



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 **7 A 9 D 1 5 0 2 3 B 0 0 2 3 9 3 7**

Component being certified: Chassis Modification Load Anchorage Log Bolsters
 Towing Connection 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) **BT0711**

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 warranty with respect to the work certified or any other aspect 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 **10/02/11** Number **366861**

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 KVmin : 1.455
 KCmax : 1.320 KVmax : 1.455

	Axle	Fd.-brake	Tyres (Rdyn [mm])	
Axle 1	ROR BMX	MERITOR/ROR B (350x200)	Type 265/70 R 19.5 Rdyn.421.00	-265/70 R 19.5 -421.00
Axle 2	ROR BMX	MERITOR/ROR B (350x200)	Type 265/70 R 19.5 Rdyn.421.00	-265/70 R 19.5 -421.00
Axle 3	ROR BMX	MERITOR/ROR B (350x200)	Type 265/70 R 19.5 Rdyn.421.00	-265/70 R 19.5 -421.00
Axle 4	ROR BMX	MERITOR/ROR B (350x200)	Type 265/70 R 19.5 Rdyn.421.00	-265/70 R 19.5 -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/SI-Adj. 127.0 [mm] (BC in acc. to : Haldex-Messung)

Axle 2 : HALDEX (DRUM) 2 * TYPE 24/30/SI-Adj. 127.0 [mm] (BC in acc. to : Haldex-Messung)

Axle 3 : HALDEX (DRUM) 2 * TYPE 24/SI-Adj. 127.0 [mm] (BC in acc. to : KO 134.4 - TUEV)

Axle 4 : HALDEX (DRUM) 2 * TYPE 24/SI-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)

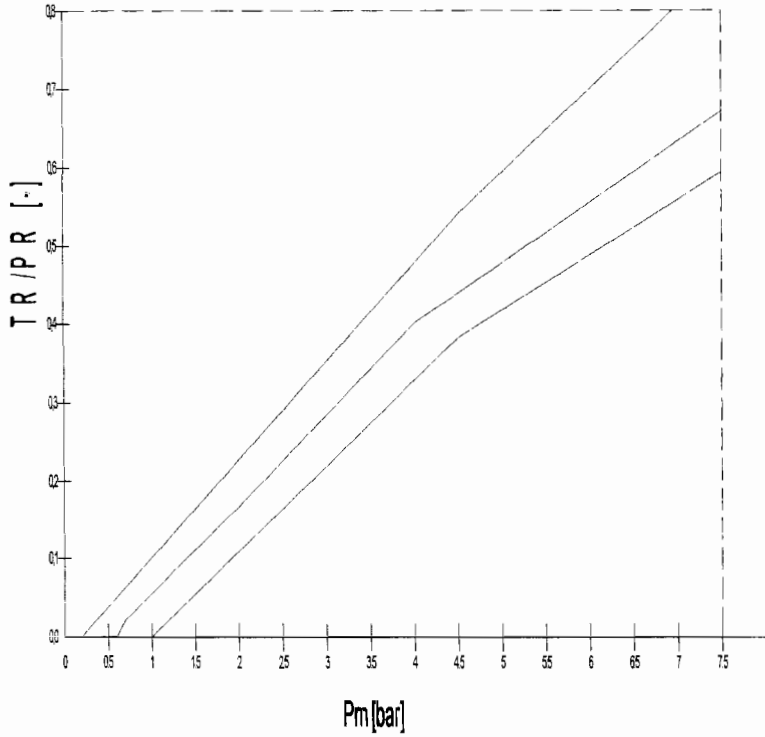
Req. brake pressrue for z = 22.5% in acc. to 98/12/EEC Ann. X Point 6.1.4 or ECE R 13 An. 13 Point 6.1.4 :

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

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 P_{cyl}=5.20 bar

PR= 26540 kg

KC_{min}= 1.3205

KC_{max}= 1.3205

unladen:

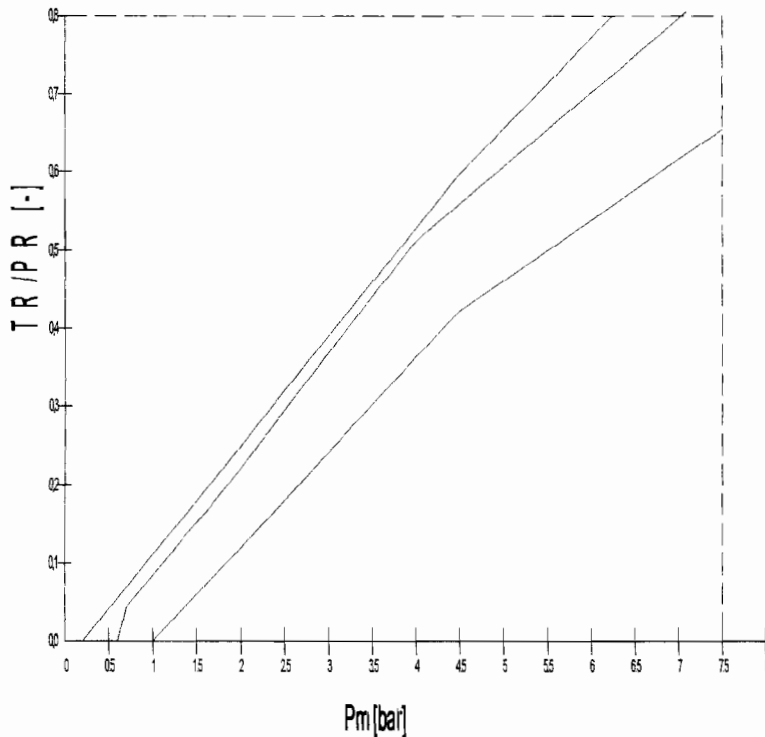
unladen : Pm=6.50 bar P_{cyl}=1.80 bar

PR= 6280 kg

KV_{min}= 1.4547

KV_{max}= 1.4547

Diagram 4 A, unladen



Notes :



Brake Technology Ltd

Brake specialist to the transport industry

This Vehicle Complies with Land Transport Heavy Vehicle Brakes - Rule 32015

CERT No. **BT 0711**

CERTIFIERS ID: **RHU**

CHASSIS/S/ No. **02397**

Unladen

Laden

LINING COF **0.90**

SLACK LENGTH: **5"**

AIR SUSP. **0.80**

3.50

CHAMBER SIZE **TYPE 24**

EBS/ RATIO SETTING:

TYRE SIZE: **265/70R19.5**

FRT: 650/ ✓ 650/ ✓

REAR: 650/ **180** 650/ **520**

PO Box 38637, Howick, Manukau 2145. Ph 09 271 4132 Fax 09 271 4134



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CERT No. **BT 0711** CERTIFIERS ID: **RHU**

CHASSIS/S/ No. **02397** Unladen Laden

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