

KL-0039-.. Universal Wheel Bearing Tool Series









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GEDORE Automotive GmbH

Breslauer Straße 41 78166 - Donaueschingen Postfach 1329 78154 Donaueschingen - GERMANY ⊖ gedore-automotive.com

L +49 (0) 771 / 8 32 23-0 +49 (0) 771 / 8 32 23-90

GEDORE TOOLS, INC.

Only for USA, Canada & Mexico / Sólo para EE.UU., Canadá y México Seulement pour les USA, le Canada et le Mexique 7187 Bryhawke Circle, Suite 700 North Charleston, SC 29418, USA

📞 +1-843 / 225 50 15 📇 +1-843 / 225 50 20 \bowtie info@gedoretools.com gedore.com







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Worldwide GEDORE service centers and offices are listed on the Internet at: www.gedore.com





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Address of the manufacturer

GEDORE Automotive GmbH

Breslauer Straße 41 // 78166 Donaueschingen - GERMANY **\$** +49 (0)771/83223-71 // **\$** info.gam@gedore.com

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1. READ AND UNDERSTAND FOR YOUR SAFETY

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

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 wheel bearing tool **must** ensure that **only** trained personnel in specialised vehicle workshops use the wheel bearing tool!
- The owner of the wheel bearing tool **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 wheel bearing tool!
- The owner of the wheel bearing tool **must** ensure that the user is familiar with the basic regulations on work safety and accident prevention, and that the personal protective equipment is available to him/her!

1.3 Intended use

The wheel bearing tool ...

- may only be used for forcing out or forcing in wheel bearings!
- **may only** be used up to the **a max. load of 17 tonnes** or **that of the weakest component used**!
- may only be driven by hand with muscle power together with a manual drive, a manually driven strand press, or a manually operated GEDORE Automotive hydraulic cylinder/pump combination with a pressure gauge for safe pressure control!
- may only be used with stand presses which comply with the recognised rules of technology and the relevant provisions of the Machinery Directive 2006/42/EC!
- **may only** with genuine **GEDORE Automotive** 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 wheel bearing tool ...

- **must never** be used for forcing out or in other parts than those intended for it!
- **must never** be used together with an impulse or impact screwdriver!
- must never be used with a machine drive, a machine-operated stand press, or a hydraulic cylinder/pump combination, or any other drive than intended!
- **must never** be used for batch processing with many forcing 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!
- **A** Use the wheel bearing tool **always** as intended. Any other use can result in **DEATH** or in **SEVERE INJURIES**!



1.5 Personal protective equipment

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

When using the wheel bearing tool, 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 wheel bearing tool to protect yourself against sharp edges and crushing between parts!

When working with the wheel bearing tool, 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 wheel bearing tool to protect yourself against dropping parts!

When working with the wheel bearing tool, 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								
	Indicates a hazardous situation which, if not avoided, could cause DEATH or SEVERE INJURIES.								
ACAUTION	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.								
í	Note on important information and useful tips.								

1.7 Basic warnings

AWARNING - Danger to life from MISUSE

MISUSE can cause the wheel bearing tool to break and thus drop or be hurled about. This can cause **DEATH** or **SEVERE INJURIES**!

- Read and understand these operating instructions before using the wheel bearing tool, and observe all safety and warning instructions for safe use!
- **Always** work with the wheel bearing tool in accordance with the basic regulations on work safety and accident prevention!
- **Conly** use the wheel bearing tool as described in these operating instructions!
- **Always** observe the vehicle-specific application procedures in the vehicle manufacturer's repair guide!
- **Vever** use the wheel bearing tool if it is damaged or has loose parts or unauthorised modifications!
- **Vever** use the wheel bearing tool with an impulse or impact wrench!
- Never use the wheel bearing tool with a <u>machine-operated</u> drive. Drive it **exclusively** by hand with muscle power with a <u>manual</u> drive, or a <u>manually</u> driven stand press or **GEDORE Automotive** hydraulic cylinder/pump combination with pressure gauge for safe pressure control!
- **Vever** use the wheel bearing tool 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!
- **Vever** hit the wheel bearing tool with a hammer or anything similar!





AWARNING - Danger to life from OVERLOAD

OVERLOADING can cause the wheel bearing tool to break and thus drop or be hurled about. This can cause **DEATH** or **SEVERE INJURIES**!

- **Vever** exceed the **maximum load** of the wheel bearing tool or the individual components!
- **Vever** use the wheel bearing tool if it is damaged or has loose parts or unauthorised modifications!
- **Vever** use the wheel bearing tool with an impulse or impact wrench!
- Never use the wheel bearing tool with a <u>machine-operated</u> drive. Drive it **exclusively** by hand with muscle power with a <u>manual</u> drive, or a <u>manually</u> driven stand press or **GEDORE Automotive** hydraulic cylinder/pump combination with pressure gauge for safe pressure control!
- **Vever** use the wheel bearing tool 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!

AWARNING - Danger of injury from FALLING

There is a risk of the wheel bearing tool **DROPPING** during preparation and use (overhead, for example). This can cause **SEVERE INJURIES** at the head!

