

AUTOMATIC TRANSMISSION SYSTEM

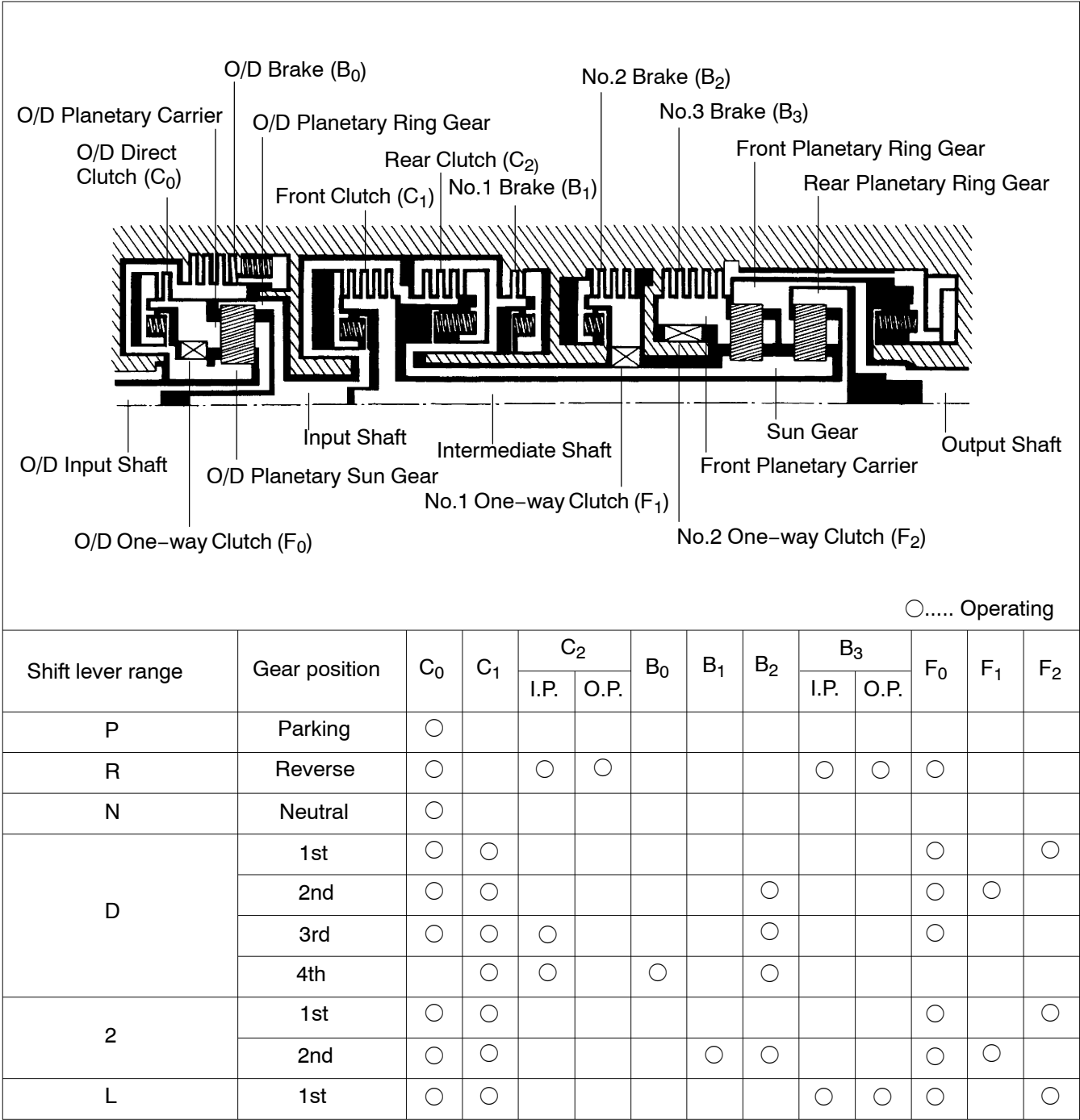
PRECAUTION

AT0HC-01

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

AUTOMATIC TRANSMISSION SYSTEM
OPERATION

AT0HD-01



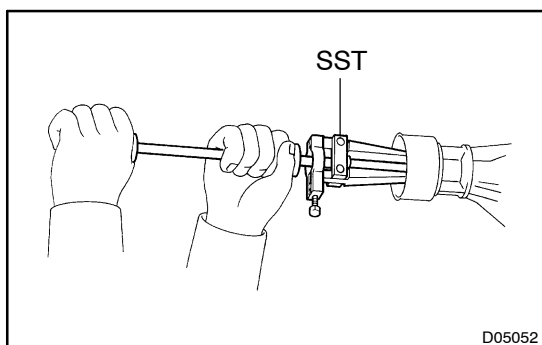
I.P.: Inner Piston
O.P.: Outer Piston

D00790

EXTENSION HOUSING OIL SEAL ON-VEHICLE REPAIR

ATOHE-01

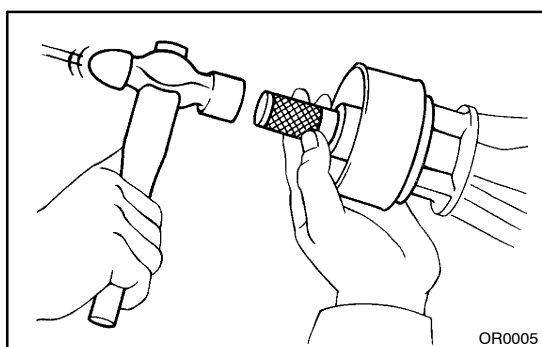
1. REMOVE NO. 1 REAR FLOOR BOARD
2. REMOVE EXHAUST PIPE ASSEMBLY
(See page PR-4)
3. REMOVE PROPELLER SHAFT (See page PR-4)



4. REMOVE REAR OIL SEAL

Using SST, remove the oil seal.

SST 09308-00010



5. 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.

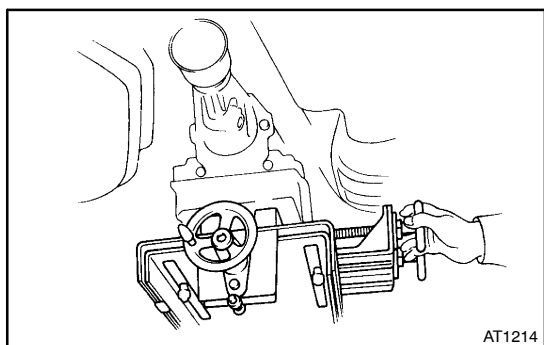
- (b) Coat the tip of a new oil seal with MP grease.

6. INSTALL PROPELLER SHAFT (See page PR-10)
7. INSTALL EXHAUST PIPE ASSEMBLY
(See page PR-10)
8. INSTALL NO. 1 REAR FLOOR BOARD
9. FILL ATF AND CHECK FLUID LEVEL
(See page DI-156)

SENSOR ROTOR ON-VEHICLE REPAIR

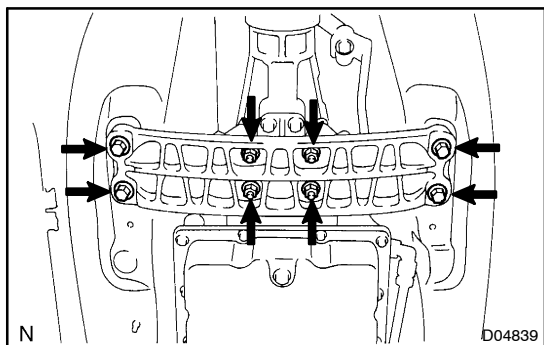
ATQHF-01

1. RAISE VEHICLE AND POSITION PAN TO CATCH ANY FLUID THAT MAY DRIP
2. REMOVE LH FRONT FLOOR CENTER COVER
3. REMOVE NO. 1 REAR FLOOR BOAD
4. REMOVE EXHAUST PIPE (See page PR-4)
5. REMOVE PROPELLER SHAFT (See page PR-4)
6. REMOVE TRANSMISSION OUTPUT SPEED SENSOR (See page AT-8)



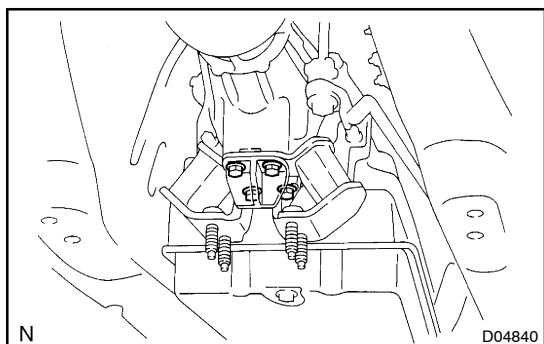
7. JACK UP TRANSMISSION SLIGHTLY

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



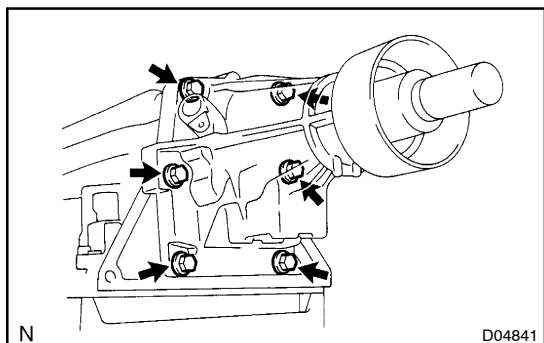
8. REMOVE ENGINE REAR SUPPORT MEMBER

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



9. REMOVE TRANSMISSION MOUNTING BRACKET

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

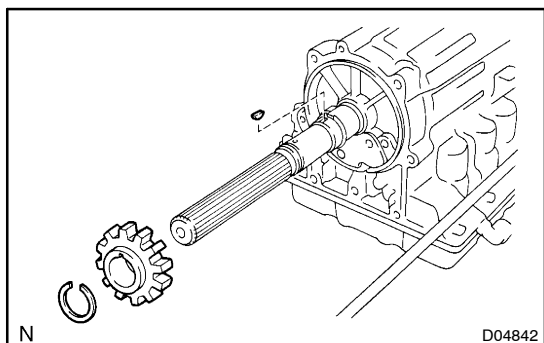
**10. REMOVE EXTENSION HOUSING**

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

HINT:

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

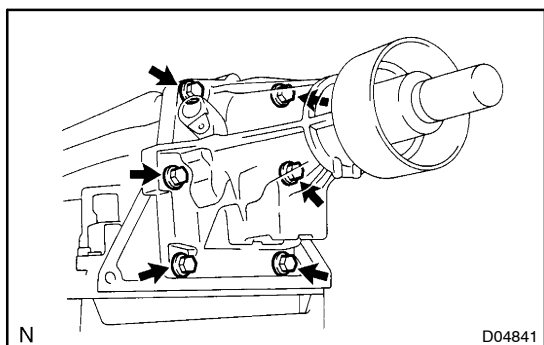
- (c) Remove the extension housing gasket.

