

# 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) **CHRIS CLARKE** ID **CJC**

Vehicle registration (optional) \_\_\_\_\_ VIN/chassis number **7A9D10010J1023718**

Make **DOMETT** Component being certified:  Chassis  Load anchorage  
 Log bolsters  Towing connection  Brakes  
 SRT  PSV stability  PSV rollover  
 Swept path  PBS

Description of work  
**CERTIFY TO HEAVY VEHICLE BRAKE RULE 32015/4.**  
**NEW ZEALAND HEAVY VEHICLE BRAKE SPECIFICATION.**

Code/standard/rule certified to **SCHEDULE 5** Component load rating(s) **GVM 26,000 Kgs**  
**BRAKES 30,000 Kgs**  
 General drawing number(s) **N/A**

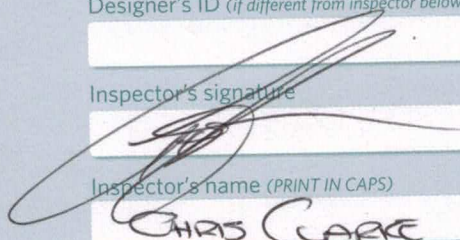
Supporting documents  
**BRAKE CODE CERTIFICATE LC180407**  
**SODC LC180407**

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) **UNTIL MODIFIED or CHANGE OF USE** 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 **17-May-18** Number **639215**

CoF vehicle inspector ID \_\_\_\_\_ CoF vehicle inspector signature \_\_\_\_\_ Date \_\_\_\_\_

All fields are mandatory unless otherwise stated.

# WABCO START-UP LOG

System	Trailer EBS-E	WABCO part number	480 102 064 0
Production date	2017-11-27	Serial number	436041121100M
Serial number (modulator)	000000162275		
Fingerprint Customer EOL / Customer Development / Flash Program	W502664 / 2018-05-17 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00		

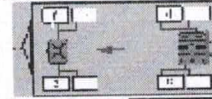
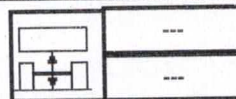
## WABCO

## TRAILER EBS-E

GGVS/ADR TUEH TB 2007 - 019.00  
361-005-16

HERSTELLER MANUFACTURER CONSTRUCTEUR	DOMETT		
TYP TYPE TYPE	4A TANKER, D1001		
VEHICLE IDENT. NUMBER CHASSIS NUMBER NUMERO DE CHASSIS	7A9D10010J1023718		
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL. DE FREINAGE NO.	TP2018ROR		
POLRADZAHNEZAHL c-d   e-f POLE WHEEL TEETH c-d   e-f DENTS ROUE DENTEE 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 virer	
	Zwillingsbereifung Twin Tire Monte jumelée	X	Kippkritisches Fahrzeug Critical Trailer Véhicule critique
Subsystems	SB	I/O	24N

GIO	Pin1	Pin3	Pin4
1	24V-O1	---	---
2	---	---	---
3	ALS2	ALS2	---
4	---	---	---
5	DIAG	DIAG	DIAG
6	---	---	---
7	---	---	---



ACHSE AXLE ESSIEU	pm (bar)		6.5		pm (bar)		0.8		2.0		---		6.5		TYP TYPE		(mm)		(mm)		(bar)	
	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
1	1400	0.4	1.5	7500	4.4	0.4	1.3	---	5.5	-	20	65	76	539	4277							
2	1400	0.4	1.5	7500	4.4	0.4	1.3	---	5.5	-	20	65	76	539	4277							
3	1200	0.3	1.2	7500	4.4	0.4	1.5	---	4.6	-	16 / 24	64	76	479	3078							
4	1200	0.3	1.2	7500	4.4	0.4	1.5	---	4.6	-	16 / 24	64	76	479	3078							
5	0	---	---	0	---	---	---	---	---	-	---	---	---	---	---							

### TEBS-E

Diagnostic memory	OK	Warning lamp control	OK
Parameter setting	carried out	Stop light 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 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	Vehicle ident. no	7A9D10010J1023718
Vehicle type	4A TANKER, D1001	Odometer reading	0.0 km
next Service	0 km	Trip reading	0.0 km
Tester	Chris Clarke	Signature	
Date	2018-05-17 3:08:27 p.m.		

