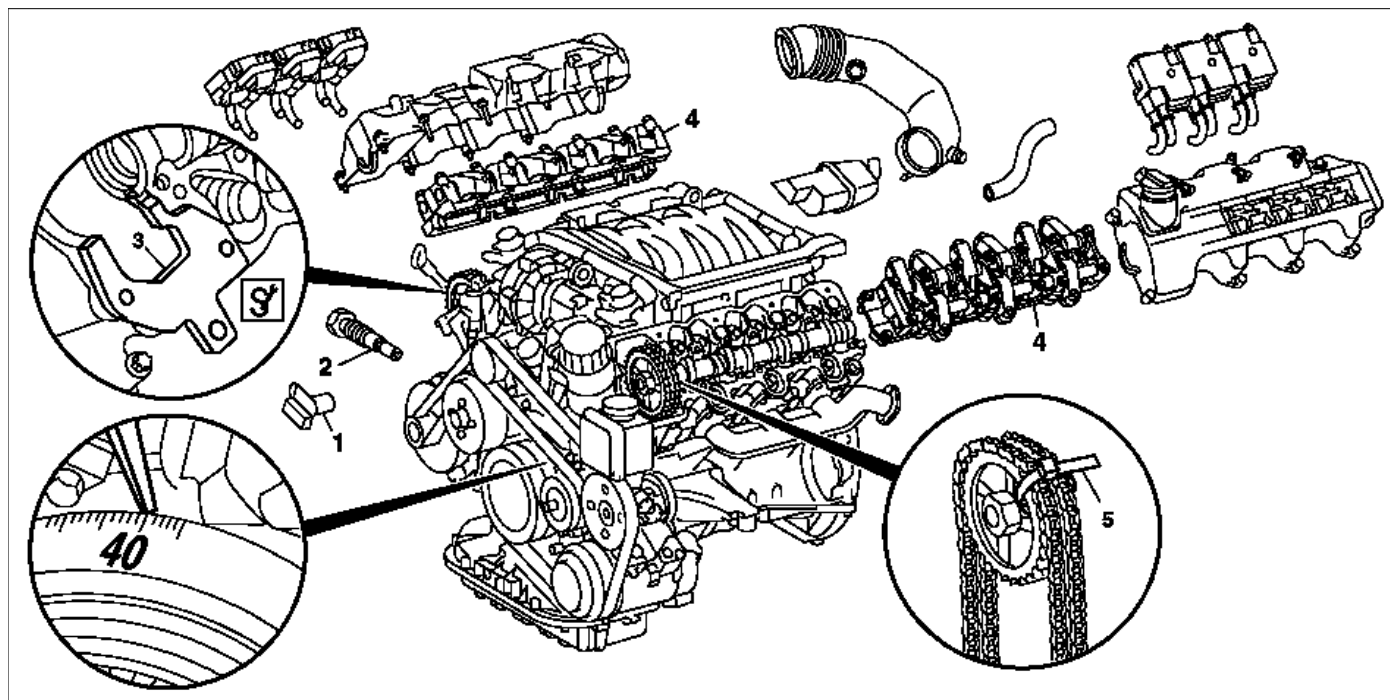


ENGINE 112
ENGINE 112.945 in MODEL 463.209 /232 /233 /244 /245 /250
ENGINE 113.962 in MODEL 463.206 /240 /241 /247 /248 /249 /254
ENGINE 113.982 in MODEL 463.243 /246
ENGINE 113 in MODEL 129, 163, 202, 203, 208, 209, 210, 211, 215, 220, 230



P05.20-0303-09

Shown on engine 112

- 1 Camshaft Hall sensor
- 2 Chain tensioner

- 3 Right-hand camshaft locating plate 40° after first ignition TDC
- 4 Camshaft bearing bridge
- 5 Cable tie

