



# Paisley News



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## ***Common Rail engine failures***

There have been an increasing number of engine failures to common rail engines directly contributable to the injector seating washer failing, when the injectors are located under the rocker cover.

When the seating washer fails, it allows carbon to form in the lubricating oil. (see the illustrations) this carbon blocks the oil pick up restricting oil flow to major engine components, (bearings etc)

The first signs of injector seat failure, is white smoke and an engine misfire at first startup cold. When these symptoms become apparent the injectors should be removed and new seals fitted.

It is important to note that some injectors are bar coded into the engine, when removing the injectors they should be numbered to the cylinders they were removed from, and then refitted to the same cylinder at the correct torque.

Some manufactures allow the injector pipes to be reused providing it is refitted to the same injector it is was original fitted to, if new injectors are being fitted new pipes should also be installed.

It is critical that the pipe nuts are torque to their correct tension and are not over tightened. Also the injector pipes should not be bent or deformed in anyway.

Fuel leaks should be checked for visually or by using a piece of tissue paper rolled into a cigar shape and then placed under and around the fittings. There should be no signs of moisture on the paper. Any leaks will necessitate the replacement of the pipe.

### ***Danger DEATH by common rail!!***

**Under no circumstances** should fingers be used to feel for leaks or be placed anywhere near high pressure fittings when the engine is running. Remember these line are carrying fuel at pressures up to **2000 bar!!!**



**D4 washer kit**

**D4 injector washer kits in stock**



**Normal seal condition, very little carbon build up**



**Start of seal failure, note start of carbon build up on nozzle**



**Total seal failure, heavy carbon formation on nozzle and injector body.**