

Heavy vehicle specialist inspector's or manufacturing inspecting organisation's name (PRINT IN CAPS) **CHRIS CLARKE** ID **CJC**

Vehicle registration (optional) **.** VIN/chassis number **7A9E25015J1023793**

Make **DOMETT TRAILERS** Component being certified: Chassis Load anchorage
 Model (optional) Log bolsters Towing connection Brakes
 Certification category **HVEK** SRT PSV stability PSV rollover
 Swept path PBS

Description of work
CERTIFY TO SCHEDULE 5 OF LTR 32015/4
RSS ON: TWIN TYRES / SUPER SINGLES SIZE = 215 75 R 17.5

Code/standard/rule certified to **LTR 32015/4** Component load rating(s) **32 Tonnes GVM**
35 Tonnes (Group ratings)
 General drawing number(s) **N/A**

Supporting documents
BRAKE CODE CERTIFICATE JH181132
BRAKE CALCULATION # TP51813

Special conditions (optional)
WARNING LAMP MUST ILLUMINATE WHEN IGNITION IS SWITCHED ON & THEN EXTINGUISH IMMEDIATELY OR WHEN VEHICLE SPEED EXCEEDS 7 KPH

Certification expiry date (if applicable) **N/A [UNLESS MODIFIED]** or Hubodometer reading (whichever comes first)

Declaration

I the undersigned, declare that I am the heavy vehicle specialist inspector identified 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 appointment. To the best of my knowledge the information contained in the certificate is true and correct.

Designer's ID (if different from inspector below)
 Inspector's signature
 Inspector's name (PRINT IN CAPS) **CHRIS CLARKE** ID number **CJC**
 Date **3-Dec-18** Number **664951**

CoF vehicle inspector ID (if applicable) CoF vehicle inspector signature (if applicable) Date

All fields are mandatory unless otherwise stated.

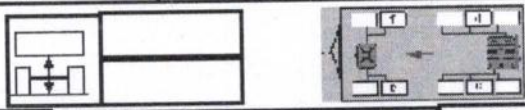
WABCO START-UP LOG

System	Trailer EBS-E	WABCO part number	480 102 084 0
Production date	2018-07-03	Serial number	437005634000N
Serial number (modulator)	000000506126		
Fingerprint Customer EOL / Customer Development / Flash Program	W503643 / 2018-12-03 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00		

WABCO TRAILER EBS-E

GGVS/ADR TUEH TB 2007 - 019.00
361-037-08

HERSTELLER MANUFACTURER CONSTRUCTEUR	DOMETT TRAILERS			GIO	Pin1	Pin3	Pin4
TYP TYPE TYPE	5AFT STOCK			1	ALS2	ALS2	LS2
VEHICLE IDENT. NUMBER CHASSIS NUMBER NUMERO DE CHASSIS	7A9E25015J1023793			2	eTASC2	---	eTASC2
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO.	TP51813A			3	eTASC	---	eTASC
POLRADZAHNEZAHL c-d e-f POLE WHEEL TEETH c-d e-f DENTS ROUE DENTÉE c-d e-f	80	80	ABS-System ABS-System Système ABS	4	---	---	LS1
RSS RSS RSS	Einfachbereifung Single Tire Monte simple	Lenkachse Steering axle Essieu vireur	4S/3M	5	DIAG	DIAG	DIAG
	Zwillingsbereifung Twin Tire Monte jumelle	X	Kipprifliches Fahrzeug Critical Trailer Véhicule critique	6	---	---	---
Subsystems	SB	I/O	24N	7	---	---	---



ACHSE AXLE ESSIEU	6.5			0.8			2.0			6.5			(bar)		
	pm (bar)	6.5	pm (bar)	0.8	2.0	---	6.5					1.0	Pz		
1	2100	1.0	2.1	8000	5.1	0.4	1.3	---	6.1	-	20	65	69	518	4360
2	2100	1.0	2.1	8000	5.1	0.4	1.3	---	6.1	-	20	65	69	518	4360
3	1900	0.9	1.8	6350	3.9	0.3	1.4	---	4.8	-	14 / 16	64	69	498	2826
4	1900	0.9	1.8	6350	3.9	0.3	1.4	---	4.8	-	14 / 14	64	69	498	2826
5	1900	0.9	1.8	6350	3.9	0.3	1.4	---	4.8	-	14	64	69	498	2826

