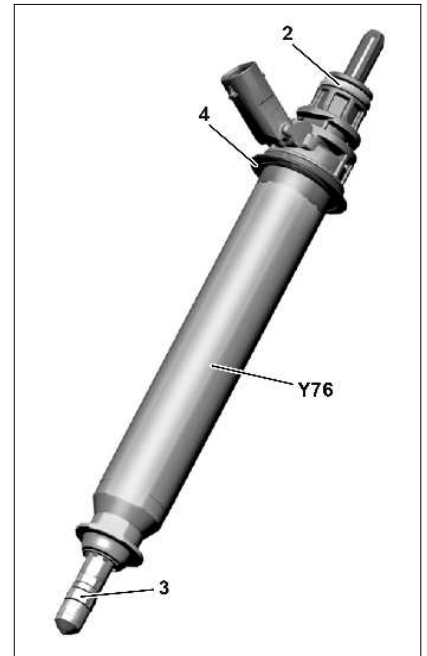


Engine 274.9 in model 213  
 Engine 274.9 in model 238

### Modification notes

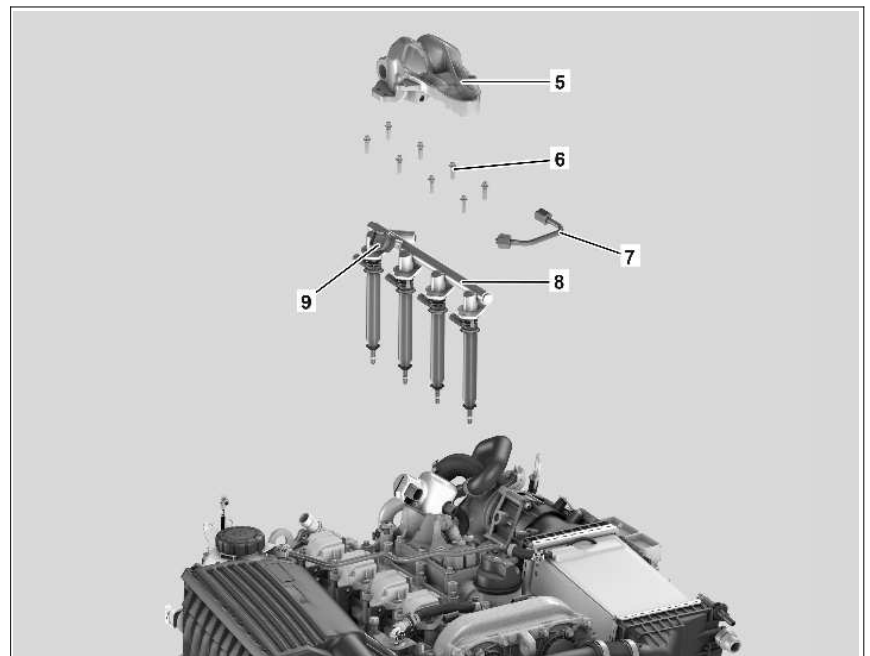
21.11.2019	Document completely revised.		
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2 Sealing ring  
 3 Sealing ring  
 4 Sealing ring  
 Y76 Fuel injector



P07.03-2423-03

5 Shielding  
 6 Screws (x 8)  
 7 High pressure pipe  
 8 Rail



P07.03-2395-06



























**Risk of explosion** caused by fuel igniting.  
**Risk of injury** to skin and eyes caused by fuel spraying out at high pressure

Keep all ignition sources out of hazard area.  
 Do not carry out any work on system when it is pressurized.

