NZ TRANSPORT AGENCY
WAKA KOTAHI

Heavy vehicle specialist certificate

Must be presented to a CoF (heavy) inspecting organisation if not entered into LANDATA

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

ID: JEH

Vehicle registration *(optional)*:

VIN/~~chassis~~ number: 7A9E20019K1023932

Make: DOMETT

Model *(optional)*: E2001 PH

Certification category: HVEK

Component being certified:

- [ ] Chassis
- [ ] Load anchorage
- [ ] Log bolsters
- [ ] Towing connection
- [X] Brakes
- [ ] SRT
- [ ] PSV stability
- [ ] PSV rollover
- [ ] Swept path
- [ ] PBS

Description of work

CERTIFY TO SCHED 5 OF LTR 32015/5: NZ HEAVY VEHICLE BRAKE SPECIFICATION
CARRY OUT BRAKE CALCULATIONS, INSPECTION AND ECU END OF LINE PROTOCOL.
5AFT CURTAINSIDE RSS ACTIVE ON TYRE: 265 70 R19.5
BRAKE CHAMBERS FRONT: 20HSCLD
BRAKE CHAMBERS REAR: 1416HTLD 14HSCLD

Code/standard/rule certified to: LTR 32015/5

General drawing number(s): N/A

Component load rating(s):
32 Tonnes GVM
16 Tonnes (Front group ratings)
19 Tonnes (Rear group ratings)

Supporting documents
BRAKE RULE CERTIFICATE JH200318
BRAKE CALCULATION # TP52039

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: 20-Mar-20

Number: 739058

CoF vehicle inspector ID *(if applicable)*:

CoF vehicle inspector signature *(if applicable)*:

Date:

All fields are mandatory unless otherwise stated.

WABCO START-UP LOG

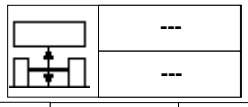
System	Trailer EBS-E	**WABCO part number**	480 102 084 0
Production date	2019-09-06	**Serial number**	437008028900E
Serial number (modulator)	000000501691		
Fingerprint Customer EOL / Customer Development / Flash Program	W041610 / 2020-03-24 ; 00000000 / 0000-00-00 ; 00000000 / 0000-00-00		

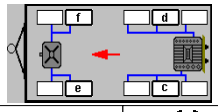
WABCO TRAILER EBS-E

GGVS/ADR TUEH TB 2007 - 019.00
TDB0749

HERSTELLER MANUFACTURER CONSTRUCTEUR	DOMETT TRAILERS
TYP TYPE TYPE	5AFT CURTAINSIDE
VEHICLE IDENT. NUMBER CHASSIS NUMBER NUMERO DE CHASSIS	7A9E20019K1023932
BREMSBERECHNUNGS-NR. BRAKE CALCULATION NO. CALCUL DE FREINAGE NO.	TP52039A
POLRADZÄHNEZAHL c-d | e-f POLE WHEEL TEETH c-d | e-f DENTS ROUE DENTÉE c-d | e-f	90 / 90
ABS-System ABS-System Système ABS	4S/3M
RSS RSS RSS Einfachbereifung Single Tire Monte simple	
Lenkachse Steering axle Essieu vireur	
Zwillingsbereifung Twin Tire Monte jumelée	X
Kippkritisches Fahrzeug Critical Trailer Véhicule critique	
Subsystems	SB / I/O / 24N

GIO	Pin1	Pin3	Pin4
1	24V-O1	---	---
2	---	---	---
3	ALS2	ALS2	---
4	---	---	---
5	DIAG	DIAG	DIAG
6	---	---	---
7	---	---	---





	pm (bar)		6.5	pm (bar)		0.8	2.0	---	6.5		TYP TYPE	(mm)	(mm)	(bar) 1.0	(bar) Pz
ACHSE AXLE ESSIEU	(kg)			(kg)					pz					TR (daN)	
1	1600	0.7	1.6	8000	5.1	0.4	1.3	---	5.7	-	20	65	69	507	4160
2	1600	0.7	1.6	8000	5.1	0.4	1.3	---	5.7	-	20	65	69	507	4160
3	1300	0.5	1.4	6350	4.0	0.3	1.4	---	4.9	-	14 / 16	64	69	488	2953
4	1300	0.5	1.4	6350	4.0	0.3	1.4	---	4.9	-	14 / 16	64	69	488	2953
5	1300	0.5	1.4	6350	4.0	0.3	1.4	---	4.9	-	14	64	69	488	2953

