

R15003004

Locking Tool Set with Angle Gauge
VW-Audi 1.5 (TSI, TFSI)



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1. FOR SAFETY, READ AND UNDERSTAND

1.1 Labelling of warning notices

Warnings indicate **potential hazards** which, if ignored, could result in **INJURY** in the worst case scenario and must therefore be observed. In these operating instructions, warnings are classified as follows for better differentiation and recognisability:

Warning sign	Significance
 CAUTION	Indicates a hazardous situation which, if not avoided, could result in MODERATE or MINOR INJURY!
 ATTENTION	Reference to a situation which, if not avoided, may lead to damage to the tool or objects in its vicinity!
	Reference to important information and useful tips.

1.2 Basic safety, warning and handling instructions

CAUTION **ATTENTION**

Failure to comply may result in injury and damage!

When using the special tool, always observe the following safety, warning and handling instructions and strictly adhere to all measures to avoid injury and damage to property due to hazards, misuse, abuse or improper handling.

- ▶ **Use only by qualified personnel:** The special tool may only be used in automotive 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 restricted 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 all instructions, regulations and notes contained therein must be strictly observed.
- ▶ **Follow the vehicle manufacturer's instructions and specifications:** When performing vehicle-specific procedures, the special tool must always be used in accordance with the vehicle manufacturer's instructions and specifications.
- ▶ **Comply with applicable safety regulations:** The special tool must always be used in accordance with the applicable regulations on occupational safety, accident prevention and environmental protection.
- ▶ **Only use original parts:** The special tool may only be used with original spare parts and accessories from GEDORE Automotive.
- ▶ **Check before use:** Before use, the special tool must be checked for damage, loose parts, unauthorised modifications, correct calibration and suitability for the intended application.
- ▶ **Do not use if damaged or defective:** The special tool must not be used if it is damaged or otherwise defective and must be checked and repaired before the next use.
- ▶ **Repairs or maintenance only by qualified personnel:** For safety reasons, the special tool may only be repaired or maintained by specially trained personnel from GEDORE Automotive.
- ▶ **Stop work immediately if handling is unsafe:** The special tool must not be used if handling is unsafe. If necessary, refer to the instructions or seek assistance from GEDORE Automotive.
- ▶ **Environmentally sound disposal:** Special tools and packaging materials must always be disposed of in an environmentally sound manner in accordance with legal requirements. If you are unsure, please contact your local authorities.
- ▶ **Disclaimer of liability, warranty and guarantee:** The special tool must always be used in accordance with the safety regulations. In the event of non-compliance 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 described in detail in these instructions; however, technical changes, errors, omissions, inaccuracies, mistakes, and damage or consequences resulting from incorrect use or misuse can never be ruled out.

1.3 Troubleshooting

Problem: The digital angle gauge cannot be switched on and does not function at all.

Cause: The built-in battery is too weak, discharged or incorrectly inserted.

Remedy: Insert a new 1.5 V micro battery (type AAA) into the battery compartment, ensuring correct polarity (+/-).

Problem: The value displayed on the digital angle gauge differs from the actual camshaft angle.

Cause: The digital angle gauge has not been calibrated correctly.

Solution: Always calibrate the angle gauge correctly to the reference angle before use, following the instructions.

1.4 Care / Storage

ATTENTION

Improper care and storage can cause damage to special tools.

▶ **Never** immerse the special tool in water, solvents or other cleaning fluids.

▶ Clean the special tool **exclusively** with a dry and clean cleaning cloth.

▶ **Only** protect the special tool with special tool care products.

▶ **Be sure to** store the special tool in a dry and clean place together with the corresponding operating instructions.

1.5 Information obligation in accordance with the German Electrical and Electronic Equipment Act (*ElektroG*)

Electrical and electronic equipment contains harmful substances and valuable resources. Therefore, do not dispose of defective equipment in household waste, but take it to a separate recycling facility. This is indicated by the crossed-out wheellie bin symbol on the equipment. If your old appliance cannot be reused, you are welcome to send it to us at the following address:

GEDORE Automotive GmbH

Breslauer Straße 41

78166 Donaueschingen

We then take care of the complete return and professional disposal via our certified waste disposal companies.

