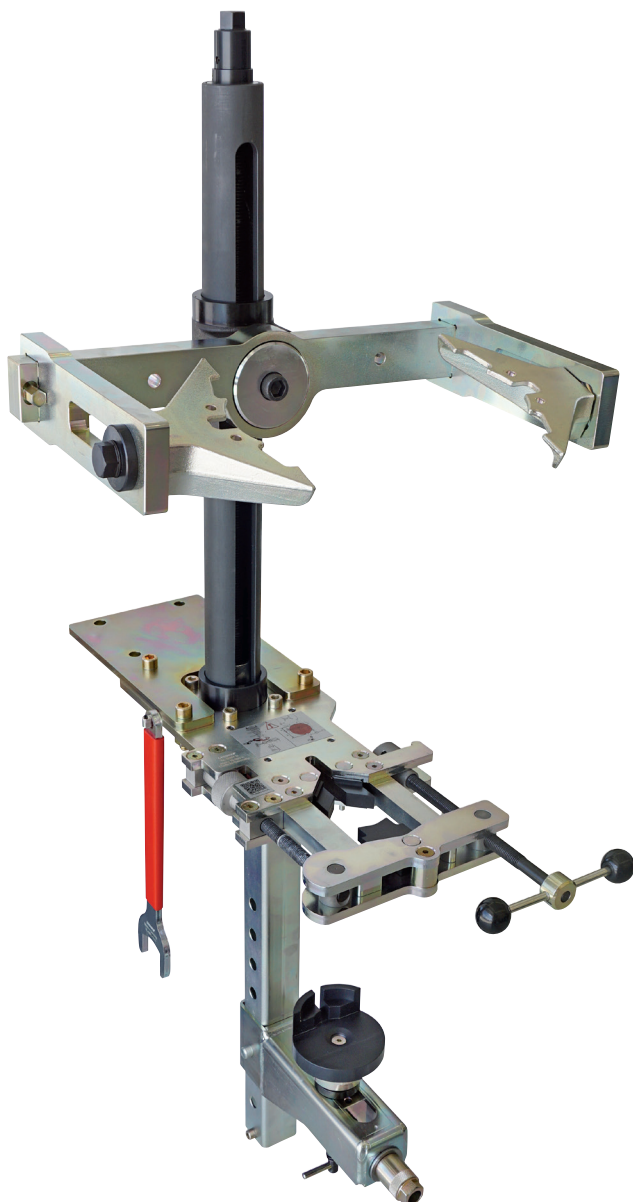


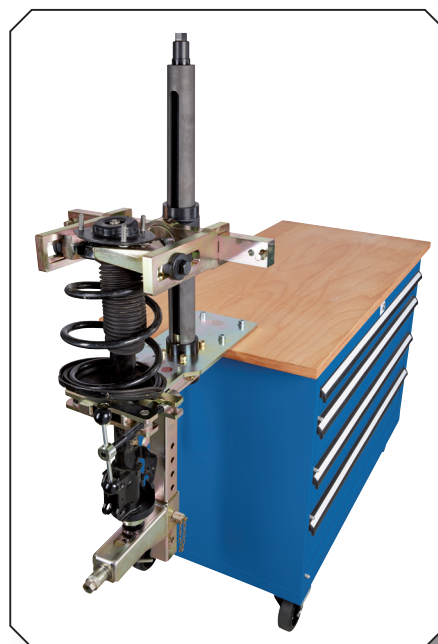


KL-5501 B Stationary Spring Compressor



Operating instructions
⚠ Read and understand before use!

EN



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1. FOR YOUR SAFETY



Read and understand these operating instructions **before using** the 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 spring compressor. Keep them at a safe place for future reference, and always pass them on to subsequent users of the spring compressor! The 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 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!

✔ **Never** allow unauthorised, inexperienced persons, minors and children, or persons with limited physical, sensory, and mental abilities to use the 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 spring compressor **must** ensure that **only** trained personnel in specialised vehicle workshops use the spring compressor!

✔ The owner of the 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 spring compressor!

✔ The owner of the 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!

1.3 Intended use

The spring compressor ...

✔ **may only be used** with McPherson struts for tensioning the spring via the upper spring collar!

✔ **may only** be used on struts as specified in **Chapter 2. - Product description**!

✔ **may only** be used to a **max. load of 15,000 Newton**!

✔ **may only** be used by hand with muscle power with a manual drive!

✔ **may only** be used up to a **max. torque of 40 Nm**!

✔ **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 spring compressor ...

✔ **must never** be used for compressing springs directly at the spring coil!

✔ **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 spring compressor **always** as intended; any other use can result in **DEATH** or to **SEVERE INJURIES** !

1.5 Personal protective equipment

For your safety, **always** wear personal protective equipment when using the spring compressor! The 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 spring compressor to protect yourself against flying parts or particles!

When using the spring compressor, flying parts or particles can cause **SEVERE INJURIES** to your **eyes**!



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

When working with the 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 spring compressor to protect yourself against dropping parts!

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

1.6 Labelling of the warnings

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

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

1.7 Basic warnings

WARNING - Danger to life from MISUSE

As a consequence of **MISUSE**, the spring compressor, strut, and spring can slip, break, and thus fall or flop around. This can cause **DEATH** or **SEVERE INJURIES**!

Read and understand these operating instructions **before using** the spring compressor, and observe all safety and warning instructions for **safe use**!

Always work with the spring compressor in accordance with the basic regulations on work safety and accident prevention!

Only use the 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 spring compressor if it is damaged or has loose parts or unauthorised modifications!

Never use the spring compressor with an impulse or impact wrench or another machine-operated drive, **only** drive it by hand with muscle power with a manual drive!

Never use the spring compressor for batch processing with many compressing operations within a few minutes!

Always observe the installation position of the chassis spring specified by the vehicle manufacturer!

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

Never hit the spring compressor with a hammer or anything similar!

⚠ WARNING - Danger to life from OVERLOAD

As a consequence of **OVERLOAD**, the spring compressor, strut, and spring can slip, break, and thus fall or flop around. This can cause **DEATH** or **SEVERE INJURIES**!

- ✔ **Never** exceed the **maximum loading capacity** of the spring compressor!
- ✔ **Never** use the spring compressor if it is damaged or has loose parts or unauthorised modifications!
- ✔ **Never** use the spring compressor with an impulse or impact wrench or another machine-operated drive, **only** drive it by hand with muscle power with a manual drive!
- ✔ **Never** use the spring compressor for batch processing with many compressing operations within a few minutes!
- ✔ **Always** wear your personal protective equipment (*safety goggles, protective gloves, safety shoes*) during work!

⚠ WARNING - Danger of injury from FALLING

The spring compressor, strut, and spring can **FALL DOWN** during preparation and use. This can cause **SEVERE INJURIES**!

- ✔ **Always** carry out all preparations of heavy parts with the help of a second specialist!
- ✔ When mounting the spring compressor, use suitable fasteners which will **safely** and **reliably** support the load of the spring compressor even during use!
- ✔ **Always** check the stability of the spring compressor before use!
- ✔ **Always** wear your personal protective equipment (*safety goggles, protective gloves, safety shoes*) during work!

ATTENTION - Risk of DAMAGE

The spring compressor, strut, and spring can be **DAMAGED**.

- ✔ **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 spring compressor for sufficient lubrication. *If necessary, lubricate them only with molybdenum disulphide paste (for example with GEDORE KL-0014-0030)!*
- ✔ **Never** use the spring compressor for batch processing with many compressing operations within a few minutes!
- ✔ **Never** clamp the spring compressor in a vice.

1.8 Basic safety instructions

For your safety, **always** observe the following safety precautions when using the 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 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 spring compressor in accordance with the basic regulations on work safety and accident prevention!
- ✔ **Never** use the spring compressor when you are tired or under the influence of alcohol, drugs, or medication!
- ✔ **Before each use**, check the 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!
- ✔ **If necessary**, carry, lift, and position the spring compressor with the help of a second specialist due to its weight!
- ✔ **Before using** the spring compressor, make sure that **no** unauthorised persons are in the immediate environment!
- ✔ **Always** observe the **max. loading capacity** when using the spring compressor, and **never** exceed it!
- ✔ **Always** keep hair, clothing, and gloves away from rotating parts!
- ✔ **Never** use the 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 spring compressor, and contact **GEDORE Automotive GmbH if necessary!**
- ✔ For safety reasons, ensure that a damaged spring compressor is no longer used! Professional inspection and repair may only be carried out by specially trained personnel at **GEDORE Automotive GmbH!**
- ✔ **Always** use the 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 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 can drip when using the spring compressor and thus pose a hazard to the environment.

- ✔ **Immediately** remove excess molybdenum disulphide paste, for example with the help of 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(R) G-N PLUS PASTE**) can be found on the manufacturer's site on the Internet (**World Wide Web**) or, if required, contact **GEDORE Automotive GmbH**.

1.11 Maintenance

Perform maintenance on the spring compressor **at regular intervals** and **only** when the tool is not tensioned or compressed! Poor and improper maintenance can damage the spring compressor, thus causing **DEATH** or **SEVERE INJURIES!**

Prior to each use:

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

Every 6 months:

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

Recommended: Every 24 months:

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

1.12 Troubleshooting

Only perform troubleshooting on the spring compressor when it is tension-free!

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

Reason: The dowel 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 dowel pin into the drive nut (see **Chapter 5**).

2. PRODUCT DESCRIPTION

2.1 KL-5501 B - Stationary spring compressor

Universal fit for all McPherson spring struts with coil springs.
Fits particularly for right or left rising springs, conical springs, eccentric springs, springs with a low number of coils, springs with a high or varying spring pitch, spring struts with tension stop springs as well as for spring struts with electronic control and sensors.
The stationary spring compressor allows tensioning of any McPherson spring struts available on the market. Since the spring is compressed via the upper spring collar against the lower one, the shape of the spring or the spring pitch does not play any role. The unique design with variable spring collar holder, the adjustable holder, and the adjustable holding device with one-hand operation make this spring compressor one of the most universal and safest on the market.
The adapter plate on the spring compressor makes it easy to mount it on a tool / installation trolley, or a workbench.

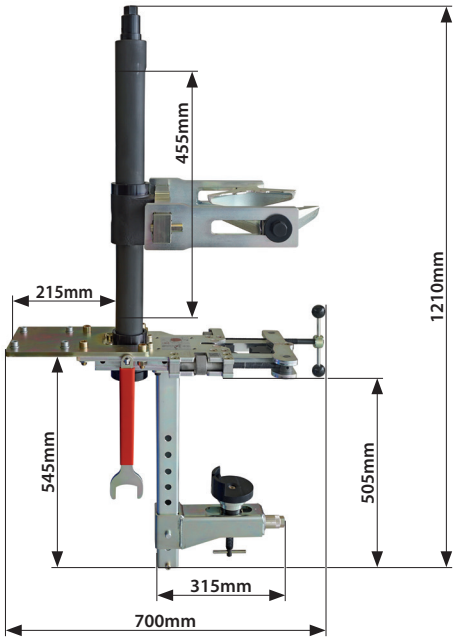
2.2 Scope of delivery

Item	Description
A	Base unit
B	Support
C	Adapter plate
D	Fastening screws
E	Screws for adapter plate
F	Plastic clamping jaws
G	Adjusting wrench
H	Molybdenum disulphide paste

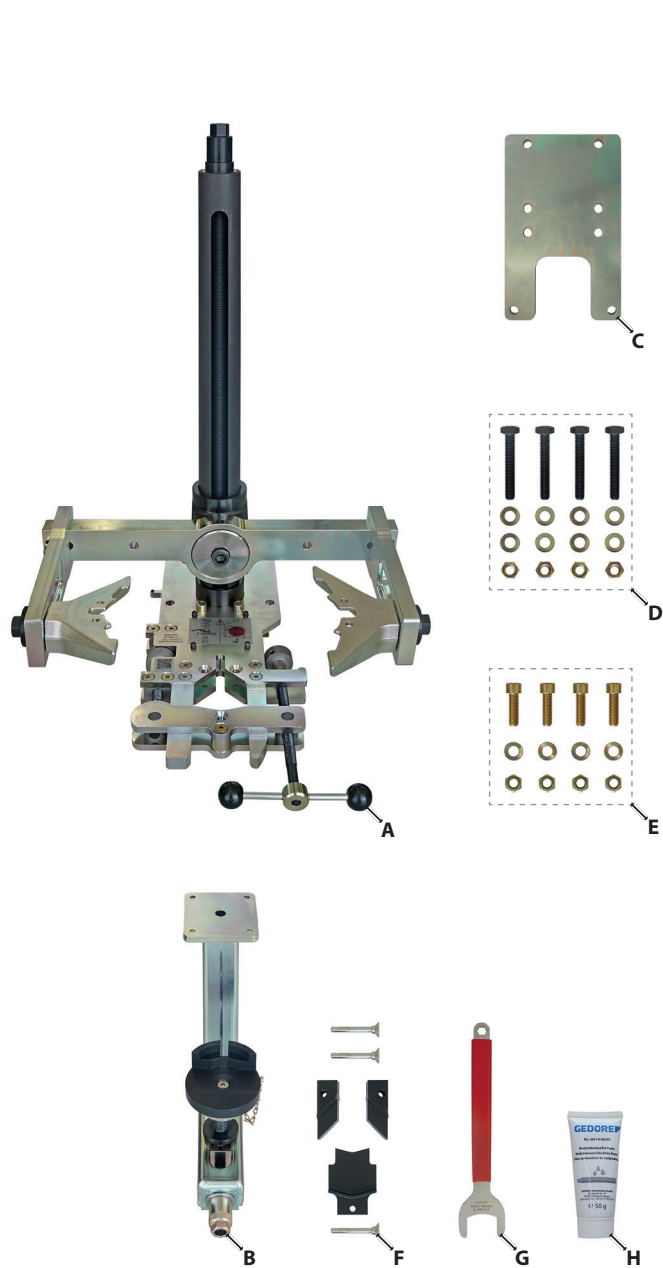
(i) Detailed overview of individual parts: See Chapter 7.

