

## VALVE BODY ASSEMBLY (2UZ-FE, 1HD-FTE)

AT09J-01

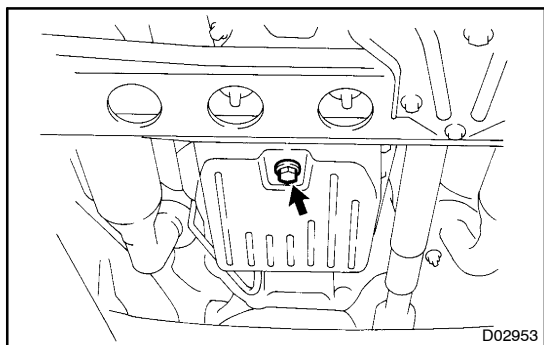
### ON-VEHICLE REPAIR

#### CAUTION:

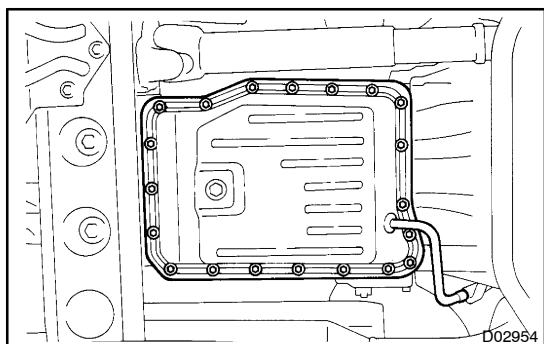
When working with FIPG material, you must observe the followings.

- Using a razor blade and a gasket scraper, remove all oil FIPG material from the gasket surfaces.
- Thoroughly clean all components to remove all loose material.
- Clean both sealing surfaces with a non-residue solvent.
- Apply FIPG in an approx. 1 mm (0.04 in.) wide bead along the sealing surface.
- Parts must be assembled within 10 minutes of application. Other side, the FIPG material must be removed and reapplied.

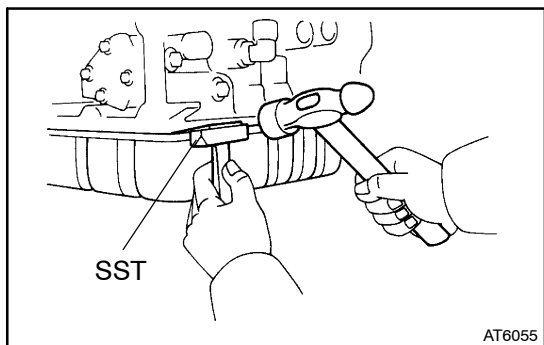
1. REMOVE NO.2 ENGINE UNDER COVER
2. 1HD-FTE Only:  
REMOVE TRANSMISSION UNDER COVER



3. REMOVE DRAIN PLUG WITH GASKET AND DRAIN ATF



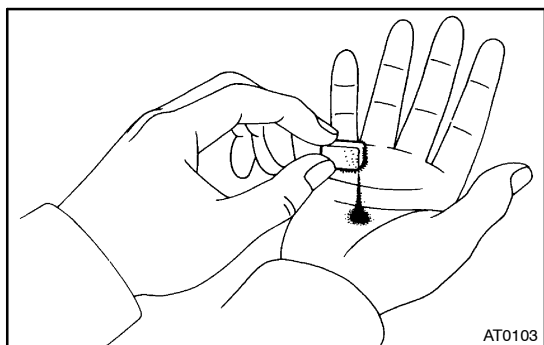
4. REMOVE OIL PAN
  - (a) Remove the 20 bolts.



- (b) Insert the blade off SST between the transmission and oil pan, cut off applied sealer, and remove the oil pan.  
SST 09032-00100

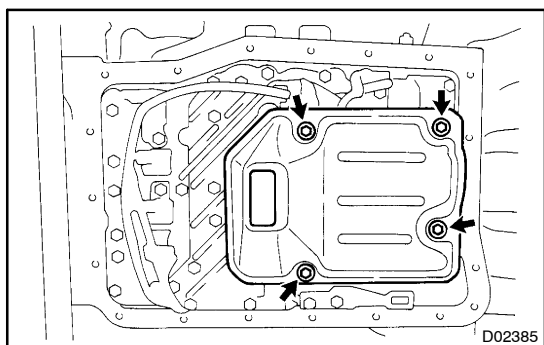
**NOTICE:**

**When removing the oil pan, be careful not to damage the oil pan flange.**

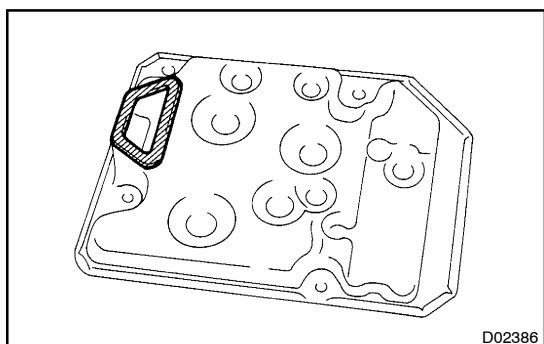
**5. EXAMINE PARTICLES IN PAN**

Remove the magnets and use them to collect steel particles. Carefully look at the foreign matter and particles in the pan and on the magnets to anticipate the type of wear you will find in the transmission.

