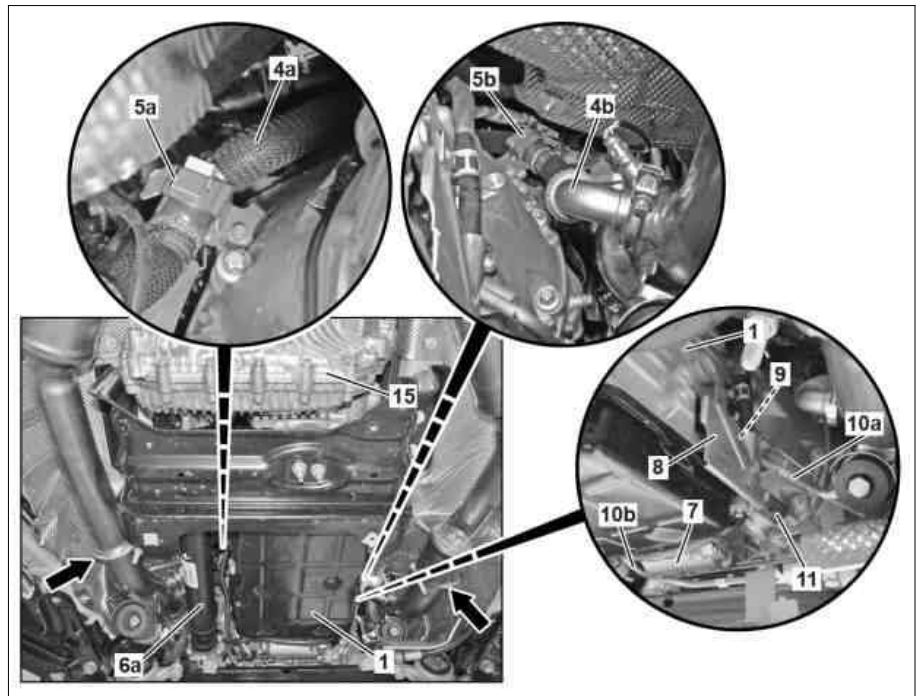


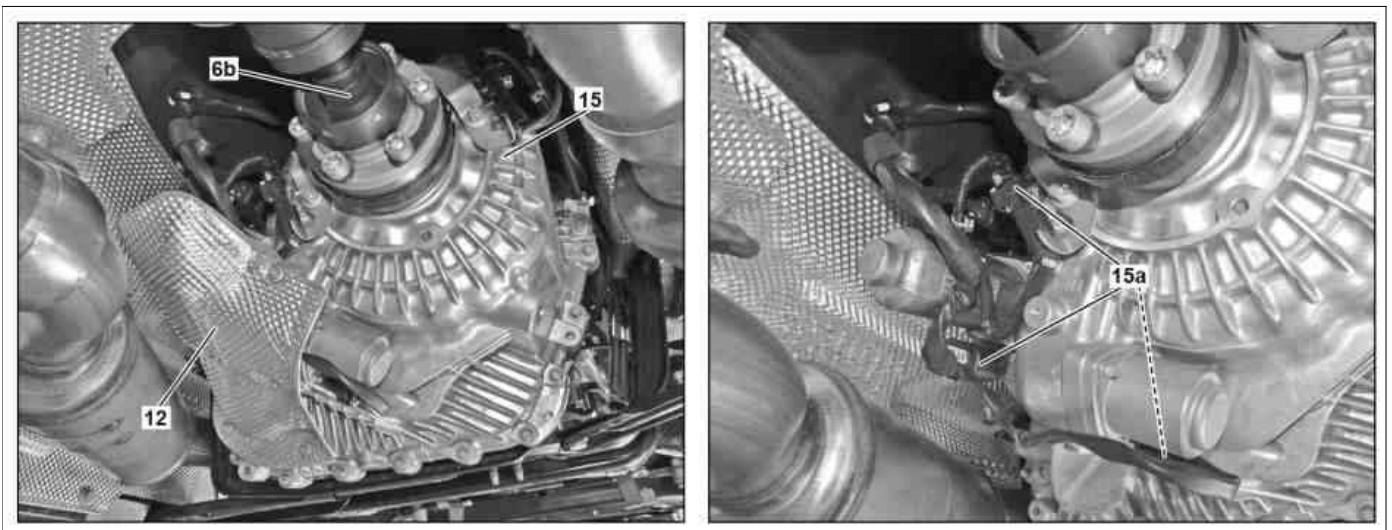
## Transmission 722.9 in model 166, 292

Shown on engine 276.9 with code 920  
(Gasoline direct injection with stratified charge)

