



AKBU 35PMQ (7 170 01 ...)
 AKBU 35PMQW, AJMU 35PMQW (7 170 02 ...)





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



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.

AKBU 35 PMQ; AKBU 35 PMQW

Lubricants and auxiliary substances required



Lubricants

AKBU 35 PMQ; AKBU 35 PMQW

Grease 0 401 32 0300 0 60 g Gearbox

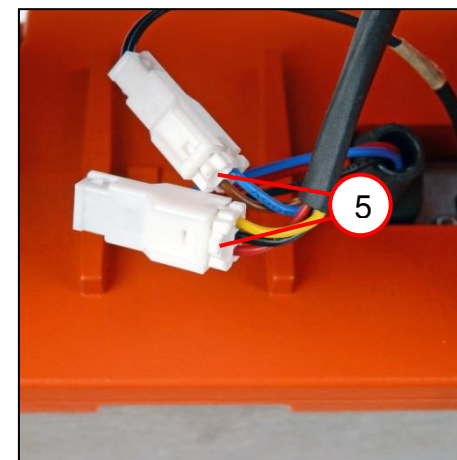
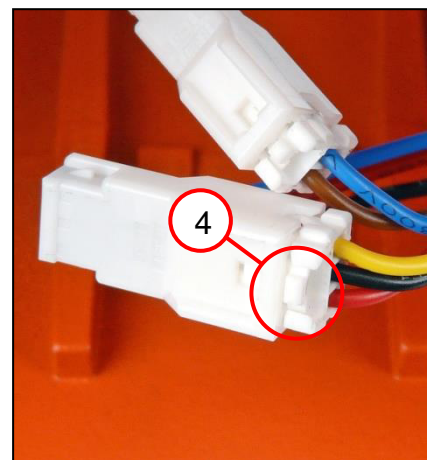
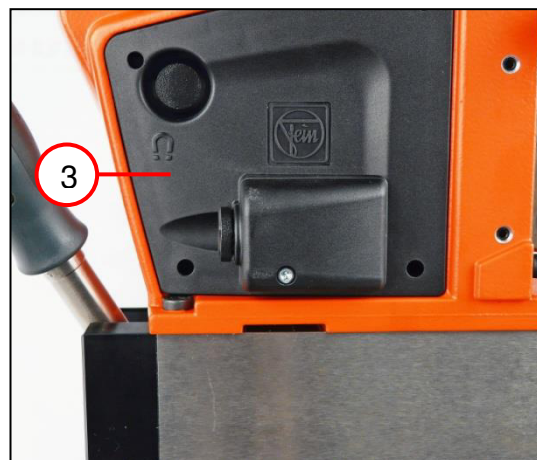


Not yet available.



Removal

Removing the electronics



1. Unscrew the four screws (1).
2. Remove the cover (2).
3. Remove the cover (3).
4. Press and hold the lock (4).
5. Remove the two plugs (5).

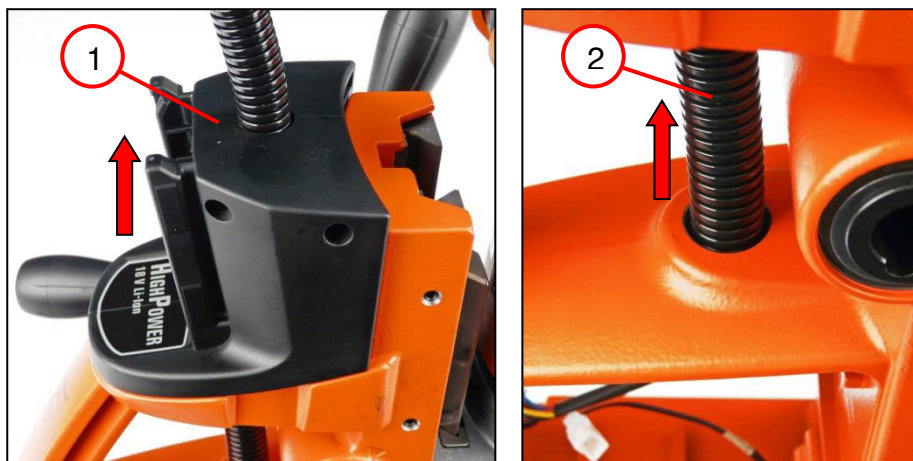
Tools:

- Torx T20; T15



Removal

Removing the drill motor



1. Remove the housing (1).
2. Remove the protective hose (2).

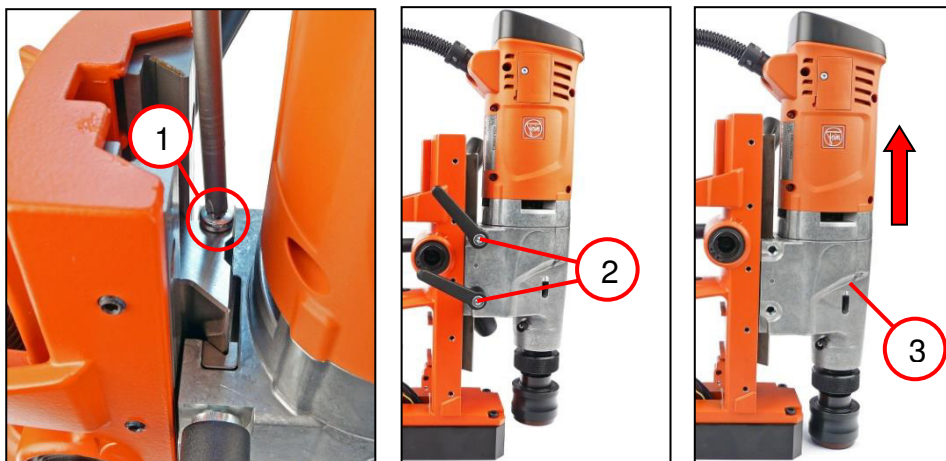
Tools:

- PH2 cross-tip screwdriver



Removal

Removing the motor housing



1. Unscrew the fillister head screw (1).

Crushing hazard around drill motor!

The drill motor will rapidly slide downwards once the two screws (2) have been loosened.

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

2. Unscrew the two levers (2).

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

Tools:

- PH2 cross-tip screwdriver

Removal

Removing the control panel



1. Unscrew the two screws (1).
2. Remove the cover (2).
3. Remove switch insert (3).
4. Open the lock (4).
5. Disconnect the ribbon cable (5).

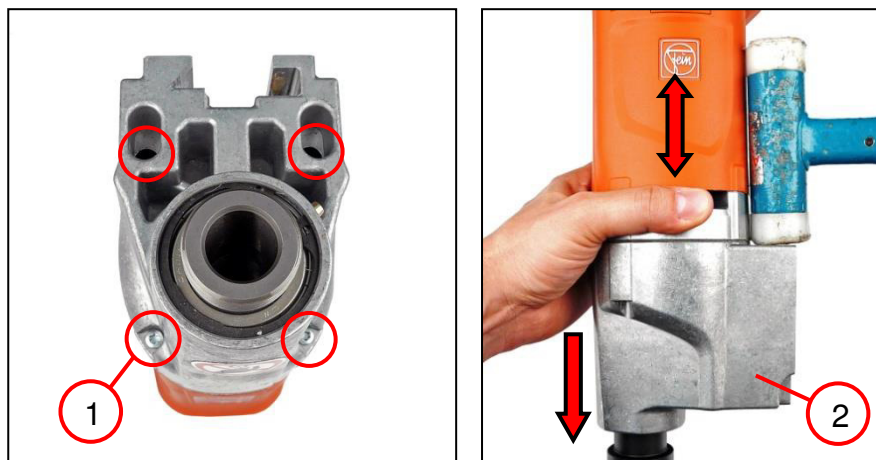
Tools:

- Torx T20



Removal

Removing the motor housing



1. Unscrew the four screws (1).
2. Remove the gearbox housing (2).

Tools:

- Torx T20
- Plastic hammer



Removal

Removing the motor housing



Caution: Magnetic field!

Damage caused by metal foreign bodies on the rotor.

☞ After removal, place the rotor down in a clean place.

1. Remove the intermediate gearbox (1).
2. Remove the air guide ring (2).
3. Cut through the information label.
4. Unscrew the five screws (3).
5. Remove the motor housing (4).

