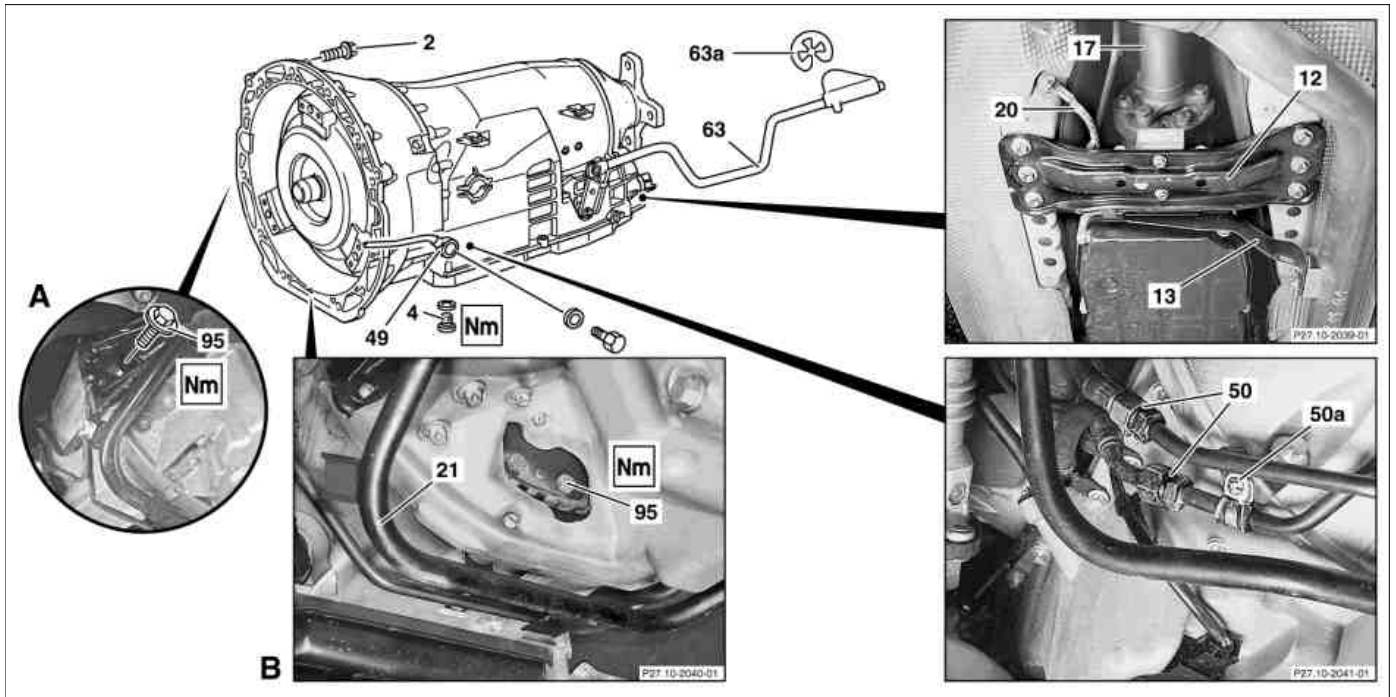


TRANSMISSION 722.6 in MODEL 203, 209 (except 203.02 /05 /08 /09 /22 /25 /28 /29)

TRANSMISSION 722.9 in MODEL 203.052 /054 /056 /252 /254 /256 /752 /756, 209.354 /356 /372 /375 /376 /454 /456 /472 /475 /476



P27.10-2095-09

Shown on model 203 with transmission 722.6

- 2 Bolts
- 4 Oil drain screw, transmission oil pan
- 12 Rear engine crossmember
- 13 Exhaust bracket

- 17 Front propeller shaft
- 20 Ground cable
- 21 Lead pipe
- 49 Oil cooling line
- 50 Oil cooling line
- 50a Screw





















