CONSUMER NOTICE: The information and instructions in this bulletin are intended for use by skilled technicians. Mazda technicians utilize the proper tools/equipment and take training to correctly and safely maintain Mazda vehicles. These instructions should not be performed by “do-it-yourselfers.” Customers should not assume this bulletin applies to their vehicle or that their vehicle will develop the described concern. To determine if the information applies, customers should contact their nearest authorized Mazda dealership. Mazda North American Operations reserves the right to alter the specifications and contents of this bulletin without obligation or advance notice. All rights reserved. No part of this bulletin may be reproduced in any form or by any means, electronic or mechanical—including photocopying and recording and the use of any kind of information storage and retrieval system—without permission in writing.
DESCRIPTION

Some vehicles may exhibit a knocking / squeaking noise from the front shock absorber when driving on rough roads and/or when turning the steering wheel while the vehicle is stopped.

The noise may be due to:

• upper front strut bearing (A) damage. (CX-5 and Mazda6)
• stick/slip between the front strut bearing and coil spring. (CX-3, CX-5 and Mazda6)
• the bump stopper (C) may be contacting the strut bearing when the front shock absorber is compressed, causing a popping noise. (Mazda6 only)
• The front lower arm bushing (D) is making a stick-slip noise in wet road conditions. (CX-5 and Mazda6)

To eliminate the noise, the following mass-production changes have been made:

1. The material and production method of the front strut bearing (A) has been changed. (CX-5 and Mazda6)
2. A protector has been installed onto the coil spring. (CX-5 and Mazda6)
3. The shape of the bump stopper (C) will be modified in the future. (Mazda6 only)
4. The shape of the coil spring has been changed. (CX-3 only)
5. Friction of the lower arm bushing has been reduced by adding a dry coating. (CX-5 and Mazda6)

NOTE: The piston rod nut (B) requires replacement.

Customers having this concern should have their vehicle repaired using the following repair procedure.
REPAIR OUTLINE

1. Use Special Service Tool (SST) ChassisEAR / EngineEAR II Combo JSP06608 or Wireless ChassisEAR JSP97202 to confirm noise is coming from the front suspension when driving over bumps and/or turning the steering wheel while the vehicle is stopped:

NOTE: SST JSP06608 and JSP97202 are available for purchase on Mazda E-Store.

2. Was the noise verified?
   - Yes - Use the table below to determine if the subject vehicle is a Type A, Type B, Type C, Type D, or Type E vehicle.
   - No - This bulletin does not apply.

<table>
<thead>
<tr>
<th>Model</th>
<th>Type A</th>
<th>Type B</th>
<th>Type C</th>
<th>Type D</th>
<th>Type E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mazda6 JM1GJ*****</td>
<td>100001-121430</td>
<td>121431-404928</td>
<td>404930-459654</td>
<td>459655-999999</td>
<td>---</td>
</tr>
<tr>
<td>CX-5 JM3KE******</td>
<td>100001-343673</td>
<td>343674-615843</td>
<td>615844-742260</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>CX-3 JM1DK******</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>100001-136727</td>
</tr>
</tbody>
</table>
3. Use the table below to identify the appropriate repair.

<table>
<thead>
<tr>
<th>Repair (Perform On Both Sides)</th>
<th>Type A</th>
<th>Type B</th>
<th>Type C</th>
<th>Type D</th>
<th>Type E</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Inspect the front strut bearing for damage. If damaged, replace it.</td>
<td>Perform</td>
<td>Do Not Perform</td>
<td>Do Not Perform</td>
<td>Do Not Perform</td>
<td>Do Not Perform</td>
</tr>
<tr>
<td>2. Install the protector onto the coil spring. (Refer to &quot;Protector Installation Procedure&quot;).</td>
<td>Perform</td>
<td>Perform</td>
<td>Do Not Perform</td>
<td>Do Not Perform</td>
<td>Perform</td>
</tr>
<tr>
<td>3. Replace the lower arm bushing.</td>
<td>Perform</td>
<td>Perform</td>
<td>Perform</td>
<td>Do Not Perform</td>
<td>Do Not Perform</td>
</tr>
<tr>
<td>4. Replace the bump stopper. (Mazda6 Only)</td>
<td>Perform</td>
<td>Perform</td>
<td>Perform</td>
<td>Perform</td>
<td>Do Not Perform</td>
</tr>
</tbody>
</table>

**NOTE:**
- For removal/installation and disassembly/assembly of the front shock absorber, refer to the workshop manual “FRONT SHOCK ABSORBER AND COIL SPRING DISASSEMBLY/ASSEMBLY”.
- Before removing the mounting rubber, put the position mark so the mounting rubber can be installed back in the original position.

**CAUTION:** It is not necessary to adjust the front wheel alignment because the front shock absorber and the mounting rubber are not replaced. However, make sure to install the mounting rubber to the original position.
REPAIR PROCEDURE

Inspect Front Strut Bearing for damage (For Vehicle Type A only)

1. Remove the front strut bearing and coil spring according to the MS3 online instructions or the Workshop Manual (section 02-13 FRONT SHOCK ABSORBER AND COIL SPRING DISASSEMBLY/ASSEMBLY).

2. Replace the front strut bearing if damaged*.

Install Protector onto Coil Spring (For Vehicle Type A, B and E)

Coil Spring Protector (A) Installation:

3. Starting from the top of the coil spring, degrease the spring 1.5 coils downward.
4. Cut a thin strip of paper to 138 mm in length (or use a cloth type measuring tape).
   **NOTE:** For CX-3, use 130 mm in length.

5. Place the strip of paper (or cloth measuring tape) along the inner side of the coil spring starting at point (A).
6. Mark the spot on the spring where (B) is. (B) is the starting point for the protector installation.

7. Install the protector (A) onto the coil spring aligning the end (slant cut side) with the marking at spot (B).
   **NOTE:** Install the protector so the gap (C) is evenly aligned around the outer edge of the coil spring.

8. The inner side of the protector contains adhesive glue. After installing the protector onto the spring, press the inner side to firmly adhere it to the spring.

9. Assemble the coil spring to the strut assembly and make sure the protector is seated onto the bearing even when the shock absorber is fully extended.
Replace Bump Stopper (For all Mazda6 vehicles)

1. Remove the front strut bearing and coil spring according to MS3 online instructions or the Workshop Manual (section 02-13 FRONT SHOCK ABSORBER AND COIL SPRING DISASSEMBLY/ASSEMBLY).

2. Replace the bump stopper (C).

3. Reinstall the front strut bearing and coil spring according to MS3 online instructions or the Workshop Manual (section 02-13 FRONT SHOCK ABSORBER AND COIL SPRING DISASSEMBLY/ASSEMBLY).

4. Repeat Steps 1 - 3 on the opposite side front suspension.

5. Verify repair.
Replace Lower Arm Bushing (For Vehicle Type A, B and C)

1. Remove the front lower arm (both sides) according to MS3 online instructions or the Workshop Manual (section 02-13 FRONT LOWER ARM REMOVAL/INSTALLATION).

2. Remove the front lower arm bushing using the SSTs. Set SSTs (49 G030 797 and 49 B025 004) and the front lower arm on a shop press as shown in the figure and remove the front lower arm bushing.

3. Install the front lower arm bushing (D) using SSTs. Install the front lower arm bushing so that the projection (A) shown in the figure is pointing toward the front (B) and out of the vehicle (C).

**NOTE:**
- Before installing the new bushing, wipe the inside of the outer tube and make sure it is clean.
- Apply soap suds to the front lower arm bushing to facilitate installation.
- If soap suds gets in the inner pipe of the front lower arm bushing, always wipe it off using a cloth.
CAUTION: Make sure that the bushing has been properly inserted by checking that the tab of the bushing is completely expanded as shown in the OK illustration.

<table>
<thead>
<tr>
<th>OK</th>
<th>NG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tab is completely expanded</td>
<td>Tab is NOT completely expanded yet</td>
</tr>
</tbody>
</table>

4. After the installation, verify that the front lower arm bushing has been installed to the correct position by the procedure shown in the figure.

Specification: Width: 5.8 +/- 0.8mm (0.22 +/- 0.03 in)

Measure the distance of the lower arm end face (A) and the inner pipe bushing (B).

Measure the width as shown

5. Install the front lower arm (both sides) according to MS3 online instructions or the Workshop Manual (section 02-13 FRONT LOWER ARM REMOVAL/INSTALLATION).

NOTE: For the joint sections with rubber bushings, raise the vehicle using a lift, and then temporarily tighten the installation bolts and nuts. Lower the vehicle to the ground and tighten them to the specified tightening torque.
6. Inspect the wheel alignment and adjust if necessary.
7. Verify repair.

**PART(S) INFORMATION**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Qty.</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>KR27-34-38X</td>
<td>Front Strut Bearing</td>
<td>1 or 2</td>
<td>Type A only</td>
</tr>
<tr>
<td>9YB0-41-237</td>
<td>Piston Rod Nut</td>
<td>2</td>
<td>All Non-reuseable nut</td>
</tr>
<tr>
<td>KDY5-34-081</td>
<td>Protector</td>
<td>2</td>
<td>Type A, B and E</td>
</tr>
<tr>
<td>GHY9-34-111</td>
<td>Bump Stopper</td>
<td>2</td>
<td>Mazda6 only</td>
</tr>
<tr>
<td>KD35-34-470C</td>
<td>F. Lower Arm Rubber Bushing</td>
<td>2</td>
<td>Type A, B and C</td>
</tr>
</tbody>
</table>

**WARRANTY INFORMATION**

**NOTE:**
- This warranty information applies only to verified customer complaints on vehicles eligible for warranty repair.
- This repair will be covered under Mazda’s New Vehicle Limited Warranty term.
- Additional diagnostic time cannot be claimed for this repair.
- Type A, B and C repairs have two different causal parts (front shock absorber and lower arm). Submit two separate claims.

**Front Shock Absorber Repair (All Types)**

<table>
<thead>
<tr>
<th></th>
<th>CX-5, Mazda6</th>
<th>CX-5, Mazda6</th>
<th>CX-3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Warranty Type</strong></td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td><strong>Symptom Code</strong></td>
<td>82</td>
<td>82</td>
<td>82</td>
</tr>
<tr>
<td><strong>Damage Code</strong></td>
<td>9A</td>
<td>9A</td>
<td>97</td>
</tr>
<tr>
<td><strong>Part Number Main Cause</strong></td>
<td>7777-SP-K08</td>
<td>KR27-34-38X</td>
<td>KR27-34-38X</td>
</tr>
<tr>
<td><strong>Quantity</strong></td>
<td>0, 1 or 2</td>
<td>0, 1 or 2</td>
<td>0</td>
</tr>
<tr>
<td><strong>Operation Number / Labor Hours</strong></td>
<td>With front lower arm bushing replacement</td>
<td>Without front lower arm bushing replacement</td>
<td>XXL9PBRX / 0.9 Hrs.</td>
</tr>
<tr>
<td></td>
<td>XXK8NDRX / 0.6 Hrs.</td>
<td>XXKBKXRX / 0.9 Hrs.</td>
<td></td>
</tr>
</tbody>
</table>
Front Lower Arm Repair (Type A, B and C)

<table>
<thead>
<tr>
<th>Warranty Type</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptom Code</td>
<td>82</td>
</tr>
<tr>
<td>Damage Code</td>
<td>93</td>
</tr>
<tr>
<td>Part Number Main Cause</td>
<td>KD35-34-470C or KDY5-34-470A</td>
</tr>
<tr>
<td>Quantity</td>
<td>2</td>
</tr>
</tbody>
</table>

Sublet Code

If Wheel Alignment Check and Adjust was performed outside of shop, claim the actual invoice amount with the sublet code “Z9”.

**Operation Number / Labor Hours**

- Replace both lower arm bushings
- Select one applicable repair below

1. Wheel Alignment Check & Adjust was performed outside of shop.
   XXK8NARX, 0.8Hrs.
2. Wheel Alignment Check & Adjust was performed at dealer using 4-wheel alignment tester
   XXK8NBRX, 1.8Hrs.
3. Wheel Alignment Check & Adjust was performed at dealer using 4-wheel alignment tester with Wireless Type.
   XXK8NCRX, 1.4Hrs.