



# Heavy Vehicle Specialist Certificate

Heavy Vehicle Specialist Inspector only (see page 2 of this Certificate)

Heavy Vehicle Specialist Inspector's Name (PRINT IN CAPS)

RONALD STUART PRATT

Vehicle Registration\*

VIN / Chassis Number

7A9E23010D1023144

Component being certified:

Chassis Modification

Load Anchorage

Log Boisters

Certification Category

Towing Connection

Brakes

SRT

HVEK

Description of Work

Certify To Brake Rule 32015/2

Code/Standard Certified to

NZ110B Rule Schedule 5

Component Load Rating(s)

max GUM = 32000kg  
RSS Sketched on Dual Tyres

General Drawing Number(s)

NA

Supporting Documents

Broke cert No JH/30517  
PREV Exempt No HVB13/140

\*Special Conditions

EBS Control. Warning lamp must illuminate when ignition switched on  
And extinguish immediately OR when vehicle reaches 7kph

Certification Expiry Date (if applicable)

NA

or

Hubodometer Reading (whichever comes first)

## 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 a manufacturer)

Inspector's / Delegate's Signature

\*Delegate's Name (PRINT IN CAPS)

Date

14/06/2013

Number

432149

COF Vehicle Inspector ID:

COF Vehicle Inspector Signature:

Date

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

Te shouq Station



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](http://www.nzta.govt.nz)

Exemption: HVB13/140

**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 Trailers Ltd, 5 Axle Full-Tailer**  
VIN/Chassis: **7A9E23010D1023144**

**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 22nd day of April 2013

A handwritten signature in black ink, appearing to read 'Jackie Hartley', is written over a horizontal line.

Jackie Hartley  
Administrator (Assessments)

**Statement of Design Compliance****S.O.D.C. number: JH130517**For Heavy vehicle brake specification  
(Schedule 5) of HV Brake Rule 32015/2**Vehicle details:**

**Make:** DOMETT  
**Model:** E2301 H  
**VIN#:** 7A9E23010D1023144  
**Chassis#:** 1144  
**GCM (kgs):** N/A  
**GVM (kgs):** 32000  
**Wheelbase (mm):** 6040  
**Axle test report #:** 361-0022-02  
**Type:** 5AFT ROR DISC BRAKE

**Component Details:**

	Front	Rear
<b>Lever length (mm):</b>	74	74
<b>Brake chamber size:</b>	TSE16HSCLD64	TSE1624HTLD64
<b>Tyre size:</b>	265 70 R 19.5	265 70 R 19.5
<b>Drawing number:</b>	1144	
(for component reference)		
<b>Brake calculation#:</b>	TP 50826	

*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 June 2013

s

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

LT 400 No =

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

**Signed:***Ron Pratt***Dated:** 14/06/2013

\*) 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. JH130517

CUSTOMER NAME

DOMETT T&T

CUSTOMER ORDER No.

3993

DATE RECEIVED

19.04.13

VEHICLE TYPE

5 AXLE FULL TRAILER

REG No.

CHASSIS No.

7A9E23010D1023144

**BRIEF SPECIFICATION AS CERTIFIED TO HVBR**

**BRAKE CHAMBERS:**

Type: 16HSCLD64 (TSE) : Max stroke = 64 mm    Lever length = 74 mm

Type: 1624HTLD64 (TSE) : Max stroke = 64 mm    Lever length = 74 mm

**BRAKE VALVES:**

Ratio Valve Setting:    **EBS CONTROL**

Test Points:    3 4 5 7

**FRICITION LINING:**

OEM    Aftermarket

(All) Lining Brand    ROR 8616 AF

EBS CONTROL: IF SPECIAL CONDITIONS APPLY – SEE INSTRUCTION ON LT400

VALVES: AS PER BRAKE CALCULATION# TP50826

TYRE SIZE: 265 70 R 19.5

**NOTES**

PACKING SLIP NO.

SO1529178

PROCESS TIME:

1

THE MERITOR CHAMBERS IN BRAKE CALC: TP50826 ARE THE TSE VARIANT. PLEASE REFER TO PART NUMBERS DETAILED ABOVE FOR PERFORMANCE DATA.

COMPLETION DATE : 28<sup>th</sup> May 2013

SIGNATURE (pp.):

*14/6/13 P. B. O. A.*


## 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: 28<sup>th</sup> May 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

## **NOTICE TO VEHICLE OPERATOR**

**This trailer is equipped with an Electronic Brake System.**

To comply with the New Zealand Heavy Vehicle Brake RULE, 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.

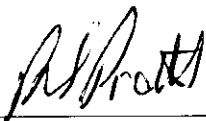
The trailer ABS/EBS warning light on the towing vehicle dashboard must illuminate when the ignition is switched on and extinguish when the vehicle is in motion.

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.

### **NB:**

If this vehicle is fitted with mechanical (spring) suspension, the load sense valving has been adjusted to suit exactly the performance of the original springs. In event of replacement being required, original equipment springs **must** be fitted to ensure correct ongoing operation. Fitment of non genuine springs can affect operation and therefore, compliance.

