



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

7A9D1001010023272

Component being certified:

Chassis Modification

Load Anchorage

Log Bolsters

Certification Category

HVEK

Towing Connection

Brakes

SRT

Description of Work

Certify to Brake Rule 32015/2

Code/Standard Certified to

NZHV Rule 32015/2

Component Load Rating(s)

General Drawing Number(s)

NA

Supporting Documents

Brake Cert No RP120310

*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

20/04/2012

Number

394644

COF Vehicle Inspector ID:

COF Vehicle Inspector Signature:

Date

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

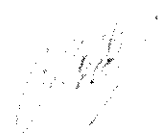
Statement of Compliance with the New Zealand Heavy Brake Rule

Documentation required to support 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: March 2011

Signed: 

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

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R S PRATT
(TRSP HVEK)

Statement of Design Compliance

S.O.D.C. number: JH120310

**For Heavy vehicle brake specification
(schedule 5) of HV Brake Rule 32015/2**

Vehicle details:

Make: Domett Trailers
Model: D1001
VIN#: 7A9D1001010023272
Chassis#: 272
GCM (kgs): N/A
GVM (kgs): 26000
Wheelbase (mm): 4770 - 4800
Axle test report #: ROR ELSA; 36102202
Type: 4 Axle Tanker

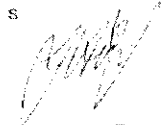
Component Details:

	<u>Front</u>	<u>Rear</u>
Slack adjuster length:	DISC	DISC
Brake chamber size:	16 (FM0305S16E)	16/24 (1624HTLD64)
Tyre size:	265 70 R 19.5	265 70 R 19.5
Drawing number: (for component reference)	DOM-FONT-DRWSET 16022012	
Brake calculation#:	TP50607	

*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: 20 March 2012

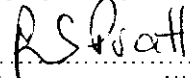
^s



LT400 No 394644

Name: John Hirst (HVEK)

Certifier ID: JEH

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

Signed: 

Dated: 20/4/2012

*) Programmed according to Wabco's End of Line protocol requirements where applicable.



INFORMATION REQUIRED FOR TRAILERS TO COMPLY WITH THE NZ HVBC

CUSTOMER
DOMETT TRUCK & TRAILER LTD (JH120310)

ADDRESS
HEWLETTS ROAD, MT MAUNGANUI

YEAR 2001	MAKE Domett
MODEL 4 Axle tanker	FULL TRAILER/SEMI Full
CHASIS NUMBER 272	VIN 7A9D1001010023272
GVM 26 000 KGS	REG

TARE TOTAL
5000 KGS (EST)
FRONT 2600 KGS REAR 2400 KGS
SPLIT REQUIRED FOR FULL TRAILERS ONLY

CONFIGURATION
4 AXLE TRAILER
AXLE SPACING FRONT 1250-70 mm REAR 1250-70 mm
MAXIMUM WEIGHT FOR 1ST TO LAST SPREAD 27000KGS

AXLE MAKE/MODEL
ROR ELSA 195 E - 36102202

S-CAM RADIUS	EFFICIENCY
DRUM RADIUS	100Nm PRESSURE

OR

PRESS IN/TORQUE OUT 100Nm	50 kPa
PRESS IN/TORQUE OUT 650kPa	9.1 (Front) to 9.5 (Rear) kNm

CHAMBER SIZE	FRONT 16	REAR 1624
SPRINGBRAKE FORCE	FRONT	REAR 7.6 kN
SPRINGBRAKE HOLDOFF PRESSURE	FRONT	REAR 480 kPa

SLACK LENGTH N/A	LINING MATERIAL
LINING COF N/A	ROR 8616AF

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

TYRE SIZE	FRONT 265 70 R 19.5	REAR 265 70 R 19.5
WHEELBASE 4.75-4.8M		
UNLADEN COG 1.0M		
LOADED COG FROM SRT – FULL TRAILERS ONLY 1.8M		
DISTANCE FRONT GROUP TO LOAD COG – FULL TRAILERS ONLY M		

BRAKE VALVES WABCO EBS E VERSION	
PRIMARY RELAY 480 102 064 0	CRACK PRESS N/A
SECONDARY RELAY 480 207 001 0	CRACK PRESS N/A
SPRING BRAKE RELAY N/A	ANTI COMPOUND <u>YES/NO</u> YES (VIA PEM)
LOCKED RATIO N/A	LOAD SENSE VALVE N/A
PARK BRAKE SEALCO 110701	
OTHER VALVES	

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

TEST POINT FITTED?

