



Heavy Vehicle Specialist Certificate

Heavy Vehicle Specialist Inspector and Inspecting Organisation

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

ID

CHRIS CLARKE

CJC

Vehicle Registration*

VIN / Chassis Number

7A9E20012C1023093

Component being certified:

Chassis Modification

Load Anchorage

Log Bolsters

Certification Category

Towing Connection

✓ Brakes

SRT

HUEK

Description of Work

CARRY OUT SET UP OF TRAILER EBS SYSTEM.

Code/Standard Certified to

Component Load Rating(s)

HUBNZ 32015/2 SCHEDS,

N/A.

General Drawing Number(s)

N/A

Supporting Documents

BRAKE DESIGN CERTIFICATE - RP12011
PREV EXEMPTION REF - HUB12/289

*Special Conditions

WARNING LAMP MUST ILLUMINATE WHEN IGNITION IS SWITCHED ON
THEN EXTINGUISH IMMEDIATELY OR WHEN VEHICLE EXCEEDS 7 KPH

Certification Expiry Date (if applicable)

or Hubodometer Reading (whichever comes first)

N/A

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

Number

26.10.2012

419624

COF Vehicle Inspector ID:

COF Vehicle Inspector Signature:

Date

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

P.O.Box 98-971

South Auckland Mail Centre

J.HIRST (JEH)

DATE	26-Oct-12	BRAKE SYSTEM	12/24V EBS
CERT. NO.	RP121011	PREV EXEMPTION	HVB12/289
VIN / CHASSIS	7A9E20012C1023C93		
BRAKE CHAMBERS FRONT 16 (BPW max stroke 60mm)			
BRAKE CHAMBERS REAR 1424 BPW max stroke 57mm			
SLACK LENGTH FRONT	80 mm	TYRE SIZE FRONT	265 70 R 19.5
SLACK LENGTH REAR	80 mm	TYRE SIZE REAR	265 70 R 19.5
THIS VEHICLE COMPLIES WITH THE NZ HVBR 32015/2 - SCHEDULE 5	LINING MATERIAL FRONT		BPW 8101 / 8200
	LINING MATERIAL REAR		BPW 8101 / 8200

WABCO

TRAILER EBS-E

GGVSI/ADR TUEH TB 2007 019.00
36105305 ECE

HERSTELLER MANUFACTURER CONSTRUCTEUR	Domett Trailers		
FAHRZEUGIDENTIFIKATIONSTYP VEHICLE IDENTIFICATION TYPE	5A Full Trailer		
CHASSISNUMMER CHASSIS NUMBER NUMERO DE CHASSIS	7A9E20012C1023093		
BREMSENRECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO	TP298		
ACHSENANZAHL AXLE COUNT NOMBRE D'AXES	90	90	ABS-System ABS-System Systeme ABS
REIFENANZAHL TYRE COUNT NOMBRE DE PNEUS	4S/3M		
PSI Einachsereifung Single Tyre Mono pneu		Leitachse Steering axle Essieu directeur	
PSI Zweiachsereifung Two Tyre Macho pneu	X	Kipptafelhaftes Fahrzeug Critical Trailer Vehicule critique	
Subsystems	I/O		

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

ACHSE AXLE AXES	pm (bar)		pm (bar)		0.7		2.0		6.5		TYP TYPE	(mm)	(mm)	(bar)	
	1	2	1	2	1	2	1	2	1	2				10	Pz
1	1520	0.4	2.5	7000	3.8	0.5	1.8	---	6.6	-	14	62	76	334	3455
2	1520	0.4	2.5	7000	3.8	0.5	1.8	---	6.6	-	14	62	76	334	3455
3	1320	0.3	1.8	6000	3.2	0.4	1.5	---	4.6	-	16 / 24	57	76	445	2929
4	1320	0.3	1.8	6000	3.2	0.4	1.5	---	4.6	-	16 / 24	57	76	445	2929
5	1320	0.3	1.8	6000	3.2	0.4	1.5	---	4.6	-	16 / 24	57	76	445	2929



NZ TRANSPORT AGENCY
WAKA KOTAHI

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

Exemption: HVB12/289

**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:

Make/Model: **Domett Trailers Ltd, 5 axle full-trailer**
VIN/CHASSIS: **7A9E20012C1023093**

SCHEDULE 2: - Exempted Requirement

Section 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) An 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 8) 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 21st day of September 2012.

Jackie Hartley
Administrator (Assessments)

WABCO START-UP PROTOCOL

System	Trailer EBS-E	WABCO part number	480 102 080 0
Production date	2012-06-06	Serial number	897000463700A
Serial number (modulator)	000000016000		
Fingerprint Customer EOL / Customer Development / Flash Program	W503643 / 2012-10-26 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00		

WABCO

TRAILER EBS-E

GGVS/ADR TUEH TB 2007 - 019.00
361-041-08 ECE

HERSTELLER MANUFACTURER CONSTRUCTEUR	DOMETT T&T		
TYP TYPE TYPE	5AX F/T CURTAINSIDE		
FAHRZEUG IDENTNR. CHASSIS NUMBER NUMERO DE CHASSIS	7A9E20012C1023093		
BREMSBERECHNUNGS NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO.	TP50666		
POLRADZAHNZAHL c-d e-f POLE WHEEL TEETH c-d e-f DENTS ROUE DENTEE c-d e-f	80	80	ABS-System ABS-System Système ABS 4S/3M
RSS RSS RSS	Einfachbereifung Single Tyre Monte simple		Lenkachse Steering axle Essieu virer
	Zwillingsbereifung Twin Tyre Monte jumelle	X	Kippritisches Fahrzeug Critical Trailer Vehicule critique
Subsystems	SB		I/O

