



04/2019

## Universal Spring Compressor



KL-0015 SP

EN

[www.gedore-automotive.com](http://www.gedore-automotive.com)

### GEDORE Automotive GmbH

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

T +49 (0) 771 / 8 32 23-0  
F +49 (0) 771 / 8 32 23-90  
info.gam@gedore.com  
www.gedore-automotive.com

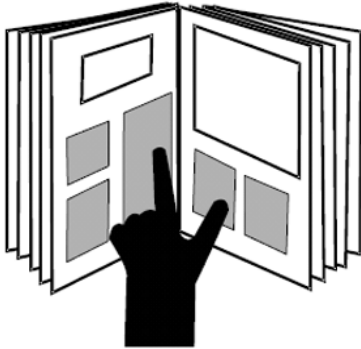
### GEDORE TOOLS, INC.

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  
Phone +1-843 / 225 50 15  
Fax +1-843 / 225 50 20  
info@gedoretools.com

### GEDORE WELTWEIT / GEDORE WORLDWIDE

Weltweite GEDORE Servicestellen / Niederlassungen finden Sie im Internet unter: [www.gedore.com](http://www.gedore.com)  
Worldwide GEDORE service centers / offices are listed on the Internet at: [www.gedore.com](http://www.gedore.com)



## Impressum

Im Zuge der Verbesserung und Anpassung an den Stand der Technik behalten wir uns Änderungen im Hinblick auf Aussehen, Abmessungen, Gewichte und Eigenschaften sowie Leistungen vor.

Damit ist kein Anspruch auf Korrektur oder Nachlieferung bereits gelieferter Produkte verbunden. Streichungen können jederzeit vorgenommen werden, ohne dass ein rechtlicher Anspruch entsteht.

Alle Hinweise zur Benutzung und Sicherheit sind unverbindlich. Sie ersetzen keinesfalls irgendwelche gesetzlichen oder berufsgenossenschaftlichen Vorschriften.

Für Druckfehler übernehmen wir keine Haftung.

Ein Nachdruck, auch auszugsweise, bedarf der vorherigen schriftlichen Zustimmung durch **GEDORE Automotive GmbH**.

Alle Rechte weltweit vorbehalten.

Wir verweisen auf unsere Allgemeinen Geschäftsbedingungen, ersichtlich im Impressum unter [www.gedore-automotive.com](http://www.gedore-automotive.com).

© Copyright by **GEDORE Automotive GmbH Donaueschingen (GERMANY)**

## Impressum/Legal Notice

As part of our commitment to continuous product improvement and adaptation to state-of-the art technology, we reserve the right to make modifications to our products with regard to design, dimension, weight, features and performances at any time and without prior notice.

Thus, the right to adjustments or replacement deliveries of goods already delivered is excluded. Cuts and cancellations can be made by us at any time without notice and no legal claims against us may arise or be derived from this.

All indications regarding use and safety are given for information only and without any commitment. In no case do they substitute for legal provisions or the regulations of the Employer's Liability Insurance Association.

Errors and omissions excepted.

Any reproduction, also in extracts, is subject to the prior written consent of **GEDORE Automotive GmbH**.

All rights reserved.

We refer to our General Terms and Conditions of Sale under 'Imprint' at [www.gedore-automotive.com](http://www.gedore-automotive.com).

© Copyright by **GEDORE Automotive GmbH Donaueschingen (GERMANY)**

## Impressum/Mentions légales

En raison des améliorations continues que nous apportons à nos produits et pour assurer leur adaptation constante à l'évolution des techniques, nous nous réservons le droit de procéder à des modifications de nos produits quant à l'apparence, aux dimensions, aux poids, aux caractéristiques et aux performances à tout moment sans préavis et sans obligation de modifier ou de remplacer des produits précédemment livrés.

Des suppressions peuvent être effectuées à tout moment et sans préavis sans qu'elles puissent donner lieu à réclamation.

Toutes les instructions d'utilisation et conseils de sécurité sont donnés sans engagement de notre part. Ils ne se substituent en aucun cas aux réglementations légales en vigueur ou à celles émises par les associations professionnelles.

Le plus grand soin possible a été apporté à la rédaction de ce document. Toutefois, nous n'assumons aucune responsabilité pour des erreurs, omissions ou défauts d'impression éventuels.

Une reproduction, même en partie, ne peut être effectuée qu'après autorisation écrite préalable de **GEDORE Automotive GmbH**.

Tous droits réservés.

Vous trouverez nos conditions générales de vente, sous Impressum/Mentions légales sur [www.gedore-automotive.com](http://www.gedore-automotive.com).

© Copyright by **GEDORE Automotive GmbH Donaueschingen (GERMANY)**

**Table of Contents** 

**Page**

- 1. Essential Safety Notices ..... 4**
  - 1.1 Safety Notices and Warnings ..... 4
  - 1.2 Personal Protective Equipment..... 4
  - 1.3 Intended Use ..... 5
  - 1.4 Safe and Proper Use ..... 5
  - 1.5 Work Environment..... 5
  - 1.6 Appropriate Users ..... 5
  
- 2. Product Description ..... 6**
  - 2.1 KL-0015 SP - Spring Compressor ..... 6
  - 2.2 Technical Data..... 7
  
- 3. Checking the Delivery/Assembling the Spring Compressor ..... 7**
  - 3.1 Scope of Delivery (Fig. 2) ..... 7
  - 3.2 Identifying and Choosing the Appropriate Jaws. .... 7
  - 3.3 Mounting the Jaws on Compressor Base Body. .... 8
  
- 4. Removing and Installing a Spring..... 9**
  - 4.1 Clamping a Suspension-/Damper Strut into the holding fixture. .... 9
  - 4.2 Removing a Spring..... 9
    - Technique 1: Removing a spring using the jaws that engage the spring coils. .... 9
    - Technique 2: Removing a spring using the special jaws that encompass the upper spring plate..... 12
  - 4.3 Installing a Spring ..... 15
    - Technique 1: Installing a spring using the jaws that engage the spring coils..... 15
    - Technique 2: Installing a spring using the special jaws that encompass the upper spring plate. .... 18
  
- 5. Inserting the Drive Nut Shear Pin..... 21**
  
- 6. Care and Storage ..... 21**
  
- 7. Accessories..... 21**
  
- 8. Maintenance and Repair by the GEDORE Automotive Service Centre ..... 23**
  
- 9. Spare Parts List KL-0015 SP ..... 24**
  
- 10. Environmentally Safe Disposal..... 24**

## 1. Essential Safety Notices


**⚠** Before using the spring compressor, it is imperative that you read and understand the Product Information. Misuse can lead to **SERIOUS INJURIES** and even **DEATH**.

This Product Information is part of the spring compressor. Keep the Product Information in a safe place for later use and pass it on to subsequent users of the spring compressor.

All specific vehicle data stated herein are supplied under reserve and without commitment.

### 1.1 Safety Notices and Warnings

For better differentiation, the warning notices in this Product Information are classified as follows:

Warning sign	Sign reads	Meaning
	<b>DANGER</b>	Indicates a hazardous situation which, if not avoided, may result in <b>serious</b> or <b>fatal injuries</b> .
	<b>ATTENTION</b>	Indicates a situation which, if not avoided, may result in damage to the spring compressor or its functioning, or to objects in its vicinity.

#### **⚠ DANGER**

Do not exceed the maximum load capacity of the spring compressor, otherwise there is a risk that it could fail/break and debris/parts becoming projectiles.

#### **ATTENTION**

Risk of damage to vehicle and tool.

- Lubricate spindles with molybdenum disulphide paste **KL-0014-0030** (accessory).
- Any work on vehicles should only be performed by qualified specialist personnel observing and complying with the directions, provisions, and safety regulations specified by the vehicle manufacturer.
- Always refer to the vehicle manufacturer's data and instructions as only these apply to all work that is carried out on the vehicle.

### 1.2 Personal Protective Equipment

**ALWAYS** wear personal protective equipment when using the spring compressor. The spring compressor can cause mechanical hazards leading to injuries such as contusions, cuts or concussions.



**EYE PROTECTION** (see OSHA 29 CFR 1910.133 and ANSI Z87) designed to protect you from flying debris/objects must be worn when using the spring compressor.

- Particles may be ejected at very high speed while working with the spring compressor and could cause serious injuries to your eyes.



**SAFETY GLOVES** must be worn when using the spring compressor.


- Working with the spring compressor can cause skin abrasions and contusions.



**SAFETY SHOES/BOOTS** with slip resistant soles and steel-toe caps (see OSHA 29 CFR 1910.136 and ANSI 241) must be worn when using the spring compressor.

- Falling parts can cause serious injuries to feet and toes.

### 1.3 Intended Use

 The spring compressor is only designed to compress the **right-hand wound** coil springs that are found in passenger car chassis systems.

The spring compressor may only be used in the manner as described in this Product Information.


The spring compressor may only be used in specialised professional passenger car workshops/garages.

The spring compressor must only be used for compressing suspension/damper struts up to a maximum load of **17,500 N**.

- Any other use can result in severe injuries or even death.

### 1.4 Safe and Proper Use

Take the following safety precautions to prevent injuries and damage that could be caused by improper handling or unsafe use of the spring compressor.

 Misuse can result in extremely severe injuries or even death.

- NEVER overload the spring compressor.
- ALWAYS check the spring compressor prior to EACH use in order to ensure that it is in good order and condition.
- ALWAYS replace any damaged or worn parts prior to using the tool.
- ONLY use the original spare parts and accessories from GEDORE Automotive on the spring compressor.

### 1.5 Work Environment

For safety reasons, work with the spring compressor should only be carried out in a safe work environment.

- The workplace should always be clean and tidy.
- The workplace should be sufficiently large and must be secured.

