

Part Number: PTR07-53090
PTR07-53091

Kit Contents

Item #	Quantity Req'd.	Description
1	2	Front Springs
2	2	Rear Springs
3	1	Hardware Bag

Hardware Bag Contents

Item #	Quantity Req'd.	Description
1	2	Front Shock Absorber Locking Nuts
2	1	Installation Instructions
3		

Additional Items Required For Installation

Item #	Quantity Req'd.	Description
1		

Conflicts

None

General Applicability

IS 250 & IS 350 (Hardtop) only

Recommended Sequence of Application

Item #	Accessory
1	F-Sport Springs
2	F-Sport Exhaust
3	F-Sport Rear Brakes

*Mandatory

Recommended Tools

Personal & Vehicle Protection	Notes
Fender Covers	
Safety Glasses	
Special Tools	Notes
Spring Compressor	
Installation Tools	Notes
Torque Wrench	3/8" & 1/2" drive
Ratchet	3/8" & 1/2" drive
Wrenches	19mm
Sockets	10, 14, 17, 19mm
Snap-On	QXXM19A or QXOM19A
Hexagon Wrench	6 mm
Nylon Pry Tool	
Special Chemicals	Notes

Vehicle Service Parts (may be required for reassembly)

Item #	Quantity Req'd.	Description
1	2	90467-12069 white trunk trim clip
1	3	90467-10167 blue trunk trim clip
1	7	90467-08186-C0 black trunk trim clip

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.
	SAFETY TORQUE: This mark indicates that torque is related to safety.

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.

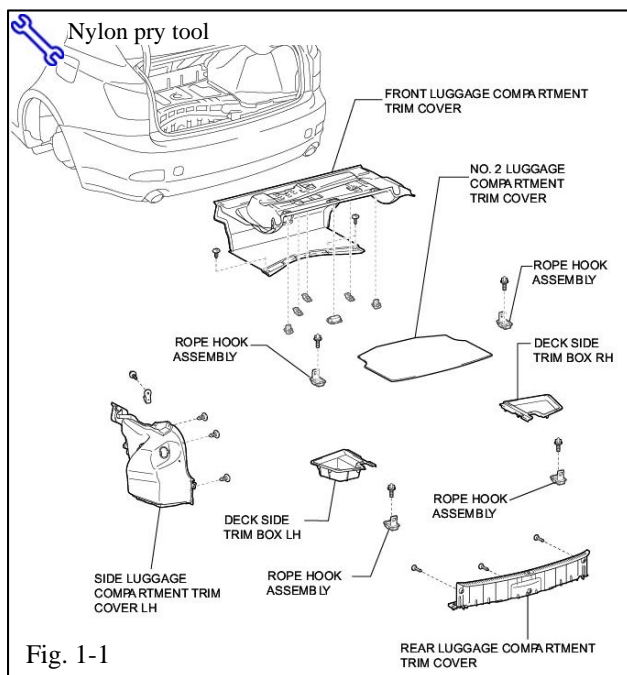
These guidelines can be found in the "Accessory Installation Practices" document.

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.).

Please see your Lexus dealer for a copy of this document.

1. Remove the Rear Shock Absorber/Spring Assemblies.



(a) Remove the No. 2 luggage compartment trim cover (Fig. 1-1).

(b) Remove the deck side trim box LH (Fig. 1-1).

(c) Remove the deck side trim box RH (Fig. 1-1).

(d) Remove the rear luggage compartment trim cover (Fig. 1-1).

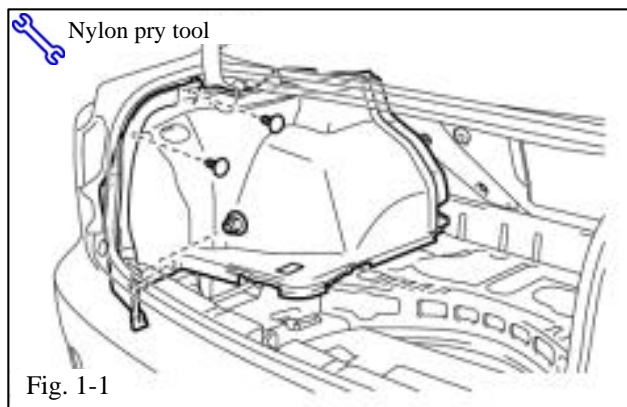
(e) Remove front luggage compartment trim cover (Fig. 1-1).

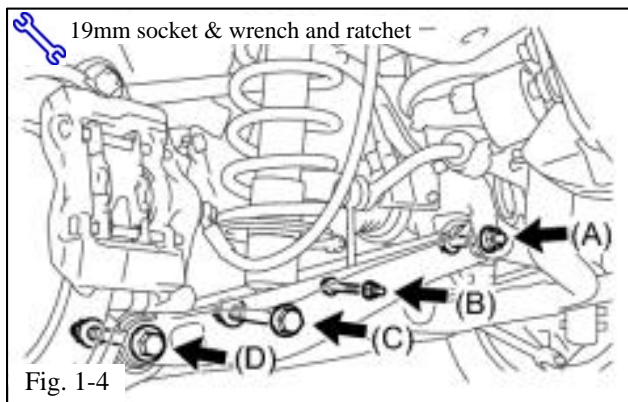
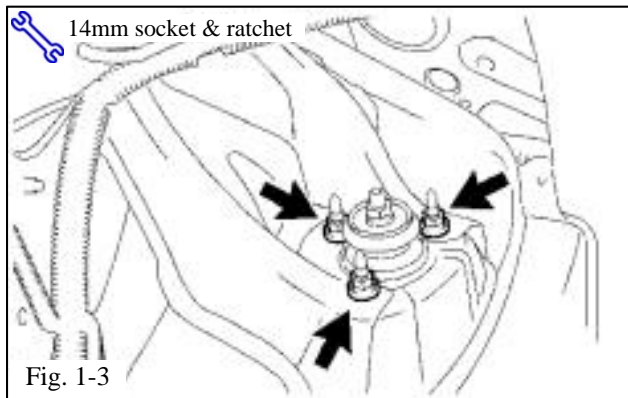
(1) Disengage the upper clips holding the trim to the package tray.

(2) Unplug the trunk light wire harness.

(f) Remove the side luggage compartment trim cover LH (Fig. 1-2). Use a panel removal tool to unlock the clip found under the rear trim cover. Do not force the clip.

(g) Remove the side luggage compartment trim cover RH.





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

(i) Raise the vehicle and remove the rear wheels.

STOP CAUTION: Do not use an impact wrench on wheel locks (if equipped).

(j) Loosen (do not remove) the lower rear No. 2 suspension arm nut (A, Fig. 1-4).

CAUTION: Do not remove the nut.

(k) Remove bolt B and the nut (Fig. 1-4).

(l) Disconnect the stabilizer link assembly and the height control sensor link bracket from the rear No. 2 suspension arm assembly (Fig. 1-4). Note the position of the height control sensor link.

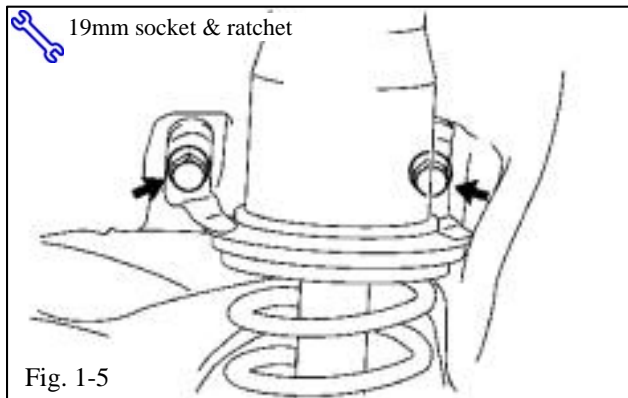
(m) Remove bolt C and the nut (Fig. 1-4).

