

- 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 BULLETIN

APPLICABILITY: 2015-2019MY Legacy and Outback
2015-2021MY WRX

NUMBER: 04-17-17R

DATE: 09/13/17

SUBJECT: Rattling Sound from EPS Gear Box

REVISED: 08/20/19

INTRODUCTION:

This bulletin provides a service procedure to address isolated customer concerns of a rattling sound identified as coming from the Electronic Power Steering (EPS) gear box (steering rack) assembly. The repair (when applicable) involves installation of a new tension spring for the worm gear to reduce / eliminate the condition. It should be noted the condition is NOT detrimental to the operation of the EPS system.

PART INFORMATION:

Description	Part Number
SPRING KIT NBL	34130AL010

SPECIAL TOOL INFORMATION:

A special tool bit is required to remove the cover screw for access to the tension spring. An inch-pound torque wrench will also be necessary. ONE tool will be provided to each Retailer AT NO CHARGE to coincide with this bulletin's release. Additional bits can be sourced (at user expense) from either Bosch or Matco. Both tool suppliers will utilize the same BTP40P part number.



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.

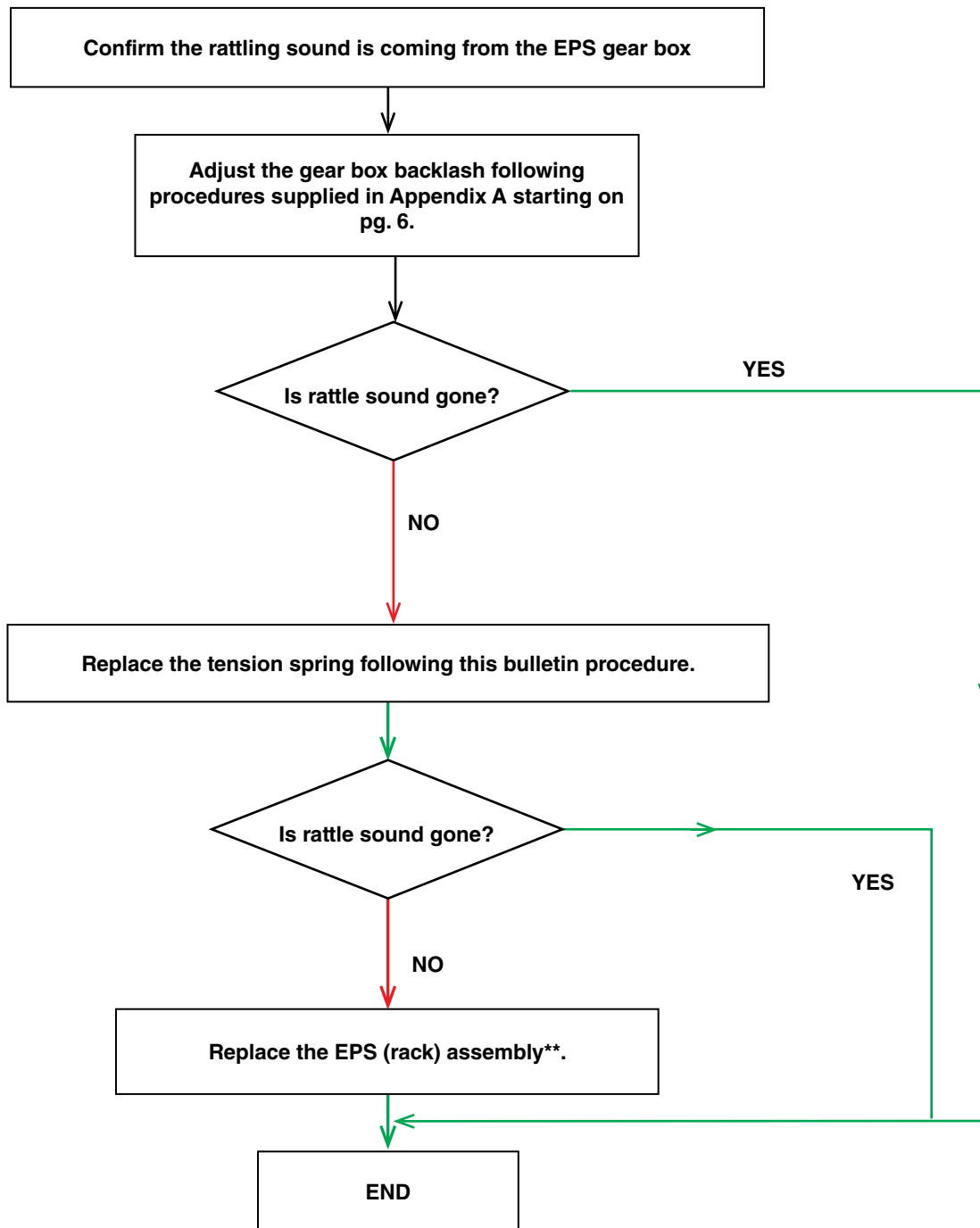
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ISO 14001 is the international standard for excellence in Environmental Management Systems. Please recycle or dispose of automotive products in a manner that is friendly to our environment and in accordance with all local, state and federal laws and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

