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Ethanol Defense Benefits for Small Engines

Ethanol Defense was formulated by Bell Performance in 2011 as a multifunction treatment for gasoline and ethanol blends. The multiple active ingredients in Ethanol Defense work together to provide solutions to the major problems that ethanol-blended fuels bring with them. Problems like damage to rubber & plastic parts, corrosion, water absorption and poor storage life.

Small engines and 2-cycle engines are considered off-road applications by the Environmental Protection Agency. As such, they are subject to different rules regarding the kinds of fuel recommended for their use. Ethanol blends in excess of 10% (i.e. E15 and E85) are not legally approved or recommended for use in small engines. This is because the evidence shows these ethanol blends cause serious problems in small engines. This shows that it is important for small engine users who use any kind of ethanol-blended gasoline to treat the fuel to prevent problems that may be serious enough to render the equipment inoperable.

Ethanol Defense & Small Engines

If you have one or more gas-powered small engines, Ethanol Defense is ideal for ensuring your equipment works its best while using ethanol-blended gasolines. Ethanol Defense is highly effective at preventing and solving these common problems that small engines have when using ethanol gasoline.

Ethanol Solvency Damage	<p>Ethanol blends damage and soften polymer materials like rubber and plastic upon long-term exposure. This phenomenon results in disabling damage to small engine equipment, where seals and fuel lines can be damaged to the point where the equipment will not operate</p> <p>Ethanol Defense combats ethanol solvency damage with an ingredient that lays down a layer of boundary protection on all surfaces contacted by the treated fuel. This protective layer keeps the ethanol fuel from softening these sensitive parts.</p>
Corrosion Damage	<p>Ethanol blends have been strongly associated with corrosion damage to small engine carburetors, due to their affinity for attracting water from the environment.</p> <p>Ethanol Defense protects parts from corrosion damage with the same type of boundary layer protection referenced above. Sensitive metal parts are coated with a protective layer that help stave off corrosion damage over time.</p>
2-Cycle Lubrication Damage	<p>Ethanol blends have been known to cause catastrophic damage in 2-cycle engines that use fuel-oil lubrication. This is due to ethanol's water attractive tendencies. Water is pulled into the fuel where it interferes with the dissolved oil's ability to bond to and protect metal surfaces that normally rely on this lubrication for continued engine operation.</p> <p>Ethanol Defense fight 2-cycle engine damage by improving the fuel's ability to absorb water without it interfering with this essential lubrication.</p>
Excessive engine deposits	<p>Ethanol fuels have a tendency to be associated with deposit buildup in small engines, partly due to their polymer-dissolving characteristics. The ethanol fuel dissolves components and carries the dissolved materials to other areas of the engine, where it drop out of solution and form harmful deposits that affect small engine performance and life.</p> <p>Ethanol Defense has multiple detergents that keep these areas clean. This ensures that the small engine and equipment functions properly over the course of its full intended life.</p>