

Heavy vehicle specialist certificate

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

CHRIS CLARKE

ID

CJC

Plate number (optional)

VIN/chassis number

7A9D10016N2023190

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
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

BRAKE RULE CERTIFICATE

LC220614

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 below)

LANCE CAWTE

LPC

Inspector's signature

Inspector's name (PRINT IN CAPS)

CHRIS CLARKE

ID number

CJC

Date

09.08.2022

Number

837684

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	2022-05-23	Serial number	897041691500E
Serial number (modulator)	000000553072		
Fingerprint Customer EOL / Customer Development / Flash Program	W503643 / 2022-08-09 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00		

WABCO

TRAILER EBS-E

GGV/ADR TUEH TB 2007 - 019.00
TDB 0749

HERSTELLER MANUFACTURER CONSTRUCTEUR	DOMETT			GIO	Pin1	Pin3	Pin4
TYPE	4A TANKER, D1001			1	24 V-O1	---	---
VEHICLE IDENT. NUMBER CHASSIS NUMBER NUMERO DE CHASSIS	7A9D10016N2023190			2	---	---	---
BREMSEBREMCHNUNGS-NR. BRAKE CALCULATION NO. CARACT. DE FREINAGE (N)	TP2022 WABCO 4A WPC			3	ALS2	ALS2	---
POLEADREHNZEICHN. c/d l+r POLARIZATION MARKING c/d l+r DENTS ROUE DENTEE c/d l+r	90	90	ABS System 1 ABS System systeme ABS	4	---	---	---
Einzelbeschlingung Single Tire Monte simple				5	DIAG	DIAG	---
Zweifelschlingung Twin Tire Monte jumelle	X			6	---	---	---
Leitachse Steering axle Essien vireur				7	---	---	---
Kennzeichens Fahrzeug Critical Trailer Vehicule critique							
Subsystems	...	I/O	24N				

ACHSE ESSEN ESSEN	pm (bar)	pm (bar)	0.8	2.0	6.5	pZ	TR (dan)	Pz
1	1400	0.5	1.5	7500	4.7	0.4	1.4	---
2	1400	0.5	1.5	7500	4.7	0.4	1.4	---
3	1200	0.4	1.2	7500	4.7	0.4	1.5	---
4	1200	0.4	1.2	7500	4.7	0.4	1.5	---
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.	7A9D10016N2023190
Vehicle type	4A TANKER, D1001	Odometer reading	0.0 km
Next service	0 km	Trip reading	0.0 km
Tester	Chris Clarke	Signature	
Date	2022-08-09 2:23:54 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 approval 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, SBW 1937, TDB 0749 ECE,

		<u>unladen</u>				<u>laden</u>
total mass	P	in	kg			30000
axle 1	P1	in	kg			7500
axle 2	P2	in	kg			7500
axle 3	P3	in	kg			7500
axle 4	P4	in	kg			7500
wheel base	E	in	mm			
centre of gravity height	h	in	mm			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		
brake factor		69	69	69	69
dyn. rolling radius	rdyn	min	in	mm	
dyn. rolling radius	rdyn	max	in	mm	
threshold torque	Co	Nm			

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	bar	5.8	5.8	4.9	4.9
piston force	ThA	at pm6,5bar	N	6702	4974	4974
brake force(rdyn min)	T lad.	at pm6,5bar	N	50729	37673	37673
brake force(rdyn max)	T lad.	at pm6,5bar	N	50729	37673	37673
Brake force incl. 1 % rolling resistance			%	26.5	26.5	23.5

