

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

Plate number (optional) _____ VIN/~~chassis~~ number **7 A 9 E 2 0 0 1 7 N 2 0 2 3 1 9 7**

Make **DOMETT** Component being certified: Chassis Load anchorage
 Model (optional) **E2001 PH** 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 CERTIFICATE: NEW TRAILER BUILD

Code/standard/rule certified to **LTR 32015/5** Component load rating(s) **32 Tonnes GVM**
 General drawing number(s) **N/A** **16 Tonne (Front brake mass)**
19 Tonne (Rear brake mass)

Supporting documents
BRAKE RULE CERTIFICATE JH220806
BRAKE CALCULATION # TP52534

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 **J E H**
 Date **19-Aug-22** Number **814594**

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:	MAINFREIGHT

VEHICLE DETAILS

VEHICLE TYPE:	5AFT CURTAINSIDE	CERT #:	JH220806
YEAR:	2022	CALCULATION #:	TP52534
MAKE:	DOMETT	REGO #:	N/A
MODEL:	E2001 PH	LT400 #:	814594
CHASSIS #:	2197	ORDER #:	8435
VIN #:	7A9E20017N2023197		
GVM: <i>t</i>	32	PRIME MOVER:	UNKNOWN
LOAD CONFIGURATION:	MIXED FREIGHT		
GROUP RATINGS: <i>t</i>	FRONT	REAR	
	16	19	
WHEEL BASE: <i>m</i>	7.44		
	UNLADEN COG <i>m</i>	MAX HEIGHT <i>m</i>	HEIGHT DECK <i>m</i>
	1.03	4.3	1.09
COG: <i>m</i>	2.080		
	FRONT	REAR	TOTAL
TARE: <i>t</i>	3	4	7
	FRONT	REAR	
TYRE SIZE:	265 70 R19.5	265 70 R19.5	
ROLLING CIRCUMFERENCE: <i>mm</i>	2645	2645	
AXLE SPACING: <i>m</i>	1.31	2.51	

SUSPENSION

	FRONT	REAR
SUSPENSION TYPE:	PNEUMATIC	PNEUMATIC
MAKE:	SAF_AIRSPRING	SAF_AIRSPRING
MODEL:	SAF_INTRA	SAF_INTRA
BELLOW SIZE:	2619, 300mm	2619, 300mm
HEIGHT CONTROL VALVE:	HALDEX 90554950	HALDEX 90554950
OTHER VALVES:	N/A	N/A
RIDE HEIGHT <i>mm</i> :	260	260
HANGER HEIGHT <i>mm</i> :	200	200
PEDESTAL HEIGHT <i>mm</i> :	50	50
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
 7A9E20017N2023197
 SODC: JH220806
 LT400: 814594

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 31.08.2018

vehicle manufacturer: DOMETT TRAILERS
 trailer model : 5AFT CURTAIN SIDE
 trailer type : 5-axle-full-trailer
 remarks : air / hydraulic / VA suspension
 WABCO TRAILER - EBS E
 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 : SAF, SBW 1937, TDB 0749 ECE,

		unladen	laden
total mass	P in kg	6900	35050
axle 1	P1 in kg	1500	8000
axle 2	P2 in kg	1500	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	7400 - 7500	
centre of gravity height	h in mm	1030	2080

	axle 1	axle 2	axle 3	axle 4	axle 5
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	20.	20.	T.14/24	T.14/24	14.
lever length	lBh in mm	69	69	69	69
brake factor	[-]	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	2.1	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	5.9	5.9	4.8	4.8	4.8
piston force ThA at pm6,5bar N	6825	6825	4586	4586	4586
brake force(rdyn min)T lad. at pm6,5bar N	51709	51709	34623	34623	34623
brake force(rdyn max)T lad. at pm6,5bar N	51709	51709	34623	34623	34623
Brake force incl. 1 % rolling resistance proportion	%	22.3	22.3	18.5	18.5

braking rate z laden 0.603 for rdyn min
 z = sum (TR)/PRmax 0.603 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 3.5 bar =>	pcha in bar :	2.9	2.9	2.6	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	0.8

vehicle manufacturer: DOMETT TRAILERS
 trailer model : 5AFT CURTAIN SIDE
 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 CURTAIN SIDE
 trailer type : 5-axle-full-trailer
 brake calculation no. : TP 52534A

