

Heavy Vehicle Specialist Certificate

Must be presented to a CoF (Heavy) Inspecting Organisation
Heavy Vehicle Specialist Inspector and Inspecting Organisation

Heavy Vehicle Specialist Inspector's or Manufacturing Inspecting Organisation's Name (PRINT IN CAPS) ID

RONALD STUART PRATT **TRSP**

Vehicle Registration* VIN/Chassis Number

7A9E25013E1023314

Component being certified:

<input type="checkbox"/> Chassis Modification	<input type="checkbox"/> Load Anchorage	<input type="checkbox"/> Log Bolsters
<input type="checkbox"/> Towing Connection	<input checked="" type="checkbox"/> Brakes	<input type="checkbox"/> SRT
<input type="checkbox"/> PSV Stability	<input type="checkbox"/> PSV Rollover	<input type="checkbox"/> Swept Path
<input type="checkbox"/> PBS		

Certification Category

HVEK

Description of Work

INSPECTION AND CERTIFICATION TO BRAKE RULE 32015/3

Code/Standard/Rule Certified to	Component Load Rating(s)
NZHVB RULE Schedule 5	GVM: 32,000 Kg
General Drawing Number(s)	RSS Switched on dual Tyres
<input type="text"/>	Optiturn Exempt No HMRE14/393

Supporting Documents

BRAKE CERT NO JH141215

Special Conditions*

EBS Control - Warning Lamp must illuminate when ignition switched on, and extinguish immediately, or when vehicle reaches 7 kph

Certification Expiry Date (if applicable) or Hubodometer Reading (whichever comes first)

n/a **n/a**

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)

n/a

Inspector's Signature

R. Stuart Pratt

Inspector's Name (PRINT IN CAPS) ID Number

RONALD STUART PRATT **TRSP**

Date Number

12/12/2014 **493940**

CoF Vehicle Inspector ID	CoF Vehicle Inspector Signature	Date
<input type="text"/>	<input type="text"/>	<input type="text"/>

All fields excluding those marked with * must be completed before this certificate can be accepted.

T/STN COPY



NZ TRANSPORT AGENCY
WAKA KOTAHI

NATIONAL OFFICE
50 Victoria Street
Private Bag 6995
Wellington 6141
New Zealand
T 64 4 894 5400
F 64 4 894 6100
www.nzta.govt.nz

Exemption: HMRE14/393

**EXEMPTION FROM SPECIFIED REQUIREMENTS OF LAND TRANSPORT RULES:
Heavy Vehicles 2004 and Vehicle Dimensions and Mass 2002**

Pursuant to Section 166(1) of the Land Transport Act 1998, and pursuant to the powers delegated to me, I, Jackie Hartley, Administrator (Assessments) hereby exempt the motor vehicle specified in Schedule 1 hereto from the requirements listed in Schedule 2, subject to the conditions specified in Schedule 3.

Schedule 1: Vehicle Details:

Make/Model: **Domett, 5 Axle Full Trailer**
VIN/Chassis: **7A9E25013E1023314**

Schedule 2: Exempted Requirements:

Heavy Vehicles 2004, Rule 31002

- Section 3.5(2)

Vehicle Dimensions & Mass 2002 Rule 41001

- Section 4.2(7)

Schedule 3: Conditions of this Exemption:

- 1) The Wabco OptiTurn function of the TEBS-E system is to be activated.
- 2) The vehicle must not be modified in any way while operating under this exemption.
- 3) This original exemption must be kept by Gough Transpecs.
- 4) A copy of this exemption including the OptiTurn function (printed on a silver WABCO sticker) must be affixed to the exempted vehicle.
- 5) The sticker in 4) must be legible and include all printed areas of this original exemption letter.
- 6) This exemption can be revoked at any time in writing by the NZ Transport Agency.

Signed at Wellington this 20th day of October 2014

A handwritten signature in black ink, appearing to read 'Jackie Hartley'.

Jackie Hartley
Administrator (Assessments)



Statement of Design Compliance

S.O.D.C. number: JH141215

For Heavy vehicle brake specification
(Schedule 5) of HV Brake Rule 32015/3

Vehicle details:

Make:	DOMETT TRAILERS
Model:	E2501
VIN#:	7A9E25013E1023314
Chassis#:	1314
GCM (kgs):	N/A
GVM (kgs):	32,000
Wheelbase (mm):	6800
Axle test report #:	TDB0749 (SAF INTRADISC)
Type:	5AFT DISC BRAKE

Component Details:

	Front	Rear
Lever length (mm):	69	69
Brake chamber size:	TSE:18	TSE:1416 (14)
Tyre size:	265 70 R 19.5	265 70 R 19.5
Drawing number: (for component reference)	1314	
Brake calculation#:	TP 51190	
OPTI exemption#:	HMRE14/393	

*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: 12 December 2014

Name: John Hirst (HVEK)
Certifier ID: JEH

L T 400 No 493940

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

Signed:

Dated: 12/12/2014

*) 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.

HVBR WORKSHEET
(PROCEDURE & COMPLIANCE DOCUMENTATION SHEET)

CERTIFICATE No. JH141215

CUSTOMER NAME DOMETT TRAILERS LTD

CUSTOMER ORDER No. 4306 DATE RECEIVED Dec 14

VEHICLE TYPE 5 AXLE FULL TRAILER

REG No. CHASSIS No. 7A9E25013E1023314

BRIEF SPECIFICATION AS CERTIFIED TO HVBR

BRAKE CHAMBERS:			
<u>Ax #</u>	<u>Make/model</u>	<u>Max stroke</u>	<u>Lever length</u>
1&2	TSE 18HSCLD65	65 mm	69 mm
3&4	TSE 1416HTLD64	64 mm	69 mm
5	TSE 14HSCLD64	64 mm	69 mm

BRAKE SYSTEM: WABCO EBS : RSS ACTIVATED & OPTITURN
 # TEST POINTS FITTED: 3 4 5 7

FRICITION LINING: OEM Aftermarket
 (All) Lining Brand JURID 539

EBS CONTROL: SPECIAL CONDITIONS APPLY – SEE INSTRUCTION ON LT400:
VALVES: AS PER BRAKE CALCULATION TP51190 & SO1565432
TYRE SIZE: 265 70 R 19.5

NOTES
 PACKING SLIP NO. SO1565432 PROCESS TIME: 1

BRAKE CALC #TP51190: THE MERITOR CHAMBERS ARE THE TSE VARIANT.
 OPTITURN EXEMPTION REF: HMRE14/393

COMPLETION DATE : 12th Dec 2014 SIGNATURE (pp.):

Statement of Compliance with the New Zealand Heavy Brake Rule

Documentation required supporting Statements of Compliance with the New Zealand Heavy Brake Rule, to be made available to the Statutory Authority on request, must include all calculations and test reports.

Confirmation of compliance

I confirm that the vehicle identified on page 1 of this Statement of Compliance complies with all relevant requirements of the current New Zealand Heavy Vehicle Brake Rule 32015/3, Schedule 5.

Date: 12th Dec 2014

Signed (pp.):



Certifier's identification

Name: J E Hirst

Phone (bus): (09) 980 7300 Fax (bus): (09) 980 7306

Postal address: Transport Specialties, Cnr Kerrs & Ash Roads

Wiri, Auckland, PO Box 98 971 Manukau City 2241

Position: JEH

Confirmation of continued compliance of modification

I confirm the brake system of the vehicle identified on page 1 of this Statement of Compliance as modified by myself, continues to comply with all the relevant requirements of the current New Zealand Heavy Vehicle Brake Rule 32015/3, Schedule 5.

