



# KL-0132-5.. / -6.. Universal Glow Plug Tool Series



(EN)









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(Translation of the operating instructions)











## Address of the manufacturer

### **GEDORE Automotive GmbH**

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# **Operating instructions** (Translation of the operating instructions)

# **CONTENTS**

١.	READ AND UNDERSTAND FOR YOUR SAFETY	4
	1.1 Target group	4
	1.2 Obligations of the owner	4
	1.3 Intended use	4
	1.4 Reasonably foreseeable misuse	4
	1.5 Personal protective equipment	4
	1.6 Labelling of the warnings	5
	1.7 Basic safety instructions and warnings	5
	1.8 Work environment	5
	1.9 Emissions	5
2.	PRODUCT DESCRIPTION	<b>6</b>
	2.1 KL-0132-5 /-6 Universal glow plug tool series	
	2.2 Scope of delivery / spare parts overview	
3.	PREPARATION	10
••	3.1 Preparing the glow plug	
_		
4.	Example of use	10
	4.1 Boring out the glow plug	. 10
	4.2 Repairing the defective mounting thread	. 13
	4.3 Removing the glow plug element	. 14
5.	CARE / STORAGE	15
5.	REPAIR	15
7	ENVIRONMENTALLY FRIENDLY DISPOSAL	15
•	ENTINOMINENTALLI I MENDEI DIST OSAL	1 -

(Translation of the operating instructions)



## 1. READ AND UNDERSTAND FOR YOUR SAFETY



Read and understand these operating instructions **before using** the glow plug tool (*Universal glow plug tool series*), and observe all safety and warning instructions! Misuse can result in **SEVERE INJURIES**! These operating instructions are an integral part of the glow plug tool. Keep them at a safe place for future reference, and always pass them on to subsequent users of the glow plug tool! The glow plug tool complies with the recognised rules of technology as well as the relevant safety regulations!

## 1.1 Target group

These operating instructions are **exclusively** intended for skilled personnel in specialised motor vehicle workshops!

The glow plug tool may only be used by skilled personnel in specialised motor vehicle workshops who are familiar with the basic regulations on work safety and accident prevention!

**▶ Never** allow unauthorised, inexperienced persons, minors and children, or persons with limited physical, sensory, and mental abilities to use the glow plug tool!



## 1.2 Obligations of the owner

Pursuant to the German Ordinance on Industrial Safety and Health (BetrSichV), employers are obliged to provide their employees with safe work equipment in accordance with the recognised rules of technology and the relevant safety regulations!

- ▶ The owner of the glow plug tool **must** ensure that **only** trained personnel in specialised vehicle workshops use the glow plug tool!
- The owner of the glow tool **must** ensure that the instructions for use are available to the user and that the user has completely read and understood the instructions for use **before** using the glow plug tool!
- The owner of the glow plug tool **must** ensure that the user is familiar with the basic regulations on work safety and accident prevention, and that the personal protective equipment is available to him!

## 1.3 Intended use

The glow plug tool ...

- **may only be used** with diesel engines with M10x1 glow plug thread for boring out torn glow plugs, for recutting and cleaning the glow plug mounting thread as well as for pulling the glow plug element!
- **may only be** driven with a suitable drilling machine up to a **drilling speed of 600rpm!**
- **may only** be used with **GEDORE Automotive** genuine spare parts and accessories!
- **may only** be used in the way described in these operating instructions!
- Any other use can result in **DEATH** or **SEVERE INJURIES!**

## 1.4 Reasonably foreseeable misuse

The glow plug tool ...

- **must never** be used for boring out, recutting and pulling out of other parts than those intended for it!
- **▼** must never be used with an impulse or impact wrench or a drive other than that intended for it!
- **▼** must never be modified, converted, or used for other purposes without authorisation!
- ⚠ Use the glow plug tool tool always as intended. Any other use can result in DEATH or in SEVERE INJURIES!

## 1.5 Personal protective equipment

For your safety, always wear personal protective equipment when using the glow plug tool! The glow plug tool can bring about mechanical hazards such as crushing, cutting and shock injuries.



Always wear EYE PROTECTION (for example to DIN EN 166, OSHA 29 CFR 1910.133, ANSI Z87) when using the glow plug tool to protect yourself against flinging parts or particles!

▼When using the glow plug tool tool, flying parts or particles can cause SEVERE INJURIES to - UNGEN your eyes!



