Removal and Installation of ATE Power Brake T 50

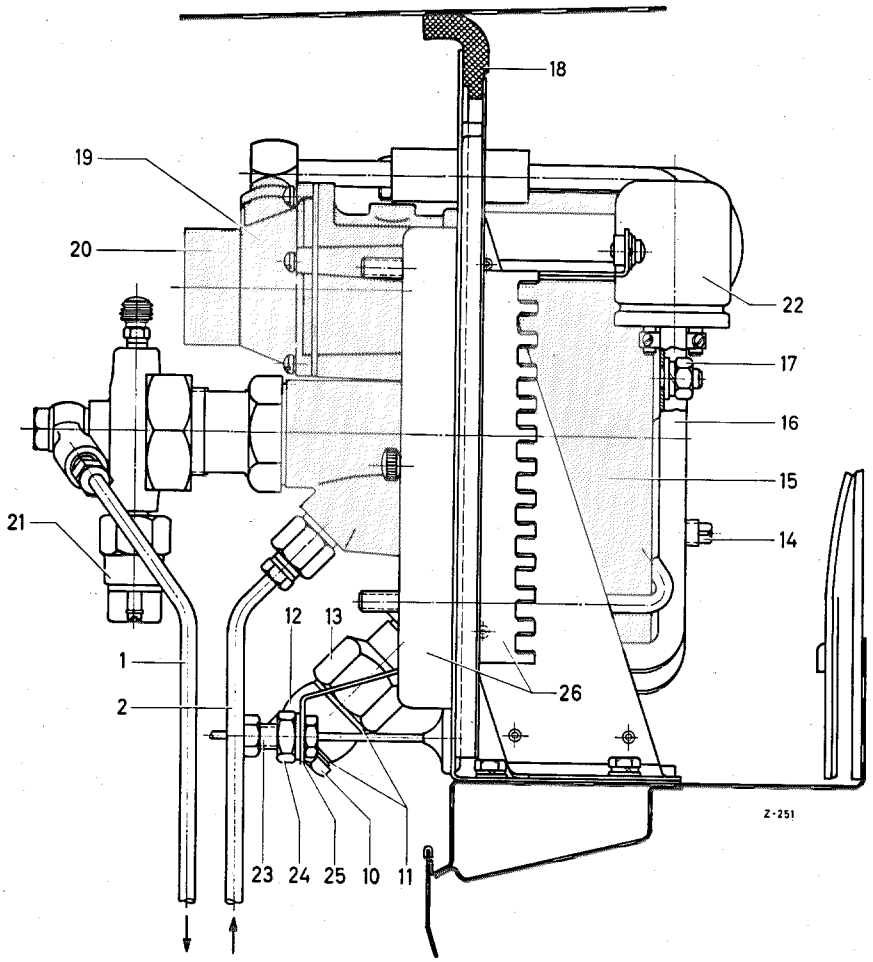

Fig. 42—14/1

1 Brake line from ATE Power Brake to distributor fitting (wheel cylinders)
2 Brake line from brake master cylinder to ATE Power Brake
10 Hollow screw D 22 × 1.5
11 Sealing ring A 22 × 27 Din 7603 copper
12 Annular nipple
13 Check valve tube connection
14 Oil filler plug
15 Vacuum power cylinder
16 Fixing clamp
17 Hexagon nut
18 Panel
19 Control valve
20 Air cleaner
21 Stop light switch
22 Flash signal mechanism
23 Threaded union of the oil pressure gage line
24 Hexagon nut
25 Bracket for oil pressure gage line
26 Fuse box with lid

Removal:

1. Unscrew the two brake lines (1) and (2) at the power brake.

2. Disconnect the vacuum hose at the annular nipple (12) of the power brake.

3. Disconnect the two cables at the stop light switch.

Note: On the recent version of the ATE Power Brake the stop light switch (21) is no longer screwed into the brake master cylinder but into the ATE Power Brake (see Fig. 42—14/1).

4. Unscrew the hexagon nut (17) at the rear of the power brake, remove lock washer, washer and fixing clamp (16), and pull out the power brake from the panel (18) toward the front.

Note: The power brake must always be held in its built-in position in order to prevent the lubricating oil in the cylinder chamber from entering the control valve via the control tube where it may destroy the rubber cups.

Installation:

5. Insert the power brake from the front into the panel (18).

6. Slide the fixing clamp (16) over the vacuum power cylinder (15), install the washer and the lock washer, screw on the hexagon nut (17) and tighten.

7. Screw the two brake lines (1) and (2) to the power brake.

8. Attach the vacuum hose to the annular nipple (12) of the power brake by means of Hose Clip S 17/g N 288 a.

Note: Use only copper sealing rings A 22 × 27 DIN 7603 at the hollow screw (10) of the ATE Power Brake.

Fiber sealing rings should always be replaced by copper sealing rings (11).

When the hollow screw (10) is tightened or retightened, always hold the check valve tube connection (13) steady with an SW 32 wrench in order to prevent damage to the thread in the power brake.

9. Where necessary, connect the two cables to the stop light switch (21).

10. Bleed the brake system (see Job No. 42—1).

11. Check the power brake and the brake lines for leakage.

a) Vacuum system:
In order to check the vacuum, connect a vacuum gage with a range of 0 — 1 kg/cm² to the oil filler plug (14) of the power brake or to a tee-piece fitted into the vacuum line. (Use Vacuum Tester 000 589 11 27).

Recent models of the ATE Power Brake T 50 are provided with a special connection (plug and sealing ring) at the control valve tube connection (9) in order to facilitate the fitting of the vacuum gage (see Fig. 42 — 15/6).

In order to produce a high degree of vacuum, race the engine several times and then allow the speed to drop to idling speed.
When the engine is switched off, the vacuum should then be 0.6 — 0.8 kg/cm² and should not decrease visibly.
If the vacuum decreases rapidly, the leak may be at the gasket between the end plate and the vacuum cylinder (15), at the atmosphere poppet of the control valve (19), at the assembly cover gasket, or at the check valve (13).
If, with the engine running, the vacuum decreases, or is too small, check the vacuum hose and its connections to the intake manifold and the power brake.
The atmosphere poppet of the control valve (19) can be checked by holding a completely flat rubber disk of 60 mm in diameter in front of the air cleaner hair retainer (20). With engine running and actuation of the brake pedal, this rubber disk will be drawn against the cleaner and be held there. If the rubber disk is drawn against the cleaner at running engine without pedal actuation, this is evidence that the atmosphere poppet of the control valve (19) is leaky and the whole cover assembly must be replaced.

b) Hydraulic system:
Depress the brake pedal full stroke and check the line connections at the brake master cylinder, the power brake, and the distributor fitting for leakage.