Clunk Noise from Front Suspension

Service Category Suspension

Section Front Suspension **Market** USA

Toyota Supports ASE Certification

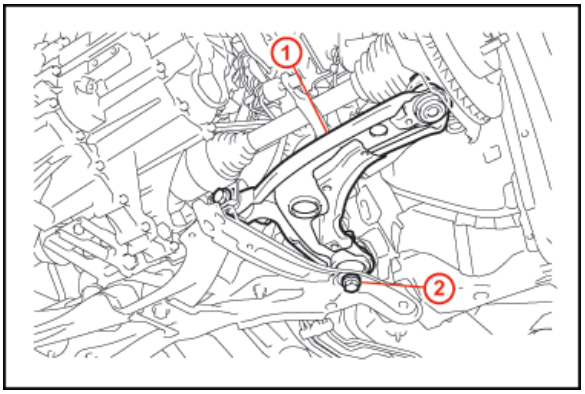
Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2007 – 2011	Yaris	Body Type(s): 3Dr. Hatch Back, 4Dr. Sedan, 5Dr. Hatch Back

Introduction

Some 2007 – 2011 model year Yaris vehicles may exhibit a noise from the front area that is heard under acceleration/deceleration, when braking, or when driving over an uneven road surface. New front lower suspension arm, crossmember, and No. 2 front lower suspension arm bolts are now available to address this condition.

Figure 1.



1	Front Lower Suspension Arm
2	No. 2 (Bolt B) Front Lower Suspension Arm Bolt

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Production Change Information

This TSB applies to 2007 – 2011 Yaris Sedan and Yaris Hatchback vehicles produced **BEFORE** the Production Change Effective VINs shown below.

MODEL	PLANT	PRODUCTION CHANGE EFFECTIVE VIN
Hatchback	Shokki	JTDJT4K3#B5330321
		JTDKT4K3#B5330321
Sedan	Kanto	JTDBT4K3#B1404325
	Central	JTDBT4K3#B4081013

Parts Information

PREVIOUS PART NUMBER	CURRENT PART NUMBER	PART NAME	QTY
90119-14126	90119-14144	No. 2 Lower Control Arm Bolt	2
48068-59135	48068-59145	Right Hand Front Lower Suspension Arm	1
48069-59125	48069-59135	Left Hand Front Lower Suspension Arm	1
51201-52080	51201-52083	Crossmember	1

Warranty Information

OP CODE	DESCRIPTION	TIME	OFP	T1	T2
SU1007	Replace Lower Control Arms, Crossmember, No. 2 Front Lower Suspension Bolts and Apply Seam Sealer and Paint to Underbody (front alignment included)	5.5	4806#-48040	91	99

APPLICABLE WARRANTY

- **This repair is covered under the Toyota Comprehensive Warranty. This warranty is in effect for 36 months or 36,000 miles, whichever occurs first, from the vehicle's in-service date.**
- **Warranty application is limited to occurrence of the specified condition described in this bulletin.**

Required Tools & Equipment

REQUIRED EQUIPMENT	SUPPLIER	PART NUMBER	QTY
TIS Techstream* or Techstream Lite NOTE: Software version 5.10.029 or later is required.	ADE	TSPKG1 or TSLITEDLR01	1

* Essential SST.

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Required Tools & Equipment (Continued)

NOTE

Additional Techstream units may be ordered by calling Approved Dealer Equipment (ADE) at 1-800-368-6787.

SPECIAL SERVICE TOOLS (SST)	PART NUMBER	QTY
Ball Joint Puller*	09960-20010-01	1
Rack and Pinion Holding Tool*	09612-00012	1

* Essential SST.

NOTE

Additional SSTs may be ordered by calling 1-800-933-8335.

REQUIRED MATERIALS	PART NUMBER	QTY
Applicator Gun	—	1
Body Sealant: 3M Urethane Seam Sealer	08360	As Needed

Repair Procedure

1. Drive the vehicle over uneven road surface to confirm that the condition is coming from the lower control arm assemblies using chassis ears or equivalent and place the vehicle on a lift.
2. Inspect the front control arms, No. 2 Control arm bolts and front cross member for any signs of corrosion.

