NZ TRANSPORT AGENCY
WAKA KOTAHI

Heavy Vehicle Specialist Certificate

Heavy Vehicle Specialist Inspector and Inspecting Organisation

Heavy Vehicle Specialist Inspector's Name *(PRINT IN CAPS)*
RONALD STUART PRATT

ID
TRSP

Vehicle Registration*

VIN / Chassis Number
7A9D20011XA002392 4

Component being certified:

- [ ] Chassis Modification
- [ ] Load Anchorage
- [ ] Log Bolsters
- [ ] Towing Connection
- [x] Brakes
- [ ] SRT

Certification Category
HUEK

Description of Work
Certify to Brake Rule 32015/2.

Code/Standard Certified to
NZHUB Rule Schedule 5

Component Load Rating(s)

General Drawing Number(s)
NA

Supporting Documents
Brake Cert No RP101210
PREV EXEMPTION NO HVB10/384

*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
RS Pratt

*Delegate's Name *(PRINT IN CAPS)*

Date
10/12/2010

Number
364453

COF Vehicle Inspector ID:

COF Vehicle Inspector Signature:

Date

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

NOTICE TO VEHICLE OPERATOR

This trailer is equipped with an **E**lectronic **B**rake **S**ystem.

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)

Transpecs
QUALITY ON THE MOVE

P.O.Box 98-971 South Auckland Mail Centre

Ronald Stuart Pratt (TRSP)

DATE	10-Dec-10	TYPE APPROVED	SAF4AEBS-E
CERTIFICATE No	RP101210	PREV EXEMPTION NO	HVB10/384
VIN No	7A9D2001XA0023924		
BRAKE CHAMBERS FRONT	14TSE64mm		
BRAKE CHAMBERS REAR	14/16TSE 64mm	LOAD SENSED	YES EBS CONTROL
SLACK LENGTH FRONT	Disc	TYRE SIZE FRONT	265/70R19.5
SLACK LENGTH REAR	Disc	TYRE SIZE REAR	265/70R19.5
THIS VEHICLE COMPLIES WITH N.Z		LINING MATERIALFRONT	Jurid 539
HVBR 32015/2 SCHEDULE 5		LINING MATERIAL REAR	Jurid 539

Domett

NZ TRANSPORT AGENCY
WAKA KOTAHI

Level 9, PSIS House
20 Ballance Street
PO Box 5084
Lambton Quay
Wellington 6145
New Zealand
T 64 4 894 5200
F 64 4 894 3305
www.nzta.govt.nz

Document: B1107018
Exemption: HVB10/384

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 Eugene Girardin, Vehicles Unit Engineer, 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 Truck & Trailer Ltd, 4 Axle Full Trailer**
VIN/CHASSIS: **7A9D2001XA0023924**

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 Transport Specialties Limited (Transpecs) or an NZ Transport Agency appointed HVEK certifier acting on behalf of, and under instruction from, Transpecs; 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) 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 Transport Specialties LTD.

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 area's 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 15th day of October 2010

E Girardin

Eugene Girardin
Engineer
Vehicles Unit

TSTN

NZ TRANSPORT AGENCY
WAKA KOTAHI

Level 9, PSIS House
20 Ballance Street
PO Box 5084
Lambton Quay
Wellington 6145
New Zealand
T 64 4 894 5200
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www.nzta.govt.nz

Document: B1107018
Exemption: HVB10/384

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Signed at Wellington this 15th day of October 2010

E. Girardin.

Eugene Girardin
Engineer
Vehicles Unit

WABCO

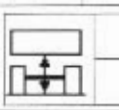
TRAILER EBS-E

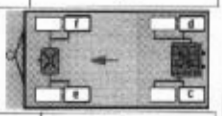
GGVS/ADR TUEH TB 2007 - 019.00
TDB 0749

HERSTELLER MANUFACTURER CONSTRUCTEUR	DOMETT
TYP TYPE TYPE	4 AX F/T C/SIDE
FAHRZEUG IDENTNR. CHASSIS NUMBER NUMERO DE CHASSIS	7A9D2001XA0023924
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO.	TP50454

POLRADZÄHNEZAHL c-d | e-f POLE WHEEL TEETH c-d | e-f DENTS ROUE DENTÉE c-d | e-f	90	90	ABS-System ABS-System Système ABS	4S/3M	
RSS RSS RSS — Einfachbereifung Single Tire Monte simple			Lenkachse Steering axle Essieu vireur		
Zwillingsbereifung Twin Tire Monte jumelée	X		Kippkritisches Fahrzeug Critical Trailer Véhicule critique		
Subsystems	---		I/O		

