

2007 Phaeton Economy "Sweet Spot"

What is the economy "Sweet Spot"? In the most basic terms it is the best speed and transmission setup which gives the best fuel economy. In the case of my 2007 Phaeton 40QSH powered by a Mercedes Benz 926 engine the "Sweet Spot" is 1500 RPM's in "Economy Mode" and 57.8 MPH.

The Allison transmission in Economy Mode requires 1500 RPM's to shift into sixth gear, the transmission can stay in sixth gear at lower RPM's once sixth gear is attained. If traveling on flat or nearly flat terrain, I have been able to maintain sixth gear with the speed in the low 50's.

"Economy Mode" is the second range selection in the Allison six speed transmissions the primary mode is "Performance Mode". Performance Mode selects a different shift pattern, the transmission will stay in a lower gear approximately 200 RPM's LONGER than Economy Mode, and it will downshift approximately 200 RPM's SOONER than Economy Mode. Here is an example.

In Economy Mode (Shift point at 1500 RPM's) my coach will shift from First to Second gear at 10.8 MPH. Shift from Second gear to Third gear at 20.2 MPH. Shift from Third gear to Fourth gear at 37.6 MPH, Fourth gear to Fifth gear at 50.1 MPH and Fifth gear to Sixth gear at 57.8 MPH

In Performance Mode (Shift point at 1700 RPM's) my coach will shift from First to Second gear at 12.2 MPH. Shift from Second gear to Third gear at 30.2 MPH. Shift from Third gear to Fourth gear at 42.6 MPH, Fourth gear to Fifth gear at 56.8 MPH and Fifth gear to Sixth gear at 65.6 MPH.

"Lifetime Fuel Economy" is a term used to denote the fuel used by the engine during its total engine life, ALL fuel consumed by the engine. When we took delivery of our coach the lifetime fuel economy was around 7.5 MPG. Our coach now has 29,000 miles and has a lifetime fuel economy of 8.54 MPG. The MB 926 engine reports to my VMSpc program dozens of parameters which are monitored on a laptop PC. On a recent one day trip of a little over 300 miles, the coach was able to achieve 10.0 MPG. Our coach weighs 31,000 lbs and the toad weighs 5,000 lbs. for a combined weight of 36,000 lbs.