FRONT CHAMBER

YES

REAR CHAMBER

YES

TANK

YES : Pressure monitored in ecu

RATIO/LSV NO.1 IN

N/A

RATIO/LSV NO.1 OUT

N/A

RATIO/LSV NO.2 IN

N/A

RATIO/LSV NO.2 OUT

N/A

DUOMATIC CONNECTIONS COLOUR CODED?

YES

NOTES:-

PREV EXEMPTION : N/A

TEST POINT AT CLF

BRAKE CALC TP50607.



QUALITY ON THE MOVE

P.O.Box 98-971

South Auckland Mail Centre

J.HIRST (JEH)

DATE 20-Mar-12 BRAKE SYSTEM 24V WABCO TEBS

CERT. NO. JH120310 PREV EXEMPTION N/A

VIN / CHASSIS 7A9D1001010023272

BRAKE CHAMBERS FRONT 16 (MASTERS FM0305S16E)

BRAKE CHAMBERS REAR 1624 (TSE 1624HTLD64)

SLACK LENGTH FRONT DISC TYRE SIZE FRONT 265 70 R 19.5

SLACK LENGTH REAR DISC TYRE SIZE REAR 265 70 R 19.5

THIS VEHICLE COMPLIES WITH THE NZ LINING MATERIAL FRONT ROR 8616AF

HVBR 32015/2 - SCHEDULE 5 LINING MATERIAL REAR ROR 8616AF

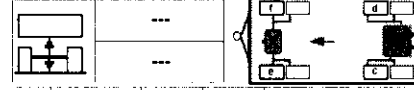
WABCO

TRAILER EBS-E

GGVS/ADR TUEH TB 2007 - 019.00
36102202

HERSTELLER MANUFACTURER CONSTRUCTEUR	DOMETT T&T		
TYP TYPE TYPE	FONTERRA TANKER		
FAHRZEUG IDENT.NR. CHASSIS NUMBER NUMERO DE CHASSIS	7A9D1001010023272		
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO.	TP50607		
POLRADZAHN(ZAHN c-d) e-f POLE WHEEL TEETH c-d e-f DENTS ROUE DENTEE c-d e-f	90	90	ABS-System ABS-System Systems ABS 4S/3M
RSS RSS RSS	Einfachbereifung Single Tyre Monte simple		Lenkachse Steering axle Essieu avant
	Zweifeltigbereifung Twin Tyre Monte pumellee	X	Kipptrailes 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 AXE ESSEU	pm (bar)		6.5		pm (bar)		0.8		2.0		---		6.5		TYP TYPE	(mm)	(mm)	(bar)	
	H (kg)	⊖	⊖	⊖	H (kg)	⊖	⊖	⊖	⊖	⊖	⊖	⊖	1.0	Pz				TR (daN)	
1	1300	0.5	1.8	6500	4.2	0.5	1.5	---	5.9	-	16	67	74	358	3577				
2	1300	0.5	1.8	6500	4.2	0.5	1.5	---	5.9	-	16	67	74	358	3577				
3	1200	0.4	1.4	6500	4.2	0.5	1.4	---	4.4	-	16 / 24	64	74	425	2796				
4	1200	0.4	1.4	6500	4.2	0.5	1.4	---	4.4	-	16 / 24	64	74	425	2796				
5	0	---	---	0	---	---	---	---	---	-	---	---	---	---	---				

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

distribution: DOMETT T&T
FONTERRA 2012 - ROR CS9/ELSA

please note!