**11. REMOVE SENSOR ROTOR AND KEY**

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

12. INSTALL KEY AND SENSOR ROTOR

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

**13. INSTALL EXTENSION HOUSING**

- (a) Install a new extension housing gasket.
- (b) Install the extension housing with the 6 bolts.

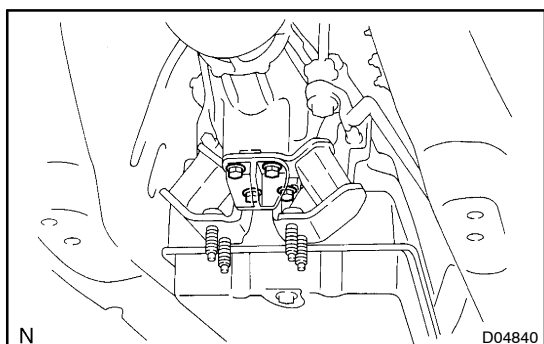
Torque: 36 N·m (370 kgf·cm, 27 ft·lbf)

HINT:

Coat the thread of the all bolts with sealant.

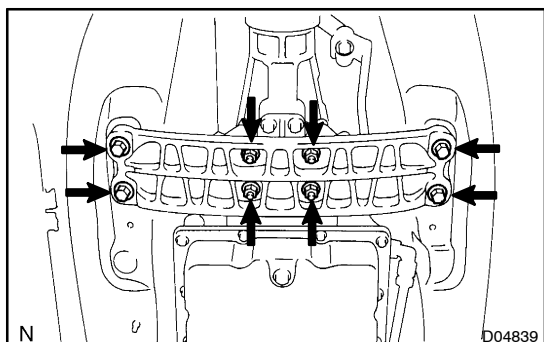
Sealant:

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

**14. 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)

**15. INSTALL ENGINE REAR SUPPORT MEMBER**

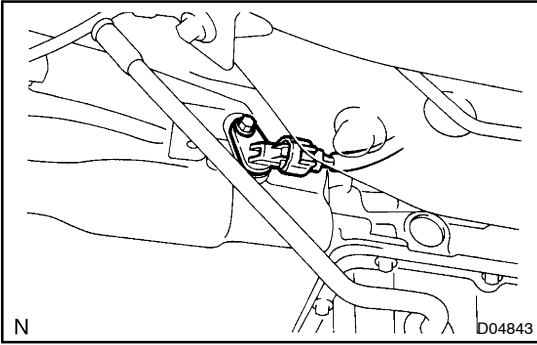
- (a) Install the rear support member with the 4 bolts.
- (b) Install the 4 nuts.

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

Torque: 14 N·m (135 kgf·cm, 10 ft·lbf)

16. REMOVE JACK**17. INSTALL TRANSMISSION OUTPUT SPEED SENSOR (See page AT-8)****18. INSTALL PROPELLER SHAFT (See page PR-10)****19. INSTALL EXHAUST PIPE (See page PR-10)**

20. INSTALL NO. 1 REAR FLOOR BOARD
21. FILL ATF AND CHECK FLUID LEVEL
(See page DI-156)

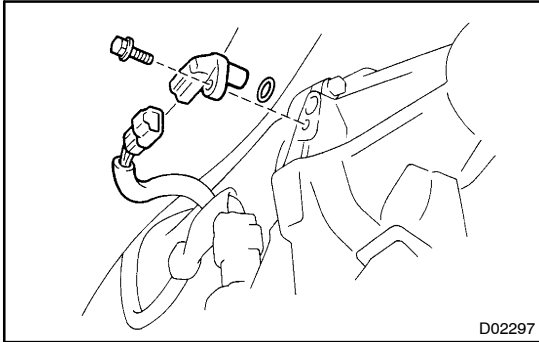


TRANSMISSION INPUT SPEED SENSOR

ATOHG-01

ON-VEHICLE REPAIR

1. **DISCONNECT TRANSMISSION INPUT SPEED SENSOR CONNECTOR**
2. **REMOVE TRANSMISSION INPUT SPEED SENSOR**
 - (a) Remove the bolt and transmission input speed sensor.
 - (b) Remove the O-ring from transmission input speed sensor.
3. **INSTALL TRANSMISSION INPUT SPEED SENSOR**
 - (a) Coat a new O-ring with ATF and install it to the transmission input speed sensor.
 - (b) Install the transmission input speed sensor to the transmission case and torque the bolt.
Torque: 5.4 N·m (55 kgf·cm, 48 in·lbf)
4. **CONNECT TRANSMISSION INPUT SPEED SENSOR CONNECTOR**



TRANSMISSION OUTPUT SPEED SENSOR

AT0HH-01

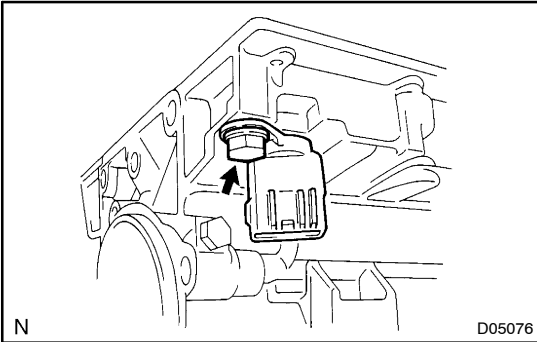
ON-VEHICLE REPAIR

1. **DISCONNECT TRANSMISSION OUTPUT SPEED SENSOR CONNECTOR**
2. **REMOVE TRANSMISSION OUTPUT SPEED SENSOR**
 - (a) Remove the bolt and transmission output speed sensor.
 - (b) Remove the O-ring from the transmission output speed sensor.
3. **INSTALL TRANSMISSION OUTPUT SPEED SENSOR**
 - (a) Coat a new O-ring with ATF and install it to the transmission output speed sensor.
 - (b) Install the transmission output speed sensor to the extension housing and torque the bolt.
Torque: 5.4 N·m (55 kgf·cm, 48 in·lbf)
4. **CONNECT TRANSMISSION OUTPUT SPEED SENSOR CONNECTOR**

ATF TEMPERATURE SENSOR ON-VEHICLE REPAIR

AT0H-01

1. REMOVE DRAIN PLUG WITH GASKET AND DRAIN ATF
2. REMOVE OIL PAN AND OIL STRAINER
(See page AT-11)
3. REMOVE SOLENOID WIRING WITH ATF TEMPERATURE SENSOR (See page AT-11)

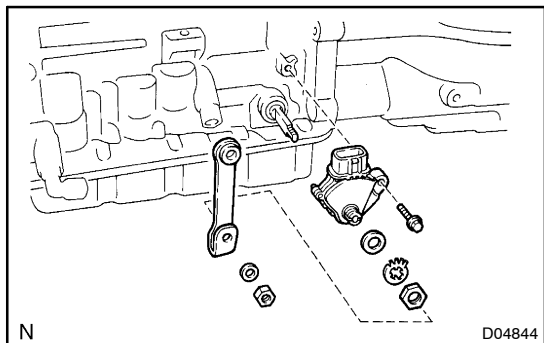


4. REMOVE SOLENOID CONNECTOR
Remove the bolt and pull out the solenoid connector.
5. INSTALL SOLENOID CONNECTOR
Pull in the solenoid connector with the bolt.
Torque: 5.4 N·m (55 kgf·cm, 48 in·lbf)
6. INSTALL SOLENOID WIRING WITH ATF TEMPERATURE SENSOR (See page AT-11)
7. INSTALL OIL STRAINER AND OIL PAN
(See page AT-11)
8. INSTALL DRAIN PLUG WITH NEW GASKET
Torque: 20 N·m (205 kgf·cm, 15 ft·lbf)
9. FILL ATF AND CHECK FLUID LEVEL
(See page DI-156)

NEUTRAL START SWITCH ON-VEHICLE REPAIR

AT0HJ-01

1. REMOVE EXHAUST PIPE (See page PR-4)
2. DISCONNECT NEUTRAL START SWITCH CONNECTOR



3. REMOVE NEUTRAL START SWITCH
 - (a) Remove the nut and disconnect the control shaft lever.
 - (b) Pry off the nut stopper.
 - (c) Remove the nut and lock washer.
 - (d) Remove the bolt and neutral start switch.
4. INSTALL NEUTRAL START SWITCH
 - (a) Install the neutral start switch and bolt.
Torque: 5.4 N·m (55 kgf·cm, 48 in·lbf)
 - (b) Install a new lock washer and the nut.
Torque: 6.9 N·m (70 kgf·cm, 61 in·lbf)
 - (c) Stake the nut with the lock washer.
 - (d) Install the control shaft lever and nut.
Torque: 16 N·m (160 kgf·cm, 12 ft·lbf)
 - (e) Connect the control shaft lever.
5. CONNECT NEUTRAL START SWITCH CONNECTOR
6. CHECK NEUTRAL START SWITCH OPERATION

Check that the engine can be started with the shift lever only in the N or P position, but not in the other position.
If not as started above, carry out the adjustment procedure (See page DI-156).
7. INSTALL EXHAUST PIPE (See page PR-10)
8. TEST DRIVE VEHICLE

VALVE BODY ASSEMBLY ON-VEHICLE REPAIR

AT0HK-01

1. REMOVE DRAIN PLUG AND DRAIN ATF
2. REMOVE OIL PAN

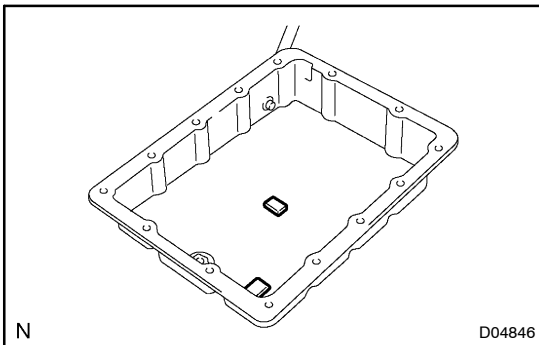
NOTICE:

Some fluid will remove in the oil pan.

