

Technical Service Bulletin

NUMBER: 19-07-99

GROUP: Steering

DATE: Dec. 22, 1999

This bulletin is supplied as technical information only and is not an authorization for repair. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without written permission of <bx>DaimlerChrysler Corporation.

SUBJECT:

Power Steering Moan Noise

OVERVIEW:

This bulletin includes information to diagnose and repair a power steering noise by removing air from the system.

MODELS:

2000 (PL) Neon

SYMPTOM/CONDITION:

Power steering moan can be described as a low frequency noise emitted by the steering system with steering wheel inputs at low engine RPM (low speed turns, parking maneuvers). Although some noise is normally present during these conditions, moan is brought to an unacceptable level when the power steering fluid is aerated. A low fluid fill causes the aerated fluid.

DIAGNOSIS:

With the engine running and the power steering reservoir cap removed, aerated fluid will have a foamy, or "champagne", appearance due to air bubbles. To alleviate this condition, the air trapped in the steering system has to be removed by conducting a bleed. Diagnosis/Repair is dependent on the power steering fluid being at the proper level within the power steering reservoir. Fluid fill is to be checked with the engine off and at normal ambient temperature, approximately 21° C to 27° C (70° F to 80° F). The proper, or recommended, fluid level in the reservoir should be:

- a. At the "**HOT**" letters, if the dipstick reads "HOT-COLD-ADD", at normal ambient temperature; or
- b. At the "**FULL**" mark, if the dipstick reads "FULL-ADD", at normal ambient temperature.
- c. Fill the power steering system to the recommended level at normal ambient temperature with new fluid (MS9933). If the moan is still apparent or the fluid appears aerated, perform the Repair Procedure.

EQUIPMENT REQUIRED:

Vacuum Pump

REPAIR PROCEDURE:

THIS REPAIR IS COMPATIBLE WITH DAIMLERCHRYSLER'S MOBILE SERVICE PROGRAM AND DOES NOT REQUIRE HOISTS OR OTHER FULL SERVICE FACILITY SPECIAL EQUIPMENT.

Bleeding With A Vacuum Pump:

1. Remove the power steering fluid cap. **DO NOT START THE VEHICLE UNTIL STEP 5.**
2. Lift the front wheels off the ground just enough to allow the wheels to be turned side to side without friction. Cycle the steering wheel lock to lock three times.
3. Check the fluid level in the reservoir and fill to the proper level if needed.
4. Apply 15 – 20 in Hg vacuum (do not exceed 20 in Hg) to the power steering system at the reservoir neck for five minutes. Remove vacuum.
5. Start engine and slowly turn the steering wheel lock-to-lock for 10 cycles while maintaining approximately 2000 rpm (+/- 150) engine speed (Do not hold steering against the lock, end-of-travel, position.).
6. After 10 cycles, allow the engine to idle for 3 minutes before shutting it off.
7. Lower the vehicle.
8. Check the fluid level. If needed, fill the reservoir to the recommended position.

Bleeding Without A Vacuum Pump.

1. **DO NOT START ENGINE UNTIL STEP 4.** Fill the power steering system to the recommended level at normal ambient temperature with new fluid (MS9933). Leave cap off.
2. Lift the front wheels off the ground just enough to allow the wheels to be turned side to side without friction. Cycle the steering wheel lock to lock three times.
3. Review fluid level in reservoir and fill to the proper level if needed.
4. Start engine and slowly turn the steering wheel lock-to-lock for 10 cycles while maintaining approximately 2000 rpm (+/- 150) engine speed (Do not hold steering against the lock, end-of-travel, position.).
5. After 10 cycles, allow the engine to idle for 3 minutes before shutting it off.
6. Lower the vehicle.
7. Check the fluid level. If needed, fill the reservoir to the recommended position.

POLICY: Information Only