

Part Number: PTR07-30090

Kit Contents:

Item #	Quantity Reqd.	Description
1	2	Front Springs
2	2	Rear Springs
3	1	Hardware Bag

Hardware Bag Contents

Item #	Quantity Reqd.	Description
1	2	Front Shock Locking Nuts
2	1	Instructions
3		

Additional Items Required For Installation

Item #	Quantity Reqd.	Description
1		
2		
3		

Conflicts

GS 350 with AVS

Recommended Tools

Personal & Vehicle Protection	Notes
Fender Covers	
Safety Glasses	
Special Tools	Notes
Spring Compressor	
Installation Tools	Notes
Air tools	May only be used for disassembly
Special Chemicals	Notes

General Applicability

GS 350 2WD






Recommended Sequence of Application

Item #	Accessory
1	F-Sport Springs should be installed at the same time as F-Sport Shocks
2	F-Sport Springs should be installed before F-Sport exhaust
3	F-Sport Springs should be installed before F-Sport rear brakes

Vehicle Service Parts (may be required for reassembly)

Item #	Quantity Reqd.	Description
1	X	90467-12069 White trunk trim clip
2	X	90467-10167 Blue trunk trim clip
3	X	90467-08186-C0 Black trunk trim clip
4	2	90177-12002 Locking Nut (front shock assembly)

Legend

	STOP: Damage to the vehicle may occur. Do not proceed until process has been complied with.
	OPERATOR SAFETY: Use caution to avoid risk of injury.
	CAUTION: A process that must be carefully observed in order to reduce the risk of damage to the accessory/vehicle and to ensure a quality installation.
	TOOLS & EQUIPMENT: Used in Figures calls out the specific tools and equipment recommended for this process.
	REVISION MARK: This mark highlights a change in installation with respect to previous issue.

Care must be taken when installing this accessory to ensure damage does not occur to the vehicle. The installation of this accessory should follow approved guidelines to ensure a quality installation

These guidelines can be found in the "Accessory Installation Practices" document.

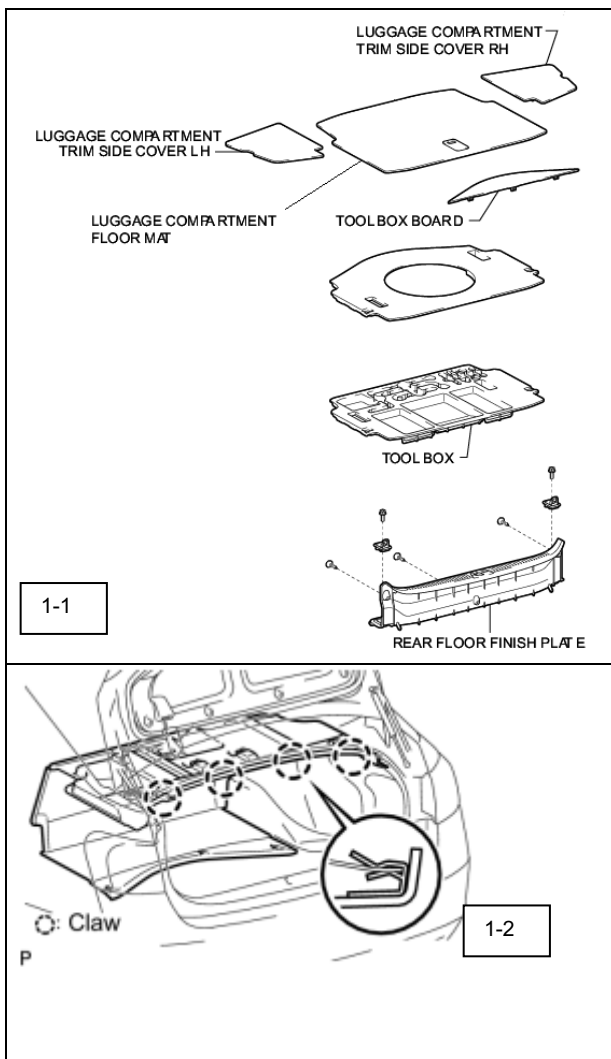
This document covers such items as:

- Vehicle Protection (use of covers and blankets, cleaning chemicals, etc.).
- Safety (eye protection, rechecking torque procedure, etc.).
- Vehicle Disassembly/Reassembly (panel removal, part storage, etc.).
- Electrical Component Disassembly/Reassembly (battery disconnection, connector removal, etc.).

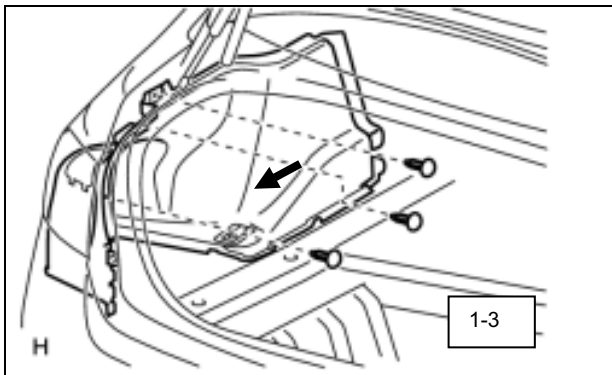
1. Remove Rear Shock and Spring Assembly.