Front Lower Suspension Arm Removal

1. Remove the front suspension cross member sub-assembly. Refer to the Technical Information System (TIS), applicable model and model year Repair Manual:
   - 2007 / 2008 / 2009 / 2010 / 2011 Yaris (Sedan):

     Steering – Power Assist Systems – "Power Steering: Steering Gear (for Sedan): Removal"
   - 2007 / 2008 / 2009 / 2010 / 2011 Yaris (Hatchback):

     Steering – Power Assist Systems – "Power Steering: Steering Gear (for Hatchback): Removal"

NOTE

Use a transmission jack or equivalent to support the cross member and remove and save the 4 bolts that support the cross member assembly to the body.

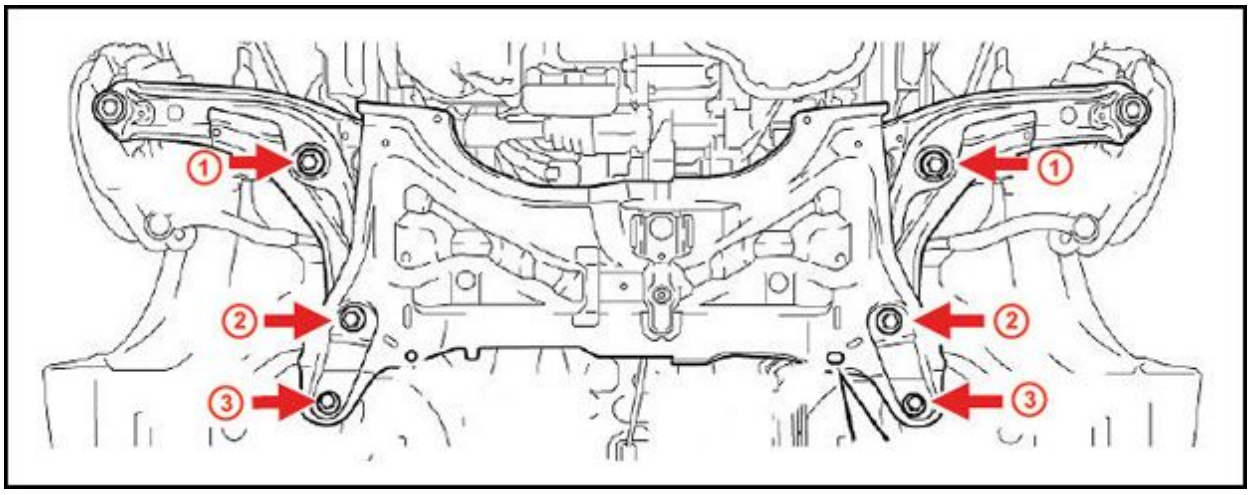
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Repair Procedure

Front Lower Suspension Arm Removal (Continued)

Figure 2.



1	Bolt A
2	Bolt B
3	Bolt C

NOTE

Discard bolt B after removal. It will NOT be reused during installation.

2. Remove power steering gear.
3. Remove front stabilizer bar.
4. Remove engine moving control rod cover.
5. Remove engine moving control rod.
6. Remove both front lower suspension arm sub assemblies.

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Clunk Noise from Front Suspension

