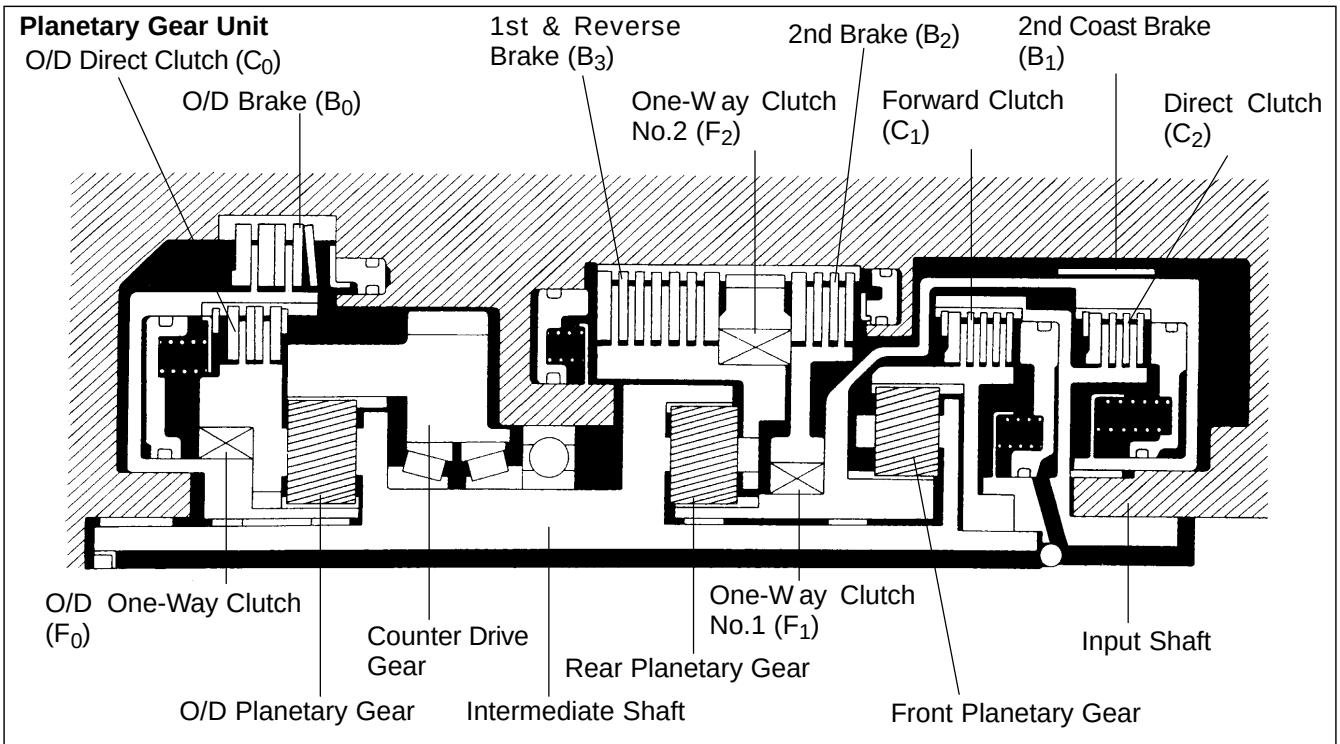
AX03M-04

# OPERATION




| Shift Lever Position | Gear Position | $C_0$ | $C_1$ | $C_2$ | $B_0$ | $B_1$ | $B_2$ | $B_3$ | $F_0$ | $F_1$ | $F_2$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| P | Parking | ○ | | | | | | | | | |
| R | Reverse | ○ | | ○ | | | | ○ | | | |
| N | Neutral | ○ | | | | | | | | | |
| D | 1st | ○ | ○ | | | | | | ○ | | ○ |
| | 2nd | ○ | ○ | | | | ○ | | ○ | ○ | |
| | 3rd | ○ | ○ | ○ | | | ○ | | ○ | | |
| | O/D | | ○ | ○ | ○ | | ○ | | | | |
| 2 | 1st | ○ | ○ | | | | | | ○ | | ○ |
| | 2nd | ○ | ○ | | | ○ | ○ | | ○ | ○ | |
| | *3rd | ○ | ○ | ○ | | | ○ | | ○ | | |
| L | 1st | ○ | ○ | | | | | ○ | ○ | | ○ |
| | *2nd | ○ | ○ | | | ○ | ○ | | ○ | ○ | |

*Down-shift only - no up-shift

○ : Operating

D01018

# AUTOMATIC TRANSAXLE SYSTEM

AX03L-02

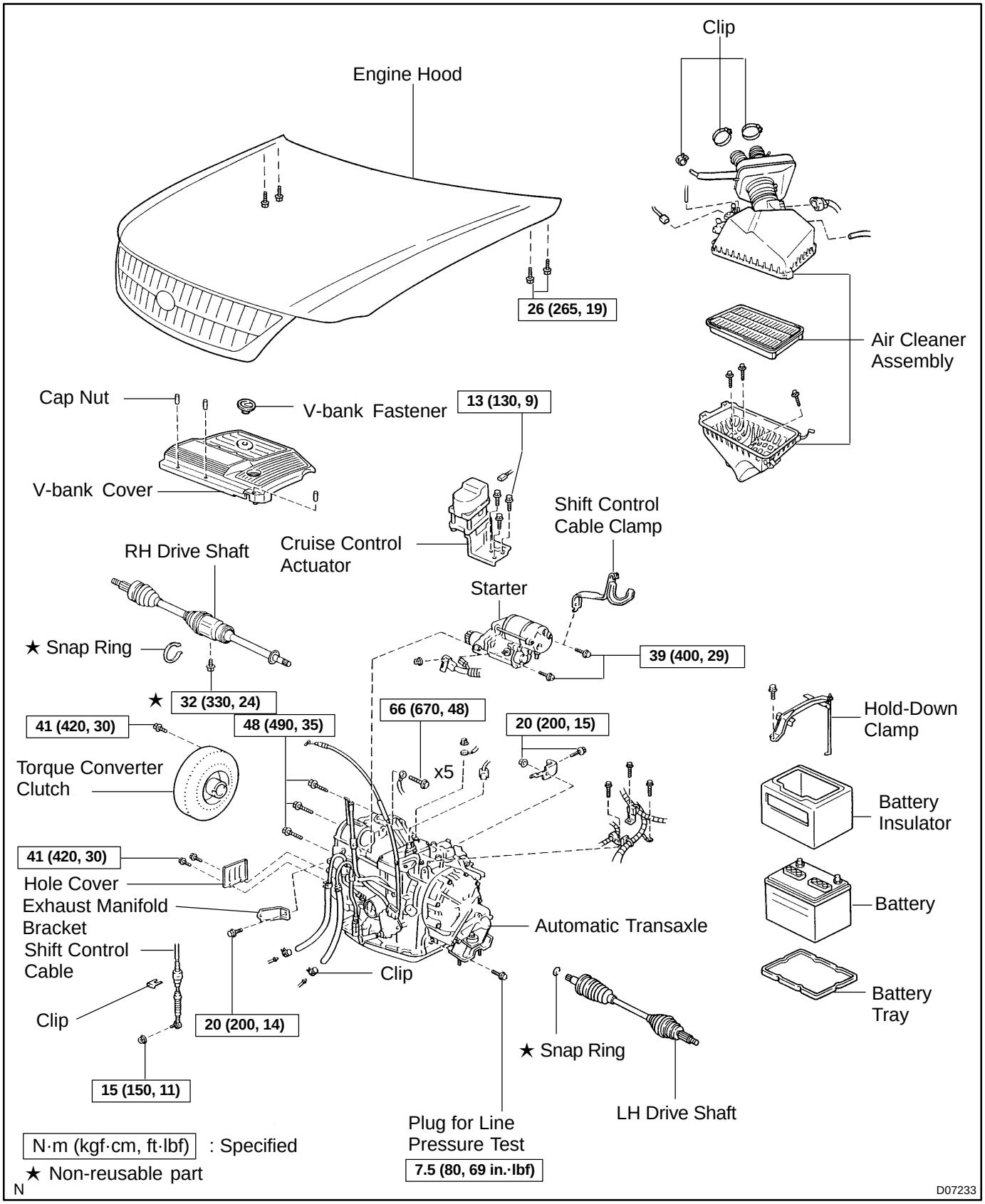
## PRECAUTION

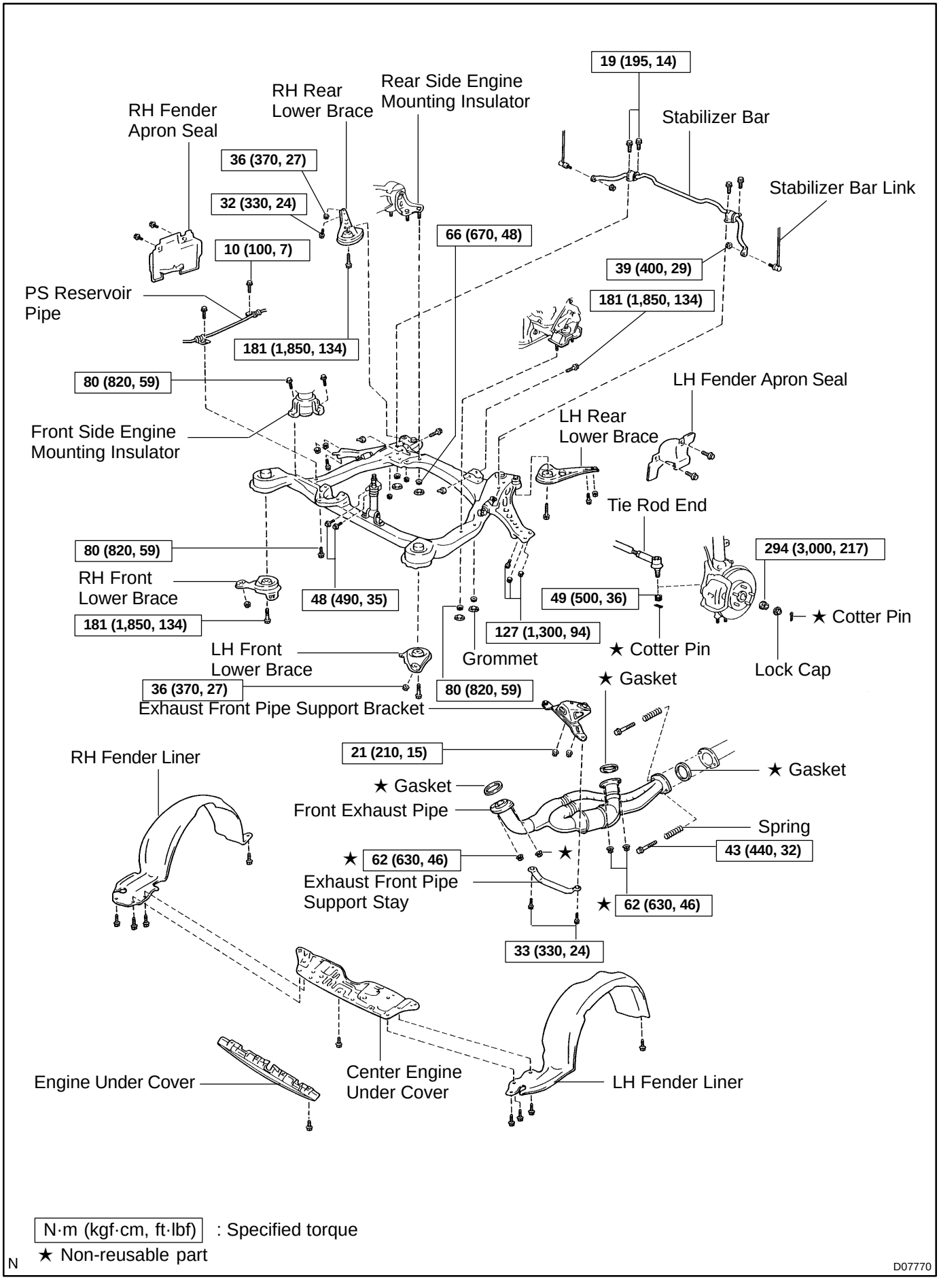
If the vehicle is equipped with a mobile communication system, refer to the precautions in the IN section.

# AUTOMATIC TRANSAXLE UNIT

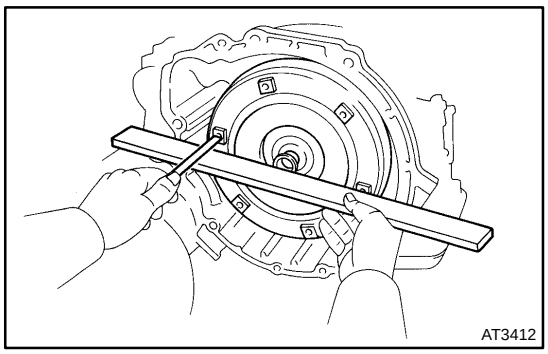
## COMPONENTS

AX03X-05




19 (195, 14)
RH Rear Lower Brace
Rear Side Engine Mounting Insulator
RH Fender Apron Seal
Stabilizer Bar
36 (370, 27)
32 (330, 24)
Stabilizer Bar Link
66 (670, 48)
10 (100, 7)
39 (400, 29)
PS Reservoir Pipe
181 (1,850, 134)
181 (1,850, 134)
80 (820, 59)
LH Fender Apron Seal
Front Side Engine Mounting Insulator
LH Rear Lower Brace
Tie Rod End
80 (820, 59)
294 (3,000, 217)
RH Front Lower Brace
48 (490, 35)
49 (500, 36)
★ Cotter Pin
181 (1,850, 134)
127 (1,300, 94)
★ Cotter Pin
LH Front Lower Brace
Grommet
Lock Cap
★ Gasket
36 (370, 27)
80 (820, 59)
Exhaust Front Pipe Support Bracket
21 (210, 15)
RH Fender Liner
★ Gasket
★ Gasket
Front Exhaust Pipe
Spring
★ 62 (630, 46)
★
43 (440, 32)
Exhaust Front Pipe Support Stay
★ 62 (630, 46)
33 (330, 24)
Engine Under Cover
Center Engine Under Cover
LH Fender Liner
N·m (kgf·cm, ft·lbf) : Specified torque
★ Non-reusable part
N
D07770

AX03Z-05




# INSTALLATION

**1. CHECK TORQUE CONVERTER CLUTCH INSTALLATION**

Using a scale and a straight edge, measure the distance from the installed surface to the transaxle housing.

**Correct distance: 13.7 mm (0.539 in.) or more**

**2. TRANSAXLE INSTALLATION**

**Installation is in the reverse order of removal (See page AX-35 ).**

HINT:

After installation, check and inspect the following items.

★ Fill ATF and check fluid level (See page DI-160 ).
★ Check front wheel alignment (See page SA-4 ).
★ Do the road test (See page DI-160 ).
★ Adjust the hood (See page BO-6 ).

**NOTICE:**

**w/ VSC:**

**After installation, perform the steering angle sensor zero point calibration (See page DI-252 ).**

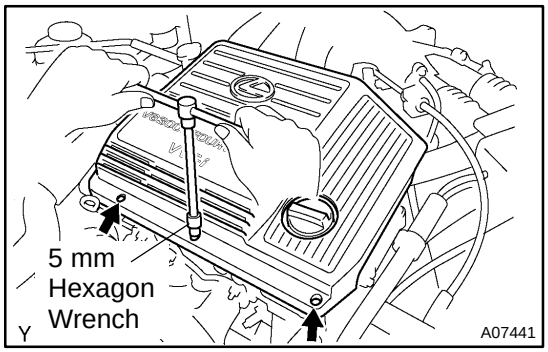
AX0KA-01

# REMOVAL

**1. REMOVE ENGINE HOOD**
**Torque: 26 N·m (265 kgf·cm, 19 ft·lbf)**

**2. REMOVE BATTERY**

**3. REMOVE AIR CLEANER ASSEMBLY**

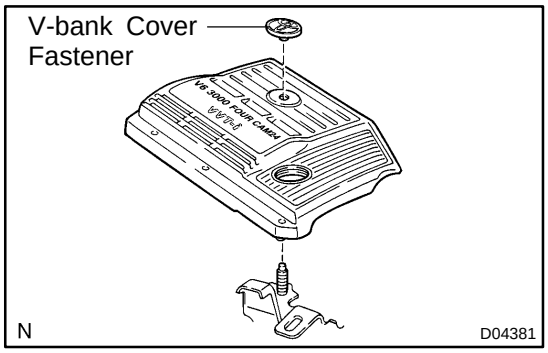



**4. REMOVE V-BANK COVER**

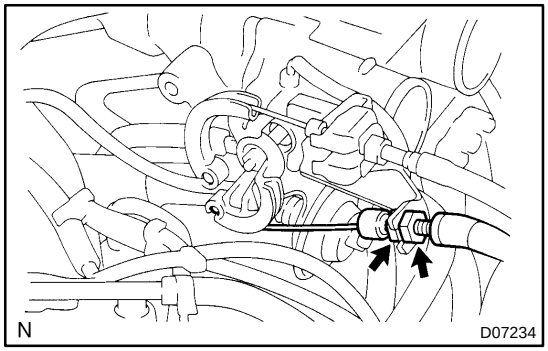
(a) Using a 5 mm hexagon wrench, remove the 3 cap nuts.

(b) Turn the V-bank cover fastener counterclockwise and loosen it.

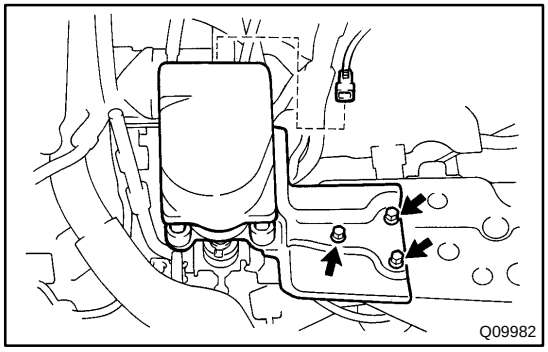
(c) Remove the V-bank cover.




HINT:
At the time of installation, please refer to the following item.
When installing the V-bank cover fastener, remove the fastener once, then position and push in it.



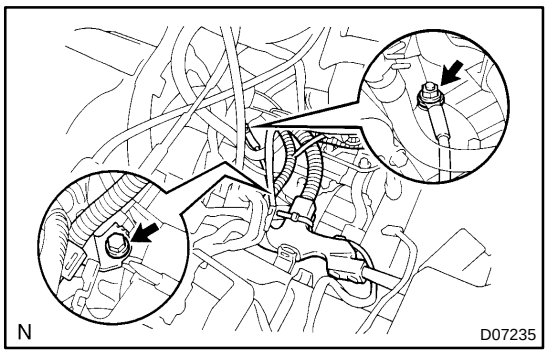

**5. REMOVE THROTTLE CABLE FROM THROTTLE BODY**
**Torque: 15 N·m (150 kgf·cm, 11 ft·lbf)**




**6. REMOVE CRUISE CONTROL ACTUATOR**

(a) Disconnect the connector.

(b) Remove the 3 bolts and disconnect cruise control actuator with the bracket.
**Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)**




**7. DISCONNECT GROUND CABLE**

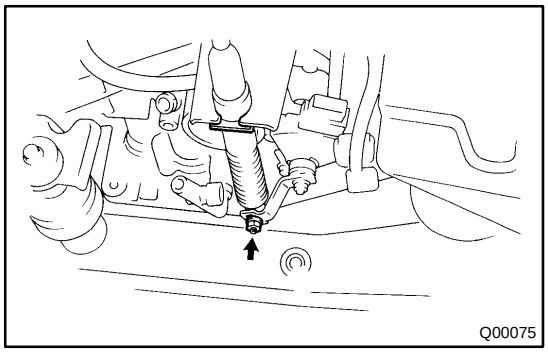
**8. SEPARATE WIRE HARNESS FROM AUTOMATIC TRANSAXLE**

Remove the bolt and separate the wire harness.

**9. DISCONNECT DIRECT CLUTCH SPEED SENSOR CONNECTOR**

**10. DISCONNECT PARK/NEUTRAL POSITION SWITCH CONNECTOR**

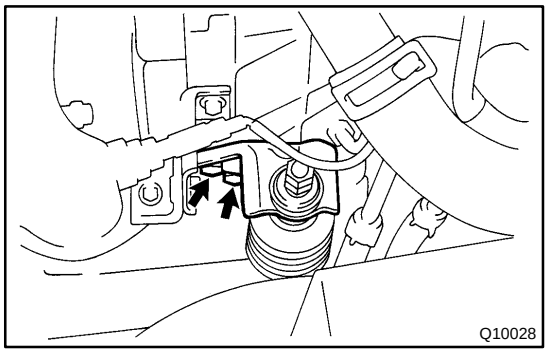
**11. DISCONNECT SOLENOID CONNECTOR**



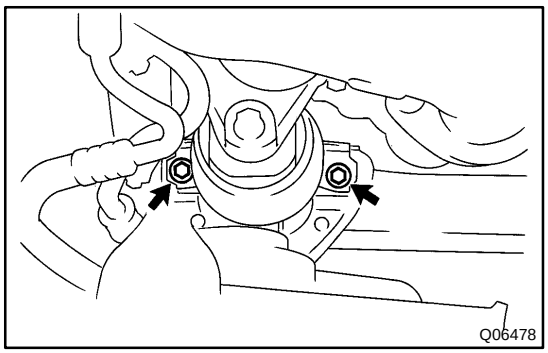

**12. DISCONNECT SHIFT CONTROL CABLE**

(a) Remove the nut and disconnect the shift control cable from the control shaft lever.
**Torque: 15 N·m (150 kgf·cm, 11 ft·lbf)**

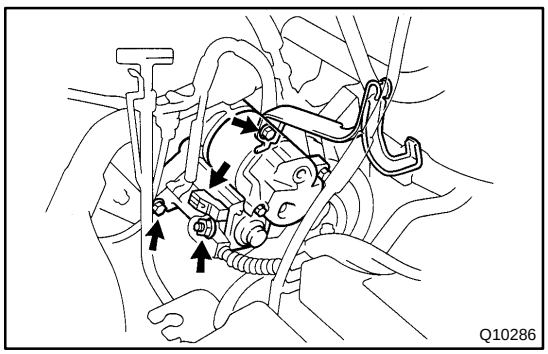
(b) Remove the clip and disconnect the shift control cable from the bracket.




