

Operating instructions EN

KL-0326-1000 B /-161 E

Postfach 1329

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Press Bracket for Suspension Joints





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Imprint

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1. READ AND UNDERSTAND FOR YOUR SAFETY

These operating instructions are intended to familiarise you with the operation of the press bracket. Therefore read and understand these operating instructions **before using** the press frame and observe all safety and warning instructions for safe use! Misuse can result in **DEATH** or **SEVERE INJURIES**! The operating instructions are a part of the press bracket. Therefore keep them in a safe place so that you can access them at any tim, and always pass them on to subsequent users of the press bracket! The press bracket 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 press bracket **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 brake fluid tester!

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 press bracket **must** ensure that **only** trained personnel in specialised vehicle workshops use the press bracket!
- The owner of the press bracket **must** ensure that the instructions for use are available to the user and that the user has completely read and understood the operating instructions for use **before** using the press bracket!
- The owner of the press bracket **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 press bracket...

- **may only** be used for pressing in and out suspension/guide joints!
- may only be used up to a max. load of 14 tonnes or 17 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 press bracket...

- **must never** be used for pressing other parts in or out or in any other way than intended!
- 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 (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!
- Always use the press frame as intended. Any other use can result in DEATH or SEVERE INJURIES!





For your safety, **always** wear personal protective equipment when using the press bracket! The press bracket 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 press bracket to protect yourself against flinging parts or particles!

When using the press bracket, 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 press bracket to protect yourself against sharp edges and crushing between parts!

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



Always wear SAFETY SHOES (e.g. DIN EN ISO 20345, OSHA 29 CFR 1910.136, ANSI Z41) when using the press bracket to protect yourself against dropping parts!

When working with the press bracket, 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	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 SERIOUS INJURIES .				
	Indicates a hazardous situation which, if not avoided, could cause MODERATE or MINOR INJURIES .				
CAUTION	Indicates a situation which, if not avoided, could cause damage to the tool or an object in its vicinity.				
í	Note on important information and useful tips.				

1.7 Work environment

Only use the press bracket in a safe working environment and **do not** expose it to extreme temperatures, direct sunlight or extreme humidity and moisture!

- 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.

1.8 Emissions

Molybdenum disulphide paste and hydraulic oil can drip or escape when using the press bracket 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 always in an environmentally friendly manner.
- Safety data sheets in accordance with Regulation (EC) No. 1907/2006 for hydraulic oil (Alsus Hyd HLP 32 or 46) as well as for molybdenum- 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.



1.9 Basic safety instructions and warnings

AWARNING / CAUTION - Failure to observe this warning may result in an accident or death

When using the press bracket, **always** observe the following safety and warning instructions as well as measures to avoid **DEATH** or **SERIOUS INJURY** as well as property damage due to hazards, misuse, abuse and unsafe handling!

