

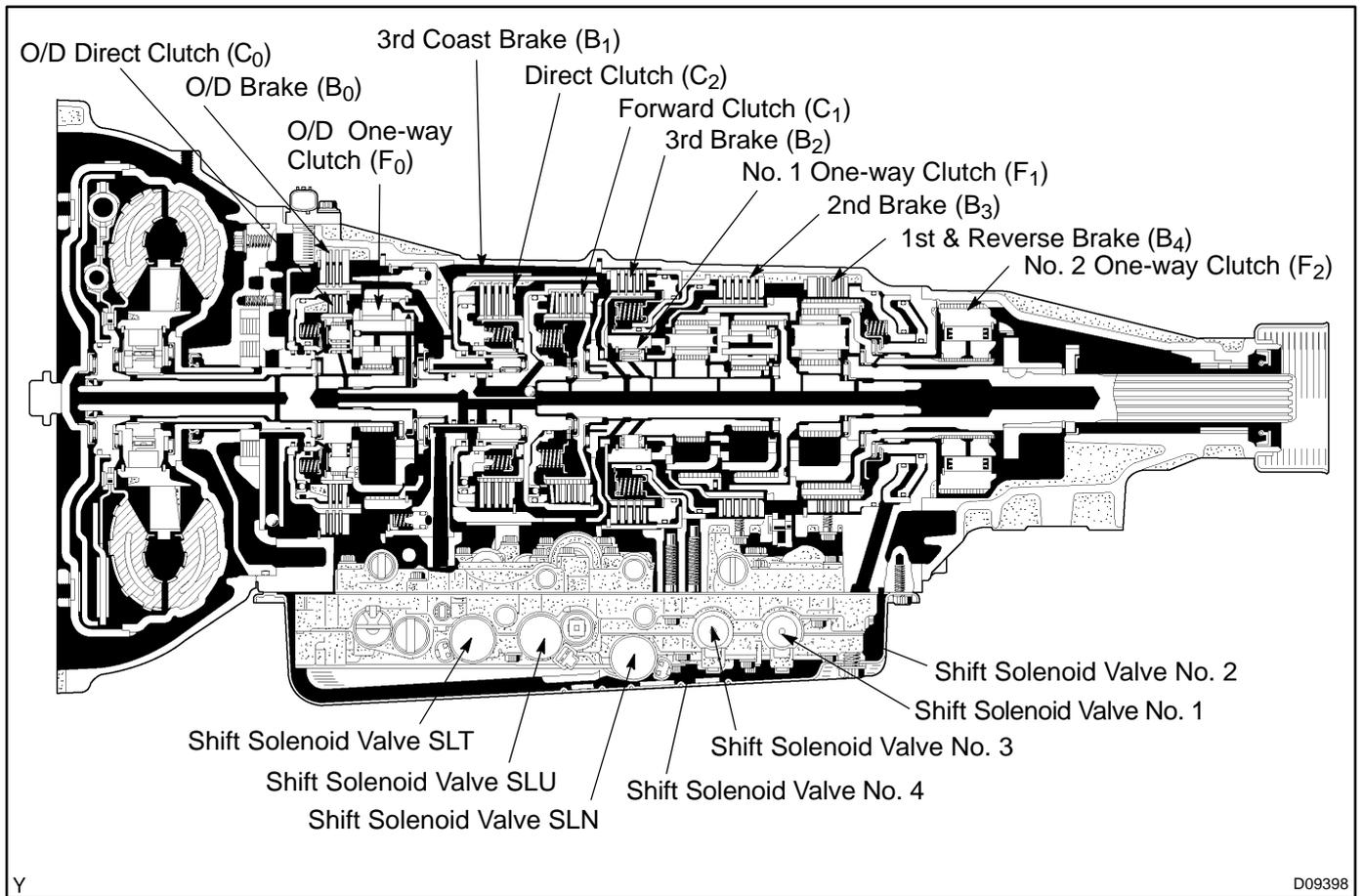
AUTOMATIC TRANSMISSION SYSTEM

PRECAUTION

AT0HC-01

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

OPERATION



Shift Lever Position	Gear Position	S1	S2	S3	S4	C ₀	C ₁	C ₂	B ₀	B ₁	B ₂	B ₃	B ₄	F ₀	F ₁	F ₂
P	Park	ON	OFF	ON	OFF	○										
R	Reverse	ON	OFF	OFF	OFF			○	○				○			
N	Neutral	ON	OFF	ON	OFF	○										
D M (5)*	1st	ON	OFF	OFF	OFF	○	○							○		○
	2nd	ON	ON	OFF	OFF	○	○					○		○		
	3rd	OFF	ON	OFF	OFF	○	○				○			○	○	
	4th	OFF	OFF	ON	OFF	○	○	○			○			○		
	5th	OFF	OFF	OFF	ON		○	○	○		○					
3	1st	ON	OFF	OFF	OFF	○	○							○		○
	2nd	ON	ON	OFF	OFF	○	○					○		○		
	3rd	OFF	ON	ON	OFF	○	○			○	○			○	○	
2	1st	ON	OFF	ON	OFF	○	○							○		○
	2nd	ON	ON	OFF	OFF	○	○					○		○		
L	1st	ON	OFF	OFF	OFF	○	○						○	○		○

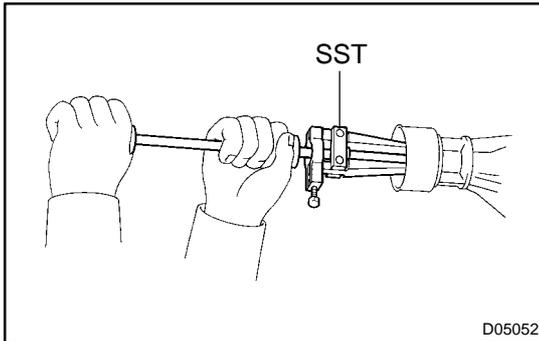
○ : Operating

* : When the shift lever position is "M" and the gear position indicator shows "5".

EXTENSION HOUSING OIL SEAL ON-VEHICLE REPAIR

ATOHE-02

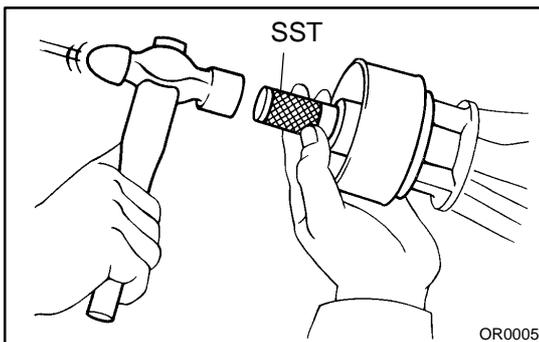
1. REMOVE NO. 1 AND NO. 2 ENGINE UNDER COVERS
2. REMOVE LH FRONT FLOOR CENTER COVER
3. REMOVE NO. 1 REAR FLOOR BOARD
4. REMOVE EXHAUST PIPE ASSEMBLY
(See page [EM-100](#))
5. REMOVE PROPELLER SHAFT (See page [PR-4](#))



6. REMOVE REAR OIL SEAL

Using SST, remove the oil seal.

SST 09308-00010



7. INSTALL NEW OIL SEAL

- (a) Using SST and a hammer, carefully drive a new oil seal in as far as it will go.

SST 09325-20010

NOTICE:

Clean the extension housing before removing the oil seal.

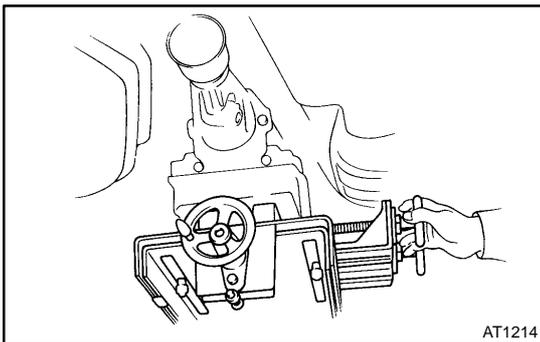
- (b) Coat the lip of a new oil seal with MP grease.

8. INSTALL PROPELLER SHAFT (See page [PR-10](#))
9. INSTALL EXHAUST PIPE ASSEMBLY
(See page [EM-100](#))
10. FILL ATF AND CHECK FLUID LEVEL
(See page [DI-338](#))
11. REMOVE NO. 1 REAR FLOOR BOARD
12. REMOVE LH FRONT FLOOR CENTER COVER
13. INSTALL NO. 1 AND NO. 2 ENGINE UNDER COVERS

SENSOR ROTOR ON-VEHICLE REPAIR

ATQHF-02

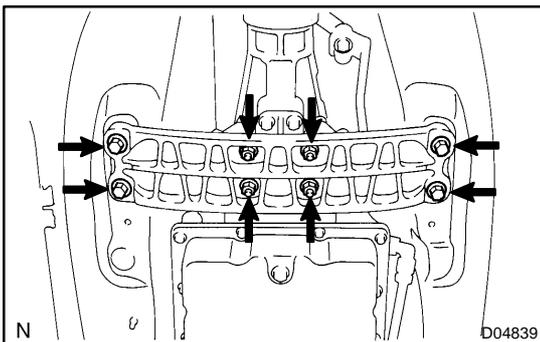
1. RAISE VEHICLE AND POSITION PAN TO CATCH ANY FLUID THAT MAY DRIP
2. REMOVE NO. 1 AND NO. 2 ENGINE UNDER COVERS
3. REMOVE LH FRONT FLOOR CENTER COVER
4. REMOVE NO. 1 REAR FLOOR BOARD
5. REMOVE EXHAUST PIPE (See page [EM-100](#))
6. REMOVE PROPELLER SHAFT (See page [PR-4](#))
7. REMOVE VEHICLE SPEED SENSOR (See page [AT-7](#))



AT1214

8. JACK UP TRANSMISSION SLIGHTLY

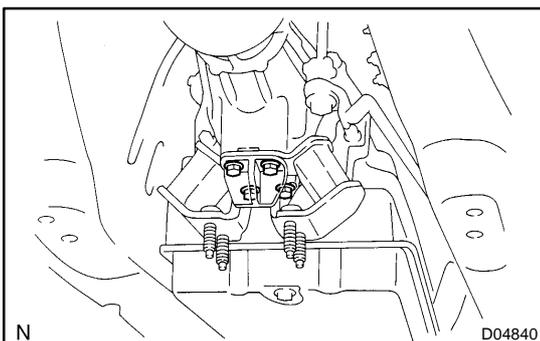
Securely support the transmission on a transmission jack.
Lift the transmission slightly from the rear support member.



D04839

9. REMOVE ENGINE REAR SUPPORT MEMBER

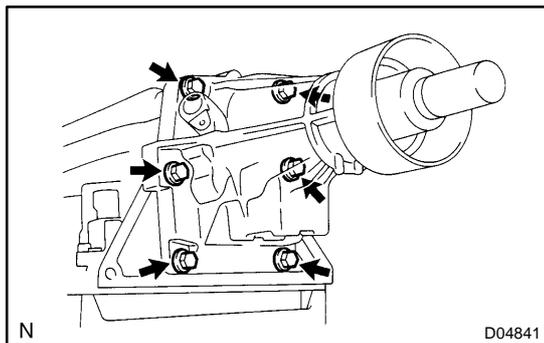
- (a) Remove the 4 nuts.
- (b) Remove the 4 bolts and rear support member.



D04840

10. REMOVE TRANSMISSION MOUNTING BRACKET

Remove the 4 bolts and the transmission mounting bracket from the transmission.

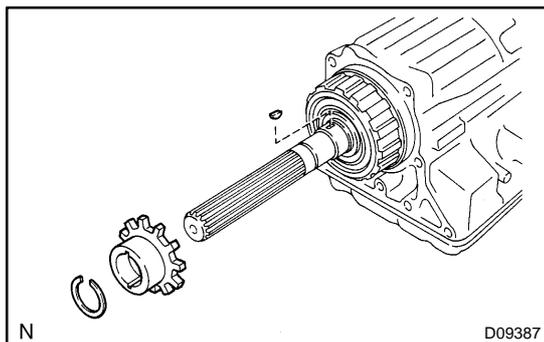
**11. REMOVE EXTENSION HOUSING**

- (a) Remove the 6 bolts.
- (b) Remove the extension housing.

HINT:

If necessary, tap the extension housing with a plastic hammer.

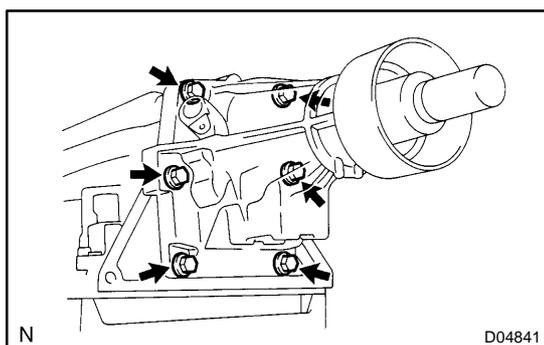
- (c) Remove the extension housing gasket.

