

**Part Number: PTR13-34070, PTR13-0C180,  
PTR62-0C180, PTR62-0C181**

**Kit Contents**

Item #	Quantity Req'd.	Description
1	2	Shock Absorber, Front
2	2	Shock Absorber, Rear
3	1	Sway Bar, Front
4	1	Sway Bar, Rear

**Hardware Bag #1 Contents**

Item #	Quantity Req'd.	Description
1	2	Flange Nut, M12 x 1.25

**Additional Items Required For Installation**

Item #	Quantity Req'd.	Description

**General Applicability**

SR5 2WD or 4WD
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**Conflicts**

Adaptive Variable Suspension (AVS), Air Suspension
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**Recommended Sequence of Application**

Item #	Accessory
1	TRD Shock Absorbers, Front
2	TRD Sway Bar, Front
3	TRD Shock Absorbers, Rear
4	TRD Sway Bar, Rear
5	Alignment
6	Skid Plate

\*Mandatory

**Recommended Tools**

<b>Personal &amp; Vehicle Protection</b>	<b>Notes</b>
<b>Special Tools</b>	<b>Notes</b>
Alignment Equipment	Turn plates needed
Paint Marker	For assembly match marks
Scan Tool	Toyota
Protected lug nut socket	22mm deep well
<b>Installation Tools</b>	<b>Notes</b>
3/8" Sockets	12mm, 14mm deep
1/2" Sockets	17mm, 19mm, 22mm & 24mm
Open-End Wrench	22mm, 27mm & 30mm
1/2" Crowfoot	18mm & 30mm
Ratchet	3/8" & 1/2"
Ratcheting Wrench	14mm, 17mm & 18mm
Adjustable wrench	6" - 8" long
Screw Driver	Long Phillips #2
Torque Wrench	3/8" & 1/2" (40" long)
Air tools	NOTE: Do not use for final assembly
<b>Special Chemicals</b>	<b>Notes</b>

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

Item #	Quantity Req'd.	Description

**Legend**

	<b>STOP:</b> Damage to the vehicle may occur. Do not proceed until process has been complied with.
	<b>OPERATOR SAFETY:</b> Use caution to avoid risk of injury.
	<b>CAUTION:</b> 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.
	<b>TOOLS &amp; EQUIPMENT:</b> Used in Figures calls out the specific tools and equipment recommended for this process.
	<b>REVISION MARK:</b> This mark highlights a change in installation with respect to previous issue.
	<b>SAFETY TORQUE:</b> 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.

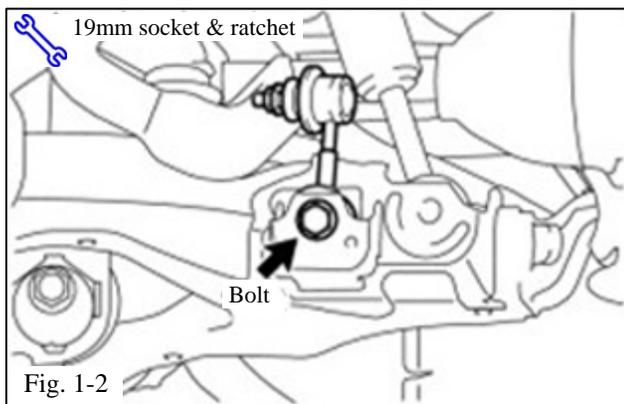
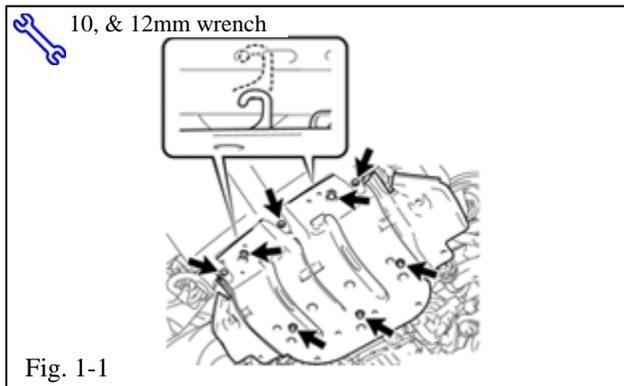
This document covers such items as:

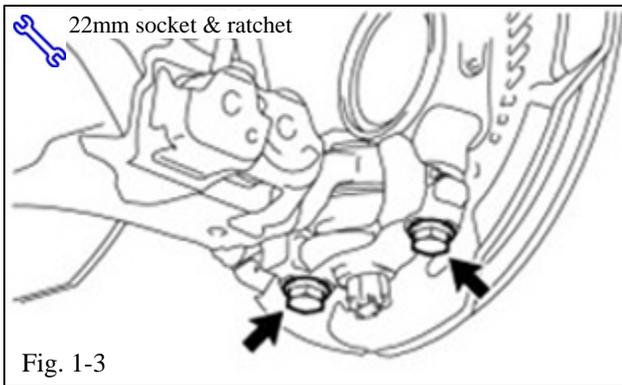
- Vehicle Protection (use of covers and blankets, cleaning chemicals, etc.).
- Safety (eye protection, rechecking torque procedure, etc.).
- Vehicle Disassembly/Reassembly (panel removal, part storage, etc.).
- Electrical Component Disassembly/Reassembly (battery disconnection, connector removal, etc.).

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

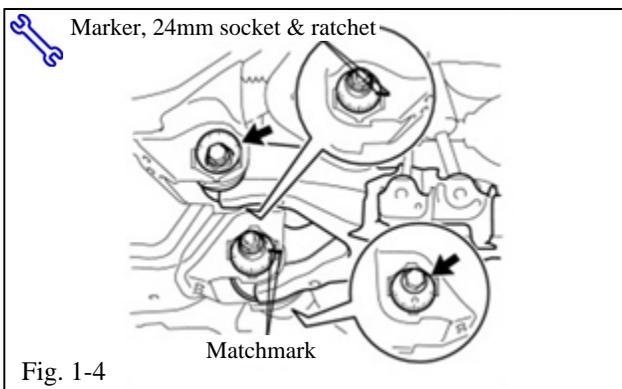
### 1. Remove the Front OE Spring/Shock Assemblies.

- (a) Cover the driver's seat for protection.
- (b) Chock the tires.
- (c) Place the vehicle in Neutral (N).
- (d) Raise the vehicle.
- (e) Remove the front wheels.
- (f) Remove the three screws between the skid plate and lower front bumper (Fig. 1-1). Retain the screws for reinstallation.
- (g) Remove the five bolts from the engine undercover and remove the engine undercover (Fig. 1-1). Retain the bolts and engine undercover for reinstallation.
- (h) Remove the bolt and disconnect the stabilizer bar on both LH and RH sides (Fig. 1-2). Retain the bolt for reinstallation.





- (i) Remove the two bolts from the lower ball joint assembly (Fig. 1-3). Retain the bolts for reinstallation.