Always wear SAFETY SHOES (e.g. DIN EN ISO 20345, OSHA 29 CFR 1910.136, ANSI Z41) when using the glow tool to protect yourself against dropping parts!

When working with the glow plug tool, dropping parts can cause **SEVERE INJURIES** to your **feet and toes!** 



(Translation of the operating instructions)

## 1.6 Labelling of the warnings

Warnings warn of potential hazards. Always observe these warnings to avoid DEATH or INJURIES!

For better differentiation, warnings in these operating instructions are classified as follows:							
Warning sign	Meaning						
<b>AWARNING</b>	<b>Indicates</b> a hazardous situation, which, if not avoided, could cause <b>DEATH</b> or <b>SERIOUS INJURIES</b> .						
<b>▲</b> CAUTION	Indicates a hazardous situation which, if not avoided, could cause MODERATE or MINOR INJURIES.						
ATTENTION	<b>Indicates</b> a situation which, if not avoided, could cause damage to the tool or an object in its vicinity.						
(i)	Note on important information and useful tips.						

## 1.7 Basic safety instructions and warnings

## ▲CAUTION - There is a risk of accident and injury if this is not observed.

When using the glow plug tool, <u>always</u> observe the following safety and warning instructions as well as measures to avoid **SERIOUS INJURY** as well as property damage due to hazards, misuse, abuse and unsafe handling!

- ▼Read and understand these operating instructions before using the glow plug tool and always observe all safety and warning instructions for safe use!
- **▼Always** work with the glow plug tool in accordance with the basic regulations on work safety, accident prevention and environmental protection!
- ▶ Always use the glow plug tool as intended. **GEDORE Automotive GmbH** accepts no liability or warranty or guarantee claims for injuries and damage resulting from improper use or infringement of the safety regulations.
- **▶ Before each use**, check the glow plug tool **carefully** for damage, loose parts, or unauthorised modifications. **Never** use it if you notice any such deficiencies! Professional inspection and repair may only be carried out by specially trained personnel from **GEDORE Automotive GmbH!**
- **▼ Only** use original spare parts and accessories from **GEDORE Automotive GmbH** for the glow plug tool!
- **▼ Always** observe the vehicle-specific manufacturer's specifications when working with the glow plug tool!
- **▼ Never** use the glow plug tool with an impulse or impact wrench or any other drive than intended!
- **▼Only** drive the glow plug tool with a suitable drill up to the **maximum permissible speed!**
- **▼ Never** use the glow plug tool when you are tired or under the influence of alcohol, drugs, or medication!
- **▶ Before using** the glow plug tool, make sure that **no** unauthorised persons are in the direct vicinity!
- ▼ Always keep hair and clothing away from rotating parts and remove gloves and jewellery that could be drawn into rotating parts before using the glow plug tool!
- **▼Always** wear tight-fitting work clothes when using the glow plug tool!
- ▼Always wear your personal protective equipment, e.g. safety goggles, safety shoes, if necessary!
- ✓ Interrupt your work immediately if you are unsure about using the glow plug tool and contact GEDORE Automotive GmbH, if necessary!

## 1.8 Work environment

For your safety, **only** use the glow plug tool in a safe working environment.

- ▼The workplace must be clean and tidy.
- **▼**The workplace **must** be sufficiently large and illuminated.
- **▼**The workplace **must** be on a solid and non-skidding floor.
- The workplace **must** be safeguarded against access of unauthorised persons.
- **▼**The workplace **must** have a room temperature between -10°C and +40°C.

## 1.9 Emissions

Oil for lubricating the drill can drip down when using the glow plug tool and pose a danger to the environment.

- **▼Immediately** remove dripping oil with oil binding agents or a cleaning rag, for example.
- **▼**In case of skin contact with hydraulic oil, clean the affected area **immediately** with degreasing soap and water.
- **▼** Dispose of pollutants such as oil in an **environmentally friendly** manner.



(Translation of the operating instructions)



## 2. Product description

## 2.1 KL-0132-5.. /-6.. - Universal glow plug tool series

The universal glow plug tool series enables a quick and professional removal of a torn glow plug and the maintenance of the mounting thread on the cylinder head.

## KL-0132-52 KB - Glow plug tool kit M10x1

Fits universally for diesel engines with M10x1 glow plug thread, e.g. on Opel, Peugeot, Renault, and many more.

Particularly suitable for VW-Audi (2.5, 2.7, 3.0 V6 TDI), BMW (M47, N47, B47, N57), Mercedes (OM 611, 612, 613, 646, 647, 648 CDI) and Ford (2.0 EcoBlue) due to vehicle-specific guide sleeves.