Date: _____

Signed: _____

Certifier's identification: JEH

Name:

Phone (bus): (09) 980 7300 Fax (bus): (09) 980 7306

Postal address: Transport Specialties Ltd

Cnr Kerrs & Ash Roads, Wiri, Auckland

PO Box 98 971, Manukau City 2241

WABCO START-UP PROTOCOL

System	Trailer EBS-E	WABCO part number	480 102 080 0
Production date	2014-07-18	Serial number	437000718700K
Serial number (modulator)	000000032624		
Fingerprint Customer EOL / Customer Development / Flash Program	W033869 / 2014-12-12 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00		

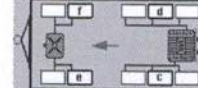
WABCO

TRAILER EBS-E

GGVS/ADR TUEH TB 2007 - 019.00
TDB0749

HERSTELLER MANUFACTURER CONSTRUCTEUR	DOMETT		
TYP TYPE	5AFT STOCK		
FAHRZEUG IDENTNR. CHASSIS NUMBER NUMERO DE CHASSIS	7A9E25013E1023314		
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO.	TP51190A		
POLRAD-ÄHNEZAHL, c-d e-f POLE WHEEL TERTI c-d e-f DENTS ROUE DENTÉE c-d e-f	90	90	ABS-System ABS system Système ABS 4S/3M
RSS RSS RSS	Einfachbereifung Single Tire Monte simple	Lenkachse Steering axle Essieu vireur	
	Zwillingsbereifung Twin Tire Monte jumelle	Kippkritisches Fahrzeug Critical Trailer Véhicule critique	
Subsystems	SB	I/O	24N


GIO	Pin1	Pin3	Pin4
1	ILS1	---	ILS1
2	eTASC	---	eTASC
3	ALS2	ALS2	---
4	---	---	LS1
5	DIAG	DIAG	DIAG
6	---	---	---
7	---	---	---



ACHSE AXLE ESSIEU	pm (bar)		6.5		pm (bar)		0.8		2.0		---		6.5		TYP TYPE	(mm)	(mm)	(bar)	
	H (kg)	⊗	⊗	⊗	H (kg)	⊗	⊗	⊗	⊗	⊗	⊗	⊗	1.0	Pz					
1	2000	1.0	2.2	7250	4.6	0.4	1.3	---	6.2	-	18	64	69	493	4196				
2	2000	1.0	2.2	7250	4.6	0.4	1.3	---	6.2	-	18	64	69	493	4196				
3	1800	0.8	1.6	6000	3.7	0.3	1.4	---	4.2	-	14 / 16	64	69	486	2516				
4	1800	0.8	1.6	6000	3.7	0.3	1.4	---	4.2	-	14 / 16	64	69	486	2516				
5	1800	0.8	1.6	6000	3.7	0.3	1.4	---	4.2	1	14	64	69	486	2516				

Diagnostic memory	OK	Warning lamp control	OK
Parameter setting	carried out	Stop light power 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 check	Not tested	Leak test	Not tested
Immobilizer test	Not tested	Signal outputs TEBS	Not tested
Signal inputs	Not tested	Tag axle test	Not tested

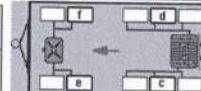
Diagnostic memory ELEX	Not tested	Signal outputs ELEX	Not tested
TailGUARDlight	Not tested	TailGUARD	Not tested

Manufacturer	DOMETT	Vehicle ident. no	7A9E25013E1023314
Vehicle type	5AFT STOCK	Odometer reading	22.8 km
next Service	0 km	Trip reading	22.8 km
Tester	Ron Pratt	Signature 	
Date	2014-12-12 11:16:34 a.m.		

WABCO**TRAILER EBS-E**GGVS/ADR TUEH TB 2007 - 019.0X
TDB0749

HERSTELLER MANUFACTURER CONSTRUCTEUR	DOMETT		
TYP TYPE TYPE	5AFT STOCK		
FAHRZEUG IDENTNR. CHASSIS NUMBER NUMERO DE CHASSIS	7A9E25013E1023314		
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO.	TP51190A		
POLRADZÄHREZAHN, c-d e-f POLE WHEEL TEETH c-d e-f DENTS ROUE DENTÉE c-d e-f	90	90	ABS-System ABS system Système ABS
RSS RSS RSS	Einfachbereifung Single Tire Monte simple		Lenkachse Steering axle Essieu virer
	Zwillingsbereifung Twin Tire Monte jumelle	X	Kippkritisches Fahrzeug Critical Trailer Véhicule critique
Subsystems	SB	I/O	24N

GIO	Pin1	Pin3	Pin4
1	ILS1	---	ILS1
2	eTASC	---	eTASC
3	ALS2	ALS2	---
4	---	---	LS1
5	DIAG	DIAG	DIAG
6	---	---	---
7	---	---	---



ACHSE AXLE ESSEU	pm (bar)		6.5		pm (bar)		0.8	2.0	---	6.5	pz	TYP TYPE	(mm)	(mm)	(bar)	
	(kg)	(kg)	(kg)	(kg)	(kg)	(kg)	(kg)	(kg)	1.0	Pz						
	TR (daN)		TR (daN)		TR (daN)		TR (daN)		TR (daN)		TR (daN)		TR (daN)		TR (daN)	
1	2000	1.0	2.2	7250	4.6	0.4	1.3	---	6.2	-	18	64	69	493	4196	
2	2000	1.0	2.2	7250	4.6	0.4	1.3	---	6.2	-	18	64	69	493	4196	
3	1800	0.8	1.6	6000	3.7	0.3	1.4	---	4.2	-	14 / 16	64	69	486	2516	
4	1800	0.8	1.6	6000	3.7	0.3	1.4	---	4.2	-	14 / 16	64	69	486	2516	
5	1800	0.8	1.6	6000	3.7	0.3	1.4	---	4.2	1	14	64	69	486	2516	



P.O.Box 98-971
J.HIRST (JEH)

South Auckland Mail Centre

DATE	12-Dec-14	BRAKE SYSTEM	24V TEBS
CERT. NO.	JH141215	OPTITURN EXEMPTION	HMRE14/393
VIN / CHASSIS	7A9E25013E1023314		
BRAKE CHAMBERS FRONT 18HSCLD65 (TSE)			
BRAKE CHAMBERS REAR 1416HTLD64 (TSE) + 14HSCLD64 (TSE)			
SLACK LENGTH FRONT	69 mm	TYRE SIZE FRONT	265 70 R 19.5
SLACK LENGTH REAR	69 mm	TYRE SIZE REAR	265 70 R 19.5
THIS VEHICLE COMPLIES WITH THE NZ		LINING MATERIAL FRONT	JURID 539
HVBR 32015/3 - SCHEDULE 5		LINING MATERIAL REAR	JURID 539



NZ TRANSPORT AGENCY
WAKA KOTAHI

NATIONAL OFFICE

50 Victoria Street
Private Bag 6995
Wellington 6141
New Zealand
T 64 4 894 5400
F 64 4 894 6100

www.nzta.govt.nz

Exemption: HMRE14/393

**EXEMPTION FROM SPECIFIED REQUIREMENTS OF LAND TRANSPORT RULES:
Heavy Vehicles 2004 and Vehicle Dimensions and Mass 2002**

Pursuant to Section 166(1) of the Land Transport Act 1998, and pursuant to the powers delegated to me, I, Jackie Hartley, Administrator (Assessments) hereby exempt the motor vehicle specified in Schedule 1 hereto from the requirements listed in Schedule 2, subject to the conditions specified in Schedule 3.