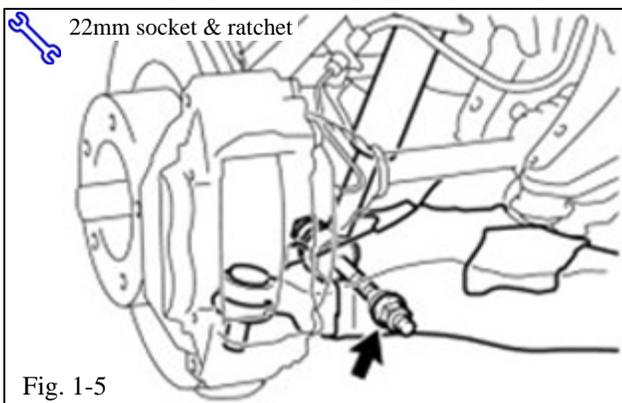


-  (j) Place matchmarks on the forward and rear lower alignment cams to indicate the original position before loosening them. This will provide a point of reference (Fig. 1-4).

- (k) Loosen (**do not remove**) the lower control arm cam bolts & nuts so the lower control arm can swing down freely later.

- (1) At the front of the arm, loosen the bolt head facing forward.

- (2) At the rear of the arm, loosen the nut facing rearward.

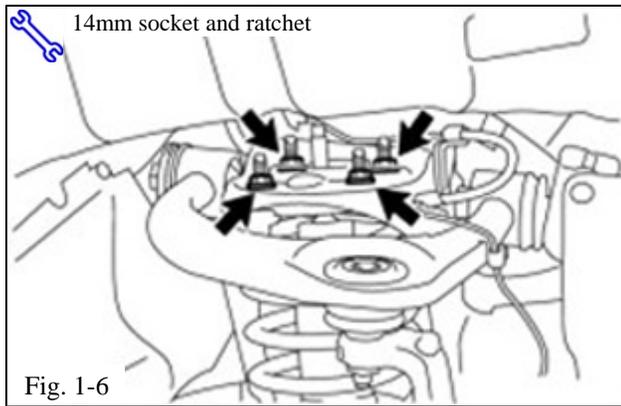


- (l) Remove the nut and bolt from the lower end of the shock assembly (Fig. 1-5). Retain them for reinstallation.

- (m) Let the lower control arm swing down.

- (n) Repeat Steps 1(k) through 1(n) for the other side of the vehicle.

- (o) Rotate the stabilizer bar downward to allow for more room to remove the spring/shock assemblies.



(p) Remove the four nuts on the upper side of the OE front shock absorber with coil spring assembly (Fig. 1-6).

(q) Support the weight of the assembly and carefully remove it from the vehicle.

**CAUTION:** Take care not to damage the axle CV boot or steering rack boot while removing the assembly.

(r) Repeat Steps 1(p) and 1(q) on the other side of the vehicle.

## 2. Disassemble the OE Front Shock Absorber & Spring Assemblies.

(a) Insert the shock assembly into a spring compressor (Fig. 2-1).

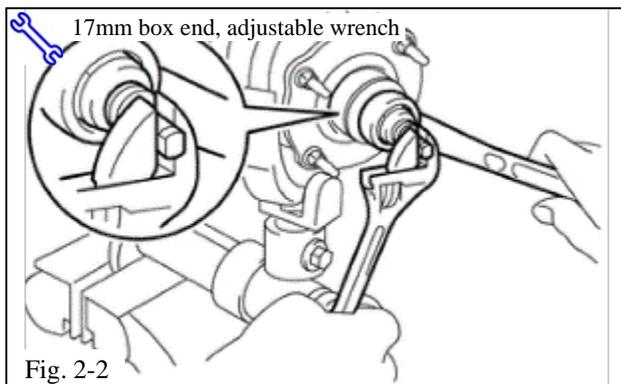
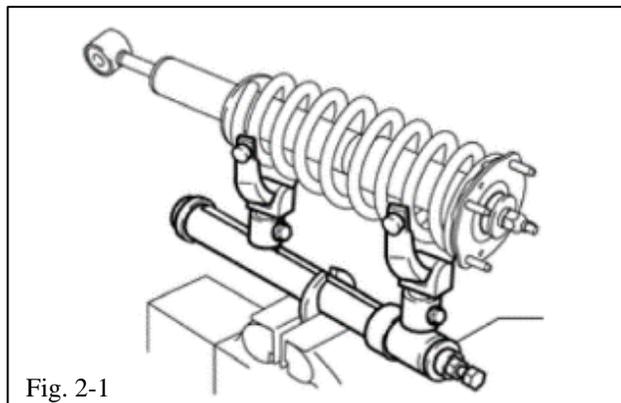
(b) Compress the coil spring.

**WARNING:**

- If the coil springs bends during compression, immediately STOP the compression and adjust the spring compressor.
- Do not compress the spring until the coils contact each other.
- Do not use an impact wrench.

(c) Remove and DISCARD the front shock absorber top nut (Fig. 2-2).

**NOTE:** Front shock absorber top nut is **non-reusable**.



- (d) Remove the upper support, 2 retainers, and cushion from the shock absorber rod.

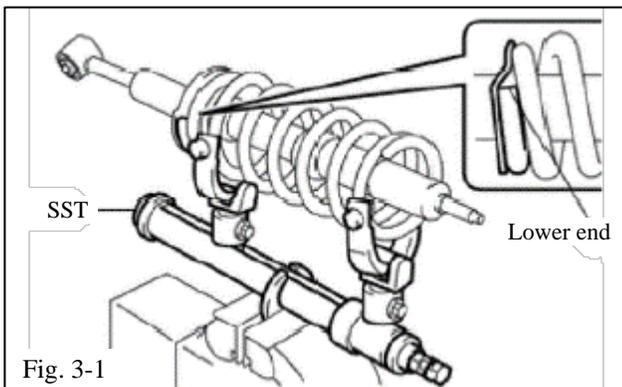
**⚠ HINT:** Note the order of which the components are installed.

- (e) Remove the coil spring from the shock absorber. Repeat for the second front shock assembly.

**⚠ NOTE:** The coil springs are side-specific. Ensure the RH and LH springs are not interchanged.

### 3. Assemble the TRD Shock Absorber with the OE Spring.

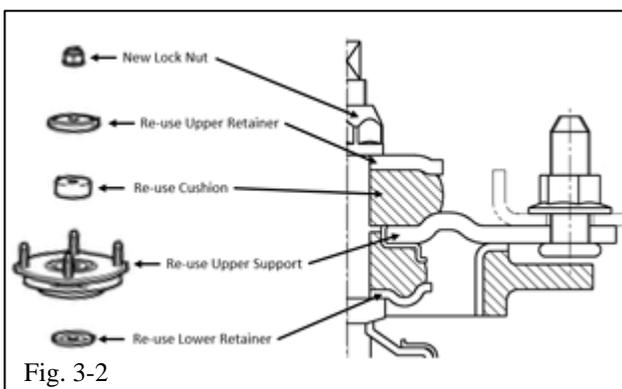
- (a) Install the coil spring. Fit the lower end of the coil spring into the step of the absorber spring seat (Fig. 3-1).

