

Heavy vehicle specialist inspector's or manufacturing inspecting organisation's name (PRINT IN CAPS) **JOHN HIRST** ID **JEH**

Vehicle registration (optional) \_\_\_\_\_ VIN/chassis number **7A9E20019M2023037**

Make **DOMETT** Component being certified:  Chassis  Load anchorage  
 Model (optional) **E2001 PSH**  Log bolsters  Towing connection  Brakes  
 Certification category **HVEK**  SRT  PSV stability  PSV rollover  
 Swept path  PBS

Description of work  
**CERTIFY TO SCHEDULE 5 OF LTR 32015/5: NZ HEAVY VEHICLE BRAKE SPECIFICATION.**  
**CARRY OUT BRAKE CALCULATIONS, INSPECTION AND ECU END OF LINE PROTOCOL.**  
**5AFT CURTAINSIDE RSS ON TYRE: 265 70 R19.5**  
**FOR SYSTEM ARCHITECTURE, PLEASE REFER TO PDS WORKSHEET & SCHEMATIC.**  
**REASON FOR CERTIFICATION: NEW TRAILER BUILD**

Code/standard/rule certified to **LTR 32015/5** Component load rating(s) **33 Tonnes GVM**  
 General drawing number(s) **N/A** **16 Tonne (Front brake mass)**  
**19 Tonne (Rear brake mass)**

Supporting documents  
**BRAKE RULE CERTIFICATE JH210219**  
**BRAKE CALCULATION # TP52235**

Special conditions (optional)  
**WARNING LAMP MUST ILLUMINATE WHEN IGNITION IS SWITCHED ON & THEN**  
**EXTINGUISH IMMEDIATELY OR WHEN VEHICLE SPEED EXCEEDS 7 KM/H**

Certification expiry date (if applicable) **N/A [UNLESS MODIFIED]** **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 **11-Mar-21** Number **760483**

CoF vehicle inspector ID (if applicable) \_\_\_\_\_ CoF vehicle inspector signature (if applicable) \_\_\_\_\_ Date \_\_\_\_\_

All fields are mandatory unless otherwise stated.



**NEW ZEALAND HEAVY VEHICLE BRAKE RULE 32015-5  
WORKSHEET, PROCEDURE DOCUMENTATION SHEET  
& CONFIRMATION OF COMPLIANCE**

**CLIENT**

MANUFACTURER:	DOMETT TRAILERS
ADDRESS:	TAURIKURA DRIVE, TAURANGA 3110
FLEET:	BOOTH'S TRANSPORT

**VEHICLE DETAILS**

VEHICLE TYPE:	SAFT CURTAINSIDE	CERT #:	JH210219
YEAR:	2021	CALCULATION #:	TP52235
MAKE:	DOMETT	REGO #:	N/A
MODEL:	E2001 PSH	LT400 #:	760483
CHASSIS #:	2037	ORDER #:	7856
VIN #:	7A9E20019M2023037		
GVM: t	33	PRIME MOVER:	UNKNOWN
LOAD CONFIGURATION:	MIXED FREIGHT		
GROUP RATINGS: t	FRONT	REAR	
	16	19	
WHEEL BASE: m	7.83		
COG: m	UNLADEN COG m	MAX HEIGHT m	HEIGHT DECK m
	1.02	4.3	1.04
TARE: t	FRONT	REAR	TOTAL
	3.1	3.9	7
TYRE SIZE:	FRONT	REAR	
	265 70 R19.5	265 70 R19.5	
ROLLING CIRCUMFERENCE: mm	2645	2645	
AXLE SPACING: m	1.31	2.51	

