

Part Number: PTR11-21100
||PTR11-21100-50

Kit Contents

Item #	Quantity Req'd.	Description
1	2	Front Springs
2	2	Rear Springs
3	2	Locking Nuts
4	2	Spring Bumpers, Front
5	1	Instruction Form

Hardware Bag Contents

Item #	Quantity Req'd.	Description
1		
2		
3		

Additional Items Required For Installation

Item #	Quantity Req'd.	Description
1		
2		
3		

Conflicts

None

Recommended Tools

Personal & Vehicle Protection	Notes
Fender Covers	2
Safety Glasses	
Special Tools	Notes
Wall mounted spring compressor	
Tall Jack Stand	
Installation Tools	Notes
Torque Wrench	3/8 & 1/2 drive
Sockets 3/8" drive	14 deep, 17mm
Sockets 1/2" drive	17, 19, 21 deep, 22mm
1/2" Impact Gun	Only for removing fasteners
3/8" Air Ratchet	Only for removing fasteners
Wrench	10mm
Screw Driver	Small Flat Blade
Special Chemicals	Notes
None	

General Applicability

2011- SCION tC







Recommended Sequence of Application

Item #	Accessory
1	TRD Springs
2	TRD Sway Bar Set
3	TRD Strut Tie Bar
4	TRD 19" Wheels

Vehicle Service Parts (may be required for reassembly)

Item #	Quantity Req'd.	Description
1	2	48341-06050 Spring Bumper
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 seat belts or SRS safety components.

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 COWL

(a) Raise hood.

(1) Place fender covers over fenders.

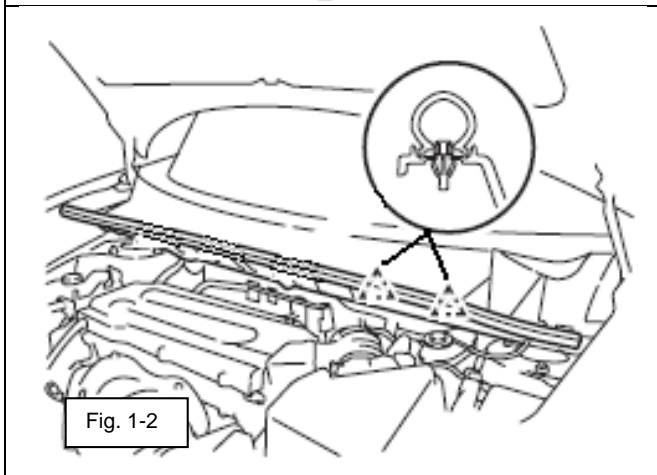
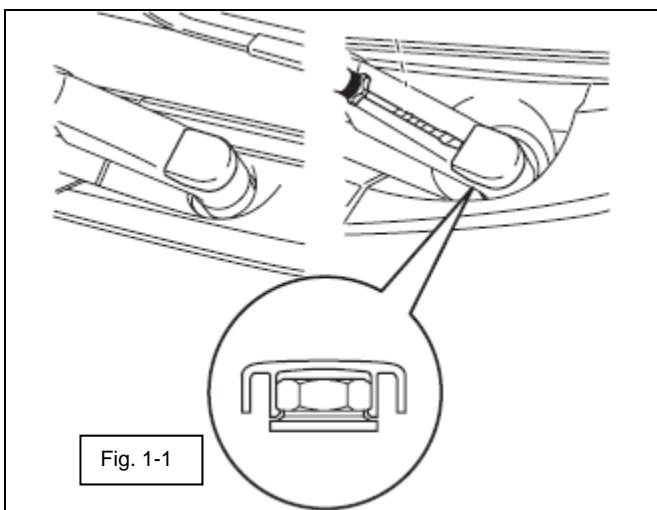
(b) Remove wiper arms.