1.6 Information obligation in accordance with the Battery Act (*BattG*)

Please note that our electrical and electronic devices contain batteries. Batteries must not be disposed of with household waste. This is indicated by the crossed-out wheellie bin symbol on the device. As an end user, you are legally obliged to return them. Batteries may contain harmful substances that can damage the environment or health if not stored or disposed of properly. Used batteries can be **returned** to designated collection points, e.g. municipal collection points, retailers or to us, **GEDORE Automotive GmbH**. Used batteries may only be returned to collection points in a discharged state and with the battery terminals protected against short circuits!

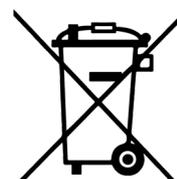
The symbols shown on the batteries have the following meanings:

Crossed-out wheellie bin = The battery must not be disposed of with household waste.

Pb = Battery contains more than 0.004% lead by mass.

Cd = Battery contains more than 0.002% cadmium by mass.

Hg = Battery contains more than 0.0005 per cent mercury by mass.



2. PRODUCT DESCRIPTION

2.1 R15003004 - Locking tool set with angle gauge

Suitable for VW, Audi, Seat, Cupra and Škoda with 1.5 (TSI, TFSI) 4-cylinder petrol engines. Especially for the EA211 EVO series with ACT (Active Cylinder Technology).

Installed in, for example: VW Arteon (3H), Caddy V (SB), Golf VII (BQ, BV), Golf Sportsvan (AUV), Golf VIII (CD, CG), Passat (3G), Passat (CB), Polo (AW), Taigo (CS), T-Cross (C11), T-Roc (A11, AC7), Tiguan (AD, BW, AX), Touran (5T); Audi A1 (GB), A3 (8V, 8Y), Q2 (GA), Q3 (F3); Cupra Formentor (KM); Seat Arona (KJ), Ateca (KH), Ibiza (KJ), Leon + Leon ST (5F, KL), Tarraco (KN); Skoda Fabia IV (PJ), Kamiq (NW), Karoq (NU), Kodiaq (NS), Octavia III (5E), Octavia IV (NX), Scala (NW), Superb III (3V), etc.

Engine code: DACA, DACB, DADA, DFYA, DPBA, DPBC, DPBE, DPCA

- Special tool kit for precise positioning of the camshafts and locking the flywheel and timing belt pulley on the auxiliary drive.
- Essential for the professional adjustment of timing when replacing timing belts or repairing engines.
- Ideal for modern EA211 engines with ACT (Active Cylinder Technology) cylinder deactivation.
- Intuitive measuring system with highly sensitive angle gauge for camshaft positioning.
- Correctly positioned camshafts are crucial for these engines to run smoothly and comply with strict emission limits.
- No additional OBD interactions with the vehicle or other complex diagnostic technology required.
- Cost-effective and practical alternative to the OEM tool VAS 611 007.
- Similar to OEM No. T10340, T10499, T10504/1.

2.2 Scope of delivery/single part overview

Pos.	Description	Quantity	Alternative tool no.
A	Spacer for intake camshaft (for 1.5 litre engine)	1	-
B	Spacer for exhaust camshaft (for 1.5 litre engine)	1	-
C	Adapter plate for camshaft housing	1	-
D	Adjustment bolt for intake camshaft (on 1.5 litre engine)	1	-
E	Adjustment bolt for exhaust camshaft (on 1.5 litre engine)	1	-
F	Locking pin for gear-side toothed belt pulley	1	T10504/1
G	Fixing screw for crankshaft	1	T10340
H	Fixing screws for reference angle	1	-
I	Reference angle for angle gauge (with 1.5 litre engine)	1	-
J	Mounting kit for adapter plate (for 1.5 litre engine)	1	-
K	Digital angle gauge	1	-
L	T-handle with hexagon socket (size (waf) 5mm)	1	-
M	Tension wrench (size (waf) 30mm)	1	T10499

