AUTOMATIC TRANSAXLE FLUID ON-VEHICLE INSPECTION

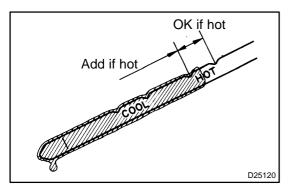
4005R-02

1. CHECK FLUID LEVEL

HINT:

Drive the vehicle so that the engine and transaxle are at normal operating temperature.

Fluid temperature: 70 - 80 °C (158 - 176 °F)



- (a) Park the vehicle on a level surface and set the parking brake.
- (b) With the engine idling and the brake pedal depressed, shift the shift lever into all positions from P to L position and return to P position.
- (c) Take out the dipstick and wipe it clean.
- (d) Put it back fully into the pipe.
- (e) Take it out and check that the fluid level is in the HOT position.

If there are leaks, it is necessary to repair or replace O-rings, FIPGs, oil seals, plugs or other parts.

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AUTOMATIC TRANSAXLE ASSY PRECAUTION

4005T-02

1. The automatic transaxle is composed of highly precision—finished parts, necessitating careful inspection before reassembly because even a small nick could cause fluid leakage or affect the performance. The instructions here are organized so that you work on only one component group at a time. This will help to avoid confusion from similar—looking parts of different sub—assemblies being on your workbench at the same time. The component groups are inspected and repaired from the converter housing side. Inspect, repair and reassemble as much as posible before proceeding to the next component group. If a defect is found in a certain component group during reassembly, inspect and repair this group immediately. If a component group cannot be assembled because parts are being ordered, be sure to keep all parts of the group in a separate container while proceeding with disassembly, inspection, repair and reassembly of other component groups.

Recommended ATF: T-IV

- 2. All disassembled parts should be washed clean and any fluid passages and holes should be blown through with compressed air.
- 3. Dry all parts with compressed air, never use shop rags.
- 4. When using compressed air, always do not aim at yourself to prevent accidentally spraying ATF or kerosene on your face.
- 5. The recommended automatic transaxle fluid or kerosene should be used for cleaning.
- 6. After cleaning, the parts should be arranged in the correct order for efficient inspection, repairs, and reassembly.
- 7. When disassembling a valve body, be sure to match each valve together with the corresponding spring.
- 8. New discs for the brakes and clutches that are to be used for replacement must be soaked in ATF for at least 15 minutes before reassembly.
- 9. All oil seal rings, clutch discs, clutch plates, rotating parts, and sliding surfaces should be coated with ATF prior to reassembly.
- 10. All gaskets and rubber O-rings should be replaced.
- 11. Do not apply adhesive cements to gaskets and similar parts.
- 12. Make sure that the ends of a snap ring are not aligned with one of the cutouts and are installed in the groove correctly.
- 13. When replacing a worn bushing, the sub-assembly containing the bushing must also be replaced.
- 14. Check thrust bearings and races for wear or damage. Replace if necessary.
- 15. Use petroleum jelly to keep parts in place.
- 16. When working with FIPG material, you must perform the following.

Using a razor blade and a gasket scraper, remove all the old packing (FIPG) material from the gasket surface.

Thoroughly clean all components to remove all the material being come off.

Clean both sealing surfaces with a non-residue solvent.

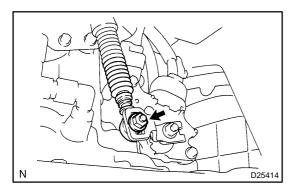
Parts must be reassembled within 10 minutes of application. Otherwise, the packing (FIPG) material must be removed and reapplied.

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PARK/NEUTRAL POSITION SWITCH ASSY

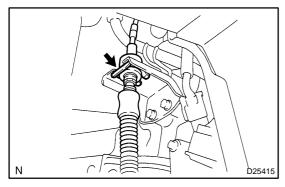
REPLACEMENT

- 1. REMOVE BATTERY
- 2. REMOVE ENGINE COVER SUB-ASSY NO.1
- 3. REMOVE AIR CLEANER ASSY
- 4. REMOVE AIR CLEANER HOSE NO.1
- 5. REMOVE INTAKE AIR RESONATOR SUB-ASSY
- 6. REMOVE ENGINE UNDER COVER LH

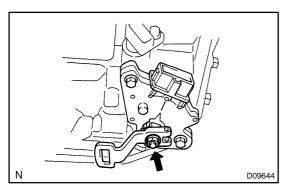


7. DISCONNECT TRANSMISSION CONTROL CABLE ASSY

- (a) Remove the nut from the control shaft lever.
- (b) Disconnect the control cable from the control shaft lever.



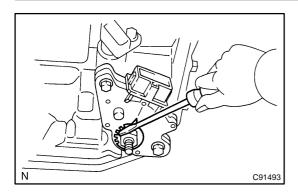
(c) Remove the clip and disconnect the control cable from the control cable bracket.



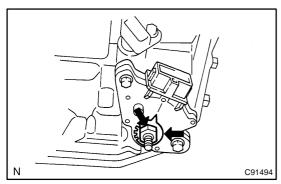
8. REMOVE PARK/NEUTRAL POSITION SWITCH ASSY

- (a) Disconnect the park/neutral position switch connector.
- (b) Remove the nut, washer and control shaft lever.

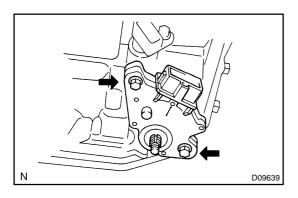
2002 CAMRY REPAIR MANUAL (RM881U)



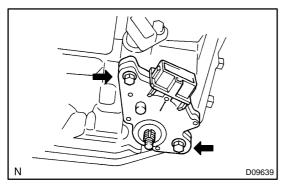
(c) Pry out the lock plate.



(d) Remove the lock nut and lock plate.



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

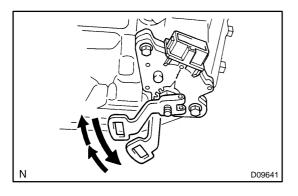


9. INSTALL PARK/NEUTRAL POSITION SWITCH ASSY

- (a) Install the park/neutral position switch to the manual valve shaft.
- (b) Temporarily install the 2 bolts.
- (c) Place a new lock plate and tighten the nut.

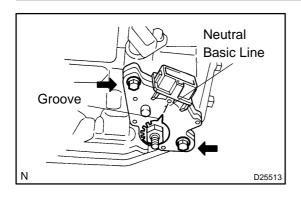
Torque: 6.9 N·m (70 kgf·cm, 61 in. lbf)

(d) Temporarily install the control shaft lever.



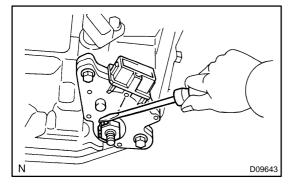
- (e) Turn the lever counterclockwise until it stops, then turn it clockwise 2 notches.
- (f) Remove the control shaft lever.

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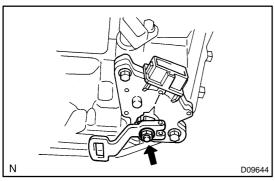


- (g) Align the groove with neutral basic line.
- (h) Hold the switch in position and tighten the 2 bolts.

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

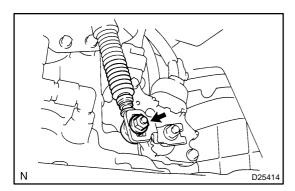


(i) Using a screwdriver, stake the nut with the lock plate.

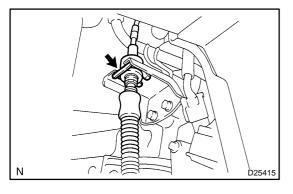


(j) Install the control shaft lever, washer and nut.

Torque: 12.7 N·m (130 kgf·cm, 9 ft·lbf)



- 10. INSTALL TRANSMISSION CONTROL CABLE ASSY
- (a) Temporarily install the control cable to the control shaft lever with the nut.



- (b) Install the control cable and a new clip to the bracket.
- (c) Connect the park/neutral position switch connector.

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- 11. ADJUST SHIFT LEVER POSITION(See page 40–47)
- 12. INSPECT SHIFT LEVER POSITION(See page 40–47)
- 13. INSPECT PARK/NEUTRAL POSITION SWITCH ASSY (See page 40–7)
- 14. INSTALL ENGINE UNDER COVER LH
- 15. INSTALL INTAKE AIR RESONATOR SUB-ASSY
- 16. INSTALL AIR CLEANER HOSE NO.1
- 17. INSTALL AIR CLEANER ASSY
- 18. INSTALL ENGINE COVER SUB-ASSY NO.1
- 19. INSTALL BATTERY

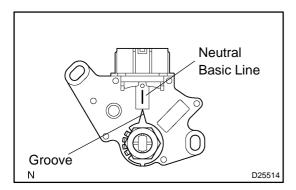
ADJUSTMENT

4005Z-02

1. INSPECT PARK/NEUTRAL POSITION SWITCH ASSY

- (a) Apply the parking brake and turn the ignition switch to ON.
- (b) Depress the brake pedal and check that the engine starts only when the shift lever is set in N or P position.
- (c) Check that the back–up light is lit and the reverse warning buzzer sounds only when the shift lever is set in R position.

If a failure is found, check the park/neutral position switch for continuity.



2. ADJUST PARK/NEUTRAL POSITION SWITCH ASSY

- (a) Loosen the 2 bolts of park/neutral position switch and set the shift lever to the N position.
- (b) Align the groove with neutral basic line.
- (c) Hold the switch in position and tighten the 2 bolts.
 - Torque: 5.4 N·m (55 kgf·cm, 48 in. lbf)
- (d) After adjustment, perform the inspection described in step 1.

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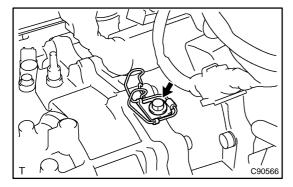
AUTOMATIC TRANSAXLE ASSY (1MZ-FE)

REPLACEMENT

1. REMOVE ENGINE ASSEMBLY WITH TRANSAXLE(See page 14–155)

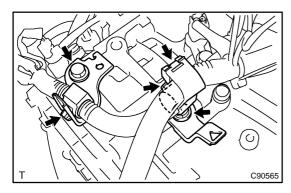
2. REMOVE FRONT DRIVE SHAFT ASSY RH (See page 30–8)

3. REMOVE FRONT DRIVE SHAFT ASSY LH (See page 30–8)



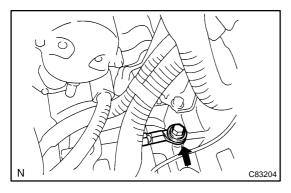
4. REMOVE TRANSMISSION CONTROL CABLE BRACKET NO.2

(a) Remove the bolt and transmission control cable bracket No.2.



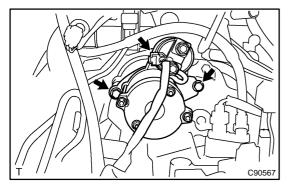
5. REMOVE WIRE HARNESS CLAMP

- (a) Disconnect the wire harness from the clamps.
- (b) Remove the 2 bolts and 2 clamps.



