

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

ID

JOHN HIRST
JEH

Vehicle registration (optional)

VIN/Chassis number

7 A 9 C 7 0 0 1 0 K 1 0 2 3 8 8 9

Make

DOMETT

Model (optional)

C7001

Certification category

HVEK

Description of work

CERTIFY TO SCHEDULE 5 OF LTR 32015/5
NEW ZEALAND HEAVY VEHICLE BRAKE SPECIFICATION.
3AFT

RSS ON TYRE: 265 70 R19.5

Code/standard/rule certified to

LTR 32015/5

 Component load rating(s)
23 Tonnes GVM

General drawing number(s)

N/A

Supporting documents

BRAKE RULE CERTIFICATE JH190916
BRAKE CALCULATION # TP51910

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]

 Hubodometer reading (whichever comes first)

Designer's ID (if different from inspector below)

Inspector's signature

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.

Declaration

CoF vehicle inspector ID (if applicable)

CoF vehicle inspector signature (if applicable)

Date

17-Sep-19
719552

Description of work

Component being certified:

Chassis

Load anchorage

Log bolsters

Towing connection

Brakes

SRT

PSV stability

PSV rollover

PBS

PBS

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

distribution: DOMETT TRAILERS
 7A9C70010K1023889
 SODC: JH190916
 LT400: **719552**

vehicle manufacturer: DOMETT TRAILERS
 trailer model : SAFT SPECIAL

trailer type : 3-axle-full-trailer
 remarks : air / hydraulic / VA suspension
 WABCO TRAILER - EBS
 TRISTOP 2+3: T.14/24 [TSE1416HTLD64 ACTUALLY FITTED -
SEE PAGE 6 FOR PERFORMANCE DATA]
 265/70 R 19,5

axle 1 + 2 + 3 : SAF, SBW 1937, TDB 0749 ECE,

	<u>unladen</u>		
	1	2	3
total mass	P in kg	6000	23200
axle 1	P1 in kg	2600	8200
axle 2	P2 in kg	1700	7500
axle 3	P3 in kg	1700	7500
wheel base	E in mm	4200	4200
centre of gravity height	h in mm	800	1600

	<u>axle 1</u>	<u>axle 2</u>	<u>axle 3</u>	<u>laden</u>
	1	2	2	2
no. of combined axles	1	1	1	1
no. of brake chambers per axle line	KDZ	BZ	BZ	BZ
brake chamber manufacturer	Merritor	Merritor	Merritor	Merritor
chamber size	T.14/24	T.14/24	T.14/24	T.14/24
lever length	1Bh in mm	69	69	69
brake factor	[-]	23.03	23.03	23.03
dyn. rolling radius	rdyn min in mm	421	421	421
dyn. rolling radius	rdyn max in mm	421	421	421
threshold torque	CO Nm	6.0	6.0	6.0

calculation:

chamber pressure (rdyn min) pH at z=22,5%bar	2.5	2.3	2.3
chamber pressure (rdyn max) pH at z=22,5%bar	2.5	2.3	2.3
chamber press. (servo)pch at pm6,5bar	6.5	5.1	5.1
piston force ThA at pm6,5bar	7564	4886	4886
brake force (rdyn min) T lad. at pm6,5bar N	57315	37008	37008
brake force (rdyn max) T lad. at pm6,5bar N	57315	37008	37008
brake force within 1 % rolling friction proportion	37.6	31.2	31.2

braking rate z laden

0.577 for rdyn min
 0.577 for rdyn max

 $z = \text{sum } (\text{TR})/\text{PRmax}$

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

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 (V6.14.04.20).
 -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 recommend to do a braking harmonisation!
 WABCOBrake V6.14.04.20 db 03.11.2017

This brake calculation is made under consideration of
 -the legal prescriptions mentioned above in the version valid
 at the time of making the program (V6.14.04.20).

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 as well as the data of the brake out of the test

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 -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 recommend to do a braking harmonisation!

WABCOBrake V6.14.04.20 db 03.11.2017

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 20HSCLDD65

axle 2:

valve 1: 480 102 ... 0

WABCO

EBS trailer modulator

brake cylinder: Meritor 1424HTLD64

axle 3:

valve 1: 480 102 ... 0

WABCO

EBS trailer modulator

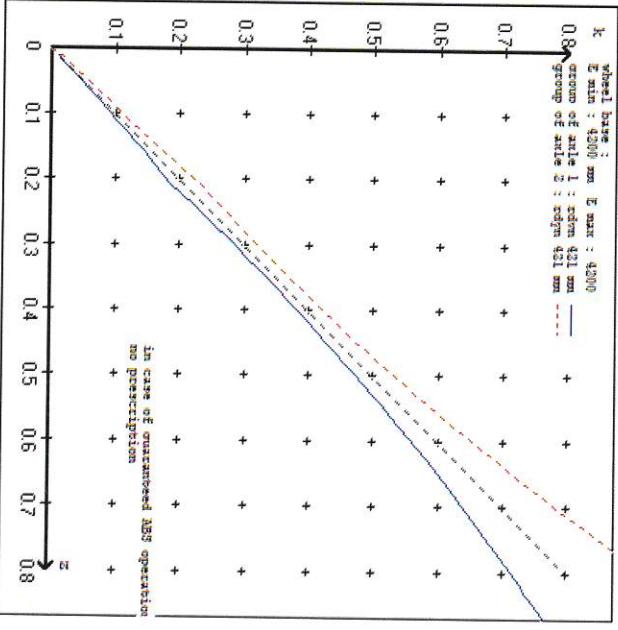
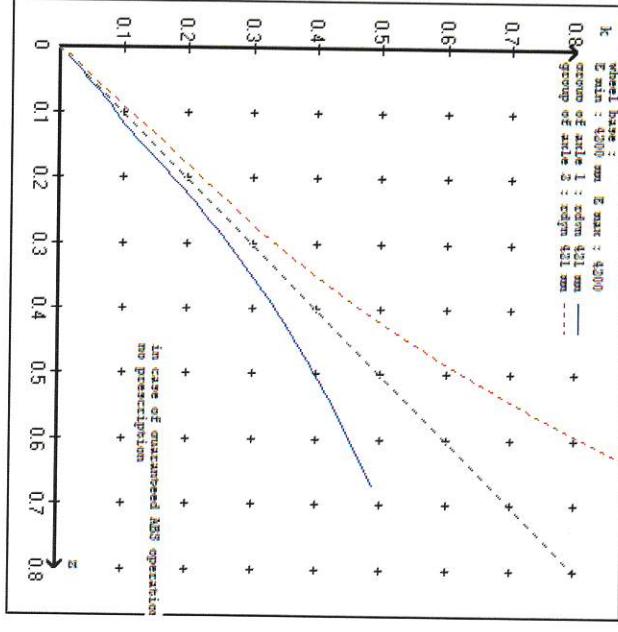
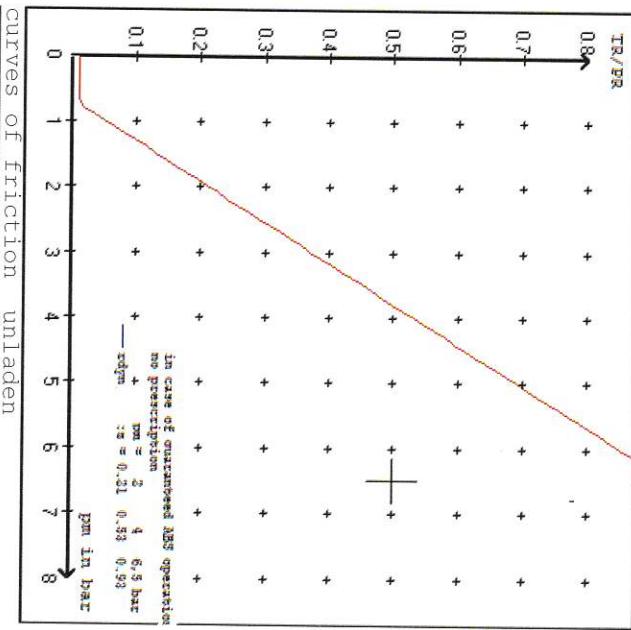
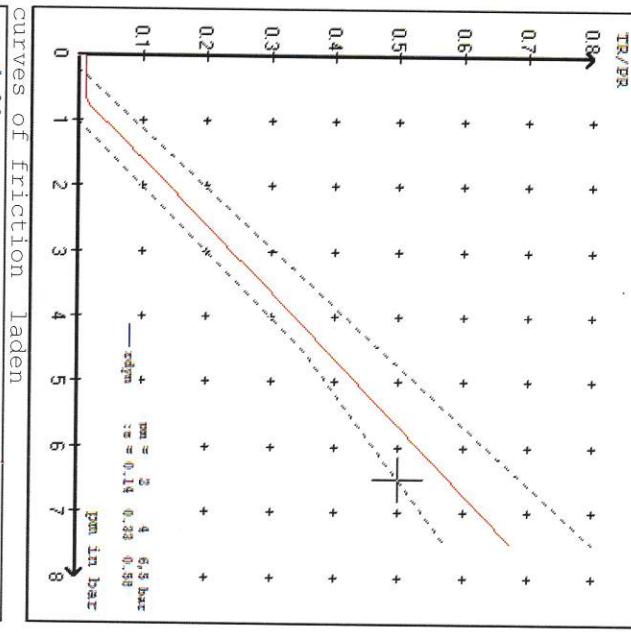
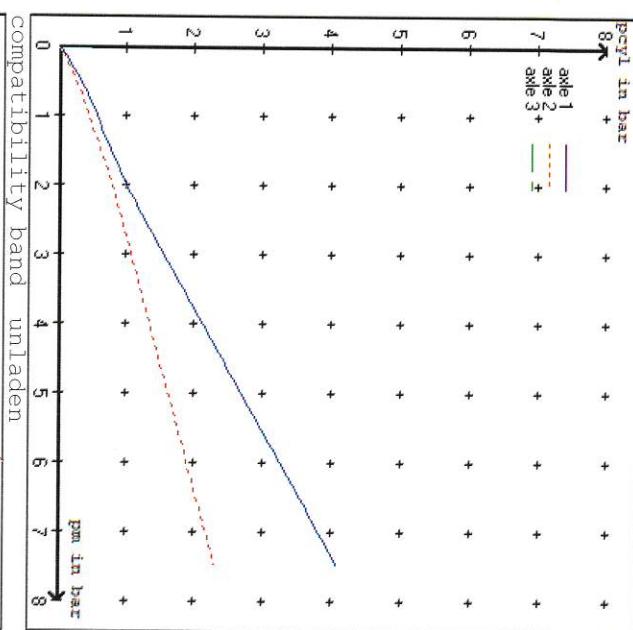
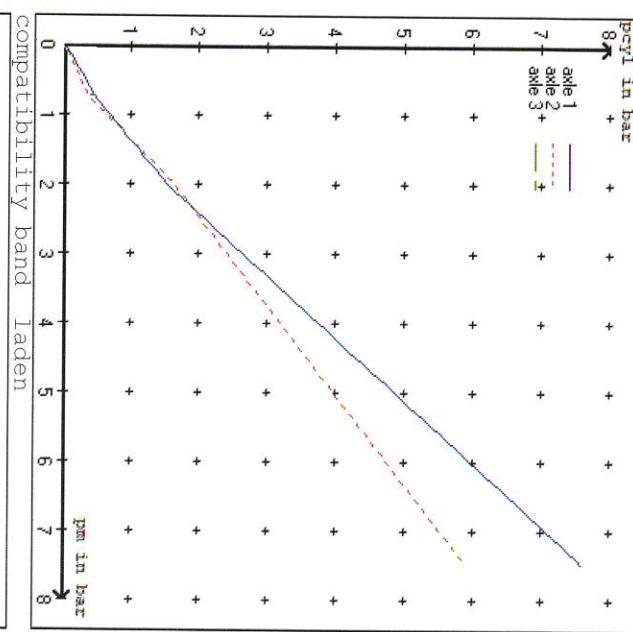
brake cylinder: Meritor 1424HTLD64