CAUTION: The nut has a locking feature. Remove the bolt and nut by turning the **BOLT** while the nut is held in place.

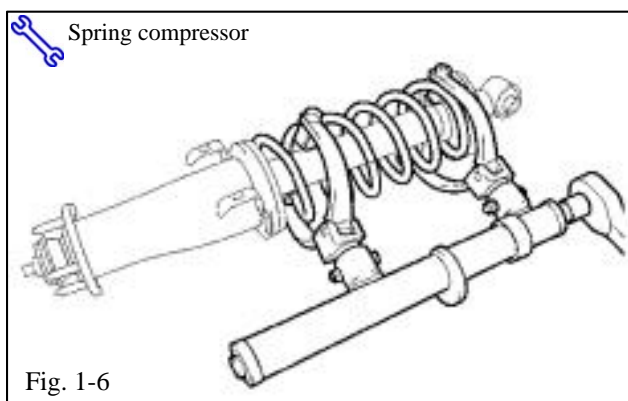
(n) Remove bolt D and the nut on the axle carrier side and lower the rear No. 2 suspension arm assembly from the knuckle assembly (Fig. 1-4).

CAUTION: The nut has a locking feature. Remove the bolt and nut by turning the **BOLT** while the nut is held in place.

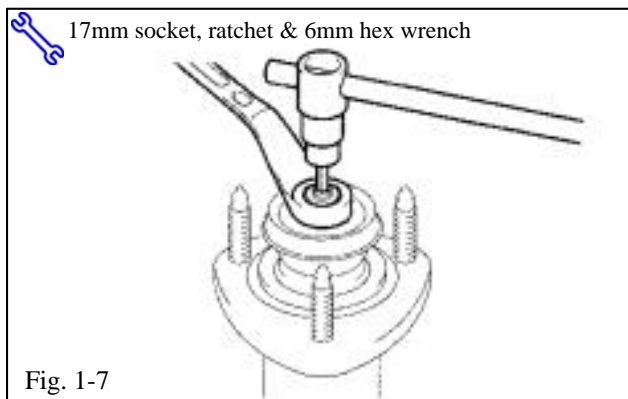
(o) Remove two fender liner nuts to access the rear shock absorber assembly.



- (p) Remove the 2 bolts and the rear shock absorber assembly from the body (Fig. 1-5). Retain the bolts for reassembly.



- (q) Remove the spring from shock absorber assembly.
- (1) Use a spring compressor to compress the rear coil spring until the tension is removed from the shock absorber assembly (Fig. 1-6).



- (2) Remove the upper shock absorber nut. If the shaft spins with the nut, hold the rod of the rear shock absorber assembly with a 6mm hexagon wrench (Fig. 1-7).
- (3) Note the order and position of the washer, bushings and jounce bumper for reassembly.
- (r) Discard the OE coil spring.
- (s) Repeat Step 1 on the other side of the vehicle.

2. Install the *F-Sport* Rear Spring.

- (a) Fit the rear coil spring end into the recessed part of the rear lower shock absorber seat (Fig. 2-1).
- (b) Reassemble the shock absorber/spring assembly as shown below (Fig. 2-2).

