

2008 Scion xD
2008 DRIVELINE/AXLES Drive Shaft - xD

2008 DRIVELINE/AXLES

Drive Shaft - xD

DRIVE SHAFT SYSTEM

PROBLEM SYMPTOMS TABLE

HINT:

Use the table below to help determine the cause of the problem symptom. The potential causes of the symptoms are listed in order of probability in the "Suspected area" column of the table. Check each symptom by checking the suspected areas in the order they are listed. Replace parts as necessary.

PROBLEM SYMPTOMS CHART

Symptom	Suspected Area	See
Front wheel shimmy	Front drive shaft (worn)	<u>FRONT DRIVE SHAFT ASSEMBLY</u>

FRONT DRIVE SHAFT ASSEMBLY

COMPONENTS

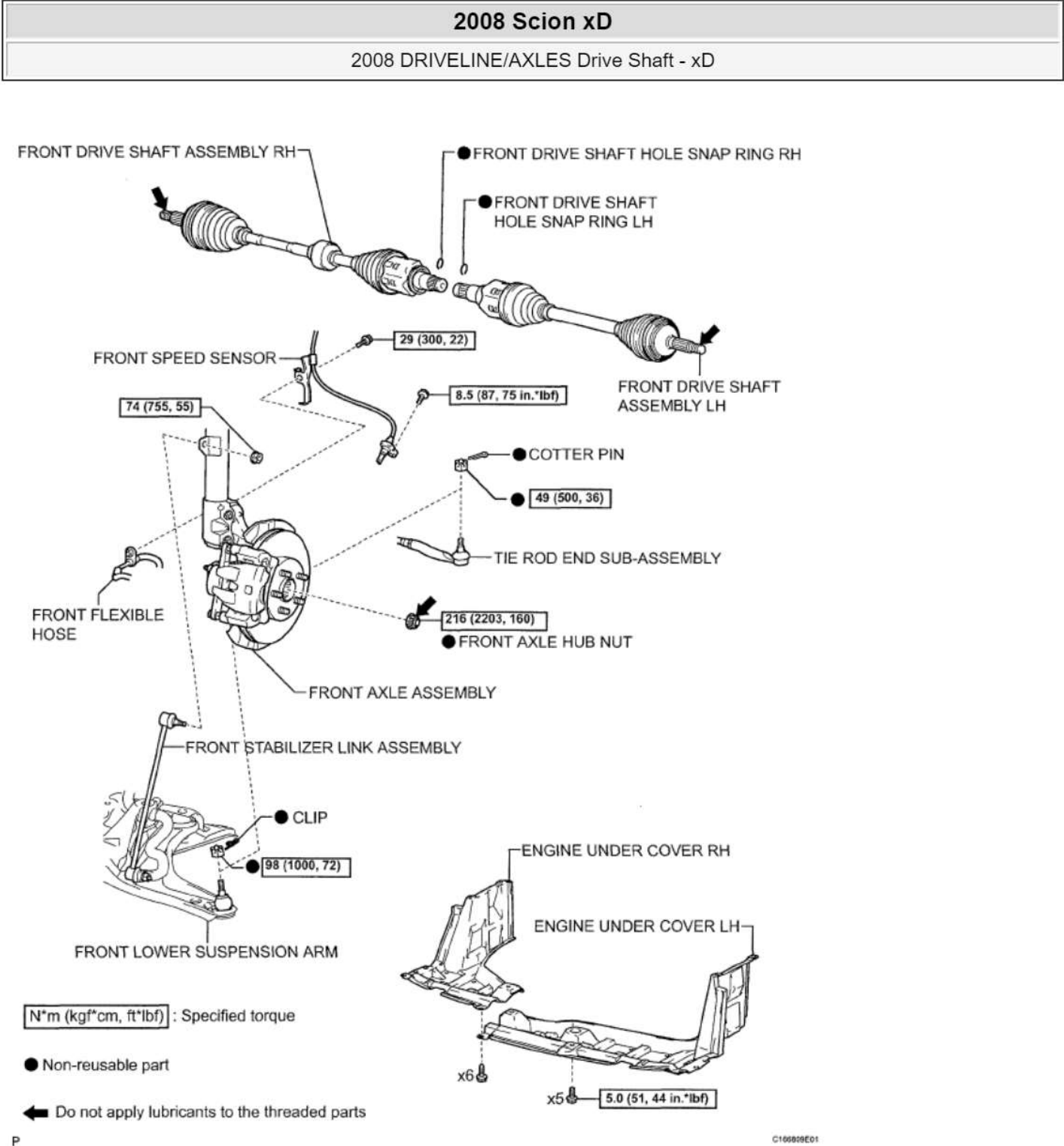
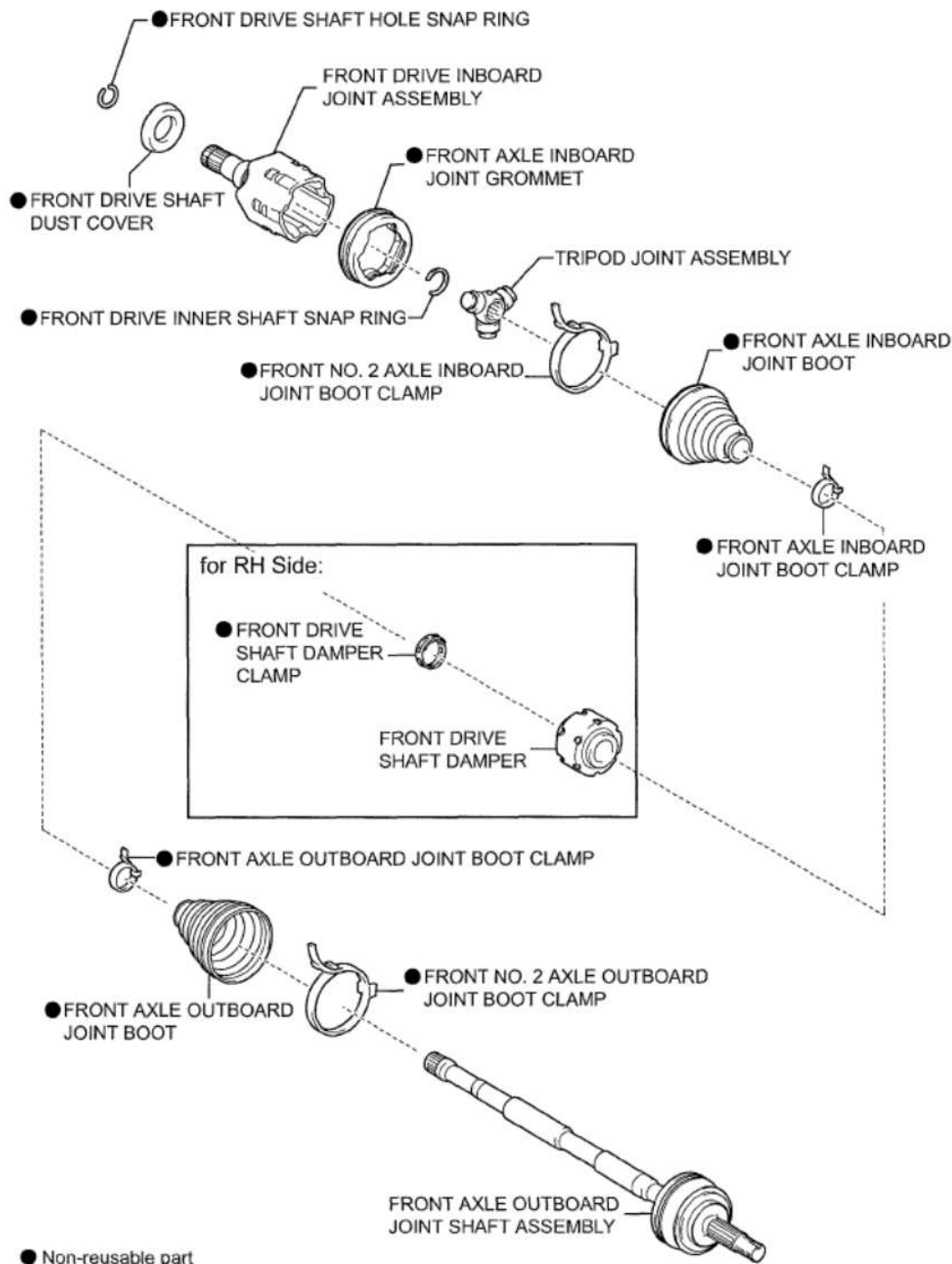


