# Special tools







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# 1 LuK special tools

1.1 SAC mounting tool



## Part no. 400 0237 10

## Content:

- 6 different tapered bushings to spread both white tensioning/centring elements (15-28 mm) to support the clutch disc
- Universal centring pin with guide and tensioning element
- 3 screw-on centring pins of varying diameter (12 mm, 14 mm, and 15 mm) for pilot bearing
- Pressure piece and spindle carrier with 3- and 4-hole pitch
- Centring sleeve (BMW)
- 4 studs M6, M7 and M8
- 4 knurled nuts
- Thread closing cover to protect the inner thread
- 2 tensioning/centring elements ( 12-28 mm) to fit pilot bearing and crankshaft bore

- 4 special centring pins (BMW) of varying diameter and corresponding screw
- Face spanner/releasing tool for pretensioned clutches (Audi, Seat, Skoda and VW)

## **Application:**

Using a special tool is an absolute must to ensure correct installation of the Self-Adjusting Clutch. No counteracting forces must be applied during installation to prevent early rotation of the adjusting ring in the clutch pressure plate.

## Supplementary information:

## **Brochure:** Self-adjusting clutch (SAC) Order no.: 999 6002 490

## Service Info:

Product replacement SAC tool kit 400 0072 10 to 400 0237 10 with additional content, LuK 0016

#### Video:

LuK self-adjusting clutch (SAC) installation video







# 1.1.1 Clutch centring pin 23mm

## Part no. 400 0046 10

**Content:** 

Clutch centring pin

## **Application:**

Clutch centring pin Ø 23mm for BMW models equipped with pretensioned SAC clutch pressure plate.



## Supplementary information:

**Brochure:** Self-adjusting clutch (SAC) Order no.: 999 6002 490

# 1.1.2 Clutch centring pin 26.5mm

## Part no. 400 0110 10

**Content:** Clutch centring pin

## **Application:**

Clutch centring pin Ø 26.5mm for BMW/ Audi models equipped with pretensioned SAC clutch pressure plate.



Supplementary information:

**Brochure:** Self-adjusting clutch (SAC) Order no.: 999 6002 490

# 1.1.3 Clutch centring pin 28mm

## Part no. 400 0045 10

## **Content:** Clutch centring pin

## **Application:**

Clutch centring pin Ø 28mm for BMW models equipped with pretensioned SAC clutch pressure plate.



Supplementary information:

**Brochure:** Self-adjusting clutch (SAC)



# **L**K

# 1.1.4 Clutch centring pin 32.5mm

## Part no. 400 0078 10

Content:

Clutch centring pin

## Application:

Clutch centring pin Ø 32.5mm for BMW models equipped with pretensioned SAC clutch pressure plate.



Supplementary information:

**Brochure:** Self-adjusting clutch (SAC) Order no.: 999 6002 490

# 1.1.5 Clutch centring sleeve

## Part no. 400 0076 10

**Content:** Centring sleeve with screw

## Application:

For centring the clutch disc on BMW applications where the pilot bearing is mounted in the primary shaft, e.g. on models equipped with N54 or N55 engines.



## Supplementary information:

**Brochure:** Self-adjusting clutch (SAC) Order no.: 999 6002 490

# 1.2 DMF special tool





## Part no. 400 0080 10

## Content:

- DTI stand
- Slotted bar
- 4 ring gear locking dog spacers
- 6 adapters
- Degree gauge locking bar
- DTI gauge
- Degree gauge
- 2 ring gear locking dogs
- Instruction DVD

## Application:

The LuK DMF special tool allows you to perform the most important measurements – freeplay and rock – in a garage environment.

## Supplementary information:

**Brochure:** Dual mass flywheel technical brochure Order no.: 999 6002 310

# 1.3 Dry double clutch special tool





## Part no. 400 0240 10

## Content:

- Setting gauge for micrometer
- 3 hooks
- 3 thrust pieces
- Circlip pliers, angled
- 5 plugs
- DTI gauge with stand
- Magnet
- 2 pulling hooks
- DVD with removal/assembly instructions and training video
- Cross beam with spindle and thrust piece
- 3 knurled-head screws
- 3 threaded bolts M10, 101mm long
- 3 threaded bolts M10, 161mm long
- Support bushing for removal
- Pressure sleeve for assembly
- Micrometer 32.92mm
- Micrometer 48.63mm
- Weight 3.5kg

## Application:

Special tool for professional removal and installation of the dry double clutch on the first-generation 7-speed OAM transmission installed in Audi, Skoda, Seat and VW models (manufactured until 05.2011).

