

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) **JOHN HIRST** ID **JEH**

Vehicle Registration* _____ VIN/Chassis Number **7A9E1001XE1023297**

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
HVEK

Description of Work
CERTIFY TO SCHEDULE 5

Code/Standard/Rule Certified to
HVBR 32015/3

Component Load Rating(s)
N/A

General Drawing Number(s)
N/A

Supporting Documents
BRAKE CODE CERTIFICATE - JH140825
OptiTurn EXEMPTION N/A

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)
N/A

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) **JOHN HIRST** ID Number **JEH**

Date **14-Oct-14** Number **488660**

CoF Vehicle Inspector ID _____ CoF Vehicle Inspector Signature _____ Date _____

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

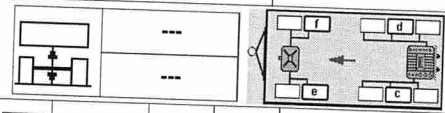
WABCO

TRAILER EBS-E

GGVS/ADR TUEH TB 2007 - 019.0X
TDB0855

HERSTELLER MANUFACTURER CONSTRUCTEUR	DOMETT		
TYP TYPE TYPE	5AFT TANKER		
FAHRZEUG IDENTNR. CHASSIS NUMBER NUMERO DE CHASSIS	7A9E1001XE1023297		
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO.	TP51104A		
POLRADZÄHNEZAHL c-d e-f POLE WHEEL TEETH c-d e-f DENTS ROUE DENTÉE c-d e-f	80	80	ABS-System ABS system Système ABS
RSS RSS RSS	Einfachbereifung Single Tire Monte simple	Lenkachse Steering axle Essieu vireur	4S/3M
	Zwillingsbereifung Twin Tire Monte jumelée	Kippkritisches Fahrzeug Critical Trailer Véhicule critique	
Subsystems	SB	I/O	24N

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



ACHSE AXLE ESSIEU	pm (bar)			pm (bar)			pz			TYP TYPE	(mm)	(mm)	TR (daN)		
	↓ (kg)	⊗	⊙	↓ (kg)	⊗	⊙	---	6.5	---				1.0	Pz	
1	1640	0.7	2.2	7500	4.7	0.4	1.6	---	5.8	-	24	67	127	488	3573
2	1640	0.7	2.2	7500	4.7	0.4	1.6	---	5.8	-	24	67	127	488	3573
3	1270	0.4	1.8	7000	4.3	0.4	1.5	---	5.4	-	24 / 30	64	127	537	3499
4	1270	0.4	1.8	7000	4.3	0.4	1.5	---	5.4	-	24 / 30	64	127	537	3499
5	1270	0.4	1.8	7000	4.3	0.4	1.5	---	5.4	-	24 / 30	64	127	537	3499

WABCO START-UP PROTOCOL

System	Trailer EBS-E	WABCO part number	480 102 080 0
Production date	2014-02-12	Serial number	437000027900G
Serial number (modulator)	000000027040		
Fingerprint Customer EOL / Customer Development / Flash Program	W041610 / 2014-10-15 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00		

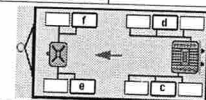
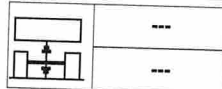
WABCO

TRAILER EBS-E

GGVS/ADR TUEH TB 2007 - 019.00
TDB0855

HERSTELLER MANUFACTURER CONSTRUCTEUR	DOMETT		
TYP TYPE TYPE	5AFT TANKER		
FAHRZEUG IDENTNR. CHASSIS NUMBER NUMERO DE CHASSIS	7A9E1001XE1023297		
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO.	TP51104A		
POLRADZÄHNEZAHL c-d e-f POLE WHEEL TEETH c-d e-f DENTS ROUE DENTEE c-d e-f	80	80	ABS-System ABS system Système ABS
RSS RSS RSS	Einfachbereifung Single Tire Monte simple		Lenkachse Steering axle Essieu vireur
	X	Zwillingsbereifung Twin Tire Monte jumelle	
Subsystems	SB	I/O	24N

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



ACHSE AXLE ESSIEU	pm (bar)		6.5	pm (bar)		0.7	2.0	---	6.5	TYP TYPE	(mm)	(mm)	(bar)		
	(kg)			(kg)					1.0				Pz		
1	1640	0.7	2.2	7500	4.7	0.4	1.6	---	5.8	-	24	67	127	488	3573
2	1640	0.7	2.2	7500	4.7	0.4	1.6	---	5.8	-	24	67	127	488	3573
3	1270	0.4	1.8	7000	4.3	0.4	1.5	---	5.4	-	24 / 30	64	127	537	3499
4	1270	0.4	1.8	7000	4.3	0.4	1.5	---	5.4	-	24 / 30	64	127	537	3499
5	1270	0.4	1.8	7000	4.3	0.4	1.5	---	5.4	-	24 / 30	64	127	537	3499

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	Vehicle ident. no	7A9E1001XE1023297
Vehicle type	5AFT TANKER	Odometer reading	0.0 km
next Service	0 km	Trip reading	0.0 km
Tester	J HIRST	Signature	
Date	2014-10-15 10:29:14 a.m.		

WABCO START-UP PROTOCOL

Vehicle ident. no

7A9E1001XE1023297

Configuration of the lifting axle valves

Lifting axle 1	LACV	Lifting axle 2	LACV
----------------	------	----------------	------

Braking pressures

Predominance CAN	0.0	Predominance pm	0.0
------------------	-----	-----------------	-----

Distance Axles / Tread width

Tread width	2.04	Second axle - Additional axle	5.9
Coupling head - First axle	3.2	Additional axle - Fourth axle	1.3
First axle - Second axle	1.3	Fourth axle - Fifth axle	1.3

Diverse

- X Warning lamp goes out after 2 seconds (ECE-R13)
- Warning lamp goes out at $v > 7$ km/h

Tire circumf. [mm]

Tire circumference Axle c-d	2650
Tire circumference Axle e-f	2650

CAN messages

- X EBS23 Standard
 - EBS23 group bit
 - EBS22 no output of total axle load
 - RGE22 no output for single axle loads
 - X Support 12V CAN Bus
- Indicate service moment via lamp
- Service interval (km) 0

