

TOPIC: Oil Filters and Ethanol E10 and E85

Currently there are two types of ethanol blended fuels in Australia, E10 and E85. E10 is a blend of standard unleaded petrol combined with 10% ethanol and E85 is a blend of standard unleaded petrol combined with up to 85% ethanol.

E10 is currently the most popular in Australia and New Zealand with up to 70% of vehicles being compatible it is recommended that any vehicle prior 1986 or fitted with carburettors do not use E10 as the solvent properties of Ethanol can lead to issues with the rubber components used on the vehicle. E85 can only be used in vehicles that have been designed to use this blend of fuel as the Ethanol is very aggressive and should not be used unless it is recommended by the manufacturer of the vehicle/engine.

Ethanol is hygroscopic which means it absorbs water and when the water content is above 0.5% the mix becomes heavier than the petrol and leads to phasing which means the water/ethanol mix will settle at the bottom of the fuel tank. To check if your vehicle is ethanol compatible you can visit the FCAI (Federal Chambers of Automotive Industries) www.fcai.com.au



What benefits does this compatibility give to you?

At Ryco we continually monitor alternative fuels and our filters to ensure all our oil (including SynTec) and fuel filters are tested to ensure compatibility with both E10 and E85 fuels.

1. Filtration media and adhesives used in the manufacturing of the filter are tested to ensure they will not break down when exposed to Ethanol.
2. All rubber components such as sealing gaskets and Anti Drain Back Valves are manufactured from rubber compounds that have high fuel resistance.
3. Ryco Oil Filters use other high-quality materials such as steel which are also tested for any reactions from exposure to Ethanol.





Oil Sump Contamination with Ethanol

Whatever you do, at some stage between oil and filter changes your oil will become contaminated with Ethanol. Even small traces of Ethanol in the engine oil will significantly reduce the lubricity of the oil, causing increased engine wear.

So how does the Ethanol end up in your sump? Assuming there is no direct link between the fuel system and the crankcase, the only other link is unburnt fuel entering the sump via the piston rings. This is more common during cold starts as all engines require a rich air/fuel mixture to start.

The best way to prevent Ethanol build up in the engine oil is to ensure your engine is run long enough and at load for the engine to reach at least 100°C to burn off any Ethanol build up. If your driving style dictates this temperature cannot be reached on a regular basis then shorter oil drain intervals should be considered. In severe cases of Blow-By gases entering the sump the oil can become so contaminated with Ethanol and water that the filter will be compromised.



"I got a call from local engine builder Tony from Knight Engines... he had seen some filter failures on a number of burn out cars using E85. Looking at the filters it appeared that the heavily E85 contaminated oil had severely degraded the media... we advised him he could safely use E85 compatible Ryco Syntec Oil Filters. He's now running SynTec on these engines and not having the same issues he saw with other filters."

*Brenton Stuart
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