- 63 Shift rod
- 63a Retainer
- 95 Screw

- A Engine 111.955
- B Except engine 111.955

Modification notes

6.8.09	Locking plate of shift rod on intermediate lever modified	BT27.60-P-0021-01A
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Icon	Remove/install		
ⓘ	Notes on self-locking nuts and bolts		AH00.00-N-0001-01A
ⓘ	Before starting work, the area around the oil cooling lines (49, 50) must be thoroughly cleaned at the separation points on the transmission. Even the smallest dirt particles, introduced into the hydraulic components, can lead to malfunctions and a total failure of the transmission		
1	Detach ground line from battery	Model 203 Model 209	AR54.10-P-0003P AR54.10-P-0003Q AH54.10-P-0001-01A
ⓘ	Notes on battery		
2.1	Remove air filter	Engine 111, 112 <b>i Installation:</b> Lightly grease rubber guides to facilitate assembly.	
2.2	Remove intake air scoop	Engine 611, 612	
2.3	Remove air filter housing	Engine 113.988 in model 203.076 /276 Engine 113.987 in model 209.376 /476 as of 24.4.04 Engine 272 in model 203 Engine 272, 273 in model 209 Engine 271 in model 203, 209 Engine 646 in model 203, 209	AR09.10-P-1150AC  AR09.10-P-1150QB  AR09.10-P-1150Q AR09.10-P-1150PM
3	Remove hot film mass air flow sensor	Model 203.076 /276 Model 209.376 / 476	AR07.07-P-1454SV
4	Detach oil filler pipe from engine		
5.1	Remove lower engine compartment paneling	Vehicles with gasoline engine	AR61.20-P-1105P
5.2	Remove bottom sections of soundproofing	Vehicles with diesel engine	AR94.30-P-5300P

6	Drain transmission oil from the transmission oil pan	 If the transmission fluid is burnt or contains abrasive particles, the oil cooling lines (49, 50) and oil cooler must be flushed to guarantee cooling efficiency: ↓ Flush out oil cooler lines and oil cooler: Transmission 722.6 Transmission 722.9  <b>Installation:</b> Replace sealing ring. 	AR27.55-P-0001A <b>AR27.55-P-0001PI</b>  *BA27.10-P-1001-03A
7.1	Remove rear exhaust system	Refer to: Exhaust system, removal and installation of complete system: Engine 611.962 /612.962 in model 203 Engine 612.967 in model 209 Engine 646 in model 203, 209 Engine 612.990 in model 203 Engine 112 in model 203, 209 Engine 113.968 in model 209 Engine 113.987 in model 209.376 up to 23.4.04 Engine 113.987 in model 209.476 Engine 111 in model 203 Engine 271.921 /940 /946 /948 /957 in model 203 Engine 271.940 /955 in model 209	AR49.10-P-7000PP  AR49.10-P-7000PM AR49.10-P-7000PF AR49.10-P-7000PV  AR49.10-P-7000PR AR49.10-P-7000QK
7.2	Remove complete exhaust system	Engine 271.942 in model 203, 209 Engine 113.987 in model 209.376 as of 24.4.04 Engine 113.988 in model 203 Engine 272 in model 203 Engine 272, 273 in model 209	AR49.10-P-7000QD AR49.10-P-7000AC  <b>AR49.10-P-7000QB</b>
8	Remove exhaust manifold with catalytic converter	Engine 271 in model 203, 209	AR14.10-P-4095QK
9	Support transmission with transmission jack and transmission plate		
10	Remove rear engine crossmember (12) with engine mount	 Do not detach engine mount from rear engine crossmember (12). Engine 111 except 111.981, 112, 113.988, 271.921 /940 /942/ 946 /948 /957 in model 203 Engine 112, 113, 271.940 /955 in model 209 Engine 646 in model 203, 209 Engine 611, 612 in model 203 Engine 612 in model 209 Engine 272 in model 203 Engine 272, 273 in model 209	AR22.10-P-1160PR  AR22.10-P-1160HC  <b>AR22.10-P-1160QB</b>
11	Disconnect front propeller shaft section (17) from transmission	 The flexible coupling remains on the front propeller shaft (17).  <b>Installation:</b> Attach front propeller shaft (17) to transmission.  	<b>AR41.10-P-0050-02EA</b> <b>AR41.10-P-0050-07EA</b>  *BA41.10-P-1001-01A *001589662100
12	 <b>WF</b> Undo fitted sleeves of flexible coupling and slide back front propeller shaft (17)	 If the fitted sleeves are jammed: ↓ Prepare drift for loosening fitted sleeves in flexible couplings.	<b>AR41.10-P-0050-09DA</b> <b>WF58.50-P-4110-01A</b>
13	 <b>BT</b> Detach shift rod (63) from below at intermediate lever Locking plate of shift rod on intermediate lever modified	 Observe variant of locking plate	<b>BT27.60-P-0021-01A</b>
14	Disconnect plug connector	Transmission 722.6  Transmission 722.9  	AR27.10-P-0500-01A *BA27.40-P-1003-01B <b>AR27.40-P-0700-01V</b> *BA27.40-P-1003-01E *BA27.40-P-1019-01A
15.1	Unclip cover and remove bolts (95)	All transmissions except 722.9 with angled threaded connection 	*BA27.20-P-1002-01C
15.2	Unclip cover from transmission bell and remove bolts (95)	Transmission 722.9 with angled threaded connection    	<b>AR27.20-P-0100-01A</b>  *BA27.20-P-1001-01C *BA27.20-P-1002-01C *001589650900 *115589035900

