

# Heavy Vehicle Specialist Certificate

Must be presented to a CoF (Heavy) Inspecting Organisation  
Heavy Vehicle Specialist Inspector and Inspecting Organisation

Heavy Vehicle Specialist Inspector's or Manufacturing Inspecting Organisation's Name (PRINT IN CAPS) ID

**Chris Clarke** **CJC**

Vehicle Registration\* VIN/Chassis Number

**7A9E25016F1023387**

Component being certified:

<input type="checkbox"/> Chassis	<input type="checkbox"/> Load Anchorage	<input type="checkbox"/> Log Bolsters
<input type="checkbox"/> Towing Connection	<input checked="" type="checkbox"/> Brakes	<input type="checkbox"/> SRT
<input type="checkbox"/> PSV Stability	<input type="checkbox"/> PSV Rollover	<input type="checkbox"/> Swept Path
<input type="checkbox"/> PBS		

Certification Category

**HVEK**

Description of Work

**CERTIFY TO SCHEDULE 5**

**ROLL STABILTY FUNCTION ACTIVATED**

Code/Standard/Rule Certified to	Component Load Rating(s)
<b>HVBR 32015/3 Schedule 5</b>	<b>32000KG</b>
General Drawing Number(s)	
<b>N/A</b>	

Supporting Documents

**BRAKE RULE CERTIFICATE - JH450617**

Special Conditions\*

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

Certification Expiry Date (if applicable) 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) ID Number

**CHRIS CLARKE** **CJC**

Date Number

**29-Jun-15** **515170**

CoF Vehicle Inspector ID	CoF Vehicle Inspector Signature	Date
<input type="text"/>	<input type="text"/>	<input type="text"/>

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

# WABCO

## START-UP PROTOCOL

System	Trailer EBS-E	WABCO part number	480 102 080 0
Production date	2015-02-06	Serial number	437001162200G
Serial number (modulator)	000000037222		
Fingerprint Customer EOL / Customer Development / Flash Program	W503643 / 2015-06-29 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00		

<b>WABCO</b>	<b>TRAILER EBS-E</b>	GGVS/ADR TUEH TB 2007 - 019.00 361-0071-04
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HERSTELLER MANUFACTURER CONSTRUCTEUR	DOMETT		
TYP TYPE TYPE	5AFT STOCK		
FAHRZEUG IDENTNR. CHASSIS NUMBER NUMERO DE CHASSIS	7A9E25016F1023387		
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO.	TP51280A		
POLRADZÄHNEZAHN 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	Kippkritisches Fahrzeug Critical Trailer Véhicule critique	
Subsystems	---	I/O	24N

GIO	Pin1	Pin3	Pin4
1	24V-01	---	---
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)	
	+	-	+	-	+	-	+	-	+	-	+	-	1.0	Pz					
1	2400	1.0	3.3	8000	4.9	0.4	1.5	---	6.7	-	20	65	74	485	4660				
2	2400	1.0	3.3	8000	4.9	0.4	1.5	---	6.7	-	20	65	74	485	4660				
3	1800	0.8	2.2	6400	3.9	0.4	1.7	---	4.5	-	16 / 24	64	74	419	2648				
4	1800	0.8	2.2	6400	3.9	0.4	1.7	---	4.5	-	16 / 24	64	74	419	2648				
5	1800	0.8	2.2	6400	3.9	0.4	1.7	---	4.5	-	16	64	74	419	2648				

Diagnostic memory	OK	Warning lamp control	OK
Parameter setting	carried out	Stop light power supply	OK
EBS 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 check	Not tested	Leak test	Not tested
Immobilizer test	Not tested	Signal outputs TEBS	Not tested
Signal inputs	Not tested	Tag axle test	Not tested

Diagnostic memory ELEX	Not tested	Signal outputs ELEX	Not tested
TailGUARDlight	Not tested	TailGUARD	Not tested

Manufacturer	DOMETT	Vehicle ident. no	7A9E25016F1023387
Vehicle type	5AFT STOCK	Odometer reading	0.0 km
next Service	0 km	Trip reading	0.0 km
Tester	Chris Clarke	Signature	
Date	2015-06-29 3:59:48 p.m.		