TEBS function selection

Standard functions

- Speed switch1 (ISS1)
- Speed switch2 (ISS2)
- Lifting axle control1 (ILS1)
- Lifting axle control2 (ILS2)
- X External axle load sensor e-f (ALS2)
- Traction help (TH)
- Lifting axle forced lowering (FL)
- Wear final value (LWI)
- X Diagnosis / Telematic system GIO5 (DIAG)
- Road finisher brake / Trailer extending control (FB)
- X Stop light power supply (24N)
- Unloading level (D-SW)
- Normal level 4 (FN4-SW)

- Demand pressure sensor on R/R (DPS-RR)
- Output emergency brake light (EBA)
- Trailer Safety Brake (TSB)
- Generic Operating Hour Counter (GOHC)
- ELM (ELM)
- External ECAS (eECAS)
- Bounce Control (relaxation function) (TR-SW)
- Brake release function (BR-SW)
- Lifting/Lowering button (LF-SW/LW-SW)
- Normal level button (NL-SW)
- Shut-off switch Level control (LC-SW)
- Freely configurable digital function (FKD-I)
 - with output (FKD-O)
- Freely configurable analogue function (FKA-I)
 - with output (FKA-O)
- Freely configurable function 1 (FCF1)
- Freely configurable function 2 (FCF2)
- Immobilizer (IM)
 - Output for buzzer (IM-SU)
- Forklift operation (FLC)

Special functions

- Traction help with res. press. maint. (TH+)
- OptiTurn / OptiLoad (MH)
- OptiTurn / OptiLoad plus (MH+)
- External axle load sensor c-d (ALS1)
- Second ext. axle load sensor c-d (S-ALS1)
- External demand pressure sensor (DPS)
- ABS active signal (ABS-O)
- RSS active signal (ABS-O)
- Speed signal (V-S)
- Steady positive voltage 1 (24V-O1)
- Steady positive voltage 2 (24V-O2)
- Tilt alert (Tilt warning) (TW)
- Steering axle lock (SAC)

Subsystems

- IVTM (IVTM)
- Remote control unit (RCU)
- Control box (RCB)
- X SmartBoard (SB)
- Telematic system (TS)
- ELEX (ELEX)

WABCO

START-UP PROTOCOL

Vehicle ident. no

7A9E1001XE1023297

ISS	On (km/h)	Off (km/h)	Level inverted	RTR Pulse	Cable break detection	Light	Valve
ISS 1	15	10	-	X	-	-	X
ISS 2	15	10	-	X	-	-	X

Automatic lifting axle control

	Lift (Bar)	Lower (Bar)	Lift (km/h)	Lifting axle function (OptiTurn/OptiLoad) interrupted with parking brake engaged	Lower with ignition off	Tag axle residual pressure control	Residual pressure Tag axle (bar)
Lifting axle 1	0.0	0.0	0	X	-	-	0.5
Lifting axle 2	0.0						

Lifting axle control with OptiLoad or Forklift detection

Raise lifting axle 1 (bar)	0.0	Raise lifting axle 2 (bar)	0.0	X	Mechanical switch
Lower lifting axle 1 (bar)	0.0	Lower lifting axle 2 (bar)	0.0	-	Proximity switch

Forced lowering lifting axle

X Button	- Switch	- Activation via SmartBoard	X All lifting axles	- Only 2nd lifting axle
----------	----------	-----------------------------	---------------------	-------------------------

Automatic wheelbase control Switch level detection

- +24v only	- Ground only	X Ground and +24v
- Continuous actuation		

Traction help

- Traction help automatic with curve detection
- Traction help with ignition on
- Only partial-/full-load

	End at (km/h)	Pressure limitation (bar)	Duration (s)
Traction help	30	0.0	0
- Off-road traction help	30	0.0	0
Activation	X Button	- Button and brake	- Only brake

OptiTurn

- Underspeed	- Curve detection with partial/full load	End at (km/h)	30
- Curve detection	- Via SmartBoard	Pressure limitation (bar)	0.0

OptiLoad

Start (km/h)	0	Activate with	Automatic at speed
Pressure limitation (bar)	0.0		- Only at partial-/full-load
Second lifting axle charact.	-		- Manually via button

Level control

Speed at which adjustment to normal level is triggered automatically (RTR)	15	X Dead-man switch (continuous button actuation)	
	- Normal level 2	- Normal level 3	
Front axle	0	Normal level 4/unloading level	
Rear axle	0	0	
Speed on (km/h)	60	0	
Speed off (km/h)	40	10	
Activation via	- Smartboard	- Remote control unit	- Smartboard
- Separate lifting/lowering left/right via remote control unit			
- Level control shut-off via SmartBoard			
Unloading level switch	X Mechanical	- Proximity switch	- Proximity switch with separate switch

WABCO

START-UP PROTOCOL

Vehicle ident. no

7A9E1001XE1023297

ECAS special parameter

Control delay	
Control delay when stopped (s)	1
Control delay when driving (s)	60
Control delay at stand-by (s)	15
Stop time for normal level control with lift/lower button (s)	2.0

Tolerances

Tolerance front axle (mm)	10
Tolerance rear axle (mm)	10
Permissible right/left deviation rear axle (mm)	20
Maximum deviation right/left or front/rear outside the levels during the lifting/lowering process (s)	50

Lowering

Lower onto buffer	X
Lower to lower calibrated level	-

Standby operation

Trailer battery installed	-
Activation of standby-mode	
X By pressing Stop button	
- Automatically with ignition off	
Tolerance in Standby (mm)	20
Standby time (h/min)	0/00

Lifting axle offset

Lifting axle offset	-
Reference of normal level	
To the lowest normal level	-
To the currently selected normal level	X
Normal level height increase when lifting axle is raised (mm)	0
Normal level height increase with traction help/OptiTurn/OptiLoad (mm)	0

Plausibility

Limit plausibility check during the lowering process at the front axle (mm)	20
Limit plausibility check during the lowering process at the rear axle (mm)	20
Period plausibility check (s)	30

ECAS with eTASC / Rotary slide valve

After ignition, actual level is same as nominal level	-
No level control at a standstill	-
Manual lifting / lowering (eTASC)	-

