



KBE 35 (7 270 50 ... ..)



**Technical data****Technical data**

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

**Tests**

Up-to-date test data and test instructions after repair can be found on the FEIN Extranet (Customer Service → Repair Guides).

**Lubricants / Auxiliary substances**

The lubricants or auxiliary substances and their 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](http://www.fein.com)

**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.**



**Lubricants and auxiliary substances required**

**Lubricants and auxiliary substances**

Grease    0 401 18 0300 9    120 g    gearbox

**KBE 35**

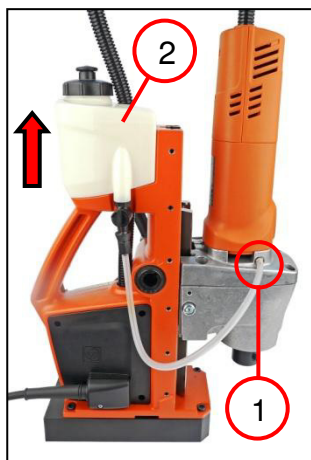
**Troubleshooting**



**Not yet available.**



### Removing the container



#### NOTE:

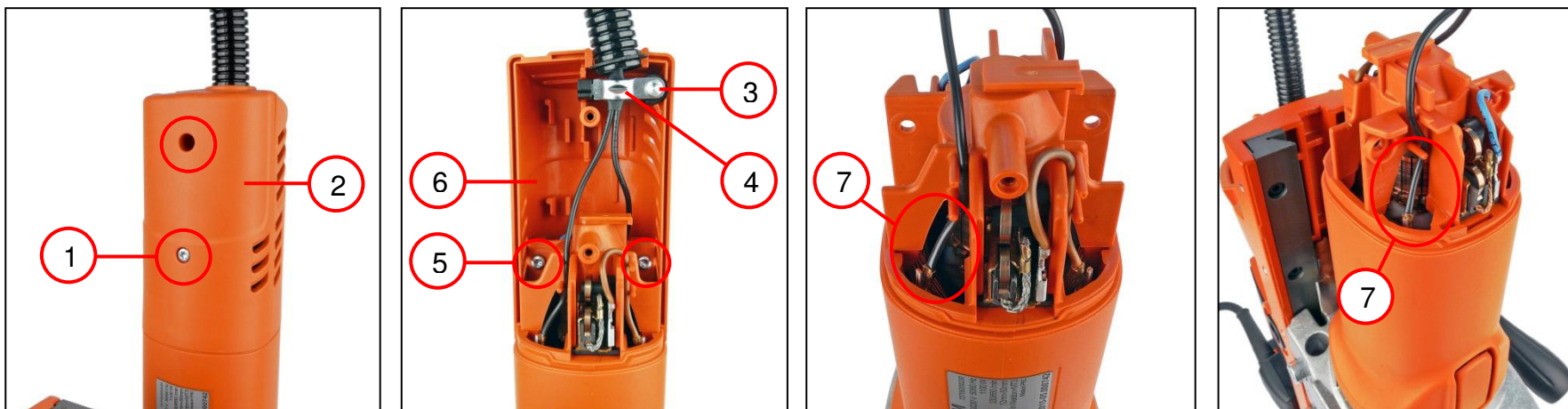
Fluid may be present in the container.

☞ Drain the container (2) before removal.

1. Remove the hose (1) from the hose socket.
2. Remove the container (2).

## Removal

### Removing the connecting cable



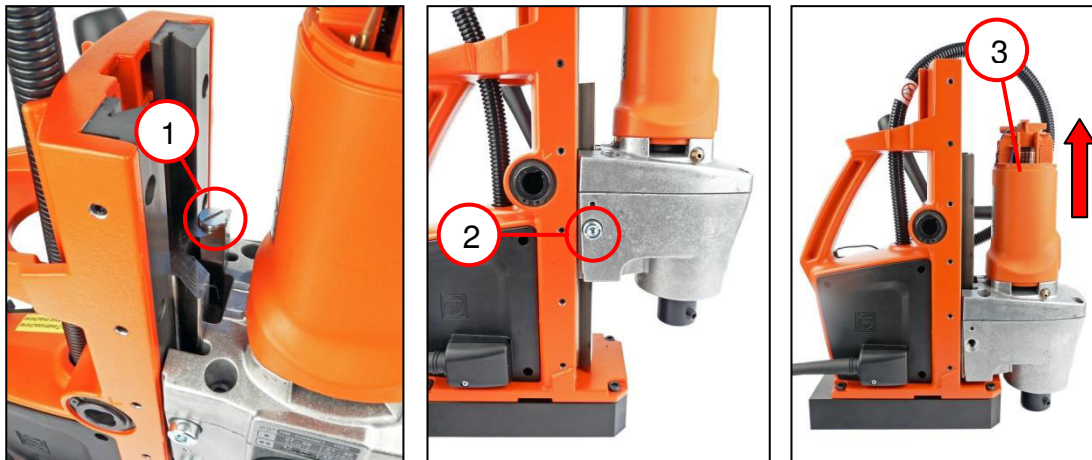
1. Unscrew the two screws (1).
2. Remove the lower part of the cover (2).
3. Unscrew the screw (3).
4. Remove the cable clamping piece (4).
5. Unscrew the two screws (5).
6. Remove the upper part of the cover (6).
7. Remove the two strands (7).

**Tools:**

- Torx T15

## Removal

## Removing the drill motor



1. Unscrew the flat headed screw (1).

**Crushing hazard around drill motor!**

The drill motor will immediately slide downwards as soon as the screw (2) has been loosened.

☞ First move the drill motor downwards and then unscrew the screw (2).

2. Move the drill motor downwards by turning the spider.

3. Unscrew the screw (2).

4. Slide the drill motor (3) out of the guide.

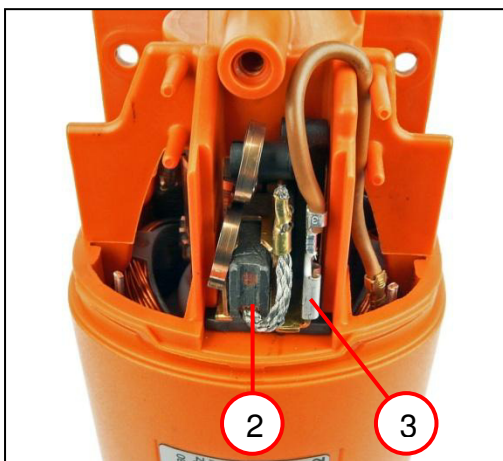
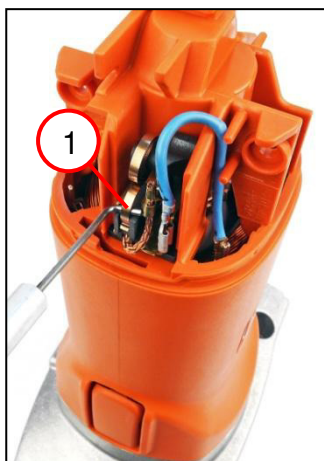
**Tools:**

- Slotted screwdriver
- Socket head wrench, 6 mm



## Removal

### Removing the carbon brush holders (on both sides)



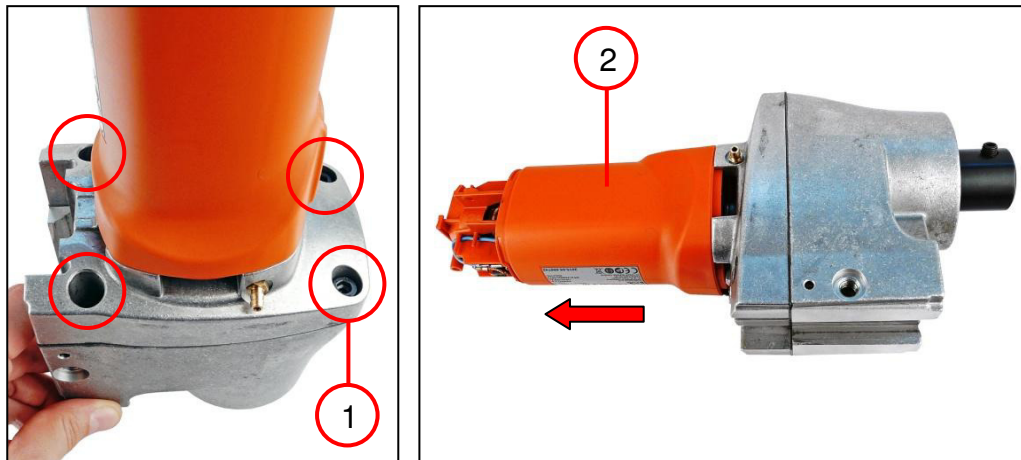
1. Lift up the spring (1).
2. Remove the carbon brush (2).
3. Pull off the plug (3).
4. Remove the carbon brush holder (4).
5. Remove the cable (5).

**Tools:**

- Assembly aid
- Long-nosed pliers



### Removing the motor



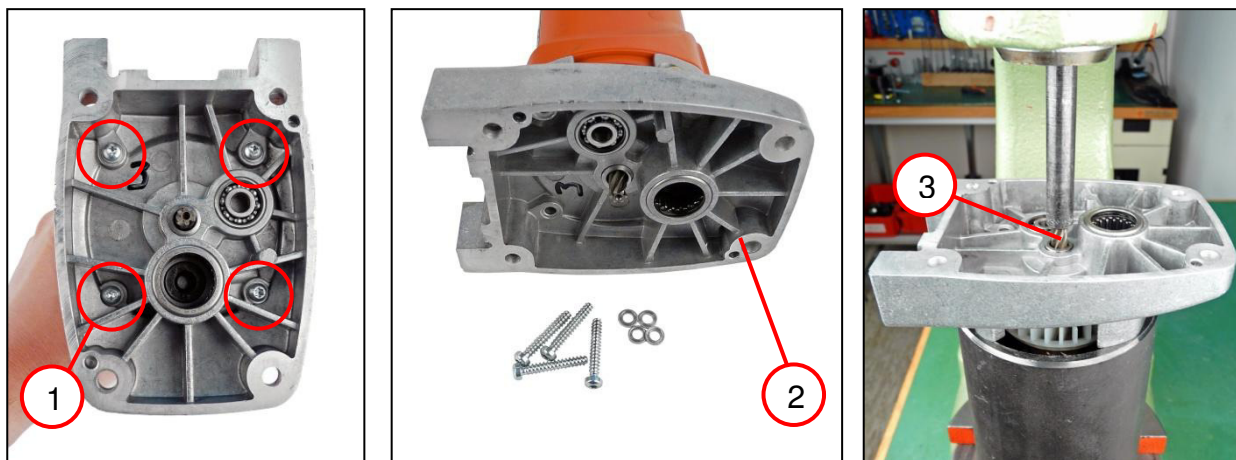
1. Unscrew the four screws (1).
2. Remove the motor (2).

