

## INSTALLATION OF COMPONENT PARTS

(See pages [AT-28](#) to 30)

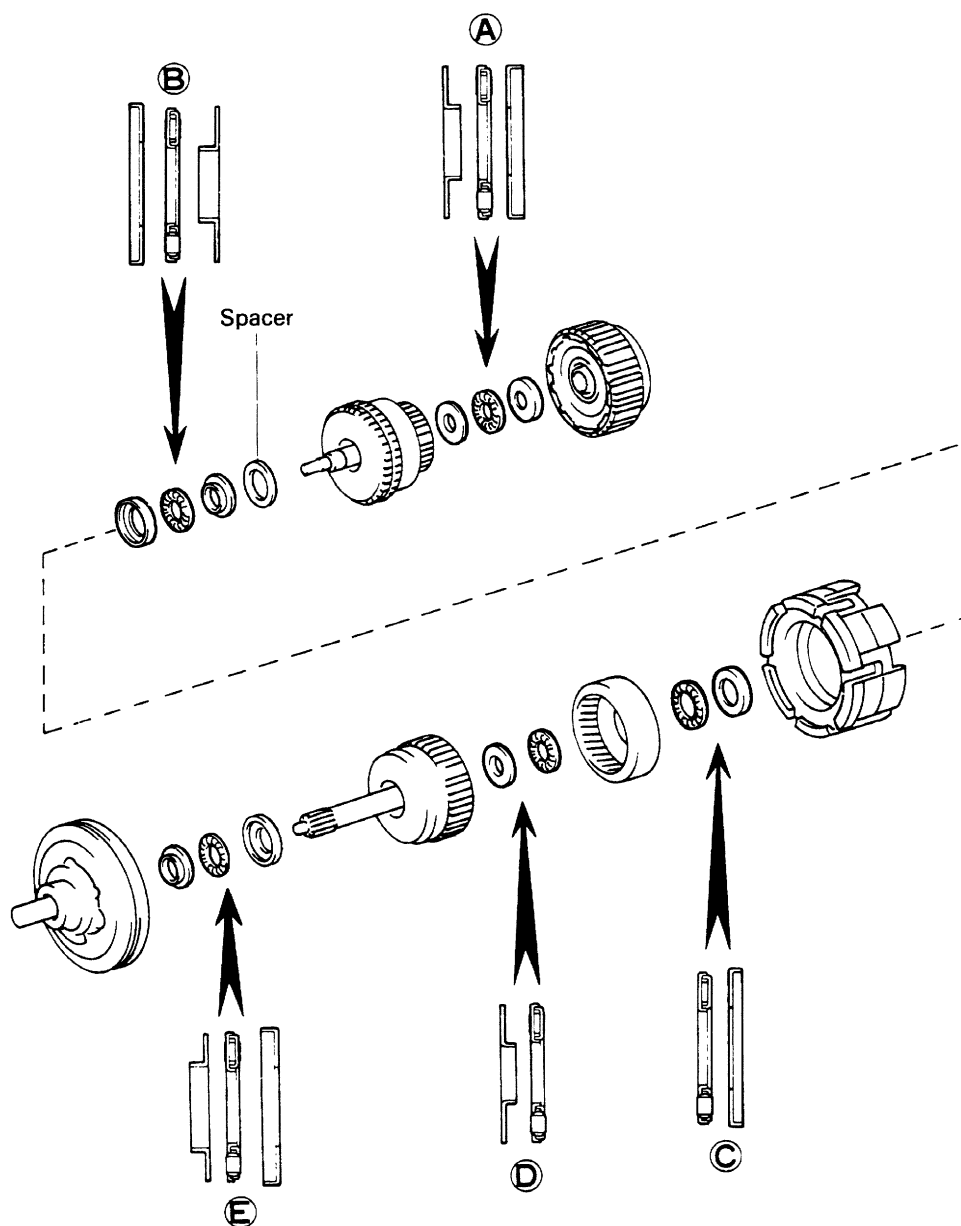
Disassembly, inspection and assembly of each component group have been indicated in the preceding chapter. Before assembly, make sure again that all component groups are assembled correctly. If something wrong is found in a certain component group during assembly, inspect and repair this group immediately.

**Recommended ATF: DEXRON® II**

### **GENERAL INSTALLATION NOTES: .**

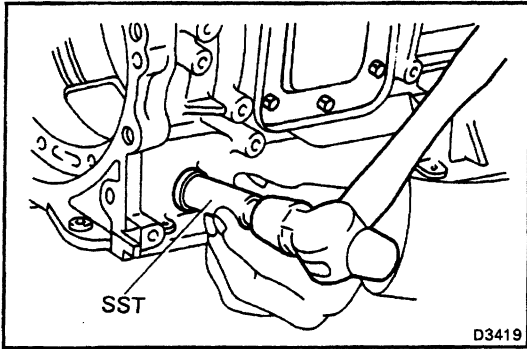
1. The automatic transmission is composed of highly precision-finished parts, necessitating careful inspection before assembly because even a small nick could cause fluid leakage or affect performance.
2. Before assembling new clutch discs, soak them in automatic transmission fluid for at least two hours.
3. Apply automatic transmission fluid on sliding or rotating surfaces of parts before assembly.
4. Use petroleum jelly to keep small parts in their places.
5. Do not use adhesive cements on gaskets and similar parts.
6. When assembling the transmission, be sure to use new gaskets and O-rings.
7. Dry all parts with compressed air – never use shop rags.

# INSTALLATION POSITION AND DIRECTION OF BEARINGS AND RACES



mm (in.) AT4068

|   | Thrust bearing diameter |              | Bearing race diameter                         |              |              |              |
|---|-------------------------|--------------|-----------------------------------------------|--------------|--------------|--------------|
|   |                         |              | Front                                         |              | Rear         |              |
|   | Inside                  | Outside      | Inside                                        | Outside      | Inside       | Outside      |
| Ⓐ | 34.7 (1.366)            | 52.0 (2.047) | 32.8 (1.291)                                  | 50.4 (1.984) | 37.0 (1.457) | 52.0 (2.047) |
| Ⓑ | 34.7 (1.366)            | 52.0 (2.047) | 37.0 (1.457)                                  | 52.0 (2.047) | 32.8 (1.291) | 50.4 (1.984) |
| Ⓒ | 34.7 (1.366)            | 52.0 (2.047) | —                                             | —            | 37.0 (1.457) | 52.0 (2.047) |
| Ⓓ | 25.0 (0.894)            | 42.0 (1.654) | 23.2 (0.913)                                  | 42.0 (1.654) | —            | —            |
| Ⓔ | 28.5 (1.122)            | 46.2 (1.819) | 27.1 (1.067), 27.9 (1.098)<br>or 28.3 (1.114) | 43.0 (1.693) | 28.5 (1.122) | 48.0 (1.890) |

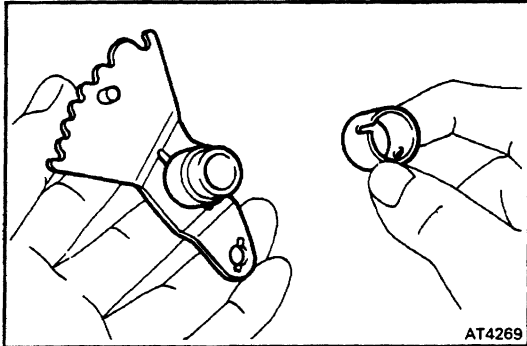


## 1. INSTALL MANUAL VALVE LEVER, SHAFT AND OIL SEALS

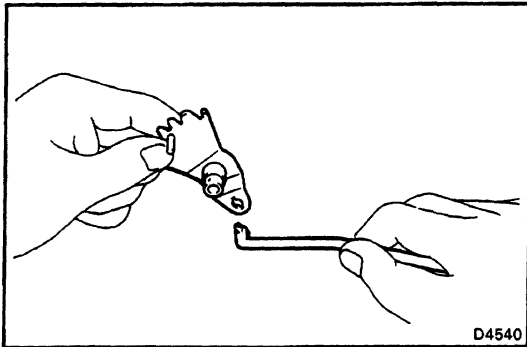
(a) Using SST, tap in new two oil seals.

SST 09350-36010 (09350-06150)

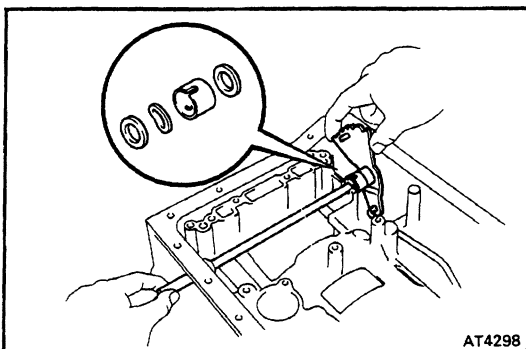
(b) Apply MP grease to the oil seal lip.



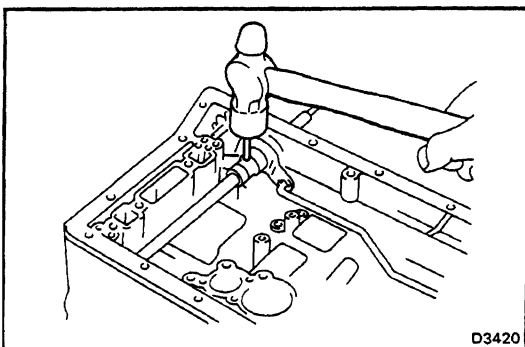
(c) Assemble a new spacer to the manual valve lever.



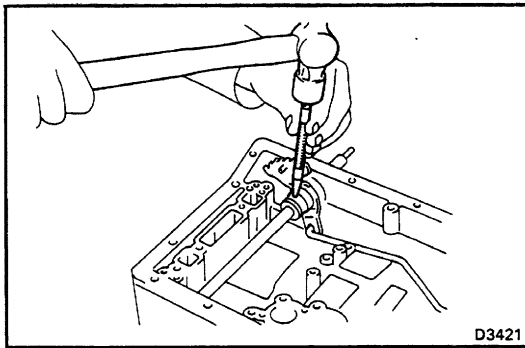
(d) Connect the parking lock rod to the manual valve lever.



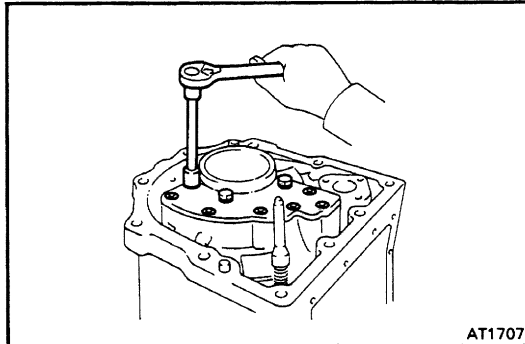
(e) Install the manual valve lever shaft to the transmission case through the plate, wave washer, manual valve lever and plate.



(f) Using a hammer, tap in the pin with the slot at a right angle to the shaft.



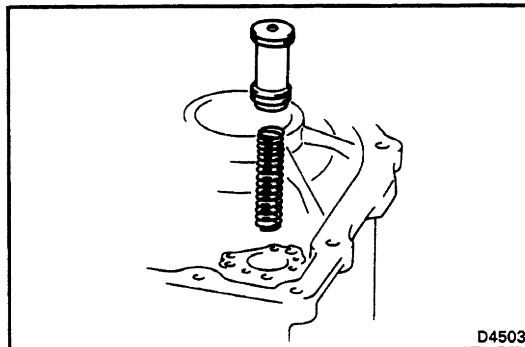
- (g) Match the spacer hole to the lever calking hollow and calk the spacer to the lever.
- (h) Make sure the manual valve lever shaft turns smoothly.



