

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) **G DUFFY** ID **GDU**

Vehicle Registration* VIN/Chassis Number **7A9C15038E1023272**

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 **HVEIK**

Description of Work **Trailer Brake system.**

Code/Standard/Rule Certified to **Schedule 5 32013-3** Component Load Rating(s) **NA**

General Drawing Number(s) **NA**

Supporting Documents **Statement of design compliance JH140935**

Special Conditions* **EBS fitted. MUST be powered up & operating. Warning lamp in tow vehicle MUST go out.**

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 **[Signature]**

Inspector's Name (PRINT IN CAPS) **GR DUFFY** ID Number **GDU**

Date **26-Sept-2014** Number **480143**

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
7A9C15038E1023272
SODC: JH140935

please note!

This brake calculation is made under consideration of
-the legal prescriptions 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 : 3ASBF
trailer type : 3-axle-semi-trailer
remarks : air / hydraulic / VA suspension
WABCO TRAILER - EBS E
TRISTOP 1+2: T.14/16
265/70 R 19,5

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

		<u>unladen</u>		<u>laden</u>	
total mass	P in kg	5500	- 6500	33000	- 33000
king-pin	PS kg	1300	- 2300	12990	- 12990
axle 1	P1 in kg		1400		6670
axle 2	P2 in kg		1400		6670
axle 3	P3 in kg		1400		6670
total axle mass	PR in kg		4200		20010
wheel base	E in mm	7900	- 7900		
centre of gravity height	h in mm		1362		2500
K-factor		Kv min	1.7462	Kc min	0.9680
K-factor		Kv max	1.7535	Kc max	0.9680

	<u>axle 1</u>	<u>axle 2</u>	<u>axle 3</u>
no. of combined axles	1	1	1
no. of brake chambers per axle line KDZ	2	2	2
The power output corresponds to	BZ 119.6	BZ 119.6	BZ 122.1
brake chamber manufacturer	Meritor	Meritor	Meritor
chamber size	T.14/16	T.14/16	14.
lever length lBh in mm	69	69	69
brake factor [-]	23.03	23.03	23.03
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	2.2	2.2	2.2
chamber pressure(rdyn max)pH at z=22,5%bar	2.2	2.2	2.2
chamber press.(servo)pcha at pm6,5bar bar	5.4	5.4	5.4
piston force ThA at pm6,5bar N	5187	5187	5187
brake force(rdyn min)T lad. at pm6,5bar N	39199	39199	39199
brake force(rdyn max)T lad. at pm6,5bar N	39199	39199	39199
brake force within 1 % rolling friction proportion %	33.3	33.3	33.3

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 : 841 701 101 0

maximum pressure: 8.5 bar

axle 1:

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

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

brake cylinder: Meritor 1416HTLD64

axle 2:

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

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

brake cylinder: Meritor 1416HTLD64

axle 3:

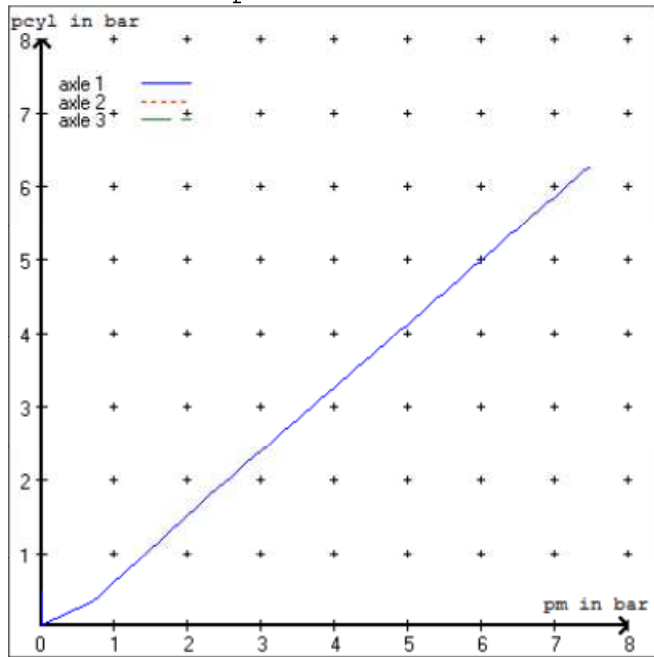
valve 1: 971 002 ... 0 WABCO
EBS emergency valve