**12. REMOVE SENSOR ROTOR AND KEY**

- (a) Using a snap ring expander, remove the snap ring.
- (b) Remove the sensor rotor and key.

13. INSTALL KEY AND SENSOR ROTOR

- (a) Install the key and sensor rotor.
- (b) Using a snap ring expander, install a new snap ring.

**14. INSTALL EXTENSION HOUSING**

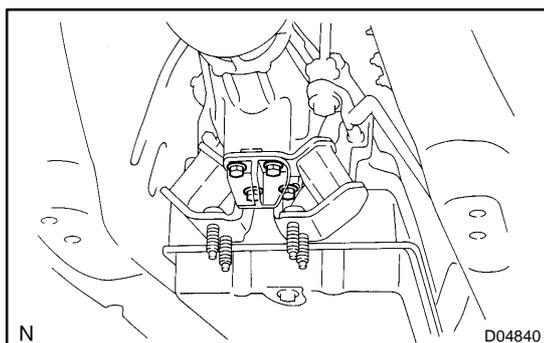
- (a) Install a new extension housing gasket.
- (b) Install the extension housing with the 6 bolts.
Torque: 34 N·m (345 kgf-cm, 25 ft-lbf)

HINT:

Coat the thread of the all bolts with sealant.

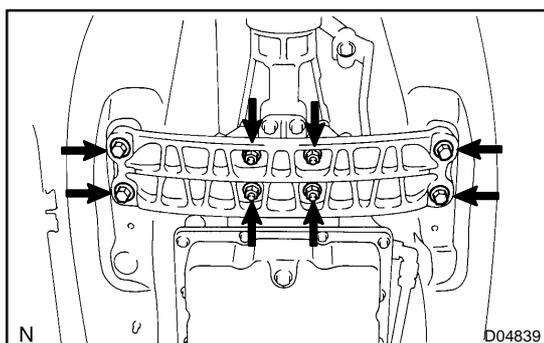
Sealant:

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

**15. INSTALL TRANSMISSION MOUNTING BRACKET**

Install the transmission mounting bracket with the 4 bolts to the transmission.

Torque: 12 N·m (120 kgf-cm, 9 ft-lbf)

**16. INSTALL ENGINE REAR SUPPORT MEMBER**

- (a) Install the rear support member with the 4 bolts.
Torque: 25 N·m (260 kgf-cm, 19 ft-lbf)

- (b) Install the 4 nuts.

Torque: 12 N·m (120 kgf-cm, 9 ft-lbf)

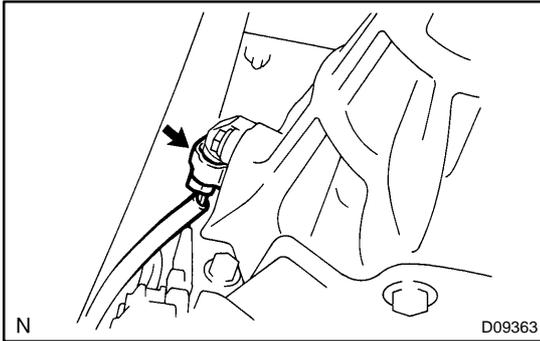
17. REMOVE JACK**18. INSTALL VEHICLE SPEED SENSOR (See page AT-7)****19. INSTALL PROPELLER SHAFT (See page PR-10)**

20. **INSTALL EXHAUST PIPE (See page [EM-100](#))**
21. **FILL ATF AND CHECK FLUID LEVEL
(See page [DI-338](#))**
22. **INSTALL NO. 1 REAR FLOOR BOARD**
23. **INSTALL LH FRONT FLOOR CENTER COVER**
24. **INSTALL NO. 1 AND NO. 2 ENGINE UNDER COVERS**

VEHICLE SPEED SENSOR ON-VEHICLE REPAIR

ATOXV-01

1. REMOVE NO. 1 AND NO. 2 ENGINE UNDER COVERS
2. REMOVE LH FRONT FLOOR CENTER COVER
3. REMOVE NO. 1 REAR FLOOR BOARD



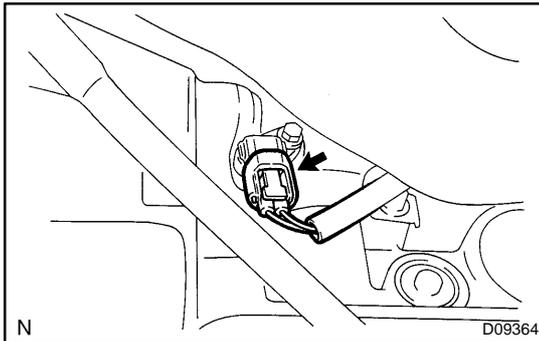
4. DISCONNECT VEHICLE SPEED SENSOR CONNECTOR
5. REMOVE VEHICLE SPEED SENSOR
 - (a) Remove the bolt and vehicle speed sensor.
 - (b) Remove the O-ring from the vehicle speed sensor.
6. INSTALL VEHICLE SPEED SENSOR
 - (a) Coat a new O-ring with ATF and install it to the vehicle speed sensor.
 - (b) Install the vehicle speed sensor to the extension housing and torque the bolt.
Torque: 5.4 N·m (55 kgf·cm, 48 in.-lbf)
7. INSTALL NO. 1 REAR FLOOR BOARD
8. INSTALL LH FRONT FLOOR CENTER COVER
9. INSTALL NO. 1 AND NO. 2 ENGINE UNDER COVERS

O/D DIRECT CLUTCH SPEED SENSOR

ON-VEHICLE REPAIR

ATOXW-01

1. REMOVE NO. 1 AND NO. 2 ENGINE UNDER COVERS
2. REMOVE LH FRONT FLOOR CENTER COVER
3. REMOVE NO. 1 REAR FLOOR BOARD



4. DISCONNECT O/D DIRECT CLUTCH SPEED SENSOR CONNECTOR
5. REMOVE O/D DIRECT CLUTCH SPEED SENSOR
 - (a) Remove the bolt and O/D direct clutch speed sensor.
 - (b) Remove the O-ring from the O/D direct clutch speed sensor.
6. INSTALL O/D DIRECT CLUTCH SPEED SENSOR
 - (a) Coat a new O-ring with ATF and install it to the O/D direct clutch speed sensor.
 - (b) Install the O/D direct clutch speed sensor to the transmission case and torque the bolt.
Torque: 5.4 N·m (55 kgf·cm, 48 in.-lbf)
7. INSTALL NO. 1 REAR FLOOR BOARD
8. INSTALL LH FRONT FLOOR CENTER COVER
9. INSTALL NO. 1 AND NO. 2 ENGINE UNDER COVERS

ATF TEMPERATURE SENSOR ON-VEHICLE REPAIR

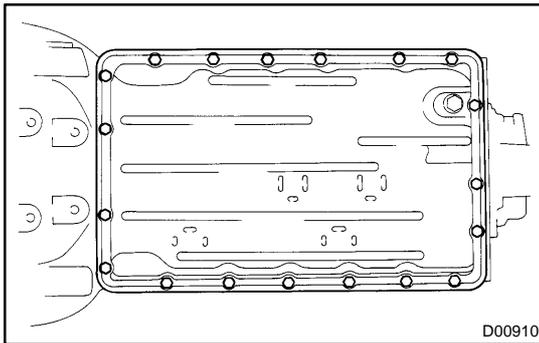
AT05Y-03

CAUTION:

When working with FIPG material, you must observe the following items.

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

1. REMOVE NO. 1 AND NO. 2 ENGINE UNDER COVERS
2. REMOVE LH FRONT FLOOR CENTER COVER
3. REMOVE NO. 1 REAR FLOOR BOARD
4. REMOVE DRAIN PLUG WITH GASKET AND DRAIN ATF

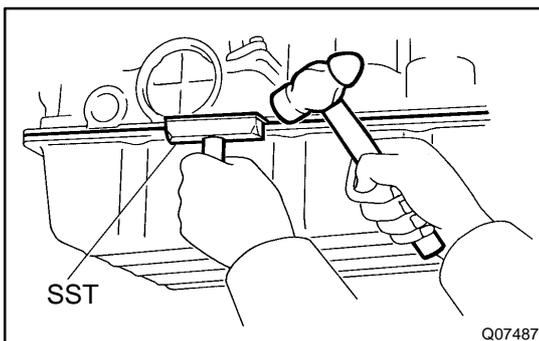


5. REMOVE OIL PAN

NOTICE:

Some fluid will remain in the oil pan.

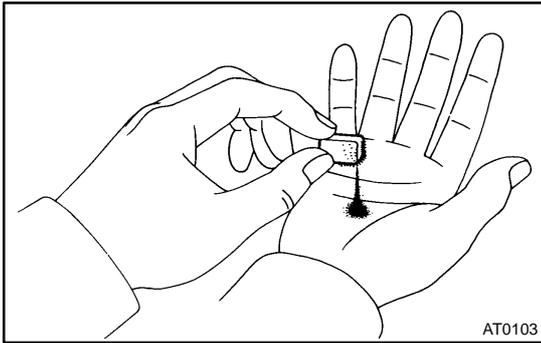
- (a) Remove the 19 bolts.



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

NOTICE:

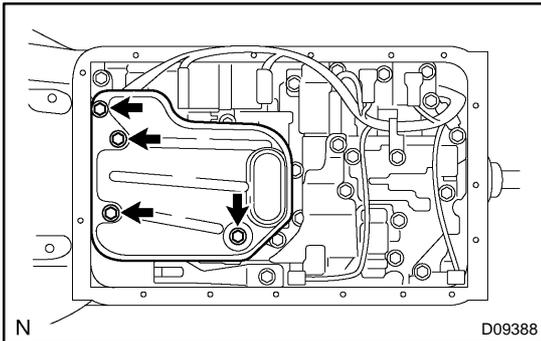
When removing the oil pan, be careful not to damage the oil pan flange.



6. EXAMINE PARTICLES IN PAN

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

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

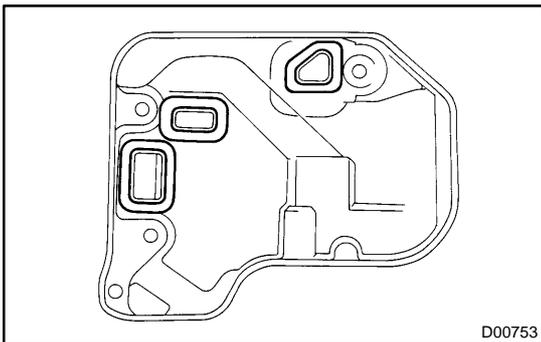


7. REMOVE OIL STRAINER

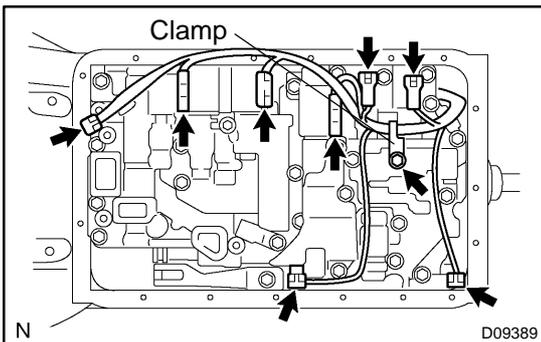
NOTICE:

Be careful as some fluid will come out of the oil strainer.

(a) Remove the 4 bolts and oil strainer.



(b) Remove the 3 gaskets from the oil strainer.

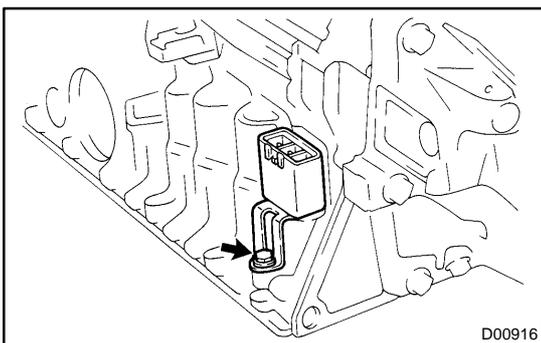


8. REMOVE SOLENOID WIRING WITH ATF TEMPERATURE SENSOR

(a) Disconnect the ATF temperature sensor and remove the O-ring.

(b) Remove the bolt and clamp.

(c) Disconnect the 7 connectors from the solenoid valves.



