

# 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
<b>Chris Clarke</b>	<b>CJC</b>

Vehicle Registration*	VIN/Chassis Number
	<b>7A9E25015F1023431</b>

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**

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**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 - CJC153483**

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)
<b>N/A</b>		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

**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

**23-Nov-15** **531383**

CoF Vehicle Inspector ID	CoF Vehicle Inspector Signature	Date

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







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

distribution: DOMETT TRAILERS  
 7A9E25015F1023431  
 SODC: JH151125  
 LT400: CJC 531383

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 TRAILERS  
 trailer model : 5AFT STOCK  
 trailer type : 5-axle-full-trailer  
 remarks : air / hydraulic / VA suspension  
 WABCO TRAILER - EBS  
 TRISTOP 3+4: T.14/24 (TSE 1416HTLD64 ACTUALLY FITTED - SEE PAGE 7 FOR PERFORMANCE DATA)  
 265/70 R 19,5

axle 1 + 2 + 3 + 4 + 5 : SAF, SBW 1937, TDB 0749 ECE,

		unladen	laden
total mass	P in kg	10300	35200
axle 1	P1 in kg	2600	8000
axle 2	P2 in kg	2600	8000
axle 3	P3 in kg	1700	6400
axle 4	P4 in kg	1700	6400
axle 5	P5 in kg	1700	6400
wheel base	E in mm	6490 - 6500	
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 KDZ	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	18.	18.	T.14/24	T.14/24	14.
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	2.5	2.5	2.0	2.0	2.0
chamber pressure(rdyn max)pH at z=22,5%bar	2.5	2.5	2.0	2.0	2.0
chamber press.(servo)pcha at pm6,5bar bar	6.7	6.7	4.3	4.3	4.3
piston force ThA at pm6,5bar N	7185	7185	4085	4085	4085
brake force(rdyn min)T lad. at pm6,5bar N	54427	54427	30842	30842	30842
brake force(rdyn max)T lad. at pm6,5bar N	54427	54427	30842	30842	30842
brake force within 1 % rolling friction proportion %	21.2	21.2	19.2	19.2	19.2

braking rate z laden 0.583 for rdyn min  
 z = sum (TR)/PRmax 0.583 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    18HSCLD64

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    18HSCLD64

axle 3:

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

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

brake cylinder: Meritor    1424HTLD64

axle 4:

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

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

brake cylinder: Meritor 1424HTLD64

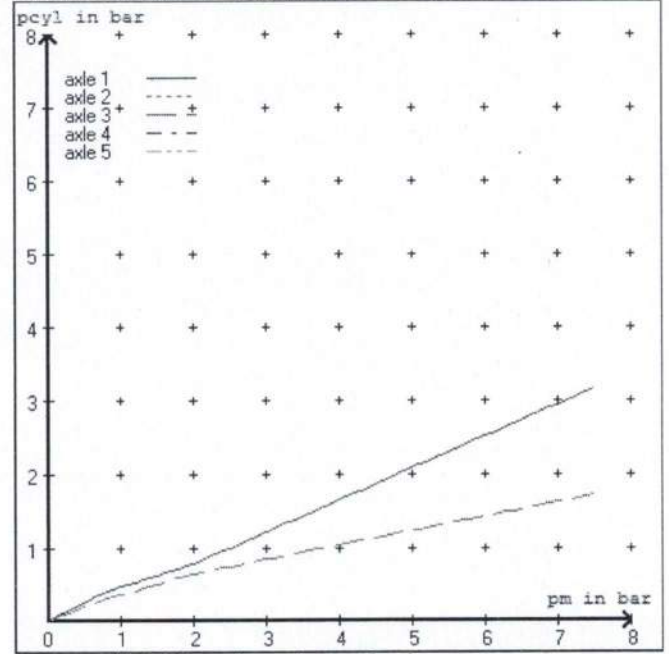
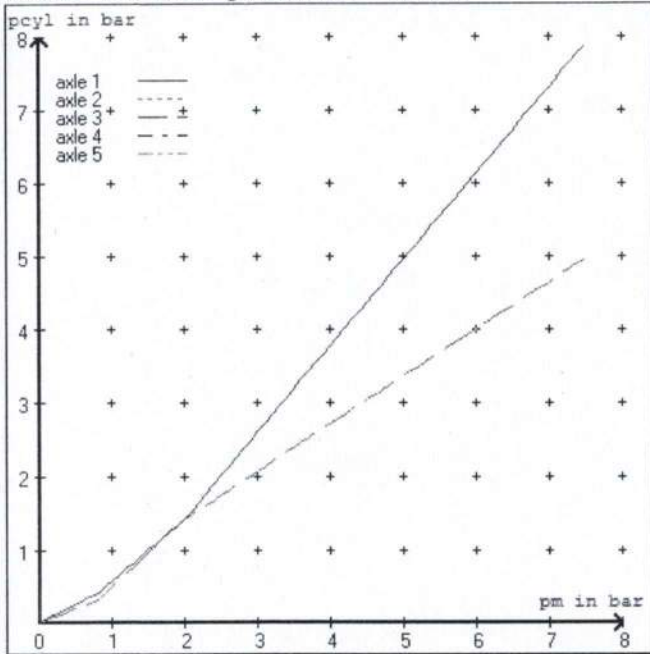
axle 5:

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

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

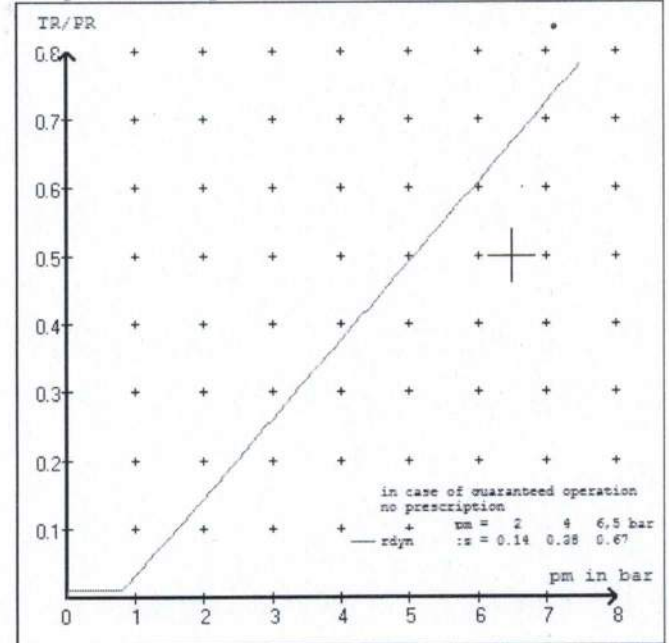
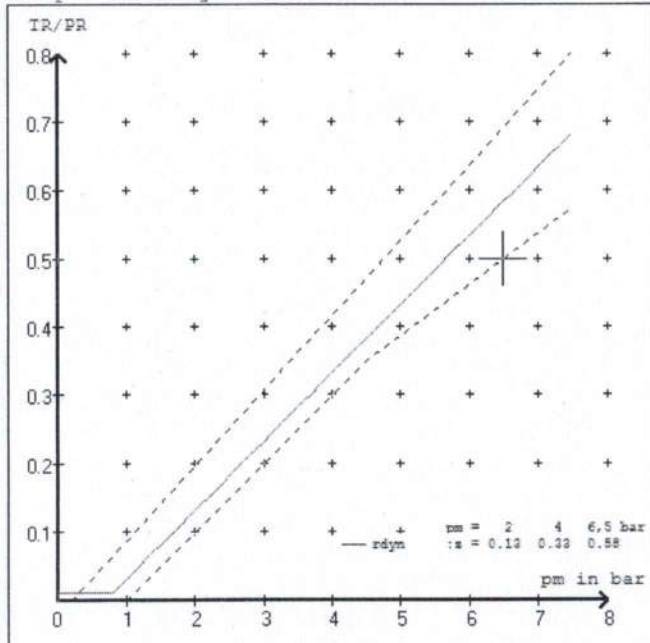
brake cylinder: Meritor 14HSCLD64

test type III (zIII = 0.30)	for rdyn min :	axle1	axle2	axle3	axle4	axle5	
at pm 3.7 bar =>	pcha in bar :	3.4	3.4	2.5	2.5	2.5	2.5
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	0.8	0.8	0.8	0.8



