

TECHNICAL INSTRUCTIONS

FOR

SAFETY RECALL J0U

TRD BRAKE KIT

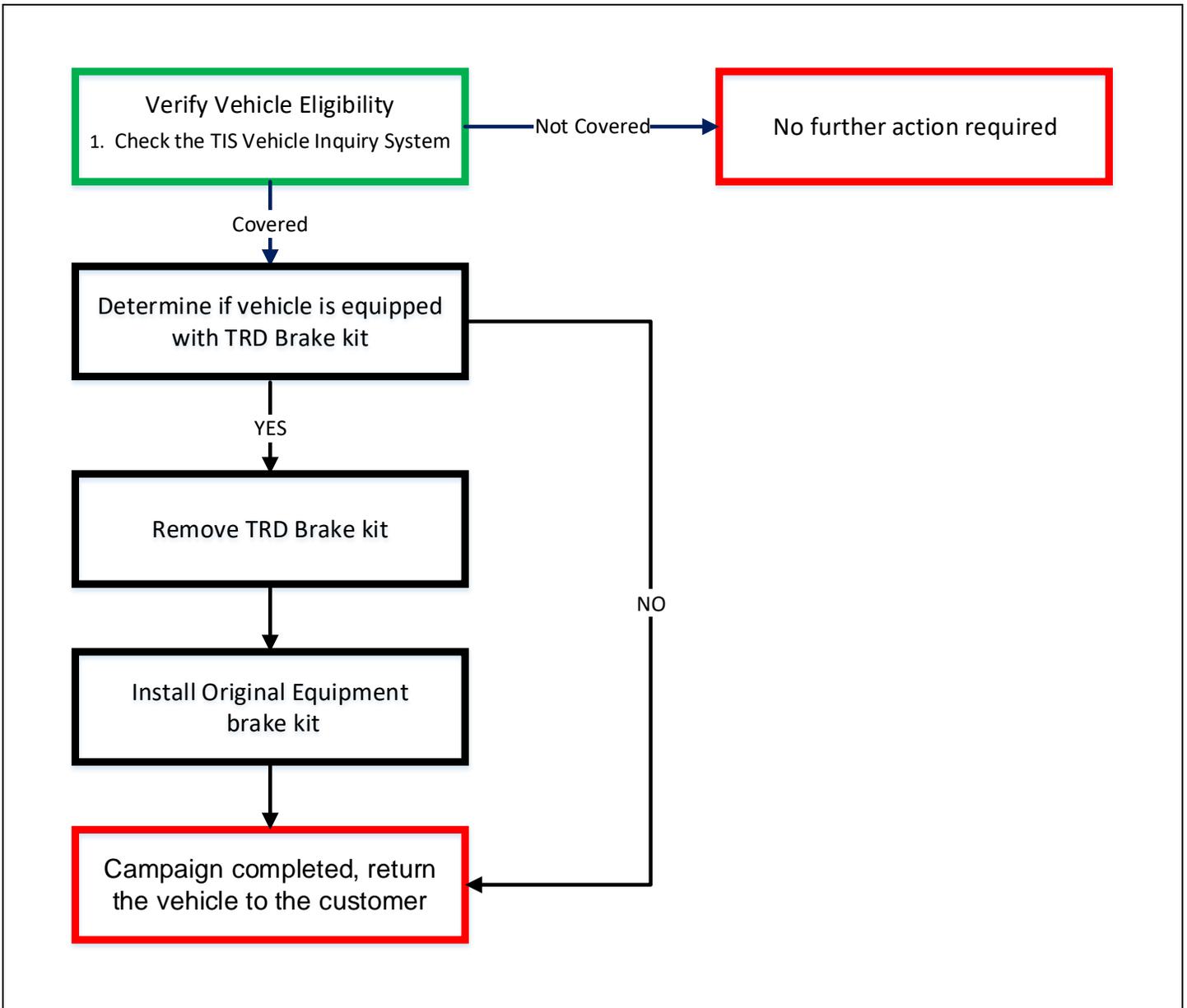
CERTAIN 2008-2015 Scion xB
2011-2016 Scion tC

The repair quality of covered vehicles is extremely important to Toyota. All dealership technicians performing this recall are required to successfully complete the most current version of the E-Learning course "Safety Recall and Service Campaign Essentials". To ensure that all vehicles have the repair performed correctly; technicians performing this recall repair are required to currently hold at least one of the following certification levels:

- Certified Technician (Chassis)
- Expert Technician (Chassis)
- Master Technician
- Master Diagnostic Technician

It is the dealership's responsibility to select technicians with the above certification level or greater to perform this recall repair. Carefully review your resources, the technician skill level, and ability before assigning technicians to this repair. It is important to consider technician days off and vacation schedules to ensure there are properly trained technicians available to perform this repair at all times.

I. OPERATION FLOW CHART



II. IDENTIFICATION OF AFFECTED VEHICLES

- Check the TIS Vehicle Inquiry System to confirm the VIN is involved in this Safety Recall, and that it has not already been completed prior to dealer shipment or by another dealer.
- TMNA warranty will not reimburse dealers for repairs completed on vehicles that are not affected or were completed by another dealer.

III. PREPARATION

A. PARTS

Part Number	Part Description	Quantity
04008-36212	Brake Kit (xB)	1
*The kit above includes the following parts:		
Part Number	Part Description	Quantity
43512-42040	DISC, FRONT	2
47782-12250	COVER, DISC BRAKE DUST, FRONT LH	1
47781-12250	COVER, DISC BRAKE DUST, FRONT RH	1
95381-03020	PIN, COTTER	2
90468-08035	CLIP	2
90119-08868	BOLT, W/WASHER	4
47389-50020	GASKET(FOR FRONT FLEXIBLE HOSE)	2
90947-02G31	HOSE, FLEXIBLE, NO.2	1
90947-02G30	HOSE, FLEXIBLE, NO.1	1
90080-17238	NUT (FOR FRONT AXLE SHAFT)	2
90401-A0001	BOLT, UNION	2
90080-10067	BOLT, HEXAGON(FOR BRAKE CALIPER)	4
04465-0R010	PAD KIT, DISC BRAKE, FRONT	1
04945-0R010	SHIM KIT, ANTI SQUEAL, FRONT	1
04947-0R010	FITTING KIT, DISC BRAKE, FRONT	1
47750-0R010	CYLINDER ASSY, DISC BRAKE, LH	1
47730-0R010	CYLINDER ASSY, DISC BRAKE, RH	1

