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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.

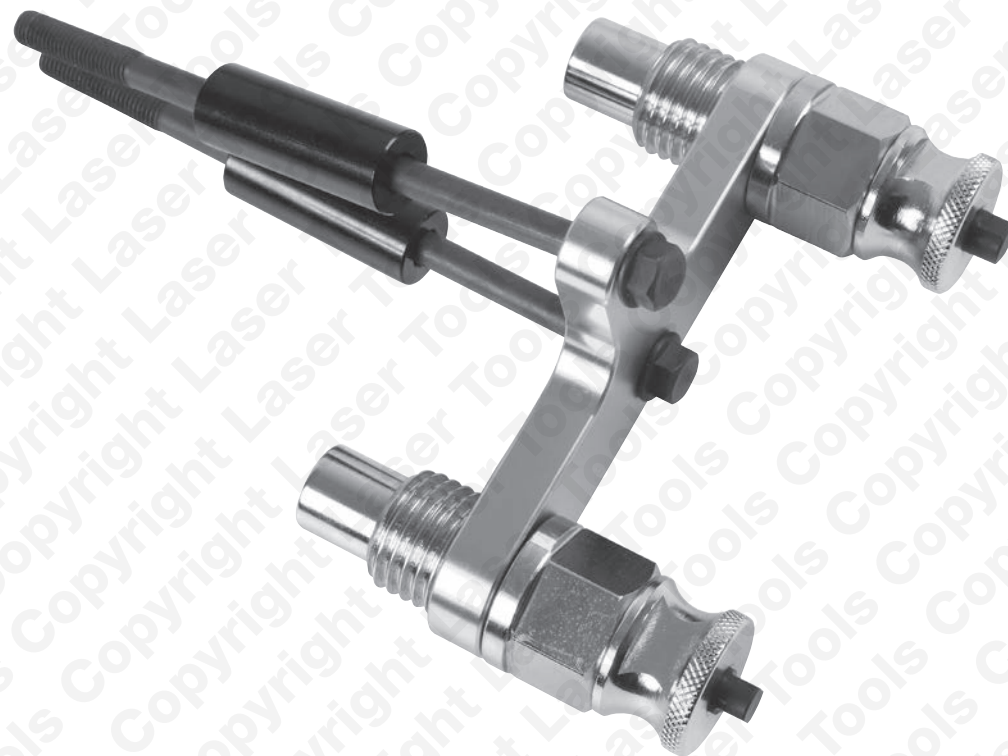
Part No. 7082

LASER[®]

Fuel Injector Removal/Installer Tool

BMW N20 | N26 | N55

Instructions



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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.



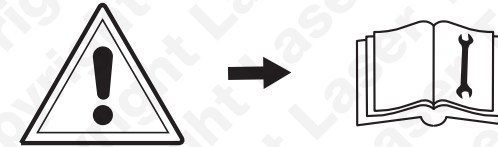
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Introduction

The Laser 7082 is a special tool designed to remove (stuck injectors) and install injectors in BMW petrol-engined models with N20, N26 and N55 engine codes.
(OEM tool reference: 13 0 320).



As the different engine configurations have different methods of gaining access to, and disconnecting, fuel lines, wiring, etc, these instructions are a guide only — refer to the manufacturer's service documentation before attempting injector removal.



PRECAUTIONS:

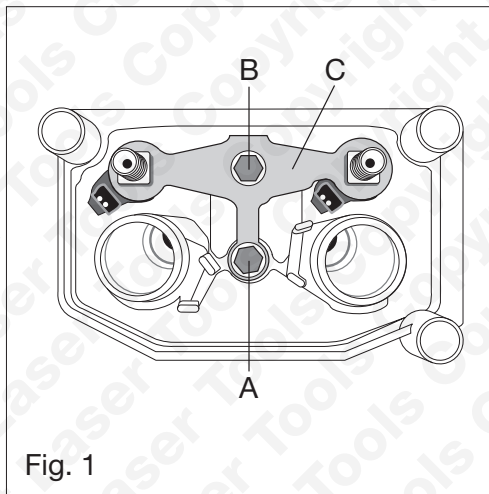
- Refer to manufacturer's guidelines and recommendations:
- Injectors may be pulled out with a maximum tensile force of **2000 N** and twisted to a maximum torsional movement of **6 Nm**. If these values are exceeded the injector will be damaged and must be replaced.
- When reassembling, it is essential to adhere to screwing sequences and manufacturer's specified tightening torques. Refer to the manufacturer's service documentation.
- Work to conditions of absolute cleanliness when carrying out repair work on a high pressure fuel system.
- Do not allow any dirt particles or other contamination to get into the system.
- Remove all traces of dirt or contamination before removing fuel lines or other components.
- Use only lint-free cloths (risk of contamination).
- Seal all fuel system openings with protective plugs or caps.

