

WBP10

Repair instructions





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WBP10



1. Models described

These repair instructions describe how to repair the following models:

Model	Order number
WBP10	7 205 51 ...



2. Technical data

Technical data

All the technical data can be found in the operating instructions for the model.

Test data

Up-to-date test data for all models can be found on the FEIN Extranet (Customer Service → Repair Guides).

Lubricants

The lubricants and container sizes available from FEIN can be found on the FEIN Extranet (Customer Service → Repair Guides).

Lists of spare parts

Lists of spare parts and exploded views are available online at www.fein.com



3. Notes and requirements

Please note

These instructions are only intended for persons with suitable technical training. It is assumed that the reader has mechanical and electrical training.

Only use original FEIN spare parts.

Provisions

Please note that power tools may only be repaired, maintained and checked by a trained electrician, as improper repair can result in serious risks to the user.

The provisions set out in **DIN VDE 0701-0702** should be observed after repairs.

The relevant accident prevention regulations of the employer's liability insurance associations are to be observed when commissioning.

The German Equipment and Product Safety Act [ProdSG] applies for correct use.

Outside Germany, the regulations applicable in the relevant country must be observed.



4. Tools required

Standard tools

Torx	T20
Cross-tip screwdriver	PH1, PH2
Slotted screwdriver (small)	
Circlip pliers	
Plastic hammer	
Arbor press	
Punch	
Long-nosed pliers	
Drill chuck key	
Cylinder head screw	M8x60
Sleeve	Inner dia. 11 mm Outer dia. 26 mm Inner dia. 16 mm Outer dia. 20 mm Inner dia. 12 mm Outer dia. ~16 mm Inner dia. 10 mm Outer dia. 26 mm

Special tools

Assembly aid	6 41 22 121 01 0
Expansion wedge, 12 mm	6 33 05 009 01 3
Drawing-off socket cap	6 41 04 150 00 8
Chuck cone, dia. 16 mm	6 41 07 016 00 1
Chuck cone, dia. 17 mm	6 41 07 017 00 0
Chuck cone, dia. 19 mm	6 41 07 019 00 7
Chuck cone, dia. 22 mm	6 41 07 022 00 1
Chuck cone, dia. 26 mm	6 41 07 026 00 0



4. Tools required

Standard tools

Sleeve

Inner dia. 9 mm
Outer dia. 22 mm

Inner dia. 12 mm
Outer dia. ~15 mm

Inner dia. 16 mm
Outer dia. ~25 mm

Inner dia. 5 mm
Outer dia. 15 mm

Inner dia. 13 mm
Outer dia. 25 mm

Inner dia. 8 mm
Outer dia. ~17 mm

Inner dia. 8 mm
Outer dia. ~19 mm



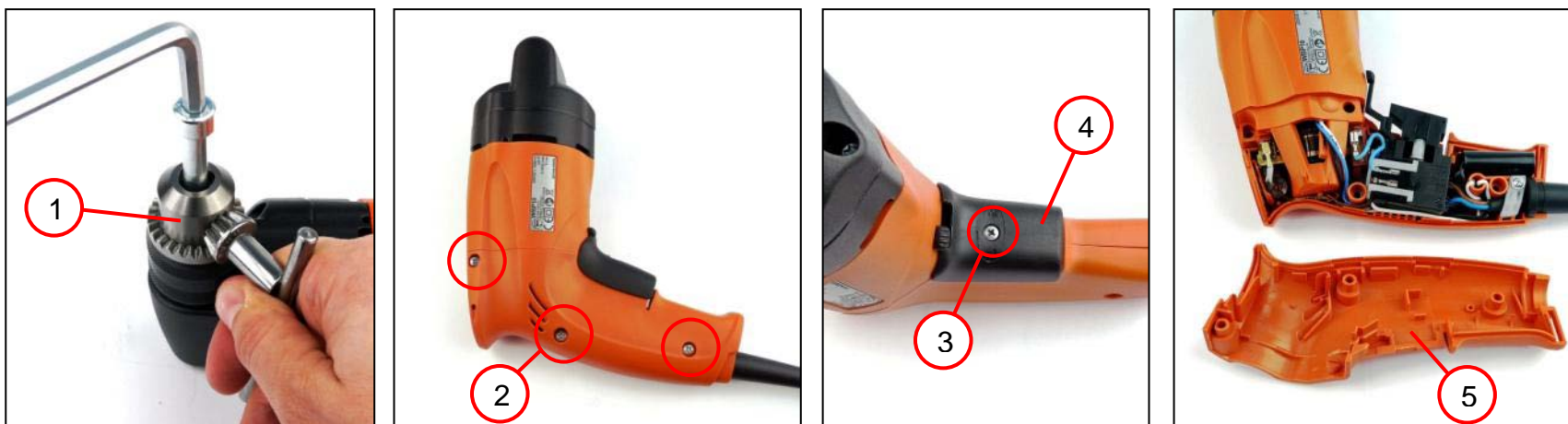
5. Lubricants and auxiliary substances required

Lubricants

Grease	0 40 101 0100 4	25 g	Housing
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6. Removal

Removing the handle half shell



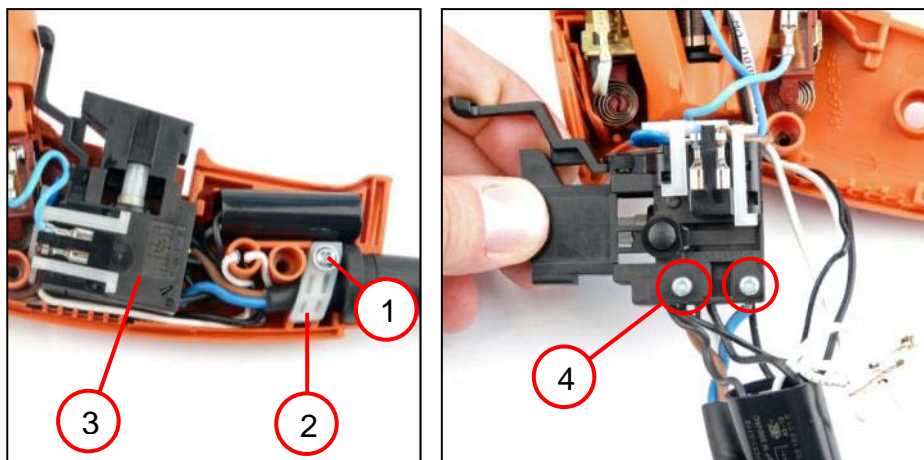
1. Remove the key-type drill chuck (1).
2. Unscrew the three screws (2).
3. Unscrew the countersunk screw (3).
4. Remove the switch pushbutton (4).
5. Remove the handle half shell (5).

Tools:

- M8x60 cylinder head screw
- 6 mm hex key
- Drill chuck key
- PH2 cross-tip screwdriver

6. Removal

Removing the cable with plug



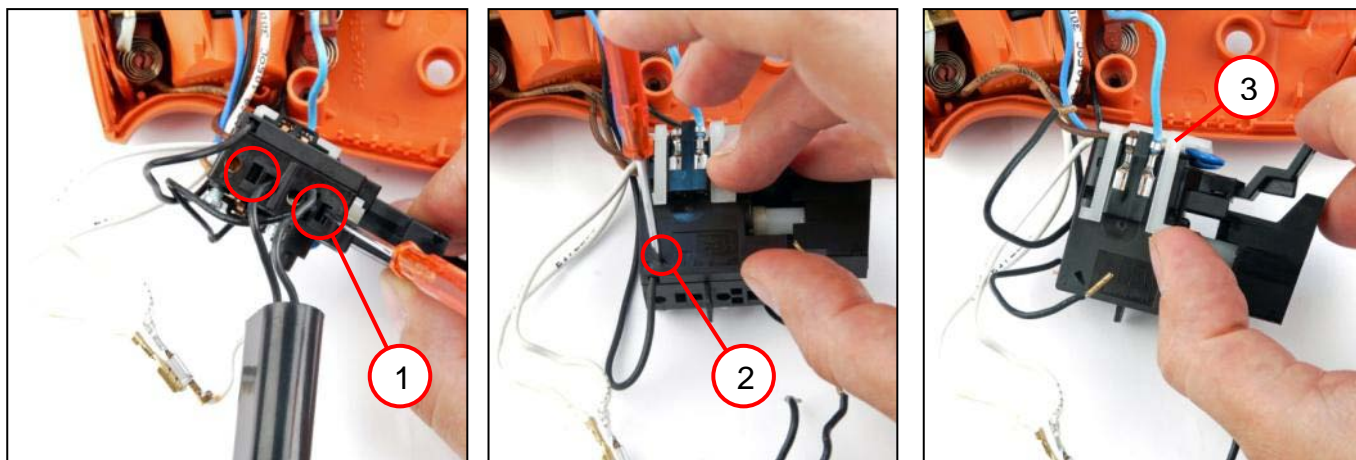
1. Unscrew the screw (1).
2. Remove the cable clamping piece (2).
3. Remove the speed setting switch (3).
4. Undo the two screws (4) and remove the cable with plug.

