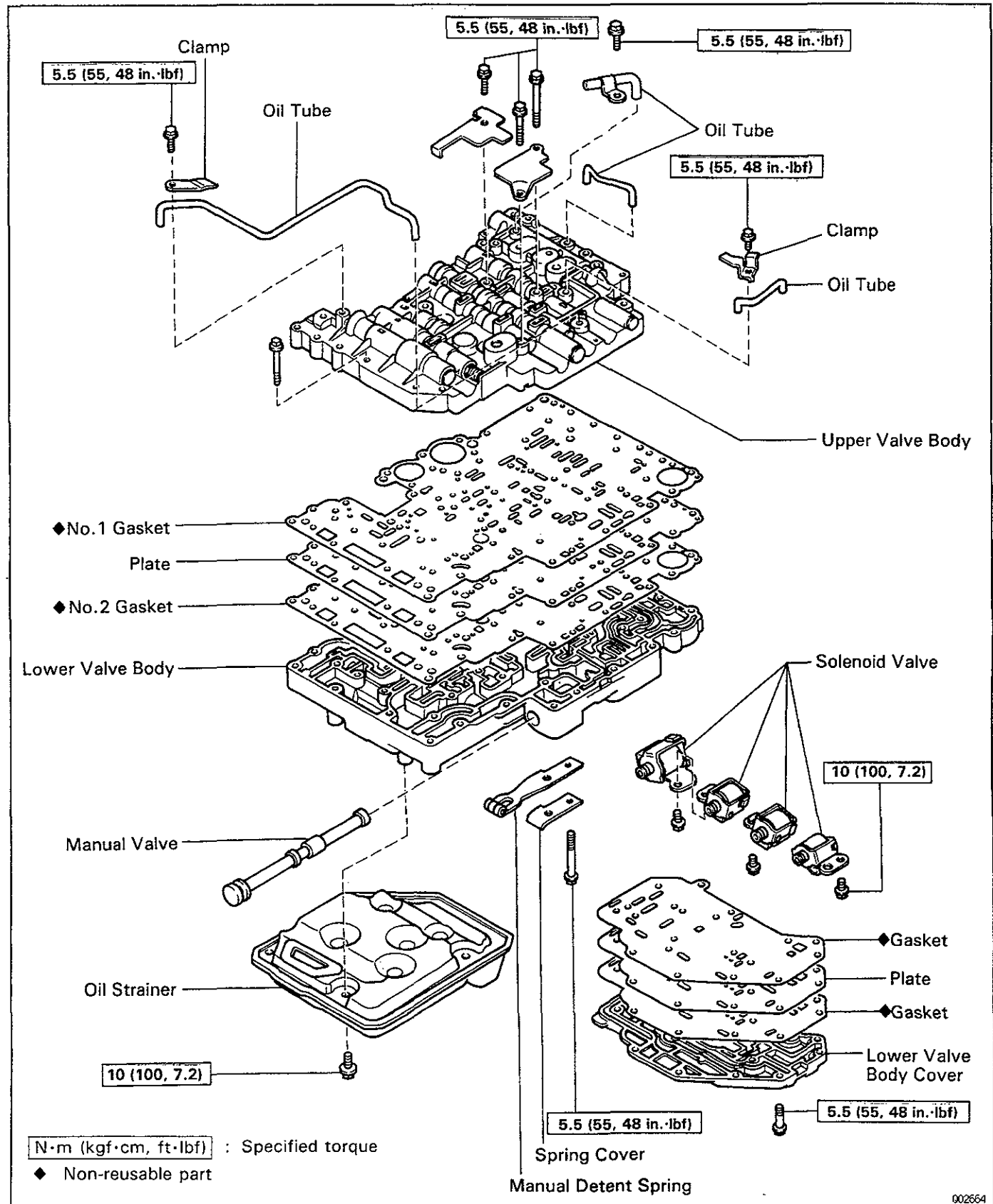


# VALVE BODY COMPONENTS

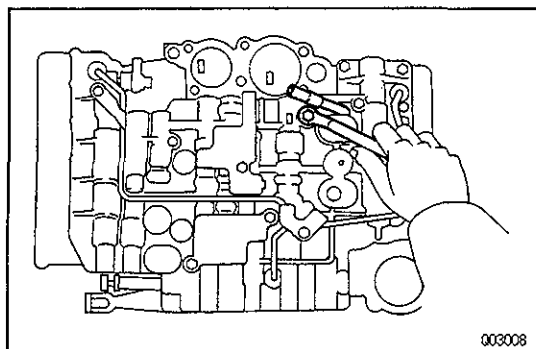
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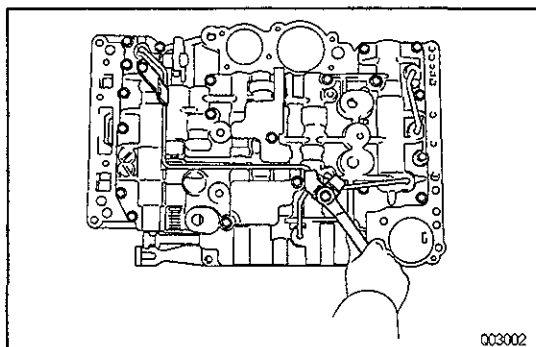
