

## Hydraulic control module, removing and installing

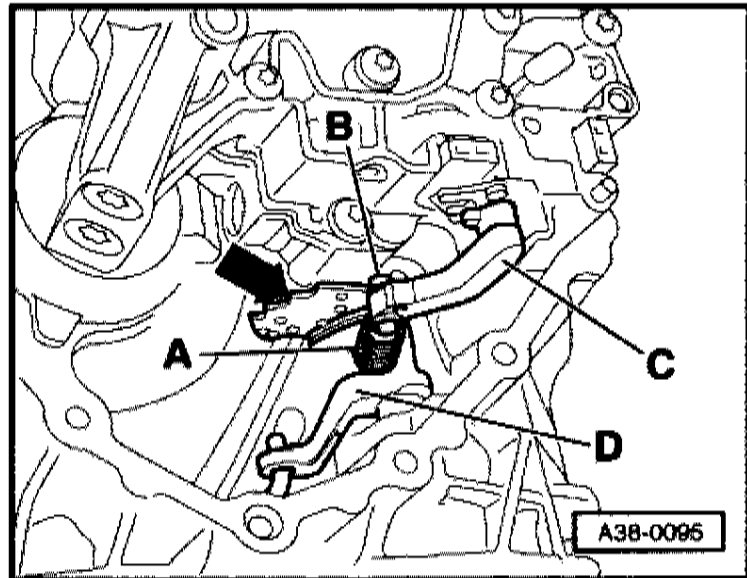


### Note

- ◆ *Observe general repair notes* → Chapter.
- ◆ *Rules for cleanliness when working on automatic transmission* → Chapter.
- ◆ *Always replace a dirty or faulty hydraulic control module.*

### Removing

- Remove end cover → Rep. Gr.38 or with removed transmission → Chapter.
- Remove Transmission Control Module (TCM) -J217- → Chapter.
- Pull slider for selector lever position -C- downward out of bearing hole of hydraulic control module.
- Disengage spring -A- from selector shaft -D-.



- Remove bolts -arrows- and remove hydraulic control module.

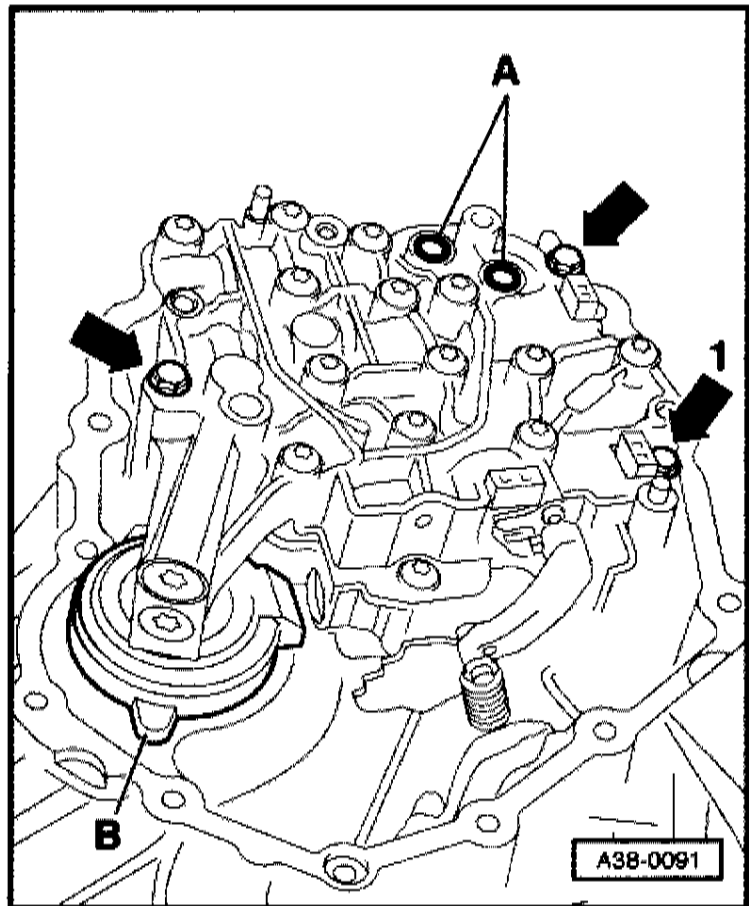
### Installing

Install in reverse order, paying attention to the following:

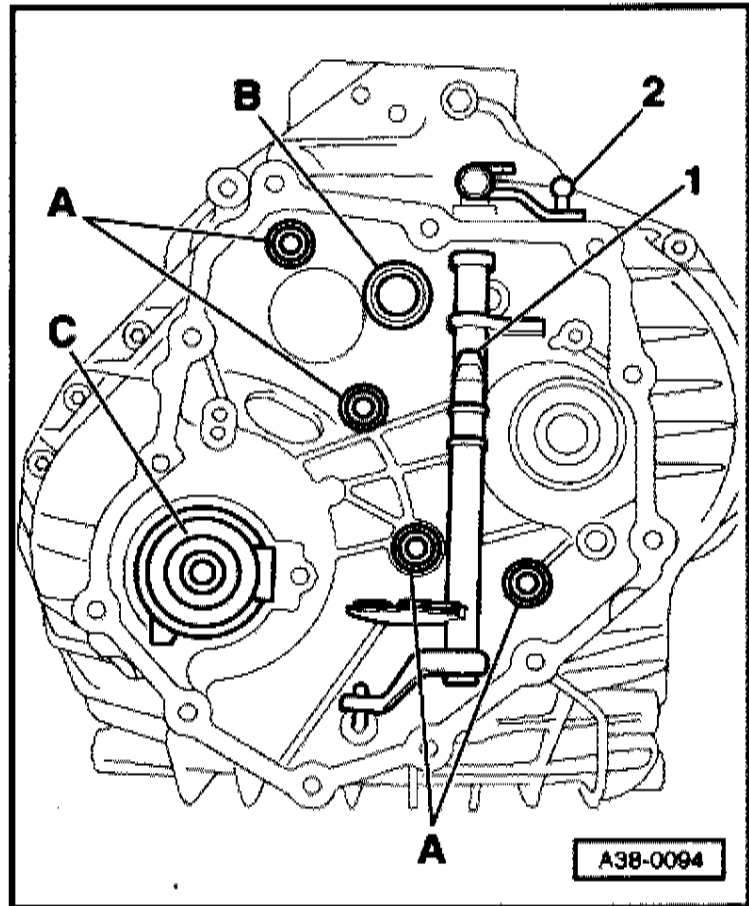


### Note

*Replace seals and O-rings.*



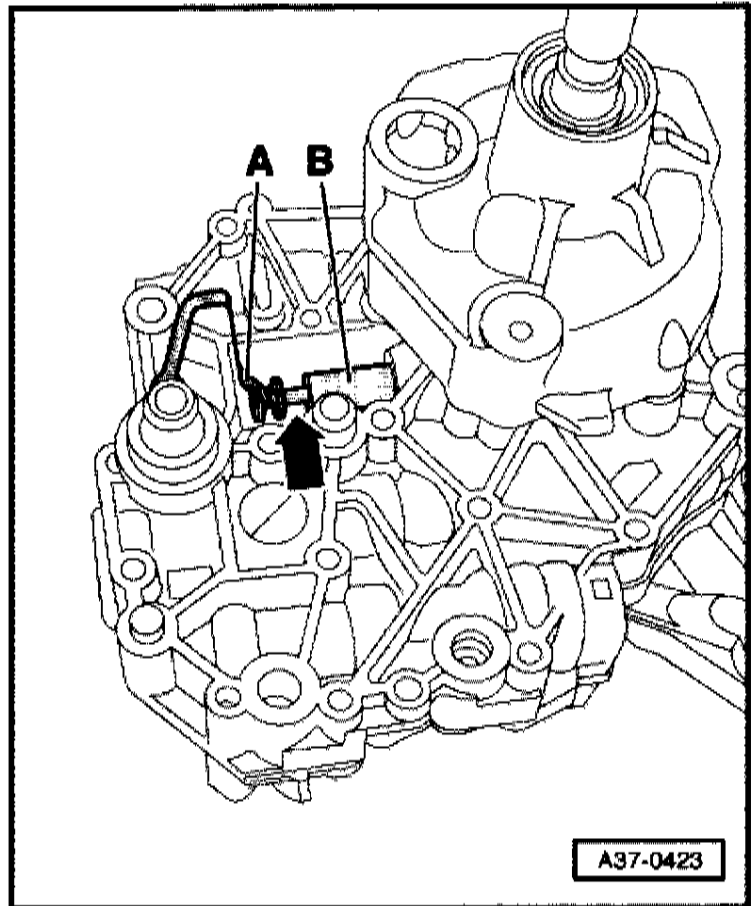
- Replace axial sealing elements -A- (qty. 4) and -B-.
- Coat axial sealing elements with ATF before installing.
- Axial sealing elements -A- must be inserted into mounts with smaller diameter facing transmission.
- Install cover -C-, while doing so note locating tab.
- Locating tab on rear side of cover must be inserted into small hole on transmission surface.
- Push lever for selector shaft -2- completely toward front until it stops so that shifting cam -1- stands almost vertically (with slight tilt toward right).



