THIS BULLETIN SUPERSEDES TECHNICAL SERVICE BULLETIN NUMBER 05-01-00, DATED MARCH 17, 2000, WHICH SHOULD BE REMOVED FROM YOUR FILES. THE BULLETIN ADDS AN ILLUSTRATION OMITTED FROM THE ORIGINAL. THE CHANGES ARE HIGHLIGHTED WITH ASTERISKS.

SUBJECT:
Brake roughness or pedal pulsation when the brakes are applied.

OVERVIEW:
This bulletin involves installing a brake pad repair kit and turning the brake rotors with an on-car brake rotor lathe or replacing the rotors if on car equipment is not available.

MODELS:
1999 - 2000 (WJ) Grand Cherokee

SYMPTOM/CONDITION:
Customer may experience a vibration of the steering wheel, floor, seat, instrument panel or a minor pedal pulsation (brake roughness) under light to moderate pedal application. This can be caused by excessive thickness variation on the rotor surface.

DISCUSSION:
A new brake pad repair kit has been released which contains an adhesive backing. This will provide for a more positive release of the brake pad when the brake pedal is released. This, in turn will move the pad away from the rotor, resulting in less friction and wear, which resulted from the pad resting on the rotor when the brakes were not applied.

The preferred method to reduce any variation at the brake rotor surface is to resurface the rotors using an "On The Car" brake lathe such as the Pro-Cut lathe which is available through Pentastar Service Equipment. This equipment does an excellent job of correcting all variation at the rotor surface. "Off the Car" equipment can correct variation on the rotor surface but does not correct for variation on other rotating components such as the hub. Situations can occur where a rotor and hub, mounted together, both within specifications, can stack up tolerances resulting in lateral runout, which can cause a pedal pulsation.

PARTS REQUIRED:
1 05018592AA Brake Pad Kit
AR 52098672 Rotor

EQUIPMENT REQUIRED:
Pro-Cut on car brake lathe (or equivalent) if available
REPAIR PROCEDURE:

1. Remove the wheel and tire assembly.
2. Remove the caliper support spring and discard the support spring.
3. Remove the caliper from the anchor. Support the caliper with wire or string from a suspension component. **DO NOT allow the caliper to hang on the flexible brake hose or permanent hose damage may result.** Retain the slide pins and slide pin bushing caps.
4. Remove the linings and discard.
5. Remove and retain the anchor. Discard the anchor attaching bolts.
6. Remove the rotors. If no on car lathe is available, the rotors should be discarded and replaced.
7. Clean the hub mounting face of the wheel bearing using a wire brush and/or fine emery paper and rinse with brake cleaner. Take care to see that all corrosion and contamination is removed.
8. Clean the paint and rust from the brake pad contact area of the anchor rails, using a wire brush and/or fine emery paper and rinse with brake cleaner. **(See FIGURE 1)**
9. Clean the caliper slide pins and bushings.

![FIGURE 1]

1. Clean and lubricate the areas indicated
10. Clean the outer pad contact surface of the caliper fingers, using a wire brush and/or fine emery paper and rinse with brake cleaner. (See FIGURE 2). **DO NOT apply a load to the flexible rubber brake hose during this cleaning operation or permanent hose damage may result.** Be sure to thoroughly dry the caliper fingers.

![FIGURE 2](image)

1. Clean surfaces indicated.

11. Install the new inner brake pad to the caliper pistons.

12. Carefully remove the protective paper covering the outboard surface of the new outer brake pad insulator, and position the pad in the caliper. Leave 6 mm (0.250 in) between the clean, dry, finger surface and the outer brake pad. (See FIGURE 3) The wear indicator should be located on the leading edge of the outer brake pad. When the pad is properly centered on the caliper, press it firmly against the fingers and hold for 10 seconds. This will insure proper adhesion of the pad to the fingers. Final adhesion will be accomplished when the brake pedal is fully applied after assembly.

13. Coat the brake pad contact rail surfaces (See Figure 1) of the anchor with the Plastilube (brown color) grease provided. **DO NOT apply grease to any portion of the caliper, brake pads, or rotor.**
14. Coat the anti-rattle spring contact area of the anchor with Plastilube. (See FIGURE 4)

1. Coat this area with Plastilube
15. If On-Car rotor turning equipment such as the Pro-Cut lathe is available, install the original rotors. Install new rotors if On-Car rotor turning equipment is not available. Install the new inner brake pad to the caliper pistons. Match mount the bearing and rotor. Refer to the appropriate Jeep Grand Cherokee Service Manual to achieve minimum rotor lateral run out. **The lateral runout of rotor and bearing should not exceed 0.025 mm, (0.001 in).**

16. If an On-Car brake lathe is available, turn the rotors using the lathe manufacturers recommended procedures.

17. Install the anchor using the new attaching bolts. (anchor bolt torque 90-115 Nm, 66-85 ft. lbs.). Take care not to get Plastilube on the rotor.

18. Carefully lubricate the caliper slide pins and slide pin bushings with the DC G807 (white color) grease provided. It is not necessary to use all the grease provided. Take care not to get grease on the linings or rotor. Install the caliper, slide pins and bushing caps. (slide pin torque 29-41 Nm, 22-30 ft lbs.).

19. Reinstall the caliper, slide pins and bushing caps. (slide pin torque 29-41 Nm, 22-30 ft lbs.).

20. Install the new caliper support spring included in the kit. There should be Plastilube where the support spring contacts with the anchor.

21. **Move the spring to its neutral position (along the axle axis) by lifting the end with a screwdriver and releasing.** Be careful to not bias the spring, as this will cause one or the other pads to tend to drag in an off-brake condition.

22. Repeat the entire procedure for the other front assembly.

23. Upon completion of both front brake assemblies, apply firm pressure to the brake pedal for 10 seconds to ensure proper final adhesion of the outer pad to the caliper fingers.

**POLICY:** Reimbursable within the provisions of the warranty.

**TIME ALLOWANCE:**

<table>
<thead>
<tr>
<th>Labor Operation No:</th>
<th>Time Allowance</th>
</tr>
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<tbody>
<tr>
<td>Install pads and turn rotors - on car</td>
<td>1.3 Hrs.</td>
</tr>
<tr>
<td>05-21-11-94</td>
<td></td>
</tr>
<tr>
<td>Optional Equipment Locking Axle - Add</td>
<td>0.2 Hrs.</td>
</tr>
<tr>
<td>05-21-11-61</td>
<td></td>
</tr>
<tr>
<td>Install pads, replace and match mount rotors</td>
<td>1.3 Hrs.</td>
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<tr>
<td>05-21-10-94</td>
<td></td>
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</tbody>
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**FAILURE CODE:** P8 - New Part