

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

CHRIS CLARKE

ID

CJC

Plate number (optional)

VIN/chassis number

7A9D10017N2023182

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

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
 FOR SYSTEM ARCHITECTURE, PLEASE REFER TO PDS WORKSHEET & SCHEMATIC.
 RSS ON TYRE: 265 70 R19.5

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

BRAKE RULE CERTIFICATE LC220605
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 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's ID)
LANCE CAWTE

L P C

Inspector's signature



Inspector's name (PRINT IN CAPS)

CHRIS CLARKE

ID number

CJC

Date

01.07.2022

Number

830395

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	480 102 080 0
Production date	2022-05-12	Serial number	897041578800E
Serial number (modulator)	000000552384		
Fingerprint Customer EOL / Customer Development / Flash Program	W503643 / 2022-07-01 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00		

WABCO

TRAILER EBS-E

GGV/SADR TUEH TB 2007 - 019.00
TDB 0749

HERSTELLER FABRIK CONSTRUCTEUR	DOMETT	GIO	Pin1	Pin3	Pin4
TYPE	4A TANKER, D1001	1	24 V-O1	---	---
VERBODEN NUMMERS	7A9D10017N2023182	2	---	---	---
CHASSIS NUMMER NUMERO DE CHASSIS	TP2022 WABCO 4A WPC	3	ALS2	ALS2	---
BEWEGINGS-AR. BRAVE CALULATION NO. CALCUL. DE FREMAGE NO.	4S/3M	4	---	---	---
POLAARZAKHEZAKH c-d / e-f POLE WHEEL, TERTH c-d / e-f DEN'S ROUE OUVRE c-d / e-f	90 90	5	DIAG	DIAG	DIAG
RSS Single Tire	---	6	---	---	---
RSS Monte Simple	---	7	---	---	---
RSS Zwillingabereitng Twin Tire	X	---	---	---	---
RSS Einachsachse Steering axle	---	---	---	---	---
RSS Koppraktisches Fahrzeug Critical frame Critical structure	---	---	---	---	---
Subsystems	I/O	24N			

ACHSE AXLE ESSIEU	pm (bar)	6.5	pm (bar)	0.8	2.0	6.5	pz	mm	mm	TR (dan)				
											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.	7A9D10017N2023182
Vehicle type	4A TANKER, D1001	Odometer reading	3.6 km
Next service	0 km	Trip reading	3.6 km
Tester	Chris Clarke	Signature	
Date	2022-07-01 2:56:02 pm		

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

distribution: DOMETT
2022 WABCO 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 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, SBW 1937, TDB 0749 ECE,

		<u>unladen</u>	<u>Laden</u>
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

	<u>axle 1</u>	<u>axle 2</u>	<u>axle 3</u>	<u>axle 4</u>
no. of combined axles	1	1	1	1
no. of brake chambers per axle line	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	69	69	69	69
brake factor	23.03	23.03	23.03	23.03
dyn. rolling radius	421	421	421	421
dyn. rolling radius	421	421	421	421
threshold torque	Co	6.0	6.0	6.0

calculation:

chamber pressure(rdyn min)pH at z=22,5%bar	2.3	2.3	2.2	2.2
chamber pressure(rdyn max)pH at z=22,5%bar	2.3	2.3	2.2	2.2
chamber press.(servo)pcha at pm6,5bar	5.8	5.8	4.9	4.9
piston force	6702	6702	4974	4974
brake force(rdyn min)T lad. at pm6,5bar N	50729	50729	37673	37673
brake force(rdyn max)T lad. at pm6,5bar N	50729	50729	37673	37673
Brake force incl. 1 % rolling resistance	26.5	26.5	23.5	23.5
proportion	%	%	%	%

braking rate z Laden 0.601 for rdyn min
z = sum (TR)/PRmax 0.601 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 20HSCID65