- Press control piston -B- on rear side of hydraulic control module completely inward (left) until it engages into assembly spring -A-.
- Insert hydraulic control assembly into transmission. Align unit properly to fit without jamming.

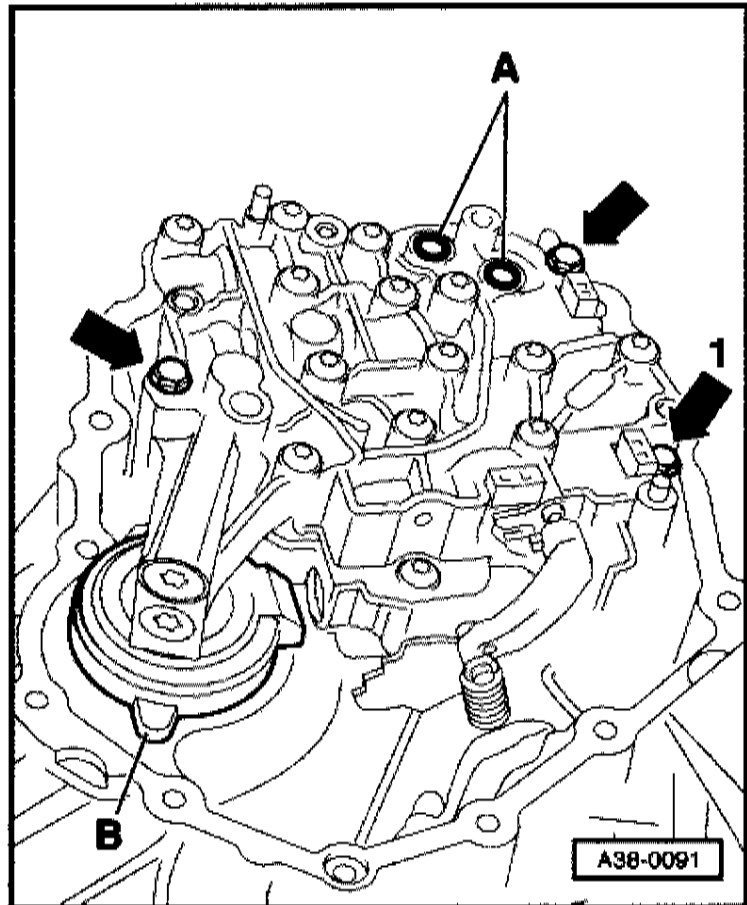
**Note**

When installing control module, make sure that shifting cam (item 1 in Fig. A38-0094 → Anchor) engages into free groove -arrow- on control piston -B-.

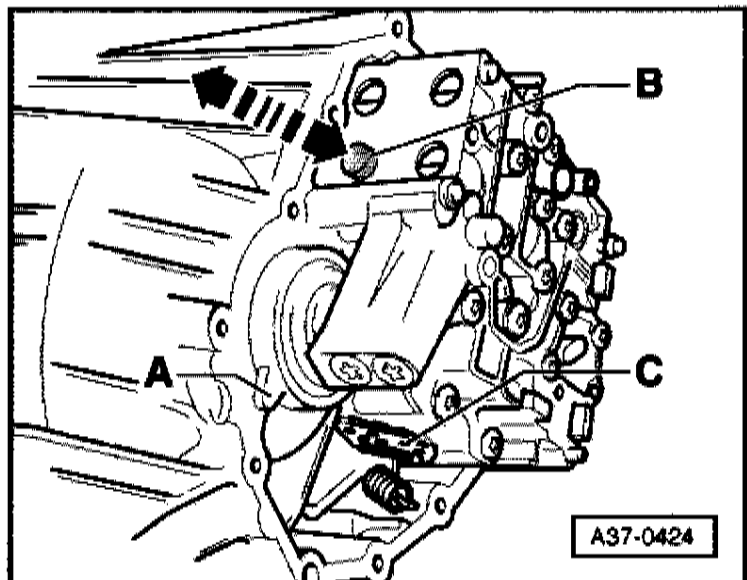


- Install screws -arrows- hand-tight. Screw - arrow 1- is shorter than the other two screws.
- Check that cover is mounted properly.
- Locating tab -B- must be inserted into hole intended for it on the transmission.

