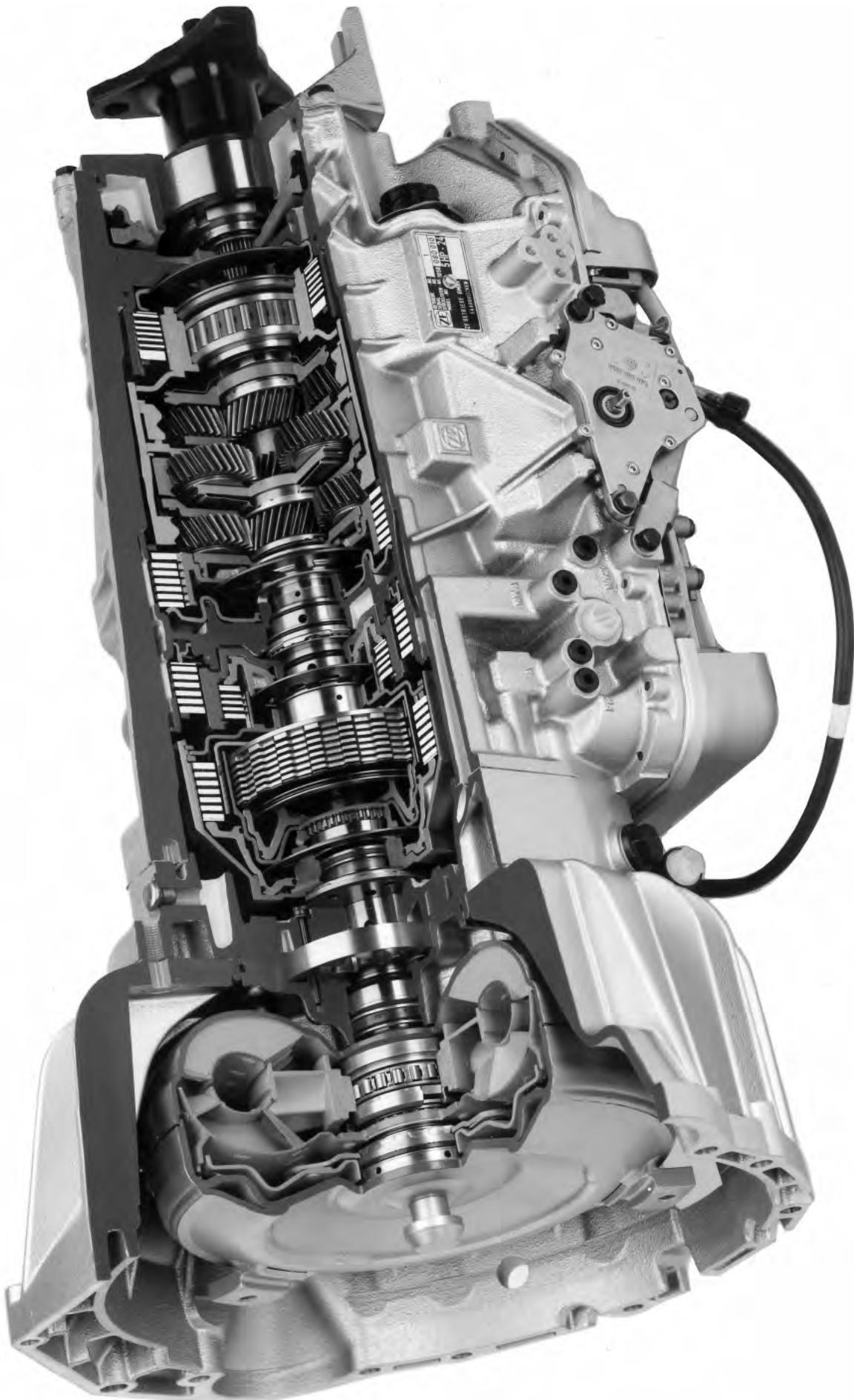


1. General information

1.1 Picture of the transmission



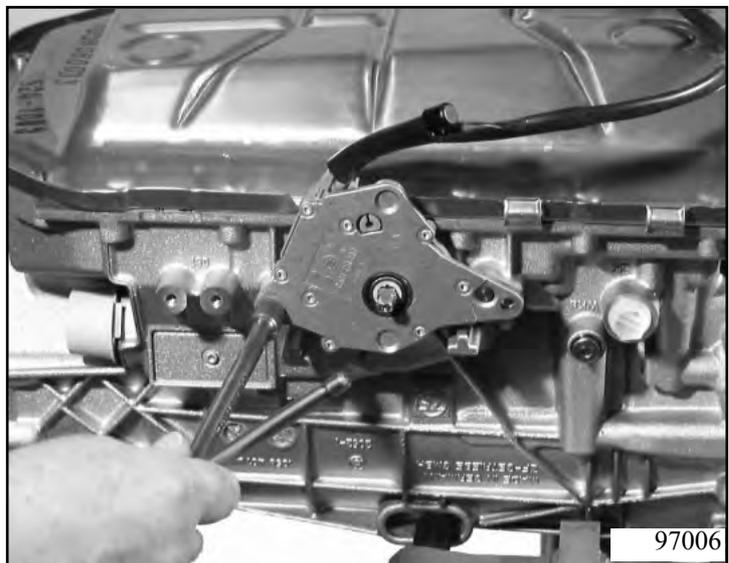
Turn the transmission 180°.
Disconnect the wiring harness plug and pull it out.
Remove the plug holder by unscrewing the machine screw.

(Wrench size = hexagon, 10 mm)



Remove the protective transport cap from the selector shaft.
Move selector lever to the “N” position.
Unscrew the two hexagonal screws and remove the position switch.