Instructions

Injector removal:

As the different engine configurations have different methods of gaining access to, and disconnecting, fuel lines, wiring, etc, refer to the manufacturer's service documentation before attempting injector removal.

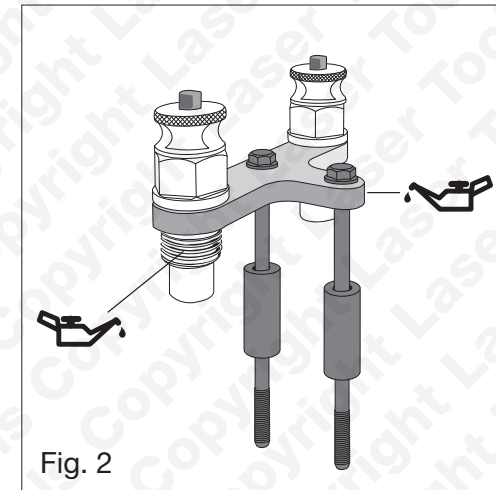
Disconnect battery (remove negative terminal). Remove engine cover(s), ignition coils, wiring connectors on injectors, earth (ground) wires, etc. Refer to model-specific manufacturer's instructions for removing the injector fuel lines.



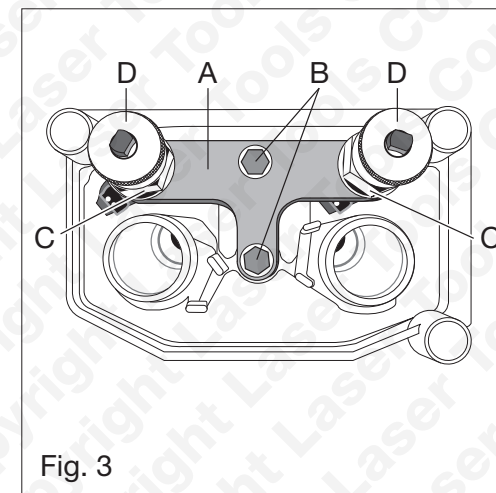
1. Refer to Figure 1: First release set screw **A**; then release set screw **B** (hold-down clamp **C** may tilt if screw **B** is released first).
2. Remove the hold-down clamp **C**.
3. Remove injectors by pulling up out of cylinder head.
4. If more than one injector is removed, mark injectors so that they can be reinstalled in their original cylinder location.

Instructions

Procedure for removal of stuck injector(s):

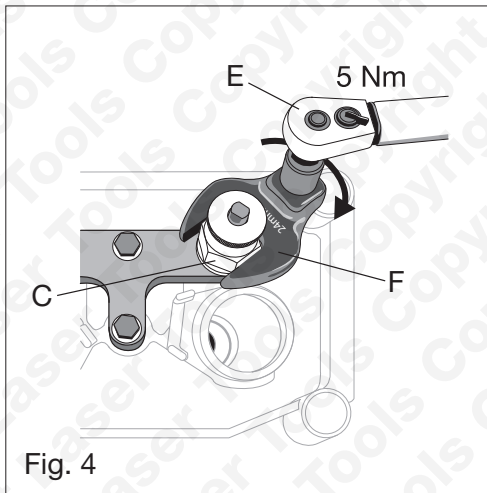


1. Use the Laser 7082 tool to remove injectors that are stuck.
2. Refer to Figure 2: lightly oil the two pull-out threads on the tool.
3. NOTE: Pull-out thread is a left-hand thread.



Instructions

- Refer to Figure 3: Fit the Laser 7082 tool (A) over the pair of injectors. Secure with the bolts B (initially just screw in a few threads).
- Screw in the pull-out threads C (left-hand thread) until it is possible to screw the injector sleeves D onto the top of the injectors. Tighten down the injector sleeves D onto the injectors.
- Tighten down the tool securing bolts B — refer to manufacturer's service documentation for model-specific tightening torque for these bolts.

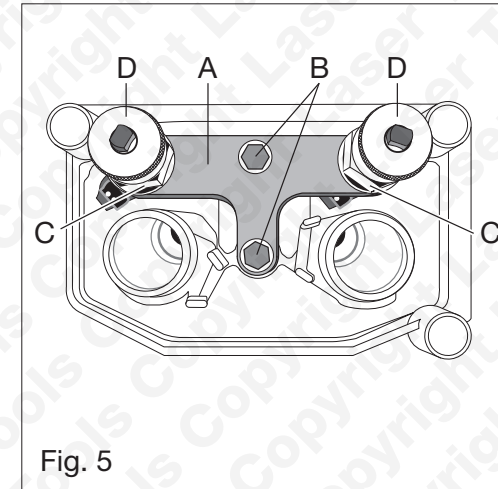


- Refer to Figure 4: Set torque wrench E to 5 Nm clockwise rotation.
- With the torque wrench, use a 24mm crow's foot wrench attachment (F) on the hexagon head of the pull-out thread (C).
- NOTE: the torque figure is critical — if the torque wrench clicks when the injector is being pulled out, the **injector must be replaced**.
- Turn the torque wrench in a clockwise direction until the injector is pulled out.
- If you intend to re-use the injector, fit protective caps to the injector tip and the top fuel line connection.