 **Storage system:** Plastic case



2.3 Technical Data

Digital angle gauge: LCD display with backlight and magnetic base
 Battery required for angle gauge: 1x 1.5V AAA battery
 Operating temperature of the angle gauge: 0°C to +50°C
 Angle gauge measuring range: +/-90°
 Accuracy of the angle gauge: +/-0.1°
 Total weight of the locking tool set: 4.9kg

3. EXAMPLES OF USE

3.1 Application example on the 1.5 TSI/TFSI engine

The locking tool differs functionally from the vehicle manufacturer's version. The following application example serves as a guide for using the locking tool kit on a **1.5 TSI/TFSI engine**. The vehicle-specific specifications, regulations and instructions of the manufacturer must be strictly observed!

📷 1: Prepare the engine according to the manufacturer's specifications...

1. Prepare all necessary parts for the following work in accordance with the manufacturer's specifications.

For example:

- ▶ Unscrew the spark plugs
- ▶ Remove timing belt covers on both sides
- ▶ Drain coolant and remove water pump
- ▶ Remove the gearbox-side plug on the inlet camshaft
- ▶ Remove the timing belt pulley on the gear side on the exhaust camshaft

Engine view from the gearbox side

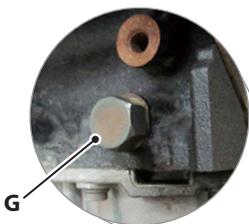
Intake camshaft

Exhaust camshaft

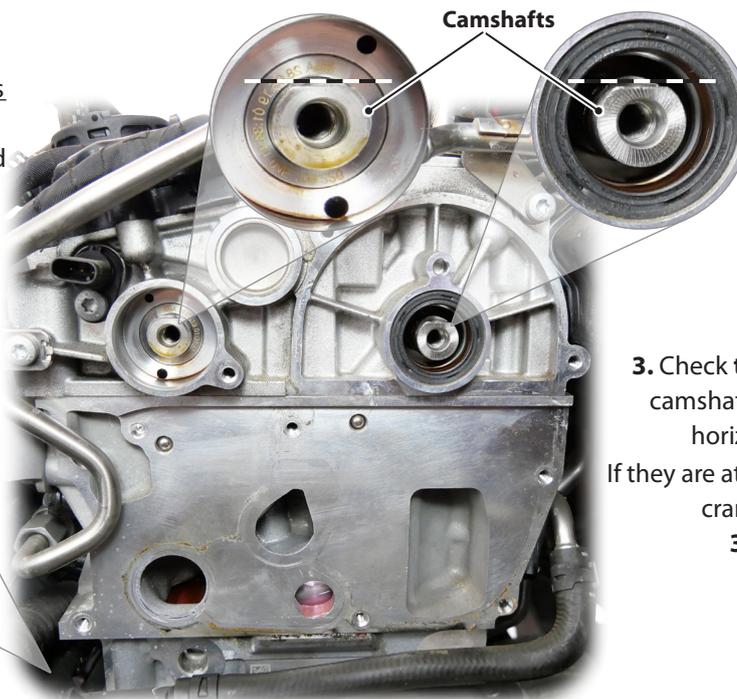


📷 2: Set the engine to TDC according to the manufacturer's specifications...

2. According to the manufacturer's specifications, screw the fixing screw [G] into the crankcase and turn the crankshaft to the **top dead centre (TDC) position** until it stops.



