

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

Plate number (optional)

VIN/Chassis number

7A9D10010N2023167

Make

DOMETT

Component being certified:

Chassis

Load anchorage

Model (optional)

D1001

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: NZ HEAVY VEHICLE BRAKE SPECIFICATION.
 CARRY OUT BRAKE CALCULATIONS, INSPECTION AND ECU END OF LINE PROTOCOL.
 4A TANKER
 FOR SYSTEM ARCHITECTURE, PLEASE REFER TO PDS WORKSHEET & SCHEMATIC.
 RSS ON TYRE: 265 70 R19.5**

Code/standard/rule certified to

LTR 32015, SCHEDULE 5

Component load rating(s)

26 Tonnes GVM

General drawing number(s)

N/A

**15 Tonne (Front group ratings)
 15 Tonne (Rear group ratings)**

Supporting documents

**BRAKE RULE CERTIFICATE LC220810
 BRAKE CALCULATION # 2022 ROR 4A WPC**

(JH220814)

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

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 002 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)

LANCE CAWTE

L P C

Inspector's signature

[Signature]

Inspector's name (PRINT IN CAPS)

JOHN HIRST

ID number

J E H

Date

01-Sep-22

Number

839951

CoF vehicle inspector ID (if applicable)

CoF vehicle inspector signature (if applicable)

Date

All fields are mandatory unless otherwise stated.

distribution: DOMETT
 2022 ROR 4A WPC
 7A9D10010N2023167
 LC220810 (JH220828)
 LT400: 839951

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 comment to do a braking harmonisation!
 WABCOBrake V6 18.07.12 db 31.08.2018

vehicle manufacturer: DOMETT
 trailer model : 4A TANKER, D1001
 trailer type : 4-axle-full-trailer
 remarks : air / hydraulic / VA suspension
 WABCO TRAILER - EBS
 TRISTOP 3+4: T.16/24
 265/70 R 19,5

axle 1 + 2 + 3 + 4 : Assali Stefen, K, 361-071-04 ECE Re 432,

		unladen	Laden
total mass	P	5200	30000
axle 1	P1	1400	7500
axle 2	P2	1400	7500
axle 3	P3	1200	7500
axle 4	P4	1200	7500
wheel base	E	5070	5070
centre of gravity height	h	700	1492

	axle 1	axle 2	axle 3	axle 4
no. of combined axles	1	1	1	1
no. of brake chambers per axle line	2	2	2	2
The power output corresponds to	BZ 122.1	BZ 122.1	BZ 119.6	BZ 119.6
brake chamber manufacturer	Meritor	Meritor	Meritor	Meritor
chamber size	20.	20.	T.16/24	T.16/24
lever length	74	74	74	74
brake factor	20.26	20.26	20.26	20.26
dyn. rolling radius	421	421	421	421
dyn. rolling radius	421	421	421	421
threshold torque	7.0	7.0	7.0	7.0

calculation:

chamber pressure(rdyn min)	pH at z=22,5%bar	2.4	2.4	2.3	2.3
chamber pressure(rdyn max)	pH at z=22,5%bar	2.4	2.4	2.3	2.3
chamber press.(servo)pcha	at pm6,5bar	6.1	6.1	5.3	5.3
piston force	THA at pm6,5bar	7071	7071	5304	5304
brake force(rdyn min)	T lad. at pm6,5bar	50425	50425	37841	37841
brake force(rdyn max)	T lad. at pm6,5bar	50425	50425	37841	37841
Brake force incl. 1 % rolling resistance	proportion	26.7	26.7	23.3	23.3

braking rate z laden 0.600 for rdyn 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: 480 207 0.. 0 WABCO or 480 207 2.. 0
 EBS relay valve