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 20HSCLD65

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

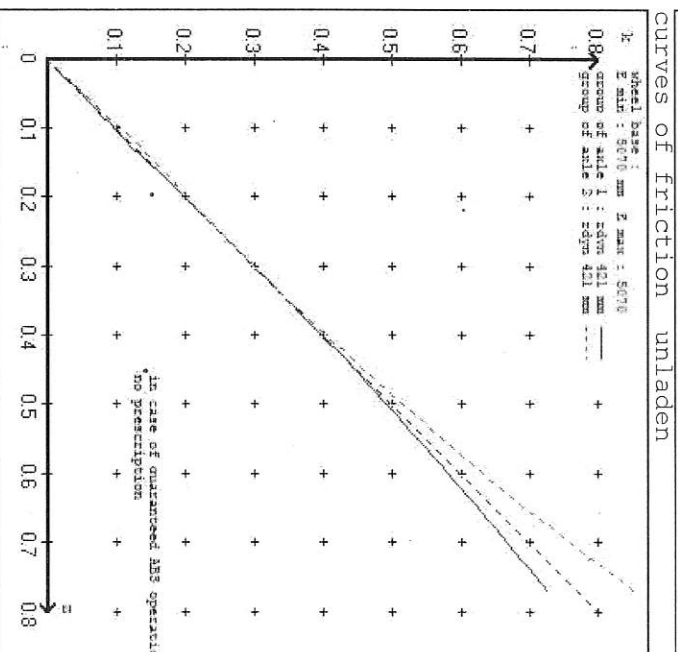
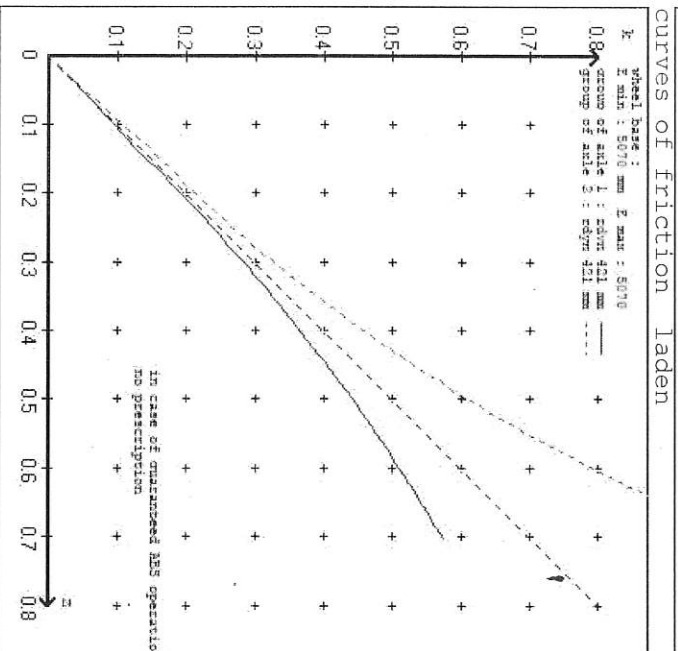