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



---

R S Pratt  
(TRSP HVEK 09 980 7300)

## **NOTICE TO VEHICLE OPERATOR**

***THIS VEHICLE HAS A BRAKE SYSTEM WHICH HAS BEEN DESIGNED AND FITTED IN ACCORDANCE WITH THE NEW ZEALAND HEAVY VEHICLE BRAKE RULE 32015: SCHEDULE 5.***

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

***PLEASE REFER TO THE CERTIFIER FOR FURTHER INFORMATION.***

### **EXCERPT FROM NZ HEAVY VEHICLE BRAKE RULE 32015**

#### **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 the rule : and*
- (b) complies with Land Transport Rule: Vehicle Repair 1998.*

#### **10.3 Responsibilities of modifiers**

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

- (a) ensure that the modification does not prevent the vehicle from complying with this rule: and*
- (b) notify the operator that the vehicle must be inspected and, if necessary, certified by a person or organisation appointed to carry out specialist inspection and certification of heavy vehicle brakes.*

#### **10.5 Responsibilities of manufactures and retailers**

*A person may manufacture, stock, or offer for sale a brake or its components. Intended for fitting to a vehicle to be used on New Zealand roads, only if that brake or component:*

- (a) complies with this Rule: and*
- (b) does not prevent a repair to a vehicle, its structure, systems, components and equipment from complying with this Rule.*

***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 Land Transport Safety Authority if dissatisfied with a Compliance issue. (refer LTNZ Deed Of Appointment Para 47.4) Land Transport NZ Helpdesk 0800 699 000***

.....  
**R S PRATT**  
**(TRSP HVEK)**



P.O.Box 98-971

South Auckland Mail Centre

J.HIRST (JEH)

DATE	28-May-13	BRAKE SYSTEM	WABCO EBS-E
CERT. NO.	JH130517	PREV EXEMPTION	HVB13/140

VIN / CHASSIS 7A9E23010D1023144

BRAKE CHAMBERS FRONT TSE 16HSCLD (Max stroke = 64mm)

BRAKE CHAMBERS REAR TSE 1624HTLD (Max stroke = 64mm)

SLACK LENGTH FRONT	74 mm	TYRE SIZE FRONT	265 70 R 19.5
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SLACK LENGTH REAR	74 mm	TYRE SIZE REAR	265 70 R 19.5
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THIS VEHICLE COMPLIES WITH THE NZ HVBR 32015/2 - SCHEDULE 5	LINING MATERIAL FRONT	ROR 8616 AF
	LINING MATERIAL REAR	ROR 8616 AF



# WABCO

## START-UP PROTOCOL

System	Trailer EBS-E	WABCO part number	480 102 080 0
Production date	2013-01-10	Serial number	897001104100K
Serial number (modulator)	000000018966		
Fingerprint Customer EOL / Customer Development / Flash Program	W033869 / 2013-06-14 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00		

# WABCO

## TRAILER EBS-E

GGVS/ADR TUEH TB 2007 - 019.00  
361-0022-02

HERSTELLER  
MANUFACTURER  
CONSTRUCTEUR

DOMETT

TYP TYPE TYPE	5AFT TIP C/SIDE		
FAHRZEUG IDENTNR CHASSIS NUMBER NUMERO DE CHASSIS	7A9E23010D1023144		
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO.	TP50826		
POLRADZAHNZAHL c-d 1 e f POL & WHEEL 1 2 3 4 c-d 1 e f DENTS ROUE DENTÉE c-d 1 e f	90	90	ABS-System ABS-System Système ABS 4S/3M
RSS RSS RSS	Einfachbereifung Single Tyre Monte simple	Lenkachse Steering axle Essieu virant	
	X	Kippkritisches Fahrzeug Critical Trailer Vehicule critique	
Subsystems		I/O	24N

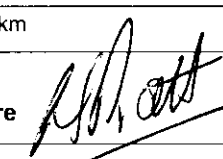
GIO	Pin1	Pin3	Pin4
1	---	---	---
2	---	---	---
3	ALS2	ALS2	---
4	---	---	---
5	DIAG	DIAG	DIAG
6	---	---	---
7	---	---	---



ACHSE AXLE ESSIEU	pm (bar)		6.5		pm (bar)		0.7		2.0		---		6.5		TYP TYPE (mm)	(mm)	(bar)	
	H (kg)	⊗	⊗	⊗	H (kg)	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	1.0			Pz	
1	1900	0.8	3.0	7250	4.7	0.5	1.6	---	6.5	-	16	64	74	408	4039			
2	1900	0.8	3.0	7250	4.7	0.5	1.6	---	6.5	-	16	64	74	400	4039			
3	1300	0.5	1.9	6600	4.3	0.5	1.6	---	4.8	-	16 / 24	64	74	403	2911			
4	1300	0.5	1.9	6600	4.3	0.5	1.6	---	4.8	-	16 / 24	64	74	403	2911			
5	1300	0.5	1.9	6600	4.3	0.5	1.6	---	4.8	-	16 / 24	64	74	403	2911			

Diagnostic memory	OK	Warning lamp control	OK
Parameter setting	carried out	Stop light power supply	Not OK
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	Vehicle ident. no	7A9E23010D1023144
Vehicle type	5AFT TIP C/SIDE	Odometer reading	0.0 km
next Service	0 km	Trip reading	0.0 km
Tested by	Ron Pratt	Signature 	
Date	2013-06-14 6:50:51 a.m.		



Exemption: HVB13/140

**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 Trailers Ltd, 5 Axle Full-Tailer**  
VIN/Chassis: **7A9E23010D1023144**