2.3 Specifications

Drive:24mm
Load max.: 15 000N
Drive torque max.: 40Nm
Max. span: 570mm
Spring collar diam.: (min. / max.) 125mm / 220mm
Dimensions: ...

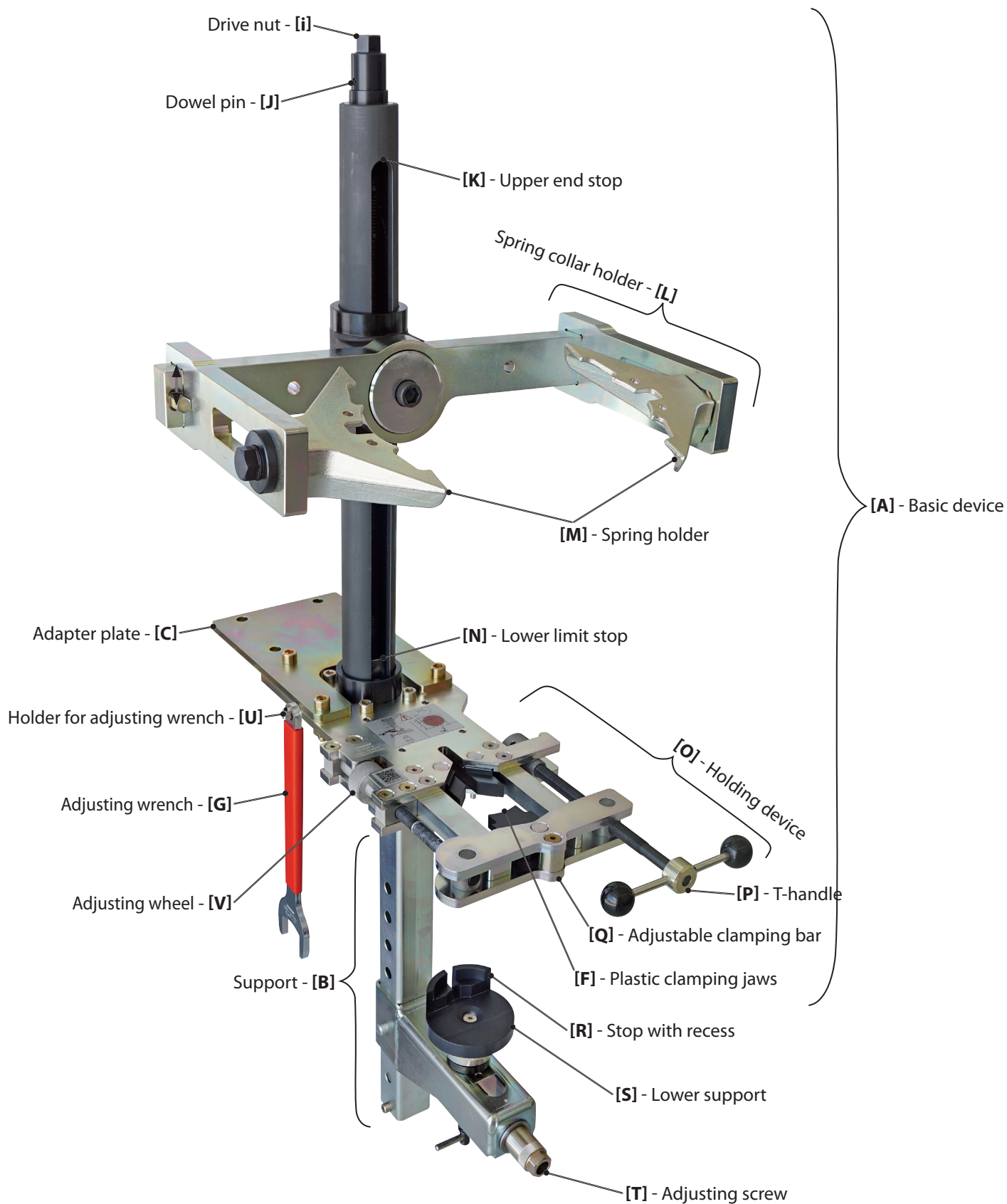


Weight: 46kg



2.4 Component overview

This overview shows basic components and designations of the spring compressor.



3. PREPARATION

⚠ WARNING

The spring compressor and the spring strut can slip off, break and fall down due to **MISUSE**, thereby the spring and other parts can fling around in an uncontrolled way. This can cause **DEATH** or **SEVERE INJURIES**!

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

✔ Use the 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 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 preparing or using the spring compressor, check that all parts of the scope of delivery are available (*see chapter 2.*), and follow the instructions below.

3.2 Assembling drive parts

⚠ WARNING

The spring compressor can slip, break or fall down due to the use of a machine-operated drive, causing the spring and other parts to fling around in an uncontrolled way. This can cause **DEATH** or **SEVERE INJURIES**!

✔ **Never** use the spring compressor with an impulse or impact wrench or another machine-operated drive, **only** drive it by hand with muscle power with a manual drive!

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

❗ **For other accessories, see chapter 8. or the GEDORE-Automotive catalogue.**

📷 1: Required drive parts



Hand crank (Size 24mm)
KL-5501-40

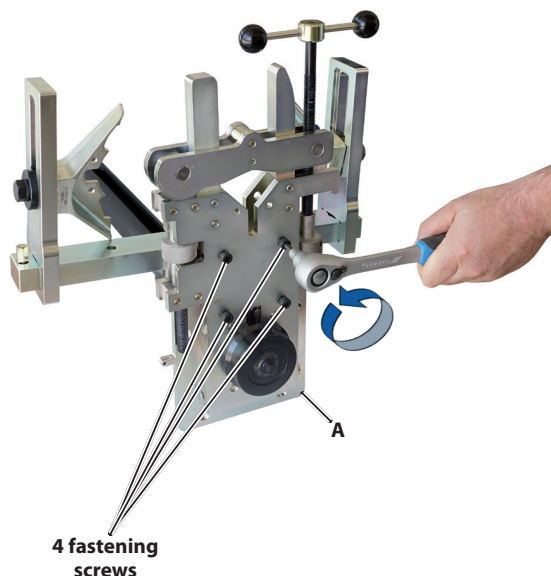
alternatively:



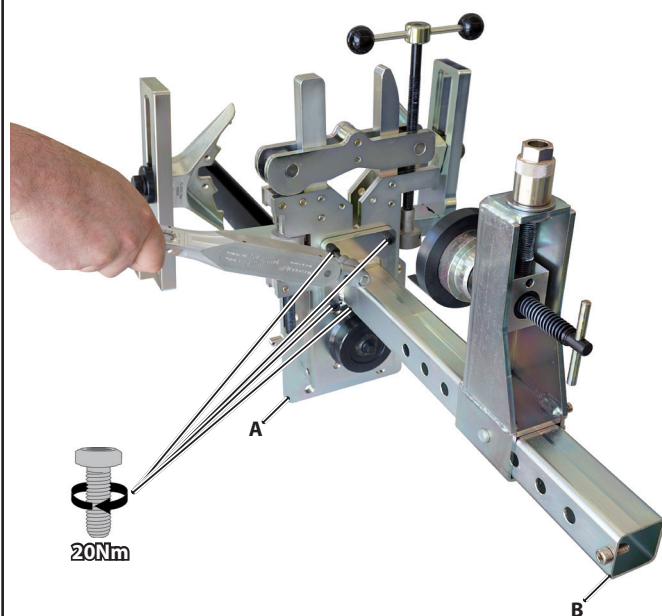
Reversible ratchet
with socket (Size 24mm)

📷 2: Install the support at the base unit.

A



B



3.3 Initial installation of the spring compressor

⚠ WARNING

Very high forces are exerted when preloading springs.

The spring compressor can break due to incorrect assembly, fall down, and thus the spring or other parts can fling around in an uncontrolled way. This can cause **DEATH** or **SEVERE INJURIES**!

✔ **Be sure to** strictly follow the instructions below for the initial installation of the spring compressor!

✔ **Always** attach the spring compressor firmly and securely to a stable surface! It **must be** ensured that tipping and falling over is **not possible under any circumstances** when working with the spring compressor!

✔ **Always** wear your personal protective equipment (*protective goggles, protective gloves, safety shoes*) when you use the spring compressor!

3.3.1 Mounting the support to the base unit

⚠ WARNING

The spring compressor may fall off during the preparation. This can cause **SEVERE INJURIES**!

✔ **Always** carry out all preparations of heavy parts with the help of a second specialist!

1. Place the base unit **[A]** securely on a non-slip surface with the help of a second specialist.

2. Completely unscrew the **4** fastening screws from the base unit **[A]**. **📷 2A**

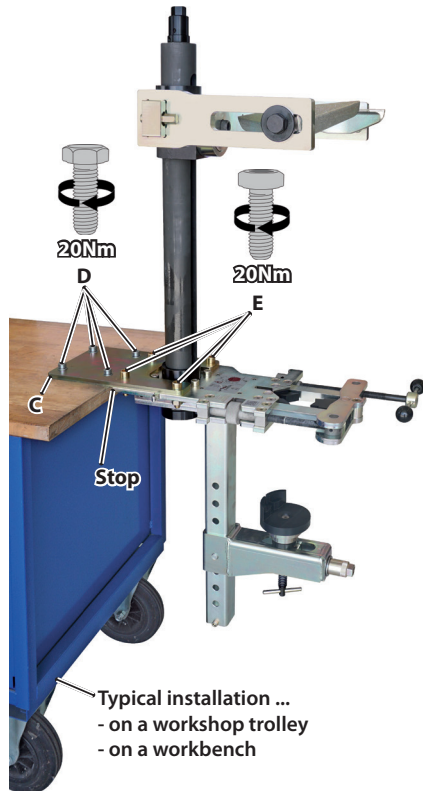
3) With the help of a second specialist, place the support **[B]** in the correct position on the base unit **[A]** as shown in **📷 2B**.

Then screw the support **[B]** to the base unit **[A]** using the **4** fastening screws. **📷 2B**

❗ Tighten the fastening screws with **20Nm**!

3.3: Fasten the spring compressor optionally on ...