**Check function of control piston**

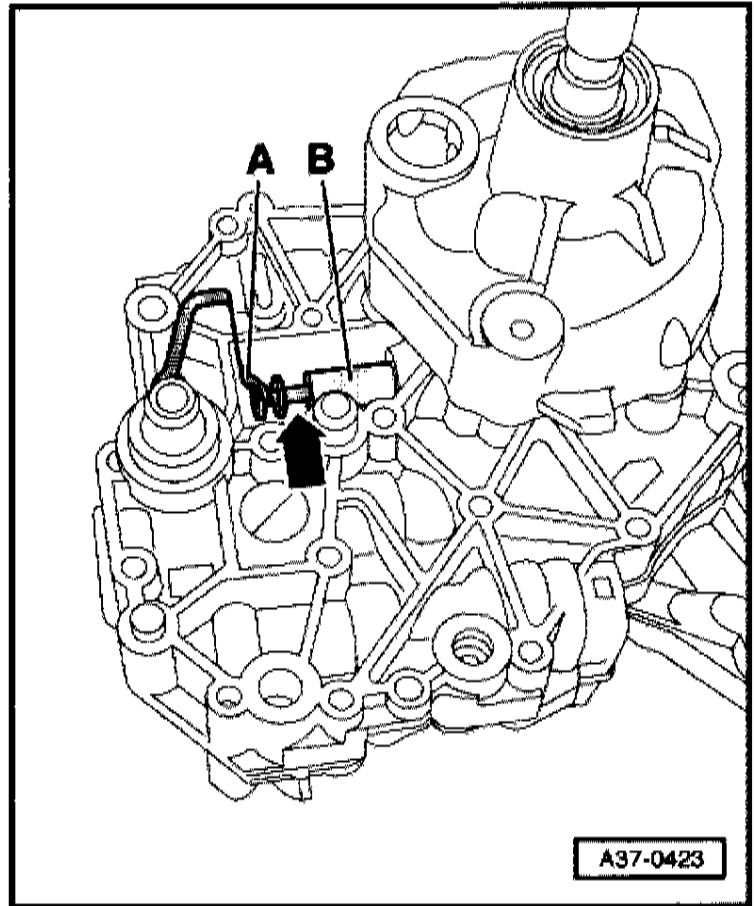


- Move selector shaft at detent plate -C- or at lever for selector shaft several times toward left and right.
- When doing this, control piston -B- must travel outward and inward accordingly -arrow-.



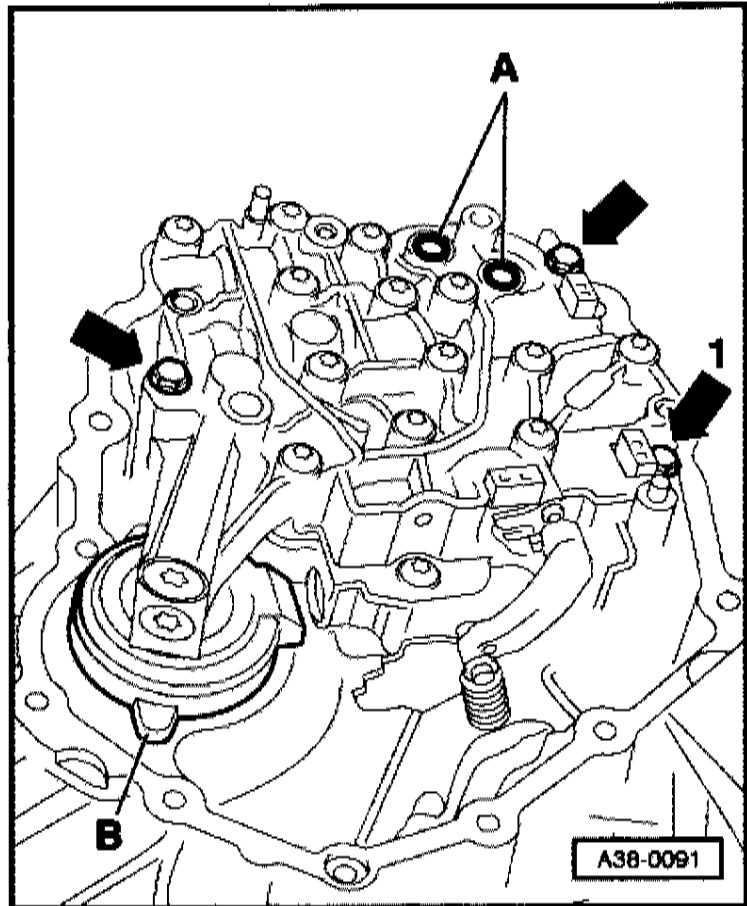
If control piston does not move, shifting cam has not engaged into groove -arrow- at control piston on rear side of hydraulic control module. In this case:

- Remove hydraulic control module once again and insert again.



