

## 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. 13.09 /10.

- 0.1. Make : JMR  
0.2. Type : CG (with electric braking system (Dexter 12x2" 6K)  
Variety : 1 axle semi trailer or centre axle trailer  
0.4. Category of vehicle : O2  
0.5. Name and address of the manufacturer : JMR Trading b.v.  
Staalstraat 1  
2984 AJ Ridderkerk  
The Netherlands
- Tests conducted by order of : JMR Trading b.v.  
Staalstraat 1  
2984 AJ Ridderkerk  
The Netherlands

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 IV, V, VI, VII, VIII, IX, XI, XII, XIII, XIV and XV of the above mentioned Regulation.

Documentation : 100408, system description and drawing dexter axle (Total 3 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.

**Conclusion only applies to vehicles with unladen axle load not lower than 1313 kg**

Test date(s) : 17-03-2010

By : B.v.d.Grif

RDW Test Centre Lelystad  
Talingweg 76  
8218 NX Lelystad  
the Netherlands

Lelystad, 29 April 2010  
The test engineer



## RDW Test Centre Lelystad

Test vehicle specifications													
<b>Brake schedule:</b>		Full trailer/Semi trailer *											
Make and type		JMR CG		VIN			XL9CG560801225061						
Brake schedule number		100408		Wheelbase (E <sub>r</sub> )			5000		mm				
<b>Maximum allowed weight( mass):</b>													
King pin		1500					kg						
Axle 1		1750					kg						
Axle 2		--					kg						
Axle 3		--					kg						
Axle 4		--					kg						
Totaal		3250											
<b>Axles:</b>													
Make and type		DEXTER		Code			Torflex 11						
<b>Tyres:</b>													
Axle number		Make and type		Tyre Size			Tyre Pressure						
Axle 1		NANKANG N2031		225/70R15C			3,5 bar						
Axle 2													
Axle 3													
Axle 4													
<b>Brakes:</b>													
Make and type		DEXTER		Lining make and type			DEX 1FF						
<b>Brake specification:</b>													
Axle number		1		2		3		4					
Brake cylinder(s)		--		--		--		--					
Disc/drum diameter		Ø 304,8		--		--		--					
Volume of the air reservoirs		--		dm <sup>3</sup>									
<b>Suspension:</b>													
Type		Mechanical / Pneumatic / Hydraulic **											
Make		Dexter Torflex 11											
Dimensions		--											
<b>Parking brake:</b>													
Make		Dexter + Herman Peters											
Type		12x2 + 0.90.000-00											
On axle number		1											
Brake lever length		200 mm											
Support legs		not used during the test											
<b>ABS or EBS System: Not applicable</b>													
Make and type		--											
Category ABS		--											
If applicable, reportnumber for Annex XIV / Annex 19					Not applicable								
<b>LSD settings: Not applicable</b>													
LSD plate			Pass / Fail *			Test connections			Pass / Fail *				
P <sub>m</sub>		bar	Suspension travel/suspension pressure		P <sub>out</sub> LSD		Mass (kg)		LSD lever length				
Position		Front		Rear		Front		Rear		Total	Front	--	mm
Unladen		--		--		--		--		--	Rear	--	mm
Laden		--		--		--		--		--			

date: 17-03-2010

Initial: 