- 1 Transmission
- 4a Exhaust gas recirculation line
- 4b Exhaust gas recirculation line
- 5a Bracket
- 5b Bracket
- 6a Front propeller shaft
- 7 Auxiliary oil pump
- 8 Heat shield
- 9 Electrical connector
- 10a Oil line
- 10b Oil line
- 11 Cover
- 15 Transfer case



P27.10-2396-06

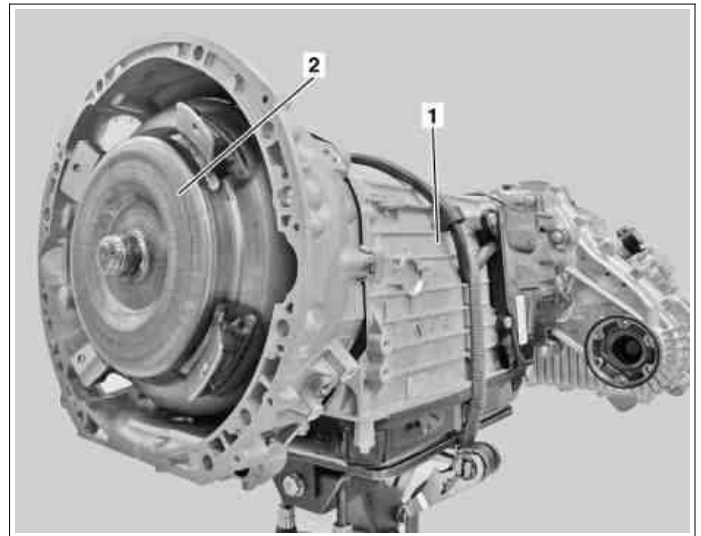


P28.19-2063-08

Shown on transfer case (15) with code 430 (On & off-road package)









- 6b Rear propeller shaft
- 15 Transfer case
- 12 Heat shield
- 15a Electrical connectors

- 1 Transmission  
2 Torque converter



P27.10-2397-11

	<b>Risk of death</b> caused by vehicle slipping or toppling off of the lifting platform.	Align vehicle between vehicle lift columns and position the four support plates at the vehicle lift support points specified by the vehicle manufacturer.	AS00.00-Z-0010-01A
⚠ Warning	<b>Risk of injury.</b> Moving parts can pinch, crush or, in extreme cases even sever extremities.	No parts of the body or limbs should be within the operating area of mechanical components when moving components.	AS00.00-Z-0009-01A
⚠ Warning	<b>Risk of injury.</b> Skin or eye injuries may result when handling hot or glowing objects.	Wear protective gloves, protective clothing and safety glasses, if necessary.	AS00.00-Z-0002-01A
⚠ Caution	<b>Risk of injury</b> to skin and eyes due to handling of transmission oil. Health risk caused by swallowing transmission oil	Wear protective gloves, protective clothing and safety glasses. Do not pour transmission oil into beverage bottles.	AS00.40-Z-0001-01A
⚠ Caution	<b>Risk of injury</b> caused by scraping or cutting body parts on sharp vehicle parts	Always wear protective gloves when working on or near sharp and non-deburred vehicle parts. Deburr repair panels.	AS00.00-Z-0017-01A
	Notes on threaded connections fastened using a tightening angle-based tightening process		AH00.00-P-0020-01A
	Information on preventing damage to electronic components due to electrostatic discharge		AH54.00-P-0001-01A
	Notes on bolted connections with self tapping screws		AH00.00-P-0007-01SF
	Notes on self-locking nuts and bolts		AH00.00-N-0001-01A
	Notes on automatic transmission		AH27.19-P-0001-01NKB
🔧 🔧	<b>Remove/install</b>		
1	Secure vehicle against rolling		
2	Shift transmission(1) into neutral position		
3	Release parking brake		
4	Disconnect ground line from battery Notes on battery		AR54.10-P-0003GZ AH54.10-P-0001-01A
5	Secure vehicle on vehicle lift		AR00.60-P-0100GZ
6	Remove rear part of underfloor paneling		AR61.30-P-1001GQ
7.1	Remove left and right holder of underfloor paneling from front axle carrier	Transmission 722.9 in model 166 with engine 276.8	
7.2	Detach exhaust gas recirculation lines (4a, 4b) from exhaust system	Transmission 722.9 in model 166 with engine 276.9 with code 920 (Direct petrol injection with stratified charging)	AR49.10-P-7100GQA
8.1	Remove left and right holder of catalytic converter from transmission (1)	Transmission 722.9 in model 166 with engine 276.8 Ⓜ Bolt, exhaust system bracket to transmission	*BA49.10-P-1020-01AK
8.2	Detach holders (5a, 5b) from transmission (1)	Transmission 722.9 in model 166 with engine 276.9 with code 920 (Direct petrol injection with stratified charging)	

