

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

Plate number (optional) **7A9D10014N2023186** VIN/chassis number

Make **DOMETT** Component being certified:  Chassis  Load anchorage

Model (optional) **D1001**  Log bolsters  Towing connection  Brakes

Certification category **HVEK**  SRT  PSV stability  PSV rollover

Swept path

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** Component load rating(s) **26 Tonnes GVM**

General drawing number(s) **N/A** **15 Tonne (Front group ratings)**  
**15 Tonne (Rear group ratings)**

Supporting documents **LC220610**  
**BRAKE RULE CERTIFICATE**  
**BRAKE CALCULATION-# 2022 WABCO 4A WPC**

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

Certification expiry date (if applicable) **N/A [UNLESS MODIFIED]** OR Hubodometer reading (whichever comes first)

**Declaration** Designer's ID (if different from inspector below) **LANCE CAWTE** **LPC**

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.

Inspector's signature **[Signature]** Inspector's name (PRINT IN CAPS) **CHRIS CLARKE** ID number **CJC**  
Date **21.07.2022** Number **830432**

CoF vehicle inspector ID (if applicable) **[Blank]** CoF vehicle inspector signature (if applicable) **[Blank]** Date **[Blank]**

All fields are mandatory unless otherwise stated.

# WABCO START-UP LOG

|   |  |                   |               |
|---|--|-------------------|---------------|
| System  | Trailer EBS-E  | WABCO part number | 480 102 080 0 |
| Production date   | 2022-05-12   | Serial number     | 897041639700A |
| Serial number (modulator)                                       | 000000552436   |                   |               |
| Fingerprint Customer EOL / Customer Development / Flash Program | W503643 / 2022-07-21 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00 |                   |               |

**WABCO TRAILER EBS-E** GGV/S/ADR TUEH TB 2007 - 019.00 TDB 0749

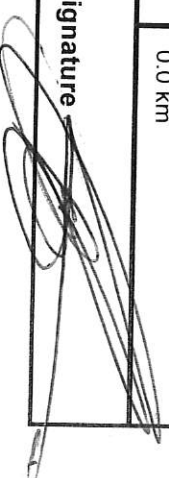
|  |                     |     |         |
|--|---------------------|-----|---------|
| HERSTELLER<br>MANUFACTURER<br>CONS TRUCTEUR        | DOMETT              |     |         |
| TYPE   | 4A TANKER, D1001    | GIO | Pin1    |
| VEHICLE IDENT NUMBER                               | 7A9D10014N2023186   | 1   | 24 V-O1 |
| MASS NUMBER<br>NUMERO DE MASSES                    |                     | 2   | ---     |
| BREMSEBEZUGUNGSNR.<br>CALCUL DE CALULATION NO.     | TP2022 WABCO 4A WPC | 3   | ALS2    |
| POLE POSITION<br>POLY POSITION                     |                     | 4   | ---     |
| POLE WHEEL POSITION<br>DENTS ROUE DEWITE c-d-l-e-l | 90                  | 5   | DIAG    |
| Einbaueinstellung<br>Single Tire                   | 90                  | 6   | ---     |
| Monte simple                                       |                     | 7   | ---     |
| Zoomingabeitigung<br>Twin Tire                     | X                   |     |         |
| Monte jumete                                       |                     |     |         |
| Subsystems   | I/O                 | 24N |         |