brake cylinder: Meritor 20HSCLD65

axle 2:
valve 1: 480 207 0.. 0 WABCO or 480 207 2.. 0
 EBS relay valve

brake cylinder: Meritor 20HSCLD65

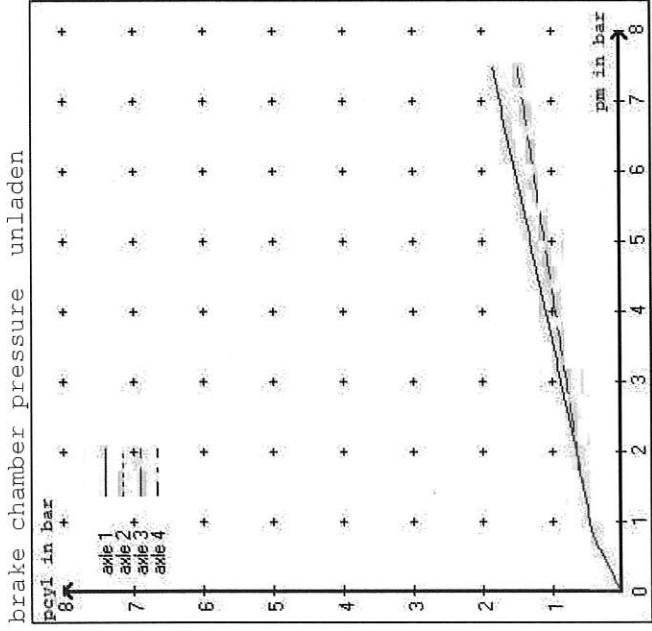
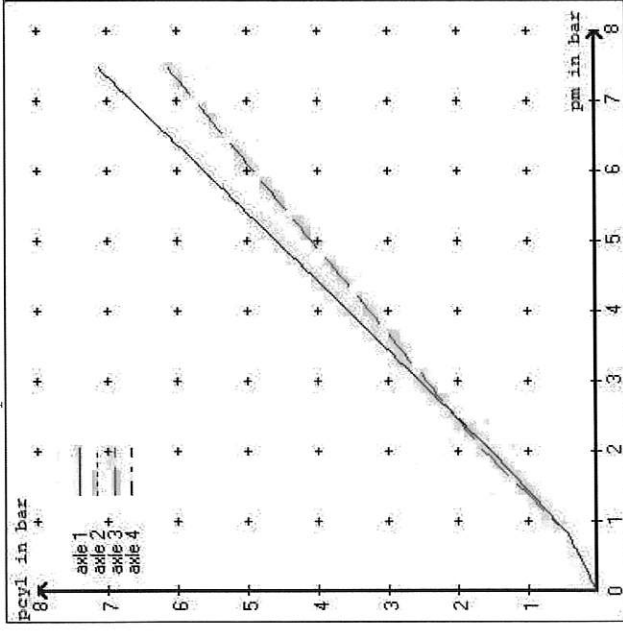
axle 3:
valve 1: 480 102 ... 0 WABCO
 EBS trailer modulator

brake cylinder: Meritor 1624HTLD64

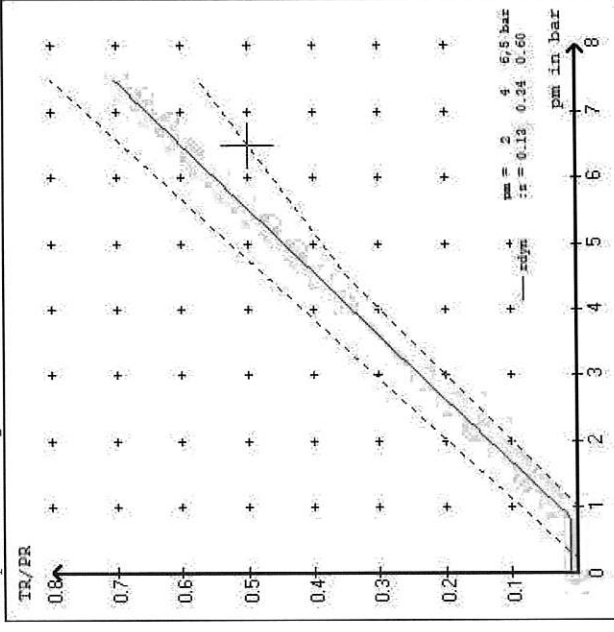
axle 4:
valve 1: 480 102 ... 0 WABCO
EBS trailer modulator
brake cylinder: Meritor 1624HTLD64

test type III	(ZIII = 0.30)	for rdyn min :	axle1	axle2	axle3	axle4	
at pm 3.6 bar =>		pcha in bar :	3.1	3.1	2.9	2.9	
test type III	(ZIII = 0.06)	for rdyn min :	axle1	axle2	axle3	axle4	
at pm 1.3 bar =>		pcha in bar :	0.9	0.9	0.9	0.9	

