NZ TRANSPORT AGENCY
WAKA KOTAHI

Heavy Vehicle Specialist Certificate

Heavy Vehicle Specialist Inspector and Inspecting Organisation

Heavy Vehicle Specialist Inspector's Name *(PRINT IN CAPS)* Ralph Hume

ID RHU

Vehicle Registration*
Not yet Registered

VIN / Chassis Number
7A9D150B0023936

Component being certified:

- [ ] Chassis Modification
- [ ] Load Anchorage
- [ ] Log Bolsters
- [ ] Towing Connection
- [X] Brakes
- [ ] SRT

Certification Category
HVEK

Description of Work
Certify Brake System as meeting the requirements of HVBR

4 Axle Semi Trailer

Fitted with Drum Brakes & EBS.

Code/Standard Certified to
NZ HVB Rule 32015

Component Load Rating(s)

General Drawing Number(s)
BT0611

Supporting Documents
N/A

*Special Conditions
This Certificate is a statement of compliance at the time of certification only & does not offer or imply any guarantee or warrenty with respect to the work certified or any other aspec of the vehicle

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 above 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 Deed of Appointment. To the best of my knowledge the information contained in this Certificate is true and correct.

Designer's ID *(if certified by a manufacturer)*
RHU

Inspector's / Delegate's Signature

*Delegate's Name *(PRINT IN CAPS)*
N/A

Date
28/01/11

Number
366857

COF Vehicle Inspector ID:

COF Vehicle Inspector Signature:

Date

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

Brake calculation pursuant to EEC REG 71/320/EEC, 74/132/EEC, 75/524/EEC, 79/489/EEC, 85/647/EEC, 98/12/EEC and 2002/78/EEC also ECE - R13 series 11 inclusive of all previous series !

Manufacturer : Domett
Type of vehicle : 4 Axle Semi
Kind of vehicle : 4 - axle - semi trailer

General data (statement of manufacturer)

Suspension unit : air suspension, ROR FL 9000 NB

	laden	unladen
G.V.W P [kg] :	42000	8000
Axle load [kg]		
PR 1	6635	1570
PR 2	6635	1570
PR 3	6635	1570
PR 4	6635	1570
Sum of PR [kg] :	26540	6280
Wheelbases [mm]		
kp-1. Axle	7867 - 7867	7867 - 7867
1.-2. Axle	1333	1333
2.-3. Axle	1333	1333
3.-4. Axle	1333	1333
Wheelbase ER [mm] :	9867 - 9867	9867 - 9867
Hgt.c.o.g. hR [mm] :	760 - 760	2020 - 2020
K-Factors	KCmin : 1.320 KCmax : 1.320	KVmin : 1.455 KVmax : 1.455

	Axle	Fd.-brake	Tyres (Rdyn [mm])	
Axle 1	ROR	MERITOR/ROR	Type 265/70 R 19.5	-265/70 R 19.5
	BMX	B (350x200)	Rdyn.421.00	-421.00
Axle 2	ROR	MERITOR/ROR	Type 265/70 R 19.5	-265/70 R 19.5
	BMX	B (350x200)	Rdyn.421.00	-421.00
Axle 3	ROR	MERITOR/ROR	Type 265/70 R 19.5	-265/70 R 19.5
	BMX	B (350x200)	Rdyn.421.00	-421.00
Axle 4	ROR	MERITOR/ROR	Type 265/70 R 19.5	-265/70 R 19.5
	BMX	B (350x200)	Rdyn.421.00	-421.00

(Data of foundation brake see annex)
(Result is valid for g = 9.81 and for fR = 0.01)

Brake equipment : (contact axle manufacturer for agreement, please)

Axle 1 : HALDEX (DRUM) 2 * TYPE 24/30/Sl-Adj. 127.0 [mm] (BC in acc. to : Haldex-Messung)
Axle 2 : HALDEX (DRUM) 2 * TYPE 24/30/Sl-Adj. 127.0 [mm] (BC in acc. to : Haldex-Messung)
Axle 3 : HALDEX (DRUM) 2 * TYPE 24/Sl-Adj. 127.0 [mm] (BC in acc. to : KO 134.4 - TUEV)
Axle 4 : HALDEX (DRUM) 2 * TYPE 24/Sl-Adj. 127.0 [mm] (BC in acc. to : KO 134.4 - TUEV)

Air brake system- and adjustment :

This calculation considers the schematic- and
adjustments for valves as shown below .
According to brake system

If you substitute other valves or brake chambers, you must guarantee that these have the same performance characteristics in order that these calculation apply.The valves are to be adjusted in accordance with the parameters specified in this brake calculation !

axle 1
Valve 1 : EB+ (EBS) : 810 ... ...

axle 2
Valve 1 : EB+ (EBS) : 810 ... ...

axle 3
Valve 1 : EB+ (EBS) : 810 001 ...

axle 4
Valve 1 : EB+ (EBS) : 810 001 ...

