

R15003002

Pneumatic Injector Extractor



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Imprint

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1. READ AND UNDERSTAND FOR SAFETY



These operating instructions are part of the **Pneumatic Injector Extractor** and are intended to familiarise you with this special tool. Read and understand these operating instructions before using the special tool and follow all instructions, regulations and notes for safe use. Keep the operating instructions in a safe place so that you or subsequent users can access them at any time. Be aware that misuse of the special tool can, in the worst case, lead to **DEATH** or **SERIOUS INJURY!** Stop work immediately if you are unsure how to use the special tool and contact **GEDORE-Automotive** if necessary.

1.1 Target group

These operating instructions are intended **exclusively** for trained specialists with comprehensive expertise in the repair of motor vehicles.

- ▶ The special tool **may only** be used in specialist automotive workshops by trained specialists who have the necessary expertise in handling special automotive tools and are familiar with the applicable regulations on occupational safety, accident prevention and environmental protection.
- ▶ The special tool **must never** be used by unauthorised, inexperienced, underage or physically, sensory or mentally impaired persons, **or** by persons who are tired or under the influence of medication, alcohol, drugs or similar intoxicating substances.

1.2 Obligations of the owner

According to the Ordinance on Industrial Safety and *Health (BetrSichV)*, employers are obliged to provide their employees with safe work equipment! The special tool from GEDORE-Automotive complies with the recognised rules of technology and relevant safety regulations at the time it is placed on the market.

- ▶ **The owner** of the special tool **must ensure that only** trained specialists in specialist vehicle workshops use the special tool!
- ▶ **The owner** of the special tool **must ensure** that the associated instructions are available to the user and that he has read and understood them in full **before** using the special tool!
- ▶ **The owner** of the special tool **must ensure** that the user has the necessary expertise in handling special automotive tools, is familiar with the applicable regulations on occupational safety, accident prevention and environmental protection and is provided with personal protective equipment!

1.3 Intended use

The pneumatic injector extractor ...

- ... **may only** be used to pull out stuck injectors on motor vehicle diesel engines!
 - ... **may only** be used on vehicles as specified in **chapter 2** - Product description!
 - ... **may only** be operated **up to a maximum operating pressure of 8 bar (115 psi)**!
 - ... **may only** be used with clean and pollutant-free compressed air!
 - ... **may only** be operated and controlled via the original hose with stopcock !
 - ... **may only** be used with **GEDORE Automotive** original spare parts and accessories!
 - ... **may only** be used in the manner described in these operating instructions!
- ⚠ Any other use may result in **DEATH** or **SERIOUS INJURIES** !

1.4 Reasonably foreseeable misuse

The pneumatic injector extractor ...

- ... **must never** be used to extract other parts or in any other way than intended!
 - ... **must never** be connected and used directly to a compressed air supply without using the original hose with stopcock!
 - ... **must never** be used for series production with many repetitive work processes!
 - ... **must never** be used with a bridged, modified or removed safety device!
 - ... **must never** be modified, converted or misused without authorisation!
- ⚠ **Always** use the special tool as intended. Any other use may result in **DEATH** or **SERIOUS INJURY** !

1.5 Personal protective equipment

For your own safety, wear personal protective equipment when using the special tool! The special tool can cause mechanical hazards such as crushing, cuts and impact injuries.



Wear **HEARING PROTECTION DEVICES** (e.g. DIN EN 352, OSHA 29 CFR 1910.95, ANSI S3 .19) when using the special tool to protect against noise!

▶When using the special tool, noise can cause **SERIOUS INJURY** to your **hearing** !



Wear **EYE PROTECTION EQUIPMENT** (e.g. DIN EN 166, OSHA 29 CFR 1910.133, ANSI Z87) when using the special tool to protect against flying parts or particles!

▶When using the special tool, flying parts or particles can cause **SERIOUS INJURY** to your **eyes** !



Wear **PROTECTIVE GLOVES** (e.g. DIN EN 388, OSHA 29 CFR 1910.138, ANSI 105) when using the special tool to protect against sharp edges and crushing between parts!

