The intended purpose of these tools is for repairing, servicing and maintaining. Prager & Co. KG does not accept any liability for incorrect use of any of these products. Prager & Co. KG cannot be held responsible for any damage to personnel, property or equipment when using these tools.

No. 2060
Universal Glow Plug Extraction Drill Set for M8, M9, M10, M12

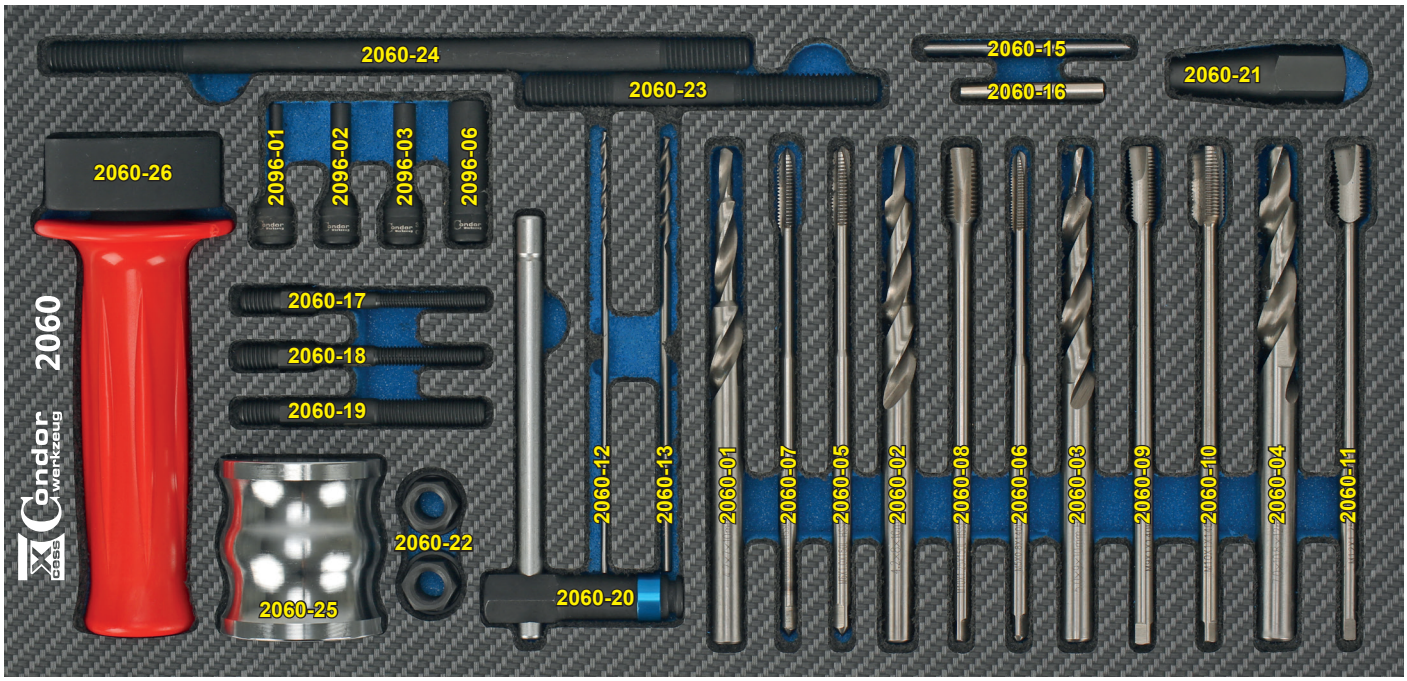
- to drill out tight or broken glow plugs
- for user-friendly, quick and cost-efficient repair jobs
- also suitable for ceramic glow plugs
- to drill out the glow plug, remove residues and cut new thread
- drills, sleeves, dies and extraction bolts specially designed for each glow plug sizes
- drills and dies in HSS-Cobalt steel quality - for extra long durability
- specialist sockets for removing glow plug electrode
- striking weight for removing residues, with 2 sliding bars to select from depending on available work space
- universal set, suitable for almost all car manufacturers