9.1	Detach rear exhaust system at connecting point (arrows) and remove	Model 166 with engine 276.9 with transmission 722.9 with code 920 (Direct petrol injection with stratified charging)	AR49.10-P-7100GQA
9.2	Detach catalytic converter from center muffler	Model 166 with engine 276.9 with transmission 722.9 except code 920 (Direct petrol injection with stratified charging)	
9.3	Detach exhaust system at connecting point between diesel particulate filter and exhaust pipe and remove	Model 166 with engine 651 with transmission 722.9 Model 166, 292 with engine 642 with transmission 722.9 Model 292 with engine 642 with transmission 722.9 Model 166 with engine 642 with transmission 722.9 Model 166 with engine 651 with transmission 722.9	AR49.10-P-7142OGR AR49.10-P-7100GQB
9.4	Remove rear exhaust system at connecting point of catalytic converter	Transmission 722.9 in model 166 with engine 276.8	AR49.10-P-7100GQA
10.1	Unclip electrical line of left oxygen sensor downstream of catalytic converter from transmission (1)	Transmission 722.9 in model 166 with engine 276.9 Transmission 722.9 in model 166, 292 with engine 157 Transmission 722.9 in model 166, 292 with engine 278	
10.2	Detach temperature sensor upstream of diesel particulate filter and place to one side	Transmission 722.9 in model 166 with engine 651 Transmission 722.9 in model 166, 292 with engine 642	AR07.04-P-0005OGR
11	Remove heat shield (12) from transfer case (15)		
12	Detach rear propeller shaft (6b) at output flange to rear axle from transfer case (15) or adapter housing	 Mark the rear propeller shaft (6b) relative to the propeller shaft flange.  <b>Installation:</b> Observe the tightening procedure for the rear propeller shaft (6b) to the transfer case (15) or adapter housing.  Model 166 with transmission 722.9 Model 292 with transmission 722.9 Self-locking screw/bolt of propeller shaft at transfer case/ adapter housing (to rear axle)  Retainer wrench	AR41.10-P-0050-17GZ  *BA41.10-P-1001-01F  *164589020700
13	Place rear propeller shaft (6b) to one side and fix in place		
14	Detach front propeller shaft (6a) to front axle from output flange of transfer case (15)	Model 166 (except 166.006/058), 292 with transmission 722.9  <b>Installation:</b> Observe tightening procedure for front propeller shaft (6a).  Model 166 with transmission 722.9 Model 292 with transmission 722.9 Self-locking bolt, drive shaft to transfer case (to front axle)  Retainer wrench	AR41.10-P-0070-03GZ  *BA41.10-P-1003-01F  *164589020700
15	Place front propeller shaft (6b) to one side and fix in place		
16	Release, detach and unclip electrical connections(15a) on transfer case(15)	Transmission 722.9 in model 166 (except 166.006/058), 292	
17	Release and disconnect electrical connector from intelligent servo module for DIRECT SELECT (A80)		AR27.19-P-0550GQ
18	Release and disconnect electrical connection from auxiliary oil pump(7)	Transmission 722.9 in model 166, 292 with code B03 (ECO start/stop function)	AR27.30-P-0651GQ
19	Unclip wiring harness of intelligent servo module for DIRECT SELECT (A80) from transmission (1)		
20	Detach heat shield (8) from transmission (1)	Model 166.0, 292 with transmission 722.9  Bolt, heat shield to transmission housing	AR27.40-P-0700-01GZ *BA27.40-P-1014-01A
21	Release and disconnect electrical connector (9) from transmission (1)		
22	Detach wiring harness from transmission (1)		