6. DISCONNECT WIRE HARNESS

(a) Remove the bolt and wire harness.



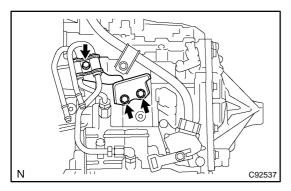
7. REMOVE STARTER ASSY

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

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8. DISCONNECT CONNECTOR

- (a) Disconnect the transmission wire connector.
- (b) Disconnect the park/neutral position switch connector.
- (c) Disconnect the 2 speed sensor connectors.

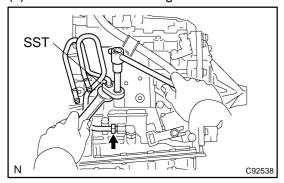


9. REMOVE TRANSMISSION CONTROL CABLE BRACKET NO.1

- (a) Remove the bolt and oil cooler tube clamp.
- (b) Remove the 2 bolts and transmission control cable bracket No.1.

10. REMOVE TRANSMISSION OIL FILLER TUBE SUB-ASSY

- (a) Remove the ATF level gauge.
- (b) Disconnect the wire harness clamp from the oil filler tube and remove the bolt and oil filler tube.
- (c) Remove the O-ring from the oil filler tube.



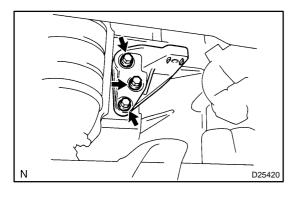
11. REMOVE OIL COOLER INLET TUBE NO.1

(a) Using SST and spanner, disconnect the oil cooler inlet tube No.1.

SST 09023-12700

12. REMOVE OIL COOLER OUTLET TUBE NO.1

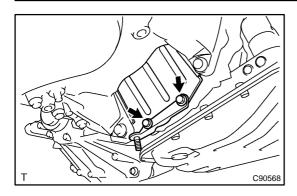
(a) Using SST and spanner, disconnect the oil cooler outlet tube No.1. SST 09023–12700



13. REMOVE TRANSVERSE ENGINE ENGINE MOUNTING BRACKET

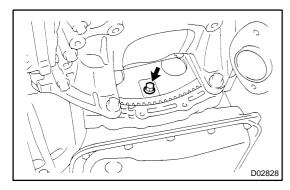
(a) Remove the 3 bolts and engine mounting bracket FR.

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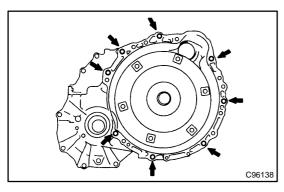
14. REMOVE FLYWHEEL HOUSING UNDER COVER

(a) Remove the 2 bolts and flywheel housing under cover.



15. REMOVE AUTOMATIC TRANSAXLE ASSY

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



- (b) Remove the 8 bolts.
- (c) Separate and remove the automatic transaxle.

16. REMOVE TORQUE CONVERTER CLUTCH ASSY

17. INSPECT TORQUE CONVERTER CLUTCH ASSY (See page 40–20)

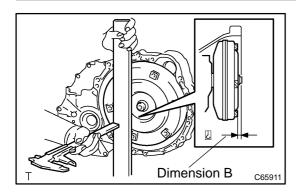
SST 09350-32014 (09351-32010, 09351-32020)

18. INSTALL TORQUE CONVERTER CLUTCH ASSY

- (a) Install the torque converter clutch to the automatic transaxle.
- T C83119

(b) Using vernier calipers, measure the dimension "A" between the transaxle fitting part and the converter fitting part of the drive plate.

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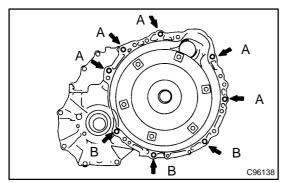
(c) Using vernier calipers and a straight edge, measure the dimension "B" shown in the illustration and check that "B" is greater than "A" measured in (b).

Standard: A + 1 mm or more

NOTICE:

Do not add the thickness of straight edge.

19. INSTALL AUTOMATIC TRANSAXLE ASSY



(a) Install the automatic transaxle and 8 bolts to the engine.

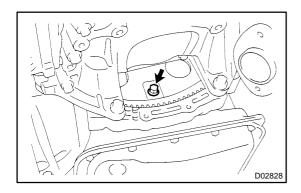
Torque:

Bolt A: 64 N·m (650 kgf·cm, 47 ft·lbf)

Bolt B: 44 N·m (449 kgf·cm, 32 ft·lbf)

(b) Apply a few drops of adhesive to each 2 threads on the tip of the 6 torque converter clutch mounting bolts.

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



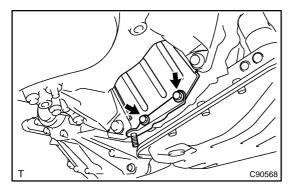
(c) Install the 6 torque converter clutch mounting bolts.

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

HINT:

21.

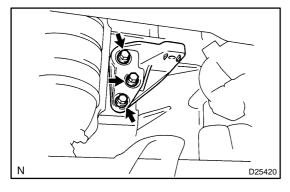
First install green colored bolt and then the 5 bolts.



20. INSTALL FLYWHEEL HOUSING UNDER COVER

(a) Install the flywheel housing under cover and 2 bolts.

Torque: 8.0 N·m (82 kgf·cm, 71 in. lbf)



BRACKET

(a) Install the engine mounting bracket FR and 3 bolts to the automatic transaxle.

INSTALL TRANSVERSE ENGINE ENGINE MOUNTING

Torque: 64 N·m (653 kgf·cm, 47 ft·lbf)

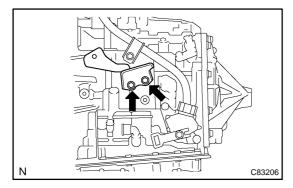
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22. INSTALL TRANSMISSION OIL FILLER TUBE SUB-ASSY

- (a) Coat a new O-ring with ATF, and install them to the oil filler tube.
- (b) Install the oil filler tube and bolt to the automatic transaxle.

Torque: 5.5 N m (56 kgf cm, 49 in. lbf)

- (c) Connect the wire harness clamp to the oil filler tube.
- (d) Install the ATF level gauge.

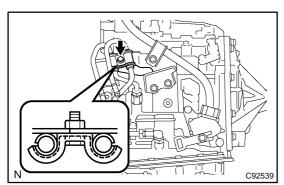


23. INSTALL TRANSMISSION CONTROL CABLE BRACKET NO.1

(a) Install the control cable bracket No.1 and 2 bolts.

Torque: 11.8 N·m (122 kgf·cm, 9 ft·lbf)

- 24. INSTALL OIL COOLER INLET TUBE NO.1
- (a) Temporarily install the oil cooler outlet tube No.1.
- (b) Temporarily install the oil cooler inlet tube No.1.

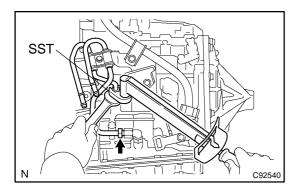


(c) Install the oil cooler tube clamp and bolt.

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

HINT:

Install them so that the oil cooler tube cushion is positioned as being illustrated.



(d) Using SST and spanner, tighten the oil cooler inlet tube No.1.

SST 09023-12700

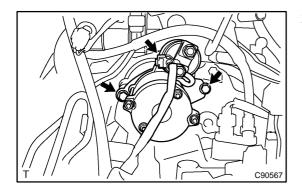
Torque: 34.3 N m (350 kgf cm, 25 ft lbf)

25. INSTALL OIL COOLER OUTLET TUBE NO.1

(a) Using SST and spanner, tighten the oil cooler outlet tube No.1.

SST 09023-12700

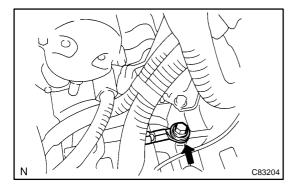
Torque: 34.3 N m (350 kgf cm, 25 ft lbf)



26. INSTALL STARTER ASSY

- (a) Install the starter assy and 2 bolts.

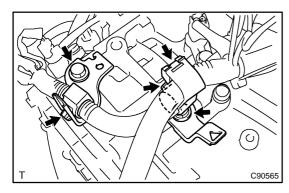
 Torque: 37 N·m (377 kgf·cm, 27 ft·lbf)
- (b) Connect the connecter.



27. INSTALL WIRE HARNESS

(a) Install the wire harness and bolt.

Torque: 25.5 N m (260 kgf cm, 19 ft lbf)

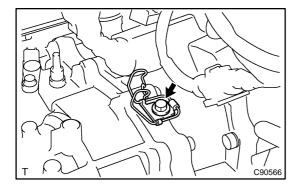


28. INSTALL WIRE HARNESS CLAMP

(a) Install the 2 clamps and 2 bolts.

Torque: 8.4 N·m (86 kgf·cm, 74 in. lbf)

(b) Connect the wire harness to the clamps.



29. INSTALL TRANSMISSION CONTROL CABLE BRACKET NO.2

(a) Install the transmission control cable bracket No.2 with the bolt.

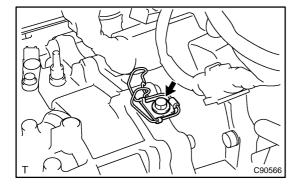
Torque: 11.8 N·m (122 kgf·cm, 9 ft·lbf)

- 30. INSTALL FRONT DRIVE SHAFT ASSY LH (See page 30–8)
- 31. INSTALL FRONT DRIVE SHAFT ASSY RH (See page 30–8)
- 32. INSTALL ENGINE ASSEMBLY WITH TRANSAXLE(See page 14–155)

AUTOMATIC TRANSAXLE ASSY (2AZ-FE)

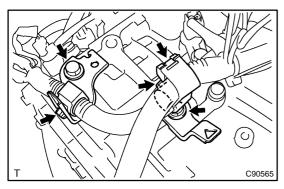
REPLACEMENT

- 1. REMOVE ENGINE ASSEMBLY WITH TRANSAXLE(See page 14–22)
- 2. REMOVE FRONT DRIVE SHAFT ASSY RH (See page 30–8)
- 3. REMOVE FRONT DRIVE SHAFT ASSY LH (See page 30–8)



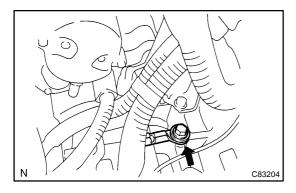
4. REMOVE TRANSMISSION CONTROL CABLE BRACKET NO.2

(a) Remove the bolt and transmission control cable bracket No.2.



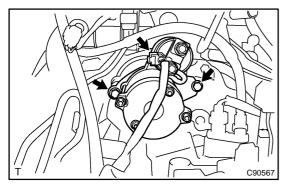
5. REMOVE WIRE HARNESS CLAMP

- (a) Disconnect the wire harness from the clamps.
- (b) Remove the 2 bolts and 2 clamps.



6. DISCONNECT WIRE HARNESS

(a) Remove the bolt and wire harness.



