

Heavy Vehicle Specialist Certificate

Must be presented to a Transport Service Delivery Agent
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
7A9E15017E1023268

Component being certified:

<input type="checkbox"/> Chassis Modification	<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
HUEK

Description of Work

CARRY OUT COMPLIANCE TO THE NZ HEAVY VEHICLE BRAKE RULE

ROLL STABILITY FUNCTION ACTIVATED

Code/Standard/Rule Certified to Component Load Rating(s)
HUBNZ 32015/3 SCHED 5 33000KG

General Drawing Number(s)
N/A

Supporting Documents
BRAKE CALCULATION - CJC2691

Special Conditions*

WARNING LAMP MUST ILLUMINATE WHEN BRAKE SYSTEM IS OIL FED AND
 + THEN EXTINGUISH IMMEDIATELY OR WHEN VEHICLE EXCEEDS 7KPH

Certification Expiry Date (if applicable) or Hubodometer Reading (whichever comes first)
N/A

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

Date Number
18.09.2014 484941

CoF Vehicle Inspector ID CoF Vehicle Inspector Signature Date

WABCO START-UP PROTOCOL

System	Trailer EBS-E	WABCO part number	480 102 080 0
Production date	2013-12-14	Serial number	437000047500F
Serial number (modulator)	000000026127		
Fingerprint Customer EOL / Customer Development / Flash Program	W503643 / 2014-09-18 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00		

WABCO	TRAILER EBS-E	GGVS/ADR TUEH TB 2007 - 019.00 TDB0749
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HERSTELLER MANUFACTURER CONSTRUCTEUR	DOMETT TRAILERS			GIO	Pin1	Pin3	Pin4
TYP TYPE TYPE	5AFT PLATFORM			1	---	---	---
FAHRZEUG-IDENTNR. CHASSIS NUMBER NUMERO DE CHASSIS	7A9E15017E1023628			2	---	---	---
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO.	TP50956A			3	ALS2	ALS2	---
POLRADZÄHNEZAHL, 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	4	---	---	---
RSS RSS RSS	Einfachbereifung Single Tire Monie simple	Lenkachse Steering axle Essieu vireur	4S/3M	5	DIAG	DIAG	DIAG
	Zwillingsbereifung Twin Tire Monie jumelée	Kipplaches Fahrzeug Critical Trailer Vehicule critique		6	---	---	---
Subsystems	---	I/O	24N	7	---	---	---

ACHSE AXLE ESSIEU	6.5		6.5				pZ	TYP TYPE	(mm)	(mm)	(bar)				
	pm (bar)	6.5	pm (bar)	0.7	2.0	---					6.5	1.0	Pz		
1	1800	1.0	2.4	7500	4.9	0.4	1.4	---	5.7	-	18	65	69	507	3934
2	1800	1.0	2.4	7500	4.9	0.4	1.4	---	5.7	-	18	65	69	507	3934
3	1250	0.6	1.7	6000	3.9	0.4	1.4	---	4.5	-	14 / 16	64	69	498	2771
4	1250	0.6	1.7	6000	3.9	0.4	1.4	---	4.5	-	14 / 16	64	69	498	2771
5	1250	0.6	1.7	6000	3.9	0.4	1.4	---	4.5	-	14	64	69	498	2771

Diagnostic memory	OK	Warning lamp control	OK
Parameter setting	carried out	Stop light power supply	OK
EBS pressure test	Not tested	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 TRAILERS	Vehicle ident. no	7A9E15017E1023628
Vehicle type	5AFT PLATFORM	Odometer reading	0.0 km
next Service	0 km	Trip reading	0.0 km
Tester	Chris Clarke	Signature	
Date	2014-09-18 7:43:02 a.m.		

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

distribution: DOMETT
7A9E15017E1023268
SODC: JH140926

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 C/SIDE
trailer type : 5-axle-full-trailer
remarks : air / hydraulic / VA suspension
WABCO TRAILER - EBS E
TRISTOP 3+4: T.14/16
265/70 R 19,5

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

		<u>unladen</u>	<u>laden</u>
total mass	P in kg	7500	33000
axle 1	P1 in kg	1650	7500
axle 2	P2 in kg	1650	7500
axle 3	P3 in kg	1400	6000
axle 4	P4 in kg	1400	6000
axle 5	P5 in kg	1400	6000
wheel base	E in mm	7850 - 7850	
centre of gravity height	h in mm	1116	2085

