

**Wheels:** An e-mail from Nick says, “I just bought a 2003 Ford Ranger that has a 4:10 rear end ratio, and as you can imagine, I am getting terrible gas mileage – about 19 mpg on the highway. I am considering changing the ring and pinion to a 3:55. Considerations about voiding the warranty on a new truck aside (although I don’t know how Ford would ever know that the switch was made); will this achieve the goal of increasing my gas mileage? Could you estimate by how much? Would getting rid of the all-terrain L/T tires and putting on similar size (P235/75/R15) tires with a different tread pattern help? Narrower tires? I drive very conservatively, don’t jack rabbit at lights, and keep a steady 60 mph on the highway. Thanks for any input you can offer.”

**Halderman:** It is much more complicated than just changing the rear axle ratio. Your truck is computer controlled. This means that the vehicle speed sensor signal will also change and this change would require a replacement computer that is programmed for the new axle ratio. I doubt this change would be cost effective. To improve your fuel economy, make sure that you are using the specified SAE 5W-20 engine oil and that the tires are properly inflated. I doubt that a change in the tire design will affect the fuel economy enough to be measurable by the average driver. The fuel economy will improve as the mileage on the truck increases. I cannot give you an estimate as to the amount of fuel economy savings that may result from the change in the rear axle ratio because there are too many variables. If this is a big concern, the best approach may be to trade the truck for a 2004.