[AS07.16-Z-0001-01A](#)

 <b>Danger</b>	<b>Risk of explosion</b> caused by fuel igniting, risk of poisoning caused by inhaling and swallowing fuel as well as risk of injury to eyes and skin caused by contact with fuel.	No fires, sparks, open flames or smoking. Pour fuels into suitable and appropriately marked containers only. Wear protective clothing when handling fuel.	<a href="#">AS47.00-Z-0001-01A</a>
 <b>Warning</b>	<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.	<a href="#">AS00.00-Z-0002-01A</a>
 <b>Warning</b>	<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.	<a href="#">AS00.00-Z-0005-01A</a>
 <b>Caution</b>	<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.	<a href="#">AS00.00-Z-0017-01A</a>
<b>Topical note</b>	Information on preventing damage to electronic components due to electrostatic discharge		<a href="#">AH54.00-P-0001-01A</a>
<b>Topical note</b>	Notes on threaded connections fastened using a tightening angle-based tightening process		<a href="#">AH00.00-P-0020-01A</a>
<b>Topical note</b>	Notes on avoiding damage through contamination and foreign objects		<a href="#">AH00.00-P-5000-01A</a>
	Note on calculation of tightening torque when using insertion or socket tools with various effective lengths		<a href="#">AH00.00-P-0015-01CW</a>
	General information on work on gasoline direct injection system		<a href="#">AH07.00-P-2000-01A</a>
	Notes on safety-relevant components		<a href="#">AH00.00-Z-0019-01A</a>
	<b>Remove</b>		
1	Remove center and rear sections of lower engine compartment lining.		<a href="#">AR61.20-P-1105LWE</a>
2	Remove fuel pressure.	 Dust cap at service connection  Pressure hose	<a href="#">AR07.03-P-1460-01MR</a> *BA07.03-P-1003-01F *119589046300
3	Remove ground line of battery.	Engine 274.9 in model 238 Engine 274.9 in model 213	<a href="#">AR54.10-P-0003LWO</a> <a href="#">AR54.10-P-0003LW</a>
4	Remove upper engine cover.		
5	Remove soundproofing.	Engine 274.9 in model 213 Engine 274.9 in model 238 Engine 274.9 in model 213 except code 920 (Direct petrol injection with stratified charging) Engine 274.9 in model 238 except code 920 (Direct petrol injection with stratified charging)	<a href="#">AR94.30-P-5410MRD</a>
6	Remove engine wiring harness.	 Do not kink lines, do not subject lines to tension. Otherwise damage will occur.	<a href="#">AR15.18-P-1000-04MRD</a>
7	Release shielding (5) in reverse order to the tightening procedure and remove.	Tightening procedure for high-pressure pump shielding	<a href="#">AR07.02-P-0815-01MR</a>
8	Remove soundproofing of the high-pressure pump.		
9	Clean area around high-pressure pump and high-pressure line (7).	 No dirt should be allowed to find its way into the fuel injection system. Failure of the fuel injection system can occur otherwise. Assembly cleaner	*BR00.45-Z-1028-04A
10	Release fuel pressure in the fuel high-pressure circuit.		<a href="#">AR07.03-P-1460-02MM</a>
11	Remove high-pressure line (7) and seal connections with suitable stop plugs.	 Do not kink or bend high-pressure line (7). Leaks can occur otherwise.  Box wrench bit  Record plug	*000589800300 *129589009100
12	Unscrew screws (6) in reverse order to tightening procedure.	Rail tightening procedure	<a href="#">AR07.03-P-1010-06MR</a>
13	Remove hold-down tools between rail (8) and fuel injectors (Y76).		
14	Mark fuel injectors (Y76) relative to the respective cylinder.	 Where fuel injectors (Y76) are reused, insert these in cylinder in which they were previously installed. Engine damage will occur otherwise.	

