

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

WILLIAM SINCLAIR

ID

SWI

Plate number (optional)

VIN/chassis number

7A9E15019N2023217

Make

DOMETT

Component being certified:

Chassis

Load anchorage

Model (optional)

E1501

Log bolsters

Towing connection

Brakes

Certification category

HVEK

SRT

PSV stability

PSV rollover

Swept path

PBS

Description of work

CERTIFY NEW TRAILER TO SCHEDULE 5: NZ HEAVY VEHICLE BRAKE SPECIFICATION.
 CARRY OUT BRAKE CALCULATIONS, INSPECTION AND ECU END OF LINE PROTOCOL.
 SAFT PLATFORM
 RSS ON TYRE: 265 70 R19.5
 FOR SYSTEM ARCHITECTURE, PLEASE REFER TO PDS WORKSHEET & SCHEMATIC.
 REASON FOR CERTIFICATION: NEW TRAILER BUILD

Code/standard/rule certified to

LTR 32015

Component load rating(s)

30 Tonnes GVM

General drawing number(s)

N/A

**16 Tonne (Front brake mass)
 19 Tonne (Rear brake mass)**

Supporting documents

BRAKE RULE CERTIFICATE

JH221123/WS221117

BRAKE CALCULATION #

TP52592

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)

JOHN HIRST

J E H

Inspector's signature

WILLIAM SINCLAIR

S W I

Inspector's name (PRINT IN CAPS)



ID number

832096

Date

28-NOV-22

Number

832096

Cof vehicle inspector ID (if applicable)

Cof vehicle inspector signature (if applicable)

Date

All fields are mandatory unless otherwise stated.



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

CLIENT

MANUFACTURER: DOMETT TRAILERS
ADDRESS: TAURIKURA DRIVE, TAURANGA 3110
FLEET: MCLEOD HIABS

VEHICLE DETAILS

VEHICLE TYPE: SAFT PLATFORM **CERT #:** JH221123
YEAR: 2022 **CALCULATION #:** TP52592
MAKE: DOMETT **REGO #:** N/A
MODEL: E1501 **LT400 #:** 832096
CHASSIS #: 2217 **ORDER #:** 9126
VIN #: 7A9E15019N2023217

GVW: t 30 **PRIME MOVER:** UNKNOWN

LOAD CONFIGURATION: MIXED FREIGHT

GROUP RATINGS: t

FRONT	REAR
16	19

WHEEL BASE: m 6.68

UNLADEN COG m	MAX HEIGHT m	HEIGHT DECK m
1.025	4.3	1.143
2.071		

TARE: t	FRONT	REAR	TOTAL
	3.28	4	7.28

TYRE SIZE:	FRONT	REAR
	265 70 R19.5	265 70 R19.5

ROLLING CIRCUMFERENCE: mm	2645	2645
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AXLE SPACING: m	1.31	2.51
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BRAKE & AXLE DETAILS

	MAKE	MODEL	TEST REPORT
AXLE:	ROR_ASSALL_STEFFEN	ROR-SL9 TSA	361-005-16
POLE WHEEL FRONT:	90	POLE WHEEL REAR:	90
LINING MATERIAL:	MAT 5200-215	BRAKE FACTOR:	22.37
SENSED AXLES:	2 + 4	NOTES:	

SERIAL NUMBERS:	1	2	3	4	5
	N/A	N/A	N/A	N/A	N/A
	ROR SL9	ROR SL9	ROR SL9	ROR SL9	ROR SL9

CHAMBER AND VALVING DETAILS

	AXLE 1 & 2	AXLE 3 & 4	AXLE 5
CHAMBERS:	HALDEX_CHAMBERS	HALDEX_CHAMBERS	HALDEX_CHAMBERS
BRAND:	HALDEX_CHAMBERS	HALDEX_CHAMBERS	HALDEX_CHAMBERS
SIZE:	20, (125 200)	1624 (135 1624)	16, (125 160)
STROKE: mm	66	65	65
TEST REPORT #:	BC0175.0	BC0165.0	BC0169.0
SPRINGBRAKE FORCE: kN	N/A	6.003	N/A
HOLDOFF PRESSURE: Bar	N/A	5.2	N/A
FOUNDATION BRAKE:	HALDEX	HALDEX	HALDEX
LEVER LENGTH: mm	74	74	74

	MAKE:	PART NUMBER:	PMI PRESS. kPa
BRAKE VALVES:	WABCO	480 102 08. 0 (MV)	70 kPa
ECU PART #:	WABCO	480 207 202 0 (12V)	70 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:			

ECU DIRECTION: FRONT REAR **FRONT FRICTION: μ**

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

ELEX 446 122 070 0 TAILGUARD

SUSPENSION

	FRONT	REAR
SUSPENSION TYPE:	PNEUMATIC	ELECTRONIC
MAKE:	ROR_AIRSPRING	ROR_AIRSPRING
MODEL:	ROR_INTRA	ROR_INTRA
BELLOW SIZE:	SL9 TSA	SL9 TSA
HEIGHT CONTROL VALVE:	HALDEX 90554950	441 050 100 0
OTHER VALVES:	N/A	463 090 500 0 (eTASC)
RIDE HEIGHT mm :	330	330
HANGER HEIGHT mm :	175	175
PEDESTAL HEIGHT mm :	8	8
LIFTAXLE:		N/A
TIPPING DUMP SWITCH:		N/A
LIFTAXLE VALVE:		N/A
PRESSURE LIMITING:		N/A

AIR TANKS

AIR TANKS STANDARD:	SAE J10A / EN286-2	
	FRONT	REAR
BRAKE TANK SIZE: L	46	46 + 25
AUXILIARY TANK SIZE: L	N/A	46
PRESSURE PROTECTION:	SEALCO 1300	

AIR LINES

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

HEAVY VEHICLE BRAKE RULE - 32015 (TRAILER)

SCHEDULE 4

SCHEDULE 5

SECTION 6

APPROVED STD

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, SKETCHES AND SPECIAL CONDITIONS

FILES RECEIVED: 09.08.22

FILES CREATED: 24.11.22

FILES SENT: 24.11.22

REQUEST A COPY OF THE TARE WEIGHT DOCKET

FILES RETURNED AS COMPLETE: 30.11.2022
REASON FOR CERTIFICATION: NEW TRAILER BUILD

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, SCHEDULE 5.

DATE: 24/11/2022

SIGNED:

CERTIFIER NAME & ID: WILLIAM SINCLAIR SWI

SODC BY: JOHN HIRST JEH

PHONE (BUS): 09-980-7300

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



Statement of Design Compliance

S.O.D.C. number: JH221123
For Heavy Vehicle Brake Specification
(Schedule 5) of HV Brake Rule 32015

Vehicle details:

Make: DOMETT
Model: E1501
Chassis#: 2217
Vin#: 7A9E15019N2023217
GVM (Tonne): 30
Wheelbase (m): 6.68
Axle test report #: 361-005-16
Axle type: ROR-SL9 TSA
Suspension & Air bag Ø (mm): ROR_INTRA SL9 TSA
Trailer type: SAFT PLATFORM

Component Details:

	AXLE 1 & 2	AXLE 3 & 4
Lever length (mm):	74	74
Brake chamber size:	20, (125 200)	1624 (135 1624)
Tyre size:	265 70 R19.5	
Drawing number:	2217	
(for component reference)		
Brake calculation#:	TP52592	LT400# 832096

I declare that I am a Heavy Vehicle Specialist Certifier – Engineer and I hold a current valid appointment.

I certify that this vehicle component design and this certification comply in all respects with the Land Transport

Rule: **Vehicle Standards Compliance 2002**; My Deed of Appointment and applicable requirements. To the best

of my knowledge the information contained in this certificate is true and correct.

Date: 24/11/2022 **Name:** JOHN HIRST

SIGNED:

I, WILLIAM SINCLAIR, certify that the braking system has been assembled
and programmed*) to the requirements of this Design Certificate.