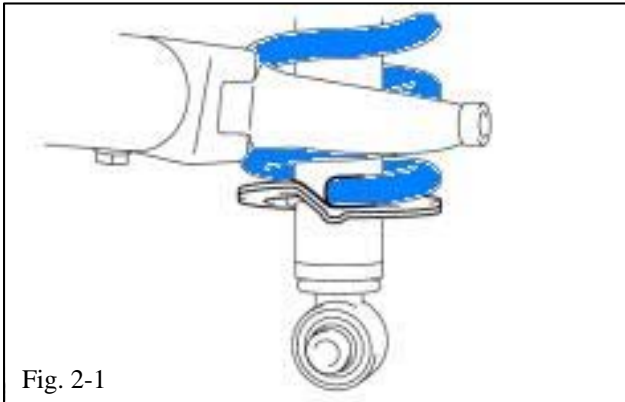


Fig. 2-1

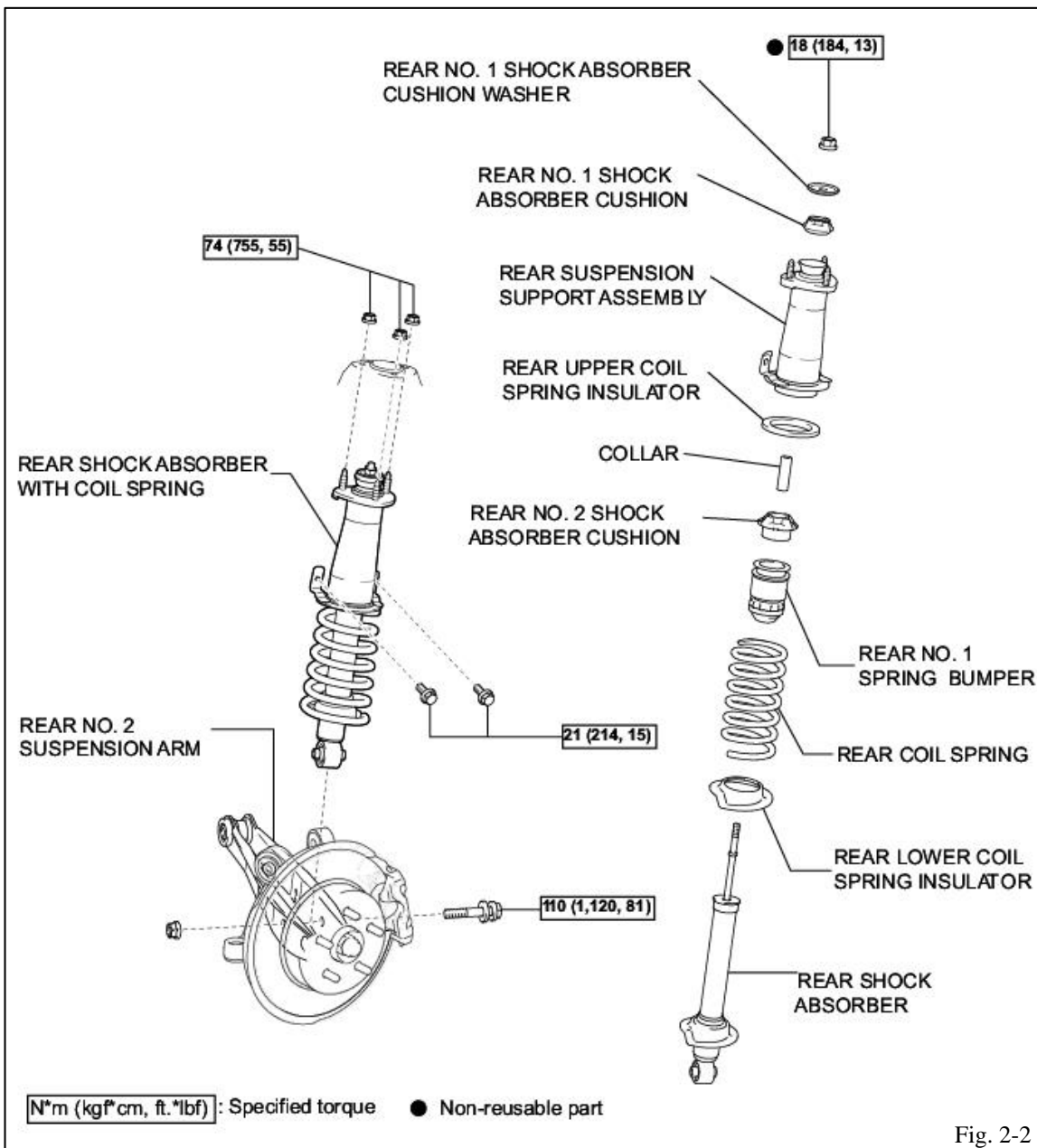


Fig. 2-2

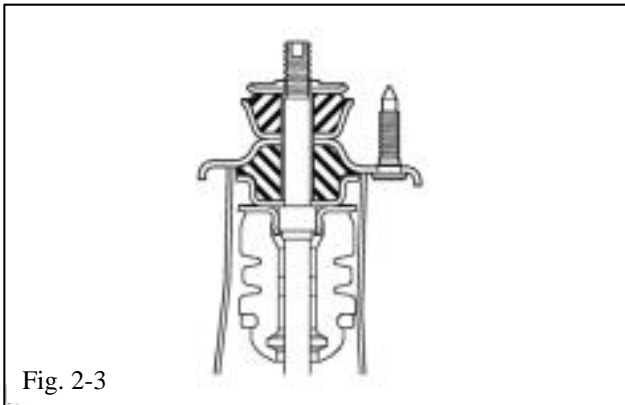


Fig. 2-3

- (c) Ensure the cushions and washer (lip turned up) are assembled in the correct direction and order (Fig. 2-3).

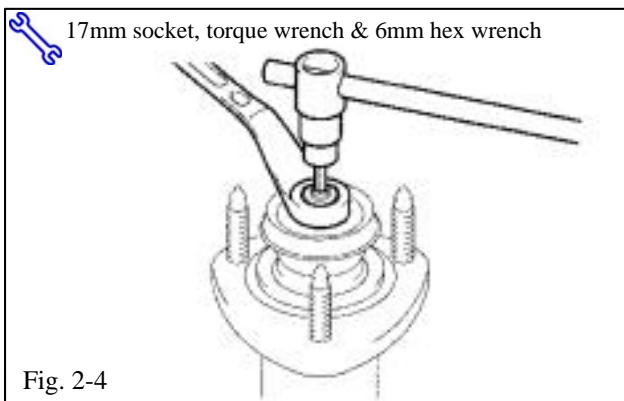


Fig. 2-4

- (d) Torque the new shock absorber shaft lock nut (Fig. 2-4).

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

Repeat Step 2 for the other side.

3. Install the Rear Shock Absorber /Spring Assembly.

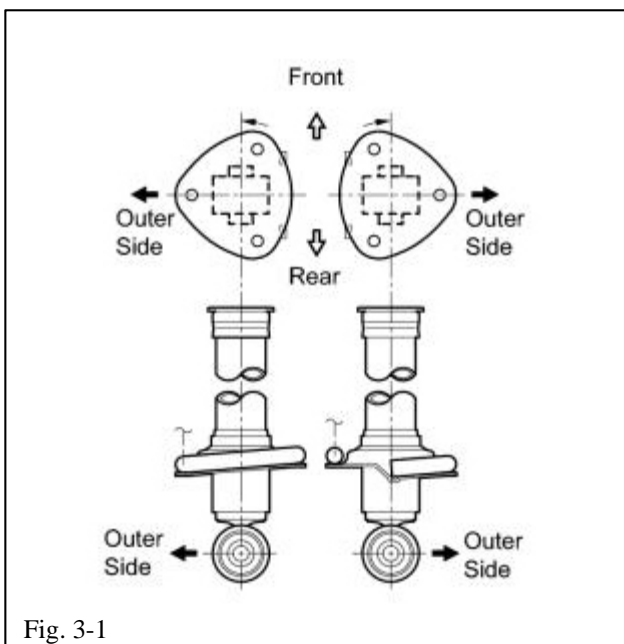
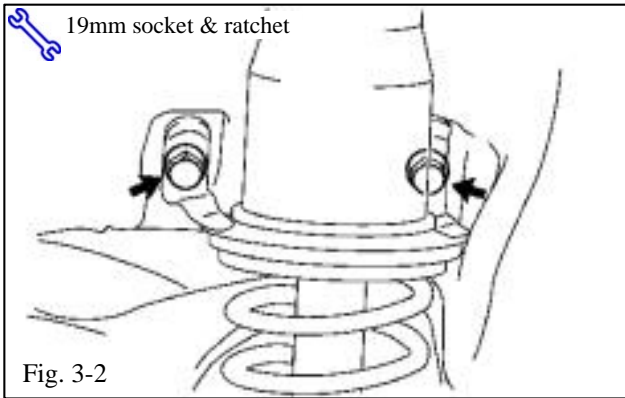


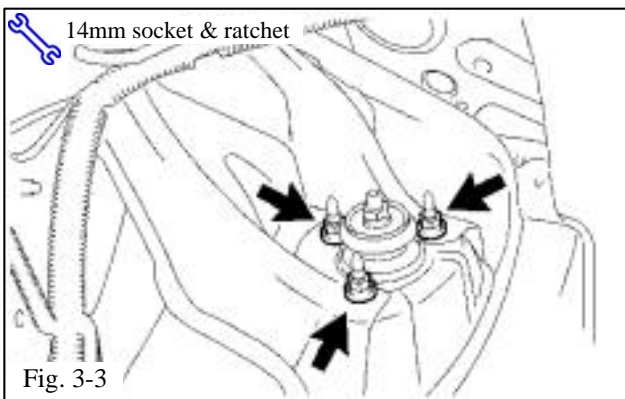
Fig. 3-1

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



- (b) Temporarily install the rear shock absorber assembly with the 2 bolts removed in Step 1(p) (Fig. 3-2).

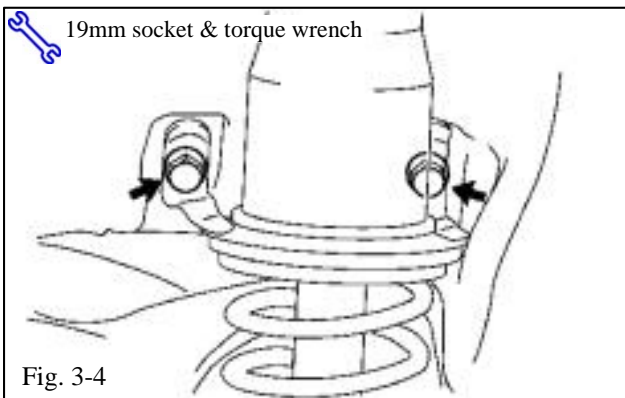
⚠ NOTE: Leave the bolts loose.



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

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

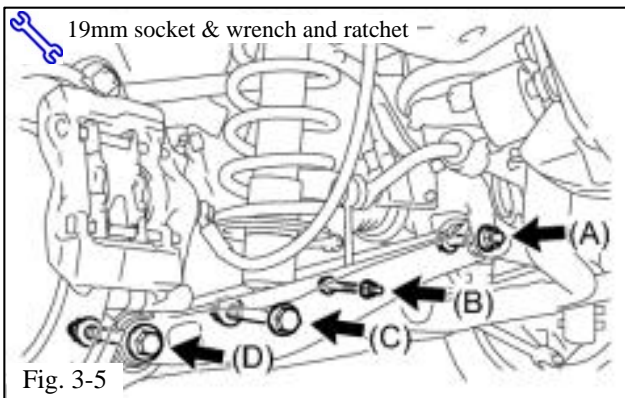
- (d) Install the trunk trim panels.



