

43-628 Renewing piston seal and disc valves of piston vacuum pump

Model 116.1

Tightening torques

Nm

Slotted screws for pump cover

2.5

Self-locking hex. nut to piston rod

9

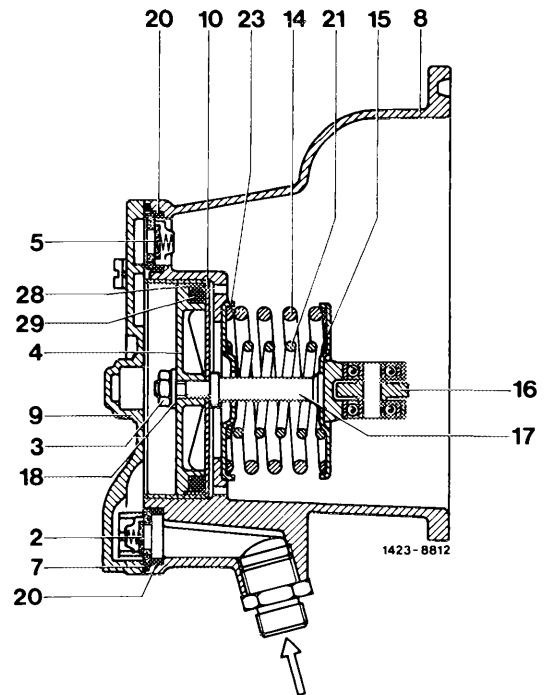
Special tool

Assembly plate for piston rod



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- 2 Disc valve (suction side)
- 3 Self-locking hex. nut
- 4 Piston
- 5 Disc valve (pressure side)
- 7 Gasket
- 8 Pump housing
- 9 Pump cover
- 10 Piston disc
- 14 Outer compression spring
- 15 Lower spring retainer
- 16 Roller
- 17 Piston rod
- 18 Washer
- 20 Sealing ring
- 21 Inner compression spring
- 23 Upper spring retainer
- 28 Piston ring
- 29 O-ring

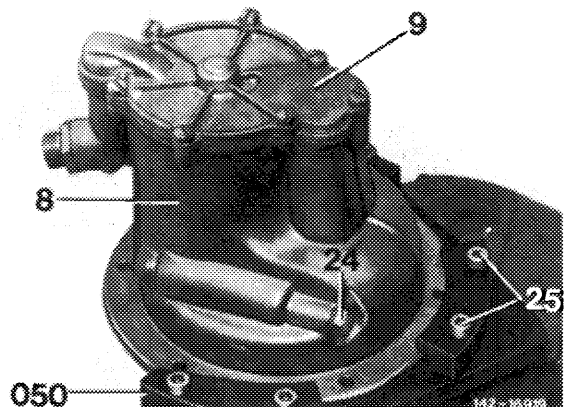


Note

Reconditioning of vacuum pump requires repair kit part no. 000 586 17 23.

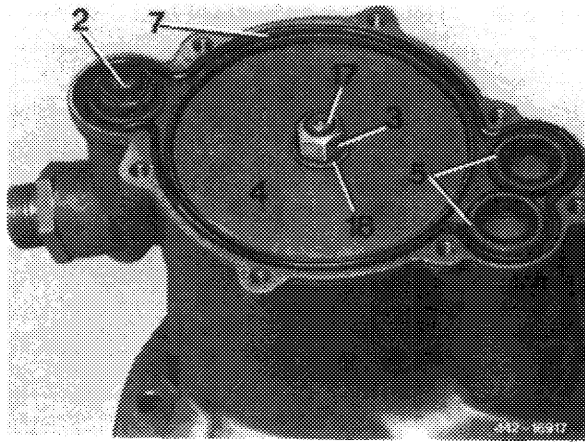
Disassembly

- 1 Turn spindle of assembly plate completely back.
- 2 Insert vacuum pump into assembly plate (050) in such a manner that the casting seam (refer to arrow) points accurately into center between the two hex. socket screws (25) of plate.
- 3 Screw-down spindle up to stop to force piston rods including piston to TDC.

