

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

Vehicle registration (optional) VIN/chassis number 7A9E2001XJ1023775

Make DOMETT TRAILERS Component being certified: Chassis Load anchorage

Model (optional) 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 32015/4 RSS ON: TWIN TYRES / SUPER SINGLES SIZE = 265 70 R 19.5

Code/standard/rule certified to LTR 32015/4 Component load rating(s) 32 Tonnes GVM 35 Tonnes (Group ratings)

Supporting documents BRAKE CODE CERTIFICATE JH180905 BRAKE CALCULATION # TP51606

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

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

Declaration Designer's ID Inspector's signature Ron Pratt Inspector's name (PRINT IN CAPS) RON PRATT ID number TRSP Date 05-Sep-2018 Number 652371

CoF vehicle inspector ID (if applicable) CoF vehicle inspector signature (if applicable) Date

All fields are mandatory unless otherwise stated.



(Cnr Kerrs &amp; Ash Road, Wiri. PO Box 98 971, Manukau City 2241, NZ)

**Statement of Design Compliance****S.O.D.C. number: JH180905**For Heavy vehicle brake specification  
(Schedule 5) of HV Brake Rule 32015/4**Vehicle details:**

<b>Make:</b>	DOMETT TRAILERS
<b>Model:</b>	E2001 PH
<b>VIN#:</b>	7A9E2001XJ1023775
<b>Chassis#:</b>	1775
<b>GCM (kgs):</b>	N/A
<b>GVM (kgs):</b>	32,000
<b>Wheelbase (mm):</b>	7220 - 7700
<b>Axle test report #:</b>	TDB0749 (SAF INTRADISC w/2619V AIR BAG)
<b>Type:</b>	5AFT DISC BRAKE

**Component Details:**

	<b>Front</b>	<b>Rear</b>
<b>Lever length (mm):</b>	69	69
<b>Brake chamber size:</b>	TSE:20HSCLD64	TSE:1416HTLD64 [14HSCLD64]
<b>Tyre size:</b>	265 70 R 19.5	265 70 R 19.5

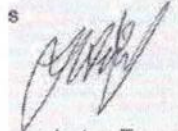
<b>Drawing number:</b> (for component reference)	<b>1775</b>
<b>Brake calculation#:</b>	TP 51606
<b>Brake system:</b>	WABCO TEBS-E (Multi-volt) ECU FACING FORWARDS

*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:** 04 Sept 2018

s


**Name:** John Hirst (HVEK)**Certifier ID:** JEH

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

**Signed:** R S PRATT  **LT400: 652371****Dated:** 06/09/2018

\*) Programmed according to WABCO's End of Line protocol requirements where applicable and that the air suspension parameter pressures suit the suspension design & air bellow size.



**HEAVY VEHICLE BRAKE RULE  
32015/4 WORKSHEET  
(PROCEDURE DOCUMENTATION SHEET-PDS)  
&  
CONFIRMATION OF COMPLIANCE**

CERTIFICATE NO.

JH180905

CUSTOMER NAME

DOMETT TRAILERS LTD

CUSTOMER ORDER NO.

5475

DATE RECEIVED

5-Sep-18

VEHICLE TYPE

CURTAINSIDE

VIN/ CHASSIS NO.

7A9E2001XJ1023775

**BRIEF SPECIFICATION AS CERTIFIED TO SCHEDULE 5**

**BRAKE VALVES**

**MAKE**

**TYPE**

PRIMARY RELAY

WABCO

480 102 08.0

SECONDARY RELAY

WABCO

480 207 202.0

YARD RELEASE VALVE

WABCO

971 002 900.0

PARK BRAKE VALVE

WABCO

971 002 900.0

**SUSP. VALVES [WABCO]**

**FRONT**

**REAR**

CONTROL

441 044 101.0

N/A

DISTANCE SENSOR

464 008 011.0

464 008 011.0

**OTHER VALVES:**

<b>MAKE:</b>	<u>WABCO</u>	<b>TYPE:</b>	<u>461 513 002.0</u>	<b>SETTING:</b>	<u>5.5 Bar</u>
<b>MAKE:</b>	<u>WABCO</u>	<b>TYPE:</b>	<u>446 193 110.0</u>	<b>SETTING:</b>	<u>SMARTBOARD</u>
<b>MAKE:</b>	<u>                    </u>	<b>TYPE:</b>	<u>                    </u>	<b>SETTING:</b>	<u>                    </u>

**MAKE:** \_\_\_\_\_

**TYPE:** \_\_\_\_\_

**SETTING:** \_\_\_\_\_

**BRAKE CHAMBERS:**

	<b>AXLE 1 &amp; 2</b>	<b>AXLE 3 &amp; 4</b>	<b>AXLE 5</b>
<b>MAKE</b>	TSE	TSE	TSE
<b>SIZE</b>	20HSCLD65	1416HTLD64	14HSCLD64
<b>MAX STROKE (mm)</b>	65	64	64
<b>SLACK LENGTH (mm)</b>	69	69	69

**DRUM TYPE:** N/A N/A N/A

**OR**

**BRAKE CALIPER:** SBW1937 SBW1937 SBW1937

**FRICTION MATERIAL:**

OEM

AFTERMARKET

**LINING BRAND**

<b>AXLE 1 &amp; 2</b>	<b>AXLE 3 &amp; 4</b>	<b>AXLE 5</b>
JURID 539	JURID 539	JURID 539

**OTHERS:**

**TYRES:**

<b>FRONT</b>	<b>REAR</b>
265 70 R 19.5	265 70 R 19.5

**BRAKE CALCULATION #:** TP51606

**COMMENTS:**

EBS, SPECIAL CONDITIONS APPLY. SEE INSTRUCTIONS ON LT400 # 652371(TRSP)

**SALES ORDER #:** SO1237247 **PROCESS TIME:** 1 HOUR

**TRAILERS EQUIPPED WITH PREV: THE PARK BRAKE PERFORMANCE MUST BE MEASURED BY PULLING THE RED ACTUATION KNOB ON THE PREV VALVE WHEN THE AXLES - EQUIPPED WITH SPRING BRAKES - ARE IN THE BRAKE ROLLERS. THE PARK BRAKE IN THE CAB MUST NOT BE APPLIED.**

**NOTES:**

**CHAMBERS & PARK BRAKE PERFORMANCE:**

REFER TO BRAKE CALCULATION TP51606: z = 0.289 @96377 (N)