test type III (ZIII = 0.30) for rdyn min : axle1 axle2 axle3

at pm 3.7 bar => pcha in bar : 3.3 2.9 2.9

test type III (ZIII = 0.06) for rdyn min : axle1 axle2 axle3

at pm 1.2 bar => pcha in bar : 0.8 0.8 0.8



vehicle manufacturer: DOMETT TRAILERS
 trailer model : 3AFT SPECIAL
 trailer type : 3-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 T.14/24 (Meritor) lever length 69 mm
 axle 3 : 2 x type/diameter T.14/24 (Meritor) lever length 69 mm

brake diagram :

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

EBS input data

=====

vehicle manufacturer:	DOMETT TRAILERS
trailer model :	3AFT SPECIAL
trailer type :	3-axle-full-trailer
brake calculation no. :	TP 51910A

tire circumference main axle : 2650 for rdyn max
 tire circumference auxiliary axle : 2650 for rdyn max

assignment pm / deceleration z: pm 0.7 bar z = 0.010
 (laden condition) 2.0 bar z = 0.138
 6.5 bar z = 0.580

axle	control pressure pm unladen	brake pr. unladen	axle load laden	control pressure pm belly pr. laden	brake pr. laden
1	2600	to be	3.5	8200	to be
2	1700	entered by	2.0	7500	entered by
3	1700	the vehicle	2.0	7500	the vehicle
4	0	manufact.	0,0	0	manufact.
5	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 pcyl	axle 2 axle load pcyl	axle 3 axle load pcyl
2600 3.5	1700 2.0	1700 2.0
3100 3.8	2200 2.3	2200 2.3
3600 4.0	2700 2.5	2700 2.5
4100 4.3	3200 2.8	3200 2.8
4600 4.6	3700 3.1	3700 3.1
5100 4.8	4200 3.3	4200 3.3
5600 5.1	4700 3.6	4700 3.6
6100 5.4	5200 3.9	5200 3.9
8200 6.5	7500 5.1	7500 5.1

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

calc. verif. of residual (hot) braking force type III

(item 4.2.1 of appendix 2 to annex 11)

axle 1 (rdyn 421 mm) (sp = 58 mm)	$T = 27.8 \frac{\%}{\text{Fe}}$
axle 2 (rdyn 421 mm) (sp = 56 mm)	$T = 20.2 \frac{\%}{\text{Fe}}$
axle 3 (rdyn 421 mm) (sp = 56 mm)	$T = 20.2 \frac{\%}{\text{Fe}}$

calculated actuator stroke in mm

(item 4.3.1.1 of appendix 2 to annex 11)

axle 1 (sp = 39 mm)	$s = 39 \text{ mm}$
axle 2 (sp = 39 mm)	$s = 39 \text{ mm}$
axle 3 (sp = 39 mm)	$s = 39 \text{ mm}$

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

axle1 ThA = 7564 N	$T = 44747 \text{ N}$
axle2 ThA = 4886 N	$T = 28976 \text{ N}$
axle3 ThA = 4886 N	$T = 28976 \text{ N}$

calc. residual (hot) braking force in N

(item 4.3.1.4 of appendix 2 to annex 11)

axle 1 (rdyn 421 mm)	$T = 44747 \text{ N}$
axle 2 (rdyn 421 mm)	$T = 28976 \text{ N}$
axle 3 (rdyn 421 mm)	$T = 28976 \text{ N}$

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)

0.58
0.45

required braking rate
(items 1.5.3 and 1.7.2 to annex 11)

$\geq 0,4$ and
 $\geq 0,6^*E$ (0.35)

axle 1 (rdyn 421 mm)	$T = 44747 \text{ N}$
axle 2 (rdyn 421 mm)	$T = 28976 \text{ N}$
axle 3 (rdyn 421 mm)	$T = 28976 \text{ N}$

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)

0.58
0.45

required braking rate
(items 1.5.3 and 1.7.2 to annex 11)

$\geq 0,4$ and
 $\geq 0,6^*E$ (0.35)

	no of TRISTOP-actuators per axle line KDZ	axle 2	axle 3
TRISTOP-actuator type	1Bh	T.14/ 16	T.14/ 16
lever length	mm	69	69
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	6160	6160
sp.brake chamber no Meritor.....		4	4
release pressure	pLs in bar	4.5	4.5

calculation:

$$\begin{aligned} \text{ratio until road} \\ i_{FB} &= 1Bh * Eta * C * rBt / (rBn * rstat) \\ &\quad \text{for } rstat \text{ in mm} \\ \text{brake force of spring br. Tf} &\quad \text{in N} \\ Tf &= (TFZ * KDZ - 2 * Co / 1Bh) * i_{FB} \\ \\ \text{braking rate} \\ z_f &= \text{sum } (TE) / P + 0,01 \end{aligned}$$

Test of the frictional connection required by the parking brake

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

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

$$\begin{aligned} \min Ef &= 2287 \text{ mm} & \text{for } E &= 4200 \text{ mm} \\ \hline \min Ef &= 2287 \text{ mm} & \text{for } E &= 4200 \text{ mm} \end{aligned}$$

