



Mercedes-Benz

## service information

**TO:** OUR MERCEDES-BENZ PASSENGER CAR DEALERS

**DATE:** May 1993 (supercedes S.I. 27/85, February 1991)

**REF. NO.** 27/85a

**Revision:** *Listing of automatic transmissions not requiring B1 adjustment.*

**SUBJECT:** ALL MODELS WITH AUTOMATIC TRANSMISSIONS 722.3 AND 722.5  
BRAKE BAND PISTON B1 WITH AUTOMATIC ADJUSTMENT

The brake band piston B1 with an automatic adjustment of B1 release clearance, together with a modified B1 piston guide piece, has entered series production on 722.3 and 722.5 transmissions as of the Transmission End Number Range shown below. Additionally, this automatic adjusting B1 piston was installed from July 1990 to September 1990 on 722.3 and 722.5 transmissions also listed within the Transmission End Number Range shown below. On the transmissions listed below only, measuring or adjusting B1 release clearance is not required and is not possible.

### CAUTION!

This B1 piston with automatic adjustment must be reset to its "zero" base position each time it is removed and installed. Refer to Section B of this Service Information for detailed resetting procedures.

Transmission	Transmission End Number Range	
	from	to
722.3/722.5 Automatic adjusting B1 piston <sup>1)</sup>	03 420691	03 450408
722.3/722.5 Automatic adjusting B1 piston <sup>1)</sup>	03 746852	—
722.3/722.5 Modified B1 piston guide piece	03 420691	—

<sup>1)</sup> To identify if automatic adjusting B1 piston is installed, observe appearance of B1 piston cover (40, Figure 1).

### A. Function of Automatic Adjustment

The brake band B1 is **engaged** by the oil pressure build-up between the brake band piston (37) and the brake band piston cover (40). The piston is shifted against the force of return compression springs (35, 36) until brake band B1 is applied. This lifting action of the piston causes diaphragm spring (37a) to pull along pin (37c), while the stroke "L" (inset) is covered first. Lock (40a) always retains pin (37c). If the application travel (stroke) of B1 piston (37) is excessive, the position of diaphragm spring (37a) is shifted on pin (37c, Figure 1). Correct clearance is thereby established.

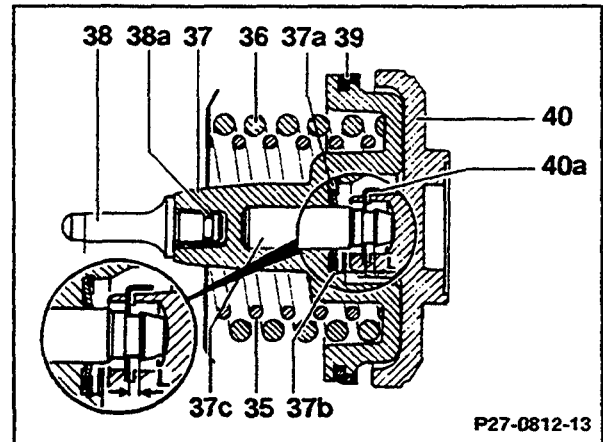


Figure 1

**For releasing** brake band B1 the oil pressure is reduced. The force of return springs (35, 36) forces the brake band piston back until the pin contacts the brake band piston cover. The locking action of the diaphragm spring (due to the shape of the diaphragm) cannot be overcome by the force of the return pressure springs. During this release action, brake band piston B1 is moved back only by stroke "L" (inset, Figure 1). This corresponds to a release clearance of 1.9 to 2.4 mm.

### B. Repair Instructions

Whenever this automatic adjusting brake band piston B1 is removed or installed, it must be reset to its original "zero" base position by carefully following the procedures described on the next pages.

### Disassembling Brake Band Piston B1

1. Separate brake band piston from brake band piston cover by pulling piston (37) from piston cover (40, Figure 1).
2. Spread lock (40a) in piston cover (40) using spreading snap ring pliers and remove pin (37c). Lock (40a) remains in piston cover (40, Figure 2).

**⚠ CAUTION!**

Observe installation position of pin (37c), Do not invert during reassembly.

3. Remove snap ring (37b) in piston (37) with a screwdriver or pointed hook tool. Remove diaphragm spring (37a, Figure 3).

**⚠ CAUTION!**

Observe installation position of diaphragm spring (37a), Do not invert during reassembly.

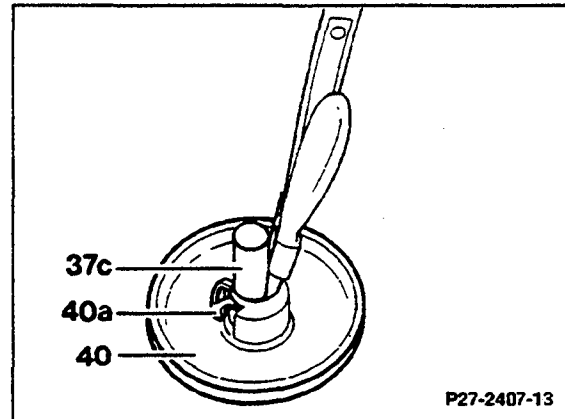


Figure 2

### Assembling Brake Band Piston B1

1. Insert pin (37c) into piston (37, Figures 1 or 3). Observe installation position (Figure 3).
2. Slide diaphragm spring over pin until spring contacts piston. Observe installation position (Figure 3 or Figure 1, inset). Insert snap ring (37b). Check for proper seating.
3. Push assembled piston (37) into piston cover (40) until pin (37c) can be heard engaging into clip (40a, Figure 1, inset).

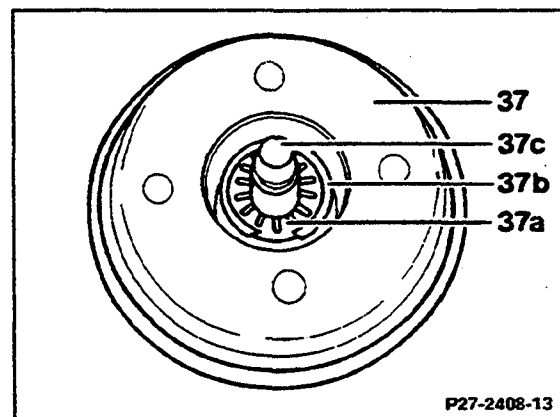


Figure 3

**⚠ CAUTION!**

DO NOT subsequently pull apart by hand. Handle with great care.

4. Install complete brake band piston and cover assembly. B1 release clearance adjustment takes place automatically upon first engagement/release of brake band B1.

- Note:**
- Before disassembling or assembling complete B1 piston and cover assembly from transmission, please loosen screw plug in front of reaction valve Rv1 (or Transmission overload protection switch (S65), if equipped) by approximately 3 turns.  
**Reassembly tightening torque: 70 Nm**
  - When installing the complete B1 piston and cover assembly, rotate return springs (items 35, 36, Figure 1) to insure proper seating in brake band guide piece. Using assembly fixture, Special Tool no. 201 589 03 59 00, install brake band piston and cover into transmission housing only as far as required to install retaining snap ring.
  - The brake band piston B1 with automatic adjustment can be installed into any 722.3 or 722.5 automatic transmission provided that the modified B1 piston guide piece is also used and all procedures included in this Service Information are closely followed.

#### Parts Information

Part Name	Part Number
Brake band piston B1 with automatic adjustment	124 270 12 32
Modified B1 piston guide piece	140 277 08 40