- (e) Torque the 2 bolts on the rear shock absorber assembly (Fig. 3-4).

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

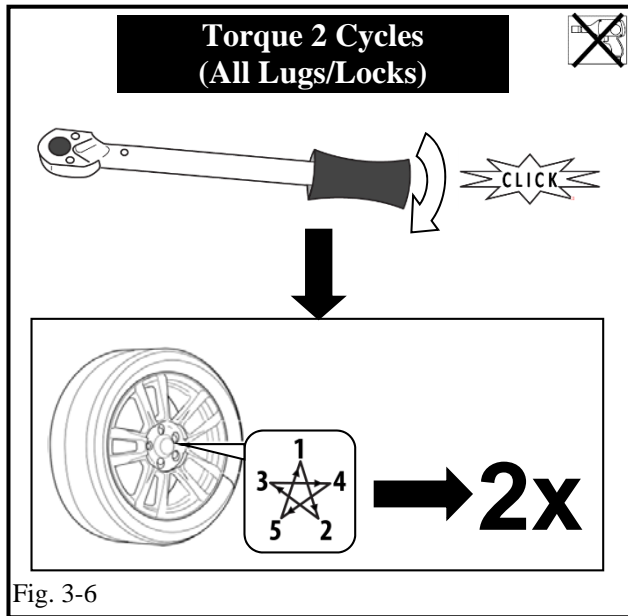
- (f) Install the rear fender liner nuts.



- (g) Raise the lower the suspension arm and temporarily install the nuts and bolts for the stabilizer link assembly (B), shock absorber (C) and knuckle (D) (Fig. 3-5).

⚠ CAUTION: Confirm that the height control sensor link is positioned correctly and not folded inward.

- (h) Repeat Step 3 for the other side of the vehicle.



- (i) If the F-Sport rear sway bar will be installed, do so now following the F-Sport Sway Bar Set instructions, otherwise skip to Step 3(j).
- (j) Install the rear wheel/tire assemblies onto the vehicle. Hand start the lug nuts.
- (k) Use a torque wrench to tighten the lug nuts in sequence 1 through 5 to 103N·m (76 ft·lbf) (Fig. 3-6).

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

- (l) Re-torque all of the lug nuts in same the 1-5 sequence (Fig. 3-6).

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

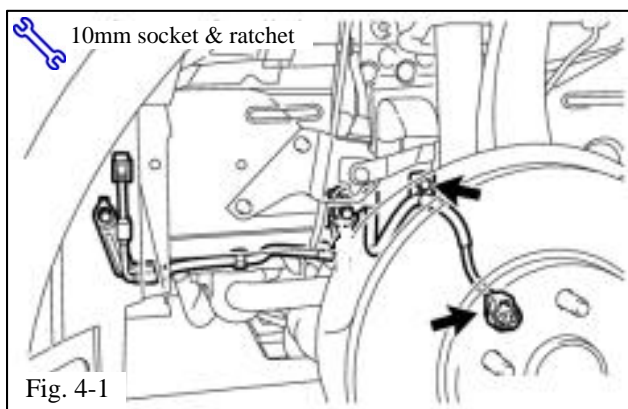
STOP CAUTION: DO NOT USE AN IMPACT WRENCH TO INSTALL OR REMOVE WHEEL LOCKS.

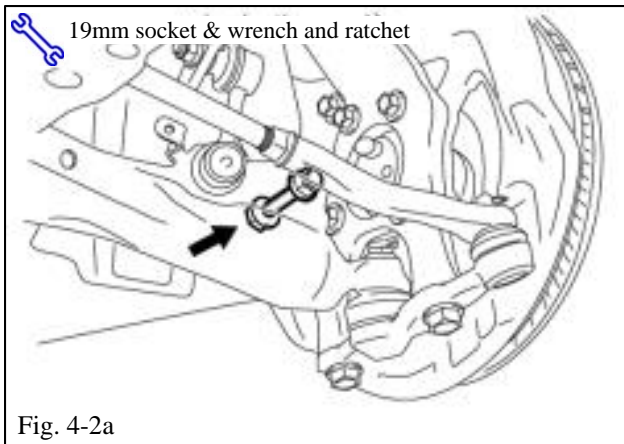
4. Remove the Front Shock Absorber/Spring Assembly.

- (a) Remove the front wheels.

STOP CAUTION: Do not use an impact wrench on wheel locks (if equipped).

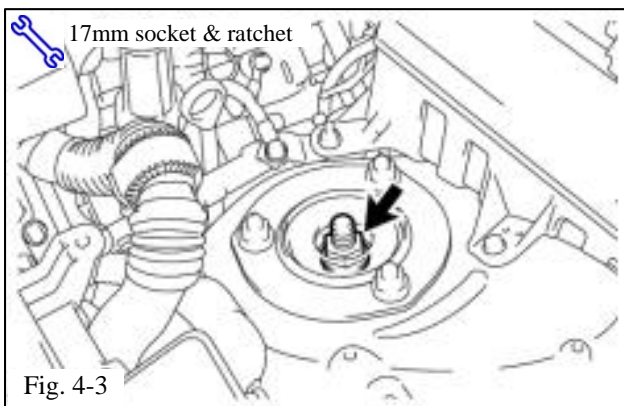
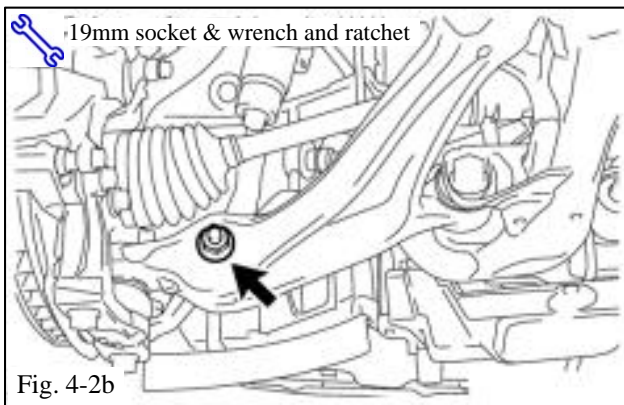
- (b) Detach the speed sensor wire from the shock absorber assembly and disconnect it from the speed sensor (Fig. 4-1).





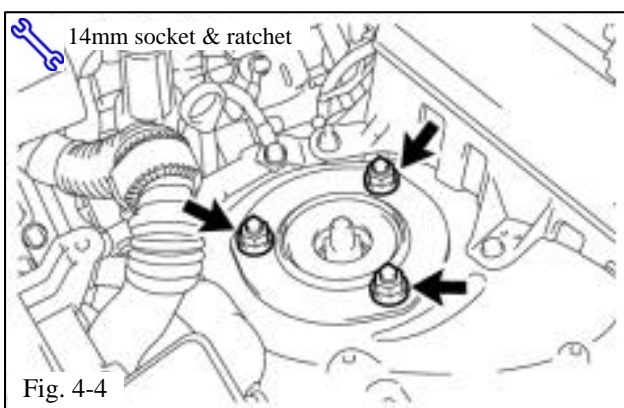
(c) Remove the nut and bolt (nut only for AWD) holding the lower end of the shock absorber (RWD Fig. 4-2a, AWD Fig. 4-2b).

(d) Remove the engine room side covers.



