

Service Concept - SM&SL7 Air Disc Brakes for Daimler Actros Applications

As part of ongoing product development and alignment with customer requirements, Knorr-Bremse has introduced an additional range of Air Disc Brakes to further enhance its portfolio.

As a result of changed vehicle requirements, Knorr-Bremse has engineered, in cooperation with the Daimler Benz AG, the new air disc brake generations SM and SL as enhancements of the current SN7 generation. Individual components have been optimized or newly constructed without changing the basic operating principle.

The development takes into account the effects of dynamic axle load distribution during the braking process and, for the first time two different sized brake calipers are mounted on one vehicle.

On the front axle or axles, the performance-optimized SM7 brake, with its larger caliper and brake pads is fitted, whilst on the rear, the weight-optimized SL7 brake is used.

The SL7 and SM7 brakes are fitted to the following Daimler Actros models.

930, 932, 933, 934, 940, 942, 943, 944, 950.5, 950.6, 953.6, 954.5, 963, 964

Comparison of brake generations

	SN7	SL7	SM7
Weight [kg]	41.7	37.6	39.8
Brake torque [kNm]	27	25	30
Pad width [mm]	247.6	207.6	244.6
ProTecS [®] retaining system	yes	yes	yes
Partially integrated tappets	no	yes	yes
Actros: MP II; MP III [up to Sep. '10]	X		
Actros: MP III [from Oct. '10]		X	X
Actros: MP IV [from Oct. '11]		X	X

Replacement and wear parts:

The SM7 and SL7 calipers have two different sizes and are neither interchangeable or reverse compatible with the SN or SB calipers.

New tool kit:

Due to geometric changes within the SM and SL disc brakes, a new tool kit is necessary for servicing in accordance with Knorr-Bremse specifications. This tool kit has the Part Number K039062K50

New brake carrier:

The brake carriers supplied with the new brakes have a special profile that corresponds to the the new brake pad profile (see 1 on following picture) as well as a changed hole configuration for mounting the caliper. Brake carrier part numbers and their related disc brakes are shown in the table on the following page.

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New brake pads:

The SM7 and SL7 brake pads have different dimensions and are neither interchangeable or reverse compatible with the SN or SB pads.

The inboard pad has partially integrated tappets (2) whilst the outboard pad is flat.

All SM and SL brake pads contain the ProTecS[®] system (3).

**Inboard pad****Outboard pad****Further service information kits**

Knorr-Bremse	New Part Number	K082433	K082434	K082453	K082454	K082455	K082456	K082445	K082446	K082447	K082448
	Replaced Part Number	K017811	K017812	K023274	K023275	K023278	K023279	K023362	K023363	K023366	K023367
	Type Number	SM7500	SM7510	SM7002	SM7012	SM7003	SM7013	SM7006	SM7016	SM7007	SM7017
OEM	Part Number	A 960 420 06 01	A 960 420 05 01	A 944 420 75 01	A 944 420 76 01	A 944 420 79 01	A 944 420 80 01	A 944 420 84 01	A 944 420 85 01	A 944 420 88 01	A 944 420 89 01
Service part		Application									
Knorr-Bremse Part Number	OEM Part Number	Description									
K046528K50	A 004 420 79 83 0080	Rationalised Caliper	X								
K046529K50	A 004 420 80 83 0080	Rationalised Caliper		X							
K052390K50	A 004 420 71 83 0080	Rationalised Caliper			X			X			
K052391K50	A 004 420 72 83 0080	Rationalised Caliper				X			X		
K052392K50	A 004 420 73 83 0080	Rationalised Caliper					X			X	
K052393K50	A 004 420 74 83 0080	Rationalised Caliper					X				X
K046498K50	—	Carrier	X	X	X	X	X	X			
K046764K50	—	Carrier						X	X	X	X
K046523K50	A 000 423 03 16	Tappets & Boots Kit	X	X	X	X	X	X	X	X	X
K035471K50	A 006 420 14 20	Brake Pads MB711-0	X	X	X	X	X	X	X	X	X
K046773K50	A 006 420 52 20	Brake Pads MB7121-0	X	X	X	X	X	X	X	X	X
K001915	—	Guide & Seal Kit	X	X	X	X	X	X	X	X	X
K000029	—	Adjuster Cap	X	X	X	X	X	X	X	X	X

