



Millers Oils Ltd  
Brighouse, West Yorkshire  
HD6 3DP, England

[millersoils.co.uk](http://millersoils.co.uk)

[enquiries@millersoils.co.uk](mailto:enquiries@millersoils.co.uk)

Tel: +44 (0)1484 713201

ENGINE OILS, TRANSMISSION OILS AND FUEL TREATMENTS



## VSP PLUS YOUR ENGINE NEEDS MORE THAN AN UNLEADED CYLINDER HEAD.

Your lead free cylinder head will have hardened seats and special valves and guides, but only solves one of your three problems.

Despite the fact that mainstream leaded petrol disappeared many years ago, the role of lead in fuel is still widely misunderstood.

Lead (tetra ethyl lead) was introduced in the 1920's to enable engines to produce much more power without the danger of detonation and destructive mechanical damage.

It was subsequently noticed that engines running on 'Ethyl' petrol did not require the valve clearances adjusting as often as engines running on standard petrol. This was due to the inherent lubricating properties of the lead additive.

So, fitting hardened valves and seats solves this problem, but what about the other two issues.

Your engine also demands;

- 1 OCTANE**, the higher the octane the more power can be released from the engine. Retarding the ignition enables the engine to be run on lower octane fuel, but at the expense of power and fuel consumption.
- 2 FLAME FRONT CONTROL**, this gives the engine resistance to high speed detonation and prevents mechanical damage. Allows maximum power and fuel efficiency to be released.



*Pistons damaged by detonation.*

Leaded petrol burns progressively without the formation of shock waves. Unleaded petrol, in a cylinder head designed to burn leaded petrol, burns erratically generating shock waves which cause detonation and result in piston damage.

For the same octane level, the burn characteristics of leaded and unleaded petrol are very different. Unleaded fuel is high in aromatics, the higher the octane, the higher the level of aromatics.

### MILLERS OILS VSP PLUS CONTAINS A POWERFUL ANTIOXIDANT TO PROLONG THE LIFE OF UNLEADED FUEL.

Millers VSP Plus lead Substitute and Octane Booster allows older (pre 1990 cars without catalyst converters) and all classic and vintage cars to run safely on unleaded petrol.

VSP Plus adds up to 2 octane numbers to the base petrol, preventing pinking and running on and protects against valve seat recession (VSR). Endorsed by the Federation of British Historic Vehicle Clubs (FBHVC).



The addition of MILLERS VSP PLUS fuel treatment to unleaded petrol replicates the three features obtained from lead;

- 1** Lubricates valves, guides and prevents valve seat recession
- 2** Adds 2 octane (20 octane points) to the base fuel
- 3** Provides flame front control to ensure efficient transfer of power across the top of the piston preventing detonation, 'hot spots' and running-on.