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

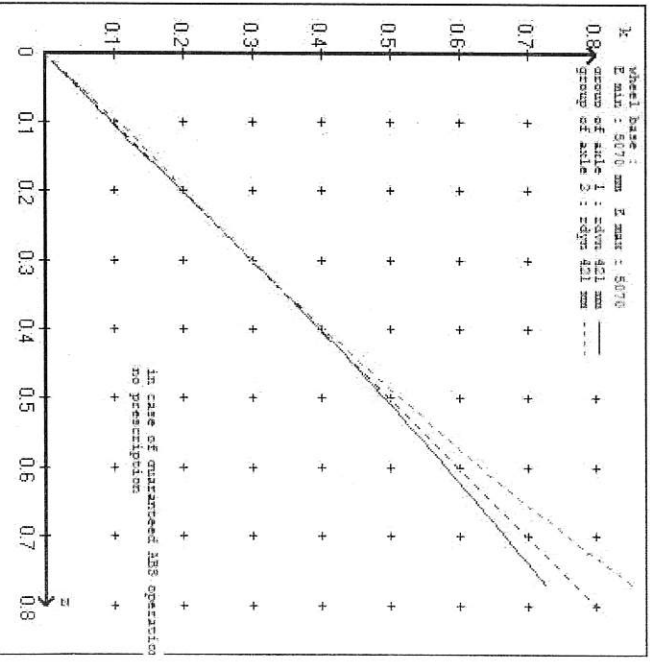
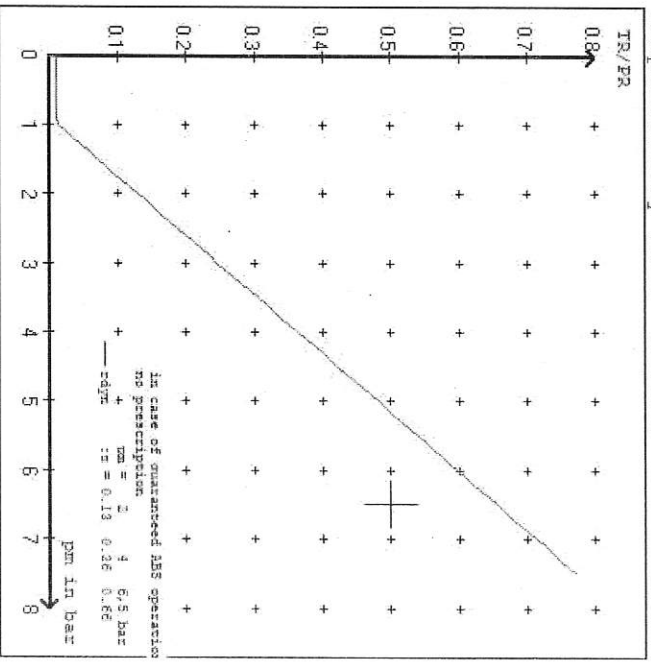
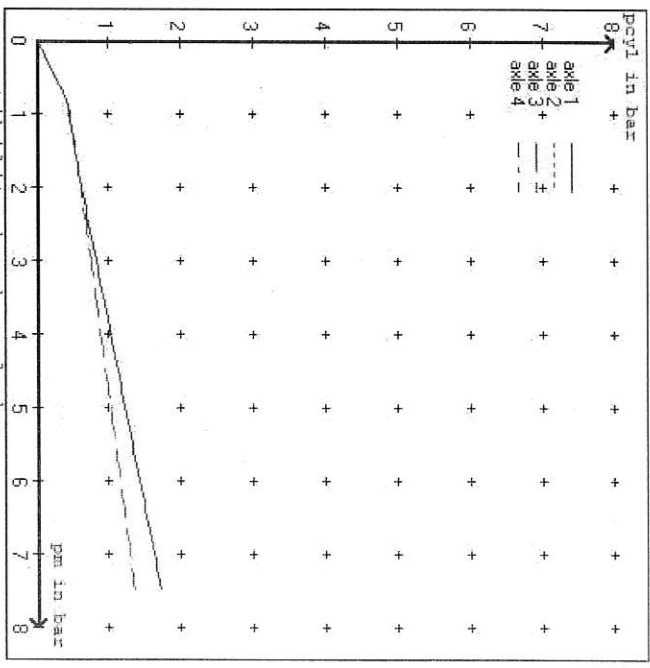