Fig. 1: Identifying Front Drive Shaft Assembly Components And Torque Specifications (1 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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Fig. 2: Identifying Front Drive Shaft Assembly Components (2 Of 2)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

REMOVAL

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1. **REMOVE ENGINE UNDER COVER**
2. **DRAIN AUTOMATIC TRANSAXLE FLUID** (for Automatic Transaxle) (See **REPLACEMENT**)
3. **DRAIN MANUAL TRANSAXLE OIL** (for Manual Transaxle) (See **REMOVAL**)
4. **REMOVE FRONT WHEEL**
5. **REMOVE FRONT AXLE HUB NUT**
 - a. Using SST and a hammer, release the staked part of the axle hub nut.

SST 09930-00010

NOTE:

- Insert SST into the groove with the flat surface facing up.
- Do not damage the tip of SST using grinders.
- Completely unstake the staked part before removing the axle hub nut.
- Do not damage the threads of the drive shaft.

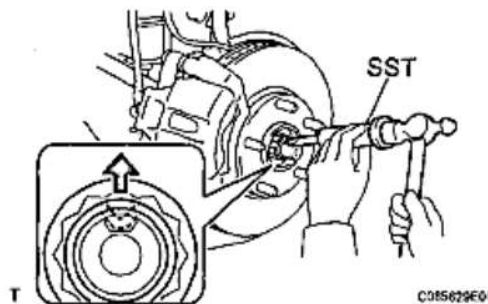


Fig. 3: Releasing Staked Part Of Axle Hub Nut
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- b. Using a 30 mm socket wrench, remove the axle hub nut.
6. **SEPARATE FRONT SPEED SENSOR**
 - a. Remove the bolt and separate the speed sensor and flexible hose.

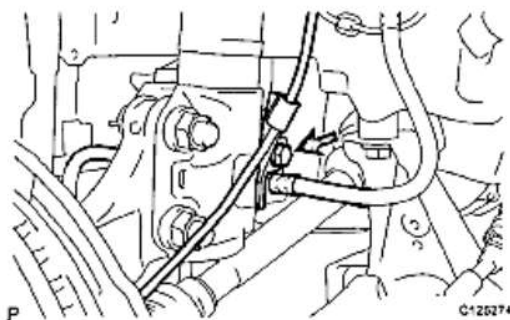


Fig. 4: Locating Bolt And Speed Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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- b. Remove the bolt and separate the speed sensor from the steering knuckle.

NOTE:

- Keep the speed sensor tip and installation portion free of foreign matter.
- Remove the speed sensor without turning it from its original installation angle.



Fig. 5: Locating Bolt And Speed Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

7. SEPARATE FRONT STABILIZER LINK ASSEMBLY

- a. Remove the nut and separate the stabilizer link from the shock absorber.

HINT:

If the ball joint turns together with the nut, use a socket hexagon wrench 6 to hold the stud.



Fig. 6: Locating Nut And Stabilizer Link
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

8. SEPARATE TIE ROD END SUB-ASSEMBLY

- a. Remove the cotter pin and castle nut.
- b. Install SST (spacer B) to the threaded section of the tie rod end.

SST 09960-20010 (09961-02060)

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NOTE: Make sure the upper ends of the threaded section of the tie rod end and SST (spacer B) are aligned.

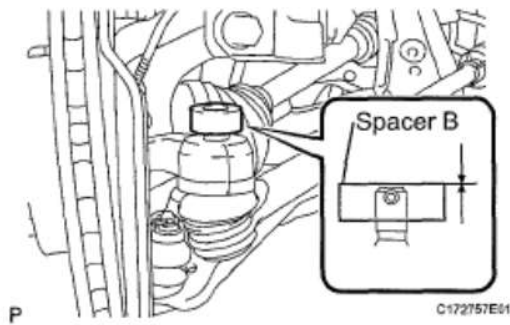


Fig. 7: Identifying SST (Spacer B) On Threaded Section Of Tie Rod End (1 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- c. Using SST, separate the tie rod end from the front axle assembly.

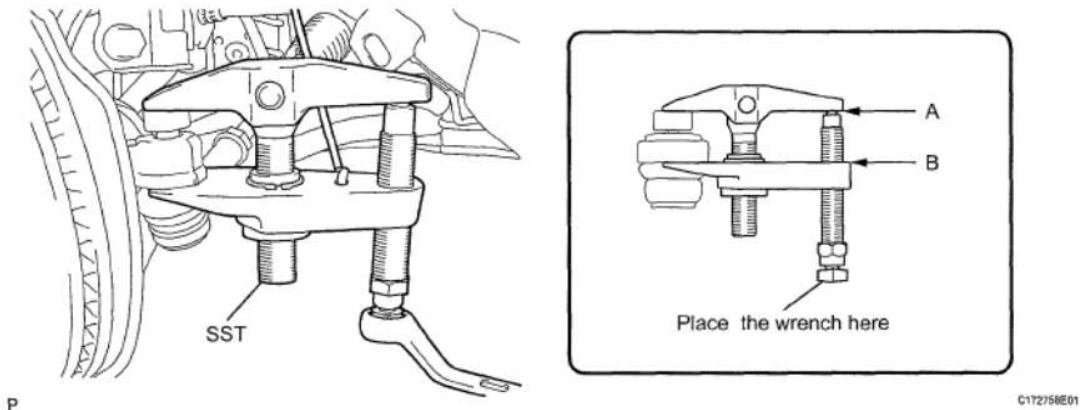


Fig. 8: Identifying SST (Spacer B) On Threaded Section Of Tie Rod End (2 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

SST 09960-20010 (09961-02010)

NOTE:

- Make sure to tie the string of SST to the vehicle to prevent SST from dropping.
- Install SST so that A and B are parallel.
- Be sure to place the wrench on the part indicated in the illustration.
- Do not damage the ball joint dust cover.
- Do not damage the front disc brake dust cover.

9. SEPARATE FRONT LOWER SUSPENSION ARM

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- a. Remove the clip and castle nut.
- b. Install SST (spacer B) to the threaded section of the lower ball joint.

SST 09960-20010 (09961-02060)

NOTE: Make sure the upper ends of the threaded section of the lower ball joint and SST (spacer B) are aligned.