## SUSPENSION

	FRONT	REAR
SUSPENSION TYPE:	PNEUMATIC	ELECTRONIC
MAKE:	HENDRICKSON_AIR	HENDRICKSON_AIR
MODEL:	HENDRICKSON_INTRAX	HENDRICKSON_INTRAX
BELLOW SIZE:	ZMD SHOCKLESS	ZMD SHOCKLESS
HEIGHT CONTROL VALVE:	464 008 011 0	441 050 100 0
OTHER VALVES:	N/A	463 090 500 0 (eTASC)
RIDE HEIGHT <i>mm</i> :	255	255
HANGER HEIGHT <i>mm</i> :	N/A	N/A
PEDESTAL HEIGHT <i>mm</i> :	N/A	N/A
LIFTAXLE:		N/A
TIPPING DUMP SWITCH:		N/A
LIFTAXLE VALVE:		N/A
PRESSURE LIMITING:		N/A

## AIR TANKS

AIR TANKS STANDARD:	SAE J10A / EN286-2	
	FRONT	REAR
BRAKE TANK SIZE: <i>L</i>	46	46 + 25
AUXILLARY TANK SIZE: <i>L</i>	N/A	46
PRESSURE PROTECTION:	WABCO PEM: 461 513 002 0	

## AIR LINES

TEST POINTS:			
CONTROL LINE:	X 1	TANK:	X 1
REAR CHAMBER:	X 2	FRONT CHAMBER:	X 1
DUOMATIC COLOUR CODED:	YES		



## **NOTICE TO VEHICLE OPERATOR**

***THIS VEHICLE HAS A BRAKE SYSTEM WHICH HAS BEEN DESIGNED AND FITTED IN ACCORDANCE WITH THE LAND TRANSPORT HEAVY VEHICLE BRAKE RULE 32015/5.***

***IF THIS VEHICLE IS OPERATED IN CONJUNCTION WITH NON-CERTIFIED VEHICLES, THERE MAY BE OPERATIONAL FACTORS WHICH NEED TO BE TAKEN INTO CONSIDERATION.***

***PLEASE REFER TO THE CERTIFIER FOR FURTHER INFORMATION.***

**EXCERPT FROM LAND TRANSPORT RULE; HEAVY-VEHICLE BRAKES RULE 32015/5. SECTION 10,**

### **10.1 RESPONSIBILITIES OF OPERATORS**

A person who operates a vehicle must ensure that the vehicle complies with this rule.

### **10.2 RESPONSIBILITIES OF REPAIRERS**

A person who repairs or adjusts a brake must ensure that the repair or adjustment:

- a) does not prevent the vehicle from complying with this rule;
- b) complies with Land Transport Rule: Vehicle Repair 1998.

### **10.3 RESPONSIBILITIES OF MODIFIERS**

A person who modifies a vehicle so as to affect the braking performance of the vehicle must:

- a) ensure that the modification does not prevent the vehicle from complying with this Rule; and
- b) notify the operator that the vehicle must be inspected and, if necessary, certified by person or organisation appointed to carry out specialist inspection and certification of heavy vehicle brakes.

***IF YOU ARE UNSURE ABOUT YOUR RESPONSIBILITIES, PLEASE CONTACT THE VEHICLE MANUFACTURER, OR MYSELF.***

***COMPLAINTS. Complaints and Warranty issues which relate to Brake Certification will be acknowledged within 7 working days and a resolution proposed within 25 working days. Resolution of complaints and Warranty issues is subject to Transpecs Warranty policy. Customers have the right to appeal to the New Zealand Transport Authority if dissatisfied with a Compliance issue. (Refer NZTA Deed Of Appointment Para 47.4) NZTA Helpdesk 0800 699 000***

(p.p.).....  
(J.Hirst (JEH) HVEK)

