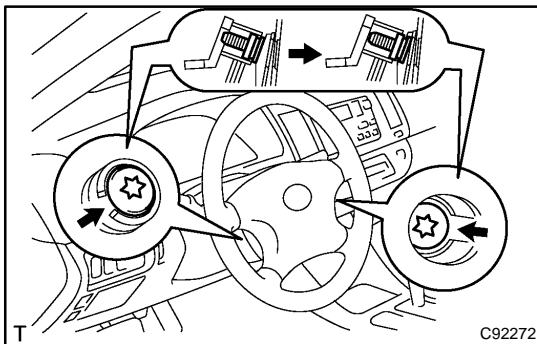


STEERING COLUMN ASSY (TMC MADE)

5002S-05

OVERHAUL

1. PRECAUTION(See page 60-1)
2. DISCONNECT BATTERY NEGATIVE TERMINAL
3. REMOVE STEERING WHEEL COVER LOWER NO.2(See page 60-25)
4. REMOVE STEERING WHEEL COVER LOWER NO.3 (W/O STEERING PAD SWITCH 4 SPOKE STEERING WHEEL)(See page 60-25)
5. REMOVE CONNECTOR COVER (W/ STEERING PAD SWITCH 4 SPOKE STEERING WHEEL)(See page 60-25)
6. REMOVE STEERING WHEEL COVER LOWER NO.3 (3 SPOKE STEERING WHEEL ASSY)(See page 60-25)
7. INSPECT PLACE FRONT WHEELS FACING STRAIGHT AHEAD



8. REMOVE HORN BUTTON ASSY

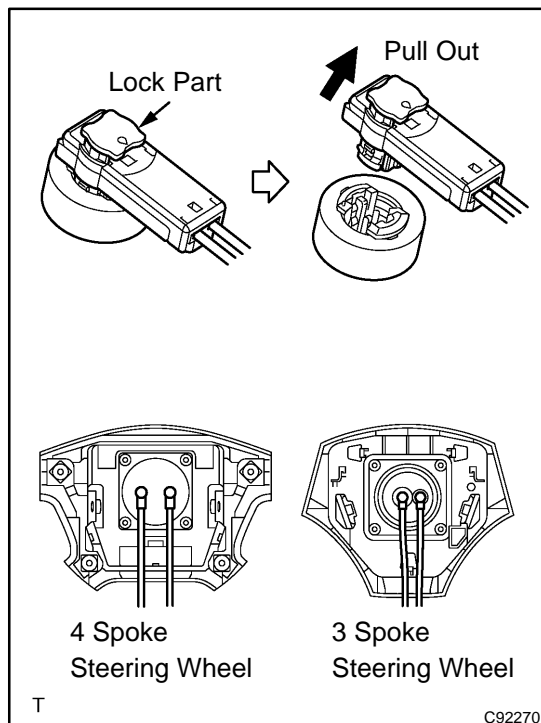
NOTICE:

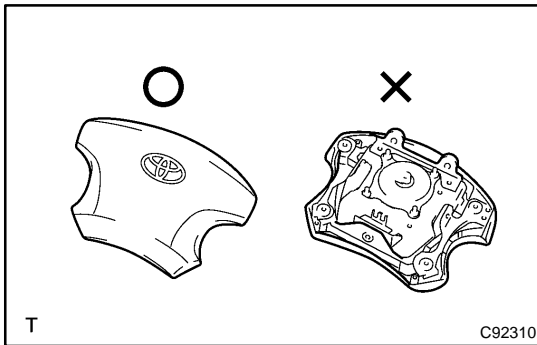
If the airbag connector is disconnected with the ignition switch being at ON, DTCs will be recorded.

- (a) Using a torx® socket wrench, loosen the 2 torx® screws until the groove along the screw circumference catches on the screw case.
- (b) Pull out the horn button assy from the steering wheel.
- (c) Using a screwdriver, release the lock part of each airbag connector and disconnect the 2 airbag connectors.
- (d) Disconnect the horn connector. (4 Spoke steering wheel)

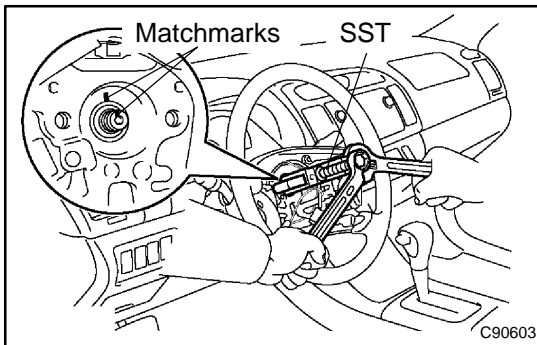
NOTICE:

When removing the horn button assy, take care not to pull the airbag wire harness.