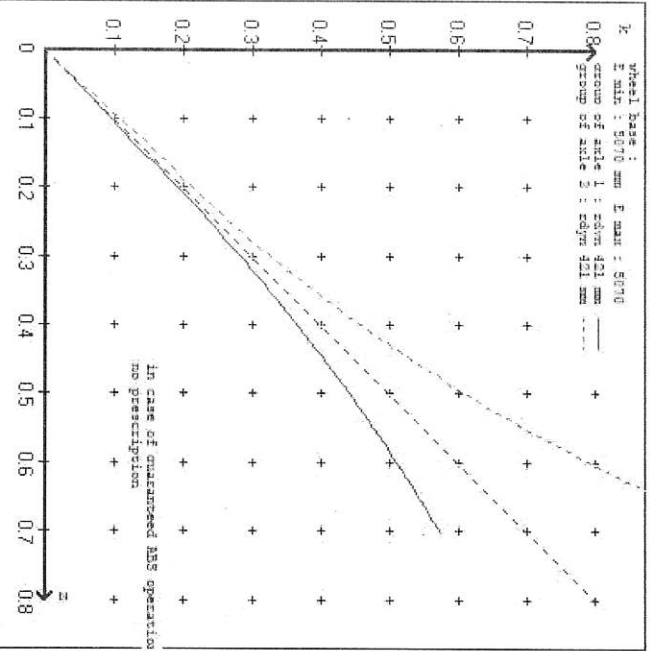
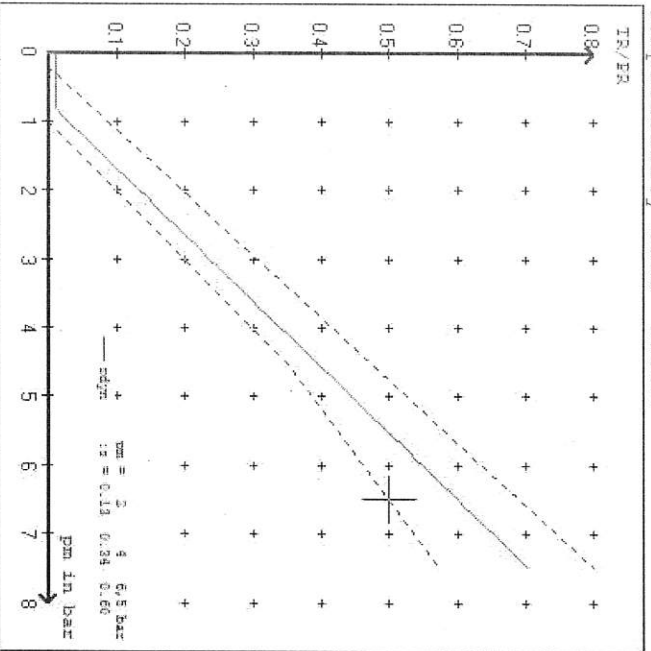
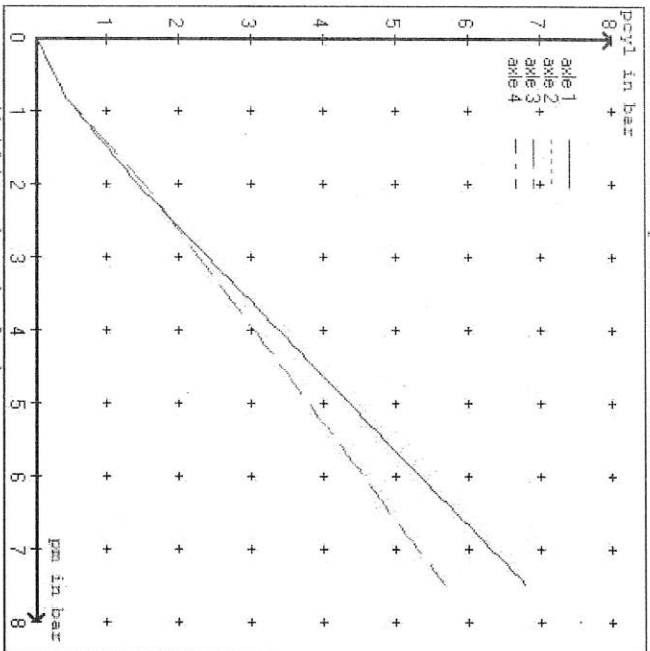
brake cylinder: Meritor 20HSCID65