23	Detach oil lines (10a, 10b) from transmission (1) and place to one side		AR27.55-P-0600GQ
24.1	Detach oil line (10a) from thermostat	Transmission 722.9 in model 166 with engine 276.9 Transmission 722.9 in model 166, 292 with engine 157 Transmission 722.9 in model 166, 292 with engine 278	AR27.55-P-0600GQ
24.2	Detach oil lines (10a, 10b) from transmission bracket	Transmission 722.9 in model 166, 292 with engine 276.8	
25	Prop up and strap down transmission(1) using major-assembly support and mounting plate 000 588 11 62 00 Major assembly mount WS 000 588 10 62 00 Support plate		WS01.00-P-0092B WS26.00-P-3309B
26	Remove engine cross member at rear	Transmission 722.9 in model 292 with engine 642 Transmission 722.9 in model 166 with engine 276 Transmission 722.9 in model 166 with engine 278 Transmission 722.9 in model 166 with engine 642 Transmission 722.9 in model 166 with engine 651 Transmission 722.9 in model 166, 292 with engine 157	AR22.10-P-4360OGR AR22.10-P-1180GQ
27	Remove cover (11) and detach torque converter (2) from star-shaped drive plate	Bolt, torque converter to driver spider Transmission 722.9 in model 166 with engine 651 Counterholder Socket wrench bit Long wedge	AR27.20-P-0100-01A *BA27.20-P-1002-01C *651589004000 *001589650900 *115589035900
28	Pry torque converter (2) evenly off star-shaped drive plate	Long wedge	*115589035900
29	Remove right lambda sensor line routing holder from torque converter housing	Transmission 722.9 in model 166, 292 with engine 276.8	
30	Remove holder at left lambda sensor plug from torque converter housing	Transmission 722.9 in model 166, 292 with engine 276.8	
31	Detach starter from transmission (1)	Transmission 722.9 in model 166 with engine 651 Transmission 722.9 in model 166, 292 with engine 642 Transmission 722.9 in model 166 with engine 276.8 Transmission 722.9 in model 166 with engine 276.9 Model 166 with engine 278 with transmission 722.9 Model 166, 292 with engine 157 with transmission 722.9 Place starter with attached lines to one side and secure against falling down.	AR15.30-P-7100CD AR15.30-P-7100OGR AR15.30-P-7100GQ AR15.30-P-7100GQA AR15.30-P-7100MLJ
32	Remove screws around circumference of transmission (1)	Bolt, automatic transmission to engine	*BA27.40-P-1008-01A
33	Remove transmission (1) with transfer case (15) or adapter housing WS 000 588 11 62 00 Major assembly mount WS 000 588 10 62 00 Support plate	Lower the major assembly lifter slowly and secure the torque converter (2) to prevent it from falling out. <b>Installation:</b> Align the bores of the torque converter (2) with the bores in the driver spider.	WS01.00-P-0092B WS26.00-P-3309B
34	Remove torque converter (2)	If necessary. <b>Installation:</b> Pay attention to the installation height of the torque converter (2). Multi-purpose paste Transmission 722.9 (except 722.93) in model 166, 292 Installed height of torque converter Handles Parallel rest	AR27.20-P-0500-01W *BR00.45-Z-1009-06A *BE27.20-P-1001-01E *168589006200 *126589043100

35	Remove corrosion from crankshaft	Assembly cleaner Multi-purpose paste	AR03.20-P-1000-01A *BR00.45-Z-1028-04A *BR00.45-Z-1009-06A
	<b>Check</b>		
36	Check threaded unions in driver spider	If threaded unions are damaged or loose ↓ Install a new driver spider. Transmission 722.9 in model 166, 292 with engine 642 Transmission 722.9 in model 166 with engine 278 Transmission 722.9 in model 166, 292 with engine 157 Transmission 722.9 in model 166 with engine 276 Transmission 722.9 in model 166 with engine 651	AR03.30-P-8001OGR AR03.30-P-8001MLJ AR03.30-P-8001GQ AR03.30-P-8001CD
37	Install in the reverse order		
	<b>Check</b>		
38	Check transmission oil level and correct if necessary	 Follow the prescribed work procedure exactly and observe the Specifications for Operating Fluids. The transmission (1) will otherwise be damaged.	AR27.00-P-0270W
39	Perform transmission adaptation using diagnostic system	After replacement or repair of transmission(1).	
40	Reset data on service life of torque converter lockup clutch using diagnostic system	After replacement of torque converter (2).	
Warning	<b>Risk of burn injuries</b> , suffocation and poisoning when working on the exhaust system and the components connected to it. Risk of suffocation and risk of poisoning caused by inhalation of gaseous and solid components of the exhaust. <b>Risk of poisoning</b> caused by skin contact with solid components of the exhaust.	Wear protective clothing and safety glasses. Use the extraction system. Move people out of the hazard area.	AS49.00-Z-0001-01A
Warning	<b>Risk of accident</b> from vehicle starting off by itself when engine running. <b>Risk of injury</b> (bruises and burns) resulting from working on the engine while it is being started or when it is running.	Secure vehicle to prevent it from starting off by itself. Wear closed and snug-fitting work clothes. Do not touch hot or rotating parts.	AS00.00-Z-0005-01A
41	Conduct engine test run, and check transmission(1) for leak tightness and proper operation		