▶When using the special tool, sharp edges and crushing between parts can cause **SERIOUS INJURY** to your **hands** !



Wear **SAFETY SHOES** (e.g. DIN EN ISO 20345, OSHA 29 CFR 1910.136, ANSI Z41) when using the special tool to protect against falling parts!

▶When using the special tool, falling parts can cause **SERIOUS INJURY** to your **feet and toes** !

1.6 Labelling of the warnings

Warning notices indicate **potential dangers** which, if ignored, can lead to **DEATH** or **SERIOUS INJURY** in the worst case and must therefore be observed at all times. In these operating instructions, the warnings are classified as follows for better differentiation and recognisability:

Warning signs	Meaning
	Indicates a potentially hazardous situation which, if not avoided, could result in DEATH or SERIOUS INJURY !
	Indicates a hazardous situation which, if not avoided, may result in MEDIUM or LOW INJURY !
	Indicates a situation which, if not avoided, can lead to damage to the tool or objects in its vicinity!
	Reference to important information and useful tips.

1.7 Working environment

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

- ▶The workplace **must** be clean and tidy.
- ▶The workstation **must** be sufficiently large and well lit.
- ▶The workplace **must** have a stable and non-slip surface.
- ▶The workplace **must** be secured against access by unauthorised persons.
- ▶The workplace **must** have a room temperature between -10 °C and +40 °C.

1.8 Emissions

Pneumatic oil can escape when using the special tool and pose a risk to the environment.

- ▶Remove any leaking pneumatic oil **immediately**, e.g. using a cleaning cloth.
- ▶In the event of skin contact, clean the affected area **immediately** with degreasing soap and water.
- ▶**Always** dispose of harmful substances such as pneumatic oil **in an environmentally friendly manner**.
- ▶Safety data sheets *in accordance with Regulation (EC) No. 1907/2006* on pneumatic oil can be found on the manufacturer's website (**World Wide Web**) or contact **GEDORE Automotive** if necessary.

1.9 Basic safety, warning and handling instructions

WARNING **CAUTION** **ATTENTION**

Disregarding this can lead to life-threatening situations, injuries and damage!

Always observe the following safety, warning and handling instructions when using the special tool and strictly adhere to all measures to avoid life-threatening situations, injuries and property damage due to hazards, misuse, abuse or improper handling.

