| SERVICE BULLETIN | | | | |
|---|--|---|--|--|
| To: For the attention of: Please copy to: | All Dealers Service Manager/After Sales Manager The Dealer Principal The Warranty Administrator Aston Martin Technician(s) The Parts Manager | Reference SB-11-0300 Issued: 15 April 2010 | | |
| Model: VIN Range: | All V8 Vantage, DBS and DB9. V8 Vantage up to C13358, DBS up to E01351 and DB9 up to A12418. | | | |
| Subject: | Squeak from the Steering Column | Page 1 of 4 | | |

Reason for this Service Bulletin

It is possible that a squeak can be heard from the area of the steering pinion when the steering is turned. This occurs when there is not sufficient lubrication of the lip-seal on the steering rack pinion. To correct this problem, it is necessary to drain and flush the Power Assisted Steering (PAS) system, then fill it with a different specification fluid and an additive.

Workshop Procedure

Note: You will need applicable equipment to measure the temperature of the PAS fluid during the procedure that follows.

- 1. Remove the cap from the PAS fluid reservoir.
- **2.** Use a syringe to remove the PAS fluid from the reservoir.
- **3.** Install the cap on the PAS fluid reservoir.
- **4.** Remove the two (V12 vehicles) or three (V8 vehicles) M6 screws that attach the PAS reservoir (refer to Figure 1 V12 shown).

Note: This is to get access to the return hose connection.

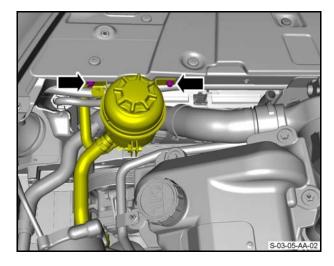


Figure 1

5. Put applicable absorbent material around the PAS fluid reservoir to absorb spilled fluid.

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6. Release the hose clamp (1) that attaches the PAS return hose (2) to the PAS reservoir (3) (refer to Figure 2).

- 7. Disconnect the PAS return hose (2) from the PAS reservoir (3).
- **8.** Install an applicable plug to seal the return port of the PAS reservoir (3).

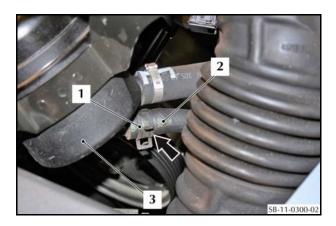


Figure 2

- 9. Put an applicable container under the PAS return hose (2) to collect PAS fluid.
- **10.** Put the PAS return hose (2) into the container to drain the fluid.
- 11. Lift the vehicle until the wheels are off the ground and make it safe.

CAUTION: DO NOT OPERATE THE ENGINE IN THE STEPS THAT FOLLOW. IF YOU DO, COMPONENTS OF THE PAS SYSTEM CAN BE DAMAGED.

- **12.** Turn the steering fully to the left, then fully to the right through ten cycles.
- **13.** Let the PAS fluid drain fully.
- **14.** Empty the unwanted PAS fluid from the container.

Note: Obey the local approved procedures when you dispose of the unwanted PAS fluid.

15. Turn the steering to the straight ahead position.

Flush the PAS System

Note: You will need approximately 0.75 litres of Pentosin CHF 11S fluid to flush the system.

- **16.** Remove the cap from the PAS fluid reservoir.
- 17. Fill the PAS reservoir with Pentosin CHF 11S fluid.
- **18.** Turn the steering fully to the left, then fully to the right through ten cycles.
- **19.** Turn the steering to the straight ahead position.
- **20.** Let the PAS fluid drain fully into the container.
- **21.** Empty the unwanted PAS fluid from the container.

Note: Obey the local approved procedures when you dispose of the unwanted PAS fluid.

Install the PAS Reservoir

- 22. Remove the sealing plug from the return pipe on the PAS reservoir.
- 23. Connect the return hose to the PAS reservoir.
- **24.** Install the hose clamp for the return hose.
- **25.** Put the PAS reservoir in position.
- **26.** Install and tighten the two or three M6 screws to attach the PAS reservoir.

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- 27. Remove the absorbent material from around the PAS fluid reservoir.
- **28.** Fully clean all spilled PAS fluid from around the work area.

