

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 Manufactur RONALD STUART PI		ation's Name (PR	INT IN CAPS)	TRSP
Vehicle Registration*	VIN/Chassis Num 7A9C2 Chassis Mod	0034E	Load Anchorage	Log Bolsters
Certification Category HVEK	PSV Stability PBS		PSV Rollover	Swept Path
Description of Work				
•	•			
Code/Standard/Rule Certified to		Component L	.oad Rating(s)	
NZHVB RULE Schedule 5		1 Section	GVM:	30,000 Kg
General Drawing Number(s) Domett 4261 Supporting Documents Brake Cert Number: JH14	1041	RSS S	Switched on D	Dual Tyres
Special Conditions* EBS Control - Warning Lamp m immediately, or when vehicle re Certification Expiry Date (if applicable) n/a			ion switched (
Declaration the undersigned, declare that I am the Heavy Vehi Inspector identified and I hold a current valid ap certify that the above mentioned vehicle comport manufacture and installation, and this certificat in all respects with the Land Transport Rule: Vehic Compliance 2002 and my Appointment. To the knowledge the information contained in the Certificat and correct.	ppointment. I nent's design, ion complies cle Standards best of my	n/a Inspector's Sig 29 Inspector's Na	A THE STUART PL ILD STUART PL Nur	ID Number RATT T R S
			_	485845
CoF Vehicle Inspector ID	CoF Vehicle Inspect		Date	
All fields excluding those mark	ked with * must be cor	npleted before t	his certificate can be	e accepted. Version No. 10/13

V	VA	B	CO				TR	AILE	ER E	BS	·E	GGVS/A TDB074		H TB 2007 -	019.0X
HERSTELI MANUFAC CONSTRU	TURER	DON	IETT					GIO	P	'in1		Pin3		Pi	n4
ТҮР ТҮРЕ			3ASB	F C/S	IDE			1						2.	•
TYPE FAHRZEU CHASSIS	G IDENTNR.		7490	20034	E1023	284		2							-
NUMERO	DE CHASSIS				L 1023	204		4							
	ALCULATION NO. E FREINAGE NO.		TP51	156S			-	5	D	IAG		DIAG		- Di	194
POLE WHI	ÄHNEZAHL c-d e EL TEETH c-d e DUE DENTÉE c-d	-f	90	/	ABS-System ABS system Système ABS	2S/2M		6	U	IAG 		DIAG			4G
RSS RSS RSS	Einfachbereifu Single Tire Monte simple	ng		Lenkachse Steering axle Essieu vireur				7						-	-
19990	Zwillingsbereit Twin Tire Monte jumelée	(11) (1) (1) (1) (1) (1) (1) (1) (1) (1)	X	Kippkritischer Critical Trailer Véhicule critic	gaaraata									•	
Subsy	stems			I	/0 2	24N				П	E				
										00			181 +	0	(bar)
	pm (b	ar)	6.5	pm	(bar)	0.8	2.0		6.5					1.0	Pz
ACHSE XXLE ESSIEU	 ↓ (kg)	8	0	₽₽₽	(B)		(0)		pz		TYP TYPE	(mm)	(mm)	TR (daN)
1	1200	0.4	1.7	6400) 4.0	0.3	1.3		5.2	-	14 / 16	64	69	438	2824
2	1200	0.4	1.7	6400) 4.0	0.3	1.3		5.2	-	14 / 16	64	69	438	2824
3	1200	0.4	1.7	6400) 4.0	0.3	1.3		5.2	-	14	64	69	438	2824
4	0			0						-					
5	0			0											

Statement of Design Compliance <u>S.O.D.C. number: JH141041</u>

For Heavy vehicle brake specification (Schedule 5) of HV Brake Rule 32015/3

Vehicle details:

Make:	DOMETT T&T					
Model:	C2003					
VIN#:	7A9C20034E1023284					
Chassis#:	1284					
GCM (kgs):	N/A					
GVM (kgs):	30,000					
Wheelbase (mm):	6900					
Axle test report #:	TDB 0749 (300 mm Air bag Suspension)					
Туре:	3AS B Front SAF Disc brake					

