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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.

# LASER<sup>®</sup>

7027

## SAC Clutch Compressor Master Kit



7027\_Instructions\_V2

### 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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- Allows the correct disassembly and assembly of self-adjusting clutches.
- Compressor kit for 6, 8 and 9 bolt clutch covers allows the correct compressing and fitting of the clutch cover to avoid clutch damage.
- Includes 6 BMW style short Clutch mandrels where the clutch cover is fitted with a transit locking device.
- Includes 2 interchangeable expandable centre plate alignment tools with interchangeable spigot bush pins 12, 14, 15, 16, 17, 18 and 19mm diameters.

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## SAC Clutch Compressor - Master Kit

Introduced as a replacement and update to the original Laser 4845 this SAC (Self Adjusting Clutch) clutch compressor master kit is a combined clutch alignment kit that includes the BMW style short clutch plate alignment tools (for use where new clutch covers are fitted with a pre-tensioned cover locking device) and more traditional centre plate alignment tools which allow the kit to be used on non-SAC clutch kits as well as other SAC clutches. The clamping frame combines 4 and 3 bolt fixing slots to give a strong but light weight frame that can be used on 6, 8, 9 bolt clutch covers.

Equivalent to: **LuK SAC clutch kit 400 0237 10.**

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 is purely down to the user's discretion and The Tool Connection Ltd cannot be held responsible for any damage caused what so ever.

Due to the range of manufacturers, vehicles, engines and transmissions covered by this kit it is not possible to give detailed instructions for all vehicle applications. Therefore we recommend the use of vehicle OEM or clutch manufacturer derived information and instructions.

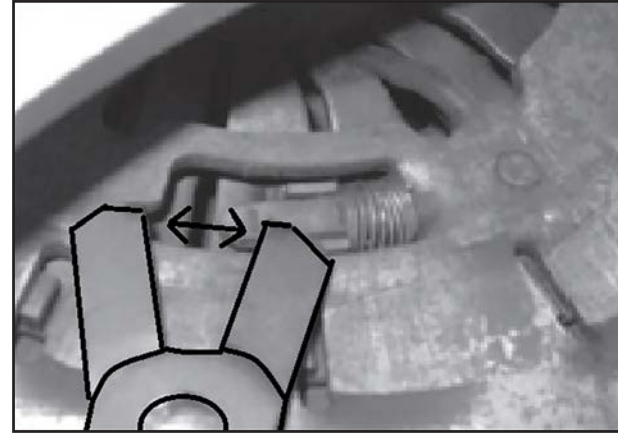


## Resetting the Adjustment Mechanism

If the old clutch cover is to be re-used it must first be reset.

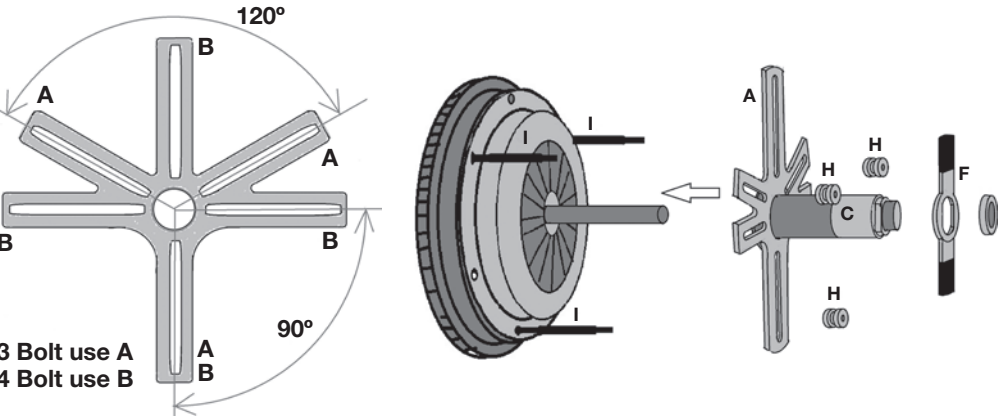
This is done by fitting the SAC tool whilst the old cover is in place and winding the compression strut down as far as it will go. Using the clutch reset tool (E) force the adjust ramp back anticlockwise until the second line on the ramp is just visible as shown.

With the reset tool in place remove the SAC tool and the clutch cover.

