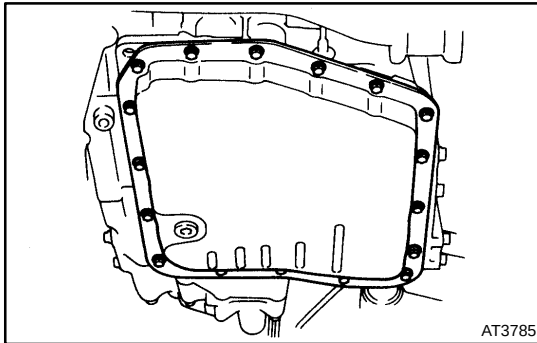




VALVE BODY ASSEMBLY ON-VEHICLE REPAIR

AX11J-01

1. REMOVE DRAIN PLUG AND DRAIN ATF

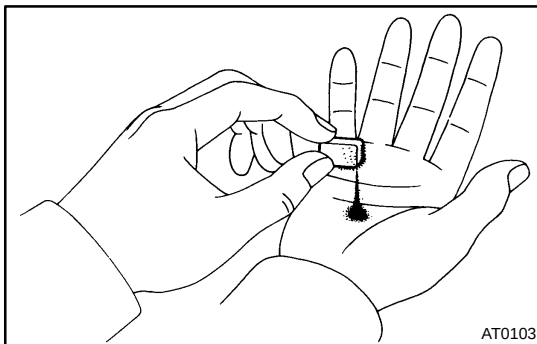
Using a hexagon wrench, remove the drain plug and drain the fluid into the suitable container.

2. REMOVE OIL PAN AND GASKET

Remove the 17 bolts.

NOTICE:

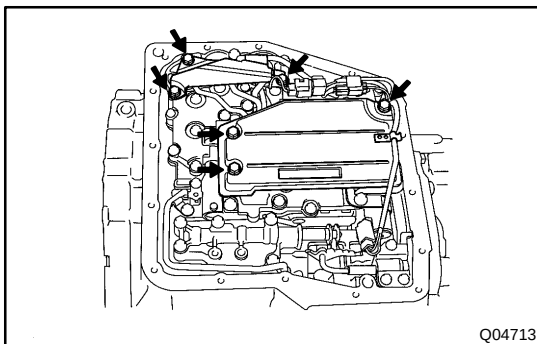
- Some fluid will remain in the oil pan.
 - Remove oil pan bolts, and carefully remove the oil pan assembly.
 - Discard the gasket.
- ### 3. REMOVE 3 MAGNETS FROM OIL PAN



4. EXAMINE PARTICLES IN PAN

Remove the magnets and use them to collect any steel chips. Look at the chips and particles in the pan and magnet carefully to anticipate what type of wear you will find in the transaxle.

- Steel (magnetic): bearing, gear and plate wear
- Brass (non-magnetic): bushing wear



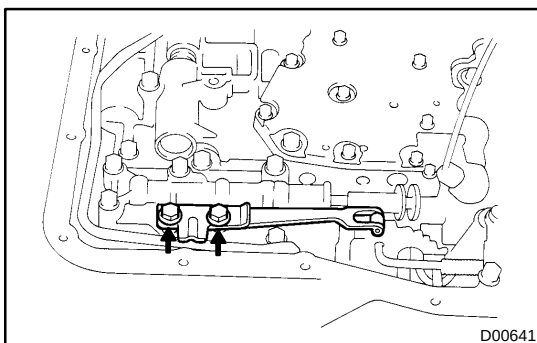
5. REMOVE OIL STRAINER AND OIL PIPE BRACKET

- (a) Remove the 3 bolts and oil strainer.

NOTICE:

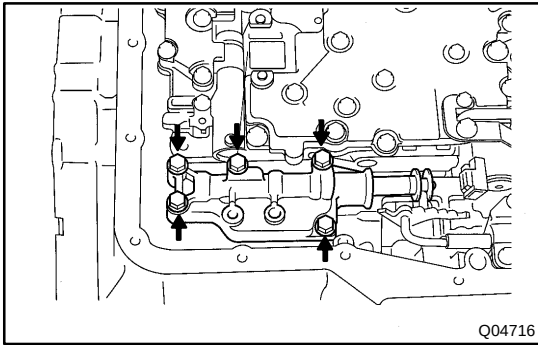
Be careful as oil will come out of the strainer when it is removed.