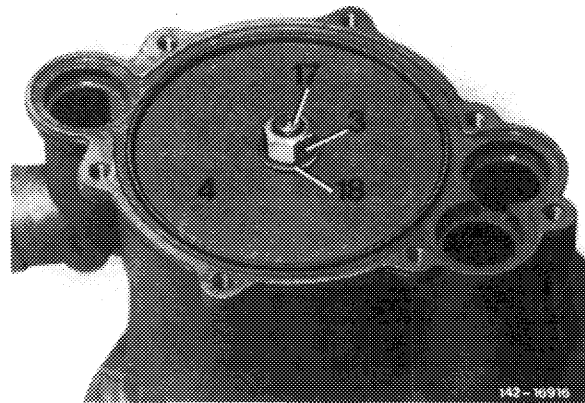


4 Unscrew slotted screws from pump housing and remove pump cover (9).

5 Remove gasket (7) from pump cover as well as gaskets and disc valves (2 and 5) of pump housing (8).

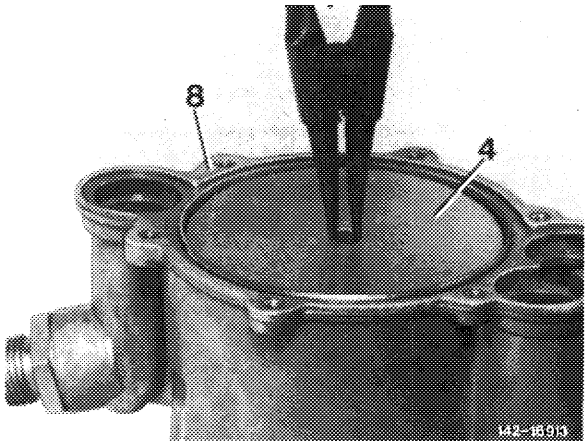


6 Unscrew self-locking hex. nut (3) from piston rod (17) and remove washer (18).

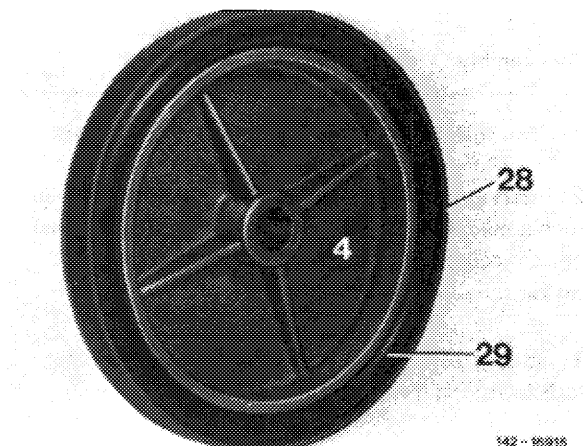


7 Turn spindle of assembly plate completely back. Then pull piston (4) out of pump housing (8) using suitable pliers.

8 Remove piston disc from pump housing (8).



9 Remove piston ring (28) and O-ring (29) from piston (4).

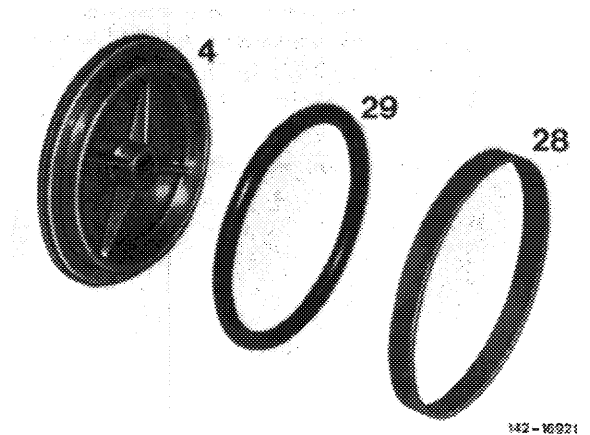


Assembly

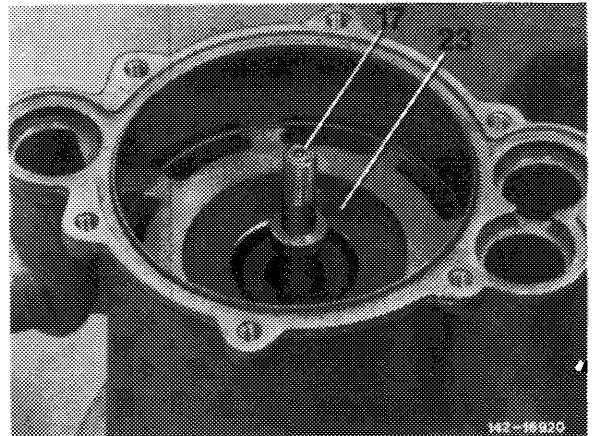
Note: Prior to assembly, check piston liner and roller for wear. If bushing is worn or shows score marks, replace vacuum pump. In the event of wear on roller, ball bearing, piston rod, rocker arm and rocker arm shaft, recondition vacuum pump with repair kit part no. 000 586 18 23 (42-635).

Check sealing surface on pump cover for gasket. Cover should be flat and level.