### 1.6 Appropriate Users

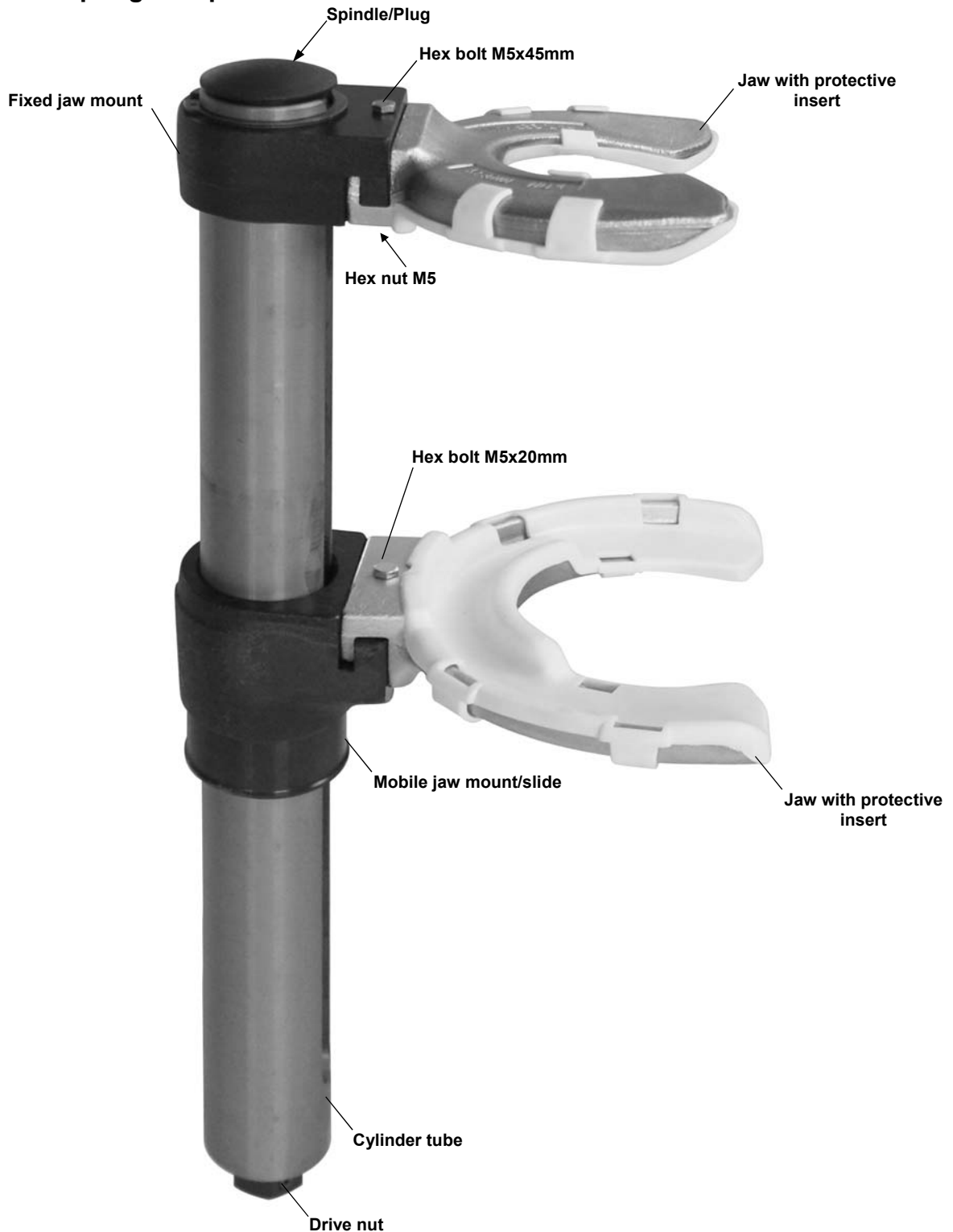
This Product Information is designed for technicians in workshops.

DO NOT allow children to use the spring compressor.

Purchasers/employers purchasing the spring compressor MUST ensure that any person/employee using the spring compressor have read and understood this Product Information prior to using the tool. This Product Information MUST be made available to the users of the spring compressor for reference at all times.

## 2. Product Description

### 2.1 KL-0015 SP Spring Compressor



#### Field of Application

The **KL-0015 SP** spring compressor comes with the pairs of jaws **KL-1510 SP (size 1N)** and **KL-1520 SP (size 2N)** equipped with protective inserts, and is designed to allow the user to professionally remove/install right-hand wound coil springs with spring  $\varnothing$  of 70-240mm\* and shock absorbers on passenger car chassis systems.

\* in conjunction with jaws available as accessories.

**Note:** The **KL-0015** Spring Compressor is like the **KL-0015 SP**, but comes without the protective inserts.

Fig. 1: Dimensions.

KL-0015-100 (Compressor base body)

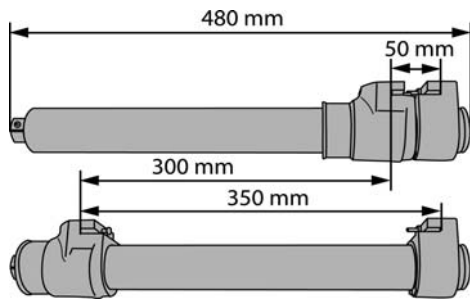


Fig. 2: Checking the Delivery.

Compressor base body



Pair of jaws with protective inserts, size 2N



Pair of jaws with protective inserts, size 1N

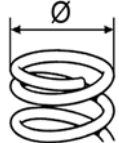
Fig. 3: Identifying and choosing the appropriate jaws.

“A”



“B”

Identify spring Ø



“C”

Identify spring pitch



## 2.2 Technical Data

### • Dimensions:

Overall length	480mm
Working travel (stroke)	300mm
Min. opening (distance between jaws):	50mm
Max. opening (distance between jaws):	350mm

### • Load capacities:

Maximum load capacity: ..... 17,500 N

Breaking point: ..... 80,000 N

### • Weight:

Compressor base body: ..... 6.7kg

Compressor base body with jaws size 1N and 2N: ..... 9.9kg

Drive: ..... waf 24mm

Spring Ø (min/max): ..... 80-195mm

## 3. Checking the Delivery/Assembling the Spring Compressor

Before the first commissioning of the spring compressor, check and confirm you have all the parts listed in the scope of delivery. Then, read and follow the mounting instructions.

### 3.1 Scope of Delivery (Fig. 2)

Compressor base body

Pair of jaws with protective inserts, size 1N

Pair of jaws with protective inserts, size 2N

### 3.2 Identifying and Choosing the Appropriate Jaws.

#### ⚠ DANGER

Considerable forces are exerted when springs are being compressed. Never use jaws which do not fit properly, otherwise there is a risk of the coil spring coming loose and falling off or being ejected from the spring compressor during the compression process.

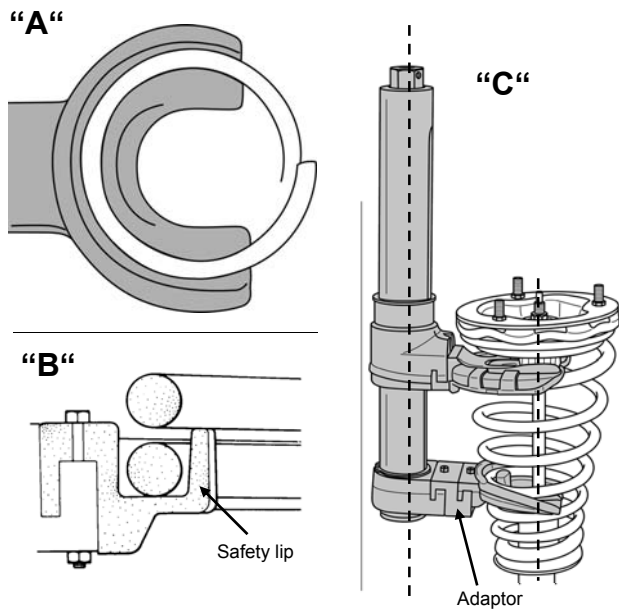
#### 1. Choose the suitable jaws. (Fig. 3 A)

**Note:** The correct jaws can also be identified manually.

#### 2. Determine the suitable jaws on the basis of the following criteria:

- Spring diameter (Fig. 3 B)
- Spring pitch (Fig. 3 C)

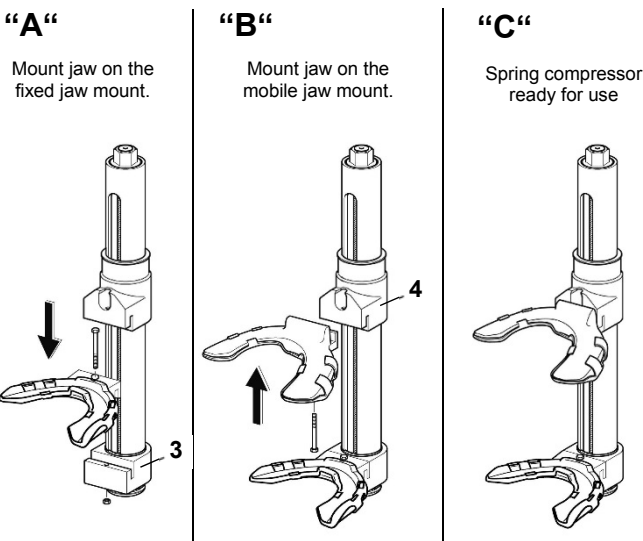
Fig. 4: Suitable jaw identified.



- The identified jaws must comply with the following criteria:
  - suitable for right-hand wound coil springs,
  - suitable to allow the spring to be accurately seated in the jaws (in diameter and in pitch). (Fig. 4 A),
  - suitable to allow the safety lip to engage behind the spring. (Fig. 4 B)
  - In the event of compressing conical springs, use the **KL-1590-1** adaptor (accessory) along with a jaw to compensate for the distance to the base body in order to ensure that the longitudinal axis of the spring and of the base body are parallel to each other. (see Fig. 4 C)

**Note:** On some vehicles, compressing the spring is only possible with the aid of specially designed jaws. (see accessories)

Fig. 5: Mounting the jaws on base body (applies to standard springs).



### 3.3 Mounting the Jaws on the Base Body.

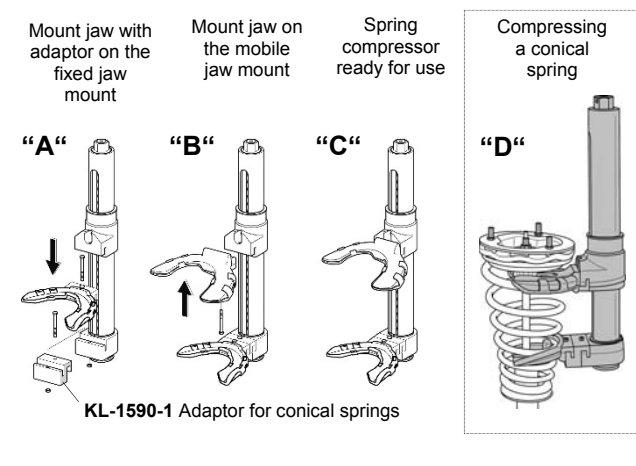
#### **⚠ DANGER**

Considerable forces are exerted when springs are being compressed. If the jaws are not properly mounted and fixed/secured with the specified hex bolts/nuts, there is a risk that the spring compressor could fail and break into pieces. This will lead to debris/parts or the spring becoming projectiles.

- Always check to ensure that the profiles of the jaws fit accurately into the profiles of the jaw mounts on the base body. If using the adaptor, also make sure it is correctly engaged in the jaw/jaw mount. Secure with the hex bolts and nuts.

Assemble spring compressor with the correct pair of jaws. Mount jaws on the spring compressor as shown in Fig. 5 A and B; secure with the hex bolts and nuts.

Fig. 6: Mounting the jaws on base body (applies to conical springs).



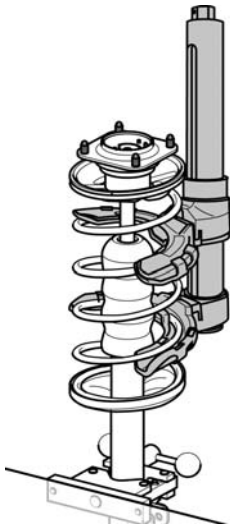
When compressing conical springs, additionally use the **KL-1590-1** adaptor (accessory), secure with the hex bolts and nuts. (Fig. 6 A, B, C and D)



Fig. 7: Compressing a spring.

**Technique 1:**

Compressing a spring via the spring coils.



**Technique 2:**

Compressing a spring via the upper spring plate.