**13. REMOVE 2 ENGINE MOUNTING ABSORBER BOLTS**
**Torque: 48 N·m (490 kgf·cm, 35 ft·lbf)**




**14. REMOVE 2 FRONT SIDE ENGINE MOUNTING BOLTS**
**Torque: 44 N·m (440 kgf·cm, 32 ft·lbf)**

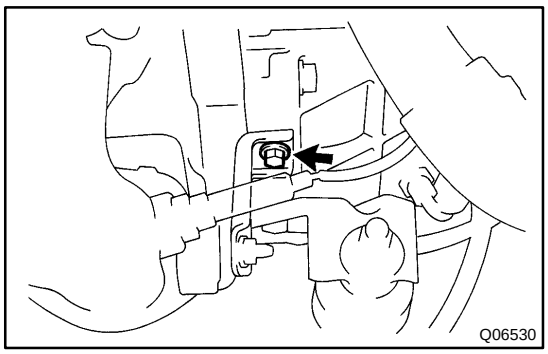



**15. REMOVE STARTER AND SHIFT CONTROL CABLE CLAMP**

(a) Disconnect the connector.

(b) Remove the nut and disconnect the terminal.

(c) Remove the 2 bolts, starter and shift control cable clamp.
**Torque: 39 N·m (400 kgf·cm, 29 ft·lbf)**




**16. REMOVE EXHAUST MANIFOLD BRACKET MOUNTING BOLT**
**Torque: 34 N·m (350 kgf·cm, 25 ft·lbf)**


**17. REMOVE 5 TRANSAXLE-TO-ENGINE BOLTS AND DISCONNECT GROUND TERMINAL**
**Torque: 66 N·m (670 kgf·cm, 48 ft·lbf)**

**18. RAISE AND SUPPORT VEHICLE SECURELY**

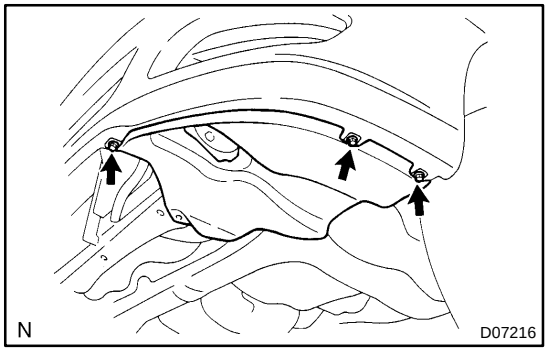
**19. REMOVE LH AND RH FRONT WHEELS**
**Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)**

**20. REMOVE DIFFERENTIAL FLUID DRAIN PLUG AND GASKET**
**Torque: 49 N·m (500 kgf·cm, 36 ft·lbf)**

HINT:
At the time of installation, please refer to the following item.
Replace the used gasket with a new gasket.

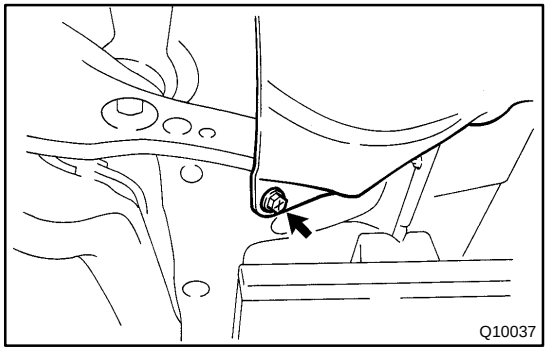
**21. DRAIN DIFFERENTIAL FLUID**

**22. REMOVE LH AND RH FRONT DRIVE SHAFTS (See page SA-16 )**



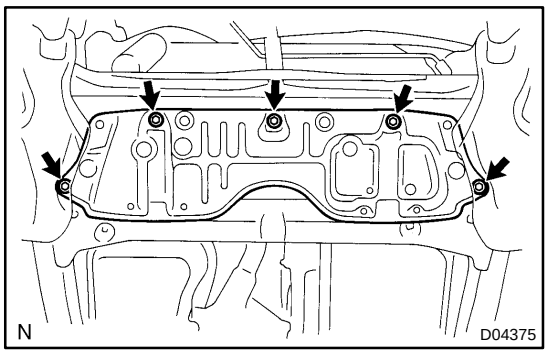

**23. REMOVE ENGINE UNDER COVER**

(a) Remove the 6 screws and turn over the front side of the LH and RH fender liners.



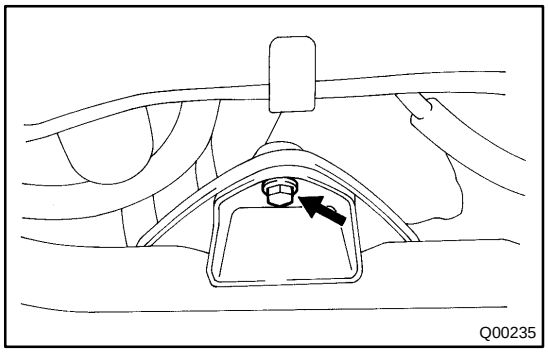

(b) Remove the 2 screws and turn over the rear side of LH and RH fender liners.

(c) Remove the engine under cover.



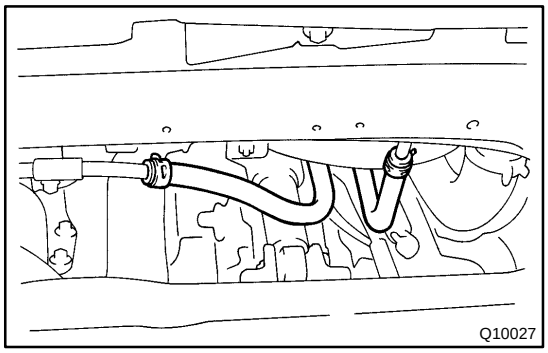

(d) Remove the 5 bolts and center engine under cover.

**24. REMOVE EXHAUST FRONT PIPE (See page EM-1 10)**



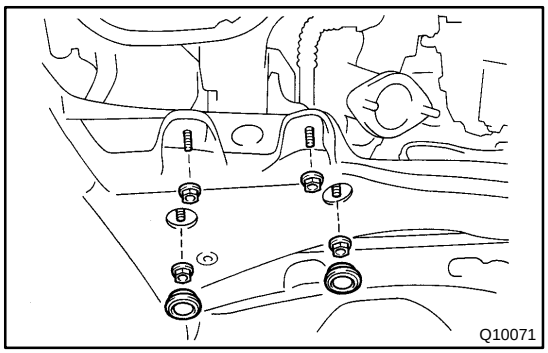

**25. REMOVE FRONT SIDE ENGINE MOUNTING INSULATOR BOLT**

**Torque: 44 N·m (440 kgf·cm, 32 ft·lbf)**




**26. DISCONNECT OIL COOLER HOSE**

Loosen the 2 clip and disconnect the 2 oil cooler hoses.

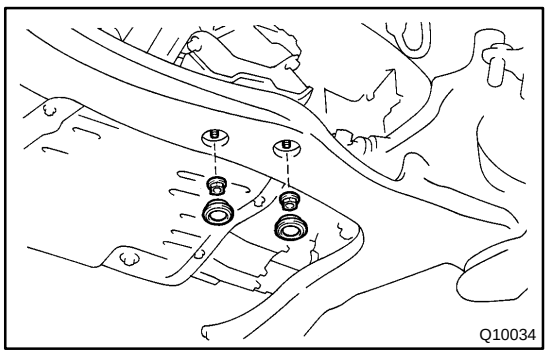



**27. REMOVE REAR SIDE ENGINE MOUNTING NUT**

(a) Remove the 2 grommets.

(b) Remove the 4 nuts.

**Torque: 66 N·m (670 kgf·cm, 48 ft·lbf)**




**28. REMOVE LEFT SIDE TRANSAXLE MOUNTING NUT**

(a) Remove the 2 grommets.

(b) Remove the 2 nuts.

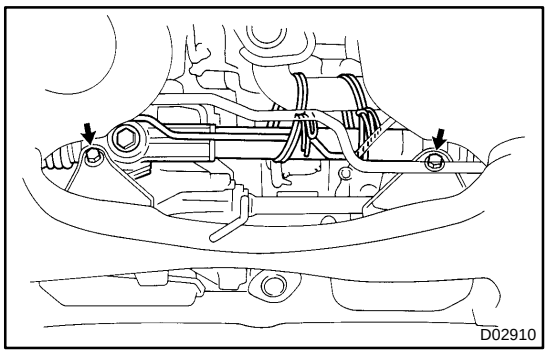
**Torque: 80 N·m (820 kgf·cm, 59 ft·lbf)**

**29. REMOVE FRONT STABILIZER BAR**

(a) Remove the 4 bolts, LH and RH stabilizer bar brackets and bushings.

**Torque: 19 N·m (195 kgf·cm, 14 ft·lbf)**

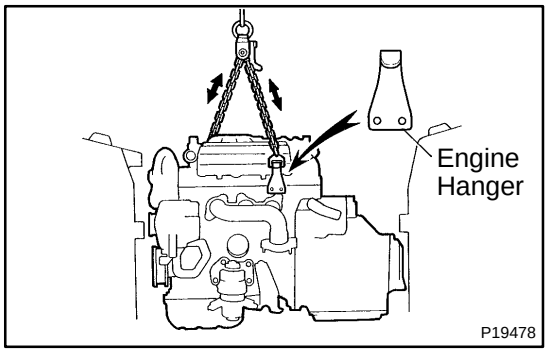
(b) Remove the front stabilizer bar (See page SA-41 ).




**30. TIE STEERING GEAR ASSEMBLY WITH CODE OR EQUIVALENT TO SUSPEND ASSEMBLY SECURELY, AS SHOWN**

**31. REMOVE 2 STEERING GEAR ASSEMBLY MOUNTING BOLTS**

**Torque: 181 N·m (1,850 kgf·cm, 134 ft·lbf)**




**32. ATTACH ENGINE SLING DEVICE TO ENGINE HANGERS**

(a) Install the No.2 engine hangers in the correct direction.

**Part No.:**

**No.2 engine hanger: 12282-20020**

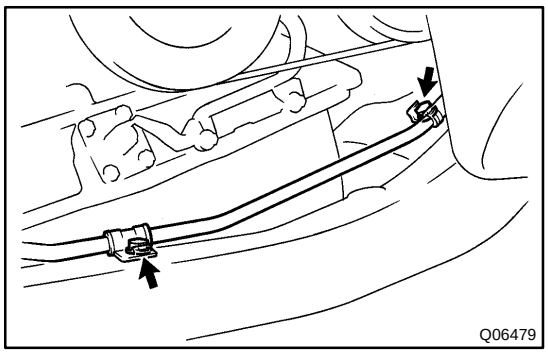
**Bolt: 91621-60822**

**Torque: 20 N·m (200 kgf·cm, 14 ft·lbf)**

(b) Attach the engine chain hoist to the engine hangers.

**CAUTION:**

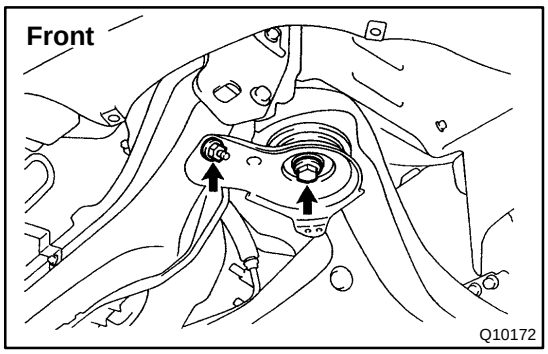
**Do not attempt to hang the engine by hooking the chain to any other part.**




**33. REMOVE FRONT FRAME ASSEMBLY**

(a) Remove the 2 bolts and PS reservoir pipe mounting brackets.

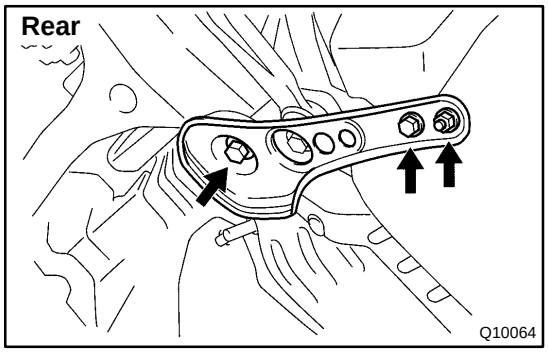
**Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)**

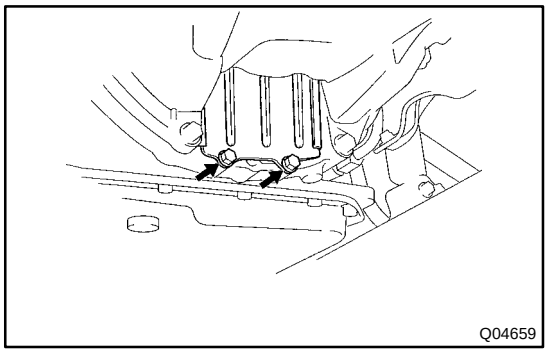



(b) Remove the 6 bolts, 4 nuts, 4 lower brace and front frame assembly.

**Torque:**
**19 mm head bolt: 181 N·m (1,850 kgf·cm, 134 ft·lbf)**
**14 mm head bolt: 32 N·m (330 kgf·cm, 24 ft·lbf)**
**Nut: 36 N·m (370 kgf·cm, 27 ft·lbf)**

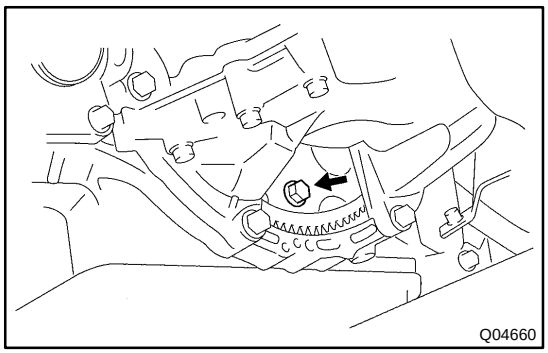
**34. SUPPORT TRANSAXLE WITH A JACK**




**35. REMOVE TORQUE CONVERTER CLUTCH MOUNTING BOLT**

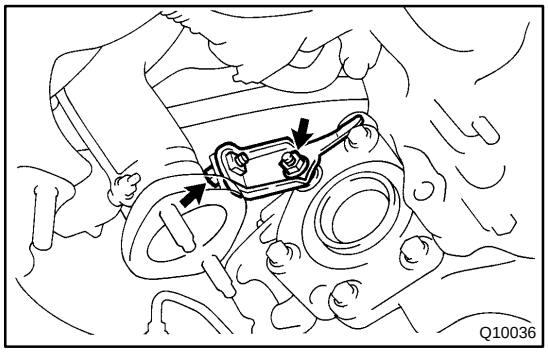
(a) Remove the 2 bolts and hole cover.




(b) Turn the crankshaft to gain access to each bolt, remove the 6 bolts while holding the crankshaft pulley bolt with a wrench.

**Torque: 41 N·m (420 kgf·cm, 30 ft·lbf)**

HINT:
At the time of installation, please refer to the following item.
First install black colored bolt and then the 5 other bolts.

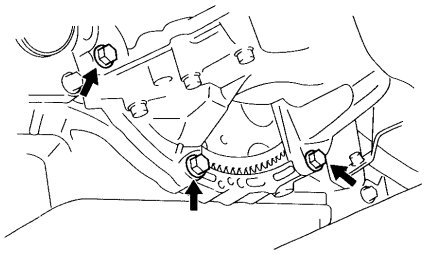



**36. REMOVE EXHAUST MANIFOLD PLATE**

Remove the bolt, nut and exhaust manifold plate.

**Torque: 34 N·m (350 kgf·cm, 25 ft·lbf)**

**Left and lower**



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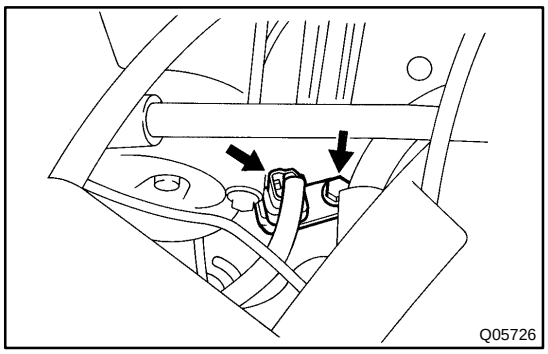
**37. REMOVE 3 LOWER TRANSAXLE-TO-ENGINE BOLTS**

**Torque: 48 N·m (490 kgf·cm, 35 ft·lbf)**

**38. REMOVE TRANSAXLE ASSEMBLY**

Separate the transaxle from the engine, and lower the transaxle.


Q05726

# DIRECT CLUTCH SPEED SENSOR

AX03O-04

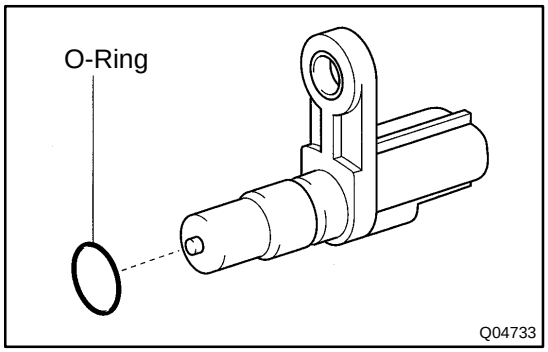
## ON-VEHICLE REPAIR

**1. REMOVE AIR CLEANER ASSEMBLY**

**2. DISCONNECT DIRECT CLUTCH SPEED SENSOR CONNECTOR**

**3. REMOVE DIRECT CLUTCH SPEED SENSOR**

(a) Remove the bolt and direct clutch speed sensor.



Q04733

(b) Remove the O-ring from the direct clutch speed sensor.

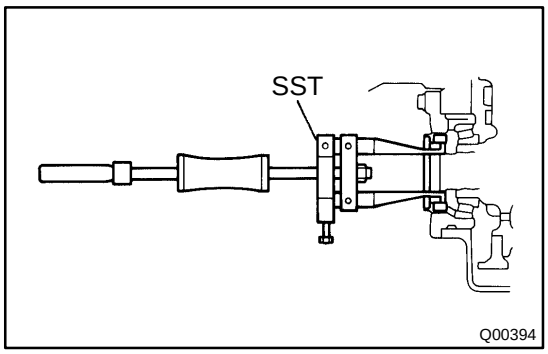
**4. INSTALL DIRECT CLUTCH SPEED SENSOR**

(a) Coat a new O-ring with ATF and install it to the direct clutch speed sensor.

(b) Install the direct clutch speed sensor with the bolt.
**Torque: 11 N·m (110 kgf·cm, 8 ft·lbf)**

**5. CONNECT DIRECT CLUTCH SPEED SENSOR CONNECTOR**

**6. INSTALL AIR CLEANER ASSEMBLY**




# DIFFERENTIAL OIL SEAL

AX03S-05

## ON-VEHICLE REPAIR

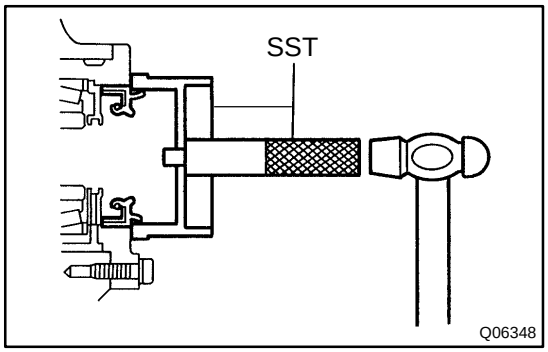
**1. REMOVE FRONT DRIVE SHAFT**

**(See page SA-16 )**

**2. REMOVE SIDE GEAR SHAFT OIL SEAL**

Using SST, pull out the oil seal.

SST 09308-00010



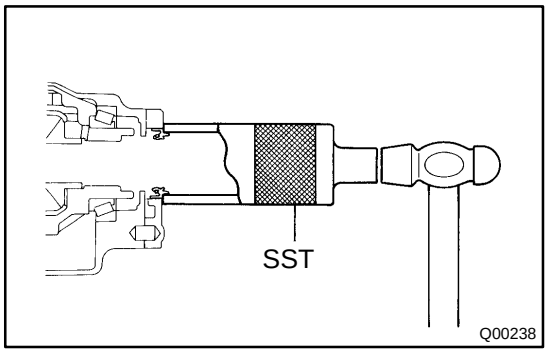

**3. INSTALL LEFT SIDE GEAR SHAFT OIL SEAL**

(a) Using SST and a hammer, drive in a new oil seal.

SST 09223-15020, 09350-32014 (09351-32130)

**Oil seal depth: 0 ± 0.5 mm (0 ± 0.02 in.)**

(b) Coat the lip of the oil seal with MP grease.




**4. INSTALL RIGHT SIDE GEAR SHAFT OIL SEAL**

(a) Using SST and a hammer, drive in a new oil seal.

SST 09316-60010 (09316-00010)

**Oil seal depth: 0 ± 0.5 mm (0 ± 0.02 in.)**

(b) Coat the lip of the oil seal with MP grease.

