

**Part Number: PTR07-02140****Kit Contents**

Item #	Quantity Req'd.	Description
1	2	Front Spring
2	2	Rear Spring
3	1	Hardware
4	1	Instruction Form

**Hardware Bag Contents**

Item #	Quantity Req'd.	Description
1	2	Spring Bumper, Front
2	2	Dust Seal
3	2	Nut, Front Shock Absorber to Support M12
4	2	Nut, Rear Shock Absorber to Support M10

**Additional Items Required For Installation**

Item #	Quantity Req'd.	Description
1		
2		
3		

**Conflicts**

None
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**Recommended Tools**

<b>Personal &amp; Vehicle Protection</b>	<b>Notes</b>
Fender Covers	
<b>Special Tools</b>	<b>Notes</b>
Coil Spring Compressor	
<b>Installation Tools</b>	<b>Notes</b>
3/8" Drive Socket	14mm, 14mm Crowfoot
1/2" Drive Socket	19mm, 22mm
Wrench	14mm
Allen or Hex drive	6mm
Ratchet	3/8" & 1/2" Drive
Torque Wrench	3/8" & 1/2" Drive
Plastic or Nylon pry tool	
<b>Special Chemicals</b>	<b>Notes</b>
MP Grease	

**General Applicability**

All Corolla
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**Recommended Sequence of Application**

Item #	Accessory
1	
2	
3	

\*Mandatory

**Vehicle Service Parts** (may be required for reassembly)

Item #	Quantity Req'd.	Description
1	2	48341-AB010 Bumper, RR Spring (recommend if installed on vehicle with high miles)
2		
3		

**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.

## Procedure

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.).

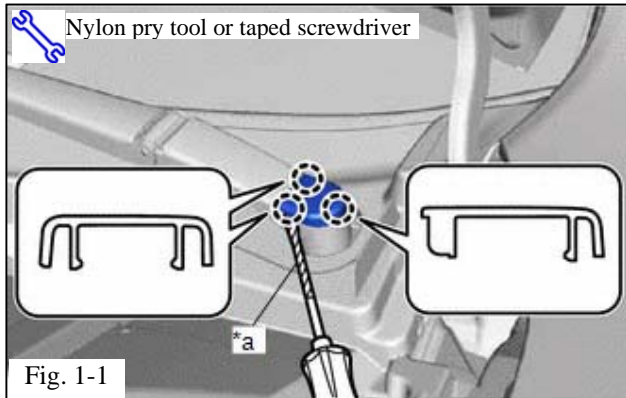
Please see your Toyota dealer for a copy of this document.

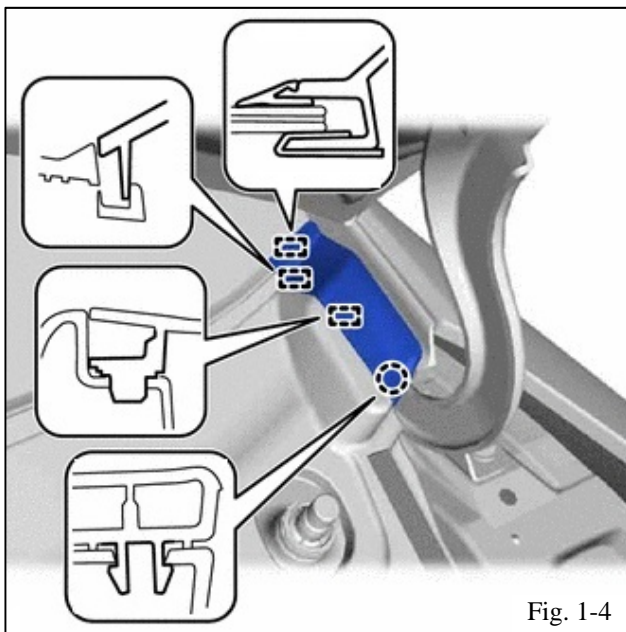
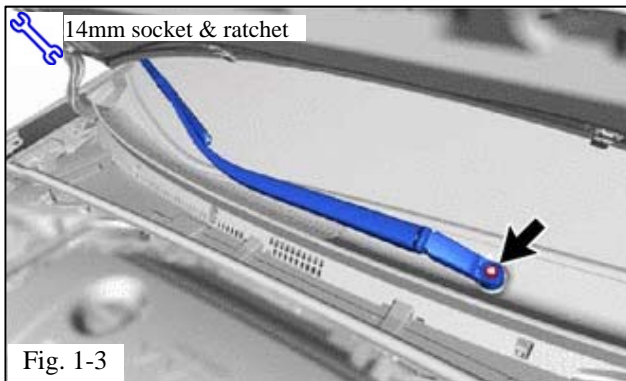
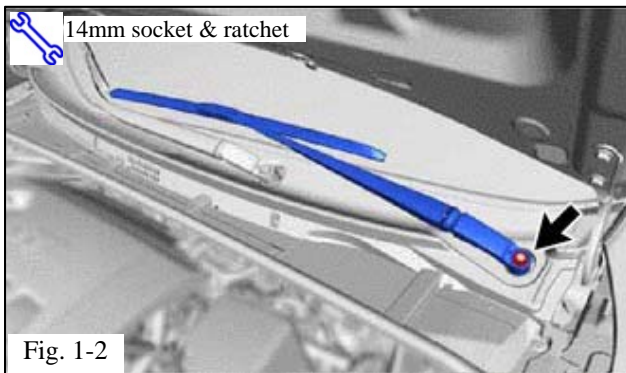
## 1. Remove the Front Shock Absorber Assemblies.

(a) Remove the front wiper arm head caps.

(1) Raise the hood.

(2) Use a nylon pry tool, tape covered screwdriver or fingers to pry the cap off of the wiper arm nut (Fig. 1-1).



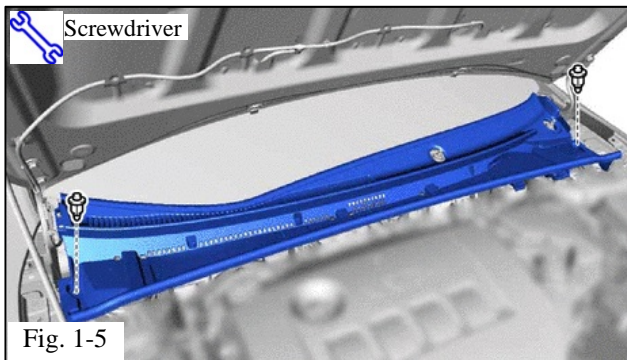


(b) Remove the front wiper arm and blade assemblies (Fig. 1-2 and Fig. 1-3).

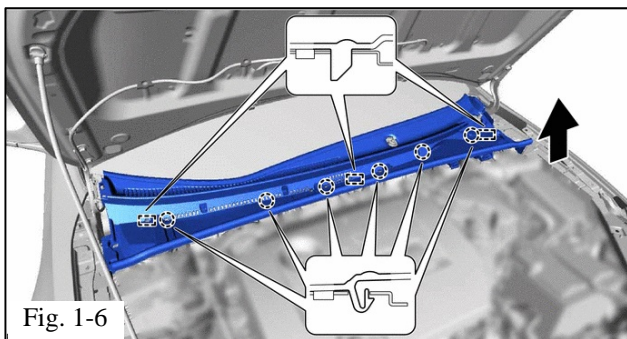
**HINT:** Push the hinge area towards the glass to free the spline from the wiper arm.

(c) Remove the plastic cowl cover.

(1) To remove the cowl side covers, lift at the bottom of the plastic and slide them forward (Fig. 1-4).