A ... a horizontal surface

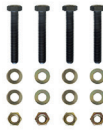


Necessary mounting parts

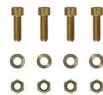
Adapter plate [C]



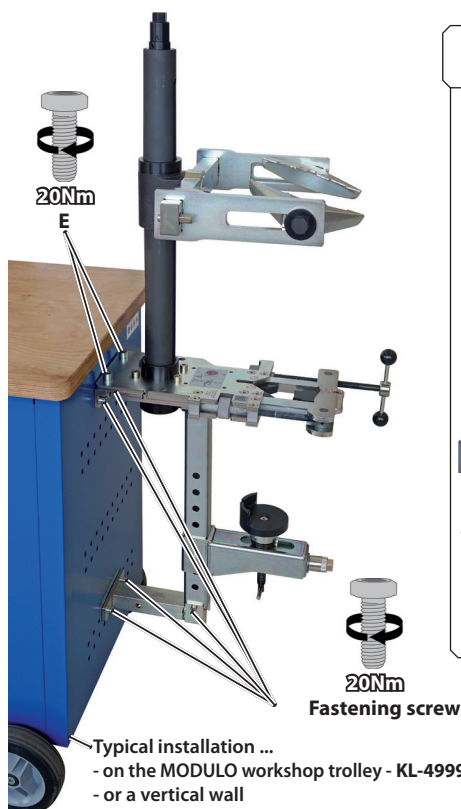
Fastening screws [D]



Screws for adapter plate [E]



B ... a vertical surface



Necessary mounting parts

MODULO bracket KL-5501-211



alternatively:

Wall bracket KL-5501-212



Screws for adapter plate [E]



3.3.2 Fastening the spring compressor ...

... optionally on a horizontal surface.

1. Screw the adapter plate [C] as shown in 3A to the base unit [A] using the 4 screws [E].

ⓘ Tighten the screws [E] with **20Nm!**

2. With the help of a second skilled person, place the spring compressor on a stable work surface, for example on a workshop trolley or workbench. Position the spring clamp properly up to the stop on the work plate 3A, and mark the 4 holes to be drilled (**12mm dia.**).

ⓘ The worktop should have a thickness of **25 ... 50mm**.

3. After drilling the holes, place the spring tensioner again on the corresponding worktop with the help of a second specialist and fix it with the 4 fastening screws [D].

ⓘ Tighten the fastening screws [D] with **20Nm!**

... optionally on a vertical surface.

(e.g. MODULO workshop trolley - KL-4999-120 A / -121 A)

1. Screw the bracket*, which is *available as an accessory*, to the spring compressor as shown in 3B, using the 2 screws [E] and the fixing screw already present on the spring compressor.

ⓘ Tighten the screws [E] and the tightening screw with **20 Nm!**

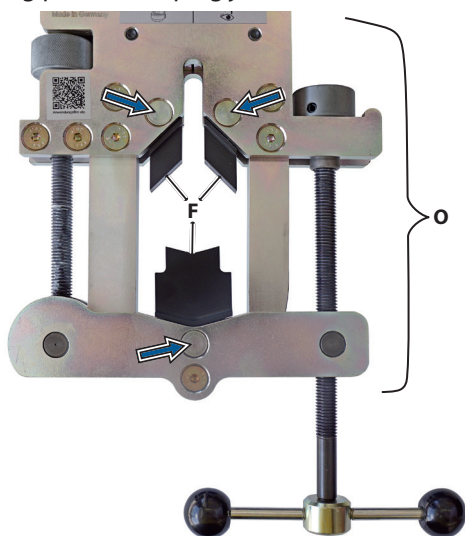
* Depending on the type of mounting, use the appropriate MODULO bracket - KL-5501-211 or wall bracket KL-5501-212!

2. Place the spring compressor on the workshop trolley* with the help of a second specialist and screw it down using the 4 fastening screws 3B supplied.

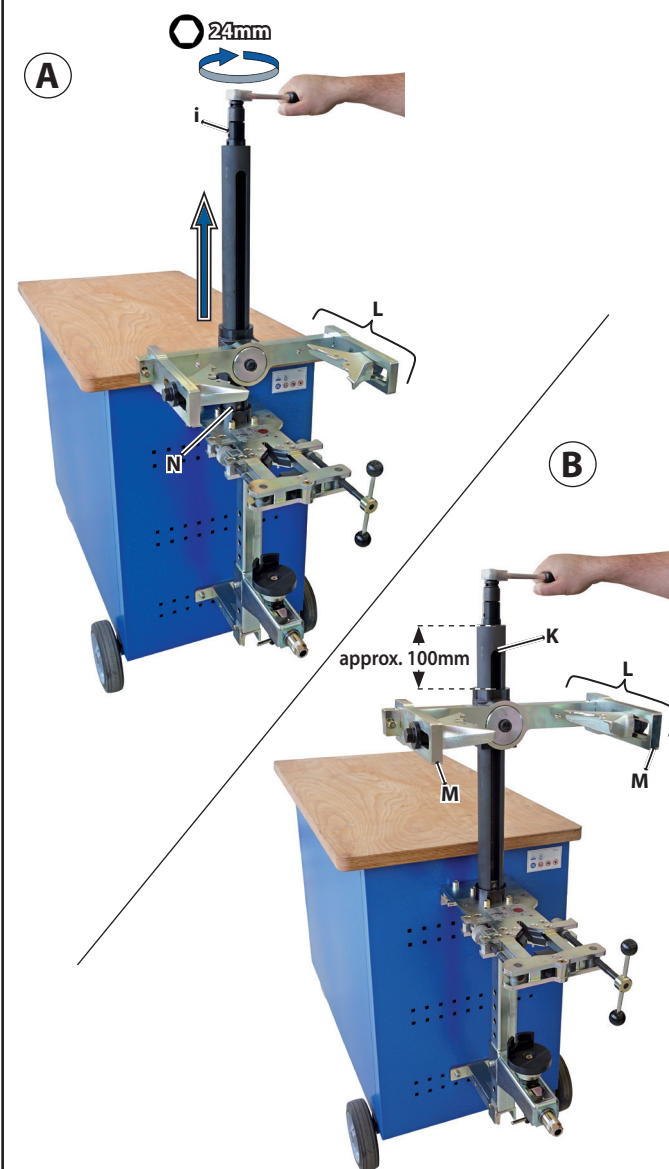
ⓘ Tighten the fastening screws with **20Nm!**

* Mounting on a stable vertical wall is done in the same way. However, you must use suitable M10 screws / wall plugs for wall mounting, which can **safely and reliably** carry the load of the spring-compressing device, also when it is used!

📷 4: Inserting plastic clamping jaws.



📷 5: Move spring collar holder to home position.



3.3.3 Checking the stability of the spring compressor

1. To check the stability, hold the spring compressor in the upper area and pull/push it firmly forwards, backwards, to the right and to the left.

The spring compressor must not wobble and, when mounted on a workshop trolley, on no account tilt or overturn!

3.3.4 Inserting the clamping jaws

1. Correctly place the plastic clamping jaws with the locking bolts, [F] as shown in 📷 4, into the holding device [O].

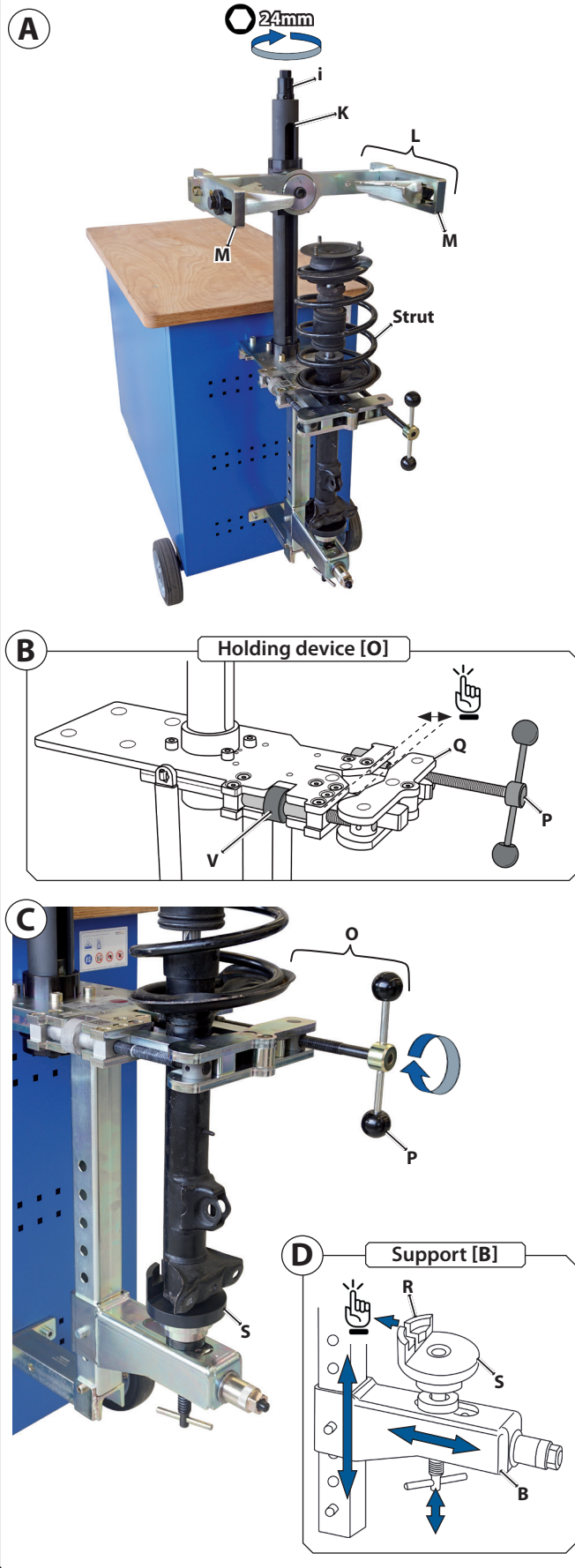
2. Insert the adjusting wrench [G] into the holder [U].

3.3.5 Spring collar holder in home position

In the delivery condition, the spring collar holder [L] is fixed to the lower limit stop [N] and must be moved to the home position.

1. Turn the drive nut [i] as shown in 📷 5A, anticlockwise until the spring collar holder [L] is **approx. 100mm** from the upper end stop [K] 📷 5B.
2. Finally, move the spring holders [M] completely apart to the RIGHT or LEFT 📷 5B.

6: Insert the spring strut into the holding device.



4. TYPICAL APPLICATION

This application example describes the tensioning and releasing of a suspension spring (*coil spring*) during removal and installation on a McPherson spring strut.

4.1 Spring removal

1. To insert a spring strut into the spring compressor without problems, first move the spring collar holder [L] to the upper end stop [K]. To do this, turn the drive nut [i] anticlockwise **6A**.

Then move the spring holders [M] completely apart to the RIGHT or LEFT **6A**.

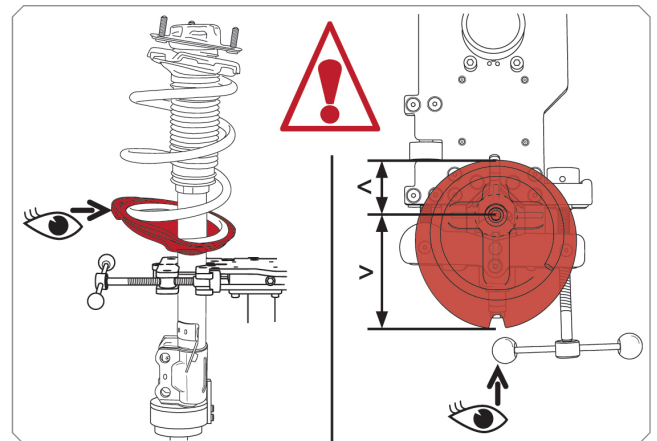
Finally, lower the support [B] and support [S] completely down **6D**.

⚠ WARNING

The strut can break due to incorrect fixing with the spring compressor, be ejected, and thus the spring or other parts can fling around in an uncontrolled way. This can cause **DEATH** or **SEVERE INJURIES!**

► **Always** secure the strut correctly in the holding device before tensioning the spring [O]!

► Clamp struts with an eccentric spring collar so that the eccentric of the spring collar points to the front!