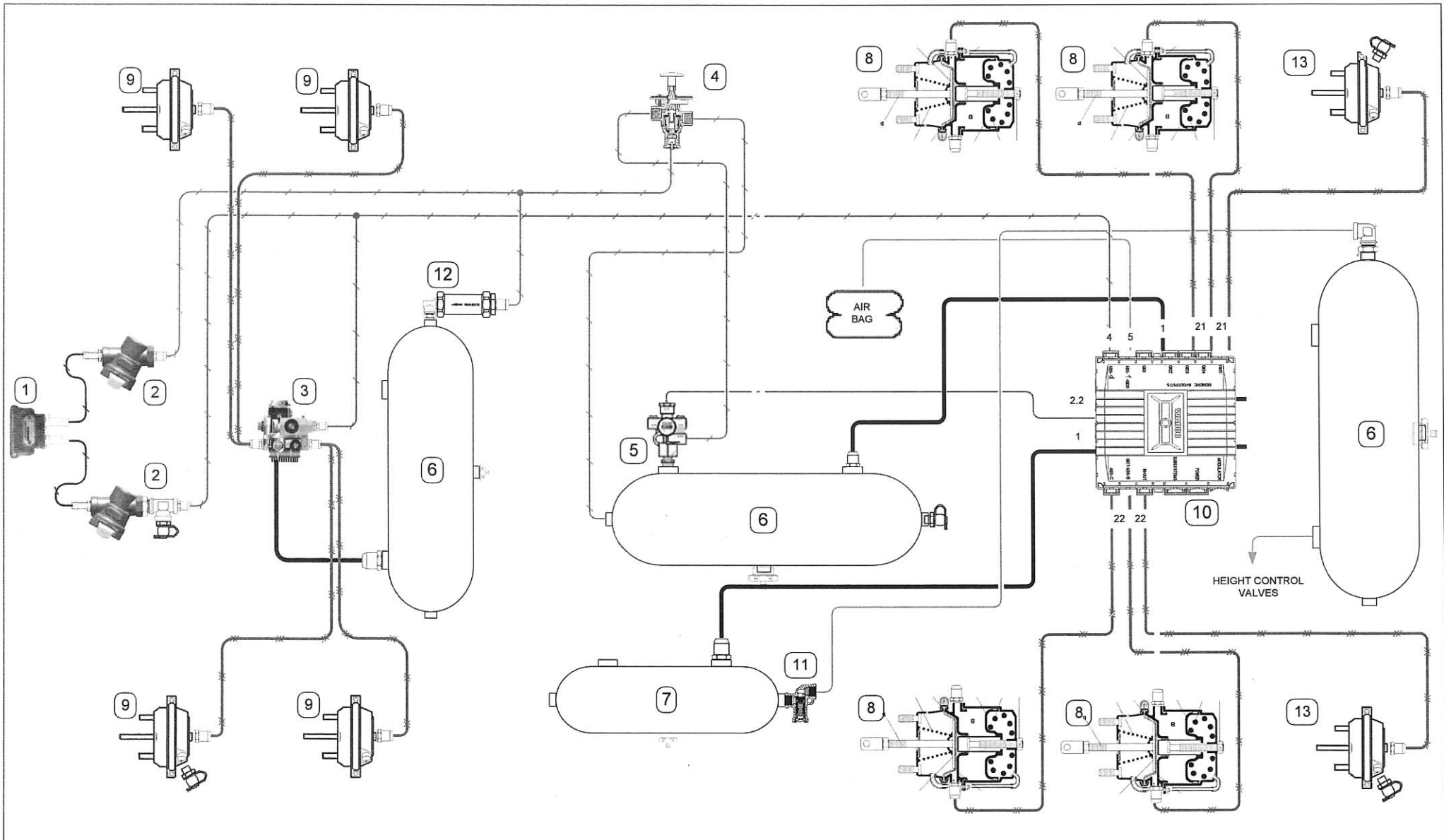
Signed:

Dated:

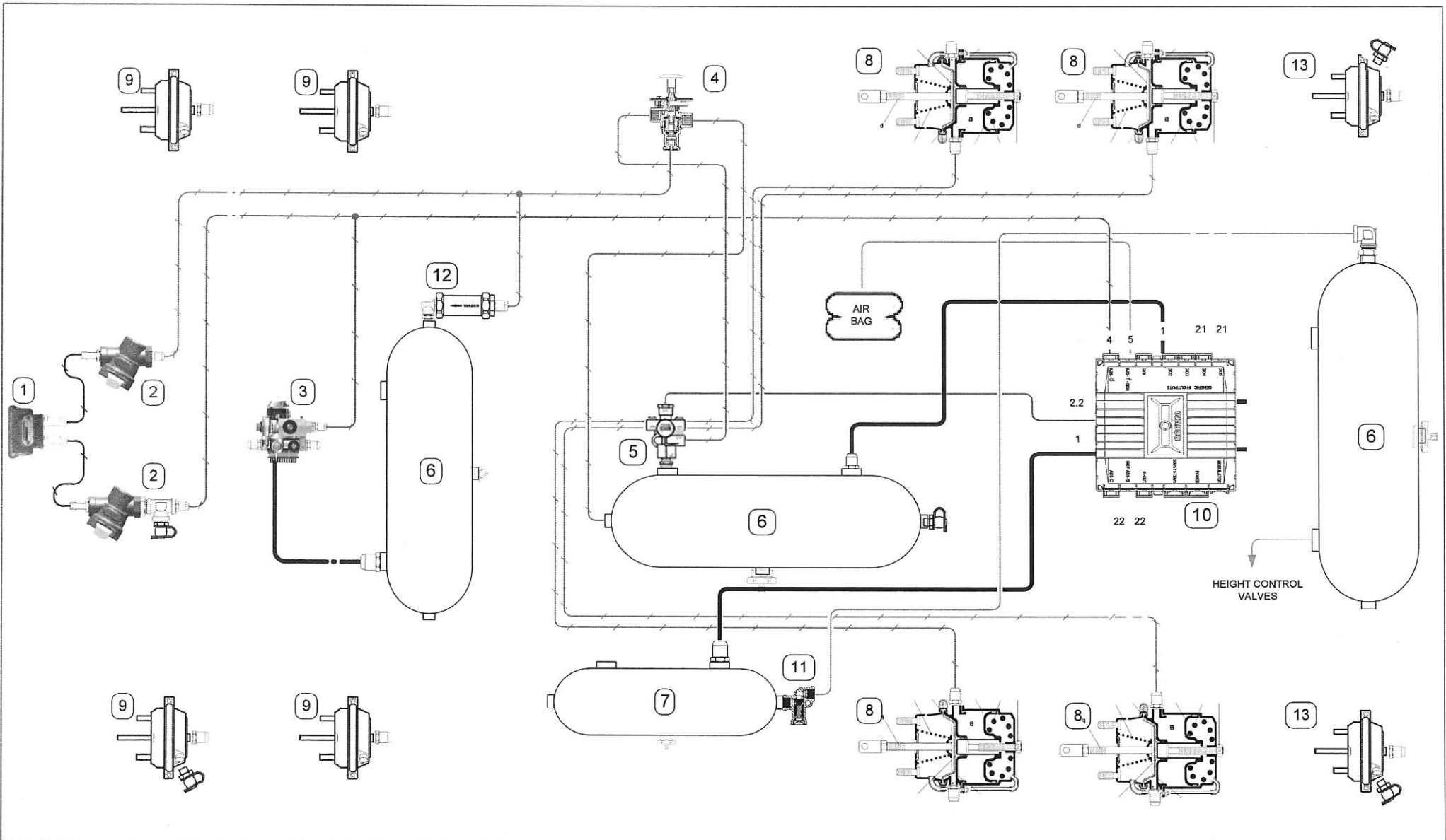
*) Programmed according to WABCO's End of Line protocol requirements where applicable and the vehicle and components correspond to the attached PDS worksheet.

