



Tech Sheet

'The Sulphur Debate'

The Sulphur debate seems to be the 'Scape-Goat' of this century! Since the start of the year there has been an epidemic of leaking diesel pumps most prevalent in 4WD's and small commercial diesels. It is only happening in these vehicles with a 'rotary' pump fitted, due to the fact that a 'rotary' pump is running and lubricated solely by the diesel fuel whilst the 'in-line' style pump, found mainly on earlier 4WD diesels and in heavier commercials, is running mainly with engine oil lubrication. Of course we have been shouting loud about the problem for a while (through the 4WD magazines and our 'tech sheets' whilst the Diesel Associations are keeping their pockets warm.

Anyway, I'd just like to quickly run through this terribly misleading DIESEL FUEL debate and give you some clarifications from the Pro's...Berrima Diesel! You've probably been reading about 'HORROR STORIES' (like up in Queensland) of the removing or reducing of Sulphur in Diesel fuel. These stories would lead one to believe that pump damage will occur and seals will leak. It is being heavily published as being so in leading 4WD publications, TV and even by 'so-called' Diesel Industry Associations!!

THIS IS ALL WRONG and misleading!!!!!! We at Berrima Diesel have been saying from Day 1 that if it leaves the nozzle as International and Australian standards dictate (and I wish the Federal Government would Prosecute if it wasn't), the fuel will have all the characteristics that it was intended to have. Robert Bosch didn't have these standards to assure him when he built the first diesel fuel system for Rudolf Diesel. He was using vegetable oil (peanut oil was one of them!) and it worked for him. Let's not forget that there never really was diesel fuel then as there is now. Diesels then and today will run on a light oil (if a tad smoky!) without refining.

One of the 'stories' being told about removing the Sulphur is that it reduces the lubricating qualities of Diesel fuel. This is true BUT, as we have always said, it will still have to pass lubricating standards before being labelled Diesel. Even if it needs lubricants adding (All the Oil Companies backs this up)!! Diesel is barely a lubricant at the best of times (WD40 rings a bell) and if it is watered down with other industry 'by-products' its qualities are reduced even further!

The other 'stories' flying around about pump seals leaking is another bit of a con! Even the Oil Companies have a little excuse for it but I don't fully believe that! Yes, composition does have an effect on the seals but we have new and old 4WD rotary pumps leaking, and not all the seals in the pump leak. These O-ring type seals have to cope with a lot of adulterated diesel. Adulterated diesel can contain (and we have seen it contain!!) some highly aggressive (to injection components and seals) substances. This combined with pump fuel operating temperatures running higher than manufacturers could believe (we've tested fuel temps in hot weather up over 80°C coming out of the pump!! Pump manufacturers say to stop testing pump delivery on the Test Bench once fuel temp. goes much over 65°C) leads to (usually the thing leaking) the top cover seal contracting or expanding, twisting and then leaking. As far as the stories of front seals filling sumps with fuel and dirt being sucked in by others is sheer that 'scare tactics.' Certain questionable Diesel Industry bodies saying that 'once the seals are replaced with new ones it won't happen again' is misleading! In fact we dare the 'Diesel Repair Industry' to come clean and stop saying pumps need complete rebuilding, for 99% of the time it is only a number of top cover seals that need replacing! With the fuel samples we are seeing here at *Berrima Diesel* at the moment, anything can happen in the future

with leaks! So make sure that if they are being replaced that they are being replaced with GENUINE seals.

Diesel 4WD owners and potential buyers (if they are still even interested in buying a diesel 4WD), shouldn't read too deeply into the problem, keep their fuel receipts and hammer their Fuel supplier and local Federal Member about the problem!! Barbara has been doing this for a while and has actually, although they would never recognise it (a member of the public bringing it to their attention), achieved discussion and proposals happening in Federal Parliament as we speak. We will keep you updated on that.

Most Oil Companies have officially announced that they are doing a back-flip on the Sulphur debate. They have finally come clean on the fact that sulphur reduction IS NOT causing the leaks but instead it is the imbalance in aromatics in fuel brought on by the reduction of the sulphur. I wonder what next will be blamed.

We still say a mixture of factors. Incorrectly balanced diesel, mixtures of adulterated illegal fuel and/or old age!!!

At the end of the day, if you notice that you have a leaking pump, don't panic and don't worry about getting it towed home from Birdsville. Just get it fixed as soon as you can.