(Fig 1-1)

- (a) Remove luggage compartment floor mat.
- (b) Remove luggage compartment trim side cover LH and RH.
- (c) Remove tool box board and tool box.
- (d) Remove rear floor finish plate.



- (e) Remove front luggage compartment trim cover.
 - (1) Remove 3 clips from floor.
 - (2) Slide out 2 upper clips and remove 2 rope hooks.
 - (3) Disengage upper clips holding trim to package tray. (Fig 1-2)
 - (4) Unplug trunk light wire harness.



(f) Remove luggage compartment trim cover inner LH.

(1) Clip found under rear trim cover can be removed using a small screwdriver to unlock clips. Do not force clip. (Fig 1-3)

(g) Remove luggage compartment trim cover inner RH.

(h) Remove rear wheels.

(i) Lower rear no. 2 suspension arm. (Fig 1-4)

(1) Loosen nut A.

NOTE: Do not remove the nut.

(2) Remove bolt B and the nut. Disconnect the stabilizer link assembly and height control sensor link bracket from the rear No. 2 suspension arm assembly. Note position of height control sensor link.

(3) Remove bolt C, nut, and rear shock absorber.

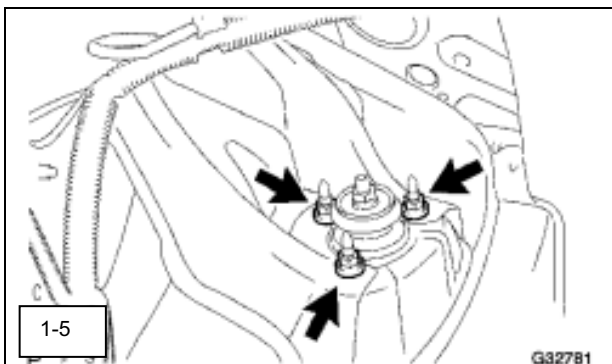
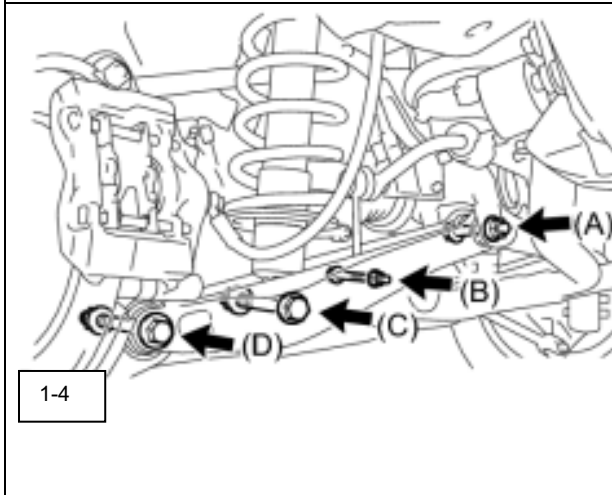
NOTE: Turn the bolt while holding the nut.

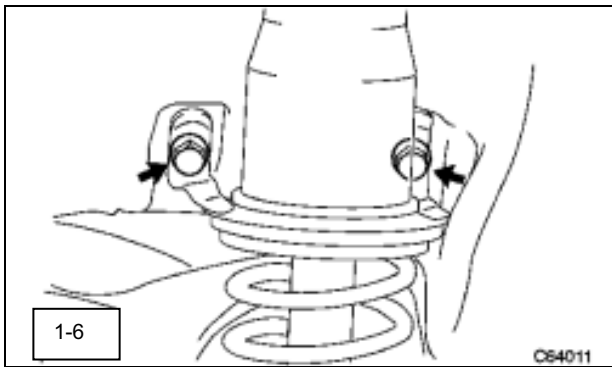
(4) Remove bolt D and the nut on the axle carrier side and lower the rear No. 2 suspension arm assembly from the knuckle assy.

NOTE: Turn the bolt while holding the nut.

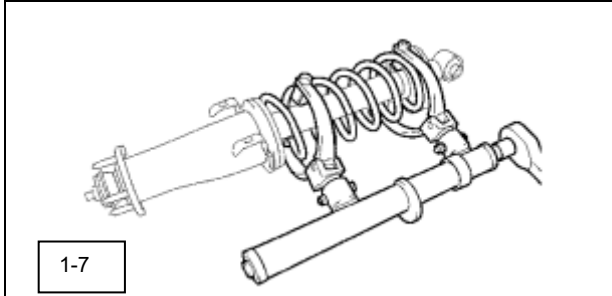
(j) Remove rear shock absorber assembly.