(Wrench size = hexagonal, 10 mm)

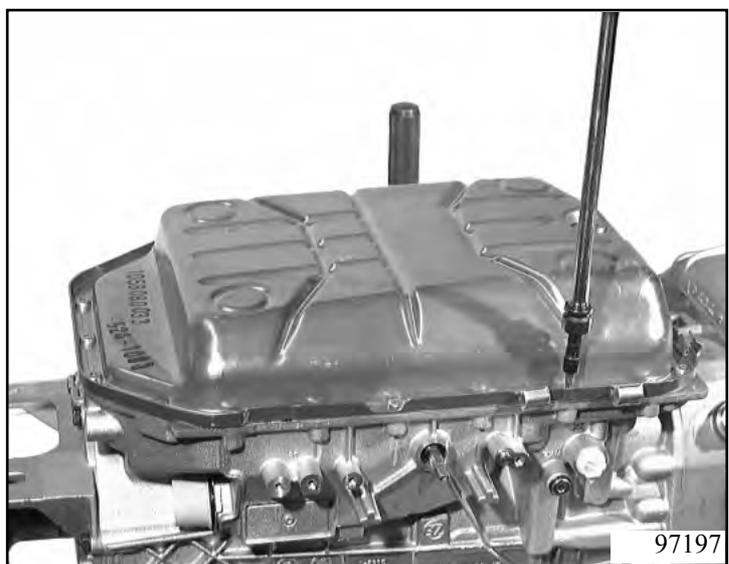


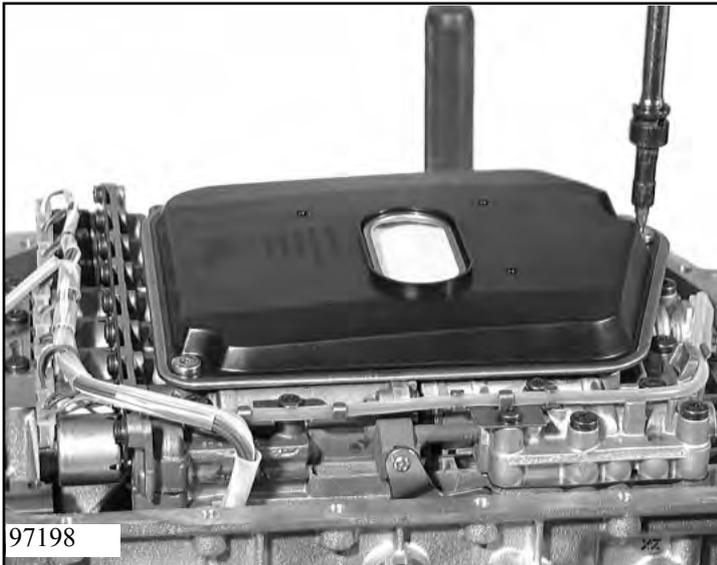
Remove the 22 machine screws used to fasten the oil pan, and lift off the oil pan and gasket.

(Wrench size = Torx - TX 27)

Important!

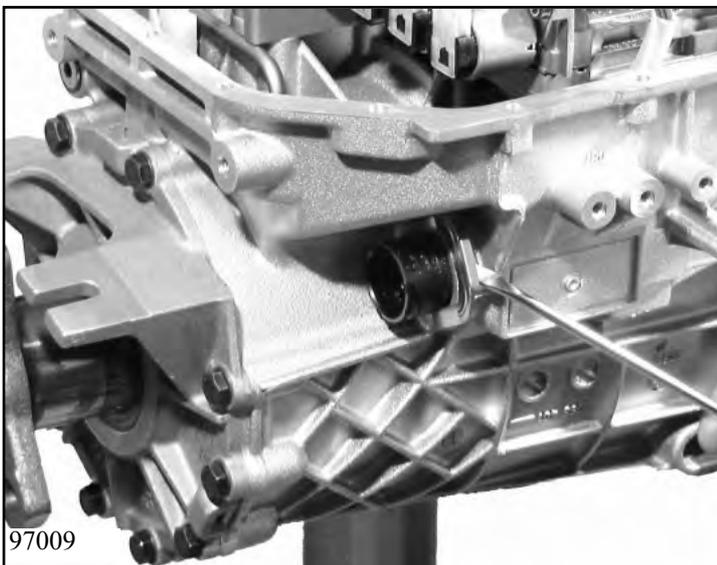
Remove any remains of the gasket from the sealing surface.



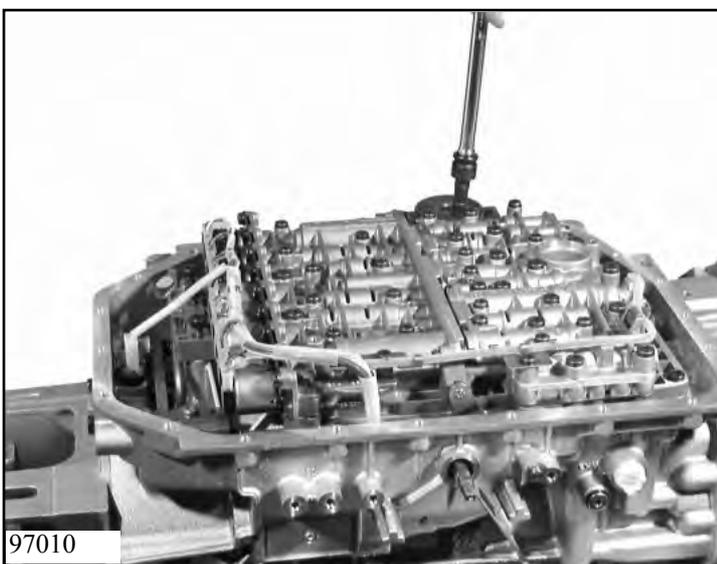


Remove the filter and the O-ring by unscrewing the 2 machine screws.

