

## ABSS 1.6E

### Repair instructions





- 1. Models described**
- 2. Technical data**
- 3. Notes and requirements**
- 4. Tools required**
- 5. Lubricants and auxiliary substances required**
- 6. Disassembly**
- 7. Assembly**
- 8. Troubleshooting**
- 9. Connection diagram**

## ABSS 1.6E



### 1. Models described

These instructions describe how to repair the following models:

Model	Order number
ABSS 1.6E	7 130 01 00 95 0



### 2. Technical data

#### Technical data

The complete 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](http://www.fein.com)



### 3. Notes and requirements

#### 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 employers' liability insurance associations are to be observed when commissioning.

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

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



## 4. Tools required

### Standard tools

Hex key 2.5mm; 4mm

Plastic mallet

Torx screwdriver T15

Slotted screwdriver

Circlip pliers

Arbor press

Cable hooks

Sleeves

- 6mm internal Ø

Feeler gauge

### Special tool

Drawing-off socket cap 6 41 04 150 00 8

Chuck cone 6 41 07 016 00 1

Chuck cone 6 41 07 016 00 1

Press-in fixture 6 41 22 108 00 0

Extractor tool 6 41 14 033 00 0

26mm ball bearing puller 6 41 07 026 00 0



### 5. Lubricants and auxiliary substances required

#### Lubricants

Grease	0 40 101 0100 4	12 g	Gearbox
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### 6. Disassembly