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 :	3.0	3.0	2.7	2.7	
test type III	(zIII = 0.06)	for rdyn min :	axle1	axle2	axle3	axle4	
at pm 1.3 bar =>		pcha in bar :	0.8	0.8	0.9	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 69 mm
 axle 2 : 2 x type/diameter 20. (Meritor) lever length 69 mm
 axle 3 : 2 x type/diameter 16/16 (WABCO) lever length 69 mm
 axle 4 : 2 x type/diameter 16/16 (WABCO) lever length 69 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
 (laden condition) 2.0 bar z = 0.134
 6.5 bar z = 0.600

axle	control pressure pm		brake pr. unladen	control pressure pm		brake pr. laden		
	axle load unladen	bellow pr. unladen		axle load laden	bellow pr. laden			
1	1400	to be	1.5	7500	to be	0.4	1.4	5.8
2	1400	entered by	1.5	7500	entered by	0.4	1.4	5.8
3	1200	the vehicle	1.2	7500	the vehicle	0.4	1.5	4.9
4	1200	manufact.	1.2	7500	manufact.	0.4	1.5	4.9
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	1.9	1900	1.9	1700	1.5	1700	1.5
2400	2.2	2400	2.2	2200	1.8	2200	1.8
2900	2.6	2900	2.6	2700	2.1	2700	2.1
3400	2.9	3400	2.9	3200	2.4	3200	2.4
3900	3.3	3900	3.3	3700	2.7	3700	2.7
4400	3.6	4400	3.6	4200	3.0	4200	3.0
4900	4.0	4900	4.0	4700	3.3	4700	3.3
7500	5.8	7500	5.8	7500	4.9	7500	4.9

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

axle 1 : reference axle: SAF	SBW 1937	brake lining: Jurid 539
test report :	TDB 0749 ECE	date : 20130930 30.09.2013
axle 2 : reference axle: SAF	SBW 1937	brake lining: Jurid 539
test report :	TDB 0749 ECE	date : 20130930 30.09.2013
axle 3 : reference axle: SAF	SBW 1937	brake lining: Jurid 539
test report :	TDB 0749 ECE	date : 20130930 30.09.2013
axle 4 : reference axle: SAF	SBW 1937	brake lining: Jurid 539
test report :	TDB 0749 ECE	date : 20130930 30.09.2013

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 = 24.4 % Fe
axle 2	(rdyn 421 mm)	T = 24.4 % Fe
axle 3	(rdyn 421 mm)	T = 19.7 % Fe
axle 4	(rdyn 421 mm)	T = 19.7 % Fe

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

axle 1	(sp = 58 mm)	s = 39 mm
axle 2	(sp = 58 mm)	s = 39 mm
axle 3	(sp = 51 mm)	s = 39 mm
axle 4	(sp = 51 mm)	s = 39 mm

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

axle1	ThA = 6702 N
axle2	ThA = 6702 N
axle3	ThA = 4974 N
axle4	ThA = 4974 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 = 39620 N
axle 2	(rdyn 421 mm)	T = 39620 N
axle 3	(rdyn 421 mm)	T = 29492 N
axle 4	(rdyn 421 mm)	T = 29492 N

basic test type III
of subject (calculated)
trailer (E) residual

braking rate of the vehicle (hot)braking
(item 4.3.2 to appendix 2 to annex 11) 0.60 0.47

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 = 39620 N
axle 2	(rdyn 421 mm)	T = 39620 N
axle 3	(rdyn 421 mm)	T = 29492 N
axle 4	(rdyn 421 mm)	T = 29492 N

basic test type III
of subject (calculated)
trailer (E) residual

braking rate of the vehicle (hot)braking
(item 4.3.2 to appendix 2 to annex 11) 0.60 0.47

required braking rate
(items 1.5.3 and 1.7.2 to annex 11) >= 0,4 and >= 0,6*E (0.36)

	axle 3	axle 4
no of TRISTOP-actuators per axle	2	2
TRISTOP-actuator type	16/16	16/16
lever length	69	69
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	...
sp.brake chamber no	925	...
release pressure
	pls	in bar
	5.0	5.0

calculation:

ratio until road
 $iFb = LBh * Eta * C * rBt / (rBn * rstat)$
for rstat in mm 3.9674 3.9674
brake force of spring br. Tf in N 401 401
 $Tf = (TFZ * KDZ - 2 * Co / LBh) * iFb$ 49157 49157
braking rate zf laden 0.344
 $zf = sum (Tf) / P + 0,01$