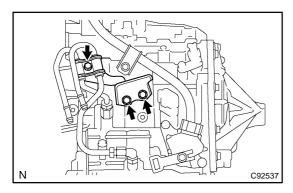
7. REMOVE STARTER ASSY

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

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8. DISCONNECT CONNECTOR

- (a) Disconnect the transmission wire connector.
- (b) Disconnect the park/neutral position switch connector.
- (c) Disconnect the 2 speed sensor connectors.

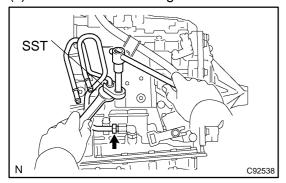


9. REMOVE TRANSMISSION CONTROL CABLE BRACKET NO.1

- (a) Remove the bolt and oil cooler tube clamp.
- (b) Remove the 2 bolts and transmission control cable bracket No.1.

10. REMOVE TRANSMISSION OIL FILLER TUBE SUB-ASSY

- (a) Remove the ATF level gauge.
- (b) Disconnect the wire harness clamp from the oil filler tube and remove the bolt and oil filler tube.
- (c) Remove the O-ring from the oil filler tube.



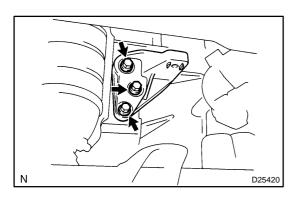
11. REMOVE OIL COOLER INLET TUBE NO.1

(a) Using SST and spanner, disconnect the oil cooler inlet tube No.1.

SST 09023-12700

12. REMOVE OIL COOLER OUTLET TUBE NO.1

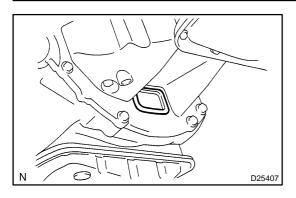
(a) Using SST and spanner, disconnect the oil cooler outlet tube No.1. SST 09023–12700



13. REMOVE TRANSVERSE ENGINE ENGINE MOUNTING BRACKET

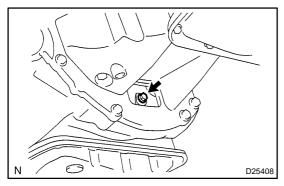
(a) Remove the 3 bolts and engine mounting bracket FR.

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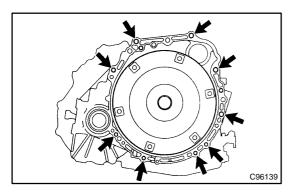
14. REMOVE FLYWHEEL HOUSING UNDER COVER

(a) Remove the flywheel housing under cover.



15. REMOVE AUTOMATIC TRANSAXLE ASSY

(a) Remove the 6 bolts while holding the crankshaft pulley bolt with a wrench.



- (b) Remove the 9 bolts.
- (c) Separate and remove the automatic transaxle.

16. REMOVE TORQUE CONVERTER CLUTCH ASSY

17. INSPECT TORQUE CONVERTER CLUTCH ASSY (See page 40–20)

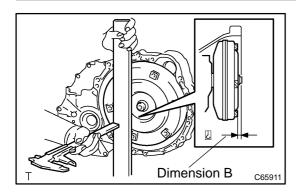
SST 09350-32014 (09351-32010, 09351-32020)

18. INSTALL TORQUE CONVERTER CLUTCH ASSY

- (a) Install the torque converter clutch to the automatic transaxle.
- P C83051

(b) Using vernier calipers, measure the dimension "A" between the transaxle fitting part and the converter fitting part of the drive plate.

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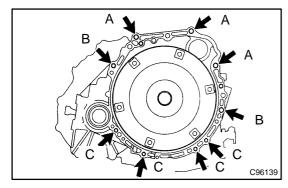
(c) Using vernier calipers and a straight edge, measure the dimension "B" shown in the illustration and check that "B" is greater than "A" measured in (b).

Standard: A + 1 mm or more

NOTICE:

Do not add the thickness of straight edge.

INSTALL AUTOMATIC TRANSAXLE ASSY



Install the automatic transaxle and 9 bolts to the engine. (a) Torque:

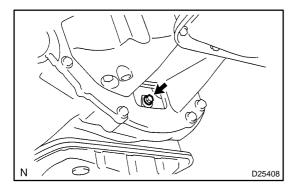
Bolt A: 64 N·m (650 kgf·cm, 47 ft·lbf)

Bolt B: 46 N m (470 kgf cm, 34 ft lbf)

Bolt C: 44 N m (449 kgf cm, 32 ft lbf)

Apply a few drops of adhesive to each 2 threads on the (b) tip of the 6 torque converter clutch mounting bolts.

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



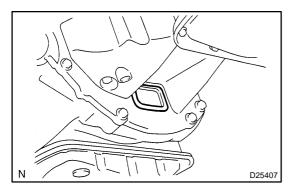
Install the 6 torque converter clutch mounting bolts.

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

HINT:

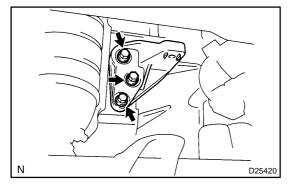
21.

First install green colored bolt and then the other 5 bolts.



INSTALL FLYWHEEL HOUSING UNDER COVER 20.

Install the flywheel housing under cover. (a)



Torque: 64 N·m (653 kgf·cm, 47 ft·lbf)

BRACKET

INSTALL TRANSVERSE ENGINE ENGINE MOUNTING

Install the engine mounting bracket FR and 3 bolts to the (a) automatic transaxle.

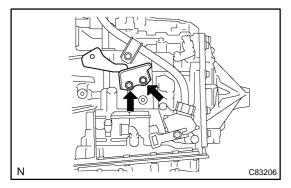
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22. INSTALL TRANSMISSION OIL FILLER TUBE SUB-ASSY

- (a) Coat a new O-ring with ATF, and install them to the oil filler tube.
- (b) Install the oil filler tube and bolt to the automatic transaxle.

Torque: 5.5 N·m (56 kgf·cm, 49 in. lbf)

- (c) Connect the wire harness clamp to the oil filler tube.
- (d) Install the ATF level gauge.

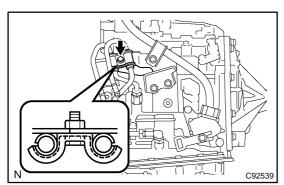


23. INSTALL TRANSMISSION CONTROL CABLE BRACKET NO.1

(a) Install the control cable bracket No.1 and 2 bolts.

Torque: 11.8 N·m (122 kgf·cm, 9 ft·lbf)

- 24. INSTALL OIL COOLER INLET TUBE NO.1
- (a) Temporarily install the oil cooler outlet tube No.1.
- (b) Temporarily install the oil cooler inlet tube No.1.

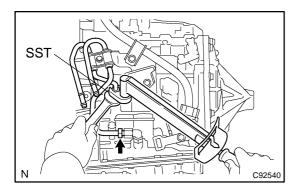


(c) Install the oil cooler tube clamp and bolt.

Torque: 5.4 N·m (56 kgf·cm, 49 in. lbf)

HINT:

Install them so that the oil cooler tube cushion is positioned as being illustrated.



(d) Using SST and spanner, tighten the oil cooler inlet tube No.1.

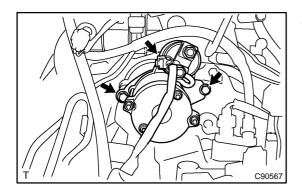
SST 09023-12700

Torque: 34.3 N m (350 kgf cm, 25 ft lbf)

25. INSTALL OIL COOLER OUTLET TUBE NO.1

(a) Using SST and spanner, tighten the oil cooler outlet tube No.1. SST 09023–12700

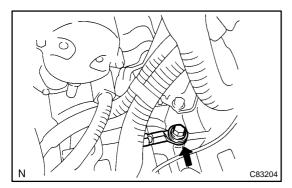
Torque: 34.3 N·m (350 kgf·cm, 25 ft·lbf)



26. INSTALL STARTER ASSY

- (a) Install the starter assy and 2 bolts.

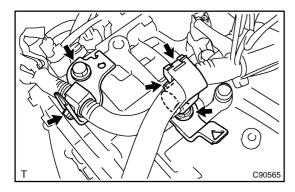
 Torque: 37 N·m (377 kgf·cm, 27 ft·lbf)
- (b) Connect the connecter.



27. INSTALL WIRE HARNESS

(a) Install the wire harness and bolt.

Torque: 25.5 N m (260 kgf cm, 19 ft lbf)

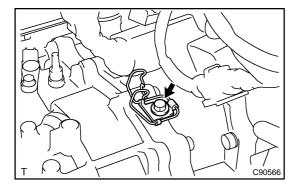


28. INSTALL WIRE HARNESS CLAMP

(a) Install the 2 clamps and 2 bolts.

Torque: 8.4 N·m (86 kgf·cm, 74 in. lbf)

(b) Connect the wire harness to the clamps.



29. INSTALL TRANSMISSION CONTROL CABLE BRACKET NO.2

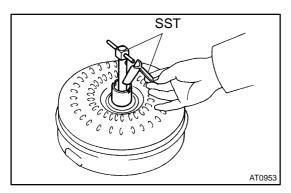
(a) Install the transmission control cable bracket No.2 and bolt.

Torque: 11.8 N·m (122 kgf·cm, 9 ft·lbf)

- 30. INSTALL FRONT DRIVE SHAFT ASSY LH (See page 30-8)
- 31. INSTALL FRONT DRIVE SHAFT ASSY RH (See page 30–8)
- 32. INSTALL ENGINE ASSEMBLY WITH TRANSAXLE(See page 14–22)

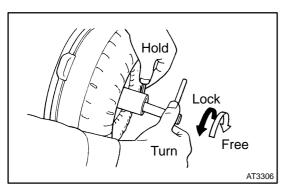
TORQUE CONVERTER CLUTCH AND DRIVE PLATE INSPECTION

40063-02



1. INSPECT TORQUE CONVERTER CLUTCH ASSY

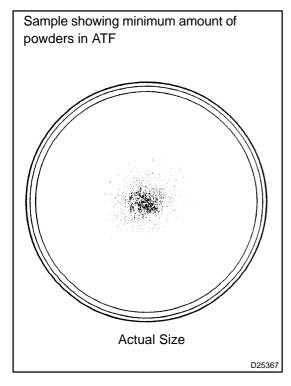
- (a) Inspect the one-way clutch.
 - (1) Set SST into the inner race of the one-way clutch.
 - SST 09350-32014 (09351-32010)
 - (2) Install SST so that it fits in the notch of the converter hub and outer race of the one–way clutch.
 - SST 09350-32014 (09351-32020)



(3) With the torque converter clutch setting up on its side, check that the one—way clutch locks when it is turned counterclockwise, and rotates clockwise smoothly.

If necessary, clean the converter and retest the one-way clutch.

Replace the converter if the one-way clutch still fails the test.



- (b) Determine the condition of the torque converter clutch assy.
 - (1) If the inspection result of the torque converter clutch assy meets the following item, replace the torque converter clutch.

Malfunction item:

Any metallic sound is heard from the torque converter clutch during stall test or when the shift lever is in neutral position.