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

distribution: DOMETT  
 7A9E25016F1023387  
 SODC: JH150617  
 CJC LT400: 515170

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 08.07.2014

vehicle manufacturer: DOMETT  
 trailer model : 5AFT STOCK  
 trailer type : 5-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 + 5 : Assali Stefen, ELSA 195 LE, 361-0071-04 ext05 ECE,

		unladen	laden
total mass	P in kg	10200	35200
axle 1	P1 in kg	2400	8000
axle 2	P2 in kg	2400	8000
axle 3	P3 in kg	1800	6400
axle 4	P4 in kg	1800	6400
axle 5	P5 in kg	1800	6400
wheel base	E in mm	6795 - 6795	
centre of gravity height	h in mm	1050	2238

	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 brake chamber manufacturer	BZ 122.1 Meritor	BZ 122.1 Meritor	BZ 119.6 Meritor	BZ 119.6 Meritor	BZ 122.1 Meritor
chamber size	20.	20.	T.16/24	T.16/24	16.
lever length	74	74	74	74	74
brake factor	20.26	20.26	20.26	20.26	20.26
dyn. rolling radius	421	421	421	421	421
dyn. rolling radius	421	421	421	421	421
threshold torque	6.0	6.0	6.0	6.0	6.0

calculation:

chamber pressure(rdyn min)pH at z=22,5%bar	2.4	2.4	2.2	2.2	2.2
chamber pressure(rdyn max)pH at z=22,5%bar	2.4	2.4	2.2	2.2	2.2
chamber press.(servo)pcha at pm6,5bar	6.7	6.7	4.5	4.5	4.5
piston force	7810	7810	4448	4448	4448
brake force(rdyn min)T lad. at pm6,5bar	55835	55835	31727	31727	31727
brake force(rdyn max)T lad. at pm6,5bar	55835	55835	31727	31727	31727
brake force within 1 % rolling friction proportion	21.7	21.7	18.9	18.9	18.9

braking rate z laden 0.599 for rdyn min  
 z = sum (TR)/PRmax 0.599 for rdyn max

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

brake diagram :

maximum pressure: 8.5 bar

axle 1:

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

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

brake cylinder: Meritor   20HSCLD65

axle 2:

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

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

brake cylinder: Meritor   20HSCLD65

axle 3:

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

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

brake cylinder: Meritor   1624HTLD64

## axle 4:

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

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

brake cylinder: Meritor 1624HTLD64

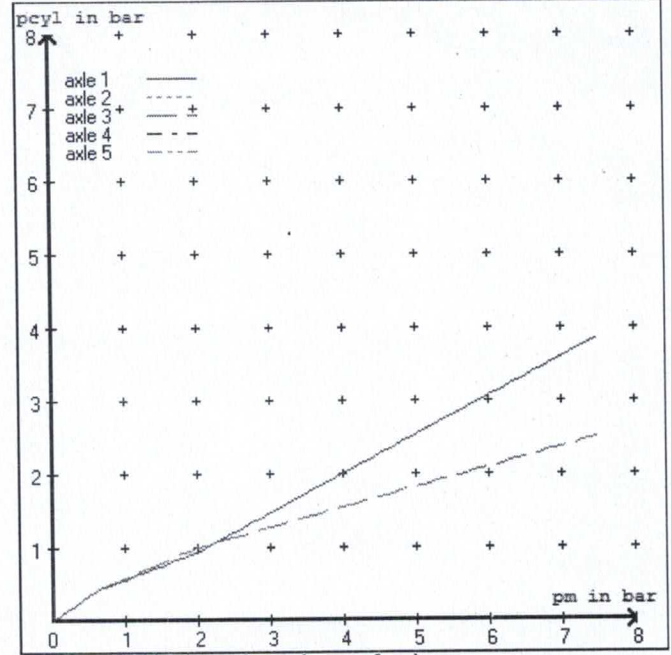
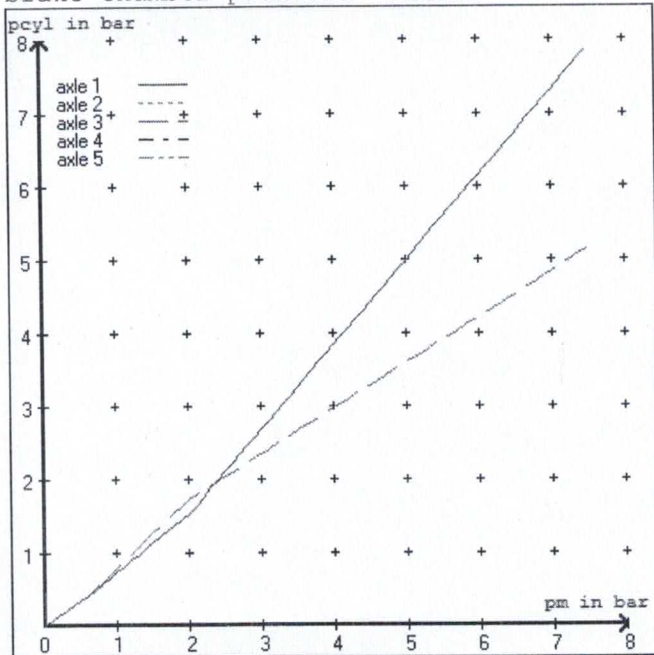
## axle 5:

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

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

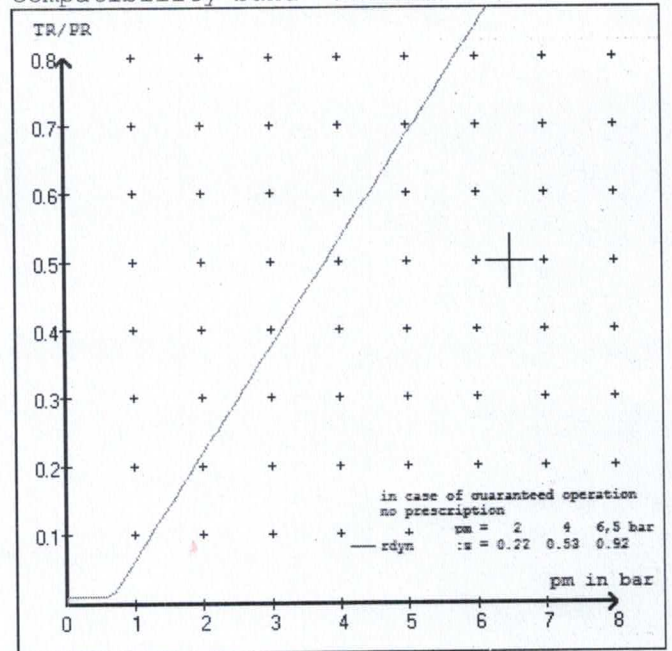
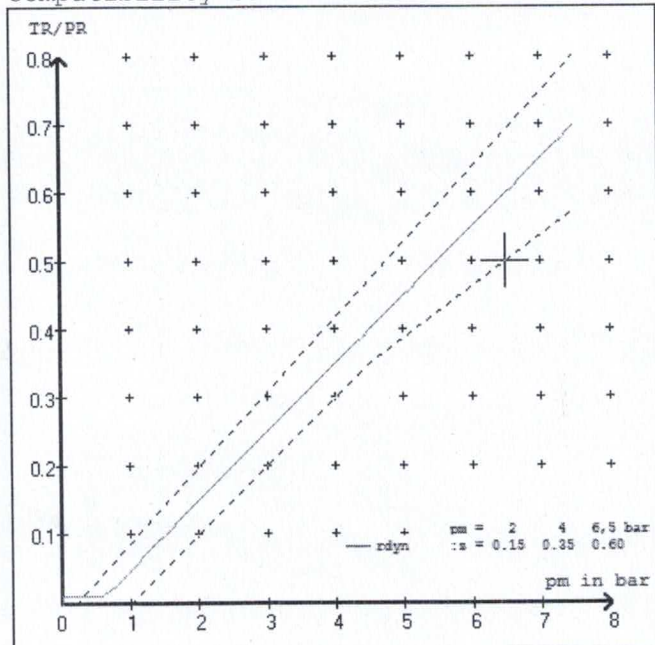
brake cylinder: Meritor 16HSCLD64

test type III (zIII = 0.30)	for rdyn min :	axle1	axle2	axle3	axle4	axle5	
at pm 3.5 bar =>	pcha in bar :	3.2	3.2	2.6	2.6	2.6	2.6
test type III (zIII = 0.06)	for rdyn min :	axle1	axle2	axle3	axle4	axle5	
at pm 1.1 bar =>	pcha in bar :	0.8	0.8	0.9	0.9	0.9	0.9