FRONT FRICTION ( $\mu$ ) = 0.48




**CONFORMATION OF COMPLIANCE**

*I CONFIRM THAT THE VEHICLE IDENTIFIED IN PAGES 1 AND 2 OF THIS CONFORMATION OF COMPLIANCE COMPLIES WITH ALL RELEVANT REQUIREMENTS OF THE CURRENT NEW ZEALAND HEAVY VEHICLE BRAKE RULE 32015/4, SCHEDULE 5.*

**DATE:** 5-Sep-18

**SIGNED: (pp)**



**NAME & ID:** J HIRST (JEH)

**PHONE (BUS):** 09 980 7300

**FAX (BUS)** 09 980 7306

**POSTAL ADDRESS:** TRANSPORT SPECIALTIES LTD  
PO BOX 98-971,  
MANUKAU CITY,  
MANUKAU 2241

**POSITION:** BRAKE CERTIFIER HVEK

*I CONFIRM THE BRAKE SYSTEM OF THE VEHICLE IDENTIFIED IN PAGE 1 OF THIS STATEMENT OF COMPLIANCE AS MODIFIED BY MYSELF, CONTINUES TO COMPLY WITH ALL THE RELIVANT REQUIREMENTS OF THE CURRENT NEW ZEALAND HEAVY BRAKE RULE 32015/4 SCHEDULE 5.*

**DATE:**

**SIGNED:**

**NAME:**

**CERTIFIERS ID:**

**POSITION:**

**PHONE (BUS):**

**FAX (BUS):**

**COMMENTS:**

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**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 32015/4.***

***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 32015/4. 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 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 32015/4, 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 HVEK)  
(09 980 7300)





**NOTICE TO VEHICLE OPERATOR**

**WABCO Park Release Emergency Valve**  
**(PREV)**

This trailer is equipped with a WABCO PREV  
Part # 971 002 900 0

Application of the park brake via the cab control valve will actuate and apply all service brakes on the trailer. In the event of a leak in the service brake system the Spring Brakes will automatically override and hold the vehicle in compliance to Land Transport Rule: Heavy-vehicle Brakes Rule 32015/4.

When the vehicle is presented for COF the trailer park brake system is tested by pulling the red actuation knob on the PREV, situated mid way down the chassis rail. The cab control in the prime mover does not have to be applied for this test procedure.

**If you are unsure of any aspect relating to this instruction please contact either the vehicle manufacturer or myself.**

(p.p.)   
\_\_\_\_\_  
J E Hirst  
(JEH HVEK)  
(09 980 7300)



# Service Bulletin

## Wabco Welding Warning

From: John Hirst, OE Braking Product Manager  
 Ref: JH-TSL-091115

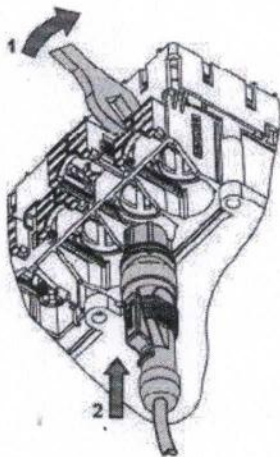
Date: 9 November 2015

**NB:** Any sort of arc welding can cause damage to an ECU fitted to a trailer. The inverter that we supply is also susceptible to damage from welding arcs.

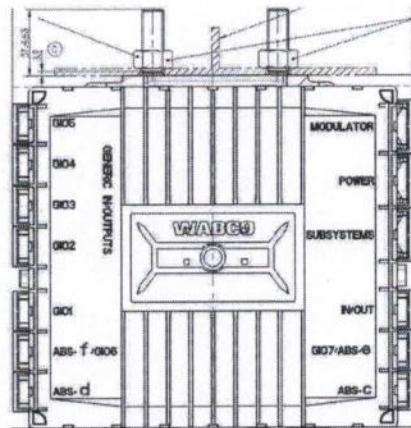
Prevention is less costly than the cure.

Please follow the following recommendation from Wabco for all ABS and EBS models:

1. Remove all the main power cables and diagnostic cables from the ECU as they have non interchangeable connections.
2. Leave the sensor cables that are plugged into the ECU and disconnect them at the wheel end. This will cover the protection against welding, and at the same time will prevent mixing them up at the ECU end.



Above: Wabco TEBS E Modulator – Plugs and dismantling of cables and protective caps.



Above: Diagram of a Wabco ECU.



P.O.Box 98-971

South Auckland Mail Centre

John Hirst (JEH)

DATE: 5-Sep-18 BRAKE SYSTEM: WABCO T-EBS E  
 CERT. NO: JH180905 BRAKE CALCULATION #: TP51606  
 VIN / CHASSIS: 7A9E2001XJ1023775

	Make	Model	Max stroke (mm)
BRAKE CHAMBERS Ax 1 & 2	TSE	20HSCLD65	65
BRAKE CHAMBERS Ax 3 & 4	TSE	1416HTLD64	64
BRAKE CHAMBERS Ax 5	TSE	14HSCLD64	64
SLACK LENGTH FRONT (mm):	69	TYRE SIZE FRONT:	265 70 R 19.5
SLACK LENGTH REAR (mm):	69	TYRE SIZE REAR:	265 70 R 19.5

THIS VEHICLE COMPLIES WITH THE NZ  
 HEAVY VEHICLE BRAKE RULE 32015/4, SCHEDULE 5  
 LINING MATERIAL FRONT: JURID 539  
 LINING MATERIAL REAR: JURID 539



# WABCO START-UP LOG

System	Trailer EBS-E	WABCO part number	480 102 084 0
Production date	2018-03-26	Serial number	437005302900D
Serial number (modulator)	000000005613		
Fingerprint Customer EOL / Customer Development / Flash Program	W033869 / 2018-09-06 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00		