TRANSPORT SPECIALTIES LTD

PO BOX 98-971, MANUKAU CITY, AUCKLAND 2241



DOMETT TRAILERS				ITEM	QTY.	PART NO.	DESCRIPTION	ITEM	QTY.	PART NO.	DESCRIPTION	PIPING LEGEND:	
Transpecs 5AFT PLATFORM 7A9E15019N2023217				1	1	452 804 001 0	WABCO DUOMATIC	9	4	20 [125 200 001]	HALDEX BRAKE CHAMBERS		3/8" Rubber
				2	2	432 500 020 0	WABCO LINE FILTER	10	1	480 102 08. 0	WABCO EBS ECU		3/8" Rubber
				3	1	480 207 202 0	WABCO EBS 3 RD MODULATOR	11	1	1300	SEALCO PPV		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.	13	2	16 [125 160 001]	HALDEX BRAKE CHAMBER		12mm Nylon
				6	3		46 LTR AIR TANK						8mm Nylon
				7	1		25 LTR AIR TANK						8mm Nylon
				8	4	1624 [135 1624 004]	HALDEX BRAKE CHAMBERS						8mm Nylon
WABCO Copyright Transpecs 2010 All rights reserved				SIZE	SPEC REFERENCE	SERVICE BRAKE LINES	REV						
SCALE				A4	2217		1						



DOMETT TRAILERS

5AFT PLATFORM
7A9E15019N2023217

ITEM	QTY.	PART NO.	DESCRIPTION	ITEM	QTY.	PART NO.	DESCRIPTION	PIPING LEGEND:
1	1	452 804 001 0	WABCO DUOMATIC	9	4	20 [125 200 001]	HALDEX BRAKE CHAMBERS	3/8" Rubber
2	2	432 500 020 0	WABCO LINE FILTER	10	1	480 102 08. 0	WABCO EBS ECU	3/8" Rubber
3	1	480 207 202 0	WABCO EBS 3 RD MODULATOR	11	1	1300	SEALCO PPV	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.	13	2	16 [125 160 001]	HALDEX BRAKE CHAMBER	12mm Nylon
6	3		46 LTR AIR TANK					8mm Nylon
7	1		25 LTR AIR TANK					8mm Nylon
8	4	1624 [135 1624 004]	HALDEX BRAKE CHAMBERS					8mm Nylon

Transpecs

WABCO
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SIZE	SPEC REFERENCE	REV
A4	2217	1
SCALE		
PARK BRAKE LINES		

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

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!
 WABCO/Brake V6.18.07.12 db 31.08.2018

distribution: DOMETT TRAILERS
 7A9E15019N2023217
 SODC: JH221123
 LT400: CJC

vehicle manufacturer: DOMETT TRAILERS

trailer model : SAFT PLATFORM

trailer type : 5-axle-full-trailer

remarks : air / hydraulic / VA suspension

WABCO TRAILER - EBS E
 TRISTOP 3+4: 16/24
 265/70 R 19,5
THE FRONT CHAMBERS ARE HALDEX LT20. 125 200 001

axle 1 + 2 + 3 + 4 + 5 : Assali Stefen, R, 361-005-16 ECE,

		<u>unladen</u>					<u>laden</u>
total mass	P	in	kg				35050
axle 1	P1	in	kg	7100			8000
axle 2	P2	in	kg	1600			8000
axle 3	P3	in	kg	1600			6350
axle 4	P4	in	kg	1300			6350
axle 5	P5	in	kg	1300			6350
wheel base	E	in	mm	6630	-	6730	
centre of gravity height	h	in	mm	1025			2070

		axle 1	axle 2	axle 3	axle 4	axle 5
no. of combined axles		1	1	1	1	1
no. of brake chambers per axle line	KDZ	1	2	2	2	2
The power output corresponds to	BZ 122.1	BZ 122.1BC	0165.2BC	0165.2BC	0169.2	
brake chamber manufacturer	Meritor	Meritor	Haldex	Haldex	Haldex	
chamber size	20.	20.	16/24	16/24	16"	
lever length	76	76	76	76	76	
brake factor	22.37	22.37	22.37	22.37	22.37	
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	6.0

calculation:

chamber pressure(rdyn min)	pH at z=22,5%bar	2.1	2.1	2.0	2.0	2.0
chamber pressure(rdyn max) <th>pH at z=22,5%bar</th> <td>2.1</td> <td>2.1</td> <td>2.0</td> <td>2.0</td> <td>2.0</td>	pH at z=22,5%bar	2.1	2.1	2.0	2.0	2.0
chamber press.(servo)pcha at pm6,5bar	bar	5.8	5.8	4.3	4.3	4.3
piston force	ThA at pm6,5bar	N	6702	4058	4058	4058
brake force(rdyn min)T lad. at pm6,5bar	N	54273	54273	32760	32760	32760
brake force(rdyn max)T lad. at pm6,5bar	N	54273	54273	32760	32760	32760
Brake force incl. 1 % rolling resistance	%	22.2	22.2	18.5	18.5	18.5

braking rate z laden 0.602 for rdyn min
 z = sum (TR)/PRmax 0.602 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.. 0 WABCO
EBS trailer modulator

brake cylinder: Haldex 135 1624 ... / 175 1624...

axle 4:

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

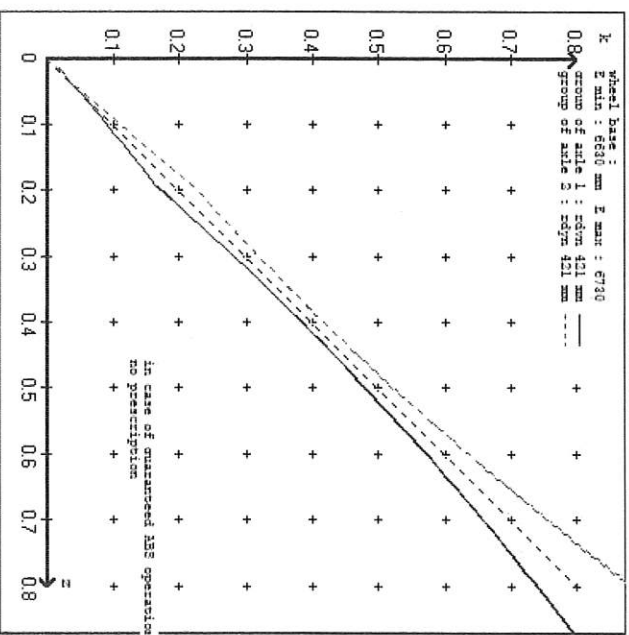
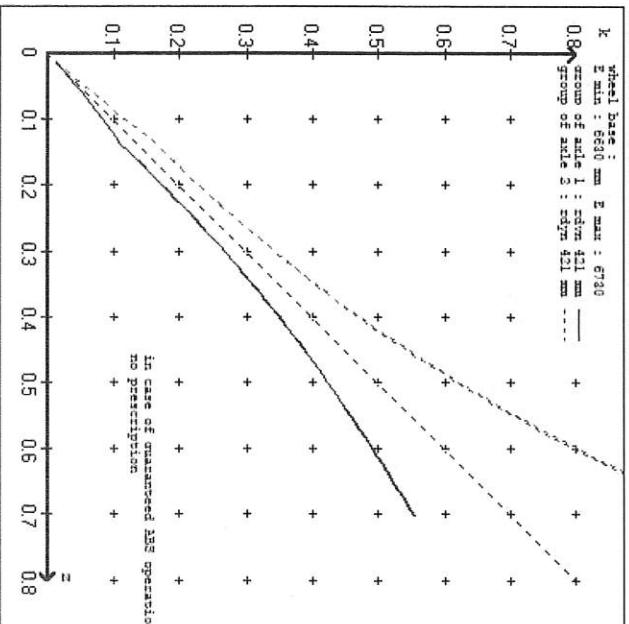
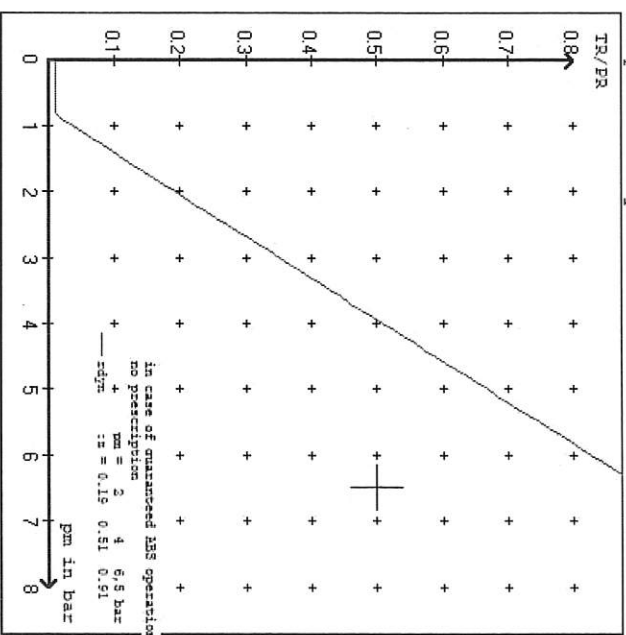
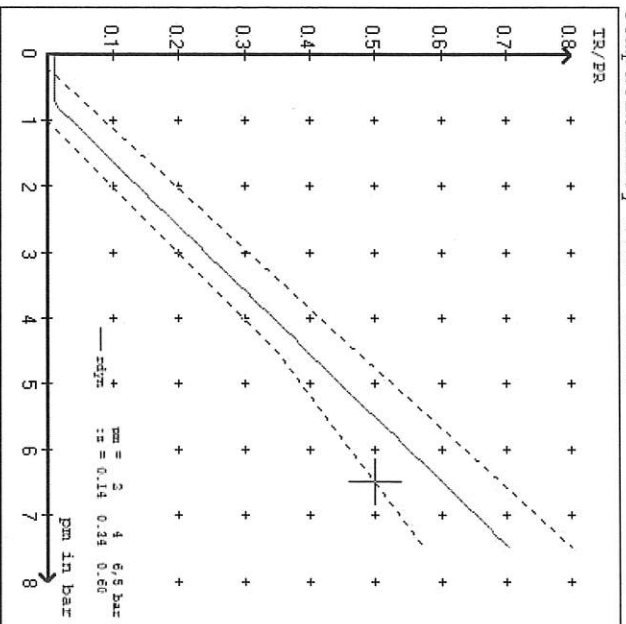
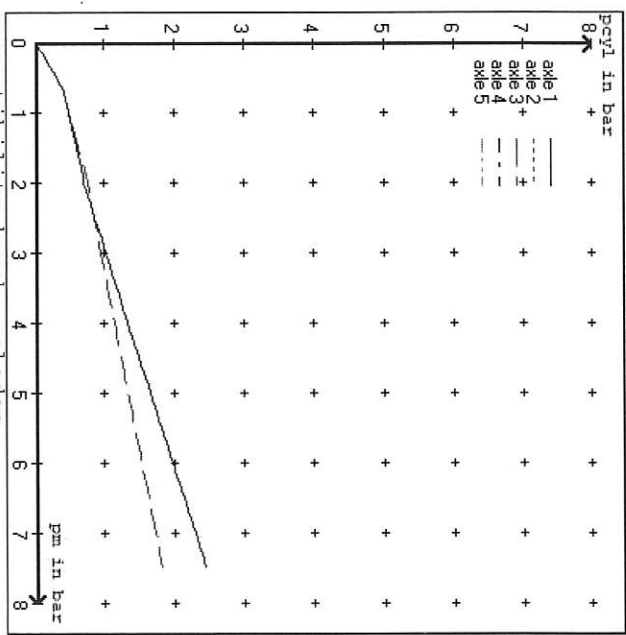
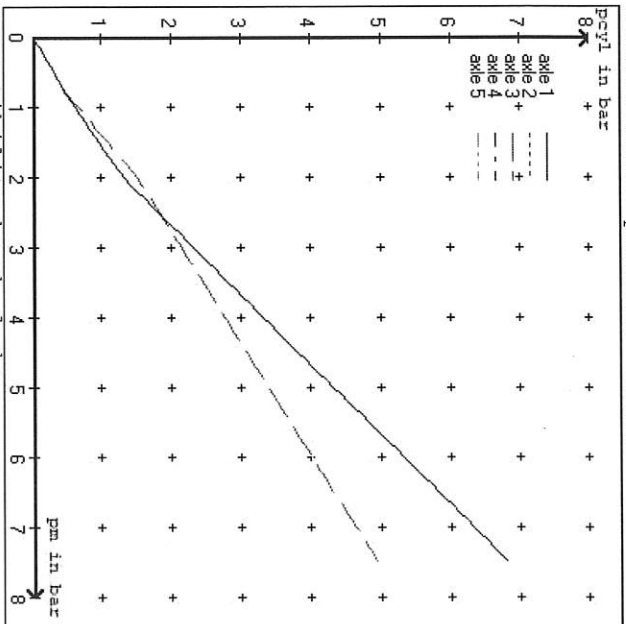
brake cylinder: Haldex 135 1624 ... / 175 1624...

