



## KL-0021-.. / KL-0025-.. Internal-Type Spring Compressor Series



**Operating instructions** EN  
 ⚠ Read and understand before use!



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## 1. READ AND UNDERSTAND FOR YOUR SAFETY



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

EN **Never** allow unauthorised, inexperienced persons, minors and children, or persons with limited physical, sensory, and mental abilities to use the internal-type spring compressor!

### 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 internal-type spring compressor **must** ensure that **only** trained personnel in specialised vehicle workshops use the internal-type spring compressor!
- ✔ The owner of the internal-type spring compressor **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 internal-type spring compressor!
- ✔ The owner of the internal-type spring compressor **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/her!

### 1.3 Intended use

The internal-type spring compressor ...

- ✔ **may only** be used for compressing and relieving chassis springs when installing or removing wishbone and multi-link axles!
- ✔ **may only** be used on vehicles as specified in **Chapter 2. - Product description!**
- ✔ **may only** be used to a **max. load of 30,000 Newton!**
- ✔ **may only** be used by hand with muscle power with a manual drive!
- ✔ **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 internal-type spring compressor ...

- ✔ **must never** be used for compressing springs other than that intended for it!
- ✔ **must never** be used together with an impulse or impact screwdriver!
- ✔ **must never** be used with a machine-operated drive or a drive other than that intended for it!
- ✔ **must never** be used for batch processing with many compressing 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 internal-type spring compressor **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 internal-type spring compressor! The internal-type spring compressor 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 internal-type spring compressor to protect yourself against flying parts or particles!

When using the internal-type spring compressor, flinging 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 internal-type spring compressor to protect yourself against sharp edges and crushing between parts!

When working with the internal-type spring compressor, 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 internal-type spring compressor to protect yourself against dropping parts!

When working with the internal-type spring compressor, dropping parts can cause **SEVERE INJURIES** to your **feet and toes!**

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### 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>Indicates</b> a hazardous situation which, if not avoided, could cause <b>DEATH</b> or <b>SEVERE INJURIES</b> .
	<b>Indicates</b> a hazardous situation which, if not avoided, could cause <b>MODERATE</b> or <b>MINOR INJURIES</b> .
	<b>Indicates</b> a situation which, if not avoided, can cause damage to the tool or an object in its vicinity.
	<b>Note</b> on important information and useful tips.

### 1.7 Basic warnings

#### **! WARNING - Danger to life from MISUSE**

As a consequence of **MISUSE**, the internal-type spring compressor and the spring can slip, break, and thus fall down or fling around. This can cause **DEATH** or **SEVERE INJURIES!**

- When using the internal-type spring compressor, flinging parts or particles can cause **SEVERE INJURIES** to your **eyes!**
- When working with the internal-type spring compressor, sharp edges and crushing between parts can cause **SEVERE INJURIES** to your **hands!**
- When working with the internal-type spring compressor, dropping parts can cause **SEVERE INJURIES** to your **feet and toes!**
- Read and understand these operating instructions **before using** the internal-type spring compressor, and observe all safety and warning instructions for **safe use!**
- Always** work with the internal-type spring compressor in accordance with the basic regulations on work safety and accident prevention!
- Only** use the internal-type spring compressor as described in these operating instructions!
- Always** observe the vehicle-specific application procedures in the repair guide of the vehicle manufacturer!
- Never** use the internal-type spring compressor if it is damaged or has loose parts or unauthorised modifications!
- Never** use the internal-type spring compressor with a machine-operated drive; **only** drive it by hand with muscle power with a manual drive!
- Never** use the internal-type spring compressor for batch processing with many compressing processes within a few minutes!
- Always** wear your personal protective equipment (*safety goggles, protective gloves, safety shoes*) during work!
- Never** hit the internal-type spring compressor with a hammer or anything similar!

## ⚠ WARNING - Danger to life from OVERLOAD

As a consequence of **OVERLOAD**, the internal-type spring compressor and the spring can slip, break, and thus fall down or fling around. This can cause **DEATH** or **SEVERE INJURIES!**

- ✔ **Never** exceed the **maximum loading capacity** of the internal-type spring compressor!
- ✔ **Never** use the internal-type spring compressor if it is damaged or has loose parts or unauthorised modifications!
- ✔ **Never** use the internal-type spring compressor with an impulse or impact wrench!
- ✔ **Never** use the internal-type spring compressor with a machine-operated drive; **only** drive it by hand with muscle power with a manual drive!
- ✔ **Never** use the internal-type spring compressor for batch processing with many compressing 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 internal-type spring compressor **DROPPING** during preparation and use (overhead, for example). This can cause **SEVERE INJURIES!**

- ✔ **As a basic rule**, ensure that the internal-type spring compressor is securely attached to the chassis spring!
- ✔ Avoid dropping the internal-type spring compressor **at all costs**, especially when it is under load!
- ✔ **Never** leave the internal-type spring compressor unattended in loaded condition at the vehicle spring!
- ✔ Put down the internal-type spring compressor **safely** to prevent it from dropping (for example on a workbench)!
- ✔ **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 chassis spring and the internal-type spring compressor.

- ✔ **Always** observe the installation position of the chassis spring 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 internal-type spring compressor for sufficient lubrication. If necessary, lubricate them only with molybdenum disulphide paste (for example **GEDORE Automotive - KL-0014-0030**)!
- ✔ **Never** use the internal-type spring compressor for batch processing with many compressing processes within a few minutes!
- ✔ **Never** clamp the internal-type spring compressor in a vice.

## 1.8 Basic safety instructions

For your safety, **always** observe the following safety precautions when using the internal-type spring compressor in order to avoid injuries and material damage caused by misuse or unsafe handling.

- ✔ Read and understand these operating instructions **before using** the internal-type spring compressor, 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 internal-type spring compressor in accordance with the basic regulations on work safety and accident prevention!
- ✔ **Never** use the internal-type spring compressor when you are tired or under the influence of alcohol, drugs, or medication!
- ✔ **Before each use**, check the internal-type spring compressor **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!
- ✔ **Before using** the internal-type spring compressor, make sure that **no** unauthorised persons are in the immediate environment!
- ✔ **Always** observe the **max. loading capacity** when using the internal-type spring compressor, and **never** exceed it!
- ✔ **Always** keep hair, clothing, and gloves away from rotating parts!
- ✔ **Never** use the internal-type spring compressor 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 internal-type spring compressor, and contact **GEDORE Automotive GmbH if necessary!**

- ✔ For safety reasons, ensure that a damaged internal-type spring compressor is no longer used! Professional inspection and repair may only be carried out by specially trained personnel from **GEDORE Automotive GmbH!**
- ✔ **Always** use the internal-type spring compressor 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 internal-type spring compressor 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.

### 1.10 Emissions

Molybdenum disulphide paste and hydraulic oil can drip when using the internal-type spring compressor, and thus pose a hazard to the environment.

- ✔ **Immediately** remove excess molybdenum disulphide paste, for example with the help a cleaning rag.
- ✔ In case of skin contact with hydraulic oil, clean the affected area **immediately** with degreasing soap and water.
- ✔ **Be sure to** dispose of pollutants such as molybdenum disulphide paste in an environmentally friendly manner.
- ✔ Safety data sheets *in accordance with Regulation (EC) No. 1907/2006*, for molybdenum disulphide paste (**MOLYKOTE® 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 internal-type spring compressor **at regular intervals** and **only** when the tool is not tensioned or compressed! Poor and improper maintenance can damage the internal-type spring compressor, thus causing **DEATH** or **SEVERE INJURIES!**

#### Prior to each use:

- ✔ **Prior to each use**, check the internal-type spring compressor **carefully** for damage, loose parts or unauthorised modifications! In particular, check that the clamping pins of the anti-rotation element are firmly seated!
- ✔ Prior to **each use** of the internal-type spring compressor, check the spindle for contamination and damage. If necessary, clean it, and subsequently lubricate it **only** with molybdenum disulphide paste! (For example, **GEDORE Automotive - KL-0014-0030**)

#### Every 6 months:

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

#### Recommended: Every 24 months:

- ✔ Have the internal-type spring compressor professionally checked **every 24 months** by authorised **GEDORE Automotive GmbH** specialists!

### 1.12 Troubleshooting

**Only** perform troubleshooting on the internal-type spring compressor when it is not compressed!

**Problem:** The spindle drive nut on the internal-type spring compressor is sluggish.

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

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

**Problem:** The drive nut of the spindle of the internal-type spring compressor is loose, no frictional connection any more.