TEBS-E

Diagnostic memory	OK	Warning lamp control	OK
Parameter setting	carried out	Stop light supply	OK
EQS pressure test	OK	Lifting axle test	Not tested
Redundancy test	OK	ECAS height sensor calibration	Not tested
ABS sensor assignment	OK	Height sensor axle load	Not tested
RTR test	Not tested	Leak test	Not tested
Immobilizer test	Not tested	Signal outputs	Not tested
Signal inputs	Not tested	Tag axle test	Not tested

Electronic Extension Module

Diagnostic memory	Not tested	Signal outputs	Not tested
TailGUARDlight	Not tested	TailGUARD	Not tested
Manufacturer	DOMETT TRAILERS	Vehicle ident. no	7A9E25015J1023793
Vehicle type	5AFT STOCK	Odometer reading	0.0 km
next Service	0 km	Trip reading	0.0 km
Tester	Chris Clarke	Signature	
Date	2018-12-03 9:39:34 a.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

distribution: DOMETT TRAILERS
7A9E25015J1023793
SODC: JH181132
LT400: CJC 664951

please note!

This brake calculation is made under consideration of
-the legal precriptions mentioned above in the version valid at the time of making the program (V6.14.04.20).
-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 V6.14.04.20 db 03.11.2017

vehicle manufacturer: DOMETT TRAILERS
trailer model : 5AFT STOCK
trailer type : 5-axle-full-trailer
remarks : air / hydraulic / VA suspension
EC w.o.annexVII
WABCO TRAILER - EBS E
TRISTOP 3+4: T.14/24 [TSE1416HTLD64 ACTUALLY FITTED -
SEE PAGE 6 FOR PERFORMANCE DATA]
215/75 R 17,5 - 235/75 R 17,5

axle 1 + 2 + 3 + 4 + 5 : IMT, WABCO PAN-17, 361-037-08 ECE,

		<u>unladen</u>	<u>laden</u>
total mass	P in kg	9900	35050
axle 1	P1 in kg	2100	8000
axle 2	P2 in kg	2100	8000
axle 3	P3 in kg	1900	6350
axle 4	P4 in kg	1900	6350
axle 5	P5 in kg	1900	6350
wheel base	E in mm	7400 - 7900	
centre of gravity height	h in mm	1050	2280

	<u>axle 1</u>	<u>axle 2</u>	<u>axle 3</u>	<u>axle 4</u>	<u>axle 5</u>
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 122.1	BZ 122.1	BZ 119.6	BZ 119.6	BZ 122.1
brake chamber manufacturer	Meritor	Meritor	Meritor	Meritor	Meritor
chamber size	20.	20.	T.14/24	T.14/24	14.
lever length	69	69	69	69	69
brake factor	19.98	19.98	19.98	19.98	19.98
dyn. rolling radius	373	373	373	373	373
dyn. rolling radius	387	387	387	387	387
threshold torque	3.4	3.4	3.4	3.4	3.4

calculation:					
chamber pressure(rdyn min)pH at z=22,5%bar	2.2	2.2	2.1	2.1	2.1
chamber pressure(rdyn max)pH at z=22,5%bar	2.3	2.3	2.1	2.1	2.1
chamber press.(servo)pcha at pm6,5bar bar	6.1	6.1	4.8	4.8	4.8
piston force ThA at pm6,5bar N	7071	7071	4586	4586	4586
brake force(rdyn min)T lad. at pm6,5bar N	52992	52992	34350	34350	34350
brake force(rdyn max)T lad. at pm6,5bar N	51104	51104	33130	33130	33130
brake force within 1 % rolling friction proportion	22.3	22.3	18.5	18.5	18.5

braking rate z laden 0.608 for rdyn min
z = sum (TR)/PRmax 0.586 for rdyn max

Trailer may only be operated in combination with trucks/tractors with ISO 7638 supply (5 or 7 polar).

