WAKA KOTAHI
NZ TRANSPORT AGENCY

# Heavy vehicle specialist certificate

Must be presented to a CoF (heavy) inspecting organisation if not entered into LANDATA

Heavy vehicle specialist inspector's or manufacturing inspecting organisation's name *(PRINT IN CAPS)*: **CHRIS CLARKE**

ID: **CJC**

Plate number *(optional)*:

VIN/chassis number: **7A9D10013N2023177**

Make: **DOMETT**

Model *(optional)*: **D1001**

Certification category: **HVEK**

Component being certified:

- [ ] Chassis
- [ ] Load anchorage
- [ ] Log bolsters
- [ ] Towing connection
- [X] Brakes
- [ ] SRT
- [ ] PSV stability
- [ ] PSV rollover
- [ ] Swept path
- [ ] PBS

Description of work:

CERTIFY TO SCHEDULE 5 OF LTR 32015: NZ HEAVY VEHICLE BRAKE SPECIFICATION.
CARRY OUT BRAKE CALCULATIONS, INSPECTION AND ECU END OF LINE PROTOCOL.
4A TANKER RSS ON TYRE: 265 70 R19.5
FOR SYSTEM ARCHITECTURE, PLEASE REFER TO PDS WORKSHEET & SCHEMATIC.

Code/standard/rule certified to: LTR 32015, SCHEDULE 5

General drawing number(s): N/A

Component load rating(s):
26 Tonnes GVM
15 Tonne (Front group ratings)
15 Tonne (Rear group ratings)

Supporting documents:

| | |
|---|---|
| BRAKE RULE CERTIFICATE | CJC297928 |
| BRAKE CALCULATION # | 2022 SAF 4A WPC |

Special conditions *(optional)*:
WARNING LAMP MUST ILLUMINATE WHEN IGNITION IS SWITCHED ON & THEN EXTINGUISH IMMEDIATELY OR WHEN VEHICLE SPEED EXCEEDS 7 KM/H

Certification expiry date *(if applicable)*: N/A [UNLESS MODIFIED]

*or*

Hubodometer reading *(whichever comes first)*:

## 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 *(if different from inspector below)*: LANCE CAWTE L P C

Inspector's signature:

Inspector's name *(PRINT IN CAPS)*: CHRIS CLARKE ID number: CJC

Date: 23.05.2022

Number: 825578

CoF vehicle inspector ID *(if applicable)*:

CoF vehicle inspector signature *(if applicable)*:

Date:

**All fields are mandatory unless otherwise stated.**

# WABCO START-UP LOG

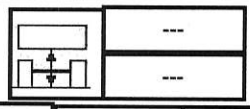
| | | | |
|---|---|---|---|
| **System** | Trailer EBS-E | **WABCO part number** | 480 102 064 0 |
| **Production date** | 2020-12-15 | **Serial number** | 436080294400A |
| **Serial number (modulator)** | 000000539486 | | |
| **Fingerprint Customer EOL / Customer Development / Flash Program** | W503643 / 2022-05-23 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00 | | |

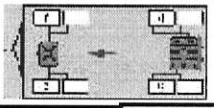
## WABCO TRAILER EBS-E

GGVS/ADR TUEH TB 2007 - 019.00
TDB 0870

| | |
|---|---|
| HERSTELLER MANUFACTURER CONSTRUCTEUR | DOMETT |
| TYP TYPE TYPE | 4A TANKER, D1001 |
| VEHICLE IDENT. NUMBER CHASSIS NUMBER NUMERO DE CHASSIS | 7A9D10013N2023177 |
| BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO. | 2022 SAF 4A WPC |
| 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: 4S/3M |
| RSS Einfachbereifung Single Tire Monte simple | Lenkachse Steering axle Essieu vireur: |
| RSS RSS Zwillingsbereifung Twin Tire Monte jumelée | X — Kippkritisches Fahrzeug Critical Trailer Véhicule critique: |
| Subsystems | --- — I/O: 24N |

| GIO | Pin1 | Pin3 | Pin4 |
|---|---|---|---|
| 1 | 24 V-O1 | --- | --- |
| 2 | --- | --- | --- |
| 3 | ALS2 | ALS2 | --- |
| 4 | --- | --- | --- |
| 5 | DIAG | DIAG | DIAG |
| 6 | --- | --- | --- |
| 7 | --- | --- | --- |



| | pm (bar) | | 6.5 | pm (bar) | | 0.8 | 2.0 | --- | 6.5 | | TYP TYPE | (mm) | (mm) | (bar) 1.0 TR (daN) | (bar) Pz |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ACHSE AXLE ESSIEU | | | | | | | | | pz | | | | | | |
| 1 | 1400 | 0.5 | 1.5 | 7500 | 4.7 | 0.4 | 1.3 | --- | 5.5 | - | 20 | 65 | 76 | 534 | 4241 |
| 2 | 1400 | 0.5 | 1.5 | 7500 | 4.7 | 0.4 | 1.3 | --- | 5.5 | - | 20 | 65 | 76 | 534 | 4241 |
| 3 | 1200 | 0.4 | 1.2 | 7500 | 4.7 | 0.4 | 1.5 | --- | 4.6 | - | 16 / 16 | 63 | 76 | 496 | 3115 |
| 4 | 1200 | 0.4 | 1.2 | 7500 | 4.7 | 0.4 | 1.5 | --- | 4.6 | - | 16 / 16 | 63 | 76 | 496 | 3115 |
| 5 | 0 | --- | --- | 0 | --- | --- | --- | --- | --- | - | --- | --- | --- | --- | --- |