**Reason:** The straight pin pin of the drive nut is defective, for example from overload of the compressor cylinder.

**Remedy:** Relieve the compressor cylinder via the auxiliary drive and insert a new straight pin into the drive nut (see **Chapter 6.**).

## 2. PRODUCT DESCRIPTION

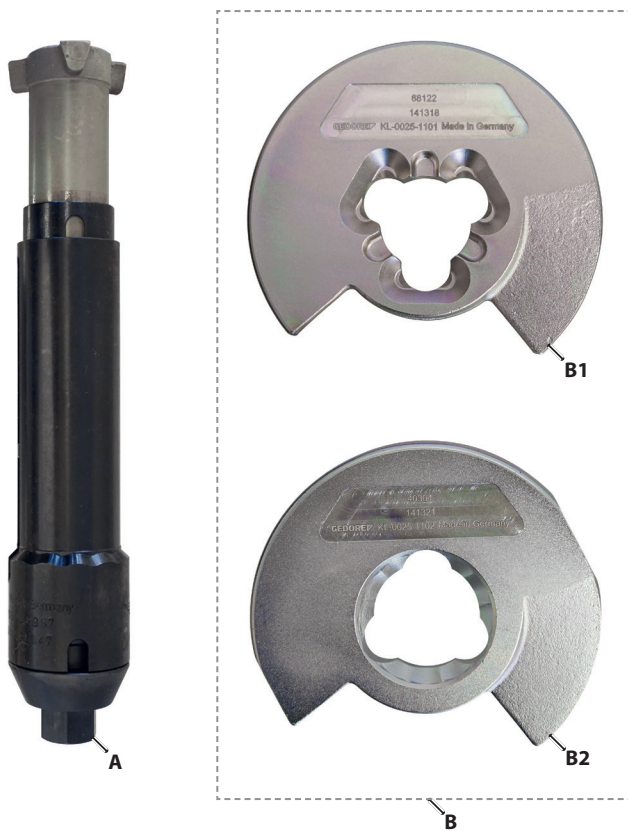
### 2.1 KL-0021-.. / KL-0025-.. - Internal-type spring compressor series with pressure plates

Universally suitable for chassis springs on wishbone and multi-link axles, for example on Mercedes, Chrysler, Saab, Ford, Opel, GM, Rover, and many more.

The internal-type spring compressor enables safe tensioning and relieving of chassis springs during the installation and removal on transverse and trailing arm axles without lowering the rear axle carrier for this purpose.

The extremely stable and robust design ensures a very high safety level, and the unique three-point safety lock as well as the special corrugated profile prevent the pressure plates from rotating in relation to each other when the spring is compressed, thus preventing the spring from popping out.

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### 2.2 Scope of delivery

Item	Description
A	Compressor cylinder
B	Pair of pressure plates
B1	Pressure plate with catch
B2	Pressure plate with corrugated profile

### 2.3 Specifications

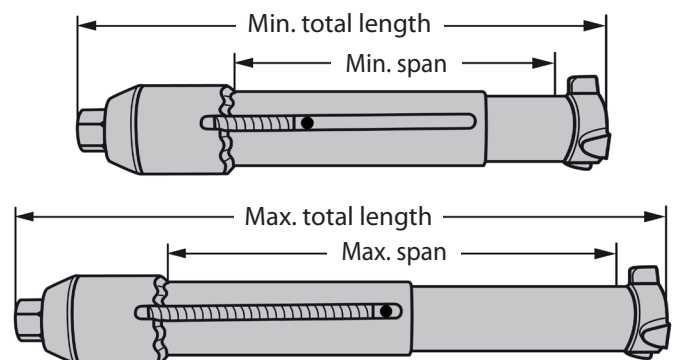
Max. load: ..... 30 000N

Breaking point: ..... 120 000N

Drive: ..... 19mm / hexagon

For spring diameter (depending on pressure plate): 95 - 190mm

Dimensions (depending on compressor cylinder): ...



**Required drive parts:**  
see Chapter 3.2

**MECHANICAL**

Total length (KL-0021-100):..... 263 - 470mm

Span (KL-0021-100):..... 110 - 317mm

Total length (KL-0025-100):..... 263 - 470mm

Span (KL-0025-100):..... 110 - 317mm

Total length (KL-0025-200):..... 233 - 410mm

Span (KL-0025-200):..... 110 - 287mm



**Fig 4: KL-0021 / KL-0021 K**



**Fig 5: KL-0025-1 / KL-0025-1 K**



**Fig 6: KL-0025-2 / KL-0025-20 E**



**KL-0025-20 E**



## 2.4 Internal-type spring compressor kits

### KL-0021 - Internal-type spring compressor with pressure plates

Universal fit for transverse and trailing arm axles; for example on Mercedes, Ford, GM, Chrysler, VW T2 and LT, Fiat, Hummer, Mazda, Toyota, Nissan, Mitsubishi, Renault, Peugeot, Volvo, etc. Especially suitable for Mercedes 190 (W201), C-Class (W202), CLK (W208), E-Class (W210), S-Class (W140), SL (R129), SLK (R170), W116, W123, W124, and W126 front and rear axles.

Part no.	Description	Qty.
KL-0021-100	Compressor cylinder	1
KL-0025-11	Pair of pressure plates size 1	1
KL-0025-12	Pair of pressure plates size 2	1

**i** KL-0021 KA is additionally in plastic case - KL-0025-2090

**i** Detailed overview of individual parts: See Chapter 9.

### KL-0025-1 - Long internal-type spring compressor with pressure plates

Universal fit for transverse and trailing arm axles; for example on Mercedes, Ford, GM, Chrysler, VW T2 and LT, Fiat, Hummer, Mazda, Toyota, Nissan, Mitsubishi, Renault, Peugeot, Volvo, etc. Especially suitable for Mercedes 190 (W201), C-Class (W202), CLK (W208), E-Class (W210), S-Class (W140), SL (R129), SLK (R170), W116, W123, W124, and W126 front and rear axles.

Part no.	Description	Qty.
KL-0025-100	Compressor cylinder, long	1
KL-0025-11	Pair of pressure plates size 1	1
KL-0025-12	Pair of pressure plates size 2	1

**i** KL-0025-1 KA is additionally in plastic case - KL-0025-2090

**i** Detailed overview of individual parts: See Chapter 9.

### KL-0025-2 - Short internal-type spring compressor with pressure plates

Fits universally for transverse and trailing arm axles.

Especially suitable for Chrysler, Mercedes C-Class (W202), CLK (W208), E-Class (W210, W211), S-Class (W140), SL (R107, R129, R170), W114, W115, W116, W123, W124, W126, and W201 for rear axle springs. In combination with pressure plates **KL-0025-16** also suitable for BMW 1 Series (E87) and 3 Series (E90).

Part no.	Description	Qty.
KL-0025-200	Compressor cylinder, short	1
KL-0025-11	Pair of pressure plates size 1	1
KL-0025-12	Pair of pressure plates size 2	1

**i** KL-0025-20 E additionally in foam insert - KL-0025-2091-2

**i** Storage system: Plastic case - KL-4990-9374

**i** Detailed overview of individual parts: See Chapter 9.

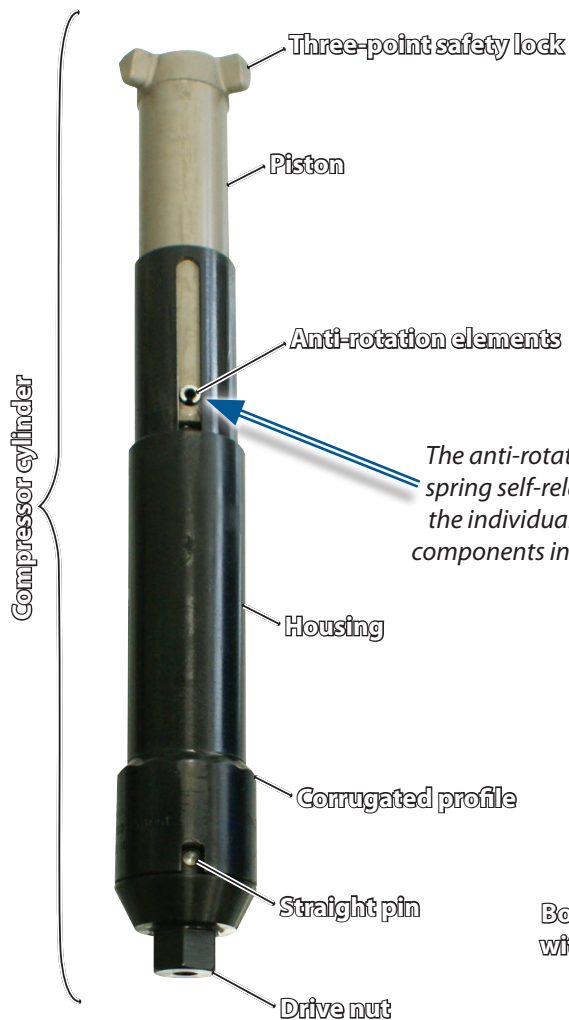
**i** For other pressure plates, see chapter 7. or the GEDORE-Automotive catalogue.