Component Details:

u Santa II. (1992) e na mangana sa	Front	Rear		
Lever length (mm):	69	69		
Brake chamber size:	TSE1416HTLD64	TSE14HSCLD64		
Tyre size:	265 70 R 19.5	265 70 R 19.5		
Drawing number:	C20	003		
(for component reference)				
Brake calculation#:	TP 51156			
PREV/OPTI exemption#:	: N/A			

I declare that I am a Heavy Vehicle Specialist Certifier – Engineer and I hold a current valid appointment. I certify that this vehicle component design and this certification comply in all respects with the Land Transport Rule: **Vehicle Standards Compliance 2002;** my Deed of Appointment and applicable requirements. To the best of my knowledge the information contained in this certificate is true and correct.

Date: 30 October 2014

Name: John Hirst (HVEK) Certifier ID: JEH

I,, certify that the braking system has been assembled and programmed*) to the requirements of this Design Certificate.

Signed:

Dated:

*) Programmed according to WABCO's End of Line protocol requirements where applicable and that the air suspension parameter pressures suit the suspension design & air bellow size.

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

distribution:	이 전문 전 전 전 전 전 전 전 전 전 전 전 전 전 전 전 전 전 전	OOMETT 7A9C20034E1023284 GODC: JH141041		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!
vehicle manufa	cturer:	DOMETT		WABCOBrake V6.14.04.20 db 08.07.2014
trailer model	:	3ASBF C/SIDE		

trailer type	:	3-axle-semi-trailer
remarks	:	air / hydraulic / VA suspension WABCO TRAILER - EBS TRISTOP 1+2: T.14/16 265/70 R 19,5

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

		unladen	laden
total mass	P in kg	5000 - 6000	30000 - 30000
king-pin	PS kg	1400 - 2400	10800 - 10800
axle 1	P1 in kg	1200	6400
axle 2	P2 in kg	1200	6400
axle 3	P3 in kg	1200	6400
total axle mass	PR in kg	3600	19200
wheel base	E in mm	6900 - 6900	
centre of gravity height	h in mm	1200	2000
K-factor		Kv min 1.8346	Kc min 1.0370
K-factor		Kv max 1.8346	Kc max 1.0370

	axle 1	axle 2	axle 3
no. of combined axles	1	1	1
no. of brake chambers per axle line KDZ	1 2	1	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 1Bh 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 chamber pressure(rdyn max)pH at z=22,5%bar chamber press.(servo)pcha at pm6,5bar bar piston force ThA at pm6,5bar N brake force(rdyn min)T lad. at pm6,5bar N brake force(rdyn max)T lad. at pm6,5bar N brake force within 1 % rolling friction proportion %	2.1 2.1 5.2 4986 37658 37658 33.3	5.2 4986	2.1 2.1 5.2 4986 37658 37658 37658 33.3
braking rate z laden	0.60	0 for r	dyn min

Draking	Lace 2	Tauen	0.000	TOT	Luyn 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: 480 102 ... 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

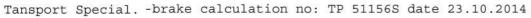
axle 3: valve 1: 971 002 ... 0 WABCO EBS emergency valve