TEBS-E

Diagnostic memory	OK	**Warning lamp control**	OK
Parameter setting	carried out	**Stop light 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 test	Not tested	**Leak test**	Not tested
Immobilizer test	Not tested	**Signal outputs**	Not tested
Signal inputs	Not tested	**Tag axle test**	Not tested

Electronic Extension Module

Diagnostic memory	Not tested	**Signal outputs**	Not tested
TailGUARDlight	Not tested	**TailGUARD**	Not tested

Manufacturer	DOMETT TRAILERS	**Vehicle ident. no**	7A9E20019K1023932
Vehicle type	5AFT CURTAINSIDE	**Odometer reading**	0.0 km
next Service	0 km	**Trip reading**	0.0 km
Tester	John Hirst	**Signature**	
Date	2020-03-24 4:09:28 PM		

WABCO START-UP LOG

Vehicle ident. no	7A9E20019K1023932

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	5.6
Coupling head - First axle	2.5	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

\- Indicate service moment via lamp

Service interval (km) 0

Tire circumference

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

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 supply (24N)
\- Unloading level (D-SW)
\- Normal level 4 (FN4-SW)

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 desired pressure sensor (DPS)
\- ABS active signal (RSS-O)
\- RSS active signal (RSS-O)
\- Speed signal (V-S)
X Steady positive voltage 1 (24V-O1)
\- Steady positive voltage 2 (24V-O2)
\- Tilt alert (Tilt warning) (TW)
\- Steering axle lock (SAC)

\- 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)

Subsystems

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

WABCO START-UP LOG

Vehicle ident. no	7A9E20019K1023932

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 1	0.0	0.0	0
Lifting axle 2	0.0		

Lifting axle function (OptiTurn/OptiLoad) interrupted with parking brake engaged	X
Lower with ignition off	X
Tag axle residual pressure regulation	-
Residual pressure Tag axle (bar)	0.5

Lifting axle control with OptiLoad or Forklift recognition

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

- Activation via SmartBoard

X Button - Switch 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 automatically with curve detection - Only partial-/full-load
- Traction help with ignition on

	Terminate 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
- Curve detection - Via SmartBoard

Terminate at (km/h) 30
Pressure limitation (bar) 0.0

- OptiLoad

Start (km/h) 0
Pressure limitation (bar) 0.0
2nd lifting axle characteristic -

Activate with
- Automatic at speed
- only at partial-/full-load
- Manually with 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	Normal level 4/unloading level
Front axle	0	0	0
Rear axle	0	0	0
Speed on (km/h)		60	
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 LOG

Vehicle ident. no	7A9E20019K1023932

ECAS special parameter

Control delay	
Control delay when stationary (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

Lowering

Lower onto buffer	X
Lower to lower calibrated level	-

Stand-by operation

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

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

Green ECAS warning lamp

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

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

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

ECAS with eTASC / Rotary slide valve

After ignition, actual level is the same as nominal level	-
No level control when stationary	-
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

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 (uA)	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 Electronic Extension Module	X

WABCO START-UP LOG

Vehicle ident. no	7A9E20019K1023932

Road finisher brake / Trailer Extending Control

- Without automatic load-dependent braking pressure (LSV)
- Pressure adjustment with hand brake lever
- Actuation only via SmartBoard (no switch required)

Pressure test pm (bar) 1.5

Function active until (km/h) 10

Switch

X Mechanical switch
- Proximity switch
- Proximity switch and separate switch

Level recognition

X Ground only
- +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

Input signal Proximity switch

Warning brake from 18

- User-defined

Pressure threshold 3.0

Brake to standstill 28

- Function can be deactivated with SmartBoard or Trailer Remote Control
- 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 5 km/h

Freely configurable digital function (GIO-FKD)

Function name

Input

If switch

- opens
X closes

and speed

X greater than
- less than

15 km/h

Function 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

Voltage 3.5

X exceeds
- drops below

and speed

X greater than
- less than

15 km/h

Function 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 stand-by mode
ABS active signal	X	-	X	
RSS active signal	X	-	X	
Steady positive voltage 1			-	-
Steady positive voltage 2			X	-
Speed signal			X	

START-UP LOG

Vehicle ident. no	7A9E20019K1023932

Operating Hour Counter

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

Tilt alert (Tilt warning)

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

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

distribution: DOMETT TRAILERS
7A9E20019K1023932
SODC: JH200318
LT400: 739058

please note!

