

## Safety Warnings - please read

- Wear hand protection when using this tool kit.
- Always carefully clean the tool components after each use.
- Keep the tool components safe and tidy in the supplied case.
- Do not use the kit for any purpose other than for which it is designed.



Our products are designed to be used correctly and with care for the purpose for which they are intended. No liability is accepted by the Tool Connection for incorrect use of any of our products, and the Tool Connection cannot be held responsible for any damage to personnel, property or equipment when using the tools. Incorrect use will also invalidate the warranty.

If applicable, the applications database and any instructional information provided has been designed to offer general guidance for a particular tool's use and while all attention is given to the accuracy of the data no project should be attempted without referring first to the manufacturer's technical documentation (workshop or instruction manual) or the use of a recognised authority such as Autodata.

It is our policy to continually improve our products and thus we reserve the right to alter specifications and components without prior notice. It is the responsibility of the user to ensure the suitability of the tools and information prior to their use.



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### Guarantee

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

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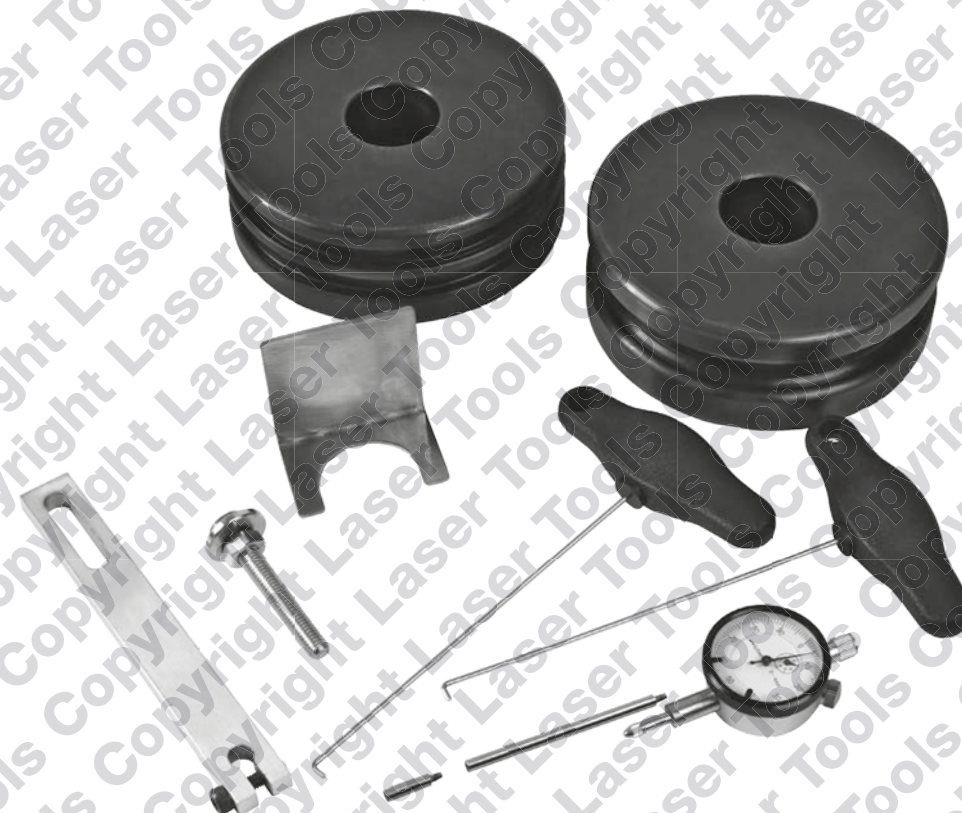
Part No. 7914

## DSG Gen1 & Gen2 Clutch Setting Gauge Kit

VW Group



## Instructions



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## Introduction

VW Group DSG (Double Clutch) setting gauge kit designed to speed up and simplify the fitting of DSG clutch kits to generations 1 and 2 DSG transmission systems. The 7914 has been specifically designed to work with Laser 6718 or 7918 clutch puller and press kits.

The 7914 can be used with both OEM and Schaeffler LuK clutch kits.