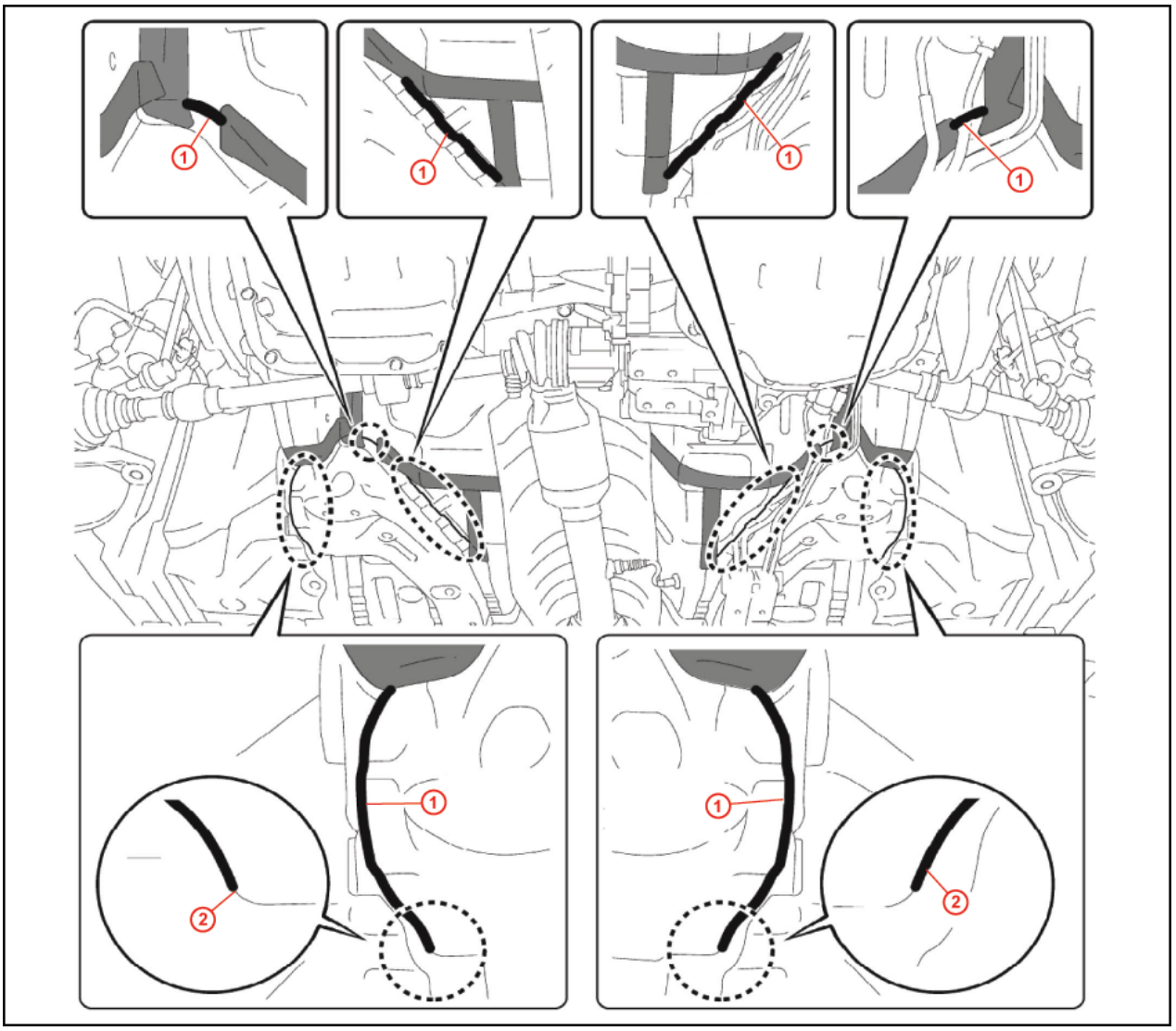
Repair Procedure (Continued)

Body Panel Sealing

NOTE

Body sealer must always be applied when performing this repair. Any where sealer is applied must be cleaned prior to application.

Figure 3.



1	Sealant Application Areas
2	Round Tip

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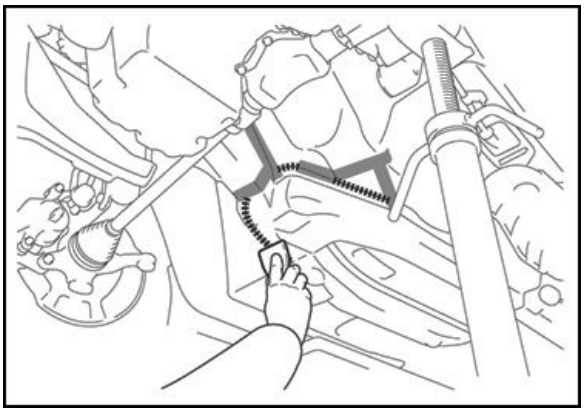
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Repair Procedure

Body Panel Sealing (Continued)

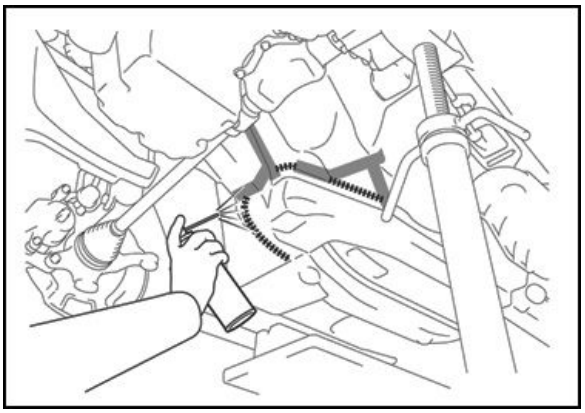
1. Sand the area where body sealer will be applied using sandpaper (#400~#800).