This brake calculation is made under consideration of
-the legal precriptions mentioned above in the version valid at the time of making the program (V6.18.07.12).
-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 CURTAINSIDE
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 PERFOMANCE 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	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	7400 - 7500	
centre of gravity height	h in mm	700	2000

		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	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	[-]	23.03	23.03	23.03	23.03	23.03
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	4.9	4.9	4.9
piston force	ThA at pm6,5bar N	6578	6578	4686	4686	4686
brake force(rdyn min)	T lad. at pm6,5bar N	49846	49846	35381	35381	35381
brake force(rdyn max)	T lad. at pm6,5bar N	49846	49846	35381	35381	35381
Brake force incl. 1 % rolling resistance proportion	%	22.3	22.3	18.5	18.5	18.5

braking rate z laden 0.599 for rdyn min
z = sum (TR)/PRmax 0.599 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: Meritor 20HSCLD65

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: Meritor 20HSCLD65

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

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

brake cylinder: Meritor 1424HTLD64

axle 4:
valve 1: 971 002 ... 0 WABCO
EBS emergency valve

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

brake cylinder: Meritor 1424HTLD64

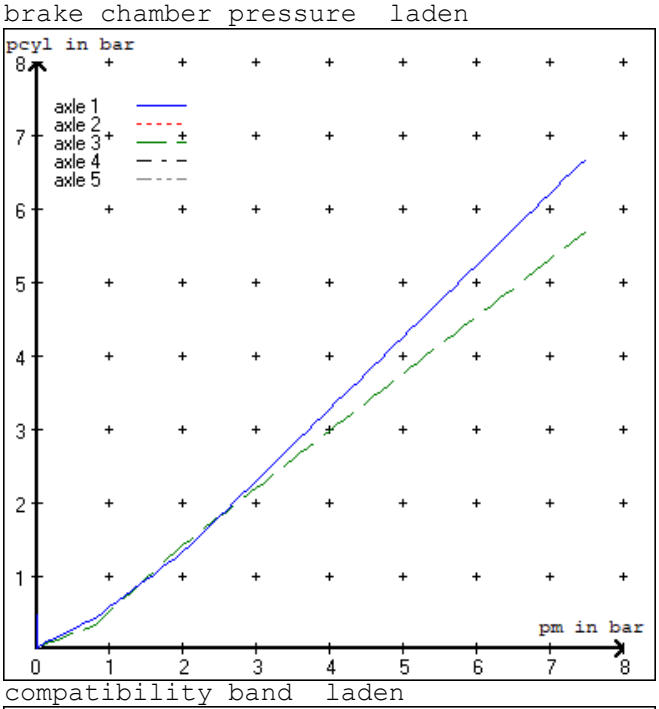
axle 5:
valve 1: 971 002 ... 0 WABCO
EBS emergency valve

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

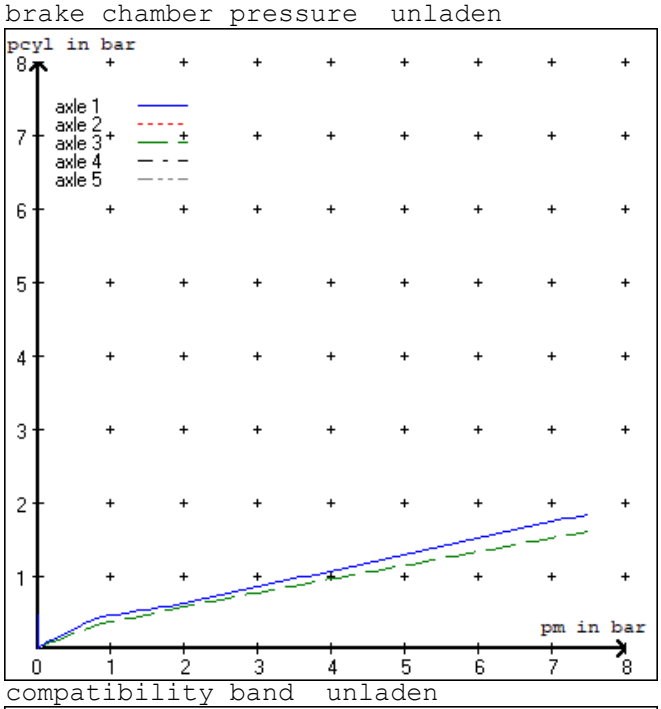
brake cylinder: Meritor 14HSCLD64

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	2.7	2.7	2.7
test type III (zIII = 0.06)	for rdyn min :	axle1	axle2	axle3	axle4	axle5
at pm 1.3 bar =>	pcha in bar :	0.8	0.8	0.8	0.8	0.8