Art. No.	Description	Glow plug
2060-26	**Handle** 143x50mm	universal
2060-25	**Striking Weight** 555g, 50x48mm	universal
2060-23	**Sliding Bar** 100mm, M10x1,5	universal
2060-24	**Sliding Bar** 200mm, M10x1,5	universal
2096-01	**Step Drill** 2,6mm	universal
2096-02	**Step Drill** 3,2mm	universal
2096-03	**Step Drill** 3,5mm	universal
2096-06	**Step Drill** 8,25mm	universal
2060-17	**Extraction Bolt** 70mm, M5x0,8 and M8x1,25	M8, M9
2060-18	**Extraction Bolt** 70mm, M6x1 and M8x1,25	M10
2060-19	**Extraction Bolt** 70mm, M8x1 and M8x1,25	M12
2060-22	**Lock Nut, 2pcs.** Hex, 14mm sq. drive	universal
2060-20	**Tap Wrench** 1/4" sq. drive	universal
2060-15	**Pilot Sleeve, 2 pcs.** 4,5x60mm, bore 2,5mm	M8, M9
2060-16	**Pilot Sleeve, 2 pcs.** 5,4x40mm, bore 3,6mm	M10, M12

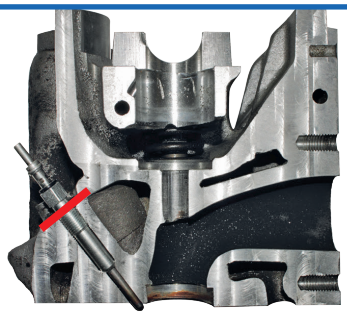
Art. No.	Description	Glow plug
2060-21	**Extraction Bolt Adapter** M8x1,25 auf M10x1,5	universal
2060-12	**Drill, HSS Co** 2,5mm, length 125mm	M8, M9
2060-13	**Drill,, HSS Co** 3,5mm, length 125mm	M10, M12
2060-01	**Step Drill, HSS Co** 4,2x7x10mm, length 140mm	M8
2060-02	**Step Drill, HSS Co** 4,2x8x10mm, length 140mm	M9
2060-03	**Step Drill, HSS Co** 5x9x10mm, length 140mm	M10
2060-04	**Stufenbohrer, HSS Co** 7x10,8x12mm, length 140mm	M12
2060-05	**Thread Cutter, HSS Co** M5x0,8, length 140mm	M8, M9
2060-06	**Thread Cutter, HSS Co** M6x1, length 140mm	M10
2060-07	**Thread Cutter, HSS Co** M8x1, length 140mm	M8, M12
2060-08	**Thread Cutter, HSS Co** M9x1, length 140mm	M9
2060-09	**Thread Cutter, HSS Co** M10x1, length 140mm	M10
2060-10	**Thread Cutter, HSS Co** M10x1,25, length 140mm	M10
2060-11	**Thread Cutter, HSS Co** M12x1,25, length 140mm	M12

- Remove all tools before starting engine.
- No responsibility is taken for the correctness of this data.
- Always observe and follow all safety notes, technical documentations, specifications and instructions of the vehicle manufacturer.



Drill out / extract broken glow plugs

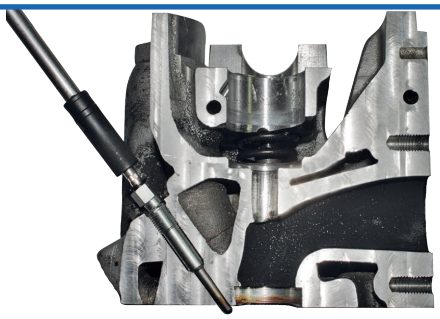
1.



Broken glow plug

Cross section displays disconnected hex from glow plug
(red line shows breaking point).

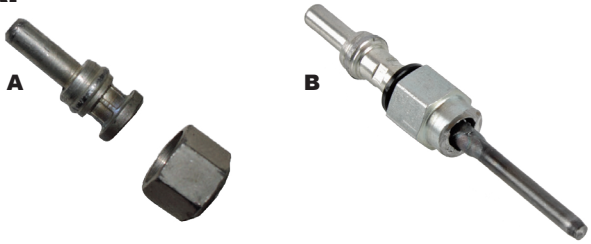
2.



Removal of fraction

Apply twist socket (2096-06) to remove central electrode.
Note that different types of fractions can occur.

2A.