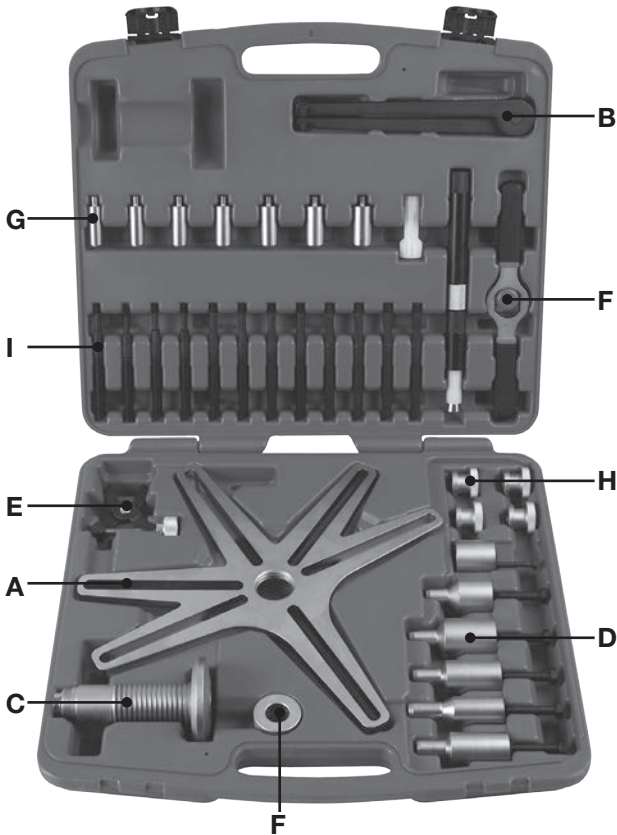


## Use of Clutch Cover Compressor

1. Remove and discard the old components (If the flywheel is of the Dual Mass type it is recommended the DMF play is checked to ensure it is within specification).
2. Using the appropriate clutch mandrels (**D** for BMW or **G** for others) centre the new centre plate on the clutch.
3. Where the flywheel is not fitted with a centre bearing the centre plate will require centring by eye.
4. When centring using component (**D** or **G**) put the mandrels through the plate and into the flywheel centre bearing.
5. The mandrels (**D**) can be easily removed after fitting the clutch by use of the mandrel extraction screws.
6. Fit the clutch cover and hold in place using alternate fixing bolts. Only tighten these bolts to finger tight - enough to hold the centre plate in place.
7. A clutch with 6 or 9 fixing bolts will use the 120° compressor frame grooves (**A**), for a clutch cover with 8 fixing bolts use the 90° frame grooves (**A**)
8. Screw the compression strut (**C**) into the bottom of the clamping tool as shown and wind it up fully.
9. Using the appropriate threaded fixing bolts (**I**) fit **C** (for **F** and **I** bolt covers) and **D** (for **H** bolt covers) to alternate cover fixing screws holes through the cover and into the flywheel as shown.
10. Fit the clamping tool and compression strut assembly and hold in place using the knurled nuts evenly as shown.
11. Ensure the compression strut aligns with the centre of the clutch cover.
12. Tighten the compression strut down using the compression strut handle (**F**).
13. The strut will contact the clutch cover fingers and press them down in doing so the gap between the cover and the flywheel will close.
14. Stop tightening when the cover has touched the flywheel and tighten the alternate cover fixing bolts.
15. When the gap is closed tighten the fixing bolts down, remove the tool and fit the remaining fixing bolts to the cover.
16. If the centring mandrel is still in place remove it now.



## Components



Ref	Description
A	Compressor frame for 6, 8 and 9 bolt clutch covers
B	Pin wrench, pre-tensioned cover locking device removal tool
C	Compressor threaded spindle
D	BMW Centring mandrels and extraction screws. (23mm, 26.5mm, 28mm, 32.5mm, 34mm and 32.5 Sleeve)
E	Adjustment reset tool
F	Compressor spindle handle and nut
G	Clutch spigot bush pins and expandable cones (Spigot pins: 12mm, 14mm, 15mm, 16mm, 17mm, 18mm, 19mm. Expandable cones: 15 to 28mm.
H	Knurled nuts for item (I)
I	Three sets of 4 cover bolts: M6 x 1.0mm, M7 x 1.0mm, M8 x 1.25mm

## Applications

Include but not restricted to: **Audi, BMW, Fiat, Ford, Mercedes-Benz, Renault, Seat, Skoda, Vauxhall/Opel, Volkswagen and Volvo.**

## N.B.

Remove the transmission from the vehicle as described by the vehicle manufacturer.