- ▶ **Use only by specialist personnel:** The special tool may only be used in specialist vehicle workshops by trained specialists who have the necessary expertise and are familiar with the applicable regulations.
- ▶ **Do not use when tired or intoxicated:** The special tool must never be used by unauthorised or impaired persons or by persons who are tired or under the influence of intoxicating substances.
- ▶ **Read the instructions:** The special tool must be used in accordance with these operating instructions and any instructions for accessories, and all instructions, regulations and notes contained therein must be strictly observed.
- ▶ **Comply with the applicable safety regulations:** The special tool must always be used in accordance with the applicable regulations on occupational safety, accident prevention and environmental protection.
- ▶ **Wear personal protective equipment:** The special tool must always be used with the required protective equipment, such as hearing protection, safety goggles, protective gloves and safety shoes.
- ▶ **Only use original parts:** The special tool may only be used with original spare parts and accessories from GEDORE-Automotive.
- ▶ **Check before use:** The special tool must be checked for damage, loose parts, unauthorised modifications and suitability for the intended application before use.
- ▶ **Regular safety checks:** For safety reasons, the special tool should be subjected to a safety check every 24 months by authorised GEDORE-Automotive specialists.
- ▶ **Do not use if damaged or defective:** The special tool must not be used in the event of damage or other defects and must be checked and repaired before the next use.
- ▶ **Repairs or servicing by specialised personnel only:** For safety reasons, the special tool may only be repaired or serviced by specially trained GEDORE-Automotive personnel.
- ▶ **Interrupt work immediately if handling is unsafe:** The special tool must not be used if it is unsafe to handle. If necessary, consult the instructions or obtain support from GEDORE-Automotive.
- ▶ **Clean and lubricate regularly:** The special tool, especially the moving parts, must be regularly checked for dirt, cleaned if necessary and treated with pneumatic oil.
- ▶ **Comply with vehicle-specific application procedures:** The special tool must always be used in accordance with the vehicle manufacturer's instructions and specifications for vehicle-specific application sequences.
- ▶ **Secure the immediate working area:** The special tool may only be used if there are no unauthorised persons in the immediate working area.
- ▶ **Ensure stability:** The special tool must generally be checked for a secure hold. In particular, the base body must be secured against falling, e.g. by holding the hose.
- ▶ **Never exceed the maximum operating pressure:** The special tool must never be overloaded or operated at a higher operating pressure than the maximum permissible.
- ▶ **Never use for series production:** The special tool must never be used for series production, especially not for processes that are repeated quickly and carried out at short intervals.
- ▶ **Keep a safe distance from moving parts:** The special tool may only be used with close-fitting work clothing and hands or fingers must be kept away from the vibrating base body.
- ▶ **Never stand in the axial extension:** The special tool may only be put into operation when nobody is in the axial extension.
- ▶ **Never actuate when unloaded:** The special tool must never be operated if it is not securely connected to a stuck injector.
- ▶ **Never inhale exhaust air:** The special tool must never be used in such a way that the exhaust air is inhaled, as it may contain oil, water, metal particles or other contaminants.
- ▶ **Never hold the impact weight during operation:** The special tool may only be held via the hose during operation and never directly on the main body.
- ▶ **Never leave it unattended during operation:** The special tool must never be left unattended on the vehicle or component, especially when it is in operation or operational.
- ▶ **Avoid damaging forces:** The special tool must never be subjected to impacts, clamping or other harmful forces.
- ▶ **Cleaning after use:** The special tool may only be cleaned after use with a clean, dry cleaning cloth. Immersion in water, solvents or other cleaning fluids is strictly prohibited.
- ▶ **Environmentally friendly disposal:** The special tool and packaging material must always be disposed of in an environmentally friendly manner in compliance with legal requirements. If in doubt, contact the local authorities.
- ▶ **Exclusion of liability, warranty and guarantee:** The special tool must always be used in compliance with the safety regulations. In the event of disregard or misuse, the user assumes sole responsibility and GEDORE-Automotive excludes any liability, warranty or guarantee claims.
- ▶ **Disclaimer regarding documentation:** The special tool and its use are carefully described in these instructions, but technical changes, errors, incompleteness, inaccuracies, mistakes and damage or consequences due to incorrect use or misuse can never be ruled out.

1.10 Maintenance

Carry out maintenance on the special tool regularly and only when it is depressurised! Insufficient or improper maintenance can cause damage to the special tool and result in life-threatening situations, serious injuries and property damage during use.

Before each use:

- ▶ **before each use**, carefully check the special tool for damage, loose parts or unauthorised modifications and, in particular, bolt connections for a tight fit.
- ▶ **before each use**, check the moving parts of the special tool for free movement and contamination. If necessary, clean and then lubricate them with pneumatic oil only.

Recommended every 24 months:

- ▶ Have the special tool professionally checked for safety **every 24 months** by authorised GEDORE-Automotive specialists.

1.11 Troubleshooting

Only carry out troubleshooting on the special tool when it is depressurised!

Problem: The injector extractor shows no reaction when the stopcock is actuated, even though it is correctly connected to compressed air.

Cause: The piston inside the injector extractor is stuck, e.g. due to a lack of oil, rust or contamination.

Remedy: Pour approx. 1ml of pneumatic oil into the air connection of the injector extractor. Then connect it to compressed air and repeatedly press the stopcock briefly and intermittently. If the injector extractor does not release, it must be returned to **GEDORE Automotive** for repair.

1.12 Care / storage

ATTENTION

Improper care and storage can lead to damage to the special tool.

- ▶ **Never** immerse the special tool in water, solvents or other cleaning fluids.
- ▶ **Only** clean the special tool with a dry and clean cleaning cloth.
- ▶ **Only** protect the special tool with special acid-free oils or greases for tool care.
- ▶ **Always** store the special tool in a dry and clean place together with the associated operating instructions.

