



**Technical Service
Information Bulletin**

July 28, 2005

Title:
**STEERING FLUTTER
FIELD-FIX PROCEDURE**

Models:
'03 - '05 GX 470

REVISÉD
ST002-05
STEERING

TSIB REVISION NOTICE:

- **September 8, 2005:** The contact information in the “Obtaining Replacement Tires” section of the “Dunlop Tire Flat Spotting Diagnosis” procedure has been updated. Previous versions of this TSIB should be discarded.

Introduction Some customers may experience a steering flutter condition while driving at highway speeds. In most cases, this concern is caused by flat spots that can normally develop in the tires after sitting for long periods of time. To minimize the effects of flat spotting and other minor tire irregularities, a new repair procedure has been developed that includes installing improved components to help reduce steering flutter complaints.

- Applicable Vehicles**
- **2003 - 2005** model year **GX 470** vehicles produced **BEFORE** the Production Change Effective VINs shown below.

**Production
Change
Information**

MODEL	PRODUCTION CHANGE EFFECTIVE VIN	
GX 470	Steering Gearbox	JTJBT20X340061726
	Steering Wheel	JTJBT20X250068961

**Warranty
Information**

OP CODE	DESCRIPTION	TIME	OFF	T1	T2
ST4005	R & R Rack Preload Spring	3.3	44215-35010	31	99
ST4006	R & R Steering Wheel	0.5	45100-60490-C0		
			45100-60490-E0		
			45100-60500-C0		
			45100-60500-E0		
			45100-60510-C0		

Applicable Warranty*:

This repair is covered under the Lexus Comprehensive Warranty. This warranty is in effect for 48 months or 50,000 miles, whichever occurs first, from the vehicle's in-service date.

* Warranty application is limited to correction of a problem based upon a customer's specific complaint.













Parts Information

PREVIOUS PART NUMBER	CURRENT PART NUMBER	PART NAME	DETAIL	QTY
N/A	44215-35010	Spring, Control Valve Pre-set	—	1
45100-60500-C0	45100-60540-C0	Steering Wheel Assembly	Wood & Leather, Black	1
45100-60500-E0	45100-60540-E0		Wood & Leather, Sandal Wood	1
45100-60510-C0	45100-60511-C0		Wood & Leather, Lexus Sport Pack, Black	1

Required Tools & Material

TOOLS & MATERIAL	PART NUMBER	QUANTITY
Three Bond 1344, Loctite 242, or equivalent	-	As Needed
Union Nut Wrench 17 mm (or equivalent)	09023-12700	1
Torx Socket T30	09042-00010	1

Required SSTs

ITEM NO.	SPECIAL SERVICE TOOLS (SSTs)	PART NUMBER	QTY	DRW**
1	Ball Joint Puller (or equivalent) 	09628-62011	1	-
2	Haweka Flange Plate #1* 	02001-02###***	1	10
3	Hexagon Wrench (24 mm)* 	09612-10022-02	1	12
4	Steering Worm Bearing Adjusting Socket* 	09616-00010-02	1	12
5	Variable Open Wrench* 	09922-10010-01	1	12
6	Puller C Set* 	09950-50013-01	1	24
COMPONENT(S) OF KIT/SET	Four (4) components from this kit/set are required:			
	• Hanger 150 (P/N 09951-05010)			
	• Slide Arm (Qty 2) (P/N 09952-05010)			
	• Center Bolt 150 (P/N 09953-05020)			
	• Claw No. 2 (P/N 09954-05020)			

* Essential SSTs.

** Refers to drawer number in SST Storage System.

*** - 28 mm, 30 mm, 36 mm, or 40 mm

Part number is different according to tire balancer's shaft size.

NOTE:

Additional SSTs may be ordered by calling SPX/OTC at 1-800-933-8335.

Diagnostic Procedure

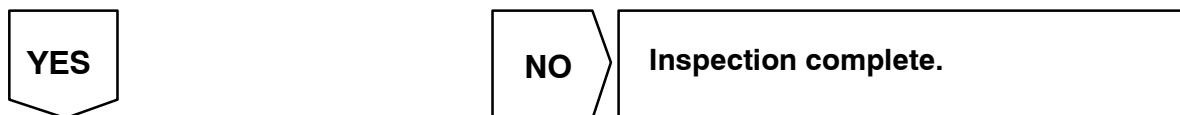
1	Confirm steering flutter complaint.
----------	--------------------------------------------

PREPARATION:

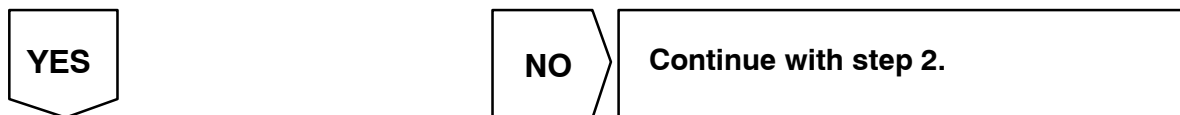
Warm tires to normal operating temperature to remove cold-soak flat spots (drive 10 minutes at 65 mph [104.6 km/h]).

NOTE:
Road test the vehicle at the same speeds and on the same type of road surfaces as the customer complaint.

Steering flutter detected?



Is the vehicle equipped with Dunlop AT20 P265/65R17 110S tires?



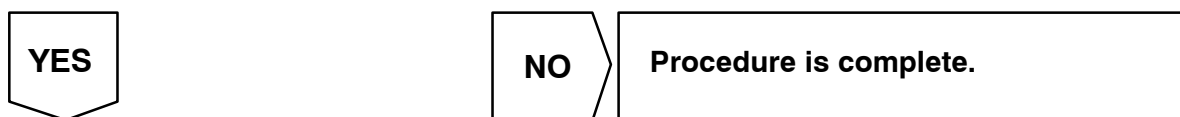
Proceed to the “Dunlop Tire Flat Spotting Diagnosis” section, page 5 of this TSIB. Once this section has been performed, go to step 2.

2	Balance the tire and wheel assembly using an On-Car Balancer or Off-Car Balancer with Haweka Flange Plate #1 (see “Tire Balance Procedure” in this TSIB, page 6).
----------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------

CAUTION:
Ensure that the tire and wheel assembly is properly centered on the Haweka adapter before balancing.

Road test for steering flutter.

Steering flutter detected?



Diagnostic Procedure
(Continued)

3	Increase the preload on steering rack assembly (see “Steering Rack Guide Preload Spring Installation Procedure” in this TSIB, page 7).
----------	-----------------------------------------------------------------------------------------------------------------------------------------------

NEXT

4	Road test for steering flutter.
----------	----------------------------------------

Steering flutter detected?

YES

NO

Procedure is complete.

5	Replace the steering wheel with the increased mass dampened steering wheel (see “Increased Mass Steering Wheel Installation Procedure,” page 22).
----------	----------------------------------------------------------------------------------------------------------------------------------------------------------

Dunlop Tire Flat Spotting Diagnosis

The following instructions apply **only** to the P265/65R17 110S Dunlop AT20 original equipment tires produced before the production week 0905. Tires produced on or after production week 0905 do NOT qualify for this program. The last four digits of the tire DOT number represent the production week.

DOT EU7Y 2KA 0804

Example: Tire Produced During Week 8 of Year 2004

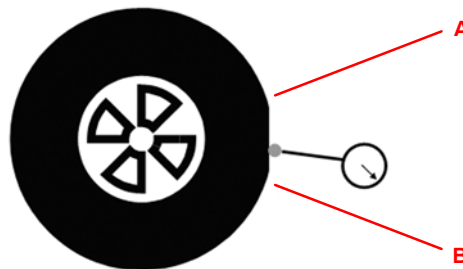
After the tires have been warmed up for a minimum 10 minutes at 65 mph (104.6 km/h), the vehicle should be immediately raised on the hoist. The tires may be checked with a dial indicator placed at the center rib of the tread design.

If the tires are flat spotted, there will be a short duration dip in the runout gauge reading equal to the approximate size of the tire's footprint, or approximately 3 - 7 inches (7.6 - 17.8 cm) of the tread circumference. The dip in the reading on the runout gauge will go in and out the same amount; it is not just a short duration but an abrupt change in the reading. Flat spotting will NOT be visible by eye and requires the use of a dial indicator. Flat spotting should NOT be confused with any external abrasion on the tire (such as a panic stop) that causes the tread depth in the tire's footprint area.



If the runout between A and B exceeds 0.020 - 0.040 inches (0.051 - 0.102 cm) over 3 - 7 inches (7.6 - 17.8 cm) of the tread circumference, this may cause a ride complaint depending on the vehicle sensitivity.

Exaggerated Illustration of Checking for Flat Spotting with Dial Indicator



If the tires are not flat spotted but the assembly runout is greater than desired, then standard match mounting and balancing procedures should be followed.

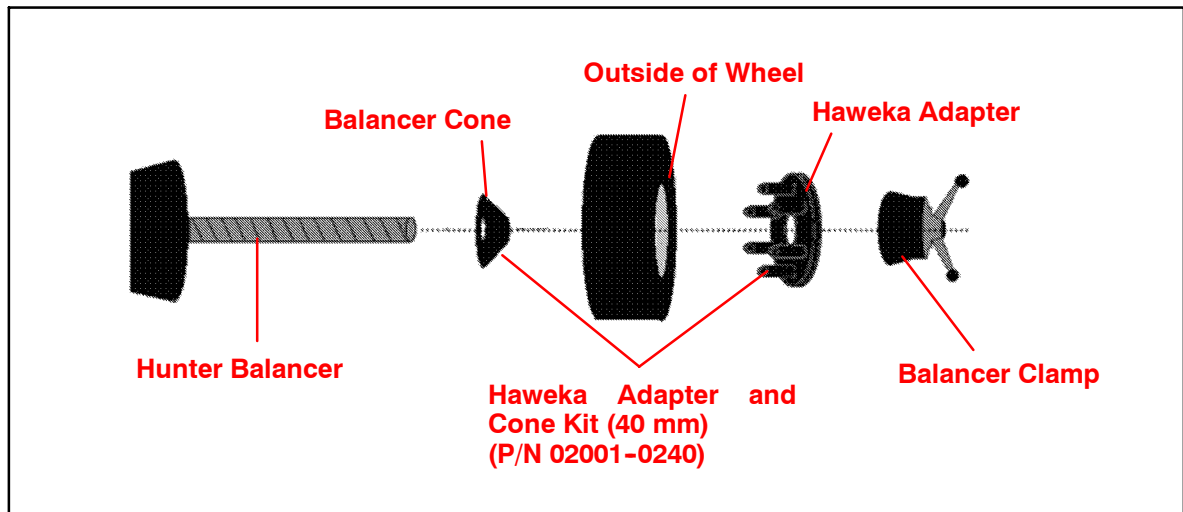
**Dunlop Tire
Flat Spotting
Diagnosis**
(Continued)

Obtaining Replacement Tires:

Tires with 9/32 or greater tread depths that are flat spotted based on the above criteria may be exchanged at no charge through a Dunlop dealer. It is recommended that all four tires be exchanged when flat spotting has occurred. For dealers participating in the Lexus Tire Center Program, please contact Program Headquarters at 1-866-867-8473 for instructions. For dealers not participating in the Lexus Tire Center Program, your local Dunlop dealer must call the Goodyear / Dunlop Customer Assistance Center at 1-800-321-2136 for authorization to return the tires through the Goodyear / Dunlop warranty system.