(1) Remove the 3 nuts on the upper side of the rear shock absorber assembly. (Fig 1-5)

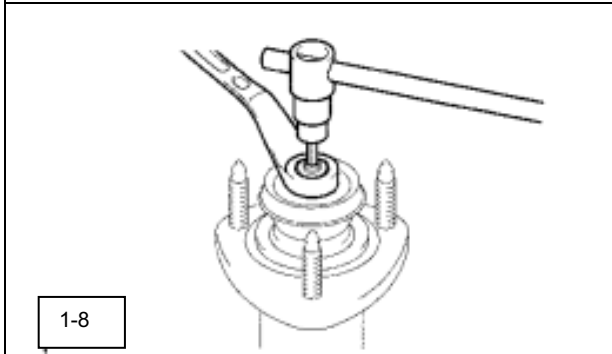




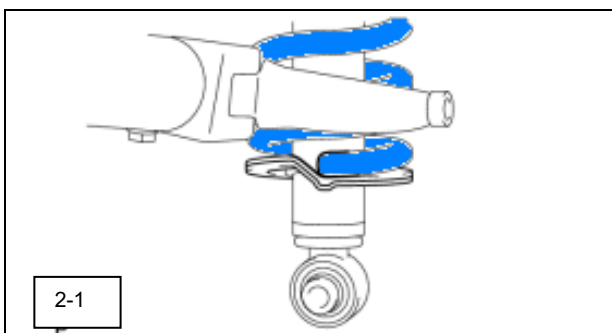
- (2) Remove the 2 bolts and the rear shock absorber assembly from the body. (Fig 1-6)
- (1) You will need to remove two fender liner nuts to get access to these two bolts.



- (k) Remove spring from shock assembly.
- (1) Using a spring compressor, compress the rear coil spring until tension is removed from the shock assy. (Fig 1-7)



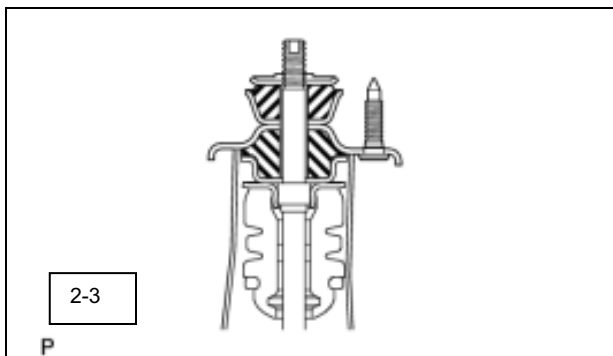
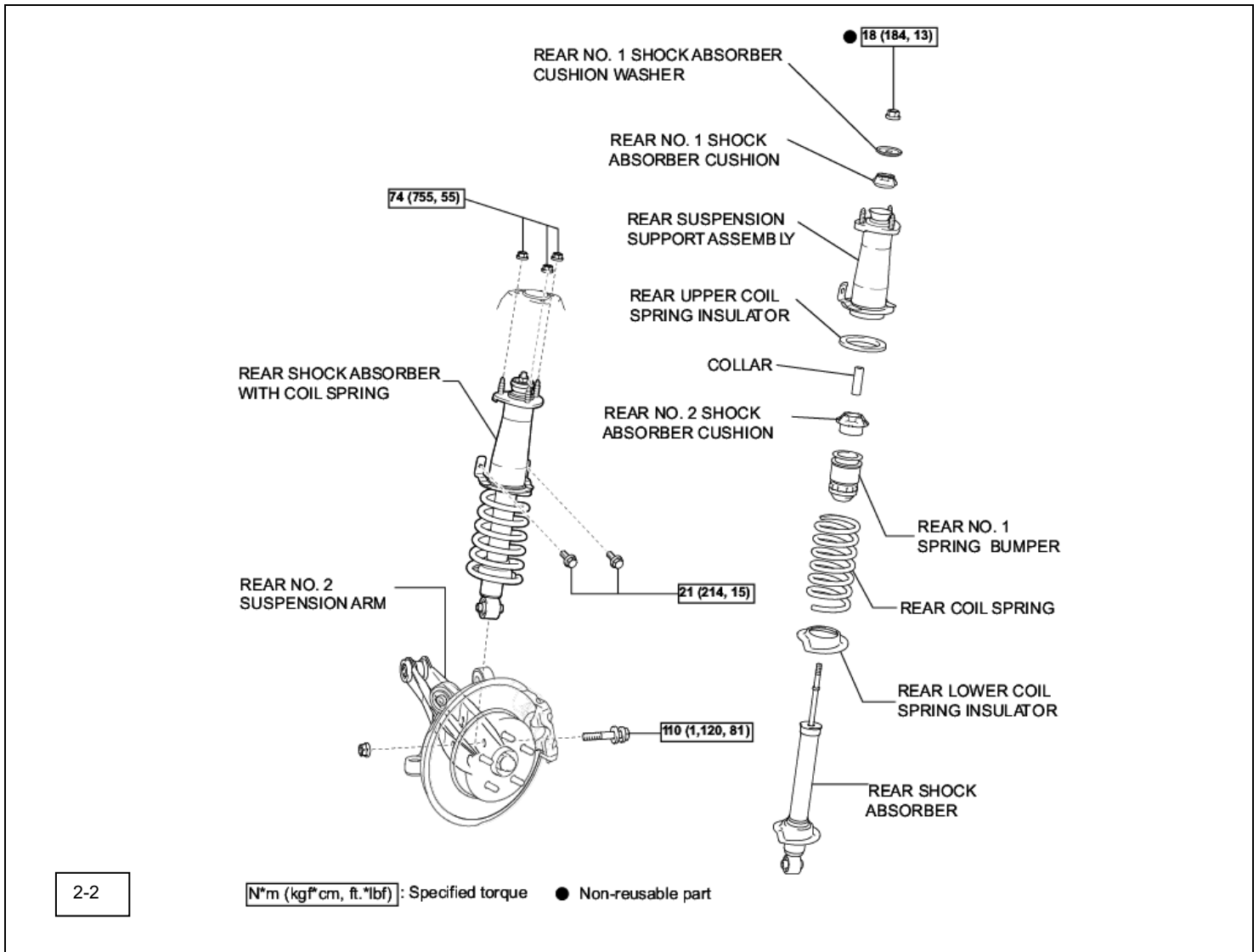
- (2) Remove the upper shock nut. If the shaft spins with the nut hold the rod of the rear shock absorber assembly with a socket hexagon wrench (6 mm). (Fig 1-8)
- (1) Note the order and position of washer, bushings, and jounce bumper for reassembly.



