



Calculating the Correct “Before” and “After” Miles per Gallon

An accurate calculation of the improvement in mileage utilizing a *Vortex Fuel Saver* is relatively easy to compute. First, we need to establish an accurate baseline (“Before” or initial MPG) by recording the results for three full tanks of gas. It would be more accurate if the same type of driving was performed on the “before” as with the “after.” We don’t want the “before” to be predominately city driving and the “after” to be predominately highway driving, or vice versa. Realizing that conditions will never be perfect, we try to be as accurate as possible.

To calculate the baseline, follow these steps:

1. Fill up gas tank
2. Re-set the trip odometer to 0 (or write down the total mileage if you don’t have a trip odometer)
3. Drive their vehicle until it goes below 1/4 of a tank
4. Fill up tank
5. Record the mileage driven (by reading the trip odometer, or subtracting the previous total mileage from the current mileage)
6. The receipt should show the amount of fuel purchased when filling up (If not, make sure you record the fuel purchased before driving away)
7. Do this for three tanks of fuel
8. Add up the total miles driven.
9. Add up the total gallons of fuel purchased.
10. Divide the total miles driven by the total gallons of fuel purchased.

EXAMPLE: Total miles driven 903.5 miles
Gallons purchased totaled 47.7
Divide the miles driven by the number of gallons of gas purchased
903.5 miles driven divided by 47.7 gallons purchased equals 18.9 MPG

We would then repeat these steps to compute the “after” calculation. Please note, however, that the *Vortex Fuel Saver* installation requires a two to four tank Stabilization Period before seeing the true results. While many customers see an immediate improvement in MPG, some vehicles (especially larger and/or diesel engine vehicles) will need to complete the Stabilization Period prior to seeing an improvement in MPG. In order to properly measure the computer MPG testing, the computer must be reset for testing the baseline, then reset for testing after the Stabilization Period.

Many people just use the on board computer readouts on the dashboard. While recording these numbers may be beneficial, we strongly suggest manually calculating your results to get the most accurate comparisons since the on board computers vary widely in how they calculate the MPG. Some cars take that last three or four tanks of gas to compute the average MPG, or the average of the last three times the cars were started, or the lifetime to date MPG. Unless you are absolutely certain of the computation method used, we strongly suggest performing manual calculations to verify the information for an accurate comparison.

With that stated, the most accurate dashboard readout is the Miles to Empty feature. Vortex has received reports of the Miles to Empty going in reverse after the initial installation – instead of the number going lower as the vehicle is driven, the number gets larger as the mileage is improved by the use of the system! This is especially true when driving highway miles shortly after installing a system.

“Before” Calculation

Miles driven per tank

Starting Odometer Reading (minus) Finish Odometer Reading = Total Miles Driven
(Or Trip Odometer Reading)

Tank #1: _____

Tank #2: _____

Tank #3: _____

Total Miles Driven _____

Gallons of Fuel Purchased

Tank #1: _____

Tank #2: _____

Tank #3: _____

Total Fuel Purchased _____

Total Miles Driven _____ *divided by Total Fuel Purchased* _____ *equals*
_____ *MPG for the “before” or baseline calculation*

“After” Calculation

Miles driven per tank

Starting Odometer Reading (minus) Finish Odometer Reading = Total Miles Driven
(Or Trip Odometer Reading)

Tank #1: _____

Tank #2: _____

Tank #3: _____

Total Miles Driven _____

Gallons of Fuel Purchased

Tank #1: _____

Tank #2: _____

Tank #3: _____

Total Fuel Purchased _____

Total Miles Driven _____ *divided by Total Fuel Purchased* _____ *equals*
_____ *MPG for the “before” or baseline calculation*

“After” MPG _____ **minus the “Before” MPG** _____ **equals** _____ **divided by “Before”**
MPG (times 100) equals _____ **%improvement in MPG.**