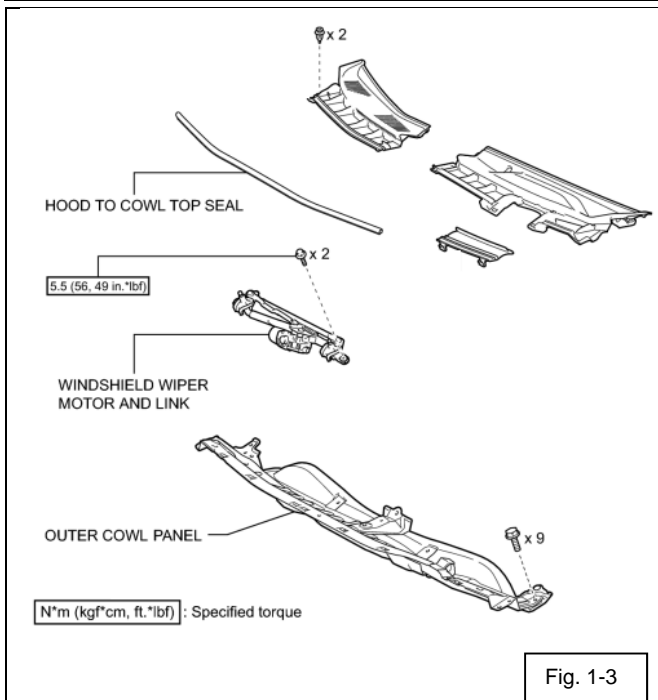
(1) Remove wiper arm head caps with nylon pry tool or pull off with fingers. (Fig. 1-1)

(2) Remove nut and pull wiper arm off of wiper drive stud. (14mm)

(c) Disconnect driver's side of cowl to hood seal.

(Fig. 1-2)





(d) Remove cowl covers. (Fig. 1-3)

NOTE:

- Convex dots in plastic indicate location of clips.
- Do not force clips on front edge of cover.

(e) Tape lower edge of windshield for protection.

(f) Remove wiper link / motor assy.

(1) Disconnect wire connector.

(2) Remove screws (2). (⚙️10mm)

(g) Remove wire harness from plastic fastener using a small screw driver.

(h) Remove cowl pan. (⚙️10mm)

2. REMOVE FRONT STRUT ASSEMBLY

(a) Loosen the front support to front shock absorber nut of the front shock absorber. (Fig 2-1)

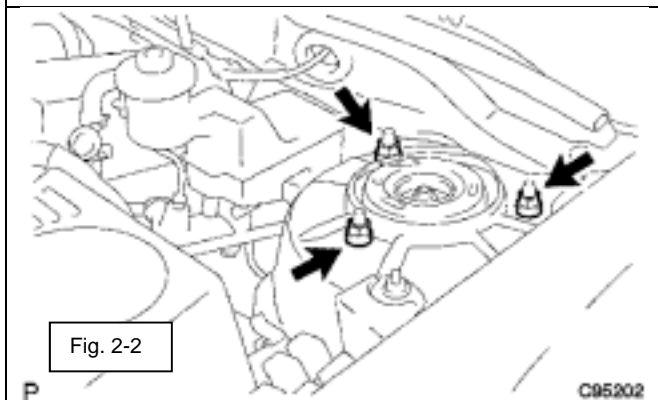
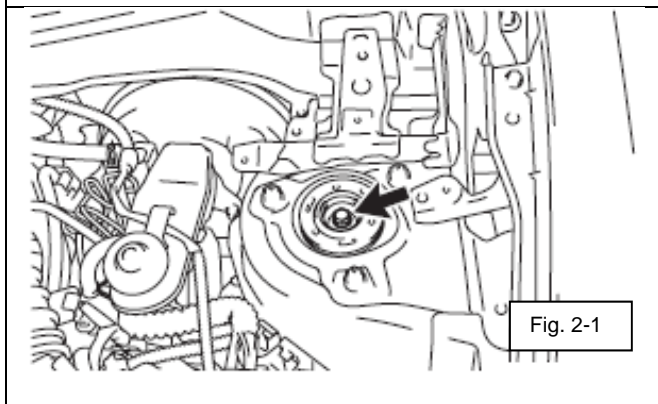
(1) Remove the front suspension support dust cover.

