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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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Guarantee

This item contains consumable elements that are **NOT** covered by the Tool Connection Guarantee. For spares contact our service department direct on: **+44 (0) 1926 818186**.

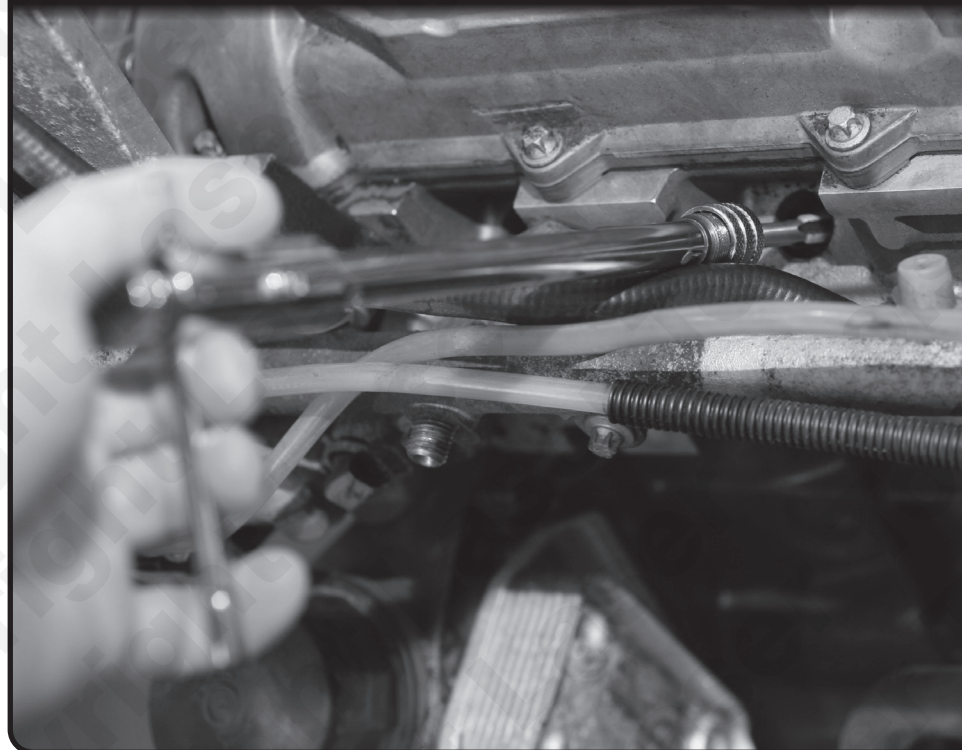
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LASER[®]

Part No. 5205

Glow Plug Removal Set

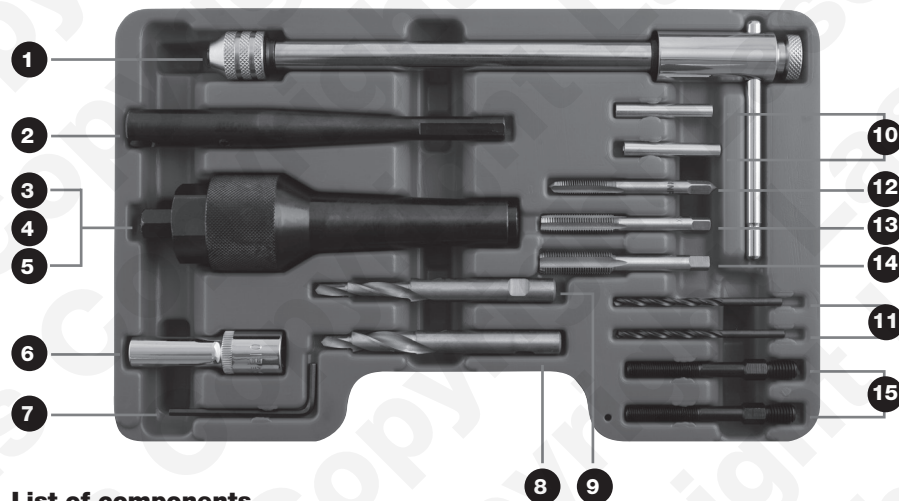
For removing damaged and broken glow plugs from cylinder heads, specifically where they have sheared off just under the hex flush, with the cylinder head.



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Glow Plug Removal Set

Suitable for glow plugs with either a M8 x 1.0 thread or M10 x 1.0 thread. Comprehensive set includes all necessary adaptors, centring and thread cleaning tools to safely remove the damaged glow plug without damaging the cylinder head.