Fill and Bleed the PAS System

- **29.** Put 50 ml of Lubrizol additive to the PAS reservoir.
- **30.** Fill the PAS system with Pentosin CHF 11S.
- 31. Use an applicable cleaner to remove all grease and oil from the surface of the cap for the PAS reservoir.
- **32.** Apply a label to the cap to show that Pentosin CHF 11S is the correct type of fluid to use in the PAS system.
- **33.** Put an applicable temperature probe into the PAS reservoir.

Note: Do the steps that follow with the vehicle on a hard, flat surface outside the workshop.

- **34.** Start the engine.
- 35. Keep the vehicle at a stop with the steering in the straight forward position
- **36.** Turn the steering wheel 90 degrees clockwise and hold it at that position.
- 37. Apply and hold a very slight force in a clockwise direction, against the pressure of the steering.

Note: Do not actually turn the steering wheel.

- **38.** Increase the speed of the engine to 2000 RPM and keep it at that speed.
- **39.** Monitor the temperature of the PAS fluid until it reaches $100 \,^{\circ}\text{C}$ +/- $5 \,^{\circ}\text{C}$.

Note: This will usually take approximately eight minutes.

40. CAUTION: DO NOT HOLD THE STEERING AT FULL LOCK FOR MORE THAN TWO SECONDS WHEN THE PAS FLUID TEMPERATURE IS AT 100 °C. IF YOU DO, DAMAGE TO THE PAS SYSTEM CAN OCCUR.

Note: Make sure that you keep the engine speed between 900 and 1000 RPM in the step that follows.

Turn the steering wheel at a moderate speed to full lock for two seconds then *very* quickly turn it back 90 degrees.

- **41.** Do step 40 again eight times.
- **42.** Do steps 40 and 41 again in a counterclockwise direction.
- **43.** Turn the steering to the straight forward position.
- **44.** Stop the engine.
- **45.** Remove the temperature probe from the PAS reservoir.
- **46.** Install the cap on the PAS reservoir.
- **47.** Do a road test of the vehicle. If the steering system continues to make a squeak sound, do steps 33 to 47 up to two times again.

Note: If the steering system continues to make a squeak noise, speak to Aston Martin Technical Support.

48. Remove the Owner's Guide from the glove box.

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- **49.** Find the page that shows the specification of the PAS fluid.
- **50.** Apply a label that covers the initial fluid type in the Owner's Guide to show the new fluid type (refer to Figure 3).

Note: The page shown in Figure 3 is an example. The actual page can look different.

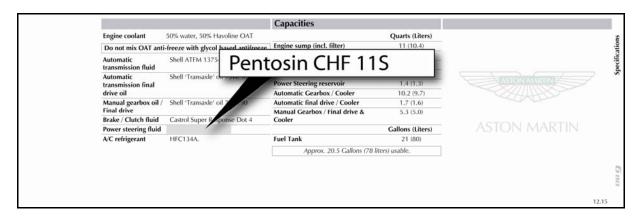


Figure 3

51. Put the Owner's Guide back into the glovebox.

Part Data

| Description | Part Number | Quantity |
|---|----------------|----------|
| Lubrizol | 4G43-24-11082 | 50 ml |
| Pentosin CHF 11S | 6G33-19H373-BA | 2 Litres |
| PAS Reservoir Label: "Pentosin CHF 11S" | AD43-3F730-AA | 1 |
| Owner's Guide Label: "Pentosin CHF 11S" | 4G43-40-11083 | 1 |

Warranty Data

| Description | Time | Labour Code |
|--|------------------------|-------------|
| Flush the PAS system and change the fluid and add an | DBS: 0.75 hours | 11.02.AM |
| additive. | DB9: 0.75 hours | |
| | V8 Vantage: 0.75 hours | |

If you have any queries related to this Service Bulletin, please contact: Aston Martin Technical Services on: +44 (0) 1926 644720 or facsimile: +44 (0) 1926 644733.

E-mail: amtech@astonmartin.com. Or contact your After Sales Manager.

The English version of this Service Bulletin is written in Simplified Technical English to ASD STE-100™.

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