

Get the Lead Out

The U. S. Environmental Protection Agency has proposed that all lead in gasoline be phased out by January 1, 1988. As a result, most of us are going to see a lot of valve and seat wear on our older gasoline engines. Lead used to provide a wear-reducing function by depositing a protective layer of lead oxides on the upper cylinder components. Some oil companies will try to tell you engines were built to use leaded gasolines, not require it. This is true of automobile engines operating under normal condition, not air cooled engines at high RPM or "full load" like most of our equipment.

Since 1977 the EPA has been slowly lowering the lead content to the point where there's almost no lead in our motor fuel today. As a result some of you may already have noticed some difficulties with engines built before this time, as they were not built with stelyte valves or seats. So we are faced with a big problem. Do we just drive that faithful old tractor into the ground? No. We need to either replace the valves and seats in our equipment built prior to 1977 with stelyte or find a gas additive to provide the lubrication lost in the lead.

I've found that the first engines effected are the Cushmans. They wear in the guides, start to draw oil into the cylinders, and foul the spark plugs. So I have taken the older Cushmans and replaced the guides with the newer stelyte types. I've also decided to go with a gas additive to lubricate the upper cylinders; hoping to stop the wear on the rest of my older equipment.

John Maguire, Mechanic
Sunset Ridge Country Club

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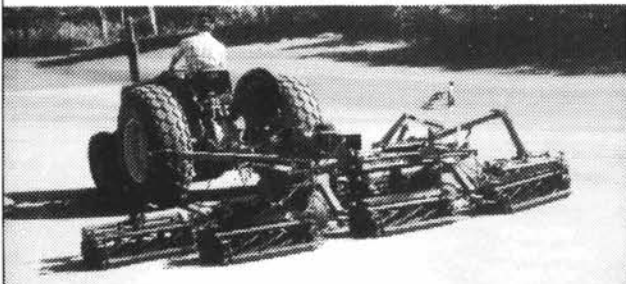
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Lead in Gasoline: A Brief History

1921 — Scientists working for the newly formed General Motors Research Corp. discover the anti-knock properties of tetraethyl lead, helping in the development of high-compression engines.
1923 — A Richmond, Ind. station owned by Amoco begins offering a gasoline containing lead.

1924-1925 — Illnesses and 15 deaths recorded at Ethyl Corp. among workers developing lead gasoline additive.

1970 — The Clean Air Act allows EPA to phase out or eliminate fuel additives it shows to be hazardous to the public health.

1972 — EPA announces a proposal to phase out tetraethyl lead additives in gasoline and set its first public hearings on the subject.

1977 — First phaseout deadline set by EPA. Lead content in motor fuels to be reduced to 1.25 gram/gal.

1985 — EPA introduces lead credit banking system to help refiners ease into total lead ban.

Jan. 1, 1985 — Lead content in motor fuels reduced to 1.1 gram/gal.

July 1, 1985 — Lead additives lowered to 0.5 gram/gal.

Jan. 1, 1986 — Lead additives limit set at 0.1 gram/gal.

Jan. 1, 1988 — Lead credit banking system scheduled to end.

???? — Total ban on leaded gasolines.

Credit: National Petroleum News, Nov., 1986