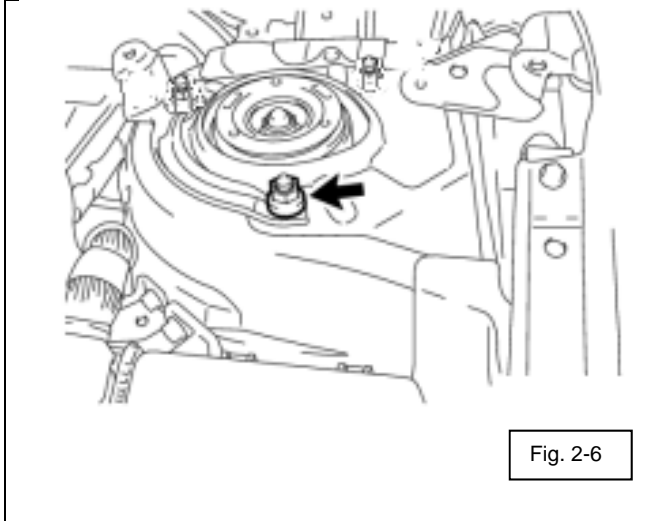
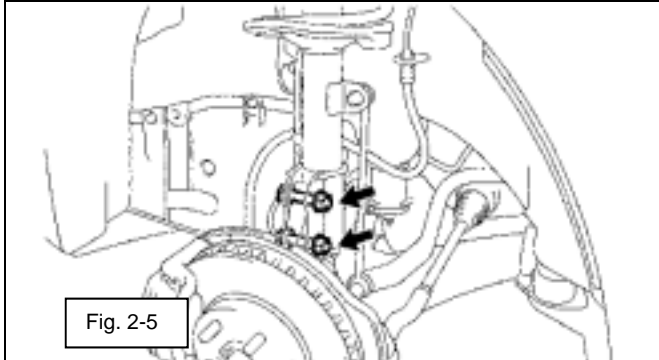
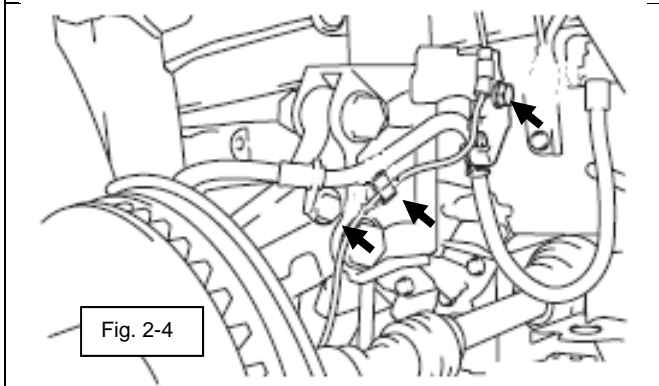
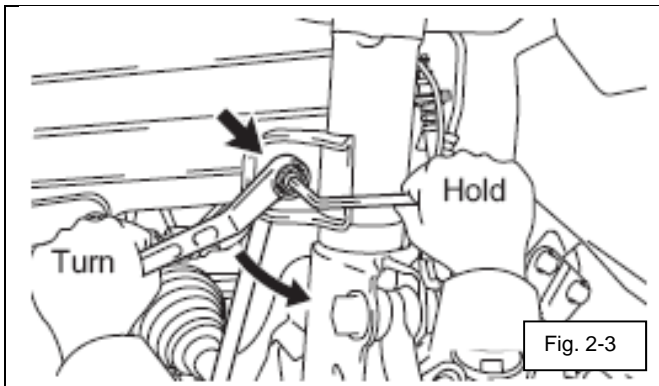
NOTE: Do not remove the nut!

(b) Remove the rear two support nuts and loosen the forward nut. (Fig 2-2)(⚙️14mm)

(c) Remove front wheels. (⚙️21mm)

CAUTION: Use owner's manual to confirm correct lift point locations.





(d) Separate front stabilizer link from the strut assy. If the ball joint spins use a 6mm allen wrench to hold the center stud in place. (Fig. 2-3) (17mm)

(e) Separate front flexible hose and speed sensor wire if equipped. (Fig 2-4)

(f) Disconnect strut assy from knuckle. (Fig 2-5)



Take careful note of the orientation and location of these bolts so that they can be installed the same way they were removed. (22mm)