**Schedule 2:** Exempted Requirement:

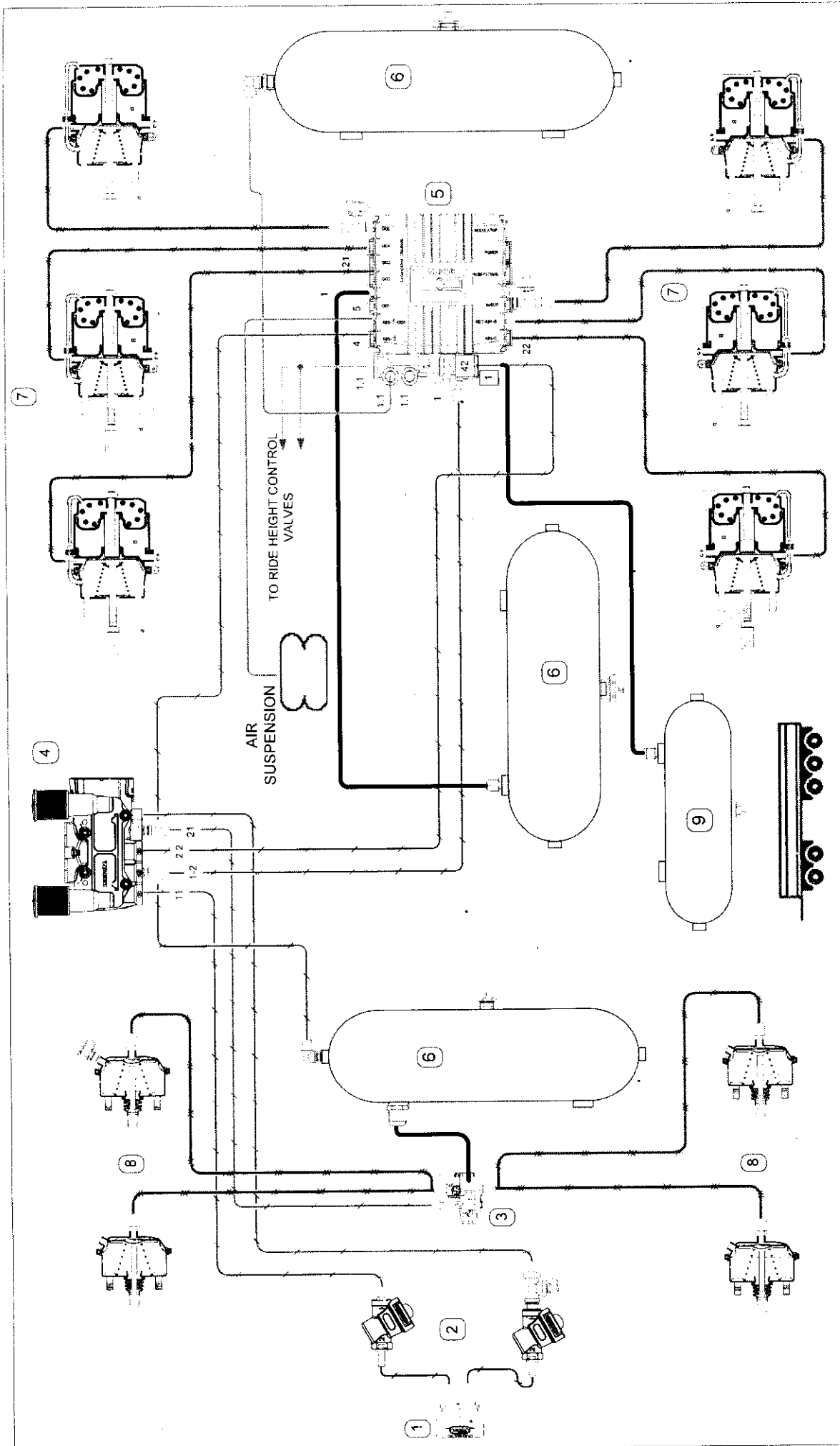
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- 9) A copy of this exemption (printed on a silver WABCO sticker) must be affixed to the exempted vehicle as close to the WABCO PREV as possible.
- 10) The sticker in 9) must be legible and include all printed areas of this original exemption letter.
- 11) This exemption can be revoked at any time in writing by the NZ Transport Agency.

Signed at Wellington this 22nd day of April 2013

Jackie Hartley  
Administrator (Assessments)



ITEM	QTY.	PART NO.	DESCRIPTION	ITEM	QTY.	PART NO.	DESCRIPTION
1	1	452 804 001 0	Wabco Due-Matic coupling	9	1	9534	24.5 Lit Air Tank
2	2	432 500 020 0	Wabco control line filter	10			
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	12113P	46 Lit Air tank				
7	6	1624HLD64	TSE Spring brake chamber				
8	4	16HSCLD64	TSE Service brake chamber				

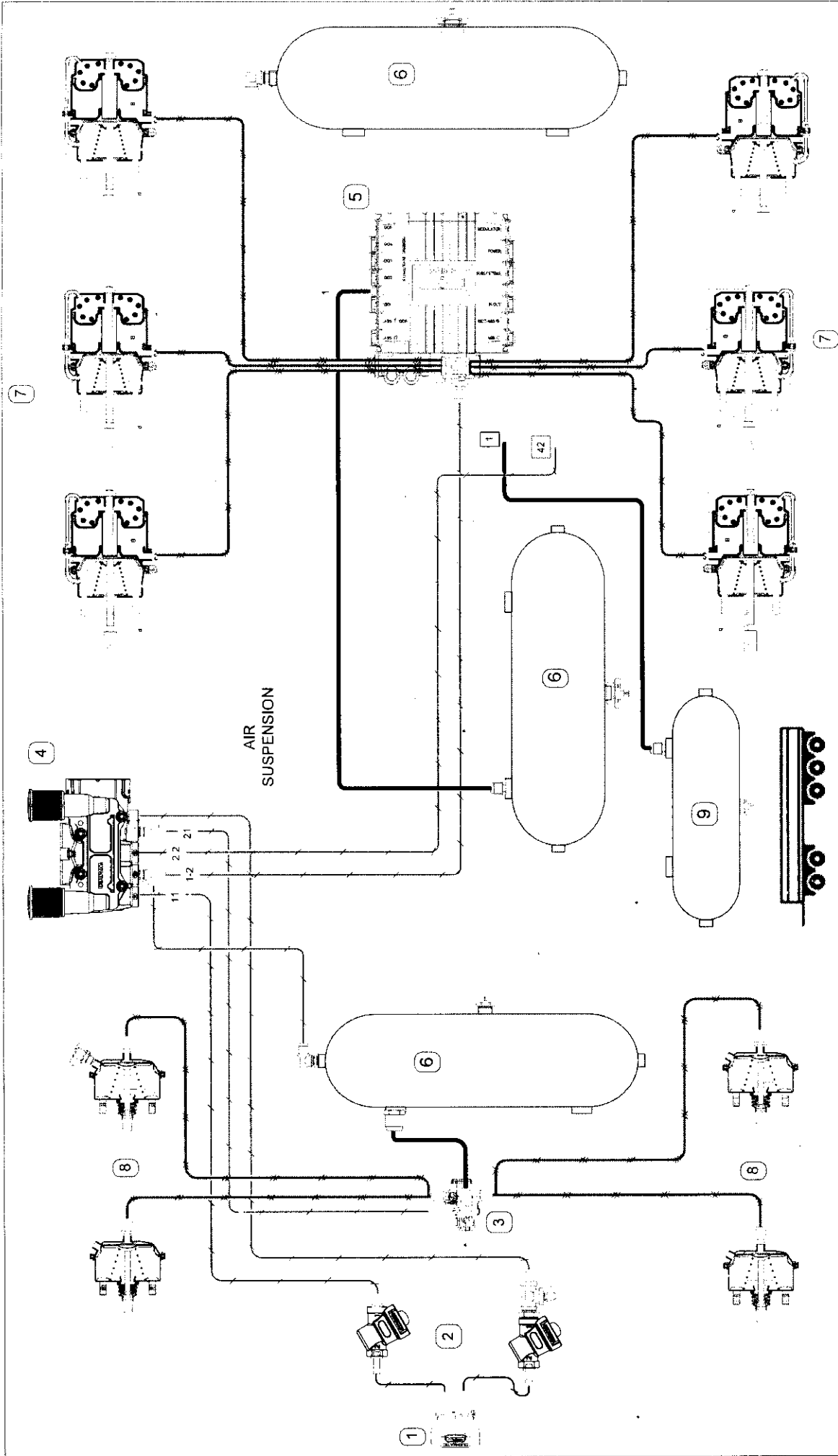
<b>DOMETT T&amp;T</b>	
DOM5AXFULL/D/EBS	7A9E23010D1023144
SIZE A4	SPEC REFERENCE 1144
SCALE	MODEL NUMBER E2301
	SERVICE LINES