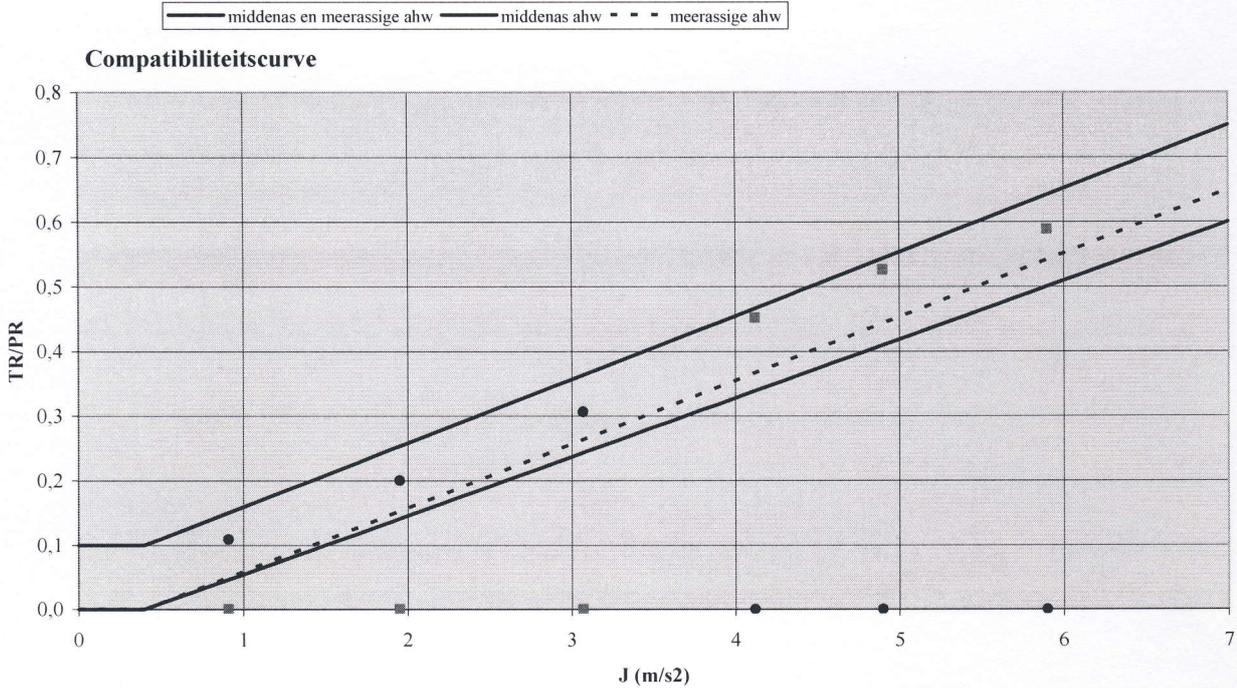
**RDW Test Centre Lelystad**

Test weight (mass) for type 0 brake tests (2.2 Annex II)										
Combination weight laden			Combination weight unladen			Tractor weight				
Axle 1	1550	kg	1550	kg	1530	kg				
Axle 2	1390	kg	1362	kg	870	kg				
Axle 3	1755	kg	1244	kg		kg				
Axle 4		kg		kg		kg				
Axle 5		kg		kg		kg				
Axle 6		kg		kg		kg				
Total	4695	kg	4156	kg	2500	kg				
Rolling resistance combination		0,1	m/s <sup>2</sup>		Rolling resistance trailer		0,1	m/s <sup>2</sup>		
Calculation factor for deceleration										
Laden		2,68								
Unladen		3,34								
Brake performance (2.2 Annex II) / Compatibility (3.4 Annex XI) LADEN										
Deceleration [m/s <sup>2</sup> ] (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	
0,91	0,093	0.047	--	1.0		0.109	--	2A	--	
1,95	0,200	0.081	--	1.6		0.200	--	3A	--	
3,07	0,313	0.121	--	2.7		0.306	--	4A	--	
4,12	0,420	0.175	--	4.1		0.452	--	14A	--	
4,90	0,500	0.203	--	5.4		0.526	--	12A	--	
5,90	0,601	0.226	--	6.1		0.589	--	15A	--	
Brake performance (2.2 Annex II) / Compatibility (3.4 Annex XI) UNLADEN										
Deceleration [m/s <sup>2</sup> ] (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	
--	--	0.177	--	3.8	--	0.568	--	16A	--	
--	--	0.207	--	4.4	--	0.669	--	17A	--	
Parking brake (2.2.2.1. Annex II)										
Simulated slope test ( on axle 1 or 2)										
Brake Force forwards		950	daN							
Brake Force rearwards		885	daN Test result copied from report RDW-71/320-1613							
Control force		30	daN							
Diagram		See report RDW-71/320-1613								
Brake force required		564	daN							
Test result parking brake : Pass/fail										
Type I (1.3 Annex II)										
Test result for Type I and 0 after I is deemed to be satisfied based upon testresult on the 2 axle vehicle. See testreport RDW-71/320-1613.										



RDW Test Centre Lelystad

LADEN :



Deceleration tractor/trailer combination J m/s <sup>2</sup>	$T_R/P_R$	$T_R/P_R$
0,91	0.109	--
1,95	0.200	--
3,07	0.306	--
4,12	0.452	--
4,90	0.526	--
5,90	0.589	--

Potentiometer setting laden : Not applicable, Load sensing function not necessary because laden and unladen have the same outcome

ECU software program : S202(17-03-2010 Dexter torflex 11)



**RDW Test Centre Lelystad**

**UNLADEN :**

Not applicable.