## 2.4 Component overview

This overview shows basic components, designations and information on the internal-type spring compressor.

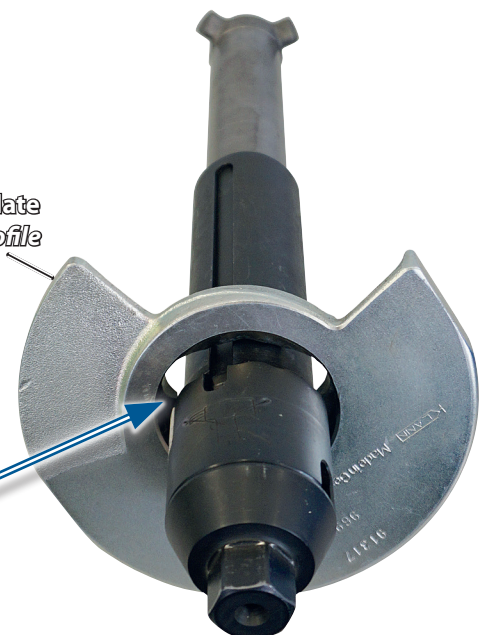
*The three-point safety lock allows the spring to be compressed only when the compressor cylinder has been properly locked in the upper pressure plate.*

Upper spring plate with three-point safety lock



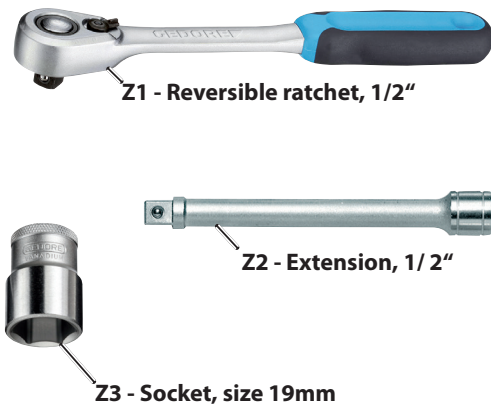
*The anti-rotation elements prevent spring self-relaxation or twisting of the individual compressor cylinder components in relation to each other.*

Bottom pressure plate with corrugated profile

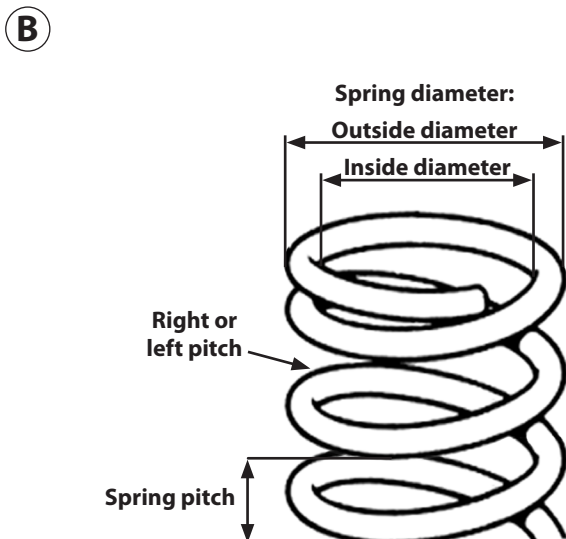
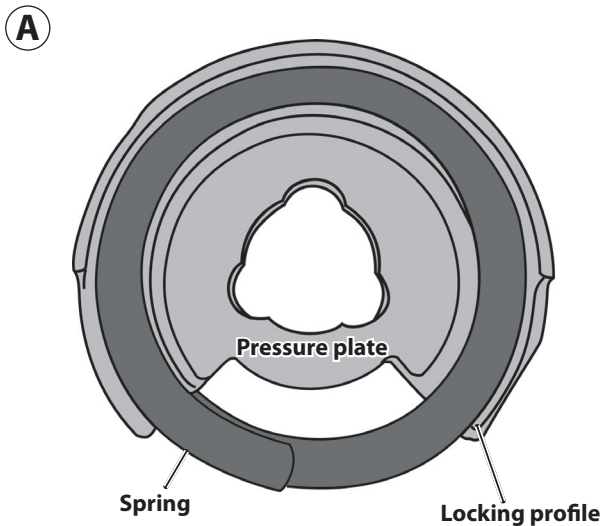


*The corrugated profile locks the lower pressure plate and prevents it from rotating towards the upper pressure plate during compression. This prevents the compressed spring from being turned out of the internal-type spring compressor.*

**📷 1:** Required drive parts



**📷 2:** Determining the suitable pressure plates.



**3. PREPARATION**

**⚠️ WARNING**

The internal-type spring compressor can break and abruptly release itself as a result of **misuse** or **overload**, which can cause the internal-type spring compressor, various parts and the spring of the vehicle to be hurled about. This can cause **DEATH** or **SEVERE INJURIES!**

✔️ **Prior to using** the internal-type spring compressor, read and understand **all** safety instructions and warnings listed in **Chapter 1** and **always observe** them for safe use!

✔️ **Use** the internal-type spring compressor as intended and described in these operating instructions. **Always** observe the vehicle-specific application procedures in the repair manual of the vehicle manufacturer!

✔️ **Before each use**, check the internal-type spring compressor **carefully** for damage, loose parts, or unauthorised modifications. **Never** use it if you notice any such deficiencies!

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

**3.1 Checking the scope of delivery**

Prior to using the internal-type spring compressor, check to ensure that all the parts included in the scope of delivery (see **chapter 2.**) are available, and follow the instructions below.

**3.2 Assembling drive parts**

**⚠️ WARNING**

Using a machine-operated drive can cause the internal-type spring compressor to slip, break and thus drop or be hurled about. This can cause **DEATH** or **SEVERE INJURIES!**

✔️ **Never** use the internal-type spring compressor with a machine-operated drive. Operate it **only** with a manual drive with muscle power!

1. Assemble the required drive parts for the internal-type spring compressor as shown in **📷 1.**

① *For other pressure plates see the GEDORE main catalogue.*

**3.3 Preparing the tool**

1. First determine the matching pressure plates. To do this, check the pressure plates for the spring.

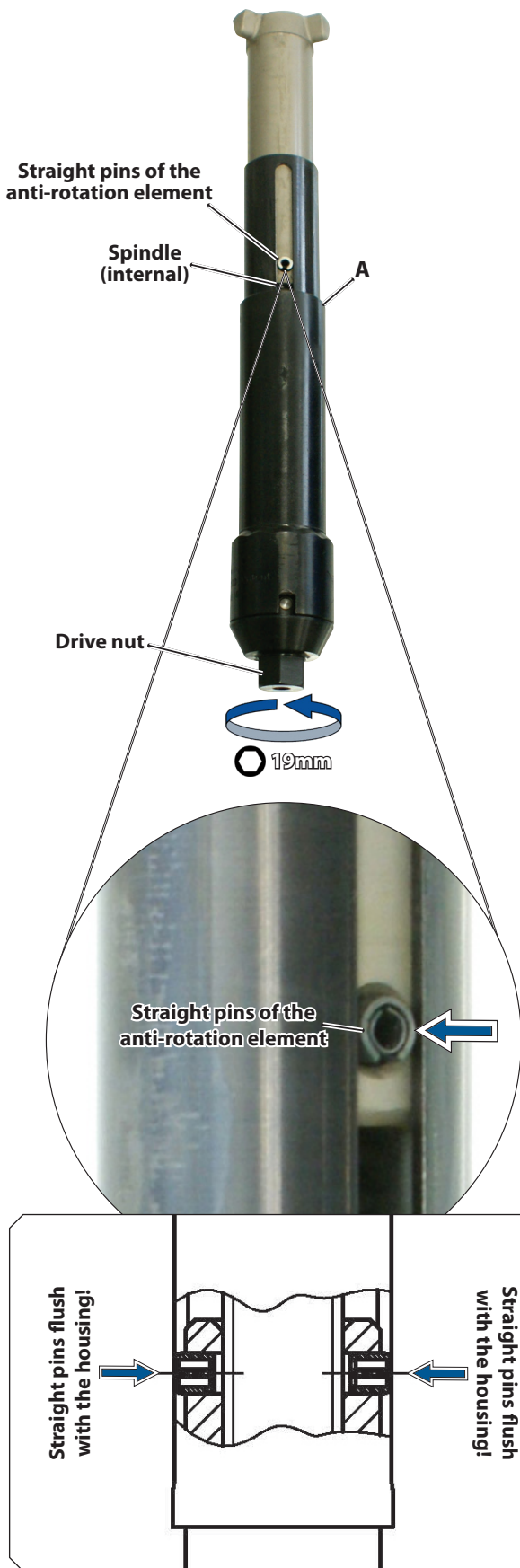
The spring must evenly rest on the pressure-plate locking profile **📷 2A.** It must match with the diameter - $\emptyset$  as well as with the pitch **📷 2B.**