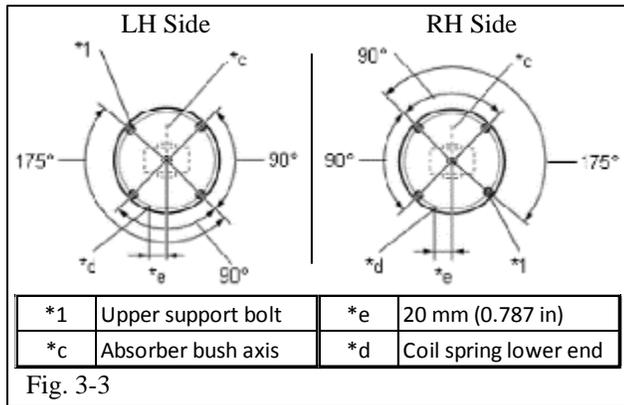


- (b) Install the lower retainer, cushion, upper support and upper retainer to the piston rod (Fig. 3-2).

**⚠ NOTE:** The upper retainer is thicker material and larger diameter than the lower retainer. Assemble following the orientation shown.

- (c) Hand start the new supplied absorber top nut.





(d) Position the upper support as shown (Fig. 3-3).

(e) Tighten the absorber top nut.

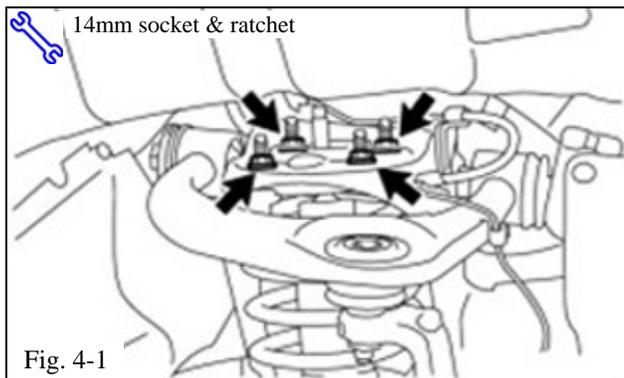
**Torque: 25 N·m (255 kgf·cm, 19 ft·lbf)**

(f) Repeat Step 3 for second front TRD shock absorber.

**4. Install the TRD Front Spring/Shock Assemblies.**

(a) Identify left- and right-hand assemblies.

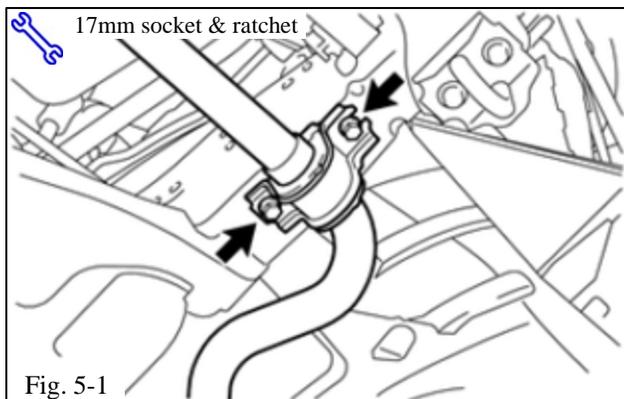
(b) Lift the TRD spring/shock assembly into place and install the four nuts onto the upper side of the front shock absorber with coil spring assembly (Fig. 4-1).



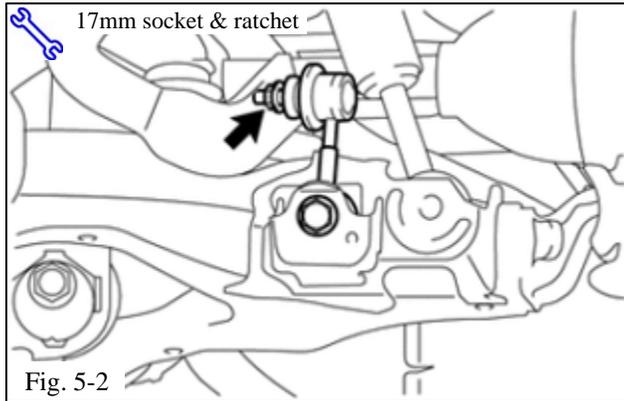
**NOTE:** Hand tighten only at this time.

**5. Remove the Front OE Stabilizer Bar Assembly.**

(a) Use a 17mm socket to remove the four bolts from the two front stabilizer brackets (Fig. 5-1). Retain the two bolts and the bracket for reinstallation.



**CAUTION:** Make sure to support the weight of the stabilizer bar prior to removing both brackets.



- (b) Carefully remove the stabilizer bar from the vehicle.
- (c) Remove the OE bushings and brackets and retain for reinstallation.
- (d) Use a 17mm socket to remove the nut from the stabilizer link (Fig. 5-2). Retain the nut for reinstallation.

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

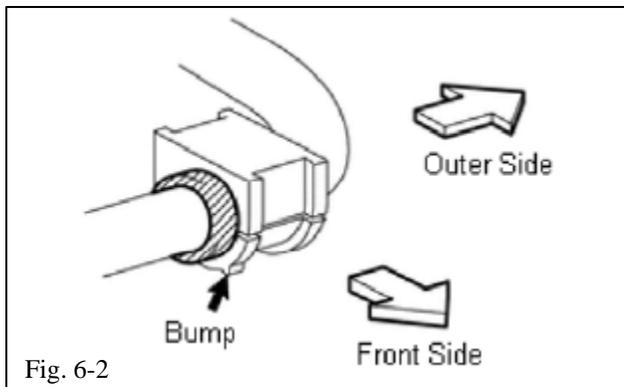
- (e) Repeat Step 5(d) on the other side of the stabilizer bar.

### 6. Assemble the TRD Sport Stabilizer Bar.

- (a) Install the two OE bushings and brackets onto the TRD Sport Stabilizer bar.

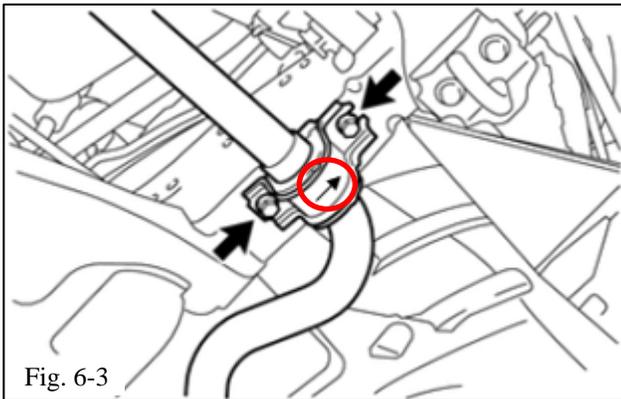


**STOP:** Make sure the stabilizer bar is set up in the correct orientation. Confirm that the “BOT” markings on the stopper rings are at the BOTTOM, the Part Number Label is on the RH side of the vehicle, and the arms of the bar point rearward (Fig. 6-1).

