Old Gas Tech Article - By Steve Logan

Do you need another excuse to drive your MG? Our cars tend to sit idle more days than they are driven. I don't drive any of mine enough, and I have frequent problems. I don't remember having as much trouble when I was using my previous MGs for daily transportation. I drove my 58 MGA HARD for many years and never had to remove the head. Not even once in 65,000 miles. A car is designed to be driven daily. Short trips don't help much. The car has to be driven far enough to thoroughly warm up the oil and then kept hot long enough to evaporate the water and gas that are diluting the engine oil. Water in the oil comes from condensation out of the air and is a by-product of combustion. Every time the engine is started cold, some unburned fuel will drain into the crankcase. Frequent medium or long trips will eliminate this problem. Engine heat will drive water and gas out through the crankcase ventilation system. If the car is driven like this frequently enough to require a full tank of gas every three months, another problem can be avoided at the same time. Old gas can adversely affects the carburetor, fuel pump, rings, valves, fuel tank and lines. Old gas will burn in the engine. It may not burn quite as well as fresh gas, but it will run the engine. Old gas can cause problems in two ways. Just sitting in the car it forms varnish and eventually gum. Burning old gas causes problems of a different sort. The varnish and gum plug up the fuel passages and cause parts to freeze up. All it takes is a check valve stuck to its seat in the fuel pump to keep the car from running. Varnish in the carburetor is common. There are much worse things that old gas can do to your car.

Varnish is a light brown, difficult to remove, deposit that is left by evaporating gasoline. It will form even in daily driving, but won't build up enough to cause problems very fast if enough fresh gas flows past the deposits. But let the MG sit for long periods and you invite problems. Even gas powered tools like chainsaws and lawn mowers that are not designed to be used daily are subject to varnish buildup. Their manufacturers recommend draining the gas from these engines if the tool is to be stored for any length of time. They also recommend that gas stored out of the tool for more than three months not be used. We have all gotten away with ignoring both of these recommendation many times, but sometimes it means a carburetor rebuild.

Gum takes longer to develop in a fuel system, but it is nasty stuff. I haven't found anything that is a good solvent for it and it can plug a 5/16 inch steel fuel line so thoroughly that it won't pass air, much less gasoline. The plugged line can be opened up with a stiff steel wire, but getting all of the gum off the line's interior walls is an iffy proposition. A new line might be in order. I have seen an old MG fuel tank that had so much gum in the bottom that the fuel level dipstick stuck to the bottom. This much gum takes decades to form.

Burning old gas leaves a black deposit that acts as a very effective adhesive. This can glue throttle shafts to the carburetor body, valve stems to the valve

guides, lifters to the block or rings to the pistons. Stuck throttle shafts are a nuisance. Stuck valves or lifters can mean a catastrophic engine failure. The cam will open the valve, but if the springs can't close it by the time the piston comes up to occupy that same space, then the piston becomes a hammer and the valve is the anvil. One poor soul wrote an account in MGB Driver of this happening to him. He flushed out the old gas and put in new gas after the second re-rebuild. He didn't make it around the block either time on a freshly rebuilt engine before the pistons hit the valves. If the rings are stuck to the pistons, they can't seal to the cylinder walls. Compression will be low. Oil consumption will be high. Crankcase venting will be dramatic.

Don't let the gas in you MG get old. Drive it. If you are working on a project car, don't even think about not draining the tank. Burn gas; don't store it!