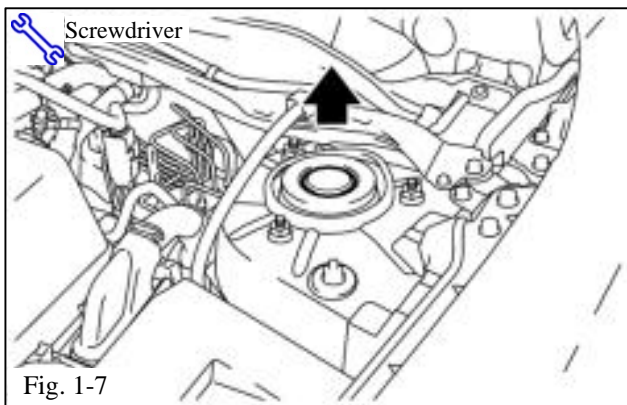


(2) Remove the two clips (Fig. 1-5).

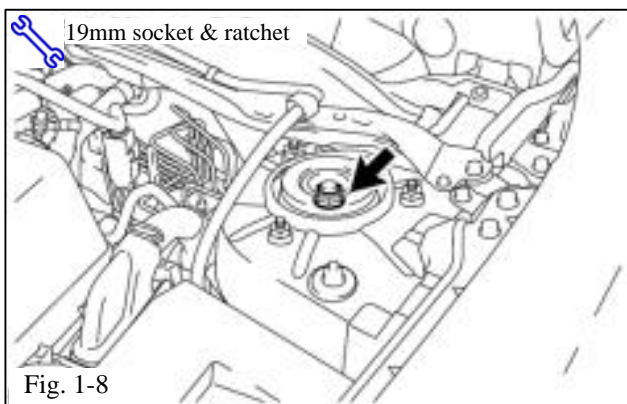


(3) Release the clips from the metal cowl pan (Fig. 1-6).

(4) Slide the cowl forward to remove it.



(d) Remove the rubber dust cover (Fig. 1-7).

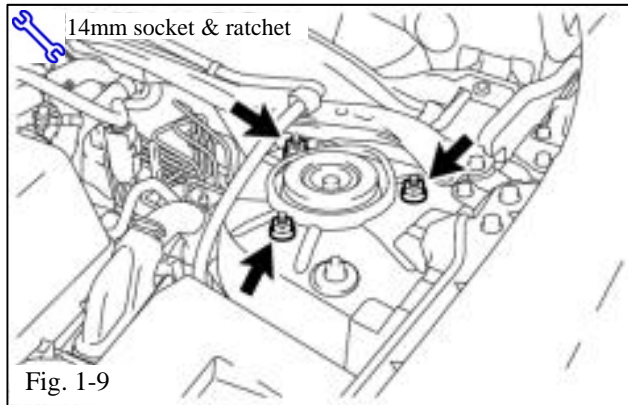


(e) **Loosen** the upper shock absorber nut (Fig. 1-8).

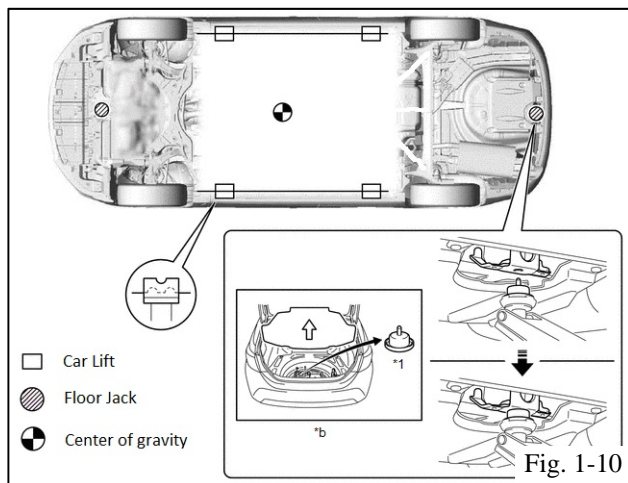
**NOTE:**

- **Do not remove** the upper shock absorber assembly nut.
- Only loosen the nut to relieve pressure from the assembly.
- Remove the nut only in a coil spring compressor when the front shock

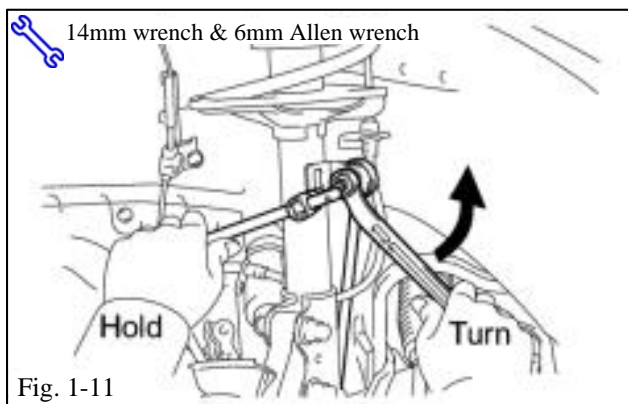
absorber with coil spring needs to be disassembled.



- (f) Loosen the three nuts holding the upper front spring support to the vehicle (Fig. 1-9). Do not remove them.



- (g) Lift the vehicle and remove the front wheel assemblies (Fig. 1-10).



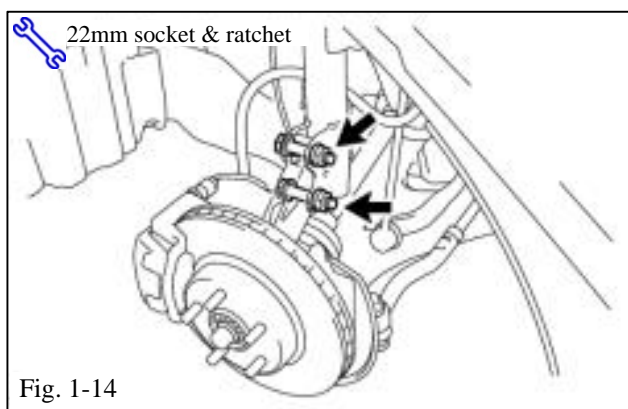
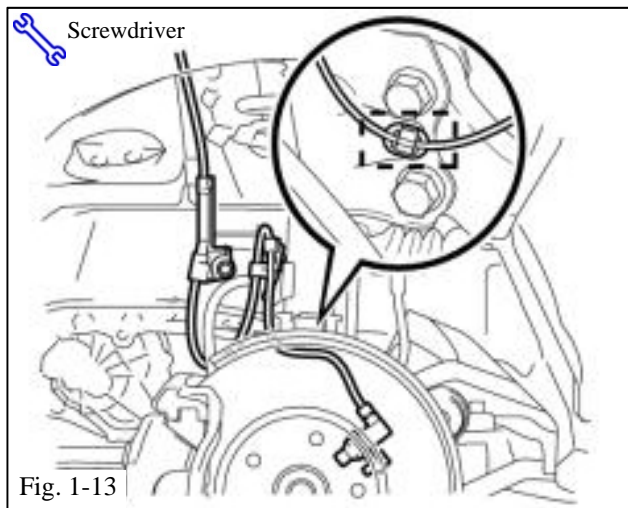
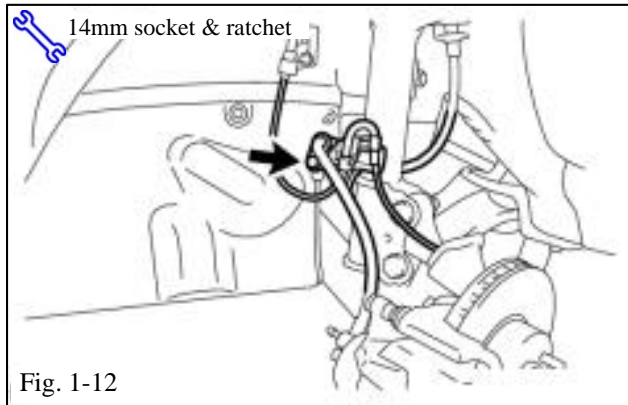
- (h) Separate the front sway bar link assembly.