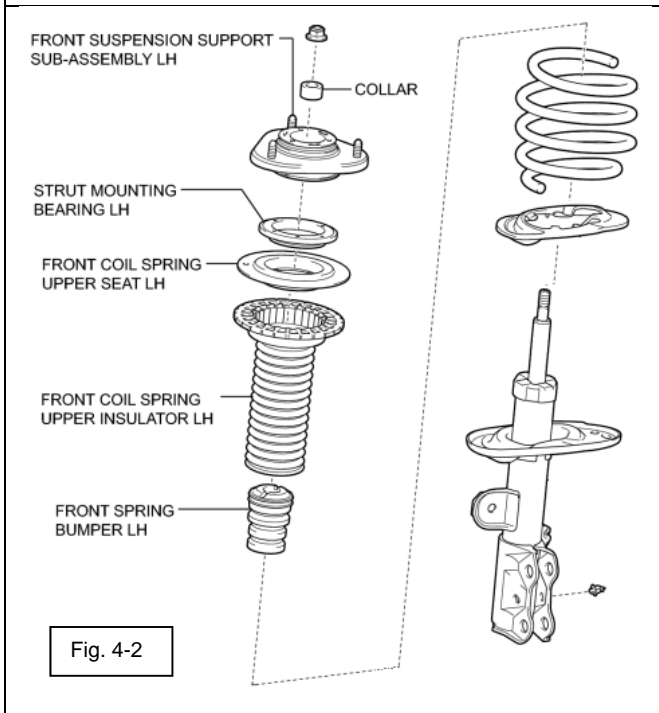
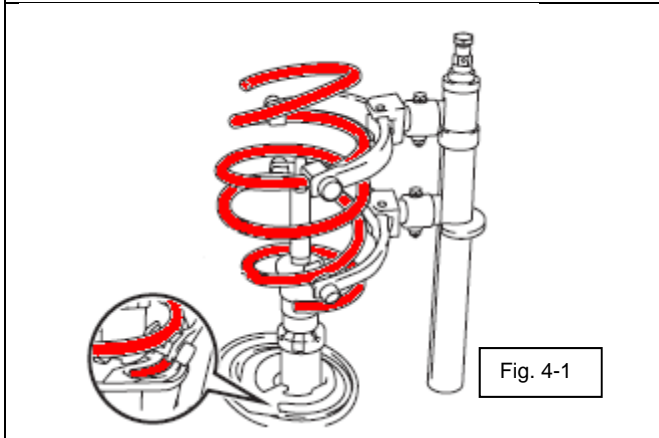
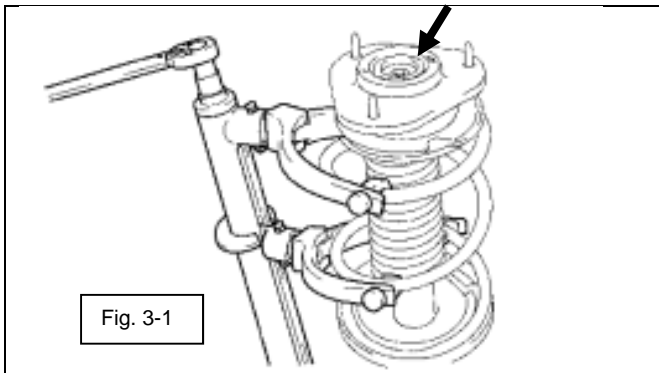
(g) Remove strut assy.



Supporting the weight of the strut assy, remove the top nut by hand and pull the strut assy out of the wheel well. (Fig 2-6)

WARNING: Take care to not put any stress on the speed sensor wire while removing the strut assembly.

HINT: take care to not allow the knuckle to fall too far from the vehicle because the inner drive axle joint will pull apart.



3. STRUT DISASSEMBLY



- (a) Compress spring in spring compressor.
- (b) Remove upper nut, coil spring seat, bumper, and insulator. (Fig. 3-1)(19mm)
- (c) Remove original spring.

4. ASSEMBLE STRUT

- (a) Install front TRD spring. (Fig. 4-1)
 - (1) Spring coil with the slightly smaller diameter should be installed in the upward direction, coil with the large gap will face downward.
 - (2) Fit the lower end of the coil spring into the pocket of the shock absorber lower seat.
- (b) Install supplied front spring bumper. (Fig 4-2)
 - (1) Install the spring bumper onto the shock absorber piston shaft.
- (c) Install the coil spring upper seat with the coil spring insulator onto the spring.
- (d) Install the support sub-assembly with strut bearing.
- (e) Install **new** shock absorber nut and original collar.
 - (1) Do not force the nut causing the shock absorber piston shaft to rotate.
 - (2) This nut will be torqued down later, once the strut assembly is back on the car.

5. INSTALL FRONT STRUT ASSEMBLY



- (a) Raise strut up into wheel well, fasten 3 nuts. (Fig. 5-1)

- (1) Confirm TRD strut brace or OE strut reinforcement is in place.

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

- (b) Attach strut assembly to knuckle with 2 bolts and 2 nuts. Install bolts the same way they came off. (Fig. 5-2)

NOTE: Do not push or pull on strut assembly while tightening nuts to maintain factory camber settings. Push in on assembly for maximum negative camber (high performance)

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

- (c) Attach front flexible brake hose and speed sensor if equipped. (Fig. 5-3)

- (1) Install the flexible hose and speed sensor without twisting them.