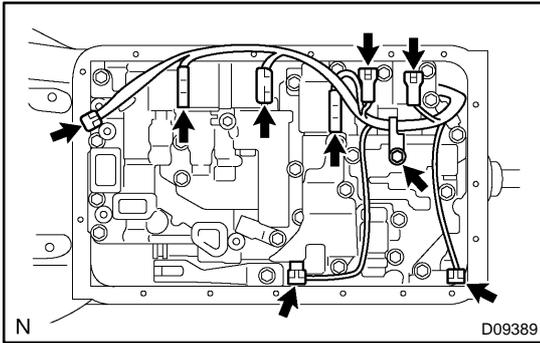
(d) Remove the bolt, solenoid connector and O-ring.

9. INSTALL SOLENOID WIRING WITH ATF TEMPERATURE SENSOR

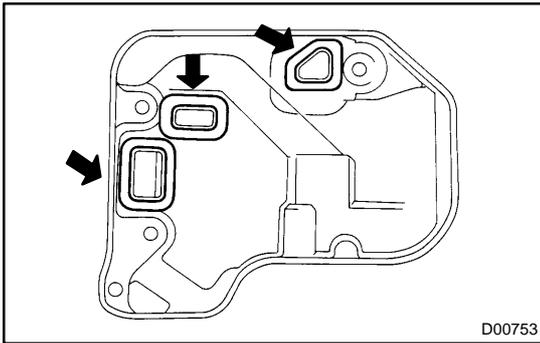
(a) Install the solenoid connector and a new O-ring with the bolt.

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

AUTOMATIC TRANSMISSION - ATF TEMPERATURE SENSOR

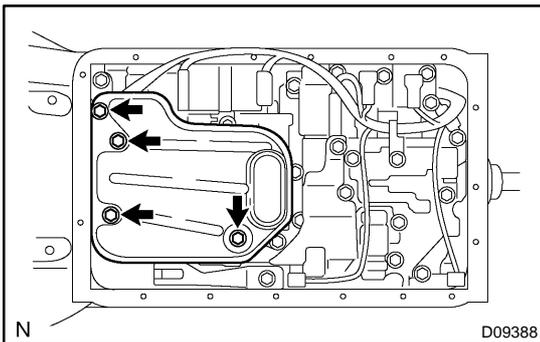


- (b) Connect the 7 connectors to the solenoid valves.
- (c) Install the clamp with the bolt.
Torque: 6.4 N·m (65 kgf·cm, 56 in.-lbf)
- (d) Install a new O-ring and connect the ATF temperature sensor.

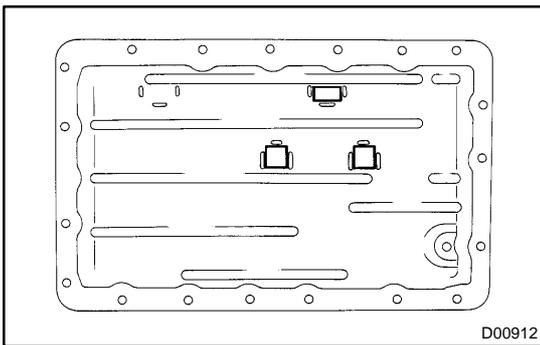


10. INSTALL OIL STRAINER

- (a) Install 3 new gaskets.

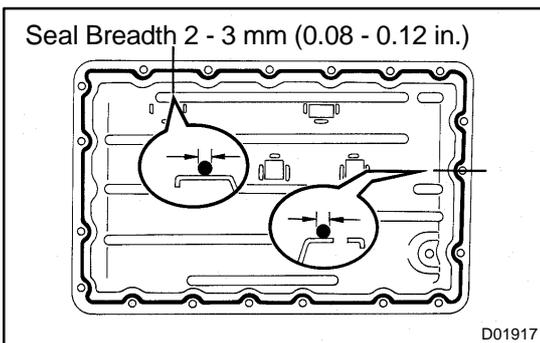


- (b) Install the oil strainer with the 4 bolts.
Torque: 10 N·m (100 kgf·cm, 7 ft-lbf)

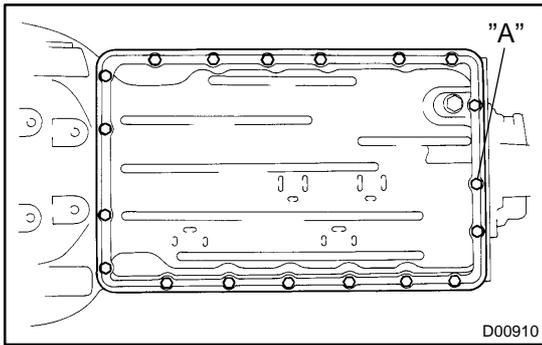


11. INSTALL OIL PAN

- (a) Install the 3 magnets in the indications of the oil pan.



- (b) Remove any packing material and be careful not to drop oil on the contacting surfaces of the transmission case and oil pan.
- (c) Apply FIPG to the oil pan.
FIPG:
Part No. 08826-00090, THREE BOND 1281 or equivalent



- (d) Install the oil pan with the 19 bolts.
Torque: 7.4 N·m (75 kgf·cm, 65 in.-lbf)

HINT:

Replace the only "A" bolt with a new one.

- 12. INSTALL DRAIN PLUG WITH NEW GASKET**
Torque: 20 N·m (205 kgf·cm, 15 ft·lbf)
- 13. FILL FLUID AND CHECK FLUID (See page [DI-338](#))**
- 14. INSTALL NO. 1 REAR FLOOR BOARD**
- 15. INSTALL LH FRONT FLOOR CENTER COVER**
- 16. INSTALL NO. 1 AND NO. 2 ENGINE UNDER COVERS**

VALVE BODY ASSEMBLY ON-VEHICLE REPAIR

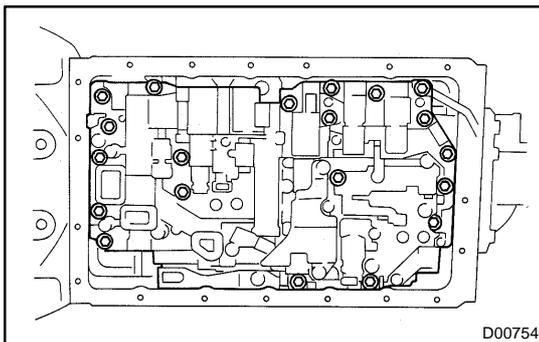
AT05Z-03

CAUTION:

When working with FIPG material, you must observe the following items.

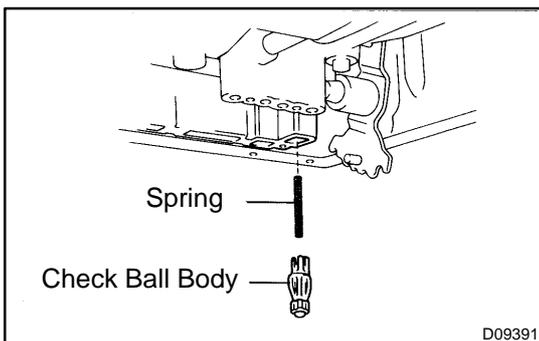
- Using a razor blade and gasket scraper, remove all the old FIPG material from the gasket surfaces.
- Thoroughly clean all components to remove all the loose material.
- Clean both sealing surfaces with a non-residue solvent.
- Apply FIPG in an approx. 1 mm (0.04 in.) wide bead along the sealing surface.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

1. REMOVE NO. 1 AND NO. 2 ENGINE UNDER COVERS
2. REMOVE LH FRONT FLOOR CENTER COVER
3. REMOVE NO. 1 REAR FLOOR BOARD
4. REMOVE DRAIN PLUG WITH GASKET AND DRAIN ATF
5. REMOVE OIL PAN (See page [AT-9](#))
6. EXAMINE PARTICLES IN PAN (See page [AT-9](#))
7. REMOVE OIL STRAINER (See page [AT-9](#))
8. REMOVE SOLENOID WIRING WITH ATF TEMPERATURE SENSOR (See page [AT-9](#))



9. REMOVE VALVE BODY

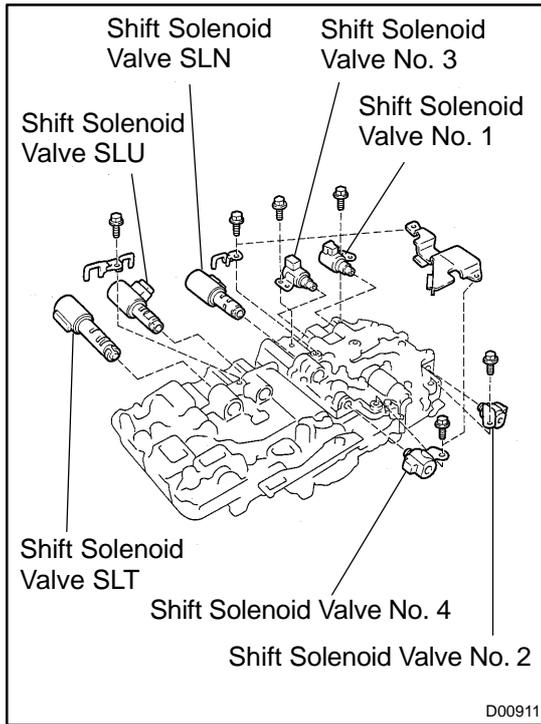
Remove the 20 bolts and valve body.



10. REMOVE CHECK BALL BODY AND SPRING

NOTICE:

Do not drop the check ball body and spring.



11. REMOVE SOLENOID VALVE

- (a) Remove the 3 bolts and shift solenoid valve No. 1, No. 2 and No. 3.
- (b) Remove the 2 bolts, oil guide plate, lock plate, shift solenoid valve SLN and No. 4.
- (c) Remove the 6 O-rings from each shift solenoid valve.
- (d) Remove the bolt, lock plate and shift solenoid valve SLU and SLT.

12. INSTALL SOLENOID VALVE

- (a) Install the shift solenoid valve SLU and SLT and the lock plate with the bolt.

Torque: 6.4 N·m (65 kgf·cm, 56 in.-lbf)

- (b) Coat 6 new O-rings with ATF.
- (c) Install the 6 O-rings to the each solenoid valve.
- (d) Install the shift solenoid valve SLN, No. 4, lock plate and oil guide plate with the 2 bolts.

Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)

- (e) Install the shift solenoid valve No. 1, No. 2 and No. 3 with the 3 bolts.

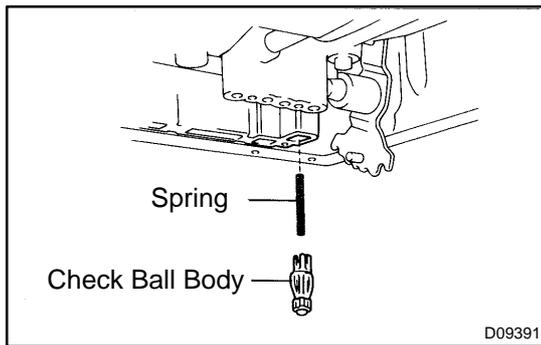
Torque:

Shift solenoid valve No. 1 and No. 3:

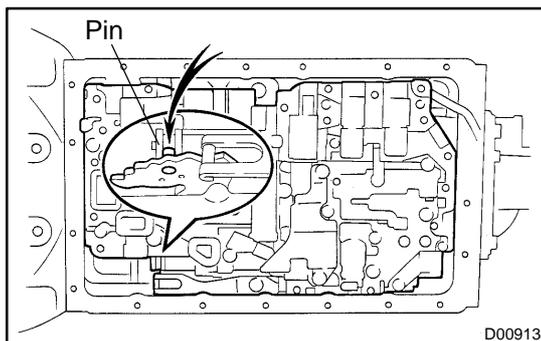
6.4 N·m (65 kgf·cm, 56 in.-lbf)

Shift solenoid valve No. 2:

10 N·m (100 kgf·cm, 7 ft·lbf)

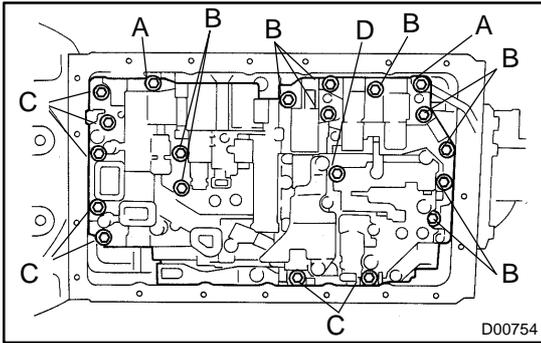


13. INSTALL CHECK BALL BODY AND SPRING



14. INSTALL VALVE BODY

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

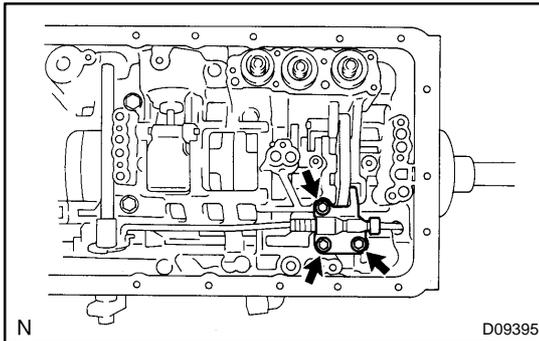


- (b) Install the 20 bolts.
Torque: 10 N·m (100 kgf-cm, 7 ft-lbf)
Bolt length:
Bolt A: 23 mm (0.91 in.)
Bolt B: 28 mm (1.10 in.)
Bolt C: 36 mm (1.42 in.)
Bolt D: 55 mm (2.17 in.)
- 15. **INSTALL SOLENOID WIRING WITH ATF TEMPERATURE SENSOR (See page AT-9)**
- 16. **INSTALL OIL STRAINER (See page AT-9)**
- 17. **INSTALL OIL PAN (See page AT-9)**
- 18. **INSTALL DRAIN PLUG WITH NEW GASKET**
Torque: 20 N·m (205 kgf-cm, 15 ft-lbf)
- 19. **FILL FLUID AND CHECK FLUID (See page DI-338)**
- 20. **INSTALL NO. 1 REAR FLOOR BOARD**
- 21. **INSTALL LH FRONT FLOOR CENTER COVER**
- 22. **INSTALL NO. 1 AND NO. 2 ENGINE UNDER COVERS**