## Note:

This special tool has been superseded by modular tool kits 400 0418 10 (basic) and 400 0419 10 (VW). The supplementary tool kit 400 0420 10 makes it compatible with the new modular tool kit system.

## Supplementary information:

## **Brochure:**

LuK repair solution for dry double clutches, 7-speed 0AM transmission on Audi, Seat, Skoda and Volkswagen models\* Order no.: 999 6002 690

## Video:

Removal/assembly of the double clutch in a 7-speed OAM transmission on Audi, Seat, Skoda and Volkswagen models\*

## DVD:

LuK RepSet 2CT, 7-Speed Transmission 0AM in Audi, Seat, Skoda and Volkswagen\* Order no.: 999 6003 500 Brochure, video, 7 languages

# 1.4 2CT Supplementary tool kit





## Part no. 400 0420 10

## Content:

- Transmission support with height adjustment
- 2 plugs for differential openings
- Special open-end wrench
- Setting dimension 32.12 mm (2nd generation, K2)
- Setting dimension 48.42 mm (2nd generation, K1)
- DMF reset tool
- Unlocking key
- DVD with assembly/disassembly instructions and training video

## **Application:**

The previous LuK double clutch special tool (part no. 400 0240 10) can be adapted to the new, modular tool system range with the supplementary tool kit (part no. 400 0420 10).

The combined content of both tool kits is identical to the contents of the basic and Volkswagen tool kits.

## Supplementary information:

**Brochures:** The dry double clutch, technology/ special tools Order no.: 999 6006 360

## Supplementary information:

#### **Brochures:**

LuK repair solution for dry double clutches, Audi, Seat, Skoda, Volkswagen, 7-speed OAM transmission Order no.: 999 6002 690

LuK repair solution for dry double clutches, Renault 6-speed DC4 transmission Order no.: 999 6006 310

## Video:

Double clutch removal/assembly on Audi, Seat, Skoda, Volkswagen 2nd generation 7-speed 0AM transmission

Double clutch removal/assembly on Renault 6-speed DC4 transmission

## DVD:

LuK RepSet 2CT Order no.: 999 6006 090 Brochures, videos, 2 languages

## 1.5 2CT Basic tool kit





## Part no. 400 0418 10

## Content:

- Puller with spindle and pressure piece
- 3 thumb screws
- 3 M10 threaded bolts, 100 mm long
- 3 M10 threaded bolts, 160 mm long
- Circlip pliers, angled
- Magnet
- Transmission support with height adjustment
- 2 plugs for driveshaft holes
- DMF reset tool
- Unlocking key
- Special open-end wrench
- DVD with assembly/disassembly instructions and training video

## Application:

The basic tool kit forms the basis of the modular tool system. It contains those tools that are generally required for **all** repairs to double clutches.

Together with a vehicle-specific tool kit, they form a complete kit for professional repairs.

This is based on all dry double clutch systems currently available from LuK.

## Supplementary information:

**Brochures:** The dry double clutch, technology/special tools Order no.: 999 6006 360

LuK repair solution for dry double clutches, Audi, Seat, Skoda, Volkswagen, 7-speed 0AM transmission Order no.: 999 6002 690

## Supplementary information:

## Brochure:

LuK repair solution for dry double clutches, Renault 6-speed DC4 transmission Order no.: 999 6006 310

## Video:

Double clutch removal/assembly, Audi, Seat, Skoda, Volkswagen, 7-speed 0AM transmission, 1st generation

Double clutch removal/assembly, Audi, Seat, Skoda, Volkswagen, 7-speed OAM transmission, 2nd generation

Double clutch removal/assembly on Renault 6-speed DC4 transmission

## DVD:

LuK RepSet 2CT, Order no.: 999 6006 090 Brochures, videos, 2 languages

## 1.6 2CT Volkswagen tool kit





## Part no. 400 0419 10

## Content:

- Dial gauge with tripod
- Reference gauge 32.92 mm (1st generation, K2)
- Reference gauge 48.63 mm (1st generation, K1)
- Reference gauge 32.12 mm (2nd generation, K2)
- Reference gauge 48.42 mm (2nd generation, K1)
- 3 thrust pieces
- Support sleeve for disassembly
- Pressure sleeve for assembly
- 6 plugs
- 3 hooks
- Setting gauge for reference gauge
- 2 pulling hooks
- Weight, 3.5 kg
- DVD with assembly/disassembly instructions and training video

## **Application:**

This vehicle-specific tool kit must be combined with the basic tool kit. It can be used to disassemble, assemble and adjust both first generation dry double clutches (up to May 2011) and second generation dry double clutches (from June 2011) in vehicles manufactured by Audi, Seat, Škoda and Volkswagen with a OAM transmission.