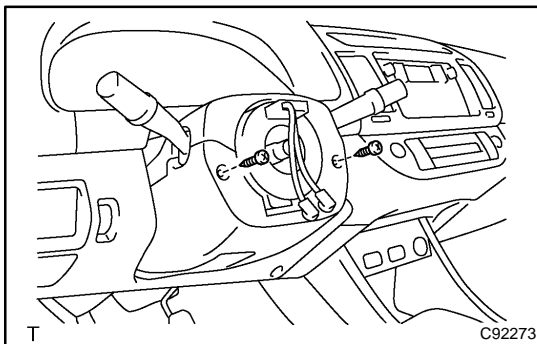


**CAUTION:**

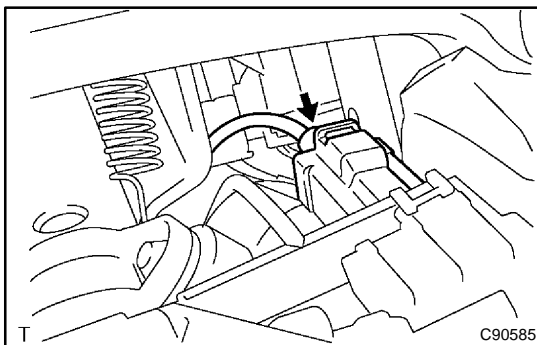
- When storing the horn button assy, keep the upper surface of the horn button assy facing upward.
- Never disassemble the horn button assy.

**9. REMOVE STEERING WHEEL ASSY**

- Disconnect the connector.
 - Remove the steering wheel assy set nut.
 - Place matchmarks on the steering wheel assy and main shaft assy.
 - Using SST, remove the steering wheel assy.
- SST 09950-50013 (09951-05010, 09952-05010, 09953-05020, 09954-05021)

10. REMOVE INSTRUMENT CLUSTER FINISH PANEL(See page 71-16)**11. REMOVE STEERING COLUMN COVER**

- Remove the 2 screws and steering column cover.

**12. DISCONNECT FLOOR SHIFT PARKING LOCK CABLE ASSY**

- Using a screwdriver, disconnect the floor shift parking lock cable from the upper bracket.

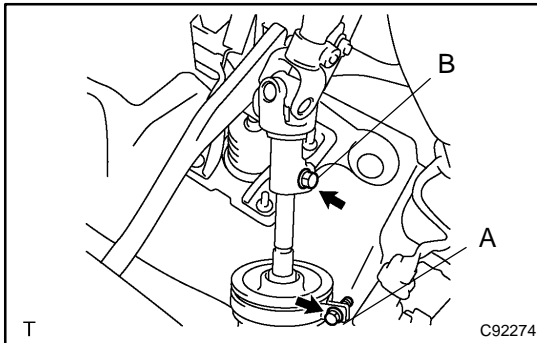
13. REMOVE SPIRAL CABLE SUB-ASSY(See page 60-34)**14. REMOVE HEADLAMP DIMMER SWITCH ASSY**

- Disconnect the connector and remove the headlamp dimmer switch assy.

15. REMOVE WINDSHIELD WIPER SWITCH ASSY

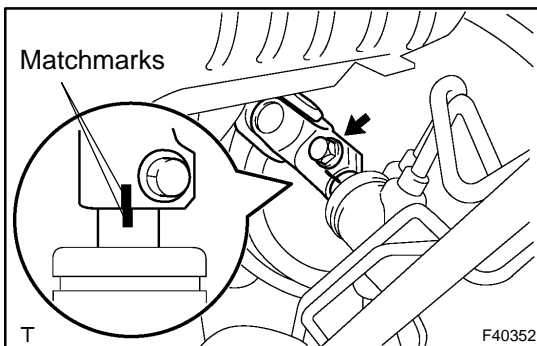
- Disconnect the connector and remove the windshield wiper switch assy.

16. REMOVE FRONT DOOR SCUFF PLATE LH(See page 71-16)
17. REMOVE COWL SIDE TRIM SUB-ASSY LH(See page 71-16)
18. REMOVE INSTRUMENT PANEL COIN BOX SUB-ASSY(See page 71-16)
19. REMOVE INSTRUMENT PANEL SUB-ASSY UPPER(See page 71-16)
20. REMOVE INSTRUMENT PNL INSERT SUB-ASSY LWR LH(See page 71-16)
21. REMOVE HEATER TO FOOT DUCT NO.3(See page 71-16)

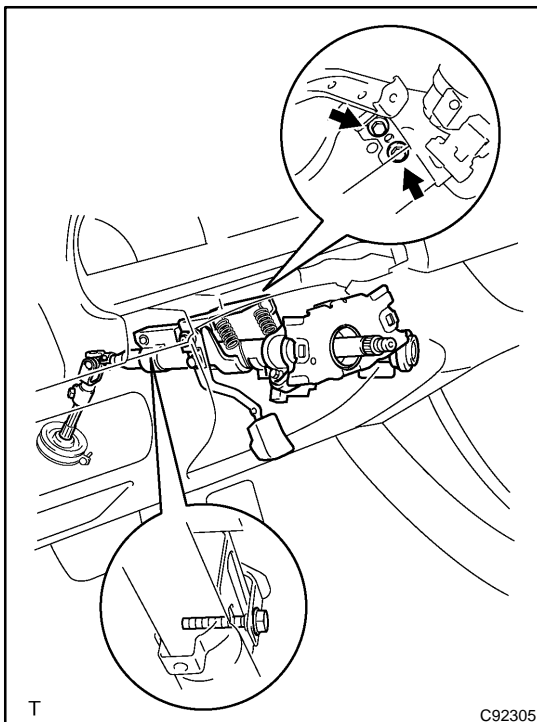


22. DISCONNECT STEERING INTERMEDIATE SHAFT SUB-ASSY

- (a) Loosen the bolt A and remove the clamp from the steering column hole cover No.1.
- (b) Separate the steering column hole cover No.2 from the steering column hole cover No.1.
- (c) Loosen the bolt B.

