

SMITH  **SYSTEM.**
Drive Different.™



Right Foot
Fuel Economysm

Smith System Driver Training can be the most effective method of reducing your fuel costs.

Follow Jim and Brian to Better Fuel Economy

The **Right Foot Fuel Economy**SM video gives you a bird's eye view of developing traffic patterns that clearly shows your ability to use the Smith 5 KeysTM to improve your fuel mileage. By "Driving the Keys", Brian was able to improve his mileage 29%! Watch the video to understand how he did so well, then return to this booklet to gain some more tips on improving your mileage even more.

Video Summary

You probably noted in the video that Brian and Jim drove the same 13.6 mile route several times. Brian drove it first the way he normally would. Then Jim instructed Brian in how the Smith 5 KeysTM could help him position himself to maintain momentum while driving. The overhead view provided a good look at all of the traffic around Brian's van. It showed that he did not hold up traffic and that the pack of cars ahead of him constantly stopped and started at intersections while Brian maintained his momentum. In Jim's words, "A car sitting at a stop light is getting zero miles per gallon." Think about that next time you find yourself running with the pack from stop light to stop light.



The video does a great job of outlining the Smith 5 KeysTM but it is always nice to see them listed in one place. These driving principles have been tested in nearly 60 years of driver training instruction. We know they work to help drivers avoid collisions and the video clearly shows that they also result in better fuel economy.

1. **Aim High In Steering**[®]. By looking out ahead of your vehicle as you drive, you provide yourself more time to react to changing traffic patterns. We call this eye-lead time. You watched Brian looking forward to understand the status of intersection lights -- that's aiming high in steering.
2. **Get the Big Picture**[®]. Knowing more about what is happening around your vehicle helps you anticipate trouble and improve the quality of your driving decisions. Did you see how Jim tracked what was happening behind and to the sides of Brian's vehicle? That information helped Brian pace the traffic safely and save fuel in the process.
3. **Keep Your Eyes Moving**[®]. We all have a tendency to stare while driving and staring diminishes our overall awareness. You can develop the skill of constantly moving your eyes to take in more of your surroundings. Seeing more makes you a smarter driver.
4. **Leave Yourself an Out**[®]. Positioning your vehicle so you can safely change lanes if something unexpected happens is critical to both safety and the momentum required for better fuel economy.
5. **Make Sure They See You**[®]. Assuming other drivers see you and understand where you are going is a dangerous thing. The fact is, many drivers are simply not paying attention and may pull into your path. Our training courses teach you how to determine whether other drivers recognize your position on the road and what to do if they don't.

Mileage Gain Techniques

The **Right Foot Fuel EconomySM** video makes eleven points on how to improve your fuel mileage in city driving. Did you catch them all? Here's a check list to help you remember what you saw.

Better Fuel Economy Check List

- ✓ **Anticipate distant light activity.** Aiming high in steering is the key here.
- ✓ **Use traffic clusters to help determine the age and location of traffic signals.** The traffic coming toward you can tell you a lot about what is happening in the intersection that is up around the corner.
- ✓ **Use Walk and Don't Walk signs to forecast signal changes.** Getting the big picture can help you here.
- ✓ **Avoid holding up traffic.** By isolating yourself in traffic with some light pacing, you don't need to hold up other drivers to maintain your momentum. A little practice will show you that you arrive at a destination at the same time as the pack ahead of you.
- ✓ **You alone are responsible for your safety and economy.** That's the reason the video is titled **Right Foot Fuel EconomySM**. That right foot is connected to your brain. You are in control.
- ✓ **Position yourself in the traffic flow to avoid braking for vehicles entering the roadway.** It's not just about the pack ahead of you. Constantly scanning your surroundings will help you anticipate your positioning when other vehicles enter your path.
- ✓ **Use vehicle clusters in front of you to trigger signals.** Many intersections are equipped with traffic sensing triggers. They change the signal to keep traffic flowing. Let the pack make those lights green so you can keep moving.
- ✓ **Don't let other drivers force you to make unsafe maneuvers.** Driving economically is not about holding up traffic simply by driving slower. No one appreciates that. But applying some light pacing does not have to hold up the people behind you. In fact, they may begin to pace your constant momentum once they realize you have a better plan.
- ✓ **Avoid charging toward obvious stopping situations.** We all have the tendency to "run with the pack". It's is easy to feel you are making better time by traveling faster. But it is those constant stops that accompany the "faster go" that kill your mileage.
- ✓ **Allow one second for each car to move out from the light ahead of you.** You are not pacing the light itself -- you are pacing the last vehicle in line ahead of you. So figure that each driver takes about a second of reaction time to move forward and pace yourself accordingly.
- ✓ **Remember the 4 Second Rule.** By putting four seconds between you and the vehicle ahead of you, you provide yourself more time to see your traffic future.

Other Fuel Economy Tips

Brian improved his fuel mileage by 29% by applying the Smith 5 Keys™. Here is a list of things you and he can do to improve mileage even more.

Check Your Tire Pressure. Under-inflated tires place more rubber on the road which increases friction and decreases fuel economy. You can add about 3% to your mileage simply by making sure your tires are properly inflated. Remember that cold weather can lower your tire PSI by about 1 PSI for every 10 degree temperature drop.

Get a Tune Up. Maintaining your engine's state of tune is essential to getting good fuel mileage. A solid preventative maintenance program can save you both fuel and the cost of major repairs. Research shows a well maintained engine can add about 4% improvement in fuel economy. A faulty oxygen sensor may rob you of 40%!

Help Your Engine Breathe Easier. A regular check of your air filter can add up to 10% to your fuel economy.

Change Your Oil. Running the proper grade of clean oil can add 1% to 2% to your mileage. The new synthetic oils may improve mileage even further.

Know Your Octane. Engines are designed to run on a specific fuel octane level. Running higher octane will not result in better performance or fuel economy in an engine not designed for it. But running lower octane will definitely rob you of both performance and fuel economy.

Lose That Roof Rack! About one quarter of each gallon you burn is used to simply overcome the wind resistance of your vehicle. So take off the roof rack and carry less stuff. If you have to have a roof rack, choose one with a sloped front end to allow air to travel over it more efficiently.

Watch Your Weight. Your vehicle weight that is. Carrying around heavy items in your trunk or cargo area requires more fuel. Every extra 100 pounds means about 2% in fuel economy.

Use Cruise Control Wisely. Cruise control can add 10% or even more to your fuel economy but you need to be careful in using it. On open stretches of flat road it is great. In hilly terrain it may actually cost you more fuel as your engine constantly surges to maintain speed. And using cruise control in town is never recommended.

A/C Yes or No? There is no doubt that air conditioning loads your engine and requires more fuel. But on the open road, having your windows down to stay cooler can increase your vehicle's drag and negate the gains of not running the A/C. Overall, we're in the camp of being comfortable because comfortable drivers tend to be more alert.

Be a Clean Machine. Dirt causes drag and drag reduces fuel economy. Keeping your vehicle clean can gain 2 to 5% in fuel economy.

Run smart. Save fuel. Drive different.



Get more information on safer and more fuel efficient driving at www.smith-system.com