<b>GOUGH Transpex</b>	<b>WABCO</b>
	Copyright Transpex 2010
	All rights reserved

PIPING LEGEND

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



### Domett T&T

DOM5AXFULL/D/EB5  
7A9E23010D1023144

SIZE	A4	SPEC REFERENCE	1144	MODEL NUMBER	E2301	REV	1
SCALE	F	PARK LINES					

**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 Duo-Matic coupling	9	1	9534	24.5 Ltr Air Tank
2	2	432 500 020 0	Wabco control line filter	10			
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	12113P	46 Ltr Air tank				
7	4	1524HTLD64	TSE Spring brake chamber				
8	4	16HSLD64	TSE Service brake chamber				

#### PIPING LEGEND

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

# WABCO

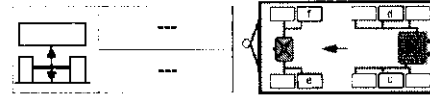
## TRAILER EBS-E

GGVS/ADR TUEH TB 2007 - 019.00  
361-0022-02

HERSTELLER MANUFACTURER CONSTRUCTEUR	<b>DOMETT</b>		
TYP TYPE TYPE	5AFT TIP C/SIDE		
FAHRZEUG IDENTNR CHASSIS NUMBER NUMERO DE CHASSIS	7A9E23010D1023144		
BREMSBECHNUNGS-NR BRAKE CALCULATION NO CALCUL DE FREINAGE NO	TP50826		
POLRADZAHNZAHL c-d   e-f POLE WHEEL TEETH c-d   e-f DENTS ROUE DENTEE c-d   e-f	90	90	ABS-System ABS-System Systeme ABS 4S/3M
RSS RSS RSS	Einfachbereifung Single Tyre Monte simple		Lenkachse Steering axle Essieu vitteur
	X		Kippkritisches Fahrzeug Critical Trailer Vehicule critique

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

Subsystems --- I/O 24N



ACHSE AXLE ESSIEU	pm (bar)		6.5		pm (bar)		0.7	2.0	---	6.5	TYP TYPE	(mm)	(mm)	(bar)	
	H (kg)	⊗	⊗	⊗	H (kg)	⊗	⊗	⊗	⊗	1.0				Pz	
															TR (daN)
1	1900	0.8	3.0	7250	4.7	0.5	1.6	---	6.5	-	16	64	74	408	4039
2	1900	0.8	3.0	7250	4.7	0.5	1.6	---	6.5	-	16	64	74	408	4039
3	1300	0.5	1.9	6600	4.3	0.5	1.6	---	4.8	-	16 / 24	64	74	403	2911
4	1300	0.5	1.9	6600	4.3	0.5	1.6	---	4.8	-	16 / 24	64	74	403	2911
5	1300	0.5	1.9	6600	4.3	0.5	1.6	---	4.8	-	16 / 24	64	74	403	2911

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

distribution: DOMETT  
 7A9E23010D1023144  
 SODC: JH130517  
 PREV: HVB13/140

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 (V6.12.08.27).  
 -the functional characteristics of our products  
 as well as the data of the brake out of the test  
 approvals of the axle manufacturers, and  
 -the other vehicle data included in the brake calculation.  
 Please check whether these data correspond to the actual vehicle data.  
 Our conditions of delivery apply (particularly section 9.0).  
 In any case we commend to do a braking harmonisation!  
 WABCO Brake V6.12.08.27 db 30.08.2012

vehicle manufacturer: DOMETT  
 trailer model : SAFT TIP C/SIDE  
 trailer type : 5-axle-full-trailer  
 remarks : air / hydraulic / VA suspension  
 WABCO TRAILER - EBS E  
 TRISTOP 3+4+5: T.16/24  
 265/70 R 19,5

axle 1 + 2 + 3 + 4 + 5 : ROR, Elsa 195 LE, 36102202, Re 432

		unladen	laden
total mass	P in kg	7700	34300
axle 1	P1 in kg	1900	7250
axle 2	P2 in kg	1900	7250
axle 3	P3 in kg	1300	6500
axle 4	P4 in kg	1300	6600
axle 5	P5 in kg	1300	6600
wheel base	E in mm	6040 - 6040	
centre of gravity height	h in mm	1200	2349