- (b) Remove the gasket from the oil strainer.
(c) Remove the 3 bolts and oil pipe bracket.

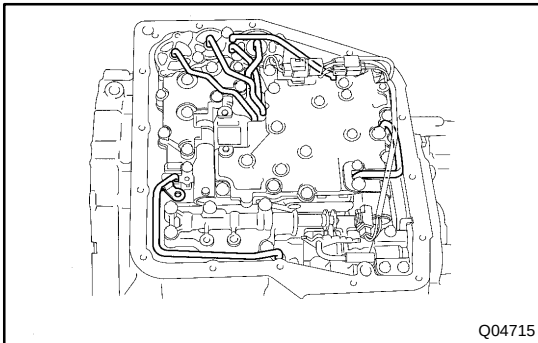


6. REMOVE MANUAL VALVE BODY

- (a) Remove the 2 bolts and detent spring.

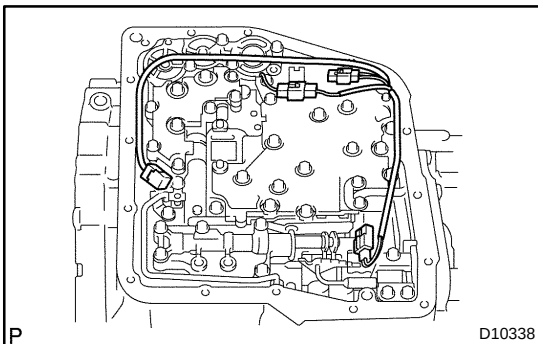


- (b) Remove the 5 bolts and manual valve body with the manual valve.
- (c) Remove the manual valve from the manual valve body.

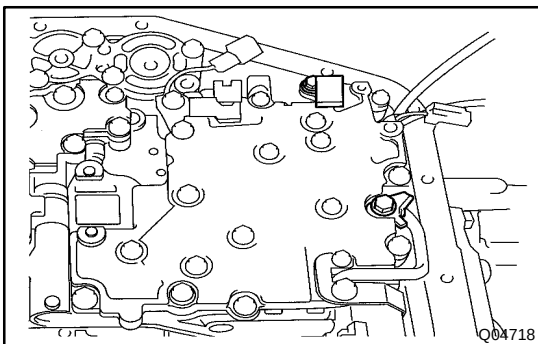


7. REMOVE OIL PIPE

- (a) Remove the bolt.
- (b) Pry up both pipe ends with a large screwdriver and remove the 6 pipes.

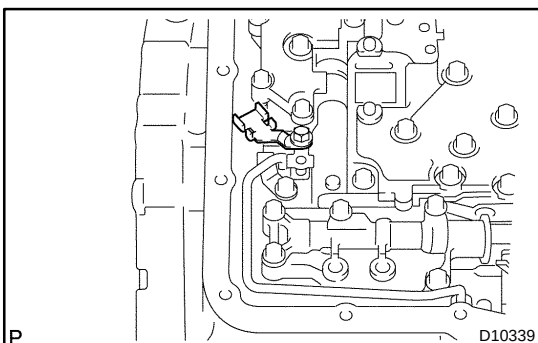


8. DISCONNECT 3 SOLENOID CONNECTORS AND ATF TEMPERATURE SENSOR



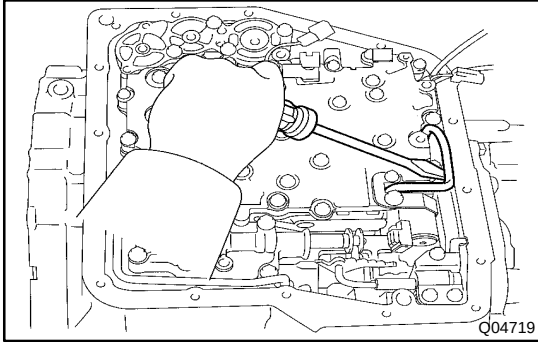
9. REMOVE CONNECTOR CLAMP AND B₃ APPLY PIPE RETAINER

- (a) Remove the bolt and connector clamp.
- (b) Remove the bolt and pipe retainer.