Schedule 1: Vehicle Details:

Make/Model: **Domett, 5 Axle Full Trailer**
VIN/Chassis: **7A9E25013E1023314**

Schedule 2: Exempted Requirements:

Heavy Vehicles 2004, Rule 31002

- Section 3.5(2)

Vehicle Dimensions & Mass 2002 Rule 41001

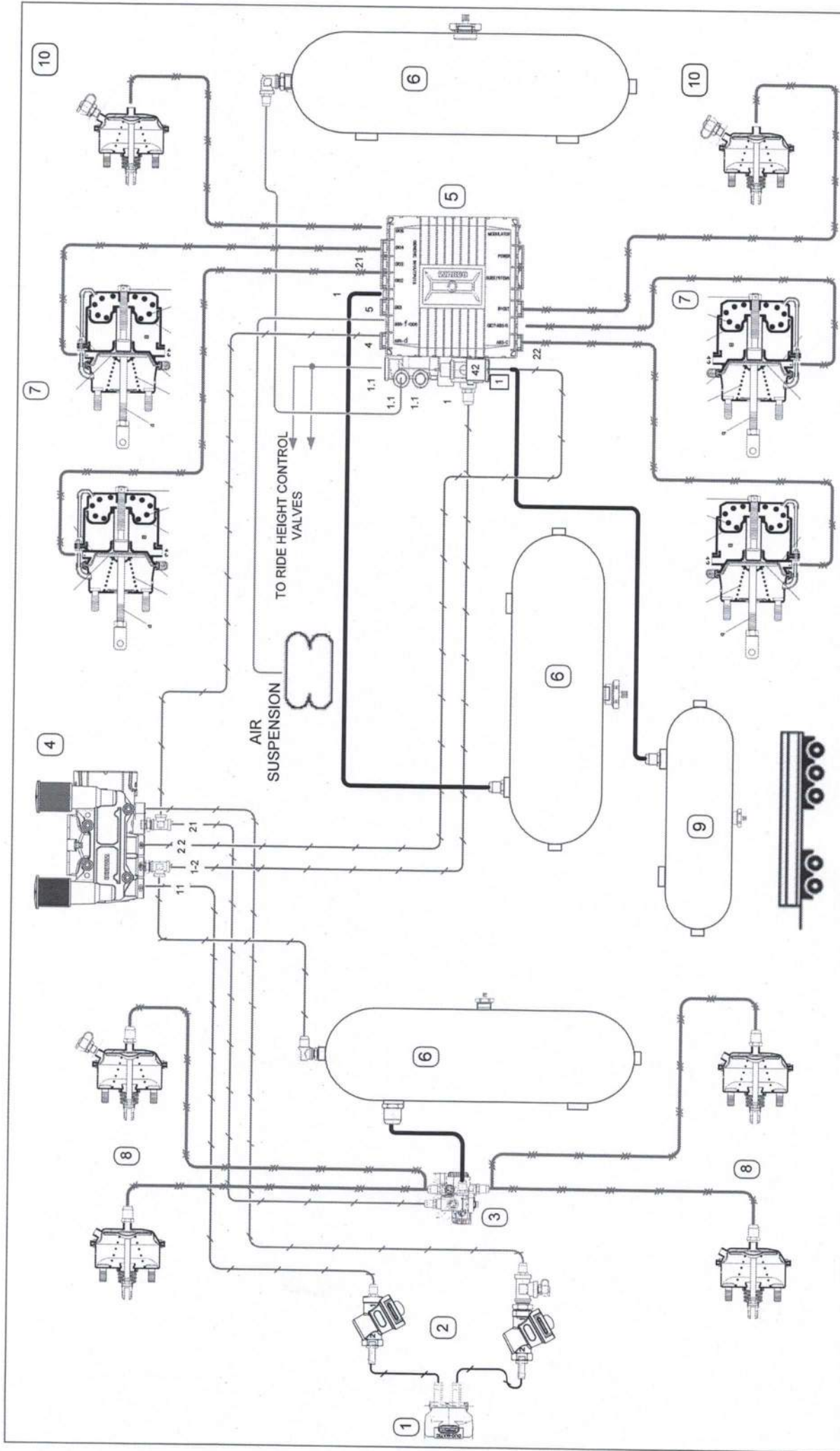
- Section 4.2(7)

Schedule 3: Conditions of this Exemption:

- 1) The Wabco OptiTurn function of the TEBS-E system is to be activated.
- 2) The vehicle must not be modified in any way while operating under this exemption.
- 3) This original exemption must be kept by Gough Transpecs.
- 4) A copy of this exemption including the OptiTurn function (printed on a silver WABCO sticker) must be affixed to the exempted vehicle.
- 5) The sticker in 4) must be legible and include all printed areas of this original exemption letter.
- 6) This exemption can be revoked at any time in writing by the NZ Transport Agency.

Signed at Wellington this 20th day of October 2014

Jackie Hartley
Administrator (Assessments)



ITEM	QTY.	PART NO.	DESCRIPTION	ITEM	QTY.	PART NO.	DESCRIPTION	PIPING LEGEND:
1	1	452 804 001 0	Wabco Duo-Matic coupling	9	1	9534	24.5 Ltr Air Tank	3/8" Rubber
2	2	432 500 020 0	Wabco control line filter	10	2	TSE14HSCLD64	TSE Service brake chamber	3/8" Rubber
3	1	480 207 202 0	Wabco EBS 3 rd modulator	11				1/2" Rubber
4	1	971 002 900 0	Wabco PREV	12				15mm Nylon
5	1	480 102 0...0	Wabco TEBS - E (premium)					12mm Nylon
6	3		46 Ltr Air tank					8mm Nylon
7	6	1416HTLD64	TSE Spring brake chamber					8mm Nylon
8	4	18HSCLD65	TSE Service brake chamber					8mm Nylon