**5. INSTALL FRONT DRIVE SHAFT**

**(See page SA-24 )**

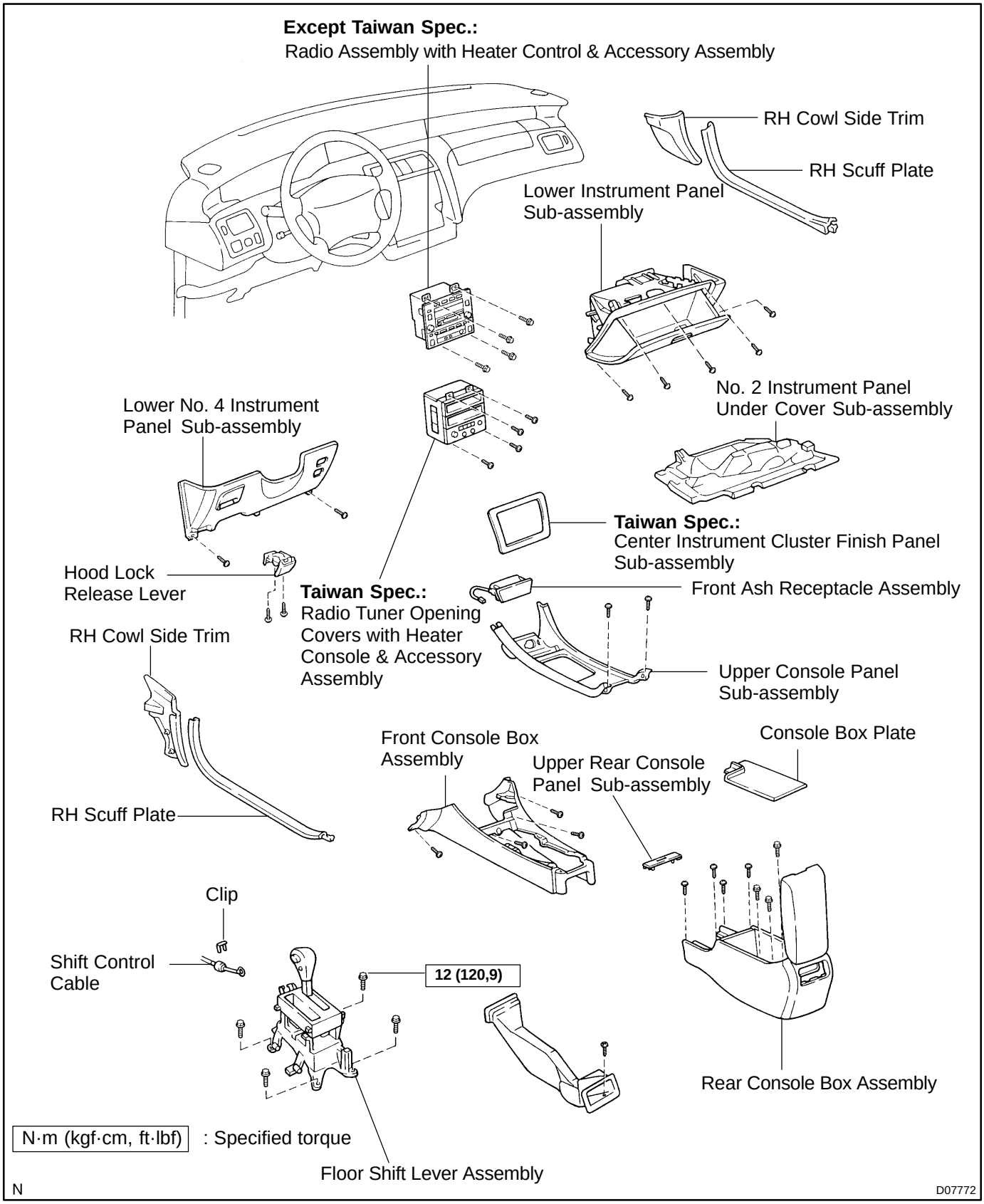
**6. CHECK TRANSAXLE FLUID LEVEL**

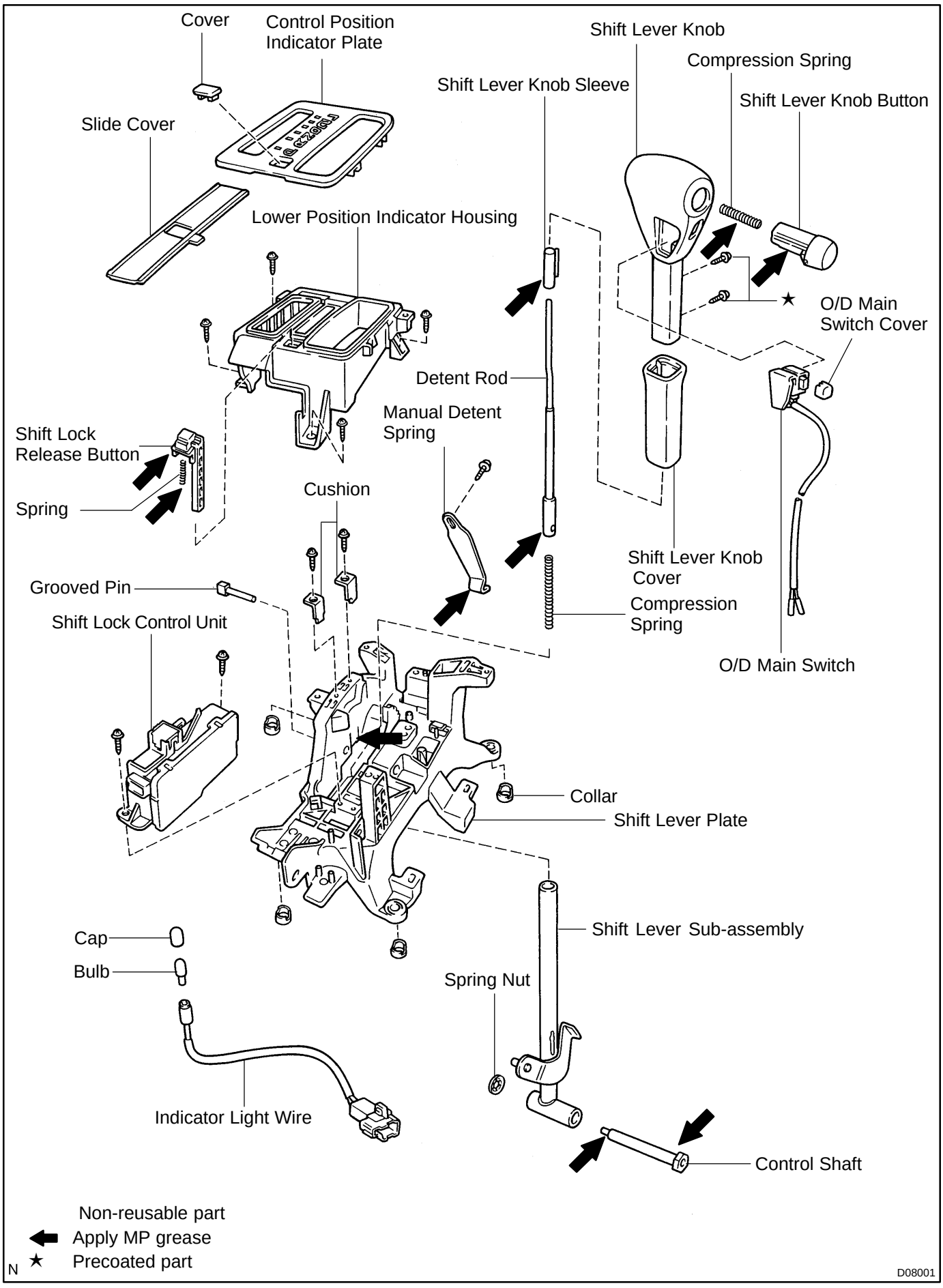
**(See page DI-160 )**

# FLOOR SHIFT ASSEMBLY

## COMPONENTS

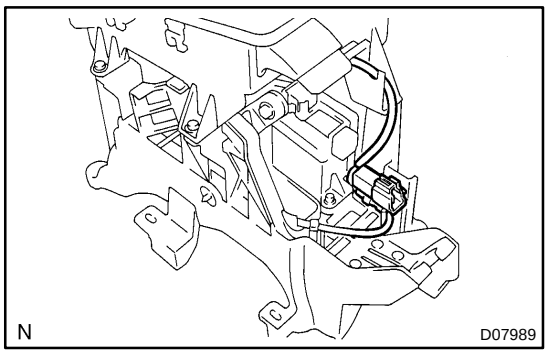
AX0KB-01




Cover
Control Position Indicator Plate
Slide Cover
Lower Position Indicator Housing
Shift Lever Knob
Compression Spring
Shift Lever Knob Sleeve
Shift Lever Knob Button
★
O/D Main Switch Cover
Detent Rod
Manual Detent Spring
Shift Lock Release Button
Spring
Cushion
Shift Lever Knob Cover
Compression Spring
Grooved Pin
Shift Lock Control Unit
O/D Main Switch
Collar
Shift Lever Plate
Shift Lever Sub-assembly
Cap
Bulb
Spring Nut
Indicator Light Wire
Control Shaft
Non-reusable part
Apply MP grease
★ Precoated part
N
D08001

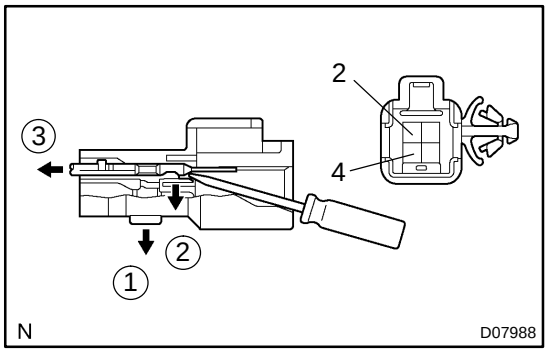
AX0KD-01

# DISASSEMBLY



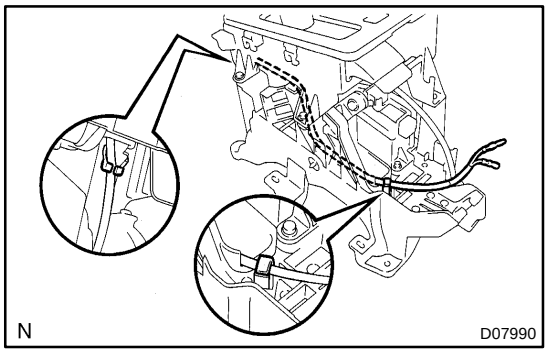

**1. REMOVE O/D MAIN SWITCH TERMINAL**

(a) Remove the connector from the shift lever plate.

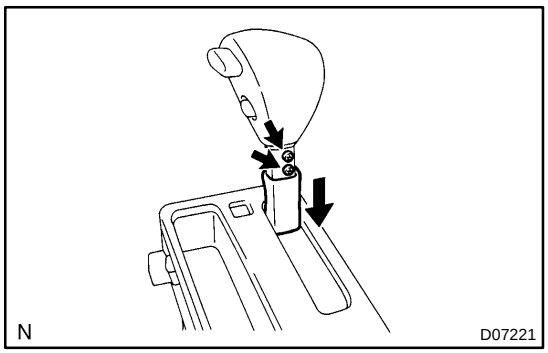



(b) Remove the secondary locking device.

(c) Release the looking lug of the terminals 2 and 4, and pull the terminals out from the rear.




(d) Separate the O/D main switch wire harness from the 2 clamps.



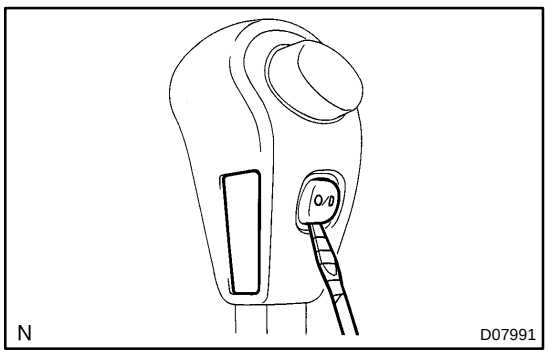

**2. REMOVE SHIFT LEVER KNOB SUB-ASSEMBLY**

(a) Side the shift lever knob cover.

(b) Remove the 2 screws and shift lever knob sub-assembly.

**NOTICE:**

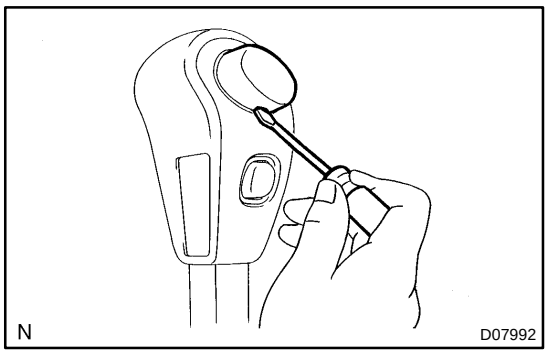
**Pay attention not to apply unnatural load onto O/D main switch wire harness.**



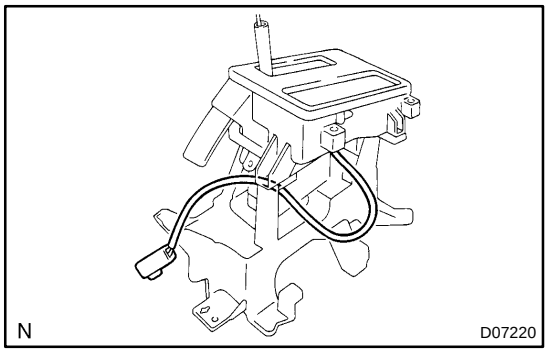

**3. DISASSEMBLE SHIFT LEVER KNOB SUB-ASSEMBL Y**

(a) Using a small screwdriver, remove the O/D main switch cover.

(b) Using a small screwdriver, remove the O/D main switch from the shift lever knob.

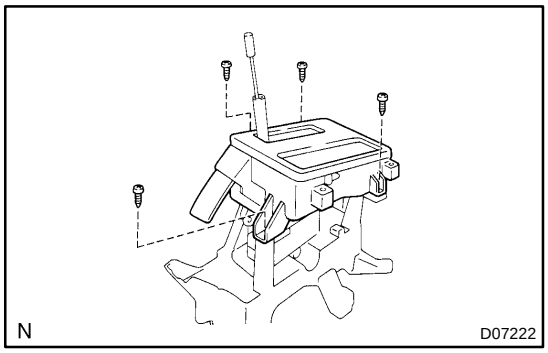



(c) Insert a small screwdriver into the position in the illustration and disengage the claw.
(d) Remove the shift lever knob button and compression spring.



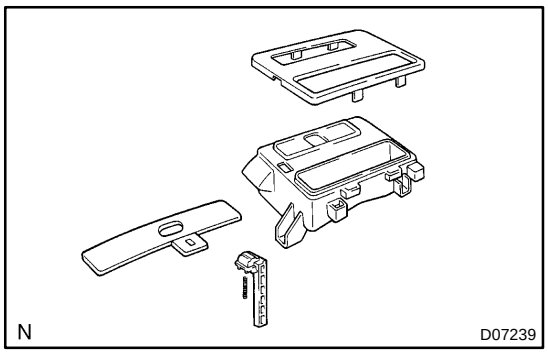

**4. REMOVE INDICATOR LIGHT**

(a) Remove the indicator light from the lower position indicator housing.
(b) Remove the cap and bulb from the indicator light wire.



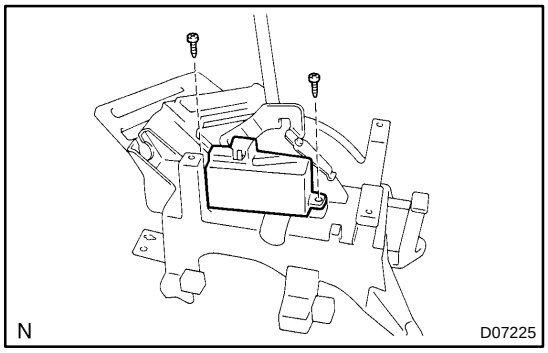

**5. REMOVE LOWER POSITION INDICATOR HOUSING**

Remove the 4 screws and lower position indicator housing.



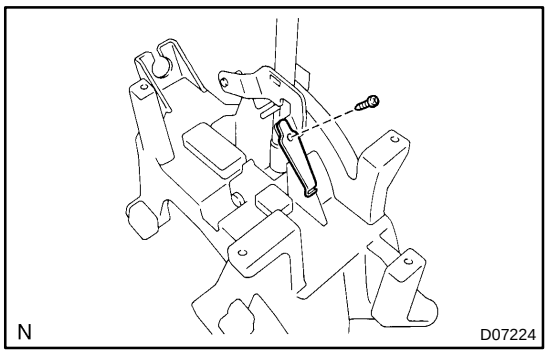

**6. DISASSEMBLE LOWER POSITION INDICATOR HOUSING**

(a) Remove the control position indicator plate.
(b) Remove the shift lock release button and spring.
(c) Remove the slide cover.



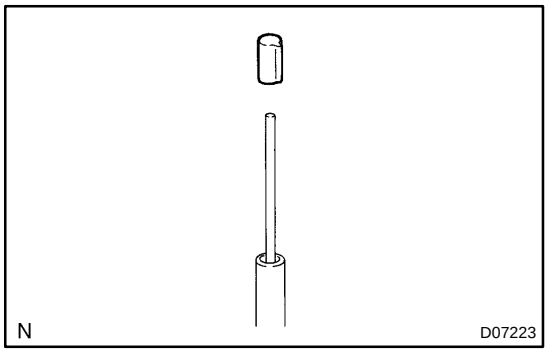

**7. REMOVE SHIFT LOCK CONTROL UNIT**

Remove the 2 screws and shift lock control unit assembly.

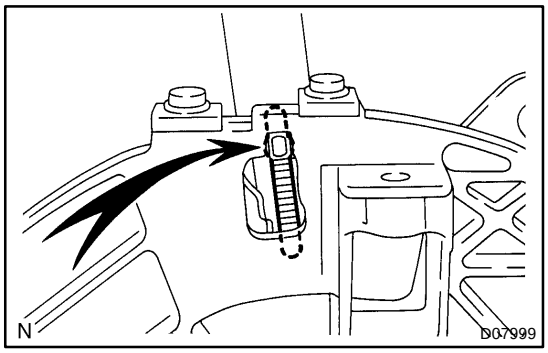



**8. REMOVE MANUAL DETENT SPRING**

Remove the screw and manual detent spring.




**9. REMOVE SHIFT LEVER KNOB SLEEVE**



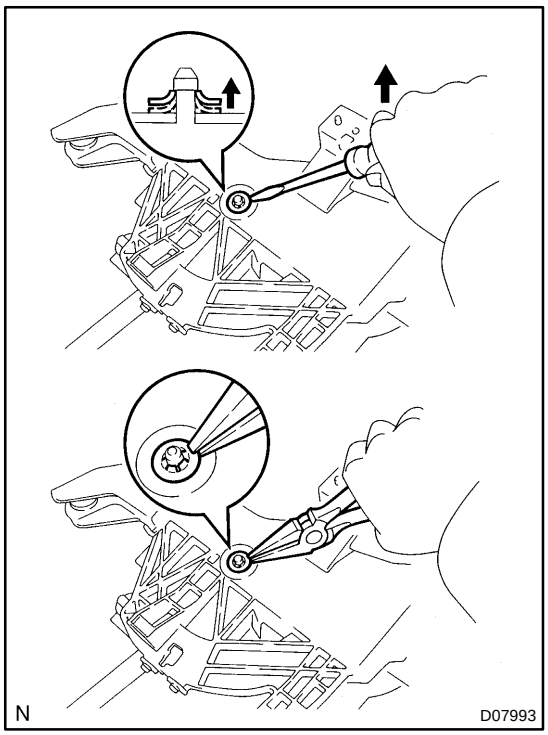

**10. REMOVE GROOVED PIN**

Secure the room for the pin to be released by using the vice and etc. as shown in the illustration, and hit the grooved pin with a hammer and pull the grooved pin out.

**NOTICE:**

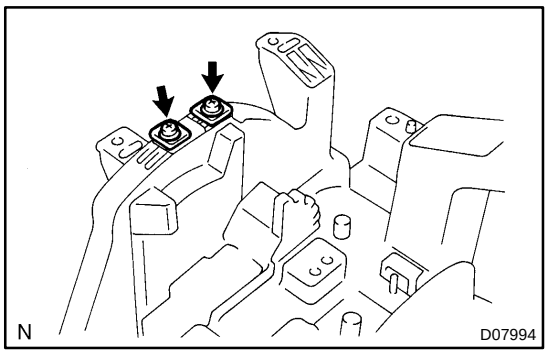
- ★ **Hit and pull the pin out gradually.**
- ★ **Do not damage the shift lever sub-assembly.**

**11. REMOVE DETENT ROD, COMPRESSION SPRING**



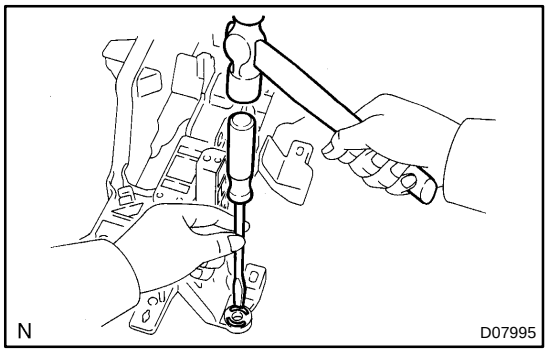

**12. REMOVE SHIFT LEVER SUB-ASSEMBLY**

(a) Using a screwdriver, pry and push up the spring nut.
(b) Using nippers, cut the spring nut off it.
(c) Remove the control shaft and shift lever sub-assembly.




**13. REMOVE CUSHION**

Remove the 2 screws and 2 cushion.




**14. REMOVE COLLAR**

Using a screwdriver and hammer, remove the 4 collars.

AX0KF-01

# INSTALLATION

**Installation is in the reverse order of removal (See page AX-22 ).**

HINT:

After installation, inspect shift lever operation.

★ When shifting it to each position, make sure that the shifting lever moves smoothly, can be moderately operated and the position indicator displays correctly.