**Tire Balance
Procedure**

Mount the tire/wheel assembly to the tire balancer as illustrated below. When balancing the tire, ensure that the Road Force function of the balancer is turned ON and the "Haweka" type balancing adapter MUST be used when balancing these tires. (Refer to your balancer owner's manual for further information about Road Force variation measurements on tire and wheel assemblies.) This is necessary to ensure that the wheels and tires are match mounted (heavy portion of tire is matched with light side of wheel or visa-versa).



Remount the tire and wheel assembly to the vehicle. Torque all wheels.

Torque: 112 N•m (1,142 kgf•cm, 83 ft•lbf)

Steering
Rack Guide
Preload
Spring
Installation
Procedure

PRECAUTION:

- The GX 470 is equipped with SRS, which comprises a driver airbag, front passenger airbag, side airbag, and curtain shield airbag. Failure to carry out service operations in the correct sequence could cause the SRS to unexpectedly deploy during servicing, possibly leading to a serious accident. Further, if a mistake is made in servicing the SRS, it is possible that the SRS may fail to operate when required. Before performing servicing (including removal or installation of parts, inspection, or replacement), be sure to read the following items carefully, then follow the correct procedures described in the repair manual.
- Work must be started 90 seconds AFTER the ignition switch is turned to the LOCK position and the negative (-) terminal cable is disconnected from the battery. (The SRS is equipped with a back-up power source so that if work is started within 90 seconds from disconnecting the negative (-) terminal cable of the battery, the SRS may be deployed.)
- Do not expose the horn button assembly, front passenger airbag assembly, airbag sensor assembly center, airbag front sensor, front seat airbag assembly, side airbag sensor assembly, curtain shield airbag assembly, airbag sensor rear, or seat position airbag sensor directly to hot air or flames.

NOTE:

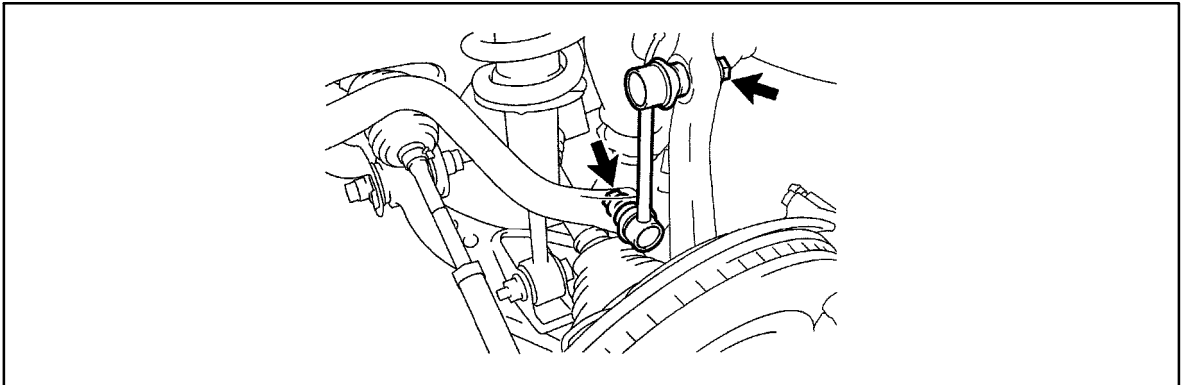
- Malfunction symptoms of the SRS are difficult to confirm, so the DTCs become the most important source of information when troubleshooting. When troubleshooting the SRS, always inspect the DTCs before disconnecting the battery.
- Even in cases of a minor collision where the SRS does not deploy, the horn button assembly, front passenger airbag assembly, airbag sensor assembly center, airbag front sensor, front seat airbag assembly, side airbag sensor assembly, curtain shield airbag assembly, airbag sensor rear, and seat position airbag sensor should be inspected.
- Before repairs, remove the airbag sensor if shocks are likely to be applied to the sensor during repairs.
- Never use SRS parts from another vehicle. When replacing parts, replace them with new parts.
- Never disassemble and repair the horn button assembly, front passenger airbag assembly, airbag sensor assembly center, airbag front sensor, front seat airbag assembly, side airbag sensor assembly, curtain shield airbag assembly, or seat position airbag sensor in order to reuse them.
- If the horn button assembly, front passenger airbag assembly, airbag sensor assembly center, airbag front sensor, front seat airbag assembly, side airbag sensor assembly, curtain shield airbag assembly, or seat position airbag sensor has been dropped, or if there are cracks, dents, or other defects in the case, bracket, or connector, replace it with a new one.
- Use a volt/ohmmeter with high impedance (10 k Ω /V minimum) for troubleshooting the system's electrical circuits.
- Information labels are attached to the periphery of the SRS components. Follow the instructions on the notices.
- After work on the SRS is completed, perform the SRS warning light check.
- When the negative (-) terminal cable is disconnected from the battery, the memory of the clock and audio system will be cancelled. So before starting work, make a record of the contents memorized in the audio memory system. When work is finished, reset the audio systems as they were before and adjust the clock. To avoid erasing the memory in each memory system, never use a back-up power supply from outside the vehicle.
- If the vehicle is equipped with a mobile communication system, refer to the preceding Precaution.

**Steering
Rack Guide
Preload
Spring
Installation
Procedure**
(Continued)

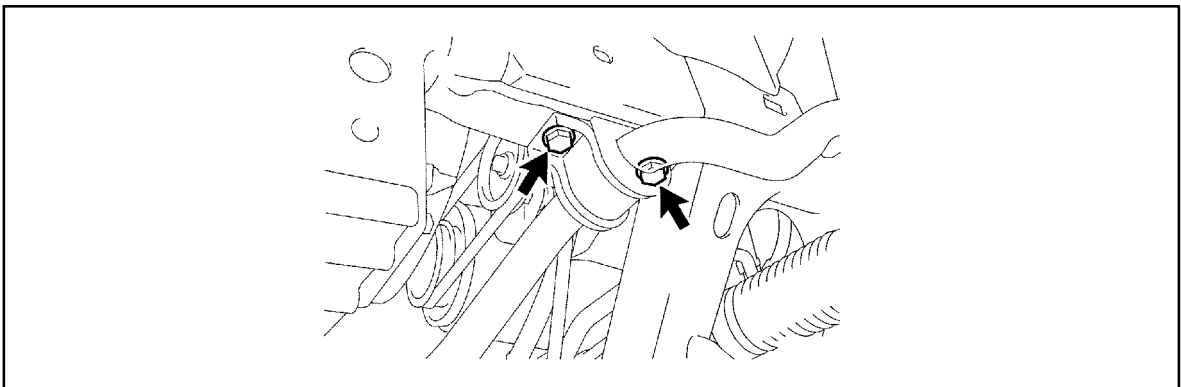
1. Place the front wheels facing straight ahead with the engine running.
2. Record the radio presets.
3. Turn the key to the OFF position and remove the keys from the ignition.
4. Disconnect the negative (-) battery terminal.
5. Remove the front wheels.
6. Remove the 6 bolts and the engine under cover assembly rear.
7. Remove the 4 bolts and the engine under cover sub-assembly No. 1.
8. Remove the 2 nuts and the front stabilizer link assembly LH.

NOTE:

If the front stabilizer link ball joint turns together with the nut, use a hexagon (6 mm) wrench to hold the stud.



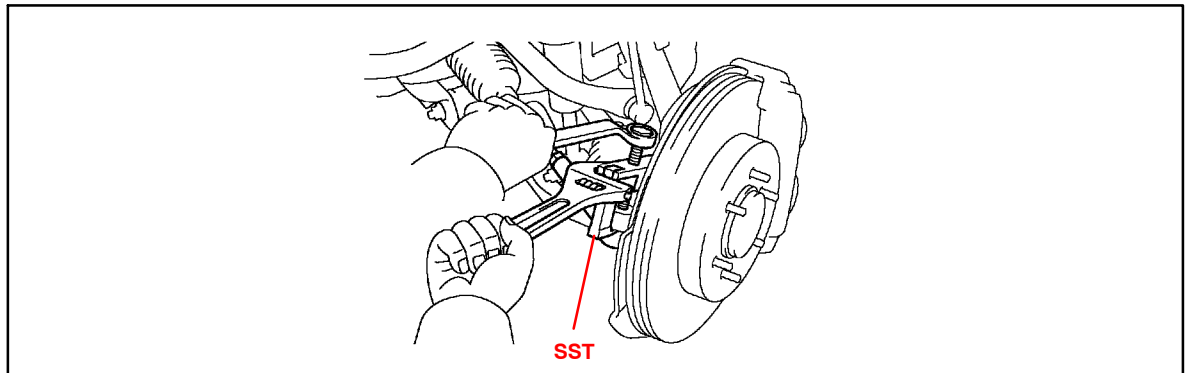
9. Remove the 2 nuts and the front stabilizer link assembly RH.



10. Remove the 2 bolts and the front stabilizer bracket No. 1 LH.
11. Remove the 2 bolts and the front stabilizer bracket No. 1 RH.
12. Remove the 2 front stabilizer bar bushings No. 1.
13. Remove the front stabilizer bar.