axle 5:

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

brake cylinder: Haldex 125 160 0.. - 125 160 5.. / 125 160 6.. - 125 160 9..

test type III	(zIII = 0.30)	for rdyn min :	axle1	axle2	axle3	axle4	axle5
at pm 3.6 bar =>		pcha in bar :	2.9	2.9	2.5	2.5	2.5
test type III	(zIII = 0.06)	for rdyn min :	axle1	axle2	axle3	axle4	axle5
at pm 1.2 bar =>		pcha in bar :	0.8	0.8	0.9	0.9	0.9



In case of unannounced ABS operation
 no prescription

In case of unannounced ABS operation
 no prescription

vehicle manufacturer: DOMETT TRAILERS
 trailer model : 5AFT PLATFORM
 trailer type : 5-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 16/24 (Haldex) Lever length 76 mm
 axle 4 : 2 x type/diameter 16/24 (Haldex) Lever length 76 mm
 axle 5 : 2 x type/diameter 16" (Haldex) Lever length 76 mm

brake diagram :

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

EBS input data

=====

vehicle manufacturer: DOMETT TRAILERS
 trailer model : 5AFT PLATFORM
 trailer type : 5-axle-full-trailer
 brake calculation no. : TP 52592A

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
 2.0 bar z = 0.142
 (Laden condition) 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	1600	to be	2.1	8000	to be	0.4
2	1600	entered by	2.1	8000	entered by	0.4
3	1300	the vehicle	1.6	6350	the vehicle	0.4
4	1300	manufact.	1.6	6350	manufact.	0.4
5	1300		1.6	6350		0.4

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 5
axle load	axle load	axle load	axle load	axle load
pcyl	pcyl	pcyl	pcyl	pcyl
1600	1600	1300	1300	1300
2100	2100	1800	1800	1800
2600	2600	2300	2300	2300
3100	3100	2800	2800	2800
3600	3600	3300	3300	3300
4100	4100	3800	3800	3800
4600	4600	4300	4300	4300
5100	5100	4800	4800	4800
8000	8000	6350	6350	6350

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

axle 1 : reference axle: Assali Steflm or IC or TMen	361-005-16 ECE	brake lining: MAT 5200-215
test report :		date : HL090216 09.02.2016
axle 2 : reference axle: Assali Steflm or IC or TMen	361-005-16 ECE	brake lining: MAT 5200-215
test report :		date : HL090216 09.02.2016
axle 3 : reference axle: Assali Steflm or IC or TMen	361-005-16 ECE	brake lining: MAT 5200-215
test report :		date : HL090216 09.02.2016
axle 4 : reference axle: Assali Steflm or IC or TMen	361-005-16 ECE	brake lining: MAT 5200-215
test report :		date : HL090216 09.02.2016
axle 5 : reference axle: Assali Steflm or IC or TMen	361-005-16 ECE	brake lining: MAT 5200-215
test report :		date : HL090216 09.02.2016

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 = 25.1 % Fe
axle 2	(rdyn 421 mm)	T = 25.1 % Fe
axle 3	(rdyn 421 mm)	T = 17.6 % Fe
axle 4	(rdyn 421 mm)	T = 17.6 % Fe
axle 5	(rdyn 421 mm)	T = 17.6 % Fe

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

axle 1	(sp = 58 mm)	S = 42 mm
axle 2	(sp = 58 mm)	S = 42 mm
axle 3	(sp = 50 mm)	S = 42 mm
axle 4	(sp = 50 mm)	S = 42 mm
axle 5	(sp = 50 mm)	S = 42 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 = 4058 N
axle4	ThA = 4058 N
axle5	ThA = 4058 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 = 39378 N
axle 2	(rdyn 421 mm)	T = 39378 N
axle 3	(rdyn 421 mm)	T = 23814 N
axle 4	(rdyn 421 mm)	T = 23814 N
axle 5	(rdyn 421 mm)	T = 23814 N

basic test	type III
of subject	(calculated)
trailer (E)	residual
	(hot)braking
	0.44

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

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 = 39378 N
axle 2	(rdyn 421 mm)	T = 39378 N
axle 3	(rdyn 421 mm)	T = 23814 N
axle 4	(rdyn 421 mm)	T = 23814 N
axle 5	(rdyn 421 mm)	T = 23814 N

basic test	type III
of subject	(calculated)
trailer (E)	residual
	(hot)braking
	0.44

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

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	16/24	16/24
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 Haldex	135	162
sp.brake chamber no Haldex	175	162
release pressure	5.2	5.2
	pls	in bar

calculation:

```

ratio until road
iFb = lBh*Eta*C*rBt/(rBn*rrstat)
for rstat in mm
brake force of spring br. Tf in N
Tf = (TFZ*KDZ-2*Co/lBh)*iFb
braking rate
zf = sum (Tf)/P + 0,01
zf laden 0.302
    
```

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 = 5131 mm for E = 6630 mm
=====
min Ef = 5200 mm for E = 6730 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 = 2070 mm height of center of gravity - laden
PR = 19050 kg maximum bogie mass - laden
P = 35050 kg maximum total mass - laden
nf = 2 no. of axle(s) with TRISTOP spring brake actuators
ng = 3 no. of bogie axle(s)
    