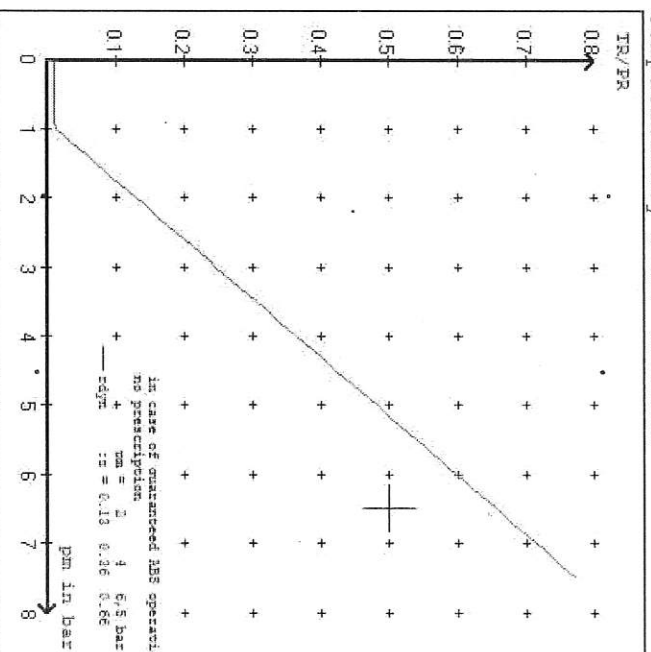
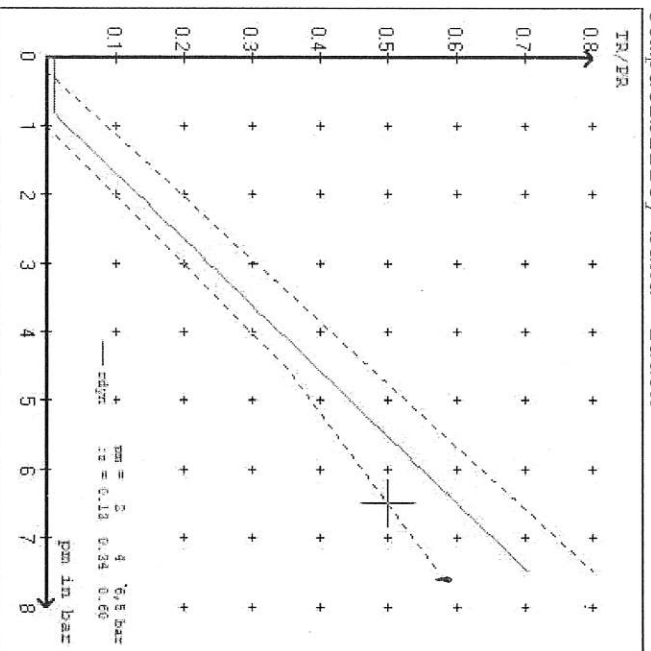
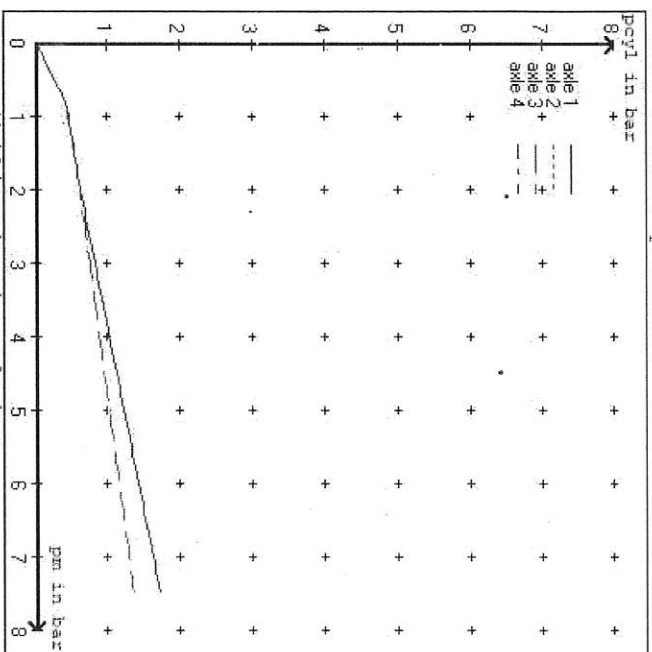
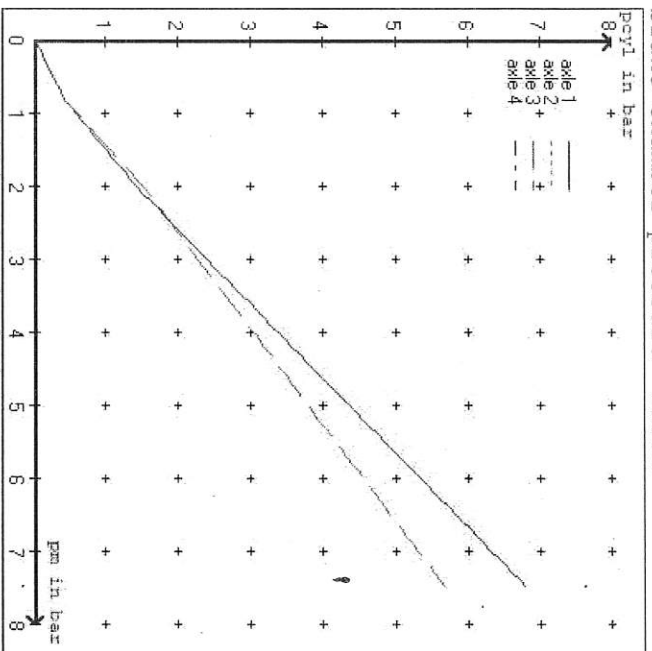
brake cylinder: Meritor 20HSCLD65