Trailer unladen mass exceeds 75 per cent of its maximum mass, limits shall be applied only to "laden" conditions.

Deceleration tractor/trailer combination J m/s <sup>2</sup>	T <sub>R</sub> /P <sub>R</sub>	T <sub>R</sub> /P <sub>R</sub>
--	--	--
--	--	--
--	--	--
--	--	--
--	--	--
--	--	--

Potentiometer setting unladen : not applicable  
 ECU software program : not applicable



Initial: *[Signature]*

\* Strike out what doesn't apply

RDW Test Centre Lelystad

<b>Annex I Constructional demands</b>		
2.2.2.2.	Braking system O2 continuous or semi continuous or inertia. Electical braking system conforming Annex XI shall permitted	PASS / <del>FAIL</del>
2.2.2.4.	The service braking shall act on all wheels of the trailer	PASS / <del>FAIL</del>
2.2.2.5.	The action of the service braking system shall suitably distributed among the axles	PASS / <del>FAIL</del>
2.2.2.6	Action of braking symmetrically to longitudinal median plane of the vehicle.	PASS / <del>FAIL</del>
2.2.2.7.	Braking surfaces in constant contact with the wheels.	PASS / <del>FAIL</del>
2.2.2.8.	wear of brakes shall be easily compensated	PASS / <del>FAIL</del>
2.2.2.8.1.	wear adjustment shall be automatic. optional for O2	PASS / <del>FAIL</del>
2.2.2.8.2.	Possible to easily check wear	PASS / <del>FAIL</del>
2.2.2.9.	Trailer is stopped automatically if coupling separates	PASS / <del>FAIL</del>
2.2.2.10	Parking braking when trailer is separated from towing vehicle. Actuating by a person standing on the ground	PASS / <del>FAIL</del>
<b>Annev XI</b>		
1.1	Contol device on the trailer?	PASS / <del>FAIL</del>
1.2	Elektrical energy supplied to the trailer by the motor vehicle	PASS / <del>FAIL</del>
1.3	Actuated by the operating of the service brake of the motorvehicle	PASS / <del>FAIL</del>
1.4	Nominal voltage rating 12 V	PASS / <del>FAIL</del>
1.5	Max. current consumption not higher than 15 A	PASS / <del>FAIL</del>
1.6	The connection: - special connector - not fit the lighting connect -plug and cable shall be on the trailer	PASS / <del>FAIL</del>
2.1	Battery on trailer must be separated during service braking of the trailer	PASS / <del>FAIL</del> On the test vehicle there was not a extra battery. If there is an extra auxilary battery this should be connected through a relay which separate this battery during braking.
2.2	Min. mass less that 75% of max Mass a load sensing device is mandatory	PASS / <del>FAIL</del> Load sensing device not mandatory because minimum load exceeds 75 % of maximum weight.
2.3	When the connection line is reduced to 7 V 20% braking effect of the max laden weight shall be mantained	PASS / <del>FAIL</del>
2.4	-It must be possible to adjust manually the position of the deceleration indicator.	PASS / <del>FAIL</del>



	-The device shall clearly indicate the horizontal position	
2.5	The relay for actuating the braking current shall be positioned on the trailer	PASS / <del>FAIL</del>
2.6	Is there a dummy socket for the plug	PASS / <del>FAIL</del>
2.7	There shall be a tell-tale: -lighting up with every application -indication the proper functioning of the electrical braking system	PASS / <del>FAIL</del>
3.1	Does brake system respond at combination deceleration of not more than 0,4 m/s <sup>2</sup>	PASS / <del>FAIL</del>
3.2	Initial brake pressure not higher than 10% of the max.stat. axle load and 13% of the unladen axle load	PASS / <del>FAIL</del> If brake lights are swithed on the brake current to the wheelbrakes :0.6 A
3.3	is the brake force increased by steps than it should fulfil these demands	Not applicable
3.4	the minimum braking force of 50% shall be be attained at not more that 5,9 m/s <sup>2</sup> combination deceleration	PASS / <del>FAIL</del> See page 3
3.6	When coupling is seperated while it is in motion minimal performance is 25% for minimal 15 minutes	PASS / <del>FAIL</del> See RDW-71/320-1613



date: 17-03-2010

Initial: 