Part Number	Part Description	Quantity
04008-36121	Brake Kit (tC)	1
*The kit above includes the following parts:		
Part Number	Part Description	Quantity
43512-42050	DISC, FRONT	2
47782-0R010	COVER, DISC BRAKE DUST, FRONT LH	1
47781-0R010	COVER, DISC BRAKE DUST, FRONT RH	1
95381-03025	PIN, COTTER	2
90468-08040	CLIP	2
91551-80818	BOLT, FLANGE	4
47389-50020	GASKET(FOR FRONT FLEXIBLE HOSE)	2
90947-02G31	HOSE, FLEXIBLE, NO.2	1
90947-02G30	HOSE, FLEXIBLE, NO.1	1
90080-17238	NUT (FOR FRONT AXLE SHAFT)	2
90401-A0001	BOLT, UNION	2
90080-10067	BOLT, HEXAGON(FOR BRAKE CALIPER)	4
04465-0R031	PAD KIT, DISC BRAKE, FRONT	1
04945-0R030	SHIM KIT, ANTI SQUEAL, FRONT	1
04947-0R010	FITTING KIT, DISC BRAKE, FRONT	1
47750-02410	CYLINDER ASSY, DISC BRAKE, LH	1
47730-02410	CYLINDER ASSY, DISC BRAKE, RH	1

NOTE: All TRD parts removed from the vehicle will be returned to Toyota Motor North America. Be sure to provide all removed parts to the part's department. Failure to return all parts will result in warranty claim debit.

NOTE: Warranty will only reimburse the dealership for the cost of the Brake Kit. Claims with individual parts listed will be denied.

B. TOOLS & EQUIPMENT

- Techstream
- Brake Fluid bleeding tool
- Standard Hand Tools
- Torque Wrench

SST – These Special Service Tools required for this repair:

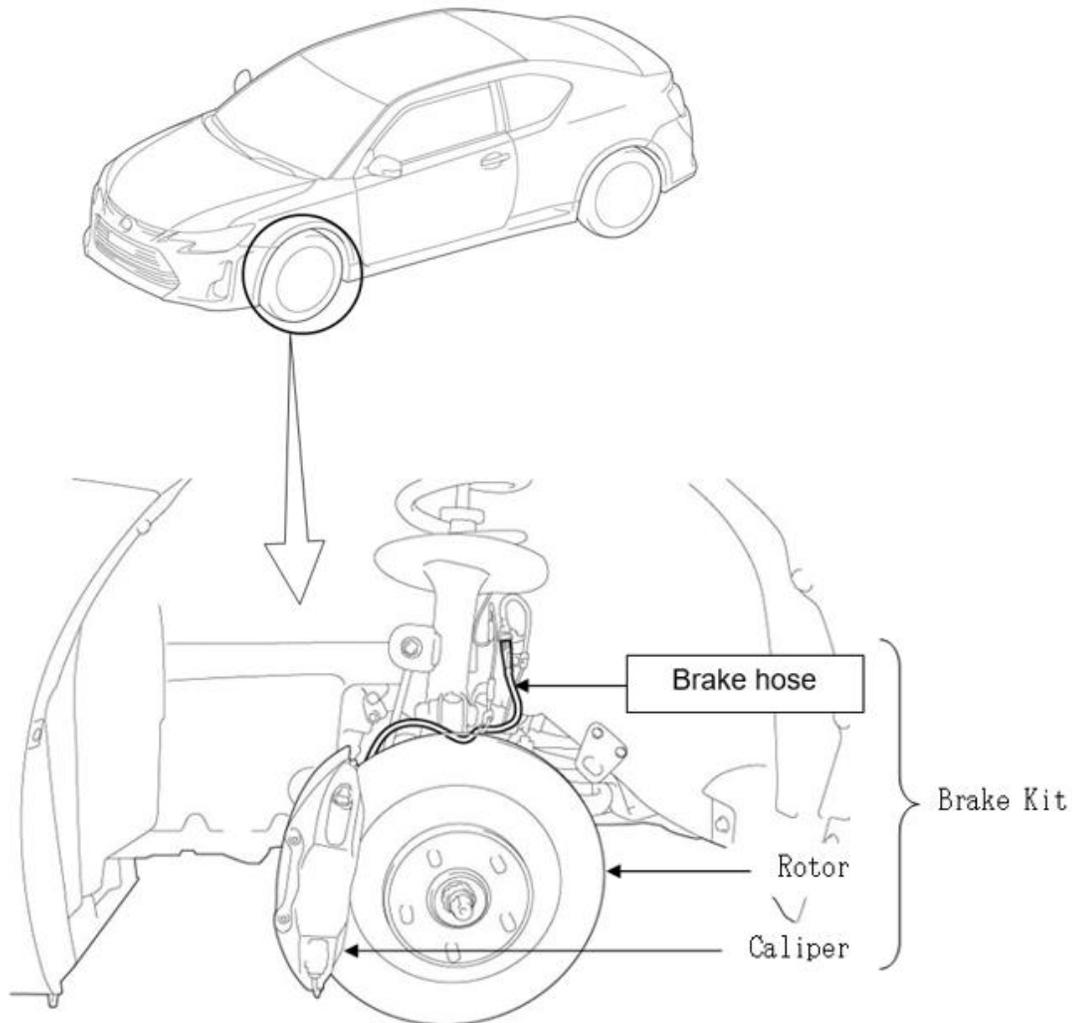
Part Number	Tool Name	Quantity
09930-00010-01	Drive Shaft Nut Chisel	1
09960-20010-01	Ball Joint Puller	1

