

SAFETY NOTICE

To understand the functioning of the tools, is it necessary to read the manual first!

- > Read these instructions before assembling, during installation and throughout use and in the proper sequence
- > Always refer to the OEM manufacturer's instructions and service manuals for the latest data and to maintain the correct sequence
- > These work instructions and the recommended tools are meant to serve as aides only and are by no means a guarantee for certain results.
- > This tool kit is a special collection and it has been tested and used successfully on several occasions. It is of the utmost importance to maintain the correct procedure as per the instructions
- > The use of the tools should only be carried out by qualified personnel!



ATTENTION

Special caution



CORRECT



LIGHT BULB

Hint or recommendation



WRONG



SAFETY GOGGLES

Wearing safety goggles
necessary

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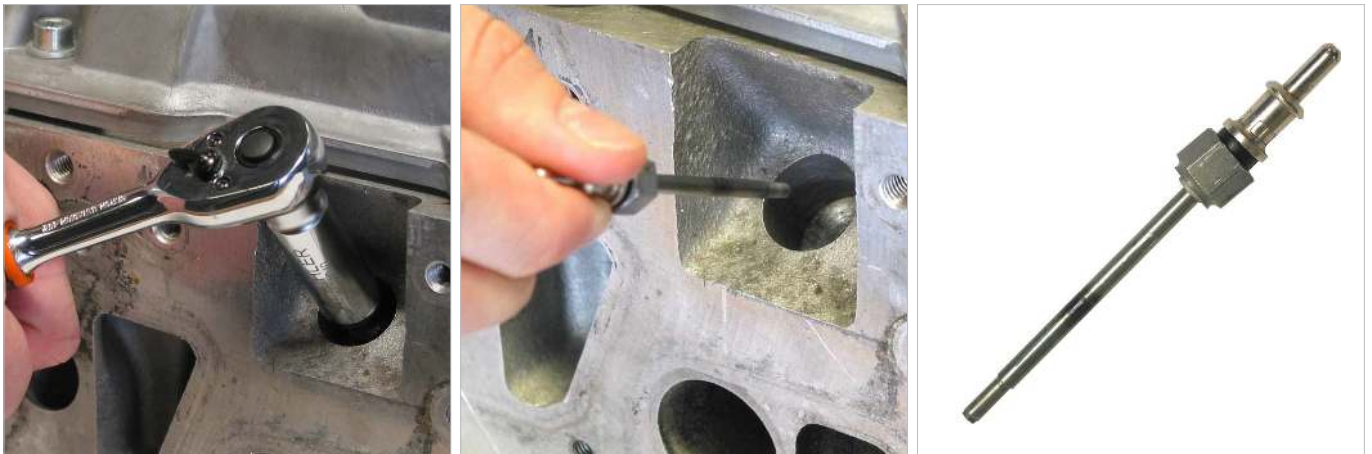


Nr.	PART.-NR.	Description	6041740
1	1131040	Stud puller custom-made 4.0 mm	1
2	60417355	Step Drill Ø 9.0 / Ø 5.4mm	1
3	9041736	Tool Holder for the Step Drill	1
4	6041749	Drill Sleeve (Ø 3.5 mm)	1
5	6041738	Tool Holder with Ratchet „KEEPER“ (long)	1
6	6041751	Drill Sleeve (Ø2.6mm)	1
7	6041743	Tap UNF 1/4" DIN 351	1
8	6041745	Drill and Extraction Sleeve	1
9	6176478	Axial Ball Bearing 51104	1
10	6176479	Bearing Adapter (for Bearing 51104)	1
11	6041746	Extraction Insert UNF 1/4", exchangeable for Extraction Spindle M16x1.5	2
12	6041748	Extraction Spindle M16x1.5	1
13	60417476	Nut M16x1.5 DIN 934	1
14	6041734	Tap M10x1 for Blind Holes	1

In preparation the glow plugs must be freed of all obstructions to the repair and all attachments e.g. the cable loom across the valve cover, high pressure pipes from the rail to the injector etc. have to be disassembled.

1. REMOVING THE CENTER ELECTRODE

Place the Stud Puller 4.0 mm **1131040** for smooth connectors **1131035** (optional) for threaded connectors on the Center Electrode. With a 1/4" ratchet break off the Center Electrode by turning it several times clockwise and remove the freed parts.



If the electrode does not break off at the bottom as desired, but directly behind the connector cap you must use Stud Puller 2.5mm **1131025** (Stud Puller 3.5mm **1131035** (optional) dependent upon the type of glow plug, again break off the Center Electrode



If this is not possible or if the Center Electrode does not break off at the bottom, in order to be able to properly drill out the Center Electrode, it must be immobilized by hammering a Drill Sleeve **6041749** or **6041751** into the glow plug.



2. DRILLING PROCEDURE

1. pass:

Place the Drill and Extraction Sleeve **6041745** in the bore. Clamp the Step Drill **6041735** in the Tool Holder **9041736** and lubricate them with spray oil. Drill until the larger diameter ($\varnothing 9$) of the Step Drill has drilled into the glow plug for about 4 - 5 mm. In the case that a Drill Sleeve has been hammered in, lift the drill frequently for better chip removal.

Remove the Drill Sleeve and remove the chips by compressed air, a vacuum cleaner and/or a magnet.