1.13 Maintenance

WARNING

Improper repair of the special tool can lead to **DEATH** or **SERIOUS INJURY**.

- ▶ If damage, loose parts or unauthorised modifications are found on the special tool, it must no longer be used for safety reasons!
 - ▶ Repairs may only be carried out by specially trained personnel at **GEDORE Automotive**!
 - ▶ **Only** use original spare parts and accessories from **GEDORE Automotive** for the special tool!
- If necessary, please contact us at **GEDORE Automotive** for a professional inspection and repair of the special tool.

1.14 Environmentally friendly disposal

Dispose of the special tool and packaging material in an environmentally friendly manner in accordance with the legal requirements. If necessary, ask your local authority about environmentally friendly disposal options.

2. PRODUCT DESCRIPTION

2.1 R15003002 - Pneumatic injector extractor

Universally suitable for diesel injectors from Bosch, Delphi, Denso, Siemens-VDO, Continental, Lucas, Magneti Marelli and other similar manufacturers. Installed in cars, commercial vehicles, vans, buses, construction machinery, agricultural machinery and municipal vehicles.

- Pneumatic injector extractor for easy removal of stuck diesel injectors.
- High-frequency impact mechanism effectively deals with coking and rust deposits.
- Compact design, ideal for working in confined spaces.
- More efficient and energy-saving than conventional manual slide hammers.
- Integrated valve for targeted regulation of the air supply.
- Including extensions for use with extremely deep-seated injectors.

2.2 Scope of delivery/single part overview

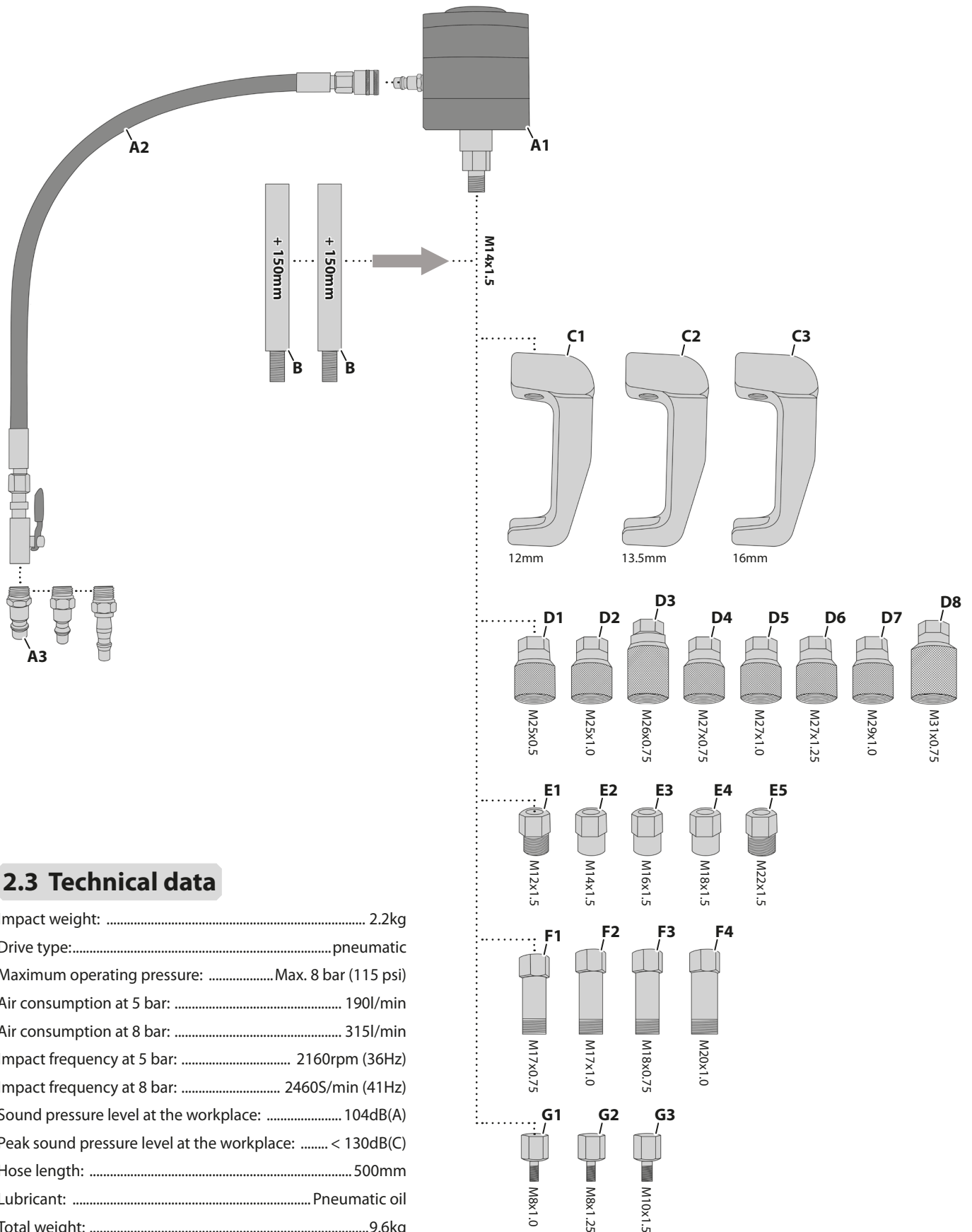
① This table shows all the components for the injector extractor.