valve 2: 480 102 ... 0 () WABCO or 480 207 0.. 0 / 2.. 0
EBS trailer modulator

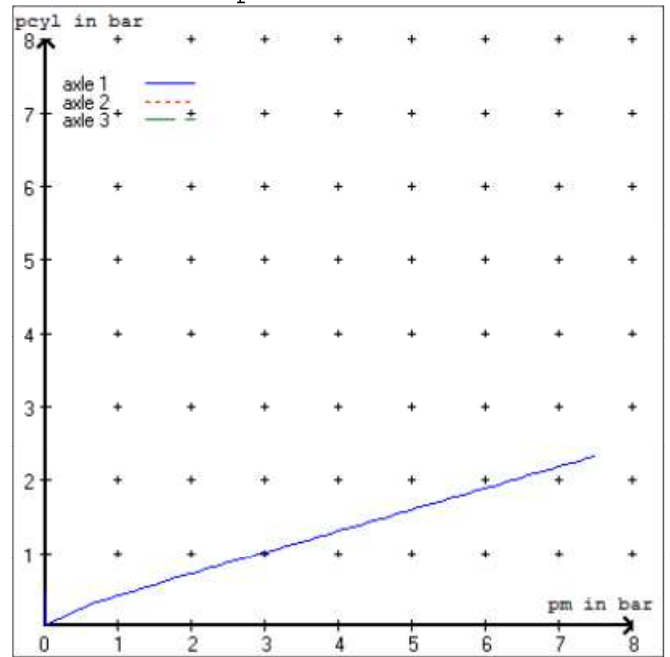
brake cylinder: Meritor 14HSCLD64

test type III (zIII = 0.30) for rdyn min : axle1 axle2 axle3
at pm 3.5 bar => pcha in bar : 2.8 2.8 2.8
test type III (zIII = 0.06) for rdyn min : axle1 axle2 axle3
at pm 1.2 bar => pcha in bar : 0.7 0.7 0.7

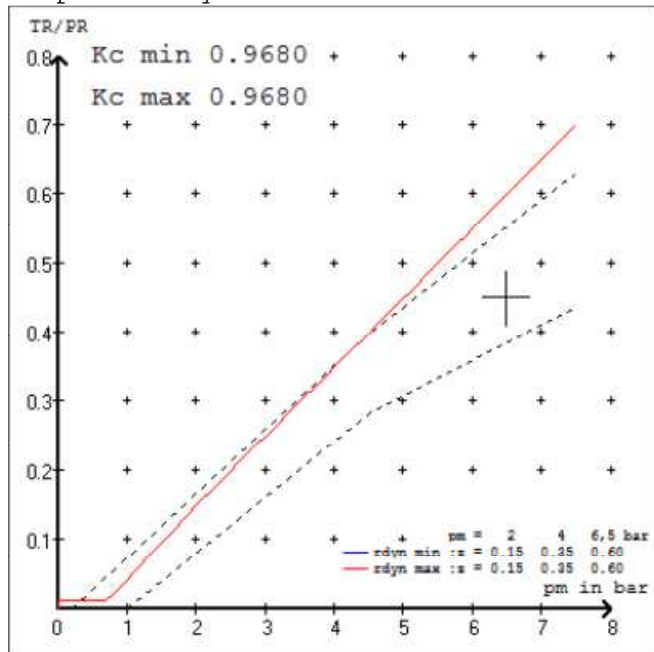
brake chamber pressure laden



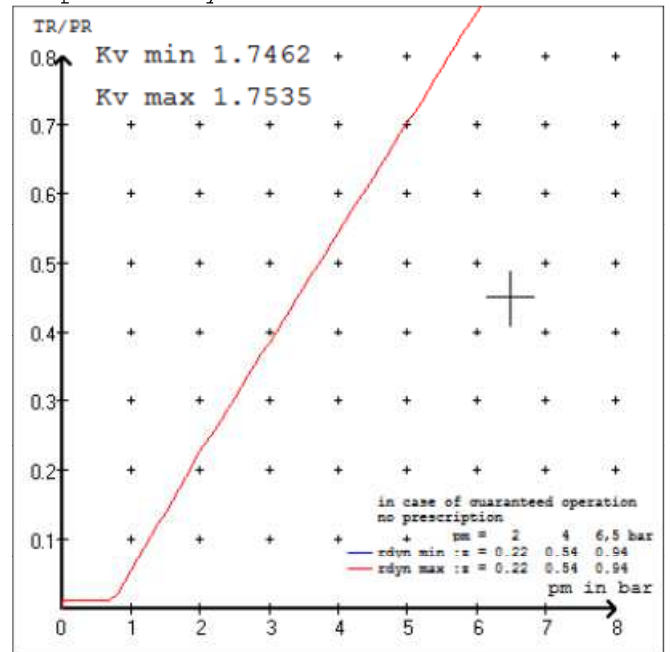
brake chamber pressure unladen



compatibility band laden



compatibility band unladen



vehicle manufacturer: DOMETT
 trailer model : 3ASBF
 trailer type : 3-axle-semi-trailer

brake chamber and lever length :

axle 1 : 2 x type/diameter T.14/16 (Meritor) lever length 69 mm
 axle 2 : 2 x type/diameter T.14/16 (Meritor) lever length 69 mm
 axle 3 : 2 x type/diameter 14. (Meritor) lever length 69 mm

brake diagram : 841 701 101 0

valve :