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	1500	to be	2.0	8000	to be	0.4	1.4	5.9	
2	1500	entered by	2.0	8000	entered by	0.4	1.4	5.9	
3	1300	the vehicle	1.7	6350	the vehicle	0.3	1.5	4.8	
4	1300	manufact.	1.7	6350	manufact.	0.3	1.5	4.8	
5	1300		1.7	6350		0.3	1.5	4.8	

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
1500 2.0	1500 2.0	1300 1.7	1300 1.7	1300 1.7
2000 2.3	2000 2.3	1800 2.0	1800 2.0	1800 2.0
2500 2.6	2500 2.6	2300 2.3	2300 2.3	2300 2.3
3000 2.9	3000 2.9	2800 2.6	2800 2.6	2800 2.6
3500 3.2	3500 3.2	3300 2.9	3300 2.9	3300 2.9
4000 3.5	4000 3.5	3800 3.2	3800 3.2	3800 3.2
4500 3.8	4500 3.8	4300 3.5	4300 3.5	4300 3.5
5000 4.1	5000 4.1	4800 3.8	4800 3.8	4800 3.8
8000 5.9	8000 5.9	6350 4.8	6350 4.8	6350 4.8

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	3.9674	3.9674
$iFb = lBh * \eta * C * rBt / (rBn * rstat)$ for rstat in mm	401	401
brake force of spring br. Tf in N	48188	48188
$Tf = (TFZ * KDZ - 2 * Co / lBh) * iFb$		
braking rate zf laden	0.290	
$zf = \text{sum}(Tf) / P + 0,01$		

Test of the frictional connection required by the parking brake

minimum wheelbase/minimum supporting width min Ef necessary
to fulfil the regulations