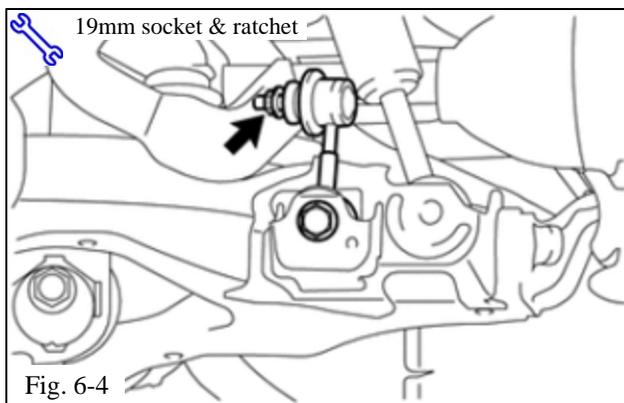


**CAUTION:** Make sure to install the OE bushings so that the slit and bump of the bushings face the front of the vehicle (Fig. 6-2).

- (b) Install the two OE brackets onto the stabilizer bar assembly.



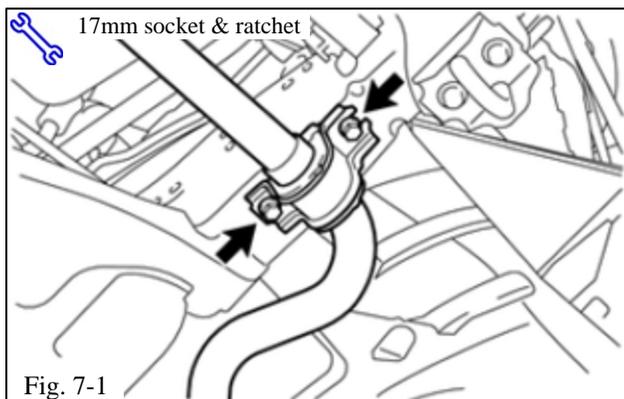
**⚠ CAUTION:** Make sure to install the brackets so that the arrows imprinted onto the brackets face the front of the vehicle (Fig. 6-3).



(c) Install the stabilizer link bolt into the stabilizer bar assembly and attach the OE nut (Fig. 6-4).

**|| S Torque: 150 N·m (1224 kgf·cm, 111 ft·lbf)**

(d) Repeat Step 6(c) on the other side of the stabilizer bar.



### 7. Install the TRD Stabilizer Bar Assembly.

(a) Lift the TRD Stabilizer Bar into place and use a 17mm socket to snug the four bolts into the stabilizer bar brackets and frame (Fig. 7-1).

**+ CAUTION:** The part weight exceeds 26 lbs. Use team lift or lift assist device.

**STOP** **STOP:** Confirm that the bar is installed in the correct orientation by checking that the “BOT” (bottom) mark on the stopper rings is down (Fig. 7-2). The bar is installed incorrectly if the “BOT” mark is not visible from below the vehicle.





**⚠ CAUTION:** The TRD logo orientation should be confirmed for aesthetic purposes only (Fig. 7-3). DO NOT USE THE LOGO TO CONFIRM BAR ORIENTATION.

(b) Tighten the four stabilizer bracket bolts (Fig. 7-1).

**S Torque: 69 N-m (704 kgf-cm, 51 ft-lbf)**

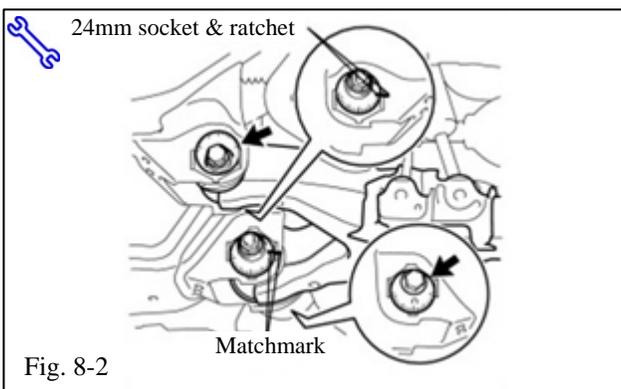
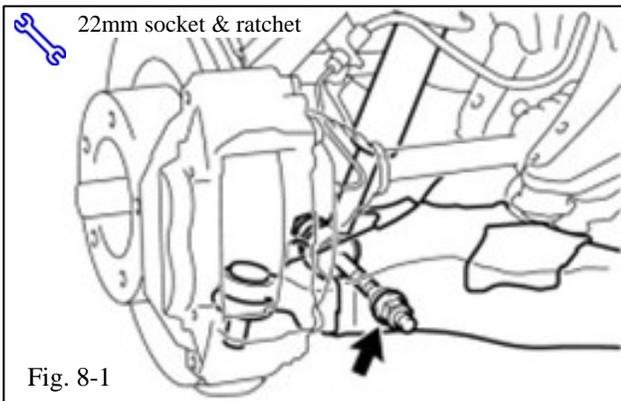
(c) Cut the wire tie and remove the part number hang tag.

**⚠ NOTE:** Do not remove the label.

### 8. Refasten the Lower Control Arm

(a) Raise the lower control arm into position and attach the lower spring/shock assembly nut & bolt (Fig. 8-1)

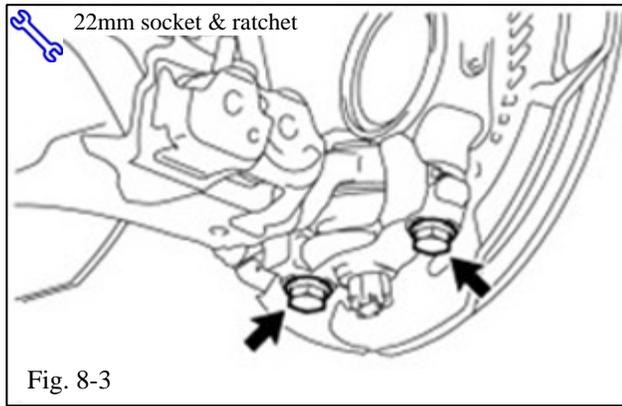
**⚠ NOTE:** Hand tighten only at this time.



(b) Align the adjustment cams to the marks made in Step 1(j) (Fig. 8-2).

(c) Use a 24mm socket to temporarily tighten the lower control arm bolts (Fig. 8-2).

**⚠ NOTE:** For the front cam, tighten the bolt. For the rear cam, tighten the nut. Ensure cams do not rotate during tightening.