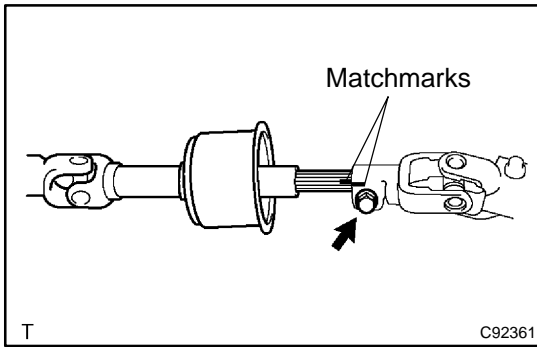


- (d) Place matchmarks on the steering intermediate shaft sub-assy and steering gear assy.
- (e) Remove the bolt and disconnect the steering intermediate shaft sub-assy.



23. REMOVE STEERING COLUMN ASSY

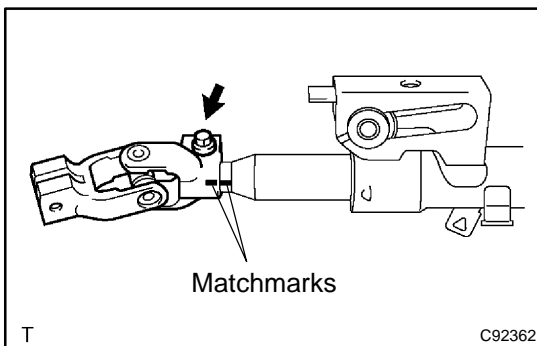
- (a) Disconnect the connectors and wire harness clamps from the steering column assy.
- (b) Remove the 3 bolts and steering column assy.



24. REMOVE STEERING INTERMEDIATE SHAFT SUB-ASSY

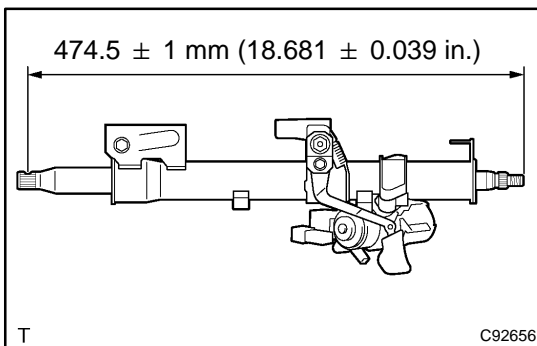
- Place matchmarks on the steering intermediate shaft sub-assy and steering sliding yoke sub-assy.
- Remove the bolt and steering intermediate shaft sub-assy.

25. REMOVE STEERING COLUMN HOLE COVER SUB-ASSY NO.2



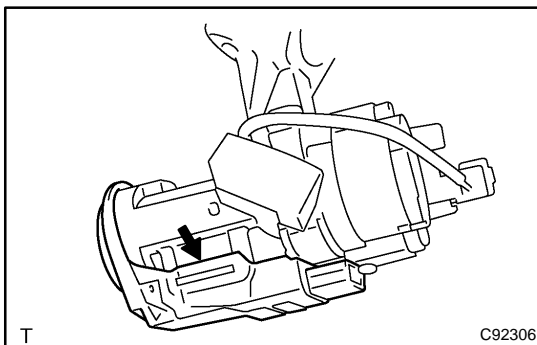
26. REMOVE STEERING SLIDING YOKE SUB-ASSY

- Place matchmarks on the steering sliding yoke sub-assy and steering main shaft assy.
- Remove the bolt and steering sliding yoke sub-assy from the steering main shaft assy.



27. INSPECT STEERING COLUMN ASSY

- Measure the length of steering main shaft.
Standard length: 474.5 ± 1 mm (18.681 ± 0.039 in.)



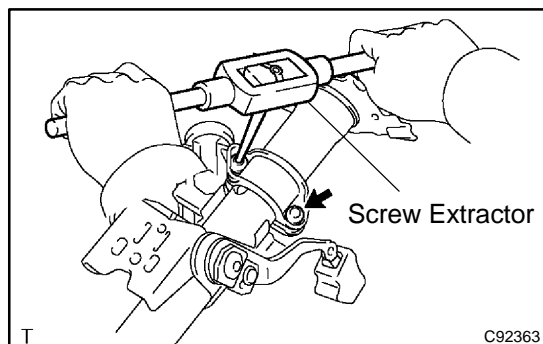
28. REMOVE TRANSPONDER KEY AMPLIFIER (W/ ENGINE IMMOBILISER SYSTEM)

- Disengage the claw hung on the upper bracket with a screwdriver.
- Pull the transponder key amplifier toward the rear of the vehicle with the claw open.

NOTICE:

Take care not to apply excessive force to prevent the case from being damaged.

