



1908 Colonel Sam Drive
Oshawa, Ontario
L1H 8P7

BULLETIN ACD98-164
DATE: November 30, 1998

TO: All ACDelco Full Line Distributors

SUBJECT: DURASTOP TECHNICAL BULLETIN
RE: CHECKING LATERAL RUN-OUT ON COMPOSITE
ROTORS

Composite design brake rotors are utilized by vehicle manufacturers to provide substantial weight reduction which can increase overall fuel economy. Unlike a full cast rotor, a composite rotor consists of a stamped steel center hub section combined with a cast iron brake surface (see fig. 1). During the manufacturing process the center hub face is compressed by a special fixture prior to machining the braking surfaces. When the vehicles wheels are installed and the lug nuts are torque to the proper specifications, the stamped steel portion of the rotor is compressed in a similar fashion. This insures that the rotor will have a minimum amount of run-out and will function properly.

When installing new Durastop rotors the lateral run-out must be checked as part of the installation process. To obtain an accurate run-out reading, the composite plate must be compressed in a similar manor. This can be accomplished by performing the following steps:

- 1) Clean all rust and debris from bearing or axle surfaces that mate with the rotor.
- 2) Position the new brake rotor on the axle or bearing flange.
- 3) Invert the lug nuts with the tapered seat facing away from rotor (see fig. 2). If the vehicle is equipped with cap style lug nuts obtain some standard lug nuts that can be used for this procedure. Torque lug nuts to the proper specification.
- 4) Use a dial indicator, slowly rotate the brake rotor and observe the amount of lateral run-out. The run-out specifications can be obtained by referring the Durastop Disc & Drum Brake Specifications manual. Note: Most vehicle manufactures allow a maximum of .004 of an inch lateral run-out.

- 5) If the initial run-out is more than specified make a mark on the rotor at the highest point and also mark the rotor mounting position on the studs. Remove the rotor and rotate it two stud holes on the bearing or axle flange. Reinstall the lug nuts and properly torque. Note the amount and location of the highest point of run-out. If the run-out is now below the maximum allowable tolerance, complete installing the brakes with the rotor in the same location. If the rotor is still over the maximum allowable run-out compare the location of the two high marks. If the high marks on the rotor are very close together the rotor should be machined with the correct lathe adapter. If the high marks on the rotor line up with the same spot on the axle or bearing flange, then the rotor is not the cause of the excessive run-out. Repair or replace axle or bearing flange as necessary.