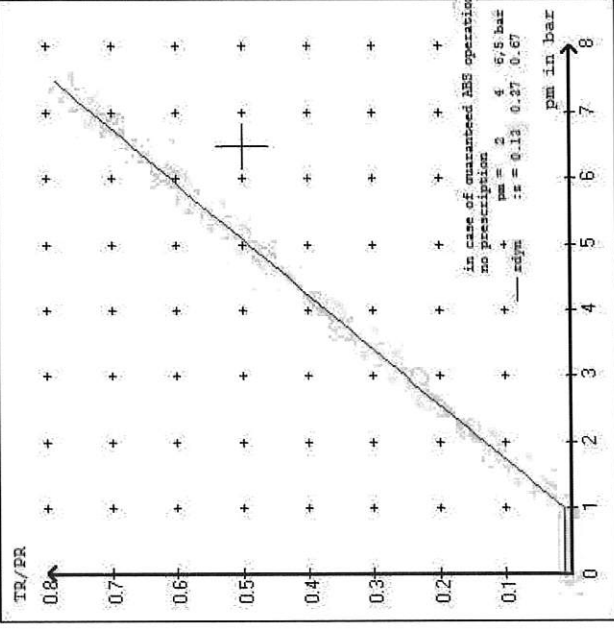
brake chamber pressure laden



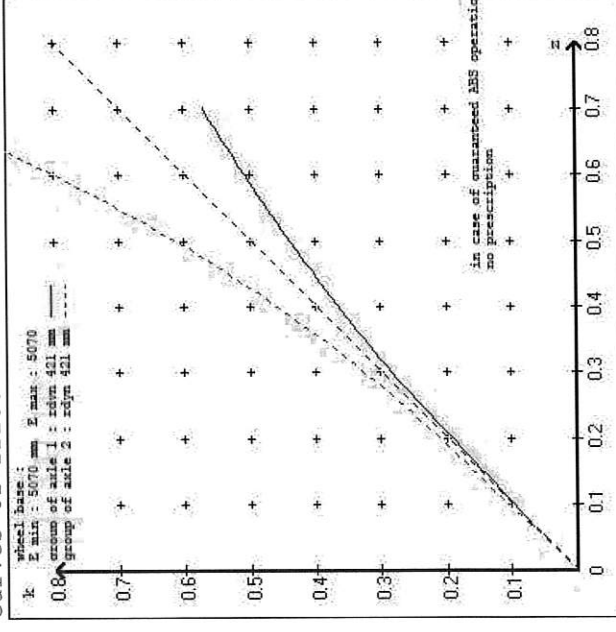
compatibility band laden



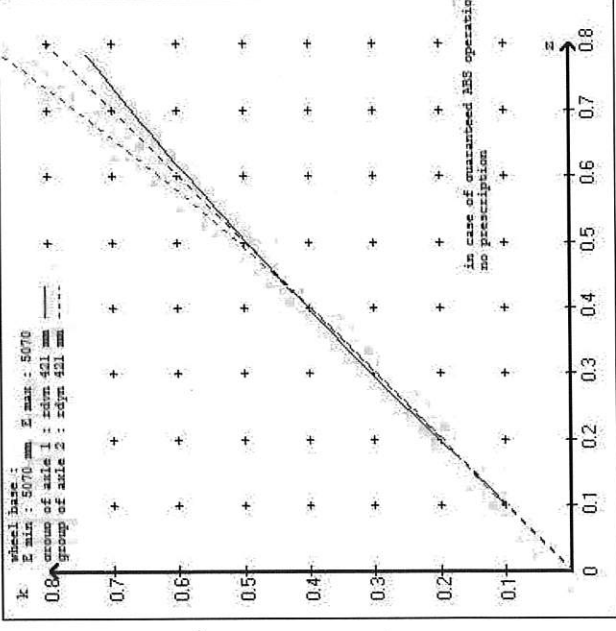
compatibility band unladen



curves of friction laden



curves of friction unladen



vehicle manufacturer: DOMETT
 trailer model : 4A TANKER, D1001
 trailer type : 4-axle-full-trailer

brake chamber and lever length :
 axle 1 : 2 x type/diameter 20. (Meritor) lever length 74 mm
 axle 2 : 2 x type/diameter 20. (Meritor) lever length 74 mm
 axle 3 : 2 x type/diameter T.16/24 (Meritor) lever length 74 mm
 axle 4 : 2 x type/diameter T.16/24 (Meritor) lever length 74 mm

brake diagram :

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 : 4A TANKER, D1001
 trailer type : 4-axle-full-trailer
 brake calculation no. : TP 20222A

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
 6.5 bar z = 0.600

axle	control pressure pm		brake pr. unladen	axle load laden	control pressure pm		brake pr. laden	
	axle load unladen	bellow pr. unladen			bellow pr. laden	brake pr. laden		
1	1400	to be	1.6	7500	to be	0.4	1.5	6.1
2	1400	entered by	1.6	7500	entered by	0.4	1.5	6.1
3	1200	the vehicle	1.3	7500	the vehicle	0.4	1.6	5.3
4	1200	manufact.	1.3	7500	manufact.	0.4	1.6	5.3
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 4
axle load	axle load	axle load	axle load
pcyl	pcyl	pcyl	pcyl
1.6	1.6	1.3	1.3
1900	1900	1700	1700
2.0	2.0	1.6	1.6
2400	2400	2200	2200
2900	2900	2700	2700
2.3	2.3	1.9	1.9
3400	3400	3200	3200
3900	3900	3700	3700
3.1	3.1	2.6	2.6
4400	4400	4200	4200
3.4	3.4	3.2	3.2
4900	4900	4700	4700
4.2	4.2	3.5	3.5
7500	7500	7500	7500
6.1	6.1	5.3	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 or LM or LCen	brake lining: ROR 8616 AF (M13)
test report : 361-071-04 ECE Re 432	date : GA310709
axle 2 : reference axle: Assali SteftM or LM or LCen	brake lining: ROR 8616 AF (M13)
test report : 361-071-04 ECE Re 432	date : GA310709
axle 3 : reference axle: Assali SteftM or LM or LCen	brake lining: ROR 8616 AF (M13)
test report : 361-071-04 ECE Re 432	date : GA310709
axle 4 : reference axle: Assali SteftM or LM or LCen	brake lining: ROR 8616 AF (M13)
test report : 361-071-04 ECE Re 432	date : GA310709