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

distribution: DOMETT TRAILERS  
 7A9E20019M2023037  
 JH210219  
 LT400: 760483

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 (V6.18.07.12).  
 -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 V6.18.07.12 db 31.08.2016

vehicle manufacturer: DOMETT TRAILERS  
 trailer model : 5AFT CURTAINSIDE  
 trailer type : 5-axle-full-trailer  
 remarks : air / hydraulic / VA suspension  
 WABCO TRAILER - EBS  
 TRISTOP 3+4: T.14/24 [TSE1416HTLD64 ACTUALLY FITTED  
 -SEE PAGE 7 FOR PERFORMANCE DATA]  
 265/70 R 19,5

axle 1 + 2 + 3 + 4 + 5 : HENDRICKSON, SBW 1937, ATRP0185,

		<u>unladen</u>	<u>laden</u>
total mass	P in kg	7100	35050
axle 1	P1 in kg	1600	8000
axle 2	P2 in kg	1600	8000
axle 3	P3 in kg	1300	6350
axle 4	P4 in kg	1300	6350
axle 5	P5 in kg	1300	6350
wheel base	E in mm	7800 - 7900	
centre of gravity height	h in mm	1020	2100

		<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		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		20.	20.	T.14/24	T.14/24	14.
lever length	lBh in mm	69	69	69	69	69
brake factor	[-]	23.49	23.49	23.49	23.49	23.49
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	6.0	6.0	6.0	6.0	6.0

calculation:

chamber pressure(rdyn min)pH at z=22,5%bar	2.2	2.2	2.1	2.1	2.1
chamber pressure(rdyn max)pH at z=22,5%bar	2.2	2.2	2.1	2.1	2.1
chamber press.(servo)pcha at pm6,5bar bar	5.7	5.7	4.7	4.7	4.7
piston force ThA at pm6,5bar N	6578	6578	4485	4485	4485
brake force(rdyn min)T lad. at pm6,5bar N	50826	50826	34530	34530	34530
brake force(rdyn max)T lad. at pm6,5bar N	50826	50826	34530	34530	34530
Brake force incl. 1 % rolling resistance proportion %	22.3	22.3	18.5	18.5	18.5

braking rate z laden 0.597 for rdyn min  
 z = sum (TR)/PRmax 0.597 for rdyn max

Trailer may only be operated in combination with trucks/tractors with ISO 7638 supply (5 or 7 polar).

axle 4:

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

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

brake cylinder: Meritor 1424HTLD64

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	2.6	2.6	2.6	
test type III (zIII = 0.06)	for rdyn min :	axle1	axle2	axle3	axle4	axle5	
at pm 1.2 bar =>	pcha in bar :	0.8	0.8	0.8	0.8	0.8	

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

brake chamber and lever length :

axle 1 : 2 x type/diameter 20. (Meritor) lever length 69 mm  
 axle 2 : 2 x type/diameter 20. (Meritor) lever length 69 mm  
 axle 3 : 2 x type/diameter T.14/24 (Meritor) lever length 69 mm  
 axle 4 : 2 x type/diameter T.14/24 (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 TRAILERS  
 trailer model : 5AFT CURTAINSIDE  
 trailer type : 5-axle-full-trailer  
 brake calculation no. : TP 52235A

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	1600	to be	2.0	8000	to be	0.4	1.4	5.7	
2	1600	entered by the vehicle manufact.	2.0	8000	entered by the vehicle manufact.	0.4	1.4	5.7	
3	1300		1.7	6350		0.3	1.5	4.7	
4	1300		1.7	6350		0.3	1.5	4.7	
5	1300		1.7	6350		0.3	1.5	4.7	

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
1600 2.0	1600 2.0	1300 1.7	1300 1.7	1300 1.7
2100 2.3	2100 2.3	1800 2.0	1800 2.0	1800 2.0
2600 2.6	2600 2.6	2300 2.3	2300 2.3	2300 2.3
3100 2.9	3100 2.9	2800 2.6	2800 2.6	2800 2.6
3600 3.2	3600 3.2	3300 2.9	3300 2.9	3300 2.9
4100 3.4	4100 3.4	3800 3.2	3800 3.2	3800 3.2
4600 3.7	4600 3.7	4300 3.5	4300 3.5	4300 3.5
5100 4.0	5100 4.0	4800 3.8	4800 3.8	4800 3.8
8000 5.7	8000 5.7	6350 4.7	6350 4.7	6350 4.7

