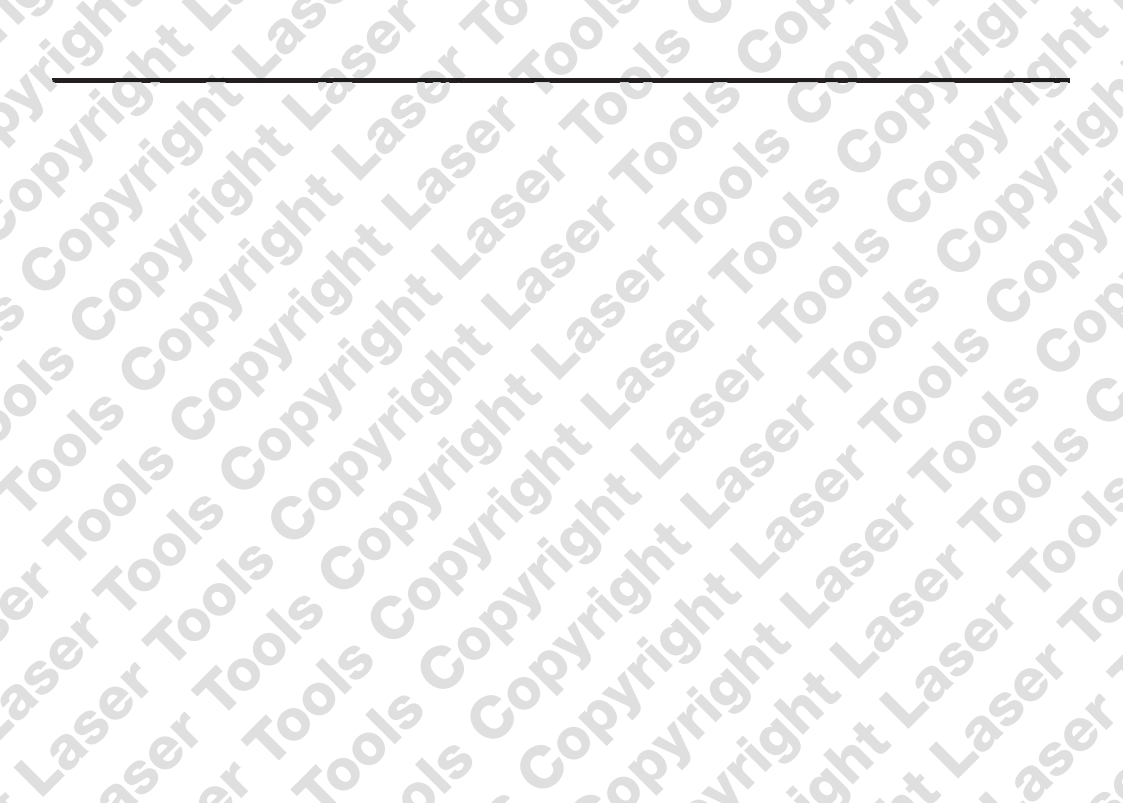


LASER®

**Volkswagen / Audi
Crankshaft Seal Installer Tool**



Part No: 4809



4809

Crankshaft Seal Installer Tool

OEM Tool Code: T10134

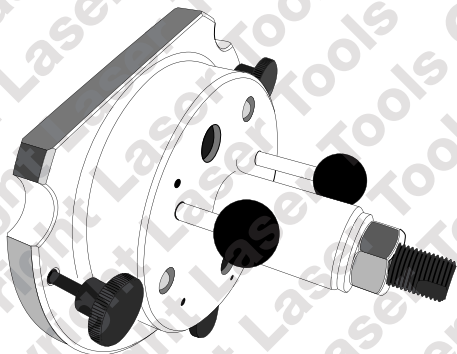
This Crankshaft Seal Installer tool is specifically designed for Volkswagen Golf, Touran and Audi A3 4. It is also suitable for other four-cylinder diesel engine applications including 1.4i Turbo, 1.4/1.6 Direct Injection (Petrol), 1.9/2.0 SDI, 2.0 TDi, 2.0 Common Rails (Diesel).

