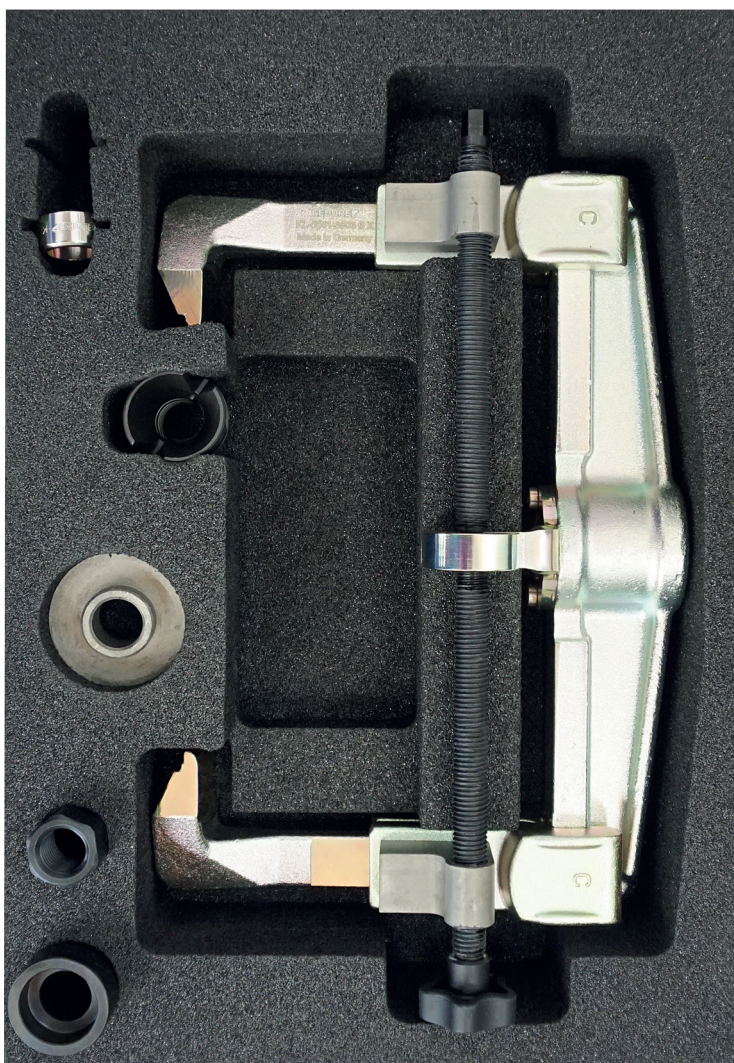




KL-0041-380 EA

Wheel Hub Extractor, in Foam Insert



Operating instructions
⚠ Read and understand before use!

EN

www.gedore-automotive.com



GEDORE Automotive GmbH

Breslauer Straße 41
78166 - Donaueschingen
Postfach 1329
78154 Donaueschingen - GERMANY

☎ +49 (0) 771 / 8 32 23-0
☎ +49 (0) 771 / 8 32 23-90
✉ info.gam@gedore.com
🌐 gedore-automotive.com

GEDORE TOOLS, INC.

Only for USA, Canada & Mexico / Sólo para EE.UU., Canadá y México
Seulement pour les USA, le Canada et le Mexique
7187 Bryhawke Circle, Suite 700
North Charleston, SC 29418, USA

☎ +1-843 / 225 50 15
☎ +1-843 / 225 50 20
✉ info@gedoretools.com
🌐 gedore.com

**ENGLISH****EN**

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Manufacturer's address

GEDORE Automotive GmbH

Breslauer Straße 41 // 78166 Donaueschingen - GERMANY

☎ +49 (0)771/83223-71 // ✉ info.gam@gedore.com

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1. READ AND UNDERSTAND FOR YOUR SAFETY



Read and understand these operating instructions **before using** the wheel hub extractor, and observe all safety and warning instructions! Misuse can result in **DEATH** or **SEVERE INJURIES** ! These operating instructions are an integral part of the wheel hub extractor. Keep them at a safe place for future reference, and always pass them on to subsequent users of the wheel hub extractor! The wheel hub extractor 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 wheel hub extractor **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 wheel hub extractor!

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 wheel hub extractor **must** ensure that **only** trained personnel in specialised vehicle workshops use the wheel hub extractor!

✔ The owner of the wheel hub extractor **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 wheel hub extractor!

✔ The owner of the wheel hub extractor **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 wheel hub extractor ...

✔ **may only** be used to pull out wheel hubs/bearing units, wheel hubs and wheel bearings out of a steering knuckle or a wheel bearing housing, and to push out drive shafts!

✔ **may only** be used up to a **max. load of 12 tonnes**!

✔ **may only** be used with a manual drive or a manually operated **GEDORE Automotive** hydraulic cylinder / pump combination with a pressure gauge for safe pressure control!

✔ **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 wheel hub extractor ...

✔ **must never** be used for pulling out or removing other parts than those intended for it!

✔ **must never** be used together with an impulse or impact screwdriver!

✔ **must never** be used with a machine drive or a machine-operated hydraulic cylinder/pump combination or any other drivethan intended!

✔ **must never** be used for batch processing with many extracting processes within a few minutes!

✔ **must never** be used with a bridged, modified, or removed safety device!

✔ **must never** be modified, converted, or used for other purposes without authorisation!

⚠ Use the wheel hub extractor **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 wheel hub extractor! The wheel hub extractor 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 wheel hub extractor to protect yourself against flinging parts or particles!

When using the wheel hub extractor, flying parts or particles can cause **SEVERE INJURIES** to your **eyes**!



Always wear **PROTECTIVE GLOVES** (for example to DIN EN 388, OSHA 29 CFR 1910.138, ANSI 105) when using the wheel hub extractor to protect yourself against sharp edges and crushing between parts!

When working with the wheel hub extractor, sharp edges and crushing between parts can cause **SEVERE INJURIES** to your **hands**!







Always wear **SAFETY SHOES** (for example to DIN EN ISO 20345, OSHA 29 CFR 1910.136, ANSI Z41) when using the wheel hub extractor to protect yourself against dropping parts!

When working with the wheel hub extractor, dropping parts can cause **SEVERE INJURIES** to your **feet and toes**!

EN

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
 WARNING	Indicates a hazardous situation which, if not avoided, could cause DEATH or SEVERE INJURIES .
 CAUTION	Indicates a hazardous situation which, if not avoided, could cause MODERATE or MINOR INJURIES .
 ATTENTION	Indicates a situation which, if not avoided, can cause damage to the tool or an object in its vicinity.
 i	Note on important information and useful tips.

1.7 Basic warnings

WARNING - Danger to life from MISUSE

MISUSE can cause the wheel hub extractor to slip, break, and thus drop or be hurled about. This can cause **DEATH** or **SEVERE INJURIES**!

Read and understand these operating instructions **before using** the wheel hub extractor, and observe all safety and warning instructions for **safe use**!