**NOTE: To identify transmission date:**

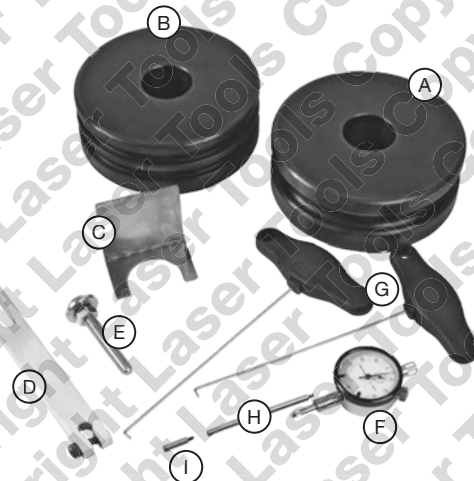
**Gen 1 fitted with cast engagement levers.**

**Gen 2 fitted with pressed steel engagement levers.**

- Applications Gen1 DSG, 7 speed transmissions fitted from 2008.
- Applications Gen2 DSG, fitted from June 2011.
- Found in vehicles across the VW group ranges.
- Equivalent to OEM T10466, T10374 gauge blocks.
- Includes DTi for checking clutch disc free play. Use Laser 6718 or Laser 7918 for pulling and fitting clutch assembly.

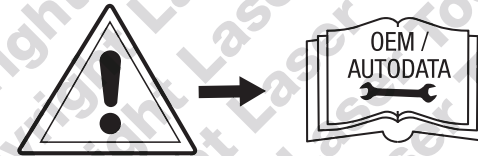
## Components

Ref.	Description
<b>A</b>	Gen 1 DSG combination setting block (one groove)
<b>B</b>	Gen 2 DSG combination setting block (two grooves)
<b>C</b>	Sliding Gauge (feeler gauge)
<b>D</b>	DTi support arm
<b>E</b>	DTi support fixing (M8 nut+bolt+2 washers)
<b>F</b>	DTi (Dial Test Indicator)
<b>G</b>	Clutch plate free-play hooks (X2)
<b>H</b>	DTi extension (long)
<b>I</b>	DTi extension (short)



The following instructions are for guidance only. Please refer to OEM derived data such as the vehicles manufactures own data or Autodata.

The use of this Clutch Tool Set is purely down to the user's discretion and The Tool Connection Ltd. cannot be held responsible for any damage caused whatsoever.



## Instructions

**NOTE: the following process is used to ensure the clutch release levers are correctly shimmed for a new clutch pack to be fitted.**

**Always check the clutch plate free play before refitting the transmission in the vehicle.**

### Preparation:

- Remove the transmission from the vehicle in accordance with the manufacturer's recommendations.
- If the transmission oil is not drained be sure to plug the breather units.
- Mount the gearbox complete with clutch mechanism on a strong bench or engine/transmission stand with the bell housing facing up. Ensure the gearbox is securely blocked to prevent it tipping.
- Remove the clutch using Laser 7918 DCT/DSG Clutch Removal Kit.
- Identify the clutch type as follows:
  - **Generation 1** = cast metal release forks – pre May 2011 – find build date on the bottom of the gearbox casing.
  - **Generation 2** = pressed steel release forks – post May 2011 - find build date on the bottom of the gearbox casing.
- Remove, examine and replace as required the K2 (small clutch release bearing), K1 (large clutch release bearing) and clutch release forks.
- Check input shaft seals for leaks etc.
- Check and clean both inner and outer input shafts.
- Reassemble the clutch release forks and bearings in accordance with the manufacturer's instructions. Ensure they are correctly seated and fully retracted.

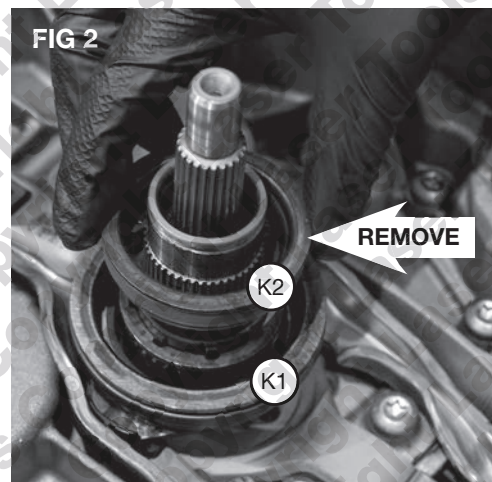


Setting Generation 1 & Generation 2 Clutch release mechanism:

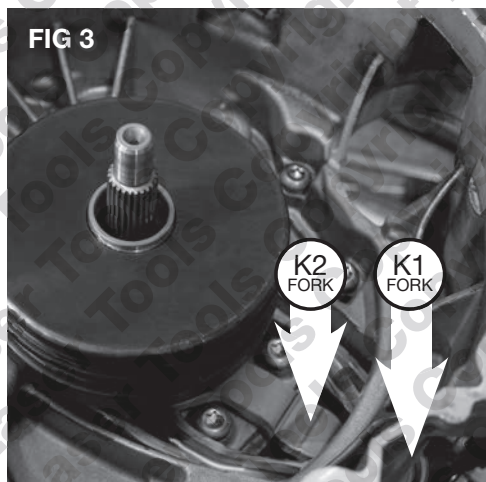
**NOTE:** Start with the clutch release forks, release bearings and shims assembled as per OEM instruction.

1. Select the appropriate setting block (A or B figure 1) according to the gearbox type:
  - a. Generation 1 – Component A – identified by one machined groove
  - b. Generation 2 – Component B – identified by two machined grooves

FIG 1



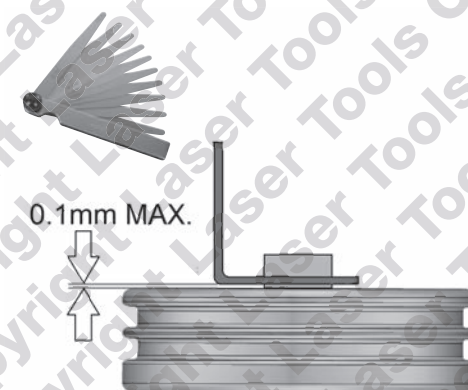
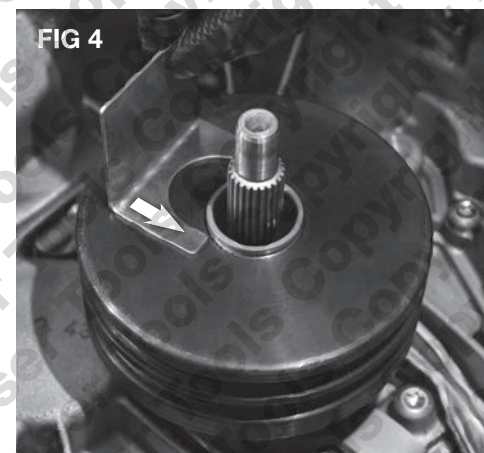
2. Remove the smaller upper clutch release bearing and shim (K2), figure 2.



3. Place the appropriate DSG combination setting block on the large release bearing (K1)
  - a. **NOTE:** check the setting block is sitting on the large release bearing by checking K1 (large release bearing) release fork has no vertical play and lifting the fork lifts the setting gauge. Figure 3.

4. With the setting block in place and correctly seated try to slide component C sliding gauge (Feeler Gauge) into the clutch pack retaining groove as shown in figure 4. The sliding gauge should slide into the groove without excessive movement between the setting block and without excessive force being required.

**NOTE:** Double check the fit of the sliding gauge by measuring the gap between the gauge block and the sliding gauge using standard metric feeler gauge's. The gap should be less than 0.1mm

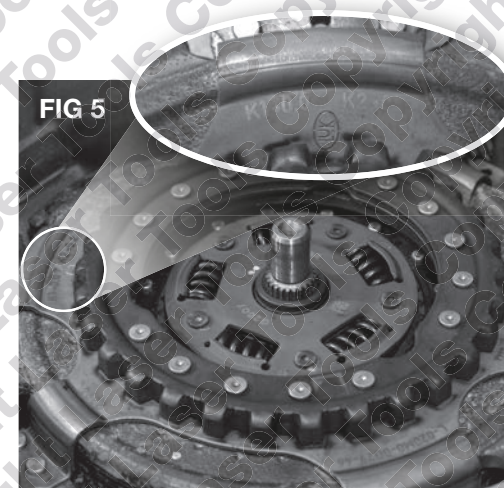


5. If the sliding gauge (C) cannot be slid into the groove then a thinner release bearing shim must be used. If the sliding gauge is too loose (the gap is greater than 0.1mm) a thicker shim is required.

If the shim(s) require replacing repeat the above process until the fit of the sliding gauge (C) is correct.

#### 6. Individual clutch pack tolerance:

The clutch packs are an assembly of many different parts and as such not all packs will be identically dimensioned. For this reason a “tolerance” measurement must be allowed for each individual clutch pack. The tolerance allowance must be added to or subtracted from the shim thickness identified by the above process. the tolerance allowance is written on the engine side of the clutch pack as shown in figure 5.