#### Removing the battery

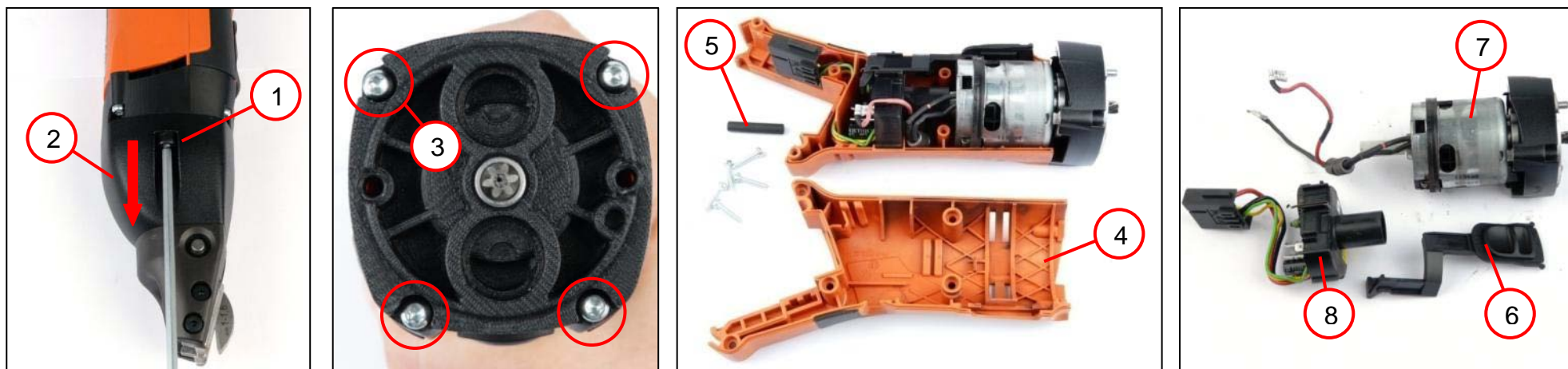


1. Use the button (1) to unlock and remove the battery.



## 6. Disassembly

### Disassembling the motor



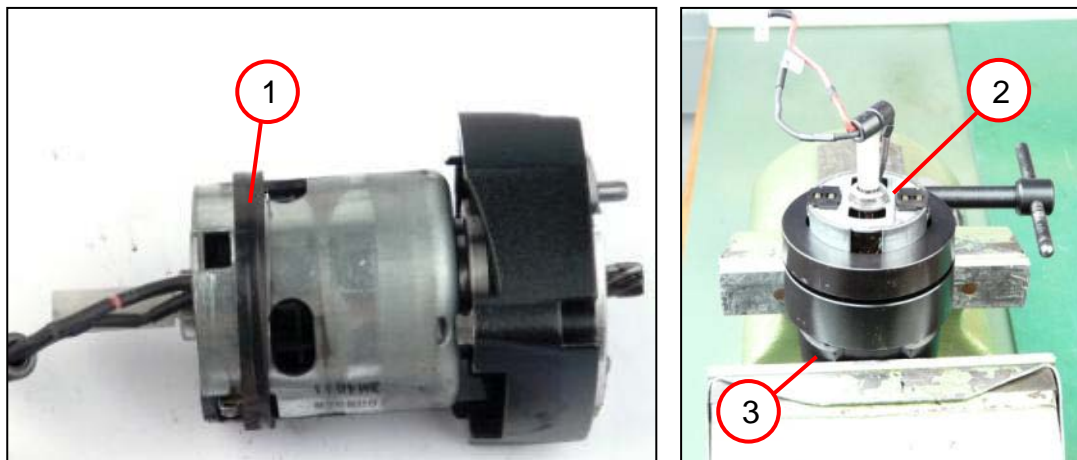
1. Remove the two socket head screws (1) on both sides.
2. Remove the housing (2).
3. Unscrew the four screws (3).
4. Unscrew the five screws and remove the cover (4).
5. Remove the pressure piece (5).
6. Remove the slide switch (6) with spring, the motor (7) and the electronics (8).
7. Unplug the motor connector cables on the electronics.

#### Tool:

- 4mm hex key
- Torx 15

### 6. Disassembly

#### Disassembling the motor



1. Remove the motor bearing ring (1).
2. Remove the motor (2) from the intermediate bearing (3).

#### NOTE

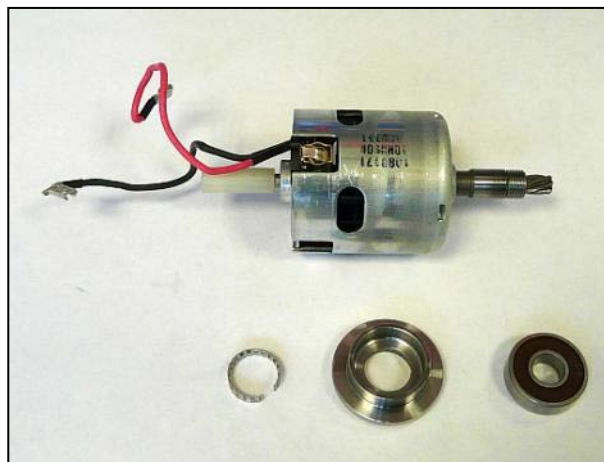
The intermediate bearing is only available as a spare part together with pressed-in bearing bush and pressed-in ball bearing.

#### Tool:

- Extractor tool  
6 41 14 033 00 0

## 6. Disassembly

### Disassembling the motor



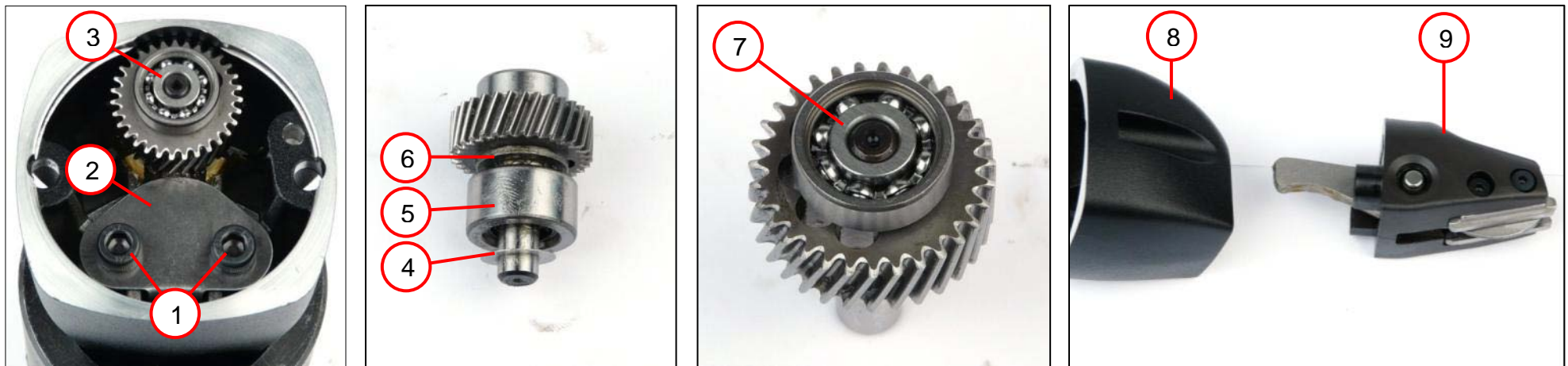
1. Take the grooved ball bearing off the motor.