```

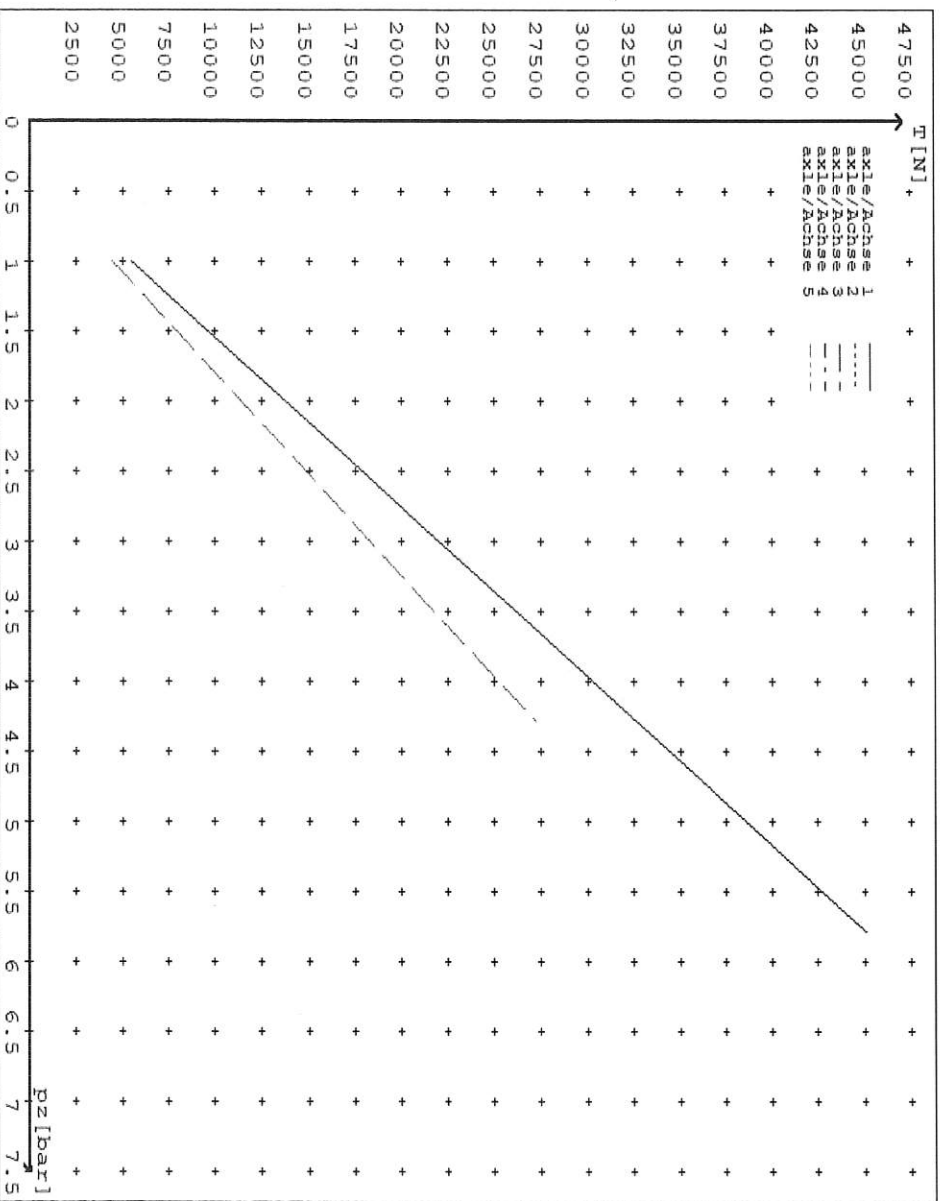
reference values

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

	pz [bar]	T [N]	T [N]
axle 1	1.0 5.8	5408 45077	
axle 2	1.0 5.8	5408 45077	
axle 3	1.0 4.3		4408 27209
axle 4	1.0 4.3		4408 27209
axle 5	1.0 4.3		4408 27209

VIN - no.:

	Axle(s) / Achse(n)				
Brake cylinder type (service / parking)	20. /	20. /	16/24	16/24	16" /
Bremszylinder Typ (Betrieb / Fest)	65	65	65	65	65
Maximum stroke smax = ...mm					
maximaler Hub smax = ...mm					
Lever length = ...mm	76	76	76	76	76
Hebellänge = ...mm					



WABCO START-UP LOG

System	Trailer EBS-E	WABCO part number	480 102 080 0
Production date	2022-11-03	Serial number	897042692000K
Serial number (modulator)	000000563257		
Fingerprint Customer EOL / Customer Development / Flash Program	W511308 / 2022-11-29 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00		

WABCO

TRAILER EBS-E

GGV/ADR TUEH TB 2007 - 019.00
361-005-16

HERSTELLER MANUFACTURER CONSTRUCTEUR	DOMETT TRAILERS
TYPE	5AFT PLATFORM
CHASSIS CHASSIS NUMBER NUMERO DE CHASSIS	7A9E15019N2023217
BREMSEBEGRIFFUNG BRAKE CALCULATION NO. CALCUL. DE FREMAGE NO.	TP52592A
POLARIZIERUNG POLARIZATION DIRECTION	90
ABS SYSTEM ABS SYSTEM	4S/3M
Einzelventil Single Valve Mono simple	
Zweigelabspeuerung Twin Valve Moins jumelle	X
Leitachse Steering axle Essieu avant	
Kippsitzliches Fahrzeug Critical Trailer Vehicule critique	
Subsystems	I/O 24N

GIO	Pin1	Pin3	Pin4
1	TAV1	MH	TAV1
2	eTASC	--	eTASC
3	ALS2	ALS2	--
4	--	--	LS1
5	DIAG	DIAG	DIAG
6	--	--	--
7	--	--	--

ACHSE TYPE Essieu	pm (bar)	6.5	pm (bar)	0.7	2.0	6.5	Pz	TR (dan)	Pz						
										TR (dan)	Pz				
1	1600	0.6	2.1	8000	4.4	0.4	1.3	---	5.8	-	20	66	76	540	4507
2	1600	0.6	2.1	8000	4.4	0.4	1.3	---	5.8	-	20	66	76	540	4507
3	1300	0.4	1.6	6350	3.4	0.4	1.5	---	4.3	-	16 / 24	65	76	440	2720
4	1300	0.4	1.6	6350	3.4	0.4	1.5	---	4.3	-	16 / 24	65	76	440	2720
5	1300	0.4	1.6	6350	3.4	0.4	1.5	---	4.3	1	16	65	76	440	2720

TEBSE

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 TRAILERS	Vehicle ident. no.	7A9E15019N2023217
Vehicle type	5AFT PLATFORM	Odometer reading	0.0 km
Next service	0 km	Trip reading	0.0 km
Tester	Billy Sinclair		
Date	2022-11-29 1:10:38 pm	Signature	

WABCO START-UP LOG

Vehicle Ident. no

7A9E15019N2023217

Configuration of the lifting axle valves		Lifting axle 1	LACV	Lifting axle 2	LACV
Braking pressures		Predominance CAN	0.0	Predominance pm	0.0
Distance Axles / Track width					
Track width		2.04		Second axle - Additional axle	
Coupling head - First axle		2.7		Additional axle - Fourth axle	
First axle - Second axle		1.3		Fourth axle - Fifth axle	
Diverse					
X	Warning lamp goes out after 2 seconds (ECE-R13)	Tire circumference Axle c-d		2650	
-	Warning lamp goes out at v > 7 km/h	Tire circumference Axle e-f		2650	
CAN messages					
X	EBS23 Standard				
-	EBS23 group bit				
-	EBS22 no output of total axle load				
-	RGE22 no output for single axle loads				
-	Indicate service moment via lamp				
	Service Interval (km)	0	X	Support 12 V CAN Bus	
TEBS function selection					
Standard functions			Subsystems		
-	Speed switch1 (ISS1)	Demand pressure sensor on R/R (DPS-RR)			
-	Speed switch2 (ISS2)	Output emergency brake light (EBA)			
-	Lifting axle control1 (ILS1)	Trailer Safety Brake (TSB)			
-	Lifting axle control2 (ILS2)	Generic Operating Hour Counter (GOHC)			
X	External axle load sensor e-f (ALS2)	ELM (ELM)			
-	Traction help (TH)	External ECAS (eECAS)			
-	Lifting axle forced lowering (FL)	Bounce Control (relaxation function) (TR-SW)			
-	Wear final value (LW)	Brake release function (BR-SW)			
X	Diagnosis / Telematic system GIO5 (DIAG)	Lifting/Lowering button (LF-SWLW-SW)			
-	Road finisher brake/ Trailer extending control (FB)	Normal level button (NL-SW)			
