

1st Version

Disassembly and reassembly of chain tensioner is the same as for the 1st version of model 190 (refer to Workshop Manual Model 190).

2nd, 3rd and 4th Version

Disassembly:

1. Unscrew cap nut (1) (Fig. 05-5/8).
2. Remove pressure spring (3), pin (5) ball retainer (6), ball (8) and pressure pin (9) from housing (4).
3. Clean all parts thoroughly and check for wear, replace if required. The radial play of the pressure pin (9) in housing (4) is 0.05–0.06 mm.

Reassembly:

4. Place pressure pin (9) into housing (4). Insert ball (8), ball retainer (6) as well as spring (3) with pin (5) into pressure pin (9). Screw-on cap nut (1) with sealing ring (2) and tighten, making sure that pressure spring presses on cap nut.
5. Fill chain tensioner with oil, bleed and test.

G. Repair of Tension Sprocket and Tension Bearing

This procedure for models 180 a, 180 b, 180 c, 190 b, 190 SL, 220 a, 219, 220 S and 220 SE is the same as for model 190. Dimensions and tolerances of the individual parts are also the same.

Model 220 SE has an additional guide sprocket (7) which is supported in cylinder head (Fig. 05-0/9).

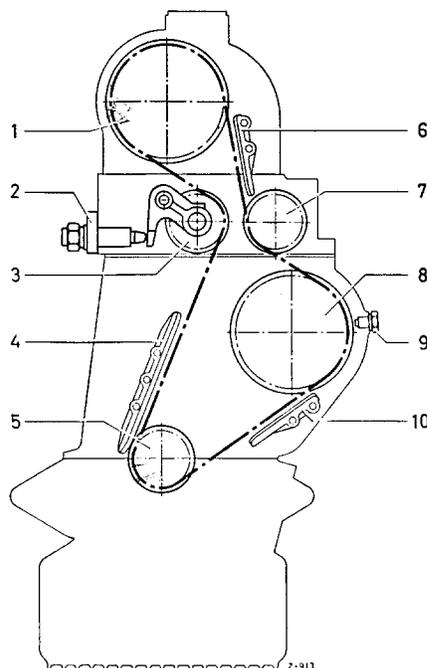


Fig. 05-5/9

Chain Drive for Model 220 SE

- 1 Camshaft timing gear
- 2 Chain tensioner
- 3 Tension sprocket
- 4 Long chain guide
- 5 Crankshaft timing gear
- 6 Short chain guide
- 7 Guide sprocket
- 8 Intermediate wheel
- 9 Lock screw
- 10 Short chain guide

To remove the pivot pin for the guide sprocket screw an M 8 screw into the threaded bore. If two spacer rings (4) are fitted, make sure when pulling the pivot pin out **that the spacer rings do not fall into the crankcase.**

Note: The spacer rings (4) are installed as standard parts only in the engines of Type 127.982 (Model 220 SEb) and Type 127.983 (Model 220 SE Convertible and Coupé with 120 HP).

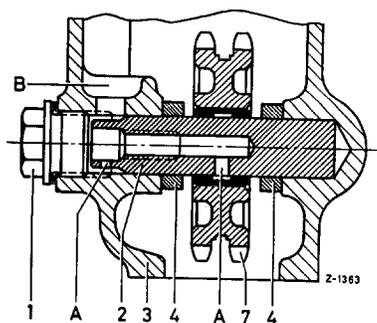


Fig. 05-5/10

- | | |
|-----------------|---|
| 1 Screw plug | 7 Guide sprocket |
| 2 Pivot pin | A Bores for lubrication of guide sprocket |
| 3 Cylinder head | B Oil case with oil bore |
| 4 Spacer ring | |

The following table contains the measurements

necessary for checking the pivot pin and the bore in the guide sprocket.

Guide Sprocket

Model 220 SE

Diameter of pivot pin	Bore in guide sprocket	Radial play
$\frac{15.984}{15.973}$	$\frac{16.000}{16.018}$	0.016—0.045

If the bushing in the guide sprocket is worn, it should be pressed out and a new bushing with a rough-turned bore pressed in.

Before pressing in a new bushing, set up the guide sprocket in the bore and lightly re-finish the teeth at their circumference (permissible eccentricity 0.02 mm). After re-finishing the teeth, press in the new bushing and then again set up the guide sprocket, this time with a chuck adapter gripping the circumference of the teeth and finish-turn the bore of the bushing (16.000 to 16.018 mm).

Maximum run-out of guide sprocket when set up on mandrel, measured at the circumference 0.02 mm.

Maximum eccentricity of guide sprocket, measured at the circumference 0.02 mm.

If the pivot pin shows signs of wear, it must be replaced.

H. Testing of Rocker Arm and Rocker Arm Mounting

For Models 180 a, 180 b, 190 SL, 220 a, 219, 220 S, and 220 SE this procedure as well as the dimensions and tolerances of the individual parts are the same as described for Model 190.

On earlier models the rocker arms were secured by sheet-metal spring clamps, whereas on recent models only spring steel wire clamps were fitted. When repairs are carried out, use only spring steel wire clamps Part No. 180 055 00 93. If the old rocker arm blocks are not being replaced, they must be provided with a notch to secure the spring clamp as shown in Fig. 05-5/11. The notch must correspond exactly to the dimensions given overleaf in order to ensure that the clamp is tensioned sufficiently and engages properly.