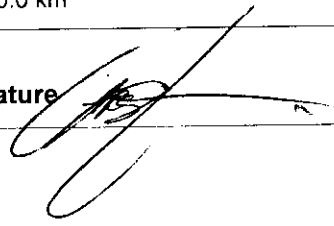
GIO	Pin1	Pin3	Pin4
1	---	---	---
2	---	---	---
3	ALS2	ALS2	---
4	---	---	---
5	DIAG	DIAG	DIAG
6	---	---	---
7	---	---	---



ACHSE AXLE ESSIEU	pm (bar)		6.5	pm (bar)		0.6	2.0	---	6.5	TYP TYPE	(mm)	(mm)	(bar)		
	(kg)			(kg)					1.0				Pz		
1	1500	0.7	1.9	7250	4.6	0.4	1.5	---	5.8	-	16	60	80	431	3649
2	1500	0.7	1.9	7250	4.6	0.4	1.5	---	5.8	-	16	60	80	431	3649
3	1300	0.6	2.0	6000	3.7	0.5	1.8	---	5.7	-	14 / 24	57	80	316	2882
4	1300	0.6	2.0	6000	3.7	0.5	1.8	---	5.7	-	14 / 24	57	80	316	2882
5	1300	0.6	2.0	6000	3.7	0.5	1.8	---	5.7	-	14 / 24	57	80	316	2882

Diagnostic memory	OK	Warning lamp control	OK
Parameter setting	carried out	Stop light power supply	Not tested
EBS pressure test	Not tested	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	7A9E20012C1023093
Vehicle type	5AX F/T CURTAINSIDE	Odometer reading	0.0 km
next Service	0 km	Trip reading	0.0 km
Tested by	Chris Clarke	Signature 	
Date	2012-10-26 2:51:24 p.m.		

trailer (full, semi-, centre-axle) with air brake system acc. to 71/320/EEC, last amended by 98/12/EC and 2006/96/EC

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!
 WABCOBrake V6.12.08.27 db 30.08.2012

distribution: DOMETT T&T
 7A9E20015C1023072 7A9E20017C1023073
 7A9E20010C1023092
 SODC - JH120821 - JH120903 - JH120904

vehicle manufacturer: DOMETT T&T
 trailer model : 5AX F/T CURTAINSIDE
 trailer type : 5-axle-full-trailer
 remarks : air / hydraulic / VA suspension
 WABCO TRAILER - EBS E
 TRISTOP 3+4+5: 14/24
 265/70 R 19,5

axle 1 + 2 + 3 + 4 + 5 : BPW, TSB 3709, 361-041-08 ECE,

		unladen	laden
total mass	P in kg	6900	32500
axle 1	P1 in kg	1500	7250
axle 2	P2 in kg	1500	7250
axle 3	P3 in kg	1300	6000
axle 4	P4 in kg	1300	6000
axle 5	P5 in kg	1300	6000
wheel base	E in mm	7400 - 7400	
centre of gravity height	h in mm	1090	2078

	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	2	2	2	2	2
The power output corresponds to	BZ 106.0	BZ 106.0	BZ 107.0	BZ 107.0	BZ 107.0
brake chamber manufacturer	BPW	BPW	BPW	BPW	BPW
chamber size	16	16	14/24	14/24	14/24
lever length	80	80	80	80	80
brake factor	20.50	20.50	20.50	20.50	20.50
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	12.0	12.0	12.0	12.0

calculation:					
chamber pressure(rdyn min)pH at z=22,5%bar	2.2	2.2	2.5	2.5	2.5
chamber pressure(rdyn max)pH at z=22,5%bar	2.2	2.2	2.5	2.5	2.5
chamber press.(servo)pcha at pm6,5bar	5.8	5.8	5.7	5.7	5.7
piston force	5840	5840	4641	4641	4641
brake force(rdyn min)T lad. at pm6,5bar	45039	45039	35574	35574	35574
brake force(rdyn max)T lad. at pm6,5bar	45039	45039	35574	35574	35574
brake force within 1 % rolling friction proportion	22.6	22.6	18.2	18.2	18.2

braking rate z laden 0.617 for rdyn min
 z = sum (TR)/PRmax 0.617 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: BPW 05.444.32.....

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: BPW 05.444.32.....

axle 3:

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

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

brake cylinder: BPW 05.444.38.....

axle 4:

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

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

brake cylinder: BPW 05.444.38.....

axle 5:

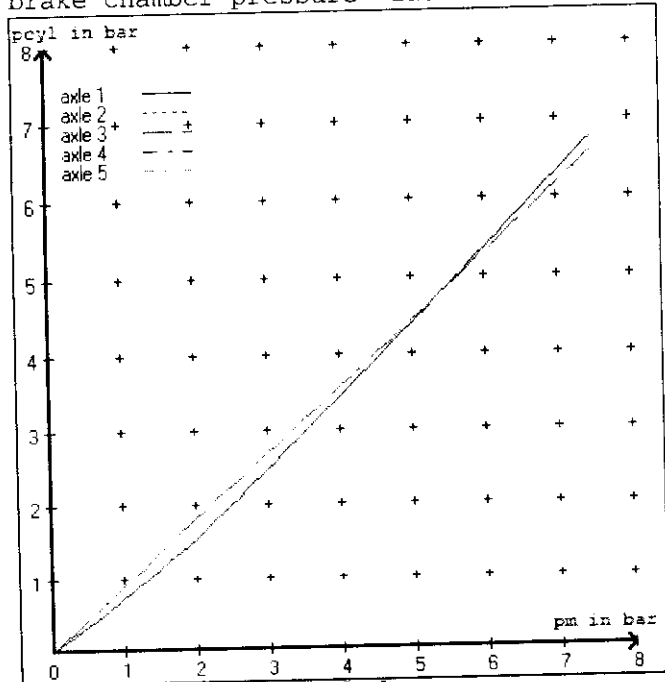
valve 1: 971 002 ... 0 WABCO
EBS emergency valve

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

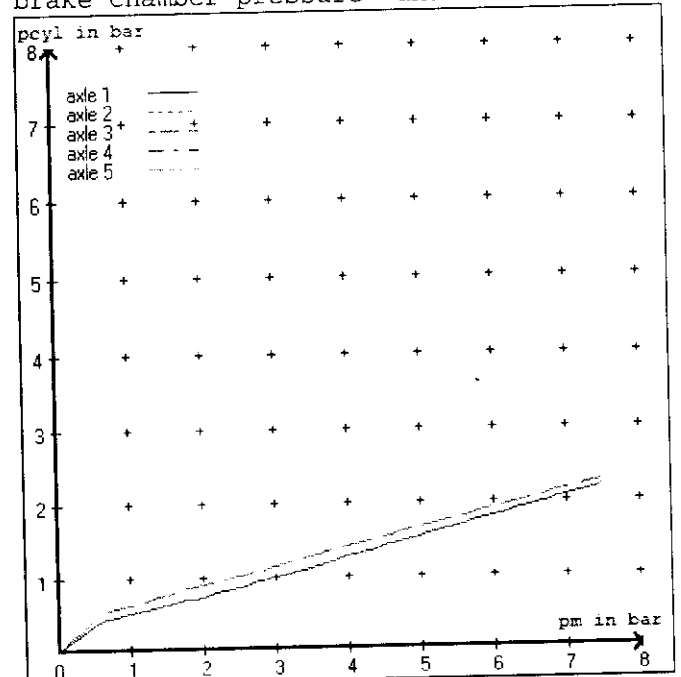
brake cylinder: BPW 05.444.38.....

test type III (zIII = 0.30)	for rdyn min :	axle1	axle2	axle3	axle4	axle5
at pm 3.5 bar =>	pcha in bar :	2.9	2.9	3.1	3.1	3.1
test type III (zIII = 0.06)	for rdyn min :	axle1	axle2	axle3	axle4	axle5
at pm 1.1 bar =>	pcha in bar :	0.8	0.8	1.0	1.0	1.0