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 20.04.2016

distribution: DOMETT  
 2018 ROR 4A WPC

vehicle manufacturer: DOMETT  
 trailer model : 4A TANKER, D1001  
 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 : Assali Stefen, K, 361-005-16,

		<u>unladen</u>	<u>laden</u>
total mass	P in kg	5200	30000
axle 1	P1 in kg	1400	7500
axle 2	P2 in kg	1400	7500
axle 3	P3 in kg	1200	7500
axle 4	P4 in kg	1200	7500
wheel base	E in mm	5070 - 5070	
centre of gravity height	h in mm	900	1538

	<u>axle 1</u>	<u>axle 2</u>	<u>axle 3</u>	<u>axle 4</u>
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	20.	20.	T.16/24	T.16/24
lever length	1Bh in mm	76	76	76
brake factor	[-]	22.37	22.37	22.37
dyn. rolling radius	rdyn min in mm	421	421	421
dyn. rolling radius	rdyn max in mm	421	421	421
threshold torque	Co Nm	6.0	6.0	6.0

calculation:				
chamber pressure (rdyn min) pH at z=22,5%bar	2.1	2.1	2.1	2.1
chamber pressure (rdyn max) pH at z=22,5%bar	2.1	2.1	2.1	2.1
chamber press. (servo) pcha at pm6,5bar bar	5.5	5.5	4.6	4.6
piston force ThA at pm6,5bar N	6332	6332	4555	4555
brake force (rdyn min) T lad. at pm6,5bar N.	51239	51239	36884	36884
brake force (rdyn max) T lad. at pm6,5bar N	51239	51239	36884	36884
brake force within 1 % rolling friction proportion %	26.7	26.7	23.3	23.3

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

brake cylinder: Meritor 20HSCLD65

axle 2:

valve 1: 480 207 0.. 0 WABCO or 480 207 2.. 0  
EBS relay valve

brake cylinder: Meritor 20HSCLD65

axle 3:

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

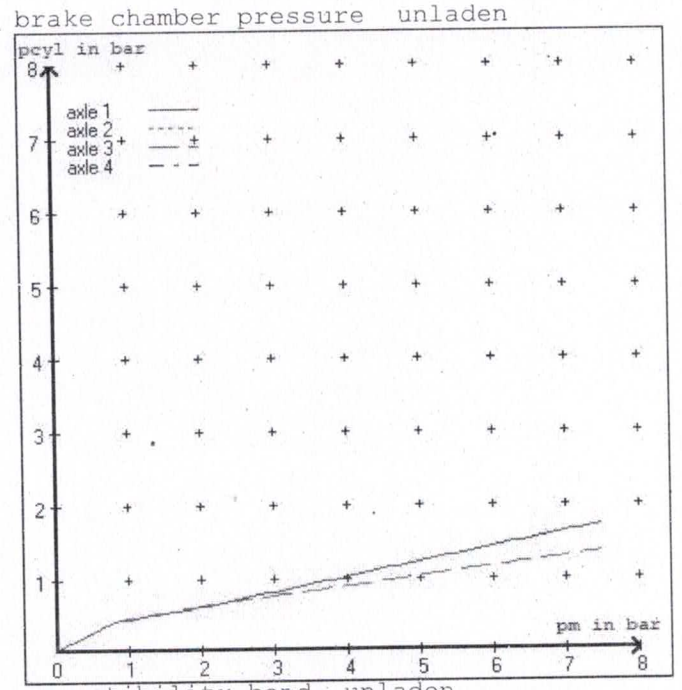
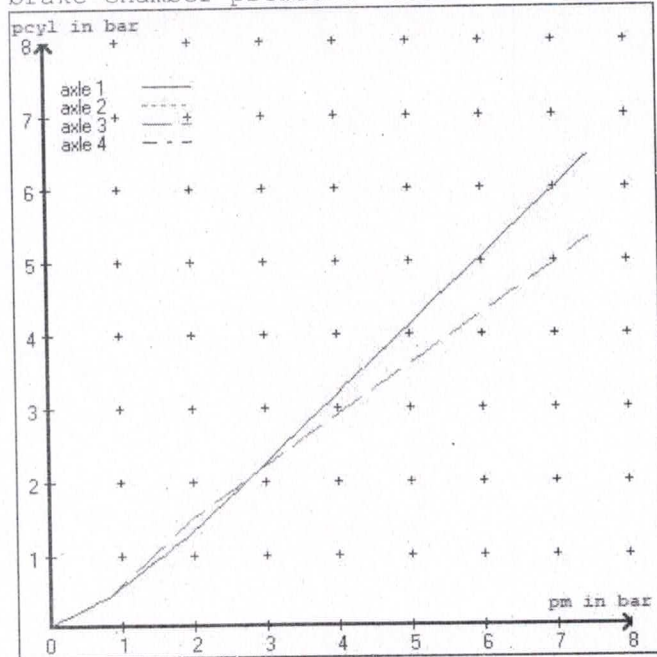
brake cylinder: Meritor 1624HTLD64