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)

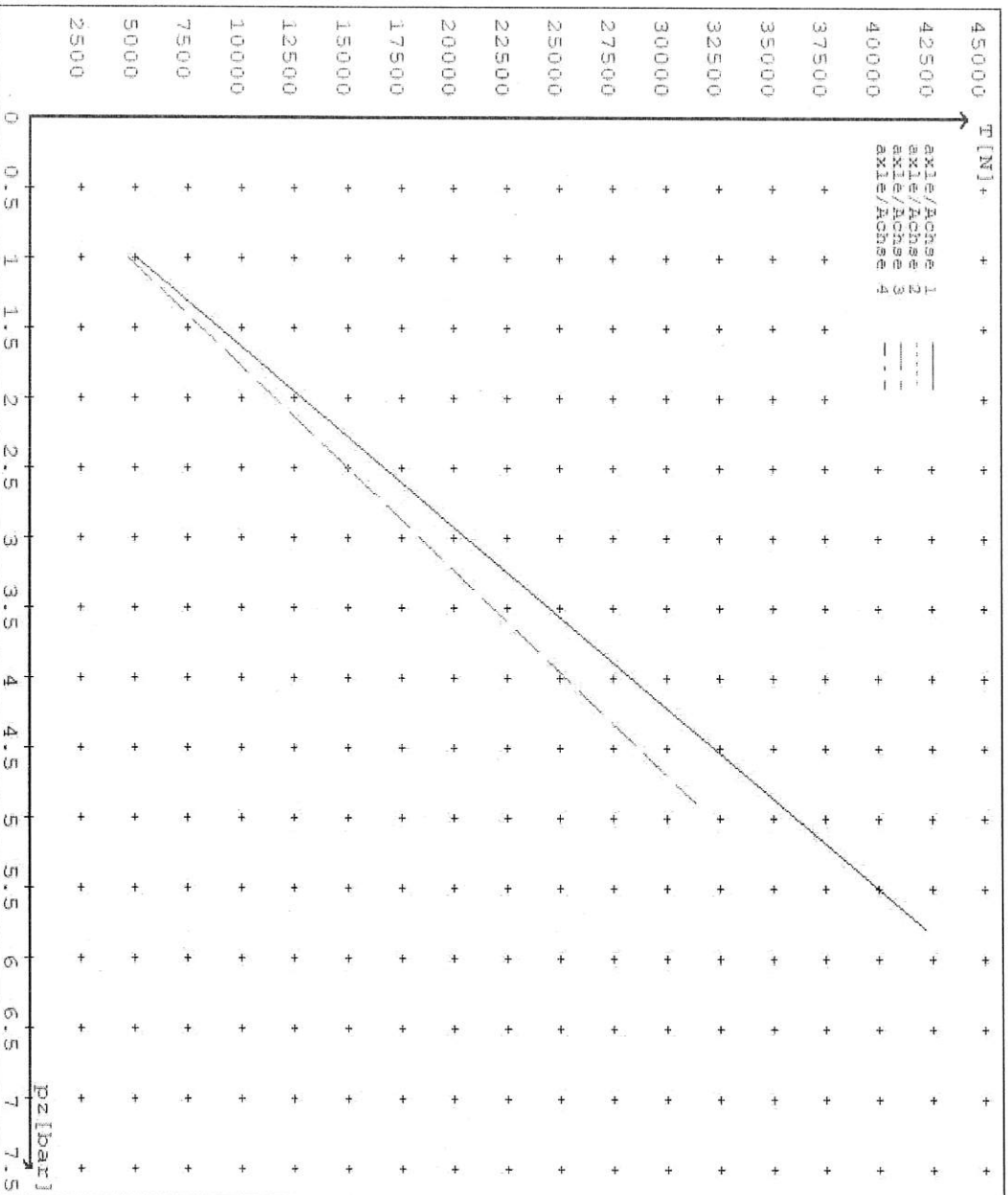
reference values

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

	pz [bar]	T [N]	T [N]
axle 1	1.0	5021	
	5.8	42203	
axle 2	1.0	5021	
	5.8	42203	
axle 3	1.0		4662
	4.9		31342
axle 4	1.0		4662
	4.9		31342

