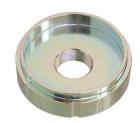






# KL-1011-121 Sleeve Set, BPW Silent Block Ø 132mm





**Operating instructions** A Read and understand before use!















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**GEDORE Automotive GmbH** 

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(Translation of the operating instructions)











### Address of the manufacturer

#### **GEDORE Automotive GmbH**

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

# **CONTENTS**

1. READ AND UNDERSTAND FOR YOUR SAFETY	4
1.1 Target group	4
1.2 Obligations of the owner	4
1.3 Intended use	
1.4 Reasonably foreseeable misuse	4
1.5 Personal protective equipment	5
1.6 Labelling of the warnings	
1.7 Basic warnings	5
1.8 Basic safety instructions	
1.9 Work environment	7
1.10 Emissions	7
1.11 Maintenance	7
1.12 Troubleshooting	
2. PRODUCT DESCRIPTION	
2.1 KL-1011-121 A - Sleeve set, BPW silent block Ø 132mm	
2.2 Scope of delivery / spare parts overview	
2.3 Specifications	ε
3. PREPARATION	9
3.1 Checking the scope of delivery	9
3.2 Required drive parts	9
3.4 Preparing the vehicle	10
3.5 Preparing the tool	10
4. EXAMPLE OF APPLICATION	11
4.1 Removal of silent blocks	
4.2 Installation of silent blocks	12
5. CARE / STORAGE	13
6. REPAIR	13
7. ENVIRONMENTALLY FRIENDLY DISPOSAL	13

(Translation of the operating instructions)



#### 1. READ AND UNDERSTAND FOR YOUR SAFETY

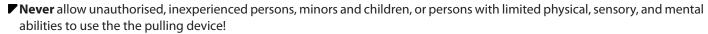


Read and understand these operating instructions before using the pulling device (sleeve set, BPW silent blocks Ø 132mm) and observe all safety and warning instructions! Misuse can result in **DEATH** or **SEVERE INJURIES**! These operating instructions are an integral part of the pulling device. Keep them at a safe place for future reference, and always pass them on to subsequent users of the pulling device. The pulling device 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 pulling device 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!





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

#### 1.3 Intended use

The pulling device ...

- **▼** may only be used for pressing in and out silent blocks.
- may only be used on silent blocks as specified in Chapter 2. Product description!
- **▼ may only be** used when using the hydraulic cylinder **KL-0040-2800** with a **max. load of 28 tonnes!**
- **may only** be operated by hand with muscle power with a manual drive or a manually operated **GEDORE Automotive** hydraulic cylinder/pump combination with pressure gauge for safe pressure control!
- **may only** be used with **GEDORE Automotive** genuine spare parts and accessories!
- **may only** be used in the way described in these operating instructions!
- Any other use can result in **DEATH** or **SEVERE INJURIES**!

### 1.4 Reasonably foreseeable misuse

The pulling device ...

- **▼** must never be used for forcing out or in other parts than those intended for it!
- **▼ must never** be used with a machine drive or a machine-operated hydraulic cylinder/pump combination or any other drive than intended!
- **must never** be used for batch processing with numerous pressing in/out 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 pulling device always as intended. Any other use can result in DEATH or in SEVERE INJURIES!





(Translation of the operating instructions)

#### 1.5 Personal protective equipment

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



Always **wear EYE PROTECTION** (see DIN EN 166, OSHA 29 CFR 1910.133, ANSI Z87) when using the pulling device to protect yourself against parts or particles flying about!

▼When using the pulling device, flying parts or particles can cause **SEVERE INJURIES** to your **eyes!** 



Always **wear PROTECTIVE GLOVES** (e.g. DIN EN 388, OSHA 29 CFR 1910.138, ANSI 105) when using the pulling device to protect yourself against sharp edges and crushing between parts!

When working with the pulling device, 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 pulling device to protect yourself against dropping parts!

When working with the pulling device, falling 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	
<b>A</b> WARNING	Indicates a hazardous situation which, if not avoided, could cause <b>DEATH</b> or <b>SEVERE INJURIES.</b>	
<b>A</b> CAUTION	Indicates a hazardous situation which, if not avoided, could cause MODERATE or MINOR INJURIES.	
ATTENTION	<b>Indicates</b> a situation which, if not avoided, can cause damage to the tool or an object in its vicinity.	
(i)	Note on important information and useful tips.	

