

Figure 00-6/16

- 1 Stroke Advance Tester 000 589 68 21
- 2 Measuring pin of stroke advance tester

b) Adjusting the Feed Begin

1. Execute operations according to Point a Paragraph 1 to 3.
2. Set engine to feed begin. The feed begin marking or the respective degree value on the pulley and/or the flywheel must coincide with timing needle.

B. OM 621

I. Checking and adjusting of the feed begin according to the overflow method (spill method) with the engine installed or removed

1. Set the piston of the 1st cylinder to the ignition dead center (see Job No. 00-3, item 3).
2. Check this position on the counterweight at the front of the crankshaft. The adjusting pointer (2) must point approximately to the TDC mark on the counterweight (1) (see Figure 00-6/17).

Note: For checking and adjusting of the feed

3. Loosen injection pump at supporting flange so that it can just be turned.
4. Press stroke advance tester well against the support at the injection pump and turn the injection pump in such a way that the dial gauge indicates a movement of 1.7 ± 0.1 mm.

On the OM 636 turning the injection pump towards the engine causes a retarded feed begin, turning the other way causes advancing.

The injection pump is now also set to feed begin. Secure injection pump in this position.

Note: During the turning of the injection pump disconnect injection lines if necessary.

5. Test adjustment of feed beginning (see Section a) and correct again if necessary (also see Job No. 07-5, Section II, Point c, adjusting stroke advance and checking feed begin).

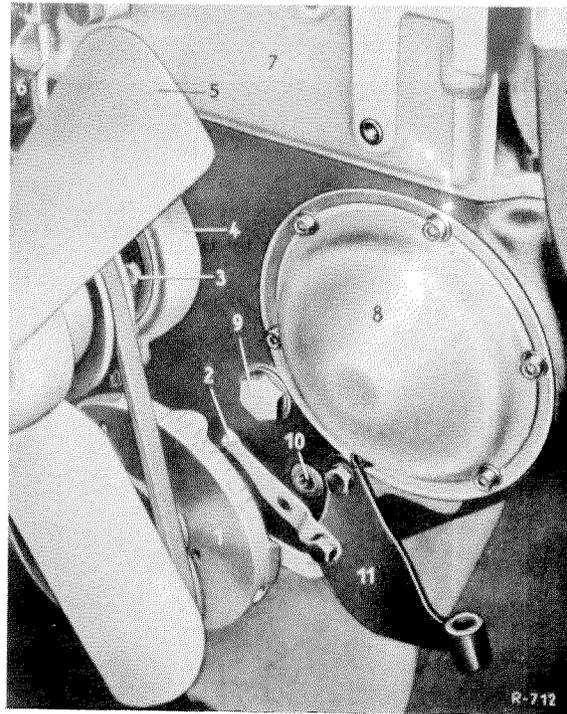
begin and the TDC, the OM 621 engines are provided with an adjusting pointer on the cylinder crankcase and a gradation on the counterweight of the crankshaft (see Figure 00-6/17).

3. Carry out operations as under A, Model OM 636, Section II, items 2-5.
4. Carry out operations as under A, Model OM 636, Section III, items 1-9.

Note: Because better and safer adjusting values are obtained by the overflow method than by the capillary tube method, (which has been described on page 21 of the 'Introduction to Models 190 D and 220 SE for Service and Maintenance'), we ask you to use principally the overflow method in future.

Figure 00-6/17

- | | |
|---------------------|---|
| 1 counterweight | 8 cover for injection timing device |
| 2 adjusting pointer | 9 screw plug for oil pressure relief valve |
| 3 hex. hd. screw | 10 screw plug with pivot pin for guide rail |
| 4 water pump | 11 engine support |
| 5 fan | |
| 6 bleeder line | |
| 7 cylinder head | |



