

What Causes Gears to Grind?

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If you've ever had grinding gears automatic transmission problem or you've experienced manual transmission grinding in 3rd gear, you're not alone. This is a very common gear issue, but it's important to be educated on the problem to keep your car or truck in the best condition possible. Keep reading to learn more about the grinding gears meaning, including how to fix grinding gears, and who you should contact for top-notch automotive care.

Why Does it Happen?

In simple terms, gears grinding stems from the speed of your wheels and engine not being on the same page. This mismatch in speed can cause a very troubling grinding noise. In order for the next gear to change in your gearbox, the shafts for both input and output should move at the same speed. In modern vehicles, synchro rings help these parts to move at the right speeds, which is why this issue is less common. But in older vehicles or in gearboxes used in American semi-trucks, these rings aren't utilized. In order to limit grinding gears, semi-truck drivers match the speed by pressing down on the throttle to increase engine revs on downshifts, then waiting for the RPMs to drop when shifting up. This is a very difficult skill to master, but semi-truck drivers do this very well.

Manual Transmissions

Although manual transmission vehicles can be very beneficial, they are less common today than they used to be years ago. Manual transmissions were a hot commodity due to the fact that they typically cost less and allow for a few more miles per gallon. But as

the technology and simplicity around automatic vehicles have been on the rise, manual transmissions are far less common.

Due to the design of manual transmissions, the system is more distinct for selecting gear ratios and matching those with the engine and wheels. When you shift into a different gear, the gears are being coupled with the input and output shafts of your transmission, which creates a proper gear ratio adjustment. As the gear shift is made, a collar slides over the end of the gear. When you hear a grinding sound, this happens because that collar that is colliding with the end of the gear is spinning at a slower or faster rate compared to the shaft in your transmission. To limit this grinding sound, a synchronizer ring is used to match these speeds effectively. ***But if you constantly hear a grinding noise, this could mean that the part isn't working correctly or that you don't have enough transmission fluid.***

Automatic Transmissions

Automatic transmissions work similarly to manual ones, but the key difference is that the car shifts gears automatically based on preset RPM settings. However, while grinding sounds are more common in manual cars, automatic transmission grinding when shifting can still happen. To limit the automatic transmission problems shifting gears, it's best to consider the following:

- *That your car has the right level of transmission fluid*
- *Your fluid isn't contaminated*
- *You don't have a cracked or chipped gear*>
- *You have enough differential fluid*

Call Ace Auto Repair Today!

Whether you're dealing with an automatic transmission not shifting into high gear or any other automotive problem, Ace Auto Repair is here to help! We can diagnose the transmission problem and have it working perfectly in no time! Call us today to work with our fast, friendly, and reliable team!