

ABLS 1.6E; ABLS 18 1.6E

Repair instructions





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ABLS 1.6E; ABL 18 1.6E



1. Models described

These instructions describe how to repair the following models:

Model	Order number
ABLS 1.6E	7 130 02
ABLS 18 1.6E	7 130 04



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



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	2mm; 3mm; 4mm; 8mm
Plastic mallet	
Torx screwdriver	T15; T25
Arbor press	
Cable hooks	
Sleeves	<ul style="list-style-type: none"> • 6mm internal Ø • 21mm external Ø
Feeler gauge	
Internal puller	8-12mm

Special tool

Assembly aid	6 41 22 108 00 0
Extractor tool	6 41 14 033 00 0
26mm ball bearing puller	6 41 07 026 00 0
Drawing-off socket cap	6 41 04 150 00 8
16mm chuck cone	6 41 07 016 00 1
Press-in fixture	6 41 22 108 00 0



5. Lubricants and auxiliary substances required

Lubricants

Grease	0 40 101 0100 4	12 g	Housing
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Auxiliary substances

Loctite 574	Set screw on bench blade
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6. Disassembly

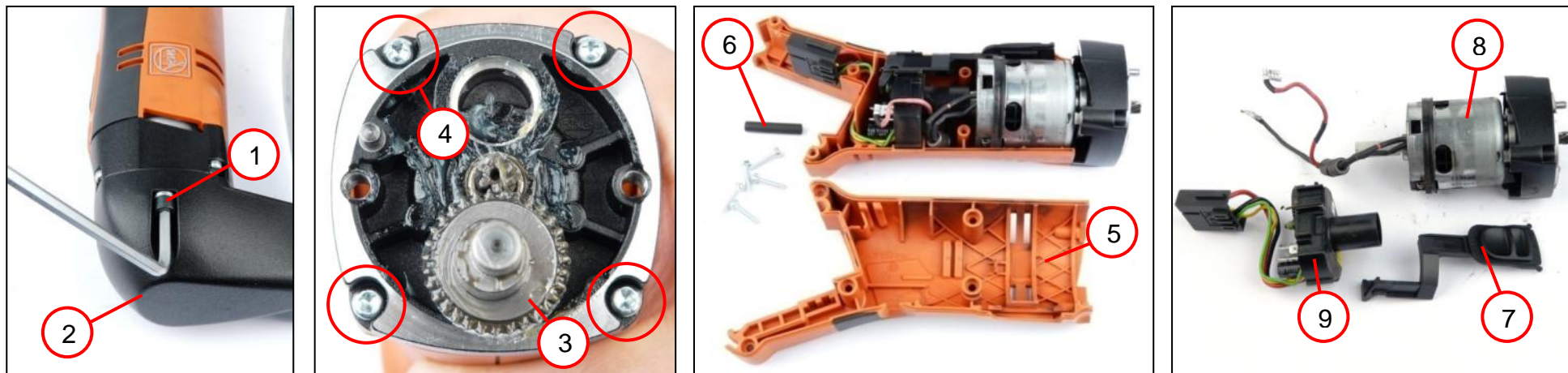
Remove battery



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

6. Disassembly

Disassembling the motor



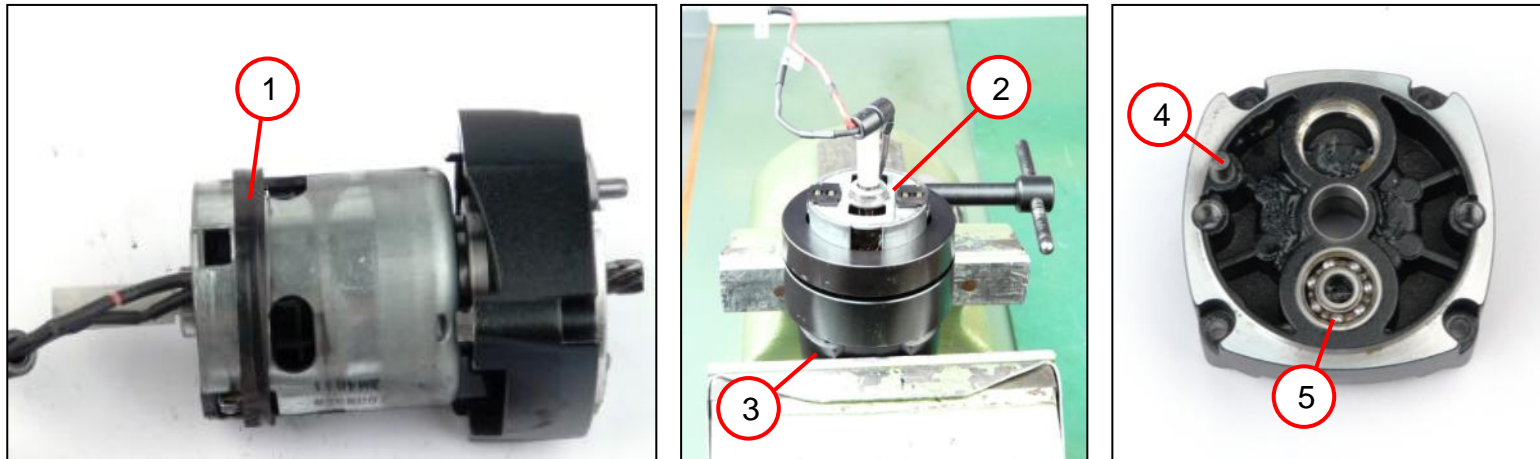
1. Remove the two socket head screws (1) on both sides.
2. Remove the housing (2).
3. Remove the eccentric shaft (3) with discs.
4. Unscrew the four screws (4).
5. Unscrew the five screws and remove the cover (5).
6. Remove the pressure piece (6).
7. Remove the slide switch (7) with spring, the motor (8) and the electronics (9).
8. Unplug the motor connector cables on the electronics.