- Before use, always secure the wheel bearing tool against falling off the vehicle or axle, e.g. using the safety retaining belt available as an accessory - KL-0040-2590 or KL-0040-2592!
- Avoid dropping the wheel bearing tool **under any circumstances**!
- **Always** make sure that the wheel bearing tool is securely attached to the vehicle!
- **Vever** leave the wheel bearing tool unattended in loaded condition on the vehicle or the wheel bearing!
- Put down the wheel bearing tool safely to prevent it from dropping (for example on a workbench)!
- **Always** carry out necessary 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

Vehicle, wheel bearing, wheel bearing housing, and the wheel bearing tool can be DAMAGED.

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

1.8 Basic safety instructions

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

- Read and understand these operating instructions before using the wheel bearing tool, 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 wheel bearing tool in accordance with the basic regulations on work safety and accident prevention!
- **Vever** use the wheel bearing tool when you are tired or under the influence of alcohol, drugs, or medication!
- Before each use, check the wheel bearing tool 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!
- F If necessary, carry, lift, and position the wheel bearing tool with the help of a second specialist due to its weight!
- FBefore using the wheel bearing tool, make sure that no unauthorised persons are in the immediate environment!
- Always observe the max. loading capacity when using the wheel bearing tool and the individual components, and never exceed it!
- **Vever** stand in the axial extension of the wheel bearing tool when it is under load!



- **Vever** use the wheel bearing tool with an unauthorised drive. Drive 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 wheel bearing tool, and contact GEDORE Automotive GmbH if necessary!
- For safety reasons, ensure that a damaged wheel bearing tool is no longer used! Professional inspection and repair may only be carried out by specially trained personnel from **GEDORE Automotive GmbH**.
- **Always** use the wheel bearing tool 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 wheel bearing tool in a safe working environment.

- The workplace **must** be clean and tidy.
- The workplace **must** be sufficiently large and illuminated.
- The workplace **must** be on a solid and non-skidding floor.
- The workplace **must** be safeguarded against access of unauthorised persons.
- The workplace **must** have a room temperature between -10°C and +40°C.

1.10 Emissions

Molybdenum disulphide paste and hydraulic oil can drip or escape when using the wheel bearing tool 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 rag, for example).
- ▶ In case of skin contact with hydraulic oil, clean the affected area immediately with degreasing soap and water.
- Tispose 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(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 wheel bearing tool **at regular intervals** and **only** when the tool is tension-free and/or depressurised! Poor and improper maintenance can damage the wheel bearing tool, thus causing **DEATH** or **SEVERE INJURIES**!

Prior to each use:

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

Recommended: Every 24 months:

► Have the wheel bearing tool professionally checked every 24 months by authorised GEDORE Automotive GmbH specialists!

1.12 Troubleshooting

Perform troubleshooting on the wheel bearing tool only when it is tension-free/depressurised!

Problem: The spindle's clamping nut on the wheel bearing tool is sluggish. (Mechanical drive)

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

Remedy: Clean the spindle, check it for damage, and lubricate it **only** with <u>molybdenum disulphide paste</u>. (For example, **GEDORE Automotive** molybdenum disulphide paste - **KL-0014-0030**)

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.



2. PRODUCT DESCRIPTION

2.1 - KL-0039-.. Wheel bearing tool series

With the modular system of the **KL-0039-..wheel bearing tool series**, wheel bearings can be forced out an in, and wheel hubs can be forced out by means of a pulling device directly on the vehicle. Alternatively, it can also be used on a suitable stationary stand press.

The special design of the thrust washers which are offset on one side, ensures precise force transmission directly to the wheel bearing outer ring or inner ring, thus preventing damage to the new wheel bearing.

The combination of centring and thrust rings results in thrust pieces which can be precisely matched to the corresponding wheel bearing diameter.

For this purpose, the modular system can be individually assembled depending on the wheel bearing diameter or wheel hub diameter, for example to...







8-(EN)







2.2 Scope of delivery/single parts overv	cope of delivery/single parts overview Wheel bearing t						ool sets (see chapter 5.)					
Specifications		×		ш	ш	8		υ		-		
(i) This table shows the basic components of the KL-0039Wheel bearing tool series . Other accessories see GEDORE Automotive catalogue!		KL-0039-0110 K	KL-0039-0101	KL-0039-8131	KL-0039-814	KL-0039-807	KL-0039-140	KL-0039-801	KL-0039-802	KL-0039-1920	KL-0039-2120	
Foam inserts	ltem											
KL-4999-1313 - Foam insert				•								
KL-4999-1314 - Foam insert					•							
Plastic case			1	1					1			
KL-0039-0119 - Plastic case		•										
KL-4999-1392 - Plastic case				Accesso- ries	Accesso- ries							
Molybdenum disulphide paste			1	nes	1105				1			
KL-0014-0030 - Molybdenum disulphide paste		•										
Hydraulic cylinder (A) (max. load 17t)			1	1				1	1			
KL-0040-2500 - Hydraulic cylinder	A1											
Mounting adapter B	_											
KL-0039-1002- Mounting adapter for clamping nut + thrust spindle	B 1	•						•	•			
KL-0039-1003 - Mounting adapter for hydraulic cylinder	B2								•			
KL-0039-1011 - Mounting adapter for mech. spindle	B3	•						•				
Draw spindles 🖸 (max. load 20t)			1					1	1			
KL-0040-3008 - Pulling spindle M20, 290mm, mechanical drive	C1	•										
KL-0039-2030 - Pulling spindle M20, 420mm, mechanical drive	C2							•				
KL-0039-1920-1 A - Pulling spindle M20, 590mm, hydraulic drive	С3								•	•	٠	
Clamping nuts D (max. load 20t)			,									
KL-0040-3009 - Clamping nut M20	D1	٠							•	•		
KL-0039-2120-2 - Quick-clamping nut M20	D2							•			٠	
Adapter rings E												
KL-0039-1503 - Adapter ring conical Ø 74/99mm, 39mm	E1				•	•						
KL-0039-1504 - Adapter ring, conical Ø 74/99mm, 44mm	E2				•	•						
KL-0039-1505 - Adapter ring, cylindrical Ø 84/104mm, 53mm	E3				•	•						
KL-0039-1509 - Adapter ring, cylindrical Ø 85/104mm, 45mm	E4				•	•						
Bearing cover F												
KL-0039-1401 - Bearing cover	F1	•		•			•					
Housing G												
KL-0039-1402 - Housing Ø 90mm	G1	٠		•		•	•					
KL-0039-1403 - Housing Ø 100mm	G2				•							
Support rings 🖪												
KL-0039-1413 - Support ring Ø 70mm	H1	٠		•			•					
KL-0039-1414 - Support ring Ø 75mm	H2	٠		•			•					
KL-0039-1415 - Support ring Ø 80mm	H3	٠		•			•					
		Con	tinued	on the fo	ollowing	page!						



