1984 - 1996 Corvette: Service Bulletin: Change in Brake Effectiveness After Brake Work

Subject: CHANGE IN BRAKE EFFECTIVENESS AFTER BRAKE WORK
Model and Year:ALL PASSENGER CARS ALL LIGHT DUTY TRUCKS
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TO: ALL CHEVROLET DEALERS

THIS BULLETIN CANCELS AND SUPERSEDES DEALER SERVICE BULLETIN NO. 90-316-5, DATED AUGUST 1990. INFORMATION HAS BEEN ADDED REGARDING HUB AND ROTOR CLEANING, PROPER TORQUING TECHNIQUE, REVISED MACHINING TABLE, CHANGE SPECIFICATION FOR MAXIMUM SCORING DEPTH. THE 1991 MODEL YEAR WAS ALSO ADDED. ALL COPIES OF 90-316-5 SHOULD BE DISCARDED.

Some comments have been received about a change in perceived braking effectiveness which occurs after rotors have been refinished and/or disc brake pads have been replaced. New lining materials have been formulated for increased lining life and to reduce brake squeal. Also, Federal regulations currently prohibit the use of asbestos in Original Equipment Manufactured (O.E.M.) front disc brake linings, and will totally ban asbestos from all O.E.M. brake linings in the near future. Due to these changes, initial rotor surface finish is more critical than in the past, and is required for good brake performance.

Following are some recommended actions/procedures to assure proper performance of the brake systems on all vehicles after rotor and/or pad service has been performed:

1. When performing routine brake maintenance such as replacing worn disc brake pads or shoes, DO NOT refinish disc brake rotors or drums unless:

A. There is a brake pulsation condition present, and this pulsation is found to be caused by the brake rotors or drums, or

B. The rotors and/or drums are excessively scored. Surface scoring that does not exceed 1.2MM (0.050 in.) on rotors or drums should not affect brake operation. Before removing rotors from the hub assembly, mark the rotor and on wheel stud so that the rotor may be re-installed in the same position.

If rotors are removed, it is very important that rust and scale be removed from the rotor and hub mating surfaces. Failure to do so may introduce excessive lateral runout when the rotor is mounted on the brake lathe, or when the rotor is re-installed to the hub.

2. When refinishing disc brake rotors, it is important that the brake lathe be in good operating condition and that all tools or bits are sharp. Recommended vibration dampeners and/or adapters should be used and should be clean and free of nicks (remember, 1988-91 W models require the use of an adapter, J37160, because of the two-piece design). The following table shows the recommended procedure for rotor machining:

ROUGH CUT FINISH CUT

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Spindle Speed 150 RPM 150 RPM

Depth of Cut (per side) 0.127mm (0.005") 0.051 mm (0.002")

Tool Cross Feed per Rev 0.152mm - 0.254mm 0.051mm (0.002") Max (0.006" - 0.01 O") Vibration Damper Yes Yes

Sand Rotors-Final Finish No Yes

It is important that a rough and a finish cut be made. All brake lathes use a single-point cutting tool which is not capable of giving the necessary surface finish. A SECONDARY FINISHING OPERATION MUST BE PERFORMED TO OBTAIN THE NECESSARY SURFACE FINISH.

An acceptable finish can be obtained using the Ammco Model 8350 Safe Swirl Disc Rotor Grinder, or equivalent, using 120 grit sandpaper and sanding each rotor surface with moderate pressure for a minimum of 60 seconds with the rotor turning at 150 RPM. An alternate method is to use a sanding block with 150 grit sandpaper. With the rotor turning at approximately 150 RPM, sand each side for a minimum of 60 seconds using moderate pressure.

After the rotor has been sanded, the surfaces must be cleaned with a solvent such as brake cleaning, denatured alcohol, or equivalent.

THE FINISHED ROTOR SURFACE SHOULD BE AS CLOSE TO THAT OF A NEW ROTOR AS POSSIBLE. FAILURE TO OBTAIN THE BEST POSSIBLE ROTOR FINISH WILL AFFECT INITIAL BRAKING PERFORMANCE.

CAUTION:

ROTORS OR DRUMS SHOULD ALWAYS BE REPLACED IF TURNING WILL RESULT IN A ROTOR OR DRUM THAT DOES NOT MEET MANUFACTURER SPECIFICATIONS FOR MINIMUM ROTOR THICKNESS OR MAXIMUM DRUM DIAMETER.

NOTICE: When re-installing tire and wheel assemblies, it is very important that proper procedures be followed when installing and torquing the wheel nuts:

A. Finger start all wheel nuts.

B. Tighten wheel nuts to specified torque (use the "star," or alternating nut pattern) using a torque wrench. DO NOT USE AN IMPACT WRENCH. UNEVEN AND/OR EXCESSIVE TORQUING OF THE WHEEL NUTS HAS BEEN FOUND TO DISTORT ROTORS, RESULTING IN PREMATURE CUSTOMER COMEBACKS FOR BRAKE PULSATION

3. After brake pads have been replaced and/or rotors have been refinished, it is recommended that the new braking surfaces be broken in, or burnished, to properly seat them. This can be accomplished by making 20 stops from 30 mph, using medium to firm pressure. Take care to avoid overheating the brakes.

4. It is strongly recommended that the correct, specified General Motors replacement part(s) be used when servicing G.M. vehicles. General Motors does not test non-G.M. parts for proper performance on G.M. vehicles. Therefore, the use of non-G.M. parts may result in unacceptable vehicle performance. It is also important that the correct G.M. part(s) be used in the correct G.M. application. For example, some ’A’ model disc brake pads (’A’ Heavy) will fit on ’C and H’ models, but will not provide the same performance as the pads specified for use on C and H vehicles. It may seem preferable to stock fewer brake pad part numbers, but customer dissatisfaction may result if vehicle performance is affected.

General Motors bulletins are intended for use by professional technicians, not a "do-it-yourselfer". They are written to inform those technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the equipment, tools, safety instructions and know-how to do a job properly and safely. If a condition is described, do not assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See a General Motors dealer servicing your brand of General Motors vehicle for information on whether your vehicle may benefit from the information.

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