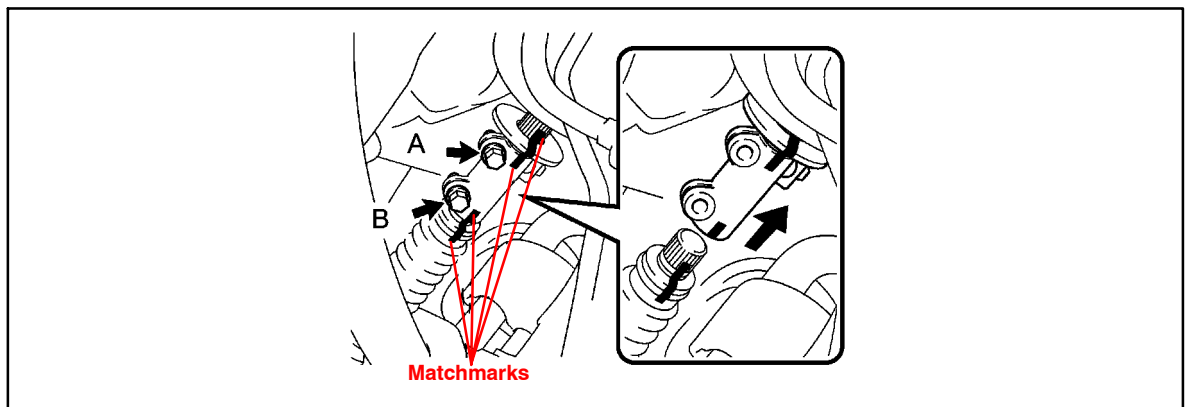
**Steering
Rack Guide
Preload
Spring
Installation
Procedure**
(Continued)

14. Separate the tie rod end sub-assembly LH.
 - A. Remove the cotter pin and nut.
 - B. Using the SST, separate the tie rod end from the steering knuckle arm.
 - **SST P/N: 09628-62011**



15. Separate the tie rod end sub-assembly RH.
 - A. Remove the cotter pin and nut.
 - B. Using the SST, separate the tie rod end from the steering knuckle arm.
 - **SST P/N: 09628-62011**

16. Remove the steering sliding yoke.
 - A. Mark matchmarks on the steering sliding yoke, steering intermediate shaft sub-assembly No. 2, and steering intermediate shaft assembly.
 - B. Remove the 2 bolts from the steering sliding yoke.

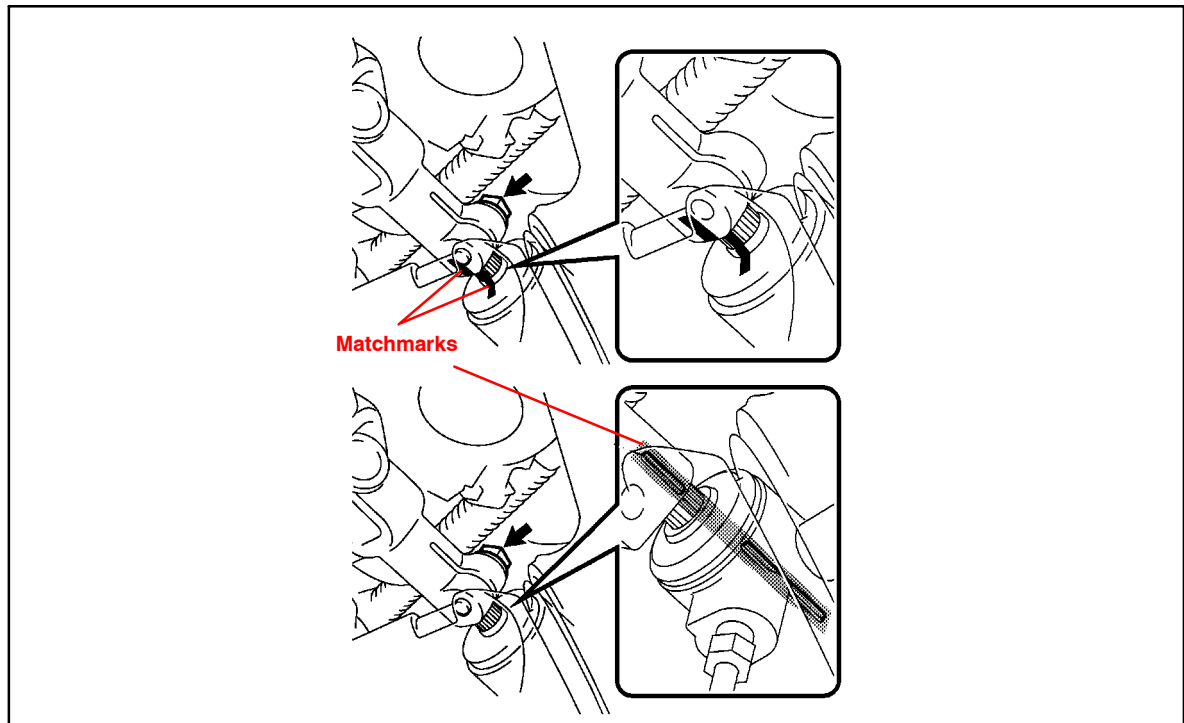


- C. Slide the steering sliding yoke up and separate it from the steering intermediate shaft sub-assembly No. 2.
- D. Pull down the steering sliding yoke from the steering intermediate shaft assembly to remove.

Steering
Rack Guide
Preload
Spring
Installation
Procedure
(Continued)

17. Remove the steering intermediate shaft No. 2.

- A. Mark the matchmarks on the power steering gear assembly and steering intermediate shaft sub-assembly No. 2.



- B. Remove the bolt and intermediate shaft sub-assembly No. 2 from the power steering gear assembly.

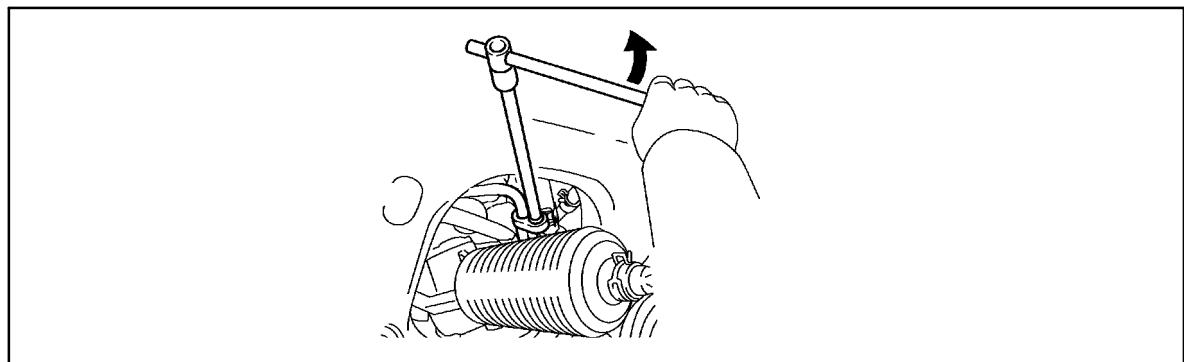
HINT:

When reinstalling the power steering gear assembly, be sure to align the matchmarks with the protrusion to install.

- C. Align the notch with the protrusion of the gearbox to make matchmarks on the intermediate shaft No. 2.

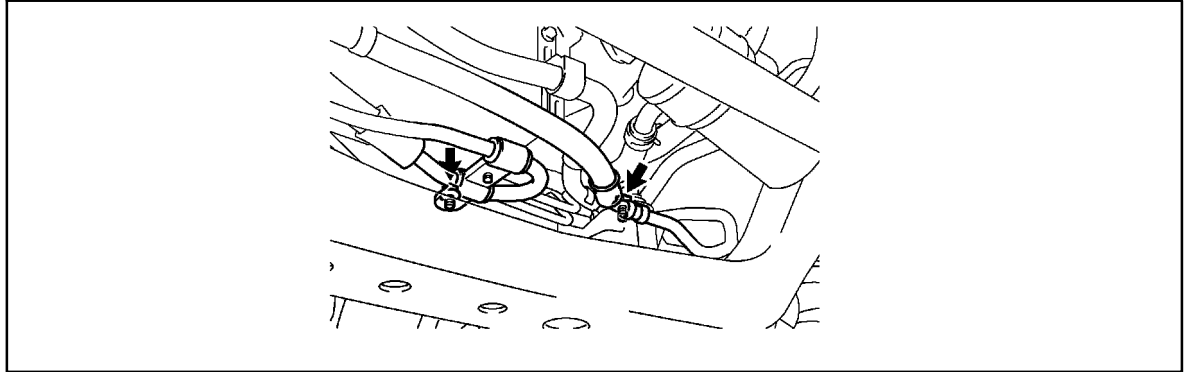
18. Disconnect the pressure feed tube assembly.

- A. Using the 17 mm Union nut wrench (or equivalent), loosen the flare nut and disconnect the pressure feed tube.



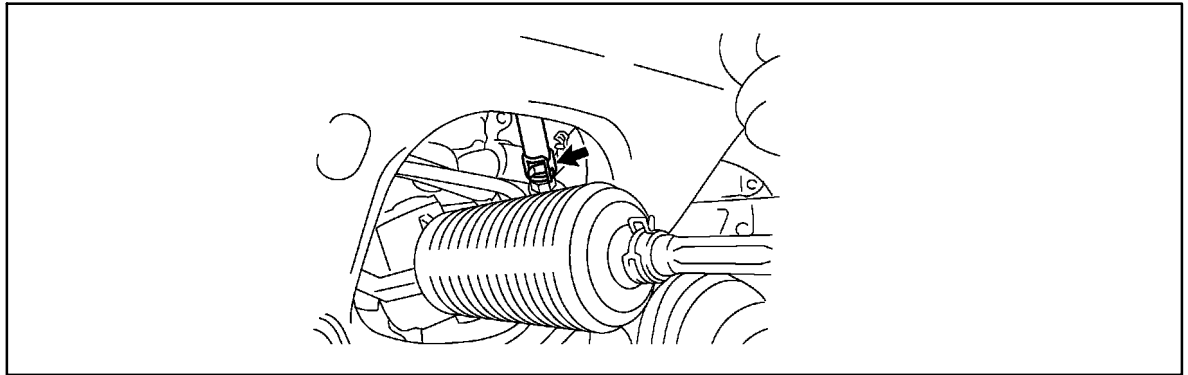
**Steering
Rack Guide
Preload
Spring
Installation
Procedure
(Continued)**

- B. Remove the 2 bolts and separate the pressure feed tube assembly from the frame sub-assembly.

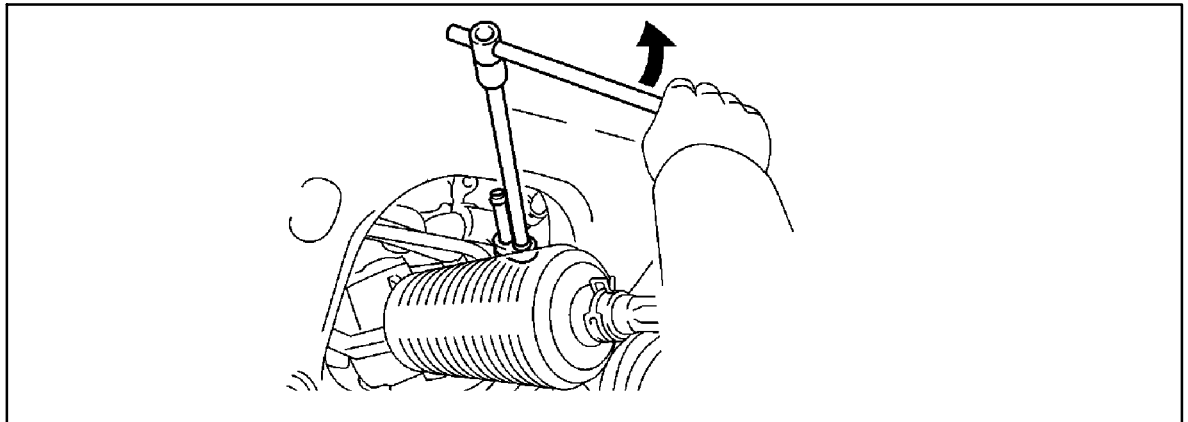


- 19. Disconnect the steering gear outlet return tube.