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

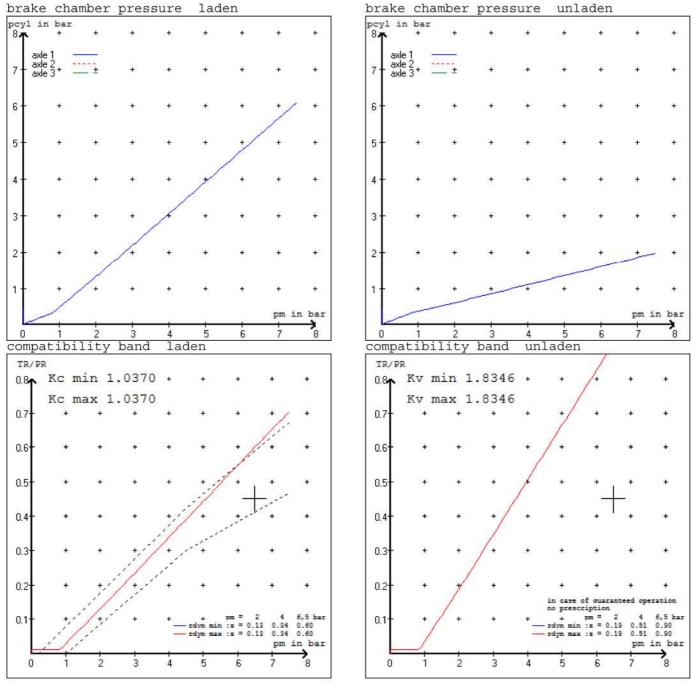
brake cylinder: Meritor 14HSCLD64

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test type III(zIII = 0.30)for rdyn min : axle1 axle2 axle3at pm 3.6 bar =>pcha in bar : 2.7 2.7 2.7test type III(zIII = 0.06)for rdyn min : axle1 axle2 axle3at pm 1.3 bar =>pcha in bar : 0.7 0.7
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Tansport Special. -brake calculation no: TP 51156S date 23.10.2014 page 4 / 7 vehicle manufacturer: DOMETT trailer model : 3ASBF C/SIDE 3-axle-semi-trailer trailer type : brake chamber and lever length : axle 1 :2 x type/diameterT.14/16 (Meritor)lever length 69 mmaxle 2 :2 x type/diameterT.14/16 (Meritor)lever length 69 mmaxle 3 :2 x type/diameter14. (Meritor)lever length 69 mm brake diagram : valve : WABCO EBS emergency valve WABCO EBS trailer modulator WABCO EBS trailer modulator or 480 207 0.. 0 / 2.. 0 971 002 ... 0 480 102 ... 0 480 102 ... 0 EBS input data ______ vehicle manufacturer: DOMETT trailer model : 3ASBF C/SIDE trailer type : 3-axle-semi-trailer : TP 51156S brake calculation no. 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

	contro	ol pressure pm	6,5	contro	ol pressure pm	0.8	2.0	6.5
axle	axle load unladen	bellow pr. unladen	brake pr. unladen	axle load laden	bellow pr. laden	br	ake p laden	
1	1200	to be	1.7	6400	to be	0.3	1.3	5.2
2	1200	entered by	1.7	6400	entered by	0.3	1.3	5.2
3	1200	the vehicle	1.7	6400	the vehicle	0.3	1.3	5.2
4	0	manufact.	0,0	0	manufact.	0,0	0,0	0,0
5	0		0,0	0		0,0	0,0	0,0

6.5 bar z = 0.600

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	l pcyl	axle load	pcyl
1200	1.7	1200	1.7	1200	1.7
1700	2.0	1700	2.0	1700	2.0
2200	2.4	2200	2.4	2200	2.4
2700	2.7	2700	2.7	2700	2.7
3200	3.0	3200	3.0	3200	3.0
3700	3.4	3700	3.4	3700	3.4
4200	3.7	4200	3.7	4200	3.7
4700	4.1	4700	4.1	4700	4.1
6400	5.2	6400	5.2	6400	5.2

