

ATTENTION:GENERAL MANAGER PARTS MANAGER CLAIMS PERSONNEL SERVICE MANAGER *IMPORTANT - All Service Personnel Should Read and Initial*

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APPLICABILITY: 1995~2000MY Legacy Vehicles**NUMBER:** 04-09-01**SUBJECT:** Steering Knocking/Rattle Noise
When Turning**DATE:** 08/15/01

If you should encounter a knocking or rattle noise from the vehicle steering system please use the procedures below to diagnose and reduce or eliminate the noise. The noise is usually heard when turning and going over a bump in the road such as when turning into a driveway. Please keep in mind that while the noise sounds the same, the cause (and ultimately the repair performed) is different between 1995-99MY Legacy and 2000MY Legacy.

EXPLANATION OF MECHANISM AND CAUSE

The power steering assist is created using hydraulic pressure. This pressure is generated by the pump and then distributed through valving on the steering rack, to the appropriate side of the rack. There is always pressure on both sides of the rack, in order to provide quick steering reaction and a positive feel.

When the steering input is negative, that is, straight driving, the fluid is basically just circulated for lubrication, while maintaining equal pressure. When the steering wheel is turned, hydraulic pressure is greater on the input side, while some residual pressure is maintained on the free side of the rack.

When turning the steering wheel, even slightly, on rough roads, or especially when entering a driveway over a curb, the tires will input a reactive force through the rack, caused by the impact. This causes the hydraulic pressure in the input lines to force back against the residual pressure in the free side lines. When the higher pressure hits the lower pressure, knocking noise is generated.



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.

While some customers may object to this noise, it does not harm the steering system or any of its components. This noise can be reduced or eliminated by following the procedures below.

REPAIR PROCEDURE

1995~1999 Model Years

If you should encounter the condition on a 95-99MY it will be necessary to install a Steering Universal Joint With Damper. The Steering Universal Joint with damper are available in two lengths:

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|----------------|------------------------|------------------|
| Legacy Models | Part Number 34160AC030 | (Shorter Length) |
| Outback Models | Part Number 34160AC090 | (Longer Length) |

These parts are available through your normal parts channel. Always check the part number suppression for any changes.

After installing the new Steering Universal Joint with damper using the procedures in the appropriate service manual, it will be necessary to drive the vehicle to confirm the correction.

2000 Model Years

If you should encounter the condition on a 2000 MY, it will be necessary to install a set of Modified Power Steering Lines.

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| Modified Power Steering Lines | Part Number 34190AE120 |
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This kit is available through you normal parts channel. Always check the part number suppression for any changes.

After installing the Modified Power Steering Lines using the procedures in the appropriate service manual. It will be necessary to drive the vehicle to confirm the correction.

WARRANTY INFORMATION/CLAIMS

For vehicles within the warranty period, these repairs can be claimed using the following warranty information.

| Year | Component | Fail Code | Operation Code | Time |
|---------|-------------------------------------|-----------|----------------|----------|
| 1995-99 | Steering Shaft Lower Universal | RAD-48 | A658-301 | 0.3 Hrs. |
| 2000 | Modified Power Steering Hose Kit | RAV-48 | A657-008 | 2.3 Hrs. |