Before using it, check that all the parts included in the scope of delivery are present and, if necessary, assemble the additional drive parts required, either mechanical or hydraulic, accordingly.

Tool set...

R15003002

Individual parts...	Pos.	
Pneumatic impact weight... A		
Impact weight 2.2 kg	A1	●
Hose 500mm with stopcock	A2	●
Plug-in nipple optionally in DE, GB, US standard	A3	●
Extensions... B		
Extension 150 mm	B	●2x
Draw hook... C		
Draw hook with opening width 12mm	C1	●
Draw hook with opening width 13.5mm	C2	●
Draw hook with opening width 16mm	C3	●
Pull adapter... D		
Pull adapter with internal thread M25x0.5mm	D1	●
Pull adapter with internal thread M25x1.0mm	D2	●
Pull adapter with internal thread M26x0.75mm	D3	●
Pull adapter with internal thread M27x0.75mm	D4	●
Pull adapter with internal thread M27x1.0mm	D5	●
Pull adapter with internal thread M27x1.25mm	D6	●
Pull adapter with internal thread M29x1.0mm	D7	●
Pull adapter with internal thread M31x0.75mm	D8	●
Pull adapter... E		
Pull adapter with external thread M12x1.5mm	E1	●
Pull adapter with internal thread M14x1.5mm	E2	●
Pull adapter with internal thread M16x1.5mm	E3	●
Pull adapter with internal thread M18x1.5mm	E4	●
Pull adapter with external thread M22x1.5mm	E5	●
Pull adapter... F		
Pull adapter with external thread M17x0.75mm	F1	●
Pull adapter with external thread M17x1.0mm	F2	●
Pull adapter with external thread M18x0.75mm	F3	●
Pull adapter with external thread M20x1.0mm	F4	●
Pull adapter... G		
Pull adapter with external thread M8x1.0mm	G1	●
Pull adapter with external thread M8x1.25mm	G2	●
Pull adapter with external thread M10x1.5mm	G3	●



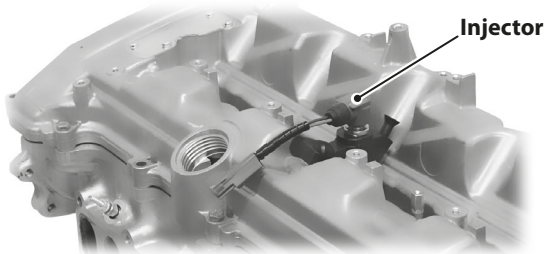
2.3 Technical data

Impact weight: 2.2kg
 Drive type:.....pneumatic
 Maximum operating pressure:Max. 8 bar (115 psi)
 Air consumption at 5 bar: 190l/min
 Air consumption at 8 bar: 315l/min
 Impact frequency at 5 bar: 2160rpm (36Hz)
 Impact frequency at 8 bar: 2460S/min (41Hz)
 Sound pressure level at the workplace: 104dB(A)
 Peak sound pressure level at the workplace: < 130dB(C)
 Hose length: 500mm
 Lubricant: Pneumatic oil
 Total weight:9.6kg

3. PREPARATION

3.1 Prepare injector

📷1: Prepare injector according to manufacturer's instructions...