spring parking brake

	<u>axle 3</u>	<u>axle 4</u>
no of TRISTOP-actuators per axle line KDZ	2	2
TRISTOP-actuator type	T.14/16	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	4.8	4.8

calculation:

ratio until road	4.0466	4.0466
iFb = lBh*Eta*C*rBt/(rBn*rstat)		
for rstat    in mm	401	401
brake force of spring br. Tf    in N	49151	49151
Tf = (TFZ*KDZ-2*Co/lBh)*iFb		
braking rate                      zf laden	0.296	
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 =	5945 mm	for E =	7800 mm
=====			
min Ef =	6014 mm	for E =	7900 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 =	2100 mm	height of center of gravity - laden
PR =	19050 kg	maximum bogie mass - laden
P =	35050 kg	maximum total mass - laden
nf =	2	no. of axle(s) with TRISTOP spring brake actuators
ng =	3	no. of bogie axle(s)



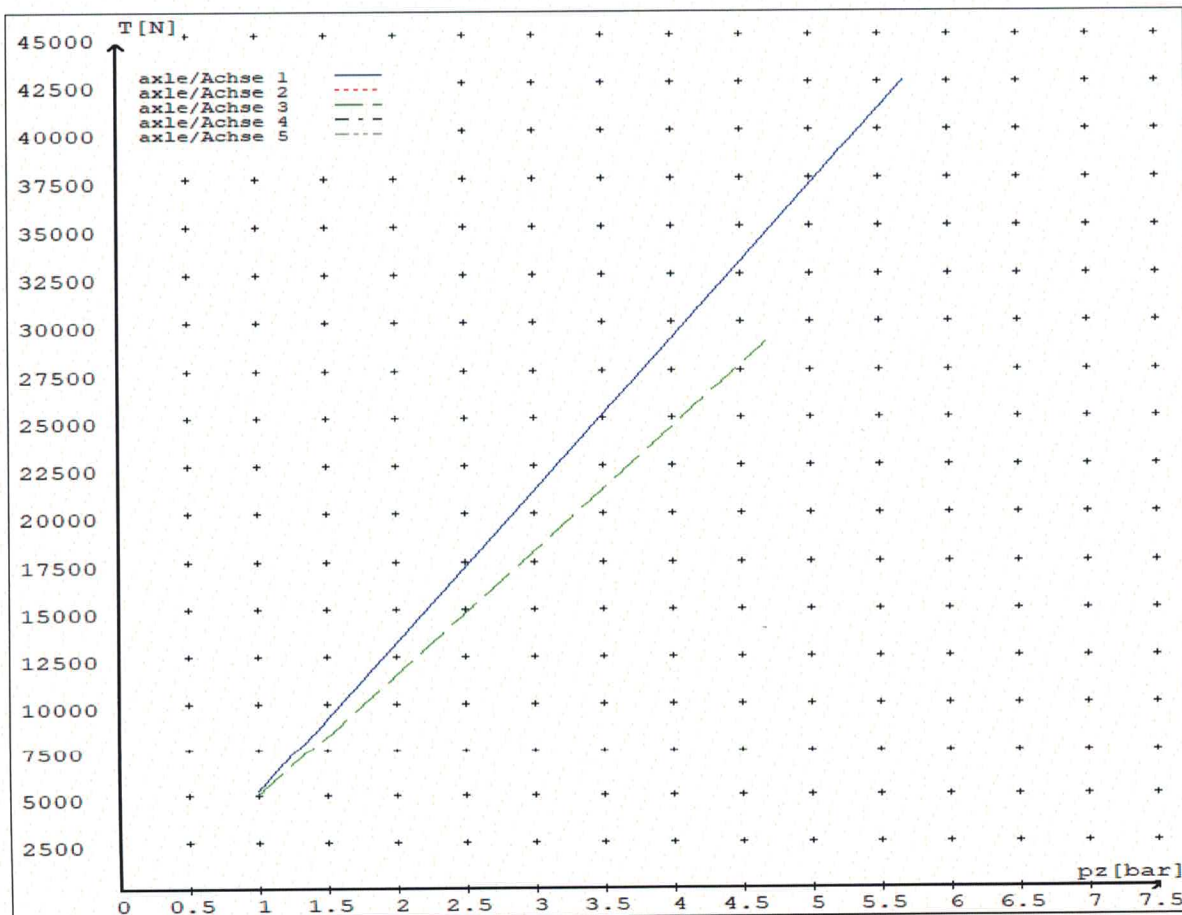
reference values

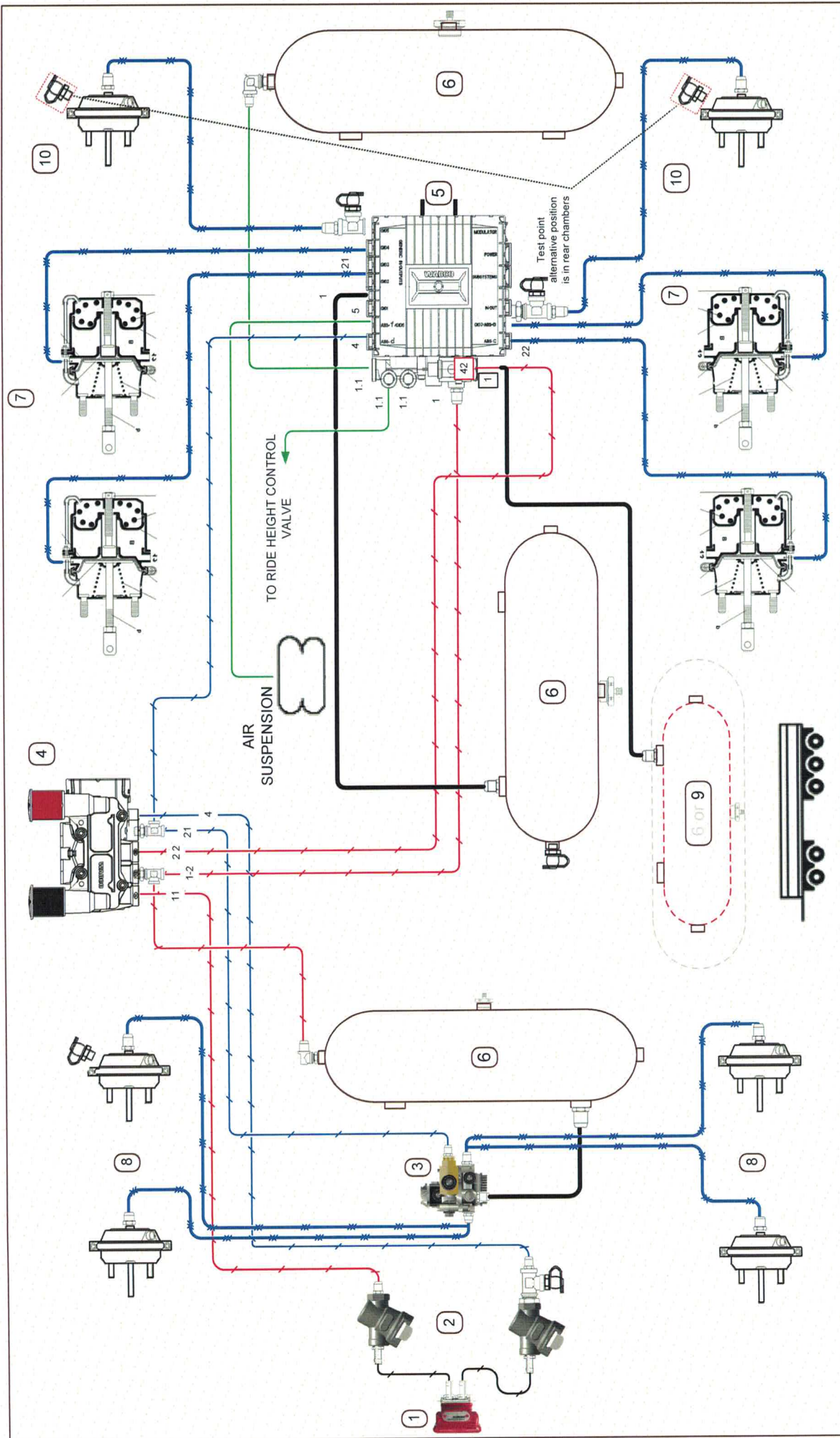
reference values for z = 50% for max rdyn: 421 mm