#### 1.7 Basic warnings

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

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

- ▼ Read and understand these operating instructions before using the oil pump, and observe all safety and warning instructions for safe use!
- ▼ Always work with the pulling device in accordance with the basic regulations on work safety and accident prevention!
- **▶ Only** use the pulling device as intended and described in these operating instructions!
- **▼ Always** observe the vehicle-specific application procedures in the repair guide of the vehicle manufacturer!
- **▼Never** use the pulling device if it is damaged or has loose parts or unauthorised modifications!
- Never use the pulling device with a machine-operated drive or any other drive than intended! Drive it only by hand and with muscle power; only use a <u>manual</u> drive or a <u>manually</u> operated GEDORE Automotive hydraulic cylinder / pump combination with a pressure gauge for safe pressure control!
- **▶ Never** use the pulling device for batch processing with numerous forcing in/out processes within a few minutes!
- **▼ Always** wear your personal protective equipment (safety goggles, protective gloves, safety shoes) during work!
- **▼ Never** beat the pulling device with a hammer or anything similar!

#### (Translation of the operating instructions)

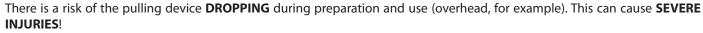


#### **AWARNING** - Danger to life from OVERLOAD

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

- **▼ Never** exceed the **maximum loading capacity** of the pulling device!
- ▼ Never use the pulling device if it is damaged or has loose parts or unauthorised modifications!
- Never use the pulling device with a machine-operated drive or any other drive than intended! Drive it only by hand and with muscle power; only use a manual drive or a manually operated GEDORE Automotive hydraulic cylinder / pump combination with a pressure gauge for safe pressure control!
- **▼ Never** use the pulling device for batch processing with numerous forcing in/out processes within a few minutes!
- **▼ Always** wear your personal protective equipment (safety goggles, protective gloves, safety shoes) during work!

#### **▲**CAUTION - Risk of injury from DROPPING and FLINGING AROUND



- ✓ Secure the pulling device against falling down and flinging around, for example by using the GEDORE safety holding belts KL-0040-2590 or KL-0040-2890, or the holding devices KL-0040-258 A or KL-0040-288!
- **▼Never** stand in axial extension of the pulling device when it is under load!
- **▼ Always** make sure that the pulling device is securely attached to the silent block!
- Avoid dropping the pulling device at all costs!
- **▼ Never** leave the pulling device unattended in loaded condition at the silent block!
- **▼** Deposit the pulling device **safely** against falling down, for example on a workbench!
- **▼ Always** carry out all preparations of heavy parts with the help of a second specialist!
- **▼ Always** wear your personal protective equipment (safety goggles, protective gloves, safety shoes) during work!

#### **ATTENTION - Risk of DAMAGE**

The vehicle, the silent block, and the pulling device can be **DAMAGED**.

- **▼ Always** observe the installation position of the silent block specified by the vehicle manufacturer!
- **▼ Always** observe vehicle-specific application procedures in the vehicle manufacturer's repair guide.
- ▼ Prior to each use, check the moving parts and the spindle of the pulling device for sufficient lubrication If necessary, lubricate them only with molybdenum disulphide paste (for example GEDORE Automotive KL-0014-0030)!
- **▼ Never** use the pulling device for batch processing with numerous forcing in/out processes within a few minutes!
- **▶ Never** clamp the pulling device in a vice.

#### 1.8 Basic safety instructions

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

- ▼ Read and understand these operating instructions before using the oil pump, and observe all safety and warning instructions for safe use!
- ▼Always observe the vehicle-specific application procedures in the vehicle manufacturer's repair guide!
- ▼ Always work with the pulling device in accordance with the basic regulations on work safety and accident prevention!
- **▼ Never** use the pulling device when you are tired or under the influence of alcohol, drugs, or medication!
- ▼Before each use, check the pulling device 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!
- ▼ Carry, lift, and position the pulling device, if necessary, get help from a second specialist due to the weight!
- **▶ Before using** the pulling device, ensure that **no** unauthorised persons are in the immediate environment!
- **▼ Always** observe the **max. loading capacity** when using the pulling device, and **never** exceed it!







(Translation of the operating instructions)

- **▼ Never** stand in axial extension of the pulling device when it is under load!
- **▼ Never** use the pulling device with any other drive than intended!
- **▼ 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 pulling device, and contact GEDORE Automotive GmbH if necessary!
- For safety reasons, stop using the pulling device if any damage is detected on it! Professional inspection and repair may only be carried out by specially trained personnel from **GEDORE Automotive GmbH!**
- **▼ Always** use the pulling device 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 pulling device 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** be at room temperature between -10°C and +40°C.

