



Heavy Vehicle Specialist Certificate

Must be presented to a Transport Service Delivery Agent
Heavy Vehicle Specialist Inspector and Inspecting Organisation

Heavy Vehicle Specialist Inspector's Name *(print name)*

ID

RONALD STUART PRATT

TRSP

Vehicle Registration*

VIN / Chassis Number

TA9E20012D1623189

Component being certified:

Chassis Modification

Load Anchorage

Log Bolsters

Towing Connection

Brakes

SRT

Certification Category

PSV Stability

PSV Rollover

Swept Path

HVEK

PBS

Description of Work

Certify to Brake Rule 32015/2

Code/Standard Certified to

NZHV Brake Rule Schedule 5

Component Load Rating(s)

max GUM = 32000kg

General Drawing Number(s)

RSS Switches on Dual Tyres

DM

Supporting Documents

Brake Cert No JH130702

SAF 5FTEBSE

*Special Conditions

ABS control warning lamp must illuminate when ignition switched on
the extinguish immediately OK when vehicle reaches 7kph

Certification Expires Date *(if applicable)*

NA

OR

Hubodometer Reading *(when applicable)*

Declaration

I, the undersigned, declare that I am the Heavy Vehicle Specialist Inspector identified above 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 Deed of Appointment. To the best of my knowledge the information contained in this Certificate is true and correct.

Designer's ID *(if certified by manufacturer)*

Inspector's / Delegate's Signature

R. Pratt

*Delegate's/Inspector's Name *(print name)*

ID number

Date

06/09/2013

Number

446858

Inspector's Signature

Heavy Vehicle Inspector's Signature

Date

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

Testing SAN



NZ TRANSPORT AGENCY
WAKA KOTAHU

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: HVB13/258

**EXEMPTION FROM SPECIFIED REQUIREMENTS OF LAND TRANSPORT RULE:
Heavy-vehicle Brakes 2006, Rule 32015**

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 section of Land Transport Rule: Heavy-vehicle Brakes 2006 (the Rule) listed in Schedule 2, subject to the conditions specified in Schedule 3.

Schedule 1: Vehicle Details:

Make/Model: **Domett T & T Ltd, 5 Axle Full Trailer**
VIN/Chassis: **7A9E20012D1023189**

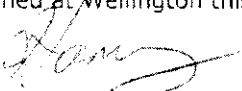
Schedule 2: Exempted Requirement:

2.3(9) The parking brake of a vehicle, whether or not it is being operated as a combination vehicle, must be able to be applied by the driver from the normal driving position using one control only.

Schedule 3: Conditions of this Exemption:

- 1) The vehicle must be fitted with a Wabco park-release emergency valve (PREV), Part Number: 971 002 900 0.
- 2) The vehicle must be fitted with the Wabco PREV name plate, Part Number 971 002 103 4, adjacent to the PREV.
- 3) The vehicle must still be fitted with a parking brake that complies with all parking brake requirements in the Rule other than the requirement in Clause 2.3(9) of the Rule.
- 4) The installation of the PREV must be approved in writing by Gough Transpecs or an NZ Transport Agency appointed HVEK certifier acting on behalf of, and under instruction from, Gough Transpecs; Gough Transpecs must keep a written record of all approvals.
- 5) The HVEK certifier in 4) must be fully trained in end of line procedures for Wabco electronically controlled braking systems.
- 6) Gough Transpecs must provide full operator training in the use of the PREV and furnish the operator with full written operating instructions for the PREV.
- 7) The vehicle must not be modified in any way while operating under this exemption.
- 8) This original exemption must be kept by Gough Transpecs.
- 9) A copy of this exemption (printed on a silver WABCO sticker) must be affixed to the exempted vehicle as close to the WABCO PREV as possible.
- 10) The sticker in 9) must be legible and include all printed areas of this original exemption letter.
- 11) This exemption can be revoked at any time in writing by the NZ Transport Agency.

Signed at Wellington this 23rd day of July 2013


Jackie Hartley
Administrator (Assessments)

Statement of Design Compliance**S.O.D.C. number: JH130802**For Heavy vehicle brake specification
(Schedule 5) of HV Brake Rule 32015/2**Vehicle details:**

Make: DOMETT
Model: E2001
VIN#: 7A9E20012D1023189
Chassis#: 1189
GCM (kgs): N/A
GVM (kgs): 32,000
Wheelbase (mm): 7450
Axle test report #: TDB 0749
Type: 5AFT DISC BRAKE

Component Details:

	Front	Rear (Axle 5)
Lever length (mm):	69	69
Brake chamber size:	TSE18HSCLD65	TSE1416HTLD64 (14HSCLD64)
Tyre size:	265 70 R 19.5	265 70 R 19.5
Drawing number: (for component reference)	1189 & 1190	
Brake calculation#:	TP 50860	

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: 25 July 2013

s

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

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

Signed: **Dated:** 06/09/2013

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

HVBR WORKSHEET
(PROCEDURE & COMPLIANCE DOCUMENTATION SHEET)

CERTIFICATE No. JH130801

CUSTOMER NAME DOMETT TRAILERS

CUSTOMER ORDER No. 4065 DATE RECEIVED 18.07.13

VEHICLE TYPE 5 AXLE FULL TRAILER

REG No. CHASSIS No. 7A9E20012D1023189

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 VALVES: T-EBS CONTROL – RRS ACTIVATED
TEST POINTS: 3 4 5 7

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

EBS CONTROL: IF SPECIAL CONDITIONS APPLY – SEE INSTRUCTION ON L1400

VALVES: AS PER BRAKE CALCULATION TP 50860 & SO1534834

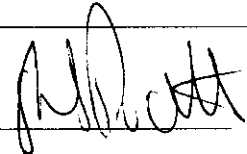
TYRE SIZE: 265 70 R 19.5

NOTES

PACKING SLIP NO. SO1534834 PROCESS TIME: 1

BRAKE CALC #TP50860 – THE MERITOR CHAMBERS ARE THE TSE VARIANT.

COMPLETION DATE : 26th July 2013

SIGNATURE (pp.): 

Statement of Compliance with the New Zealand Heavy Brake Rule

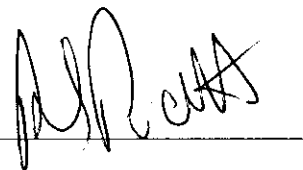
Documentation required supporting Statements of Compliance with the New Zealand Heavy Brake Rule, to be made available to the Statutory Authority on request, must include all calculations and test reports.

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 32015/2, Schedule 5.