X	Stop light supply (24N)	Shut-off switch Level control (LC-SW)			
-	Unloading level (D-SW)	Freely configurable digital function (FKD-I)			
-	Normal level 4 (FN4-SW)	- with output (FKD-O)			
Special functions			Freely configurable analogue function (FKA-I)		
- Traction help with res. press. maint. (TH+)			- with output (FKA-O)		
X	OptiTum / Optiload (MH)	Freely configurable function 1 (FCF1)			
-	OptiTum / Optiload plus (MH+)	Freely configurable function 2 (FCF2)			
-	External axle load sensor c-d (ALS1)	Immobilizer (IM)			
-	Second ext. axle load sensor c-d (S-ALS1)	- Output for buzzer (IM-SU)			
-	External demand pressure sensor (DPS)	Forklift operation (FLC)			
-	ABS active signal (RSS-O)				
-	RSS active signal (RSS-O)				
-	Speed signal (V-S)				
-	Steady positive voltage 1 (24 V-O1)				
-	Steady positive voltage 2 (24 V-O2)				
-	Tilt alert (Tilt warning) (TW)				
-	Steering axle lock (SAC)				

WAABCO START-UP LOG

Vehicle Ident. no.

7A9E15019N2023217

ISS	On (km/h)	Off (km/h)	Level Inverted	RTR Pulse	Cable break detection	Light	Valve
ISS 1	15	10	-	X	-	-	X
ISS 2	15	10	-	X	-	-	X

Automatic lifting axle control		Lifting axle function (OptiTurn/Optiload) interrupted with parking brake engaged		Lower with ignition off		Tag axle residual pressure regulation		Residual pressure Tag axle (bar)	
Lifting axle	Lift (Bar)	Lower (Bar)	Lift (km/h)						
Lifting axle 1	0.2	3.4	0					X	
Lifting axle 2	0.0							-	0.5

Lifting axle control with Optiload or Forklift recognition			
Raise lifting axle 1 (bar)	0.0	Raise lifting axle 2 (bar)	0.0
Lower lifting axle 1 (bar)	0.0	Lower lifting axle 2 (bar)	0.0

Forced lowering lifting axle		Activation via SmartBoard		Only 2nd lifting axle	
X	Button	-	Switch	X	All lifting axles

Automatic wheelbase control Switch level detection			
-	+24 V only	-	Ground only
-	Continuous actuation	X	Ground and +24 V

Traction help		Traction help automatically with curve detection		Only partial/full load	
-	Traction help	-	Traction help with ignition on		
		Terminate at (km/h)	Pressure limitation (bar)	Duration (s)	
		30	0.0	0	
		- Off-road traction help	30	0.0	0
	Activation	X	Button	-	Button and brake

OptiTurn		Curve detection with partial/full load		Terminate at (km/h)	
-	Underspeed	-	Via SmartBoard	-	Pressure limitation (bar)
					20
-	Curve detection				3.4

Optiload		Activate with		Automatic at speed	
	Start (km/h)	0	0.0	-	Only at partial/full load
	Pressure limitation (bar)	0.0		-	Manually with button
	2nd lifting axle characteristic	-			

Level control		Normal level 2		Normal level 3		Normal level 4/unloading level	
	Speed at which adjustment to normal level is triggered automatically (RTR)	-	15	X	Dead-man switch (continuous button actuation)		
	Front axle	0	0	0			
	Rear axle	0	0	0			
	Speed on (km/h)		60				
	Speed off (km/h)		40				10
	Activation via	-	Smartboard	-	Remote control unit	-	Smartboard
	- Separate lifting/lowering left/right via remote control unit						
	- Level control shut-off via SmartBoard						
	Unloading level switch	X	Mechanical	-	Proximity switch	-	Proximity switch with separate switch

WABCO START-UP LOG

Vehicle ident. no.

7A9E15019N2023217

ECAS special parameter		Tolerances	
Control delay		Tolerance front axle (mm)	10
Control delay when stationary (s)	1	Tolerance rear axle (mm)	10
Control delay when driving (s)	60	Permissible right/left deviation rear axle (mm)	20
Control delay at stand-by (s)	15		
Stop time for normal level control with lift/lower button (s)	2.0	Maximum deviation right/left or front/rear outside the levels during the lifting/lowering process (s)	50
Lowering			
Lower onto buffer	-	Lifting axle offset	-
Lower to lower calibrated level	X	Lifting axle offset	-
		Reference of normal level	-
		To the lowest normal level	-