① The pressure plates **[B]** **only** fit with right-hand springs **📷 2B!**

① *For other pressure plates, see chapter 7. or the GEDORE-Automotive main catalogue.*



**📷 3:** Check the anti-rotation elements at the compressor cylinder [A] for tight seat before each use!



2. Extend the compressor cylinder [A] completely until **shortly before the stop.**

To do this, turn the drive nut on the compressor cylinder [A] with the reversible ratchet [Z1] and the socket [Z3] anticlockwise **📷 3.**

## ⚠️ WARNING

The internal-type spring compressor can suddenly release itself and break if the anti-rotation element is loose or defective. As a result, parts being hurled about and the spring of the vehicle can cause **DEATH** or **SEVERE INJURIES!**

➤ **Before each use** of the internal-type spring compressor check both straight pins of the anti-rotation element for tight seat!

➤ **Never** use the internal-type spring compressor when the anti-rotation elements are loose or damaged.

➤ If the straight pins of the anti-rotation element are loose, the internal-type spring compressor must be sent to **GEDORE Automotive GmbH** for repair.

3. Before using the internal-type spring compressor, check the two straight pins of the anti-rotation element at the compressor cylinder [A] for tight seat **📷 3.**

① The straight pins of the anti-rotation elements prevent spring self-relaxation or twisting of the individual compressor cylinder components in relation to each other.

## ⚠️ CAUTION

In case of springs with extremely high spring force or in case of overheating, the internal-type spring compressor can slowly release itself. This can cause **MODERATE** or **MINOR INJURIES** due to crushing hands or fingers.

➤ To lubricate the spindle, use **only** molybdenum disulphide paste, for example **KL-0014-0030!**

## CAUTION

The spindle of the internal-type spring compressor can run dry and be damaged.

➤ **Always** ensure that the spindle on the internal-type spring compressor is clean. Lubricate it **only** with molybdenum disulphide paste, for example **KL-0014-0030!**

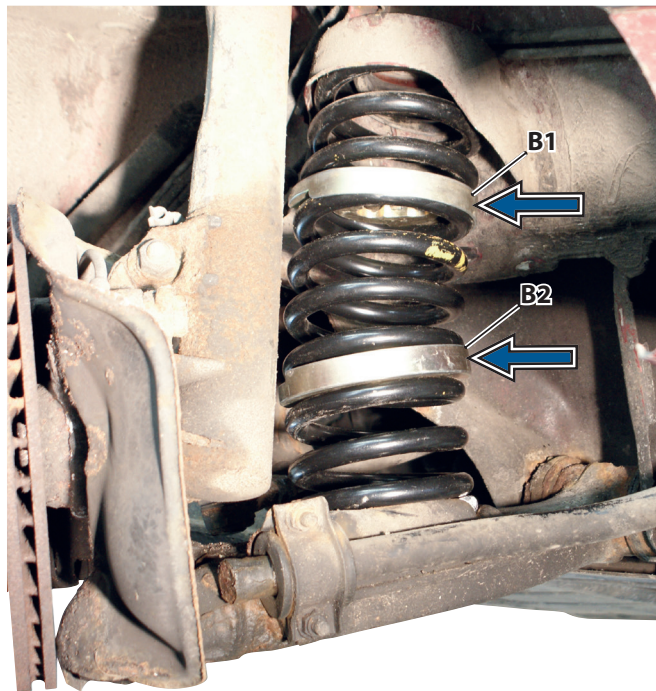
4. Check the spindle on the internal-type spring compressor for dirt and damage; clean it if necessary, and lubricate it with molybdenum disulphide paste, for example **KL-0014-0030!**

## 3.4 Preparing the vehicle

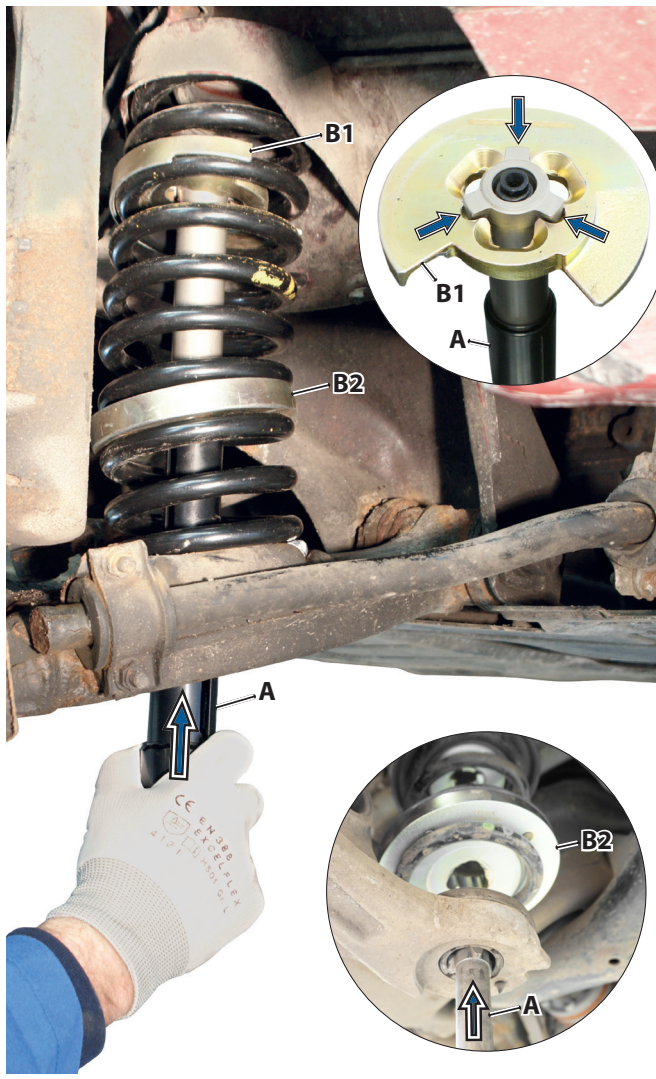
1. Loosen and dismantle all necessary parts as specified by the manufacturer. For example, remove wheels and loosen cable plug connections.



📷4: Insert the pressure plates [B..] into the spring.



📷5: Insert the compressor cylinder [A] and lock it.



## 4. TYPICAL APPLICATION

This typical application describes the tensioning and releasing of a suspension spring during removal and installation on a wishbone or trailing arm axles.

### 4.1 Removing the chassis spring

#### ⚠️WARNING

**Very high forces** are exerted when tensioning springs! Using the wrong pressure plates bears the risk of the spring jumping out of the pressure plates during the tensioning process. This can result in **DEATH** or **SEVERE INJURIES** caused by the spring or fragments of it being hurled about.

- ✔ Ensure that the spring rests **evenly** in the locking profile of the pressure plates [B..], both in diameter and in pitch!
- ✔ Use the pressure plates [B..] **only** for right-hand springs!

#### ⚠️CAUTION

The pressure plates can drop and cause **moderate** or **minor injuries**.

- ✔ Insert the pressure plates [B..] safely into the spring so that they cannot drop.

1. As shown in 📷4, insert the pressure plate [B1] with locking in the **upper half** of the spring, and the pressure plate [B2] with corrugated profile in the **lower half** of the spring.

#### ⚠️CAUTION

The compressor cylinder and the pressure plates can drop and cause **moderate** or **minor injuries**.

- ✔ Hold the pressure plates tight [B..] when inserting the compressor cylinder [A]!
- ✔ Only release the compressor cylinder [A] when it sits safely in the three-point safety lock.

2. Insert the clamping cylinder [A] from below through the spring into the pressure plates [B..] and lock it by a **60° turn + lowering** into the *three-point safety lock* of the upper pressure plate [B1] 📷5.