Other functions

Tire deflection compensation (25mm when fully laden)	X
Front (mm)	25
Rear (mm)	25
Normal level control with reduction in bellows pressure differences (only ECAS 2 point control)	-
Permissible bellows pressure	12.0
Vehicle speed up to which manual height changes are permitted (km/h)	10

Green ECAS warning lamp

Installed	-	as LED	-
Behaviour upon faults			
Flashes 4 times after ignition on	-		
Flashes permanently	X		

Immobilizer

Buzzer output	X	Permanent	-	Periodic
Connected Components	X	Valve (buzzer)	-	Light
Emergency release function			-	
Unlock only with engaged parking brake			X	

Proximity switch

Switching threshold (μ A)		600
--------------------------------	--	-----

Steering axle lock

As of speed	30	After reverse driving, disable up to speed (km/h)	10
Level inverted	-	Activation via switch	-
with raised lifting axle	X	Reverse detection via ELEX	X

WABCO START-UP PROTOCOL

Vehicle ident. no

7A9E1001XE1023297

Road finisher brake / Trailer Extending Control

- Without load-dependent braking pressure (LSV) Pressure test pm (bar) 1.5
- Pressure adjustment with hand brake lever Function active until (km/h) 10
- Actuation only via SmartBoard (no switch required)

Switch

- X Mechanical switch Level recognition
- Proximity switch X Ground only
- Proximity switch and separate switch - +24v only (with resistance cable)
- Road finisher brake, Deactivation unloading level during road finisher operation
- Trailer Extending Control, only brake rear aggregate

Trailer Safety Brake

- Tank truck/Container truck X Tipper
- Function can be deactivated with SmartBoard or Trailer Remote Control
- Input signal Proximity switch
- Pressure 3.0
- Display via separate warning lamp

Emergency brake light output

- Actuation permanent
- LED installed X Actuation periodic
- 3 Frequency (Hz)

Bounce Control

- Activation only via SmartBoard (no push-button required)

Brake release function

- Activation only via SmartBoard
- For wood hauling trailers up to 5km/h

Freely configurable digital function (GIO-FKD)

- Function name
- Input
- If switch and speed
- opens X greater than
 - X closes - less than
- Function 15 km/h
- after (s) 180
- Switch output
 - Invert output
 - Save event
- Connected Components
- X Valve - Light
- Duration of function for (s) 180
- or until speed 30 km/h
- X exceeds
 - drops below

Freely configurable analogue function (GIO-FKA)

- Function name
- Input
- When input voltage and speed
- Voltage 3.5 X greater than
- X exceeds - less than
 - drops below 15 km/h
- Function 180
- after (s) 180
- Switch output
 - Invert output
 - Save event
- Connected Components
- X Valve - Light
- Duration of function for (s) 180
- or until speed 30 km/h
- X exceeds
 - drops below

Connected Components

	Valve	Light	Cable break detection	No standby
ABS active signal	X		X	
RSS active signal	X		X	
Steady positive voltage 1				
Steady positive voltage 2				
Speed signal			X	

WABCO START-UP PROTOCOL

Vehicle ident. no

7A9E1001XE1023297

Operating Hour Counter

Service name			- Display with ABS lamp
Service interval	0		- Display via external signal light
Input signal	Internal signal		X Service interval can be reset
Signal name	---		- Service interval can be changed
Conditions	Active		Threshold value (V) 3.5

Tilt alert (Tilt warning)

Maximum permissible tilt angle (degree)	2	Connected Components
- Display only via SmartBoard (no output required!)		X Valve
		- Light

HVBR WORKSHEET
(PROCEDURE & COMPLIANCE DOCUMENTATION SHEET)

CERTIFICATE No. JH140825

CUSTOMER NAME DOMETT TRAILERS

CUSTOMER ORDER No. 4238 DATE RECEIVED 05.08.14

VEHICLE TYPE 5 AXLE FULL TRAILER

REG No. CHASSIS No. 7A9E1001XE1023297

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/24S	67 mm	127 mm
3, 4 & 5:	TSE/2430GC	64 mm	127 mm

BRAKE SYSTEM: WABCO T-EBS WITH RSS ACTIVATED

TEST POINTS FITTED: 3 4 5 7

FRICITION LINING: OEM Aftermarket
(All) Lining Brand ROR 685 AF

EBS CONTROL: IF SPECIAL CONDITIONS APPLY – SEE INSTRUCTION ON LT400 488660

VALVES: AS PER BRAKE CALCULATION TP51104 & SO1560044

TYRE SIZE: 265 70 R 19.5

NOTES

PACKING SLIP NO. SO1560044 PROCESS TIME: 1

BRAKE CALC #TP51104 – THE WABCO CHAMBERS ARE THE TSE VARIANT.
PERFORMANCE DIFFERENTIAL IS $\leq 3\%$

COMPLETION DATE : 14th Oct 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: 14th Oct 2014

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

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

distribution: DOMETT
 7A9E10012E1023293
 7A9E10014E1023294, 7A9E10016E1023295
 7A9E10018E1023296, 7A9E1001XE1023297
 7A9E10011E1023298, 7A9E10013E1023299

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 axle manufacturers, and 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 : SAFT TANKER
 trailer type : 5-axle-full-trailer
 remarks : air / hydraulic / VA suspension
 WABCO TRAILER - EBS E
 TRISTOP 3+4+5: 24/30
 265/70 R 19,5

axle 1 + 2 + 3 + 4 + 5 : Assali Stefen, B (350x200), TDB 0855 ECE,

		<u>unladen</u>	<u>laden</u>
total mass	P in kg	7090	36000
axle 1	P1 in kg	1640	7500
axle 2	P2 in kg	1640	7500
axle 3	P3 in kg	1270	7000
axle 4	P4 in kg	1270	7000
axle 5	P5 in kg	1270	7000
wheel base	E in mm	7200 - 7200	7000
centre of gravity height	h in mm	1066	1630