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





	pm (bar)		6.5	pm (bar)		0.7	2.0	---	6.5					(bar) 1.0	(bar) Pz
ACHSE AXLE ESSIEU	(kg)			(kg)					pz		TYP TYPE	(mm)	(mm)	TR (daN)	
1	1500	0.7	2.1	8000	5.3	0.3	1.6	---	6.4	-	14	64	69	---	---
2	1500	0.7	2.1	8000	5.3	0.3	1.6	---	6.4	-	14	64	69	---	---
3	1700	0.9	2.3	8000	5.3	0.3	1.6	---	6.2	-	14 / 16	64	69	---	---
4	1700	0.9	2.3	8000	5.3	0.3	1.6	---	6.2	-	14 / 16	64	69	---	---
5	0	---	---	0	---	---	---	---	---	-	---	---	---	---	---

WABCO START-UP PROTOCOL

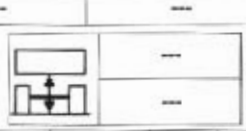
System	Trailer EBS-E	**WABCO part number**	480 102 064 0
Production date	2010-07-16	**Serial number**	284009301500
Fingerprint Customer EOL / Customer Development / Flash Program	W 029383 / 2010-12-10 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00		

WABCO TRAILER EBS-E

GGVS/ADR TUEH TB 2007 - 019.00
TDB 0749

HERSTELLER MANUFACTURER CONSTRUCTEUR	DOMETT
TYP TYPE TYPE	4 AX F/T C/SIDE
FAHRZEUG IDENTNR. CHASSIS NUMBER NUMERO DE CHASSIS	7A9D2001XA0023924
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO.	TP50454
POLRADZÄHNEZAHL c-d | e-f POLE WHEEL TEETH c-d | e-f DENTS ROUE DENTÉE c-d | e-f	90 / 90
ABS-System ABS-System Système ABS	4S/3M
RSS Einfachbereifung Single Tire Monte simple	
Lenkachse Steering axle Essieu viseur	
RSS Zwillingsbereifung Twin Tire Monte jumelée	X
Kippartiisches Fahrzeug Critical Trailer Véhicule critique	
Subsystems ---	I/O

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



	pm (bar)		6.5	pm (bar)		0.7	2.0	---	6.5					1.0	Pz
AXLE ESSIEU	(kg)			(kg)					pz		TYP TYPE	(mm)	(mm)	TR (daN)	
1	1500	0.7	2.1	8000	5.3	0.3	1.6	---	6.4	-	14	64	69	---	---
2	1500	0.7	2.1	8000	5.3	0.3	1.6	---	6.4	-	14	64	69	---	---
3	1700	0.9	2.3	8000	5.3	0.3	1.6	---	6.2	-	14 / 16	64	69	---	---
4	1700	0.9	2.3	8000	5.3	0.3	1.6	---	6.2	-	14 / 16	64	69	---	---
5	0	---	---	0	---	---	---	---	---	-	---	---	---	---	---

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		

Manufacturer	DOMETT	**Vehicle ident. no**	7A9D2001XA0023924
Vehicle type	4 AX F/T C/SIDE	**Odometer reading**	0.0 km
next Service	0 km	**Trip reading**	0.0 km
Tested by	Ron Pratt		
Date	2010-12-10 8:19:49 AM		**Signature**

trailer (full, semi-, centre-axle) with air brake system acc. to
71/320/EEC, last amended by 98/12/EC and 2006/96/EC or UN/ECE-R.13.11

please note!

This brake calculation is made under consideration of
-the legal precriptions mentioned above in the version valid
alt the time of making the program (V6.10.05.21).
-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 V6.10.05.21 db 26.05.2010

distribution: DOMETT
7A9D2001XA0023924

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

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

		unladen	laden
total mass	P in kg	6400	32000
axle 1	P1 in kg	1500	8000
axle 2	P2 in kg	1500	8000
axle 3	P3 in kg	1700	8000
axle 4	P4 in kg	1700	8000
wheel base	E in mm	7500 - 7500	
centre of gravity height	h in mm	1090	2000

		axle 1	axle 2	axle 3	axle 4
no. of combined axles		1	1	1	1
no. of brake chambers per axle line	KDZ	2	2	2	2
The power output corresponds to		BZ 122.1	BZ 122.1	BZ 119.6	BZ 119.6
brake chamber manufacturer		Meritor	Meritor	Meritor	Meritor
chamber size		14.	14.	T.14/16	T.14/16
lever length	lBh in mm	69	69	69	69
brake factor	[-]	23.03	23.03	23.03	23.03
dyn. rolling radius	rdyn min in mm	421	421	421	421
dyn. rolling radius	rdyn max in mm	421	421	421	421
threshold torque	Co Nm	6.0	6.0	6.0	6.0
calculation:					
chamber pressure(rdyn min)pH at z=22,5%bar		2.6	2.6	2.5	2.5
chamber pressure(rdyn max)pH at z=22,5%bar		2.6	2.6	2.5	2.5
chamber press.(servo)pcha at pm6,5bar	bar	6.4	6.4	6.2	6.2
piston force	ThA at pm6,5bar N	6189	6189	5988	5988
brake force(rdyn min)T lad. at pm6,5bar	N	46902	46902	45387	45387
brake force(rdyn max)T lad. at pm6,5bar	N	46902	46902	45387	45387
brake force within 1 % rolling friction proportion	%	25.0	25.0	25.0	25.0