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

- (d) Attach front stabilizer link assembly.

- (1) If the ball joint turns together with the nut, use a 6 mm allen wrench to hold the stud. (Fig. 5-4)

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

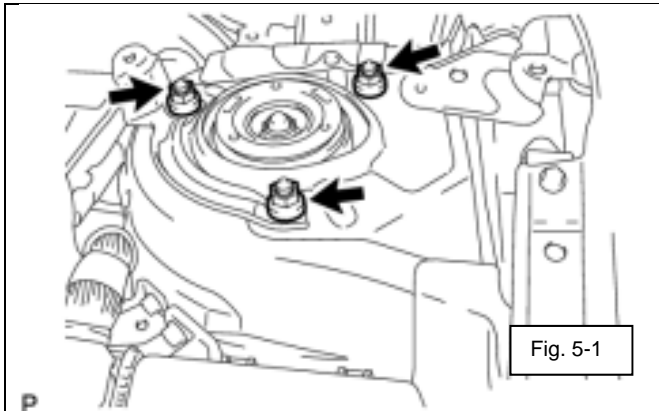


Fig. 5-1

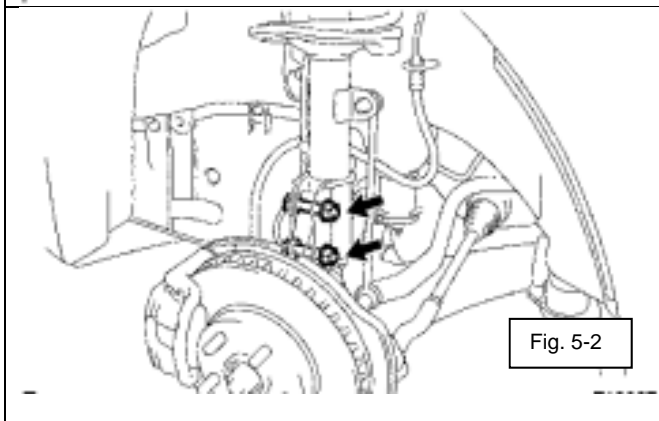


Fig. 5-2

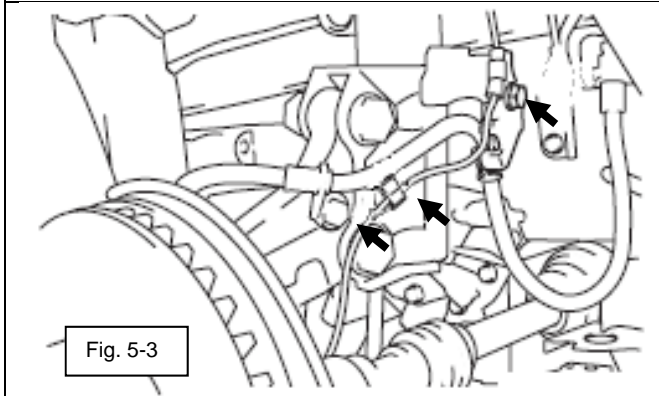


Fig. 5-3

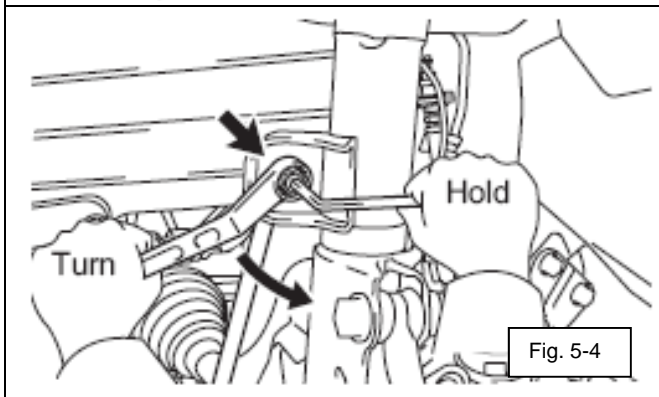
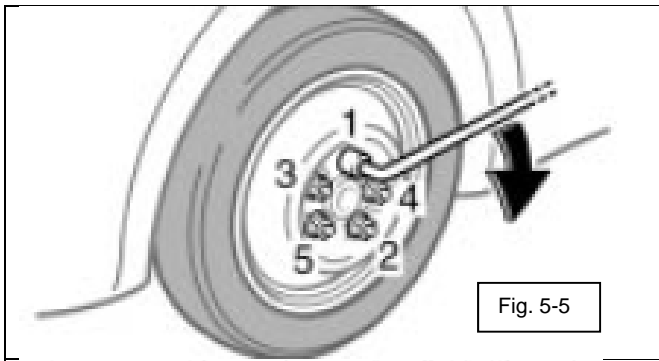