WABCO		TRAILER EBS-E		GGVS/ADR TUEH TB 2007 - 019.00 AT0185											
HERSTELLER MANUFACTURER CONSTRUCTEUR	DOMETT TRAILERS			GIO	Pin1	Pin3	Pin4								
TYP TYPE TYPE	5AFT BULK			1	24V-O1	---	---								
VEHICLE IDENT. NUMBER CHASSIS NUMBER NUMERO DE CHASSIS	7A9E3501XH1023652			2	---	---	---								
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO.	TP51645A			3	ALS2	ALS2	---								
POLRADZAHNEZAHL. c-d   e-f POLE WHEEL TEETH c-d   e-f DENTS ROUE DENTEE c-d   e-f	100	100	ABS-System ABS-System Système ABS	4	---	---	---								
			4S/3M	5	DIAG	DIAG	DIAG								
RSS RSS RSS	Einfachbereifung Single Tire Monte simple		Lenkachse Steering axle Essieu vireur	6	---	---	---								
	Zwillingsbereifung Twin Tire Monte jumelée	X	Rippkritisches Fahrzeug Critical Trailer Véhicule critique	7	---	---	---								
Subsystems	SB	I/O	24N												
	pm (bar)	6.5	pm (bar)	0.6	2.0	---	6.5								
ACHSE AXLE ESSIEU								pZ	TYP TYPE	(mm)	(mm)	(mm)	(bar)	Pz	TR (daN)
1	1650	0.9	2.3	8000	5.1	0.4	1.4	---	6.4	-	20	65	69	516	4797
2	1650	0.9	2.3	8000	5.1	0.4	1.4	---	6.4	-	20	65	69	516	4797
3	1150	0.6	1.4	6400	4.0	0.3	1.6	---	4.2	-	14 / 16	64	69	497	2560
4	1150	0.6	1.4	6400	4.0	0.3	1.6	---	4.2	-	14 / 16	64	69	497	2560
5	1150	0.6	1.4	6400	4.0	0.3	1.6	---	4.2	-	14	64	69	497	2560

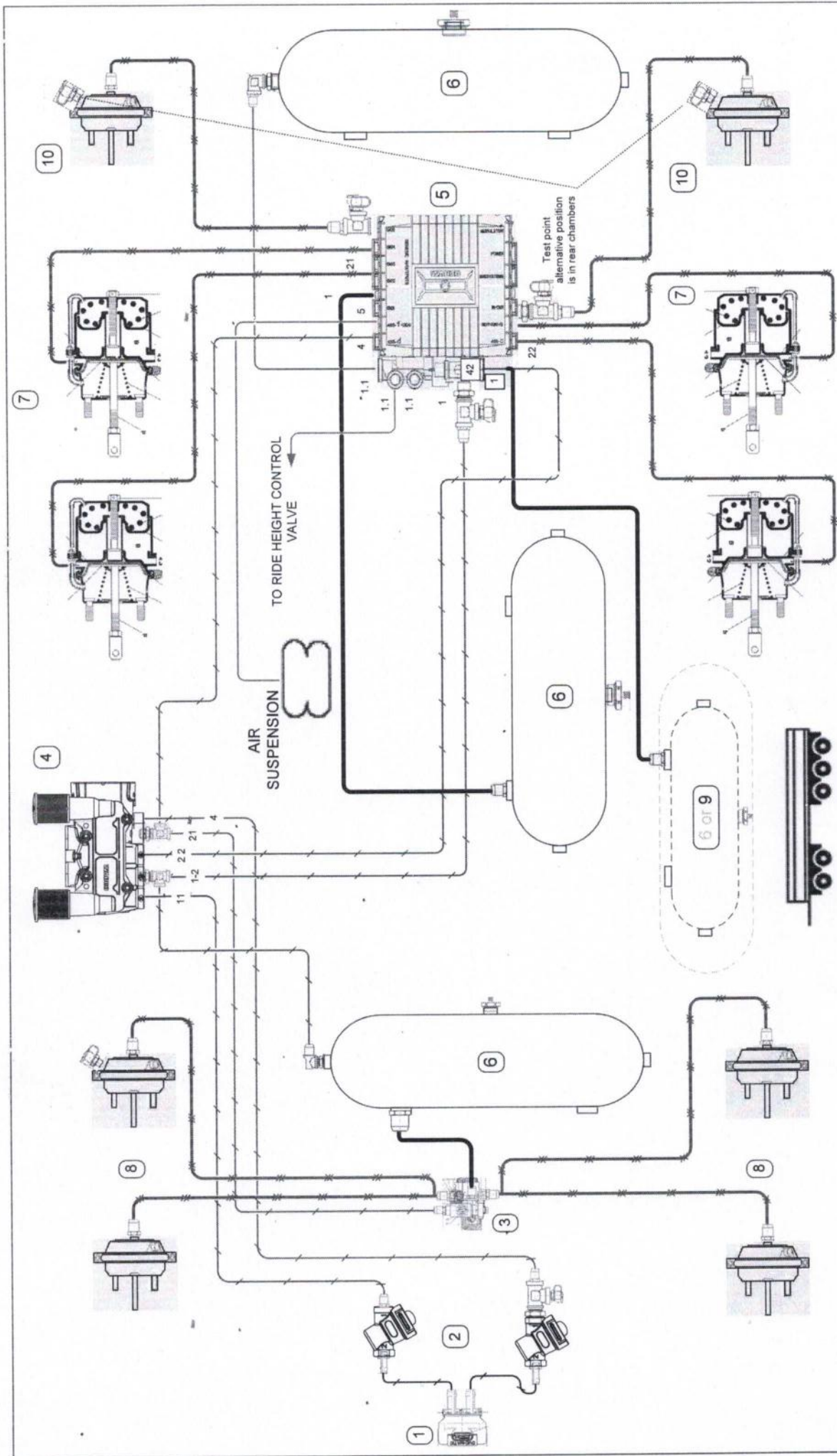
## TEBS-E

Diagnostic memory	OK	Warning lamp control	OK
Parameter setting	carried out	Stop light supply	Not tested
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	7A9E3501XH1023652
Vehicle type	5AFT BULK	Odometer reading	0.0 km
next Service	0 km	Trip reading	0.0 km
Tester	Ron Pratt	Signature	
Date	2018-09-06 12:33:39 PM		





ITEM	QTY.	PART NO.	DESCRIPTION	ITEM	QTY.	PART NO.	DESCRIPTION	PIPING LEGEND:
1	1	452 804 001 0	WABCO Dup-Matic coupling	9	1	24.5 Ltr Air Tank	3/8" Rubber	3/8" Rubber
2	2	432 500 020 0	WABCO control line filter	10	2	14HSCLD64	TSE Service brake chamber	3/8" Rubber
3	1	480 207 202 0	WABCO EBS 3 <sup>rd</sup> modulator	11				1/2" Rubber
4	1	971 002 900 0	WABCO PREV	12				15mm Nylon
5	1	480 102 08. 0	WABCO TEBS - E (premium)					12mm Nylon
6	3		46 Ltr Air tank					8mm Nylon
7	4	1416HTLD64	TSE Spring brake chamber					8mm Nylon
8	4	20HSCLD65	TSE Service brake chamber					8mm Nylon

