

Revision: Completely revised.

**Adjusting Data**

Transmission	722.004
End play of front transmission case cover or of gear assembly	0.5–0.6
Idle travel of brake band piston B 1	3.0–4.0
Idle travel of brake band piston B 2	3.0–4.0
Adjusting screw brake band B 3	3.0 Tighten adjusting screw to 5 Nm (0.5 kpm), then loosen by 1 <sup>3</sup> / <sub>4</sub> turns and tighten counternut.
Thickness of compensating washers for radial ball bearing front transmission case cover	0.1 – 0.2 – 0.5
Lengths of thrust pins	for brake band B 1 and B 2 23 – 24 – 25 – 26 – 27 – 28
	for brake band B 3 45
	for modulating pressure transmitter bright 39.65 yellow 40.15 black 40.65

**Tightening Torques**

	Nm	(kpm)
Fastening bolts for oil pan on transmission housing	7	(0.7)
Fastening bolts for oil filter	4	(0.4)
Hex. bolts for shift valve housing on transmission case	13	(1.3)
Slotted nut on three-legged flange	120	(12.0)
Hex. bolts for rear transmission case	13	(1.3)
Hex. bolts for front transmission case	13	(1.3)
Kickdown solenoid valve	20	(2.0)
Hex. bolts for modulating pressure housing on transmission case	7	(0.7)
Hex. bolts for leaf spring of detent plate	10	(1.0)
Hex. socket bolt for detent plate on shaft of range selector lever	10	(1.0)



# 27.2 Disassembly and Assembly of Transmission

## Tightening Torques (ctd.)

	Nm	(kpm)
Cyl. head screws for starter lockout and back-up light switch	5	(0.5)
High-speed filling valve	25	(2.5)

## Special Tools

Assembly stand	116 589 06 59 00
Installation sleeve for brake band piston B 2	115 589 18 61 00
Screw driver insert 1/2" square head for slotted plug	116 589 00 11 00
Slot nut wrench insert 1/2" square head for slot nut	115 589 08 07 00
Assembly fixture for brake band piston B 1	115 589 04 59 00
Knurled screw for pin length on modulating pressure regulator	115 589 11 21 00
Measuring bridge	116 589 00 21 00

## Self-made Tool

Locating pin for control pressure valve	refer to Fig. 76
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## Notes

Special attention must be paid to absolute cleanliness during all assembly jobs. The perfect function of the transmission depends on the fact that there is no dirt on transmission members, on control valves and on oil circuit. Therefore, wash all parts carefully upon disassembly, flush oil ducts and dry. **Do not use benzine for washing rubber seals**, since this type of fluid will attack the rubber.

Use spirit of alcohol for cleaning rubber parts. Also note, that the parts are not touched with woollen rags, since even the most minor contamination (for example by fuzz) may result in trouble.

When assembling transmission members, provide bearing points and sliding parts with specified automatic transmission fluid (refer to "Specifications for Service Products", page 236.4).

## Disassembly

- 1 Position transmission with oil pan up.

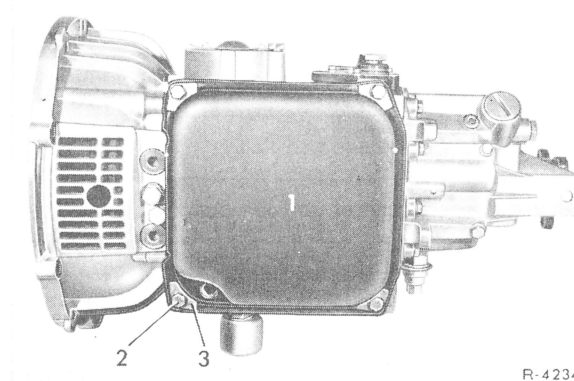


Fig. 1

- 1 Oil pan
- 2 Fastening bolt

- 3 Shim

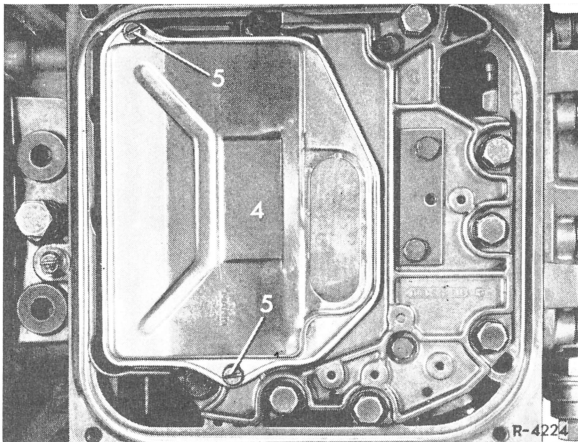


Fig. 2

4 Oil filter

5 Fastening bolts

Remove oil pan after loosening the four fastening bolts (2) including gasket and shims (3) (Fig. 1).

2 Screw transmission on assembly stand.

3 Remove oil filter (4) (Fig. 2), unscrew fastening bolts (6) of shift valve housing (7). Move range selector lever between position "P" and "R" and remove with valve housing (Fig. 3).

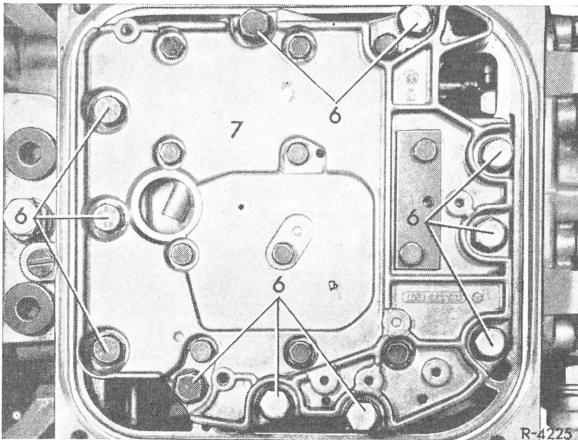


Fig. 3

6 Fastening bolts

7 Shift valve housing

4 Remove plug pipes (8), then pull sealing caps (9) from plug pipes (Fig. 5).

5 Unscrew solenoid valve (25) and control pressure lever (28) (Fig. 4).

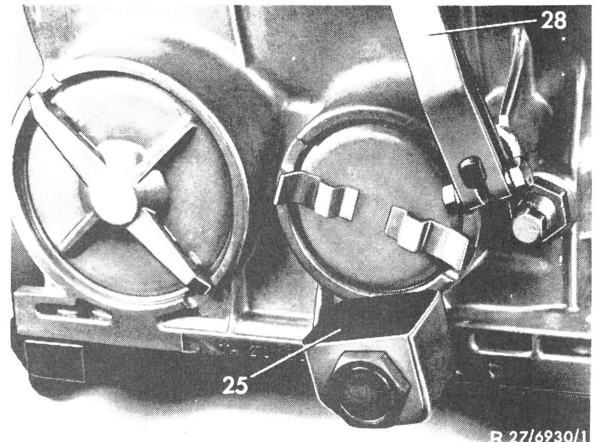


Fig. 4

25 Solenoid valve

28 Control pressure lever

6 Remove circlip (24) from brake band piston cover B 2 (65) and pull out brake band piston cover (Fig. 5).

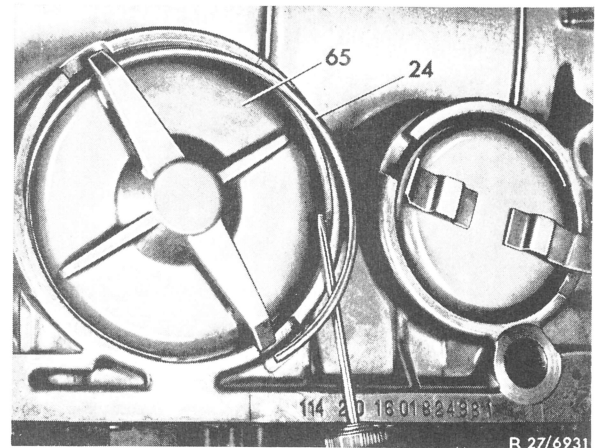


Fig. 5

24 Circlip

65 Brake band piston cover B 2

**7** Mount insertion sleeve (66) and push out brake band piston B 2 (67) (Fig. 7).

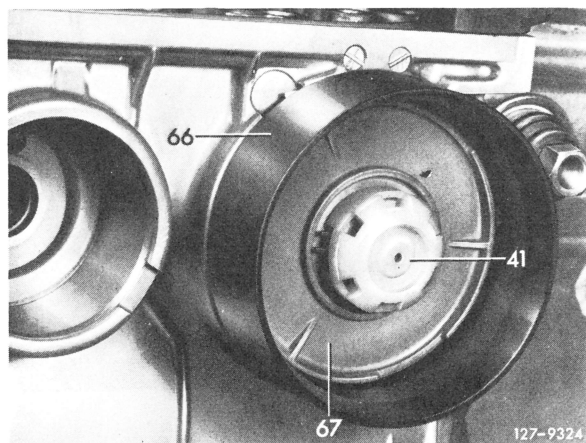


Fig. 7

41 Bypass valve  
66 Insertion sleeve 115 589 18 61 00 or 116 589 05 14 00  
67 Brake band piston B 2

**8** Position assembly fixture for brake band piston cover B 1. Tension assembly fixture and remove circlip (27) (Fig. 8).

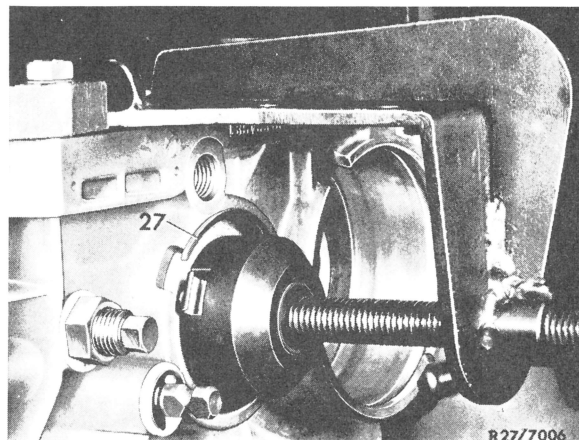


Fig. 8

27 Circlip

**9** Remove load from assembly fixture and unscrew fastening bolts. Remove brake band piston cover, brake band piston B 1 and compression springs.