Always work with the wheel hub extractor in accordance with the basic regulations on work safety and accident prevention!

Only use the wheel hub extractor as described in these operating instructions!

Always observe the vehicle-specific application procedures in the repair guide of the vehicle manufacturer!

Never use the wheel hub extractor if it is damaged or has loose parts or unauthorised modifications!

Never use the wheel hub extractor with a machine-operated drive. Drive it **exclusively** by hand with muscle power with a manual drive, or a manually driven **GEDORE Automotive** hydraulic cylinder/pump combination with pressure gauge for safe pressure control!

Never use the wheel hub extractor for batch processing with many extraction processes within a few minutes!

Always wear your personal protective equipment (*safety goggles, protective gloves, safety shoes*) during work!

Never beat the wheel hub extractor with a hammer or anything similar!

⚠ WARNING - Danger to life from OVERLOAD

OVERLOAD can cause the wheel hub extractor to slip, break, and thus drop or be hurled about. This can cause **DEATH** or **SEVERE INJURIES**!

- ✔ **Never** exceed the **maximum loading capacity** of the wheel hub extractor!
- ✔ **Never** use the wheel hub extractor if it is damaged, or has loose parts or unauthorised modifications!
- ✔ **Never** use the wheel hub extractor with an impulse or impact wrench!
- ✔ **Never** use the wheel hub extractor with a machine-operated drive. Drive it **exclusively** by hand with muscle power with a manual drive, or a manually driven **GEDORE Automotive** hydraulic cylinder/pump combination with pressure gauge for safe pressure control!
- ✔ **Never** use the wheel hub extractor for batch processing with many extraction processes within a few minutes!
- ✔ **Always** wear your personal protective equipment (*safety goggles, protective gloves, safety shoes*) during work!

⚠ WARNING - Danger of injury from FALLING

There is a risk of the wheel hub extractor **DROPPING** during preparation and use (overhead, for example). This can cause **SEVERE INJURIES**!

- ✔ **As a precaution**, secure the wheel hub extractor against dropping, for example using the **GEDORE** safety harness - **KL-0040-2590** or **KL-0040-2592**, or the mounting device - **KL-0040-258 A**
- ✔ **Always** make sure that the wheel hub extractor is securely attached!
- ✔ Avoid dropping the wheel hub extractor **at all costs**, especially when it is under load!
- ✔ **Never** leave the wheel hub extractor unattended in loaded condition on the vehicle or on the wheel bearing housing!
- ✔ Put down the wheel hub extractor **safely** to prevent it from dropping (for example on a workbench)!
- ✔ **Always** carry out all preparations of heavy parts with the help of a second specialist!
- ✔ When mounting the wheel hub extractor, use suitable fasteners which will **safely** and **reliably** support the load of the wheel hub extractor even during use!
- ✔ **Always** check the stability of the wheel hub extractor before use!
- ✔ **Always** wear your personal protective equipment (*safety goggles, protective gloves, safety shoes*) during work!

ATTENTION - Risk of DAMAGE

There is a risk of **DAMAGING** the vehicle, the steering knuckle, and wheel hub extractor.

- ✔ **Always** observe the installation position of the wheel hub extractor specified by the vehicle manufacturer!
- ✔ **Always** observe vehicle-specific application procedures in the repair guide of the vehicle manufacturer.
- ✔ Prior to each use, check the moving parts and the spindle of the spring compressor for sufficient lubrication. If necessary, lubricate them only with molybdenum disulphide paste (*for example, with GEDORE KL-0014-0030*)!
- ✔ **Never** use the wheel hub extractor for batch processing with many extraction processes within a few minutes!
- ✔ **Never** clamp the wheel hub extractor in a vice.

1.8 Basic safety instructions

For your safety, **always** observe the following safety precautions when using the wheel hub extractor in order to avoid injuries and material damage caused by misuse or unsafe handling.

- ✔ Read and understand these operating instructions **before using** the wheel hub extractor, and observe all safety and warning instructions for **safe use**!
- ✔ **Always** observe the vehicle-specific application procedures in the repair guide of the vehicle manufacturer!
- ✔ **Always** work with the wheel hub extractor in accordance with the basic regulations on work safety and accident prevention!
- ✔ **Never** use the wheel hub extractor when you are tired or under the influence of alcohol, drugs, or medication!
- ✔ **Before each use**, check the wheel hub extractor **carefully** for damage, loose parts, or unauthorised modifications. **Never** use it if you notice any such deficiencies!
- ✔ Use **only genuine GEDORE Automotive** spare parts and accessories!
- ✔ **If necessary**, carry, lift, and position the wheel hub extractor with the help of a second specialist due to its weight!
- ✔ **Before using** the wheel hub extractor, make sure that **no** unauthorised persons are in the immediate environment!
- ✔ **Always** observe the **max. loading capacity** when using the wheel hub extractor, and **never** exceed it!
- ✔ **Never** stand in axial extension of the wheel hub extractor when it is under load!
- ✔ **Always** keep hair, clothing, and gloves away from rotating parts!
- ✔ **Be sure to** take off gloves as well as jewellery such as rings and chains which can be drawn into rotating parts, before using the wheel hub extractor!

- ✔ **Never** use the wheel hub extractor with an unauthorised drive. Operate it **only** with an approved drive!
- ✔ **Always** wear your personal protective equipment (*safety goggles, protective gloves, safety shoes*) during work!
- ✔ Interrupt your work **immediately** if you are unsure about using the wheel hub extractor and contact **GEDORE Automotive GmbH, if necessary!**
- ✔ For safety reasons, ensure that a damaged wheel hub extractor is no longer used! Professional inspection and repair may only be carried out by specially trained personnel from **GEDORE Automotive GmbH!**
- ✔ **Always** use the wheel hub extractor as intended. Non-compliance will invalidate any warranty claim and may significantly reduce its durability!

1.9 Work environment

For your safety, **only** use the wheel hub extractor in a safe work 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.

1.10 Emissions

Molybdenum disulphide paste and hydraulic oil can drip or escape when using the wheel hub extractor and thus pose a hazard to the environment.

- ✔ **Immediately** remove leaking hydraulic oil as well as excess molybdenum disulphide paste (using oil binding agents or a 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 hydraulic oil and molybdenum disulphide paste in an **environmentally friendly** manner.
- ✔ Safety data sheets *in accordance with Regulation (EC) No. 1907/2006*, for hydraulic oil (**Alsus Hyd HLP 32**) as well as for molybdenum disulphide paste (**MOLYKOTE(R) G-N PLUS PASTE**) can be found on the manufacturer's site on the Internet (**World Wide Web**) or, if required, contact **GEDORE Automotive GmbH**.