Instructions

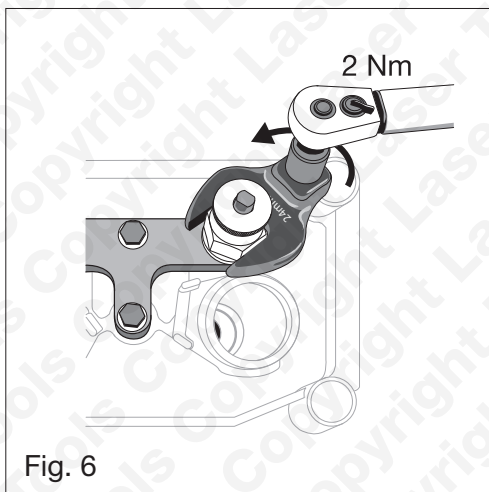
Injector installation:

NOTE: Refer to manufacturer's service documentation for injector installation procedures regarding reusing existing injector(s), or fitting new injector(s).

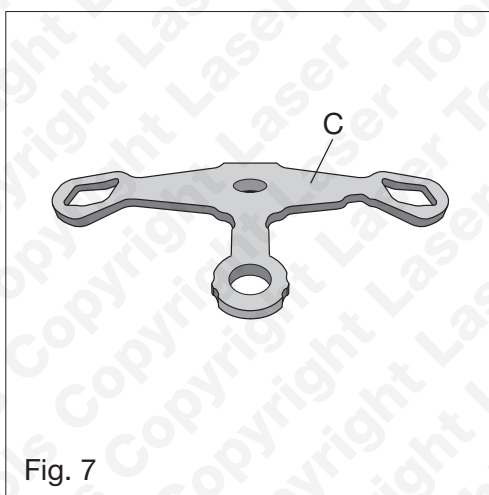


- Refer to Figure 5: Fit the Laser 7082 tool (A) over the pair of injectors. Secure with the bolts B (initially just screw in a few threads).
- Screw in the pull-out threads C (left-hand thread) until it is possible to screw the injector sleeves D onto the top of the injectors. Tighten down the injector sleeves D onto the injectors.
- Tighten down the tool securing bolts B — refer to manufacturer's service documentation for model-specific tightening torque for these bolts.

Instructions

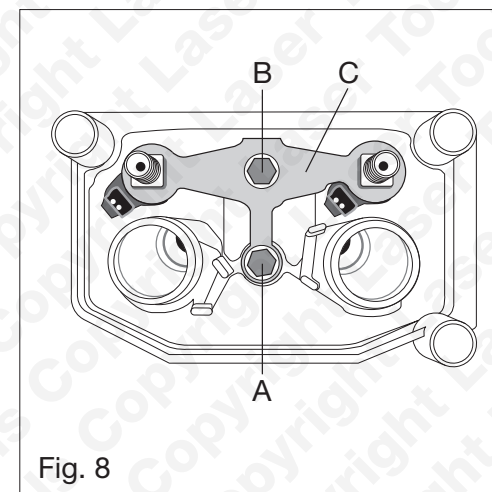


4. Refer to Figure 6: Set torque wrench to **2 Nm** anti-clockwise rotation.
5. With the torque wrench, use a 24mm crows foot wrench attachment on the hexagon head of the pull-out thread.
6. Turn the torque wrench in an anti-clockwise direction until the **2 Nm** figure is reached.
7. Then remove the Laser 7082 tool.



Instructions

8. Install hold-down clamp (**C**) with clamp curvature as shown in Figure 7.



9. Refer to Figure 8: Hand-tighten hold-down clamp set screw **B**. Insert set screw **A** by just a few threads (hold-down clamp **C** may tilt if screw **A** is tightened first).
10. Fit the fuel lines to the injectors — refer to manufacturer's service documentation for model-specific tightening torque for these fuel line connections.
11. Now tighten hold-down clamp set screw **B**, followed by set screw **A** — refer to manufacturer's service documentation for model-specific tightening torque for these set screws.

Refer to the manufacturer's service documentation for final reassembly of previously removed components, and connection to diagnostic system for injector quantity compensation procedure.

Safety Warnings - please read

- Wear eye and hand protection when using this tool kit.
- Always carefully clean the tool components after each use.
- Keep the tool components safe and tidy in the supplied case.
- Do not use the kit for any purpose other than for which it is designed.



Safety First. Be Protected.