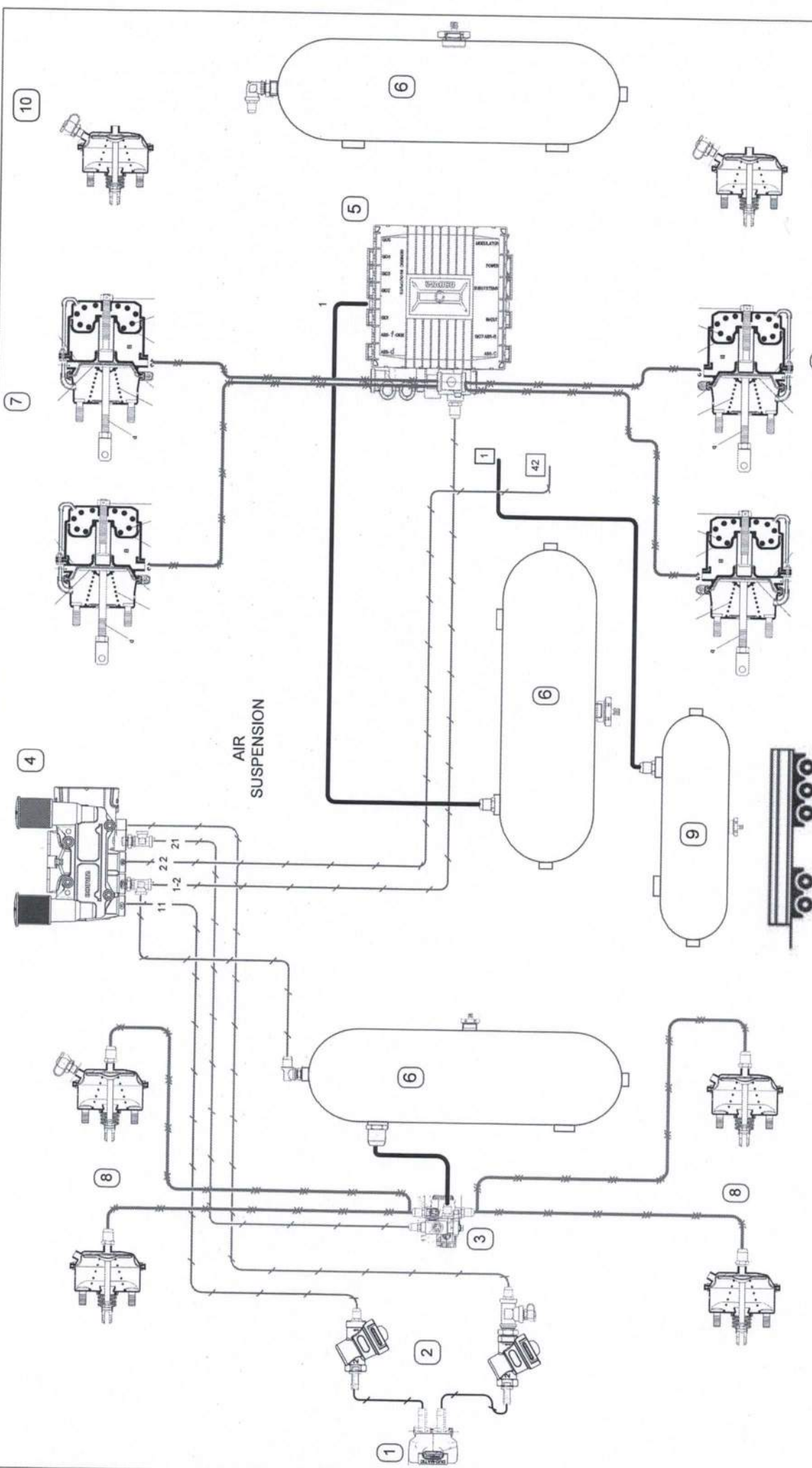
Domett T&T

DOM5AXFULL/EB
7A9E25013E1023314

SIZE A4
SCALE
SPEC REFERENCE 1314
MODEL NUMBER E2501
REV 1

GOUGH Transpecs

WABCO
Copyright Transpecs 2010
All rights reserved



ITEM	QTY.	PART NO.	DESCRIPTION	ITEM	QTY.	PART NO.	DESCRIPTION
1	1	452 804 001 0	Wabco Duc-Matic coupling	9	1	9534	24.5 Ltr Air Tank
2	2	432 500 020 0	Wabco control line filter	10	2	14HSCLD64	TSE Service brake chamber
3	1	480 207 202 0	Wabco EBS 3" modulator	11			
4	1	971 002 900 0	Wabco PREV	12			
5	1	480 102 0..0	Wabco TEBS - E (premium)				
6	3		46 Ltr Air tank				
7	4	1416HTLD64	TSE Spring brake chamber				
8	4	18HSCLD65	TSE Service brake chamber				

Domett T&T

DOM5AXFULL/EBS
7A9E25013E1023314

SIZE A4
SPEC REFERENCE 1314
MODEL NUMBER E2501
SCALE

WABCO
Copyright Transpecs 2010
All rights reserved

GOUGH Transpecs

10

7

10

5

6

4

AIR
SUSPENSION

1

2

3

6

8

9

6

1

42

7

7

7

7

8

8

8

8

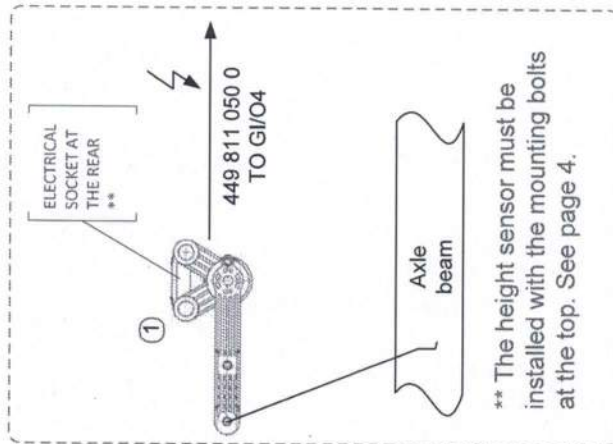
8

3/8" Rubber
3/8" Rubber
1/2" Rubber
15mm Nylon
12mm Nylon
8mm Nylon
8mm Nylon

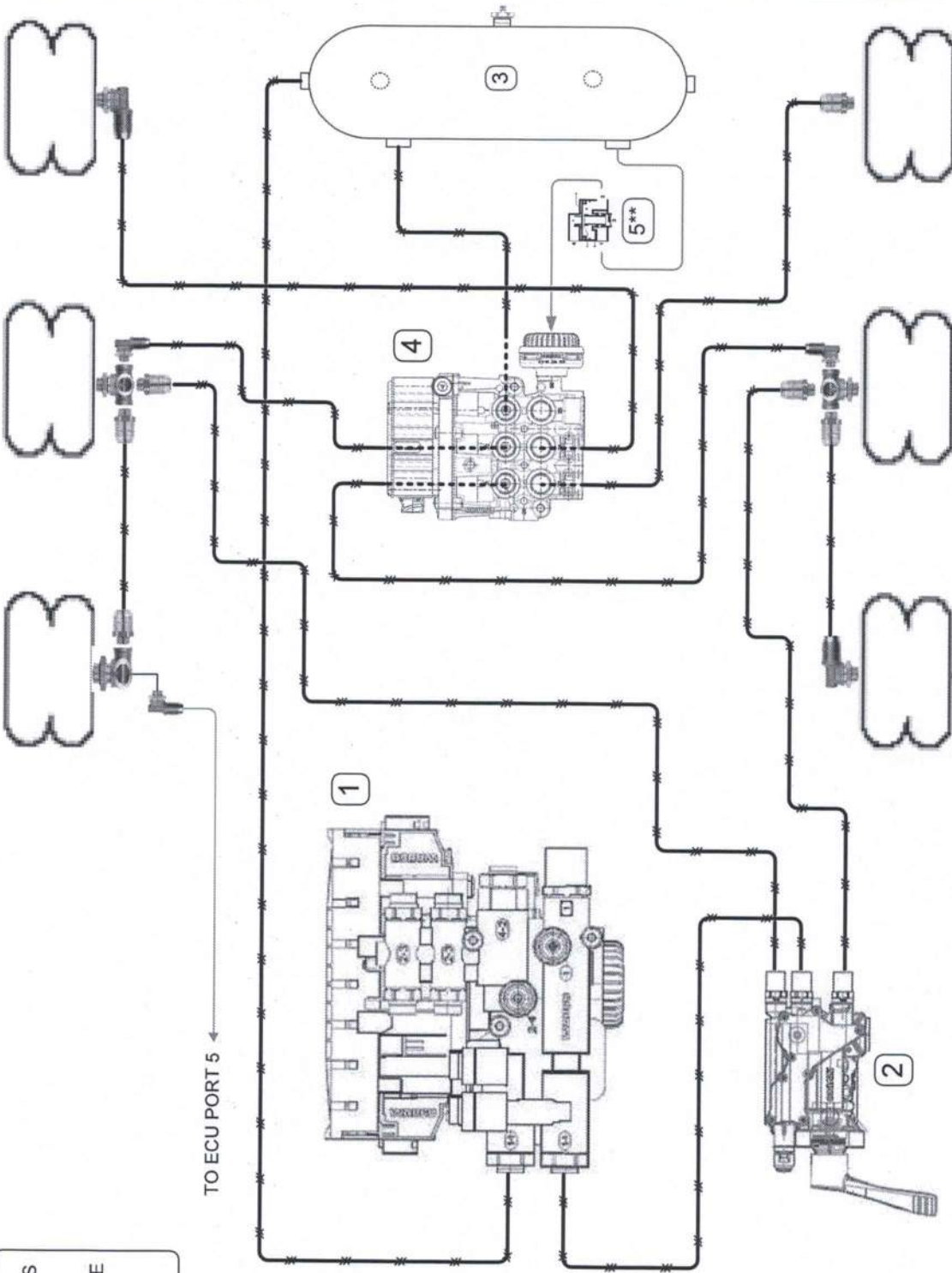
PIPING LEGEND:

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.