**10** Unscrew assembly fixture.

**11** Remove thrust pins (34) for B 1 and B 2 (Fig. 9).

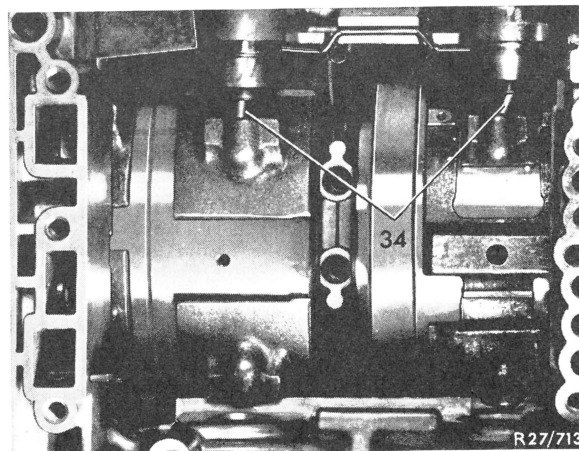


Fig. 9

34 Thrust pins

**12** Swivel transmission on assembly stand in such a manner that the front transmission case faces upwards. Unscrew fastening bolts (21) for front transmission case (22) (Fig. 10).

**13** Loosen front transmission case by applying light blows with a plastic hammer and remove.



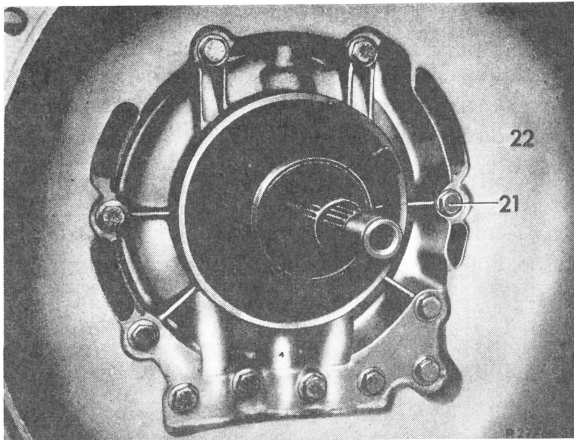


Fig. 10  
21 Fastening bolts  
22 Front transmission case

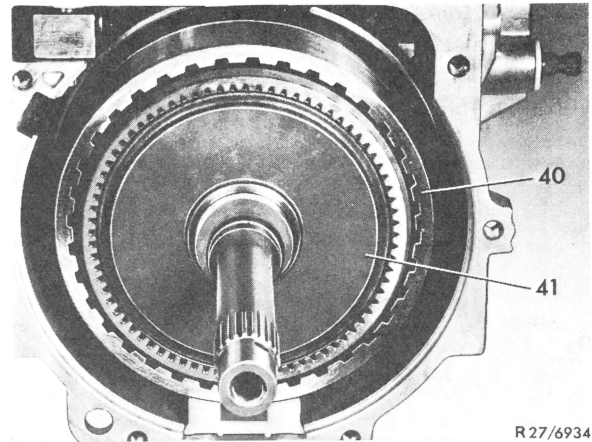


Fig. 12  
40 Gear assembly  
41 Drive shaft

**14** Swivel transmission on assembly stand in horizontal position.

**15** Unlock adjusting screw for brake band B 3 (35) by loosening counternut (36) and screw out. Remove both thrust pins (37) (Fig. 11).

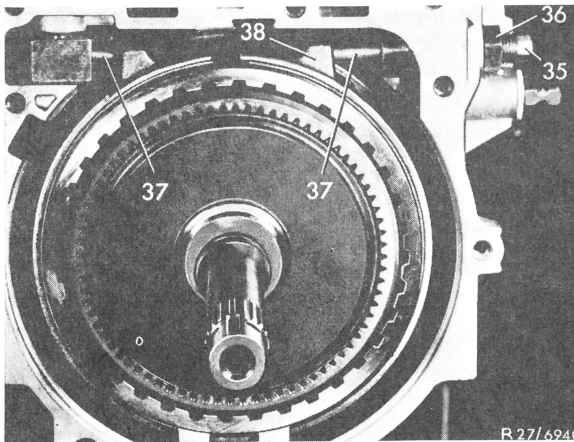


Fig. 11  
35 Adjusting screw B 3  
36 Counternut  
37 Thrust pins  
38 Brake band B 3

**16** Remove brake band B 3 (38) in forward direction.

**17** Pull drive shaft (41) out of gear assembly (40) (Fig. 12).

**18** Clamp brake band B 1 (39) on drum in position by means of a circlip of brake band piston cover B 2 and remove gear assembly (40) from transmission case. Brake band B 2 will remain in transmission case (Fig. 13).

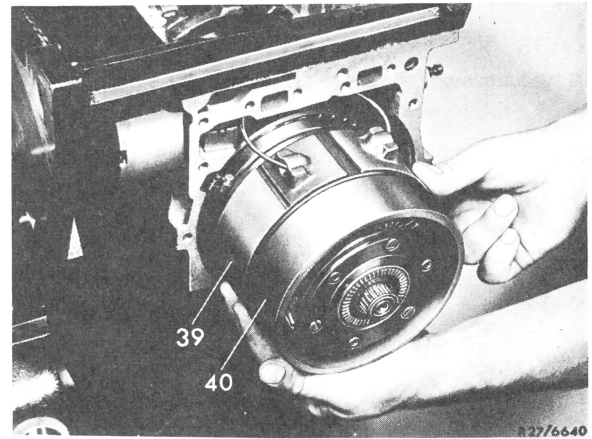


Fig. 13  
49 Brake band B 1  
40 Gear assembly

**19** Remove brake band B 2 (77) from transmission case (Fig. 14).

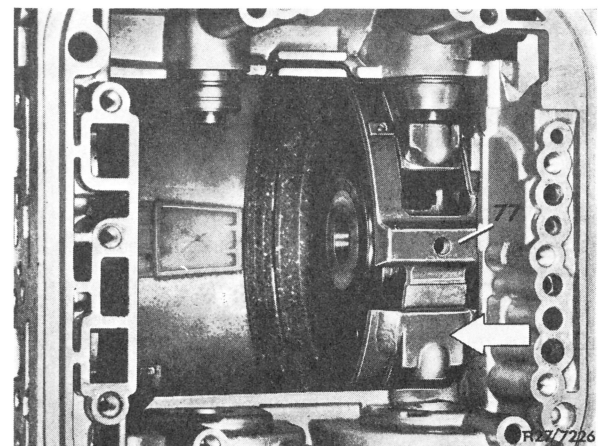


Fig. 14  
77 Brake band B 2

## 27.2 Disassembly and Assembly of Transmission

**20** Swivel transmission on assembly fixture in such a manner that the rear transmission case faces upwards. Unscrew vacuum box (10) with thrust pin (12) (Fig. 15).

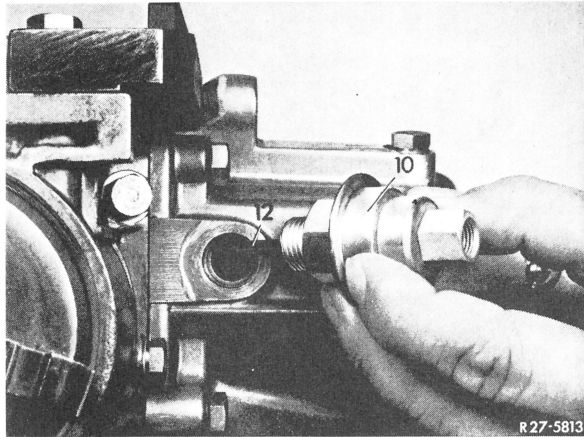


Fig. 15

10 Vacuum box

12 Thrust pin

**21** Unscrew plug for secondary pump (13) with screw driver and remove compression spring (14) (Fig. 16).

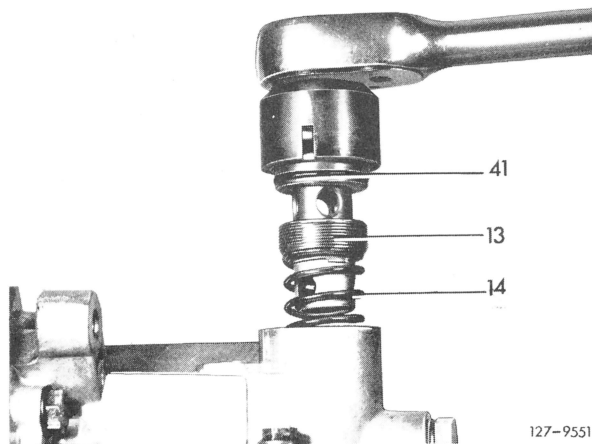


Fig. 16

13 Plug for secondary pump  
14 Compression spring

41 O-ring

**22** Unlock slot nut on three-legged flange and unscrew with slot nut wrench. Pull three-legged flange from output shaft.

**23** Unscrew fastening screws for rear transmission case, loosen rear transmission case by applying light blows with a plastic hammer and remove.

Disassemble rear transmission case (27.2–500).

**24** Remove cup spring (85) with worm gear of tachometer drive (15), eccentric ring for secondary pump (16) and centrifugal governor (17) from output shaft (Fig. 17).