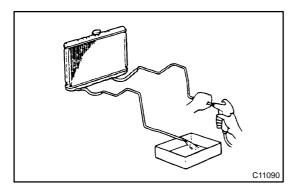
One—way clutch is free or locked in both directions. Fine powders exceeding the sample limit is identified in ATF. (See the sample.)

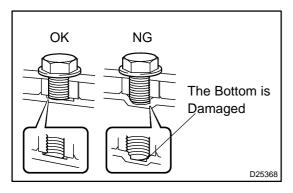
HINT:

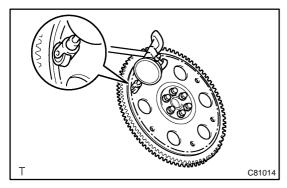
The sample shows the auto fluid of approx. 0.25 liters (0.26 US qts, 0.22 lmp. qts) that is taken out from the removed torque converter clutch

- (c) Exchange the ATF in the torque converter clutch.
 - (1) If the ATF is discolored and/or has a foul odor, completely stir the ATF in the torque converter clutch and drain the ATF with the torque converter facing to up.

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- (d) Clean and check the oil cooler and oil pipe line.
 - (1) If the torque converter clutch is inspected or the ATF is exchanged, clean the oil cooler and oil pipe line.

HINT:

- Spray compressed air of 196 kPa (2 kgf/cm², 28 psi) from the inlet hose.
- If plenty of fine powders are identified in the ATF, add new ATF using a bucket pump and clean it again.
 - (2) If the ATF is cloudy, inspect the oil cooler (radiator).
- (e) Prevent deformation of the torque converter clutch and damage to the oil pump gear.
 - (1) When any marks due to interference are found on the end of the bolt for the torque converter clutch and on the bottom of the bolt hole, replace the bolt and the torque converter clutch.
 - (2) All of the bolts must be the same length.
 - (3) The bolts with washers must be used.

2. INSPECT DRIVE PLATE & RING GEAR SUB-ASSY

- (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.)

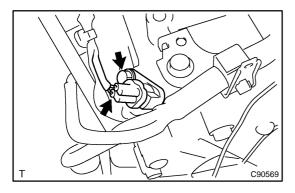
If the runout is not within the specification or ring gear is damaged, replace the drive plate.

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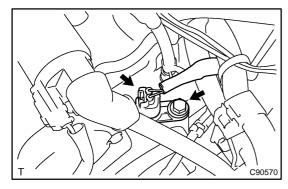
TRANSMISSION REVOLUTION SENSOR

REPLACEMENT

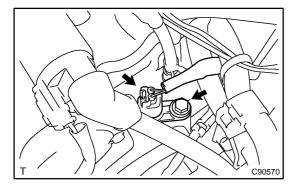
- 1. REMOVE BATTERY
- 2. REMOVE ENGINE COVER SUB-ASSY NO.1
- 3. REMOVE AIR CLEANER ASSY
- 4. REMOVE AIR CLEANER HOSE NO.1



- 5. REMOVE TRANSMISSION REVOLUTION SENSOR(NT SENSOR)
- (a) Disconnect the transmission revolution sensor connector.
- (b) Remove the bolt and transmission revolution sensor.



- 6. REMOVE TRANSMISSION REVOLUTION SENSOR(NC SENSOR)
- (a) Disconnect the transmission revolution sensor connector.
- (b) Remove the bolt and transmission revolution sensor.



- 7. INSTALL TRANSMISSION REVOLUTION SENSOR(NC SENSOR)
- (a) Coat an O-ring with ATF.
- (b) Install the transmission revolution sensor with the bolt.

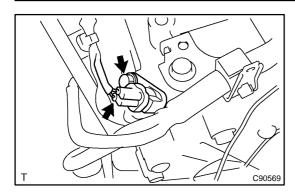
Torque: 11.3 N m (115 kgf cm, 8 ft lbf)

HINT:

Make sure of the manufacturer's name.

(c) Connect the transmission revolution sensor connector.

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8. INSTALL TRANSMISSION REVOLUTION SENSOR(NT SENSOR)

- (a) Coat an O-ring with ATF.
- (b) Install the transmission revolution sensor with the bolt.

Torque: 11.3 N·m (115 kgf·cm, 8 ft·lbf)

HINT:

Make sure of the manufacturer's name.

- Connect the transmission revolution sensor connector.
- 9. INSTALL AIR CLEANER HOSE NO.1
- 10. INSTALL AIR CLEANER ASSY

Torque: 5.0 N·m (51 kgf·cm, 44 in. lbf)

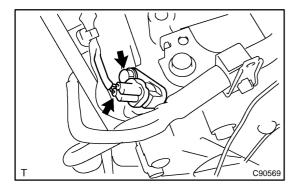
11. INSTALL ENGINE COVER SUB-ASSY NO.1

2002 CAMRY REPAIR MANUAL (RM881U)

SPEED SENSOR

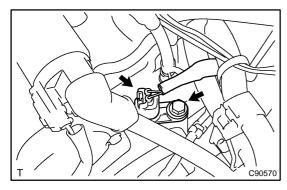
REPLACEMENT

- 1. REMOVE BATTERY
- 2. REMOVE ENGINE COVER SUB-ASSY NO.1
- 3. REMOVE AIR CLEANER ASSY
- 4. REMOVE AIR CLEANER HOSE NO.1



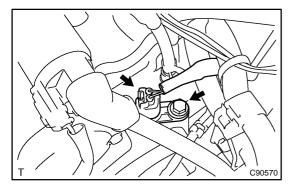
5. REMOVE SPEED SENSOR(NT SENSOR)

- (a) Disconnect the speed sensor connector.
- (b) Remove the bolt and speed sensor.



6. REMOVE SPEED SENSOR(NC SENSOR)

- (a) Disconnect the speed sensor connector.
- (b) Remove the bolt and speed sensor.



7. INSTALL SPEED SENSOR(NC SENSOR)

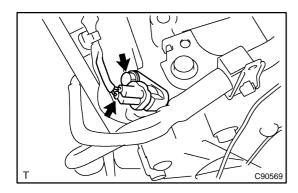
- (a) Coat an O-ring with ATF.
- (b) Install the speed sensor with the bolt.Torque: 11.3 N·m (115 kgf·cm, 8 ft·lbf)

HINT:

Make sure of the manufacturer's name.

(c) Connect the speed sensor connector.

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8. INSTALL SPEED SENSOR(NT SENSOR)

- (a) Coat an O-ring with ATF.
- (b) Install the speed sensor with the bolt.

Torque: 11.3 N·m (115 kgf·cm, 8 ft·lbf)

HINT:

Make sure of the manufacturer's name.

(c) Connect the speed sensor connector.

- 9. INSTALL AIR CLEANER HOSE NO.1
- 10. INSTALL AIR CLEANER ASSY

Torque: 5.0 N·m (51 kgf·cm, 44 in. lbf)

11. INSTALL ENGINE COVER SUB-ASSY NO.1

2002 CAMRY REPAIR MANUAL (RM881U)

TRANSMISSION WIRE

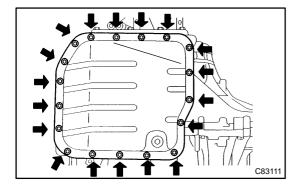
REPLACEMENT

1. REMOVE ENGINE UNDER COVER LH

2. DRAIN AUTOMATIC TRANSAXLE FLUID

- (a) Remove the drain plug and gasket, and drain ATF.
- (b) Install a new gasket and drain plug.

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



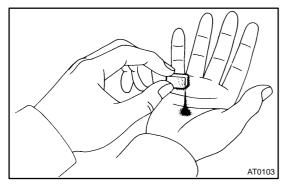
3. REMOVE AUTOMATIC TRANSAXLE OIL PAN SUB-ASSY

(a) Remove the 18 bolts, oil pan and gasket.

NOTICE:

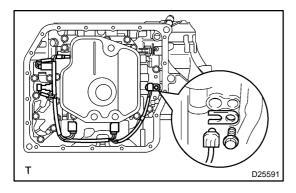
Some fluid will remain in the oil pan. Remove all pan bolts, and carefully remove the oil pan assembly.

(b) Remove the 2 magnets from the oil pan.



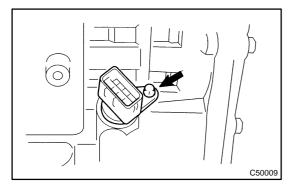
- (c) Examine particles in pan.
 - (1) Remove the magnets and use them to collect any steel chips. Look carefully at the chips and particles in the pan and the magnet to anticipate what type of wear you will find in the transaxle.

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



4. DISCONNECT TRANSMISSION WIRE

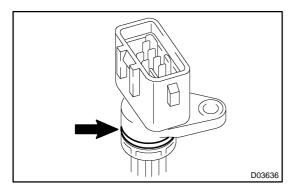
- (a) Disconnect the 5 shift solenoid valve connectors.
- (b) Remove the bolt and lock plate, and disconnect the ATF temperature sensor.



5. REMOVE TRANSMISSION WIRE

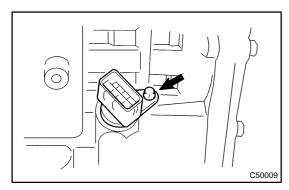
- (a) Disconnect the transmission wire connector.
- (b) Remove the bolt and transmission wire.

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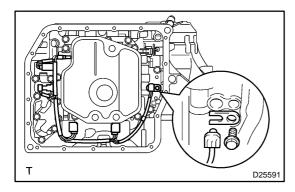
6. INSTALL TRANSMISSION WIRE

- (a) Coat a O-ring of the transmission wire connector with ATF.
- (b) Install the transmission wire.



(c) Install the bolt.

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

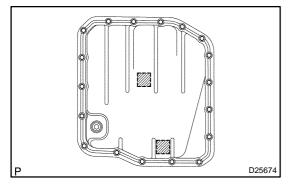


7. CONNECT TRANSMISSION WIRE

- (a) Coat a O-ring of the ATF temperature sensor with ATF.
- (b) Install the ATF temperature sensor with the lock plate and bolt.

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

(c) Connect the 5 shift solenoid valve connectors.

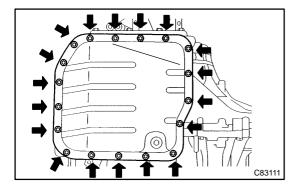


8. INSTALL AUTOMATIC TRANSAXLE OIL PAN SUB-ASSY

- (a) Install the 2 magnets in the oil pan.
- (b) Apply seal packing or equivalent to 18 bolts.

Seal packing:

THREE BOND 2430 or equivalent



(c) Install a new gasket, oil pan and 18 bolts to the transaxle case.

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

NOTICE:

Because the bolts should be seal bolts, apply seal packing to bolts and tighten them within 10 minutes after application.

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- 9. ADD AUTOMATIC TRANSAXLE FLUID
- 10. INSPECT AUTOMATIC TRANSAXLE FLUID(See page 40–1)
- 11. INSTALL ENGINE UNDER COVER LH

TRANSMISSION VALVE BODY ASSY REPLACEMENT

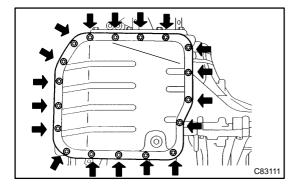
40064-03

1. REMOVE ENGINE UNDER COVER RH

2. DRAIN AUTOMATIC TRANSAXLE FLUID

- (a) Remove the drain plug and gasket, and drain ATF.
- (b) Install a new gasket and drain plug.