1.11 Maintenance

Perform maintenance on the wheel hub extractor **at regular intervals** and **only** when the tool is depressurised! Poor and improper maintenance can damage the wheel hub extractor, thus causing **DEATH** or **SEVERE INJURIES!**

Prior to each use:

- ✔ **Prior to each use**, check the wheel hub extractor **carefully** for damage, loose parts, or unauthorised modifications!
- ✔ Prior to **each use** of the wheel hub extractor, check the spindle for contamination and damage. If necessary, clean it, and subsequently lubricate it **only** with molybdenum disulphide paste! (For example, **GEDORE Automotive** molybdenum disulphide paste - **KL-0014-0030**)

Every 6 months:

- ✔ Clean and lubricate the spindle on the wheel hub extractor **at least every 6 months** and **only** with molybdenum disulphide paste! (For example, **GEDORE Automotive** molybdenum disulphide paste - **KL-0014-0030**)

Recommended: Every 24 months:

- ✔ Have the wheel hub extractor professionally checked **every 24 months** by authorised **GEDORE Automotive GmbH** specialists!

1.12 Troubleshooting

Only perform troubleshooting on the wheel hub extractor when it is depressurised!

Problem: The spindle drive nut on the special tool is sluggish. (*Mechanical drive*)

Reason: The spindle is contaminated or insufficiently lubricated, or wrong lubricant was used.

Remedy: Clean the spindles, check them for damage, and lubricate **exclusively** with molybdenum disulphide paste. (for example, **GEDORE Automotive** molybdenum disulphide paste - **KL-0014-0030**)

Problem: Hydraulic oil escapes from the hydraulic coupling between hydraulic cylinder and hand pump.

Reason: Hydraulic coupling contaminated or loose.

Remedy: Clean and retighten the hydraulic coupling. Top up lacking hydraulic oil (**HLP 32**) at the hand pump.

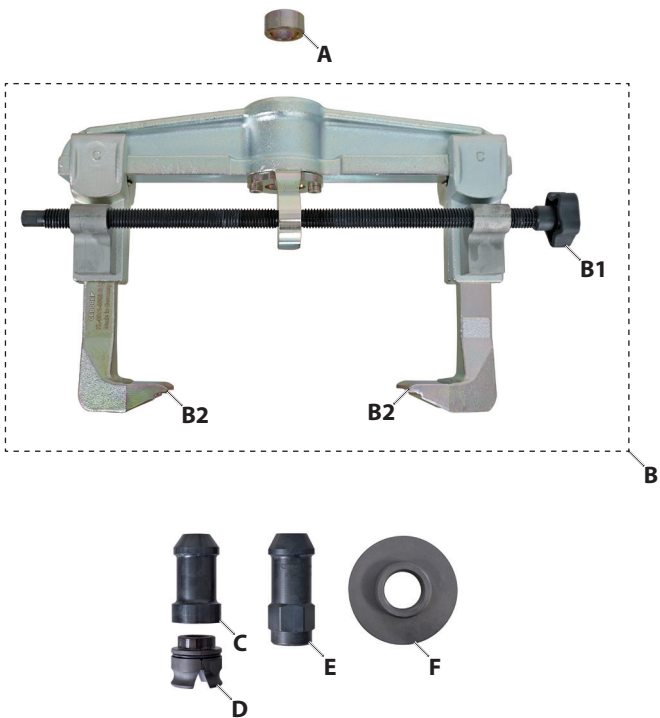
2. PRODUCT DESCRIPTION

2.1 KL-0041-380 EA - Wheel hub extractor in foam insert

Universally fits wheel hub / wheel bearing units, wheel hubs, and wheel bearings with a diameter of up to 250mm.

For quick, safe, and precise pulling out of wheel hub / wheel bearing units, wheel hubs, and wheel bearings from the wheel bearing housing. Even bonded, stuck, or corroded wheel hub / wheel bearing units, wheel hubs, and wheel bearings are no problem for the wheel hub extractor's design which can be subject to loads of up to **12 tonnes**.

① The installation can be carried out, for example, using the wheel bearing tools from the **KL-0039-..series** or **KL-0041-..series**, see *GEDORE-Automotive catalogue*.



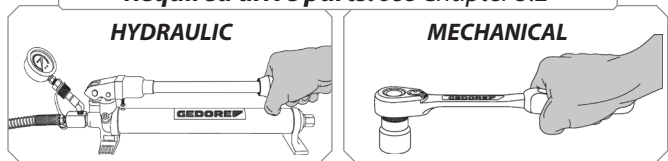
2.2 Scope of delivery

Item	Part no.	Description	Qty.
A	KL-0214-2202	Spacer ring 30mm dia.	1
B	KL-0041-3800 A	Wheel hub extractor basic unit with adjusting spindle	1
B1	KL-0041-3803	Hook	2
B2	KL-0121-3003	Star handle M8	1
C	KL-0039-2192	Conical adapter 37mm dia.	1
D	KL-0039-2120-2	Quick-release nut M20	1
E	KL-0041-3812	Clamping nut 30mm dia.	1
F	KL-0039-1506	Thrust ring 60mm dia.	1
Not illustrated	KL-4999-1315	Foam insert	1

① **Storage system:** Plastic case - **KL-4999-1391**

① **Detailed overview of individual parts:** See Chapter 7.

Required drive parts: see Chapter 3.2



2.3 Specifications

Maximum load capacity*: 12t*

* in combination with thrust spindle (1.2606280KS): 7t

Maximum span: up to 250mm

3. PREPARATION

⚠ WARNING

Misuse or overloading the wheel hub extractor can cause it to slip, break, and thus drop or fling around. This can cause **DEATH** or **SEVERE INJURIES**!

- ✔ **Prior to using** the wheel hub extractor, read and understand **all** safety instructions and warnings listed in **Chapter 1**, and **always observe** them **for safe use**!
- ✔ Use the wheel hub extractor **as intended**, and **always** carry out maintenance and repair work in compliance with the regulations on occupational safety and accident prevention as well as the vehicle manufacturer's instructions!
- ✔ **Prior to each use**, check the wheel hub extractor **carefully** for damage, loose parts, or unauthorised modifications. **Never** use it if you notice any such deficiencies!
- ✔ **Always** wear your personal protective equipment (*such as safety goggles, protective gloves, safety shoes*) during work!

3.1 Checking the scope of delivery

Prior to preparing or using the wheel hub extractor, check that all parts of the scope of delivery are available (*see chapter 2.*), and follow the instructions below.

3.2 Assembling drive parts

⚠ WARNING

Using a machine-operated drive can cause the wheel hub extractor to slip, break, and thus drop or be hurled about. This can cause **DEATH** or **SEVERE INJURIES**!