		KL-0039-0110 K	KL-0039-01 01	KL-0039-8131 E	KL-0039-814 E	KL-0039-807 B
Centring rings	ltem				,	
KL-0039-1325 - Centring ring Ø 25mm	1				•	
KL-0039-1326 - Centring ring Ø 26mm	12				•	
KL-0039-1327 - Centring ring Ø 27mm	13				•	
KL-0039-1328 - Centring ring Ø 28mm	14				•	
KL-0039-1329 - Centring ring Ø 29mm	15				•	
KL-0039-1330 - Centring ring Ø 30mm	16				•	
KL-0039-1331 - Centring ring Ø 31mm	17				•	
KL-0039-1332 - Centring ring Ø 32mm	18				•	
KL-0039-1333 - Centring ring Ø 33mm	19				•	
KL-0039-1334 - Centring ring Ø 34mm KL-0039-1335 - Centring ring Ø 35mm	10 11	•	•	•	•	
KL-0039-1335 - Centring ring Ø 36mm	111				•	
KL-0039-1337 - Centring ring Ø 37mm	112				•	
KL-0039-1338 - Centring ring Ø 38mm	113	•	•	•	•	
KL-0039-1339 - Centring ring Ø 39mm	115	•	•	•		
KL-0039-1340 - Centring ring Ø 40mm	116	•	•	•		
KL-0039-1341 - Centring ring Ø 41mm	117	•	•	•		
KL-0039-1342 - Centring ring Ø 42mm	118	•	•	•		
KL-0039-1343 - Centring ring Ø 43mm	119	•	•	•		
KL-0039-1344 - Centring ring Ø 44mm	120				•	
KL-0039-1345 - Centring ring Ø 45mm	I21	•	•	•		
KL-0039-1346 - Centring ring Ø 46mm	122				•	
KL-0039-1347 - Centring ring Ø 47mm	123				•	
KL-0039-1348 - Centring ring Ø 48mm	124				•	
KL-0039-1349 - Centring ring Ø 49mm	125				•	
KL-0039-1350 - Centring ring Ø 50mm	126				•	
KL-0039-1351 - Centring ring Ø 51mm	127				•	
KL-0039-1352 - Centring ring Ø 52mm	128				•	
KL-0039-1353 - Centring ring Ø 53mm	129 130				•	
KL-0039-1354 - Centring ring Ø 54mm KL-0039-1355 - Centring ring Ø 55mm	130				•	
KL-0039-1355 - Centring ring Ø 55mm KL-0039-1356 - Centring ring Ø 56mm	131				•	
KL-0039-1350 - Centring ring Ø 57mm	132				•	
KL-0039-1358 - Centring ring Ø 58mm	133				•	
KL-0039-1359 - Centring ring Ø 59mm	135				•	
KL-0039-1360 - Centring ring Ø 60mm	136				•	
KL-0039-1506 - Centring ring Ø 60mm e.g. for stand press	137			•		•
Thrust rings J						
KL-0039-1254 - Thrust ring Ø 54mm	J1				•	
KL-0039-1260 - Thrust ring Ø 60mm	J2	•	•	•		
KL-0039-1261 - Thrust ring Ø 61mm	J3				•	
KL-0039-1262 - Thrust ring Ø 62mm	J4				•	
KL-0039-1263 - Thrust ring Ø 63mm	J5				•	
KL-0039-1264 - Thrust ring Ø 64mm	J6	•	•	•		
KL-0039-1265 - Thrust ring Ø 65mm	J7				•	
KL-0039-1266 - Thrust ring Ø 66mm	J8				•	
KL-0039-1267 - Thrust ring Ø 67mm	J9		-		•	
KL-0039-1268 - Thrust ring Ø 68mm KL-0039-1269 - Thrust ring Ø 69mm	J10 J11	•	•	•	•	
KL-0039-1269 - Thrust ring Ø 69mm KL-0039-1270 - Thrust ring Ø 70mm	J11 J12				•	
KL-0039-1270 - Thrust ring Ø 70mm KL-0039-1271 - Thrust ring Ø 71mm	J12				•	
KL-0039-1272 - Thrust ring Ø 72mm	J14	•	•	•	•	
KL-0039-1273 - Thrust ring Ø 73mm	J15		-		•	
KL-0039-1274 - Thrust ring Ø 74mm	J16	•	•	•		
KL-0039-1275 - Thrust ring Ø 75mm	J17				•	
KL-0039-1276 - Thrust ring Ø 76mm	J18				•	
KL-0039-1277 - Thrust ring Ø 77mm	J19				•	
KL-0039-1278 - Thrust ring Ø 78mm	J20				•	
KL-0039-1279 - Thrust ring Ø 79mm	J21				•	
KL-0039-1280 - Thrust ring Ø 80mm	J22	•	•	•		
KL-0039-1281 - Thrust ring Ø 81mm	J23				•	
KL-0039-1282 - Thrust ring Ø 82mm	J24	•	•	•		
KL-0039-1283 - Thrust ring Ø 83mm	J25				•	
KL-0039-1284 - Thrust ring Ø 84mm	J26		-		•	
KL-0039-1285 - Thrust ring Ø 85mm KL-0039-1286 - Thrust ring Ø 86mm	J27 J28	•	•	•	•	
KL-0039-1286 - Inrust ring Ø 86mm KL-0039-1287 - Thrust ring Ø 87mm	J28 J29				•	
KL-0039-1287 - Thrust ring Ø 87mm KL-0039-1288 - Thrust ring Ø 88mm	J29 J30				•	
KL-0039-1288 - Thrust ring Ø 88mm KL-0039-1289 - Thrust ring Ø 89mm	J30 J31				•	
KL-0039-1290 - Thrust ring Ø 90mm	J32				•	
KL-0039-1296 - Thrust ring Ø 96mm	J33			•		
KL-0039-1501 - Thrust ring Ø 95mm with recess for ABS sensor	J34				•	