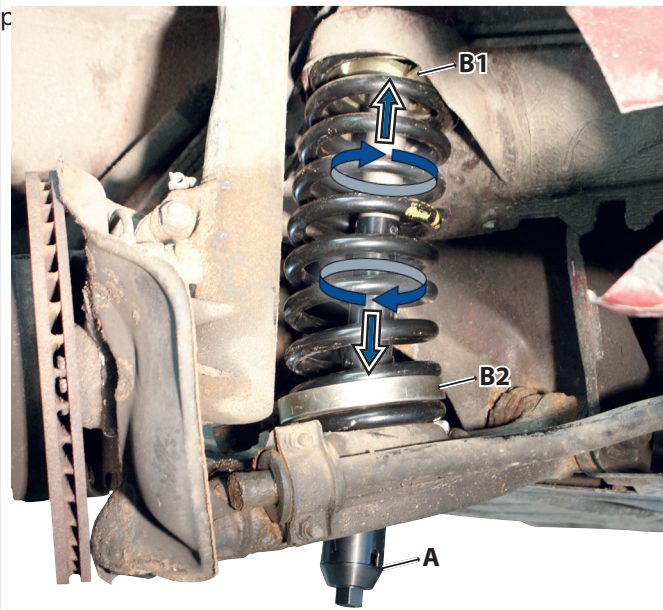
- ① The *three-point safety lock* allows the spring to be compressed only when the compressor cylinder [A] was properly locked into the pressure plate [B1].

#### 🧑Expert's tip:

To facilitate the insertion of the compressor cylinder [A] at various vehicles, it is helpful to lubricate the bottom hole of the wishbone with a suitable lubricant.



📷6: Turn the pressure plates into the max. clamping



3. Take the following steps to tension as many coils of the spring as possible and thus make removal easier!

Turn the upper pressure plate [B1] together with the locked compressor cylinder [A] as far as possible by hand upwards in the spring 📷6.

Subsequently, turn the lower pressure plate [B2] about the compressor cylinder [A] as far as possible by hand downwards in the spring 📷6.

① Make sure that the pressure plates [B..] are offset from each other by about **180°** to allow straight tensioning of the spring.

## ⚠️WARNING

**Very high forces** are exerted when tensioning springs! Incorrect assembly, overloading or misuse can cause the internal-type spring compressor to slip and break, causing the spring to suddenly release itself! As a result, parts being hurled about and the spring can cause **DEATH** or **SEVERE INJURIES!**

✔ **Before each use** of the internal-type spring compressor, check both screws of the anti-rotation element for tight seat.

✔ **Before each use**, check the internal-type spring compressor **carefully** for damage, loose parts, or unauthorised modifications. **Never** use it if you notice any such deficiencies!

✔ **Never** exceed the **maximum load of 30 000 Newton** of the internal-type spring compressor.

✔ **Never** use the internal-type spring compressor with a machine-operated drive. Operate it **only** with a manual drive with muscle power!

✔ Stop compression **immediately** when the maximum span is reached or the spring coils are in contact with each other!

## ⚠️CAUTION

In case of springs with extremely high spring force or in case of overheating, the internal-type spring compressor can slowly release itself. This can cause **MODERATE** or **MINOR INJURIES** due to crushing hands or fingers.

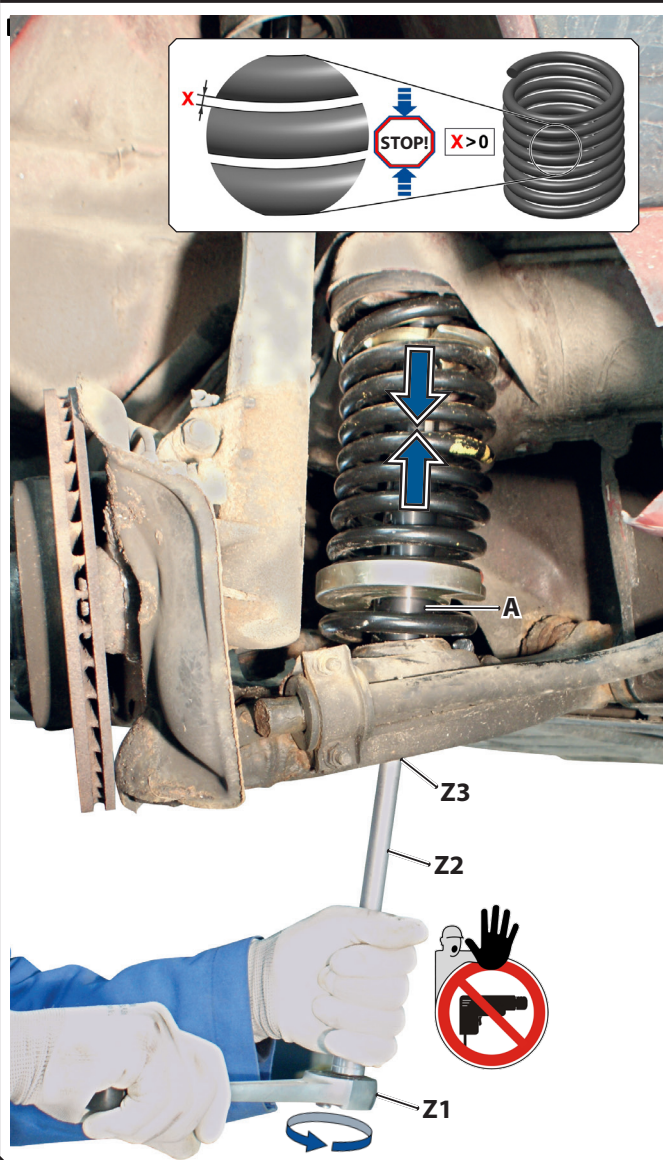
✔ Stop the tensioning process **immediately** if the internal-type spring compressor releases itself!

✔ **Never** use the internal-type spring compressor for batch processing with *many compressing processes within a few minutes!*

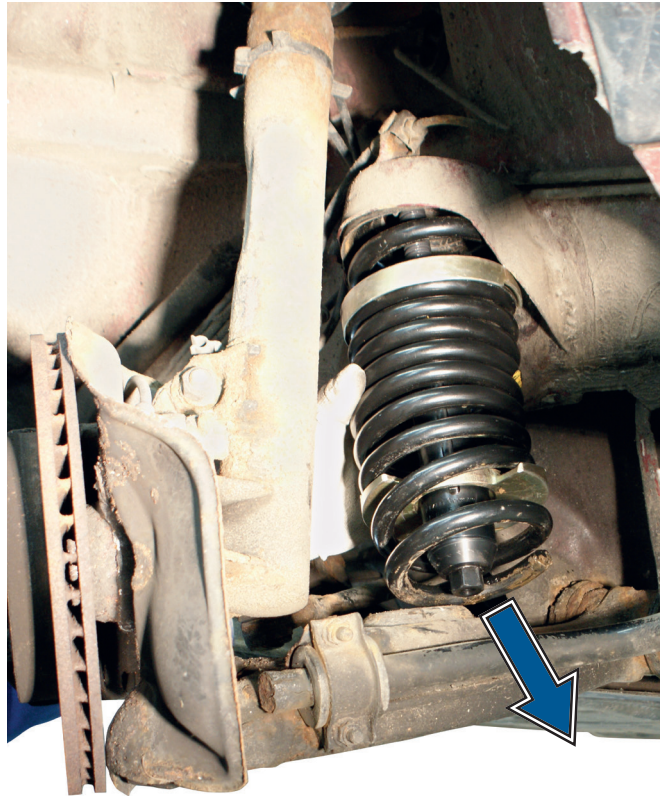
4. To compress the spring, turn the **drive nut** on the compressor cylinder [A] clockwise using the reversing ratchet [Z1] and the socket [Z3] until the internal-type spring compressor with spring can be removed from the axle without tension 📷7.

① However, if it is impossible to compress the spring to such an extent that it can be removed without tension, interrupt compressing and repeat it at **item 3**.

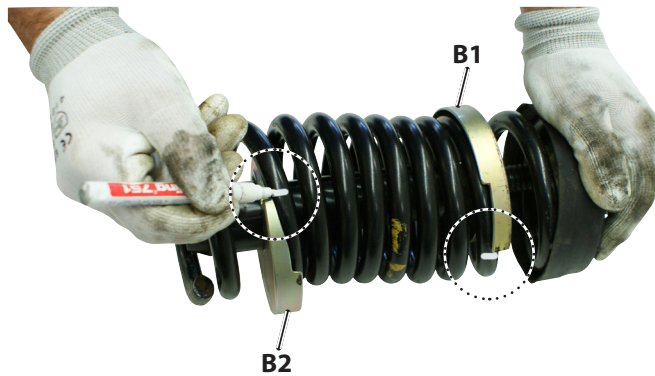
If the **drive nut** at the compressor cylinder [A] comes loose, insert a new **straight pin**. (see **Chapter 6**.)