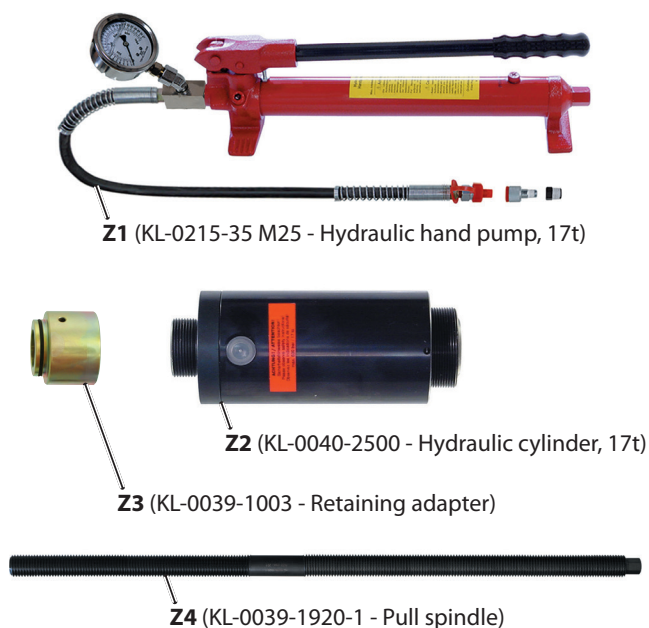
- ✔ **Never** use the wheel hub extractor with a machine-operated drive. Drive it **exclusively** by hand with muscle power with a manual drive, or a manually driven **GEDORE Automotive** hydraulic cylinder/pump combination with pressure gauge for safe pressure control!
- ✔ **Never** use the wheel hub extractor with an impulse or impact wrench!

1. Assemble the required drive parts for the wheel hub extractor as shown in **❶**.

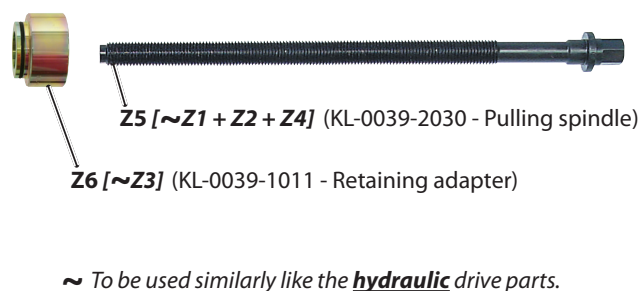
❶ *For other pressure plates see the GEDORE Automotive catalogue.*

❶ Required drive parts

HYDRAULIC



alternatively: MECHANICAL



MECHANICAL (Only for pressing out cardan shafts!)

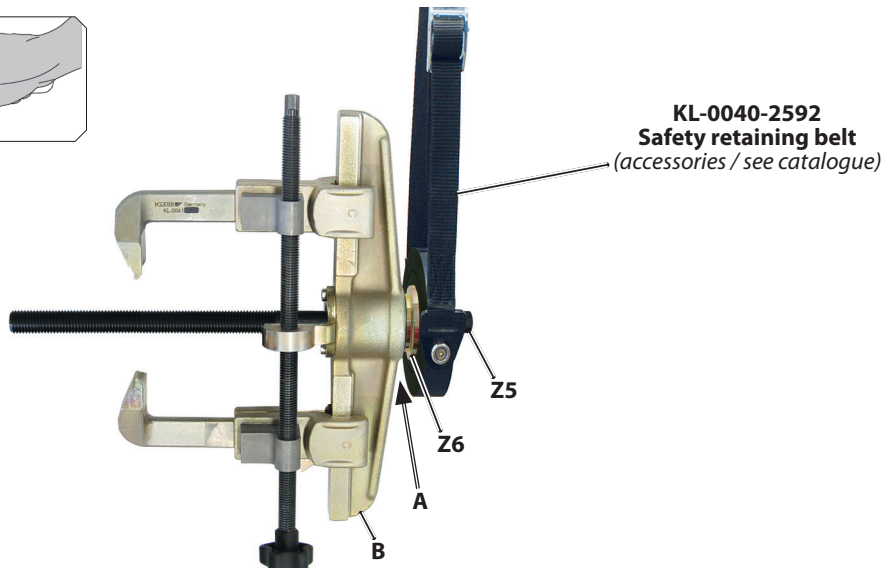
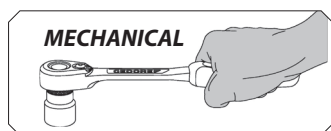
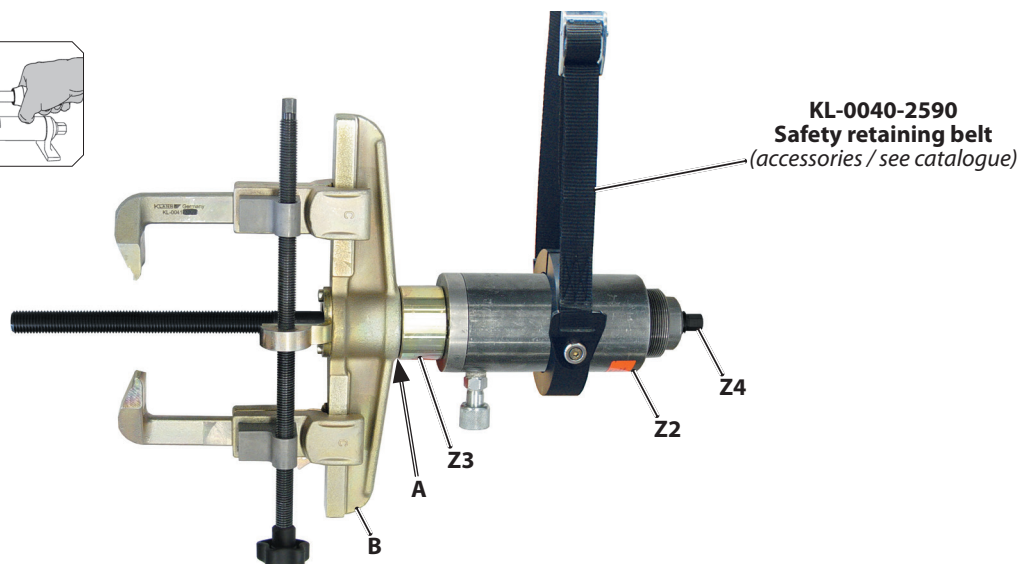
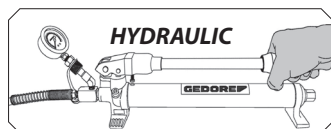


3.3 Preparing the tool

1) Assemble the wheel hub extractor to suit the type of drive (*hydraulic or mechanical*) as shown in **📷2**.

① The safety retaining belts - **KL-0040-2590** or **KL-0040-2592**, which are available as an *accessory*, or the mounting device - **KL-0040-258 A**, for example, make it possible to secure the wheel hub extractor against dropping.