2. Install *F-Sport* Rear Spring.

- (a) Install the rear lower coil spring insulator and fit the rear coil spring end into the recessed part of the rear lower shock absorber seat. (Fig 2-1)

(b) Reassemble the shock spring assembly as shown below. (Fig 2-2)



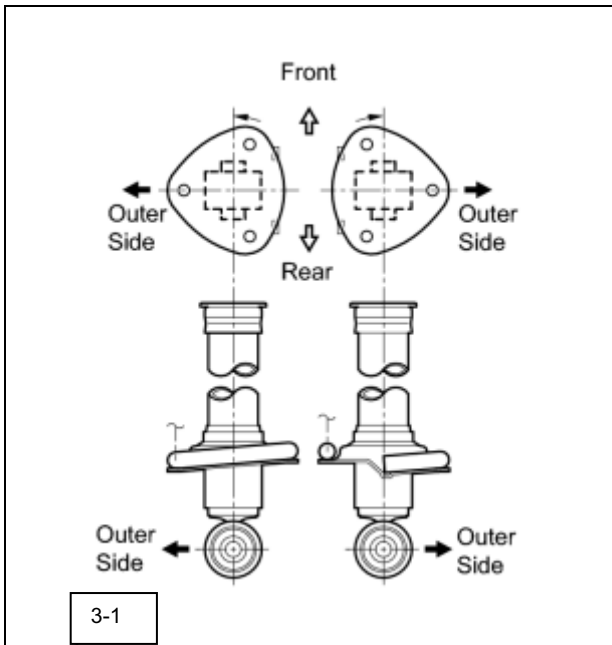
(c) Make sure the cushions and washer are assembled in the correct direction and order as shown. (Fig. 2-3)

(d) Tighten the new shock absorber shaft nut.

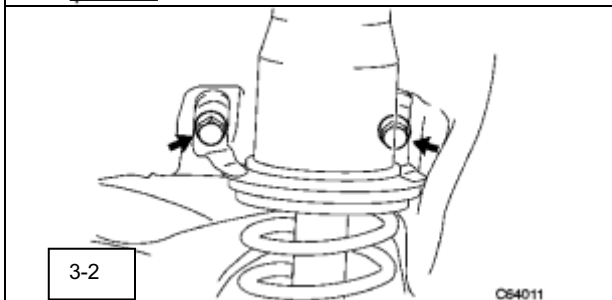
Torque: 18 N·m (184 kgf·cm, 13 ft·lbf)

3. Install Rear Shock and Spring Assembly.

- (a) Make sure that the left (driver's side) coil spring end faces toward the front of the vehicle and the right coil spring end faces toward the rear.
(Fig 3-1)



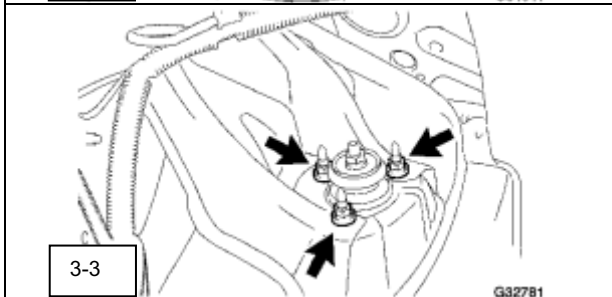
- (b) Temporarily install the rear shock absorber assy with the 2 bolts. (Fig 3-2)



- (c) Install the 3 nuts on the upper side of the rear shock absorber assy. (Fig 3-3)

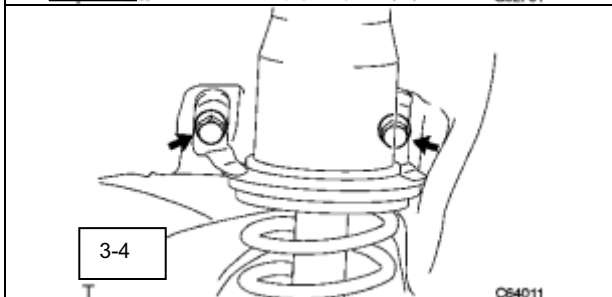
Torque: 74 N·m (755 kgf·cm, 55 ft·lbf)

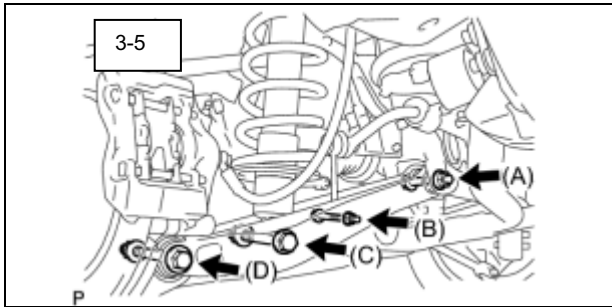
- (d) Install trunk trim panels



- (e) Fully tighten the 2 bolts. (Fig 3-4)