| ACQUE<br>AXLE<br>ESSEU | 5.5 bar  |     | 5.5 bar  |      | TO  | TYP<br>TYPE | (mm) | (mm) | TR (dan) |     |         |     |     |      |      |
|------------------------|----------|-----|----------|------|-----|-------------|------|------|----------|-----|---------|-----|-----|------|------|
|                        | pm (bar) | 6.5 | pm (bar) | 0.8  |     |             |      |      | 2.0      | 1.0 | Pz      |     |     |      |      |
| 1                      | 1400     | 0.5 | 1.5      | 7500 | 4.7 | 0.4         | 1.4  | ---  | 5.8      | 20  | 65      | 69  | 502 | 4220 |      |
| 2                      | 1400     | 0.5 | 1.5      | 7500 | 4.7 | 0.4         | 1.4  | ---  | 5.8      | 20  | 65      | 69  | 502 | 4220 |      |
| 3                      | 1200     | 0.4 | 1.2      | 7500 | 4.7 | 0.4         | 1.5  | ---  | 4.9      | -   | 16 / 16 | 63  | 69  | 466  | 3134 |
| 4                      | 1200     | 0.4 | 1.2      | 7500 | 4.7 | 0.4         | 1.5  | ---  | 4.9      | -   | 16 / 16 | 63  | 69  | 466  | 3134 |
| 5                      | 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.  | 7A9D10014N2023186 |
| Vehicle type      | 4A TANKER, D1001      | Odometer reading  | 0.0 km            |
| Next service      | 0 km                  | Trip reading  | 0.0 km            |
| Tester            | Chris Clarke          | Signature  |                   |
| Date              | 2022-07-21 2:50:14 pm |   |                   |

distribution: DOMETT  
 2022 SAF 4A WPC

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 (V6.18.07.12),  
 -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 command 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,

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

|                                     | <u>axle 1</u> |          | <u>axle 2</u> |            | <u>axle 3</u> |            | <u>axle 4</u> |            |
|-------------------------------------|---------------|----------|---------------|------------|---------------|------------|---------------|------------|
| no. of combined axles               | 1             | 2        | 1             | 2          | 1             | 2          | 1             | 2          |
| no. of brake chambers per axle line | 2             | 2        | 2             | 2          | 2             | 2          | 2             | 2          |
| The power output corresponds to     | BZ 122.1      | BZ 122.1 | IBC 0006.0    | IBC 0006.0 | IBC 0006.0    | IBC 0006.0 | IBC 0006.0    | IBC 0006.0 |
| brake chamber manufacturer          | Meritor       | Meritor  | WABCO         | WABCO      | WABCO         | WABCO      | WABCO         | WABCO      |
| chamber size                        | 20.           | 20.      | 16/16         | 16/16      | 16/16         | 16/16      | 16/16         | 16/16      |
| lever length                        | 76            | 76       | 76            | 76         | 76            | 76         | 76            | 76         |
| brake factor                        | 22.37         | 22.37    | 22.37         | 22.37      | 22.37         | 22.37      | 22.37         | 22.37      |
| dyn. rolling radius                 | 421           | 421      | 421           | 421        | 421           | 421        | 421           | 421        |
| dyn. rolling radius                 | 421           | 421      | 421           | 421        | 421           | 421        | 421           | 421        |
| threshold torque                    | Co            | Nm       | 6.0           | 6.0        | 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       | 5.5   | 5.5   | 4.6   | 4.6   |
| piston force                                | 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    | 26.5  | 26.5  | 23.5  | 23.5  |
| proportion                                  | %     |       |       |       |