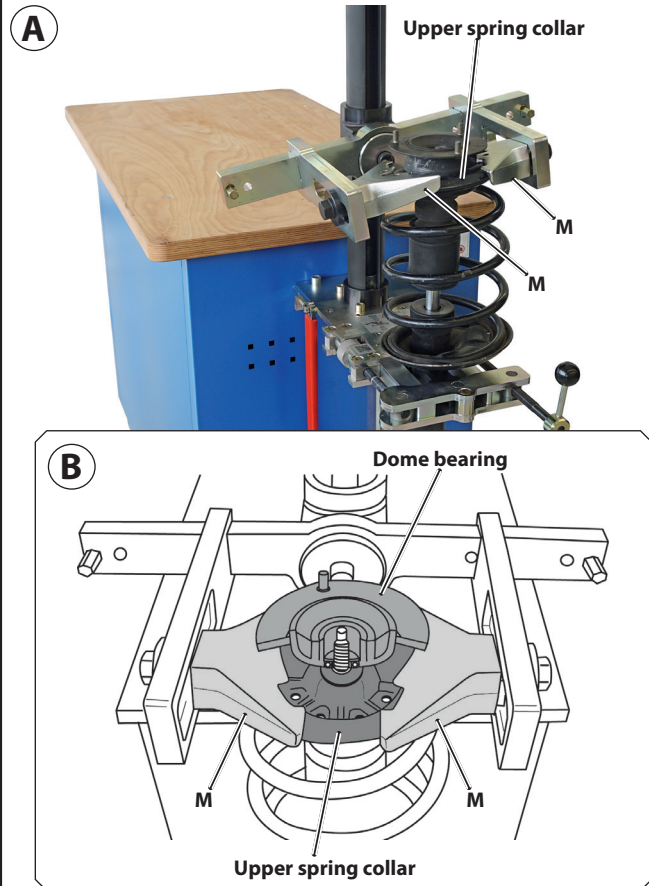
2. Insert the spring strut into the spring compressor as shown in **6A**, and fix it in the holding device [O] by tightening the T-handle slightly by hand [P]. **6C**

Align the clamping bars [Q] with the adjustingwheel [V] until they are parallel to each other **6B**.

3. Then adjust the support [B] so that the spring strut rests safely on the lower collar [S] **6C**, and that the stop [R] points to the rear **6D**.

① Exceptional spring strut designs may require additional accessories. (See chapter 8. or the GEDORE-Automotive catalogue)

7: Positioning the spring holder correctly on the spring collar.



8: Compressing the spring.



4) Turn the drive nut [i] clockwise until the spring holders [M] are positioned directly above the upper spring collar **7A**.

⚠ WARNING

If improperly fitted, the spring holders [M] can slip off the spring strut, causing the spring and other parts to fling around in an uncontrolled way. This can cause **DEATH** or **SEVERE INJURIES**!

- **Never** mount the spring holder [M] directly to the spring, but **only** to the upper spring collar!
- Ensure that the spring holders [M] **rest evenly and securely** on the upper spring collar but are not in contact with the **inside** of the strut bearing!

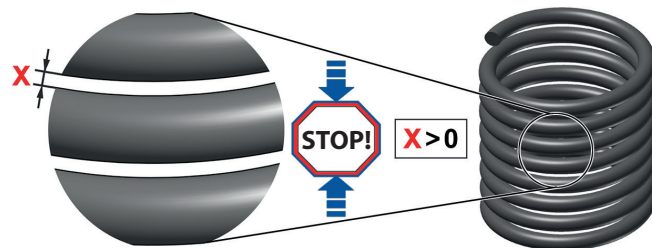
5. Place the spring holders [M] securely to the upper spring collar as shown in **7A + B**.

⚠ WARNING

Very high forces are exerted when preloading springs.

The spring compressor can slip off, break, or fall down due to incorrect assembly; and thus the spring and other parts can fling around in an uncontrolled way. This can cause **DEATH** or **SEVERE INJURIES**!

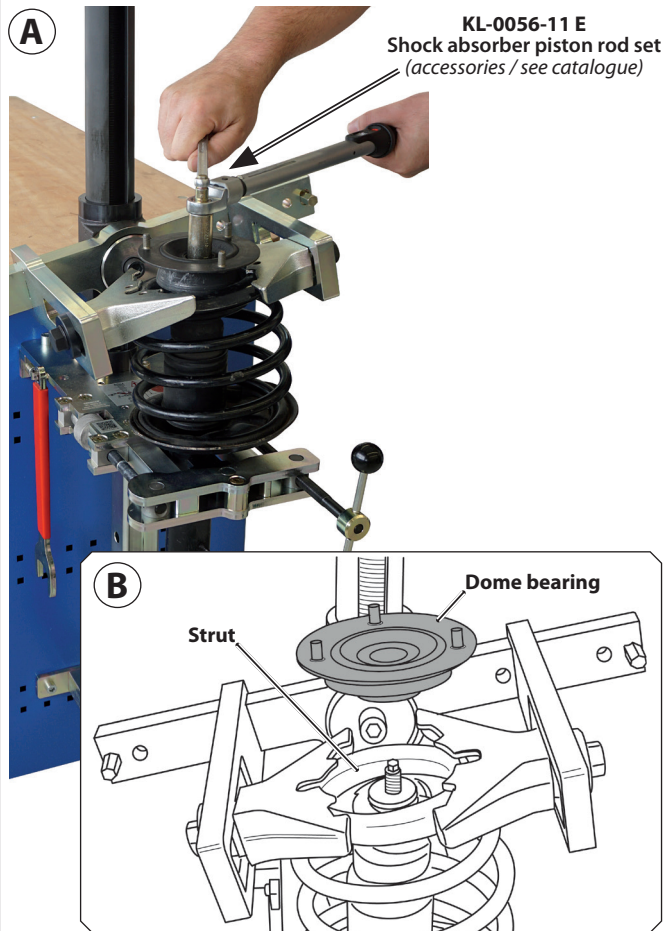
- **Never** exceed the **maximum load** of **15 000 Newton** of the spring compressor!
- Only operate the drive nut on the spring compressor up to a **maximum torque of 40Nm**!
- **Never** use the spring compressor with an impulse or impact wrench or another machine-operated drive, **only** drive it by hand with muscle power with a manual drive!
- **Never** use the spring compressor for batch processing with many compressing operations within a few minutes!
- Stop the tensioning process at the **latest** when the spring compressor has completely retracted to the lower end stop [N] or before the spring coils are in contact with each other!



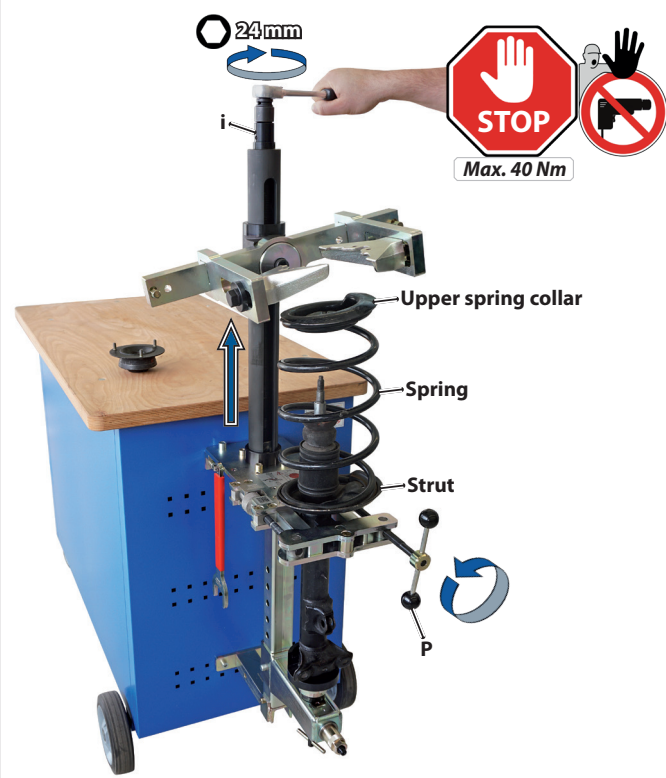
6. To tension the spring turn the drive nut [i] clockwise until the piston rod nut on the spring strut can be loosened without tension. **8**

① If the drive nut [i] becomes loose (for example from an overload!), insert a new dowel pin [J]. (see **maintenance instructions, chapter 5**)

📷 9: Loosening the piston rod nut, removing the dome bearing.



📷 10: Completely relieving the spring



7. Loosen the piston rod nut on the spring strut according to the manufacturer's instructions. 📷 9A

❗ For professional loosening and tightening of the piston rod nut on the spring strut, we recommend the spring strut piston rod set **KL-0056-11 E**, which is available as an accessory. (see the *GEDORE Automotive catalogue*)

8. Remove the strut bearing from the strut. 📷 9B

❗ Prior to relieving the spring tension, it is **helpful** to mark the position of the spring holders **[M]** on the spring collar with a colour pen. This marking facilitates repositioning when assembling the spring.

9. To relieve the spring tension, turn the drive nut **[i]** anticlockwise until the spring and the spring collar can be removed without tension. 📷 10

⚠ CAUTION

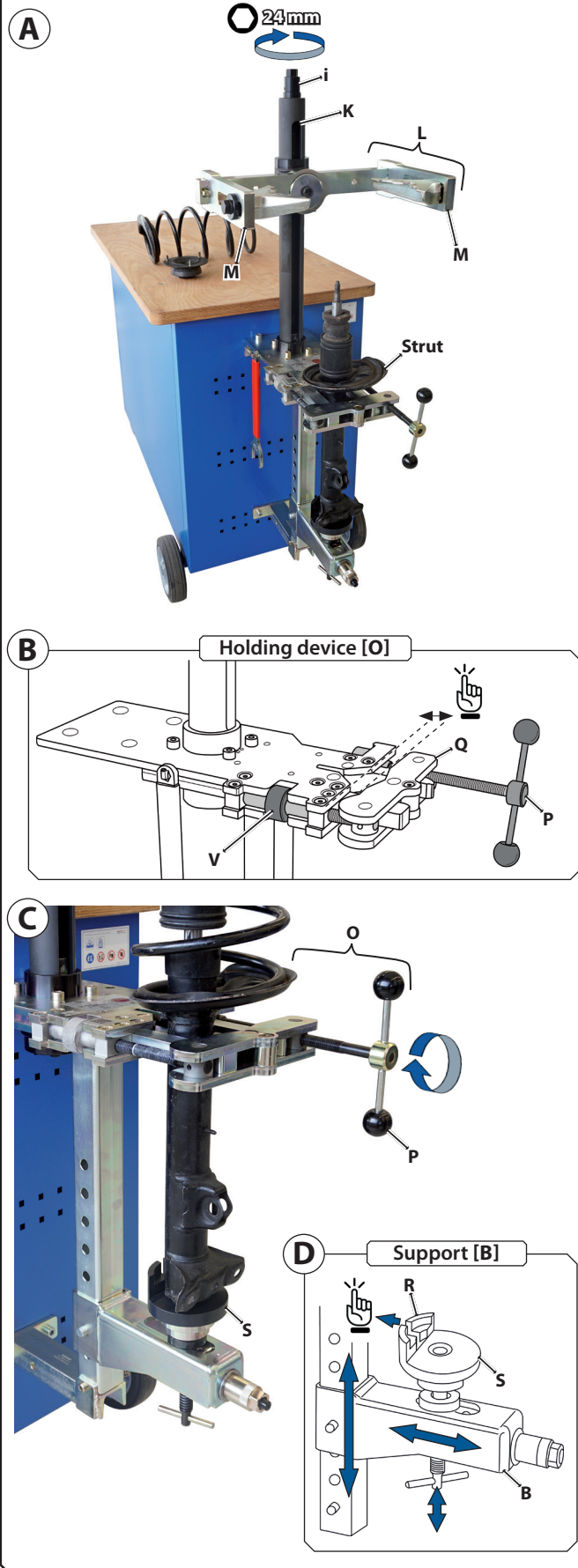
The spring strut may fall down during the removal. This can cause **MEDIUM** or **LIGHT INJURIES**.

► Hold the spring strut when releasing the T-handle **[P]**.

► **Always** wear your personal protective equipment (*safety goggles, protective gloves, safety shoes*) when working!

10. To remove the spring strut from the spring compressor, loosen the T-handle **[P]** anticlockwise. 📷 10

📷 11: Insert the spring strut into the holding device.



4.2 Spring mounting

1. In order to insert a spring strut into the spring compressor without any problems, first move the spring collar retainer [L] to the upper end stop [K]; to do this, turn the drive nut [i] **anticlockwise** 📷 11A.

Then move the spring holders [M] completely apart to the RIGHT or LEFT 📷 11A.