Braking values table: Pressure in bar, Forces in N

laden :

Pm	Pcyl 1	Pcyl 2	Pcyl 3	Pcyl 4	TRmin	Zmin	TRmax	Zmax
0.50	0.16	0.16	0.16	0.16	2604	0.010	2604	0.010
1.00	0.72	0.72	0.72	0.72	14394	0.055	14394	0.055
1.50	1.19	1.19	1.19	1.19	28907	0.111	28907	0.111
2.00	1.65	1.65	1.65	1.65	43421	0.167	43421	0.167
2.50	2.14	2.14	2.14	2.14	58703	0.225	58703	0.225
3.00	2.63	2.63	2.63	2.63	73986	0.284	73986	0.284
3.50	3.11	3.11	3.11	3.11	89269	0.343	89269	0.343
4.00	3.60	3.60	3.60	3.60	104551	0.402	104551	0.402
4.50	3.92	3.92	3.92	3.92	114583	0.440	114583	0.440
5.00	4.24	4.24	4.24	4.24	124615	0.479	124615	0.479
5.50	4.56	4.56	4.56	4.56	134646	0.517	134646	0.517
6.00	4.88	4.88	4.88	4.88	144678	0.556	144678	0.556
6.50	5.20	5.20	5.20	5.20	154710	0.594	154710	0.594
7.00	5.52	5.52	5.52	5.52	164741	0.633	164741	0.633
7.50	5.84	5.84	5.84	5.84	174773	0.671	174773	0.671
8.00	6.16	6.16	6.16	6.16	184805	0.710	184805	0.710
	25.0 %	25.0 %	25.0 %	25.0 %	100 %			

Brake force proportion per axle in % valid for Pm= 6.5 [bar]

Braking values table: Pressure in bar, Forces in N

unladen :

Pm	Pcyl 1	Pcyl 2	Pcyl 3	Pcyl 4	TRmin	Zmin	TRmax	Zmax
0.50	0.33	0.33	0.33	0.33	616	0.010	616	0.010
1.00	0.49	0.49	0.49	0.49	5210	0.085	5210	0.085
1.50	0.63	0.63	0.63	0.63	9443	0.153	9443	0.153
2.00	0.76	0.76	0.76	0.76	13676	0.222	13676	0.222
2.50	0.91	0.91	0.91	0.91	18134	0.294	18134	0.294
3.00	1.05	1.05	1.05	1.05	22591	0.367	22591	0.367
3.50	1.19	1.19	1.19	1.19	27049	0.439	27049	0.439
4.00	1.33	1.33	1.33	1.33	31506	0.511	31506	0.511
4.50	1.43	1.43	1.43	1.43	34432	0.559	34432	0.559
5.00	1.52	1.52	1.52	1.52	37358	0.606	37358	0.606
5.50	1.61	1.61	1.61	1.61	40284	0.654	40284	0.654
6.00	1.71	1.71	1.71	1.71	43210	0.701	43210	0.701
6.50	1.80	1.80	1.80	1.80	46136	0.749	46136	0.749
7.00	1.89	1.89	1.89	1.89	49062	0.796	49062	0.796
7.50	1.99	1.99	1.99	1.99	51987	0.844	51987	0.844
8.00	2.08	2.08	2.08	2.08	54913	0.891	54913	0.891

Typ III - Cylinder pressure for braking ratio per axle at z =0.06 (0.30)

Pcyl [bar]	Tyre max.	Tyre min.
Axle 1	0.76 (2.76)	0.76 (2.76)
Axle 2	0.76 (2.76)	0.76 (2.76)
Axle 3	0.76 (2.76)	0.76 (2.76)
Axle 4	0.76 (2.76)	0.76 (2.76)

Req. brake pressrue for z = 22.5% in acc. to 98/12/EEC Ann. X Point 6.1.4 or ECE R 13 An. 13 Point 6.1.4 :

For braking ratio z = 22,5% required brake pressure pH at ca. 2.13 bar

Annex for foundation brake :

Man. of foundation brake	:	MERITOR/ROR
Type of foundation brake	:	B (350x200)
Source of datas	:	RDW 19160103 (00)
Kind of foundation brake	:	S-Cam brake
Drum radius	:	175.0000 [mm]
Brake factor, (Tw/Tb)	:	9.1000
Threshold torque c0	:	27.0000 [Nm]
Number of BC./ axle	:	2