#### Tools:

- Socket head wrench, 5 mm

## Removal

### Removing the motor



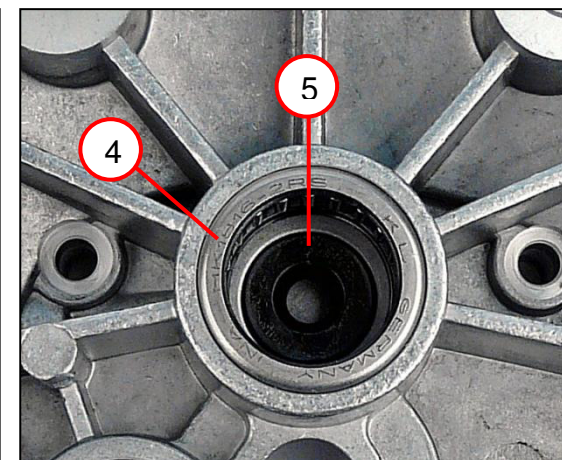
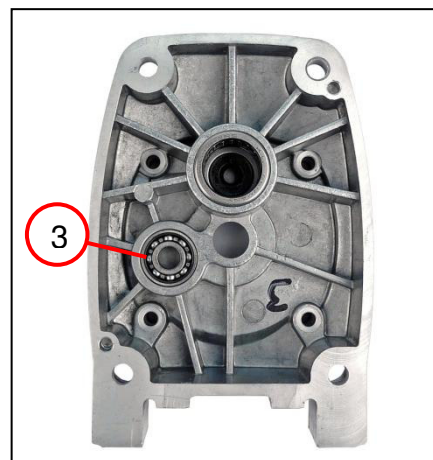
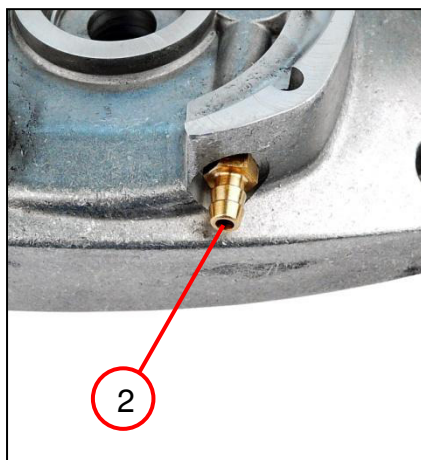
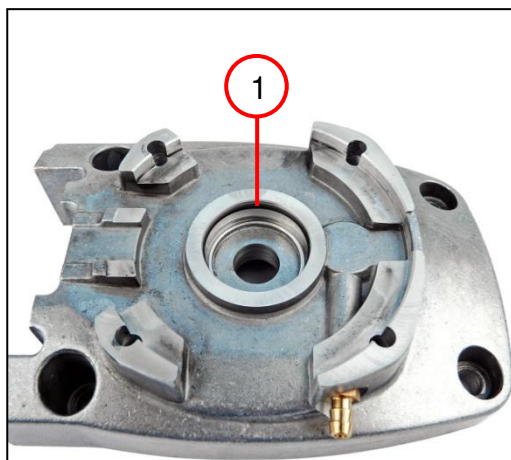
1. Unscrew the four screws (1).
2. Remove the intermediate gearbox (2).
3. Press out the armature (3).

**Tools:**

- Torx T20
- Sleeve  
60 mm inner diameter  
85 mm outer diameter
- Punch,  
7 mm diameter

## Removal

## Removing the intermediate gearbox



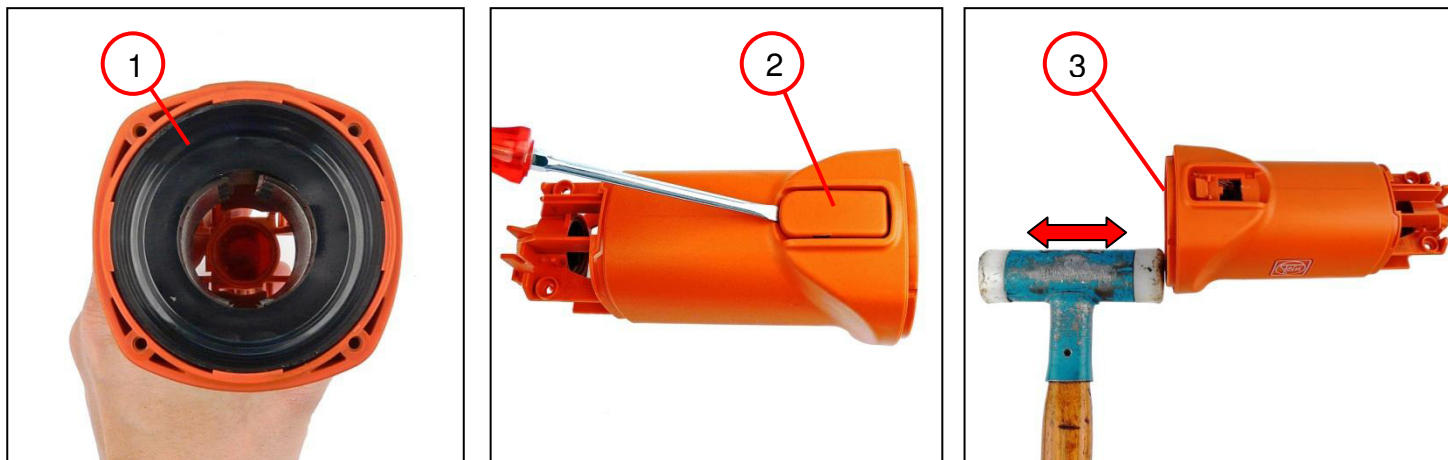
1. Remove the sealing ring (1).
2. Unscrew the hose socket (2).
3. Remove the grooved ball bearing (3).
4. Remove the needle sleeve (4).
5. Remove the sealing ring (5).

**Tools:**

- Socket wrench
- Socket wrench insert, 7 mm
- Slide hammer
- Inner puller
- Assembly aid

## Removal

## Removing the motor



1. Remove the air guide ring (1).
2. Remove the cover (2).
3. Remove the stator (3).

**Tools:**

- Slotted screwdriver
- Plastic hammer





### Removing the armature



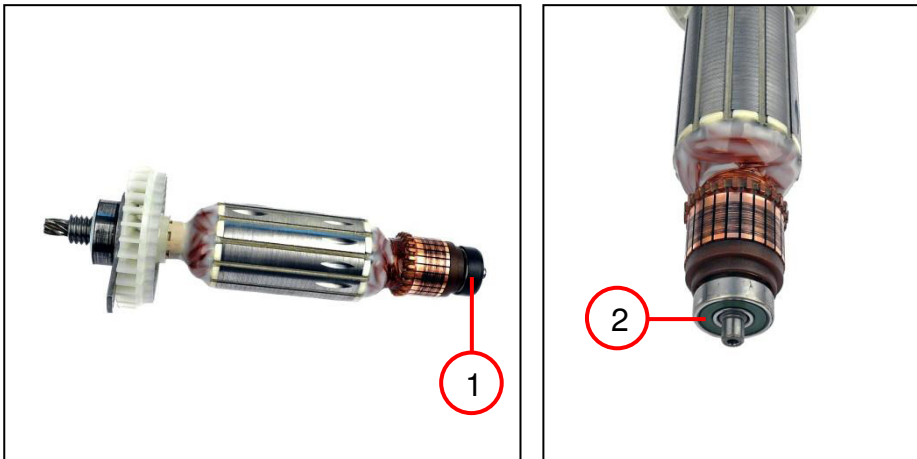
1. Remove the grooved ball bearing (1).

#### Tools:

- Drawing-off socket cap
- Chuck cone, 26 mm



### Removing the armature



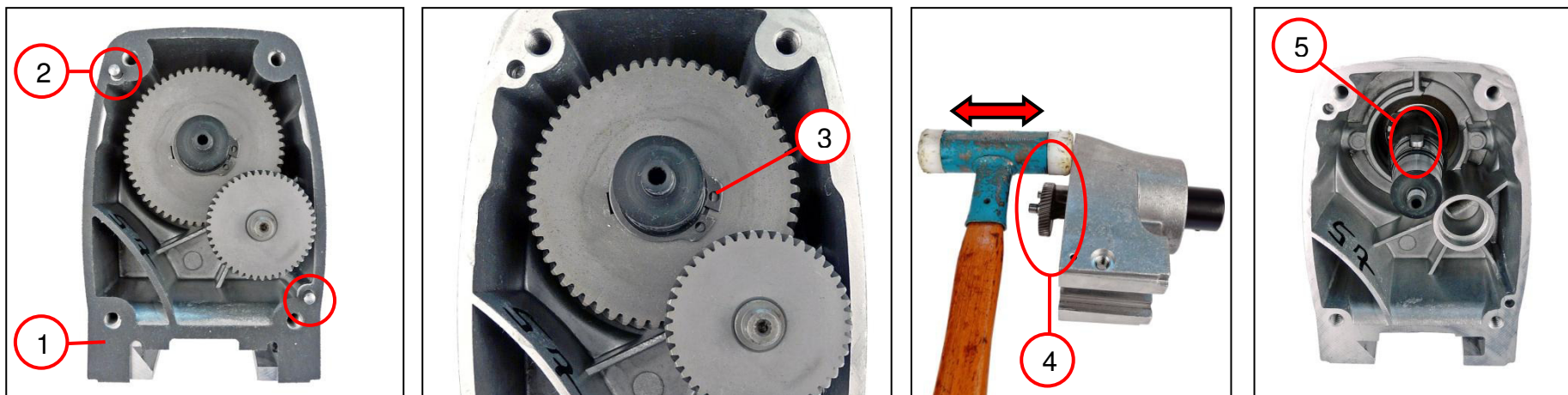
1. Remove the bearing bush (1).
2. Remove the grooved ball bearing (2).

#### Tools:

- Drawing-off socket cap
- Chuck cone, 19 mm

## Removal

## Removing the gearbox housing



1. Remove the seal (1).
2. Remove the two straight pins (2).
3. Remove the circlip (3).
4. Remove the gear wheels (4).
5. Remove the feather key (5).