## VALVE BODY DISASSEMBLY

### 1. REMOVE DRAIN TUBE

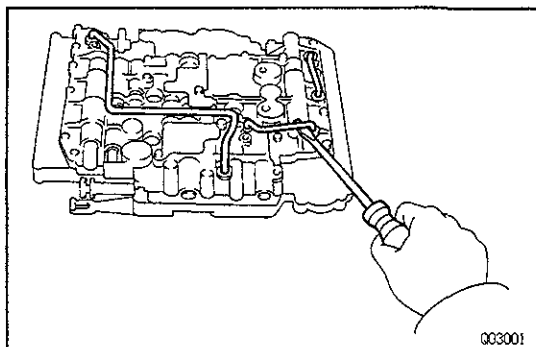


### 2. REMOVE OIL TUBES

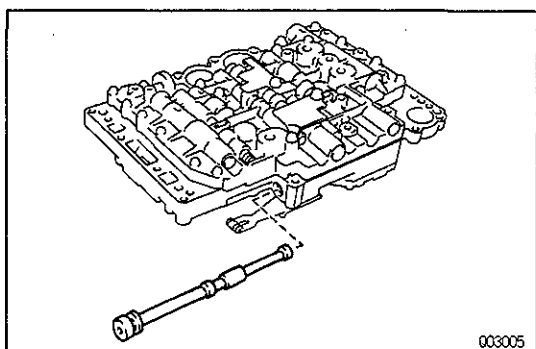
- (a) Remove the two tube clamps.



- (b) Using a large screwdriver, pry out the three oil tubes.