**RDW Test Centre Lelystad**

**Meteorological conditions**

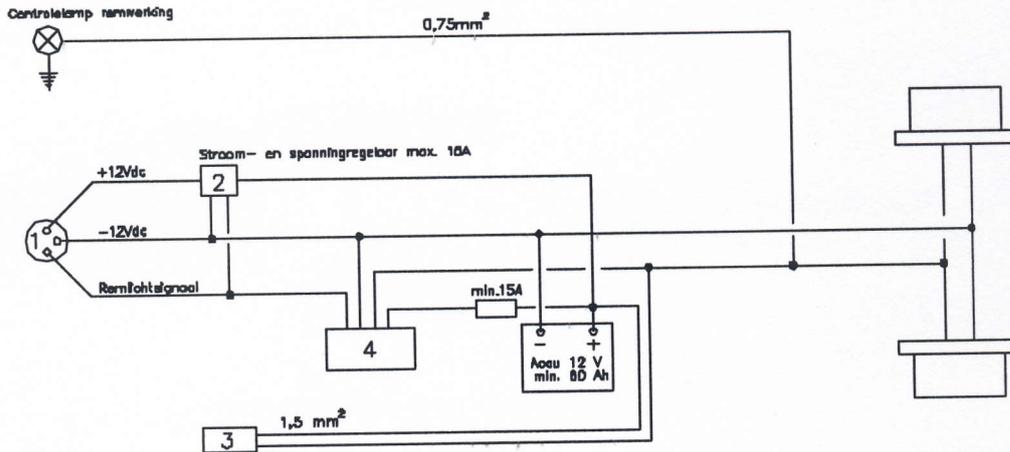
Date:	17-03-2010	Location of test track:	RDW Test Centre Lelystad
Barometric pressure	1022 mbar	Weather conditions	dry
Winddirection	SSW	Relative humidity	72 %
Temperature	9 °C	Wind speed	4 m/s

**Used testequipment**

Description	Required accuracy	Registration number
Pressure (manometer)	± 1 % of 16 bar	--
(registration; pressure transducer)	(± 2,5% of 10 bar)	--
Speed- / distance	± 1 %	VYF78 GPS05
ABS test equipment		--
Temperature (0 – 700°C)	± 10°C	TEM42
Weighing installation	± 10 kg per plate	OPS08
Time (test type I,II)	± 5 s	STW15
Wabco simulator	± 1 % of 16 bar	--
Recorder		RCH12
Force	± 3%	KRA21
Amplifier		MVS33/12/87/88/80/83
Current		UNV24/25
Order nr.: VR183741		

date: 17-03-2010  
 Initial: 





\*\* Alle niet nader genoemde aansluitdraden min. 2,5 mm<sup>2</sup>

\*\* Indien er een accessoire-accu aanwezig is moet deze geschakeld zijn middels een scheidingsrelais.

1. Steker, minimaal 3-polig.
2. Stroom- en spanningregelaar max. 15A  
merk: JMR, type EH15
3. Losbreekrem
4. Remregeling: Merk: JMR Trading B.V.  
Type: JACO SP 012-..

Dynamische bandenstraal: 312-332 mm  $\pm$  5%

Wielremmen:

Merk: DEXTER  
Type: 12"x2" DXQ  
Remvoering: DEX 1 FF

Handrem:

Handremspindel, merk: Herman Peters  
Type: 090.000-00 alt. 090.001-00  
Goedkeuringsnr.: Dekra 2008 19534  
Handrem werkend op één as.



	Voertuiggewichten:			
	Oplegger		Middenaanhangwagen	
	Max. massa	Min. massa	Max. massa	Min. massa
Totaal	5000 kg	1613 kg	2100 kg	1363 kg
Koppeling	1500 kg	300 kg	350 kg	50 kg
As nr. 1	1750 kg	1313 kg	1750 kg	1313 kg

Fabrikant: JMR Trading B.V.  
Staalstraat 1  
2984 AJ Ridderkerk  
Tel. ++311804 27292  
Fax. ++311804 31302

Deelnr: 00-04-2010      Get: J. Mema      WZ:

Benaming:  
Elektrische reminstallatie voor oplegger of middenaanhangwagen met elektrische trommelremmen.