📷2: Preparing the tool



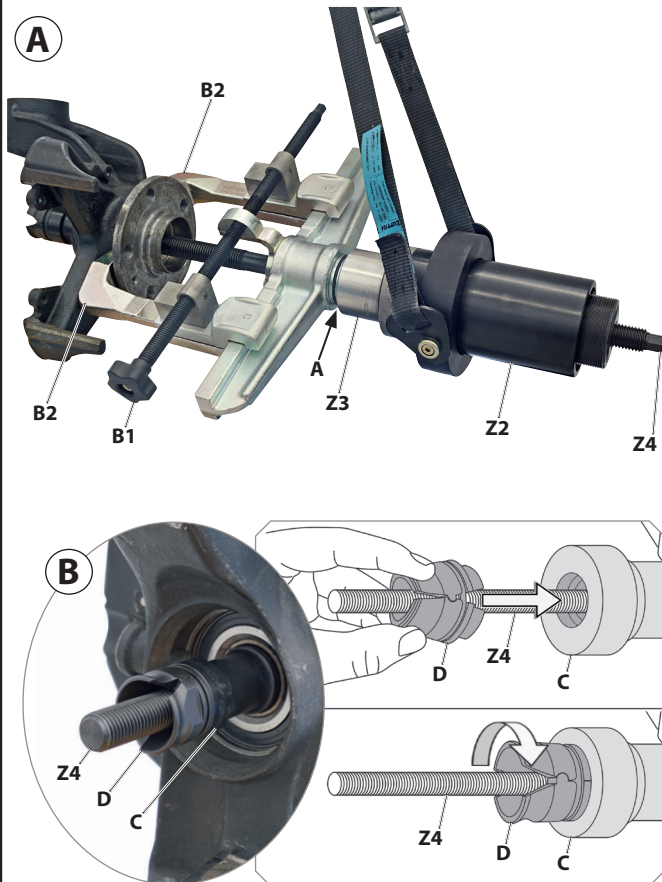
3.4 Preparing the vehicle

Loosen or remove all necessary parts as specified by the manufacturer (for example, unscrew wheel, remove brake, loosen central nut on wheel bearing).

Go to ...

- ➔ **Chapter 4.1** - Removing a wheel hub / wheel bearing unit
- ➔ **Chapter 4.2** - Removing a wheel hub and wheel bearing
- ➔ **Chapter 4.3** - Removing a cardan shaft

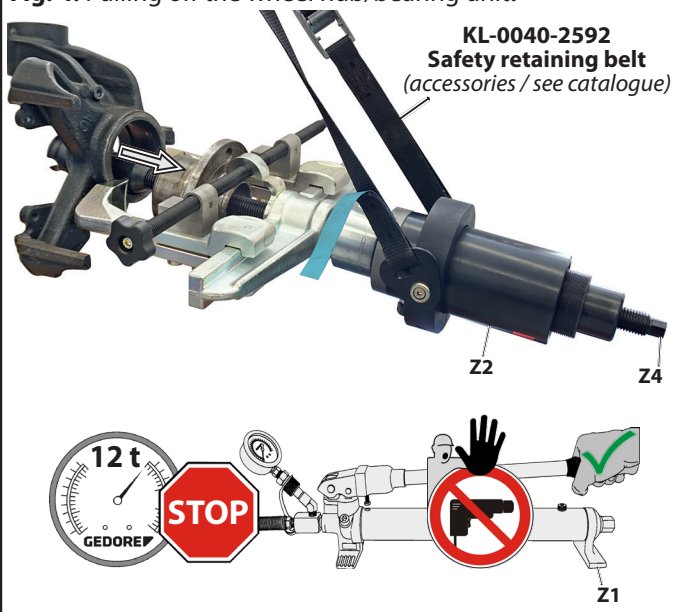
Fig. 3: Position the wheel hub extractor correctly



i

The maximum stroke of the hydraulic cylinder [Z2] is 50mm! As soon as it is reached: Interrupt the forcing process, relieve the pressure at the hydraulic pump [Z1], re-tighten the quick-release nut [D] until it is fully applied, and continue the forcing process.

Fig. 4: Pulling off the wheel hub/bearing unit.



4. TYPICAL APPLICATIONS

4.1 Removing a wheel hub / wheel bearing unit

This typical application describes the **hydraulic** extraction of a **wheel hub/bearing unit** from the **wheel bearing housing**.

(The **mechanical** extraction follows the same principle)

CAUTION

Risk of damaging the wheel hub extractor and the steering knuckle.

► The **contact surfaces on the wheel bearing housing**, on which the hooks [B2] are placed, **must be** level and at the same height so that the wheel hub extractor is exactly at right angles to the wheel bearing!

► The hooks [B2] must be adjusted by turning the adjusting spindle via the star handle [B1] so that they rest evenly and securely on the wheel bearing housing over the largest possible area.

► Be sure to use the quick-release nut [D] in conjunction with the conical adapter [C].

1. Position the wheel hub extractor on the wheel bearing housing as shown in **Fig. 3A**.

Then push the conical adapter [C] in the correct position, as shown in **Fig. 3B**, together with the quick-release nut [D] completely onto the pulling spindle [Z4], and tighten the quick-release nut [D] hand-tight.

2. Connect the hydraulic pump [Z1] to the hydraulic cylinder [Z2].

WARNING

The wheel hub extractor can break, fling around, and fall down when pulling out the wheel hubs/bearing unit. This can cause **DEATH** or **SEVERE INJURIES**!

► **Never** exceed the **maximum load of 12t**!

► **Constantly** watch the pressure on the pressure gauge of the hydraulic pump [Z1] while pulling out.

► While pulling out, **never** stand in the axial extension of the pull spindle [Z4].

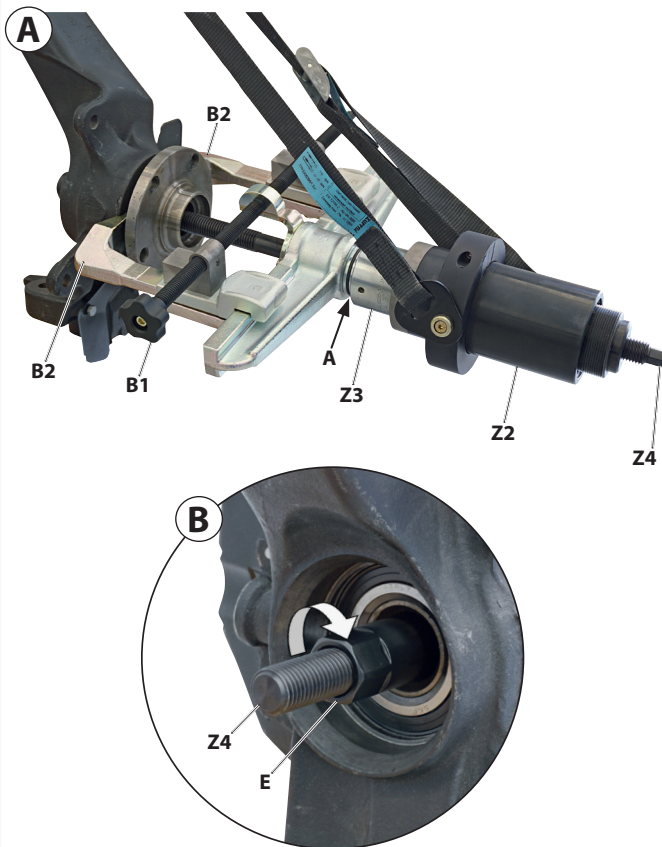
► Always secure the wheel hub extractor against dropping, for example using the safety retaining belt - **KL-0040-2590**, or the mounting device - **KL-0040-258 A**!