C. MATERIALS

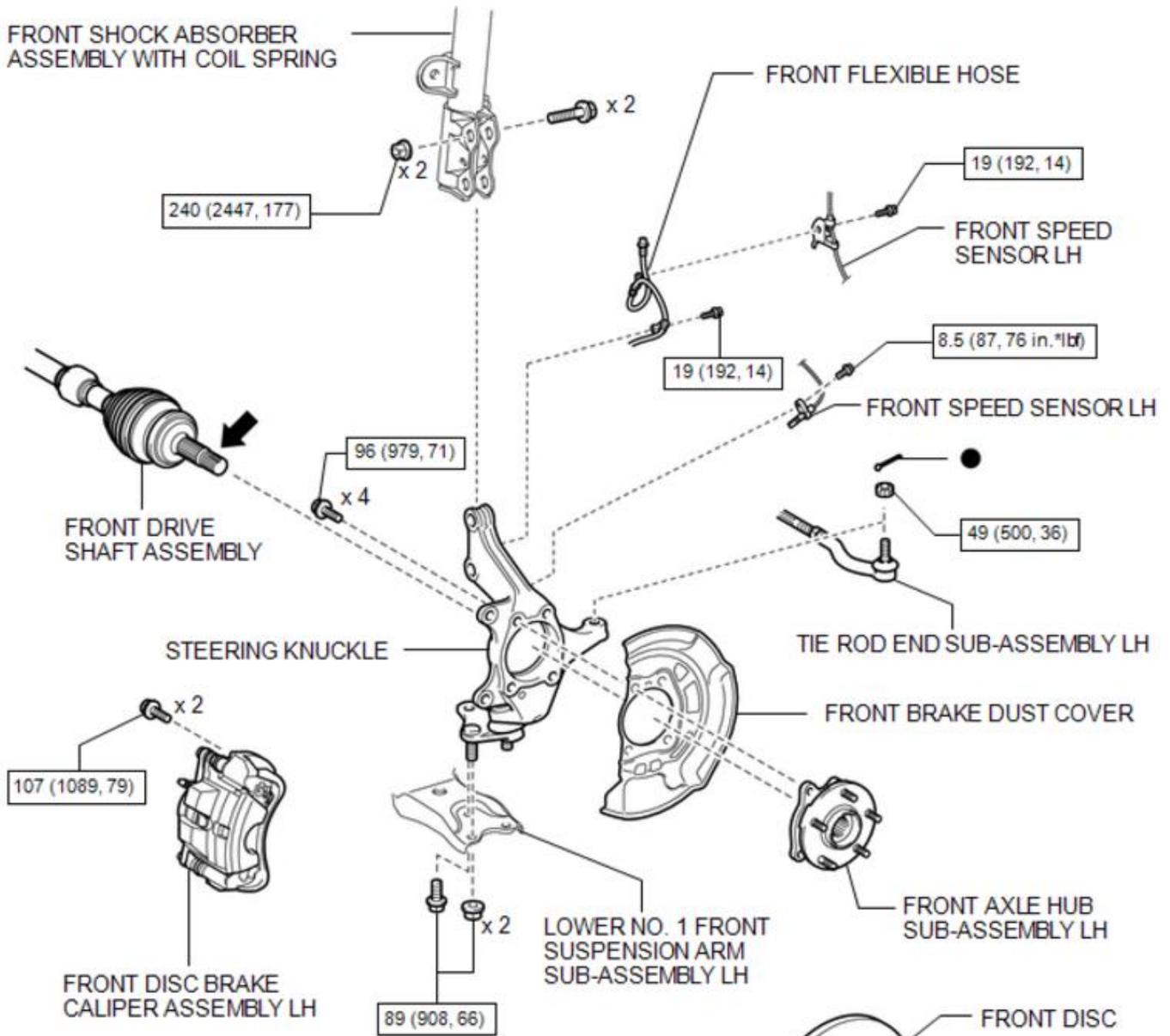
- Toyota Genuine Brake Fluid
SAE J1703 or FMVSS No. 116 DOT 3

IV. BACKGROUND

If an involved Scion tC or xB is equipped with an optional front wheel TRD brake kit, there is a possibility that the brake hoses installed as a part of this kit could become damaged over time. This condition could lead to reduced braking performance while driving, increasing the risk of a crash.



V. COMPONENTS



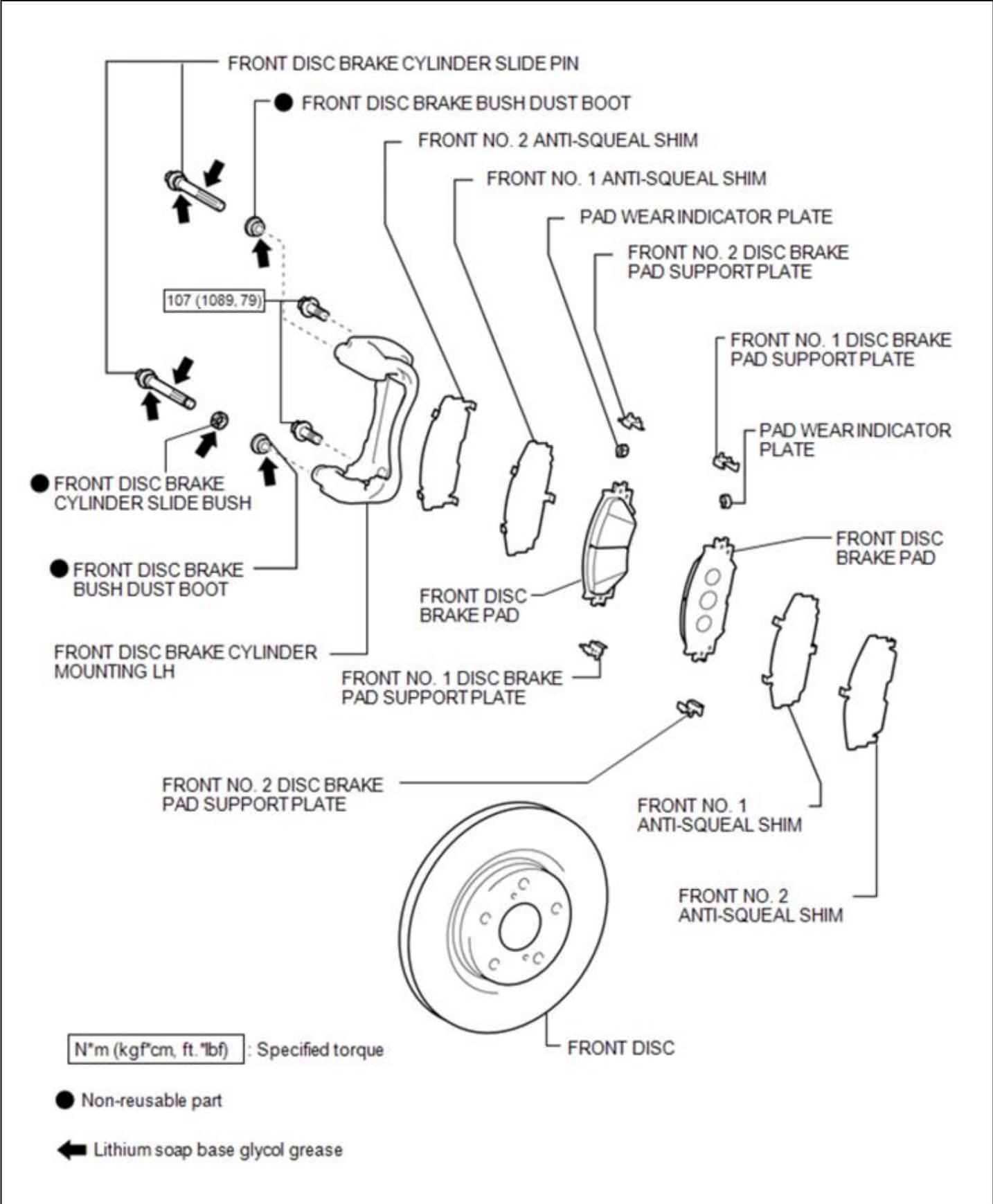
N*m (kgf*cm, ft. *lbf) : Specified torque