- A. Remove the clip and disconnect the return hose.



- B. Using the 17 mm Union nut wrench (or equivalent), remove the outlet return tube.

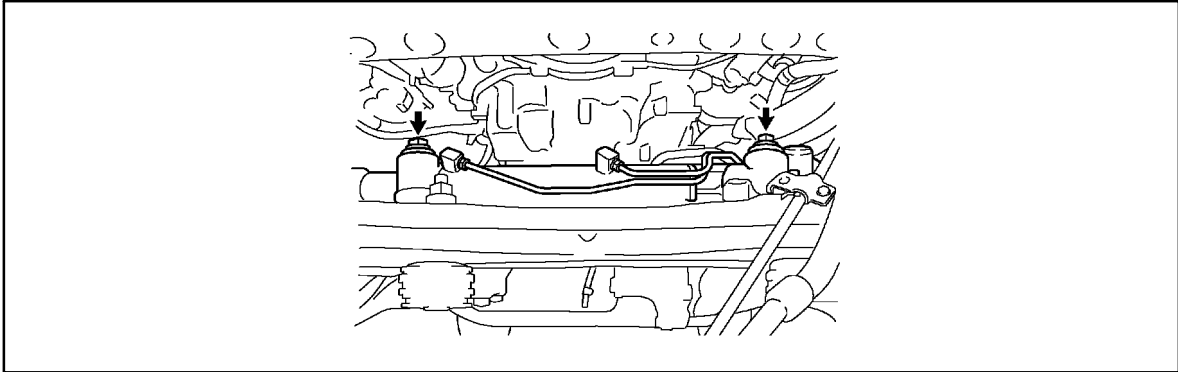


**Steering
Rack Guide
Preload
Spring
Installation
Procedure**
(Continued)

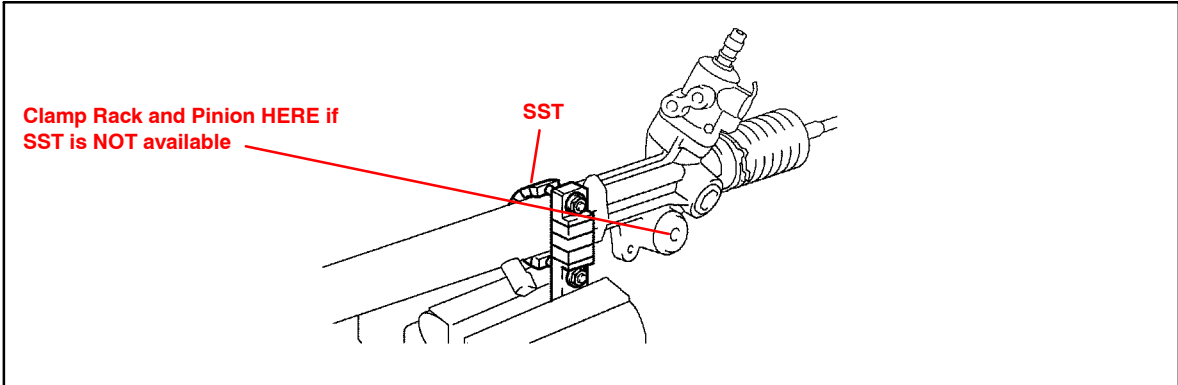
20. Remove the 2 bolts, 2 nuts, and power steering link assembly.

NOTE:
Be sure to only turn the bolt as the nut has a detent.

HINT:
After loosening the 2 bolts, raise the bolt from the frame. Slide the power steering gear assembly and the bolt as a unit to the position where the bolt can be pulled out.



21. Carefully secure the power steering gear assembly in a vise (if available, use SST P/N: 09612-00012-01).

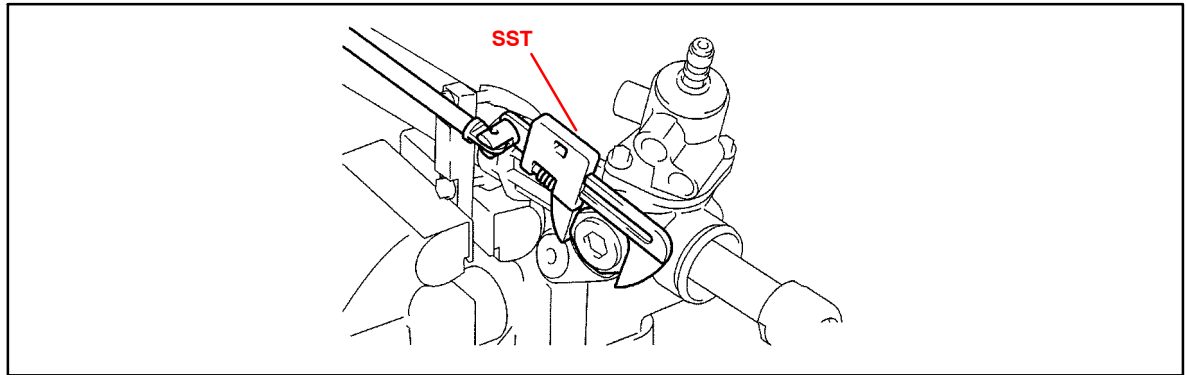


**Steering
Rack Guide
Preload
Spring
Installation
Procedure**
(Continued)

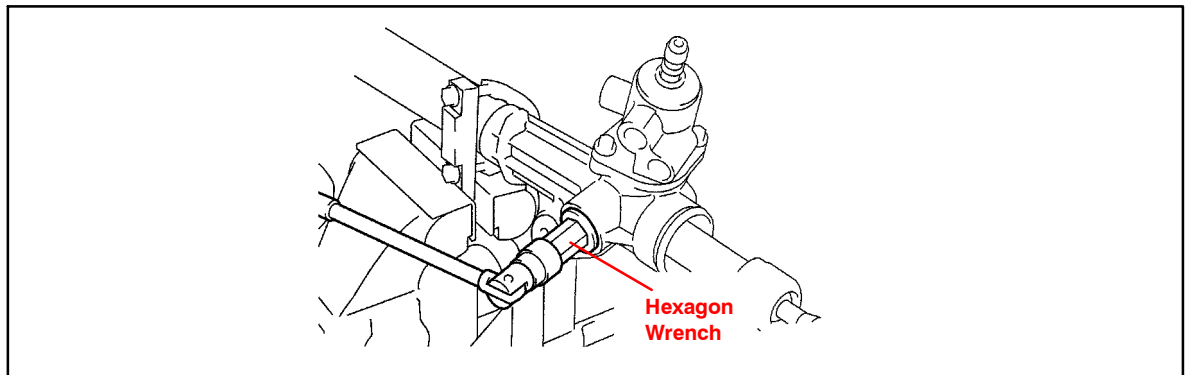
22. Remove the rack guide.

A. Using the SST, remove the lock nut as shown in the illustration.

- SST P/N: 09922-10010-01



B. Using a hexagon wrench (24 mm), remove the rack guide spring cap.



C. Remove the spring and rack guide.

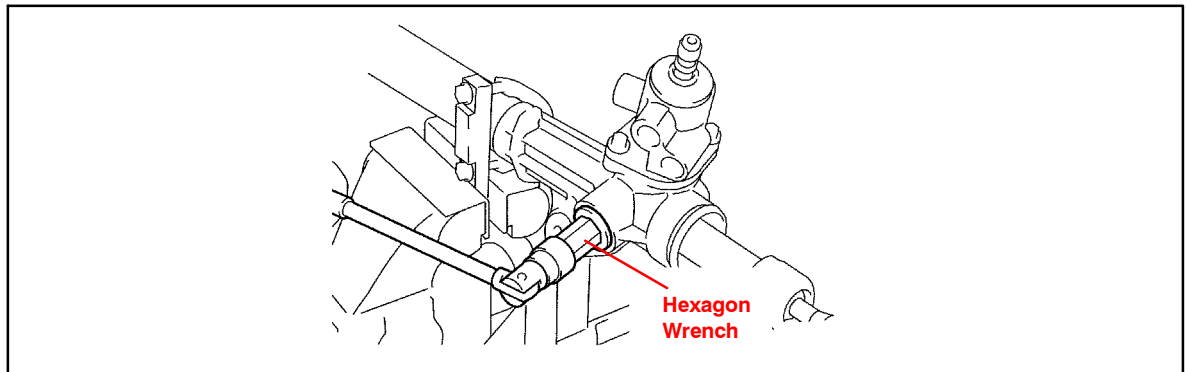
23. Install the rack guide spring.

