



TEST REPORT



Concerning the braking system of certain categories of motor vehicles corresponding the ~~Directive of the Council 71/320/EEC as last amended by the Commission Directive 2002/78/EC and~~ ECE Regulation no. 13.11 up to and including supplement 11.

- 0.1. Make : JMR
- 0.2. Type : SC
- Variety : 3-axle full trailer
- 0.4. Category of vehicle : O2
- 0.5. Name and address of the manufacturer : JMR trading BV
Weusdijk 1
7261 NG Ruurlo
the Netherlands

Tests conducted by order of : See item 0.5.

Tests : The tests have been conducted according to ~~Annex I, II, III, IV, V, VI, VII, VIII, X, XI, XII, XIII, XIV and XV of the above mentioned Directive and/or~~ Annex 4, 5, 6, 7, 8, 9, 11, 12, 13, 14 and 15 of the above mentioned Regulation.

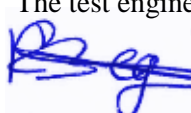

Documentation : JMR 201401, total 2 pages.

Conclusion : The type of ~~motor~~ vehicle does/~~does not~~* comply with the stated requirements and there ~~are~~ / are no* objections against approval according to the above mentioned ~~Directives and~~ Regulation.

Test date(s) : 13-11-2014

By : R. Begeman/ X. v/d Berg/ L. Vellekoop

RDW Test Centre Lelystad
Talingweg 76
8218 NX Lelystad
the Netherlands

Lelystad, 23-01-2015
The test engineer,


R. B. H. Begeman

RDW Test Centre Lelystad

Test vehicle specifications											
Brake schedule:		Full trailer/Semi-trailer *									
Make and type		JMR SC			VIN			XL9VSC00014441052			
Brake schedule number		201401			Wheelbase			3820 - 655		mm	
Maximum allowed weight(mass):											
King pin		-- kg									
Axle 1		900 kg									
Axle 2		1300 kg									
Axle 3		1300 kg									
Totaal		3500 kg									
Axles:											
Make and type		DEXTER			Code			TORFLEX 10			
Tyres:											
Axle number		Make and type			Tyre Size			Tyre Pressure			
Axle 1		Kenda Radial Kargo			195/50R13C			600 kPa			
Axle 2		Kenda Radial Kargo			195/50R13C			600 kPa			
Axle 3		Kenda Radial Kargo			195/50R13C			600 kPa			
Brakes:											
Make and type		DEXTER 10 x 2 ¼			Lining make and type			Dexter 1FF (041-175-00)			
Brake specification:											
Axle number		1		2		3		4			
Brake cylinder(s)		--		--		--		--			
Disc/drum diameter		10 "		10 "		10 "					
Volume of the air reservoirs		-- dm ³									
Suspension:											
Type		Mechanical / Pneumatic / Hydraulic **									
Make		DEXTER TORFLEX 10									
Dimensions		--									
Parking brake:											
Make		See documentation									
Type		See documentation									
On axle number		1,2 and 3									
Brake lever length		See documentation									
Support legs		not used during the test									
ABS or EBS System: Not applicable											
Make and type		--									
Category ABS		--									
If applicable, report number for Annex XIV / Annex 19											
LSD settings: Not applicable											
LSD plate		Pass / Fail *				Test connections			Pass / Fail *		
P _m		bar	Suspension travel/suspension pressure		P _{out} LSD		Mass (kg)		LSD lever length		
Position		Front	Rear	Front	Rear	Front	Rear	Total	Front	--	mm
Unladen		--	--	--	--	--	--	--	Rear	--	mm
Laden		--	--	--	--	--	--	--			



