

Engine 274.9 in model 205

Engine 274.9 in model 253














Shown on ENGINE 274.910 in MODEL 205

- 1 Air cleaner housing
- 2 Cap
- 3 Fuel system high pressure pump
- 4 Oil separator
- 5 Coolant vent line
- 6 Cylinder head cover
- 7 Bracket
- 8 Top slide rail
- 9 Front cover
- 10 Rail
- 11 Coolant vent line



P01.20-2353-06

⚠ Warning	Risk of injury. 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
	Risk of explosion 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.	AS47.00-Z-0001-01A
⚠ Caution	Risk of injury 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
⚠ Caution	Risk of injury to skin and eyes due to handling of engine oil. Risk of poisoning caused by swallowing engine oil	Wear protective gloves, protective clothing and safety glasses. Do not fill engine oil into beverage containers.	AS18.00-Z-0001-01A
	Information on preventing damage to electronic components due to electrostatic discharge		AH54.00-P-0001-01A
	Notes on threaded connections fastened using a tightening angle-based tightening process		AH00.00-P-0020-01A
	Notes on avoiding damage through contamination and foreign objects		AH00.00-P-5000-01A
	Notes on threaded connections with aluminum screws/bolts		AH00.00-P-0006-01RM
	Note on calculation of tightening torque when using insertion or socket tools with various effective lengths		AH00.00-P-0015-01CW
	General information on work on gasoline direct injection system		AH07.00-P-2000-01A
🔧 🔧	Remove/install		
1	Drain off coolant	i Installation: Only install upper engine cover and lower engine compartment paneling after the performing a leak test.	AR20.00-P-1142LW
2	Remove charge air cooler		AR09.41-P-6819MRA
3	Place coolant vent line (5) to one side		
4	Remove ME-SFI [ME] control unit (N3/10)		AR07.08-P-7008MRA
5	Remove the holder of the charge air cooler	Nm Screw/bolt, water-cooled charge air cooler bracket to cylinder head cover/cylinder head	*BA09.41-P-1003-01U
6	Remove front cover (9)		AR01.20-P-5700MRB

8	Remove rail (10) with fuel injectors		AR07.03-P-1052MRA
9	Remove air filter housing (1)		AR09.10-P-1150MRA
10	Remove front bracket of air filter housing (1)	 M8 × 1.25	*BA00.10-P-1005-04A
11	Remove rear right engine suspension lug and place to one side	 Bolt, lifting eye to cylinder head/cylinder head cover	*BA01.30-P-1008-01Y
12	Remove ignition coils		AR15.12-P-2003MRA
13	Remove the intake camshaft valve lift switching actuator(Y49/8)	Engine 274.910 in model 205	AR05.20-P-6500MRA
14	Remove oil separator (4) from cylinder head cover (6) and place to one side	Engine 274.9 in model 205 with code 494 (US version) Engine 274.9 in model 205 with code 945 (China Stage 6 exhaust treatment) Engine 274.9 in model 253 with code 494 (US version) Engine 274.9 in model 253 with code 945 (China Stage 6 exhaust treatment) Engine 274.9 in model 205 except code 494 (US version) except code 945 (China Stage 6 exhaust treatment) Engine 274.9 in model 253 except code 494 (US version) except code 945 (China Stage 6 exhaust treatment)	AR01.20-P-9691MRU AR01.20-P-9691MRA
15	Remove coolant vent line (11) from cylinder head cover (6), unclip from brackets and place to one side	 Hose clamp pliers	*003589033700
16	Disconnect engine wiring harness	 M6 × 1	AR15.18-P-1000-04LWA *BA00.10-P-1002-04A
17	Remove vacuum pump		AR43.05-P-1320LWA
18	Remove cap (2)	 Installation: Replace cap (2).	
19	Release screws of cylinder head cover (6) in reverse order to tightening procedure and remove	 Installation: Replace screw/bolts. Observe tightening procedure for cylinder head cover (6).  Bolt, cylinder head cover to cylinder head	AR01.20-P-5014-03MR *BA01.20-P-1001-01R
20	Remove cylinder head cover (6) from cylinder head Notes on sealant path for cylinder head cover	 Do not hammer in a tool to pry off between cylinder head cover (6) and cylinder head. Sealing surfaces of cylinder head and cylinder head cover (6) will otherwise be damaged.  Cylinder head cover (6) and cylinder head must be replaced together.  Installation: Install new sealing rings.  Installation: Apply sealant to cylinder head cover (6). Sealant, Loctite 5970, 50 ml  Application gun	AH01.30-P-1000-08MR *BR00.45-Z-1013-01A *112589002500
21	Remove bracket (7) for engine cover	When replacing the cylinder head cover (6).	
22	Remove bracket for air intake pipe	When replacing the cylinder head cover (6).	
23	Remove Hall sensors on camshafts	When replacing the cylinder head cover (6).	AR15.10-P-2000MRA
24	Remove top slide rail (8)	When replacing the cylinder head cover (6).	AR05.10-P-8480MRA
25	Remove oil filler cap with molded seal	When replacing the cylinder head cover (6).	
	Check		
26	Check upper slide rail (8) of timing chain for galling and score marks	In a case of galling or score marks ↓ Replace upper slide rail (8).	AR05.10-P-8480MRA
27	Check camshaft mounts in the cylinder head cover (6), cylinder head and camshafts for galling and score marks	In the case of galling and score marks ↓	