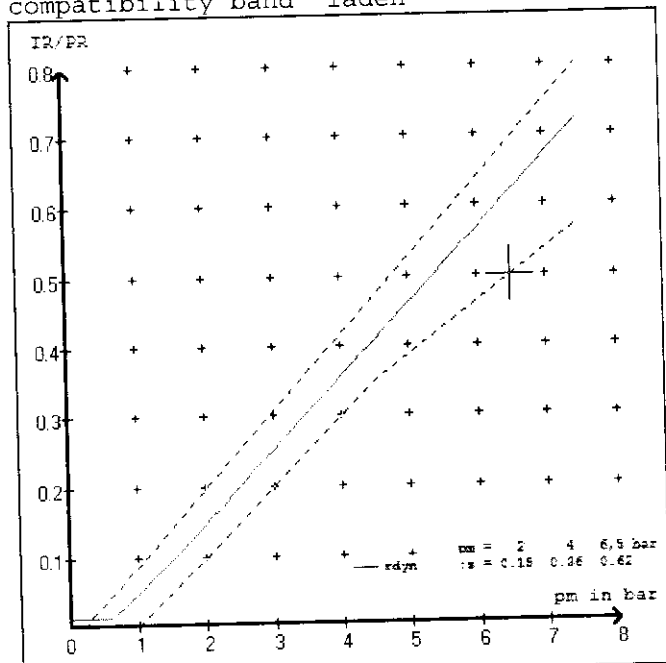
brake chamber pressure laden



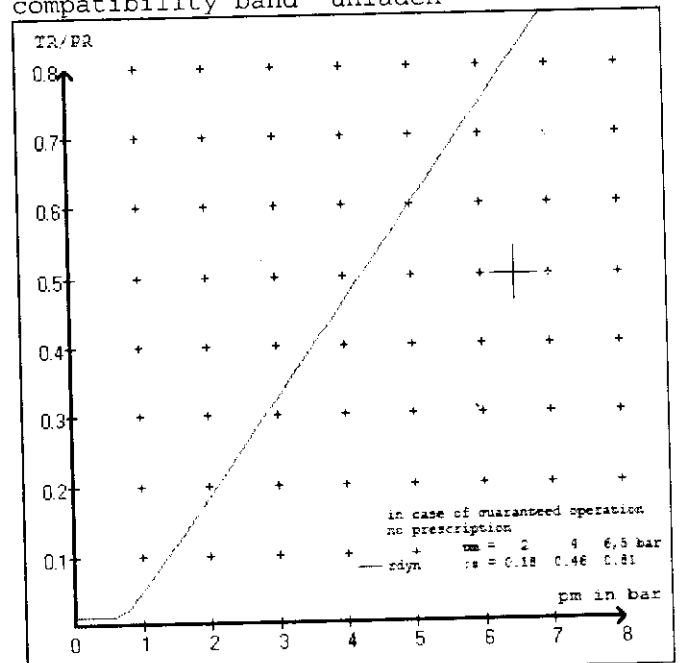
brake chamber pressure unladen



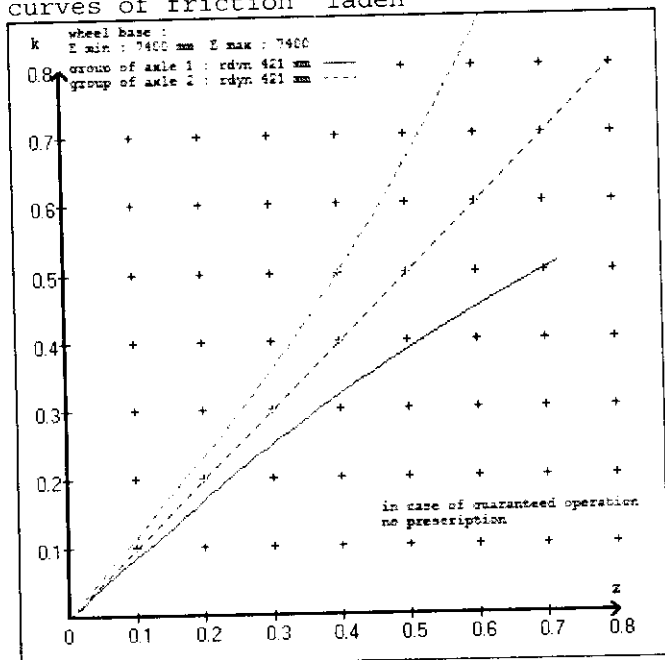
compatibility band laden



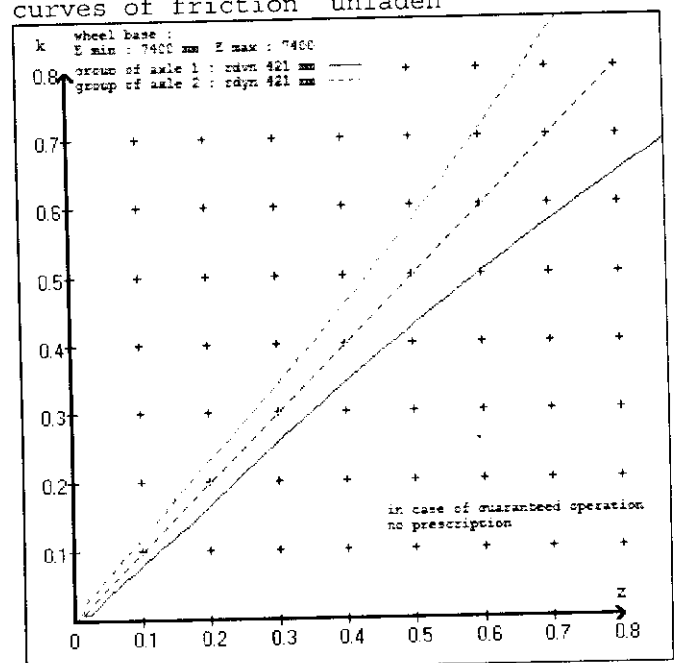
compatibility band unladen



curves of friction laden



curves of friction unladen



vehicle manufacturer: DOMETT T&T
 trailer model : SAX F/T CURTAINSIDE
 trailer type : 5-axle-full-trailer

brake chamber and lever length :
 axle 1 : 2 x type/diameter 16 (BPW) lever length 80 mm
 axle 2 : 2 x type/diameter 16 (BPW) lever length 80 mm
 axle 3 : 2 x type/diameter 14/24 (BPW) lever length 80 mm
 axle 4 : 2 x type/diameter 14/24 (BPW) lever length 80 mm
 axle 5 : 2 x type/diameter 14/24 (BPW) lever length 80 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 : SAX F/T CURTAINSIDE
 trailer type : 5-axle-full-trailer
 brake calculation no. : TP 50666A

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

assignment pm / deceleration z: pm 0.6 bar z = 0.010
 (laden condition) 2.0 bar z = 0.146
 6.5 bar z = 0.615

control pressure pm			6,5	control pressure pm			0.6	2.0	6.5
axle	axle load unladen	bellow pr. unladen	brake pr. unladen	axle load laden	bellow pr. laden	brake pr. laden			
1	1500	to be	1.9	7250	to be	0.4	1.5	5.8	
2	1500	entered by	1.9	7250	entered by	0.4	1.5	5.8	
3	1300	the vehicle	2.0	6000	the vehicle	0.5	1.8	5.7	
4	1300	manufact.	2.0	6000	manufact.	0.5	1.8	5.7	
5	1300		2.0	6000		0.5	1.8	5.7	