calc. verif. of residual (hot) braking force type III
(item 4.2.1 of appendix 2 to annex 11)

axle 1	(rdyn 421 mm)	T = 22.7 % Fe
axle 2	(rdyn 421 mm)	T = 22.7 % Fe
axle 3	(rdyn 421 mm)	T = 18.2 % Fe
axle 4	(rdyn 421 mm)	T = 18.2 % Fe

calculated actuator stroke in mm

(item 4.3.1.1 of appendix 2 to annex 11)

axle 1	(sp = 58 mm)	s = 38 mm
axle 2	(sp = 58 mm)	s = 38 mm
axle 3	(sp = 57 mm)	s = 38 mm
axle 4	(sp = 57 mm)	s = 38 mm

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

axle1	ThA = 7071 N
axle2	ThA = 7071 N
axle3	ThA = 5304 N
axle4	ThA = 5304 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 = 43214 N
axle 2	(rdyn 421 mm)	T = 43214 N
axle 3	(rdyn 421 mm)	T = 32459 N
axle 4	(rdyn 421 mm)	T = 32459 N

braking rate of the vehicle

(item 4.3.2 to appendix 2 to annex 11)

basic test of subject trailer (E)

0.60

type III (calculated) residual (hot)braking

0.51

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 = 43214 N
axle 2	(rdyn 421 mm)	T = 43214 N
axle 3	(rdyn 421 mm)	T = 32459 N
axle 4	(rdyn 421 mm)	T = 32459 N

braking rate of the vehicle

(item 4.3.2 to appendix 2 to annex 11)

basic test of subject trailer (E)

0.60

type III (calculated) residual (hot)braking

0.51

required braking rate

(items 1.5.3 and 1.7.2 to annex 11)

>= 0,4 and

>= 0,6*E (0.36)

spring parking brake

	axle 3	axle 4
no of TRISTOP-actuators per axle	2	2
TRISTOP-actuator type	T.16/24	T.16/24
lever length	74	74
stat. tyre radius	401	401
at a stroke of	30	30
min. force of spring brake	7605	7605
sp.brake chamber no Meritor.....	4	4
release pressure	4.8	4.8
	pls in bar	

Calculation:

ratio until road 3.7388 3.7388
 $iFb = 1Bh * \eta + C * rBt / (rBn * rstat)$
 for rstat in mm 401 401
 brake force of spring br. Tf in N 56159 56159
 $Tf = (TFz * KDZ - 2 * Co / 1Bh) * iFb$
 braking rate z_f laden 0.392
 $z_f = \text{sum}(Tf) / P + 0,01$

Test of the frictional connection required by the parking brake

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

$$\min Ef = E * (1 - PR/P + zferf * h/E) / (1 - zferf / (fzul * nF/ng))$$

min Ef = 3617 mm for E = 5070 mm
 =====
 min Ef = 3617 mm for E = 5070 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 = 1492 mm height of center of gravity - laden
 PR = 15000 kg maximum bogie mass - laden
 P = 30000 kg maximum total mass - laden
 nF = 2 no. of axle(s) with TRISTOP spring brake actuators
 ng = 2 no. of bogie axle(s)