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



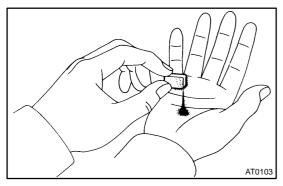
3. REMOVE AUTOMATIC TRANSAXLE OIL PAN SUB-ASSY

(a) Remove the 18 bolts, oil pan and gasket.

NOTICE:

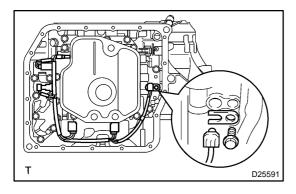
Some fluid will remain in the oil pan. Remove all pan bolts, and carefully remove the oil pan assembly.

(b) Remove the 2 magnets from the oil pan.



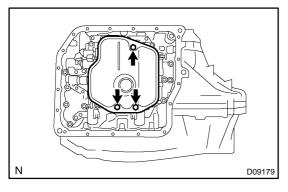
- (c) Examine particles in pan.
 - (1) Remove the magnets and use them to collect any steel chips. Look carefully at the chips and particles in the pan and the magnet to anticipate what type of wear you will find in the transaxle.

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



4. DISCONNECT TRANSMISSION WIRE

- (a) Disconnect the 5 shift solenoid valve connectors.
- (b) Remove the bolt and lock plate, and disconnect the ATF temperature sensor.



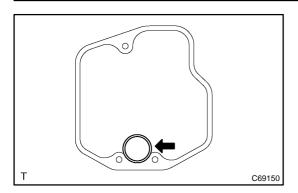
5. REMOVE VALVE BODY OIL STRAINER ASSY

(a) Remove the 3 bolts and oil strainer.

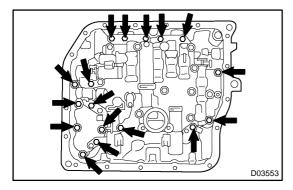
NOTICE:

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

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(b) Remove the O-ring from the oil strainer.

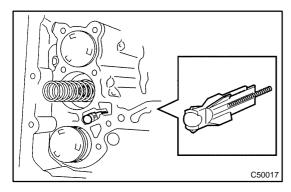


6. REMOVE TRANSMISSION VALVE BODY ASSY

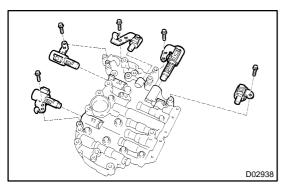
Support the valve body assy and remove the 17 bolts and (a) the valve body assy.

NOTICE:

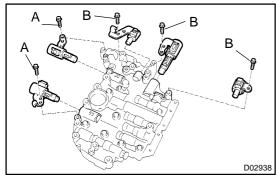
Be careful not to drop the check valve body, spring and accumulator piston.



(b) Remove the check ball body and spring.



Remove the 5 bolts and 5 shift solenoid valves. (c)



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INSTALL TRANSMISSION VALVE BODY ASSY 7.

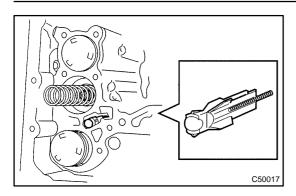
Install the 5 shift solenoid valves with the 5 bolts. (a)

Torque:

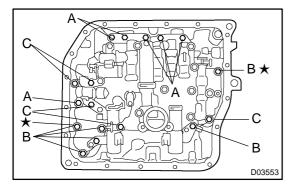
Bolt A: 6.6 N·m (67 kgf-cm, 58 in.·lbf) Bolt B: 10.8 N·m (110 kgf·cm, 8 ft ·lbf)

Bolt length:

Bolt A: 12 mm (0.47 in.) Bolt B: 45 mm (1.77 in.)



(b) Install the spring and check ball body.



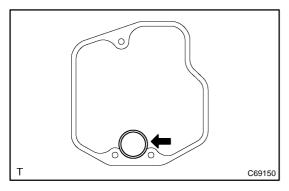
- (c) Align the groove of the manual valve with the pin of lever.
- (d) Install the 17 bolts.

Torque: 10.8 N·m (110 kgf·cm, 8 ft·lbf)

NOTICE:

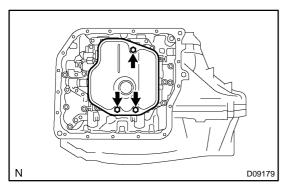
- Push the valve body against the accumulator piston spring and the check ball body to install it.
- Tighten those bolts marked by ★ in the illustration first temporarily because they are positioning bolts.
 Bolt length:

Bolt A: 25 mm (0.984 in.) Bolt B: 41 mm (1.614 in.) Bolt C: 45 mm (1.771 in.)



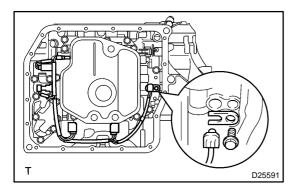
8. INSTALL VALVE BODY OIL STRAINER ASSY

- (a) Coat a new O-ring with ATF.
- (b) Install the O-ring to the oil strainer.



(c) Install the oil strainer with the 3 bolts.

Torque: 10.8 N·m (110 kgf·cm, 8 ft·lbf)

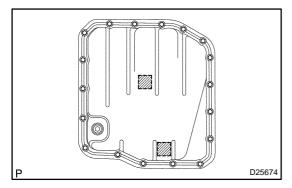


9. INSTALL TRANSMISSION WIRE

- (a) Coat an O-ring with ATF.
- (b) Install the ATF temperature sensor with the lock plate and bolt.

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

(c) Connect the 5 shift solenoid valve connectors.

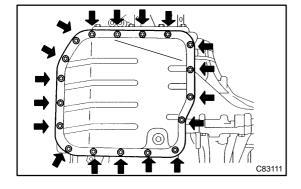


10. INSTALL AUTOMATIC TRANSAXLE OIL PAN SUB-ASSY

- (a) Install the 2 magnets in the oil pan.
- (b) Apply seal packing or equivalent to 18 bolts.

Seal packing:

THREE BOND 2430 or equivalent



(c) Install a new gasket, oil pan and 18 bolts to the transaxle case.

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

NOTICE:

Because the bolts should be seal bolts, apply seal packing to bolts and tighten them within 10 minutes after application.

- 11. ADD AUTOMATIC TRANSAXLE FLUID
- 12. INSPECT AUTOMATIC TRANSAXLE FLUID(See page 40-1)

FRONT DIFFERENTIAL OIL SEAL (U241E)

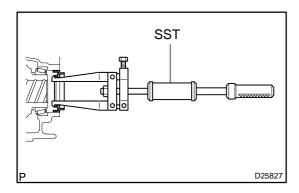
40065-02

- REPLACEMENT

 1. REMOVE FRONT WHEEL
- 2. REMOVE ENGINE UNDER COVER RH
- 3. REMOVE ENGINE UNDER COVER LH
- 4. DRAIN AUTOMATIC TRANSAXLE FLUID
- (a) Remove the drain plug and gasket, and drain ATF.
- (b) Install a new gasket and drain plug.

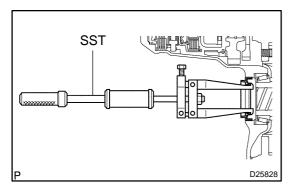
Torque: 49 N·m (500 kgf·cm, 36 ft·lbf)

- 5. REMOVE FRONT DRIVE SHAFT ASSY RH (See page 30–8)
- 6. REMOVE FRONT DRIVE SHAFT ASSY LH (See page 30–8)



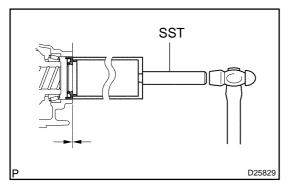
7. REMOVE TRANSAXLE HOUSING OIL SEAL

(a) Using SST, pull out the oil seal. SST 09308–00010



8. REMOVE DIFFERENTIAL SIDE BEARING RETAINER OIL SEAL

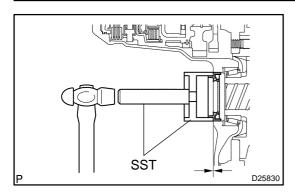
(a) Using SST, pull out the oil seal. SST 09308–00010



9. INSTALL TRANSAXLE HOUSING OIL SEAL

- (a) Using SST and a hammer, drive in a new oil seal. SST 09316–60011 (09316–00011) Oil seal drive in depth: 0 \pm 0.5 mm (0 \pm 0.020 in.)
- (b) Coat the lip of the oil seal with MP grease.

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- 10. INSTALL DIFFERENTIAL SIDE BEARING RETAINER OIL SEAL
- (a) Using SST and a hammer, drive in a new oil seal. SST 09649–17010, 09950–70010 (09951–07150) Oil seal drive in depth: 0 \pm 0.5 mm (0 \pm 0.020 in.)
- (b) Coat the lip of the oil seal with MP grease.
- 11. INSTALL FRONT DRIVE SHAFT ASSY LH (See page 30–8)
- 12. INSTALL FRONT DRIVE SHAFT ASSY RH (See page 30–8)
- 13. INSTALL ENGINE UNDER COVER LH
- 14. INSTALL ENGINE UNDER COVER RH
- 15. INSTALL FRONT WHEEL
 Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)
- 16. ADD AUTOMATIC TRANSAXLE FLUID
- 17. INSPECT AUTOMATIC TRANSAXLE FLUID(See page 40–1)
- 18. CHECK ABS SPEED SENSOR SIGNAL(See page 05-363, 05-404 or 05-452)

FRONT DIFFERENTIAL OIL SEAL (U140E)

40066-02

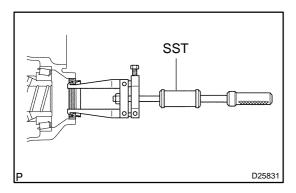
1. REMOVE FRONT WHEEL

REPLACEMENT

- 2. REMOVE ENGINE UNDER COVER RH
- 3. REMOVE ENGINE UNDER COVER LH
- 4. DRAIN AUTOMATIC TRANSAXLE FLUID
- (a) Remove the drain plug and gasket, and drain ATF.
- (b) Install a new gasket and drain plug.