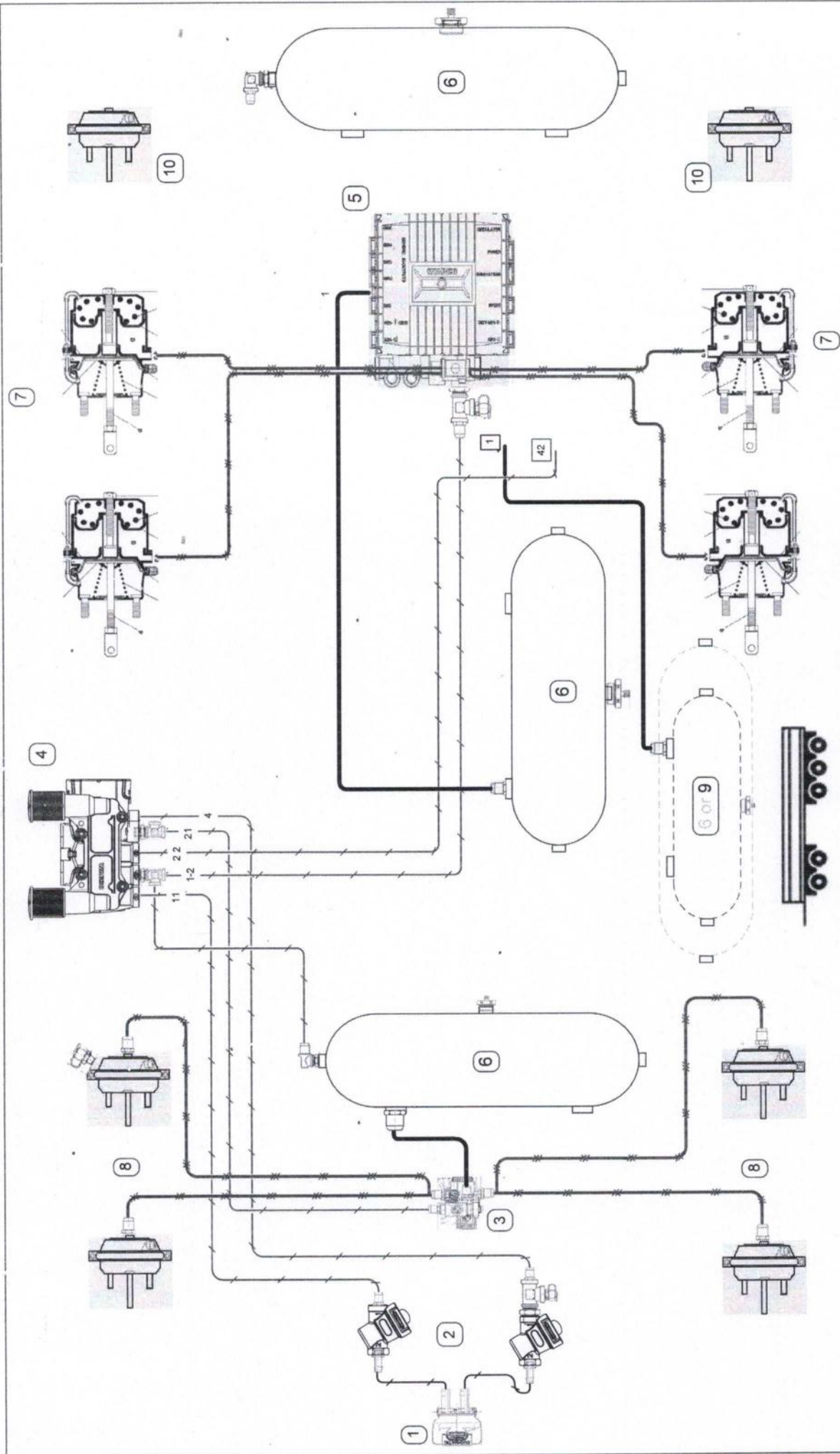
**DOMETT TRAILERS**

**5 AXLE FULL TRAILER**

SIZE A4  
 SPEC REFERENCE 1775  
 MODEL NUMBER DOM5AXFULL/D/EBS  
 REV 1  
 SCALE SERVICE LINES



**WABCO**  
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ITEM		QTY.	PART NO.	DESCRIPTION	ITEM	QTY.	PART NO.	DESCRIPTION	PIPING LEGEND:	
1	452 804 001 0	1	452 804 001 0	WABCO Duo-Matic coupling	9	1	14HSCLD64	24.5 Ltr Air Tank	---	3/8" Rubber
2	432 500 020 0	2	432 500 020 0	WABCO control line filter	10	2		TSE Service brake chamber	---	3/8" Rubber
3	480 207 202 0	1	480 207 202 0	WABCO EBS 3 <sup>rd</sup> modulator	11				---	1/2" Rubber
4	971 002 900 0	1	971 002 900 0	WABCO PREV	12				---	15mm Nylon
5	480 102 08 0	1	480 102 08 0	WABCO, TEBS - E (premium)					---	12mm Nylon
6	1416HTLD64	3	1416HTLD64	46 Ltr Air tank					---	8mm Nylon
7	20HSCLD65	4	20HSCLD65	TSE Spring brake chamber					---	8mm Nylon
8		4		TSE Service brake chamber					---	8mm Nylon