This brake calculation is made under consideration of
-the legal precriptions mentioned above in the version valid all 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

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

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

		unladen	laden
total mass	P in kg	5000	26000
axle 1	P1 in kg	1300	6500
axle 2	P2 in kg	1300	6500
axle 3	P3 in kg	1200	6500
axle 4	P4 in kg	1200	6500
wheel base	E in mm	4800 - 4800	
centre of gravity height	h in mm	1000	1800

	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 163.1	BZ 163.1	BZ 119.6	BZ 119.6
brake chamber manufacturer	Meritor	Meritor	Meritor	Meritor
chamber size	16	16	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	2.1	2.1
chamber pressure(rdyn max)pH at z=22,5%bar	2.6	2.6	2.1	2.1
chamber press.(servo)pcha at pm6,5bar bar	5.9	5.9	4.4	4.4
piston force ThA at pm6,5bar N	5540	5540	4340	4340
brake force(rdyn min)T lad. at pm6,5bar N	39209	39209	30648	30648
brake force(rdyn max)T lad. at pm6,5bar N	39209	39209	30648	30648
brake force within 1 % rolling friction proportion %	24.1	24.1	25.9	25.9

braking rate z laden 0.548 for rdyn min
z = sum (TR)/PRmax 0.548 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 FM0305S16E

axle 2:

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

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

brake cylinder: Meritor FM0305S16E

axle 3:

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

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

brake cylinder: Meritor 1624HTLD64

axle 4:

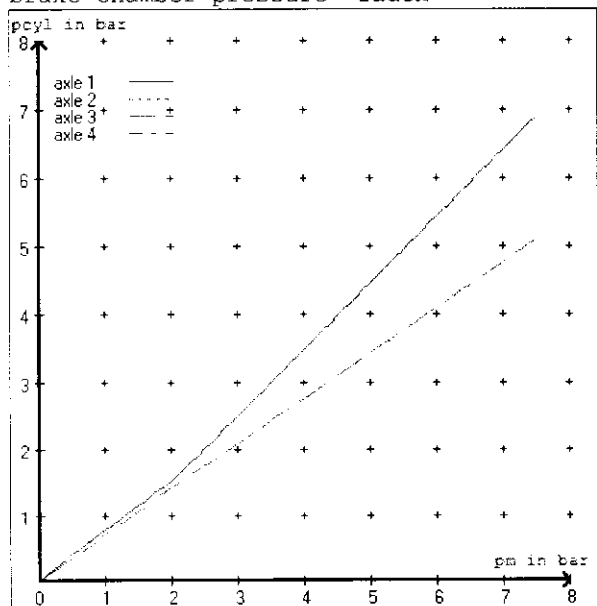
valve 1: 971 002 ... 0 WABCO
 EBS emergency valve

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

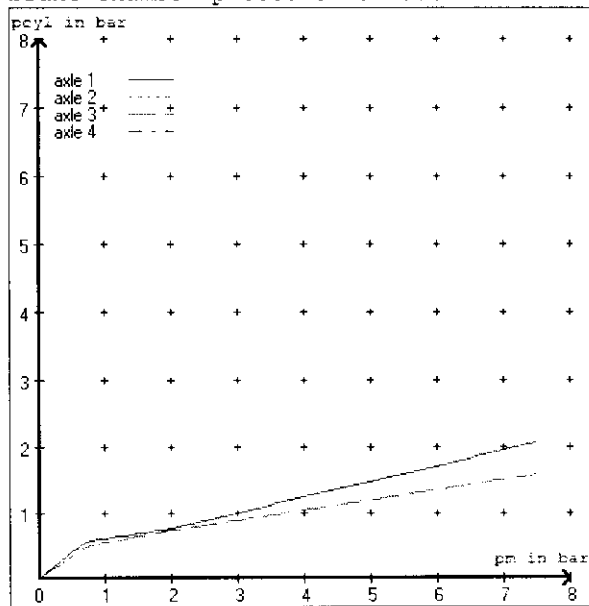
brake cylinder: Meritor 1624HTLD64

test type III (zIII = 0.30)	for rdyn min :	axle1	axle2	axle3	axle4
at pm 3.9 bar =>	pcha in bar :	3.4	3.4	2.7	2.7
test type III (zIII = 0.06)	for rdyn min :	axle1	axle2	axle3	axle4
at pm 1.3 bar =>	pcha in bar :	1.0	1.0	0.9	0.9