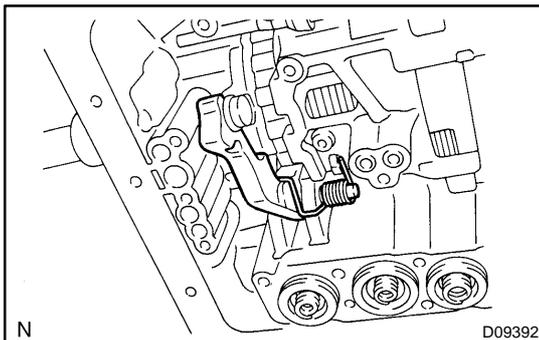
PARKING LOCK PAWL ON-VEHICLE REPAIR

ATOHL-02

1. REMOVE NO. 1 AND NO. 2 ENGINE UNDER COVERS
2. REMOVE LH FRONT FLOOR CENTER COVER
3. REMOVE NO. 1 REAR FLOOR BOARD
4. REMOVE VALVE BODY (See page [AT-13](#))



5. REMOVE PARKING LOCK PAWL BRACKET
Remove the 3 bolts and parking lock pawl bracket.



6. REMOVE SPRING FROM PARKING LOCK PAWL SHAFT
7. REMOVE PARKING LOCK PAWL SHAFT AND PARKING LOCK PAWL
8. INSTALL PARKING LOCK PAWL AND PARKING LOCK PAWL SHAFT
9. INSTALL SPRING TO PARKING LOCK PAWL SHAFT
10. INSTALL PARKING LOCK PAWL BRACKET

Install the parking lock pawl bracket with the 3 bolts.

Torque: 7.4 N·m (75 kgf·cm, 65 in.-lbf)

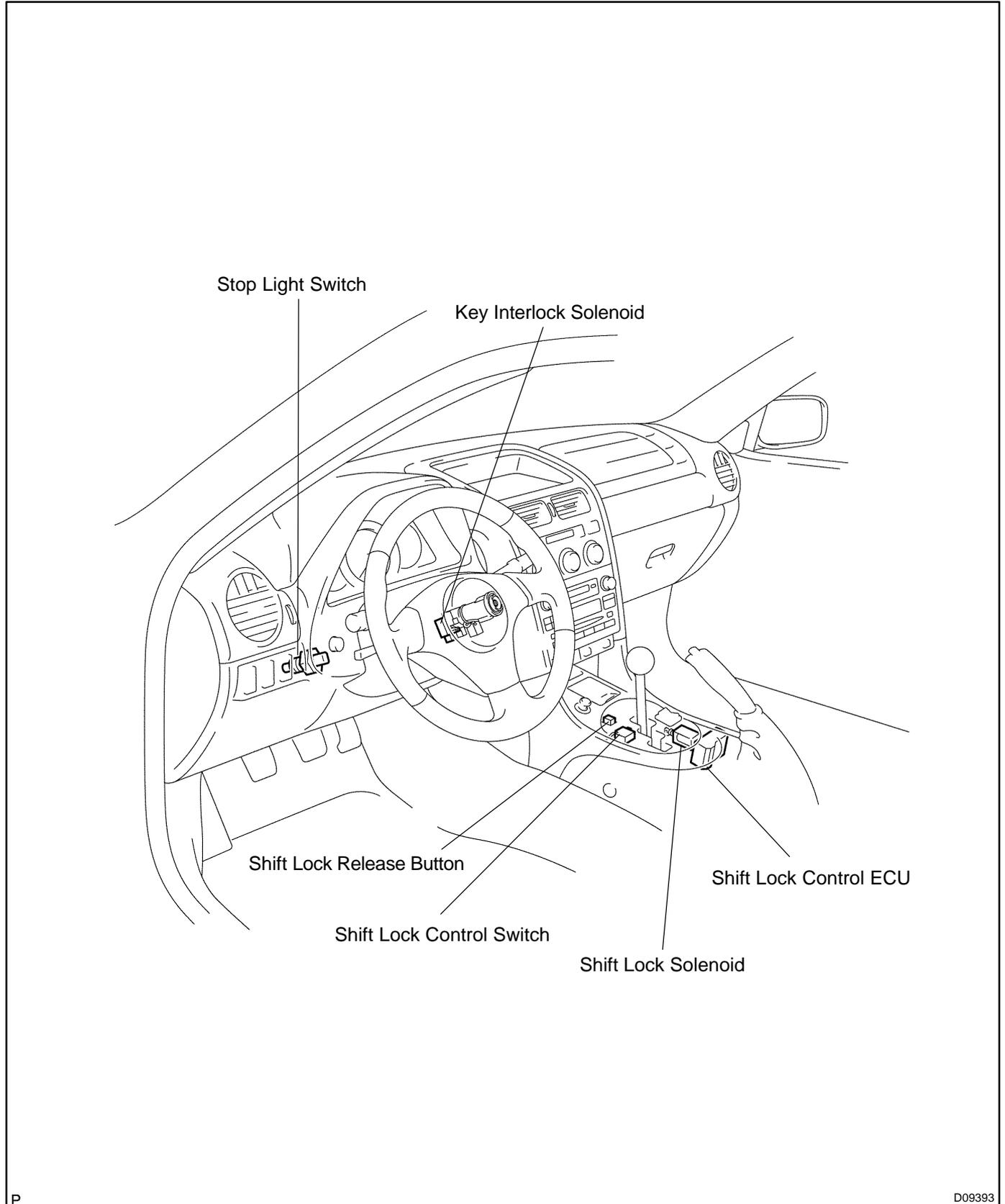
HINT:

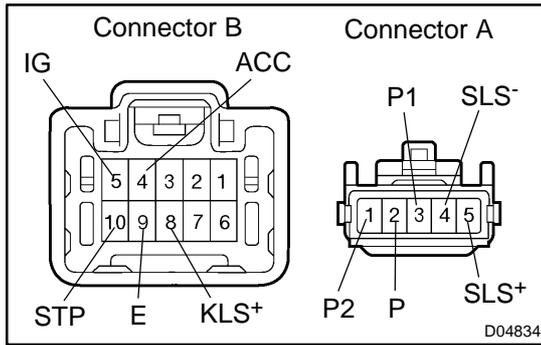
- Push the lock rod fully forward.
- Check that the parking lock pawl operates smoothly.

11. INSTALL VALVE BODY (See page [AT-13](#))
12. INSTALL NO. 1 REAR FLOOR BOARD
13. INSTALL LH FRONT FLOOR CENTER COVER
14. INSTALL NO. 1 AND NO. 2 ENGINE UNDER COVERS

SHIFT LOCK SYSTEM LOCATION

AT0HM-02





INSPECTION

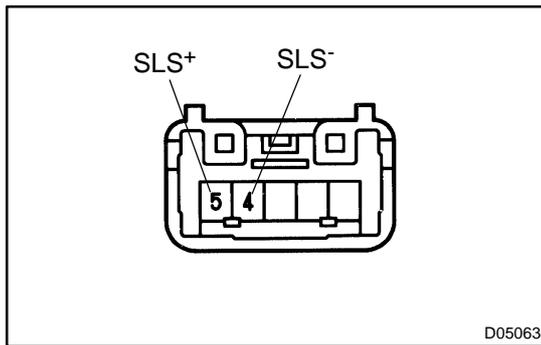
1. INSPECT SHIFT LOCK CONTROL ECU

Using a voltmeter, measure the voltage at each terminal.

HINT:

Do not disconnect the shift lock control ECU connector.

Terminal	Measuring condition	Voltage (V)
B4 - B9 (ACC - E)	Ignition switch ACC	10 - 14
B5 - B9 (IG - E)	Ignition switch ON	10 - 14
B8 - B9 (KLS+ - E)	4. Ignition switch ACC and P position	0
	5. Ignition switch ACC and except P position	7.5 - 11.5
	6. Ignition switch ACC and except P position (After approx. 1 second)	6 - 9
B10 - B9 (STP - E)	Depressing brake pedal	10 - 14
A5 - A4 (SLS+ - SLS-)	1. Ignition switch ON and P position	0
	2. Depress brake pedal	8 - 15
	3. Depress brake pedal (After approx. 1 second)	6 - 11
	4. Shift between P and N position under conditions above	6 - 11
	5. Shift D position under conditions above	0
A3 - A2 (P1 - P)	1. Ignition switch ON, P position and depress brake pedal	0
	2. Shift except P position under condition above	12
A1 - A2 (P2 - P)	1. Ignition switch ON, P position and depress brake pedal	12
	2. Shift except P position under conditions above	0



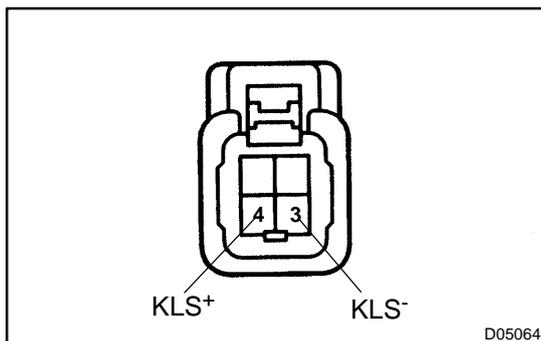
2. INSPECT SHIFT LOCK SOLENOID

- (a) Disconnect the solenoid connector.
- (b) Using an ohmmeter, measure resistance between terminals.

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

- (c) Check the solenoid operating sound when connecting the battery positive terminal to 5 (SLS+) and battery negative terminal to 4 (SLS-).

If the solenoid does not operate, replace the solenoid.



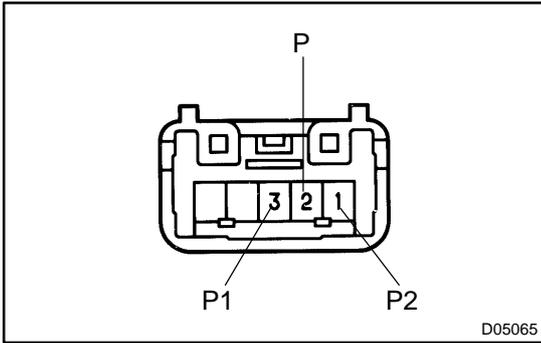
3. INSPECT KEY INTERLOCK SOLENOID

- (a) Disconnect the solenoid connector.
- (b) Using an ohmmeter, measure resistance between terminals.

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

- (c) Check the solenoid operating sound when connecting the battery positive terminal to 4 (KLS+) and battery negative terminal to 3 (KLS-).

If the solenoid does not operate, replace the solenoid.