- Read and understand these operating instructions before using the press bracket and and observe all safety and warning instructions for safe use!
- **Always** work with the press bracket in accordance with the basic regulations on work safety, accident prevention and environmental protection!
- Always use the press bracket as intended. GEDORE Automotive does not accept any liability or warranty or guarantee claims for injuries and damage resulting from improper use or disregard of the.
- Before each use, check the press bracket carefully for damage, loose parts, or unauthorised modifications. Never use it, if you notice any such deficiencies! Professional inspection and repair may only be carried out by specially trained personnel from GEDORE Automotive!
- **Vonly** use original spare parts and accessories from **GEDORE Automotive** for the press bracket!
- **Always** observe the vehicle-specific manufacturer's specifications when working with the press bracket!
- Secure the press bracket and in particular the hydraulic cylinder against falling down and flinging around, for example by holding it or by using the GEDORE safety retaining belt KL-0040-2590 or, alternatively, the retaining device KL-0040-258 A!
- Never use the press bracket with a machine-operated 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!
- **Vever** use the perforated press bracket for batch processing with numerous forcing in/out processes within a few minutes!
- **Vever** use the press bracket when you are tired or under the influence of alcohol, drugs, or medication!
- **F**Before using the press bracket, make sure that **no** unauthorised persons are in the immediate environment!
- Always observe the max. loading capacity when using the press bracket, and never exceed it!
- Wear your personal protective equipment such as safety goggles, protective gloves, safety shoes during work!
- **Always** make sure that the press bracket is securely attached to the vehicle!
- **Vever** leave the press bracket unattended in loaded condition on the wheel bearing!
- **Never** hit the press bracket with a hammer or other objects and **never** clamp it in a vice!
- Always avoid dropping, hitting or knocking the press bracket, especially when it is under load! Always place it on a clean shelf or workbench to prevent it from falling down!
- **Never** operate the hydraulic pump if it is not connected to the hydraulic cylinder. Otherwise, the pressure hose and the connecting pieces can be damaged!
- Always use the hydraulic pump together with a pressure gauge specially adapted to the hydraulic cylinder for safe pressure control!
- Always check whether all technical specifications comply with the requirements of the hydraulic cylinder before using the hydraulic cylinder!
- **Vever** use the hydraulic pump on hydraulic cylinders which are used for lifting, lowering and supporting loads!
- **Never** use the hydraulic pump with a hydraulic cylinder that pumps more oil back into the tank than the hydraulic pump can hold.
- ✓ If an existing hydraulic hand pump in the workshop is to be used as the drive for the GEDORE Automotive hydraulic cylinder, it must first be equipped with a GEDORE Automotive pressure gauge matched to the hydraulic cylinder!
- Stop work **immediately** if you are unsure about using the press bracket and contact **GEDORE Automotive if necessary**!
- For safety reasons, ensure that a damaged press bracket is **no longer** used! Professional inspection and repair may **only** be carried out by specially trained personnel from **GEDORE Automotive GmbH**!





1.10 Maintenance

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

Prior to each use:

- **Prior** to each use, check the press bracket carefully for damage, loose parts, or unauthorised modifications!
- ✓ Prior to each use of the press bracket, 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 press bracket professionally checked every **24 months** by authorised **GEDORE Automotive** specialists!

1.11 Troubleshooting

Only perform troubleshooting on the press bracket 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 or 46) 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 hand pump is open or hydraulic oil is missing.

Remedy: Close the pressure release valve on the hand pump completely and top up missing hydraulic oil (**HLP 32 or 46**) on the hand pump, if necessary.

1.12 Care / Storage

CAUTION

Improper care and storage can damage the press bracket.

- Therefore, **never** immerse the press bracket in water, solvents, or other cleaning liquids.
- ▼ After use, clean all parts of the press bracket with a dry and clean cleaning cloth.
- Store the press bracket and the operating instructions in a dry and clean place.

1.13 Repair

WARNING

Improper repair of the press bracket can result in **DEATH** or **SEVERE INJURIES**.

- ✓ If damage, loose parts or unauthorised modifications have been found on the press bracket, it must no longer be used for safety reasons!
- ▼ Repair may only be carried out by specially trained personnel from **GEDORE Automotive**!
- **Conly** use original spare parts and accessories from **GEDORE Automotive** for the press bracket!

If necessary, contact the **GEDORE Automotive** for a professional inspection and repair of the press bracket.

1.14 Environmentally friendly disposal

Dispose of the press bracket brake fluid tester 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.



2. PRODUCT DESCRIPTION

2.1 KL-0326-1... - Press frame series for suspension/guide joints

KL-0326-161 E - Press bracket kit for suspension joints

Universally suitable for vehicles with pressed suspension/guide joints on the front or rear axle.

Particularly suitable, for example...

...on the lower suspension/guide joint and stabiliser joint of the front axle on Mercedes:

E-Class (W211, W124), CLS (W219), S-Class (W220), SL (W230), 190 (W201).

...on the lower suspension/guide joint of the front and rear axle on Mercedes: M-Class (W163).

...on the upper suspension/guide joint of the front axle on Volkswagen: Transporter T4 (7D).