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Test weight (mass) for type 0 brake tests									
Combination weight laden			Combination weight unladen			Tractor weight			
Axle 1	910 kg		459 kg			1569 kg			
Axle 2	1285 kg		269 kg			1050 kg			
Axle 3	1286 kg		269 kg			kg			
Total	3481 kg		997 kg			2619 kg			
Rolling resistance combination	0.1	m/s ²		Rolling resistance trailer	0.1	m/s ²			
Calculation factor for deceleration									
Laden	1.752								
Unladen	3.627								
Brake performance / Compatibility LADEN									
Deceleration [m/s ²] (combination is braked by brake pedal of tractor)	measured deceleration in jmr braking-system	Deceleration combination (only trailer is braked with external computer)		Current intensity [A]		Deceleration calculated for trailer		Diagram number	
		up	down	up	down	up	down	up	down
1.0	0.10 g	0.59	--	0.6	--	0.10	--	37	--
2.0	0.20 g	1.14	--	1.1	--	0.20	--	36	--
2.9	0.30 g	1.70	--	1.8	--	0.30	--	41	--
3.9	0.40 g	2.50	--	3.3	--	0.44	--	39	--
4.9	0.50 g	2.97	--	5.5	--	0.52	--	40	--
Brake performance / Compatibility UNLADEN									
Deceleration [m/s ²] (combination is braked by brake pedal of tractor)	measured deceleration in jmr braking-system	Deceleration combination (only trailer is braked with external computer)		Current intensity [I]		Deceleration calculated for trailer		Diagram number	
		up	down	up	down	up	down	up	down
1.0	0.10 g	0.28	--	0.3	--	0.08	--	24	--
2.0	0.20 g	0.50	--	0.4	--	0.16	--	23	--
2.9	0.30 g	0.85	--	0.6	--	0.29	--	22	--
3.9	0.40 g	1.04	--	0.9	--	0.36	--	21	--
4.9	0.50 g	1.37	--	1.3	--	0.48	--	19	--
5.1	0.52 g	1.42	--	1.4	--	0.50	--	20	--
Parking brake (2.2.2.1. Annex II)									
Simulated slope test									
Brake Force forewards		7.22 kN							
Brake Force rearwards		7.46 kN							
Control force		60 daN							
Diagram		P _{front} / P _{rear}							
Brake force required		6.18 kN							
Test result parking brake : Pass/fail									

