



POSITION STATEMENT ON ADDITIVES IN GASOLINE/PETROL AND DIESEL FUEL

Additives to gasoline can be divided into two types:

- Type 1. Those based on hydrocarbons, which may be partly oxygenated, which burn in the engine or on passage through a catalytic converter, essentially to form carbon dioxide and water.
- Type 2. Those that contain inorganic elements that therefore cannot burn completely.

In general terms there should be no effect on catalyst durability when additives of type 1 are used. Catalyst performance may be affected to a small extent if the temperature at which the additive burns in the catalyst is different (higher or lower) to the temperature at which the hydrocarbons, which form gasoline, burn.

Type 2 additives can have an effect on catalyst performance and durability. Since the products of combustion are not gaseous they will, in time, form a coating over the surface on the catalyst stopping the catalytic reactions from taking place. Some additives, lead is an example, also react with the catalyst itself rendering it, in time, ineffective.

The manganese-containing additive, Methyl cyclopentadienyl Manganese Tricarbonyl or MMT, has also been found to have a detrimental effect on vehicle emission control systems. A [recent study](#) by the US and Canadian motor industry associations has confirmed these deleterious effects¹. The tests found that MMT was responsible for significant increases in smog forming emissions. MMT also was found to rapidly deteriorate some catalytic converters at high mileages.

Additives for diesel fuel:

Fuel-borne catalysts are used for Diesel Particulate Filter (DPF) regeneration. These additives are mixed with diesel fuel and contain inorganic elements that do not burn completely in the engine. They are used to catalyse periodic combustion of the soot trapped in the DPF, and must be only used in conjunction with an efficient DPF. At present, only Iron and Cerium additives have been classified in this group.

AECC believes that the producers of additives should take the responsibility for proving that their products are not harmful to catalyst and trap based emission control systems. AECC supports the [World-Wide Fuel Charter](#) issued by the world motor industry associations.

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¹ "The Impact of MMT on Vehicle Emissions and Durability", Auto Alliance, 29 July 2002