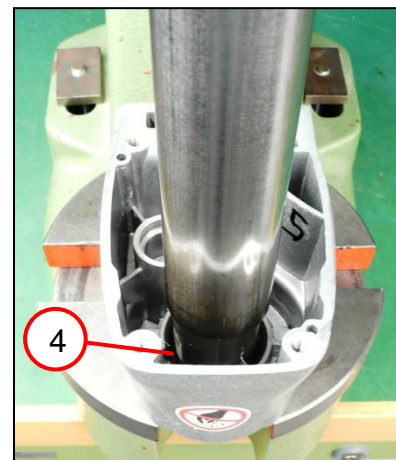
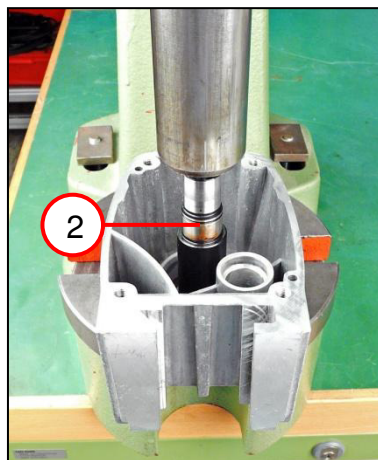
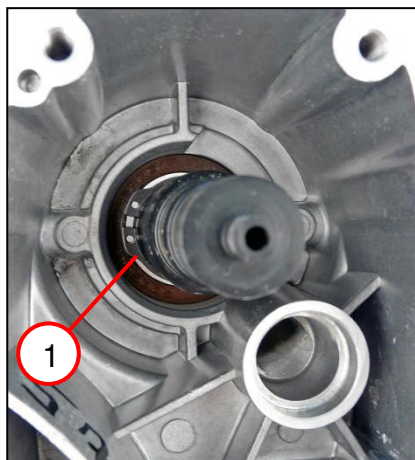
**Tools:**

- Combination pliers
- Circlip pliers
- Plastic hammer



## Removal

## Removing the gearbox housing



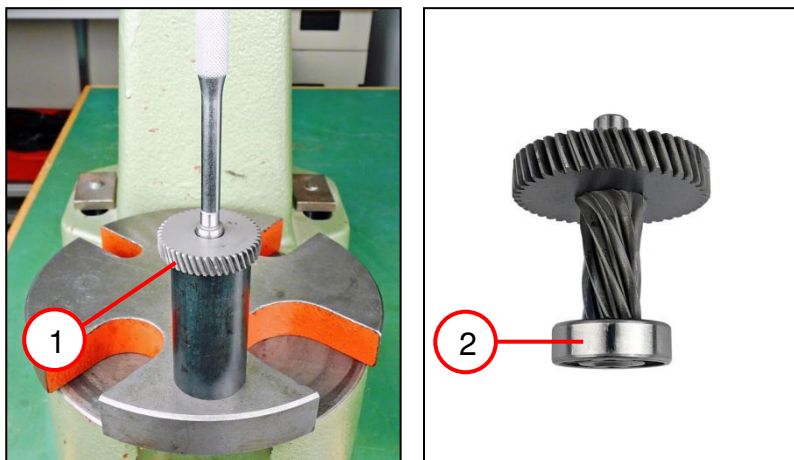
1. Remove the circlip (1).
2. Press out the shaft (2).
3. Remove the circlip (3).
4. Press out the grooved ball bearing (4).

**Tools:**

- Circlip pliers
- Arbor press
- Sleeve  
10 mm inner diameter  
34 mm outer diameter

## Removal

## Removing the gearbox housing



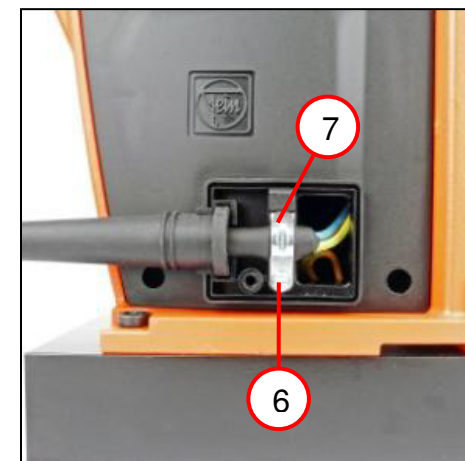
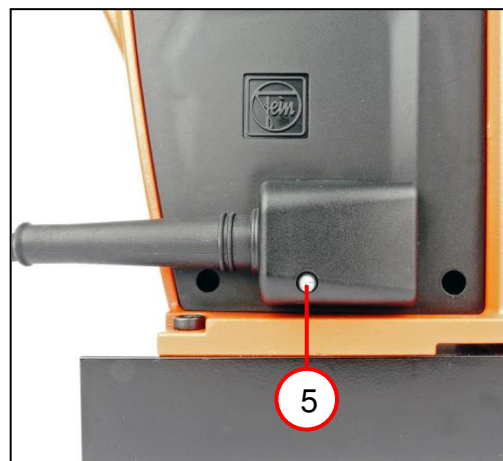
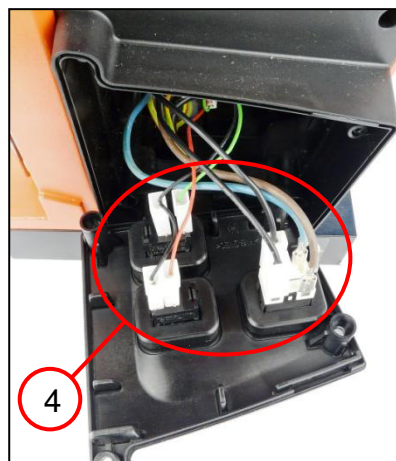
1. Remove the gear wheel (1).
2. Pull off the grooved ball bearing (2).

**Tools:**

- Arbor press
- Sleeve  
10 mm inner diameter  
34 mm outer diameter
- Drawing-off socket cap
- Clamping sleeve,  
22 mm diameter



## Removing the electronics



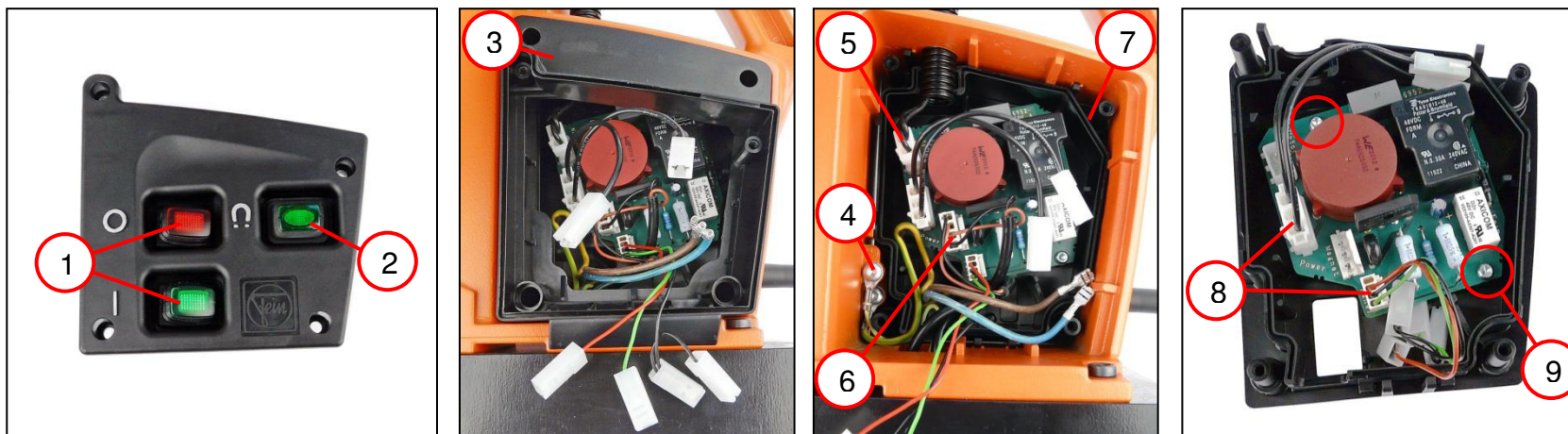
1. Unscrew the six screws (1).
2. Remove the holder (2).
3. Remove the cover (3).
4. Disconnect all the connectors (4).
5. Unscrew the screw (5).
6. Unscrew the screw (6).
7. Remove the cable clamping piece (7).

**Tools:**

- Torx T20



## Removing the electronics



1. Remove the two switches (1) and the button (2).
2. Remove the cover (3).
3. Unscrew the screw (4).
4. Disconnect the cable (5).
5. Disconnect the cable (6).
6. Remove the cover (7) with the electronics.
7. Remove the two cables (8).
8. Unscrew the two screws (9) and remove the electronics.

**Tools:**

- Torx T20



## Removal

## Removing the magnetic foot



1. Unscrew the fillister head screw (1).
2. Unscrew the four screws (2) and remove the magnetic foot.
3. Unscrew the screw (3) and remove the cable.

**Tools:**

- Torx T20
- Socket head wrench, 5 mm
- PH2 cross-head screwdriver

## Removal

## Removing the connecting cable



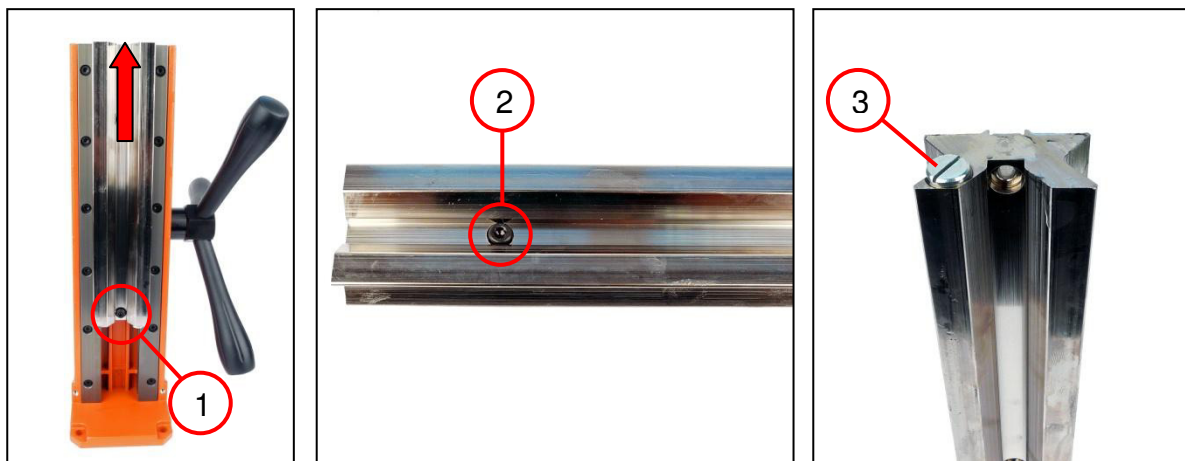
1. Remove the protective hose (1).
2. Remove the sealing ring (2).
3. Remove the circlip (3).
4. Pull out the connecting cable (4).