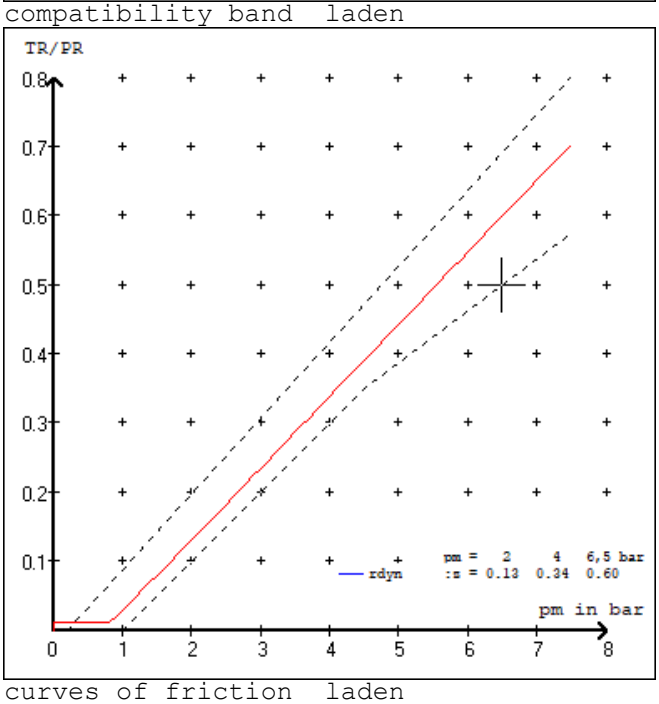
brake chamber pressure laden



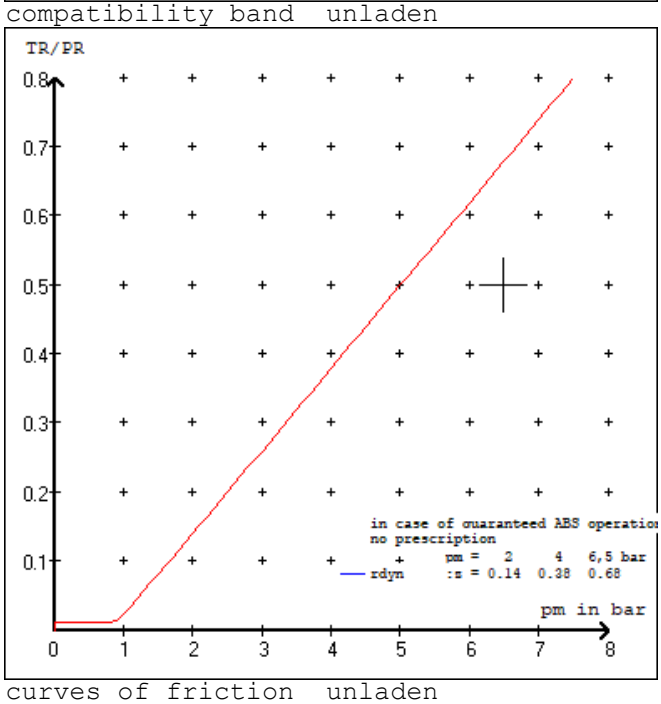
brake chamber pressure unladen



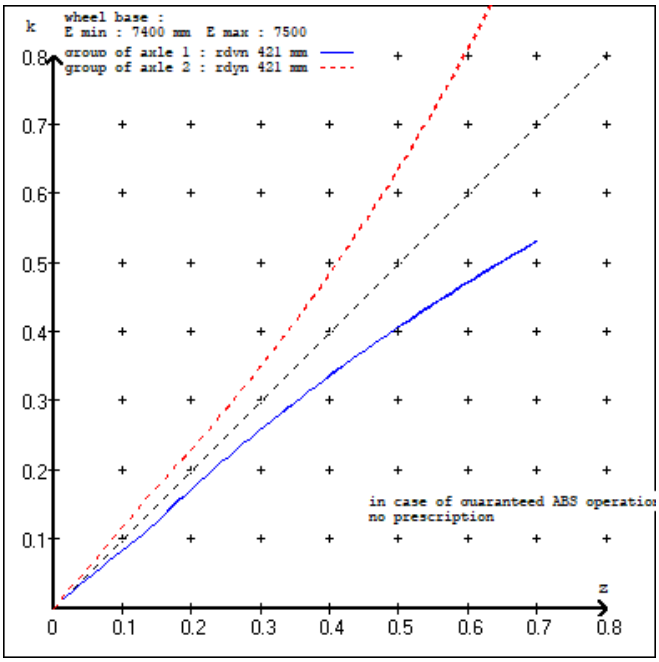
compatibility band laden



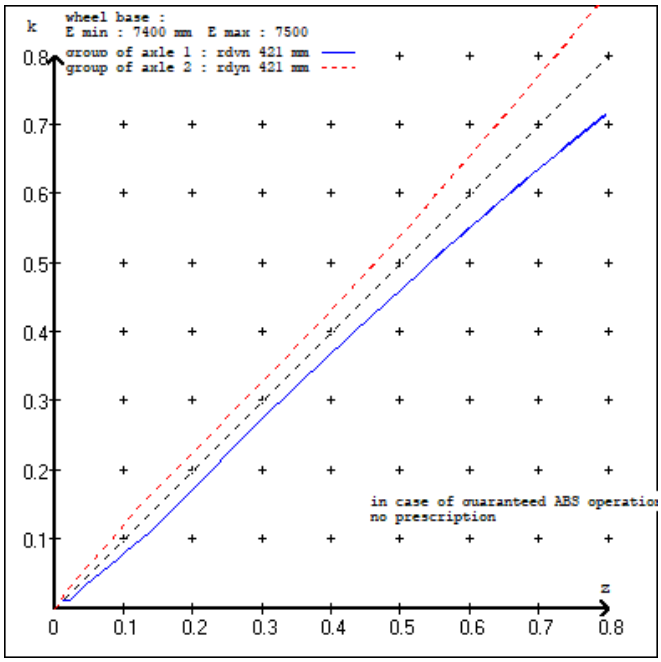
compatibility band unladen



curves of friction laden



curves of friction unladen



vehicle manufacturer: DOMETT 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
==========
vehicle manufacturer: DOMETT TRAILERS
trailer model : 5AFT CURTAINSIDE
trailer type : 5-axle-full-trailer
brake calculation no. : TP 52039A

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

control pressure pm			6,5	control pressure pm		0.8	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 entered by the vehicle manufact.	1.6	8000	to be entered by the vehicle manufact.	0.4	1.3	5.7
2	1600		1.6	8000		0.4	1.3	5.7
3	1300		1.4	6350		0.3	1.4	4.9
4	1300		1.4	6350		0.3	1.4	4.9
5	1300		1.4	6350		0.3	1.4	4.9

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	1.6	1600	1.6	1300	1.4	1300	1.4	1300	1.4
2100	1.9	2100	1.9	1800	1.7	1800	1.7	1800	1.7
2600	2.2	2600	2.2	2300	2.1	2300	2.1	2300	2.1
