

05—240 Renewal of rocker arms and rocker arm bearing brackets

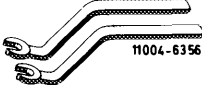
Valve clearance	with engine cold (approx. 20 °C)	with engine warm (60 °C ± 15 °C)
Intake	0.10 ¹⁾	0.15 ¹⁾
Exhaust	0.35	0.40

¹⁾ 0.05 mm higher during lasting outside temperatures below –20 °C.

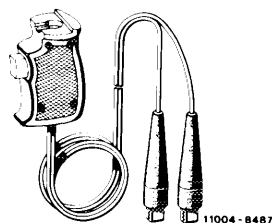
Rocker arms, rocker arm brackets and shaft

Basic bore in rocker arm		14.00 14.02
OD of bushing	(open bushing) ≈	14.03 14.05
	(open bushing)	—
ID of bushing	final dimension	12.00 12.02
Dia. of rocker arm shaft		11.98 11.96
Radial play of rocker arm on shaft		0.02–0.06
Bore in rocker arm bearing bracket		11.98 12.00
Width of rocker arm bearing brackets		24.07–24.20
Tightening torques		Nm
Nuts for cylinder head cover		15
Rocker arm bearing brackets to cylinder head		38

Special tools

Valve adjusting wrench 14 mm (2 each)	 11004-6356	615 589 00 01 00
Holding wrench for valve spring retainer	 11004-7118	615 589 00 03 00
Socket 27 mm, 1/2" square, for rotating engine	 11004-6193	001 589 65 09 00

Contact handle for rotating engine
(component of compression pressure
recorder 001 589 46 21 00)



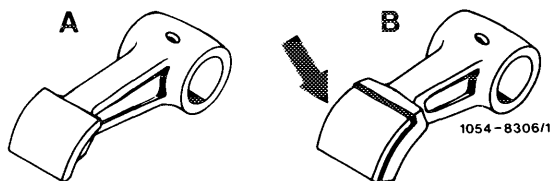
001 589 46 21 08

Note

There are two rocker arm versions:

1st version

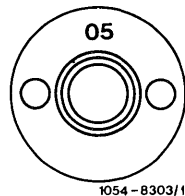
Rocker arm with inductance-hardened and hard-chromed running surface (A) for camshaft made of malleable cast iron (code number 00).



2nd version

Rocker arm with brazed-on carbide facing as running surface (B, arrow), for camshafts made of chilled cast iron (code number 05 and 08).

Code number is punched into rear end of camshaft.



Attention!

Do not mix up rocker arms, since this will lead to destruction of cam and of rocker arm running surface.

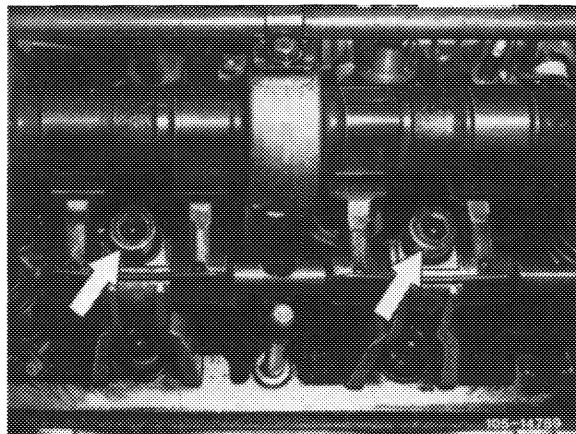
During renewal, make sure whether rocker arm has a bushing or not.

Rocker arms without bushing should be scrapped.

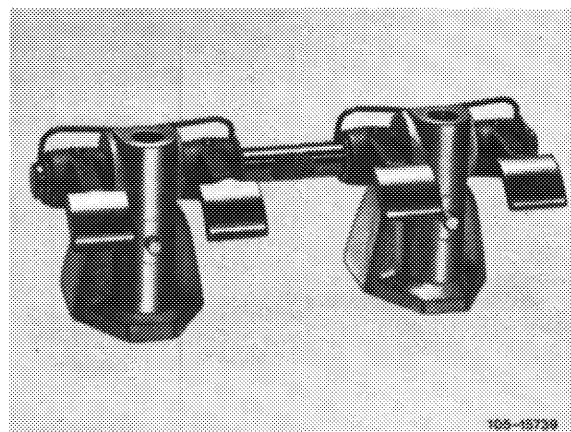
On rocker arms with bushings, bushing can be renewed.

Removal

- 1 Completely remove rocker arm groups (05–235).

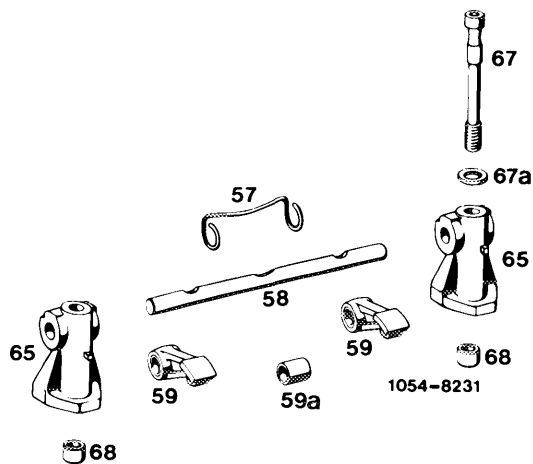


- 2 Push down tensioning springs of rocker arm brackets.



- 3 Pull tensioning spring (57), bearing brackets (65) and rocker arm (59) from rocker arm shaft (58).

- 57 Tensioning spring
- 58 Rocker arm shaft
- 59 Rocker arm
- 59a Rocker arm bearing bushing
- 65 Bearing bracket
- 67 Screw
- 67a Washer
- 68 Fitted sleeve



Installation

- 4 Slip tensioning spring (57), rocker arm (59) and bearing brackets (65) on rocker arm shaft (58).
- 5 Slip tensioning spring with second eye on rocker arm shaft and push into groove of bearing brackets.
- 6 Completely install rocker arm groups (05–235).
- 7 Adjust valve clearance (05–210).