For boring out torn glow plugs, for recutting the mounting thread as well as for pulling the glow plug element.

Particular vehicle-specific guide sleeves for precise centring, straight guidance and exact drilling depth.

Can be also used <u>without</u> guide sleeves for a lot of diesel engines with **M10x1** mounting thread.

## **Necessary accessories**

KL-0369-300 A - Turning lathe operator

KL-0369-303 A - Mounting tool for guide sleeves\*

\*consisting of: Impact extractor - KL-0049-100 A + Base body - KL-0369-3031 B

## **Alternative accessories**

**KL-0369-305 A** - Extraction tool for glow plugs (For the extraction of stuck glow plug elements)

## KL-0132-55 KA - Glow plug tool kit M8x1

Fits universally for diesel engines with M8x1 glow plug thread.

Due to vehicle-specific guide sleeves especially suitable for, e.g. Mercedes (OM639, OM640, OM642, OM651 CDI) and Fiat (1.3, 2.3, 3.0 JTD)

For boring out torn glow plugs, for recutting the mounting thread as well as for pulling the glow plug element.

Particular straight specific guide sleeves for precise centring, straight guidance and exact drilling depth.

Can be also used <u>without</u> guide sleeves for a lot of diesel engines with **M8x1** mounting thread.

## **Necessary accessories**

KL-0369-300 A - Turning lathe operator

KL-0049-100 A - Impact extractor

### **Alternative accessories**

**KL-0369-305 A** - Extraction tool for glow plugs (For the extraction of stuck glow plug elements)







(Translation of the operating instructions)

Fits universally for diesel engines with M8x1+ M10x1 glow plug thread.

For the repair of defective glow plug mounting threads on the cylinder head, by extension and insertion of a threaded bushing.

## **Necessary accessories**

KL-0283-7021 A - Core drill for M10 KL-0283-7022 - Tap M10x1



## KL-0132-62 KB - Universal glow plug tool kit M10x1.25

Fits universally for diesel engines with M10x1.25 glow plug thread.

Especially suitable for, e.g. Opel, Mazda, Ford, Hyundai, Kia, Nissan and Toyota 1.4 - 3.0 (D / DI / DTI / TD / CRDi / CDTi) diesel engines and many more.

For boring out torn glow plugs, for recutting the mounting thread as well as for pulling the glow plug element.

## **Necessary accessories**

KL-0369-300 A - Turning lathe operator

KL-0049-100 A - Impact extractor

## **Alternative accessories**

KL-0369-305 A - Extraction tool for glow plugs

(For the extraction of stuck glow plug elements)



