

Front Brake Vibration

Service
Category Brake

Section Brake (front)

Market USA

Lexus Supports
ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2007 – 2015	LS460	

Introduction

Some 2007 – 2015 model year 2WD LS 460 standard (non F-Sport, non AWD) and LS 460L vehicles may exhibit vibration/pulsation in the brake pedal and/or steering wheel while lightly applying the brake pedal at high speeds (65 – 75 mph). Follow the procedures in this bulletin to address this condition.

Warranty Information

OP CODE	DESCRIPTION	TIME*	OFF	T1	T2
BR1501	Front Caliper Modification and Front Disc Brake Repair (One Side)	0.7	04947-50120 04947-50130	9B	13
BR1501A	Front Caliper Modification and Front Disc Brake Repair (Opposite Side)	0.5	43512-50240		

* Time includes BOTH (1) caliper modification, and (2) rotor resurfacing OR rotor replacement.

APPLICABLE WARRANTY

- This repair is covered under the Lexus Basic Warranty. This warranty is in effect for 48 months or 50,000 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.

Parts Information

MODEL YEAR	PART NUMBER	PART NAME	QTY
2007 – 2009	04947-50120*	Fitting Kit, Disc	1
2010 – 2015	04947-50130*		1

* Only P/N 47748-50200 (Anti-Rattle Spring/M-Spring) is needed from the Kit for this repair.

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Parts Information (Continued)

Order the Following Parts ONLY if Needed:

DRIVETRAIN	PART NUMBER	PART NAME	QTY
2WD	43512-50240	Disc, FR	2
—	04465-50260	Pad Kit, Disc Brake, Front	1

Repair Procedure

1. Conduct a road test to verify the condition described in the Introduction.

NOTE

The condition usually occurs when the vehicle is driven at high speeds (60 – 75 mph) and when braking at low pressure.

Can the vibration condition be duplicated?

- YES — Continue to step 2.
- NO — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.

2. Remove the front wheel.
3. Measure front rotor thickness and refinish or replace as necessary.

A. Measure the front rotor thickness. If the thickness is below the standard specification, replace the front rotors.

DISC SIZE	STANDARD THICKNESS	MINIMUM THICKNESS
13.14 inch	30.0 mm (1.181 in.)	27.0 mm (1.063 in.)
14.06 inch	34.0 mm (1.339 in.)	31.0 mm (1.221 in.)

B. If the front rotor thickness is within specification, resurface the rotors to a smooth finish using an on-car brake lathe.

4. Inspect the front brake pads.

Measure the thickness of both front brake pads. If the thickness is out of specification, replace the front brake pads.

Standard Thickness: 13.5 mm (0.532 in.)

Minimum Thickness: 1.0 mm (0.039 in.)

NOTE

If the thickness is within specification, there is no need to replace the brake pads.

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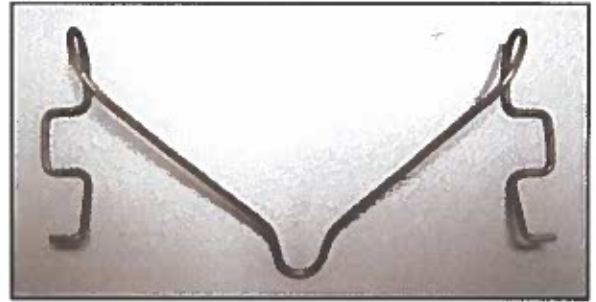
Repair Procedure (Continued)