Tool:

- 4mm hex key
- Torx T15

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.

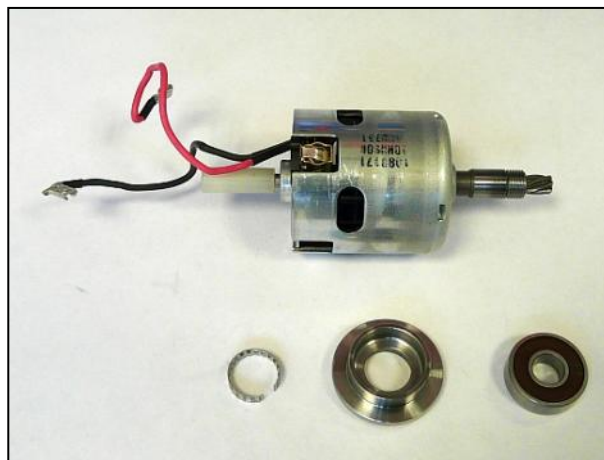
3. Remove the pin (1).
4. Remove the grooved ball bearing (2) with an internal puller.

Tool:

- Extractor tool
6 41 14 033 00 0
- Slide hammer
- 5-8mm internal puller

6. Disassembly

Disassembling the motor



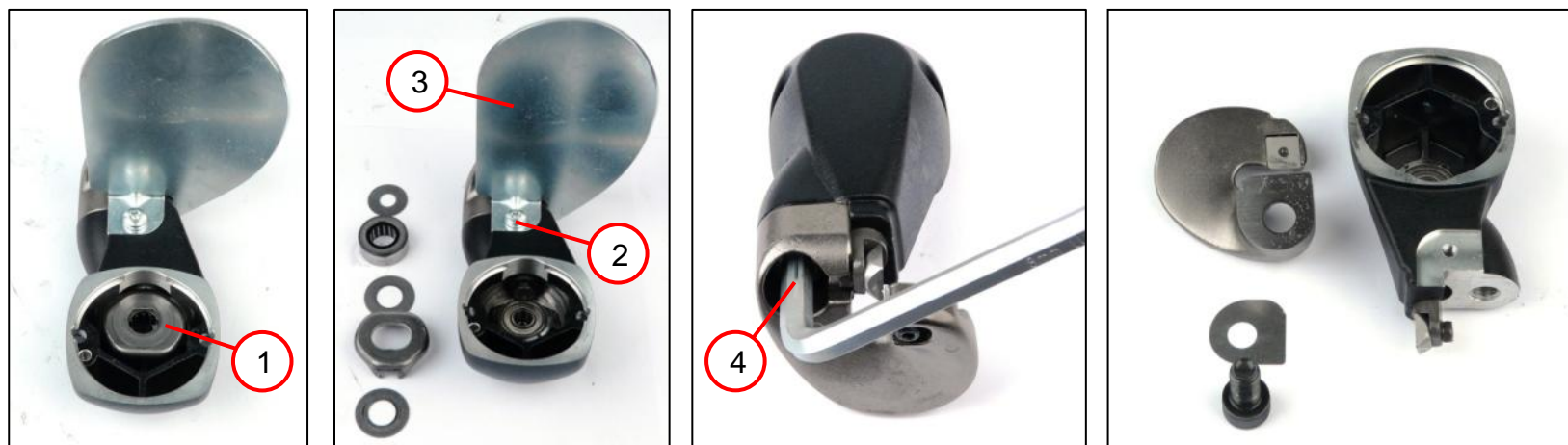
1. Take the grooved ball bearing off the motor.

