

2008 Scion xD
2008 STEERING Steering Column - xD

2008 STEERING**Steering Column - xD****STEERING SYSTEM****PRECAUTION****1. HANDLING PRECAUTIONS FOR SRS AIRBAG SYSTEM**

- a. The vehicle is equipped with SRS (Supplemental Restraint System) such as airbags. Failure to carry out service operations in the correct sequence could cause the SRS to unexpectedly deploy during servicing. This may cause a serious accident. Before servicing (including inspection, replacement, removal and installation of parts), be sure to read the precautionary notices for the Supplemental Restraint System (See **PRECAUTION**).

2. HANDLING PRECAUTIONS FOR STEERING COLUMN

- a. When handling the steering column assembly:
 1. Avoid any impact to the steering column assembly, especially to the motor or the torque sensor. Replace the steering column assembly with a new one if it is dropped or subjected to any severe impacts.
 2. Do not pull the wire harness when moving the steering column assembly.
 3. Hold the motor and housing section when carrying the steering column assembly. Do not hold the shaft or the tilt lever so as not to damage the steering column assembly.
 4. After replacing the steering column assembly or power steering ECU assembly, clear the rotation angle sensor calibration value, initialize the rotation angle sensor, and calibrate the torque sensor zero point (See **CALIBRATION**).
- b. When disconnecting or reconnecting the connectors:
 1. When disconnecting connectors related to the electronic motor power steering system, turn the ignition switch ON (the engine is stopped), center the steering wheel, turn the ignition switch off, and then disconnect the connectors.
 2. When reconnecting connectors related to the electronic motor power steering system, make sure that the ignition switch is turned off, center the steering wheel and then turn the ignition switch ON (the engine is stopped).

NOTE: **Do not turn the ignition switch ON without the steering wheel being centered.**

3. If the above operations are not carried out correctly, the steering center point (zero point) will deviate, causing a difference in steering effort between right and left turns. If there is a difference in the steering effort between right and left turns, perform the steering center point adjustment (zero point calibration) (See **CALIBRATION**).

PROBLEM SYMPTOMS TABLE**Steering system**

2008 Scion xD**2008 STEERING Steering Column - xD****STEERING SYSTEM REFERENCE**

Symptom	Suspected Area	See
Heavy steering	Front tires (Improperly inflated or unevenly worn)	<u>TIRE AND WHEEL SYSTEM</u>
	Front wheel alignment (Incorrect)	<u>FRONT WHEEL ALIGNMENT</u>
	Front suspension (Lower ball joint)	<u>REMOVAL</u>
	Steering intermediate shaft	<u>STEERING COLUMN ASSEMBLY</u>
	Steering column	<u>STEERING COLUMN ASSEMBLY</u>
	Steering gear	<u>REMOVAL</u>
	Power steering ECU	<u>REMOVAL</u>
Poor return	Front tires (Improperly inflated or unevenly worn)	<u>TIRE AND WHEEL SYSTEM</u>
	Front wheel alignment (Incorrect)	<u>FRONT WHEEL ALIGNMENT</u>
	Steering column	<u>STEERING COLUMN ASSEMBLY</u>
	Steering gear	<u>REMOVAL</u>
	Power steering ECU	<u>REMOVAL</u>
No free play or excessive play	Steering intermediate shaft	<u>STEERING COLUMN ASSEMBLY</u>
	Steering gear	<u>REMOVAL</u>
Knocking (or clunking) sound occurs when steering wheel turned while power steering in operation	Steering intermediate shaft	<u>STEERING COLUMN ASSEMBLY</u>
	Front suspension (Lower ball joint)	<u>REMOVAL</u>
	Front axle hub (Hub bearing)	<u>REMOVAL</u>
	Steering gear	<u>REMOVAL</u>
Friction sound occurs when steering wheel turned during low-speed driving	Power steering motor	<u>STEERING COLUMN ASSEMBLY</u>
	Steering column	<u>STEERING COLUMN ASSEMBLY</u>
High-pitched sound (squealing sound) occurs when steering wheel turned slowly with vehicle stopped	Power steering motor	<u>STEERING COLUMN ASSEMBLY</u>
Steering wheel vibrates and noise occurs when steering wheel turned while vehicle stopped	Power steering motor	<u>STEERING COLUMN ASSEMBLY</u>
	Steering column	<u>STEERING COLUMN ASSEMBLY</u>

2008 Scion xD**2008 STEERING Steering Column - xD****ON-VEHICLE INSPECTION****1. CHECK STEERING WHEEL FREE PLAY**

- Stop the vehicle and align the tires facing straight ahead.
- Turn the steering wheel gently right and left, and check the steering wheel free play.

Maximum free play:

30 mm (1.18 in.)

If the free play exceeds the maximum, check the steering system (See **STEERING SYSTEM**).

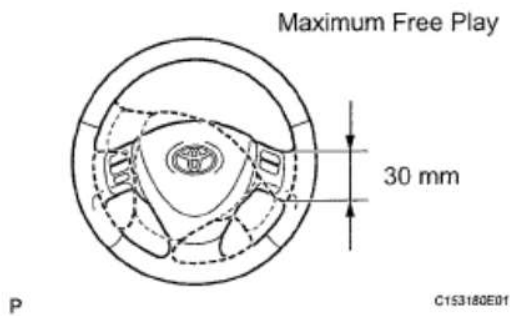
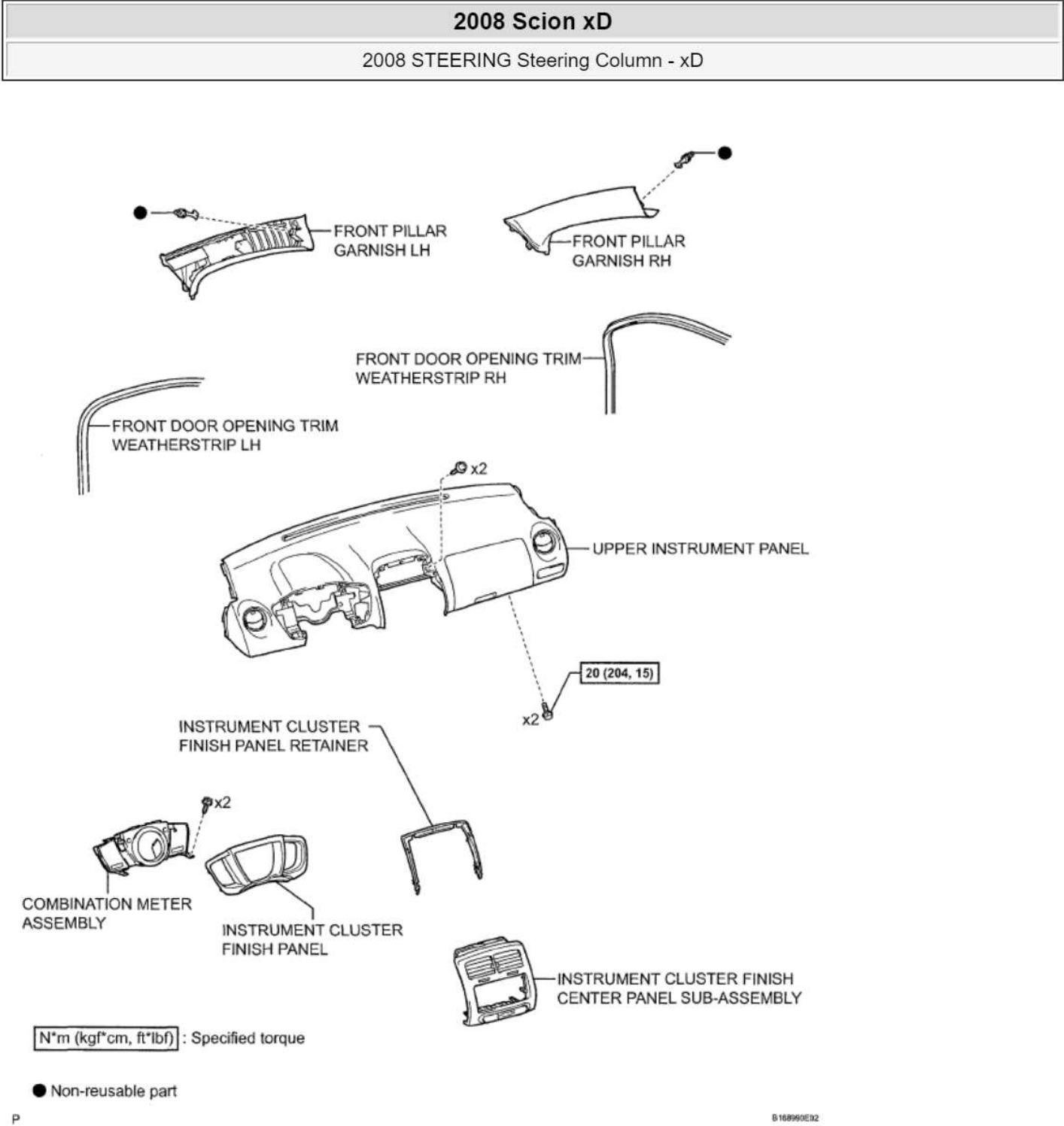