## 2. INSTALL TRANSMISSION REAR COVER

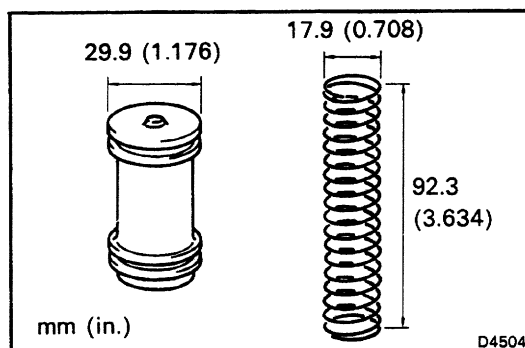
Install a new gasket and rear cover with the three bolts and six screws.

**Torque: 80 kg-cm (69 in.-lb, 7.8 N-m)**

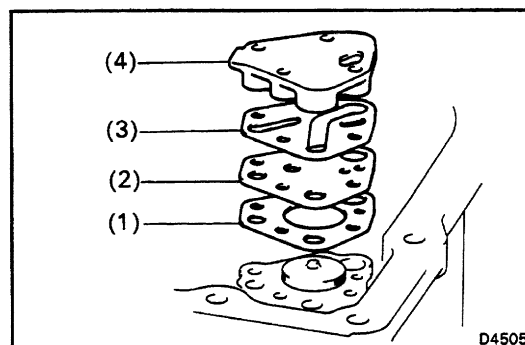


## 3. INSTALL C, ACCUMULATOR PISTON AND SPRING

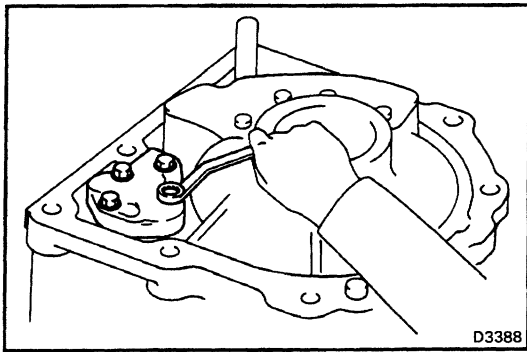
- (a) Coat new O-rings with ATF, and install them to the piston.
- (b) Install the spring and accumulator piston into the bore of the transmission case.



**HINT:** Piston, spring diameters and spring free length are shown in the figure.

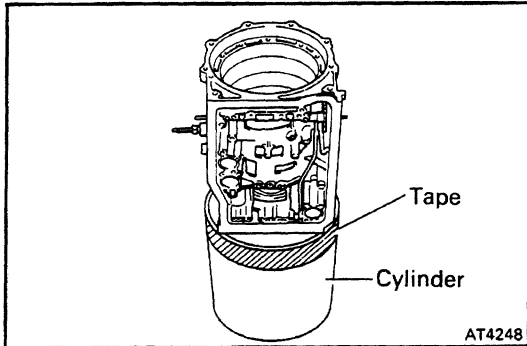


- (c) Place the following parts on the transmission case.
- (1) New gasket
- (2) Plate
- (3) New gasket
- (4) Front clutch accumulator cover



(d) Install the four bolts.

**Torque: 80 kg-cm (69 in.-lb, 7.8 N-m)**

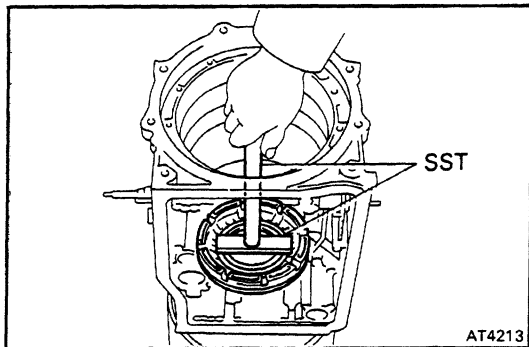


#### 4. INSTALL FIRST AND REVERSE BRAKE PISTON

(a) Place the transmission case on a cylinder.

**NOTICE: Be careful not to damage the transmission case.**

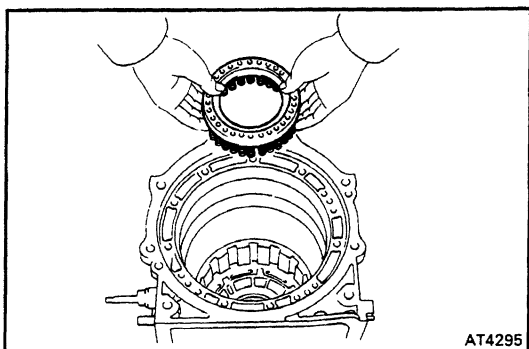
**Tape the top of the cylinder.**



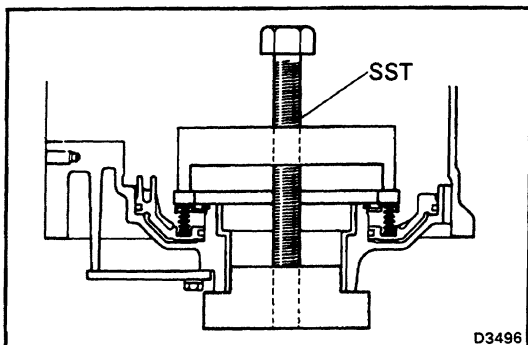
(b) Coat new two O-rings with ATF, and install them to the brake piston.

(c) Using SST, push in the brake piston.

SST 09350-36010 (09350-06035, 09350-06050)

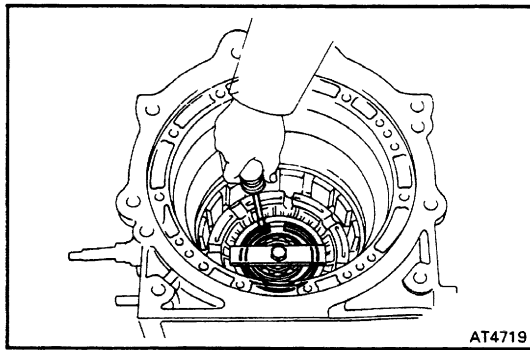


(d) Place the return spring on the brake piston.

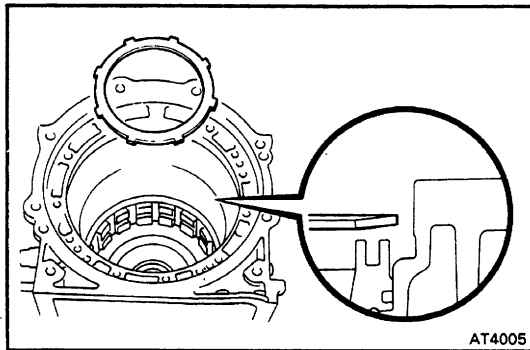


(e) Using SST, compress the return spring.

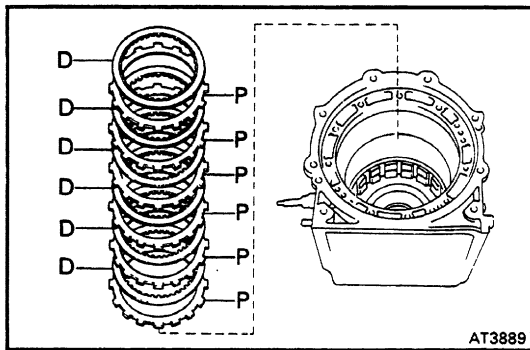
SST 09350-36010 (09350-06030)



(f) Using a screwdriver, install the snap ring.



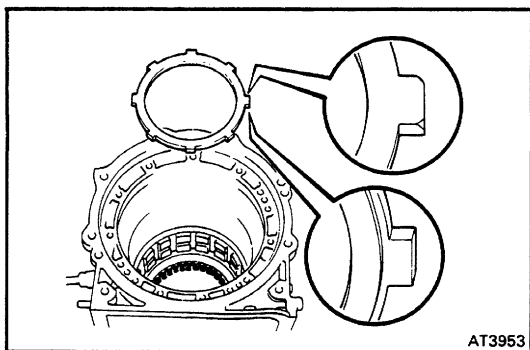
(g) Install the cushion plate, facing the rounded edge inward.



(h) Install the six plates and six discs in order:

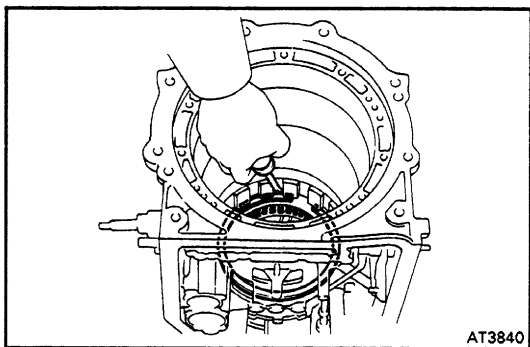
P = Plate D = Disc

P-D-P-D-P-D-P-D-P-D



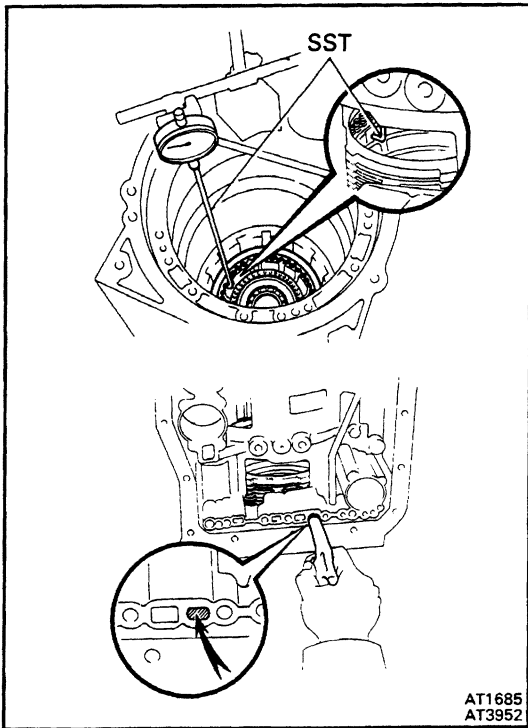
(i) Install the flange, facing the rounded edge outward.

HINT: If the flange is step-edged, install the flange with the step-edge, facing inward.



(j) Install the snap ring.

HINT: Be sure the end of the snap ring is not aligned with the cutout portion of the transmission case.



## 5. CHECK PISTON STROKE OF FIRST AND REVERSE BRAKE

Using SST and a dial indicator, measure the piston stroke by applying and releasing the compressed air (4 – 8 kg/cm<sup>2</sup>, 57 – 114 psi or 392 – 785 kPa) as shown.