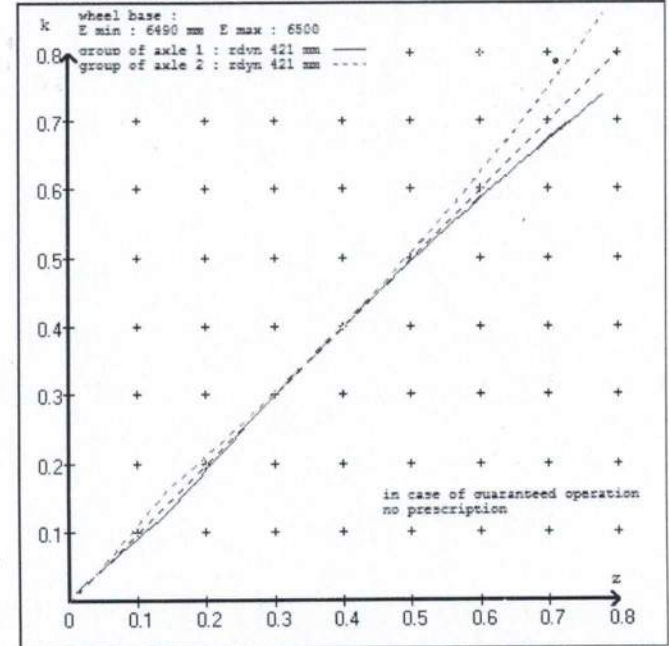
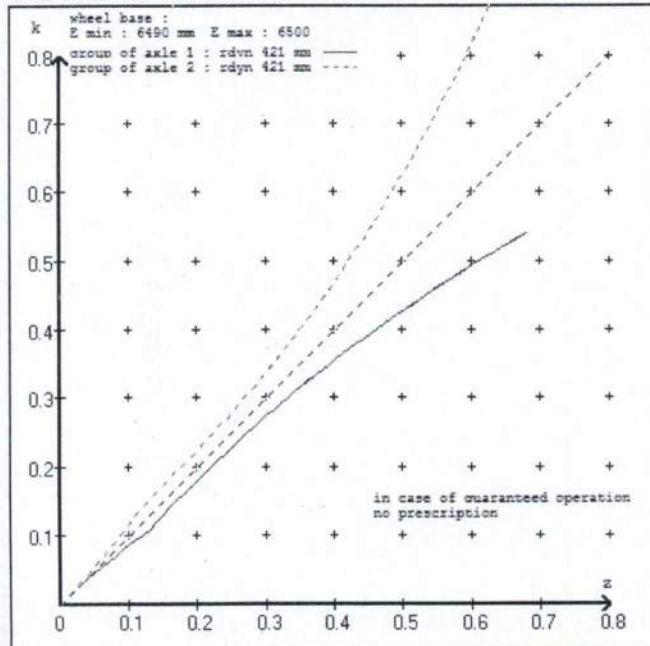
compatibility band laden

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 18. (Meritor) lever length 69 mm  
 axle 2 : 2 x type/diameter 18. (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 :

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

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vehicle manufacturer: DOMETT TRAILERS  
 trailer model : 5AFT STOCK  
 trailer type : 5-axle-full-trailer  
 brake calculation no. : TP 51338A

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

assignment pm / deceleration z: pm 0.8 bar z = 0.010  
 (laden condition) 2.0 bar z = 0.130  
 6.5 bar z = 0.580

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	2600	to be	2.7	8000	to be	0.4	1.4	6.7
2	2600	entered by the vehicle manufact.	2.7	8000	entered by the vehicle manufact.	0.4	1.4	6.7
3	1700		1.5	6400		0.3	1.4	4.3
4	1700		1.5	6400		0.3	1.4	4.3
5	1700		1.5	6400		0.3	1.4	4.3

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
2600 2.7	2600 2.7	1700 1.5	1700 1.5	1700 1.5
3100 3.1	3100 3.1	2200 1.8	2200 1.8	2200 1.8
3600 3.4	3600 3.4	2700 2.1	2700 2.1	2700 2.1
4100 3.8	4100 3.8	3200 2.4	3200 2.4	3200 2.4
4600 4.2	4600 4.2	3700 2.7	3700 2.7	3700 2.7
5100 4.6	5100 4.6	4200 3.0	4200 3.0	4200 3.0
5600 4.9	5600 4.9	4700 3.3	4700 3.3	4700 3.3
6100 5.3	6100 5.3	5200 3.6	5200 3.6	5200 3.6
8000 6.7	8000 6.7	6400 4.3	6400 4.3	6400 4.3

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

axle 1 : reference axle: SAF	SBW 1937	brake lining: Jurid 539
test report :	TDB 0749 ECE	date : 20130930 30.09.2013
axle 2 : reference axle: SAF	SBW 1937	brake lining: Jurid 539
test report :	TDB 0749 ECE	date : 20130930 30.09.2013
axle 3 : reference axle: SAF	SBW 1937	brake lining: Jurid 539
test report :	TDB 0749 ECE	date : 20130930 30.09.2013
axle 4 : reference axle: SAF	SBW 1937	brake lining: Jurid 539
test report :	TDB 0749 ECE	date : 20130930 30.09.2013
axle 5 : reference axle: SAF	SBW 1937	brake lining: Jurid 539
test report :	TDB 0749 ECE	date : 20130930 30.09.2013