Tools:

- PH2 cross-tip screwdriver

6. Removal

Removing the speed setting switch



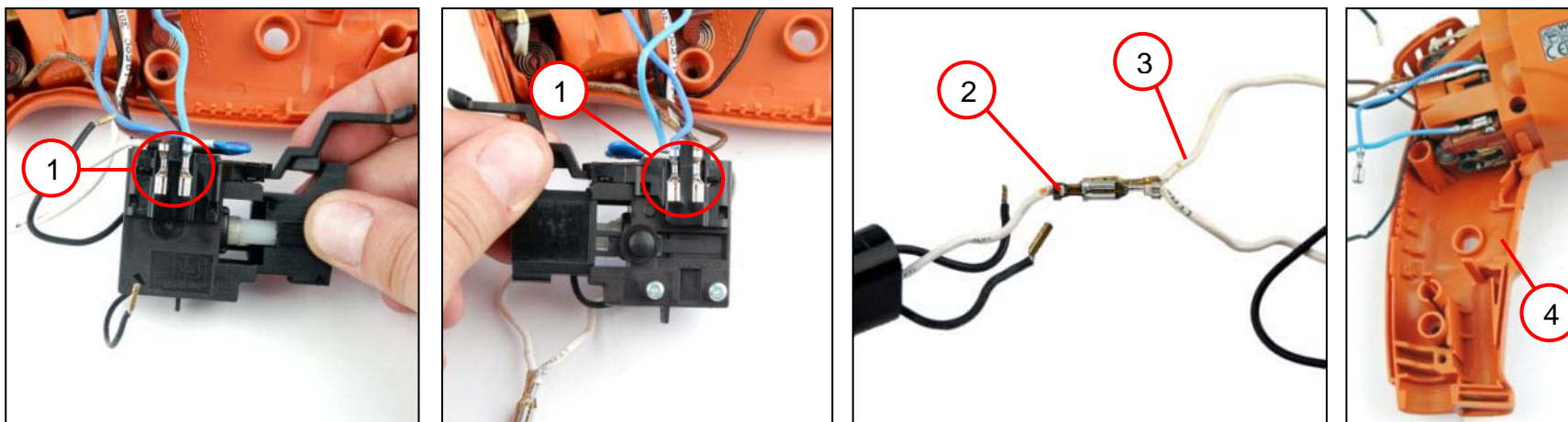
1. Press the spring terminals (1) to open them and pull out the stranded wires.
2. Press the spring terminal (2) to open it and pull out the stranded wire.
3. Remove the holder (3).

Tools:

- Slotted screwdriver (small)

6. Removal

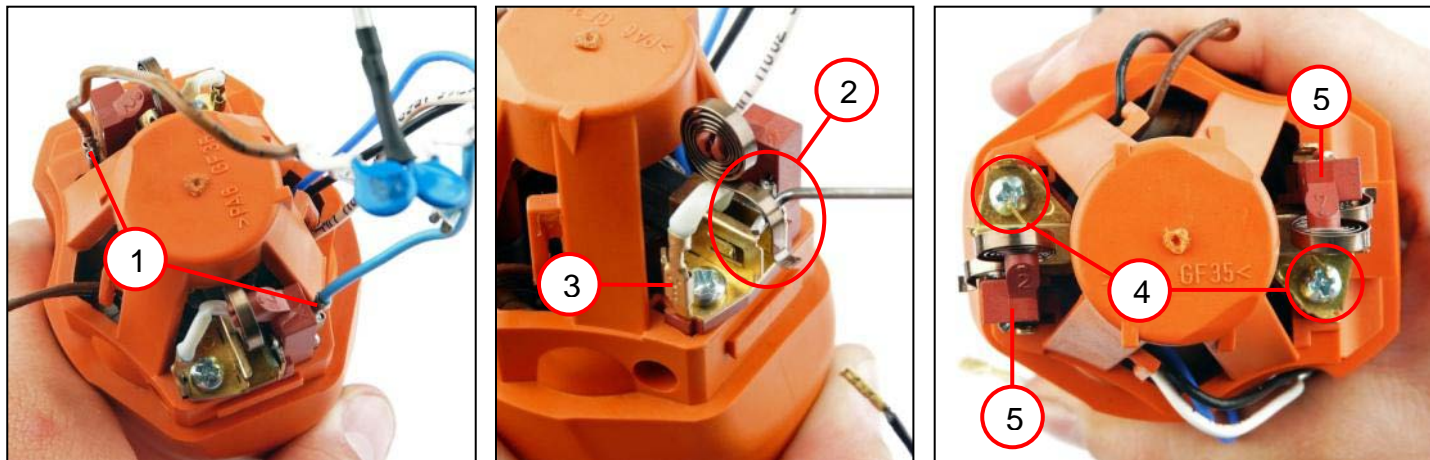
Removing the speed setting switch



1. Remove all plugs (1).
2. Pull out the capacitor's connection cable (2).
3. Pull out the connecting cable (3).
4. Remove the lower part of the handle (4).

6. Removal

Removing the carbon brushes and carbon brush holders



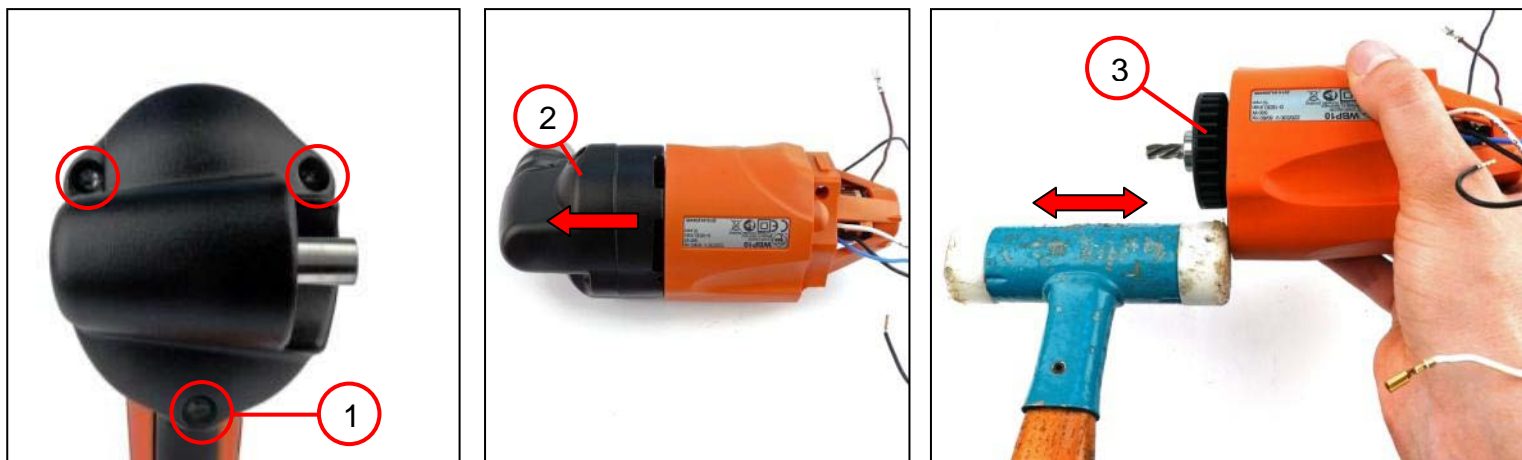
1. Pull out the radio shielding connection cables (1).
2. Lift the spring (2) on each of the carbon brush holders to one side.
3. Pull out the connection cable (3) from each of the carbon brushes.
4. Remove each of the carbon brushes.
5. Unscrew the screws (4).
6. Remove the carbon brush holders (5).