**25** Remove parking lock pawl (19) and expanding spring. Pull parking lock wheel (18) from output shaft (Fig. 17).

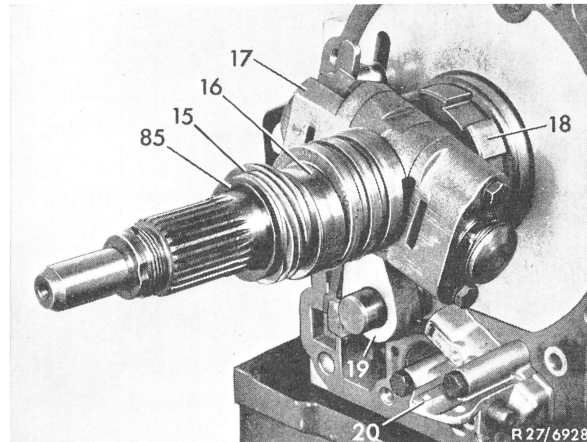


Fig. 17

15 Worm gear tachometer drive  
16 Eccentric ring secondary pump  
17 Centrifugal governor  
18 Parking lock wheel

19 Parking lock pawl  
20 Modulating pressure housing  
85 Cup spring

**26** Swivel assembly fixture.

**27** Loosen output shaft (76) with plastic hammer and remove (Fig. 18).

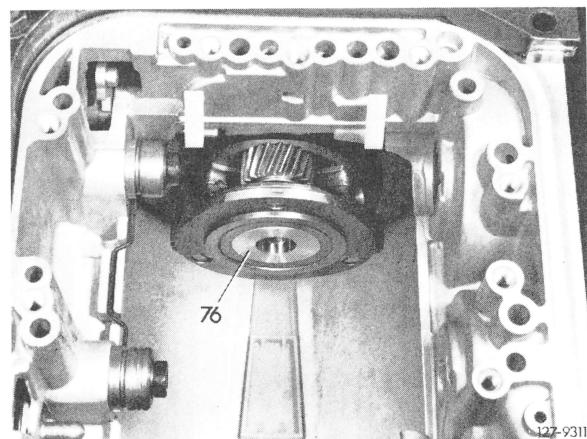


Fig. 18

76 Output shaft

**28** Remove locking clip (58) for thrust body B 1 (59) and B 2 (61) and remove both thrust bodies (Fig. 19).

**29** Remove upper brake band guide (81) and lower brake band guide for B 2 (52) from housing (Fig. 19).

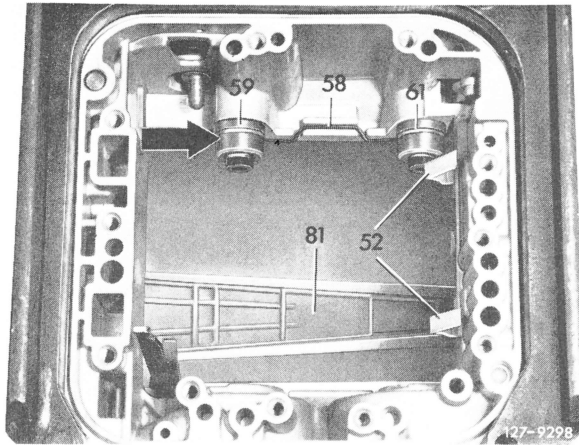


Fig. 19

52 Brake band guide B 2	61 Thrust body B 2
58 Locking clip	81 Brake band guide top
59 Thrust body B 1	→ identification groove

**30** Swivel assembly fixture.

**31** Unscrew modulating pressure valve housing (20) and remove gasket (42) (Fig. 20).

**32** Unscrew bracket (43), remove with leaf spring (44) and roller on needle bearing (Fig. 20).

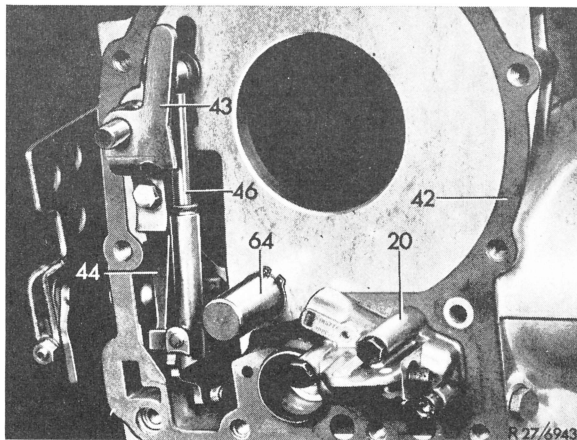


Fig. 20

20 Modulating pressure valve housing	44 Leaf spring
42 Gasket	46 Elastic linkage
43 Bracket parking lock	64 Bearing bolt parking lock pawl

**33** Remove elastic linkage (46) with roller (26) and washer (11) (Fig. 21).

**34** Unscrew clamping screw for detent plate (49) (Fig. 21).

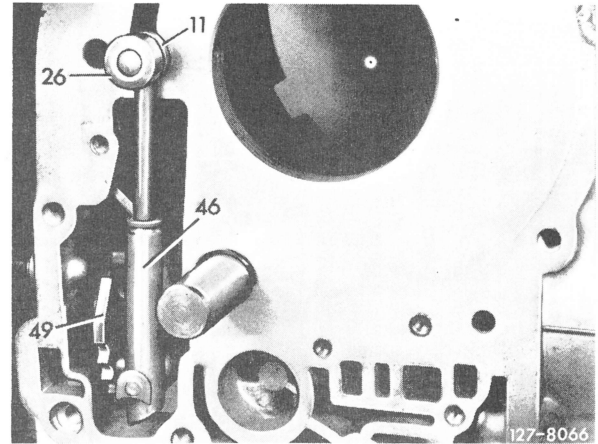


Fig. 21

11 Washer	46 Elastic linkage
26 Roller	49 Detent plate

**35** Remove transmission case from assembly stand.

**36** Pull out range selector lever with shaft and remove detent plate (49) from transmission case (Fig. 21).

**37** Remove starter lockout and back-up light switch (50) after loosening fastening bolts.

**38** Remove locking ring (24) and pull out cover (65) (Fig. 22).

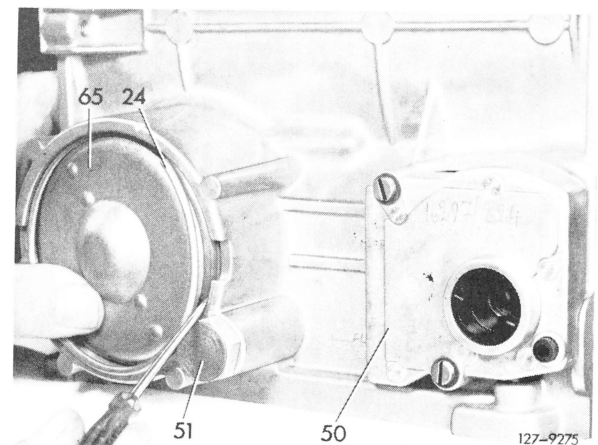


Fig. 22

24 Locking ring	51 High-speed filling valve
50 Starter lockout and back-up light switch	65 Brake band piston cover

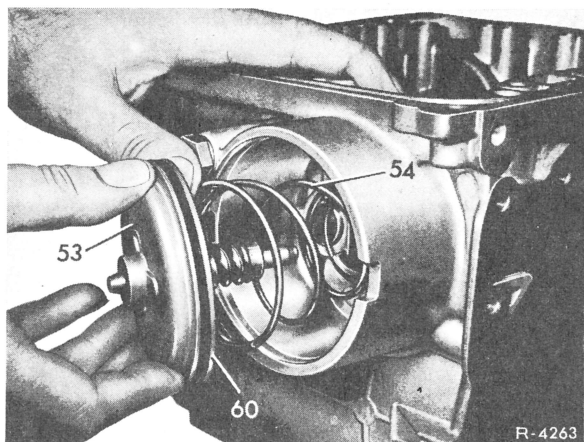


Fig. 23

53 Brake band piston B 3  
54 Truncated cone spring  
60 Lip sealing ring

**39** Remove brake band piston B 3 (53) and truncated cone spring (54) (Fig. 23).

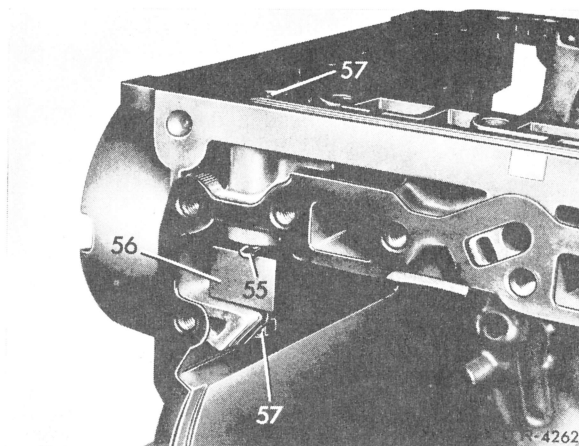


Fig. 25

55 Clamp  
56 Brake band lever B 3  
57 Bearing bolts

The sealing rings now still remaining in transmission case cannot be used for a replacement case. New sealing rings should be pressed-in with care.

**40** Pull clamp (55) for bearing bolt out of brake band lever B 3 and knock out bearing bolt (57) in downward direction (Fig. 25).

**41** Remove brake band piston B 3 (56) from transmission case.

## Assembly

**42** Replace O-rings depending on version in transmission case (arrows in Fig. 27) or on thrust bodies.

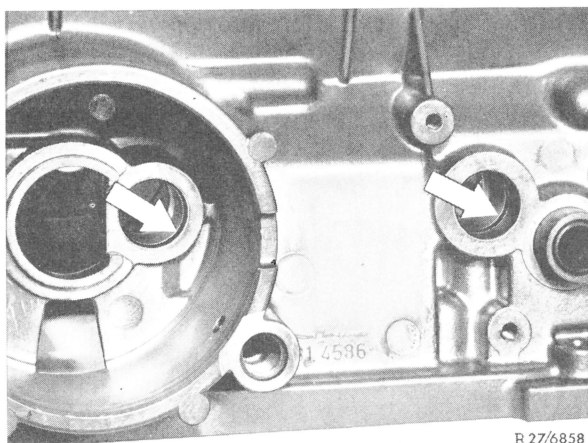


Fig. 27

**43** Insert thrust body B 1 (59) with one groove (sharp-edged) in valve cap and thrust body B 2 (61) without identification into transmission case and then lock with locking clip (58).

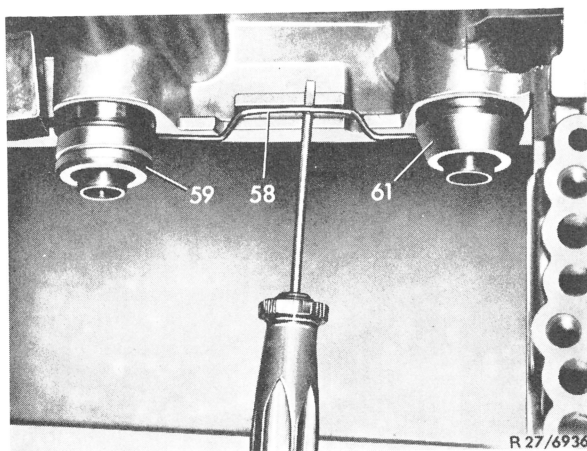


Fig. 28

58 Locking clip  
59 Thrust body B 1

61 Thrust body B 2

**44** Insert brake band lever B 3 (56) into transmission case. Introduce bearing bolt (57) from above and secure with clamp (55) (Fig. 25).

