



S-TYPE

DATE 07/03  
Amended 02/04

S211-04

**SERVICE**

## **TECHNICAL BULLETIN**

Squeaking Noise –  
Power Steering System –  
Flush System

MODEL 2003 MY-ON  
S-TYPE

VIN M44998-ON

Remove and destroy Bulletin S211-04, dated 07/03.  
Replace with this Bulletin.  
Revisions are marked with a bar and in **bold text**.

### **Issue:**

On some 2003 MY-ON S-TYPE vehicles, a squeaking noise may be apparent from the power assisted steering system when the steering wheel is rotated in either direction. The noise is caused by a seal inside the steering rack. The noise can emanate through the steering column and steering wheel, making it difficult to diagnose.

The system can be drained and refilled with new fluid to address the customer concern. This bulletin does not address any other PAS noises such as PAS pump or drive belt related noises.

### **Action:**

On a customer complaint basis only, drain, refill (with fluid specified in Parts Information below) and bleed the PAS system following the workshop procedure outlined below.

#### FLUSHING PROCEDURE

1. Open door.
2. Open hood, fit fender protector covers.
3. Remove PAS reservoir filler cap.
4. Raise vehicle on lift.
5. Remove air deflector (see Workshop Manual, JTIS CD ROM, Section: 501-02, SRO 76.11.41).
6. Place suitable drain tray under vehicle.
7. Clean local area around the PAS rack, feed and return pipes to remove any road dirt.
8. Unclip PAS rack feed and return pipes from retaining clips.
9. On V6 vehicles only, release the left hand upstream oxygen sensor lead from the PAS pipe clip.

## SECURING SCREW FOR FEED/RETURN LINES

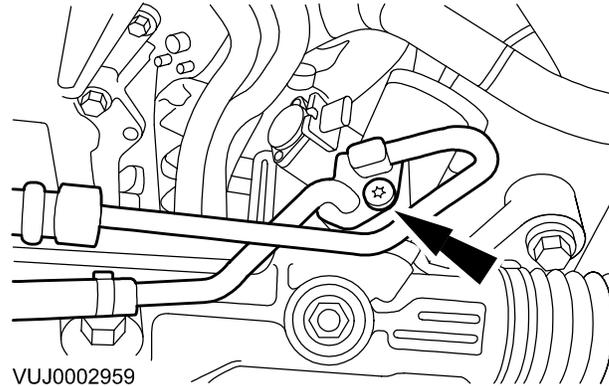


ILLUSTRATION 1

10. On all vehicles, remove the PAS rack feed and return pipes securing screw (Illustration 1).
11. Disconnect and reposition the PAS feed and return pipes from the PAS rack.
12. Allow fluid to drain from system.

**Note:** Lower vehicle on ramp and slowly cycle steering ten times lock to lock to ensure all fluid is purged from system.

13. Raise vehicle on ramp, clean residual fluid from the PAS rack and PAS feed and return pipes.
14. Connect and align the PAS feed and return pipes to the PAS rack.

**Note:** Existing PAS feed/return pipe seals are to remain in position during first purge operation if they are not damaged.

15. Install and tighten the PAS feed and return pipes securing screw.
16. Remove drain tray from under the vehicle.
17. Lower vehicle on ramp.
18. Fill PAS reservoir with new fluid.
19. Start engine and allow to idle for two minutes while slowly cycling steering lock to lock.

**Note:** If necessary top up fluid as air is purged from system.

20. Switch engine 'Off'.
21. Raise vehicle on ramp to a suitable working height.
22. Place suitable drain tray under vehicle.
23. Repeat steps 10 - 13.
24. Remove and discard O-ring seals from the PAS rack feed and return pipes.

25. Lubricate and install the new O-ring seals on the PAS rack feed and return pipes.
26. Connect and align the PAS feed and return pipes to the PAS rack.
27. Install and tighten the PAS feed and return pipes securing screw.
28. On V6 vehicles only, secure the left hand upstream oxygen sensor lead to the PAS pipe clip.
29. On all vehicles, clip PAS rack feed and return pipes onto retaining clips.
30. Install air deflector (see Workshop Manual, JTIS CD ROM, Section: 501-02, SRO 76.11.41).
31. Remove drain tray from under vehicle.
32. Lower vehicle on ramp and repeat steps 18 - 20.
33. Install PAS reservoir filler cap.
34. Remove fender protector covers and close hood.
- 35. Start engine.**

**Note: Step 36 MUST be carried out quickly and forcefully.**

- 36. QUICKLY AND FORCEFULLY turn steering to full lock. Bounce steering on/off full lock five times. Turn to opposite lock and repeat procedure.**
- 37. Turn steering to full lock, hold on full lock for ONE SECOND, then QUICKLY turn back through 90 degrees. Slowly return to full lock and repeat five times. Turn to opposite lock and repeat procedure.**
- 38. Close door.**
- 39. Repeat steps 36 and 37 with the vehicle off the ramp and the wheels on the ground.**

**⚠ Warning: Do not carry out the following procedure on the public highway, if a suitable area is not available contact the Technical Helpline (1-888-524-3577) for further assistance.**

- 40. Repeat steps 36 and 37 while slowly driving the vehicle in circles to achieve full lock.**
- 41. Retest for fault. If fault rectified no further action is necessary. If fault still apparent contact the Technical Helpline (1-888-524-3577) for further assistance.**

**Parts Information:**

<b><u>DESCRIPTION</u></b>	<b><u>PART NUMBER</u></b>	<b><u>QTY</u></b>
Transmission fluid – Mobil ATF (1 Liter bottle)	JLM 21703	3
PAS rack hose O-ring	XR8 29167	1
PAS rack hose O-ring	XR8 29168	1

**Warranty Information:**

Warranty claims should be submitted quoting the information found in the table below. This will result in payment of the stated time and, where applicable parts/miscellaneous expense codes as listed.

<b>Description</b>	<b>SRO</b>	<b>Time</b>	<b>Causal Part Number</b>
Drain, refill and bleed PAS system	57.91.29	1.2 hrs.	JLM 21703