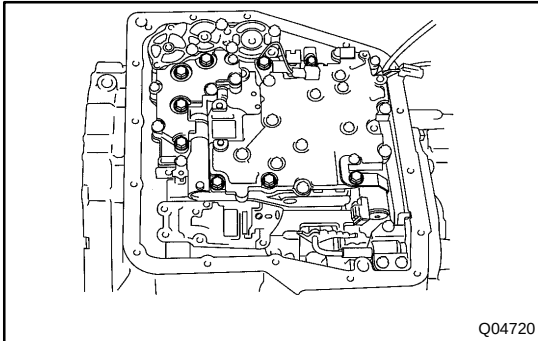


10. REMOVE CLAMP BRACKET

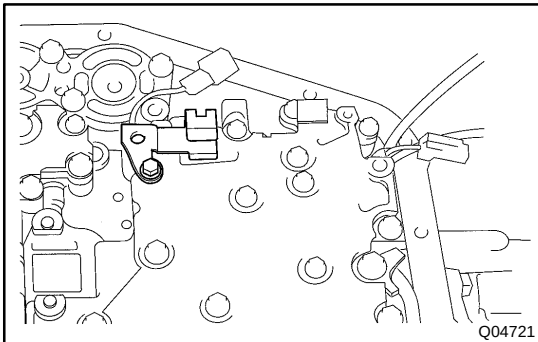
Remove the bolt and clamp bracket.

**11. REMOVE B₃ APPLY PIPE**

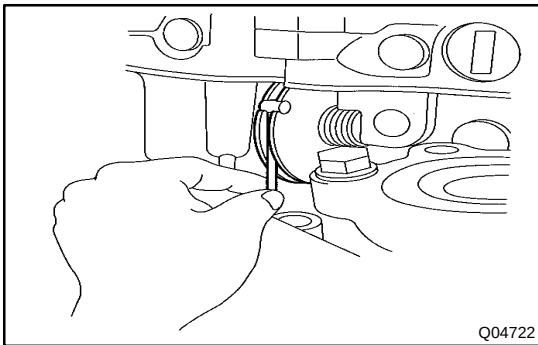
Pry up the pipe with a screwdriver and remove the apply pipe.

**12. REMOVE VALVE BODY**

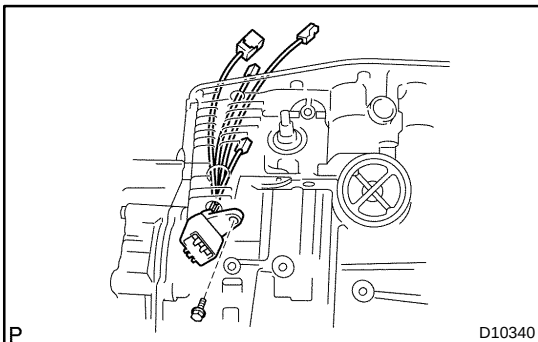
(a) Remove the 9 bolts.



(b) Remove the bolt and wire harness clamp.

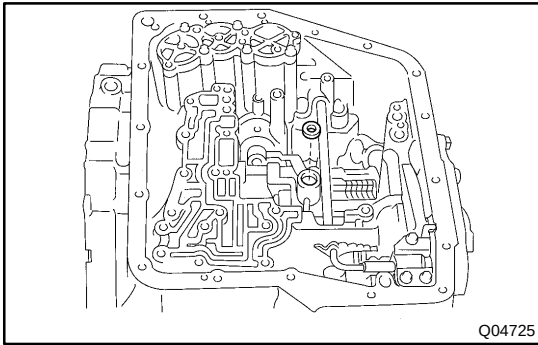


(c) Disconnect the throttle cable from the cam and remove the valve body.