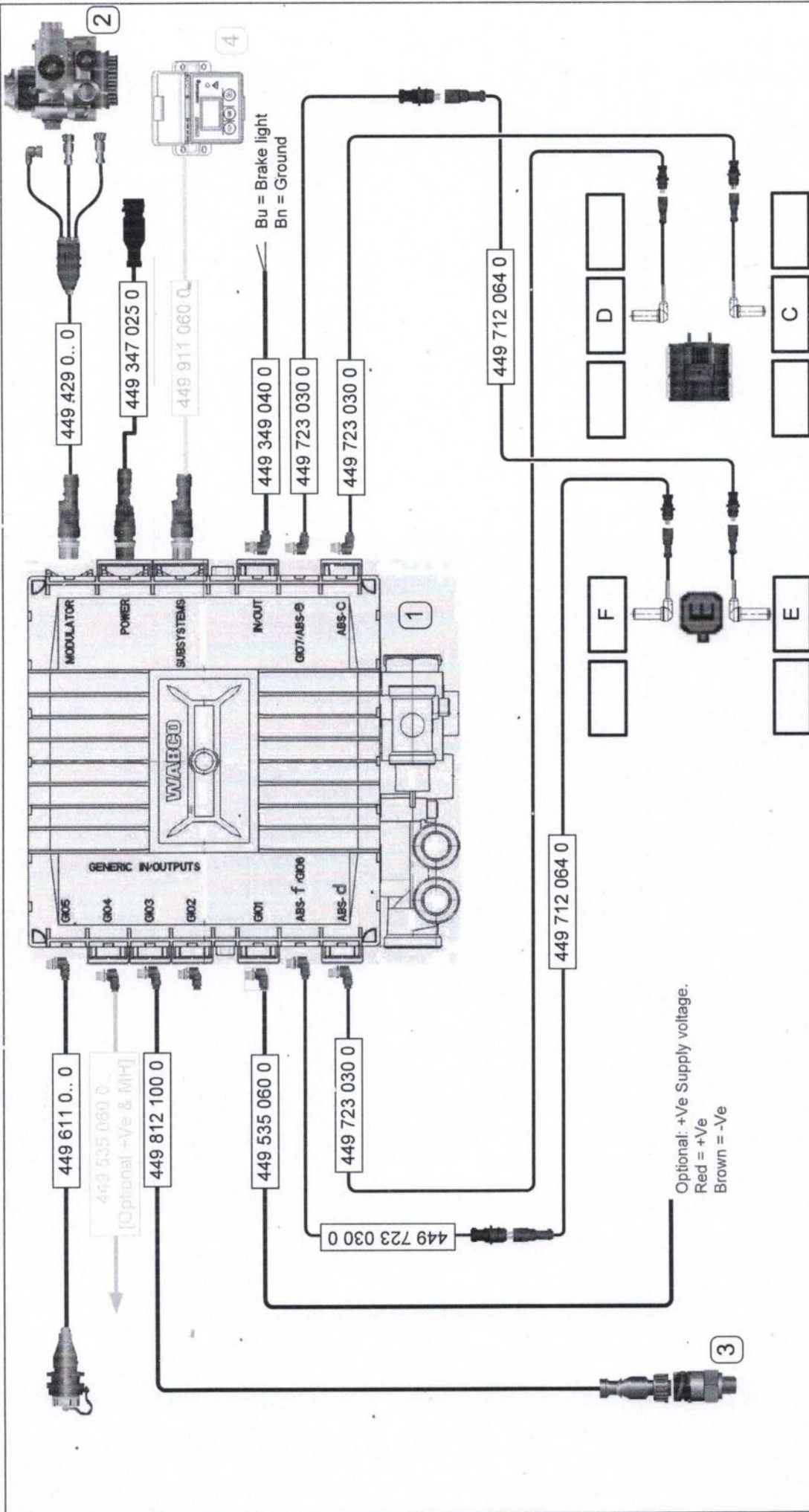
  

<b>DOMETT TRAILERS</b>	
5 AXLE FULL TRAILER	
SIZE	MODEL NUMBER
A4	DOM5AXFULL/D/EBS
SPEC REFERENCE	REV
1775	1
SCALE	PARK LINES

**GOUGH Transpecs**

**WABCO**  
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5



ITEM	QTY.	PART NO.	DESCRIPTION
1	1	480 102 08 0	WABCO T-EBS ECU
2	1	480 207 202 0	WABCO 3 <sup>RD</sup> MODULATOR
3	1	441 044 101 0	WABCO PRESSURE SENSOR
4	1	446-165-119-0	WABCO-3-AXLE-5-AXLE
5	1	480-102-08-0	WABCO-T-EBS-ECU

**DOMETT TRAILERS**

**5 AXLE FULL TRAILER**

SIZE	A4	MODEL NUMBER	DOM5AXFULL/D/EBS	REV	1
SPEC REFERENCE	1775	SCALE	G10 PORTS		







**PDS INFORMATION REQUIRED FOR FULL TRAILERS  
TO COMPLY WITH THE NZ HVBR 32015/4**

**GOUGH** *Transpecs*

**GOUGH** **TWL**  
TRANSPORT WHOLESALE

**CLIENT**

<b>BUILDER:</b>	DOMETT TRAILERS LTD
<b>ADDRESS:</b>	70 WHAKAKAKE STREET, TAURANGA
<b>END USER:</b>	NOT SPECIFIED

**VEHICLE DETAILS**

<b>VEHICLE TYPE:</b>	CURTAINSIDE	<b>CERT #</b>	JH180905
<b>YEAR:</b>	2018	<b>MODEL:</b>	E2001 PH
<b>MAKE:</b>	DOMETT TRAILERS	<b>CHASSIS #:</b>	1775
<b>VIN #:</b>	7A9E2001XJ1023775		
<b>GVM (t):</b>	32	<b>REGO:</b>	N/A
<b>BODY TYPE</b>	1		
<b>GROUP RATINGS (t)</b>	<b>FRONT</b>	<b>REAR</b>	
	16	19	
<b>WHEEL BASE (M):</b>	7.5		
	<b>DECK HEIGHT (M)</b>	<b>MAX HEIGHT (M)</b>	
	1.09	4.3	
<b>COG (M):</b>	2.089		
<b>TARE (t):</b>	<b>FRONT</b>	<b>REAR</b>	<b>TOTAL</b>
	3.2	3.9	7.1
<b>TYRE SIZE:</b>	<b>FRONT</b>	<b>REAR</b>	
	265 70 R 19.5	265 70 R 19.5	
<b>AXLE SPACING (M):</b>	<b>FRONT</b>	<b>REAR</b>	
	1.31	2.51	
<b>AXLE:</b>	<b>MAKE</b>	<b>MODEL</b>	<b>TEST REPORT</b>
	SAF	INTRADISC	TDB0749

**BRAKE DETAILS**

	<b>AXLE SERIAL #</b>	<b>POLEWHEEL TEETH #</b>
1	N/A	90
2	N/A	90
3	N/A	90
4	N/A	90
5	N/A	90



## BRAKE DETAILS

### CHAMBERS

	AXLE 1 & 2		POLEWHEEL TEETH #
BRAND:	TSE	TSE	TSE
SIZE/MODEL:	20HSCLD65	1416HTLD64	14HSCLD64
MAX STROKE (mm):	65	64	64
SPRINGBRAKE FORCE (Kn):	N/A	6.2	N/A
HOLDOFF PRESSURE (Bar):	N/A	4.5	N/A
SLACK LENGTH (mm):	69	69	69
BRAKE CALIPER:	SBW1937	SBW1937	SBW1937
LINING MATERIAL:	JURID 539	JURID 539	JURID 539

### BRAKE VALVES

	MAKE	PART#	CRACK / SETTING
SERVICE RELAY 1ST:	WABCO	480 102 08. 0	N/A
SERVICE RELAY 2ND:	WABCO	480 207 202 0	N/A
RATIO VALVE:	N/A	N/A	N/A
YARD RELEASE:	WABCO	971 002 900 0	N/A