16	Detach pipe (21) from engine oil pan	Engine 111, 611, 612 Engine 112, 113 Engine 271 Engine 272, 273 Engine 646	*BA01.45-P-1001-01A *BA01.45-P-1001-01B *BA01.45-P-1001-01H *BA01.45-P-1007-01M *BA01.45-P-1001-01G
17.1	Detach oil cooling line (49) to oil cooler from transmission	Engine 111, 112, 113, 271, 272, 273	
17.2	Disconnect oil cooling line (50) to oil cooler	Engine 611, 612, 646	
18	Slacken bolt (50a)	Engine 611, 612, 646	
19	Remove bolt (2)	Transmission 722.6:   Transmission 722.9:  	*BA27.40-P-1001-01B *BA27.40-P-1002-01B *BA27.40-P-1001-01E *BA27.40-P-1002-01E
20	Turn lead pipe (21) down out of the way		
21	Remove transmission downwards at an angle using transmission jack and transmission platform	Secure torque converter to prevent it from falling out.	
22	Remove torque converter using  grab handles	If necessary Transmission 722.6 Transmission 722.9  	AR27.20-P-0500-01P AR27.20-P-0500-01W *BE27.20-P-1001-01B *BE27.20-P-1001-01E *168589006200 *126589043100 *BR00.45-Z-1009-06A
	<b>Checking</b>		
23	Check threaded unions in driven plate/torque converter	If threaded unions are damaged and loose, the driven plate/torque converter must be replaced.	
24	Install in the reverse order		
25	Perform basic programming	Model 203 Model 209	AR00.19-P-0200P AR00.19-P-0200Q
26	Check transmission oil level and correct if necessary	Transmission 722.6 Transmission 722.9	AR27.00-P-0100AC AR27.00-P-0270W
27	Read out fault memory with STAR DIAGNOSIS and erase if necessary		
28	Perform transmission adaptation	Transmission adaptation must be performed after the transmission is changed or repaired.	
<b>Danger!</b>	<b>Risk of accident</b> caused by vehicle starting off by itself when engine is running. <b>Risk of injury</b> caused by contusions and burns during starting procedure or when working near the engine as it is running	Secure vehicle to prevent it from moving by itself. Wear closed and snug-fitting work clothes. Do not touch hot or rotating parts.	AS00.00-Z-0005-01A
29	Perform engine test run and check transmission for proper function and leaktightness.		

#### Torque converter test values

Number	Designation	Transmission 722.600/601/602/603/ 604/605/608/611/614/ 615/616/619/626/629/ 634/637/640/642/660/ 661/695/699	Transmission 722.606/607/609/617/ 618/623/624/628/630/ 631/632/633/636/641/ 643/645/662/663/664/ 665/666/667/668/669/ 672/674/675/676/690/ 696/698
BE27.20-P-1001-01B	Installed height of torque converter	Distance from transmission housing	mm
			7 (-2)
			19.5 (-2)

**Test values for torque converter**

Number	Designation	Transmission 722.9
BE27.20-P-1001-01E	Installed height of torque converter	Distance, bolt flange to transmission housing flange
		helical screwed connection
		axial screwed connection
		See fig.

**Nm Oil pan**

Number	Designation	Engine 111.92/94/ 952/956/ 957/96/97/ 98	Engine 111.951/ 955/958	Engine 611.960/ 961/962	
BA01.45-P-1001-01A	Bolt, oil pan to cylinder crankcase	M6 Nm	10	8	9
		M8 Nm	25	20	20
		M10 Nm	-	-	-

**Nm Oil pan**

Number	Designation	Engines 612.961/962/ 963/965/966, 613.961	Engine 612.967	Engine 612.990	
BA01.45-P-1001-01A	Bolt, oil pan to cylinder crankcase	M6 Nm	9	9	9
		M8 Nm	20	20	20
		M10 Nm	-	-	-

**Nm Oil pan**

Number	Designation	Engine 112.910/911/ 912/913/914/ 915/917/920/ 921/922/923/ 940/941/942/ 943/944/945/ 946/947/949/ 951/954/955/ 960/961/970/ 972/973/976	Engine 113.940/941/ 942/943/944/ 945/946/960/ 961/962/963/ 965/967/968/ 969/980/981/ 982/984/986/ 992/995	Engine 113.987/ 988/991
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BA01.45-P-1001-01B	Bolt, oil pan to cylinder crankcase	M6	Nm	9	9	9
		M8	Nm	20	20	20

