

## TECH ARTICLE # T011

### Brake Pedal Pulsation

Many of today's vehicles have brake systems where the disc rotors are a "top hat" design; These designs are generally easier to service but at times, can create some customer dissatisfaction due to brake pedal pulsation during the brake application.



Brake pedal pulsation is most often the result of disc thickness variation in the rotor. Disc thickness variation (DTV) is the technical term for a rotor that is not uniformly thick.

Quality rotors are uniformly thick when new, and will stop the vehicle smoothly. However, due to other potential irregularities in the braking system, disc thickness variation can develop over time and eventually lead to brake pedal pulsation.

DTV = Pulsating Brake Pedal (and, in extreme cases, severe mechanical vibration through the entire vehicle)

The most common cause of DTV is rust scale or debris between the hub and rotor mounting surfaces, This causes the rotor not to sit flat resulting in excessive runout.

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