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
1500 1.9	1500 1.9	1300 2.0	1300 2.0	1300 2.0
2000 2.2	2000 2.2	1800 2.4	1800 2.4	1800 2.4
2500 2.6	2500 2.6	2300 2.8	2300 2.8	2300 2.8
3000 2.9	3000 2.9	2800 3.2	2800 3.2	2800 3.2
3500 3.3	3500 3.3	3300 3.6	3300 3.6	3300 3.6
4000 3.6	4000 3.6	3800 4.0	3800 4.0	3800 4.0
4500 3.9	4500 3.9	4300 4.4	4300 4.4	4300 4.4
5000 4.3	5000 4.3	4800 4.8	4800 4.8	4800 4.8
7250 5.8	7250 5.8	6000 5.7	6000 5.7	6000 5.7

data sheet to EC/ECE vehicle type-approval certificate concerning braking equipment: according to 98/12/EC annex IX 2.7.4

axle 1	: reference axle: BPW	D 115-2	brake lining: BPW 8101
	test report :	361-041-08	EC date : 01.04.2011
axle 2	: reference axle: BPW	D 115-2	brake lining: BPW 8101
	test report :	361-041-08	EC date : 01.04.2011
axle 3	: reference axle: BPW	D 115-2	brake lining: BPW 8101
	test report :	361-041-08	EC date : 01.04.2011
axle 4	: reference axle: BPW	D 115-2	brake lining: BPW 8101
	test report :	361-041-08	EC date : 01.04.2011
axle 5	: reference axle: BPW	D 115-2	brake lining: BPW 8101
	test report :	361-041-08	EC date : 01.04.2011

calc. verif. of residual (hot) braking force type III
(item 4.2 of appendix I to annex VII)

axle 1	(rdyn 421 mm)	T = 18.7 % Fe
axle 2	(rdyn 421 mm)	T = 18.7 % Fe
axle 3	(rdyn 421 mm)	T = 15.8 % Fe
axle 4	(rdyn 421 mm)	T = 15.8 % Fe
axle 5	(rdyn 421 mm)	T = 15.8 % Fe

calculated actuator stroke in mm
(item 4.3.1.1 of appendix I to annex VII)

axle 1	(sp = 57 mm)	s = 48 mm
axle 2	(sp = 57 mm)	s = 48 mm
axle 3	(sp = 51 mm)	s = 48 mm
axle 4	(sp = 51 mm)	s = 48 mm
axle 5	(sp = 51 mm)	s = 48 mm

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

axle1	ThA = 5840 N
axle2	ThA = 5840 N
axle3	ThA = 4641 N
axle4	ThA = 4641 N
axle5	ThA = 4641 N

calc. residual (hot) braking force in N
(item 4.3.1.4 of appendix I to annex VII)

axle 1	(rdyn 421 mm)	T = 40816 N
axle 2	(rdyn 421 mm)	T = 40816 N
axle 3	(rdyn 421 mm)	T = 32242 N
axle 4	(rdyn 421 mm)	T = 32242 N
axle 5	(rdyn 421 mm)	T = 32242 N

	basic test	type III
	of subject	(calculated)
braking rate of the vehicle	trailer (z)	residual
(item 4.3.2 to appendix I to annex VII)	0.62	(hot)braking
		0.56

required braking rate $\geq 0,4$ and $\geq 0,6 * z$ (0.37)
(items 1.3.3 and 1.6.2 to annex II)

axle 1	(rdyn 421 mm)	T = 40816 N
axle 2	(rdyn 421 mm)	T = 40816 N
axle 3	(rdyn 421 mm)	T = 32242 N
axle 4	(rdyn 421 mm)	T = 32242 N
axle 5	(rdyn 421 mm)	T = 32242 N

	basic test	type III
	of subject	(calculated)
braking rate of the vehicle	trailer (z)	residual
(item 4.3.2 to appendix I to annex VII)	0.62	(hot)braking
		0.56

required braking rate $\geq 0,4$ and $\geq 0,6 * z$ (0.37)
(items 1.3.3 and 1.6.2 to annex II)

data sheet to EC/ECE vehicle type-approval certificate concerning braking equipment: according to 98/12/EC annex IX 2.7.4

axle 1	: reference axle: BPW	D 115-2	brake lining: BPW 8200
	test report :	361-041-08	EC date : 02.04.2011
axle 2	: reference axle: BPW	D 115-2	brake lining: BPW 8200
	test report :	361-041-08	EC date : 02.04.2011
axle 3	: reference axle: BPW	D 115-2	brake lining: BPW 8200
	test report :	361-041-08	EC date : 02.04.2011
axle 4	: reference axle: BPW	D 115-2	brake lining: BPW 8200
	test report :	361-041-08	EC date : 02.04.2011
axle 5	: reference axle: BPW	D 115-2	brake lining: BPW 8200
	test report :	361-041-08	EC date : 02.04.2011

calc. verif. of residual (hot) braking force type III
(item 4.2 of appendix I to annex VII)

axle 1	(rdyn 421 mm)	T = 18.7 % Fe
axle 2	(rdyn 421 mm)	T = 18.7 % Fe
axle 3	(rdyn 421 mm)	T = 15.8 % Fe
axle 4	(rdyn 421 mm)	T = 15.8 % Fe
axle 5	(rdyn 421 mm)	T = 15.8 % Fe

calculated actuator stroke in mm
(item 4.3.1.1 of appendix I to annex VII)

axle 1	(sp = 57 mm)	s = 47 mm
axle 2	(sp = 57 mm)	s = 47 mm
axle 3	(sp = 51 mm)	s = 47 mm
axle 4	(sp = 51 mm)	s = 47 mm
axle 5	(sp = 51 mm)	s = 47 mm