(See fig. 17)

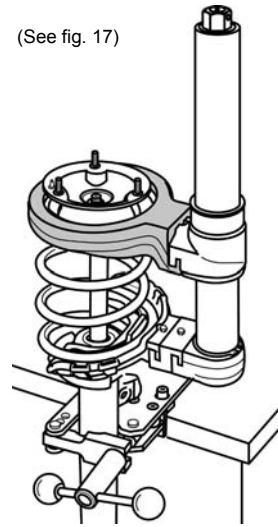
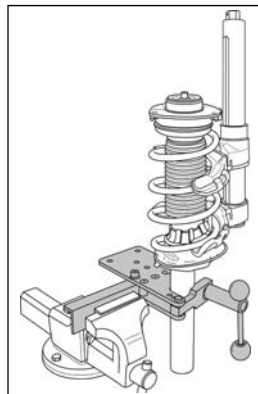
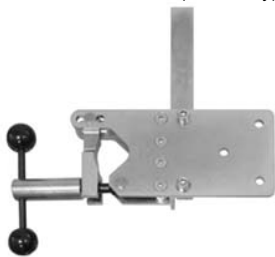


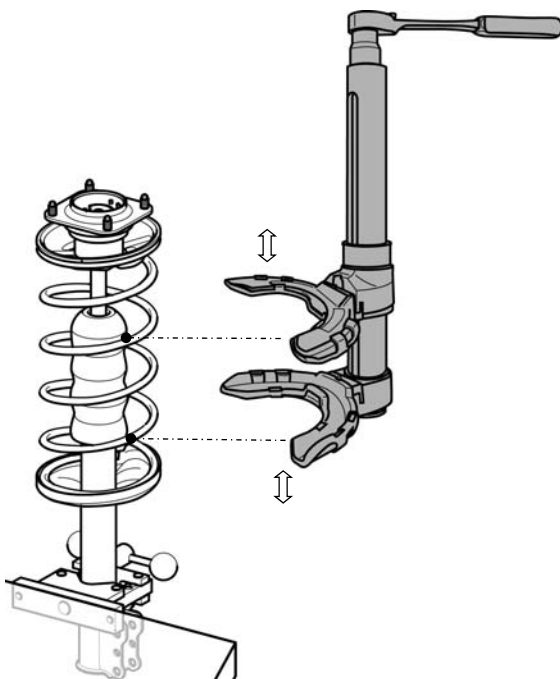
Fig. 8: Clamping a suspension-/damper strut into holding fixture.

KL-0055-60 Holding Fixture (Accessory)



**Removing a Spring (Technique 1)**

Fig. 9: Preadjusting the spring compressor.



## 4. Removing and Installing a Spring

The following instructions describe the procedure of removing and installing a right-hand wound coil spring on a suspension/damper strut. The examples show two different techniques which are to be applied depending on the type of jaws used. (Fig. 7)

**Technique 1:** Removing and installing a spring using the jaws that engage the spring coils.

**Technique 2:** Removing and installing a spring using the special jaws that encompass the upper spring plate.

**Note:** Compressing a rear axle spring on the vehicle can be carried out according to the same principle as described in technique 1. The procedure is similar, however, with the difference that dismantling / reassembling the suspension/damper strut is not necessary. During the whole compression and decompression processes, pay attention to the space available. Make sure that the base body and the jaws do not touch the vehicle/car body parts, and that they are not pushed against these.

**⚠ DANGER**

Considerable forces are exerted when springs are being compressed. Strictly adhere to the following instructions. Non-observance can lead to hazardous situations such as a failure of the spring compressor resulting in debris/parts or the spring becoming projectiles.

- Never use the spring compressor if it is damaged or defective.
- Never use a hammer on the tool.
- Lubricate spindle with molybdenum disulphide paste, for example KL-0014-0030.
- Only use molybdenum disulphide paste, for example KL-0014-0030, as lubricant.
- Only use Original GEDORE spare parts.

**ATTENTION**

Stop turning the drive nut once the spring compressor has reached its limit stop, that is when the mobile jaw mount has been slid against the fixed one until limit stop. Failure to do so will result in damage to the spring compressor.

- Once the spring compressor has reached its limit stop, that is when the mobile jaw mount has been slid against the fixed one until limit stop, make sure that the drive nut is rotated only in the opposite direction.

**Note:** Always perform all work on the vehicle/vehicle components in strict compliance with the directions, provisions, and safety regulations specified by the vehicle manufacturer.

### 4.1 Clamping a Suspension-/Damper Strut into the holding fixture.

**⚠ DANGER**

Suspension-/damper struts which are not fixed correctly can come loose and fall off the spring compressor while the spring is being compressed.

- Do not clamp neither the suspension-/damper strut nor the spring compressor into a vice.

Clamp the removed MacPherson suspension-/damper strut into holding fixture KL-0055-60 (accessory). (See Fig. 8)

### 4.2 Removing a Spring

**Technique 1: Removing a spring using the jaws that engage the spring coils.**

1. **ATTENTION**

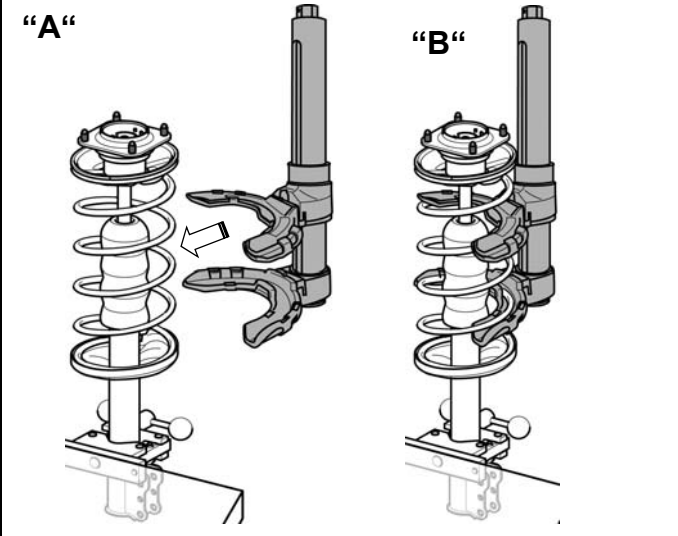
When opening the jaws, there is a risk of damage to the base body.

- When opening the jaws on the base body, make sure that there is no pressure being exerted on the limit stop once the maximum opening distance has been reached.

(Stop turning the drive nut counter-clockwise.)

Using a 1/2" reversible ratchet with a 24mm (waf) socket, turn the drive nut and adjust the spring compressor so as to enable it to compress as many coils as possible. (Fig. 9)

Fig. 10: Applying the spring compressor against the spring.



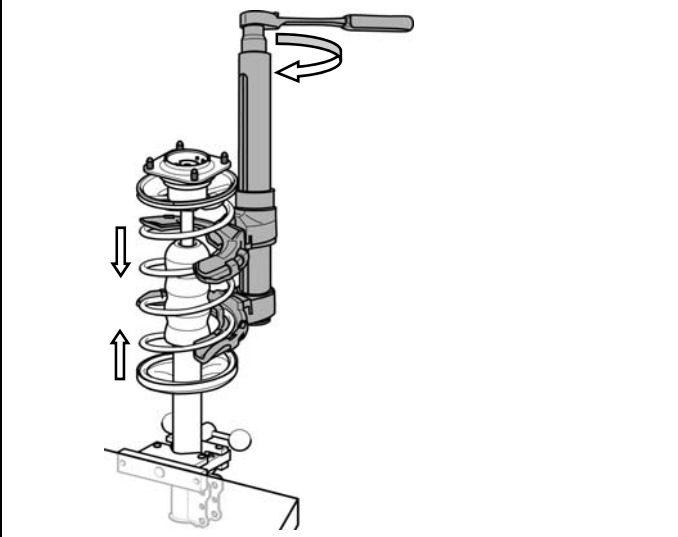
## 2. **⚠ DANGER**

Make sure that the spring compressor is positioned correctly, otherwise there is a risk of the coil spring coming loose and falling off or being ejected from the spring compressor during the compression process.

- The spring must be accurately seated in the jaws (in diameter and in pitch). (See Fig. 4 A)
- The safety lip must engage behind the spring. (See Fig. 4 B)
- In the event of compressing conical springs, use the **KL-1590-1** adaptor (accessory) along with a jaw to compensate for the distance to the base body in order to ensure that the longitudinal axis of the spring and of the base body are parallel to each other. (See Fig. 4 C)

Apply spring compressor against spring.  
(see Fig. 10 A and B)

Fig. 11: Compressing the spring.



## 3. **DANGER**

The maximum load capacity of the spring compressor must not be exceeded (see technical data), otherwise there is a risk that the tool could fail and break into pieces. This will lead to debris/parts becoming projectiles.

- At the latest, stop compressing the spring once the minimum opening distance has been reached, that is when the mobile jaw mount touches the fixed jaw mount, but in any case before the spring coils touch each other.

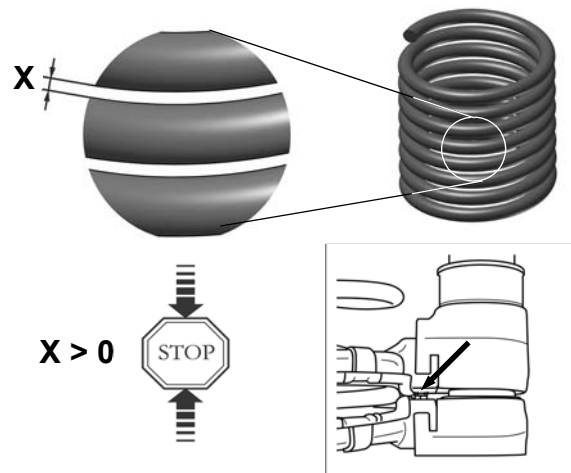
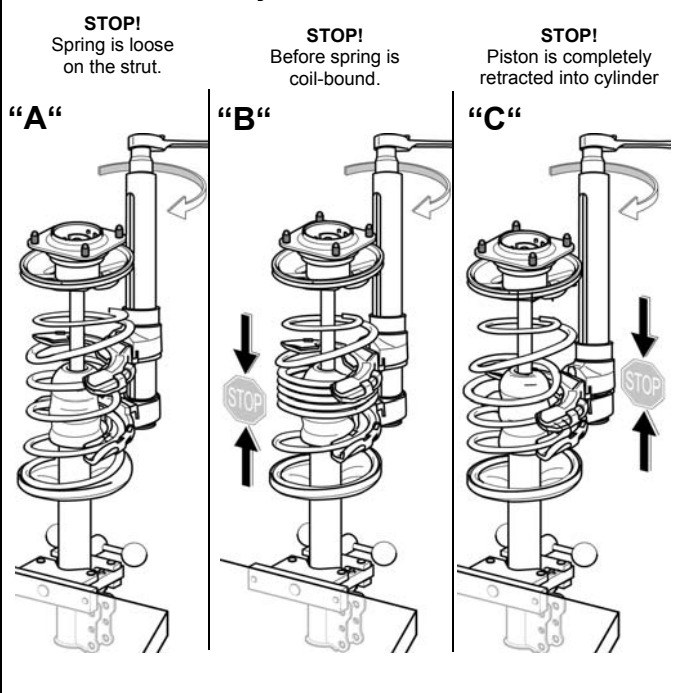


Fig. 12: Compressing the spring until pressure on piston rod nut is fully relieved.



To compress the spring, turn the drive nut clockwise (as shown in Fig. 11) using a 1/2" reversible ratchet with a 24mm (waf) socket. Compress the spring until the pressure on the piston rod nut has been completely relieved. (Fig. 12 A, B and C)

### Note:

- If it is **not possible** to compress the spring in such a manner that there is **no longer** any pressure on the piston rod nut, the compression process must be **aborted**. In this case, the spring **cannot** be removed.
- The spring compressor features an auxiliary drive.