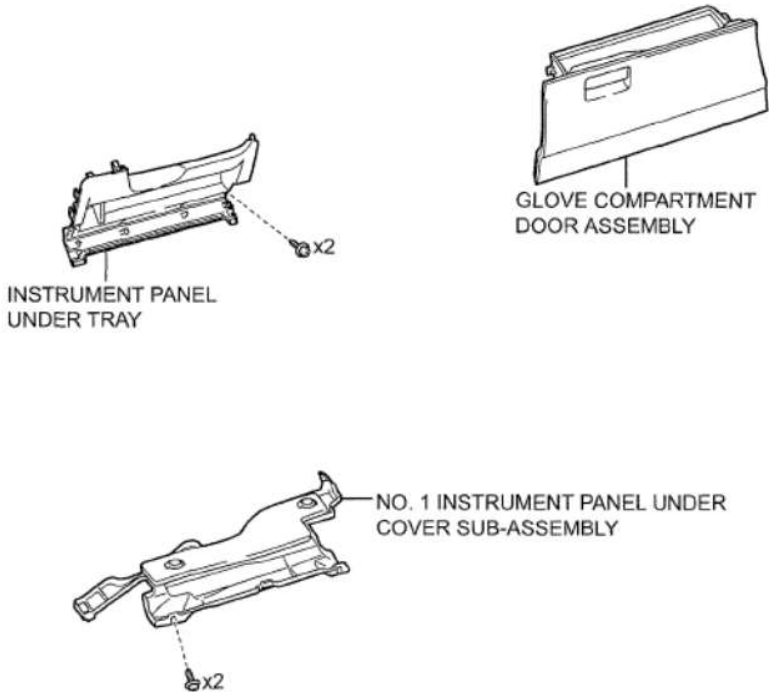
Fig. 1: Identifying Steering Wheel Free Play Dimension
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

STEERING COLUMN ASSEMBLY**COMPONENTS**



2008 Scion xD

2008 STEERING Steering Column - xD



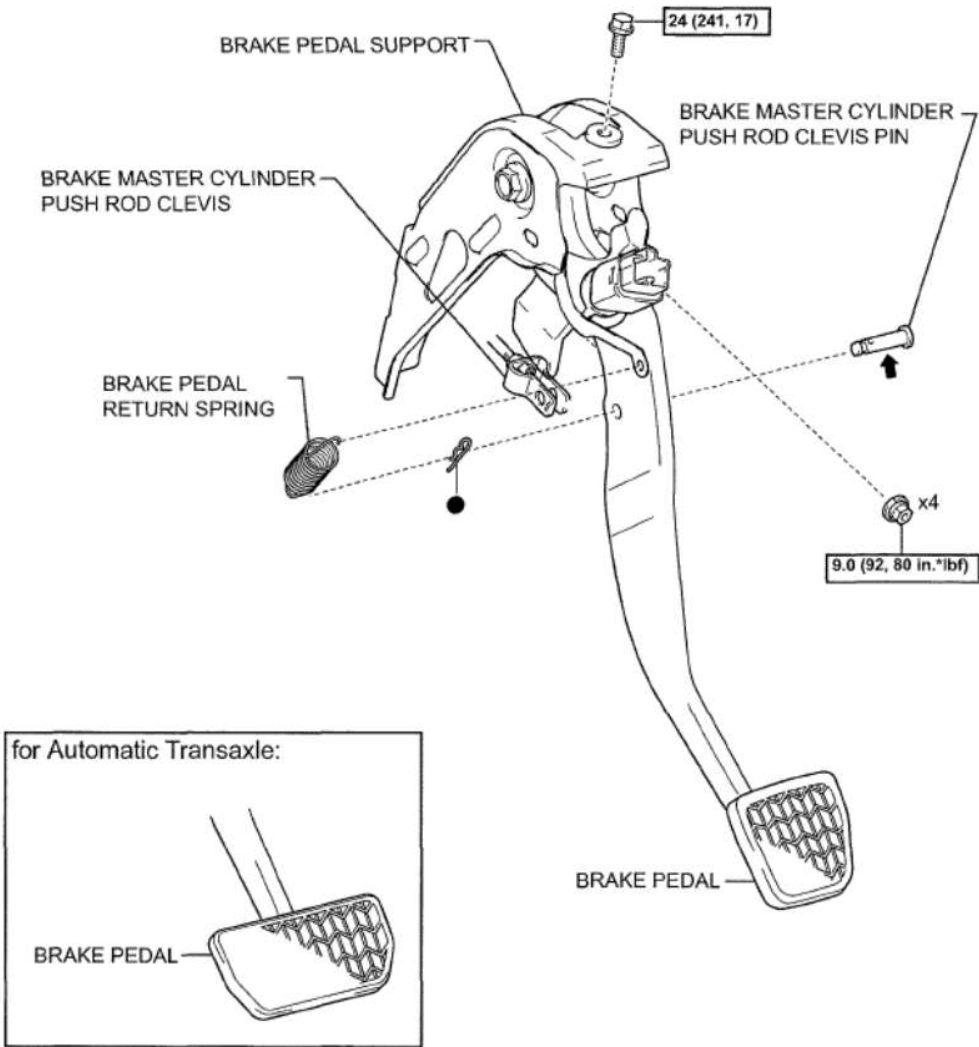
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Fig. 3: Identifying Steering Column Assembly Components (2 Of 5)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2008 Scion xD

2008 STEERING Steering Column - xD



[N*m (kgf*cm, ft.*lbf)] : Specified torque

- Non-reusable part
- ← Lithium Soap base glycol grease

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Fig. 4: Identifying Steering Column Assembly Components With Torque Specifications (3 Of 5)
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2008 Scion xD