10 Clean piston (4). Mount new O-ring (29) and piston ring (28). Lubricate parts lightly for this purpose.

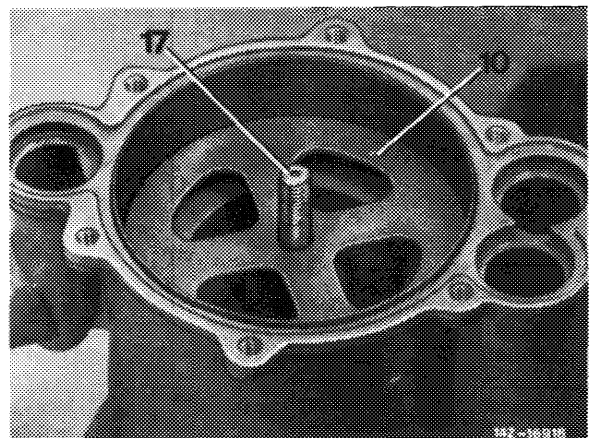


11 Push piston rod (17) upwards up to stop by means of assembly plate spindle. Make sure that the flange of the piston rod is perfectly guided through upper spring retainer (23).

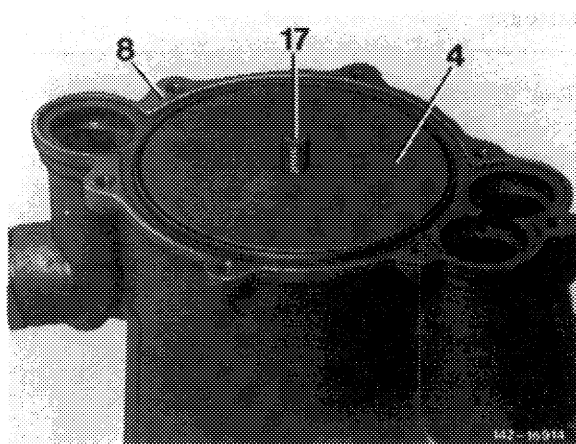


12 Place piston disc (10) on piston rod (17) with the 4 dead centers ahead.

13 Slightly lubricate piston liner.

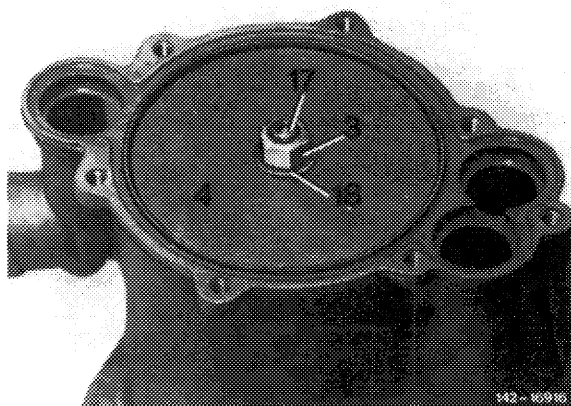


14 Mount piston (4), making sure that piston ring is not damaged.

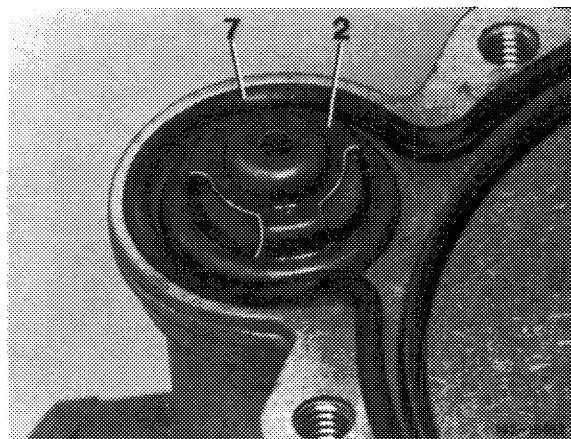


15 Mount washer (18). Then loosely screw-on new self-locking hex. nut (3) and move piston (4) against base of housing by reversing spindle. Then tighten hex. nut (3) to 9 Nm.

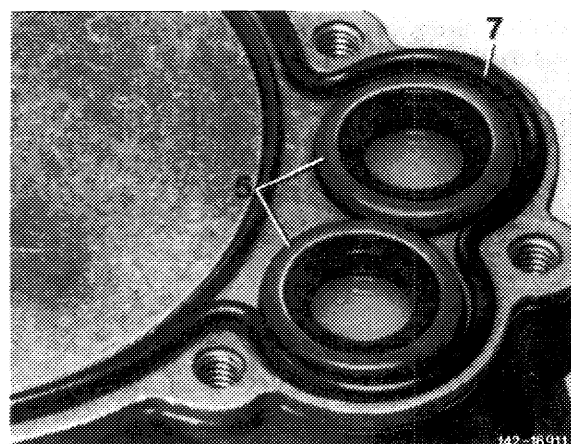
Note: Use self-locking hex. nut only once.



16 Insert sealing ring (7), new sealing rings and the three disc valves (2 and 5) into pump housing in correct installation position.



Layout suction side



Layout pressure side

17 Place pump cover (9) on housing. Screw-in slotted screws and tighten to 2.5 Nm.

18 Remove pump from assembly plate.