		Replace cylinder head cover (6), cylinder head and camshafts. Replace camshafts Replace cylinder head	AR05.20-P-6992MRA AR01.30-P-5800MRB
	Clean		
28	Clean sealing surfaces on cylinder head and on cylinder head cover (6)	 Do not use any sharp-edged tools or abrasive paper. Sealing surfaces of cylinder head and cylinder head cover (6) will otherwise be damaged. Loctite 7063 cleaning spray (150 ml) Loctite 7200	AR01.00-P-0050-01A *BR00.45-Z-1046-04A *BR00.45-Z-1038-04A
29	Install in the reverse order		
Warning	Risk of burn injuries , 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. Risk of poisoning 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	Risk of accident from vehicle starting off by itself when engine running. Risk of injury (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
30	Perform an engine test run and check engine for proper operation and leaktightness		

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

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

Number	Designation		8.8	10.9
BA00.10-P-1005-04A	M8×1.25	Nm	22	32

Crankcase ventilation system, cylinder head cover, camshaft housing

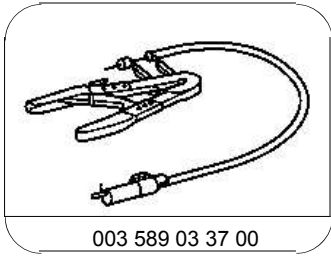
Number	Designation		Engine 274
BA01.20-P-1001-01R	Bolt, cylinder head cover to cylinder head	Stage 1	Nm 10
		Stage 2	∠° 90

Cylinder head

Number	Designation		Engine 274
BA01.30-P-1008-01Y	Bolt, lifting eye to cylinder head/cylinder head cover	M8 Nm	20

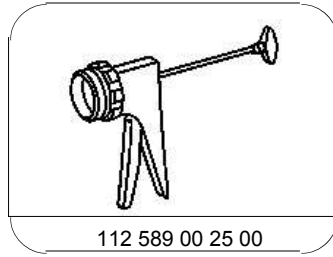
Charge air pipe/charge air cooling

Number	Designation		Engine 274
BA09.41-P-1003-01U	Screw/bolt, water-cooled charge air cooler bracket to cylinder head cover/cylinder head	Nm	9



003 589 03 37 00

Hose clamp pliers



112 589 00 25 00

Application gun

Repair materials

Number	Designation	Order number
BR00.45-Z-1013-01A	Sealant, Loctite 5970, 50 ml	A 003 989 98 20 10
BR00.45-Z-1038-04A	Loctite 7200	Henkel AG & Co. KGaA http://www.loctite.de
BR00.45-Z-1046-04A	Loctite 7063 cleaning spray (150 ml)	A 001 986 71 71 10