2008 STEERING Steering Column - xD

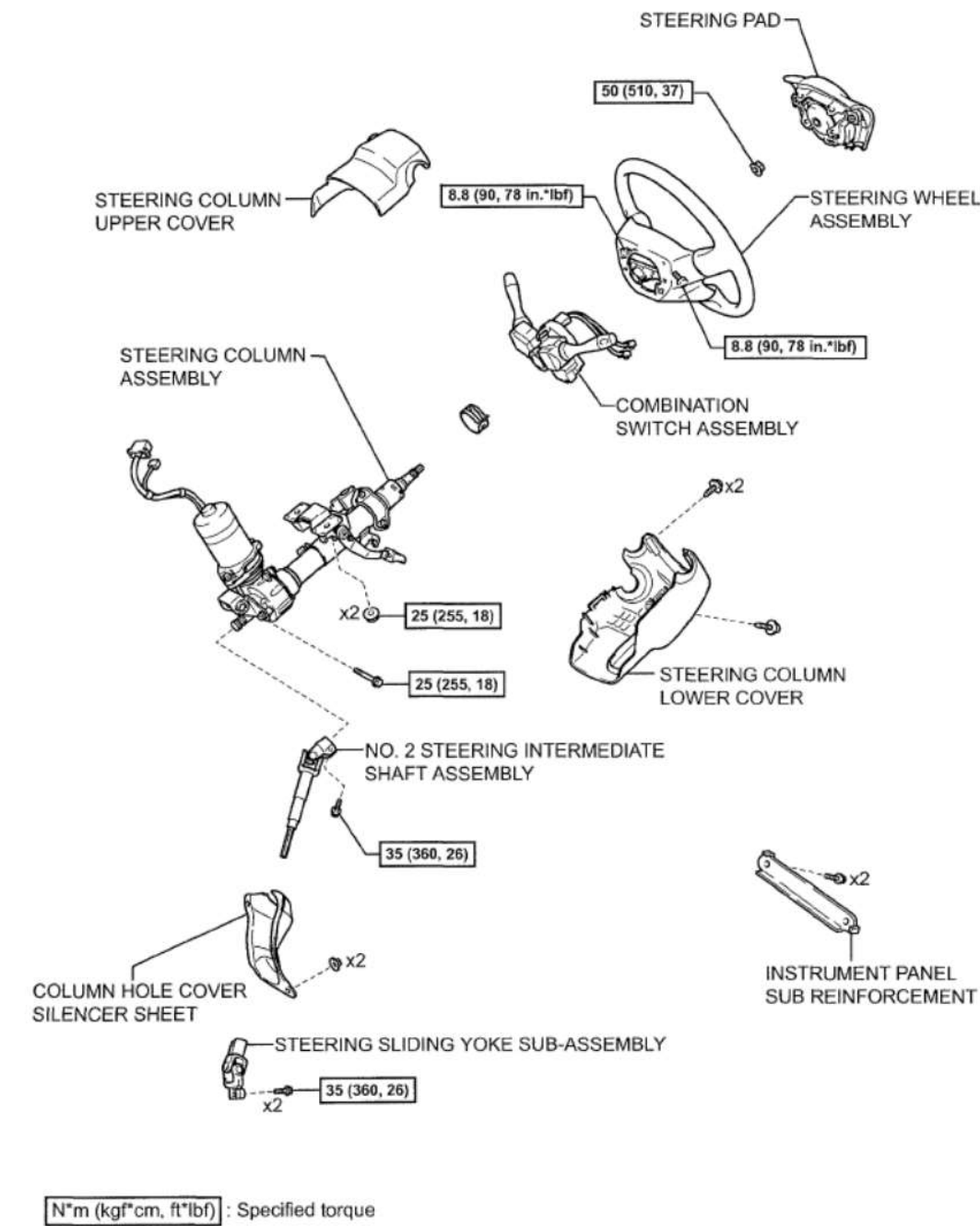
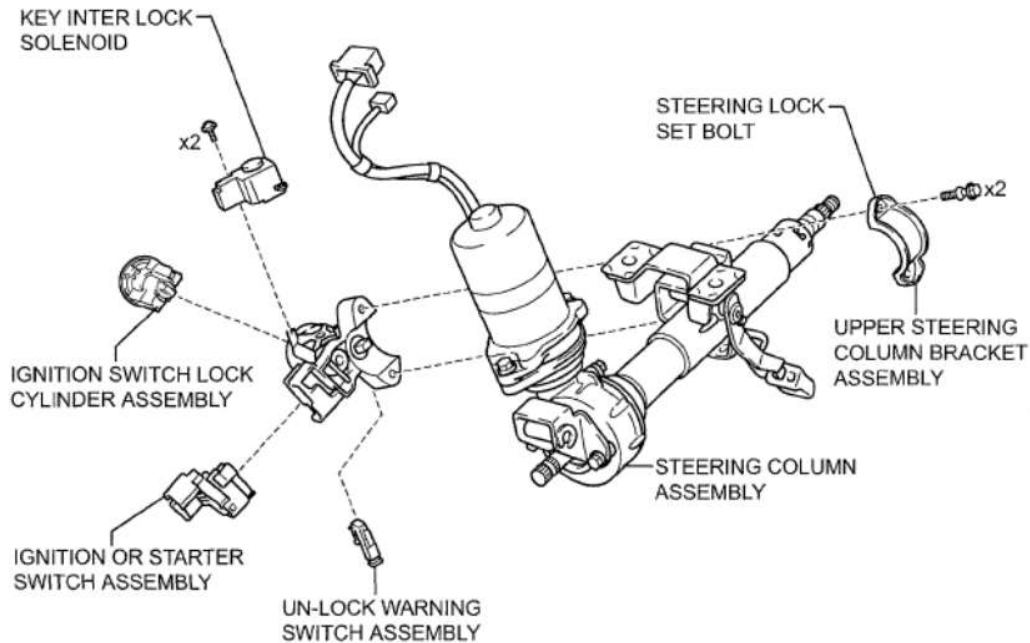


Fig. 5: Identifying Steering Column Assembly Components With Torque Specifications (4 Of 5)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2008 Scion xD

2008 STEERING Steering Column - xD



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Fig. 6: Identifying Steering Column Assembly Components (5 Of 5)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

REMOVAL

CAUTION: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing RS-1

1. POSITION FRONT WHEELS FACING STRAIGHT AHEAD
2. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

CAUTION: Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to prevent airbag and seat belt pretensioner activation.

3. REMOVE STEERING PAD (See REMOVAL)

2008 Scion xD

2008 STEERING Steering Column - xD

4. REMOVE STEERING WHEEL ASSEMBLY

- Fully extend and tilt up the steering wheel.
- Remove the steering wheel assembly set nut.
- Put matchmarks on the steering wheel assembly and the steering main shaft.

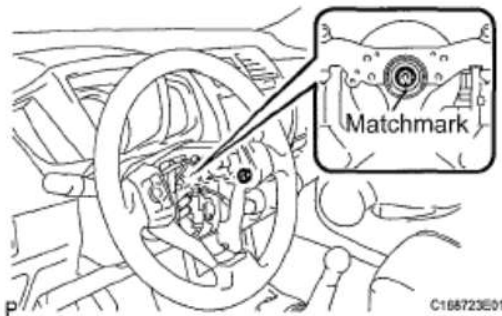


Fig. 7: Identifying Matchmarks On Steering Wheel Assembly And Steering Main Shaft
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- Disconnect the connectors from the spiral cable.
- Using SST, remove the steering wheel assembly.

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

NOTE: Apply a small amount of grease to the threads and tip of SST (center bolt) before use.

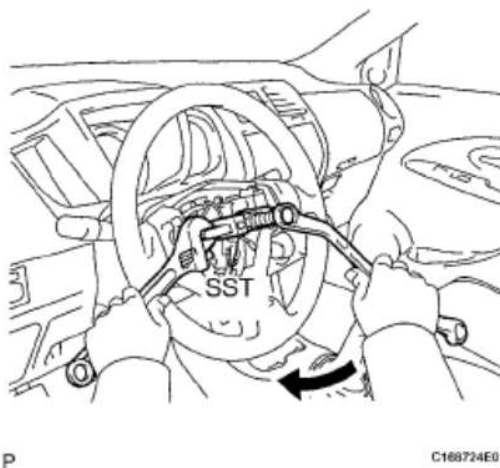


Fig. 8: Removing Steering Wheel Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

5. REMOVE STEERING COLUMN LOWER COVER

- Remove the 3 screws. disengage the 2 claws. release the tilt lever and remove the steering column

2008 Scion xD**2008 STEERING Steering Column - xD**

lower cover.

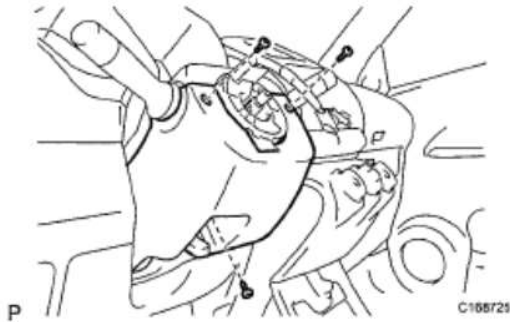


Fig. 9: Identifying Steering Column Lower Cover Screw
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

6. REMOVE STEERING COLUMN UPPER COVER

- a. Disengage the claw and remove the steering column upper cover.