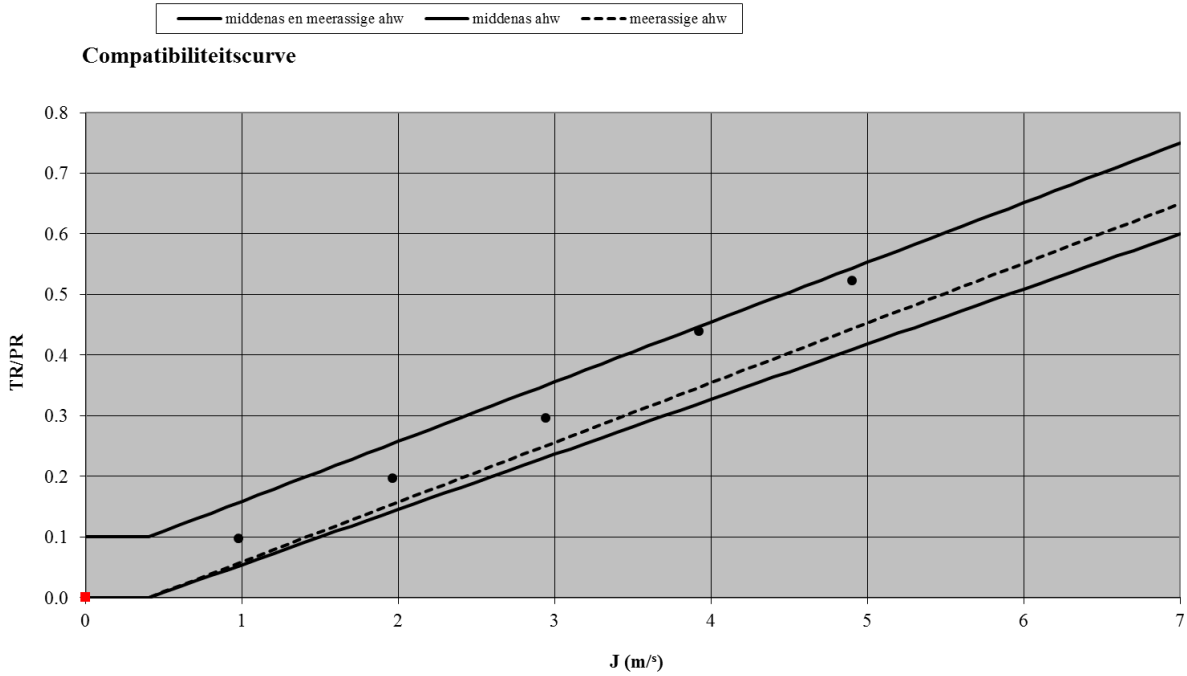


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LADEN :



Deceleration tractor/trailer combination J m/s^2	T_R/P_R	T_R/P_R
0.98	0.10	--
1.96	0.20	--
2.94	0.30	--
3.92	0.44	--
4.91	0.52	--
		--

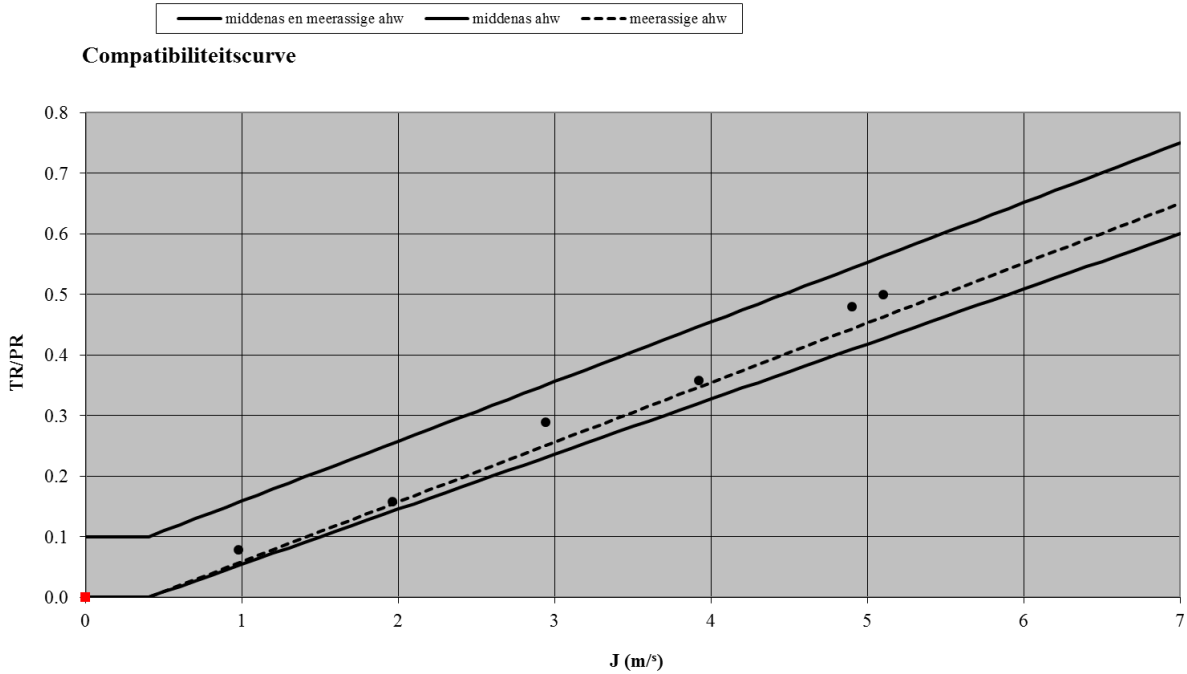


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UNLADEN :



Deceleration tractor/trailer combination J m/s^2	T_R/P_R	T_R/P_R
0.98	0.08	--
1.96	0.16	--
2.94	0.29	--
3.92	0.36	--
4.91	0.48	--
5.10	0.50	--



