

Front Strut Function

By: Ralph Seekins

Question: I recently had my car in for an oil and filter change and the young man told me the front struts on my car were leaking and needed to be replaced. What is he talking about and how important is this?

Answer: A strut is an assembly used on the front end of nearly every front-wheel-drive or all-wheel-drive vehicle. It is made up of a number of suspension parts including a coil spring, spring seats, a shock absorber, a strut bearing and a steering knuckle. Proper function of your vehicle's struts is essential to safe operation.

In your case, what the young man was probably trying to tell you was that the shock absorber portions of the struts were losing internal oil and needed to be replaced as soon as possible. If indeed the shocks were leaking, he was right. Get your vehicle to your repair shop right away. And, while you are there, have the shop personnel inspect the entire strut assembly for wear.

Simply speaking, inside a shock absorber, a piston travels up and down inside a tube. One end of the tube is attached to the vehicle body. The other end is attached to the suspension. The inside of the tube is filled with oil. Valves are located either in the piston or at the base of the shock absorber that control the rate of oil flow as the piston travels up and down thereby determining how much force it takes to move the piston. Your vehicle's manufacturer has determined what specific shock absorber stiffness and travel is right for your vehicle in order to produce the right handling dynamics. Too stiff or not stiff enough can create an unacceptable ride. If the oil has leaked out of your shock absorbers, the ride can actually become dangerous.

Shock absorbers have a very hard life in Interior Alaska. Some experts will tell you that, even on a smooth road, shock absorbers may travel up and down an average of 1,750 times for every mile. Then, take into consideration the extreme high and low temperatures we experience up here with the fact that Tanana River Valley dust is extremely small and abrasive, and you can understand why seals wear out more quickly and thus why we see more leaking shock absorbers than are seen in milder climates.

All four struts and shock absorbers should be replaced at the same time. Replacing just one shock or strut can create a balance problem that can make your car unstable when braking and/or accelerating.

And, while you are at the repair shop to have the shock absorber portions of the struts replaced, ask them to inspect the remainder of the assembly. For example, if the springs are worn, that can shorten the life of the new shock absorbers you are having installed and can affect the ride height and suspension angles.

All this to say that, YES, you need to get your vehicle to your repair shop as possible and have them verify the reported concern and check out the entire strut assembly. Your driving comfort and safety depends on this entire assembly operating within the parameters of the original manufacturer's specifications.