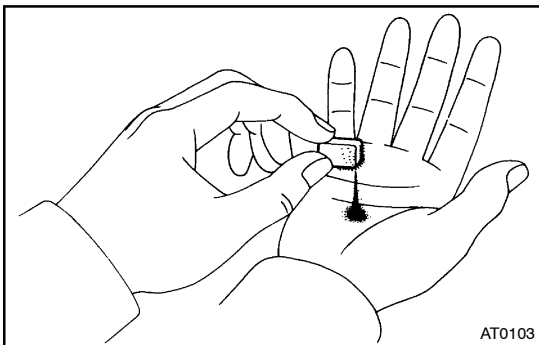
- (a) Remove the 14 bolts.
- (b) Remove the oil pan and gasket.

NOTICE:

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



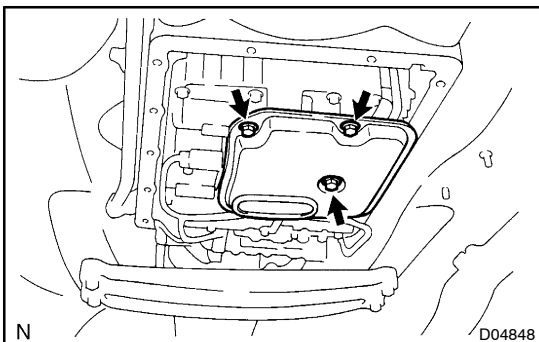
3. REMOVE 2 MAGNETS FROM OIL PAN



4. EXAMINE PARTICLES IN PAN

Remove the magnets and use them to collect any steel chips. Look carefully at the chips and particles in the pan and the magnet to anticipate what type of wear you will find in the transmission.

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

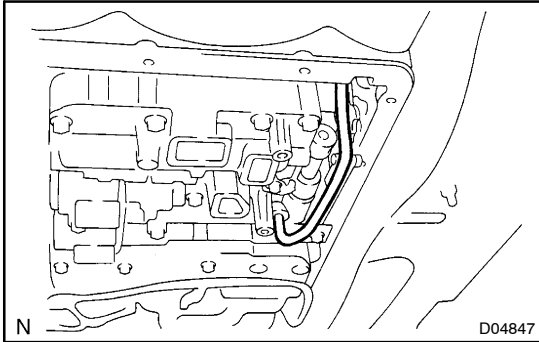


5. REMOVE OIL STRAINER

NOTICE:

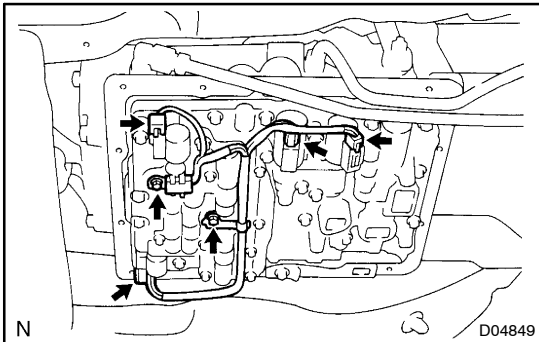
Be careful as some fluid will come out of the oil strainer.

- (a) Remove the 3 bolts and oil strainer from the valve body.
- (b) Remove the gasket.



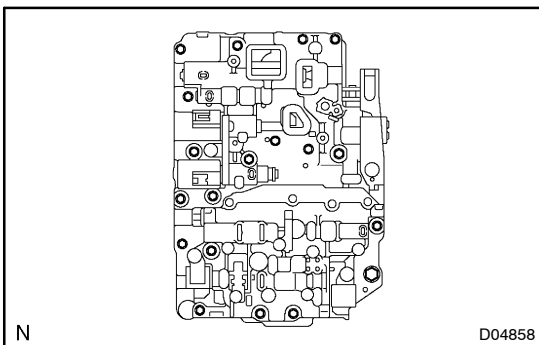
6. REMOVE OIL PIPE

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



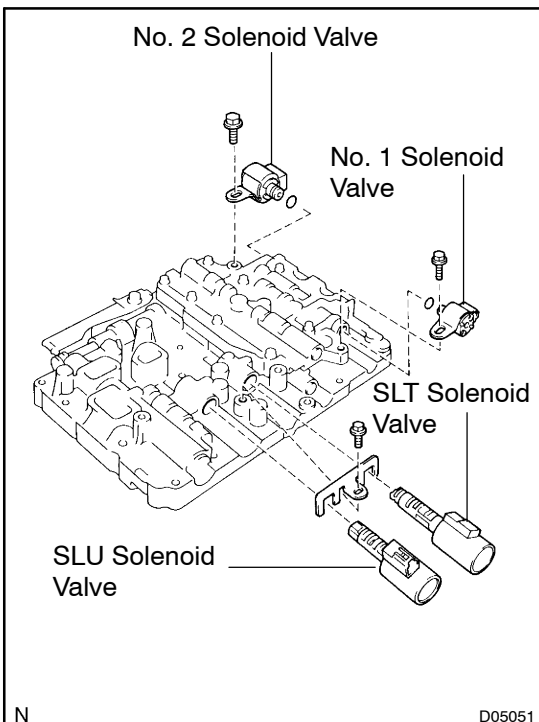
7. REMOVE SOLENOID WIRING WITH ATF TEMPERATURE SENSOR

- Remove the bolt and disconnect the ATF temperature sensor.
- Remove the bolt and clamp.
- Disconnect the 4 connectors from the solenoid.



8. REMOVE VALVE BODY

- Remove the 17 bolts.
- Remove the valve body.



9. REMOVE SOLENOID VALVE

- Remove the 2 bolts and No. 1 solenoid valve and No. 2.
- Remove the 2 O-rings from each solenoid valve.
- Remove the bolt, lock plate and SLU solenoid valve and SLT.

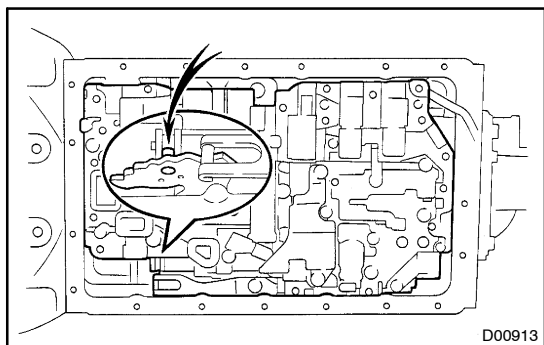
10. INSTALL SOLENOID VALVE

- Install the SLU solenoid valve and SLT and lock plate with the bolt.

Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)

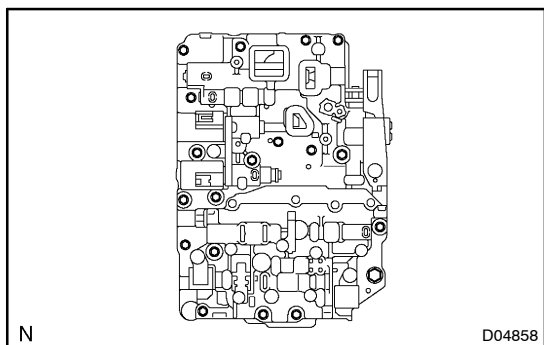
- Coat 2 new O-rings with ATF.
- Install the 2 O-rings to the each solenoid valve.
- Install the No. 1 solenoid valve and No. 2 with the 2 bolts.

Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)

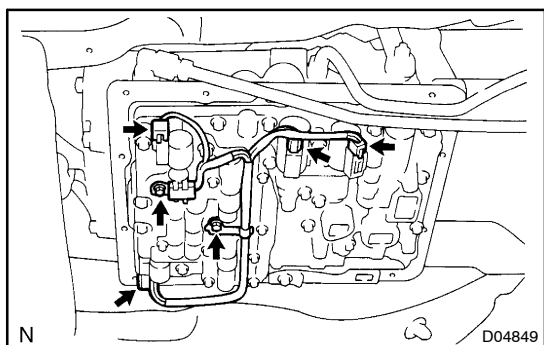


11. INSTALL VALVE BODY

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

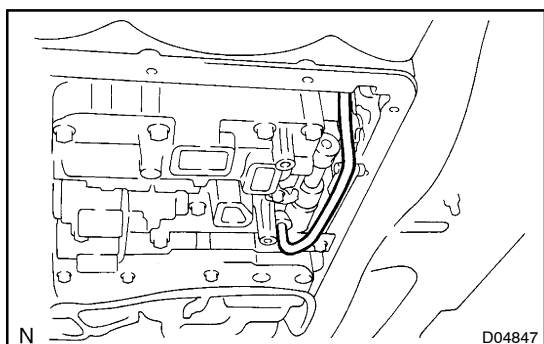


- (b) Install the valve body with the 17 bolts.
Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)

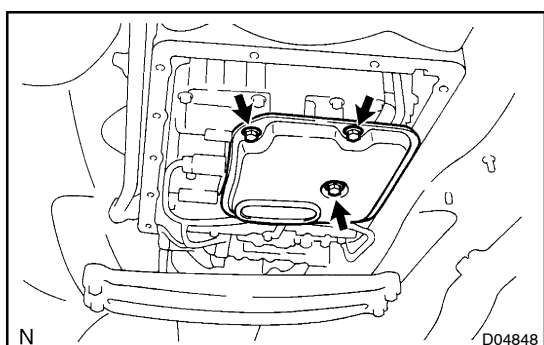


12. INSTALL SOLENOID WIRING WITH ATF TEMPERATURE SENSOR

- (a) Connect the 4 connectors to the solenoid.
 (b) Install the clamp and bolt.
Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)
 (c) Install the TAF temperature sensor with the bolt.
Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)

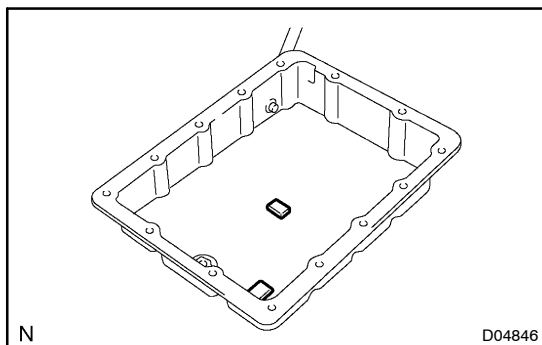


13. INSTALL OIL PIPE



14. INSTALL OIL STRAINER

- (a) Install the gasket.
 (b) Install the oil strainer with the 3 bolts to the valve body.
Torque: 10 N·m (100 kgf·cm, 7 ft·lbf)

**15. INSTALL 2 MAGNETS TO OIL PAN****16. INSTALL OIL PAN**

Install the new gasket and oil pan with the 14 bolts.