Other Tools Required:

Torque Wrench 5-60Nm

3 X Hexagonal Bolts M6 X 35mm

Vernier Gauge (or straight edge and feeler gauges).



The flywheel end oil seal is integral with the oil seal housing and speed sender, and is supplied with a new timing ring. If the oil seal is faulty, the whole assembly must be renewed. This **Crankshaft Seal Installer Tool 4809** is required to press the new seal housing assembly into position. Note that removing the oil seal will also remove the serrated timing ring from the end of the crankshaft and care must be taken to refit the ring in its exact position.

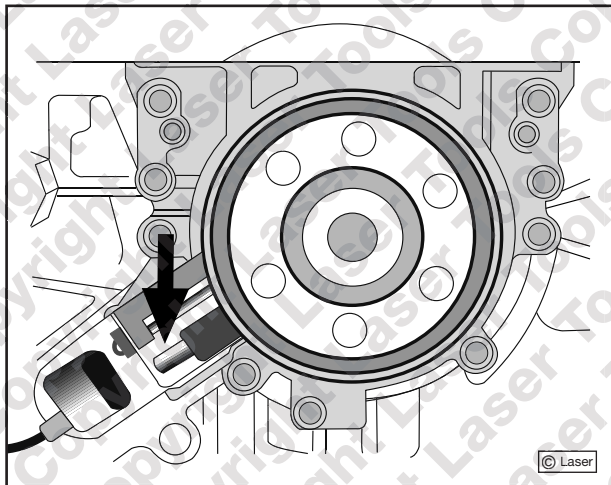
Remove the flywheel or driveplate (as applicable).

Set the engine to TDC.

Remove the sump.

Disconnect the wiring spur from the engine speed sender on the oil seal housing (**ARROW**), then unbolt and remove the sender and recover the rubber grommet.

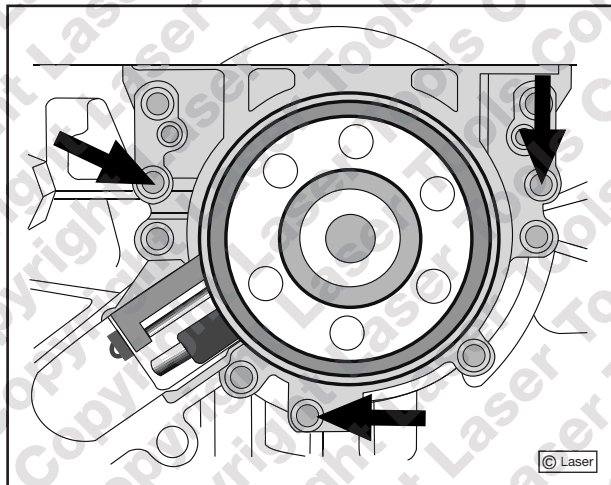
Unscrew the housing securing bolts and remove them. Discard the bolts as new ones must be used on reassembly.



Removing the crankshaft seal housing

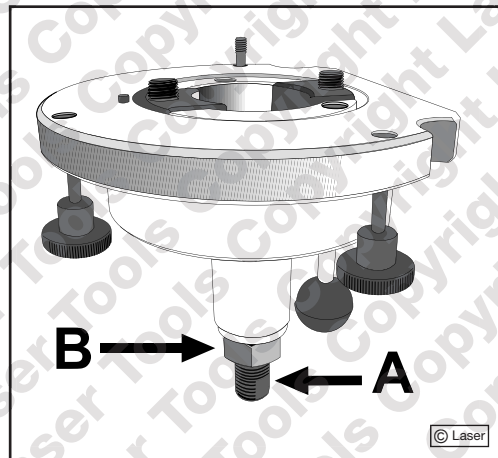
The seal housing assembly is pressed off using three M6 bolts screwed into the threaded holes provided (**ARROWS**).

Screw bolts alternately (maximum half-turn for each bolt) into seal housing and press seal housing together with sender timing ring off the crankshaft.