(Wrench size = Torx - TX 27)



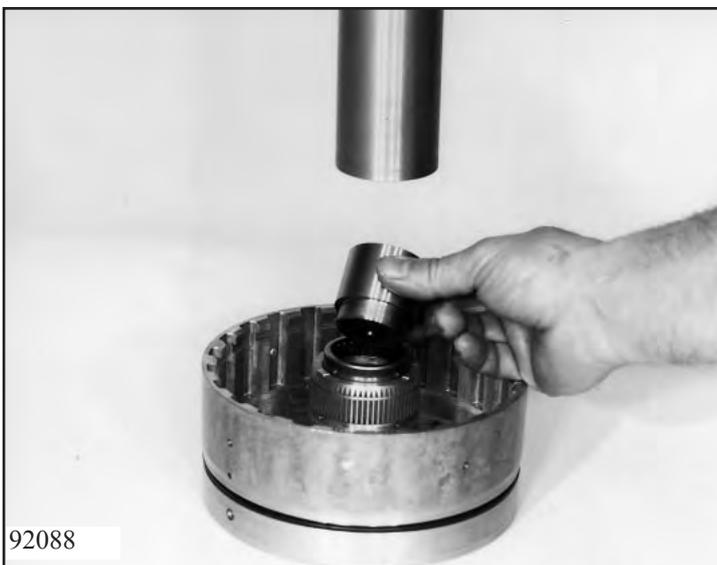
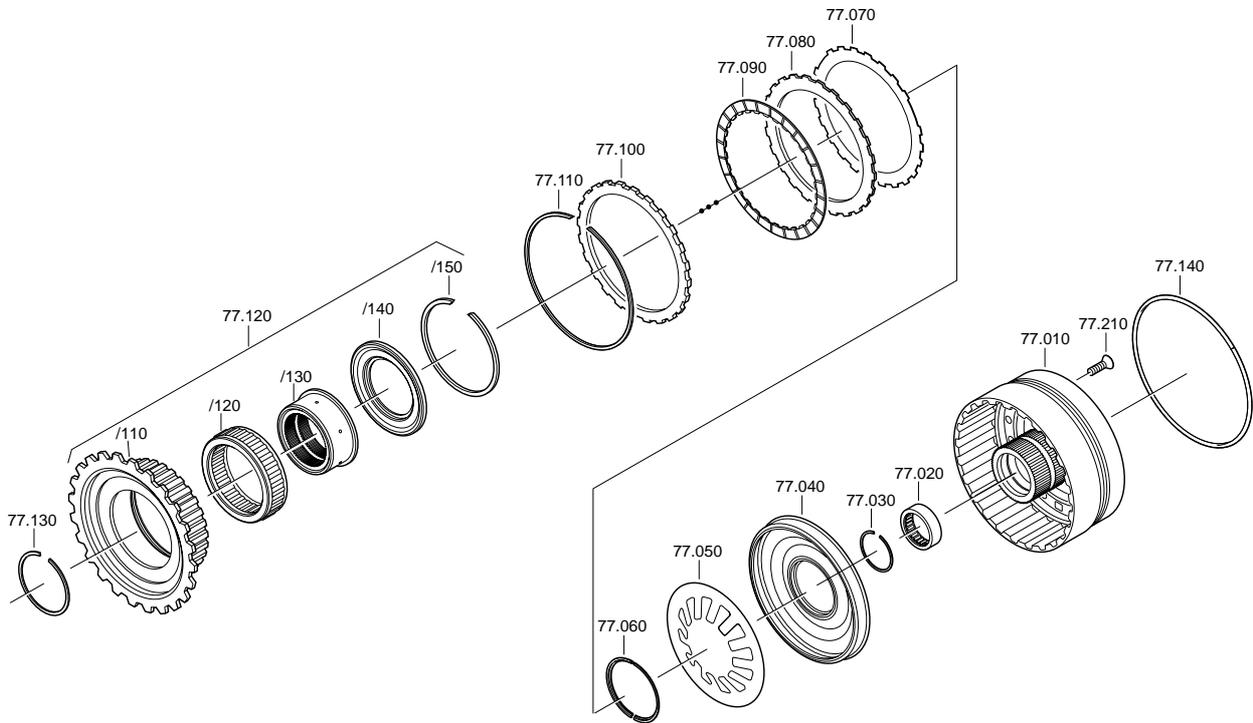
Disconnect the transport protection cap from the wiring harness socket, unlock the retaining clip using a suitable screwdriver, and press the socket into the housing by hand.



Loosen the inductive transmitter screw and remove together with holder. Unscrew the screws with **large heads** (M6), und remove the control unit as a complete unit.

(Wrench size = Torx - TX 27)