Torque: 4.4 N·m (45 kgf·cm, 39 in·lbf)

17. INSTALL DRAIN PLUG WITH NEW GASKET

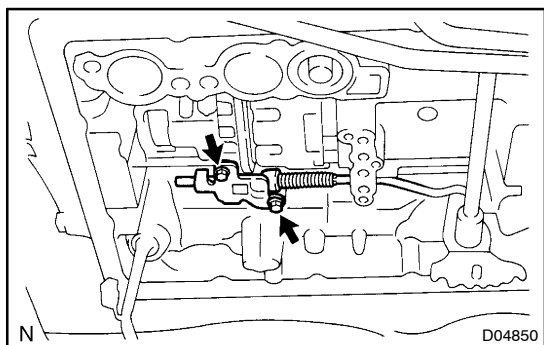
Torque: 20 N·m (205 kgf·cm, 15 ft·lbf)

18. FILL ATF AND CHECK FLUID LEVEL

(See [page DI-156](#))

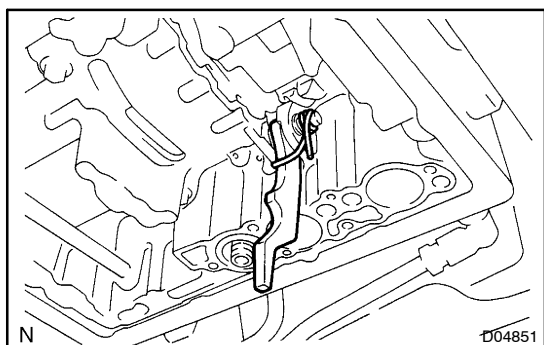
PARKING LOCK PAWL ON-VEHICLE REPAIR

1. REMOVE VALVE BODY (See page AT-11)



2. REMOVE PARKING LOCK PAWL BRACKET

Remove the 2 bolts and parking lock pawl bracket.



3. REMOVE SPRING FROM PARKING LOCK PAWL SHAFT

4. REMOVE PARKING LOCK PAWL SHAFT AND PARKING LOCK PAWL

5. INSTALL PARKING LOCK PAWL AND PARKING LOCK PAWL SHAFT

6. INSTALL SPRING TO PARKING LOCK PAWL SHAFT

7. INSTALL PARKING LOCK PAWL BRACKET

Install the parking lock pawl bracket with the 2 bolts.

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

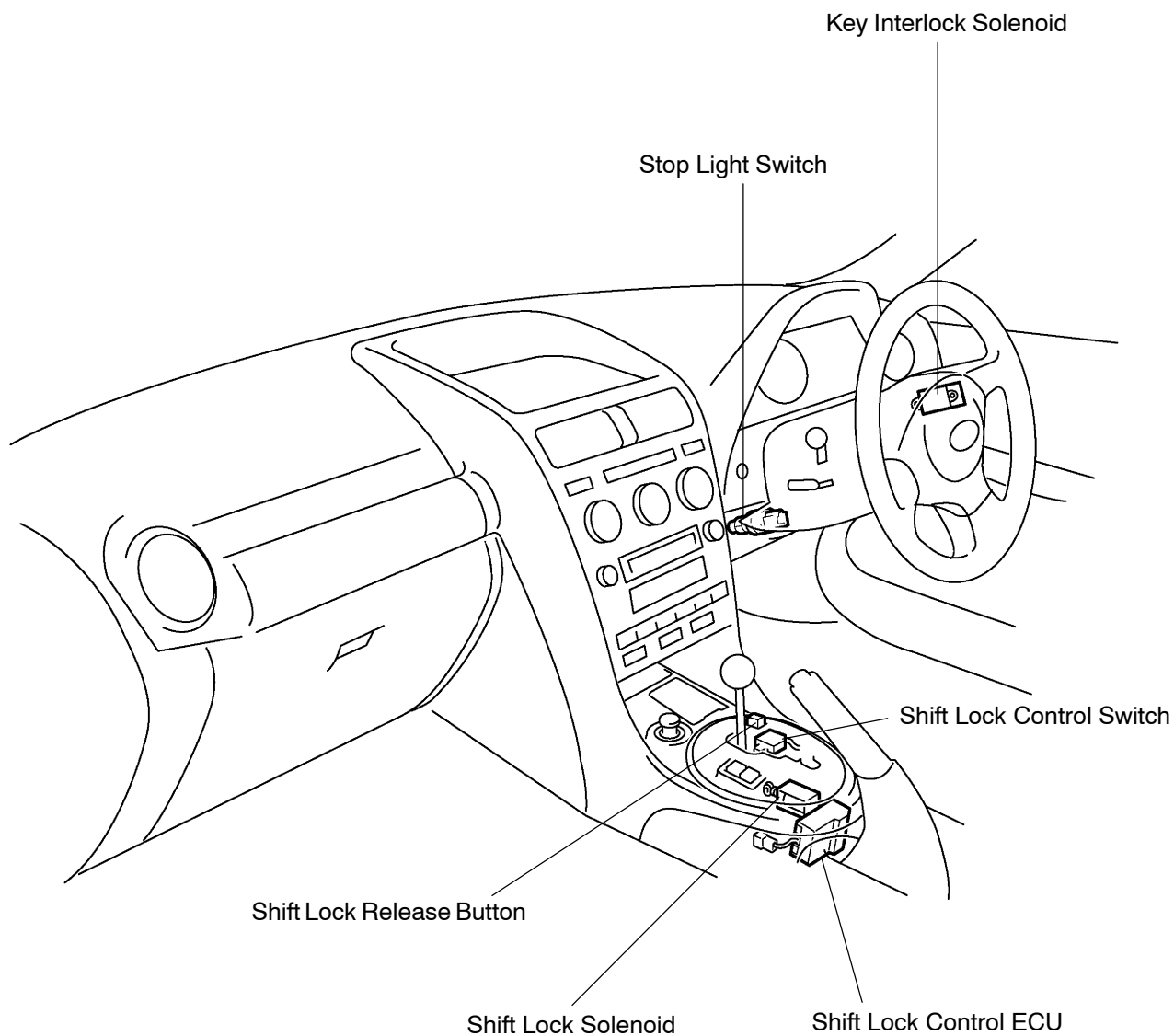
HINT:

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

8. INSTALL VALVE BODY (See page AT-11)

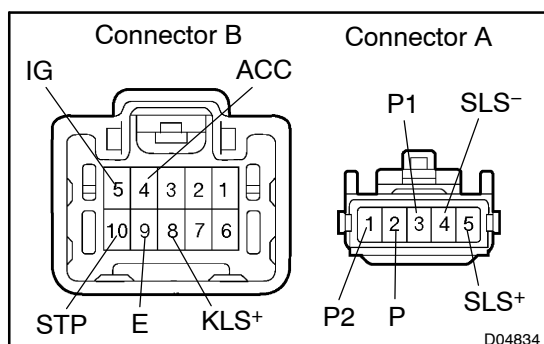
SHIFT LOCK SYSTEM LOCATION

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INSPECTION

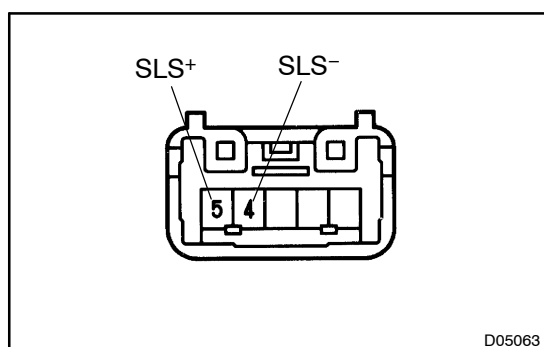
1. INSPECT SHIFT LOCK CONTROL ECU

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)	1. Ignition switch ACC and P range	0
	2. Ignition switch ACC and except P range	7.5 – 11.5
	3. Ignition switch ACC and except P range (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 range	0
	2. Depress brake pedal	8 – 15
	3. Depress brake pedal (After approx. 1 second)	6 – 11
	4. Shift between P and N range under conditions above	6 – 11
	5. Shift D range under conditions above	0
A3 – A2 (P1 – P)	1. Ignition switch ON, P range and depress brake pedal	0
	2. Shift except P range under condition above	12
A1 – A2 (P2 – P)	1. Ignition switch ON, P range and depress brake pedal	12
	2. Shift except P range under conditions above	0



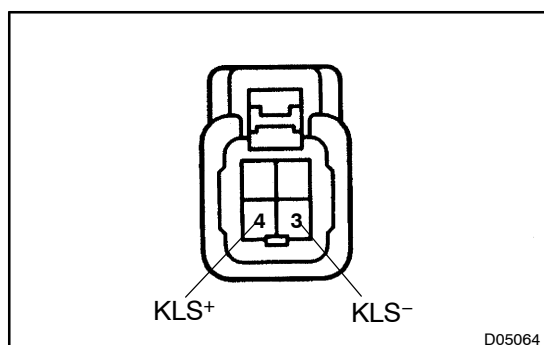
2. INSPECT SHIFT LOCK SOLENOID

- Disconnect the solenoid connector.
- Using an ohmmeter, measure resistance between terminals.

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

- 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.