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SERVICE PROCEDURE / INFORMATION:

Use the following flow chart when diagnosing a steering rattle sound concern on the applicable vehicles specified above:



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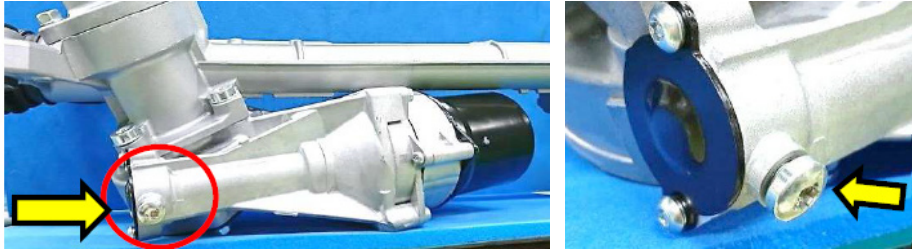
TENSION SPRING REPLACEMENT PROCEDURE:

IMPORTANT NOTES:

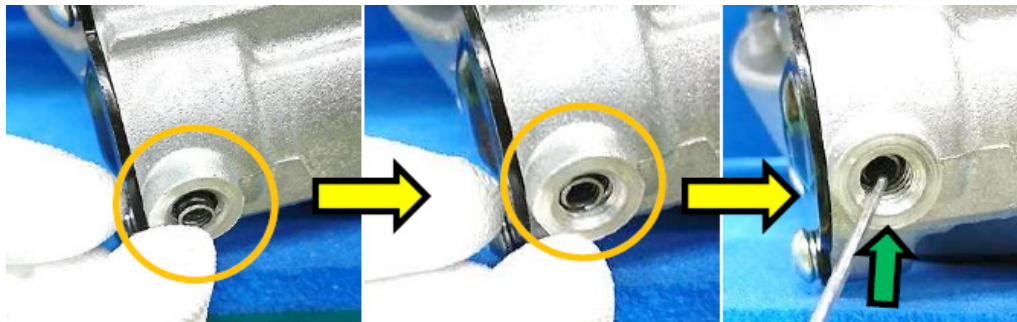
- This repair does NOT require the EPS gear box to be removed. (Photos below for reference only.)
- Post-repair wheel alignment is NOT required or necessary.

Step 1- Raise the vehicle and remove the undercover following the procedure in the applicable Service Manual.

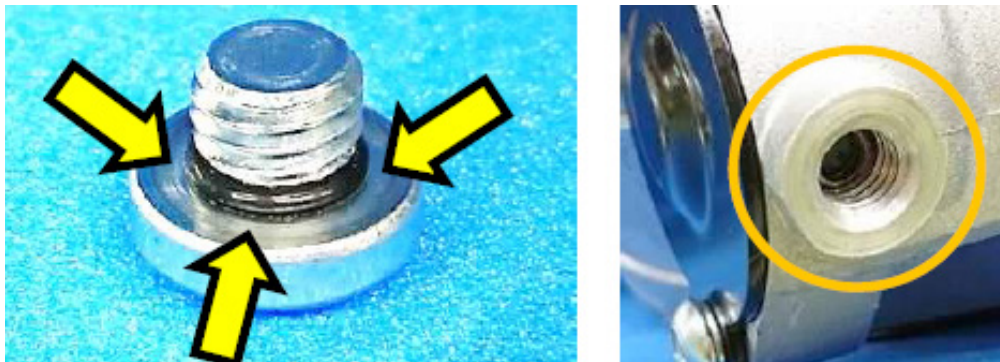
Step 2- Using the special tool bit, remove the tension spring cover screw.



Step 3- Remove the tension spring and replace with the new part. Make sure the new spring is fully seated in the hole.



Step 4- Make sure the cover screw hole is clean with no contamination before reinstallation. Lubricate the o-ring with some ATF on your fingers then install the new tension spring cover screw / o-ring and torque to **40 inch-pounds**.



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WARRANTY / CLAIM INFORMATION:

For vehicles within the Basic New Car Limited Warranty period or covered by an active Subaru Added Security Classic or Gold plan, this repair may be submitted using the following claim information:

Use ONE of the following 3 scenarios listed below when coding the applicable EPS Rack repair. All times include road testing.

Labor Description	Labor Operation #	Labor Time		Fail Code
		Leg / Obk	WRX	
TEST DRIVE, EPS RACK BACKLASH ADJ. -REPAIRED	A659-008	0.7	2.0	RDQ-20
TEST DRIVE, EPS RACK BACKLASH ADJ, NOT REPAIRED REPL. TENSION SPRING -REPAIRED	A659-006	1.3	2.4	
TEST DRIVE, EPS RACK BACKLASH ADJ, -NOT REPAIRED REPL. TENSION SPRING, -NOT REPAIRED, REPL. REPL EPS RACK, -REPAIRED	A659-016	4.0	3.8	

IMPORTANT REMINDERS:

- 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 check for any open recalls or campaigns anytime a vehicle is in for servicing.
- Always refer to STIS for the latest service information before performing any repairs.