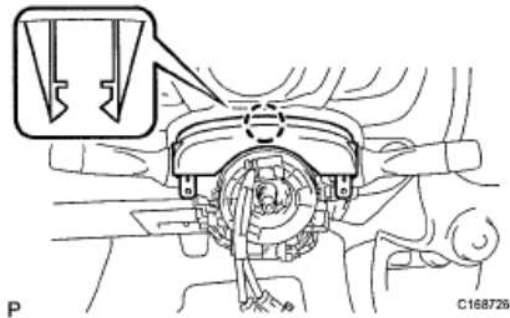
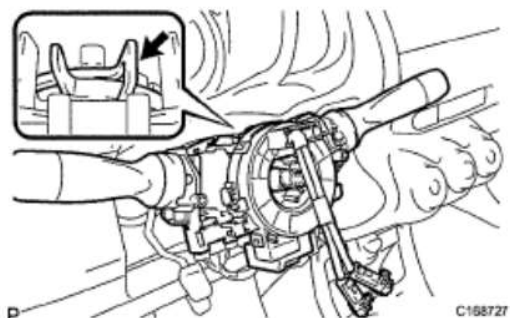


Fig. 10: Identifying Steering Column Upper Cover Claw
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

7. REMOVE COMBINATION SWITCH ASSEMBLY

- a. Disconnect all connectors from the turn signal switch with spiral cable.
- b. Use pliers to hold the clamp and raise the claw with a screwdriver. Remove the turn signal switch assembly with spiral cable sub-assembly from the steering column assembly.

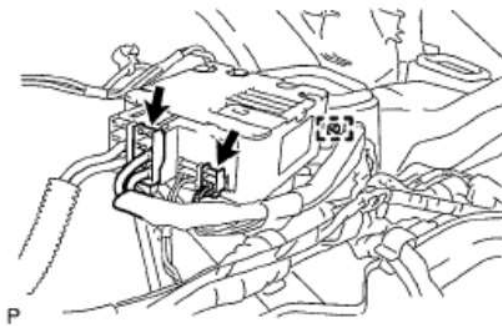


2008 Scion xD
2008 STEERING Steering Column - xD

Fig. 11: Locating Turn Signal Switch Assembly

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

8. **SEPARATE FRONT DOOR OPENING TRIM WEATHERSTRIP RH** (See **REMOVAL**)
9. **SEPARATE FRONT DOOR OPENING TRIM WEATHERSTRIP LH** (See **REMOVAL**)
10. **REMOVE FRONT PILLAR GARNISH RH** (See **REMOVAL**)
11. **REMOVE FRONT PILLAR GARNISH LH** (See **REMOVAL**)
12. **REMOVE INSTRUMENT CLUSTER FINISH PANEL** (See **REMOVAL**)
13. **REMOVE COMBINATION METER ASSEMBLY** (See **REMOVAL**)
14. **REMOVE INSTRUMENT CLUSTER FINISH CENTER PANEL SUB-ASSEMBLY** (See **REMOVAL**)
15. **REMOVE INSTRUMENT CLUSTER FINISH PANEL RETAINER** (See **REMOVAL**)
16. **REMOVE GLOVE COMPARTMENT DOOR ASSEMBLY** (See **REMOVAL**)
17. **REMOVE UPPER INSTRUMENT PANEL** (See **REMOVAL**)
18. **DISCONNECT POWER STEERING ECU**
 - a. Detach the power steering motor harness and torque sensor wire harness clamps from the power steering ECU side.



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Fig. 12: Locating Power Steering Motor Harness

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- b. Disconnect the 2 steering column assembly connectors from the power steering ECU.
19. **REMOVE NO. 1 INSTRUMENT PANEL UNDER COVER SUB-ASSEMBLY** (See **REMOVAL**)
20. **REMOVE INSTRUMENT PANEL UNDER TRAY** (See **REMOVAL**)
21. **REMOVE INSTRUMENT PANEL SUB REINFORCEMENT**
 - a. Remove the 2 bolts and remove the instrument panel sub reinforcement.

2008 Scion xD

2008 STEERING Steering Column - xD

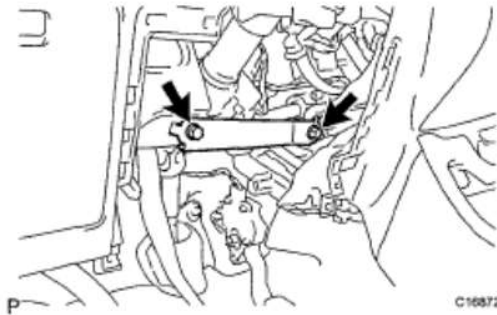


Fig. 13: Locating Instrument Panel Sub Reinforcement Bolt
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

22. REMOVE COLUMN HOLE COVER SILENCER SHEET

- a. Pull back the floor carpet, remove the 2 clips and remove the column hole cover silencer sheet.

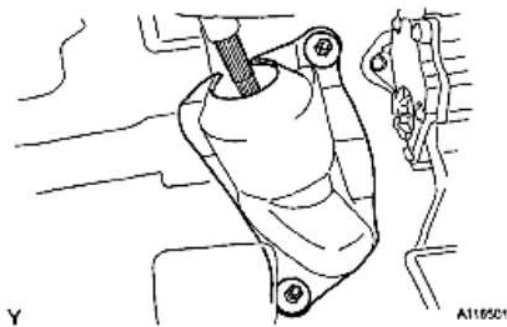
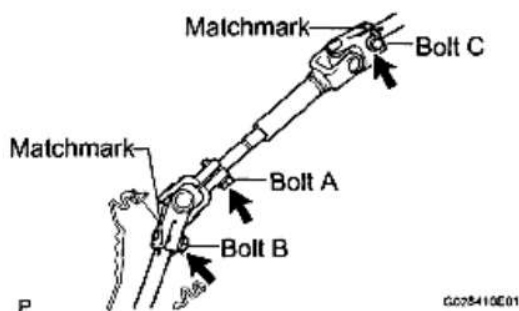


Fig. 14: Identifying Column Hole Cover Silencer Sheet
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

23. REMOVE NO. 2 STEERING INTERMEDIATE SHAFT ASSEMBLY

- a. Loosen bolt A.
- b. Place matchmarks on the steering intermediate assembly and steering gear assembly.
- c. Remove bolt B and detach the steering intermediate assembly from the steering gear assembly.
- d. Place matchmarks on the steering intermediate assembly and steering column assembly.



2008 Scion xD

2008 STEERING Steering Column - xD

Fig. 15: Locating Matchmarks On Steering Intermediate Assembly And Steering Gear Assembly

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- e. Remove bolt C and detach the steering intermediate shaft assembly from the steering column assembly.
- 24. **REMOVE BRAKE MASTER CYLINDER PUSH ROD CLEVIS** (See **REMOVAL**)
- 25. **REMOVE BRAKE PEDAL SUPPORT** (See **REMOVAL**)
- 26. **REMOVE STEERING COLUMN ASSEMBLY**
 - a. Disconnect all connectors and detach all wire harness clamps from the steering column assembly.

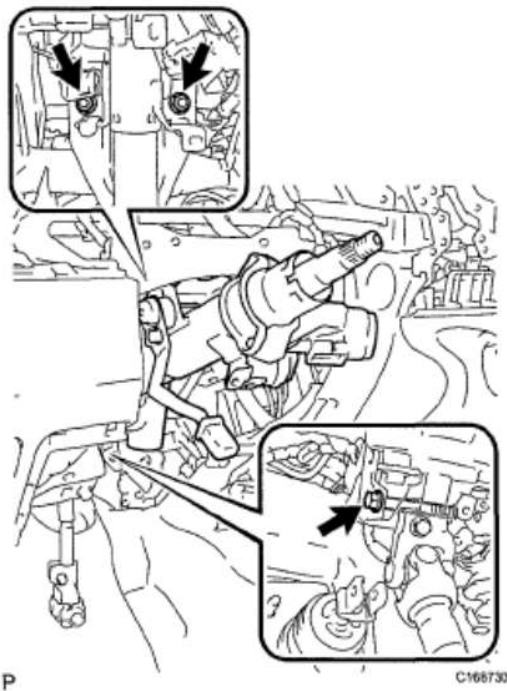


Fig. 16: Locating Steering Column Assembly

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- b. Remove the 3 bolts and remove the steering column assembly from the instrument panel reinforcement assembly.