Tools:

- PH2 cross-tip screwdriver
- Assembly aid

6. Removal

Removing the motor housing



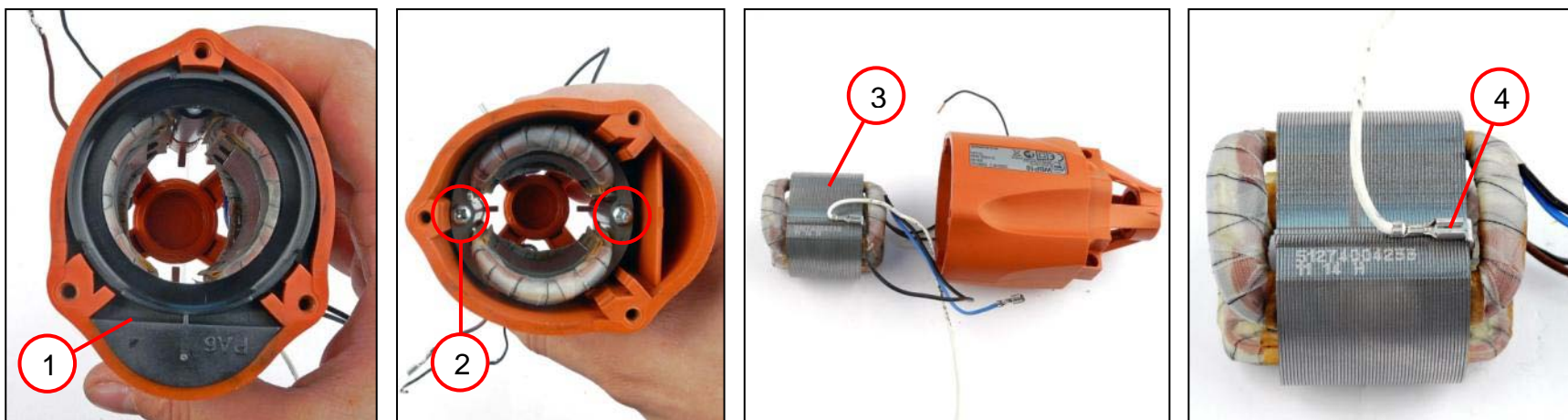
1. Unscrew the three screws (1).
2. Remove the gearbox head (2) together with the intermediate gear box.
3. Remove the armature (3) from the motor housing.

Tools:

- Torx T20
- Plastic hammer

6. Removal

Removing the motor housing



1. Remove the air guide ring (1).
2. Unscrew the two screws (2).
3. Remove the stator (3) from the motor housing.
4. Pull out the connecting cable (4).

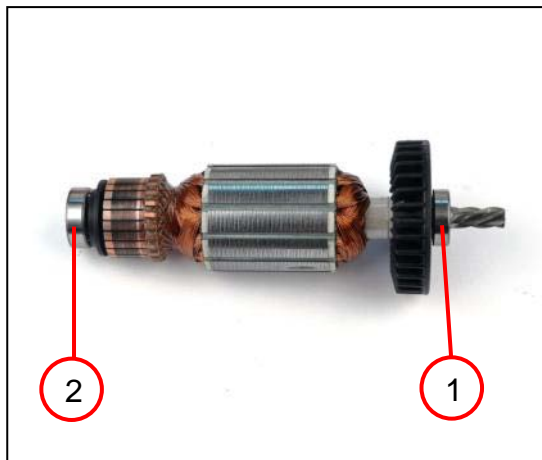
Tools:

- PH2 cross-tip screwdriver



6. Removal

Removing the armature



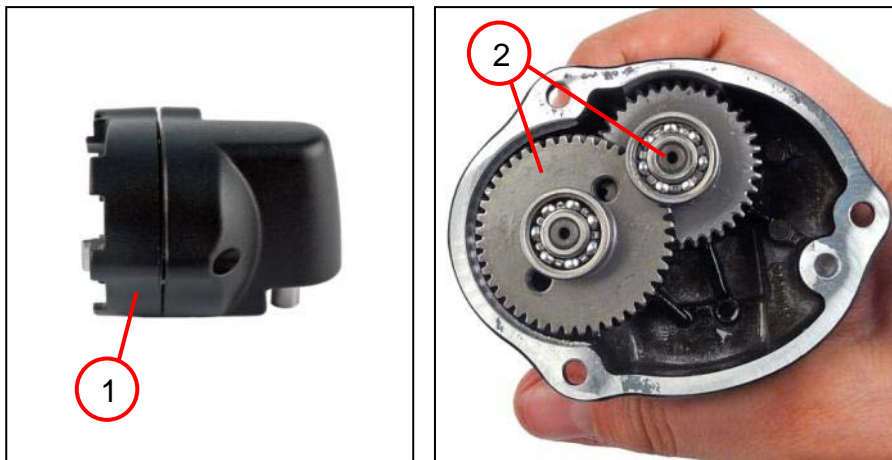
1. Pull off the grooved ball bearing (1).
2. Pull off the grooved ball bearing (2).

Tools:

- Drawing-off socket cap
- Chuck cone, dia. 17 mm
- Chuck cone, dia. 19 mm

6. Removal

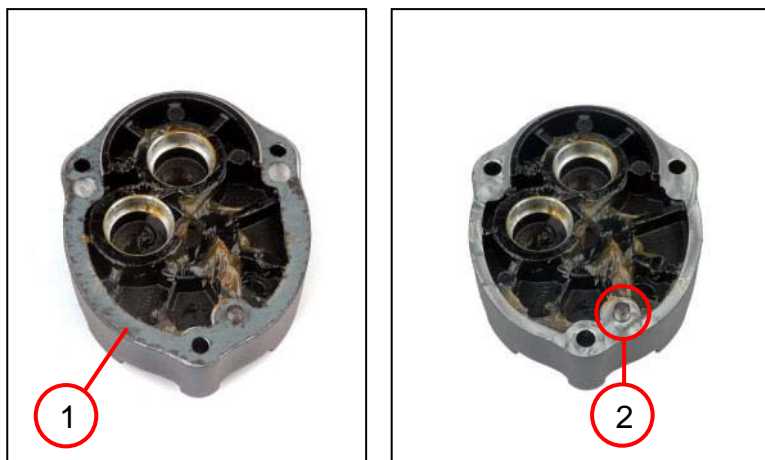
Removing the gearbox housing



1. Pull the intermediate gear box (1) off the gearbox housing.
2. Remove the gearbox (2) from the gearbox housing.

6. Removal

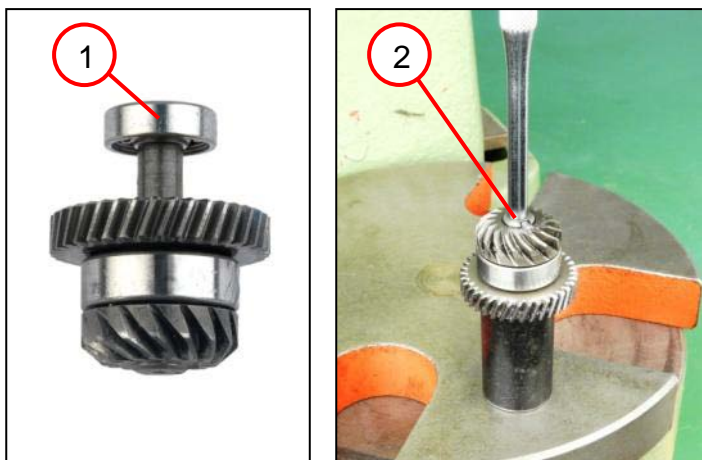
Removing the gearbox housing



1. Remove the seal (1) from the intermediate gear box.
☞ Each time you remove the gearbox housing, dispose of the old seal.
2. Pull the dowel pin (2) out of the intermediate gear box.