Ralph Hume

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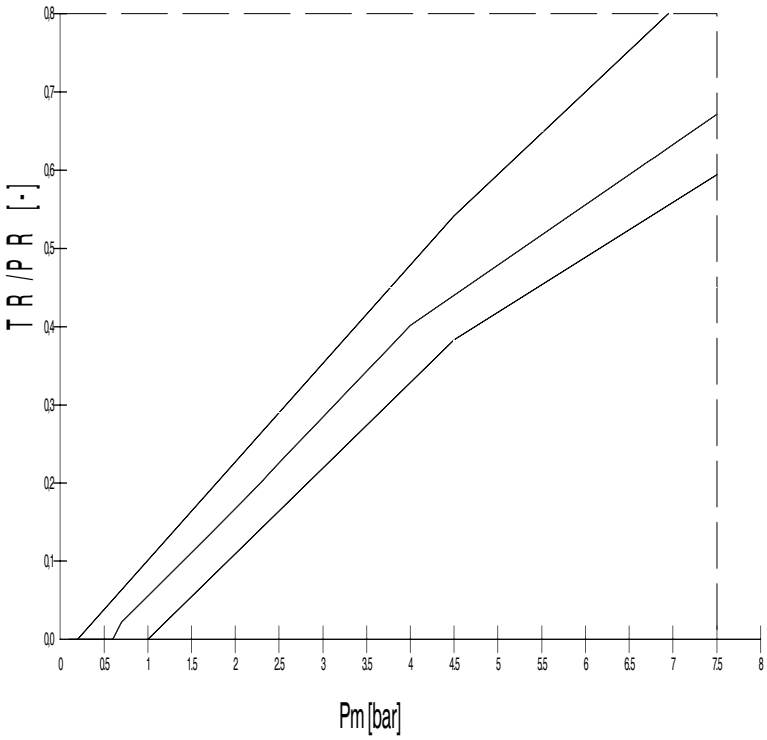
Diagram 4 A , laden



Brake Equipment:

Axle1 : 2 * TYP 24/30 / 127.0 mm

Axle2 : 2 * TYP 24/30 / 127.0 mm

Axle3 : 2 * TYP 24 / 127.0 mm

Axle4 : 2 * TYP 24 / 127.0 mm

laden:

laden : Pm=6.50 bar Pcyl=5.20 bar
PR= 26540 kg

KCmin= 1.3205
KCmax= 1.3205

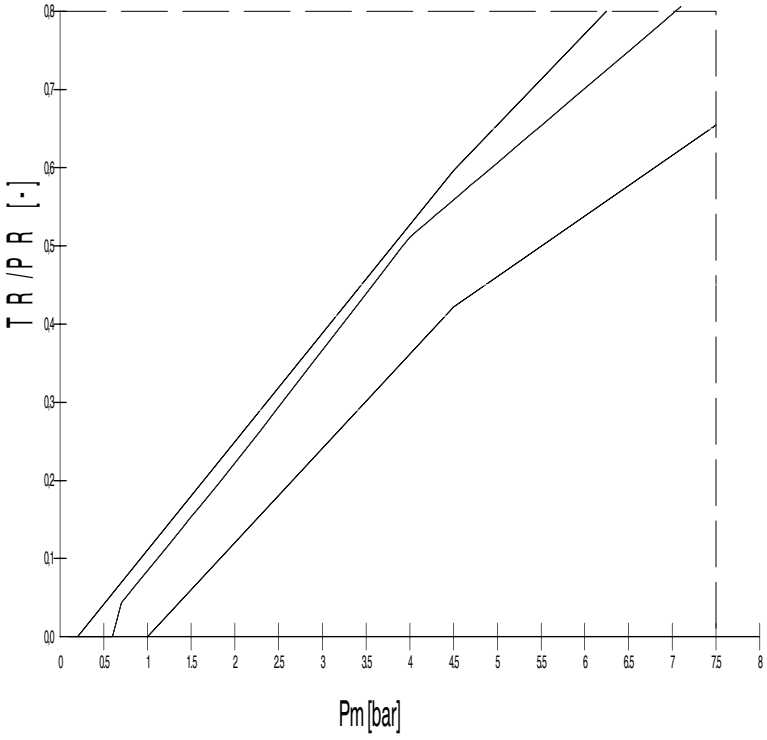
unladen:

unladen : Pm=6.50 bar Pcyl=1.80 bar

PR= 6280 kg

KVmin= 1.4547
KVmax= 1.4547

Diagram 4 A , unladen



Notes :