axle 4:

valve 1: 480 102 0.. 0 WABCO
EBS trailer modulator

brake cylinder: Meritor 1424HTLD64

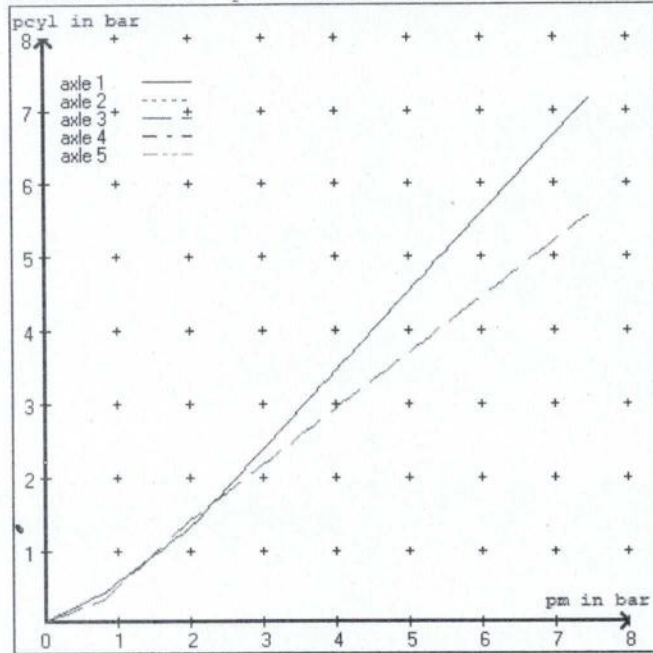
axle 5:

valve 1: 480 102 0.. 0 WABCO
EBS trailer modulator

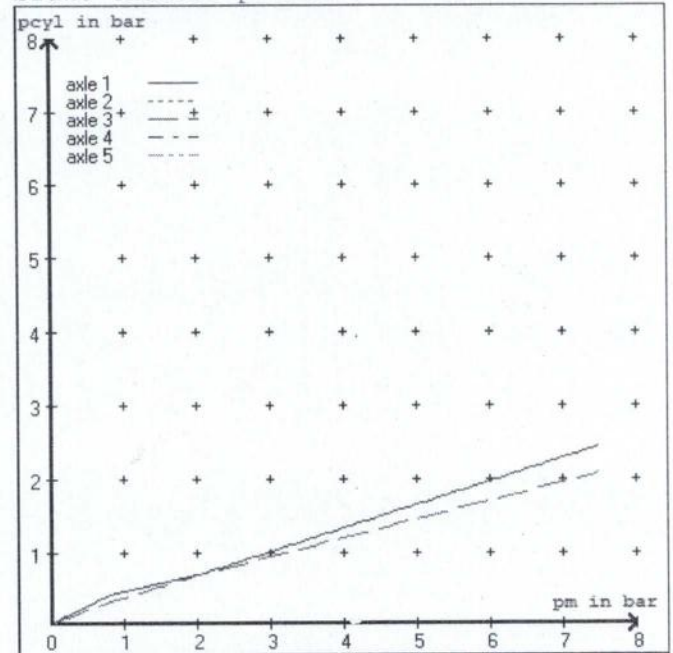
brake cylinder: Meritor 14HSCLD64

test type III (zIII = 0.30)	for rdyn min :	axle1	axle2	axle3	axle4	axle5	
at pm 3.6 bar =>	pcha in bar :	3.0	3.0	2.6	2.6	2.6	2.6
test type III (zIII = 0.06)	for rdyn min :	axle1	axle2	axle3	axle4	axle5	
at pm 1.3 bar =>	pcha in bar :	0.8	0.8	0.7	0.7	0.7	0.7