$$\text{min Ef} = E * (1 - PR/P + zferf * h/E) / (1 - zferf / (fzul * nf/ng))$$

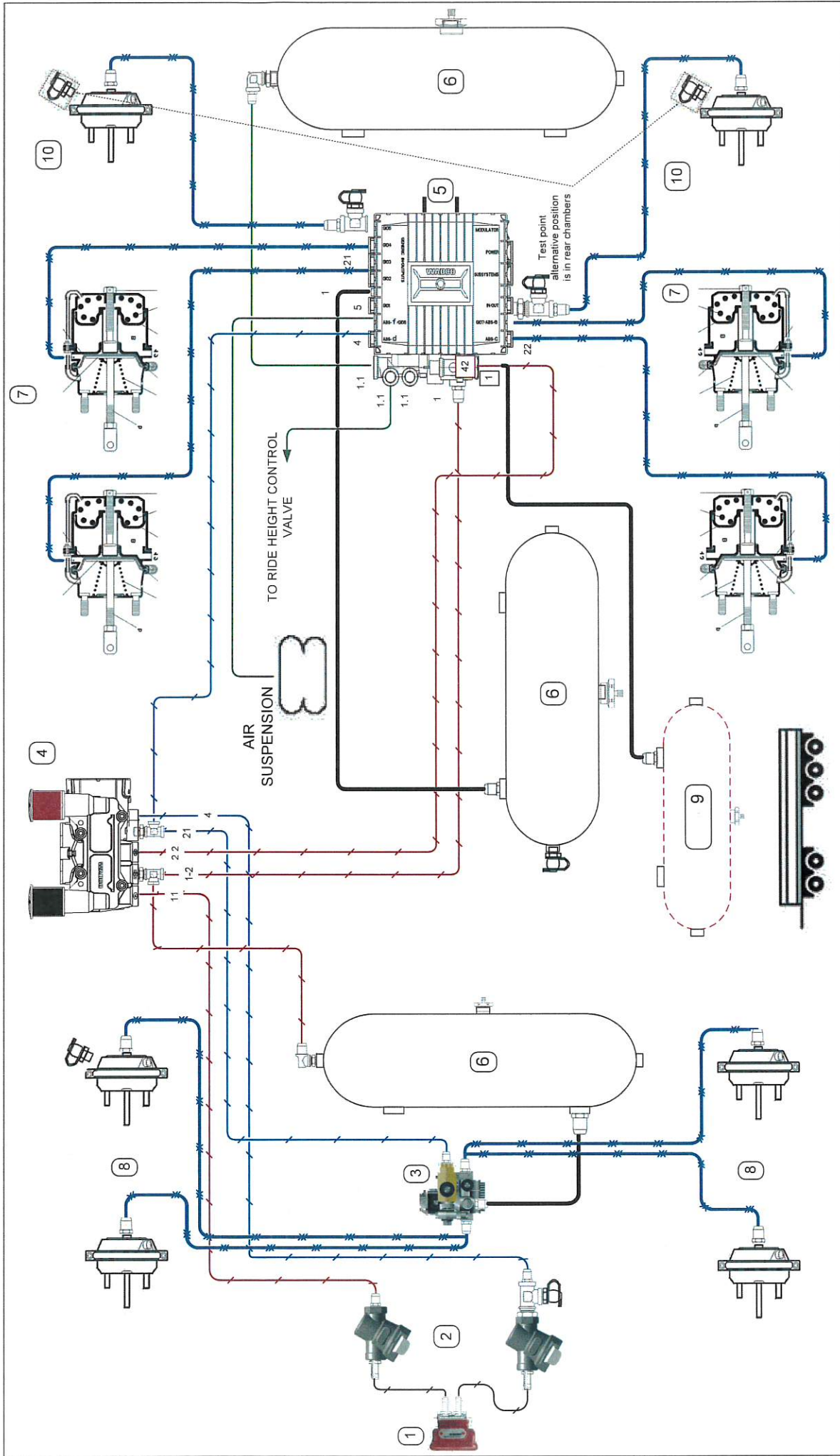
min Ef = 5664 mm for E = 7400 mm

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min Ef = 5733 mm for E = 7500 mm