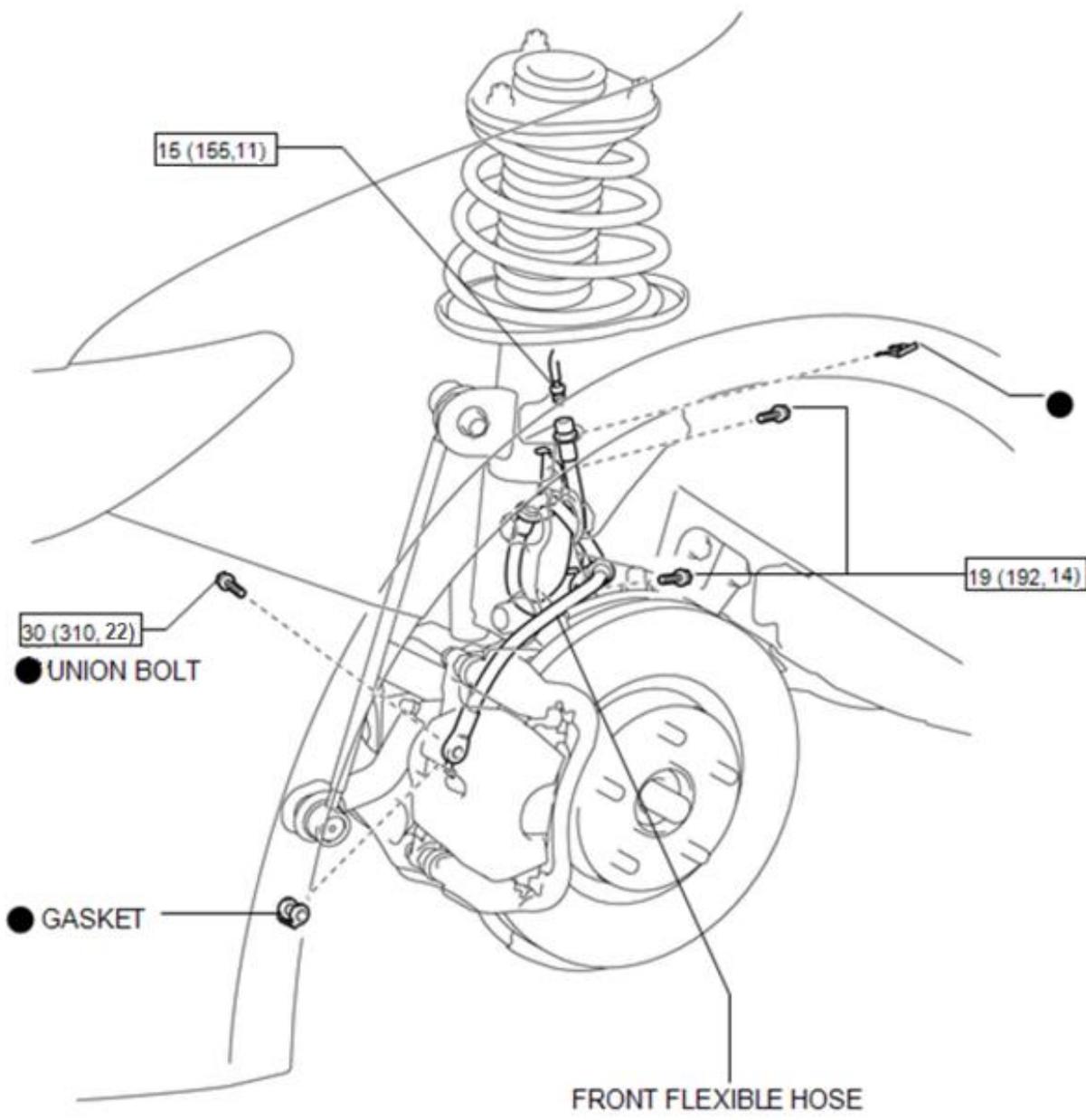
● Non-reusable part

← Do not apply lubricants to the threaded parts

*1 For Automatic Transaxle

*2 For Manual Transaxle





N*m (kgf*cm, ft.*lbf) : Specified torque

● Non-reusable part

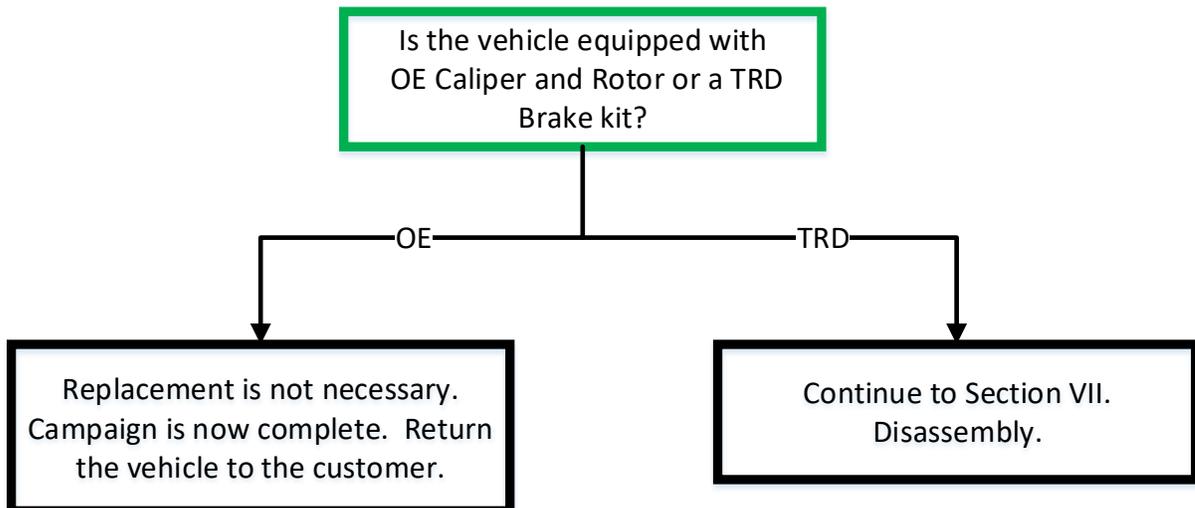
VI. INSPECTION

1. DETERMINE IF VEHICLE IS EQUIPPED WITH TRD BRAKE KIT

- a. Look at the FRONT brake calipers and rotors to determine if the vehicle is equipped with the Original Equipment (OE) caliper and rotor or an authentic Toyota Racing Development (TRD) front brake kit.