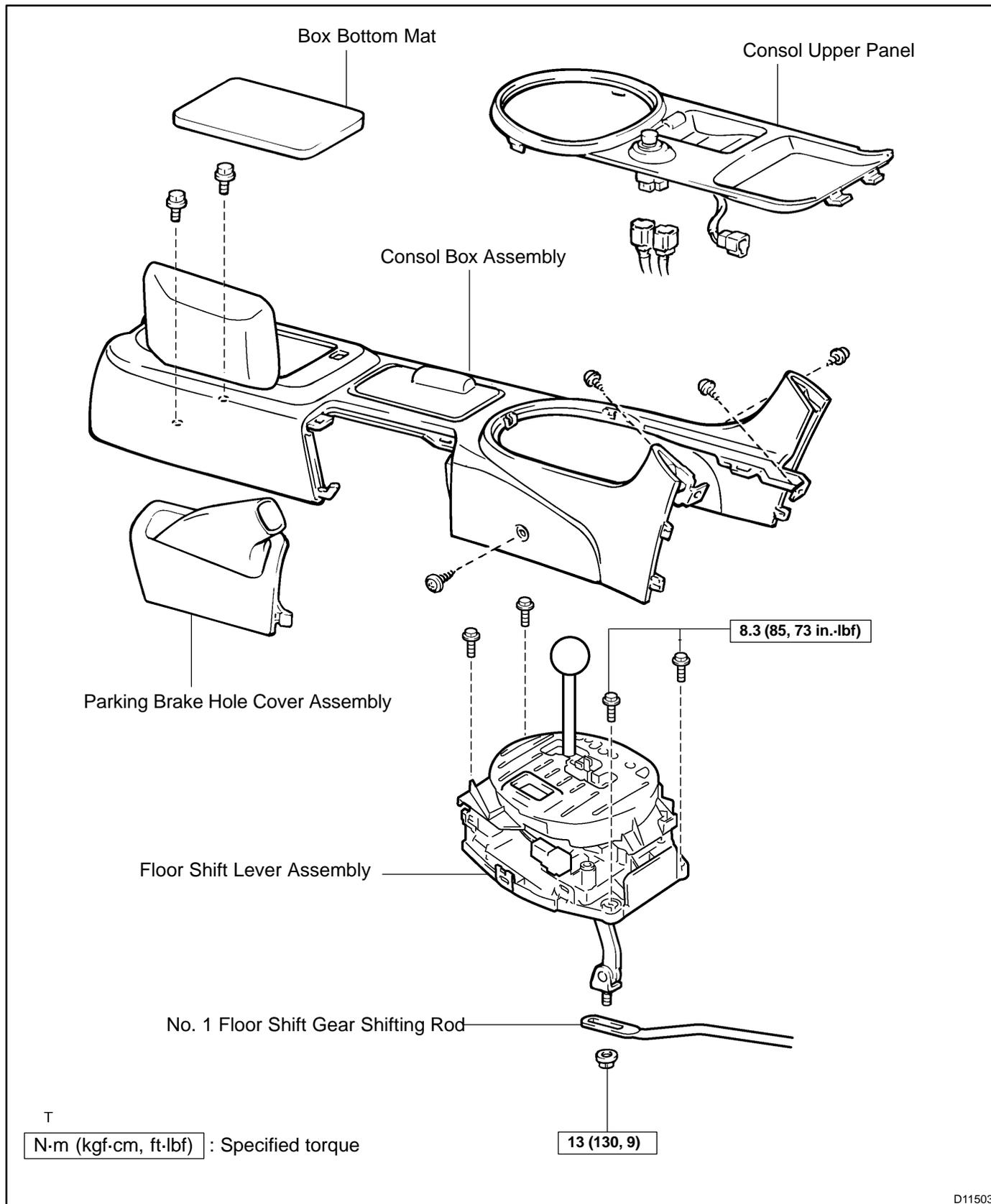
4. INSPECT SHIFT LOCK CONTROL SWITCH

- (a) Disconnect the shift lock control switch.
- (b) Inspect that continuity exists between each terminal.

Shift position	Terminal condition to terminal number	Specified value
P position (Release button is not pushed)	P - P1	Continuity
P position (Release button is pushed)	P - P1 P - P2	Continuity
Except P position	P - P2	Continuity

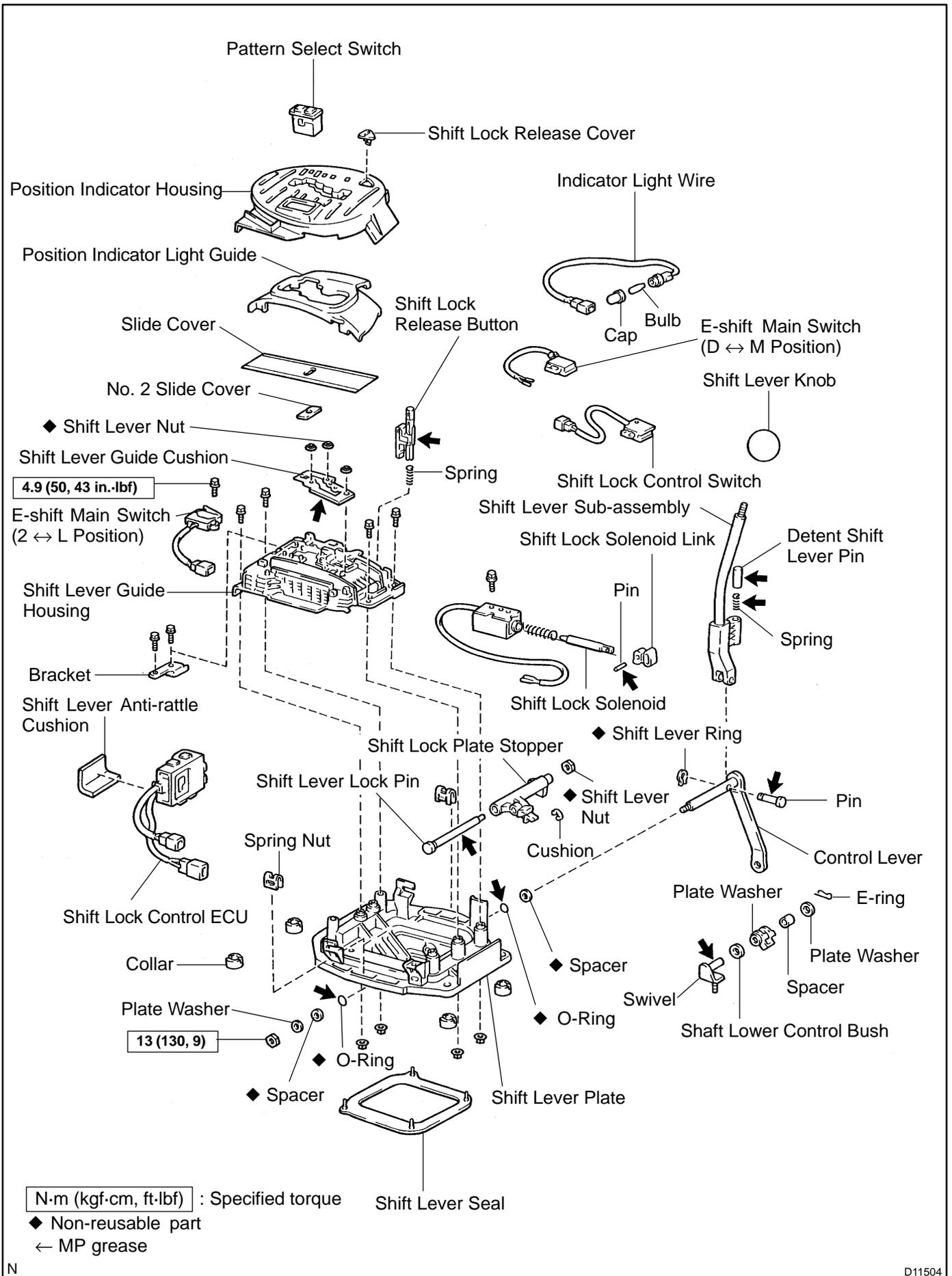
FLOOR SHIFT ASSEMBLY COMPONENTS

AT0HO-02



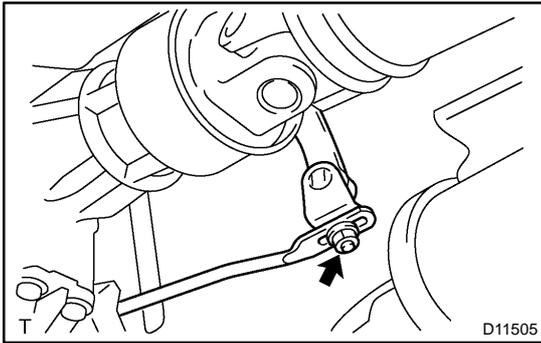
D11503

AUTOMATIC TRANSMISSION - FLOOR SHIFT ASSEMBLY



N

D11504



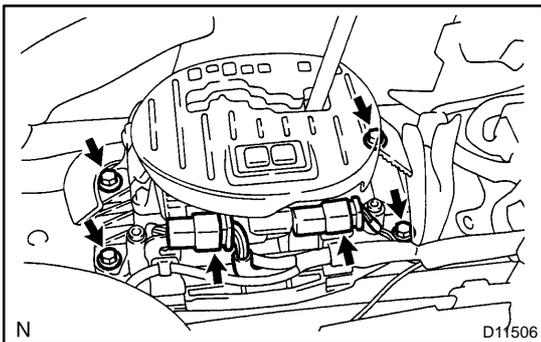
REMOVAL

1. SEPARATE NO. 1 FLOOR SHIFT GEAR SHIFTING ROD

- (a) Shift into the N position.
- (b) Remove the nut and separate the No. 1 floor shift gear shifting rod from the connecting rod swivel.

2. REMOVE CONSOLE BOX ASSEMBLY (See page [BO-139](#))

- (a) Remove the console upper panel.
- (b) Remove the box bottom mat.
- (c) Remove the parking brake hole cover assembly.
- (d) Remove the console box assembly.

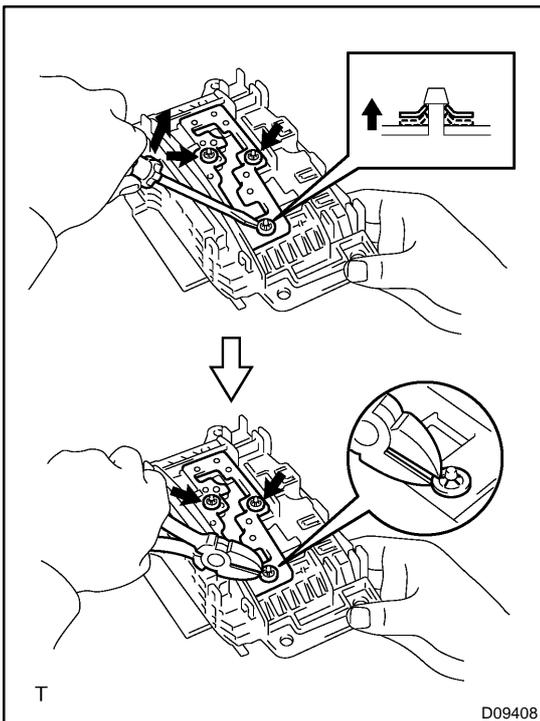
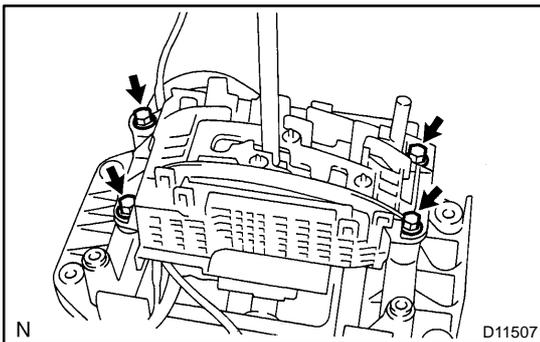


3. REMOVE FLOOR SHIFT LEVER ASSEMBLY

- (a) Remove the 4 bolts.
- (b) Disconnect the 2 connectors.
- (c) Remove the floor shift lever assembly.

DISASSEMBLY

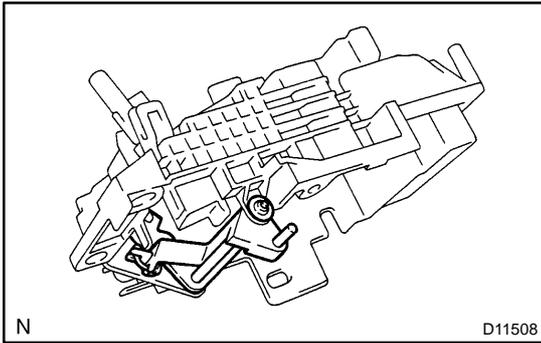
1. **REMOVE SHIFT LEVER KNOB**
2. **REMOVE POSITION INDICATOR HOUSING**
 - (a) Using a small screwdriver, remove the shift lock release cover from the position indicator housing.
 - (b) Disconnect the pattern select switch connector.
 - (c) Remove the position indicator housing assembly.
 - (d) Remove the pattern select switch from the position indicator housing assembly.
3. **REMOVE POSITION INDICATOR LIGHT GUIDE**
 - (a) Disconnect the indicator light wire from the position indicator light guide.
 - (b) Remove the position indicator light guide.
4. **REMOVE SLIDE COVER AND NO. 2 SLIDE COVER**
5. **REMOVE SHIFT LEVER GUIDE HOUSING**
 - (a) Disconnect the shift lock control ECU connector and indicator light wire from the shift lever plate.
 - (b) Remove the 2 E-shift main switches and shift lock control switch from the shift lever guide housing.
 - (c) Remove the 4 bolts, nuts and shift lever guide housing assembly.
 - (d) Remove the bulb and cap and from the indicator light wire.