	<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	18.	18.	T.14/16	T.14/16	14.
lever length	69	69	69	69	69
brake factor	23.03	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	2.2	2.2	2.0	2.0	2.0
chamber pressure(rdyn max)pH at z=22,5%bar	2.2	2.2	2.0	2.0	2.0
chamber press.(servo)pcha at pm6,5bar	5.9	5.9	4.6	4.6	4.6
piston force	6285	6285	4385	4385	4385
brake force(rdyn min)T lad. at pm6,5bar N	47576	47576	33075	33075	33075
brake force(rdyn max)T lad. at pm6,5bar N	47576	47576	33075	33075	33075
brake force within 1 % rolling friction proportion	%	21.2	21.2	19.2	19.2

braking rate z laden 0.600 for rdyn min
z = sum (TR)/PRmax 0.600 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 1416HTLD64

axle 4:

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

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

brake cylinder: Meritor 1416HTLD64

axle 5:

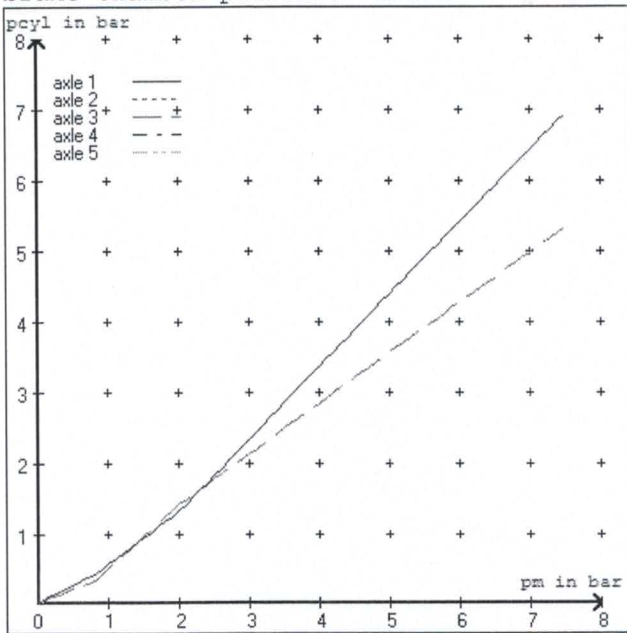
valve 1: 971 002 ... 0 WABCO
 EBS emergency valve

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

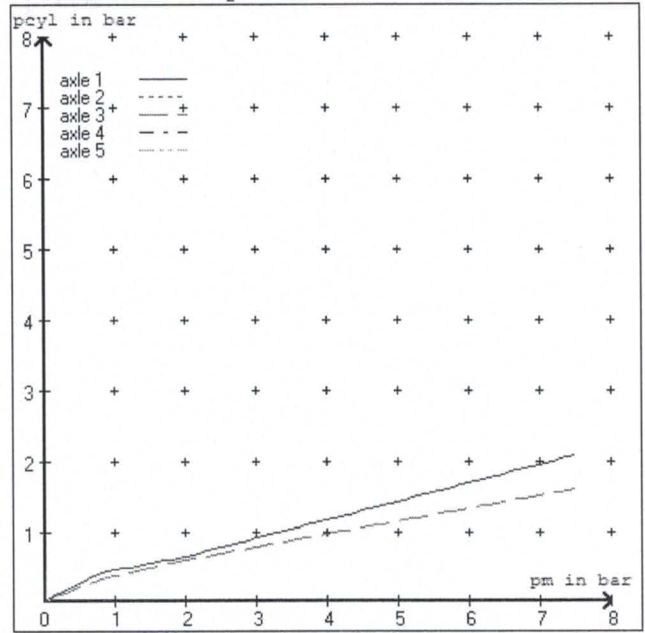
brake cylinder: Meritor 14HSCLD64

test type III (zIII = 0.30)	for rdyn min :	axle1	axle2	axle3	axle4	axle5	
at pm 3.6 bar =>	pcha in bar :	2.9	2.9	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	0.7	0.7	0.7	