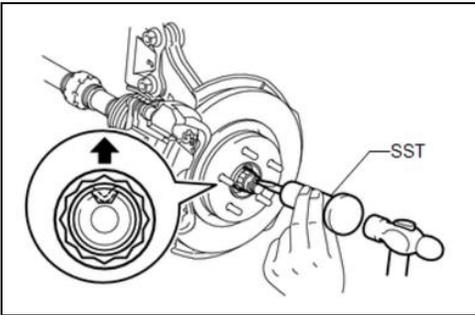
Note: TRD wheels may be found on vehicles without the TRD Brake kit. This Safety Recall only involves the TRD Brake kit.



VII. DISASSEMBLY

1. REMOVE WHEEL ASSEMBLY FRONT LH & RH

Note: Impact guns MUST NOT be used on splined lug nuts.

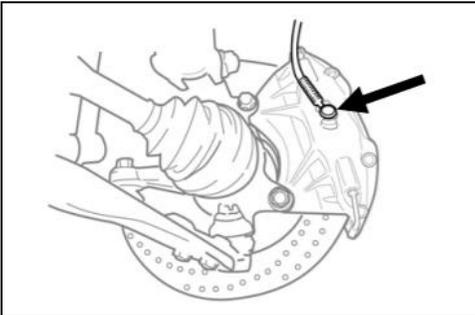


2. REMOVE AXLE SHAFT NUT LH & RH

a. Using SST and a hammer, un-stake the front axle hub nut.

SST: 09930-00010-01

b. Remove the axle shaft nut.

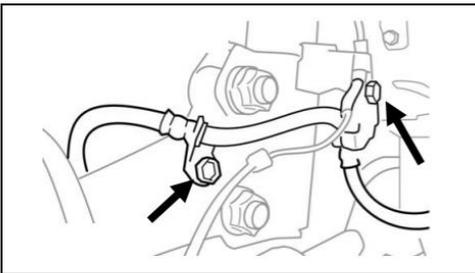


3. REMOVE TRD BRAKE HOSE LH & RH

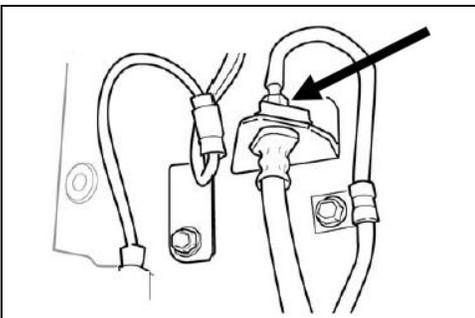
a. Place a drip pan the brake caliper assembly.

b. Remove the banjo bolt from caliper.

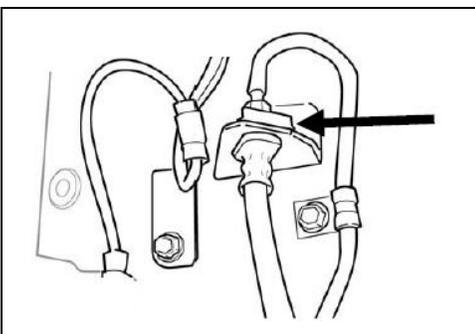
c. Drain the brake fluid in the drip pan.



d. Remove the 2 bolts securing the hose to the steering knuckle and strut.



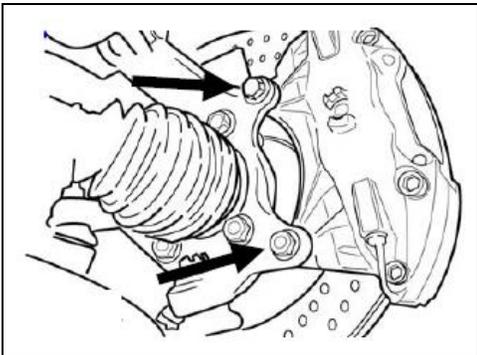
e. Using a flare nut wrench, separate the steel line union from the brake hose.



f. Remove the brake hose retaining clip.

g. Remove the brake hose from the vehicle.

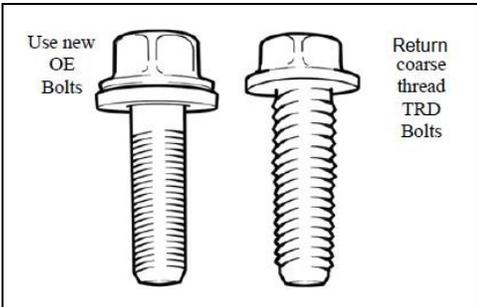
Note: These TRD brake hoses will be recovered. Return these to the parts department.



4. REMOVE TRD BRAKE CALIPER & ROTOR LH & RH

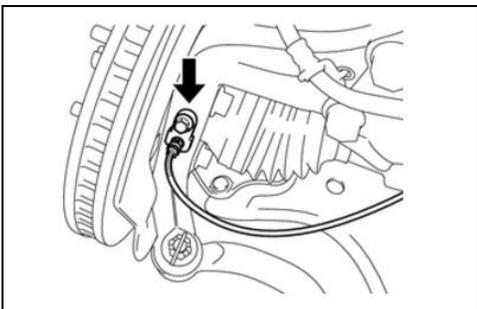
- Remove the 2 bolts securing the brake caliper to the steering knuckle.
- Remove the TRD brake caliper from the vehicle.
- Remove the TRD rotor from the vehicle.

Note: The TRD caliper's and rotor's will to be recovered. Return these to the parts department.



Note: DO NOT reuse the bolts removed from the TRD calipers. They are a different thread pitch than the OE caliper. **NEW** bolts must be used.

Note: The TRD caliper bolts will be recovered. Return these to the parts department.