**Tool:**

- 26mm ball bearing puller  
6 41 07 026 00 0
- Drawing-off socket cap  
6 41 04 150 00 8

## 6. Disassembly

### Disassembling the gearbox



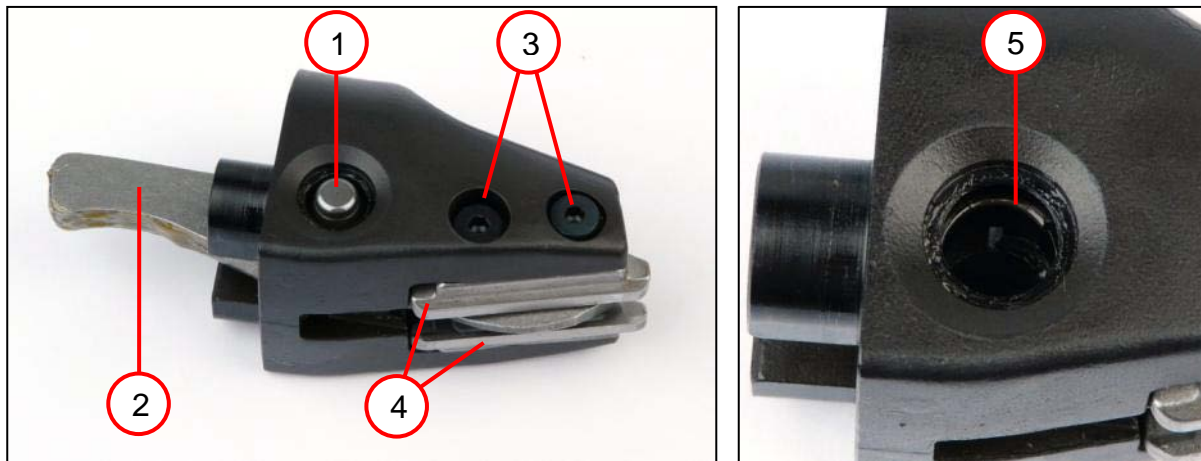
1. Remove the two screws (1).
2. Remove the leaf springs (2).
3. Remove the eccentric shaft (3).
4. Remove the two shims (4 and 6) and the roller (5) from the eccentric shaft.
5. Remove the grooved ball bearing (7) with a drawing-off socket cap from the eccentric shaft.
6. Unscrew the tool head (9) from the housing (8).

#### Tool:

- 4mm hex key
- Drawing-off socket cap  
6 41 04 150 00 8
- 16mm chuck cone  
6 41 07 016 00 1