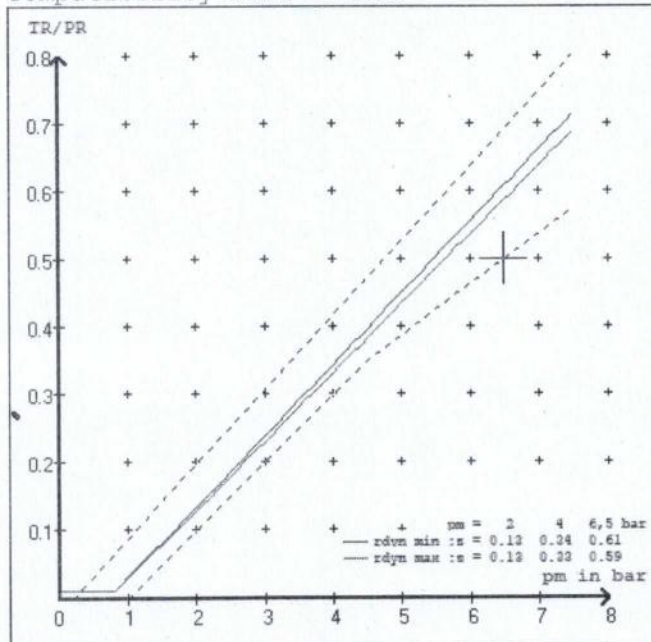
brake chamber pressure laden



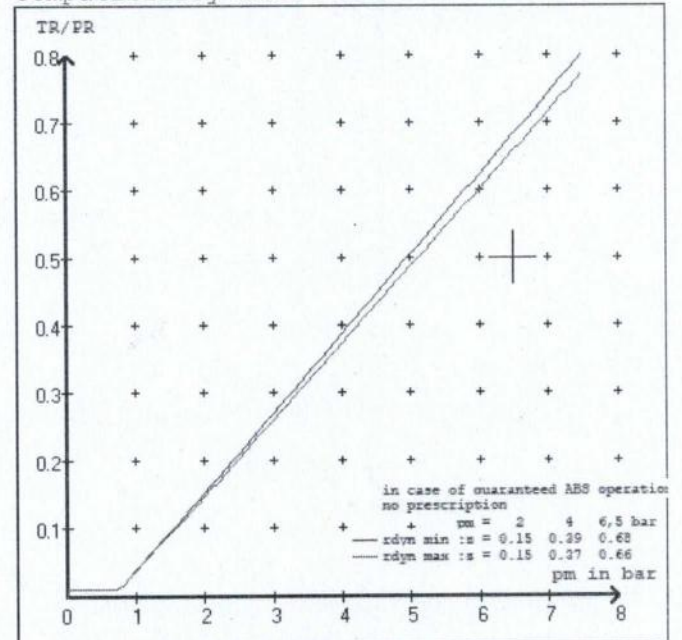
brake chamber pressure unladen



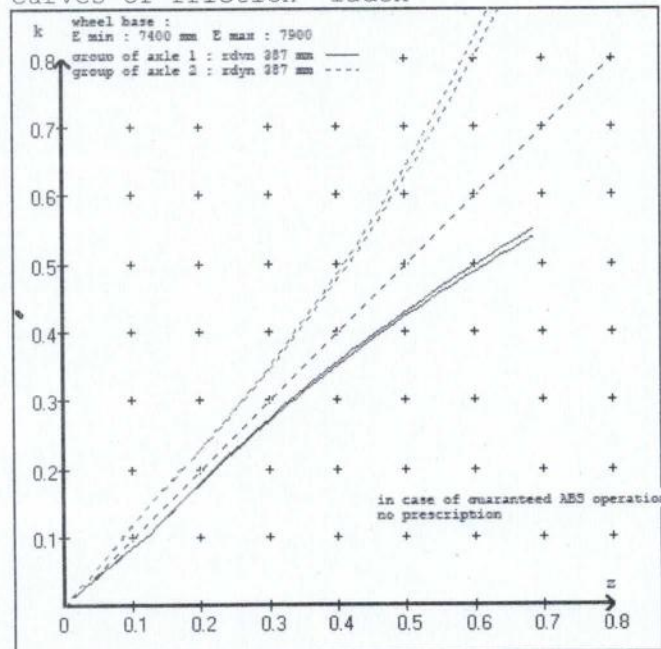
compatibility band laden



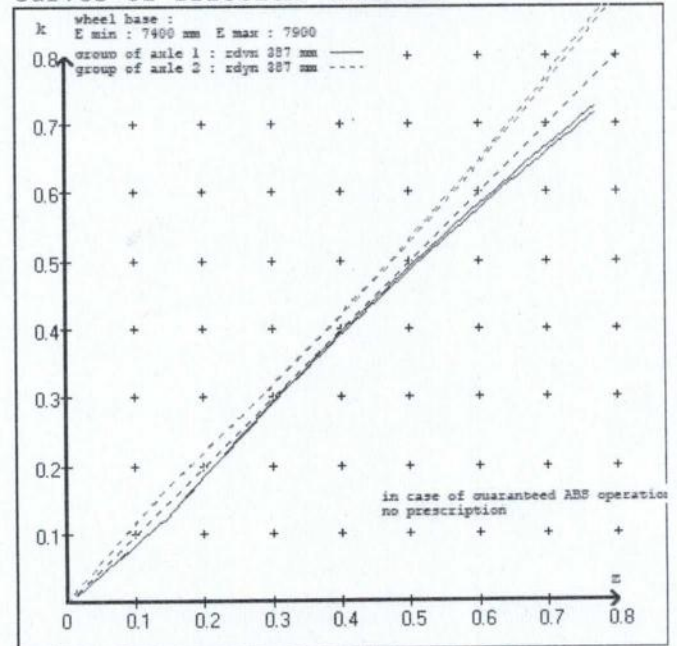
compatibility band unladen



curves of friction laden



curves of friction unladen



vehicle manufacturer: DOMETT TRAILERS
 trailer model : 5AFT STOCK
 trailer type : 5-axle-full-trailer