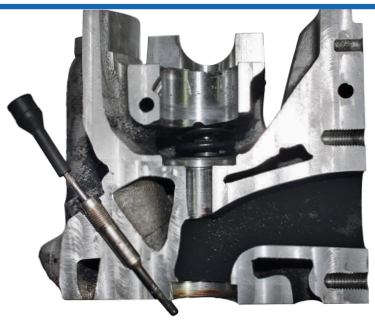


Type A
Removed parts: Cap piece and hex drive.
Go to step 3.

Type B
Removed parts:
Cap piece with central electrode and hex drive.
Go to step 5.

If central electrode is still visible, then go to step 4.

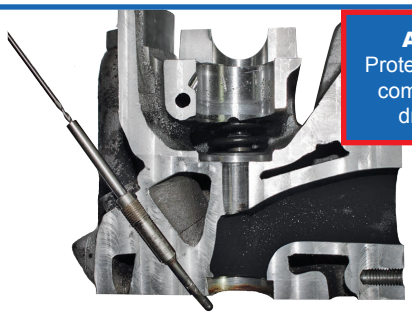
3.



Removal of central electrode

Apply twist socket to remove central electrode
(2096-01, 2096-02 or 2096-03).

4.



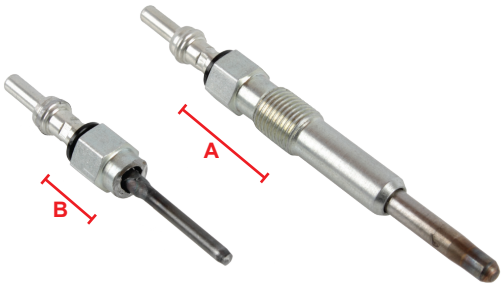
Attention:
Protect open engine components from drilling chips.

Drill out central electrode

Please make sure that the central electrode has been removed deep enough to apply step 5.
Select suitable pilot sleeve and drill
(2060-15 + 2060-12 or 2060-16 + 2060-13).

Apply bore and cutting oil.

5.



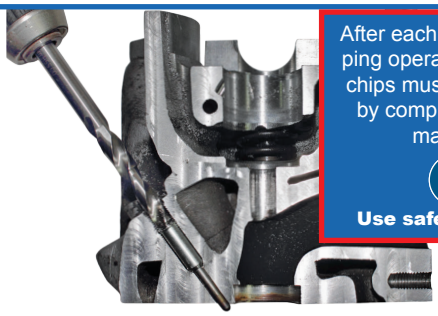
Determine drilling depth

A
total length of identical glow plug

B
length of removed parts

A - B = drilling depth (add approx. 2 mm)

6.



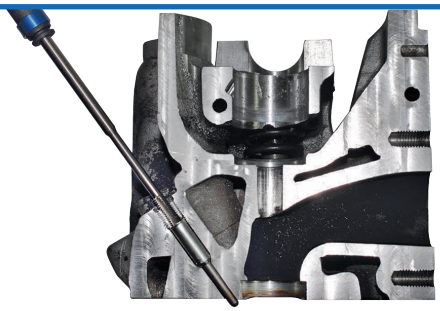
After each drilling or tapping operation the metal chips must be removed by compressed air or magnets.

Use safety glasses!

Drill out glow plug
Select appropriate step drill and mark drilling depth on drill by using a marker pen, tape or depth stop.
Select step drill:
M8 glow plug -> step drill 4.2x7x10 mm (2060-01)
M9 glow plug -> step drill 4.2x8x10 mm (2060-02)
M10 glow plug -> step drill 5x9x10 mm (2060-03)
M12 glow plug -> step drill 7x10.8x12 mm (2060-04)

Apply bore and cutting oil.

7.



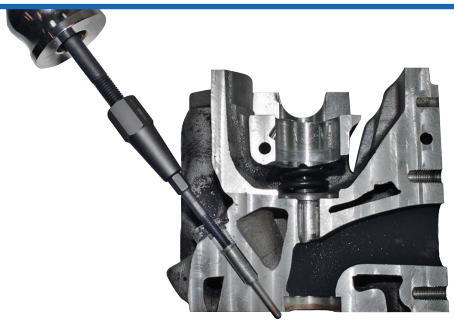
Cut thread for extraction bolt
M8/M9 glow plug:
thread cutter M5x0.8 (2060-05) for extraction bolt (2060-17)

M10 glow plug:
thread cutter M6x1 (2060-06) for extraction bolt (2060-18)

M12 glow plug:
thread cutter M8x1 (2060-07) for extraction bolt (2060-19)

Use tap wrench (2060-20) to cut thread and then insert extraction bolt.