### 6. Disassembly

#### Disassembling the tool head (BSS 1.6E)



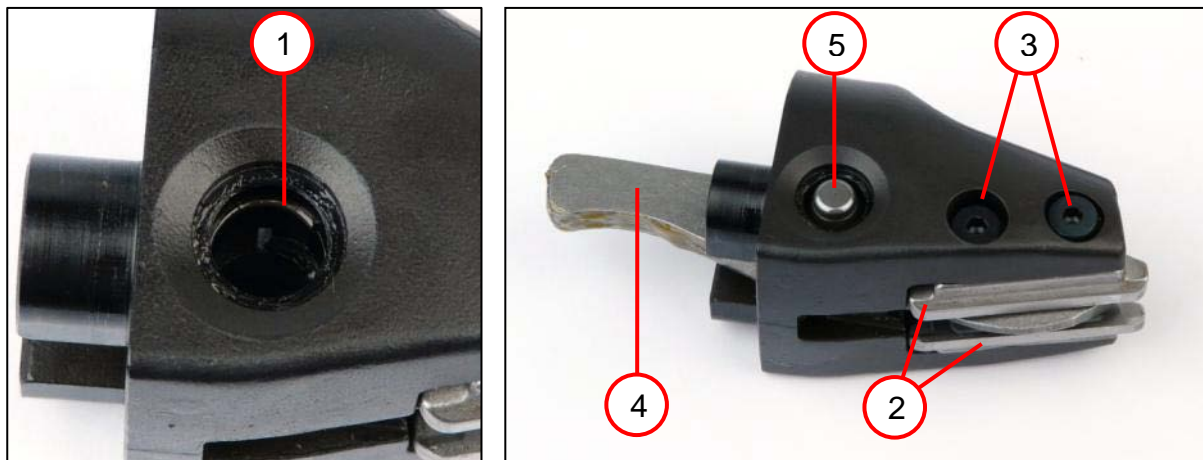
1. Push out the bolts (1) from the gearbox head.
2. Remove the cutter blade (2).
3. Unscrew the four socket head screws (3).
4. Remove the two cutting jaws (4).
5. Remove the two circlips (5) on both sides using a small screwdriver.

**Tool:**

- Slotted screwdriver
- 2.5mm hex key

### 7. Assembly

#### Assembling the tool head (BSS 1.6E)



1. Install the two circlips (1) on both sides using a small screwdriver.
2. Attach the two cutting jaws (2) and tighten with two socket head screws (3) each [4.5 Nm].
3. Attach the cutter blade (4).
4. Push the bolts (5) into the gearbox head.

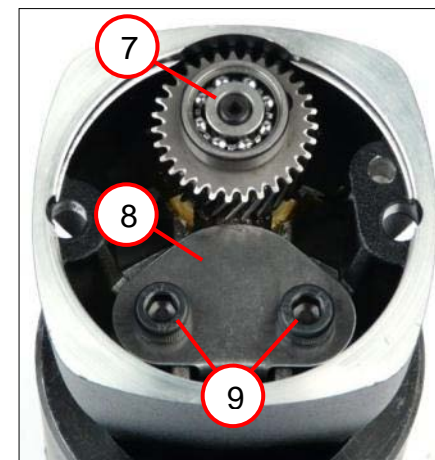
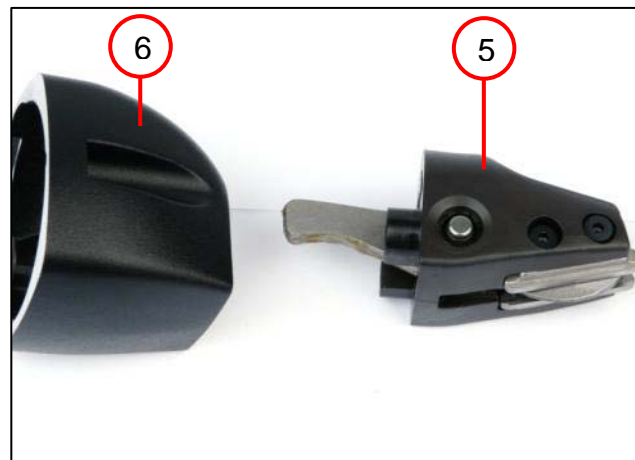
**Tool:**