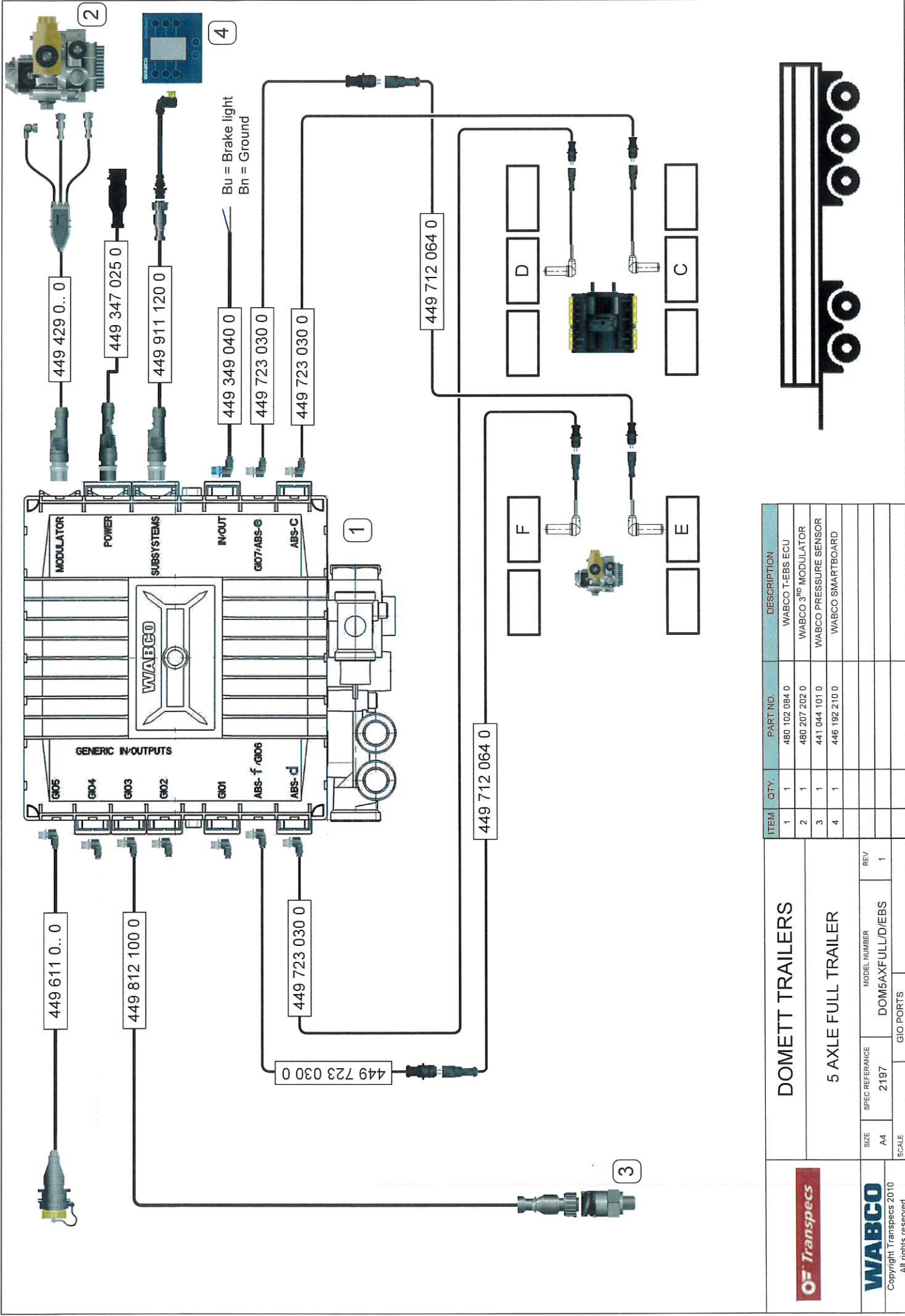
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- min Ef = minimum distance between front axle(s) (trailer) or support (semitrailer) and the rear axle(s) (resultant of the bogie)
- E = wheel base
- fzul = 0.80 maximum permissible frictional connection required
- zferf = 0.18 maximum required braking ratio of the parking brake
- h = 2080 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)



ITEM		QTY.	PART NO.	DESCRIPTION	ITEM	QTY.	PART NO.	DESCRIPTION	PIPING LEGEND:
1	1	1	452 804 001 0	WABCO Duo-Matic coupling	9	1	24.5 Ltr Air Tank	3/8" Rubber	---
2	2	2	432 500 020 0	WABCO control line filter	10	2	14HSCLD64	3/8" Rubber	---
3	1	1	480 207 202 0	WABCO EBS 3" modulator	11			1/2" Rubber	---
4	1	1	971 002 900 0	WABCO PREV	12			15mm Nylon	---
5	1	1	480 102 084 0	WABCO TEBBS - E (premium) 46 Ltr Air tank				12mm Nylon	---
6	3	3	1416HTLD64	TSE Spring brake chamber				8mm Nylon	---
7	4	4	20HSCLD65	TSE Service brake chamber				8mm Nylon	---

DOMETT	
5 AXLE FULL TRAILER	
SIZE A4	SPEC REFERENCE 2197
SCALE	SERVICE LINES
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ITEM	QTY.	PART NO.	DESCRIPTION
1	1	480 102 084 0	WABCO T-EBS ECU
2	1	480 207 202 0	WABCO 3 RD MODULATOR
3	1	441 044 101 0	WABCO PRESSURE SENSOR
4	1	446 192 210 0	WABCO SMARTBOARD

DOMETT TRAILERS

5 AXLE FULL TRAILER

SIZE	A4	SPEC REFERENCE	2197	MODEL NUMBER	DOM5AXFULL/D/EBS	REV	1
SCALE					G10 PORTS		



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