**Positions which can be operated without pressing the shift lever knob button**

**R → N → D, L → 2 → D → N**

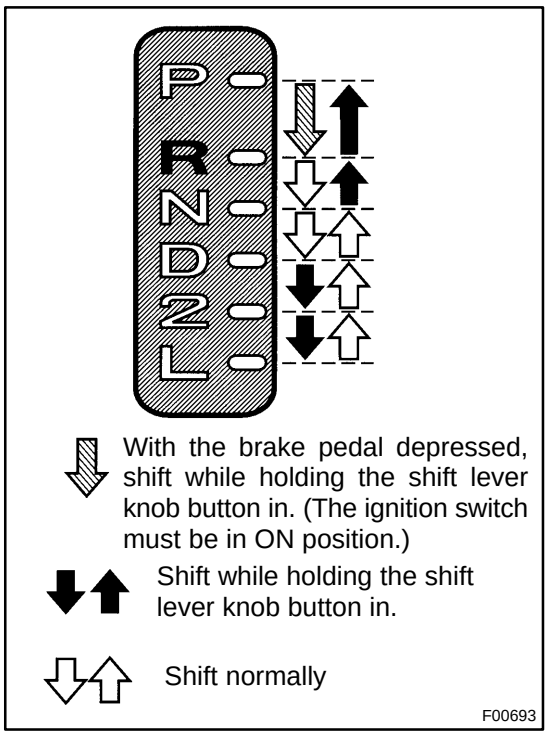
**Positions which can be operated only with pressing the shift lever knob button**

**2 → L, N → R → P**

**Positions which can be operated only with pressing the shift lever knob button, ignition switch ON and brake pedal depressed**

**P → R**

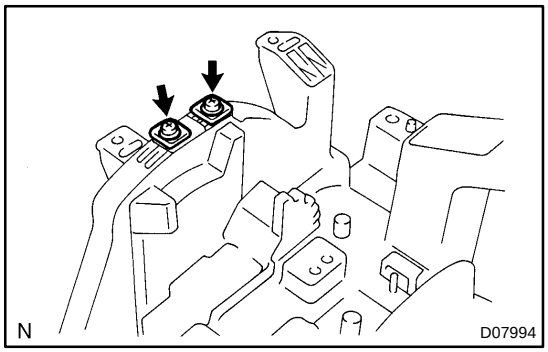
★ When starting the engine, make sure that the vehicle moves forward when shifting from N to D position, and moves rearward when shifting to R position.



AX0KE-01

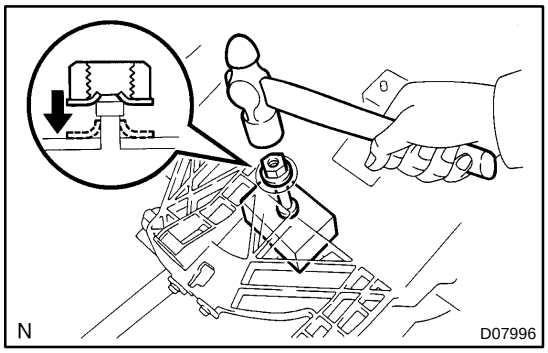
# REASSEMBLY

## 1. INSTALL 4 COLLARS



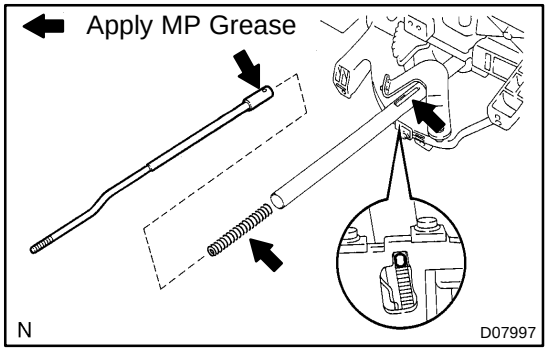

## 2. INSTALL CUSHION

Install the 2 cushions with the 2 screws.



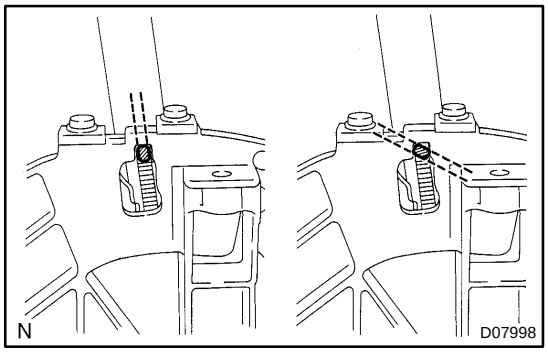

## 3. INSTALL SHIFT LEVER SUB-ASSEMBLY

(a) Install the shift lever sub-assembly with the control shaft.
(b) Support the control shaft, as shown in the illustration.
(c) Install a new spring nut to the control shaft by knocking them lightly via the 10-mm seated nut.




## 4. INSTALL GROOVED PIN

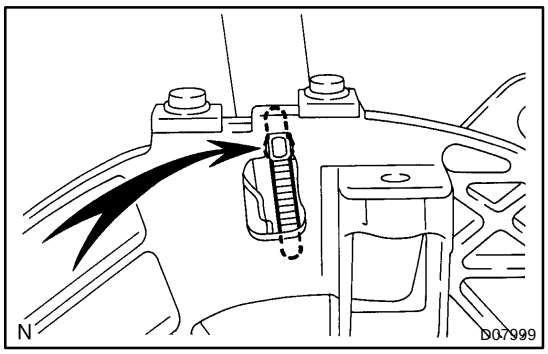
(a) Apply MP grease on the compression spring, detent rod and shift lever sub-assembly.
(b) Place the shift lever plate.



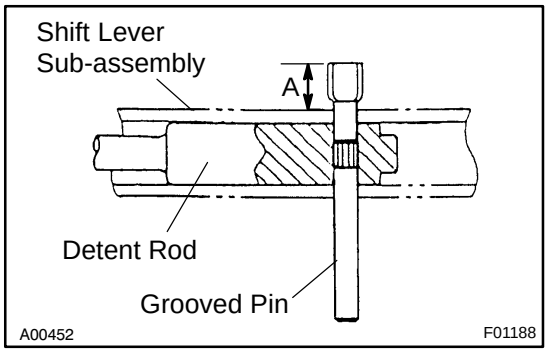

(c) Insert the grooved pin in the detent rod pin hole.

**NOTICE:**

★ **Assemble the grooved pin to ensure that it fits into the guide hole of the shift lever sub-assembly in parallel.**
★ **Take care not to insert the pin in the wrong direction of the detent rod.**




(d) Meet the grooved pin with the notch of the guide hole.



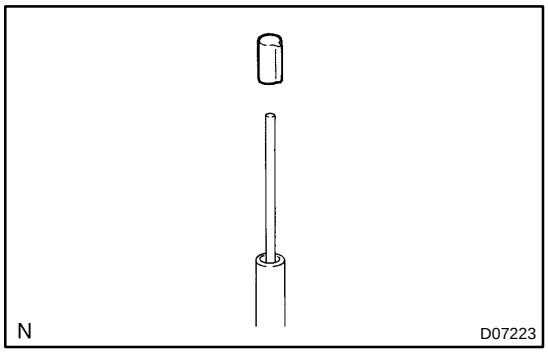

(e) Press the pin with a hammer.

**A: 10.0 - 10.4 mm (0.39 - 0.41 in.)**

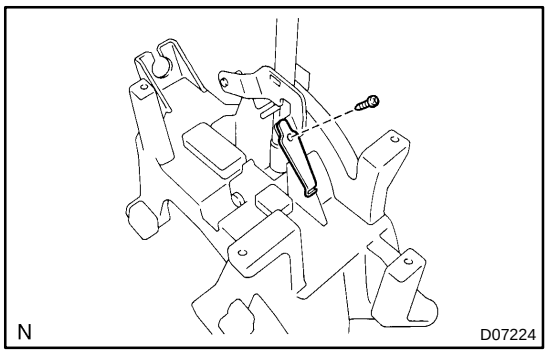
**NOTICE:**

**When pressing in the grooved pin, if doing it at the place other than the notch, the shift lever sub-assembly might be damaged.**

**5. CHECK DETENT ROD OPERATION**

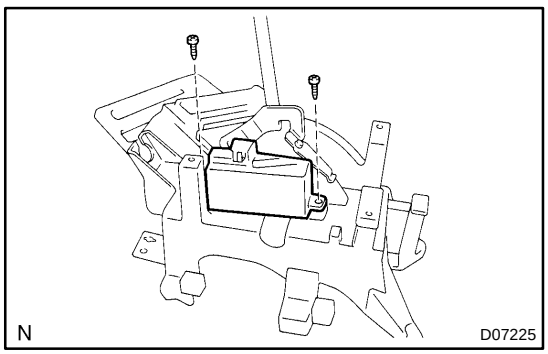



**6. INSTALL SHIFT LEVER KNOB SLEEVE**



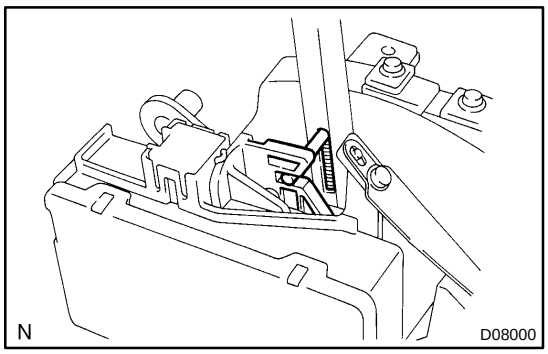

**7. INSTALL MANUAL DETENT SPRING**

Install the manual detent spring with the screw.

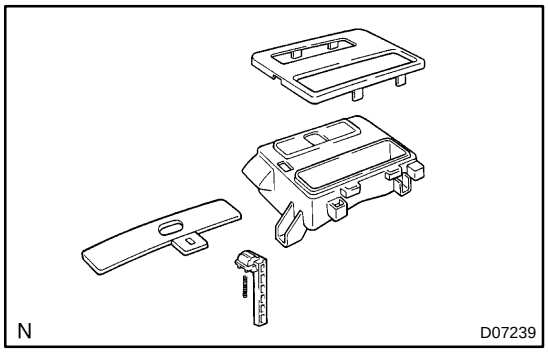



**8. INSTALL SHIFT LOCK CONTROL UNIT**

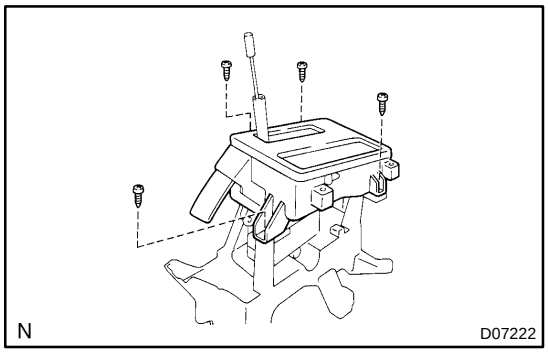
Install the shift lock unit assembly with the 2 screws.



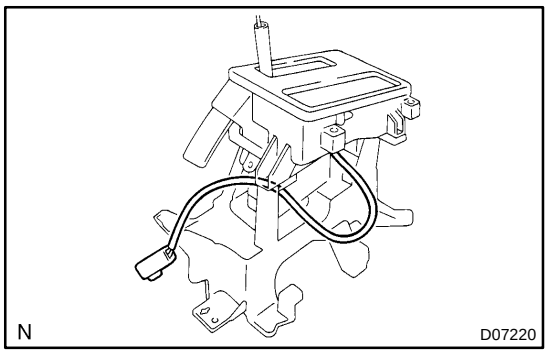

**NOTICE:**
**Install the grooved pin into the groove of the shift lock unit as shown in the illustration.**




**9. ASSEMBLE LOWER POSITION INDICATOR HOUSING**
(a) Install the slide cover.
(b) Install the spring and shift lock release bottom.
(c) Install the control position indicator plate.




**10. INSTALL LOWER POSITION INDICATOR HOUSING**
Install the lower position indicator housing with the 4 screws.




**11. INSTALL INDICATOR LIGHT**
(a) Install the bulb and cap to the indicator light wire.
(b) Install the indicator light to the lower position indicator housing.

**12. ASSEMBLE SHIFT LEVER KNOB SUB-ASSEMBLY**
(a) Install the spring and shift lever knob to the shift lever knob.
(b) Install the O/D main switch and O/D main switch cover to the shift lever knob.

**13. INSTALL SHIFT LEVER KNOB AND SHIFT LEVER KNOB COVER**
(a) Pass through the wire harness of the O/D main switch as shown in the illustration and set it.
(b) Install the shift lever knob and shift lever knob cover to the shift lever sub-assembly.

**NOTICE:**
**When operating the shift lever sub-assembly, check that excessive force is not applied to the wire harness of the O/D main switch.**

(c) Install the 2 shift lever sub-assembly set screws.
**Torque: 2.2 N·m (22 kgf·cm, 19 in.·lbf)**

(d) Raise the shift lever knob cover.

**14. CONNECT O/D MAIN SWITCH TERMINAL**

(a) Connect the terminals of the O/D main switch.

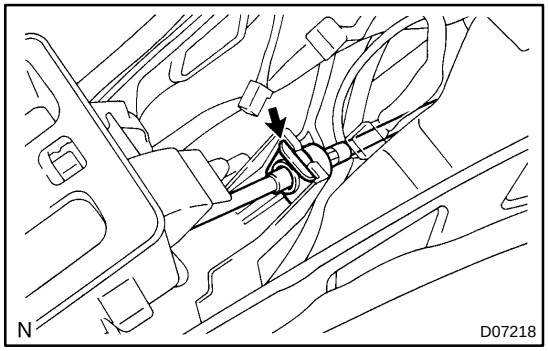
(b) Connect the O/D main switch connector to the shift lever plate.

AX0KC-01

# REMOVAL

1. **REMOVE UPPER REAR CONSOLE PANEL SUB-ASSEMBLY (See page BO-90 )**
2. **REMOVE FRONT ASH RECEPTACLE ASSEMBLY (See page BO-90 )**
3. **REMOVE UPPER CONSOLE PANEL SUB- ASSEMBLY (See page BO-90 )**
4. **REMOVE CONSOLE BOX PLATE (See page BO-90 )**
5. **REMOVE REAR CONSOLE BOX ASSEMBLY (See page BO-90 )**
6. **REMOVE LH AND RH SCUFF PLATES (See page BO-90 )**
7. **REMOVE LH AND RH COWL SIDE TRIMS (See page BO-90 )**
8. **REMOVE LOWER NO.4 INSTRUMENT PANEL SUB-ASSEMBLY (See page BO-90 )**
9. **REMOVE NO.2 INSTRUMENT PANEL UNDER COVER SUB-ASSEMBL Y (See page BO-90 )**
10. **REMOVE LOWER INSTRUMENT PANEL SUB- ASSEMBLY (See page BO-90 )**
11. **Taiwan Spec.:**
    **REMOVE CENTER INSTRUMENT CLUSTER FINISH PANEL SUB-ASSEMBLY (See page BO-90 )**
12. **Taiwan Spec.:**
    **REMOVE RADIO TUNER OPENING COVERS WITH HEATER CONSOLE & ACCESSORY ASSEMBLY (See page BO-90 )**
13. **Except Taiwan spec.:**
    **REMOVE RADIO ASSEMBLY WITH HEATER CONSOLE & ACCESSORY ASSEMBLY (See page BO-90 )**
14. **REMOVE FRONT CONSOLE BOX ASSEMBLY (See page BO-90 )**
15. **w/ Rear Heater:**
    **REMOVE REAR CONSOLE NO.1 BOX ASSEMBLY CONSOLE BOX DUCT**

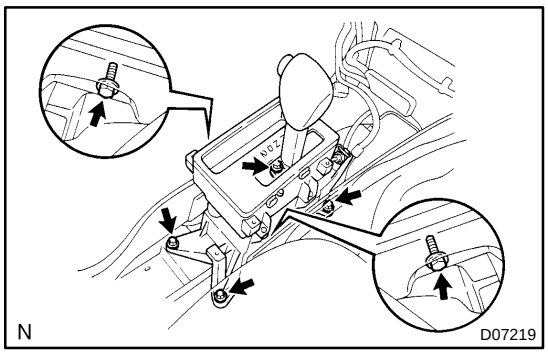
Remove the clip and duct.




16. **REMOVE FLOOR SHIFT LEVER ASSEMBLY**

(a) Remove the clip and disconnect the shift cable from the floor shift assembly.

(b) Disconnect the wire harness from the wire harness clamp.

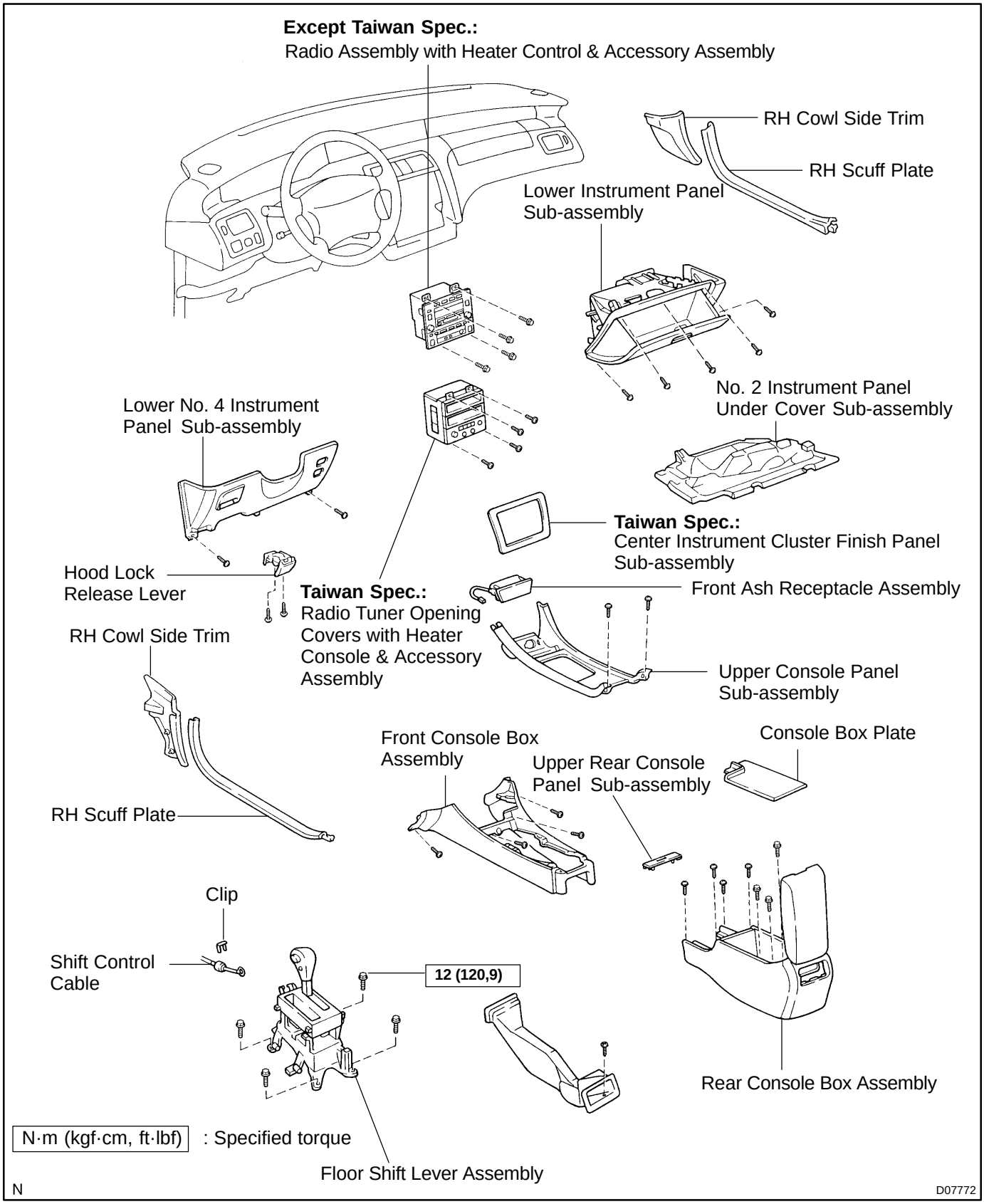


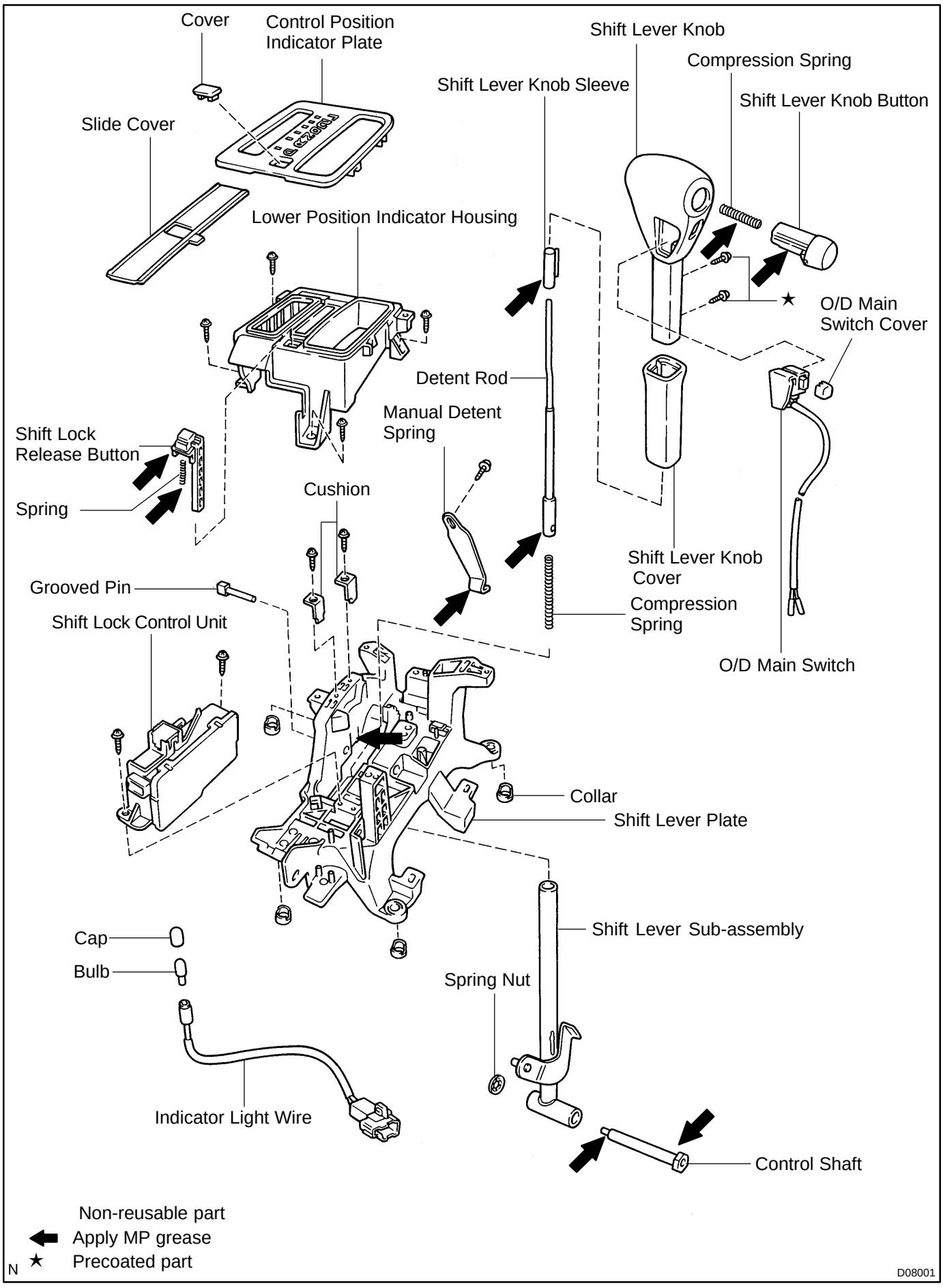

(c) Remove the 2 bolts from the brace.
(d) Remove the 4 bolts and floor shift assembly.
**Torque: 12 N·m (120kgf·cm, 9 ft·lbf)**