brake chamber and lever length :

axle 1 : 2 x type/diameter 20. (Meritor) lever length 69 mm
 axle 2 : 2 x type/diameter 20. (Meritor) lever length 69 mm
 axle 3 : 2 x type/diameter T.14/24 (Meritor) lever length 69 mm
 axle 4 : 2 x type/diameter T.14/24 (Meritor) lever length 69 mm
 axle 5 : 2 x type/diameter 14. (Meritor) lever length 69 mm

brake diagram :

valve :

480 207 0.. 0 WABCO EBS relay valve or 480 207 2.. 0
 480 102 0.. 0 WABCO EBS trailer modulator

EBS input data

=====

vehicle manufacturer: DOMETT TRAILERS
 trailer model : 5AFT STOCK
 trailer type : 5-axle-full-trailer
 brake calculation no. : TP 51813A

tire circumference main axle : 2425 for rdyn max
 tire circumference auxiliary axle : 2425 for rdyn max

assignment pm / deceleration z: pm 0.8 bar z = 0.010
 (laden condition) 2.0 bar z = 0.134
 6.5 bar z = 0.600

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	2100	to be	2.1	8000	to be	0.4	1.3	6.1	
2	2100	entered by the vehicle manufact.	2.1	8000	entered by the vehicle manufact.	0.4	1.3	6.1	
3	1900		1.8	6350		0.3	1.4	4.8	
4	1900		1.8	6350		0.3	1.4	4.8	
5	1900		1.8	6350		0.3	1.4	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
2100 2.1	2100 2.1	1900 1.8	1900 1.8	1900 1.8
2600 2.4	2600 2.4	2400 2.1	2400 2.1	2400 2.1
3100 2.8	3100 2.8	2900 2.5	2900 2.5	2900 2.5
3600 3.1	3600 3.1	3400 2.8	3400 2.8	3400 2.8
4100 3.5	4100 3.5	3900 3.1	3900 3.1	3900 3.1
4600 3.8	4600 3.8	4400 3.5	4400 3.5	4400 3.5
5100 4.1	5100 4.1	4900 3.8	4900 3.8	4900 3.8
5600 4.5	5600 4.5	5400 4.2	5400 4.2	5400 4.2
8000 6.1	8000 6.1	6350 4.8	6350 4.8	6350 4.8

spring parking brake

	<u>axle 3</u>	<u>axle 4</u>
no of TRISTOP-actuators per axle line KDZ	2	2
TRISTOP-actuator type	T.14/16	T.14/16
lever length lBh in mm	69	69
stat. tyre radius rstat max in mm	376	376
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	3.6878	3.6878
$iFb = lBh * \eta * C * rBt / (rBn * rstat)$ for rstat in mm	376	376
brake force of spring br. Tf in N	45070	45070
$Tf = (TFZ * KDZ - 2 * Co / lBh) * iFb$		
braking rate zf laden	0.272	
$zf = \text{sum}(Tf) / P + 0,01$		

Test of the frictional connection required by the parking brake

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

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

$$\text{min Ef} = 5718 \text{ mm} \quad \text{for } E = 7400 \text{ mm}$$

$$\text{min Ef} = 6063 \text{ mm} \quad \text{for } E = 7900 \text{ mm}$$

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 =	2280 mm	height of center of gravity - laden
PR =	19050 kg	maximum bogie mass - laden
P =	35050 kg	maximum total mass - laden
nf =	2	no. of axle(s) with TRISTOP spring brake actuators
ng =	3	no. of bogie axle(s)

