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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:

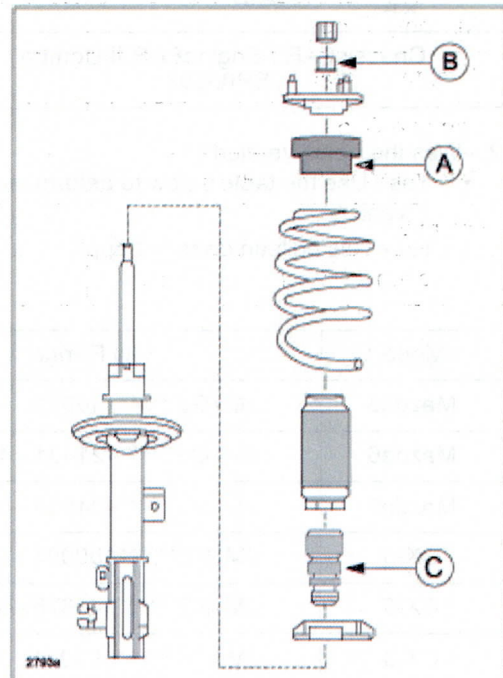
- upper front strut bearing (A) damage. (CX-5 and Mazda6)
- stick/slip between the front strut bearing and coil spring.
- the bump stopper (C) may be contacting the strut bearing when the front shock absorber is compressed, causing a popping noise. (Mazda6 only)

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.

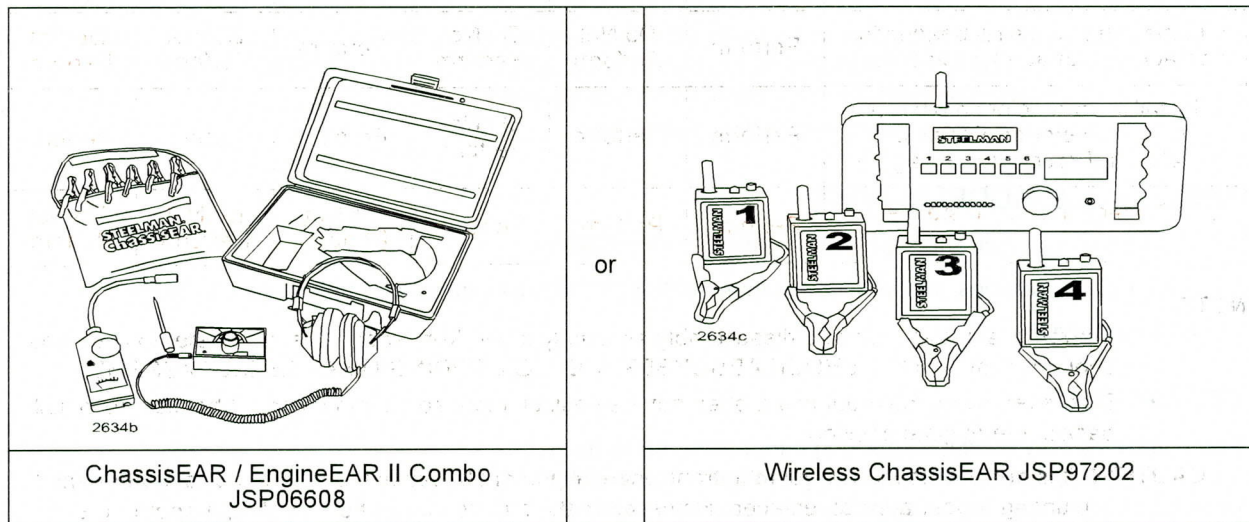


CONSUMER NOTICE: The information and instructions in this bulletin are intended for use by skilled technicians. Mazda technicians utilize the proper tools/equipment and take training to correctly and safely maintain Mazda vehicles. These instructions should not be performed by "do-it-yourselfers." Customers 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.

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:

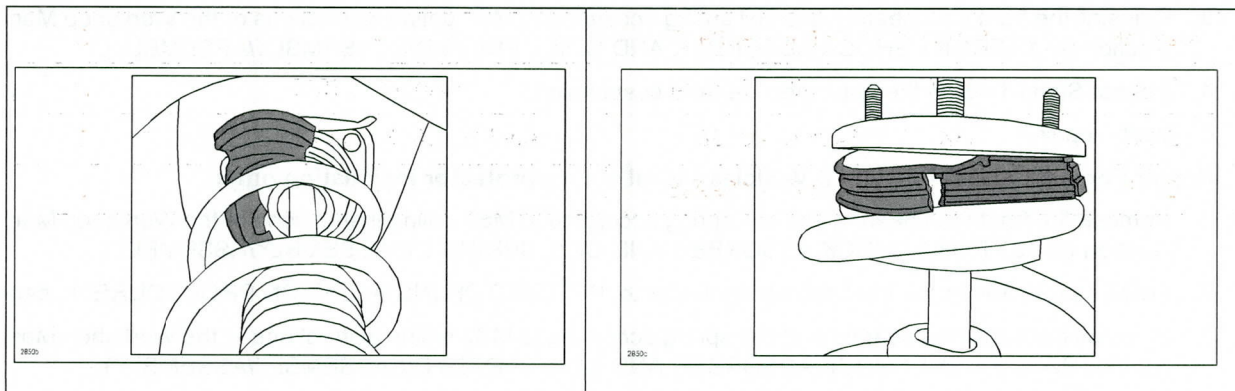
- For removal/installation and disassembly/assembly of the front shock absorber, refer to the workshop manual "FRONT SHOCK ABSORBER AND COIL SPRING DISASSEMBLY/ASSEMBLY".
- Before removing the mounting rubber, put the position mark so the mounting rubber can be installed back in the original position.