axle 4:

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

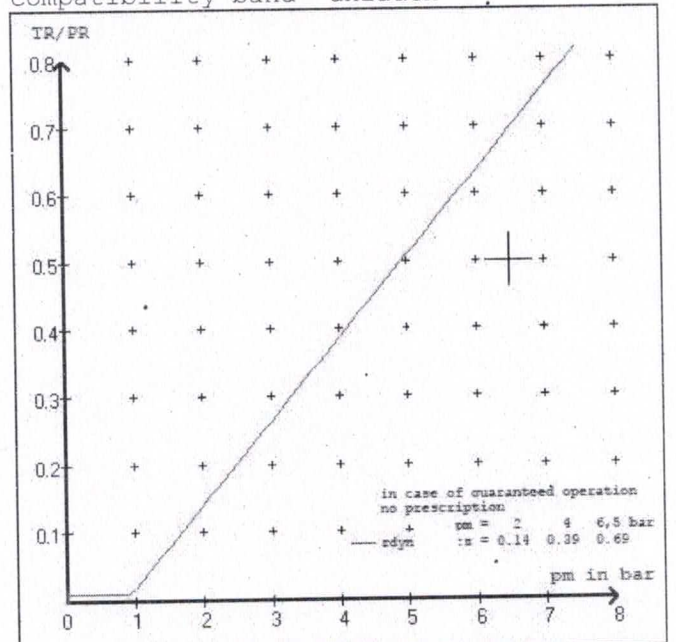
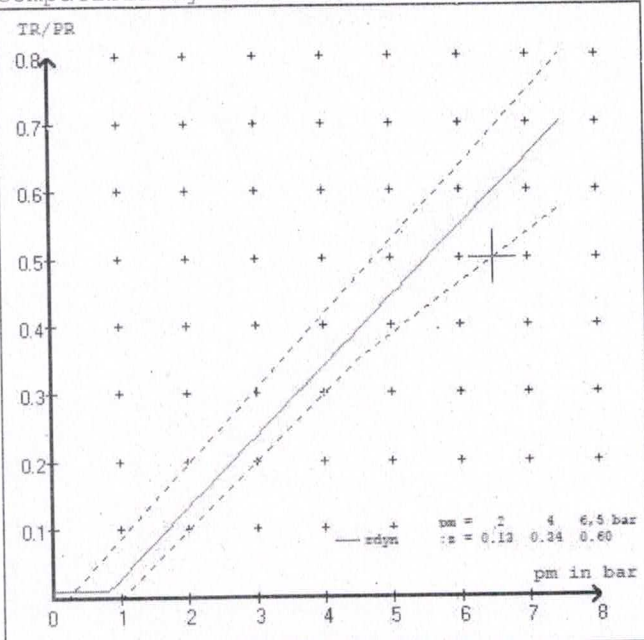
brake cylinder: Meritor 1624HTLD64