# FLOOR SHIFT ASSEMBLY

## COMPONENTS

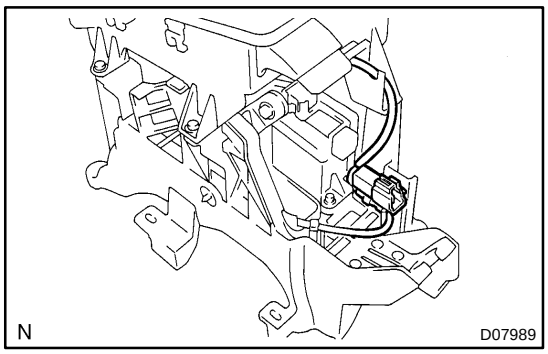
AX0KB-01




Cover
Control Position Indicator Plate
Slide Cover
Lower Position Indicator Housing
Shift Lever Knob
Compression Spring
Shift Lever Knob Sleeve
Shift Lever Knob Button
★
O/D Main Switch Cover
Detent Rod
Manual Detent Spring
Shift Lock Release Button
Spring
Cushion
Shift Lever Knob Cover
Compression Spring
Grooved Pin
Shift Lock Control Unit
O/D Main Switch
Collar
Shift Lever Plate
Shift Lever Sub-assembly
Cap
Bulb
Spring Nut
Indicator Light Wire
Control Shaft
Non-reusable part
Apply MP grease
★ Precoated part
N
D08001

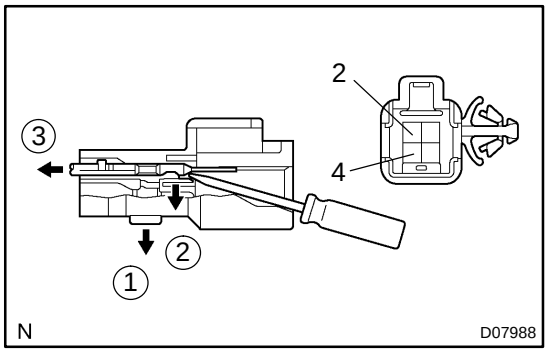
AX0KD-01

# DISASSEMBLY



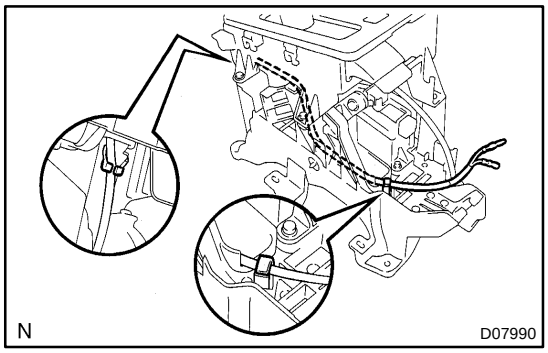

**1. REMOVE O/D MAIN SWITCH TERMINAL**

(a) Remove the connector from the shift lever plate.

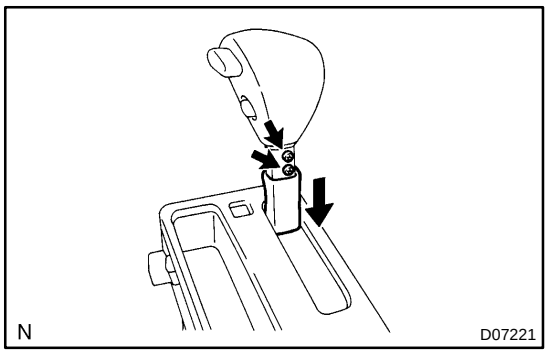



(b) Remove the secondary locking device.

(c) Release the looking lug of the terminals 2 and 4, and pull the terminals out from the rear.




(d) Separate the O/D main switch wire harness from the 2 clamps.



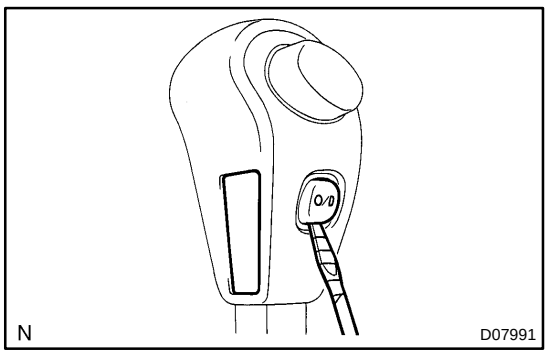

**2. REMOVE SHIFT LEVER KNOB SUB-ASSEMBLY**

(a) Side the shift lever knob cover.

(b) Remove the 2 screws and shift lever knob sub-assembly.

**NOTICE:**

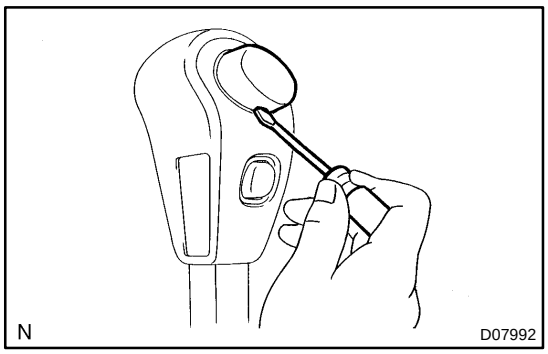
**Pay attention not to apply unnatural load onto O/D main switch wire harness.**



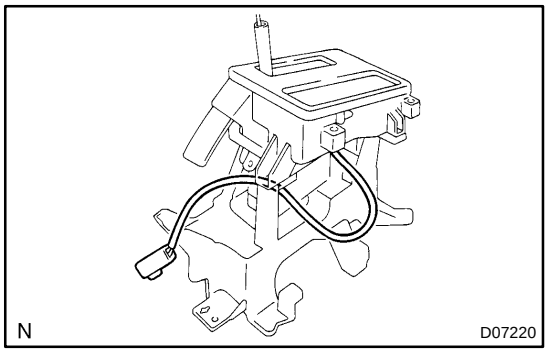

**3. DISASSEMBLE SHIFT LEVER KNOB SUB-ASSEMBL Y**

(a) Using a small screwdriver, remove the O/D main switch cover.

(b) Using a small screwdriver, remove the O/D main switch from the shift lever knob.

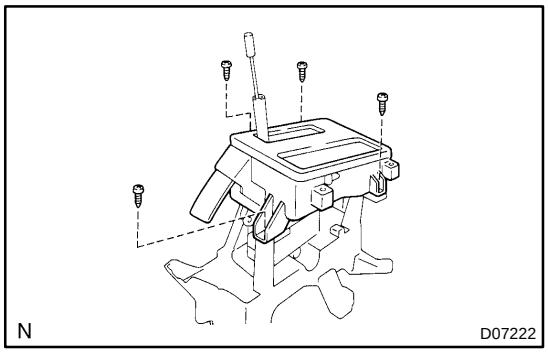



(c) Insert a small screwdriver into the position in the illustration and disengage the claw.
(d) Remove the shift lever knob button and compression spring.



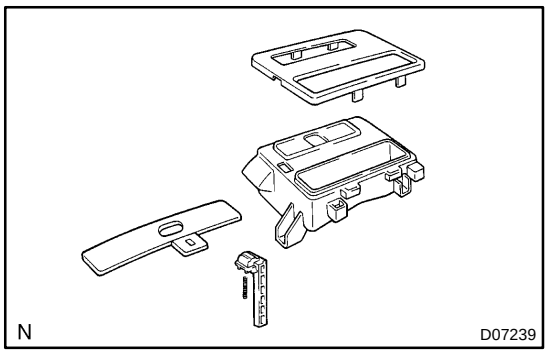

**4. REMOVE INDICATOR LIGHT**

(a) Remove the indicator light from the lower position indicator housing.
(b) Remove the cap and bulb from the indicator light wire.



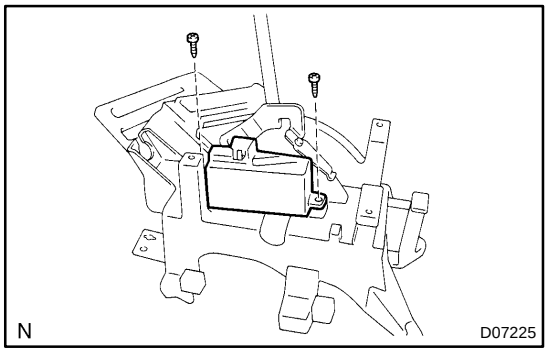

**5. REMOVE LOWER POSITION INDICATOR HOUSING**

Remove the 4 screws and lower position indicator housing.



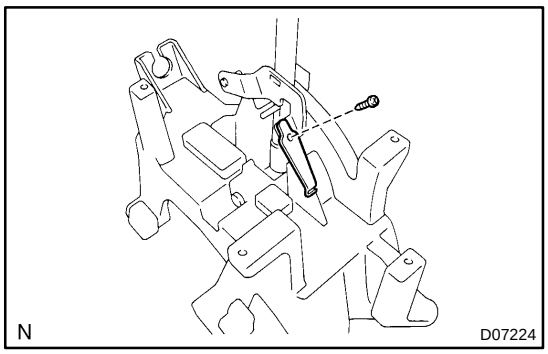

**6. DISASSEMBLE LOWER POSITION INDICATOR HOUSING**

(a) Remove the control position indicator plate.
(b) Remove the shift lock release button and spring.
(c) Remove the slide cover.



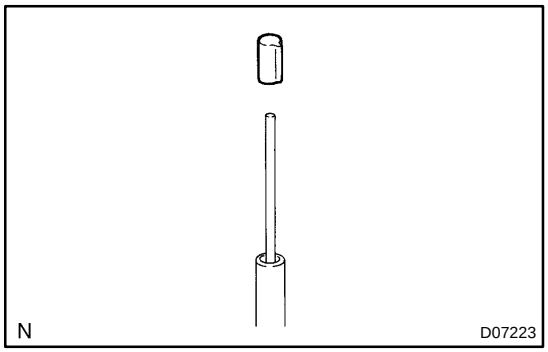

**7. REMOVE SHIFT LOCK CONTROL UNIT**

Remove the 2 screws and shift lock control unit assembly.

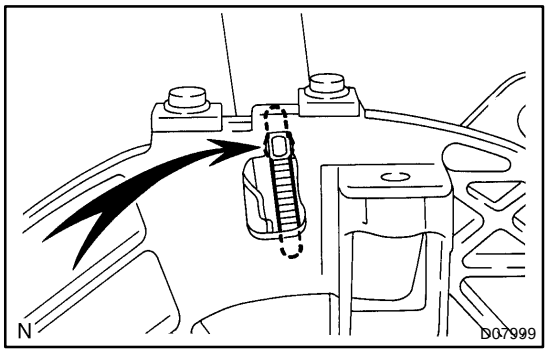



**8. REMOVE MANUAL DETENT SPRING**

Remove the screw and manual detent spring.




**9. REMOVE SHIFT LEVER KNOB SLEEVE**



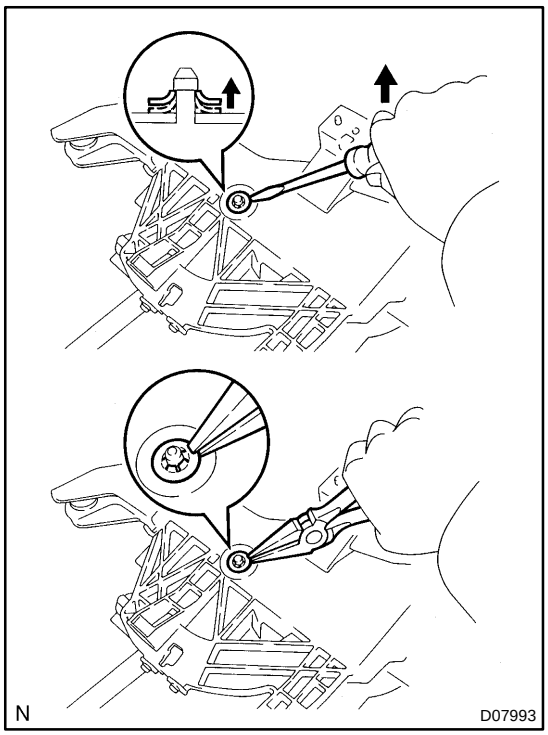

**10. REMOVE GROOVED PIN**

Secure the room for the pin to be released by using the vice and etc. as shown in the illustration, and hit the grooved pin with a hammer and pull the grooved pin out.

**NOTICE:**

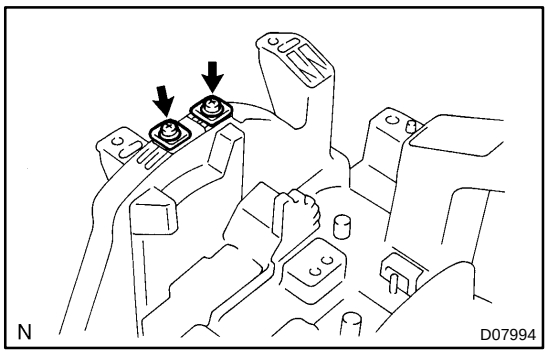
- ★ **Hit and pull the pin out gradually.**
- ★ **Do not damage the shift lever sub-assembly.**

**11. REMOVE DETENT ROD, COMPRESSION SPRING**



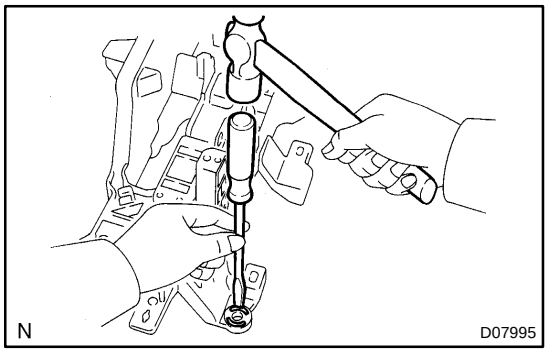

**12. REMOVE SHIFT LEVER SUB-ASSEMBLY**

(a) Using a screwdriver, pry and push up the spring nut.
(b) Using nippers, cut the spring nut off it.
(c) Remove the control shaft and shift lever sub-assembly.




**13. REMOVE CUSHION**

Remove the 2 screws and 2 cushion.




**14. REMOVE COLLAR**

Using a screwdriver and hammer, remove the 4 collars.

AX0KF-01

# INSTALLATION

**Installation is in the reverse order of removal (See page AX-22 ).**

HINT:

After installation, inspect shift lever operation.

★ When shifting it to each position, make sure that the shifting lever moves smoothly, can be moderately operated and the position indicator displays correctly.

**Positions which can be operated without pressing the shift lever knob button**

**R → N → D, L → 2 → D → N**

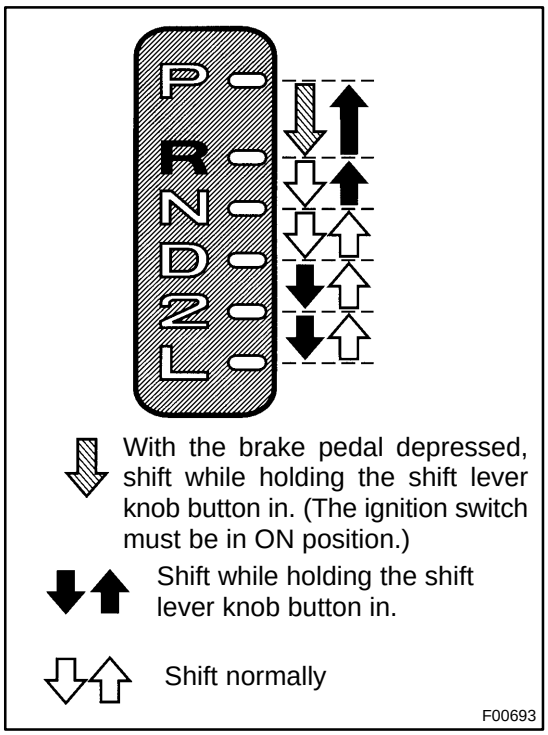
**Positions which can be operated only with pressing the shift lever knob button**

**2 → L, N → R → P**

**Positions which can be operated only with pressing the shift lever knob button, ignition switch ON and brake pedal depressed**

**P → R**

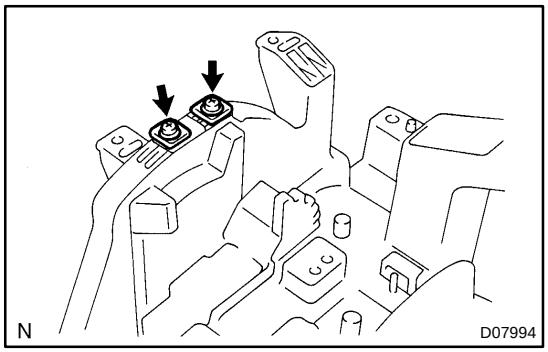
★ When starting the engine, make sure that the vehicle moves forward when shifting from N to D position, and moves rearward when shifting to R position.



AX0KE-01

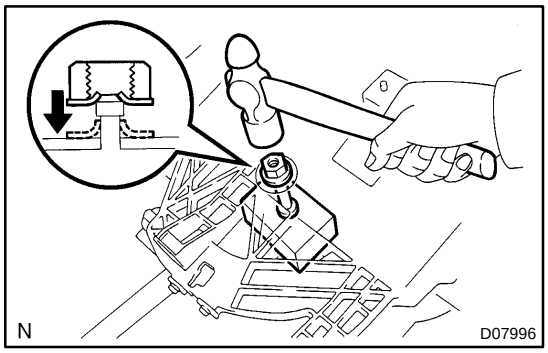
# REASSEMBLY

## 1. INSTALL 4 COLLARS



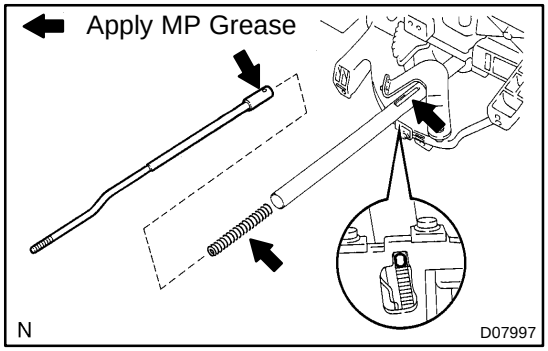

## 2. INSTALL CUSHION

Install the 2 cushions with the 2 screws.



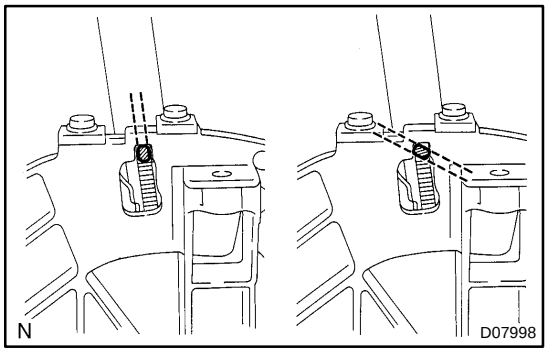

## 3. INSTALL SHIFT LEVER SUB-ASSEMBLY

(a) Install the shift lever sub-assembly with the control shaft.
(b) Support the control shaft, as shown in the illustration.
(c) Install a new spring nut to the control shaft by knocking them lightly via the 10-mm seated nut.




## 4. INSTALL GROOVED PIN

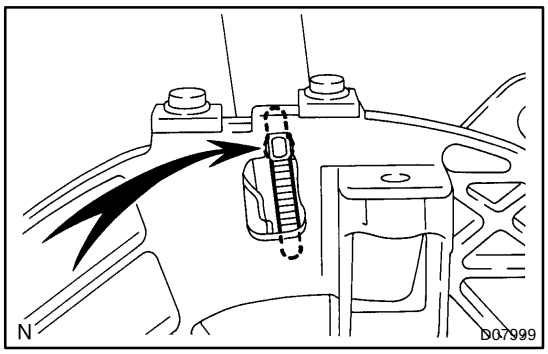
(a) Apply MP grease on the compression spring, detent rod and shift lever sub-assembly.
(b) Place the shift lever plate.



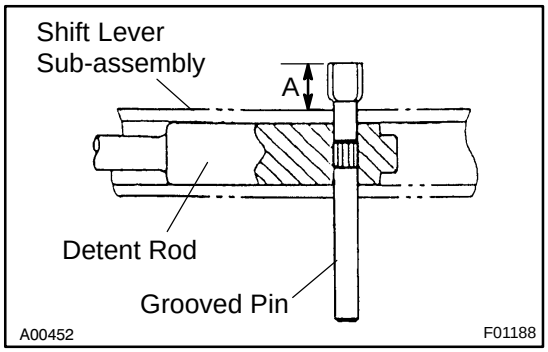

(c) Insert the grooved pin in the detent rod pin hole.

