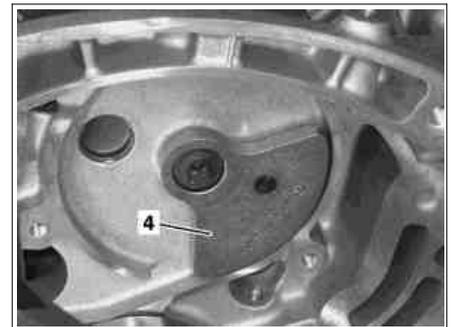


P03.30-2143-09

- 1 Cylinder head cover
- 2 Camshaft adjuster
- 3 Slide rail pins
- 4 Correctional weight

- 5 Balance shaft
- 6 Notch
- 7 Marking

- 8 Key
- 9 Marking



P03.20-2156-01

	Remove/install		
⚠ Danger!	Risk of death caused by vehicle slipping or toppling off of the lifting platform.	Align vehicle between columns of vehicle lift and position four support plates at vehicle lift support points specified by vehicle manufacturer.	AS00.00-Z-0010-01A
1	Unfasten center bolt on crankshaft vibration damper		AR03.30-P-1600QB
2	Unscrew torque converter from driver	Transmission 722.9 Nm Nm ⊗ ⊗	AR27.20-P-0100-01A *BA27.20-P-1001-01C *BA27.20-P-1002-01C *001589650900 *115589035900
3	Remove engine	Except model 203.08/ 09/ 28/ 29 Model 203.08 /09 /28 /29	AR01.10-P-2401QB AR01.10-P-2401QD
4	Detach transmission from engine	Transmission 722.9 Transmission 722.6 in model 203.08/ 09/ 28/ 29 Transmission 716.6	AR27.10-P-0500P AR27.10-P-0500PW AR26.10-P-0020P
5	Mount engine onto assembly stand		
6	Remove oil pan	Except model 203.08/ 09/ 28/ 29 Model 203.08 /09 /28 /29	AR01.45-P-7500QB AR01.45-P-7500QD
7	Remove flywheel/drive plate		AR03.30-P-8001QB

8	Remove end cover with crankshaft radial sealing ring	i Installation: Replace end cover with crankshaft radial sealing ring.	AR03.20-P-3063QB
9	Turn engine at crankshaft in direction of engine rotation to a 40° crank angle after ignition TDC.		
10	Remove timing case cover	! Do not damage cylinder head gaskets.	AR01.40-P-8000QB
11	Check basic position of camshafts		AR05.20-P-6010-01VB
12	Mark timing chain relative to camshaft adjusters as well as the balance shaft wheel and mark crankshaft using color coding	i Installation: Check position of timing chain using the color coding. i When replacing balance shaft transfer color coding to the new part.	
13	Pull tensioning rail bolts out of right cylinder head and remove tensioning rail downwards	 	AR01.30-P-5800-04V *116589203300 *116589013400
14	Pull out slide rail pins (3) from right cylinder head	 	AR01.30-P-5800-04V *116589203300 *116589013400
15	Remove camshaft adjuster (2) of right cylinder bank	i No removal of cylinder head cover for a removed tensioning rail.	AR05.20-P-7201QC
16	Detach balance weight (4) at the rear of engine from the balance shaft (5)	i Fix correctional weight (4) to the cylinder crankcase using a pin or punch. i Installation: The balance weight (4) has an anti-twist lock and only fits onto the balance shaft (5) in one position only. Nm	*BA03.20-P-1002-02A
17	Press timing chain on balance shaft (5) downward and pull balance shaft (5) forwards and out of the crankcase	i Installation: At a 40° crank angle after ignition TDC the fitted pin (8) is aligned with marking (9) on the crankcase and the notch (6) on the front correctional weight must be aligned with marking (7).	
18	Install in the reverse order		
! Danger!	Risk of accident caused by vehicle starting off by itself when engine is running. Risk of injury caused by contusions and burns during starting procedure or when working near the engine as it is running	Secure vehicle to prevent it from moving by itself. Wear closed and snug-fitting work clothes. Do not touch hot or rotating parts.	AS00.00-Z-0005-01A
19	Check for oil leaks with engine running		

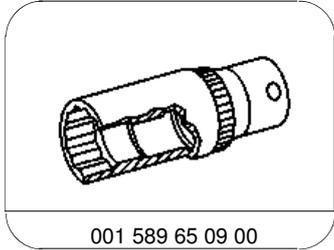
Nm Torque converter

Number	Designation	Trans- mission 722.9
BA27.20-P-1001-01C	Oil drain bolt to torque converter	M8 Nm 10
		M10 Nm 15
BA27.20-P-1002-01C	Bolt, torque converter to drive plate	Straight threaded connection M8 Nm 42
		Angled threaded connection Stage 1 Nm 4
		Stage 2 Nm 30
		Stage 3 ∠° 90

Nm Balance shaft

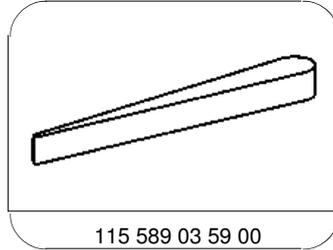
Number	Designation	Engine 272

BA03.20-P-1002-02A	Bolt, correctional weight to balance shaft	Stage 1	Nm	15
		Stage 2	∠°	90
		Length	mm	-



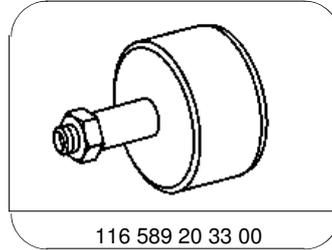
001 589 65 09 00

Wrench socket



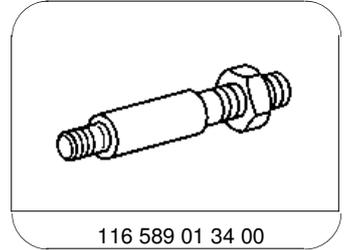
115 589 03 59 00

Long wedge



116 589 20 33 00

Impact extractor



116 589 01 34 00

Threaded stud