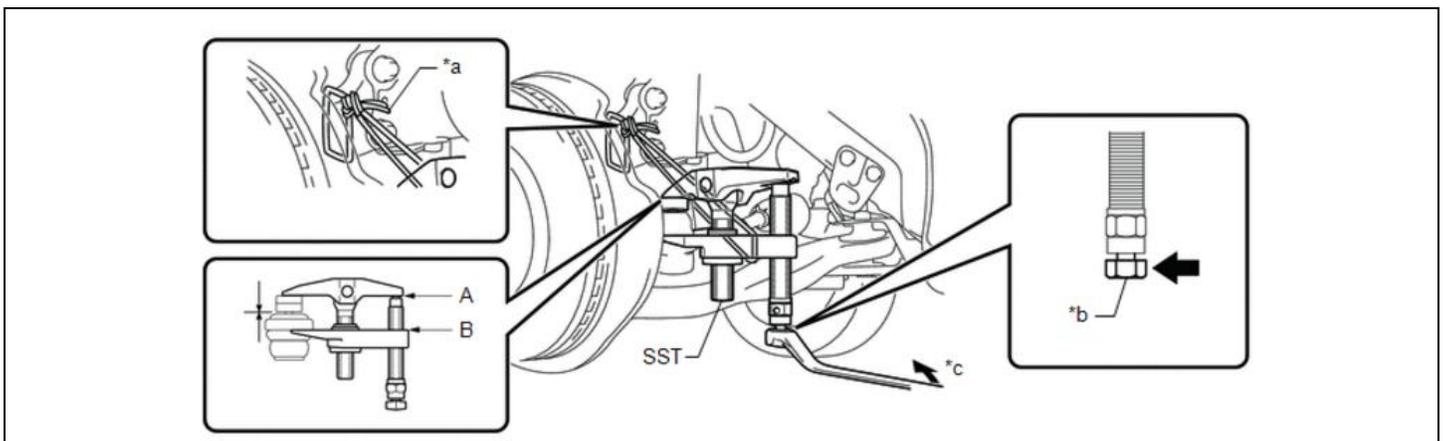
5. REMOVE SPEED SENSOR LH & RH

- Remove the bolt and clamp.
- Remove the speed sensor from the steering knuckle.

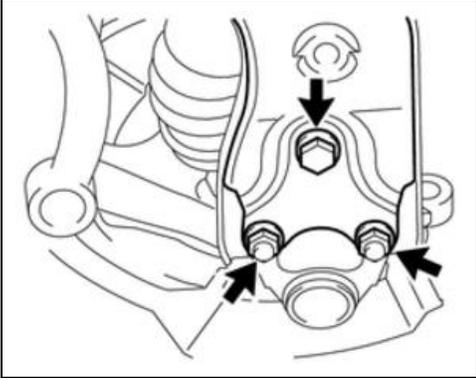
6. DISCONNECT TIE ROD END LH & RH

- Remove the cotter pin and nut.
- Using SST, disconnect the tie rod end from the steering knuckle.

SST: 09960-20010-01

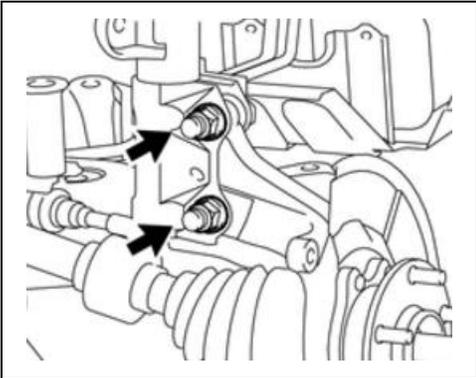


*a	Tie the string without allowing slack	*b	Place the wrench here
*c	Turn	-	-



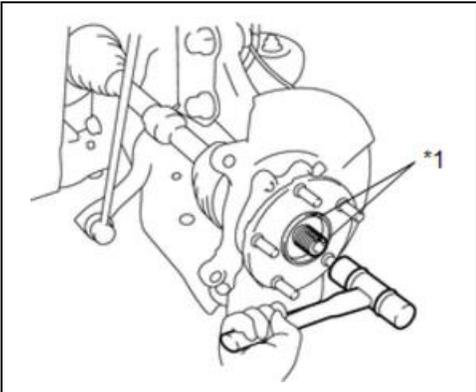
7. REMOVE STEERING KNUCKLE LH & RH

- a. Remove the bolt and 2 nuts

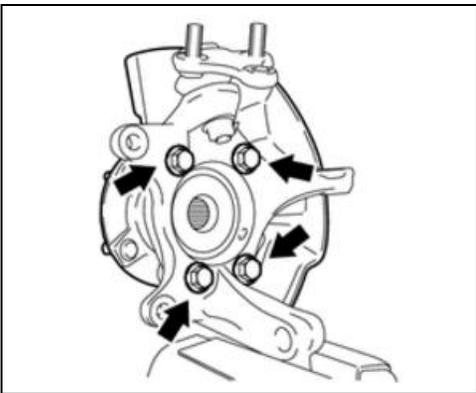


8. REMOVE STEERING KNUCKLE LH & RH

- a. Remove the 2 bolts and 2 nuts to separate the front strut assembly.



- b. Put matchmarks on the drive shaft and front axle hub.
c. Using a plastic-faced hammer to release the axle shaft, remove the steering knuckle assembly.

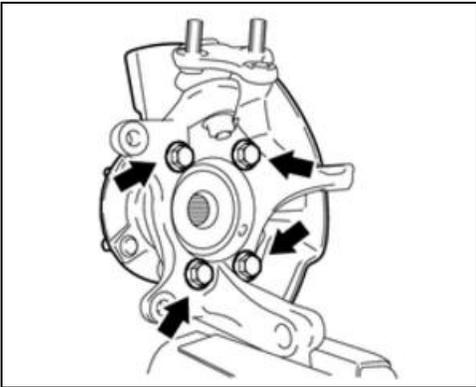


9. REMOVE AXLE HUB LH & RH

- a. Secure the steering knuckle in a vise.
b. Remove the 4 bolts and separate the axle hub from the steering knuckle.
c. Remove the brake dust cover.

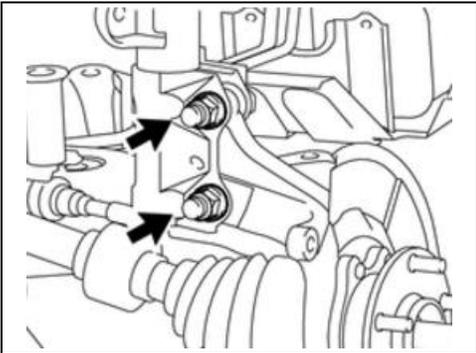
Note: The brake dust covers will be recovered. Return these to the parts department.

VIII. REASSEMBLY



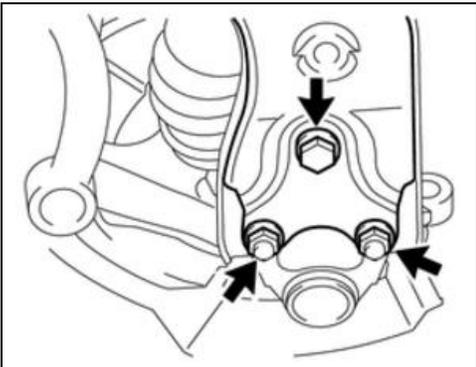
1. **INSTALL *NEW* DUST COVER AND AXLE HUB LH & RH**
 - a. Install the *NEW* brake dust cover.
 - b. Install the original axle hub and 4 bolts.