Fig. 13: If necessary, relieve pressure on the spring via the auxiliary drive.

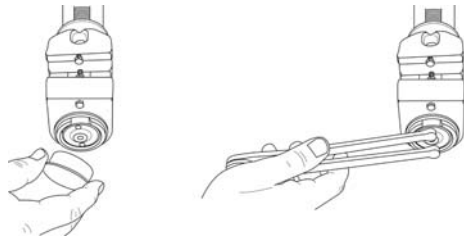


Fig. 14: Removing the compressed spring.

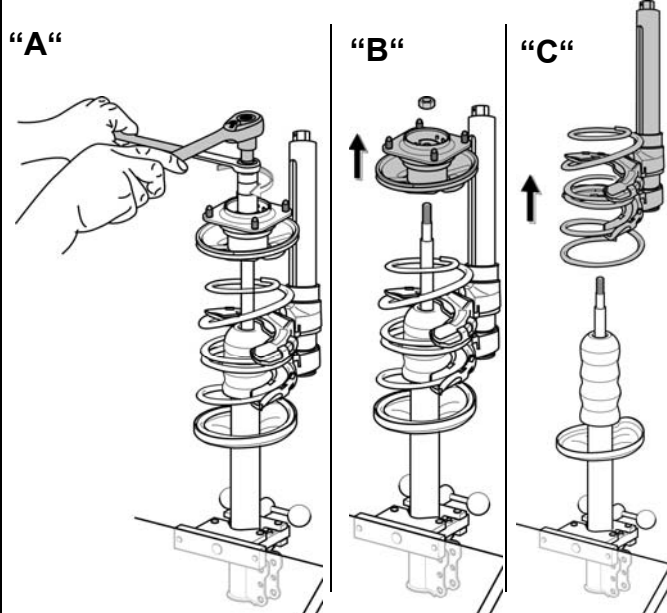


Fig. 15: Marking the position of the jaws.

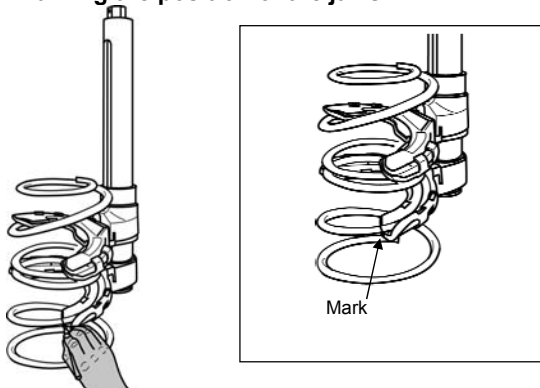
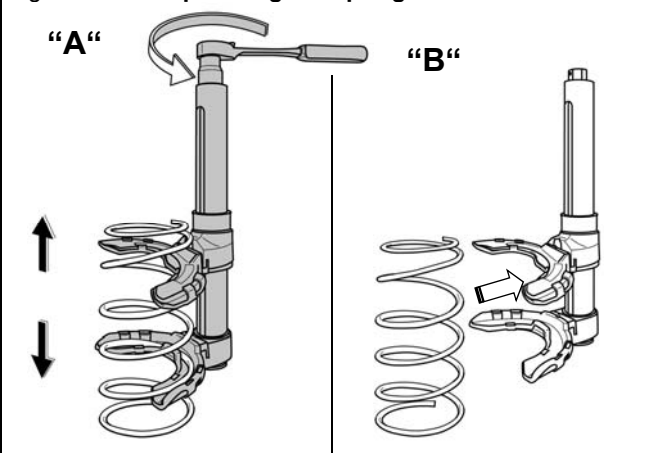


Fig. 16: Decompressing the spring.



#### 4. ATTENTION

Do not compress the spring via the auxiliary drive, as this could damage the spindle.

- The auxiliary drive may only be used for relieving pressure on the spring.

If necessary, relieve pressure on the spring compressor via the auxiliary drive and insert a new shear pin into the drive nut.

(See Fig. 13 and Chapter 5)

5. Loosen piston rod nut; for example, by means of the **KL-0056-100 K** tool set. Remove strut mount and upper spring plate. (Fig. 14 A and B)

6. Remove compressed spring along with spring compressor from strut. (Fig. 14 C)

7. Use paint to mark the positions of the jaws on the spring. (Fig. 15)

#### 8. ATTENTION

When decompressing the spring, there is a risk of damage to the jaws.

- When decompressing the spring, make sure that the jaws with their outer face do not touch the spring.
- When decompressing the spring, there is a risk of damage to the base body.
- When decompressing the spring, make sure that there is no pressure being exerted on the limit stop once the maximum opening distance on the base body has been reached.

(Stop turning the drive nut counter-clockwise.)

To decompress the spring, turn the drive nut counter-clockwise using a 1/2" reversible ratchet with a 24mm (waf) socket (Fig. 16A) until the jaws do no longer touch the spring. Stop the decompression process as soon as the maximum opening distance of 350mm has been reached.

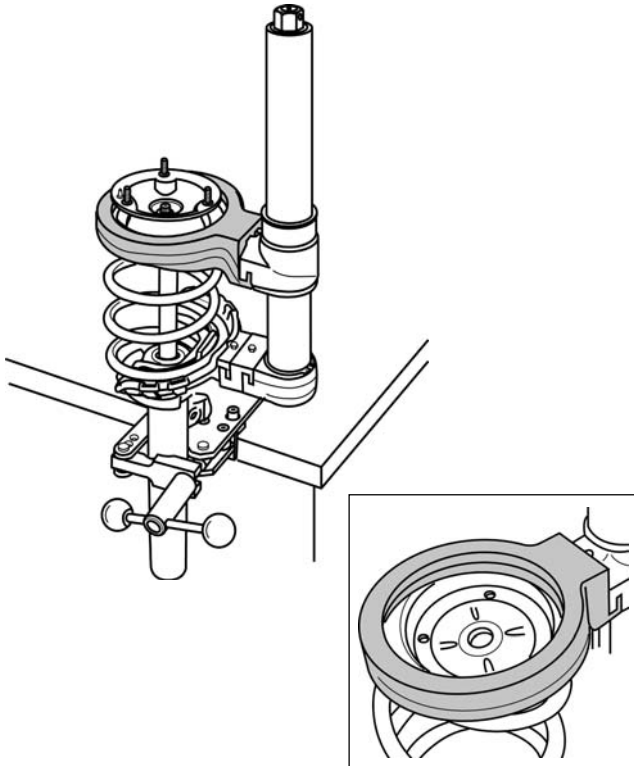
**Note:** If it is not possible to release, respectively open the spring compressor far enough so that the jaws are no longer in contact with the spring and the spring can be removed, the decompression process must be aborted. In this case, the spring must be compressed again and the MacPherson suspension-/damper strut must be reassembled according to the manufacturer's instructions. Changing the spring is not possible.

9. Remove spring compressor from spring. (Fig. 16 B)

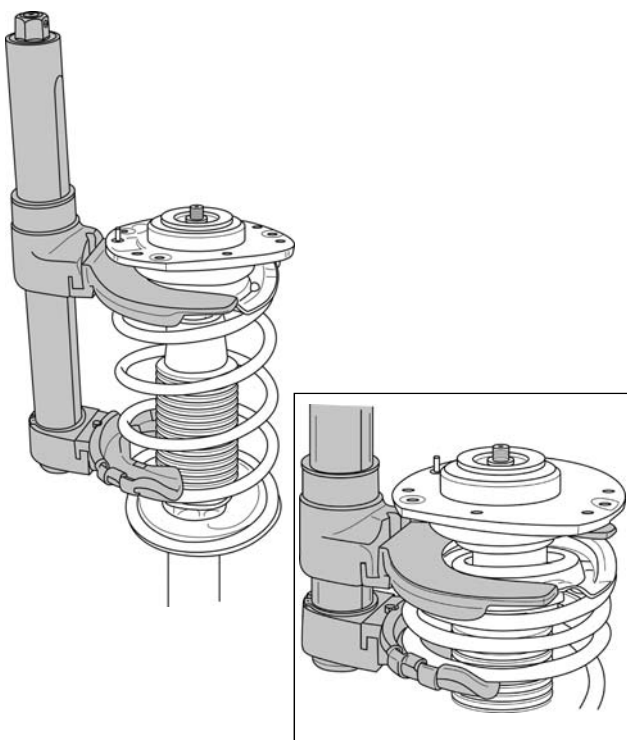
## Removing a Spring (Technique 2)

Fig. 17: Applying the spring compressor against the spring.

Compressing the spring via the upper spring plate.



## Compressing a spring: Peugeot 206.



## Technique 2: Removing a spring using the special jaws that encompass the upper spring plate.

### 1. **ATTENTION**

When opening the jaws, there is a risk of damage to the base body.

- When opening the jaws on the base body, make sure that no pressure is being exerted on the limit stop once the maximum opening distance has been reached. (Stop turning the drive nut counter-clockwise.)

Using a 1/2" reversible ratchet with a 24mm (waf) socket, turn the drive nut and adjust the spring compressor so as to enable it to compress as many coils as possible.

### 2. **DANGER**

Make sure that the spring compressor is positioned correctly, otherwise there is a risk of the coil spring coming loose and falling off or being ejected from the spring compressor during the compression process.

- Be sure that the spring is accurately seated in the jaws (in diameter and in pitch). (See Fig. 4 A)
- The safety lip must engage behind the spring. (See Fig. 4 B)
- In the event of compressing conical springs, use the **KL-1590-1** adaptor (accessory) along with a jaw to compensate for the distance to the base body in order to ensure that the longitudinal axis of the spring and of the base body are parallel to each other. (See Fig. 4 C)

Apply spring compressor against spring.

(see Fig. 17)

**Note:** The plastic adaptor rings of the ring jaws are specially adapted to the shape of the respective upper spring plates. When positioning the ring jaw on the suspension/damper strut, make sure that it fits properly the shape of the spring plate.

Fig. 18: Compressing the spring.

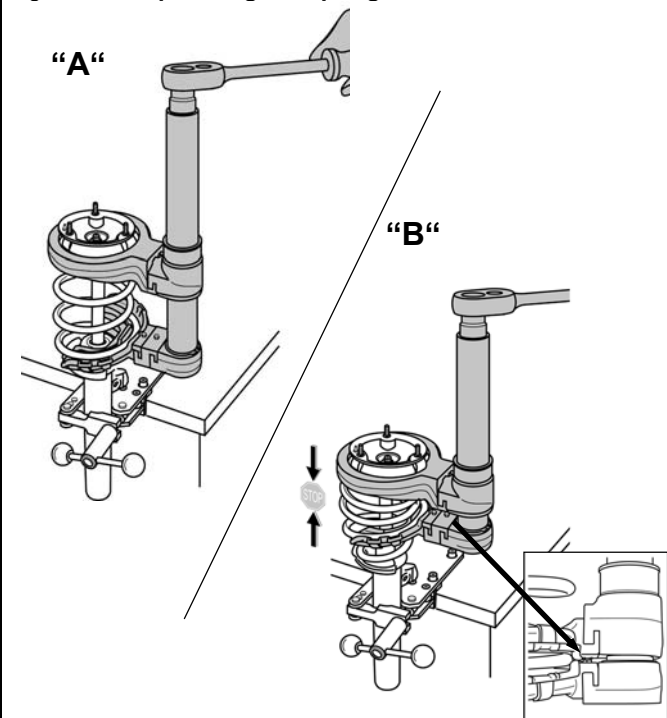


Fig. 19: If necessary, relieve pressure on the spring via the auxiliary drive.