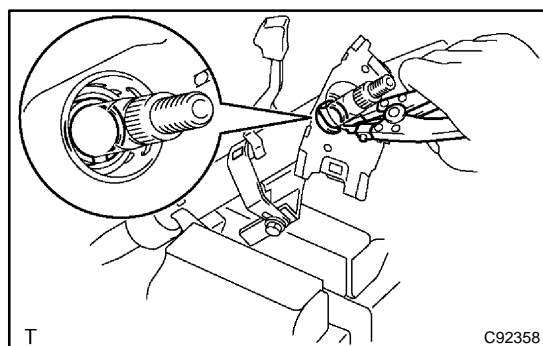
29. REMOVE KEY CYLINDER LAMP ASSY (W/ ILLUMINATED ENTRY SYSTEM)



30. REMOVE STEERING COLUMN UPPER W/SWITCH BRACKET ASSY

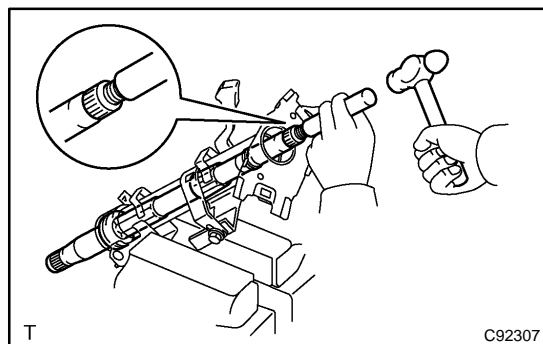
- Using a centering punch, mark the center of the 2 lap-ered-head bolts.
- Using a 3 – 4 mm (0.12 – 0.16 in.) drill, drill into the 2 bolts.
- Using a screw extractor, remove the 2 bolts and steering column upper w/ switch bracket assy.

31. REMOVE STEERING COLUMN CLAMP UPPER



32. REMOVE STEERING MAIN SHAFT ASSY

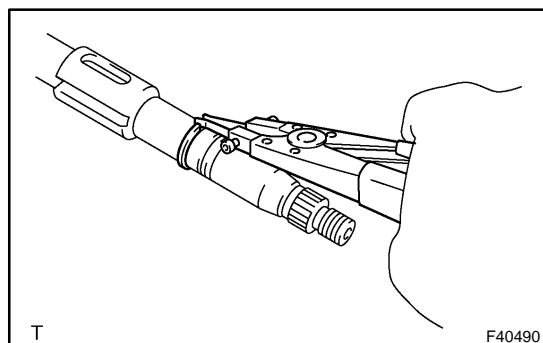
- Using a snap ring expander, remove the steering main shaft snap ring (outer side).



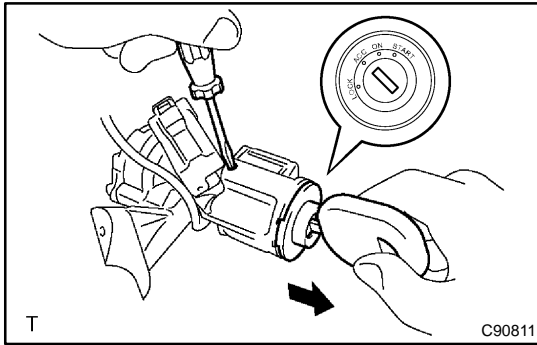
- Using a brass bar and a hammer, remove the steering main shaft assy and steering main shaft radial ball bearing.

NOTICE:

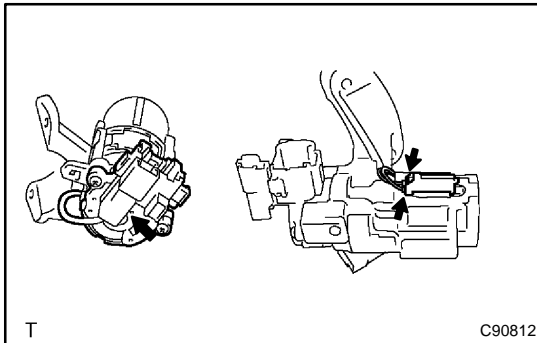
Be careful not to drop the steering main shaft assy.



- Using a snap ring expander, remove the steering main shaft snap ring (inner side).

**33. REMOVE IGNITION SWITCH LOCK CYLINDER ASSY**

- (a) Place the ignition switch lock cylinder assy at the ACC position.
- (b) Push down the stop pin with a screwdriver, and pull out the cylinder assy.

**34. REMOVE UN-LOCK WARNING SWITCH ASSY**

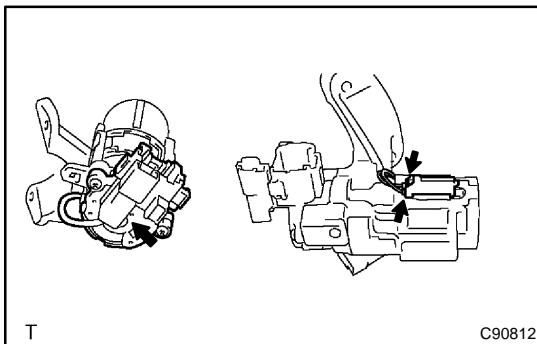
- (a) Disconnect the un-lock warning switch assy connector from the ignition or starter switch assy.
- (b) Remove the un-lock warning switch assy.