3. PREPARATION

The wheel bearing tool can slip, break and fall or be thrown around as a result of **incorrect use** or **overloading**. This can cause **DEATH** or **SEVERE INJURIES**!

- Prior to using the wheel bearing tool, read and understand all safety instructions and warnings listed in Chapter 1 and always observe them for safe use!
- Use the wheel bearing tool 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 wheel bearing tool carefully for damage, loose parts, or unauthorised modifications. Never use it if you notice any such deficiencies!
- **Always** wear your personal protective equipment (such as safety goggles, protective gloves, safety shoes) during work!

3.1 Checking the scope of delivery

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

3.2 Assemble drive parts for traction device

Using a machine-operated drive can cause the wheel bearing tool to break and thus drop or be hurled about. This can cause **DEATH** or **SEVERE INJURIES**!

- Never use the wheel bearing tool with a <u>machine-operated</u> drive. Drive it **exclusively** by hand with muscle power with a <u>manual</u> drive, or a <u>manually</u> driven **GEDORE Automotive** hydraulic cylinder/pump combination with pressure gauge for safe pressure control!
- **Vever** use the wheel bearing tool with an impulse or impact wrench!

1. When using the pulling device, assemble all the required drive parts for the wheel bearing tool as shown in **1**.

(i) For other pressure plates see the GEDORE Automotive catalogue.









3.4 Preparing the vehicle





Operating instructions

(Translation of the operating instructions)

4. TYPICAL APPLICATIONS

The following application examples describe the forcing out and forcing in of a wheel bearing as well as the forcing in of a wheel hub in **two** different ways ...





4.1 Forcing out and in by means of a pulling device

This application example describes the forcing out and forcing in of a wheel bearing <u>by means of a pulling device</u>. The process follows the same principle, both mechanically and hydraulically.

Forcing out wheel bearings

CAUTION (H) or adapter ring **[E]** and thrust ring **[J]**.

The wheel bearing can get stuck in the support ring [H] or adapter ring [E] when forced out!

Select a support ring [H] or adapter ring [E] whose inner diameter is <u>larger</u> than the outer diameter of the wheel bearing!

The thrust ring [J] can get stuck in the wheel bearing housing when the wheel bearing is forced out, and be damaged!

- Select a thrust ring [J] whose outer diameter is <u>smaller</u> than the outer diameter of the wheel bearing
- ▶ Align the thrust ring [J] with the <u>flat side</u> facing the wheel bearing housing!
- **1.** Depending on the wheel bearing outer diameter, determine a suitable support ring **[H]** or adapter ring **[E]**, and a thrust ring **[J]**.



15: Assemble the wheel bearing tool to fit and mount it in the correct position to the wheel bearing housing.

CAUTION

The draw spindle **[C]** can be damaged when the wheel bearing is forced out as a consequence of an inclined fit of the wheel bearing tool!

Ensure that the support ring [H] or adapter ring [E] is positioned at a right angle to the wheel bearing on <u>at least two</u> opposing surfaces and securely seated on the wheel bearing housing!

When forcing out, the wheel bearing can collide with the support ring **[H]** or adapter ring **[E]** and the thrust ring **[J]** with the wheel bearing housing!