test type III (zIII = 0.30)	for rdyn min :	axle1	axle2	axle3	axle4	
at pm 3.6 bar =>	pcha in bar :	2.8	2.8	2.6	2.6	
test type III (zIII = 0.06)	for rdyn min :	axle1	axle2	axle3	axle4	
at pm 1.3 bar =>	pcha in bar :	0.8	0.8	0.9	0.9	



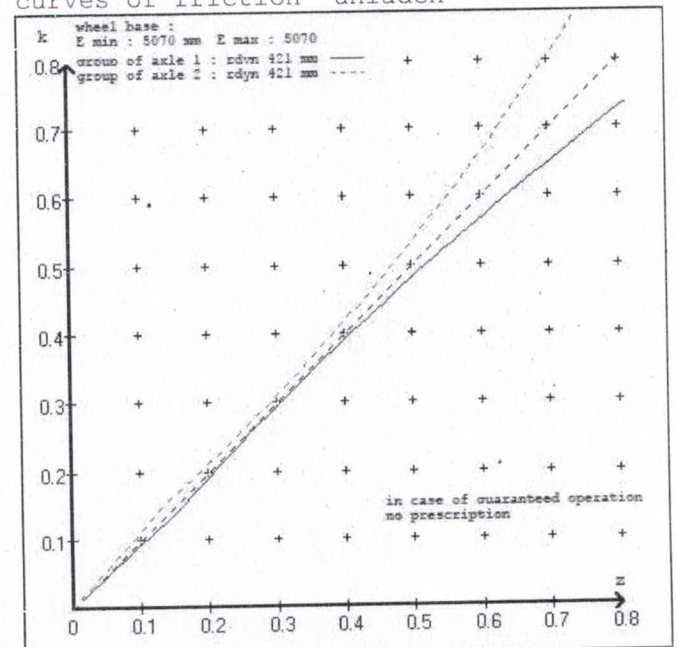
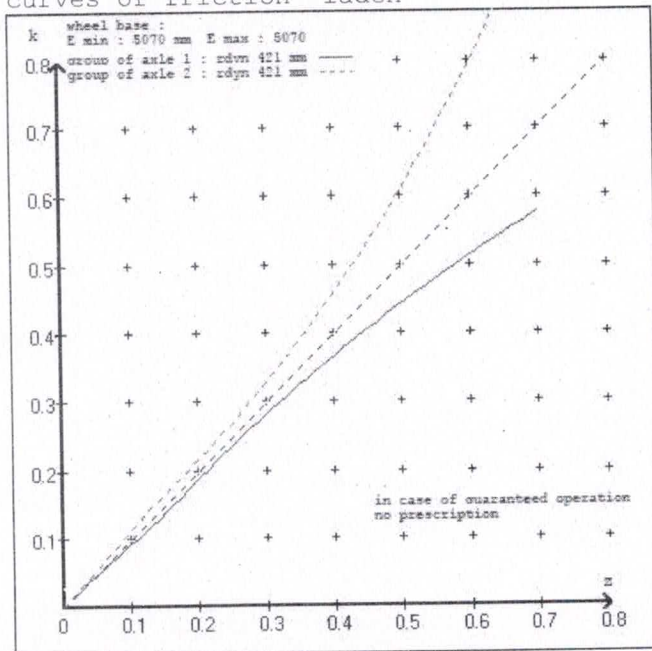
compatibility band laden