5. Install the additional M-Spring.

HINT

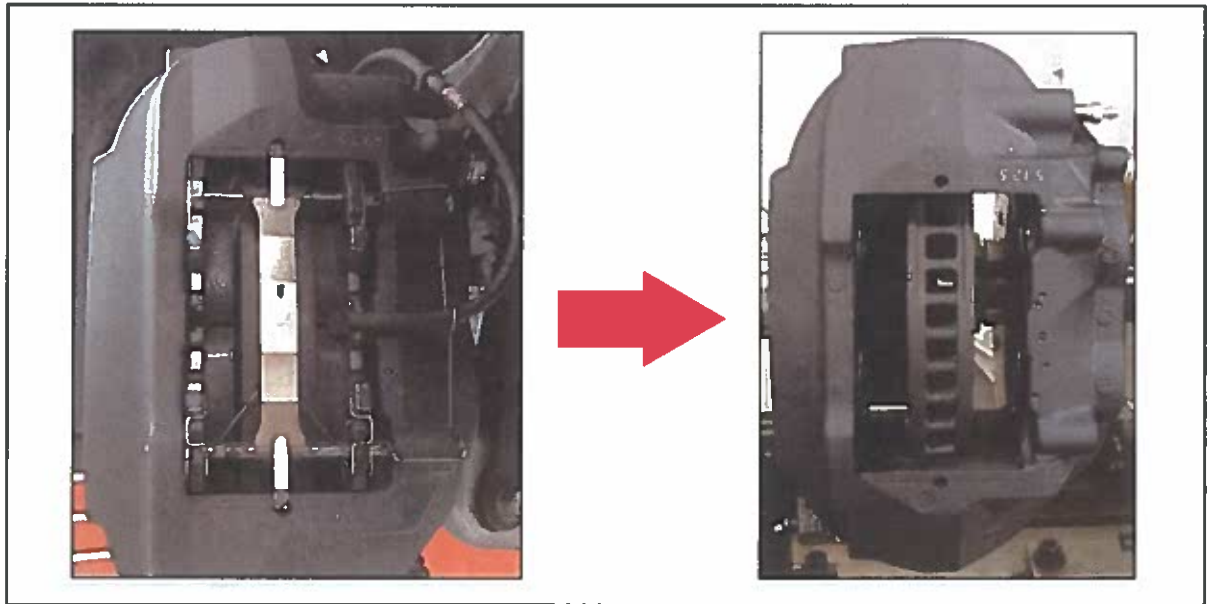
M-Spring shown at right.

Figure 1. M-Spring/Anti-Rattle Spring (P/N 47748-50200)



- A. Remove all components from the calipers (including brake pads and all fitting kit components).

Figure 2.



NOTE

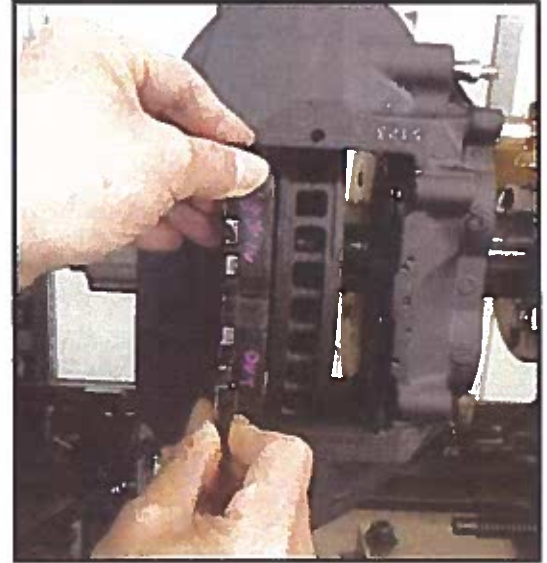
Check brake pad surface. If there is any abnormal surface condition, such as wear or streak marks, replace the brake pads.

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Repair Procedure (Continued)

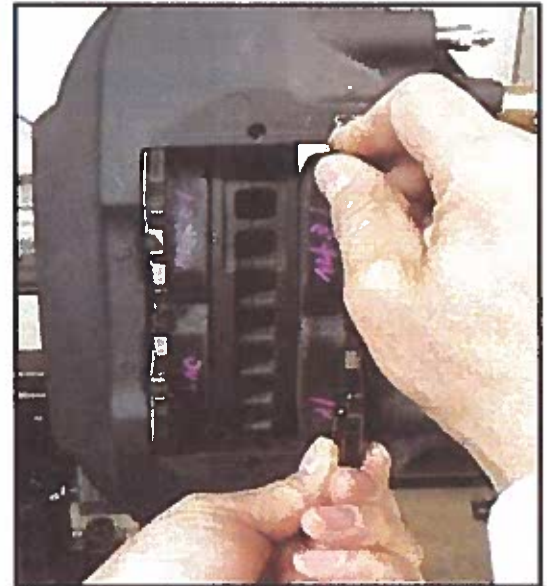
- B. Install the outer brake pad (with new or original pads).