braking rate z laden 0.588 for rdyn min
z = sum (TR)/PRmax 0.588 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
           EBS relay valve

  brake cylinder: Meritor 14HSCLD64

axle 2:
  valve 1: 971 002 ... 0 WABCO
           EBS emergency valve

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

  brake cylinder: Meritor 14HSCLD64

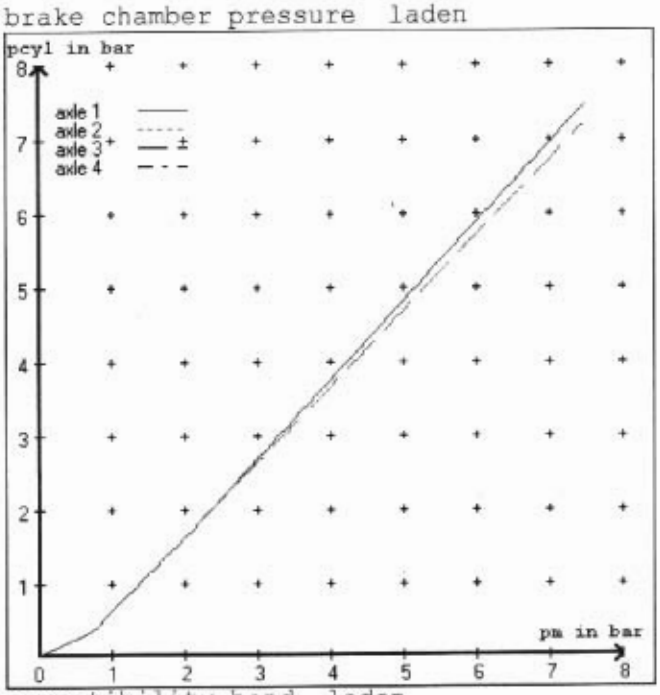
axle 3:
  valve 1: 971 002 ... 0 WABCO
           EBS emergency valve

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

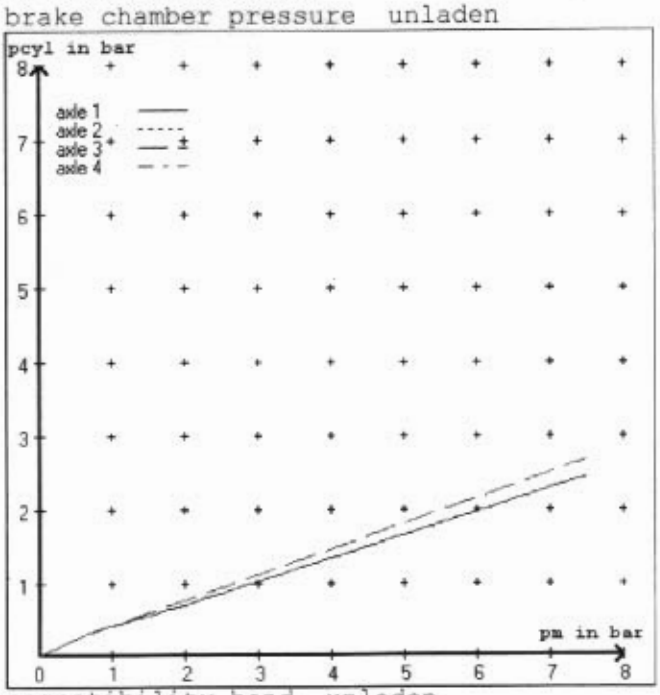
  brake cylinder: Meritor 1416HTLD64

```
axle 4:
  valve 1: 971 002 ... 0              WABCO
           EBS emergency valve

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

  brake cylinder: Meritor   1416HTLD64


test type III  (zIII = 0.30)  for rdyn min : axle1 axle2 axle3 axle4
at pm  3.6 bar  =>            pcha  in bar :    3.4    3.4    3.3    3.3
test type III  (zIII = 0.06)  for rdyn min : axle1 axle2 axle3 axle4
at pm  1.2 bar  =>            pcha  in bar :    0.8    0.8    0.8    0.8
```

