

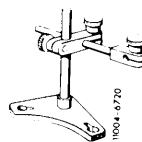
05–225 Grinding camshaft bearing journals

Data

Mean roughness of camshaft bearing journal		0.005					
Deviation of camshaft bearing journal from true when mounted at camshaft sprocket seat and rear camshaft bearing journal		0.030					
Deviation of camshaft bearing journal from true		0.010					
Bearing points (fig., refer to note)		1, 9	2	3, 10, 11	4,5,12,13	6,7,14,15	8
Standard dimension	bearing dia.	<u>38.016</u> 38.000	<u>50.066</u> 50.050	<u>50.016</u> 50.000	<u>51.519</u> 51.500	<u>53.019</u> 53.000	<u>54.019</u> 54.000
	journal dia.	<u>23.993</u> 23.980	<u>49.950</u> 49.934	<u>49.950</u> 49.934	<u>51.440</u> 51.421	<u>52.940</u> 52.921	<u>53.940</u> 53.921
Intermediate stage –0.1 mm (exchange engines)	bearing dia.		<u>49.966</u> 49.950	<u>49.916</u> 49.900	<u>51.419</u> 51.400	<u>52.919</u> 52.900	<u>53.919</u> 53.900
	journal dia.		<u>49.850</u> 49.834	<u>49.850</u> 49.834	<u>51.340</u> 51.321	<u>52.840</u> 52.821	<u>53.840</u> 53.821
1st repair stage –0.25 mm	bearing dia.		<u>49.816</u> 49.800	<u>49.765</u> 49.750	<u>51.269</u> 51.250	<u>52.769</u> 52.750	<u>53.769</u> 53.750
	journal dia.		<u>49.700</u> 49.684	<u>49.700</u> 49.684	<u>51.190</u> 51.171	<u>52.690</u> 52.671	<u>53.690</u> 53.671
2nd repair stage –0.5 mm	bearing dia.		<u>49.566</u> 49.550	<u>49.516</u> 49.500	<u>51.019</u> 51.000	<u>52.519</u> 52.500	<u>53.519</u> 53.500
	journal dia.		<u>49.450</u> 49.434	<u>49.450</u> 49.434	<u>50.940</u> 50.921	<u>52.440</u> 52.421	<u>53.440</u> 53.421
Camshaft bearing play	radial	<u>0.057</u> 0.124	<u>0.100</u> 0.132	<u>0.050</u> 0.082	<u>0.060</u> 0.098	<u>0.060</u> 0.098	<u>0.060</u> 0.098
	axial	<u>0.050</u> 0.120					
Sleeve for bearing a	OD	<u>37.950</u> 37.925	ID	<u>24.013</u> 24.000			

Special tool

Dial gauge holder for camshaft axial play

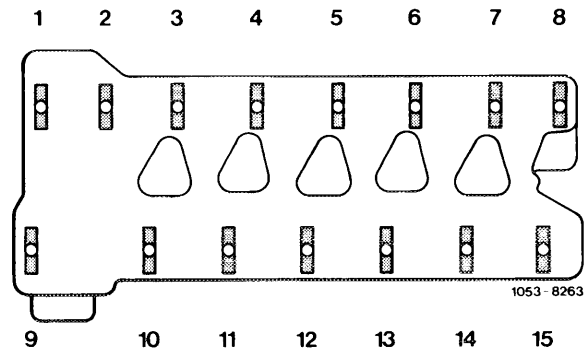


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Note

For camshafts with reground bearing journals, **camshaft housings with repair stages -0.25 mm and -0.50 mm** are available.

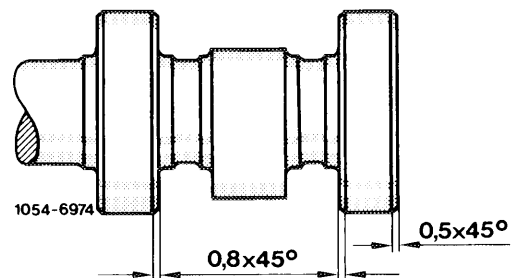
The bearing journals are not hardened.



Some exchange engines are delivered with camshaft bearings in intermediate and repair sizes. This means that a standard camshaft cannot be installed in this camshaft housing, since the bearing journals are larger in diameter than the bearings.