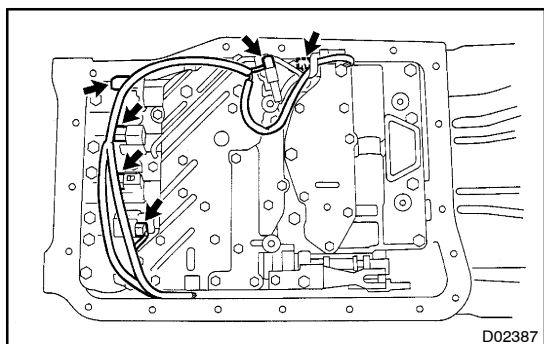
Steel (magnetic) ... bearing, gear and clutch plate wear  
Brass (non-magnetic) ... bushing wear

**6. REMOVE OIL STRAINER**

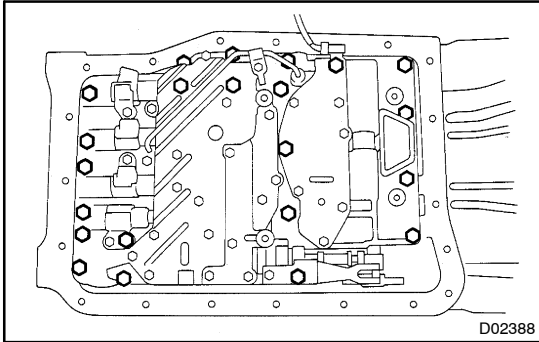
- (a) Remove the 4 bolts and oil strainer.



- (b) Remove the gasket.

**7. REMOVE VALVE BODY**

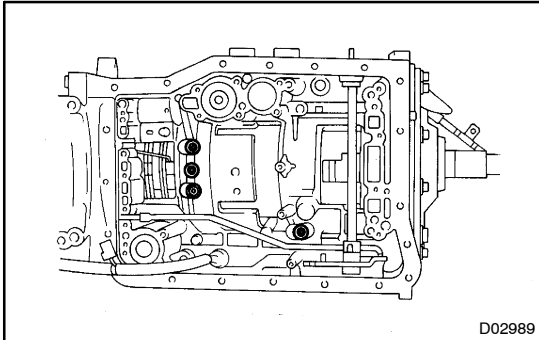
- (a) Disconnect the 5 solenoid valve connectors and ATF temperature sensor connector.



- (b) Remove the 22 bolts and valve body.

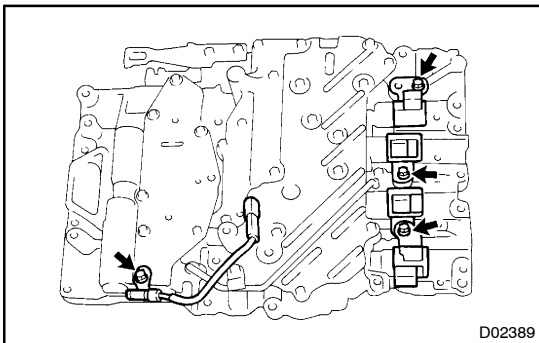
**NOTICE:**

**Be careful not to drop the B<sub>1</sub> and C<sub>2</sub> accumulator springs.**



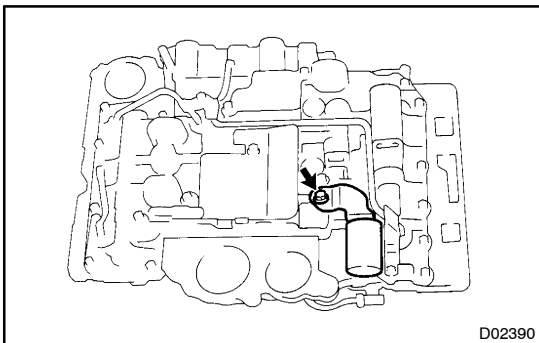
**8. REMOVE O/D CASE AND CENTER SUPPORT APPLY GASKETS**

Remove the 4 apply gaskets.



