

ATTENTION:
 GENERAL MANAGER
 PARTS MANAGER
 CLAIMS PERSONNEL
 SERVICE MANAGER

IMPORTANT - All Service Personnel Should Read and Initial in the boxes provided, right.

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QUALITY DRIVEN® SERVICE

SERVICE INFORMATION

APPLICABILITY: 2006-2009MY Legacy Spec B and 3.0R Limited Models with Bilstein® Front Struts
NUMBER: 05-60-15
SUBJECT: Rattling Sound from Front Suspension While Driving
DATE: 07/27/15
 Inspection Method for Loose Strut Retaining Nut

INTRODUCTION

This bulletin provides an inspection method for the threaded portion of the front strut piston rod. If you receive a customer concern of a rattling sound in the front of the vehicle while driving and inspection results of the related suspension components are inconclusive, the strut retaining top nut torque should be checked using the following procedure.

SERVICE PROCEDURE / INFORMATION

Use the special tool as shown to remove and tighten the locking nut; a 17mm Strut Lock Nut Wrench, p.n. 20099PA000 (SOA Essential Tool).



IMPORTANT NOTE: When using an extension which increases the overall “length” of the torque wrench, the torque values applied will change. Refer to the illustration and calculation formula provided on the last page of this bulletin for determining the revised torque specification when using an extension like a Crow’s Foot wrench shown in the example photo above.

1. Check the torque of the top retaining nut.
 - If the nut torque exceeds 25Nm (18.4 ft. lbs.), torque the nut to 70 Nm (51.6 ft/lbs.) and proceed to Step #2.
 - Using the special tool shown above, if the nut torque is less than 25Nm (18.4 ft. lbs.), either the strut piston dust sleeve is out of position and being pinched or, there may be a crack in the threaded portion at the top of the strut piston. Proceed to **Step #3**.

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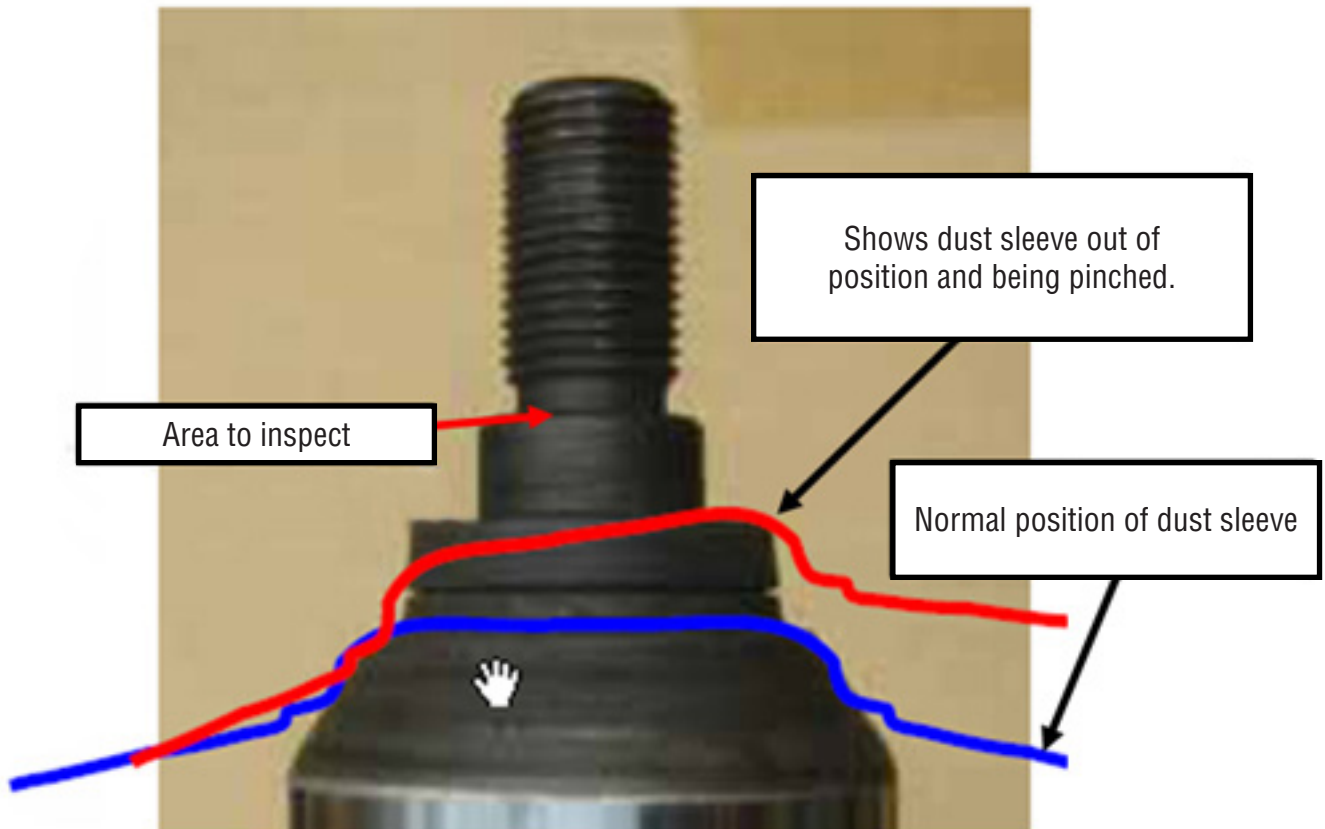
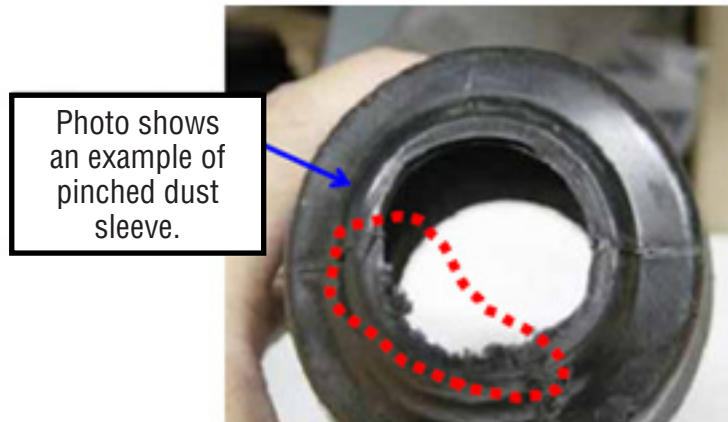
CAUTION: VEHICLE SERVICING PERFORMED BY UNTRAINED PERSONS COULD RESULT IN SERIOUS INJURY TO THOSE PERSONS OR TO OTHERS.