	<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 KDZ	2	2	2	2	2
The power output corresponds to	BC 0029.0BC	0029.0BC	0051.0BC	0051.0BC	0051.0
brake chamber manufacturer	WABCO	WABCO	WABCO	WABCO	WABCO
chamber size	24	24	24/30	24/30	24/30
lever length 1Bh in mm	127	127	127	127	127
brake factor [-]	9.10	9.10	9.10	9.10	9.10
dyn. rolling radius rdyn min in mm	421	421	421	421	421
dyn. rolling radius rdyn max in mm	421	421	421	421	421
threshold torque Co Nm	25.0	25.0	25.0	25.0	25.0

calculation:

chamber pressure (rdyn min) pH at z=22,5%bar	2.3	2.3	2.2	2.2	2.2
chamber pressure (rdyn max) pH at z=22,5%bar	2.3	2.3	2.2	2.2	2.2
chamber press. (servo) pcha at pm6,5bar bar	5.5	5.5	5.3	5.3	5.3
piston force ThA at pm6,5bar N	7678	7678	7529	7529	7529
brake force (rdyn min) T lad. at pm6,5bar N	41806	41806	40944	40944	40944
brake force (rdyn max) T lad. at pm6,5bar N	41806	41806	40944	40944	40944
brake force within 1 % rolling friction proportion %	19.8	19.8	20.1	20.1	20.1

braking rate z laden
 z = sum (TR)/PRmax
 0.585 for rdyn min
 0.585 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: WABCO 423 106 90. 0 / 423 106 96x 0

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: WABCO 423 106 90. 0 / 423 106 96x 0

axle 3:

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

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

brake cylinder: WABCO 925 376 005 0 / 925 376 2.. 0

axle 4:

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

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

brake cylinder: WABCO 925 376 005 0 / 925 376 2.. 0

axle 5:

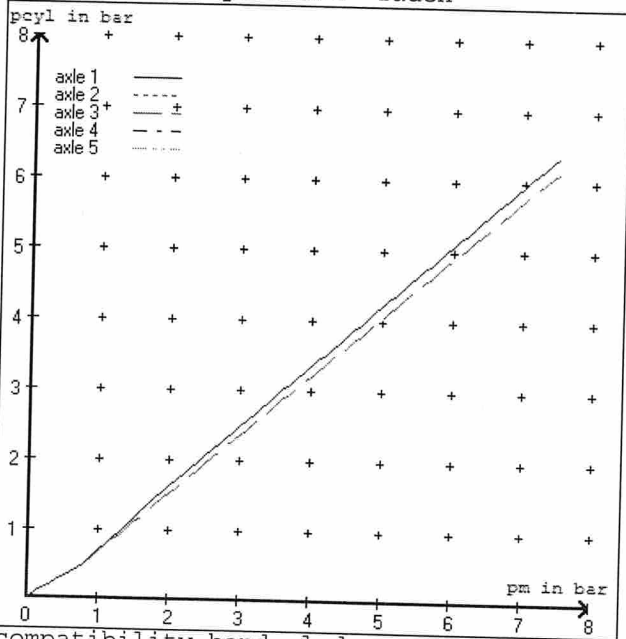
valve 1: 971 002 ... 0 WABCO
EBS emergency valve

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

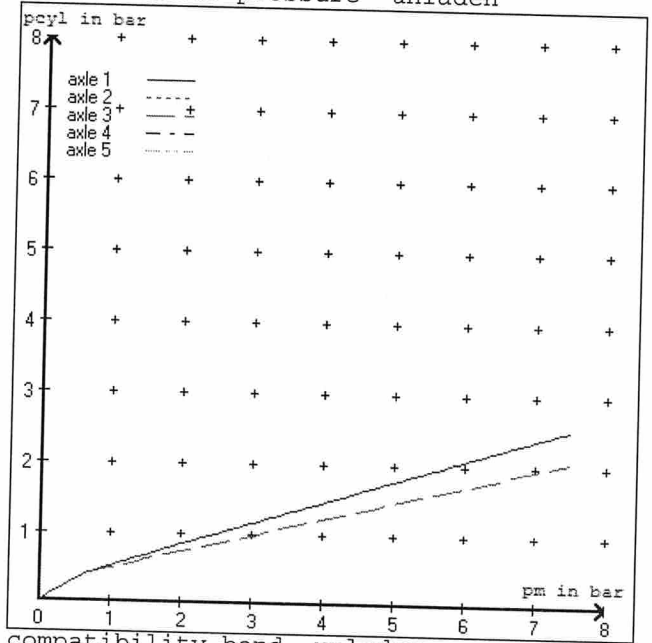
brake cylinder: WABCO 925 376 005 0 / 925 376 2.. 0

test type III (zIII = 0.30)	for rdyn min :	axle1	axle2	axle3	axle4	axle5	
at pm 3.6 bar =>	pcha in bar :	3.0	3.0	2.8	2.8	2.8	2.8
test type III (zIII = 0.06)	for rdyn min :	axle1	axle2	axle3	axle4	axle5	
at pm 1.1 bar =>	pcha in bar :	0.8	0.8	0.8	0.8	0.8	0.8