II. Checking and adjusting of the feed begin with the stroke advance tester

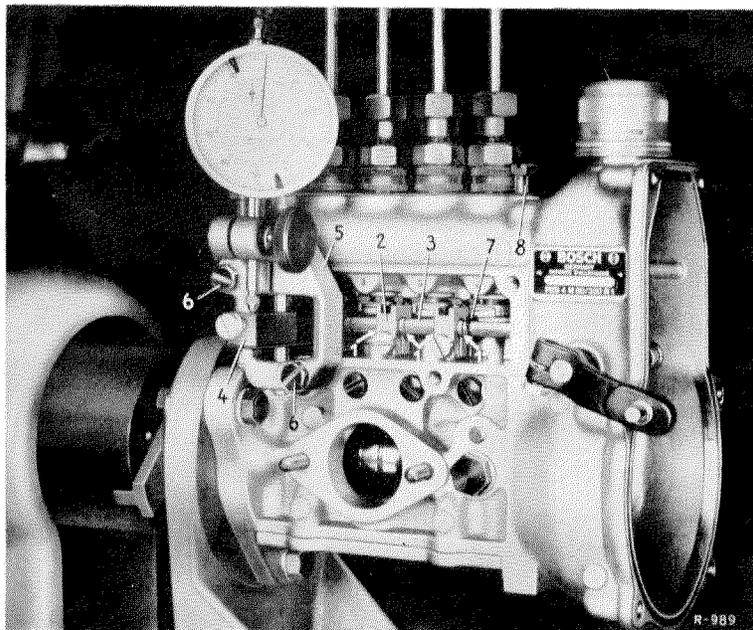
a) Checking of the feed begin

1. Remove the cover for the tappet chamber of the injection pump.
2. Turn the engine in direction of rotation until the tappet of the 1st pump cylinder is in BDC.
3. Fit and screw the advance stroke tester (5) to the injection pump in such a way that the measuring pin (4) of the advance

stroke tester properly sits on the tappet sleeve (7) of the 1st pump cylinder, however, does not graze on the tappet spring (6) (see Figures 00-6/18 and 00-6/19). The dial gauge must then have a pre-tension of approx. 0.5 mm. Turn the graduated ring on the dial gauge until the pointer points to zero.

Figure 00-6/18

- | |
|---|
| 1 marks |
| 2 clamping pieces with guide groove and clamping screw or fill. hd. screw |
| 3 control rod |
| 4 feeler of the advance stroke tester |
| 5 advance stroke tester EFEP 303 part No. 000 589 85 21 |
| 6 hex. hd. screws |
| 7 locking ring |
| 8 bleeder screw |



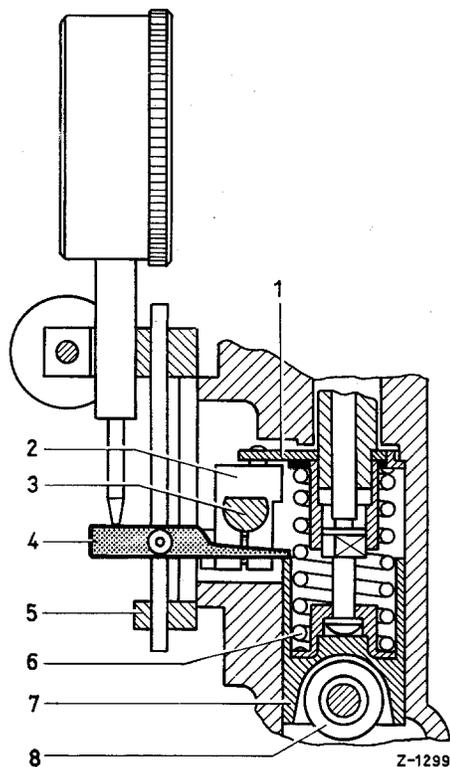


Figure 00-6/19

- 1 control arm with pin and control sleeve
- 2 clamping piece with guide groove
- 3 control rod
- 4 feeler of the advance stroke tester
- 5 advance stroke tester EFEP 303 part No. 000 589 85 21
- 6 tappet spring
- 7 tappet sleeve
- 8 tappet roller

4. Slowly turn engine in direction of rotation until the dial gauge shows $1.7 + 0.1$ mm.

Note: With the advance stroke tester mounted, it is not possible to go on turning until TDC, because the feeler (4) of the advance stroke tester touches the control rod (3) (see Figure 00-6/19).

5. In this position of the injection pump, the respective degree value (26 deg) on the counterweight (1) must coincide with the adjusting pointer (2) (see Figure 00-6/17).

If necessary, correct adjustment (see paragraph b).

b) Adjustment of feed begin:

1. Carry out operations acc. to section a) items 1 to 3.
2. Set the engine to feed begin by slowly turning in direction of rotation, i.e., until the respective degree value (26 deg) on the counterweight (1) corresponds with the adjusting pointer (2) (see Figure 00-6/17).

Note: With the advance stroke tester mounted it is not possible to go on turning until TDC, because the feeler (4) of the advance stroke tester touches then the control rod (3) (see Figure 00-6/19).

3. Loosen injection pump on mounting flange so that it can just be turned.
4. Then turn the injection pump so that dial gauge shows $1.7 + 0.1$ mm.

In the case of the OM 621 turning of the injection pump towards the engine results in an advanced feed begin, turning from the engine results in a retarded feed begin.

Now, the injection pump is also set to feed begin. Tighten the injection pump in this position and remove the advance stroke tester.

Note: For turning the injection pump, disconnect the injection lines from the pump, if necessary.

5. Check the adjustment of the feed begin, (see section a) and if necessary, correct again (also see Job No. 07-5, section II, item c, adjusting advance stroke and checking feed begin).