#### 1.10 Emissions

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

- **▼Immediately** remove leaking hydraulic oil as well as excess molybdenum disulphide paste (using oil binding agents or a cleaning cloth, for example).
- ✓ In case of skin contact with hydraulic oil, clean the affected area immediately with degreasing soap and water.
- ▶ Dispose of pollutants such as hydraulic oil and molybdenum disulphide paste in an **environmentally friendly** manner.
- ► Safety data sheets in accordance with Regulation (EC) No. 1907/2006, for hydraulic oil (Alsus Hyd HLP 32) as well as for molybdenum disulphide paste (MOLYKOTE® 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 pulling device **at regular intervals** and **only** when the tool is not subject to pressure! Poor and improper maintenance can damage the pulling device, thus causing **DEATH** or **SEVERE INJURIES**!

#### Prior to each use:

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

#### **Recommended: Every 24 months:**

▼ Have the pulling device professionally checked every 24 months by authorised GEDORE Automotive GmbH specialists!

#### 1.12 Troubleshooting

Always troubleshoot the pulling device when it is depressurised.

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

**Reason:** Hydraulic coupling contaminated or loose.

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

**Problem:** The hydraulic hand pump does not build up pressure or only very slowly.

Reason: The pressure release valve on the hydraulic hand pump is open or hydraulic oil is missing.

**Remedy:** Close the pressure release valve on the hydraulic pump completely. Top up lacking hydraulic oil **(HLP 32)** at the hydraulic hand pump.



(Translation of the operating instructions)



## 2. PRODUCT DESCRIPTION

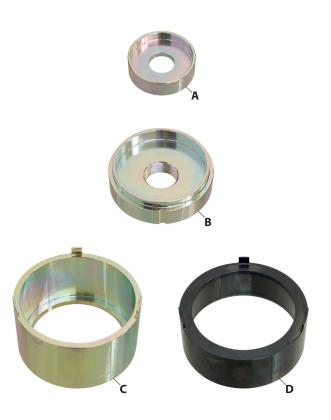
#### 2.1 KL-1011-121 A - Sleeve set, BPW silent block Ø 132mm

Suitable for silentblocs with Ø 132mm. Installed e.g. on BPW ECO Air/ECO Air Compact axles with steel-rubber bushings No. 02.0314.38.00.

Alternative tools: BPW 99.00.000.9.69

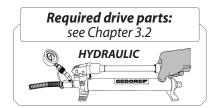
The sleeve set enables the quick and professional pressing out and in silent blocks on the trailing arm.





#### 2.2 Scope of delivery/component overview

Item	Part no.	Description	Qty.
A	KL-1011-1212	Thrust piece	1
В	KL-1011-1214	Cover	1
С	KL-1011-1213	Support sleeve	1
D	KL-1011-1211	Tapered sleeve	1



## 2.3 Specifications

Max. load on the hydraulic cylinder [Y]:	28 tonnes
Max. load on the pulling spindles [X]:	28 tonnes
Max. load on the hydraulic cylinder [~Y]:	17 tonnes
Max. load on the pulling spindles [~X]:	20 tonnes



# (Translation of the operating instructions)



#### 3. PREPARATION

#### **AWARNING**

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

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

#### 3.1 Checking the scope of delivery

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

#### 3.2 Required drive parts

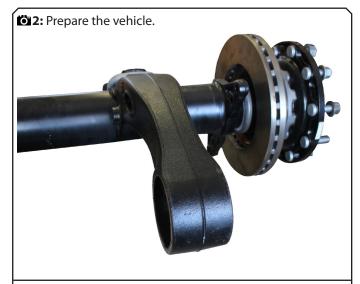
#### **AWARNING**

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

- ▼Never use the pulling device with a machine-operated drive or any other drive than intended! Drive it only by hand and with muscle power and a manually operated GEDORE Automotive hydraulic cylinder / pump combination with a pressure gauge for safe pressure control!
- **1.** Assemble the required drive parts for the pulling device, either **17t** or **28t**, as shown in **©1**.
- (i) The application example in *Chapter 4.* Is described with **28t** drive parts. The procedure with **17t** drive parts always follows the same principle.
- (i) For other drive components see the GEDORE Automotive catalogue.

(Translation of the operating instructions)





3: Note the notches on the silent block and cover [B]!

#### 3.4 Preparing the vehicle

1. Lift the vehicle safely according to the manufacturer's instructions and loosen or prepare all necessary parts for the subsequent work.