TO ECU PORT 5

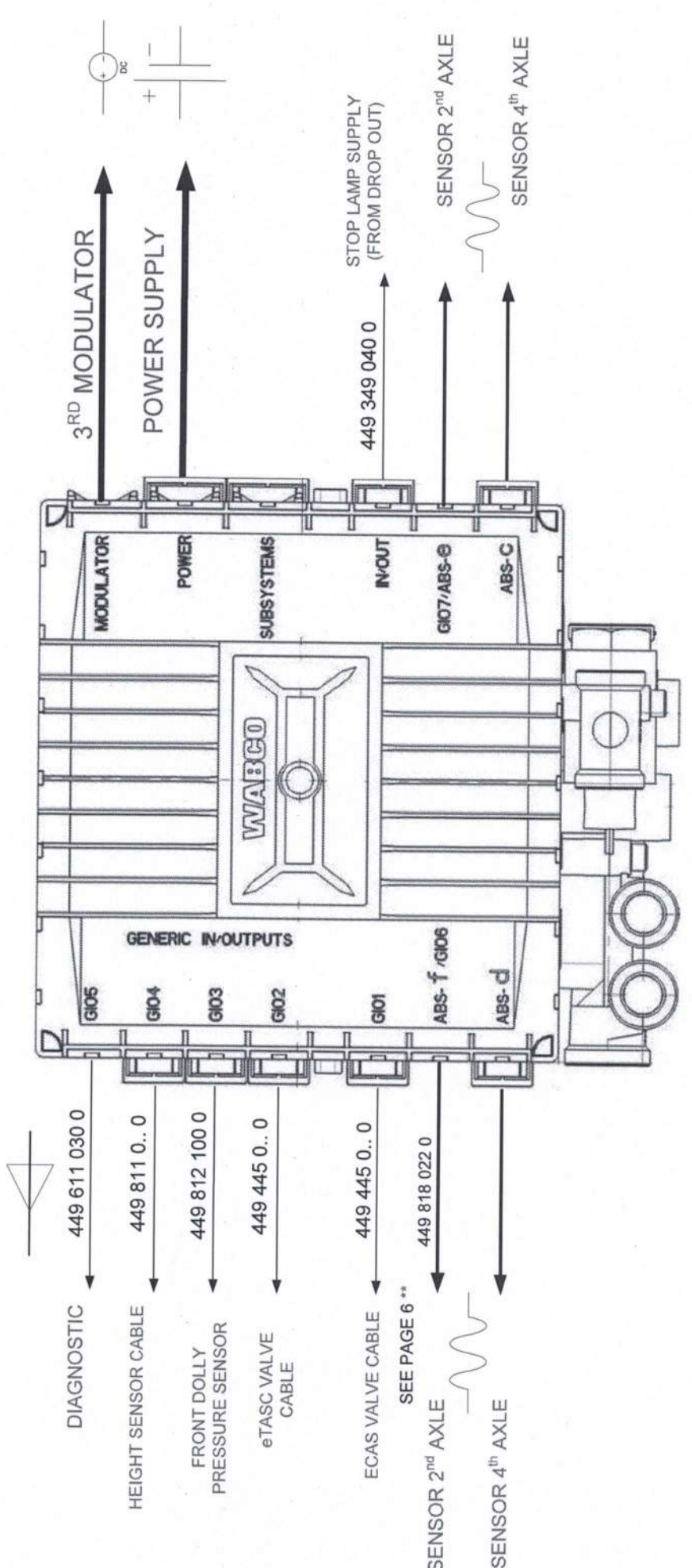


5** -- Remove the silencer (see arrow) from 463 084 100 0 and fit the 68ME8/22x1.5. Run 8mm nylon tube, from port 2 of 475 019 000 0, in to this fitting.



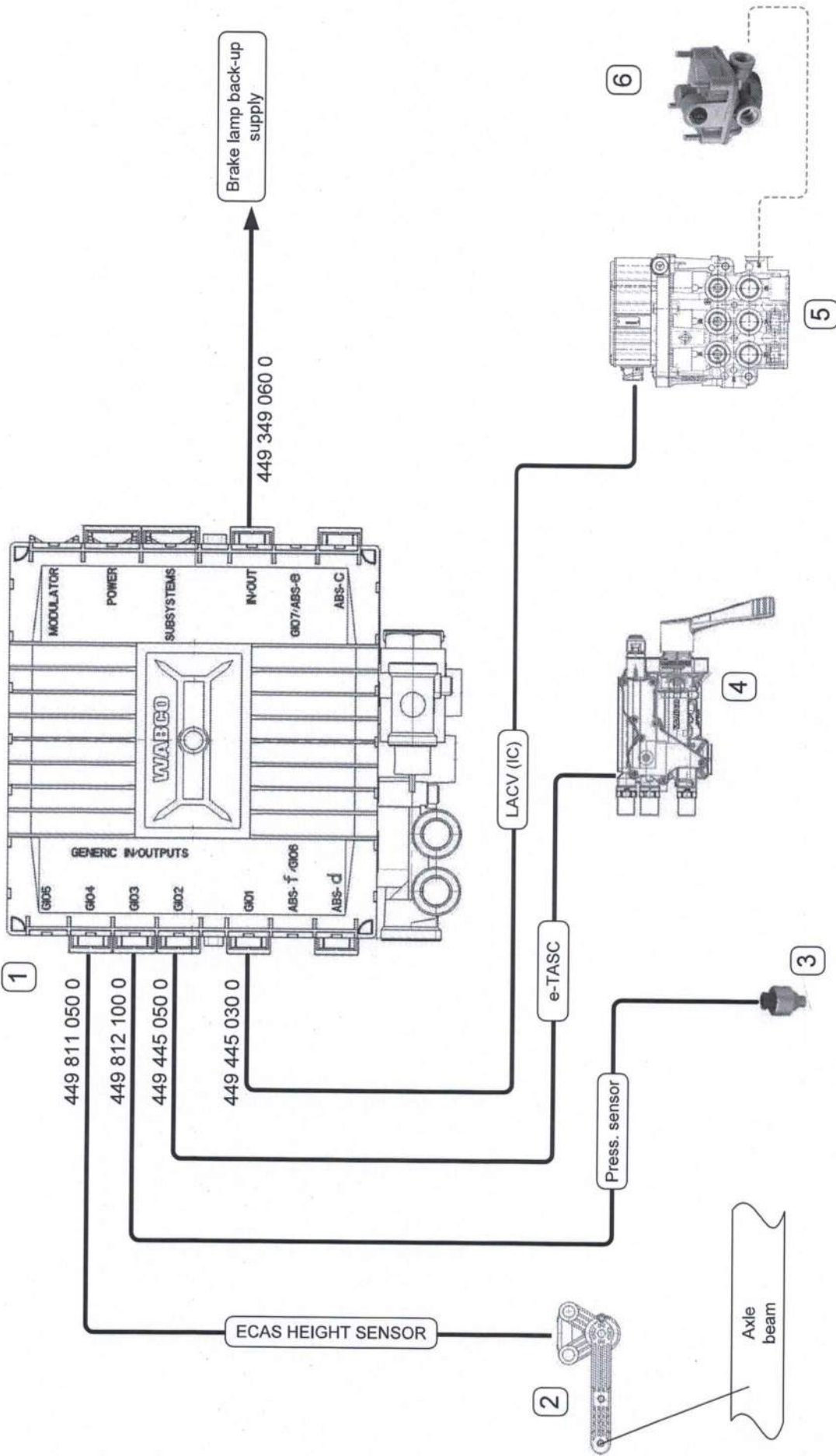
ITEM	QTY.	PART NO.	DESCRIPTION	ITEM	QTY.	PART NO.	DESCRIPTION	PIPING LEGEND:
1	1	480 102 080 0	WABCO TEBS E (PREMIUM)					3/8" Rubber
2	1	463 090 500 0	e-TASC VALVE					3/8" Rubber
3	1	1211/1259 3P	AIR TANK					12mm Nylon
4	1	463 084 100 0	LACY (IC)					15mm Nylon
5	1	475 019 000 0	WABCO PRESS. LIMITING VALVE					12mm Nylon
								8mm Nylon
								8mm Nylon
								8mm Nylon