Figure 4.



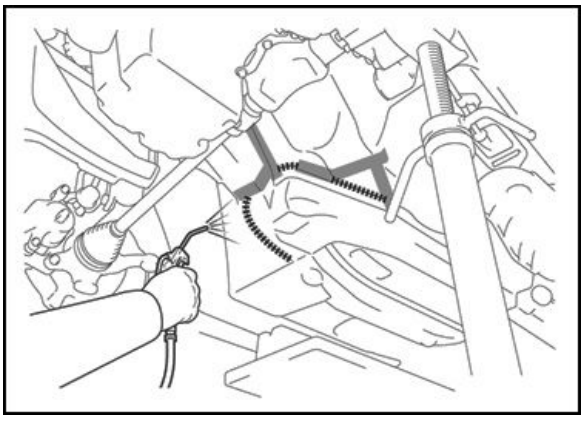
2. Clean and degrease the sanded area with a suitable paint preparation cleaner/degreaser product.

Figure 5.



3. Clean the coating area using an air gun.

Figure 6.



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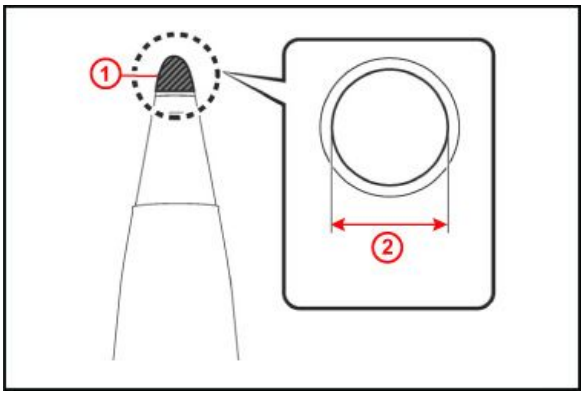
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Repair Procedure

Body Panel Sealing (Continued)

4. Cut the tip of the sealer gun nozzle to create approximately 3 mm diameter opening.

Figure 7.



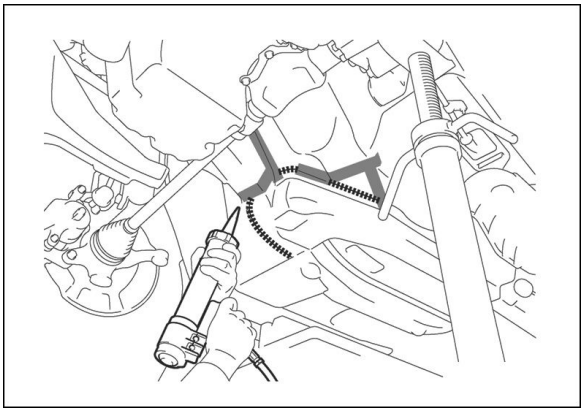
1	Cut
2	3 mm

5. Apply body sealer.

NOTE

Apply body sealer so that it fills into the seams of the weld panels without leaving any breaks or gaps in the sealer.

Figure 8.



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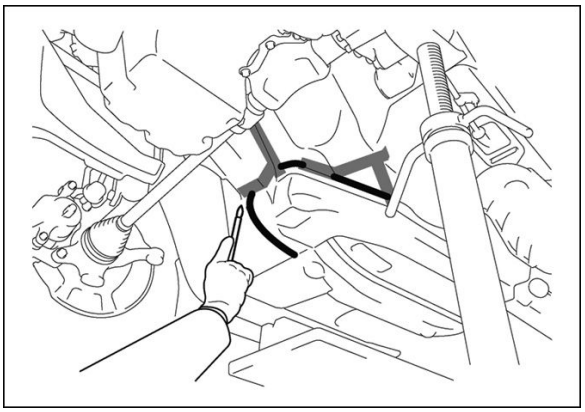
Clunk Noise from Front Suspension

Repair Procedure

Body Panel Sealing (Continued)

6. Finish by smoothing the body sealer with a nylon bristled brush.

Figure 9.