Figure 3.



- C. Install the inner brake pad.

Figure 4.



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Repair Procedure (Continued)

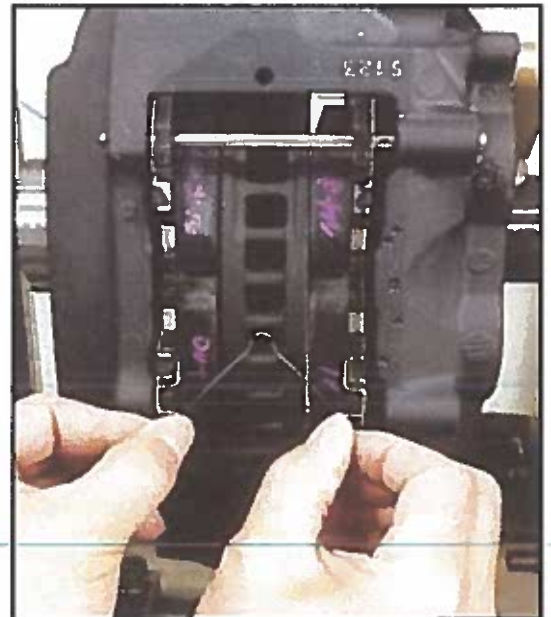
- D. Temporarily install the slide pin on the trailing side of the caliper to secure the brake pads.

Figure 5.



- E. Reinstall the original M-Spring onto the leading side of the caliper.

Figure 6.



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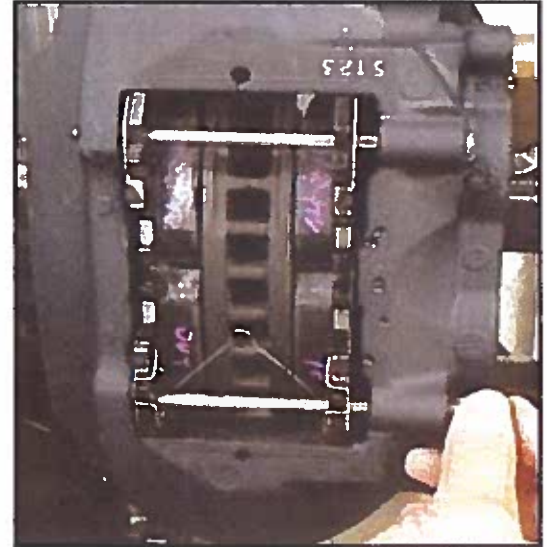
Repair Procedure (Continued)

- F. Insert the slide pin on the leading side through the M-Spring.

NOTE

Make sure that the slide pin is inserted through the spring.

Figure 7.