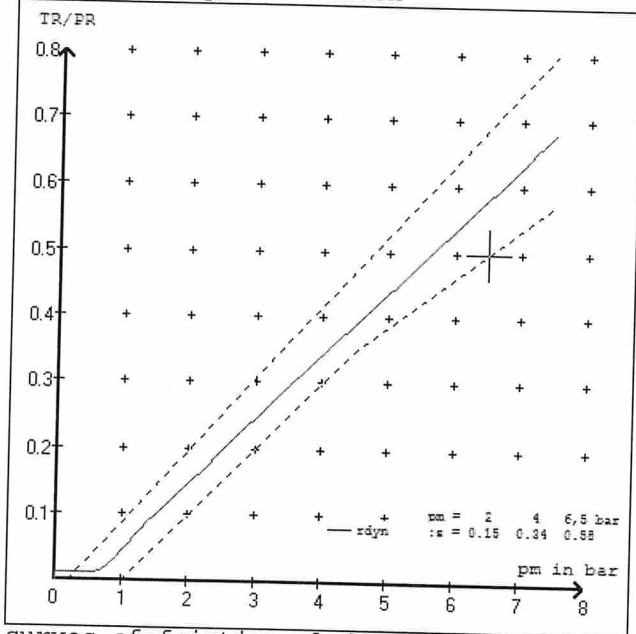
brake chamber pressure laden



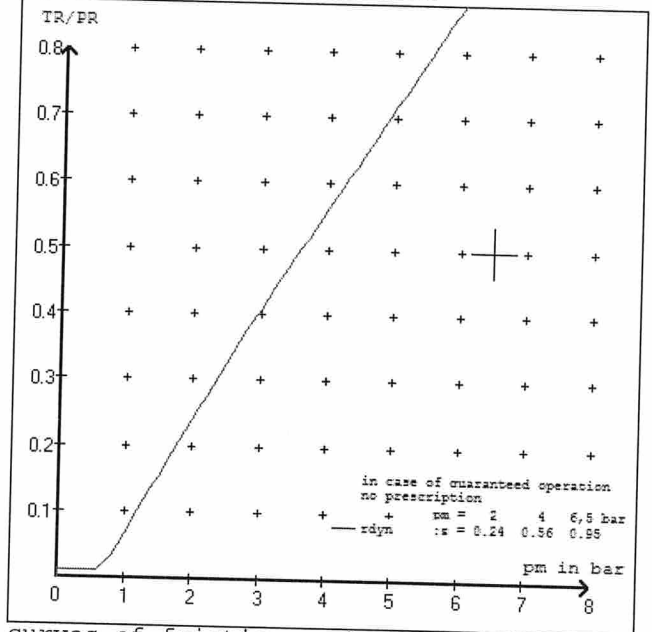
brake chamber pressure unladen



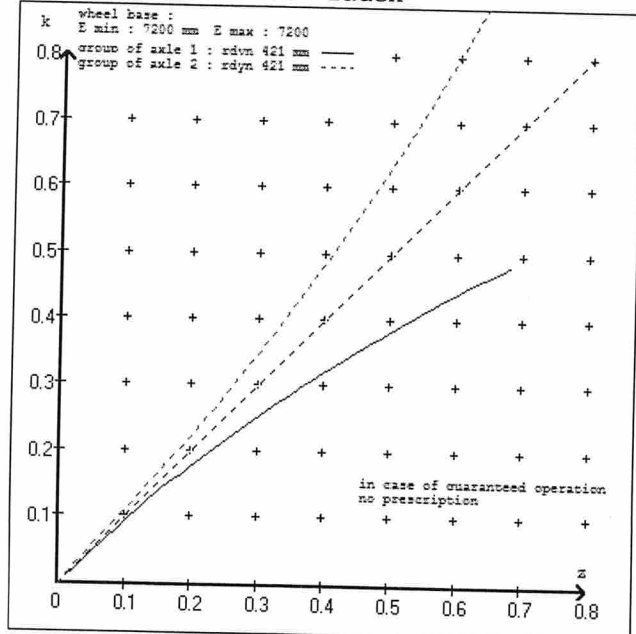
compatibility band laden



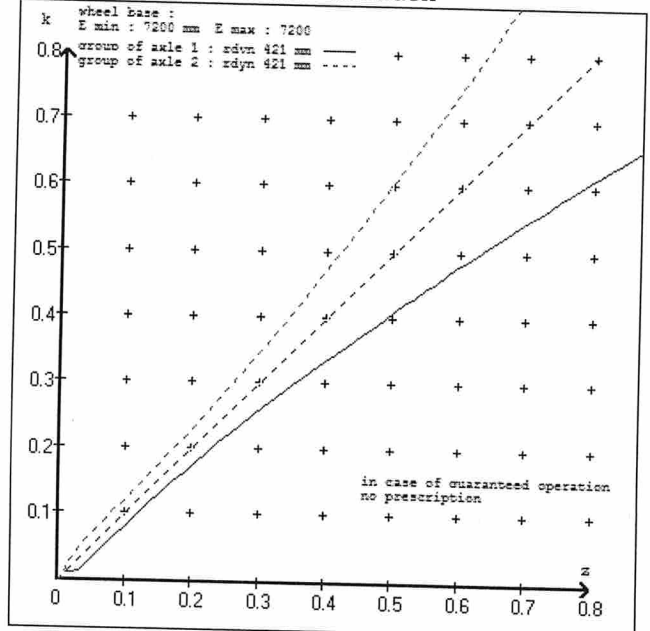
compatibility band unladen



curves of friction laden



curves of friction unladen



vehicle manufacturer: DOMETT
 trailer model : 5AFT TANKER
 trailer type : 5-axle-full-trailer

brake chamber and lever length :

axle 1 : 2 x type/diameter 24 (WABCO) lever length 127 mm
 axle 2 : 2 x type/diameter 24 (WABCO) lever length 127 mm
 axle 3 : 2 x type/diameter 24/30 (WABCO) lever length 127 mm
 axle 4 : 2 x type/diameter 24/30 (WABCO) lever length 127 mm
 axle 5 : 2 x type/diameter 24/30 (WABCO) lever length 127 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

=====

vehicle manufacturer: DOMETT
 trailer model : 5AFT TANKER
 trailer type : 5-axle-full-trailer
 brake calculation no. : TP 51104A

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 = 0.138
 6.5 bar z = 0.580

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	1640	to be	2.2	7500	to be	0.4	1.6	5.5
2	1640	entered by the vehicle manufact.	2.2	7500	entered by the vehicle manufact.	0.4	1.6	5.5
3	1270		1.8	7000		0.4	1.5	5.3
4	1270		1.8	7000		0.4	1.5	5.3
5	1270		1.8	7000		0.4	1.5	5.3

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.