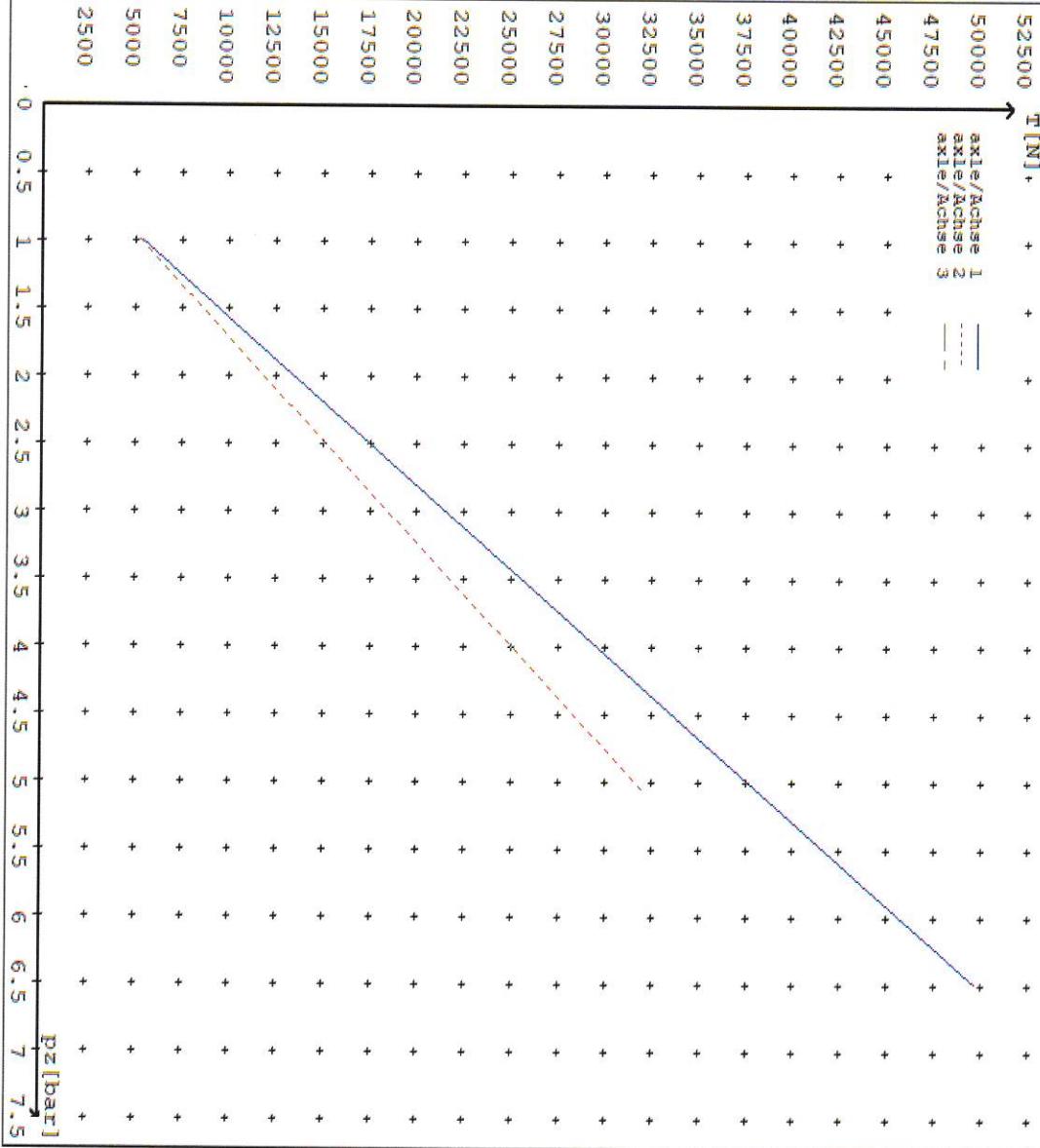
min Ef	=	minimum distance between front axle(s) (trailer) or support (semitrailer)
and the rear axle(s)	(resultant of the bogie)	
E	=	wheel base
fzul	=	maximum permissible frictional connection required
zferf	=	maximum required braking ratio of the parking brake
h	=	height of center of gravity - laden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

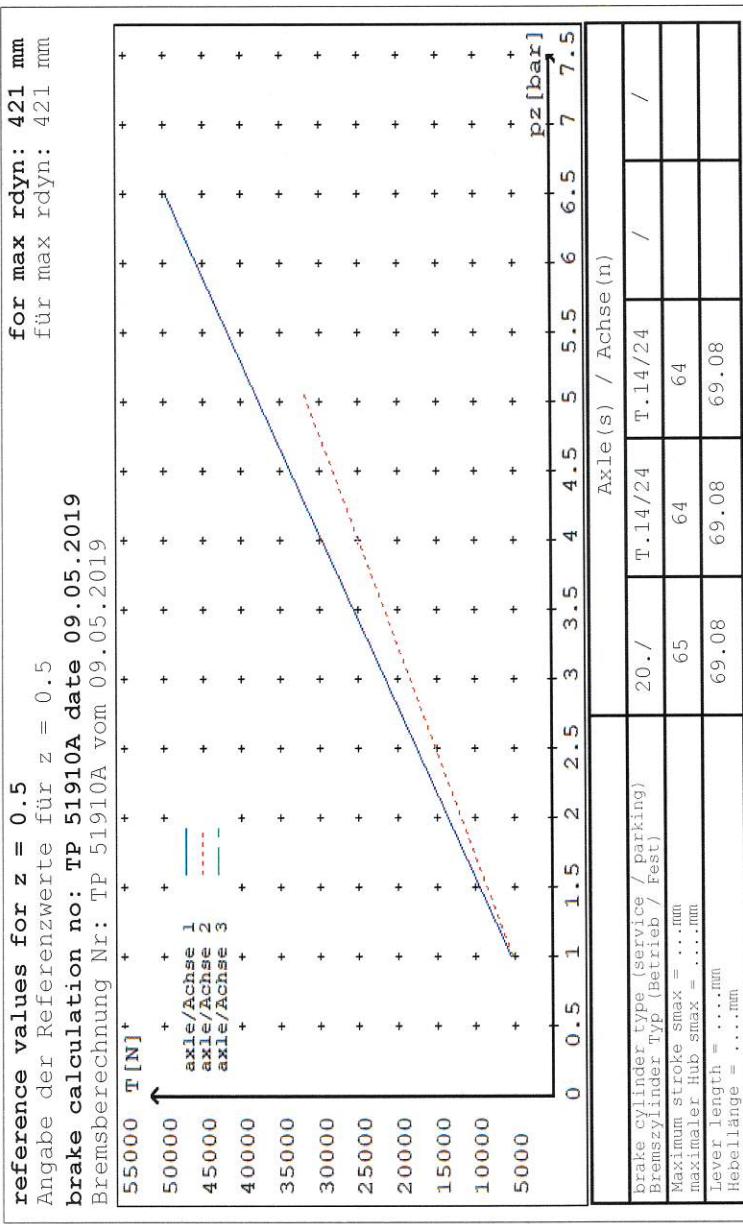
reference valuesreference values for $z = 50\%$ for max r_{dyn} : 421 mm