DISASSEMBLY

1. REMOVE STEERING SLIDING YOKE SUB-ASSEMBLY

- a. Place matchmarks on steering intermediate shaft assembly No. 2 and the steering sliding yoke.

2008 Scion xD

2008 STEERING Steering Column - xD

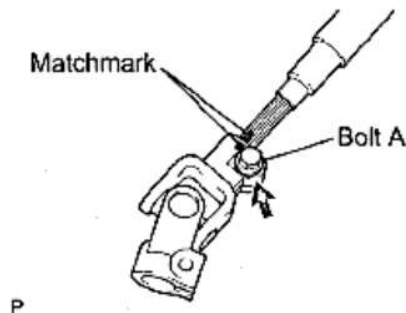


Fig. 17: Locating Matchmarks On Steering Intermediate Shaft Assembly No. 2
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- b. Remove bolt A and remove the steering sliding yoke from steering intermediate shaft No. 2.

2. REMOVE UPPER STEERING COLUMN BRACKET ASSEMBLY

- a. Fix the steering column assembly in a vise between aluminum plates.

NOTE: Do not overtighten the vise.

- b. Using a drill, drill a hole in each of the 2 steering lock set bolts, to insert a screw extractor.
- c. Using the screw extractor, remove the 2 steering lock set bolts and remove the steering column upper w/ switch bracket assembly and steering column clamp upper.

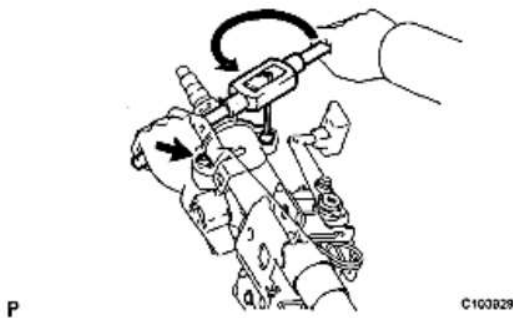


Fig. 18: Removing Steering Lock Set Bolts
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. REMOVE IGNITION SWITCH LOCK CYLINDER ASSEMBLY

- a. Turn the ignition switch to ACC.
- b. Insert the tip of a screwdriver into the hole in the steering column bracket assembly upper, as shown in the illustration, and pull the ignition switch lock cylinder assembly out until its claw comes into contact with the stopper of the steering column bracket assembly upper.

NOTE: Pull the ignition switch lock cylinder assembly out until the claw comes into contact with the stopper of the steering column bracket assembly upper. Otherwise, the following procedure cannot be

2008 Scion xD

2008 STEERING Steering Column - xD

conducted properly.

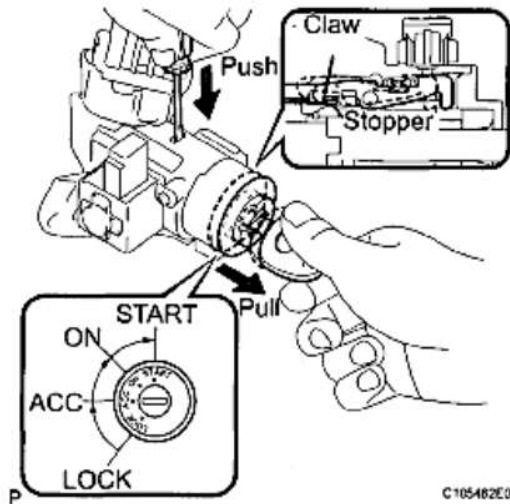


Fig. 19: Locating Steering Column Bracket Assembly Upper
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- c. Insert the tip of a screwdriver into the hole in the steering column bracket and tilt it downward, as shown in the illustration, to disengage the claw on the ignition switch lock cylinder. Then pull out the ignition switch lock cylinder.

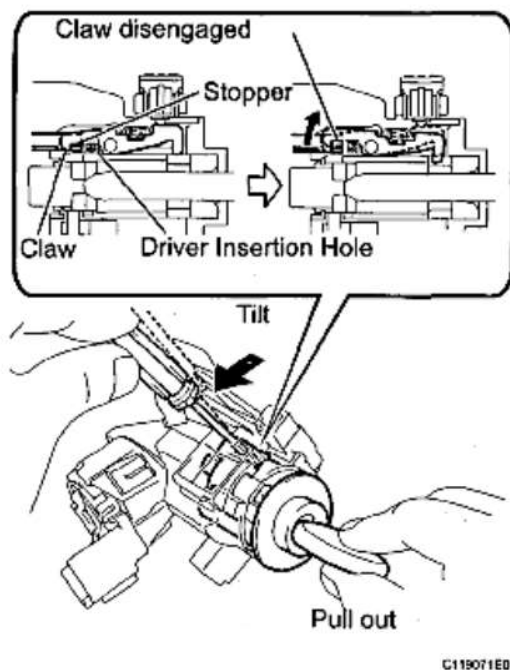


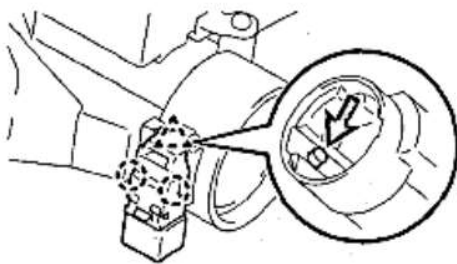
Fig. 20: Pulling Ignition Switch Lock Cylinder
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2008 Scion xD**2008 STEERING Steering Column - xD****4. REMOVE UN-LOCK WARNING SWITCH ASSEMBLY**

- a. Push up the un-lock warning switch assembly center portion to disengage the 2 claws.

HINT:

Slide the un-lock warning switch assembly, in the direction shown by the arrow in the illustration, to remove it.



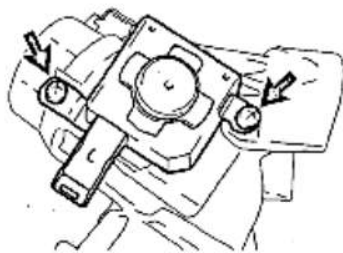
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Fig. 21: Locating Un-Lock Warning Switch Assembly Claw
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

5. REMOVE KEY INTER LOCK SOLENOID (for Automatic Transaxle)

- a. Remove the 2 screws and remove the key lock solenoid from the steering column bracket assembly upper.



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Fig. 22: Locating Steering Column Bracket Assembly Upper Screws
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

6. REMOVE IGNITION OR STARTER SWITCH ASSEMBLY

- a. Disengage the 2 claws and remove the ignition (starter) switch assembly from the steering column bracket assembly upper.

2008 Scion xD

2008 STEERING Steering Column - xD

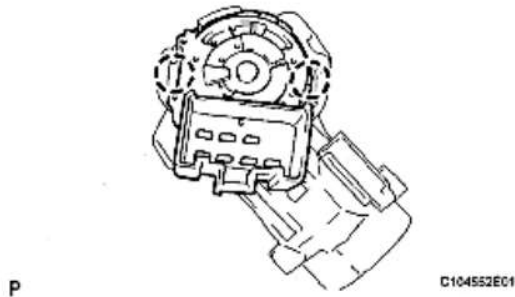


Fig. 23: Identifying Ignition Switch Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

REASSEMBLY

1. INSTALL IGNITION OR STARTER SWITCH ASSEMBLY

- Engage the 2 claws to install the ignition (starter) switch assembly onto the steering column bracket assembly upper.

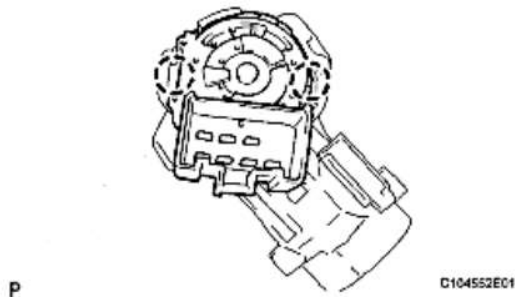


Fig. 24: Identifying Starter Switch Assembly Claws
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. INSTALL KEY INTER LOCK SOLENOID (for Automatic Transaxle)

- Install the key inter lock solenoid onto the steering column bracket assembly upper with the 2 screws.