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 housing



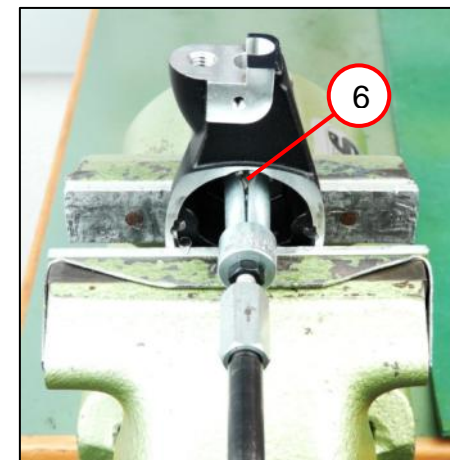
1. Remove the parts (1).
2. Unscrew the fillister head screw (2).
3. Remove the hand guard (3).
4. Unscrew the socket head screw (4) and the cutting table with disc.

Tool:

- 8mm hex key
- Torx T25

6. Disassembly

Disassembling the housing



1. Remove the socket head screw (1) and unscrew the set screw (2).
2. Remove the bench blade (3).
3. Pull out the plunger (4).
4. Loosen the socket head screw (5) and remove the plunger blade.
5. Remove the grooved ball bearing (6).

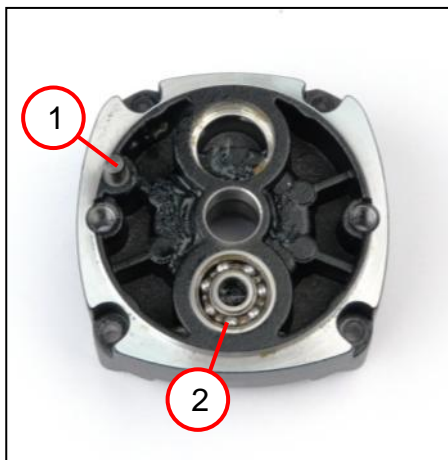
Tool:

- 2mm; 3mm hex key
- 8-12mm internal puller



7. Assembly

Assembling the flange



1. Insert the pin (1).
2. Press the grooved ball bearing (2) with a sleeve into the flange.

Tool:

- Arbor press
- Sleeve with $\varnothing 16\text{mm}$ external



7. Assembly

Assembling the housing



1. Press the grooved ball bearing (1) into the housing.

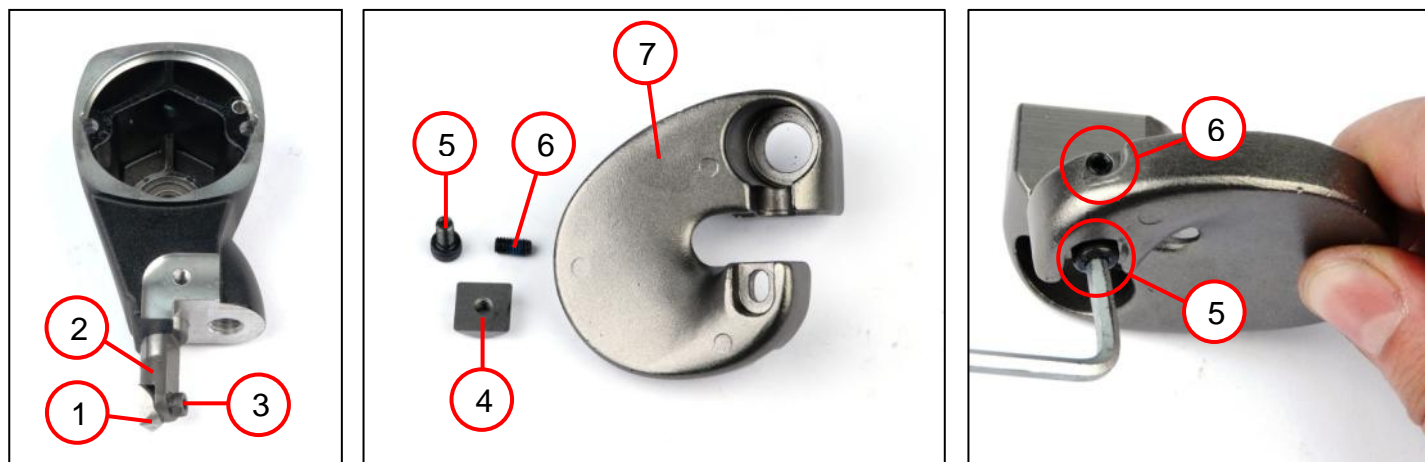
Tool:

- Sleeve with Ø21mm external



7. Assembly

Assembling the housing



1. Secure the plunger blade (1) on the plunger (2) with a cylinder head screw (3) [5 Nm].
2. Push the plunger into the housing.
3. Secure the bench blade (4) on the cutting table with the screw (5) [5 Nm].
4. Place the set screw (6) in position.