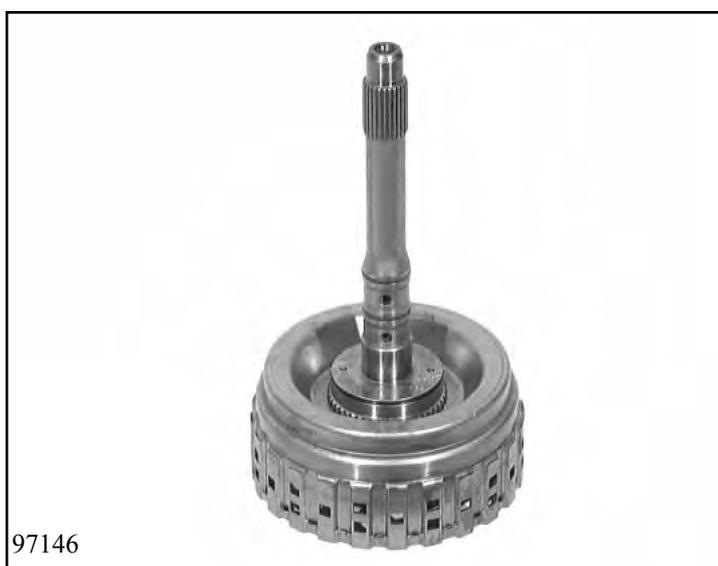
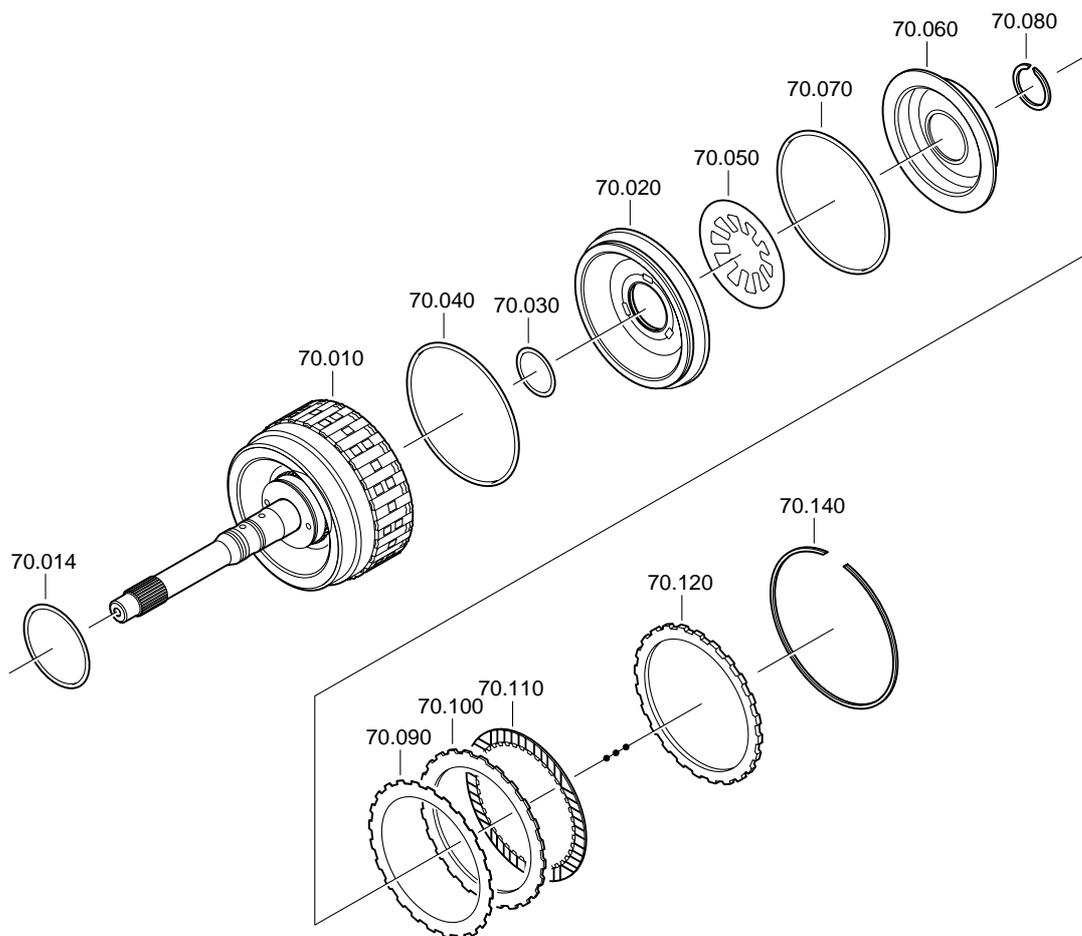
3.2 Brake F with freewheel, 1st gear



Put O-ring 75.140 on cylinder F 75.010. Press needle roller bearing 75.020 into cylinder F with press-in fixture 5x46 001 006 in the mandrel press, and secure it with snap ring 75.030.

3.5 Tower II (input with clutches A and B)

3.5.1 Clutch A (input)



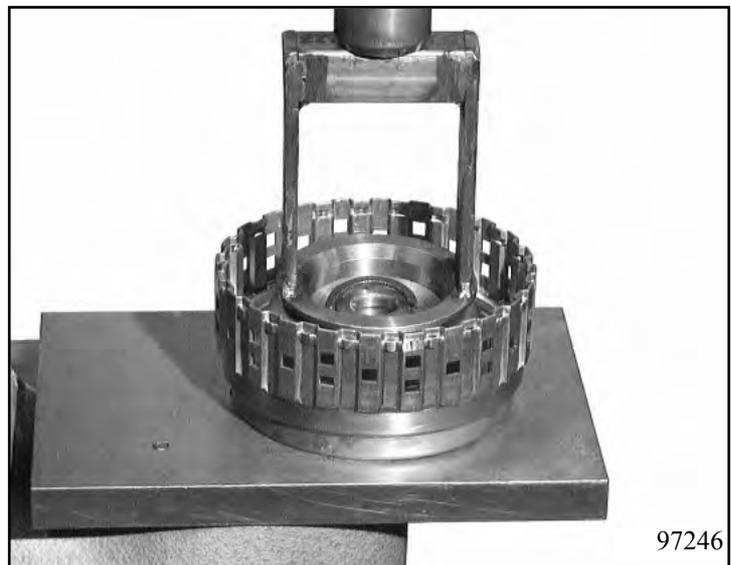
Place a new O-ring 70.014 and two rectangular-section rings 72.140 on cylinder A 70.010 with the input shaft.

97146

Put new O-rings 70.030 and 70.040 on piston 70.020.
Press the piston into cylinder A.



Put a new O-ring 70.070 onto oil dam 70.060. Insert cup spring 70.050 into cylinder A and press in the oil dam. Using assembly bracket 5x46 001 499, press down the oil dam in the mandrel press, and secure it with snap ring 70.080.