<p>GOUGH Transpecs</p>		<p>5 Axle F/T (Rear suspension)</p>	
ITEM	SYSTEM	ASSYST NUMBER	DATE
	ECAS		28.10.14
PAGE NO	1/6	J HRST	E & OE
<p>Copyright Transpec 2010 All rights reserved</p>		<p>CHECKED BY NAME</p>	



**Optional extra

		5 Axle F/T GIO Assignment			
		ITEM	SYSTEM	ASSY/INT NUMBER	DATE
	ECAS	306	J HIRST	E & OE	29.10.14
Copyright Transpax 2010 All rights reserved		PAGE NO:	CHECKED BY NAME		



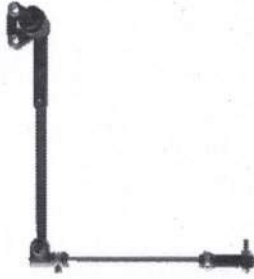
ITEM	QTY.	PART NO.	DESCRIPTION
1	1	480 102 080 0	WABCO TEB5 E (PREMIUM)
2	1	441 050 100 0	ECAS HEIGHT SENSOR
3	1	441 044 101 0	FRONT DOLLY PRESS. SENSOR
4	1	463 090 500 0	eTASC
5	1	463 084 100 0	LACV (IC)
6	1	475 019 000 0	PRESSURE LIMIT VALVE

ECAS - G/IO COMPONENT ASSIGNMENT

ITEM	DRAWING NUMBER	ASSY/KIT NUMBER	DATE
	ECAS		25.10.14
PAGE NO:	36	J HIRST	E & OE

6.6 Installation Distance sensor

Distance sensor with extension and linkage



Distance sensor 441 050 100 0 is used to both measure the driving level with ECAS vehicles and for determining the axle load with mechanical suspension.

- Install the distance sensor in such a way that the two mounting holes are horizontal and face upward.
- A lever is used for linking the distance sensor lever.
- The maximum excursion of the lever $\pm 50^\circ$ may not be exceeded.
- The length of the distance sensor lever can be set.
- On vehicles with long compression travel, use a longer lever.
- Use a shorter lever in vehicles with especially short compression travel to obtain more accurate measurements. Here the lever length of the distance sensor should be 100 mm. Lever lengths other than 100 mm must be specified in the parameter settings see chapter 7.1 "Parameter definition with TEBS E Diagnostic Software", page 125, Window *TEBS - LSV => Distance sensor Lever length [mm]*.

It is important that the distance sensor moves freely across its operating range, and that the lever can only move in the way intended.

The distance sensor and the lever both have a fastening hole (4 mm) for locking the lever into the optimal position for the driving level.

The linkage for the distance sensor should be fastened so that the lever is horizontal at driving level.

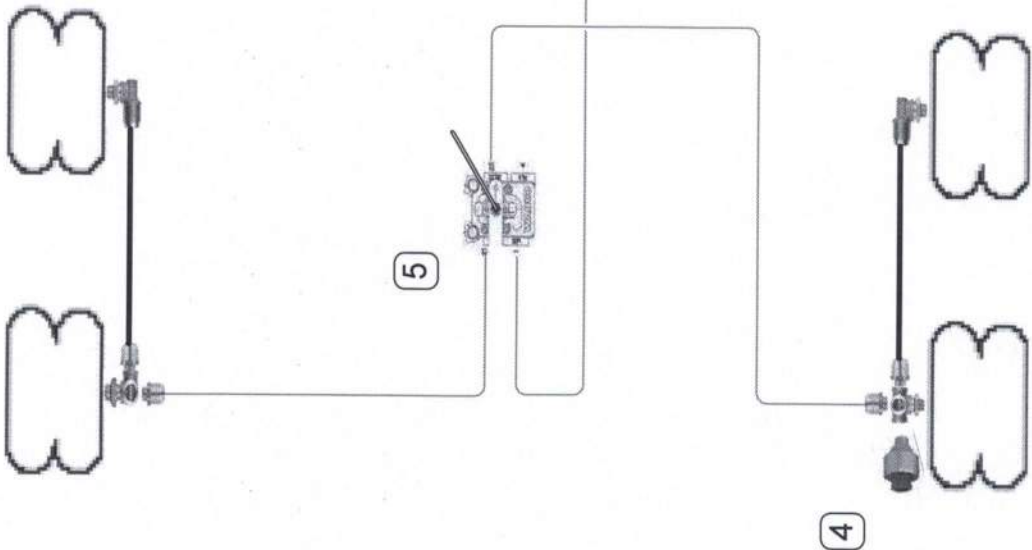
The connection to the axle may be achieved by means of the linkage.

The rubber link of the lever should be connected by a 6 mm rod (solid) to the linkage on the axle.

ECAS vehicles

1-point control

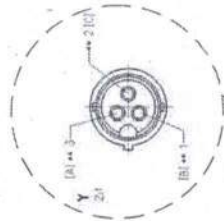
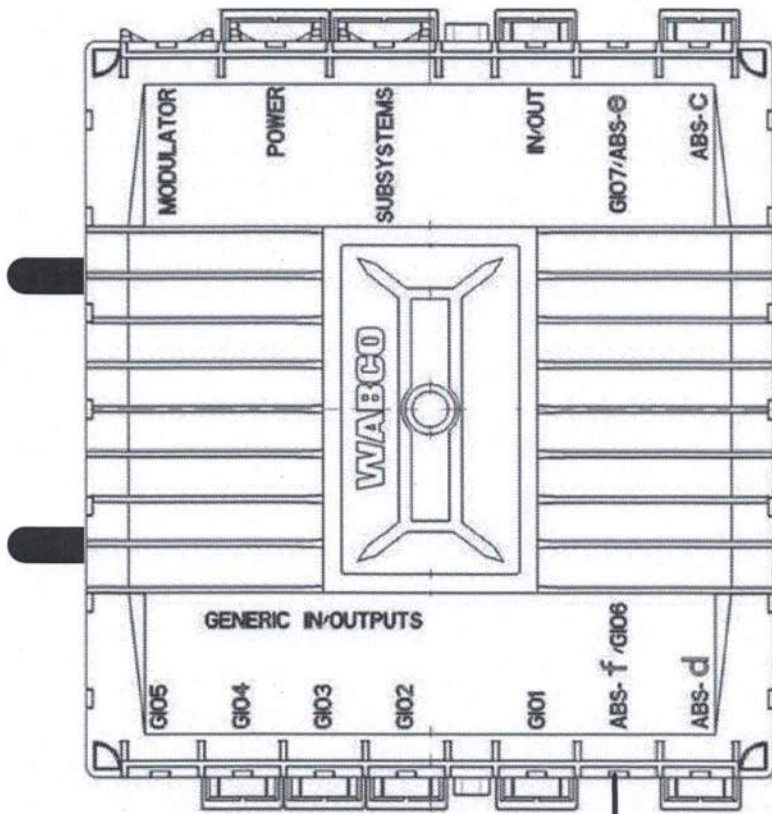
- Move the distance sensor to the middle of the main axle to prevent damage to the distance sensor when travelling around curves with greater vehicle inclination.