VIN - no.:

		Axle (s) / Achse (n)			
Brake cylinder type (service / parking)	20. /	20. /	16/16	16/16	/
Bremszylinder Typ (Betrieb / Fest)	65	65	63	63	
Maximum stroke smax = ...mm					
maximaler Hub smax = ...mm					
Lever length = ...mm	69.08	69.08	69.08	69.08	
Hebellänge = ...mm					





**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 #:** LC220605
YEAR: 2022 **CALCULATION #:** 2022 WABCO 4A WPC
MAKE: DOMETT **REGO #:**
MODEL: D1001 **LT400 #:** 830395
CHASSIS #: 2182 **ORDER #:** 8872
VIN #: 7A9D10017N2023182

GVM: t 26 **PRIME MOVER:** EBS / EUROPEAN

LOAD CONFIGURATION: UNIFORM DENSITY

GROUP RATINGS: t

FRONT	15	REAR	15
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WHEEL BASE: m 5.07

UNLADEN COG m	0.7	MAX HEIGHT m	2.38	HEIGHT DECK m	1.00
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COG: m 1.492

TARE: t	FRONT	2.8	REAR	2.4	TOTAL	5.2
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TYRE SIZE:	FRONT	265 70 R19.5	REAR	265 70 R19.5	FITTED	265 70R 19.5
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ROLLING CIRCUMFERENCE: MM 2645

AXLE SPACING: m 1.3

BRAKE & AXLE DETAILS

	MAKE	MODEL	TEST REPORT
AXLE:	SAF	SAF-Z19W	TDB0749
POLE WHEEL FRONT:	90	POLE WHEEL REAR:	90
LINING MATERIAL:	JURID 539	BRAKE FACTOR:	23.03
SENSED AXLES:	1 + 3		
SERIAL NUMBERS:	1 2 3 4 5		
NOTES:			

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	WABCO PAN19	WABCO PAN19	
FOUNDATION BRAKE:	69	69	N/A
LEVER LENGTH: mm	MAKE: PART NUMBER: PM PRESS. kPa		
BRAKE VALVES:	WABCO	480 102 08. 0 (MV)	80 kPa
ECU PART #:	WABCO	480 207 001 0 (24V)	80 kPa
3RD MODULATOR #:	YES		
ANTI-COMPOUNDING:	SEALCO_SBR	110701	
SPRING BRAKE RELAY:	SEALCO_YR	17600B	
YARD RELEASE VALVE:	N/A	N/A	
INLINE RELAY FITTED:	FRONT FRICTION: μ 0.51		
ECU DIRECTION:	<input checked="" type="checkbox"/> FRONT	<input type="checkbox"/> REAR	
SUBSYSTEMS:	<input type="checkbox"/> SMARTBOARD	<input type="checkbox"/> OPTI-LINK	<input type="checkbox"/> CAN ROUTER 446 122 050 0
	<input type="checkbox"/> ELEX 446 122 070 0	<input type="checkbox"/> 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
RISE HEIGHT <small>MM</small> :	250	250
HANGER HEIGHT <small>MM</small> :		
PEDESTAL HEIGHT <small>MM</small> :		
LIFT AXLE:	N/A	N/A
TIPPING DUMP SWITCH:	PNEUMATIC	
LIFTAXLE VALVE:	N/A	N/A
PRESSURE LIMITING:	N/A	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 PEMI: 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	315

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.
15/06/2022 Complete paperwork, SODC & ECU file 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, EGE R13, FM255 121

DATE: 1/07/2022

SIGNED: Lance Carate

CERTIFIER NAME & ID: CHRIS CLARKE CIC

SODC BY: LANCE CAWTE LPC

PHONE (BUS): 09-980-7300

FAX:

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