3. While you are operating the hydraulic pump [Z1], watch the pressure on the pressure gauge, and remove the wheel hub / bearing unit from the steering knuckle. **Fig. 4**

4. Perform further work on the vehicle as specified by the manufacturer.

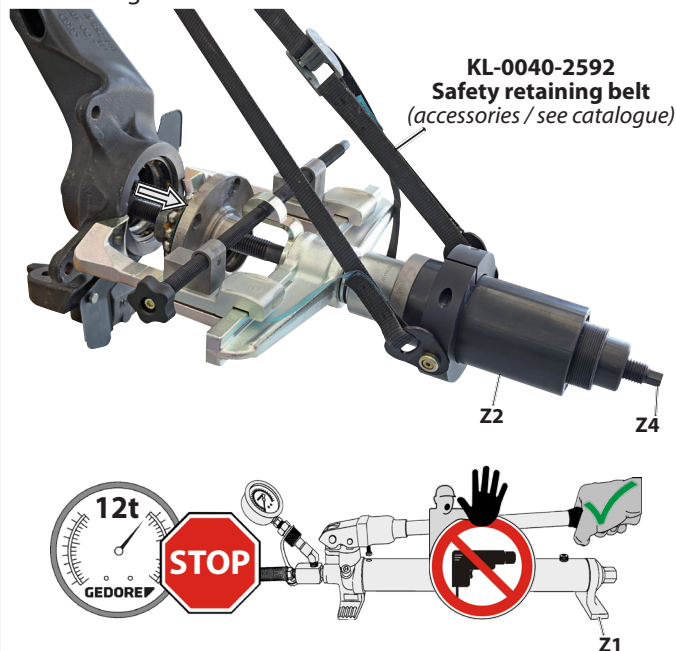
The subsequent installation can be carried out, for example, using the wheel bearing tools from the **KL-0041-..series**, see the **GEDORE-Automotive catalogue**.

📷 5: Position the wheel hub extractor correctly



i The maximum stroke of the hydraulic cylinder [Z2] is 50mm! As soon as it is reached: Interrupt the forcing process, relieve the pressure at the hydraulic pump [Z1], re-tighten the clamping nut [E] until it is fully applied, and continue the forcing process.

📷 6: Pulling out the wheel hubs



4.2 Removing a wheel hub and a wheel bearing

This typical application describes the **hydraulic** extraction of a wheel hub from the wheel bearing housing as well as the subsequent pulling out of the wheel bearing from the wheel bearing housing.

(The **mechanical** extraction follows the same principle.)

CAUTION

Risk of damaging the wheel hub extractor and the steering knuckle.

- The **contact surfaces on the wheel bearing housing**, on which the hooks [B2] are placed, **must be** level and at the same height so that the wheel hub extractor is exactly at the right angle to the wheel bearing!
- The hooks [B2] must be adjusted by turning the adjusting spindle via the star handle [B1] so that they rest evenly and securely on the wheel bearing housing over the largest possible area.

1. Position the wheel hub extractor on the wheel bearing housing as shown in 📷 5A.

Subsequently, screw the clamping nut [E] completely onto the tension spindle [Z4] in the correct position, as shown in 📷 5B, and tighten it by hand.

2. Connect the hydraulic pump [Z1] to the hydraulic cylinder [Z2].

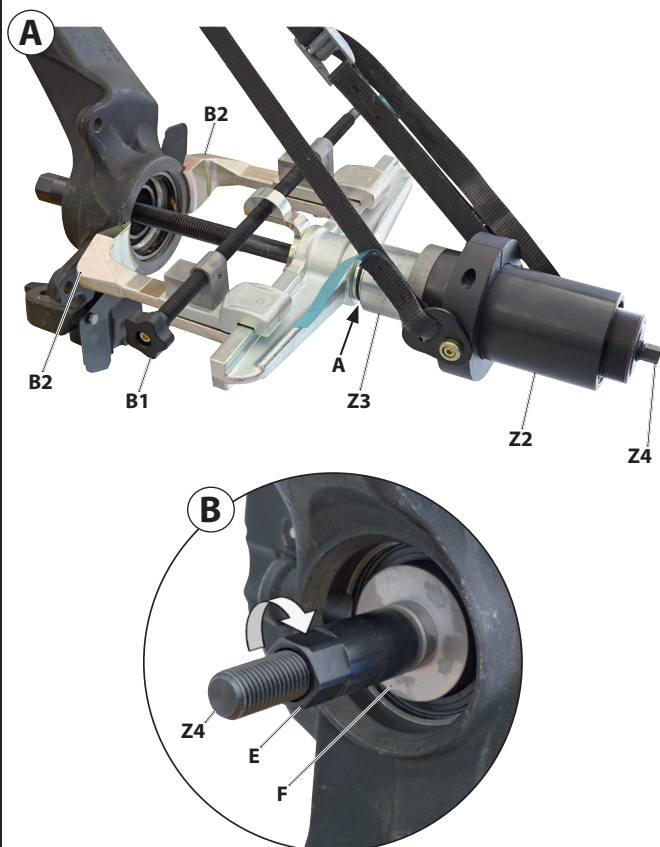
⚠ WARNING

The wheel hub extractor can break, fling around, and fall down when pulling out the wheel hubs/bearing unit. This can cause **DEATH** or **SEVERE INJURIES**!

- **Never** exceed the **maximum load of 12t**!
 - **Constantly** watch the pressure on the pressure gauge of the hydraulic pump [Z1] while pulling out.
 - While pulling out, **never** stand in the axial extension of the pull spindle [Z4].
 - It is **essential** to secure the wheel bearing housing against dropping, for example using the GEDORE safety harness - KL-0040-2590, or the mounting device - KL-0040-258 A!
3. While you are operating the hydraulic pump [Z1], watch the pressure on the pressure gauge, and remove the wheel hubs from the wheel bearing. 📷 6

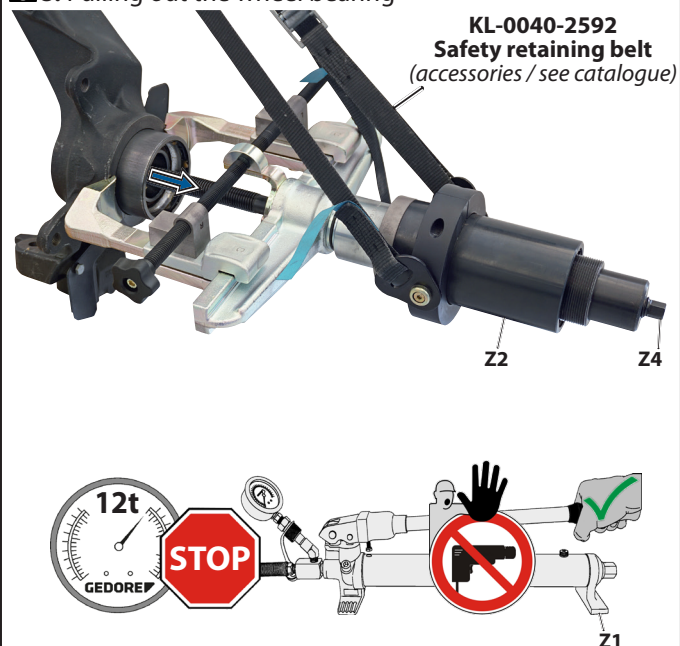
4. Relieve the hydraulic cylinder [Z2] via the hydraulic pump [Z1]. Remove the wheel hub extractor from the steering knuckle and remove the wheel hub.