**Tools:**

- Circlip pliers

## Removal

### Removing the guide



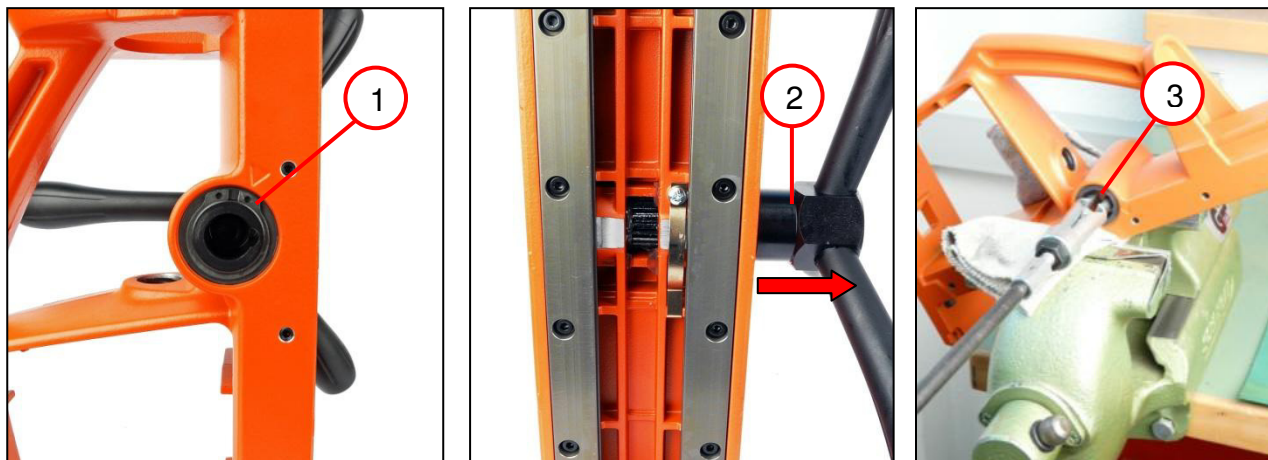
1. Unscrew the screw (1).
2. Move the guide upwards using the spider.
3. Remove the guide.
4. Unscrew the screw (2).
5. Unscrew the flat headed screw (3).

**Tools:**

- Socket head wrench, 4 mm
- Slotted screwdriver

## Removal

## Removing the guide



1. Remove the circlip (1).
2. Pull out the spider (2).
3. Remove the bush (3) on both sides.

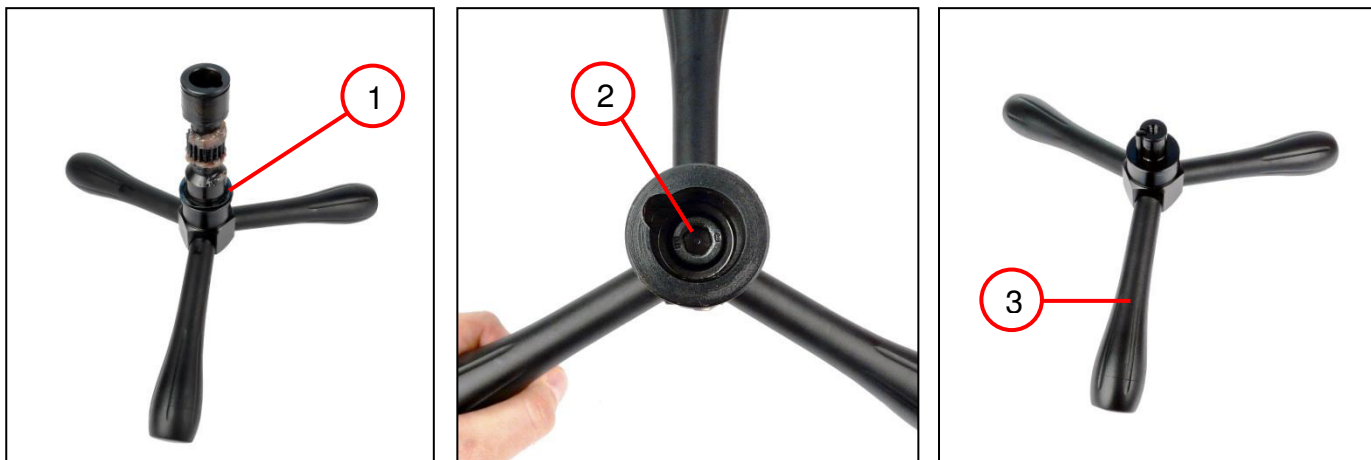
**Tools:**

- Circlip pliers
- Inner bearing puller, 18-22 mm
- Slide hammer





### Removing the guide



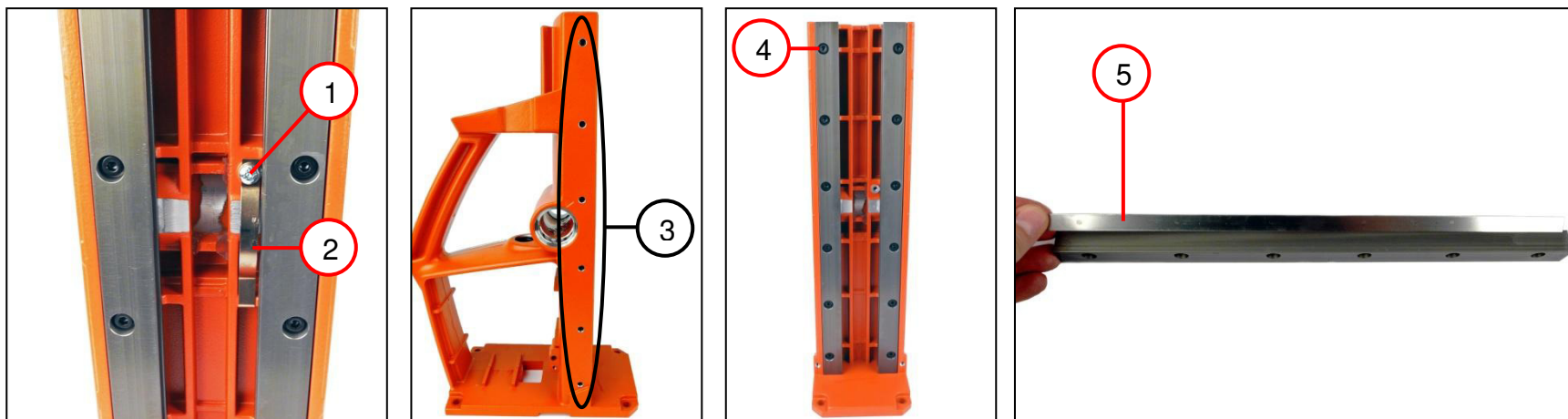
1. Remove the disc (1).
2. Unscrew the screw (2) and remove the shaft.
3. Unscrew the three handles (3).

#### Tools:

- Socket head wrench, 5 mm

## Removal

## Removing the guide



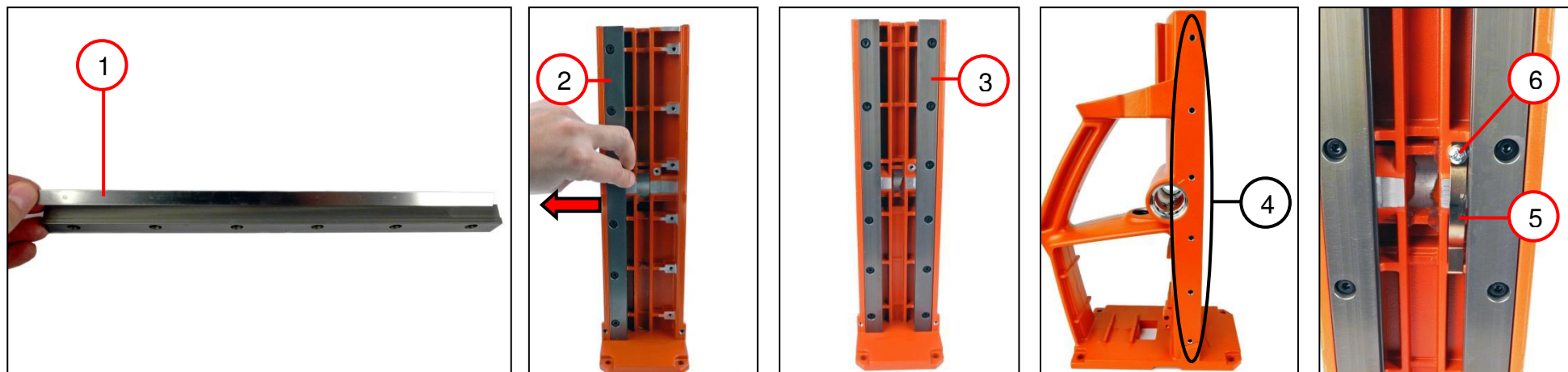
1. Unscrew the fillister head screw (1).
2. Remove the leaf spring (2).
3. Unscrew the six set screws (3).
4. Unscrew the six screws (4) and remove the guide strip.
5. Remove the pressure piece (5).

**Tools:**

- PH2 cross-head screwdriver
- Socket head wrenches, 2.5 mm; 3 mm



## Fitting the guide



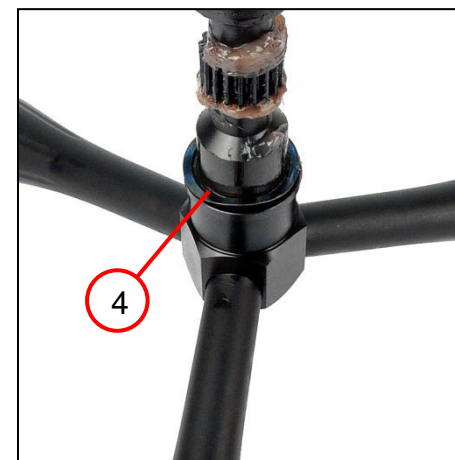
1. Place the pressure piece (1) in the correct position.
2. Position the guide strip (2) with the pressure piece and press onto the housing.
3. Insert the six cylinder head screws.
4. Position the guide strip (3).
5. Insert the six cylinder head screws.
6. Position the six set screws (4).  
 ☞ The guide clearance is adjusted after installation of the drill motor
7. Position the leaf spring (5).
8. Screw in the screw (6) [ $1.1 \text{ Nm} \pm 0.15 \text{ Nm}$ ].

**Tools:**

- Socket head wrenches,  
3 mm; 2.5 mm
- PH2 cross-head  
screwdriver



## Fitting the handle



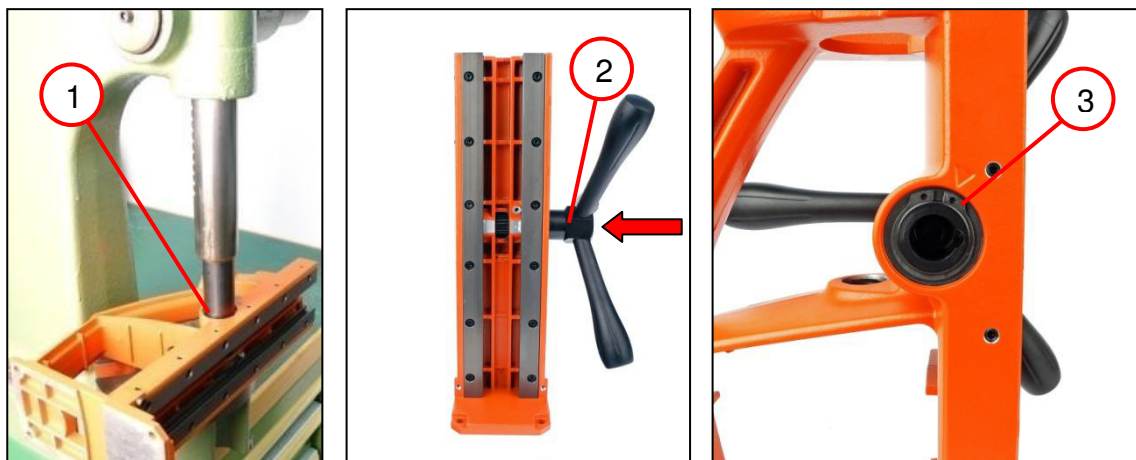
1. Screw in the three handles (1).
2. Position the shaft (2).
3. Screw in the cylinder head screw (3) [ $8.0 \text{ Nm} \pm 0.5 \text{ Nm}$ ].
4. Position the disc (4).
5. Coat the shaft with grease.