- ▼Align the support ring [H] or adapter ring [E] and thrust ring [J] exactly in the centre of the wheel bearing!
- 2. Fix the wheel bearing tool as shown to the wheel bearing housing, either *hydraulically* or, as an alternative, *mechanically*, and with all necessary components.





Operating instructions

(Translation of the operating instructions)



WARNING

When forcing out the wheel bearing, the draw spindle **[C]** can break, and the wheel bearing tool can fling around or fall down. This can cause **DEATH** or **SEVERE INJURIES**.

Vever exceed the max. load of 17 tonnes or that of the weakest component used!

- **Constantly** watch the pressure on the pressure gauge of the hydraulic pump [1] while forcing out.
- Before use, always secure the wheel bearing tool against flinging around or falling off the vehicle, for example by using the safety retaining harness which is available as an accessory - KL-0040-2590 or KL-0040-2592!
- While forcing out, **never** stand in the axial extension of the draw spindle [C].
- **4.** While operating the hydraulic pump [1], watch the pressure on the pressure gauge, and force the wheel bearing out of the wheel bearing housing.
- (1) The maximum stroke of the hydraulic cylinder [A] is 50mm! As soon as it is reached: Interrupt the forcing process, relieve the pressure at the hydraulic pump [1], re-tighten the clamping nut [D] until it is fully applied, and continue the forcing process.





Forcing in wheel bearings

🙆 7: According to the wheel bearing diameter, determine a matching centring ring [I] and matching thrust rings [J]. CAUTION The thrust collar [J] (housing side) can be pulled into the wheel bearing housing when forcing in the wheel bearing! Select a thrust ring [J] (housing side), whose outer diameter is larger than the outer diameter of the wheel bearing! The thrust ring [J] (wheel bearing side) can get stuck in the wheel bearing housing when forcing in the wheel bearing and damage the wheel bearing! Select a thrust ring [J] (wheel bearing side) whose outer diameter is <u>smaller</u> than the outer diameter of the wheel bearing and rests safely on the wheel bearing outer ring! 1. Depending on the wheel bearing outer diameter, determine a suitable centring ring [I] and one thrust collar [J] each for the wheel bearing and the housing side. Wheel bearing side Housing side Align towards the Wheel bearing offset side! Wheel bearing housing **108:** Assemble the wheel bearing tool to fit and mount it in the correct position to the wheel bearing housing.

CAUTION

The draw spindle **[C]** and the new wheel bearing can be damaged when the wheel bearing is forced in as a consequence of an inclined fit of the wheel bearing tool!

Ensure that the thrust ring [J] (housing side) is positioned at a right angle to the wheel bearing on <u>at least two</u> opposing surfaces, and securely seated on the wheel bearing housing!

The wheel bearing can tilt on the wheel bearing housing during forcing-in, and the thrust collar [J..] (wheel bearing side) can collide with the wheel bearing housing!

- ▼Align the new wheel bearing and thrust ring [J] (wheel bearing side) exactly centred to the wheel bearing housing!
- 2. Fix the wheel bearing tool as shown to the wheel bearing housing, either *hydraulically* or, as an alternative, *mechanically*, and with all necessary components and the new wheel bearing in the correct position and according to the manufacturer's instructions to the wheel bearing housing.
- (1) The centring ring [1] facilitates centring of the wheel bearing to the pulling device and thus ensures the straightest possible forcing-in of the wheel bearing without tilting.







CAUTION

The wheel bearing and any ABS sensor disc on it may be damaged when forcing in!

- **F**Be sure to observe the installation position of the wheel bearing <u>according to the manufacturer's specifications</u>.
- When forcing in the wheel bearing, always pay attention to any ABS sensor disc which may be attached to it!

WARNING

When forcing in the wheel bearing, the draw spindle **[C]** can break, and the wheel bearing tool can fling around or fall down. This can cause **DEATH** or **SEVERE INJURIES**.

- **Vever** exceed the max. load of 17 tonnes or that of the weakest component used!
- **Constantly** watch the pressure on the pressure gauge of the hydraulic pump [1] while forcing out.
- Before use, **always** secure the wheel bearing tool against flinging around or falling off the vehicle, for example by using the safety retaining harness which is available as an *accessory* **KL-0040-2590** or **KL-0040-2592**!
- While forcing out, **never** stand in the axial extension of the draw spindle **[C]**.
- **4.** While operating the the pump **[1]**, watch the pressure on the pressure gauge and force the wheel bearing out <u>according to the manufacturer's instructions</u> of the wheel bearing.
- (i) The maximum stroke of the hydraulic cylinder [A] is 50mm! As soon as it is reached: Interrupt the forcing process, relieve the pressure at the hydraulic pump [1], re-tighten the clamping nut [D] until it is fully applied, and continue the forcing process.







Forcing in the wheel hub

10: Depending on the wheel hub diameter and the wheel bearing diameter determine a matching thrust ring [J..] and a centring ring [I].

CAUTION

The centring ring [I] can be pulled into the wheel bearing when the wheel hub is forced in and damage the wheel bearing!