3100	2.6	3100	2.6	2800	2.4	2800	2.4	2800	2.4
3600	2.9	3600	2.9	3300	2.8	3300	2.8	3300	2.8
4100	3.2	4100	3.2	3800	3.1	3800	3.1	3800	3.1
4600	3.5	4600	3.5	4300	3.5	4300	3.5	4300	3.5
5100	3.8	5100	3.8	4800	3.8	4800	3.8	4800	3.8
8000	5.7	8000	5.7	6350	4.9	6350	4.9	6350	4.9

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
test report :	TDB 0749 ECE	date : 20130930 30.09.2013
axle 3 : reference axle: SAF	SBW 1937	brake lining: Jurid 539
test report :	TDB 0749 ECE	date : 20130930 30.09.2013
axle 4 : reference axle: SAF	SBW 1937	brake lining: Jurid 539
test report :	TDB 0749 ECE	date : 20130930 30.09.2013
axle 5 : reference axle: SAF	SBW 1937	brake lining: Jurid 539
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)

axle 1	(rdyn 421 mm)	T = 23.8 % Fe
axle 2	(rdyn 421 mm)	T = 23.8 % Fe
axle 3	(rdyn 421 mm)	T = 18.5 % Fe
axle 4	(rdyn 421 mm)	T = 18.5 % Fe
axle 5	(rdyn 421 mm)	T = 18.5 % Fe

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

axle 1	(sp = 58 mm)	s = 39 mm
axle 2	(sp = 58 mm)	s = 39 mm
axle 3	(sp = 56 mm)	s = 39 mm
axle 4	(sp = 56 mm)	s = 39 mm
axle 5	(sp = 56 mm)	s = 39 mm