**Tools:**

- Socket head wrench, 5 mm



### Fitting the spider



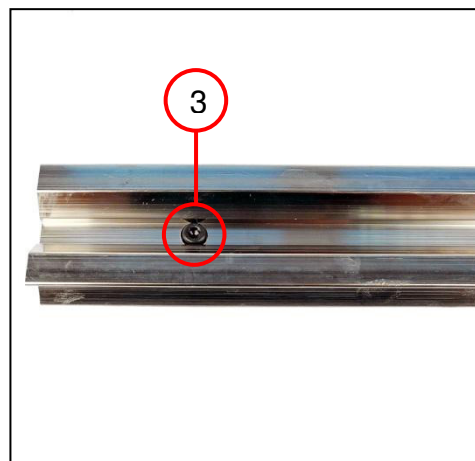
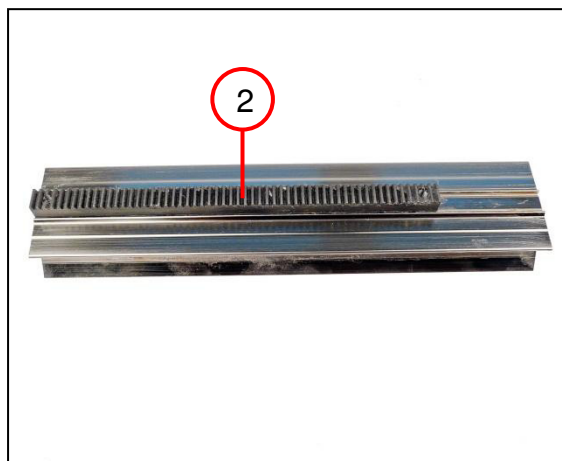
1. Press in the plastic bushes (1) on both sides.
2. Position the spider (2).
3. Fit the circlip (3).

#### Tools:

- Arbor press
- Sleeve  
26 mm inner diameter  
30 mm outer diameter
- Circlip pliers



## Fitting the guide



1. Screw in the flat headed screw (1) [ $1.2 \text{ Nm} \pm 0.15 \text{ Nm}$ ].  
☞ Check the position.
2. Position the gear rack (2).
3. Screw in the screw (3) with the disc [ $3.0 \text{ Nm} \pm 0.3 \text{ Nm}$ ].
4. Coat the guide with grease.
5. Slide the guide into the guide strip.
6. Use the spider to move the guide downwards.
7. Screw in the screw (4) with the disc [ $3.0 \text{ Nm} \pm 0.3 \text{ Nm}$ ].

### Tools:

- Slotted screwdriver
- Socket head wrench, 3 mm



### Fitting the connecting cable

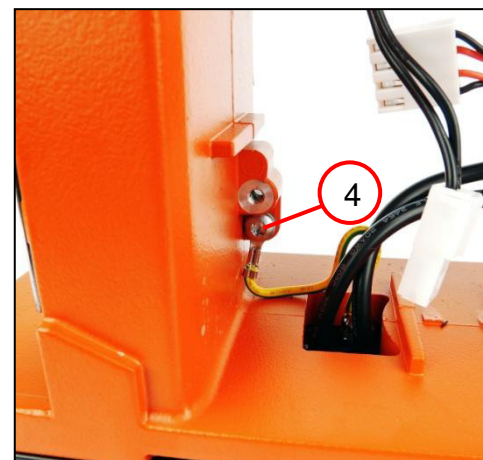
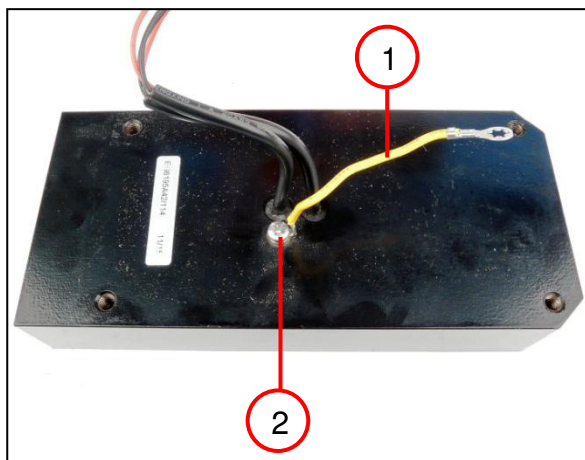


1. Thread the connecting cable (1) into the protective hose.
2. Insert the sealing ring (2).
3. Fit the protective hose (3).





### Fitting the magnetic foot



1. Position the connecting cable (1).
2. Screw in the screw (2) [ $1.5 \text{ Nm} \pm 0.2 \text{ Nm}$ ].
3. Screw in the four screws (3) [ $8.0 \text{ Nm} \pm 0.5 \text{ Nm}$ ].
4. Place the connecting cable in the correct position.
5. Screw in the screw (4) [ $1.5 \text{ Nm} \pm 0.2 \text{ Nm}$ ].

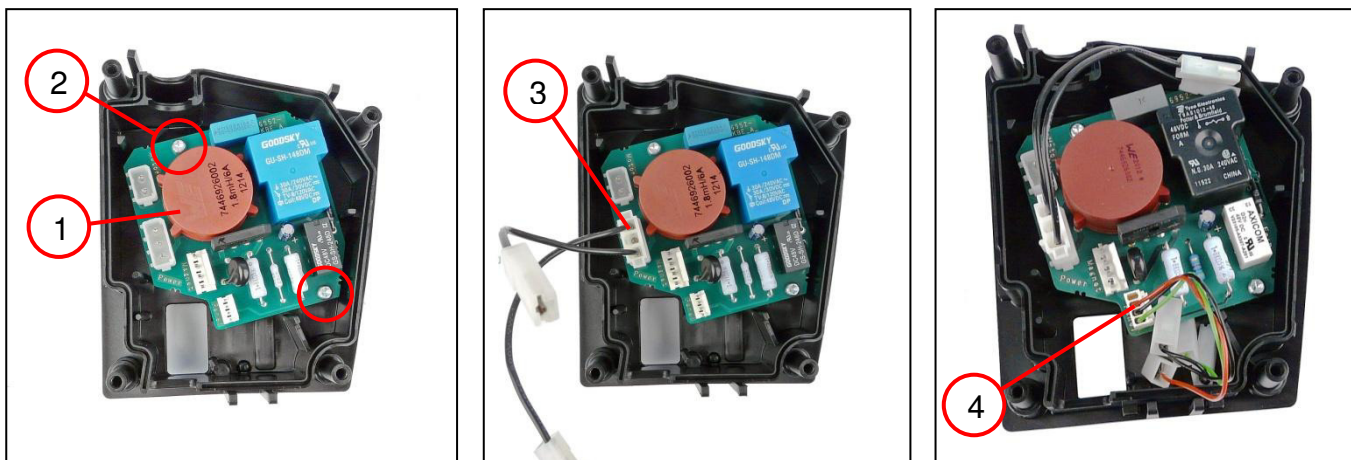
**Tools:**

- PH2 cross-head screwdriver
- Socket head wrench, 5 mm
- Torx T20





## Fitting the electronics



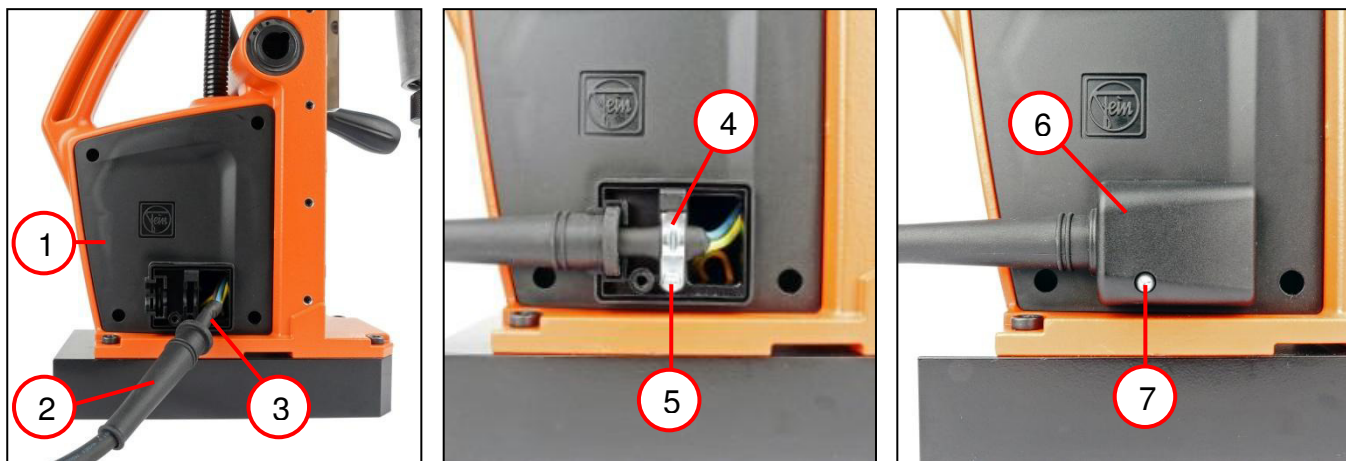
1. Place the electronics (1) in the correct position.
2. Screw in the two screws (2) [ $1.1 \text{ Nm} \pm 0.15 \text{ Nm}$ ].
3. Connect the cable (3).
4. Connect the cable harness (4).