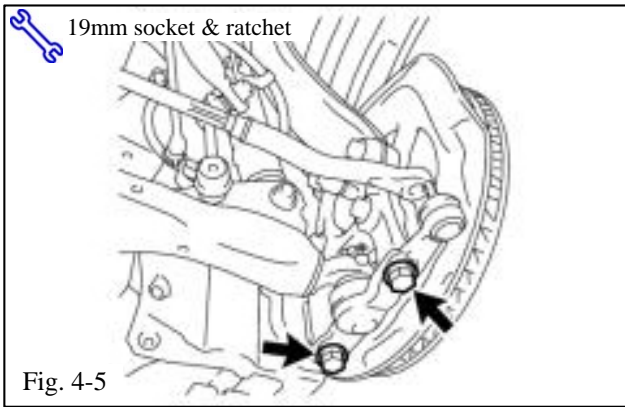
(e) Loosen the front shock absorber lock nut (Fig. 4-3).

⚠ NOTE: Do not remove the lock nut.



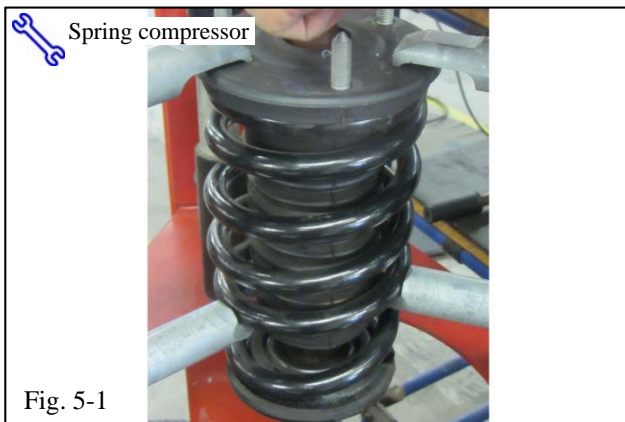
(f) Remove the 3 nuts on the upper side of the front suspension support (Fig. 4-4).

⚠ NOTE: The lower arm bushing preload will not allow the shock absorber assembly to fall.

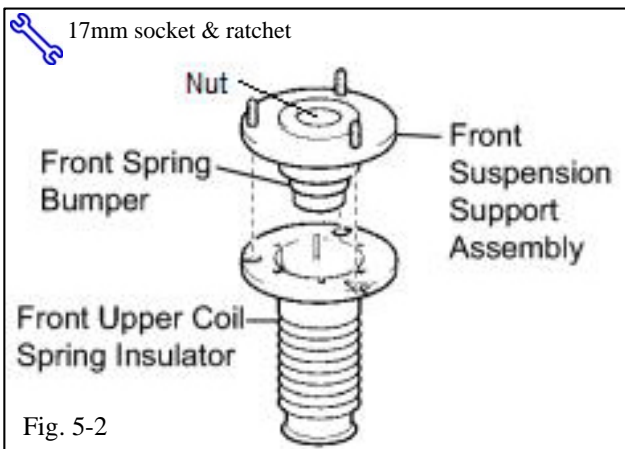


- (g) **RWD Only:** Remove the 2 bolts from the front lower ball joint (Fig. 4-5).
- (h) Remove the shock absorber/spring assembly from the vehicle.
- (i) Repeat Step 4 on the other side of the vehicle.

5. Install the *F-Sport* Front Spring.



- (a) Compress the spring enough to remove tension from the upper spring support (Fig. 5-1).



- (b) Remove the lock nut (Fig. 5-2). It will not be reused.
- (c) Remove the front suspension support assembly with the front upper coil spring insulator (Fig. 5-2). Retain them for reinstallation.
- (d) Remove the coil spring.

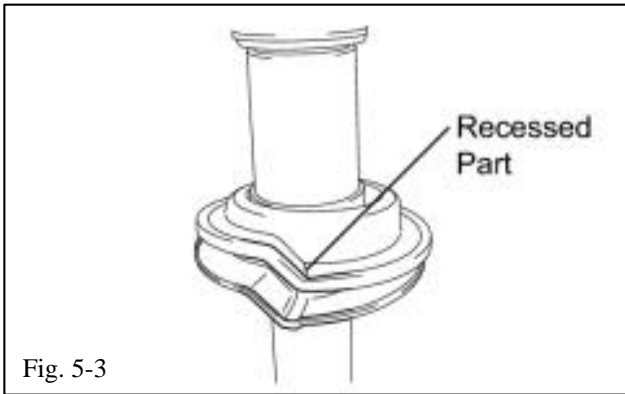


Fig. 5-3

- (e) Confirm that the lower spring insulator is indexed properly and free of debris (Fig. 5-3).
- (f) Compress a new front spring and place it over the shock absorber assembly.

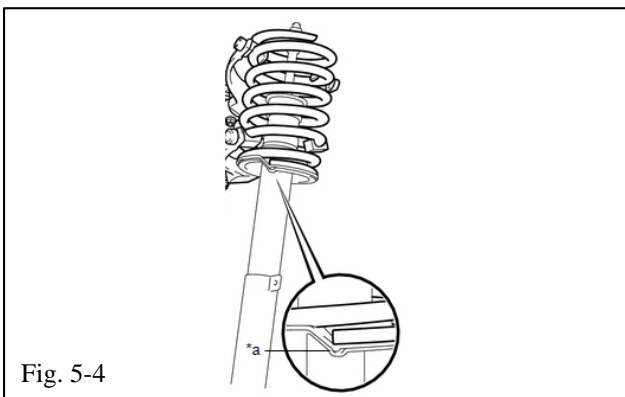


Fig. 5-4

- (g) Confirm that the end of the spring sits in the stepped portion (*a) of the lower spring seat (Fig. 5-4).

⚠ NOTE: Ensure the F-Sport logo is facing outward.

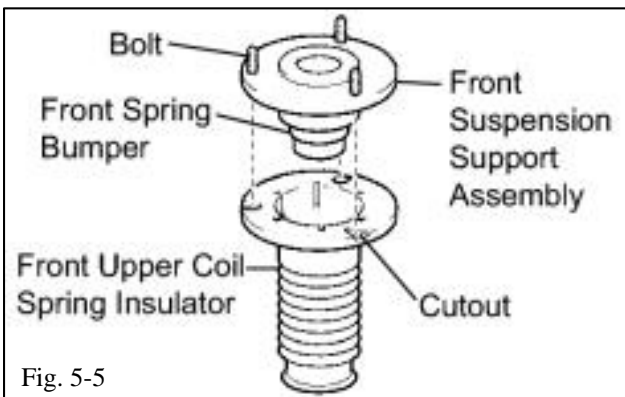


Fig. 5-5

- (h) Install the front spring bumper onto the front suspension support assembly (Fig. 5-5).
- (i) Align the bolt heads of the front suspension support assembly with the cutouts of the front upper coil spring insulator (Fig. 5-5).
- (j) Install the front upper coil spring insulator on the front suspension support assembly (Fig. 5-5).