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RPB

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Tests Type I and III on the vehicle								
Type 0			Type I			Type 0 after I		
Speed	40.3	km/h	Speed	40	km/h	Speed	40.3	km/h
t 40-20	--	s	brake time	160	s	t 40-20	--	s
current I	4.3	A	current I	--	A	current I	4.2	A
Deceleration	0.50		Force	338	daN	Deceleration	0.39	
Diagram	44 40km/h		Distance	1700	m	Diagram	Ona11-2	
			Diagram	"sleeptest"				
Tests continued:								
Type III			No	deceleration	control force	No	deceleration	control force
Speed		km/h	1			11		
Control force		daN	2			12		
Control pressure		bar	3			13		
Deceleration		m/s ²	4			14		
Time		s	5			15		
Diagram			6			16		
Type 0 after III			7			17		
Speed		km/h	8			18		
Control force		daN	9			19		
Control pressure		bar	10			20		
Deceleration		m/s ²	Remarks:					
Diagram								
Alternative procedures for Type I and III test for trailer brakes								
See test report number :			Not applicable					



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Item 5 Specifications		
5.2.2.2.	Braking system O2 continuous or semi continuous or inertia. Electrical braking system conforming Annex 14 shall permitted	PASS / FAIL
5.2.2.4.1	The service braking shall act on all wheels of the trailer	PASS / FAIL
5.2.2.4.2	The service braking shall distribute its action appropriately among the axles	PASS / FAIL
5.2.2.5	Action of braking symmetrically to longitudinal median plane of the vehicle.	PASS / FAIL
5.2.2.7.	Braking surfaces in constant connection with the wheels.	PASS / FAIL
5.2.2.8.	wear of brakes shall be easily compensated	PASS / FAIL
5.2.2.8.1.	wear adjustment shall be automatic. optional for O2	PASS / FAIL
5.2.2.8.2.	Possible to easily check wear	PASS / FAIL
5.2.2.8.2.2.	This information shall be made freely available e.g. vehicle handbook or electronic data record.	PASS / FAIL
5.2.2.9.	Trailer is stopped automatically if coupling separates	PASS / FAIL
5.2.2.10	Parking braking when trailer is separated from towing vehicle. Actuating by a person standing on the ground	PASS / FAIL
Annex 14		
1.1	Contol device on the trailer?	PASS / FAIL
1.2	Elektrical energy supplied to the trailer by the motor vehicle	PASS / FAIL
1.3	Actuated by the operating of the service brake of the motorvehicle	PASS / FAIL
1.4	Nominal voltage rating 12 V	PASS / FAIL
1.5	Max. current consumption not higher than 15 A	PASS / FAIL
1.6	The connection: - special connector - not fit the lighting connect -plug and cable shall be on the trailer	PASS / FAIL
2.1	Battery on trailer must be separated during service braking of the trailer	n/a
2.2	Min. mass less that 75% of max Mass a load sensing device is mandatory	PASS / FAIL
2.3	When the connection line is reduced to 7 V 20% braking effect of the max laden weight shall be maintained	PASS / FAIL
2.4	-It must be possible to adjust manually the position of the	PASS / FAIL



RS

	deceleration indicator. -The device shall clearly indicate the horizontal position	
2.5	The relay for actuating the braking current shall be positioned on the trailer	PASS / FAIL
2.6	Is there a dummy socket for the plug	PASS / FAIL
2.7	There shall be a tell-tale: -lighting up with every application -indication the proper functioning of the electrical braking system	PASS / FAIL
3.1	Does brake system respond at combination deceleration of not more than 0,4 m/s ²	PASS / FAIL
3.2	Initial brake pressure not higher than 10% of the max.stat. axle load and 13% of the unladen axle load	PASS / FAIL
3.3	is the brake force increased by steps than it should fulfil these demands	n/a
3.4	the minimum braking force of 50% shall be attained at not more than 5,9 m/s ² combination deceleration	PASS / FAIL See page 3
3.6	When coupling is separated while it is in motion minimal performance is 25% for minimal 15 minutes	PASS / FAIL (mechanical)