A. Install the rack guide and new spring (P/N: 44215-35010).

B. Apply sealant to 2 or 3 threads of the rack guide spring cap.

Sealant: Three Bond 1344, Loctite 242, or equivalent

C. Using a hexagon wrench (24 mm), temporarily install the spring cap.

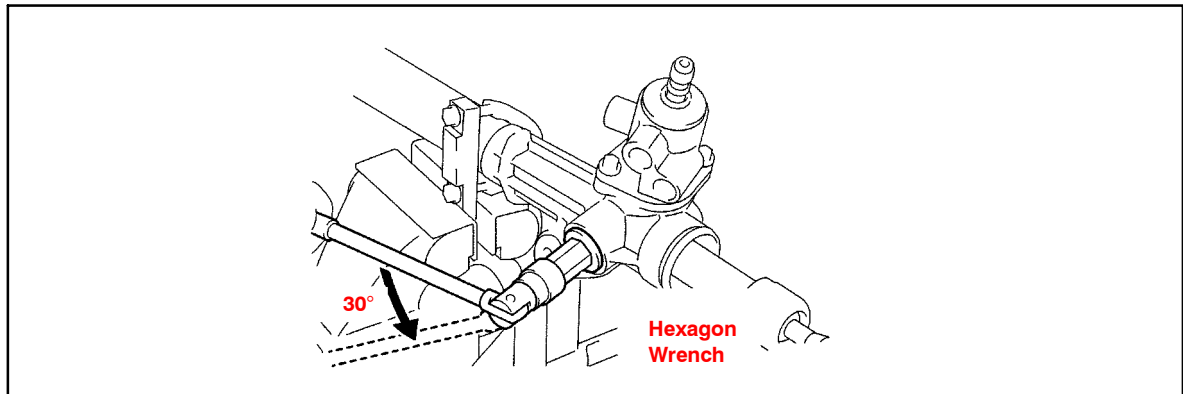


**Steering
Rack Guide
Preload
Spring
Installation
Procedure**
(Continued)

24. Adjust the total preload.

A. Using a hexagon wrench (24 mm), tighten the rack guide spring cap.

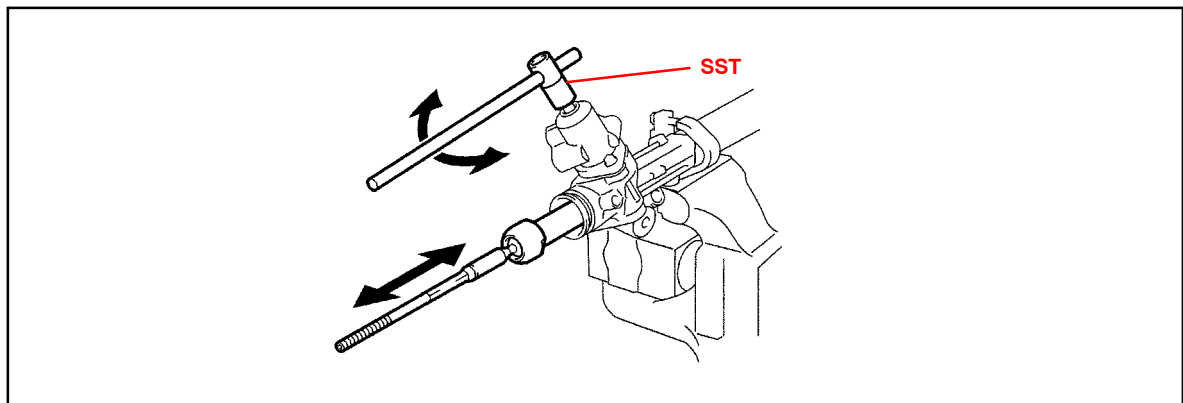
Torque: 25 N•m (250 kgf•cm, 18 ft•lbf)



B. Turn the cap an additional 30° counterclockwise.

C. Using the SST, turn the control valve shaft right and left 1 or 2 times.

- SST P/N: 09616-00010-02



D. Using a hexagon wrench (24 mm), loosen the cap until the rack guide spring has no tension.

**Steering
Rack Guide
Preload
Spring
Installation
Procedure**
(Continued)

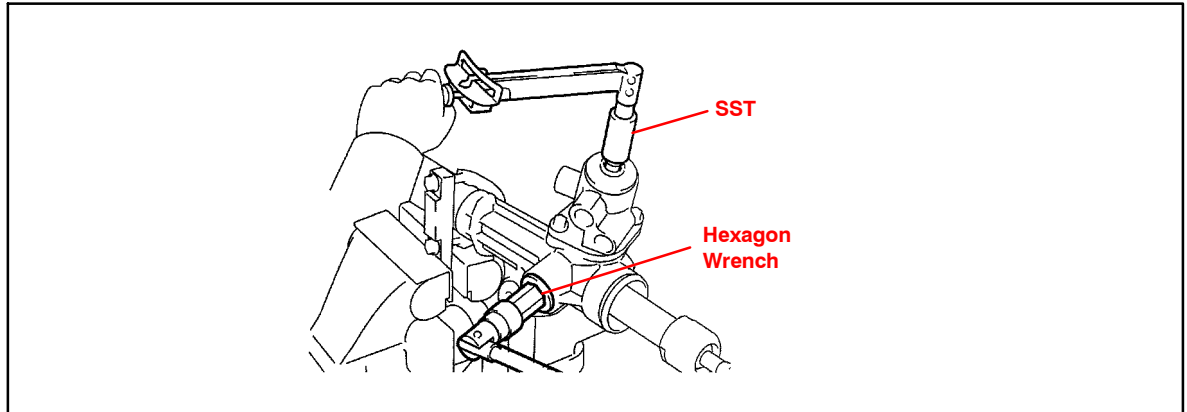
E. Using the SST, a torque wrench, and a hexagon wrench (24 mm), tighten the cap until the preload is within specification.

- **SST 09616-00010-02**

Preload (turning): 1.4 to 1.6 N•m (14.3 to 16.3 kgf•cm, 12.4 to 14.2 in.•lbf)

NOTE:

When making the adjustment, be sure to turn the cap in the clockwise direction.



F. Apply sealant to 2 or 3 threads of the lock nut.

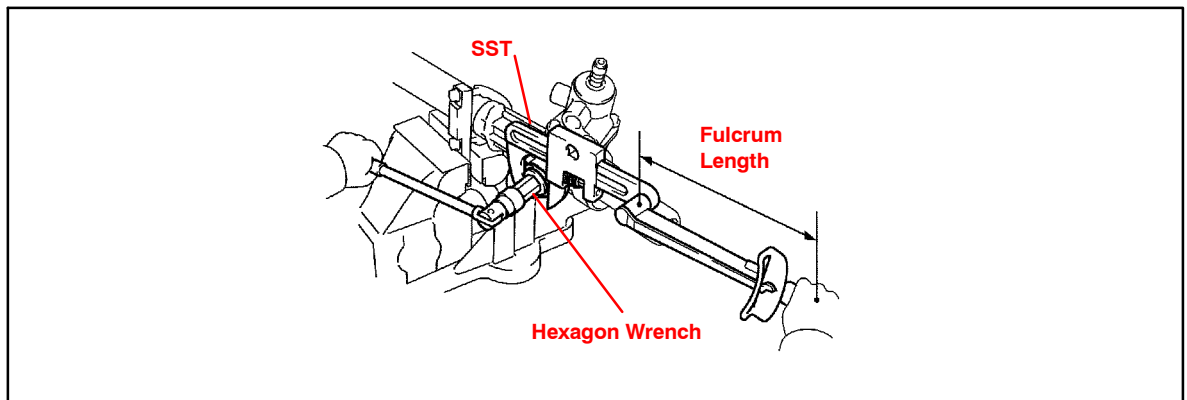
Sealant: Three Bond 1344, Loctite 242, or equivalent

G. Temporarily install the lock nut.

H. Using a hexagon wrench (24 mm), holding the rack guide from rotating, and using the SST, torque the nut.

- **SST 09922-10010-01**

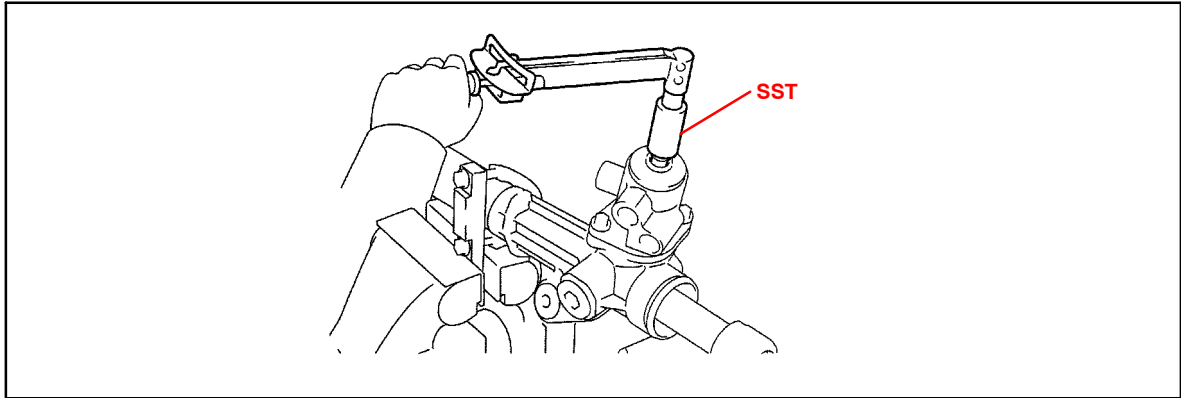
Torque: 69 N•m (700 kgf•cm, 51 ft•lbf) for use with SST



Steering
Rack Guide
Preload
Spring
Installation
Procedure
(Continued)

- I. Recheck the total preload.

Preload (turning): 1.4 to 1.6 N•m (14.3 to 16.3 kgf•cm, 12.4 to 14.2 in.•lbf)



25. Install the power steering link assembly into the vehicle with the 2 bolts and 2 nuts.

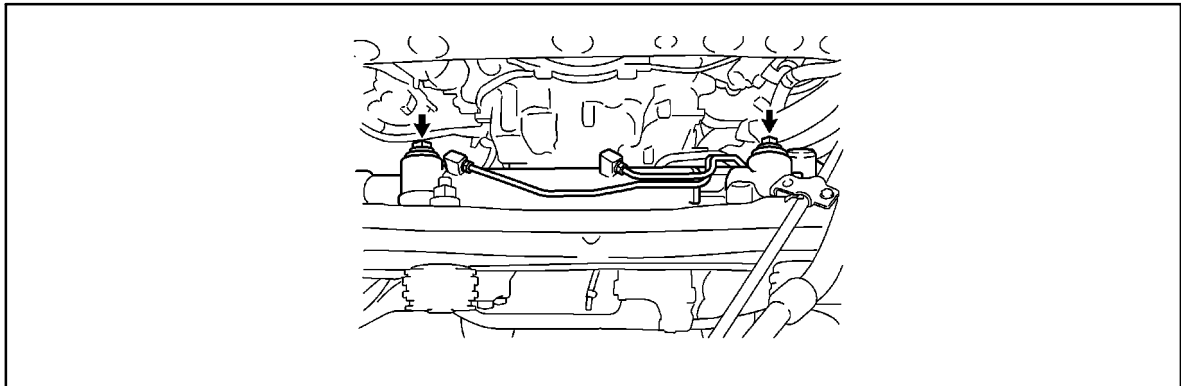
Torque: 100 N•m (1,020 kgf•cm, 74 ft•lbf)

NOTE:

The nut has a detent, so never turn the nut. Be sure to turn the bolt.

HINT:

Insert the bolts and position it with the power steering gear assembly as a unit. Then install the bolts on the frame.