Date: 26th July 2013

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 32015/2, 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

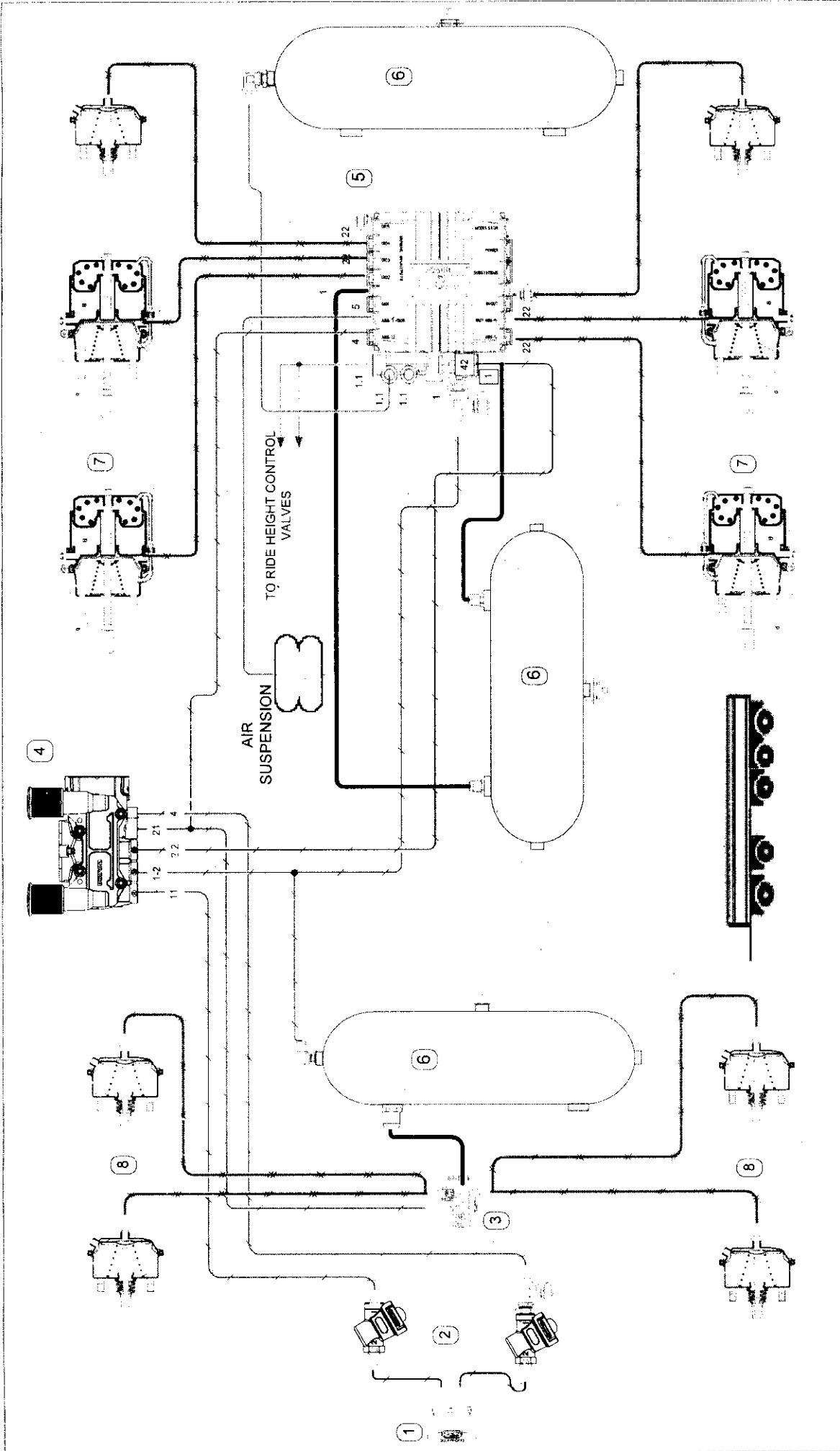
PO Box 98 971, Manukau City 2241



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

South Auckland Mail Centre

DATE	26-Jul-13	BRAKE SYSTEM	12/24V EBS
CERT. NO.	JH130801	PREV/OPTI EXEMPTION	HVB13/258
VIN / CHASSIS	7A9E20012D1023189		
BRAKE CHAMBERS	1,3,5 TSE 18HSCLD65		
BRAKE CHAMBERS REAR	TSE 1416HTLD64 (TSE 14HSCLD64)		
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	
HVBR 32015/2 - SCHEDULE 5		LINING MATERIAL REAR	
		JURID 539	
		JURID 539	



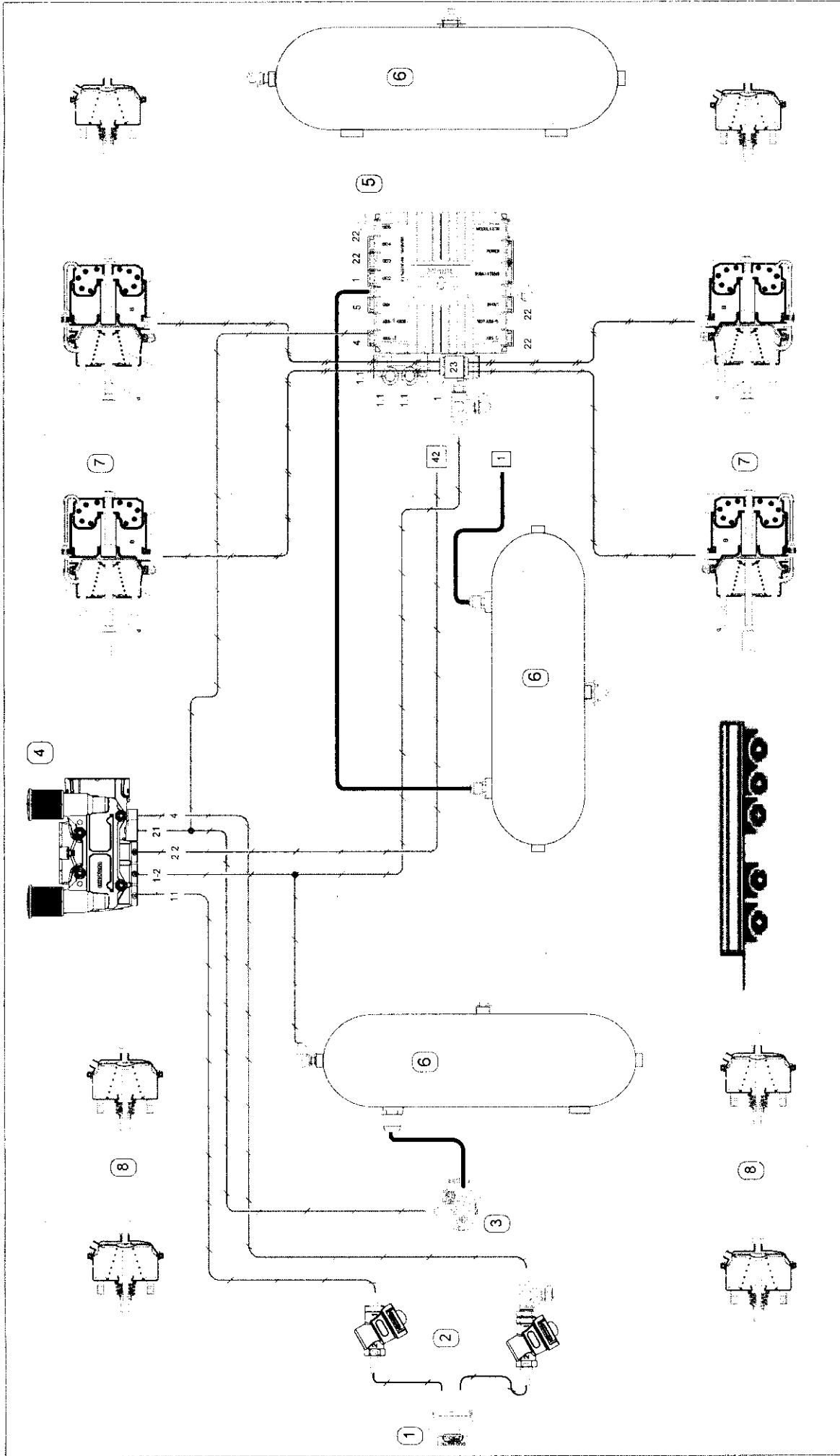
ITEM		QTY.	PART NO.	DESCRIPTION	ITEM	QTY.	PART NO.	DESCRIPTION	PIPING LEGEND
1	1	452 804 001 0	Wabco Duo-Matic coupling	9				3/8" Rubber	---
2	2	432 500 020 0	Wabco control line filter	10				3/8" Rubber	---
3	1	480 207 001 0	Wabco EBS 3" modulator	11				1/2" Rubber	---
4	1	971 002 900 0	Wabco PREV	12				15mm Nylon	---
5	1	480 102 064 0	Wabco TEBS - E (premium)					12mm Nylon	---
6	3	12593P	50 Ltr Air tank					8mm Nylon	---
7	4	2430GC**	TSE Spring brake chamber	**	4	1416GC	TSE disc option	8mm Nylon	---
8	6	24S	TSE Service brake chamber	**	6	14S	TSE disc option	8mm Nylon	---