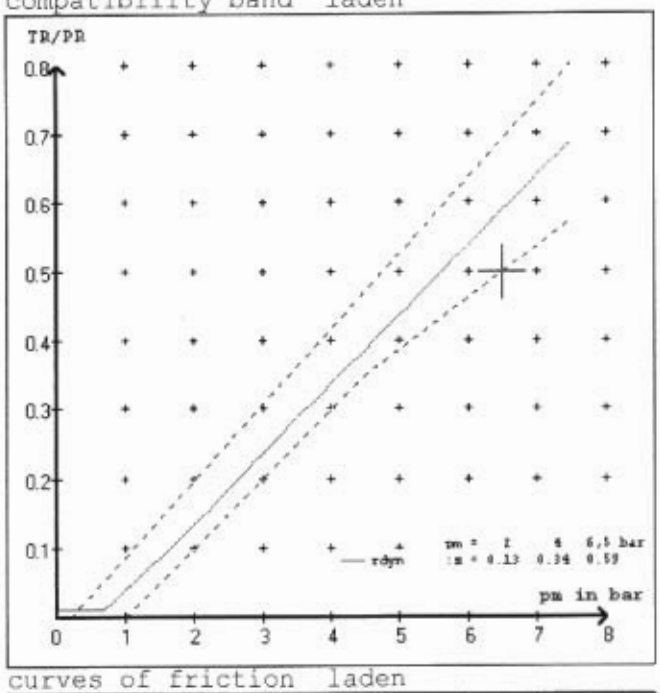
brake chamber pressure laden



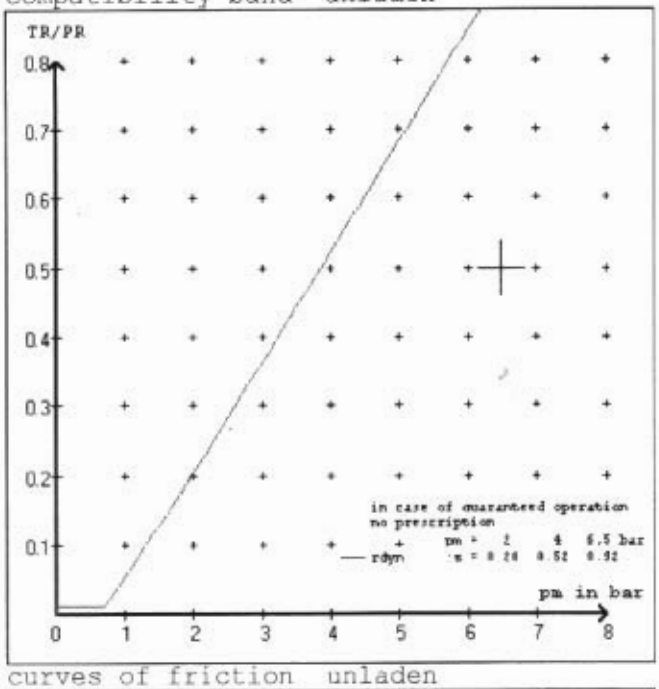
brake chamber pressure unladen



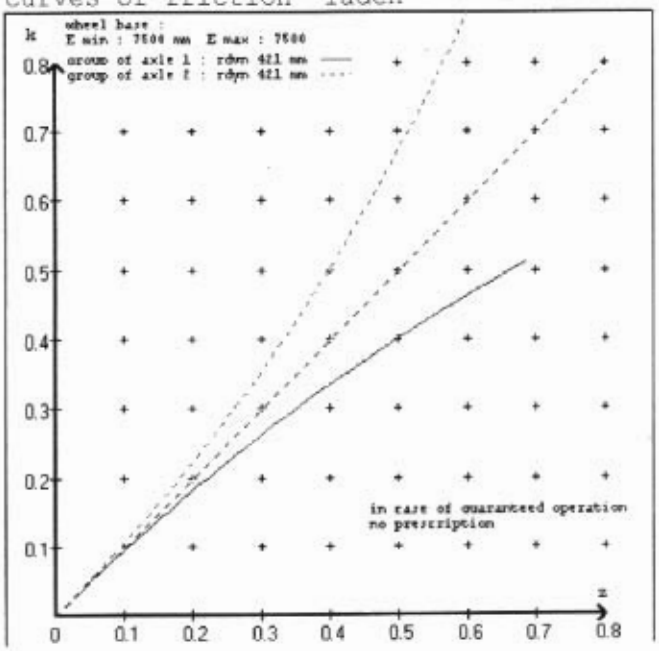
compatibility band laden



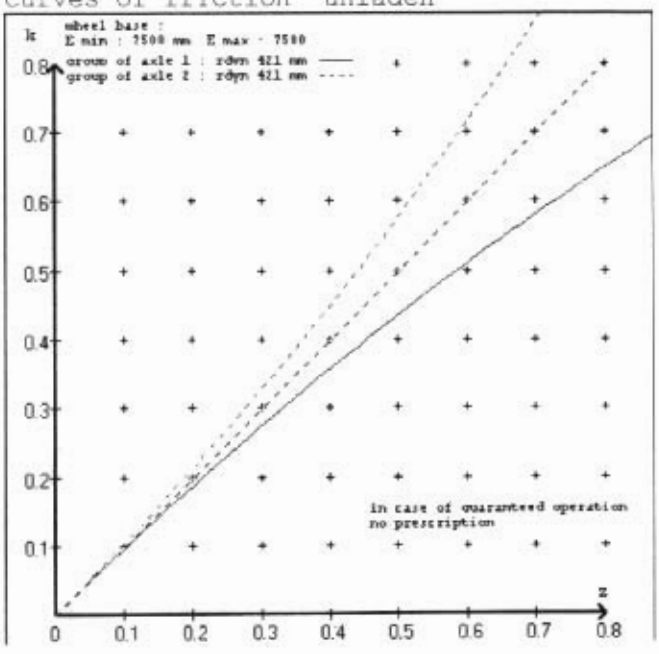
compatibility band unladen



curves of friction laden



curves of friction unladen



vehicle manufacturer: DOMETT
trailer model : 4AX F/T C/SIDE
trailer type : 4-axle-full-trailer

brake chamber and lever length :

axle 1 :	2 x type/diameter	14.	(Meritor)	lever length 69 mm
axle 2 :	2 x type/diameter	14.	(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

brake diagram :

valve :