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

axle 1	(rdyn 421 mm)	T = 26.2 % Fe
axle 2	(rdyn 421 mm)	T = 26.2 % Fe
axle 3	(rdyn 421 mm)	T = 17.1 % Fe
axle 4	(rdyn 421 mm)	T = 17.1 % Fe
axle 5	(rdyn 421 mm)	T = 17.1 % Fe

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

axle 1	(sp = 58 mm)	s = 39 mm
axle 2	(sp = 58 mm)	s = 39 mm
axle 3	(sp = 56 mm)	s = 39 mm
axle 4	(sp = 56 mm)	s = 39 mm
axle 5	(sp = 56 mm)	s = 39 mm

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

axle1	ThA = 7185 N
axle2	ThA = 7185 N
axle3	ThA = 4085 N
axle4	ThA = 4085 N
axle5	ThA = 4085 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 = 42502 N
axle 2	(rdyn 421 mm)	T = 42502 N
axle 3	(rdyn 421 mm)	T = 24166 N
axle 4	(rdyn 421 mm)	T = 24166 N
axle 5	(rdyn 421 mm)	T = 24166 N

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

braking rate of the vehicle (item 4.3.2 to appendix 2 to annex 11) 0.58 (hot)braking 0.46

required braking rate (items 1.5.3 and 1.7.2 to annex 11)  $\geq 0,4$  and  $\geq 0,6 * E (0.35)$

axle 1	(rdyn 421 mm)	T = 42502 N
axle 2	(rdyn 421 mm)	T = 42502 N
axle 3	(rdyn 421 mm)	T = 24166 N
axle 4	(rdyn 421 mm)	T = 24166 N
axle 5	(rdyn 421 mm)	T = 24166 N

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

braking rate of the vehicle (item 4.3.2 to appendix 2 to annex 11) 0.58 (hot)braking 0.46

required braking rate (items 1.5.3 and 1.7.2 to annex 11)  $\geq 0,4$  and  $\geq 0,6 * E (0.35)$