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Meteorological conditions

Date:	13-11-2014	Location of test track:	RDW Test Centre Lelystad
Barometric pressure	1011 mbar	Weather conditions	Dry
Winddirection	SE	Relative humidity	90 %
Temperature	8 °C	Wind speed	3 m/s

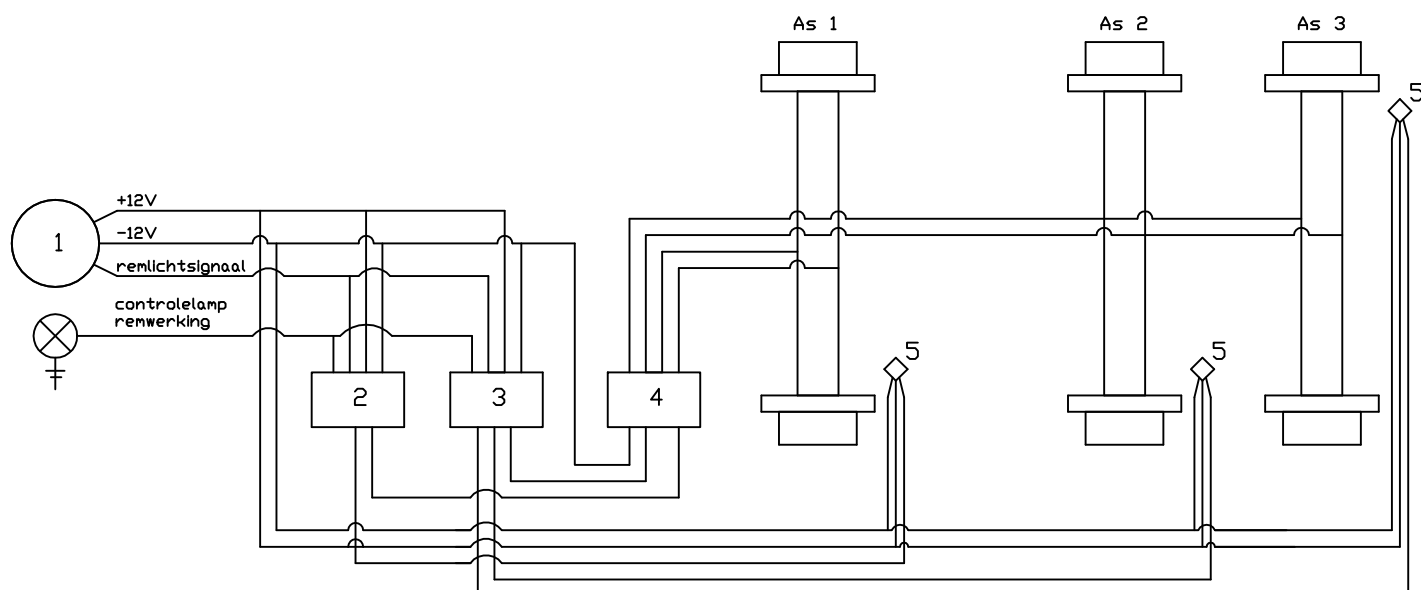
Used testequipment

Description	Required accuracy	Registration number
Pressure (manometer)	± 1 % of 16 bar	BVA17
(registration; pressure transducer)	(± 2,5% of 10 bar)	--
Speed- / distance	± 1 %	GPS05/VYF81
ABS test equipment		--
Temperature (0 – 700°C)	± 10°C	TEM51
Weighing installation	± 10 kg per plate	OPS07
Time (test type I,II)	± 5 s	--
Wabco simulator	± 1 % of 16 bar	--
Recorder		--
Force	± 3%	KRA21, PKM13
Amplifier		MVS101, 87, 88, 91
Current		UNV 26



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Aansluitdraden:

- * Remkrachtregelaar, zijn 0,75 mm.
- * Controlelamp remwerking en remlichtsignaal zijn 1 mm.
- * Overige zijn 2,5 mm.