- Tighten bolts -arrows-.

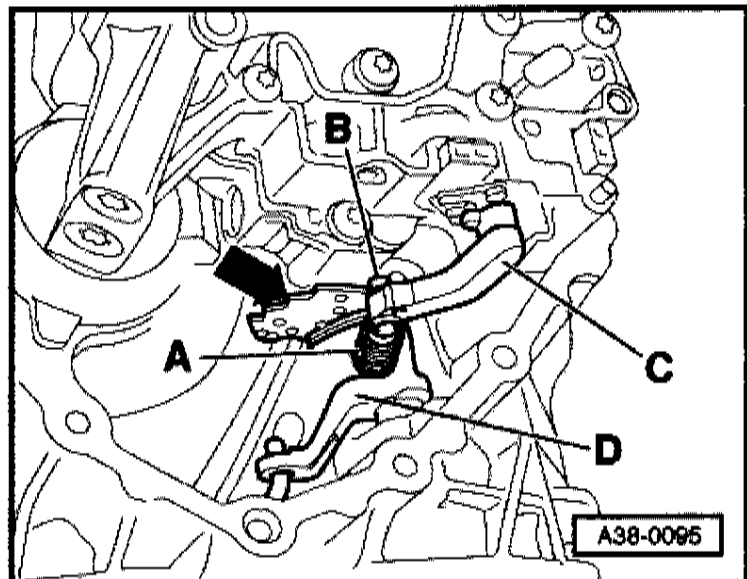
**Installing slider for selector lever position**



- Connect roller -B- with collar downward onto slider for selector lever position -C-.
- Engage spring -A- into selector shaft -D- and slider for selector lever position.
- Slide slider for selector lever position into bearing hole in housing of hydraulic control module.

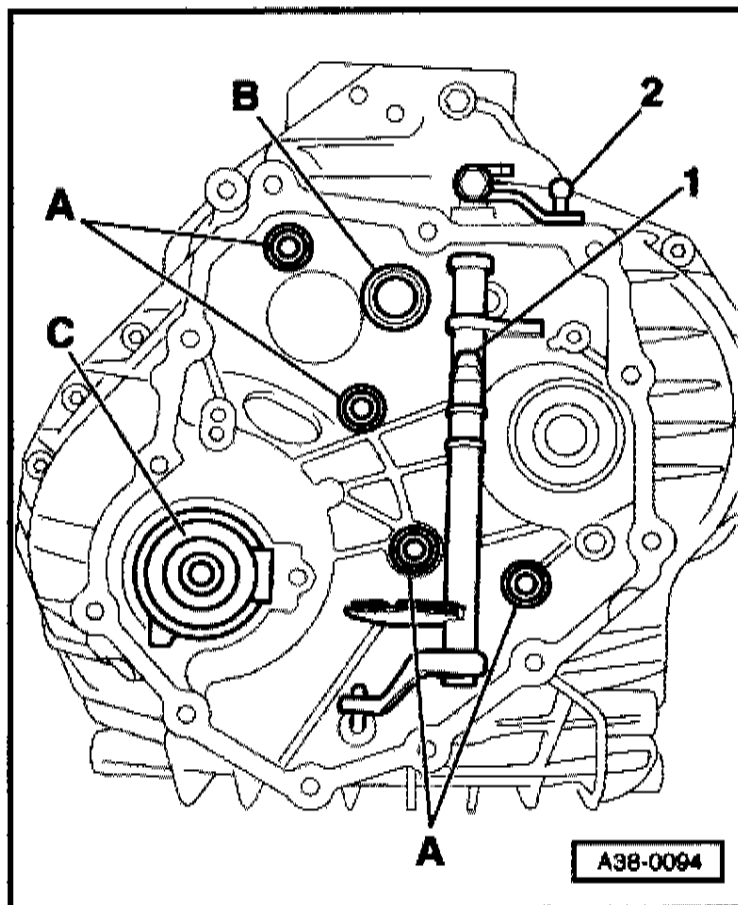
**Note**

For the sake of illustration, transmission is shown without hydraulic control module.