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

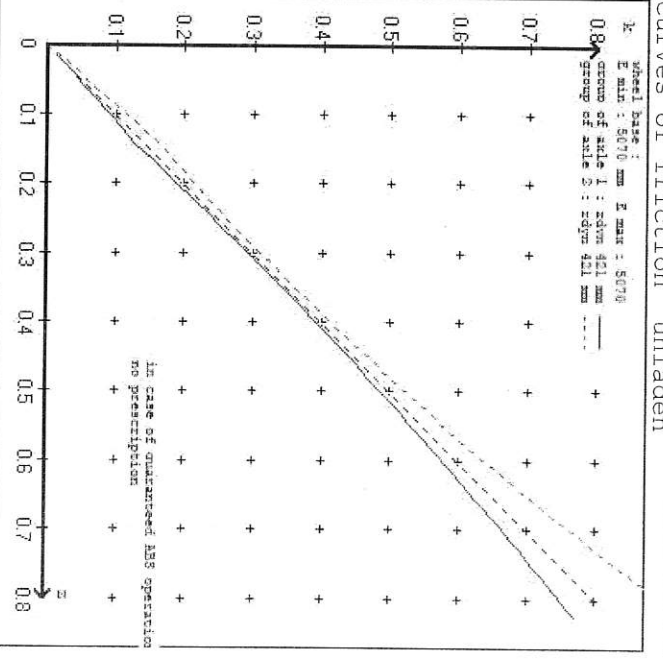
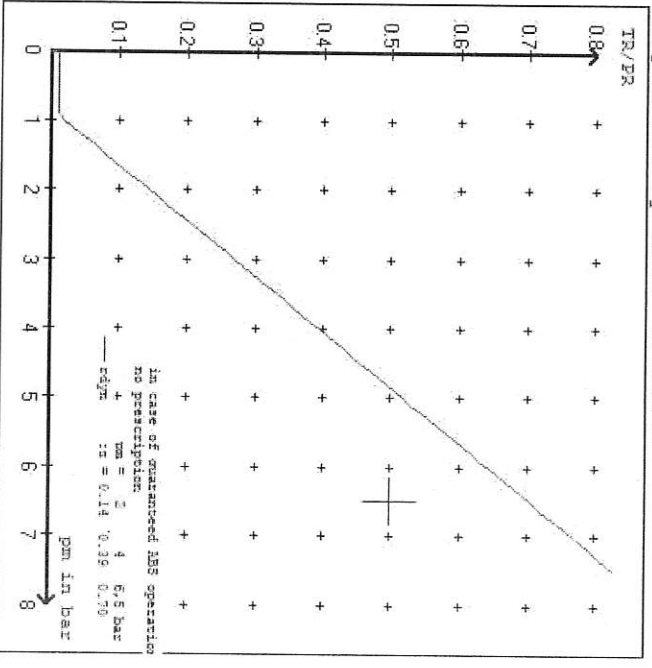