6. Removal

Removing the gearbox



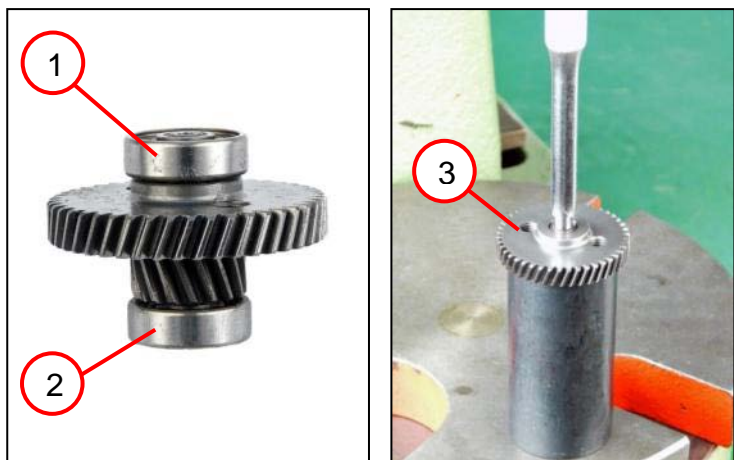
1. Pull the grooved ball bearing (1) off the shaft.
2. Push all the individual parts off the shaft (2).

Tools:

- Drawing-off socket cap
- Chuck cone, dia. 16 mm
- Arbor press
- Punch, dia. 4 mm
- Sleeve Inner dia. 16 mm
Outer dia. ~20 mm

6. Removal

Removing the gearbox



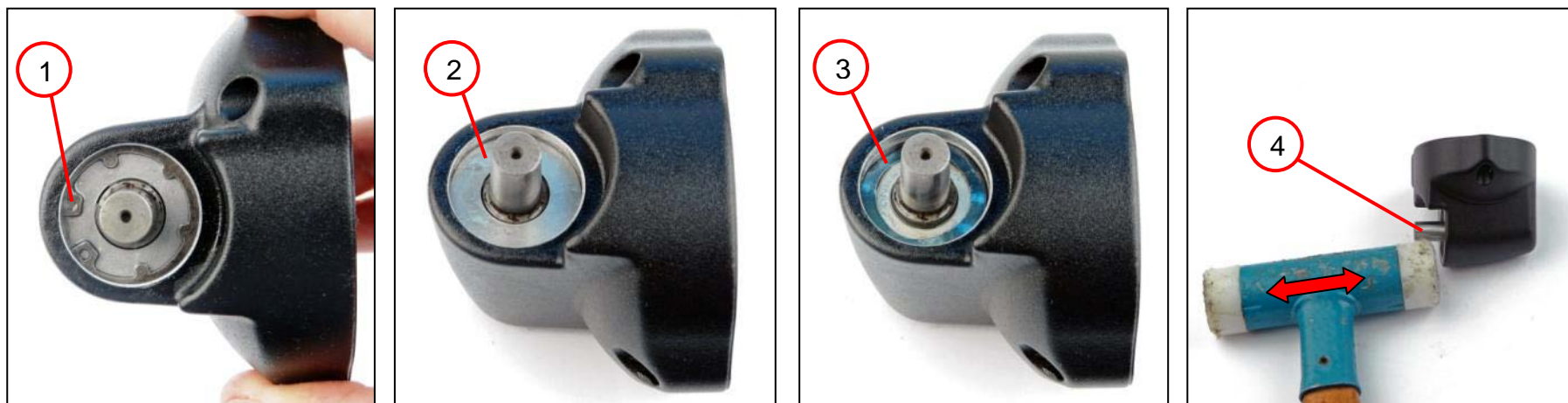
1. Pull the grooved ball bearing (1) off the shaft.
2. Pull the grooved ball bearing (2) off the shaft.
3. Push the gear-wheel [z=44] (3) off the shaft.

Tools:

- Drawing-off socket cap
- Chuck cone, dia. 16 mm
- Arbor press
- Punch, dia. 5 mm
- Sleeve Inner dia. 12 mm
Outer dia. ~16 mm

6. Removal

Removing the gearbox housing



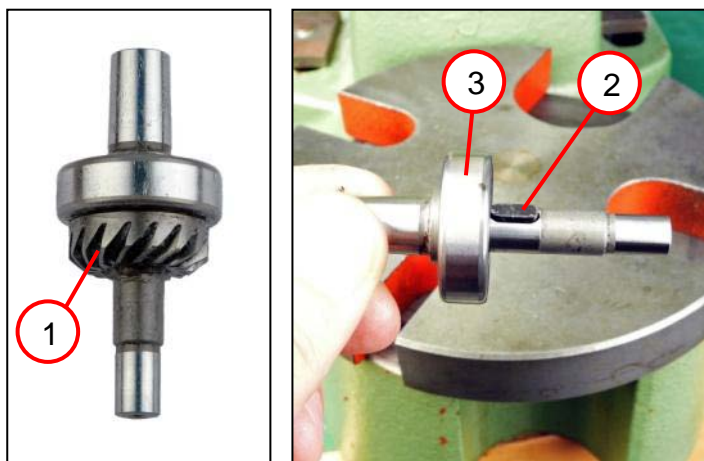
1. Remove the circlip (1).
☞ When refitting the gearbox housing, always use a new circlip.
2. Remove the disc (2).
3. Remove the disc (3).
4. Remove the shaft (4) from the housing.

Tools:

- Circlip pliers
- Plastic hammer

6. Removal

Removing the gearbox



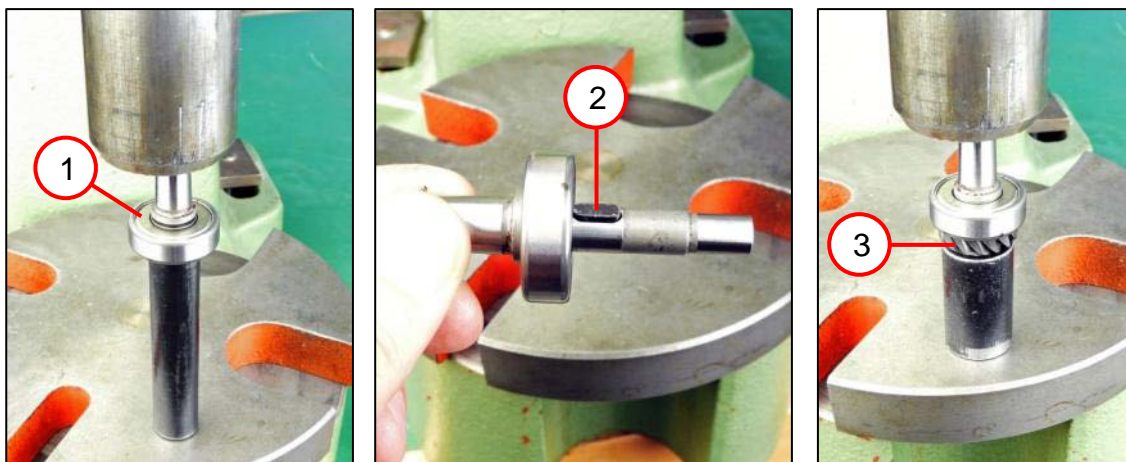
1. Pull the gear-wheel [z=16] (1) off the shaft.
2. Remove the feather key (2).
3. Pull the grooved ball bearing (3) off the shaft.