	axle 1	axle 2	axle 3	axle 4	axle 5
no. of combined axles	1	1	1	1	1
no. of brake chambers per axle line KDZ	2	2	2	2	2
The power output corresponds to	BZ 122.1	BZ 122.1	BZ 119.6	BZ 119.6	BZ 119.6
brake chamber manufacturer	Meritor	Meritor	Meritor	Meritor	Meritor
chamber size	16.	16.	T.16/24	T.16/24	T.16/24
lever length	lBh in mm	74	74	74	74
brake factor	[-]	20.30	20.30	20.30	20.30
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	10.0	10.0	10.0	10.0

calculation:

chamber pressure(rdyn min)pH at z=22,5%bar	2.6	2.6	2.2	2.2	2.2
chamber pressure(rdyn max)pH at z=22,5%bar	2.6	2.6	2.2	2.2	2.2
chamber press.(servo)pcha at pm6,5bar bar	6.5	6.5	4.8	4.8	4.8
piston force ThA at pm6,5bar N	6590	6590	4769	4769	4769
brake force(rdyn min)T lad. at pm6,5bar N	46772	46772	33715	33715	33715
brake force(rdyn max)T lad. at pm6,5bar N	46772	46772	33715	33715	33715
brake force within 1 % rolling friction proportion %	20.0	20.0	20.0	20.0	20.0

braking rate z laden 0.579 for rdyn min  
 z = sum (TR)/PRmax 0.579 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    16HSCLD64

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    16HSCLD64

axle 3:

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

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

brake cylinder: Meritor    1624HTLD64

axle 4:

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

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

brake cylinder: Meritor 1624HTLD64

axle 5:

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

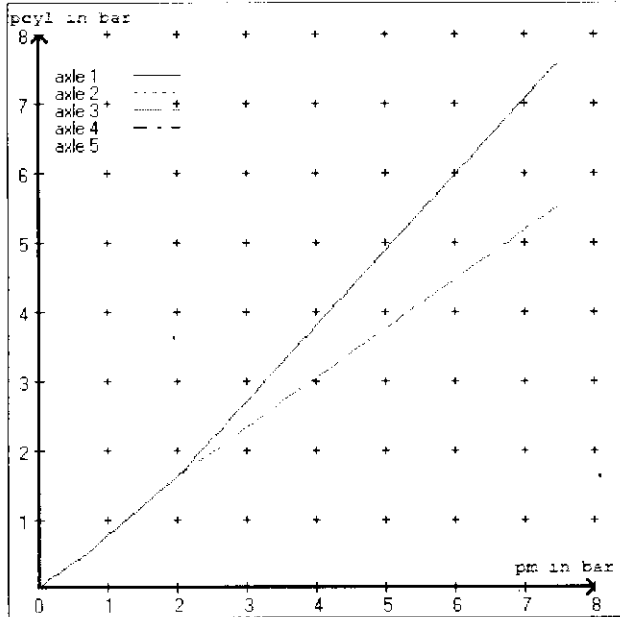
valve 2: 480 102 ... 0 WABCO  
EBS trailer modulator

brake cylinder: Meritor 1624HTLD64

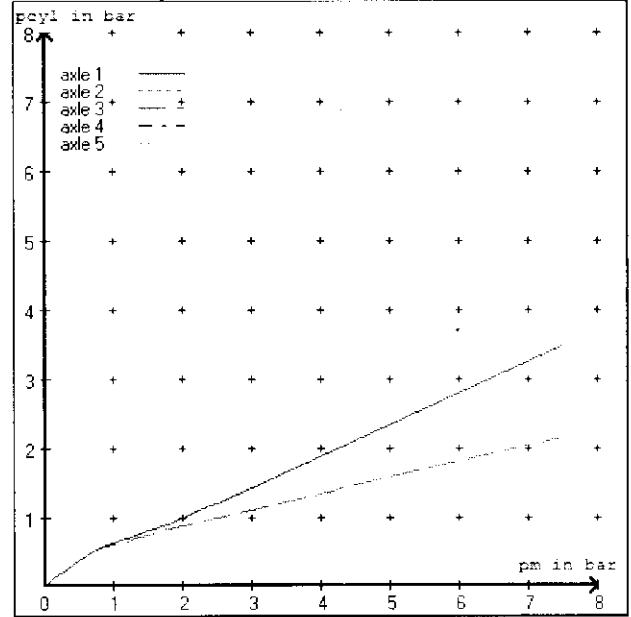
test type III (zIII = 0.30)	for rdyn min :	axle1	axle2	axle3	axle4	axle5	
at pm 3.7 bar =>	pcha in bar :	3.4	3.4	2.8	2.8	2.8	
test type III (zIII = 0.06)	for rdyn min :	axle1	axle2	axle3	axle4	axle5	
at pm 1.2 bar =>	pcha in bar :	0.9	0.9	0.9	0.9	0.9	