# **Operating instructions**(Translation of the operating instructions)



## 2.2 Scope of delivery / Overview of the single parts

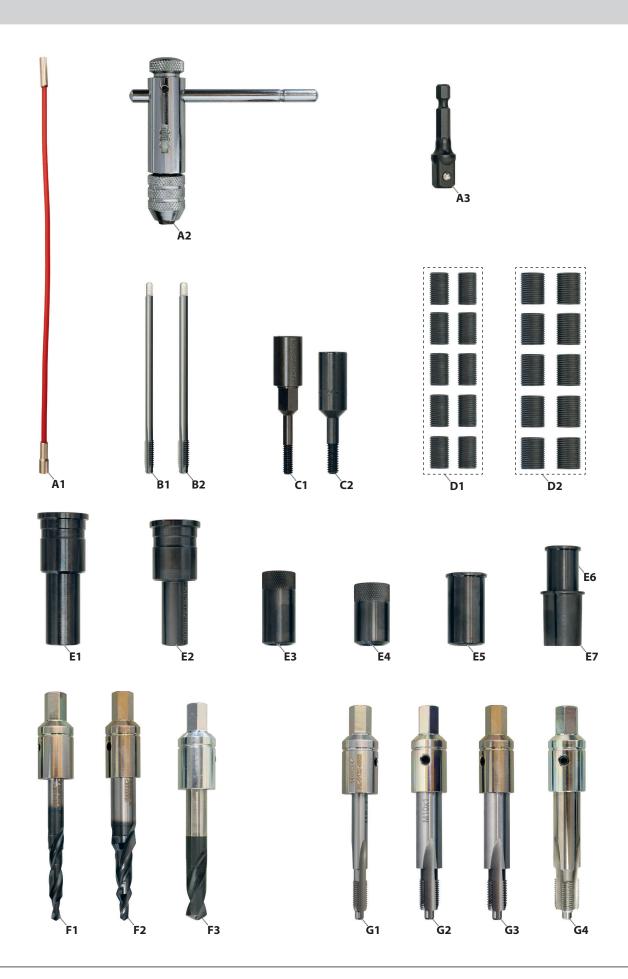
		Glow plug tool kits			
(i) Prior to using the glow plug tool, check to ensure that all the parts included in the scope of delivery are available.	KL-0132-52 KB	KL-0132-55 KA	KL-0132-57 K	KL-0132-62 KB	
Basic tools A Item	볼	Ž.	Ž.	KL-	
KL-0126-221 - Magnetic lifter, flexible A1	•	•		•	
KL-0369-306 - Tool holder for taps UNC	•	•		•	
KL-4007-2510 - Adapter 3/8" for drill A3	•	•		•	
Tap UNCB					
KL-1383-2241 - Tap 12-24 UNC B1		•			
KL-0369-3056 - Tap ¼"-20 UNC	•			•	
Pull boltC					
KL-0132-5501 - Pull bolt 12-24 UNC for impact extractor		•			
KL-0132-5202 - Pull bolt ¼"-20 UNC for impact extractor	•			•	
Threaded sleeves D					
KL-0369-3023 - Threaded sleeves M10x1 to M8x1 (10 pieces) <b>D1</b>			•		
KL-1383-2234 - Threaded sleeves M12x1 to M10x1 (10 pieces) <b>D2</b>			•		
Guide sleeves E					
KL-0132-5504 - Guide sleeve (Fiat JTD)		•			
KL-0132-5505 - Guide sleeve (Mercedes)		•			
KL-0283-7003 - Guide sleeve (VW-Audi)	•				
KL-0283-7004 - Guide sleeve (BMW)	•				
KL-0132-5201 - Guide sleeve (Mercedes)	•				
KL-0283-7005 - Guide sleeve (Ford)	•				
KL-0369-3015 - Centring sleeve for KL-0283-7005	•				
Core drill F					
KL-0132-5502 A - Core drill for M8		•			
KL-0283-7021 A - Core drill for M10	•		Accessories	•	
KL-0283-7031 B - Core drill for M12			•		
Тар С					
KL-0132-5503 - Tap M8x1		•			
KL-0283-7022 - Tap M10x1	•		Accessories		
KL-0132-6201 - Tap M10x1,25				•	
KL-0283-7032 A - Tap M12x1 G4			•		
Storage Systems:					
KL-4990-2001 - Plastic box 53x107x18mm			●2x		
KL-0132-5290-1 B- Foam insert -	•				
KL-0132-5790-1 - Foam insert -			•		
KL-4990-9224 - Plastic case -	•		•		
KL-0132-5590 A- Plastic case		•		•	







# **Operating instructions** (Translation of the operating instructions)





## 3. PREPARATION

## 3.1 Preparing the glow plug

**1:** If necessary, remove the protruding middle electrode of the torn glow plug.





1. In most cases, the middle electrode remains stuck if the glow plug is torn. If this is the case, make sure to remove it before further work, for example by using the **roller extractor** -

Glow plug middle electrode

## 4. TYPICAL APPLICATION

This typical application describes the boring out of a torn glow plug, the recutting as well as the repair of the glow plug mounting thread and the extraction of a glow plug element on the cylinder head.

KL-0369-300 A - available as an accessory.

①The boring out of a glow plug can be executed <u>with</u> or <u>without</u> a vehicle-specific guide sleeve [E..]. Using a vehicle-specific guide sleeve ensues a precise centring, straight guidance and exact drilling depth. When drilling <u>without</u> a guide sleeve, care must be taken to ensure straight guidance and exact drilling depth!