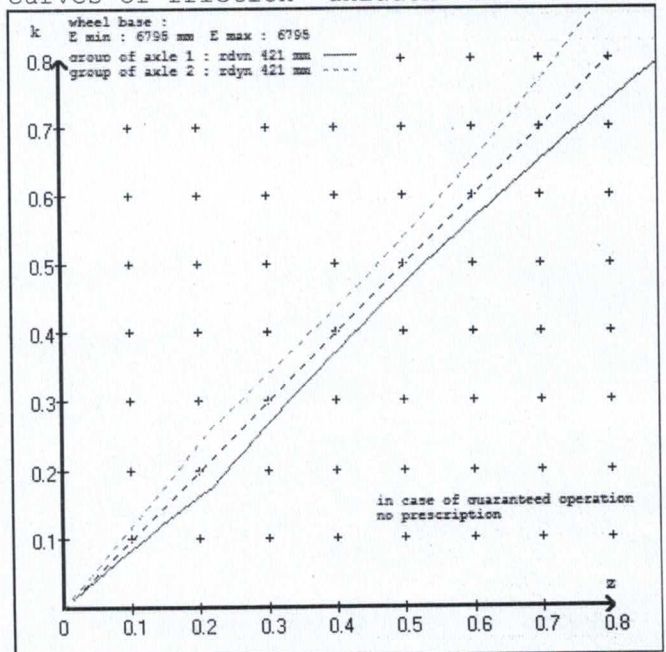
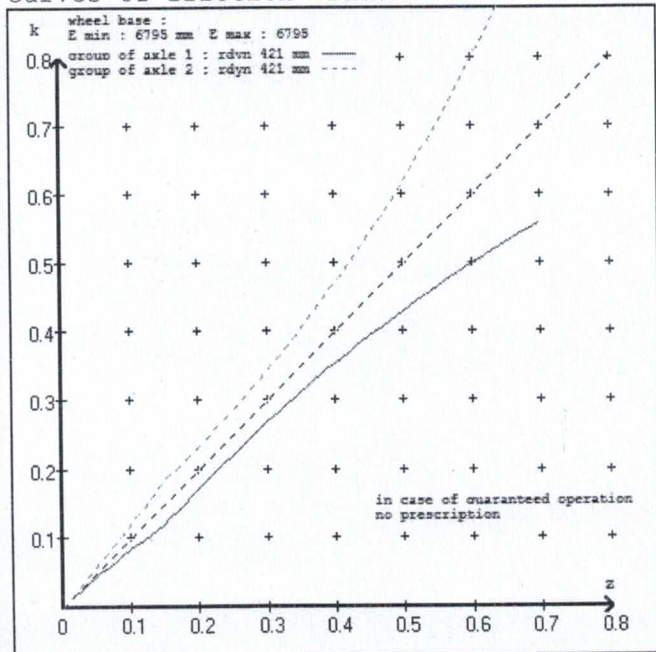
compatibility band laden

compatibility band unladen



curves of friction laden

curves of friction unladen



vehicle manufacturer: DOMETT  
 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 74 mm  
 axle 2 : 2 x type/diameter 20. (Meritor) lever length 74 mm  
 axle 3 : 2 x type/diameter T.16/24 (Meritor) lever length 74 mm  
 axle 4 : 2 x type/diameter T.16/24 (Meritor) lever length 74 mm  
 axle 5 : 2 x type/diameter 16. (Meritor) lever length 74 mm

brake diagram :

valve :  
 971 002 ... 0 WABCO EBS emergency valve  
 480 207 0.. 0 WABCO EBS relay valve or 480 207 2.. 0  
 480 102 ... 0 WABCO EBS trailer modulator

EBS input data

=====

vehicle manufacturer: DOMETT  
 trailer model : 5AFT STOCK  
 trailer type : 5-axle-full-trailer  
 brake calculation no. : TP 51280A

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 = 0.150  
 6.5 bar z = 0.600

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	2400	to be	3.3	8000	to be	0.4	1.5	6.7	
2	2400	entered by the vehicle manufact.	3.3	8000	entered by the vehicle manufact.	0.4	1.5	6.7	
3	1800		2.2	6400		0.4	1.7	4.5	
4	1800		2.2	6400		0.4	1.7	4.5	
5	1800		2.2	6400		0.4	1.7	4.5	

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.