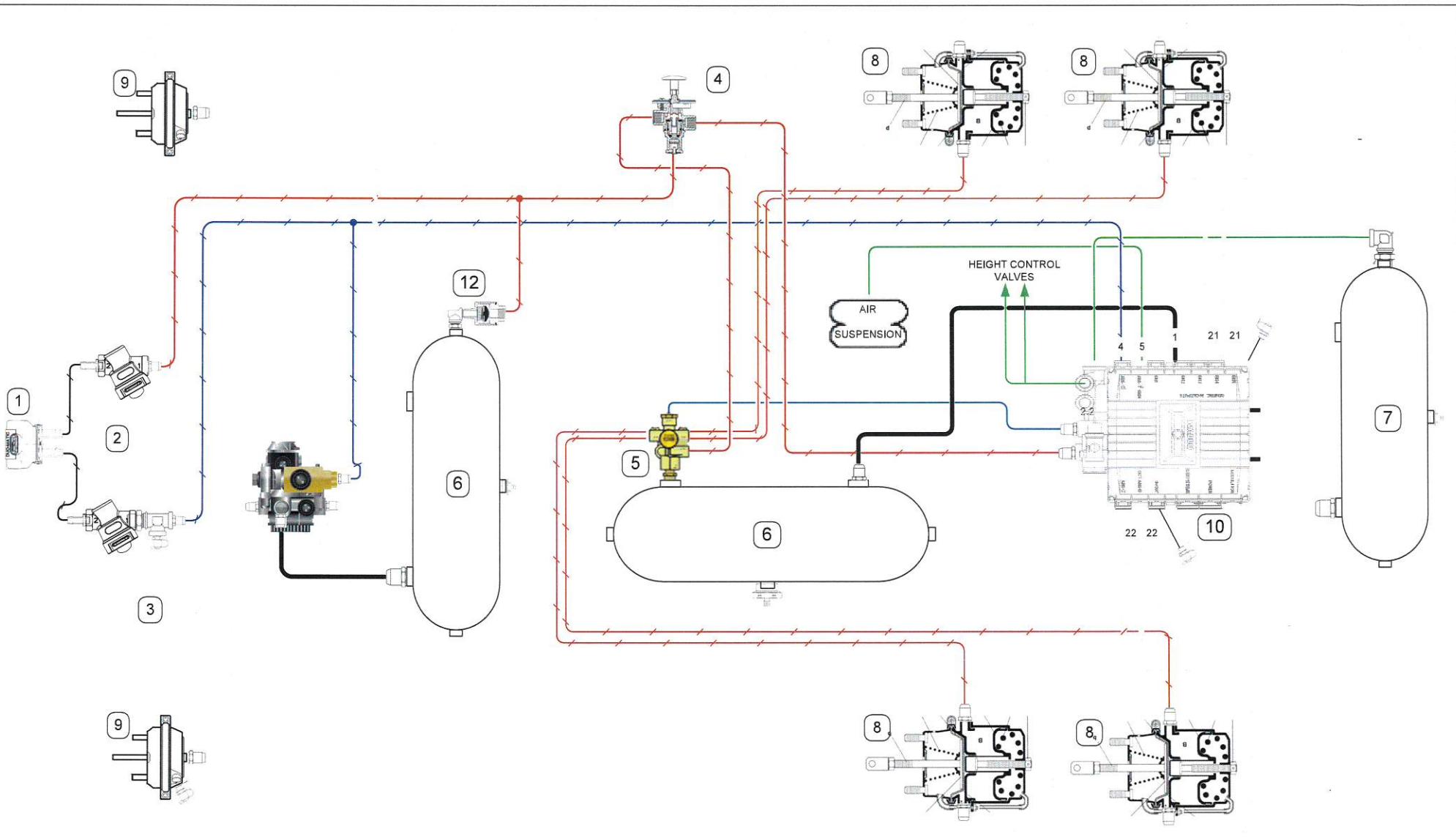
	p_z [bar]	T [N]	τ [N]
axle 1	1.0 6.5	5289 49666	
axle 2	1.0 5.1	5164 32069	
axle 3	1.0 5.1	5164 32069	

VIN - no.:

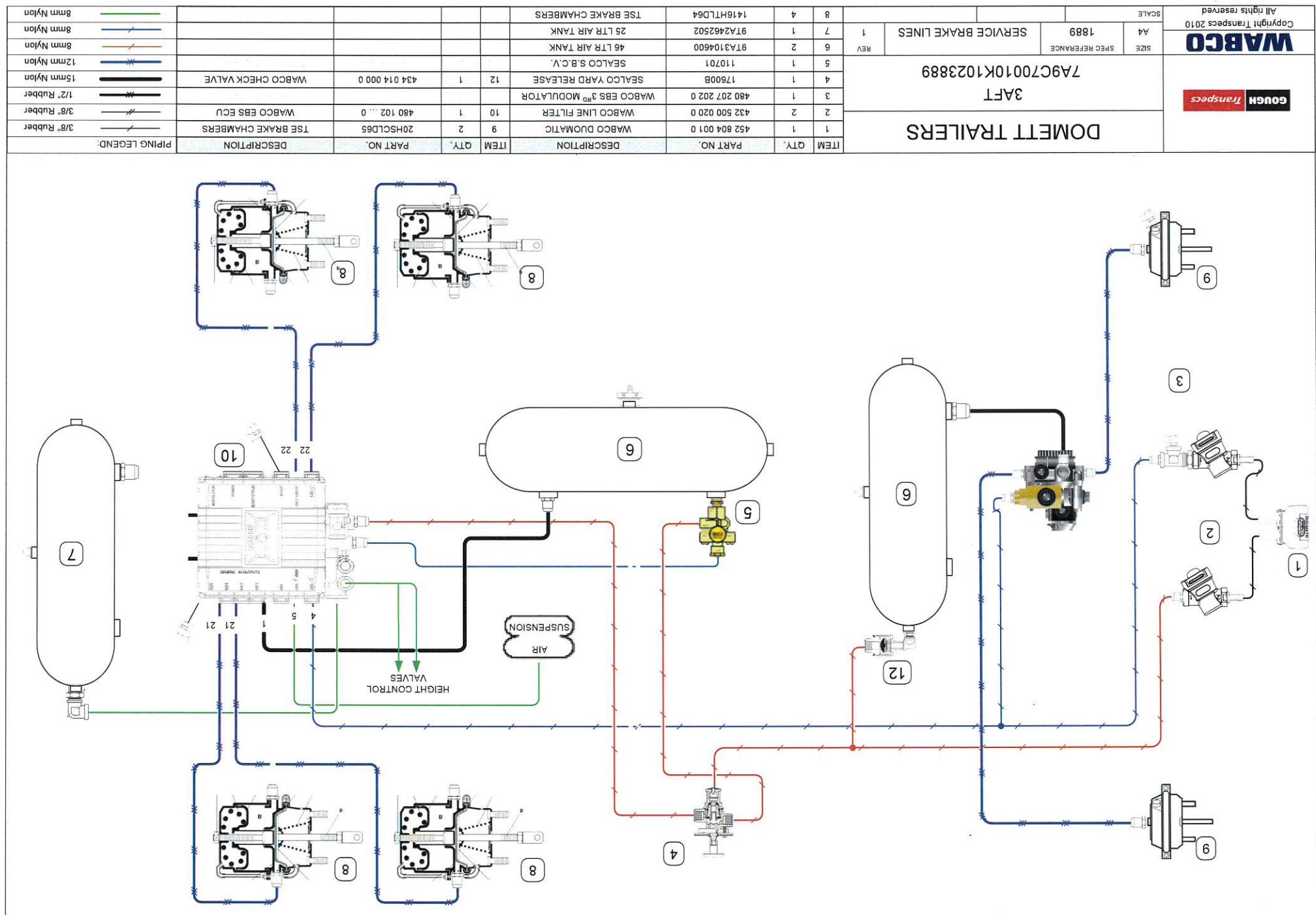
		Axle(s) / Achse(n)		
		T.14/24	T.14/24	/
brake cylinder type (service / parking)		20. /		/
Bremzylinder Typ (Betrieb / Fest)				/
Maximum stroke smax = ...mm		65	64	
maximaler Hub smax = ...mm			64	
Lever length = ...mm		69.08	69.08	
Hebellänge = ...mm			69.08	