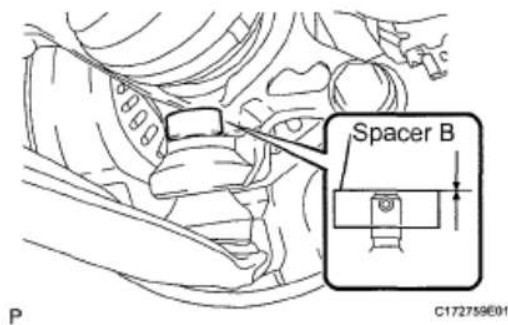


Fig. 9: Identifying SST (Spacer B) On Threaded Section Of Lower Ball Joint
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- c. Using SST, separate the front lower suspension arm from the front axle assembly.

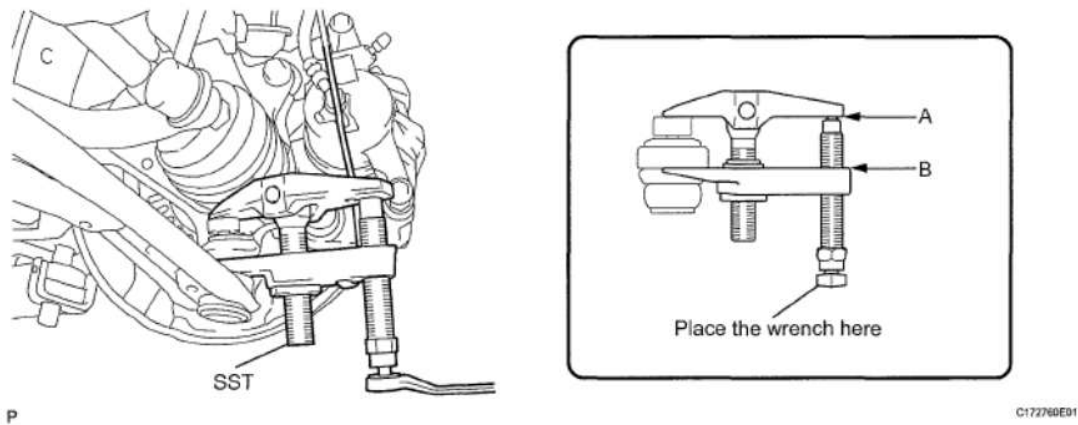


Fig. 10: Separating Front Lower Suspension Arm From Front Axle Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

SST 09960-20010 (09961-02010)

- NOTE:**
- Make sure to tie the string of SST to the vehicle to prevent SST from dropping.
 - Install SST so that A and B are parallel.
 - Be sure to place the wrench on the part indicated in the

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illustration.

- Do not damage the lower ball joint dust cover.
- Do not damage the drive shaft outboard joint boots.
- Do not damage the front disc brake dust cover.

10. SEPARATE FRONT AXLE ASSEMBLY

- a. Using a plastic hammer, tap the end of the drive shaft and disengage the fitting between the drive shaft and front axle.

HINT:

If it is difficult to disengage the fitting, tap the end of the drive shaft with a brass bar and hammer.

- b. Push the front axle out of the vehicle to remove the drive shaft from the front axle.

NOTE:

- Do not push the front axle further out of the vehicle than is necessary.
- Do not damage the outboard joint boot.
- Do not damage the speed sensor rotor.
- Suspend the drive shaft with a piece of rope or the equivalent.

11. REMOVE FRONT DRIVE SHAFT ASSEMBLY LH

- a. Using SST, remove the drive shaft.

SST 09520-01010, 09520-24010 (09520-32040)

NOTE:

- Do not damage the oil seal.
- Do not damage the inboard joint boot.
- Do not drop the drive shaft.

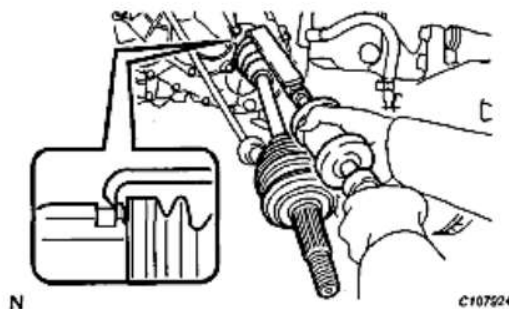


Fig. 11: Removing Drive Shaft

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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12. REMOVE FRONT DRIVE SHAFT ASSEMBLY RH

- Using a screwdriver and hammer, remove the drive shaft.

NOTE:

- Do not damage the oil seal.
- Do not damage the inboard joint boot.
- Do not drop the drive shaft.

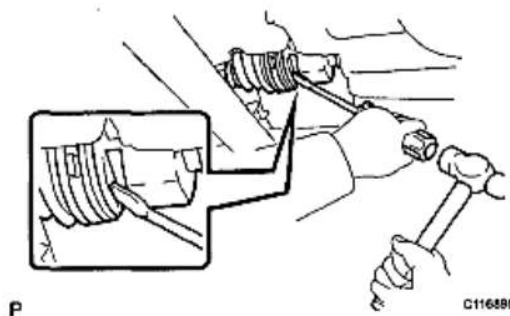


Fig. 12: Removing Drive Shaft Using Screwdriver And Hammer
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

13. FIX FRONT AXLE ASSEMBLY

SST 09608-16042 (09608-02021, 09608-02041)

HINT:

The hub bearing could be damaged if it is subjected to the vehicle's full weight, such as when moving the vehicle with the drive shaft removed. If it is absolutely necessary to place the vehicle's full weight on the hub bearing, first support it with SST.

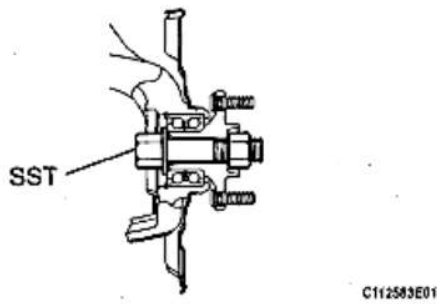


Fig. 13: Identifying SST
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

DISASSEMBLY

2008 Scion xD**2008 DRIVELINE/AXLES Drive Shaft - xD****1. REMOVE FRONT NO. 2 AXLE INBOARD JOINT BOOT CLAMP**

- a. Using a screwdriver, release the staked part of the boot clamp and separate the boot clamp.

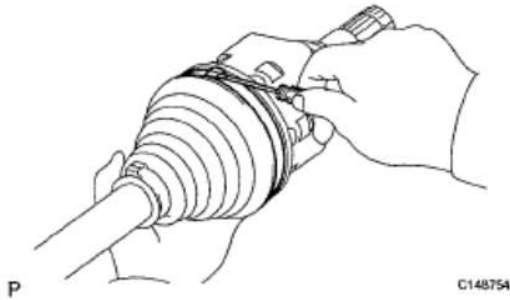


Fig. 14: Releasing Staked Part Of Boot Clamp

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. REMOVE FRONT AXLE INBOARD JOINT BOOT CLAMP

- a. Using a screwdriver, release the staked part of the boot clamp and separate the boot clamp.

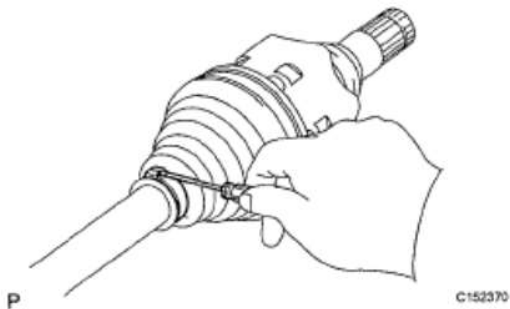


Fig. 15: Releasing Staked Part Of Boot Clamp

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. SEPARATE FRONT AXLE INBOARD JOINT BOOT

- a. Separate the inboard joint boot from the inboard joint grommet.