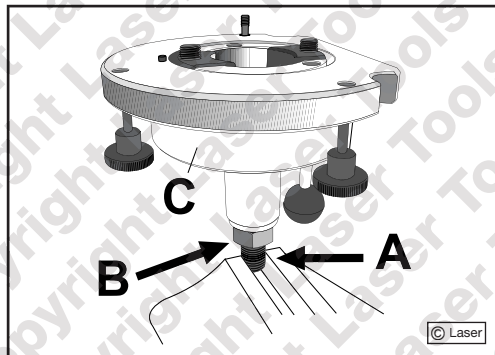


Attaching the seal housing assembly with sender timing ring to the Installer Tool 4809.

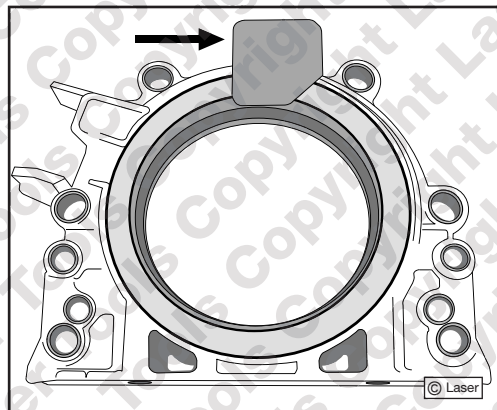
Screw in the large hex nut **B** to just before the clamping surfaces **A** of the threaded spindle.



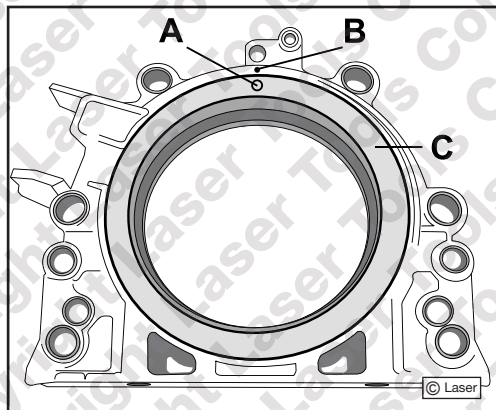
Clamp Installer Tool 4809 to a vice (clamping surfaces **A** on threaded spindle). Press tool housing **C** down so that it lies on large hex nut **B** (arrow). Screw large hex nut up threaded spindle until inner part of tool is level with tool housing.



Before fitting the new seal housing, check that the hole in the timing ring is aligned with the TDC mark on the seal housing. A plastic clip (**ARROW**) holds the ring in the correct position, this must be removed.



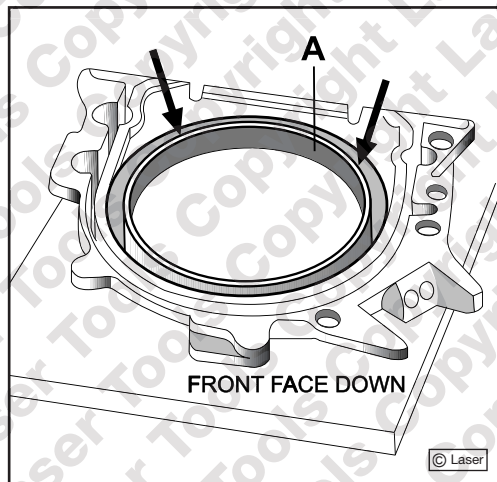
Locating hole **A** on timing ring **C** must align with TDC mark **B** on seal housing.



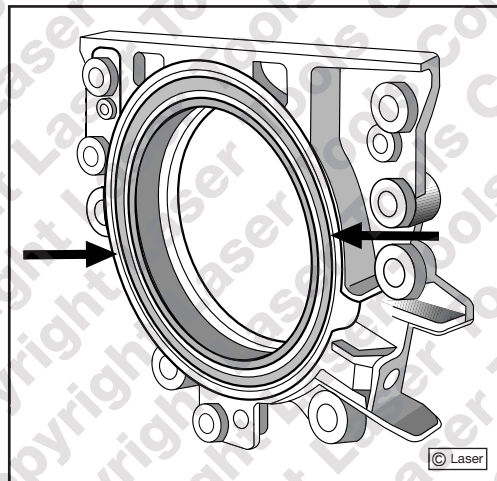
NOTE: The timing ring must not be taken out of the seal housing or turned.

