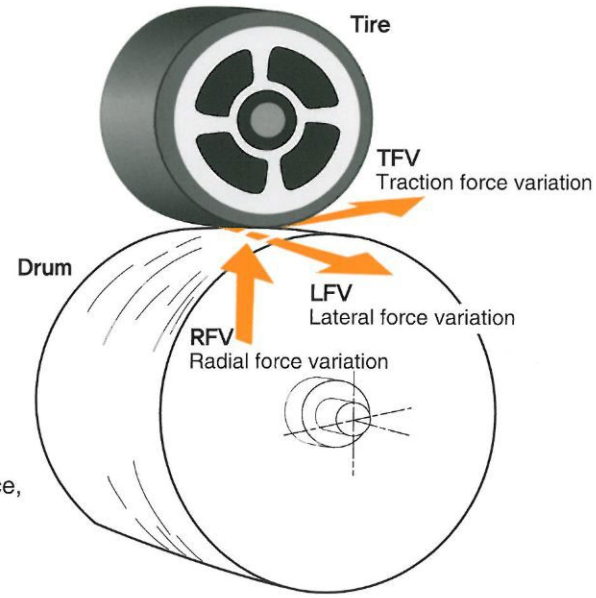
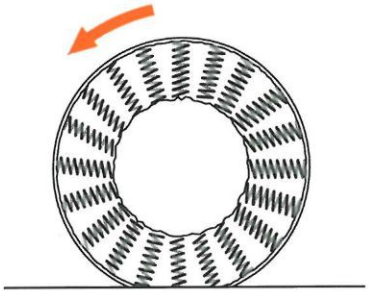
Vibration

• Force variation

Excessive force variation sometimes causes vibration problems particularly where radial force variation is involved. In order to understand easily the effects of radial force variation, imagine the tire as an infinite number of springs between the rim and the tread. If these "springs" are not of uniforms stiffness, a various force is exerted on the axle as the tire rotates and flexes.
The stiffness inside a tire must theoretically be kept uniform. But even if the tire is perfectly round and properly balanced, LFV(Later Force Variation) problems can generally be associated with misplacement of the steel belts under tread.
This type of non-uniformity usually results in uneven wear. As the tire starts to wear unevenly it quickly becomes out- of-balance, and this contributes considerably to the vibration problem.





• Conicity (Radial pull)

One more important uniformity factor is associated with radial tires in addition to RFV(Radial Force Variation) and LFV(Lateral Force Variation), namely "conicity".
If during the building process, the belts of the radial tire are placed off to one side or the other, the effect is as shown in this illustration. In other words, the tire will have a "radial pull", and in the case shown here, it will tend to roll off the right.
If the steering wheel of an automobile is pulling to one side, first check the toe-in.
If this is O.K., chances are that it is a conicity problem.
In the case shown here, the light front tire would have to be demounted, reversed on the rim, and then remounted on the car.