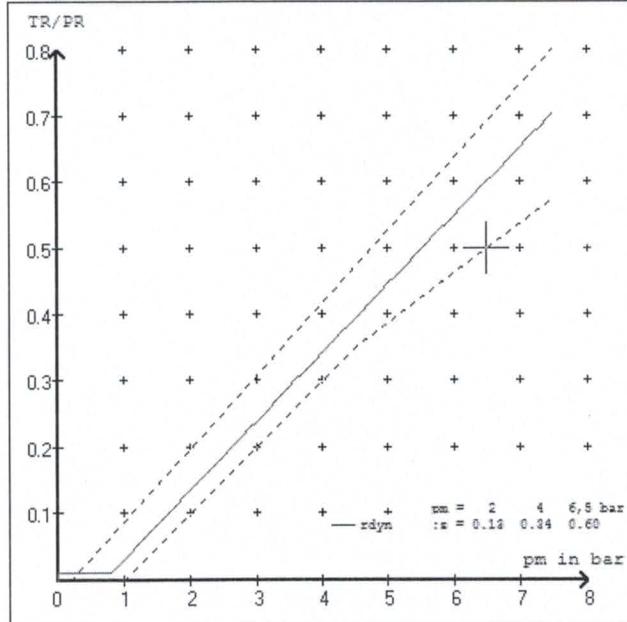
brake chamber pressure laden



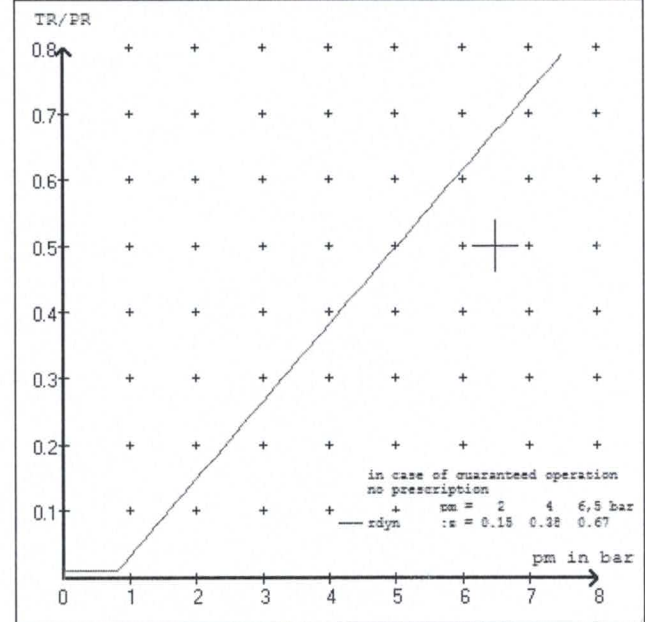
brake chamber pressure unladen



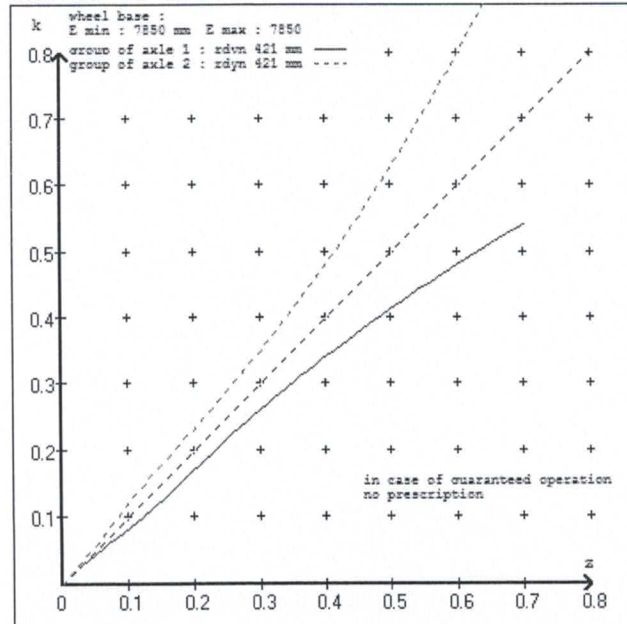
compatibility band laden



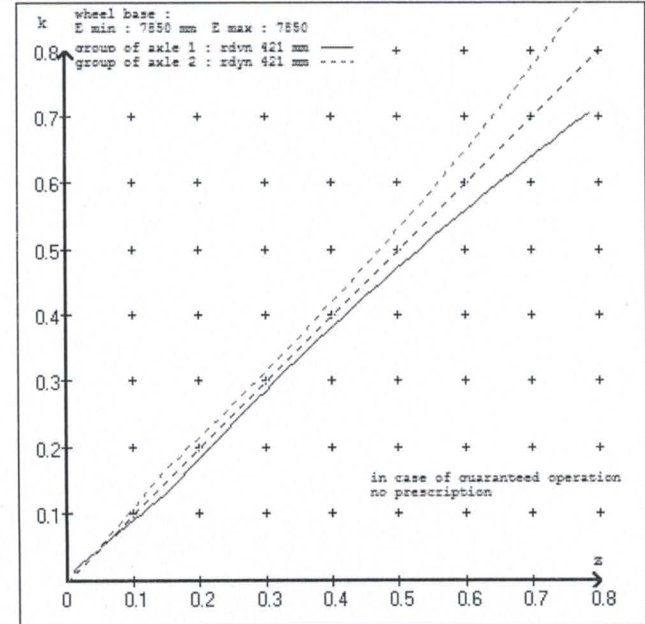
compatibility band unladen



curves of friction laden



curves of friction unladen



vehicle manufacturer: DOMETT
 trailer model : 5AFT C/SIDE
 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.14/16 (Meritor) lever length 69 mm
 axle 4 : 2 x type/diameter T.14/16 (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
 trailer model : 5AFT C/SIDE
 trailer type : 5-axle-full-trailer
 brake calculation no. : TP 51126A

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	1650	to be	1.8	7500	to be	0.4	1.3	5.9
2	1650	entered by	1.8	7500	entered by	0.4	1.3	5.9
3	1400	the vehicle	1.4	6000	the vehicle	0.3	1.4	4.6
4	1400	manufact.	1.4	6000	manufact.	0.3	1.4	4.6
5	1400		1.4	6000		0.3	1.4	4.6

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
1650	1.8	1650	1.8	1400	1.4	1400	1.4	1400	1.4
2150	2.2	2150	2.2	1900	1.7	1900	1.7	1900	1.7
2650	2.5	2650	2.5	2400	2.1	2400	2.1	2400	2.1
3150	2.9	3150	2.9	2900	2.4	2900	2.4	2900	2.4
3650	3.2	3650	3.2	3400	2.8	3400	2.8	3400	2.8
4150	3.6	4150	3.6	3900	3.1	3900	3.1	3900	3.1
4650	3.9	4650	3.9	4400	3.5	4400	3.5	4400	3.5
5150	4.3	5150	4.3	4900	3.8	4900	3.8	4900	3.8
7500	5.9	7500	5.9	6000	4.6	6000	4.6	6000	4.6

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

axle 1	(rdyn 421 mm)	T = 22.4 % Fe