- Slotted screwdriver
- 2.5mm hex key



## 7. Assembly

### Assembling the gearbox



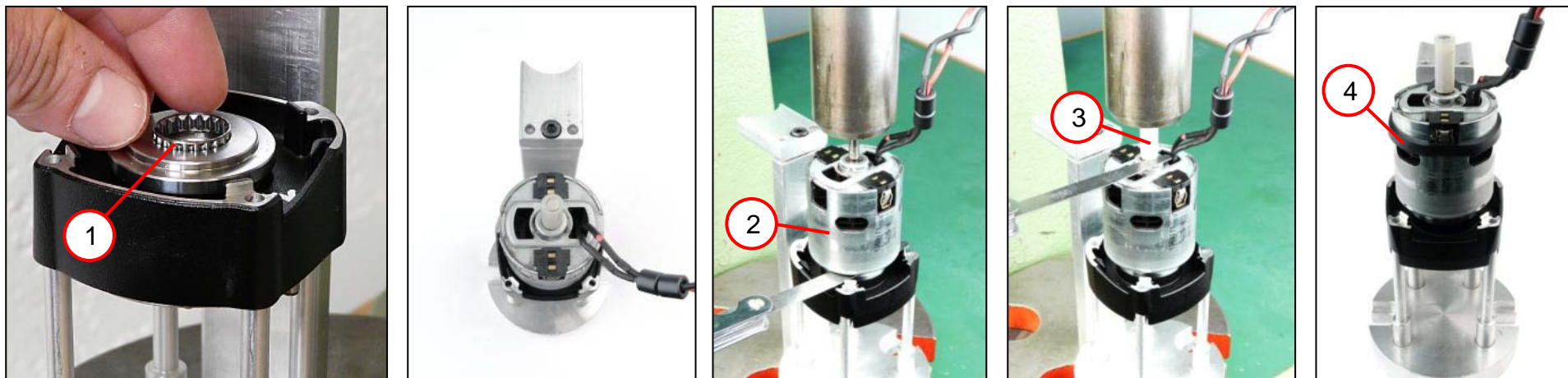
1. Press the grooved ball bearing (1) onto the eccentric shaft.
2. Slide the shim [d = 1.5mm] (2), the needle bearing (3) and the shim [d = 0.15mm] (3) onto the eccentric shaft.
3. Install the tool head (5) onto the housing (6).
4. Place the eccentric shaft (7) in the housing.
5. Place the leaf spring into the housing and fasten using the two socket head screws (9) [8 Nm].
6. Fill 12 g of grease into the gearbox.

#### Tool:

- 4mm hex key
- Arbor press
- Sleeve with  $\varnothing 6\text{mm}$  internal
- Grease  
0 40 101 0100 4

## 7. Assembly

### Assembling the armature



1. Insert the tolerance ring (1) into the bearing bush.
2. Align the motor on the intermediate bearing, as shown in the second image.
3. Press the motor (2) into the intermediate bearing as shown in the dimensional drawing [see page 17].
4. Press the magnet (3) into the motor as shown in the dimensional drawing [see page 17].
5. Place the motor bearing ring (4) on the motor as shown in the dimensional drawing [see page 17].