15	Remove rail (8) from fuel injectors (Y76) and seal connections with suitable stop plugs.	 Ensure utmost cleanliness. Otherwise, leaks and malfunctions occur.  Record plug	*129589009100
16	Remove fuel injectors (Y76) from cylinder head and seal injector well bores with suitable stop plugs.	 Remove all fuel injectors (Y76), rail (8) may only be installed together with fuel injectors (Y76).  Puller  Plug	<a href="#">AR07.03-P-0004-03MM</a>  *278589003300 *270589039100
	<b>Check</b>		
17	Check fuel injectors (Y76) for external damage and replace if necessary.	 If fuel injectors (Y76) are replaced, install these immediately after removal of transport protective caps. Leaks can occur otherwise.	
18	Check high-pressure line (7) for damage and replace if necessary.	Assembly cleaner	<a href="#">AR07.03-P-1010-03MM</a>  *BR00.45-Z-1028-04A
	<b>Clean</b>		
19	Clean fuel connections at fuel injectors (Y76).	 For cleaning the fuel connections, hold downwards. Otherwise failure of the fuel injectors (Y76) can occur. Assembly cleaner	*BR00.45-Z-1028-04A
	<b>Install</b>		
20	Replace sealing packages of fuel injectors (Y76) at rail (8).	Assembly cleaner  Drift	<a href="#">AR07.03-P-0004-02MM</a>  *BR00.45-Z-1028-04A *278589011500
21	Replace sealing rings (2, 4) of fuel injectors (Y76).		
22	Replace sealing rings (3) of fuel injectors (Y76).	Assembly cleaner  Assembly tool	<a href="#">AR07.03-P-0004-01MM</a>  *BR00.45-Z-1028-04A *272589004300
23	Remove stop plugs, install fuel injectors (Y76) in rail (8) and secure with hold-down tools.	 Where fuel injectors (Y76) are reused, insert these in cylinder in which they were previously installed. Engine damage will occur otherwise.  Replace hold-down tools.  Record plug	*129589009100
24	Remove stop plugs and install rail (8) with fuel injectors (Y76).	 Plug	*270589039100
25	Screw in bolts (6).	Rail tightening procedure  Screw/bolt, fuel distributor to cylinder head cover	<a href="#">AR07.03-P-1010-06MR</a> *BA07.52-P-1001-01H
26	Remove stop plugs and install high-pressure line (7).	 Do not kink or bend high-pressure line (7). Leaks can occur otherwise.  Union nut, fuel line to fuel distributor  Union nut, fuel line to high-pressure pump  Box wrench bit  Record plug	<a href="#">AR07.03-P-1010-02MR</a>  *BA07.03-P-1001-01F *BA07.03-P-1002-01F *000589800300 *129589009100
27	Install soundproofing of the high-pressure pump.		
28	Install shielding (5).	Tightening procedure for high-pressure pump shielding  Bolt for high-pressure pump shielding	<a href="#">AR07.02-P-0815-01MR</a>  *BA07.02-P-1004-01D
29	Install engine wiring harness.	 M6 × 1	<a href="#">AR15.18-P-1000-04MRD</a> *BA00.10-P-1002-04A
30	Install ground line of battery.	Engine 274.9 in model 238 Engine 274.9 in model 213	<a href="#">AR54.10-P-0003LWO</a> <a href="#">AR54.10-P-0003LW</a>
31	Read out fault memory with vehicle diagnosis system and delete if necessary.	Engine 274.9 in model 213	<a href="#">AD00.00-P-2000-04B</a>

AD		Engine 274.9 in model 238	AD00.00-P-2000-06LWO
32	Store injector quantity compensation coding in motor control module (MCM).	For installation of new fuel injectors (Y76).	
AD		Engine 274.9 in model 213	AD00.00-P-2000-04B
AD		Engine 274.9 in model 238	AD00.00-P-2000-06LWO
	<b>Check</b>		
33	Check fuel high-pressure circuit for leak tightness.		
AD		Engine 274.9 in model 213	AD00.00-P-2000-04B
AD		Engine 274.9 in model 238	AD00.00-P-2000-06LWO AR07.03-P-1010-04MM
34	Carry out engine test run and check engine for proper operation and leak tightness.		
35	Install soundproofing.	Engine 274.9 in model 213 Engine 274.9 in model 238 Engine 274.9 in model 213 except code 920 (Direct petrol injection with stratified charging) Engine 274.9 in model 238 except code 920 (Direct petrol injection with stratified charging)	AR94.30-P-5410MRD
36	Install center and rear lower engine compartment lining.		AR61.20-P-1105LWE
37	Install upper engine cover.		