### TEBS-E

| | | | |
|---|---|---|---|
| **Diagnostic memory** | OK | **Warning lamp control** | OK |
| **Parameter setting** | carried out | **Stop light supply** | OK |
| **EBS pressure test** | OK | **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 test** | Not tested | **Leak test** | Not tested |
| **Immobilizer test** | Not tested | **Signal outputs** | Not tested |
| **Signal inputs** | Not tested | **Tag axle test** | Not tested |

### Electronic Extension Module

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

| | | | |
|---|---|---|---|
| **Manufacturer** | DOMETT | **Vehicle ident. no.** | 7A9D10013N2023177 |
| **Vehicle type** | 4A TANKER, D1001 | **Odometer reading** | 0.0 km |
| **Next service** | 0 km | **Trip reading** | 0.0 km |
| **Tester** | Chris Clarke | | |
| **Date** | 2022-05-23 12:36:49 pm | **Signature** | |

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

distribution: DOMETT
2022 SAF 4A WPC

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 (V6.18.07.12).
-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 V6.18.07.12 db 31.08.2018

vehicle manufacturer: DOMETT
trailer model : 4A TANKER, D1001
trailer type : 4-axle-full-trailer
remarks : air / hydraulic / VA suspension
WABCO TRAILER - EBS
TRISTOP 3+4: 16/16
265/70 R 19,5

axle 1 + 2 + 3 + 4 : SAF, SBS 1918, TDB 0870 ECE,

| | | unladen | laden |
|---|---|---|---|
| total mass | P in kg | 5200 | 30000 |
| axle 1 | P1 in kg | 1400 | 7500 |
| axle 2 | P2 in kg | 1400 | 7500 |
| axle 3 | P3 in kg | 1200 | 7500 |
| axle 4 | P4 in kg | 1200 | 7500 |
| wheel base | E in mm | 5070 - 5070 | |
| centre of gravity height | h in mm | 700 | 1492 |

| | | 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 122.1BC | 0006.0BC | 0006.0 |
| brake chamber manufacturer | | Meritor | Meritor | WABCO | WABCO |
| chamber size | | 20. | 20. | 16/16 | 16/16 |
| lever length | lBh in mm | 76 | 76 | 76 | 76 |
| brake factor | [-] | 22.37 | 22.37 | 22.37 | 22.37 |
| 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 | 2.1 | 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 | 5.5 | 5.5 | 4.6 | 4.6 |
| piston force ThA at pm6,5bar | N | 6332 | 6332 | 4648 | 4648 |
| brake force(rdyn min)T lad. at pm6,5bar | N | 51239 | 51239 | 37636 | 37636 |
| brake force(rdyn max)T lad. at pm6,5bar | N | 51239 | 51239 | 37636 | 37636 |
| Brake force incl. 1 % rolling resistance proportion | % | 26.5 | 26.5 | 23.5 | 23.5 |

| | | |
|---|---|---|
| braking rate z laden | 0.604 | for rdyn min |
| z = sum (TR)/PRmax | 0.604 | 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 or 480 207 2.. 0
EBS relay valve

brake cylinder: Meritor 20HSCLD65

axle 2:
valve 1: 480 207 0.. 0 WABCO or 480 207 2.. 0
EBS relay valve

brake cylinder: Meritor 20HSCLD65

axle 3:
valve 1: 480 102 ... 0 WABCO
EBS trailer modulator

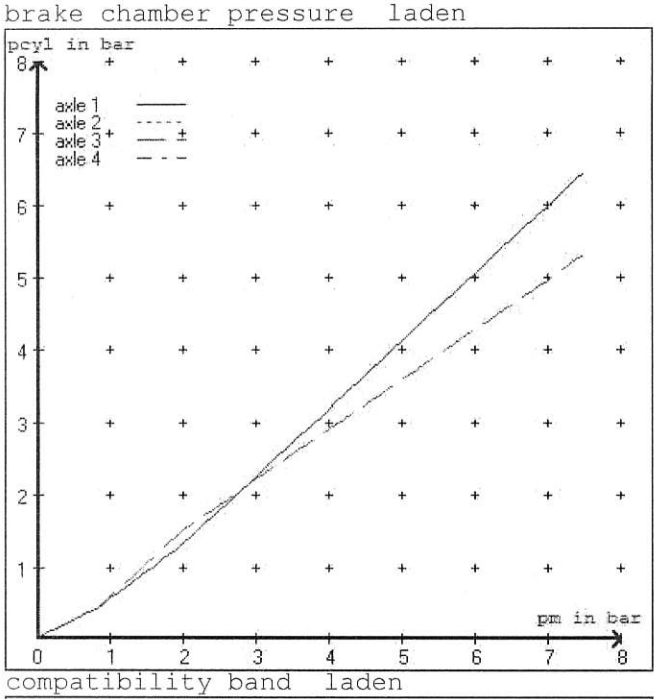
brake cylinder: WABCO 925 464 4.. 0 / 925 484 96. 0