**9. REMOVE ATF TEMPERATURE SENSOR AND SOLENOID VALVE**

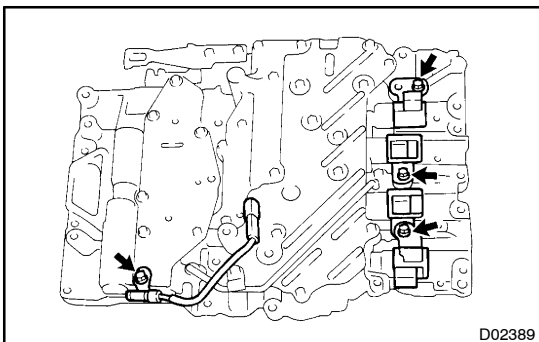
- (a) Remove the bolt and ATF temperature sensor.
- (b) Remove the 3 bolts and 4 solenoid valves.
- (c) Remove the 4 O-rings from the each solenoid valves.



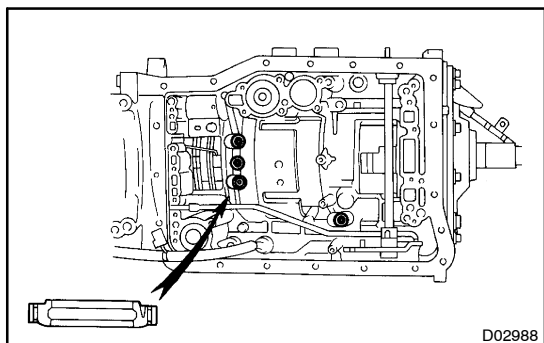
- (d) Remove the bolt and solenoid valve.

**10. INSTALL ATF TEMPERATURE SENSOR AND SOLENOID VALVE**

- (a) Install the solenoid valve with the bolt.  
**Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)**

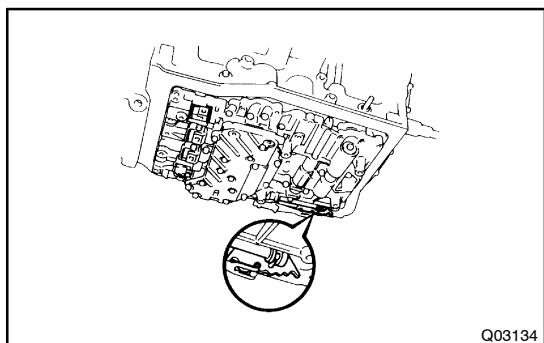


- (b) Coat 4 new O-rings with ATF.
- (c) Install the 4 O-rings to the each solenoid valves.
- (d) Install the 4 solenoid valves with the 3 bolts.  
**Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)**
- (e) Install the ATF temperature sensor with the bolt.  
**Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)**



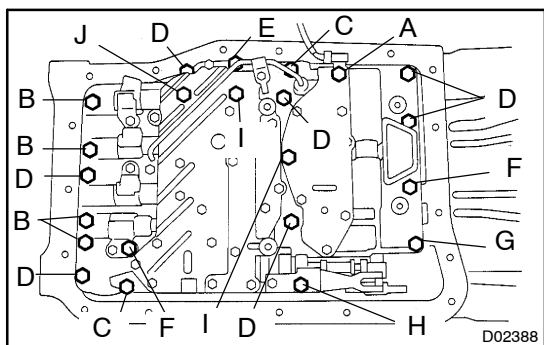
## 11. INSTALL O/D CASE AND CENTER SUPPORT APPLY GASKETS

Install 4 new gaskets, facing the pitted side forward the transmission case.



## 12. INSTALL VALVE BODY

(a) Align the groove of the manual valve with the pin of the manual valve lever.



(b) Temporarily install the valve body with the 22 bolts.

### Bolt length:

**Bolt A:** 15 mm (0.59 in.)

**Bolt B:** 22 mm (0.86 in.)

**Bolt C:** 28 mm (1.10 in.)

**Bolt D:** 32 mm (1.26 in.)

**Bolt E:** 37.5 mm (1.48 in.)

**Bolt F:** 40 mm (1.57 in.)

**Bolt G:** 41 mm (1.61 in.)

**Bolt H:** 45 mm (1.77 in.)

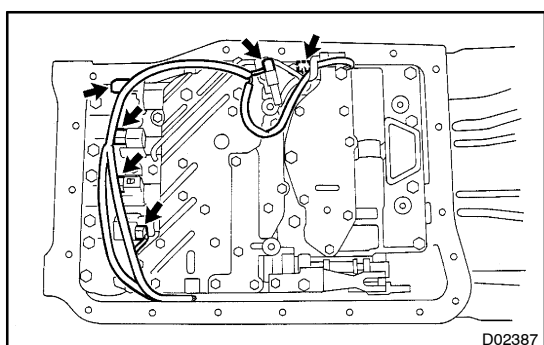
**Bolt I:** 52 mm (2.05 in.)

