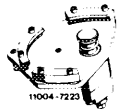
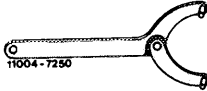


A. Model 115.1

Tightening torques	Nm	(kpm)
Slotted screws for pump cover	5	(0.5)
Slotted screws for closing cover	2.5	(0.25)
Hex. socket screw in diaphragm rod	9	(0.9)

Special tools

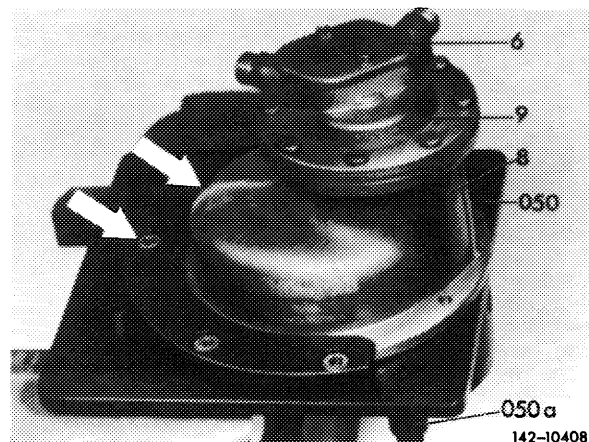
Assembly plate for diaphragm rod		115 589 14 21 00
Pin spanner		000 589 00 05 00

Note

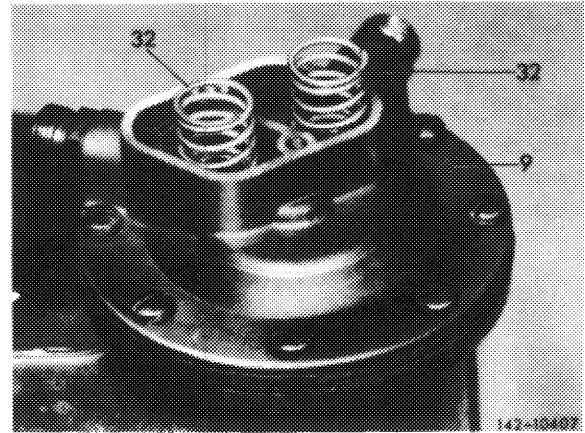
Repairing the vacuum pump requires the two repair sets part no. 000 586 40 43 (valves) and 000 586 41 43 (diaphragm).

Disassembly

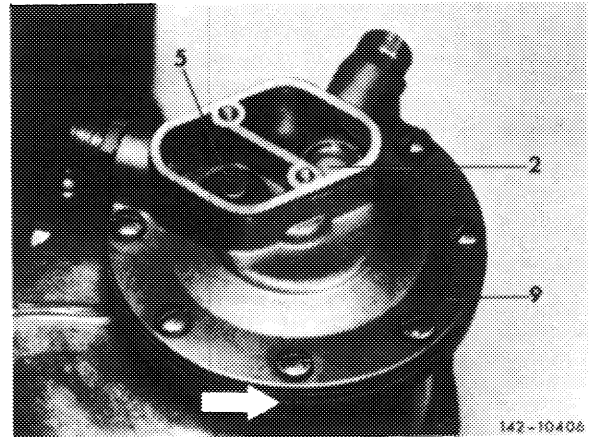
- 1 Turn screw spindle (050a) of assembly plate completely back.
- 2 Insert vacuum pump into assembly plate (050) in such a manner that the seam of the casting (refer to arrow) points toward center hex. socket screw of plate.
- 3 Preload diaphragm rod by turning spindle (050a) up to stop.



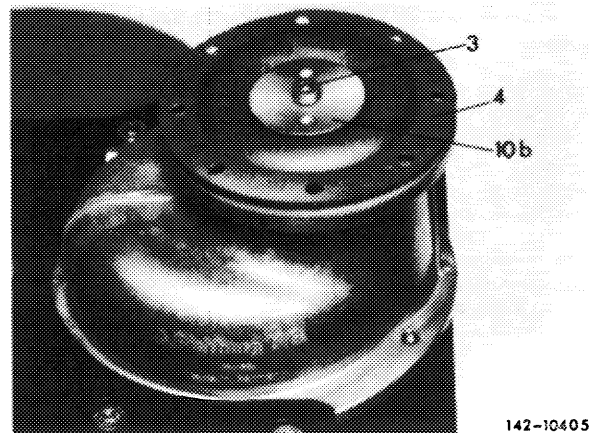
4 Unscrew slotted screws from closing cover (6). Remove closing cover (6) and both compression springs (32) including the two plate valves.