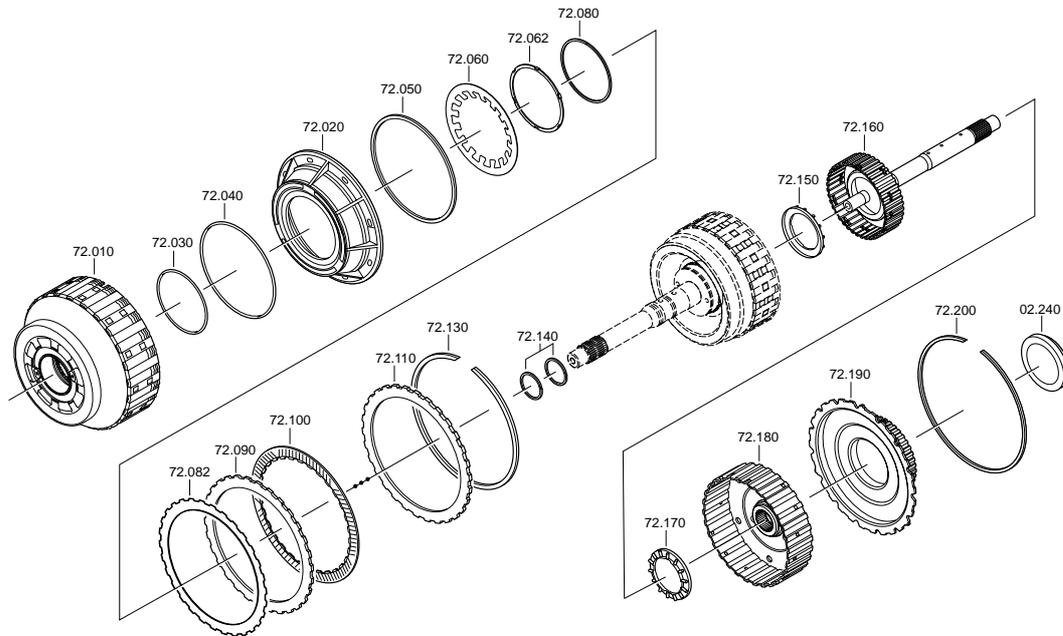


Insert the complete clutch pack A. Begin with spring clutch disc 70.090, followed alternately by outer clutch disc 70.100 and lined clutch disc 70.110. Insert end disc 70.120 and secure it with snap ring 70.140.



Important!
Making adjustments: see **Chapter 1.4.7**

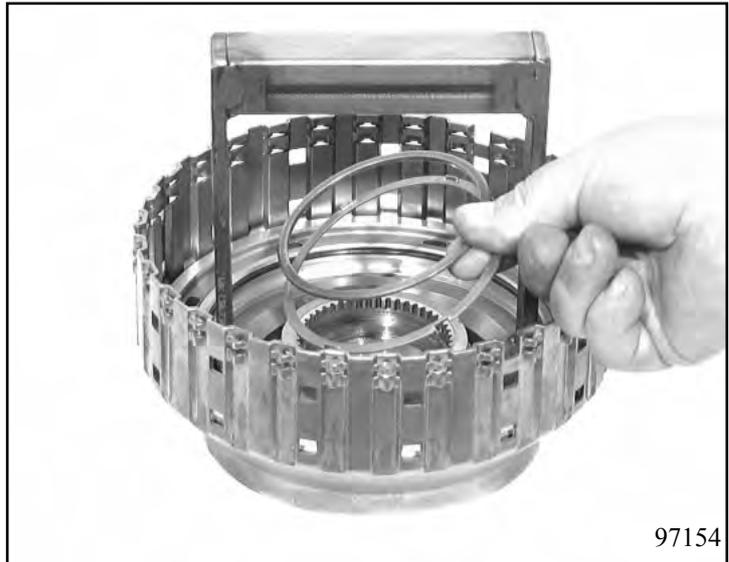
3.5.2 Clutch B (input)



Put two O-rings (72.030, 72.040) and sealing ring 72.050 on piston B 72.010. Press piston B into cylinder B.

97153

Insert cup spring 72.060 and press it down in the mandrel press using assembly bracket 5x46 001 500; insert retaining ring 72.062 and secure it with retaining ring 72.080.



Insert the complete clutch pack B. Begin with spring clutch disc 72.082 followed alternately by outer clutch disc 72.090 and lined clutch disc 72.100. Secure the top outer clutch disc 72.110 with snap ring 72.130.



Important!

Making adjustments: see **Chapter 1.4.8**

Insert the complete clutch A into clutch B. Place axial needle roller bearing 72.150 on the hub of cylinder A. See the picture beside for the correct installation of the bearing.





Align the discs for clutches A and B, and insert intermediate shaft 72.160, turning it as you put it in.
 Attach axial needle roller bearing 72.170 to the hub of inner disc carrier B using petroleum jelly.
 Insert inner disc carrier B 72.180, turning it as you put it in.

98005



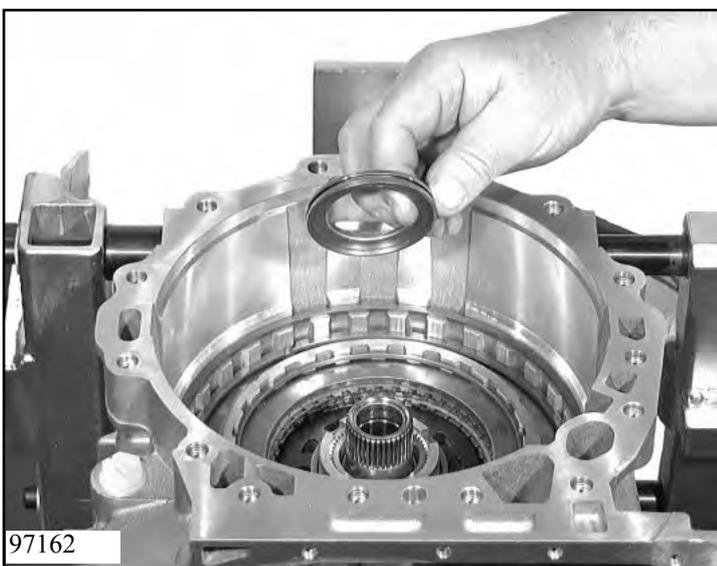
Put inner disc carrier C 72.190 into cylinder B and secure it with snap ring 72.200.

Important!

The snap ring should be 2.6 mm thick.

Ensure that the angle thrust bearing from the axial needle bearing is pressed into the hub.