Tools:

- Drawing-off socket cap
- Chuck cone, dia. 22 mm
- Chuck cone, dia. 26 mm

7. Fitting

Fitting the gearbox



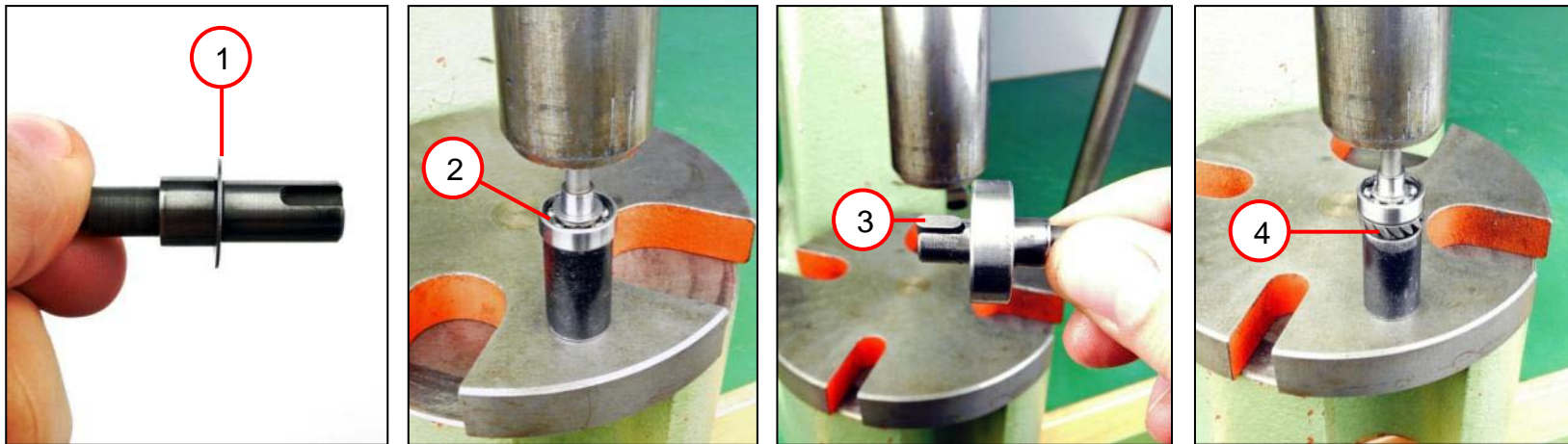
1. Push the grooved ball bearing (1) onto the shaft.
2. Insert the feather key (2) into the recess.
3. Push the gear-wheel [z=16] (3) onto the shaft.

Tools:

- Arbor press
- Sleeve Inner
dia. 10 mm
Outer dia. 26 mm
- Sleeve Inner
dia. 11 mm
Outer dia. 26 mm

7. Fitting

Fitting the gearbox



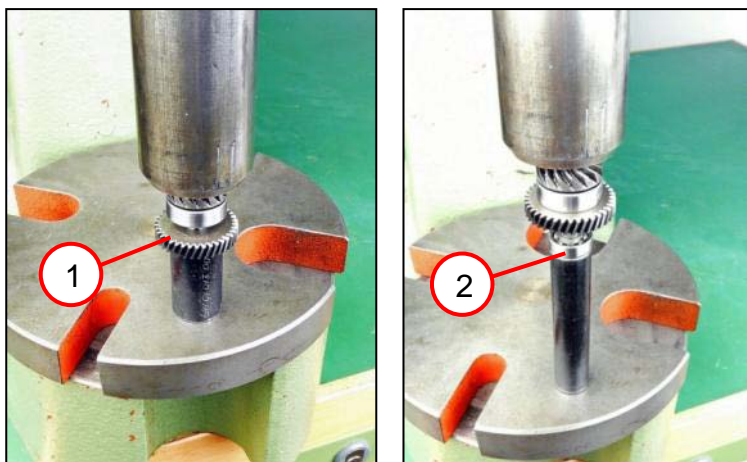
1. Place the disc (1) onto the shaft.
2. Push the grooved ball bearing (2) onto the shaft.
3. Place the feather key (3) into the recess in the shaft.
4. Push the gear-wheel [z=17] (4) onto the shaft.

Tools:

- Arbor press
- Sleeve Inner dia. 9 mm
Outer dia. 22 mm
- Sleeve Inner dia. 12 mm
Outer dia. ~15 mm

7. Fitting

Fitting the gearbox



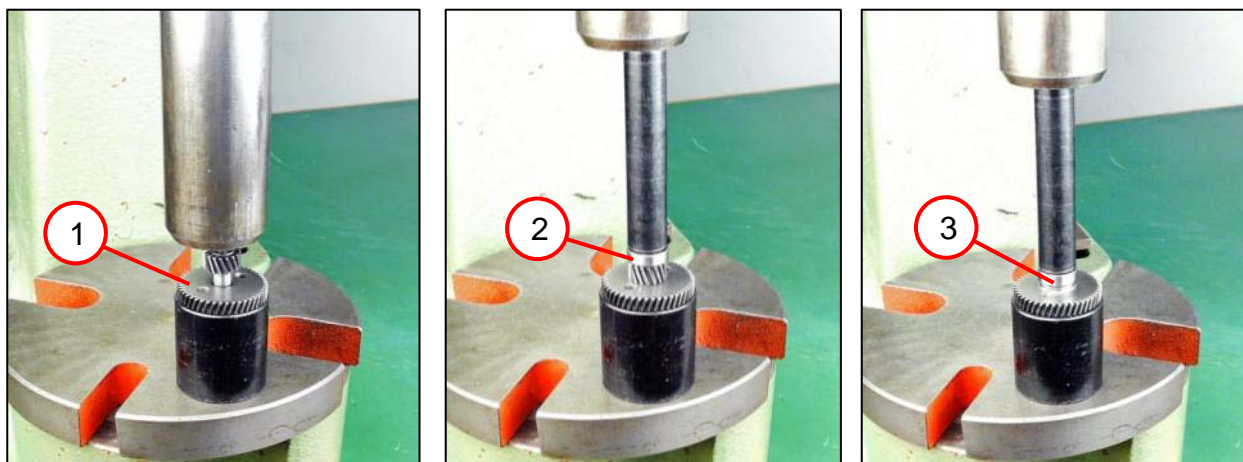
5. Push the gear-wheel (1) onto the shaft.
6. Push the grooved ball bearing (2) onto the shaft.

Tools:

- Arbor press
- Sleeve Inner
dia. 16 mm
Outer dia. ~25 mm
- Sleeve Inner dia. 5 mm
Outer dia. 15 mm