**Tools:**

- Torx T15



### Fitting the electronics



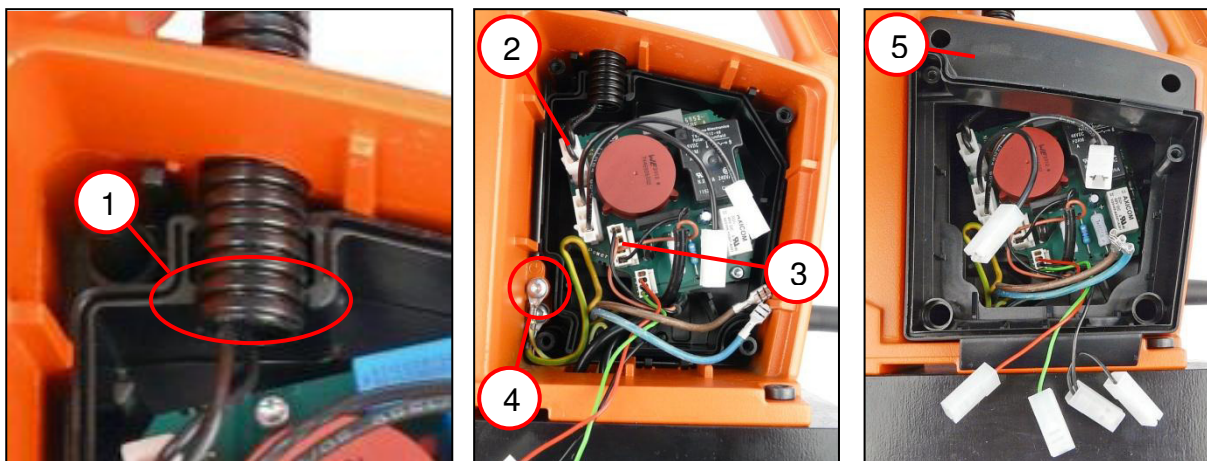
1. Fit the cover (1).
2. Slide the protective hose (2) over the cable (3).
3. Position the cable with the protective hose.
4. Position the cable clamping piece (4).
5. Screw in the screw (5) [0.9 Nm  $\pm 0.1$  Nm].
6. Position the cover (6).
7. Screw in the screw (7) [1.8 Nm  $\pm 0.1$  Nm].

**Tools:**

- Torx T15



### Fitting the electronics



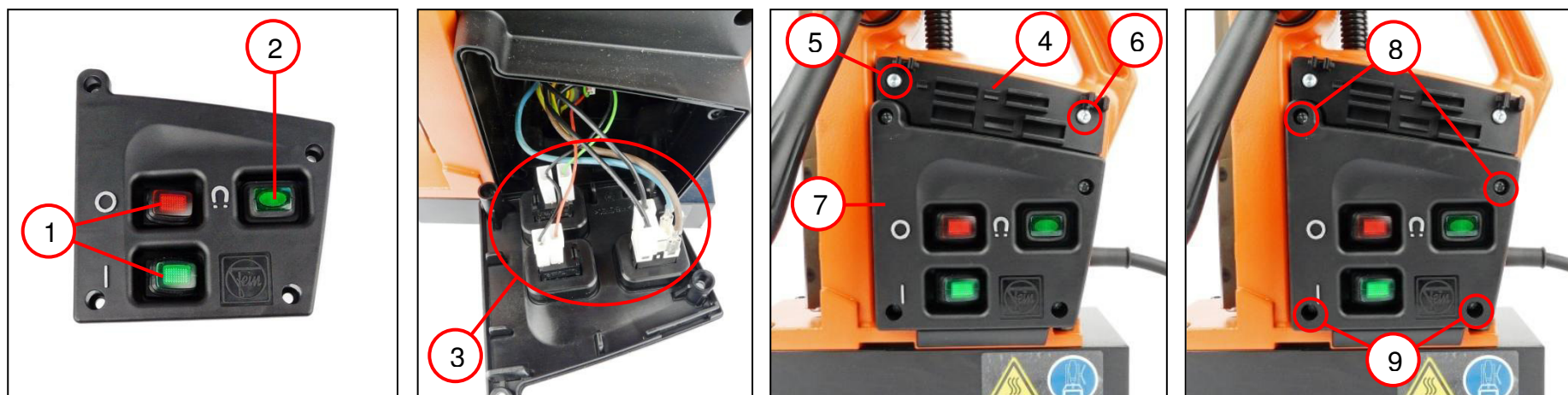
1. Place the protective hose in the recess (1).
2. Connect the connecting cable (2).
3. Connect the magnet cable (3).
4. Position the earthing conductor of the cable with plug.
5. Screw in the screw (4) [ $1.5 \text{ Nm} \pm 0.2 \text{ Nm}$ ].
6. Fit the cover (5).

**Tools:**

- Torx T20



### Fitting the electronics



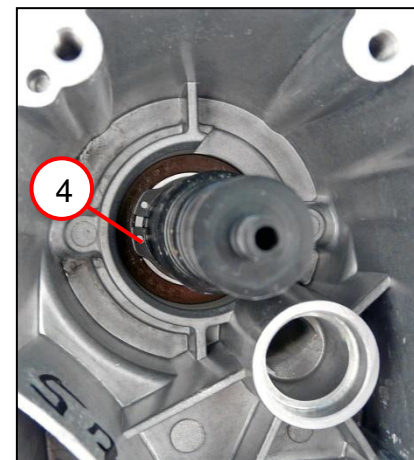
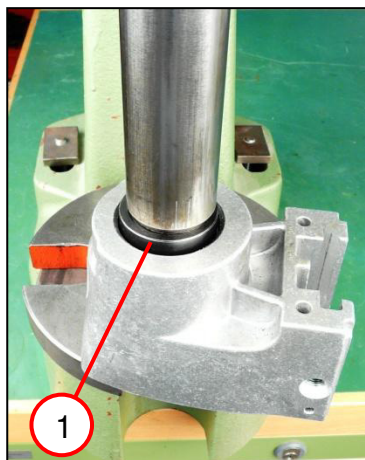
1. Install the two buttons (1).
2. Install the switch (2).
3. Connect all cables (3) as shown in the connection diagram.
4. Position the holder (4).
5. Screw in the screw "4x48" (5) [2.0 Nm  $\pm 0.3$  Nm].
6. Screw in the screw "4x35" (6) [2.0 Nm  $\pm 0.3$  Nm].
7. Fit the cover (7).
8. Screw in the two screws "4x18" (8) [2.0 Nm  $\pm 0.3$  Nm].
9. Screw in the two screws "4x48" (9) [2.0 Nm  $\pm 0.3$  Nm].

#### Tools:

- Torx T20



### Fitting the gearbox housing



1. Press in the grooved ball bearing (1).
2. Fit the circlip (2).
3. Press in the shaft (3).
4. Fit the circlip (4).

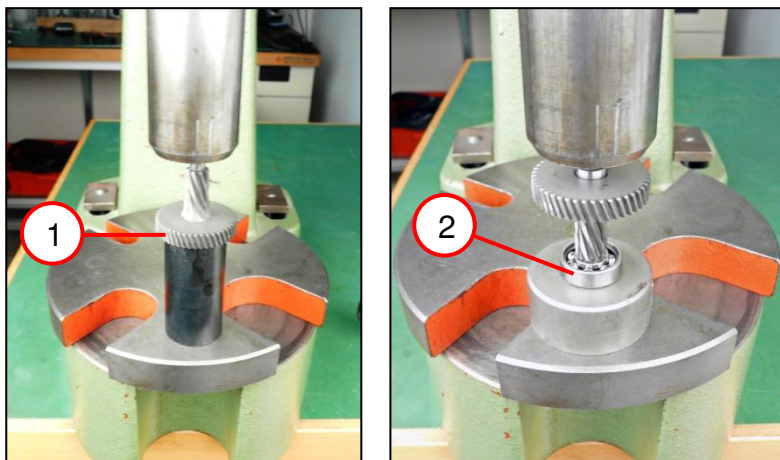
**Tools:**

- Arbor press
- Sleeve  
30 mm inner diameter  
45 mm outer diameter
- Sleeve  
25 mm inner diameter  
35 mm outer diameter  
105 mm length
- Circlip pliers





### Fitting the gearbox housing



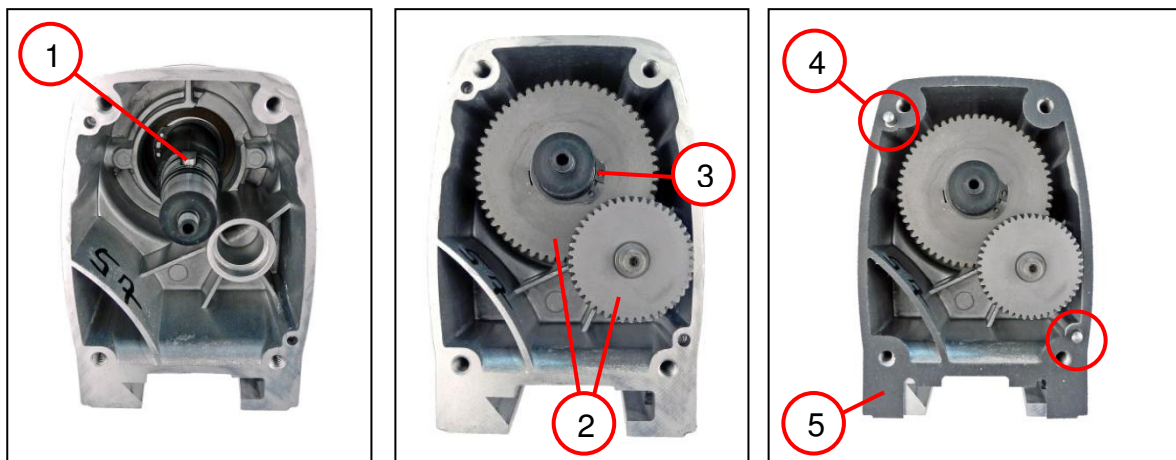
1. Press on the gear wheel (1).
2. Press on the grooved ball bearing (2).

#### Tools:

- Sleeve  
11 mm inner diameter  
25 mm outer diameter
- Sleeve  
8 mm inner diameter  
22 mm outer diameter

## Fitting

## Fitting the gearbox housing



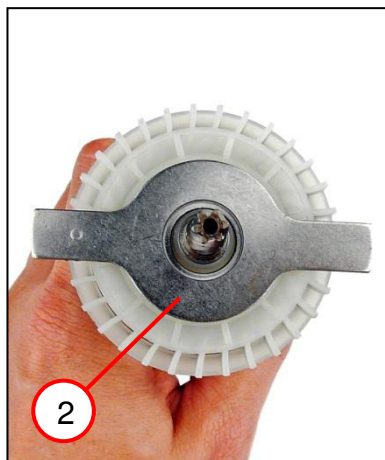
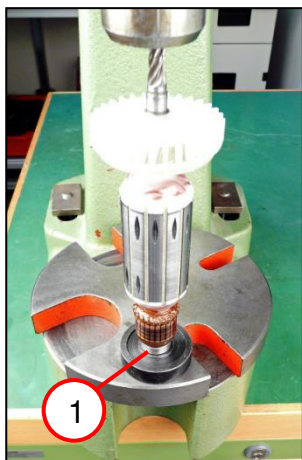
1. Insert the feather key (1).
2. Insert the two gear wheels (2).
3. Fit the circlip (3).
4. Fit the two straight pins (4).
5. Position the seal (5).

**Tools:**

- Circlip pliers



## Fitting the armature



1. Press on the grooved ball bearing (1).
2. Position the plate (2).
3. Press on the grooved ball bearing (3).
4. Press on the sealing ring (4).