		To the currently selected normal level	X
Stand-by operation		Normal level height increase when lifting axle is raised (mm)	0
Trailer battery installed	-	Normal level height increase with traction help/OptTurn/OptLoad (mm)	0
Activation of stand-by mode			
- By pressing Stop button			
X Automatically with ignition off			
Tolerance in Stand-by (mm)	20		
Stand-by time (h/min)	1/00	ECAS with eTASC / Rotary slide valve	
		After ignition, actual level is the same as nominal level	X
Plausibility		No level control when stationary	-
Limit plausibility check during the lowering process at the front axle (mm)	20	Manual lifting / lowering (eTASC)	X
Limit plausibility check during the lowering process at the rear axle (mm)	20		
Period plausibility check (s)	30	Other functions	
		Tire deflection compensation (25 mm when fully laden)	-
Green ECAS warning lamp		Front (mm)	25
Installed	-	Rear (mm)	25
Behaviour upon faults	as LED	Normal level control with reduction in bellows pressure differences (only ECAS 2-point control)	-
Flashes 4 times after ignition on	-	Permissible bellows pressure	12.0
Flashes permanently	X	Vehicle speed up to which manual height changes are permitted (km/h)	10
Immobilizer			
Buzzer output	X permanent	- periodic	
Connected Components	X Valve (buzzer)	- Light	
Emergency release function		-	
Unlock only with engaged parking brake		X	
Proximity switch			
Switching threshold (uA)			600
Steering axle lock			
as of speed	30	After reverse driving, disable up to speed (km/h)	10
Level inverted	-	Activation via switch	-
with raised lifting axle	X	Reverse detection via Electronic Extension Module	X

WABCO START-UP LOG

Vehicle ident. no.

7A9E15019N2023217

Road finisher brake / Trailer Extending Control		Pressure test pm (bar)	1.5
<ul style="list-style-type: none"> - Without automatic load-dependent braking pressure (LSV) - Pressure adjustment with hand brake lever - Actuation only via SmartBoard (no switch required) 		Function active until (km/h)	10
Switch		Level recognition	
<ul style="list-style-type: none"> X Mechanical switch - Proximity switch - Proximity switch and separate switch - Road finisher brake. Deactivation unloading level during road finisher operation - Trailer Extending Control, only brake rear aggregate 		<ul style="list-style-type: none"> X Ground only - +24 V only (with resistance cable) 	
Trailer Safety Brake			
<ul style="list-style-type: none"> - Tank truck/Container truck 		X Tipper	
Input signal	Proximity switch	- User-defined	Function can be deactivated with SmartBoard or Trailer Remote Control
Warning brake from	18	Pressure threshold 3.0	
		Braking from 28	Display via separate warning lamp
Emergency brake light output			
<ul style="list-style-type: none"> - Actuation permanent - LED installed 		X Actuation periodic	
		3 Frequency (Hz)	
Bounce Control			
<ul style="list-style-type: none"> - Activation only via SmartBoard (no push-button required) 		- Activation only via SmartBoard	
		- For wood hauling trailers up to 5 km/h	
Freely configurable digital function (GIO-FKD)		Freely configurable analogue function (GIO-FKA)	
Function name		Function name	
Input		Input	
If switch	and speed	When input voltage	and speed
- opens	X greater than	Voltage	X greater than
X closes	- less than	X exceeds	- less than
	15 km/h	- drops below	15 km/h
Function after (s)	180	Function after (s)	180
<ul style="list-style-type: none"> - Switch output - Invert output - Save event 		<ul style="list-style-type: none"> - Switch output - Invert output - Save event 	
Connected component		Connected component	
X Valve	- Light	X Valve	- Light
Duration of function for (s)	180	Duration of function for (s)	180
or until speed		or until speed	
30 km/h	X exceeds	30 km/h	X exceeds
	- drops below		- drops below