	pz [bar]	T [N]	T [N]
axle 1	1.0	5184	
	5.7	42568	
axle 2	1.0	5184	
	5.7	42568	
axle 3	1.0		4984
	4.7		28920
axle 4	1.0		4984
	4.7		28920
axle 5	1.0		4984
	4.7		28920

VIN - no.:

	Axle(s) / Achse(n)				
brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	20./	20./	T.14/24	T.14/24	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





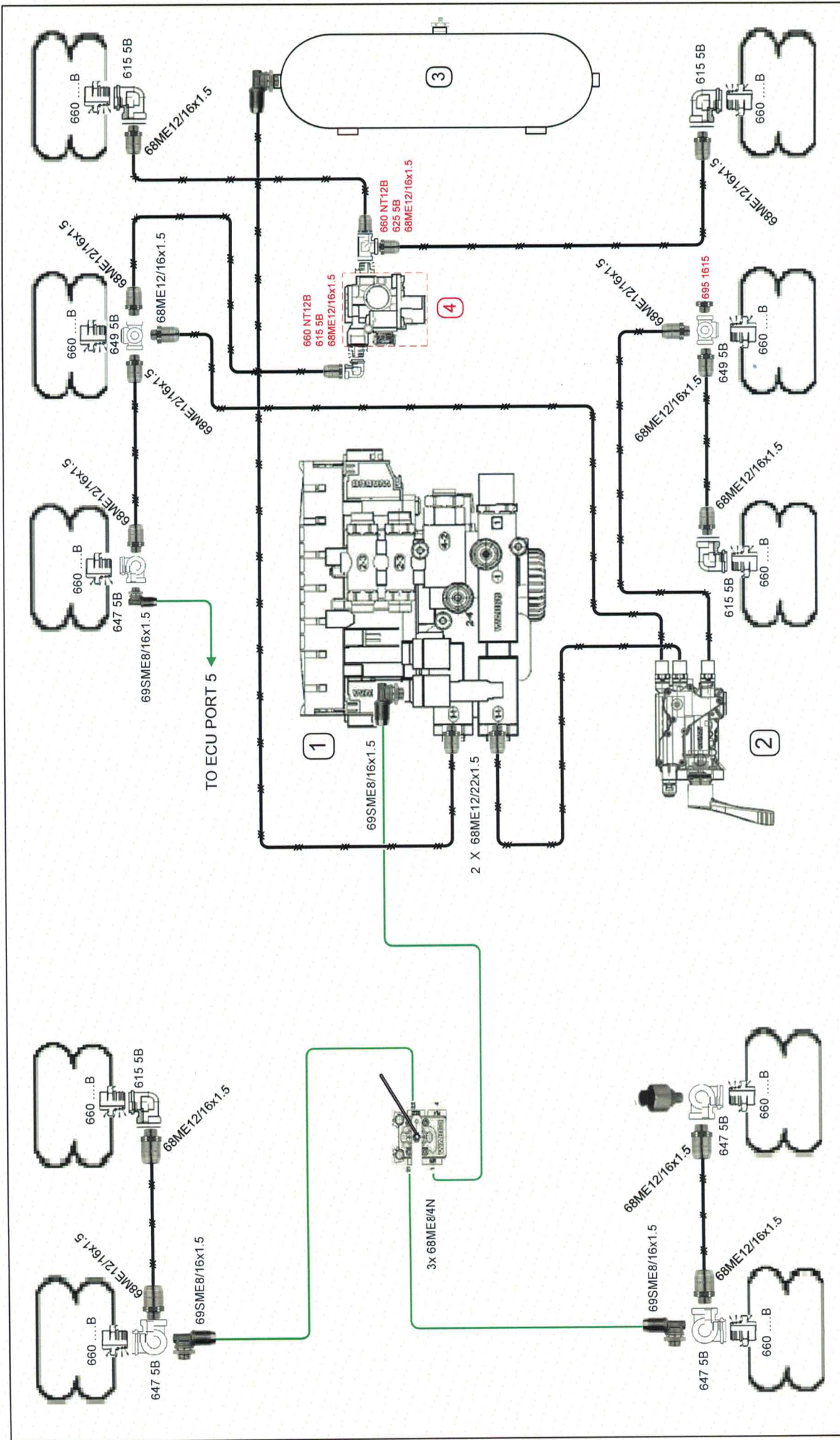
ITEM		QTY.	PART NO.	DESCRIPTION	ITEM	QTY.	PART NO.	DESCRIPTION	PIPING LEGEND:
1	1	452 804 001 0	452 804 001 0	WABCO Duo-Matic coupling	9	1	24.5 Ltr Air Tank	3/8" Rubber	—
2	2	432 500 020 0	432 500 020 0	WABCO control line filter	10	2	14HSCLD64	3/8" Rubber	—
3	1	480 207 202 0	480 207 202 0	WABCO EBS 3" modulator	11			1/2" Rubber	—
4	1	971 002 900 0	971 002 900 0	WABCO PREV	12			15mm Nylon	—
5	1	480 102 08 0	480 102 08 0	WABCO TEBS - E (premium)				12mm Nylon	—
6	3			46 Ltr Air tank				8mm Nylon	—
7	4	1416HTLD64	1416HTLD64	TSE Spring brake chamber				8mm Nylon	—
8	4	20HSCLD65	20HSCLD65	TSE Service brake chamber				8mm Nylon	—