35. REMOVE IGNITION OR STARTER SWITCH ASSY

- (a) Remove the 2 screws and ignition or starter switch assy from the steering column bracket assy.

36. INSTALL IGNITION OR STARTER SWITCH ASSY

- (a) Install the ignition or starter switch assy to the steering column bracket assy with the 2 screws.

**37. INSTALL UN-LOCK WARNING SWITCH ASSY**

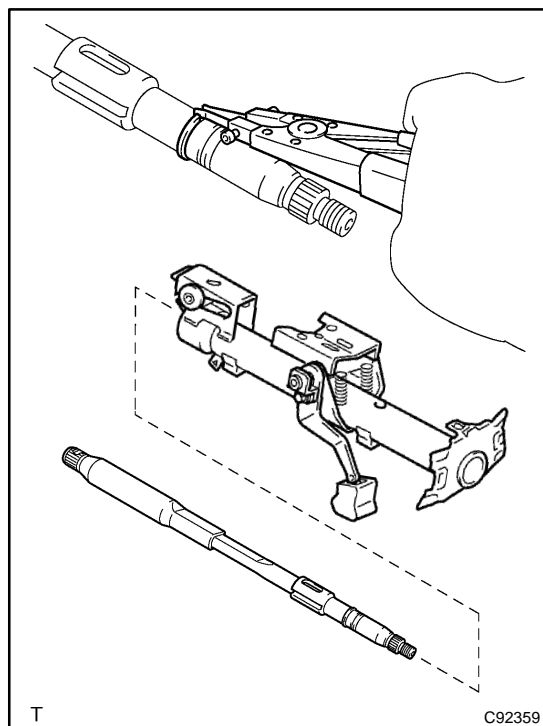
- (a) Install the un-lock warning switch assy.
- (b) Connect the un-lock warning switch assy connector to the ignition or starter switch assy.

38. INSTALL IGNITION SWITCH LOCK CYLINDER ASSY

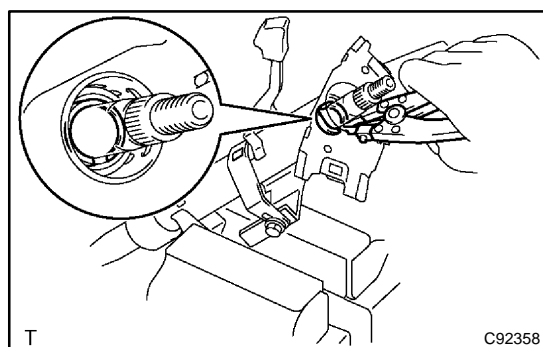
- (a) Make sure that the ignition switch lock cylinder assy is at the ACC position.
- (b) Install the ignition switch lock cylinder assy.

39. INSPECT STEERING LOCK OPERATION

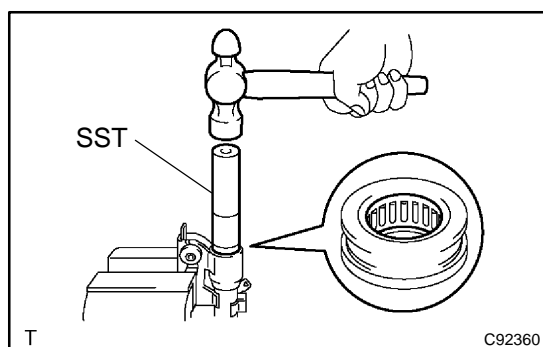
- (a) Check that the steering lock mechanism is activated when removing the key.
- (b) Check that the steering lock mechanism is deactivated when inserting the key and turning it to ACC position.

**40. INSTALL STEERING MAIN SHAFT ASSY**

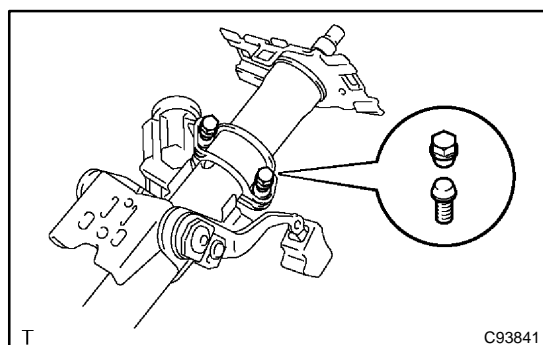
- (a) Using a snap ring expander, install a new steering main shaft snap ring (inner side) to the steering main shaft assy.
- (b) Install the steering main shaft assy to the steering column tube.



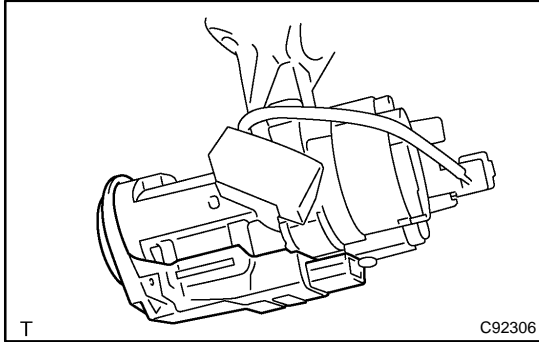
- (c) Using a snap ring expander, install a new steering main shaft snap ring (outer side) to the steering main shaft assy.