compatibility band unladen



curves of friction laden

curves of friction unladen



vehicle manufacturer: DOMETT  
 trailer model : 4A TANKER, D1001  
 trailer type : 4-axle-full-trailer

brake chamber and lever length :  
 axle 1 : 2 x type/diameter 20. (Meritor) lever length 76 mm  
 axle 2 : 2 x type/diameter 20. (Meritor) lever length 76 mm  
 axle 3 : 2 x type/diameter T.16/24 (Meritor) lever length 76 mm  
 axle 4 : 2 x type/diameter T.16/24 (Meritor) lever length 76 mm

brake diagram :

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 : 4A TANKER, D1001  
 trailer type : 4-axle-full-trailer  
 brake calculation no. : TP 2018A

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 = 0.134  
 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	1400	to be	1.5	7500	to be	0.4	1.3	5.5	
2	1400	entered by	1.5	7500	entered by	0.4	1.3	5.5	
3	1200	the vehicle	1.2	7500	the vehicle	0.4	1.5	4.6	
4	1200	manufact.	1.2	7500	manufact.	0.4	1.5	4.6	
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
1400	1.5	1200	1.2
1900	1.8	1700	1.5
2400	2.2	2200	1.7
2900	2.5	2700	2.0
3400	2.8	3200	2.3
3900	3.1	3700	2.5
4400	3.5	4200	2.8
4900	3.8	4700	3.1
7500	5.5	7500	4.6

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

axle 1 : reference axle: Assali StefLM or LC or TMen	brake lining: FER 5200-215
test report : 361-005-16	date : 09-02-2016
axle 2 : reference axle: Assali StefLM or LC or TMen	brake lining: FER 5200-215
test report : 361-005-16	date : 09-02-2016
axle 3 : reference axle: Assali StefLM or LC or TMen	brake lining: FER 5200-215
test report : 361-005-16	date : 09-02-2016
axle 4 : reference axle: Assali StefLM or LC or TMen	brake lining: FER 5200-215
test report : 361-005-16	date : 09-02-2016

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 = 24.4 % Fe
axle 2 (rdyn 421 mm)	T = 24.4 % Fe
axle 3 (rdyn 421 mm)	T = 19.7 % Fe
axle 4 (rdyn 421 mm)	T = 19.7 % 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

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

axle1	ThA = 6332 N
axle2	ThA = 6332 N
axle3	ThA = 4555 N
axle4	ThA = 4555 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 = 49452 N
axle 2 (rdyn 421 mm)	T = 49452 N
axle 3 (rdyn 421 mm)	T = 35608 N
axle 4 (rdyn 421 mm)	T = 35608 N

braking rate of the vehicle (item 4.3.2 to appendix 2 to annex 11)	basic test	type III
	of subject	(calculated)
0.60	trailer (E)	residual
		(hot)braking
		0.58

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 = 49452 N
axle 2 (rdyn 421 mm)	T = 49452 N
axle 3 (rdyn 421 mm)	T = 35608 N
axle 4 (rdyn 421 mm)	T = 35608 N

braking rate of the vehicle (item 4.3.2 to appendix 2 to annex 11)	basic test	type III
	of subject	(calculated)
0.60	trailer (E)	residual
		(hot)braking
		0.58

required braking rate  
(items 1.5.3 and 1.7.2 to annex 11)

>= 0,4 and  
>= 0,6\*E (0.36)



	axle 3	axle 4
no of TRISTOP-actuators per axle line KDZ	2	2
TRISTOP-actuator type	T.16/24	T.16/24
lever length	76	76
stat. tyre radius	401	401
at a stroke of	30	30
min. force of spring brake	7605	7605
sp.brake chamber no Meritor.....	4	4
release pressure	4.8	4.8

calculation:

ratio until road	4.2397	4.2397
$iFb = lBh * \eta * C * rBt / (rBn * rstat)$		
for rstat in mm	401	401
brake force of spring br. Tf in N	63816	63816
$Tf = (TFZ * KDZ - 2 * Co / lBh) * iFb$		
braking rate	0.444	
zf laden		
$zf = \sum (Tf) / P + 0,01$		