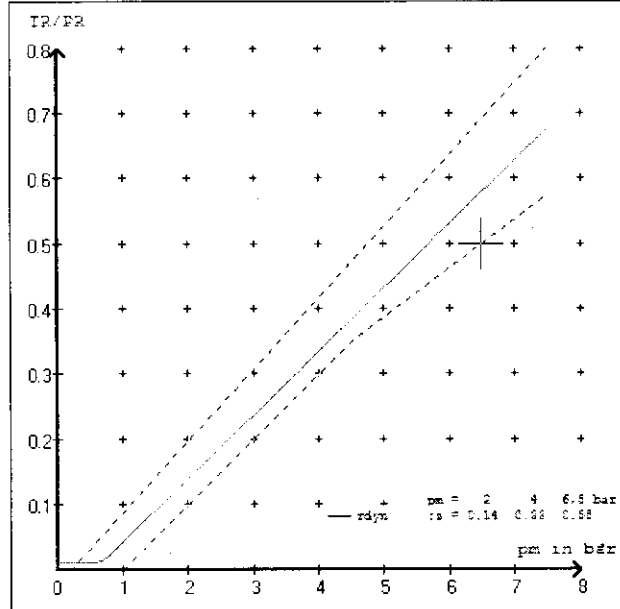
brake chamber pressure laden



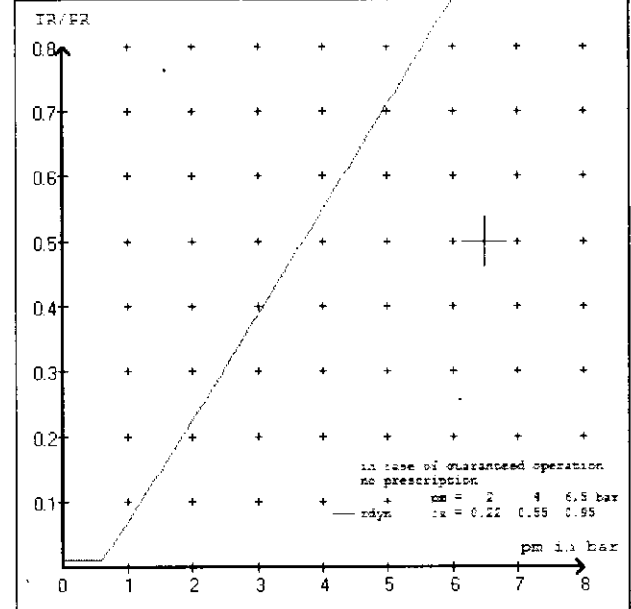
brake chamber pressure unladen



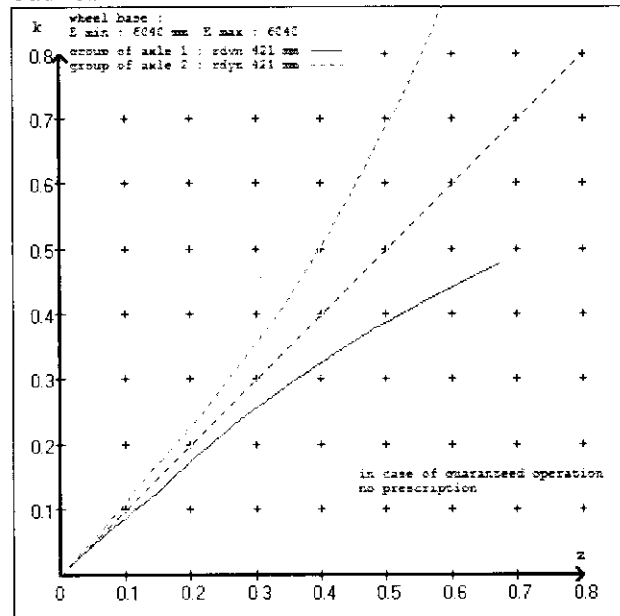
compatibility band laden



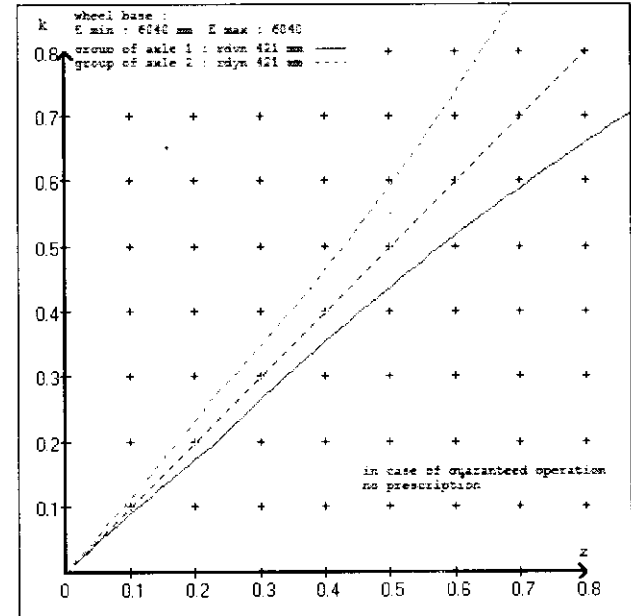
compatibility band unladen



curves of friction laden



curves of friction unladen



vehicle manufacturer: DOMETT  
 trailer model : SAFT TIP C/SIDE  
 trailer type : 5-axle-full-trailer

brake chamber and lever length :

axle 1 : 2 x type/diameter 16. (Meritor) lever length 74 mm  
 axle 2 : 2 x type/diameter 16. (Meritor) lever length 74 mm  
 axle 3 : 2 x type/diameter T.16/24 (Meritor) lever length 74 mm  
 axle 4 : 2 x type/diameter T.16/24 (Meritor) lever length 74 mm  
 axle 5 : 2 x type/diameter T.16/24 (Meritor) lever length 74 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 : SAFT TIP C/SIDE  
 trailer type : 5-axle-full-trailer  
 brake calculation no. : TP 50826A

tire circumference main axle : 2650 for r dyn max  
 tire circumference auxiliary axle : 2650 for r dyn max

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

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	1900	to be	3.0	7250	to be	0.5	1.6	6.5	
2	1900	entered by	3.0	7250	entered by	0.5	1.6	6.5	
3	1300	the vehicle	1.9	6600	the vehicle	0.5	1.6	4.8	
4	1300	manufact.	1.9	6600	manufact.	0.5	1.6	4.8	
5	1300		1.9	6600		0.5	1.6	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 pcyl	axle load pcyl	axle load pcyl	axle load pcyl	axle load pcyl
1900 3.0	1900 3.0	1300 1.9	1300 1.9	1300 1.9
2400 3.3	2400 3.3	1800 2.2	1800 2.2	1800 2.2
2900 3.7	2900 3.7	2300 2.4	2300 2.4	2300 2.4
3400 4.0	3400 4.0	2800 2.7	2800 2.7	2800 2.7
3900 4.3	3900 4.3	3300 3.0	3300 3.0	3300 3.0
4400 4.6	4400 4.6	3800 3.3	3800 3.3	3800 3.3
4900 5.0	4900 5.0	4300 3.5	4300 3.5	4300 3.5
5400 5.3	5400 5.3	4800 3.8	4800 3.8	4800 3.8
7250 6.5	7250 6.5	6600 4.8	6600 4.8	6600 4.8