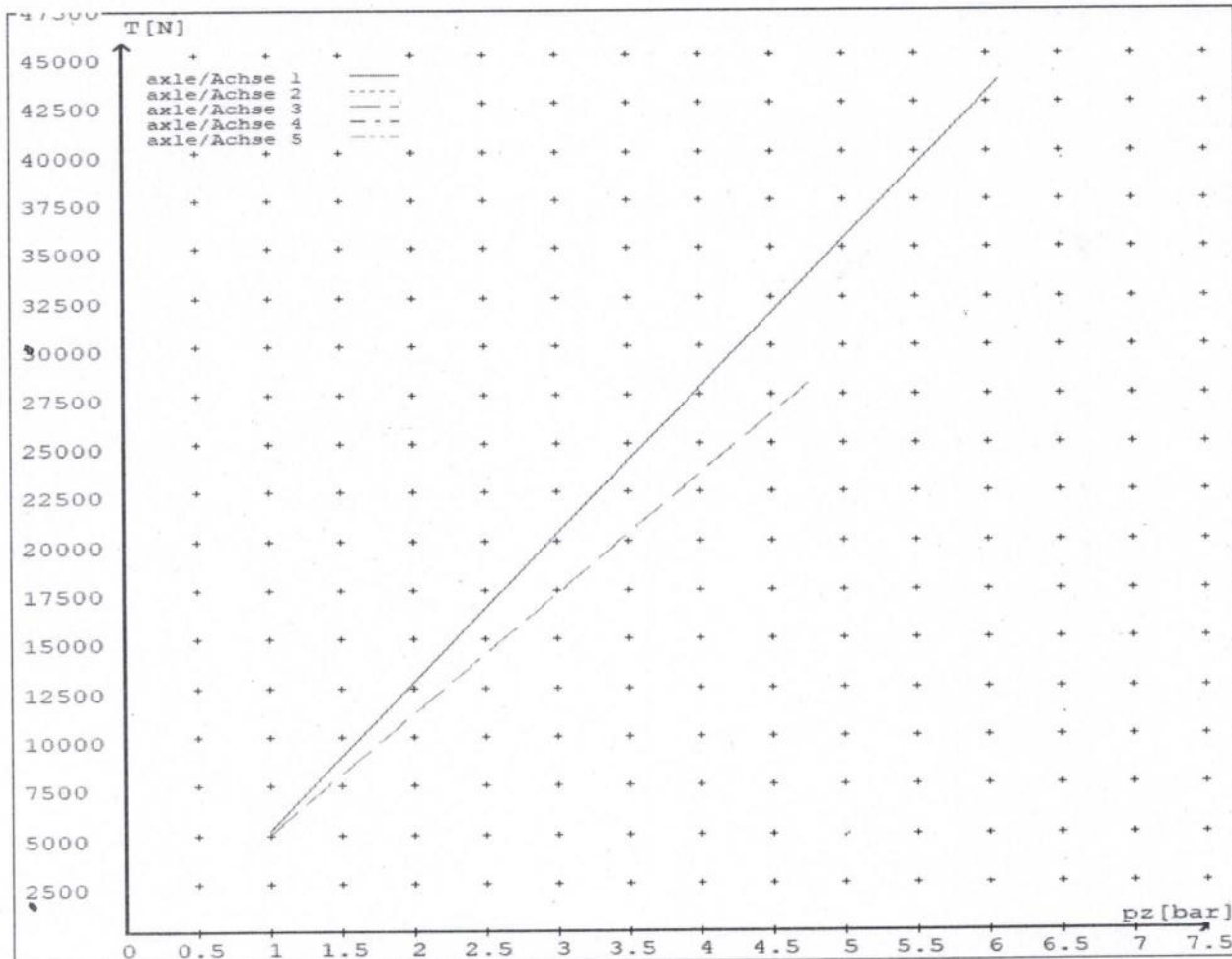
reference values

reference values for z = 50% for max rdyn: 387 mm

	pz [bar]	T [N]	T [N]
axle 1	1.0	5186	
	6.1	43604	
axle 2	1.0	5186	
	6.1	43604	
axle 3	1.0		4987
	4.8		28268
axle 4	1.0		4987
	4.8		28268
axle 5	1.0		4987
	4.8		28268

VIN - no.:

	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	20./	20./	T.14/24	T.14/24	14./
Maximum stroke smax = ...mm maximaler Hub smax =mm	65	65	64	64	64
Lever length =mm Hebellänge =mm	69.4	69.4	69.4	69.4	69.4



reference values for $z = 0.5$

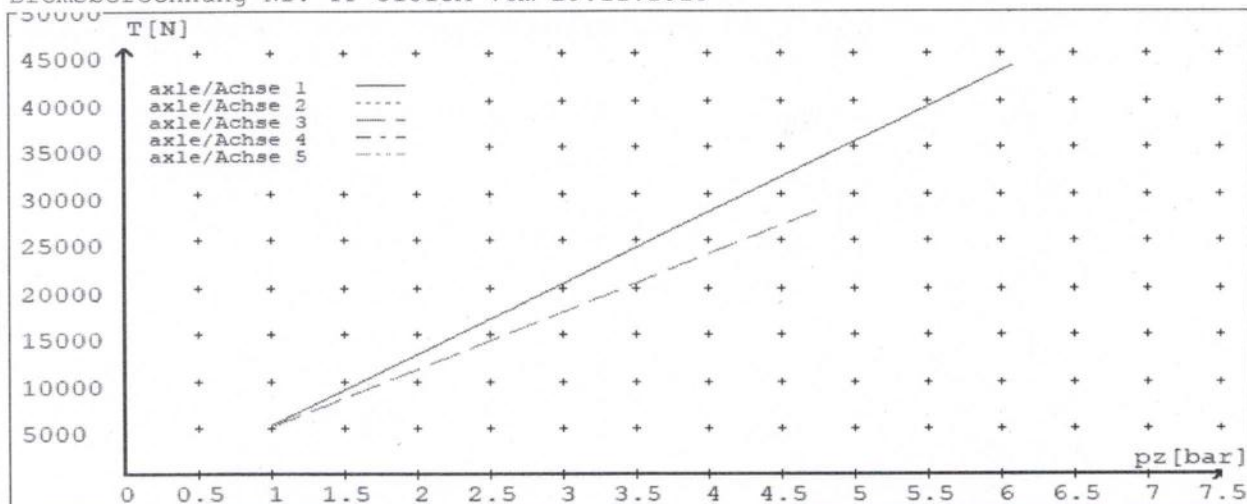
Angabe der Referenzwerte für $z = 0.5$

for max rdyn: 387 mm

für max rdyn: 387 mm

brake calculation no: TP 51813A date 29.11.2018

Bremsberechnung Nr: TP 51813A vom 29.11.2018



	Axle (s) / Achse (n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	20./	20./	T.14/24	T.14/24	14./
Maximum stroke $s_{max} = \dots$ mm maximaler Hub $s_{max} = \dots$ mm	65	65	64	64	64
Lever length = \dots mm Hebellänge = \dots mm	69.4	69.4	69.4	69.4	69.4

NOTICE TO VEHICLE OPERATOR

THIS VEHICLE HAS A BRAKE SYSTEM WHICH HAS BEEN DESIGNED AND FITTED IN ACCORDANCE WITH THE LAND TRANSPORT HEAVY VEHICLE BRAKE RULE 32015/4.

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

PLEASE REFER TO THE CERTIFIER FOR FURTHER INFORMATION.

**EXCERPT FROM LAND TRANSPORT RULE; HEAVY-VEHICLE BRAKES
RULE 32015/4. SECTION 10,**

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 this rule;
- 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 person or organisation appointed to carry out specialist inspection and certification of heavy vehicle brakes.

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 New Zealand Transport Authority if dissatisfied with a Compliance issue. (Refer NZTA Deed Of Appointment Para 47.4) NZTA Helpdesk 0800 699 000

(p.p.).....
(J.Hirst (JEH) HVEK)

NOTICE TO VEHICLE OPERATOR

This trailer is equipped with an Electronic Brake System.

To comply with the New Zealand Heavy Vehicle Brake Rule 32015/4, 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.

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


(p.p.)
J E Hirst
(JEH HVEK)
(09 980 7300)

**HEAVY VEHICLE BRAKE RULE
32015/4 WORKSHEET
(PROCEDURE DOCUMENTATION SHEET-PDS)
&
CONFIRMATION OF COMPLIANCE**

CERTIFICATE NO. JH181132

CUSTOMER NAME DOMETT TRAILERS LTD

CUSTOMER ORDER NO. 5881 DATE RECEIVED 3-Dec-18

VEHICLE TYPE STOCK TRAILER

VIN/ CHASSIS NO. 7 A 9 E 2 5 0 1 5 J 1 0 2 3 7 9 3

BRIEF SPECIFICATION AS CERTIFIED TO SCHEDULE 5

<u>BRAKE VALVES</u>	<u>MAKE</u>	<u>TYPE</u>
PRIMARY RELAY	WABCO	480 102 08. 0
SECONDARY RELAY	WABCO	480 207 202 0
YARD RELEASE VALVE	SEALCO	17600B
PARK BRAKE VALVE	SEALCO	110701
<u>SUSP. VALVES [WABCO]</u>	<u>FRONT</u>	<u>REAR</u>
CONTROL	463 090 500 0	463 090 500 0
DISTANCE SENSOR	441 050 100 0	441 050 100 0