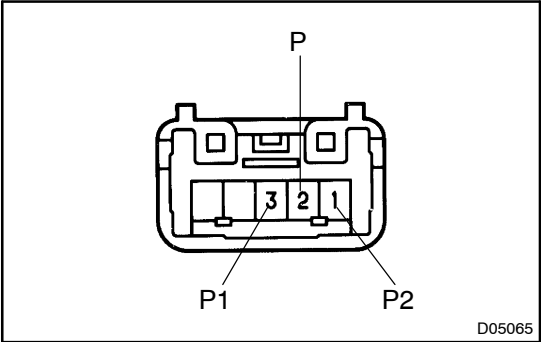
3. INSPECT KEY INTERLOCK SOLENOID

- Disconnect the solenoid connector.
- Using an ohmmeter, measure resistance between terminals.

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

- 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.



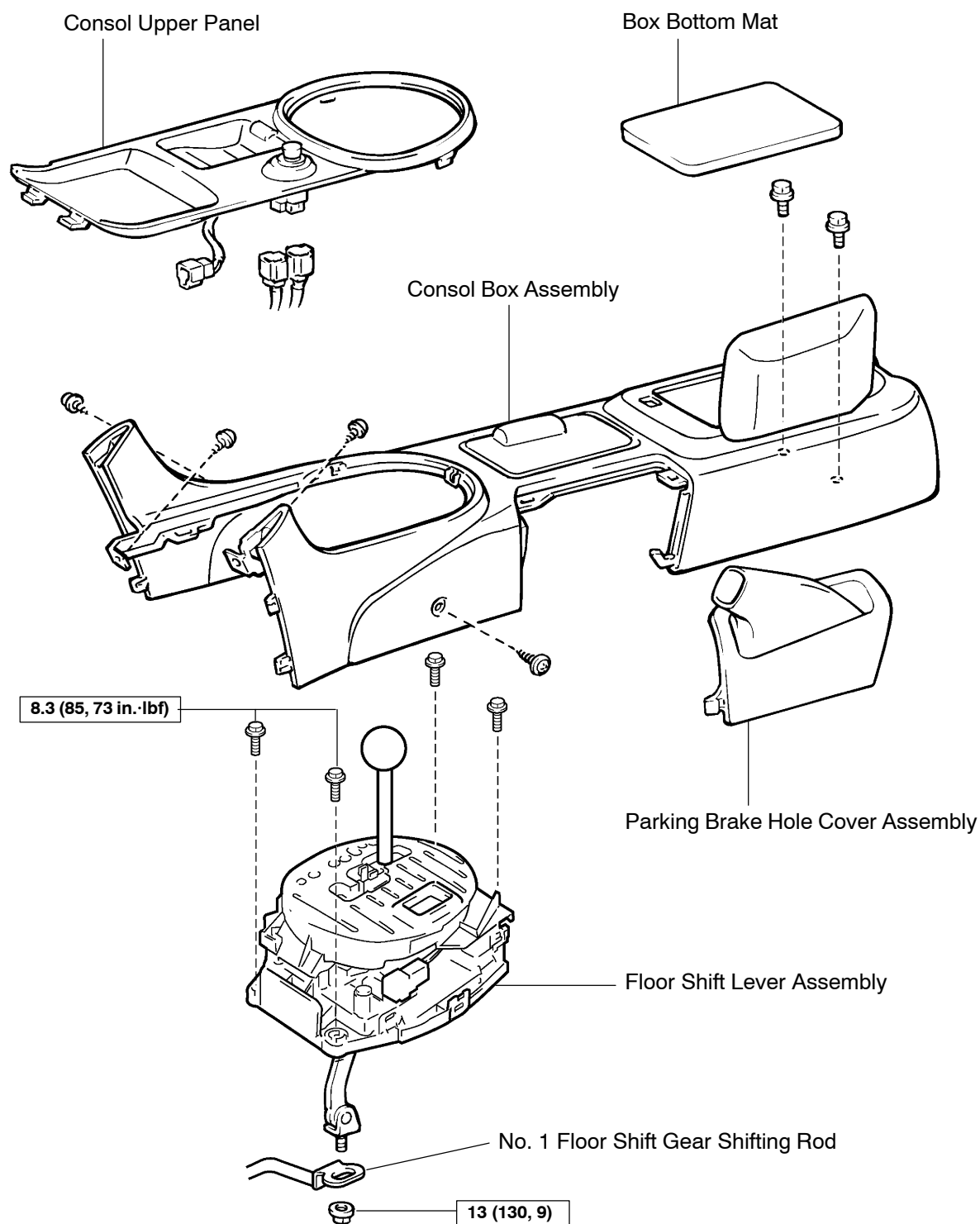
4. INSPACT SHIFT LOCK CONTROL SWITCH

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

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

FLOOR SHIFT ASSEMBLY COMPONENTS

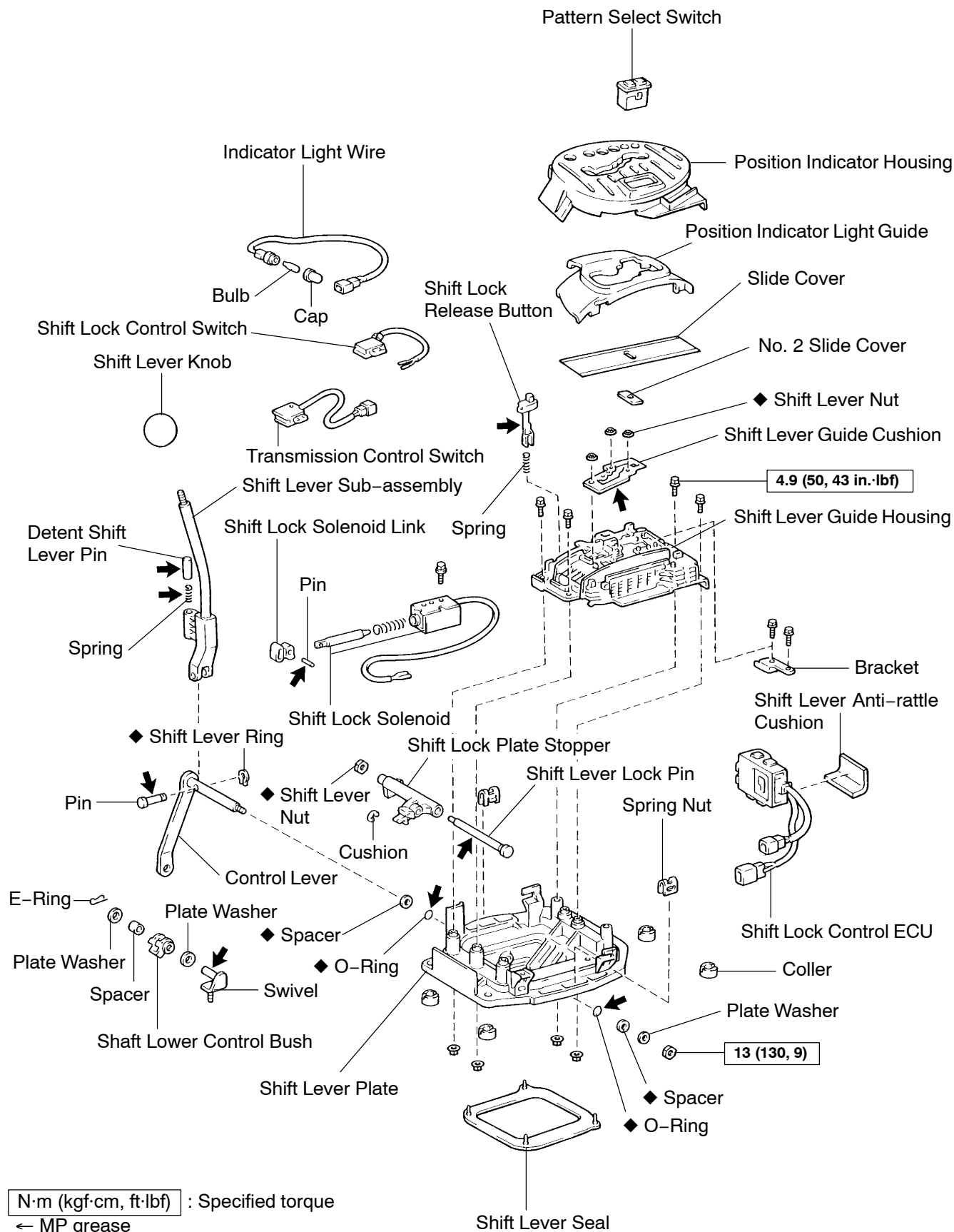
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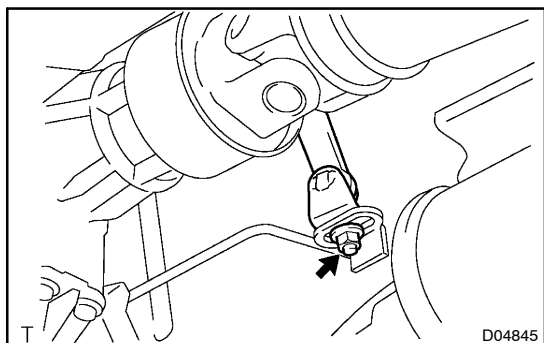


N·m (kgf·cm, ft·lbf) : Specified torque

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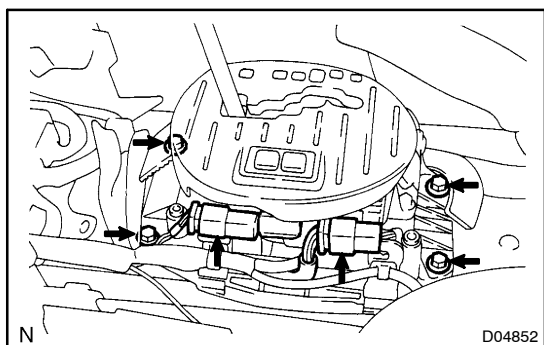
REMOVAL

1. SEPARATE NO. 1 FLOOR SHIFT GEAR SHIFTING ROD

- (a) Shift into the N range.
- (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-96)

- (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.