SST 09350-36010 (09350-06120, 09350-06130)

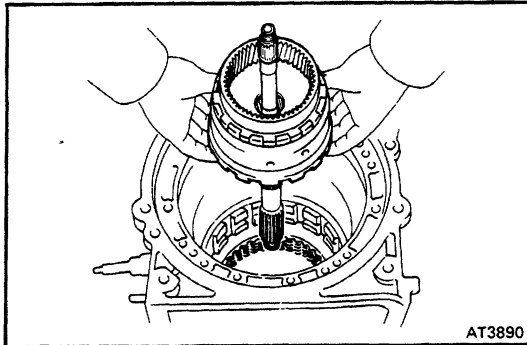
**Piston stroke: 1.5 – 3.0 mm (0.059 – 0.118 in.)**

If the piston stroke is less than specified, parts may have been assembled incorrectly, check and reassemble again. If the piston stroke is not as specified, select another flange. \_

HINT: There are three different thicknesses for flange.

mm (in.)

| No.  | Thickness     |
|------|---------------|
| None | 6.65 (0.2618) |
| 1    | 7.05 (0.2776) |
| 2    | 7.45 (0.2933) |

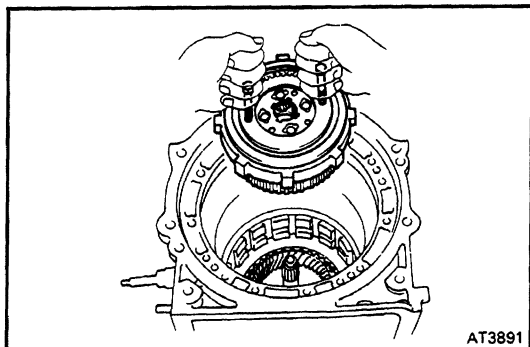


## 6. INSTALL PLANETARY GEARS, ONE-WAY CLUTCH AND OUTPUT SHAFT ASSEMBLY

(a) Place the transmission case on a cylinder.

(See step 4 (a) on page AT- 121)

(b) Install the rear planetary carrier and output shaft assembly to the transmission case.



(c) Install two bolts to the front planetary carrier.

HINT: Use two 6 mm (1 mm pitch) bolts. Do not screw over 5 revolutions.

(d) Align the spline of the one-way clutch with the spline groove of the transmission case.

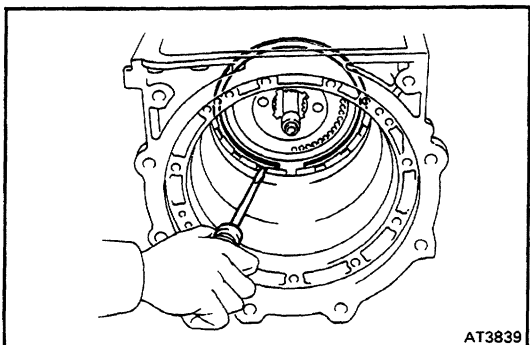
(e) Install the front planetary carrier and one-way clutch assembly into the transmission case.

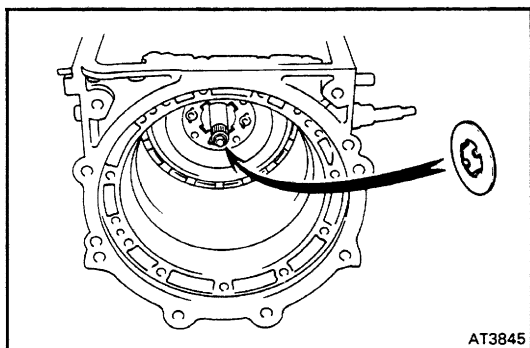
HINT:

- Mesh the spline of the front planetary carrier with the flukes of the discs by rotating and pushing the front planetary carrier clockwise.
- If the front planetary carrier will not rotate clockwise, check the installation of the one-way clutch.

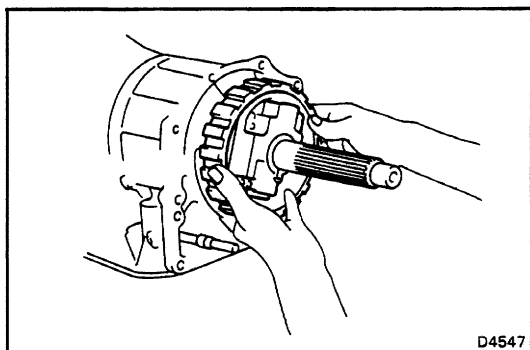
(f) Using a screwdriver, install the snap ring.

HINT: Be sure the end of the snap ring is not aligned with the cutout portion of the transmission case.



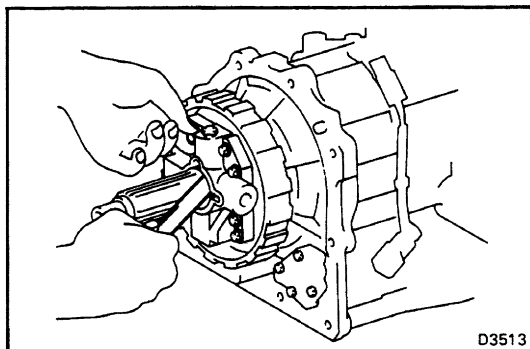


- (g) Coat the thrust washer with petroleum jelly, and install it onto the front planetary carrier.  
 HINT: Securely fit the claws of the thrust washer into the grooves of the front planetary gear.

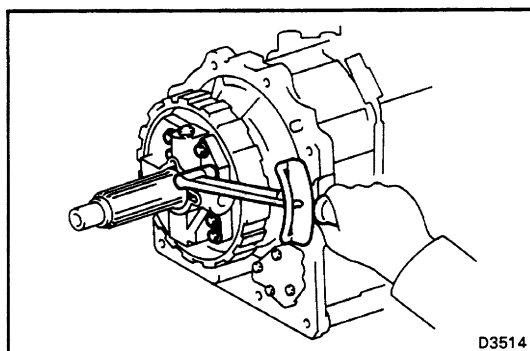


## 7. INSTALL GOVERNOR BODY

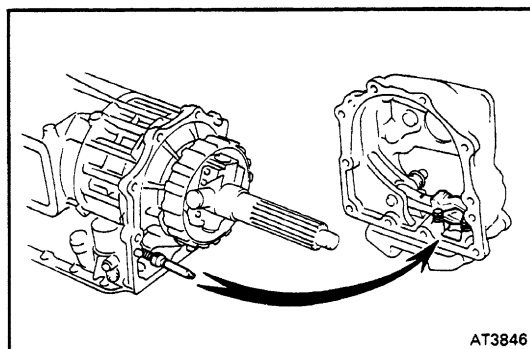
- (a) Install the governor body onto the output shaft.



- (b) Insert a 0.01 mm (0.0004 in.) feeler gauge between the output shaft and governor body, and temporarily tighten the bolts.  
 (c) Check that the clearance between the output shaft and governor body is even all the way around.

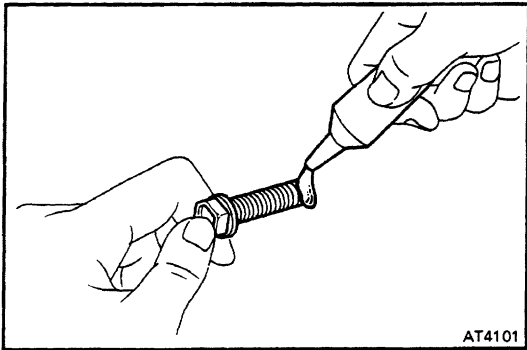


- (d) Tighten the bolts.  
**Torque: 100 kg-cm (7 ft-lb, 10 N-m)**



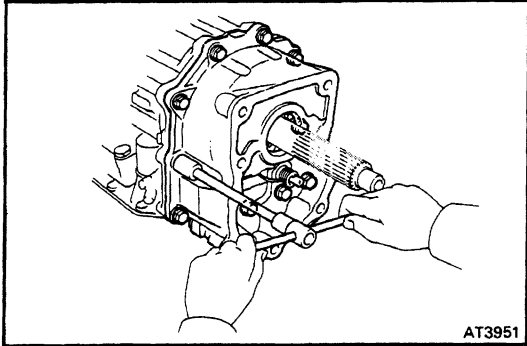
## 8. INSTALL TRANSFER ADAPTOR

- (a) Place a new gasket on the transmission case.  
 (b) Insert the parking lock rod between the parking lock pawl and bracket, and attach the transfer adaptor on the transmission case.



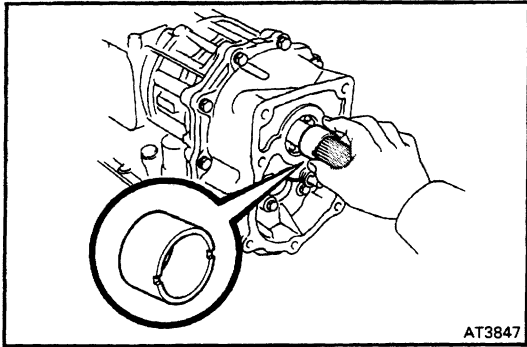
(c) Apply sealant to the bolt threads.

**Sealant: Part No.08833-00070, THREE BOND 1324 or equivalent**



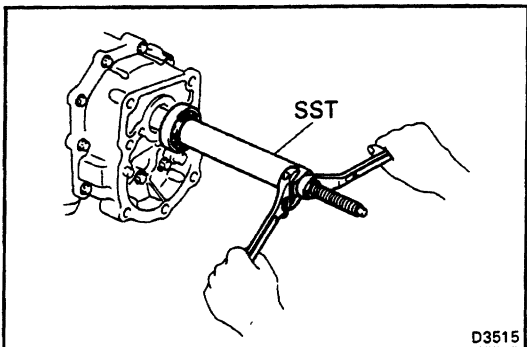
(d) Install a new gasket and the transfer adaptor with the ten bolts.

**Torque: 380 kg-cm (27 ft-lb, 37 N-m)**



## 9. INSTALL OUTPUT SHAFT SPACER

Slide the spacer onto the output shaft, facing the cutout portion outward.

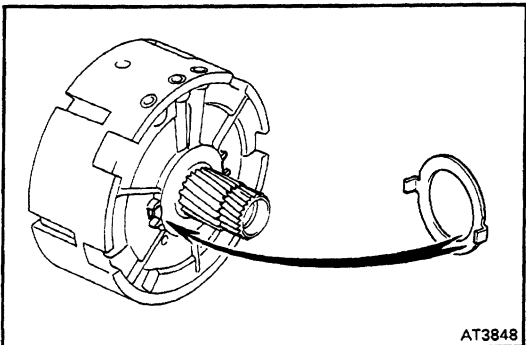


## 10. INSTALL OUTPUT SHAFT REAR BEARING

Using SST, install the bearing.

SST 09309-36033

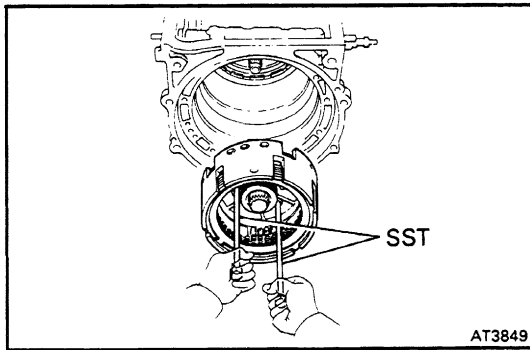
## 11. INSTALL TRANSFER COMPONENT PARTS WITHOUT INSTALLING NO.2 TRANSFER CASE COVER (See pages [TF-35](#) to 43)



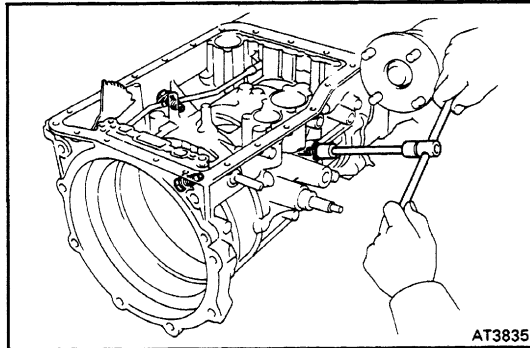
## 12. TEMPORARILY INSTALL CENTER SUPPORT ASSEMBLY

(a) Coat the thrust washer with petroleum jelly, and install it onto the rear side of the center support.