7: Position the wheel hub extractor correctly



i The maximum stroke of the hydraulic cylinder [Z2] is 50mm! As soon as it is reached: Interrupt the forcing process, relieve the pressure at the hydraulic pump [Z1], re-tighten the clamping nut [E] until it is fully applied, and continue the forcing process.

8: Pulling out the wheel bearing



5. Depending on the vehicle, remove the circlip for the wheel bearing, if necessary.

CAUTION

The wheel hub extractor, the thrust ring [F], and the steering knuckle can be damaged.

▀ The **contact surfaces on the wheel bearing housing**, on which the hooks [B2] are placed, **must be** level and at the same height so that the wheel hub extractor is exactly at the right angle to the wheel bearing!

▀ The hooks [B2] must be adjusted by turning the adjusting spindle via the star handle [B1] so that they rest evenly and securely on the wheel bearing housing over the largest possible area!

▀ The inner diameter at the wheel bearing **must not be** larger than 56mm!

6. Position the wheel hub extractor on the wheel bearing housing as shown in **7A**.

Subsequently, screw the clamping nut [E] together with the thrust ring [F] completely onto the tension spindle [Z4] in the correct position, as shown in **7B**, and tighten the clamping nut [E] by hand.

i The inner diameter at the wheel bearing must not be larger than **56mm**, otherwise the thrust ring [F] can be pulled into the wheel bearing.

WARNING

The wheel hub extractor can break, fling around, and fall down when pulling out the wheel bearing. This can cause **DEATH** or **SEVERE INJURIES**!

▀ **Never** exceed the **maximum load of 12t**!

▀ **Constantly** watch the pressure on the pressure gauge of the hydraulic pump [Z1] while pulling out.

▀ While pulling out, **never** stand in the axial extension of the pull spindle [Z4].

▀ Always secure the wheel hub extractor against dropping, for example using the safety retaining belt - **KL-0040-2590**, or the mounting device - **KL-0040-258 A**!

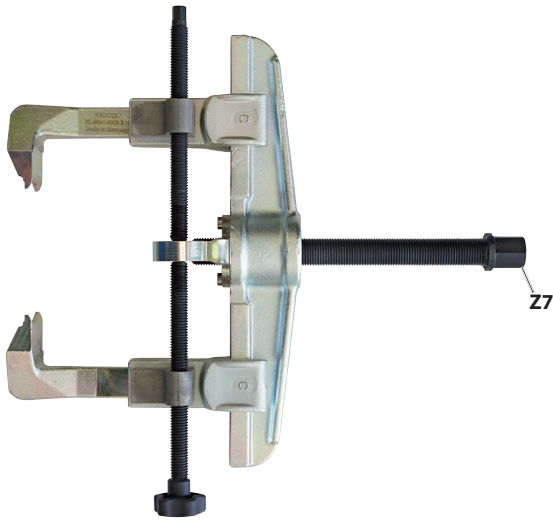
7. While you are operating the hydraulic pump [Z1], watch the pressure on the pressure gauge, and remove the wheel bearing from the steering knuckle. **8**

i Make sure that the thrust ring [F] is centred on the wheel bearing.

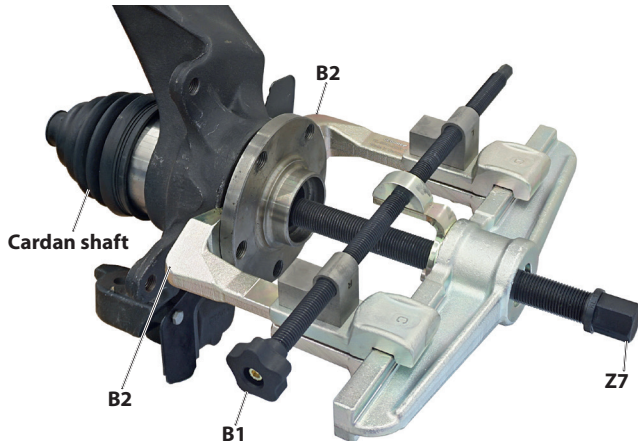
8. Perform further work on the vehicle as specified by the manufacturer.

The subsequent installation can be carried out, for example, using the wheel bearing tools from the **KL-0039-..series**, see the **GEDORE-Automotive catalogue**.

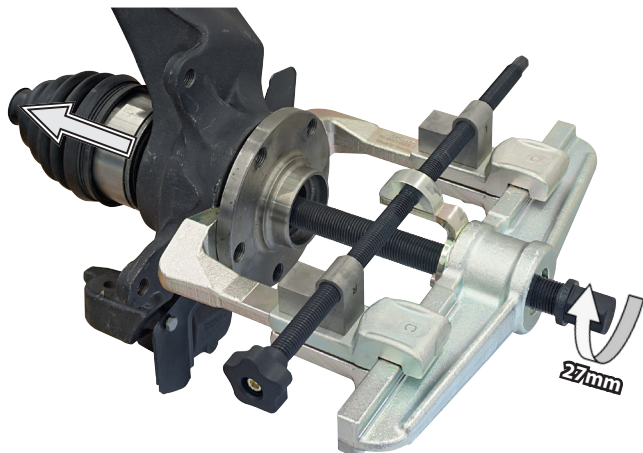
📷 9: Screw in the pressure spindle [Z7]



📷 10: Position the wheel hub extractor correctly



📷 11: Pressing out the cardan shaft



4.3 Removing a cardan shaft

This typical application describes the mechanical extraction of a bonded or stuck cardan shaft from the wheel hub.

- ❗ The wheel hub must have a flat support surface on the rear side to provide a support to the wheel hub extractor!
When using the thrust spindle [Z7], the max. load capacity of the wheel hub extractor is reduced to **7t**.

1. First prepare the wheel hub extractor accordingly. To do this, turn the pressure spindle [Z7] clockwise a few turns into the wheel hub extractor. 📷 9

CAUTION

Risk of damaging the wheel hub extractor and the wheel hub.