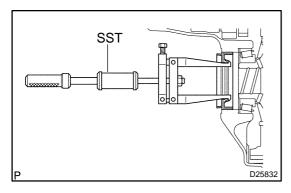
Torque: 49 N·m (500 kgf·cm, 36 ft·lbf)

- 5. REMOVE FRONT DRIVE SHAFT ASSY RH (See page 30–8)
- 6. REMOVE FRONT DRIVE SHAFT ASSY LH (See page 30–8)



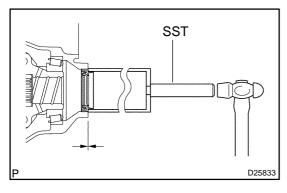
7. REMOVE TRANSAXLE HOUSING OIL SEAL

(a) Using SST, pull out the oil seal. SST 09308–00010



8. REMOVE DIFFERENTIAL SIDE BEARING RETAINER OIL SEAL

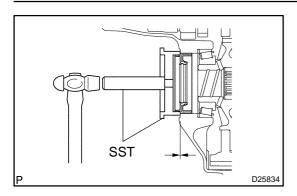
(a) Using SST, pull out the oil seal. SST 09308–00010



9. INSTALL TRANSAXLE HOUSING OIL SEAL

- (a) Using SST and a hammer, drive in a new oil seal. SST 09316–60011 (09316–00011) Oil seal drive in depth: 0 \pm 0.5 mm (0 \pm 0.020 in.)
- (b) Coat the lip of the oil seal with MP grease.

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- 10. INSTALL DIFFERENTIAL SIDE BEARING RETAINER OIL SEAL
- (a) Using SST and a hammer, drive in a new oil seal. SST 09223–15020, 09950–70010 (09951–07150) Oil seal drive in depth: 0 \pm 0.5 mm (0 \pm 0.020 in.)
- (b) Coat the lip of the oil seal with MP grease.
- 11. INSTALL FRONT DRIVE SHAFT ASSY LH (See page 30–8)
- 12. INSTALL FRONT DRIVE SHAFT ASSY RH (See page 30–8)
- 13. INSTALL ENGINE UNDER COVER RH
- 14. INSTALL ENGINE UNDER COVER LH
- 15. INSTALL FRONT WHEEL
 Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)
- 16. ADD AUTOMATIC TRANSAXLE FLUID
- 17. INSPECT AUTOMATIC TRANSAXLE FLUID(See page 40-1)
- 18. CHECK ABS SPEED SENSOR SIGNAL(See page 05–363, 05–404 or 05–452)

SHIFT LOCK SYSTEM

ON-VEHICLE INSPECTION

40067_0

1. CHECK SHIFT LOCK OPERATION

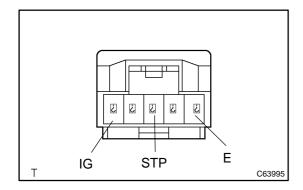
- (a) Shift the shift lever to P position.
- (b) Turn the ignition switch to LOCK.
- (c) Check that the shift lever cannot be shifted to any other positions other than P.
- (d) Turn the ignition switch to ON, depress the brake pedal and check that the shift lever can be shifted to any other positions.

2. CHECK SHIFT LOCK RELEASE BUTTON OPERATION

- (a) Using a screwdriver, remove the shift lock release button cover.
- (b) When operating the shift lever with the shift lock release button pressed and the ignition key in ACC or ON, check that the lever can be shifted to any other position.

3. CHECK KEY INTERLOCK OPERATION

- (a) Turn the ignition switch to ON.
- (b) Depress the brake pedal and shift the shift lever to any other positions other than P.
- (c) Check that the ignition key cannot be turned to LOCK.
- (d) Shift the shift lever to P position, turn the ignition key to LOCK and check that the ignition key can be removed.



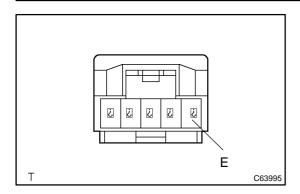
4. INSPECT SHIFT LOCK CONTROL SWITCH

(a) Using a voltmeter, measure the voltage at each terminal. HINT:

Do not disconnect the shift lock control unit connector.

Terminal	Measuring Condition	Voltage (V)
5 (IG) - 1 (E)	Ignition switch ON	10 – 14
5 (IG) – 1 (E)	Ignition switch OFF	0
3 (STP) - 1 (E)	Depress brake pedal	10 – 14
3 (STP) – 1 (E)	Release brake pedal	0

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(b) Using an ohmmeter, measure the resistance at terminal E (1) and body ground.

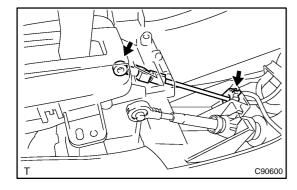
Terminal	Measuring Condition	Specified Value
1 (E) – Body ground	Always	Continuity

FLOOR SHIFT ASSY

OVERHAUL

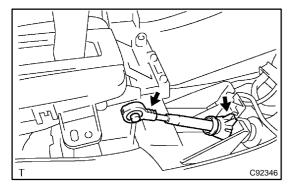
400FL-01

- 1. REMOVE CONSOLE PANEL UPPER REAR (See page 71–12)
- 2. REMOVE CONSOLE BOX CARPET
- 3. REMOVE RR CONSOLE BOX(See page 71-12)
- 4. REMOVE INSTRUMENT PANEL CUP HOLDER TRAY(W/O ASHTRAY) (See page 71–12)
- 5. REMOVE INSTRUMENT PANEL ASH RECEPTACLE ASSY(W/ ASHTRAY) (See page 71–12)
- 6. REMOVE CONSOLE PANEL UPPER (See page 71–12)
- 7. REMOVE CONSOLE BOX FRONT (See page 71–12)
- 8. REMOVE AIR DUCT REAR NO.1 (See page 71–12)
- 9. REMOVE AIR DUCT REAR NO.2 (See page 71-12)
- 10. REMOVE CONSOLE BOX DUCT NO.1 (See page 71–12)



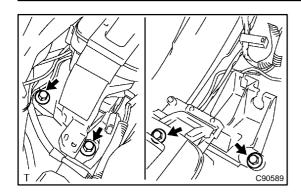
11. DISCONNECT FLOOR SHIFT PARKING LOCK CABLE ASSY

(a) Disconnect the parking lock cable from the transmission floor shift assy.

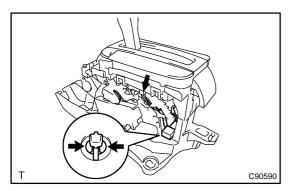


12. DISCONNECT FLOOR SHIFT CABLE TRANSMISSION CONTROL SHIFT

- (a) Disconnect the floor shift cable from the transmission floor shift assy.
- 13. REMOVE FLOOR SHIFT ASSY
- (a) Disconnect the shift lock control computer connector.
- (b) Disconnect the transmission control switch connector.

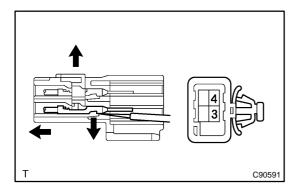


(c) Remove the 4 bolts and transmission floor shift assy.

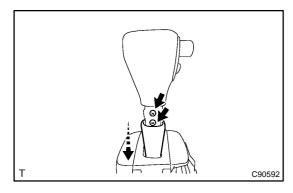


14. REMOVE INDICATOR LAMP WIRE SUB-ASSY

- (a) Releasing the lock by pressing the slick, disconnect the indicator lamp wire connector from the shift lever plate.
- (b) Disconnect the indicator lamp from the position indicator housing.



- (c) Using a screwdriver, release the stopper of the connector.
- (d) Using a small screwdriver, disengage the locking lug of the terminals 3 and 4, and pull the terminals out from the rear.
- (e) Disconnect the wire harness from the clamps, and remove the indicator lamp wire.
- (f) Remove the indicator lamp cap and indicator lamp bulb from the indicator lamp wire sub–assy.

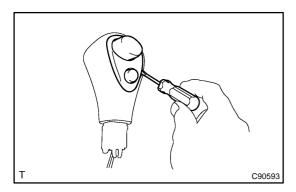


15. REMOVE FLOOR SHIFT SHIFT LEVER KNOB SUB-ASSY

- (a) Lower the position indicator slide cover.
- (b) Remove the 2 screws and shift lever knob from the shift lever.

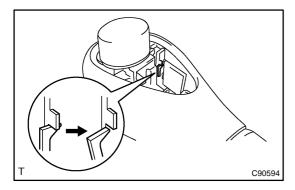
16. REMOVE POSITION INDICATOR SLIDE COVER

(a) Remove the position indicator slide cover from the shift lever.



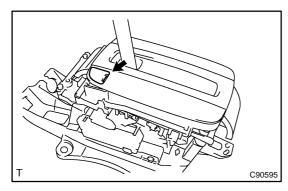
17. REMOVE TRANSMISSION CONTROL SWITCH

(a) Using a screwdriver, remove the transmission control switch from the shift lever knob.



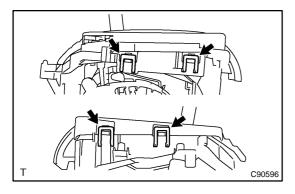
18. REMOVE SHIFT LEVER KNOB BUTTON

- (a) Using a screwdriver, release the claw and remove the shift lever knob button
- (b) Remove the compression spring.



19. REMOVE SHIFT LOCK RELEASE BUTTON COVER

(a) Using a screwdriver, remove the shift lock release button cover.

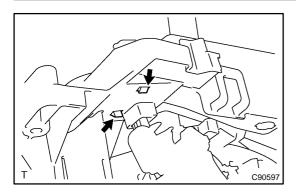


20. REMOVE POSITION INDICATOR HOUSING UPPER

(a) Using a screwdriver, release the 4 claws and remove the position indicator housing upper.

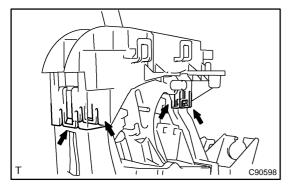
21. REMOVE POSITION INDICATOR HOUSING COVER

22. REMOVE POSITION INDICATOR SLIDE COVER



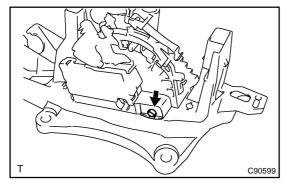
23. REMOVE SHIFT LOCK RELEASE BUTTON

(a) While pressing the 2 claws, remove the shift lock release button and shift lock release spring.



24. REMOVE POSITION INDICATOR HOUSING LOWER

(a) Using a screwdriver, release the 4 claws and remove the position indicator housing lower.

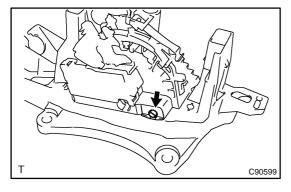


25. REMOVE SHIFT LOCK CONTROL UNIT ASSY

(a) Remove the toggle lever support pin and shift lock control unit assy.

26. REMOVE SHIFT LEVER INSERT NO.1

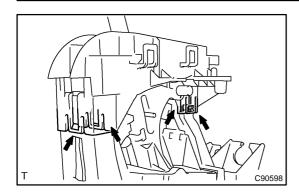
- (a) Remove the 4 shift lever No.1 inserts from the shift lever control plate.
- 27. INSTALL SHIFT LEVER INSERT NO.1
- (a) Install the 4 shift lever No.1 inserts to the shift lever control plate.



28. INSTALL SHIFT LOCK CONTROL UNIT ASSY

(a) Install the shift lock control unit assy and toggle lever support pin.

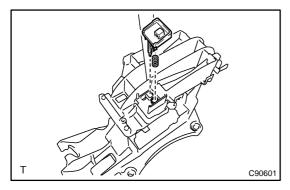
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29. INSTALL POSITION INDICATOR HOUSING LOWER

(a) Install the position indicator housing lower. HINT:

Fit the claws securely.