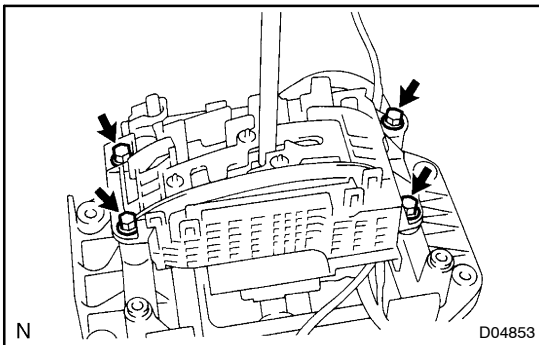


3. REMOVE FLOOR SHIFT LEVER ASSEMBLY

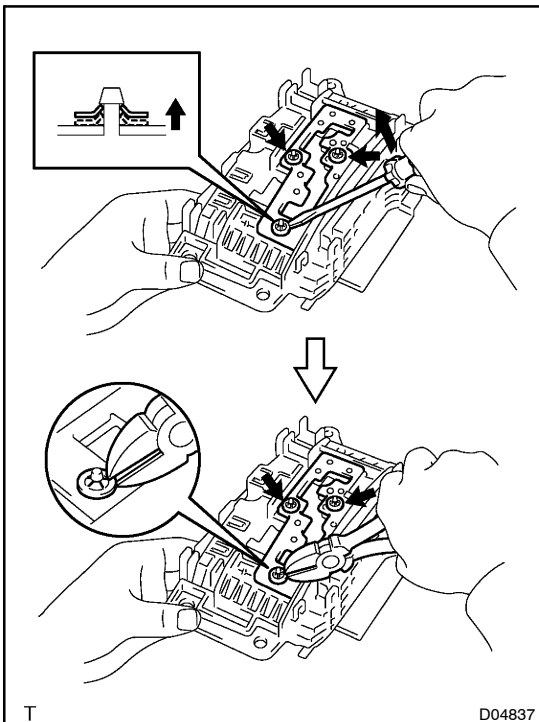
- (a) Remove the 4 bolts.
- (b) Disconnect the 2 connectors.
- (c) Remove the floor shift lever assembly.

DISASSEMBLY

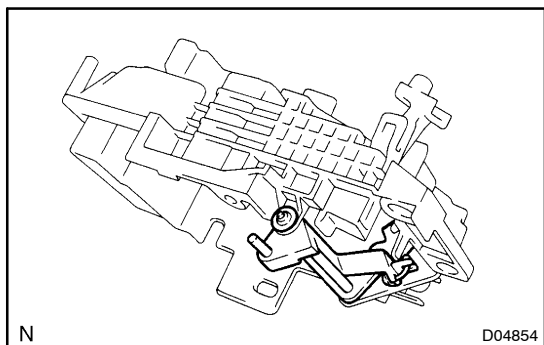
1. **REMOVE SHIFT LEVER KNOB**
2. **REMOVE POSITION INDICATOR HOUSING**
 - (a) Disconnect the pattern select switch connector.
 - (b) Remove the position indicator housing assembly.
 - (c) Remove the pattern select switch from the position indicator housing.
3. **REMOVE POSITION INDICATOR LIGHT GUIDE**
 - (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 transmission control switch and shift lock control switch from the shift lever guide housing.



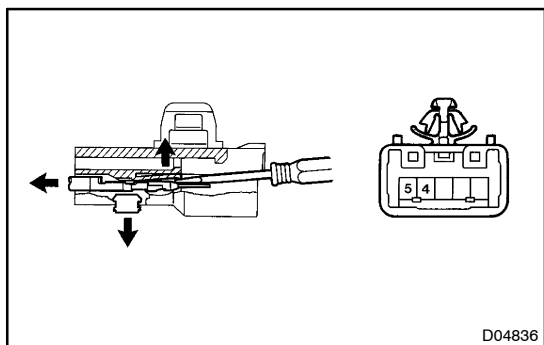
- (c) Remove the 4 bolts, nuts and shift lever guide housing assembly.
- (d) Remove the bulb and cap and from the indicator light wire.



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 transmission control 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.



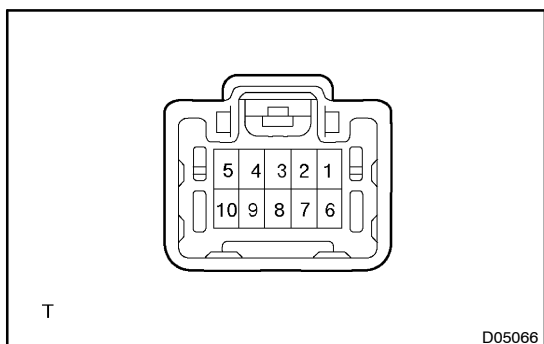
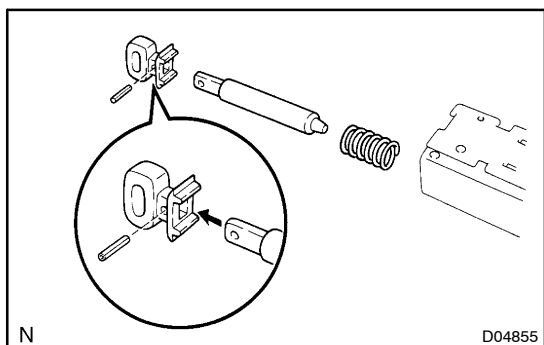
7. DISCONNECT SHIFT LOCK CONTROL ECU, SHIFT LOCK SOLENOID, SHIFT LOCK CONTROL SWITCH AND TRANSMISSION CONTROL SWITCH

- (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.

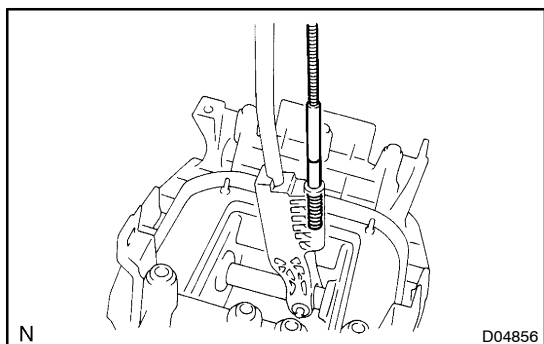
HINT:

Remove the transmission control 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.

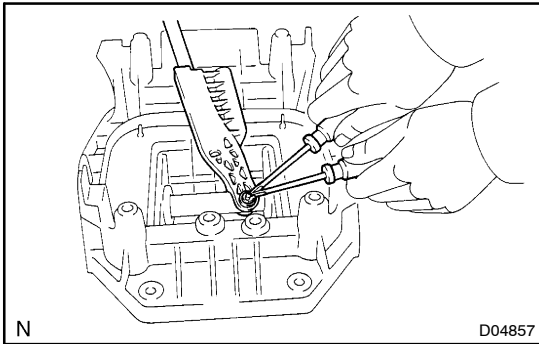


- (e) Disengage the secondary locking device of shift lock solenoid.
(f) Release the locking lag of the terminals 1 and 6, and pull the terminals out from the rear.
(g) Remove the transmission control switch.

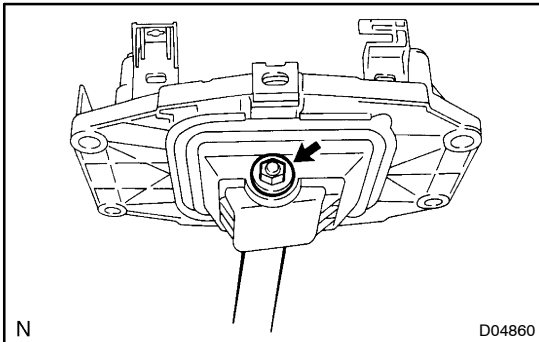


8. REMOVE SHIFT LEVER SUB-ASSEMBLY

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

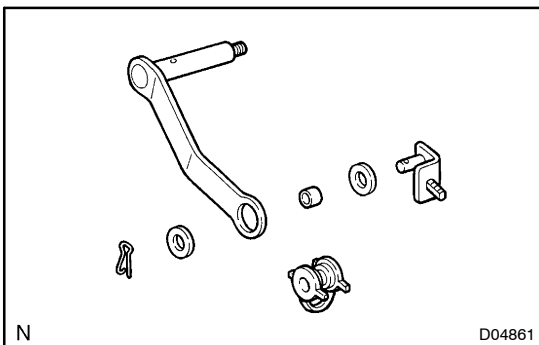


- (b) Using 2 screwdrivers, remove the shift lever ring.
- (c) Remove the pin and shift lever sub-assembly.



9. DISASSEMBLE SHIFT LEVER PLATE

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

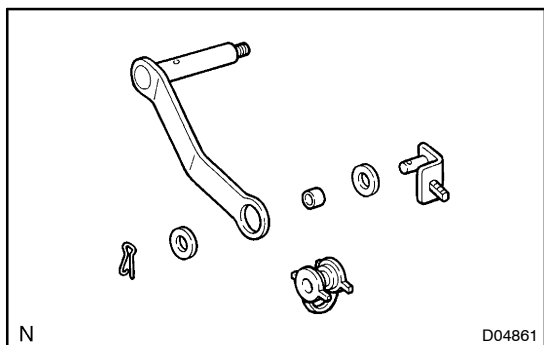


- (b) Using pliers, remove the E-ring.
- (c) Remove the swivel, 2 plate washer, shaft lower control bush and spacer.
- (d) Remove the shift lever seal.
- (e) Remove the 4 collars.
- (f) Remove the 2 spring nuts.

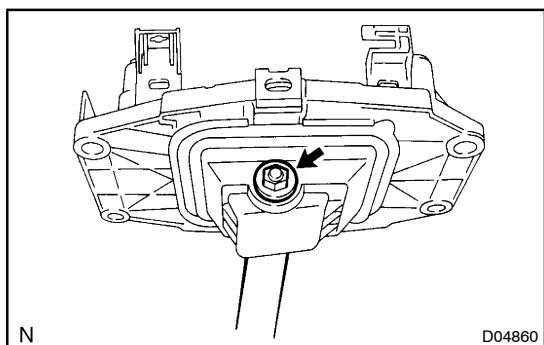
REASSEMBLY

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.