**41. INSTALL STEERING MAIN SHAFT BEARING**

- (a) Using SST and a hammer, install a new steering main radial ball bearing.
SST 09608-06041

**42. INSTALL STEERING COLUMN UPPER W/SWITCH BRACKET ASSY**

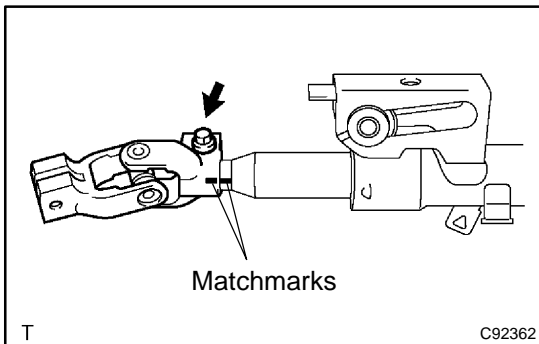
- (a) Temporarily install the steering column upper w/switch bracket assy and steering column upper clamp with 2 new tapered-head bolts.
- (b) Tighten the 2 tapered-head bolts until the bolt heads break off.

43. INSTALL KEY CYLINDER LAMP ASSY (W/ ILLUMINATED ENTRY SYSTEM)**44. INSTALL TRANSPONDER KEY AMPLIFIER (W/ ENGINE IMMOBILISER SYSTEM)**

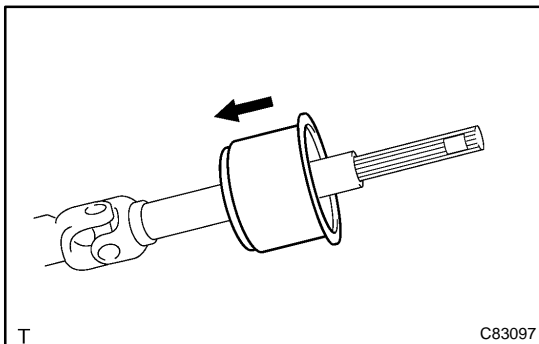
- (a) Align the transponder key amplifier with the installation position of the upper bracket with the amplifier inclined.
- (b) Push the transponder key amplifier up and connect it to the upper bracket.

NOTICE:

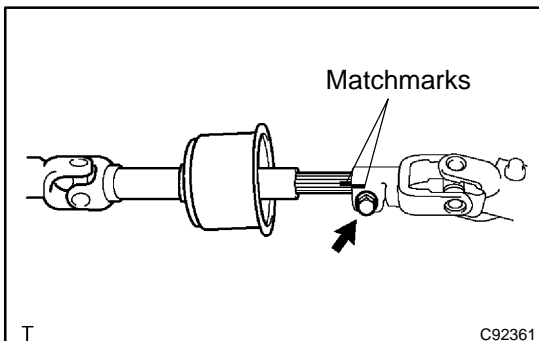
Take care not to push the amplifier up with excessive force to prevent it from being damaged.

**45. INSTALL STEERING SLIDING YOKE SUB-ASSY**

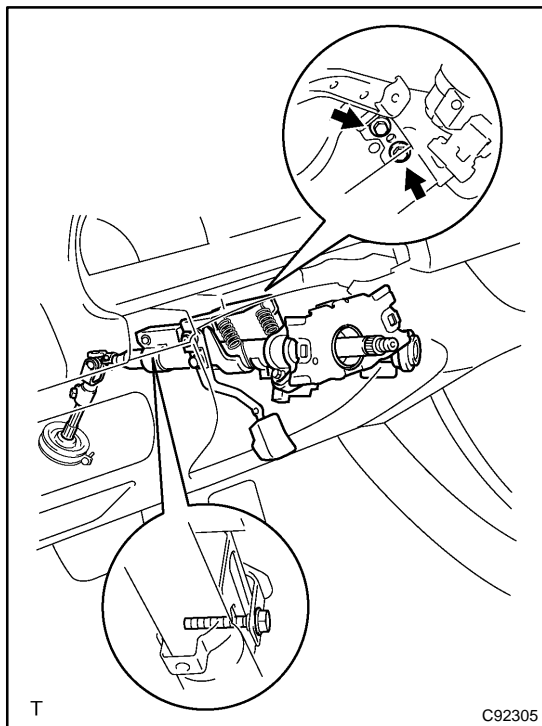
- (a) Align the matchmark with the one on the steering sliding yoke sub-assy and steering main shaft assy.
 - (b) Install the steering sliding yoke sub-assy with the bolt.
- Torque: 35.3 N·m (360 kgf·cm, 26 ft·lbf)**

**46. INSTALL STEERING COLUMN HOLE COVER SUB-ASSY NO.2**

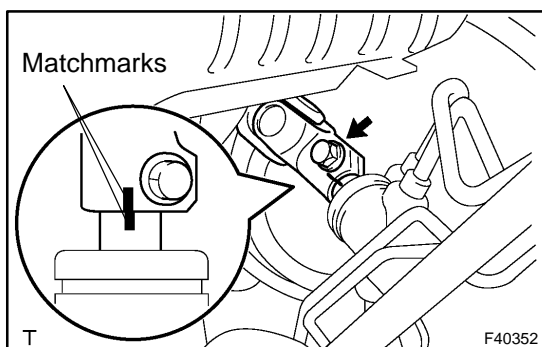
- (a) Install the steering column hole cover sub-assy No.2 to the steering intermediate shaft sub-assy.