axle 4:
valve 1: 480 102 ... 0 WABCO
EBS trailer modulator

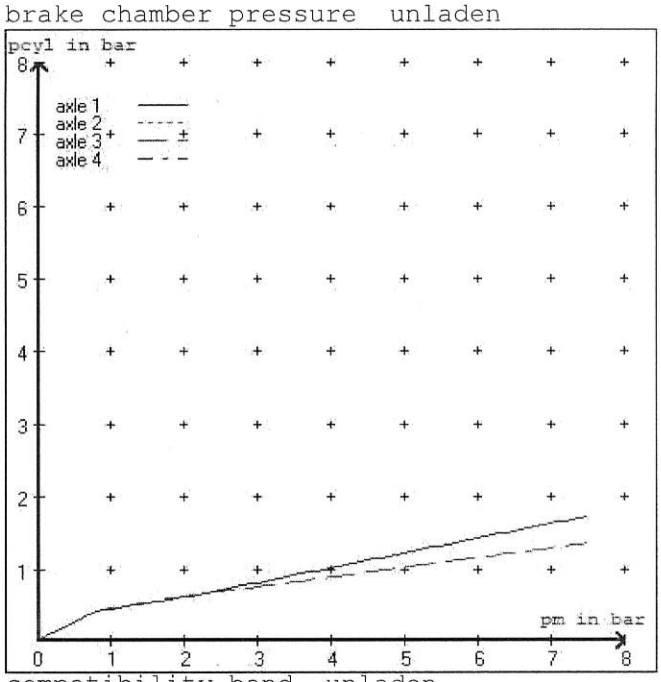
brake cylinder: WABCO 925 464 4.. 0 / 925 484 96. 0

| | | | | | | |
|---|---|---|---|---|---|---|
| test type III (zIII = 0.30) | for rdyn min : | axle1 | axle2 | axle3 | axle4 | |
| at pm 3.6 bar => | pcha in bar : | 2.8 | 2.8 | 2.6 | 2.6 | |
| 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 | 0.9 | 0.9 | |