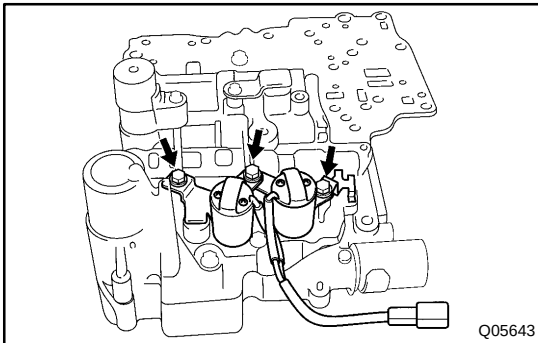
**13. REMOVE SOLENOID WIRE**

(a) Remove the bolt and solenoid wire.

(b) Remove the O-ring.



14. REMOVE 2ND BRAKE APPLY GASKET



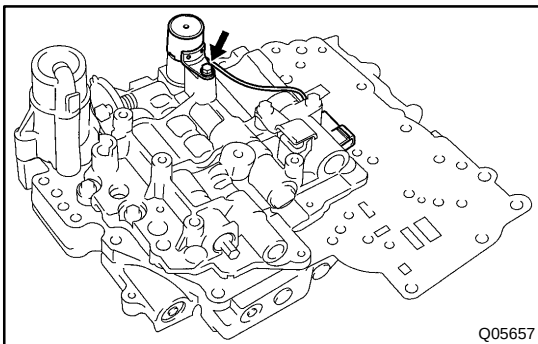
15. REMOVE SOLENOID VALVE

- (a) Remove the 3 bolts and shift solenoid valves No.1 and No.2.

NOTICE:

When removing the solenoid, do not use a screwdriver, etc. to pry up the solenoid.

- (b) Remove the O-ring from each solenoid valve.

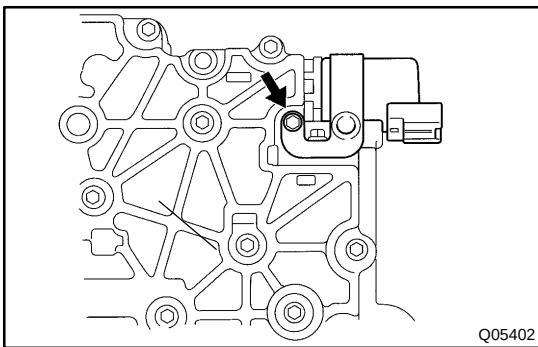


- (c) Remove the bolt and shift solenoid valve SL.
- (d) Remove the O-ring from the solenoid valve.

16. INSTALL SHIFT SOLENOID VALVE

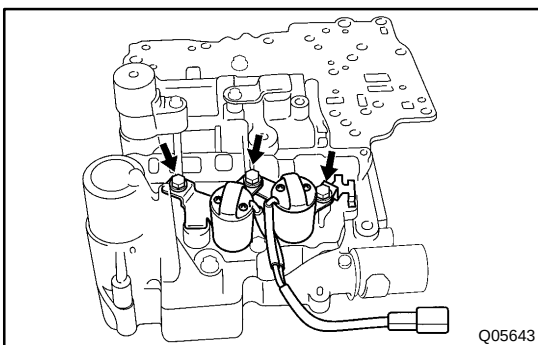
- (a) Coat 2 new O-rings with ATF and install them to the shift solenoid valves.
- (b) Install the shift solenoid valve SL.
- (c) Install the bolt.

Torque: 6.6 N·m (67 kgf·cm, 58 in.·lbf)



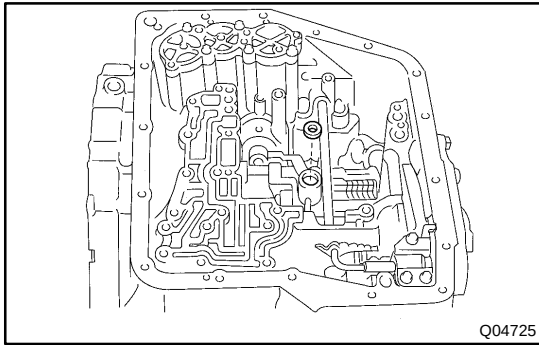
- (d) Install the shift solenoid valve SLN with the bolt.

