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

Verify Vehicle Eligibility
1. Check the TIS Vehicle Inquiry System

Not Covered

No further action required

Covered

Determine if vehicle is equipped with TRD Brake kit

YES

Remove TRD Brake kit

NO

Install Original Equipment brake kit

Campaign completed, return the vehicle to the customer

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

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Part Description</th>
<th>Quantity</th>
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</thead>
<tbody>
<tr>
<td>04008-36212</td>
<td>Brake Kit (xB)</td>
<td>1</td>
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</table>

*The kit above includes the following parts:

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Part Description</th>
<th>Quantity</th>
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<tbody>
<tr>
<td>43512-42040</td>
<td>DISC, FRONT</td>
<td>2</td>
</tr>
<tr>
<td>47782-12250</td>
<td>COVER, DISC BRAKE DUST, FRONT LH</td>
<td>1</td>
</tr>
<tr>
<td>47781-12250</td>
<td>COVER, DISC BRAKE DUST, FRONT RH</td>
<td>1</td>
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<tr>
<td>95381-03020</td>
<td>PIN, Cotter</td>
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<tr>
<td>90468-08035</td>
<td>CLIP</td>
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<tr>
<td>90119-08868</td>
<td>BOLT, W/WASHER</td>
<td>4</td>
</tr>
<tr>
<td>47389-50020</td>
<td>GASKET (FOR FRONT FLEXIBLE HOSE)</td>
<td>2</td>
</tr>
<tr>
<td>90947-02G31</td>
<td>HOSE, FLEXIBLE, NO.2</td>
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<tr>
<td>90947-02G30</td>
<td>HOSE, FLEXIBLE, NO.1</td>
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<tr>
<td>90080-17238</td>
<td>NUT (FOR FRONT AXLE SHAFT)</td>
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<tr>
<td>900401-A0001</td>
<td>BOLT, UNION</td>
<td>2</td>
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<tr>
<td>90080-10067</td>
<td>BOLT, HEXAGON (FOR BRAKE CALIPER)</td>
<td>4</td>
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<tr>
<td>04465-0R010</td>
<td>PAD KIT, DISC BRAKE, FRONT</td>
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<tr>
<td>04945-0R010</td>
<td>SHIM KIT, ANTI SQUEAL, FRONT</td>
<td>1</td>
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<tr>
<td>04947-0R010</td>
<td>FITTING KIT, DISC BRAKE, FRONT</td>
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<tr>
<td>47750-0R010</td>
<td>CYLINDER ASSY, DISC BRAKE, LH</td>
<td>1</td>
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<tr>
<td>47730-0R010</td>
<td>CYLINDER ASSY, DISC BRAKE, RH</td>
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<thead>
<tr>
<th>Part Number</th>
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<th>Quantity</th>
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<tbody>
<tr>
<td>04008-36121</td>
<td>Brake Kit (xC)</td>
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*The kit above includes the following parts:

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<thead>
<tr>
<th>Part Number</th>
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<th>Quantity</th>
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<tbody>
<tr>
<td>43512-42050</td>
<td>DISC, FRONT</td>
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<tr>
<td>47782-0R010</td>
<td>COVER, DISC BRAKE DUST, FRONT LH</td>
<td>1</td>
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<tr>
<td>47781-0R010</td>
<td>COVER, DISC BRAKE DUST, FRONT RH</td>
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</tr>
<tr>
<td>95381-03025</td>
<td>PIN, Cotter</td>
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<tr>
<td>90468-08040</td>
<td>CLIP</td>
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<tr>
<td>91551-80818</td>
<td>BOLT, FLANGE</td>
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<tr>
<td>47389-50020</td>
<td>GASKET (FOR FRONT FLEXIBLE HOSE)</td>
<td>2</td>
</tr>
<tr>
<td>90947-02G31</td>
<td>HOSE, FLEXIBLE, NO.2</td>
<td>1</td>
</tr>
<tr>
<td>90947-02G30</td>
<td>HOSE, FLEXIBLE, NO.1</td>
<td>1</td>
</tr>
<tr>
<td>90080-17238</td>
<td>NUT (FOR FRONT AXLE SHAFT)</td>
<td>2</td>
</tr>
<tr>
<td>900401-A0001</td>
<td>BOLT, UNION</td>
<td>2</td>
</tr>
<tr>
<td>90080-10067</td>
<td>BOLT, HEXAGON (FOR BRAKE CALIPER)</td>
<td>4</td>
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<tr>
<td>04465-0R031</td>
<td>PAD KIT, DISC BRAKE, FRONT</td>
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<td>04945-0R030</td>
<td>SHIM KIT, ANTI SQUEAL, FRONT</td>
<td>1</td>
</tr>
<tr>
<td>04947-0R010</td>
<td>FITTING KIT, DISC BRAKE, FRONT</td>
<td>1</td>
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<tr>
<td>47750-02410</td>
<td>CYLINDER ASSY, DISC BRAKE, LH</td>
<td>1</td>
</tr>
<tr>
<td>47730-02410</td>
<td>CYLINDER ASSY, DISC BRAKE, RH</td>
<td>1</td>
</tr>
</tbody>
</table>