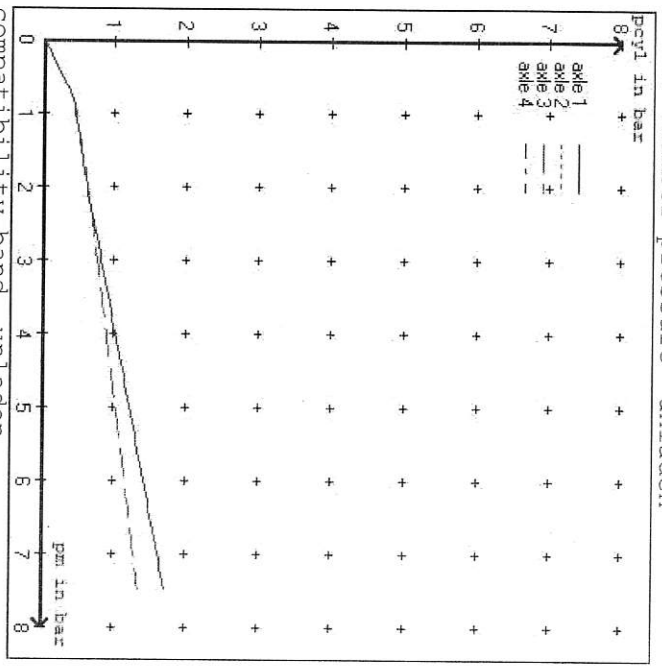
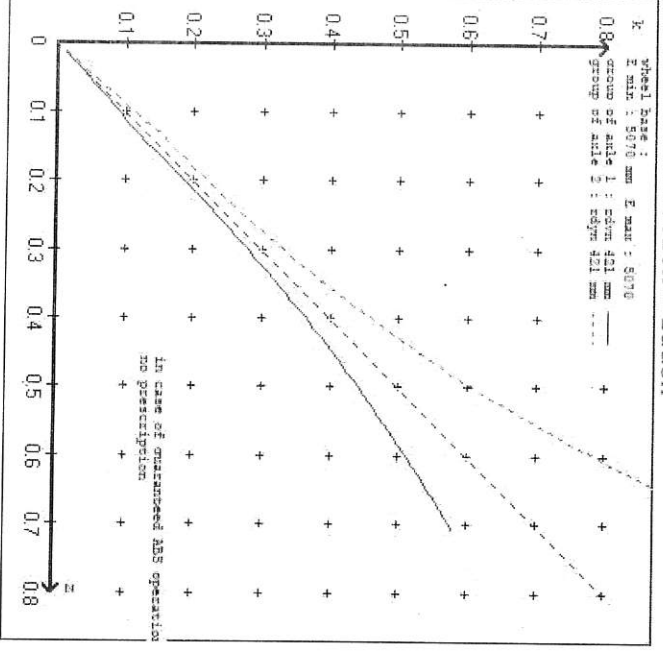
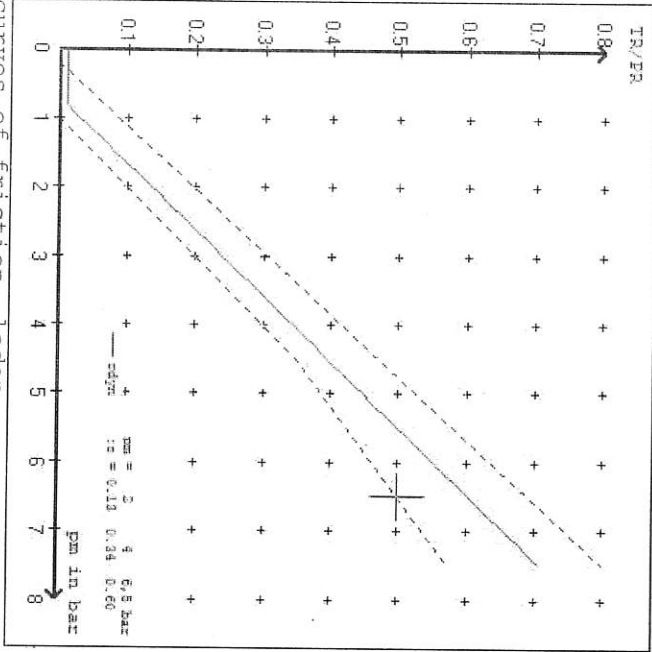
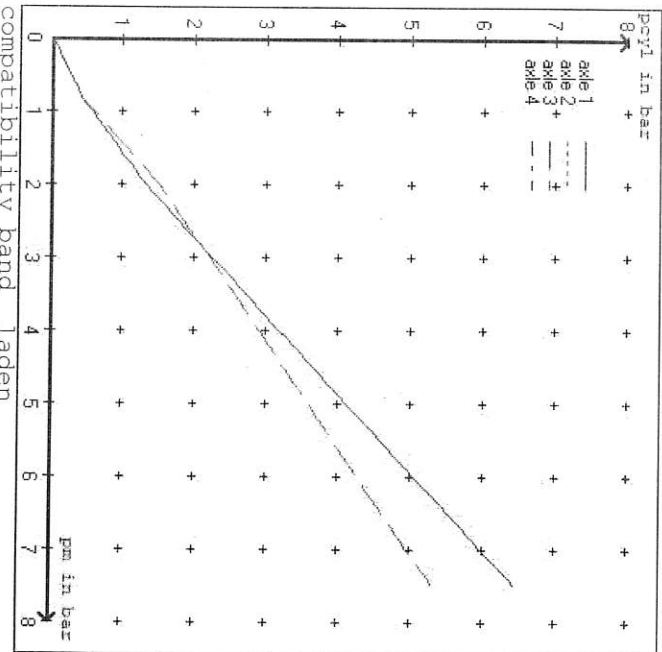
axle 4:

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

WABCO

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   |  |



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 auxilliary axle : 2650 for rdyn max

assignment pm / deceleration z: pm 0.8 bar z = 0.010  
 2.0 bar z = 0.134  
 (laden condition) 6.5 bar z = 0.600

| axle | control pressure pm |                    | brake pr. unladen | axle load laden | control pressure pm |                 | brake pr. laden | brake pr. laden |
|------|---------------------|--------------------|-------------------|-----------------|---------------------|-----------------|-----------------|-----------------|
|      | axle load unladen   | bellow pr. unladen |                   |                 | bellow pr. laden    | brake pr. laden |                 |                 |
| 1    | 1400                | to be              | 1.5               | 7500            | to be               | 0.4             | 1.3             | 5.5             |
| 2    | 1400                | entered by         | 1.5               | 7500            | entered by          | 0.4             | 1.3             | 5.5             |
| 3    | 1200                | the vehicle        | 1.2               | 7500            | the vehicle         | 0.4             | 1.5             | 4.6             |
| 4    | 1200                | manufact.          | 1.2               | 7500            | manufact.           | 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 load pcyl1      axle 2 :  
 axle load pcyl1      axle 3 :  
 axle load pcyl1      axle 4 :  
 axle load pcyl1

|      |     |      |     |      |     |      |     |
|------|-----|------|-----|------|-----|------|-----|
| 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  | type III     |
| of subject  | (calculated) |
| trailer (E) | residual     |
|             | (hot)braking |
|             | 0.46         |

braking rate of the vehicle  
 (item 4.3.2 to appendix 2 to annex 11)

|                                     |                 |
|-------------------------------------|-----------------|
| required braking rate               | >= 0,4 and      |
| (items 1.5.3 and 1.7.2 to annex 11) | >= 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  | type III     |
| of subject  | (calculated) |
| trailer (E) | residual     |
|             | (hot)braking |
|             | 0.46         |

braking rate of the vehicle  
 (item 4.3.2 to appendix 2 to annex 11)

|                                     |                 |
|-------------------------------------|-----------------|
| required braking rate               | >= 0,4 and      |
| (items 1.5.3 and 1.7.2 to annex 11) | >= 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  | type III     |
| of subject  | (calculated) |
| trailer (E) | residual     |
|             | (hot)braking |
|             | 0.48         |

braking rate of the vehicle  
 (item 4.3.2 to appendix 2 to annex 11)

|                                     |                 |
|-------------------------------------|-----------------|
| required braking rate               | >= 0,4 and      |
| (items 1.5.3 and 1.7.2 to annex 11) | >= 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  | type III     |
| of subject  | (calculated) |
| trailer (E) | residual     |
|             | (hot)braking |
|             | 0.48         |

braking rate of the vehicle  
 (item 4.3.2 to appendix 2 to annex 11)

|                                     |                 |
|-------------------------------------|-----------------|
| required braking rate               | >= 0,4 and      |
| (items 1.5.3 and 1.7.2 to annex 11) | >= 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                              | 76     | 76       |
| stat. tyre radius                         | 401    | 401      |
| at a stroke of                            | S      | in mm    |
| min. force of spring brake                | TFZ    | in N     |
| sp.brake chamber no 925                   | 464    | 4.. 0464 |
| sp.brake chamber no 925                   | 484    | 96. 0484 |
| release pressure                          | 5.0    | 5.0      |
|   | pls    | in bar   |

Calculation:

ratio until road  
 $iFb = LBh * \text{Eta} * C * rBt / (rBn * rstat)$   
 for rstat in mm  
 brake force of spring br. Tf in N  
 $Tf = (TFZ * KDZ - 2 * Co / LBh) * iFb$   
 braking rate zf laden 0.367  
 $zf = \text{sum}(Tf) / P + 0,01$

Test of the frictional connection required by the parking brake

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

$$\text{min Ef} = E * (1 - PR/P + zferf * h/E) / (1 - zferf / (fzul * nf/ng))$$

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) wheel base

E =  
 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)