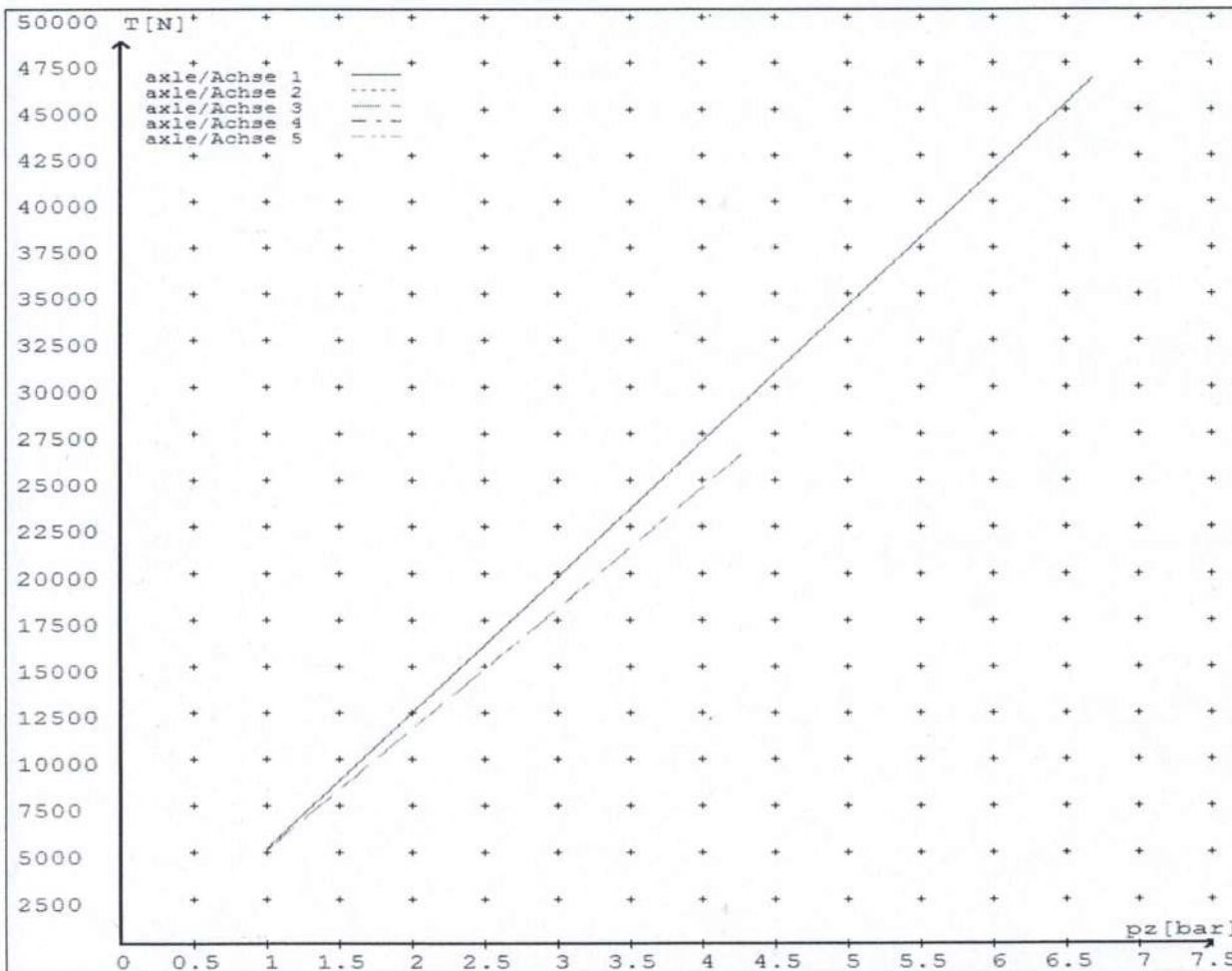
**reference values**

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

	pz [bar]	T [N]	T [N]
axle 1	1.0	5114	
	6.7	46679	
axle 2	1.0	5114	
	6.7	46679	
axle 3	1.0		5018
	4.3		26451
axle 4	1.0		5018
	4.3		26451
axle 5	1.0		5018
	4.3		26451

VIN - no.:

	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	18./	18./	T.14/24	T.14/24	14./
Maximum stroke smax = ...mm maximaler Hub smax = ....mm	64	64	64	64	64
Lever length = ....mm Hebellänge = ....mm	69.08	69.08	69.08	69.08	69.08





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

CERTIFICATE No. JH151125

CUSTOMER NAME

DOMETT TRAILERS LTD

CUSTOMER ORDER No.

4474

DATE RECEIVED

August 2015

VEHICLE TYPE

5 AXLE FULL TRAILER

REG No.

CHASSIS No.

7A9E25015F1023431

**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 18HSCLD65	65 mm	69 mm
3&4	TSE 1416HTLD64	64 mm	69 mm
5	TSE 14HSCLD64	64 mm	69 mm

BRAKE SYSTEM:

WABCO EBS : RSS ACTIVATED

# TEST POINTS FITTED:

3 4 5 7

FRICITION LINING:

(All) Lining Brand

OEM

Aftermarket

JURID 539

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

VALVES: AS PER BRAKE CALCULATION TP51338 & SO208343

TYRE SIZE: 265 70 R 19.5

NOTES

PACKING SLIP NO.

SO208343

PROCESS TIME:

1

BRAKE CALC #TP51338. THE MERITOR CHAMBERS ARE THE TSE VARIANT. THE 1424HTLD64 IN THE CALC ARE USED TO DETERMINE THE SERVICE BRAKE PERFORMANCE. 1616HTLD64 ARE USED TO DETERMINE THE PARK BRAKE PERFORMANCE.

COMPLETION DATE : 18<sup>th</sup> Nov 2015

SIGNATURE (pp.):



# Statement of Compliance with the New Zealand Heavy Brake Rule

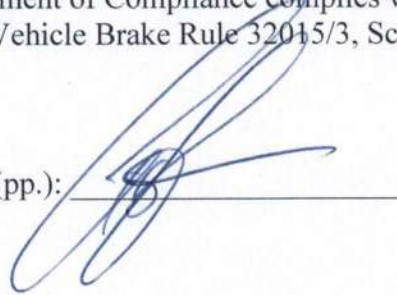
Documentation required supporting Statements of Compliance with the New Zealand Heavy Brake Rule, to be made available to the Statutory Authority on request, must include all calculations and test reports.

## 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: 18<sup>th</sup> Nov 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



**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 32015/3.***

***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 32015/3. 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 (J.H) HVEK)

**NOTICE TO VEHICLE OPERATOR**

This trailer is equipped with an Electronic Brake System.

To comply with the New Zealand Heavy Vehicle Brake Rule 32015/3, 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)