1. Prepare all parts required for removing the injector according to the manufacturer's instructions.

For example:

- Remove the fuel line from the injector...
- Disconnect the cable connector...
- Loosen the attachment on the cylinder head...
- If necessary, open and disassemble the injector...

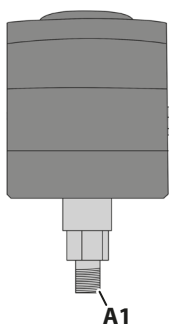
3.2 Prepare injector extractor

📷2: Prepare and lubricate the pneumatic impact weight ...

ATTENTION

The impact weight [A..] can be damaged by moisture and lack of oil.

- ▶ Only operate the injector extractor with clean and dry compressed air and lubricate it regularly with **pneumatic oil** **before** and **after** use!



1. Attach the plug nipple [A3] and hose with stopcock [A2] firmly and securely to the impact weight [A1] as shown.



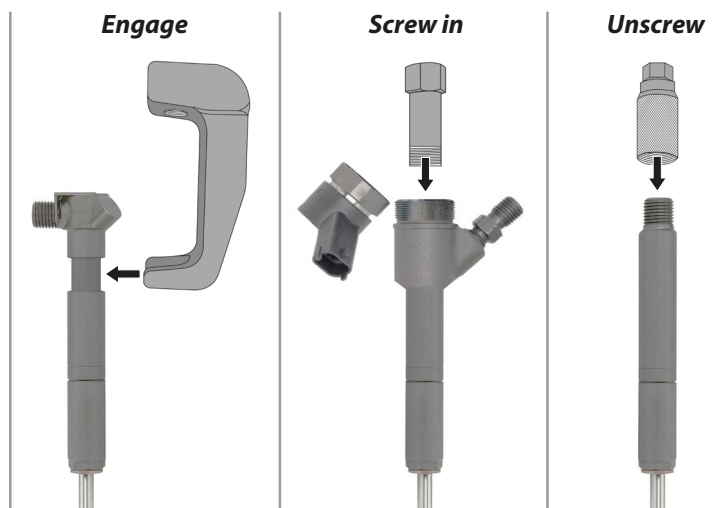
2. For lubrication, supply the pneumatic impact weight [A..] with approx. **1ml of pneumatic oil** via the compressed air connection, then connect to a compressed air supply and briefly open the stopcock to allow the pneumatic oil to enter the interior.

📷3: Select a suitable adapter depending on the injector...

Typical examples of use depending on the injector...

1. Depending on the injector, select a suitable draw hook [C..] or pull adapter [D, E, F, G..].

- ⓘ Some injectors have to be dismantled to enable a pull adapter to be screwed in.



4. APPLICATION EXAMPLE

① This application example shows the extraction of a stuck injector in conjunction with the pneumatic injector extractor.

📹 4: Assemble the pneumatic injector extractor and pull out the injector in a controlled manner...

ATTENTION

The injector extractor can be damaged.

▶ **Regularly** add pneumatic oil to the extractor and **only** operate with clean compressed air.

CAUTION

The injector extractor can fall down, spin around and cause **INJURY!**

▶ **Only** operate the injector extractor in a controlled manner via the hose with shut-off valve [A2]!