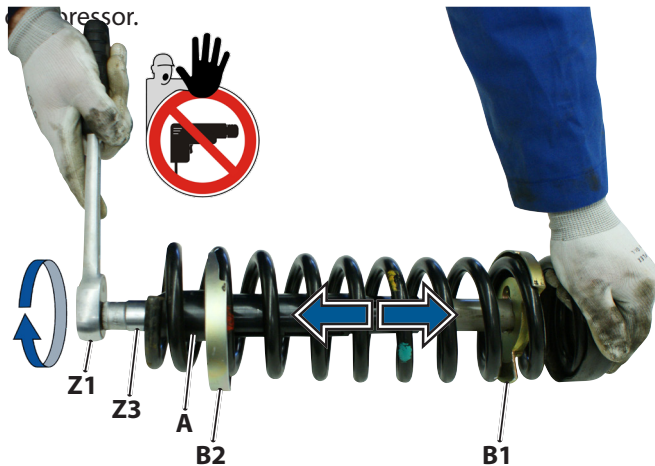
**📸8:** Remove the compressed spring from the axle.



**📸9:** Mark the pressure plate position on the spring.



**📸10:** Release the spring and remove the spring compressor.



5. Carefully remove the internal-type spring compressor together with the compressed spring from the axle. **📸8.**

6. To make it easier to reposition the internal-type spring compressor when installing the spring, the position of the pressure plates **[B..]** **should** be marked on the old spring, and then simply transfer them to the new spring **📸9.**

**⚠️ CAUTION**

The internal-type spring compressor and the spring can drop during the releasing process and cause **moderate** or **minor injuries**.

- ▶️ Firmly hold on to the internal-type spring compressor with spring when releasing the tension!
- ▶️ Release the spring tension on a clean and level workbench.
- ▶️ **Always** wear your personal protective equipment (*safety shoes*) during work!

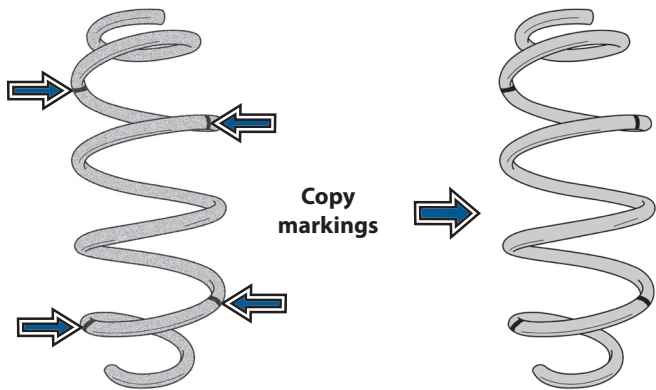
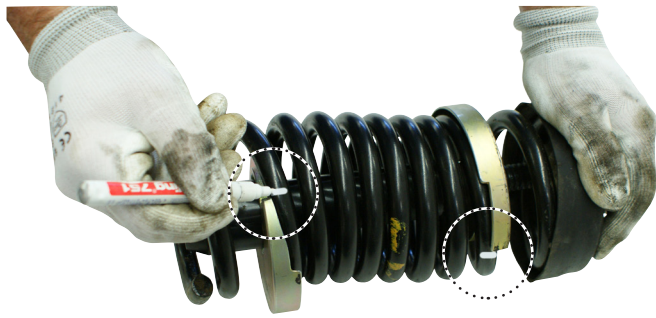
7. To release the spring tension, turn the **drive nut** on the compressor cylinder **[A]** anticlockwise using the reversing ratchet **[Z1]** and the socket **[Z3]** until the pressure plates **[B..]** are free, or the maximum span of the compressor cylinder **[A]** is reached **📸10.**

① If it is not possible to release the spring pressure to the extent that the pressure plates **[B..]** are tension-free, interrupt releasing the pressure and additionally compress the spring with the aid of a suitable spring compressing device.

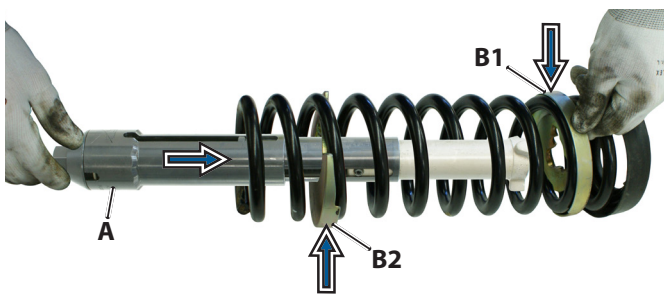
8. Release the compressor cylinder **[A]** from the *three-point safety lock* and remove it and the pressure plates **[B..]** from the chassis spring **📸10.**



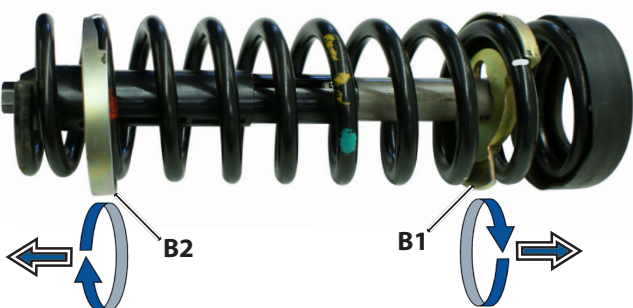
**📷 11:** Copy the markings from the spring.



**📷 12:** Insert pressure plates [B..] and compressor cylinder [A].



**📷 13:** Turn the pressure plates [B..] towards the markings.



## 4.2 Installing the chassis spring

1. When using a new spring, you **must** transfer the markings set in **chapter 4.1 / step 6.** from the old spring to the new spring **📷 11.**
2. As shown in **📷 12,** insert the pressure plate [B1] with locking in the **upper half** of the spring, and the pressure plate [B2] with corrugated profile in the **lower half** of the spring.

### ⚠ CAUTION

The compressor cylinder and the pressure plates can drop and cause **moderate** or **minor injuries.**

▼ Hold the pressure plates tight [B..] when inserting the compressor cylinder [A]!

3. Insert the clamping cylinder [A] from below through the spring into the pressure plates [B..] and lock it by a **60° turn + lowering** into the *three-point safety lock* of the upper pressure plate [B1] **📷 12.**

📌 The *three-point safety lock* allows the spring to be compressed only when the compressor cylinder [A] was correctly locked into the pressure plate [B1].

4. Turn the pressure plate [B..] towards the previously set markings on the spring **📷 13.**

📌 Make sure that the pressure plates [B..] are offset from each other by about **180°** to allow straight tensioning of the spring.



📸 14: Compress the spring.



📸 15: Insert the compressed spring into the axle.



**⚠️ WARNING**

**Very high forces** are exerted when tensioning springs! Incorrect assembly, overloading or misuse can cause the internal-type spring compressor to slip and break, causing the spring to suddenly release itself! As a result, parts being hurled about and the spring can cause **DEATH** or **SEVERE INJURIES!**

- ✔ **Before each use** of the internal-type spring compressor, check both screws of the anti-rotation element for tight seat.
- ✔ **Before each use**, check the internal-type spring compressor **carefully** for damage, loose parts, or unauthorised modifications. **Never** use it if you notice any such deficiencies!
- ✔ **Never** exceed the **maximum load** of **30 000 Newton** of the internal-type spring compressor.
- ✔ **Never** use the internal-type spring compressor with a machine-operated drive. Operate it **only** with a manual drive with muscle power!
- ✔ Stop compression **immediately** when the maximum span is reached or the spring coils are in contact with each other!

**⚠️ CAUTION**

In case of springs with extremely high spring force or in case of overheating, the internal-type spring compressor can slowly release itself. This can cause **MODERATE** or **MINOR INJURIES** due to crushing hands or fingers.