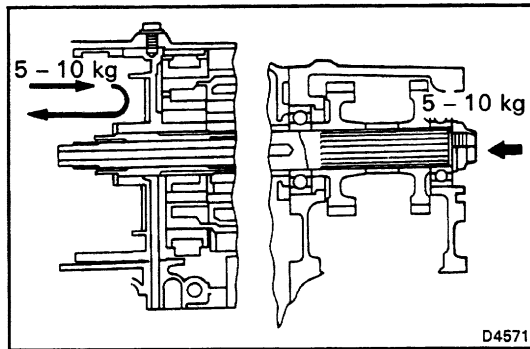
**HINT:** Securely fit the claws of the thrust washer into the grooves of the center support.



- (b) Install SST (two bolts) to the center support.  
SST 09350-36010 (09350-06140)
- (c) Align the oil holes and bolt holes of the center support and transmission case.
- (d) Install the center support assembly into the transmission case.

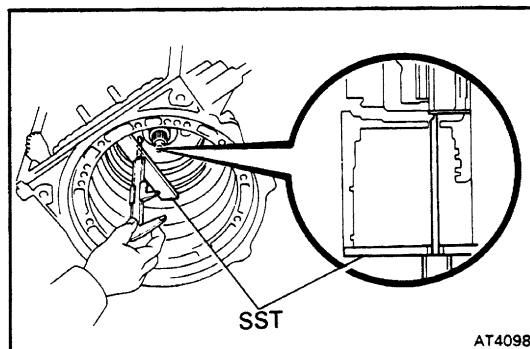


- (e) Install the three center support set bolts.  
**Torque: 250 kg-cm (18 ft-lb, 25 N-m)**

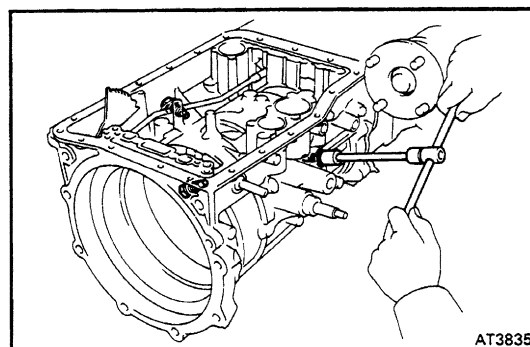


### 13. ADJUST THRUST CLEARANCE OF CENTER SUPPORT

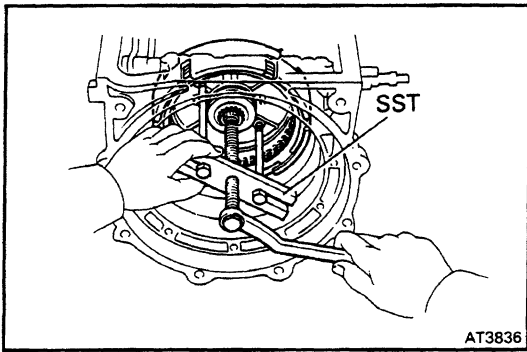
- (a) Push the transmission output shaft toward the front of the transmission by applying a force of 5 –10 kg (11.0 – 22.0 lb, 49 – 98 N).
- (b) Push the center support toward the rear of the transmission by applying a force of 5 –10 kg (11.0 – 22.0 lb, 49 – 98 N), then pull with the same amount of force.



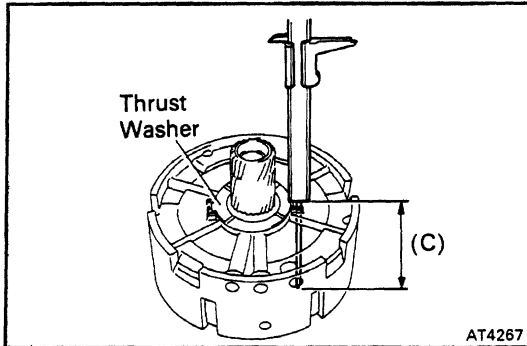
- (c) Place SST on the center support.  
SST 09350-36010 (09350-06090)
- (d) Using calipers, measure distance (A) between the tops of SST and the thrust washer on the front planetary gear.
- (e) Using calipers, measure thickness (B) of SST.



- (f) Remove the three center support set bolts.



- (g) Using SST, remove the center support assembly from the transmission case.  
SST 09350-36010 (09350-06140)



- (h) Turn over the center support together with the thrust washer, and place it on a flat surface.  
(i) Inserting calipers into the thrust washer hole, measure the distance (C) between it and the flat surface.

Center support thrust clearance:

$$A - (B + C)$$

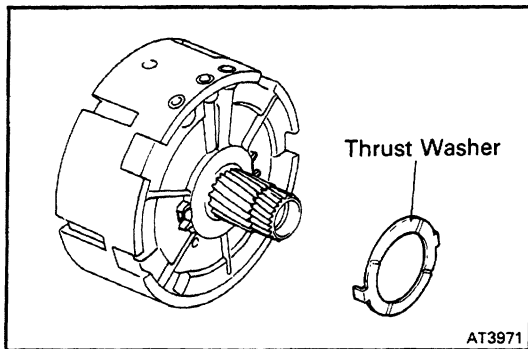
**Standard thrust clearance: 0.30 – 0.70 mm**

**(0.0118 – 0.0276 in.)**

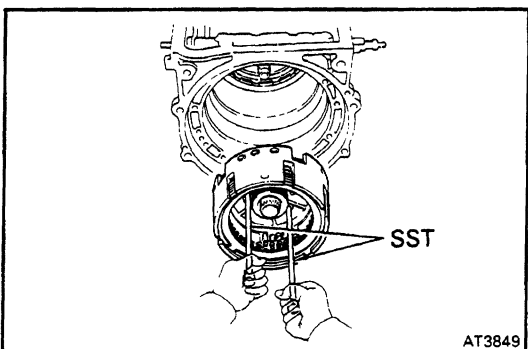
**Maximum thrust clearance: 0.90 mm (0.0354 in.)**

If the thrust clearance is greater than maximum, select and install a thrust washer.

HINT: There are four different thicknesses for thrust washer.

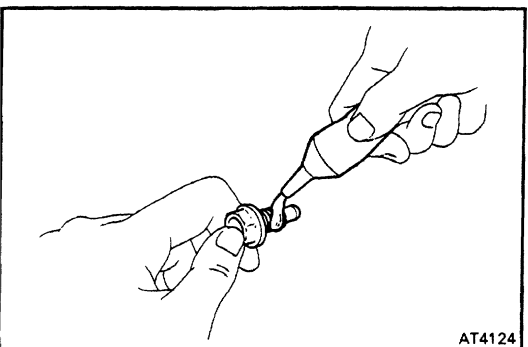


| Thrust washer thickness mm (in.) |             |
|----------------------------------|-------------|
| 1.8 (0.071)                      | 2.4 (0.094) |
| 2.1 (0.083)                      | 2.6 (0.102) |



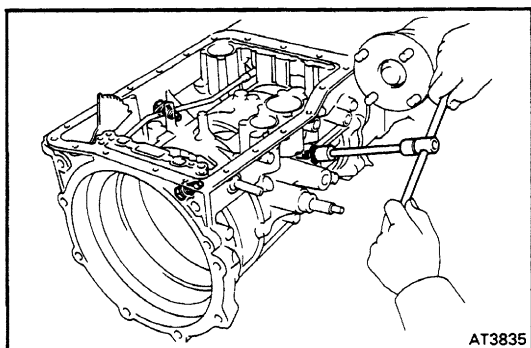
#### 14. INSTALL CENTER SUPPORT ASSEMBLY

- (a) Coat new three O-rings with ATF, and install them to the oil holes of the center support.  
(b) Install SST (two bolts) to the center support.  
SST 09350-36010 (09350-06140)  
(c) Align the oil holes and bolt holes of the center support and transmission case.  
(d) Install the center support assembly into the transmission case.



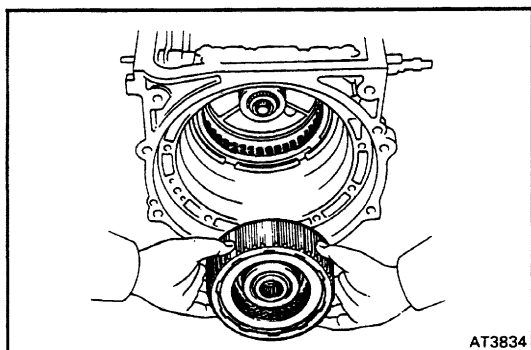
- (e) Apply sealant to the threads of the center support set bolts.

**Sealant: Part No.08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent**



(f) Install the three center support set bolts.

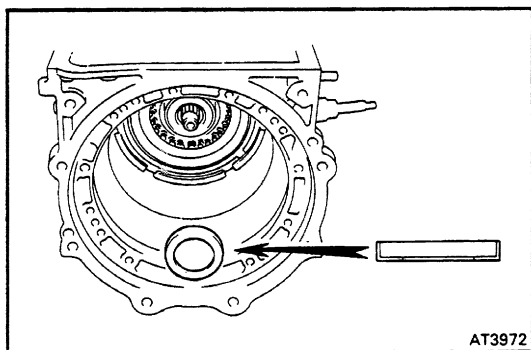
**Torque: 250 kg-cm (18 ft-lb, 25 N-m)**



## 15. INSTALL REAR CLUTCH ASSEMBLY

Install the rear clutch assembly into the transmission case.

**HINT:** Mesh the spline of the rear clutch drum with the flukes of the discs by rotating and pushing the rear clutch drum clockwise or counterclockwise.



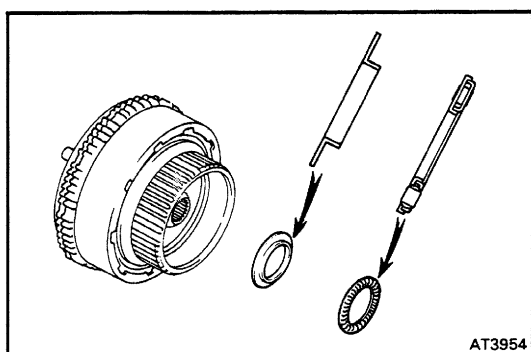
## 16. INSTALL FRONT CLUTCH ASSEMBLY

(a) Coat the race with petroleum jelly, and install it onto the rear clutch drum.

**HINT:** Race diameter

mm (in.)

|      | Inside       | Outside      |
|------|--------------|--------------|
| Race | 37.0 (1.457) | 52.0 (2.047) |

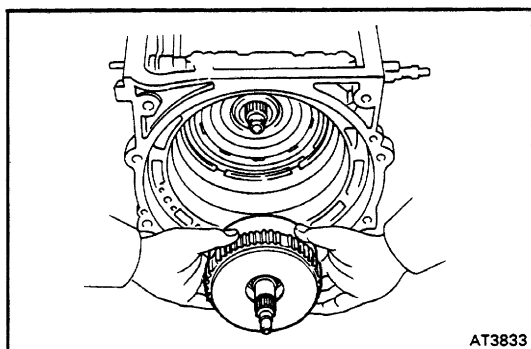


(b) Coat the race and bearing with petroleum jelly, and install them onto the front clutch hub.

