

Bendix Brake

ALERT

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Weighing in on Rotor Balancing

When purchasing new tires, one of the final procedures before mounting them on the vehicle is wheel balancing. The wheel assembly is placed on a machine to determine if the weight of the wheel is evenly distributed from side-to-side. Because of the way tires are manufactured (molten rubber poured into a mold), it is not unusual for even the most expensive tires to have minor differences in wall thickness or tread depth that can cause uneven weight distribution. Fortunately, this weight disparity can be offset by the attachment of a weight to the rim.

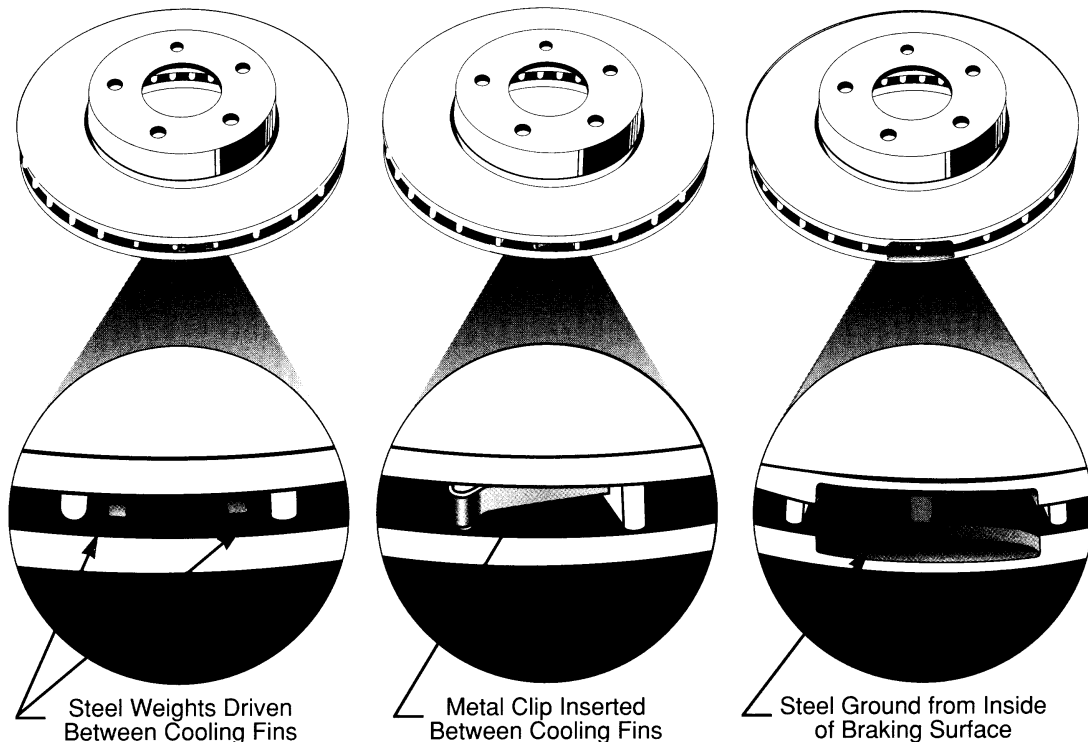
Disc brake rotors are manufactured in a similar manner to tires: molten steel is poured into a mold. The resulting "raw" casting is then machined to its finished state. These

finished rotors are then checked for balance. As with tires, minor side-to-side weight disparity may be evident, regardless of the quality of the rotor. And fortunately, as with tires, this weight disparity can be compensated for. However, unlike tires, rotor balancing is done in the manufacturing process and not in the field.

A rotor that is out of balance can cause the same types of problems as an out of balance tire: shudder and shaking that can be felt through the steering wheel, becoming more severe as the vehicle's speed increases. In addition, pedal pulsation and vibration can often be felt upon brake application, becoming

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Rotor Balancing Methods



more pronounced as the rate of deceleration increases.

There are several ways that rotor imbalance can be addressed. In some cases, a piece of steel stock is driven between the cooling fins of the rotor. In others, a metal clip is bent and inserted between the fins. Both of these procedures will add weight to the "light side" of the rotor.

A new approach to rotor balancing has been seen recently. Rather than adding weight to achieve balance, weight is actually being removed. This is achieved by grinding iron off of the inside of the braking surfaces, on the "heavy side".

It is important to note that the issue of rotor balancing isn't limited to aftermarket product. In fact, Original Equipment rotors often utilize these same methods to achieve balanced weight distribution.

The presence of a balance weight or ground area should not lead you to believe that a rotor is of inferior quality or somehow reworked to save it from the scrap pile. Quite the contrary: it shows that the manufacturer has taken the time and effort to ensure that the rotor is properly balanced and will provide problem-free service.

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