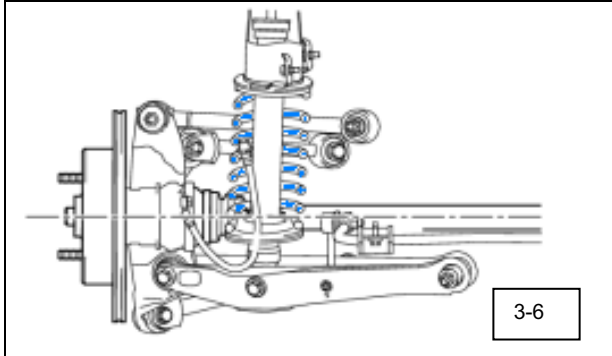
Torque: 21 N·m (214 kgf·cm, 15 ft·lbf)





(f) Raise the lower suspension arm and temporarily install the nuts and bolts for the sway bar, shock, and knuckle. (Fig 3-5)

(1) Confirm height control sensor link is positioned correctly. (not folded inward)



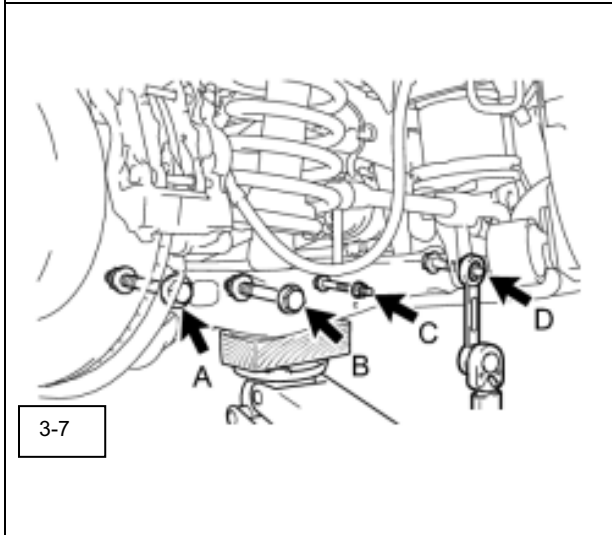
(g) Safely load the suspension. (1 of 3 ways)

(1) Lower vehicle arm onto a tripod stand.

(2) Raise arm with a block of wood and floor jack.

(3) Install wheel and lower vehicle onto a load ramp.

NOTE: Drive axle position should be level. (Fig 3-6)



(h) Fully tighten the bolt and nut on the rear No. 2 suspension arm assembly LH. (Fig 3-7)

A: Torque: 161 N·m (1,640 kgf·cm, 118 ft·lbf)

B: Torque: 110 N·m (1,120 kgf·cm, 80 ft·lbf)

C: Torque: 27 N·m (275 kgf·cm, 20 ft·lbf)

D: Torque: 102 N·m (1,040 kgf·cm, 75 ft·lbf)

NOTE: If using Lexus special service tool SST 09022-12170 for nut and bolt D use the following spec.

(i) **D: Torque: 140 N·m (1,426 kgf·cm, 103 ft·lbf)**

(j) Install rear fender liner nuts.

(k) Install rear wheels. (Fig 3-8)

Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)

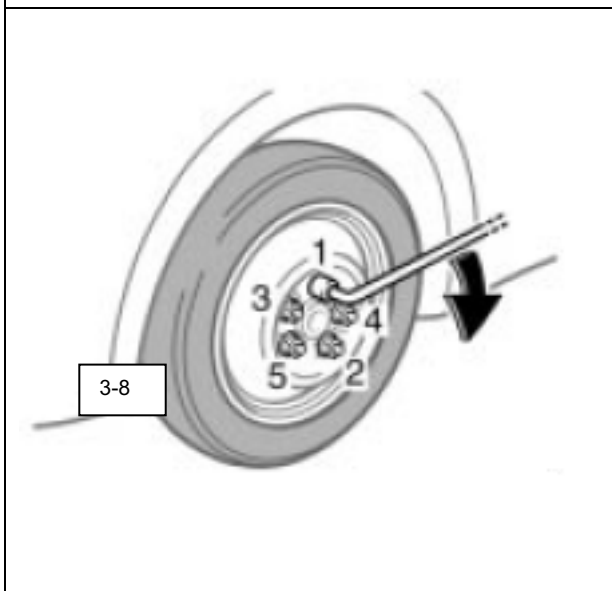
(l) Install side luggage compartment trim covers.

(m) Install front luggage compartment trim covers and rear floor finish plate.