Tekstnr.: 100408

## **Beschrijving elektrisch remsysteem vlg. tek. 100408.**

Het remsysteem is middels de **stekker (1)** elektrisch verbonden met het trekkende voertuig. De stekker heeft minstens 3 contacten: 2 stuks (+/-12V) om de boordaccu te laden, en één contact welke verbonden is met het remlichtsignaal van de voorwagen. Het remlichtsignaal zorgt ervoor dat remregeling (4) geactiveerd wordt

De **regelaar (2)** dient om de laadstroom in de verbindingkabels naar de rem-accu van de aanhangwagen te begrenzen tot een maximum van 15 Ampère, zoals bepaald is in de remmenrichtlijn. Ook wordt er geen spanning meer doorgelaten als de spanning van de accu van de motorwagen lager is dan 11,5 Volt. Dit is zo gedaan om ervoor te zorgen dat de accu van de aanhangwagen die van de motorwagen niet kan ontladen als b.v. de combinatie langdurig wordt geparkeerd. Tevens is de regelaar verbonden met het remlichtsignaal van de motorwagen ter beveiliging van de remwerking van de aanhanger. Mocht de spanning van de rem-accu van de aanhangwagen lager worden dan 7 Volt, dan zorgt het remlichtsignaal ervoor dat tijdens de remming de regelaar weer voedingspanning gaat doorlaten van de motorwagen naar de accu van de aanhangwagen.

De **remregeling (4)** wordt geactiveerd door het remlichtsignaal van het trekkende voertuig. In de remregeling is een vertragingsoptrekkende opgenomen, welke de remvertraging van de combinatie registreert en afhankelijk hiervan een bij de vertraging passende stroom aan de remspoelen levert.

Ter controle van de remwerking is de kabel van de remspoelen verbonden met een controlelamp op het dashboard van de voorwagen, welke oplicht zodra er stroom geleverd wordt aan de remspoelen.

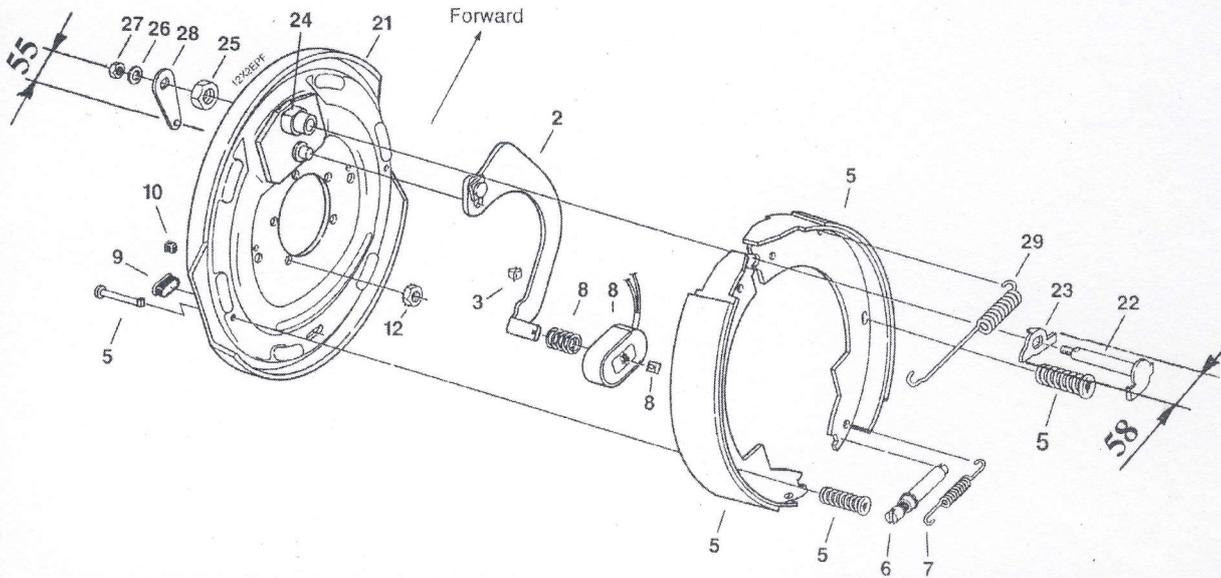
Het is ook mogelijk om deze controlelamp links – of rechtsvoor op de kop van de aanhangwagen te monteren, zodat deze vanuit de cabine te zien is in de achteruitkijkspiegel.

Optioneel is het ook mogelijk om in de cabine een accuspanningcontrole voor de accu van de aanhangwagen te monteren in de vorm van een buzzer of accuspanningsmeter.

Er is een **losbreekschakelaar (3)** gemonteerd, welke een uittrekbare pen heeft die met een staalkabel en clip verbonden is met het trekkende voertuig. Zodra tijdens de rit de aanhanger losbreekt van het trekkende voertuig, wordt de pen uit de schakelaar getrokken en wordt rechtstreeks uit de boordaccu 12 Volt naar de pomp gevoerd en gaat de oplegger remmen.