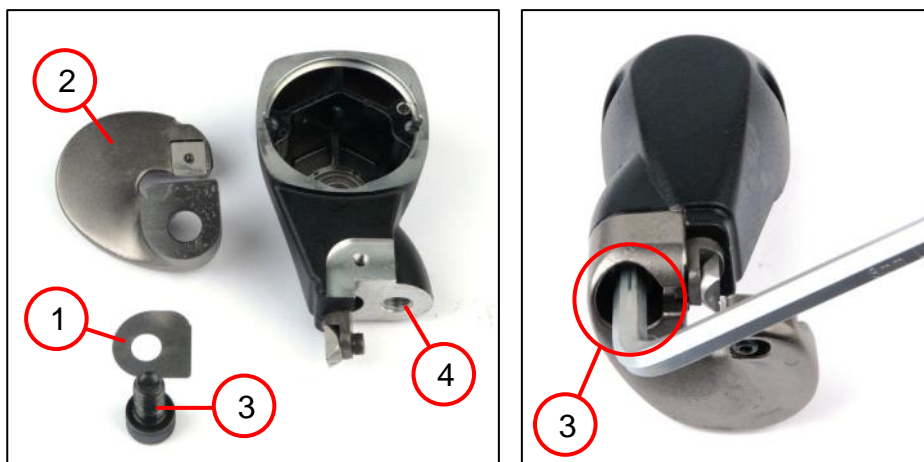
Tool:

- 2mm; 3mm hex key



7. Assembly

Assembling the housing



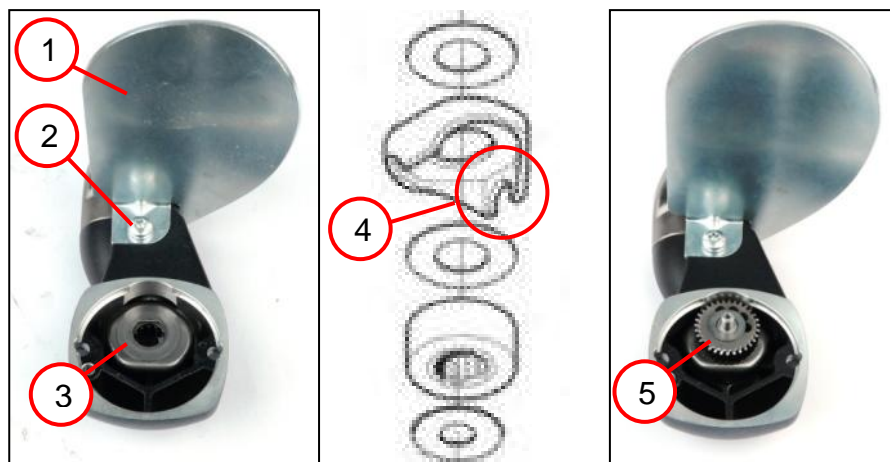
1. Position the disc (1) correctly on the surface (4) of the housing.
2. Rotate the plunger into position, as shown in the first image.
3. Position the cutting table (2) correctly on the surface (4) of the housing.
4. Using the cylinder head screw (3), secure the cutting table on the housing [65Nm].

Tool:

- 8mm hex key

7. Assembly

Assembling the housing



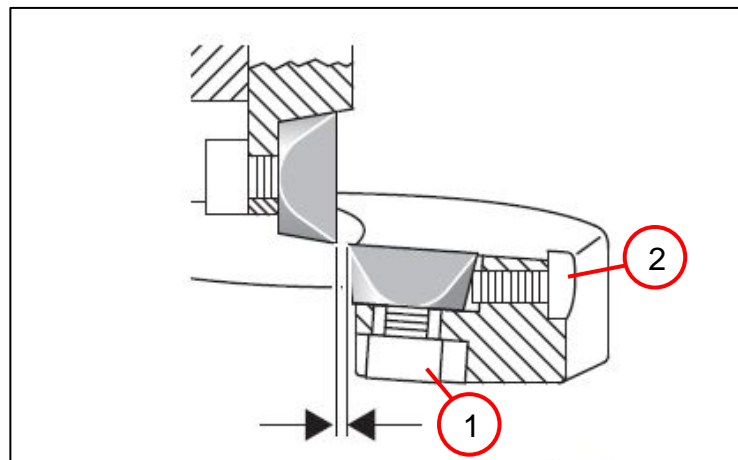
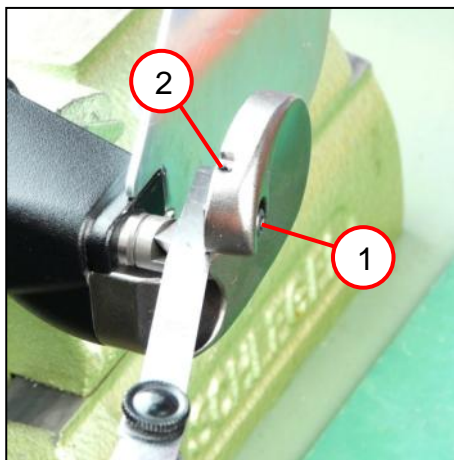
1. Fix the hand guard (1) on the housing with the fillister head screw (2) [5Nm].
2. Insert the parts (3) into the housing, as shown in the fourth image.
☞ Make sure that the cut-out (4) is positioned on the plunger.
3. Fill the housing with 12 g of grease.
4. Plug the eccentric shaft (5) into the grooved ball bearing in the housing and insert the shim [h=0.15].

Tool:

- Torx T25
- Grease
(0 40 101 0100 4)

7. Assembly

Configuring the blade



1. Install the cylinder head screw (1).
2. Using the set screw (2), configure the distance from the bench blade to the plunger blade.
 - ☞ Measure the distance with a feeler gauge.
 - ☞ For the distance dimension, refer to page 20.
 - ☞ To secure the set screw, apply a drop of Loctite 574.
3. Tighten the cylinder head screw (1) [5Nm].

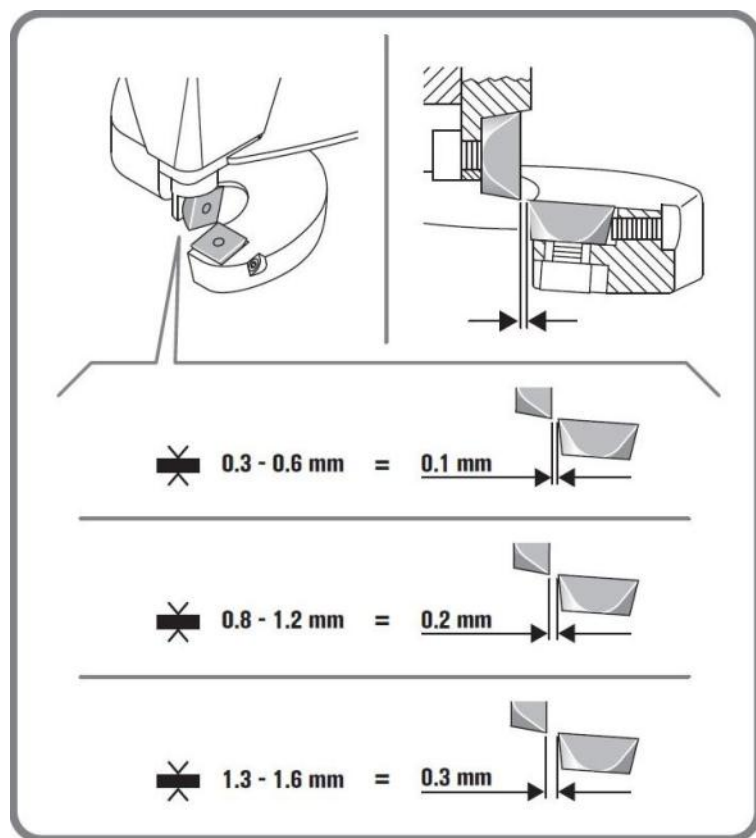
Tool:

- Feeler gauge
- Loctite 574



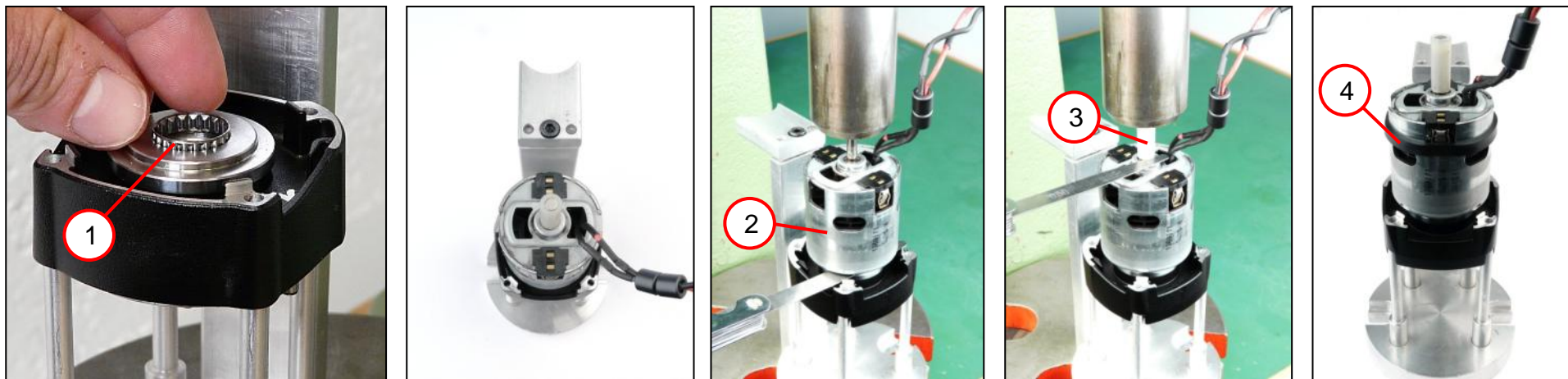
7. Assembly

Configuring the blade



7. Assembly

Assembling the armature



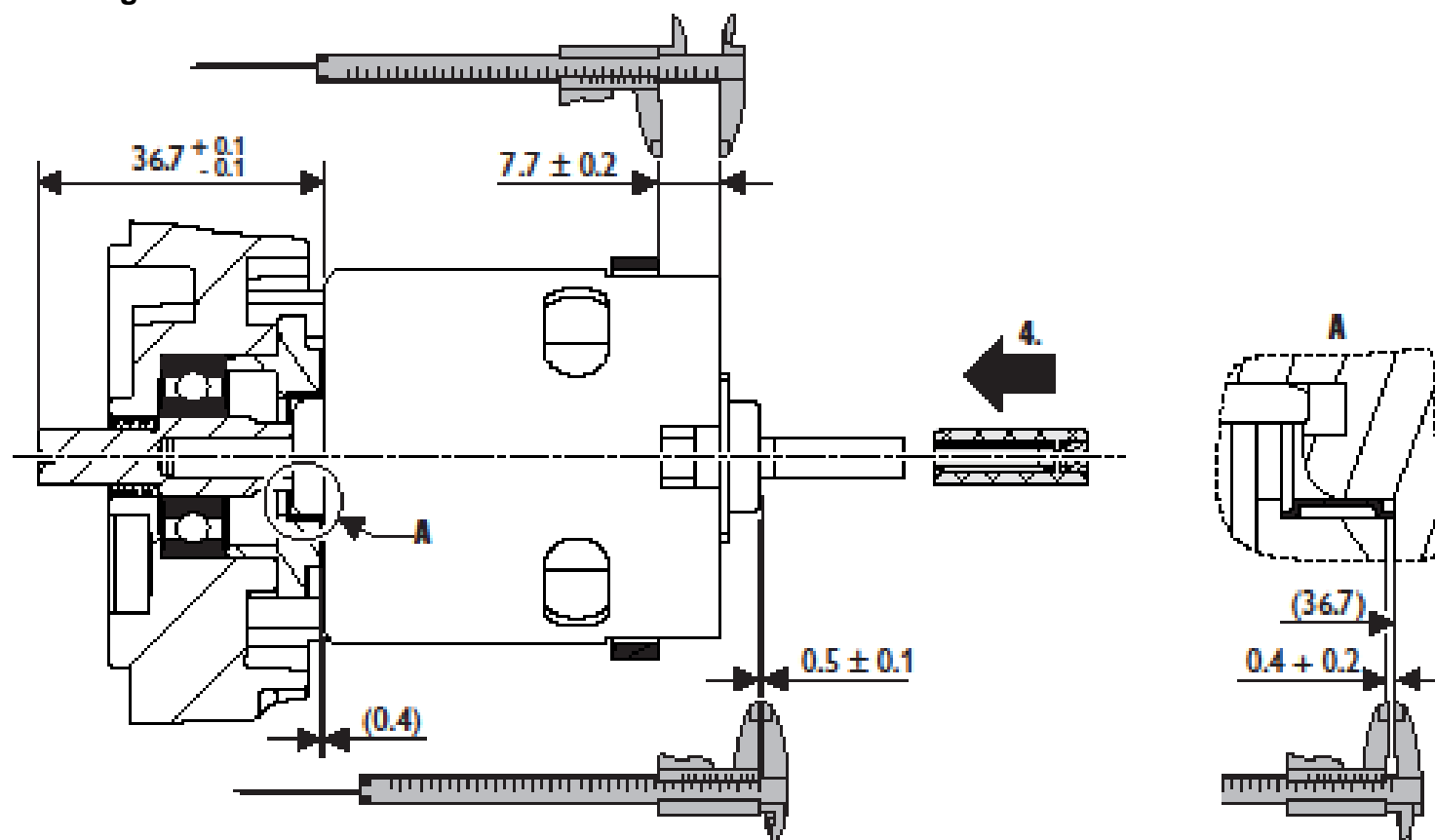
1. Insert the tolerance ring (1) into the bearing bush.
2. Align the motor on the intermediate bearing, as shown in the second image.
3. Press the motor (2) into the intermediate bearing as shown in the dimensional drawing [see page 22].
4. Press the magnet (3) into the motor as shown in the dimensional drawing [see page 22].
5. Place the motor bearing ring (4) on the motor as shown in the dimensional drawing [see page 22].