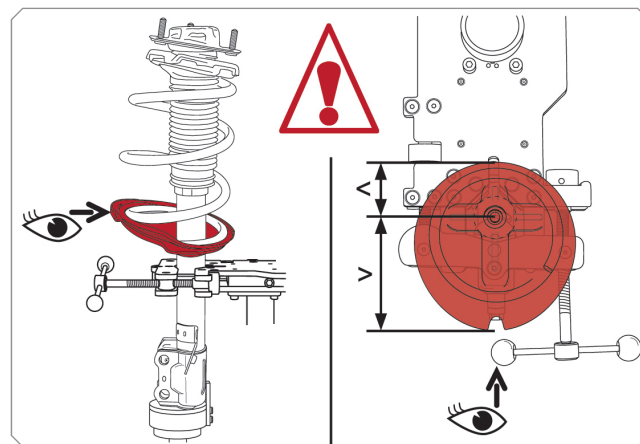
Finally, lower the support [B] and support [S] completely down 📷 11D.

⚠️ WARNING

The strut can break due to incorrect fixing with the spring compressor, be ejected, and thus the spring or other parts can fling around in an uncontrolled way. This can cause **DEATH** or **SEVERE INJURIES!**

► **Always** secure the strut correctly in the holding device before tensioning the spring [O]!

► Clamp struts with an eccentric spring collar so that the eccentric of the spring collar points to the front!



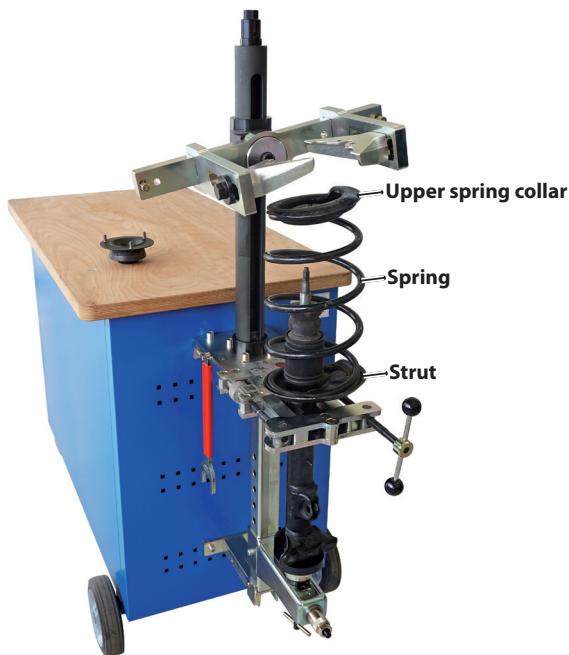
2. Insert the spring strut into the spring compressor as shown in 📷 11A, and fix it in the holding device [O] by tightening the **T-handle slightly by hand** [P]. 📷 11C

Align the clamping bars [Q] with the adjusting wheel [V] until they are parallel to each other 📷 11B.

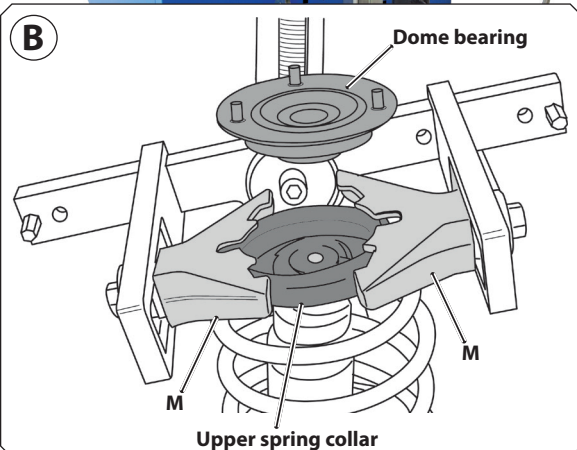
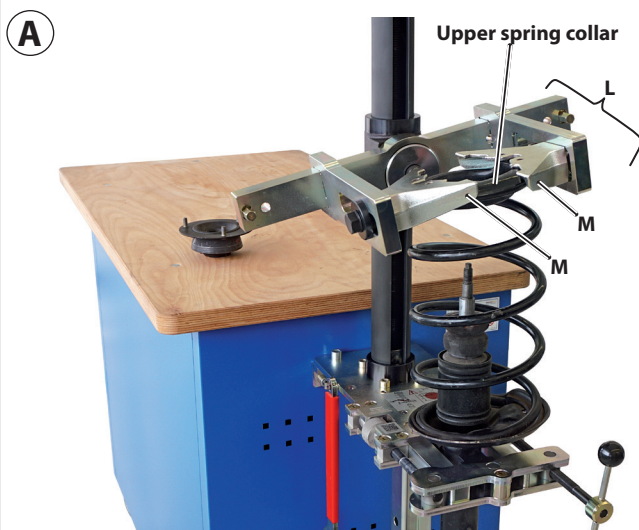
3. Then adjust the support [B] so that the spring strut rests safely on the lower collar [S] 📷 11C, and that the stop [R] points to the rear 📷 11D.

① Exceptional spring strut designs may require additional accessories. (See chapter 8. or the GEDORE-Automotive catalogue)

📷 12: Positioning spring + spring collar as specified by the manufacturer.



📷 13: Positioning the spring holder correctly on the spring collar.



CAUTION

The spring strut can be damaged if it is assembled incorrectly.

► **Always** observe the installation position of spring and spring collar specified by the vehicle manufacturer!

4. Place the spring and the spring collar in the correct position on the spring strut according to the manufacturer's specifications. 📷 12

5. Turn the drive nut [i] clockwise until the spring holders [M] are positioned directly above the upper spring collar 📷 13A.

⚠ WARNING

If improperly fitted, the spring holders [M] can slip off the spring strut, causing the spring and other parts to fling around in an uncontrolled way. This can cause **DEATH** or **SEVERE INJURIES**!

► **Never** mount the spring holder [M] directly to the spring, but **only** to the upper spring collar!

► Ensure that the spring holders "F" rest evenly and securely on the upper spring collar but are not in contact with the inside of the strut bearing!

CAUTION

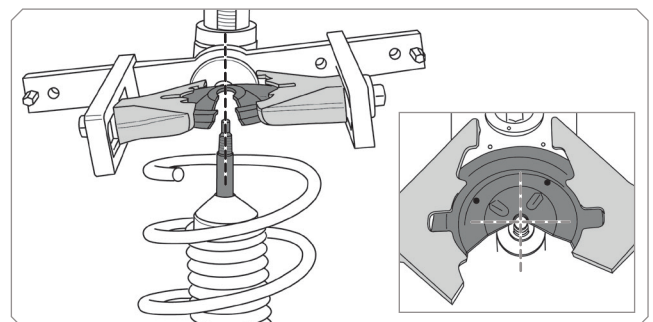
The strut bearing cannot be fitted, or it can be damaged during the installation, if the spring holders [M] are incorrectly mounted.

► To check that the spring holders [M] are correctly positioned, briefly place the strut bearing on the upper spring collar.

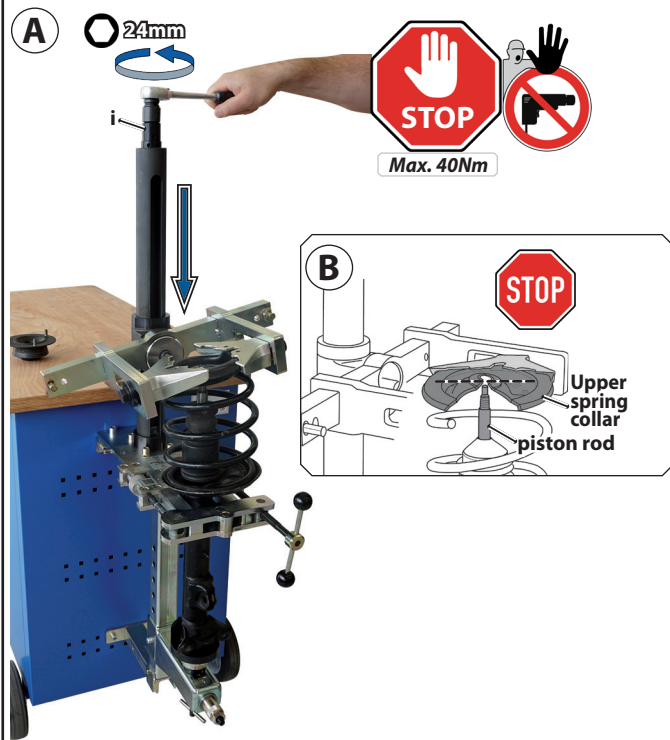
► If you have marked the position of the spring holders on the spring collar as described in **chapter 4.1 / item 8 [M]**, insert them back in the correct position again. 📷 13B

6) Place the spring holders [M] securely to the upper spring collar as shown in 📷 13A + B.

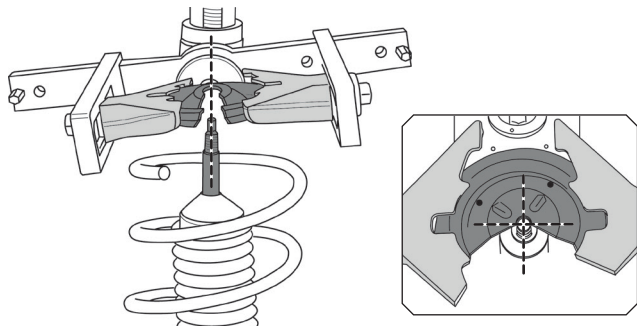
① The spring holders [M] must be aligned such that the piston rod bore in the spring collar is aligned as exactly as possible with the piston rod on the suspension strut!



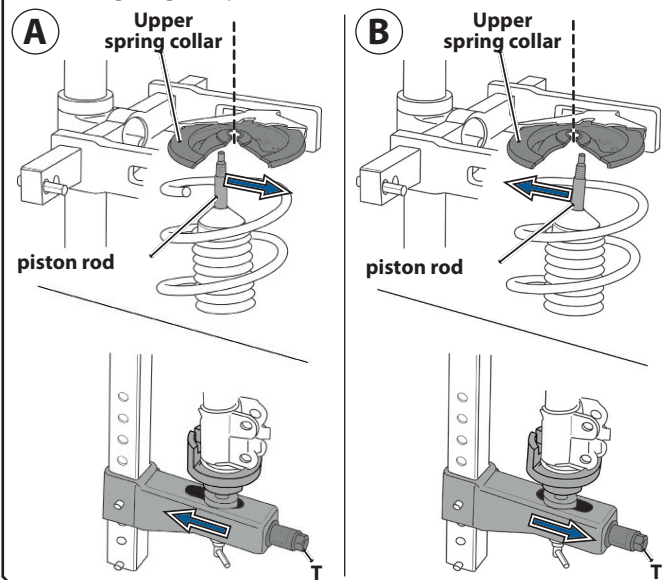
14: Preloading the spring up to the piston rod.



15: Checking the position of the spring collar towards the piston rod.



16: Aligning the piston rod FORWARD and REARWARD.

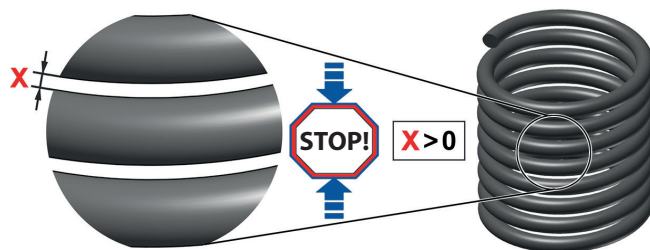


⚠ WARNING

Very high forces are exerted when preloading springs.

The spring compressor can slip off, break, or fall down due to incorrect assembly; and thus the spring and other parts can fling around in an uncontrolled way. This can cause **DEATH** or **SEVERE INJURIES!**

- **Never** exceed the **maximum load** of **15 000 Newton** of the spring compressor!
- Only operate the drive nut on the spring compressor up to a **maximum torque of 40Nm!**
- **Never** use the spring compressor with an impulse or impact wrench or another machine-operated drive, **only** drive it by hand with muscle power with a manual drive!
- **Never** use the spring compressor for batch processing with many compressing operations within a few minutes!
- Stop the tensioning process at the **latest** when the spring compressor has completely retracted to the lower end stop [N] or before the spring coils are in contact with each other!