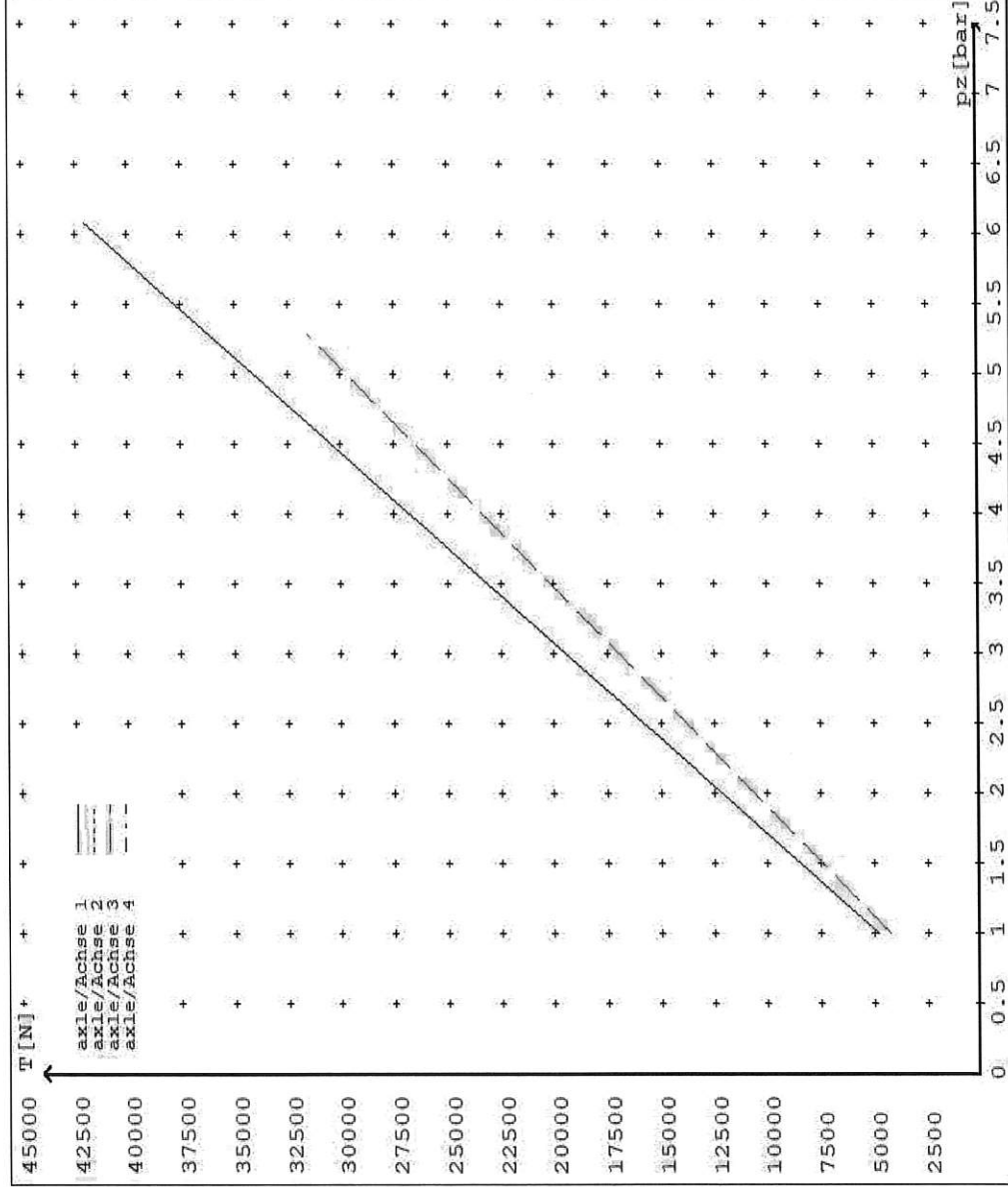
reference values

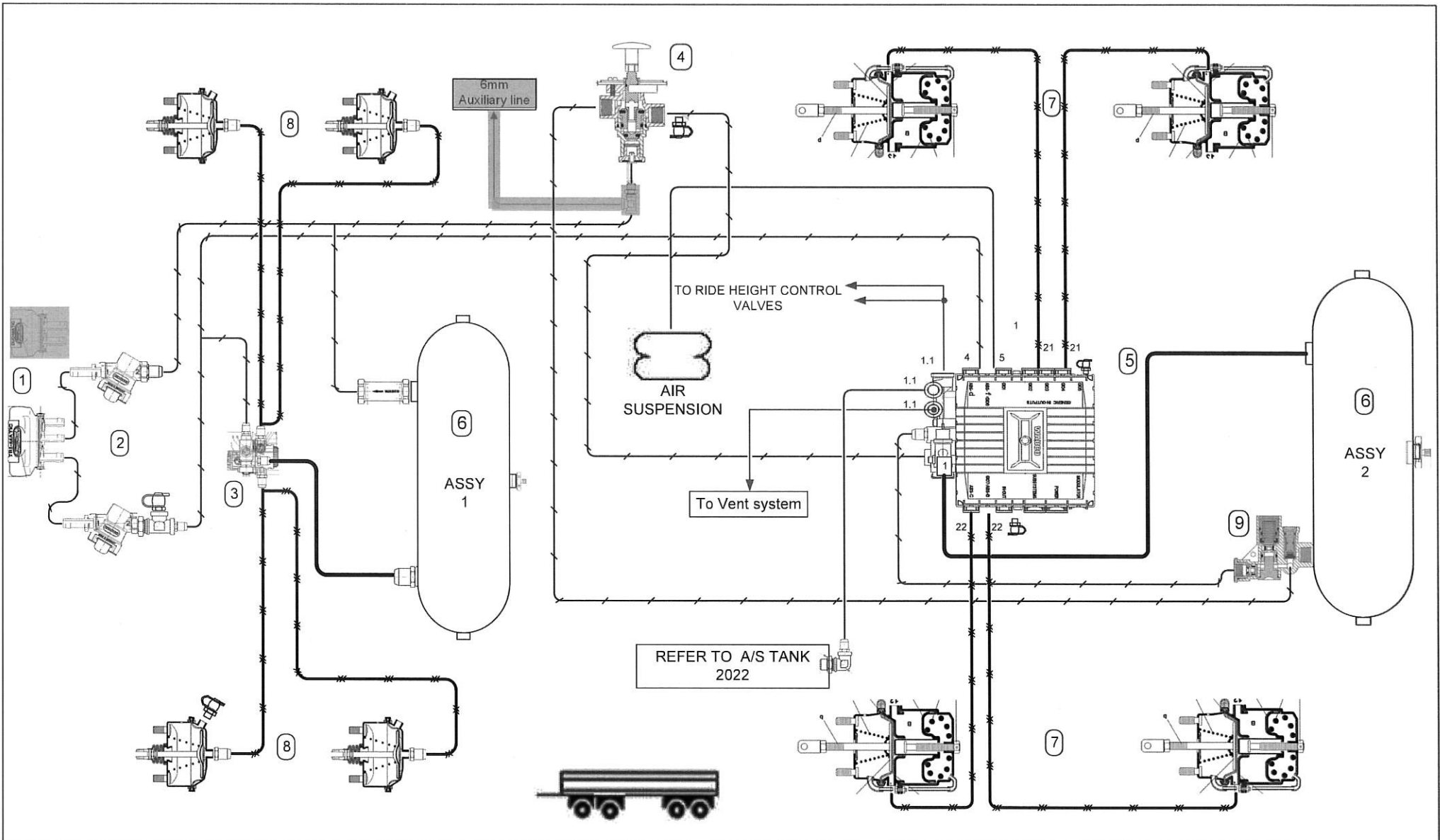
reference values for z = 50% for max rdyn: 421 mm