Connected component		Connected component	
Valve	Light	Cable break detection	No stand-by mode
ABS active signal	X	X	X
RSS active signal	X	-	-
Steady positive voltage 1		X	X
Steady positive voltage 2		X	X
Speed signal		X	X

WABCO START-UP LOG

Vehicle ident. no.

7A9E15019N2023217

Operating Hour Counter

Service name			-	Display with ABS light
Service interval	0	Internal signal	-	Display via external signal light
Input signal			X	Service interval can be reset
Signal name	--		-	Changeable service interval
Conditions	Active		Threshold value (V)	3.5

Tilt alert (Tilt warning)

Maximum permissible tilt angle (degree)	2	Connected component
-	Display only via SmartBoard (no output required!)	X Valve
		- Light

WABCO

TRAILER EBS-E

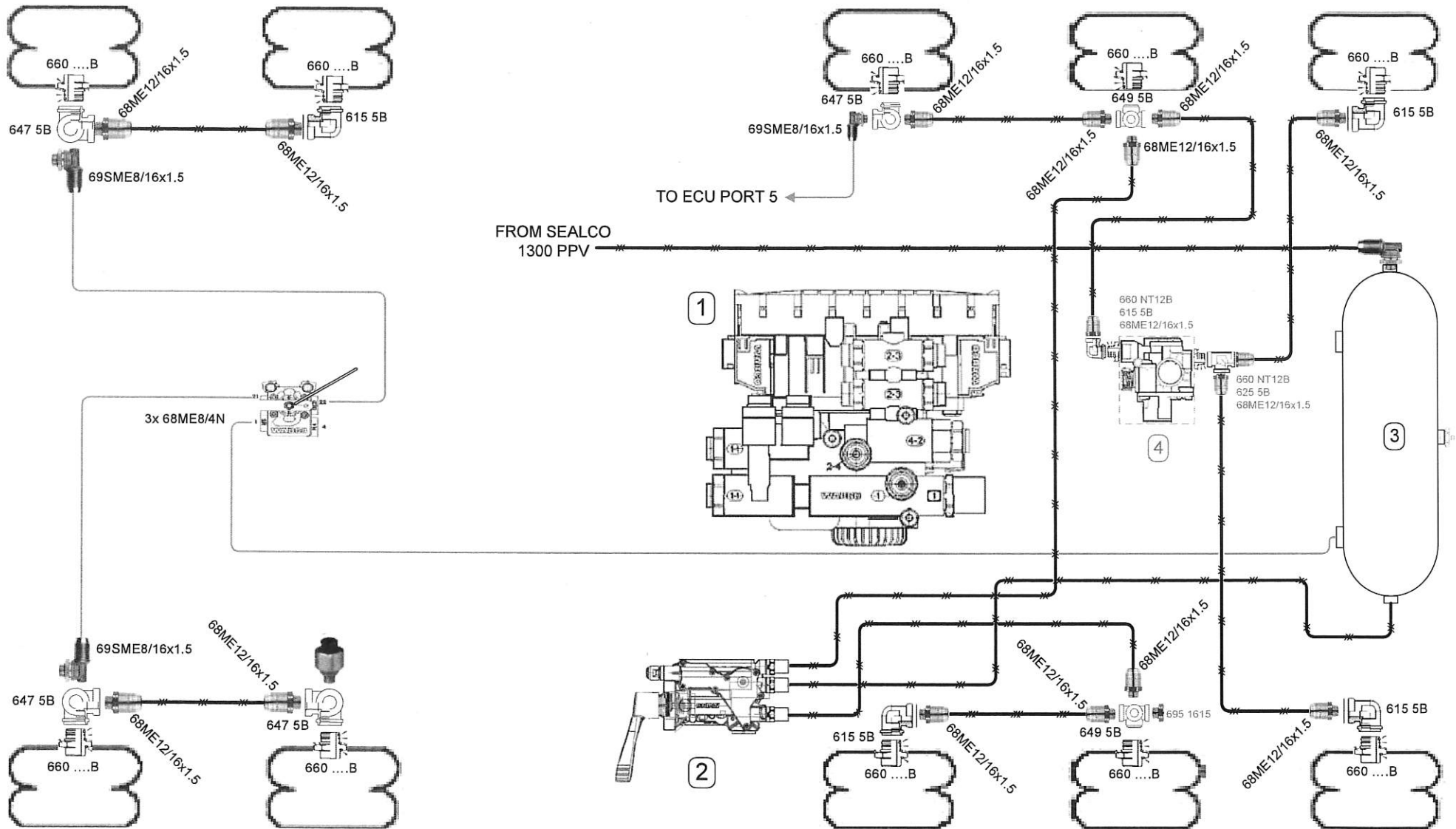
GGV/SADR TUEH TB 2007 - 019.0X
361-005-16

TRIEBERLEITER MANUFACTURER CONSTRUCTEUR	DOMETT TRAILERS
TYPE TYPE	SAFT PLATFORM
VEHICLE IDENT. NUMBER CHASSIS NUMBER NUMERO DE CHASSIS	7A9E15019N2023217
BRANDBEZEICHNUNGSPART PART NUMBER PART NO.	TP52592A
POLE ANZAHL/AXIAL c-d l-r POLE WHEEL TERTIARY c-d l-r DENT'S ROUE DENTEE c-d l-r	90 90
RSS Single Tire Moine simple	
RSS Zwillingsbereifung Vvin Tire Moine jumele	X
Steering axle Lentachasse	
Kippkränisches Fahrzeug Critical angle Vehicle straddle	
ABS-System Ass-System Systeme ABS	4S/3M
Subsystems	I/O 24N

GIO	Pin1	Pin3	Pin4
1	TAV1	MH	TAV1
2	eTASC	---	eTASC
3	ALS2	ALS2	---
4	---	---	LS1
5	DIAG	DIAG	DIAG
6	---	---	---
7	---	---	---



ACHSE ESSEU	pm (bar)	pm (bar)	pm (bar)			TR (dan)					
			0.7	2.0	6.5						
1	1600 0.6	2.1 8000	4.4 0.4	1.3 1.3	5.8	20	66	76	540	4507	
2	1600 0.6	2.1 8000	4.4 0.4	1.3 1.3	5.8	20	66	76	540	4507	
3	1300 0.4	1.6 6350	3.4 0.4	1.5 1.5	4.3	-	16 / 24	65	76	440	2720
4	1300 0.4	1.6 6350	3.4 0.4	1.5 1.5	4.3	-	16 / 24	65	76	440	2720
5	1300 0.4	1.6 6350	3.4 0.4	1.5 1.5	4.3	1	16	65	76	440	2720

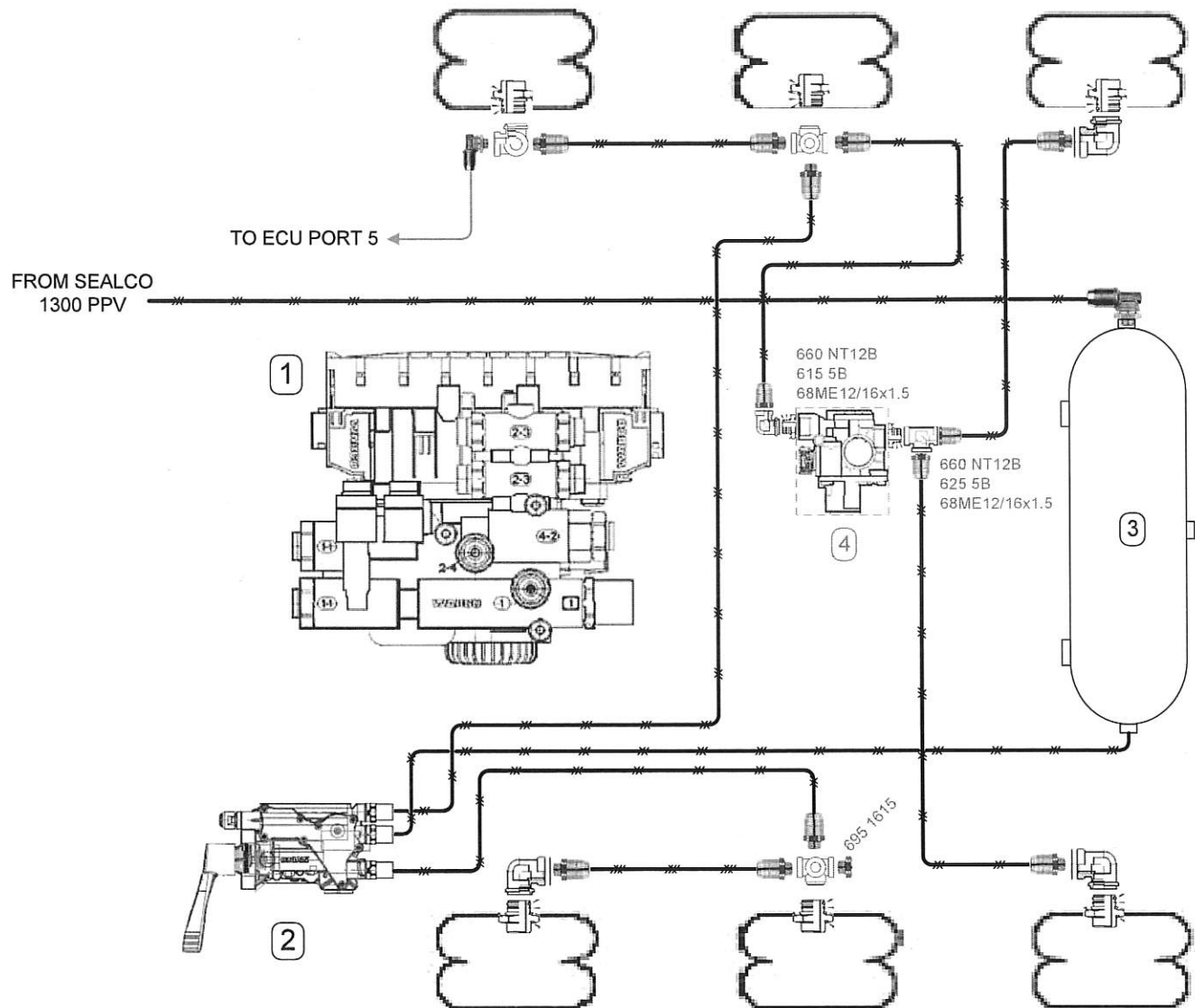


ITEM		QTY.	PART NO.	DESCRIPTION	ITEM	QTY.	PART NO.	DESCRIPTION	PIPING LEGEND:
1		1	480 102 080 0	WABCO TEBS E (IN BRAKE KIT)					3/8" Rubber
2		1	463 090 500 0	e-TASC VALVE					3/8" Rubber
3		1		AIR TANK					12mm Nylon
4		1	472 195 052 0	TAG AXLE VALVE					15mm Nylon
									12mm Nylon
									8mm Nylon
									8mm Nylon
									8mm Nylon

		eTASC 1 Point control with Manoeuvre Assist 'Add-on' kit		
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PAGE NO: 1/3	J HIRST	E & OE		

ECAS/MAAOK

- 1x 472 192 052 0
- 1x 449 445 030 0
- 2x 660 NT12B
- 1x 615 5B
- 1x 625 5B
- 2x 68ME12/16x1.5
- 1x 695 1615



	eTASC 1 Point control with Manoeuvre Assist 'Add-on' kit				ITEM	QTY.	PART NO.	DESCRIPTION	ITEM	QTY.	PART NO.	DESCRIPTION	PIPING LEGEND:
	ITEM	SYSTEM	ASSY/KIT NUMBER	DATE	1	1	480 102 080 0	WABCO TEBS E (IN BRAKE KIT)					3/8" Rubber
				2	1	463 090 500 0	e-TASC VALVE					3/8" Rubber	
				3	1		AIR TANK					12mm Nylon	
				4	1	472 195 052 0	TAG AXLE VALVE					15mm Nylon	
												12mm Nylon	
												8mm Nylon	
												8mm Nylon	
												8mm Nylon	
												8mm Nylon	

WABCO

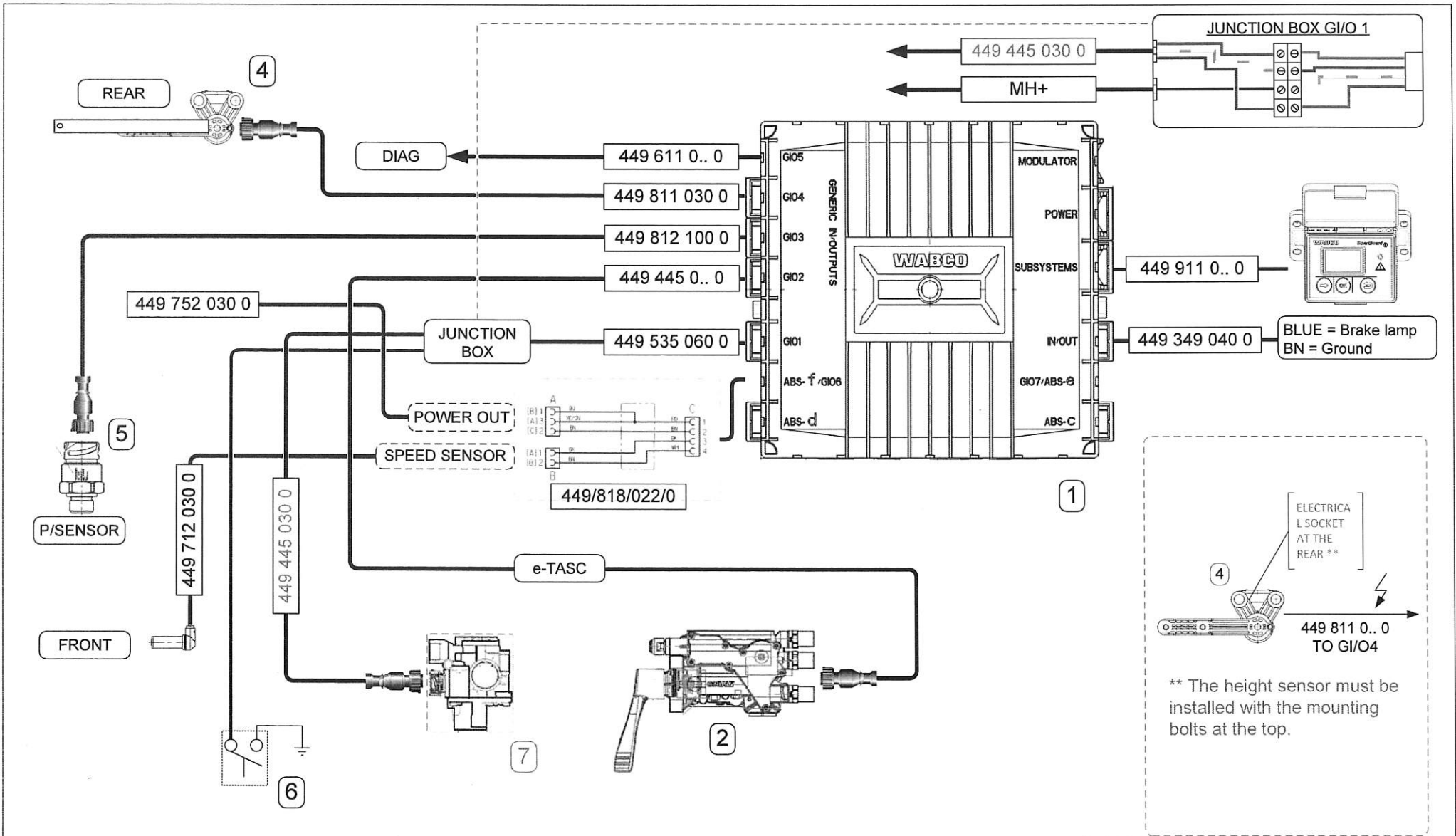
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PAGE NO: 2/3

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J HIRST

E & OE



ITEM		QTY.	PART NO.	DESCRIPTION
1		1	480 102 080 0	WABCO TEBS E (PREMIUM)
2		1	463 090 500 0	eTASC
4		1	463 050 100 0	ECAS HEIGHT SENSOR
5		1	441 044 101 0	AIR BAG PRESSURE SENSOR
6		1		MOMENTARY SWITCH
7		1	472 195 052 0	TAG AXLE VALVE

eTASC 1 Point control with Manoeuvre Assist 'Add-on' kit			
ITEM	SYSTEM	ASSY/KIT NUMBER	DATE
		ECAS/MAAOK	12.05.17
PAGE NO. 3/3		J HIRST	E & OE

THE INSTALLATION POSITION OF THE FITTINGS IN THE AIR BAG IS FOR DEMONSTRATION PURPOSES ONLY. THE TRAILER MANUFACTURER CAN ALTER THE POSITION TO SUIT TRAILER / SUSPENSION DESIGN.