7. To tension the spring turn the drive nut [i] clockwise until the upper collar is directly above the piston rod nut of the spring strut. **18**

① If the drive nut [i] becomes loose (for example from an overload!), insert a new dowel pin [J]. (see **maintenance instructions, chapter 5**)

8. First check the alignment between the piston rod and the bore in the spring collar.

Is the hole in the spring collar aligned with the piston rod on the strut, as shown in 15?

- ➔ **If YES,**
continue with **step 9.** - Tensioning the spring.
- ➔ **If NO,**
continue with ...

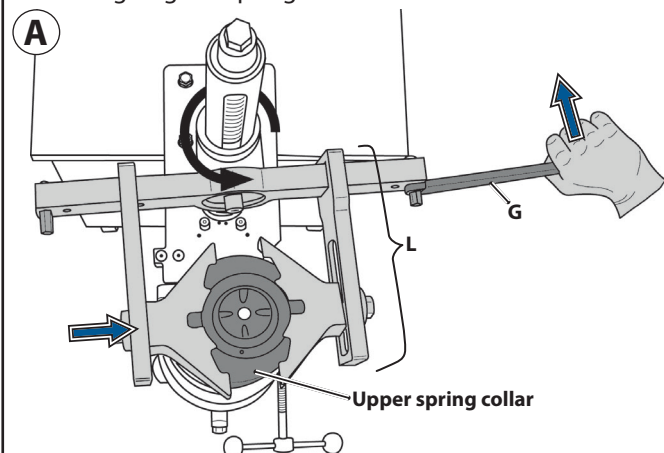
... Aligning the piston rod towards **THE FRONT**

To do this, turn the adjusting screw [T] anticlockwise as shown in **16A**.

... Align the piston rod towards the **REAR**.

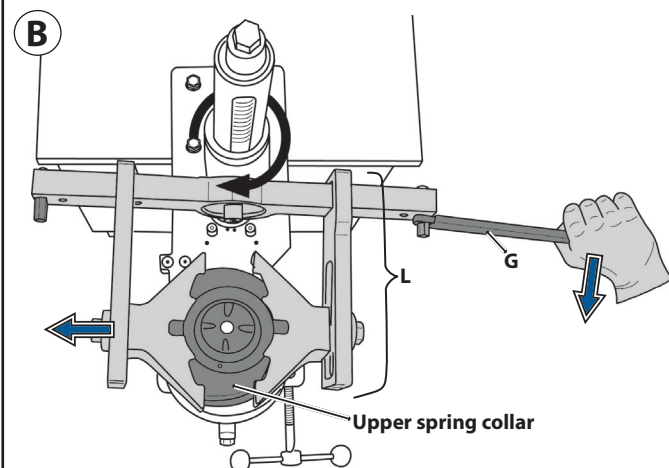
To do this, turn the adjustment screw [T] clockwise as shown in **16B**.

17: Aligning the spring collar to RIGHT / LEFT.



... Aligning the spring collar to the RIGHT

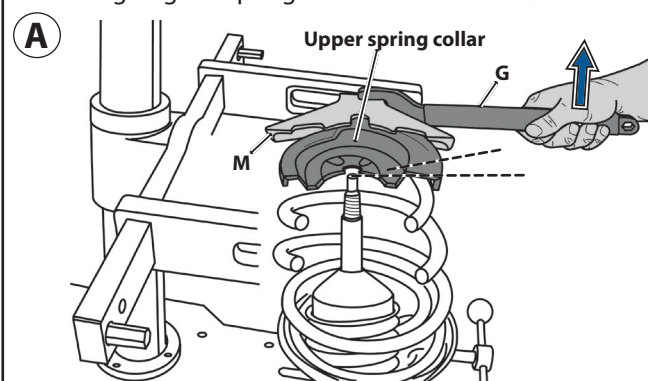
To do this, turn the spring collar holder [L] anticlockwise with the aid of the adjustment wrench [G] as shown in **17A**.



... Aligning the spring collar to the LEFT

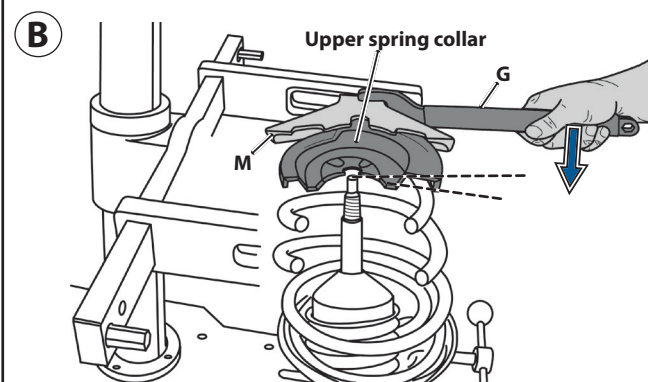
To do this, turn the spring collar holder [L] clockwise with the aid of the adjustment wrench [G] as shown in **17B**.

18: Aligning the spring collar inclination UP / DOWN.



... Aligning the spring collar inclination UPWARDS

To do this, turn the spring holder [M] upwards with the aid of the adjustment wrench [G] as shown in **18A**.

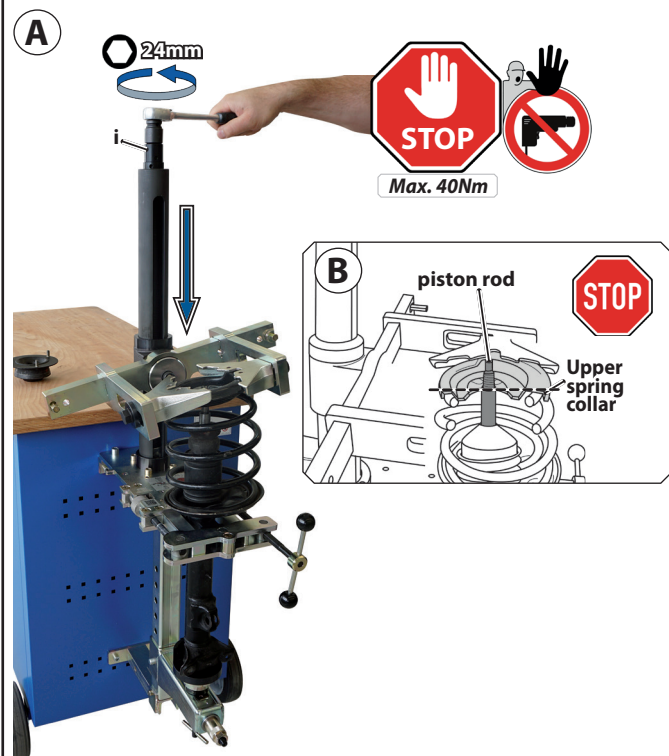


... Aligning the spring collar inclination DOWNWARDS

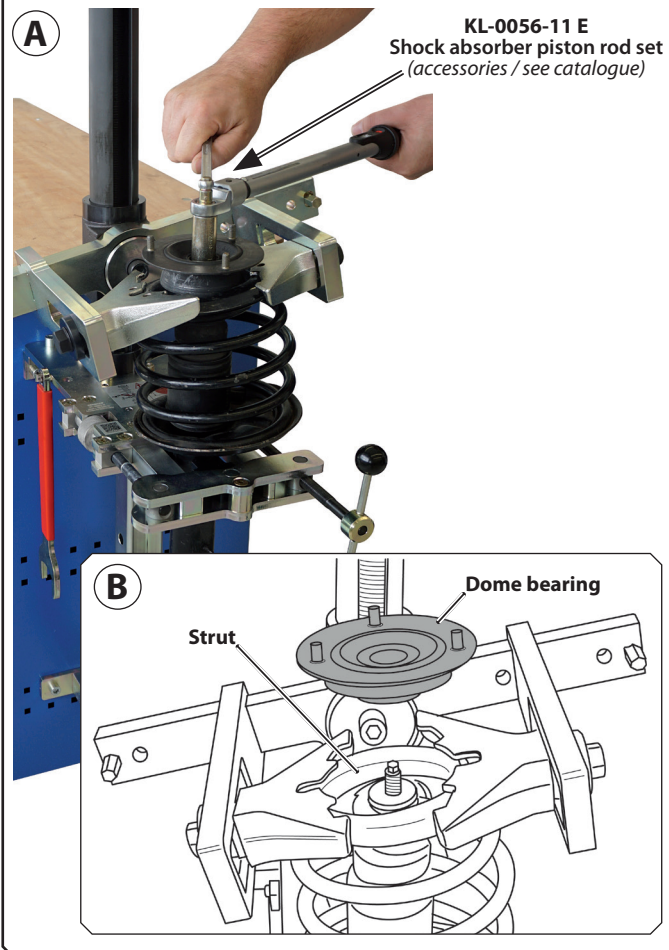
To do this, turn the spring holder [M] downwards with the aid of the adjustment wrench [G] as shown in **18B**.

i If an exact alignment of the spring collar to the piston rod is not possible, release the spring and re-align the spring holders [M] as described in **section 6**.

19: Compressing the spring.



20: Install the strut bearing as specified by the manufacturer.

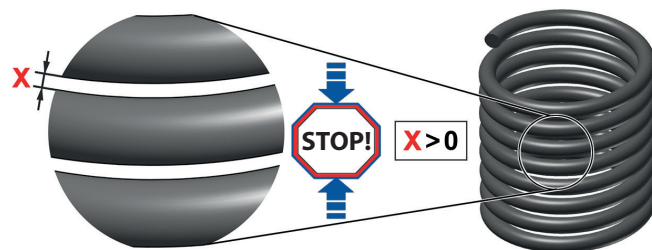


WARNING

Very high forces are exerted when preloading springs.

The spring compressor can slip off, break, or fall down due to incorrect assembly; and thus the spring and other parts can fling around in an uncontrolled way. This can cause **DEATH** or **SEVERE INJURIES**!

- **Never** exceed the **maximum load** of **15 000 Newton** of the spring compressor!
- Only operate the drive nut on the spring compressor up to a **maximum torque of 40Nm**!
- **Never** use the spring compressor with an impulse or impact wrench or another machine-operated drive, **only** drive it by hand with muscle power with a manual drive!
- **Never** use the spring compressor for batch processing with many compressing operations within a few minutes!
- Stop the tensioning process at the **latest** when the spring compressor has completely retracted to the lower end stop [N] or before the spring coils are in contact with each other!



9. To tension the spring, turn the drive nut [i] clockwise until the upper spring collar is directly above the piston rod nut of the spring strut. **19**

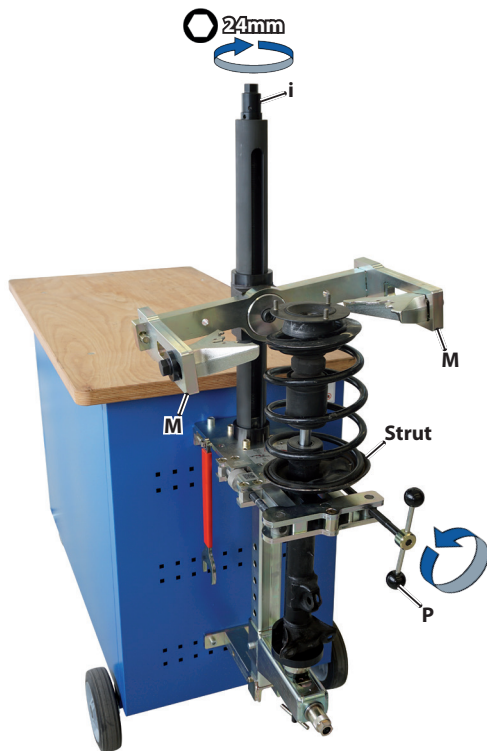
- ① If the drive nut [i] becomes loose (for example from an overload!), insert a new dowel pin [J]. (see **maintenance instructions, chapter 5**)

CAUTION

The spring strut can be damaged if it is assembled incorrectly.

- **Always** install the strut bearing in the installation position specified by the vehicle manufacturer!
10. First place the strut bearing in the correct position on the strut and then screw the strut together according to the manufacturer's instructions. **20B**
 - ① For professional loosening and tightening of the piston rod nuts on the spring strut, we recommend the shock absorber / piston rod set **KL-0056-11 E**, which is available as an accessory. (see the **GEDORE Automotive catalogue**)

📷 21: Completely relieve the spring compressor.