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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
2400 3.3	2400 3.3	1800 2.2	1800 2.2	1800 2.2
2900 3.6	2900 3.6	2300 2.5	2300 2.5	2300 2.5
3400 3.9	3400 3.9	2800 2.7	2800 2.7	2800 2.7
3900 4.2	3900 4.2	3300 3.0	3300 3.0	3300 3.0
4400 4.5	4400 4.5	3800 3.2	3800 3.2	3800 3.2
4900 4.8	4900 4.8	4300 3.5	4300 3.5	4300 3.5
5400 5.1	5400 5.1	4800 3.7	4800 3.7	4800 3.7
5900 5.4	5900 5.4	5300 4.0	5300 4.0	5300 4.0
8000 6.7	8000 6.7	6400 4.5	6400 4.5	6400 4.5

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

axle 1 : reference axle: Assali Stef---/--- ---/K---en	brake lining: ROR8616AF(M13)
test report : 361-0071-04 ext05 ECE	date : 17.06.2011
axle 2 : reference axle: Assali Stef---/--- ---/K---en	brake lining: ROR8616AF(M13)
test report : 361-0071-04 ext05 ECE	date : 17.06.2011
axle 3 : reference axle: Assali Stef---/--- ---/K---en	brake lining: ROR8616AF(M13)
test report : 361-0071-04 ext05 ECE	date : 17.06.2011
axle 4 : reference axle: Assali Stef---/--- ---/K---en	brake lining: ROR8616AF(M13)
test report : 361-0071-04 ext05 ECE	date : 17.06.2011
axle 5 : reference axle: Assali Stef---/--- ---/K---en	brake lining: ROR8616AF(M13)
test report : 361-0071-04 ext05 ECE	date : 17.06.2011

calc. verif. of residual (hot) braking force type III  
(item 4.2.1 of appendix 2 to annex 11)

axle 1 (rdyn 421 mm)	T = 23.6 % Fe
axle 2 (rdyn 421 mm)	T = 23.6 % Fe
axle 3 (rdyn 421 mm)	T = 16.2 % Fe
axle 4 (rdyn 421 mm)	T = 16.2 % Fe
axle 5 (rdyn 421 mm)	T = 16.2 % Fe

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

axle 1 (sp = 58 mm)	s = 37 mm
axle 2 (sp = 58 mm)	s = 37 mm
axle 3 (sp = 57 mm)	s = 37 mm
axle 4 (sp = 57 mm)	s = 37 mm
axle 5 (sp = 57 mm)	s = 37 mm

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

axle1	ThA = 7810 N
axle2	ThA = 7810 N
axle3	ThA = 4448 N
axle4	ThA = 4448 N
axle5	ThA = 4448 N

calc. residual (hot) braking force in N  
(item 4.3.1.4 of appendix 2 to annex 11)

axle 1 (rdyn 421 mm)	T = 49610 N
axle 2 (rdyn 421 mm)	T = 49610 N
axle 3 (rdyn 421 mm)	T = 28213 N
axle 4 (rdyn 421 mm)	T = 28213 N
axle 5 (rdyn 421 mm)	T = 28213 N

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

braking rate of the vehicle (item 4.3.2 to appendix 2 to annex 11)	0.60	(hot)braking 0.53
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required braking rate (items 1.5.3 and 1.7.2 to annex 11)	>= 0,4 and >= 0,6*E (0.36)
--	-------------------------------

axle 1 (rdyn 421 mm)	T = 49610 N
axle 2 (rdyn 421 mm)	T = 49610 N
axle 3 (rdyn 421 mm)	T = 28213 N
axle 4 (rdyn 421 mm)	T = 28213 N
axle 5 (rdyn 421 mm)	T = 28213 N

