Tightening torques		Nm
Crankshaft end bolt	with 3 diaphragm springs <sup>1</sup> )	270-330
	with 4 diaphragm springs <sup>1</sup> )	370-400
Bolts, V-belt pulley to hub		35
<sup>1</sup> ) See Note.		
Special tools		
Detent for counterholding crankshaft (starter flange left or right)	Frank T and	116 589 01 40 00
Torque wrench 3/4′′ drive, 150—500 Nm	11004-1204	001 589 31 21 00
Socket insert 27 mm, 1/2'' drive	1004	001 589 65 09 00
Sleeve for front radial sealing ring		110 589 07 61 00
Conventional tool		
Adapter 3/4" inside to 1/2" outside drive	e.g. Hazet, D—5630 Remscheid Order No. 1058 RI	

# Note

As of 1985, the number of diaphragm springs was increased from 3 to 4.

For purposes of repair it is not permitted to increase the number of diaphragm springs by adding one additional diaphragm spring, but **4 new** diaphragm springs must be used.

The old version (with 3 diaphragm springs) may be retained.

If 4 diaphragm springs (2nd version) are used instead of 3 diaphragm springs (1st version) during repairs, the tightening torque must be increased to 370– 400 Nm.



#### Crankshaft arrangement 1st version

- V-belt pulley 1
- Bolt M 8 x 22
- 2 3 Vibration damper
- 4 Bolt M 18 x 1.5 x 45
- 5 Diaphragm springs (3 required)
- Hub
- Radial sealing ring
- 6 7 8 Woodruff key
- 9 Timing case cover
- 10 Crankshaft sprocket
- Crankshaft 11

### Note

Prior to installation, the space between sealing and dust lips of the radial sealing ring must be filled with long-life grease according to sheet 266.2 of the Specifications for Service Products.

### Caution!

The V-belt pulley on the crankshaft is optionally made of cast iron or pressed steel plate.

Care should be exercised not to break the cast-iron pulley.



Crankshaft arrangement 2nd version

- 1
- V-belt pulley Bolt M 8 x 22 Vibration damper 2 3
- 4 Bolt M 18 x 1.5 x 45
- 5 Diaphragm springs (4 required)
- 6 Hub
- Radial sealing ring Woodruff key 7
- 8
- Timing case cover Crankshaft sprocket 9
- 10
- 11 Crankshaft

# Renewing

1 Remove hub, vibration damper and V-belt pulley (03-342).



2 Force out radial sealing ring by means of a screwdriver.

## Caution!

Do not damage crankshaft and seating bore for radial sealing ring.

3 Remove burr from edge of radial sealing ring seat.

4 Pull in radial sealing ring by means of installation sleeve (1). For installing, use the hexagon head bolt (107) for mounting hub to crankshaft and one diaphragm spring (106).

The radial sealing ring must be positioned at right angles to the crankshaft journal.

**Note:** Hubs with running grooves from the radial sealing ring must be renewed.

5 Install hub, vibration damper and V-belt pulley (03-342).

The bolt M  $18 \times 1.5 \times 45$  (4) is installed with 4 diaphragm springs (2nd version) (see Note).