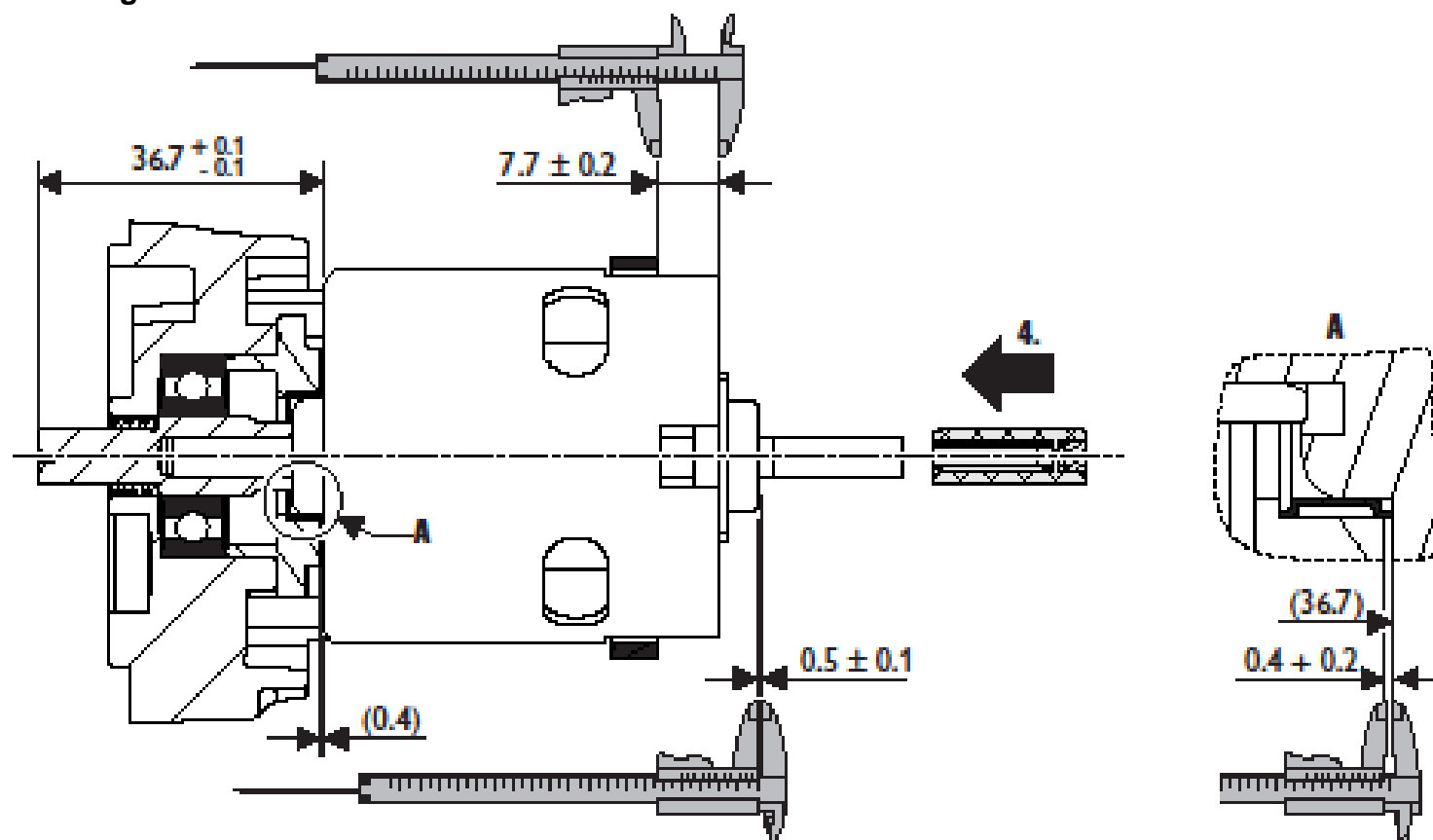
#### Tools:

- Torx T15
- Feeler gauge
- Press-in fixture  
6 41 22 108 00 0



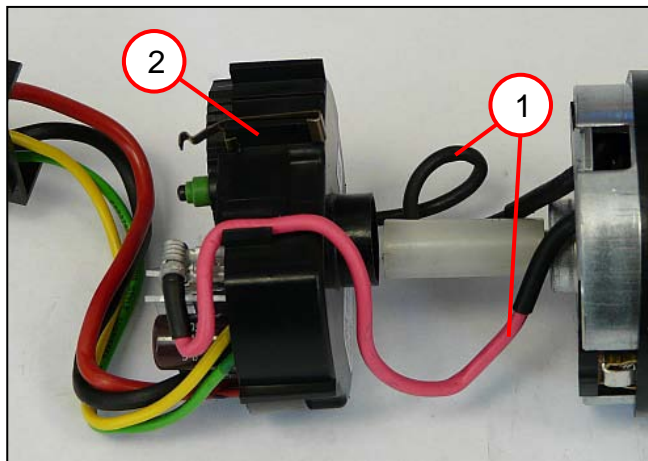
## 7. Assembly

### Installing the motor/field coil



## 7. Assembly

### Installing the motor/field coil



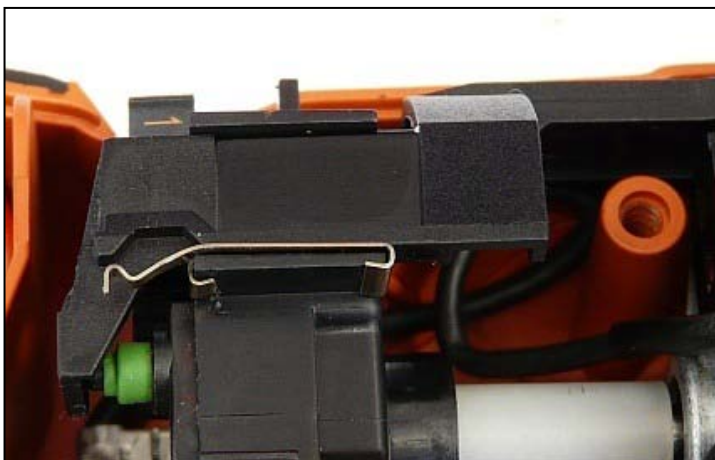
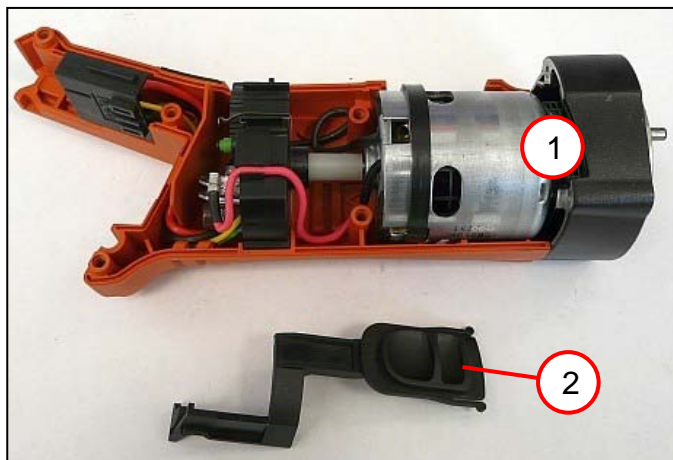
1. Connect the two motor cables (1) to the electronics (2).
  - ☞ Refer to the electronics circuit diagram in "8. Electronics circuit diagram" for the correct way to connect them.