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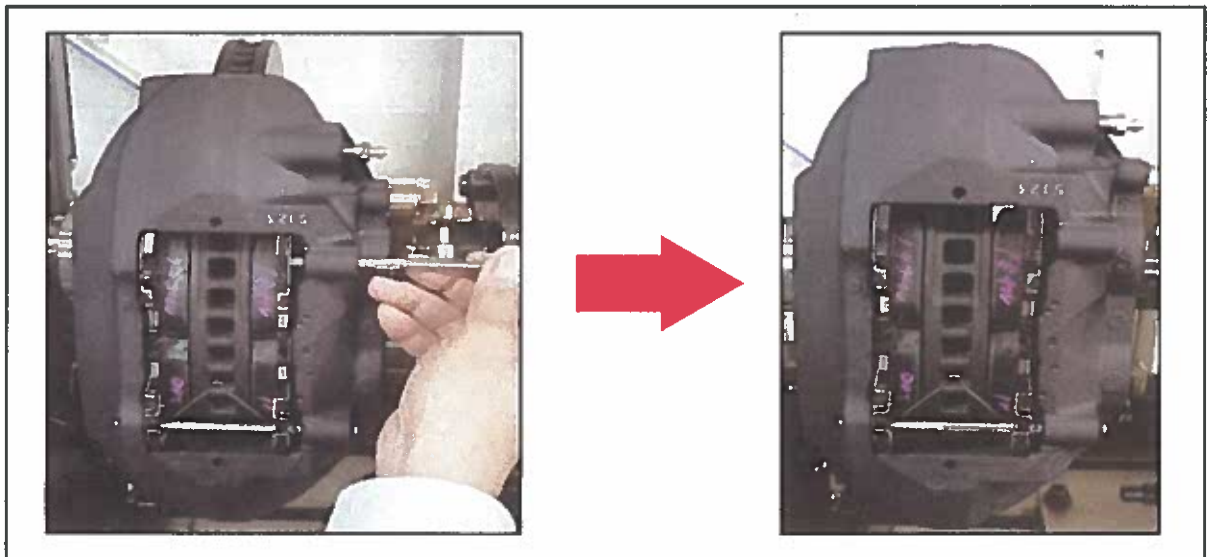
Repair Procedure (Continued)

- G. Remove the trailing side slide pin that was previously inserted to secure the brake pads. The leading side installation is now complete.

NOTE

Confirm proper installation before proceeding.

Figure 8.