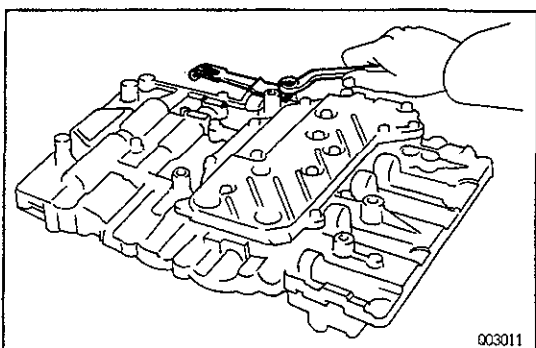


### 3. REMOVE MANUAL VALVE

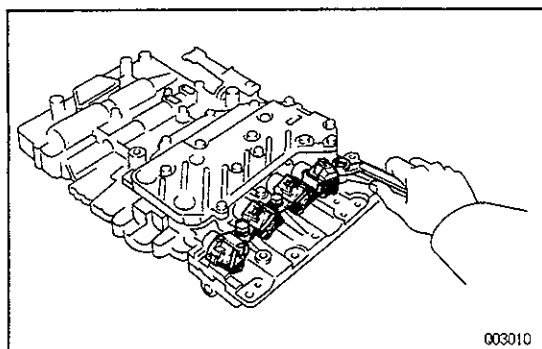


### 4. REMOVE MANUAL DETENT SPRING

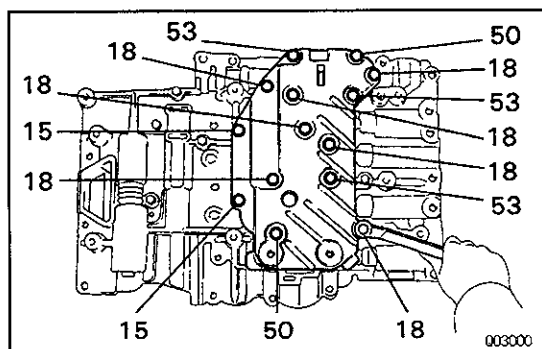
- (a) Turn over the valve body assembly.
- (b) Remove the bolt, wave washer, spring cover and detent spring.



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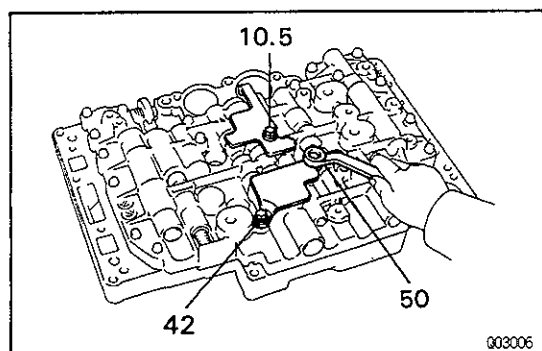


## 5. REMOVE FOUR SOLENOID VALVES

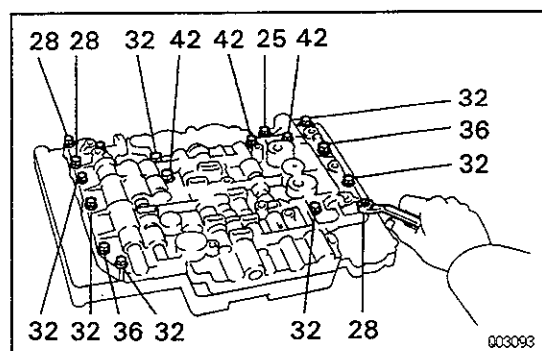


## 6. REMOVE LOWER VALVE BODY COVER AND PLATE

Remove the sixteen bolts, wave washers, body cover, two gaskets and body plate.

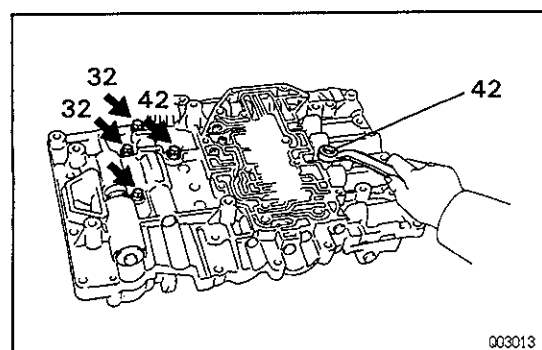


## 7. REMOVE TWO PLATS

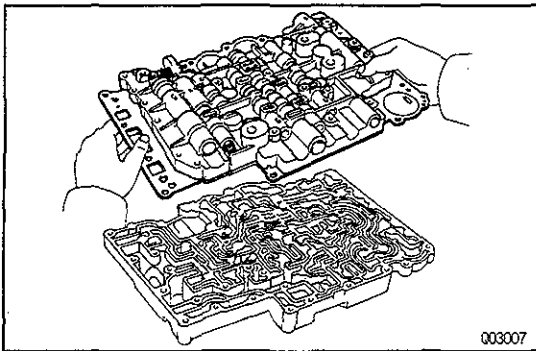


## 8. SEPARATE UPPER AND LOWER VALVE BODYS

(a) Remove the thirteen bolts from the upper valve body.