Transpers
 QUALITY ON THE MOVE
WABCO

Trailer manufacturer
 EBS KIT 5A D/BAR

SIZE: A4
 SCALE: 1:1

REV: 1
 SERVICE



ITEM		QTY.	PART NO.	DESCRIPTION	ITEM	QTY.	PART NO.	DESCRIPTION	PIPING LEGEND:
1	1	452 804 001 0	Wabco Duo-Matic coupling	0				3/8" Rubber	---
2	2	432 500 020 0	Wabco control line filter	10				3/8" Rubber	---
3	1	480 207 001 0	Wabco EBS 3" modulator	11				1/2" Rubber	---
4	1	971 002 900 0	Wabco PREV	12				15mm Nylon	---
5	1	480 102 064 0	Wabco TEBS - E (premium)					12mm Nylon	---
6	3	12593P	50 Lit Air tank					8mm Nylon	---
7	4	2430GC**	TSE Spring brake chamber	**	4	1416GC	TSE disc option	8mm Nylon	---
8	6	24S**	TSE Service brake chamber	**	6	14S	TSE disc option	8mm Nylon	---

Transpec
QUALITY OF THE MOVE

WABCO

Trailer manufacturer
EBS KIT 5A DIBAR

SIZE: A4
SCALE: A4

EMERGENCY
KIT NUMBER

REV

INFORMATION REQUIRED FOR TRAILERS TO COMPLY WITH THE NZ HVBC

CUSTOMER
DOMETT TRUCK & TRAILER LTD (JH130801)

ADDRESS
HEWLETTS ROAD, MT MAUNGANUI

YEAR 2013	MAKE Domett
MODEL E2001	FULL TRAILER/SEMI Full
CHASIS NUMBER 1189	VIN 7A9E20012D1023189
GVM 32,000 KGS	REG

TARE TOTAL
7500 KGS (EST)
FRONT 3300 KGS REAR 4200 KGS
SPLIT REQUIRED FOR FULL TRAILERS ONLY

CONFIGURATION
5 AXLE C/SIDE TRAILER
AXLE SPACING FRONT 1310 mm REAR 2510 mm
MAXIMUM WEIGHT FOR 1ST TO LAST SPREAD 30,000KGS

AXLE MAKE/MODEL
SAF INTRADISC – TDB 0749

S-CAM RADIUS	EFFICIENCY
DRUM RADIUS	100Nm PRESSURE

OR

PRESS IN/TORQUE OUT 100Nm	40 kPa & 30 kPa
PRESS IN/TORQUE OUT 650kPa	10.98 kNm & 9.83 kNm

CHAMBER SIZE	FRONT TSE18HSCLD64	REAR TSE1416HTLD64 & TSE14HSCLD64
SPRINGBRAKE FORCE	FRONT	REAR 6.16 kN
SPRINGBRAKE HOLD OFF PRESSURE	FRONT	REAR 450 kPa

SLACK LENGTH 69 mm	LINING MATERIAL
LINING COF N/A	JURID 539

SUSPENSION TYPE REACTIVE/NON REACTIVE	
FRONT	NON REACTIVE (300mm AIR BAG)
REAR	NON REACTIVE (300mm AIR BAG)

TYRE SIZE	FRONT 265 70 R 19.5	REAR 265 70 R 19.5
WHEELBASE	7.45 M	
UNLADEN COG	1.09 M	
LOADED COG FROM SRT – FULL TRAILERS ONLY	2.06 M	
OVERALL HEIGHT	4.25 M	

BRAKE VALVES WABCO EBS E VERSION	
PRIMARY RELAY 480 102 080 0	CRACK PRESS N/A
SECONDARY RELAY 480 207 202 0	CRACK PRESS N/A
SPRING BRAKE RELAY N/A	ANTI COMPOUND <u>YES/NO</u> YES (VIA PEM)
LOCKED RATIO N/A	LOAD SENSE VALVE N/A
PARK BRAKE WABCO PREV 971 002 900 0	
OTHER VALVES	

AIR TANKS TO STANDARD?	SAE J10
SIZE FRONT	46 LTR
SIZE REAR	46 & 25 LTR
AUXILIARY WITH PROTECTION	YES – VIA P.E.M. (46 LTR)

TEST POINT FITTED?