## Supplementary information:

**Brochures:** The dry double clutch, technology/special tools Order no.: 999 6006 360

## Supplementary information:

#### Brochures:

LuK repair solution for dry double clutches, Audi, Seat, Skoda, Volkswagen, 7-speed 0AM transmission Order no.: 999 6002 690

## Videos:

Double clutch removal/assembly on Audi, Seat, Skoda, Volkswagen 1st generation 7-speed OAM transmission

Double clutch removal/assembly on Audi, Seat, Skoda, Volkswagen 2nd generation 7-speed 0AM transmission

#### DVD:

LuK RepSet 2CT, Order no.: 999 6006 090 Brochures, videos, 2 languages

# ЦК

## 1.7 2CT Renault tool kit



## Part no. 400 0423 10

## Content:

- 3 hooks
- Pressure sleeve for assembly
- Support sleeve for disassemblyLocking piece
- DVD with assembly/disassembly instructions and training video

## **Application:**

This tool kit contains all tools that are required to carry out professional repairs on a dry double clutch on a Renault vehicle (DC4 6-speed transmission). It must be used together with the basic tool kit.

## Supplementary information:

## **Brochures:**

The dry double clutch, technology/special tools Order no.: 999 6006 360

LuK repair solution for dry double clutches, Renault 6-speed DC4 transmission Order no.: 999 6006 310

## Video:

Double clutch removal/assembly on Renault 6-speed DC4 transmission

## DVD:

LuK RepSet 2CT Order no.: 999 6006 090 <u>Brochures, videos, 2 languages</u>

## 1.8 2CT Reset tool kit





## Part no. 400 425 10

## Content:

- Base plate with spindle
- Pressure nut
- Adapter
- 2 fixing pins
- 2 knurled nuts
- K2 pressure piece, Ø 115 mm
- K2 pressure piece, Ø 131 mm
- K1 pressure ring, Ø 85 mm
- K1 pressure ring, Ø 105 mm
- K1 return ring
- K2 return ring
- 3 K1 fixing pieces
- DVD with assembly/disassembly instructions and training video

## **Application:**

New double clutches for Renault vehicles with a DC4 transmission and for Ford vehicles with a DPS6 transmission are in principle fitted with a transport fastener. This means that no additional work is necessary prior to assembly. The transport fastener must be put back in place if the double clutch is used again after disassembly, e.g. because work has been carried out on the transmission seals. The reset tool kit (part no. 400 0425 10) must be used for this type of work.

## Supplementary information:

#### **Brochures:**

The dry double clutch, technology/special tools Order no.: 999 6006 360

LuK repair solution for dry double clutches, Renault 6-speed DC4 transmission Order no.: 999 6006 310

#### Video:

Resetting the transport lock, Renault 6-speed DC4 transmission

## DVD:

LuK RepSet 2CT Order no.: 999 6006 090 Brochures, videos, 2 languages





# 1.9 Overview of 2CT tool kit applications

The table below shows which tool kits need to be combined if no LuK special tool is available yet.

|          | Application                                 | Audi, SEAT, Škoda, VW<br>1st generation | Audi, SEAT, Škoda, VW<br>2nd generation | Renault |
|----------|---|---|---|---------|
|          | Basic tool kit<br>Part no. 400 0418 10      | x                                       | Х                                       | х       |
| Tool kit | Volkswagen tool kit<br>Part no. 400 0419 10 | Х                                       | Х                                       |         |
|          | Renault tool kit<br>Part no. 400 0423 10    |   |   | Х       |

This table illustrates how the tool systems are combined if the LuK double clutch special tool part no. 400 0240 10 is already available.