(b) Remove the five bolts from the lower valve body.  
**NOTICE:** Be careful that the check balls, springs and check valves do not fall out from the lower valve body.



- (c) Remove the lower valve body together with the valve body

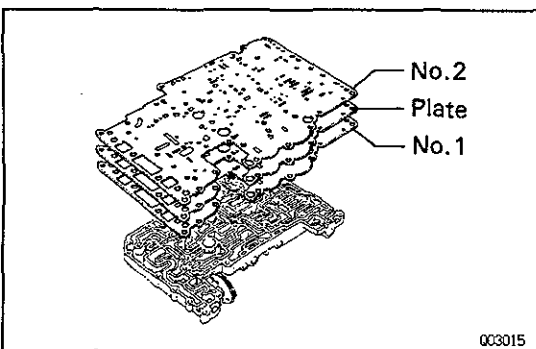
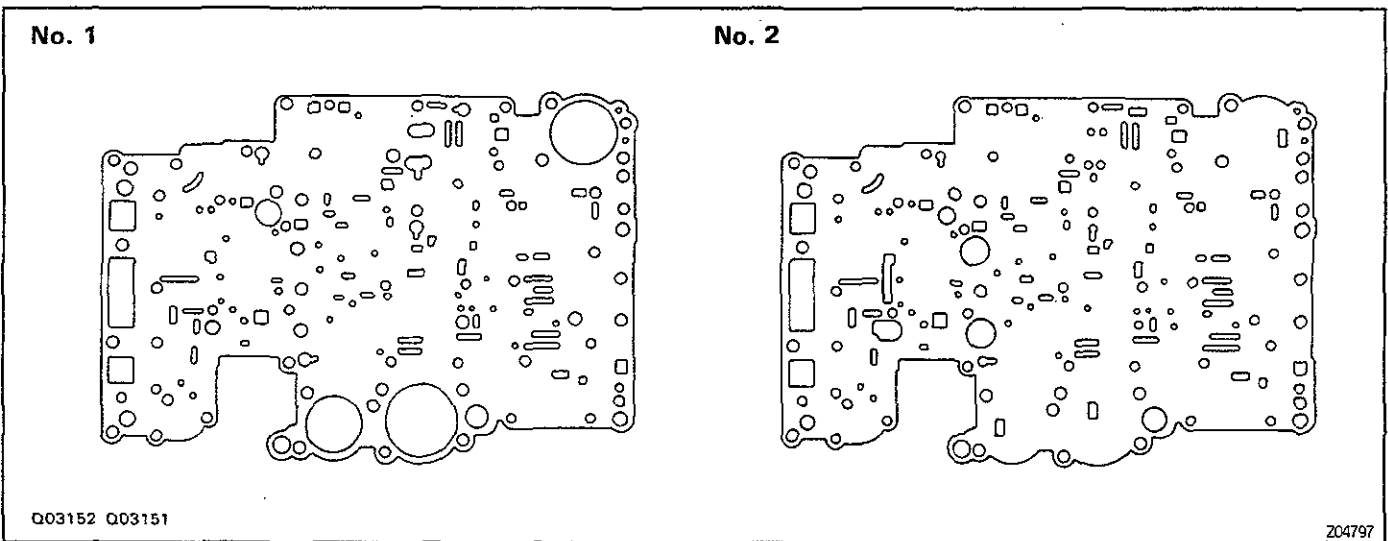
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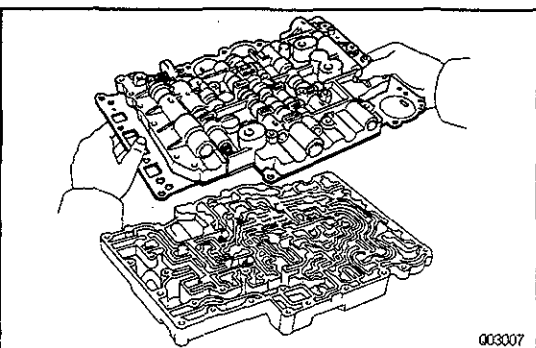
## VALVE BODY ASSEMBLY

### 1. INSTALL VALVE BODY PLATE

HINT: Since No.1 and No.2 gaskets look similar, use the illustrations below to differentiate them.