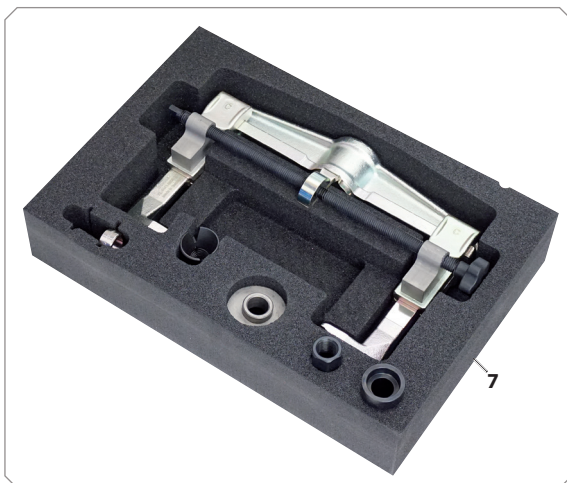
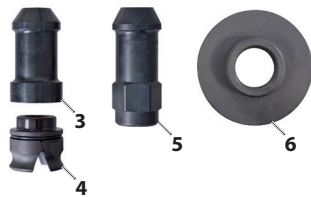
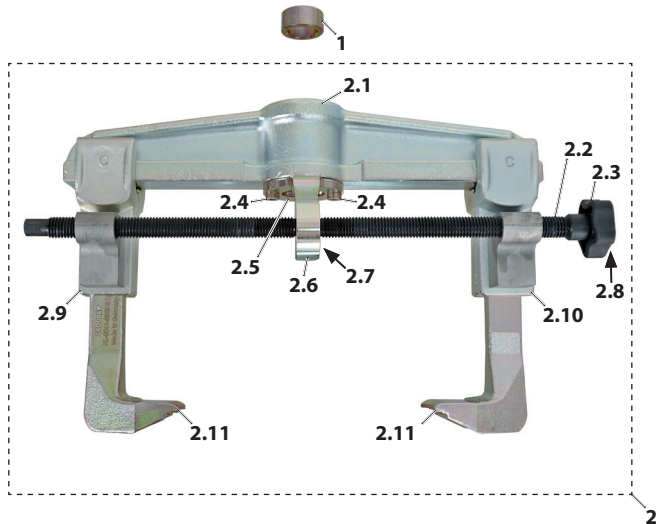
- The **contact surfaces on the wheel bearing**, on which the hooks [B2] are placed, **must be** level and at the same height so that the wheel hub extractor is exactly at right angles to the wheel bearing!
 - The hooks [B2] must be adjusted by turning the adjusting spindle via the star handle [B1] so that they rest evenly and securely on the wheel bearing housing over the largest possible area.
2. Position the wheel hub extractor on the wheel bearing housing as shown in 📷 10.
Then screw in the pressure spindle [Z7] until it rests against the cardan shaft or cardan shaft screw.

⚠ WARNING

The wheel hub extractor can break, fling around, and fall down when pressing out the cardan shaft. This can cause **DEATH** or **SEVERE INJURIES**!

- **Never** exceed the **maximum load** of **7t**!
 - **Constantly** watch the pressure on the pressure gauge of the hydraulic pump [Z1] while pulling out.
 - While pulling out, **never** stand in the axial extension of the pull spindle [Z4].
 - Always secure the wheel hub extractor against dropping, for example using the safety retaining belt - **KL-0040-2590**, or the mounting device - **KL-0040-258 A**!
3. Turn the pressure spindle [Z7] clockwise using a reversible ratchet (**size 27mm**) and push the cardan shaft out of the wheel hub. 📷 11
 4. Perform further work on the vehicle as specified by the manufacturer.

Overview of the single parts: KL-0041-380 EA



5. CARE AND STORAGE

ATTENTION

Improper care and storage can damage the wheel hub extractor. Therefore, **never** immerse the wheel hub extractor 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 wheel hub extractor and the operating instructions at a dry and clean place.

6. REPAIR

WARNING

For safety reasons, ensure that a damaged wheel hub extractor 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. SINGLE COMPONENT OVERVIEW

KL-0041-380 EA - Wheel hub extractor in foam insert

Item	Part no.	Description	Qty.
1	KL-0214-2202	Spacer ring 30mm dia.	1
2	KL-0041-3800 A	Wheel hub extractor basic unit with adjusting spindle	1
2.1	KL-0041-3801 A	Bridge	1
2.2	KL-0041-3808	Adjusting spindle	1
2.3	KL-0121-3003	Star handle M8	1
2.4	KL-0284-9007	Cheese-head screw M6 x 14mm	2
2.5	KL-0041-3806	Bracket	1
2.6	KL-0041-3807 A	Spindle housing	1
2.7	KL-0028-2008	Countersunk screw M6 x 14mm	2
2.8	KL-0055-0012	Cheese-head screw M6 x 25mm	1
2.9	KL-0041-3804	Clamping shoe pair, left-handed thread	1
2.10	KL-0041-3805	Clamping shoe pair, right-handed thread	1
2.11	KL-0041-3803	Hook	2
3	KL-0039-2192	Conical adapter 37mm dia.	1
4	KL-0039-2120-2	Quick-release nut M20	1
5	KL-0041-3812	Clamping nut 30mm dia.	1
6	KL-0039-1506	Thrust ring 60mm dia.	1
7	KL-4999-1315	Foam insert (Empty)	1
-	KL-4999-9001	Anchor nail 3.1 x 40mm	2
-	KL-4999-9066	Rating plate M-014A-01B	1

i Storage system: Plastic case - **KL-4999-1391**

8. ENVIRONMENTALLY COMPLIANT DISPOSAL

Dispose of the wheel hub extractor and the packaging material in an environmentally compatible way in accordance with the legal requirements. If necessary, ask your local authorities about environmentally friendly disposal options.

GEDORE-Werkzeugfabrik GmbH & Co. KG

Remscheider Straße 149
42899 - Remscheid
Postfach 120361
47873 Remscheid
GERMANY

Vertrieb DEUTSCHLAND

☎ +49 (0) 2191 / 596-0
📠 +49 (0) 2191 / 596-230
✉ info@gedore.com
🌐 www.gedore.com

Sales INTERNATIONAL

☎ +49 (0) 2191 / 596-910
📠 +49 (0) 2191 / 596-911
✉ info@gedore.com
🌐 www.gedore.com

GEDORE TOOLS, INC.

Only for USA, Canada & Mexico
Sólo para EE.UU., Canadá y México
Seulement pour les USA, le Canada et le Mexique
7187 Bryhawke Circle, Suite 700, North Charleston, SC 29418, USA

☎ +1-843 / 225 50 15
📠 +1-843 / 225 50 20
✉ info@gedoretools.com
🌐 www.gedoretools.com

Worldwide GEDORE service centers and offices are listed on the Internet at: www.gedore.com

GEDORE Automotive GmbH

Breslauer Straße 41
78166 - Donaueschingen
Postfach 1329
78154 Donaueschingen
GERMANY

Vertrieb DEUTSCHLAND

☎ +49 (0) 771 / 8 32 23-0
📠 +49 (0) 771 / 8 32 23-90
✉ info.gam@gedore.com
🌐 gedore-automotive.com



www.gedore-automotive.com