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

EBS input data

=====
 vehicle manufacturer: DOMETT
 trailer model : 3ASBF
 trailer type : 3-axle-semi-trailer
 brake calculation no. : TP 51133S

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

assignment pm / deceleration z: pm 0.7 bar z = 0.010
 (laden condition) 2.0 bar z = 0.142
 6.5 bar z = 0.600

control pressure pm			6,5	control pressure pm			0.7	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	2.0	6670	to be	0.3	1.5	5.4	
2	1400	entered by the vehicle manufact.	2.0	6670	entered by the vehicle manufact.	0.3	1.5	5.4	
3	1400		2.0	6670		0.3	1.5	5.4	
4	0		0,0	0		0,0	0,0	0,0	0,0
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 load pcyl	axle load pcyl	axle load pcyl
1400	2.0	1400 2.0
1900	2.3	1900 2.3
2400	2.6	2400 2.6
2900	3.0	2900 3.0
3400	3.3	3400 3.3
3900	3.6	3900 3.6
4400	3.9	4400 3.9
4900	4.3	4900 4.3
6670	5.4	6670 5.4

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

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 = 19.6 % Fe
axle 2	(rdyn 421 mm)	T = 19.6 % Fe
axle 3	(rdyn 421 mm)	T = 19.6 % Fe

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

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

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

axle1	ThA = 5187 N
axle2	ThA = 5187 N
axle3	ThA = 5187 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 = 30655 N
axle 2	(rdyn 421 mm)	T = 30655 N
axle 3	(rdyn 421 mm)	T = 30655 N

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

basic test	type III
of subject	(calculated)
trailer (E)	residual
	(hot)braking
0.60	0.47

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 = 30655 N
axle 2	(rdyn 421 mm)	T = 30655 N
axle 3	(rdyn 421 mm)	T = 30655 N

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

basic test	type III
of subject	(calculated)
trailer (E)	residual
	(hot)braking
0.60	0.47