**NOTICE:**

★ **Assemble the grooved pin to ensure that it fits into the guide hole of the shift lever sub-assembly in parallel.**
★ **Take care not to insert the pin in the wrong direction of the detent rod.**




(d) Meet the grooved pin with the notch of the guide hole.



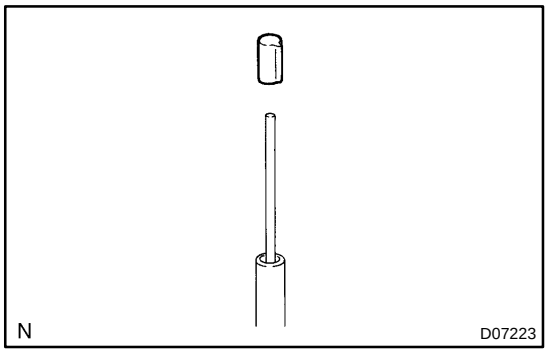

(e) Press the pin with a hammer.

**A: 10.0 - 10.4 mm (0.39 - 0.41 in.)**

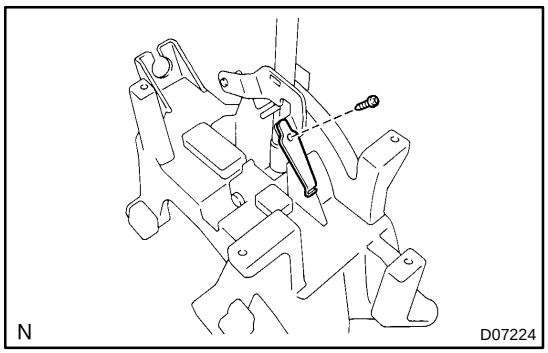
**NOTICE:**

**When pressing in the grooved pin, if doing it at the place other than the notch, the shift lever sub-assembly might be damaged.**

**5. CHECK DETENT ROD OPERATION**

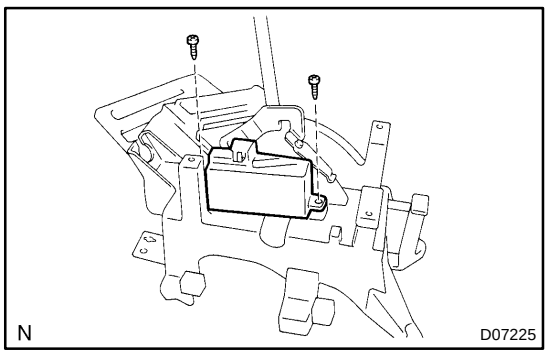



**6. INSTALL SHIFT LEVER KNOB SLEEVE**



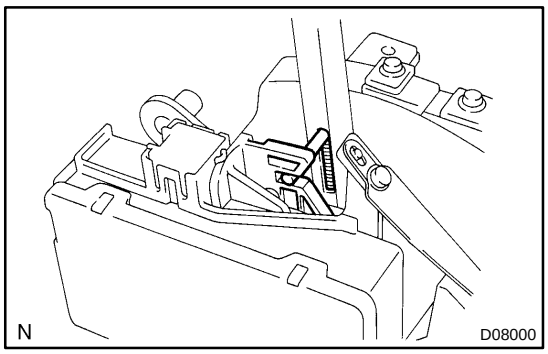

**7. INSTALL MANUAL DETENT SPRING**

Install the manual detent spring with the screw.

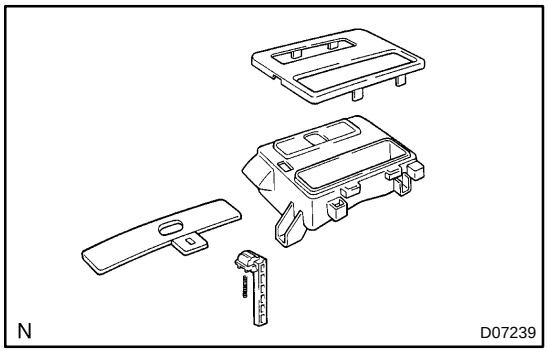



**8. INSTALL SHIFT LOCK CONTROL UNIT**

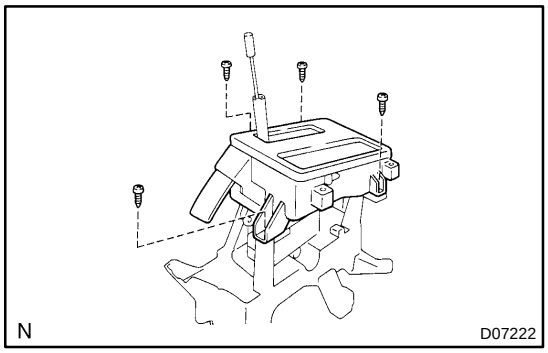
Install the shift lock unit assembly with the 2 screws.



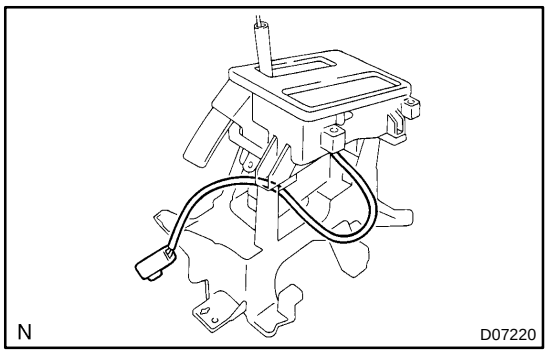

**NOTICE:**
**Install the grooved pin into the groove of the shift lock unit as shown in the illustration.**




**9. ASSEMBLE LOWER POSITION INDICATOR HOUSING**
(a) Install the slide cover.
(b) Install the spring and shift lock release bottom.
(c) Install the control position indicator plate.




**10. INSTALL LOWER POSITION INDICATOR HOUSING**
Install the lower position indicator housing with the 4 screws.




**11. INSTALL INDICATOR LIGHT**
(a) Install the bulb and cap to the indicator light wire.
(b) Install the indicator light to the lower position indicator housing.

**12. ASSEMBLE SHIFT LEVER KNOB SUB-ASSEMBLY**
(a) Install the spring and shift lever knob to the shift lever knob.
(b) Install the O/D main switch and O/D main switch cover to the shift lever knob.

**13. INSTALL SHIFT LEVER KNOB AND SHIFT LEVER KNOB COVER**
(a) Pass through the wire harness of the O/D main switch as shown in the illustration and set it.
(b) Install the shift lever knob and shift lever knob cover to the shift lever sub-assembly.

**NOTICE:**
**When operating the shift lever sub-assembly, check that excessive force is not applied to the wire harness of the O/D main switch.**

(c) Install the 2 shift lever sub-assembly set screws.
**Torque: 2.2 N·m (22 kgf·cm, 19 in.·lbf)**

(d) Raise the shift lever knob cover.

**14. CONNECT O/D MAIN SWITCH TERMINAL**

(a) Connect the terminals of the O/D main switch.

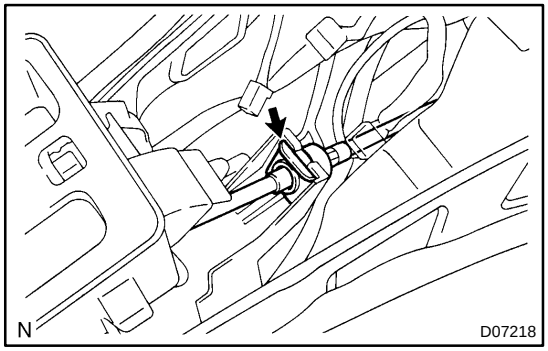
(b) Connect the O/D main switch connector to the shift lever plate.

AX0KC-01

# REMOVAL

1. **REMOVE UPPER REAR CONSOLE PANEL SUB-ASSEMBLY (See page BO-90 )**
2. **REMOVE FRONT ASH RECEPTACLE ASSEMBLY (See page BO-90 )**
3. **REMOVE UPPER CONSOLE PANEL SUB- ASSEMBLY (See page BO-90 )**
4. **REMOVE CONSOLE BOX PLATE (See page BO-90 )**
5. **REMOVE REAR CONSOLE BOX ASSEMBLY (See page BO-90 )**
6. **REMOVE LH AND RH SCUFF PLATES (See page BO-90 )**
7. **REMOVE LH AND RH COWL SIDE TRIMS (See page BO-90 )**
8. **REMOVE LOWER NO.4 INSTRUMENT PANEL SUB-ASSEMBLY (See page BO-90 )**
9. **REMOVE NO.2 INSTRUMENT PANEL UNDER COVER SUB-ASSEMBL Y (See page BO-90 )**
10. **REMOVE LOWER INSTRUMENT PANEL SUB- ASSEMBLY (See page BO-90 )**
11. **Taiwan Spec.:**
    **REMOVE CENTER INSTRUMENT CLUSTER FINISH PANEL SUB-ASSEMBLY (See page BO-90 )**
12. **Taiwan Spec.:**
    **REMOVE RADIO TUNER OPENING COVERS WITH HEATER CONSOLE & ACCESSORY ASSEMBLY (See page BO-90 )**
13. **Except Taiwan spec.:**
    **REMOVE RADIO ASSEMBLY WITH HEATER CONSOLE & ACCESSORY ASSEMBLY (See page BO-90 )**
14. **REMOVE FRONT CONSOLE BOX ASSEMBLY (See page BO-90 )**
15. **w/ Rear Heater:**
    **REMOVE REAR CONSOLE NO.1 BOX ASSEMBLY CONSOLE BOX DUCT**

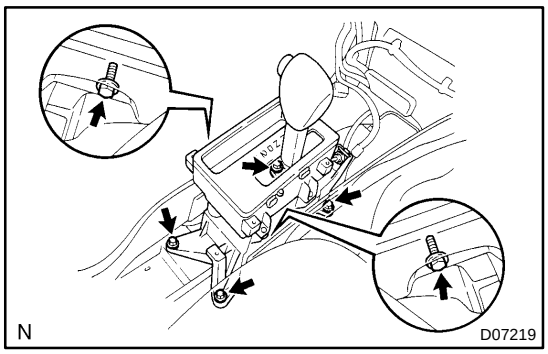
Remove the clip and duct.



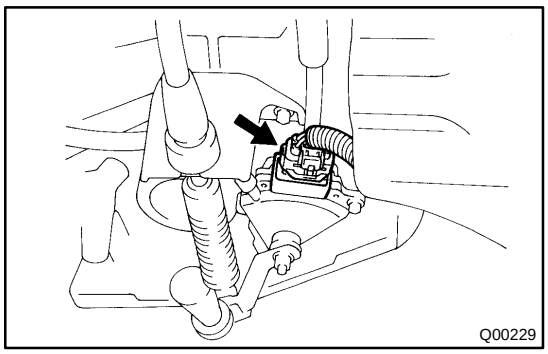

16. **REMOVE FLOOR SHIFT LEVER ASSEMBLY**

(a) Remove the clip and disconnect the shift cable from the floor shift assembly.

(b) Disconnect the wire harness from the wire harness clamp.




(c) Remove the 2 bolts from the brace.
(d) Remove the 4 bolts and floor shift assembly.
**Torque: 12 N·m (120kgf·cm, 9 ft·lbf)**



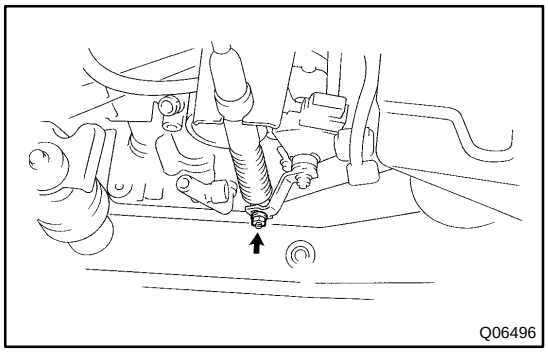

# PARK/NEUTRAL POSITION (PNP) SWITCH

AX0CJ-02

## ON-VEHICLE REPAIR

**1. REMOVE ENGINE UNDER COVER**

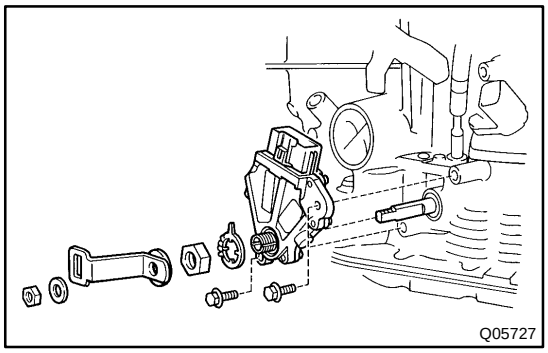
**2. DISCONNECT PARK/NEUTRAL POSITION SWITCH CONNECTOR**




**3. REMOVE PARK/NEUTRAL POSITION SWITCH**

(a) Remove the clip from the shift control cable.

(b) Remove the nut and disconnect the control cable.

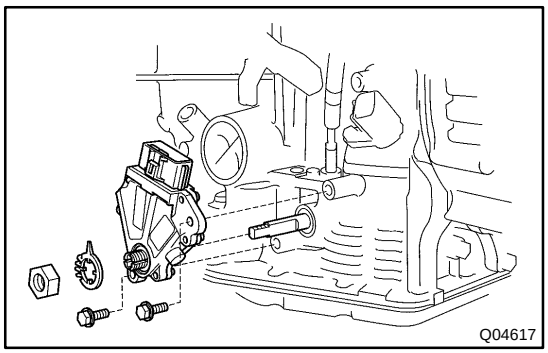



(c) Remove the nut, washer and transaxle control shaft lever.

(d) Using a screwdriver, pry off the lock plate.

(e) Remove the nut and lock plate.

(f) Remove the 2 bolts and pull out the park/neutral position switch.

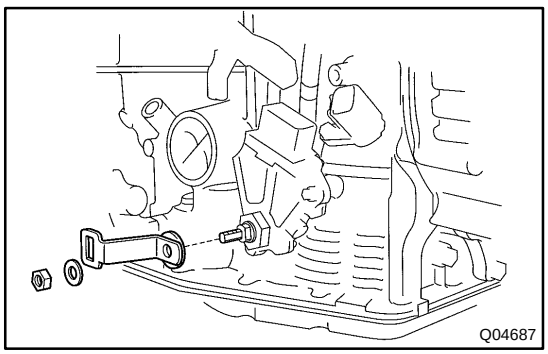



**4. INSTALL AND ADJUST PARK/NEUTRAL POSITION SWITCH**

(a) Install the park/neutral position switch with the 2 bolts.
**Torque: 5.4 N·m (55 kgf·cm, 48 in.·lbf)**

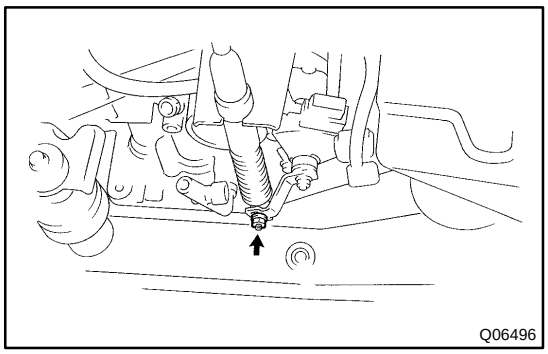
(b) Install a new lock plate and nut.
**Torque: 6.9 N·m (70 kgf·cm, 61 in.·lbf)**

(c) Bend the claws on the lock plate to stake the nut.




(d) Install the transaxle control shaft lever and washer.

(e) Install and torque the nut.
**Torque: 15 N·m (150 kgf·cm, 11 ft·lbf)**




(f) Install the control cable and nut.
**Torque: 15 N·m (150 kgf·cm, 11 ft·lbf)**

(g) Install the clip to the shift control cable.

**5. CONNECT PARK/NEUTRAL POSITION SWITCH CONNECTOR**

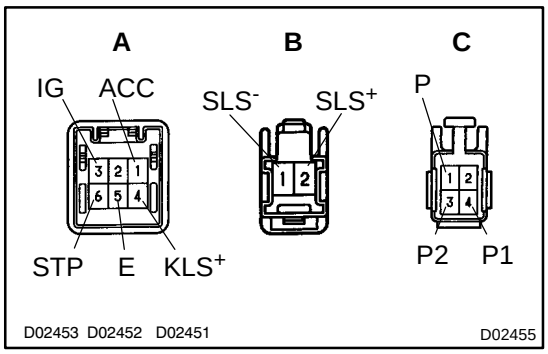
**6. CHECK PARK/NEUTRAL POSITION SWITCH OPERATION**

Check that the engine can be started with the shift lever only in the N or P position, but not in other positions.
If not as started above, carry out the adjustment procedure (See page DI-160 ).

**7. TEST DRIVE VEHICLE**

**8. INSTALL ENGINE UNDER COVER**

AX05E-03




# INSPECTION

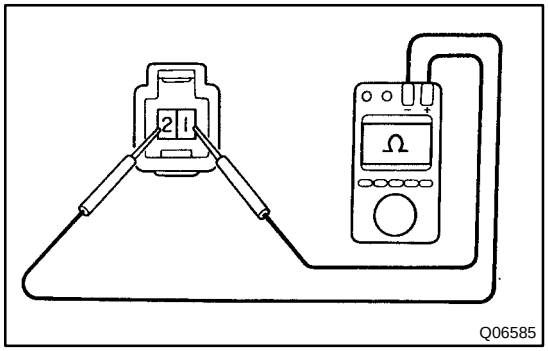
## 1. INSPECT SHIFT LOCK CONTROL UNIT ASSEMBLY

Using a voltmeter, measure the voltage at each terminal.

HINT:

Do not disconnect the shift lock control unit assembly connector.

| Terminal No. (Symbols) | Measuring Condition | Voltage (V) |
|---|---|---|
| 1 (ACC) - 5 (E) | Ignition switch ACC | 10 - 14 |
| 3 (IG) - 5 (E) | Ignition switch ON | 10 - 14 |
| 6 (STP) - 5 (E) | Depressing brake pedal | 10 - 14 |
| 4 ($KLS^+$) - 5 (E) | 4. Ignition switch ACC and P position<br>5. Ignition switch ACC and except P position<br>6. Ignition switch ACC and except P position (After approx. 1 second) | 0<br>7.5 - 11<br>6 - 9 |
| 2 ($SLS^+$) - 1 ($SLS^-$) | 1. Ignition switch ACC and P position<br>2. Depress brake pedal<br>3. Except P position | 0<br>8.5 -13.5<br>0 |
| 4 (P1) - 1 (P) | 1. Ignition switch ON, P position and depress brake pedal<br>2. Shift except P position under condition above | 0<br>9 - 13.5 |
| 3 (P2) - 1 (P) | 1. Ignition switch ACC and P position<br>2. Shift except P position under condition above | 9 - 13.5<br>0 |



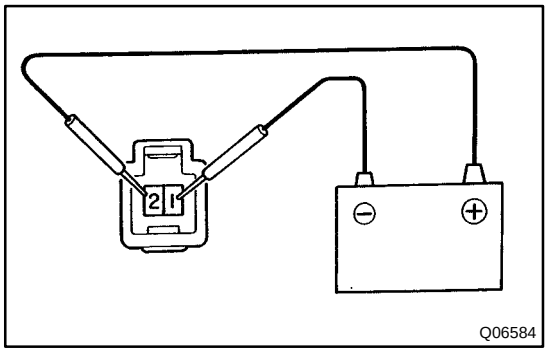

## 2. INSPECT SHIFT LOCK SOLENOID

(a) Disconnect the solenoid connector.

(b) Using an ohmmeter, measure resistance between terminals.

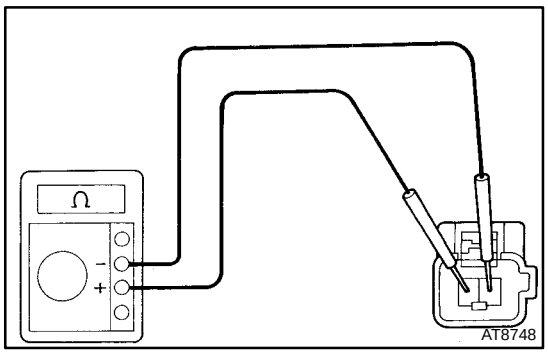
**Standard resistance: 29 - 35 Ω**

If resistance value is not as specified, replace the solenoid.




(c) Supply battery positive voltage between terminals. Check that an operation noise can be heard from the solenoid.

If the solenoid does not operate, replace the solenoid.



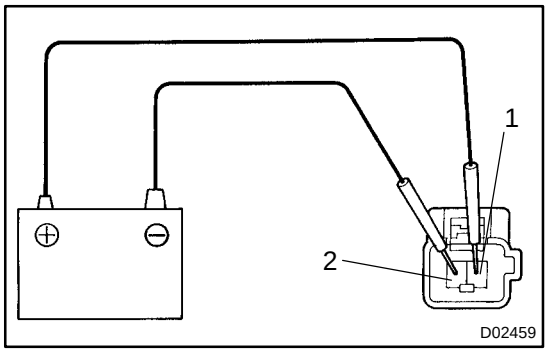

### 3. INSPECT KEY INTERLOCK SOLENOID

(a) Disconnect the solenoid connector.

(b) Using an ohmmeter, measure the resistance between terminals.

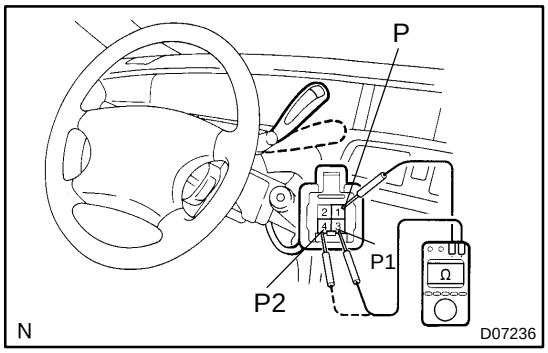
**Standard resistance: 12.5 -16.5 Ω**

If resistance value is not as specified, replace the solenoid.