**47. INSTALL STEERING INTERMEDIATE SHAFT SUB-ASSY**

- (a) Align the matchmark with the one on the steering intermediate shaft sub-assy and steering main shaft assy.
- (b) Temporarily install the steering intermediate shaft sub-assy with the bolt.

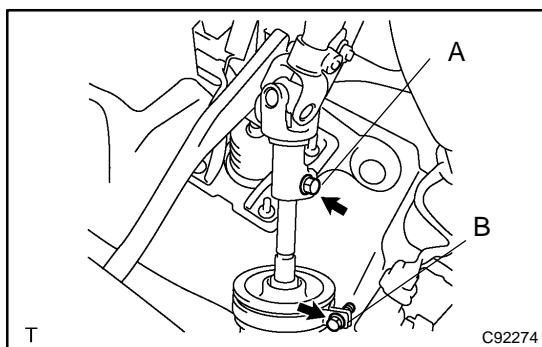
**48. INSTALL STEERING COLUMN ASSY**

- (a) Install the steering column assy with the 3 bolts.
Torque: 20.6 N·m (210 kgf·cm, 15 ft·lbf)
- (b) Connect the connectors and wire harness clamps.

**49. CONNECT STEERING INTERMEDIATE SHAFT SUB-ASSY**

- (a) Align the matchmarks on the intermediate shaft sub-assy and steering gear assy.
- (b) Install the steering intermediate shaft sub-assy with the bolt.

Torque: 35.3 N·m (360 kgf·cm, 26 ft·lbf)



- (c) Tighten the bolt A.
Torque: 35.3 N·m (360 kgf·cm, 26 ft·lbf)
- (d) Install the steering column hole cover No. 2 to the steering column hole cover No.1.
- (e) Connect the clamp to the steering column hole cover No.1 and tighten the bolt B.

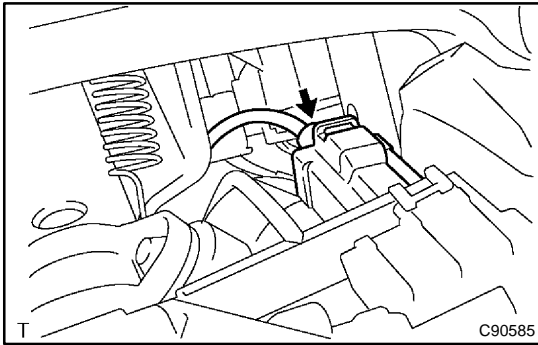
50. INSTALL WINDSHIELD WIPER SWITCH ASSY

- (a) Install the windshield wiper switch assy and connect the connector.

51. INSTALL HEADLAMP DIMMER SWITCH ASSY

- (a) Install the headlamp dimmer switch assy and connect the connector.

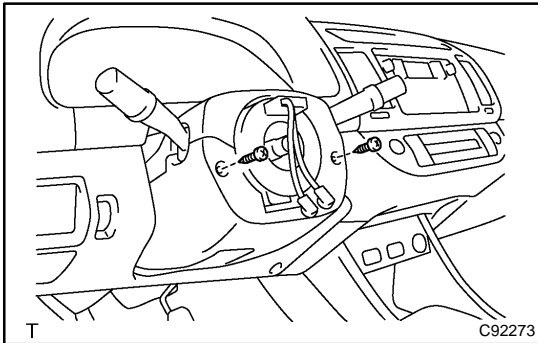
52. PLACE FRONT WHEELS FACING STRAIGHT AHEAD**53. INSTALL SPIRAL CABLE SUB-ASSY(See page 60-34)**



54. CONNECT FLOOR SHIFT PARKING LOCK CABLE ASSY

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

55. CHECK KEY INTERLOCK OPERATION(See page 40-51)



56. INSTALL STEERING COLUMN COVER

- (a) Install the steering column cover with the 2 screws.

57. INSTALL INSTRUMENT CLUSTER FINISH PANEL

58. INSTALL HEATER TO FOOT DUCT NO.3

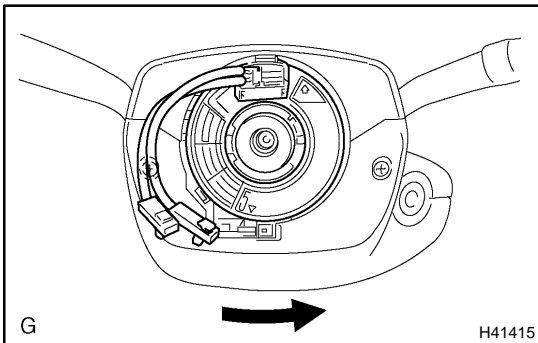
59. INSTALL INSTRUMENT PNL INSERT SUB-ASSY LWR LH