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

braking rate of the vehicle (item 4.3.2 to appendix 2 to annex 11)	0.60	(hot)braking 0.53
---	------	----------------------

required braking rate (items 1.5.3 and 1.7.2 to annex 11)	>= 0,4 and >= 0,6*E (0.36)
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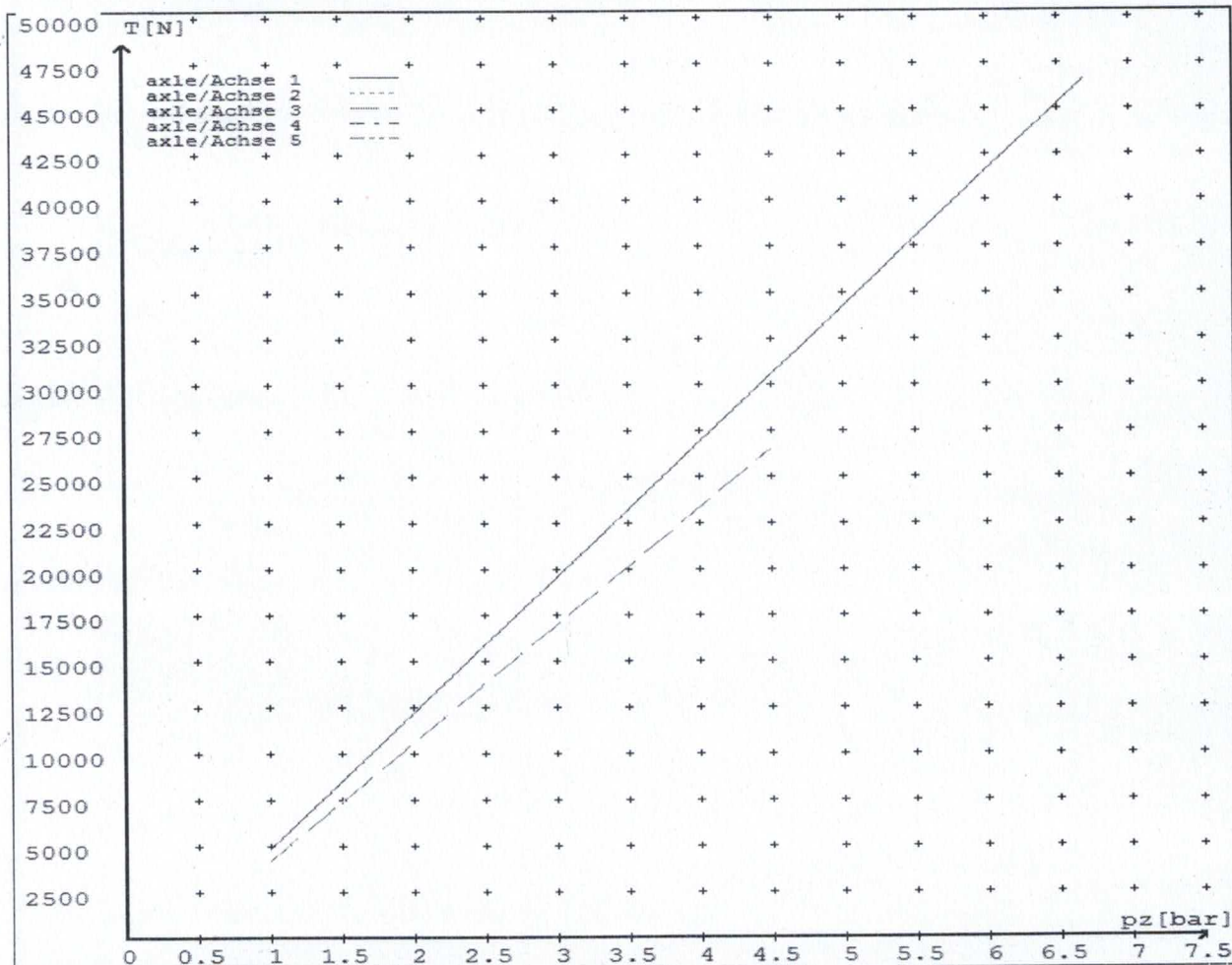
**reference values**