(c) Supply battery positive voltage between terminals.

If the solenoid does not operate, replace the solenoid.




### 4. INSPECT SHIFT LOCK CONTROL SWITCH

Inspect that continuity between at each terminal.

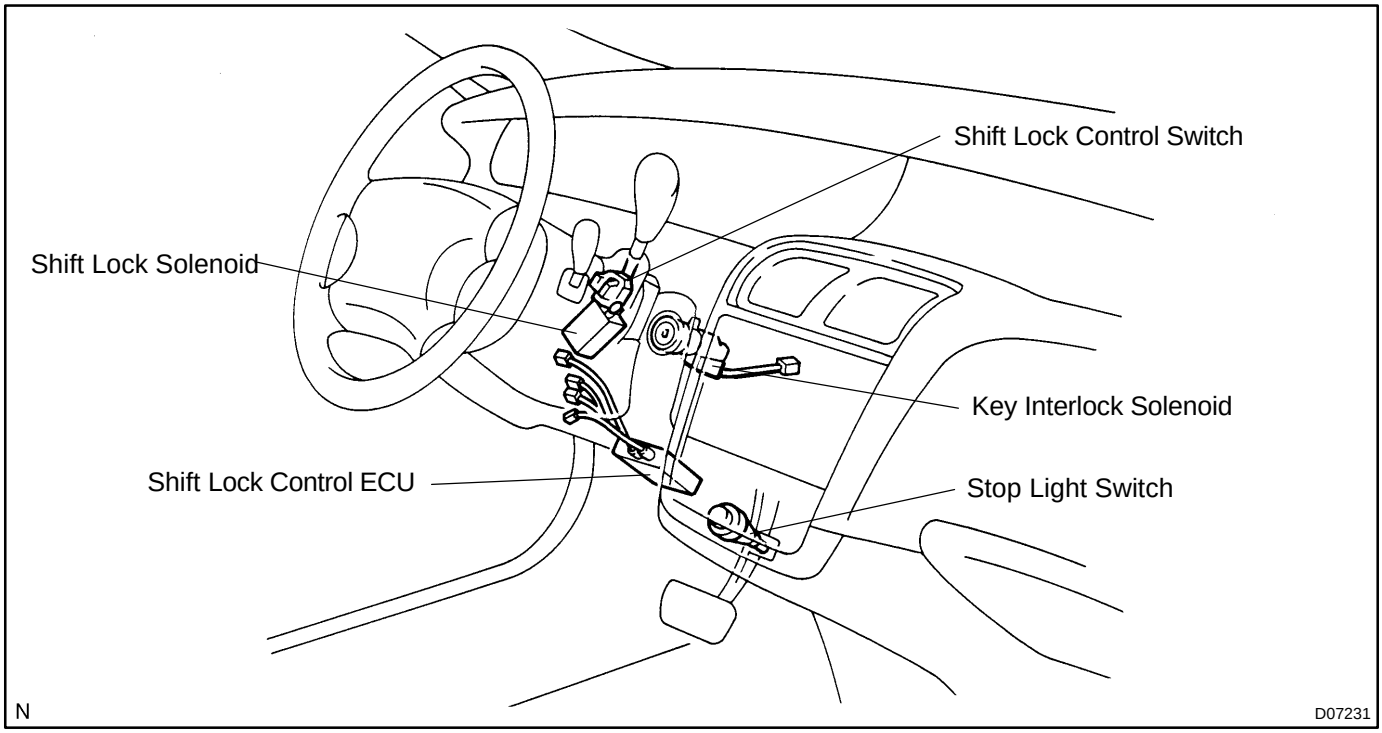
| Shift position | Tester connection | Specified value |
|---|---|---|
| P position (Release button is not pushed) | 3 (P1) - 1 (P) | Continuity |
| P position (Release button is pushed) | 3 (P1) - 1 (P)<br>4 (P2) - 1 (P) | Continuity |
| R, N, D, 2, L position | 4 (P2) - 1 (P) | Continuity |

If continuity is not specified, replace the switch.

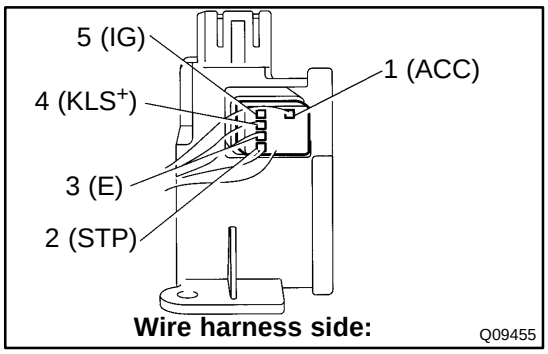
# SHIFT LOCK SYSTEM (Column Shift)

AX03T-04

## LOCATION



AX0CT-02




# INSPECTION

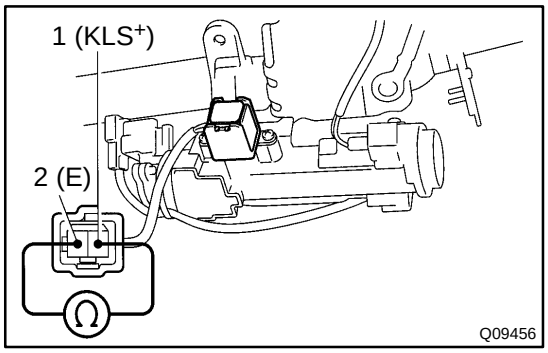
**1. INSPECT SHIFT LOCK CONTROL UNIT ASSEMBLY**

Using a voltmeter, measure the voltage at each terminal.

HINT:

Do not disconnect the shift lock control unit assembly connector.

| Terminal (Symbol) | Measuring Condition | Voltage (V) |
|---|---|---|
| 1 (ACC) - 3 (E) | Ignition switch ACC | 10 - 14 |
| 5 (IG) - 3 (E) | Ignition switch ON | 10 - 14 |
| 2 (STP) - 3 (E) | Depressing brake pedal | 10 - 14 |
| 4 (KLS+) - 3 (E) | (1) Ignition switch ACC and P position<br>(2) Ignition switch ACC and except P position<br>(3) Ignition switch ACC and except P position (After approx. 1 second) | 0<br>7.5 - 11<br>6 - 9.5 |



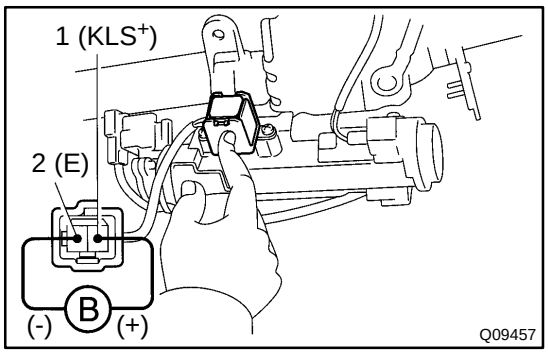

**2. INSPECT KEY INTERLOCK SOLENOID**

(a) Disconnect the solenoid connector.

(b) Using an ohmmeter, measure resistance between terminals.

**Standard resistance: 14.5 ± 1.5 Ω**

If resistance value is not as specified, replace the solenoid.



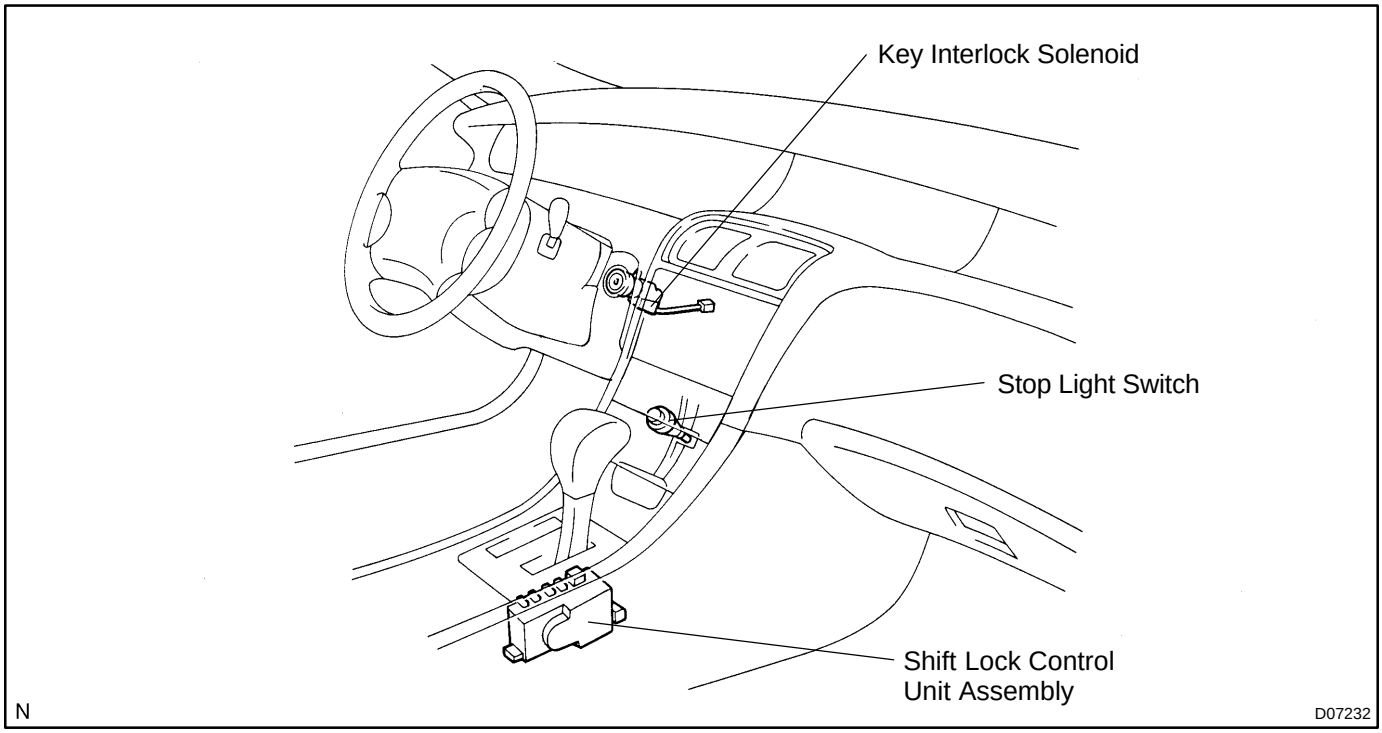

(c) Apply battery positive voltage between terminals. Check that an operation noise can be heard from the solenoid.

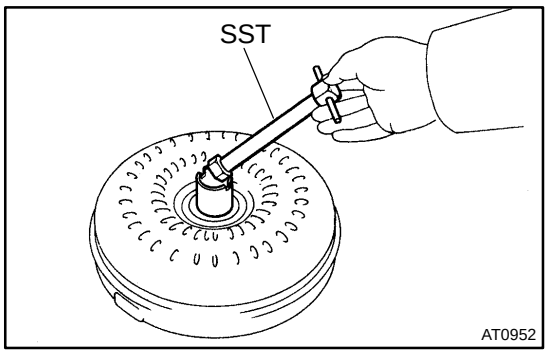
If the solenoid does not operated, replace the solenoid.

# SHIFT LOCK SYSTEM (Floor Shift)

AX0CS-02

## LOCATION





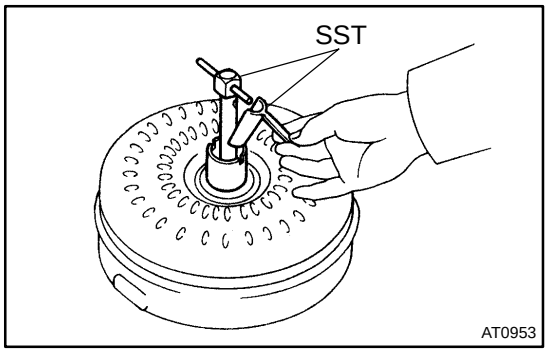

# TORQUE CONVERTER CLUTCH AND DRIVE PLATE

AX040-04

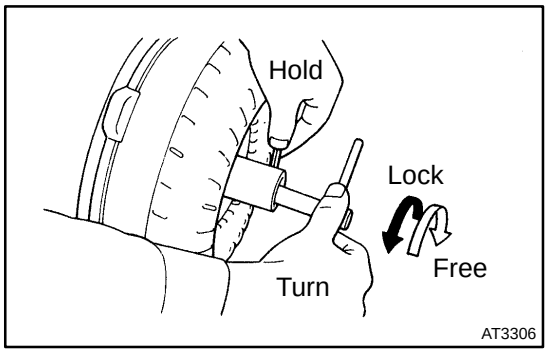
## INSPECTION

**1. INSPECT ONE-WAY CLUTCH**

(a) Install SST into the inner race of the one-way clutch.
SST 09350-32014 (09351-32010)

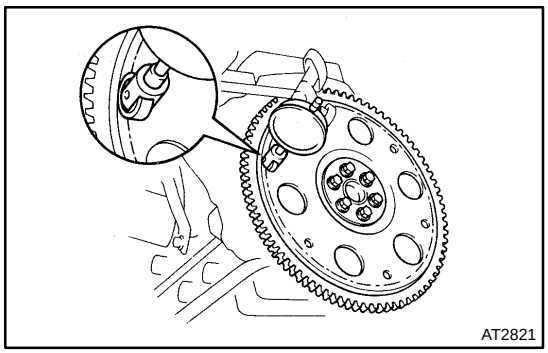



(b) Install SST so that it fits in the notch of the converter clutch hub and outer race of the one-way clutch.
SST 09350-32014 (09351-32020)




(c) With the torque converter clutch standing on its side, the clutch locks when turned counterclockwise, and rotates freely and smoothly clockwise.

If necessary, clean the converter and retest the clutch.
Replace the converter if the clutch still fails the test.

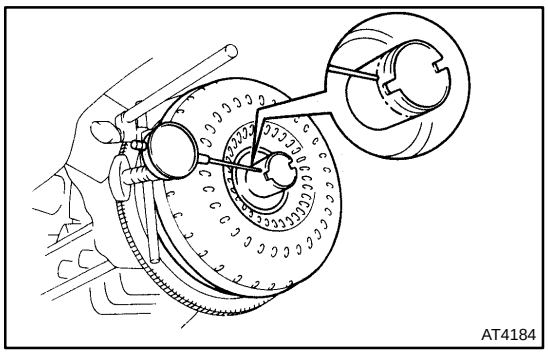



**2. MEASURE DRIVE PLATE RUNOUT AND INSPECT RING GEAR**

(a) Set up a dial indicator, and measure the drive plate runout.

(b) Check the damage of the ring gear.
**Maximum runout: 0.20 mm (0.0079 in.)**

If the runout is not within the specification or ring gear is damaged, replace the drive plate.
**Torque: 83 N·m (850 kgf·cm, 61 ft·lbf)**




**3. MEASURE TORQUE CONVERTER CLUTCH SLEEVE RUNOUT**

(a) Temporarily mount the torque converter clutch to the drive plate. Set up a dial indicator and measure the torque converter clutch sleeve runout.

**Maximum runout: 0.30 mm (0.0118 in.)**

If the runout is not within the specification, try to correct by reorienting the installation of the converter clutch.

HINT:

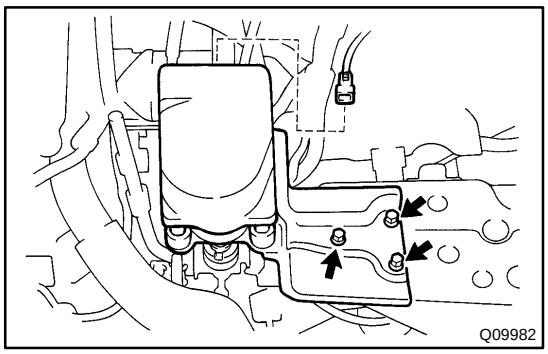
Mark the position of the converter clutch to ensure the correct installation.

(b) Remove the torque converter clutch.

# THROTTLE CABLE

AX03R-05

## ON-VEHICLE REPAIR

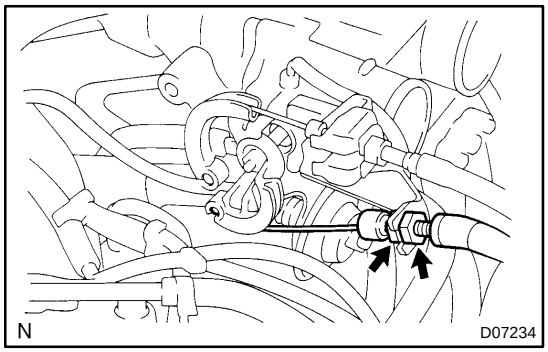



**1. REMOVE BATTERY**

**2. REMOVE CRUISE CONTROL ACTUATOR**

(a) Remove the 3 bolts and cruise control actuator.

(b) Disconnect the connector.

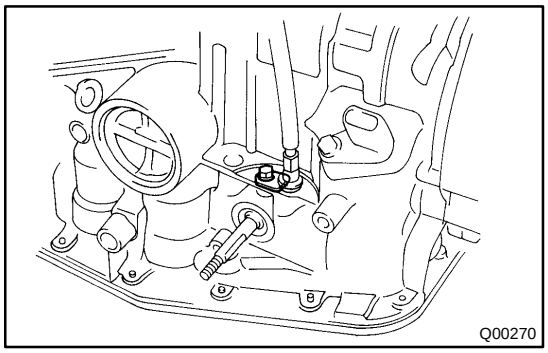



**3. DISCONNECT THROTTLE CABLE FROM ENGINE**

Disconnect the cable from the throttle linkage.

**4. REMOVE PARK/NEUTRAL POSITION SWITCH (See page AX-4 )**

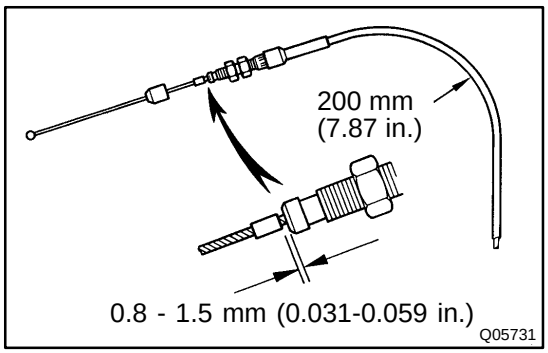
**5. REMOVE VALVE BODY (See page AX-6 )**




**6. REMOVE THROTTLE CABLE**

(a) Remove the bolt and retaining plate.

(b) Pull out the cable from the transaxle case.




**7. INSTALL THROTTLE CABLE**

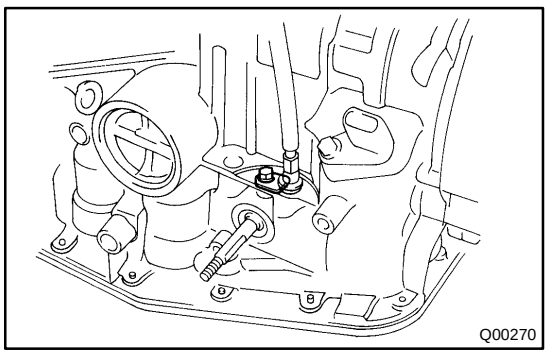
If the throttle cable is new, do the following operations (a) - (b).

(a) Bend the cable so there is a radius of about 200 mm (7.87 in.).

(b) Pull the inner cable lightly until slight resistance is felt, and hold it there.

(c) Stake the stopper, 0.8-1.5 mm (0.031-0.059 in.) from the end of outer cable.

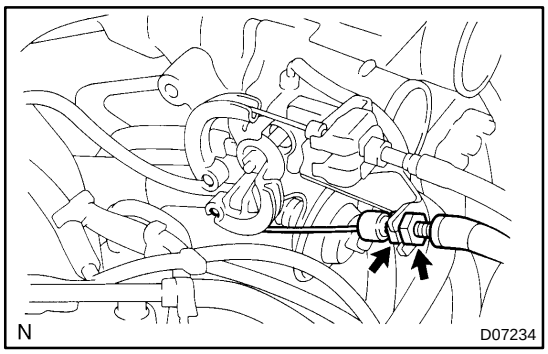
(d) Install a new O-ring to the throttle calbe.




(e) Make sure to push it in all the way.

(f) Install the retaining plate and bolt.
**Torque: 5.4 N·m (55 kgf·cm, 48 in.·lbf)**

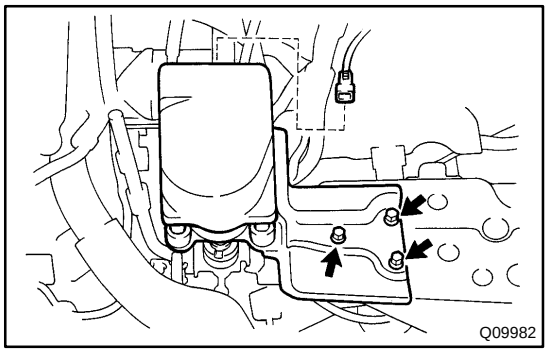
**8. INSTALL VALVE BODY (See page AX-6 )**




**9. CONNECT THROTTLE CABLE TO ENGINE**
**Torque: 15 N·m (150 kgf·cm, 11 ft·lbf)**

**10. ADJUST THROTTLE CABLE (See page DI-160 )**

**11. INSTALL PARK/NEUTRAL POSITION SWITCH (See page AX-4 )**




**12. INSTALL CRUISE CONTROL ACTUATOR**

(a) Install the cruise control actuator with the 3 bolts.
**Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)**

(b) Connect the connector.

**13. INSTALL BATTERY**

**14. TEST DRIVE VEHICLE**

# VALVE BODY ASSEMBLY

AX05D-03

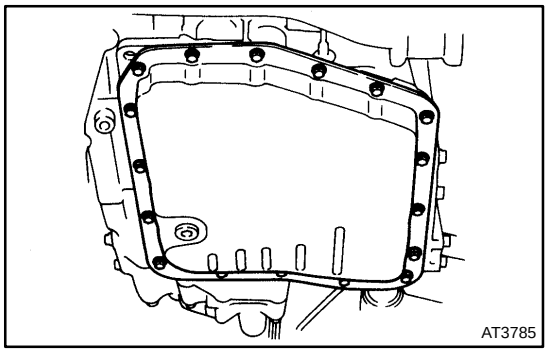
## ON-VEHICLE REPAIR

**1. CLEAN TRANSAXLE EXTERIOR**

To help prevent contamination, clean the exterior of the transaxle.