971 002 ... 0	WABCO EBS emergency valve
480 207 0.. 0	WABCO EBS relay valve
480 102 0.. 0	WABCO EBS trailer modulator

EBS input data
==========
vehicle manufacturer: DOMETT
trailer model : 4AX F/T C/SIDE
trailer type : 4-axle-full-trailer
brake calculation no. : TP 50454A

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 = 0.000
(laden condition) 2.0 bar z = 0.132
6.5 bar z = 0.590

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	1500	to be	2.1	8000	to be	0.3	1.6	6.4
2	1500	entered by	2.1	8000	entered by	0.3	1.6	6.4
3	1700	the vehicle	2.3	8000	the vehicle	0.3	1.6	6.2
4	1700	manufact.	2.3	8000	manufact.	0.3	1.6	6.2
5	0		0,0	0		0,0	0,0	0,0

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 load	pcyl	axle load	pcyl	axle load	pcyl	axle load	pcyl
1500	2.1	1500	2.1	1700	2.3	1700	2.3
2000	2.4	2000	2.4	2200	2.6	2200	2.6
2500	2.8	2500	2.8	2700	2.9	2700	2.9
3000	3.1	3000	3.1	3200	3.2	3200	3.2
3500	3.4	3500	3.4	3700	3.5	3700	3.5
4000	3.8	4000	3.8	4200	3.8	4200	3.8
4500	4.1	4500	4.1	4700	4.2	4700	4.2
5000	4.4	5000	4.4	5200	4.5	5200	4.5
8000	6.4	8000	6.4	8000	6.2	8000	6.2

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

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

axle 1	(rdyn 421 mm)	T = 23.8 % Fe
axle 2	(rdyn 421 mm)	T = 23.8 % Fe
axle 3	(rdyn 421 mm)	T = 23.3 % Fe
axle 4	(rdyn 421 mm)	T = 23.3 % 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 = 57 mm)	s = 39 mm
axle 4	(sp = 57 mm)	s = 39 mm

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

axle1	ThA = 6189 N
axle2	ThA = 6189 N
axle3	ThA = 5988 N
axle4	ThA = 5988 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 = 36945 N
axle 2	(rdyn 421 mm)	T = 36945 N
axle 3	(rdyn 421 mm)	T = 35758 N
axle 4	(rdyn 421 mm)	T = 35758 N

	basic test of subject trailer (z)	type III (calculated) residual (hot)braking
braking rate of the vehicle (item 4.3.2 to appendix I to annex VII)	0.59	0.46
required braking rate (items 1.3.3 and 1.6.2 to annex II)		>= 0,4 and >= 0,6*z (0.35)

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

axle 1	(rdyn 421 mm)	T = 36945 N
axle 2	(rdyn 421 mm)	T = 36945 N
axle 3	(rdyn 421 mm)	T = 35758 N
axle 4	(rdyn 421 mm)	T = 35758 N

	basic test of subject trailer (z)	type III (calculated) residual (hot)braking
braking rate of the vehicle (item 4.3.2 to appendix I to annex VII)	0.59	0.46
required braking rate (items 1.3.3 and 1.6.2 to annex II)		>= 0,4 and >= 0,6*z (0.35)

spring parking brake

		axle 3	axle 4
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	4.8	4.8

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	0.317
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 = 5303 mm for E = 7500 mm
==========
min Ef = 5303 mm for E = 7500 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	=	2000 mm	height of center of gravity - laden
PR	=	16000 kg	maximum bogie mass - laden
P	=	32000 kg	maximum total mass - laden
nf	=	2	no. of axle(s) with TRISTOP spring brake actuators
ng	=	2	no. of bogie axle(s)