**45** Insert brake band piston B 3 (53) with a new lip sealing ring (60) and compression spring (54) into transmission case (Fig. 23).

**46** Mount brake band piston cover B 3 with new O-rings and secure with locking ring (24) (Fig. 29).

**47** Mount starter lockout and back-up light switch (50) and tighten fastening bolts to 5 Nm (0.5 kpm). (Fig. 29).

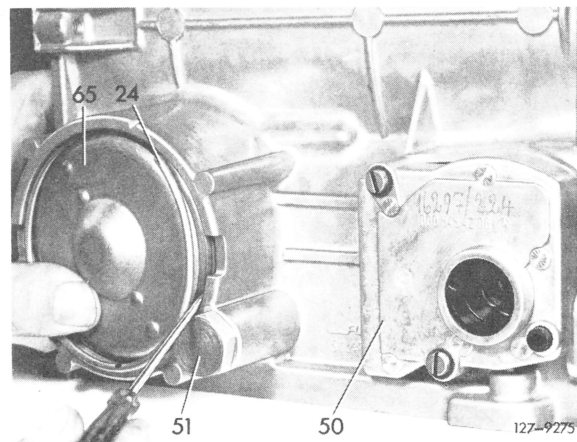


Fig. 29

24 Locking ring  
50 Starter lockout and back-up light switch  
51 High-speed filling valve  
65 Brake band piston cover

**48** Insert detent plate (49 in Fig. 21) into transmission case. Introduce range selector lever (48) with shaft (96 in Fig. 30) into teeth of detent plate and tighten clamping screw to 10 Nm (1.0 kpm) (Fig. 21).

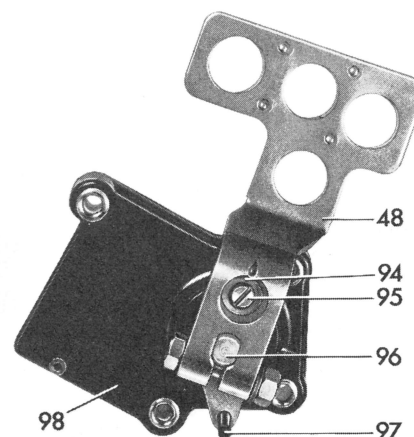


Fig. 30

Starter lockout and back-up light switch version 1

48 Range selector lever  
94 Washer  
95 Adjusting screw  
96 Shaft  
97 Locating pin  
98 Clamping screw



# 27.2 Disassembly and Assembly of Transmission

**49** Loosen adjusting screw (95) and introduce locating pin (97) (4-mm round material) through driver into locating bore in shift housing (Fig. 30 and 31).

**50** Tighten adjusting screw (95) and remove locating pin (97) (Fig. 30 and 31).

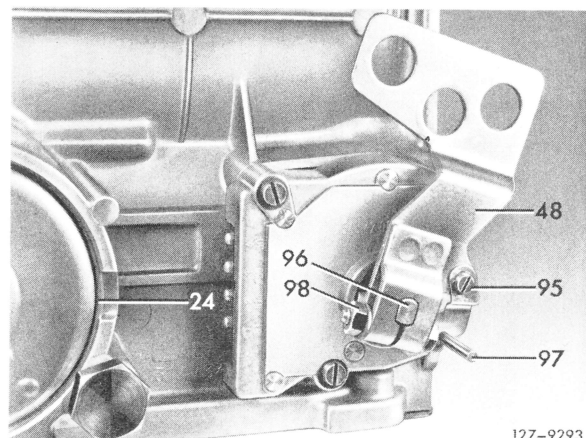


Fig. 31

Starter lockout and back-up light switch version 2

- |                         |                   |
|-------------------------|-------------------|
| 24 Circlip              | 96 Shaft          |
| 48 Range selector lever | 97 Locating pin   |
| 95 Adjusting screw      | 98 Clamping screw |

**51** Mount transmission case on assembly fixture.

**52** Install control pressure shaft (100), insert plastic washer (102) with lock (101) (Fig. 32).

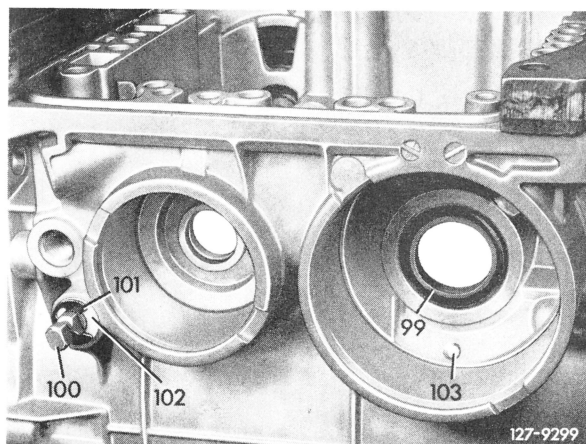


Fig. 32

- |                            |                    |
|----------------------------|--------------------|
| 99 Lip sealing ring        | 102 Plastic washer |
| 100 Control pressure shaft | 103 Throttle bore  |
| 101 Lock                   |                    |

**53** Press-in lip sealing ring (99) for release end B 2 until ring is flush with housing (Fig. 32).

**54** Insert upper brake band guide (81) and lower brake band guide for B 2 (52) into housing (Fig. 33).

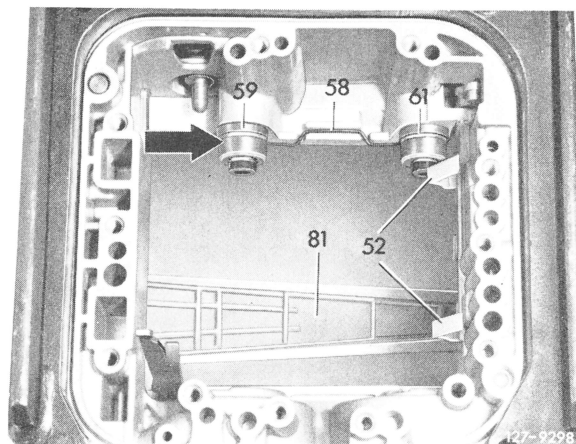


Fig. 33

- |                         |                         |
|-------------------------|-------------------------|
| 52 Brake band guide B 2 | 61 Thrust body B 2      |
| 58 Locking clip         | 81 Brake band guide top |
| 59 Thrust body B 1      | → identification groove |

**55** Swivel assembly fixture.

**56** Plug-on elastic linkage (46) with washer (11) and roller (26) (Fig. 34).

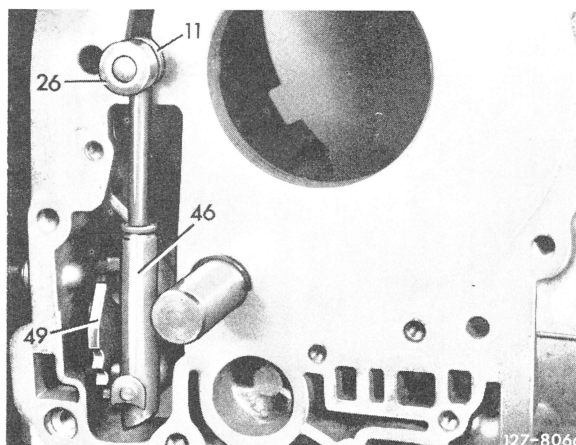


Fig. 34

- |           |                    |
|-----------|--------------------|
| 11 Washer | 46 Elastic linkage |
| 26 Roller | 49 Detent plate    |

**57** Plug-on leaf spring (44) and roller on needle bearing (47) (Fig. 35).

**58** Tighten bracket (43) with hex. bolt to 10 Nm (1.0 kpm) and mount bearing bolt (64) for parking lock pawl (Fig. 36).

**59** Mount modulating pressure valve housing (20) with a new gasket (42) for rear transmission case. Tighten fastening screws to 7 Nm (0.7 kpm) (Fig. 36).

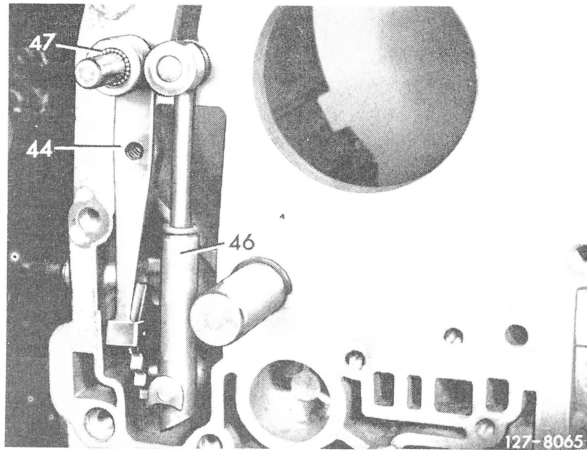


Fig. 35

44 Leaf spring  
46 Elastic linkage  
47 Roller on needle bearing

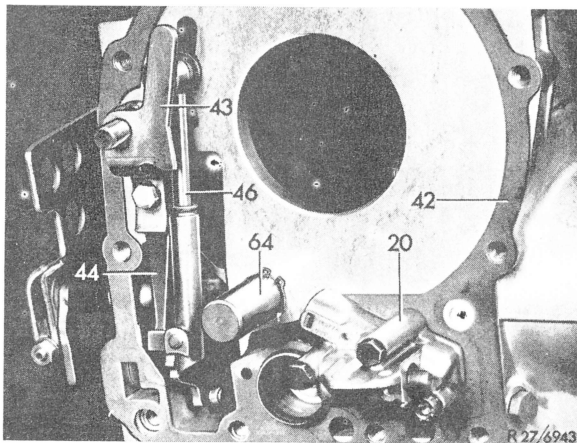


Fig. 36

20 Modulating pressure valve housing  
42 Gasket  
43 Bracket parking lock  
44 Leaf spring  
46 Elastic linkage  
64 Bearing bolt parking lock pawl

**Note:** Prior to tightening modulating pressure valve housing, center gasket at bores for fitted pins.

Upon tightening, check valve for easy operation.