**2. DRAIN ATF**

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

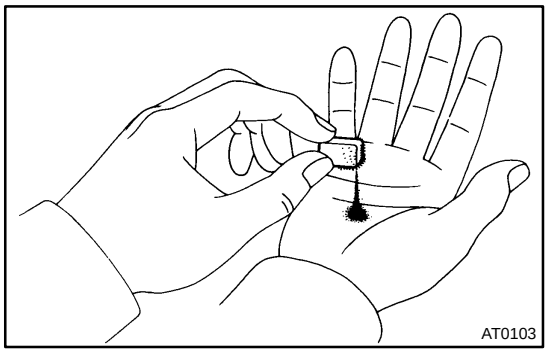



**3. REMOVE OIL PAN AND GASKET**

**NOTICE:**

**Some fluid will remain in the oil pan.**

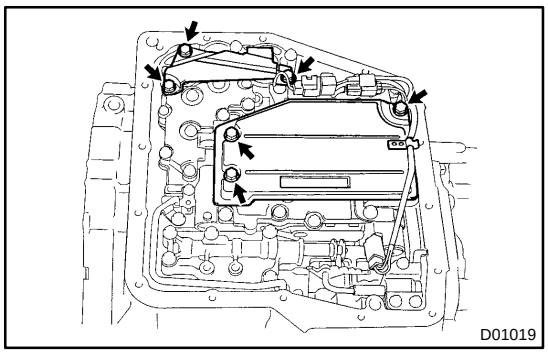
Remove oil pan bolts, and carefully remove the pan assembly. Discard the gasket.




**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



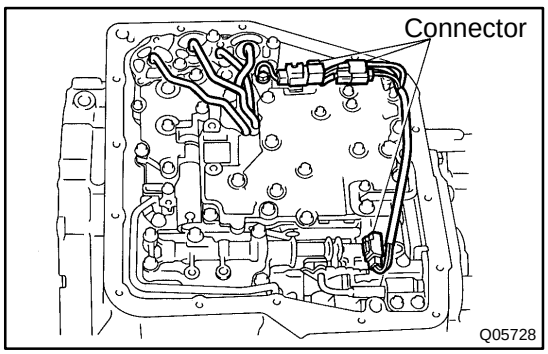

**5. REMOVE OIL STRAINER AND APPLY PIPE BRACKET**

(a) Remove the 3 bolts and oil strainer.

**NOTICE:**

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

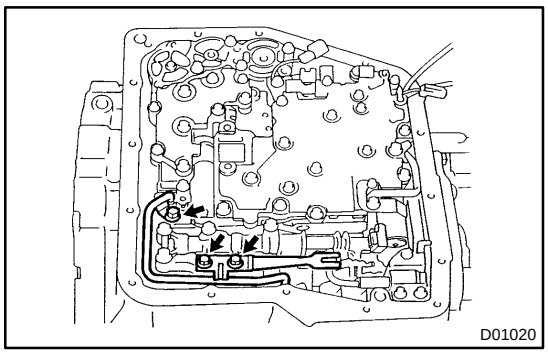
(b) Remove the 3 bolts and apply pipe bracket.




**6. REMOVE OIL PIPE**

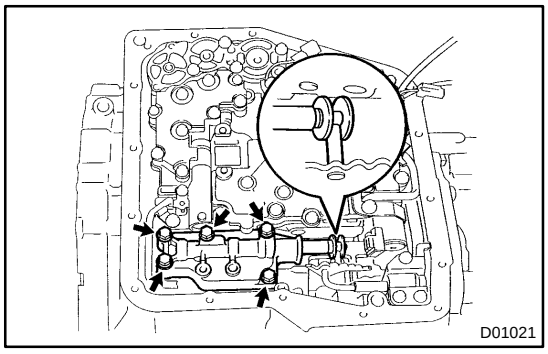
Pry up both pipe ends with a large screwdriver and remove the 5 pipes.

**7. DISCONNECT 3 SOLENOID CONNECTORS**



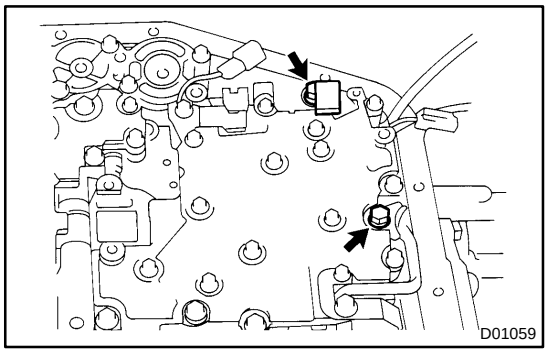

**8. REMOVE DETENT SPRING AND OIL PIPE**

(a) Remove the 2 bolts and detent spring.
(b) Remove the bolt.
(c) Pry up the pipe with a screwdriver and remove the pipe.



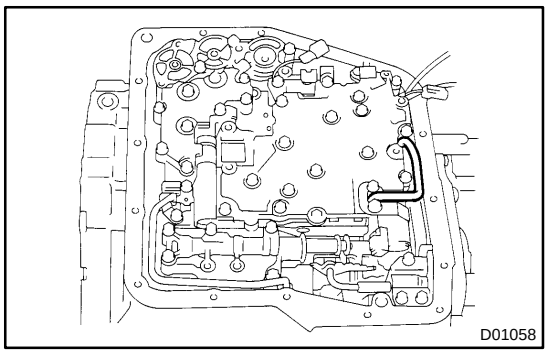

**9. REMOVE MANUAL VALVE BODY**

Remove the 5 bolts and manual valve body.



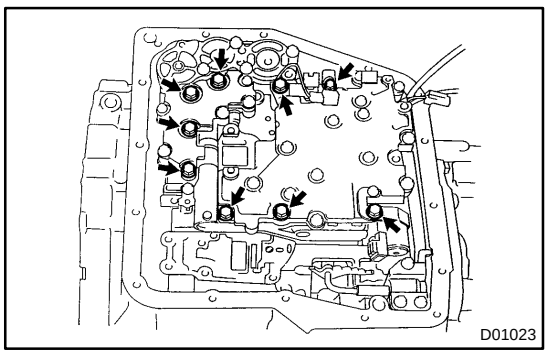

**10. REMOVE CONNECTOR CLAMP AND PIPE RETAINER**

Remove the 2 bolts, connector clamp and pipe retainer.



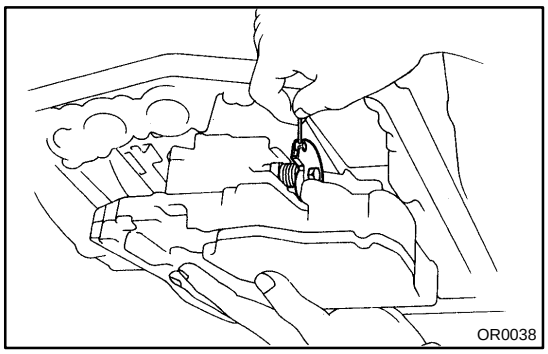

**11. REMOVE $B_3$ APPLY PIPE**

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



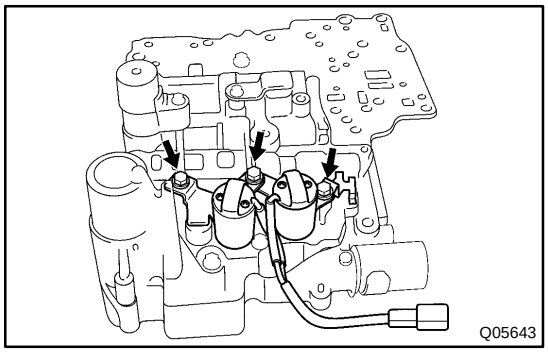

**12. REMOVE VALVE BODY**

(a) Remove the 9 bolts.




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

**13. REMOVE 2ND BRAKE APPLY GASKET**



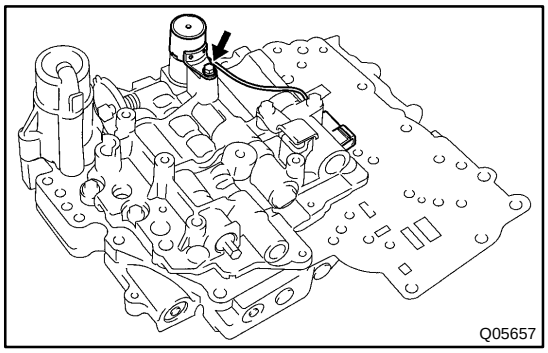

**14. REMOVE SHIFT SOLENOID VALVE**

(a) Remove the 3 bolts, shift solenoid valve No.1 and No.2 with the retainer.

**NOTICE:**

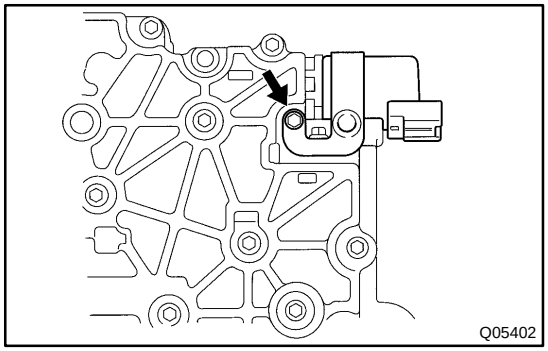
**When removing solenoid, do not use a screwdriver, etc. to pry up the solenoid.**

(b) Remove the O-rings from the shift solenoid valve No.1 and No.2.

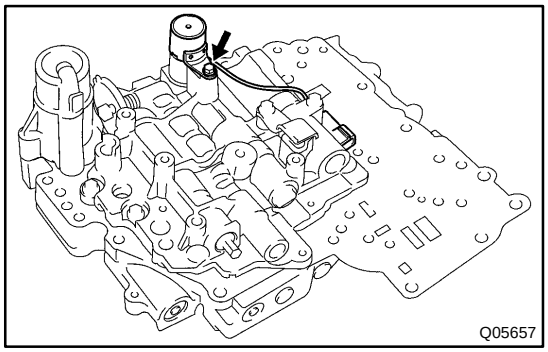



(c) Remove the bolt and shift solenoid valve SL.

(d) Remove the 2 O-rings from the shift solenoid valve SL.




(e) Remove the bolt and shift solenoid valve SLN.

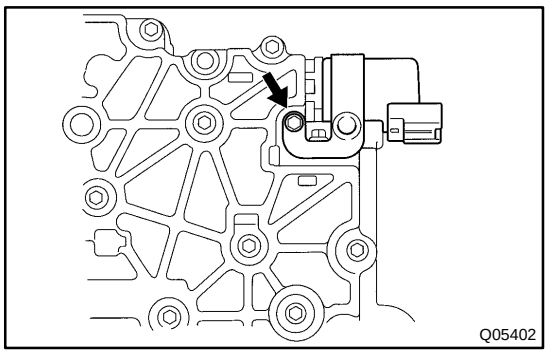



**15. INSTALL SOLENOID VALVE**

(a) Coat 2 new O-rings with ATF and install it to the shift solenoid valve SL.

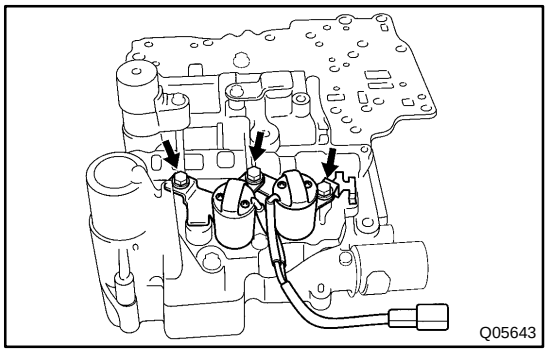
(b) Install the shift solenoid valve SL with the bolt.

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



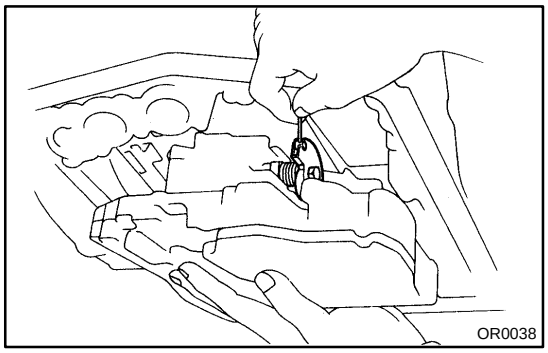

(c) Install the shift solenoid valve SLN with the bolt.
**Torque: 6.6 N·m (67 kgf·cm, 58 in.·lbf)**

(d) Coat 2 new O-rings with ATF and install them to the shift solenoid valve No.1 and No.2.




(e) Install the shift solenoid valve No.1 and No.2 with the 3 bolts.
**Torque: 6.6 N·m (67 kgf·cm, 58 in.·lbf)**

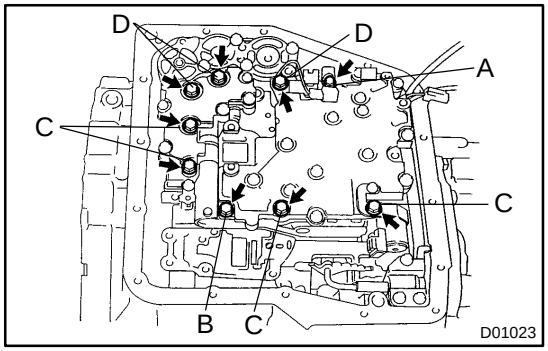
**16. PLACE NEW 2ND BRAKE APPLY GASKET**




**17. INSTALL VALVE BODY TO TRANSAXLE CASE**

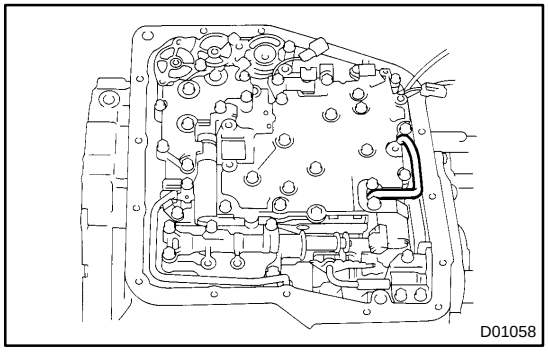
(a) While holding the cam down with your hand, slip the cable end into the slot.

**NOTICE:**
**Be careful not to entangle the solenoid wire.**




(b) Install the valve body with the 9 bolts.
**Torque: 11 N·m (110 kgf·cm, 8 ft·lbf)**

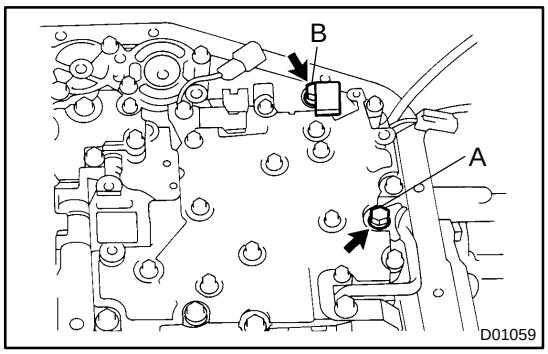
HINT:
Temporarily install the 9 bolts first, then torque them.
**Bolt length:**
**Bolt A: 30 mm (1.181 in.)**
**Bolt B: 43 mm (1.693 in.)**
**Bolt C: 48 mm (1.890 in.)**
**Bolt D: 52 mm (2.047 in.)**




**18. INSTALL $B_3$ APPLY PIPE**

Using a plastic hammer, install the pipe into the position indicated in the illustration.

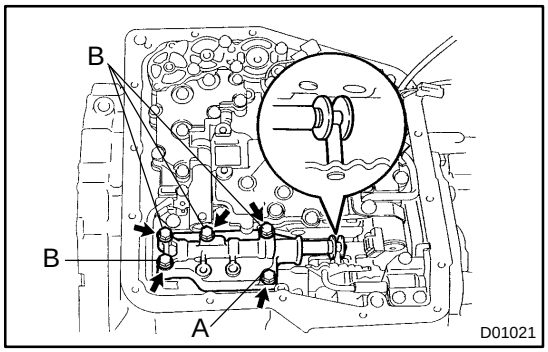
**NOTICE:**
**Be careful not to bend or damage the pipe.**




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

Install the connector clamp and pipe retainer with the 2 bolts.

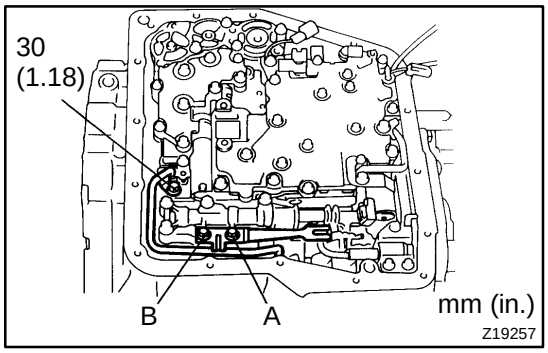
**Torque: 6.6 N·m (67 kgf·cm, 58 in.·lbf)**
**Bolt length:**
**Bolt A: 48 mm (1.890 in.)**
**Bolt B: 39 mm (1.535 in.)**




**20. INSTALL MANUAL VALVE BODY**

(a) Aligning the valve body with the pin on the manual shaft lever.
(b) Lower the manual valve body into place.
(c) Temporarily the 5 bolts first. Then, tighten them with a torque wrench.

**Torque: 11 N·m (110 kgf·cm, 8 ft·lbf)**
**Bolt length:**
**Bolt A: 22 mm (0.866 in.)**
**Bolt B: 37 mm (1.457 in.)**




**21. INSTALL DETENT SPRING AND OIL PIPE**

(a) Place the detent springs on the manual valve body and temporarily install the 2 bolts first. Then, tighten them with a torque wrench.

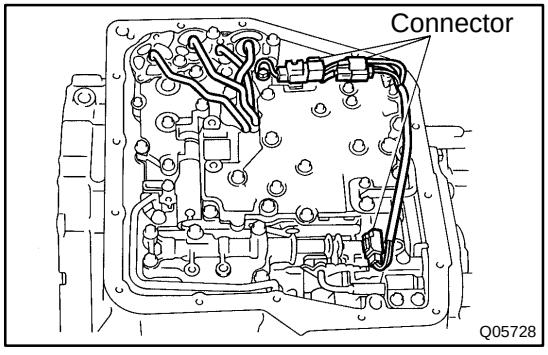
**Torque: 11 N·m (110 kgf·cm, 8 ft·lbf)**
**Bolt length:**
**Bolt A: 14 mm (0.551 in.)**
**Bolt B: 37 mm (1.457 in.)**

(b) Check that the manual valve lever is touching the center of the detent spring tip roller.
(c) Using a plastic hammer, install the pipe into the position.

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

(d) Install the bolt.

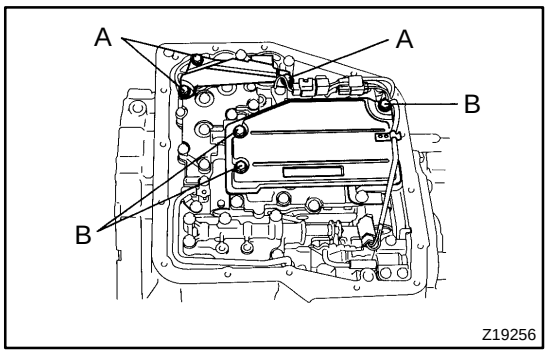
**Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)**




**22. CONNECT 3 SOLENOID CONNECTORS**
**23. INSTALL OIL PIPE**

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

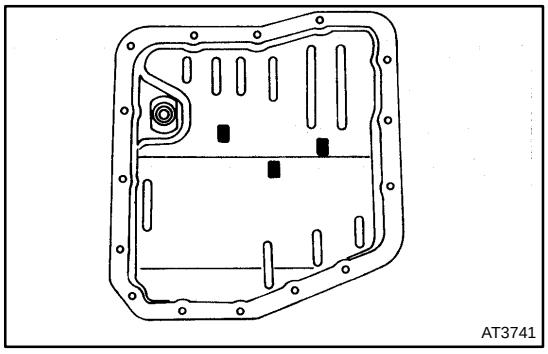
**NOTICE:**
**Be careful not to bend or damage the pipes.**




**24. INSTALL OIL STRAINER AND APPLY PIPE BRACKET**

Install the oil strainer and apply pipe bracket with the 6 bolts.

**Torque:**
**Bolt A: 10 N·m (100 kgf·cm, 7 ft·lbf)**
**Bolt B: 11 N·m (110 kgf·cm, 8 ft·lbf)**
**Bolt length:**
**Bolt A: 22 mm (0.866 in.)**
**Bolt B: 53 mm (2.087 in.)**

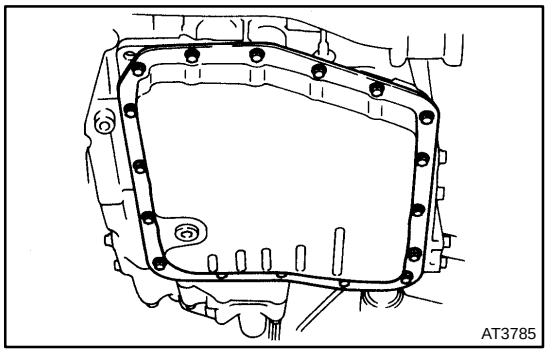



**25. INSTALL MAGNET IN PLACE**

Install the 3 magnets in the indentations of the oil pan, as shown in the illustration.

**NOTICE:**

**Make sure that the magnet does not interfere with the oil pipes.**




**26. INSTALL OIL PAN AND GASKET**

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

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

**27. INSTALL DRAIN PLUG**

Install a new gasket and drain plug.

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

**28. FILL ATF AND CHECK FLUID LEVEL**

**(See page DI-160 )**