|          | Application                                       | Audi, SEAT, Škoda, VW<br>1st generation | Audi, SEAT, Škoda, VW<br>2nd generation | Renault |
|----------|---|---|---|---------|
|          | Previous LuK special tool<br>Part no. 400 0240 10 | х                                       | Х                                       | х       |
| Tool kit | Supplementary tool kit<br>Part no. 400 0420 10    |   | Х                                       | Х       |
|          | Renault tool kit<br>Part no. 400 0423 10          |   |   | Х       |

If a Ford or Renault double clutch already in use is reassembled, the transport fasteners must be reset using the specified tool.

|          | Application                            | Audi, SEAT, Škoda, VW<br>1st generation | Audi, SEAT, Škoda, VW<br>2nd generation | Renault |
|----------|--|---|---|---------|
| Tool kit | Reset tool kit<br>Part no. 400 0425 10 |   |   | Х       |

# 2 INA special tools 2.1 OAP/OAD tool kit





## Part no. 400 0338 10

## Content:

- 17x20 Multipoint adapter with 33 teeth, A/F 21mm
- Hexagonal adapter, A/F 21/28mm
- Torx bit with hexagonal socket TX50, A/F 12mm, 53mm long
- Hexagonal bit with internal hexagonal socket A/F 10mm, 40mm long
- Multipoint bit with hexagonal socket XZN M10, A/F 12mm, 53mm long
- Adapter with 3 bolts, A/F 21mm
- Hexagonal adapter, A/F 17/21mm
- Multipoint bit with 1/2-inch socket, XZN M10, 73mm long
- Multipoint bit with multipoint adapter, 12x14 (31 teeth, A/F 21mm) and 1/2-inch socket, XZN M10, 75mm long
- Mulitpoint bit with 1/2-inch socket, XZN M10, 103mm long

- Torx bit with multipoint adapter, 12x14, (31 teeth, A/F 21mm) and 1/2-inch socket, TX50, 75mm long
- Torx bit with 1/2-inch socket, TX50 M10, 73mm long
- 8mm hexagonal bit with hexagonal socket, A/F 13mm, 64mm long
- 10mm hexagonal bit with hexagonal socket, A/F 13mm, 64mm long

## Application:

For removal and installation of overrunning alternator pulleys.

## Supplementary information:

**Brochure:** Belt drive components Oder no.: 944 1000 240

Service Info: OAP/OAD tool kit, INA 0111





## Part no. 400 0200 10

#### Content:

Multipoint bit with adapter, (33 teeth, A/F 21mm) and 1/2-inch socket, XZN M10, 125mm long

## Application:

For removal and installation of overrunning alternator pulleys.



Supplementary information:

**Brochure:** Belt drive components, Oder no.: 944 1000 240

\* also included in OAP/OAD tool kit 400 0338 10

# 2.1.2 Socket wrench set for alternators\*

## Part no. 400 0231 10

## Content:

Hexagonal adapter, A/F 21/28mm, multipoint bit with hexagonal socket, XZN M10, A/F 12mm, 64mm long

## Application:

For removal and installation of overrunning alternator pulleys.



Supplementary information:

**Brochure:** Belt drive components, Oder no.: 944 1000 240

 $^{\star}$  also included in OAP/OAD tool kit 400 0338 10

# 2.1.3 Socket wrench set for alternators\*

## Part no. 400 0233 10

## Content:

Hexagonal bit with internal hexagonal socket, A/F 10mm, 40mm long, multipoint adapter 17x20 with 33 teeth, A/F 21mm

## Application:

For removal and installation of overrunning alternator pulleys.



Supplementary information:

**Brochure:** Belt drive components, Oder no.: 944 1000 240





## Part no. 400 0234 10

## Content:

Multipoint bit with hexagonal socket, XZN M10, A/F 12mm, 53mm long, multipoint adapter 17x20 with 33 teeth, A/F 21mm

## Application:

For removal and installation of overrunning alternator pulleys.



Supplementary information:

**Brochure:** Belt drive components, Oder no.: 944 1000 240

\* also included in OAP/OAD tool kit 400 0338 10

# 2.1.5 Socket wrench set for alternators\*

## Part no. 400 0235 10

## Content:

Torx bit with hexagonal socket, TX50, A/F 12mm, 53mm long, multipoint adapter 17x20 with 33 teeth, A/F 21mm

## **Application:**

For removal and installation of overrunning alternator pulleys.