=====

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
1640 2.2	1640 2.2	1270 1.8	1270 1.8	1270 1.8
2140 2.5	2140 2.5	1770 2.1	1770 2.1	1770 2.1
2640 2.8	2640 2.8	2270 2.4	2270 2.4	2270 2.4
3140 3.0	3140 3.0	2770 2.7	2770 2.7	2770 2.7
3640 3.3	3640 3.3	3270 3.0	3270 3.0	3270 3.0
4140 3.6	4140 3.6	3770 3.3	3770 3.3	3770 3.3
4640 3.9	4640 3.9	4270 3.6	4270 3.6	4270 3.6
5140 4.2	5140 4.2	4770 3.9	4770 3.9	4770 3.9
7500 5.5	7500 5.5	7000 5.3	7000 5.3	7000 5.3

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

axle 1 : reference axle: Assali StefTM / LM / LCen	brake lining: ROR 685 AF
test report : TDB 0855 ECE	date : 20110721
axle 2 : reference axle: Assali StefTM / LM / LCen	brake lining: ROR 685 AF
test report : TDB 0855 ECE	date : 20110721
axle 3 : reference axle: Assali StefTM / LM / LCen	brake lining: ROR 685 AF
test report : TDB 0855 ECE	date : 20110721
axle 4 : reference axle: Assali StefTM / LM / LCen	brake lining: ROR 685 AF
test report : TDB 0855 ECE	date : 20110721
axle 5 : reference axle: Assali StefTM / LM / LCen	brake lining: ROR 685 AF
test report : TDB 0855 ECE	date : 20110721

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 = 20.8 % Fe
axle 2	(rdyn 421 mm)	T = 20.8 % Fe
axle 3	(rdyn 421 mm)	T = 20.4 % Fe
axle 4	(rdyn 421 mm)	T = 20.4 % Fe
axle 5	(rdyn 421 mm)	T = 20.4 % Fe

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

axle 1	(sp = 70 mm)	s = 54 mm
axle 2	(sp = 70 mm)	s = 54 mm
axle 3	(sp = 63 mm)	s = 54 mm
axle 4	(sp = 63 mm)	s = 54 mm
axle 5	(sp = 63 mm)	s = 54 mm

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

axle1	ThA = 7678 N
axle2	ThA = 7678 N
axle3	ThA = 7529 N
axle4	ThA = 7529 N
axle5	ThA = 7529 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 = 34369 N
axle 2	(rdyn 421 mm)	T = 34369 N
axle 3	(rdyn 421 mm)	T = 33648 N
axle 4	(rdyn 421 mm)	T = 33648 N
axle 5	(rdyn 421 mm)	T = 33648 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
0.58	0.48

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

>= 0,4 and
>= 0,6*E (0.35)

axle 1	(rdyn 421 mm)	T = 34369 N
axle 2	(rdyn 421 mm)	T = 34369 N
axle 3	(rdyn 421 mm)	T = 33648 N
axle 4	(rdyn 421 mm)	T = 33648 N
axle 5	(rdyn 421 mm)	T = 33648 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
0.58	0.48

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

>= 0,4 and
>= 0,6*E (0.35)

spring parking brake

	<u>axle 3</u>	<u>axle 4</u>	<u>axle 5</u>
no of TRISTOP-actuators per axle line KDZ	2	2	2
TRISTOP-actuator type	24/30	24/30	24/30
lever length	127	127	127
stat. tyre radius	401	401	401
at a stroke of	30	30	30
min. force of spring brake	6360	6360	6360
sp.brake chamber no 925 ...	376 005 0376	005 0376	005 0
sp.brake chamber no 925 ...	376 2.. 0376	2.. 0376	2.. 0
release pressure	4.9	4.9	4.9

calculation:

ratio until road	2.8820	2.8820	2.8820
$iFb = lBh * \eta * C * rBt / (2 * rBn * rstat)$			
for rstat in mm	401	401	401
brake force of spring br. Tf in N	35525	35525	35525
$Tf = (TFZ * KDZ - 2 * Co / lBh) * iFb$			
braking rate	0.312		
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 = 4250 mm for E = 7200 mm

=====

min Ef = 4250 mm for E = 7200 mm

=====

- min Ef = minimum distance between front axle(s) (trailer) or support (semitrailer) 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 = 1630 mm height of center of gravity - laden
- PR = 21000 kg maximum bogie mass - laden
- P = 36000 kg maximum total mass - laden
- nf = 3 no. of axle(s) with TRISTOP spring brake actuators
- ng = 3 no. of bogie axle(s)

