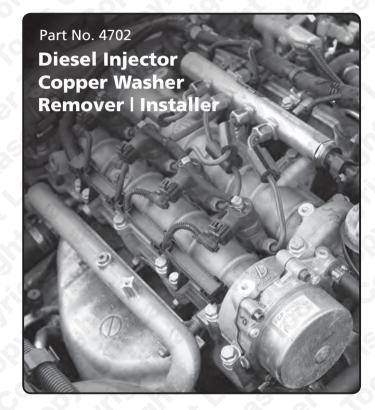
## **LASER**°







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## Guarantee

If this product fails through faulty materials or workmanship, contact our service department direct on: +44 (0) 1926 818186. Normal wear and tear are excluded as are consumable items and abuse.

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## **Diesel Injector Copper Washer Remover | Installer**



Injector blow-by can be the cause of many problems on Common Rail Diesel engines including:

- Problems with starting
- Uneven tick over
- Lumpy running
- Hesitation on acceleration
- Smoke on tick over or acceleration
- Black tar around the injectors
- Chuffing sound from the engine when running
- These problems will affect the ECU and can cause over fuelling of the cylinder head.

Even after the diesel injector is removed, cleaned and a new copper washer fitted it may not always rectify the problem.

Often the seat of the injector has been damaged due to constant erosion from escaping combustion gases.

The only way to reface the seat is gently reface the seat in the cylinder head.

To do this the Copper Washer must be removed.

This Copper Washer Removal Tool is used in conjunction with the Laser Diesel Injector Cutter Tool Set (Part No 4597)

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## Instructions for use:

- To remove the copper seal from the engine the 4702 must first have the
  protrusion of the split collet set according to the thickness of the seal to be
  removed.
- To set the collet, first ensure the large knurled nut on the top of the tool is lose enough to allow the collet to be turned in the tool body. The split collet protrusion can now be adjusted by winding it into or out of the body.

TIP: use a new seal to set the protrusion. Set the protrusion so the collet just sits proud of the seal as shown.



- Remove the seal used to set the protrusion from the tool and insert the tool collet, end down first into the injector tube.
- Once the collet is located into the centre of the fixed seal tighten the knurled nut so the collet grips the seal and pulls the washer out.
- Remove the old seal from the tool by loosening the knurled nut and using your fingers release the collet from the seal.
- 6. Ensure the protrusion of the collet is still set and repeat for all injector seals

Allow the engine to tick over gently when first started.

To check for blow-by, make a solution of dish washer soap and water and squirt this around the injector when the engine is ticking over.

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