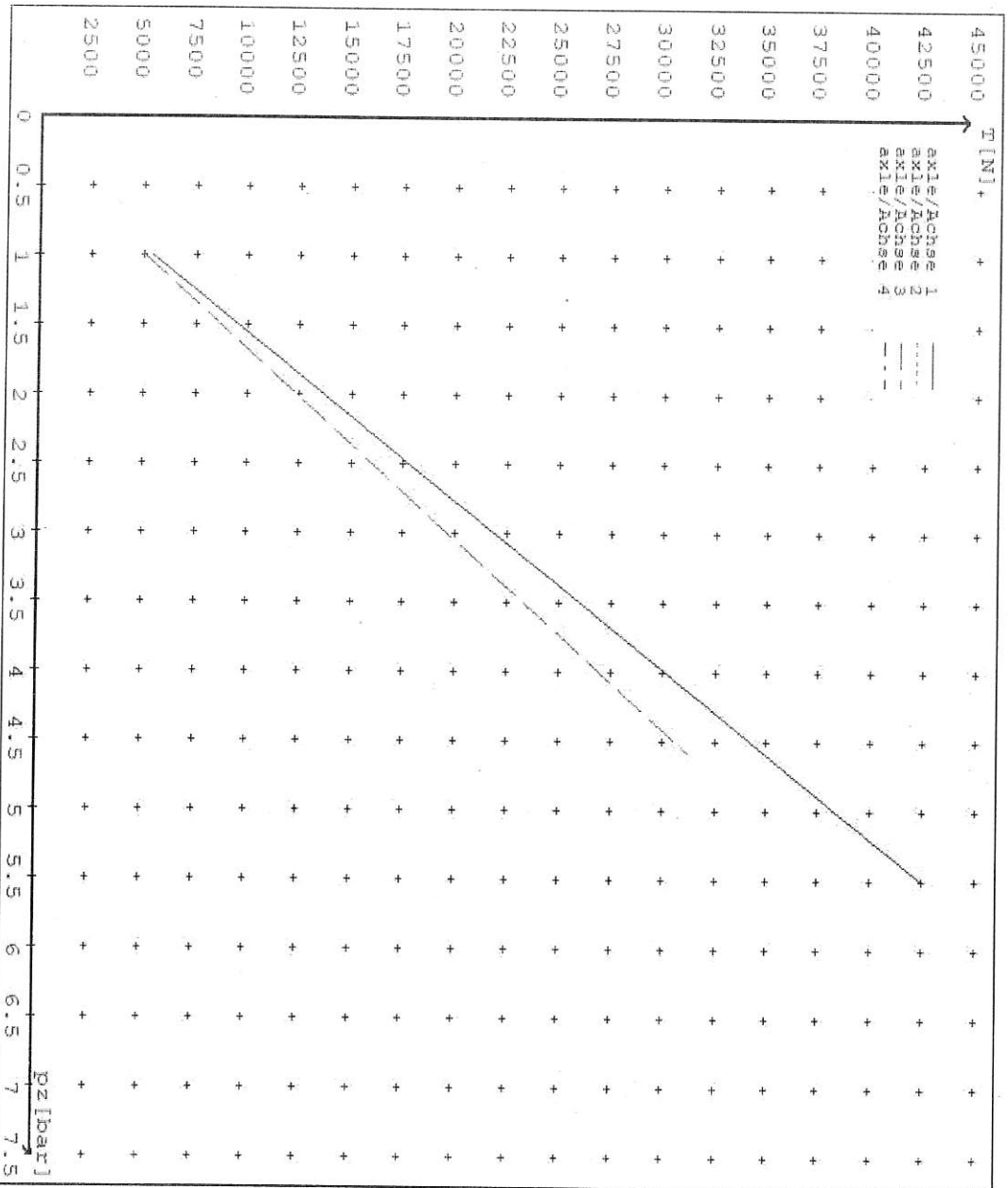
**reference values**

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

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

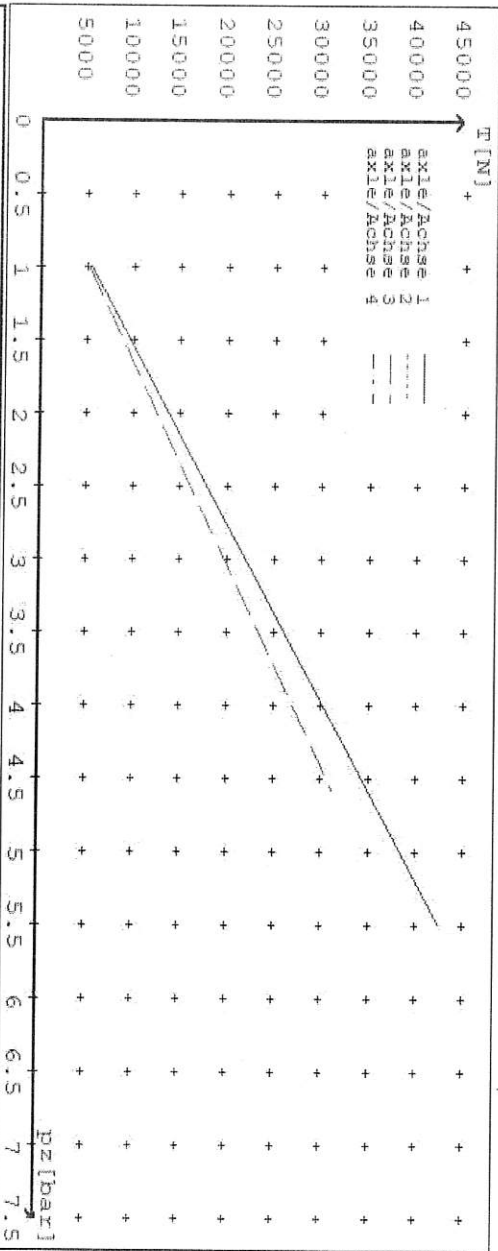
VIN - no.:

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



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

For max rdyn: 421 mm  
 für max rdyn: 421 mm



|   |  | Axle(s) / Achse(n) |      |       |       |   |  |  |  |  |  |
|---|--|--------------------|------|-------|-------|---|--|--|--|--|--|
| Drake cylinder type (service / parking) |  | 20./               | 20./ | 16/16 | 16/16 | / |  |  |  |  |  |
| Maximum stroke smax = .....mm           |  | 65                 | 65   | 63    | 63    |   |  |  |  |  |  |
| maximaler Hub smax = .....mm            |  | 65                 | 65   | 63    | 63    |   |  |  |  |  |  |
| Lever length = .....mm                  |  | 76                 | 76   | 76    | 76    |   |  |  |  |  |  |
| 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:** FONTEERRA

**VEHICLE DETAILS**

**VEHICLE TYPE:** 4A TANKER **CERT #:** LC220610  
**YEAR:** 2022 **CALCULATION #:** 2022 WABCO 4A WPC  
**MAKE:** DOMETT **REGO #:**  
**MODEL:** D1001 **LT400 #:** 830432  
**CHASSIS #:** 2186 **ORDER #:** 8876  
**VIN #:** 7A9D10014N2023186

**GVMI:** 26 **PRIME MOVER:** EBS / EUROPEAN

**LOAD CONFIGURATION:**

UNIFORM DENSITY

**GROUP RATINGS:** t

| FRONT | REAR |
|-------|------|
| 15    | 15   |
| 5.07  |      |

**WHEEL BASE:** m

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

**COG:** m

| FRONT | REAR | TOTAL |
|-------|------|-------|
| 2.8   | 2.4  | 5.2   |

**TARE:** t

| FRONT        | REAR         | FITTED       |
|--------------|--------------|--------------|
| 265 70 R19.5 | 265 70 R19.5 | 265 70R 19.5 |