4. REMOVE FRONT DRIVE INBOARD JOINT ASSEMBLY

- a. Remove the old grease from the inboard joint.
- b. Place matchmarks on the inboard joint and outboard joint shaft.

NOTE: Do not cause any damage when placing the marks.

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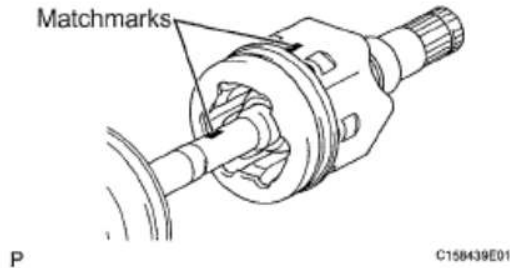


Fig. 16: Identifying Matchmarks On Inboard Joint And Outboard Joint Shaft
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- c. Remove the inboard joint from the outboard joint shaft.
- d. Fix the outboard joint shaft in a vise between aluminum plates.

NOTE: Do not overtighten the vise.

- e. Using a snap ring expander, remove the snap ring.

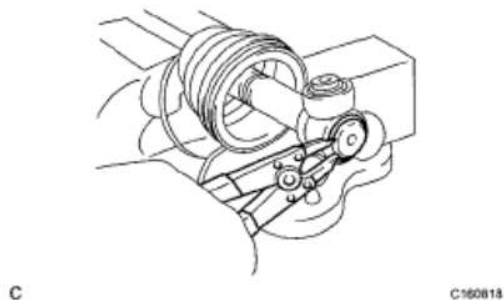


Fig. 17: Removing Snap Ring
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- f. Place matchmarks on the tripod joint and outboard joint shaft.

NOTE: Do not cause any damage when placing the marks.

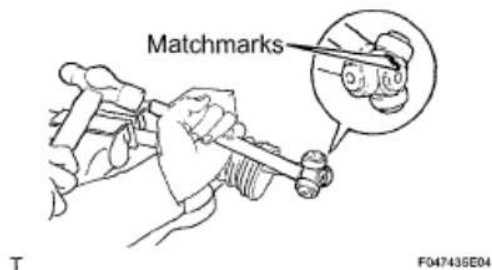


Fig. 18: Removing Tripod Joint
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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- g. Using a brass bar and hammer, remove the tripod joint.

NOTE: Do not tap the rollers.

- h. Remove the No. 2 inboard joint boot clamp, the inboard joint boot and the inboard joint boot clamp.

5. REMOVE FRONT AXLE INBOARD JOINT GROMMET

- a. Remove the inboard joint grommet from the inboard joint.

6. REMOVE FRONT DRIVE SHAFT DAMPER CLAMP (for RH Side)

- a. Using needle-nose pliers, disengage the hook and remove the damper clamp.

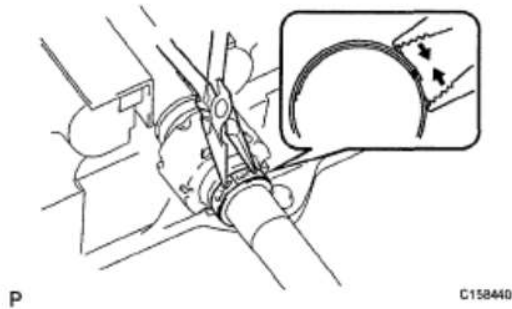


Fig. 19: Removing Damper Clamp

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

7. REMOVE FRONT DRIVE SHAFT DAMPER (for RH Side)

8. REMOVE FRONT NO. 2 AXLE OUTBOARD JOINT BOOT CLAMP

- a. Using a screwdriver, release the staked part of the boot clamp and remove the boot clamp.

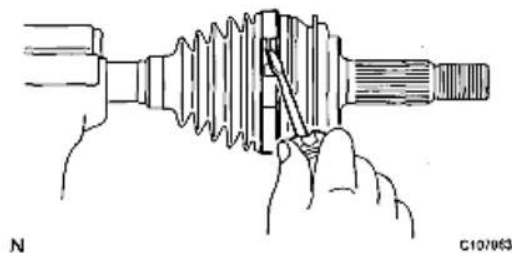


Fig. 20: Releasing Staked Part Of Boot Clamp

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

9. REMOVE FRONT AXLE OUTBOARD JOINT BOOT CLAMP

- a. Using a screwdriver, release the staked part of the boot clamp and remove the boot clamp.

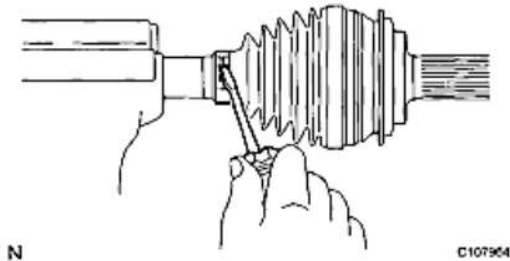
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Fig. 21: Releasing Staked Part Of Boot Clamp
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

10. **REMOVE FRONT AXLE OUTBOARD JOINT BOOT**
 - a. Remove the outboard joint boot from the outboard joint shaft.
 - b. Remove the old grease from the outboard joint.
11. **REMOVE FRONT DRIVE SHAFT HOLE SNAP RING**
 - a. Using a screwdriver, remove the snap ring.

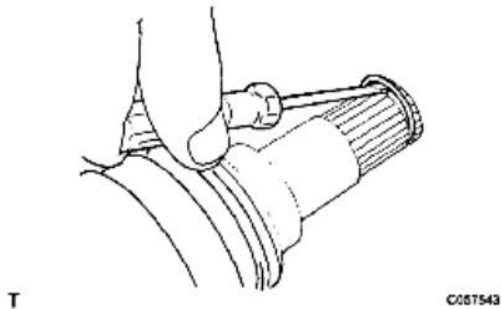


Fig. 22: Removing Snap Ring
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

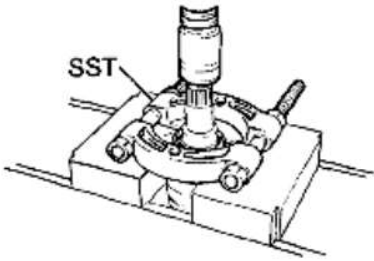
12. **REMOVE FRONT DRIVE SHAFT DUST COVER**
 - a. Using SST and a press, remove the dust cover.

SST 09950-00020

NOTE: Do not drop the inboard joint.

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Fig. 23: Removing Dust Cover
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

REASSEMBLY

1. INSTALL FRONT DRIVE SHAFT DUST COVER

- a. Using SST and a press, install a new dust cover into the inboard joint until it is flush with the end.

SST 09527-10011

- NOTE:**
- Install the dust cover in the correct orientation.
 - Do not deform the dust cover.

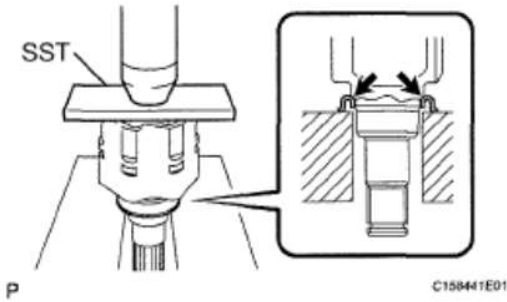


Fig. 24: Installing Dust Cover Into Inboard Joint
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. INSTALL FRONT DRIVE SHAFT HOLE SNAP RING

- a. Install a new snap ring.

