

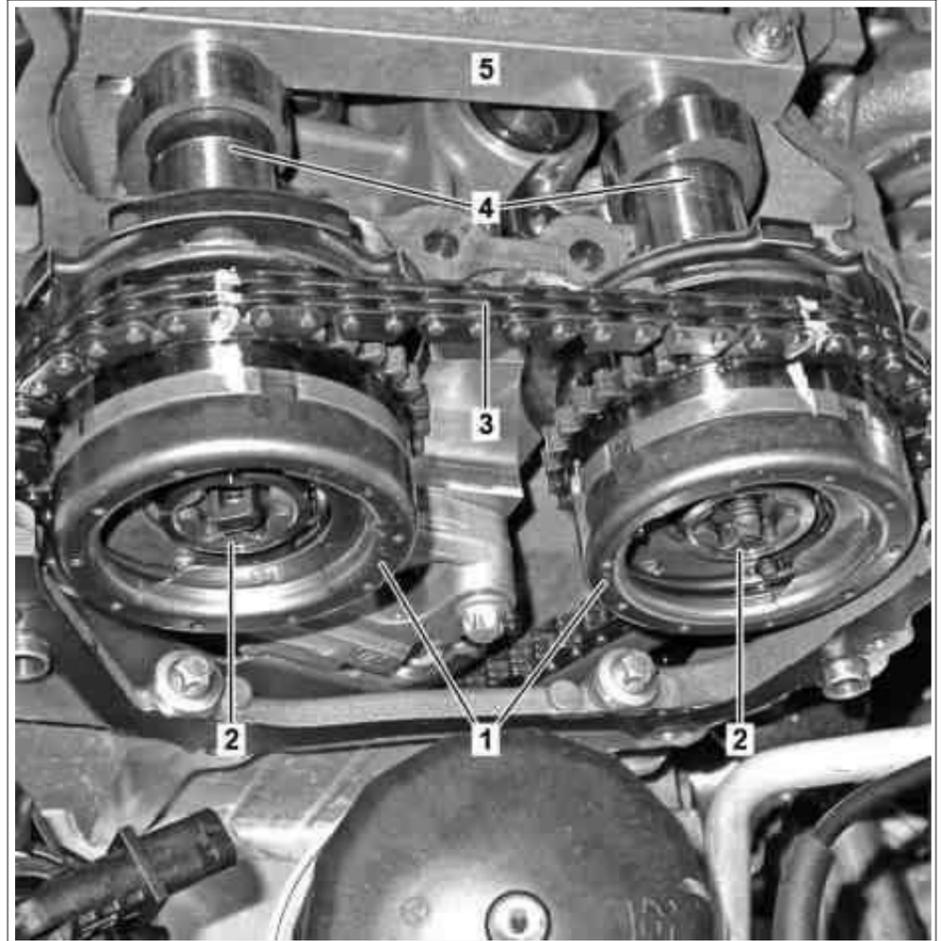
Document title Remove/install camshaft adjusters

Document number ar0520p7201els

Engine 276.8 in model 207, 212, 218

Shown on left cylinder head

- 1 Camshaft positioner
- 2 Control valve
- 3 Timing chain
- 4 Camshafts
- 5 Hold-down tool



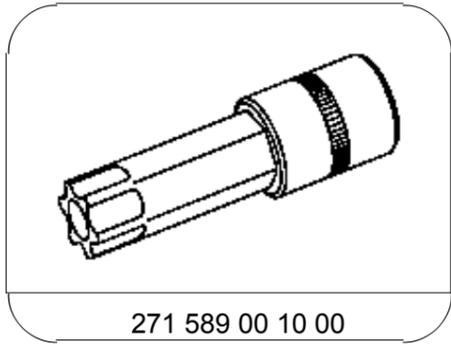
P05.20-2396-12

☒ ☒	Remove/install		
1	Unfasten charge air cooler and press to the front with attached coolant lines		AR09.41-P-6819ELS
2	Rotate engine at crankshaft center bolt in direction of engine rotation to a 40° crank angle (CA) after top dead center (TDC) on cylinder 1 (ignition TDC)		AR05.10-P-7620-04MM
3	Remove right or left cylinder head cover	Left cylinder head cover Right cylinder head cover	AR01.20-P-5013ELS AR01.20-P-5012ELS
4	Mount hold-down tool (5) on camshafts (4)	☒ Tie-down set	*276589014000
5	Remove right or left chain tensioner	MODEL 207 MODEL 212, 218	AR05.10-P-7800FH AR05.10-P-7800EL
6	Loosen control valve (2) and remove	<p>☒ i To loosen and tighten control valve (2) the camshafts (4) must be counterheld at their rear ends by a helper using a Torx T 60.</p> <p>☒ i Installation: The thread and bolt head contact surface of the control valve (2) must be oiled. The control valve (2) must be tightened down evenly without discontinuity with torque.</p> <p>☒ Nm Center valve, pulse wheel/camshaft adjuster to camshaft</p> <p>☒ ☒ Socket</p>	*BA05.20-P-1009-02A *271589001000
7	Remove camshaft positioner (1) from camshaft (4)	<p>☒ i Installation: The camshaft positioners (1) must not be mixed up with each other.</p> <p>☒ i Installation: Check basic position of camshafts (4) and adjust if necessary. Set the basic position of camshaft (4).</p> <p style="text-align: center;">↓</p> <p>MODEL 207 MODEL 212, 218</p>	AR05.20-P-6020FHA AR05.20-P-6020EL
8	Remove timing chain (3) from camshaft positioners (1)	☒ i Installation: The right hand timing chain (3) is placed first on the camshaft positioner (1) for the intake camshaft and then on the camshaft positioner (1) for the exhaust camshaft. The left hand timing chain (3) is placed first on the camshaft positioner (1) for the exhaust camshaft and then on the camshaft positioner (1) for the intake camshaft.	
9	Install in the reverse order		

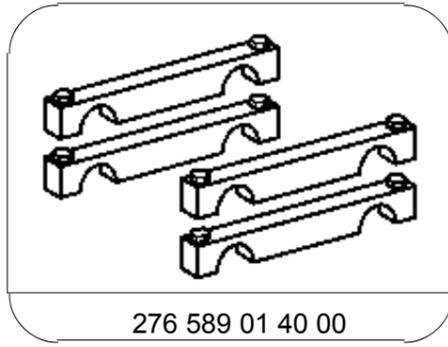
10	<p>Risk of accident from vehicle starting off by itself when engine running. Risk of injury (bruises and burns) resulting from working on the engine while it is being started or when it is running.</p> <p>Perform an engine test run and check engine for functionality</p>	<p>Secure vehicle to prevent it from starting off by itself. Wear closed and snug-fitting work clothes. Do not touch hot or rotating parts.</p>	AS00.00-Z-0005-01A
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Nm Camshaft, camshaft adjustment

Number	Designation	Engine 276						
BA05.20-P-1009-02A	Center valve, pulse wheel/camshaft adjuster to camshaft	<table border="1"> <tr> <td data-bbox="1029 507 1409 572">Stage 1</td> <td data-bbox="1312 507 1409 572">Nm</td> <td data-bbox="1409 507 1680 572">130</td> </tr> <tr> <td data-bbox="1029 572 1409 620">Stage 2</td> <td data-bbox="1312 572 1409 620">4°</td> <td data-bbox="1409 572 1680 620">-</td> </tr> </table>	Stage 1	Nm	130	Stage 2	4°	-
Stage 1	Nm	130						
Stage 2	4°	-						



Socket



Tie-down set