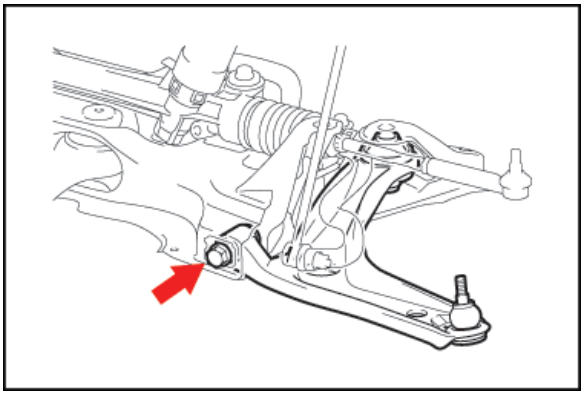


7. After the sealer has dried, paint the areas with body sealer.

Front Lower Suspension Arm Installation

1. Temporarily tighten the NEW front lower suspension arm sub-assembly and NEW front suspension crossmember sub-assembly with the bolt.

Figure 10.



2. Install engine moving control rod.
   Torque: 100 N*m (1020 kgf*cm, 74 ft*lbf)
3. Install engine moving control rod cover.

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Clunk Noise from Front Suspension

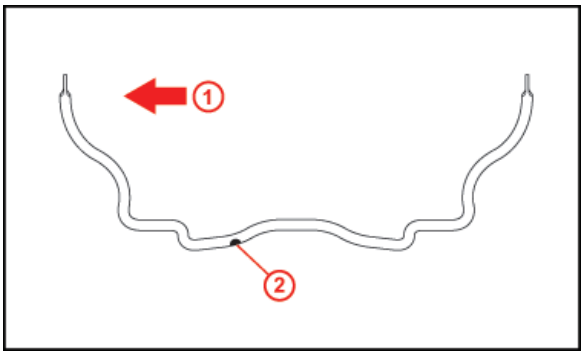
Repair Procedure

Front Lower Suspension Arm Installation (Continued)

4. Install front stabilizer bar.

> **NOTE**
>
> **Install the front stabilizer bar onto the crossmember with the paint mark on the left side of the vehicle.**

Figure 11.

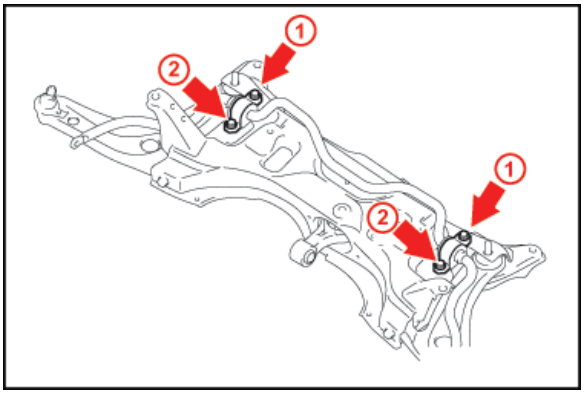


1	Left Side
2	Paint Mark

5. Temporarily tighten with 2 bolts and 2 brackets. Tighten the 4 bolts to the specified torque, starting with bolts B and then tightening A.

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

Figure 12.



1	Bolt A
2	Bolt B

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Repair Procedure

Front Lower Suspension Arm Installation (Continued)

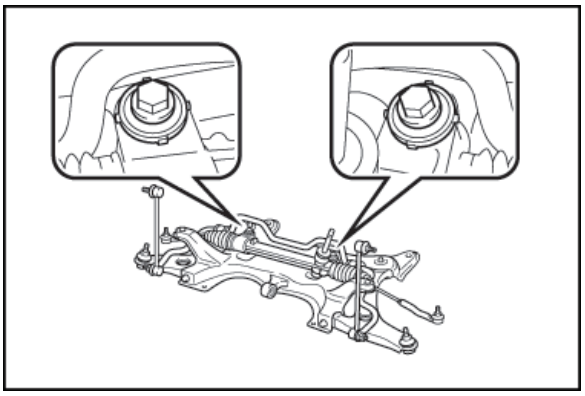
6. Install power steering gear.

   Torque: 96 N*m (979 kgf*cm, 71 ft*lbf)

   NOTE

   Keep the nut from rotating while turning the bolt.

Figure 13.