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 :	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
 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	
	axle load unladen	bellow pr. unladen			bellow pr. laden	brake 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	1400	1200	1200
1900	1900	1700	1700
2400	2400	2200	2200
2900	2900	2700	2700
3400	3400	3200	3200
3900	3900	3700	3700
4400	4400	4200	4200
4900	4900	4700	4700
7500	7500	7500	7500

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
	(hot)braking

braking rate of the vehicle
(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
	(hot)braking

braking rate of the vehicle
(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)

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	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	464	464
sp.brake chamber no 925	484	96.0484
release pressure	5.0	5.0
	pls in bar	

calculation:

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

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)
 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)

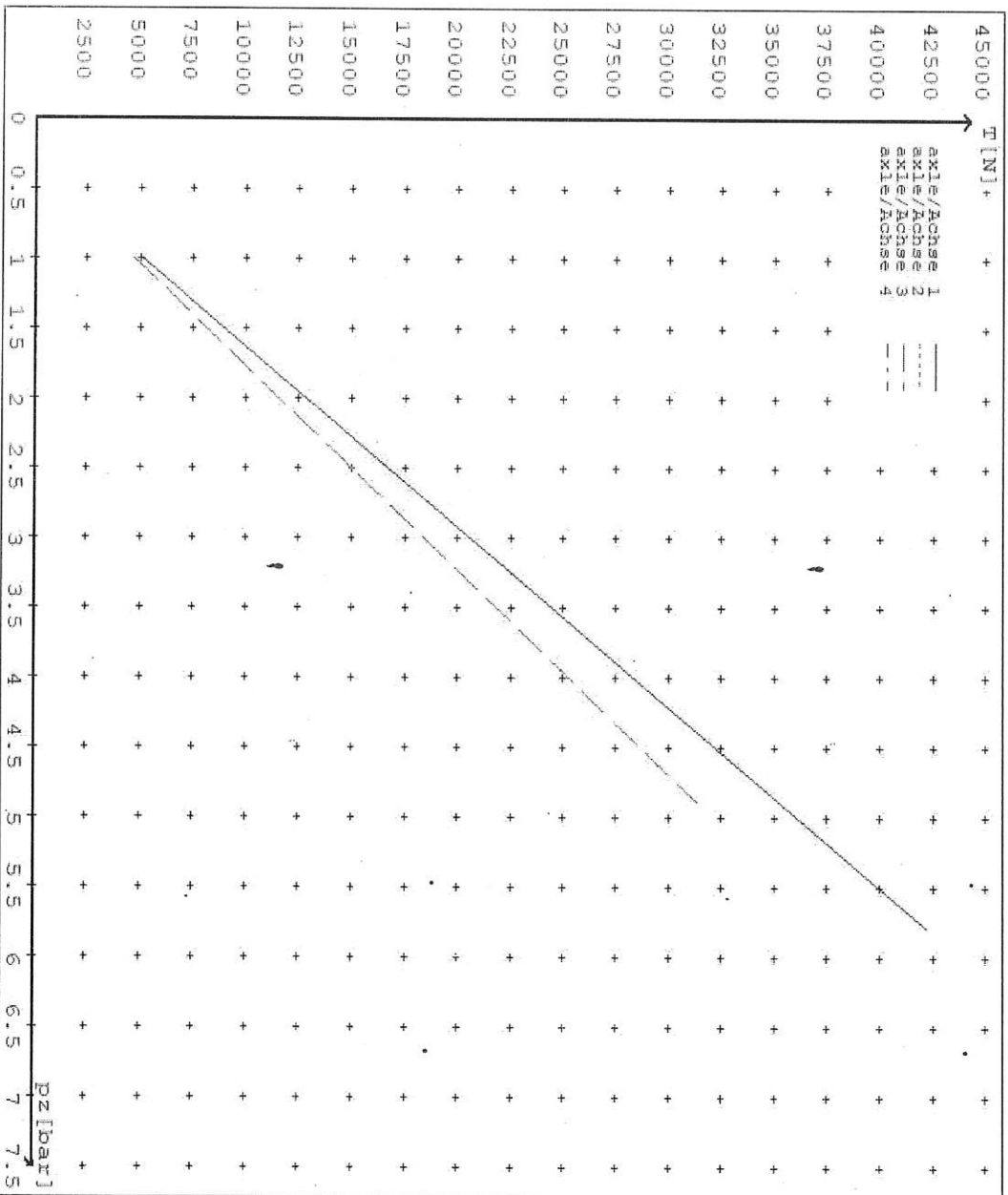
reference values

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

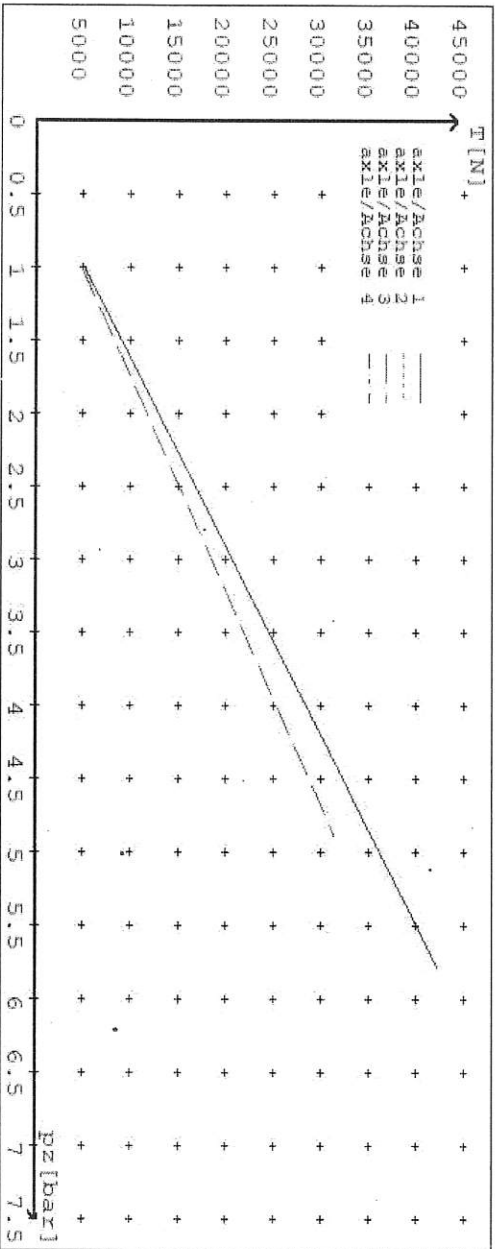
VIN - no.:

	Axle(s) / Achse(n)			
brake cylinder type (service / parking)	20./	20./	16/16	16/16
Bremszylinder Typ (Betrieb / Fest)				/
Maximum stroke smax = ...mm	65	65	63	63
maximaler Hub smax = ...mm				
Lever length = ...mm	69.08	69.08	69.08	69.08
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)						
brake cylinder type (service / parking)		20. /	20. /	16/16	16/16	16/16	/	
Bremszylinder Typ (Betrieb / Fest)		65	65	63	63	63		
Maximum stroke smax = ...mm								
maximaler Hub smax = ...mm								