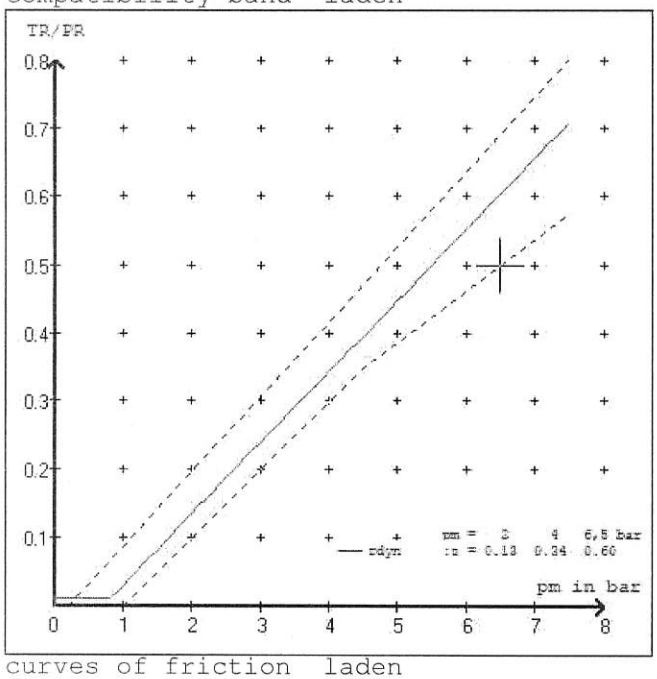
brake chamber pressure laden



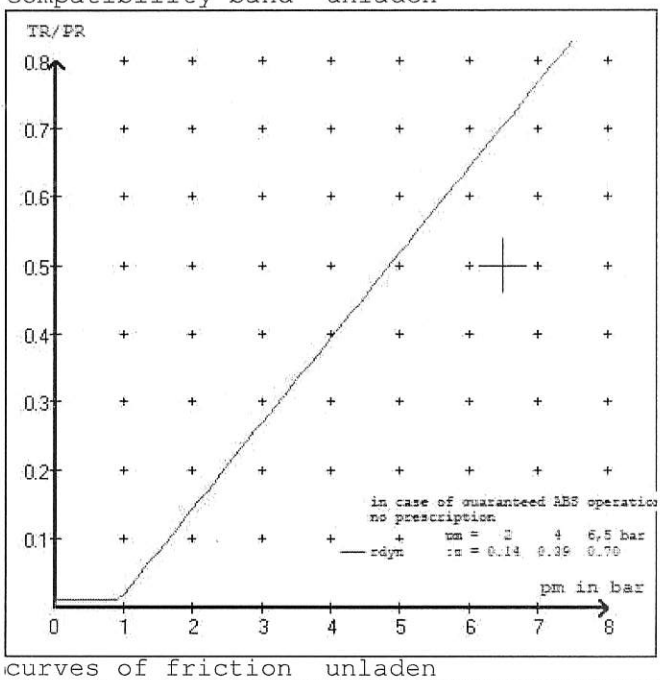

brake chamber pressure unladen



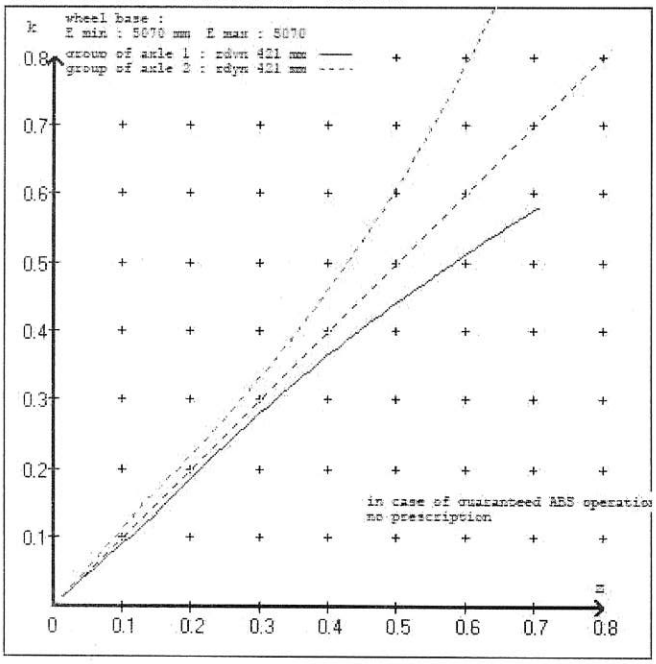

compatibility band laden



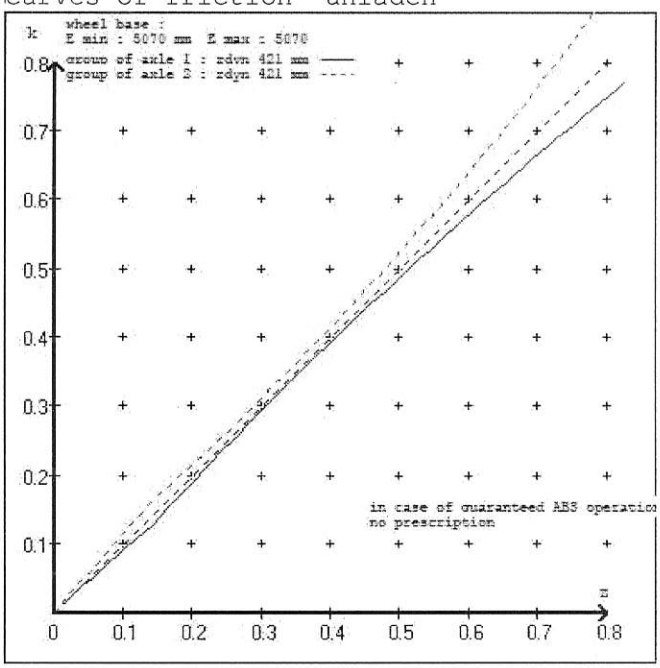

compatibility band unladen




curves of friction laden




curves of friction unladen



vehicle manufacturer: DOMETT
trailer model : 4A TANKER, D1001
trailer type : 4-axle-full-trailer

brake chamber and lever length :
axle 1 : 2 x type/diameter 20. (Meritor) lever length 76 mm
axle 2 : 2 x type/diameter 20. (Meritor) lever length 76 mm
axle 3 : 2 x type/diameter 16/16 (WABCO) lever length 76 mm
axle 4 : 2 x type/diameter 16/16 (WABCO) lever length 76 mm

brake diagram :

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

EBS input data
==========
vehicle manufacturer: DOMETT
trailer model : 4A TANKER, D1001
trailer type : 4-axle-full-trailer
brake calculation no. : TP 2022A

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 = 0.010
(laden condition) 2.0 bar z = 0.134
6.5 bar z = 0.600

| 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 entered by the vehicle manufact. | 1.5 | 7500 | to be entered by the vehicle manufact. | 0.4 | 1.3 | 5.5 |
| 2 | 1400 | | 1.5 | 7500 | | 0.4 | 1.3 | 5.5 |
| 3 | 1200 | | 1.2 | 7500 | | 0.4 | 1.5 | 4.6 |
| 4 | 1200 | | 1.2 | 7500 | | 0.4 | 1.5 | 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 | 1200 | 1.2 | 1200 | 1.2 |
| 1900 | 1.8 | 1900 | 1.8 | 1700 | 1.5 | 1700 | 1.5 |
| 2400 | 2.2 | 2400 | 2.2 | 2200 | 1.7 | 2200 | 1.7 |
| 2900 | 2.5 | 2900 | 2.5 | 2700 | 2.0 | 2700 | 2.0 |
| 3400 | 2.8 | 3400 | 2.8 | 3200 | 2.3 | 3200 | 2.3 |
| 3900 | 3.1 | 3900 | 3.1 | 3700 | 2.5 | 3700 | 2.5 |
| 4400 | 3.5 | 4400 | 3.5 | 4200 | 2.8 | 4200 | 2.8 |
| 4900 | 3.8 | 4900 | 3.8 | 4700 | 3.1 | 4700 | 3.1 |
| 7500 | 5.5 | 7500 | 5.5 | 7500 | 4.6 | 7500 | 4.6 |

data sheet to ECE vehicle type-approval certificate concerning braking equipment: according to ECE R13 annex 11

| | | | | |
|---|---|---|---|---|
| axle 1 : | reference axle: SAF | SBS 1937 | brake lining: | SAF 437 |
| | test report : | TDB 0870 ECE | date : | 20131111 |
| axle 2 : | reference axle: SAF | SBS 1937 | brake lining: | SAF 437 |
| | test report : | TDB 0870 ECE | date : | 20131111 |
| axle 3 : | reference axle: SAF | SBS 1937 | brake lining: | SAF 437 |
| | test report : | TDB 0870 ECE | date : | 20131111 |
| axle 4 : | reference axle: SAF | SBS 1937 | brake lining: | SAF 437 |
| | test report : | TDB 0870 ECE | date : | 20131111 |

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

| | | |
|---|---|---|
| axle 1 | (rdyn 421 mm) | T = 24.1 % Fe |
| axle 2 | (rdyn 421 mm) | T = 24.1 % Fe |
| axle 3 | (rdyn 421 mm) | T = 20.0 % Fe |
| axle 4 | (rdyn 421 mm) | T = 20.0 % Fe |

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

| | | |
|---|---|---|
| axle 1 | (sp = 58 mm) | s = 47 mm |
| axle 2 | (sp = 58 mm) | s = 47 mm |
| axle 3 | (sp = 50 mm) | s = 47 mm |
| axle 4 | (sp = 50 mm) | s = 47 mm |