Torque: 71 ft.lbs {96 N·m, 979 kgf·cm}



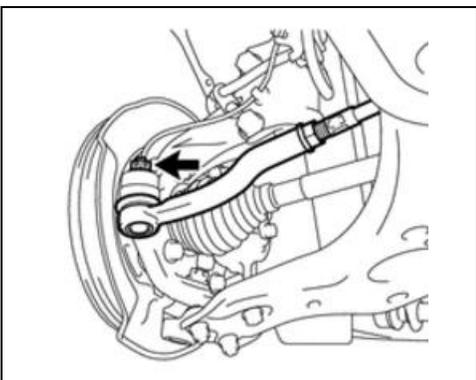
2. **INSTALL STEERING KNUCKLE LH & RH**
 - a. Align the matchmarks on the drive shaft and axle hub while guiding the driveshaft through the axle hub.
 - b. Install the steering knuckle to the strut assembly with 2 bolts and 2 nuts.

Torque: 177 ft.lbs {240 N·m, 2447 kgf·cm}



3. **INSTALL LOWER SUSPENSION ARM #1 LH & RH**
 - a. Connect the lower suspension arm #1 to the lower ball joint with the bolt and 2 nuts.

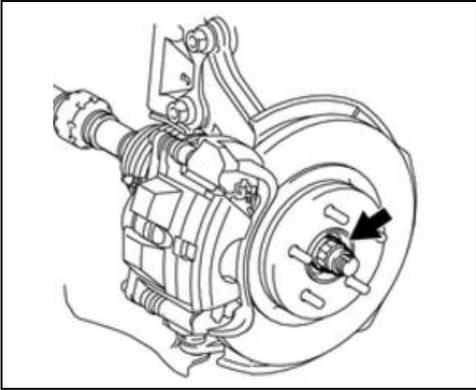
Torque: 66 ft.lbs {89 N·m, 908 kgf·cm}



4. **INSTALL TIE ROD END LH & RH**
 - a. Connect the tie rod end to the steering knuckle with the nut.

Torque: 36 ft.lbs {49 N·m, 500 kgf·cm}

 - b. Install a *NEW* cotter pin.



5. INSTALL **NEW AXLE SHAFT NUT LH & RH**

- a. Clean the threaded part of the drive shaft with a non-residue solvent.
- b. Install a **NEW** axle shaft nut.
- c. Using a 30mm socket, torque the axle shaft nut.

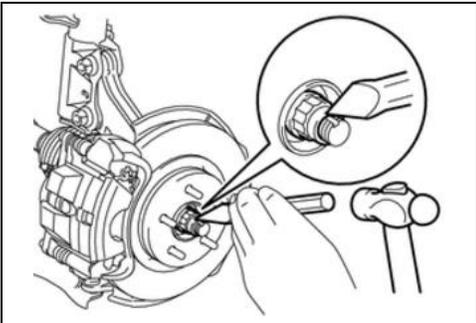
Torque:

for automatic Transaxle:

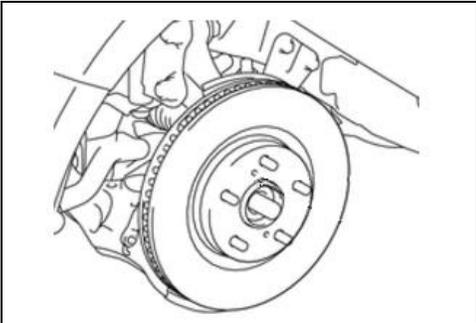
159 ft.lbs {216 N·m, 2203 kgf·cm}

for Manual Transaxle:

215 ft.lbs {292 N·m, 2978 kgf·cm}

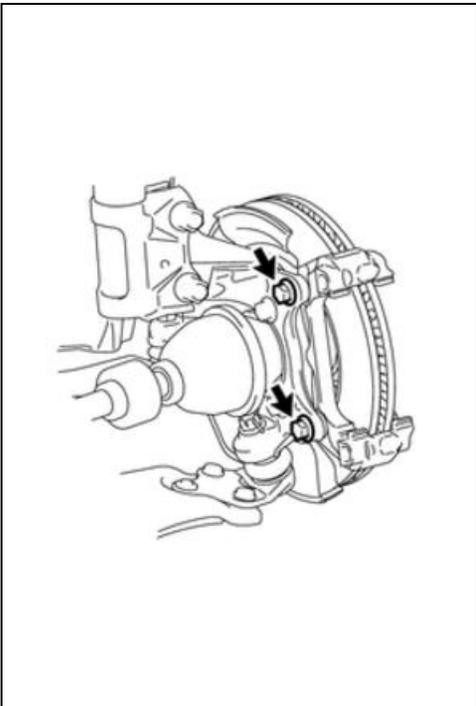


- d. Using a chisel and hammer, stake the **NEW** axle shaft nut.



6. INSTALL **NEW FRONT BRAKE DISC LH & RH**

- a. Guide the **NEW** front brake disc onto the axle hub studs.



7. INSTALL **NEW DISC BRAKE CYLINDER MOUNTING (BRACKET) LH & RH**

- a. Install the **NEW** disc brake cylinder mounting (bracket) to the steering knuckle with the 2 **NEW** bolts.

Torque: 79 ft.lbs {107 N·m, 1089 kgf·cm}

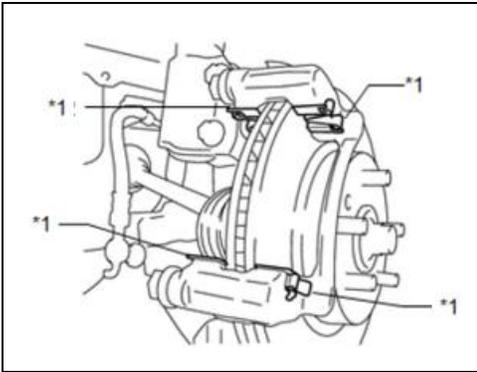


• DO NOT reuse the bolts removed from the TRD calipers. They are a different thread pitch than the OE caliper.