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



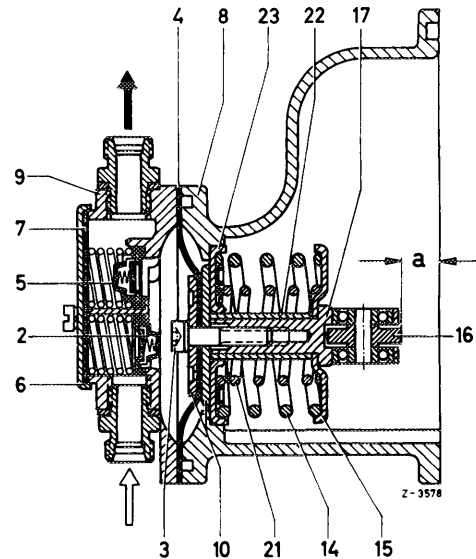
6 Unscrew hex. socket screw (3) from diaphragm rod and remove diaphragm (4) with both diaphragm discs (10).



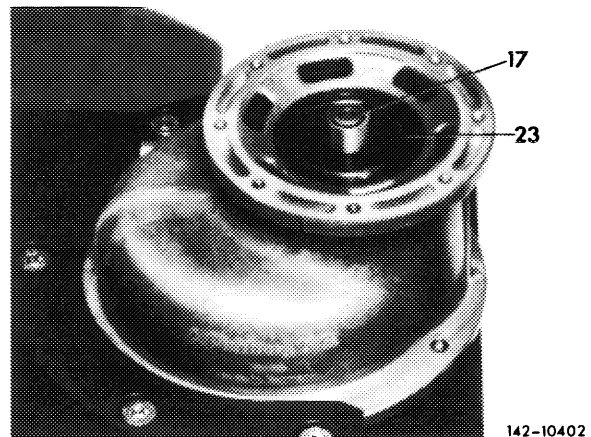
## Assembly

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

- 2 Plate valve (suction end)
  - 3 Hex. socket screw
  - 4 Diaphragm
  - 5 Plate valve (pressure end)
  - 6 Closing cover
  - 7 Gasket
  - 8 Pump housing
  - 9 Pump cover
  - 10 Diaphragm disc
  - 14 Outer compression spring
  - 15 Lower spring retainer
  - 16 Roller
  - 17 Diaphragm rod
  - 21 Inner compression spring
  - 22 Guide bushing
  - 23 Upper spring retainer
- Dimension  $a = 26$  mm (preload)



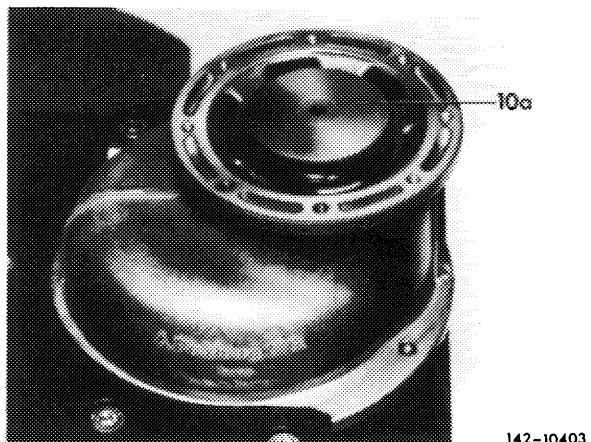
7 Wipe female threads of diaphragm rod (17) free of grease.



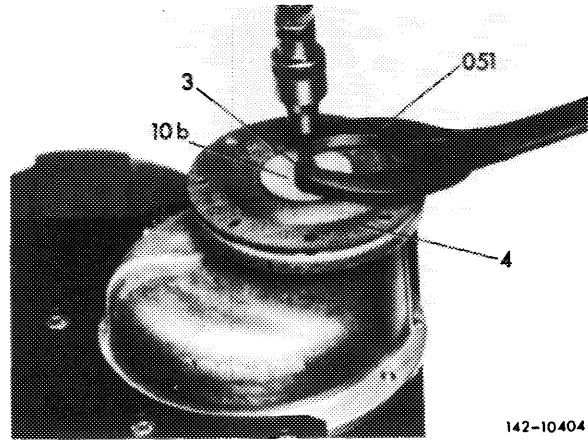
8 Place large diaphragm disc (10a) with both blind holes pointing downwards, then diaphragm (4) with marked or raised portion pointing upwards and smaller diaphragm disc (10b) on diaphragm rod.

### Attention!

Install grey-green diaphragm only.