ITEM		QTY.	PART NO.	DESCRIPTION	ITEM	QTY.	PART NO.	DESCRIPTION	PIPING LEGEND:
1	1	480 102 0..0	WABCO TEBS E (PREMIUM)						3/8" Rubber
4	1	441 044 101 0	AIR BAG PRESSURE SENSOR						3/8" Rubber
5	1	464 008 011 0	WABCO H.C.V.						1/2" Rubber
									15mm Nylon
									12mm Nylon
									8mm Nylon
									8mm Nylon
									8mm Nylon

Front Dolly		DATE	
ECAS OptiTurn		ASSY/PRT NUMBER	
ITEM	DRAWING NUMBER	J HIRST	E & OE
	Generic	56	

	Copyright Transpex 2010 All rights reserved
--	--



TO HYDRAULIC PRESSURE SWITCH

449 712 030 0

449 818 022 0

Front wheel speed sensor

** OPTIONAL EXTRA

		eTASC with OPTITURN – FULL TRAILER	
		ECAS SUSPENSION DUMP	
ITEM	DRAWING NUMBER	ASSYKIT NUMBER	DATE
	ECAS		28.10.14
PAGE NO:	65	J-HRST	E & OE
<small>Copyright Transpacs 2010 All rights reserved</small>			

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

distribution: DOMETT
7A9E25013E1023314

please note!

This brake calculation is made under consideration of
-the legal precriptions 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 08.07.2014

vehicle manufacturer: DOMETT
trailer model : 5AFT STOCK
trailer type : 5-axle-full-trailer
remarks : air / hydraulic / VA suspension
WABCO TRAILER - EBS E
TRISTOP 3+4: T.14/16
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	9400	32500
axle 1	P1 in kg	2000	7250
axle 2	P2 in kg	2000	7250
axle 3	P3 in kg	1800	6000
axle 4	P4 in kg	1800	6000
axle 5	P5 in kg	1800	6000
wheel base	E in mm	6800 - 6800	
centre of gravity height	h in mm	1093	2318

	<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	18.	18.	T.14/16	T.14/16	14.
lever length	69	69	69	69	69
brake factor	23.03	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	2.2	2.2	1.9	1.9	1.9
chamber pressure(rdyn max)pH at z=22,5%bar	2.2	2.2	1.9	1.9	1.9
chamber press.(servo)pcha at pm6,5bar bar	6.2	6.2	4.2	4.2	4.2
piston force ThA at pm6,5bar N	6622	6622	3984	3984	3984
brake force(rdyn min)T lad. at pm6,5bar N	50102	50102	30045	30045	30045
brake force(rdyn max)T lad. at pm6,5bar N	50102	50102	30045	30045	30045
brake force within 1 % rolling friction proportion	%	21.2	21.2	19.2	19.2

braking rate z laden 0.597 for rdyn min
z = sum (TR)/PRmax 0.597 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 18HSCLD64

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 18HSCLD64

axle 3:

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

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

brake cylinder: Meritor1416HTLD64

axle 4:

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

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

brake cylinder: Meritor1416HTLD64

axle 5:

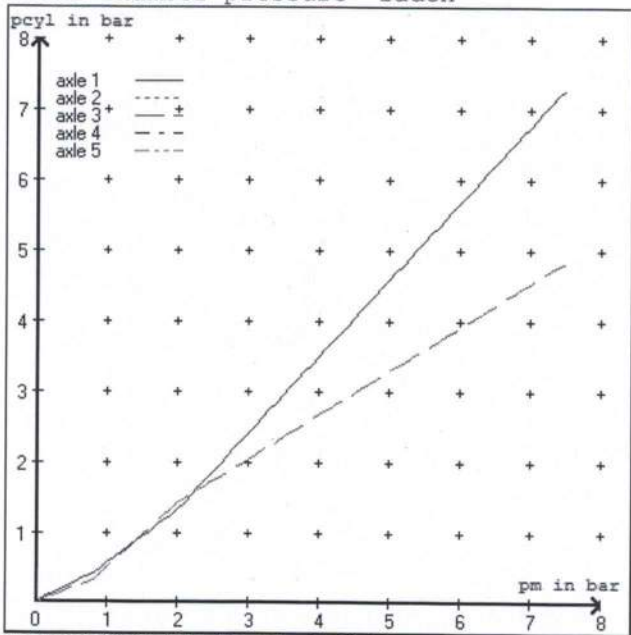
valve 1: 971 002 ... 0 WABCO
EBS emergency valve

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

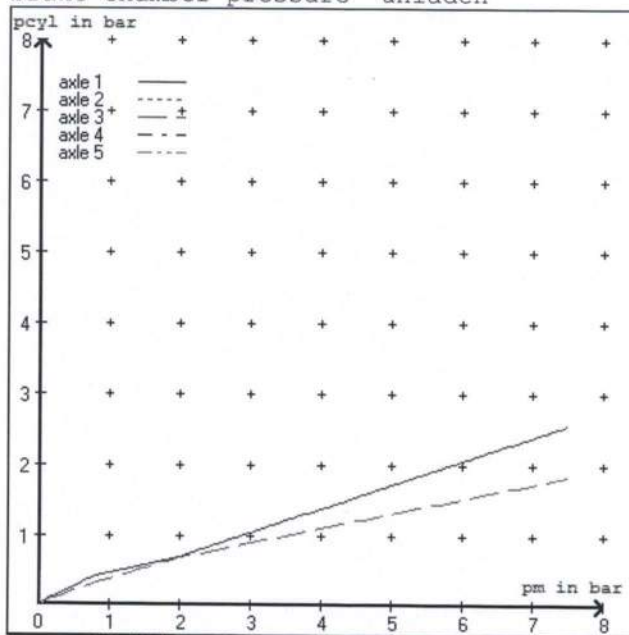
brake cylinder: Meritor 14HSCLD64

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	2.4	2.4	2.4	
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	0.7	0.7	0.7	