Camshafts



3. Check the **position** of the camshafts: The flats must be horizontal at the top. If they are at the bottom, turn the crankshaft another **360 degrees!**

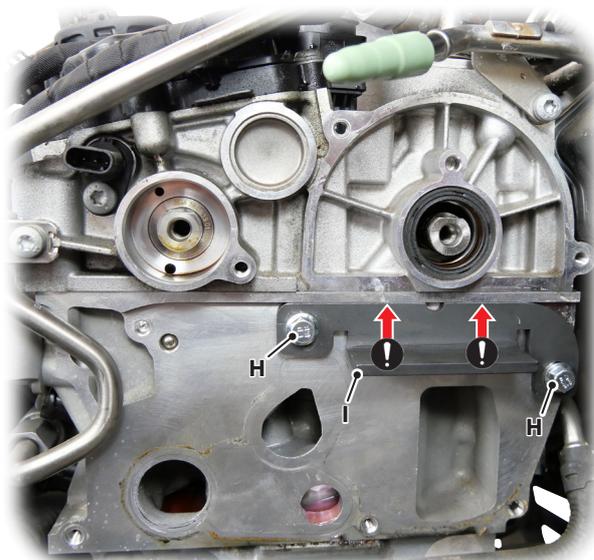
3: Mount the reference angle [I] correctly on the cylinder head...

① The reference angle [I] enables precise calibration of the angle gauge [K] to the exact installation position of the motor.

ATTENTION

Incorrect installation of the reference angle [I] can falsify the calibration of the angle gauge [K] and lead to incorrect timing settings, which can damage the engine.

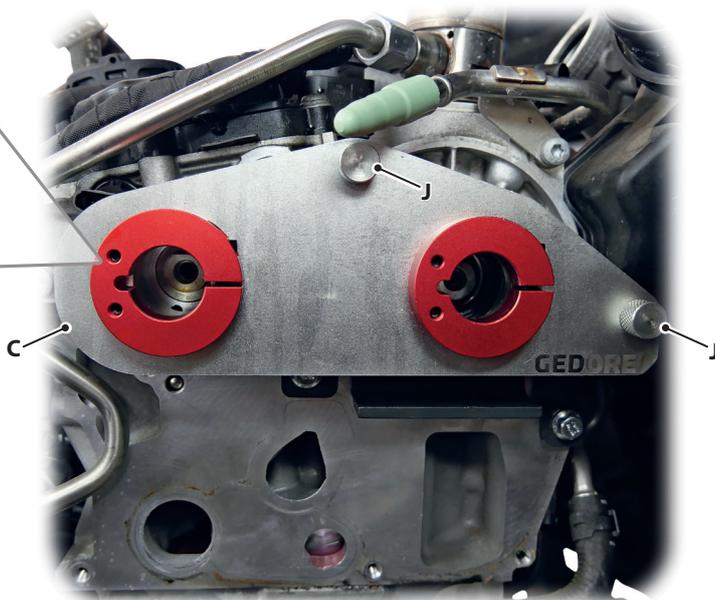
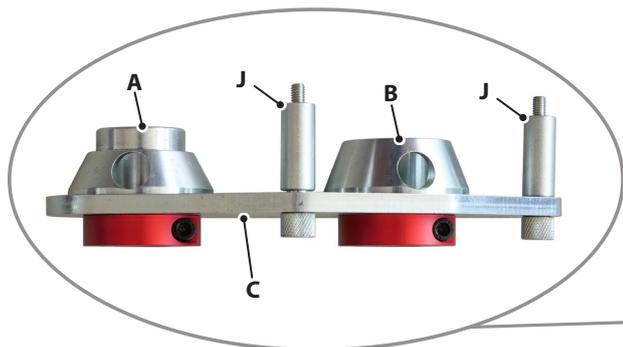
▶ The reference angle [I] must be clean and completely flush with the entire length of the lower edge of the cylinder head!



4. Position the reference angle [I] correctly on the cylinder head as shown and fasten it using the screws [H] with **10 Nm**. Press the reference angle [I] against the lower edge of the cylinder head.

4: Mount the adapter plate [C] in the correct position on the camshaft housing...

5. Assemble the adapter plate [C] as shown, together with the spacers [A] + [B] and the mounting kit [J].



6. Position the adapter plate [C] correctly on the camshaft housing as shown and secure it with the screws from the mounting kit [J].

📷 5: Insert the adjustment bolts [E] + [H] into the camshafts in the correct position and secure them...