3. INSTALL FRONT AXLE OUTBOARD JOINT BOOT

- a. Wrap the spline of the outboard joint shaft with protective tape.
- b. Install new parts onto the outboard joint shaft in the following order.

OUTBOARD JOINT SHAFT CHART

1.	Front No. 2 axle outboard joint boot clamp
2.	Front axle outboard joint boot

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3. Front axle outboard joint boot clamp

- c. Pack the outboard joint shaft joint portion and outboard joint boot with grease.

Standard Quantity:

135 to 145 g (4.8 to 5.1 oz.)

- d. Install the outboard joint boot onto the outboard joint shaft groove.

NOTE: Keep the groove free of grease.

4. INSTALL FRONT NO. 2 AXLE OUTBOARD JOINT BOOT CLAMP

CAUTION: Wear protective gloves to avoid injuries to your hands.

- a. Install the boot clamp onto the outboard joint boot and provisionally fold back the lever.

NOTE:

- Set the lever into the guide groove correctly and install the clamp as far into the inner side of the vehicle as possible.
- Check the band and the lever for any deformation before folding back the lever.

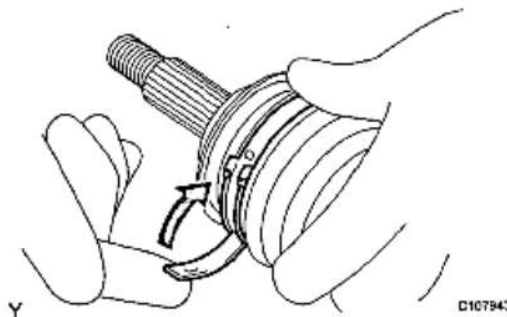


Fig. 25: Installing Boot Clamp Onto Outboard Joint Boot
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- b. Lean your weight on your hand and roll the outboard joint forward while pressing the outboard joint against the work plane. Roll the outboard joint and fold the lever until a click sound can be heard.

NOTE:

- Do not damage the deflector.
- Make sure that the outboard joint is in direct contact with the work plane.

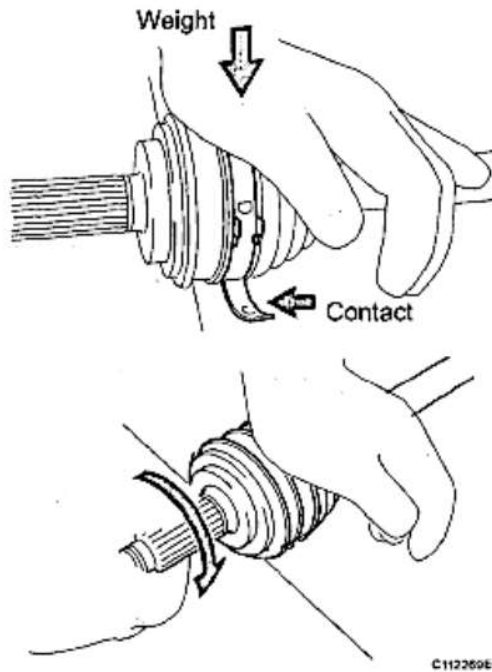
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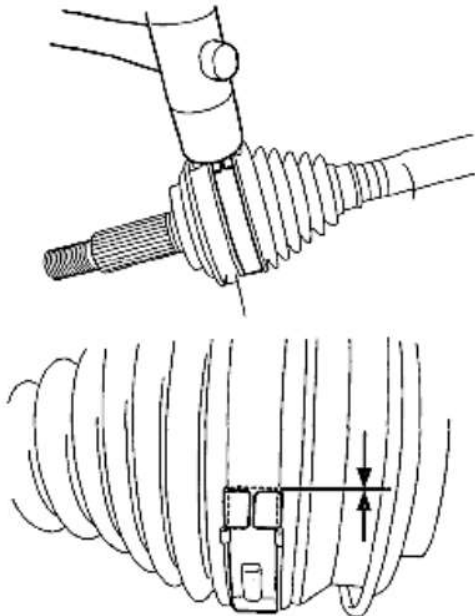
Fig. 26: Rolling Outboard Joint Forward
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- c. Using a plastic hammer, tap the buckle to fix it while adjusting the clearance between the lever and the groove to make the clearances between the buckle edge and the lever end even.

NOTE: **Do not damage the outboard joint boot.**

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Fig. 27: Adjusting Clearance Between Lever And Groove
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

5. INSTALL FRONT AXLE OUTBOARD JOINT BOOT CLAMP

CAUTION: Wear protective gloves to avoid injuries to your hands.

- a. Install the boot clamp onto the outboard joint boot and provisionally fold back the lever.

NOTE:

- Set the lever into the guide groove correctly.
- Check the band and the lever for any deformation before folding back the lever.



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Fig. 28: Installing Boot Clamp Onto Outboard Joint Boot
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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- b. Using water pump pliers, pinch the boot clamp to provisionally fix it.

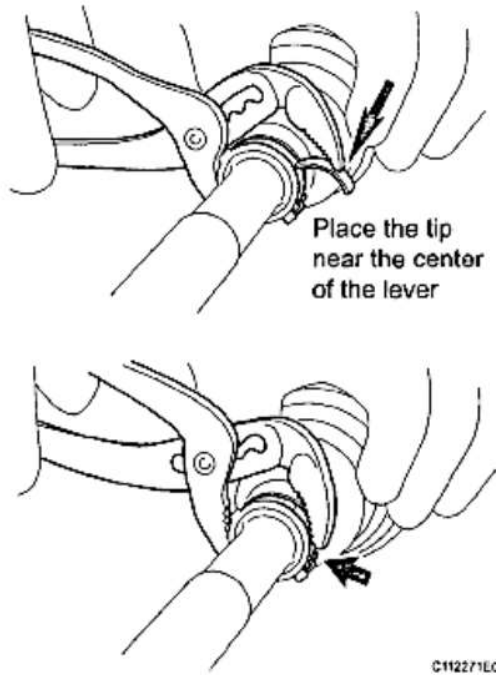


Fig. 29: Pinching Boot Clamp

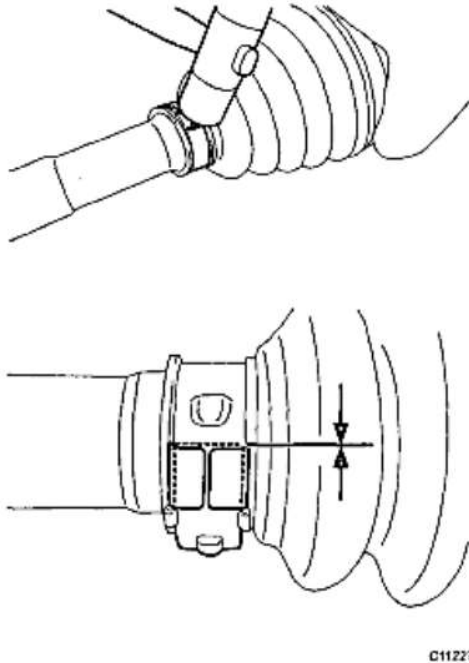
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- c. Using a plastic hammer, tap the buckle to fix it while adjusting the clearance between the lever and the groove to make the clearances between the buckle edge and the lever end even.

NOTE: Do not damage the outboard joint boot.