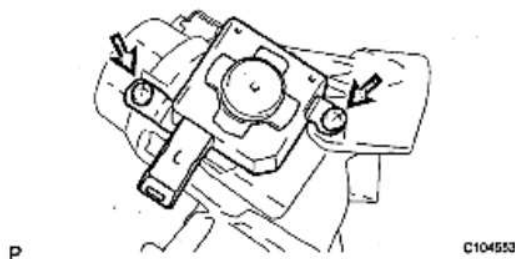


Fig. 25: Locating Steering Column Bracket Assembly Upper Screws
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2008 Scion xD

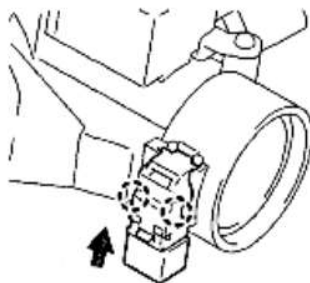
2008 STEERING Steering Column - xD

3. INSTALL UN-LOCK WARNING SWITCH ASSEMBLY

- Engage the 2 claws to install the un-lock warning switch assembly onto the steering column bracket assembly upper.

HINT:

Slide the un-lock warning switch assembly, in the direction shown by the arrow in the illustration, to install it.



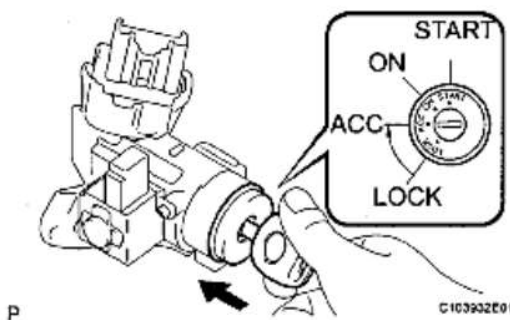
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Fig. 26: Locating Steering Column Bracket Assembly Upper Claws
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

4. INSTALL IGNITION SWITCH LOCK CYLINDER ASSEMBLY

- Turn the ignition switch to ACC.
- Install the ignition switch lock cylinder assembly into the steering column bracket assembly upper.



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Fig. 27: Installing Ignition Switch Lock Cylinder Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

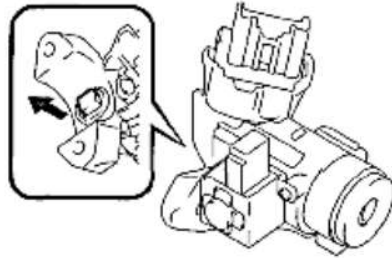
- Make sure that the ignition switch lock cylinder assembly is securely fixed onto the ignition switch lock cylinder assembly.

5. INSPECT STEERING LOCK OPERATION

- Remove the key and check that the steering lock function is activated.

2008 Scion xD

2008 STEERING Steering Column - xD



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Fig. 28: Inspecting Steering Lock Operation

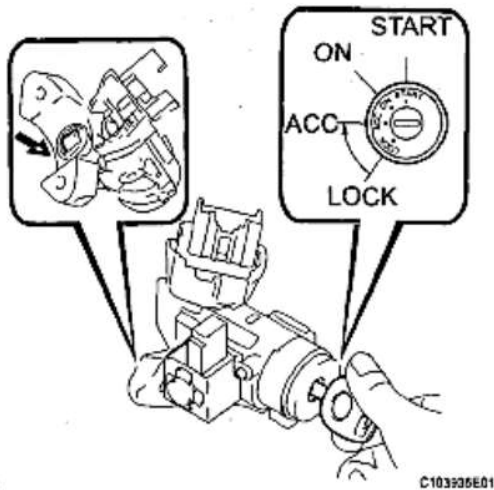
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- b. Insert the key, turn the ignition switch to ACC and check that the steering lock function has been deactivated.

6. INSTALL UPPER STEERING COLUMN BRACKET ASSEMBLY

- a. Fix the steering column assembly in a vise between aluminum plates.

NOTE: Do not overtighten the vise.



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Fig. 29: Checking Steering Lock

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- b. Install the steering column upper with switch bracket assembly and steering column clamp upper with 2 new steering lock set bolts, and then tighten the bolts until their heads come off.

2008 Scion xD

2008 STEERING Steering Column - xD

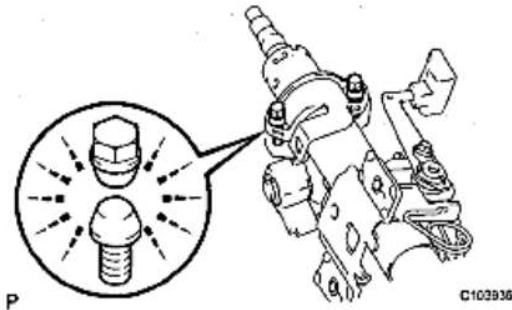


Fig. 30: Identifying Steering Column Upper With Switch Bracket
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

7. INSTALL STEERING SLIDING YOKE SUB-ASSEMBLY

- Align the matchmarks on steering intermediate shaft assembly No. 2 and the steering sliding yoke and provisionally install them with the bolt.

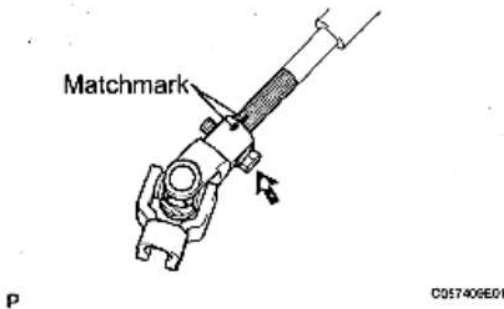


Fig. 31: Aligning Matchmarks On Steering Intermediate Shaft Assembly No. 2 And Steering Sliding Yoke
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSTALLATION

1. INSTALL STEERING COLUMN ASSEMBLY

- Install the steering column assembly onto the instrument panel reinforcement assembly with the bolts and 2 nuts.

Torque: 25 N*m (255 kgf*cm, 18 ft.*lbf)

2008 Scion xD

2008 STEERING Steering Column - xD

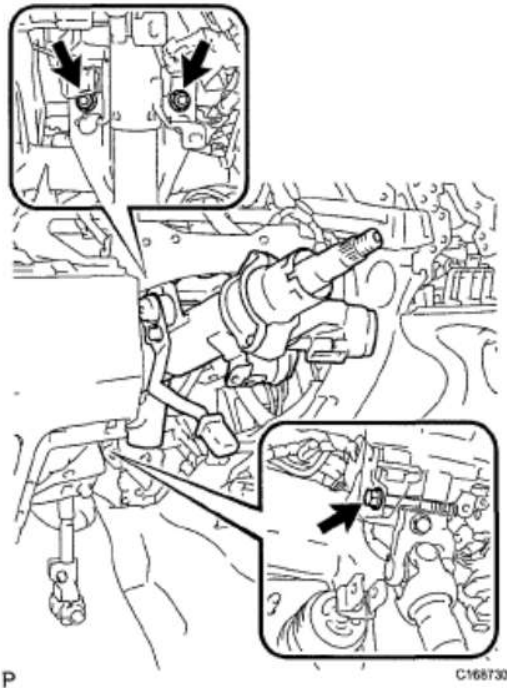


Fig. 32: Locating Steering Column Assembly Bolts
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- b. Connect all the connectors and clamp the wire harnesses onto the steering column assembly bracket.
2. **INSTALL BRAKE PEDAL SUPPORT** (See INSTALLATION)
3. **INSTALL BRAKE MASTER CYLINDER PUSH ROD CLEVIS** (See INSTALLATION)
4. **INSTALL NO. 2 STEERING INTERMEDIATE SHAFT ASSEMBLY**
 - a. Align the matchmarks on steering intermediate shaft assembly No. 2 and the steering sliding yoke and provisionally install them with bolt C.