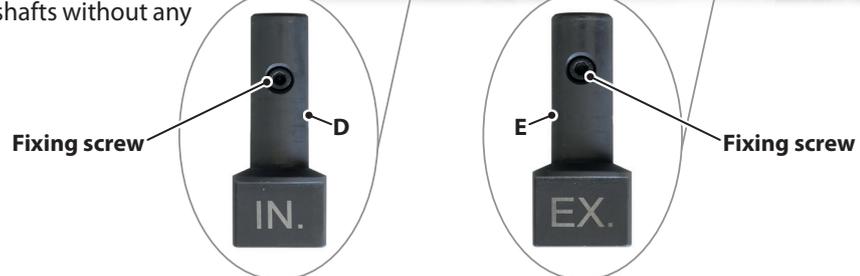
ATTENTION

Using incorrect adjustment bolts or faulty assembly can distort the measurement with the angle gauge [K] and lead to incorrect timing settings, which can damage the engine.

- ▶ Use the correct adjustment bolts [D] + [E] for the 1.5 TSI/TFSI engine!
- ▶ The adjustment bolts [D] + [E] must engage fully and cleanly in the camshafts and be fastened without play using the **fixing screws**!

7. Insert the adjustment bolt [D] on the intake camshaft and the adjustment bolt [E] on the exhaust camshaft in the correct position through the adapter plate [C].

Then tighten the two **fixing screws** to **10 Nm** to secure the bolts to the camshafts without any play.



📷 6: Calibrate angle gauge [K] in the correct position at reference angle [I]...

ATTENTION

Incorrect calibration of the angle gauge [K] can distort subsequent measurements and lead to incorrect timing settings, which can damage the engine.

- ▶ The angle gauge [K] **must** be calibrated to **0.0°** at the reference angle [I] **before each measurement!**
- ▶ The angle gauge [K] **must always** be recalibrated to **0.0°** at the reference angle [I] **after raising or lowering the vehicle** due to a possible change in the position of the engine.

8. Place the [K] angle gauge in the correct position on the [I] reference angle as shown, switch it on using the **ON/OFF** button and calibrate it to **0.0°** by pressing the **ZERO** button .



7: Check timing or camshaft angle and adjust according to manufacturer's specifications...

ATTENTION

The locking tool and the vehicle may be damaged.

- ▶ The locking tool must not be used as a counterholder for loosening or tightening the camshaft screw connections. It is essential to use the counterholder tools specified by the manufacturer!
- ▶ The camshaft bolts must always be tightened in accordance with the manufacturer's specifications!
- ▶ The angle gauge [K] must be calibrated to **0.0°** at the reference angle [I] before each measurement!
- ▶ The following instructions are only intended as a guide for using the locking tool kit. Always comply with the vehicle-specific specifications, regulations and instructions provided by the manufacturer!

9. Counterhold the camshaft sprockets in with a suitable tool in accordance with the manufacturer's specifications and loosen them so that they can be turned on the camshafts.

10. Calibrated angle gauge [K] in the correct position on the corresponding adjustment bolt [D] or [E] and check the camshaft angle. If necessary, use the **hexagon socket** on the adjustment bolt [D] or [E] to correct the camshaft angle in accordance with Manufacturer's specifications. Then fix the camshafts in this position. To do this, tighten the **clamping screws** on the adapter plate [C] to **10 Nm**.

11. Replace the timing belt in accordance with the manufacturer's specifications and initially only fasten the two camshaft wheels using pre-tensioning torque. Use a suitable counter-holding tool to prevent the camshafts, which have already been correctly adjusted, from turning.

12. Unscrew the fixing screw [G] on the crankcase and loosen the clamping screws on the adapter plate [C] so that the motor can move freely again. Then turn the engine several times by hand in a controlled manner. Next, screw the fixing screw [G] back in according to the manufacturer's specifications and turn the crankshaft to the **TDC position** until it stops.

13. Place the calibrated angle gauge [K] in the correct position on the corresponding adjustment bolt and check the camshaft angle again. After successful verification, fully tighten the camshaft gears according to the manufacturer's specifications, remove the locking tool and continue with the remaining work according to the manufacturer's specifications.