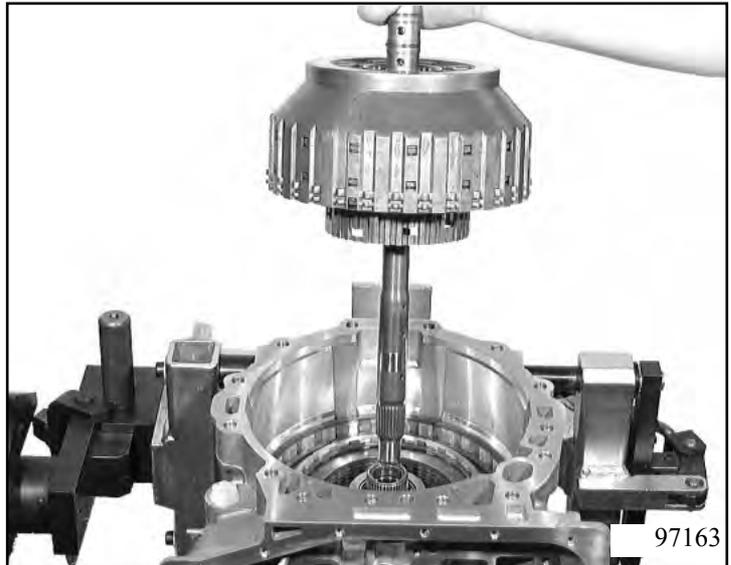
97161



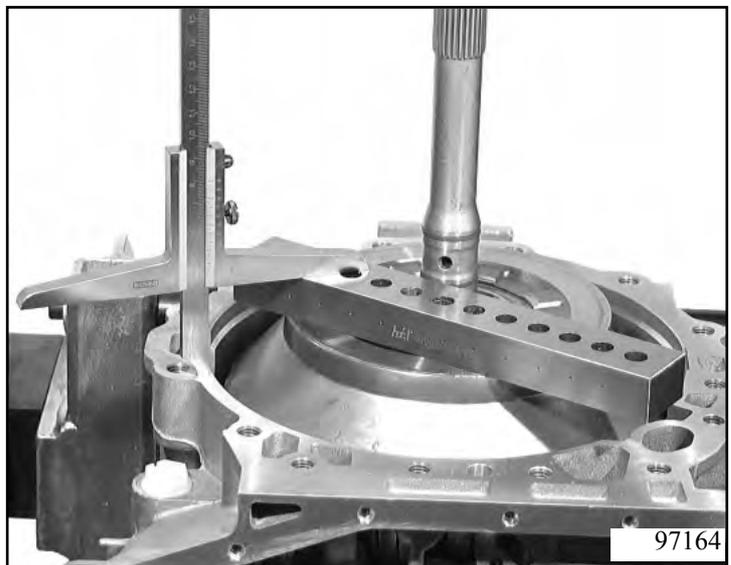
Place axial needle roller bearing 02.240 on tower I.
 See the picture on the left hand side for the correct installation of the bearing.

97162

Turn tower II 180° in the support fixture. Align the discs for brake C. Then put in tower II by hand, turning it backwards and forwards until the discs engage completely in disc carrier C.

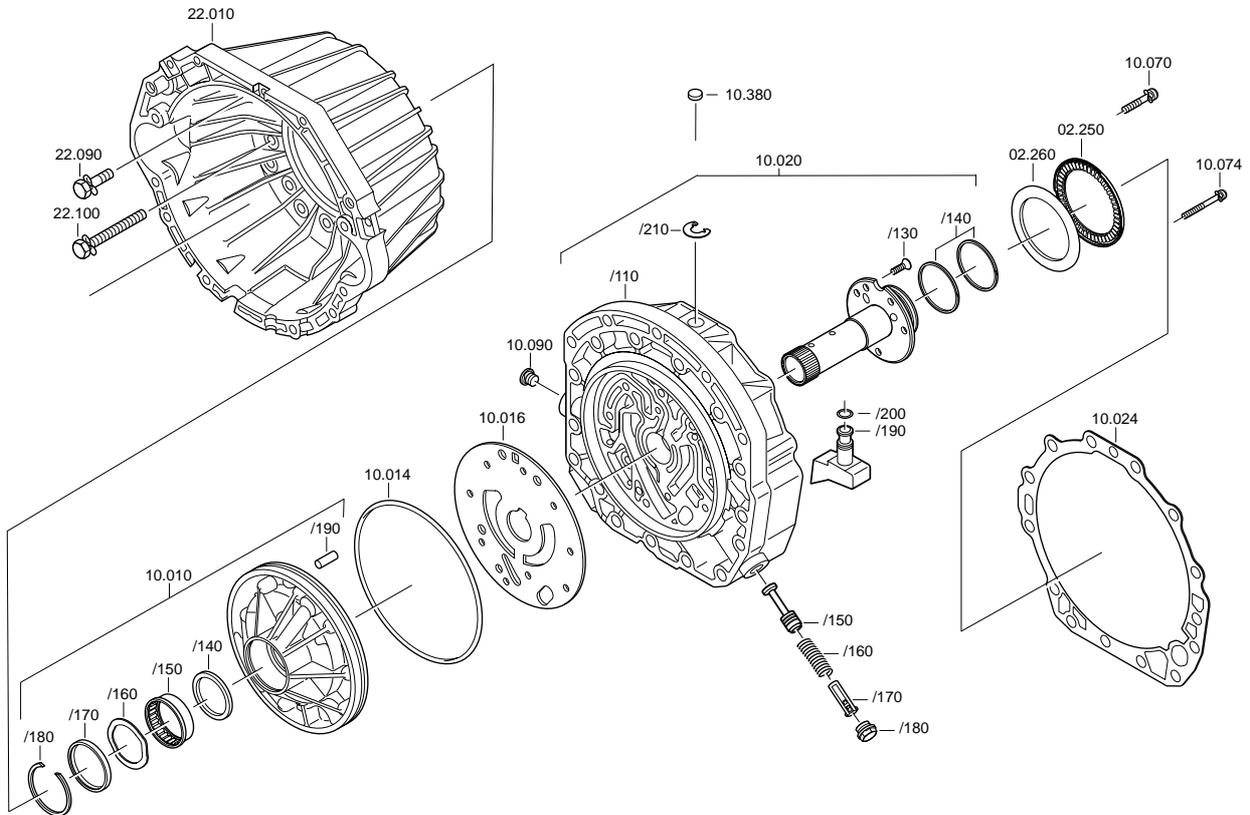


Control dimension:
Cylinder AB to the transmission housing's sealing area: approx. 20 mm.