	pz [bar]	T [N]	T [N]
axle 1	1.0	4729	
	6.1	42021	
axle 2	1.0	4729	
	6.1	42021	
axle 3	1.0		4200
	5.3		31534
axle 4	1.0		4200
	5.3		31534

VIN - no.:

brake cylinder type (service / parking) Bremszylinder Typ (Betrieb / Fest)	Axle (s) / Achse (n)	
	20./	T.16/24
Maximum stroke smax = ...mm maximaler Hub smax =mm	65	64
Lever length = ...mm Hebellänge =mm	74	74
		T.16/24
		/











 DOMETT / FONTERRA EBS KIT 4A D/BAR SERVICE				ITEM	QTY.	PART NO.	DESCRIPTION	ITEM	QTY.	PART NO.	DESCRIPTION	PIPING LEGEND:	
 Copyright Transpecs 2010 All rights reserved				1*	1	452 808 002 0	TRAILER HALF TRIOMATIC (MALE)	1*	Hawera	use- 452/804/001/0	TRAILER HALF DUOMATIC		3/8" Rubber
				2	2	432 500 020 0	Wabco control line filter			Hawera kits only			3/8" Rubber
				3	1	480 207 001 0	Wabco EBS 3 rd modulator						1/2" Rubber
				4	1	17600B-M	RELEASE VALVE SEALCO						15mm Nylon
				5	1	480 102 064 0	Wabco TEBS - E (premium)						12mm Nylon
				6	2	C51902	48 Ltr Air tank						8mm Nylon
				7	4	1624 (342.162.401)	Haldex Spring brake chamber						8mm Nylon
				8	4	20 (125 200 ..)	Service Chamber Disc T20	9	1	110701-M	S/BRAKE VALVE ADR CURRENT		8mm Nylon

DOMETT / FONTERRA

EBS KIT 4A D/BAR
SERVICE

ITEM	SPEC REFERENCE	KIT NUMBER	DATE
	System 4S/3M	DOM/BRAKE/FONT/2010	20/02/2012
PAGE	1/20	JOHN HIRST	E & OE BILLY SINCLAIR

ITEM	QTY.	PART NO.	DESCRIPTION	ITEM	QTY.	PART NO.	DESCRIPTION	PIPING LEGEND:
1*	1	452 808 002 0	TRAILER HALF TRIOMATIC (MALE)	1*	Hawera	use- 452/804/001/0	TRAILER HALF DUOMATIC	
2	2	432 500 020 0	Wabco control line filter			Hawera kits only		
3	1	480 207 001 0	Wabco EBS 3 rd modulator					
4	1	17600B-M	RELEASE VALVE SEALCO					
5	1	480 102 064 0	Wabco TEBS - E (premium)					
6	2	C51902	48 Ltr Air tank					
7	4	1624 (342.162.401)	Haldex Spring brake chamber					
8	4	20 (125 200 ..)	Service Chamber Disc T20	9	1	110701-M	S/BRAKE VALVE ADR CURRENT	