Place seal housing with front side down on a clean, flat surface.

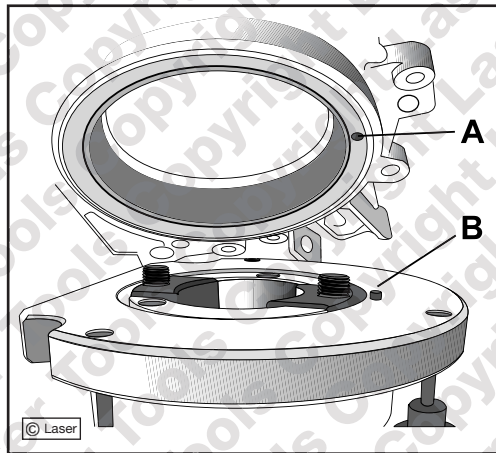
Push sealing lip support ring **A** downwards in direction of arrows until it lies on flat surface.



Upper edge of timing ring and front edge of seal housing must align (**arrows**).

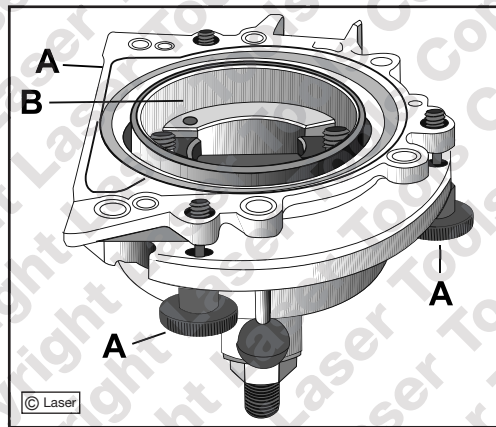


Place seal housing with front side onto Installer Tool 4809 — ensure that tool locating pin **B** can be inserted into timing ring hole **A**.



NOTE: Ensure seal housing lies flat on Installer Tool 4809.

Push seal housing and support ring for sealing lip **B** against surface of Installer Tool 4809 while tightening the three knurled screws **A**, so that locating pin cannot slide out of timing ring hole.



NOTE: When installing seal housing, ensure that timing ring remains fixed in Installer Tool.

Attaching Installer Tool 4809 with seal housing to crankshaft flange.

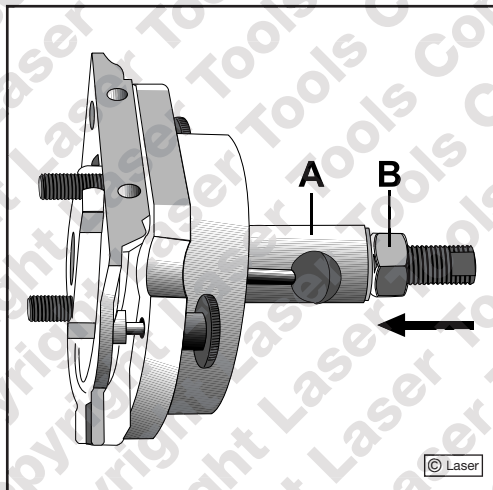
Crankshaft flange must be free of oil and grease.

Check that the engine is still at TDC.

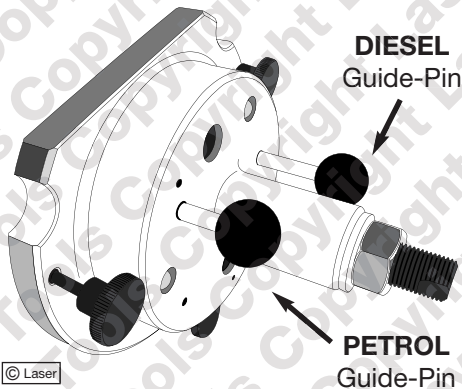
Screw large hex nut **B** to end of threaded spindle.