List of components referring to picture above:

- | | |
|--|--|
| 1: Ratchet T-bar | 9: Dual-size high-tensile step drill M10 |
| 2: Drill holding adaptor | 10: Pilot drill centring sleeves |
| 3: Puller outer housing | 11: Pilot drills 3.5mm |
| 4: Force screw | 12: Tap: 1/4" |
| 5: Force nut | 13: Tap: M8 |
| 6: Top connection removal tool star socket | 14: Tap: M10 |
| 7: Hex key | 15: Puller adaptor mandrels |
| 8: Dual-size high-tensile step drill M8 | |

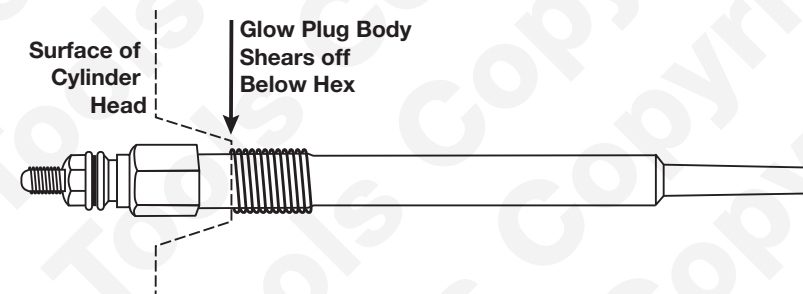
Before you start:

- We strongly recommend that the cylinder head is removed from the engine before work is commenced.
- If cylinder head is to be left in situ, then remove the relevant injector and connect an air-line via a suitable adaptor to ensure metal swarf and dirt cannot enter the combustion chamber.
- Maintain tools in a good and clean condition.
- Keep well lubricated. Lubricate thread cutting taps with thick machine oil or grease.
- Wear correct eye protection, particularly when cleaning any swarf away from engine.
- When finished, account for all tools and parts being used. Do not leave them in or near the engine. Return all parts to the case and store in a safe, dry place.

Precautions:

- Wear suitable eye protection.
- DO NOT USE AIR TOOLS WITH THIS PRODUCT.

Instructions



1. Push-fit Top Connection Removal Tool star socket (6) onto top of glow plug. It may need to be tapped on gently with a hammer.
2. Using a 3/8" ratchet handle, turn clockwise to break off the top part of the glow plug.

Note: When top portion of glow plug breaks, it may also shear off the inner glow plug electrode. If the inner electrode does not break, it can be withdrawn completely from the glow plug body. In this case go straight to point 5.

If the inner electrode does shear off, then continue to point 3:

3. Position Centring Sleeve (10) onto remains of glow plug. It may need to be tapped on.
4. Using 3.5mm pilot drill (11) drill a pilot hole into remains of connector post / electrode. Drill down at least 15mm past uppermost part of the glow plug body.
5. Fit either M8 (8) or M10 (9) dual-size stepped drill (depending on size of glow plug) to the drill holding adaptor (2). Secure stepped drill into adaptor by tightening the grub screw with hex key (7) provided, ensuring the grub screw acts on the flat on the shank of the stepped drill. Fit the drill holding adaptor to chuck of power drill and drill out remains of connector post / electrode and threaded portion of glow plug body.

Care Point:

The dual-size step drill allows removal of the remains of the connector post / electrode while also removing the threaded portion of the glow plug body. Take care to keep the drill straight so that the threads in the cylinder head are not damaged. Drill down again at least 15mm to remove all of threaded portion.

6. Take either M8 (13) or M10 (14) tap (depending on size of glow plug) and fit to Ratchet T-Bar provided (1). Clean out /

recut the threaded portion of cylinder head. Coat the tap in grease to lubricate and also contain the swarf produced.

7. Take the 1/4" tap and fit to Ratchet T-Bar provided (1). Cut a thread in the remaining glow plug body. Again coat the tap in grease to lubricate and also contain the swarf produced. Cut a full 15mm of thread.

The remains of the glow plug body can now be removed:

8. Screw a puller adaptor mandrel (15) into the 1/4" thread that has just been cut.
9. Screw on the force screw (4) to the puller adaptor mandrel.
10. Fit the puller outer housing (3) over the force screw.
11. Screw on the force nut (5) with raised collar facing inwards.
12. Holding the force screw with a 12mm spanner or socket, wind the force nut down (30mm spanner). This action will draw out the remains of the glow plug body free from the cylinder head.
13. Before fitting the new glow plug, thoroughly clean inside the aperture with a wire brush or similar. Ensure that all swarf, dirt and debris is removed from aperture, glow plug thread and combustion chamber before fitting new glow plug.

Note: Due to the nature of the task and tools, the three taps, two pilot drill centring sleeves, two pilot drills, two dual-size step drills and two puller adaptor mandrels are regarded as consumable and not therefore covered by the Tool Connection guarantee. (Replacement parts are available.)