Tansport Special. -brake calculation no: TP 51156S date 23.10.2014 page 5 / 7 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 date : 20130930 30.09.2013 test report : TDB 0749 ECE axle 3 : reference axle: SAF brake lining: Jurid 539 SBW 1937 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) (rdyn 421 mm) axle 1 T = 18.8 % Fe axle 2 (rdyn 421 mm) T = 18.8 % Fe T = 18.8 % Fe axle 3 (rdyn 421 mm) calculated actuator stroke in mm (item 4.3.1.1 of appendix 2 to annex 11) (sp = 56 mm)axle 1 s = 39 mmaxle 2 (sp = 56 mm)s = 39 mmaxle 3 (sp = 56 mm)s = 39 mmaverage thrust output in N at pm = 6,5 bar (however max. pcha = 7,0 bar) axle1 ThA = 4986 Naxle2 ThA = 4986 Naxle3 ThA = 4986 Ncalc. residual (hot) braking force in N (item 4.3.1.4 of appendix 2 to annex 11) axle 1 (rdyn 421 mm) T = 29453 Naxle 2 (rdyn 421 mm) T = 29453 NT = 29453 Naxle 3 (rdyn 421 mm) basic test type III of subject (calculated) trailer (E) residual braking rate of the vehicle (hot) braking (item 4.3.2 to appendix 2 to annex 11) 0.60 0.47 >= 0, 4 and required braking rate (items 1.5.3 and 1.7.2 to annex 11) >= 0,6*E(0.36)axle 1 (rdyn 421 mm) T = 29453 NT = 29453 Naxle 2 (rdyn 421 mm) axle 3 (rdyn 421 mm) T = 29453 Nbasic test type III of subject (calculated) trailer (E) residual braking rate of the vehicle (hot) braking (item 4.3.2 to appendix 2 to annex 11) 0.60 0.47 required braking rate >= 0,4 and >= 0,6*E (0.36) (items 1.5.3 and 1.7.2 to annex 11)

spring parking brake

	<u>axle 1</u>	axle 2
no of TRISTOP-actuators per axle line KDZ	2	2
TRISTOP-actuator type		T.14/16
lever length lBh in mm	69	69
stat. tyre radius rstat max in mm	401	401
at a stroke of s in mm	30	30
min. force of spring brake TFZ in N	6160	6160
sp.brake chamber no Meritor	4	4
release pressure pLs in bar		
	4.5	4.5
calculation:		
ratio until road	3.9674	3.9674
iFb = 1Bh*Eta*C*rBt/(rBn*rstat)		
for rstat in mm	401	401
brake force of spring br. Tf in N	48188	
Tf = (TFZ*KDZ-2*Co/1Bh)*iFb	10100	10100
braking rate zf laden	0.522	
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 = minimum distance between front axle(s) (trailer) or support (semitrailer) and the rear axle(s) (resultant of the bogie) Ε wheel base = 0.80 maximum permissible frictional connection required fzul = 0.18 maximum required braking ratio of the parking brake zferf =2000 mm height of center of gravity - laden h = = 19200 kg maximum bogie mass - laden PR = 30000 kg maximum total mass - laden Ρ 2 no. of axle(s) with TRISTOP spring brake actuators nf = no. of bogie axle(s) 3 ng =

