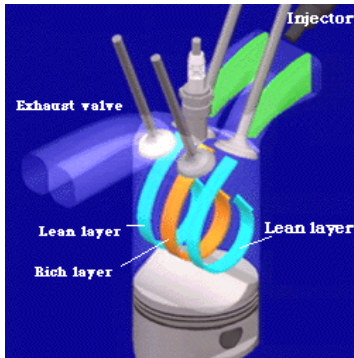




ProTecta Synthetic Fuel System Treatment: Technical Overview

Performance testing conducted by major oil companies leads us to believe that the next generation of additives will be those that work with or re-fortify the engine oil. This can be addressed on two fronts - fortifying the engine oil as SFR has engaged in for over 15 years, or considering fuel additives as "daily vitamins" for the engine oil. This gives us a new and challenging technical area for improving the performance and durability of modern automobile engines.

The piston and ring area is mostly a "boundary lubrication" area, where the oil film is very thin and the microscopic "high spots" of metal parts come into contact with other metal parts. The resulting friction in such areas is a major reason for inefficiencies that contribute to fuel consumption.



The design of the modern gasoline engine provides great opportunity for a fuel additive to assist the engine oil and function as a friction reducer. By introducing ProTecta® Fuel System Treatment into the fuel, it is delivered to the cylinder wall. This area of the engine will see the greatest improvement and the benefit is almost immediate.

The piston rings and cylinder wall regions are only marginally serviced by crankcase engine oil. The piston skirts and lower ring are sometimes targeted with an oil spray but often only receive splash lubrication from the crankcase. Engine manufacturers are also keeping the cylinder walls drier to prevent oil consumption, further reducing the lubrication in this area of high friction. To increase fuel economy based on the all out push by our government, engine manufacturers are forcing oil formulations to much lower viscosities. For example, reducing the viscosities from SAE 10W-40 to SAE 5W-30. With such thinner oils, and with engines operating at higher temperatures, oil film thickness is reduced and thus there is a greater chance for metal-to-metal contact to occur.

SFR's ProTecta® Fuel System Treatment enters into the oil sump via the piston rings, it can further assist in reducing friction in other parts of the engine as well. Based on the additive's ability to reduce internal friction, the benefits for the consumer can include improved fuel economy and reduced wear. By using the SFR ProTecta® Engine Treatment along with the SFR ProTecta® Fuel System Treatment one can maximize results.

For those that wonder how a fuel additive can enter the engine oil, this phenomenon of additive entry into the oil has persisted throughout the development of fuel intake system deposit control additive, from the carburetor through fuel injection, intake valves and combustion chambers. To improve combustion efficiency, today's engines create a "swirl" effect, which mixes the intake charge. However, but because fuel additives do not tend to change direction as quickly as gasoline, the additives still impinge on the cylinder wall, where a thin layer of engine oil provides a convenient and safe landing spot. After a swipe from the piston rings, the additives are transported into the crankcase oil. Research has shown that approximately 25% of fuel additive put into gasoline finds its way into the crankcase oil.

The effects of fuel additives on oil performance have ranged from harmful to doing nothing, and today have even been found to be beneficial. While the public usually attributes engine oil performance solely to the oil put directly into the crankcase, it is possible to isolate the effects of fuel additives that make their way into the engine oil. SFR has been a leader in oil fortifiers for many years and now takes another step in reducing friction through a fuel system treatment.

1. Engine dynamometer tests have shown proven fuel economy.
2. Vehicle tests (modified Federal Test Procedure) have shown improved fuel economy.
3. Can improve/restore fuel efficiency of engine oil during the oil drain interval.
4. Can improve/restore fuel efficiency of engine oil in the first tank full.
5. Observed benefits independent of engine type or condition.
6. Reduces engine friction for improved fuel economy in the first tank full.
7. Improves fuel economy as shown in (modified) Sequence VI tests.
8. Reduces engine friction over the oil drain interval.

In addition to fortifying the engine oil to improve mileage SFR has developed a synthetic fuel system cleaner found in ProTecta® Fuel System Treatment to keep components working like new. This powerful fuel cleaner is designed to provide:

1. Control of carburetor, fuel injector, intake valve and combustion chamber deposits.
2. Restores lost power and acceleration.
3. Reduces valve stick in cold temperatures.
4. Control of octane requirement increase: Allows good operation on lower cost gasoline. No need to purchase Octane boosters.
5. Reduction of existing carburetor, fuel injector, intake valve and combustion chamber deposits.

SFR ProTecta® Fuel System Treatment is the most advanced fuel system product on the market today providing multiple benefits including fuel economy on even new cars!