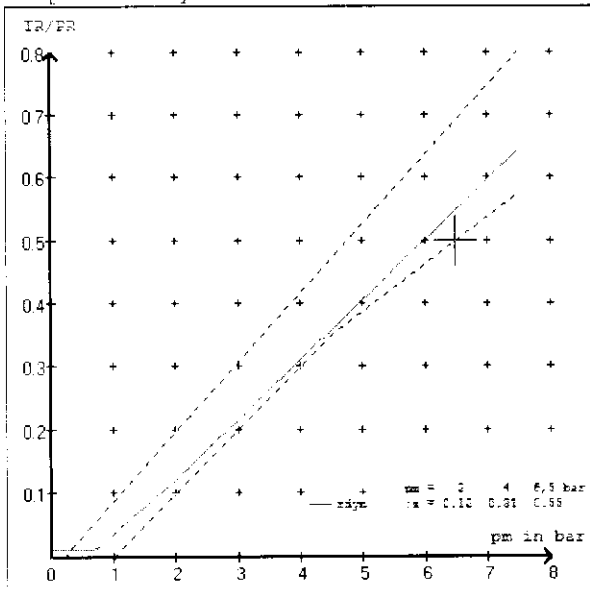
brake chamber pressure laden



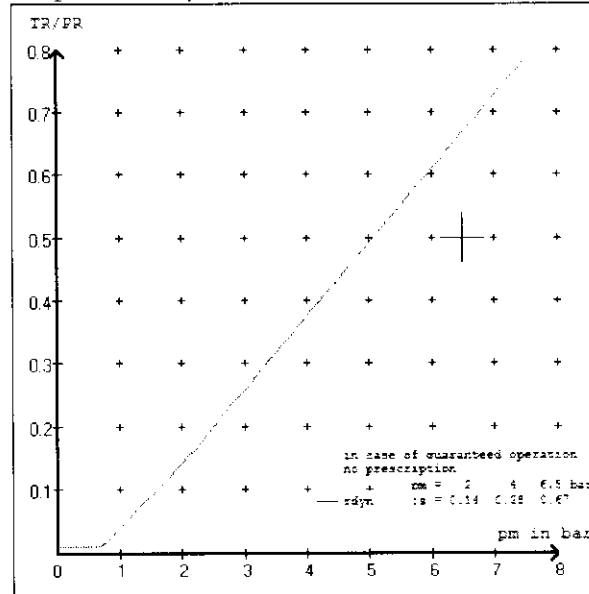
brake chamber pressure unladen



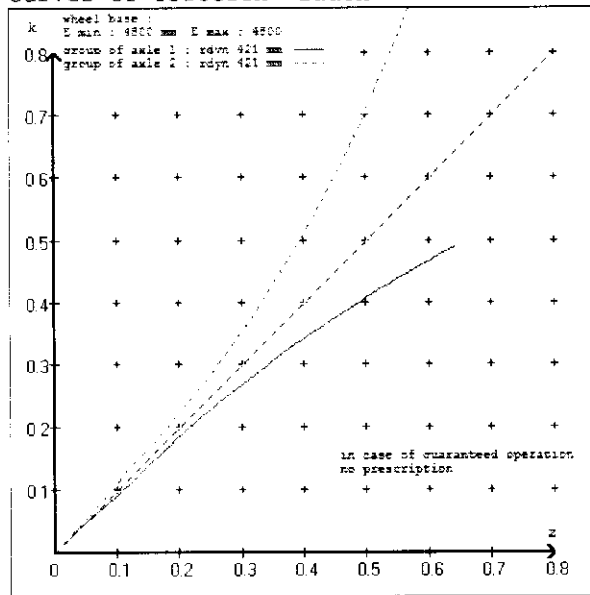
compatibility band laden



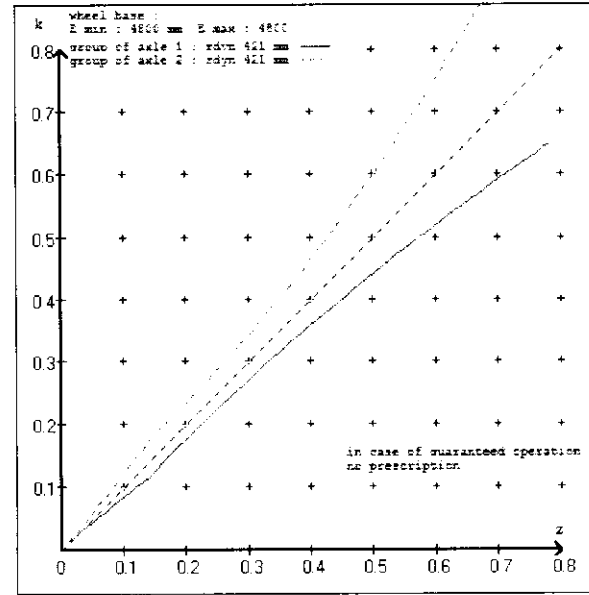
compatibility band unladen



curves of friction laden



curves of friction unladen



vehicle manufacturer: DOMETT T&T
 trailer model : FONTERRA TANKER
 trailer type : 4-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