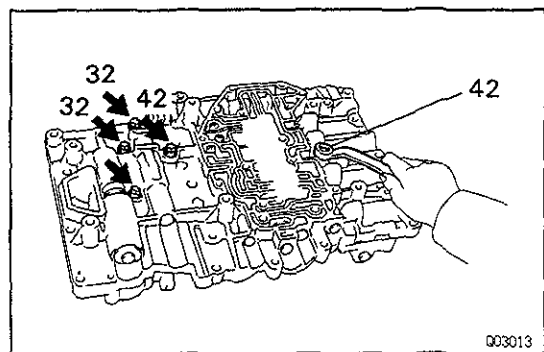


Place a new No.1 gasket, the body plate and a new No.2 gasket on the lower valve body.



### 2. INSTALL LOWER VALVE BODY

- (a) Turn over the valve body assembly together with the plate and two gaskets.  
HINT: Be careful do not fall out the check balls, check valve and the springs.
- (b) Place the lower valve body on the upper valve body.

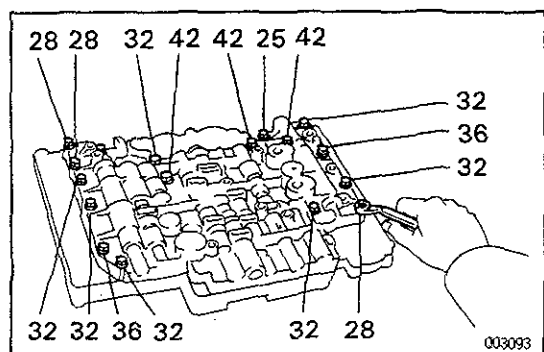


- (b) Temporarily install the five bolts.  
HINT: Each bolt length mm (in.) is indicated in the figure.

Bolt length:

32 mm (1.26 in.)

42 mm (1.65 in.)



### 3. INSTALL UPPER VALVE BODY INSTALLATION BOLTS

- (a) Turn over the valve body assembly.  
(b) Temporarily install the twenty bolts.  
HINT: Each bolt length mm (in.) is indicated in the figure.

Bolt length:

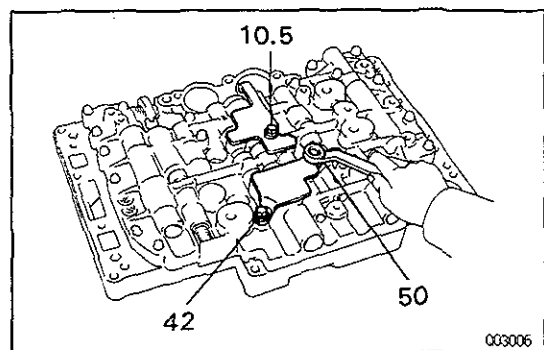
25 mm (0.98 in.)

28 mm (1.10 in.)

32 mm (1.26 in.)

36 mm (1.42 in.)

42 mm (1.65 in.)



### 4. INSTALL TWO PLATES

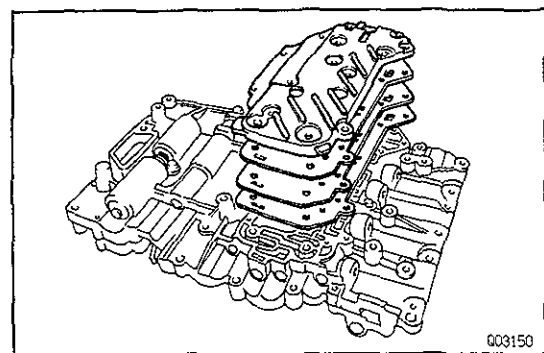
HINT: Each bolt length mm (in.) is indicated in the figure.