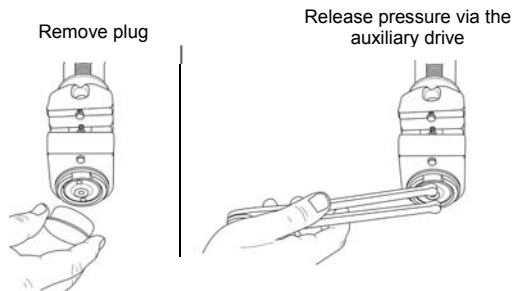
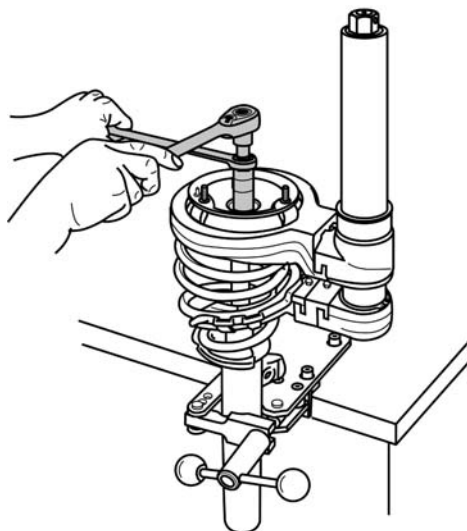


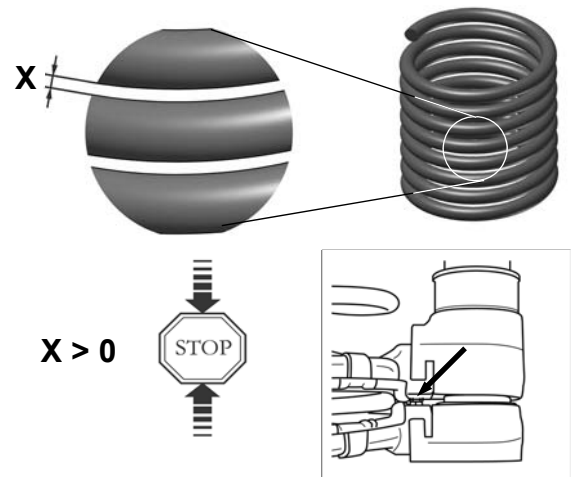
Fig. 20: Loosening the piston rod nut.



### 3. **⚠ DANGER**

The maximum load capacity of the spring compressor must not be exceeded (see technical data), otherwise there is a risk that the tool could fail and break into pieces. This will lead to debris/parts becoming projectiles.

- At the latest, stop compressing the spring once the minimum opening distance has been reached, that is when the mobile jaw mount touches the fixed jaw mount, but in any case before the spring coils touch each other.



To compress the spring, turn the drive nut clockwise using a 1/2" reversible ratchet with a 24mm (waf) socket as shown in **Fig. 18**. Compress the spring until the pressure on the piston rod nut has been completely relieved.

#### Note:

- If it is **not possible** to compress the spring in such a manner that there is **no longer** any pressure on the piston rod nut, the compression process must be **aborted**. In this case, the spring **cannot** be removed.
- The spring compressor features an auxiliary drive.

### 4. **ATTENTION**

Do not compress the spring via the auxiliary drive, as this could damage the spindle.

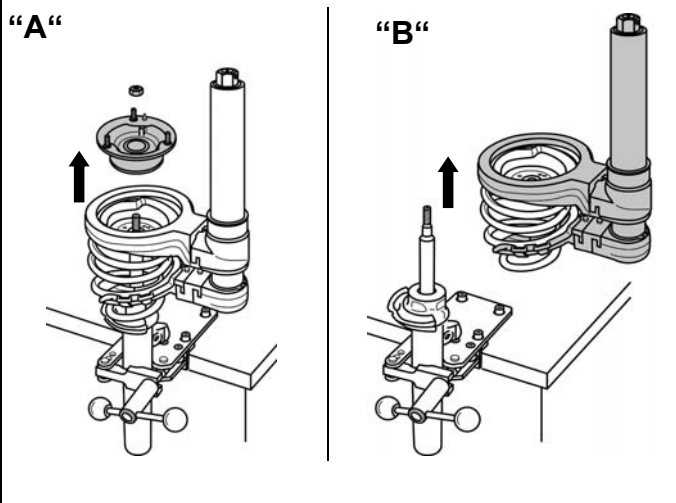
- The auxiliary drive may only be used for relieving pressure on a spring.

If necessary, relieve pressure on the spring compressor via the auxiliary drive and insert a new shear pin into the drive nut.

**(See Fig. 19 and Chapter 5)**

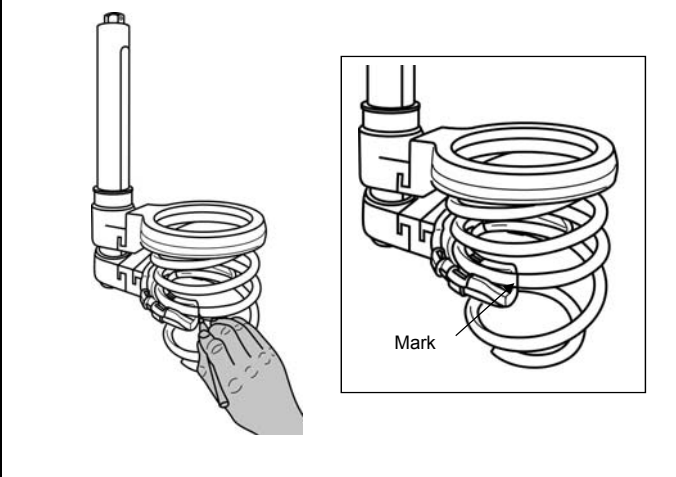
5. Loosen piston rod nut; for example, by means of the **KL-0056-100 K** tool set (accessory). (**Fig. 20**)

Fig. 21: Removing the compressed spring.



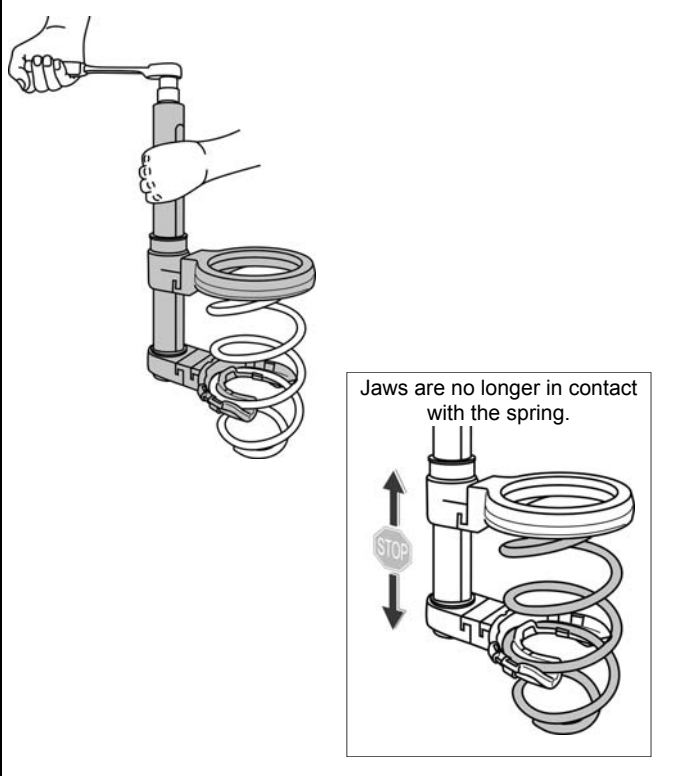
- Remove strut mount and upper spring plate. (Fig. 21 A)  
Remove compressed spring along with spring compressor from strut. (Fig. 21 B)

Fig. 22: Marking the position of the jaws.



- Use paint to mark the positions of the jaws on the spring. (Fig. 22)

Fig. 23: Decompressing the spring.



## 8. ATTENTION

When decompressing the spring, there is a risk of damage to the base body.

- When decompressing the spring, make sure that there is no pressure being exerted on the limit stop once the maximum opening distance on the base body has been reached.

(Stop turning the drive nut counter-clockwise.)

To decompress the spring, turn the drive nut counter-clockwise using a 1/2" reversible ratchet with a 24mm (waf) socket (Fig. 23) until the jaws do no longer touch the spring. Stop the decompression process as soon as the maximum opening distance of 350mm has been reached.

**Note:** If it is **not possible** to release, respectively open, the spring compressor far enough so that the jaws are no longer in contact with the spring and the spring can be removed, the decompression process **must be aborted**. In this case, the MacPherson suspension-/damper strut must be reassembled according to the manufacturer's instructions. Changing the spring is not possible.

- Remove spring compressor from spring.

**Installing a Spring (Technique 1)**

Fig. 24. Pre-adjusting the spring compressor.

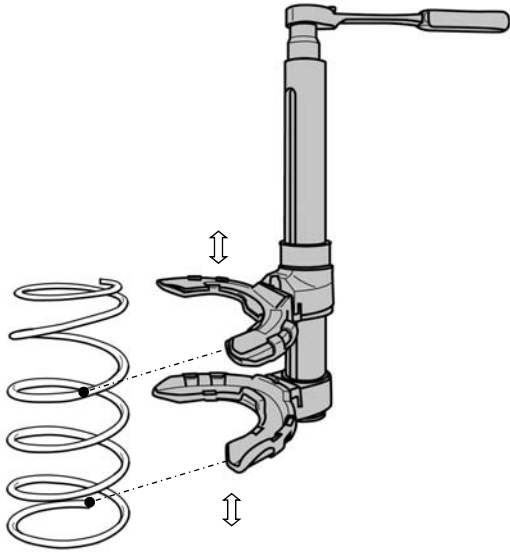


Fig. 25. Applying the spring compressor against spring.

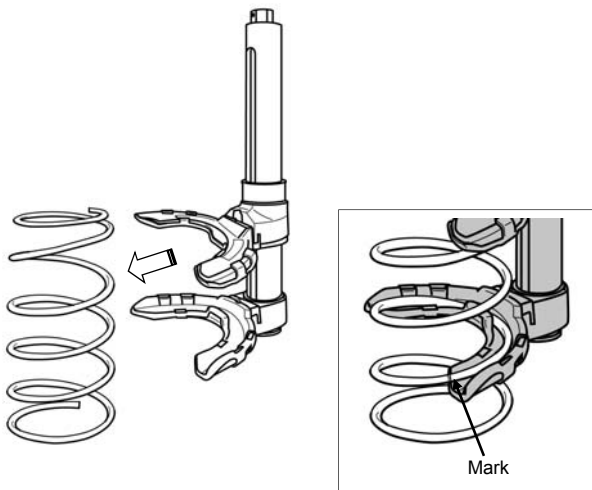
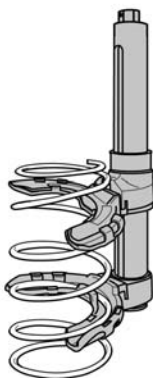


Fig. 26. Spring compressor applied against spring.