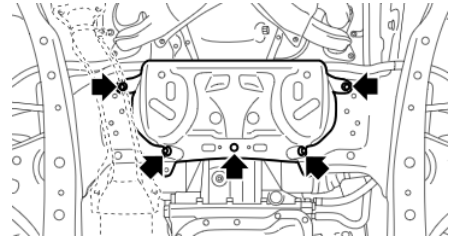
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Appendix A

EPS GEARBOX BACKLASH ADJUSTING PROCEDURE:

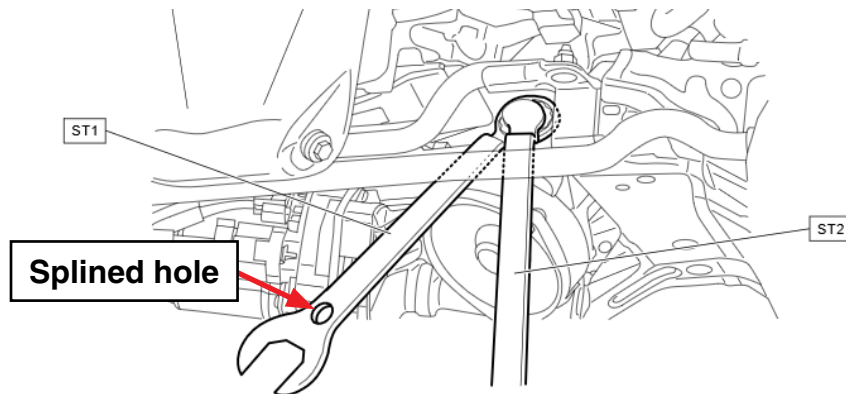
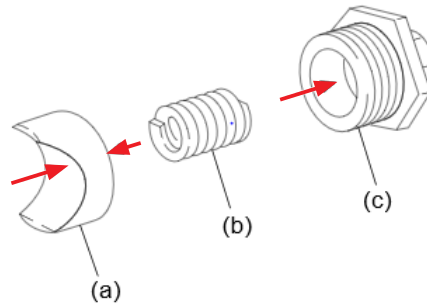
- 1) **For Legacy and Outback:** Gain access to the lock nut and adjusting screw by following the applicable Service Manual procedures for removing the following components:

- Front under-cover
- Front Stabilizer bar
- Front exhaust pipe assembly
- 5 bolts securing the TPS rack guard as shown.



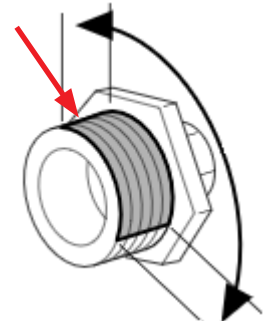
For WRX: Remove the EPS gear box assembly following the procedure in the applicable Service Manual. The remaining steps are the same as Legacy / Outback.

- 2) Use the special tools to loosen / remove the lock and adjusting nut (c), spring (b) and pressure pad (a).



- **ST1-** 34199AJ030
- **ST2-** 34199AJ040

- 3) Apply grease (p.n. **SOA868V9700** / Autolex “A”) to the face and back side (red arrows) of the pad (a) and re-insert it into the housing.
- 4) Fill the inside of the adjusting nut (c) “cup” (red arrow) with the same grease (p.n. **SOA868V9700** / Autolex “A”) and insert the spring into it.
- 5) Apply liquid gasket (red arrow): ThreeBond 1215 / **SOA868V9700** to 1/3 or more of entire perimeter of adjusting screw thread (c).
- 6) Reinstall the adjusting screw and tighten to 20 N·m (14.8 ft-lbs.) and loosen it.
- 7) Tighten again to 20 Nm (14.8 ft-lbs) and loosen it.



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- 8) Tighten a third time to 20 Nm (14.8 ft-lbs), then loosen it by 30 degrees, and reinstall the lock nut while holding the screw in position using the special tools.
- 9) While holding the adjusting screw, torque the lock nut to 45Nm (33.2 ft. lbs.).
- 10) On WRX, use the splined hole in the special tool (ST1 shown above) on the pinion splines to turn the EPS gear box and confirm smooth operation before re-installation. On Legacy / Outback, with the front wheels raised, turn the steering wheel to right and left, and perform the adjustment procedure again if the steering does not feel smooth. If necessary, repeat the adjustment procedure by GRADUALLY loosening the adjusting nut as needed for smooth steering feel BUT, never exceed more than 40 degrees TOTAL.
- 11) If this backlash adjustment procedure is unsuccessful, the complete EPS gear box assembly will need to be replaced.
- 12) When EPS repair is complete, reassemble removed components in reverse order following the applicable Service Manual procedures INCLUDING replacement of any one-time use parts.

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