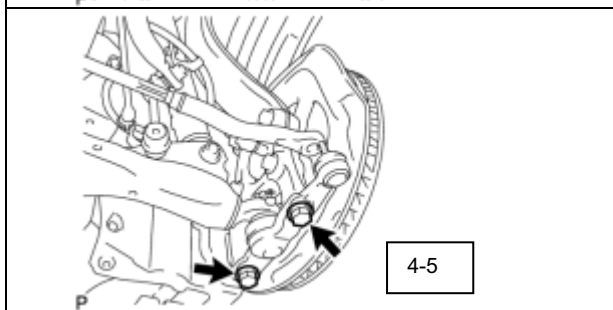
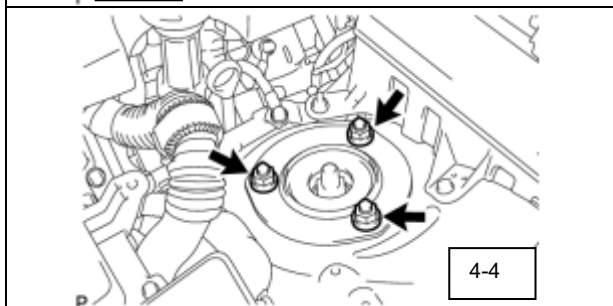
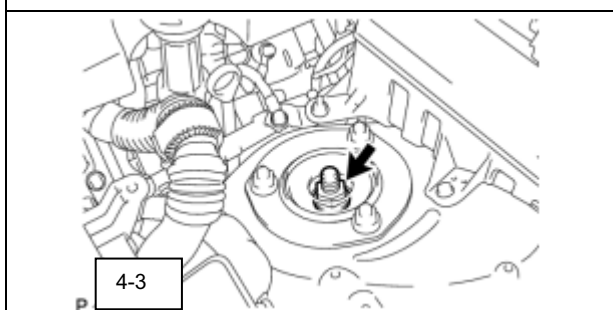
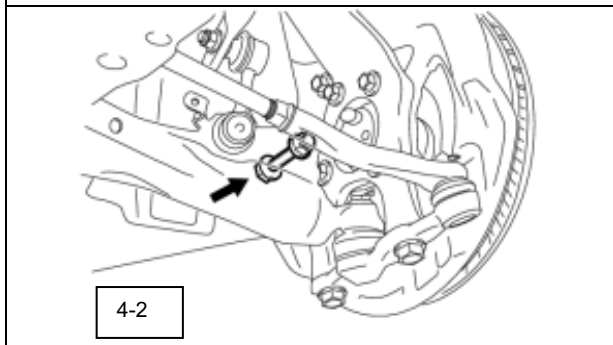
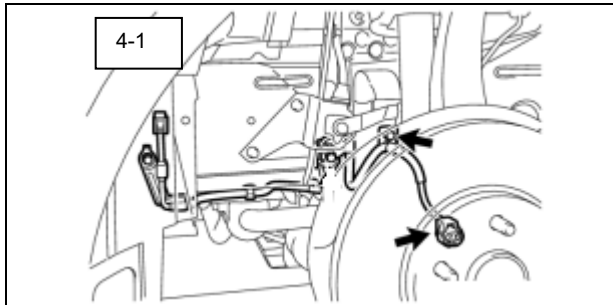
(n) Install tool box and tool box board.

(o) Install luggage compartment trim side cover LH and RH.

(p) Install luggage compartment floor mat.



4. Remove front Shock assemblies.



- (a) Remove front wheel.
- (b) Detach speed sensor wire from shock assembly and disconnect it from the speed sensor. (Fig 4-1)

- (c) Remove nut and bolt holding lower end of shock absorber. (Fig 4-2)

- (d) Remove engine room side covers.

- (e) Loosen the lock nut of the front shock absorber. (Fig 4-3)



NOTE: Do not remove the lock nut.

- (f) Remove the 3 nuts on the upper side of the front suspension support. (Fig 4-4)

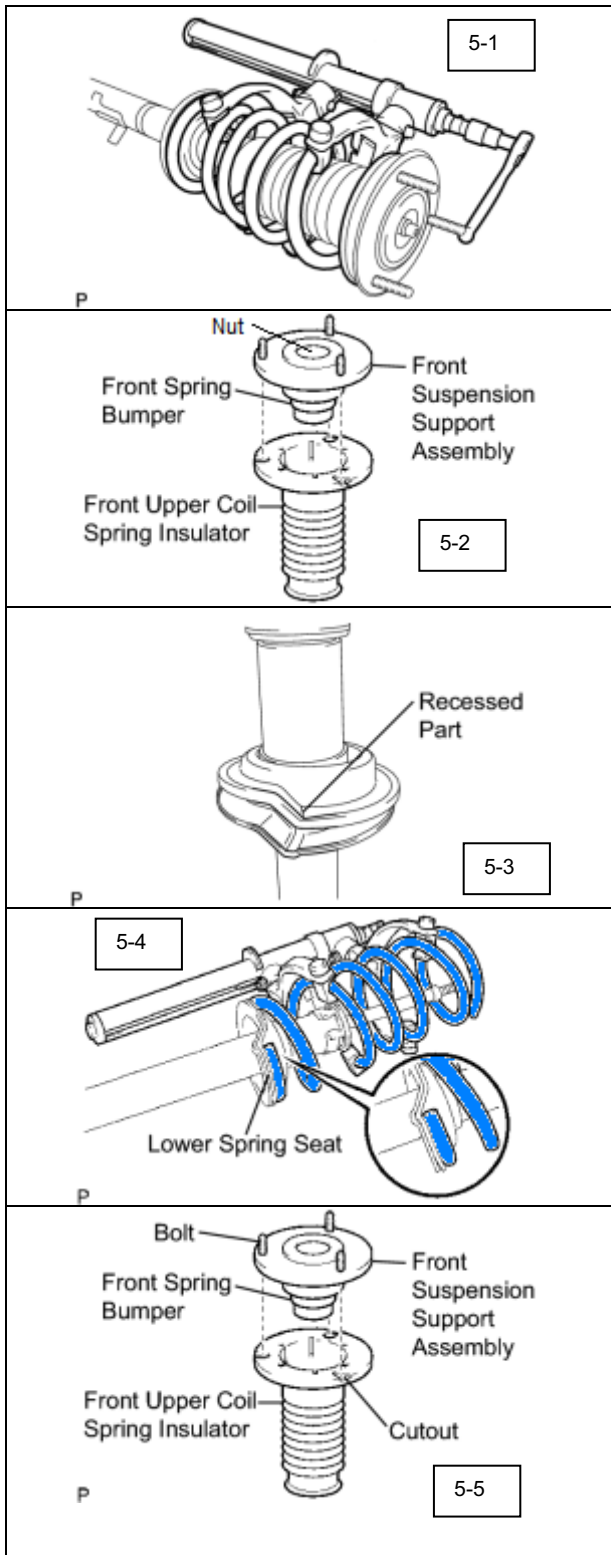
NOTE: Lower arm bushing preload will not allow the shock assembly to fall.