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

axle 1	: reference axle: ROR	.../... .../K brake lining: ROR 8616 AF
	test report :	36102202 date : 07.06.2002
axle 2	: reference axle: ROR	.../... .../K brake lining: ROR 8616 AF
	test report :	36102202 date : 07.06.2002
axle 3	: reference axle: ROR	.../... .../K brake lining: ROR 8616 AF
	test report :	36102202 date : 07.06.2002
axle 4	: reference axle: ROR	.../... .../K brake lining: ROR 8616 AF
	test report :	36102202 date : 07.06.2002
axle 5	: reference axle: ROR	.../... .../K brake lining: ROR 8616 AF
	test report :	36102202 date : 07.06.2002

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 = 21.4 % Fe
axle 2	(rdyn 421 mm)	T = 21.4 % Fe
axle 3	(rdyn 421 mm)	T = 16.9 % Fe
axle 4	(rdyn 421 mm)	T = 16.9 % Fe
axle 5	(rdyn 421 mm)	T = 16.9 % Fe

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

axle 1	(sp = 58 mm)	s = 40 mm
axle 2	(sp = 58 mm)	s = 40 mm
axle 3	(sp = 57 mm)	s = 40 mm
axle 4	(sp = 57 mm)	s = 40 mm
axle 5	(sp = 57 mm)	s = 40 mm

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

axle1	ThA = 6590 N
axle2	ThA = 6590 N
axle3	ThA = 4769 N
axle4	ThA = 4769 N
axle5	ThA = 4769 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 = 38122 N
axle 2	(rdyn 421 mm)	T = 38122 N
axle 3	(rdyn 421 mm)	T = 27508 N
axle 4	(rdyn 421 mm)	T = 27508 N
axle 5	(rdyn 421 mm)	T = 27508 N

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

braking rate of the vehicle (item 4.3.2 to appendix 2 to annex 11)	0.58	0.47
---	------	------

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 = 38122 N
axle 2	(rdyn 421 mm)	T = 38122 N
axle 3	(rdyn 421 mm)	T = 27508 N
axle 4	(rdyn 421 mm)	T = 27508 N
axle 5	(rdyn 421 mm)	T = 27508 N

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

braking rate of the vehicle (item 4.3.2 to appendix 2 to annex 11)	0.58	0.47
---	------	------

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

	axle 3	axle 4	axle 5
no of TRISTOP-actuators per axle line KDZ	2	2	2
TRISTOP-actuator type	T.16/24	T.16/24	T.16/24
lever length	74	74	74
stat. tyre radius	401	401	401
at a stroke of	30	30	30
min. force of spring brake	7605	7605	7605
sp.brake chamber no Meritor.....	4	4	4
release pressure	4.8	4.8	4.8

calculation:

ratio until road	3.7461	3.7461	3.7461
$iFb = lBh * \eta * C * rBt / (rBn * rstat)$			
for rstat in mm	401	401	401
brake force of spring br. Tf in N	55966	55966	55966
$Tf = (TFZ * KDZ - 2 * Co / lBh) * iFb$			
braking rate	0.509		
zf = 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 = 3840 mm for E = 6040 mm  
 =====  
 min Ef = 3840 mm for E = 6040 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 = 2349 mm height of center of gravity - laden  
 PR = 19800 kg maximum bogie mass - laden  
 P = 34300 kg maximum total mass - laden  
 nf = 3 no. of axle(s) with TRISTOP spring brake actuators  
 ng = 3 no. of bogie axle(s)