Lever length = ...mm		69.08	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 #:	LC220614
YEAR:	2022	CALCULATION #:	2022 WABCO 4A WPC
MAKE:	DOMETT	REGO #:	
MODEL:	D1001	LT400 #:	837684
CHASSIS #:	2190	ORDER #:	8880

VIN #:	7A9D10016N2023190		
GVM: t	26	PRIME MOVER:	EBS / EUROPEAN

LOAD CONFIGURATION:

UNIFORM DENSITY

GROUP RATINGS: t

FRONT		REAR	
15	15		

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		REAR		TOTAL
2.8	2.4			5.2

TYRE SIZE:

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

ROLLING CIRCUMFERENCE: MM

2645	2645
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AXLE SPACING: m

1.3	1.3
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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	NOTES:	

SERIAL NUMBERS:	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	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	

ECU DIRECTION:	<input checked="" type="checkbox"/> FRONT	<input type="checkbox"/> REAR	FRONT FRICTION: μ	0.51
SUBSYSTEMS:	<input type="checkbox"/> SMARTBOARD	<input type="checkbox"/> OPTI-LINK	<input checked="" 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
RIDE 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
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:	<input type="text"/>	<input type="text"/>
NORMAL LEVEL:	<input type="text"/>	<input type="text"/>
LOWER LEVEL:	<input type="text"/>	<input type="text"/>

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:	<input type="text" value="265"/>	<input type="text" value="275"/>	<input type="text" value="305"/>

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 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: 22/06/2022

SIGNED: Lance Cawte

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