Torque: 6.6 N·m (67 kgf·cm, 58 in.·lbf)

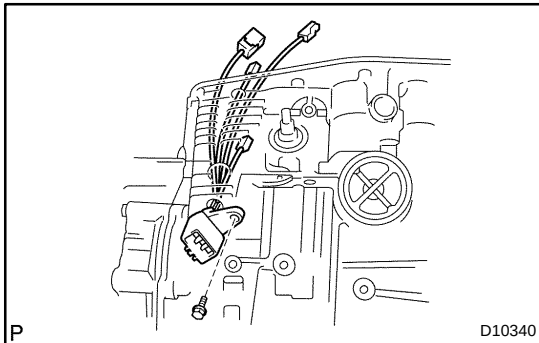


- (e) Coat 2 new O-rings with ATF and install them to the each shift solenoid valve.
- (f) Install the shift solenoid valve No. 1 and No. 2 and retain-er.
- (g) Install the 3 bolts.

Torque: 6.6 N·m (67 kgf·cm, 58 in.·lbf)



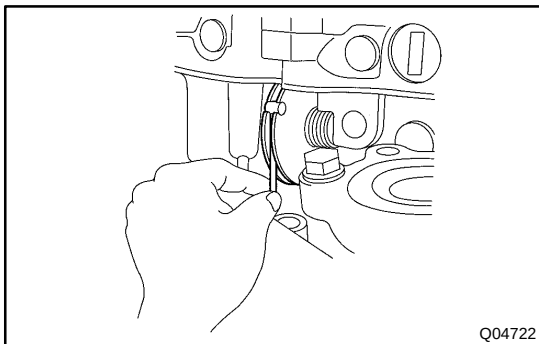
17. PLACE NEW 2ND BRAKE APPLY GASKET



18. INSTALL SOLENOID WIRE

- Install a new O-ring to the solenoid wire.
- Coat the O-ring with ATF.
- Install the solenoid wire with the bolt.

Torque: 5.5 N·m (55 kgf·cm, 49 in·lbf)

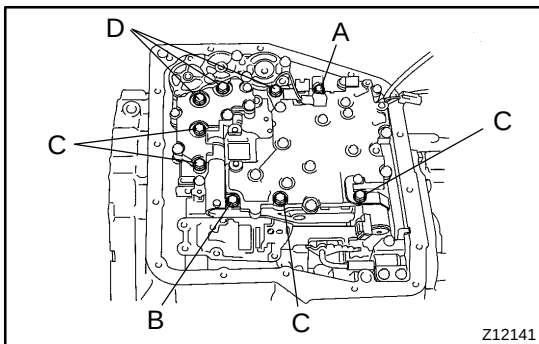


19. INSTALL VALVE BODY

- While holding the cam down with your hand, slip the cable end into the slot.
- Lower the valve body into place.

NOTICE:

Do not entangle the solenoid wire.



- Install the 9 bolts.

Torque: 11 N·m (110 kgf·cm, 8 ft·lbf)

HINT:

- Each bolt length is indicated below.
- Hand tighten the 9 bolts first, then torque with a torque wrench.

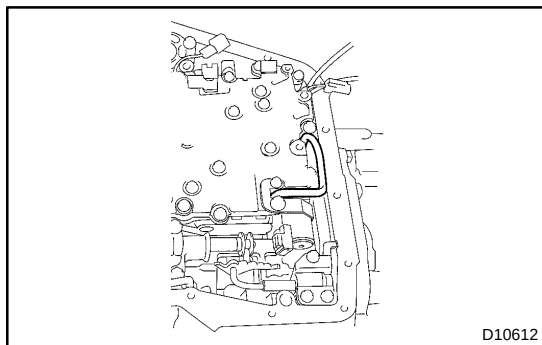
Bolt length:

Bolt A: 30 mm (1.181 in.)