**TYRE SIZE:**

**ROLLING CIRCUMFERENCE:** MM

|      |      |
|------|------|
| 2645 | 2645 |
| 1.3  | 1.3  |

**AXLE SPACING:** m

**BRAKE & AXLE DETAILS**

|                   | MAKE    | MODEL            | TEST REPORT |
|-------------------|---------|------------------|-------------|
| AXLE:             | SAF     | SAF-Z19S         | TDB0878     |
| POLE WHEEL FRONT: | 90      | POLE WHEEL REAR: | 90          |
| LINING MATERIAL:  | SAF 607 | BRAKE FACTOR:    | 22.37       |
| SENSED AXLES:     | 1 + 3   |                  |             |
| SERIAL NUMBERS:   | NOTES:  |                  |             |

|   |  |  |
|---|--|--|
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |

**CHAMBER AND VALVING DETAILS**

|                        | AXLE 1 & 2        | AXLE 3 & 4           | AXLE 5         |
|------------------------|-------------------|----------------------|----------------|
| CHAMBERS:              | TSE_CHAMBERS      | WABCO_CHAMBERS       | N/A            |
| BRAND:                 | 20HSCLD           | 1616 (925/464/461/0) | N/A            |
| SIZE:                  | 65                | 63                   |                |
| STROKE: mm             | BC 0041.0 Jul '07 | BC 0006.0            |                |
| TEST REPORT #:         | N/A               | 6.28                 |                |
| SPRING BRAKE FORCE: kN | N/A               | 5                    |                |
| HOLDOFF PRESSURE: Bar  | SAF SBS1918       | SAF SBS1918          |                |
| FOUNDATION BRAKE:      | 69                | 69                   | N/A            |
| LEVER LENGTH: mm       | MAKE:             | PART NUMBER:         | PMI PRESS. kPa |
| BRAKE VALVES:          | WABCO             | 480 102 08.0 (MV)    | 80 kPa         |
| ECU PART #:            | WABCO             | 480 207 001 0 (24V)  | 80 kPa         |
| 3RD MODULATOR #:       | WABCO             | YES                  |                |
| ANTI-COMPOUNDING:      | SEALCO_SBR        | 110701               |                |
| SPRING BRAKE RELAY:    | SEALCO_YR         | 17600B               |                |
| YARD RELEASE VALVE:    | N/A               | N/A                  |                |
| INLINE RELAY FITTED:   |                   |                      |                |
| ECU DIRECTION:         |                   |                      |                |
| SUBSYSTEMS:            |                   |                      |                |

FRONT     REAR    FRONT FRICTION:  $\mu$    

SMARTBOARD     OPTI-LINK     CAN ROUTER 446 122 050 0

ELEX 446 122 070 0     TAILGUARD

**SUSPENSION**

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

**AIR TANKS**

|                               |                          |                 |
|-------------------------------|--------------------------|-----------------|
| <b>AIR TANKS STANDARD:</b>    | SAE J10A / EN286-2       |                 |
| <b>BRAKE TANK SIZE: L</b>     | <b>FRONT</b>             | <b>REAR</b>     |
|                               | C51902, 48L              | C51902, 48L     |
| <b>AUXILIARY TANK SIZE: L</b> |                          | C51901, 25L x 2 |
| <b>PRESSURE PROTECTION:</b>   | WABCO PEM: 461 513 002 0 |                 |

**AIR LINES**

|                               |            |                                |
|-------------------------------|------------|--------------------------------|
| <b>TEST POINTS:</b>           |            |                                |
| <b>CONTROL LINE:</b>          | FILTER X 1 | <b>TANK:</b> ECU X 1           |
| <b>REAR CHAMBER:</b>          | ECU X 2    | <b>FRONT CHAMBER:</b> LEFT 1st |
| <b>DUOMATIC COLOUR CODED:</b> | 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 |
|-----|

|     |
|-----|
| 265 |
|-----|

|     |
|-----|
| 290 |
|-----|

**NOTES AND SPECIAL CONDITIONS**

3/12/2021 received est build schedule.15/12/2021 request to do project, receive drawings etc.  
24/3/2022 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.

22/06/2022 Complete paperwork, SODC & ECU file & 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, SCHEDULE 5, ADR-35, ECE-R13, FMZSS-121

DATE:

21/07/2022

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