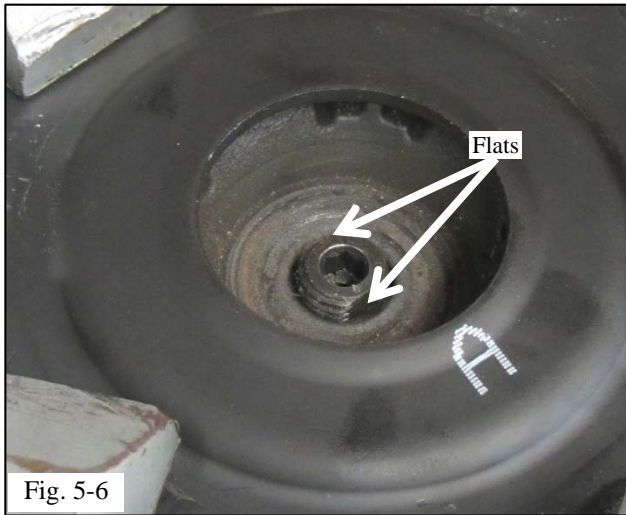
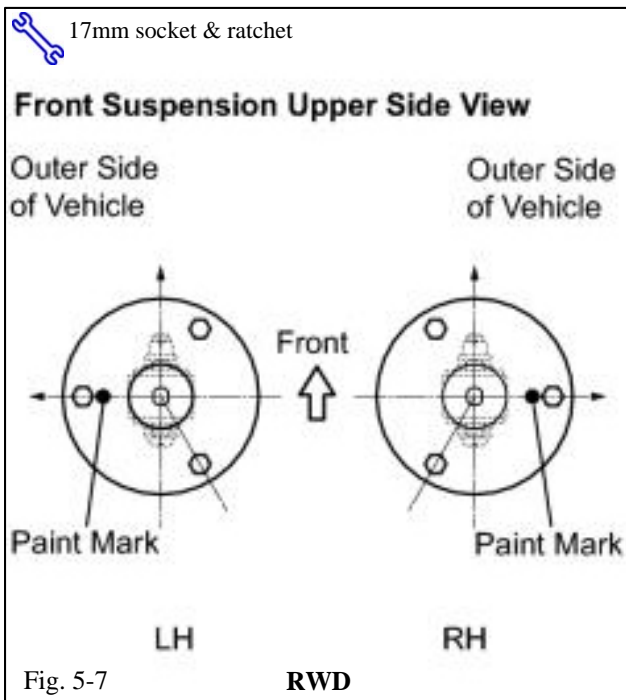
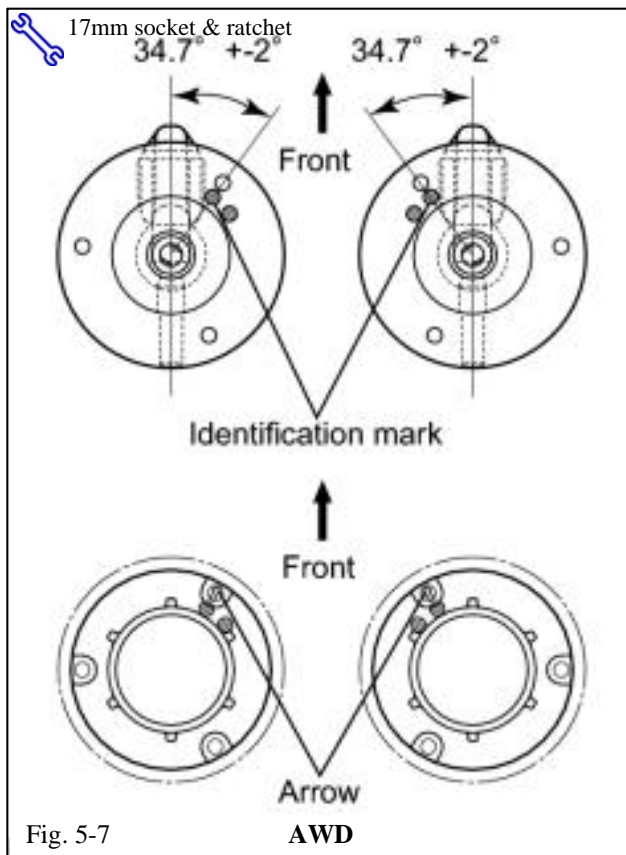


Fig. 5-6

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



(l) **RWD Only:** Turn the front suspension support assembly so that the bolts align to the lower shock absorber eyelets (Fig. 5-7).

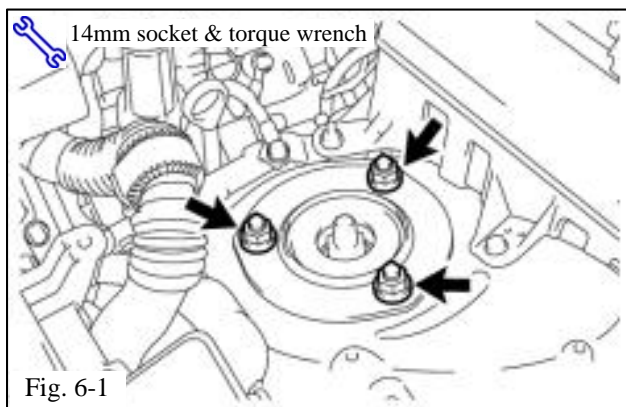


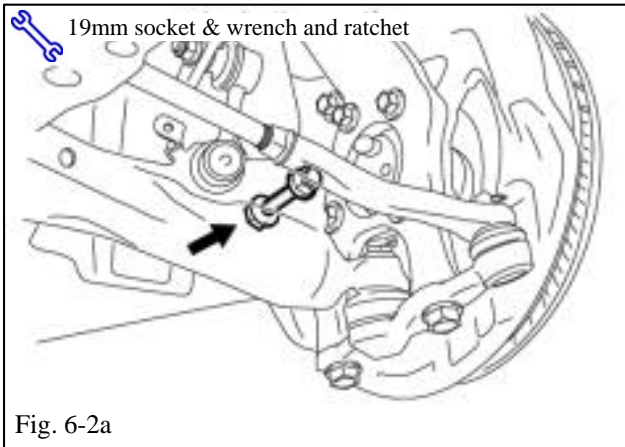
- (m) **AWD Only:** Align the front suspension support assembly so that the bolts are positioned as shown (Fig. 5-8).
- (n) Temporarily tighten a supplied lock nut to the front shock absorber.
- (o) Repeat Step 5 for the other side.

6. Install the Front Shock Absorber/Spring Assembly.

- (a) Install the front shock absorber assembly into the vehicle and tighten the 3 nuts on the suspension support (engine bay) side (Fig. 6-1).

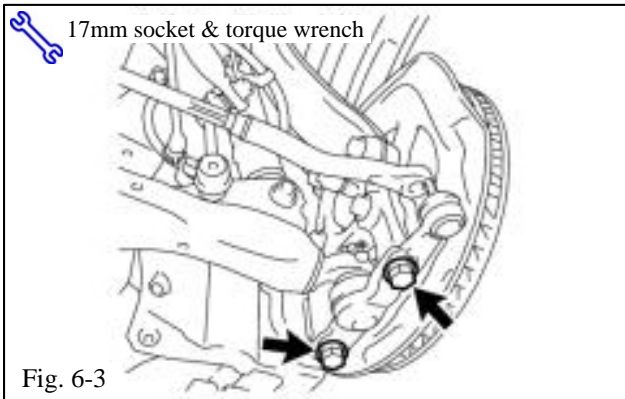
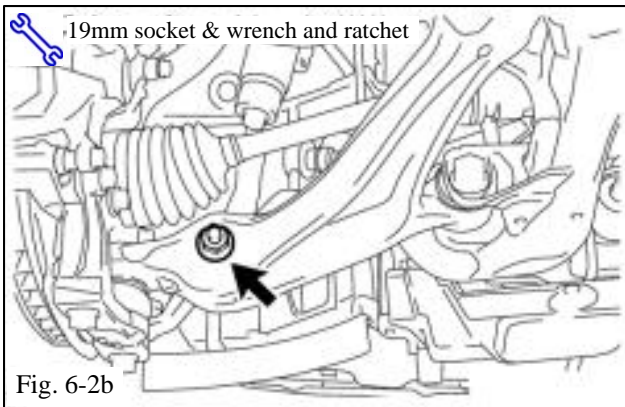
Torque: 67 N·m (683 kgf·cm, 49 ft·lbf)