Tansport Spe

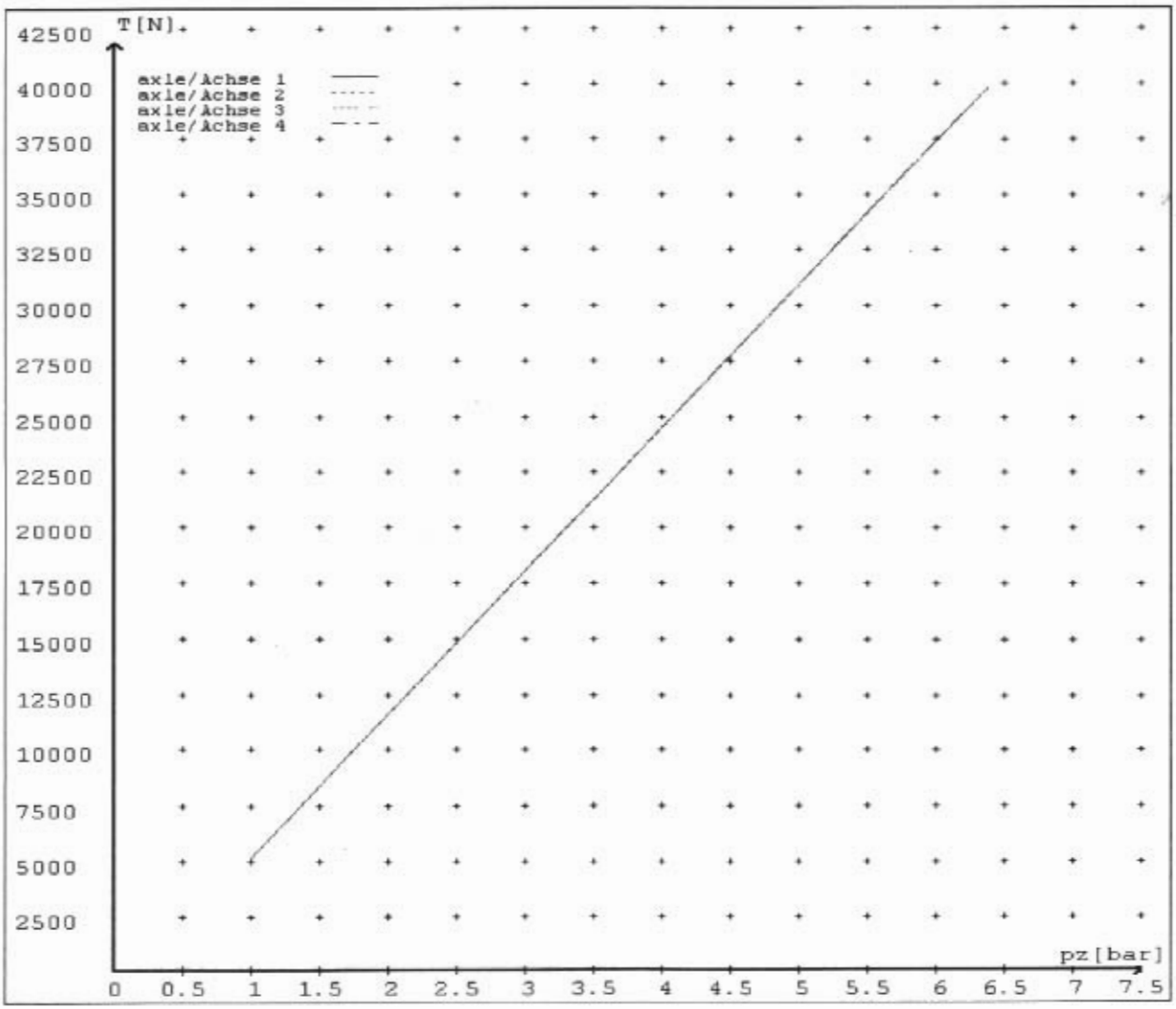
reference values

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

	pz [bar]	T [N]	T [N]
axle 1	1.0 6.4	5109 39883	
axle 2	1.0 6.4	5109 39883	
axle 3	1.0 6.2		5109 38595
axle 4	1.0 6.2		5109 38595

VIN - no.:

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

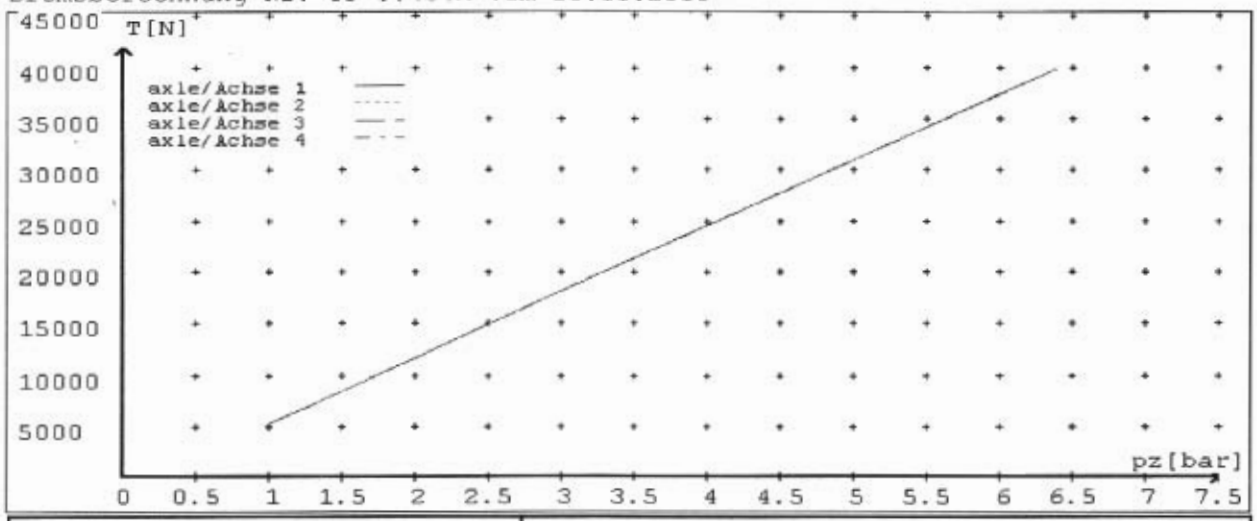


reference values for z = 0.5 **for max rdyn: 421 mm**

Angabe der Referenzwerte für z = 0.5 für max rdyn: 421 mm

brake calculation no: TP 50454A date 30.11.2010

Bremsberechnung Nr: TP 50454A vom 30.11.2010



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

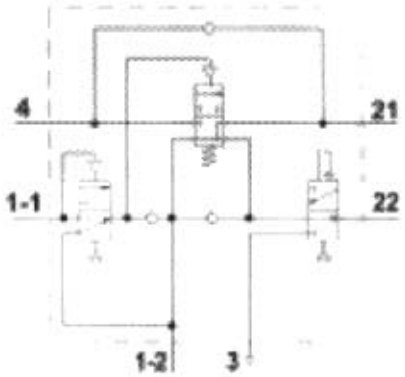
Transpecs
QUALITY ON THE MOVE

WABCO

Fleet operators

Market information

Park-release emergency valve (PREV) | 971 002 900 0



Transpecs
QUALITY ON THE MOVE

WABCO

Market information

Technical information release: **Wabco PREV ID # 971 002 900 0**

Trailers in the fleet may be equipped with Wabco's Park Release Emergency Valve (PREV) - subject to an approved exemption notice (The notice must be kept in the towing vehicles cab - copy attached).
The PREV replaces the standard Spring Brake Control & Yard Release valves to significantly enhance vehicle control & stability. The valve may be fitted as O.E. or as a retrofit package.
The valve will be located mid way down the side of the chassis rail & can be identified by the prominent Red & Black control knobs spaced 120mm apart, housed in one assembly.
The trailer equipped with a PREV & used in conjunction with EBS brake control systems will have proportional & modulated (ABS) braking through actuation of the service brakes, rather than the spring brakes, when the Emergency brake is operated.

If any of the following events occur;
- Emergency brake application (via cab control)
- Drop in supply line pressure (< 310 kPa)
- Supply line rupture ...

...the improved operational characteristic of the emergency brake function prevents wheel lock & the prevalent tyre damage associated with it. More importantly though a Service brake application provides optimum stability by ensuring full directional control of the vehicle is maintained.

Application of the park brake via the cab control will apply all Service Brakes on the trailer. Should the sytem pressure drop the trailer Spring Brakes will automatically apply.
When the trailer is presented for COF the park brake system performance is checked by pulling the Red control knob on the PREV assembly. The park brake control in the cab does not have to be applied during the park brake test at COF.