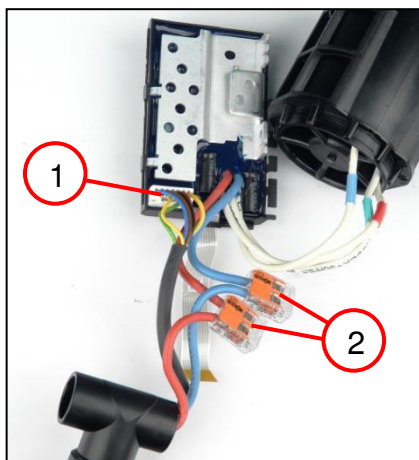
Tools:

- Blade
- Torx T20



Removal

Removing the housing

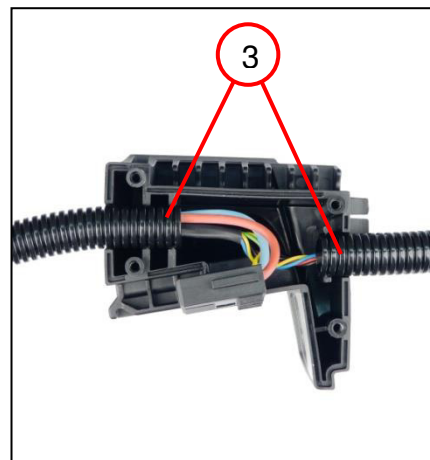
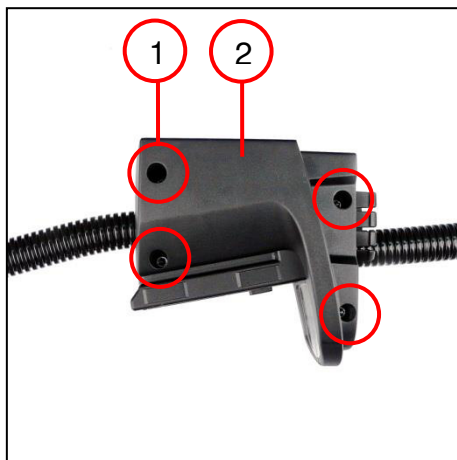


1. Remove all components from the motor housing.
2. Unlock and remove the plug (1).
3. Remove the two terminals (2).



Removal

Removing the motor housing



1. Cut through the sticker.
2. Unscrew the four screws (1).
3. Remove the housing (2).
4. Remove the protective hose (3).

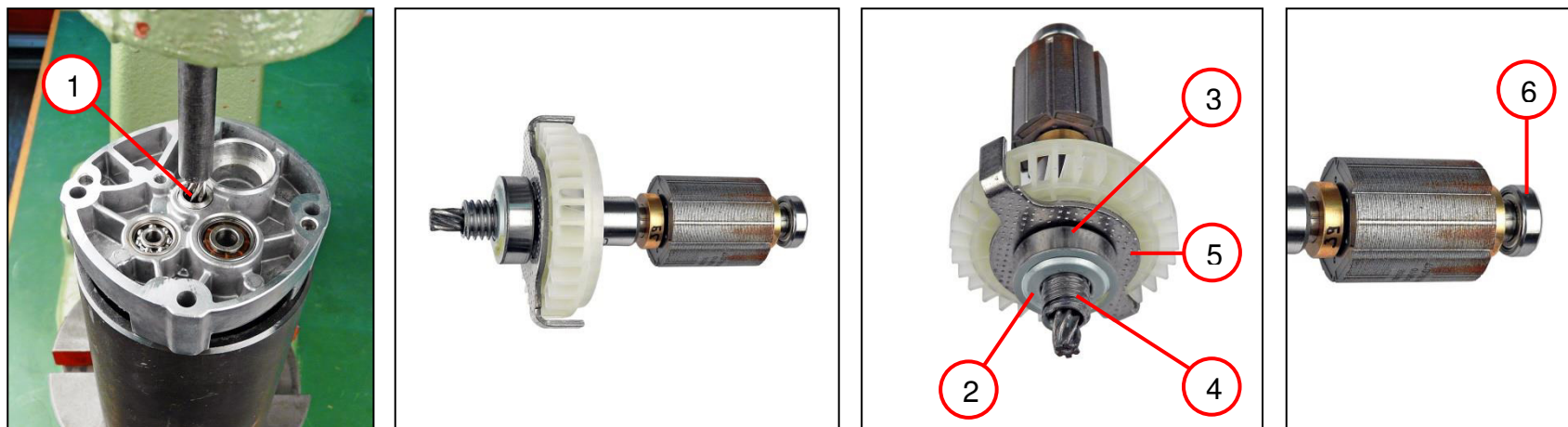
Tools:

- Torx T15



Removal

Removing the armature



Caution: Magnetic field!

Damage caused by metal foreign bodies on the rotor.

☞ After removal, place the rotor down in a clean place.

1. Press out the armature (1).
2. Remove the sealing ring (2).
3. Remove the grooved ball bearing (3) together with the sealing ring (4).
4. Remove the plate (5).
5. Pull off the grooved ball bearing (6).