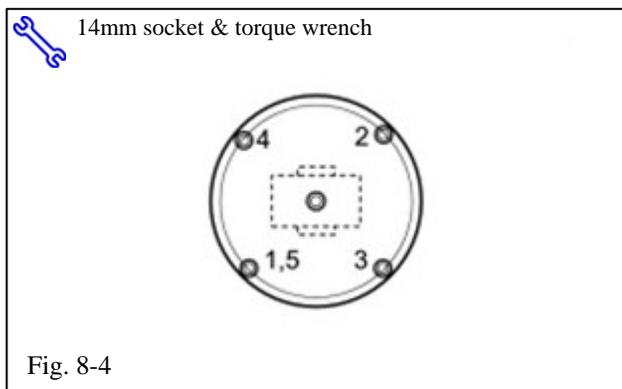


- (d) Use a 22mm socket and extension to install and torque the front lower ball joint attachment to the steering knuckle (Fig. 8-3).

**STOP** **WARNING:** You **MUST** hand start these bolts.

**HINT:** Push down on the upper control arm with a covered pry tool.

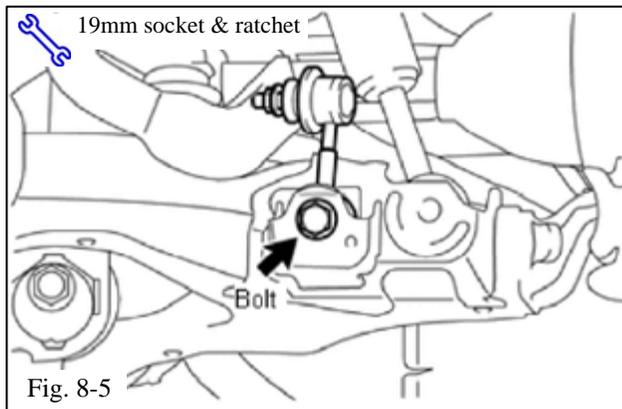
**S** **Torque: 300 N·m (3059 kgf·cm, 222 ft·lbf)**



- (e) Tighten the four upper shock assembly nuts in a crisscross fashion (Fig.4-5).

**S** **Torque: 45 N·m (459 kgf·cm, 33 ft·lbf)**

- (f) Repeat Steps 8(a) through Step 8(e) for the second front TRD shock absorber.



- (g) Install the stabilizer bar link to the lower control arm and tighten the bolt (Fig. 8-5).

**S** **Torque: 120 N·m (1224 kgf·cm, 89ft·lb)**

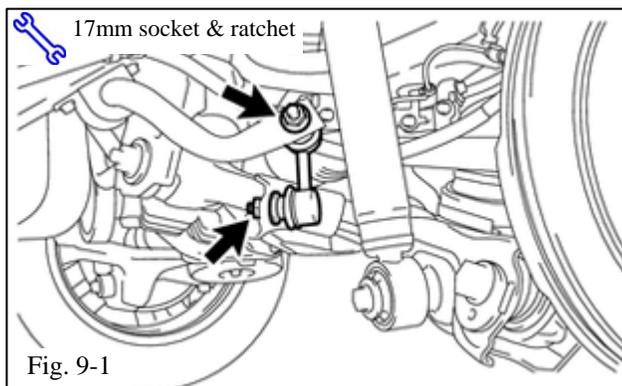
- (h) Repeat Step 8(g) on the other side of the vehicle.

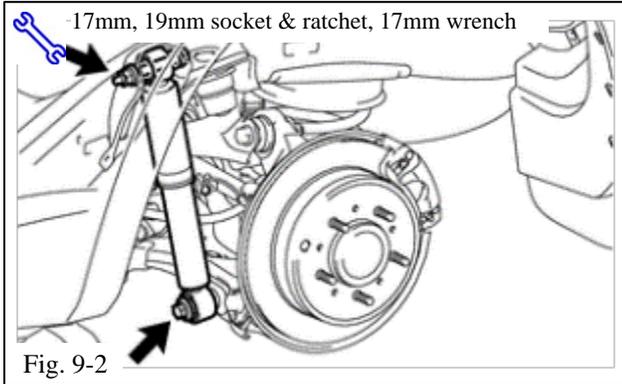
## 9. Remove the Rear OE Shock Absorber.

- (a) Remove the rear wheels.

- (b) Remove the stabilizer link nuts to the rear stabilizer bar and control arm (Fig 9-1). Retain the nuts and stabilizer link for reinstallation.

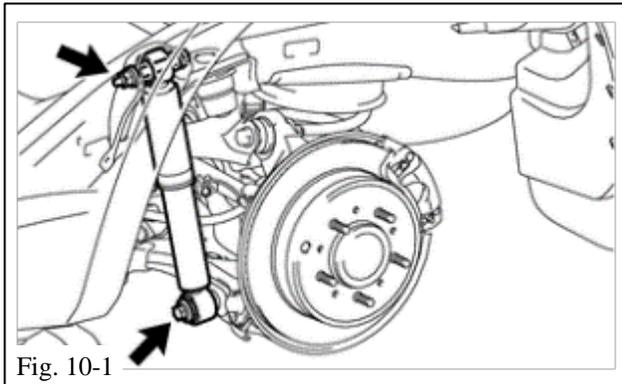
**!** **HINT:** If the ball joint turns together with the nut, use a 6mm hexagon wrench to hold the stud.





- (c) Support the lower control arm with a transmission jack or lift stand below the lower ball joint.
- (d) Loosen the upper and lower shock absorber fasteners (Fig. 9-2).
- (e) Remove the 2 bolts and nut and remove the rear shock absorber (Fig. 9-2).
- (f) Repeat Steps 9(a) through Step 9(e) for the second rear OE shock absorber.

### 10. Install the TRD Rear Shock Absorber.

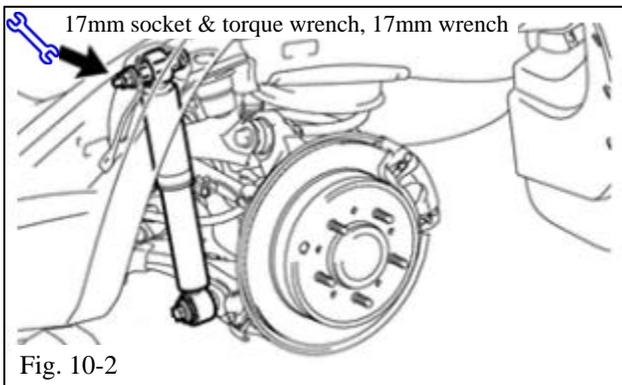


- (a) Temporarily install the upper side of the shock absorber to the chassis frame with the bolt and nut (Fig. 10-1).

**⚠ NOTE:** Hand tighten only at this time.

- (b) Temporarily install the lower side of the shock absorber to the lower suspension arm with the bolt (Fig. 10-1).