7. Install front suspension crossmember sub-assembly. Refer to TIS, applicable model and model year Repair Manual:

   - 2007 / 2008 / 2009 / 2010 / 2011 Yaris (Sedan):

     Steering – Power Assist Systems – "Power Steering: Steering Gear (for Sedan): Installation"

   - 2007 / 2008 / 2009 / 2010 / 2011 Yaris (Hatchback):

     Steering – Power Assist Systems – "Power Steering: Steering Gear (for Hatchback): Installation"

   NOTE

   Support the front suspension crossmember with a tool such as a transmission jack.

8. Temporarily install the front suspension crossmember sub-assembly with the 6 bolts.

   NOTE

   - **Use only NEW bolt B. Do NOT reuse the old bolt B.**
   - **Do NOT fully tighten NEW bolt B. This will be torqued to specification on step 20.**
   - **Insert a punch or similar tool into the datum hole in a vertical orientation.**
   - **If a punch can not be inserted into the datum hole vertically, loosen all the bolts and then insert the punch again.**

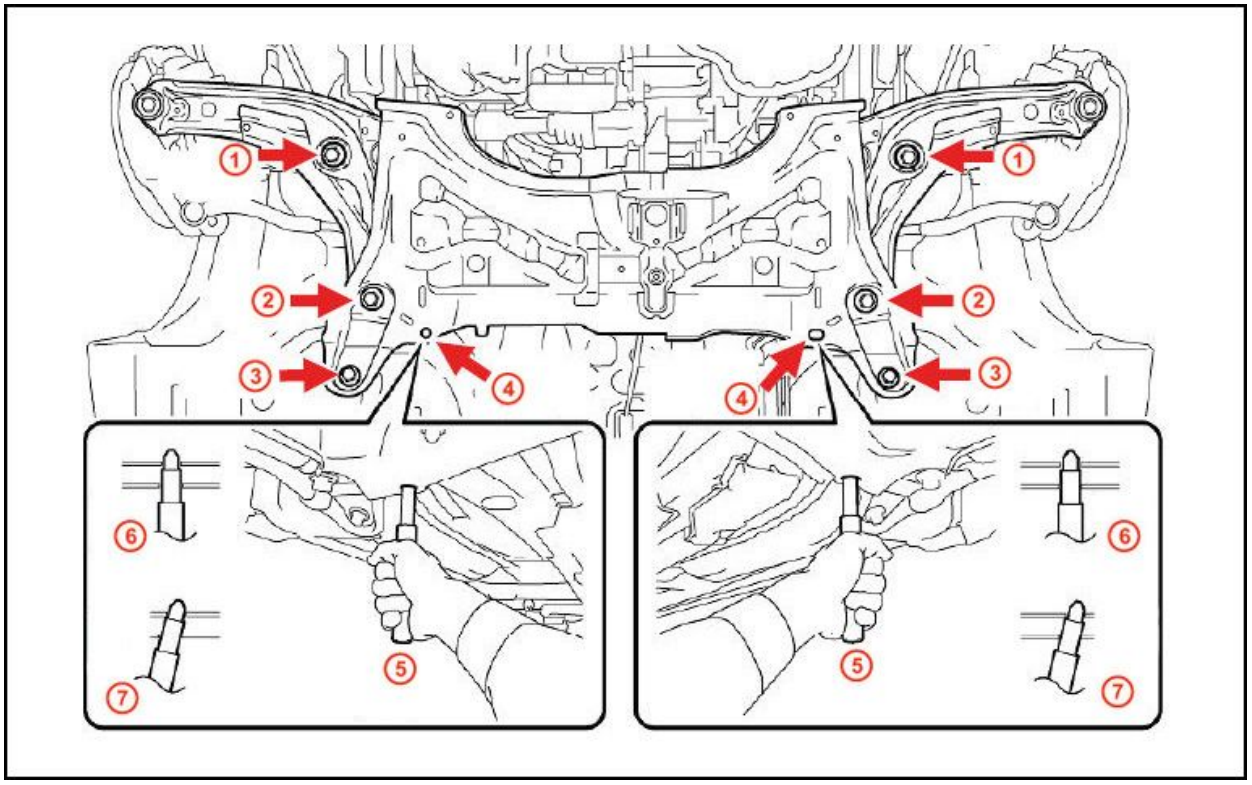
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Repair Procedure

Front Lower Suspension Arm Installation (Continued)

Figure 14.