30. INSTALL SHIFT LOCK RELEASE BUTTON

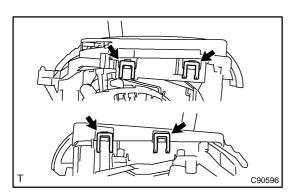
- (a) Apply MP grease to the shift lock release spring and shift lock release button.
- (b) Install the shift lock release button and shift lock release spring to the position indicator housing lower.

HINT:

Fit the claws securely.

31. INSTALL POSITION INDICATOR SLIDE COVER

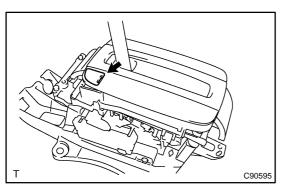
32. INSTALL POSITION INDICATOR HOUSING COVER



33. INSTALL POSITION INDICATOR HOUSING UPPER

(a) Install the control position indicator housing upper. HINT:

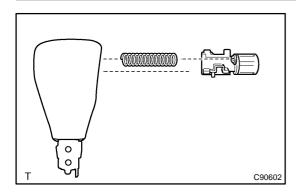
Fit the claws securely.



34. INSTALL SHIFT LOCK RELEASE BUTTON COVER

(a) Install the shift lock release button cover to the position indicator housing upper.

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35. INSTALL SHIFT LEVER KNOB BUTTON

(a) Apply MP grease to the shift lever knob button and compression spring and install them to the shift lever knob.

HINT:

Fit the claws securely.

36. INSTALL TRANSMISSION CONTROL SWITCH

(a) Install the transmission control switch to the shift lever knob.

HINT:

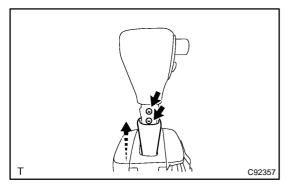
Fit the claws securely.

37. INSTALL POSITION INDICATOR SLIDE COVER

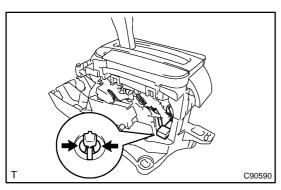
(a) Install the position indicator slide cover to the shift lever.

38. INSTALL FLOOR SHIFT SHIFT LEVER KNOB SUB-ASSY

(a) Install the wire harness of the transmission control switch.

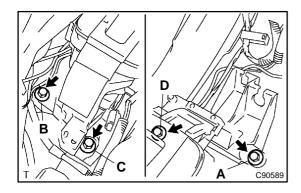


- (b) Install the shift lever knob to the shift lever with 2 screws.
- (c) Install the position indicator slide cover to the shift lever knob.



39. INSTALL INDICATOR LAMP WIRE SUB-ASSY

- (a) Install the indicator lamp bulb and indicator lamp cap to the indicator lamp wire.
- (b) Connect the transmission control switch wire harness to the indicator lamp wire harness connector.
- (c) Install the indicator lamp wire to the position indicator housing lower.
- (d) Install the indicator lamp wire harness and connector as shown in the illustration.



40. INSTALL FLOOR SHIFT ASSY

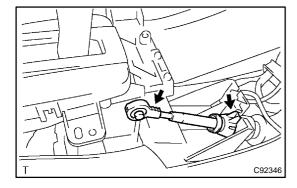
(a) Install the floor shift assy to the vehicle with the 4 bolts.

Torque: 11.8 N·m (122 kgf·cm, 9 ft·lbf)

HINT:

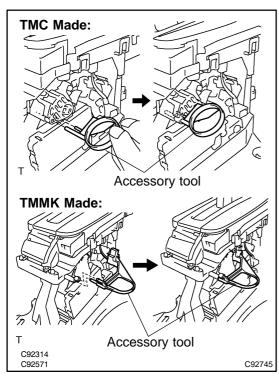
Tighten them in the order, A, B, C and D.

- (b) Connect the transmission control switch connector.
- (c) Connect the shift lock control computer connector.



41. CONNECT FLOOR SHIFT CABLE TRANSMISSION CONTROL SHIFT

- (a) Connect the floor shift cable to the floor shift assy. HINT:
- Install it with the uneven surface facing to up.
- Fit the claws securely.



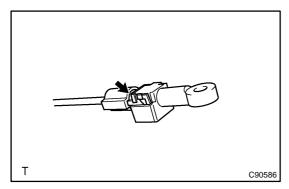
42. CONNECT FLOOR SHIFT PARKING LOCK CABLE ASSY

- (a) Set the accessory tool.
 - (1) Shift the shift lever to P position and turn the ignition switch to LOCK. (TMC made)
 - (2) Shift the shift lever to N position and turn the ignition switch to ACC. (TMMK made)
 - (3) Set the accessory tool to the shift lock control unit assy as shown in the illustration.

Accessory tool parts No.: TMC Made: 33693-33010 TMMK Made: 33693-06010

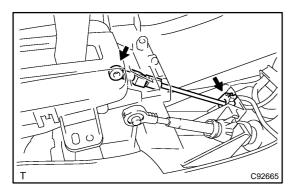
HINT:

Only in the case of reusing the shift lock control unit assy.



(b) Using a screwdriver, unlock the claw of the lock key of automatic adjustment part.

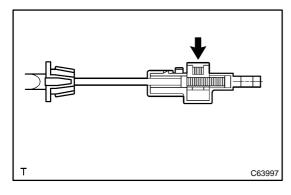
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(c) Insert the lever pin into the hole in the floor shift parking lock cable.

HINT:

Fit the claws securely.



(d) Lock the lock key. HINT:

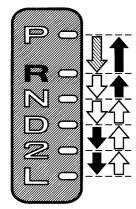
- At this time, the shift lever should be in P position and the ignition key should be set to LOCK. (TMC Made)
- At this time, the shift lever should be in N position and the ignition key should be set to ACC. (TMMK Made)
- (e) Remove the accessory tool.

Accessory tool parts NO.: TMC Made: 33693-33010 TMMK Made: 33693-06010

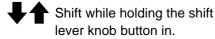
- 43. CHECK KEY INTERLOCK OPERATION(See page 40-37)
- 44. CHECK SHIFT LOCK OPERATION(See page 40-37)
- 45. CHECK SHIFT LOCK RELEASE BUTTON OPERATION(See page 40-37)
- 46. INSTALL CONSOLE BOX DUCT NO.1
- 47. INSTALL AIR DUCT REAR NO.2
- 48. INSTALL AIR DUCT REAR NO.1
- 49. INSTALL CONSOLE BOX FRONT
- 50. INSTALL CONSOLE PANEL UPPER
- 51. INSTALL INSTRUMENT PANEL CUP HOLDER TRAY(W/O ASHTRAY)
- 52. INSTALL INSTRUMENT PANEL ASH RECEPTACLE ASSY(W/ ASHTRAY)
- 53. INSTALL RR CONSOLE BOX
- 54. INSTALL CONSOLE BOX CARPET
- 55. INSTALL CONSOLE PANEL UPPER REAR

ADJUSTMENT

40069-02



With the brake pedal depressed, shift while holding the shift lever knob button in. (The ignition switch must be in ON position.)



Shift normally

F00693

1. INSPECT SHIFT LEVER POSITION

(a) When shifting the shift lever to each position, make sure that it moves smoothly, and the position indicator displays correctly.

Positions which can be shifted without pressing the shift lever knob button

$$R \rightarrow N \rightarrow D, L \rightarrow 2 \rightarrow D \rightarrow N$$

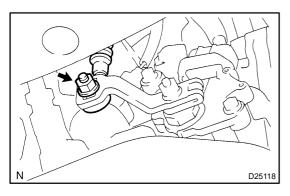
Positions which can be operated only while pressing the shift lever knob button

$$D \rightarrow 2 \rightarrow L, N \rightarrow R \rightarrow P$$

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

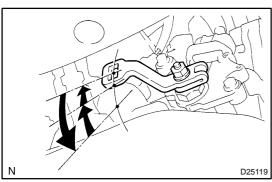
$$P \rightarrow R$$

(b) Start the engine and make sure that the vehicle moves forward when shifting the lever from N to D position, and moves rearward when shifting to R position.



2. ADJUST SHIFT LEVER POSITION

(a) Loosen the nut on the control shaft lever.



- (b) Push the control shaft fully downward.
- (c) Return the control shaft lever 2 notches to N position.
- (d) Set the shift lever to N position.
- (e) While holding the shift lever lightly toward the R position side, tighten the shift lever nut.

Torque: 14.7 N-m (150 kgf-cm, 10 ft-lbf)

(f) Start the engine and make sure that the vehicle moves forward when shifting the lever from N to D position and moves rearward when shifting it to R position.

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FLOOR SHIFT PARKING LOCK CABLE ASSY

REPLACEMENT

- 1. PRECAUTION
- 2. DISCONNECT BATTERY NEGATIVE TERMINAL
- 3. REMOVE STEERING WHEEL COVER LOWER NO.2 (See page 50-6)
- 4. REMOVE STEERING WHEEL COVER LOWER NO.3(W/O STEERING PAD SWITCH 4 SPOKE STEERING WHEEL)

(See page 50-6)

- 5. REMOVE CONNECTOR COVER(W/ STEERING PAD SWITCH 4 SPOKE STEERING WHEEL) (See page 50–6)
- 6. REMOVE STEERING WHEEL COVER LOWER NO.3(3 SPOKE STEERING WHEEL ASSY) (See page 50–6)
- 7. PLACE FRONT WHEELS FACING STRAIGHT AHEAD
- 8. REMOVE HORN BUTTON ASSY (See page 50–9 or 50–22)
- 9. REMOVE STEERING WHEEL ASSY

(See page 50-9 or 50-22)

SST 09950-50013 (09951-05010, 09952-05010, 09953-05020, 09954-05021)

10. REMOVE INSTRUMENT CLUSTER FINISH PANEL

(See page 71-12)

11. REMOVE STEERING COLUMN COVER

(See page 50-9 or 50-22)

12. REMOVE FRONT DOOR SCUFF PLATE LH

(See page 71–12)

13. REMOVE COWL SIDE TRIM SUB-ASSY LH

(See page 71–12)

14. REMOVE INSTRUMENT PANEL COIN BOX SUB-ASSY

(See page 71–12)

15. REMOVE INSTRUMENT PANEL SUB-ASSY UPPER

(See page 71–12)

16. REMOVE INSTRUMENT PNL INSERT SUB-ASSY LWR LH

(See page 71-12)

17. REMOVE CONSOLE PANEL UPPER REAR

(See page 71–12)

18. REMOVE CONSOLE BOX CARPET

(See page 71–12)

- 19. REMOVE RR CONSOLE BOX(See page 71–12)
- 20. REMOVE INSTRUMENT PANEL CUP HOLDER TRAY(W/O ASHTRAY) (See page 71–12)
- 21. REMOVE INSTRUMENT PANEL ASH RECEPTACLE ASSY(W/ ASHTRAY) (See page 71–12)
- 22. REMOVE CONSOLE PANEL UPPER

(See page 71–12)

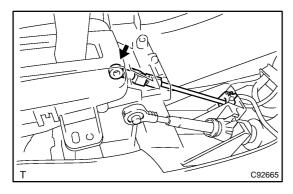
23. REMOVE CONSOLE BOX FRONT

(See page 71–12)

24. REMOVE AIR DUCT REAR NO.2

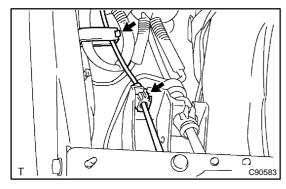
(See page 55-29)

- 25. REMOVE AIR DUCT REAR NO.1 (See page 55-29)
- 26. REMOVE CONSOLE BOX DUCT NO.1 (See page 55-29)

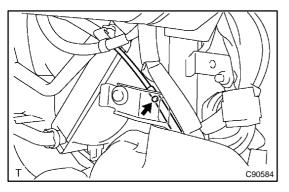


27. REMOVE FLOOR SHIFT PARKING LOCK CABLE ASSY

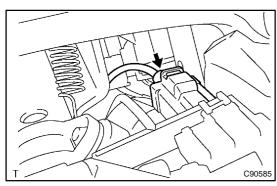
(a) Disconnect the parking lock cable end from the lever pin of the floor shift assembly.