Press threaded spindle of Installer Tool 4809 in direction of **arrow**, until large hex nut **B** lies against installer housing **A**.

Align **flat edge** of Installer Tool 4809 on **sump side** of crankcase sealing surface and fit the tool and new seal housing assembly over the crankshaft and onto the cylinder block.



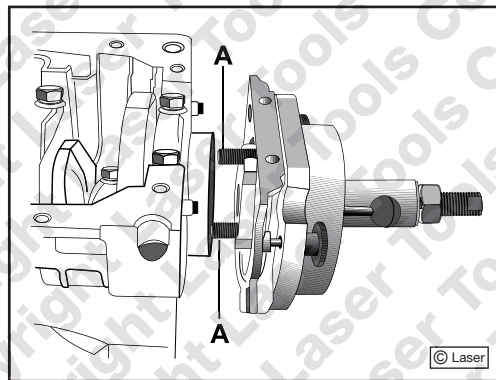
Push **guide pin** (as applicable for **petrol** or **diesel** engines) into hole in crankshaft. This ensures that the timing ring reaches its final installation position



NOTE: The guide-pin for diesel engines (right-hand knob) must not be inserted into threaded hole of crankshaft on petrol engines (and vice-versa).

Secure tool and new seal housing assembly to crankshaft flange with the Allen-headed bolts **A**.

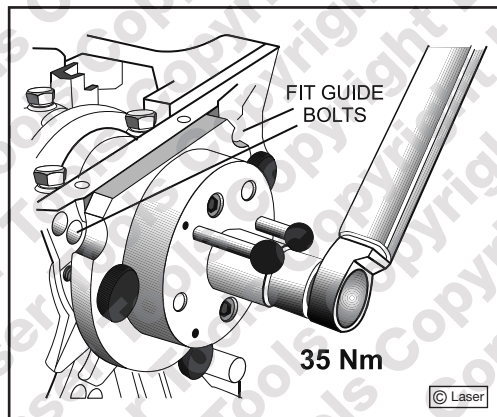
To guide the seal housing, screw two M6 X 35mm bolts into cylinder block.



NOTE: Screw Allen-headed bolts **A** into crankshaft flange (approximately 5 full turns).

Tighten large hex nut of Installer Tool 4809 to **35 Nm**, this will press the timing ring onto the crankshaft.

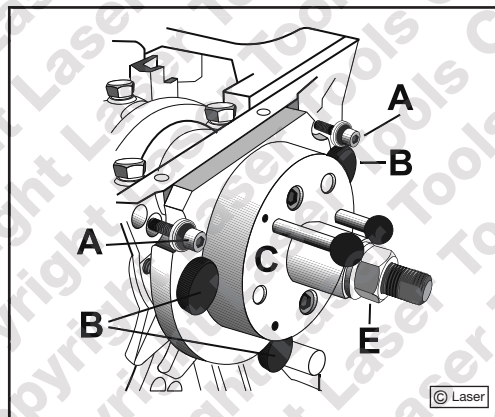
After tightening the hex nut, there must be a small air gap between the seal housing and the cylinder block.



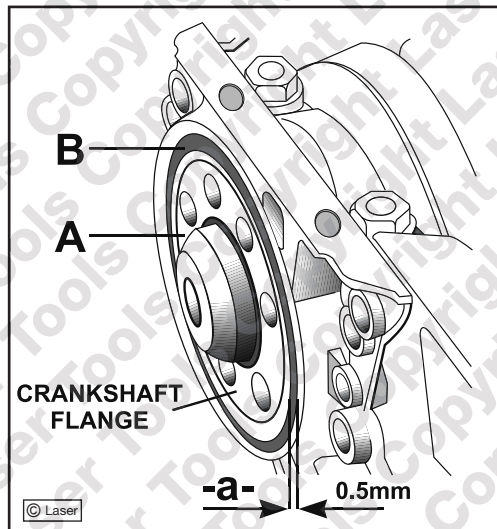
Screw large hex nut **E** to end of threaded spindle.