<u>FRONT CHAMBER</u>	<u>YES</u>
<u>REAR CHAMBER</u>	<u>YES</u>
<u>TANK</u>	<u>YES</u> : Pressure monitored in ecu
<u>RATIO/LSV NO.1 IN</u>	<u>N/A</u>
<u>RATIO/LSV NO.1 OUT</u>	<u>N/A</u>
<u>RATIO/LSV NO.2 IN</u>	<u>N/A</u>
<u>RATIO/LSV NO.2 OUT</u>	<u>N/A</u>

<u>DUOMATIC CONNECTIONS COLOUR CODED?</u>	<u>YES</u>
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<p>NOTES:-</p> <ul style="list-style-type: none"> • PREV EXEMPTION : HVB13/258 • OPTI EXEMPTION: N/A • TEST POINT AT CONTROL LINE FILTER. • BRAKE CALC TP50860 • MERITOR CHAMBERS ARE TSE VARIANT • SODC: JH130801
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WABCO START-UP PROTOCOL

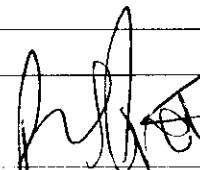
System	Trailer EBS-E	WABCO part number	480 102 080 0
Production date	2013-04-10	Serial number	897001302300G
Serial number (modulator)	000000021222		
Fingerprint Customer EOL / Customer Development / Flash Program	W033869 / 2013-09-06 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00		

WABCO		TRAILER EBS-E		GGVS/ADR TUEN TB 2007 - 019.00 TDB0749			
HERSTELLER MANUFACTURER CONSTRUCTEUR	DOMETT T&T			GIO	Pin1	Pin3	Pin4
TYP TYPE	5AFT C/SIDE			1	---	---	---
FAHRZEUG IDENTIFIK. CHASSIS NUMBER NUMERO DE CHASSIS	7A9E20012D1023189			2	---	---	---
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO CALCUL DE FREINAGE NO	TP50860A			3	ALS2	ALS2	---
POLRADZÄHNEZAHL c-d 1-a-f POLE WHEEL TEETH c-d 1-a-f DENTS ROUES DENTÉL c-d 1-a-f	90	90	ABS-System ABS-System Systeme ABS	4	---	---	---
RSS RSS RSS	Einachsberereitung Single Tyre Monte simple	Leinachse Steering axle Ess/au vireur	4S/3M	5	DIAG	DIAG	DIAG
	Zwillingsberereitung Twin Tyre Monte jumelle	X	Kipprittisches Fahrzeug Critical Trailer Véhicule critique	6	---	---	---
Subsystems	SB	I/O	24N	7	---	---	---

ACHSE AXLE ESSIEU	pm (bar)			6.5			pm (bar)			0.7			2.0			---			6.5			TYP TYPE	(mm)	(mm)	(bar)		Pz
	H (kg)	0.8	1.7	H (kg)	0.8	1.7	H (kg)	0.8	1.7	H (kg)	0.8	1.7	H (kg)	0.8	1.7	H (kg)	0.8	1.7	1.0	TR (daN)							
1	1600	0.8	1.7	7500	4.9	0.4	1.4	---	5.8	-	18	65	69	508	4021												
2	1600	0.8	1.7	7500	4.9	0.4	1.4	---	5.8	-	18	65	69	508	4021												
3	1400	0.7	1.4	6000	3.9	0.3	1.4	---	4.4	-	14 / 16	64	69	500	2716												
4	1400	0.7	1.4	6000	3.9	0.3	1.4	---	4.4	-	14 / 16	64	69	500	2716												
5	1400	0.7	1.4	6000	3.9	0.3	1.4	---	4.4	-	14	64	69	500	2716												

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 distance sensor calibration	Not tested
ABS sensor assignment	OK	Distance sensor Axle load calibr	Not tested
RTR check	Not tested	Leak test	Not tested
Immobilizer test	Not tested	Signal outputs TEBS	Not tested
Signal inputs	Not tested		

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

Manufacturer	DOMETT T&T	Vehicle ident. no	7A9E20012D1023189
Vehicle type	5AFT C/SIDE	Odometer reading	0.0 km
next Service	0 km	Trip reading	0.0 km
Tested by	Ron Pratt	Signature	
Date	2013-09-06 2:28:19 p.m.		

WABCO

TRAILER EBS-E

GGVS/ADR TUEH TB 2007 - 019.00
TDB0749

HERSTELLER MANUFACTURER CONSTRUCTEUR		DOMETT T&T		GIO		Pin1		Pin3		Pin4																					
TYP TYPE TYPE		5AFT C/SIDE		1		---		---		---																					
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BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL. DE FREINAGE NO.		TP50860A		3		ALS2		ALS2		---																					
POLRADZAHNEZAHL c-d e-f POLE WHEEL TEETH c-d e-f DENTS ROUE DENTEE c-d e-f		90 90		4		---		---		---																					
ABS-System ABS-System Système ABS		4S/3M		5		DIAG		DIAG		DIAG																					
RSS RSS RSS		Einfachbereifung Single Tyre Monte simple		Lenkachse Steering axle Essieu directeur		---		---		---																					
Zwillingsbereifung Twin Tyre Monte jumelle		X		Klopkrritisches Fahrzeug Critical Trailer Véhicule critique		---		---		---																					
Subsystems		SB		/O		24N																									
ACHSE AXLE ESSIEU		pm (bar)		6.5		pm (bar)		0.7		2.0		---		6.5		TYP TYPE		(mm)		(mm)		(bar)		1.0		Pz					
		H (kg)		H (kg)		H (kg)		H (kg)		H (kg)		H (kg)		H (kg)		H (kg)		H (kg)		H (kg)		H (kg)		H (kg)		H (kg)		H (kg)			
1		1600		0.8		1.7		7500		4.9		0.4		1.4		---		5.8		-		18		65		69		508		4021	
2		1600		0.8		1.7		7500		4.9		0.4		1.4		---		5.8		-		18		65		69		508		4021	
3		1400		0.7		1.4		6000		3.9		0.3		1.4		---		4.4		-		14 / 16		64		69		500		2716	
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5		1400		0.7		1.4		6000		3.9		0.3		1.4		---		4.4		-		14		64		69		500		2716	

C.O.G CALCULATOR DOMETT CHASSIS 1189

Max Height 4.25 U/L CoG 1.09 Tare Weight 7.5 GVM 32 Body Type 1

C.O.G = 2.058

DIMENSIONS TO BE ENTERED IN METRES
WEIGHTS TO BE ENTERED IN TONNES

- Body Type
1 = C SIDER
2 = FLAT DECK
3 = TIPPER
4 = TANKER
5 = STOCK



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: HVB13/258

**EXEMPTION FROM SPECIFIED REQUIREMENTS OF LAND TRANSPORT RULE:
Heavy-vehicle Brakes 2006, Rule 32015**

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 section of Land Transport Rule: Heavy-vehicle Brakes 2006 (the Rule) listed in Schedule 2, subject to the conditions specified in Schedule 3.

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VIN/Chassis: **7A9E20012D1023189**

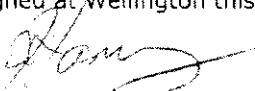
Schedule 2: Exempted Requirement:

2.3(9) The parking brake of a vehicle, whether or not it is being operated as a combination vehicle, must be able to be applied by the driver from the normal driving position using one control only.