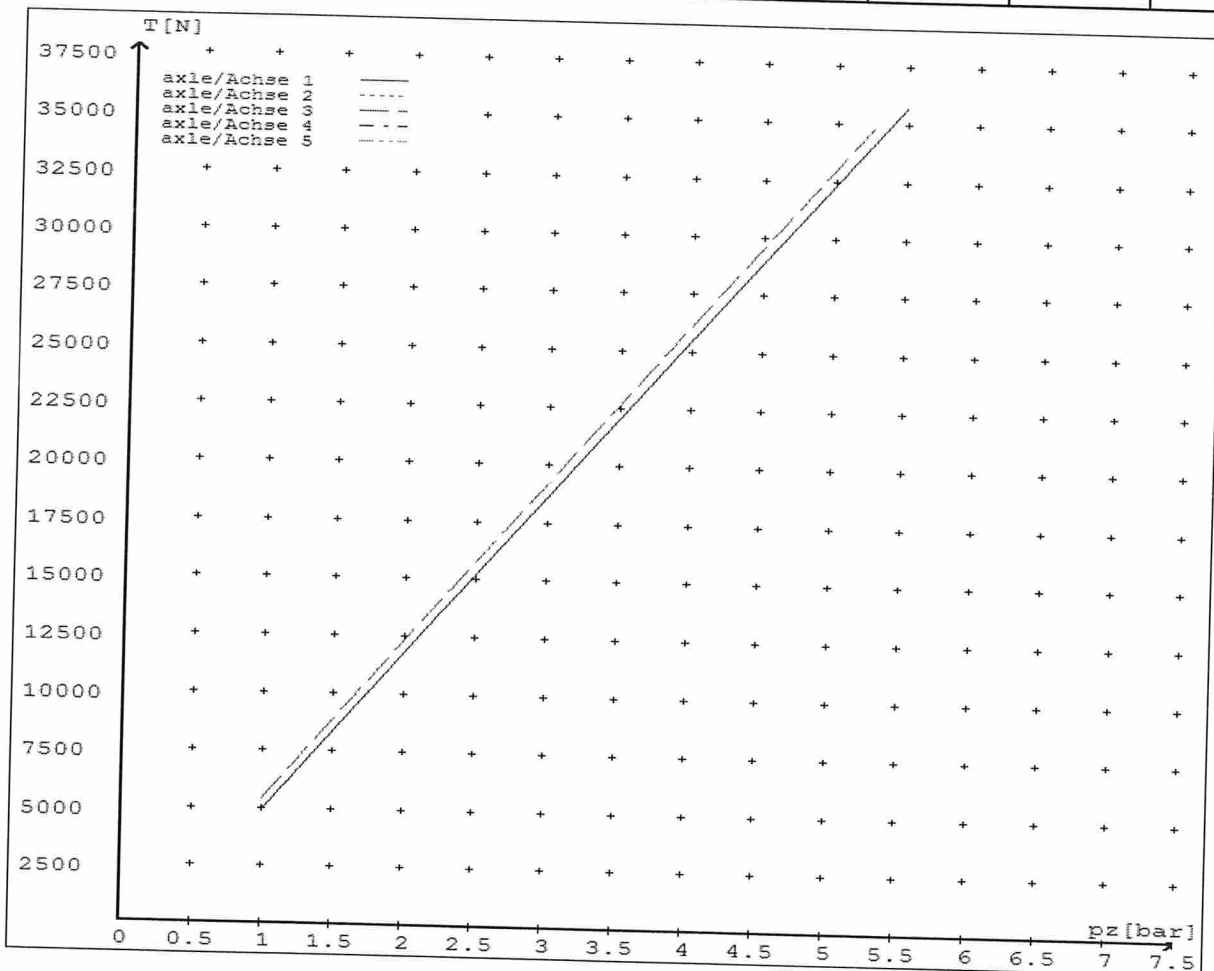
reference values

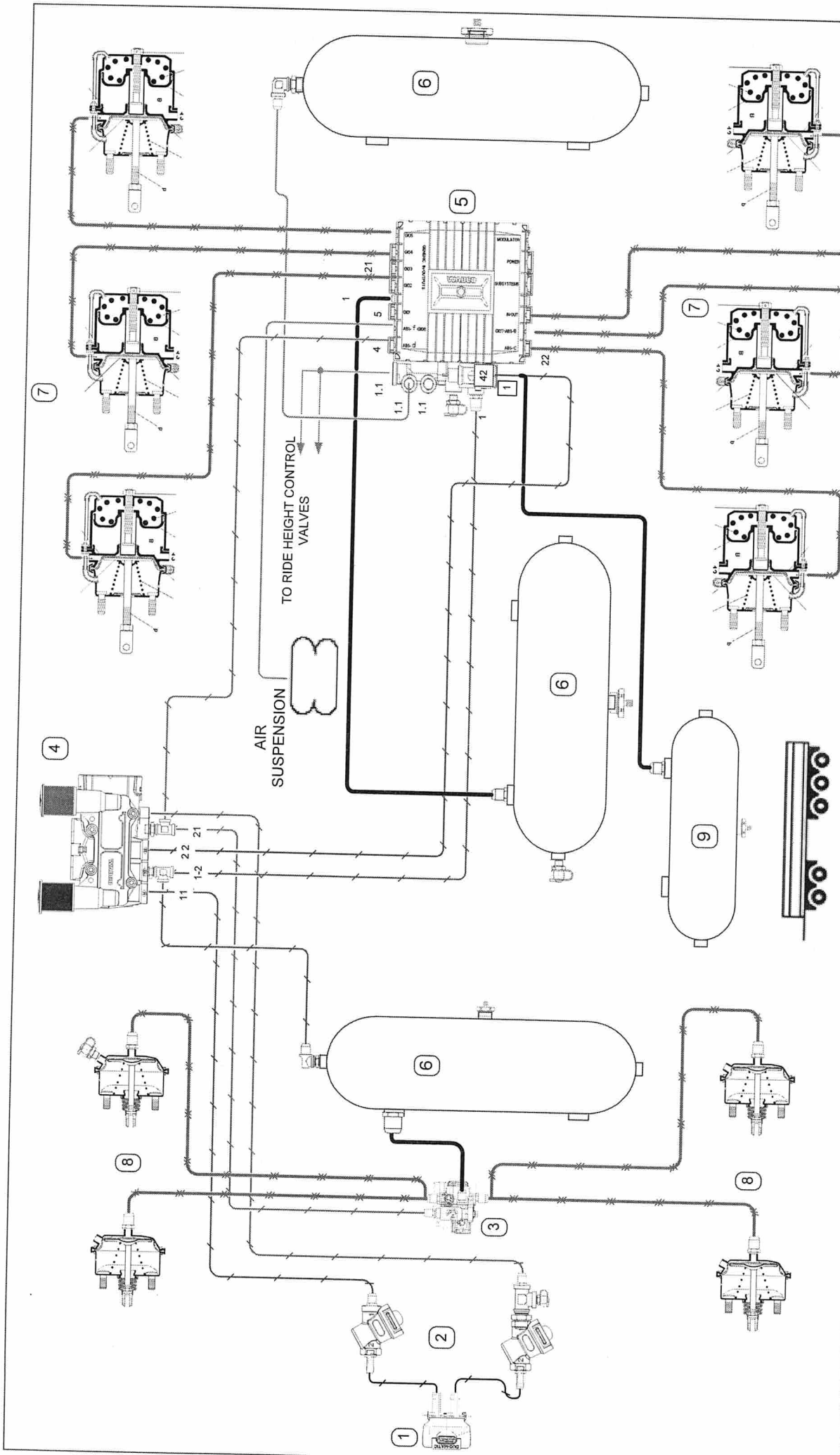
reference values for z = 50% for max rdyn: 421 mm

	pz [bar]	T [N]	T [N]
axle 1	1.0	4881	
	5.5	35732	
axle 2	1.0	4881	
	5.5	35732	
axle 3	1.0		5374
	5.3		34995
axle 4	1.0		5374
	5.3		34995
axle 5	1.0		5374
	5.3		34995

VIN - no.:

brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	Axle(s) / Achse(n)				
	24/	24/	24/30	24/30	24/30
Maximum stroke smax = ...mm maximaler Hub smax =mm	67	67	64	64	64
Lever length =mm Hebellänge =mm	127	127	127	127	127