- (1) Remove the nut and retain it for reuse (Fig. 1-11).

**HINT:** If the ball joint turns together with the nut, use a hexagon wrench (6 mm) to hold the stud bolt.

- (2) Separate the stabilizer link assembly from the front shock absorber assembly.





(i) Separate the front speed sensor wire and brake hose.

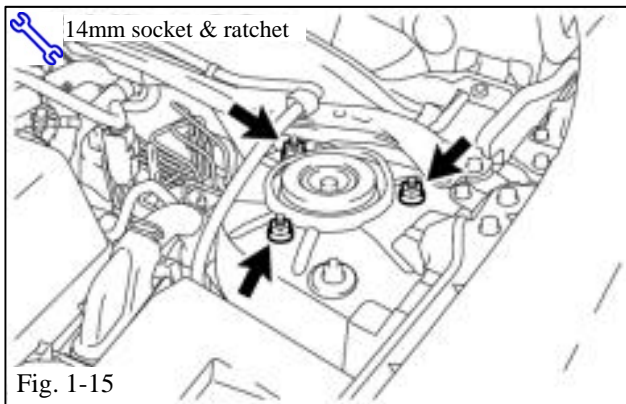
(1) Remove the bolt and separate the front flexible brake hose and the front speed sensor wire from the front shock absorber assembly (Fig. 1-12). Retain the bolt for reuse.

(2) Unhook the clip with a small flat blade screw driver and separate the front speed sensor wire from the front shock absorber (Fig. 1-13).

**NOTE:** Be sure to separate the front speed sensor wire from the front shock absorber assembly completely.

(j) Remove the 2 bolts and 2 nuts and separate the front shock absorber assembly (lower end) from the steering knuckle (Fig. 1-14). Retain the nuts and bolts for reuse.

**HINT:** Turn the nuts, not the bolts.

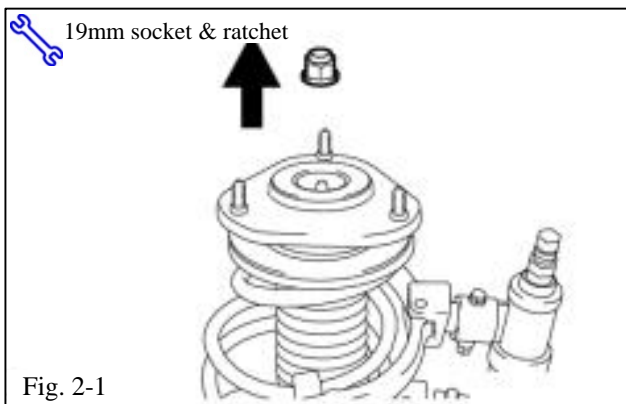


- (k) Remove the 3 nuts and each front shock absorber assembly (Fig. 1-15). Retain them for reuse.

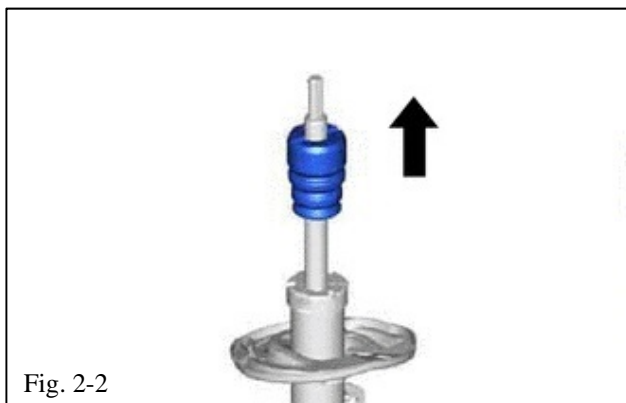
**CAUTION:** Make sure that the front speed sensor is completely separated from the front shock absorber assembly.

## 2. Remove the OE Springs.

- (a) Compress the coil spring with a spring compressor.
- (b) Remove the shock absorber nut and all hardware above the coil (Fig. 2-1).

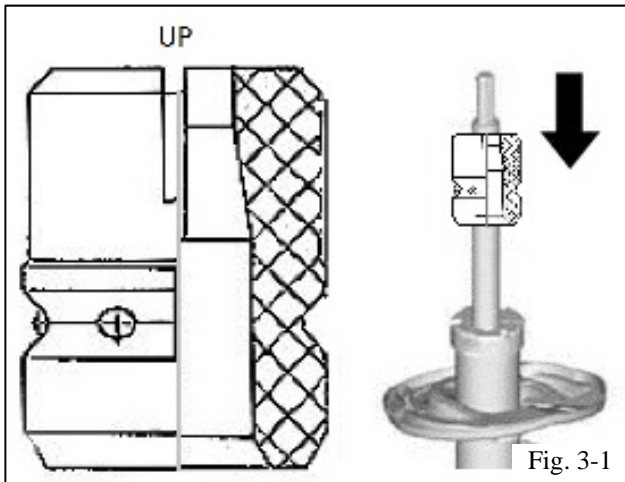


- (c) Remove the OE spring bumper and discard it (Fig. 2-2).