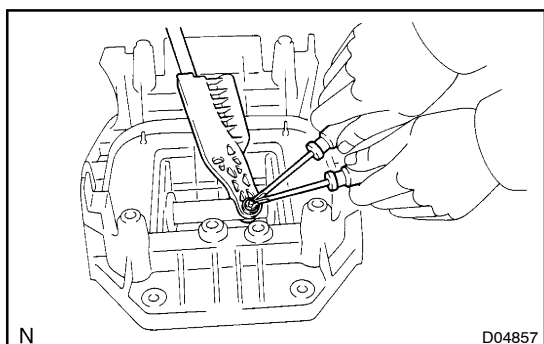


- (f) Apply MP grease to the new 2 O-rings.
- (g) Install the 2 O-rings, 2 new spacers, plate washer, control lever and nut.

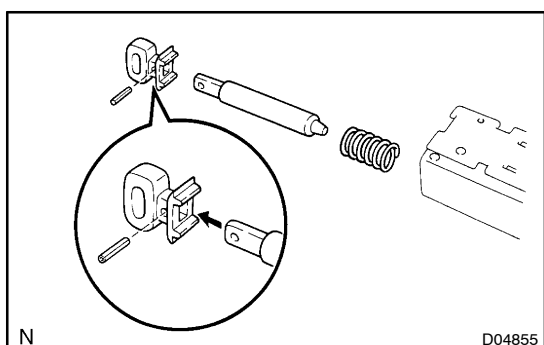
Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)

2. INSTALL SHIFT LEVER SUB-ASSEMBLY

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



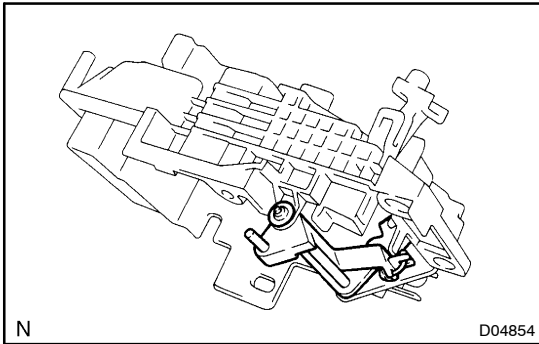
- (c) Using 2 screwdriver, install the shift lever ring.
- (d) Apply MP grease to the detent shift lever pin and spring.
- (e) Install the detent shift lever pin and spring.



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 TRANSMISSION CONTROL SWITCH



5. RASSEMBLE 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.

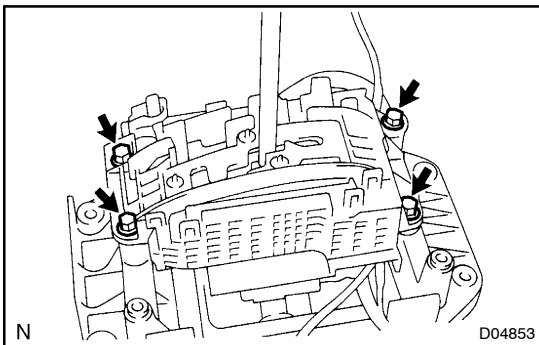
HINT:

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 transmission control 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 transmission control switch 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

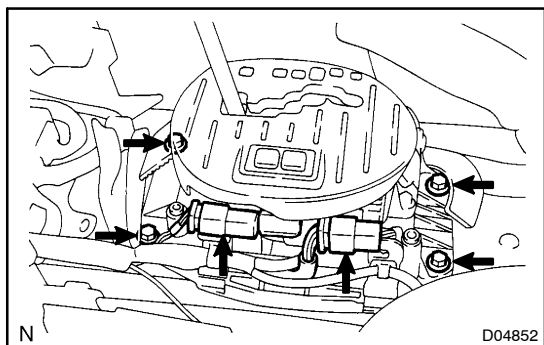
8. INSTALL POSITION INDICATOR LIGHT GUIDE

- (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.

10. INSTALL SHIFT LEVER KNOB



INSTALLATION

1. INSTALL FLOOR SHIFT LEVER ASSEMBLY

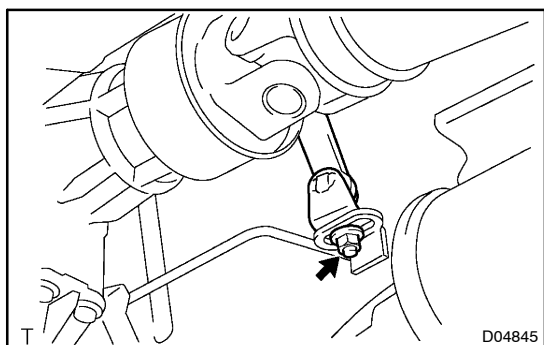
- (a) Connect the 2 connectors to the floor shift lever assembly.
- (b) Install the floor shift lever assembly with the 4 bolts.

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

2. INSTALL CONSOLE BOX ASSEMBLY

(See page BO-104)

- (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 range.
- (b) Connect the No. 1 floor shift gear shifting rod and connecting rod swivel with the nut.

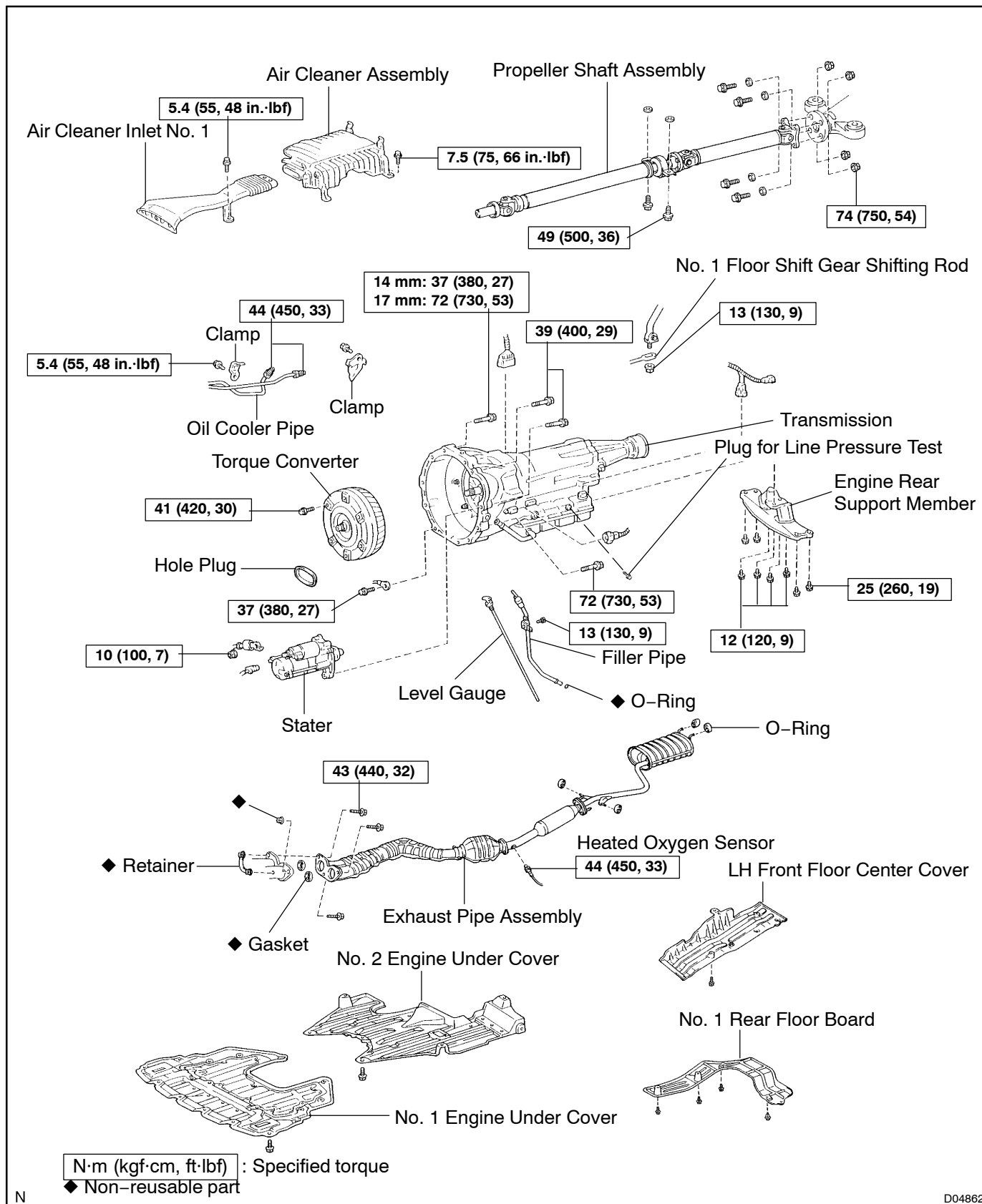
Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)

4. CHECK SHIFTING LEVER POSITION

(See page DI-156)

AUTOMATIC TRANSMISSION UNIT COMPONENTS

ATOHT-01



D04862

REMOVAL

1. REMOVE AIR CLEANER INLET NO. 1
Torque: 5.4 N·m (55 kgf·cm, 48 in·lbf)
2. REMOVE AIR CLEANER ASSEMBLY
Torque: 7.5 N·m (75 kgf·cm, 66 in·lbf)
3. REMOVE NO. 1, NO. 2 ENGINE UNDER COVERS
4. REMOVE LH FRONT FLOOR CENTER COVER
5. REMOVE NO. 1 REAR FLOOR BOARD
6. REMOVE LEVEL GAUGE
7. REMOVE FILLER PIPE

Remove the bolt and filler pipe.

Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)

8. REMOVE EXHAUST PIPE ASSEMBLY
(See page PR-4)
9. REMOVE PROPELLER SHAFT ASSEMBLY
(See page PR-4)

10. DISCONNECT OIL COOLER PIPE

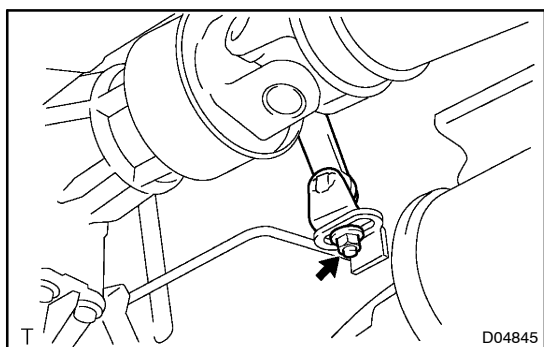
- (a) Loosen the 2 union nuts.

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

NOTICE:

Be careful not to damage the oil cooler pipe.