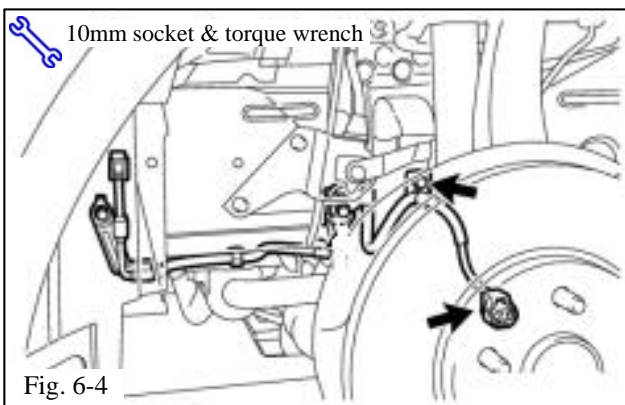
- (b) Install the front shock absorber lower side on the front lower suspension arm and insert the bolt (RWD) from the rear of the vehicle (RWD Fig. 6-2a, AWD Fig. 6-2b).
- (c) Temporarily tighten the nut while holding the bolt.

⚠ NOTE: The nut will be fully tightened after settling the suspension.



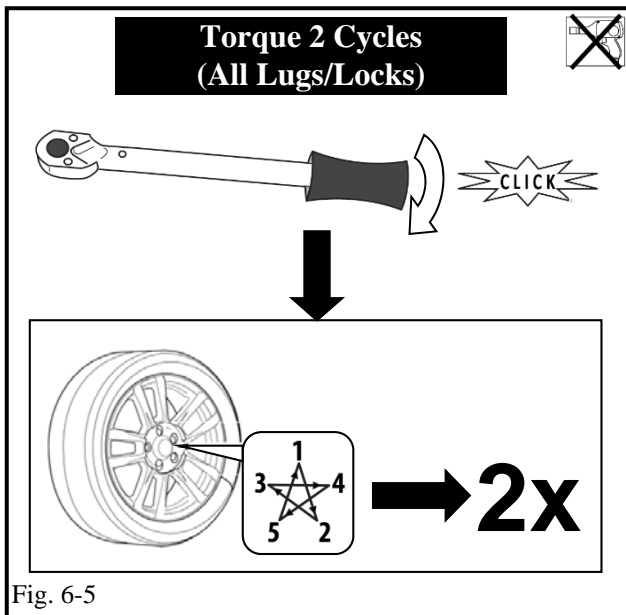
- (d) **RWD Only:** Replace the 2 bolts into the front lower ball joint (Fig. 6-3).

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



- (e) Install the front speed sensor to the front shock absorber and reconnect it (Fig. 6-4).

Torque: 6.0 N·m (61 kgf·cm, 53 in·lbf)



(f) Repeat Step 6 on the other side of the vehicle.

(g) If the F-Sport front sway bar will be installed, do so now following the F-Sport Sway Bar Set instructions, otherwise skip to Step 6(h).

(h) Install the front wheel/tire assemblies onto the vehicle. Hand start the lug nuts.

(i) Use a torque wrench to tighten the lug nuts in sequence 1 through 5 to 103N·m (76 ft-lbf) (Fig. 6-5).

Torque: 103N·m (76 ft-lbf)

(j) Re-torque all of the lug nuts in same the 1-5 sequence (Fig. 6-5).

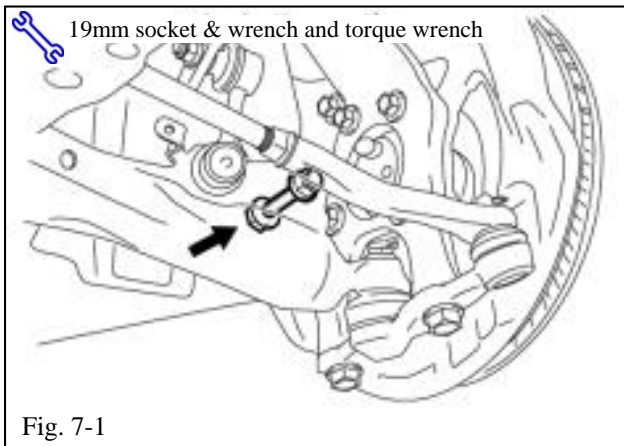
Torque: 103N·m (76 ft-lbf)

CAUTION: DO NOT USE AN IMPACT WRENCH TO INSTALL OR REMOVE WHEEL LOCKS.

7. Tighten the Suspension Component Fasteners.

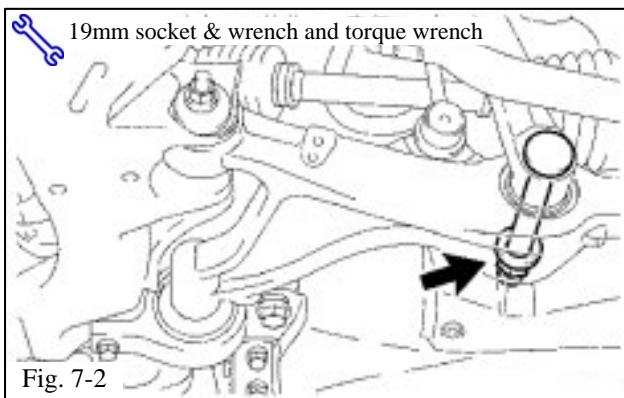
(a) Lower the vehicle onto alignment car stands with slip plates under all four wheels. Set the parking brake and lower the lift arms away from the vehicle.

(b) Jounce the vehicle front and rear to settle the suspension.



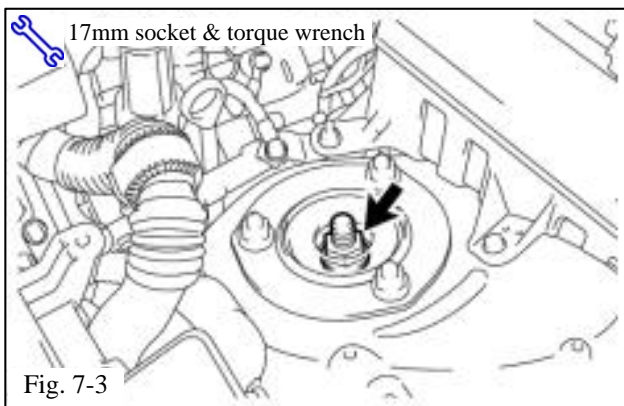
(c) **RWD Only:** Torque the front lower shock absorber bolt (Fig. 7-1).

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



(d) **AWD Only:** Torque the front lower shock absorber bolt (Fig. 7-2).

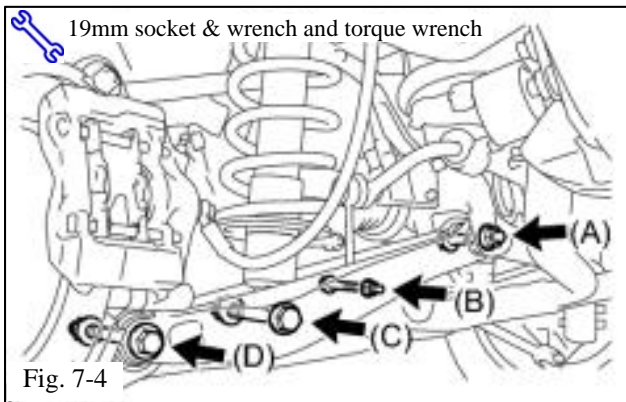
S Torque: 112 N·m (1,140 kgf·cm, 83 ft·lbf)



(e) Torque the new front shock absorber assembly lock nut (Fig. 7-3).