Note!
Dimensions is indicated without the measuring bar thickness.

3.6 Oil supply



Complete pump 10.010.
 First put sealing ring 10.010/140 into the pump housing and press in the needle bearing 10.010/150 with assembly drift 5x46 000 954 in the mandrel press.

97165

Insert plate 10.010/160. Using assembly sleeve 5x46 000 953, mount shaft seal 10.010/170 into the pump housing and secure it with snap ring 10.010/180.



Press in sleeve 10.010/190.
Assemble a new O-ring 10.014.
Before putting the pump gear and pump ring gear together, lubricate them slightly with oil.
After this, put the pump together in such a way that one marking can be seen on the pump ring gear and two can be seen on the pump gear.



Put two rectangular-section rings 10.020/140 on stator shaft 10.020/120. In order to be able to mount the stator shaft on the intermediate plate, the two parts have to be positioned together properly. The procedure for doing this is described on the next page.

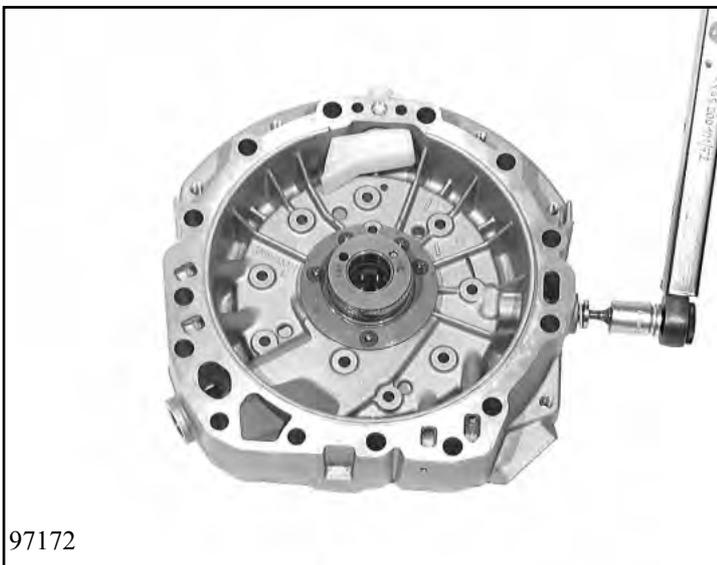




Warm the intermediate plate 10.020/110 up to 70° C using a hot-air blower. Screw two locating pins 5x46 001 007 into the intermediate plate. Guide in the stator shaft using the locating pins and secure it first with three countersunk screws 10.020/130. Remove the locating pins and screw in the rest of the counter-sunk screws.

(See Chapter 1.5 for tightening torque)

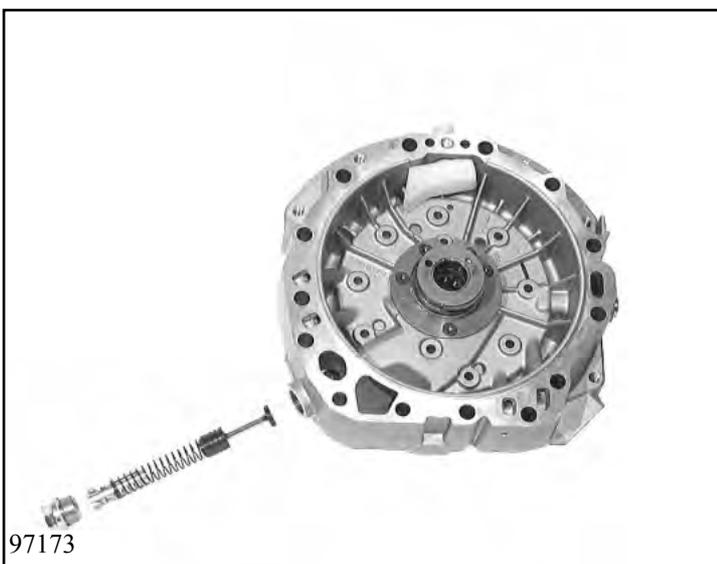
97171



Mount breather 10.020/190 (with a new O-ring 10.020/200) into the intermediate plate and secure it with retaining disc 10.020/210. Put breather cover 10.380 on the breather. Screw plug 10.090 into the intermediate plate.

(See Chapter 1.5 for tightening torque)

97172



Insert the flow control valve (consisting of piston 10.020/150, pressure spring 10.020/160, sleeve 10.020/170) into the intermediate plate and secure it with screw plug 10.020/180.

(See Chapter 1.5 for tightening torque)

97173

Screw locating pin 5x46 001 007 into the pump. Mount the complete pump (including intermediate metal sheet 10.016) over the stator shaft onto the intermediate plate. Remove the locating pins and fasten tight with 9 machine screws 10.070 and 1 cylinder screw 10.074.

