
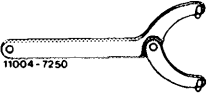


43–620 Replacing diaphragm and plate valves of single-diaphragm vacuum pump

Model 123.1

Tightening torques	Nm
Slotted screws for pump cover	5
Slotted screws for closing cover	2.5
Hex. socket screw in diaphragm rod	9

Special tools

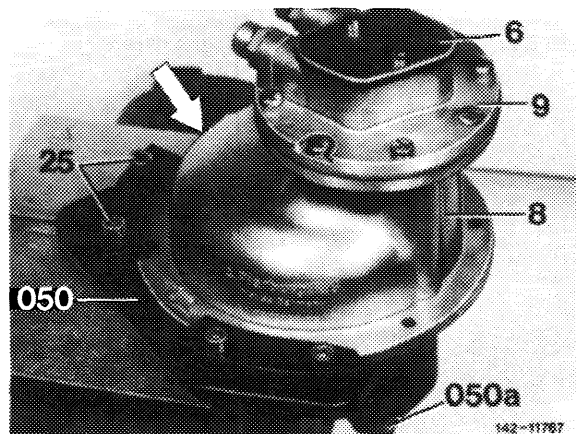
Assembly plate for diaphragm rod		115 589 14 21 00
Special wrench		000 589 00 05 00

Note

Repairing the vacuum pump requires the two repair sets part no. 000 586 40 43 (valves) and 000 586 41 43 (diaphragm).

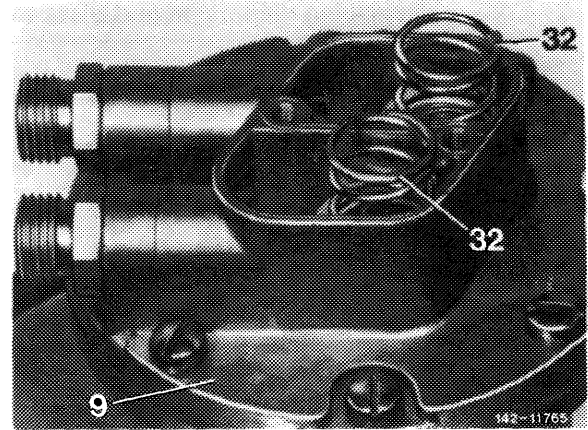
Disassembly

- 1 Screw spindle (050a) of assembly plate completely back.
- 2 Insert vacuum pump into assembly plate (050) in such a manner that the casting seam (arrow) points accurately into center between the two hex. socket screws (25) of plate.
- 3 Preload diaphragm rod by screwing spindle (050a) up to stop.

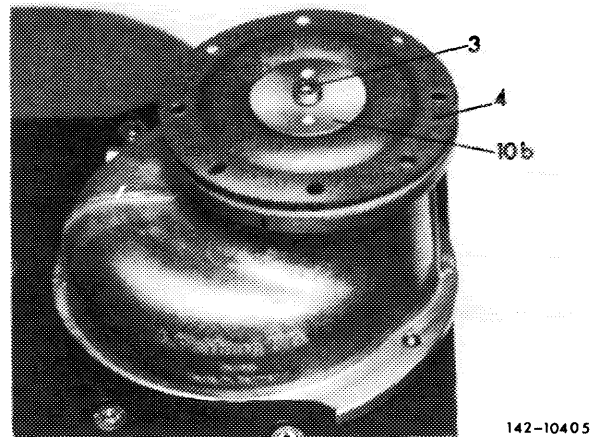


4 Unscrew slotted screws from closing cover (6).
Remove closing cover (6) and both compression
springs (32) together with the two plate valves.

5 Mark pump cover (9) in relation to pump housing
(8), then unscrew slotted screws from pump housing
and remove pump cover.



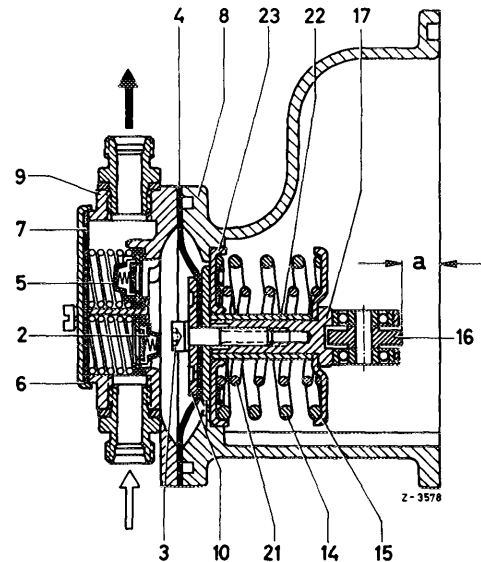
6 Screw hex socket screw (3) out of diaphragm rod
and remove diaphragm (4) together with both discs (10).