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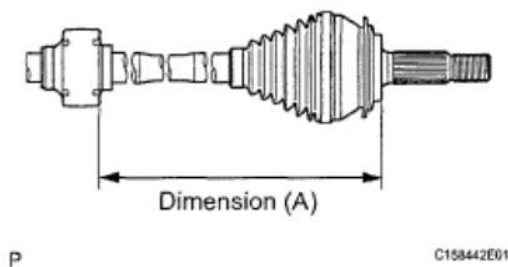
Fig. 30: Identifying Clearance Between Lever And Groove
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

6. INSTALL FRONT DRIVE SHAFT DAMPER (for RH Side)

- Install the drive shaft damper onto dimension (A) shown in the illustration.

Dimension (A):

436.5 to 440.5 mm (17.2 to 17.3 in.)



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Fig. 31: Identifying Drive Shaft Damper Dimension
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

7. INSTALL FRONT DRIVE SHAFT DAMPER CLAMP (for RH Side)

- Using needle-nose pliers, align the concave part with the protrusion on a new damper clamp in order to fix it.

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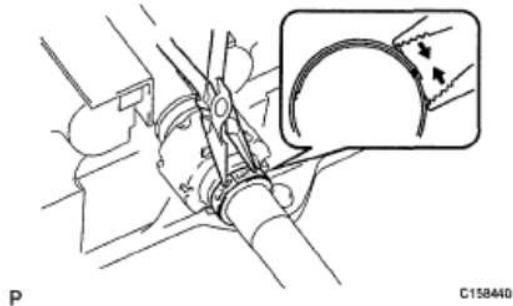


Fig. 32: Tightening Damper Clamp

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

8. INSTALL FRONT AXLE INBOARD JOINT GROMMET

- Install a new inboard joint grommet onto the inboard joint groove.

NOTE: Securely fit the protrusion on the inboard joint grommet into the inboard joint groove.

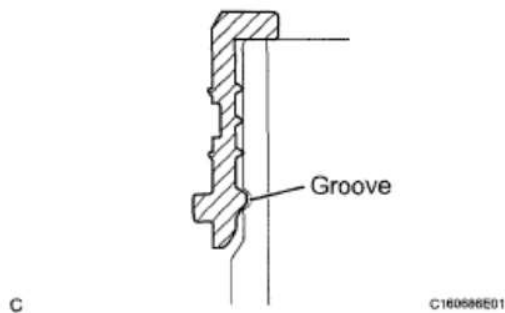


Fig. 33: Identifying Inboard Joint Groove

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

9. INSTALL FRONT DRIVE INBOARD JOINT ASSEMBLY

- Install new parts onto the outboard joint shaft in the following order.

OUTBOARD JOINT SHAFT CHART

1.	Front axle inboard joint boot clamp
2.	Front axle inboard joint boot
3.	Front No. 2 axle inboard joint boot clamp

- Fix the outboard joint shaft in a vise between aluminum plates.

NOTE: Do not overtighten the vise.

- Remove the protective tape.

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- d. Align the matchmarks and install the tripod joint onto the outboard joint shaft.

NOTE: Face the serrated side of the tripod joint outward and install it onto the outboard joint end.

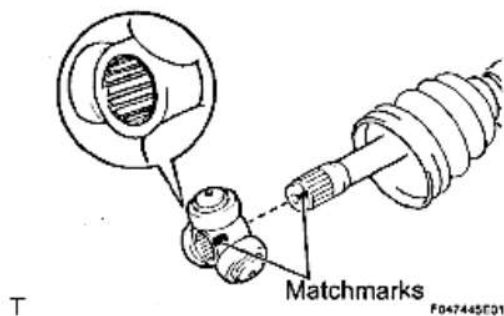


Fig. 34: Aligning Matchmarks

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- e. Using a brass bar and hammer, install the tripod joint.

NOTE:

- Do not hit the rollers.
- Keep the tripod joint free of foreign matter.

- f. Using a snap ring expander, install a new snap ring.

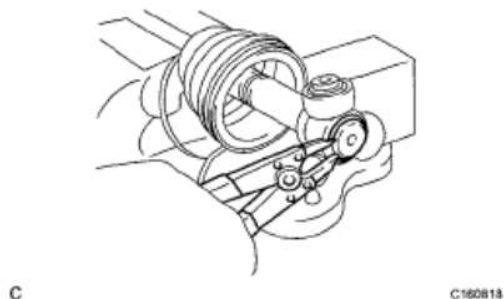


Fig. 35: Installing Snap Ring

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- g. Pack the inboard joint with grease.

Standard Quantity:

175 to 185 g (6.2 to 6.5 oz.)

- h. Align the matchmarks and install the inboard joint onto the outboard joint shaft.

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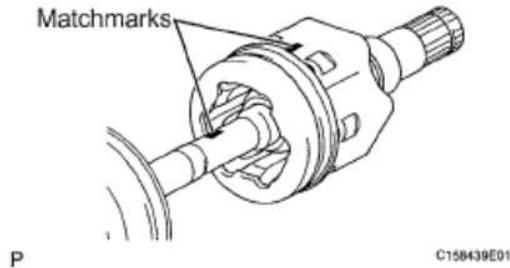


Fig. 36: Aligning Matchmarks

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

10. INSTALL FRONT AXLE INBOARD JOINT BOOT

- Install the inboard joint boot into the grooves of the inboard joint grommet and outboard joint shaft.

NOTE: Keep the grooves free of grease.

11. INSTALL FRONT AXLE INBOARD JOINT BOOT CLAMP

CAUTION: Wear protective gloves to avoid injuries to your hands.

- Install the boot clamp onto the inboard joint boot and provisionally fold back the lever.

NOTE:

- Set the lever into the guide groove correctly.
- Check the band and the lever for any deformation before folding back the lever.

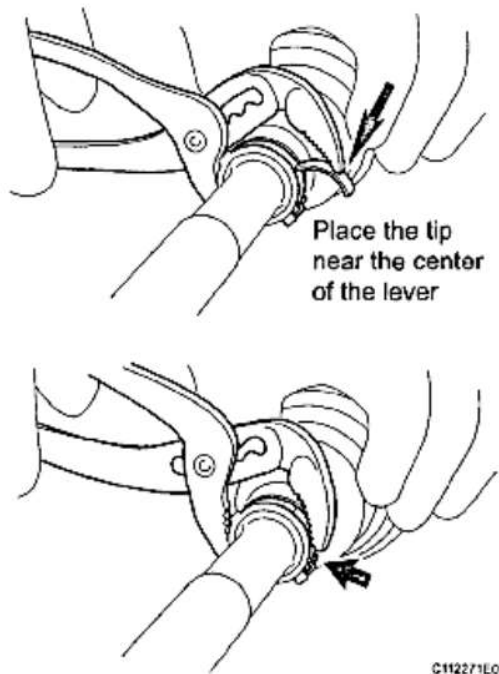


Fig. 37: Installing Boot Clamp Onto Inboard Joint Boot
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- Using water pump pliers, pinch the boot clamp to provisionally fix it.