Modification notes

18.6.97	M112: Procedure modified, new special tool.	Step 1-14	*112589010300
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		Removing	
1		Remove cylinder head covers	Air filter mounted on vehicle Air filter mounted on engine AR01.20-P-5014B AR01.20-P-5014BV
2		Position piston of cylinder 1 at 40° after TDC	i Rotate engine at crankshaft in direction of rotation until 40° marking on belt pulley/ vibration damper is aligned with marking on timing case cover. The grooves on the camshafts must be pointing toward the inner V. i Engine must not be rotated backwards. AR05.10-P-6858V
3		Remove chain tensioner (2)	Model 129, 463 Model 163 except 163.174 /175 Model 202, 208, 210 with engine 113 Model 170, 202, 203, 208, 209, 210 with engine 112 Model 163.174/ 175 Model 209.375 /475 Model 209.376 /476 up to 23.4.04 Model 203 with engine 113 Model 209.376/ 476 as of 24.4.04 Model 211.0 with engine 112, 113 Model 211.276 Model 215 Model 220, 230 with engine 112, 113 Model 211.2 except 211.276 with engine 112, 113 Model 171 with engine 113 AR05.10-P-7800C AR05.10-P-7800CA AR05.10-P-7800AC AR05.10-P-7800AM

		Model 211.2 except 211.276 with engine 112, 113 Model 171 with engine 113	
14	Check engine valve timing		AR05.10-P-6858V
15	Install cylinder head covers	Air filter mounted on vehicle Air filter mounted on engine	AR01.20-P-5014B AR01.20-P-5014BV

Camshaft

Number	Designation			Engine 112 except 112.951/976	Engine 112.951/ 976
BA05.20-P-1001-01B	Bolt, camshaft sprocket	M12×45	Stage 1	Nm	50
			Stage 2	⌵°	90

Camshaft

Number	Designation			Engine 113.940/941/ 942/943/944/ 948/961/962/ 963/964/965/ 966/967/968/ 969/971/980/ 981/982/984/ 986/992/995
BA05.20-P-1001-01B	Bolt, camshaft sprocket	M12×45	Stage 1	Nm
			Stage 2	⌵°

Camshaft

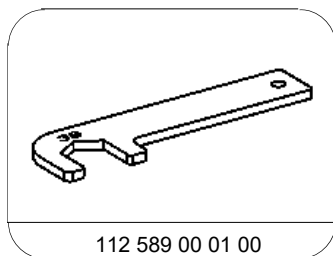
Number	Designation			Engine 113.960 without code 479	Engine 113.960 with code 479
BA05.20-P-1001-01B	Bolt, camshaft sprocket	M12×45	Stage 1	Nm	50
			Stage 2	⌵°	90

Camshaft

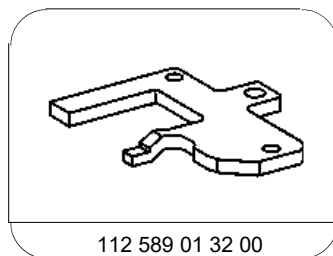
Number	Designation			Engine 113.987/988/ 990/993	Engine 113.991
BA05.20-P-1001-01B	Bolt, camshaft sprocket	M12×45	Stage 1	Nm	50
			Stage 2	⌵°	90

Nm Position sensor

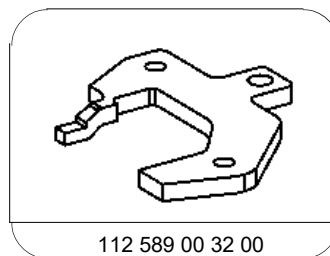
Number	Designation		Engine 112.910/911/ 912/913/914/ 915/916/917/ 920/921/922/ 923/940/941/ 942/943/944/ 945/946/947/ 949/951/953/ 954/955/960/ 961/970/972/ 973/975/976	Engine 113.940/941/ 942/943/944/ 948/960/961/ 962/963/964/ 965/966/967/ 968/969/971/ 980/981/982/ 984/986/992/ 993/995	Engine 113.987/ 988/990/ 991
BA15.10-P-1002-03A	Camshaft Hall sensor to cylinder head	Nm	8	8	8



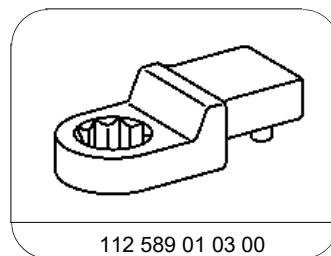
Open end wrench



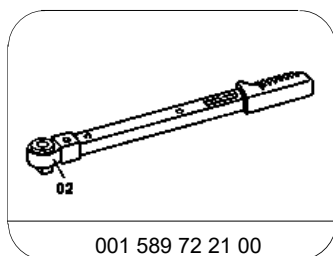
Locating plate



Locating plate



Insertion tool



Torque wrench