7. Fitting

Fitting the gearbox



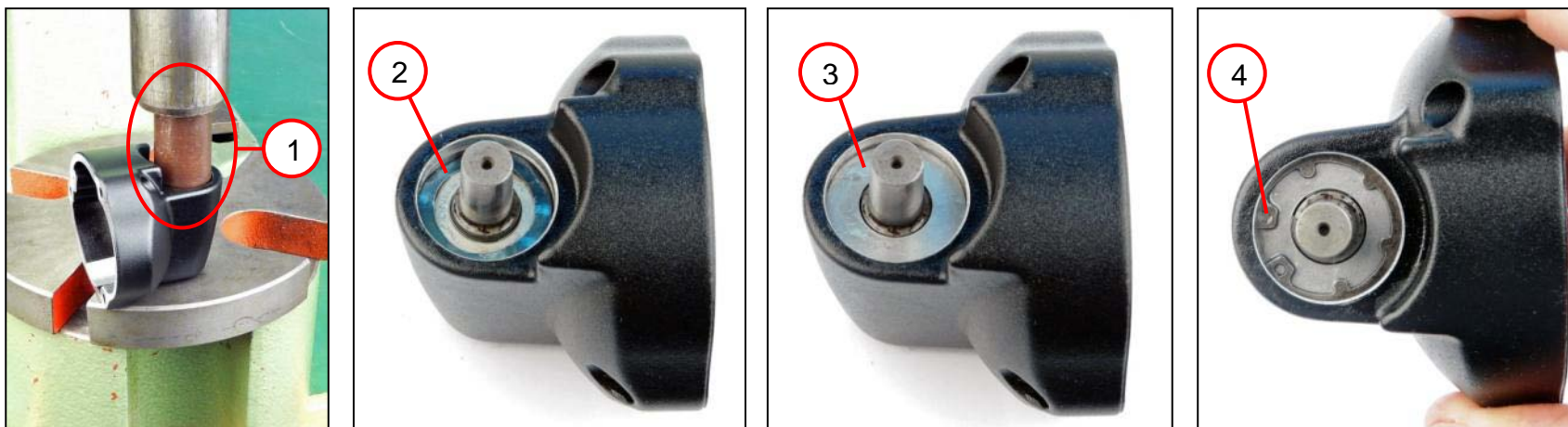
1. Push the gear-wheel (1) onto the shaft.
2. Push the grooved ball bearing (2) onto the shaft.
3. Push the grooved ball bearing (3) onto the shaft.

Tools

- Arbor press
- Sleeve Inner dia. 16 mm
Outer dia. ~25 mm
- Sleeve Inner dia. 5 mm
Outer dia. ~15 mm

7. Fitting

Fitting the gearbox housing



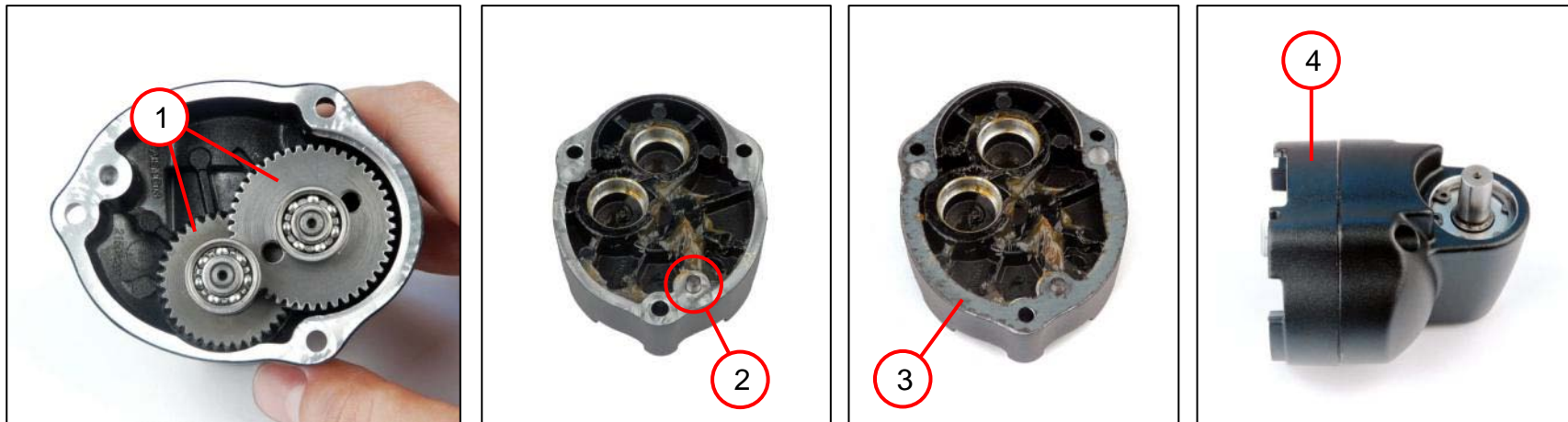
1. Push the shaft (1) into the gearbox housing.
 - ☞ Take care not to damage the needle bearing in the gearbox housing when pushing the shaft in.
2. Insert the disc (2).
3. Insert the disc (3).
4. Fit the circlip (4).
5. When refitting the gearbox housing, always use a new circlip.

Tools:

- Arbor press
- Sleeve Inner dia. 13 mm
Outer dia. 25 mm
- Circlip pliers

7. Fitting

Fitting the gearbox housing

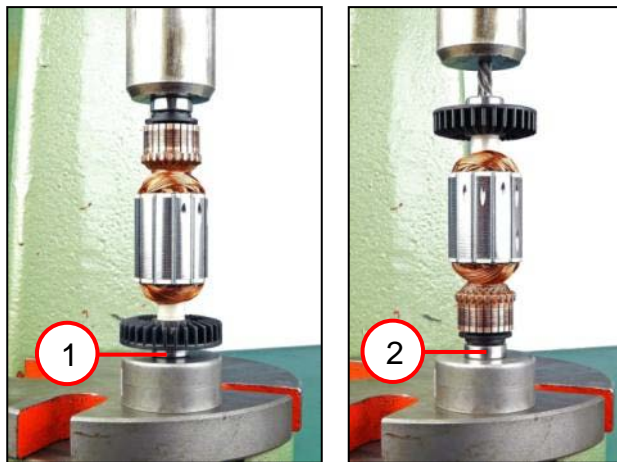


1. Insert the gearbox parts (1) at the same time.
2. Insert the dowel pin (2).
3. Place the seal (3) into the correct position on the intermediate gear box.
☞ When refitting the gearbox housing, always use a new seal.
4. Fit the intermediate gear box (4) to the gearbox housing.



7. Fitting

Fitting the armature



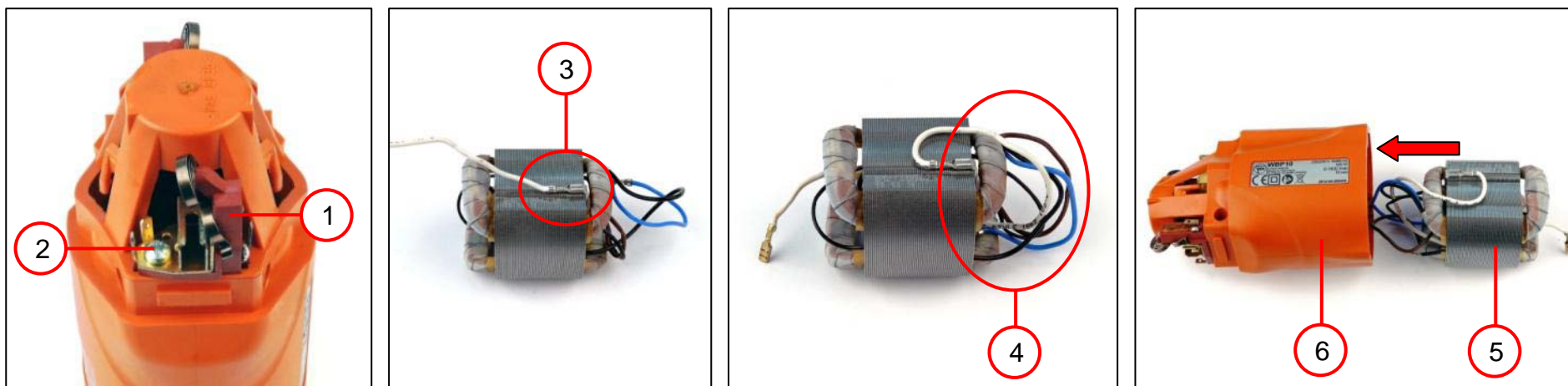
1. Push on the grooved ball bearing (1).
2. Push on the grooved ball bearing (2).