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 = 3628 mm for E = 5070 mm  
 =====  
 min Ef = 3628 mm for E = 5070 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 = 1538 mm height of center of gravity - laden
- PR = 15000 kg maximum bogie mass - laden
- P = 30000 kg maximum total mass - laden
- nf = 2 no. of axle(s) with TRISTOP spring brake actuators
- ng = 2 no. of bogie axle(s)

axle manufacturer	axle 1 + 2 + 3 + 4
type of brake	Assali Stefen
type of axle	K
	LM or LC or TM
	361-005-16
test report of characteristic value	
adm. stat. axle load	Pstat in kg 11000
tested axle load	Pe in kg 10200
max. adm. tyre radius	Rezul in mm 999
adm. cam. torque (6,5 bar)	Czul in Nm 940
lining area per brake	AB in cm <sup>2</sup> 304
no. of brake cylinder	- 2
brakefactor (SB) Bf	- 22.37
brakefactor (PB) Bf	- 22.37
threshold torque (Co,dec)	Mo in Nm 6
date	09-02-2016
brake lining	FER 5200-215
cam torque	Ce in Nm 638
brake force	TeIII in daN 5366
stroke	seIII in mm 37
tested tyre radius	Re in mm 518
tested lever length	le in mm 76
threshold torque (Co,e)	in Nm 6

