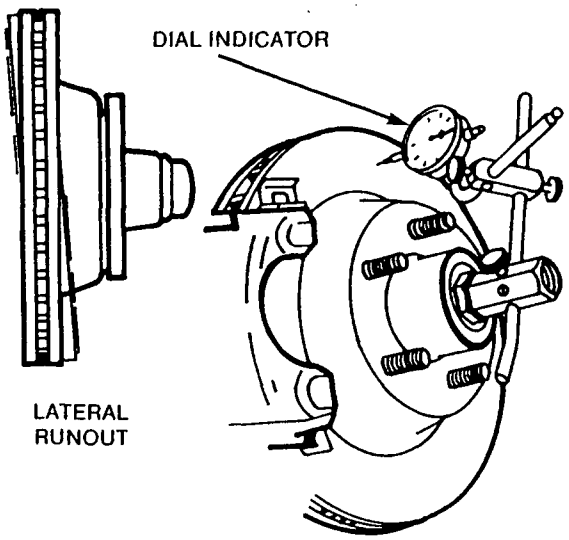
Hubless rotors are mounted to the brake lathe by using a hubless rotor adaptor. The clamping feet must be true to mount the rotor correctly.

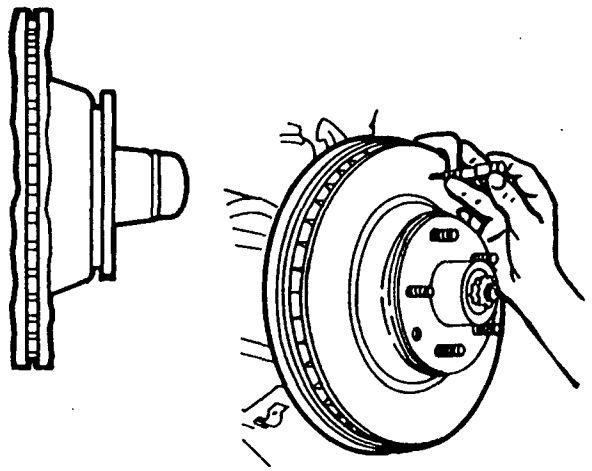
After the machined rotor is mounted on the vehicle, the vehicle lug nuts should be torqued. Using an air impact wrench can cause an uneven torque on the lug nuts, often resulting in a warped rotor as the rotor heats and cools. This creates a pulsating brake pedal when the brakes are applied.



(Figure 65) Lateral runout is checked with a dial indicator.

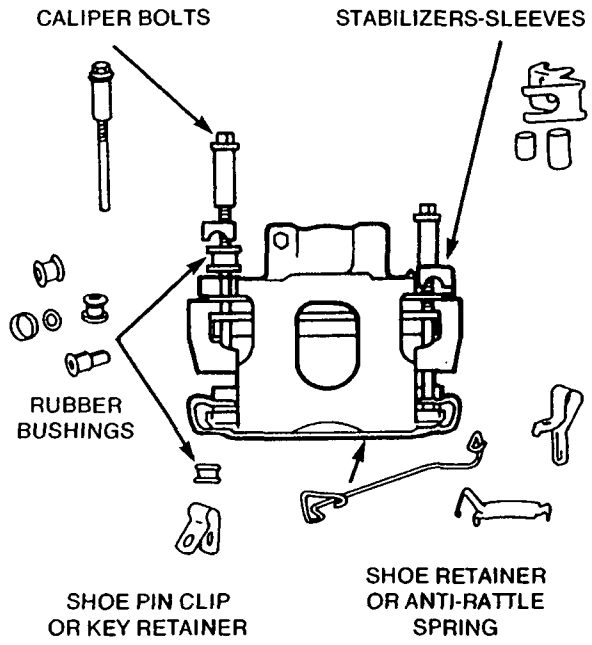
Another serious disc brake problem is lateral runout, the movement of the rotor from side to side as it rotates, causing the disc brake piston to knock back and forth into the caliper bore when the brake is applied. If the runout is excessive, it will push the piston deeper in the bore, creating excessive clearance between the lining and the rotor, and the next time the brake pedal is pressed, it will decrease or eliminate braking action. Lateral runout and warpage should be checked with a dial indicator, and if the runout exceeds the manufacturer's tolerances, the rotor should be machined.

Another critical measurement is the variation in the rotor thickness. Non-parallel rotor surfaces can cause excessive front-end vibration, pedal pulsation, and chatter. Rotor thickness is measured in six or more places, and if any of these measurements are outside of recommended tolerances, the rotor must be machined.



(Figure 66) Rotor thickness variation is checked with a micrometer.

DISC BRAKE HARDWARE



(Figure 67) Floating Caliper Hardware

The hardware on the disc brake, like the hardware on the drum brake, is affected by high operating temperatures, weather conditions, abrasive elements, and normal wear. Since hardware in good operating condition is important in holding the caliper in proper alignment with the rotor and getting the maximum life from disc pads, it should be replaced whenever the brakes are relined.