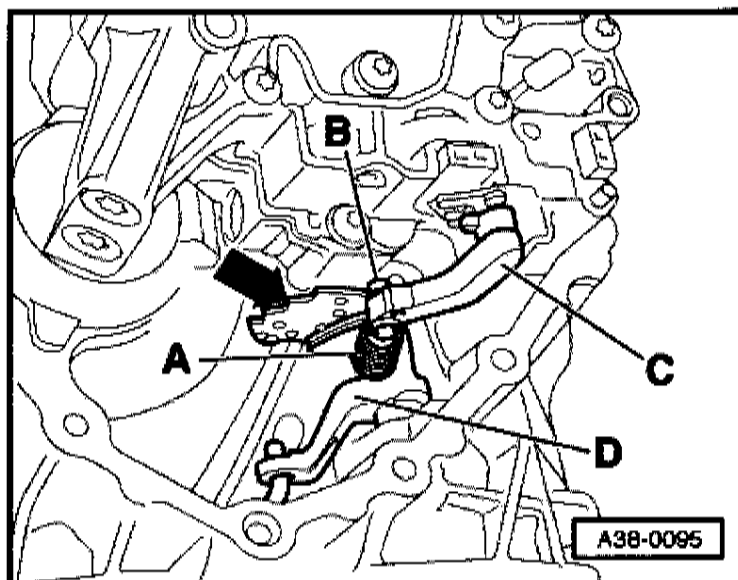
- Shift lever for selector shaft -2- toward front and rear until stop:





- Detent plate -arrow- moves toward front or toward rear.
  - When doing this, it must allow the roller -B- to be engaged in the individual notches.
  - Slider for selector lever position -C- moves in steps toward front or rear.
  - Roller must be installed with collar facing downward so that it cannot be pulled off upward.
- Clean selector shaft → Chapter.
  - Install Transmission Control Module (TCM) - J217- with new O-rings → Chapter.
  - Install end cover → Rep. Gr.38.

**Torque specification**



Component	Nm
Hydraulic control module to transmission housing	10



## Transmission Control Module (TCM) -J217-, removing and installing

### Note

- ◆ *Observe general repair notes* → Chapter.
- ◆ *Rules for cleanliness when working on automatic transmission* → Chapter.

### Removing

- Remove end cover from → Rep. Gr.38 or with removed transmission → Chapter.
- Remove bolts -arrows- and pull out Transmission Control Module (TCM) -J217- without canting it.
- Remove twin lip oil seal -A- from Transmission Control Module (TCM) -J217-.

### Note

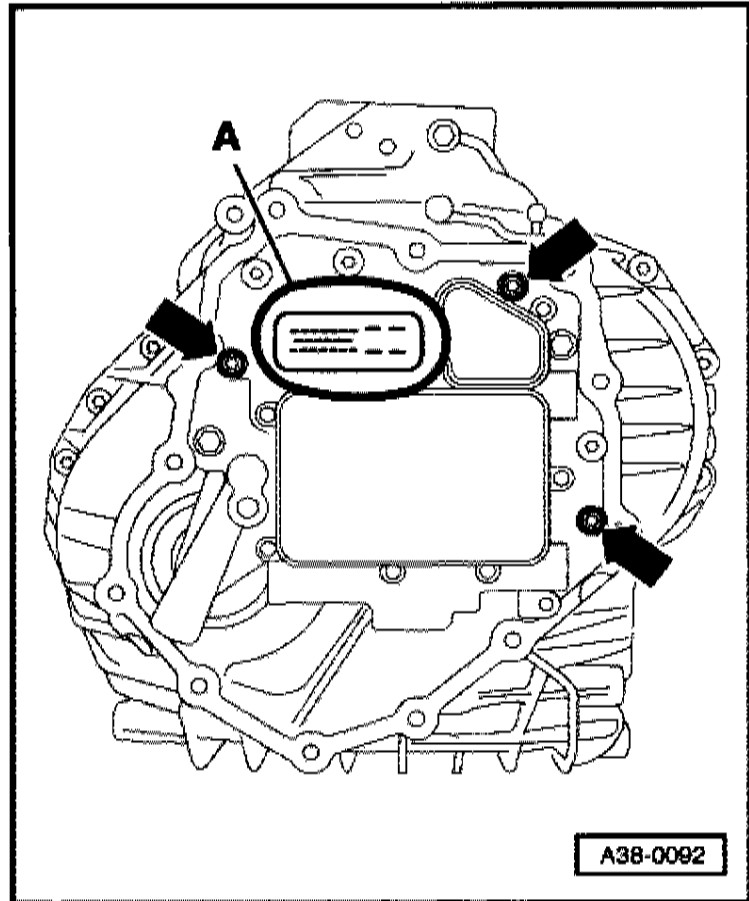
*When setting aside the Transmission Control Module (TCM) -J217-, make sure that sensors on the control module are not damaged.*