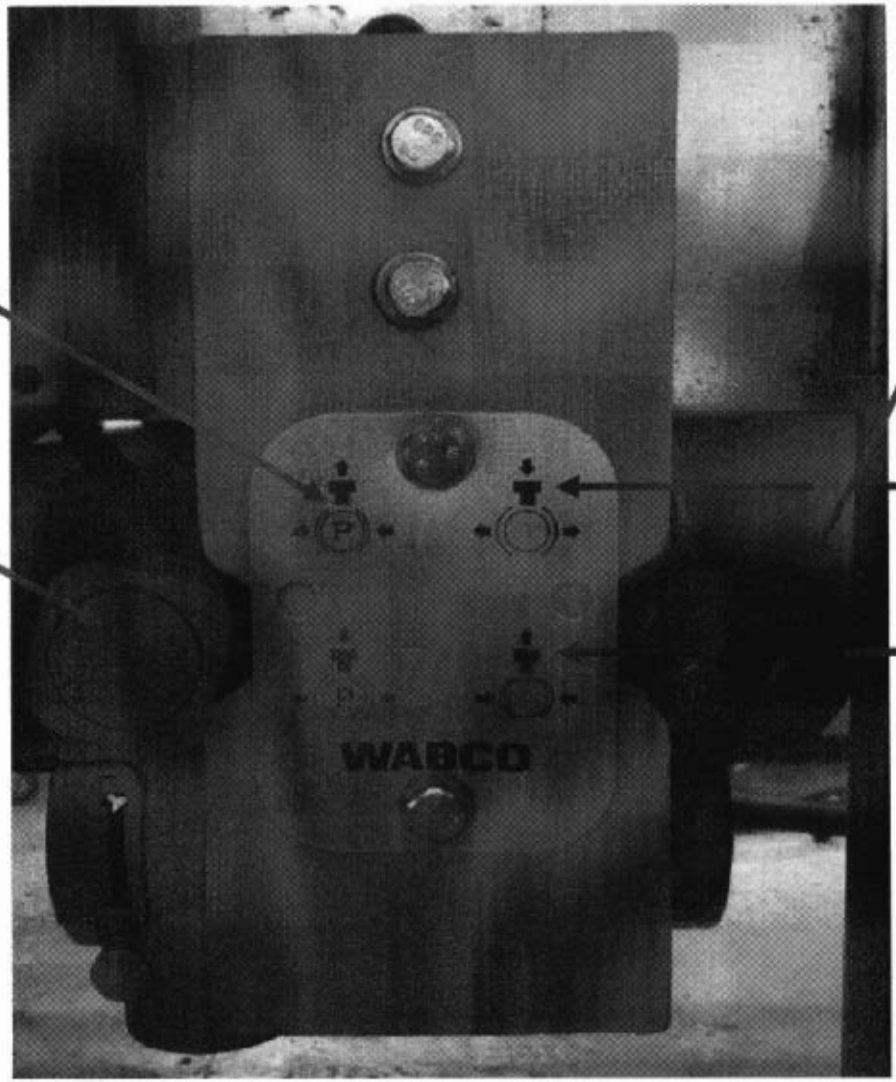
Transpecs
QUALITY ON THE MOVE

WABCO

Market information

The trailer Park brake is applied by pulling the Red control knob.
The Parking Brake performance of the trailer is therefore checked on the Brake Roller Machine by pulling the Red park brake control knob.

If the trailer is detached from the prime mover, please apply the Park brake.



When the park brake is applied in the towing vehicle, the Service brakes are applied on the trailer.

The Black control knob is used to manouever the trailer when not connected to a prime mover.

Push the control knob in to release the Service brakes

– pull the control knob out to reapply the Service brakes.

If the control knob is left pushed in it will automatically 'pop-out' when the prime mover is re-coupled, the supply lines reconnected & the Park brake control in the cab is released.

Transpecs
QUALITY ON THE MOVE

WABCO

Market information

An Emergency Brake application will apply the Service brakes. The vehicle operator should notice the event & will be able to safely manouever the combination to a controlled stop.
However, if the operator is initially unaware of a problem the illuminated EBS/ABS warning lamp will indicate that a problem exists.
TEBS is a self-monitoring system & may generate a fault code similar to the example illustrated below.
The importance of monitoring & reporting the ABS/EBS warning lamp events cannot be stressed enough & must be reported immediately. It is recommended Service providers check the TEBS diagnostic memory at each service interval. This operation takes approx 5 minutes.

Pneumatic Control line/ Residual pressure

Residual pressure has been detected in the pneumatic control line (yellow coupling head).

The fault is detected when the desired-pressure sensor measures a pressure > 0.3 bar and the vehicle speed increases by 30 km/h.

(Plausibility: The vehicle cannot accelerate and brake at the same time.)

Are pipes kinked or blocked?

Is the trailer control valve in the towing vehicle OK?

Transpecs
QUALITY ON THE MOVE

HEAVY VEHICLE BRAKE RULE WORKSHEET

(PROCEDURE DOCUMENTATION SHEET – PDS)

&

CONFIRMATION OF COMPLIANCE

CERTIFICATE No. RP101210

CUSTOMER NAME DOMETT TRAILERS

CUSTOMER ORDER No. 3489 DATE RECEIVED 01/12/2010

VEHICLE TYPE 4Axle Full Trailer Curtainsider

REG No. CHASSIS No. 7A9D2001XA0023924

BRIEF SPECIFICATION AS CERTIFIED TO SCHEDULE 5

BRAKE VALVES:

Primary Relay
Make: _WABCO_____ Type: 480-102-064-0_____

Secondary Relay
Make: _WABCO_____ Type: 480/207/001/0_____

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 HBV10/384_____

BRAKE CHAMBERS:

Front: Make TSE Type: 14 STROKE: 64 mm

Rear: Make TSE Type: 14/16 STROKE: 64 mm

SLACK ADJUSTER:

Front Length (mm)__Disc_____ Rear Length (mm)_Disc_____

BRAKE CALIPERS: Type _WABCO PAN19+_____

OTHER:

TYRES ____265/70R 19.5____

NOTES:

PACKING SLIP NO. | PROCESS TIME: 3.5

Confirmation of compliance

I confirm that the vehicle identified on page 1 and 2 of this Confirmation of Compliance complies with all relevant requirements of the current New Zealand Heavy Vehicle Brake Rule 32015, Schedule 5.

Date: _10/12/2010_____ 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 myself, continues to comply with all the relevant requirements of the current New Zealand Heavy Vehicle Brake Rule 32015, Schedule 5.

Date: _____ Signed: _____

Certifier's identification: _____

Name: _____

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

Postal address: _____

_____

Position: _____

Comments:

_____
_____
_____
_____
_____