## 4.1 Boring out the glow plug

**©2:** Depending on the motor, select a suitable guide sleeve **[E..]** if necessary. Guide sleeves... E ltem Suitable for diesel engines... ...for Fiat 2.3, 3.0 (JTD) KL-0132-5504 - Guide sleeve (Fiat JTD) E1 ...for Mercedes OM639, OM640, OM642, OM651 (CDI) **E2** KL-0132-5505 - Guide sleeve (Mercedes) ...Fiat 1.3 (JTD) KL-0283-7003 - Guide sleeve (VW-Audi) **E3** ...for VW-Audi 2.5, 2.7, 3.0 V6 (TDI) KL-0283-7004 - Guide sleeve (BMW) E4 ...for BMW (M47, N47, B47, N57) ...for Mercedes OM611, OM612, OM613, OM646, OM647, OM648 (CDI) **E**5 KL-0132-5201 - Guide sleeve (Mercedes) **E6** KL-0283-7005 - Guide sleeve (Ford) ...for Ford 2.0 (EcoBlue) KL-0369-3015 - Centring sleeve for KL-0283-7005 **E7** ...e.g. with VW-Audi, BMW, Mini, Mercedes, Fiat, Ford, Opel, Renault, Peugeot, Mazda, Hyundai, Honda, Kia, Nissan Renault, Toyota and many more. Without vehicle-specific guide sleeve ...e.g. with 1.0 - 6.0 liter engines (D / DI / DTI / TD / TDI / CDI / CRDi / CDTi / JTD / EcoBlue) and many more.









When using a guide sleeve [E..], insert it in the correct position at the glow plug bore.



e.g. Mercedes / Fiat



e.g. Mercedes



- 1. Insert the selected guide sleeve [E..] completely at the glow plug bore.
- (i) The guide sleeve [E6] and centring sleeve [E7] must also be fixed as described in (ii) 4.

**12.** When using the guide sleeve **[E6]** and centring sleeve **[E7]**, fix them additionally.

- 2. Using the assembly tool available as an accessory KL-0369-303 A\*, lightly tap the guide sleeve [E6] and centring sleeve [E7] into the glow plug bore.
- (i) The removal of the sleeves [E6] + [E7] is done later in the same way.
  - \* **KL-0369-303 A** consisting of:
  - Impact extractor KL-0049-100 A
  - Base body **KL-0369-3031 B**





**5:** Insert the adapter [A3] together with a suitable socket into a drill.



- **3.** Insert the adapter **[A3]** together with a socket spanner **(3/8" SW 10mm)** into a suitable drilling machine.
- (i) The speed of the drill should be adjustable to about 600rpm.

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(Translation of the operating instructions)



**6:** Coat the core drill [F..] with oil and drill out the glow plug.



## **A**CAUTION

When working with cutting tools, sharp edges and flying chips can cause **injuries** to hands and eyes.

▼Wear your personal protective equipment such as safety goggles during work!

## CAUTION

The core drill [F..] and cylinder head may be damaged.

- ▼ Apply a little oil to the core drill during the drilling process!
- ▼ Keep to the recommended drilling speed of approx. 600rpm!
- **▼** Apply only **light pressure** to the core drill during the drilling process!
- ► When drilling without guide sleeve [E..] yourself, ensure straight guidance and exact drilling depth!
- **4.** First insert the core drill **[F..]** on the drilling machine.

Now drill out the glow plug under slight pressure until the core drill [F..] rests on the guide sleeve [E..]. Interrupt the drilling process several times to remove chips and oil the core drill [F..].

**107:** Coat the tap **[G..]** with <u>spirit</u> and recut the glow plug receiving thread.

## **CAUTION**

The tap [G..] and cylinder head may be damaged.

- ► When cutting, apply a little spirit to the tap!
- When recutting without guide sleeve [E..] yourself, ensure straight guidance and exact drilling depth!
- **5.** First insert the tap **[G..]** e.g. on a T-handle with socket **SW10**.

Now recut the glow plug mounting thread until the tap **[G..]** rests on the guide sleeve **[E..]**. Interrupt the cutting process <u>several times</u> to remove chips and apply <u>spirit</u> to the tap **[G..]**.

**6.** Check the glow plug mounting thread, if it is OK then continue with

However, if the glow plug mounting thread is damaged, it can be repaired in the next step as described in **chapter 4.2**.

chapter 4.3.

However, if the glow plug mounting thread is damaged, it can be repaired





12 - **(EN**)







## 4.2 Repairing the defective mounting thread

**©8:** Coat the core drill [F..] with spirit and drill out the glow plug receiving hole one step.

## **ACAUTION**

When working with cutting tools, sharp edges and flying chips can cause **INJURY** to hands and eyes.

Wear your personal protective equipment such as safety goggles during work!

## CAUTION

The core drill [F..] and cylinder head may be damaged.