**4.3 Installing a Spring**

**Technique 1: Installing a spring using the jaws that engage the spring coils.**

- Using a 1/2" reversible ratchet with a 24mm (waf) socket, turn the drive nut and adjust the spring compressor so that the jaws can be positioned on the spring at exactly the same place as they were when the spring was removed. **(Fig. 24)**

**Note:** If a **new spring** is used, remember to copy the marks for the positioning of the jaws from the old spring to the new one.

**2. ⚠ DANGER**

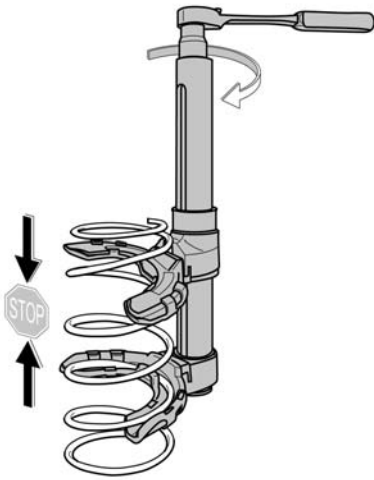
Make sure that the spring compressor is positioned correctly, otherwise there is a risk of the coil spring coming loose and falling off or being ejected from the spring compressor during the compression process.

- Be sure that the spring is accurately seated in the jaws (in diameter and in pitch). **(See Fig. 4 A)**
- The safety lip must engage behind the spring. **(See Fig. 4 B)**
- In the event of compressing conical springs, use the **KL-1590-1** adaptor (accessory) along with a jaw to compensate for the distance to the base body in order to ensure that the longitudinal axis of the spring and of the base body are parallel to each other. **(See Fig. 4 C)**

Position the spring compressor at exactly the same place as it was when the spring was removed. **(Fig 25)**

- Using a 1/2" reversible ratchet with a 24mm (waf) socket, turn the drive nut clockwise until both jaws with their clamping surface properly fit the spring. **(Fig 26)**

Fig. 27: Compressing the spring.



#### 4. **⚠ DANGER**

The maximum load capacity of the spring compressor must not be exceeded (see technical data), otherwise there is a risk that the tool could fail and break into pieces. This will lead to debris/parts becoming projectiles.

- At the latest, stop compressing the spring once the minimum opening distance has been reached, that is when the mobile jaw mount touches the fixed jaw mount, but in any case before the spring coils touch each other.

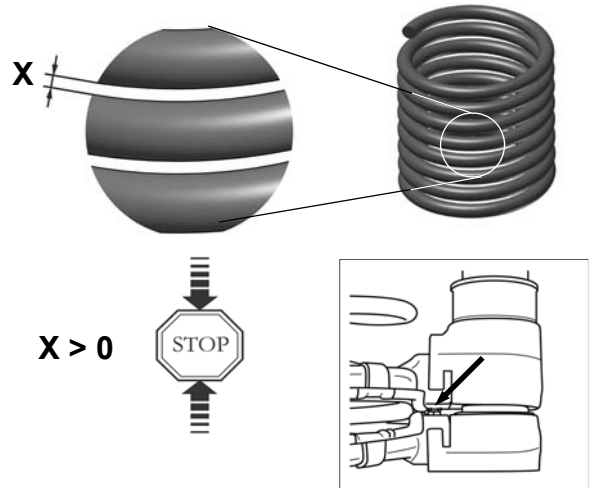
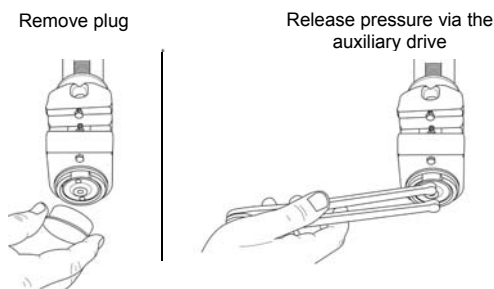


Fig. 28: If necessary, relieve pressure on the spring via the auxiliary drive.



To compress the spring, turn the drive nut clockwise using a 1/2" reversible ratchet with a 24mm (waf) socket, as shown in Fig. 27.

**Note:** The spring compressor features an auxiliary drive.

Fig. 29: Spring is compressed.



#### 5. **ATTENTION**

Do not compress the spring via the auxiliary drive, as this could damage the spindle.

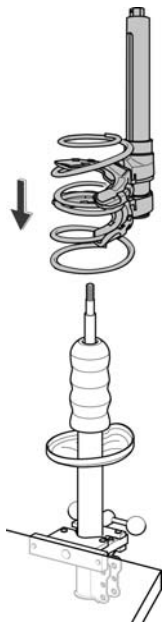
- The auxiliary drive may only be used for relieving pressure on a spring.

If the drive nut comes loose on the spindle, relieve pressure on the spring compressor via the auxiliary drive and insert a new shear pin into the drive nut.

(See Fig. 28 and Chapter 5)



Fig. 30. Positioning the spring on the suspension-/damper strut.



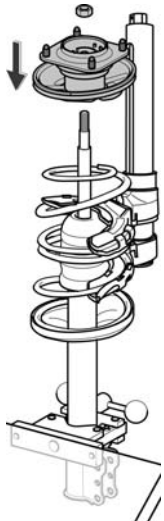
- Stop the compression process as soon as the upper spring plate and strut mount can be placed on the piston rod. **(Fig. 30)**

Place spring compressor along with spring on suspension-/damper strut.

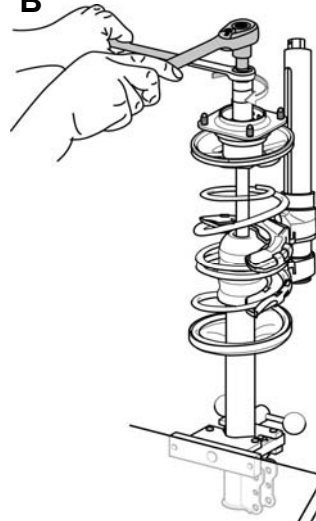
**Note:** When assembling the suspension-/damper strut, make sure that the piston rod has been extended completely. Pull out the piston rod if necessary.

Fig. 31. Assembling the suspension strut.

“A”



“B”



- Assemble suspension strut according to the manufacturer's instructions. Make sure the spring is seated correctly. **(Fig. 31)**

### 8. ATTENTION

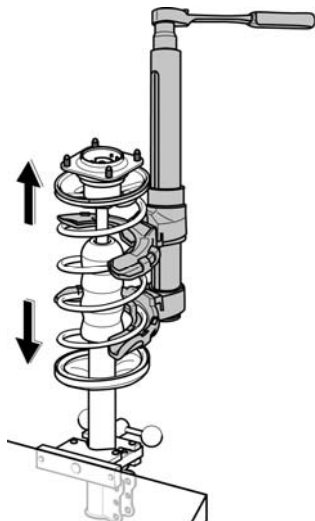
When decompressing the spring, there is a risk of damage to the jaws.

- When decompressing the spring, make sure that the jaws with their outer face do not touch the spring.

To decompress the spring, turn the drive nut counter-clockwise using a 1/2" reversible ratchet with a 24mm (waf) socket until the jaws do no longer touch the spring **(Fig. 32)**.

**Note:** Make sure that the spring is correctly seated in the lower and upper spring plates.

Fig. 32. Decompressing the spring.



- Remove spring compressor from spring.

## Installing a Spring (Technique 2)

Fig. 33. Pre-adjusting the spring compressor.

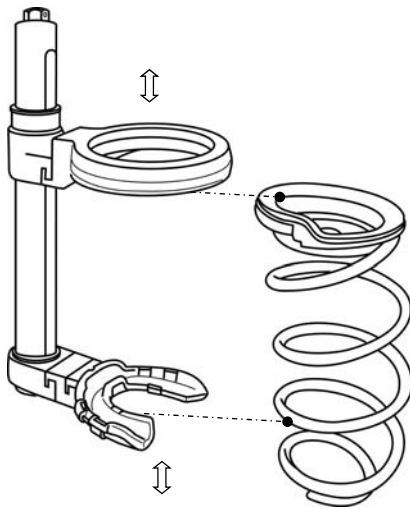


Fig. 34. Applying the spring compressor against spring.

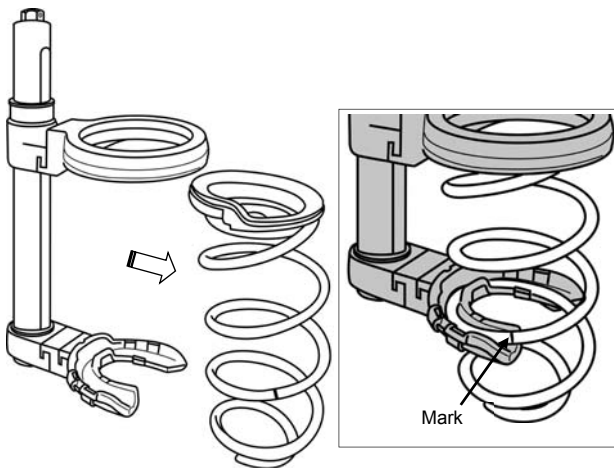
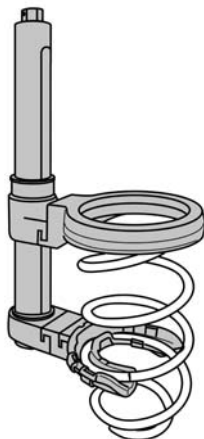


Fig. 35. Spring compressor applied against spring.



### Technique 2: Installing a spring using the special jaw that encompasses the upper spring plate.

- Using a 1/2" reversible ratchet with a 24mm (waf) socket, turn the drive nut and adjust the spring compressor so that the jaws can be positioned on the spring at exactly the same place as they were when the spring was removed. **(Fig 33)**

**Note:** If a **new spring** is used, remember to copy the marks for the positioning of the jaws from the old spring to the new one.

#### 2. **⚠ DANGER**

Make sure that the spring compressor is positioned correctly, otherwise there is a risk of the coil spring coming loose and falling off or being ejected from the spring compressor during the compression process.

- Be sure that the spring is accurately seated in the jaws (in diameter and in pitch). **(See Fig. 4 A)**
- The safety lip must engage behind the spring. **(See Fig. 4 B)**
- In the event of compressing conical springs, use the **KL-1590-1** adaptor (accessory) along with a jaw to compensate for the distance to the base body in order to ensure that the longitudinal axis of the spring and of the base body are parallel to each other. **(See Fig. 4 C)**

Position the spring compressor at exactly the same place as it was when the spring was removed. **(Fig 34)**

- To pre-compress the spring, turn the drive nut clockwise using a 1/2" reversible ratchet with a 24mm (waf) socket. Pre-compress approximately 10cm.

- Place spring compressor along with spring on suspension-/damper strut.

**Note:** When assembling the suspension-/damper strut, make sure that the piston rod has been completely extended. Pull out the piston rod if necessary.