11. To relieve the spring tension, turn the drive nut [i] anticlockwise until the spring and the spring holder [M] can be removed without tension. **📷 21**

⚠ CAUTION

The suspension strut can fall off. This can cause **MEDIUM** or **LIGHT INJURIES**.

► Hold the spring strut when releasing the T-handle [P].

► **Always** wear your personal protective equipment (*safety goggles, protective gloves, safety shoes*) when working!

12. To remove the spring strut from the spring compressor, loosen the T-handle [P] anticlockwise. **📷 21**

5) MAINTENANCE INSTRUCTIONS (Replacing the dowel pin of the drive nut)

If the drive nut [i] becomes loose, for example from an overload, insert a new dowel pin [J]. These maintenance instructions describe how to replace the dowel pin [J] on the drive nut [i].

⚠ CAUTION

When the spring is tensioned using the auxiliary drive, the spindle on the spring-compressing device may be damaged.

► **Never** use the auxiliary drive to tension a spring!

► Use the auxiliary drive **exclusively** for relieving and counterholding the spring compressor when replacing the dowel pin [J] on the drive nut [i]!

1. Unscrew the drive nut [i] clockwise from the spring compressor and remove the remains of the defective dowel pin [J] from the holes. **📷 22A**

① If necessary, hold the lower auxiliary drive on the spring tensioner against it. **📷 22B**

2) Screw the drive nut [i] anticlockwise onto the spring compressor until the holes in the drive nut [i] and the spindle are exactly aligned with each other. **📷 22A+C**

① If necessary, hold the lower auxiliary drive on the spring tensioner against it. **📷 22B**

3) Insert the new dowel pin [J] - **KL-5501-1114 M** into the hole so that it is flush with the drive nut on both sides. **📷 22C**

📷 22: Replace the dowel pin of the drive nut.

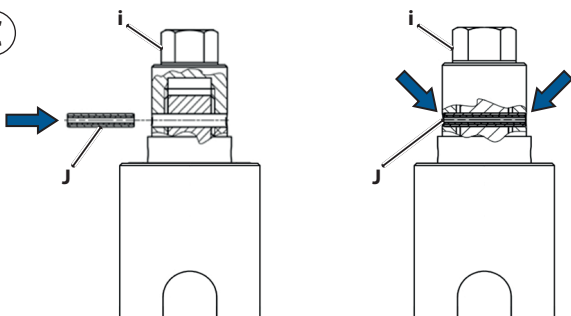
A



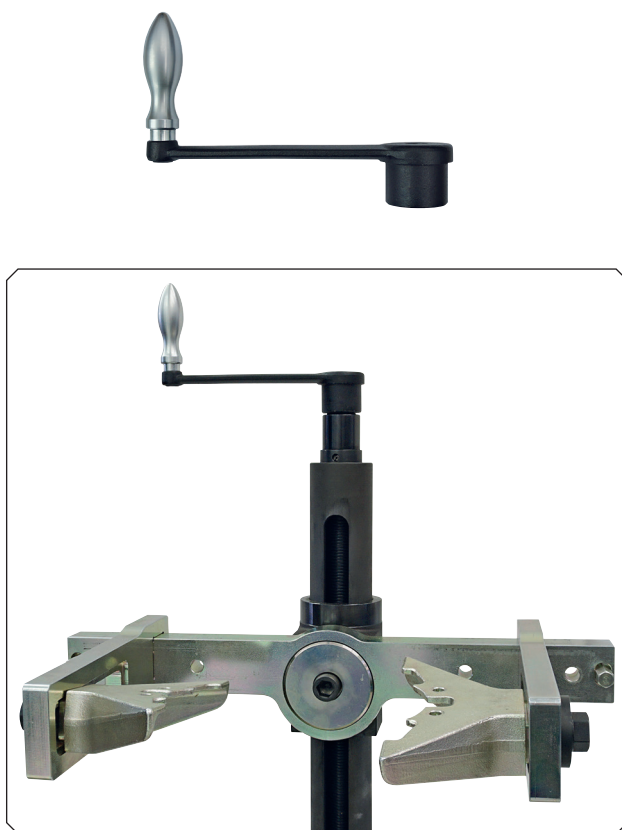
B



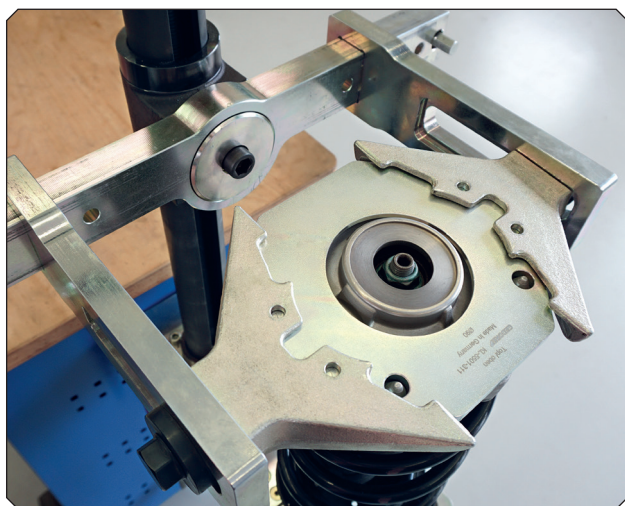
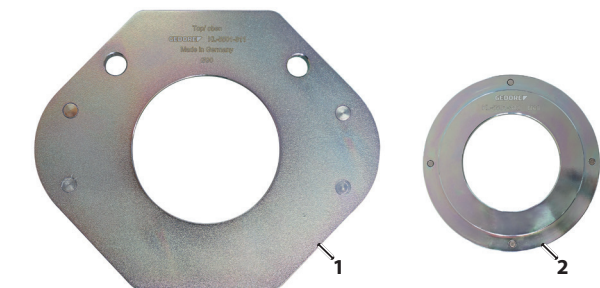
C



23: KL-5501-40



24: KL-5501-31



6. CARE AND STORAGE

ATTENTION

Improper care and storage can damage the spring compressor. Therefore, **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 spring compressor and the operating instructions at a dry and clean place.

7. REPAIR

WARNING

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

8. ACCESSORIES

KL-5501-40 - Hand crank SW24

The hand crank enables an amazingly simple and fast drive of the stationary spring compressor - **KL-5501** and **KL-5501 B** when tensioning and releasing a McPherson strut. For this purpose, the crank handle is simply attached to the spring compressor via the 24 mm drive hexagon.

Specifications:

Downforce: Hexagon / 24 mm
Length: 195 mm

KL-5501-31 - Collar mounting kit 60mmØ/90mmØ

Fits VW (MEB platform) ID.3, ID.4; Audi Q4 e-tron; Škoda Enyaq iV; Renault Clio IV (type X98); Nissan Qashqai II (J11).

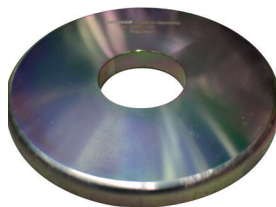
The collar mounting kit enables the stationary spring compressor - **KL-5501** / **KL-5501 B** to be securely mounted on the spring collar at the front axle strut. For this purpose, the plate holder (90mm dia.) and, depending on the spring strut, the adapter ring (60mm dia.) are simply placed on the upper spring collar.

Item	Part no.	Description	Qty.
1	KL-5501-311	Collar mount 90mm dia.	1
2	KL-5501-312	Collar adapter for KL-5501-311, 60mm Ø	1

Specifications:

Inner diameter: 60mm Ø + 90mm Ø
Weight: 1.9kg

25: KL-5501-171



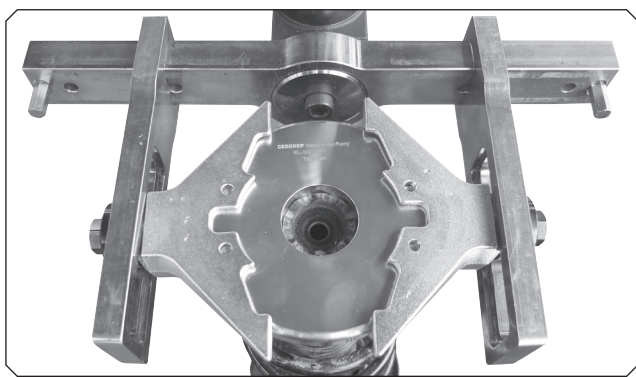
KL-5501-171 - Adapter ring Nissan, Renault, Fiat
Fits the front axle spring strut on Nissan Qashqai (J11), Renault Kadjar, and Fiat Panda (312, 319).

The adapter ring permits the spring compressor to be securely attached to the spring collar on the front axle spring strut.

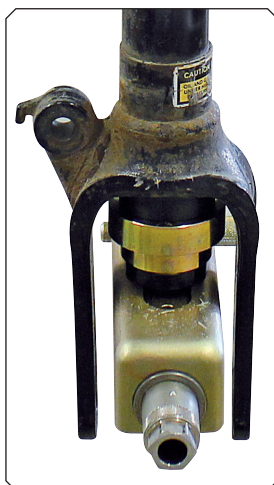
For this purpose, the adapter ring is positioned on the upper spring collar. Pay attention to the Top/oben marking on the adapter ring!

Specifications:

Outside diameter: 170mm



26: KL-5501-1435 A



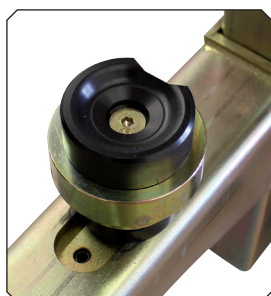
KL-5501-1435 A - Adapter for shock absorber with fork mount

Fits spring struts with fork mount. Installed, for example, on Mercedes M-Class (W164, W166), R-Class (W251); Audi Q7 (4LB); VW Touareg (7L, 7P); Porsche Cayenne (9PA, 92A), Panamera (970); etc.

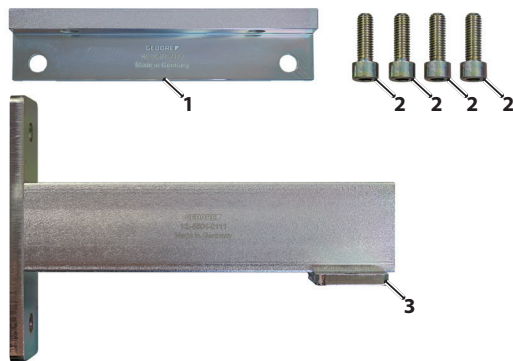
The adapter enables the safe reception of spring struts with fork mount on the lower support of the stationary spring compressor. The adapter is mounted on the spring compressor instead of the plastic support.

Specifications:

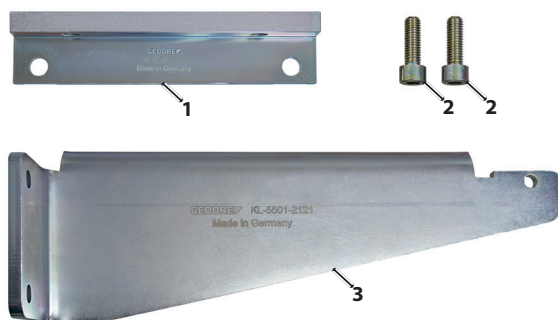
Outside diameter: 57mm



27: KL-5501-211

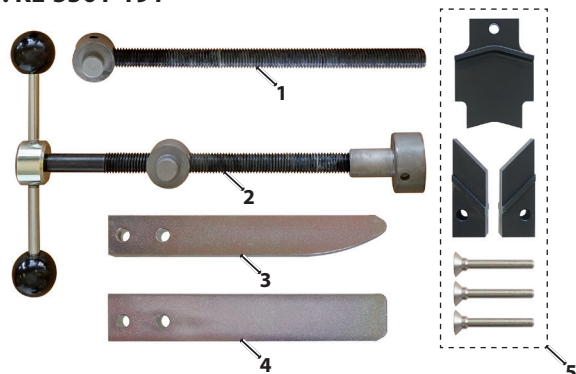


28: KL-5501-212

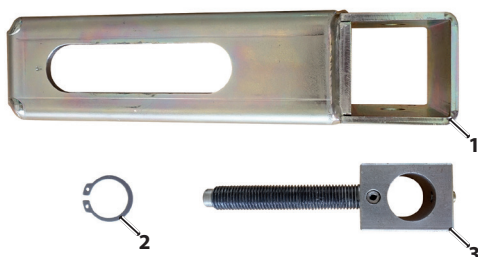


KL-5501-19
Supplementary kit clamping unit long
+ boom below (complete)
(consisting of KL-5501-191 + KL-5501-192)

29: KL-5501-191



30: KL-5501-192



KL-5501-211 - MODULO and wall bracket, short
Fits KL-5501 B (NOT for KL-5501).