Subaru Service Bulletins are intended for use by professional technicians ONLY. They are written to inform those technicians of conditions that may occur in some vehicles, or to provide information that could assist in the proper servicing of the vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do the job correctly and safely. If a condition is described, DO NOT assume that this Service Bulletin applies to your vehicle, or that your vehicle will have that condition.

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ISO 14001 is the international standard for excellence in Environmental Management Systems. Please recycle or dispose of automotive products in a manner that is friendly to our environment and in accordance with all local, state and federal laws and regulations.

2. Remove the front wheel assembly then try to rotate the dust sleeve around the strut piston.
 - If the dust sleeve does not turn easily, the strut assembly will need to be disassembled for closer inspection.
 - If you are able to turn it easily, the procedure is complete. Further inspection to determine the source of the sound is necessary.



3. Once the strut has been disassembled, the area indicated in the photo above will need to be inspected closely for cracking.

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The photo below shows a Magnaflux Spotcheck® SK-416 Penetrant Inspection Kit, which can be purchased from industrial equipment suppliers such as MX Industrial, (215) 322-8909 for \$99.00 (plus shipping), or online at: www.mxindustrial.com.



Magnaflux Spotcheck® SK-416 Penetrant Inspection Kit

PENETRANT CHECKING PROCEDURE:

- (3-1) Clean the area to be inspected thoroughly of any dirt or grease with the cleaner.



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- (3-2) Apply penetrant evenly to the inspection area then allow to dwell (penetrate) for about 10 minutes.



- (3-3) Remove any excess penetrant with a clean shop cloth sprayed with cleaner. **DO NOT** spray cleaner directly on the part. Otherwise, any defect the process is trying to show may be rinsed clean. (**NOTE:** some penetrant will remain in the threads.)