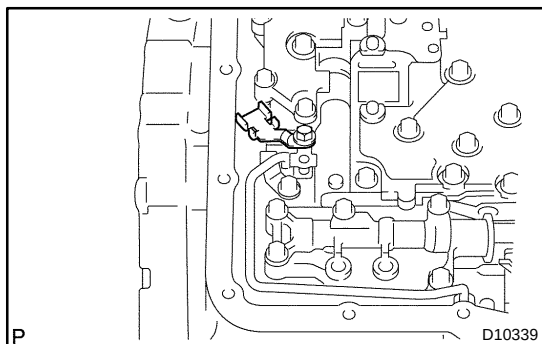
Bolt B: 43 mm (1.693 in.)

Bolt C: 48 mm (1.890 in.)

Bolt D: 52 mm (2.047 in.)

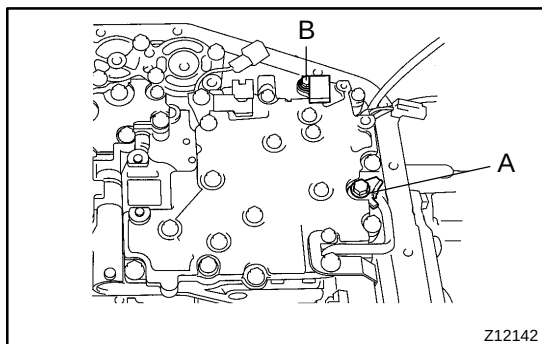
**20. INSTALL B₃ APPLY PIPE****NOTICE:**

Be careful not to bend or damage the pipe.

**21. INSTALL CLAMP BRACKET**

Install the clamp bracket with the bolt.

Torque: 11 N·m (110 kgf·cm, 8 ft·lbf)

**22. INSTALL CONNECTOR CLAMP AND PIPE RETAINER**

(a) Install the connector clamp with the bolt.

Torque: 11 N·m (110 kgf·cm, 8 ft·lbf)

(b) Install the pipe retainer with the bolt.

Torque: 11 N·m (110 kgf·cm, 8 ft·lbf)

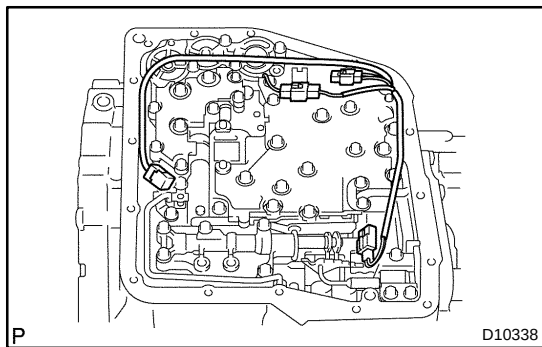
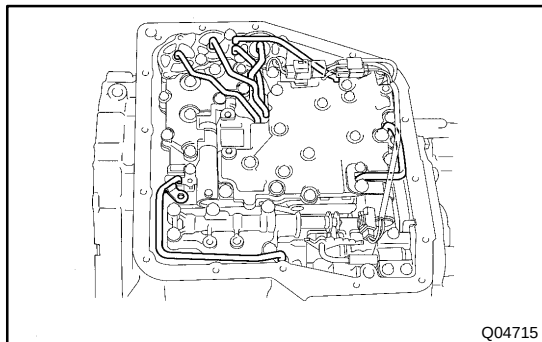
HINT:

Each bolt length is indicated below.

Bolt length:

Bolt A: 48 mm (1.890 in.)

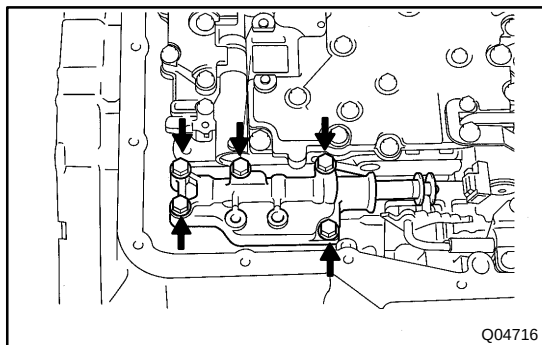
Bolt B: 39 mm (1.535 in.)