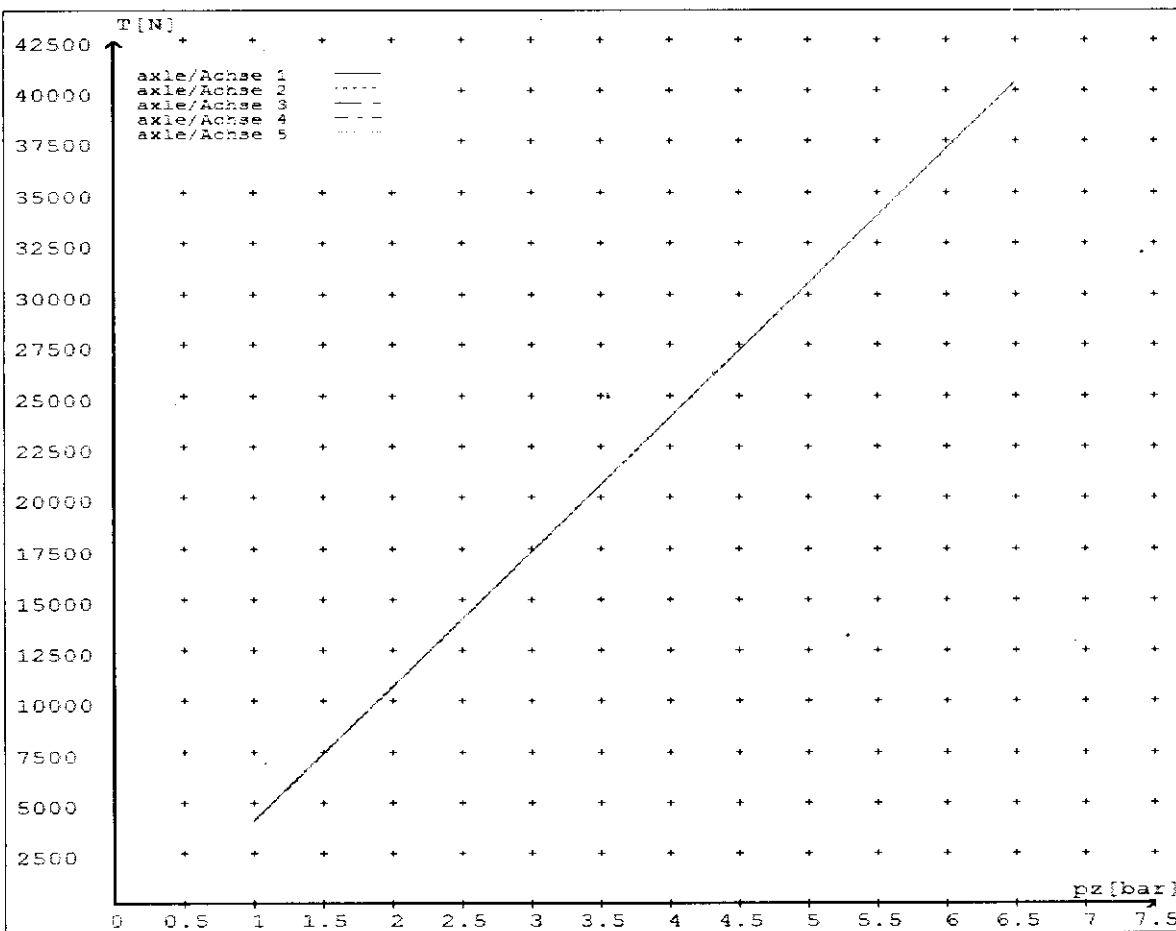
reference values

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

	pz [bar]	T [N]	T [N]
axle 1	1.0	4089	
	6.5	40390	
axle 2	1.0	4089	
	6.5	40390	
axle 3	1.0		4034
	4.8		29115
axle 4	1.0		4034
	4.8		29115
axle 5	1.0		4034
	4.8		29115

VIN - no.:

	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	16./	16./	T.16/24	T.16/24	T.16/24
Maximum stroke smax = ...mm maximaler Hub smax = ....mm	64	64	64	64	64
Lever length = ....mm Hebellänge = ....mm	74	74	74	74	74



**GOUGH***Transpecs*

P.O.Box 98-971

South Auckland Mail Centre

J.HIRST (JEH)

DATE	<u>28-May-13</u>	BRAKE SYSTEM	<u>WABCO EBS-E</u>
CERT. NO.	<u>JH130517</u>	PREV EXEMPTION	<u>HVB13/140</u>
VIN / CHASSIS	<u>7A9E23010D1023144</u>		
BRAKE CHAMBERS FRONT TSE 16HSCLD (Max stroke = 64mm)			
BRAKE CHAMBERS REAR TSE 1624HTLD (Max stroke = 64mm)			
SLACK LENGTH FRONT	<u>74 mm</u>	TYRE SIZE FRONT	<u>265 70 R 19.5</u>
SLACK LENGTH REAR	<u>74 mm</u>	TYRE SIZE REAR	<u>265 70 R 19.5</u>
THIS VEHICLE COMPLIES WITH THE NZ HVBR 32015/2 - SCHEDULE 5	LINING MATERIAL FRONT		<u>ROR 8616 AF</u>
	LINING MATERIAL REAR		<u>ROR 8616 AF</u>

<b>WABCO</b>			<b>TRAILER EBS-E</b>				GGVS/ADR TUEH TB 2007 - 019.00 361-0022-02												
HERSTELLER MANUFACTURER CONSTRUCTEUR		<b>DOMETT</b>		GIO		Pin1		Pin3		Pin4									
TYP TYPE TYPE		<b>5AFT TIP C/SIDE</b>		1		---		---		---									
FAHRZEUG IDENTNR CHASSIS NUMBER NUMERO DE CHASSIS		<b>7A9E23010D1023144</b>		2		---		---		---									
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO.		<b>TP50826</b>		3		<b>ALS2</b>		<b>ALS2</b>		---									
POLRADZÄHREZAHL c-d   e-f POLE WHEEL TEETH c-d   e-f DENTS ROUE DENTÉE c-d   e-f		<b>90 90</b>		4		---		---		---									
ABS-System ABS-System Système ABS		<b>4S/3M</b>		5		<b>DIAG</b>		<b>DIAG</b>		<b>DIAG</b>									
RSS RSS RSS		Einfachbereifung Single Tyre Roue simple		Lerkaechse Steering axle Essieu vitreur		---		---		---									
Zwillingsbereifung Twin Tyre Roue jumelle		<b>X</b>		Kippkritisches Fahrzeug Critical Trailer Véhicule critique		---		---		---									
Subsystems		I/O		24N		---		---		---									
ACHSE AXLE ESSEU		pm (bar)		6.5		pm (bar)		0.7		2.0		---		6.5		pz			
1		1900		0.8		3.0		7250		4.7		0.5		1.6		---		6.5	
2		1900		0.8		3.0		7250		4.7		0.5		1.6		---		6.5	
3		1300		0.5		1.9		6600		4.3		0.5		1.6		---		4.8	
4		1300		0.5		1.9		6600		4.3		0.5		1.6		---		4.8	
5		1300		0.5		1.9		6600		4.3		0.5		1.6		---		4.8	



NZ TRANSPORT AGENCY  
WAKA KOTAHU

Exemption: HVB13/140

NATIONAL OFFICE  
50 Victoria Street  
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Wellington 6141  
New Zealand  
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**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 Trailers Ltd, 5 Axle Full-Tailer**  
VIN/Chassis: **7A9E23010D1023144**

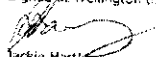
**Schedule 2: Exempted Requirement:**

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 22nd day of April 2013

  
Jackie Hartley  
Administrator (Assessments)