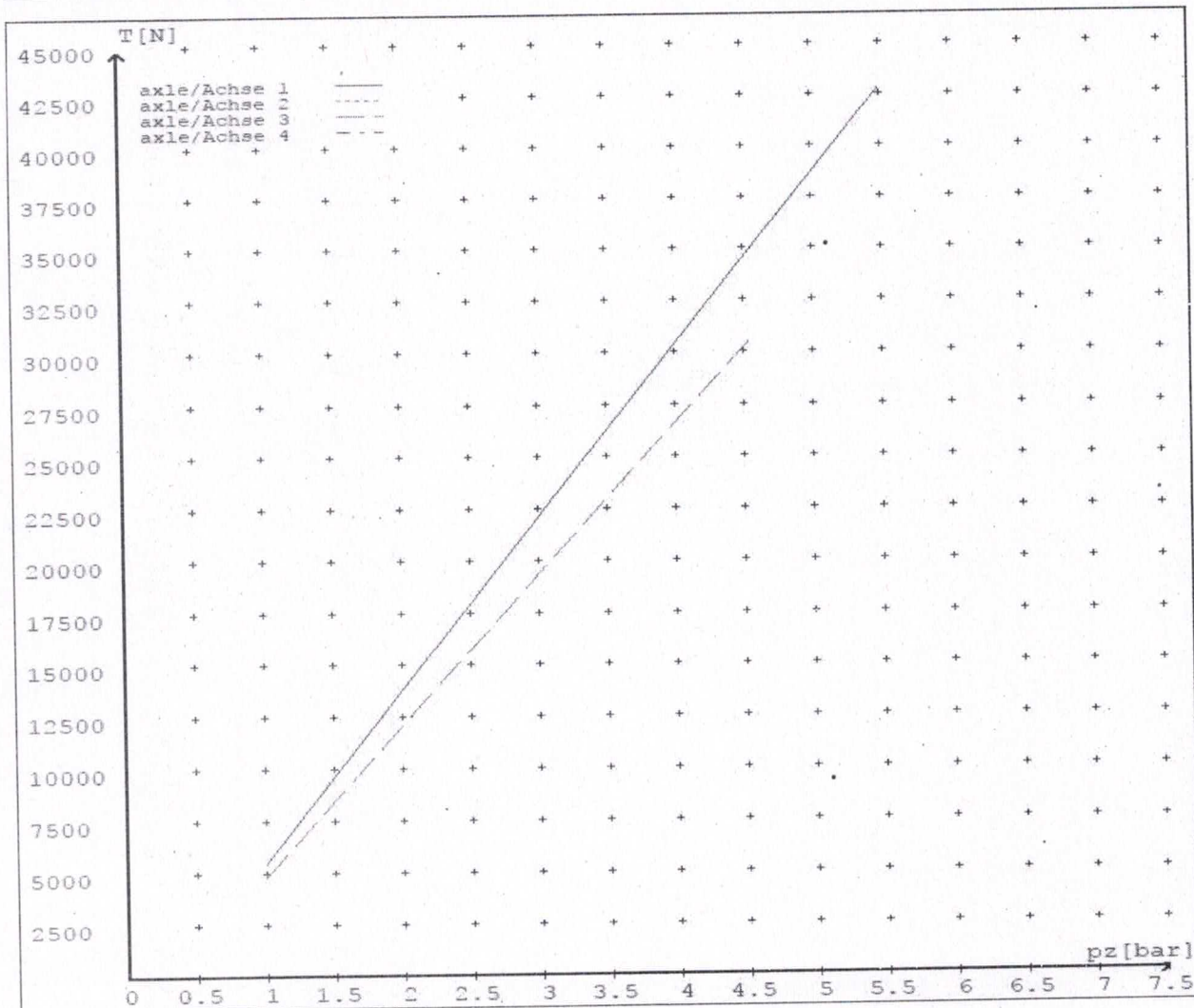
reference values

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

	pz [bar]	T [N]	T [N]
axle 1	1.0	5394	
	5.5	42770	
axle 2	1.0	5394	
	5.5	42770	
axle 3	1.0		4794
	4.6		30788
axle 4	1.0		4794
	4.6		30788

VIN - no.:

	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	20./	20./	T.16/24	T.16/24	/
Maximum stroke smax = ...mm maximaler Hub smax = ....mm	65	65	64	64	
Lever length = ....mm Hebellänge = ....mm	76	76	76	76	



