



# ASNU TIPS

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## ASNU and Preserving the GDI Injectors used by VW/Audi, BMW/Bentley/Mini, Ford/Mazda Fiat/Alfa Romeo GM and more

As the Gasoline Direct Injector HDEV1 version used in first generation VW/Audi engines is now 10 years old and no longer used in OE production, this version injector, like the old EVI Port injector when it's no longer required, production of this HDEV1 injector will cease in the near future.



HDEV 1

As, unlike the Port injectors where you could use another injector as a replacement, this is not the case with GDI as they have moved on to the HDEV5 which is a different style completely, so the time is right to invite your customers to have an INJECTOR FILTER UPGRADE and a PREVENTATIVE MAINTENANCE INJECTOR SERVICE.



HDEV 5

As most workshops are aware of the problems with Carbon Build Up in the combustion chamber, that *will* increase with the age of the vehicle if not addressed during a service interval. This Carbon Build Up *is* a consequence of poor fuel atomisation, caused by several contributing factors such as the lack of Maintenance of the Injectors, ECU Fuel Trims, Automatic Stop/ Start Controls, Speed Humps and Fuel Quality as some of the main contributors to the cause.

### *The time has come for some PREVENTATIVE MAINTENANCE.*



There has been an increase in workshops trying to remove the carbon by flushing the fuel system with an aggressive chemical as a means of removing the carbon build-up - a process that in our opinion is a short-term fix but one that can cause long term engine damage, starting with the injectors and their filter baskets.



The missing bits of mesh of the damaged filter baskets are now inside the injector and as the injector has a seat with micron tolerances, there is no way these bits of mesh will pass through the injector.

If you look at the pictures below of the pintle section and the holes that the fuel has to flow through, you will understand that if anything blocks one of these holes it can greatly reduce the flow up to 25% if one hole is blocked. If it reaches the second platform, it could also reduce the flow or even worse get caught in the seating at the bottom of the Pintle shaft and either disrupt the spray pattern, cause a leak or even cause the injector to stick wide open, the consequences of any of these could be costly.



This now creates a problem inside the injector where bits of broken nylon are restricting the injectors' operating functions, for example the fuel delivery quantity, the travel of the pintle and the possibility of these particles causing the injector to leak or cause the injector to stick open and cause hydraulic lock.

ASNU have now produced a filter with a Steel Mesh that will withstand



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any of the aggressive chemical flush programmes for both the HDEV1 and the HDEV5; protecting the injectors' performance and preventing any possible long term engine damage.

To prevent your customers from having failure in the future, advise them to have their injectors serviced now and the existing filter baskets replaced, this will certainly help maintain the value of the vehicle should the owner decide to sell it in the future, you all know the cost of stripping out and replacing with a new set of injectors, if they are available.



HDEV 1 & 5  
New Filters