Torque: 35 N*m (360 kgf*cm, 26 ft.*lbf)

- b. Align the matchmarks on the steering sliding yoke and steering gear assembly and install them with bolt B.

Torque: 35 N*m (360 kgf*cm, 26 ft.*lbf)

2008 Scion xD

2008 STEERING Steering Column - xD

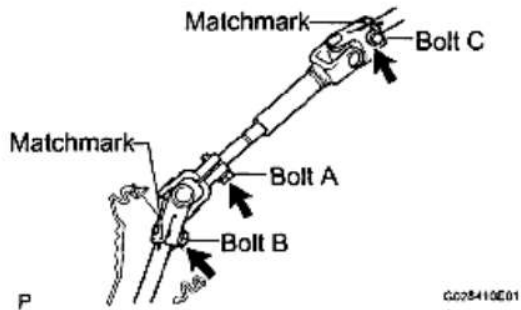


Fig. 33: Aligning Matchmarks On Steering Sliding Yoke And Steering Gear Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- c. Tighten bolt A.

Torque: 35 N*m (360 kgf*cm, 26 ft.*lbf)

5. INSTALL COLUMN HOLE COVER SILENCER SHEET

- a. Install the column hole cover plate with the 2 clips.

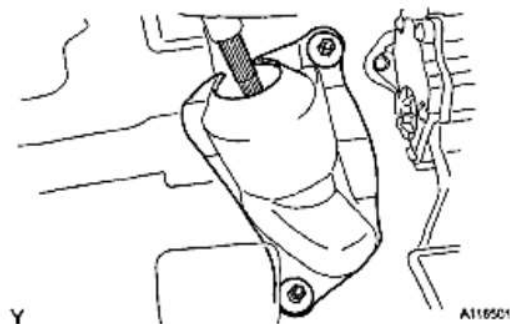


Fig. 34: Identifying Column Hole Cover Silencer Sheet
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- b. Install the floor carpet.

6. INSTALL INSTRUMENT PANEL SUB REINFORCEMENT

- a. Align the 2 claws and install the instrument panel sub reinforcement with the 2 bolts.

2008 Scion xD

2008 STEERING Steering Column - xD

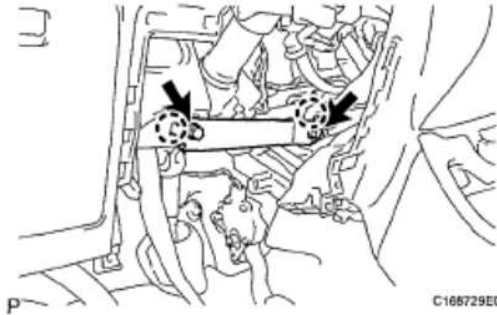


Fig. 35: Locating Instrument Panel Sub Reinforcement With Bolts
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

7. **INSTALL INSTRUMENT PANEL UNDER TRAY** (See INSTALLATION)
8. **INSTALL NO. 1 INSTRUMENT PANEL UNDER COVER SUB-ASSEMBLY** (See INSTALLATION)
9. **CONNECT POWER STEERING ECU**
 - a. Connect the 2 steering column assembly connectors to the power steering ECU.

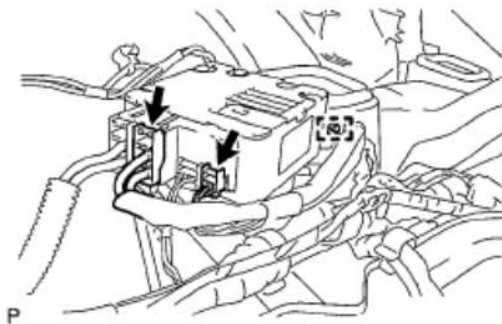


Fig. 36: Locating Power Steering ECU
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- b. Install the power steering motor harness and torque sensor wire harness clamps onto the side of the power steering ECU.
 - c. Tilt the steering column assembly up and down to make sure that the power steering motor harness and torque sensor wire harness do not interfere with any components.
10. **INSTALL UPPER INSTRUMENT PANEL** (See INSTALLATION)
11. **INSTALL GLOVE COMPARTMENT DOOR ASSEMBLY** (See INSTALLATION)
12. **INSTALL INSTRUMENT CLUSTER FINISH PANEL RETAINER** (See INSTALLATION)
13. **INSTALL INSTRUMENT CLUSTER FINISH CENTER PANEL SUB-ASSEMBLY** (See INSTALLATION)
14. **INSTALL COMBINATION METER ASSEMBLY** (See INSTALLATION)

2008 Scion xD
2008 STEERING Steering Column - xD

15. **INSTALL INSTRUMENT CLUSTER FINISH PANEL** (See INSTALLATION)
16. **INSTALL FRONT PILLAR GARNISH RH** (See INSTALLATION)
17. **INSTALL FRONT PILLAR GARNISH LH** (See INSTALLATION)
18. **INSTALL FRONT DOOR OPENING TRIM WEATHERSTRIP RH** (See INSTALLATION)
19. **INSTALL FRONT DOOR OPENING TRIM WEATHERSTRIP LH** (See INSTALLATION)
20. **INSTALL COMBINATION SWITCH ASSEMBLY**
 - a. Install the turn signal switch assembly with spiral cable onto the steering column assembly with the clamp

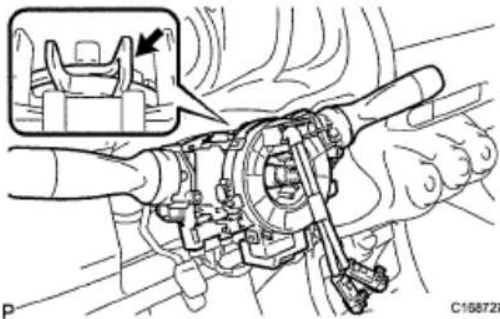


Fig. 37: Locating Combination Switch Assembly

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- b. Connect all the connectors to the turn signal switch with spiral cable.
21. **INSTALL STEERING COLUMN UPPER COVER**
 - a. Engage the claw to install the steering column upper cover.

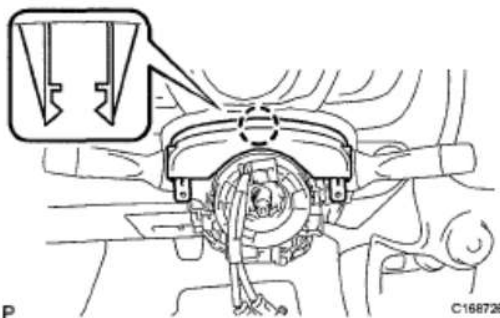


Fig. 38: Identifying Steering Column Upper Cover

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

22. **INSTALL STEERING COLUMN LOWER COVER**
 - a. Engage the 2 claws to install the steering column lower cover.
 - b. Install the 3 screws.

2008 Scion xD

2008 STEERING Steering Column - xD

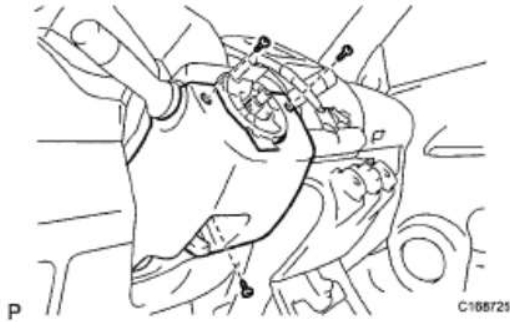


Fig. 39: Identifying Steering Column Lower Cover Screw
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

23. INSTALL STEERING WHEEL ASSEMBLY

- a. Align the matchmarks and install the steering wheel assembly onto the steering column assembly.

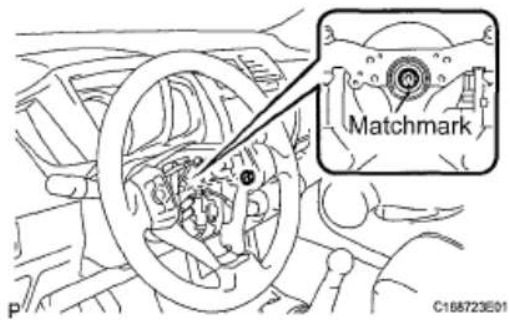


Fig. 40: Identifying Matchmarks On Steering Wheel Assembly And Steering Main Shaft
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- b. Install the nut.