- Select a centring ring [I] whose outer diameter is <u>larger</u> than the inner diameter of the wheel bearing and rests safely on the wheel bearing inner ring!
- The wheel bearing and and the wheel hub can be damaged when forcing in the wheel hub!
- Select a thrust ring [J] whose outer diameter is larger than the *mid-centring diameter* on the wheel bearing!
- Place the thrust ring [J..] with its <u>offset side</u> on the wheel hub!
- 1. Depending on the wheel hub diameter, determine a matching thrust ring [J] and a matching centring ring [I] depending on the wheel bearing inner diameter.



11: Assemble the wheel bearing tool to fit and mount it in the correct position to the wheel bearing housing.

CAUTION

The draw spindle **[C]**, the wheel hub and the and the wheel bearing can be damaged when forcing in the wheel bearing, as a consequence of a tilted fit of the wheel bearing tool!

Make sure that the wheel hub is in a straight line to the wheel bearing, and that the thrust ring [J] is at a right angle and rests safely on the wheel hub!

The wheel hub can tilt on the wheel bearing when forced in!

- Align the new wheel bearing and thrust ring [J] <u>exactly centred</u> to the wheel bearing!
- 2. Fix the wheel bearing tool as shown to the wheel bearing housing, either *hydraulically* or, as an alternative, *mechanically*, and with all necessary components as well as the wheel hub.







3. Connect the hydraulic pump [1] to the hydraulic cylinder [A].

CAUTION

The wheel hub and any ABS sensor disc on it may be damaged when forcing in!

- **FBe sure** to observe the installation position of the wheel hub <u>according to the manufacturer's specifications</u>!
- When forcing in the wheel hub, always pay attention to any ABS sensor disc which may be attached to it!

When forcing in the wheel hub, the draw spindle **[C]** can break, and the wheel bearing tool can fling around or fall down. This can cause **DEATH** or **SEVERE INJURIES**.

- **Vever** exceed the max. load of 17 tonnes or that of the weakest component used!
- **Constantly** watch the pressure on the pressure gauge of the hydraulic pump [1] while forcing out.
- Before use, always secure the wheel bearing tool against flinging around or falling off the vehicle, for example by using the safety retaining harness which is available as an accessory - KL-0040-2590 or KL-0040-2592!
- While forcing out, **never** stand in the axial extension of the draw spindle **[C]**.
- **4.** While operating the hydraulic pump [1], watch the pressure on the pressure gauge and force in the wheel bearing in a controlled manner <u>according to the manufacturer's instructions</u>.
- (i) The maximum stroke of the hydraulic cylinder [A] is 50mm! As soon as it is reached: Interrupt the forcing process, relieve the pressure at the hydraulic pump [1], re-tighten the clamping nut [D] until it is fully applied, and continue the forcing process.





4.2 Forcing out and in by means of a stand press

This application example describes how to force out and force in a wheel bearing by means of a stand press.

Forcing out wheel bearings

🖸 13: Depending on the wheel bearing diameter, determine a suitable support ring [H] or adapter ring [E] and thrust ring [J].

CAUTION

The wheel bearing can get stuck in the support ring [H] or adapter ring [E] when forced out!

Select a support ring [H] or adapter ring [E] whose inner diameter is <u>larger</u> than the outer diameter of the wheel bearing! The thrust ring [J] can get stuck in the wheel bearing housing when the wheel bearing is forced out, and be damaged!

- Select a thrust ring [J] whose outer diameter is <u>smaller</u> than the outer diameter of the wheel bearing
- ▼ Align the thrust ring [J] with the <u>flat side</u> facing the wheel bearing!
- 1. Depending on the wheel bearing outer diameter, determine a suitable support ring [H] or adapter ring [E], and a thrust ring [J].



14: Assemble the wheel bearing tool to fit and mount it in the correct position to the wheel bearing housing.

When forcing out the wheel bearing, parts of the wheel bearing can slip off the wheel bearing tool and fling around due to an inclined fit. This can cause **DEATH** or **SEVERE INJURIES**.

Ensure that the support ring [H] or adapter ring [E] is positioned at a right angle to the wheel bearing on <u>at least two</u> opposing surfaces and securely seated on the wheel bearing housing!

When forcing out, the wheel bearing can collide with the support ring **[H]** or adapter ring **[E]** and the thrust ring **[J]** with the wheel bearing housing!

- Align the support ring [H] or adapter ring [E] and thrust ring [J] exactly in the <u>centre</u> of the wheel bearing!
- **2.** Insert the wheel bearing tool as shown with all necessary components and the wheel bearing housing on a suitable stand press.





©15: Force the wheel bearing out of the wheel bearing housing in a controlled manner. There is the risk that the wheel bearing tool can break and fling around when a machine-operated drive is used. This can cause **DEATH** or **SEVERE INJURIES**. N 0 0 **POnly** use the wheel bearing tool with a stationary press complying with the recognised rules of technology and the relevant provisions of the Machinery Directive 2006/42/EC! ▼ Use the wheel bearing tool **exclusively** with a <u>manually</u> operated hydraulic stand press with a manometer for \bigcirc 0 reliable pressure control!

When pressing out the wheel bearing, parts of the wheel bearing tool and the wheel bearing housing can slip off, break, and fling around or fall down. This can cause **DEATH** or **SEVERE INJURIES**.