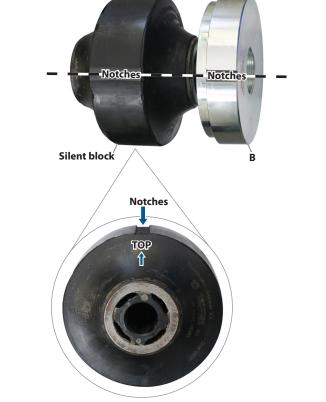


# 3.5 Preparing the tool

#### **CAUTION**

The pulling device and the silent block can be damaged during the further work.

- **▼** Since the hole on the silent block is off-centre, make sure during all further work that the notch on the cover [B] always matches the notch on the silent block 3!
- 1. Prepare the pulling device as shown in 4, to do this screw the pulling spindle [X] into the hydraulic cylinder [Y] and screw on the cover [B] in the correct position.
- (i)The safety retaining belts KL-0040-2590 **KL-0040-258 A** available as an *accessory* or the holding devices - KL-0040-288 or KL-0040-288 make it possible to secure the pulling device against falling.



# **4:** Prepare the pulling device accordingly. Safety retaining belt (accessories / see catalogue)

#### **AWARNING**

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

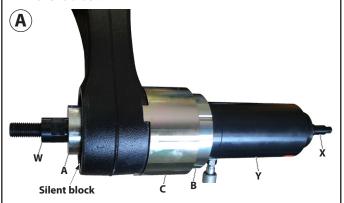
- **▼ Never** use the pulling device with a machine-operated drive or any other drive than intended! Drive it only by hand and with muscle power and a manually operated **GEDORE** Automotive hydraulic cylinder / pump combination with a pressure gauge for safe pressure control!
- 2. Connect the hydraulic pump [Z...] to the the hydraulic cylinder [Y..].

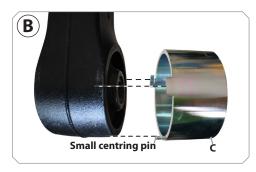




(Translation of the operating instructions)

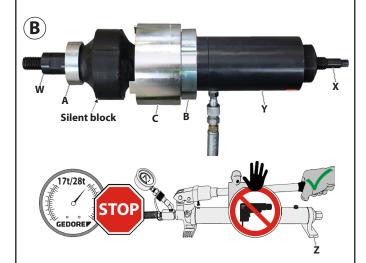
# **5:** Place the pulling device in the correct position on the silent block.





**6:** Pull out the silent block in a controlled manner.





#### 4. TYPICAL APPLICATION

This application example describes the pulling out and pressing in of a silent block on the trailing arm in connection with **28t** drive parts. The procedure with **17t** drive parts basically follows the same principle.

#### 4.1 Removing the silent block

#### **AWARNING**

The pulling device may fall down during use. This can cause **SEVERE INJURIES!** 

✓ Always secure the pulling device against falling down and flinging around! For example using the GEDORE safety retaining belts - KL-0040-2590 or KL-0040-2890 or the mounting devices - KL-0040-258 A or KL-0040-288!

#### **CAUTION**

The pulling device, in particular the support sleeve **[C]**, can be damaged when the silent block is pulled out.

- ✓ Align the support sleeve [C] in such a way that all three centring pins grip the trailing arm neatly. When doing so, note the position of the small centring pin, as shown in To 5B!
- 1. Assemble appropriately the pulling device as shown in **5A**, place it in correct position on the silent block and secure it.

#### **AWARNING**

When pulling out the double silent block, the pulling spindle can break and throw parts around in an uncontrolled manner. This can cause **DEATH** or **SEVERE INJURIES**.

- **▶ Never** exceed the maximum load of the pulling device, depending on the drive kit, of **17t** or **28t**!
- ► While pulling out, **never** stay in the axial extension of the pulling spindle [X]!

#### CAUTION

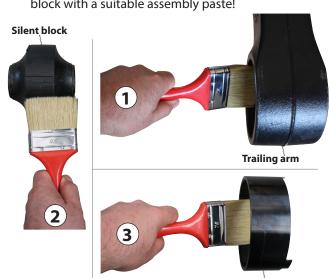
The pulling device can be damaged when the silent block is pulled out.

- ✓ Align the notch on the cover [B] to match the notch on the silent block 3!
- 2. Operate the hydraulic pump [Z] observing the pressure on the manometer, and pull out the silent block in a controlled manner 66A+b.
- (i) The max. stroke of the 28 t Hydraulic cylinder [Y] is 50mm or 45mm with 17t hydraulic cylinder [~Y]! As soon as this is reached interrupt the pressing process, relieve the pressure at the hydraulic pump [Z], retighten the clamping nut [W] until it is fully in place again, and continue the pressing process.
- **3.** Relieve the pulling device and remove the silent block.