! The camshaft angle must always be adjusted in accordance with the manufacturer's specifications !



i The arrow on the display of the angle gauge [K] indicates the direction of rotation to the **0.0°** position.

4. EU KONFORMITÄTSERKLÄRUNG / EU DECLARATION OF CONFORMITY

EU KONFORMITÄTSERKLÄRUNG

Name und Anschrift des Herstellers

GEDORE Automotive GmbH
Breslauer Straße 41
78166 Donaueschingen, GERMANY


Produktbeschreibung

Artikelnummer: R15003004 // Artikelbezeichnung: Arretierwerkzeugsatz mit Winkelmesser

Hiermit erklären wir,

dass das oben genannte Produkt den einschlägigen Bestimmungen der folgenden EU-Richtlinien entspricht:

- **EMV – Elektromagnetische Verträglichkeit 2014/30/EU**
Elektromagnetische Verträglichkeit von Elektro- und Elektronikgeräten
- **RoHS – Beschränkung gefährlicher Stoffe 2011/65/EU (RoHS II) + 2015/863/EU (RoHS III) + 2017/2102/EU**
Beschränkung gefährlicher Stoffe in elektrischen und elektronischen Geräten

Diese Erklärung verliert ihre Gültigkeit, wenn das Produkt ohne unsere Zustimmung umgebaut oder verändert wird.

Angewandte harmonisierte EN-Normen

EN IEC 61326-1:2021 – Elektrische Mess-, Steuer-, Regel- und Laborgeräte – EMV-Anforderungen – Teil 1: Allgemeine Anforderungen
EN 61000-4-2:2009 – Elektromagnetische Verträglichkeit (EMV) – Teil 4-2: Prüf- und Messverfahren – Prüfung der Störfestigkeit gegen elektrostatische Entladungen
EN 61000-4-3:2006+A1:2008+A2:2010 – Elektromagnetische Verträglichkeit (EMV) – Teil 4-3: Prüf- und Messverfahren – Prüfung der Störfestigkeit gegen hochfrequente elektromagnetische Felder

Sonstige angewandte nationale Normen und Spezifikationen

DIN EN IEC/IEEE 82079-1:2021-09 – Erstellung von Nutzungsinformationen für Produkte – Teil 1: Grundsätze und Anforderungen

Bevollmächtigter für die Zusammenstellung und Bereitstellung aller technischen Unterlagen

Leitung der Produktentwicklung, GEDORE Automotive GmbH, Breslauer Straße 41, 78166 Donaueschingen, GERMANY

Donaueschingen, 29. September 2025

Patrick Mau, Geschäftsführer der GEDORE Automotive GmbH

EU DECLARATION OF CONFORMITY

Manufacturer's Name and Address

GEDORE Automotive GmbH
Breslauer Straße 41
78166 Donaueschingen, GERMANY


Product Description

Article Number: R15003004 // Article Name: Locking Tool Set with Angle Gauge

We hereby declare that,

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

- **EMC – Electromagnetic Compatibility 2014/30/EU**
Electromagnetic Compatibility of Electrical and Electronic Equipment
- **RoHS – Restriction of Hazardous Substances 2011/65/EU (RoHS II) + 2015/863/EU (RoHS III) + 2017/2102/EU**
Restriction of Hazardous Substances in Electrical and Electronic Equipment

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

Applicable Harmonized EN Standards

EN IEC 61326-1:2021 – Electrical equipment for measurement, control and laboratory use – EMC requirements – Part 1: General requirements
EN 61000-4-2:2009 – Electromagnetic compatibility (EMC) – Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test
EN 61000-4-3:2006+A1:2008+A2:2010 – Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test

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

Head of Product Development, GEDORE Automotive GmbH, Breslauer Straße 41, 78166 Donaueschingen, GERMANY

Donaueschingen, 29. September 2025

Patrick Mau, Managing Director of GEDORE Automotive GmbH