### Installing

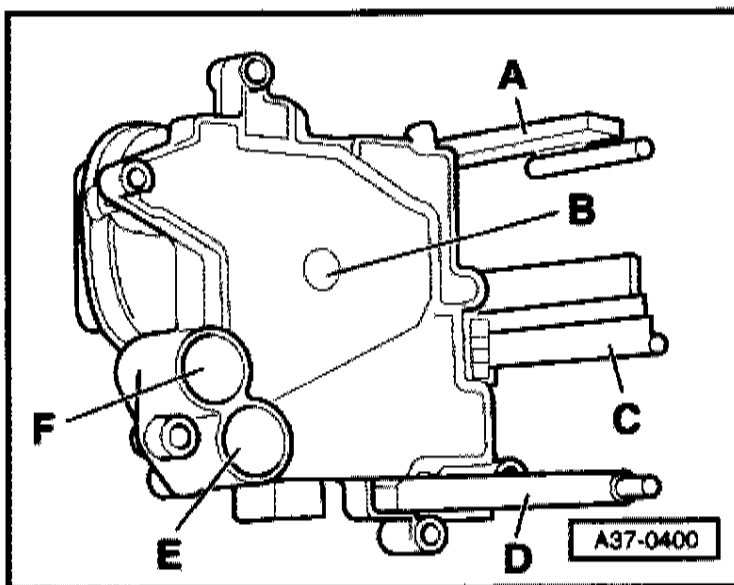
Install in reverse order, paying attention to the following:

### Note

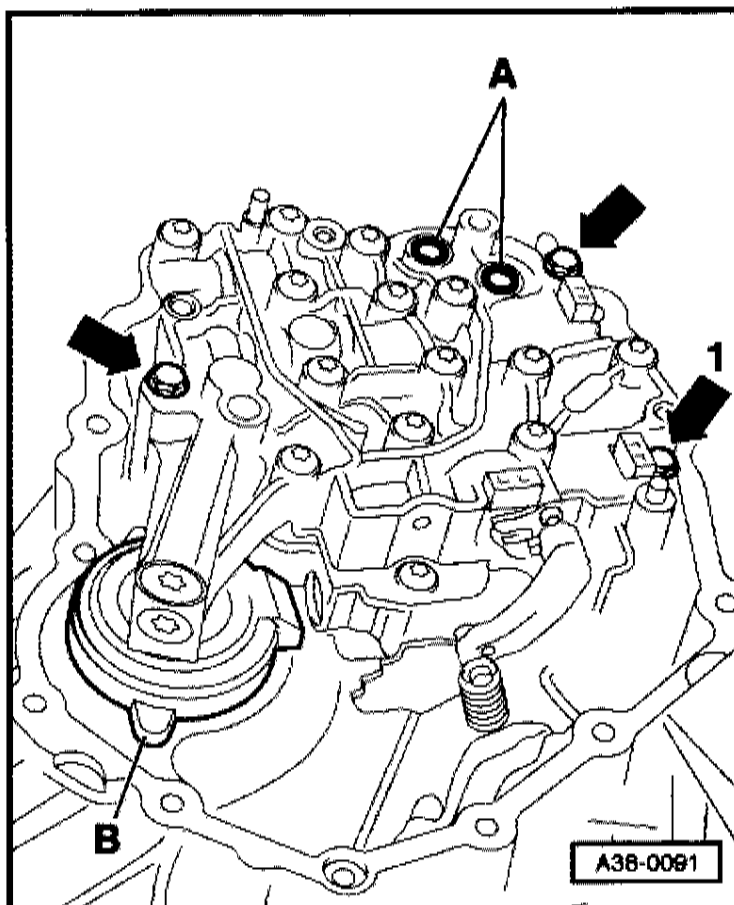
*Replace seals and O-rings.*



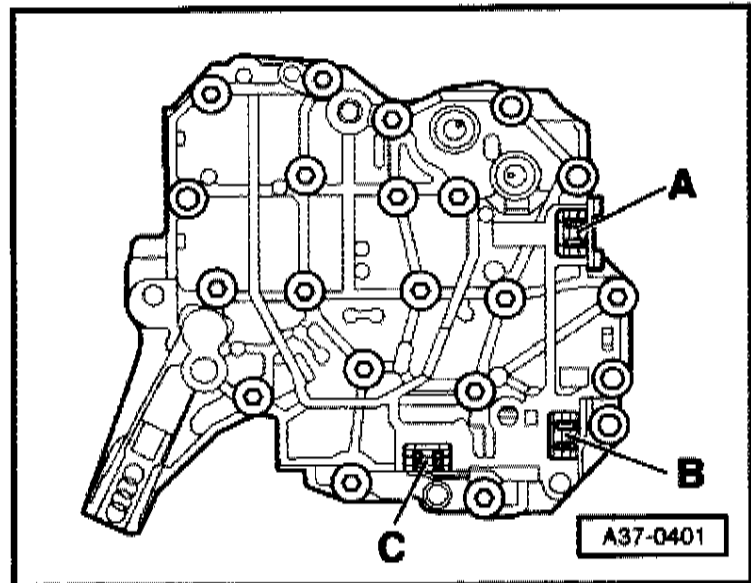
- If necessary, clean sensors -A-, -C- and -D- of dirt and metal shavings.
- Clean selector shaft → Chapter.



- Before installing Transmission Control Module (TCM) -J217-, coat new O-rings -A- on hydraulic control module with ATF.
- Install Transmission Control Module (TCM) - J217- without canting it.



- Harness connectors -A-, -B- and -C- on rear side of control module must engage on hydraulic control module.



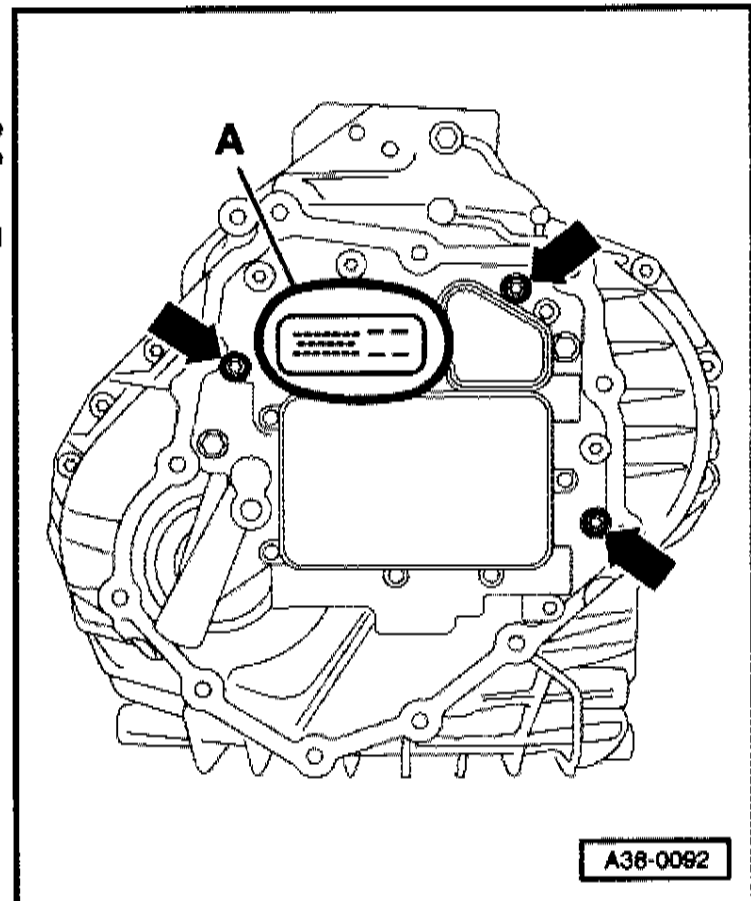
- Tighten bolts -arrows-.
- Install end cover → Rep. Gr.38.

**After connecting Transmission Control Module (TCM) -J217-, the following work steps must be performed:**

- Complete coding for new Transmission Control Module (TCM) -J217-.
- Perform adaptation for Transmission Control Module (TCM) -J217-.

**Use Vehicle Diagnosis, Testing and Information System -VAS 5051 A- for this.**

**Torque specification**



Component	Nm
Transmission Control Module (TCM) -J217- to hydraulic control module	10