60. INSTALL INSTRUMENT PANEL SUB-ASSY UPPER

61. INSTALL INSTRUMENT PANEL COIN BOX SUB-ASSY

62. INSTALL COWL SIDE TRIM SUB-ASSY LH

63. INSTALL FRONT DOOR SCUFF PLATE LH



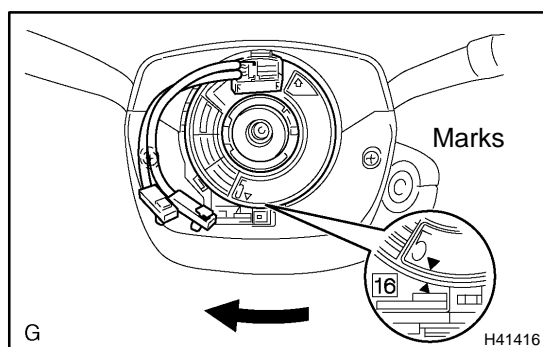
64. CENTER SPIRAL CABLE

- (a) Check that the ignition switch is at OFF.
- (b) Check that the battery negative terminal is disconnected.

NOTICE:

Do not start the operation for 90 seconds after removing the terminal.

- (c) Turn the cable counterclockwise by hand until it becomes harder to turn.



- (d) Then rotate the cable clockwise about 2.5 turns to align the marks.

HINT:

The cable will rotate about 2.5 turns to both right and left of the center.

65. INSTALL STEERING WHEEL ASSY

- (a) Align the matchmark with the one on the steering wheel assy and steering main shaft assy.
 (b) Install the steering wheel assy with the set nut.

Torque: 50 N·m (510 kgf·cm, 37 ft·lbf)

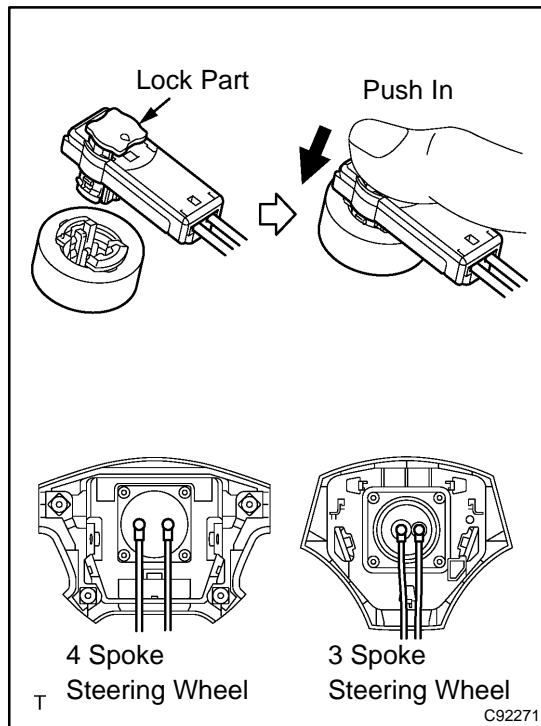
- (c) Connect the connector.

66. INSPECT HORN BUTTON ASSY(See page 60-25)

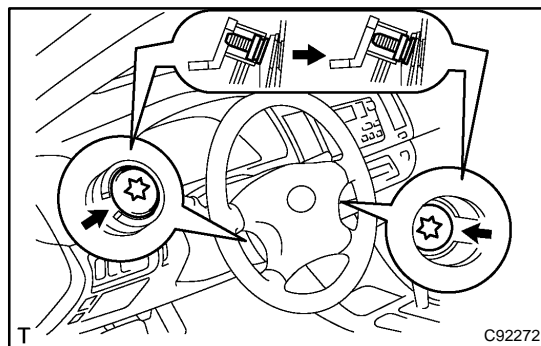
67. INSTALL HORN BUTTON ASSY

NOTICE:

- Never use the airbag parts removed from another vehicle. When replacing parts, replace with new ones.
- Make sure that the horn button assy is installed with the specified torque.
- If the horn button assy has been dropped, or there are cracks, dents or other defects in the case or connector, replace the horn button assy with a new one.
- When installing the horn button assy, take care so that the wirings do not interfere with other parts and that they are not pinched between other parts.



- (a) Connect the 2 airbag connectors.
- (b) Connect the horn connector. (4 Spoke steering wheel)



- (c) Install the horn button assy after confirming that the circumference groove of the torx® screws is caught on the screw case.
- (d) Using a torx® socket wrench, torque the 2 screws.
Torque: 8.8 N·m (90 kgf·cm, 78 in.-lbf)

- 68. INSTALL STEERING WHEEL COVER LOWER NO.2(See page 60-25)
- 69. INSTALL STEERING WHEEL COVER LOWER NO.3 (W/O STEERING PAD SWITCH 4 SPOKE STEERING WHEEL)(See page 60-25)
- 70. INSTALL CONNECTOR COVER (W/ STEERING PAD SWITCH 4 SPOKE STEERING WHEEL)(See page 60-25)
- 71. INSTALL STEERING WHEEL COVER LOWER NO.3 (3 SPOKE STEERING WHEEL ASSY)(See page 60-25)
- 72. INSPECT STEERING WHEEL CENTER POINT
- 73. INSPECT SRS WARNING LIGHT(See page 05-1456)