



**Experiencing Continuous Rotor Pulsation Problems?
 The Source of the Problem Could be the Hub Flange**

The hub flange is ground zero for pulsation problems. Any runout in the flange will be magnified by the rotor. But, when do you replace a flange, stub axle or an entire hub assembly unit? Verifying the answer requires some basic math and a micrometer.

All flanges have some degree of run-out. This is why there are tolerances in the service specification and in manufacturing. A flange may have up to .005" of runout and the bearings may have zero end play. It is impossible to see damage with the naked eye. This is why carefully measuring with a dial indicator as part of a brake job is important.

What are the Most Common Causes of Hub Flange Runout?

- A flange can be damaged by curb strikes or pot holes
- If a hub or bearing is over torqued, it can damage the flange and cause run-out. It can also damage the bearings and the axle shaft.
- Pitting and corrosion where the rotor mates to the flange can induce run-out.
- The flange can be damaged by excessive and uneven lug nut torque.

Suggested Replacement Guidelines

As a rule of thumb, if runout is greater than .005" for a light vehicle, then it's a sign that the flange may be damaged or out of specification and further corrective action must be taken. If all attempts have been made to correct runout and it can't be brought below .002" or recommended specification, then you should replace the hub assembly or wheel bearing hub unit.

Source: BrakeandFrontEnd.com



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