Gasoline Fuel-Additive Breakdown

Store shelves are chock-full of gasoline additives that claim to increase fuel economy, smooth engine operation, reduce emissions, extend engine life, maximize horsepower and more. But do they really work? AMSOIL additives work, and we have the data to prove it. Here's a brief break-down of our gasoline fuel additives.

AMSOIL P.i.®

Over time, carbonaceous deposits form on your engine's fuel injectors, valves and in the combustion chamber. Injectors are highly engineered to tight tolerances, and even minute deposits interfere with the spray pattern, reducing power and fuel economy. Fouling can also lead to increased engine wear.

The problem is especially pronounced in gasoline direct-injection (GDI) engines that locate the injectors inside the combustion chamber where they are exposed to intense heat. In fact, direct injection

typically creates 30 to 40 times more soot than port-fuel injectors (PFI). Eventually, you notice a reduction in power, throttle response, fuel economy and drivability.



AMSOIL P.i.[®] can change the game. P.i. contains concentrated detergent that aggressively cleans stubborn deposits from injectors, valves and the combustion chamber – restoring up to 14% horsepower.¹ P.i. restores GDI fuel injectors to a 100% flow rate after just one tank of fuel.²

In other words, AMSOIL P.i. is a low-cost and effective option for cleaning injectors, valves and the combustion chamber.

Upper Cylinder Lubricant

Your engine's top end is sparsely lubricated and prone to the development of deposits. That's because the intense heat of combustion and limitations of the oilcontrol piston ring result in a lack of oil at the top of each cylinder. This can lead to ring and cylinder wear that reduces engine compression, decreasing power and performance. The top end is also highly susceptible to corrosion, an issue compounded by the prevalence of ethanol in fuel.



AMSOIL Upper Cylinder Lubricant is designed to solve those issues.

Many additives are marketed as upper-cylinder lubricants, but again, AMSOIL stands out for its outstanding performance. In fact, AMSOIL Upper Cylinder Lubricant delivers 18% more lubricity than Lucas* and 20% more than Sea Foam* for better retention of horsepower and fuel economy.³



AMSOIL Upper Cylinder Lubricant also fights ethanol-related corrosion. It uses potent corrosion inhibitors to coat metal surfaces, block out moisture and stop deterioration before it starts. This is particularly important when using gasoline that contains ethanol due to its propensity to attract water.

In other words, AMSOIL Upper Cylinder Lubricant inhibits corrosion and reduces wear in the engine's top end to guard against compression loss and maintain peak horsepower.



Gasoline Stabilizer

Shockingly, gasoline can start to break down in as little as 30 days. Gums and varnish become more concentrated and less soluble as lighter hydrocarbons evaporate. In addition, gas is continually oxidizing, which adds varnish and other gunk to the mixture. As the transformation progresses, gums, varnish and other solids foul the fuel system and prevent gas from flowing into the combustion chamber.



In severe cases, gasoline can change so dramatically that it no longer ignites. Ethanol added to gasoline at the refinery can absorb water from the air, which can lead to phase separation where the ethanol and gas separate into layers. Ethanol that has absorbed enough moisture and has sat long enough can foul the fuel system and prevent the engine from starting.

For these reasons, it's vital to stabilize fuel prior to storage. Proactively adding fuel stabilizer is a simple and inexpensive way to head off more serious downtime and repairs down the road. AMSOIL provides fuel stability that Sea Foam* Motor Treatment can't match, helping maintain startability and protect against the formation of varnish and gum.⁴



AMSOIL Gasoline Stabilizer improves gasoline stability for up to 12 months so your vehicles and equipment fire to life when you take them out of storage. It also protects against corrosion during storage to maintain fuel-system cleanliness.

We recommend adding AMSOIL Gasoline Stabilizer to your gas can with every fill. That way you never have to worry about fuel going bad inside your gas can, or worse, inside your powersports toys, lawnmowers, chainsaws or other equipment that's stored periodically.

and the set

Quickshot®

It happens. A piece of equipment is put into storage for several months without quality (or any) fuel stabilizer and it won't start or run well when it's pulled back out. Quickshot can help with that. It features chemistry that cleans gummed or dirty injectors and carburetors and cleans hard-to-remove carbon deposits from piston tops, spark plugs and other combustion-chamber parts to restore engine performance. Quickshot also helps prevent water-induced



performance. Quickshot also helps prevent water-induced ethanol separation and breakdown and protects against the formation of gum and varnish buildup in tanks and fuel systems for up to six months.

Diesel Fuel Additives

In addition to industry-leading gasoline additives, AMSOIL also offers a complete line of diesel fuel additives. For peak performance, diesel engines need a daily dose of detergent for cleaning and lubricity to protect the injectors and fuel pump while keeping the combustion



chamber clean. Here's a brief introduction to each product.

AMSOIL Diesel Injector Clean uses unique chemistry to target and eliminate specific performance issues to maximize diesel power. It cleans dirty injectors to restore power and torque and reduce smoke and emissions. It also lubricates pumps and injectors to reduce wear, downtime and maintenance costs.

AMSOIL Diesel Cold Flow combats diesel-fuel gelling by improving diesel cold-flow ability. It is formulated with an advanced deicer to enhance fuel flow and help prevent fuel-filter plugging in cold temperatures.

AMSOIL Diesel Cetane Boost raises the cetane number of diesel fuel up to eight points for maximum horsepower, increased fuel economy and easier starts in all diesel engines.

AMSOIL Diesel Injector Clean + Cetane Boost combines the superior detergency and improved lubricity of AMSOIL Diesel Injector Clean and the increased horsepower and cetane of AMSOIL Cetane Boost.

AMSOIL Diesel All-In-One puts the benefits of AMSOIL Diesel Injector Clean, Diesel Cold Flow and Diesel Cetane Boost into one convenient package. Diesel All-In-One delivers outstanding detergency, improved lubricity and higher cetane. It also does a great job preventing fuel gelling in cold weather. How good is it? AMSOIL Diesel All-In-One provides as much as 32°F (18°C) better protection against cold-temperature gelling than Howes* Lubricator Diesel Treat.⁵

⁴Based on independent testing of AMSOIL Gasoline Stabilizer obtained Nov. 8, 2018 and Sea Foam Motor Treatment purchased Oct. 25, 2018 in the ASTM D525 using test fuel containing no exidation-stability improving additives. ⁶Based on third-party testing in July 2017 of AMSOIL Diesel All-In-One and Howes Lubricator Diesel Treat using diesel fuel representative of the U.S. marketplace and Howes' recommended treat ratio for above 0°F (-17.8°C.)