Fig. 5-4

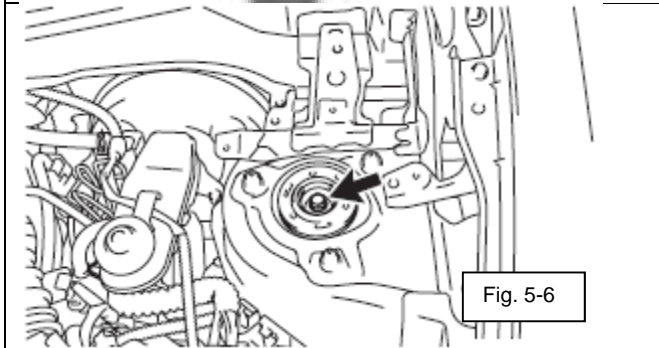


(e) Install front wheel.

(1) Install wheel nuts.

(2) Tighten in a star pattern. (Fig. 5-5)

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



(f) With vehicle weight on the tires, tighten the upper shock absorber nuts. (Fig. 5-6)

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

(g) Install front suspension support dust cover.

6. Install Cowl and Wiper Assembly

(a) Install metal cowl pan.

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

(b) Install wiper motor and link assy.

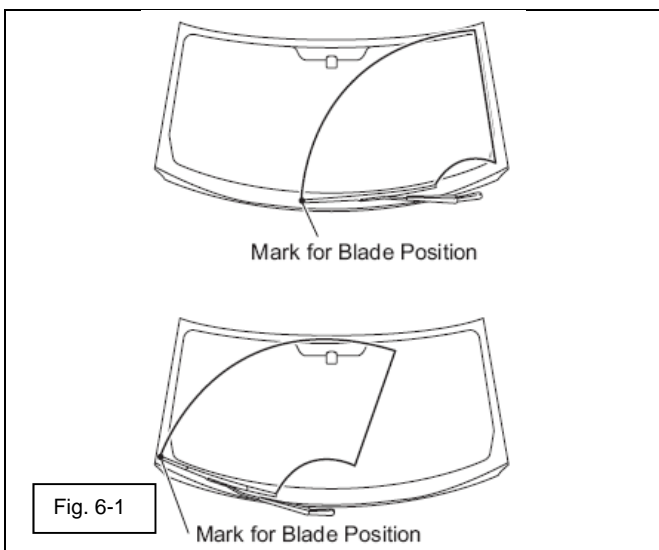
(1) Connect wire harness and clip harness to cowl pan.

Torque: 5.5 N·m (56 kgf·cm, 49 in·lbf)

(c) Install cowl top vent louvers (plastic).

(d) Install wiper arms. (Fig 6-1)