Metric screws/bolts and nuts as per MBN 10 105, 10 143

Number	Designation		8.8	10.9
BA00.10-P-1002-04A	M6 × 1	Nm	9	13

High pressure pump

Number	Designation		Engine 274
BA07.02-P-1004-01D	Bolt for high-pressure pump shielding	Nm	20

Injection nozzles, injection valves, lines

Number	Designation		Engine 274
BA07.03-P-1001-01F	Union nut, fuel line to fuel distributor	Stage 1	Nm 15
		Stage 2	∠° 75
		Stage 3	∠° 25

Injection nozzles, injection valves, lines

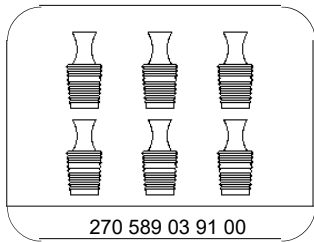
Number	Designation		Engine 274
BA07.03-P-1002-01F	Union nut, fuel line to high-pressure pump	Stage 1	Nm 15
		Stage 2	∠° 75
		Stage 3	∠° 25

Injection nozzles, injection valves, lines

Number	Designation		Engine 274
BA07.03-P-1003-01F	Dust cap at service connection	Plastic	Nm 2
		Metal	Nm 15

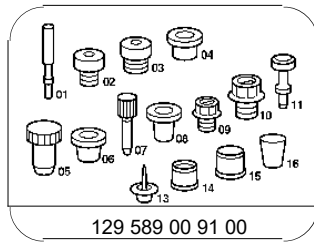
Fuel distributor

Number	Designation		Engine 274
BA07.52-P-1001-01H	Screw/bolt, fuel distributor to cylinder head cover	Nm	8



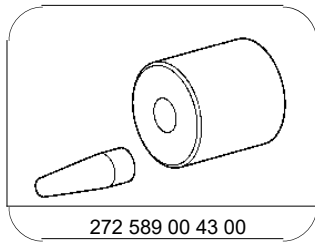
270 589 03 91 00

Plug



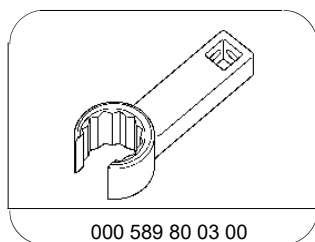
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Record plug



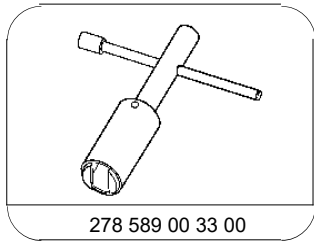
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Assembly tool



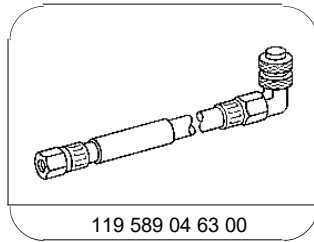
000 589 80 03 00

Box wrench bit



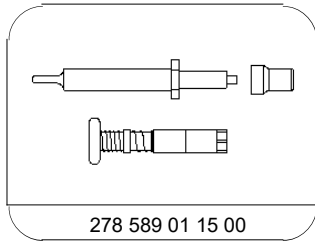
278 589 00 33 00

Puller



119 589 04 63 00

Pressure hose



278 589 01 15 00

Drift

**Repair materials**

Number	Designation	Order number
BR00.45-Z-1028-04A	Assembly cleaner	A 000 986 56 01