# 12x2" ELECTRIC BRAKE WITH PARKING FEATURE



## DXQ ELECTRIC PARKING BRAKE 6000# (CSA 5200#)

Item	Part No.	Qty/Brk	Description
0	K23-112-00	1	LH Complete Brake Assembly
0	K23-113-00	1	RH Complete Brake Assembly (shown)
2	047-107-05	1	LH Actuating Lever Arm Assembly
2	047-108-05	1	RH Actuating Lever Arm Assembly
3	027-005-00	2	Wire Clip
5	K71-048-00	1	Shoe and Lining Kit containing: 1 #040-044-00 Primary S&L 1 #040-045-00 Secondary S&L 2 #049-011-00 Shoe Hold Down Pin #2 2 #046-077-00 Shoe Hold Down Spring & Cup
6	043-004-00	1	Adjuster Assembly
7	046-018-00	1	Adjusting Screw Spring
8	K71-105-00	1	Magnet Kit containing: 1 #042-099-01 Magnet (white wire) 1 #027-009-00 Magnet Clip 1 #046-080-00 Magnet Spring
9	046-007-00	1	Adjuster Slot Plug
10	046-016-00	1	Wire Grommet
12	006-193-00	5	Nut Washer Assembly
20	036-089-08	1	LH Backing Plate Ass'y Complete (incl. #21-28)
20	036-089-09	1	RH Backing Plate Ass'y Complete (incl. #21-28)
21	036-089-06	1	LH Backing Plate Ass'y
21	036-089-07	1	RH Backing Plate Ass'y
22	039-025-00	1	LH Pivot Pin & Cam Sub-Assembly
22	039-026-00	1	RH Pivot Pin & Cam Sub-Assembly
23	039-048-00	1	LH Actuating Cam
23	039-049-00	1	RH Actuating Cam
24	038-068-00	1	Anchor Post & Bushing Sub-Assembly
25	006-047-00	1	Anchor Post Locknut
26	005-041-00	1	Washer
27	006-011-00	1	Pivot Pin Locknut
28	047-070-00	1	Parking Brake Lever
29	046-005-00	1	Retractor Spring

\* Not included with complete brake assembly. Items sold separately.

## ELECTRIC PARKING BRAKE 6000# (CSA 6000#)

Item	Part No.	Qty/Brk	Description
0	K23-328-00	1	LH Complete Brake Assembly
0	K23-329-00	1	RH Complete Brake Assembly
2	047-107-05	1	LH Actuating Lever Arm Assembly
2	047-108-05	1	RH Actuating Lever Arm Assembly
3	027-005-00	2	Wire Clip
5	K71-127-00	1	Shoe and Lining Kit containing: 1 #040-215-00 Primary S&L 1 #040-216-00 Secondary S&L 2 #049-011-00 Shoe Hold Down Pin #2 2 #046-077-00 Shoe Hold Down Spring & Cup
6	043-004-00	1	Adjuster Assembly
7	046-018-00	1	Adjusting Screw Spring
8	K71-105-00	1	Magnet Kit containing: 1 #042-099-01 Magnet (white wire) 1 #027-009-00 Magnet Clip 1 #046-080-00 Magnet Spring
9	046-007-00	1	Adjuster Slot Plug
10	046-016-00	1	Wire Grommet
12	006-193-00	5	Nut Washer Assembly
20	036-089-08	1	LH Backing Plate Ass'y Complete (incl. #21-28)
20	036-089-09	1	RH Backing Plate Ass'y Complete (incl. #21-28)
21	036-089-06	1	LH Backing Plate Ass'y
21	036-089-07	1	RH Backing Plate Ass'y
22	039-025-00	1	LH Pivot Pin & Cam Sub-Assembly
22	039-026-00	1	RH Pivot Pin & Cam Sub-Assembly
23	039-048-00	1	LH Actuating Cam
23	039-049-00	1	RH Actuating Cam
24	038-068-00	1	Anchor Post & Bushing Sub-Assembly
25	006-047-00	1	Anchor Post Locknut
26	005-041-00	1	Washer
27	006-011-00	1	Pivot Pin Locknut
28	047-070-00	1	Parking Brake Lever
29	046-005-00	1	Retractor Spring

CSA approved at 6000#/14.2 SLR



**Parkeerremconstructie elektrische rem**

**DEXTER AXLE**