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

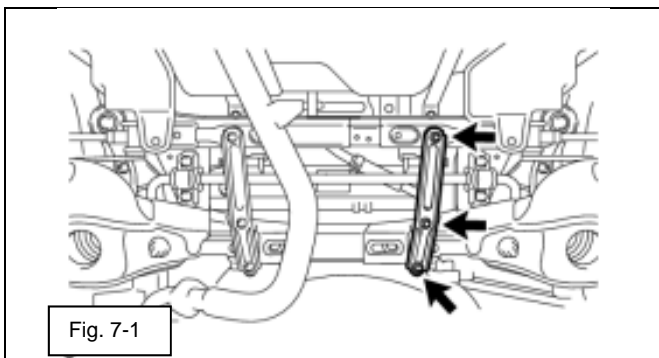


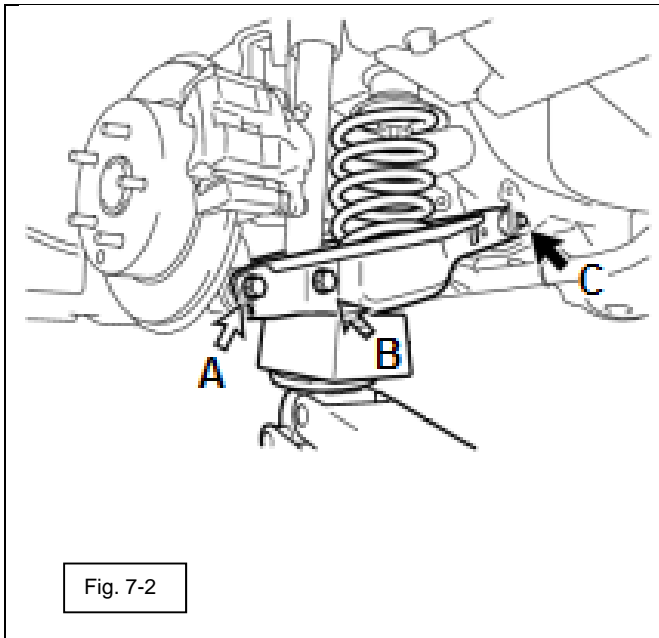
7. Remove Rear OE Springs

(a) Remove rear wheels.

(b) Remove both rear suspension member braces.

(1) Remove the 3 bolts and rear suspension member brace LH from the rear suspension member sub-assembly. Same for the RH side. (Fig 7-1)





(c) Remove rear coil spring. (Fig 7-2)

(1) Raise the rear No. 2 suspension arm assembly using a jack or tall stand 2 inches. (protect the painted surface with a rag or rubber pad)

(2) Remove bolt A.

(1) Turn bolt not locking nut.

(3) Remove bolt B.

(1) Lower arm to remove load from bolt.

(2) Turn bolt not locking nut.

NOTE: Repeat steps 1-3 for the other side.

(4) Remove coil spring.

(1) Remove upper insulator and save for TRD spring.

8. Install Rear TRD Springs

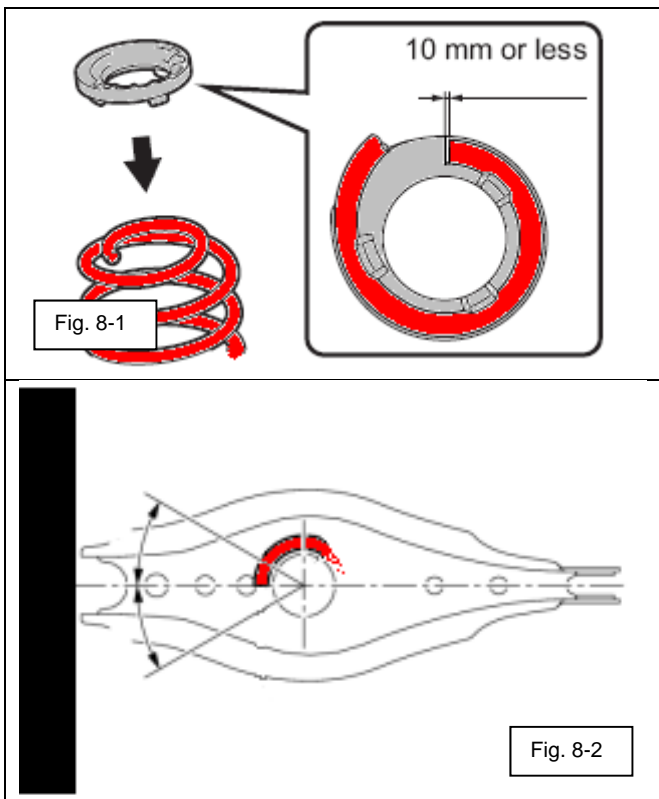
(a) Install upper spring insulator onto TRD spring. (Fig 8-1)

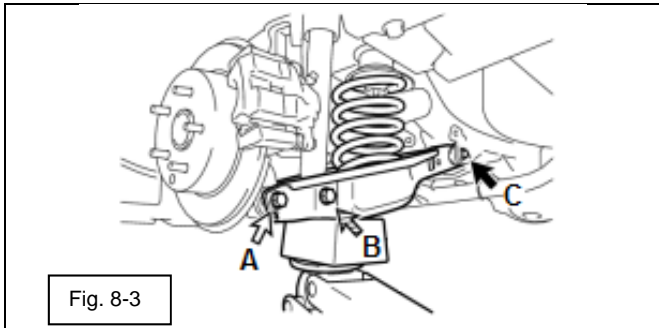
HINT: Upper end of spring has a smaller diameter coil than the lower end. Coils with the smaller gaps will be installed upward.