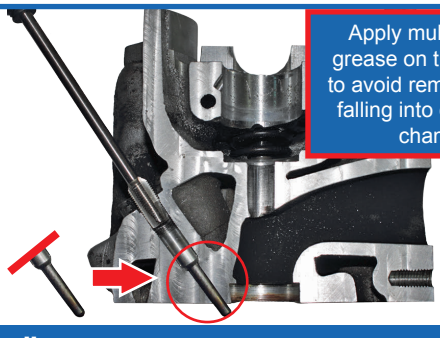
8.



Glow plug removal

Connect sliding hammer to extraction bolt
(2060-25 + 2060-26 + 2060-21).
Select suitable sliding bar according to available space
(2060-22 + 2060-23 or 2060-24).
Operate sliding hammer carefully and extract remaining glow plug.

9.

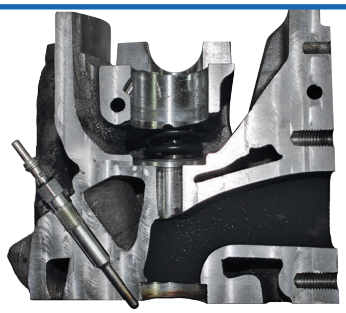


Apply multi-purpose grease on thread cutter to avoid remaining chips falling into combustion chamber.

Rethreading
To avoid chips entering the combustion chamber, cut the glow plug tip, clean it and insert into shaft to use as plug.

Select thread cutter according to glow plug thread:
Thread cutter 2060-07 for glow plugs M8x1
Thread cutter 2060-08 for glow plugs M9x1
Thread cutter 2060-09 for glow plugs M10x1
Thread cutter 2060-10 for glow plugs M10x1.25
Thread cutter 2060-11 for glow plugs M12x1.25

10.



Insert new glow plug

Before the new glow plug can be fitted, the shaft must be clean with a reamer. E.g. with glow plug reamer set Condor No. **2093**.

If the thread cannot be restored, the thread must be repaired with new thread inserts. E.g. with thread repair sets.
e.g. Condor No. **5670** (M8x1), **5671** (M9x1), **5672** (M10x1), **5673** (M10x1.25) or **5674** (M12x1.25).

When installing pay attention to the maximum tightening torque of the manufacturer. e.g. with Torque Wrench Condor No. **8122/0**

Glow plug Ø	Tightening torque for NGK *Source: NGK NTK*
M8 metal	**8,5 Nm** +/- 10%
M9 metal	**11 Nm** +/- 10%
M10 metal	**15 Nm** +/- 10%
M12 metal	**23 Nm** +/- 10%
M8 ceramic	**10 Nm** +/- 10%
M10 ceramic	**18 Nm** +/- 10%

ATTENTION: reference without liability!
Please observe tightening torque of glow plug manufacturer!

No. 2093
Glow Plug Reamer Set, 3 pcs.

- for removing engine carbon deposits when changing glow plugs
- before using, put grease on reamers to ensure removed deposits stick to the reamer and do not fall into the combustion chamber
- for popular glow plugs in European cars



No. 5670 - Thread Repair Set for Glow Plugs M8x1.0
8 pcs.

- for cleaning old threads or cutting new threads
- includes 5 pcs. threaded bushes M8x1.0 with antirust coating



No. 5671 - Thread Repair Set for Glow Plugs M9x1.0
8 pcs.

- for cleaning old threads or cutting new threads
- includes 5 pcs. threaded bushes M9x1.0 with antirust coating



No. 5672 - Thread Repair Set for Glow Plugs M10x1.0
13 pcs.

- for cleaning old threads or cutting new threads
- includes 2x 5 pcs. threaded bushes M10x1.0 with antirust coating



No. 5673 - Thread Repair Set for Glow Plugs M10x1.25
8 pcs.

- for cleaning old threads or cutting new threads
- includes 5 pcs. threaded bushes M10x1.25 with antirust coating



No. 5674 - Thread Repair Set for Glow / Spark Plugs M12x1.25
18 pcs.

- for cleaning old threads or cutting new threads
- includes 3x 5 pcs. threaded bushes M12x1.25 with antirust coating