DOMETT / FONTERRA
EBS KIT 4A D/BAR
PARK

ITEM	SPEC REFERENCE	KIT NUMBER	DATE
System 4S/3M	DOM/BRAKE/FONT/2010	20M2/2012	

PAGE 2/20

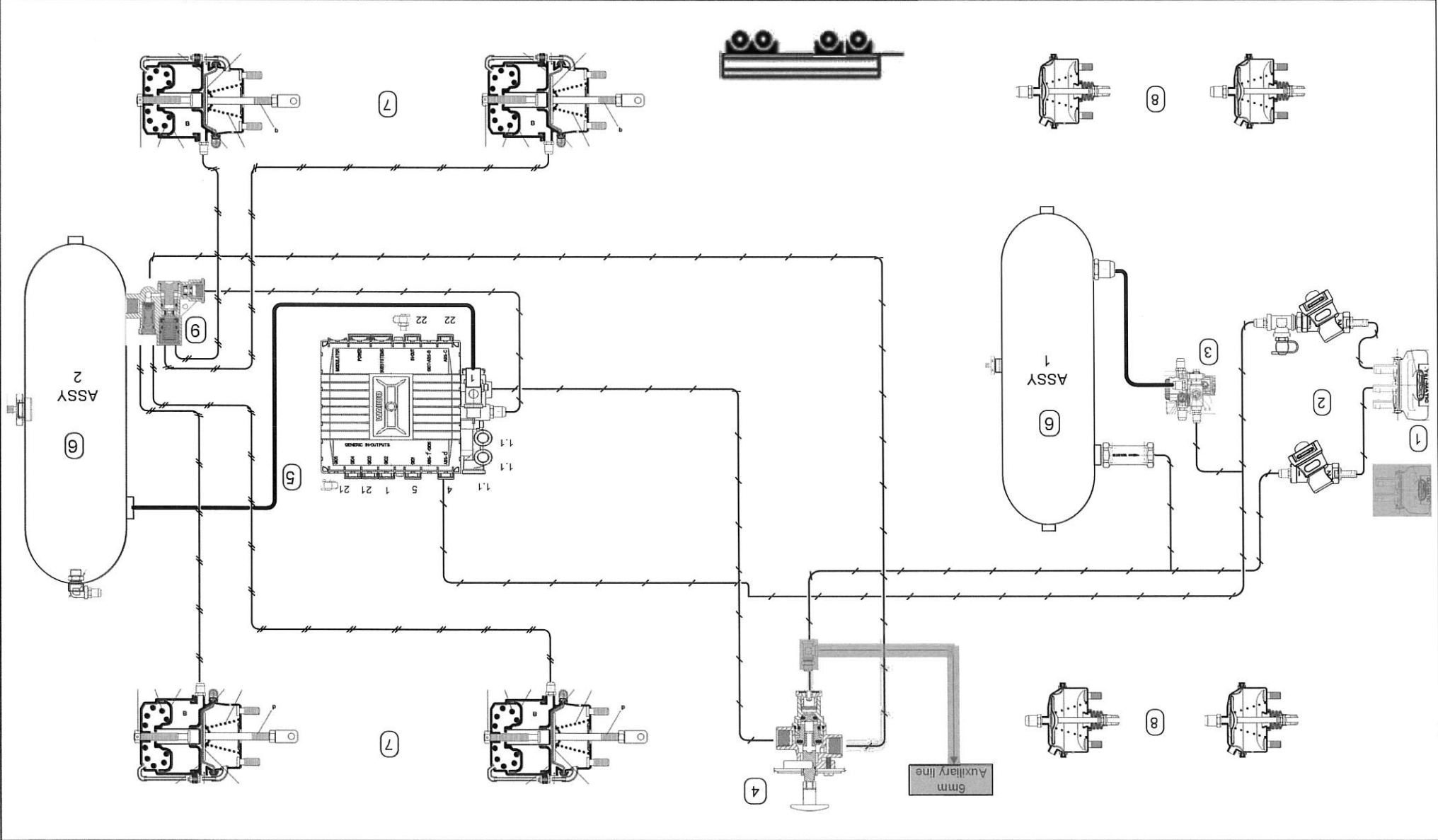
JOHN HIRST

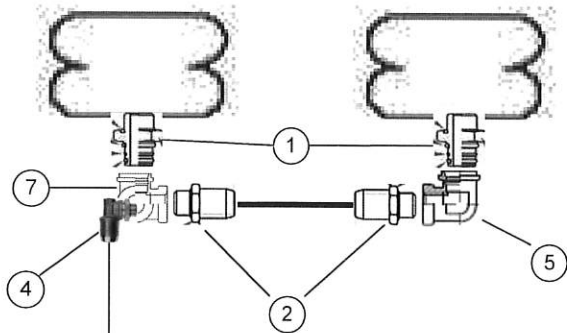
E & OE

BILLY SINCLAIR

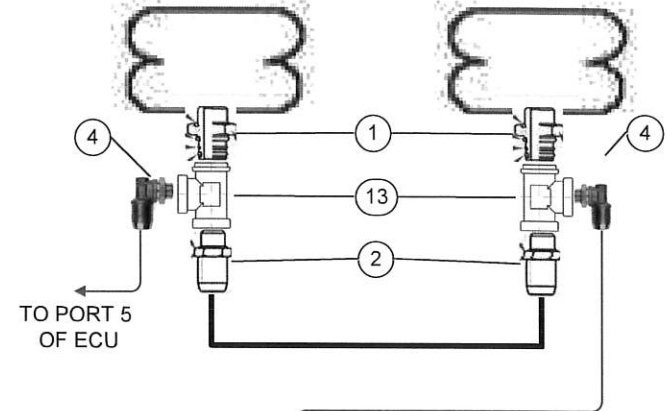
ITEM QTY.	PART NO.	DESCRIPTION	ITEM QTY.	PART NO.	DESCRIPTION
1*	452 808 002 0	TRAILER HALF TRIOMATIC (MALE)	1*	Hawera	use- 452/804/001/0
2	432 500 020 0	Wabco control line filter			Hawera kits only
3	480 207 001 0	Wabco EBS 3" modulator			
4	17600B-M	RELEASE VALVE SEALCO			
5	480 102 064 0	Wabco TEBS - E (premium)			
6	C51902	48 Ltr Air tank			
7	1624 (342,162,401)	Haldex Spring brake chamber			
8	20 (125 200 ..)	Service Chamber Disc T20	9	1	110701-M