(Translation of the operating instructions)



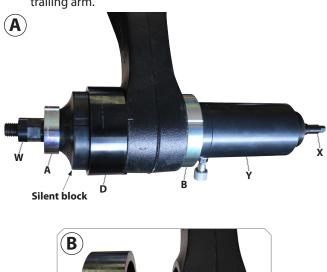
**©17:** Rub the trailing arm, tapered sleeve **[D]** and silent block with a suitable assembly paste!



**© 8:** Insert the silent block as far as possible into the tapered sleeve [D].



Place the pulling device in the correct position on the trailing arm.



#### 4.2 Installation of the silent block

#### CAUTION

The silent block can be damaged during installation due to a lack of sliding properties.

- ▼ It is essential that you rub the silent block with an assembly paste suitable for rubber mounts before installing it! Never use fats, oils or soaps, as these can soften the rubber material!
- 1. Rub the trailing arm, the tampered sleeve [D] and the silent block with a suitable assembly paste. 67

2. Insert the silent block as far as possible into the tapered sleeve [D]. 58

#### **AWARNING**

The pulling device may fall down during use. This can cause **SEVERE INJURIES!** 

▼ Always secure the pulling device against falling down and flinging around! For example using the GEDORE safety retaining belts - KL-0040-2590 or KL-0040-2890 or the mounting devices - KL-0040-258 A or KL-0040-288!

#### [CAUTION]

The silent block and the tampered sleeve [**D**] can be damaged during pressing in the silent block.

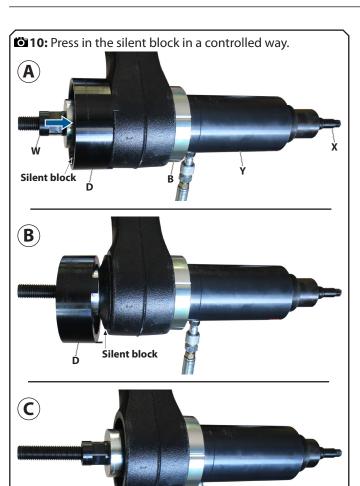
- ✓ Align the tapered sleeve [C] in such a way that all three centring pins grip the trailing arm neatly. When doing so, note the position of the small centring pin, as shown in ©9B.
- **3.** Assemble appropriately the pulling device as shown in **©9A**, place it in correct position on the trailing arm and secure it.



Small centring pin



#### (Translation of the operating instructions)



#### AWARNING

When the silent block is pressed in, the pulling spindle [X] can break and parts can be thrown around in an uncontrolled manner. This can cause **DEATH** or **SEVERE INJURIES**.

- **▶Never** exceed the maximum load of the pulling device, depending on the drive kit, of **17t** or **28t**!
- **▼**While pulling out, **never** stay in the axial extension of the pulling spindle **[X]**!

#### **CAUTION**

The pulling device and the silent block can be damaged when pressed in.

- ▼It is essential that you observe the installation position of the silent block specified by the manufacturer!
- ✓ Align the notch on the cover [B] to match the notch on the silent block 3!
- 4. Operate the hydraulic pump [Z], observe the pressure on the manometer and press in the silent block in a controlled manner according to the manufacturer's specifications until the tapered sleeve [D] on the silent block falls down.

Interrupt the pressing process, remove the conical sleeve [D] on the pulling device and continue the pressing process until the silent block has reached the correct position.

- (1) The max. stroke of the **28t** Hydraulic cylinder [Y] is **50mm** or **45mm** with **17t** hydraulic cylinder [~Y]! As soon as this is reached interrupt the pressing process, relieve the pressure at the hydraulic pump [Z], retighten the clamping nut [W] until it is fully in place again, and continue the pressing process.
- **5.** Relieve the pulling device, remove it and make further repairs on the vehicle <u>according to the manufacturer's</u> instructions.

### **5. CARE / STORAGE**

#### **CAUTION**

Improper care and storage can damage the pulling device. Therefore, **never** immerse the pulling device 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 pull device and the operating instructions at a dry and clean place.

#### 6. REPAIR

#### **AWARNING**

If damage to the pulling device is detected, do no longer use it for safety reasons! Professional inspection and repair may only be carried out by specially trained experts from **GEDORE Automotive GmbH**. Improper repair can result in **DEATH** or **SEVERE INJURIES**.

#### 7. ENVIRONMENTALLY COMPLIANT DISPOSAL

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

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







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



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