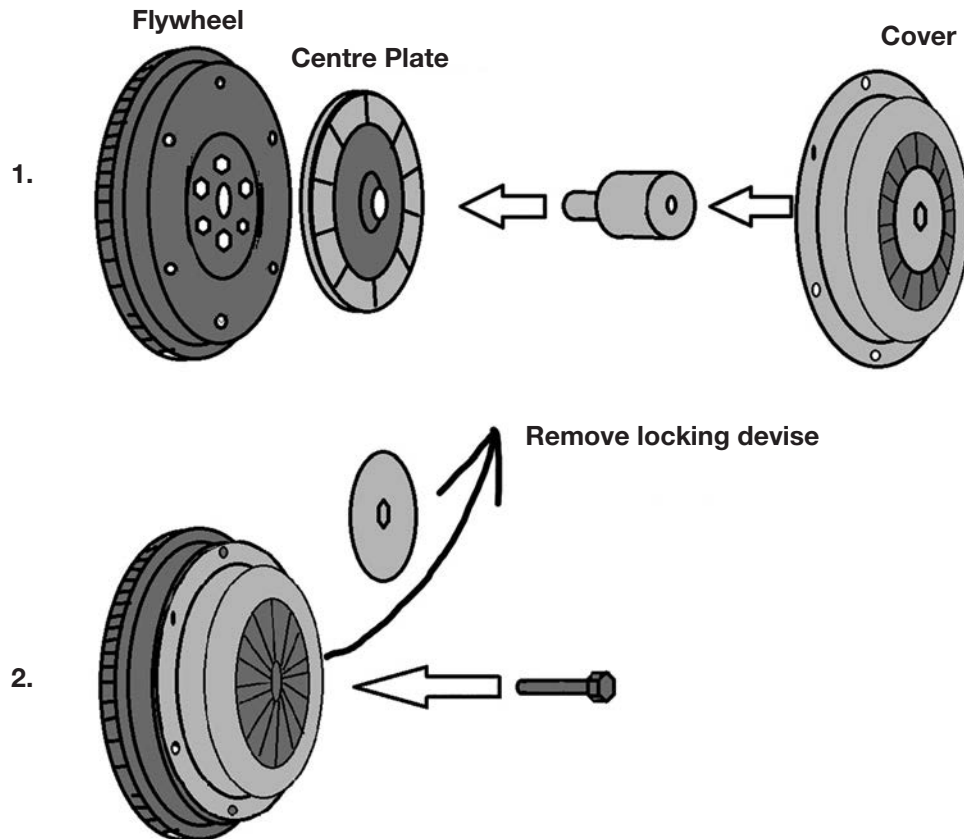
## Basic Instructions

If the clutch cover is identified as an SAC cover and it is to be re-used then the clutch compressor frame should be used to allow the cover adjustment mechanism to be reset and controlled release of the clutch cover to protect the SAC mechanism from damage.

When fitting a used SAC clutch cover or a new cover that is not equipped with a pre-tensioning locking device always use the compressor frame to fit the cover.

## BMW Clutch Fitted with Pre-tensioning Locking Device

1. Using appropriate centre plate alignment mandrel (**D**) fit the centre plate to the flywheel and then fit the new cover over the plate. Fit and evenly tighten the cover fixing bolts.
2. Remove the pre-tensioning locking device using the removal tool (**B**) and using the mandrel removal screw extract the alignment mandrel.
3. Fit transmission as required.



## Use of Clutch Centring Tool (G):

- Select the appropriate expandable cone that just fits into the clutch centre plate and the appropriate spigot bush that is a good fit into the spigot bearing.
- Assemble as shown.
- Slide the assembled tool into the clutch centre plate and expand the cone so it grips the centre plate. Fit to the flywheel and fit clutch cover.

Note: the clutch compressor spindle (**C**) has a hole up the middle of it to allow the use of centring tool (**G**) with the compressor.