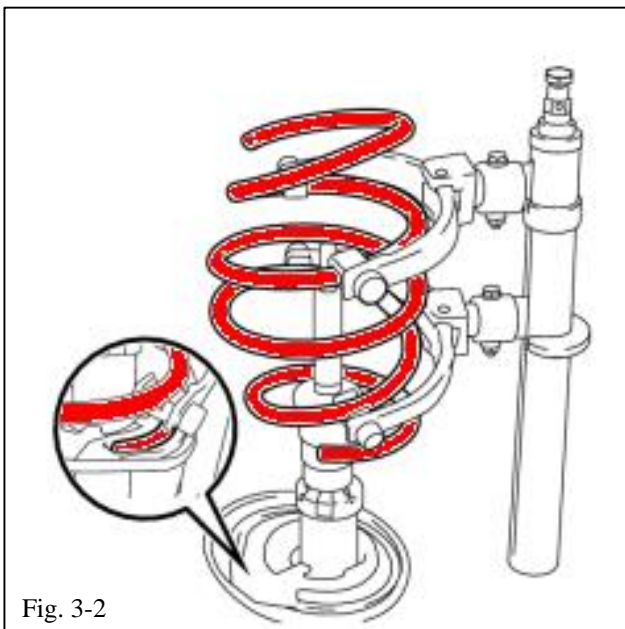


### 3. Install the TRD Front Springs.

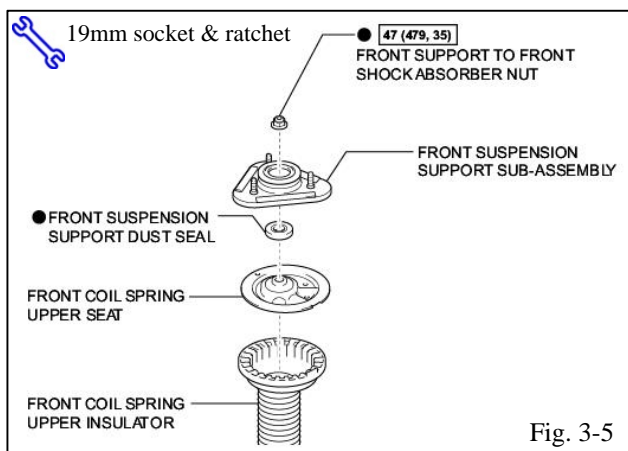
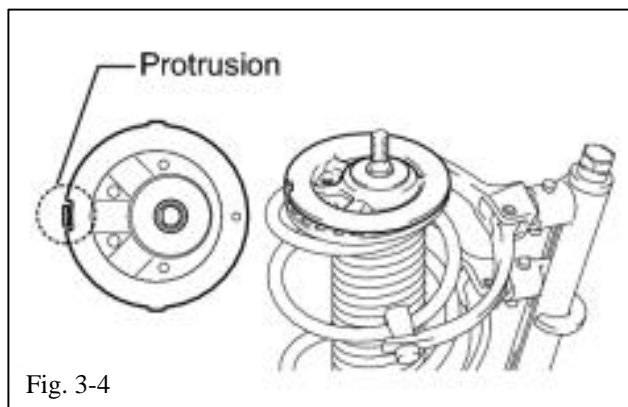
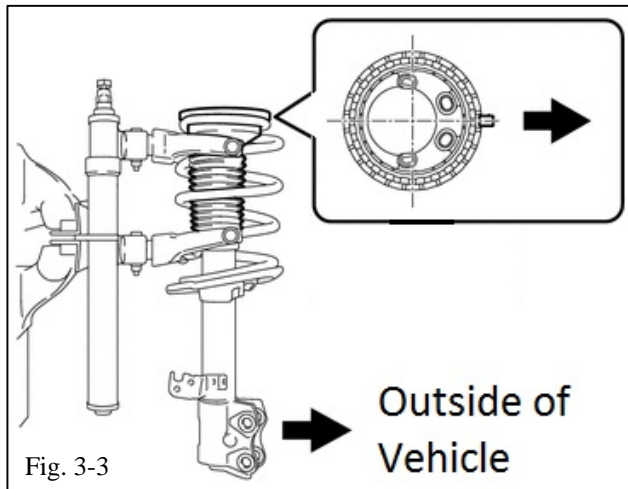
- (a) Install a supplied spring bumper (Fig. 3-1).
- (b) Clean any debris from the lower spring insulator.
- (c) Compress a TRD front spring.



- (d) Install the front coil spring by fitting the lower end of the front coil spring into the gap of the lower spring seat (Fig. 3-2).







(e) Install the upper insulator and spring seat.

- (1) Install the front coil spring upper insulator to the front shock absorber with the protrusion on the insulator facing the same direction as the mounting points to the steering knuckle (Fig. 3-3).

- (2) Align the cutout of the upper spring seat with the protrusion on the coil spring upper insulator (Fig. 3-4).

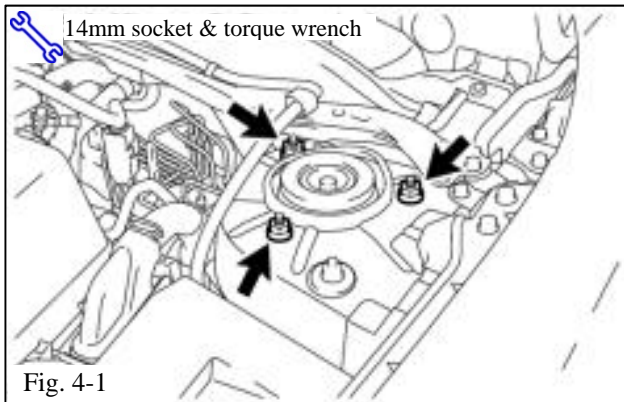
- (3) Check that the D shape on the piston rod and the D shape on the front coil spring upper seat are aligned.

**NOTE:** The shock absorber rod can be rotated as necessary.

- (f) Install a new front suspension support dust seal (Fig. 3-5).

- (g) Install the front suspension support sub-assembly (Fig. 3-5).

- (h) Temporarily tighten a supplied front shock absorber assembly nut (Fig. 3-5).

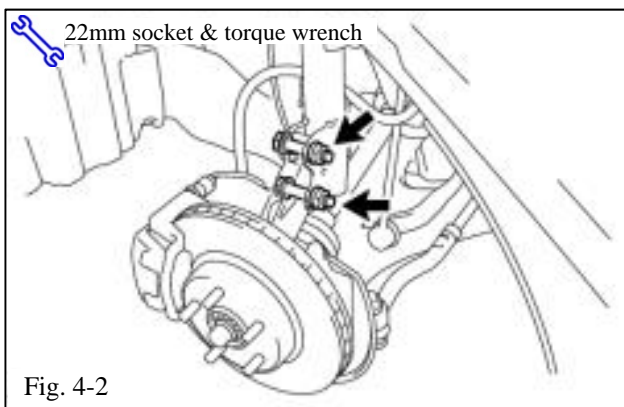


#### 4. Install the Front Shock Absorber Assemblies.

- (a) Install the front shock absorber with coil spring (upper end) with the 3 nuts removed in Step 1(k) (Fig. 4-1).



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



- (b) Install the front shock absorber assembly (lower end) to the steering knuckle with the 2 bolts and 2 nuts removed in Step 1(j) (Fig. 4-2).



**Torque: 240 N·m (2447 kgf·cm, 177 ft·lbf)**

**HINT:** Push the shock absorber inward towards the car when tightening these fasteners to get the car closer to a performance camber setting.

**NOTE:** The bolts can be installed in either direction, however, make sure that they are both installed in the same direction.