Fig. 36. **Compressing the spring.**

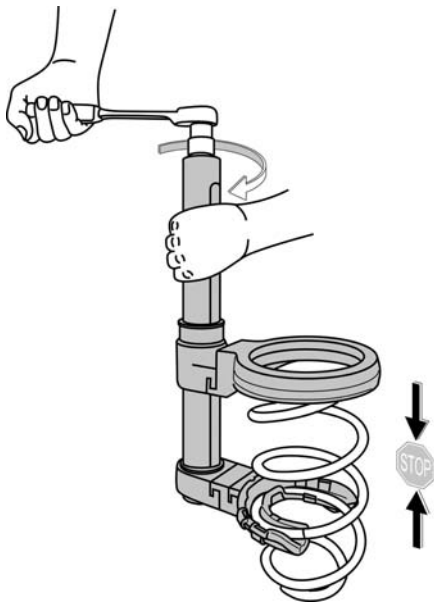


Fig. 37. **If necessary, relieve pressure on the spring via the auxiliary drive.**

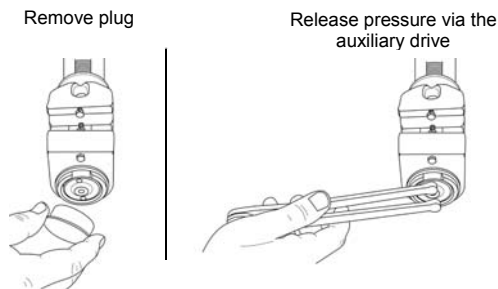
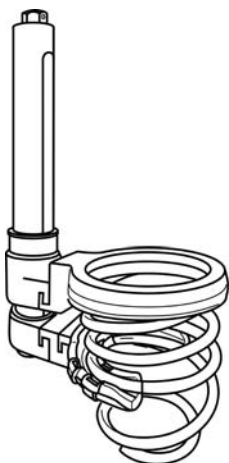


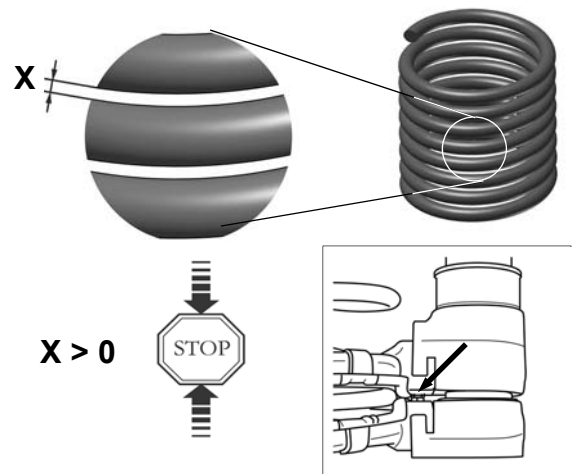
Fig. 38. **Spring is compressed.**



## 5. **DANGER**

The maximum load capacity of the spring compressor must not be exceeded (see technical data), otherwise there is a risk that the tool could fail and break into pieces. This will lead to debris/parts becoming projectiles.

- At the latest, stop compressing the spring once the minimum opening distance has been reached, that is when the mobile jaw mount touches the fixed jaw mount, but in any case before the spring coils touch each other.



To compress the spring, turn the drive nut clockwise using a 1/2" reversible ratchet with a 24mm (waf) socket, as shown in **Fig. 36**.

**Note:** The spring compressor features an auxiliary drive.

## 6. **ATTENTION**

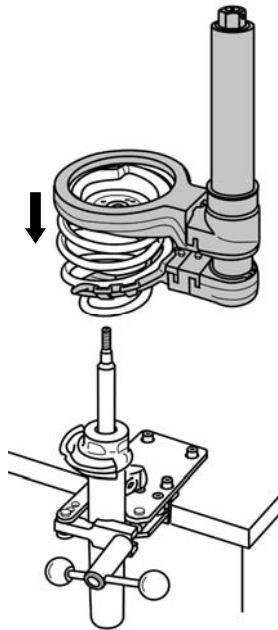
Do not compress the spring via the auxiliary drive, as this could damage the spindle.

- The auxiliary drive may only be used for relieving pressure on a spring.

If the drive nut comes loose on the spindle, relieve pressure on the spring compressor via the auxiliary drive and insert a new shear pin into the drive nut.

**(See Fig. 37 and Chapter 5)**

Fig. 39. Positioning the spring on suspension-/damper strut.

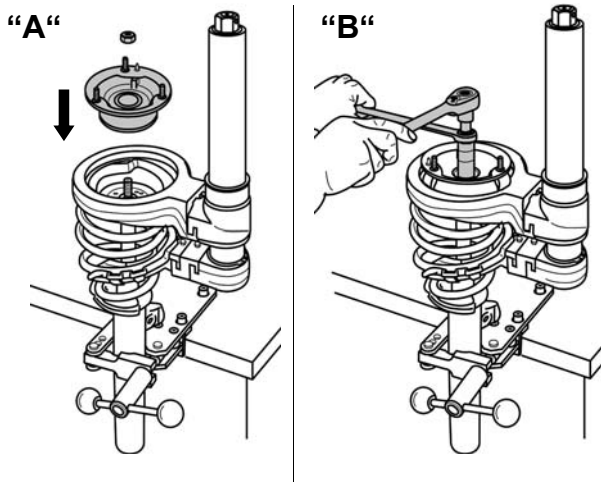


7. Stop the compression process as soon as the strut mount can be placed on the piston rod. **(Fig. 39)**

**Note:** Be sure that the piston rod is completely extended.

8. Assemble the suspension strut according to the manufacturer's instructions. Make sure the spring is correctly seated. **(Fig. 40)**

Fig. 40. Assembling the suspension strut.



9. **ATTENTION**

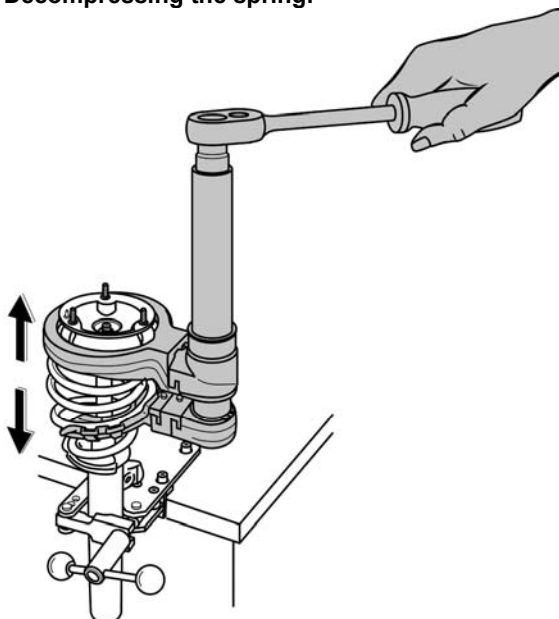
When decompressing the spring, there is a risk of damage to the jaws.

- When decompressing the spring, make sure that the jaws with their outer face do not touch the spring.

To decompress the spring, turn the drive nut counter-clockwise using a 1/2" reversible ratchet with a 24mm (waf) socket until the jaws do no longer touch the spring. **(Fig. 41)**

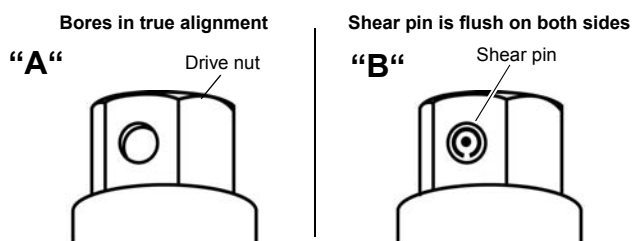
**Note:** Make sure that the spring is correctly seated in the lower and upper spring plates.

Fig. 41. Decompressing the spring.



10. Remove spring compressor from spring.

Fig. 42. Insertion: Drive nut shear pin.



## Accessories

### KL-1502 - Pair of Jaws, Size 0C



### KL-1512 - Pair of Jaws, Size 1A



### KL-1514 - Pair of Jaws, Size 1B



### KL-1516 SP - Pair of Jaws, Size 1C



### KL-1518 A SP - Pair of Jaws, Size 1D



### KL-1510 - Pair of Jaws, Size 1N



### KL-1525 SP - Jaw, Size 2B



### KL-1520 - Pair of Jaws, Size 2N



## 5. Inserting the Drive Nut Shear Pin

1. Remove all residue of the old shear pin from the bores so that the bore holes in the drive nut and in the spindle are free from any dirt and debris.
2. Screw the drive nut onto the spindle (left-handed thread) so that the bore hole in the drive nut is in true alignment with the one in the spindle. (Fig. 42 A)
3. Insert shear pin into the bore hole making sure that it is flush fitting in the nut on both sides. (Fig. 42 B)

## 6. Care and Storage

**ATTENTION** Petroleum ether and chemical solvents can damage seals. Always clean all parts after their use with a clean cloth only.

In order to protect against corrosion, lightly lubricate all parts after their use and store them in a clean and dry place.

## 7. Accessories

### KL-1502 - Pair of Jaws, Size 0C

Universally suitable

For spring Ø	70-110mm
Weight (pair)	1.1kg

**KL-1502 SP - Pair of Jaws with Protective Inserts, Size 0C (not shown)**  
Like KL-1502, however comes with protective inserts.

### KL-1512 - Pair of Jaws, Size 1A

Suitable for Audi A4 front axle, Audi A8 rear axle, Porsche, Saab 90/900, Chrysler, Vauxhall/Opel etc.

For spring Ø	80-150mm
Weight (pair)	1.9kg

**KL-1512 SP - Pair of Jaws with Protective Inserts, Size 1A (not shown)**  
Like KL-1512, however comes with protective inserts.

### KL-1514 - Pair of Jaws, Size 1B

Suitable for Audi A8 front axle.

For spring Ø	85-150mm
Weight (pair)	2.0kg

**KL-1514 SP - Pair of Jaws with Protective Inserts, Size 1B (not shown)**  
Like KL-1514, however comes with protective inserts.

### KL-1516 SP - Pair of Jaws with Protective Inserts, Size 1C

Suitable for Audi A4 (model 2001 onwards) rear axle wishbone.

These jaws allow the removal and installation of rear axle springs to be performed within just a few minutes without having to loosen the wishbone or to lower the axle. This technique eliminates the need for performing a wheel alignment after springs have been removed/installed.

For spring Ø	80-150mm
Weight (pair)	1.9kg

### KL-1518 A SP - Pair of Jaws with Protective Inserts, Size 1D

Suitable for Volvo XC 90 (model 2015 onwards), front axle.

For spring Ø	110-125mm
Weight (pair)	1.9kg

### KL-1510 - Pair of Jaws, Size 1N

Universally suitable

For spring Ø	80-165mm
Weight (pair)	1.9kg

### KL-1510 SP - Pair of Jaws with Protective Inserts, Size 1N

(not shown)  
Like KL-1510, however comes with protective inserts.

### KL-1525 SP - Jaw with Protective Insert, Size 2B

Suitable for BMW 3 Series E46, BMW 5 Series E39.

For spring Ø	155-195mm
Weight (piece)	0.9kg

### KL-1520 - Pair of Jaws, Size 2N

Universally suitable

For spring Ø	155-195mm
Weight (pair)	1.9kg

**KL-1520 SP - Pair of Jaws with Protective Inserts, Size 2N (not shown)**  
Like KL-1520, however comes with protective inserts.

