

LASER®

Instructions



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Introduction

Designed to allow removal of Volkswagen Group petrol injectors including the new style direct injection petrol injectors used on TFSi & FSi engines. Supplied complete with the seal calibration tools required when fitting new Teflon seals.

- Direct injection petrol injector removal & seal replacement tool set.
- This updated tool kit assists the removal of the high pressure petrol injectors used on direct injection VAG engines.
- Equivalent to OEM T10133C, T10133/1, T10133/20, T10133/21.
- Applications across the VW Group vehicle range including Audi, Seat, Skoda & Volkswagen petrol engines.
- Use in accordance with OEM instructions.

Components



Ref.	OEM Ref.	Description
A	T10133/1	Twin Jaw Injector Puller Adaptor
B	T10133/2A	Injector Puller Adaptor
C	T10133/3	Slide Hammer
D	T10133/4	Injector Aperture Cleaning Brush
E	T10133/5	Injector Seal Assembly Cone
F	T10133/6	Injector Seal Assembly Sleeve
G	T10133/7	Injector Seal Calibration Sleeve
H	T10133/8	Injector Seal Calibration Sleeve
I	T10133/9	Injector Installer
J	T10133/10	Injector Puller Adaptor
K	T10133/11	Injector Seal Fitting Control Ring
L	T10133/12	Retaining Plate
M	T10133/13	Tapered Tool (Fuel Rail Seal Spacer Ring Fitting Tool)
N	T10133/14	Calibration Sleeve (Use With M)
O	T10133/15	Injector Puller Adaptor
P	T10133/16A	Injector Removal Tool (Threaded Puller)
Q	T10133/17	Calibration Sleeve
R	T10133/18A	Injector Puller Adaptor
S	T10133/19	Injector Puller Adaptor (Direct Injection)
T	T10133/20	Injector Puller Adaptor

Instructions

The information given below is for reference only. Laser Tools recommends the use of Manufacturer data. Laser Tools cannot be held responsible for damage to the vehicle or personnel whilst using this tool kit.

Instructions for use:

NOTE: Due to the large number of injector types covered by this kit it is not possible to give full instruction on every injector type. The following is for guidance only as an example of use. For full instructions please refer to the vehicle manufacturers vehicle specific instructions.



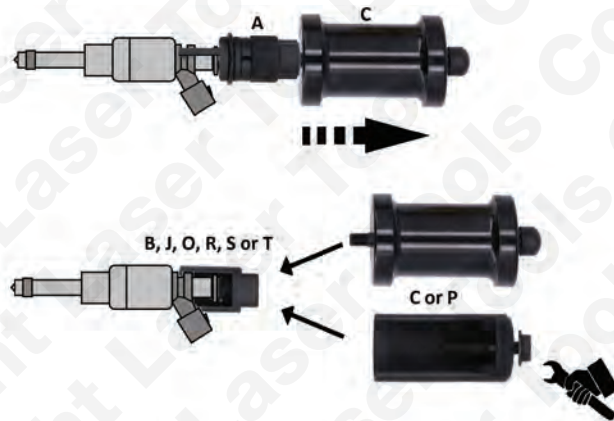
Instructions

This tool kit assists the removal and installation of the high pressure petrol injectors mounted in the cylinder head or inlet manifold. Tools are also included for the installation of the injector seals both at the top and bottom of the injector.

INJECTOR REMOVAL:

- Remove the manifold, fuel rail and injector fixings.
- Remove the injector rail support ring from the injector.
- Attach the appropriate injector puller adaptor (A, B, J, O, R, S or T) as identified by OEM instructions. See figure 1 for example.
- Attach the slide hammer (C) or threaded injector puller (P) as required.
- Extract the injector.

Fig 1:



Before fitting the injectors ensure the injector aperture clean and clear of any debris. Use cleaning brush (D) to clean the injector aperture.

Instructions

INJECTOR SEAL REPLACEMENT:

Fuel rail seal and spacer ring (where fitted):

- Replacement of the fuel rail seal is done by hand
- Replacement of the rail retaining spring and support ring may require the use of L, M, N & Q depending on the specific injector used. See vehicle manufacturer instructions for correct use.

Injector to manifold/combustion chamber seal replacement:

NOTE 1: Some injector may require the use of seal fitting control ring (K), always consult the manufacturers fitting instructions.

NOTE 2: The Teflon seal must be carefully removed using a sharp blade (razor blade) being careful not to scratch or damage the injector.

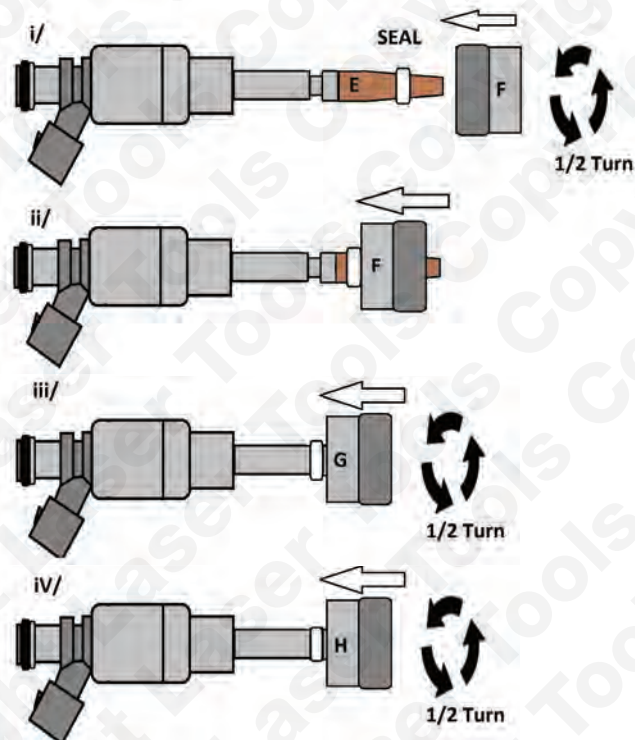
WARNING: do not apply grease or oil to the seal at any stage during the fitting of the seal or the assembled injector in to the engine.

Basic Instruction:

- Place the seal guide cone (E) on the end of the injector and push the seal on to the injector using the assembly sleeve (F).
- Once the seal is seated in the seal groove it must be "compressed" into place using the injector seal calibration sleeves (G & H). While pushing the calibration tools over the seal turn them ½ a turn. DO NOT USE LUBRICANT. See figure 2.

Instructions

Fig 2:



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If applicable, the applications database and any instructional information provided has been designed to offer general guidance for a particular tool's use and while all attention is given to the accuracy of the data no project should be attempted without referring first to the manufacturer's technical documentation (workshop or instruction manual) or the use of a recognised authority such as Autodata.

It is our policy to continually improve our products and thus we reserve the right to alter specifications and components without prior notice. It is the responsibility of the user to ensure the suitability of the tools and information prior to their use.



Safety First. Be Protected.



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