#### Test values for torque converter

Number	Designation	Transmission 722.9 (except 722.93)
BE27.20-P-1001-01E	Installed height of torque converter Distance, bolt flange to transmission housing flange	Helical screwed connection mm 9,5
		See picture AR27.20-P-0500-01W
		Axial screwed connection mm 19,5

#### Torque converter

Number	Designation	Transmission 722.9
BA27.20-P-1002-01C	Bolt, torque converter to driver spider	Straight threaded connection M8 Nm 42
		Angled threaded connection Stage 1 Nm 4
		Stage 2 Nm 30
		Stage 3 $\angle$ ° 90

#### Housing

Number	Designation	Transmission 722.9		
BA27.40-P-1008-01A	Bolt, automatic transmission to engine	M10 × 40	Nm	38
		M10 × 45	Nm	38
		M10 × 90	Nm	38
		M12	Nm	–

**Nm** Housing

Number	Designation	Transmission 722.9	
BA27.40-P-1014-01A	Bolt, heat shield to transmission housing	Nm	9

**Nm** Propeller shaft

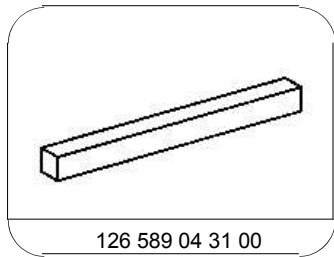
Number	Designation			Model 166	Model 292
BA41.10-P-1001-01F	Self-locking screw/bolt of propeller shaft at transfer case/adaptor housing (to rear axle)	Stage 1	Nm	40	40
		Stage 2	⚡°	90	90

**Nm** Propeller shaft

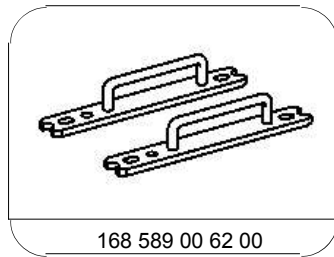
Number	Designation			Model 166	Model 292
BA41.10-P-1003-01F	Self-locking bolt, drive shaft to transfer case (to Stage 1 front axle)	Stage 1	Nm	40	40
		Stage 2	⚡°	90	90

**Nm** Exhaust system

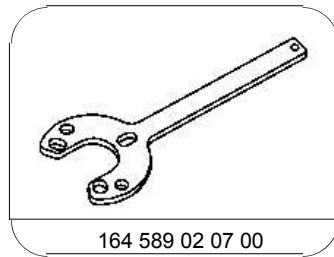
Number	Designation	Engine 276 in model 166		
BA49.10-P-1020-01AK	Bolt, exhaust system bracket to transmission	Stage 1	Nm	8
		Stage 2	⚡°	90



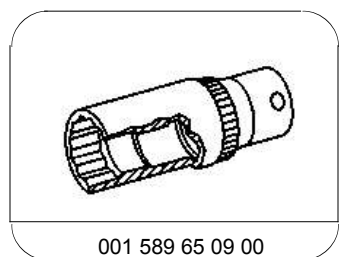
Parallel rest



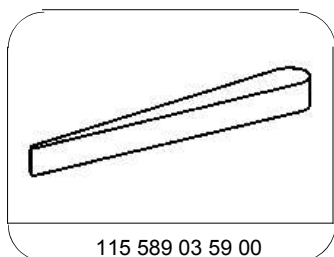
Handles



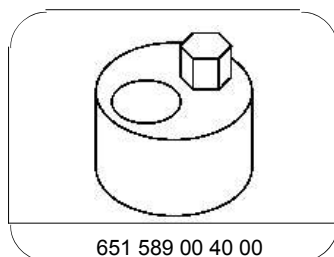
Retainer wrench



Socket wrench bit



Long wedge



Counterholder

**Repair materials**

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

BR00.45-Z-1028-04A	Assembly cleaner	Adolf Würth GmbH & Co. KG Reinhold-Würth-Str. 12-17 74653 Künzelsau-Gaisbach Germany Tel. +49 7940 15-0 Fax +49 7940 15-1000 <a href="http://www.wuerth.de">http://www.wuerth.de</a>
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