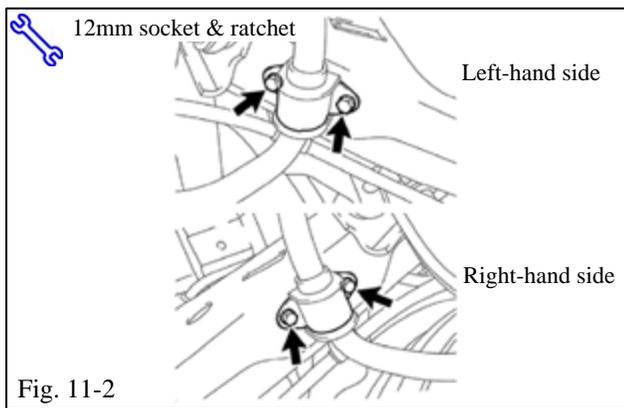
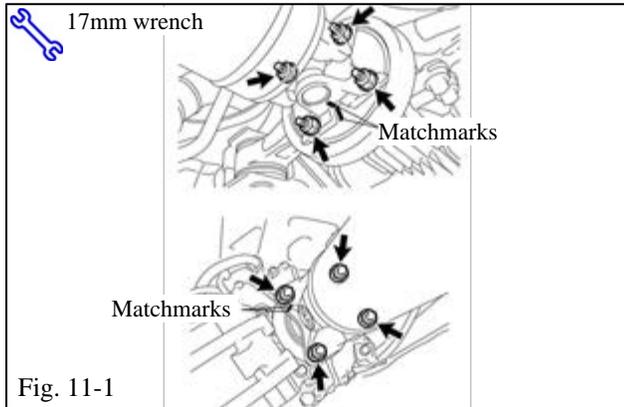
**⚠ NOTE:** Hand tighten only at this time.



- (c) Tighten the upper bolt and nut (Fig. 10-2).

**⚠ Torque: 135 N-m (1377 kgf-cm, 100 ft-lbf)**

- (d) Repeat Steps 10(a) through Step 10(c) for the second rear TRD shock absorber.



## 11. Remove the Rear OE Stabilizer Bar.

- (a) Remove the four nuts holding the propeller shaft to the rear differential (Fig. 11-1). Retain the nuts for reinstallation. Support the propeller shaft so that stabilizer bar can be removed from the vehicle.

**⚠ CAUTION:** Make sure to matchmark the orientation of the propeller shaft to the rear differential for correct reinstallation.

- (b) Remove the four bolts from the two rear stabilizer brackets (Fig. 11-2). Retain the four bolts and the two brackets for reinstallation.

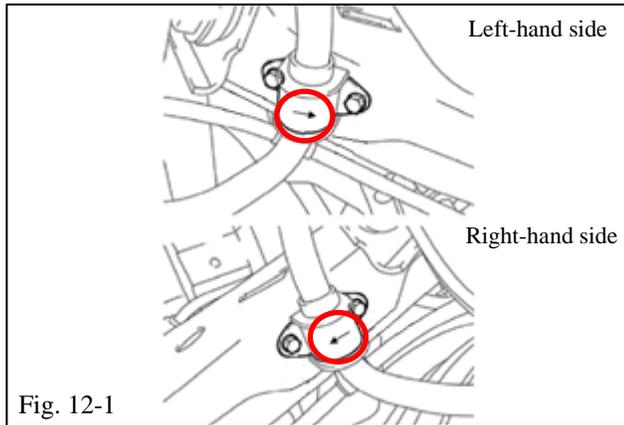
**⚠ CAUTION:** Make sure to support the weight of the stabilizer bar prior to removing both brackets.

- (c) Support the weight of the stabilizer bar and carefully remove it from the vehicle.
- (d) Remove the OE bushings and brackets and retain them for reinstallation.

## 12. Assemble the TRD Sport Stabilizer Bar with the OE Bushings and Brackets.

- (a) Install the two OE bushings onto the TRD Sport Stabilizer bar.

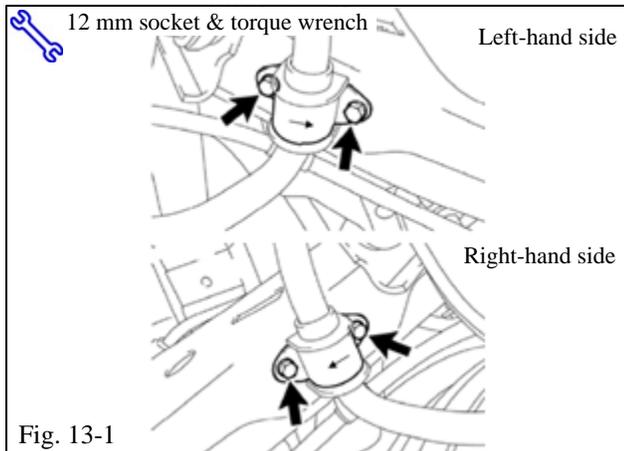
**⚠ CAUTION:** Make sure to install the OE bushings so that the slit of the bushings face the rear of the vehicle.



(b) Install the two OE brackets onto the stabilizer bar assembly (Fig. 12-1).

**⚠ CAUTION:** Make sure to install the brackets so that the arrows imprinted onto the brackets face the front of the vehicle.

### 13. Install the TRD Stabilizer Bar Assembly.

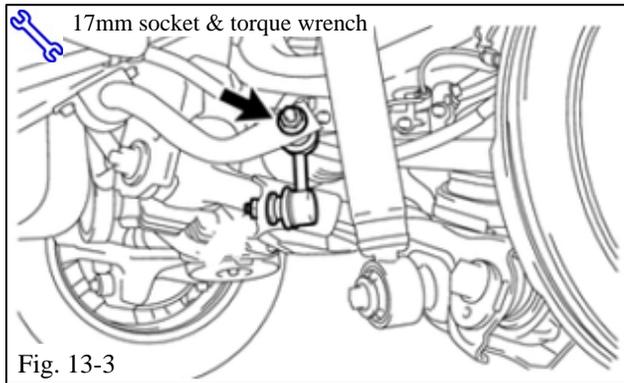


(a) Lift the TRD stabilizer bar into place and use a 12mm socket to install the four bolts into the frame (Fig. 13-1).

**⚠ CAUTION:** Identify the bar is installed in the correct orientation by confirming the “BOT” (bottom) mark on the stopper rings is facing down (Fig. 13-2).

**⚠ Torque: 27 N-m (275 kgf-cm, 20 ft-lbf)**

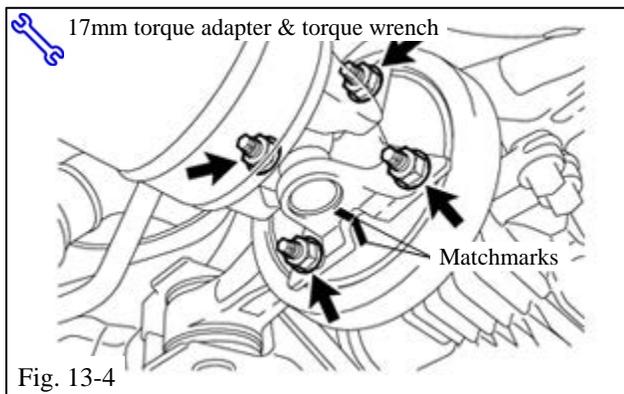




- (b) Install the stabilizer link bolt into the stabilizer bar assembly and attach the OE nut (Fig. 12-3).