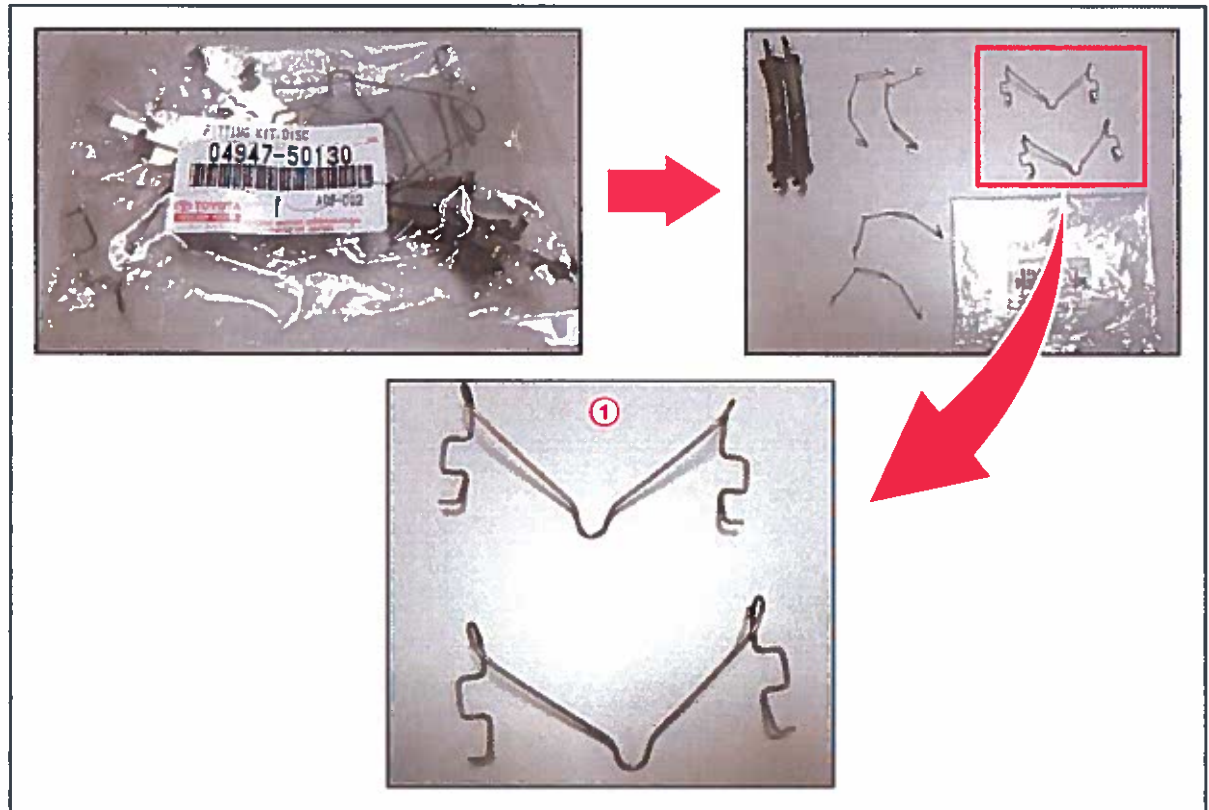


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Repair Procedure (Continued)

H. Take out ONLY the M-Springs/Anti-Rattle Springs (P/N 47748-50200) from the Disc Fitting Kit (P/N 04947-50120 or 04947-50130).

Figure 9.



1	M-Springs/Anti-Rattle Springs (P/N 47748-50200)
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NOTE
Only ONE spring per side is required.

Front Brake Vibration

Repair Procedure (Continued)

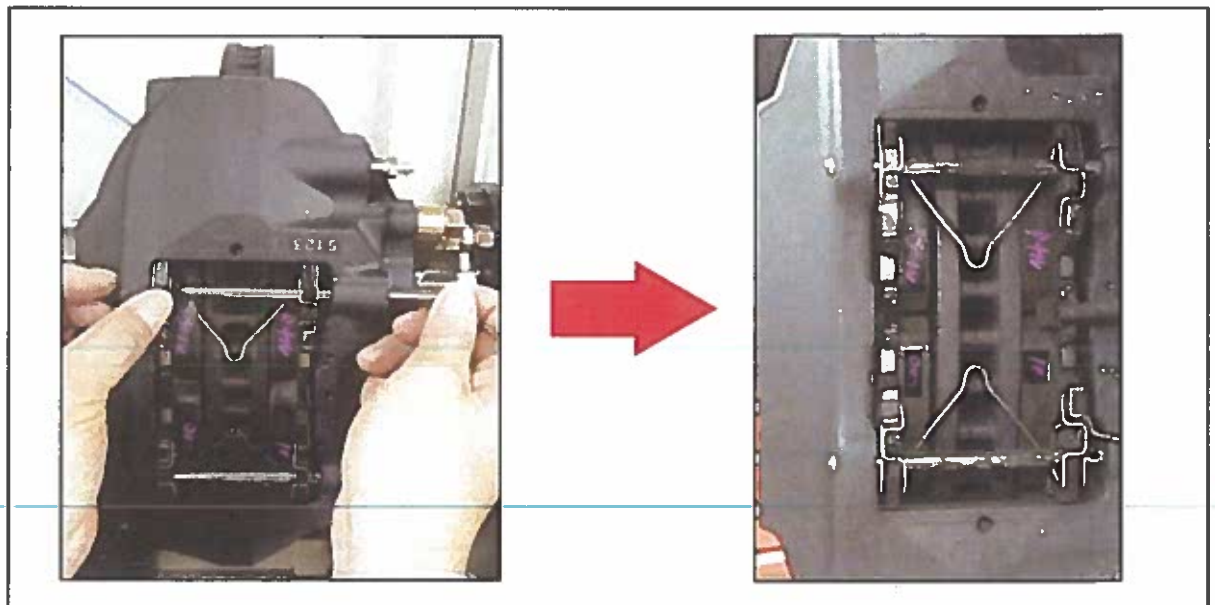
- I. Install the NEW M-Spring onto the trailing side of the caliper.

Figure 10.



- J. Insert the trailing side slide pin through the M-Spring. The dual M-Spring installation is now complete.

Figure 11.