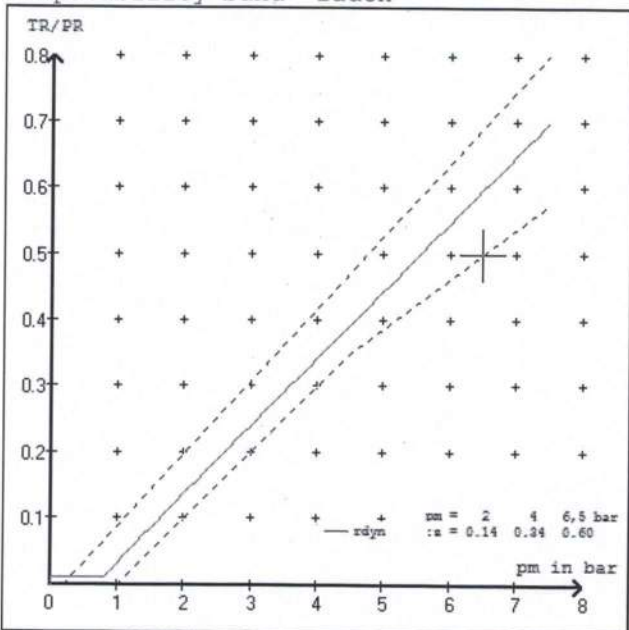
brake chamber pressure laden



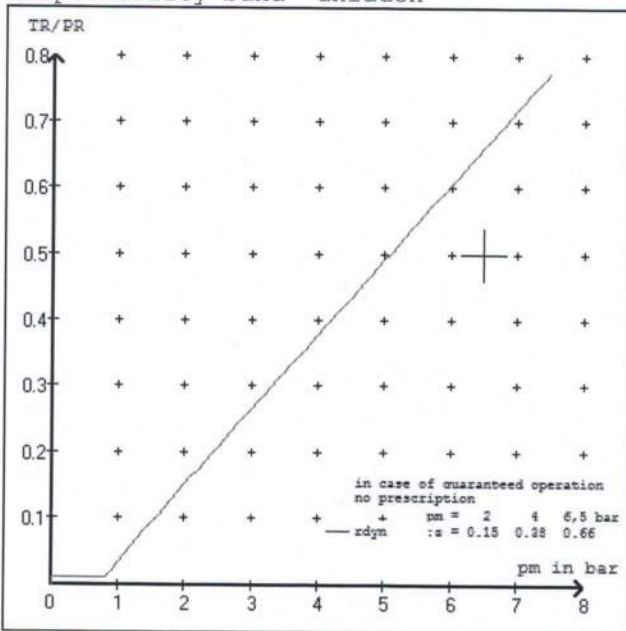
brake chamber pressure unladen



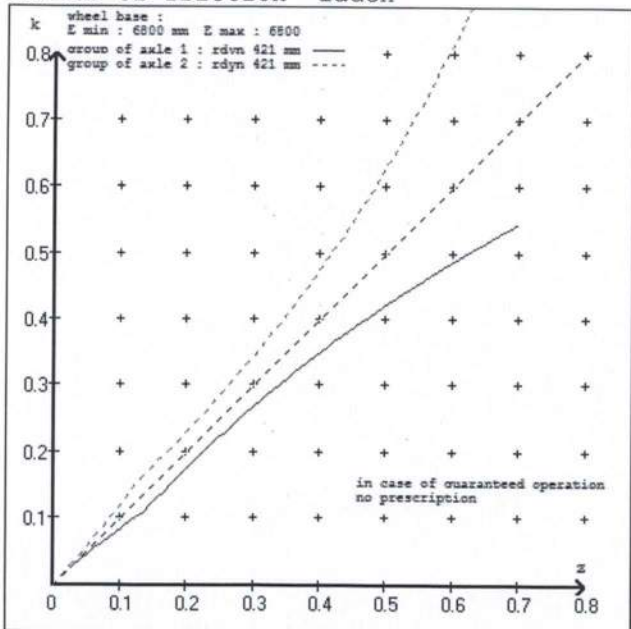
compatibility band laden



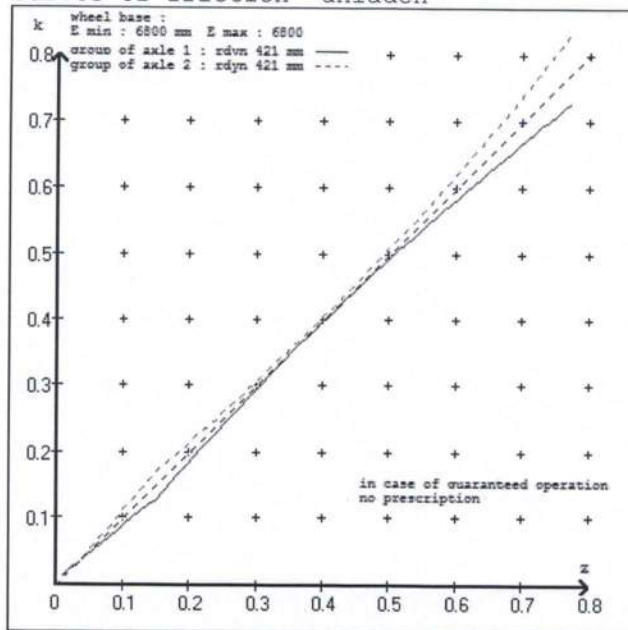
compatibility band unladen



curves of friction laden



curves of friction unladen



vehicle manufacturer: DOMETT
 trailer model : 5AFT STOCK
 trailer type : 5-axle-full-trailer

brake chamber and lever length :

axle 1 : 2 x type/diameter 18. (Meritor) lever length 69 mm
 axle 2 : 2 x type/diameter 18. (Meritor) lever length 69 mm
 axle 3 : 2 x type/diameter T.14/16 (Meritor) lever length 69 mm
 axle 4 : 2 x type/diameter T.14/16 (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
 trailer model : 5AFT STOCK
 trailer type : 5-axle-full-trailer
 brake calculation no. : TP 51190A

tire circumference main axle : 2650 for r dyn max
 tire circumference auxiliary axle : 2650 for r dyn 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	2000	to be	2.2	7250	to be	0.4	1.3	6.2
2	2000	entered by	2.2	7250	entered by	0.4	1.3	6.2
3	1800	the vehicle	1.6	6000	the vehicle	0.3	1.4	4.2
4	1800	manufact.	1.6	6000	manufact.	0.3	1.4	4.2
5	1800		1.6	6000		0.3	1.4	4.2

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
2000 2.2	2000 2.2	1800 1.6	1800 1.6	1800 1.6
2500 2.6	2500 2.6	2300 1.9	2300 1.9	2300 1.9
3000 3.0	3000 3.0	2800 2.2	2800 2.2	2800 2.2
3500 3.3	3500 3.3	3300 2.5	3300 2.5	3300 2.5
4000 3.7	4000 3.7	3800 2.8	3800 2.8	3800 2.8
4500 4.1	4500 4.1	4300 3.1	4300 3.1	4300 3.1
5000 4.5	5000 4.5	4800 3.5	4800 3.5	4800 3.5
5500 4.9	5500 4.9	5300 3.8	5300 3.8	5300 3.8
7250 6.2	7250 6.2	6000 4.2	6000 4.2	6000 4.2

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. verific. of residual (hot) braking force type III
(item 4.2.1 of appendix 2 to annex 11)

axle 1	(rdyn 421 mm)	T = 23.2 % Fe
axle 2	(rdyn 421 mm)	T = 23.2 % Fe
axle 3	(rdyn 421 mm)	T = 16.4 % Fe
axle 4	(rdyn 421 mm)	T = 16.4 % Fe
axle 5	(rdyn 421 mm)	T = 16.4 % 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 = 6622 N
axle2	ThA = 6622 N
axle3	ThA = 3984 N
axle4	ThA = 3984 N
axle5	ThA = 3984 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 = 39128 N
axle 2	(rdyn 421 mm)	T = 39128 N
axle 3	(rdyn 421 mm)	T = 23538 N
axle 4	(rdyn 421 mm)	T = 23538 N
axle 5	(rdyn 421 mm)	T = 23538 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 = 39128 N
axle 2	(rdyn 421 mm)	T = 39128 N
axle 3	(rdyn 421 mm)	T = 23538 N
axle 4	(rdyn 421 mm)	T = 23538 N
axle 5	(rdyn 421 mm)	T = 23538 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)

reference values

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

	pz [bar]	T [N]	T [N]
axle 1	1.0	4932	
	6.2	41962	
axle 2	1.0	4932	
	6.2	41962	
axle 3	1.0		4868
	4.2		25164
axle 4	1.0		4868
	4.2		25164
axle 5	1.0		4868
	4.2		25164

VIN - no.:

	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	18./	18./	T.14/16	T.14/16	14./
Maximum stroke smax = ...mm maximaler Hub smax =mm	64	64	64	64	64
Lever length =mm Hebellänge =mm	69.08	69.08	69.08	69.08	69.08