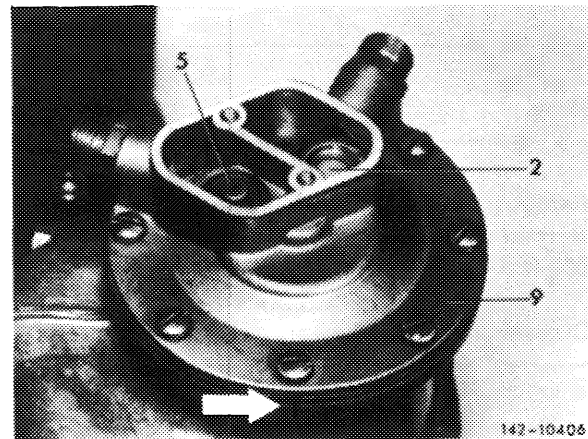


9 Place copper sealing ring on hex. socket screw (3), coat threads of screw with with Loctite, then screw hex. socket screw into diaphragm rod and tighten to 9 Nm (0.9 kpm). Apply counterhold to diaphragm disc (10) with pin spanner and make sure that diaphragm moves into correct position.



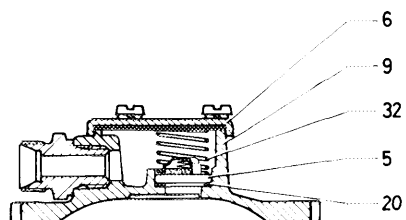
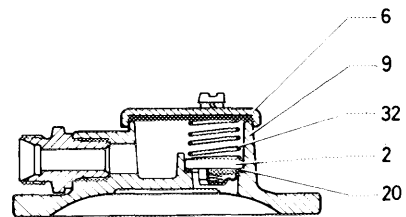
142-10404

10 Place pump cover on housing while paying attention to the two marking lines. Screw-in slotted screws and tighten to 5 Nm (0.5 kpm).



142-10406

11 Place sealing rings (20) and then plate discs (2 and 5) into valve seats, insert compression springs (32) and attach closing cover with a new gasket to pump cover.



1422-5296/1

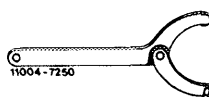
- 2 Plate valve (suction end)
- 5 Plate valve (pressure end)
- 6 Closing cover
- 9 Pump cover
- 20 Sealing ring
- 32 Pressure spring

## B. Models 115.01, 114.06/07 USA-version — model year 1973 to 1975

<b>Tightening torques</b>	Nm	(kpm)
Slotted screws for pump cover	5	(0.5)
Slotted screws for closing cover	2.5	(0.25)
Hex. socket screw in pump piston	9	(0.9)

### Special tool

Pin spanner



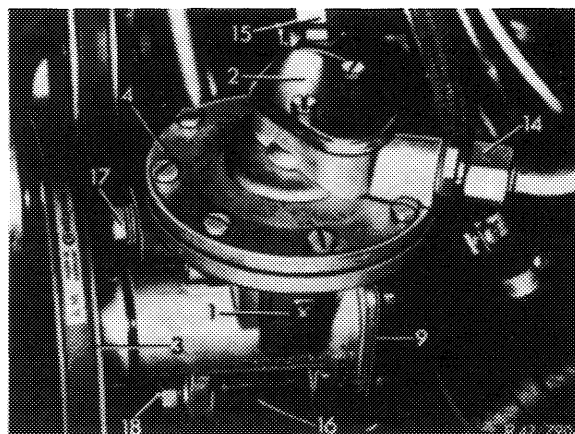
000 589 00 05 00

### Note

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

### Disassembly

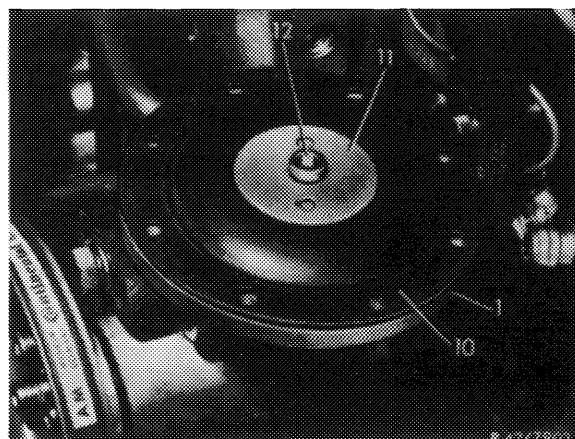
- 1 Remove vacuum pump on models 114.06 and 114.07 (42–610).
- 2 Unscrew slotted screws from pump cover (4). Remove closing cover (2), both compression springs, both plate valves and sealing rings.
- 3 Loosen both vacuum lines (14 and 15).
- 4 Mark pump cover (4) in relation to pump housing (1), then unscrew slotted screws from pump housing and remove pump cover.



- 5 Unscrew hex. socket screw (12) from pump piston (27), while applying counterhold to upper diaphragm disc (11) with pin spanner. Remove diaphragm (10).