**Bolt J:** 57 mm (2.24 in.)

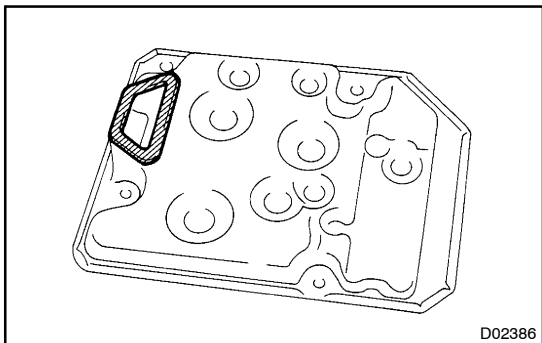
(c) Check that the manual valve lever contacts the center of the roller at the tip of the detent spring.

(d) Tighten the 22 bolts.

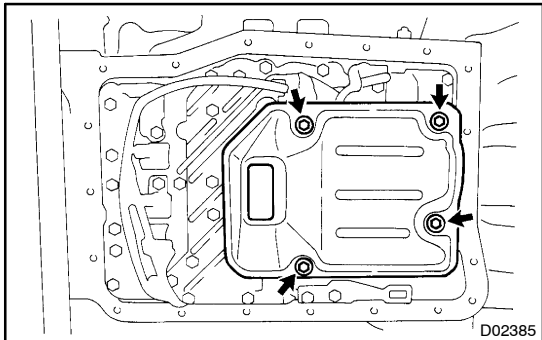
**Torque:** 10 N·m (100 kgf·cm, 7 ft·lbf)



(e) Connect the 5 solenoid valve connectors and ATF temperature sensor connector.

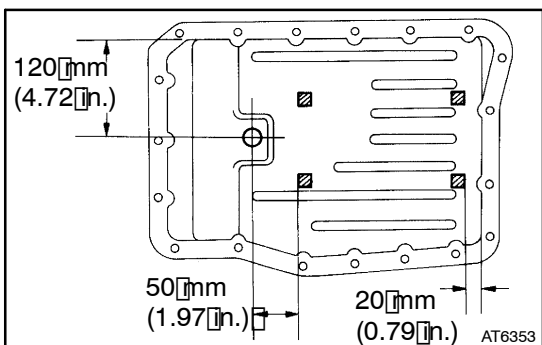
**13. INSTALL OIL STRAINER**

(a) Install a new gasket.

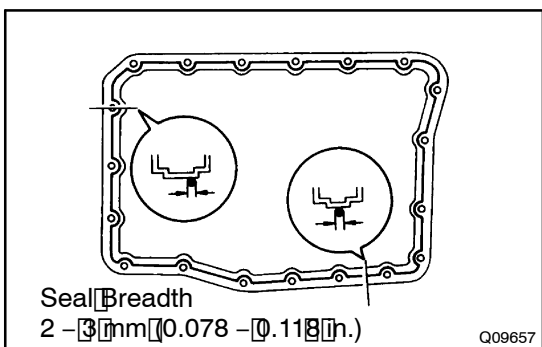


(b) Install the oil strainer with the 4 bolts.

**Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)**

**14. INSTALL MAGNET IN OIL PAN**

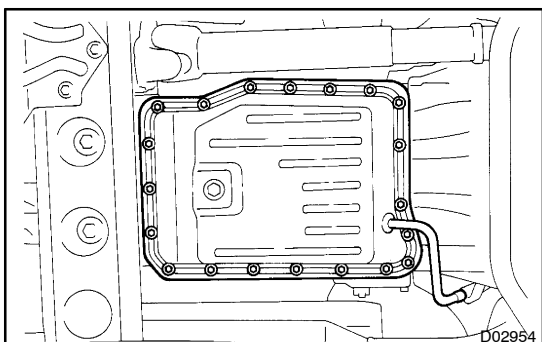
Install the 4 magnets in the oil pan, as shown in the illustration.

**15. INSTALL OIL PAN**

(a) Remove any packing material and be careful not to drop oil on the contacting surfaces of the transmission case and oil pan.

(b) Apply FIPG to the oil pan.

**FIPG: Part No. 08826-00090, THREE BOND 1281 or equivalent**



(c) Install the 20 bolts.

**Torque: 6.9 N·m (70 kgf·cm, 51 in·lbf)**

**16. INSTALL DRAIN PLUG**

Install a new gasket and drain plug.

**Torque: 27 N·m (280 kgf·cm, 20 ft·lbf)**

**17. INSTALL NO.2 ENGINE UNDER COVER**

**18. 1HD-FTE Only:**

**INSTALL TRANSMISSION UNDER COVER**

**19. FILL ATF AND CHECK ATF LEVEL**

**(See page DI-80)**