axle 2	(rdyn 421 mm)	T = 22.4 % Fe
axle 3	(rdyn 421 mm)	T = 17.4 % Fe
axle 4	(rdyn 421 mm)	T = 17.4 % Fe
axle 5	(rdyn 421 mm)	T = 17.4 % 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 = 6285 N
axle2	ThA = 6285 N
axle3	ThA = 4385 N
axle4	ThA = 4385 N
axle5	ThA = 4385 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 = 37175 N
axle 2	(rdyn 421 mm)	T = 37175 N
axle 3	(rdyn 421 mm)	T = 25888 N
axle 4	(rdyn 421 mm)	T = 25888 N
axle 5	(rdyn 421 mm)	T = 25888 N

	basic test	type III
	of subject	(calculated)
braking rate of the vehicle	trailer (E)	residual
(item 4.3.2 to appendix 2 to annex 11)	0.60	(hot)braking
		0.47

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

axle 1	(rdyn 421 mm)	T = 37175 N
axle 2	(rdyn 421 mm)	T = 37175 N
axle 3	(rdyn 421 mm)	T = 25888 N
axle 4	(rdyn 421 mm)	T = 25888 N
axle 5	(rdyn 421 mm)	T = 25888 N

	basic test	type III
	of subject	(calculated)
braking rate of the vehicle	trailer (E)	residual
(item 4.3.2 to appendix 2 to annex 11)	0.60	(hot)braking
		0.47

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

reference values

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

	pz [bar]	T [N]	T [N]
axle 1	1.0	4928	
	5.9	39647	
axle 2	1.0	4928	
	5.9	39647	
axle 3	1.0		4843
	4.6		27562
axle 4	1.0		4843
	4.6		27562
axle 5	1.0		4843
	4.6		27562

VIN - no.:

	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	18./	18./	T.14/16	T.14/16	14./
Maximum stroke smax = ...mm maximaler Hub smax =mm	65	65	64	64	64
Lever length =mm Hebellänge =mm	69.08	69.08	69.08	69.08	69.08