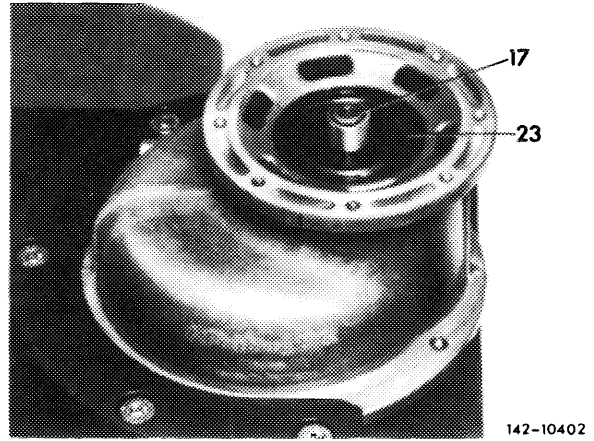
Assembly

Note: To avoid damage to diaphragm, mount
diaphragm under a slight preload. This is attained by
preloading the diaphragm rod (17) to dimension
 $a = 26 \text{ mm}$ by means of the screw spindle (050a)
turned against stop.

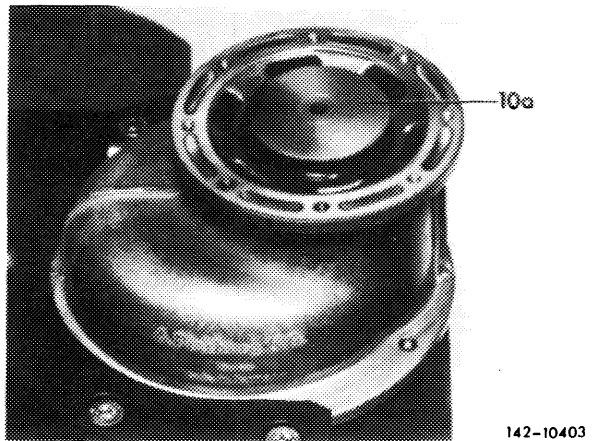
- | | |
|------------------------------|--------------------------------|
| 2 Plate valve (suction end) | 14 External compression spring |
| 3 Hex socket screw | 15 Lower spring retainer |
| 4 Diaphragm | 16 Roller |
| 5 Plate valve (pressure end) | 17 Diaphragm rod |
| 6 Closing cover | 21 Internal compression spring |
| 7 Gasket | 22 Guide bushing |
| 8 Pump housing | 23 Upper spring retainer |
| 9 Pump cover | Dimension $a = 26 \text{ mm}$ |
| 10 Diaphragm plate | (preload dimension) |



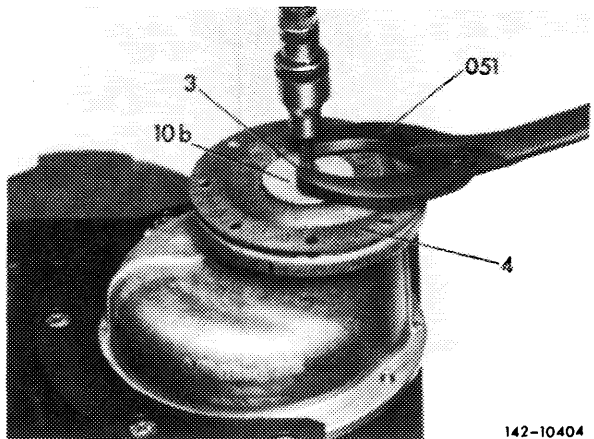
7 Remove grease from internal threads of diaphragm rod (17).



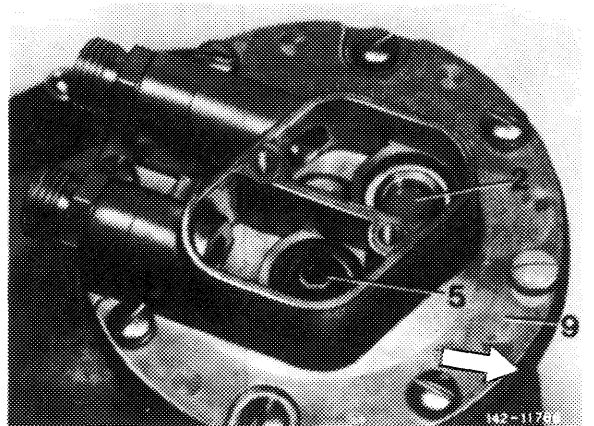
8 Place large diaphragm plate (10a) with both blind holes in downward direction on diaphragm rod, then diaphragm (4) with lettered or raised portion facing upwards, as well as smaller diaphragm plate (10b).



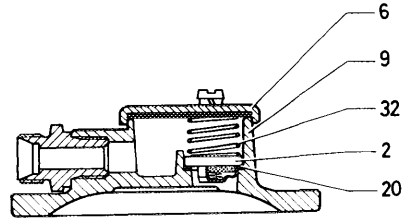
9 Place copper sealing ring on hex socket screw (3), coat threads of screw with Loctite, then screw hex socket screw into diaphragm rod and tighten to 9 Nm (0.9 kpm). Apply counterhold to diaphragm (10) with pin spanner and make sure that diaphragm comes into correct position.



10 Place pump cover on housing while paying attention to the two marking lines (refer to arrow). Screw in slotted screws and tighten to 5 Nm.



11 Insert sealing rings (29), then plate valves (2 and 5) into valve seats, insert compression springs (32) and attach closing cover to pump cover together with a new gasket.



- 2 Plate valve (suction end)
- 5 Plate valve (pressure end)
- 6 Closing cover
- 9 Pump cover
- 20 Sealing ring
- 32 Compression spring