- (g) Remove the 2 bolts from the front lower ball joint. (Fig 4-5)

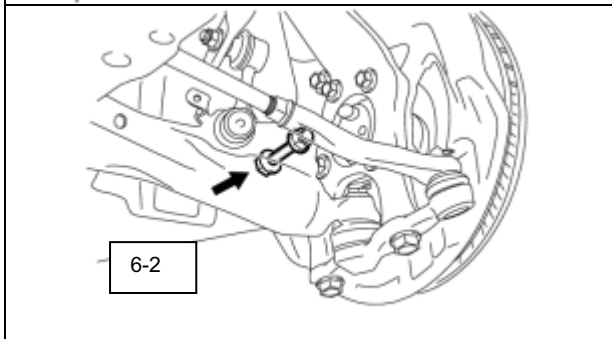
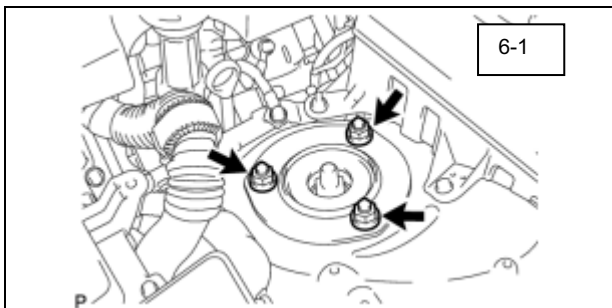
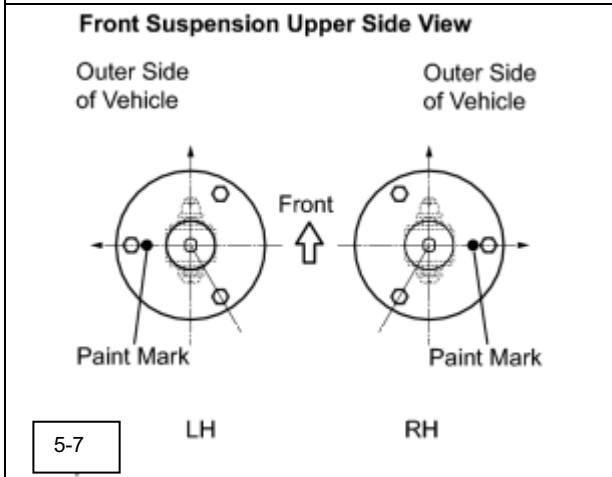
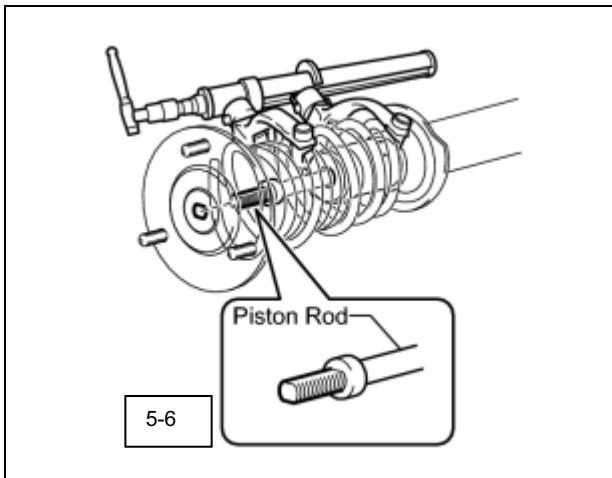
- (h) Pull shock assembly from the vehicle.

- (i) Repeat for other side of vehicle.