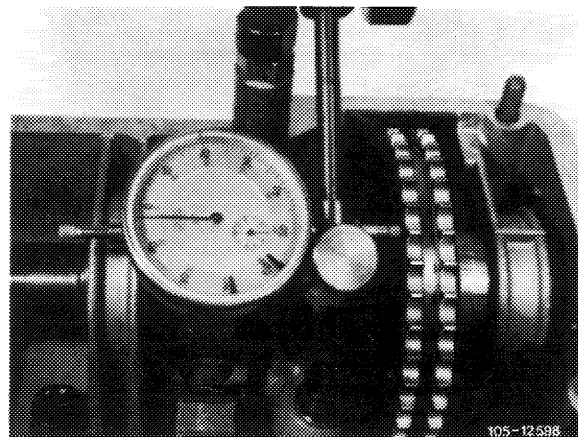
Also refer to coordination camshaft housing and camshafts (01-471).

Chamfer bearing journals after grinding (see sketch for dimensions).



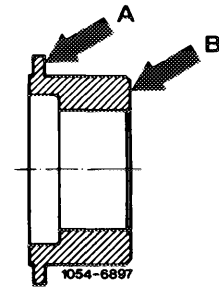
Checking axial play

- 1 Bolt dial gauge holder to camshaft housing.
- 2 Clamp dial gauge with a preload of about 3 mm.
- 3 Press back camshaft and set needle at 0.
- 4 Press camshaft forward and read axial play.

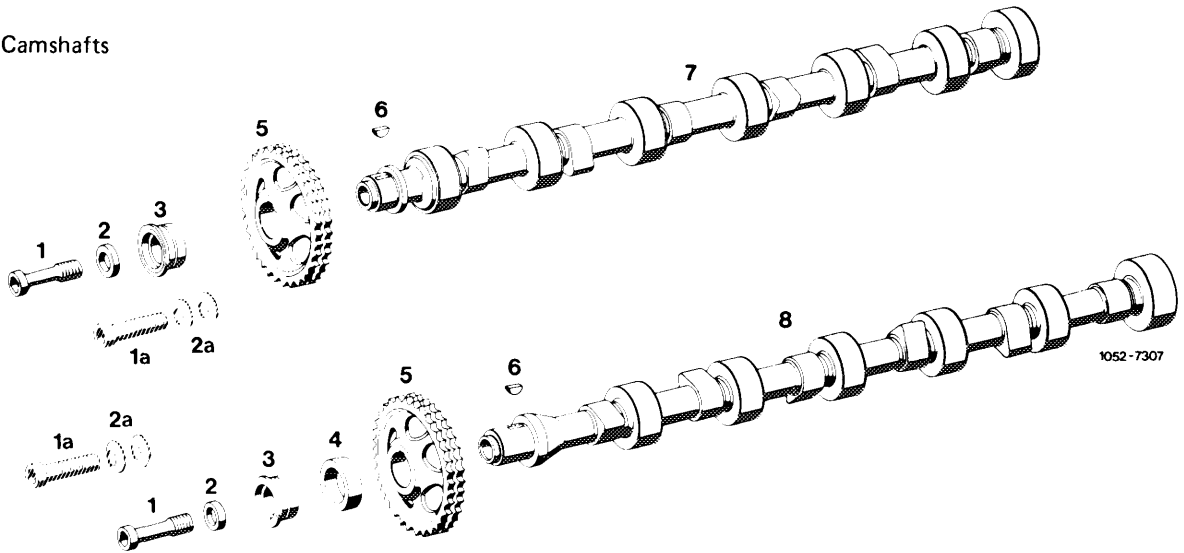


Note: If the end play is too small, grind spacing sleeve or driver at face B as required.

If the axial play is too large, the spacer or dog must be ground at collar A.



Camshafts



- | | | | |
|----|-----------------------------------|---|-------------------------|
| 1 | 2 expansion bolts 2nd version | 4 | Spacer |
| 1a | 2 bolts 1st version (not valid) | 5 | 2 camshaft sprockets |
| 2 | 2 washers 2nd version | 6 | 2 woodruff keys 4 x 6.5 |
| 2a | 4 washers 1st version (not valid) | 7 | Exhaust camshaft |
| 3 | 2 spacers | 8 | Intake camshaft |