reference values for  $z = 0.5$

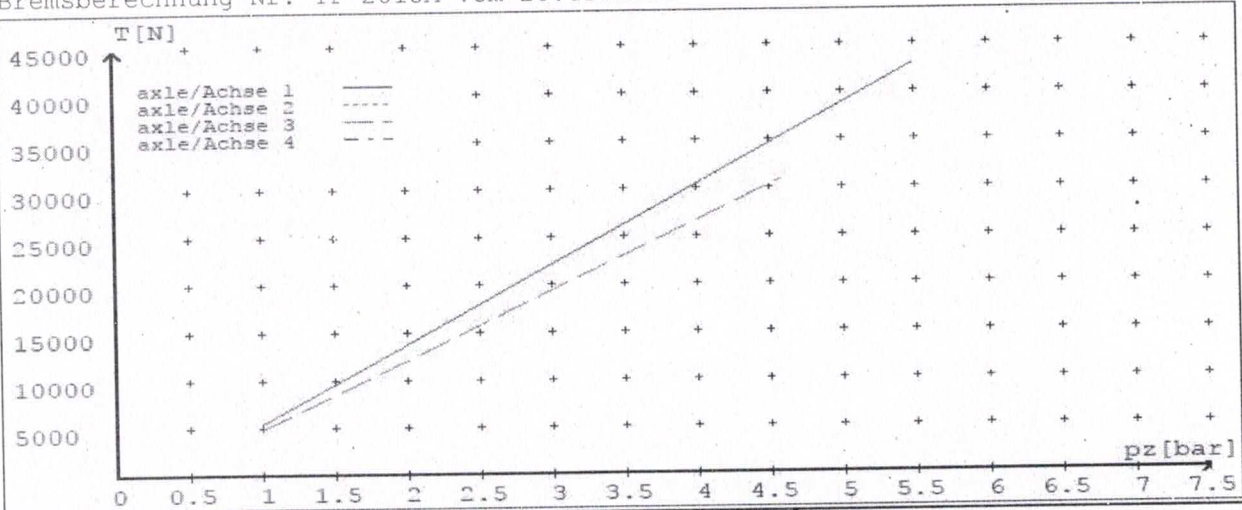
Angabe der Referenzwerte für  $z = 0.5$

brake calculation no: TP 2018A date 20.03.2018

Bremsberechnung Nr: TP 2018A vom 20.03.2018

for max rdyn: 421 mm

für max rdyn: 421 mm



	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	20./	20./	T.16/24	T.16/24	/
Maximum stroke smax = ...mm maximaler Hub smax = ...mm	65	65	64	64	
Lever length = ...mm Hebellänge = ...mm	76	76	76	76	



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

CERTIFICATE NO: LC180407  
CUSTOMER NAME: DOMETT TRAILERS  
CUSTOMER ORDER NO: 5309 DATE RECEIVED: 16/03/2018  
VEHICLE TYPE: FULL TANKER  
VIN / CHASSIS NO: 7A9D10010J1023718

BRIEF SPECIFICATION AS CERTIFIED TO SCHEDULE 5

BRAKE VALVES:	MAKE	TYPE
PRIMARY RELAY:	WABCO	480 102 064 0
SECONDARY RELAY:	WABCO	480 207 001 0
SPRING BRAKE RELAY:	SEALCO	110701
PARK BRAKE VALVE:	SEALCO	17600B
LOCKED RATIO:		
MAKE:		
SETTING:		

OTHER VALVES

OTHER VALVES	MAKE	TYPE	SETTING	

**BRAKE CHAMBERS**

	FRONT	REAR	5TH
MAKE:	HALDEX	BERTOCCO	0
SIZE:	20, 125-200-001	1624	0
STROKE: MM	62mm	57mm	0
SLACK LENGTH: MM	DISC, 76mm	DISC, 76mm	0

**BRAKE CALIPERS**

**BRAKE CALIPERS:**

HALDEX

**FRICTION MATERIAL:**

OEM

Aftermarket

**LINING BRAND**

**LINING BRAND**

**FRONT**

**REAR**

MAT 5200-215

MAT 5200-215

**OTHERS**

**TYRES:**

**FRONT**

**REAR**

265/70R 19.5

265/70R 19.5

**COMMENTS**

EBS, SPECIAL CONDITIONS APPLY. SEE INSTRUCTIONS ON LT400 #

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**NOTES:**

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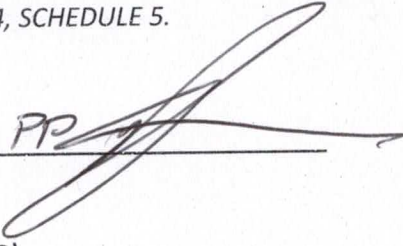
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PACKING SLIP NO. \_\_\_\_\_ PROCESS TIME \_\_\_\_\_

**CONFIRMATION OF COMPLIANCE**

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

DATE: 7/04/2018 SIGNED: 

NAME & ID: LANCE CAWTE (LPC)

PHONE (BUS): 09 980 7300 FAX (BUS): 03 3083277

POSTAL ADDRESS: TRANSPORT SPECIALTIES LTD  
PO BOX 98-971,  
MANUKAU CITY,  
AUCKLAND 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 RELEVANT REQUIREMENTS OF THE CURRENT NEW ZEALAND HEAVY BRAKE RULE 32015/4 SCHEDULE 5.

DATE: \_\_\_\_\_ SIGNED: \_\_\_\_\_

NAME: \_\_\_\_\_

CERTIFIERS ID: \_\_\_\_\_ POSITION: \_\_\_\_\_

PHONE (BUS): \_\_\_\_\_ FAX (BUS): \_\_\_\_\_

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_