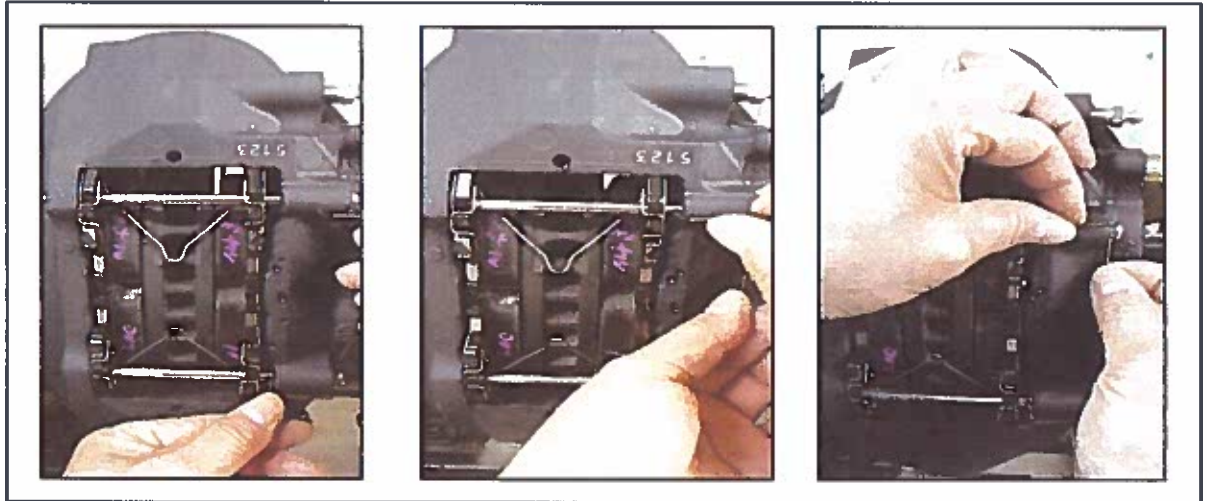


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Repair Procedure (Continued)

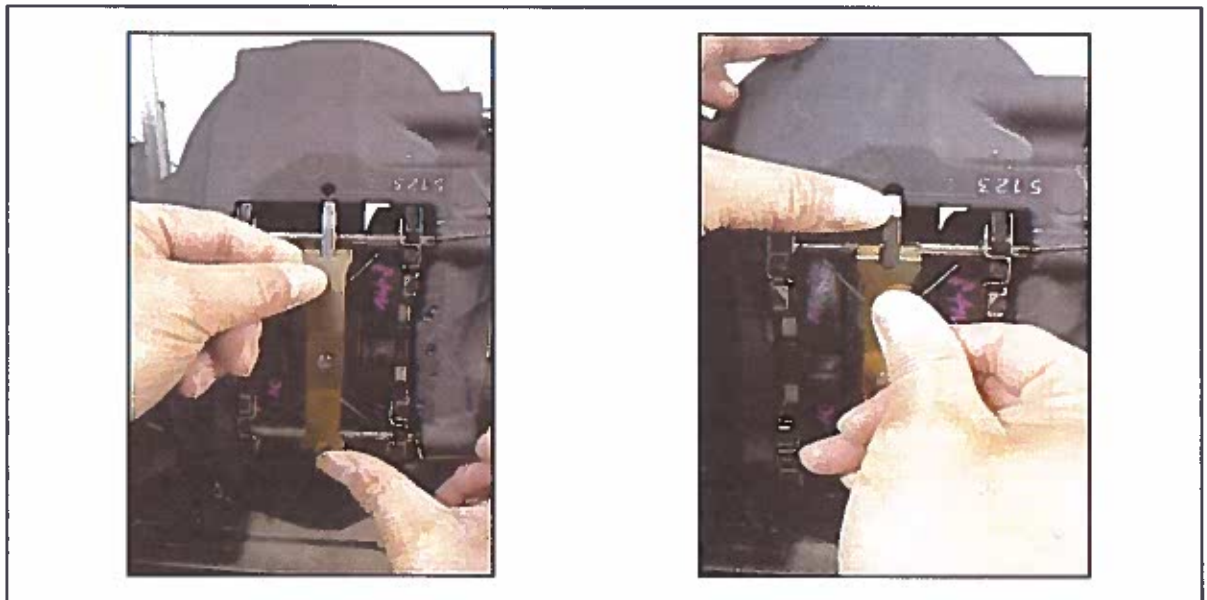
- K. Install the original pad wear indicator retainer.