### KL-1530 - Pair of Jaws, Size 3N



### KL-1550 - Pair of Jaws, Size 5.



### KL-1561 - Jaw, Size 6.



### KL-1571 - Ring Jaw for BMW.



### KL-1581-R - Ring Jaw for Renault.



### Pair of Protective Inserts.



### KL-1540 - Jaw Set (4-piece set), Size 4.



### KL-1570-1 - Jaw Set for BMW.



### KL-1579-2 - Jaw Set for BMW E90.



### KL-1530 - Pair of Jaws, Size 3N

Universally suitable

For spring Ø	180-240mm
Weight (pair)	3.0kg

### KL-1550 - Pair of Jaws, Size 5

Suitable for Citroën C 15 rear axle, Peugeot 305 Break rear axle.

Weight (pair)	2.3kg
---------------	-------

### KL-1561 - Jaw, Size 6

Suitable for Ford Probe, Mazda 323, 626, MX6, Mitsubishi-Galant with electronically-pneumatically controlled strut, Peugeot 206.

Special recess	110mm
Inner Ø	180mm
Weight (piece)	1.3kg

### KL-1571 - Ring Jaw, BMW

Suitable for BMW 8 Series E31 and if used in conjunction with the adaptor ring KL-9001-1910 also suitable for BMW 3 Series E46 (models 1998 onwards), BMW 5 Series E39 (models 1995 onwards).

Recess Ø	139mm
Inner Ø	165mm
Weight (piece)	2.3kg

### KL-1581-R - Ring Jaw, Renault

Suitable for Renault Laguna and Safrane, Lancia Gamma in conjunction with jaw in size 3, Hyundai.

Special recess	162mm
Inner Ø	238mm
Weight (piece)	2.5kg

### Protective Inserts

Protective Inserts	for jaws
Part No.	Part No.
KL-1502-S (1 pair with 6 grooved nails)	KL-1502
KL-1512-S (1 pair)	KL-1512
KL-1514-S (1 pair)	KL-1514
KL-1510-S (1 pair)	KL-1510
KL-1520-S (1 pair)	KL-1520
KL-1521-S (1 piece)	KL-1525

### KL-1540 - Jaw Set (4-piece set), Size 4

Suitable for VW Golf, Bora vehicles with 4-wheel drive (4 Motion).

These specially shaped jaws are indispensable for the removal and installation of rear axle springs. Set consists of:

Part No.	Description
KL-1541	Jaw, size 4, bottom left
KL-1543	Jaw, size 4, top left
KL-1545	Jaw, size 4, bottom right
KL-1547	Jaw, size 4, top right

### KL-1570-1 - Jaw Set, BMW (German Utility Model)

Suitable for BMW E46 (3 Series 1998 onwards), E39 (5 Series 1995 onwards).

The KL-1570-1 jaw set is designed to compress front springs. Set is used in conjunction with ring jaw KL-1571. Set consists of:

Part No.	Description	Spring Ø
KL-1525	Jaw, size 2B	155-195mm
KL-1521-S	Protective insert, size2N	155-195mm
KL-9001-1910	Adaptor ring, BMW E46	160mm

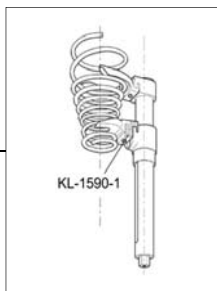
### KL-1579-2 - Jaw Set, BMW E90

Suitable for BMW E90/E91/E92/E93, front axle.

Designed to remove/install front coil springs. Set consists of:

Part No.	Description
KL-1511 SP	Jaw with protective insert, size 1N
KL-1590-1	Adaptor for conical springs
KL-1579-1	Ring jaw with adaptor ring BMW E90 (Consists of ring jaw KL-1571 and adaptor ring KL-1579)

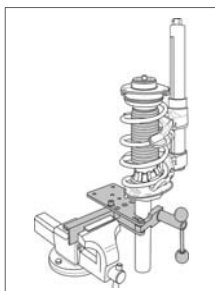
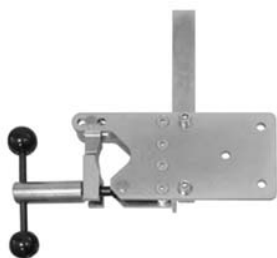
KL-1590-1



KL-1590-2



KL-0055-60



KL-0056-100 K



Piston rod- / Retaining tool profiles



Example of use:



## KL-1590-1 - Adaptor for Conical Springs

Suitable for Alfa Romeo, Chrysler, Nissan, Seat Arosa, VW Lupo etc. Designed to extend jaws for distance compensation.

## KL-1590-2 - Adaptor Set

Used to extend the jaws for distance compensation, for example, when compressing the rear axle spring on a VW Lupo. Also suitable for barrel springs. (Set consists of 2 x KL-1590-1).

## KL-0055-60 - Holding Fixture for Suspension Struts (German Utility Model)

For MacPherson suspension struts, shock absorbers and steering systems.

This holding fixture is either screw-fitted to a workbench or clamped into a vice, thus enabling quick, safe and professional repairs to be carried out. Strut axles **should NOT** be clamped directly into a vice for assembly work (risk of deformation).

## KL-0056-100 K - Shock Absorber Piston Rod Tool Set Universal application.

Indispensable tool set used to counter-hold the shock absorber piston rod while loosening or tightening the piston rod nut, e.g. on MacPherson-type suspension strut systems.

Scope of Delivery:

Special Hexagon Sockets, Length 82mm, drive  $\text{O}_{19/22}$

Part No.	Description	Suitable for:
KL-0056-17	Special Hexagon Socket 17mm	VW-Audi, Seat, Fiat
KL-0056-18	Special Hexagon Socket 18mm	VW-Audi, Seat, Citroën, Fiat, Opel/Vauxhall, Peugeot, Renault, Jap. cars
KL-0056-19	Special Hexagon Socket 19mm	VW-Audi, Seat, Citroën, Fiat, Opel/Vauxhall, Peugeot, Renault, Jap. cars
KL-0056-21	Special Hexagon Socket 21mm	VW-Audi, BMW, Mercedes, Jap. cars, Volvo
KL-0056-22	Special Hexagon Socket 22mm	VW-Audi, Seat, Citroën, Fiat, Opel/Vauxhall, Peugeot, Renault
KL-0056-24	Special Hexagon Socket 24mm	Opel/Vauxhall

Counter-Hold Tools, Drive  $\text{O}_{10}$

Part No.	Description	Suitable for:
KL-0056-37	Insert Torx® T50	Opel/Vauxhall, Volvo
KL-0056-45	Insert $\text{O}_{11}$	Japanese vehicles
KL-0056-51	Insert $\text{O}_6$	BMW, Seat, Fiat, Citroën, Peugeot, Opel/Vauxhall, Renault, Jap. cars
KL-0056-52	Insert $\text{O}_7$	VW-Audi, Seat, Fiat, Citroën, Mercedes, Peugeot, Renault
KL-0056-71	Insert 2-flat 5.2mm	VW-Audi, Nissan
KL-0056-72	Insert 2-flat 6mm	VW-Audi, Renault
KL-0056-74	Insert 2-flat 7mm	VW-Audi, Seat, Fiat
KL-0056-75	Insert 2-flat 8mm	Seat, Fiat
KL-0056-96	Insert XZN 12mm	Opel/Vauxhall

Pin Spanner, Drive  $\text{O}_{22}$

Part No.	Description
KL-0050-0015	Pin Spanner, 14mm, VW-Audi
KL-0050-51	Pin Spanner, Mercedes W203

Combination Spanner/Ratchet Ring Spanner

Part No.	Description
6000830	Combination Spanner $\text{O}_{10}$
KL-4111-1922	Ratchet Ring Spanner $\text{O}_{19}$ and $\text{O}_{22}$

Plastic Storage Case

Part No.	Description
KL-0056-1090	Plastic Storage Case (440×340×100mm)

## 8. Maintenance and Repair by the GEDORE Automotive Service Centre

For safety reasons, as soon as damage is noticed on the spring compressor, immediate steps must be taken to prevent it from being used. For professional inspection and repair of the tool, please contact the GEDORE Automotive Service Centre.

Address:

GEDORE Automotive GmbH

Breslauerstr. 41

DE- 78166 Donaueschingen

Phone: + 49 (0) 771 83 22 371

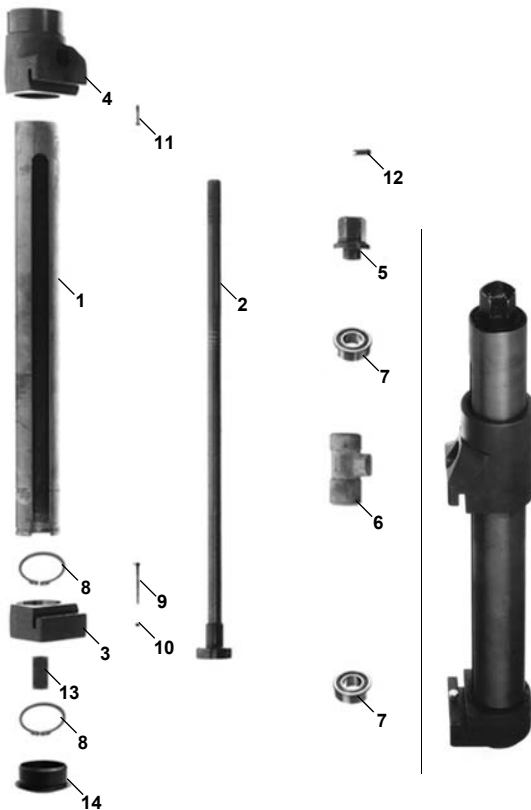
Email: info@gedore-automotive.com

For additional information concerning the use of our spring compressor, please contact the GEDORE Automotive Service Centre.

### Spare parts: KL-0015 SP - Spring Compressor.



### Compressor base body KL-0015-100.



### 9. Spare Parts List KL-0015 SP

Part No.	Description
KL-0015 SP	Spring Compressor, incl. Pairs of Jaws with Protective Inserts, Size 1N and 2N
<i>consists of:</i>	
KL-0015-100	Compressor Base Body
KL-1510 SP	Pair of Jaws with Protective Inserts, Size 1N
KL-1520 SP	Pair of Jaws with Protective Inserts, Size 2N

Pos.	Part No.	Description	Qty	KL-0015-0035	KL-0015-0040
-	KL-0015-100	Compressor Base Body	1		
<i>consists of</i>					
1	KL-0015-0001	Cylinder Tube	1		
2	KL-0015-0002	Spindle	1		•
3	KL-0015-0003	Fixed Jaw Mount	1		
4	KL-0015-0004	Mobile Jaw Mount	1		
5	KL-0015-0005	Hex Nut	1		•
6	KL-0015-0006	Slide	1		•
7	KL-0015-0008	Taper Roller Bearing	2		•
8	KL-0014-0022	Circlip A 50	2	•	•
9	KL-0015-0010 A	Hex Bolt, 5x45 mm	1	•	•
10	KL-0014-0025	Hex Nut, M5	1	•	•
11	KL-0015-0012	Hex Bolt, M5x20mm	1	•	•
12	KL-0015-0014 M	Shear Pin, 6x26mm	1	•	•
13	KL-0015-0015	Feather Key	1		•
14	KL-0015-0016	Plug for Spindle	1		
-	KL-0014-0030	Molybdenum Disulphide Paste (not shown)			•

**KL-0015-0035 Repair Kit (Small Kit)**  
(For scope of delivery, see table)

**KL-0015-0040 Repair Kit (Big Kit)**  
(For scope of delivery, see table)

### 10. Environmentally Safe Disposal

Recycle/dispose of the spring compressor and its packaging material in compliance with the legal rules and regulations in force.