Remove the two guide bolts **A** from cylinder block.

Screw the three knurled screws **B** out of housing. Remove sealing lip support ring, then remove Installer Tool 4809.



The timing ring is in the correct position on the crankshaft of a gap **-a-** = 0.5 mm exists between crankshaft flange **A** and timing ring **B**.



Set vernier gauge on crankshaft flange. Measure distance **-a-** between crankshaft flange and timing ring. This can also be checked with a straight edge placed across crankshaft flange and feeler gauge(s) used to measure the clearance.

If measurement **-a-** is too small, re-press the timing ring (see section on page 15).

If dimension **-a-** is correct:

Fit the new housing securing bolts.

Tighten these new housing securing bolts to **15 Nm** using alternate and diagonal sequence.

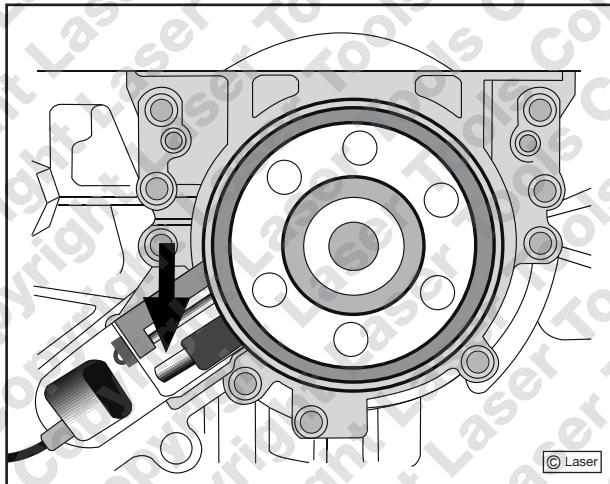
Insert the crankshaft speed sender and tighten the securing bolt to 5 Nm.

Refit sump.

Refit intermediate plate.

Refit flywheel using new bolts.

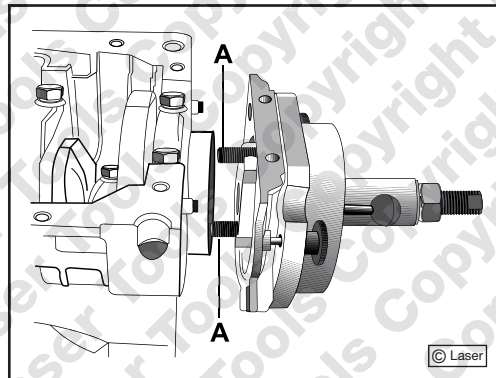
Tighten securing bolts to 60 Nm + one-quarter turn (90°).



Re-pressing timing ring (if required)

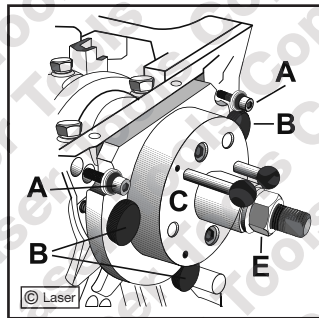
Re-attach Installer Tool 4809 to crankshaft flange using the Allen-headed bolts **A**. Hand tighten these bolts.

Push Installer Tool 4809 by hand to sealing flange.



Screw large hex nut **E** onto threaded spindle by hand until it is in contact with tool body **C**.

Tighten large hex nut **E** to to **40 Nm** using torque wrench.



Check installation position of timing ring on crankshaft again (refer to page 13).

If dimension -a- is too small again, tighten large hex nut **E** to to **45 Nm** using torque wrench and check installation position of timing ring on crankshaft again.



Guarantee

If this product fails through faulty materials or workmanship, contact our service department direct on: **+44 (0) 1926 818186**. Normal wear & tear are excluded as are consumable items & abuse.



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