**Tools:**

- Arbor press
- Sleeve  
8 mm inner diameter  
20 mm outer diameter
- Sleeve  
7 mm inner diameter  
26 mm outer diameter





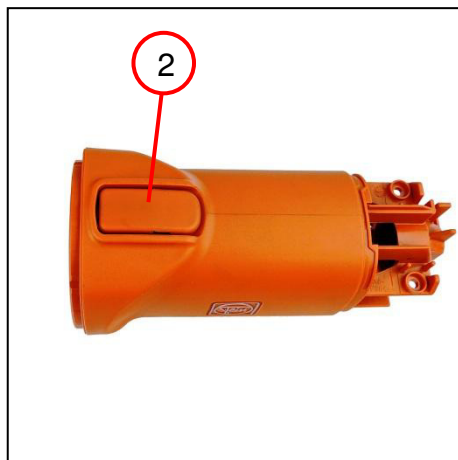
### Fitting the armature



1. Position the bearing bush (1).



### Fitting the motor housing



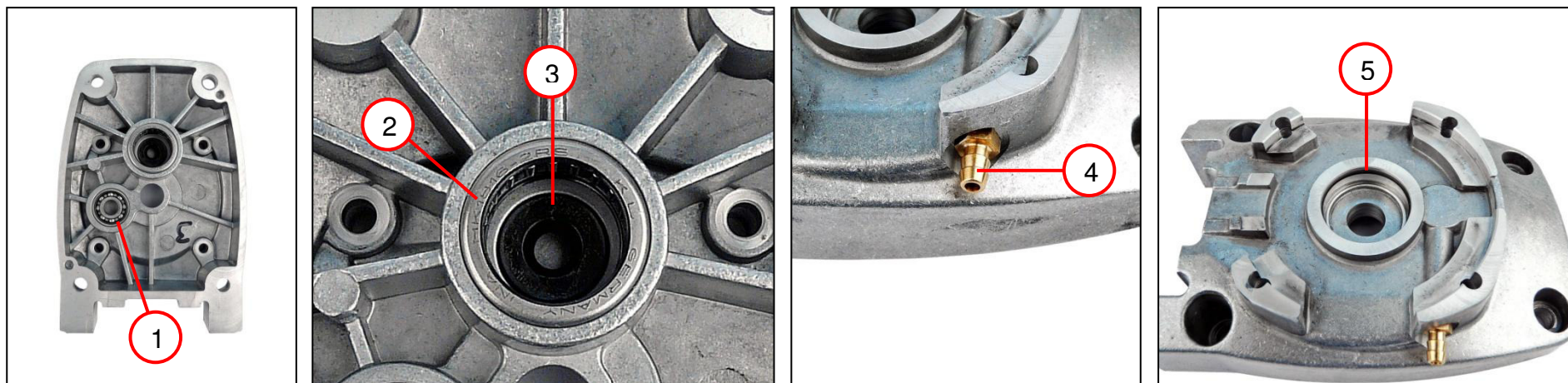
1. Press in the stator (1).
2. Fit the cover (2).
3. Insert the air guide ring (3).

**Tools:**

- Arbor press
- Pressure piece
- 4x round material,  
diameter 20 mm;  
length 60 mm



## Fitting the gearbox housing



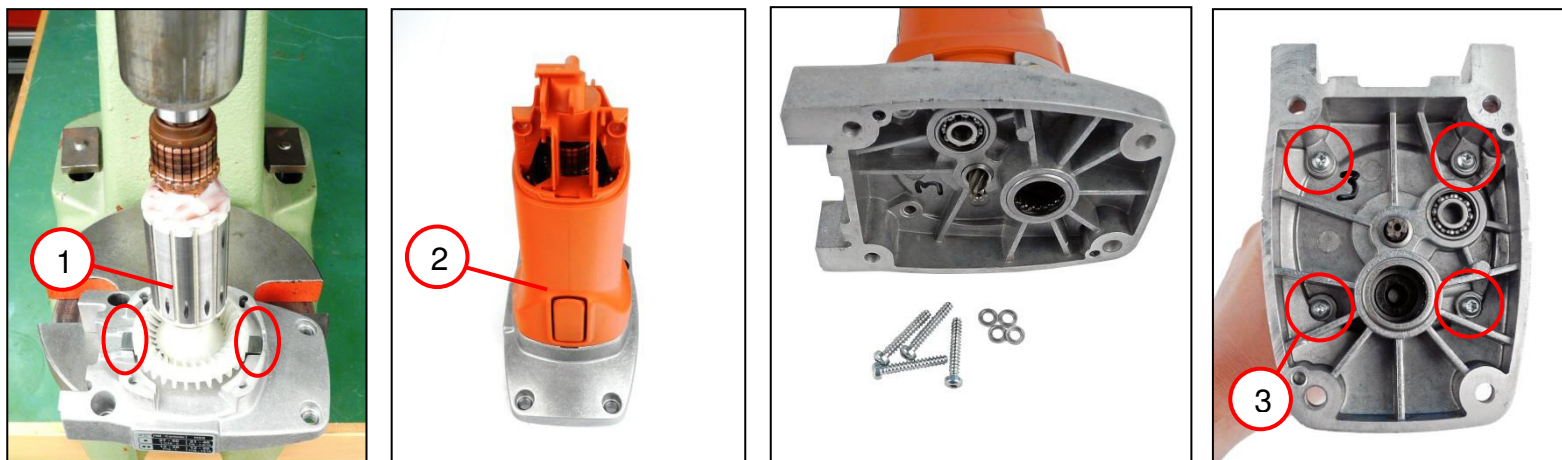
1. Press in the grooved ball bearing (1).
2. Press in the needle bearing (2).
3. Grease the sealing ring (3).
4. Fit the sealing ring (3).
5. Screw in the hose socket (4) [ $1.6^{+0.25}_{-0.25}$  Nm].
6. Grease the seal (5).
7. Position the seal (5).

### Tools:

- Arbor press
- Sleeve  
8 mm inner diameter  
18 mm outer diameter
- Sleeve  
15 mm inner diameter  
24 mm outer diameter
- Socket wrench
- Socket wrench insert,  
7 mm – 1/4"

## Fitting

## Fitting the motor housing



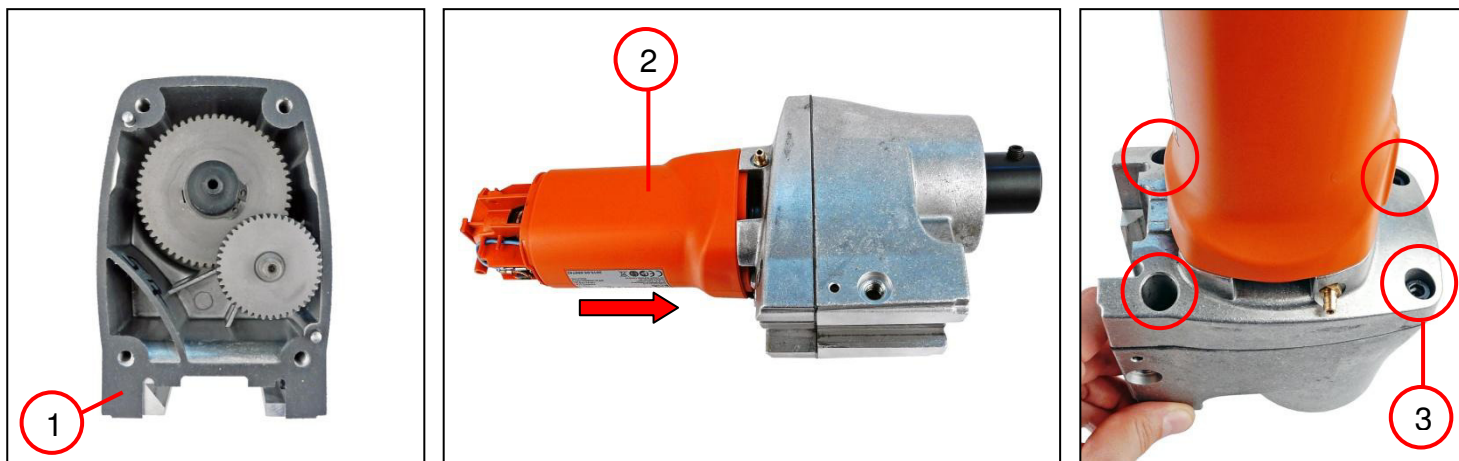
1. Press in the armature (1).
  - ☞ Note the position of the plates.
2. Fit the motor housing (2).
3. Screw in the four screws (3) with sealing ring [ $1.8^{+0.1}$  Nm].
  - ☞ Use new sealing rings for each new fitting.

**Tools:**

- Arbor press
- Torx T20

## Fitting

## Fitting the motor

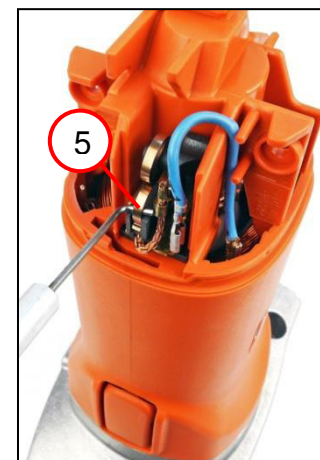
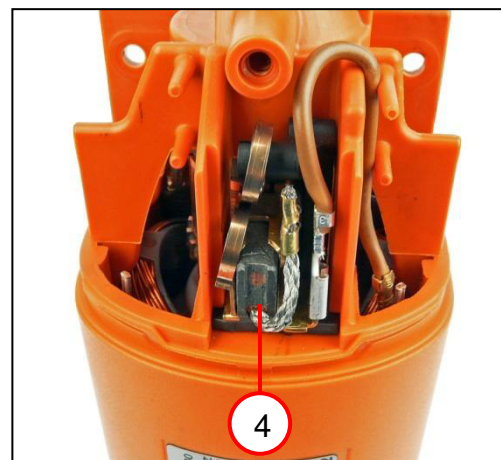
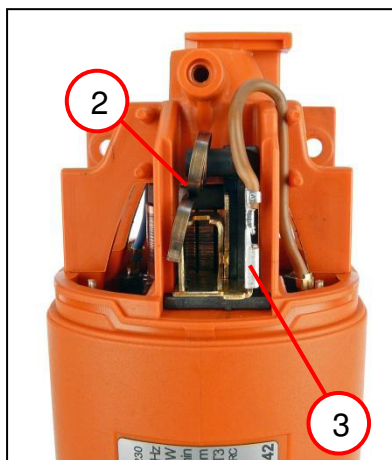


1. Position the seal (1).  
☞ Use a new seal for each new fitting.
2. Place the motor housing (2) on the gearbox housing.
3. Screw in the four screws (3) [ $8.0^{+0.3}$  Nm].

**Tools:**

- Socket head wrench,  
5 mm



**Fitting the carbon brush holders (on both sides)**

1. Connect the cable (1) as shown in the connection diagram.
2. Fit the carbon brush holder (2).
3. Connect the cable (3) as shown in the connection diagram.
4. Place the carbon brush (4) in the correct position and connect it.
5. Place the spring (5) on the carbon brush.