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

| | |
|---|---|
| axle1 | ThA = 6332 N |
| axle2 | ThA = 6332 N |
| axle3 | ThA = 4648 N |
| axle4 | ThA = 4648 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 = 38993 N |
| axle 2 | (rdyn 421 mm) | T = 38993 N |
| axle 3 | (rdyn 421 mm) | T = 28649 N |
| axle 4 | (rdyn 421 mm) | T = 28649 N |

| | basic test of subject trailer (E) | type III (calculated) residual (hot) braking |
|---|---|---|
| braking rate of the vehicle (item 4.3.2 to appendix 2 to annex 11) | 0.60 | 0.46 |
| required braking rate (items 1.5.3 and 1.7.2 to annex 11) | | >= 0,4 and >= 0,6*E (0.36) |

| | | |
|---|---|---|
| axle 1 | (rdyn 421 mm) | T = 38993 N |
| axle 2 | (rdyn 421 mm) | T = 38993 N |
| axle 3 | (rdyn 421 mm) | T = 28649 N |
| axle 4 | (rdyn 421 mm) | T = 28649 N |

| | basic test of subject trailer (E) | type III (calculated) residual (hot) braking |
|---|---|---|
| braking rate of the vehicle (item 4.3.2 to appendix 2 to annex 11) | 0.60 | 0.46 |
| required braking rate (items 1.5.3 and 1.7.2 to annex 11) | | >= 0,4 and >= 0,6*E (0.36) |

data sheet to ECE vehicle type-approval certificate concerning braking equipment: according to ECE R13 annex 11

| | | | |
|---|---|---|---|
| axle 1 : reference axle: SAF | SBS 1937 | brake lining: SAF 607 |
| test report : | TDB 0870 ECE | date : 2014520 |
| axle 2 : reference axle: SAF | SBS 1937 | brake lining: SAF 607 |
| test report : | TDB 0870 ECE | date : 2014520 |
| axle 3 : reference axle: SAF | SBS 1937 | brake lining: SAF 607 |
| test report : | TDB 0870 ECE | date : 2014520 |
| axle 4 : reference axle: SAF | SBS 1937 | brake lining: SAF 607 |
| test report : | TDB 0870 ECE | date : 2014520 |

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

| | | |
|---|---|---|
| axle 1 | (rdyn 421 mm) | T = 24.1 % Fe |
| axle 2 | (rdyn 421 mm) | T = 24.1 % Fe |
| axle 3 | (rdyn 421 mm) | T = 20.0 % Fe |
| axle 4 | (rdyn 421 mm) | T = 20.0 % Fe |

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

| | | |
|---|---|---|
| axle 1 | (sp = 58 mm) | s = 46 mm |
| axle 2 | (sp = 58 mm) | s = 46 mm |
| axle 3 | (sp = 50 mm) | s = 46 mm |
| axle 4 | (sp = 50 mm) | s = 46 mm |

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

| | |
|---|---|
| axle1 | ThA = 6332 N |
| axle2 | ThA = 6332 N |
| axle3 | ThA = 4648 N |
| axle4 | ThA = 4648 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 = 40838 N |
| axle 2 | (rdyn 421 mm) | T = 40838 N |
| axle 3 | (rdyn 421 mm) | T = 29995 N |
| axle 4 | (rdyn 421 mm) | T = 29995 N |

| | basic test of subject trailer (E) | type III (calculated) residual (hot)braking |
|---|---|---|
| braking rate of the vehicle (item 4.3.2 to appendix 2 to annex 11) | 0.60 | 0.48 |
| required braking rate (items 1.5.3 and 1.7.2 to annex 11) | | >= 0,4 and >= 0,6*E (0.36) |


| | | |
|---|---|---|
| axle 1 | (rdyn 421 mm) | T = 40838 N |
| axle 2 | (rdyn 421 mm) | T = 40838 N |
| axle 3 | (rdyn 421 mm) | T = 29995 N |
| axle 4 | (rdyn 421 mm) | T = 29995 N |

| | basic test of subject trailer (E) | type III (calculated) residual (hot)braking |
|---|---|---|
| braking rate of the vehicle (item 4.3.2 to appendix 2 to annex 11) | 0.60 | 0.48 |
| required braking rate (items 1.5.3 and 1.7.2 to annex 11) | | >= 0,4 and >= 0,6*E (0.36) |

spring parking brake

| | | axle 3 | axle 4 |
|---|---|---|---|
| no of TRISTOP-actuators per axle line | KDZ | 2 | 2 |
| TRISTOP-actuator type | | 16/16 | 16/16 |
| lever length | lBh in mm | 76 | 76 |
| stat. tyre radius | rstat max in mm | 401 | 401 |
| at a stroke of | s in mm | 30 | 30 |
| min. force of spring brake | TFZ in N | 6282 | 6282 |
| sp.brake chamber no 925 ... ... . | | 464 4.. 0 | 464 4.. 0 |
| sp.brake chamber no 925 ... ... . | | 484 96. 0 | 484 96. 0 |
| release pressure | pLs in bar | 5.0 | 5.0 |

calculation:

| | | | |
|---|---|---|---|
| ratio until road | | 4.2397 | 4.2397 |
| iFb = lBh*Eta*C*rBt/(rBn*rstat) | | | |
| | for rstat in mm | 401 | 401 |
| brake force of spring br. Tf | in N | 52598 | 52598 |
| Tf = (TFZ*KDZ-2*Co/lBh)*iFb | | | |
| braking rate | zf laden | 0.367 | |
| zf = sum (Tf)/P + 0,01 | | | |