Tools:

- Arbor press
- Sleeve Inner dia. 8 mm
Outer dia. ~17 mm
- Sleeve Inner dia. 8 mm
Outer dia. ~19 mm

7. Fitting

Fitting the motor housing



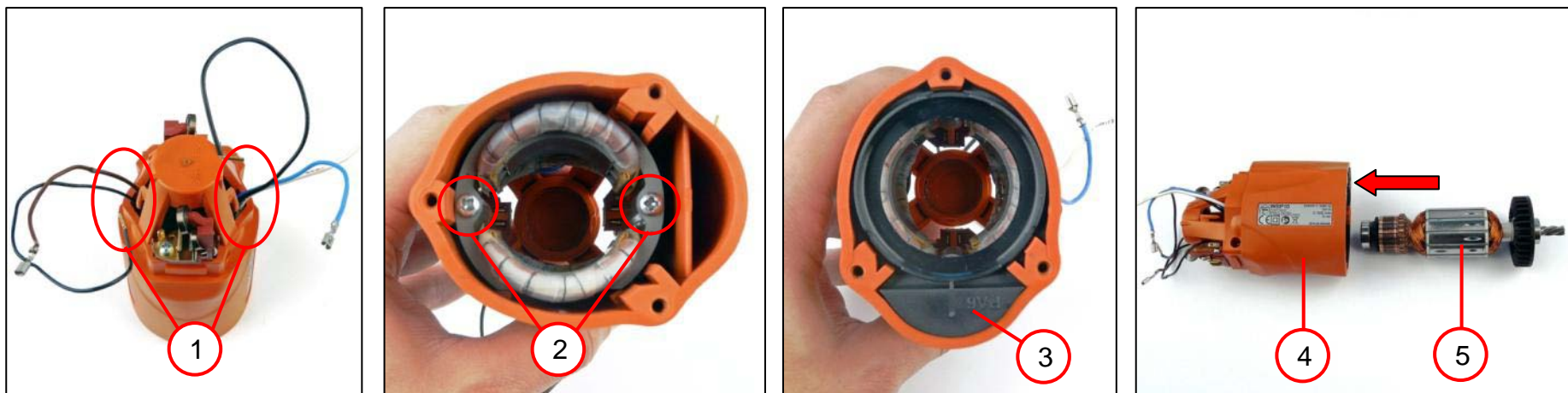
1. Put the carbon bush holder (1) in place and use the screw (2) to fasten it [0.6 Nm +0.1 Nm].
2. Connect the cable (3) to the stator.
3. Insert the cables (4) into the stator.
4. Slide the stator (5) into the correct position in the motor housing (6).

Tools:

- PH2 cross-tip screwdriver

7. Fitting

Fitting the motor housing



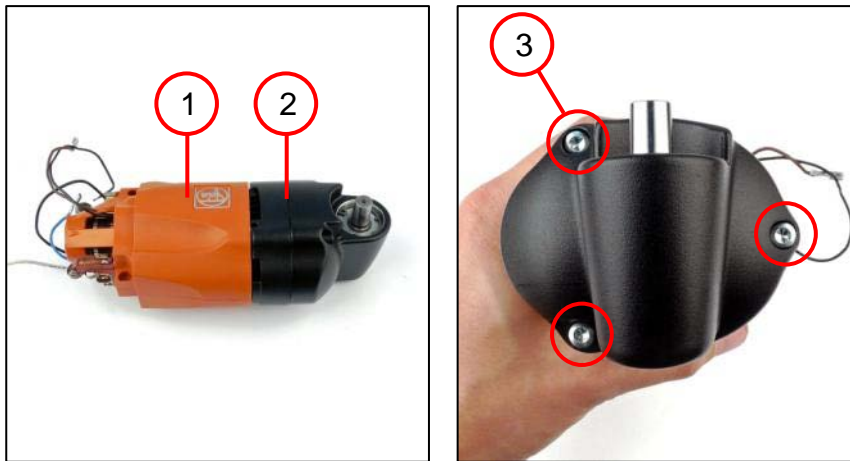
1. Remove the cables (1) from the stator.
2. Use the two screws (2) to fasten the stator [1 Nm +0.4 Nm].
3. Insert the air guide ring (3).
4. Slide the armature (5) into the housing (4).

Tools:

- Assembly aid
- PH2 cross-tip screwdriver

7. Fitting

Fitting the housing



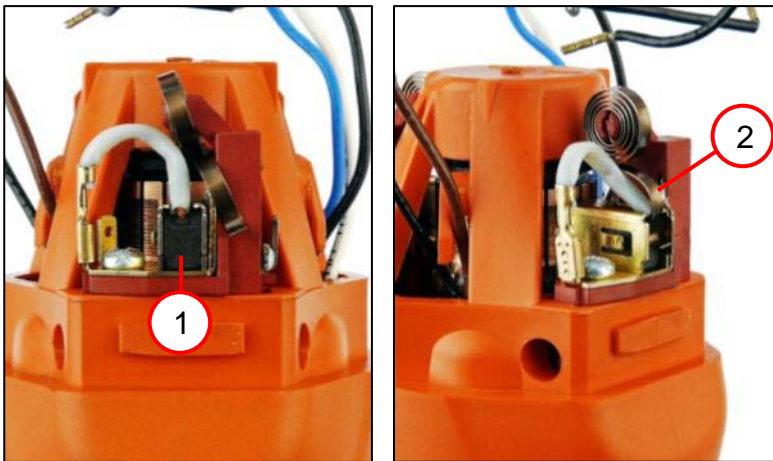
1. Fit the motor housing (1) to the gearbox housing (2).
2. Use the three screws (3) to fasten the gearbox housing [1.8 Nm +0.2 Nm].

Tools:

- Torx T20

7. Fitting

Fitting the carbon brushes



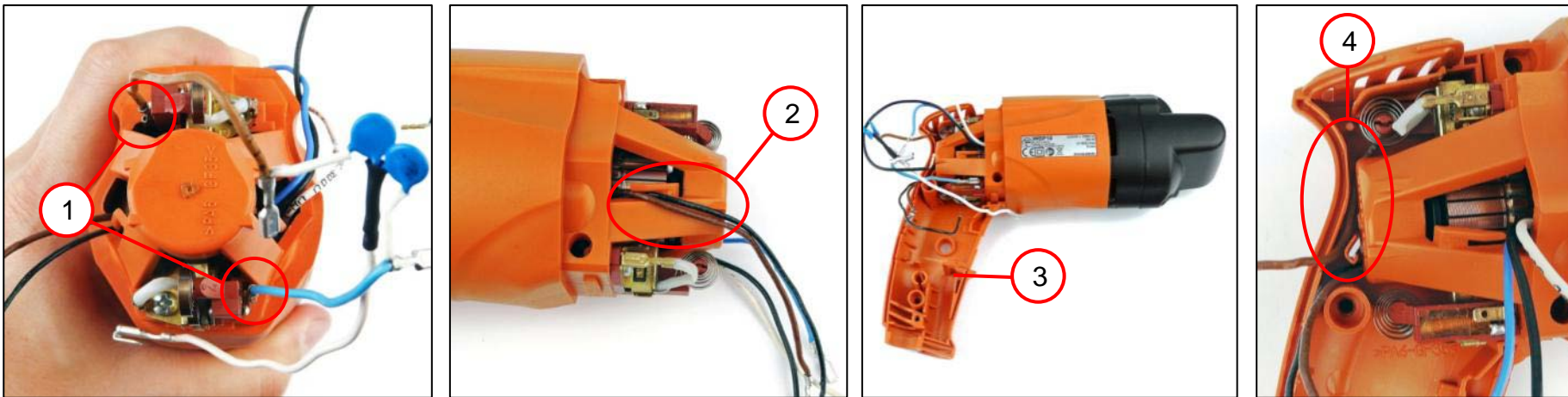
1. Fit each of the carbon brushes (1) in the correct position and connect them.
2. Place a spring (2) on each of the carbon brushes.