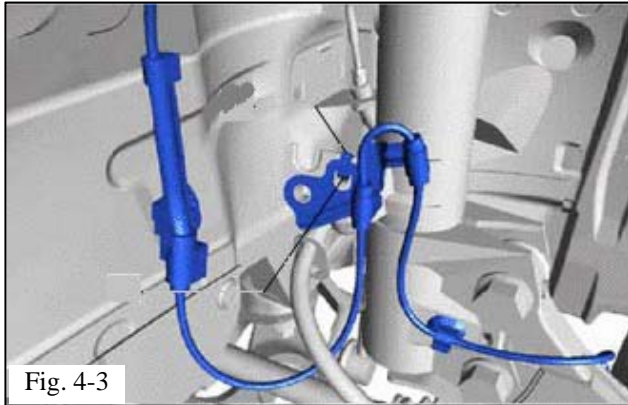


Fig. 4-3

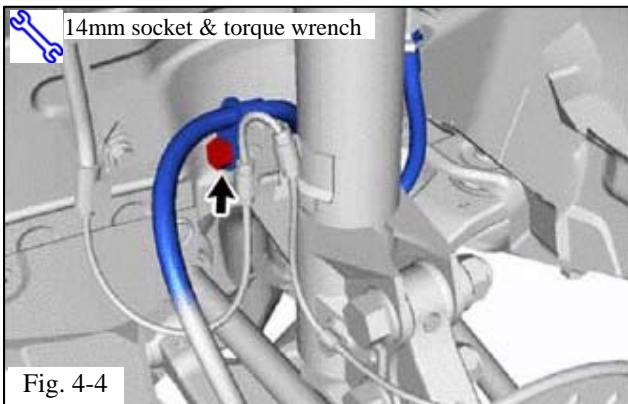


Fig. 4-4

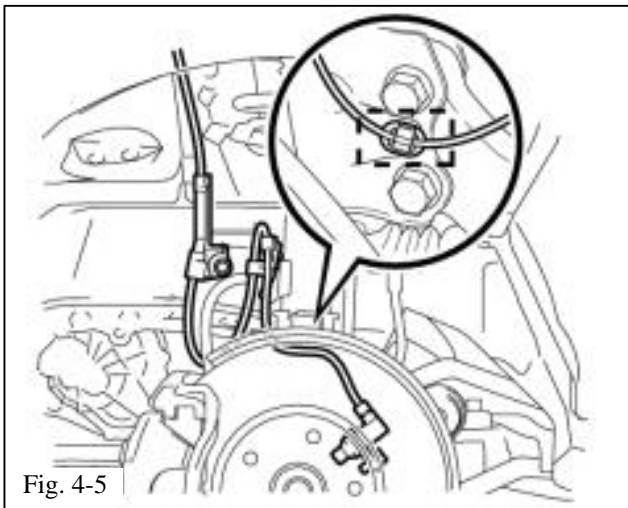


Fig. 4-5

(c) Install the front speed sensor wire and flexible brake hose.

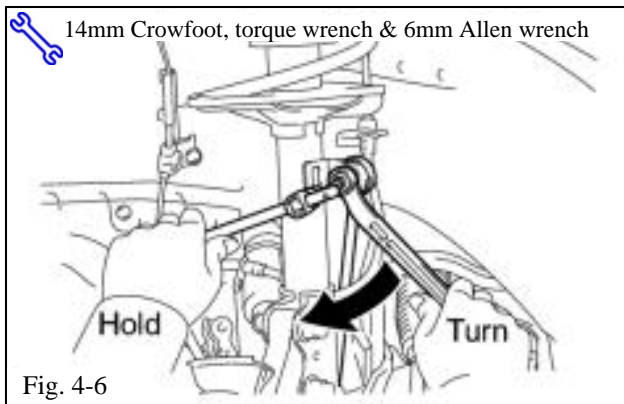
(1) Install the sensor wire and hose to the front shock absorber with the bolt removed in Step 1(h)(1) (Fig. 4-3 & Fig. 4-4)).

**Torque: 29 N·m (296 kgf·cm, 21 ft·lbf)**

**CAUTION:** Do not twist the speed sensor wire when installing it.

**HINT:** Install the speed sensor harness bracket first, and then the front flexible hose.

(2) Install the front speed sensor wire back into the clip on the shock absorber assembly (Fig. 4-5).



- (d) Fasten the front stabilizer link assembly to the front shock absorber assembly with the nut removed in Step 1(h)(1) (Fig. 4-6).

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

**HINT:** If the ball joint turns together with the nut, use a hexagon wrench (6 mm) to hold the stud bolt.

- (e) Install the wheel/tire assemblies onto the vehicle. Hand start the lug nuts.

- (f) Tighten the lug nuts in sequence 1 through 5 (Fig. 4-7). Ensure that the socket does not scuff the wheels. Use a torque wrench to tighten the nuts to 103N·m (76 ft·lbf).

**S** **Torque: 103 N·m (1050 kgf·cm, 76 ft·lbf)**



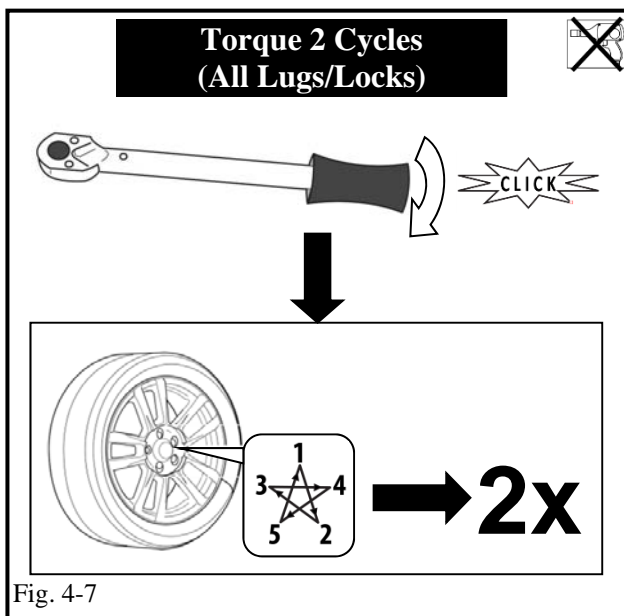
- (g) Re-torque all of the lug nuts in same the 1-5 sequence (Fig. 4-7).



**Torque: 103 N·m (1050 kgf·cm, 76 ft·lbf)**



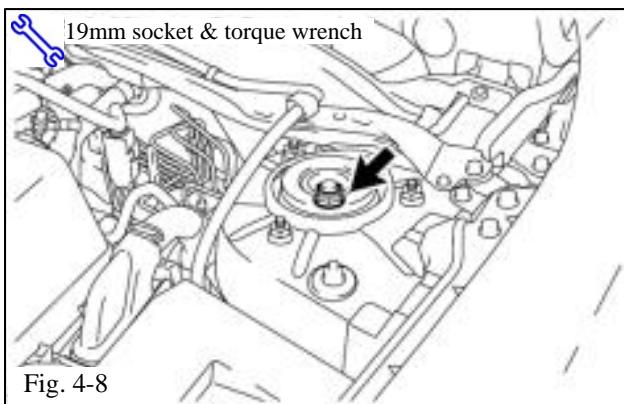
**CAUTION: DO NOT USE AN IMPACT WRENCH TO INSTALL OR REMOVE WHEEL LOCKS.**

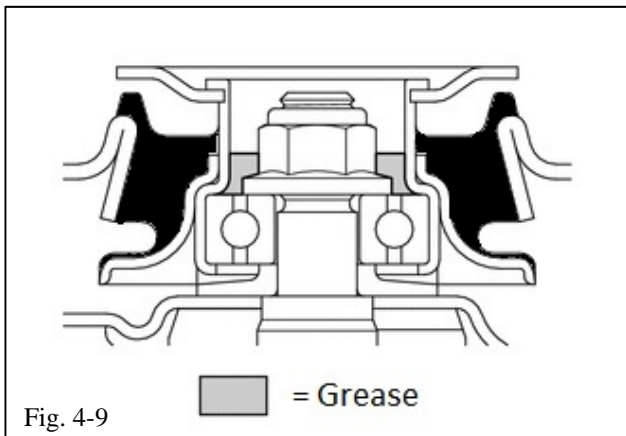


- (h) Place the vehicle back on the ground.

- (i) Fully tighten the front support to the front shock absorber (Fig. 4-8).

**S** **Torque: 47 N·m (479 kgf·cm, 35 ft·lbf)**





- (j) Add bearing grease around the base of the nut (Fig. 4-9).

**NOTE:** Take care to not get grease onto the rubber portions of the strut bearing (Fig. 4-9).

- (k) Replace the front suspension support dust cover.

- (l) Replace the plastic cowl covers.