**S Torque: 98 N-m (999 kgf-cm, 73 ft-lbf)**

- (c) Repeat Step 12(b) on the other side of the stabilizer bar.



- (d) Install the propeller shaft to the rear differential using the four nuts. Tighten the nuts (Fig. 13-4).

**CAUTION:** Make sure to use the matchmarks to install the propeller shaft in the correct orientation.

**S Torque: 70 N-m (714 kgf-cm, 52 ft-lbf)**

#### 14. Install the Front & Rear Wheels.

- (a) Install all four tire-wheel assemblies onto the vehicle.
- (b) Hand start the lug nuts during installation and tighten them in sequence 1 through 5 or equivalent star pattern (Fig. 14-1).

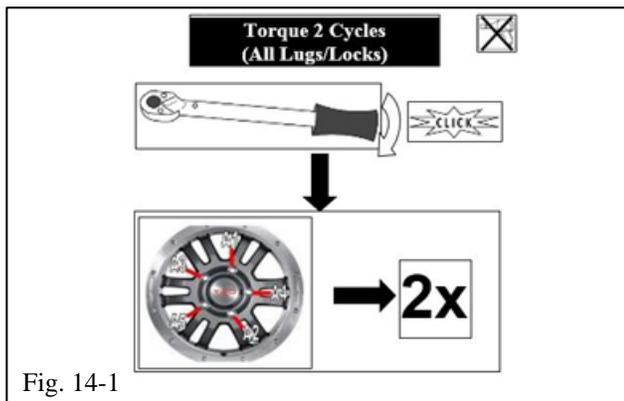
**CAUTION:** Ensure that the socket does not scuff the wheels.

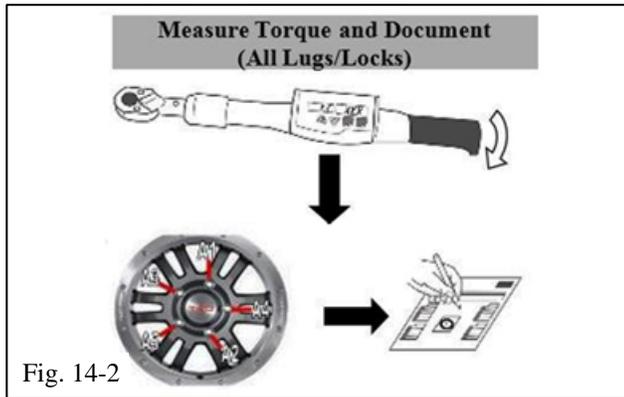
**S Torque: 131 N-m (1336 kgf-cm, 97 ft-lbf)**

- (c) Re-torque all lug nuts in the same 1-5 sequence (Fig. 14-1).

**S Torque: 131 N-m (1336 kgf-cm, 97 ft-lbf)**

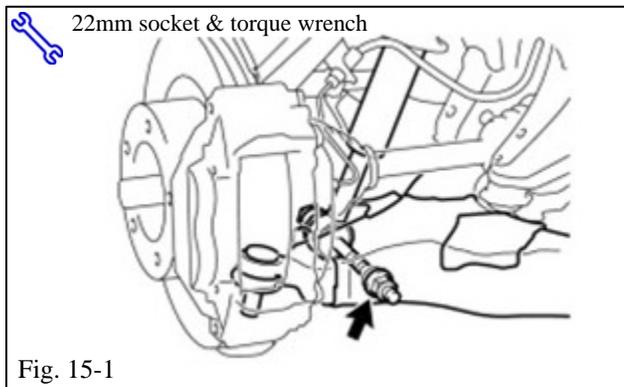
**STOP CAUTION: DO NOT USE AN IMPACT WRENCH TO INSTALL OR REMOVE WHEEL LOCKS.**





- (d) With the vehicle still on the lift, use a digital torque wrench to measure the torque of each lug nut/lock and record it on the Torque Audit Sheet (Fig. 14-2). (PPO installation only. Does not apply to DIO installation).
- (e) Lower the vehicle so it is sitting on the ground.

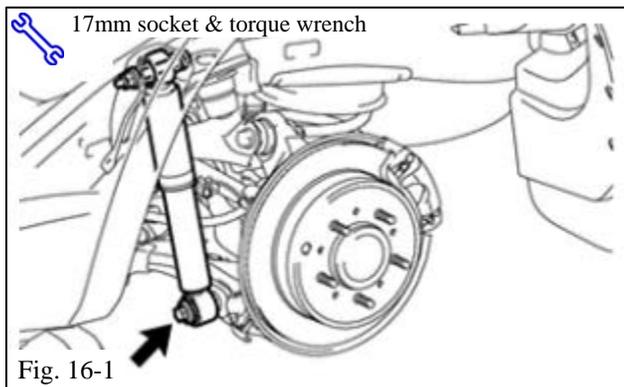
**15. Tighten the Front Suspension Components.**



- (a) With the vehicle on the ground, tighten the front shock assembly to lower the control arm (Fig. 15-1).

**⚠ Torque: 195 N-m (1988 kgf-cm, 144 ft-lbf)**

**16. Tighten the Rear Suspension Components.**



- (a) With the vehicle on the ground, tighten the rear shock absorber lower bolts (Fig. 16-1).

**⚠ Torque: 90 N-m (918 kgf-cm, 67 ft-lbf)**

**17. Adjust the Wheel Alignment.**

- (a) Place the vehicle on an alignment lift and stop the vehicle with the front tires placed on the turn plates. Leave the vehicle shifter in the “Neutral” position.

**+** (b) Place tire chocks in front and behind the driver’s side rear tire.

- (c) Raise the alignment platform to ideal height then lower it onto the stops.

