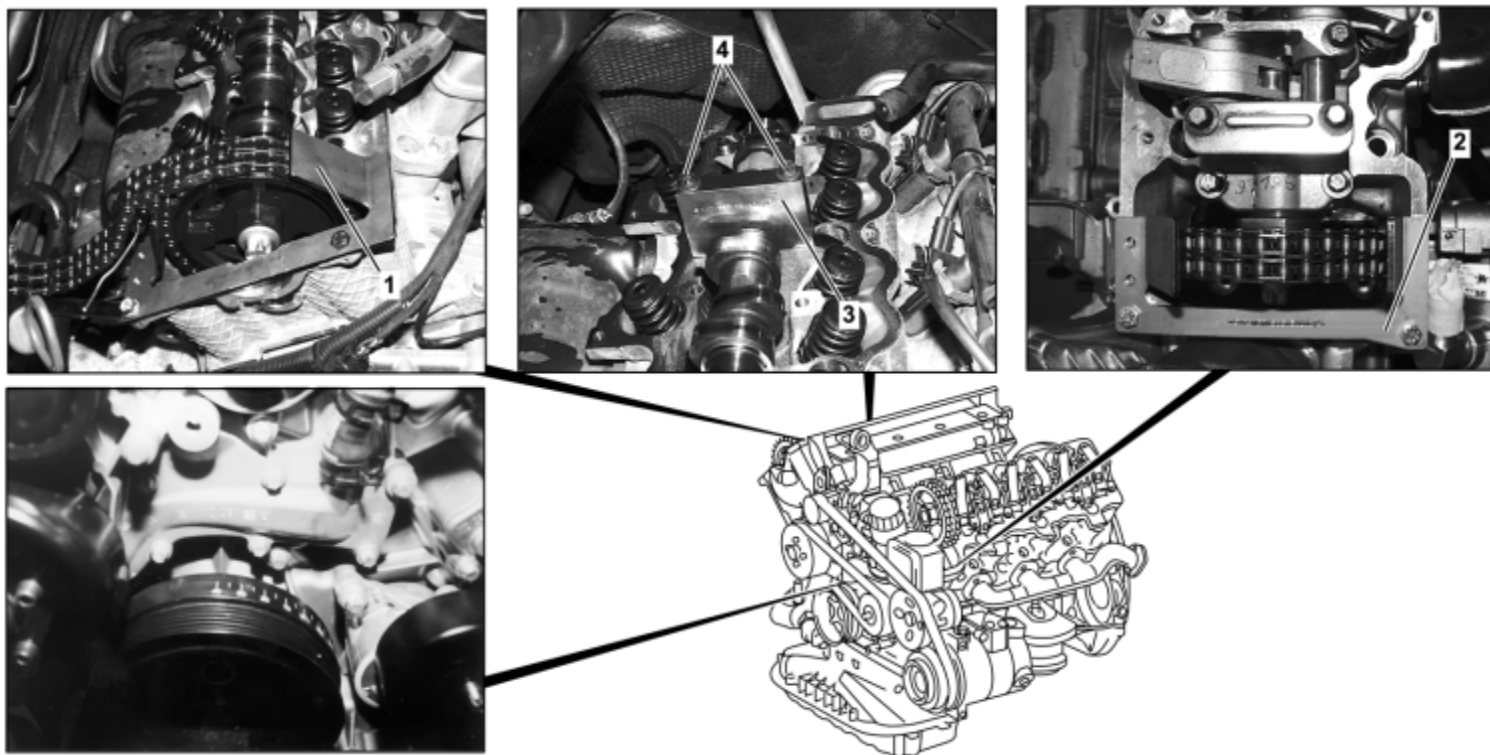


AR05.10-P-7601AV	Replace timing chain	20.10.98
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ENGINE 112, 113





















P05.10-2035-09








1 Retainer for timing chain (right)
2 Retainer for timing chain (left)

3 Locking bush for camshaft (right)
4 Torx screws

☒	Remove		
⚠ Danger!	Risk of explosion from explosive gas. Risk of poisoning and caustic burns	No fire, sparks, open flames or smoking. Wear protective gloves, acid-	AS54.10-Z-0001-01A