- **▼** Apply a little **Spirit** to the core drill during the drilling process!
- ▼ Keep to the recommended drilling speed of approx. 600rpm!
- **▼** Apply only **light pressure** to the core drill during the drilling process!
- ► When drilling without guide sleeve [E..] yourself, ensure straight guidance and exact drilling depth!
- 1. First insert the core drill [F..] on the drilling machine.
  Now drill the glow plug mounting hole one step further under slight pressure until the core hole drill [F..] rests on the guide sleeve [E..]. Interrupt the drilling process several times to remove chips and to apply spirit to the core drill [G..].



**©9:** Coat the tap [G..] with spirit and cut the receiving thread for the threaded sleeve [D..].



## CAUTION

The tap [G..] and cylinder head may be damaged.

- **▼** Put some <u>spirit</u> on the tap during the cutting process!
- When recutting without guide sleeve [E..] yourself, ensure straight guidance and exact drilling depth!
- **2.** First insert the tap **[G..]** e.g. on a T-handle with socket **SW10**.

  Now cut the mounting thread for the threaded sleeve **[D..]** until the tap **[G..]** rests on the guide sleeve **[E..]**. Interrupt the cutting process <u>several times</u> to remove chips and apply <u>spirit</u> to the tap **[G..]**.
- (i) Before inserting the threaded sleeve [D..], the glow plug must first be pulled out, see **chapter 4.3**.



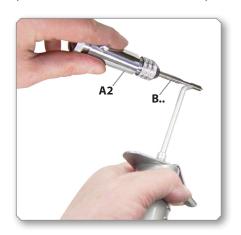
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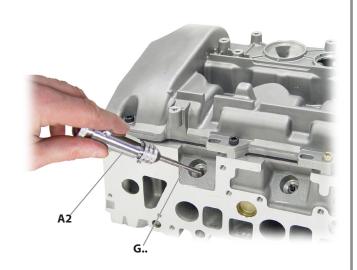
(Translation of the operating instructions)



## 4.3 Removing the glow plug element

**10:** Coat tap [B..] with oil and cut a 5mm deep thread on the glow plug.





## CAUTION

The tap [B..] can be damaged.

- ▼Apply a little oil to the tap during the cutting process!
- 1. First remove the guide sleeve [E..].

Now insert the tap **[B..]** on the tool holder **[A2]** and cut a **5 mm** deep thread in the glow plug element. Interrupt the cutting process <u>several times</u> to remove chips and to oil the tap oil the tap **[B..]**.

**11:** Screw in the pull bolt **[C..]** on the glow plug and pull it out.

## CAUTION

The engine may be damaged!

- ▼Be sure to remove all chips and impurities before pulling out the glow plug!
- Screw the pull bolt [C..] together with the impact extractor - KL-0049-100 A, available as an accessory, completely into the glow plug.

Now pull the glow plug out of the cylinder head in a controlled manner by pressing the impact weight.





(i) Extremely stuck glow plugs can be pulled out with the help of the extraction tool KL-0369-305 A, which is available as an accessory.

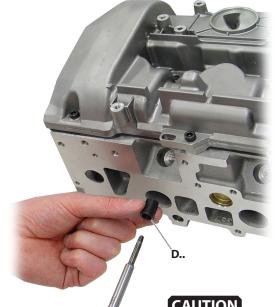






(Translation of the operating instructions)

**12:** Screw the glow plug into the cylinder head according to the manufacturer's specifications.





CAUTION

The cylinder head may be damaged!

- **▼**Observe the tightening torque according to the manufacturer's specifications!
- 3. Screw the glow plug into the cylinder head according to the manufacturer's instructions.
- ①When the glow plug mounting thread has been repaired, the glow plug is screwed into the cylinder head together with the matching threaded sleeve [D..].

## 5. CARE / STORAGE

**Glow plug** 

## CAUTION

Improper care and storage can cause damage to the glow plug tool. Never immerse the glow plug tool in water, solvents, or other cleaning liquids. After use, clean all parts only with a dry and clean cleaning cloth. To protect against corrosion, rub all metal parts with a tool care oil or wax. Store the clutch glow plug tool and the operating instructions at a dry and clean place.

## 6. REPAIR

## **A**WARNING

For safety reasons, ensure that a damaged glow plug tool is no longer used! Professional inspection and repair may only be carried out by specially trained experts from GEDORE Automotive GmbH. Improper repair can result in DEATH or SEVERE INJURIES.

## 7. ENVIRONMENTALLY COMPLIANT DISPOSAL

Dispose of the glow plug tool and its packaging material in an environmentally compatible way in accordance with the legal requirements. If necessary, ask your local authorities about environmentally friendly disposal options.



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