Tools:

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

7. Assembly

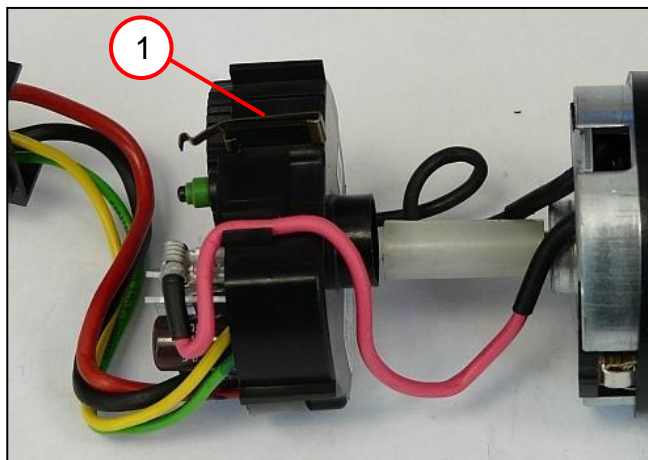
Installing the motor/field coil





7. Assembly

Installing the motor/field coil



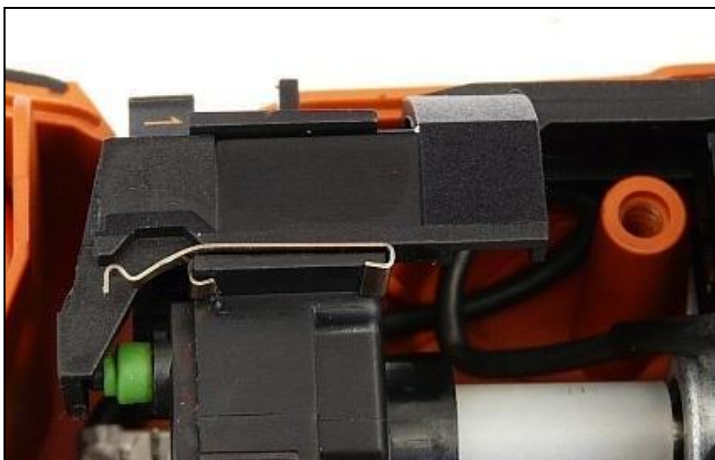
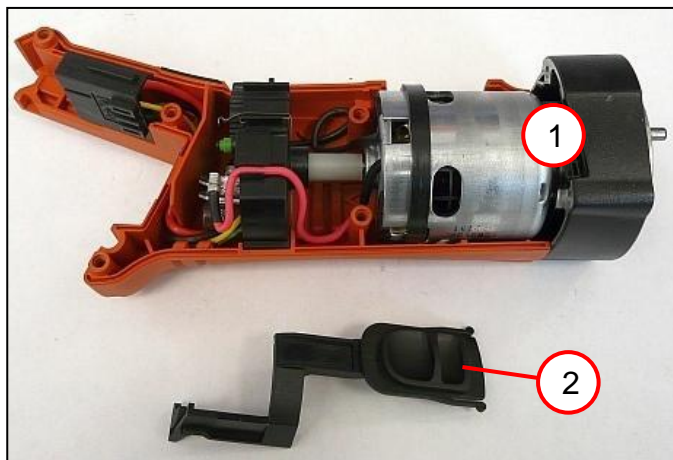
1. Connect the two motor cables to the electronics (1).
 - ☞ Refer to the electronics circuit diagram in Chapter 8, Connection plan, for the correct connection.