**HINT:** Bearing and race diameters

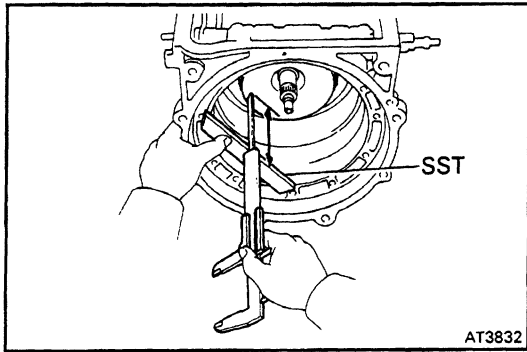
mm

|         | Inside       | Outside      |
|---------|--------------|--------------|
| Bearing | 34.7 (1.366) | 52.0 (2.047) |
| Race    | 32.8 (1.291) | 50.4 (1.984) |



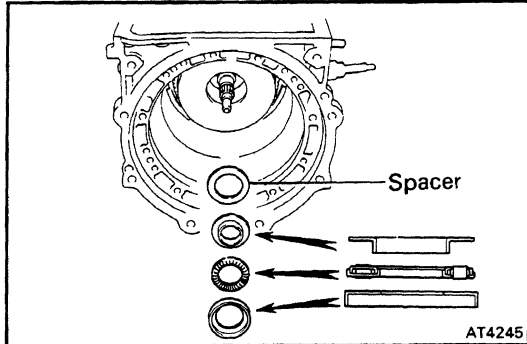
(c) Install the front clutch assembly into the transmission case.

**HINT:** Mesh the spline of the front clutch hub with the flukes of the discs by rotating and pushing the front clutch drum clockwise or counterclockwise.



## 17. CHECK CORRECT INSTALLATION OF FRONT CLUTCH ASSEMBLY

- Place SST on the installation surface of the oil pump.  
SST 09350-36010 (09350-06090)
- Using calipers, measure the distance between the tops of SST and the clutch drum.  
If the distance corresponds to that during disassembly, the front clutch assembly is installed correctly.



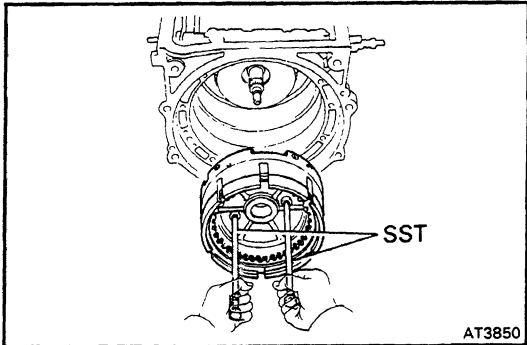
## 18. TEMPORARILY INSTALL OVERDRIVE CASE ASSEMBLY

- Remove the oil seal ring from the input shaft.
- Coat the two races and bearing with petroleum jelly, and install the spacer and them onto the front clutch drum.

HINT: Bearing and race diameter

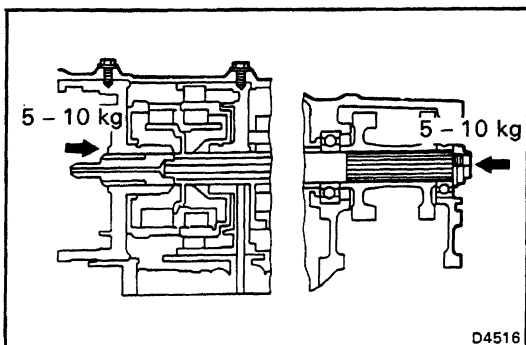
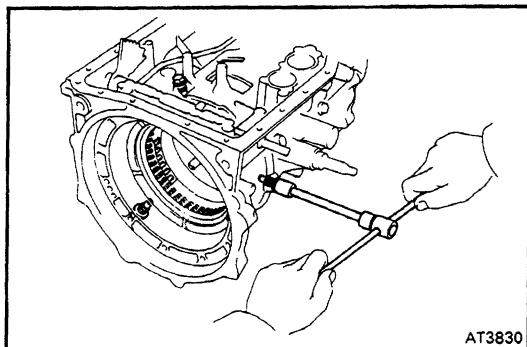
mm (in.)

|              | Inside       | Outside      |
|--------------|--------------|--------------|
| Bearing      | 34.7 (1.366) | 52.0 (2.047) |
| Race (Front) | 37.0 (1.457) | 52.0 (2.047) |
| Race (Rear)  | 32.8 (1.291) | 50.4 (1.984) |



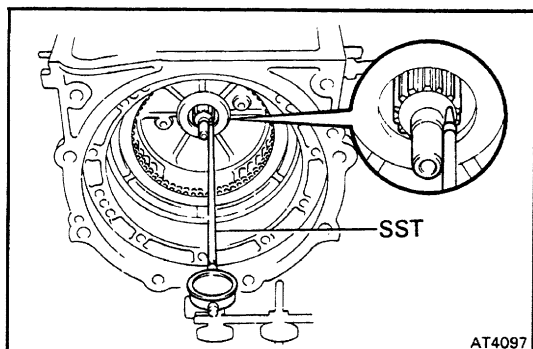
- Install SST (two bolts) to the O/D case.  
SST 09350-36010 (09350-06140)
- Align the oil holes and bolt holes of the O/D case and transmission case.
- Install the O/D case assembly.
- Install the three O/D case set bolts.

**Torque: 250 kg-cm (18 ft-lb, 25 N-m)**



## 19. ADJUST THRUST CLEARANCE OF INPUT SHAFT (FRONT CLUTCH DRUM)

- Push the transmission output shaft toward the front of the transmission by applying a force of 5 – 10 kg (11.0 – 22.0 lb, 49 – 98 N).
- Push the O/D case toward the rear of the transmission by applying a force of 5 – 10 kg (11.0 – 22.0 lb, 49 – 98 N).



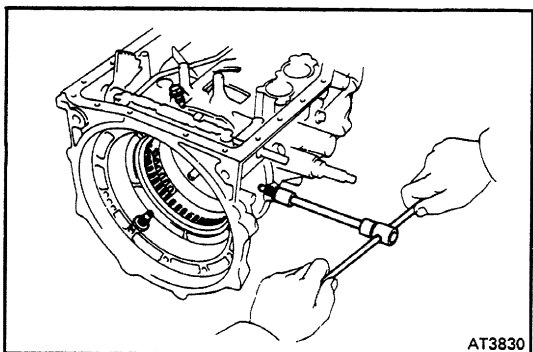
- (c) Using SST and a dial indicator, measure the thrust clearance of the input shaft.

SST 09350-36010 (09350-06130)

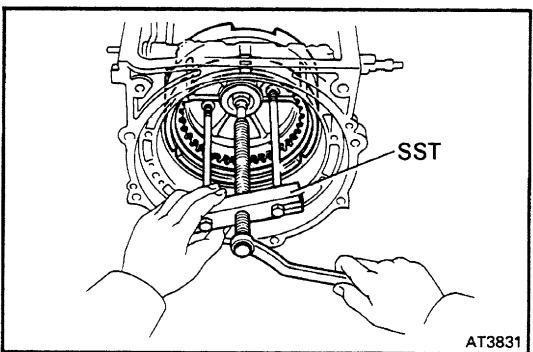
**Standard thrust clearance: 0.30 – 0.70 mm  
(0.0118 – 0.0276 in.)**

**Maximum thrust clearance: 0.70 mm (0.0276 in.)**

If the thrust clearance is greater than maximum, adjust with a spacer.

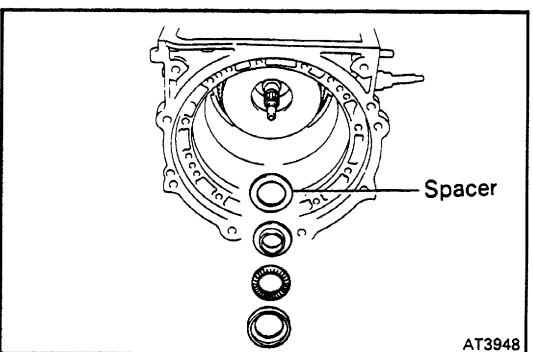


- (d) Remove the three O/ D case set bolts.



- (e) Using SST, remove the O/D case assembly.

SST 09350-36010 (09350-06140)



- (f) Remove the two races, thrust bearing and spacer from the front clutch drum or O/D case.

- (g) Select a spacer.

HINT: There are five different thicknesses for spacer.

| Spacer thickness mm (in.) |             |
|---------------------------|-------------|
| 0.9 (0.035)               | 1.8 (0.071) |
| 1.2 (0.047)               | 2.1 (0.083) |
| 1.5 (0.059)               |             |

- (h) Install the spacer, two races and bearing onto the front clutch drum.

- (i) Reinstall the oil seal ring to the input shaft.

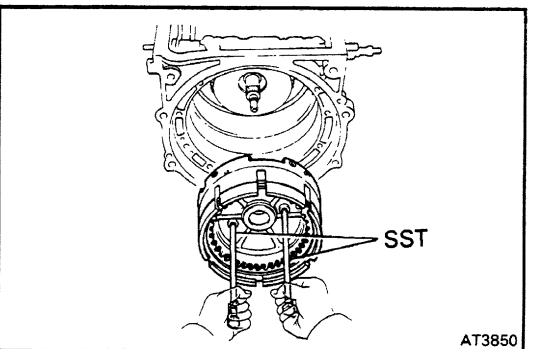
## 20. INSTALL OVERDRIVE CASE ASSEMBLY

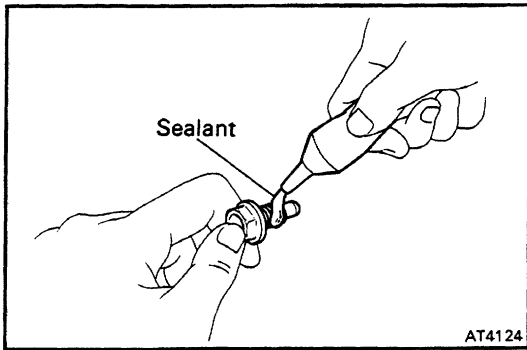
- (a) Coat new three O-rings with ATF, and install them to the oil holes of the O/D case.

- (b) Install SST (two bolts) to the O/D case.

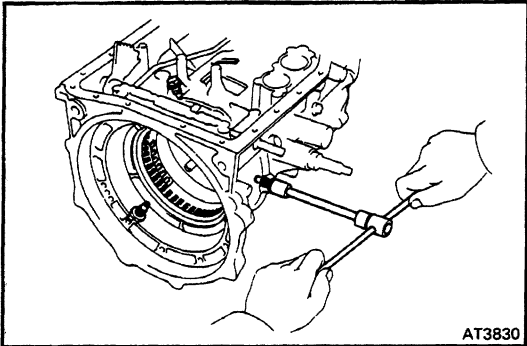
SST 09350-36010 (09350-06140)

- (c) Align the oil holes and bolt holes of the O / D case and transmission case.

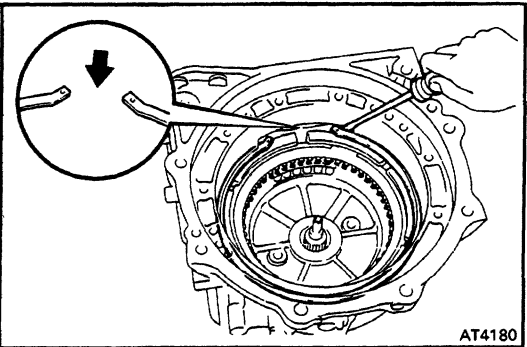




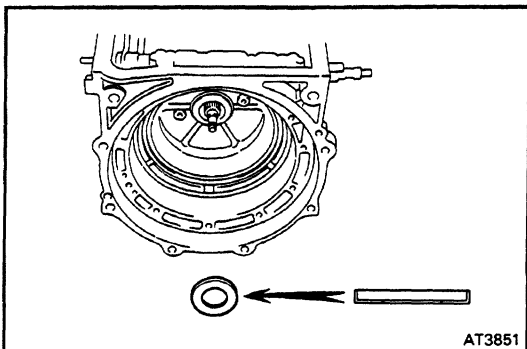
- (d) Apply sealant to the threads of the a / D case set bolts.  
Sealant: , Part No.08833-00080, THREE BOND 1344,  
**LOCTITE 242 or equivalent**



- (e) Install the three O/ D case set bolts.  
**Torque: 250 kg-cm (18 ft-lb, 25 N-m)**



- (f) Using a screwdriver, install the snap ring.  
**21. INSTALL TRANSFER NO.2 CASE COVER**  
(See step 18 on page [TF-42](#))



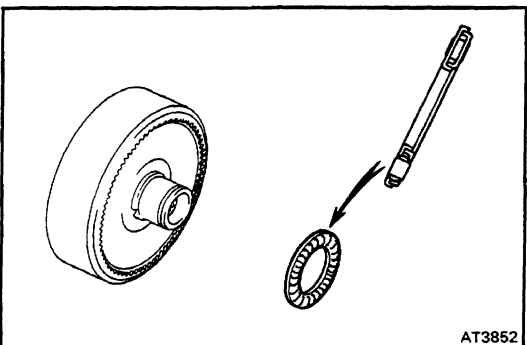
## 22. INSTALL OVERDRIVE RING GEAR ASSEMBLY

- (a) Coat the race with petroleum jelly, and install it onto the O/D case.