Figure 12.



- L. Install the original anti-rattle spring.

Figure 13.

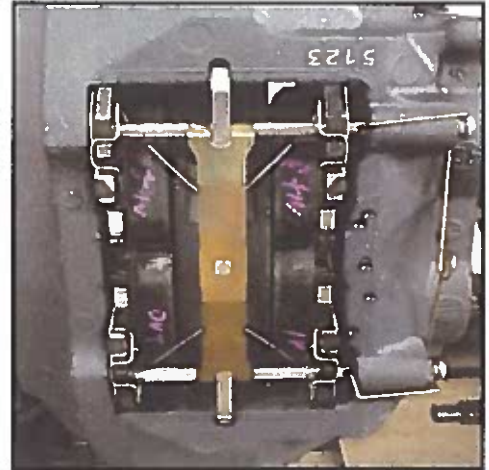


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Repair Procedure (Continued)

M. Repeat the steps on the opposite side.

Figure 14.



6. Reinstall the front wheel and torque to specification using the correct tightening sequence shown in Figure 15.

CAUTION

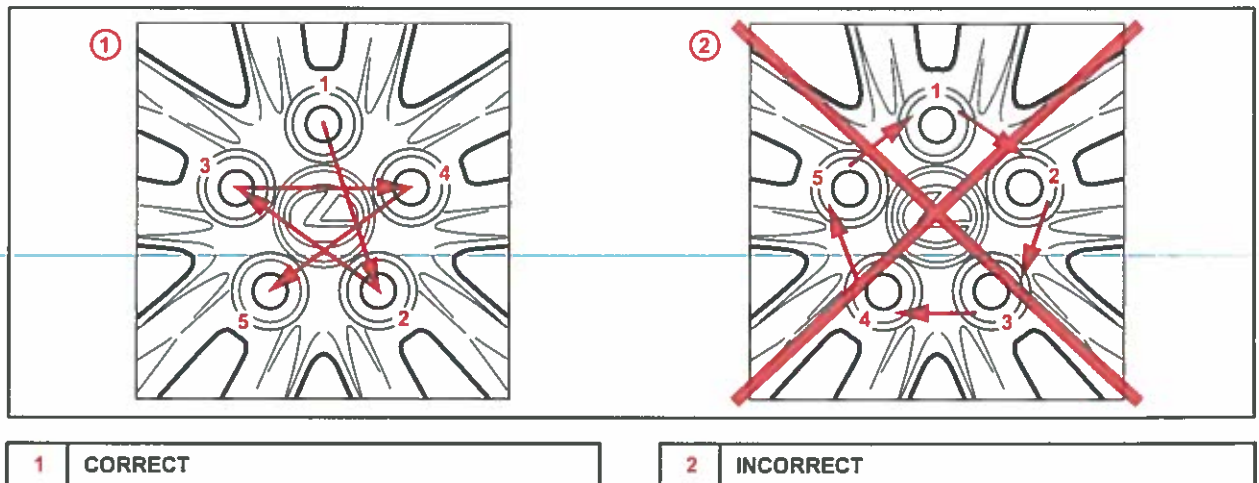
It is **ESSENTIAL** to install the front wheel lug nuts with the correct torque specification using a torque wrench, in the correct star pattern sequence (shown in Figure 15).

NOTICE

Do **NOT** use an impact gun to tighten the lug nuts.

Torque: 140 N*m (1428 kgf*cm, 103 ft*lbf)

Figure 15. Star Pattern Sequence



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Repair Procedure (Continued)

7. Road test to confirm vibration/pulsation condition has been remedied.