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

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

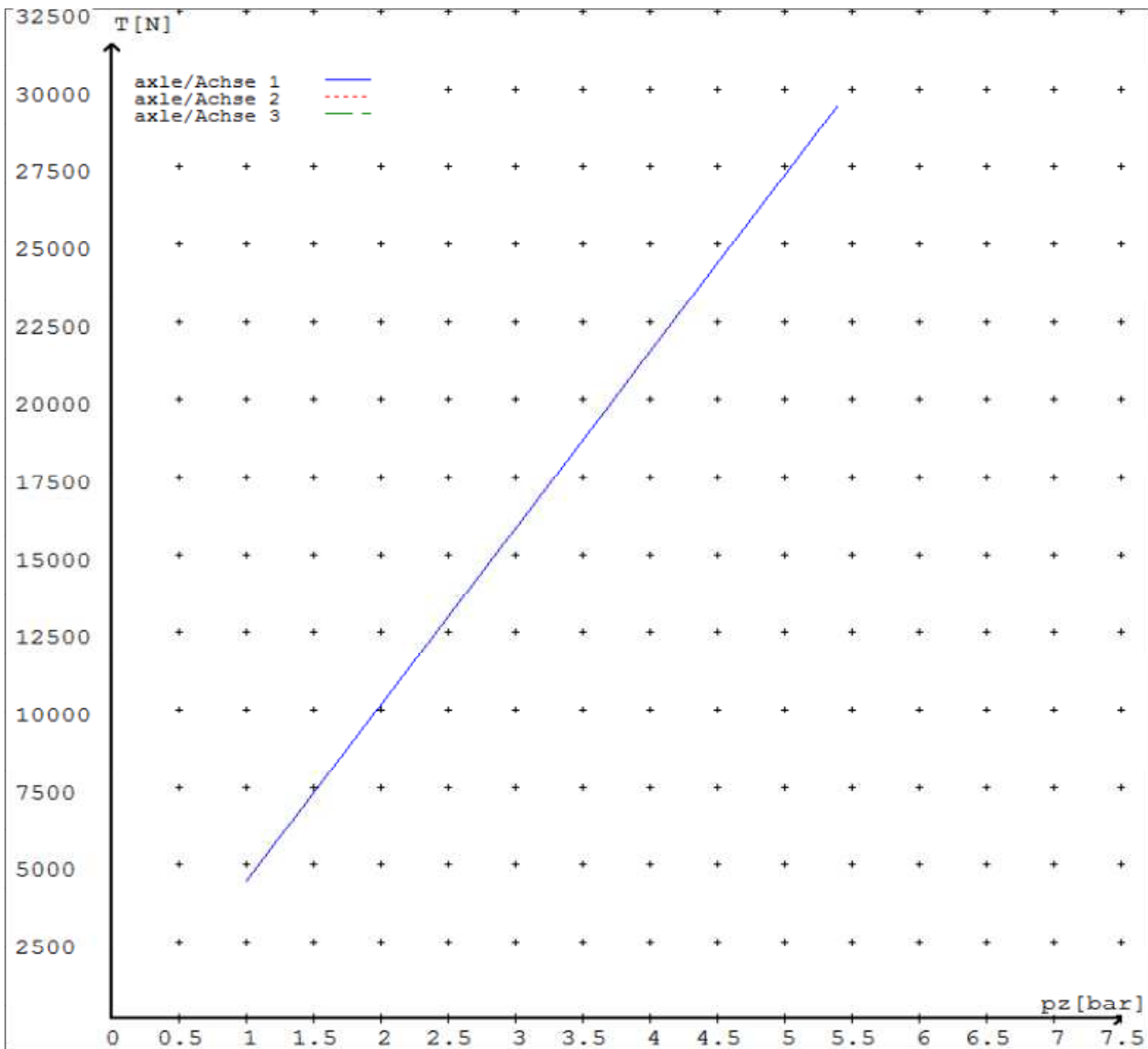
reference values

reference values for z = 45% for max rdyn: 421 mm

	pz [bar]	T [N]	T [N]
axle 1	1.0		4416
	5.4		29448
axle 2	1.0		4416
	5.4		29448
axle 3	1.0		4416
	5.4		29448

VIN - no.:

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



reference values for $z = 0.45$

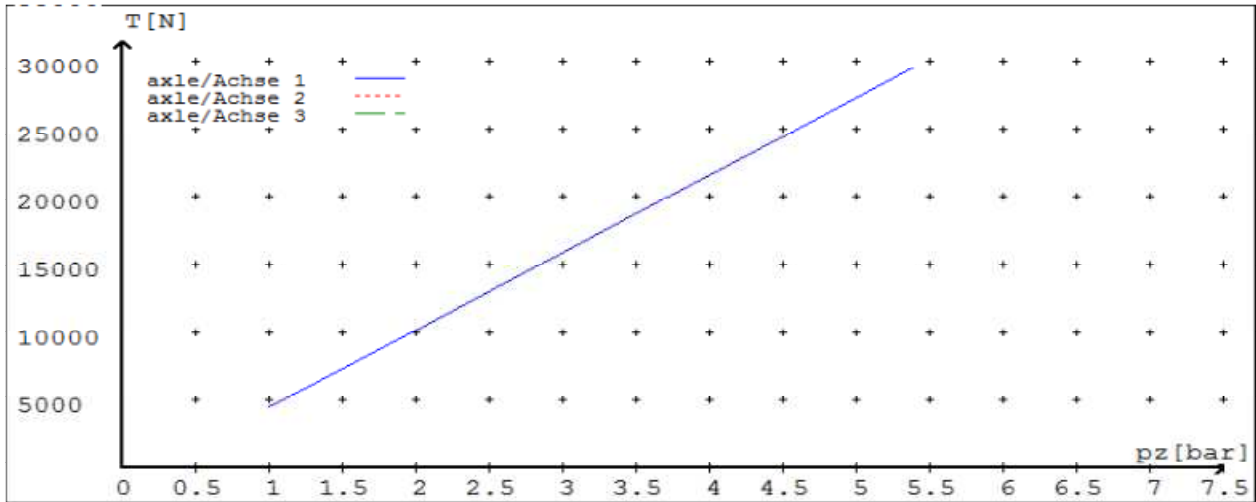
Angabe der Referenzwerte für $z = 0.45$

for max r_{dyn}: 421 mm

für max r_{dyn}: 421 mm

brake calculation no: TP 51133S date 25.09.2014

Bremsberechnung Nr: TP 51133S vom 25.09.2014



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