reference values

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

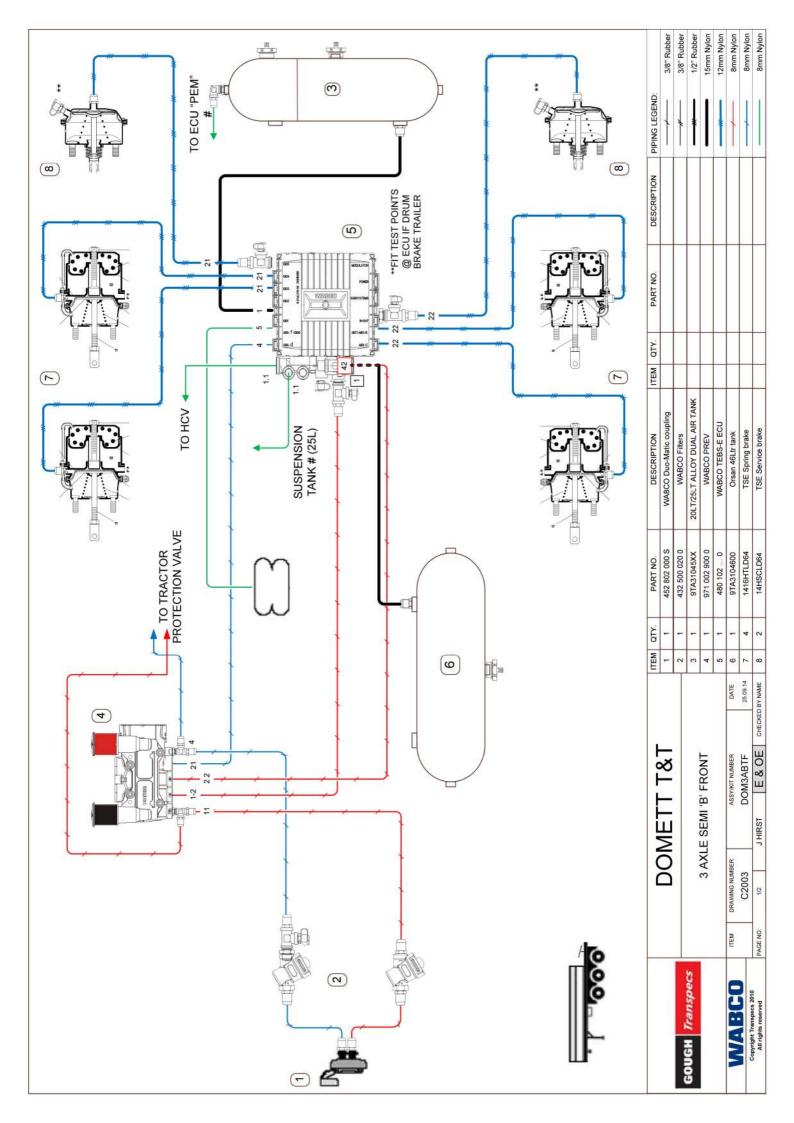
	pz [bar]	T [N]	T [N]
axle 1	1.0 5.2		4389 28243
axle 2	1.0 5.2		4389 28243
axle 3	1.0 5.2		4389 28243

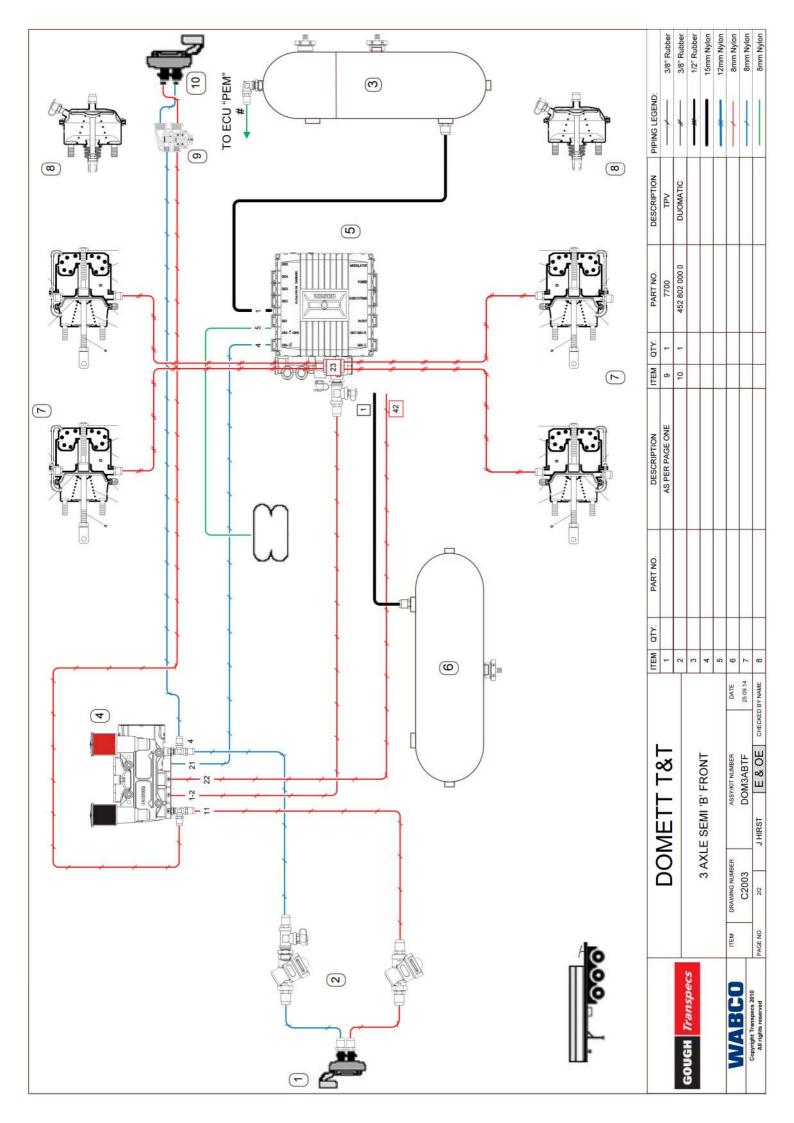
VIN - no.:

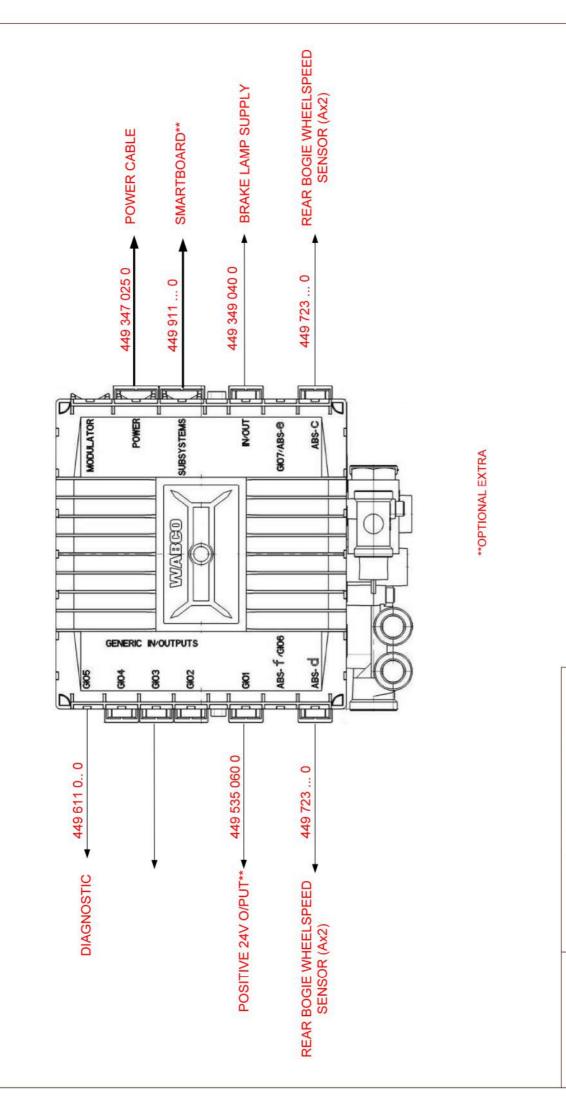
		Axle	(s) / Achs	e(n)	
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	T.14/16	T.14/16	14./	/	/
Maximum stroke smax =mm maximaler Hub smax =mm	64	64	64		
Lever length =mm Hebellänge =mm	69.08	69.08	69.08		

	T[N]														
30000		+	+	+	+	+	+	+	+	+	+	+	+	+	+
27500	axle/ axle/ axle/	Achse Achse Achse +	1	•	٠	٠	٠	٠	+	1	·	+	+	÷	ŧ
25000	+	+	+	+	٠	•	٠	+	./	÷	+	+	+	٠	+
22500	+	+	٠	+	٠	+	٠	•/		+	٠	+	+	٠	×
20000	+	٠	÷	+	+	+	•/		+	+	:•)	+	84	٠	+
17500	+	+	+	٠	٠	•	/.	+	٠	+	٠	+	+	+	÷
15000	+	+	•	+	•	/.	+	+	+	+	+	+	+	+	+
12500	+	٠	٠	÷	1.	٠	٠	+	٠	+	٠	+	+	+	÷
10000	+	+	+	/	+	٠	٠	+	+	+	+	+	+	+	+
7500	+	+	1	+	+	+	÷	+	+	+	+	+	+	+	+
5000	+	•/	+	+	+	٠	·	+	+	÷	+	+	+	٠	+
2500	+	+	+	+	+	٠	÷	+	+	+	+	+	+	+	÷
														pz[bar]
	0 0.5	5 1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5