Supplementary information:

**Brochure:** Belt drive components, Oder no.: 944 1000 240

\* also included in OAP/OAD tool kit 400 0338 10

FAG

# **3 FAG special tools**

3.1 FAG special tool for Light Commercial Vehicles



## Part no. 400 6199 10

## Content:

- Base plate
- Pull / pressure plate with bridge (ø 96 mm bearing – Mercedes-Benz Sprinter and VW Crafter
- Closing plate (ø 96 mm bearing)
- Pull / pressure plate (ø 92 mm bearing) without closing plate
- Closing plate (ø 92 mm bearing)
- 3 knurled screws M14 x 1.5
- 2 retaining pins with O-ring
- Hydraulic cylinder 17t
- Adapter 2 1/4 -14 UNS to M42 x 2
- Pull / pressure spindle M20 x 600 mm
- Pressure nut with pilot pin (w/o O-ring)
- 2 supporting rods 275 mm
- Supporting rod transverse bore
- Screw with cone M16 x 1.5 x 80
- 4 washers ø 19 mm
- 3 shoulder nuts M18

- 2 hexagon socket screws M14 x 70
- Reinforcing rail 196 mm
- Reinforcing rail 140 mm
- Steering knuckle mounting bracket
- DVD with removal / installation instructions

## Application:

Front wheel bearing removal/assembly on Mercedes-Benz Sprinter, Vito, Viano and VW Crafter, with RWD.

## Supplementary information:

## **Brochure:**

FAG wheel bearing repair solution for light commercial vehicles Order no.: 955 1000 590

## Service Info:

Wheel bearing repair solution for vans, FAG0021

## Video:

FAG wheel bearing repair solution for light commercial vehicles

## DVD:

Wheel bearing repair solution for light commercial vehicles Order no.: 955 1000 600 Brochure, video, 6 languages

# **4 Ruville special tools**

COD RUVILLE



## Part no. 1002226

## **Content:**

- 2 long threaded spindles (part no. 1002221), M20x1.5x800mm
- Coupling sleeve (part no. 1002224) M20x1.5x100mm
- Short threaded spindle (part no. 1002222) M20x1,5x400mm
- Thrust tube (part no. 1002216) 57x65x-240mm
- 2 thrust pieces (part no. 1002217 & 1002218) 50.6x56.5/65x11mm and 47.7x56.5/65x11mm
- 2 thrust pieces (part no. 1002220 & 1002227) 21x33/50x20mm and 21x27/50x20mm
- End piece (part no. 1002219) 21x56.5/65x20mm
- Protective tube (part no. 1002223) 25x2x-150mm
- 2 axial bearings (part no. 51204)
- 2 tool nuts (part no. 31305)
- Lubricant (part no. 71343) Molykote GN+

## **Application:**

Tool kit for the removal and installation of rear axle journals on different PSA models equipped with torsion bar rear axles.

## Supplementary information:

**Brochures:** 

Fitting instructions Citroen AX and Saxo; Peugeot 106 and 206 Order no.: 999 0193 730

## Supplementary information:

#### Brochures:

Fitting instructions Citroën Berlingo and Peugeot Partner Order no.: 999 0194 310

Tool user manual 1002226

Service Info: Technical Info no. 1106

## Video:

Axle journal repair on Citroën Berlingo & Peugeot Partner rear

Axle journal repair on Citroën Berlingo & Peugeot Partner rear axles, long version

# 4.2 Torsion bar tool kit





## Part no. 1002240

## Content:

- Impact weight (part no. 1002228)
- Guide bar (part no. 1002229)
- 2 locking bars (part no. 1002230 & 1002231)
- 2 thrust pins (part no. 1002233 & 1002234)
- Connector (part no. 1002232)
- Thrust washers incl. screws (part no. 1002237 & 1002238 & 41127)
- 2 threaded spindles (part no. 1002236)
- 2 angle pieces (part no. 1002235)
- Locking wedge (part no. 1002239)
- 2 threaded spindles (part no. 1002242)

## **Application:**

Tool kit for torsion bar removal on Renault and PSA rear axles.

## Supplementary information:

Service Info: Technical Info Nr.1136

## Film:

Axle journal repair on Citroën Berlingo & Peugeot Partner rear axles, short version

Axle journal repair on Citroën Berlingo & Peugeot Partner rear axles, long version



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