Bolt length:

10.5 mm (0.413 in.)

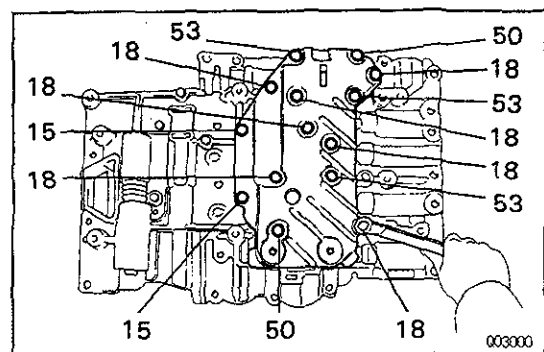
42 mm (1.657 in.)

50 mm (1.97 in.)



### 5. INSTALL LOWER VALVE BODY PLATE AND COVER

- (a) Place a new No.3 gasket, the body plate and a new No.4 gasket on the lower valve body.



- (b) Install the body cover with the two wave washers and fourteen bolts.

Torque: 5.4 N·m (55 kgf·cm, 48 in·lbf)

HINT: Each bolt length mm (in.) is indicated in the figure.

**Bolt length:**

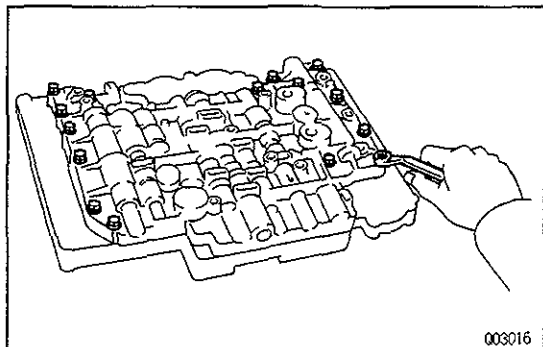
15 mm (0.59 in.)

18 mm (0.71 in.)

50 mm (1.97 in.)

53 mm (2.09 in.)

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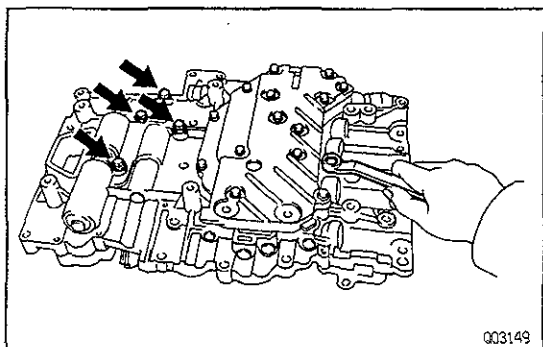


**6. TIGHTEN BOLTS OF UPPER AND LOWER VALVE BODIES**

**(a) (Upper Side)**

Tighten the seven bolts.

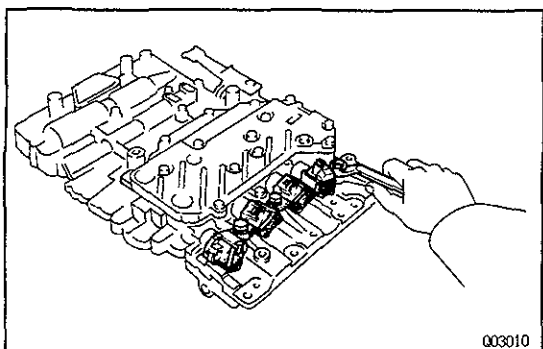
Torque: 5.4 N·m (55 kgf·cm, 48 in.-lbf)



**(b) (Lower Side)**

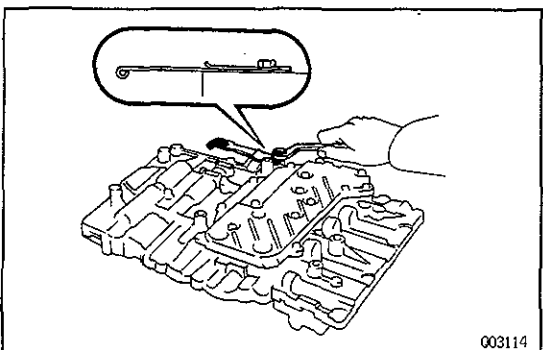
Tighten the nine bolts.