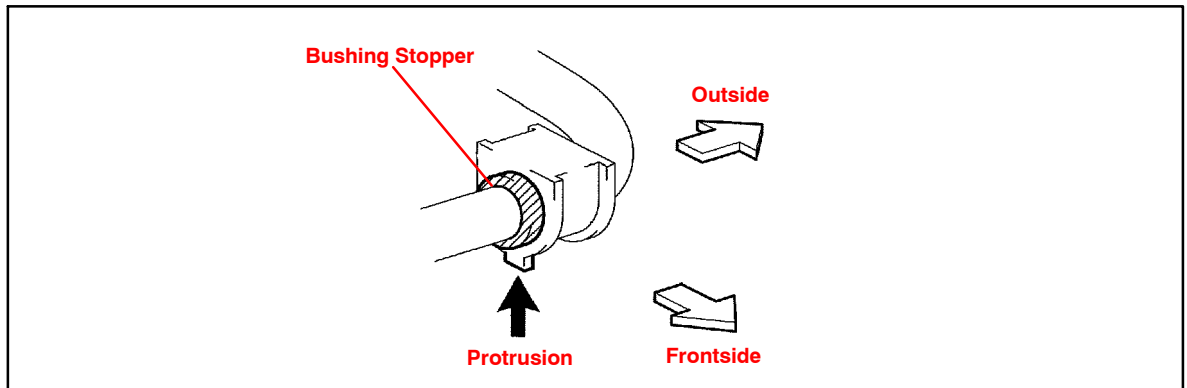
26. Install the front stabilizer bar.

Steering
Rack Guide
Preload
Spring
Installation
Procedure
(Continued)

27. Install the 2 front stabilizer bar bushings No. 1.

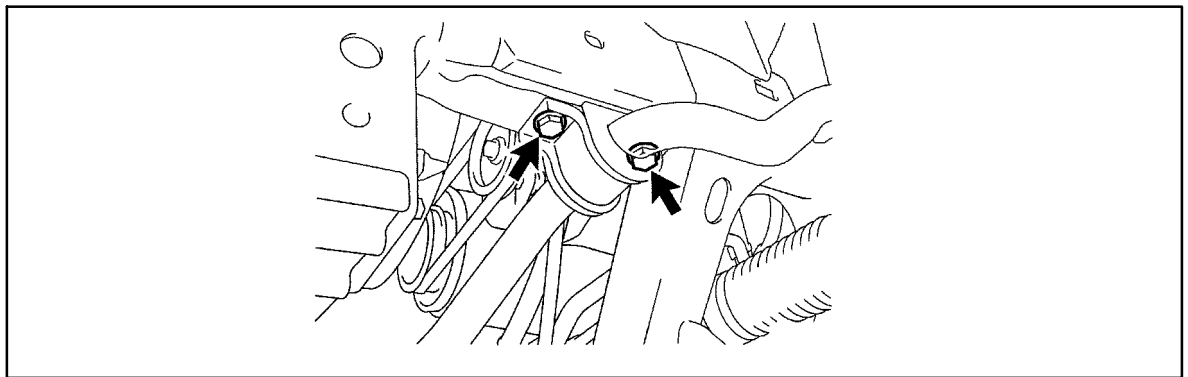
NOTE:

- Install the bushing to the inner side of the bushing stopper on the stabilizer bar.
- Install the stabilizer bushing No. 1 as shown in the illustration.



28. Install the front LH bushing and bracket with 2 bolts.

Torque: 40 N•m (410 kgf•cm, 30 ft•lbf)



29. Install the front RH bushing and bracket with 2 bolts.

Torque: 40 N•m (410 kgf•cm, 30 ft•lbf)

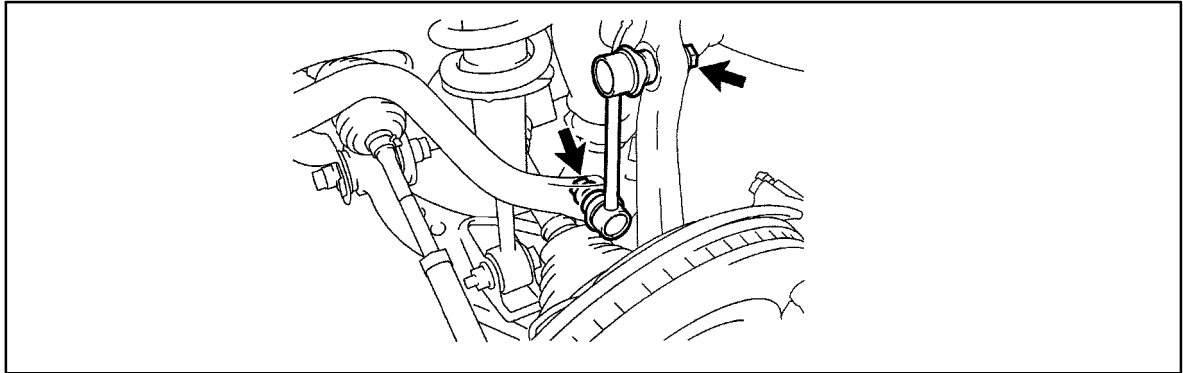
Steering
Rack Guide
Preload
Spring
Installation
Procedure
(Continued)

30. Install the front stabilizer link assembly LH with the 2 nuts.

Torque: 70 N•m (710 kgf•cm, 52 ft•lbf)

NOTE:

If the front stabilizer link ball joint turns together with the nut, use a hexagon (6 mm) wrench to hold the stud.



31. Install the front stabilizer link assembly RH with the 2 nuts.

Torque: 70 N•m (710 kgf•cm, 52 ft•lbf)

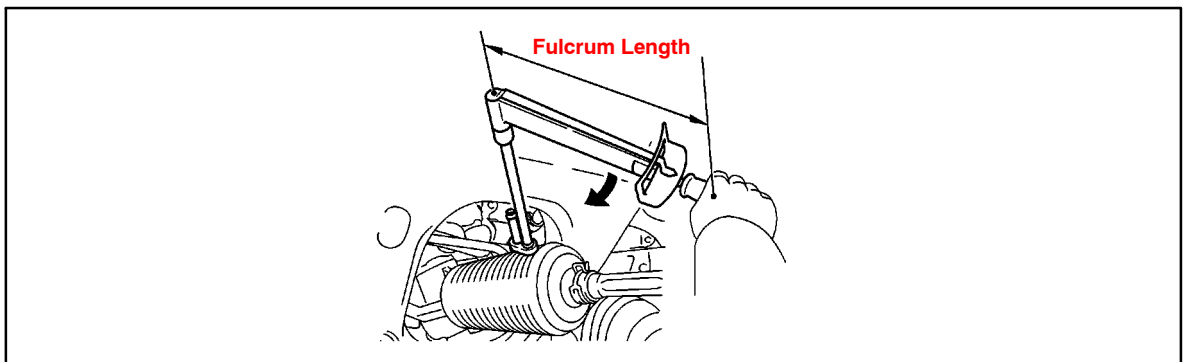
32. Connect the steering gear outlet return tube.

A. Using the 17 mm Union nut wrench (or equivalent), connect the outlet return tube.

Torque: 44 N•m (440 kgf•cm, 32 ft•lbf)

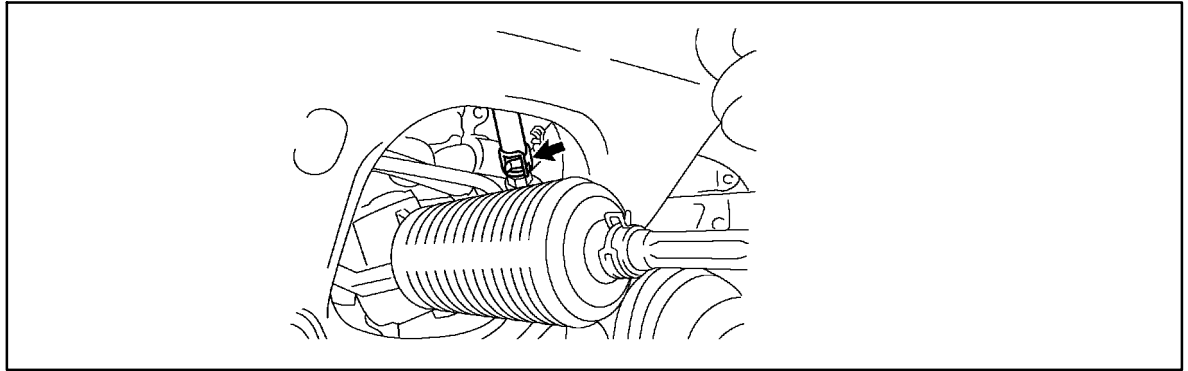
HINT:

- Use a torque wrench with a fulcrum length of 300 mm (11.81 in.).
- This torque wrench should be held as shown in the illustration.



Steering
Rack Guide
Preload
Spring
Installation
Procedure
(Continued)

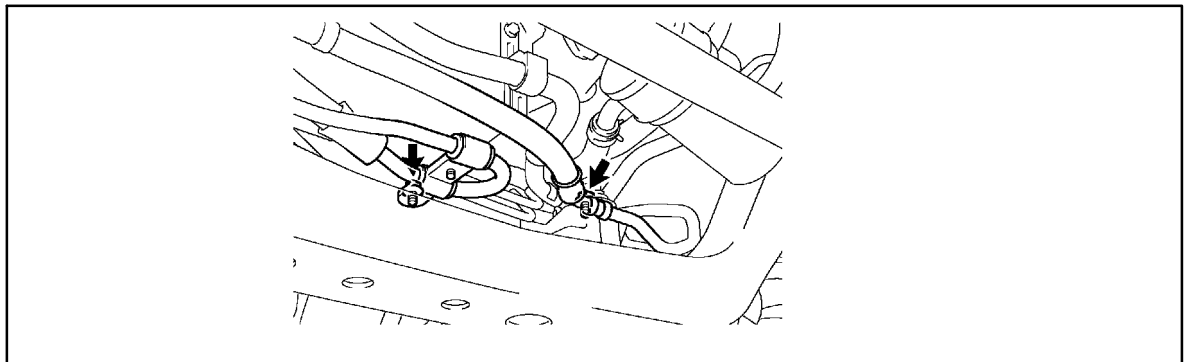
B. Install the hose with the clip.