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

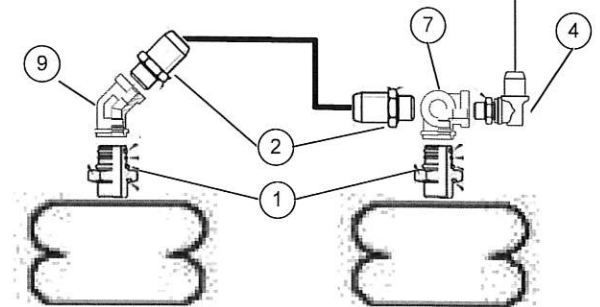
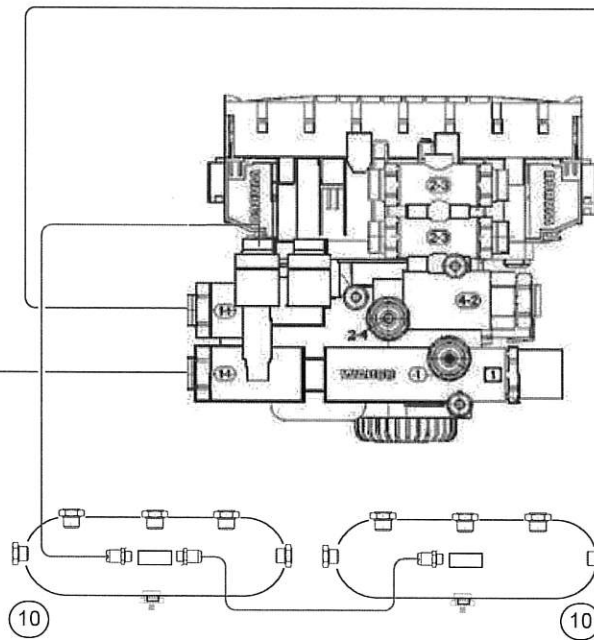
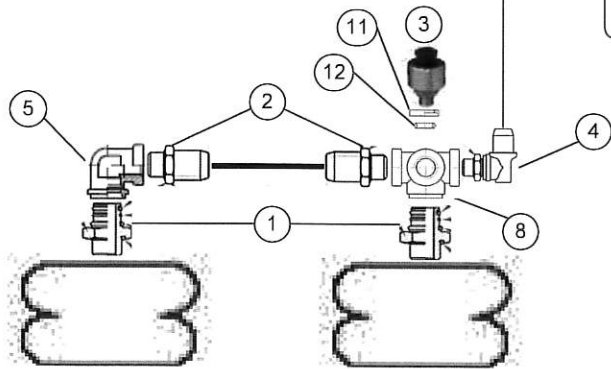




THE INSTALLATION POSITION OF THE FITTINGS IN THE AIR BAG IS FOR THE FONTERRA 2010 PROJECT.



AS PER REAR HCV



ITEM		QTY.	PART NO.	DESCRIPTION	ITEM	QTY.	PART NO.	DESCRIPTION	PIPING LEGEND:
1		8	660 1215B	SWIVEL STUD 12mm	9	1	645 5B	SIRIT SWIVEL45 DEGREE 16X1.5MM	
2		8	68ME15/16X1.5	15MM STRAIGHT MALE CONNECTOR	10	2	C51901	AIR TANK 25L 4 PORT	
3		1	441/044/101/0	EBS AIR BAG PRESS SENSOR	11	1	893/030/170/4	16mm BACKUP RING	
4		5	69SME8/16X1.5	8MM 90DEG M/SWIVEL 16X1.5	12	1	897/770/250/4	O RING 16mm	
5		2	615 5B	SIRIT SWIVEL 16X1.5MM ELBOW	13	2	625 5B	SIRIT SWIVEL 16X1.5MM T PIECE	
7		2	647 5B	SIRIT SWIVEL DOUBLE 16X1.5MM					
8		1	649 5B	SIRIT SWIVEL 16X1.5MM 3 PORT					

Transpecs

Air Susp Supply kit (Fonterra)

PART NUMBER
DOM4A/ASK/ROR/F

WABCO

Copyright Transpecs 2010
All rights reserved

SIZE	SPEC REFERENCE	FITTING ASSEMBLY KIT NUMBER	DATE
A4		DOM4A/ASK/FIT/F/ROR	19/01/18
PAGE	17/20	BILLY SINCLAIR E & OE	JOHN HIRST

PIPING LEGEND:

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