HINT: Race diameter

mm (in.)

|      | Inside       | Outside      |
|------|--------------|--------------|
| Race | 37.0 (1.457) | 52.0 (2.047) |

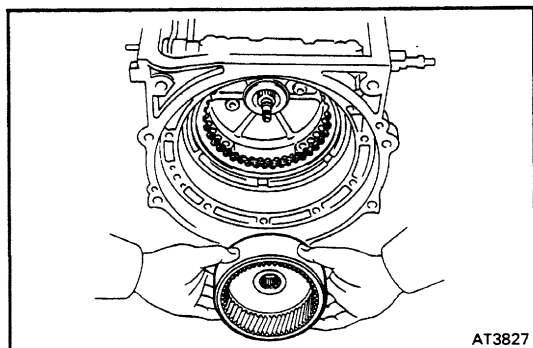


- (b) Coat the bearing with petroleum jelly, and install it onto the ring gear flange.

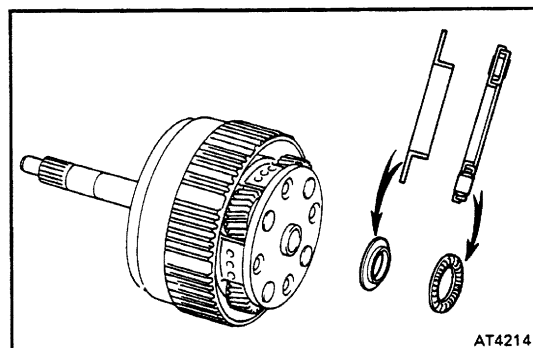
HINT: Bearing diameter

mm (in.)

|         | Inside       | Outside      |
|---------|--------------|--------------|
| Bearing | 34.7 (1.366) | 52.0 (2.047) |



(c) Install the ring gear assembly into the O/D case.



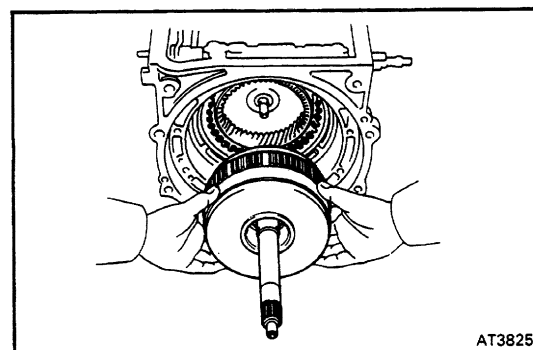
### 23. INSTALL OVERDRIVE PLANETARY GEAR OVERDRIVE DIRECT CLUTCH AND ONE-WAY CLUTCH ASSEMBLY

(a) Coat the bearing and race with petroleum jelly, and install them onto the planetary gear.

HINT: Bearing and race diameters

mm (in.)

|         | Inside       | Outside      |
|---------|--------------|--------------|
| Bearing | 25.0 (0.984) | 42.0 (1.654) |
| Race    | 23.2 (0.913) | 42.0 (1.654) |



(b) Install planetary gear, direct clutch and one-way clutch assembly into transmission case.

HINT: Mesh the spline of the O/D direct clutch drum with the flukes of the discs by rotating and pushing the O/D direct clutch drum clockwise or counterclockwise.

### 24. CHECK CORRECT INSTALLATION OF OVERDRIVE PLANETARY GEAR, OVERDRIVE DIRECT CLUTCH AND ONE-WAY CLUTCH ASSEMBLY

(a) Place SST on the installation surface of the oil pump.  
SST 09350-36010 (09350-06090)

(b) Using calipers, measure the distance between the tops of SST and the clutch drum.

If the distance corresponds to that during disassembly, the O/D planetary gear, O/D direct clutch and one-way clutch assembly is installed correctly.

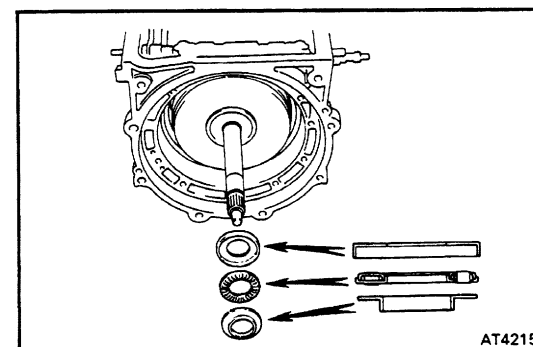
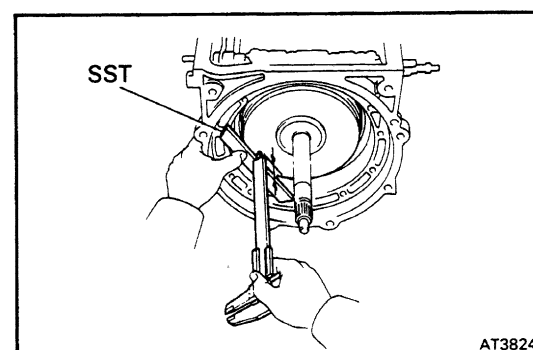
### 25. TEMPORARILY INSTALL OIL PUMP

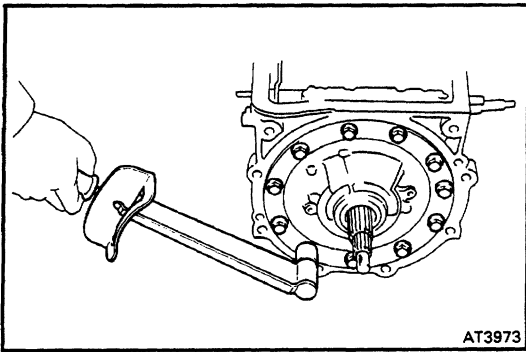
(a) Coat the two races and bearing with petroleum jelly, and install them onto the clutch drum.

HINT: Bearing and race diameters

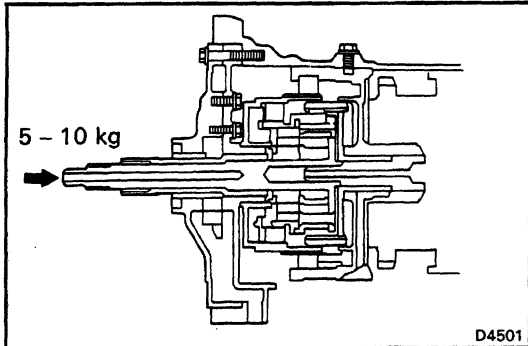
mm (in.)

|              | Inside                                        | Outside      |
|--------------|-----------------------------------------------|--------------|
| Bearing      | 28.5 (1.122)                                  | 46.2 (1.819) |
| Race (Front) | 27.1 (1.067), 27.9 (1.098)<br>or 28.3 (1.114) | 43.0 (1.693) |
| Race (Rear)  | 28.5 (1.122)                                  | 48.0 (1.890) |



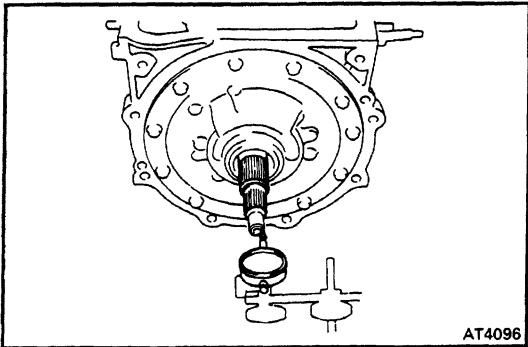


- (b) Place the gasket on the transmission case.
  - (c) Align the bolt holes of the pump body and transmission case, and slide it.
  - (d) Install and tighten the eleven bolts.
- Torque: 210 kg-cm (16 ft-lb, 21 N-m)**



## 26. ADJUST THRUST CLEARANCE OF OVERDRIVE INPUT SHAFT (OVERDRIVE PLANETARY GEAR)

- (a) Push the O/D input shaft toward the rear of the transmission by applying a force of 5 – 10 kg (11.0 – 22.0 lb, 49 – 98 N ) .



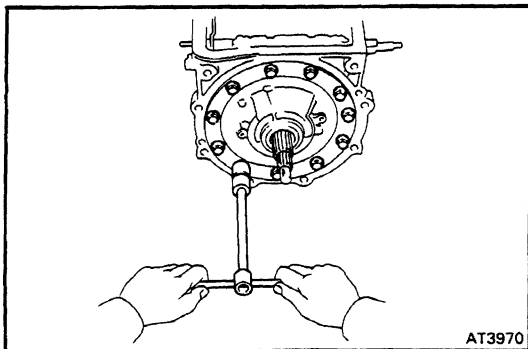
- (b) Using a dial indicator, measure the thrust clearance of the input shaft.

**Standard thrust clearance: 0.40 – 0.90 mm**

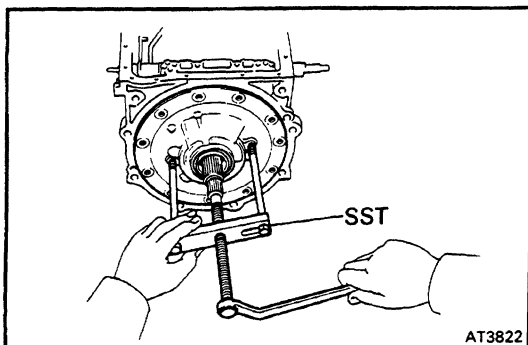
**(0.0157 – 0.0354 in.)**

**Maximum thrust clearance: 0.90 mm (0.0354 in.)**

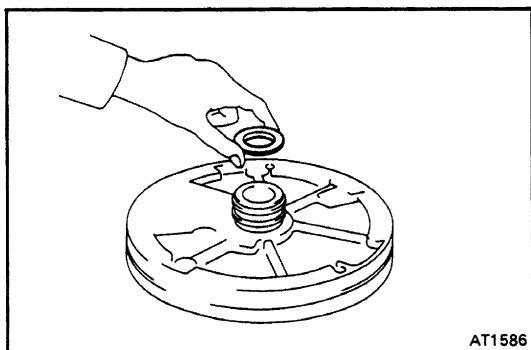
If the thrust clearance is greater than maximum, adjust with a race.



- (c) Remove the eleven oil pump set bolts.



- (d) Using SST, remove the oil pump and gasket.  
SST 09350-36010 (09350-06140)



(e) Remove the race from the oil pump cover.

(f) Select a race.

HINT: There are three different thicknesses for race.

| Race thickness      mm (in.) |             |
|------------------------------|-------------|
| 0.8 (0.031)                  | 1.4 (0.055) |
| 1.0 (0.039)                  |             |

(g) Coat the race with petroleum jelly, and install it onto the oil pump cover.

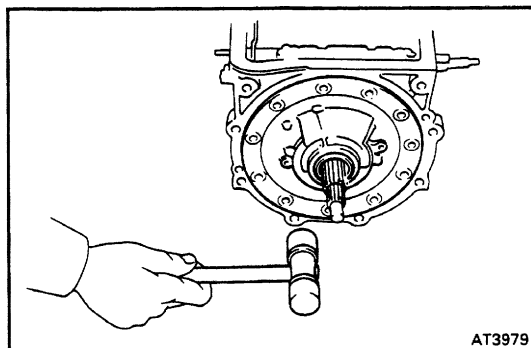
## 27. INSTALL OIL PUMP

(a) Place a new gasket on the transmission case.

(b) Coat a new O-ring with ATF, and install it to the oil pump body.

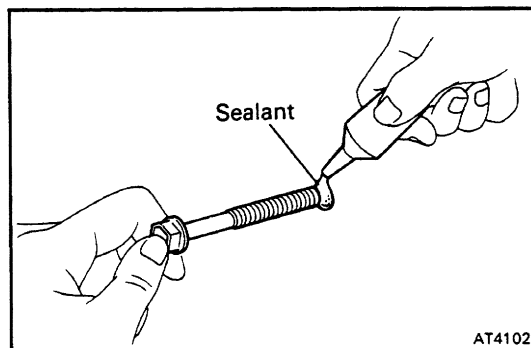
(c) Align the bolt holes of the pump body and transmission case.

(d) Using a plastic-faced hammer, lightly tap in the oil pump to transmission case.



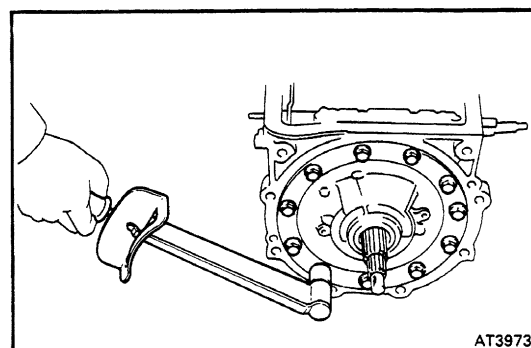
(e) Apply sealant to the threads of the oil pump set bolts.

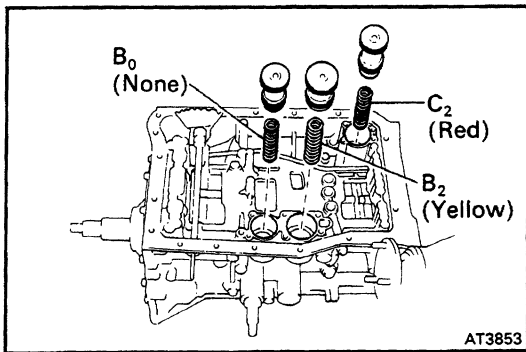
**Sealant: Part No.08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent**



(f) Install and tighten the eleven bolts.

**Torque: 210 kg-cm (16 ft-lb, 21 N-m)**





## 28. INSTALL C<sub>2</sub>, B<sub>0</sub>, B<sub>2</sub> ACCUMULATOR SPRINGS AND PISTONS

- Coat new O-rings with ATF, and install them to the pistons.
- Install the three springs and accumulator pistons into the bore of the transmission case as shown.

HINT: Piston diameter

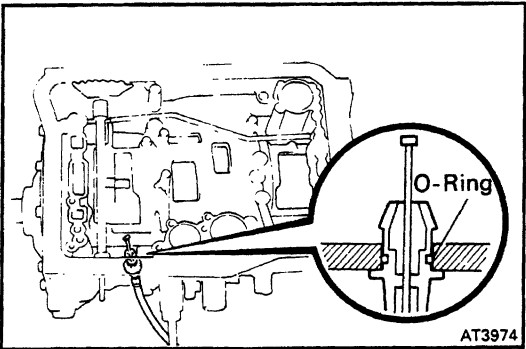
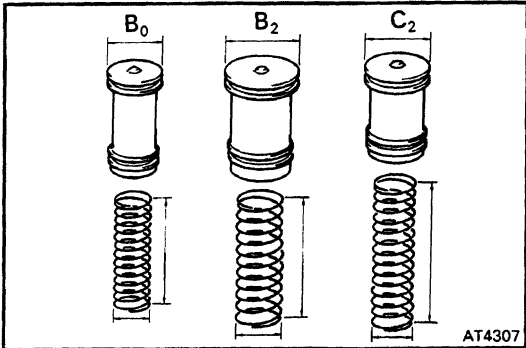
mm (in.)

| Piston diameter |              |
|-----------------|--------------|
| B <sub>0</sub>  | 29.9 (1.177) |
| B <sub>2</sub>  | 39.9 (1.571) |
| C <sub>2</sub>  | 35.9 (1.413) |

HINT: Spring diameter and free length

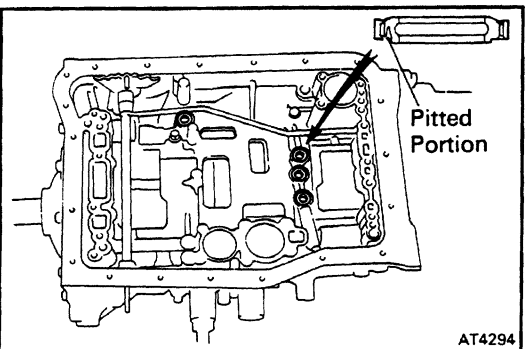
mm (in.)

| Spring         | Color  | Free length  | Diameter     |
|----------------|--------|--------------|--------------|
| B <sub>0</sub> | None   | 64.1 (2.524) | 21.1 (0.831) |
| B <sub>2</sub> | Yellow | 65.0 (2.559) | 25.1 (0.988) |
| C <sub>2</sub> | Red    | 87.3 (3.437) | 21.8 (0.858) |



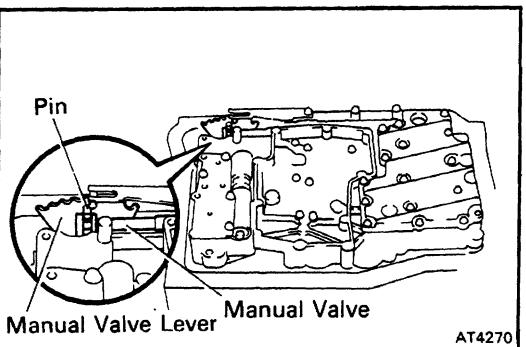
## 29. INSTALL THROTTLE CABLE

- Coat a new O-ring with ATF, and install it to the cable.
- Install the cable to the transmission case.



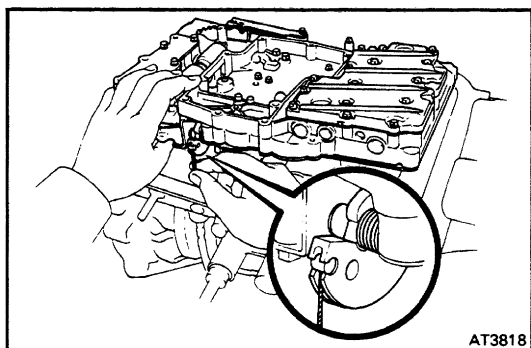
## 30. INSTALL CENTER SUPPORT APPLY GASKETS

Install new four gaskets, facing the pitted side toward the transmission case.

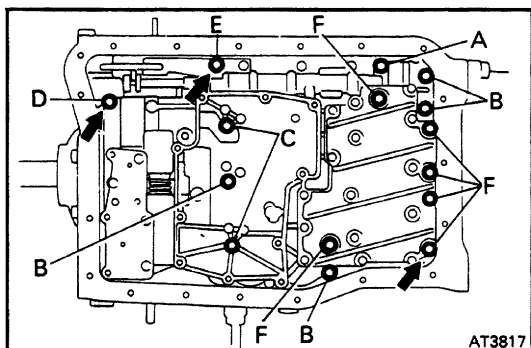


## 31. INSTALL VALVE BODY

- Align the groove of the manual valve with the pin of the manual valve lever.



(b) Connect the throttle cable to the cam.



(c) Install the three bolts indicated by arrows. –

(d) Install the other bolts.

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

**Bolt length: A 22 mm (0.87 in.)**

**B 32 mm (1.26 in.)**

**C 36 mm (1.42 in.)**

**D 41 mm (1.61 in.)**

**E 45 mm (1.77 in.)**

**F 57 mm (2.24 in.)**

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

(f) Tighten the bolts.

**Torque: 100 kg-cm (7 ft-lb, 10 N-m)**

### 32. INSTALL OIL STRAINER

Install a new gasket and the oil strainer with the seven wave washers (for 8 mm head bolts) and ten bolts.

**Torque:**

**8 mm head bolt 55 kg-cm (48 in.-lb, 5.4 N-m)**

**10 mm head bolt 100 kg-cm (7 ft-lb, 10 N-m)**

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

**Bolt length: A 12 mm (0.47 in.)**

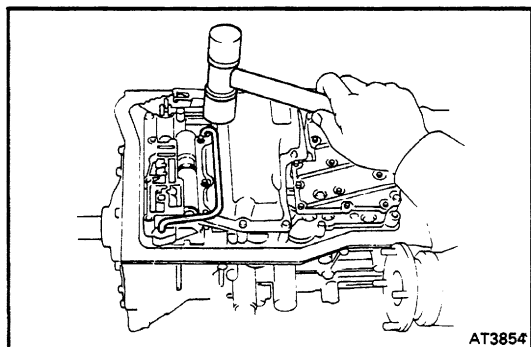
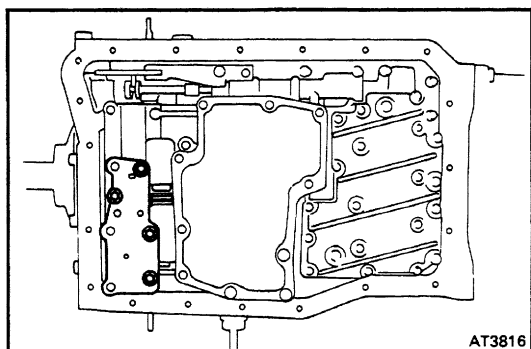
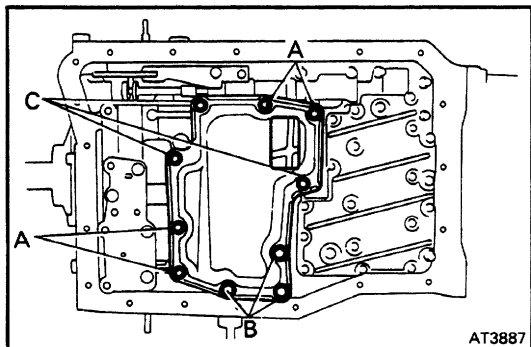
**B 45 mm (1.77 in.)**

**C 47 mm (1.85 in.)**

### 33. INSTALL OIL TUBE

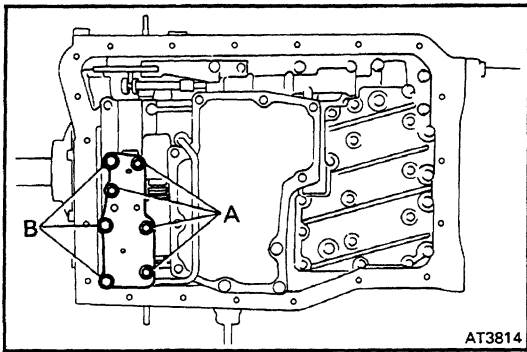
(a) Remove the lock-up relay valve body plate.