Schedule 3: Conditions of this Exemption:

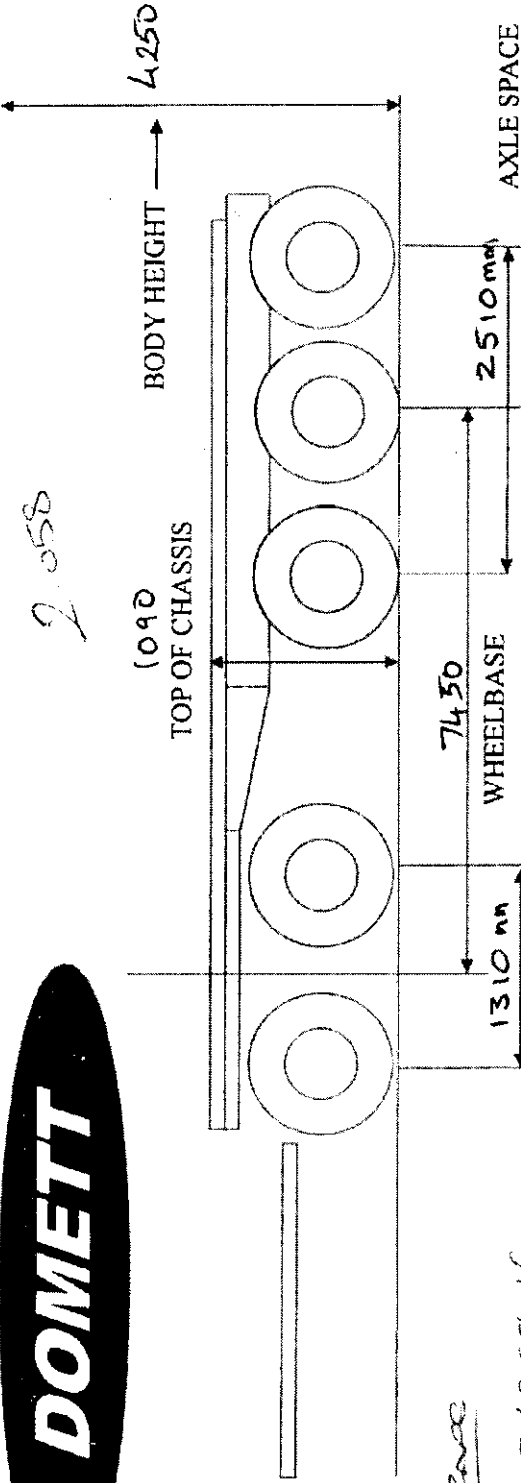
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- 3) The vehicle must still be fitted with a parking brake that complies with all parking brake requirements in the Rule other than the requirement in Clause 2.3(9) of the Rule.
- 4) The installation of the PREV must be approved in writing by Gough Transpecs or an NZ Transport Agency appointed HVEK certifier acting on behalf of, and under instruction from, Gough Transpecs; Gough Transpecs must keep a written record of all approvals.
- 5) The HVEK certifier in 4) must be fully trained in end of line procedures for Wabco electronically controlled braking systems.
- 6) Gough Transpecs must provide full operator training in the use of the PREV and furnish the operator with full written operating instructions for the PREV.
- 7) The vehicle must not be modified in any way while operating under this exemption.
- 8) This original exemption must be kept by Gough Transpecs.
- 9) A copy of this exemption (printed on a silver WABCO sticker) must be affixed to the exempted vehicle as close to the WABCO PREV as possible.
- 10) The sticker in 9) must be legible and include all printed areas of this original exemption letter.
- 11) This exemption can be revoked at any time in writing by the NZ Transport Agency.

Signed at Wellington this 23rd day of July 2013


Jackie Hartley
Administrator (Assessments)

HV613/258
 JH130801
 TPS0860

2058



Park Brake

• 308 Z @ 48188 Af

501534834

ORDER NUMBER 4065
 Vin NUMBER 7A9E20012D1023189

ABS
 EBS
 LSV

VOLTAGE: 12V 24V Multi Volt
 PRIME MOVER MAKE Volvo

SUSP PRESS

1600 = 0.8 7500 = 4.9
 1400 = 0.7 6000 = 3.9

MAKE	Domett
MODEL	E2001 - PH
CHASSIS NO.	1189
TYPE	Curtainsider
BODY TYPE	
GVM	3200 KG
TARE WEIGHT FRONT	≈ 3300
TARE WEIGHT REAR	≈ 4200
AXLE TYPE/MAKE	SAF INTRADISC
AXLE TEST REPORT NUMBER	TP80749
SUSPENSION	SAF INTRADISC
BRAKE CHAMBER SIZES	15HSCLD 14/16HTED 14HSCLD
TYRE SIZE	265/70 R 19.5

300 Body

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

distribution: DOMETT T&T
 7A9E20012D1023189 & 7A9E20019D1023190
 SODC: JH130801 & JH130802
 PREV: HVB13/258 & HVB13/257

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 (V6.13.06.12).
 -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!
 WABCOBrake V6.13.06.12 db 12.06.2013

vehicle manufacturer: DOMETT T&T
 trailer model : SAFT C/SIDE
 trailer type. : 5-axle-full-trailer
 remarks : air / hydraulic / VA suspension
 WABCO TRAILER - EBS
 TRISTOP 3+4: T.14/16
 265/70 R 19,5

axle 1 + 2 + 3 + 4 + 5 : SAF, PAN 19-1, TDB 0749 ECE,

		unladen	laden
total mass	P in kg	7400	33000
axle 1	P1 in kg	1600	7500
axle 2	P2 in kg	1600	7500
axle 3	P3 in kg	1400	6000
axle 4	P4 in kg	1400	6000
axle 5	P5 in kg	1400	6000
wheel base	E in mm	7450 - 7450	
centre of gravity height	h in mm	1090	2058

	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 K D Z	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 lbh in mm	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	421
dyn. rolling radius rdyn max in mm	421	421	421	421	421
threshold torque Co Nm	6.0	6.0	6.0	6.0	6.0

calculation:

chamber pressure(rdyn min)pH at z=22,5%bar	2.3	2.3	2.0	2.0	2.0
chamber pressure(rdyn max)pH at z=22,5%bar	2.3	2.3	2.0	2.0	2.0
chamber press.(servo)pcha at pm6,5bar bar	5.8	5.8	4.4	4.4	4.4
piston force ThA at pm6,5bar N	6172	6172	4185	4185	4185
brake force(rdyn min)T lad. at pm6,5bar N	46726	46726	31560	31560	31560
brake force(rdyn max)T lad. at pm6,5bar N	46726	46726	31560	31560	31560
brake force within 1 % rolling friction proportion %	21.2	21.2	19.2	19.2	19.2

braking rate z laden 0.581 for rdyn min
 z = sum (TR)/PRmax 0.581 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: Meritor 1416HTLD64

axle 4:

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

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

brake cylinder: Meritor 1416HTLD64

axle 5:

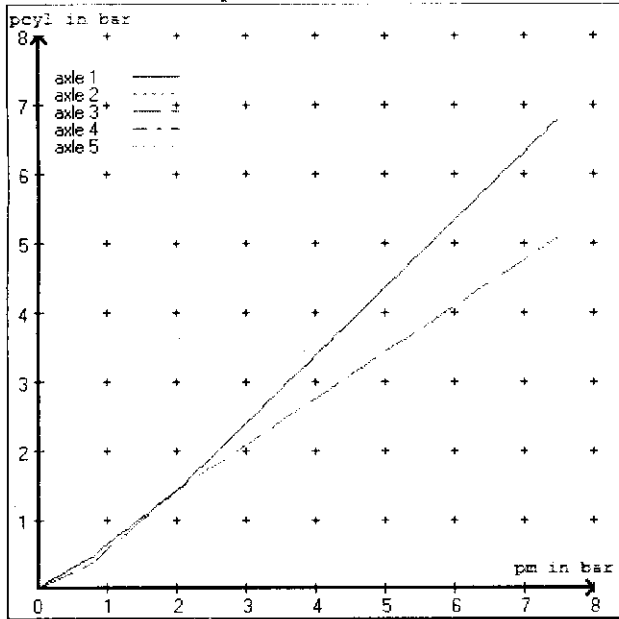
valve 1: 971 002 ... 0 WABCO
 EBS emergency valve

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

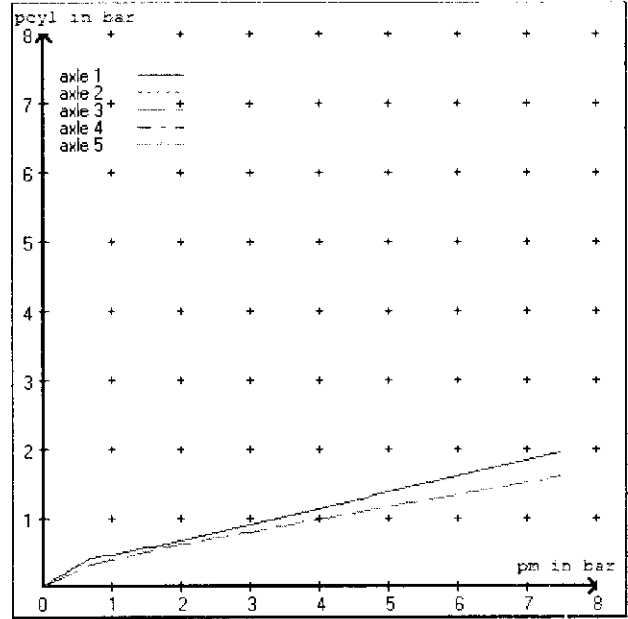
brake cylinder: Meritor 14HSCLD64

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	2.5	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	0.7	0.7	0.7

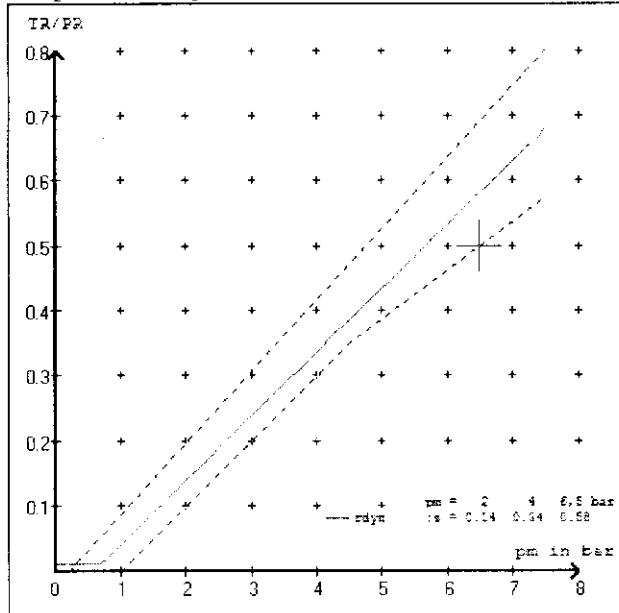
brake chamber pressure laden



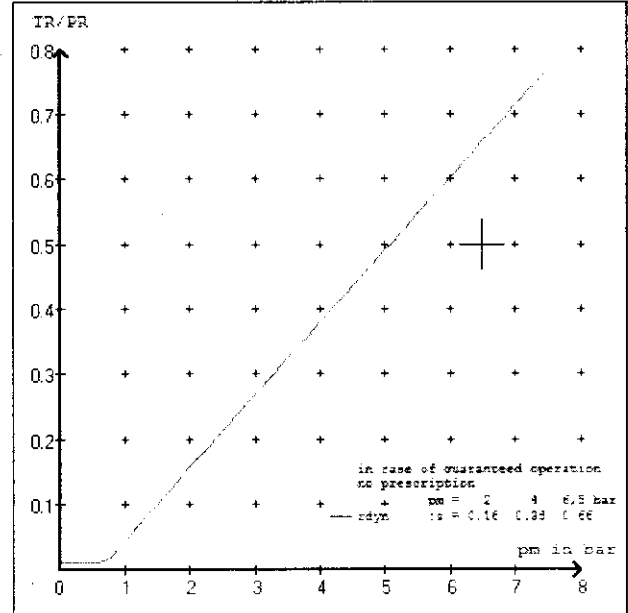
brake chamber pressure unladen



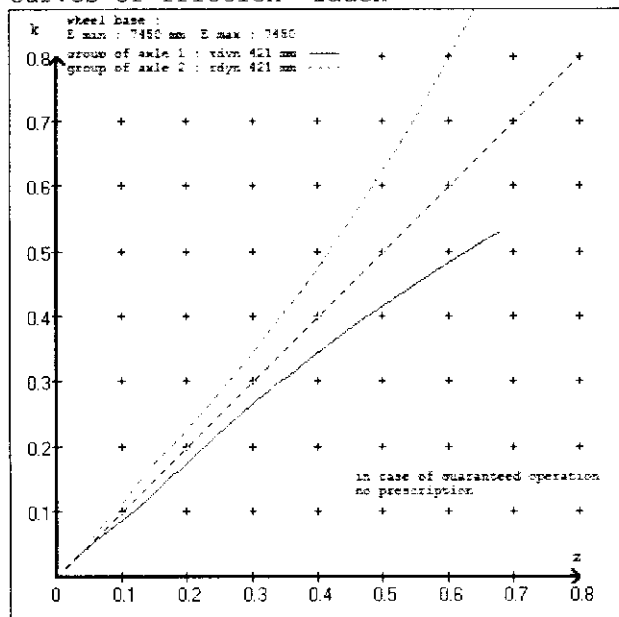
compatibility band laden



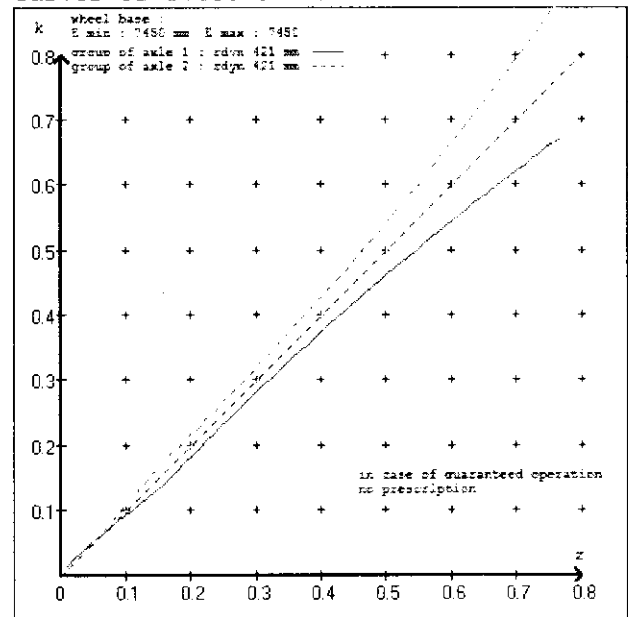
compatibility band unladen



curves of friction laden



curves of friction unladen



vehicle manufacturer: DOMETT T&T
 trailer model : 5AFT C/SIDE
 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 T&T
 trailer model : 5AFT C/SIDE
 trailer type : 5-axle-full-trailer
 brake calculation no. : TP 50860A