- **Vever** stack several parts of the wheel bearing tool which can slip against each other!
- **Vever** exceed the the wheel bearing tool's **maximum load** of **17 tonnes**!
- **Constantly** watch the pressure on the pressure gauge at the stand press while forcing out.
- Read and understand the operating instructions for the stand press **before using** the wheel bearing tool and observe all safety and warning instructions for **safe use**!
- Always work with the stand press in accordance with the basic regulations on work safety and accident prevention!
- **3.** While operating the stand press, watch the pressure on the pressure gauge, and force the wheel bearing out of the wheel bearing housing.





Forcing in wheel bearings



When forcing in the wheel bearing, parts of the wheel bearing can slip off the wheel bearing tool and fling around due to an inclined fit. This can cause **DEATH** or **SEVERE INJURIES**.

Ensure that the thrust ring [J] (housing side) is positioned at a right angle to the wheel bearing on <u>at least two</u> opposing surfaces, and safely seated on the wheel bearing housing!

The wheel bearing can tilt on the wheel bearing housing during forcing-in, and the thrust collar **[J..]** (wheel bearing side) can collide with the wheel bearing housing!

- Align the new wheel bearing and thrust ring [J] (wheel bearing side) exactly centred to the wheel bearing housing!
- **2.** Fix the wheel bearing tool as shown with all necessary components, the new wheel bearing, and the wheel bearing housing <u>in the correct position as specified by the manufacturer</u> to a suitable stand press.
- (i) The centring ring [I] facilitates centring of the wheel bearing to the stand press and thus ensures the straightest possible forcing-in of the wheel bearing without tilting.







CAUTION

The wheel bearing and any ABS sensor disc on it may be damaged when forcing in!

- **Be sure** to observe the installation position of the wheel bearing <u>according to the manufacturer's specifications</u>.
- When forcing in the wheel bearing, always pay attention to any ABS sensor disc which may be attached to it!

When forcing in the wheel bearing, parts of the wheel bearing tool, the wheel bearing, and the wheel bearing housing can slip off, break, and fling around or fall down. This can cause **DEATH** or **SEVERE INJURIES**.

- **Vever** stack several parts of the wheel bearing tool which can slip against each other!
- **Never** exceed the the wheel bearing tool's **maximum load** of **17 tonnes**!
- Constantly watch the pressure on the pressure gauge at the stand press while forcing out.
- Read and understand the operating instructions for the stand press before using the wheel bearing tool and observe all safety and warning instructions for safe use!
- Always work with the stand press in accordance with the basic regulations on work safety and accident prevention!
- **3.** Operate the stand press, watch the pressure on the pressure gauge, and force in the wheel bearing into the wheel bearing housing in a controlled manner and <u>according to the manufacturer's instructions</u>.





Forcing in the wheel hub

19: Depending on the wheel hub diameter and the wheel bearing diameter determine a matching thrust ring [J..] and a centring ring [I].

CAUTION

EN

The centring ring [I] can be pulled into the wheel bearing when the wheel hub is forced in and damage the wheel bearing!

- Select a centring ring [I] whose outer diameter is <u>larger</u> than the inner diameter of the wheel bearing and rests safely on the wheel bearing inner ring!
- The wheel bearing and and the wheel hub can be damaged when forcing in the wheel hub!
- Select a thrust ring [J] whose outer diameter is larger than the *mid-centring diameter* on the wheel bearing!
- Place the thrust ring [J..] with its <u>offset side</u> on the wheel hub!
- 1. Depending on the wheel hub diameter, determine a matching thrust ring [J] and a matching centring ring [I] depending on the wheel bearing inner diameter.



© 20: Assemble the wheel bearing tool to fit and mount it in the correct position to the wheel bearing housing.

When forcing in the wheel hub, parts of the wheel hub can slip off the wheel bearing tool and fling around as a consequence of an inclined fit. This can cause **DEATH** or **SEVERE INJURIES**.

Make sure that the wheel hub is in a straight line to the wheel bearing, and that the thrust ring [J] is at a right angle and rests safely on the wheel hub!

The wheel hub can tilt on the wheel bearing when forced in!

- Align the new wheel bearing and thrust ring [J] <u>exactly centred</u> to the wheel bearing!
- 2. Fix the wheel bearing tool as shown with all necessary components, the wheel hub, and the wheel bearing housing in the correct position as specified by the manufacturer into a suitable stand press.





©21: Force in the wheel hub into the wheel bearing in a controlled manner <u>according to manufacturer's specifications</u>.





There is the risk that the wheel bearing tool, the wheel hub, and the wheel bearing housing can slip off, break, and fling around when a machine-operated drive is used. This can cause **DEATH** or **SEVERE INJURIES**.

- ✓ Only use the wheel bearing tool with a stationary press complying with the recognised rules of technology and the relevant provisions of the *Machinery Directive 2006/42/EC*!
- ✓ Use the wheel bearing tool exclusively with a manually operated hydraulic stand press with a manometer for reliable pressure control!

CAUTION

The wheel hub and any ABS sensor disc on it may be damaged when forcing in!

- **FBe sure** to observe the installation position of the wheel hub <u>according to the manufacturer's specifications</u>!
- When forcing in the wheel hub, always pay attention to any ABS sensor disc which may be attached to it!

When forcing in the wheel hub, parts of the wheel bearing tool, the wheel hub, and the wheel bearing housing can slip off, break, and fling around or fall down. This can cause **DEATH** or **SEVERE INJURIES**.