### PARK BRAKE

	MAKE	PART#	ANTI-COMPOUND
	WABCO	971 002 900 0	YES

### HEIGHT CONTROL:

Electronic  Pneumatic

### SMART BOARD:

N/A
-----

### LIFT AXLE:

N/A
-----

### ETASC:

N/A
-----

### SUSPENSION TYPE:

Reactive  Non-Reactive

### MAKE:

SAF	SAF
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### MODEL:

NG-IU28-ZI9-19W-68A	NG-IU28-ZI9-19W-68A
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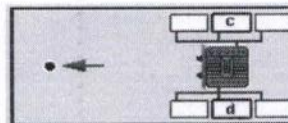
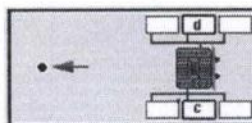
### BELLOW SIZE (mm):

300	300
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### ECU DIRECTION:

FRONT

REAR



## AIR TANKS

### AIR TANKS STANDARD:

SAE J10 / EN 286-2
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### BRAKE CAPACITY (Ltr):

46	71
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### SUSP. CAPACITY (Ltr):

N/A	46
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### AUXILLARY/ PROTECTED:

YES (VIA P.E.M. 461/513/002/0)
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**AIR LINES & TEST POINTS****TEST POINTS**

<b>FRONT CHAMBER:</b>	YES	<b>RATIO IN (Bar):</b>	N/A
<b>REAR CHAMBER:</b>	YES (@ ECU)	<b>RATIO OUT (Bar):</b>	N/A
<b>TANK:</b>	YES (@ ECU)	<b>CONTROL LINE:</b>	YES
<b>DUOMATIC COLOUR CODED:</b>	YES		
<b>CLEARED ON SEMI:</b>	N/A		
<b>SENSORS ON AXLES:</b>	2 + 4		

**ELECTRONIC HEIGHT SENSOR CALIBRATION**


	TIMER TICKS: F / R	MILLIMETRE: F / R	
<b>UPPER LEVEL:</b>	N/A	N/A	
<b>NORMAL LEVEL:</b>	N/A	N/A	
<b>LOWER LEVEL:</b>	N/A	N/A	
	<b>MODULATOR 2.1</b>	<b>MODULATOR 2.2</b>	<b>RELAY VALVE</b>
<b>RESPONSE TIME (m/s):</b>			


**DECLARATION**

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 /4, SCHEDULE 5.**

**DATE:** 5-Sep-18

**SIGNED:**  **NAME & ID:** J HIRST (JEH)

**SODC SIGNED:**  **NAME & ID:** R PRATT (TRSP)

**PHONE (BUS):** (09) 980 7300  
**FAX:** (09) 980 7306

**POSTAL ADDRESS:**

**P.O. Box 98-971, Manukau 2241**

**New Zealand**

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

distribution: DOMETT TRAILERS  
 7A9E2001XJ1023775  
 SODC: JH180905  
 LT400: TRSP .....

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 commend to do a braking harmonisation!  
 WABCOBrake V6.14.04.20 db 20.04.2016

vehicle manufacturer: DOMETT TRAILERS  
 trailer model : 5AFT CURTAINSIDE  
 trailer type : 5-axle-full-trailer  
 remarks : air / hydraulic / VA suspension  
 WABCO TRAILER - EBS  
 TRISTOP 3+4: T.14/24 [TSE1416HTLD64 ARE ACTUALLY FITTED -  
 SEE PAGE 7 FOR PERFORMANCE DATA]  
 265/70 R 19,5

axle 1 + 2 + 3 + 4 + 5 : SAF, SBW 1937, TDB 0749 ECE,

		<u>unladen</u>	<u>laden</u>
total mass	P in kg	7100	35200
axle 1	P1 in kg	1600	8000
axle 2	P2 in kg	1600	8000
axle 3	P3 in kg	1300	6400
axle 4	P4 in kg	1300	6400
axle 5	P5 in kg	1300	6400
wheel base	E in mm	7220 - 7700	
centre of gravity height	h in mm	1090	2089

	<u>axle 1</u>	<u>axle 2</u>	<u>axle 3</u>	<u>axle 4</u>	<u>axle 5</u>
no. of combined axles	1	1	1	1	1
no. of brake chambers per axle line	2	2	2	2	2
The power output corresponds to	BZ 122.1	BZ 122.1	BZ 119.6	BZ 119.6	BZ 122.1
brake chamber manufacturer	Meritor	Meritor	Meritor	Meritor	Meritor
chamber size	20.	20.	T.14/24	T.14/24	14.
lever length	lBh in mm	69	69	69	69
brake factor	[-]	23.03	23.03	23.03	23.03
dyn. rolling radius	rdyn min in mm	421	421	421	421
dyn. rolling radius	rdyn max in mm	421	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	2.3	2.3	2.1	2.1	2.1
chamber pressure(rdyn max)pH at z=22,5%bar	2.3	2.3	2.1	2.1	2.1
chamber press.(servo)pcha at pm6,5bar bar	5.9	5.9	4.8	4.8	4.8
piston force ThA at pm6,5bar N	6825	6825	4586	4586	4586
brake force(rdyn min)T lad. at pm6,5bar N	51709	51709	34628	34628	34628
brake force(rdyn max)T lad. at pm6,5bar N	51709	51709	34628	34628	34628
brake force within 1 % rolling friction proportion	%	22.3	22.3	18.5	18.5

braking rate z laden 0.600 for rdyn min  
 z = sum (TR)/PRmax 0.600 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: 971 002 ... 0                    WABCO  
          EBS emergency valve

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

brake cylinder: Meritor    20HSCLD65

axle 2:

valve 1: 971 002 ... 0                    WABCO  
          EBS emergency valve

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

brake cylinder: Meritor    20HSCLD65

axle 3:

valve 1: 971 002 ... 0                    WABCO  
          EBS emergency valve

valve 2: 480 102 ... 0                    WABCO  
          EBS trailer modulator

brake cylinder: Meritor    1424HTLD64

axle 4:

valve 1: 971 002 ... 0 WABCO  
EBS emergency valve

valve 2: 480 102 ... 0 WABCO  
EBS trailer modulator

brake cylinder: Meritor 1424HTLD64

axle 5:

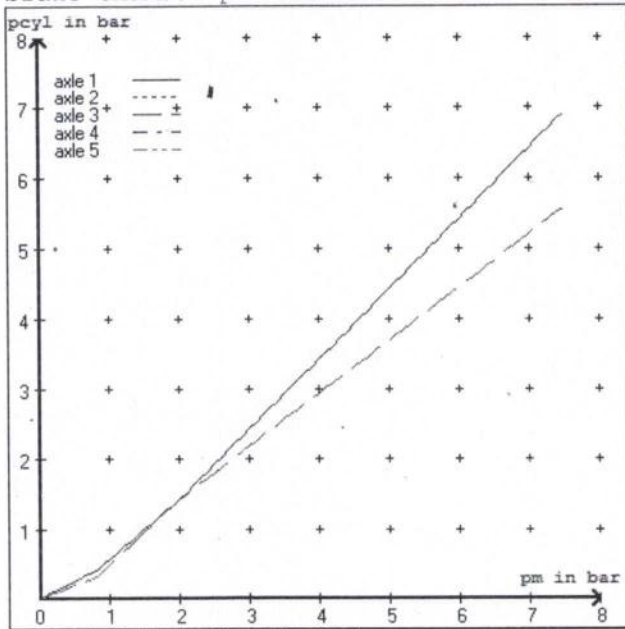
valve 1: 971 002 ... 0 WABCO  
EBS emergency valve

valve 2: 480 102 ... 0 WABCO  
EBS trailer modulator

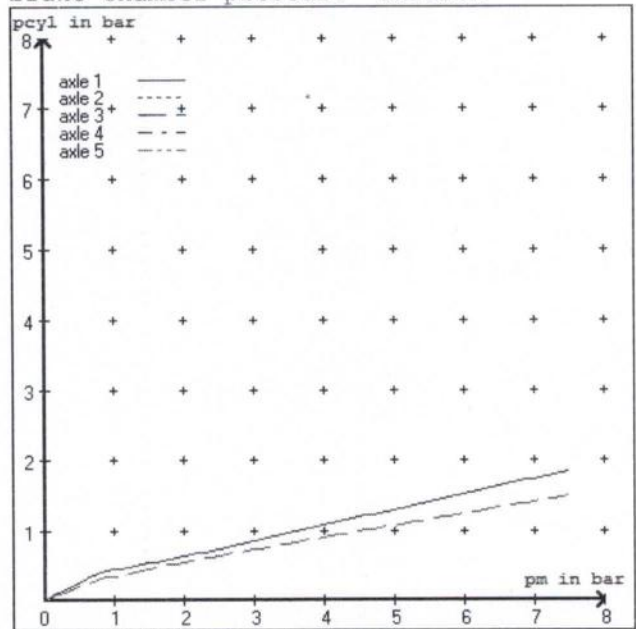
brake cylinder: Meritor 14HSCLD64

test type III (zIII = 0.30)	for rdyn min :	axle1	axle2	axle3	axle4	axle5	
at pm 3.6 bar =>	pcha in bar :	3.0	3.0	2.6	2.6	2.6	
test type III (zIII = 0.06)	for rdyn min :	axle1	axle2	axle3	axle4	axle5	
at pm 1.3 bar =>	pcha in bar :	0.8	0.8	0.8	0.8	0.8	