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

axle1	ThA = 5840 N
axle2	ThA = 5840 N
axle3	ThA = 4641 N
axle4	ThA = 4641 N
axle5	ThA = 4641 N

calc. residual (hot) braking force in N
(item 4.3.1.4 of appendix I to annex VII)

axle 1	(rdyn 421 mm)	T = 42399 N
axle 2	(rdyn 421 mm)	T = 42399 N
axle 3	(rdyn 421 mm)	T = 33491 N
axle 4	(rdyn 421 mm)	T = 33491 N
axle 5	(rdyn 421 mm)	T = 33491 N

braking rate of the vehicle (item 4.3.2 to appendix I to annex VII)	basic test	type III
	of subject	(calculated)
0.62	trailer (z)	residual
		(hot)braking
		0.58

required braking rate (items 1.3.3 and 1.6.2 to annex II)	>= 0,4 and >= 0,6*z (0.37)
--	-------------------------------

axle 1	(rdyn 421 mm)	T = 42399 N
axle 2	(rdyn 421 mm)	T = 42399 N
axle 3	(rdyn 421 mm)	T = 33491 N
axle 4	(rdyn 421 mm)	T = 33491 N
axle 5	(rdyn 421 mm)	T = 33491 N

braking rate of the vehicle (item 4.3.2 to appendix I to annex VII)	basic test	type III
	of subject	(calculated)
0.62	trailer (z)	residual
		(hot)braking
		0.58

required braking rate (items 1.3.3 and 1.6.2 to annex II)	>= 0,4 and >= 0,6*z (0.37)
--	-------------------------------

data sheet to EC/ECE vehicle type-approval certificate concerning braking equipment: according to 98/12/EC annex IX 2.7.4

axle 1 : reference axle: BPW	D 115-2	brake lining: BPW 8302
test report :	361-041-08 EC date	: 03.04.2011
axle 2 : reference axle: BPW	D 115-2	brake lining: BPW 8302
test report :	361-041-08 EC date	: 03.04.2011
axle 3 : reference axle: BPW	D 115-2	brake lining: BPW 8302
test report :	361-041-08 EC date	: 03.04.2011
axle 4 : reference axle: BPW	D 115-2	brake lining: BPW 8302
test report :	361-041-08 EC date	: 03.04.2011
axle 5 : reference axle: BPW	D 115-2	brake lining: BPW 8302
test report :	361-041-08 EC date	: 03.04.2011

calc. verif. of residual (hot) braking force type III
(item 4.2 of appendix I to annex VII)

axle 1	(rdyn 421 mm)	T = 18.7 % Fe
axle 2	(rdyn 421 mm)	T = 18.7 % Fe
axle 3	(rdyn 421 mm)	T = 15.8 % Fe
axle 4	(rdyn 421 mm)	T = 15.8 % Fe
axle 5	(rdyn 421 mm)	T = 15.8 % Fe

calculated actuator stroke in mm
(item 4.3.1.1 of appendix I to annex VII)

axle 1	(sp = 57 mm)	s = 39 mm
axle 2	(sp = 57 mm)	s = 39 mm
axle 3	(sp = 51 mm)	s = 39 mm
axle 4	(sp = 51 mm)	s = 39 mm
axle 5	(sp = 51 mm)	s = 39 mm

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

axle1	ThA = 5840 N
axle2	ThA = 5840 N
axle3	ThA = 4641 N
axle4	ThA = 4641 N
axle5	ThA = 4641 N

calc. residual (hot) braking force in N
(item 4.3.1.4 of appendix I to annex VII)

axle 1	(rdyn 421 mm)	T = 43290 N
axle 2	(rdyn 421 mm)	T = 43290 N
axle 3	(rdyn 421 mm)	T = 34194 N
axle 4	(rdyn 421 mm)	T = 34194 N
axle 5	(rdyn 421 mm)	T = 34194 N

braking rate of the vehicle (item 4.3.2 to appendix I to annex VII)	basic test of subject trailer (z)	type III (calculated) residual (hot)braking
	0.62	0.59

required braking rate (items 1.3.3 and 1.6.2 to annex II)	>= 0,4 and >= 0,6*z (0.37)
--	-------------------------------

axle 1	(rdyn 421 mm)	T = 43290 N
axle 2	(rdyn 421 mm)	T = 43290 N
axle 3	(rdyn 421 mm)	T = 34194 N
axle 4	(rdyn 421 mm)	T = 34194 N
axle 5	(rdyn 421 mm)	T = 34194 N

braking rate of the vehicle (item 4.3.2 to appendix I to annex VII)	basic test of subject trailer (z)	type III (calculated) residual (hot)braking
	0.62	0.59

required braking rate (items 1.3.3 and 1.6.2 to annex II)	>= 0,4 and >= 0,6*z (0.37)
--	-------------------------------

spring parking brake

		<u>axle 3</u>	<u>axle 4</u>	<u>axle 5</u>
no of TRISTOP-actuators per axle line KDZ		2	2	2
TRISTOP-actuator type		14/24	14/24	14/24
lever length	lBh in mm	80	80	80
stat. tyre radius	rstat max in mm	401	401	401
at a stroke of	s in mm	30	30	30
min. force of spring brake	TFZ in N	5809	5809	5809
sp.brake chamber no BPW		05.444.3805	05.444.3805	05.444.3805
release pressure	pLs in bar	4.9	4.9	4.9

calculation:

ratio until road		4.0898	4.0898	4.0898
$iFb = lBh * \eta * C * rBt / (rBn * rstat)$				
	for rstat in mm	401	401	401
brake force of spring br. Tf in N		46288	46288	46288
$Tf = (TFZ * KDZ - 2 * Co / lBh) * iFb$				
braking rate	zf laden	0.446		
$zf = \text{sum}(Tf) / P + 0,01$				