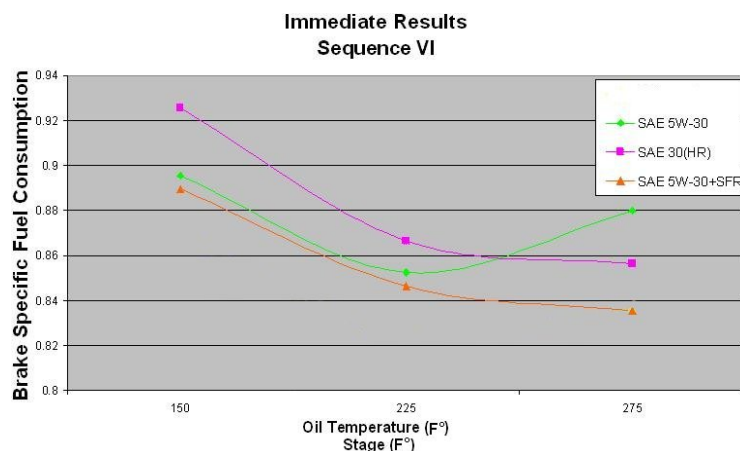
ProTecta Synthetic Fuel System Treatment: ASTM Sequence VI Test

The "**Sequence VI test**" (a fuel economy test previously used in the lubricant industry) was modified to compare the economy of two different fuels - one with fuel additive and the other without. The tests revealed that the improvement in fuel economy from using the fuel additive was equal to that obtained by blending the ProTecta® Fuel System Treatment friction reducers into engine oil formulations.

This Sequence VI engine testing demonstrates the ProTecta® Fuel System Treatment concept. The results of the Sequence VI test show that ProTecta® Fuel System Treatment is effective in improving fuel economy. The immediate results show that the ProTecta® Fuel System Treatment is delivered in a very effective manner to an area of the engine, the rings and cylinder walls, that contribute a great deal of the internal friction in the engine. The aged results show that the ProTecta® Fuel System Treatment accumulated in the crankcase oil and provided additional benefits. This particular test is also a good indication that ProTecta® Fuel System Treatment will deliver good results in modern engines and new engines as most of the Sequence VI tests begin with a freshly rebuilt motor.

The "**Sequence VI test**" (a fuel economy test previously used in the lubricant industry) was modified to compare the economy of two different fuels - one with fuel additive and the other without. The tests revealed that the improvement in fuel economy from using the fuel additive was equal to that obtained by blending the ProTecta® Fuel System Treatment friction reducers into engine oil formulations.

This Sequence VI engine testing demonstrates the ProTecta® Fuel System Treatment concept. The results of the



Sequence VI test show that ProTecta® Fuel System Treatment is effective in improving fuel economy. The immediate results show that the ProTecta® Fuel System Treatment is delivered in a very effective manner to an area of the engine, the rings and cylinder walls, that contribute a great deal of the internal friction in the engine. The aged results show that the ProTecta® Fuel System Treatment accumulated in the crankcase oil and provided additional benefits. This particular test is also a good indication that ProTecta® Fuel System Treatment will deliver good results in modern engines and new engines as most of the Sequence VI tests begin with a freshly rebuilt motor.

This graph shows the results of three passenger cars motor oil formulations PCMO1 and one with SFR's ProTecta® Fuel System Treatment.

ProTecta® Fuel System Treatment	% Gain at 135C Stage	Effective Fuel Economy Improvement
300ml	4.66%	3.26% (EFEI)

ProTecta Synthetic Fuel System Treatment: No Harm Testing

Although our extensive testing has shown that the new fuel additive chemistry in ProTecta® Fuel System Treatment can provide improved fuel economy as it gets into the engine oil, it is also important to know that this is accomplished without harming the engine. SFR ProTecta® Fuel System Treatment has passed a number of rigorous no harm tests and has demonstrated that its chemical integrity is maintained.

- 60 vehicle fleet test using a leading motor oil, gasoline treated with ProTecta® Fuel System Treatment and ran over 3 million miles trouble free.
- Trooper fleet test using a leading motor oil treated with ProTecta® Fuel System Treatment which ran for over 7 million trouble-free miles.
- Various elastomers or gaskets tested in liquid and vapor for 14 days showing no difference in density, swelling and hardness between base fuel and additised base fuel.
- Lubricity Additive Compatibility tests checking the filterability and sediment formation resulted in a pass at double the test duration and compatibility with engine oils containing Group 1 and Group IV base oils.
- Accumulation of the ProTecta® Fuel System Treatment can be accurately calculated using Fourier Transform Infrared Spectrometry (FTIR).
- Chemical integrity and oxidative stability demonstrated through Differential Scanning Calorimetry (DSC).

15 % Obstructed



Clean Fuel Injector



Dirty Intake Valve



Clean Intake Valve



Cleans and Protects. Improves Performance and Fuel Economy – Even on New Cars

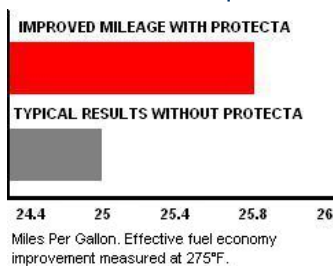
Why Use ProTecta®? No Fuel treatment does more for your car than ProTecta®. That's because ProTecta® Fuel System Treatment is a double-acting super concentrate with cleaners and friction reducers that make your car run like new again. Cleans injectors, valves and combustion chambers. ProTecta's friction reducers migrate from the fuel into the motor oil, reducing friction and further improving your gas mileage, until the next oil change.

Use with complete confidence

and Peace of Mind: ProTecta's advanced synthetic formula is safe to use in engines requiring gasoline or petrol.

ProTecta® is safe for all emission systems and increases the life of the system.

OVER 3% INCREASE IN FUEL MILEAGE (As Demonstrated in Sequence VI Tests)



19% REDUCED EMISSIONS WITH PROTECTA