**23. CONNECT 3 SOLENOID CONNECTORS AND ATF TEMPERATURE SENSOR****24. INSTALL OIL PIPE**

Using a plastic hammer, install the 6 pipes into the positions.

NOTICE:

Be careful not to bend or damage the pipes.



25. INSTALL MANUAL VALVE BODY AND DETENT SPRING

- Align the manual valve with the pin on the manual shaft lever.
- Lower the manual valve body into place.
- Hand tighten the 5 bolts first. Then, tighten them with a torque wrench.

Torque: 11 N·m (110 kgf·cm, 8 ft·lbf)

HINT:

Each bolt length is indicated below.

Bolt length:

Bolt A: 22 mm (0.866 in.)

Bolt B: 37 mm (1.457 in.)

- Place the detent springs on the manual valve body and hand tighten the 2 bolt first. Then, tighten them with a torque wrench.

Torque: 11 N·m (110 kgf·cm, 8 ft·lbf)

HINT:

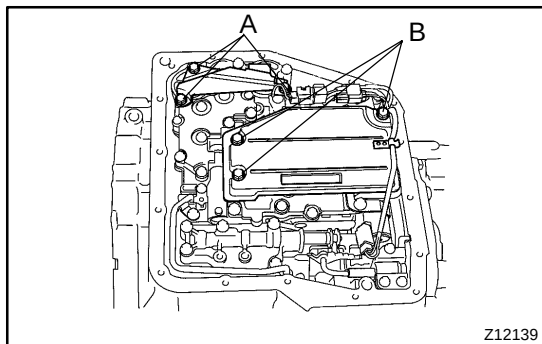
Each bolt length is indicated below.

Bolt length:

Bolt A: 14 mm (0.551 in.)

Bolt B: 37 mm (1.457 in.)

- Check that the manual valve lever is touching the center of the detent spring tip roller.



26. INSTALL PIPE BRACKET AND OIL STRAINER

- Install the oil pipe bracket with the 3 bolts.

Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)

- Place a new gasket to the oil strainer.
- Install the oil strainer with the 3 bolts.

Torque: 11 N·m (110 kgf·cm, 8 ft·lbf)

- Each bolt length is indicated below.

Bolt length:

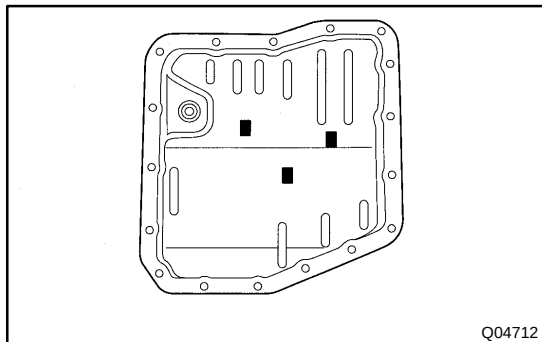
Bolt A: 22 mm (0.866 in.)

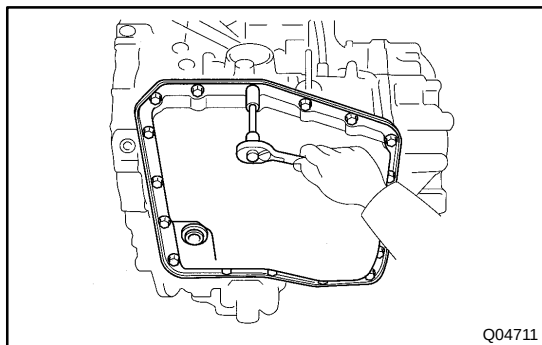
Bolt B: 53 mm (2.087 in.)

27. INSTALL 3 MAGNETS INPLACE

NOTICE:

Make sure that the magnets do not interfere with the oil pipes.



**28. INSTALL OIL PAN WITH NEW GASKET**

- (a) Install a new gasket and oil pan.
- (b) Install the 17 bolts.

Torque: 7.8 N·m (80 kgf·cm, 69 in·lbf)

29. INSTALL DRAIN PLUG

Torque: 49 N·m (500 kgf·cm, 36 ft·lbf)

30. FILL ATF AND CHECK FLUID LEVEL

(See page [DI-157](#))