1	Bolt A (38 mm) Torque: 70 N*m (714 kgf*cm, 52 ft*lbf)
2	Temporarily Tighten Bolt B (99 mm)
3	Bolt C (45 mm) Torque: 95 N*m (969 kgf*cm, 70 ft*lbf)
4	Datum Hole
5	Punch
6	Correct Punch Location
7	Incorrect Punch Location

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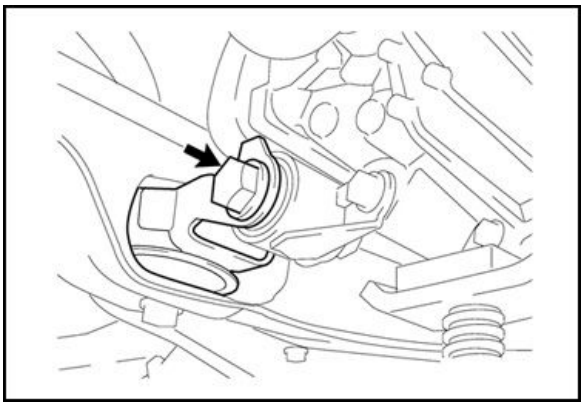
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Repair Procedure

Front Lower Suspension Arm Installation (Continued)

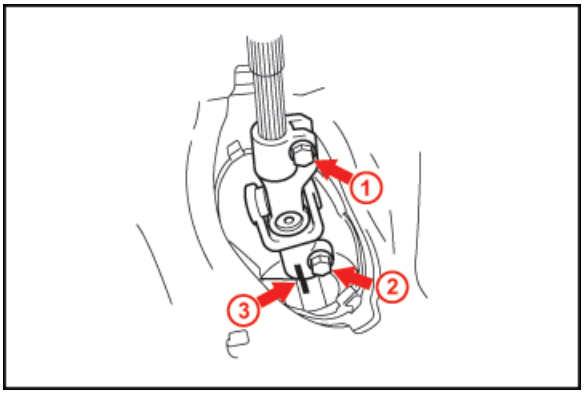
9. Install the engine moving control rod with the bolt.
   Torque: 120 N*m (1224 kgf*cm, 89 ft*lbf)

Figure 15.



10. Install no. 1 steering column hole cover sub-assembly.
11. Install steering sliding yoke sub-assembly.
    A. Align the matchmarks and install the sliding yoke onto the intermediate shaft.
    B. Tighten bolt A.
       Torque: 35 N*m (360 kgf*cm, 26 ft*lbf)
    C. Tighten bolt B.
       Torque: 35 N*m (360 kgf*cm, 26 ft*lbf)

Figure 16.



1	Bolt A
2	Bolt B
3	Matchmark

12. Install column hole cover silencer sheet.

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Clunk Noise from Front Suspension

Repair Procedure

Front Lower Suspension Arm Installation (Continued)

13. Install front lower suspension arm sub-assembly.

A. Using a 19 mm torque wrench extension, Install the NEW castle nut.

Without a 19 mm torque wrench extension:

Torque: 98 N*m (1000 kgf*cm, 72 ft*lbf)

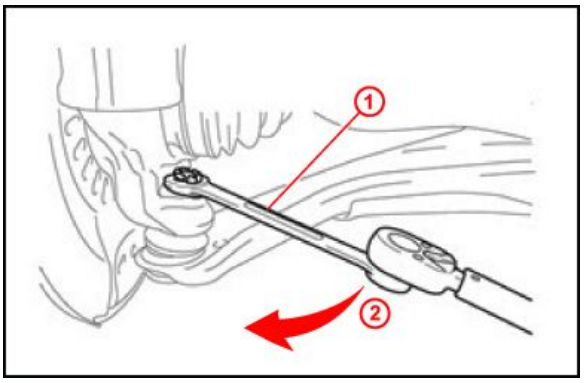
With a 19 mm torque wrench extension:

Torque: 62 N*m (632 kgf*cm, 46 ft*lbf)

NOTE

- **Use only a NEW castle nut. A new nut and clip are included with the new front lower suspension control arm.**
- **Use a torque wrench with a fulcrum length of 260 mm (10.23 in.).**
- **Do NOT allow grease to get on the screw or in the tapered hole.**
- **If the holes for the clip are not aligned, tighten the nut further up to 60°.**