Do not loosen or adjust adjusting screw on modulating pressure valve housing with bimetallic coil.

**60** Swivel transmission on assembly stand into horizontal position.

**61** Insert output shaft (76) with radial ball bearing into transmission case and knock-in by means of a plastic hammer (Fig. 37).

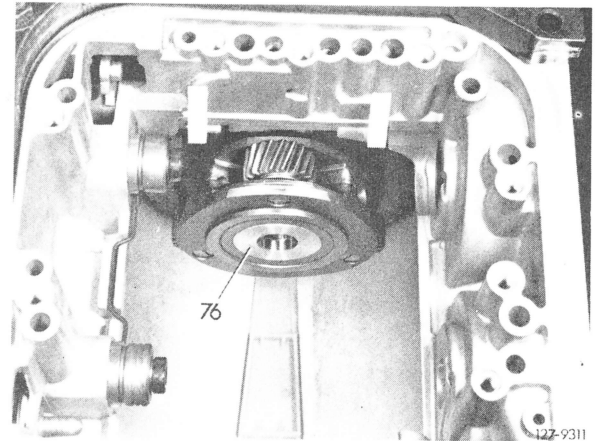


Fig. 37

76 Output shaft

**62** Turn transmission with assembly fixture.

**63** Mount parking lock wheel on output shaft.

**64** Slide tensioning spring (63) on bearing bolt (64) and attach to transmission housing (refer to arrow). Pull tensioning spring (63) outwards by means of a tracer needle (Fig. 38) and slip-on parking lock pawl (19) (Fig. 39).

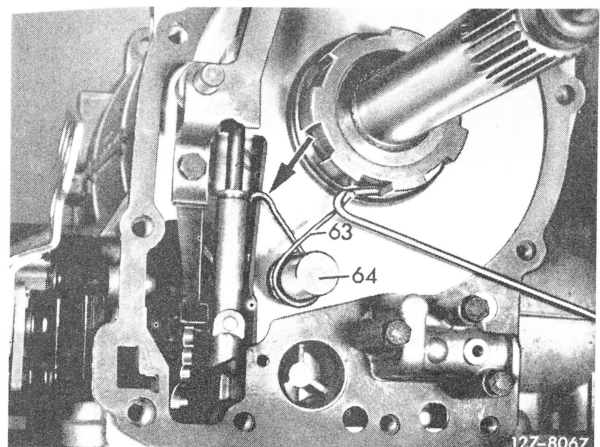


Fig. 38

63 Tensioning spring

64 Bearing bolt



## 27.2 Disassembly and Assembly of Transmission

**65.** Check function of parking lock. Slip centrifugal governor (17) eccentric ring for secondary pump (16), worm gear for tachometer drive (15) and cup spring (85) on output shaft (Fig. 39).

**66** Assemble rear transmission case (27.2–560).

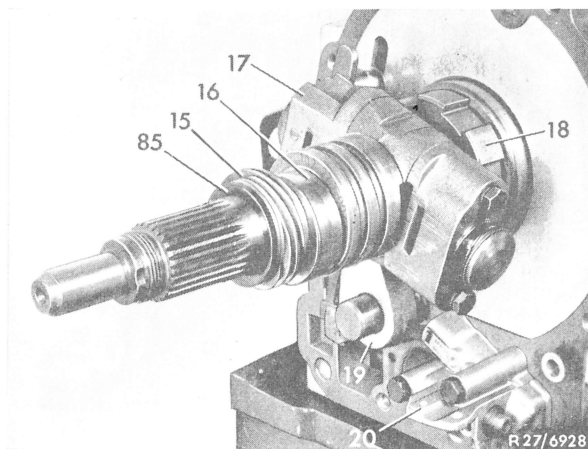


Fig. 39

- |                                  |                                |
|----------------------------------|--------------------------------|
| 15 Worm gear tachometer drive    | 19 Parking lock pawl           |
| 16 Eccentric ring secondary pump | 20 Modulating pressure housing |
| 17 Centrifugal governor          | 85 Cup spring                  |
| 18 Parking lock wheel            |                                |

**67** Install pressure-receiving piston:

Insert pressure-receiving spring (82) with pressure-receiving piston (23) in the sequence shown in illustration into rear transmission case (Fig. 41).

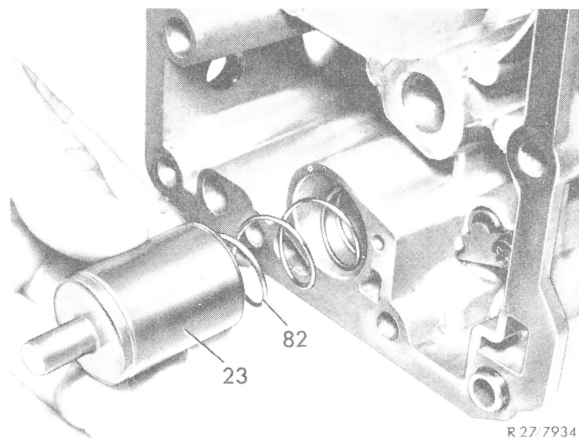


Fig. 41

- 23 Pressure-receiving piston 82 Pressure-receiving spring

**68** Push delivery piston for secondary pump outwards and mount transmission case (Fig. 42).

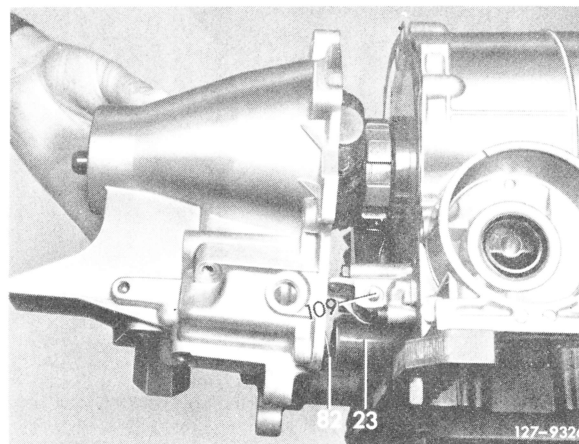


Fig. 42

- 23 Pressure-receiving piston 109 Modulating pressure control valve  
82 Pressure-receiving spring

**69** Screw-in fastening bolts of rear transmission case and tighten to 13 Nm (1.3 kpm).

**70** Screw-in plug for secondary pump (13) with new O-ring (41) and compression spring (14) (Fig. 43).

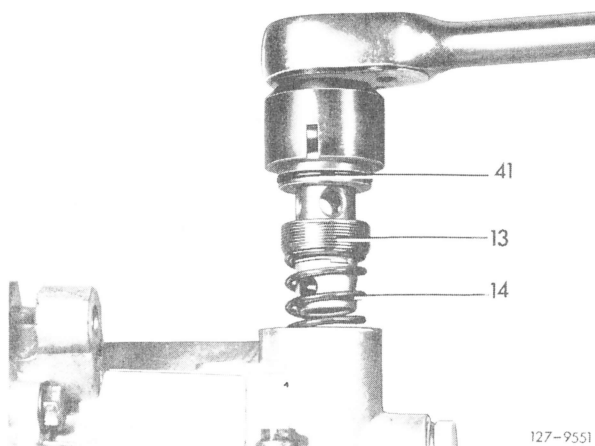


Fig. 43

13 Plug for secondary pump  
14 Compression spring

41 O-ring

**71** Plug three-legged flange on output shaft and tighten slot nut to 120 Nm (12.0 kpm), lock slot nut (arrow in Fig. 44).

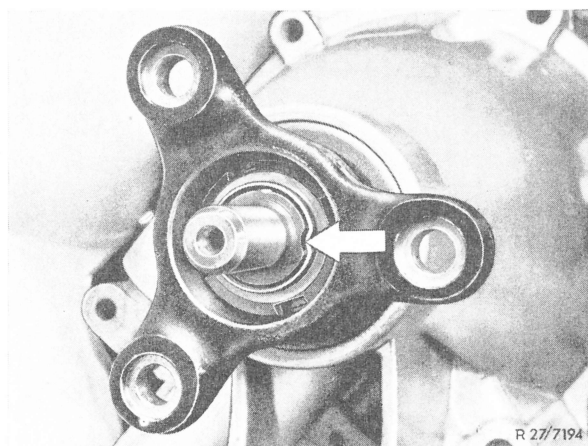


Fig. 44

**72** Screw measuring device (62) into housing and tighten slightly. Insert thrust pin (12) and push down against stop (Fig. 45). Thrust pin should be flush with face of measuring device. For this reason, thrust pins are available in three different lengths, which are color coded.

**73** Glue thrust pin as measured into vacuum box with Omnifit-Rapid Rot M.

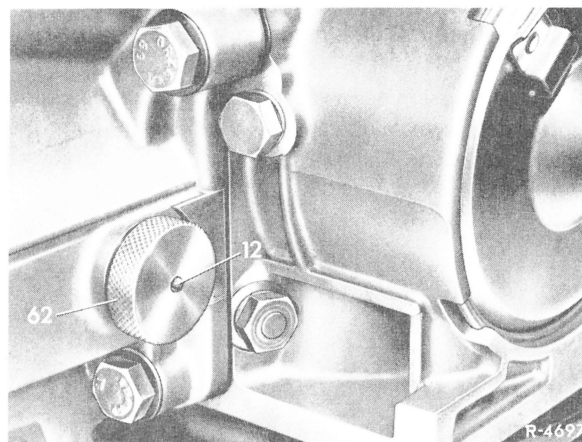


Fig. 45

12 Thrust pin

62 Measuring device

**74** Coat vacuum box (10) on threads with sealing compound and screw into rear transmission case (Fig. 46), making sure that the thrust pin enters bore in control valve.