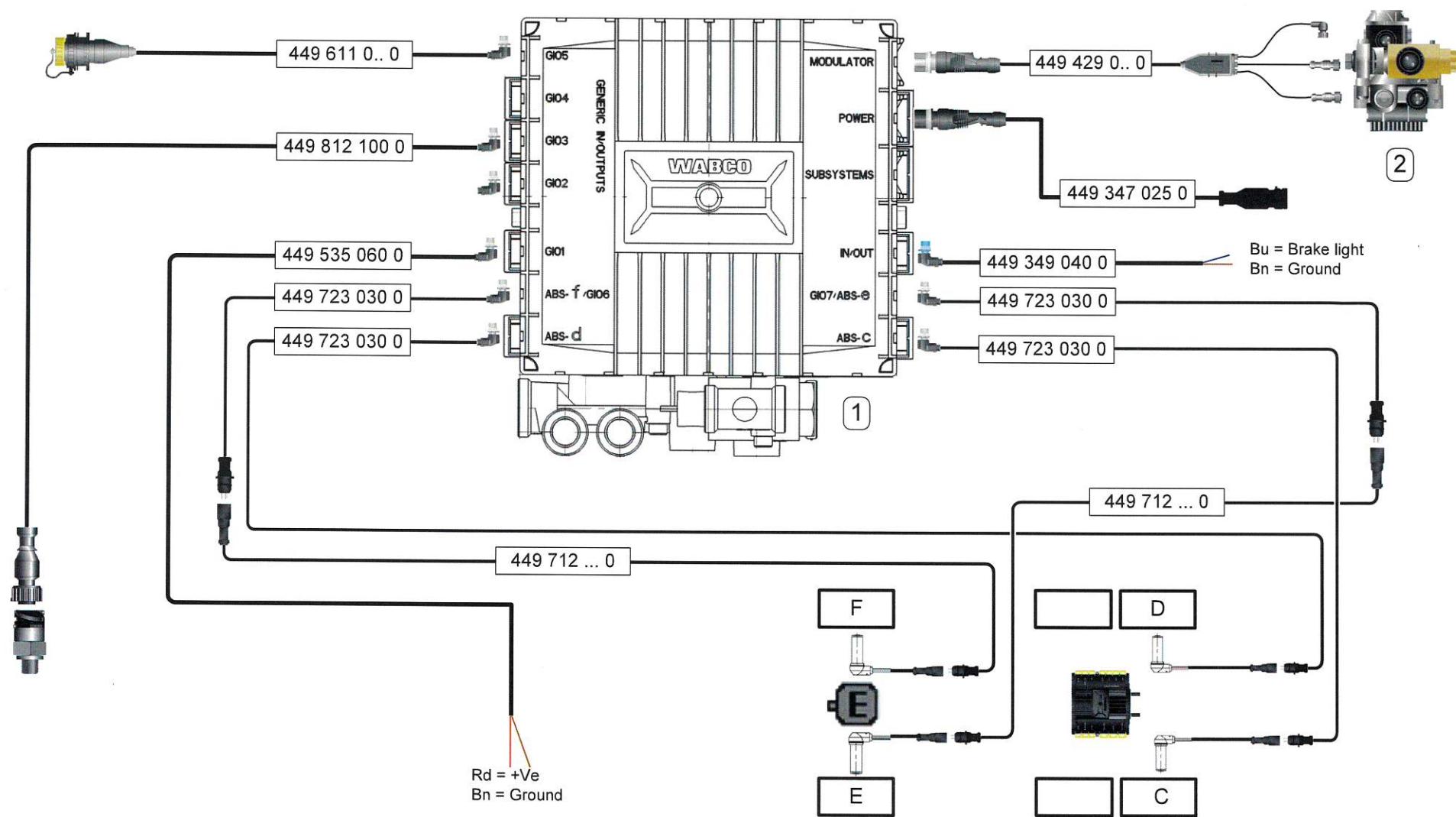




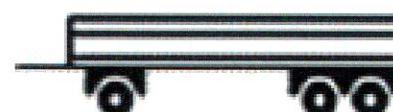


GOUGH Transpecs		DOMETT TRAILERS				ITEM	QTY.	PART NO.	DESCRIPTION	ITEM	QTY.	PART NO.	DESCRIPTION	PIPING LEGEND:	
						1	1	452 804 001 0	WABCO DUOMATIC	9	2	20HSCLD65	TSE BRAKE CHAMBERS		3/8" Rubber
		3AFT 7A9C70010K1023889				2	2	432 500 020 0	WABCO LINE FILTER	10	1	480 102 ... 0	WABCO EBS ECU		3/8" Rubber
		3	1	480 207 202 0	WABCO EBS 3 RD MODULATOR						1/2" Rubber				
		4	1	17600B	SEALCO YARD RELEASE	12	1	434 014 000 0	WABCO CHECK VALVE		15mm Nylon				
		5	1	110701	SEALCO S.B.C.V.								12mm Nylon		
		6	2	9TA3104600	46 LTR AIR TANK								8mm Nylon		
WABCO	Copyright Transpecs 2010 All rights reserved	SIZE	SPEC REFERENCE	A4	1889	PARK BRAKE LINES	REV	1	7	1	9TA2462502	25 LTR AIR TANK			8mm Nylon
								8	4	1416HTLD64	TSE BRAKE CHAMBERS				8mm Nylon





ITEM	QTY.	PART NO.	DESCRIPTION
1	1	480 102 08.0	WABCO T-EBS ECU
2	1	480 207 202 0	WABCO 3 RD MODULATOR
3	1	441 044 101 0	WABCO PRESSURE SENSOR





NOTICE TO VEHICLE OPERATOR

THIS VEHICLE HAS A BRAKE SYSTEM WHICH HAS BEEN DESIGNED AND FITTED IN ACCORDANCE WITH THE LAND TRANSPORT HEAVY VEHICLE BRAKE RULE 32015/5.

IF THIS VEHICLE IS OPERATED IN CONJUNCTION WITH NON-CERTIFIED VEHICLES, THERE MAY BE OPERATIONAL FACTORS WHICH NEED TO BE TAKEN INTO CONSIDERATION.

PLEASE REFER TO THE CERTIFIER FOR FURTHER INFORMATION.

**EXCERPT FROM LAND TRANSPORT RULE; HEAVY-VEHICLE BRAKES
RULE 32015/5. SECTION 10,**

10.1 RESPONSIBILITIES OF OPERATORS

A person who operates a vehicle must ensure that the vehicle complies with this rule.

10.2 RESPONSIBILITIES OF REPAIRERS

A person who repairs or adjusts a brake must ensure that the repair or adjustment:

- a) does not prevent the vehicle from complying with this rule;
- b) complies with Land Transport Rule: Vehicle Repair 1998.

10.3 RESPONSIBILITIES OF MODIFIERS

A person who modifies a vehicle so as to affect the braking performance of the vehicle must:

- a) ensure that the modification does not prevent the vehicle from complying with this Rule; and

- b) notify the operator that the vehicle must be inspected and, if necessary, certified by a person or organisation appointed to carry out specialist inspection and certification of heavy vehicle brakes.

IF YOU ARE UNSURE ABOUT YOUR RESPONSIBILITIES, PLEASE CONTACT THE VEHICLE MANUFACTURER, OR MYSELF.

COMPLAINTS. Complaints and Warranty issues which relate to Brake Certification will be acknowledged within 7 working days and a resolution proposed within 25 working days. Resolution of complaints and Warranty issues is subject to Transpecs Warranty policy. Customers have the right to appeal to the New Zealand Transport Authority if dissatisfied with a Compliance issue. (Refer NZTA Deed Of Appointment Para 47.4) NZTA Helpdesk 0800 699 000

(P.P.)

J.Hirst (JEH) HVEK



NOTICE TO VEHICLE OPERATOR

This trailer is equipped with an Electronic Brake System.