TIP

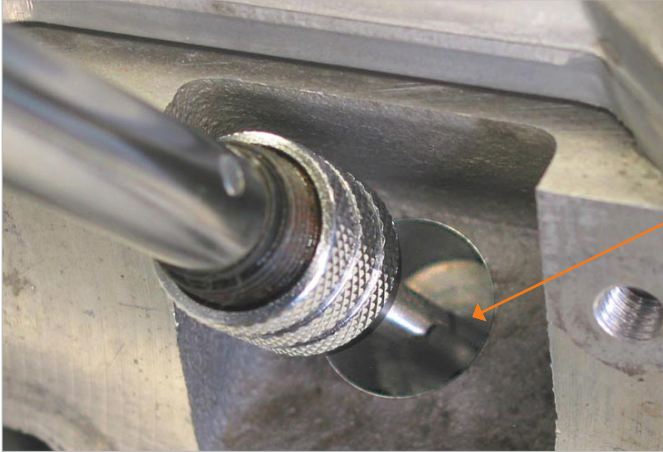
Good results can be obtained, by putting a funnel on the nozzle of the vacuum cleaner.



3. TAPPING PROCEDURE

1. pass:

Use the Tap UNF 1/4" **6041743** in the Ratchet "KEEPER" **6041738** to cut a screw thread as far as it goes into the glow plug.



ATTENTION

- Lubricate well
- tap carefully

4. DRILLING PROCEDURE

2. pass:

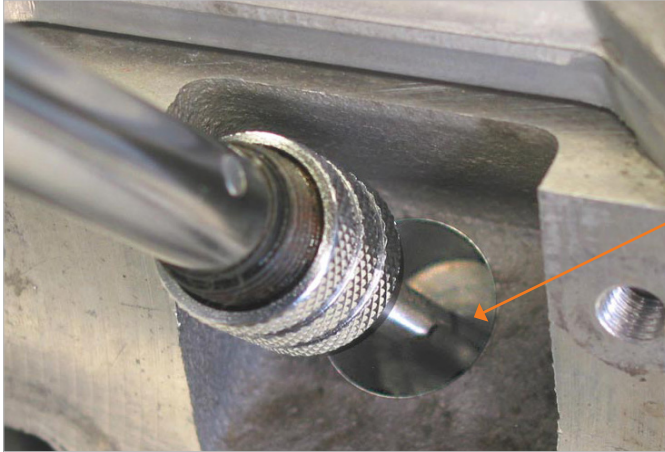
Place the Drill Sleeve **6041745** again in the bore and with the Step Drill **6041735** clamped in the Tool Holder **9041736** drill until the stop of the Tool Holder. Do not forget to lubricate sufficiently! In the case that a Drill Sleeve has been hammered in, lift the drill frequently for better chip removal. Check to assure that the proper depth has been drilled.



5. TAPPING PROCEDURE

2. pass:

Use the Tap UNF 1/4" **6041743** in the Ratchet "KEEPER" **6041738** to cut a screw thread as far as it goes in the glow plug.



ATTENTION

- Lubricate well
- tap carefully

6. EXTRACTION PROCEDURE

Screw with Extraction Insert UNF 1/4" **6041746** on Extraction Spindle M16x1.5 **6041748** into the newly cut screw thread of the glow plug. Place the Drill Sleeve **6041745**, the Bearing **6176478**, Bearing Adapter **6176479** and screw on the Nut M16 x 1.5 **61717476**. Now extract the glow plug.



ATTENTION

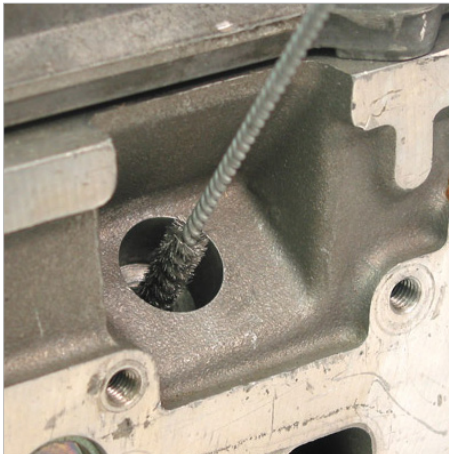
During extraction it is most important to prevent the spindle from turning, be sure to use a wrench on the hex to prevent rotation.

With increased energy expenditure to the nut it is advisable to spray first the remains of the glow plug with rust remover before increase tension again. Additionally it is possible to tap at the hexagonl with a hammer to loosen the glow plug.



7. CLEANING AND CLOSING

Clean the now empty glow plug shaft first with the Pipe Brush Ø9.0mm **6049029** (optional), then with the Pipe Brush Ø5.3mm **6049025** (optional) of soot and deposits. Shorten the remainder of the glow plug at the drilled out end by approx. 10mm. Tap the UNF ¼" thread and clean the shank with a file or an emery cloth. Drop this part into the cleaned glow plug shaft to be used as a plug during cleaning.



8. RECUTTING OF THE THREAD IN THE CYLINDER HEAD

Wet the threads of Tap M10x1 **6041734** and with the Ratchet „KEEPER“ **6041738** clean the thread in the cylinder head. Remove the plug with a magnet or a spindle (if needed; start the car shortly). And mount the new glow plug with the proper torque.



TIP

In case the thread M10x1 in the cylinder head is damaged, it can be renewed with the thread repair set **6041785**.

NOTES

NOTES



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