**Nm** Oil pan

Number	Designation			Engine 272	Engine 273
BA01.45-P-1007-01M	Bolt, oil line bracket to oil pan	M6	Nm	9	9

**Nm** Oil pan

Number	Designation			Engine 646.951/ 961/962/ 963/966
BA01.45-P-1001-01G	Bolt, oil pan to cylinder crankcase	M6	Nm	9
		M8	Nm	20
		M10	Nm	-

**Nm** Oil pan

Number	Designation			Engine 271
BA01.45-P-1001-01H	Bolt, oil pan to cylinder crankcase	M6×30	Nm	9
		M6×90	Nm	9
		M8×35	Nm	20

**Nm** Housing

Number	Designation		Trans- mission 722.9 in model 203	Trans- mission 722.9 in model 209
BA27.40-P-1001-01E	Bolt, automatic transmission to crankcase	Nm	39	39
BA27.40-P-1002-01E	Bolt, automatic transmission to engine oil pan	Nm	39	39
BA27.40-P-1003-01E	Bolt, heat shield to transmission housing	Nm	11	11

**Nm** Housing

Number	Designation		Transmission 722.6 in model 203	Transmission 722.6 in model 209
BA27.40-P-1001-01B	Bolt, automatic transmission to crankcase	Nm	39	39
BA27.40-P-1002-01B	Bolt, automatic transmission to engine oil pan	Nm	39	39
BA27.40-P-1003-01B	Bolt, heat shield to transmission housing	Nm	11	11

#### **Nm** Oil pan, automatic transmission

Number	Designation		Transmission 722.6 except 722.628/ 648/649	Transmission 722.628	Transmission 722.9
BA27.10-P-1001-03A	Oil drain screw to oil pan	Nm	20	20	22

#### **Nm** Propeller shaft

Number	Designation		Model 203	Model 209
BA41.10-P-1001-01A	Self-locking nut, flexible coupling to transmission or front propeller shaft	M10 Nm	40	40
		M12 Nm	60	60

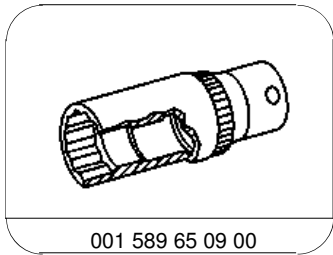
#### **Nm** Housing

Number	Designation		Transmission 722.6 except 722.660/661/662/ 663/666/673/674	Transmission 722.9
BA27.40-P-1019-01A	Bolt, leaf spring to transmission housing	Nm	8	5

#### **Nm** Torque converter

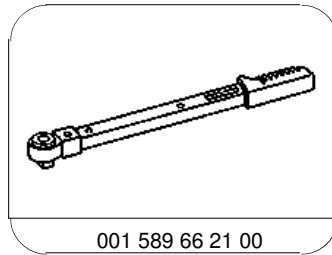
Number	Designation		Transmission 722.6 except 722.648	Transmission 722.9
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BA27.20-P-1001-01C	Oil drain bolt to torque converter		M8	Nm	10	10
			M10	Nm	15	15
BA27.20-P-1002-01C	Bolt, torque converter to drive plate	Straight threaded connection	M8	Nm	42	42
		Angled threaded connection	Stage 1	Nm	4	4
			Stage 2	Nm	30	30
			Stage 3	°	90	90



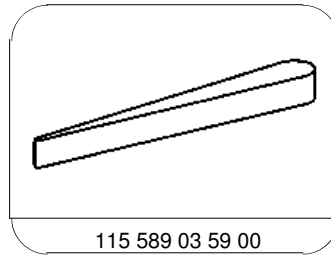
001 589 65 09 00

Wrench socket



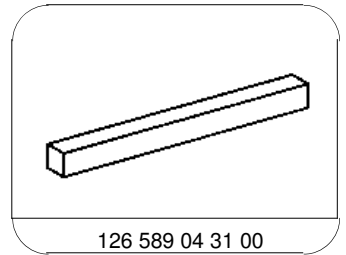
001 589 66 21 00

Torque wrench



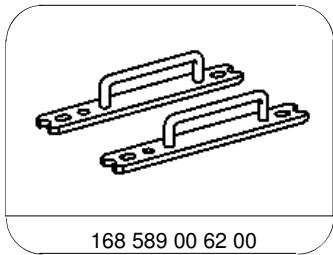
115 589 03 59 00

Long wedge



126 589 04 31 00

Parallel support



168 589 00 62 00

Grab handle

### Repair materials

Number	Designation	Order number
BR00.45-Z-1009-06A	Multi-purpose paste	000 989 80 51 10