Torque: 5.4 N·m (55 kgf·cm, 48 in.-lbf)



**7. INSTALL FOUR SOLENOID VALVES**

Torque: 5.4 N·m (55 kgf·cm, 48 in.-lbf)

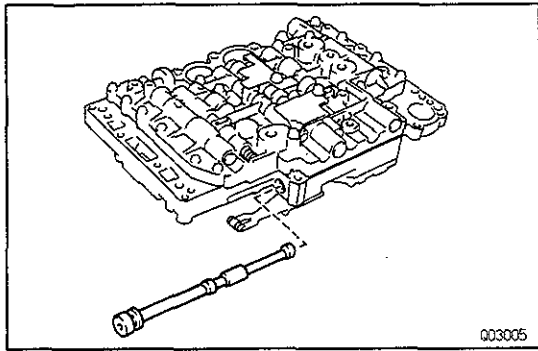


**8. INSTALL MANUAL DETENT SPRING**

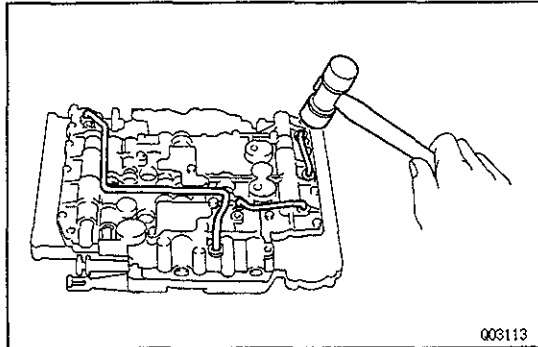
Install the detent spring and cover with the wave washer and bolt.

Torque: 5.4 N·m (55 kgf·cm, 48 in.-lbf)

HINT: Use the bolt which is 43 mm (1.69 in) in length.

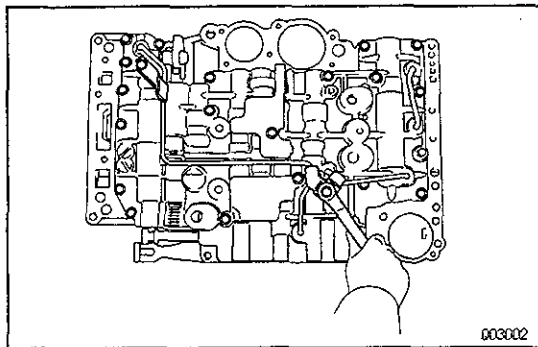


## 9. INSTALL MANUAL VALVE

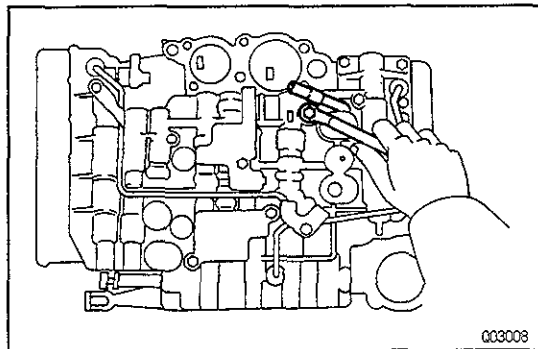


## 10. INSTALL OIL TUBES

- (a) Using a plastic-faced hammer, tap in the oil tubes.  
**NOTICE:** Be careful not to bend or damage the tubes.



- (b) Install the tube clamps with the two wave washers and bolts.  
**HINT:** Use the bolt which is 10.5 mm (0.41 in.) in length.



## 11. INSTALL DRAIN TUBE

Install the drain tube.

**HINT:** Use the bolt which is 10.5 mm (0.41 in.) in length.