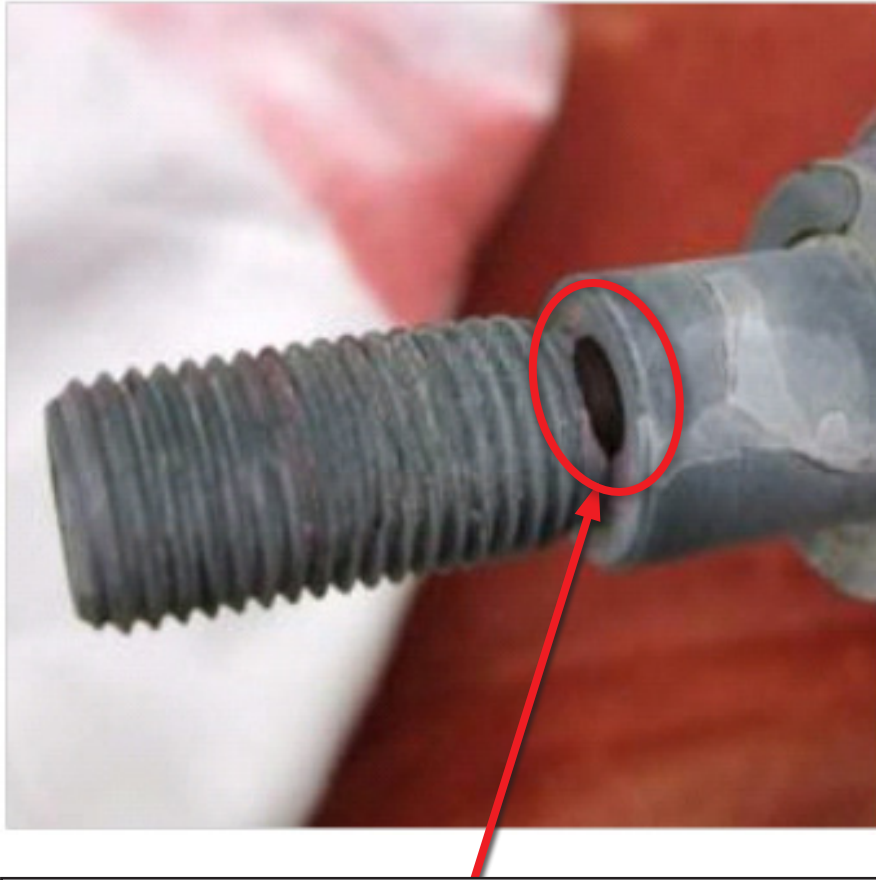


- (3-4) Apply the developer evenly to the threaded area and allow it to dry. The bolt will appear like it is coated with white powder as shown in the photo on the right.



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- (3-5) Check the developer for penetrant seepage. The strut in the photo below requires replacement.



The base of the threads as shown below is the focal point of the penetrant inspection. After applying the developer, watch carefully for a red line to appear indicating the presence of a crack. If a crack is present, the penetrant indication will eventually widen and blur as it appears in the photo.

- (3-6) If the penetrant inspection reveals no cracking, wash away any remaining penetrant materials thoroughly with the cleaner and wipe dry with a clean shop cloth. If a crack is found, replace the strut.
4. Reassemble the strut assembly following the procedure in the applicable Service Manual. **NOTE:** be sure to use a **NEW** self-locking top nut, part number 902350027 and torque it to 70 Nm (51.6 ft. lbs.).

IMPORTANT: To insure proper tightening torque of the nut and tension on top portion of the strut assembly are achieved, the special strut mount socket tool, part number 20099PA000 and a 6mm hex key wrench to hold the strut piston firmly **must** be used as shown on pg. 1.

5. Road test the vehicle to verify any change to (or elimination of) the original condition. If the sound is gone, the repair is complete. If the sound persists, further inspection to determine the source will be necessary.

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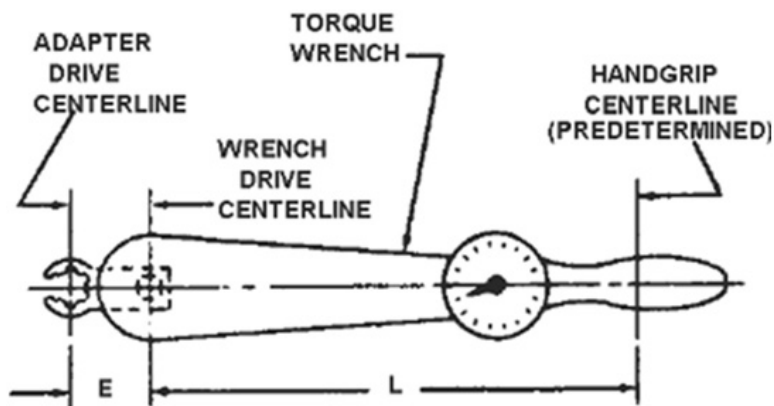
WARRANTY / CLAIM INFORMATION

For vehicles within the Basic New Car Limited Warranty period or with an active Added Security Classic or Gold Service Agreement, this repair may be claimed using the following information:

LABOR DESCRIPTION	LABOR OPERATION #	FAIL CODE	LABOR TIME
FRONT STRUT OVERHAUL- ONE	B611-201	NAD48	2.0
FRONT STRUT OVERHAUL- BOTH	B611-204		2.4

NOTE: Labor times provided include penetrant inspection and 4-wheel alignment.

Revised Torque Specification Calculation Formula:



$T = 51.6$ ft. lbs. (Current Torque Specification)

$L = 10"$ (Length of Torque Wrench)

$E = 1.5"$ (Length of "Extension" / Crow's Foot in this example)

$Y =$ "New" Torque Specification

Calculation Formula: $T \times L \div L + E = Y$

Example: $51.6 \times 10 = 516$ (T)

$10 + 1.5 = 11.5$ (L)

$516 \div 11.5 = 44.9$ (Y)

The "New" Torque Specification is **44.9 ft. lbs.**

REMINDER: SOA strongly discourages the printing and/or local storage of service information as previously released information and electronic publications may be updated at any time.

Always refer to STIS for the latest service information before performing any repairs.