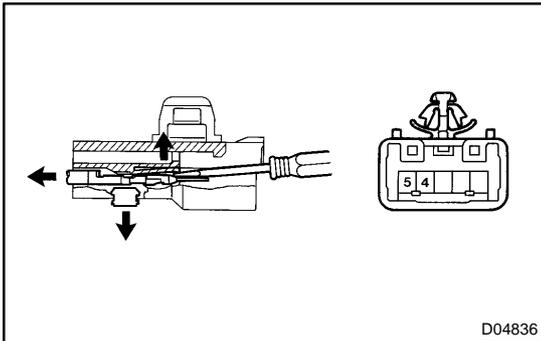
6. **DISASSEMBLE SHIFT LEVER GUIDE HOUSING**
 - (a) Using a screwdriver, pry and push up 3 shift lever nuts.
 - (b) Using nippers, cut the 3 shift lever nuts off then.

HINT:
Remove the shift lever lock pin of shift lever nut in the same way.

 - (c) Remove the shift lever guide cushion.
 - (d) Remove the 3 screws, shift lock control ECU and shift lock solenoid.
 - (e) Remove the shift lock control ECU bracket and shift lever anti-rattle cushion from the shift lock control ECU.
 - (f) Disconnect the E-shift main switch connector from the shift lever guide housing.
 - (g) Remove the shift lock release button and spring.



- (h) Remove the shift lever lock pin, shift lock plate stopper and cushion.



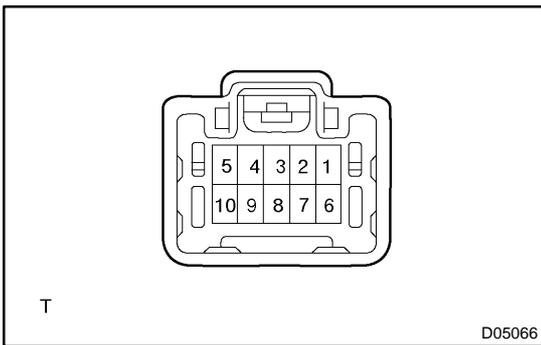
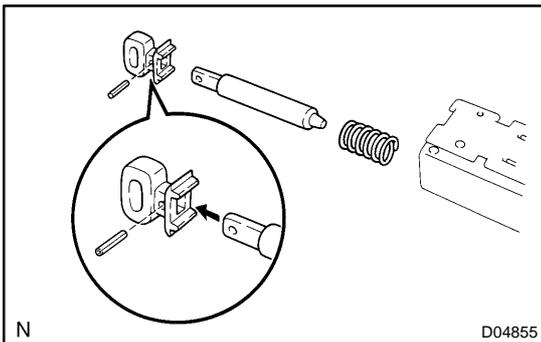
7. DISCONNECT SHIFT LOCK CONTROL ECU, SHIFT LOCK SOLENOID, SHIFT LOCK CONTROL SWITCH AND E-SHIFT MAIN SWITCH

- (a) Disengage the secondary locking device of shift lock solenoid.
- (b) Release the locking lug of the terminals 4 and 5, and pull the terminals out from the rear.

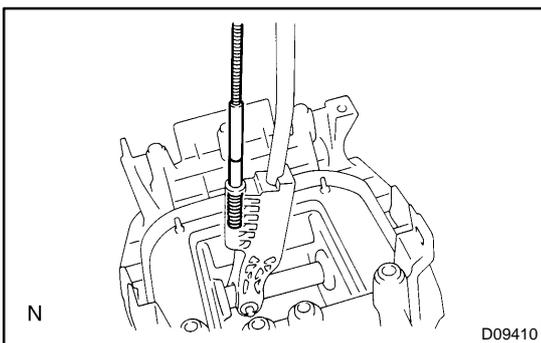
HINT:

Remove the E-shift main switch in the same way.

- (c) Remove the shift lock solenoid.
- (d) Using 2 mm dia. steel wire, remove the pin the remove the shift lock solenoid link from the shift lock solenoid plunger.

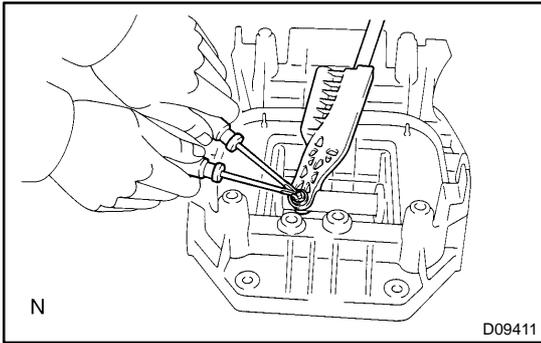


- (e) Disengage the secondary locking device of shift lock solenoid.
- (f) Release the locking lag of the terminals 1 and 6, and pull the terminals out from the rear.
- (g) Remove the E-shift main switch.

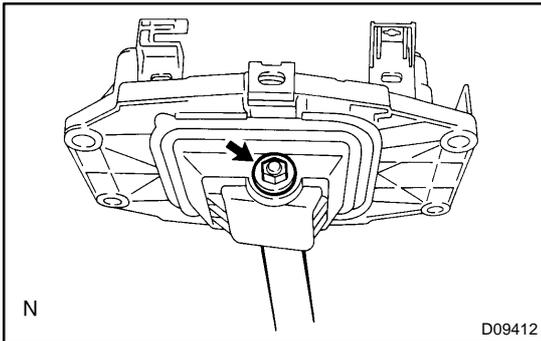


8. REMOVE SHIFT LEVER SUB-ASSEMBLY

- (a) Using a magnetic finger, remove the detent shift lever pin and spring.

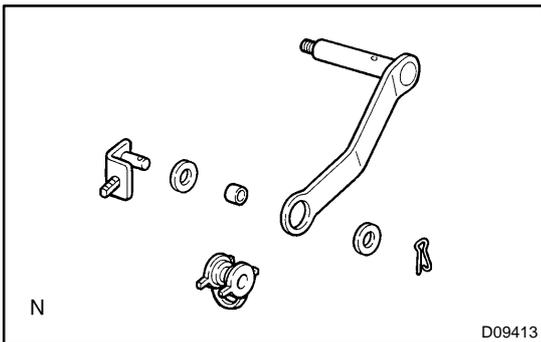


- (b) Using 2 screwdrivers, remove the shift lever ring.
- (c) Remove the pin and shift lever sub-assembly.



9. DISASSEMBLE SHIFT LEVER PLATE

- (a) Remove the nut, control lever, plate washer, 2 spacers and 2 O-ring.

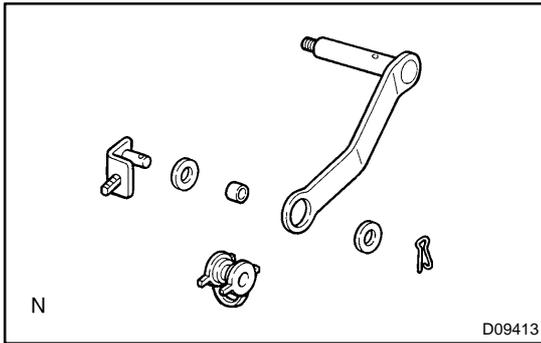


- (b) Using pliers, remove the E-ring.
- (c) Remove the swivel, 2 plate washer, shaft lower control bush and spacer.
- (d) Remove the shift lever seal.
- (e) Remove the 4 collars.
- (f) Remove the 2 spring nuts.

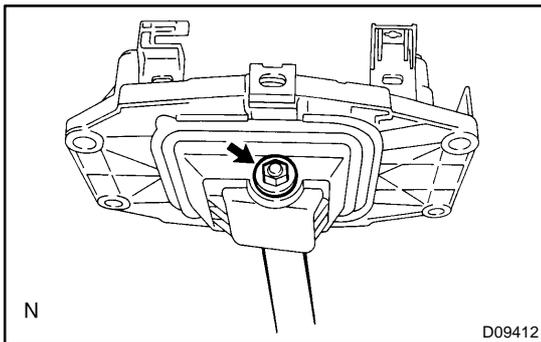
REASSEMBLY

1. REASSEMBLE SHIFT LEVER PLATE

- (a) Install the 2 spring nuts.
- (b) Install the 4 collars.
- (c) Install the shift lever seal.



- (d) Install the shaft lower control bush, spacer, 2 plate washers and swivel.
- (e) Using pliers, install the E-ring.

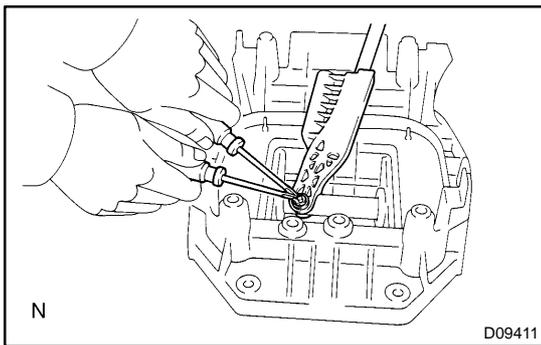


- (f) Apply MP grease to the new 2 O-rings.
- (g) Install the 2 O-rings, 2 new spacers, plate washer, control lever and nut.

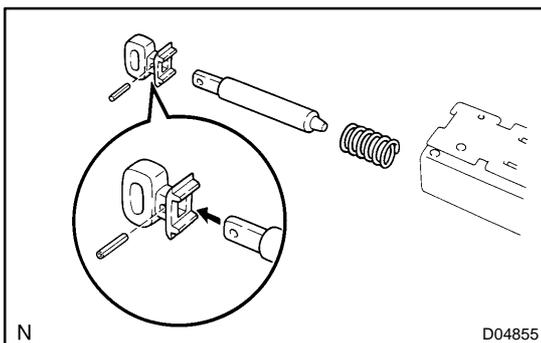
Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)

2. INSTALL SHIFT LEVER SUB-ASSEMBLY

- (a) Apply MP grease to the pin.
- (b) Install the shift lever sub-assembly and pin.



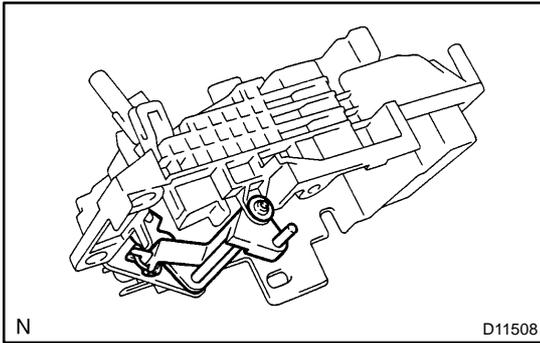
- (c) Using 2 screwdriver, install the shift lever ring.
- (d) Apply MP grease to the detent shift lever pin and spring.
- (e) Install the detent shift lever pin and spring.



3. REASSEMBLE SHIFT LOCK SOLENOID

- (a) Apply MP grease to the shift lock solenoid link.
- (b) Install the shift lock solenoid link and pin to the shift lock solenoid plunger.
- (c) Install the shift lock solenoid link with shift lock solenoid plunger and spring to the shift lock solenoid.

4. CONNECT SHIFT LOCK CONTROL ECU, SHIFT LOCK SOLENOID, SHIFT LOCK CONTROL SWITCH AND E-SHIFT MAIN SWITCH



5. REASSEMBLE SHIFT LEVER GUIDE HOUSING

- (a) Apply MP grease to the shift lever lock pin.
- (b) Install the shift lever lock pin, shift lock plate stopper and cushion to the shift lever guide housing.
- (c) Install the new shift lever nut to the shift lever lock pin by knocking them lightly via the 10 mm seated nut.

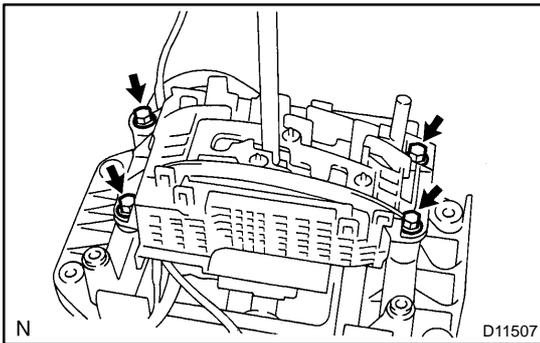
HINT:

Install the shift lever guide cushion of the shift lever nut in the same way.

- (d) Apply MP grease to the shift lock release button.
- (e) Install the spring and shift lock release button.
- (f) Connect the E-shift main switch connector to the shift lever guide housing.
- (g) Install the shift lock control ECU bracket and shift lever anti-rattle cushion to the shift lock control ECU.
- (h) Install the shift lock control ECU and shift lock solenoid with the 3 screws to the shift lever guide housing.
- (i) Install the shift lever guide cushion with new 3 shift lever nuts.

6. INSTALL SHIFT LEVER GUIDE HOUSING

- (a) Install the bulb and cap to the indicator light wire.