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**Fig. 38: Pinching Boot Clamp**

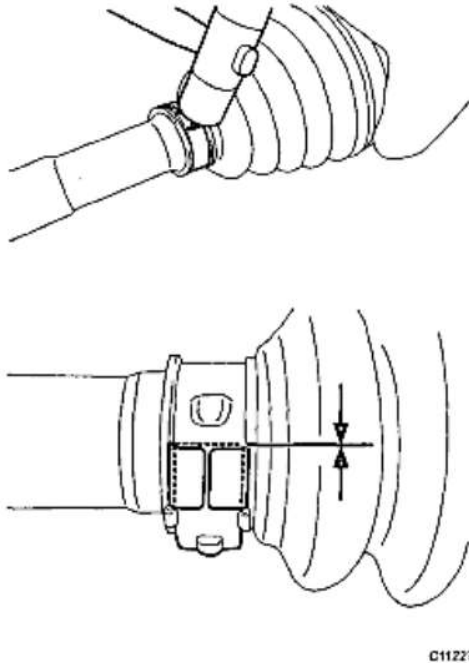
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- c. Using a plastic hammer, tap the buckle to fix it while adjusting the clearance between the lever and the groove to make the clearances between the buckle edge and the lever end even.

NOTE: Do not damage the inboard joint boot.

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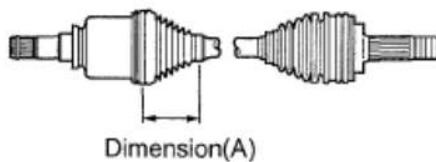
Fig. 39: Identifying Clearance Between Lever And Groove
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

12. INSTALL FRONT NO. 2 AXLE INBOARD JOINT BOOT CLAMP

- Install the boot clamp onto the inboard joint boot.
- Adjust dimension (A) between the centers of the boot clamp and No. 2 boot clamp until it is within the specified length.

Dimension (A):

69.1 to 77.1 mm (2.27 to 3.03 in.)



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Fig. 40: Identifying Dimension Between Centers Of Boot Clamp
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- While keeping dimension (A) within the specified length, put the inside of the inboard joint under atmospheric pressure by pulling the recessed parts on the inboard joint grommet out.
- Set the lever fulcrum point at any point A indicated in the illustration and temporarily bend the lever.

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CAUTION: Wear protective gloves to avoid injuries to your hands.

NOTE:

- Perform this work with the inside of the inboard joint kept at atmospheric pressure.
- Set the lever into the guide groove correctly and install the clamp as far into the inner side of the vehicle as possible.
- Check the band and the lever for any deformation before folding back the lever.

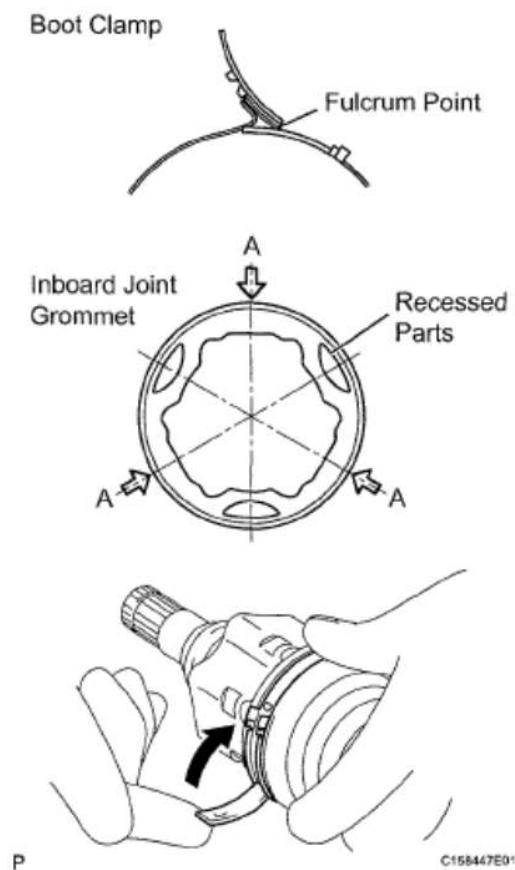


Fig. 41: Bending Lever
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

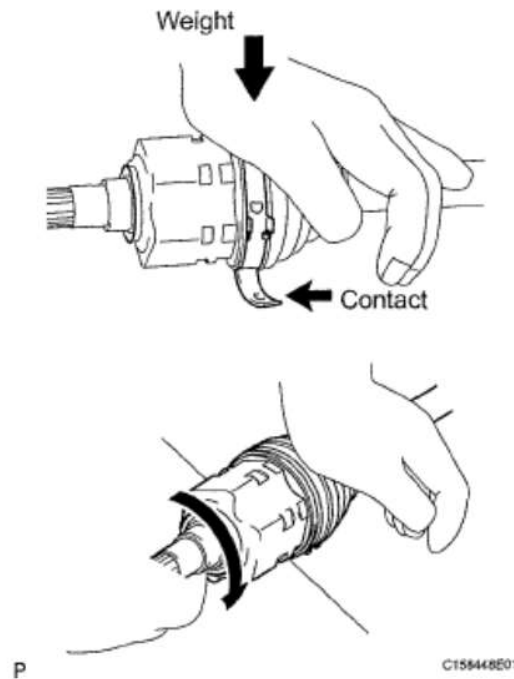
- Lean your weight on your hand and roll the inboard joint forward while pressing the inboard joint against the work plane. Roll the inboard joint and fold the lever until a click sound can be heard.

NOTE:

- Do not damage the deflector.
- Make sure that the inboard joint is in direct contact with the work plane.

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**Fig. 42: Bending Lever****Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

- f. Using a plastic hammer, tap the buckle to fix it while adjusting the clearance between the lever and the groove to make the clearances between the buckle edge and the lever end even.

NOTE: Do not damage the inboard joint boot.

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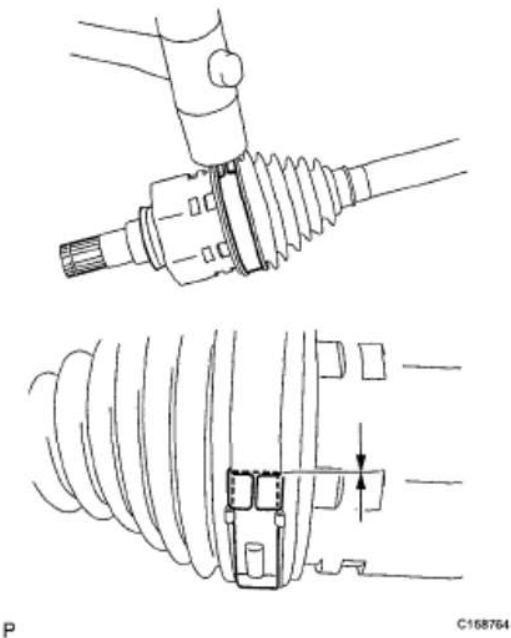


Fig. 43: Identifying Clearance Between Lever And Groove
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

13. INSPECT FRONT DRIVE SHAFT

- a. Check whether the drive shaft dimensions are within the following specifications.

HINT:

The following table shows dimension (A) of the drive shaft.

Dimension (A)

DIMENSION CHART

LH	RH
565.9 mm (22.28 in.)	840.9 mm (33.11 in.)

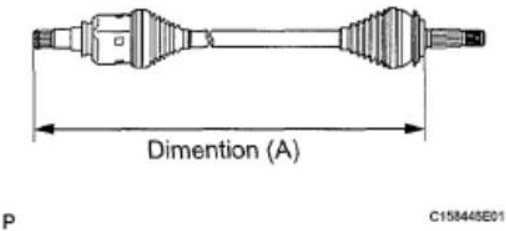
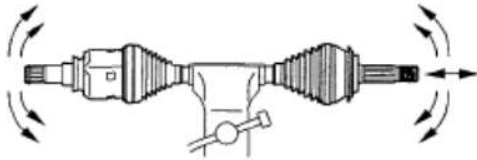


Fig. 44: Identifying Drive Shaft Dimensions
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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- b. Check for noticeable looseness when turning the joint up and down, left and right, and in the thrust direction.