- (b) Remove the bolt and clamp.
Torque: 5.4 N·m (55 kgf·cm, 48 in·lbf)
- (c) Disconnect the 2 oil cooler pipes from the transmission.



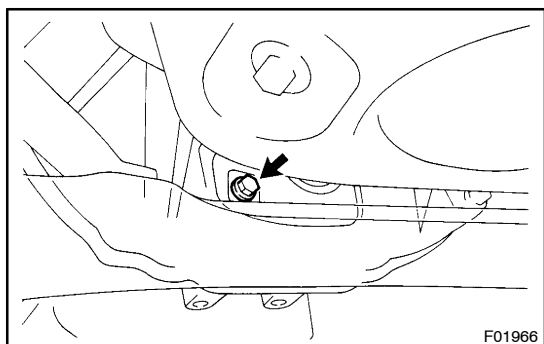
11. SEPARATE NO. 1 FLOOR SHIFT GEAR SHIFTING ROD

Remove the nut and separate the No. 1 floor shift gear shifting rod.

Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)

12. REMOVE TORQUE CONVERTER CLUTCH MOUNTING BOLT

- (a) Remove the hole flug.

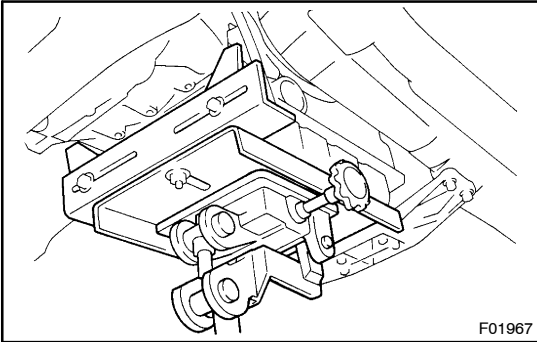
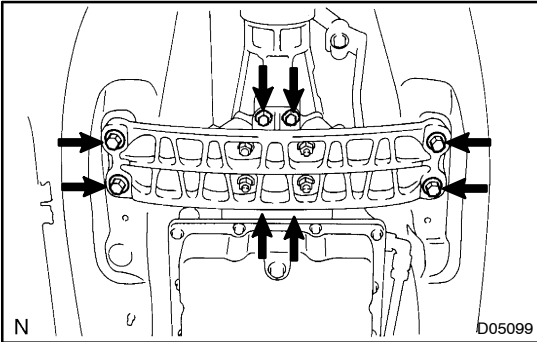


- (b) Turn the crankshaft to gain access and remove the 6 bolts with holding the crankshaft pulley set bolt with a wrench.

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

HINT:

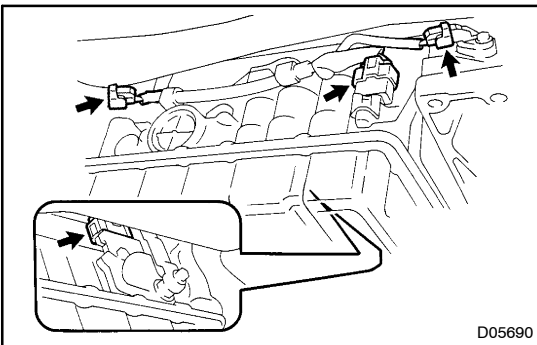
At the time of installation, please refer to the following item.
First, install the grey colored bolt and then the 5 other bolts.

**13. SUPPORT TRANSMISSION WITH JACK****14. REMOVE 4 ENGINE REAR SUPPORT MEMBER BOLTS**

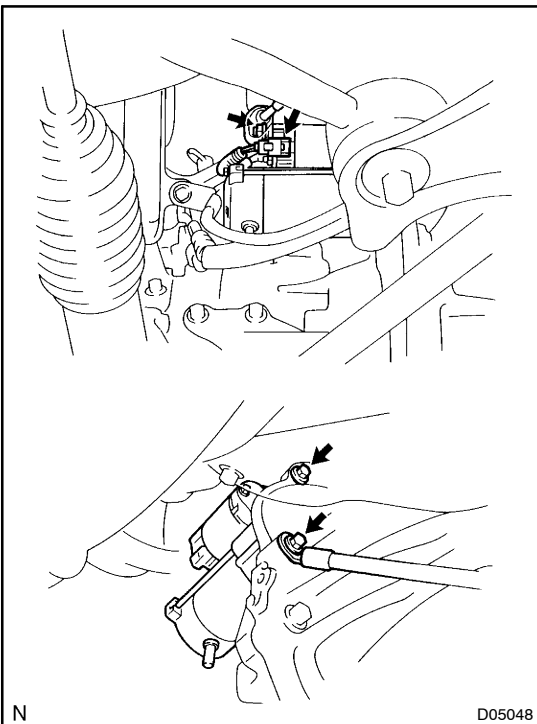
Torque: 25 N·m (260 kgf·cm, 19 ft·lbf)

15. REMOVE 4 TRANSMISSION MOUNTING BRACKET BOLTS

Torque: 12 N·m (120 kgf·cm, 9 ft·lbf)

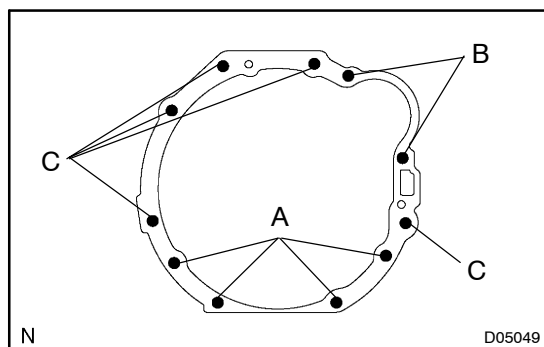
**16. DISCONNECT CONNECTORS AND CLAMPS**

- Tilt down the transmission.
- Disconnect the O/D direct clutch speed sensor connector.
- Disconnect the speed sensor connector.
- Disconnect the neutral start switch connector.
- Disconnect the solenoid connector.
- Disconnect the wire harness clamp from the bracket on transmission.

**17. REMOVE STARTER**

- Disconnect the connector and remove the nut.
- Remove the 2 bolts and starter.

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



18. REMOVE TRANSMISSION

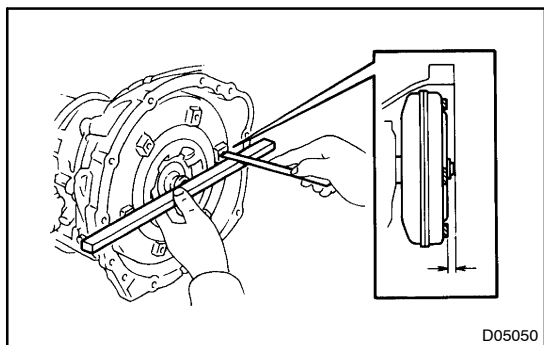
Remove the 11 bolts and transmission.

Torque:

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

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

Bolt C: 72 N·m (730 kgf·cm, 53 ft·lbf)



INSTALLATION

1. CHECK TORQUE CONVERTER INSTALLATION

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

Correct distance: More than 26.05 mm (1.0256 in.)

2. INSTALL TRANSMISSION

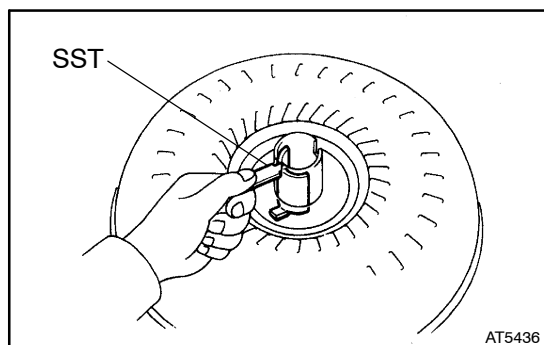
Installation is in the reverse order of removal

(See page AT-29).

HINT:

After installation, check, inspect and adjust the following items.

- Shift lever position and neutral start switch
(See page DI-156)
- Fluid level (See page DI-156)
- Conduct the road test of the vehicle

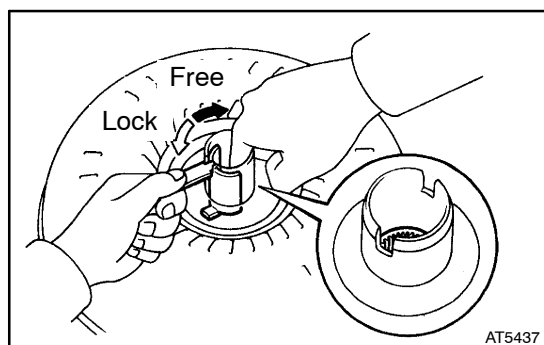


TORQUE CONVERTER AND DRIVE PLATE INSPECTION

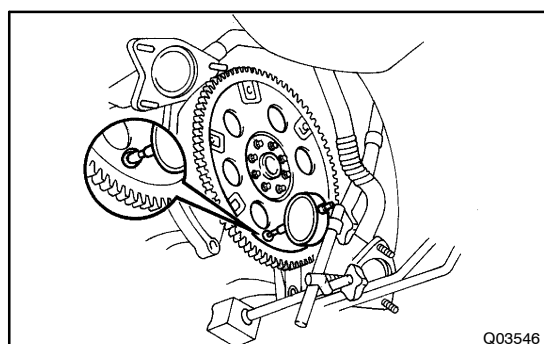
AT0HW-01

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 (09350-32020)



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



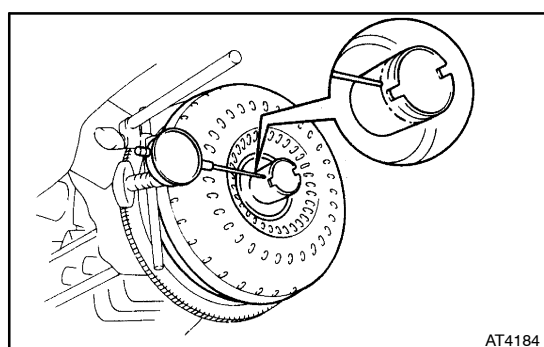
2. MEASURE DRIVE PLATE RUNOUT AND INSPECT RING GEAR

- (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. 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 SLEEVE RUNOUT

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

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

HINT:

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

- (b) Remove the torque converter.