ITEM		QTY.	PART NO.	DESCRIPTION	ITEM	QTY.	PART NO.	DESCRIPTION	PIPING LEGEND:
1	452 804 001 0	1	Wabco Duo-Matic coupling	9	1	24.5 Ltr Air Tank	3/8" Rubber	3/8" Rubber	
2	432 500 020 0	2	Wabco control line filter	10			1/2" Rubber	1/2" Rubber	
3	480 207 202 0	1	Wabco EBS 3 rd modulator	11			15mm Nylon	15mm Nylon	
4	971 002 900 0	1	Wabco PREV	12			8mm Nylon	8mm Nylon	
5	480 102 0..0	1	Wabco TEBS - E (premium)				8mm Nylon	8mm Nylon	
6		3	46 Ltr Air tank						
7	2430GC@127mm	6	TSE Spring brake chamber						
8	245S@127mm	4	TSE Service brake chamber						

Domett T&T

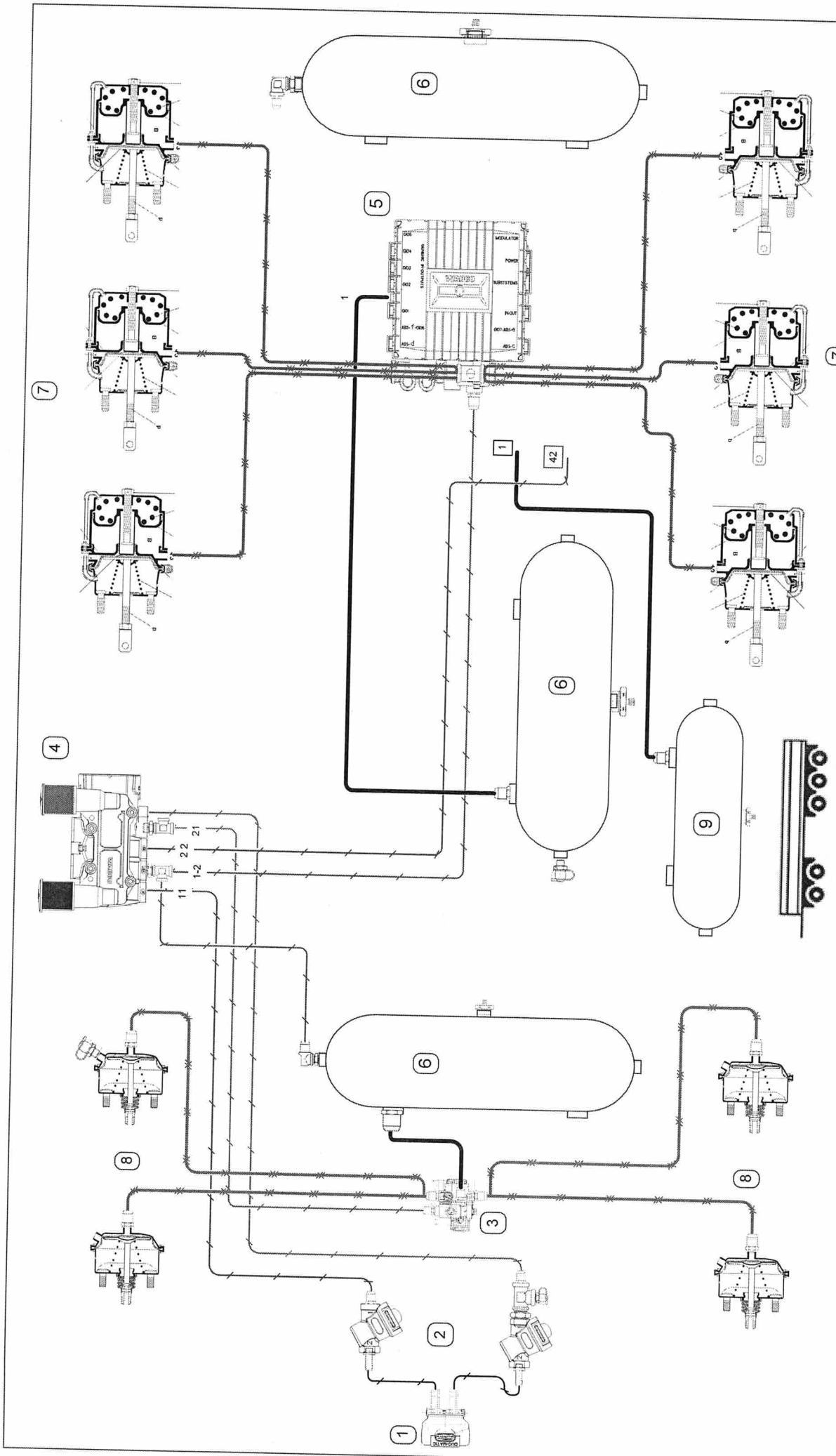
DOMSAXFULL/EBS
7A9E1001XE1023297

SIZE A4
SPEC REFERENCE 1297
MODEL NUMBER E1001
SERVICE LINES
REV 1
J. HIRST

GOUGH Transpecs

WABCO

Copyright Transpecs 2010
All rights reserved



ITEM		QTY.	PART NO.	DESCRIPTION	ITEM	QTY.	PART NO.	DESCRIPTION
1	1	452 804 001 0	Wabco Duo-Matic coupling	9	1		24.5 Ltr Air Tank	
2	2	432 500 020 0	Wabco control line filter	10				
3	1	480 207 202 0	Wabco EBS 3 rd modulator	11				
4	1	971 002 900 0	Wabco PREV	12				
5	1	480 102 0..0	Wabco TEBS - E (premium)					
6	3	2430GC@127mm	46 Ltr Air tank					
7	6		TSE Spring brake chamber					
8	4	24S@127mm	TSE Service brake chamber					

PIPING LEGEND:	
---	3/8" Rubber
---	3/8" Rubber
---	1/2" Rubber
---	15mm Nylon
---	12mm Nylon
---	8mm Nylon
---	8mm Nylon
---	8mm Nylon

DOMETT T&T		REV 1	
DOM5AXFULL/EBS		MODEL NUMBER	
7A9E1001XE1023297		E1001	
SIZE	A4	SPEC REFERENCE	1297
E & O E		PARK LINES	J HIRST

GOUGH Transpecs

WABCO
 Copyright Transpecs 2010
 All rights reserved