- **Vever** stack several parts of the wheel bearing tool which can slip against each other!
- **Vever** exceed the the wheel bearing tool's **maximum load** of **17 tonnes**!
- Constantly watch the pressure on the pressure gauge at the stand press while forcing out.
- Read and understand the operating instructions for the stand press before using the wheel bearing tool and observe all safety and warning instructions for safe use!
- Always work with the stand press in accordance with the basic regulations on work safety and accident prevention!
- **3.** Operate the stand press, watch the pressure on the pressure gauge and force the bearing hub in <u>according to the manufacturer's instructions</u>.







5. TOOL KITS AND ACCESSORIES

(i) Further accessories and drive parts can also be found in the GEDORE Automotive catalogue!

KL-0039-0110 K - Wheel bearing tool kit, mechanical

Universal fit for VW-Audi, BMW, Ford, Seat, Škoda, Opel/ Vauxhall, etc.

Simple <u>mechanical</u> tool kit for forcing out and in standard wheel bearings as well as forcing in wheel hubs directly on the vehicle.

For severely stuck or corroded wheel bearings, hydraulic drive parts can also be used as an <u>option:</u>

KL-0040-2500 - Hydraulic cylinder, 17t, **KL-0215-35 M25** - Hydraulic pump, **KL-0039-802** - Hydraulic drive

(i) Scope of supply/single part overview see chapter 2.2

KL-0039-8131 E - Wheel bearing tool kit 1, with foam insert

Universal fit for VW-Audi, BMW, Ford, Seat, Škoda, Opel/ Vauxhall, etc.

Simple wheel bearing basic tool kit <u>without drive parts</u> for forcing out and in standard wheel bearings as well as forcing in wheel hubs directly on the vehicle.

Fully extendible to the large wheel bearing tool kit with the **wheel bearing tool kit 2.**

Required drive parts (mechanical): KL-0039-801 C - Mechanical drive

Required drive parts (hydraulic): KL-0040-2500 - Hydraulic cylinder, 17t

KL-0215-35 M25 - Hydraulic pump 17t **KL-0039-802** - Hydraulic drive

(i) Scope of supply/single part overview see chapter 2.2

KL-0039-814 E - Wheel bearing tool kit 2 with foam insert

Complete supplementary kit for **wheel bearing tool kit 1**, with many additional parts for forcing out and forcing in wheel bearings as well as forcing in wheel hubs.

(i) Scope of supply/single part overview see chapter 2.2



10 25: Thrust/centring ring set, 16 pieces - **KL-0039-0101**

26: Set of support rings - KL-0039-807 B



KL-0039-0101- Thrust/centring ring set, 16 pieces

Simple thrust/centring ring set <u>without drive parts</u>, for forcing wheel bearings out and in.

(i) Scope of supply/single part overview see chapter 2.2

KL-0039-807 B - Set of support rings

Special support ring set <u>without drive parts</u>, for supporting the wheel bearing tool on wheel bearing housings with very small or uneven contact surfaces, e.g. when forcing wheel bearings out or in.

The special recesses on the support rings allow unevenness, for example by an ABS sensor, to be easily bridged.

(i) Scope of supply/single part overview see chapter 2.2

27: Set of housings - KL-0039-140



KL-0039-140 - Set of housings

Simple housing set <u>without drive drive parts</u>, for supporting the wheel bearing tool on conventional wheel bearing housings, for example when pulling out wheel bearings.

(i) Scope of supply/single part overview see chapter 2.2





6. CARE AND STORAGE

ATTENTION

Improper care and storage can damage the wheel bearing tool. **Never** immerse the wheel bearing tool 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 wheel bearing tool and the operating instructions at a dry and clean place.

7. REPAIR

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

8. ENVIRONMENTALLY COMPLIANT DISPOSAL

Dispose of the the wheel bearing tool 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.





GEDORE-Werkzeugfabrik GmbH & Co. KG

Remscheider Straße 149 42899 - Remscheid Postfach 120361 47873 Remscheid GERMANY

Vertrieb DEUTSCHLAND

↓ +49 (0) 2191 / 596-0
 ⇒ +49 (0) 2191 / 596-230
 ∞ info@gedore.com
 ⇒ www.gedore.com

Sales INTERNATIONAL

↓ +49 (0) 2191 / 596-910

 ↓ +49 (0) 2191 / 596-911

 ⋈ info@gedore.com

 ŵ www.gedore.com

GEDORE TOOLS, INC.

Only for USA, Canada & Mexico Sólo para EE.UU., Canadá y México Seulement pour les USA, le Canada et le Mexique 7187 Bryhawke Circle, Suite 700, North Charleston, SC 29418, USA **↓** +1-843 / 225 50 15
 +1-843 / 225 50 20
 ∞ info@gedoretools.com
 www.gedoretools.com

Worldwide GEDORE service centers and offices are listed on the Internet at: www.gedore.com

GEDORE Automotive GmbH

Breslauer Straße 41 78166 - Donaueschingen Postfach 1329 78154 Donaueschingen GERMANY

Vertrieb DEUTSCHLAND

**** +49 (0) 771 / 8 32 23-0

 ⇒ +49 (0) 771 / 8 32 23-90

 ∞ info.gam@gedore.com

 @ gedore-automotive.com







www.gedore-automotive.com