▶ **Never** exceed the **maximum permissible operating pressure** of the injector extractor of **8 bar (115 psi)!**

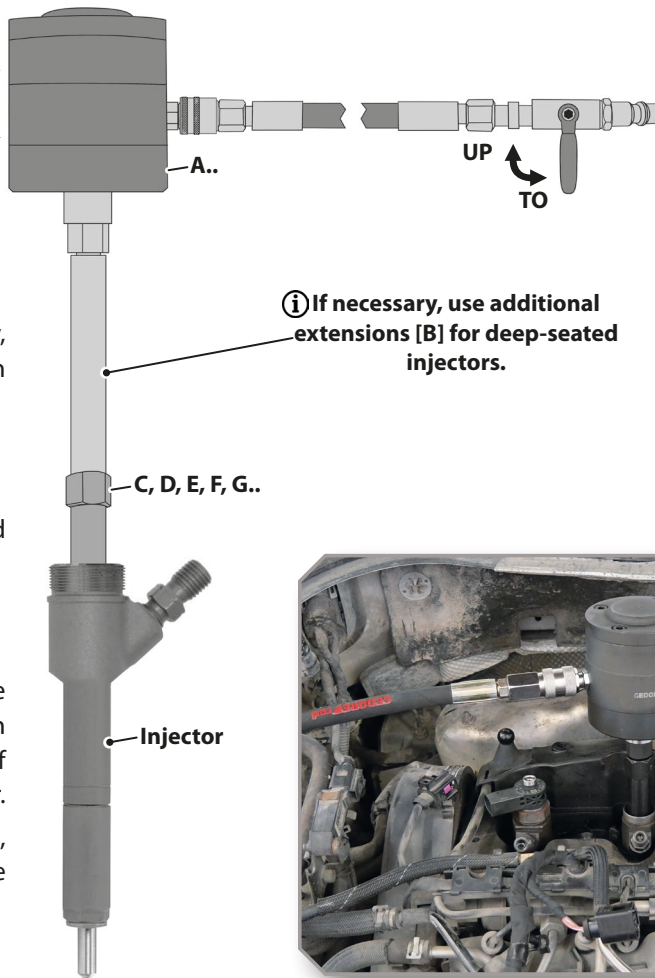
▶ Wear personal protective equipment such as hearing protection, safety goggles and safety shoes!

▶ **Never** hold the main body of the injector extractor with your hands during operation!

▶ **Always** secure the injector extractor against falling or being flung around, e.g. by holding the hose with the stopcock [A2]!

▶ **Never** leave the injector extractor unattended, especially during operation!

▶ **Never** inhale the exhaust air from the injector extractor!



1. Mount the injector extractor firmly, securely and in the correct position on the injector.

① If necessary, use additional extensions [B] for deep-seated injectors.

2. Then connect it to a clean compressed air supply.

3. Now hold the injector extractor over the hose with stopcock [A2], slowly open the stopcock and pull the injector out of the cylinder head in a controlled manner. As soon as the injector comes loose, reduce the air supply and close it at the latest when the injector is loose.



5. EU DECLARATION OF CONFORMITY

EU DECLARATION OF CONFORMITY

Manufacturer's Name and Address

GEDORE Automotive GmbH
Breslauer Straße 41
78166 Donaueschingen, GERMANY



Product Description

Article Number: R15003002 // Article Name: Pneumatic Injector Extractor

We hereby declare that,

the above-mentioned product complies with the relevant provisions of the following EU Directives:

- **MD – Machinery Directive 2006/42/EC**

Safety of machinery – basic health and safety requirements

This declaration becomes invalid if the product is altered or modified without our consent.

Applicable Harmonized EN Standards

Machinery Directive 2006/42/EC

EN ISO 12100:2010 – Safety of machinery – General principles for design – Risk assessment and risk reduction

EN ISO 4414:2010 – Pneumatic fluid power – General rules and safety requirements for systems and their components

EN ISO 11148-13:2017 – Hand-held non-electric power tools – Safety requirements – Part 13: Fastener driving tools

Other Applicable National Standards and Specifications

DIN EN IEC/IEEE 82079-1:2021-09 – Preparation of Instructions for Use of Products – Part 1: Principles and Requirements

Authorized Person for the Compilation and Provision of All Technical Documentation

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Donaueschingen, 25. August 2025

Patrick Mau, Managing Director of GEDORE Automotive GmbH