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 T&T
 trailer model : FONTERRA TANKER
 trailer type : 4-axle-full-trailer
 brake calculation no. : TP 50607A

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 = 0.123
 6.5 bar z = 0.550

control pressure pm			6,5	control pressure pm			0.8	2.0	6.5
axle	axle load unladen	bellow pr. unladen	brake pr. unladen	axle load laden	bellow pr. laden	brake pr. laden			
1	1300	to be	1.8	6500	to be	0.5	1.5	5.9	
2	1300	entered by	1.8	6500	entered by	0.5	1.5	5.9	
3	1200	the vehicle	1.4	6500	the vehicle	0.5	1.4	4.4	
4	1200		1.4	6500		0.5	1.4	4.4	
5	0	manufact.	0,0	0	manufact.	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 pcy1	axle load pcy1	axle load pcy1	axle load pcy1
1300 1.8	1300 1.8	1200 1.4	1200 1.4
1800 2.2	1800 2.2	1700 1.7	1700 1.7
2300 2.6	2300 2.6	2200 2.0	2200 2.0
2800 3.0	2800 3.0	2700 2.2	2700 2.2
3300 3.4	3300 3.4	3200 2.5	3200 2.5
3800 3.8	3800 3.8	3700 2.8	3700 2.8
4300 4.2	4300 4.2	4200 3.1	4200 3.1
4800 4.6	4800 4.6	4700 3.4	4700 3.4
6500 5.9	6500 5.9	6500 4.4	6500 4.4

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: 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

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

axle 1	(rdyn 421 mm)	T = 19.3 % Fe
axle 2	(rdyn 421 mm)	T = 19.3 % Fe
axle 3	(rdyn 421 mm)	T = 16.1 % Fe
axle 4	(rdyn 421 mm)	T = 16.1 % Fe

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

axle 1	(sp = 51 mm)	s = 40 mm
axle 2	(sp = 51 mm)	s = 40 mm
axle 3	(sp = 57 mm)	s = 40 mm
axle 4	(sp = 57 mm)	s = 40 mm

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

axle1	ThA = 5540 N
axle2	ThA = 5540 N
axle3	ThA = 4340 N
axle4	ThA = 4340 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 = 31966 N
axle 2	(rdyn 421 mm)	T = 31966 N
axle 3	(rdyn 421 mm)	T = 25015 N
axle 4	(rdyn 421 mm)	T = 25015 N

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

braking rate of the vehicle (item 4.3.2 to appendix I to annex VII)	0.55	(hot)braking 0.45
--	------	----------------------

required braking rate (items 1.3.3 and 1.6.2 to annex II)	>= 0,4 and >= 0,6*z (0.33)
--	-------------------------------

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

axle 1	(rdyn 421 mm)	T = 31966 N
axle 2	(rdyn 421 mm)	T = 31966 N
axle 3	(rdyn 421 mm)	T = 25015 N
axle 4	(rdyn 421 mm)	T = 25015 N

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

braking rate of the vehicle (item 4.3.2 to appendix I to annex VII)	0.55	(hot)braking 0.45
--	------	----------------------

required braking rate (items 1.3.3 and 1.6.2 to annex II)	>= 0,4 and >= 0,6*z (0.33)
--	-------------------------------

reference values

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

	pz [bar]	T [N]	T [N]
axle 1	1.0	3583	
	5.9	35775	
axle 2	1.0	3583	
	5.9	35775	
axle 3	1.0		4253
	4.4		27963
axle 4	1.0		4253
	4.4		27963

VIN - no.:

	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	16/	16/	T.16/24	T.16/24	/
Maximum stroke smax = ...mm maximaler Hub smax = ...mm	67	67	64	64	
Lever length = ...mm Hebellänge = ...mm	74	74	74	74	