In the example given in figure 5 (page 5) the allowance is  $K1 = +0.0$  &  $K2 = +0.2$ . This means that 0.0 (nothing) needs to be taken from or added to the shim for K1 (the larger lower release bearing) shim and 0.2mm should be added to the thickness of the K2 (the smaller upper release bearing) shim.

7. Having set the K1 release bearing shim remove the setting block and refit the K2 bearing and shim.

8. Refit the setting block.

**NOTE:** check the setting block is sitting on the small release bearing by checking K2 (small release bearing) release fork has no vertical play and lifting the fork lifts the setting gauge. Figure 3. There should now be clearance on the K1 fork.

9. Repeat process 4 and 5 using the sliding gauge (C).

10. Repeat process 6 for K2 (small release bearing shim).

11. Fit the new clutch as per OEM instructions lowering it gently into place and ensuring it full engages with the input shafts. Press the clutch into place using a suitable press frame like Laser 7918. Fit the new clutch holding snap ring. **DO NOT FIT THE TOP CLUTCH HUB**

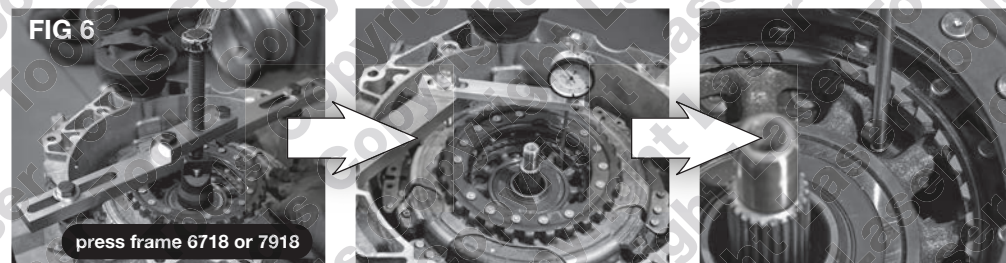
#### **Checking the final set up before final installation:**

It is recommended that the clutch plates be checked for the adequate amount of free play. Components D, E, F, G, H & I (DTi depth gauge, mounting brackets and hooks) are provided for this purpose. The mounting bracket is designed to be used in conjunction with either the VAG OEM T10323 clutch press frame, Laser 6718 or Laser 7918 clutch extraction and fitting kit using the following process.

1. Using one of the legs of the clutch press frame assemble the components D, E, F, H & I as shown in figure 6. Ensure that the 2 extension pieces are screwed together and the ball end from the DTi gauge is screwed on to the bottom of the extension pieces.

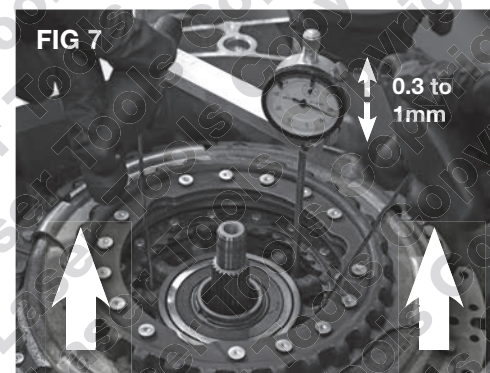
**NOTE:** DO NOT over tighten the DTi pinch bolt on the bracket (D) as this can damage the DTi beyond repair.

2. Position the component so the DTi foot touches and the lower clutch plate and depresses the DTi by at least 1 mm. set the dial to zero (0.00mm)



3. Using the 2 clutch free play hooks (G) try to lift the lower clutch plate making a note of the reading on the DTi. There should be between 0.3 to 1.0mm of lift (clutch free play). See figure 7. Repeat this process at 3 equal points around the clutch plate.

If Free play is excessive or too small the clutch must be removed and the release shims reset. If within tolerance move on to point 4 below



4. Fit the top clutch centre hub and clip ensuring correct alignment. Reinstall the DTi gauge without the short extension (I) and set the DTi up so it contacts the upper clutch plate. Repeat the play checks from 2 and 3 above. See figure 8.

If the clutch play in both cases is within tolerance the setup is now complete and the gearbox can now be placed back in the vehicle in accordance with OEM instructions.