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

	pz [bar]	T [N]	T [N]
axle 1	1.0	4858	
	6.7	46607	
axle 2	1.0	4858	
	6.7	46607	
axle 3	1.0		4198
	4.5		26483
axle 4	1.0		4198
	4.5		26483
axle 5	1.0		4198
	4.5		26483

VIN - no.:

	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	20./	20./	T.16/24	T.16/24	16./
Maximum stroke smax = ...mm maximaler Hub smax = ....mm	65	65	64	64	64
Lever length = ....mm Hebellänge = ....mm	74	74	74	74	74



**HVBR WORKSHEET**  
(PROCEDURE & COMPLIANCE DOCUMENTATION SHEET)

CERTIFICATE No. JH150617

CUSTOMER NAME

DOMETT TRAILERS LTD

CUSTOMER ORDER No.

4417

DATE RECEIVED

MAY 2015

VEHICLE TYPE

5 AXLE FULL TRAILER

REG No.

CHASSIS No.

7A9E25016F1023387

**BRIEF SPECIFICATION AS CERTIFIED TO HVBR**

**BRAKE CHAMBERS:**

<u>Ax #</u>	<u>Make/model</u>	<u>Max stroke</u>	<u>Lever length</u>
1&2	TSE 20HSCLD65	65 mm	74 mm
3&4	TSE 1624HTLD64	64 mm	74 mm
5	TSE 16HSCLD64	64 mm	74 mm

**BRAKE SYSTEM:**

WABCO EBS : RSS ACTIVATED

**# TEST POINTS FITTED:**

3 4 5 7

**FRICITION LINING:**

(All) Lining Brand

OEM

Aftermarket

ROR 8616 AF

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

**VALVES:** AS PER BRAKE CALCULATION TP51280 & SO4207

**TYRE SIZE:** 265 70 R 19.5

**NOTES**

PACKING SLIP NO.

SO4207

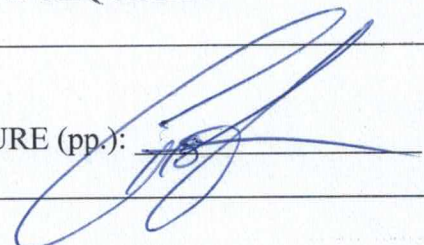
PROCESS TIME:

1

BRAKE CALC #TP51280. THE MERITOR CHAMBERS ARE THE TSE VARIANT. THE 5<sup>th</sup> AXLE BRAKE CHAMBERS COULD ALSO BE 1624HTLD64 IF REQUIRED.

COMPLETION DATE : 24<sup>th</sup> June 2015

SIGNATURE (pp.):



# Statement of Compliance with the New Zealand Heavy Brake Rule

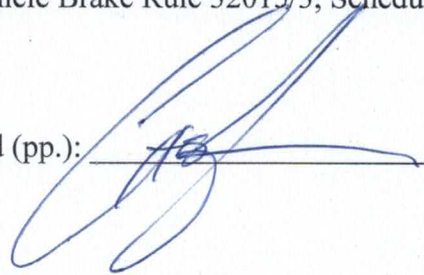
Documentation required supporting Statements of Compliance with the New Zealand Heavy Brake Rule, to be made available to the Statutory Authority on request, must include all calculations and test reports.

## Confirmation of compliance

I confirm that the vehicle identified on page 1 of this Statement of Compliance complies with all relevant requirements of the current New Zealand Heavy Vehicle Brake Rule 32015/3, Schedule 5.

Date: 24<sup>th</sup> June 2015

Signed (pp.):



## Certifier's identification

Name: J E Hirst

Phone (bus): (09) 980 7300 Fax (bus): (09) 980 7306

Postal address: Transport Specialties, Cnr Kerrs & Ash Roads

Wiri, Auckland, PO Box 98 971 Manukau City 2241

Position: JEH

## Confirmation of continued compliance of modification

I confirm the brake system of the vehicle identified on page 1 of this Statement of Compliance as modified by myself, continues to comply with all the relevant requirements of the current New Zealand Heavy Vehicle Brake Rule 32015/3, 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