- (b) Install the shift lever guide housing assembly with the 4 bolts and nuts to the shift lever plate.

Torque: 4.9 N·m (50 kgf·cm, 43 in.-lbf)

- (c) Install the 2 E-shift main switches and shift lock control switch to the shift lever guide housing.
- (d) Connect the shift lock control ECU and indicator light wire connector to the shift lever plate.

7. INSTALL SLIDE COVER AND NO. 2 SLIDE COVER

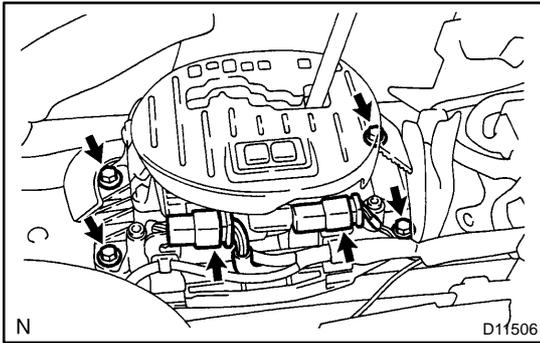
8. INSTALL POSITION INDICATOR LIGHT GUIDE

- (a) Install the position indicator light guide.
- (b) Connect the indicator light wire to the position indicator light guide.

9. INSTALL POSITION INDICATOR HOUSING

- (a) Install the pattern select switch to the position indicator housing.
- (b) Install the position indicator housing.
- (c) Connect the pattern select switch connector.
- (d) Install the shift lock release cover to the position indicator housing.

10. INSTALL SHIFT LEVER KNOB



INSTALLATION

1. INSTALL FLOOR SHIFT LEVER ASSEMBLY

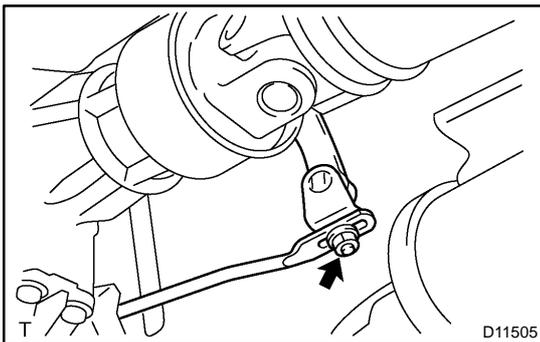
- (a) Connect the 2 connectors to the floor shift lever assembly.
- (b) Install the floor shift lever assembly with the 4 bolts.

Torque: 8.3 N·m (85 kgf·cm, 73 in.-lbf)

2. INSTALL CONSOLE BOX ASSEMBLY

(See page [BO-149](#))

- (a) Install the console box assembly.
- (b) Install the parking brake hole cover assembly.
- (c) Install the box bottom mat.
- (d) Install the console upper panel.



3. INSTALL NO. 1 FLOOR SHIFT GEAR SHIFTING ROD

- (a) Shift into the N position.
- (b) Connect the No. 1 floor shift gear shifting rod and connecting rod swivel with the nut.

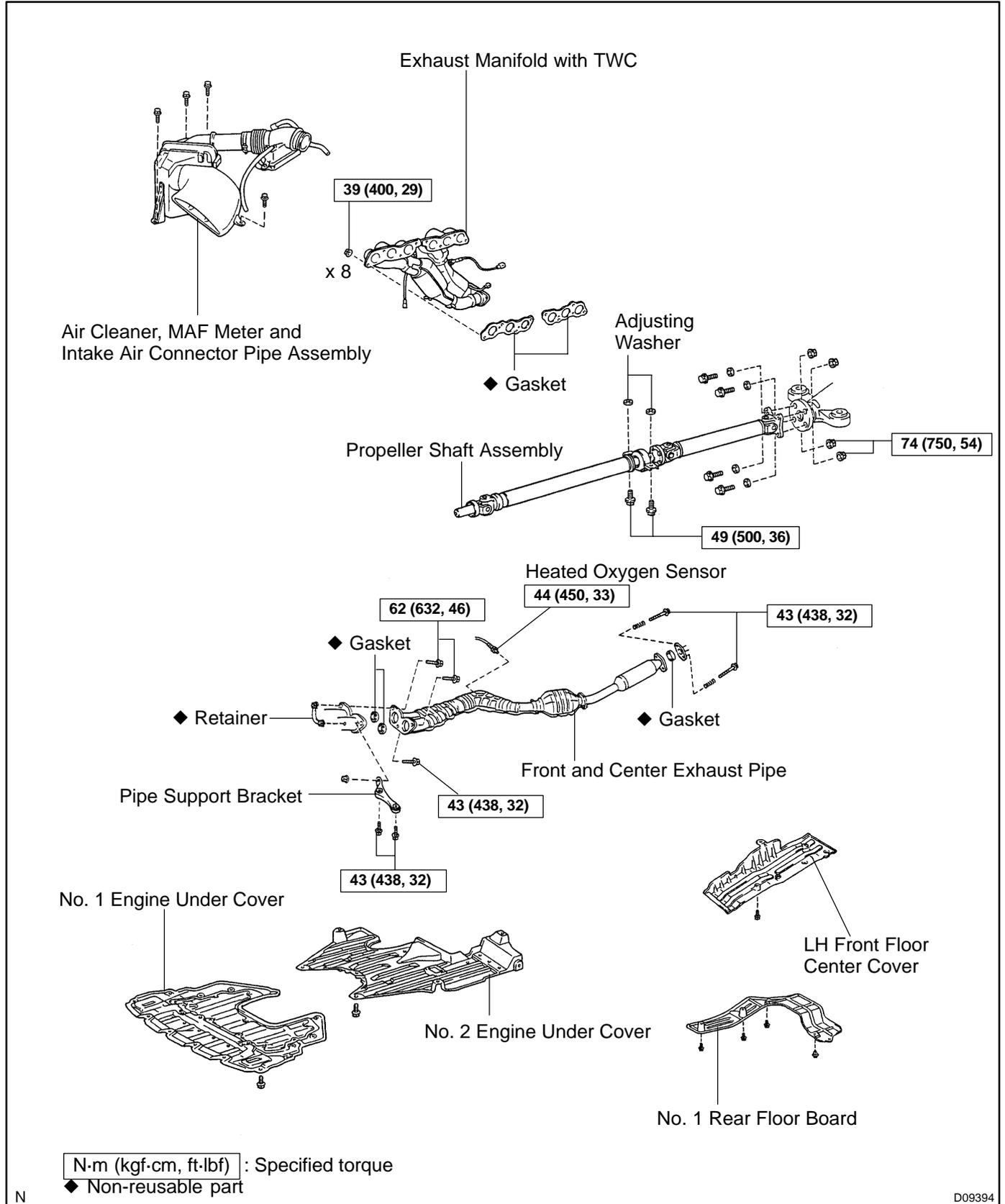
Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)

4. CHECK SHIFTING LEVER POSITION

(See page [DI-338](#))

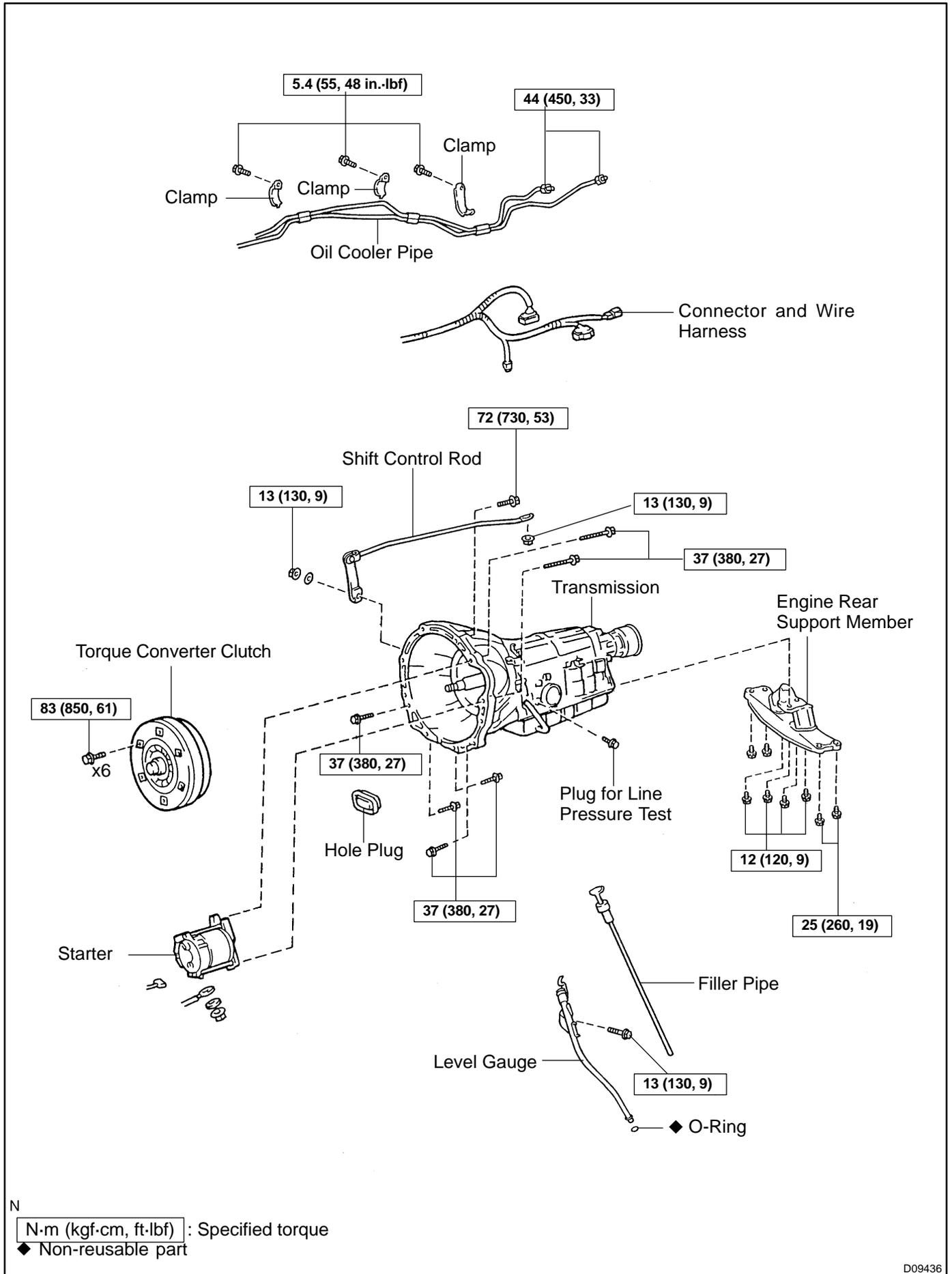
AUTOMATIC TRANSMISSION UNIT COMPONENTS

AT0XX-03



N

D09394



D09436

REMOVAL

1. REMOVE LEVEL GAUGE

2. REMOVE FILLER PIPE

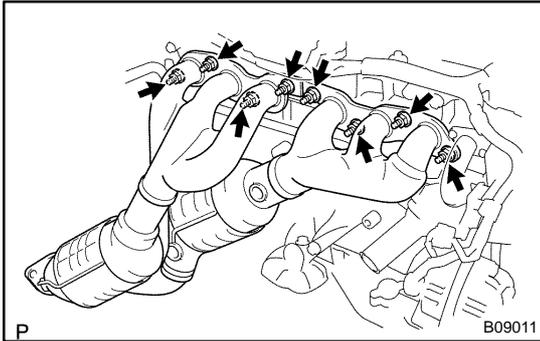
Remove the bolt and filler pipe with the O-ring.

HINT:

At the time of installation, please refer to the following item.

Replace the used O-ring with a new one.

3. REMOVE AIR CLEANER, MAF METER AND INTAKE AIR CONNECTOR PIPE ASSEMBLY



4. REMOVE EXHAUST MANIFOLD WITH TWC

(a) Disconnect the 3 connectors.

(b) Remove the 8 nuts, 2 gaskets and exhaust manifold with the TWC.

Torque: 39 N·m (400 kgf·cm, 29 ft·lbf)

HINT:

At the time of installation, please refer to the following item.

Replace the used gaskets with new ones.

5. RAISE VEHICLE

NOTICE:

Make sure that the vehicle is securely supported.