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

SST – These Special Service Tools required for this repair:

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Tool Name</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>09930-00010-01</td>
<td>Drive Shaft Nut Chisel</td>
<td>1</td>
</tr>
<tr>
<td>09960-20010-01</td>
<td>Ball Joint Puller</td>
<td>1</td>
</tr>
</tbody>
</table>

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

- Front shock absorber assembly with coil spring
- Front flexible hose
- Front speed sensor LH
- Front drive shaft assembly
- Steering knuckle
- Front disc brake caliper assembly LH
- Front disc brake dust cover
- Lower NO. 1 front suspension arm sub-assembly LH
- Front axle hub sub-assembly LH
- Front axle shaft nut LH

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
7
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.

   **OE Caliper and Rotor**
   - Floating Single Piston Caliper
   - Non-drilled rotor

   **TRD Brake kit**
   - Red painted 4 piston fixed caliper
   - TRD logo on face of caliper
   - Cross-drilled rotor

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

   Is the vehicle equipped with OE Caliper and Rotor or a TRD Brake kit?

   OE

   Replacement is not necessary. Campaign is now complete. Return the vehicle to the customer.

   TRD

   Continue to Section VII. Disassembly.
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  
   a. Remove the 2 bolts securing the brake caliper to the steering knuckle.  
   b. Remove the TRD brake caliper from the vehicle.  
   c. 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  
   a. Remove the bolt and clamp.  
   b. Remove the speed sensor from the steering knuckle.

6. DISCONNECT TIE ROD END LH & RH  
   a. Remove the cotter pin and nut.  
   b. Using SST, disconnect the tie rod end from the steering knuckle.  

   **SST: 09960-20010-01**
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\cdot m, 979 kgf\cdot 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\cdot m, 2447 kgf\cdot 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\cdot m, 908 kgf\cdot 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\cdot m, 500 kgf\cdot 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 \(\{216 \text{ N}\cdot\text{m}, 2203 \text{ kgf}\cdot\text{cm}\}\)
      for Manual Transaxle:
      215 ft.lbs \(\{292 \text{ N}\cdot\text{m}, 2978 \text{ kgf}\cdot\text{cm}\}\)
   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 \(\{107 \text{ N}\cdot\text{m}, 1089 \text{ kgf}\cdot\text{cm}\}\)

   • DO NOT reuse the bolts removed from the TRD calipers. They are a different thread pitch than the OE caliper.
8. **INSTALL NEW BRAKE PADS LH & RH**

   a. Install the 4 NEW disc brake support plates.

   ![Diagram of disc brake 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.

   ![Diagram of disc brake pads and wear indicators]

   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:

   |-----|---|---|------|------|------|------|------|------|

12. INSTALL FRONT WHEELS

   Impact guns MUST NOT be used on splined lug nuts.

   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 DECODER

<table>
<thead>
<tr>
<th>H</th>
<th>0</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year Campaign is Launched</td>
<td>Repair Phase</td>
<td>Current Campaign Letter for this year</td>
</tr>
<tr>
<td>B = 2011</td>
<td>0 = Remedy</td>
<td>1st Campaign = A</td>
</tr>
<tr>
<td>C = 2012</td>
<td>1 = Interim (Remedy not yet available)</td>
<td>2nd Campaign = B</td>
</tr>
<tr>
<td>D = 2013</td>
<td>“1” will change to “0” when the Remedy is available</td>
<td>3rd Campaign = C</td>
</tr>
<tr>
<td>E = 2014</td>
<td>(May use other characters in unique cases)</td>
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<td>F = 2015</td>
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<td>G = 2016</td>
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<td>H = 2017</td>
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<tr>
<td>Etc...</td>
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<td>Etc...</td>
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Example:
C1B = Launched in 2012, Interim Phase, 2nd Campaign Launched in 2012
E0A = Launched in 2014, Remedy Phase, 1st Campaign Launched in 2014