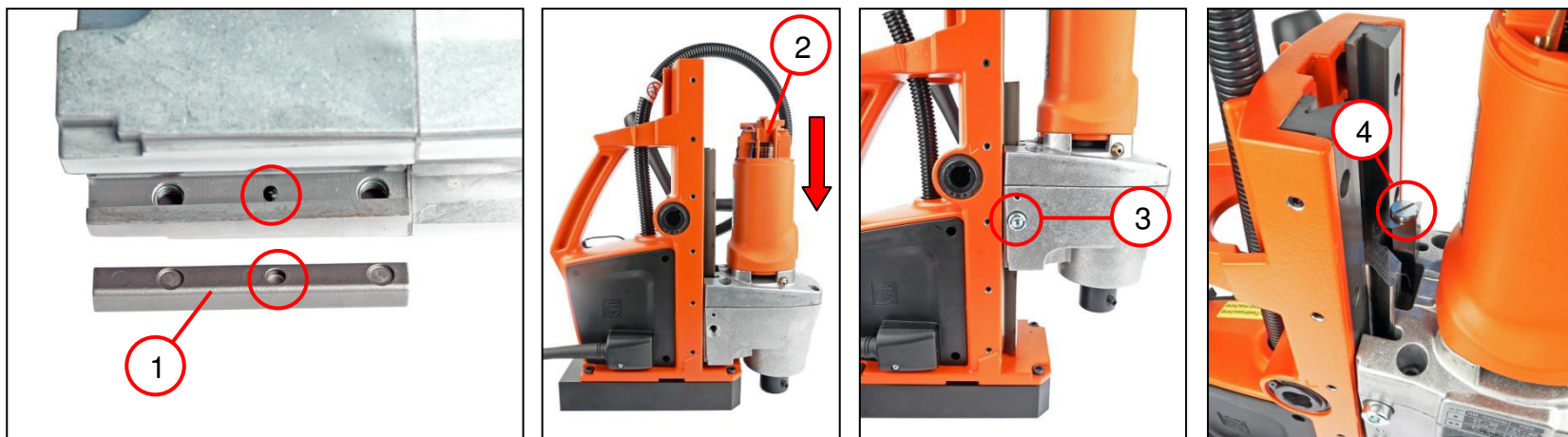
**Tools:**

- Assembly aid
- Long-nosed pliers





### Fitting the drill motor



1. Insert the pressure piece (1) in the correct position.

#### **Crushing hazard around drill motor!**

☞ The drill motor will rapidly slide downwards if the screw (2) is not tight.

2. Slide the drill motor (2) onto the guide.

3. Screw in the screw (3).

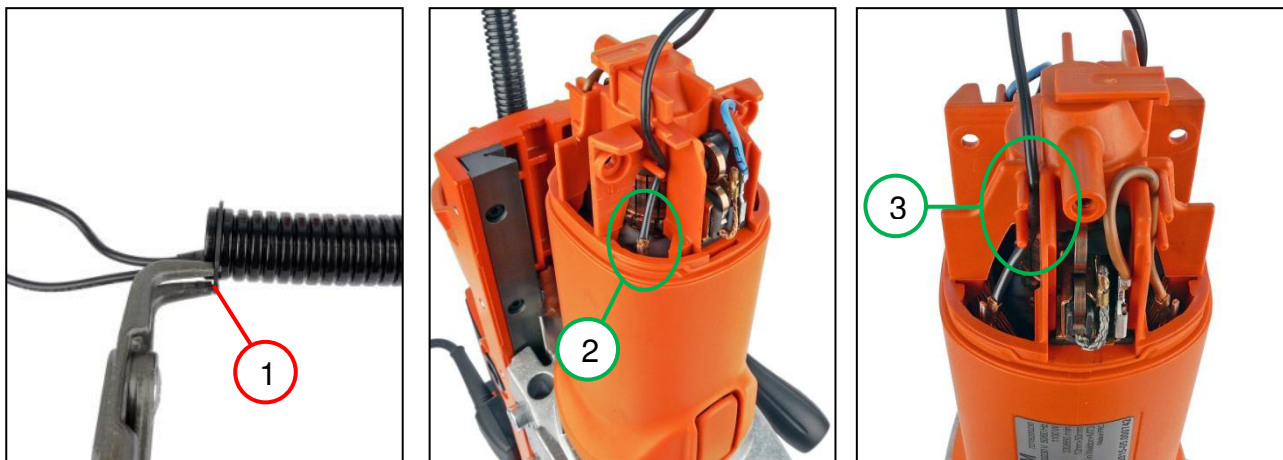
4. Screw in the flat headed screw (4) [ $1.2 \text{ Nm} \pm 0.15 \text{ Nm}$ ].

#### **Tools:**

- Socket head wrench, 6 mm
- Slotted screwdriver



### Fitting the connecting cable

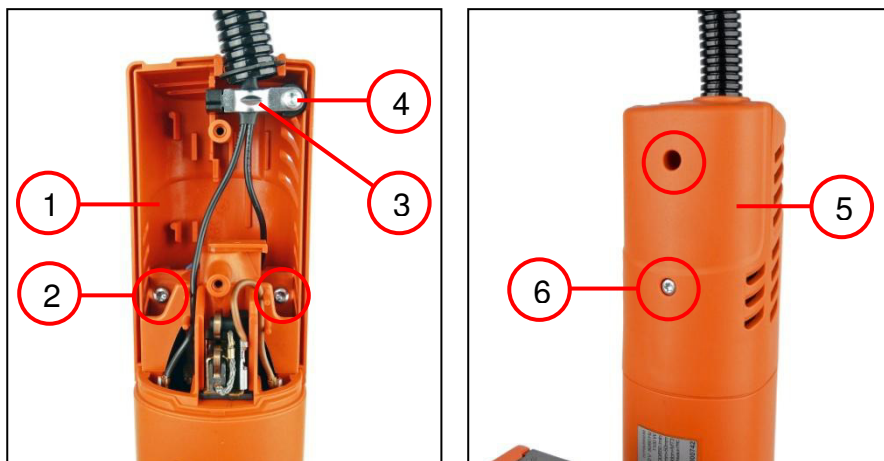


1. Fit the circlip (1).
2. Connect the cable on the stator (2).
3. Route the cable (3).

#### Tools:

- Circlip pliers

## Fitting the connecting cable



1. Position the upper part of the cover (1).
2. Screw in the two screws (2) [ $1.6 \text{ Nm} \pm 0.25 \text{ Nm}$ ].
3. Position the cable clamping piece (3).
4. Screw in the screw (4) [ $1.6 \text{ Nm} \pm 0.25 \text{ Nm}$ ].
5. Position the lower part of the cover (5).
6. Screw in the two screws (6) [ $1.6 \text{ Nm} \pm 0.25 \text{ Nm}$ ].

**Tools:**

- Torx T15



### Setting the guide



1. Use the six set screws (1) to set zero backlash on the guide.

- ☞ To check the setting, move the drill motor up and down using the spider.
- ☞ At the places where the drill unit moves too fast or too slowly, screw the stud bolts in or out a little further.

#### Tools:

- Socket head wrench,  
2.5 mm



### Fitting the container

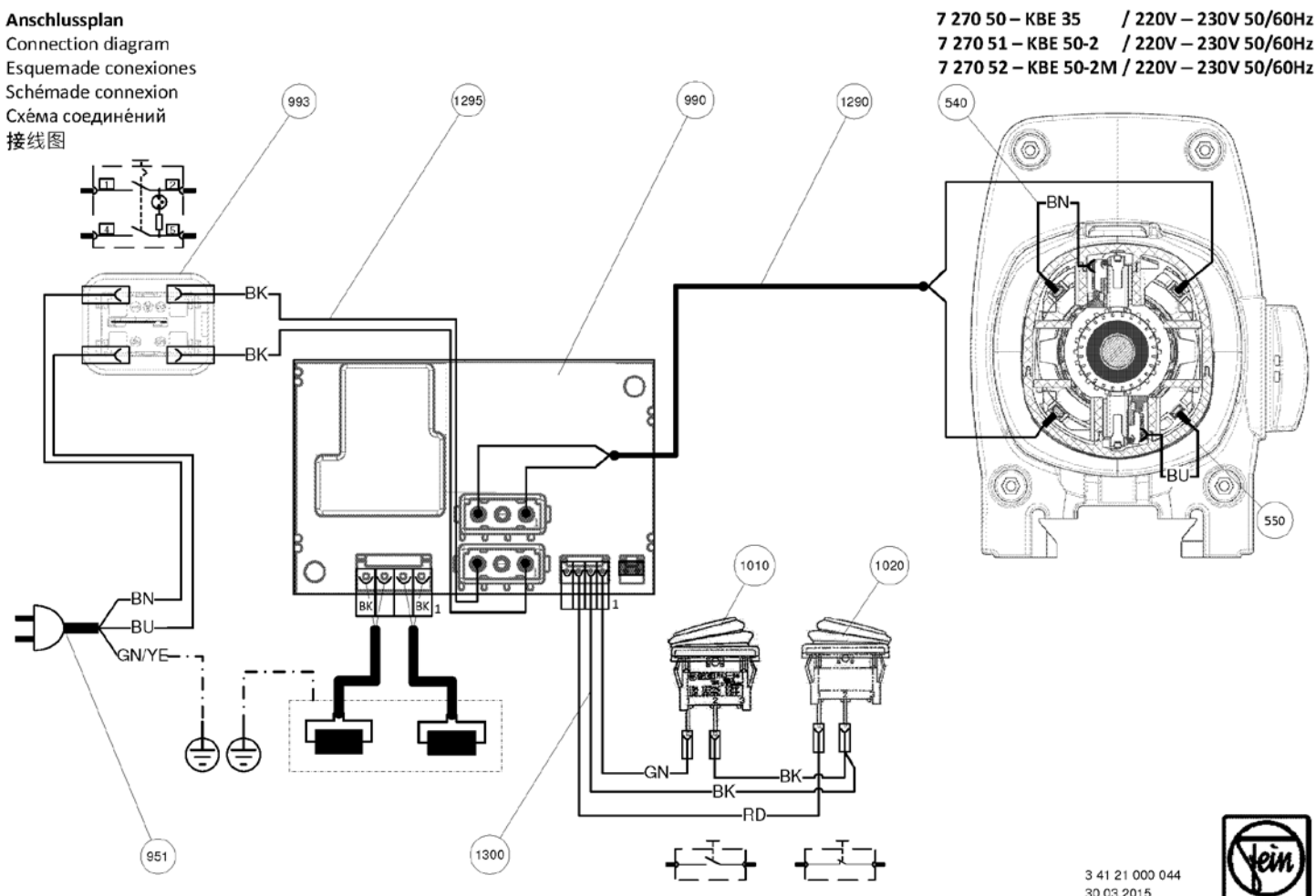


1. Position the container (1).
2. Place the hose on the hose socket (2).



### Anschlussplan

Connection diagram  
Esquema conexiones  
Schéma connexion  
Схема соединений  
接线图



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