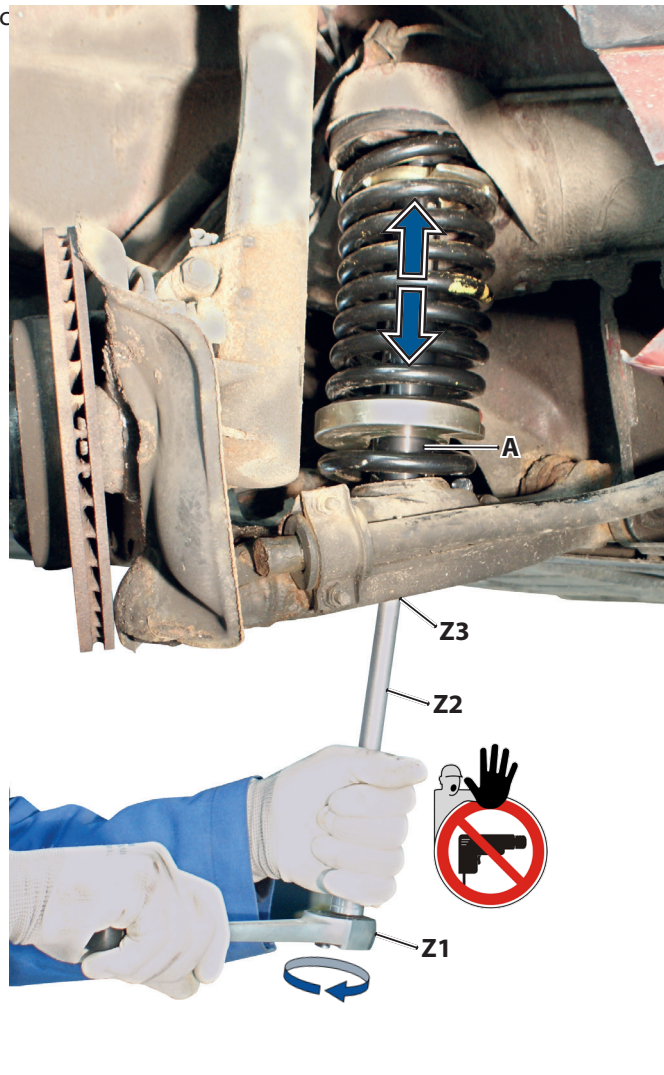
- ✔ Stop the tensioning process **immediately** if the internal-type spring compressor releases itself!
- ✔ **Never** use the internal-type spring compressor for batch processing with *many compressing processes within a few minutes!*

5. To compress the spring, turn the **drive nut** on the compressor cylinder [A] clockwise 📸13, using the reversing ratchet [Z1] and the socket [Z3] until the internal-type spring compressor with spring can be inserted into the axle without tension.

ⓘ If the **drive nut** at the compressor cylinder [A] comes loose, insert a new **straight pin**. (see Chapter 6.)

6. Insert the internal-type spring compressor together with the tensioned spring into the axle in the correct position as specified by the manufacturer 📸 15.

📷 16: Release and remove the internal-type spring



📷 17: Complete the vehicle as specified by the manufacturer.



## ⚠️ CAUTION

The internal-type spring compressor and the spring can drop after the releasing process and cause **moderate** or **minor injuries**.

- ▶ Hold tight the internal-type spring compressor when releasing pressure!
  - ▶ **Always** wear your personal protective equipment (*safety shoes*) during work!
7. To release the spring tension, turn the **drive nut** on the compressor cylinder **[A]** anticlockwise using the reversing ratchet **[Z1]** and the socket **[Z3]** until the pressure plates **[B..]** are free, or the maximum span of the compressor cylinder **[A]** is reached 📷 16.

8. Release the compressor cylinder **[A]** from the *three-point safety lock* and remove it as well as the pressure plates **[B..]** from the chassis spring.

9. Perform the further work on the vehicle as specified by the manufacturer 📷 17.

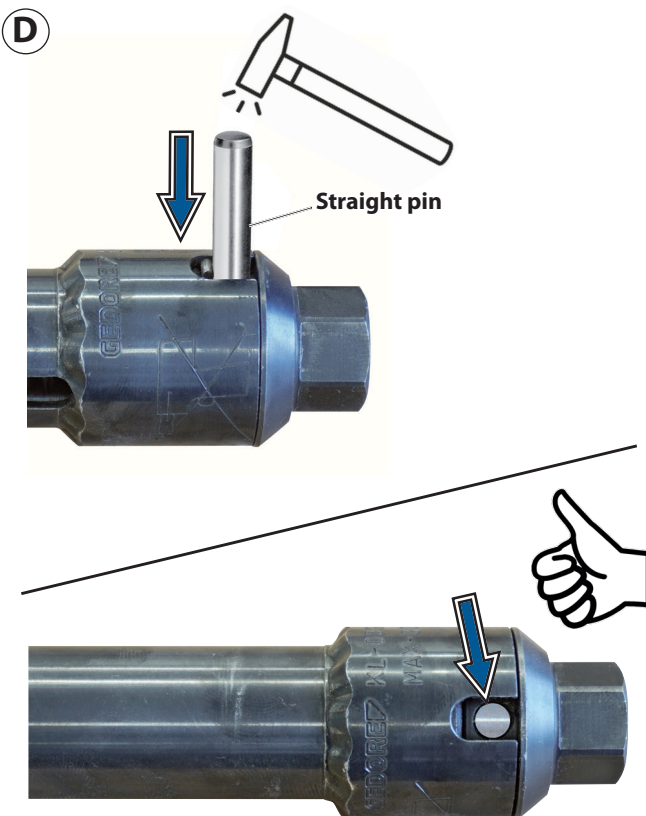
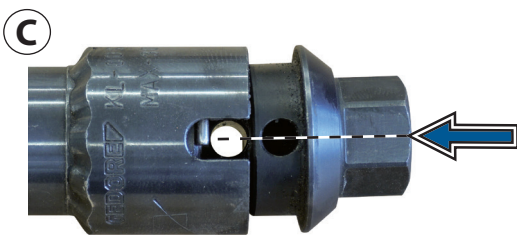
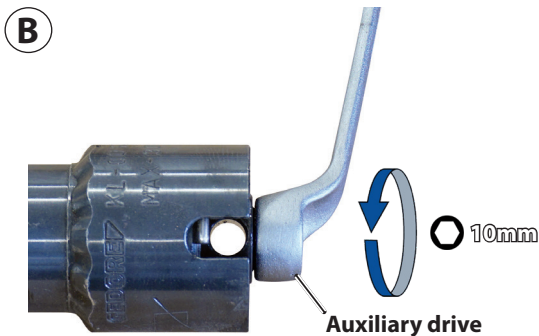
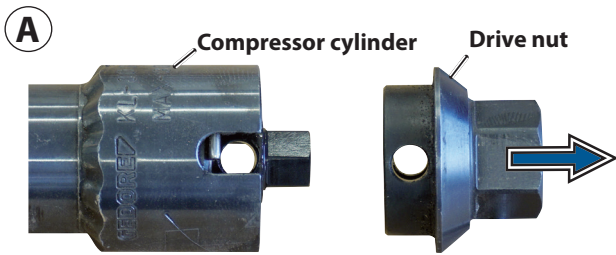
## 5. CARE AND STORAGE

### ⚠️ ATTENTION

Improper care and storage can damage the internal-type spring compressor. **Never** immerse the internal-type spring compressor 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 internal-type spring compressor and the operating instructions at a dry and clean place.



**📷18:** Replacing the straight pin on the compressor cylinder [A].



## 6. Replacing the straight pin on the compressor cylinder

A new straight pin must be inserted if the drive nut on the compressor cylinder [A] spins without contact, for example **due to overload**. These maintenance instructions describe the installation of a new straight pin in the drive nut.

ⓘ The compressor cylinder - **KL-0021-100** has no straight pin!

1. First remove the drive nut from the compressor cylinder [A] and remove the remains of the defective straight pin **📷18A**.

### CAUTION

When the spring is compressed with the auxiliary drive, there is a risk that the spindle of the compressor cylinder [A] will be damaged.

✔ Use the auxiliary drive **only** for relieving the compressor cylinder [A]!

✔ **Never** use the auxiliary drive to compress the spring!

2. If there is a tensioned spring in the internal-type spring compressor, **first release** the tension of the compressor cylinder [A] with the auxiliary drive [Ø 10mm] by rotating it **anticlockwise** **📷18B**.

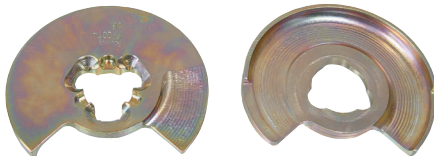
3. Place the drive nut on the compressor cylinder [A] such that the holes in the drive nut and spindle are exactly aligned with each other **📷18C**.

4. Drive the new straight pin (kit - **KL-0025-101**) into the hole of the drive nut such that it is flush on both sides with the drive nut **📷18D**.