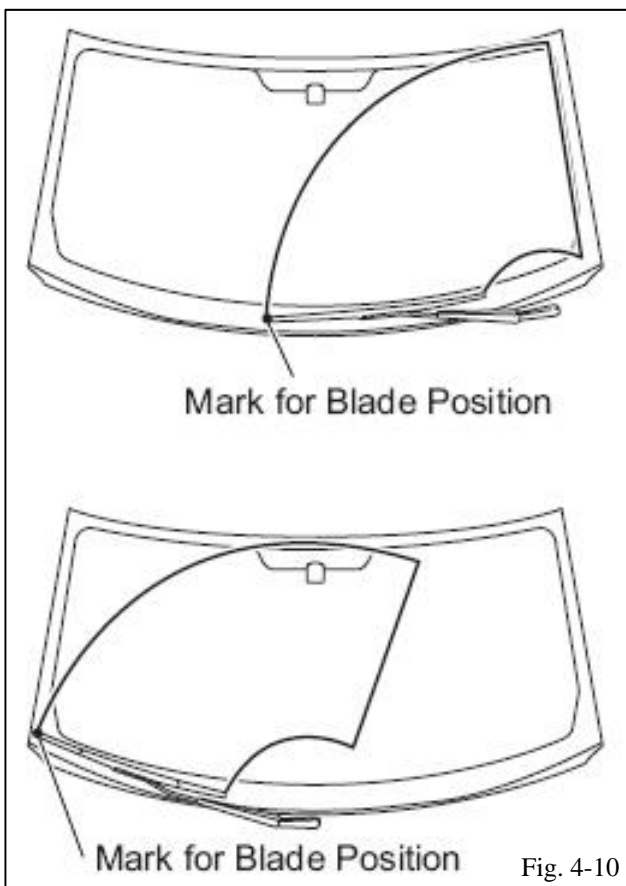
- (m) Replace the wiper arm assemblies.

- (1) Use the clear dot in the black paint behind the glass to indicate where the tip of the wiper blade should line up (Fig. 4-10).

- (2) Hold the wiper arm by hand when tightening the nut.

**Torque: 26 N·m (265 kgf·cm, 19 ft·lbf)**

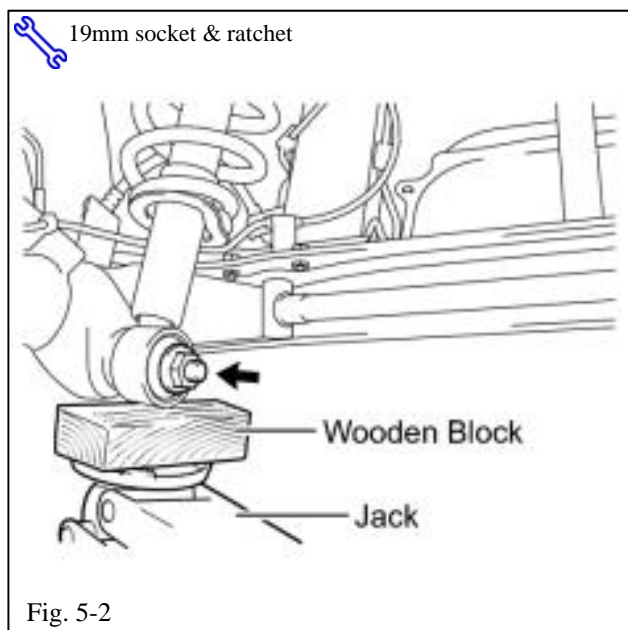
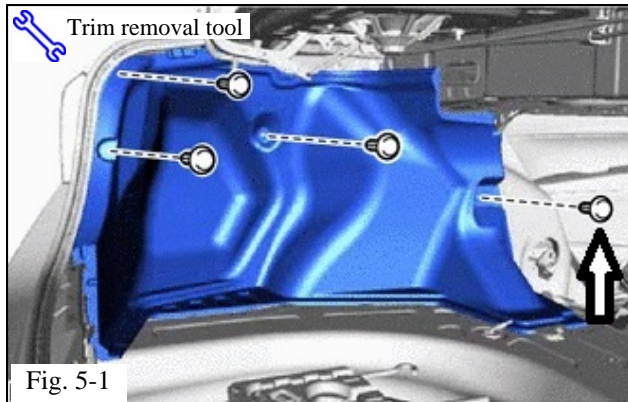
- (n) Replace the wiper arm head caps.

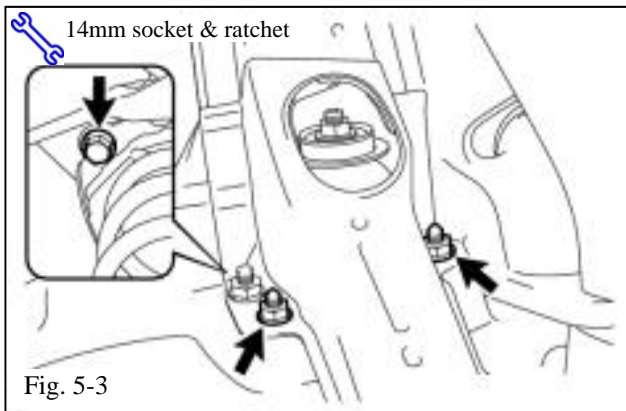




## 5. Remove the Rear Shock Absorber Assemblies.

- (a) Remove spare wheel assembly cover.
- (b) Lift the forward edges of the inner luggage compartment trim covers.
  - (1) Remove the forward clips (arrow, Fig. 5-1).
  - (2) Pull the trim covers back to expose the upper shock absorber nuts.
- (c) Remove the lower shock absorber.
  - (1) Support the rear axle beam assembly with a jack and a wooden block (Fig. 5-2).
  - (2) Remove the nut and retaining washer (Fig. 5-2). Retain them for reuse.



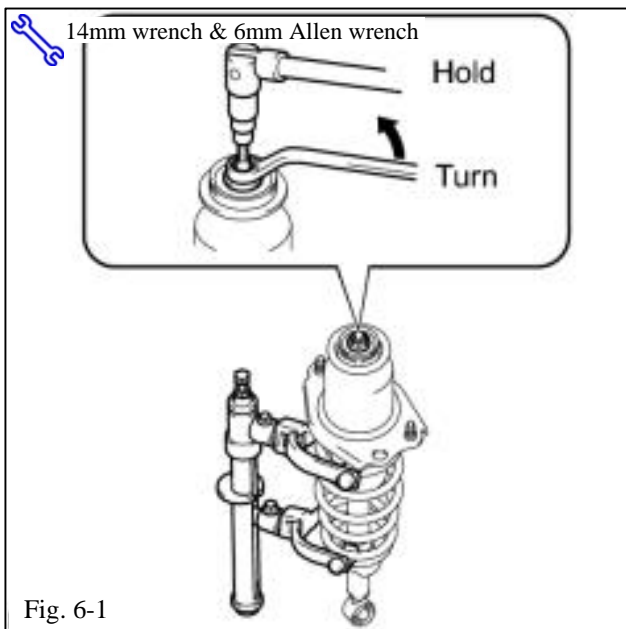


- (d) Remove the 2 nuts from the rear shock absorber assembly (upper side) (main, Fig. 5-3). Retain them for reuse.
- (e) Remove the bolt (lower side) from the rear shock absorber assembly (inset, Fig. 5-3). Retain it for reuse.

**NOTE:** Only remove one rear shock absorber assembly at a time so that the rear beam axle does not hang freely under the car.

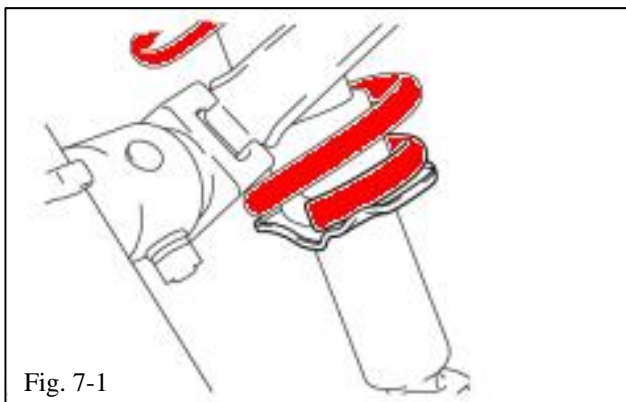
## 6. Remove the OE Springs.