### Assembly

- 6 Wipe female threads in pump piston and threads of hex. socket screw free of oil and grease.

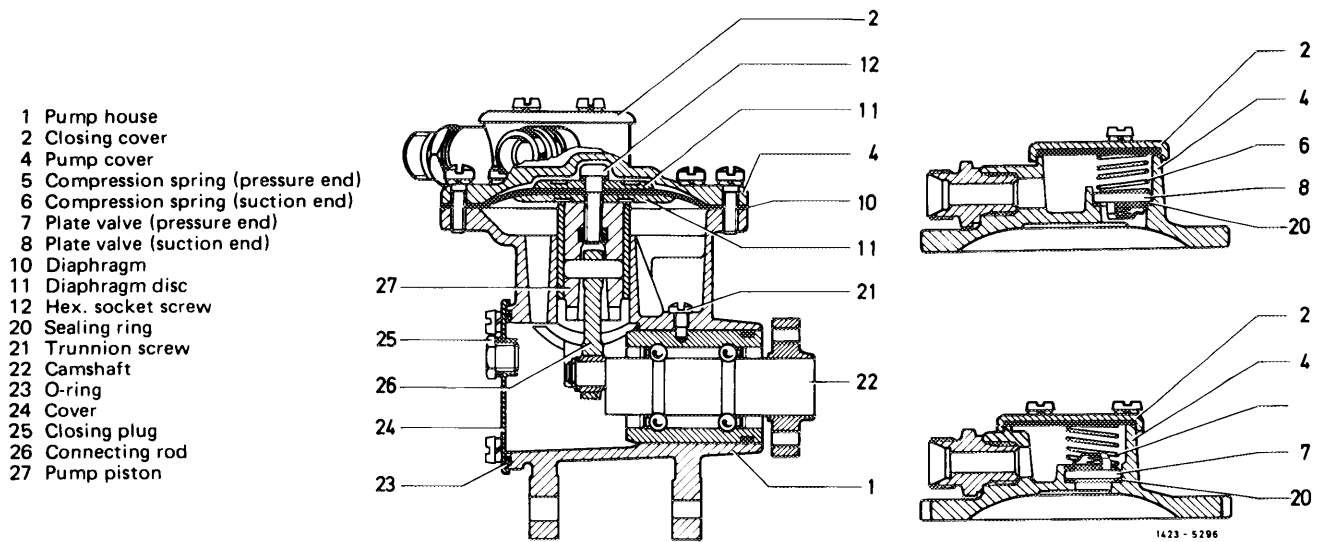


7 Place **black diaphragm** (10) with marked portion pointing upwards on pump piston.

8 Coat threads of hex. socket screw with Loctite type A, then screw into pump piston and tighten to 9 Nm (9 kpm). Apply counterhold to diaphragm disc (11) with pin spanner and make sure that diagram moves into correct position.

**Note:** When installing hex. socket screw proceed as follows:

On vacuum pump for model 115.01 (belt-driven pump) the hex. socket screw is mounted with copper sealing ring, and on pump for models 114.06 and 114.07 (flange pump) with washer and O-ring.

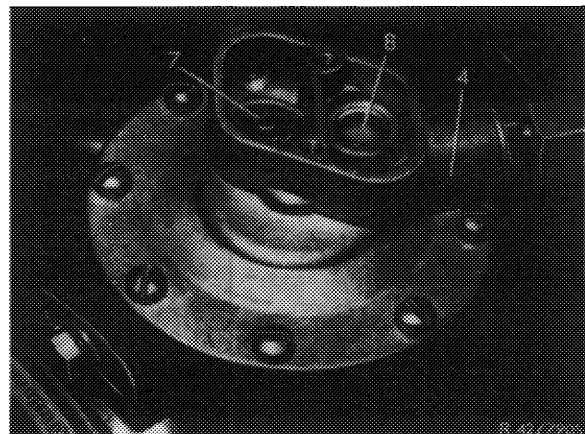


9 Place pump cover on housing while paying attention to the two marking lines. Screw-in slotted screws and tighten to 5 Nm (0.5 kpm) — reference value.

10 Place sealing rings (20) into pump cover (4).

11 Insert new plate valves into pump cover as shown in illustration.

**Note:** On suction end (connection to brake unit) the valve cage faces the pump cover, at pressure end (connection to intake pipe) the valve cage faces the closing cover.



- 12 Insert both compression springs (5 and 6).
- 13 Renew gasket in closing cover and attach closing cover to pump cover.
- 14 On models 114.06 and 114.07, install vacuum pump (42–610 section C).
- 15 Connect both vacuum lines to vacuum pump.