DOMETT		5 AXLE FULL TRAILER	
		REV	1
SIZE	A4	SPEC REFERENCE	DOM5AXFULL/DIEBS
SCALE		SERVICE LINES	

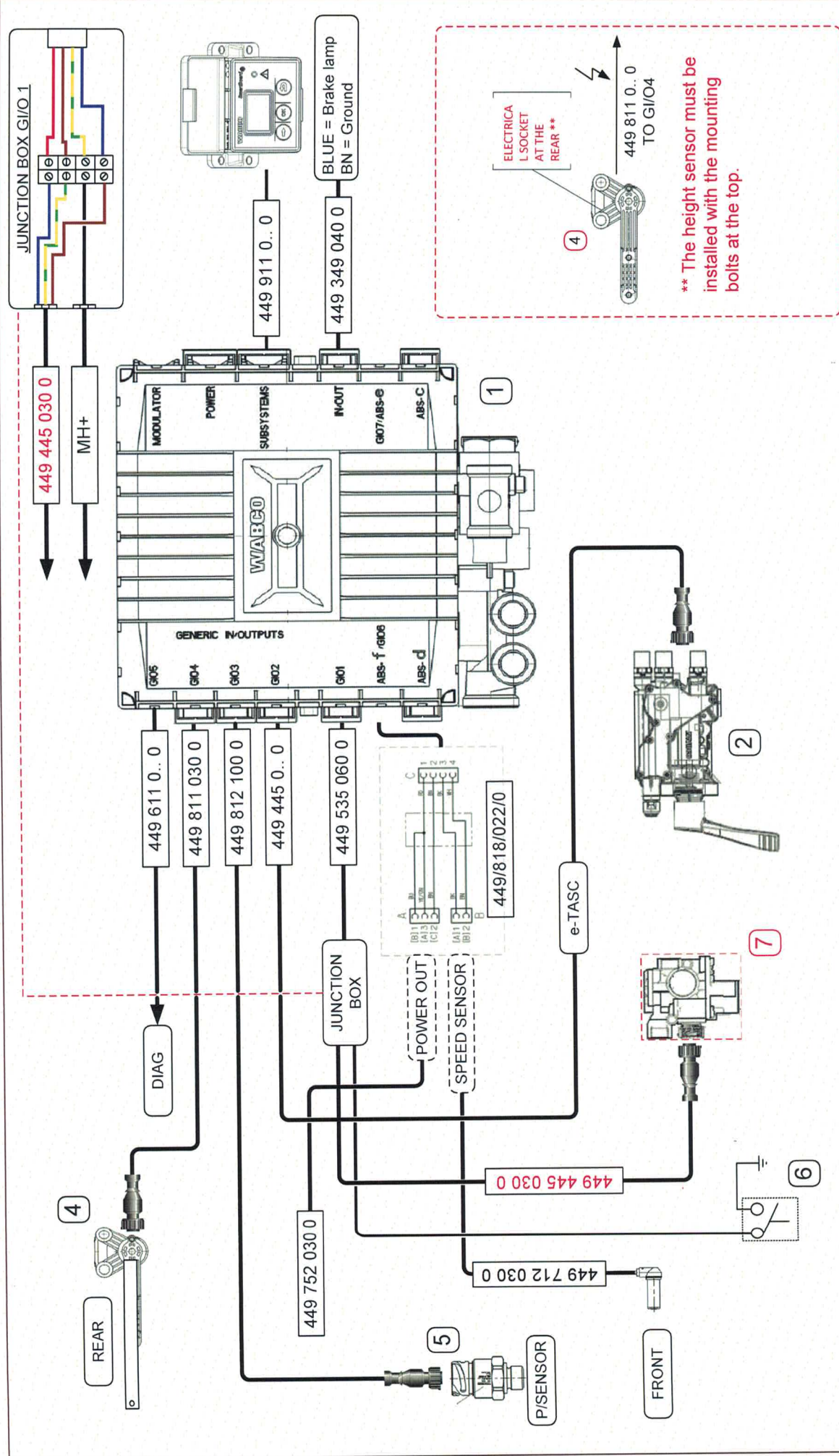
<b>Transpecs</b>
<b>WABCO</b> Copyright Transpecs 2010 All rights reserved



ITEM	QTY.	PART NO.	DESCRIPTION	ITEM	QTY.	PART NO.	DESCRIPTION	PIPING LEGEND:
1	1	480 102 080 0	WABCO TEBS E (IN BRAKE KIT)					3/8" Rubber
2	1	463 090 500 0	e-TASC VALVE					3/8" Rubber
3	1		AIR TANK					12mm Nylon
4	1	472 195 052 0	TAG AXLE VALVE					15mm Nylon
								12mm Nylon
								8mm Nylon
								8mm Nylon
								8mm Nylon

		<b>eTASC 1 Point control with Manoeuvre Assist 'Add-on' kit</b>		DATE	12.05.17
ITEM	SYSTEM	ASSY/KIT NUMBER	ECAS/MAAOK		
PAGE NO.	1/3	J HIRST	<b>E &amp; OE</b>		



THE INSTALLATION POSITION OF THE FITTINGS IN THE AIR BAG IS FOR DEMONSTRATION PURPOSES ONLY. THE TRAILER MANUFACTURER CAN ALTER THE POSITION TO SUIT TRAILER / SUSPENSION DESIGN.

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	480 102 080 0	WABCO TEBS E (PREMIUM)
2	1	463 090 500 0	eTASC
4	1	463 050 100 0	ECAS HEIGHT SENSOR
5	1	441 044 101 0	AIR BAG PRESSURE SENSOR
6	1		MOMENTARY SWITCH
7	1	472 195 052 0	TAG AXLE VALVE

eTASC 1 Point control with Manoeuvre Assist 'Add-on' kit		DATE	12.05.17
SYSTEM	ECAS/MAOK	ASSY/KIT NUMBER	
PAGE NO:	3/3	J HIRST	E & OE