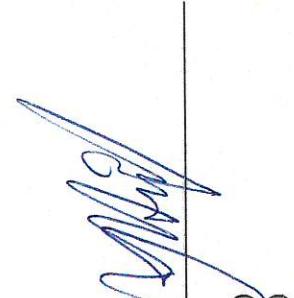
To comply with the New Zealand Heavy Vehicle Brake Rule 32015/5, it must be used only in conjunction with a truck/tractor equipped with a 5 or 7 pin ABS/EBS power supply socket.

Failure to connect to such supply invalidates Brake Rule compliance.

The trailer ABS/EBS warning light on the towing vehicle dashboard must illuminate when the ignition is switched on and extinguish when the vehicle is in motion.

If the light does not illuminate when ignition is switched on, the system must be checked. If the light remains illuminated when the vehicle is in motion, Brake Rule compliance is compromised. Repairs must be made as soon as possible.

If you are unsure of your responsibilities and/or obligations, please contact either the vehicle manufacturer or myself.


(p.p.) _____
J E Hirst
(JEH HVER)
(09 980 7300)

ELECTRONIC HEIGHT SENSOR CALIBRATION

	TIMER TICKS [F/R]	MILLIMETRE [F / R]
UPPER LEVEL:	<input type="text" value="N/A"/>	<input type="text" value="N/A"/>
NORMAL LEVEL:	<input type="text" value="N/A"/>	<input type="text" value="N/A"/>
LOWER LEVEL:	<input type="text" value="N/A"/>	<input type="text" value="N/A"/>

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:

NOTES AND SPECIAL CONDITIONS

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.

NEW ZEALAND HEAVY VEHICLE BRAKE RULE 32015/5, SCHEDULE 5.

DATE:

17/09/2019

SIGNED:


CERTIFIER NAME & ID: JOHN HIRST JEH

SODC ENDORSED BY:

N/A

N/A

PHONE (BUS):

09-980-7300

FAX:

POSTAL ADDRESS:

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

SUSPENSION

	FRONT	REAR
SUSPENSION TYPE:	PNEUMATIC	PNEUMATIC
MAKE:	SAF_AIRSPRING	SAF_AIRSPRING
MODEL:	SAF_INTRA	SAF_INTRA
BELLOW SIZE:	2924, 350mm	2924, 350mm
HEIGHT CONTROL VALVE:	464 008 011 0	464 008 011 0
OTHER VALVES:	N/A	N/A
RIDE HEIGHT mm:	375	375
HANGER HEIGHT mm:	300	300
PEDESTAL HEIGHT mm:	100	100
LIFTAXLE:	N/A	N/A
TIPPING DUMP SWITCH:		
LIFTAXLE VALVE:		

AIR TANKS

AIR TANKS STANDARD:	SAE J10A / EN286-2	
	FRONT	REAR
BRAKE TANK SIZE: L	46	46
AUXILLARY TANK SIZE: L	N/A	25
PRESSURE PROTECTION:	WABCO PEM: 461 513 002 0	

AIR LINES

TEST POINTS:	
CONTROL LINE:	X 1
REAR CHAMBER:	X 2
DUOMATIC COLOUR CODED:	YES

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:

SERIAL NUMBERS:

- 1
- 2
- 3
- 4
- 5

1

2

3

4

5

1 + 3

Chamber and Valving Details**Chambers:**

TSE_CHAMBERS

TSE_CHAMBERS

20HSCLD

1416HTLD

SIZE:

65

64

STROKE: MILLIMETRES

BC 0041.0 Jul '07

BC0143.0

TEST REPORT #:

N/A

6.16

SPRING BRAKE FORCE: kN

N/A

4.5

HOLDOFF PRESSURE: kPa

WABCO PAN19

WABCO PAN19

FOUNDATION BRAKE:

69

69

LEVER LENGTH: MILLIMETRES

MAKE:

WABCO

480 102 08. 0 (MV)

70 kPa

ECU PART #:

WABCO

480 207 202 0 (12V)

70 kPa

3RD MODULATOR #:

YES

ELEX:

N/A

ANTI-COMPOUNDING:

SEALCO_SBR

110701

N/A

SPRING BRAKE RELAY:

SEALCO_YR

17600B

N/A

YARD RELEASE VALVE:

N/A

N/A

N/A

INLINE RELAY FITTED:

FRONT

REAR

FRONT FRICTION: μ

0.44

ECU DIRECTION:

 SMARTBOARD OPTI-LINK

Page 2

**NEW ZEALAND HEAVY VEHICLE BRAKE RULE 32015-5
WORKSHEET, PROCEDURE DOCUMENTATION SHEET
& CONFIRMATION OF COMPLIANCE**

CLIENT

MANUFACTURER:

ADDRESS:

FLEET:

VEHICLE DETAILS

VEHICLE TYPE:

3AFT

CERT #:

JH190916

YEAR:

2019

CALCULATION #:

TP51910

MAKE:

DOMETT

REGO:

N/A

MODEL:

C7001

LT400 #:

719552

CHASSIS #:

1889

ORDER NUMBER:

6875

VIN #:

7A9C70010K1023889

PRIME MOVER:

UNKNOWN

LOAD CONFIGURATION:

GVM: TONNES

UNIFORM DENSITY

GROUP RATINGS: TONNES

FRONT

REAR

WHEEL BASE: METRES

8.2

15

TARE: TONNES

FRONT

REAR

COG: METRES

0.8

2.4

TYRE SIZE:

2.6

3.4

ROLLING CIRCUMFERENCE: mm

2.645

2645

AXLE SPACING: METRES

1.266

1.266

TOTAL

6

REAR

265 70 R19.5

FRONT

265 70 R19.5

TYRE SIZE:

2.645

2645

AXLE SPACING: METRES

1.266

1.266