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

- c. Connect all the connectors to the spiral cable.

24. INSTALL STEERING PAD (See INSTALLATION)

25. POSITION FRONT WHEELS FACING STRAIGHT AHEAD

26. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

27. INSPECT SRS WARNING LIGHT TURNS OFF

(See DIAGNOSIS SYSTEM)

28. PERFORM CALIBRATION OF TORQUE SENSOR ZERO POINT

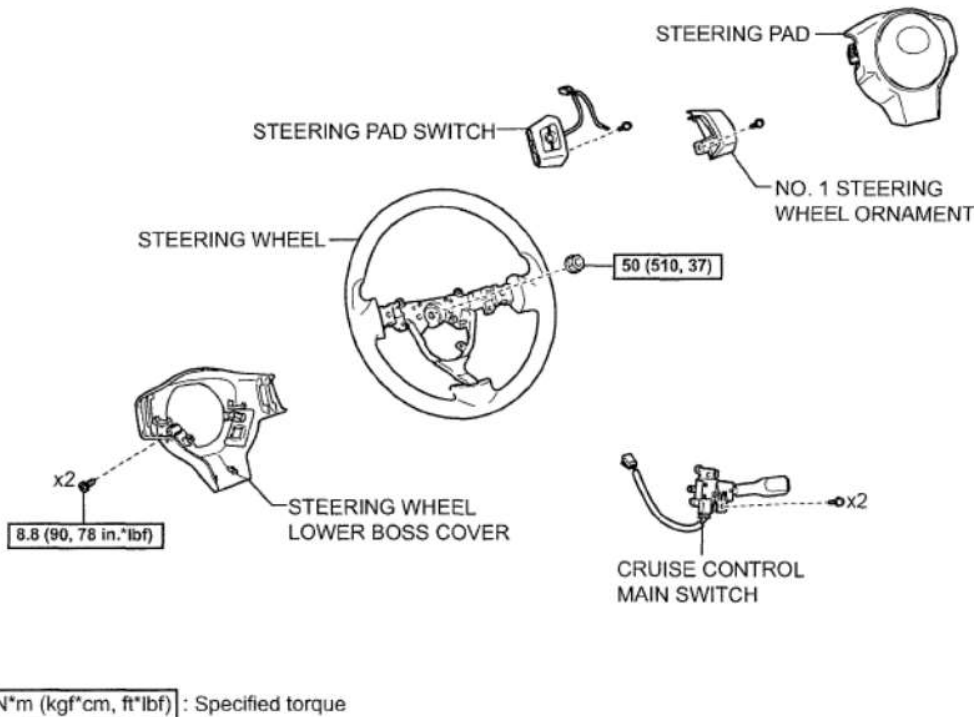
(See CALIBRATION)

2008 Scion xD

2008 STEERING Steering Column - xD

STEERING WHEEL

COMPONENTS



P

C160717E01

Fig. 41: Identifying Steering Wheel Components With Torque Specifications
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

REMOVAL

CAUTION: Some of these service operations affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system before servicing the steering column (See PRECAUTION).

1. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

CAUTION: Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to prevent airbag and seat belt pretensioner activation.

2. REMOVE STEERING PAD (See REMOVAL)
3. REMOVE CRUISE CONTROL MAIN SWITCH (See REMOVAL)
4. REMOVE STEERING PAD SWITCH (See REMOVAL)

2008 Scion xD**2008 STEERING Steering Column - xD****5. REMOVE NO. 1 STEERING WHEEL ORNAMENT**

- a. Remove the screw.
- b. Disengage the 2 claws and the pin.
- c. Remove the No.1 steering wheel ornament.

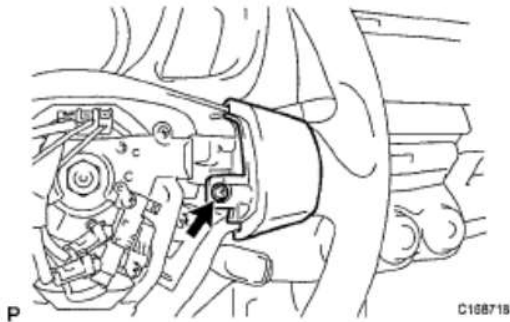


Fig. 42: Locating No.1 Steering Wheel Ornament
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

6. REMOVE STEERING WHEEL (See REMOVAL)**7. REMOVE STEERING WHEEL LOWER BOSS COVER**

- a. Remove the 2 screws.
- b. Disengage the claw and remove the steering wheel lower boss cover.

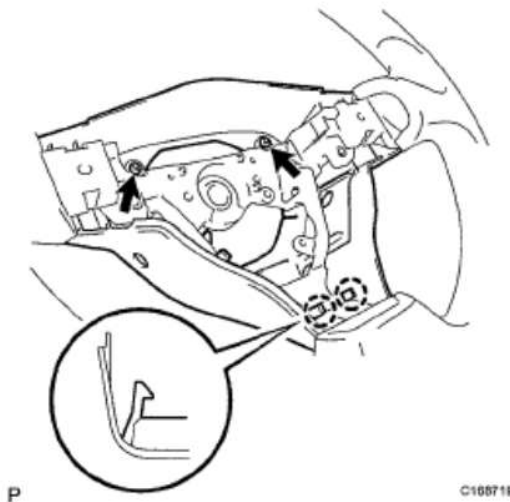


Fig. 43: Locating Steering Wheel Lower Boss Cover
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSTALLATION

CAUTION: Some of these service operations affect the SRS airbag system. Read the

2008 Scion xD
2008 STEERING Steering Column - xD

precautionary notices concerning the SRS airbag system before servicing (See PRECAUTION).

1. INSTALL STEERING WHEEL LOWER BOSS COVER

- a. Engage the claw and install the steering wheel lower boss cover.

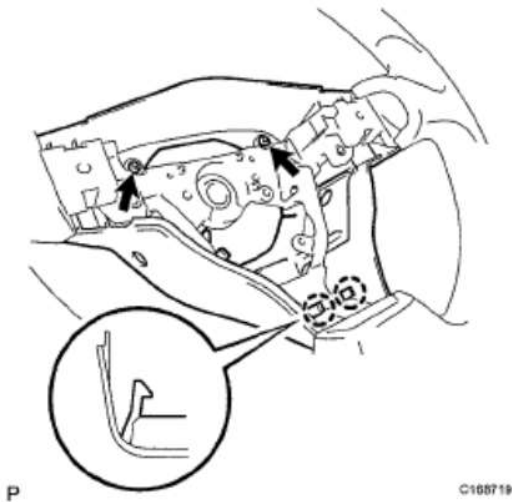


Fig. 44: Locating Steering Wheel Lower Boss Cover Screw
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- b. Tighten the screw.

2. INSTALL STEERING WHEEL (See INSTALLATION)

3. INSTALL NO. 1 STEERING WHEEL ORNAMENT

- a. Engage the 2 claws and the pin.
- b. Install the steering pad switch LH with the screw.

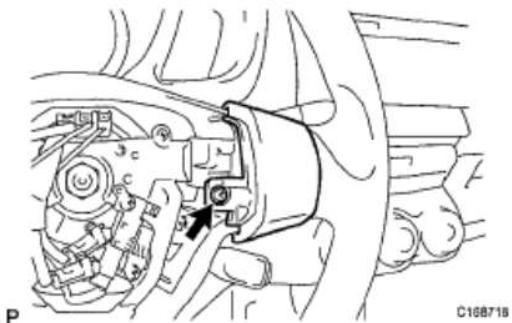


Fig. 45: Locating No.1 Steering Wheel Ornament Screw
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

4. INSTALL STEERING PAD SWITCH

5. INSTALL CRUISE CONTROL MAIN SWITCH

2008 Scion xD

2008 STEERING Steering Column - xD

6. **INSTALL STEERING PAD**
7. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**

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

8. **INSPECT SRS WARNING LIGHT**

(See **DIAGNOSIS SYSTEM**)