OTHER VALVES:

MAKE:	WABCO	TYPE:	441 044 101 J	SETTING:	PRESS. SENSOR
MAKE:	WABCO	TYPE:	446 192 110 0	SETTING:	SMARTBOARD
MAKE:	WABCO	TYPE:	461 513 002 0 (PEM)	SETTING:	5.5 Bar
MAKE:		TYPE:		SETTING:	

BRAKE CHAMBERS:**AXLE 1 & 2****AXLE 3 & 4****AXLE 5****MAKE**

TSE

TSE

TSE

SIZE

20HSCLD65

1416HTLD64

14HSCLD64

MAX STROKE (mm)

65

64

64

SLACK LENGTH (mm)

69

69

69

DRUM TYPE:

N/A

N/A

N/A

OR**BRAKE CALIPER:**

WABCO PAN17

WABCO PAN17

WABCO PAN17

FRICTION MATERIAL: OEM AFTERMARKET**LINING BRAND****AXLE 1 & 2****AXLE 3 & 4****AXLE 5**

JURID 539

JURID 539

JURID 539

OTHERS:**TYRES:****FRONT****REAR**

215 75 R 17.5

215 75 R 17.5

BRAKE CALCULATION #:

TP51813

COMMENTS:

EBS, SPECIAL CONDITIONS APPLY. SEE INSTRUCTIONS ON LT400 #

(CJC)

SALES ORDER #:

SO1307960

PROCESS TIME:

1 HOUR

TRAILERS EQUIPPED WITH PREV: THE PARK BRAKE PERFORMANCE MUST BE**MEASURED BY PULLING THE RED ACTUATION KNOB ON THE PREV VALVE WHEN****THE AXLES EQUIPPED WITH SPRING BRAKES ARE IN THE BRAKE ROLLERS. THE****PARK BRAKE IN THE CAB MUST NOT BE APPLIED.****NOTES:****CHAMBERS & PARK BRAKE PERFORMANCE:**REFER TO BRAKE CALCULATION TP51813: $z = 0.272 @ 90140 (N)$ FOR 235 75 R 17.5 TYREFRONT FRICTION (μ) = 0.47

TSE 1416HTLD64 ARE NOT LISTED IN WABCOBRAKE. TSE 1616HTLD ARE USED TO DETERMINE

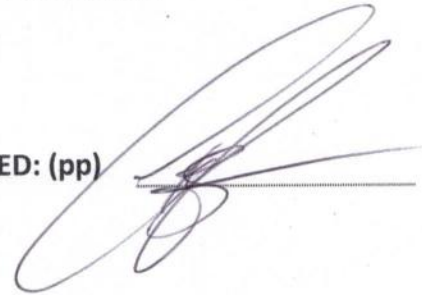
THE PARK BRAKE PERFORMANCE

CONFORMATION OF COMPLIANCE

I CONFIRM THAT THE VEHICLE IDENTIFIED IN PAGES 1 AND 2 OF THIS CONFORMATION OF COMPLIANCE COMPLIES WITH ALL RELEVANT REQUIREMENTS OF THE CURRENT NEW ZEALAND HEAVY VEHICLE BRAKE RULE 32015/4, SCHEDULE 5.

DATE: 3-Dec-18

SIGNED: (pp)



NAME & ID: J HIRST (JEH)

PHONE (BUS): 09 980 7300

FAX (BUS) 09 980 7306

POSTAL ADDRESS:

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

POSITION: BRAKE CERTIFIER HVEK

I CONFIRM THE BRAKE SYSTEM OF THE VEHICLE IDENTIFIED IN PAGE 1 OF THIS STATEMENT OF COMPLIANCE AS MODIFIED BY MYSELF, CONTINUES TO COMPLY WITH ALL THE RELIVANT REQUIREMENTS OF THE CURRENT NEW ZEALAND HEAVY BRAKE RULE 32015/4 SCHEDULE 5.

DATE:

SIGNED:

NAME:

CERTIFIERS ID:

POSITION:

PHONE (BUS):

FAX (BUS):

COMMENTS:
