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| Subject: KNOCKING / SQUEAKING NOISE FROM FRONT SHOCK ABSORBER | Bulletin No: 02-003/15 |
| | Last Issued: 12/17/2015 |

BULLETIN NOTE

- This bulletin supersedes the previous bulletin 02-003/15 issued on 02/04/2015, 02-005/13, issued on 08/24/13 and 11/11/13. The APPLICABLE MODEL(S)/VINS, DESCRIPTION, REPAIR PROCEDURE, PARTS INFORMATION and WARRANTY INFORMATION have been revised.
- Changes are noted below in Red beside the change bar.

APPLICABLE MODEL(S)/VINS

2016 CX-3 vehicles with VINs lower than JM1 DK***** 199999

2013-2016 CX-5 vehicles with VINs lower than JM3KE*****615844 (produced before Jan. 1, 2015)

2014-2016 Mazda6

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:

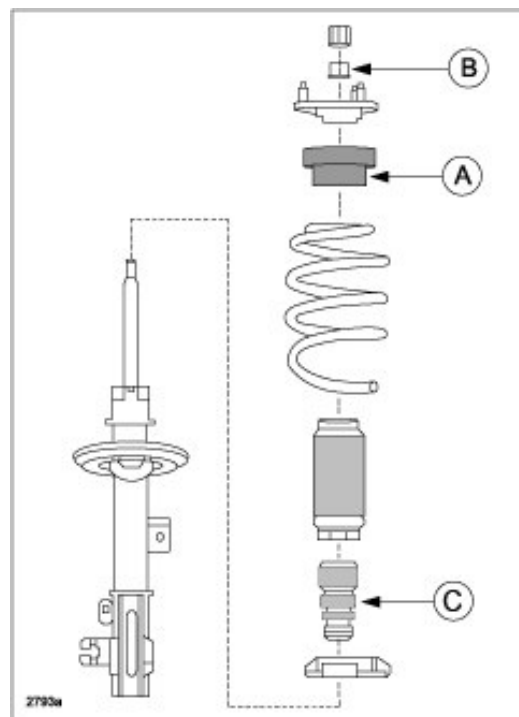
- upper front strut bearing (A) damage. (CX-5 and Mazda6)
- stick/slip between the front strut bearing and coil spring.
- the bump stopper (C) may be contacting the strut bearing when the front shock absorber is compressed, causing a popping noise. (Mazda6 only)

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)

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

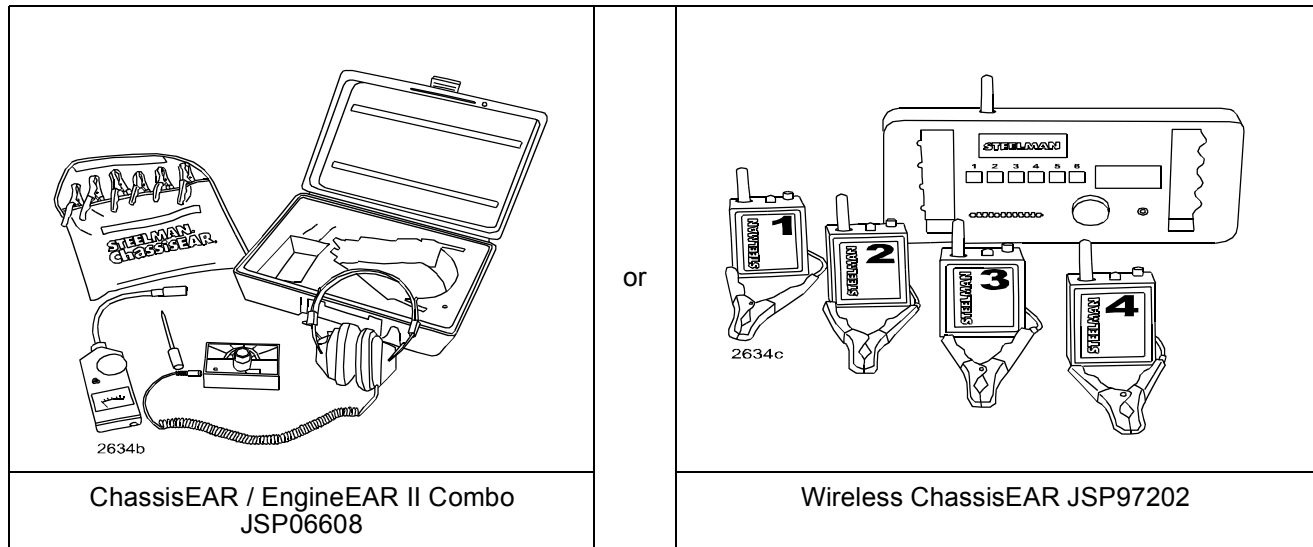
Customers having this concern should have their vehicle repaired using the following repair procedure.



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.

| Model | VIN Range | Mass-Production Date Range | Type |
|--------|---------------------------|-------------------------------|------|
| Mazda6 | JM1GJ*****100001 - 121430 | ~ April 16, 2013 | A |
| Mazda6 | JM1GJ*****121431 - 404929 | April 16, 2013 ~ Jan. 6, 2015 | B |
| Mazda6 | JM1GJ*****404930 - 999999 | --- | C |
| CX-5 | JM3KE*****100001 - 343674 | ~ April 16, 2013 | D |
| CX-5 | JM3KE*****343675 - 615844 | April 16, 2013 ~ Jan. 1, 2015 | E |
| CX-3 | JM1DK*****100001 - 199998 | --- | E |

3. Use the table below to identify the appropriate repair.

| Repair (Perform On Both Sides) | Subject VIN Range | | | | | |
|--|-------------------|----------------|----------------|----------------|----------------|----------------|
| | Mazda6 | | | CX-5 | | CX-3 |
| | Type A | Type B | Type C | Type D | Type E | Type E |
| 1. Inspect the front strut bearing for damage. If damaged, replace it. | Perform | Do Not Perform | Do Not Perform | Perform | Do Not Perform | Do Not Perform |
| 2. Install the protector onto the coil spring. (Refer to "Protector Installation Procedure" in page 5. | Perform | Perform | Do Not Perform | Perform | Perform | Perform |
| 3. Replace the bump stopper. | Perform | Perform | Perform | Do Not Perform | Do Not Perform | Do Not Perform |

NOTE:

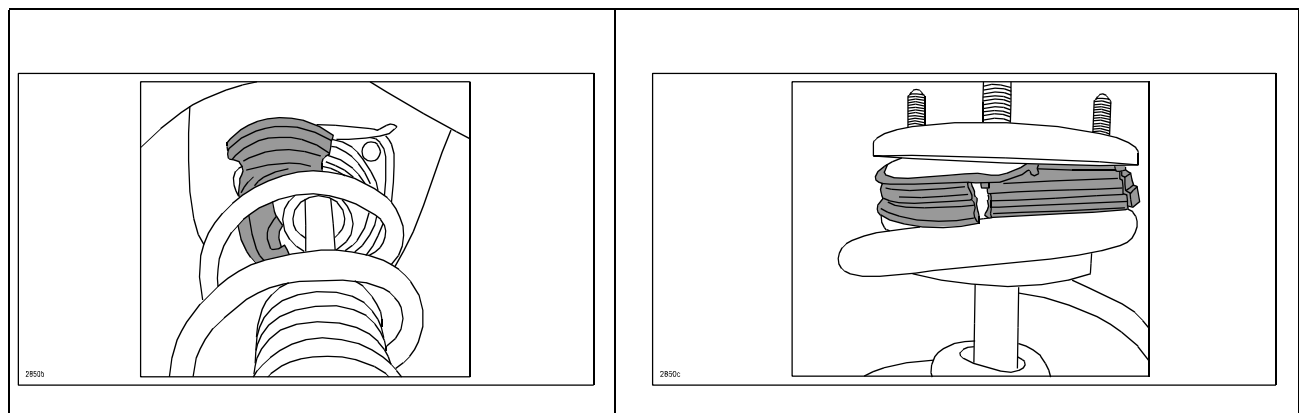
- For removal/installation and disassembly/assembly of the front shock absorber, refer to the workshop manual "FRONT SHOCK ABSORBER AND COIL SPRING DISASSEMBLY/ASSEMBLY".
- Before removing the mounting rubber, put the position mark so the mounting rubber can be installed back in the original position.

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

Repair For Mazda6 Type A Vehicles - (Replace strut bearing*, bump stopper and install coil spring protector):

- 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).
- Replace the front strut bearing if damaged*.



3. Install a protector on the front coil spring. Refer to "PROTECTOR INSTALLATION PROCEDURE" in page 5.
4. **Replace the bump stopper.**
5. 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).
6. Repeat Steps 1 - 5 on the opposite side front suspension.
7. Verify repair.

Repair For Mazda6 Type B Vehicles - (Replace bump stopper and install coil spring protector):

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. Install a protector on the front coil spring. Refer to "PROTECTOR INSTALLATION PROCEDURE" in page 5.
3. **Replace the bump stopper.**
4. 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).
5. Repeat Steps 1 - 4 on the opposite side front suspension.
6. Verify repair.

Repair For Mazda6 Type C Vehicles - (Replace bump stopper only):

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.**
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.**

Repair For CX-5 Type D Vehicles - (Modified strut bearing* and coil spring protector installation):

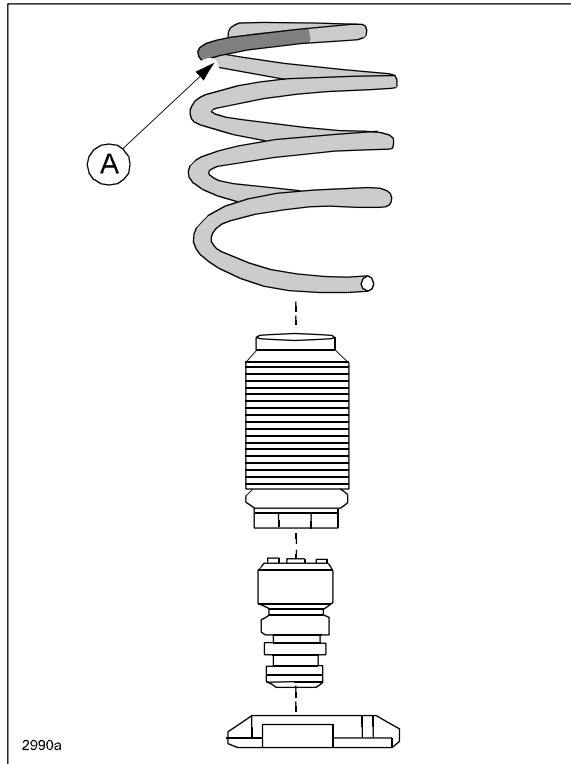
1. Remove the front strut bearing and coil spring according to the MS3 online instructions or the Workshop Manual (section 02-13 FRONT SHOCK ABSORBER AND COIL SPRING DISASSEMBLY/ASSEMBLY).
NOTE: *If the front strut bearing is found to be damaged, replace it with a modified part.
2. Install a protector on the front coil spring. Refer to "PROTECTOR INSTALLATION PROCEDURE" in page 5.
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.

Repair For CX-3 and CX-5 Type E Vehicles - (Coil spring protector installation only):

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. Install a protector on the front coil spring. Refer to "PROTECTOR INSTALLATION PROCEDURE" in page 5.
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.

PROTECTOR INSTALLATION PROCEDURE (Type A, B, **D, and **E**)**

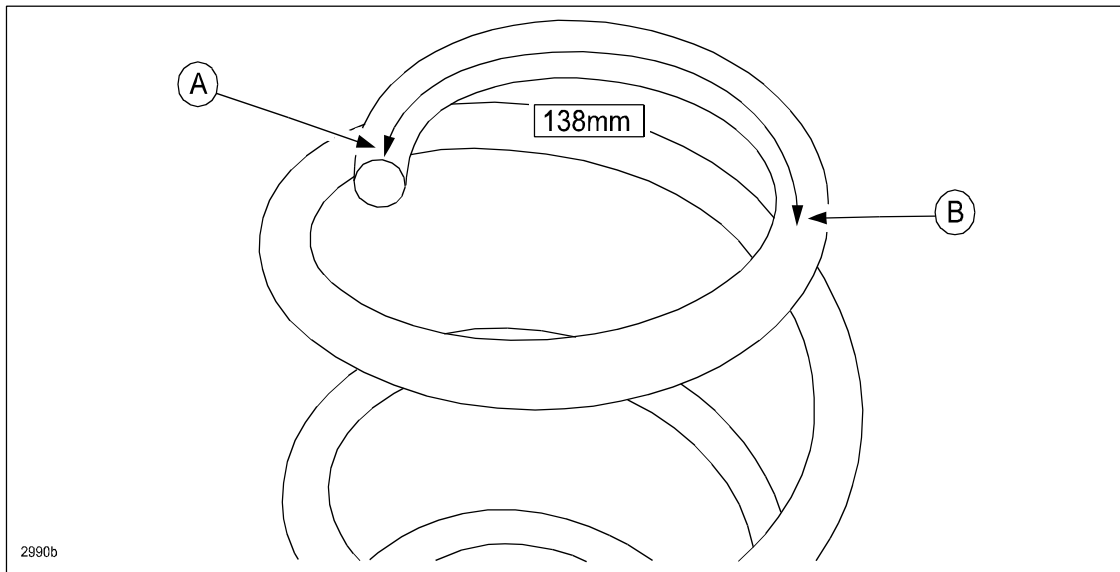
Coil Spring Protector (A) Installation:



6. Starting from the top of the coil spring, degrease the spring 1.5 coils downward.
7. Cut a thin strip of paper to 138 mm in length (or use a cloth type measuring tape).

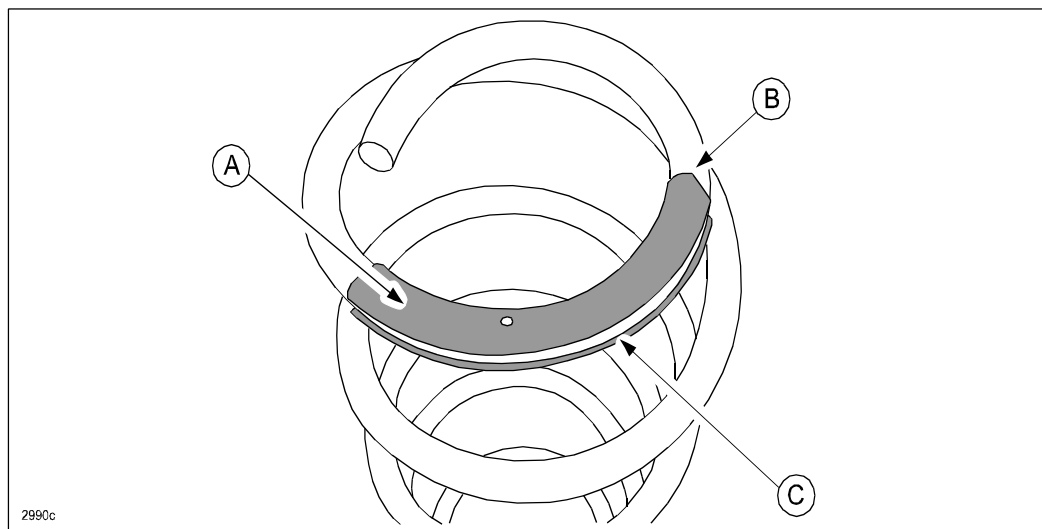
NOTE: For CX-3, use 130 mm in length.

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



10. 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.



11. 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.
12. 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.

PART(S) INFORMATION

| Part Number | Description | Qty. | Notes |
|-------------|---------------------|--------|---|
| KR27-34-38X | Front Strut Bearing | 1 or 2 | Mazda6 and CX-5 only Only replace if damaged |
| 9YB0-41-237 | Piston Rod Nut | 2 | Replace |
| KDY5-34-081 | Protector | 2 | Coil spring protector |
| GHY9-34-111 | Bump Stopper | 2 | Mazda6 only |

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.

| | CX-5, Mazda6 | CX-3 |
|--------------------------------|--------------------|---------------------|
| Warranty Type | A | A |
| Symptom Code | 82 | 82 |
| Damage Code | 9A | 97 |
| Part Number Main Cause | KR27-34-38X | 7777-SP-K08 |
| Quantity | 0, 1 or 2 | 0 |
| Operation Number / Labor Hours | XXKBKRX / 0.9 Hrs. | XXL9PBRX / 0.9 Hrs. |