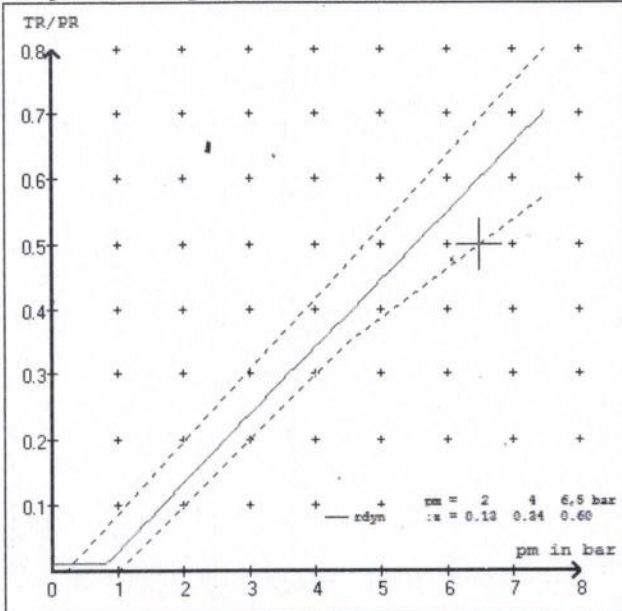
brake chamber pressure laden



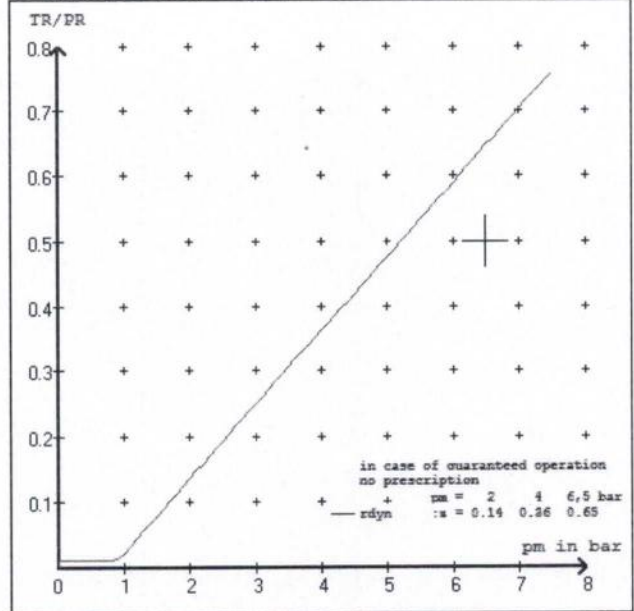
brake chamber pressure unladen



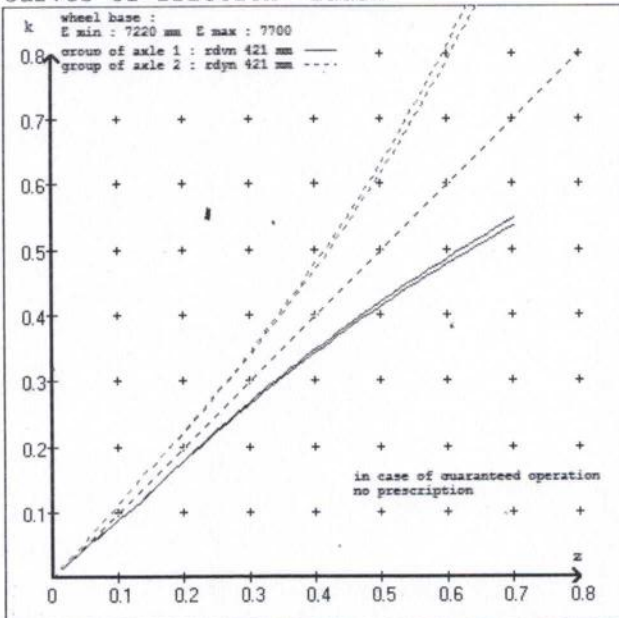
compatibility band laden



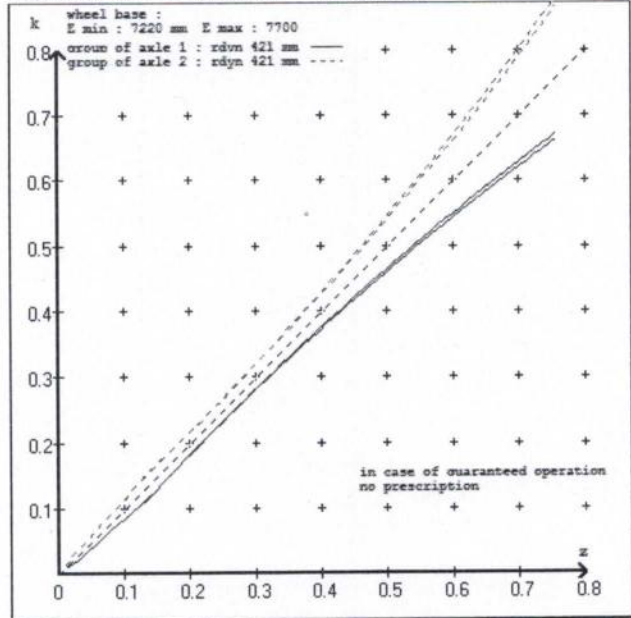
compatibility band unladen



curves of friction laden



curves of friction unladen





vehicle manufacturer: DOMETT TRAILERS  
 trailer model : 5AFT CURTAINSIDE  
 trailer type : 5-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 T.14/24 (Meritor) lever length 69 mm  
 axle 4 : 2 x type/diameter T.14/24 (Meritor) lever length 69 mm  
 axle 5 : 2 x type/diameter 14. (Meritor) lever length 69 mm

brake diagram :

valve :  
 971 002 ... 0 WABCO EBS emergency 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 TRAILERS  
 trailer model : 5AFT CURTAINSIDE  
 trailer type : 5-axle-full-trailer  
 brake calculation no. : TP 51606A

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

control pressure pm			6,5	control pressure pm			0.8	2.0	6.5
axle	axle load unladen	bellow pr. unladen	brake pr. unladen	axle load laden	bellow pr. laden	brake pr. laden			
1	1600	to be	1.6	8000	to be	0.4	1.4	5.9	
2	1600	entered by	1.6	8000	entered by	0.4	1.4	5.9	
3	1300	the vehicle	1.3	6400	the vehicle	0.3	1.4	4.8	
4	1300	manufact.	1.3	6400	manufact.	0.3	1.4	4.8	
5	1300		1.3	6400		0.3	1.4	4.8	

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 pcy1	axle load pcy1	axle load pcy1	axle load pcy1	axle load pcy1
1600 1.6	1600 1.6	1300 1.3	1300 1.3	1300 1.3
2100 1.9	2100 1.9	1800 1.6	1800 1.6	1800 1.6
2600 2.3	2600 2.3	2300 2.0	2300 2.0	2300 2.0
3100 2.6	3100 2.6	2800 2.3	2800 2.3	2800 2.3
3600 2.9	3600 2.9	3300 2.7	3300 2.7	3300 2.7
4100 3.3	4100 3.3	3800 3.0	3800 3.0	3800 3.0
4600 3.6	4600 3.6	4300 3.4	4300 3.4	4300 3.4
5100 4.0	5100 4.0	4800 3.7	4800 3.7	4800 3.7
8000 5.9	8000 5.9	6400 4.8	6400 4.8	6400 4.8

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
axle 5 : 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 = 24.7 % Fe
axle 2	(rdyn 421 mm)	T = 24.7 % Fe
axle 3	(rdyn 421 mm)	T = 18.0 % Fe
axle 4	(rdyn 421 mm)	T = 18.0 % Fe
axle 5	(rdyn 421 mm)	T = 18.0 % 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 = 56 mm)	s = 39 mm
axle 4	(sp = 56 mm)	s = 39 mm
axle 5	(sp = 56 mm)	s = 39 mm

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

axle1	ThA = 6825 N
axle2	ThA = 6825 N
axle3	ThA = 4586 N
axle4	ThA = 4586 N
axle5	ThA = 4586 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 = 40393 N
axle 2	(rdyn 421 mm)	T = 40393 N
axle 3	(rdyn 421 mm)	T = 27103 N
axle 4	(rdyn 421 mm)	T = 27103 N
axle 5	(rdyn 421 mm)	T = 27103 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	>= 0,4 and
(items 1.5.3 and 1.7.2 to annex 11)	>= 0,6*E (0.36)

axle 1	(rdyn 421 mm)	T = 40393 N
axle 2	(rdyn 421 mm)	T = 40393 N
axle 3	(rdyn 421 mm)	T = 27103 N
axle 4	(rdyn 421 mm)	T = 27103 N
axle 5	(rdyn 421 mm)	T = 27103 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	>= 0,4 and
(items 1.5.3 and 1.7.2 to annex 11)	>= 0,6*E (0.36)

spring parking brake

		<u>axle 3</u>	<u>axle 4</u>
no of TRISTOP-actuators per axle line KDZ		2	2
TRISTOP-actuator type		T.14/16	T.14/16
lever length	lBh in 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	6200	6200
sp.brake chamber no Meritor.....		4	4
release pressure	pLs in bar	4.5	4.5

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		48188	48188
$Tf = (TFZ * KDZ - 2 * Co / lBh) * iFb$			
braking rate	zf laden	0.289	
$zf = \text{sum}(Tf) / P + 0,01$			

Test of the frictional connection required by the parking brake

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

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

$$\min Ef = 5521 \text{ mm} \quad \text{for } E = 7220 \text{ mm}$$

$$\min Ef = 5851 \text{ mm} \quad \text{for } E = 7700 \text{ mm}$$

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 =	2089 mm	height of center of gravity - laden
PR =	19200 kg	maximum bogie mass - laden
P =	35200 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	5070	
	5.9	43091	
axle 2	1.0	5070	
	5.9	43091	
axle 3	1.0		4876
	4.8		28857
axle 4	1.0		4876
	4.8		28857
axle 5	1.0		4876
	4.8		28857

VIN - no.:

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