33. Connect the pressure feed tube assembly.

A. Install the pressure feed tube assembly to the frame sub-assembly with the 2 bolts.

Torque: 28 N•m (286 kgf•cm, 21 ft•lbf)

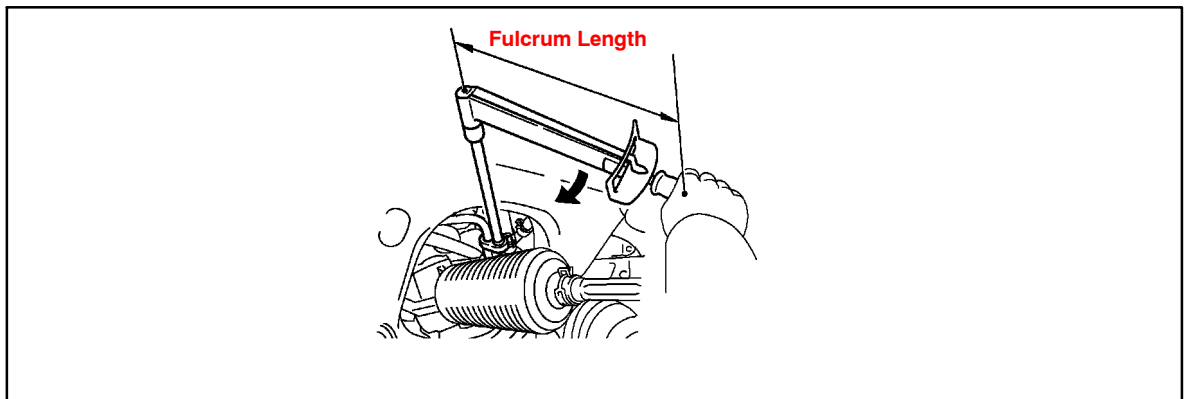


B. Using the 17 mm Union nut wrench (or equivalent), tighten the flare nut and connect the pressure feed tube.

Torque: 44 N•m (440 kgf•cm, 32 ft•lbf)

NOTE:

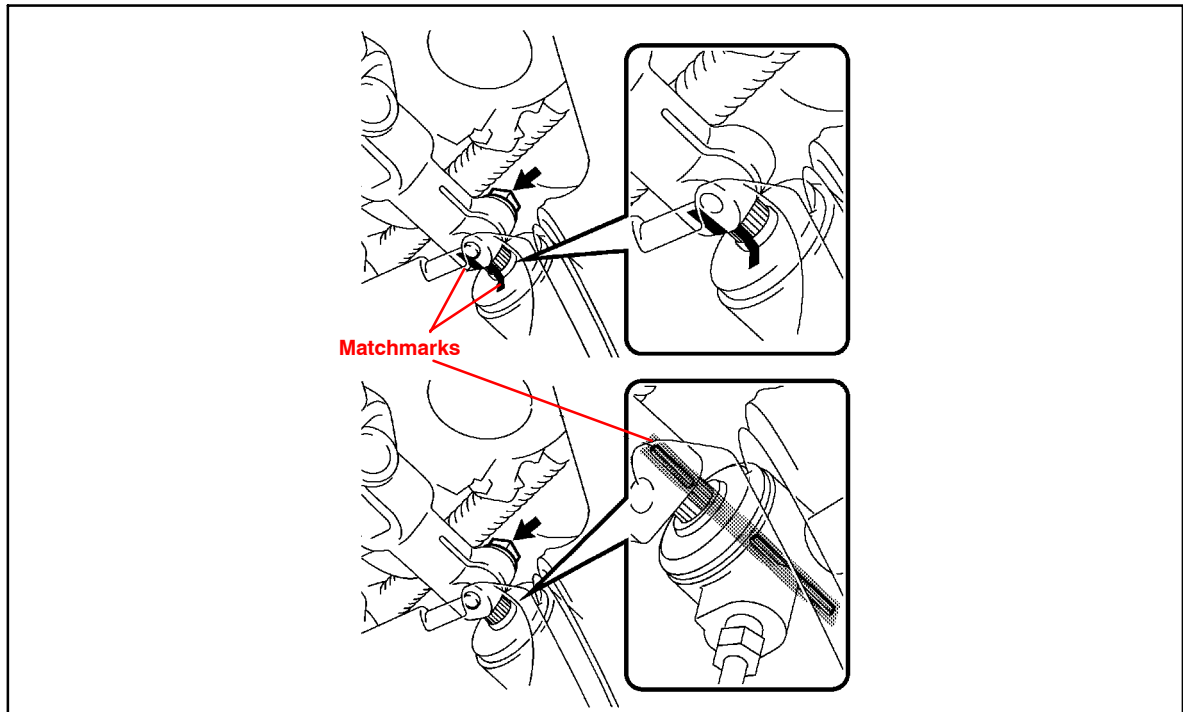
- Use a torque wrench with a fulcrum length of 300 mm (11.81 in.).
- This torque wrench should be held as shown in the illustration.



**Steering
Rack Guide
Preload
Spring
Installation
Procedure**
(Continued)

34. Install the steering intermediate shaft No. 2.

- A. Align the matchmarks on the power steering gear assembly and steering intermediate shaft No. 2.

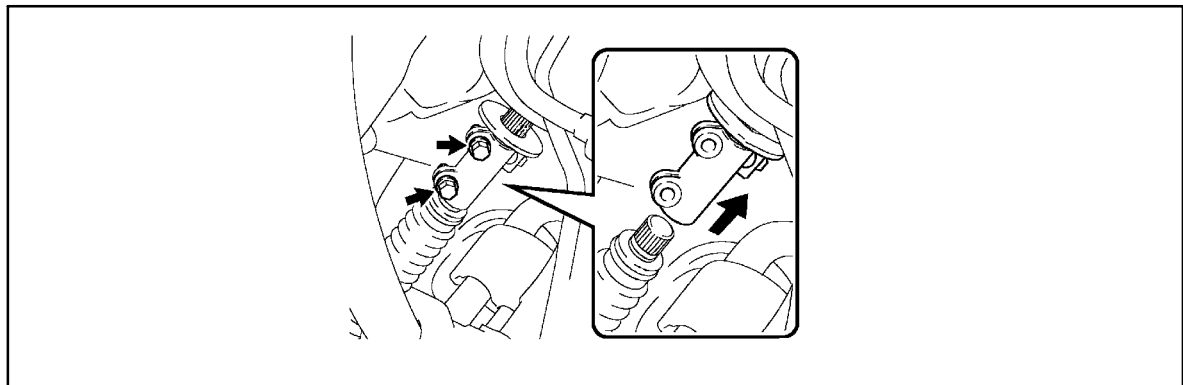


- B. Install the steering intermediate shaft No. 2 to the power steering gear assembly with the bolt.

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

35. Install the steering sliding yoke.

- A. Install the steering sliding yoke to the steering column assembly and slide it upward.



- B. Install the steering sliding yoke to the intermediate shaft No. 2 with the 2 bolts.

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

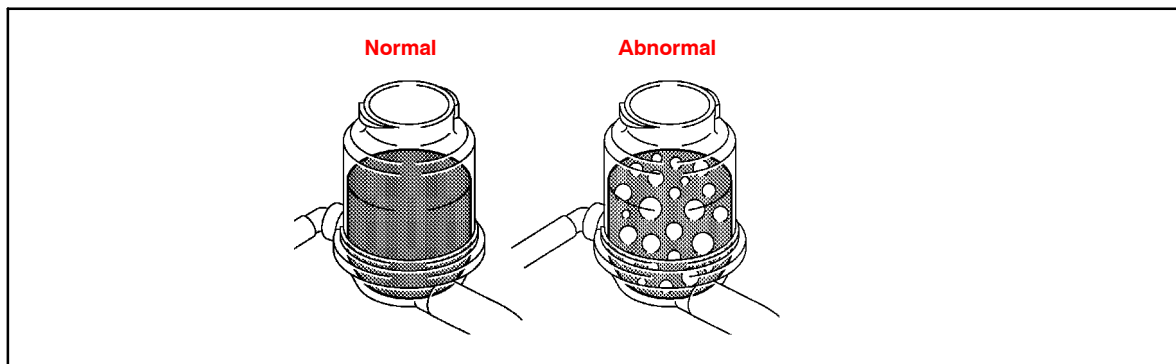
36. Connect the tie rod end sub-assembly LH.

- A. Connect the tie rod end to the steering knuckle arm.
B. Install the nut and cotter pin.

Torque: 91 N•m (928 kgf•cm, 67 ft•lbf)

**Steering
Rack Guide
Preload
Spring
Installation
Procedure**
(Continued)

37. Connect the tie rod end sub-assembly RH.
- Connect the tie rod end to the steering knuckle arm.
 - Install the nut and cotter pin.
Torque: 91 N•m (928 kgf•cm, 67 ft•lbf)
38. Install the engine under cover sub-assembly No. 1 with the 4 bolts.
39. Install the engine under cover assembly rear with the 6 bolts.
40. Install the front wheel.
Torque: 112 N•m (1,142 kgf•cm, 83 ft•lbf)
41. Place the front wheels facing straight ahead.
42. Add power steering fluid.
43. Bleed the power steering fluid.
- Check the fluid level.
 - Ensure that the front of the vehicle is slightly higher than the rear of the vehicle to aid in air bleeding of steering rack.
 - Turn the steering wheel. With the engine stopped, turn the wheel slowly from lock to lock several times.
 - Lower the vehicle.
 - Reconnect the negative (-) battery terminal.
 - Start the engine. Run the engine at idle for a few minutes.
 - Turn the steering wheel.
 - With the engine idling, turn the wheel to left or right full lock position and keep it there for 2 to 3 seconds. Then turn the wheel to the opposite full lock position and keep it there for 2 to 3 seconds.
 - Repeat step "a" several times.
 - Stop the engine.
 - Check for foaming or emulsification. If the system has to be bled twice because of foaming or emulsification, check for fluid leaks in the system.



- J. Check the fluid level.

**Steering
Rack Guide
Preload
Spring
Installation
Procedure**
(Continued)

44. Check the power steering fluid leakage.
45. Inspect and adjust the wheel alignment. Inspect the vehicle alignment using the instructions provided on the Technical Information System (TIS): 2003 or 2004 model year GX 470 Repair Manual: *Front Suspension: Front Wheel Alignment: Adjustment*.
46. Return to "Diagnostic Procedure" (page 4), step 4, to continue procedure.

NOTE:

When repair is complete, initialize the power windows according to the procedure in TSIB No. PD018-05, "Initialization of Power Window During PDS."

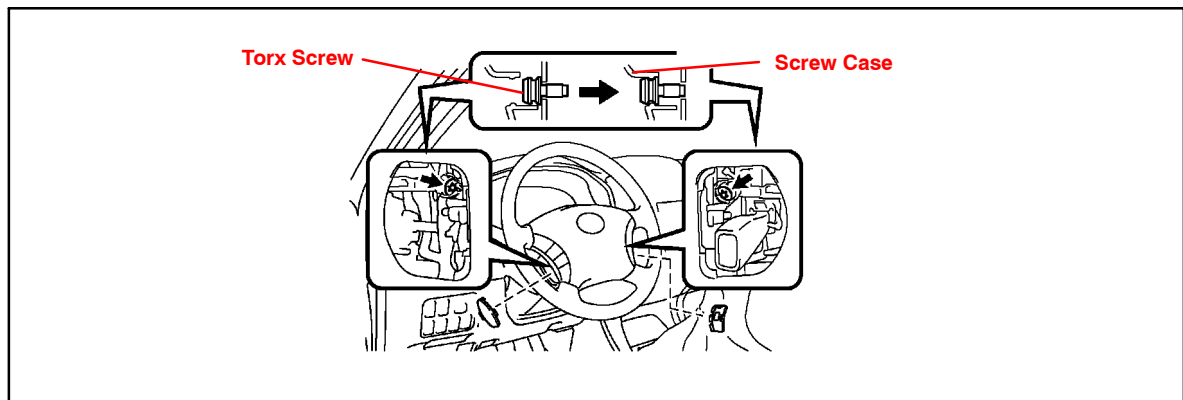
**Increased
Mass
Steering
Wheel
Installation
Procedure**

1. See the precaution in the "Steering Rack Guide Spring Installation Procedure" of this TSIB.
2. Place the front wheels facing straight ahead with the engine running.
3. Record the radio presets.
4. Turn the key to the OFF position and remove the keys from the ignition.
5. Disconnect the negative (-) battery terminal.
6. Remove the steering wheel cover lower No. 3.
7. Remove the steering wheel cover lower No. 2.
8. Remove the horn button assembly.