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Fig. 45: Turning Joint Up And Down

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- c. Check for cracks, damage and grease leakage on the boot joint.

NOTE: Keep the drive shaft level while moving it.

INSTALLATION

1. INSTALL FRONT DRIVE SHAFT ASSEMBLY LH

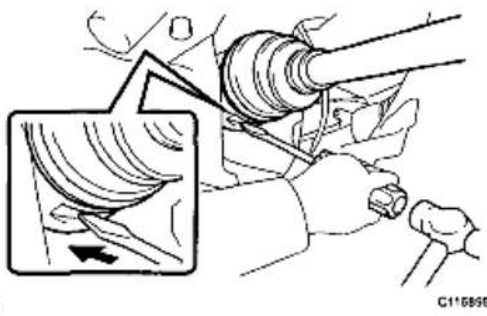
- Coat the spline of the inboard joint with gear oil.
- Align the inboard joint splines and install the drive shaft with a screwdriver and hammer.

NOTE:

- Face the cut area of the front drive shaft hole snap ring downward.
- Do not damage the oil seal.
- Do not damage the inboard joint boot.

HINT:

Confirm whether the drive shaft is securely driven in by checking the reaction force and sound.



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Fig. 46: Installing Drive Shaft With Screwdriver And Hammer

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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2. INSTALL FRONT DRIVE SHAFT ASSEMBLY RH

HINT:

Use the same procedure as for the LH side.

3. INSTALL FRONT AXLE ASSEMBLY

- a. Push the front axle out of the vehicle to align the spline of the drive shaft with the front axle and insert the front axle.

NOTE:

- Do not push the front axle further out of the vehicle than is necessary.
- Do not damage the outboard joint boot.
- Check for any foreign matter on the speed sensor rotor and insertion part.
- Do not damage the speed sensor rotor.

4. INSTALL FRONT LOWER SUSPENSION ARM

- a. Install the lower arm onto the steering knuckle with a new castle nut.

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

NOTE:

If the holes for the clip are not aligned, tighten the nut by a further turn of up to 60°.

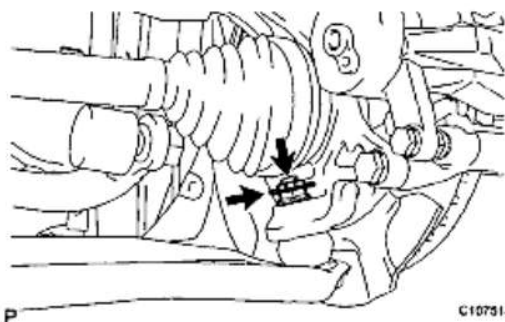


Fig. 47: Locating Steering Knuckle Nut

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- b. Install a new clip.

5. INSTALL TIE ROD END SUB-ASSEMBLY

- a. Install the tie rod end onto the steering knuckle with a new castle nut.

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

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NOTE: If the holes for the clip are not aligned, tighten the nut by a further turn of up to 60°.

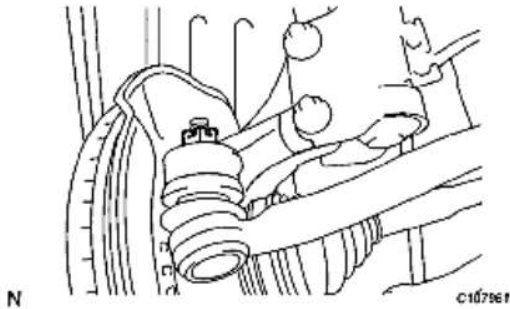


Fig. 48: Installing Tie Rod End Onto Steering Knuckle
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

b. Install a new cotter pin.

6. INSTALL FRONT STABILIZER LINK ASSEMBLY

a. Install the stabilizer link with the nut.

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

HINT:

If the ball joint turns together with the nut, use a socket hexagon wrench 6 to hold the stud.



Fig. 49: Locating Nut And Stabilizer Link
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

7. INSTALL FRONT SPEED SENSOR

a. Install the speed sensor onto the steering knuckle with the bolt.

Torque: 8.5 N*m (87 kgf*cm, 75 in.*lbf)

NOTE: • Check that the speed sensor tip and installation portion are free

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of foreign matter.

- Install the speed sensor without turning it from its original installation angle.



Fig. 50: Locating Bolt And Speed Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- Install the flexible hose and speed sensor with the bolt.

Torque: 29 N*m (300 kgf*cm, 22 ft.*lbf)

NOTE: Install the flexible hose and speed sensor without twisting them.

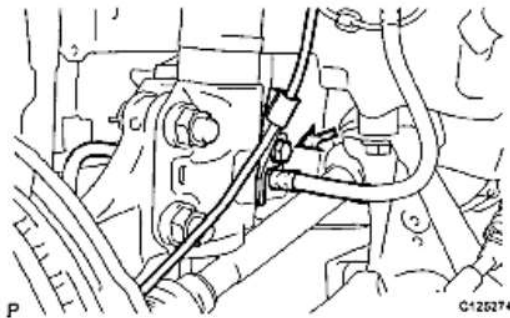


Fig. 51: Locating Bolt And Speed Sensor
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

8. INSTALL FRONT AXLE HUB NUT

- Clean the threaded parts on the drive shaft and axle hub nut using a non-residue solvent.

NOTE:

- Be sure to perform this work for a new drive shaft.
- Keep the threaded parts free of oil and foreign objects.

- Using a 30 mm socket wrench, install a new axle hub nut.

Torque: 216 N*m (2203 kgf*cm, 160 ft.*lbf)

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- c. Using a chisel and hammer, caulk the axle hub nut.

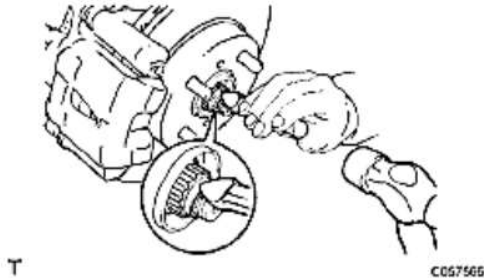


Fig. 52: Caulking Axle Hub Nut

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

9. INSTALL FRONT WHEEL

Torque: 103 N*m (1050 kgf*cm, 76 ft.*lbf)

- 10. ADD AUTOMATIC TRANSAXLE FLUID (for Automatic Transaxle)**
- 11. INSPECT AUTOMATIC TRANSAXLE FLUID (for Automatic Transaxle) (See ON-VEHICLE INSPECTION)**
- 12. INSPECT FOR AUTOMATIC TRANSAXLE FLUID LEAK (for Automatic Transaxle)**
- 13. ADD MANUAL TRANSAXLE OIL (for Manual Transaxle)**
- 14. INSPECT MANUAL TRANSAXLE OIL (for Manual Transaxle) (See ON-VEHICLE INSPECTION)**
- 15. INSPECT FOR MANUAL TRANSAXLE OIL LEAK (for Manual Transaxle)**
- 16. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT**

HINT:

(See ADJUSTMENT)

17. INSTALL ENGINE UNDER COVER

Torque: 5.0 N*m (51 kgf*cm, 44 in.*lbf)

18. CHECK ABS SENSOR SIGNAL

HINT:

(See TEST MODE PROCEDURE)