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

(f) Install the engine room side covers.



(g) Torque the nuts and bolts on the rear No. 2 suspension arm assembly (Fig. 7-4).

S Torque(A): 140 N·m (1,426 kgf·cm, 103 ft·lbf)

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

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

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

! NOTE: Nut A on the RH side cannot be accessed with a 19mm socket. Snap-on Torque Head, P/N QXXM19A or QXOM19A (Fig. 7-5) is recommended to be used and torqued to the spec above.

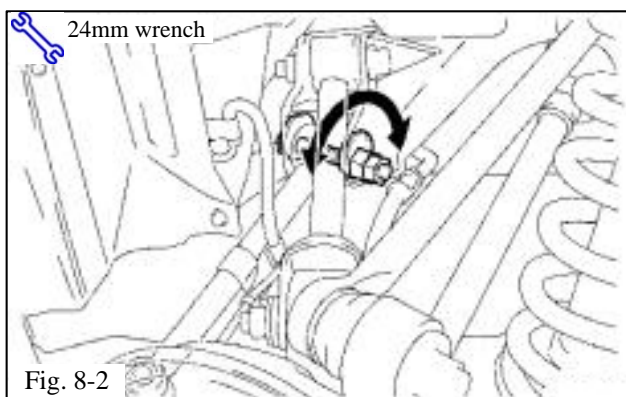
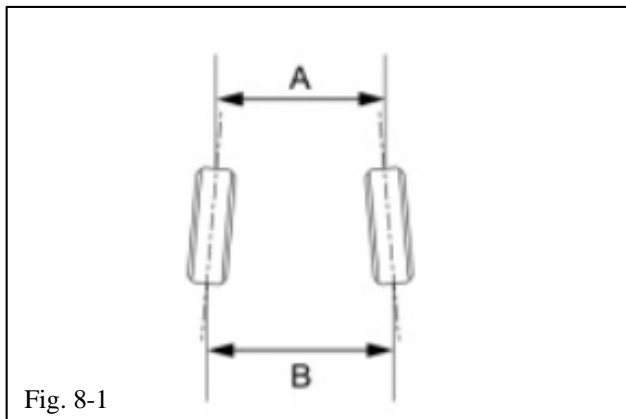
(h) Repeat Step 7 on the other side of the vehicle.

8. Adjust the Wheel Alignment.

(a) Adjust the rear toe settings.

Rear Toe-In (Total) (Fig. 8-1)

B - A: 3.0 +/- 2.0 mm (0.12 +/- 0.08 in.)



(1) Loosen the toe adjust cam nut (Fig. 8-2).

(2) Turn the adjust cams by an equal amount to adjust toe-in.

(3) Tighten the nut (Fig. 8-2).

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

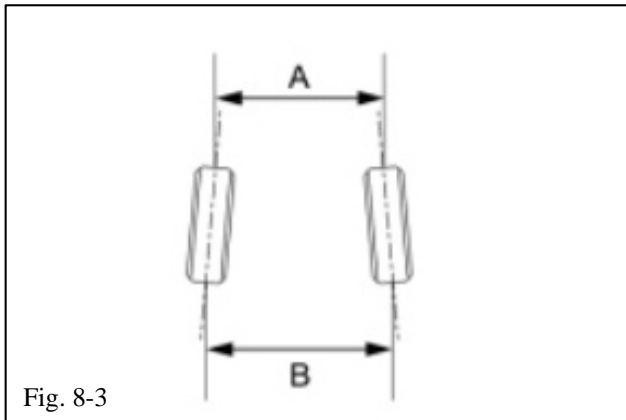


Fig. 8-3

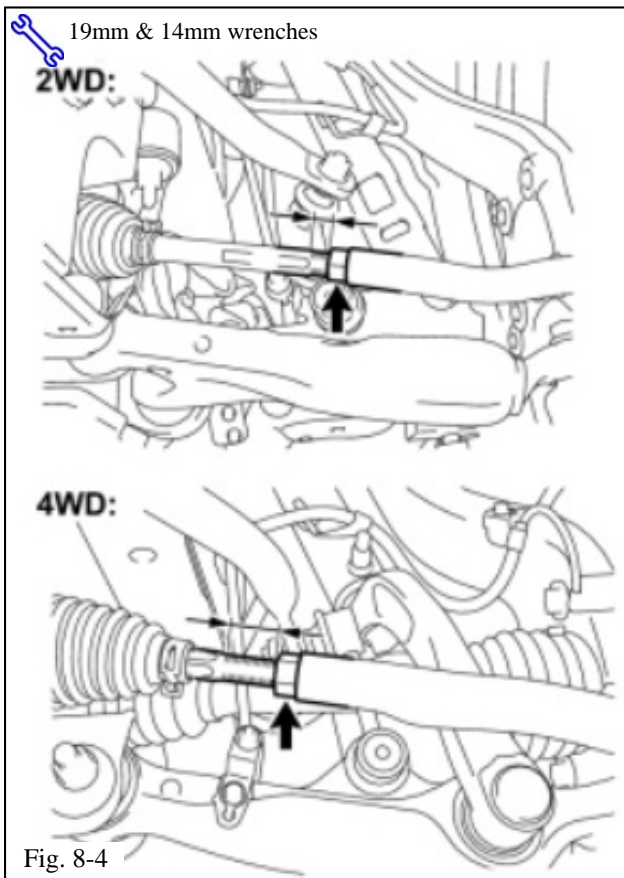


Fig. 8-4

(b) Adjust the front toe settings.

Front Toe-In (Total) (Fig. 8-3)

B - A: 1.0 +/- 2.0 mm (0.04 +/- 0.08 in.)

- (1) Confirm the steering wheel is locked in the straight ahead position.
- (2) Remove the outer steering rack boot clips from the boots.

- (3) Loosen the tie rod lock nuts (Fig. 8-4).
- (4) Turn the right and left steering rack ends by an equal amount to adjust the toe-in.
- (5) Make sure that the thread length of the right and left steering rack ends are the same (small arrows, Fig. 8-4).
- (6) Tighten the tie rod lock nuts (Fig. 8-4).

S Torque: 56 N·m (571 kgf·cm, 41 ft·lbf)

! NOTE: Temporarily tighten the lock nut while holding the hexagonal part of the steering rack end so that the lock nut and the steering rack end do not turn together. Hold the width across the flat of the tie rod end and tighten the lock nut.

- (7) Replace the steering rack boots on the seats and install the steering rack boot clips.

! NOTE:

- Make sure the steering rack boots are not twisted.
- Make sure the steering rack boot clips are facing towards the front of the vehicle.

LEXUS IS 250/350 2006 - 2013 LOWERING SPRINGS

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

Check:	Look For:
<p><u>Accessory Function Checks</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Check for noise <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 	<p>Confirm all springs are seated properly</p>
<p><u>Vehicle Function Checks</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Confirm VSC light is not on <input type="checkbox"/> Confirm ASF OFF light is not on <input type="checkbox"/> Confirm all hardware with torque values are tight 	<p>Speed sensor wires are plugged in</p> <p>Height sensor links are positioned correctly</p> <p>Loose hardware</p>
<p><u>Vehicle Appearance Check</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> After accessory installation and removal of protective cover(s), perform a visual inspection. 	<p>Ensure no damage (including scuffs and scratches) was caused during the installation process. (For PPO installations, refer to TMS Accessory Quality Shipping Standard.)</p>