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

axle1	ThA = 6578 N
axle2	ThA = 6578 N
axle3	ThA = 4686 N
axle4	ThA = 4686 N
axle5	ThA = 4686 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 = 38948 N
axle 2	(rdyn 421 mm)	T = 38948 N
axle 3	(rdyn 421 mm)	T = 27686 N
axle 4	(rdyn 421 mm)	T = 27686 N
axle 5	(rdyn 421 mm)	T = 27686 N

	basic test of subject trailer (E)	type III (calculated) residual (hot)braking
braking rate of the vehicle (item 4.3.2 to appendix 2 to annex 11)	0.60	0.47
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 = 38948 N
axle 2	(rdyn 421 mm)	T = 38948 N
axle 3	(rdyn 421 mm)	T = 27686 N
axle 4	(rdyn 421 mm)	T = 27686 N
axle 5	(rdyn 421 mm)	T = 27686 N

	basic test of subject trailer (E)	type III (calculated) residual (hot)braking
braking rate of the vehicle (item 4.3.2 to appendix 2 to annex 11)	0.60	0.47
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 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	4.5	4.5

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 = 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 = 5642 mm for E = 7400 mm
==========
min Ef = 5711 mm for E = 7500 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	=	2000 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)

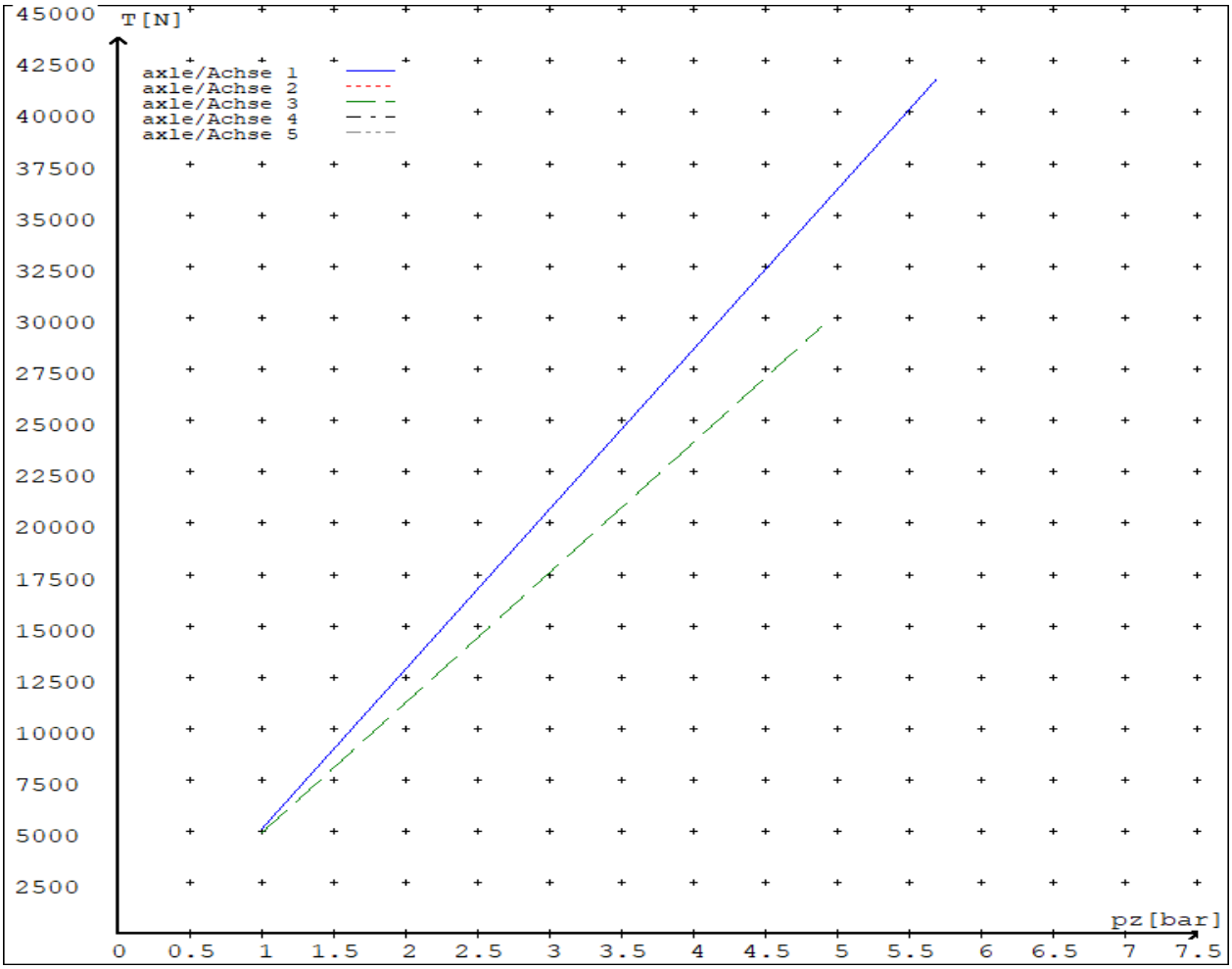
reference values

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

	pz [bar]	T [N]	T [N]
axle 1	1.0 5.7	5078 41608	
axle 2	1.0 5.7	5078 41608	
axle 3	1.0 4.9		4880 29533
axle 4	1.0 4.9		4880 29533
axle 5	1.0 4.9		4880 29533

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



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

CLIENT

MANUFACTURER:	DOMETT TRAILERS