Use new
OE
Bolts



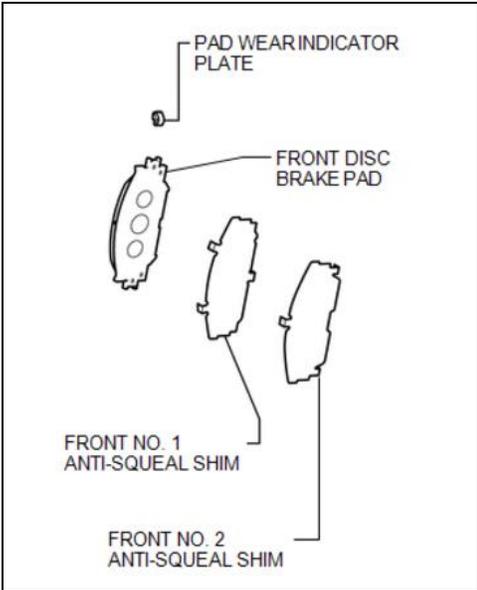
Return
coarse
thread
TRD
Bolts



8. INSTALL *NEW* BRAKE PADS LH & RH

a. Install the 4 *NEW* disc brake support plates.

*1 Front No. 1 disc brake pad support plate

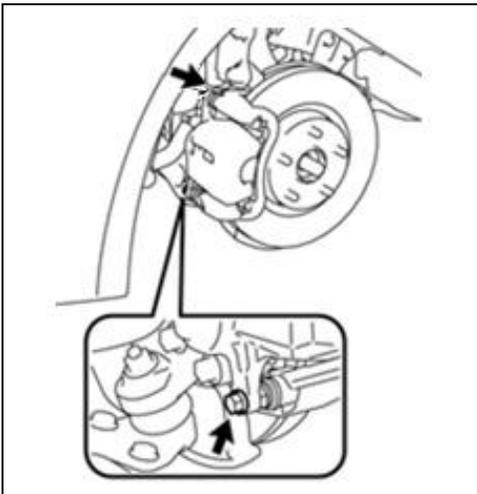


b. Install the *NEW* anti-squeal shims to the *NEW* disc brake pads.

Note: There are two shims installed on each pad.

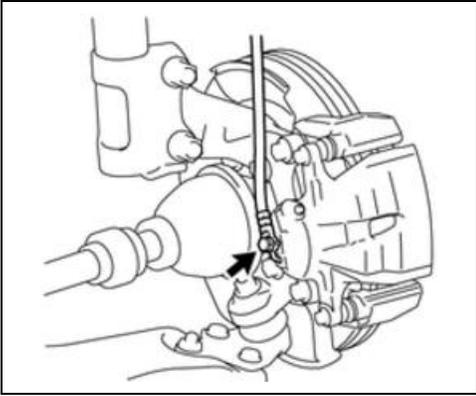
c. Install the *NEW* pad wear indicators plates to the pads.

d. Install the *NEW* disc brake pad assemblies into the disc brake cylinder mounting bracket.



e. Install the *NEW* disc brake cylinder assembly into place and install the 2 bolts.

Torque: 25 ft.lbs {34 N·m, 350 kgf·cm}



9. INSTALL *NEW* BRAKE CYLINDER (CALIPER) FLEXIBLE HOSE LH & RH

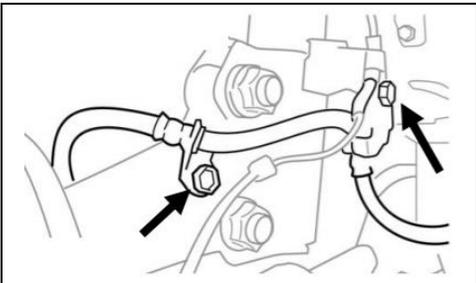
- a. Install a *NEW* flexible hose to the brake cylinder using a *NEW* Union bolt and a *NEW* gasket.

Torque: 22 ft.lbs {30 N·m, 310 kgf·cm}

Caliper Flexible Hose:

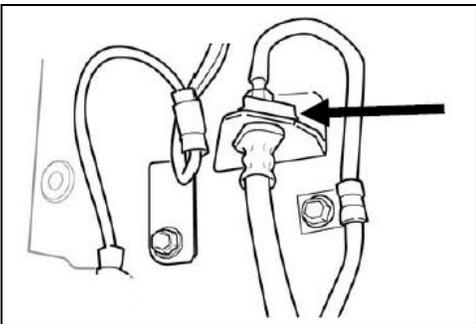
Left: 90947-02G31

Right: 90947-02G30

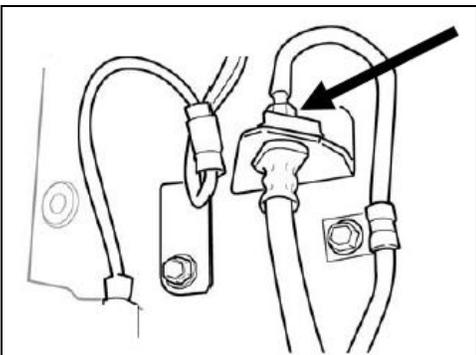


- b. Install the 2 bolts securing the *NEW* flexible hose to the steering knuckle and strut.

Torque: 14 ft.lbs {19 N·m, 192 kgf·cm}

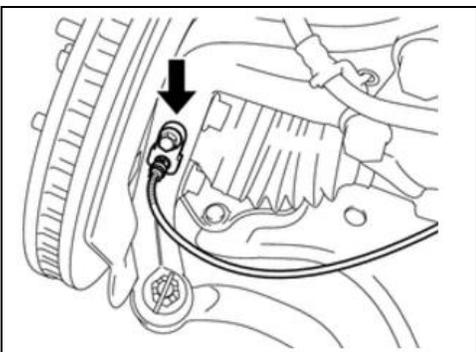


- c. Install the *NEW* brake hose retaining clip.



- d. Using a flare nut wrench, install the steel line union to the flexible brake hose.

Torque: 11 ft.lbs {15 N·m, 155 kgf·cm}



10. INSTALL SPEED SENSOR LH & RH

- a. Install the bolt and clamp.

Torque: 76 in.lbs {8.5 N·m, 87 kgf·cm}

11. BLEED BRAKE LINES

a. Bleed the air from the brake lines. Reference the appropriate Repair Manual link for the procedure:

tC				2011	2012	2013	2014	2015	2016
xB	2008	2009	2010	2011	2012	2013	2014	2015	

12. INSTALL FRONT WHEELS



Torque: 76 ft.lbs {103 N·m, 1050 kgf·cm}

13. ADJUST FRONT WHEEL ALIGNMENT

◀ VERIFY REPAIR QUALITY ▶

- Check for brake fluid leaks.
- Confirm brake performance.
- Confirm brake fluid level in the reservoir.

If you have any questions regarding this update, please contact your regional representative.

10. APPENDIX

A. PARTS DISPOSAL

As required by Federal Regulations, please make sure all recalled parts (original parts) removed from the vehicle are disposed of in a manner in which they will not be reused, **unless requested for parts recovery return.**

B. CAMPAIGN DESIGNATION DECORDER