**Tool:**

- Torx 15

## 7. Assembly

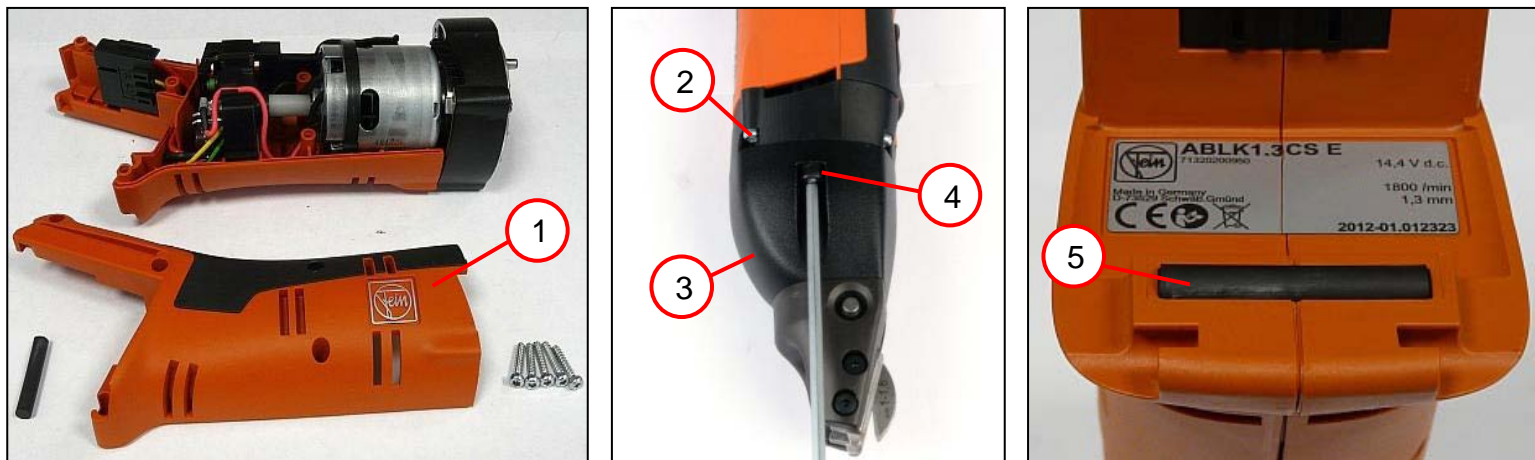
### Installing the motor/field coil



1. Insert the motor with an intermediate flange (1) into the housing.
2. Route the cables as shown in the first image.
3. Insert the slide switch (2) with spring, as shown in the second image.

## 7. Assembly

### Installing the motor/field coil



1. Attach and fasten the upper section of the housing (1).
2. Screw down intermediate flange with the four screws (2).
3. Attach the housing with the tool head (3) to the intermediate bearing.
4. Fasten the housing with tool head using the two screws (4) [ $5 \pm 0,2\text{Nm}$ ].
5. Insert the pressure piece (5).
6. Perform function check.

#### Tool:

- 4mm hex key
- Torx 15

# ABSS 1.6E

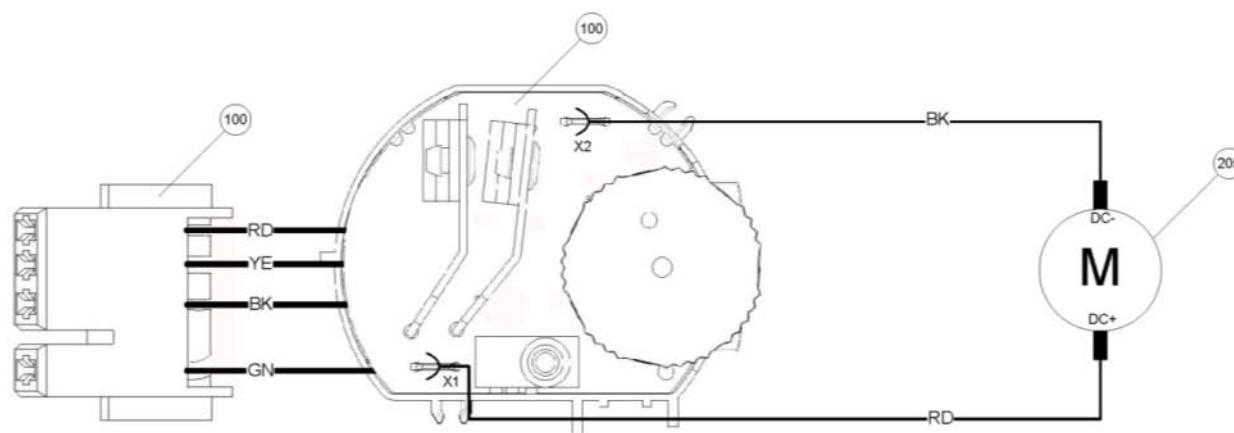


## 8. Connection diagram

### Anschlussplan

Connection diagram  
Esquemade conexiones  
Schémade connexion  
Схема соединений  
接线图

7 129 09 – AFMM14	14,4V
7 130 01 – ABSS1.6E	14,4V
7 130 02 – ABL51.6E	14,4V
7 132 01 – ABLK1.6E	14,4V
7 132 02 – ABLK1.3CSE	14,4V
7 132 03 – ABLK1.3TE	14,4V



3 41 21 000 025  
21.10.2013