#### Vacuum box version 1 (steel)

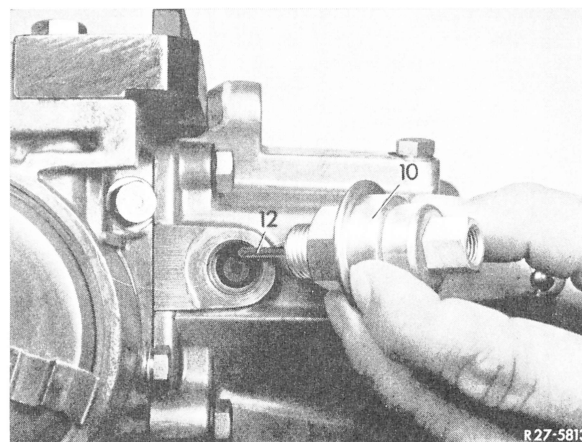


Fig. 46

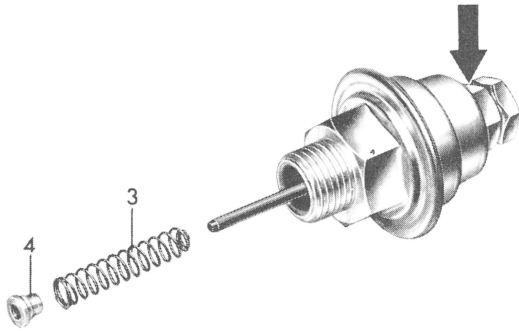
10 Vacuum box

12 Thrust pin

## 27.2 Disassembly and Assembly of Transmission

### Transmission 722.004, model year 1975

This transmission has a vacuum box with compression spring and spring guide as well as an identifying groove (arrow in Fig. 47).



127-8028

Fig. 47

3 Compression spring      4 Spring guide

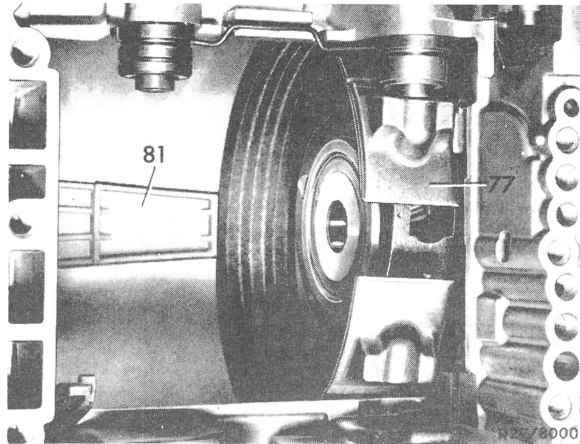


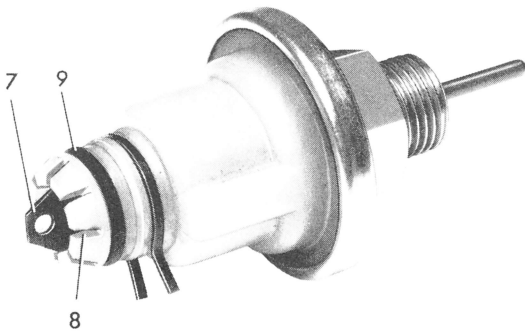
Fig. 49

77 Brake band B 2

81 Brake band guide

### Vacuum box version 2 (plastics)

The vacuum box is partially made of plastics (Fig. 48).



127-10627

Fig. 48

7 Locking plate  
8 Locking slots

9 O-ring

**75** Place brake band B 2 (77) (moderate steel band with radially grooved lining) into transmission case (Fig. 49).

**76** Insert axial bearing (78) and radial bearing (79) with grease into gear assembly (Fig. 51).

**77** Clamp brake band B 1 (39) (smooth lining) with circlip for brake band piston cover B 2 on brake band drum (Fig. 52).

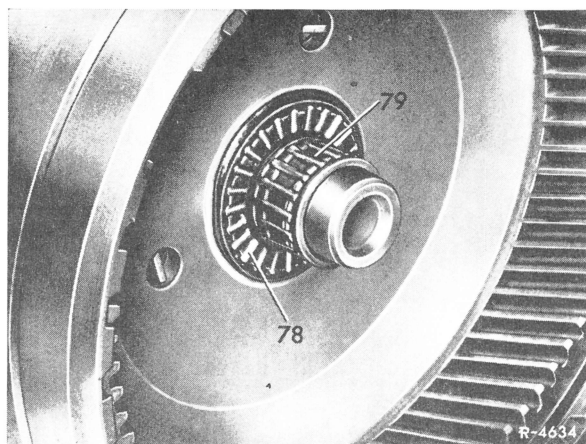


Fig. 51

78 Axial bearing

79 Radial bearing

**78** Insert gear assembly (40) with brake band B 1 (39), while introducing the supporting lever for the oil feed sleeve in groove in transmission case (Fig. 52).

**Note:** When introducing gear assembly into transmission case, make sure that the sector teeth of the sun gear on output shaft are correctly entering the brake drum B 2.

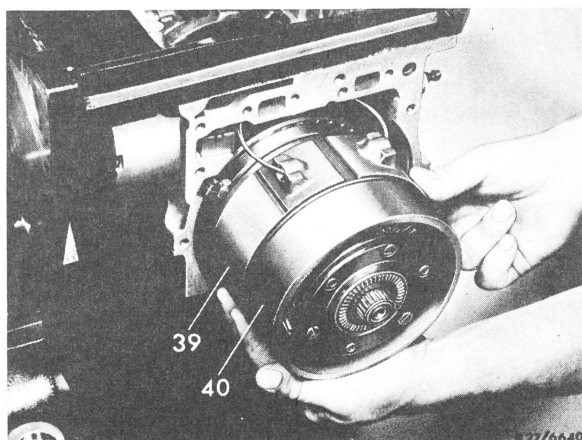


Fig. 52

39 Brake band B 1

40 Gear assembly

**79** Insert input shaft (41) into gear assembly (40) (Fig. 53).

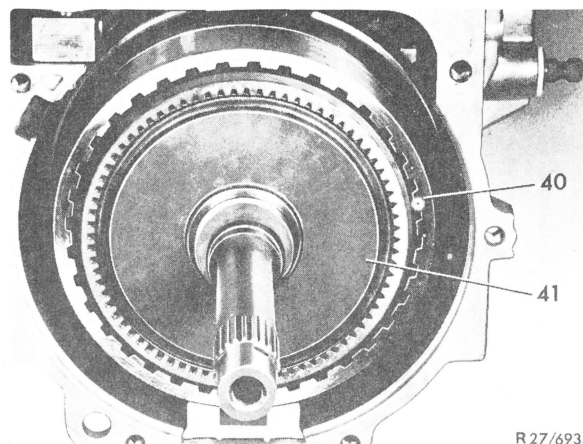


Fig. 53

40 Gear assembly

41 Input shaft

**80** Insert brake band B 3 with radially grooved lining (strong steel band) (38) from the front into transmission case, insert both thrust pins (37) into brake band B 3 (38) and turn adjusting screw (35), coated with sealing compound, into transmission case until brake band is held in place (Fig. 54).

**81** Turn transmission with assembly fixture so that the input shaft is facing upwards.

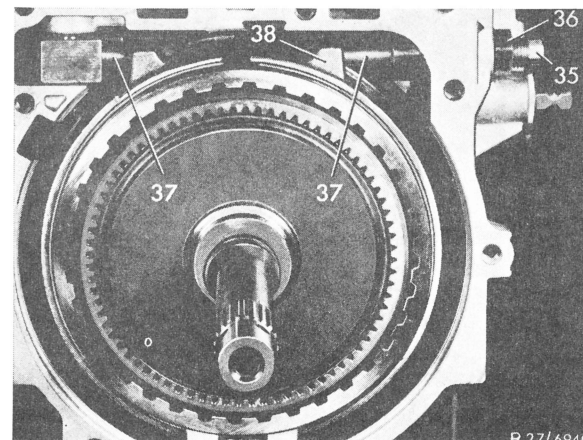


Fig. 54

35 Adjusting screw B 3  
36 Counternut37 Thrust pin  
38 Brake band B 3

**82** Measure end play of gear assembly by placing measuring bridge on transmission case and measuring dimension "A" by means of depth gauge (Fig. 55).

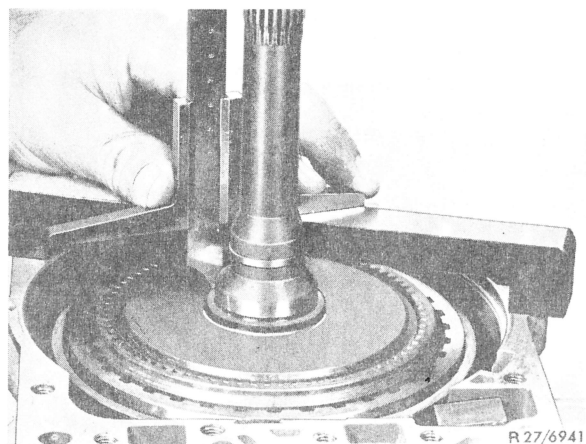


Fig. 55

**83** Place new gasket on front transmission housing and determine dimension "B" (Fig. 56).

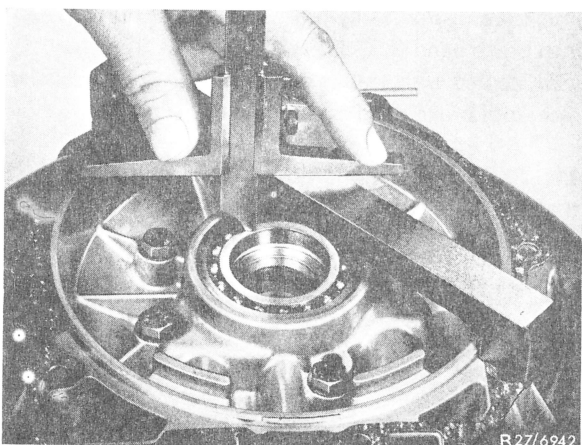


Fig. 56

The difference of dimensions A and B is the play "C" of gear assembly (Fig. 57).

The starting point for the computation is the 30 mm thickness of the measuring bridge.

The end play dimension "C" results from the following computation:

1. 30 mm minus measured dimension "A".
2. The measured dimension "B" minus 30 mm.
3. The difference of the values measured under items 1 and 2 provides dimension "C".