Tool:

- Torx 15

7. Assembly

Installing the motor/field coil

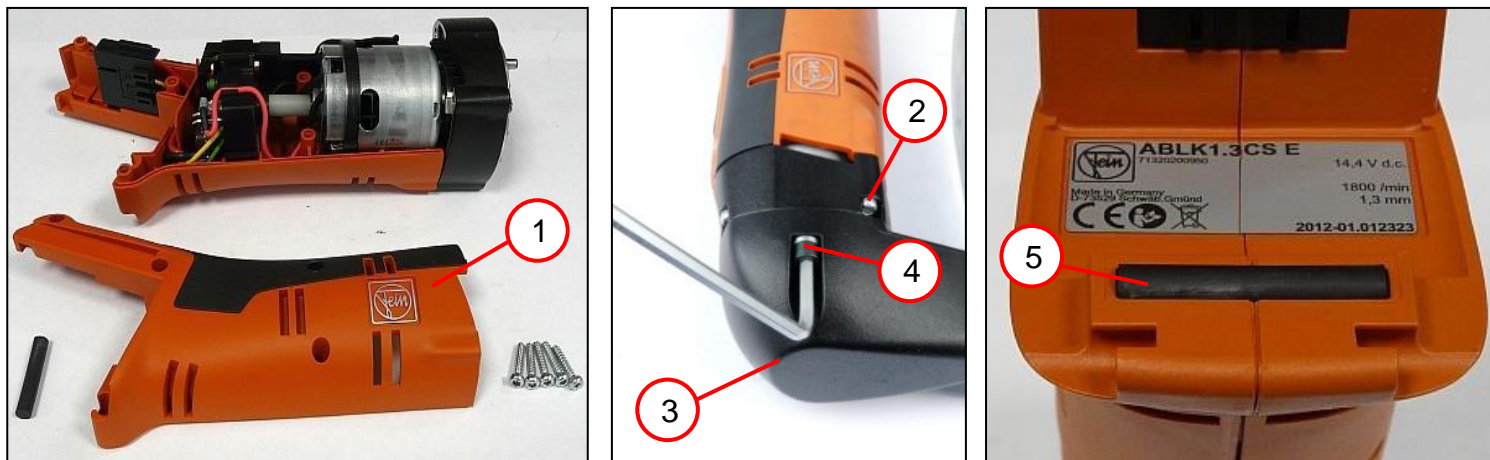


1. Insert the motor with an intermediate flange (1) into the housing.
2. Route the cables as shown in the first image.
3. Insert the slide switch (2) with spring, as shown in the second image.



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

ABLS 1.6E; ABL 18 1.6E



8. Connection diagram

Anschlussplan

Connection diagram

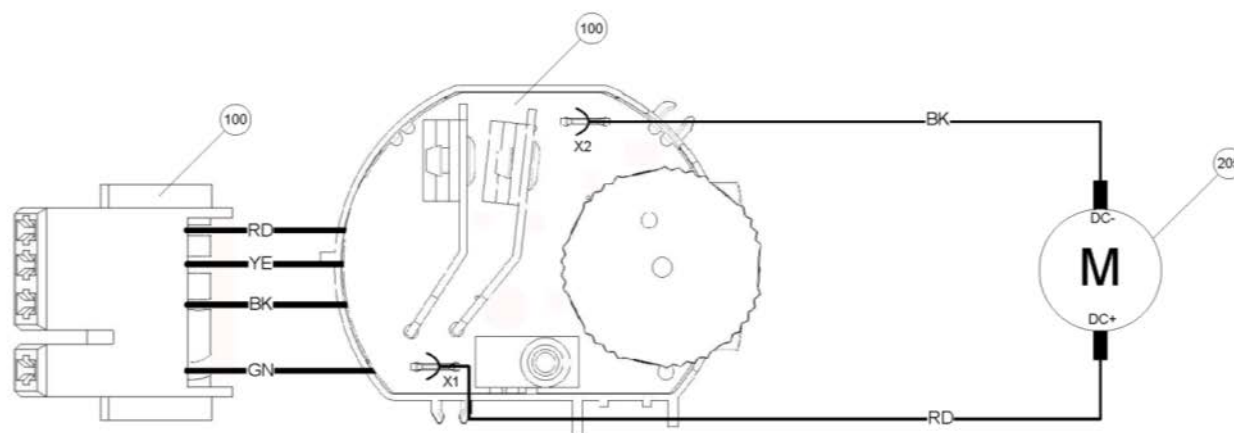
Esquemade conexiones

Schémade connexion

Схема соединений

接线图

7 129 09 – AFMM14	14,4V
7 130 01 – ABSS1.6E	14,4V
7 130 02 – ABL1.6E	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
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