

Vette Sette Tech Talk

- Todays Topic – Tire Chatter
- Future Topics
 - Solenoid failure.....the gas cover won't open (and you're in Needles)
 - Are ceramic brakes better?
 - What exactly is the C6 harmonic balancer?
 - C8 trunk temperature data

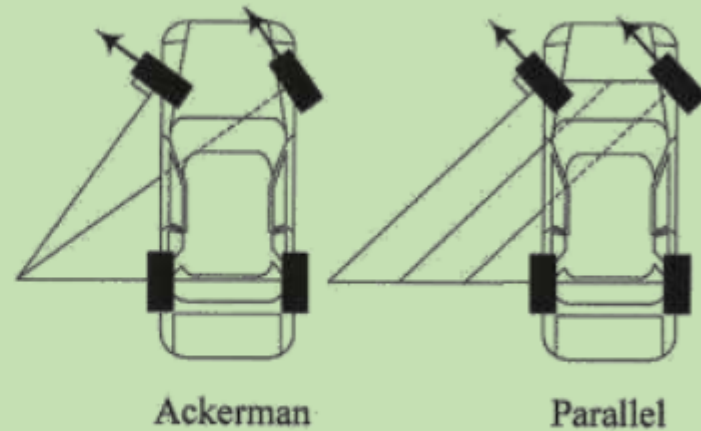
Tire Chatter

- Terrible sounding lurching when
 - Tires are cold
 - Turn radius is tight
- Chatter is more prevalent with:
 - Wider tires
 - Stiffer “run flat” tires
 - C7 GS than with the C6 or C8
- Chevrolet treats the chatter as not a problem
 - Calls it “hopping”....live with it
 - Don’t bring the car in for service

What is causing the chatter?

- The Ackerman Steering Principle

“Chatter,” experienced when the C7 is turned sharply at low speeds is caused by less than “full” Ackerman steering employed. You can see in the left figure that when turning sharply the two tires turn at different radius causing, if parallel, one tire to scrub or “chatter” as it is dragged across the pavement. The solution is to have the tires turn at different radiuses. The sharper the turn desired the more the steering angle difference is needed! Note the C7 also has a 2-foot sharper turning radius then the C6, making the “chatter” more pronounced.



- Excellent summary at: http://netwelding.com/Wheel_Chatter.pdf

Solutions

- When cold, i.e. backing out of a garage
 - Make wider turns, “K” turns
 - Avoid tight radius
- Softer sidewalls, tread
- Live with it or move to Phoenix