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

assignment pm / deceleration z: pm 0.7 bar z = 0.010
 (laden condition) 2.0 bar z = 0.142
 6.5 bar z = 0.580

control pressure pm			6,5	control pressure pm			0.7	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	1.7	7500	to be	0.4	1.4	5.8	
2	1600	entered by	1.7	7500	entered by	0.4	1.4	5.8	
3	1400	the vehicle manufact.	1.4	6000	the vehicle manufact.	0.3	1.4	4.4	
4	1400		1.4	6000		0.3	1.4	4.4	
5	1400		1.4	6000		0.3	1.4	4.4	

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 pcy1	axle load pcy1	axle load pcy1	axle load pcy1	axle load pcy1
1600 1.7	1600 1.7	1400 1.4	1400 1.4	1400 1.4
2100 2.0	2100 2.0	1900 1.7	1900 1.7	1900 1.7
2600 2.4	2600 2.4	2400 2.1	2400 2.1	2400 2.1
3100 2.7	3100 2.7	2900 2.4	2900 2.4	2900 2.4
3600 3.1	3600 3.1	3400 2.7	3400 2.7	3400 2.7
4100 3.4	4100 3.4	3900 3.0	3900 3.0	3900 3.0
4600 3.8	4600 3.8	4400 3.4	4400 3.4	4400 3.4
5100 4.1	5100 4.1	4900 3.7	4900 3.7	4900 3.7
7500 5.8	7500 5.8	6000 4.4	6000 4.4	6000 4.4

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 : 13.10.2008
axle 2	: reference axle: SAF	SBW 1937-...	brake lining: Jurid 539
	test report :	TDB 0749 ECE	date : 13.10.2008
axle 3	: reference axle: SAF	SBW 1937-...	brake lining: Jurid 539
	test report :	TDB 0749 ECE	date : 13.10.2008
axle 4	: reference axle: SAF	SBW 1937-...	brake lining: Jurid 539
	test report :	TDB 0749 ECE	date : 13.10.2008
axle 5	: reference axle: SAF	SBW 1937-...	brake lining: Jurid 539
	test report :	TDB 0749 ECE	date : 13.10.2008

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 = 22.9 % Fe
axle 2	(rdyn 421 mm)	T = 22.9 % Fe
axle 3	(rdyn 421 mm)	T = 17.1 % Fe
axle 4	(rdyn 421 mm)	T = 17.1 % Fe
axle 5	(rdyn 421 mm)	T = 17.1 % 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 = 6172 N
axle2	ThA = 6172 N
axle3	ThA = 4185 N
axle4	ThA = 4185 N
axle5	ThA = 4185 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 = 36796 N
axle 2	(rdyn 421 mm)	T = 36796 N
axle 3	(rdyn 421 mm)	T = 24874 N
axle 4	(rdyn 421 mm)	T = 24874 N
axle 5	(rdyn 421 mm)	T = 24874 N

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

braking rate of the vehicle (item 4.3.2 to appendix 2 to annex 11)	0.58	(hot)braking 0.46
---	------	----------------------

required braking rate (items 1.5.3 and 1.7.2 to annex 11)	>= 0,4 and >= 0,6*E (0.35)
--	-------------------------------

axle 1	(rdyn 421 mm)	T = 36796 N
axle 2	(rdyn 421 mm)	T = 36796 N
axle 3	(rdyn 421 mm)	T = 24874 N
axle 4	(rdyn 421 mm)	T = 24874 N
axle 5	(rdyn 421 mm)	T = 24874 N

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

braking rate of the vehicle (item 4.3.2 to appendix 2 to annex 11)	0.58	(hot)braking 0.46
---	------	----------------------

required braking rate (items 1.5.3 and 1.7.2 to annex 11)	>= 0,4 and >= 0,6*E (0.35)
--	-------------------------------

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	6160	6160
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	0.308	
$zf = \text{sum}(Tf) / P + 0,01$		

Test of the frictional connection required by the parking brake

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

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

min Ef = 5671 mm for E = 7450 mm
 =====
 min Ef = 5671 mm for E = 7450 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 = 2058 mm height of center of gravity - laden
 PR = 18000 kg maximum bogie mass - laden
 P = 33000 kg maximum total mass - laden
 nf = 2 no. of axle(s) with TRISTOP spring brake actuators
 ng = 3 no. of bogie axle(s)

