

How to perform an accurate mileage test:

Getting an accurate mileage test is much more difficult than you may think. There are a number of factors that will contribute to varying results. Please read the following figure before you start the basic test method.

Effect	Conditions	Average Fuel Economy Reduction	Maximum Fuel Reduction
Temperature*	20F vs 77F	5.3%	13%
Head Wind	20 mph	2.3%	6%
Hills/Mountains	7% road grade	1.9%	25%
Poor road conditions*	Gravel, curves, slush, snow, etc.	4.3%	50%
Traffic Congestion	20 vs 27 mph average speed	10.6%	15%
Highway speed	70 vs 55 mph	N/A	25%
Acceleration Rate	"Hard" vs "Easy"	11.8%	20%
Wheel Alignment	1/2 inch	<1%	10%
Tire Type	non-radial vs radial	<1%	4%
Tire Pressure*	15 psi vs 26 psi	3.3%	6%
Air Conditioning	Extreme Heat	21%	N/A
Defroster*	Extreme Use	Analogous to A/C on some vehicle	
Idling/Warm up*	Winter vs Summer	Variable with Driver	20%
Windows	Open vs Closed	Unknown but likely small	

* Source from [EPA 420-F-95-003, 1995. \(http://www.epa.gov/otaq/rfgecon.htm\)](http://www.epa.gov/otaq/rfgecon.htm)

Basic Test method:

- 1) Make sure the engine oil is clean (recently serviced). Change the engine oil if necessary.
- 2) Testing distance should be more than 80kms (50 miles) on a route that provides uninterrupted travel.
- 3) Vehicle testing speed should be controlled in a stable way and speed range. Cruise control recommended.
- 4) Low Speed Test (City): 40 km/h (25miles/h). Use the cruise control with no stopping where possible.
- 5) High Speed Test (Freeway): 100 km/h (60miles/h). Use the cruise control with no stopping where possible.
- 6) Use the same kind of fuel to do the test (Same service station as well).
- 7) Do not use any fuel that has already contacted and been treated by the fuel saver for your baseline test. Once the fuel contacts the fuel saver, the fuel molecules have been changed.
- 8) The Driver shall accelerate and brake smoothly, using the same visual reference points when possible. For example, perform the test in the same or similar weather, temperature, driver, air condition, route, speed, weight, fuel, tire pressure, and so on.
- 9) Fill the fuel tank and start the baseline test few times. Record the mileage every time you finished one baseline test.
- 10) After you have the mileage records for the baseline test. Install the fuel saver and wait exactly 30 minutes. After 30 minutes, start the engine and raise the engine RPM to 2/3 rpm of the maximum rpm for around 5 minutes.
- 11) Refill the fuel tank and wait exactly 30 minutes. Double check to use the same visual reference points when possible.
- 12) Start the modified test few times. Record the mileage every time you finished one baseline test. Remember to wait 30 minutes everything you filled the fuel tank.
- 13) Each vehicle will only be good for one baseline test and one modified test. Uninstalling the fuel saver will not immediately make the vehicle back to baseline because the fuel saver treated fuel will continue to work on many of the next tanks of fuel. Before the vehicle can be considered "back to baseline", ALL the treated fuel must be absolutely used up. The engine oil must be changed as it also has been treated, and a period of approximately one month must pass to allow the effects on other fluids to wear off.

IMPORTANT LAB TEST MEMO:

- 1) Nonstop test. No breaks or stops during the test.
- 2) Test speed should be controlled in a stable way and speed range. Cruise control recommended.
- 3) A test vehicle of over 2.0 litres engine capacity can get a better result.
- 4) The recommended test speeds should be 40km/h (25miles/h city driving) and 100km/h (60miles/h highway driving).
- 5) Run the low speed and high speed tests separately.
- 6) Testing distance should be over 80 kilometres (50 miles).
- 7) Read and follow the "Basic Test Method" carefully.

According to our test experience, taking breaks or stop/starts will cause many errors. We strongly suggest that you test the vehicle by using the cruise control on both low speed test and a high speed test without stops or breaks.

Older vehicles may need time to see the results. Moletech Fuel Saver system will firstly clean up the carbon, and the emission test will prove the process by showing an increase in emissions. Once the carbon build up inside the engine has been removed, emissions and fuel consumption will reduce to below the baseline results. Depends on the condition of the vehicle and driving habits, it usually takes around 1000 km / 600 miles at high speed driving to remove the carbon build-up.

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