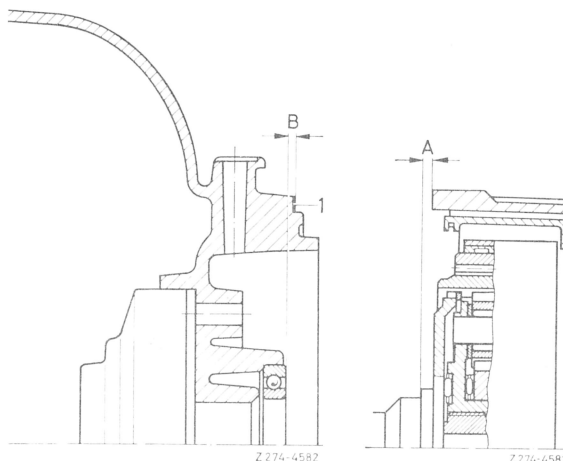


Fig. 57

1 Gasket

**Example:**

Measuring bridge	= 30.0 mm
Dimension "A"	= 28.0 mm
	<hr/> 2.0 mm

Dimension "B"	= 32.4 mm
Measuring bridge	= 30.0 mm
	<hr/> 2.4 mm

Dimension "C"	= 2.4 - 2.0 = 0.4 mm
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**84** Adjust dimension "C" for end play by placing compensating washer (88) on input shaft to its value of  $0.4 + 0.1$  mm (Fig. 58).

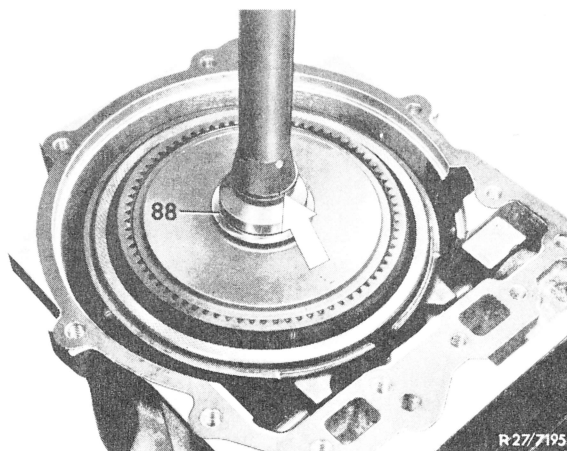


Fig. 58

88 Compensating washer

**85** Center gasket prior to mounting front transmission cover. Align piston ring on input shaft in such a manner, that the gap and the groove are aligned (arrow in Fig. 58).

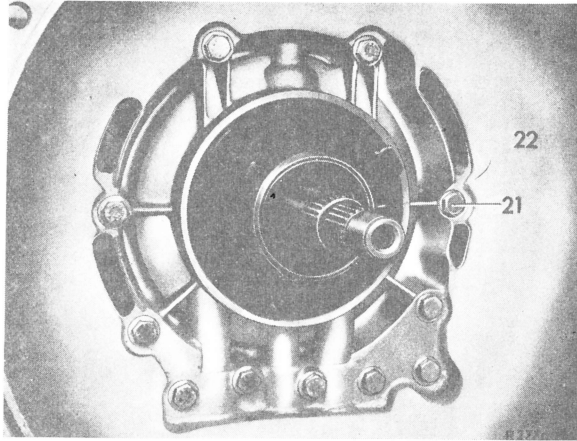


Fig. 59

21 Fastening bolts      22 Front transmission case

**86** Mount front transmission case (22) with new gasket. Screw-in fastening bolts and tighten to 13 Nm (1.3 kpm) (Fig. 59).

**Note:** Lightly coat threads of lower seven bolts with sealing compound.

**87** Insert the two thrust pins (34) (Fig. 60).

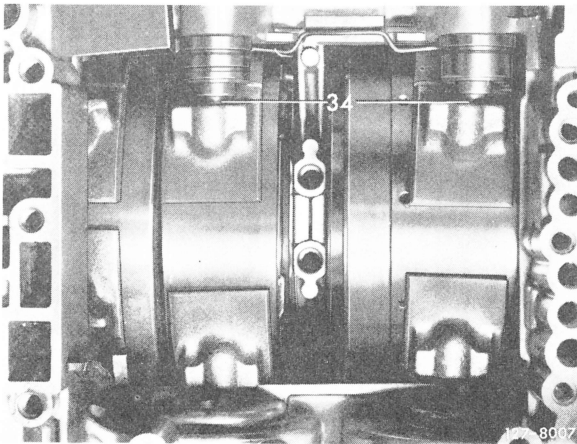


Fig. 60

34 Thrust pins

**88** Visually check oil sealing ring and bypass valve (41) for brake band piston B 2 (Fig. 61).

**89** Install brake band piston B 2:

Introduce brake band piston B 2 (67) with introducing ring (66) into transmission case and watch out for correct seat of thrust pin in bore of brake band B 2 (Fig. 61).

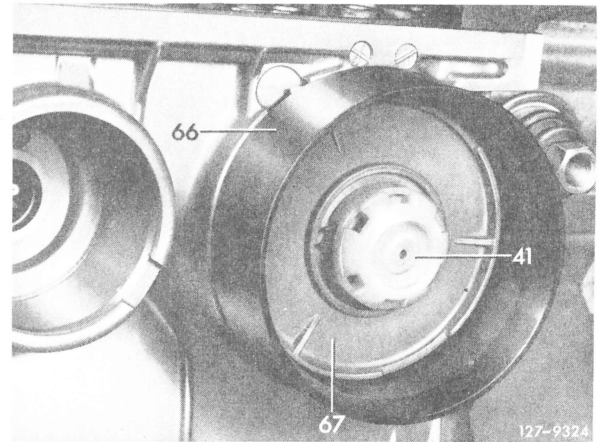


Fig. 61

41 Bypass valve  
66 Introducing sleeve 115 589 18 61 00 or 116 589 05 14 00  
67 Brake band piston B 2

Provide brake band piston cover B 2 (65) with a new O-ring (80) and insert together with truncated cone spring (68). Then secure with circlip (Fig. 62).

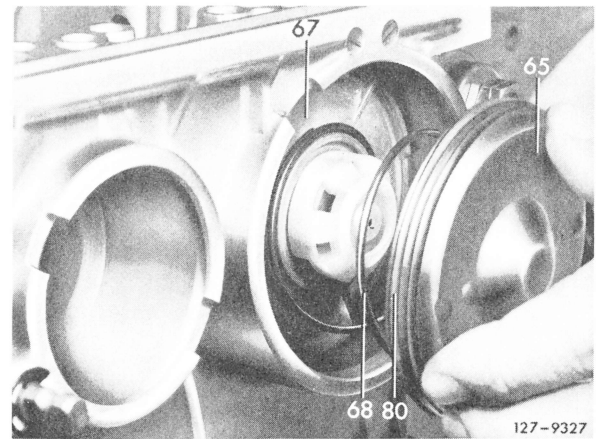


Fig. 62

65 Brake band piston cover B 2      68 Truncated cone spring  
67 Brake band piston B 2      80 O-ring



**90** Replace O-ring (32) of brake band piston cover B 1 (Fig. 69).

**91** Replace lip sealing ring (33) of brake band piston B 1 (30). Assemble auxiliary piston and brake band piston B 1 (transmission 722.003), slip compression spring(s) (31) on brake band piston (Fig. 69).

**92** Mount assembly fixture with brake band piston B 1 and screw down. Introduce brake band piston cover B 1 (29) with assembly fixture (Fig. 69) and secure by means of circlip.

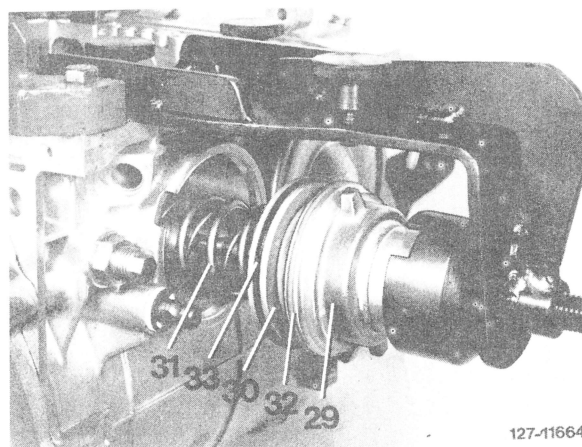


Fig. 69

29 Brake band piston cover B 1

30 Brake band piston B 1

31 Compression springs

32 O-ring

33 Lip sealing ring

**93** Remove assembly fixture for brake band piston B 1.

**94** Measure idle travel of brake band piston B 1 and B 2. For this purpose, move brake band piston B 2 by means of compressed air via bore for lifting pressure (69) into lifting position and determine dimension "b". Then move brake band piston with compressed air via bore for control pressure B 2 (70) into shift position (Fig. 70), while again determining dimension "b". The difference of the two measurements provides the idle travel "L".

Under the influence of the compression spring(s), the brake band piston B 1 is now in lifting position. Determine dimension "a" when in this position. Then move brake band piston with compressed air via bore for control pressure B 1 (71) into shift position (Fig. 70), while again determining dimension "a". The difference of the two measurements provides the idle travel "L".



## 27.2 Disassembly and Assembly of Transmission

The idle travel "L" of brake band piston B 1 and B 2 should amount to 3.0 – 4.0 mm, with the exception of transmission 722.003 the idle travel for B 2 amounts to 6.0 – 7.0 mm.

When the idle travel "L" is too high, install a longer thrust pin (34), when it is too low, install a shorter pin.

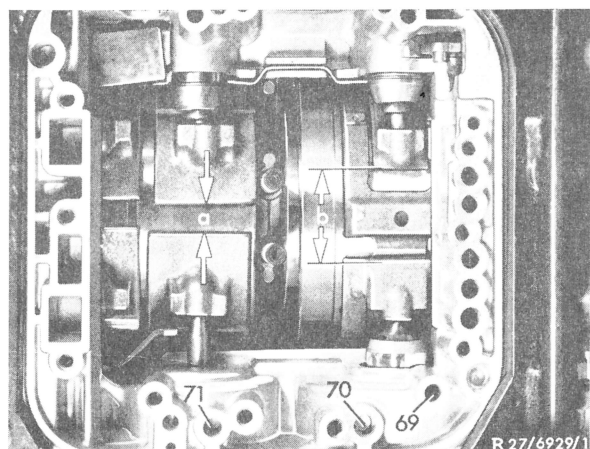


Fig. 70

69 Lifting pressure B 2  
70 Shift pressure B 2

71 Shift pressure B 1

### 95 Adjust brake band B 3.

**Attention!** Do not use adjusting screw (35) again, but use a new adjusting screw having a recess behind octagon (arrow in Fig. 71) as a replacement.