NOTE:

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

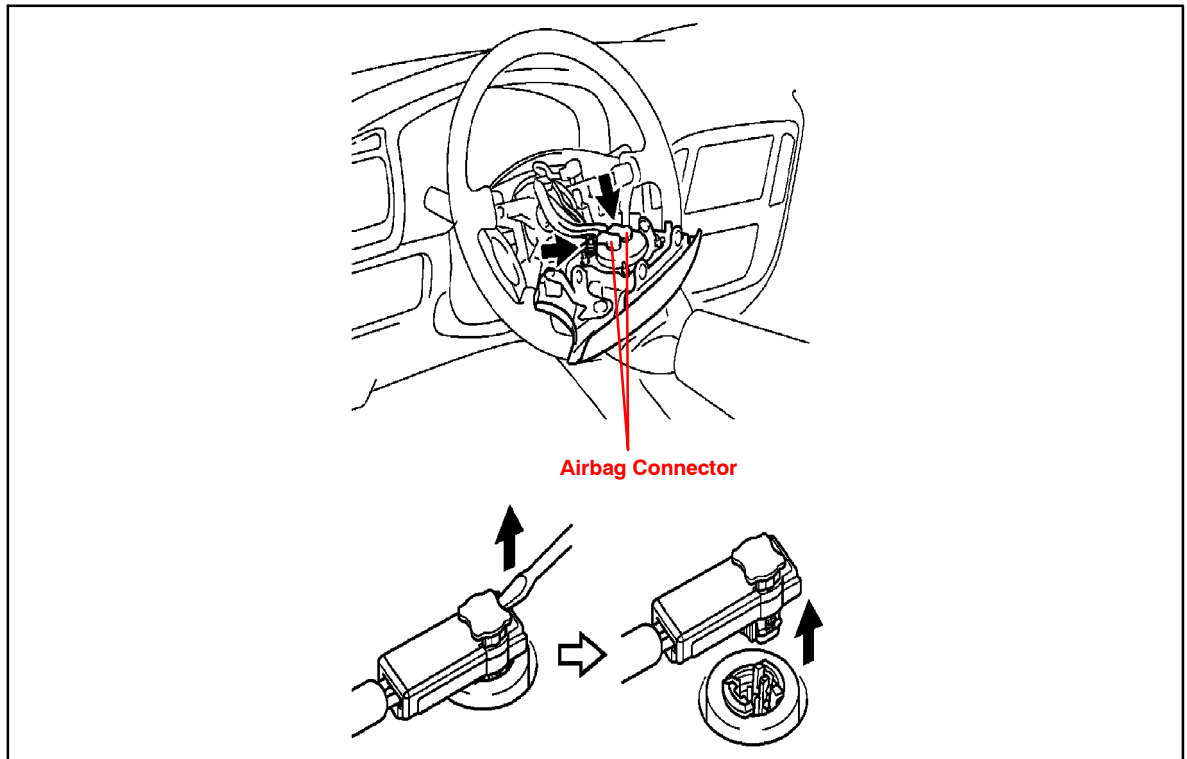
- A. Using a torx socket wrench (Torx socket wrench [T=30]), loosen the 2 torx screws until the groove along the screw circumference catches on the screw case.

**NOTE:**

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

**Increased
Mass
Steering
Wheel
Installation
Procedure
(Continued)**

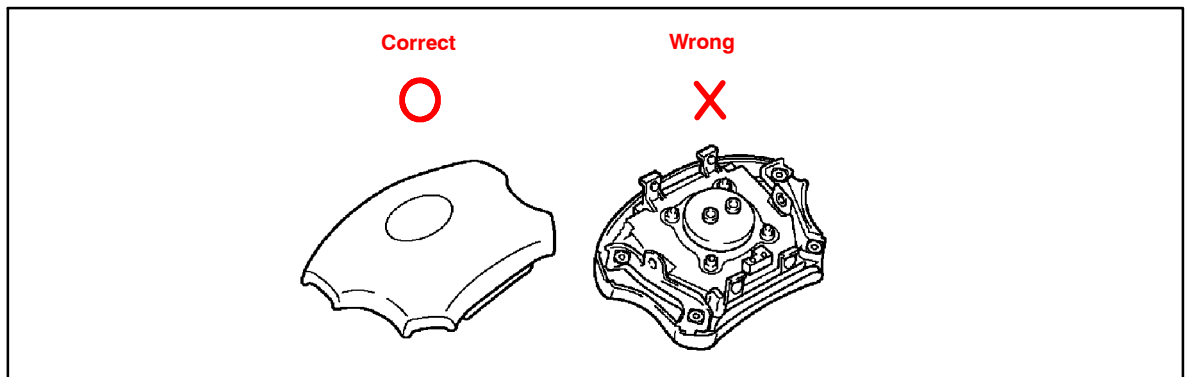
B. Pull out the horn button assembly from the steering wheel assembly.



- C. Using a screwdriver, release the lock part of each of the airbag connectors and disconnect the 2 airbag connectors.
- D. Disconnect the horn ground harness from the horn button assembly.

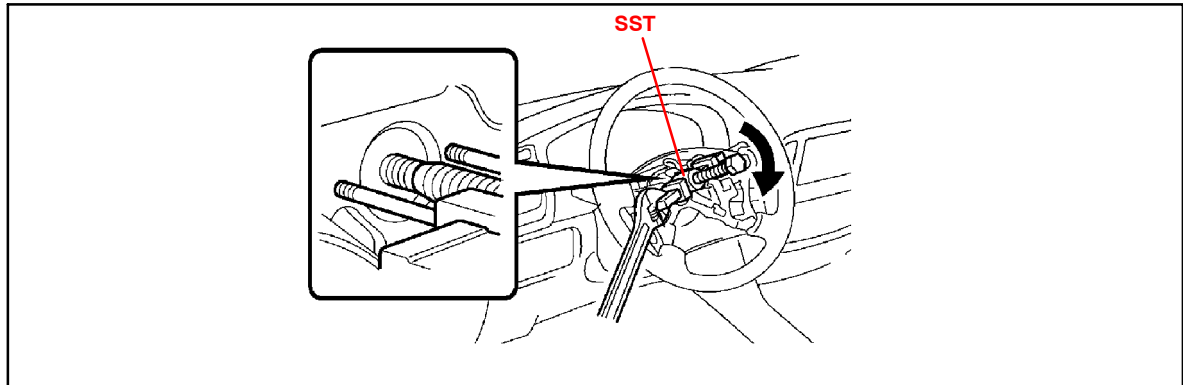
CAUTION:

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



**Increased
Mass
Steering
Wheel
Installation
Procedure
(Continued)**

9. Remove the steering wheel assembly.
 - A. **With steering switch:** Disconnect the steering switch connector.
 - B. Remove the steering wheel assembly set nut.

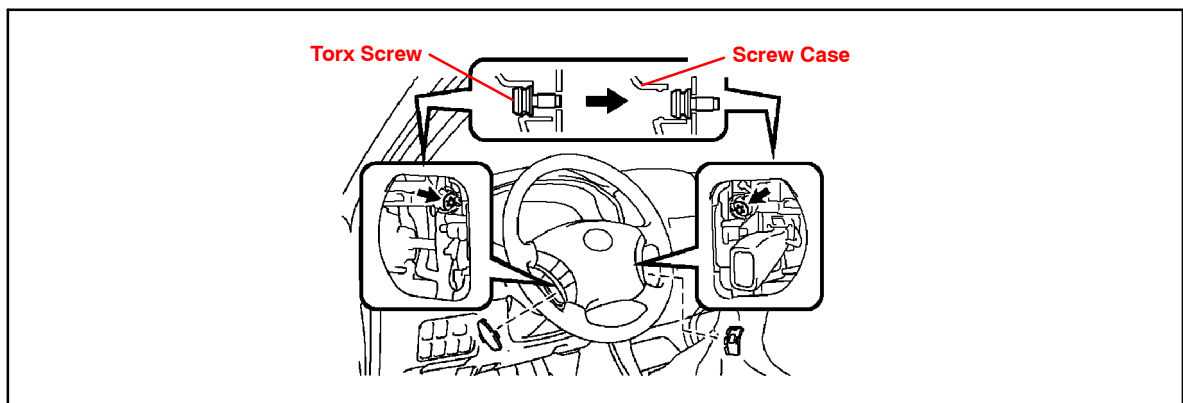


- C. Remove the steering wheel assembly.
 - **SST P/N: 09950-50013-01** (09951-05010, 09952-05010, 09953-05020, 09954-05020)
10. Install the steering wheel assembly.
 - A. Install the new steering wheel assembly with the steering set nut.
Torque: 50 N•m (510 kgf•cm, 37 ft•lbf)
 - B. **With steering switch:** Connect the connector.
11. Install the horn button assembly.

NOTE:

- Make sure the horn button assembly is installed to the specified torque.
- If the horn button assembly has been dropped or there are cracks, dents, or other defects in the case of the connector, replace the horn button assembly with a new one.
- When installing the horn button assembly, take care that the harness does not interfere with other parts and the wires are NOT pinched between other parts.

- A. Connect the horn ground harness to the horn button assembly.



**Increased
Mass
Steering
Wheel
Installation
Procedure**
(Continued)

- B. Connect the 2 airbag connectors.
 - C. Install the horn button assembly after confirming that the circumference groove of torx screw is caught on the screw case.
 - D. Using a torx socket wrench (Torx socket wrench [T=30]), torque the 2 screws.
Torque: 8.8 N•m (90 kgf•cm, 78 in.•lbf)
12. Install the steering wheel cover lower No. 2.
 13. Install the steering wheel cover lower No. 3.
 14. Ensure that the front wheels are facing straight ahead.
 15. Install the negative (-) battery terminal.
 16. Inspect the SRS warning light.
 17. Return to “Diagnostic Procedure” (page 4), step 4, to continue procedure.

NOTE:

When repair is complete, initialize the power windows according to the procedure in TSIB No. PD018-05, “Initialization of Power Window During PDS.”