5. Replace front springs



- (a) Compress spring enough to remove tension from the upper spring support. (Fig 5-1)
- (b) Remove the lock nut. (Fig 5-2)
- (c) Remove the front suspension support assembly with the front upper coil spring insulator.
- (d) Remove the front coil spring.
- (e) Confirm lower spring insulator is indexed properly and free from debris. (Fig 5-3)
- (f) Compress new front spring and place over shock assy.
- (g) Confirm that the end of the spring sits in the stepped portion of the lower spring seat. (Fig 5-4)
- (h) Install the front spring bumper onto the front suspension support assembly.
- (i) Align the bolt heads of the front suspension support assembly with the cutouts of the front upper coil spring insulator, and install the front upper coil spring insulator on the front suspension support assembly. (Fig 5-5)



(j) Match the shape of the piston rod end to the hole in the front suspension support assembly to install the front shock absorber. (Fig 5-6)

(k) Adjust the front suspension support assembly so that the bolts come to the positions shown in the illustration, and remove the spring compressor from the front coil spring. (Fig 5-7)

(l) Temporarily tighten a new lock nut to the front shock absorber.

6. Install front shock assy.

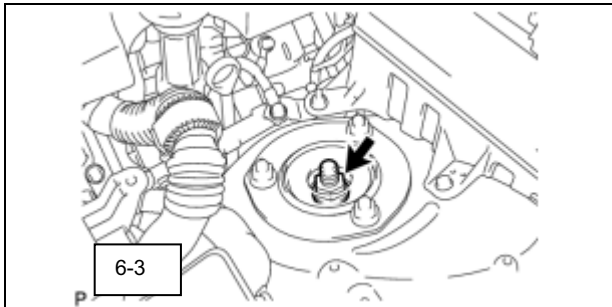
(a) Install the front shock absorber assy onto the vehicle by tightening the 3 nuts on the suspension support side. (Fig 6-1)

Torque: 67 N·m (683 kgf·cm, 49 ft·lbf)

(b) Insert the bolt from the rear of the vehicle, and install the front shock absorber lower side on the front lower suspension arm. (Fig 6-2)

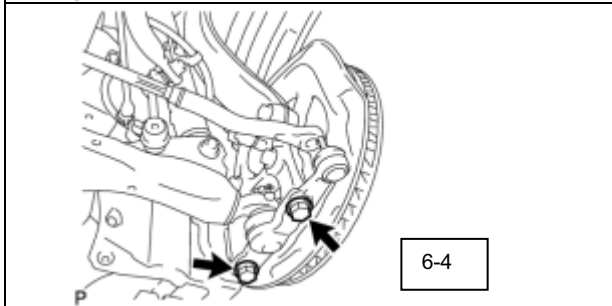
(c) Temporarily tighten the nut while holding the bolt.

NOTE: You will fully tighten the nut after settling the suspension.



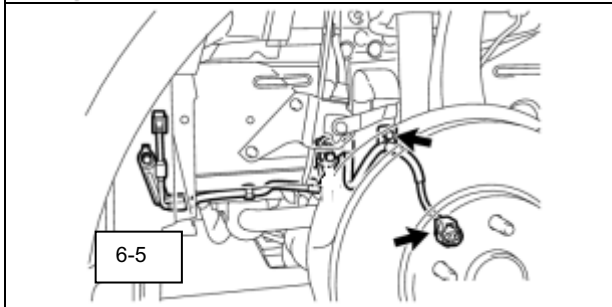
- (d) Now fully tighten the new shock assy lock nut.
(Fig 6-3)

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



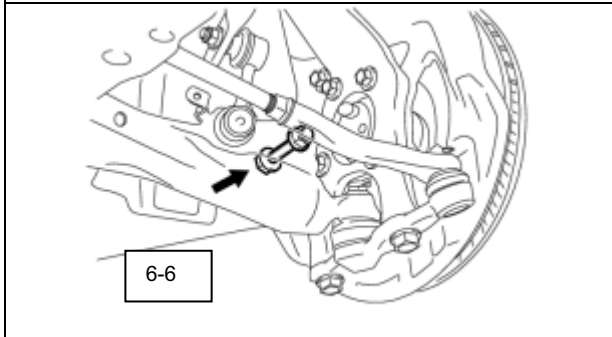
- (e) Install the front lower ball joint with the 2 bolts.
(Fig 6-4)

Torque: 120 N·m (1,220 kgf·cm, 89 ft·lbf)



- (f) Connect front speed sensor wire. (Fig 6-5)
(1) Install the front speed sensor to the front shock absorber.

Torque: 6.0 N·m (61 kgf·cm, 4.4 ft·lbf)



- (g) Fully tighten lower shock bolt. (Fig 6-6)
(1) Jack up lower suspension arm so that weight of vehicle is supported.

Torque: 157 N·m (1,600 kgf·cm, 116 ft·lbf)

- (h) Install engine room side covers.

- (i) Install front wheel assy.

Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)



7. ADJUST WHEEL ALIGNMENT

Front: Total Toe = 1 +/- 2 mm (0.04 +/- 0.08 in.)

Rear: Total Toe = 3 +/- 2 mm (0.12 +/- 0.08 in.)

Checklist. These points **MUST** be checked to ensure a quality installation.

CHECK FOR:

Accessory Function Checks

Check for noise

LOOK FOR:

Confirm all springs are seated properly.

Vehicle Function Checks

Confirm VSC light is not on.

Confirm ASF OFF light is not on.

Confirm all hardware with torque values are tight

Confirm speed sensor wires are plugged in.

Confirm height sensor links are positioned correctly.

Loose hardware.