ADDRESS:	TAURIKURA DRIVE, TAURANGA 3173
FLEET:	NOT SPECIFIED

VEHICLE DETAILS

VEHICLE TYPE:	5AFT CURTAINSIDE	**CERT #:**	JH200318
YEAR:	2020	**CALCULATION #:**	TP52039
MAKE:	DOMETT	**REGO:**	N/A
MODEL:	E2001 PH	**LT400 #:**	739058
CHASSIS #:	1932	**ORDER NUMBER:**	7185
VIN #:	7A9E20019K1023932		
GVM: *TONNES*	32	**PRIME MOVER:**	EBS / EUROPEAN
LOAD CONFIGURATION:	MIXED FREIGHT		

	FRONT	REAR
GROUP RATINGS: *TONNES*	16	19
WHEEL BASE: *METRES*	7.5	

	UNLADEN COG	MAX HEIGHT	HEIGHT DECK
	0.7	4.3	1.09
COG: *METRES*	1.997		

	FRONT	REAR	TOTAL
TARE: *TONNES*	3.2	4	7.2

	FRONT	REAR
TYRE SIZE:	265 70 R19.5	265 70 R19.5
ROLLING CIRCUMFERENCE: *MM*	2645	2645
AXLE SPACING: *METRES*	1.31	2.51

BRAKE & AXLE DETAILS

		MAKE	MODEL	TEST REPORT
AXLE:		SAF	SAF-ZI9W	TDB0749
POLE WHEEL FRONT:		90	**POLE WHEEL REAR:**	90
LINING MATERIAL:		JURID 539	**BRAKE FACTOR:**	23.03
SENSED AXLES:		2 + 4		
SERIAL NUMBERS:	1	11 19 303 0360		
	2	11 19 253 0262		
	3	11 19 303 0347		
	4	11 19 303 0370		
	5	11 19 303 0377		

CHAMBER AND VALVING DETAILS

CHAMBERS:	AXLE 1 & 2	AXLE 3 & 4	AXLE 5
BRAND:	TSE_CHAMBERS	TSE_CHAMBERS	TSE_CHAMBERS
SIZE:	20HSCLD	1416HTLD	14HSCLD
STROKE: *MILLIMETRES*	65	64	64
TEST REPORT #:	BC 0041.0 Jul '07	BC0143.0	BZ 122.1 Sep '00
SPRINGBRAKE FORCE: *kN*	N/A	6.16	N/A
HOLDOFF PRESSURE: *kPa*	N/A	4.5	N/A
FOUNDATION BRAKE:	WABCO PAN19	WABCO PAN19	WABCO PAN19
LEVER LENGTH: *MILLIMETRES*	69	69	69

BRAKE VALVES:	MAKE:	PART NUMBER:	PM PRESS. *kPa*
ECU PART #:	WABCO	480 102 08. 0 (MV)	80 kPa
3RD MODULATOR #:	WABCO	480 207 202 0 (12V)	80 kPa
ANTI-COMPOUNDING:	YES	**ELEX:**	N/A
SPRING BRAKE RELAY:	WABCO_PREV	971 002 900 0	
YARD RELEASE VALVE:	WABCO-PREV	971 002 900 0	
INLINE RELAY FITTED:	N/A	N/A	