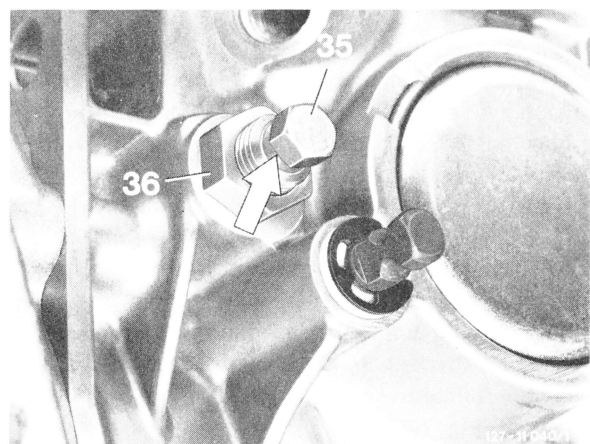


Fig. 71

35 Adjusting screw

36 Counternut

Screw-in adjusting screw (35) with counternut released and tighten to 5 Nm (0.5 kpm).

Measure gap "A" on brake band (Fig. 72).

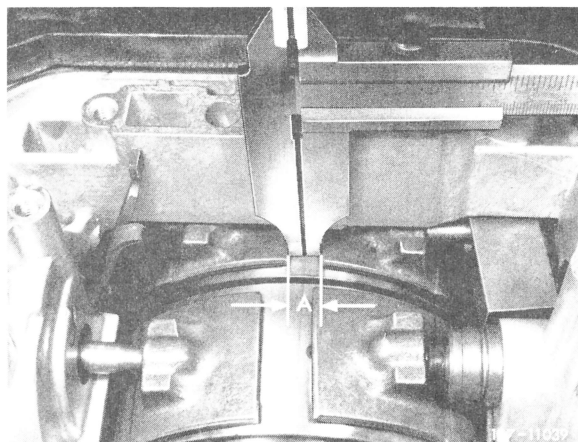


Fig. 72

Unscrew adjusting screw by  $1\frac{3}{4}$  turns and measure gap "A" once again. The difference between the two measurements is the idle travel and should be at least 3 mm.

**96** Partially turn (machine) off hex. head of adjusting screw (Fig. 74).

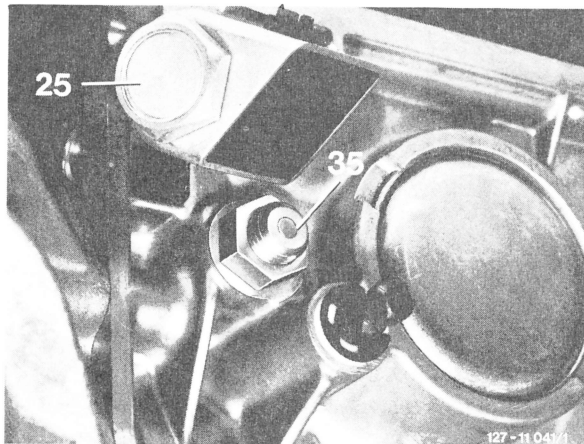


Fig. 74

25 Solenoid valve

35 Adjusting screw

**97** Screw-in solenoid valve (25) with new O-ring and sealing ring and tighten to 30 Nm (3.0 kpm) (Fig. 74).

**98** Screw-on control pressure lever.

**99** Insert both plug pipes (8) with new sealing rings (9) (Fig. 75).

**100** Move range selector lever between position "P" and "R". Insert locating pin for control pressure valve (72) into shift valve housing and screw two studs M 8 x 50 (73) into transmission case (Fig. 77).

**101** Carefully introduce shift valve housing into transmission case. Make particularly sure that the range selector valve (74) enters the range selector lever (75) (Fig. 77).

**102** Unscrew stud (73) (Fig. 77). Screw-in fastening bolts (6) with spring washers and tighten to 13 Nm (1.3 kpm) (Fig. 78).

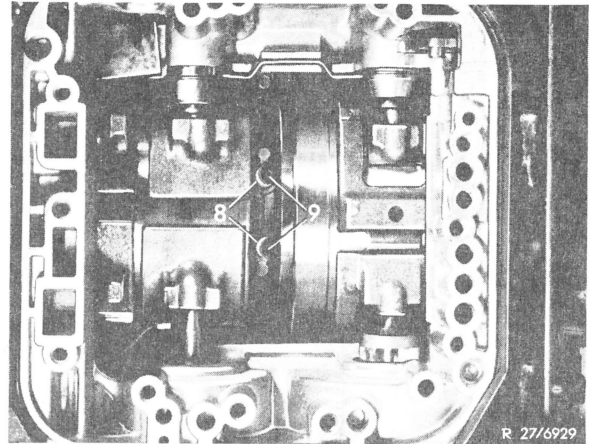


Fig. 75

8 Plug pipe

9 Sealing bushing

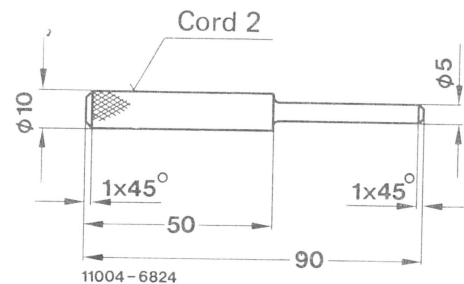


Fig. 76

Locating pin (self-made)

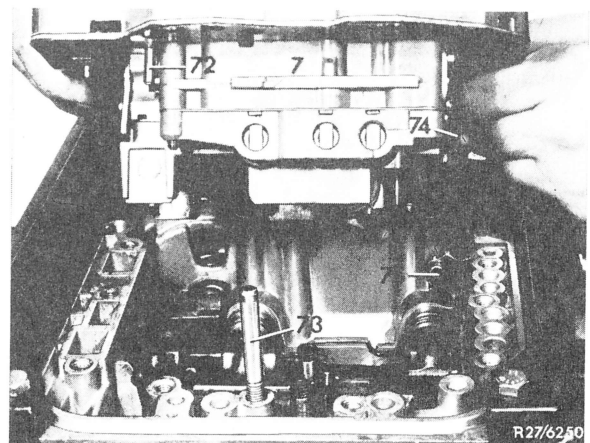


Fig. 77

7 Shift valve housing

72 Locating pin control pressure

73 Stud

74 Range selector valve

75 Range selector lever

# 27.2 Disassembly and Assembly of Transmission

**Attention!** Watch out for different length of fastening bolts (Fig. 78). Bolts item 6 a M 8 x 25, bolts item 6 b M 8 x 30.

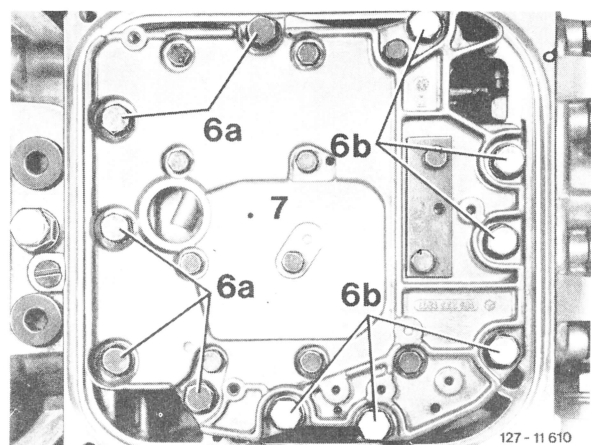


Fig. 78

6a Fastening bolts M 8 x 25  
6b Fastening bolts M 8 x 30  
7 Shift valve housing

**103** Pull out locating pin (72) for control pressure valve.

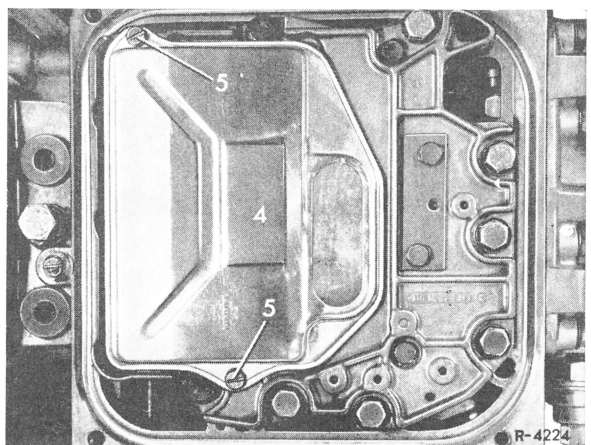


Fig. 79

4 Oil filter  
5 Fastening bolts

**104** Mount oil filter (4), screw-in fastening bolts (5) and tighten to 4 Nm (0.4 kpm) (Fig. 79).

**105** Remove transmission from assembly stand.

**106** Mount oil pan (1) with new gasket, screw-in fastening bolts (2) with shims (3) and tighten to 7 Nm (0.7 kpm) (Fig. 80).

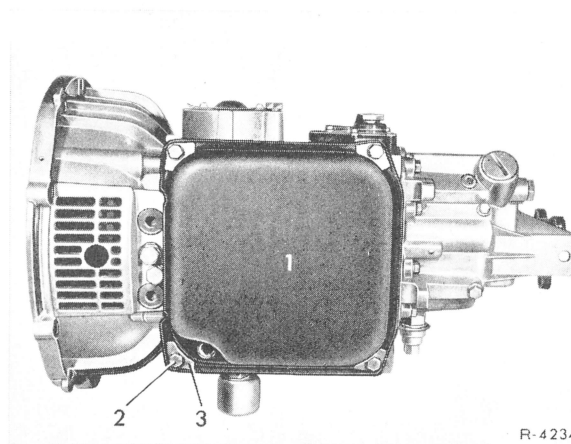


Fig. 80

1 Oil pan  
2 Fastening bolts  
3 Shims