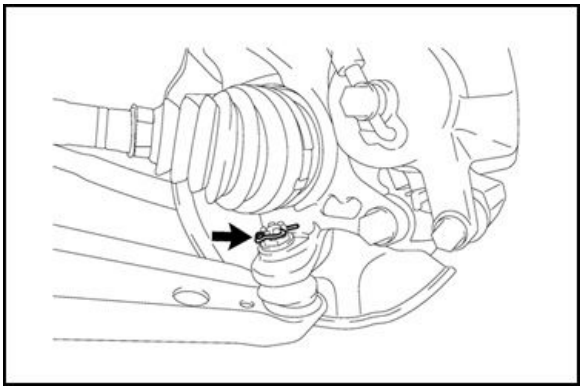
Figure 17.



1	Torque Wrench Extension
2	Turn

B. Install the NEW clip.

Figure 18.



14. Install tie rod end sub-assembly.

Torque: 49 N*m (500 kgf*cm, 36 ft*lbf)

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Clunk Noise from Front Suspension

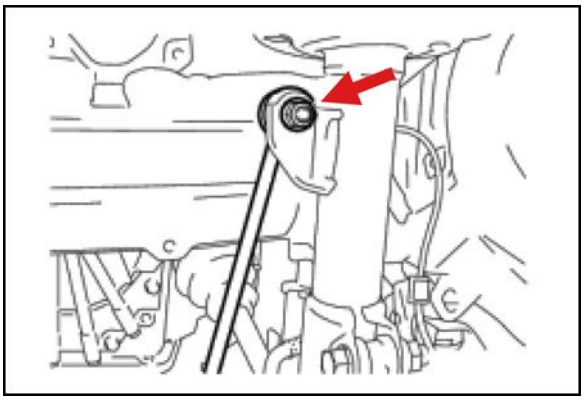
Repair Procedure

Front Lower Suspension Arm Installation (Continued)

15. Install front stabilizer link assembly.
    Torque: 74 N*m (755 kgf*cm, 55 ft*lbf)

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

Figure 19.



16. Install front wheel.
    Torque: 103 N*m (1050 kgf*cm, 76 ft*lbf)
17. Unsecure steering wheel.
18. Position wheels facing straight ahead.
19. Bounce the vehicle up and down several times to stabilize the suspension.
20. Fully tighten the 2 bolts on the front lower suspension.

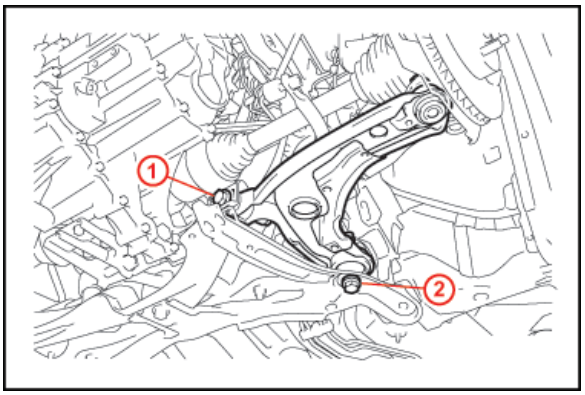
    Bolt A:

    Torque: 137 N*m (1397 kgf*cm, 101 ft*lbf)

    Bolt B:

    Torque: 151 N*m (1540 kgf*cm, 111 ft*lbf)

Figure 20.



1	Bolt A
2	Bolt B

21. Inspect and adjust front wheel alignment.
22. Write down radio presets. (w/ VSC)

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Clunk Noise from Front Suspension

Repair Procedure

Front Lower Suspension Arm Installation (Continued)

23. Disconnect the cable from the negative (–) battery terminal for MORE THAN two (2) seconds. (w/ VSC)
24. Connect cable to negative battery terminal. (w/ VSC)
25. Reprogram radio with presets.
26. Perform yaw rate sensor zero point calibration. (w/ VSC)
    - 2010 / 2011 Yaris:

      Brake – Brake Control/Dynamic Control System – "Vehicle Stability Control System: Calibration"
27. Perform torque sensor zero point calibration. (w/ VSC)
    - 2010 / 2011 Yaris:

      Steering – Power Steering – "Power Steering System: Calibration"
28. Reinitialize all applicable systems available on the vehicle (power window, sunroof, power lift door, etc.).
29. Test drive vehicle and confirm noise is no longer present.

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