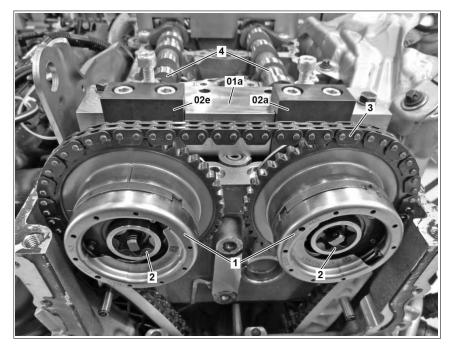
Engine	274.9 in model 213
Engine	274.9 in model 238

Hold-down tool
Holding device
Holding device
Camshaft positioner
Control valves
Timing chain
Camshafts



P05.20-2362-06

A 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	
Topical note	Notes on avoiding damage through contamination and foreign objects		AH00.00-P-5000-01A	
Topical note	Notes on threaded connections fastened using a tightening angle-based tightening process		AH00.00-P-0020-01A	
XX	Remove/install			
1	Remove engine air intake duct upstream of air filter			
2	Rotate engine at crankshaft center bolt in direction of engine rotation to top dead center (TDC) on cylinder 1	The TDC marking on belt pulley/ vibration damper must be aligned with positioning edge on timing case cover. Socket wrench bit	*001589650900	
3	Bemove evlinder head eaver	Socket wrench bit	AR01.20-P-5014MRD	
3	Remove cylinder head cover	i Installation: Only install upper engine cover after the leak test.	AR01.20-P-5014MRD	
4	Mount hold-down tool (01a) for camshafts (4) with holding devices (02a, 02e) for the camshafts (4)	I Holding device	*270589016100	
5	Remove the chain tensioner		AR05.10-P-7800MRD	
6	Unfasten control valve (2) for the respective camshaft positioner (1) and remove			
i ₩ BB	Specified engine oils (service) - Overview	i Installation: Wet thread and the bolt head contact surface of the control valve (2) with engine oil. Tighten control valve (2) evenly without discontinuity using the specified torque. Mm Center valve, pulse wheel/camshaft	BB00.40-P-0223-02A *BA05.20-P-1002-02K	
		adjuster to camshaft Socket	*271589001000	
			*270589001000	
		S Holding device	210009010100	

7	Remove camshaft positioners (1) from camshafts (4)	1 The timing chain (3) must be laid on or taken off for assembly or disassembly of the camshaft positioner (1).	
8	Install in the reverse order		
4	Check		
9	Rotate engine at center bolt of crankshaft in direction of engine rotation twice and place piston for cylinder 1 at top dead center (ignition TDC)	Socket wrench bit	*001589650900
10	Check basic position of camshafts (4)	If the basic position is not correct ↓ Adjust basic position of camshafts (4).	AR05.20-P-6010MRD
A 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 buttoned-up and snug-fitting work clothes. Do not touch hot or rotating parts.	
11	Carry out an engine test run, checking the engine for leaktightness and proper operation		
12	Install upper engine cover		

Nm Camshaft, camshaft adjustment

Number	Designation			Engine 274
BA05.20-P-1002-02K	Center valve, pulse wheel/camshaft adjuster to Stage 1 camshaft		Nm	18
		Stage 2	۲°	45