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 = 4743 mm for E = 7400 mm
 =====
 min Ef = 4743 mm for E = 7400 mm
 =====

min Ef = minimum distance between front axle(s) (trailer) or support (semitraile) 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 = 2078 mm height of center of gravity - laden
 PR = 18000 kg maximum bogie mass - laden
 P = 32500 kg maximum total mass - laden
 nf = 3 no. of axle(s) with TRISTOP spring brake actuators
 ng = 3 no. of bogie axle(s)

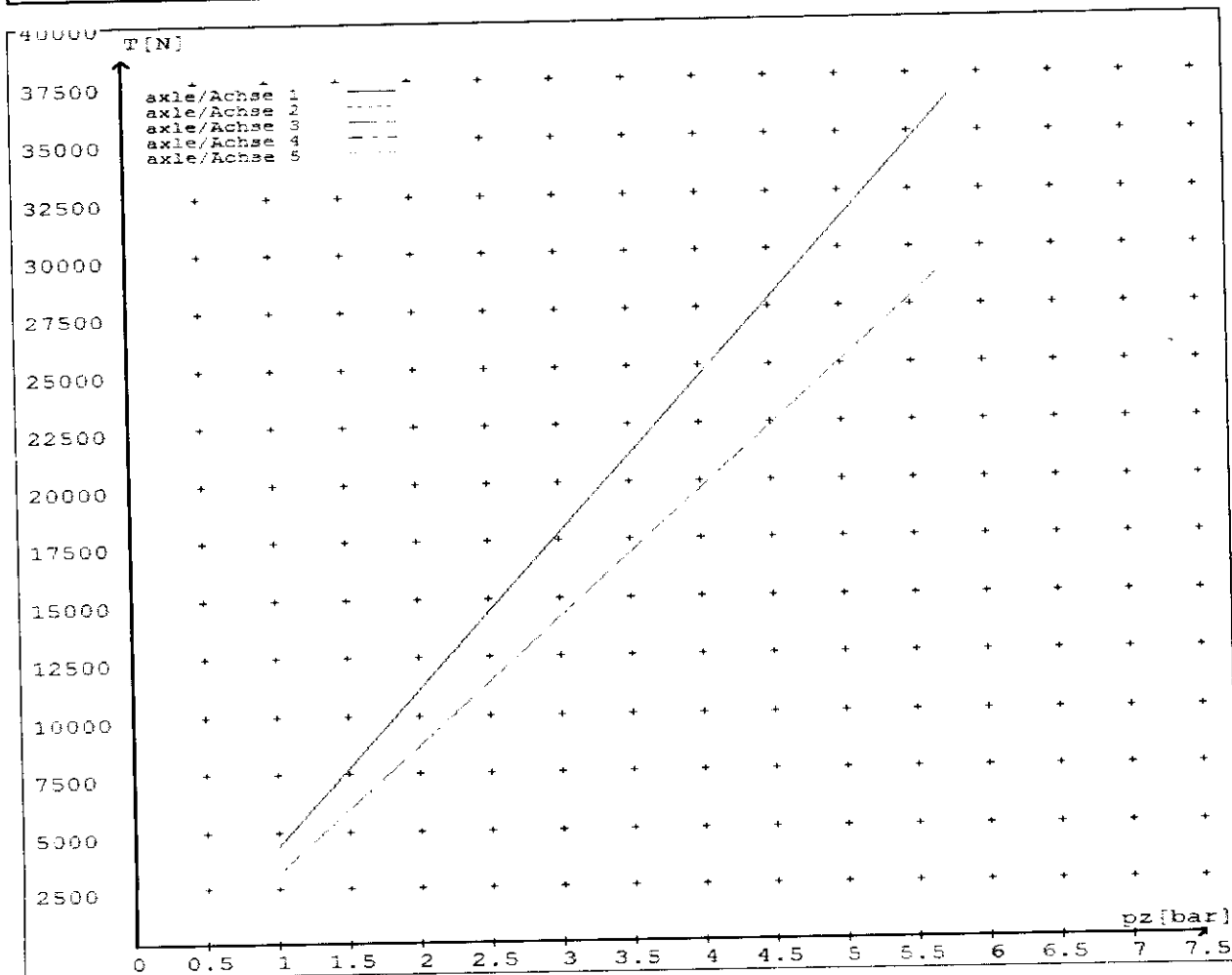
reference values

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

	pz [bar]	T [N]	T [N]
axle 1	1.0	4314	
	5.8	36498	
axle 2	1.0	4314	
	5.8	36498	
axle 3	1.0		3160
	5.7		28828
axle 4	1.0		3160
	5.7		28828
axle 5	1.0		3160
	5.7		28828

VIN - no.:

	Axle(s) / Achse(n)				
	16/	16/	14/24	14/24	14/24
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)					
Maximum stroke smax = ...mm maximaler Hub smax =mm	60	60	57	57	57
Lever length =mm Hebellänge =mm	80	80	80	80	80



reference values for $z = 0.5$

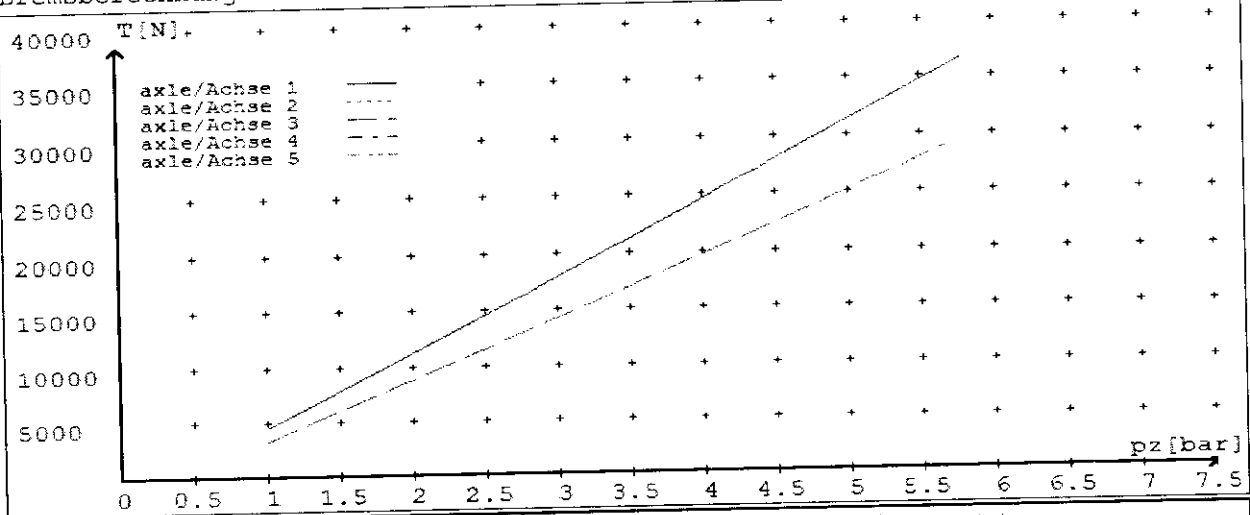
Angabe der Referenzwerte für $z = 0.5$

brake calculation no: TP 50666A date 10.09.2012

Bremsberechnung Nr: TP 50666A vom 10.09.2012

for max r_{dyn}: 421 mm

für max r_{dyn}: 421 mm



	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	16/	16/	14/24	14/24	14/24
Maximum stroke s _{max} = ...mm maximaler Hub s _{max} = ...mm	60	60	57	57	57
Lever length = ...mm Hebellänge = ...mm	80	80	80	80	80



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

CERTIFICATE No. **RP121011**

CUSTOMER NAME

DOMETT TRAILERS

CUSTOMER ORDER No.

3917

DATE RECEIVED

18/09/2012

VEHICLE TYPE

5Axle Full Trailer

REG No.

CHASSIS No.

7A5E20012C1023093

BRIEF SPECIFICATION AS CERTIFIED TO SCHEDULE 5

BRAKE VALVES:

Primary Relay

Make: WABCO Type: 480-102-080-0

Secondary Relay

Make: WABCO Type: 480/207/020/2

Spring Brake Relay

Make: PREV WABCO Type: 971-002-103-4

Park Brake Release Valve

Make: Prev WABCO Type: 971-002-103-4

Locked Ratio

Make: _____ Type: _____ Setting: _____

Load Sense Valve

Front: Make: EBS Control Type: _____

Settings: Laden: _____ Unladen: _____

Load Sense Valve

Rear: Make: EBS Control Type: _____

Setting: Laden: _____ Unladen: _____

Other Valves

Make: WABCO Type: line filters Setting: X 2

Make: _____ Type: _____ Setting:- _____

Make: _____ Type: _____ Setting: _____

Make: _____ Type: _____ Setting:- _____

Comments: Prev Valve EXEMPTION NO HB/12/289

BRAKE CHAMBERS:

Front: Make BPW Type: 16 STROKE: 60 mm
Rear: Make BPW Type: 14/24 STROKE: 57 mm

SLACK ADJUSTER:

Front Length (mm) Disc _____ Rear Length (mm) Disc _____

BRAKE CALIPERS: Type Knorr BPW

OTHER:

TYRES 265/70R 19.5

NOTES:

PACKING SLIP NO.

PROCESS TIME:

3.5

MA

Confirmation of compliance

I confirm that the vehicle identified on page 1 and 2 of this Confirmation of Compliance complies with all rel



Date: 15/10/2012 _____ Signed: _____

Certifier's identification

Name & ID: _____ RON PRATT (TRSP) _____

Phone (bus): 09 9807300 _____ Fax (bus): 09 9807306 _____

Postal address: TRANSPORT SPECIALTIES LTD
PO BOX 98-971,
MANUKAU CITY,
MANUKAU 2241

Position: TRSP (HVEK) _____

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

Date: _____ Signed: _____

Certifier's identification: _____

Name: _____

Phone (bus): _____ Fax (bus): _____

Postal address: _____

Position: _____

Comments: _____

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.

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) NZTA Helpdesk 0800 699 000*