4.4 | | 26496 |
| axle 3 | 1.0 | | 4880 |
| | 4.4 | | 26496 |

VIN - no.:

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