- (a) Compress the spring.
- (b) Use a hexagon wrench (6 mm) to hold the rear shock absorber piston rod and remove the nut (Fig. 6-1).
- (c) Remove all upper spring seat hardware and save for reuse.
- (d) Remove the OE spring.



## 7. Install the TRD Rear Springs.

- (a) Compress a TRD rear spring.
- (b) Install the coil spring onto the shock absorber making sure that the end of the rear coil spring is positioned in the depression of the lower spring seat (Fig. 7-1).



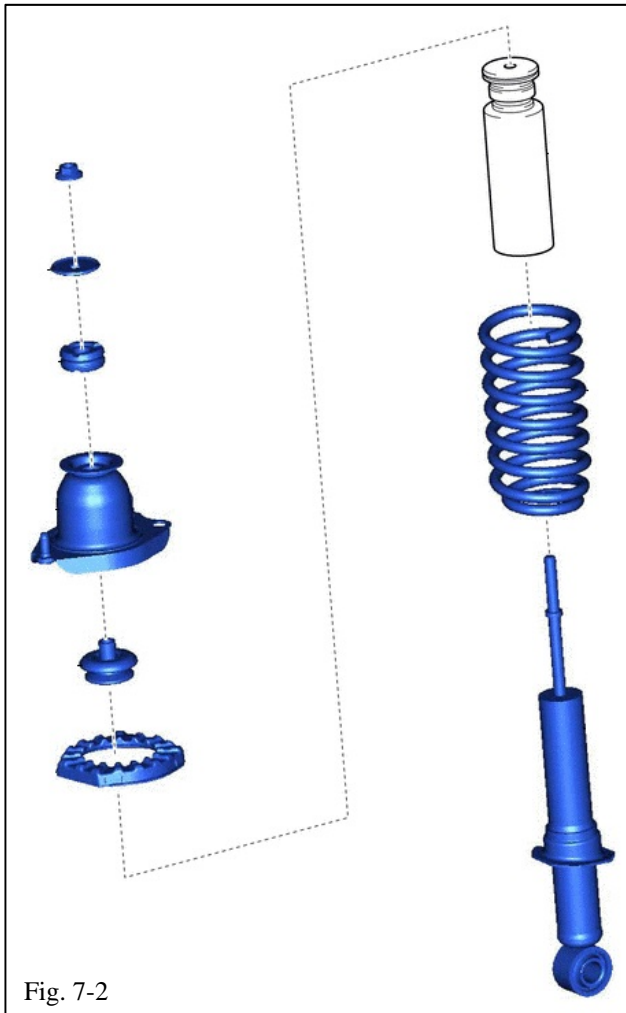


Fig. 7-2

(c) Install a jounce bumper/dust cover (Fig. 7-2).

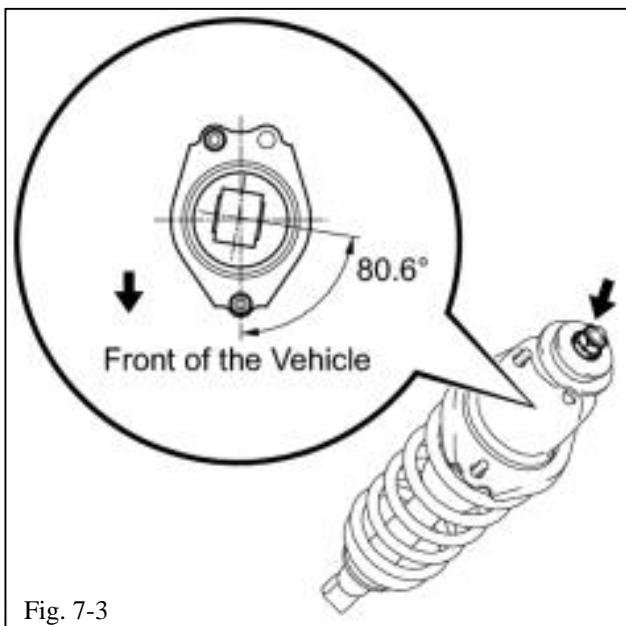
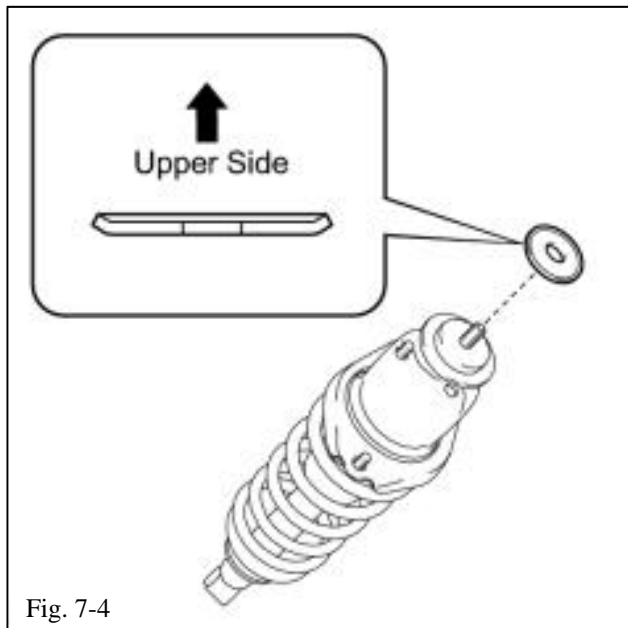


Fig. 7-3

(d) Install an upper spring seat with a spring insulator. Position the upper spring seat over the spring so that the lower shock absorber mount lines up as shown (Fig. 7-3).

**NOTE:** The passenger side shock absorber assembly is shown.



- (e) Install the upper bushing and washer (Fig. 7-4).

**NOTE:** Be sure the washer is oriented correctly (Fig. 7-4).

- (f) Use a socket hexagon wrench (6 mm) to secure the rear shock absorber piston rod and install a supplied upper nut.



**Torque: 39 N·m (398 kgf·cm, 29 ft·lbf)**

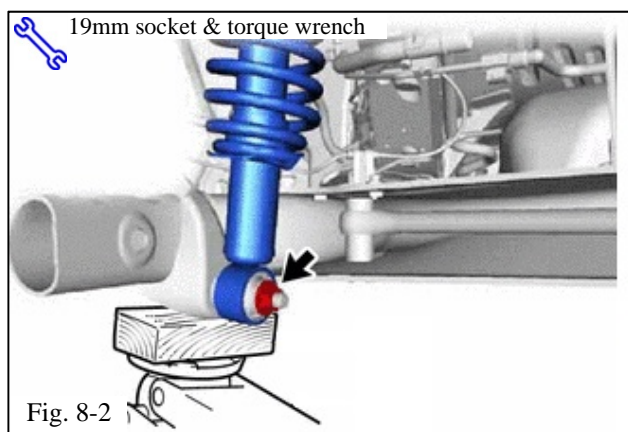
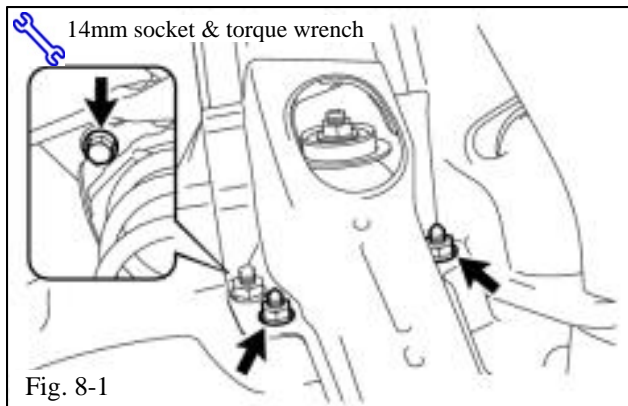
## 8. Install the Rear Shock Absorber Assemblies.

