**Please read the below and if your happy to proceed sign at the bottom of the page and hand in at reception or email to** **info@ryansautomotive.ie**

Your vehicle is booked in for seized injector removal and we would like to explain the following before we proceed.

Seized injector removal can be quite a tricky process, and the difficulty can depend on many things.

When you try to remove the injectors on some modern common rail diesel engines they can be seized in the cylinder head, this is due to various reasons e.g. carbon build up caused by blow by on the injector washer, corrosion etc.

We have the latest Govoni and Pichler injector removal equipment and can provide this service on a huge range of makes and models.

Many different scenarios can occur when an injector is seized from a straightforward removal with the hydraulic pullers to an injector breaking on removal or the injector clamp bolts breaking off. We are equipped to deal with any of these situations and can almost always remove the injector without cylinder head removal.

Removing seized injectors is a time consuming and very tricky slow process and requires many special tools and techniques.

**The removal of seized injectors can vary significantly depending on several factors, such as**

* The level of corrosion and or carbon that has made the injector become seized in the first place
* The accessibility of the injectors, this varies a lot depending on each make and model and engine type. The accessibility can also depend on which cylinder the injector needs to be removed on
* What components must be removed to access the injectors
* What extra components must be removed if the injector or injector bolt must be drilled out
* Whether someone has already tried to remove the injector with incorrect equipment or incorrect process and damaged the injector

**Warnings:**

* When removing seized injectors there is always a risk that the cylinder head may need to be removed and or the cylinder head may become damaged and may need to be replaced. There is no way of foreseeing this, it’s a bit like going for surgery, there are always associated risks.
There is a very low chance of this happening, but we always prefer to inform the customer of all possibilities.
* If the seized injector has to be removed for other reasons other than replacement, for example the injector has to be removed to replace the injector washer or it has to be removed to get access to other components, in these cases the injector will be reused again but depending how hard it is to remove we cant guarantee that the injector wont be damaged during the removal process and may need to be replaced
* If injector washers have been leaking on a engine for a long time it can cause a tar like build up all over the top of the engine and the injectors, and to remove the tar like build up other components may get damaged like leak off pipes and injector connections etc and may have to be replaced,
Some of the reason for this is the heat caused by the combustion gases leaking past the injector has heated these components and made them brittle and then when you try to remove them in a normal manner they break,
* The injector hold down bolts can also be seized and shear off when we try to remove them and then they will have to be drilled out,
* If the cylinder head must be removed or replaced this will be at the vehicle owners cost as we Ryans Automotive will have done all in our power to try remove the injectors without dismantling the engine (There is a very low chance of this happening, but we always prefer to inform the customer of all possibilities)

**Pricing:**

We wanted to explain why we are unable to provide a fixed quote for this service in advance.

* As you can understand from the above explanations and warnings it is impossible to give a quotation for this type of work due to the unforeseen nature of seized injector removal.
* We strive to provide the most accurate and fair pricing possible, but due to the unpredictable nature of this task, it is difficult to provide a fixed quote without first assessing the situation in person. And even after inspecting the vehicle we still can’t know exactly how long it will take until we start trying to remove the injectors.
* If you would like to proceed, we can schedule an appointment for a thorough inspection, at which point we can assess the condition of the injectors and provide a more accurate estimate for the work involved.

**As a rough guide the below prices can be used**

* Seized injector removal per cylinder (this is a fixed charge for the use of the special tools and replacement parts for these tool sets) €35 + vat
* Our hourly rate for injector removal is €69 + vat
* If the injectors need to be replaced the cost varies depending on the make and model, but as a rough guide standard injector price range from €170 to €450 + vat each. Due to our insurance, we cannot fit customer supplied parts
* If we were to use an average time it takes to remove seized injectors on the most popular vehicles, we have done over the years the time would be around 1.5 to 3.5 hours per injector (note this time must only be used as a guide)(in some cases this can take longer than 3.5)
* And as we have explained above that in some very rare cases the cylinder head may have to be removed or replaced and if this happens, we will be able to give a quote for this before proceeding (There is a very low chance of this happening, but we always prefer to inform the customer of all possibilities)

Thank you for your understanding, and please feel free to reach out if you have any further questions.

**Sign here if you wish to proceed: ………………………………….. Date:…………………..**

**Our email;** **info@ryansautomotive.ie**