ECU DIRECTION: ☑ FRONT ☐ REAR **FRONT FRICTION: μ** 0.47

SMARTBOARD/OPTILINK: ☐ SMARTBOARD ☐ OPTI-LINK

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:	464 008 011 0	464 008 011 0
OTHER VALVES:	N/A	N/A
RIDE HEIGHT *MM*:	280	280
HANGER HEIGHT *MM*:	200	200
PEDESTAL HEIGHT *MM*:	50	50
LIFTAXLE:		N/A
TIPPING DUMP SWITCH:		N/A
LIFTAXLE VALVE:		N/A

AIR TANKS

AIR TANKS STANDARD:	SAE J10A / EN286-2

	FRONT	REAR
BRAKE TANK SIZE: *L*	46	46 + 25
AUXILLARY TANK SIZE: *L*	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		

ELECTRONIC HEIGHT SENSOR CALIBRATION

	TIMER TICKS [F/R]	MILLIMETRE [F / R]
UPPER LEVEL:	N/A	N/A
NORMAL LEVEL:	N/A	N/A
LOWER LEVEL:	N/A	N/A

CHECKS AT COMMISSION OF VEHICLE

CHAMBER BUNGS REMOVED: ☑ **VALVE MOUNTING:** ☑

ECU BLANKING PLUGS CHECKED: ☑

RESPONSE TIME:	**MODULATOR 2.1**	**MODULATOR 2.2**	**RELAY VALVE**
ms:	200	215	365

NOTES AND SPECIAL CONDITIONS

CERTIFY NEW TRAILER

LHS 2ND AXLE + LHS 5TH AXLE BRAKE CHAMBERS MOUNTED INCORRECTLY - RECTIFIED (JH)

I UNDERSTAND AND DECLARE THAT I AM THE CERTIFIER IDENTIFIED BELOW AND HOLD A CURRENT VALID APPOINTMENT. I CERTIFY THAT AT THE TIME OF INSPECTION THE ABOVE MENTIONED VEHICLE COMPONENT DESIGN AND THIS CERTIFICATION COMPLIES IN ALL RESPECTS WITH THE LAND TRANSPORT RULE VEHICLE STANDARDS COMPLIANCE 2002 AND MY DEED OF APPOINTMENT. TO THE BEST OF MY KNOWLEDGE THE INFORMATION CONTAINED IN THIS CERTIFICATE IS TRUE AND CORRECT.

NEW ZEALAND HEAVY VECHLE BRAKE RULE 32015/5, SCHEDULE 5.

DATE: **20/03/2020**

SIGNED: 

CERTIFIER NAME & ID:	**JOHN HIRST**	**JEH**
SODC BY:	**N/A**	**N/A**

PHONE (BUS): **09-980-7300**

FAX:

POSTAL ADDRESS: **P.O. Box 98-971, Manukau 2241**
New Zealand

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)

NOTICE TO VEHICLE OPERATOR

This trailer is equipped with an **E**lectronic **B**rake **S**ystem.

To comply with the New Zealand Heavy Vehicle Brake Rule 32015/5, it must be used only in conjunction with a truck/tractor equipped with a 5 or 7 pin ABS/EBS power supply socket.
Failure to connect to such supply invalidates Brake Rule compliance.

The trailer ABS/EBS warning light on the towing vehicle dashboard must illuminate when the ignition is switched on and extinguish when the vehicle is in motion.
If the light does not illuminate when ignition is switched on, the system must be checked. If the light remains illuminated when the vehicle is in motion, Brake Rule compliance is compromised. Repairs must be made as soon as possible.

If you are unsure of your responsibilities and/or obligations, please contact either the vehicle manufacturer or myself.

(p.p.)_____
J E Hirst
(JEH HVEK)
(09 980 7300)

GOUGH Transpecs

NOTICE TO VEHICLE OPERATOR

WABCO Park Release Emergency Valve (PREV)

This trailer is equipped with a WABCO PREV
Part # 971 002 900 0

Application of the park brake via the cab control valve will actuate and apply all service brakes on the trailer. In the event of a leak in the service brake system the Spring Brakes will automatically override and hold the vehicle in compliance to Land Transport Rule: Heavy-vehicle Brakes Rule 32015/5.
When the vehicle is presented for COF the trailer park brake system is tested by pulling the red actuation knob on the PREV, situated mid way down the chassis rail. The cab control in the prime mover does not have to be applied for this test procedure.

If you are unsure of any aspect relating to this instruction please contact either the vehicle manufacturer or myself.

(p.p.)_____
J E Hirst
(JEH HVEK)
(09 980 7300)