Knorr-Bremse	New Part Number	K023248	K023249	K082461	K082462	K082463	K082464
	Replaced Part Number			K044399	K044400	K044401	K044402
	Type Number	SL7504	SL7514	SL7504	SL7514	SL7505	SL7515
OEM	Part Number	A960 420 01 02	A960 420 02 02	A944 420 10 02	A944 420 11 02	A944 420 12 02	A944 420 13 02
Service part		Application					
Knorr-Bremse Part Number	OEM Part Number	Description					
K052380K50	A 004 420 75 83 0080	Rationalised Caliper	X		X		
K052381K50	A 004 420 76 83 0080	Rationalised Caliper		X		X	
K052382K50	A 004 420 77 83 0080	Rationalised Caliper				X	
K052383K50	A 004 420 78 83 0080	Rationalised Caliper					X
K052379K50	—	Carrier	X	X	X	X	X
K046523K50	A 000 423 03 16	Tappets & Boots Kit	X	X	X	X	X
K035472K50	A 006 420 15 20	Brake Pads MB7211-0	X	X	X	X	X
K046774K50	A 006 420 53 20	Brake Pads MB7211-0	X	X	X	X	X
K001915	—	Guide & Seal Kit	X	X	X	X	X
K000029	—	Adjuster Cap	X	X	X	X	X

Caution:
Also refer to the "Service Manual SL7, SM7" (Document No.: Y081564), as well as the guidelines of the vehicle manufacturer. You can find the latest revision of the service manual at:
www.knorr-bremseCVS.com
See Documentation Download area.

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Air Disc Brakes - SM7 / SL7: Service Strategy for Daimler Application

1. Rationalised Caliper (RC)
Replacement of the complete caliper guarantees a fast and time optimised service assuring you taking the biggest advantage of your workshop.

1.1 - SM		1.2 - SL	
ADB Type	RC Part number	ADB Type	RC Part number
SM7500	K046528K50	SL7504	K052380K50
SM7510	K046529K50	SL7514	K052381K50
SM7002	K052390K50	SL7504	K052380K50
SM7012	K052391K50	SL7514	K052381K50
SM7003	K052392K50	SL7505	K052382K50
SM7013	K052393K50	SL7515	K052383K50
SM7006	K052390K50		
SM7016	K052391K50		
SM7007	K052392K50		
SM7017	K052393K50		

2. Wear Parts
For a quick replacement and service of main wear parts

2.1 - Pads with ProTecs®
SM: (K035471K50)
(K046773K50)
SL: (K035472K50)
(K046774K50)

5. Core return with Core Surcharge

- The core surcharge of €225 will be credited back to the customer's core bank once KB receives the old caliper back.
- The core will be collected by the KB regional locations

SL7 / SM7 Air Disc Brake (ADB)
OE-Product

3. Service Kits
four service kits are available, applicable to all variants for a high degree of serviceability.

3.1 - Carrier
(K046498K50)
(K046764K50)
(K052379K50)

3.2 - Tappets and Boots
(K046523K50)

3.3 - Guide and Seal kit
(K001915)

3.4 - Adjuster Cap
(K000029)

4. Tools for Workshops / Manuals
→ The support for an optimal service
The toolkit is necessary to assure an optimal service of the caliper.

Poti digital testing device (K154433N5)

Service Manual (Y081564)

Service tool kit (K039062K50)

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Revision Details

Rev. 000	March 2012	New document
Rev. 001	April 2013	Extra Actros models added on page 1. Text amended, "New Part Numbers" added to table and table format modified on page 2. New poti tester added and Disclaimer moved to page 3.

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