**NOTICE: Do not drop the lock-up relay valve pins.**



(b) Using a plastic-faced hammer, install the tube into position.

**NOTICE: Be careful not to bend or damage the tube.**



- (c) Install a new gasket and the lock-up relay valve body plate with the four wave washers (for short bolts) and seven bolts.

**Torque:**

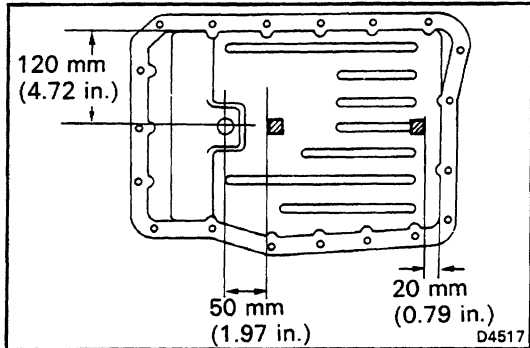
**8 mm head bolt 55 kg-cm (48 in.-lb, 5.4 N-m)**

**10 mm head bolt 100 kg-cm (7 ft-lb, 10 N-m)**

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

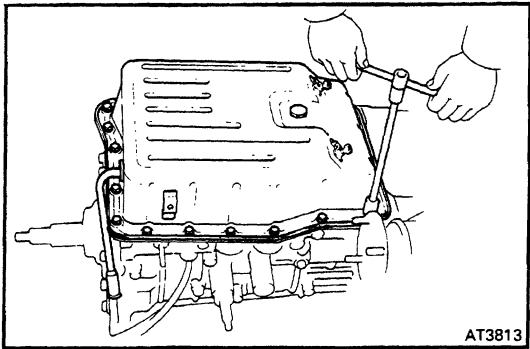
Bolt length: A 12 mm (0.47 in.)

B 64 mm (2.52 in.)



### 34. INSTALL MAGNETS IN PAN

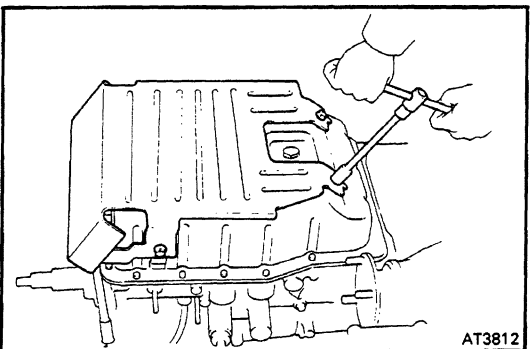
Install the two magnets in the oil pan as shown in the figure.



### 35. INSTALL OIL PAN

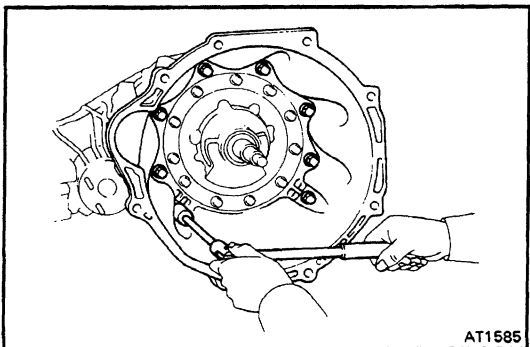
Install a new gasket and the oil pan with the twenty bolts.

**Torque: 70 kg-cm (61 in.-lb, 6.9 N-m)**



### 36. INSTALL OIL PAN PROTECTOR

Install the protector with the four bolts.

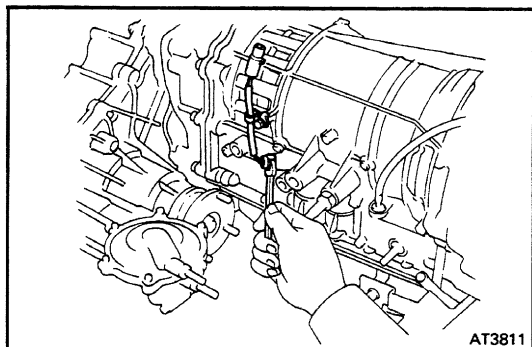


### 37. INSTALL TRANSMISSION HOUSING

- (a) Install the transmission housing with the eight bolts.

**Torque: 650 kg-cm (47 ft-lb, 64 N-m)**

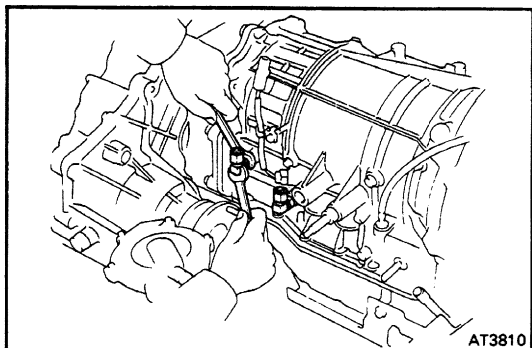
- (b) Install the throttle cable to the transmission case with the bolt.

**38. INSTALL A/T FLUID TEMPERATURE SENSOR**

- (a) Coat a new O-ring with ATF, and install it to the sensor.
- (b) Install the sensor.

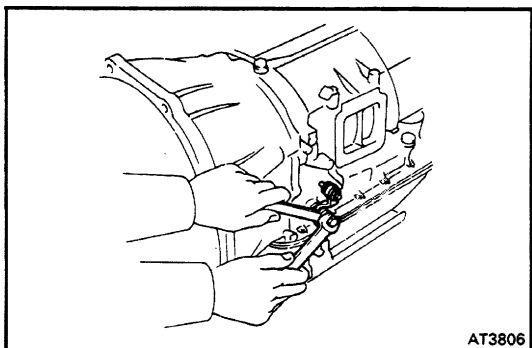
**Torque: 350 kg-cm (25 ft-lb, 34 N-m)**

- (c) Install the wire clamp with the bolt.

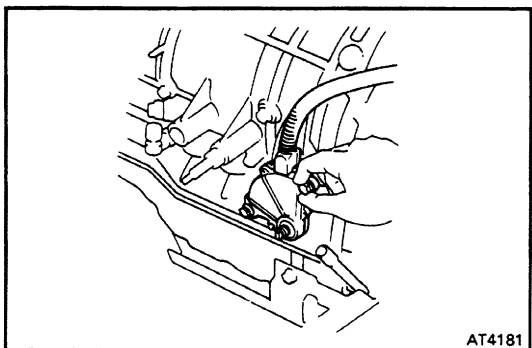
**39. INSTALL OIL COOLER UNIONS**

- (a) Coat new two O-rings with ATF, and install them to each union.
- (b) Install the two unions.

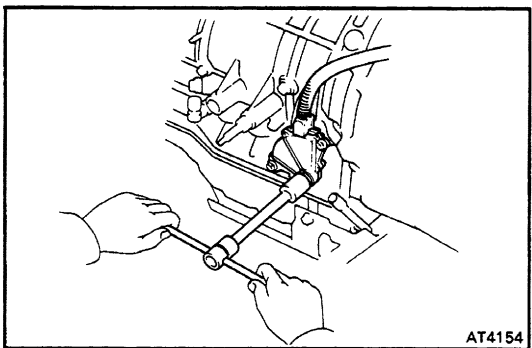
**Torque: 300 kg-cm (22 ft-lb, 29 N-m)**

**40. INSTALL CONTROL SHAFT LEVER**

**Torque: 130 kg-cm (9 ft-lb, 13 N-m)**

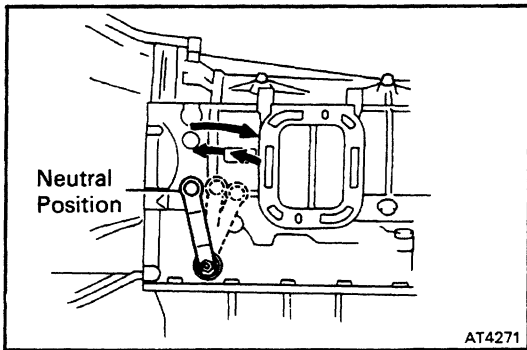
**41. INSTALL NEUTRAL START SWITCH**

- (a) Temporarily install the neutral start switch with the two bolts.

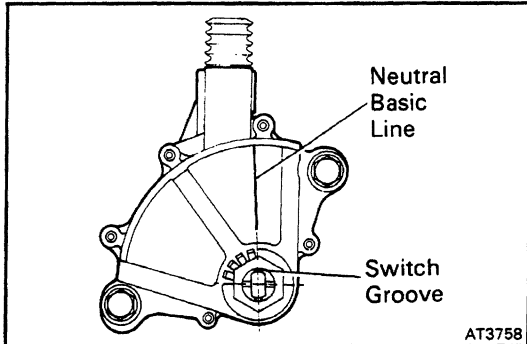


- (b) Install the grommet, a new lock washer and the nut.

**Torque: 70 kg-cm (61 in.-lb, 6.9 N-m)**



- (c) Fully turn the control shaft lever back and return two notches. It is now in neutral position.

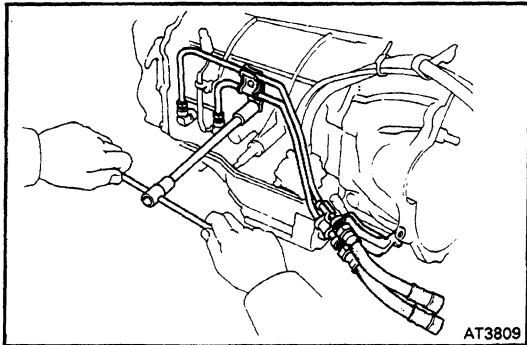


- (d) Align the neutral basic line with the switch groove, –  
and tighten the two bolts.

**Torque: 130 kg-cm (9 ft-lb, 13 N-m)**

- (e) Bend the tabs of the lock washer.

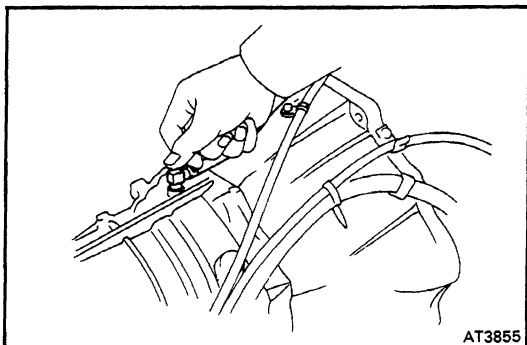
HINT: Bend at least two of the lock washer tabs.



#### 42. INSTALL OIL COOLER PIPES

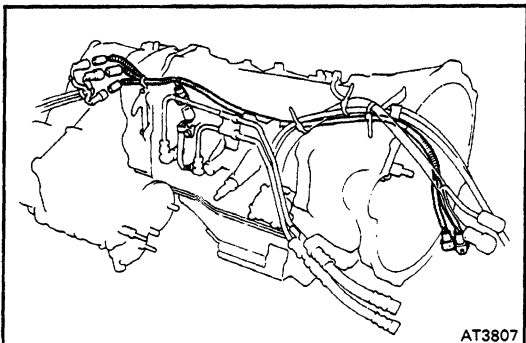
Install the oil cooler pipes with the two unions and bolts.

Torque (Union): 350 kg-cm (25 ft-lb, 34 N-m)



#### 43. INSTALL BREATHER PLUG AND HOSE

- (a) Coat a new O-ring with ATF, and install it to the breather plug.  
(b) Install the breather plug and hose.



#### 44. INSTALL TRANSMISSION WIRE

Connect the four connectors, and install the transmission wire.