Test of the frictional connection required by the parking brake

minimum wheelbase/minimum supporting width min Ef necessary
to fulfil the regulations

min Ef = E * (1 - PR/P + zferf * h/E) / (1 - zferf / (fzul * nf/ng))

min Ef = 3617 mm for E = 5070 mm
==========
min Ef = 3617 mm for E = 5070 mm
==========

| | | | |
|---|---|---|---|
| min Ef | = | | minimum distance between front axle(s) (trailer) or support (semitrailer) and the rear axle(s) (resultant of the bogie) |
| E | = | | wheel base |
| fzul | = | 0.80 | maximum permissible frictional connection required |
| zferf | = | 0.18 | maximum required braking ratio of the parking brake |
| h | = | 1492 mm | height of center of gravity - laden |
| PR | = | 15000 kg | maximum bogie mass - laden |
| P | = | 30000 kg | maximum total mass - laden |
| nf | = | 2 | no. of axle(s) with TRISTOP spring brake actuators |
| ng | = | 2 | no. of bogie axle(s) |

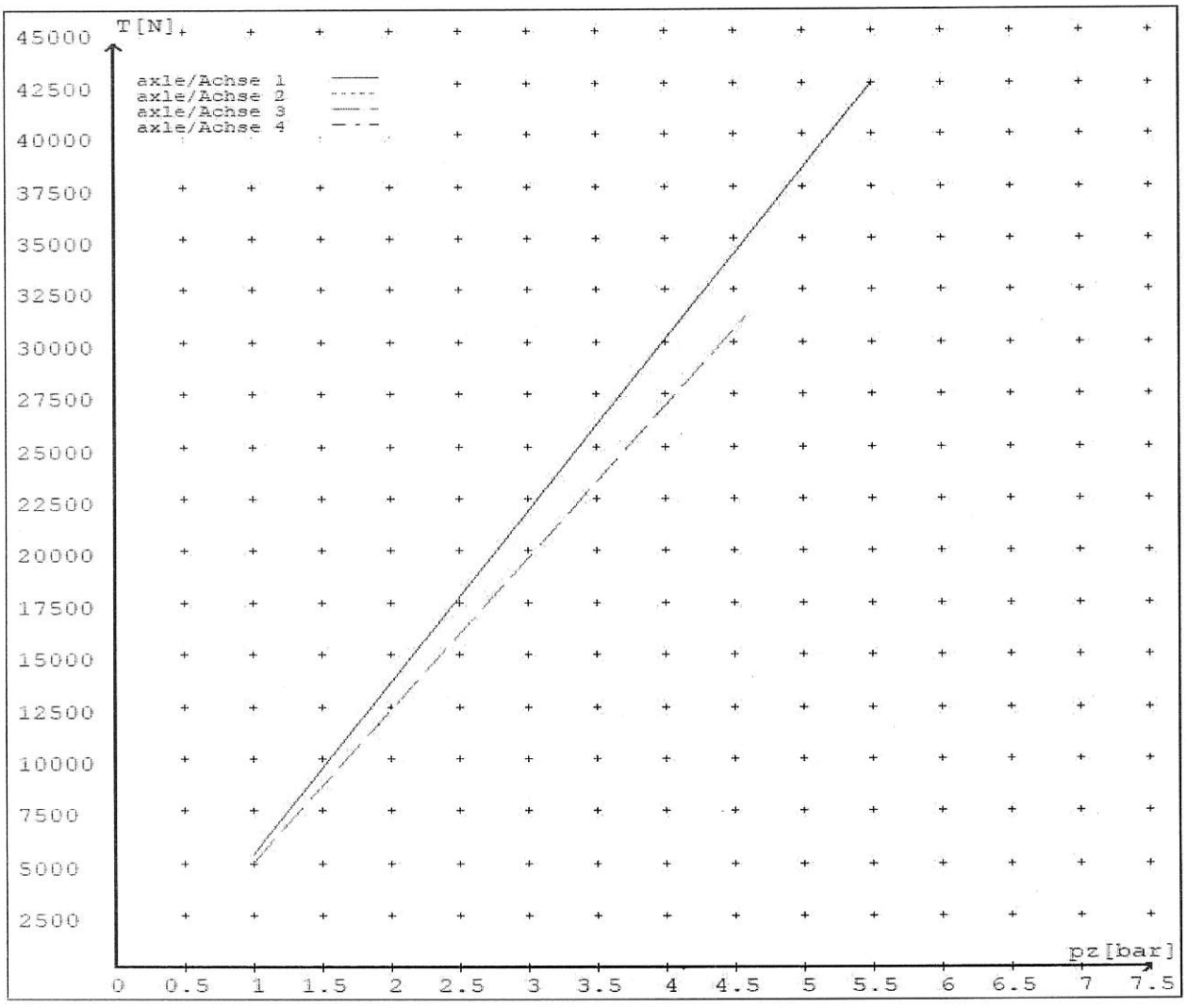
**reference values**

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

| | pz [bar] | T [N] | T [N] |
|---|---|---|---|
| axle 1 | 1.0<br>5.5 | 5350<br>42416 | |
| axle 2 | 1.0<br>5.5 | 5350<br>42416 | |
| axle 3 | 1.0<br>4.6 | | 4969<br>31156 |
| axle 4 | 1.0<br>4.6 | | 4969<br>31156 |