The short MODULO/wall mounting bracket is particularly suitable for stable mounting of the stationary spring compressor - **KL-5501 B** to the **MODULO** tool/assembly trolley - **KL-4999-120 A** or **KL-4999-121 A** (GEDORE 1507 XL).

Also suitable for space-saving mounting on a vertical wall. However, due to the proximity to the wall, the use of a hand ratchet is only possible up to a return angle of approx. 180°. Using the hand crank - **KL-5501-40** is excluded. As an alternative, use the long wall bracket - **KL-5501-212**.

Item	Part no.	Description	Qty.
1	KL-5501-2112	Adapter	1
2	KL-1283-1118	Cheese-head screw M10 x 30 mm	4
3	KL-5501-2111	Support	1

KL-5501-212 - Wall bracket, long
Fits KL-5501 B (NOT for KL-5501).

The long wall bracket enables stable mounting of the stationary spring compressor - **KL-5501 B** on a vertical wall. Here, using the hand ratchet as well as the hand crank - **KL-5501-40** is possible without problems.

Recommended accessories: Hand crank - **KL-5501-40**

Item	Part no.	Description	Qty.
1	KL-5501-2112	Adapter	1
2	KL-5501-2005	Cheese-head screw M12 x 30 mm	2
3	KL-5501-2121	Support	1

9. CONVERSION KIT
(from KL-5501 to KL-5501 B)

KL-5501-191 - Conversion kit compress unit long

The conversion kit - **KL-5501-191**, in combination with the stationary spring-compressing device - **KL-5501**, makes it possible to secure complex suspension struts (as with **KL-5501 B**) which have a very small mounting surface on the damper tube.

Item	Part no.	Description	Qty.
1	KL-5501-1221 B	Hinge bolt with adjusting spindle	1
2	KL-5501-1210 B	Clamping crew	1
3	KL-5501-1202 A	Guide strip narrow, extended	1
4	KL-5501-1203 A	Guide strip wide, extended	1
5	KL-5501-1222 A	Plastic clamping jaws + locating pins	1

KL-5501-192 - Conversion kit for support

The conversion kit - **KL-5501-192** provides an extended adjustment option for the lower support (as with **KL-5501 B**) on the stationary spring-compressor - **KL-5501**.

Item	Part no.	Description	Qty.
1	KL-5501-1411 B	Boom without supporting spindle	1
2	KL-9055-1004	Retaining ring A24	1
3	KL-5501-1921	Slider with spindle pre-assembled	1

10. COMPONENT OVERVIEW

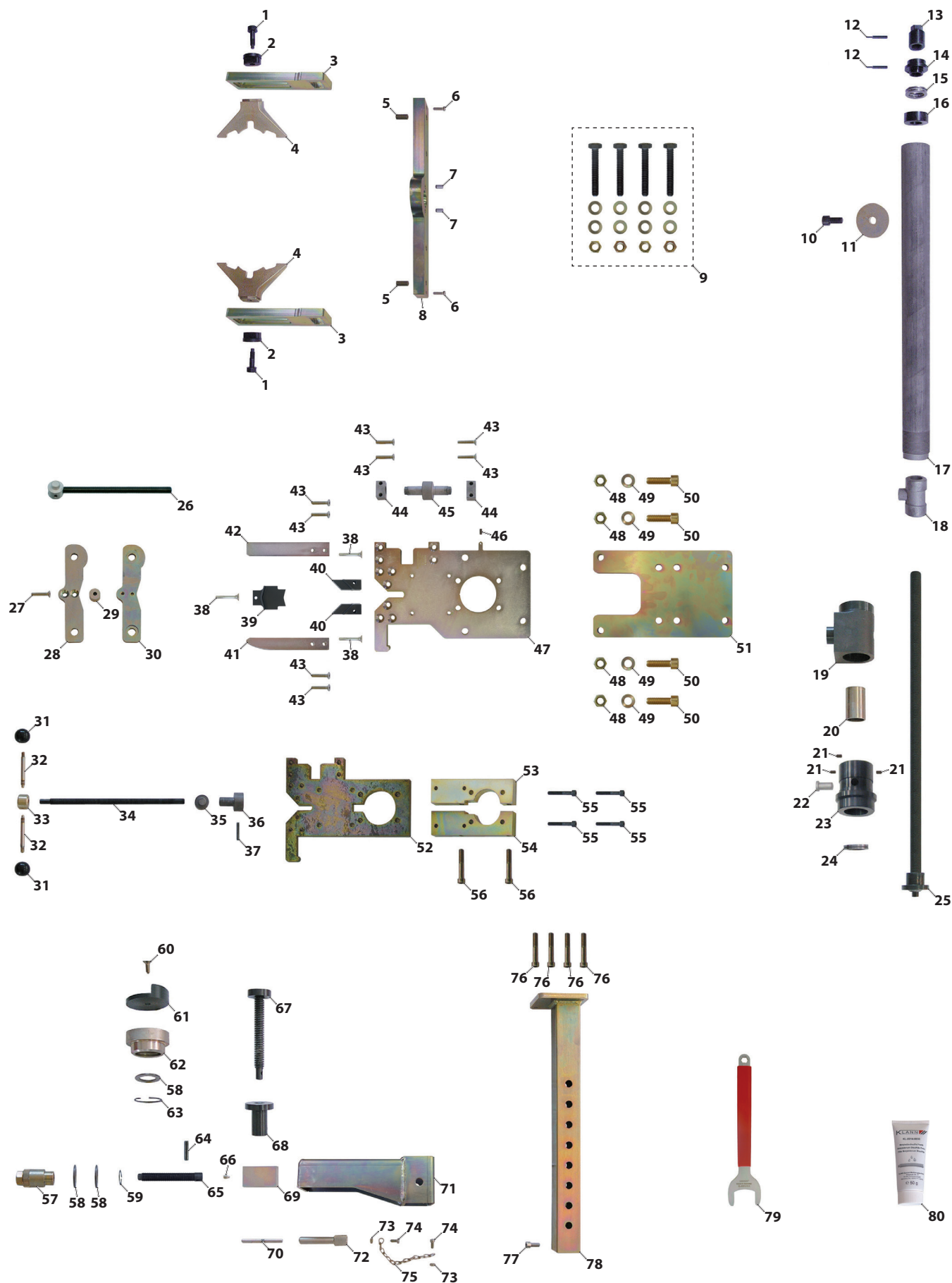
KL-5501 B - stationary spring-compressor

Item	Part no.	Description	Quantity
-	KL-5501-13 A	Spring retainer	1
1	KL-5501-1307	Special hexagon head screw	2
2	KL-5501-1306	Sliding block	2
3	KL-5501-1303 A	Guide plate	2
4	KL-5501-1304	Spring holder	2
5	KL-5501-1308	Hex stop	2
6	KL-5501-1309	Cheese-head screw M8 x 35 mm	2
7	KL-5501-1302	Straight pin Ø10 x 20 mm	2
8	KL-5501-1301 A	Transverse plate	1
9	KL-5501-151	Fastening screws - set (4 screws)	1
10	KL-5501-1105	Cheese-head screw M16 x 30 mm	1
11	KL-5501-1104	Washer Ø80 mm	1
-	KL-5501-11 A	Compressor cylinder	1
12	KL-5501-1114 M	Dowel pin Ø6 x 32 mm pre-assembled	2
13	KL-5501-1113	Drive nut	1
14	KL-5501-1112	Thrust ring	1
15	KL-0027-0011	Axial bearing	1
16	KL-5501-1111	Bearing insert	1
17	KL-5501-1101	Guide tube	1
18	KL-5501-1102	Dog	1
19	KL-5501-1103	Holder	1
20	KL-5501-1108	Spacer sleeve	1
21	KL-5501-1117	Grub screw M8x8	3
22	KL-5501-1116 B	Bolt	1
23	KL-5501-1109 C	Bearing housing	1
24	KL-0028-1115	Axial needle bearing	1
25	KL-5501-1110	Spindle with threaded joint	1
-	KL-5501-1223 A	Clamping unit	1
26	KL-5501-1221 B	Hinge bolt with adjusting spindle	1
27	KL-5501-1207	Countersunk screw M8 x 40 mm	1
28	KL-5501-1209	Clamping bar with counterbore	1
29	KL-5501-1211	Spacer sleeve	1
30	KL-5501-1208	Clamping bar with thread	1
-	KL-5501-1210	Clamping crew	1
31	KL-0286-1102	Ball knob Ø30, M8	2
32	KL-5501-1210-4	Threaded bar	2
33	KL-5501-1210-3	Base body	1
34	KL-5501-1210-1 A	Spindle 280 mm long	1
35	KL-5501-1210-2 A	Hinge bolt without bore	1
36	KL-5501-1210-5 A	Threaded sleeve	1
37	KL-0255-0006	Dowel pin Ø6 x 36 mm	1
-	KL-5501-1222 A	Plastic clamping jaw set	1
38	KL-5501-1216	Locating pin	3
39	KL-5501-1214 A	Plastic clamping jaw, V-shaped	1
40	KL-5501-1215 A	Plastic clamping jaw oblique	2
41	KL-5501-1202 A	Guide strip narrow, extended	1
42	KL-5501-1203 A	Guide strip wide, extended	1

Item	Part no.	Description	Quantity
43	KL-5501-1207	Countersunk screw M8 x 40 mm	8
44	KL-5501-1204	Guide for adjusting nut	2
45	KL-5501-1205	Adjusting nut	1
46	KL-5501-1218	Dowel pin Ø4 x 12 mm	1
47	KL-5501-1206 B	Base plate top	1
-	KL-5501-123	Adapter plate set	1
48	KL-0035-0023	Hex nut M12	4
49	KL-0066-0004	Washer Ø12	4
50	KL-5501-1232	Cheese-head screw M12x40	4
51	KL-5501-1231	Adapter plate	1
52	KL-5501-1201 A	Base plate bottom	1
53	KL-5501-1225 B	Clamping jaw with thread	1
54	KL-5501-1226 B	Clamping jaw with through bore	1
55	KL-0041-3804-3	Cheese-head screw M10 x 40 mm	4
56	KL-5501-1227	Cheese-head screw M12 x 80 mm	2
-	KL-5501-141 B	Boom with supporting spindle	1
57	KL-5501-1415	Collar nut	1
58	KL-5501-1416	Running disc Ø42x25x3 mm	3
59	KL-9055-1004	Retaining ring A24	1
60	KL-5501-1432	Countersunk screw M8 x 25 mm	1
61	KL-5501-1431	Plastic pad Ø100 mm	1
62	KL-5501-1425	Support plate	1
63	KL-5501-1428	Retaining ring I42	1
64	KL-0206-1003	Dowel pin Ø8 x 36 mm	1
65	KL-5501-1421 B	Spindle	1
66	KL-5501-1420	Grub screw M8 x 12 mm	1
67	KL-5501-1423	Supporting spindle Tr18x4 with thread	1
68	KL-5501-1419	Threaded bushing	1
69	KL-5501-1418 A	Slider	1
70	KL-5501-1424	Transverse handle	1
71	KL-5501-1411 B	Boom without supporting spindle	1
-	KL-5501-1412 M	Locking pin, mounted	1
72	KL-5501-1412	Locking bolt with ball	1
73	KL-0500-4035	Hex nut M6	2
74	KL-0284-9007	Cheese-head screw M6 x 14 mm	2
75	KL-5501-1413	Chain with S hook	1
76	KL-5501-1217	Cheese-head screw M8 x 50 mm	4
77	KL-0255-0012	Cheese-head screw M8 x 20 mm	1
78	KL-5501-1401	Guide tube	1
79	KL-5501-15	Open-end wrench with protective grip	1
80	KL-0014-0030	Molybdenum disulphide paste	1

11. ENVIRONMENTALLY COMPLIANT DISPOSAL

Dispose of the 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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