

ETHANOL 101: WHAT YOU NEED TO KNOW ABOUT E10/ETHANOL FUEL



4 MAIN PROBLEMS WITH E10 / ETHANOL FUEL

PROBLEM 1: DEBRIS IN FUEL

Ethanol is a powerful solvent and when first introduced it strips away any gums, varnish, or other build up found in fuel tanks and fuel delivery systems. This debris drops into the fuel and leads to clogged filters, injectors and carburetors.

STAR TRON® SOLUTION: Star Tron's enzymes break down this debris into sub-micron sized particles that are safely burned away while the engine operates. This greatly reduces the engine problems associated with the initial use of E10 fuels.

PROBLEM 2: EXCESSIVE WATER IN THE FUEL AND PHASE SEPARATION

Ethanol attracts moisture from the atmosphere, chemically bonding with it to form an ethanol/water molecule. Water in the fuel causes engines to run rough, stall and can lead to internal damage to engine components. Fuel will naturally hold .5% water in suspension, but if water levels exceed this threshold the water drops out of suspension. The water/ethanol molecules are heavier than the fuel and drop to the bottom of the tank. This is phase separation. Ethanol provides a significant amount of the fuel's octane, so when the ethanol separates and drops to the bottom of the tank, the remaining fuel is left without enough octane to properly operate the engine. Plus, the ethanol/water mixture is only partially combustible which can lead to severe engine problems.

STAR TRON® SOLUTION: Star Tron's enzymes prevent the water and ethanol molecules from chemically bonding. Therefore the water falls harmlessly to the bottom of the tank leaving the ethanol molecules in suspension with the fuel and preserving the fuel's octane rating. This prevents phase separation from occurring. The remaining water on the bottom of the tank is broken down to sub-micron size allowing it to be safely burned away while the engine is operating.

PROBLEM 3: ETHANOL FUELS BREAK DOWN QUICKLY

Ethanol and gasoline do not chemically bond, instead they are held together in a weak suspension. Over a short period of time the E10 fuel begins to break down. The fuel begins forming solids which can clog the fuel delivery system and reduce octane ratings.

STAR TRON® SOLUTION: Star Tron® is also a powerful fuel stabilizer which prevents the fuel's breakdown for up to 1 year. Star Tron® will also rejuvenate old fuel, restoring it to serviceable condition.

PROBLEM 4: ETHANOL CAUSES LOST POWER PERFORMANCE AND DECREASED FUEL ECONOMY.

Ethanol does not produce as much energy as gasoline, losing up to 20+% of its power. E10 fuels result in decreased performance, reduced throttle response and greatly reduced fuel economy. Unburnt fuel leads to carbon deposits.

STAR TRON® SOLUTION: Star Tron's enzymes allow more oxygen to attach to the fuel molecules at the time of combustion, resulting in a more complete burn of the fuel. This leads to greatly improved fuel economy as well as restored power and throttle response. The enzymes remove existing carbon deposits and future deposits are prevented.

Star Tron® is the ONLY multifunctional fuel additive that addresses all Ethanol Issues. For 6 years now, Star Tron® has been solving ethanol problems for boaters across the US. Now it will do the same job for snowmobile, ATV, PWC and motorcycle owners. Star Tron® works in all 2 and 4-cycle engines under all conditions. In addition to improving performance when using E10 fuel, it will also stabilize fuel for 1 year, making it the only all-season, all-purpose additive you need. It does this at the lowest cost of any fuel additive.

Be careful of what additive you use – many are alcohol-based. Adding any alcohol to E10 can lead to engine problems. Star Tron® does not contain any alcohol and is 100% safe for use in E10 fuel. Read the MSDS of any fuel additive before using it with E10 fuel.



To learn the entire Star Tron® story and to find the nearest retailer, log onto WWW.STARTRON.COM or call (800) 327-8583