In conjunction with the required drive parts, the press bracket kit enables quick, professional removal and installation of suspension/guide joints directly on the vehicle. Time-consuming removal of the steering knuckle is not necessary.

Required drive parts

Hydraulic:

KL-0039-1930 - Thrust spindle M20 x 350mm **KL-0040-2500** - Hydraulic cylinder **KL-0215-35 M25** - Hydraulic hand pump

Mechanical:

KL-0174-620 - Mechanical spindle **KL-0174-853** - Thrust piece for mechanical spindle **KL-0174-547** - Adapter 2 ¼"-14 UNS to M20x2

Scope of supply / Single part overview See Chapter 2.3



KL-0326-1000 B - Press bracket (basic tool)

In conjunction with the corresponding pressure/support sleeves, adapter rings and required drive parts, the press bracket enables quick, professional pressing out and pressing in of suspension/guide joints directly on the vehicle. Time-consuming removal of the steering knuckle is not necessary.

Required drive parts

Hydraulic:

KL-0039-1930 - Thrust spindle M20 x 350mm **KL-0040-2500** - Hydraulic cylinder **KL-0215-35 M25** - Hydraulic hand pump

Mechanical: KL-0174-620 - Mechanical spindle KL-0174-853 - Thrust piece for mechanical spindle KL-0174-547 - Adapter 2 ¼"-14 UNS to M20x2

Necessary accessories

KL-0039-16.. - Short pressure/support sleeves KL-0326-1.. -

Scope of supply / Single part overview See Chapter 2.3





2.2 Component overview

(i) This overview shows basic components, designations, and information on the press bracket. A detailed overview of the scope of delivery/individual parts can be found in **chapter 2.3**.







2.3 Scope of delivery / Overview of the single parts

(i)The tak	ole shows all components of the press bracket	Press bracket KL-0326-1000 B	Press bracket kit KL-0326-161 E	
Prior to using	the press bracket, check that all the parts inclusion scope of delivery are available.			
Basic tools	A	ltem		
KL-0326-1001 B	- Press bracket	A1	•	•
KL-0326-1004 - Reinforcement bar		A2	•	•
KL-0326-1003-1	- Cheese-head screw	A3	2x ●	2x ●
Adapter rings	5 B			
KL-0326-1111 - Adapter ring, internal-Ø 51mm		B1		•
KL-0326-1311	Adapter ring, internal-Ø 38mm	B2		•
KL-0326-1312 A	- Adapter ring, internal-Ø 51/47mm	B3		•
KL-0326-1411	Adapter ring internal-Ø 34/38mm	B4		•
Pressure/sup	port sleeves C			
KL-0039-1634 -	Pressure/support sleeve short, external-Ø 34mm	C1		•
KL-0039-1640 -	Pressure/support sleeve short, external-Ø 40mm	C2		•
KL-0039-1642 - Pressure/support sleeve short, external-Ø 42mm		СЗ		•
KL-0039-1650 - I	KL-0039-1650 - Pressure/support sleeve short, external-Ø 50mm			•
KL-0326-1314 -	Pressure/support sleeve short, external-Ø 56mm	C5		•
KL-0326-1313 A	- Pressure/support sleeve short, external-Ø 60mm	C6		•
KL-0043-8662 A	- Thrust sleeve double, external-Ø 44/ 52mm	С7		•
KL-0350-5102 -	Pressure/support sleeve short, external-Ø 34mm	С8		•
Drive parts	Ζ			
	KL-0039-1930 - Thrust spindle M20 x 350mm	Z1 [⊬]		
hydraulic	KL-0040-2500 - Hydraulic cylinder, 17t	Z2 ^H		
	KL-0215-35 M25 - Hydr. hand pump 17t	Z3 ^H		
	KL-0174-853 - Thrust piece for mech. spindle	Z1 ^M		
mechanical	KL-0174-547 - Adapter 2 ¼"-14 UNS to M20x2	Z2 [™]		
	KL-0174-620 - Mechanical spindle	Z3 [™]		
Storage Syste	ems:			
KL-4999-1319 -	Foam insert	-		•







2.4 Specifications

Max. load of press bracket without reinforcement bar:
Max. load of press bracket with reinforcement bar [A2]:
Max. load of hydraulic cylinder [Z2^H] : 17t





3. PREPARATION

3.1 Preparing the vehicle



3.2 Preparing the tool

🛱 2: Prepare the press bracket [A1] accordingly...