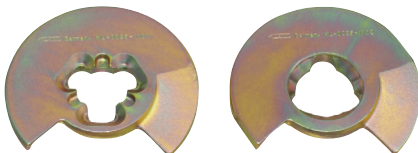
**KL-0025-16 - Pair of pressure plates size 0 A (Special)**



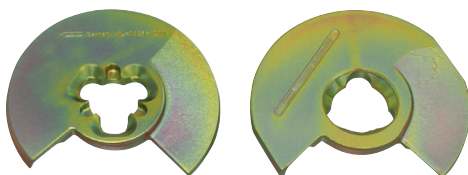
**KL-0025-17 - Pair of pressure plates size 1.5 (Special)**



**KL-0025-11 - Pair of pressure plates size 1 (Standard)**



**KL-0025-12 - Pair of pressure plates size 2 (Standard)**



**7. ACCESSORIES**

**KL-0025-16 - Pair of pressure plates size 0 A (Special)**

**Universal fit**, especially for Mercedes C-class (W203 / W204), CLK (W209); E-Class (W211 4-matic / W212), GLK (X204), SLK (R171); BMW Series 1 (E87, F20) and 3 (E90, F30); Hyundai i30 (GD) rear axle.

① Off-centre locating holes on the pressure plates, for springs installed in a very strong bow position.

**Specifications:**

For spring diameters (*inside - outside*):..... 95 - 110mm

Pressure plate pitch to 240 degrees: ..... 6mm

**KL-0025-17 - Pair of pressure plates size 1.5 (Special)**

**Universal fit**, especially for Mercedes M-Class (W164) rear axle.

**Specifications:**

For spring diameters (*inside - outside*):..... 110 - 130mm

Pressure plate pitch to 270 degrees: ..... 7mm

**KL-0025-11 - Pair of pressure plates size 1 (Standard)**

**Universal fit**, especially for Mercedes 190 (W201), C-Class (W202), SL (R129), W116, W123, W124, front spring; 190 (W201), C-Class (W202), SL (R129), W124; 4-Matic rear axle; Saab; Škoda; Ford.

**Specifications:**

For spring diameters (*inside - outside*):..... 95 - 120mm

Pressure plate pitch to 240 degrees: ..... 6mm

**KL-0025-12 - Pair of pressure plates size 2 (Standard)**

**Universal fit**, especially for front axle springs on Mercedes S-Class (W140), W126, and rear axle springs for Mercedes S-Class (W140), SL (R107), W114, W115, W116, W123, W126; Ford Mondeo (V).

**Specifications:**

For spring diameters (*inside - outside*):..... 120 - 140mm

Pressure plate pitch to 240 degrees: ..... 6mm



**KL-0025-13 - Pair of pressure plates size 3 (Special)**



**KL-0025-13 - Pair of pressure plates size 3 (Special)**

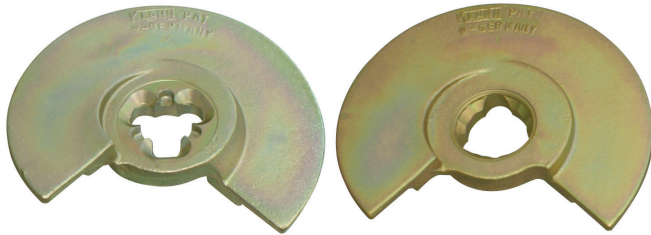
**Universal fit**, especially for TESLA Model 3 and Model S, for example, and Ford Galaxy (III) rear axle.

**Specifications:**

For spring diameters (*inside - outside*):..... 100 - 155mm

Pressure plate pitch to 240 degrees: ..... 20mm

**KL-0025-14 - Pair of pressure plates size 4 (Special)**



**KL-0025-14 - Pair of pressure plates size 4 (Special)**

**Universal fit.**

**Specifications:**

For spring diameters (*inside - outside*):..... 155 - 190mm

Pressure plate pitch to 180 degrees: ..... 25 and 15mm

**KL-0025-15 - Pair of pressure plates size 5 (Special)**



**KL-0025-15 - Pair of pressure plates size 5 (Special)**

**Universal fit**, especially for Mercedes W124 4-Matic front axle.

**Specifications:**

For spring diameters (*inside - outside*):..... 110 - 130mm

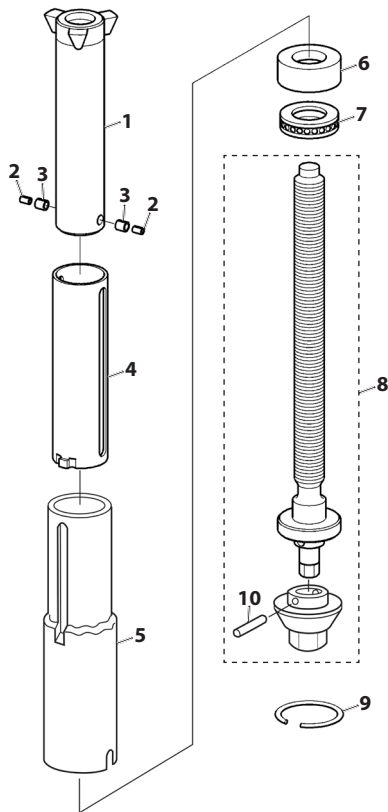
Pressure plate pitch to 270 degrees: ..... 5mm

**8. REPAIR**

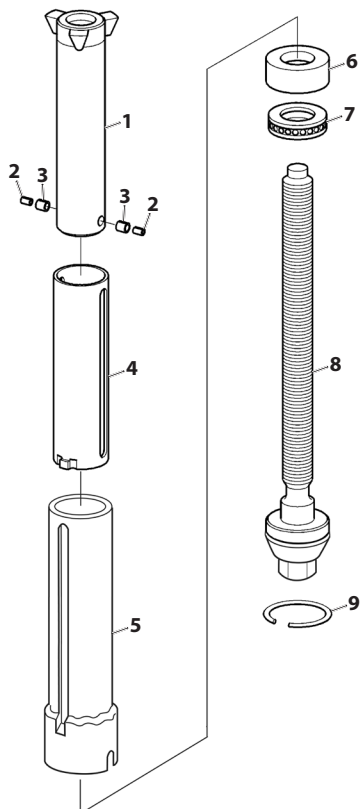
**⚠ WARNING**

For safety reasons, ensure that a damaged internal-type spring compressor is no longer used! Professional inspection and repair may only be carried out by specially trained personnel from **GEDORE Automotive**. Improper repair can result in **DEATH** or **SEVERE INJURIES**.

## Overview of the single parts: KL-0025-100 / KL-0025-200



## Overview of the single parts: KL-0021-100



## 9. SINGLE COMPONENT OVERVIEW

### KL-0025-100 - Compressor cylinder (long version)

Item	Part no.	Description	Qty.
1	KL-0021-0001	Piston	1
2	KL-0021-0022	Straight pin 4 dia. × 6mm	2
3	KL-0021-0021	Straight pin 6 dia. × 6mm	2
4	KL-0021-0004	Intermediate pipe	1
5	KL-0025-1011	Housing	1
6	KL-0021-0005	Bearing insert	1
7	KL-0021-0006	Axial bearing TN	1
8	KL-0025-1007	Spindle with nut and straight pin	1
9	KL-0021-0020	Snap ring	1
10	KL-0025-101	Straight pin kit 5 dia. × 28mm (5 pieces)	1

### KL-0025-200 - compressor cylinder (short version)

Item	Part no.	Description	Qty.
1	KL-0021-0001	Piston	1
2	KL-0021-0022	Straight pin 4 dia. × 6mm	2
3	KL-0021-0021	Straight pin 6 dia. × 6mm	2
4	KL-0024-0004	Intermediate pipe	1
5	KL-0025-2011	Housing	1
6	KL-0021-0005	Bearing insert	1
7	KL-0021-0006	Axial bearing TN	1
8	KL-0025-2007	Spindle with nut and straight pin	1
9	KL-0021-0020	Snap ring	1
10	KL-0025-101	Straight pin kit 5 dia. × 28mm (5 pieces)	1

### KL-0021-100 - compressor cylinder (long version)

Item	Part no.	Description	Qty.
1	KL-0021-0001	Piston	1
2	KL-0021-0022	Straight pin 4 dia. × 6mm	2
3	KL-0021-0021	Straight pin 6 dia. × 6mm	2
4	KL-0021-0004	Intermediate pipe	1
5	KL-0021-0003	Housing	1
6	KL-0021-0005	Bearing insert	1
7	KL-0021-0006	Axial bearing TN	1
8	KL-0021-0002	Spindle	1
9	KL-0021-0020	Snap ring	1

## 10. ENVIRONMENTALLY COMPLIANT DISPOSAL

Dispose of the internal-type spring compressor 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.



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