Tools:

- Assembly aid

7. Fitting

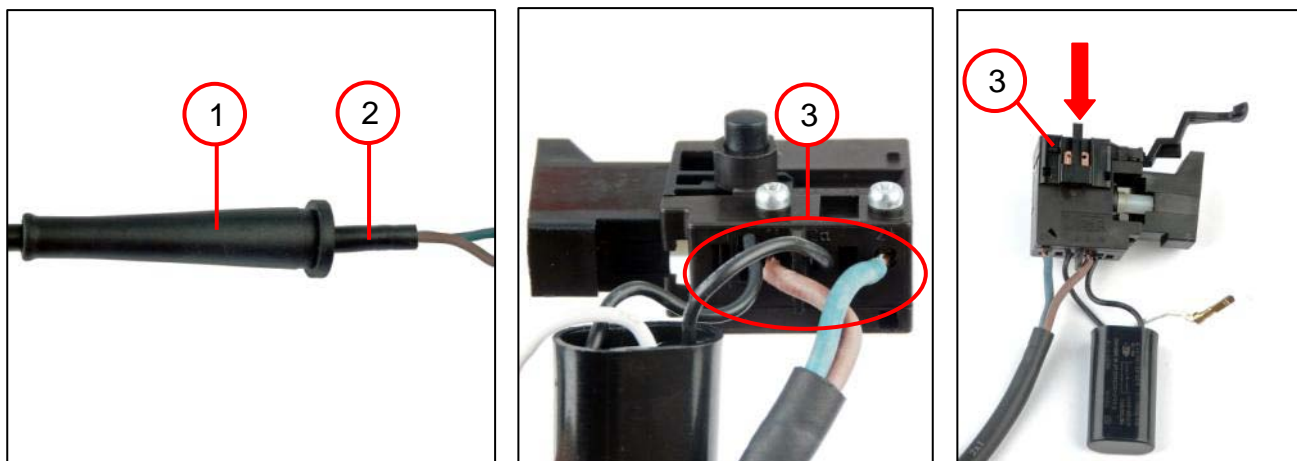
Fitting the electronics



1. Connect the long radio shielding cables to the brush holders.
☞ See "Connection diagram".
2. Route the cables (2) as shown in the photograph.
3. Fit the handle half shell (3).
4. Route the brown radio shielding cable (4) as shown in the photograph.

7. Fitting

Fitting the electronics



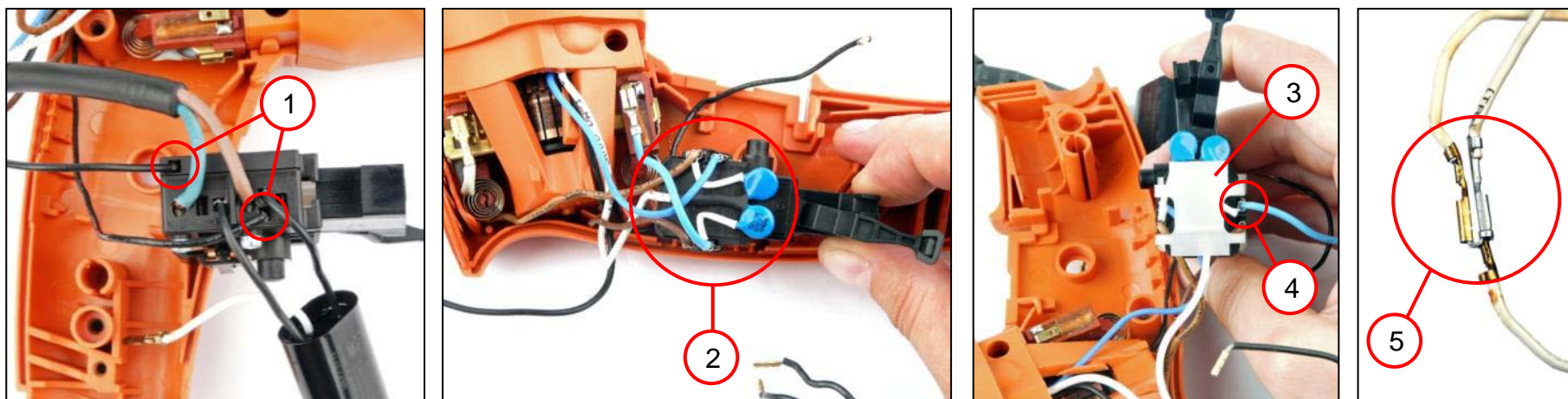
1. Slide the cable grommet (1) onto the cable (2).
2. Connect the cable and the capacitor (3) to the speed setting switch.
☞ See "Connection diagram".
3. Fit the toggle switch (3) to the speed setting switch.

Tools:

- PH1 cross-tip screwdriver

7. Fitting

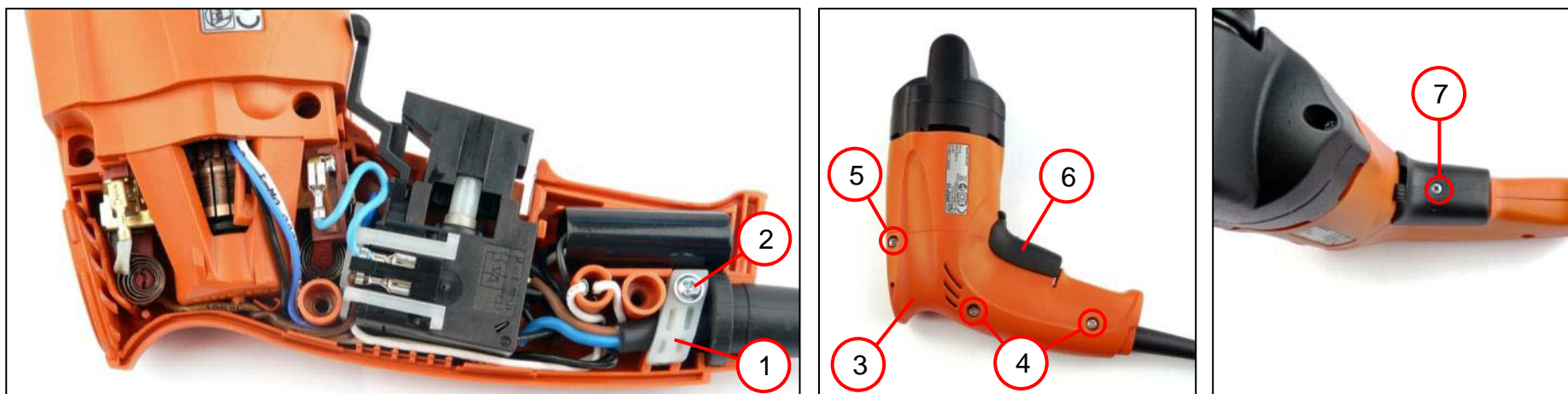
Fitting the battery



1. Connect the two black connection cables (1) from the stator to the speed setting switch.
2. Connect all cables to the toggle switch (2).
 - ☞ Start with the radio shielding.
 - ☞ See “Connection diagram”.
3. Fit the cover (3) on the speed setting switch.
 - ☞ The blue cable (4) is outside of the cover.
4. Connect the three cables (5) to one another.
 - ☞ See “Connection diagram”.

7. Fitting

Fitting the battery



1. Put all the electronic components in place in the housing half as shown in the first photograph.
2. Route all the cables as shown in the first photograph.
3. Fit the cable clamping piece (1) and use the screw (2) to screw it in place [0.7 Nm +0.1 Nm].
4. Fit the second housing half (3).
5. Screw in the two screws 9x22 (4) [1.2 Nm +0.2 Nm].
6. Screw in the screw 4x30 (5) [1.2 Nm +0.2 Nm].
7. Put the switch pushbutton (6) in place and use the countersunk screw (7) to fasten it [0.6 Nm +0.2 Nm].

Tools:

- PH2 cross-tip screwdriver



7. Fitting

Fitting the key-type drill chuck



1. Degrease the shaft and the key-type drill chuck.
2. Connect the key-type drill chuck (1) to the shaft.
3. Tap the key-type drill chuck with a plastic hammer to fix it in place.

Tools:

- Plastic hammer

8. Connection diagram