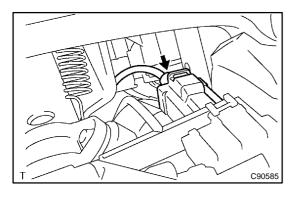
(b) Using a screwdriver, disconnect the parking lock cable from the floor shift assembly and clamp.



- (c) Disconnect the cable clamp.
- (d) Turn the ignition switch to ACC or ON.

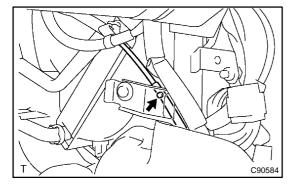


(e) Using a screwdriver, remove the cable from the upper bracket.

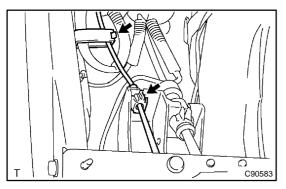


28. INSTALL FLOOR SHIFT PARKING LOCK CABLE ASSY

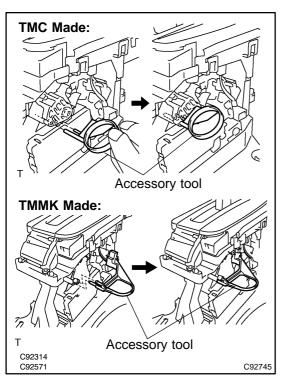
- (a) Turn the ignition switch to ACC or ON.
- (b) Connect the cable to the upper bracket.



(c) Connect the cable clamp.



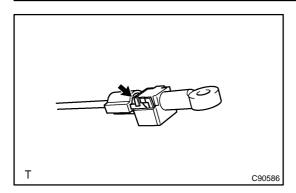
(d) Insert the slide cap into the through hole and install.



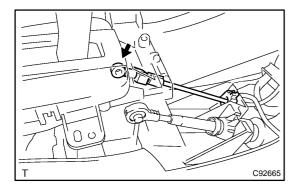
- (e) Set the accessory tool.
 - (1) Shift the shift lever to P position and turn the ignition switch to LOCK. (TMC made)
 - (2) Shift the shift lever to N position and turn the ignition switch to ACC. (TMMK made)
 - (3) Set the accessory tool to the shift lock control unit assy.

Accessory tool parts No.: TMC Made: 33693-33010 TMMK Made: 33693-06010

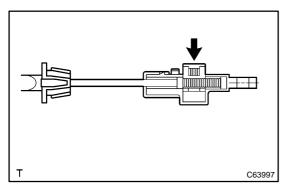
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(f) Using a screwdriver, unlock the claw of the lock key of automatic adjustment part.



(g) Insert the lever pin into the hole in the floor shift parking lock cable.



(h) Lock the lock key.

HINT:

- At this time, the shift lever should be in P position and the ignition key should be set to LOCK. (TMC Made)
- At this time, the shift lever should be in N position and the ignition key should be set to ACC. (TMMK Made)
- (i) Remove the accessory tool.

Accessory tool parts No.: TMC Made: 33693-33010 TMMK Made: 33693-06010

- 29. CHECK KEY INTERLOCK OPERATION(See page 40-37)
- 30. INSTALL CONSOLE BOX DUCT NO.1
- 31. INSTALL AIR DUCT REAR NO.1
- 32. INSTALL AIR DUCT REAR NO.2
- 33. INSTALL CONSOLE BOX FRONT
- 34. INSTALL CONSOLE PANEL UPPER
- 35. INSTRUMENT PANEL CUP HOLDER TRAY(W/O ASHTRAY)
- 36. INSTRUMENT PANEL ASH RECEPTACLE ASSY(W/ ASHTRAY)
- 37. INSTALL RR CONSOLE BOX
- 38. INSTALL CONSOLE BOX CARPET
- 39. INSTALL CONSOLE PANEL UPPER REAR

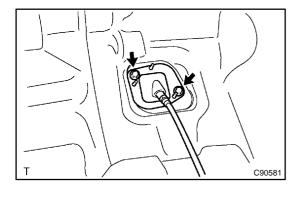
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- 40. INSTALL INSTRUMENT PNL INSERT SUB-ASSY LWR LH
- 41. INSTALL INSTRUMENT PANEL SUB-ASSY UPPER
- 42. INSTALL INSTRUMENT PANEL COIN BOX SUB-ASSY
- 43. INSTALL COWL SIDE TRIM SUB-ASSY LH
- 44. INSTALL FRONT DOOR SCUFF PLATE LH
- 45. INSTALL STEERING COLUMN COVER (See page 50–9 or 50–22)
- 46. INSTALL INSTRUMENT CLUSTER FINISH PANEL
- 47. INSTALL STEERING WHEEL ASSY (See page 50-9 or 50-22)
- 48. INSPECT STEERING WHEEL CENTER POINT
- 49. INSTALL HORN BUTTON ASSY (See page 50-9 or 50-22)
- 50. INSTALL STEERING WHEEL COVER LOWER NO.2 (See page 50-6)
- 51. INSTALL STEERING WHEEL COVER LOWER NO.3(W/O STEERING PAD SWITCH 4 SPOKE STEERING WHEEL)
 (See page 50-6)
- 52. INSTALL CONNECTOR COVER(W/ STEERING PAD SWITCH 4 SPOKE STEERING WHEEL) (See page 50–6)
- 53. INSTALL STEERING WHEEL COVER LOWER NO.3(3 SPOKE STEERING WHEEL ASSY) (See page 50-6)
- 54. CONNECT BATTERY NEGATIVE TERMINAL
- 55. INSPECT SRS WARNING LIGHT(See page 05-690)

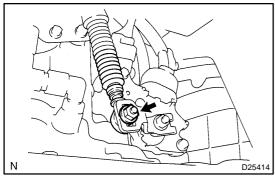
FLOOR SHIFT CABLE TRANSMISSION CONTROL SHIFT

REPLACEMENT

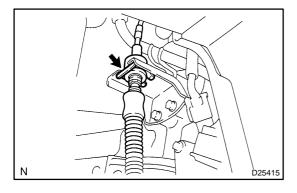
- 1. **REMOVE INSTRUMENT PANEL SAFETY PAD SUB-ASSY** (See page 71-12)
- 2. REMOVE AIR CONDITIONING RADIATOR ASSY (See page 55-29)
- 3. REMOVE AIR BAG SENSOR ASSY CENTER (See page 60-56)
- **REMOVE BATTERY** 4.
- **REMOVE AIR CLEANER ASSY** 5.
- 6. **REMOVE AIR CLEANER HOSE NO.1**
- 7. **REMOVE INTAKE AIR RESONATOR SUB-ASSY**



- 8. DISCONNECT SHIFT CABLE GROMMET RETAINER NO.2
- (a) Remove the 2 bolts and disconnect shift cable grommet retainer No.2.

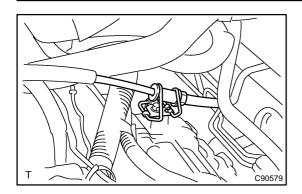


- REMOVE FLOOR SHIFT CABLE TRANSMISSION 9. **CONTROL SHIFT**
- Remove the nut from the control shaft lever. (a)
- Disconnect the control cable from the control shaft lever. (b)

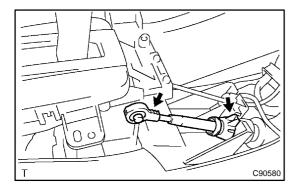


Remove the clip and disconnect the control cable from (c) the control cable bracket.

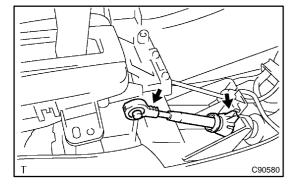
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(d) Disconnect the control cable from the control cable clamp.

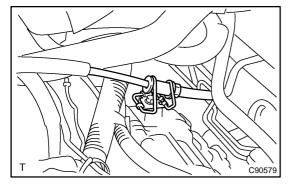


- (e) Disconnect the floor shift cable from the transmission floor shift assy.
- (f) Pull out the control cable from the body.
- (g) Remove the shift cable grommet retainer No. 2.

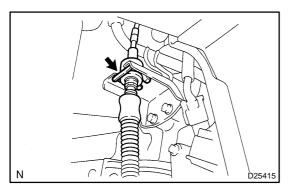


10. INSTALL FLOOR SHIFT CABLE TRANSMISSION CONTROL SHIFT

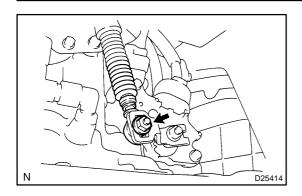
- (a) Put in the control cable to the body.
- (b) Install the shift cable grommet retainer No.2 to the floor shift cable.
- (c) Install the floor shift cable as shown in the illustration. HINT:
- Install it with the uneven surface facing to up.
- Fit the claws securely.
- (d) Connect the control cable to the control cable clamp.



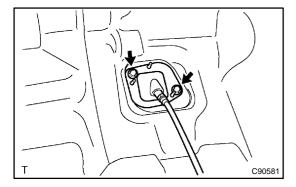
(e) Install the control cable and a new clip to the bracket.



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(f) Temporarily install the control cable to the control shaft lever with nuts.



11. INSTALL SHIFT CABLE GROMMET RETAINER NO.2

(a) Install the shift cable grommet retainer No.2 with the 2 bolts.

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

- 12. INSTALL AIR BAG SENSOR ASSY CENTER (See page 60–56)
- 13. INSTALL AIR CONDITIONING RADIATOR ASSY
- 14. ADJUST SHIFT LEVER POSITION(See page 40-47)
- 15. INSPECT SHIFT LEVER POSITION(See page 40-47)
- 16. INSTALL INTAKE AIR RESONATOR SUB-ASSY
- 17. INSTALL AIR CLEANER HOSE NO.1
- 18. INSTALL AIR CLEANER ASSY
- 19. INSTALL BATTERY