1. Stekker, 7 polig.
2. Remregelaar as 1: merk: JMR TRading B.V.
Type: Jaco SP 012-2
3. Remregelaar as 2 en 3: merk: JMR TRading B.V.
Type: Jaco SP 012-2
4. Verdeeldoos remspoelen
5. Remkrachtregelaar
Jaco 90901 Hallsensor 4-20 mA. Aantal: 3 stuks
Alternatief: Knorr 0504002113100 (1,8 - 2,8 kΩhm). Aantal 3 stuks
Alternatief: Jaco 90902 Luchtdruksensor 4-20 mA. Aantal 2stuks.

Dynamische bandenstraal: 267 ±5%
 Wielremmen: Merk: Dexter
 Type: 10x2¼
 Remvoering: DEX 1FF

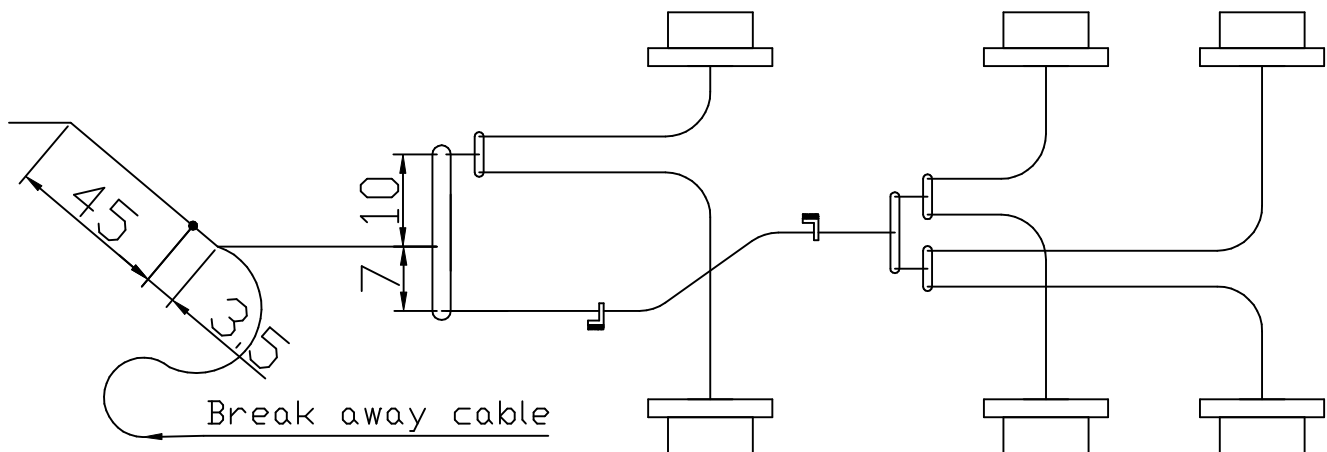
Fabrikant: JMR Trading B.V.
 Weusdijk 1
 7261 NG Ruurlo
 Tel: +31(0)573 460936

Datum: 28-11-2014 get: G Smeets

Benaming:
 Lastafhankelijke elektrische
 reminstallatie voor autonome
 aanhangwagens met elektrische
 trommelremmen.

201401 blad 1-2





Maten in cm.

Koppeling: Knott KFG 35
met geblokkeerde
oploop inrichting.

Voertuiggewichten		
	Min gewicht	Max gewicht
Totaal	1035 kg	3500 kg
As 1	470 kg	900 kg
As 2 en 3 koppeling	565 kg	2600 kg
		3500 kg

Fabrikant: JMR Trading B.V.
Weusdijk 1
7261 NG Ruurlo
Tel: +31(0)573 460936

Datum: 28-11-2014 get: G Smeets

Benaming:
Parkeerrem en losbreekrem voor
autonome aanhangwagens met
elektrische trommelremmen.