- (a) Install the lower side bolt removed in Step 5(e) and leave hand tight for now (inset, Fig. 8-1).

- (b) Install the 2 nuts removed in Step 5(d) on the upper side (main, Fig. 8-1).



**Torque: 80 N·m (816 kgf·cm, 59 ft·lbf)**



- (c) Install the lower shock absorber mount onto the beam axle (Fig. 8-2).



**CAUTION:** Do not tighten the shock absorber nut yet.

- (d) Lower the vehicle onto its tires and settle it to normal ride height.

- (e) Tighten the lower shock absorber nuts.



**Torque: 80 N·m (816 kgf·cm, 59 ft·lbf)**

- (f) Reinstall the trunk trim clips and the spare tire cover.

## 9. Inspect and Adjust the Front Wheel Alignment.

(a) Adjust the camber.

- (1) Fully push or pull the front axle hub in the direction of the required adjustment (Fig. 9-1).

$-0^{\circ}35' \pm 0^{\circ}45'$  ( $-0.58^{\circ} \pm 0.75^{\circ}$ )

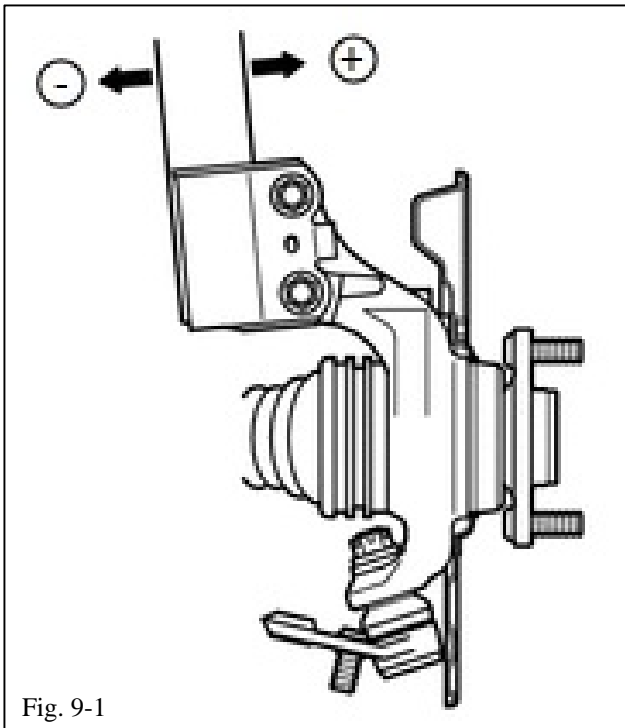


Fig. 9-1

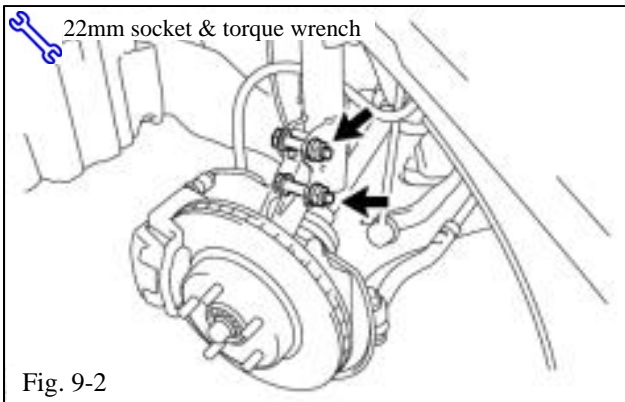
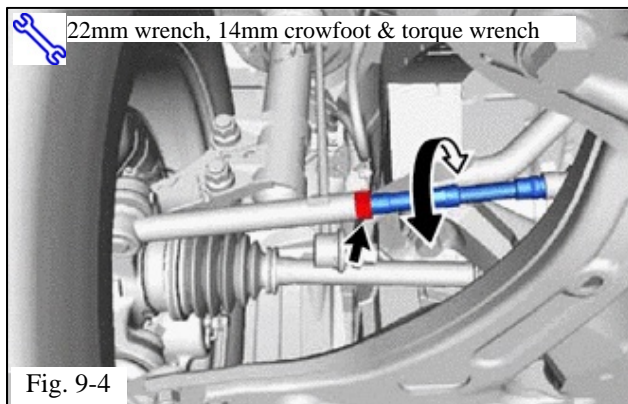
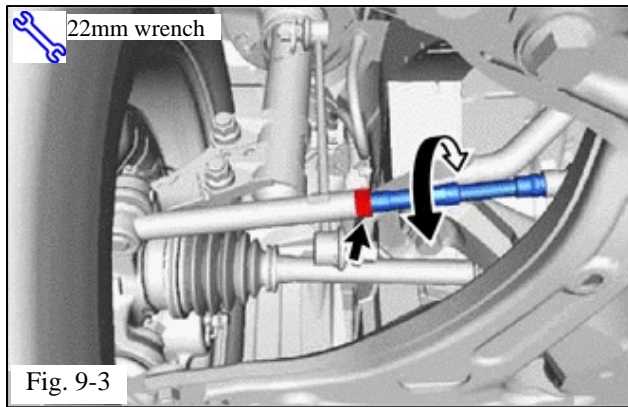


Fig. 9-2

- (2) Tighten the 2 nuts (Fig. 9-2).

**S** Torque: 240 N·m (2447 kgf·cm, 177 ft·lbf)





(b) Adjust the toe.

- (1) Remove the steering rack boot clips.  
Retain them for reinstallation.
- (2) Loosen the tie rod end sub-assembly lock nuts (red, Fig. 9-3).
- (3) Adjust the steering rack ends (blue, Fig. 9-3).

**0°00' +/- 0°12' (0.00° +/- 0.20°)**

**0 +/- 2.0 mm (0 +/- 0.0787 in.)**

**HINT:** Make sure that the thread length of the right and left steering rack ends are approximately the same.

**Standard Difference: 1.5 mm (0.0591 in.) or less.**

- (4) Tighten the tie rod end sub-assembly lock nuts (red, Fig. 9-4).

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

- (5) Place the steering rack boots on the seats and reinstall the steering rack boot clips.

**10. Double Check all ⚠ Torque Values.**

# TOYOTA COROLLA 2014 - TRD LOWERING SPRINGS

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

Check:	Look For:
<u>Accessory Function Checks</u>  <input type="checkbox"/> Confirm no unusual noise comes from the suspension  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>	  Properly seated springs; proper torque on shock assembly mounting points
<u>Vehicle Function Checks</u>  <input type="checkbox"/> Confirm wipers operate normally  <input type="checkbox"/>  <input type="checkbox"/>	  Connected wiper motor harness
<u>Vehicle Appearance Check</u>  <input type="checkbox"/> After accessory installation and removal of protective cover(s), perform a visual inspection.	  Ensure no damage (including scuffs and scratches) was caused during the installation process. (For PPO installations, refer to TMS Accessory Quality Shipping Standard.)