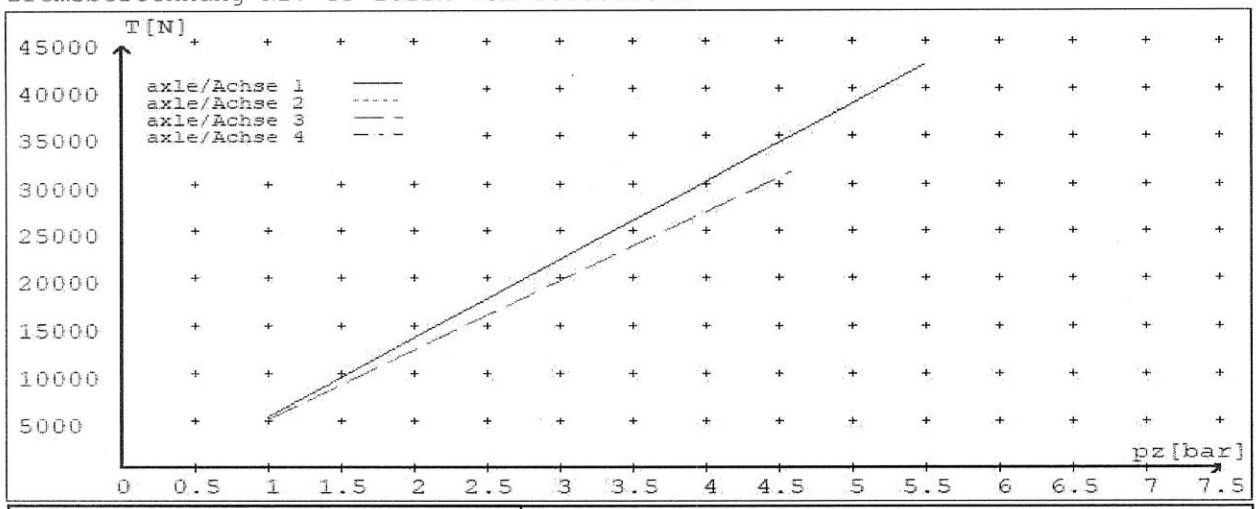
VIN - no.:

| | Axle(s) / Achse(n) | | | | |
|---|---|---|---|---|---|
| brake cylinder type (service / parking)<br>Bremszylinder Typ (Betrieb / Fest) | 20./ | 20./ | 16/16 | 16/16 | / |
| Maximum stroke smax = ...mm<br>maximaler Hub smax = ....mm | 65 | 65 | 63 | 63 | |
| Lever length = ....mm<br>Hebellänge = ....mm | 76 | 76 | 76 | 76 | |



Print on WABCO no. 899 200 922 4 (only possible with laser printers!)

**reference values for z = 0.5** **for max rdyn: 421 mm**
Angabe der Referenzwerte für z = 0.5 für max rdyn: 421 mm
**brake calculation no: TP 2022A date 25.03.2022**
Bremsberechnung Nr: TP 2022A vom 25.03.2022




| | Axle(s) / Achse(n) | | | | |
|---|---|---|---|---|---|
| brake cylinder type (service / parking)<br>Bremszylinder Typ (Betrieb / Fest) | 20./ | 20./ | 16/16 | 16/16 | / |
| Maximum stroke smax = ...mm<br>maximaler Hub smax = ....mm | 65 | 65 | 63 | 63 | |
| Lever length = ....mm<br>Hebellänge = ....mm | 76 | 76 | 76 | 76 | |

# NEW ZEALAND HEAVY VEHICLE BRAKE RULE 32015
# WORKSHEET, PROCEDURE DOCUMENTATION SHEET
# & CONFIRMATION OF COMPLIANCE

## CLIENT

| | |
|---|---|
| **MANUFACTURER:** | DOMETT TRAILERS |
| **ADDRESS:** | Taurikura Drive, Tauranga 3110 |
| **FLEET:** | FONTERRA |

## VEHICLE DETAILS

| | | | |
|---|---|---|---|
| **VEHICLE TYPE:** | 4A TANKER | **CERT #:** | CJC297928 |
| **YEAR:** | 2022 | **CALCULATION #:** | 2022 SAF 4A WPC |
| **MAKE:** | DOMETT | **REGO #:** | |
| **MODEL:** | D1001 | **LT400 #:** | 825578 |
| **CHASSIS #:** | 2177 | **ORDER #:** | 8867 |
| **VIN #:** | 7A9D10013N2023177 | | |
| **GVM:** *t* | 26 | **PRIME MOVER:** | EBS / EUROPEAN |
| **LOAD CONFIGURATION:** | UNIFORM DENSITY | | |

| | FRONT | REAR |
|---|---|---|
| **GROUP RATINGS:** *t* | 15 | 15 |
| **WHEEL BASE:** *m* | 5.07 | |

| | UNLADEN COG *m* | MAX HEIGHT *m* | HEIGHT DECK *m* |
|---|---|---|---|
| | 0.7 | 2.38 | 1.00 |
| **COG:** *m* | 1.492 | | |

| | FRONT | REAR | TOTAL |
|---|---|---|---|
| **TARE:** t | 2.8 | 2.4 | 5.2 |

| | FRONT | REAR | FITTED |
|---|---|---|---|
| **TYRE SIZE:** | 265 70 R19.5 | 265 70 R19.5 | 265 70R 19.5 |
| **ROLLING CIRCUMFERENCE:** *MM* | 2645 | 2645 | |
| **AXLE SPACING:** *m* | 1.3 | 1.3 | |

## BRAKE & AXLE DETAILS

| | MAKE | MODEL | TEST REPORT |
|---|---|---|---|
| **AXLE:** | SAF | SAF-ZI9S | TDB0878 |
| **POLE WHEEL FRONT:** | 90 | **POLE WHEEL REAR:** | 90 |
| **LINING MATERIAL:** | SAF 607 | **BRAKE FACTOR:** | 22.37 |
| **SENSED AXLES:** | 1 + 3 | | **NOTES:** |
| **SERIAL NUMBERS:** 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |

## CHAMBER AND VALVING DETAILS

| **CHAMBERS:** | **AXLE 1 & 2** | **AXLE 3 & 4** | **AXLE 5** |
|---|---|---|---|
| **BRAND:** | TSE_CHAMBERS | WABCO_CHAMBERS | N/A |
| **SIZE:** | 20HSCLD | 1616 (925/464/461/0) | N/A |
| **STROKE:** *mm* | 65 | 63 | |
| **TEST REPORT #:** | BC 0041.0 Jul '07 | BC 0006.0 | |
| **SPRING BRAKE FORCE:** *kN* | N/A | 6.28 | |
| **HOLDOFF PRESSURE:** *Bar* | N/A | 5 | |
| **FOUNDATION BRAKE:** | SAF SBS1918 | SAF SBS1918 | |
| **LEVER LENGTH:** *mm* | 76 | 76 | N/A |
| **BRAKE VALVES:** | **MAKE:** | **PART NUMBER:** | **PM PRESS.** *kPa* |
| **ECU PART #:** | WABCO | 480 102 08. 0 (MV) | 80 kPa |
| **3RD MODULATOR #:** | WABCO | 480 207 001 0 (24V) | 80 kPa |
| **ANTI-COMPOUNDING:** | YES | | |
| **SPRING BRAKE RELAY:** | SEALCO_SBR | 110701 | |
| **YARD RELEASE VALVE:** | SEALCO_YR | 17600B | |
| **INLINE RELAY FITTED:** | N/A | N/A | |
| **ECU DIRECTION:** | ☑ FRONT ☐ REAR | **FRONT FRICTION: μ** | 0.51 |

**SUBSYSTEMS:** ☐ SMARTBOARD ☐ OPTI-LINK ☐ CAN ROUTER 446 122 050 0

☐ ELEX 446 122 070 0 ☐ TAILGUARD

## SUSPENSION

| | FRONT | REAR |
|---|---|---|
| **SUSPENSION TYPE:** | PNEUMATIC | PNEUMATIC |
| **MAKE:** | SAF_AIRSPRING | SAF_AIRSPRING |
| **MODEL:** | SAF_INTRA | SAF_INTRA |
| **BELLOW SIZE:** | 2619, 300mm | 2619, 300mm |
| **HEIGHT CONTROL VALVE:** | 464 008 011 0 | 464 008 011 0 |
| **OTHER VALVES:** | NORGREN 3042402 | NORGREN 3042402 |
| **RIDE HEIGHT *MM*:** | 250 | 250 |
| **HANGER HEIGHT *MM*:** | | |
| **PEDESTAL HEIGHT *MM*:** | | |
| **LIFT AXLE:** | | N/A |
| **TIPPING DUMP SWITCH:** | | PNEUMATIC |
| **LIFTAXLE VALVE:** | | N/A |
| **PRESSURE LIMITING:** | | N/A |

## AIR TANKS

**AIR TANKS STANDARD:** SAE J10A / EN286-2

| | FRONT | REAR |
|---|---|---|
| **BRAKE TANK SIZE:** *L* | C51902, 48L | C51902, 48L |
| **AUXILIARY TANK SIZE:** *L* | | C51901, 25L x 2 |
| **PRESSURE PROTECTION:** | WABCO PEM: 461 513 002 0 | |

## AIR LINES

**TEST POINTS:**

| | | | |
|---|---|---|---|
| **CONTROL LINE:** | FILTER X 1 | **TANK:** | ECU X 1 |
| **REAR CHAMBER:** | ECU X 2 | **FRONT CHAMBER:** | LEFT 1st |
| **DUOMATIC COLOUR CODED:** | YES | | |

## ELECTRONIC HEIGHT SENSOR CALIBRATION

| | TIMER TICKS [F/R] | MILLIMETRE [F / R] |
|---|---|---|
| UPPER LEVEL: | | |
| NORMAL LEVEL: | | |
| LOWER LEVEL: | | |

## CHECKS AT COMMISSION OF VEHICLE

CHAMBER BUNGS REMOVED: ☑ VALVE MOUNTING: ☑

ECU BLANKING PLUGS CHECKED: ☑

| RESPONSE TIME: | MODULATOR 2.1 | MODULATOR 2.2 | RELAY VALVE |
|---|---|---|---|
| ms: | 260 | 270 | 300 |

## NOTES AND SPECIAL CONDITIONS

3/12/2021 received est build schedule.15/12/2021 request to do project, receive drawings etc.
24/03/2022 start files, request and receive product and trailer data. 25/3/2022 do calculations and ECU files.
29/03/2022 Advised air reservoirs changed. Redo paperwork to reflect change.
26/04/2022 Complete paperwork and SODC and send.

**REASON FOR CERTIFICATION:** NEW TRAILER

*I UNDERSTAND AND DECLARE THAT I AM THE CERTIFIER IDENTIFIED BELOW AND HOLD A CURRENT VALID APPOINTMENT. I CERTIFY THAT AT THE TIME OF INSPECTION THE ABOVE MENTIONED VEHICLE COMPONENT DESIGN 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.*

**RULE / STD COMPLIED TO:**

NEW ZEALAND HEAVY VEHICLE BRAKE RULE 32015, **SCHEDULE 5**, ~~ADR 35, ECE R13, FMVSS 121~~

**DATE:** 23/05/2022

**SIGNED:** *Lance Cawte*


**CERTIFIER NAME & ID:** CHRIS CLARKE CJC

**SODC BY:** LANCE CAWTE LPC

**PHONE (BUS):** 09-980-7300

**FAX:**

**POSTAL ADDRESS:** P.O. Box 98-971, Manukau 2241
New Zealand