6. REMOVE NO. 1 AND NO. 2 ENGINE UNDER COVERS

7. REMOVE LH FRONT FLOOR CENTER COVER

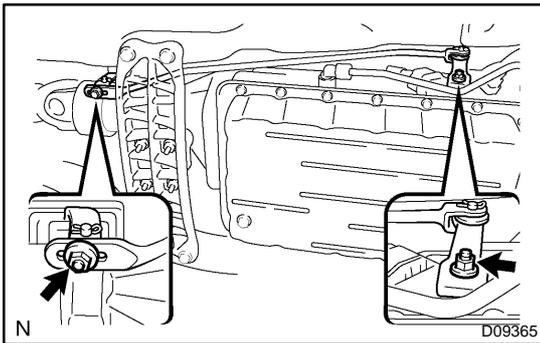
8. REMOVE NO. 1 REAR FLOOR BOARD

9. DRAIN ENGINE COOLANT

10. REMOVE UPPER RADIATOR HOSE FROM RADIATOR

11. REMOVE FRONT AND CENTER EXHAUST PIPES

(See page [EM-100](#))



12. REMOVE SHIFT CONTROL ROD

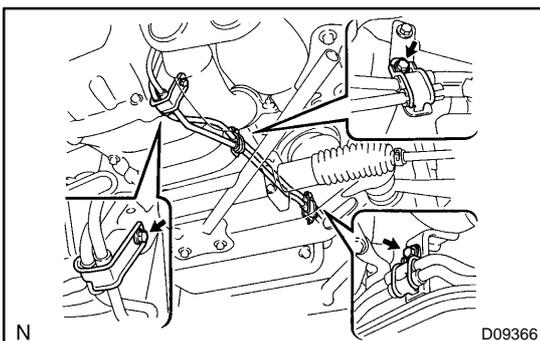
(a) Remove the nut and washer, and disconnect the rod.

Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)

(b) Remove the nut and shift control rod.

Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)

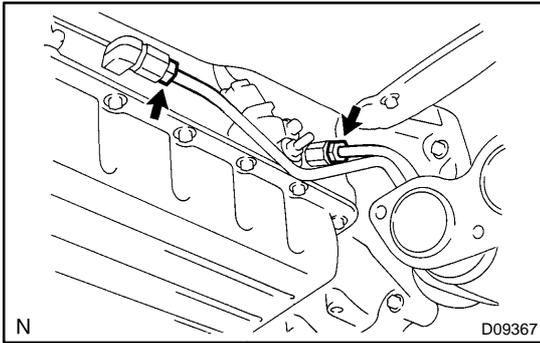
13. REMOVE PROPELLER SHAFT (See page [PR-4](#))



14. DISCONNECT OIL COOLER PIPE

(a) Remove the 3 bolts and 3 clamps.

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



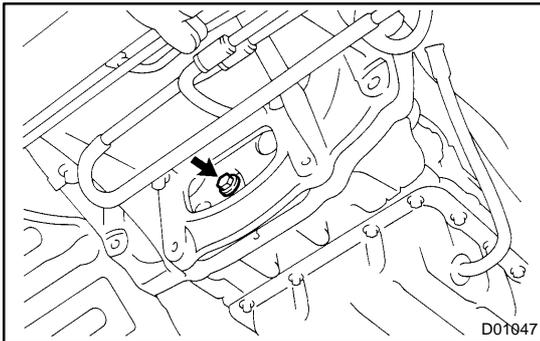
(b) Loosen the 2 union nuts from the transmission.

Torque: 44 N·m (450 kgf-cm, 33 ft-lbf)

NOTICE:

Be careful not to damage the oil cooler pipe.

(c) Disconnect the 2 oil cooler pipes from the transmission.



15. REMOVE TORQUE CONVERTER CLUTCH MOUNTING BOLT

(a) Remove the hole plug.

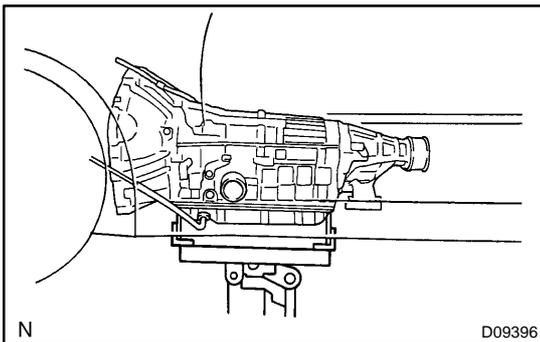
(b) Turn the crankshaft to gain access to each bolt.

(c) Hold the crankshaft pulley nut with a wrench and remove the 6 bolts.

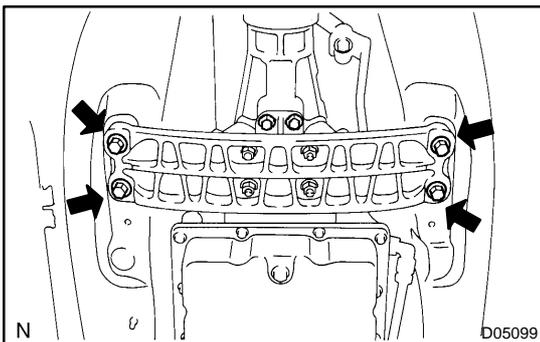
Torque: 48 N·m (490 kgf-cm, 35 ft-lbf)

HINT:

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

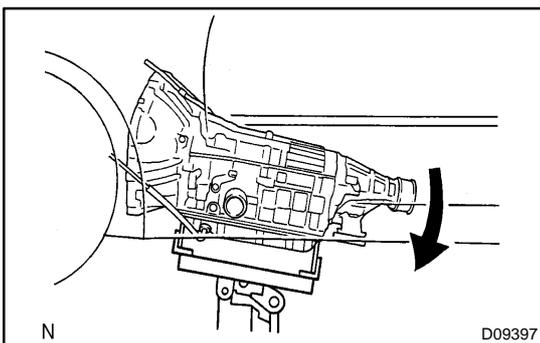


16. SUPPORT TRANSMISSION WITH JACK



17. REMOVE 4 ENGINE REAR SUPPORT MEMBER SET BOLTS

Torque: 25 N·m (260 kgf-cm, 19 ft-lbf)



18. DISCONNECT CONNECTORS AND WIRE HARNESS

(a) Tilt down the transmission.

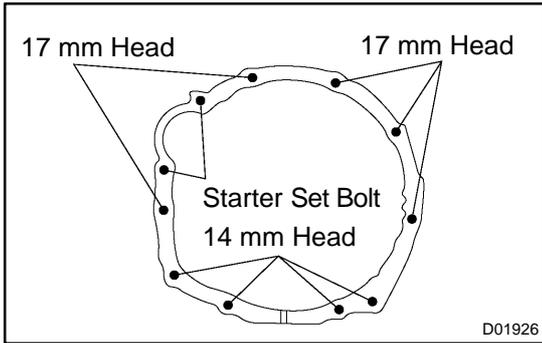
NOTICE:

Take care so that the cooling fan does not come in contact with the fan shroud.

(b) Disconnect the following connectors:

- (1) O/D direct clutch speed sensor connector
- (2) Vehicle speed sensor connector
- (3) Park/neutral position switch connector
- (4) Solenoid connector

- (c) Disconnect the wire harness from the clamps on the transmission.



19. REMOVE STARTER

- (a) Disconnect the connector and wire from the starter.
- (b) Remove the 2 bolts and starter.

Torque: 37 N·m (380 kgf·cm, 27 ft·lbf)

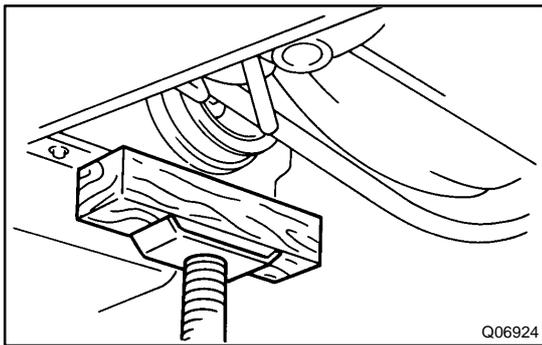
20. REMOVE TRANSMISSION

Remove the 9 bolts, ground cable and transmission.

Torque:

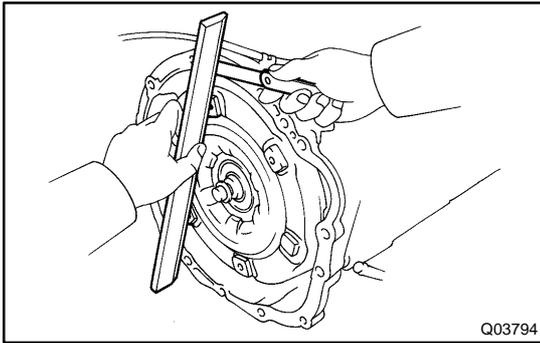
17 mm head: 72 N·m (730 kgf·cm, 53 ft·lbf)

14 mm head: 37 N·m (380 kgf·cm, 27 ft·lbf)



HINT:

At the time of installation, please refer to the following item.
Lift the front side of the engine.



INSTALLATION

1. CHECK TORQUE CONVERTER CLUTCH INSTALLATION

Using calipers and a straight edge, measure from the distance from the installed surface of the transmission housing to the installed surface of the torque converter clutch.

Correct distance: More than 0.1 mm (0.004 in.)

If the distance is less than the standard, check for an improper installation.

2. INSTALL TRANSMISSION

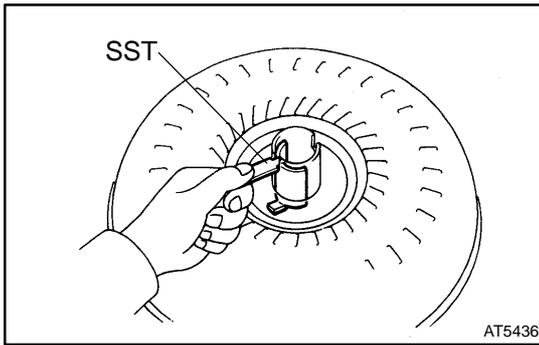
Installation is in the reverse order of removal

(See page [AT-31](#)).

HINT:

After installation, check and inspect items as follows.

- Adjust the shift lever position (See page [DI-338](#)).
- Fill ATF and check fluid level (See page [DI-338](#)).
- Do the road test (See page [DI-338](#)).
- Fill with engine coolant (See page [CO-2](#)).

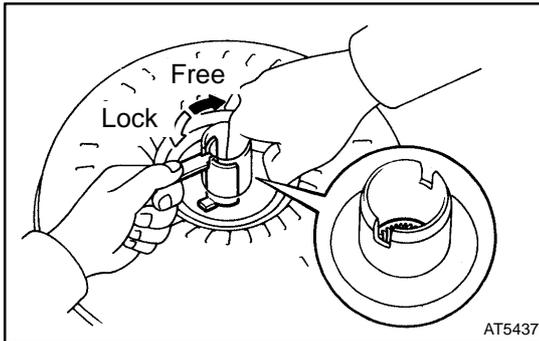


TORQUE CONVERTER CLUTCH AND DRIVE PLATE INSPECTION

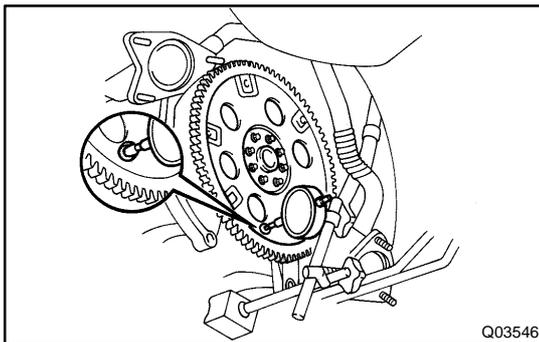
AT06D-03

1. INSPECT ONE-WAY CLUTCH

- (a) Install SST so that it fits in the notch of the converter hub and outer race of the one-way clutch.
SST 09350-30020 (09351-32020)



- (b) Press on the serrations of starter with a finger and rotate it.
Check if it rotates smoothly when turned clockwise and locks up when turned counterclockwise.



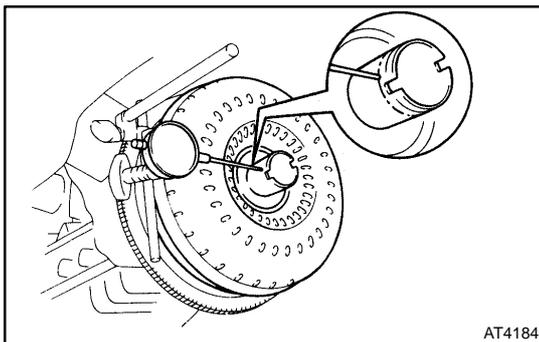
2. MEASURE DRIVE PLATE RUNOUT AND INSPECT RING GEAR

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

Maximum runout: 0.20 mm (0.0079 in.)

If runout exceeds 0.20 mm (0.0079 in.) or if the ring gear is damaged, replace the drive plate. If installing a new drive plate, note the orientation of spacers and tighten the bolts.

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.

Maximum runout: 0.30 mm (0.0118 in.)

If runout exceeds 0.30 mm (0.0118 in.), try to correct by reorienting the installation of the torque converter clutch.

If excessive runout cannot be corrected, replace the torque converter clutch.

HINT:

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

- (b) Remove the torque converter clutch.