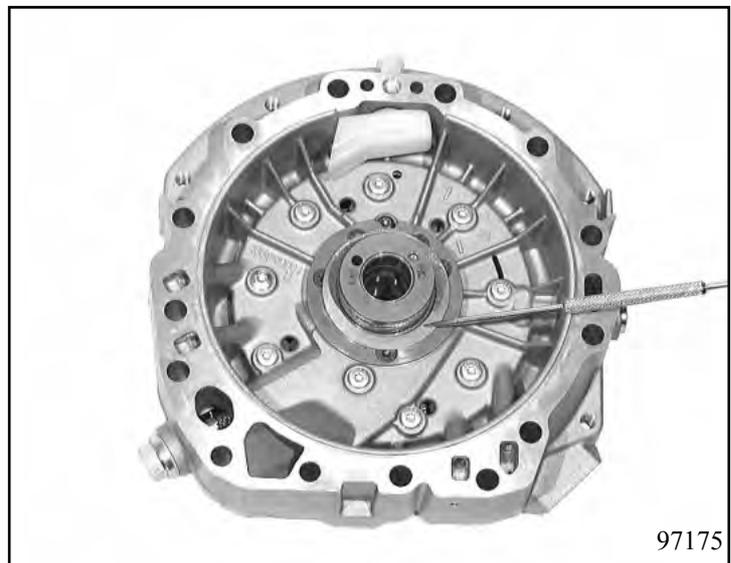
(See Chapter 1.5 for tightening torque)

Note!

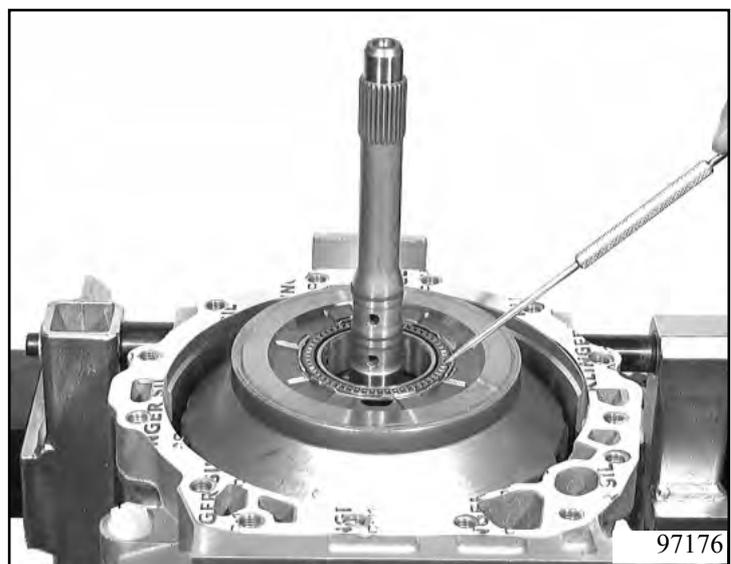
Check pump with sleeve 5x56 000 021 to ensure that it moves freely. The pump wheels must turn freely and easily.

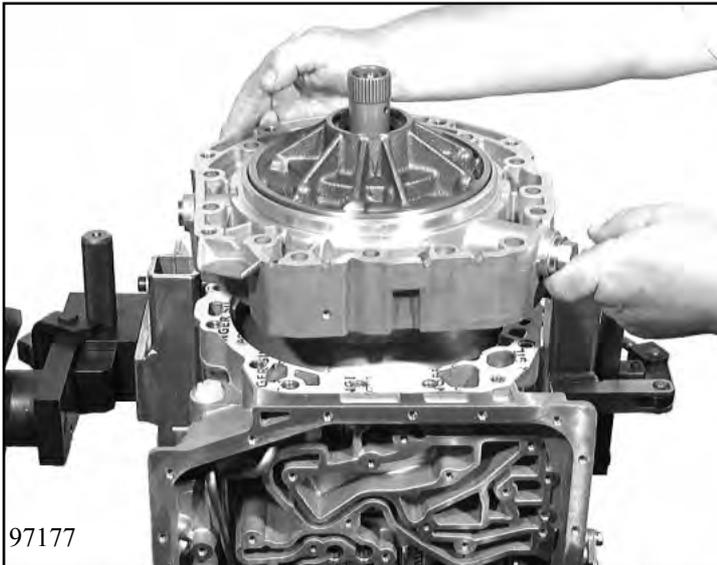


Attach shim 02.260 to the stator shaft using petroleum jelly.

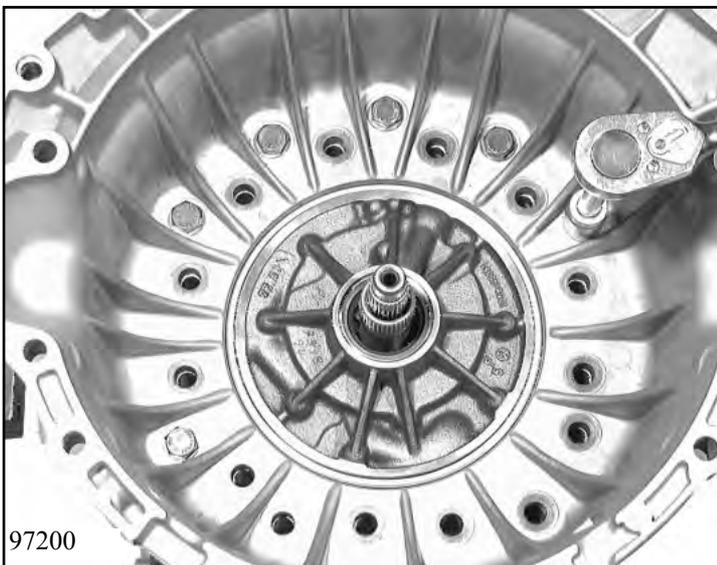


Attach seal 10.024 to the transmission housing using petroleum jelly. Put axial needle roller bearing 02.250 over the drive shaft onto clutch B.





Coat the rectangular-section rings on the drive shaft with some petroleum jelly. Put the intermediate plate carefully onto the transmission housing and align it.



Put converter bell housing 22.010 onto the intermediate plate so that 20 hexagonal screws can be screwed in as follows:

- 6 screws: 22.090 (see picture)
35mm long
- 14 screws: 22.100 (rest of the screws)
90mm long

(See Chapter 1.5 for tightening torque)

Important!
Making adjustments: see **Chapter 1.4.8**

3.7 Control unit, oil pan and converter
 (complete control unit, see spare parts list, technical cover sheet, position YO2)