	ce valu der Ref					0.45	5						rdyn: rdyn:		
remsbe	alculat rechnun								4				~~		
30000 1	T[N]	+	+	+	+	+	+		+	+	+	+	+	+	+
25000	axle/Ac axle/Ac axle/Ac	chse 2			+	٠	.+	•	,		+	+	٠	+	+
20000	+	+	+	+	+	+		1.	+	٠	+	+	+	+	+
15000	٠	+	+	+	+	+	+	٠	+	+	+	٠	٠	+	+
10000	٠	+	+	1	+	+	+	٠	٠	٠	+	٠	٠	+	+
5000	+	t	+	÷	+	+	+	+	+	÷	÷	٠	+	+	+
		r												pz[k	ar
(0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.
									Axle	(s) /	Achse	(n)			
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)					T.14/16 T.14/16 1		14	/		/		/			
	troke smax Hub smax					64	4	6	4	64					
Lever leng	gth = e =mm	mm				69.	08	69.	08	69.	08				









HVBR WORKSHEET (procedure & compliance documentation sheet)

	CERTIFIC	ATE No.	JH141041						
CUSTOMER NAME		DOMETT T&T							
CUSTOMER ORDER No.	4261	DATE	RECEIVED	August 2014					
VEHICLE TYPE	3 AXL	3 AXLE SEMI TRAILER (B FRC							
REG No. CH	IASSIS No.	7.	A9C20034E1	023284					
BRIEF SPECIFICATION AS CERTIFIED TO HVBR									
BRAKE CHAMBERS: Type: 1416HTLD64 (TSE) : Max stroke = 64 mm Lever length = 69 mm Type: 14HSCLD64 (TSE) : Max stroke = 64 mm Lever length = 69 mm									
	BRAKE SYSTEM: WABCO T-EBSE WITH RSS ACTIVATEDTEST POINTS: $3 \underline{4} 5 7$								
FRICTION LINING: (All) Lining Brand	FRICTION LINING: OEM Aftermarket (All) Lining Brand JURID 539 Aftermarket								
EBS CONTROL: IF SPECIAL C	ONDITIONS APP	LY – SEE	INSTRUCTION	NON LT400					
VALVES: AS PER BRAKE CA	LCULATION# TP	51156 & S	01562620						
<u>TYRE SIZE:</u> 265 70 R 19.5									
NOTES PACKING SLIP NO. MERITOR CHAMBERS IN BRA									
COMPLETION DATE : 30 th October 2014 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: 30th October 2014

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

Signed (pp.):



P.O.Box 98-971		ntre	
J.HIRST (JEH)			
DATE	30-Oct-14	BRAKE SYSTEM	WABCO 12/24V TEBS-E
CERT. NO.	JH141041	OPTI EXEMPTION	N/A
VIN / CHASSIS	7A9C20034E102	3284	
BRAKE CHAMBERS FRONT	1416HTLD64 (TS	SE MaxStroke - 64mm)	
BRAKE CHAMBERS REAR	14HSCLD64 (TS	E MaxStroke - 64mm)	
SLACK LENGTH FRONT	69 mm	TYRE SIZE FRONT	265 70 R 19.5
SLACK LENGTH REAR	69 mm	TYRE SIZE REAR	265 70 R 19.5
THIS VEHICLE COMPLIES V	VITH THE NZ	LINING MATERIAL FRONT	JURID 539
HVBR 32015/3 - SCHEDULE	5	LINING MATERIAL REAR	JURID 539