**⚠ NOTE:** This step is critical to confirm vehicle is level.

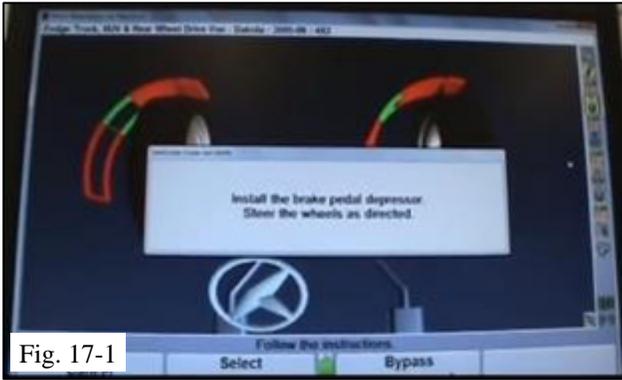


Fig. 17-1



Fig. 17-2

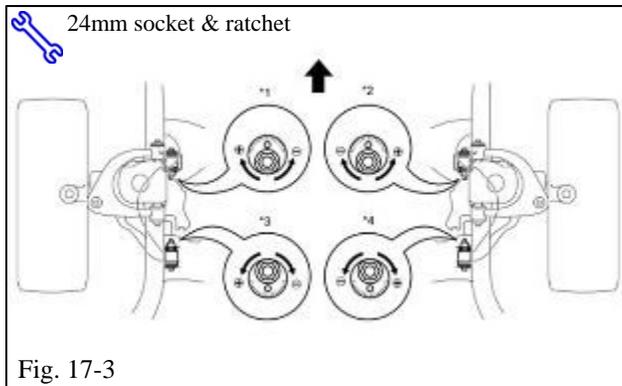


Fig. 17-3

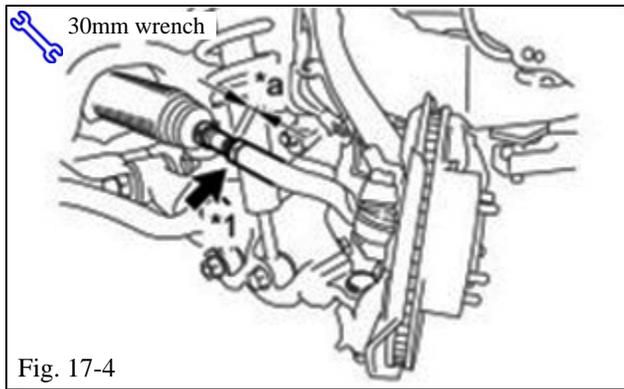
- (d) Place the laser reflector heads onto the wheel tire assemblies.
- (e) Select the appropriate vehicle from the menu.
- (f) Perform the calibration procedure as instructed on the screen (Fig. 17-1).
- (g) Be sure the turn plates are free to move.

**!** (h) Install a brake hold tool (Fig. 17-2).

- (i) Perform the caster reading procedure as instructed on the screen (Fig. 17-1).

Vehicle Model	Tire	Camber	Caster	Toe B-A
USK60L-GKTSKA		-0°10' +/-45' (-0.17° +/-0.75°)	3°45' +/-45' (3.76° +/-0.75°)	2.15 mm (0.0847 in.)
USK65L-GKTSKA	P275/55R20	0°01' +/-45' (-0.02° +/-0.75°)	3°35' +/-45' (3.59° +/-0.75°)	2.31 mm (0.0909 in.)
USK65L-GKTSKA				

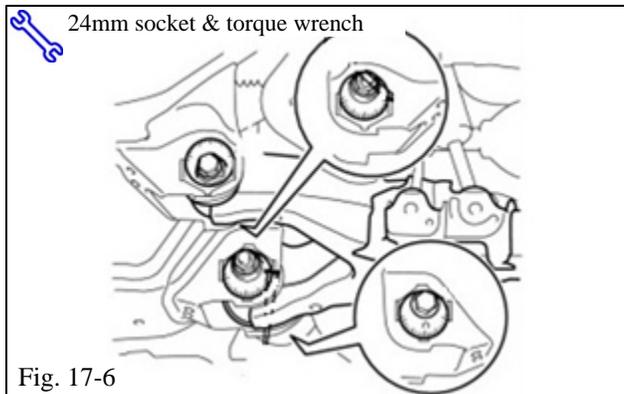
- (j) Adjust the lower control arm cams to get the camber and caster alignment settings centered (Fig. 17-3).



- (k) Loosen the tie rod lock nuts and roughly adjust the toe settings (Fig. 17-4).
- (l) Recheck the caster measurements by following the procedure as instructed on the screen.
- (m) Start the engine.



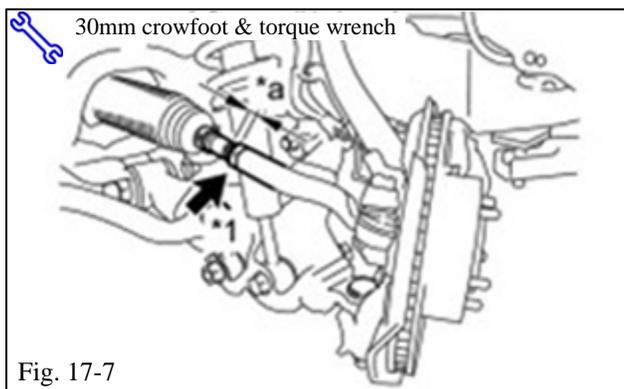
- (n) Center the steering wheel and install a steering wheel lock (Fig. 17-5).
- (o) Turn the engine off.
- (p) Make any final caster/camber adjustments as necessary.



- (q) Tighten the lower control arm bolts (Fig. 17-6).

**S** Torque: 280 N-m (2855 kgf-cm, 207ft-lbf)

- (r) Perform a final toe adjustment.



- (s) Tighten the tie rod end lock nuts (Fig. 17-7).

**!** NOTE: If a crowfoot is used on a standard torque wrench, turn the crowfoot 90° to the lever arm of the torque wrench and use the torque value below.

**S** Torque: 82 N-m (836 kgf-cm, 61ft-lbf)

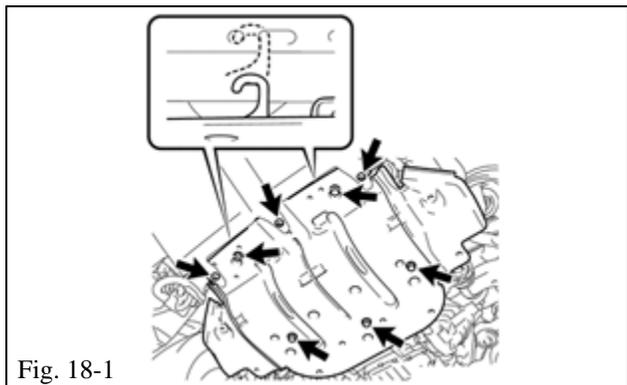


Fig. 18-1

### 18. Reinstall the Front Engine Under Cover.

- (a) Install the engine undercover to the vehicle by tightening the five bolts (Fig. 18-1).

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

- (b) Install the front bumper cover to the engine undercover by tightening the three screws (Fig. 18-1).

**▽ Torque: 3.0 N-m (31 kgf-cm, 27 in-lbf)**

- (c) Remove the alignment heads from the wheel assemblies and return them to a safe location.

**+** (d) Roll the vehicle back and chock the tires.

- (e) Fix the turn plates in place.

**TOYOTA SEQUOIA 2018 – TRD SPORT SUSPENSION**  
 Checklist - these points **MUST** be checked to ensure a quality installation.

<u>Check:</u>	<u>Look For:</u>
<p><u>Accessory Function Checks</u></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Check front sway bar orientation.</li> <li><input type="checkbox"/> Ensure torque audit sheets are fully completed</li> </ul>	<p>'BOT' marks should face downward.</p>
<p><u>Vehicle Function Checks</u></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Check the steering wheel.</li> <li><input type="checkbox"/> Verify the headlight aim.</li> <li><input type="checkbox"/> Check the VSC warning light on the dash.</li> </ul>	<p>The steering wheel should be straight.                      The headlight aim should be in spec.                      The VSC warning light on the dash should be off when the engine is running.</p>
<p><u>Vehicle Appearance Check</u></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> After accessory installation and removal of protective cover(s), perform a visual inspection.</li> </ul>	<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>