(b) Confirm lowering spring insulator is free of debris and in place on the lower control arm.

(c) Install rear springs so that the lower end of the coil is indexed to line up within 30° of the wheel as shown. (Fig 8-2)

NOTE: Install both springs before reconnecting shock and rear axle assembly to lower control arm.





- (d) Temporarily install bolt (B) and nut into the rear No. 2 suspension arm assembly.
- (e) Fasten the rear No. 2 suspension arm assembly to the rear axle assembly with the bolt (A) and nut.

Torque: 90 N·m (918 kgf·cm, 66ft·lbf)

- (f) Install rear suspension member braces.

Torque: 32 N·m (326 kgf·cm, 24ft·lbf)

- (g) Install Rear Wheels

- (1) Install wheel nuts.

- (2) Tighten in a star pattern.

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

- (h) Now torque bolt “B”.

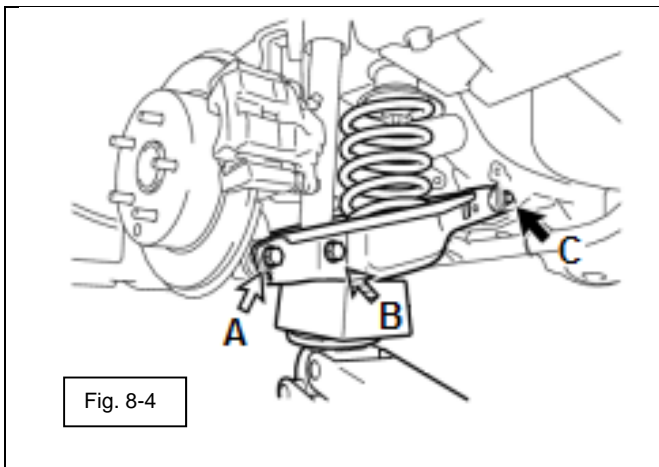
- (1) Place weight of vehicle on rear tires or control arms using a ramp or jack stands.

WARNING: Be sure to chalk front wheels if using jack stands.

Torque: 90 N·m (918 kgf·cm, 66ft·lbf)

- (i) Loosen and re-torque bolt “C”.

Torque: 90 N·m (918 kgf·cm, 66ft·lbf)



9. Alignment

Alignment should not be necessary after installing the TRD lowering springs. However, checking for correct measurements and adjusting to the specs. below will provide optimal performance from your SCION tC.

Front:

Total Toe = 1.0 +/-2.0 mm (0.04 +/-0.08 in.)

Camber = -0°13' +/-45' (-0.22° +/-0.75°)

Rear:

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

Camber = -1°30' +/-45' (-1.50° +/-0.75°) (Modified by TRD USA)

Note: Camber left and right must be within 0°45' (0.75°) of each other.

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

CHECK FOR:

Accessory Function Checks

Vehicle Function Checks

Confirm wipers operate properly

Torque on all fasteners.

Strut Top x3

Strut to Knuckle x2

Brake Hose to Knuckle

Sway Bar Link to Strut

Top Nut, Front Shock Assembly
w/Torque Wrench Extension Tool

Lower Control Arm, Rear Bolt A

Lower Control Arm, Rear Bolt B

Lower Control Arm, Rear Bolt C

Suspension Member Braces, Rear

Wheels

Confirm upper and lower rear spring insulators are located properly per the instructions above.

Vehicle Appearance Check

After accessory installation and removal of protective cover(s), perform a visual inspection.

LOOK FOR:

- No operation
- Hitting edge of windshield seal

The torque specs. called out in these instructions are taken directly from the 2011 SCION tC repair manual. Torque specs. are expected to be accurate within the capability or range of the tool used during assembly.

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

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

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

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

Torque: 50 N·m (510 kgf·cm, 37ft·lbf)

Torque: 34 N·m (345 kgf·cm, 25ft·lbf)

Torque: 90 N·m (918 kgf·cm, 66ft·lbf)

Torque: 90 N·m (918 kgf·cm, 66ft·lbf)

Torque: 90 N·m (918 kgf·cm, 66ft·lbf)

Torque: 32 N·m (326 kgf·cm, 24 ft·lbf)

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

Look for insulator bent or folded. Look for insulator squeezed out of position (refer to installation step 6)

Ensure no damage (including scuffs and scratches) was caused during the installation process.
(For PPO installations, refer to TMS Accessory Quality Shipping Standard.)