	from swallowing battery electrolyte. Risk of injury through burns to skin and eyes from battery acid or when handling damaged lead-acid batteries	resistant clothing and safety glasses. Pour battery electrolyte only into suitable and appropriately marked containers.	
	Notes on battery	All models.	AH54.10-P-0001-01A
1	Disconnect ground cable	Model 163	AR54.10-P-0003A
2	Remove spark plugs	 To ensure that the engine can be easily cranked when drawing in the timing chain, and to avoid the timing chain jumping across.	
		 Remove only one spark plug at each cylinder.	
	Replace spark plugs	Model 163	AP15.10-P-1580GH
3	Remove cylinder head covers	Air cleaner mounted on vehicle.	AR01.20-P-5014B
		Air cleaner positioned at engine side.	AR01.20-P-5014BV
4	Remove viscous fan	 Right-hand thread!	AR20.40-P-5660C
5	Remove fan shroud	 On model 163 unscrew bolts at bottom of fan shroud.	
6	Position engine to 40° after TDC of first cylinder.	 Engine must not be cranked back. The notches of the camshafts must point toward the inner V. It must be possible to easily insert the two locking plates. If this is not possible: ↓	
		Set the basic position of camshafts	AR05.20-P-6020AU
		 The copper tabs of the timing chain must be aligned with the markings on the camshaft sprockets. Because of the unevenly long travel of the timing chain it may be necessary to crank the engine as much as 14 times until the copper tabs are aligned with	

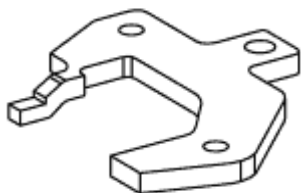
		the markings on the camshaft sprockets. On vehicles equipped with an air pump, the combination valve must be unbolted before the right locking plate is inserted.	
		Installation: Replace Gasket of combination valve.	
		 Nm	BA09.20-P-1001-01D
		 Locating plate	112 589 00 32 00
		 Locating plate	112 589 01 32 00
 GF	Timing chain drive - general		GF05.10-P-9611-01C
7	Remove chain tensioner		AR05.10-P-7800C
8	Remove camshaft position sensor		AR15.10-P-2000A
9	Crank engine in direction of rotation until the link for separating the timing chain is easily accessible	 Timing chain is separated one chain link next to the copper plate (on right). See new timing chain.	
10	Remove camshaft bearing bridge on right	Engine 112, 113.	AR05.20-P-7103AU
11	Install holding bush (3) onto camshaft on right	 Screw in bolts (4) only until they touch.	
			112 589 05 40 00
12	Attach retaining devices (1, 2) for timing chain to right and left cylinder head		112 589 04 40 00
13	Separate timing chain	 Parts which have dropped into the timing case recess, must be removed. Cover over timing case recess with a clean cloth.	AR05.10-P-7601-01AV
		 Connect old timing chain to new timing chain before pulling out.	

	Install		
14	Draw in new timing chain	 To draw in the new timing chain, crank engine in direction of rotation at the crankshaft.	AR05.10-P-7601-04AV
15	Remove retaining devices (1, 2) for timing chain at right and left cylinder head		112 589 04 40 00
16	Rivet new timing chain		AR05.10-P-7601-02AV
17	Crank engine in direction of rotation		
18	Check timing of engine		AR05.10-P-6858V
19	Take off holding bush (3) on right camshaft		112 589 05 40 00
20	Install camshaft bearing bridge on right	Engine 112, 113	AR05.20-P-7103AU
21	Install camshaft position sensor		AR15.10-P-2000A
22	Installing chain tensioner		AR05.10-P-7800C
23	Install fan shroud		
24	Install viscous-drive fan	 Right-hand thread!	AR20.40-P-5660C
25	Install cylinder head covers	Air cleaner mounted on vehicle.	AR01.20-P-5014B
		Air cleaner positioned at engine side.	AR01.20-P-5014BV
26	Install spark plugs		
 AP	Replace spark plugs	Model 163	AP15.10-P-1580GH
27	Connect ground cable	Model 129, 208, 210	AR54.10-P-0003A
 Danger!	Risk of accident. Accidents may result if the vehicle starts off unintentionally with the engine running. Risk of injury. Crushing and burn injuries may result while working on engine during when it is being started or when it is in operation.	Secure vehicle to prevent it from moving. Wear closed and snug-fitting work clothes. Do not grasp hot or rotating parts.	AS00.00-Z-0005-01A

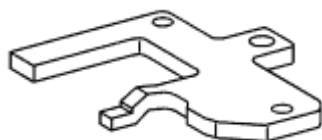
28	Run engine and inspect for leaks	
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Nm Intake manifold

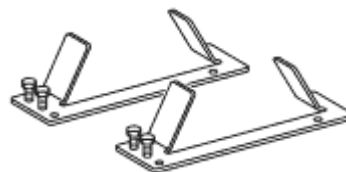
Number	Designation			Engines 112.942/970	Engines 113.942/965/981
BA09.20-P-1001-01D	Bolt of intake manifold on cylinder head	M8	Nm	20	20



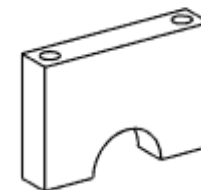
112 589 00 32 00
Locating plate



112 589 01 32 00
Locating plate



112 589 04 40 00
Holding device



112 589 05 40 00
Holding bush