12-(EN)



4. TYPICAL APPLICATION

(1) This application example describes the hydraulic pressing out and pressing in of a support/guide joint on a steering knuckle using the press bracket series. Whether mechanical or hydraulic drive parts, the process always follows the same principle.

4.1 Determining adapter rings as well as pressure/support sleeves

- 3: Determine suitable adapter rings [B..] and pressure/support sleeves [C..] depending on the suspension/guide joint.
 - (i) There are basically <u>two</u> different methods for pressing out and pressing in a suspension/ guide joint. Depending on the position of the stop, it is either pressed out or pressed in via the adapter ring [**B**..] or the pressure/support sleeve [**C**..] in the corresponding direction.

CAUTION

The suspension/guide joint can be damaged if the wrong adapter rings [B..] and pressure/support sleeves [C..] are used. It is therefore essential that the outer Ø of the thrust side is smaller than the outer Ø of the suspension/guide joint and the inner Ø of the support side is larger!



Determine suitable adapter rings [B..] and pressure/support sleeves [C..] depending on the diameter-Ø of the suspension/guide joint and the required removal and installation method.

(i) Vehicle-specific combinations, see below.





4.2 Forcing out the suspension/guide joint

🖾 4: Position the press bracket [A1] correctly on the suspension/guide joint.

CAUTION

The suspension/guide joint can collide with the press bracket during pressing out and damage it! It is therefore essential to align the press bracket so that it rests on the entire surface, is at right angles to and centred on the component and the suspension/guide joint can be pressed out without collision!

1. Insert the adapter ring [B..] determined in **chapter 4.1** and the pressure/ support sleeve [C..] in the correct position on the press bracket.

Now place the press bracket in the correct position on the suspension/ guide joint as shown and screw in the thrust spindle **[Z1^H]** until the pressure/ support sleeve **[C..]** is in full contact with the suspension/guide joint.

(i) If the suspension/guide joints are extremely tight, the maximum load on the press bracket [A1] can be increased from 14 to 17 tonnes by fitting the reinforcement bar [A2].

Tighten the screws [A3] to 25Nm.





Suspension/guide joint

not exce

maximum lo

🖸 5: Press out the suspension/guide joint in a controlled manner.

The press bracket can break and spin around due to overloading or misuse. This can cause DEATH or SEVERE INJURIES! Therefore, never overload the press bracket, never use it with a mechanical drive or in any other way than intended!

2. Connect the hydraulic cylinder [Z2^H] to the hydraulic pump [Z3^H].

Now actuate the hydraulic pump **[Z3^H]**, always observing the pressure on the pressure gauge, and press out the support/guide joint in a controlled manner.

(i) The max. stroke of the hydraulic cylinder [**Z2**^H]is 45 mm! As soon as it is reached: Interrupt the pressing process, release the pressure at the hydraulic pump [**Z3**^H], turn the thrust spindle [**Z1**^H], continue the pressing process.





72H



4.3 Forcing in the suspension/guide joint



CAUTION

The suspension/guide joint can be damaged during press-fitting! It is therefore essential to observe the installation direction and installation position according to the vehicle manufacturer's specifications!

WARNING

The press bracket can break and spin around due to overloading or misuse. This can cause DEATH or SEVERE INJURIES!

Therefore, never overload the press bracket, never use it with a mechanical drive or in any other way than intended!

2. Actuate the hydraulic pump [Z3^H], always observing the pressure on the pressure gauge, and press in the suspension/quide joint in a controlled manner in accordance with the manufacturer's instructions.





Suspension/guide joint



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