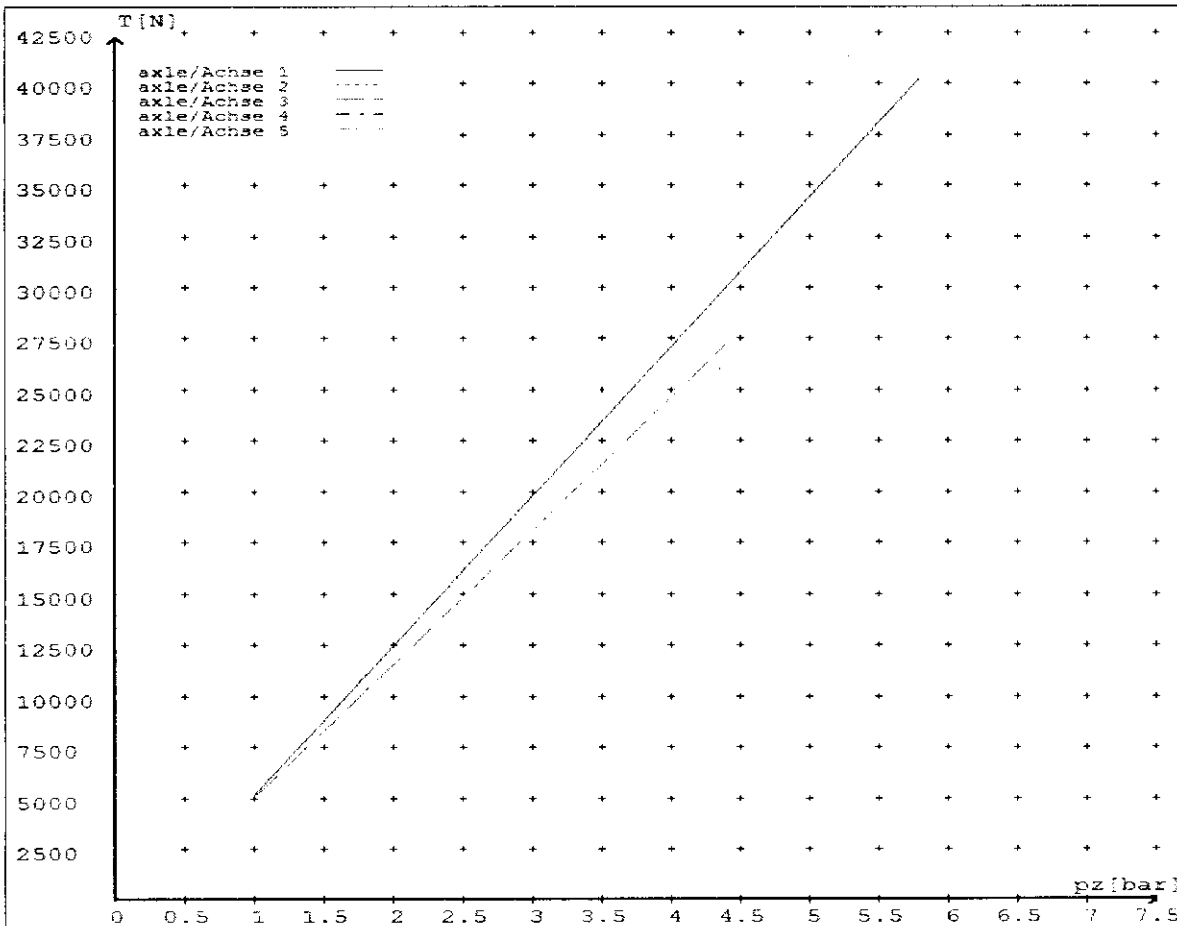
reference values

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

	pz [bar]	T [N]	T [N]
axle 1	1.0	5089	
	5.8	40212	
axle 2	1.0	5089	
	5.8	40212	
axle 3	1.0		5002
	4.4		27160
axle 4	1.0		5002
	4.4		27160
axle 5	1.0		5002
	4.4		27160

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



GOUGH**Transpecs**

P.O.Box 98-971

South Auckland Mail Centre

J.HIRST (JEH)

DATE	26-Jul-13	BRAKE SYSTEM	12/24V EBS
CERT. NO.	JH130801	PREV/OPTI EXEMPTION	HVB13/258
VIN / CHASSIS	7A9E20012D1023189		
BRAKE CHAMBERS 1,3,5	TSE 18HSCLD65		
BRAKE CHAMBERS REAR	TSE 1416HTLD64 (TSE 14HSCLD64)		
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 HVBR 32015/2 - SCHEDULE 5	LINING MATERIAL FRONT		JURID 539
	LINING MATERIAL REAR		JURID 539

WABCO		TRAILER EBS-E		GGVS/ADR TUEH TB 2007 - 019.00 TDB0749							
HERSTELLER MANUFACTURER CONSTRUCTEUR		DOMETT T&T		GIO	Pin1	Pin3	Pin4				
TYP TYPE		5AFT C/SIDE		1	---	---	---				
FAHRZEUG IDENTIFIK. CHASSIS NUMBER NUMERO DE CHASSIS		7A9E20012D1023189		2	---	---	---				
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO		TP50860A		3	ALS2	ALS2	---				
POLRADZÄHNEZAHL POLE WHEEL TEETH DENTS ROUE DENTÉE		90	90	4	---	---	---				
ABS-System ABS-System Système ABS		4S/3M		5	DIAG	DIAG	DIAG				
RSS RSS	Einfachbereifung Single Tyre Monte simple	Lankachse Steering axle Essieu avant		6	---	---	---				
Zwillingsbereifung Twin Tyre Monte jumelés		X	Kippröhliches Fahrzeug Critical Trailer Vehicule critique	7	---	---	---				
Subsystems		SB	I/O								
ACHSE AXLE ESSEU		pm (bar)		pm (bar)		pz		TR (daN)			
		0.7 2.0 --- 6.5		0.7 2.0 --- 6.5				1.0 Pz			
1		1600 0.8 1.7	7500 4.9 0.4 1.4	---	5.8	-	18	65	69	508	4021
2		1600 0.8 1.7	7500 4.9 0.4 1.4	---	5.8	-	18	65	69	508	4021
3		1400 0.7 1.4	6000 3.9 0.3 1.4	---	4.4	-	14 / 16	64	69	500	2716
4		1400 0.7 1.4	6000 3.9 0.3 1.4	---	4.4	-	14 / 16	64	69	500	2716
5		1400 0.7 1.4	6000 3.9 0.3 1.4	---	4.4	-	14	64	69	500	2716



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Exemption: HVB13/258

**EXEMPTION FROM SPECIFIED REQUIREMENTS OF LAND TRANSPORT RULE:
Heavy-vehicle Brakes 2006, Rule 32015**

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 section of Land Transport Rule: Heavy-vehicle Brakes 2006 (the Rule) listed in Schedule 2, subject to the conditions specified in Schedule 3.

Schedule 1: Vehicle Details:

Make/Model: **Domett T & T Ltd, 5 Axle Full Trailer**
VIN/Chassis: **7APE20012D1023189**

Schedule 2: Exempted Requirement:

2.3(9) The parking brake of a vehicle, whether or not it is being operated as a combination vehicle, must be able to be applied by the driver from the normal driving position using one control only.

Schedule 3: Conditions of this Exemption:

- 1) The vehicle must be fitted with a Wabco park-release emergency valve (PREV), Part Number: 971 002 900 0.
- 2) The vehicle must be fitted with the Wabco PREV name plate, Part Number 971 002 103 4, adjacent to the PREV.
- 3) The vehicle must still be fitted with a parking brake that complies with all parking brake requirements in the Rule other than the requirement in Clause 2.3(9) of the Rule.
- 4) The installation of the PREV must be approved in writing by Gough Transpecs or an NZ Transport Agency appointed HVEK certifier acting on behalf of, and under instruction from, Gough Transpecs; Gough Transpecs must keep a written record of all approvals.
- 5) The HVEK certifier in 4) must be fully trained in end of line procedures for Wabco electronically controlled braking systems.
- 6) Gough Transpecs must provide full operator training in the use of the PREV and furnish the operator with full written operating instructions for the PREV.
- 7) The vehicle must not be modified in any way while operating under this exemption.
- 8) This original exemption must be kept by Gough Transpecs.
- 9) A copy of this exemption (printed on a silver WABCO sticker) must be affixed to the exempted vehicle as close to the WABCO PREV as possible.
- 10) The sticker in 9) must be legible and include all printed areas of this original exemption letter.
- 11) This exemption can be revoked at any time in writing by the NZ Transport Agency.

Signed at Wellington this 23rd day of July 2013


Jackie Hartley
Administrator (Assessments)