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):

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*.



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):

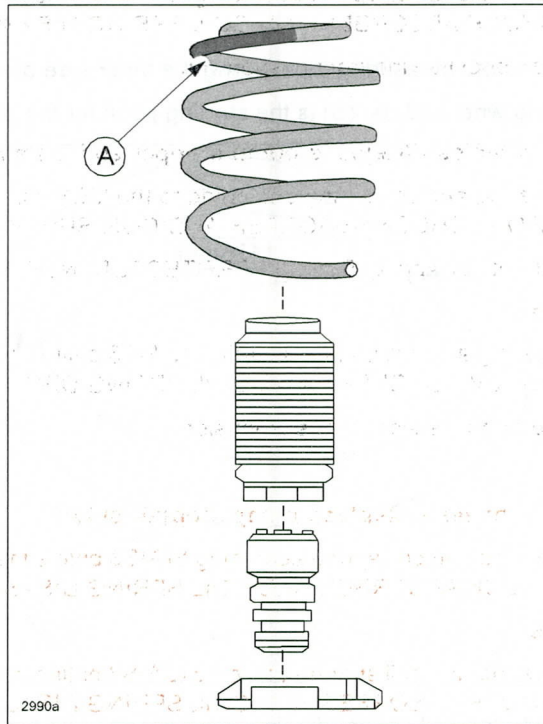
1. Remove the front strut bearing and coil spring according to the MS3 online instructions or the Workshop Manual (section 02-13 FRONT SHOCK ABSORBER AND COIL SPRING DISASSEMBLY/ASSEMBLY).
NOTE: *If the front strut bearing is found to be damaged, replace it with a modified part.
2. Install a protector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

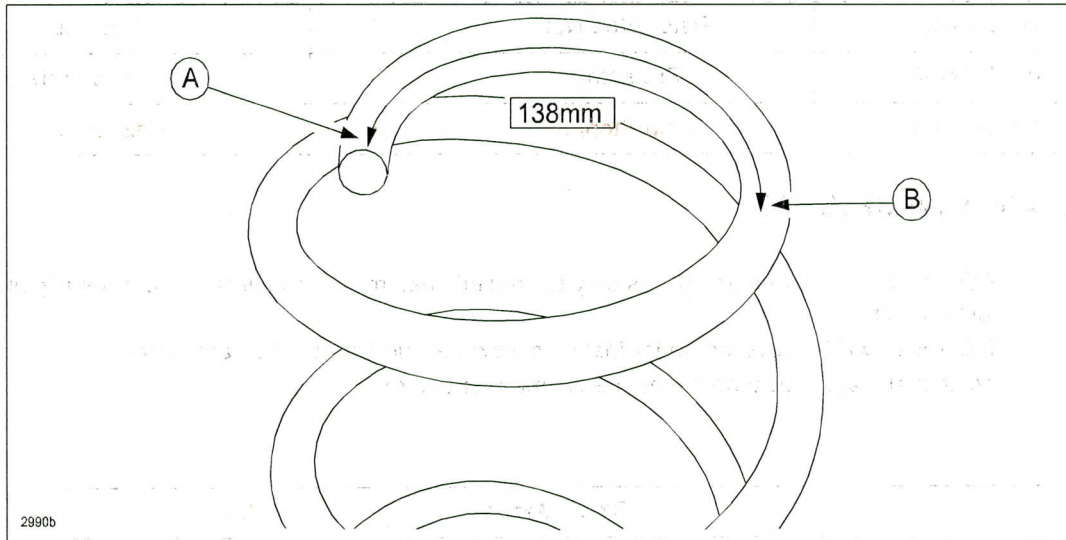
Coil Spring Protector (A) Installation:



6. Starting from the top of the coil spring, decrease 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).

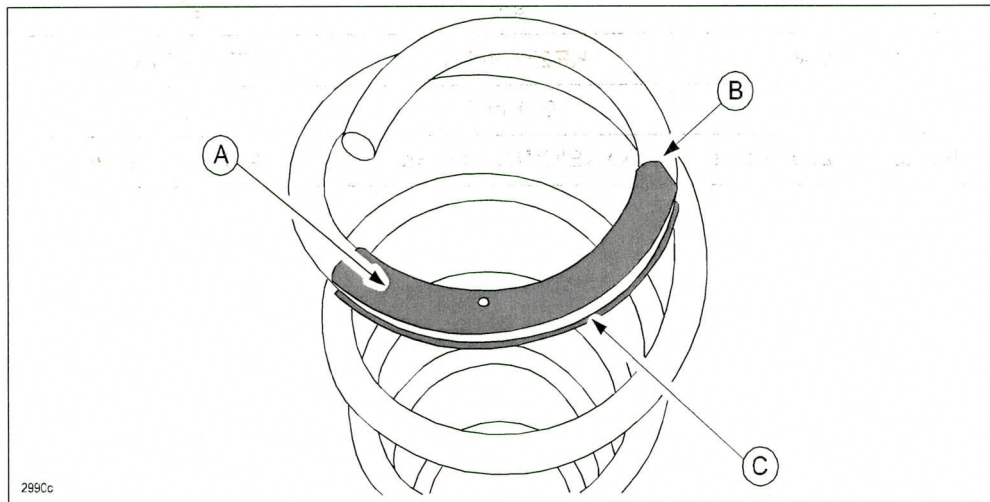
NOTE: For CX-3, use 130 mm in length.

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	XXKBKXR / 0.9 Hrs.	XXL9PBRX / 0.9 Hrs.