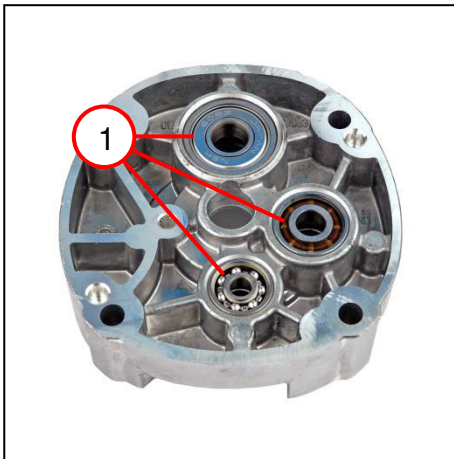
Tools:

- Arbor press
- Punch, 10 mm
- Drawing-off socket cap
- Chuck cone, 26 mm
- Chuck cone, 19 mm



Removal

Removing the intermediate gearbox



1. Pull out the three grooved ball bearings (1).

Tools:

- Slide hammer
- Inner puller



Removal

Removing the gearbox housing



1. Unscrew the four screws (1).
2. Remove the gearbox housing (2).

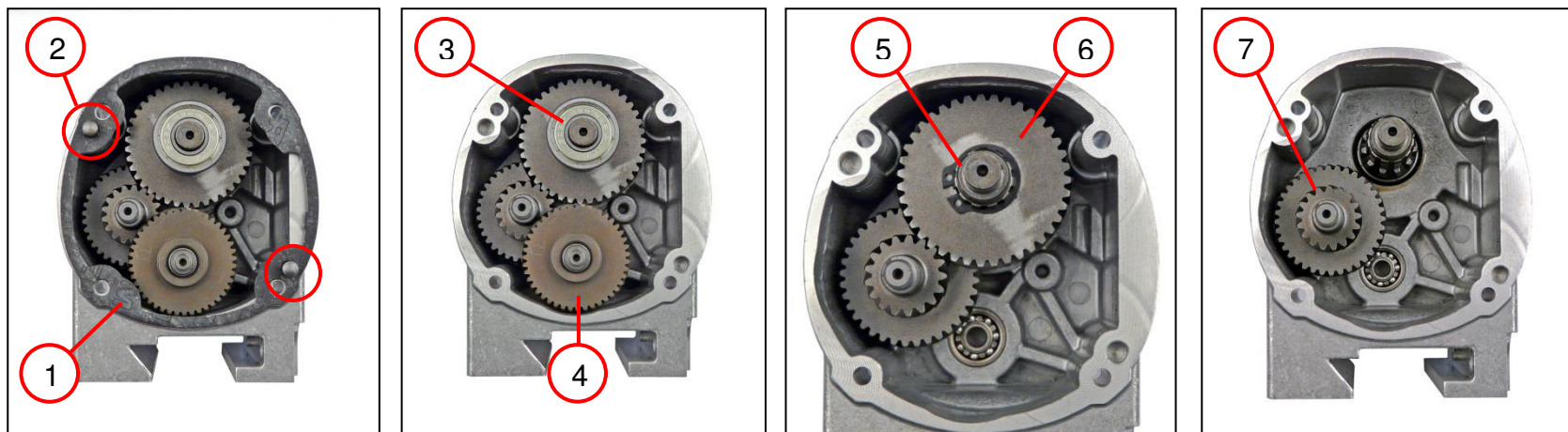
Tools:

- Torx T20
- Plastic hammer



Removal

Removing the gearbox housing



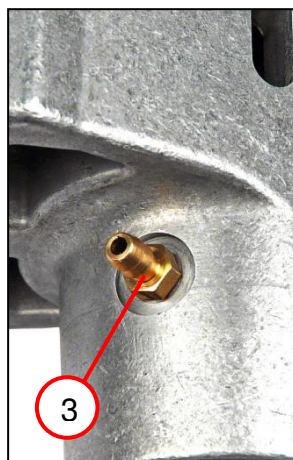
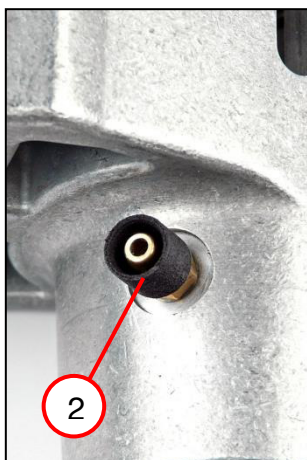
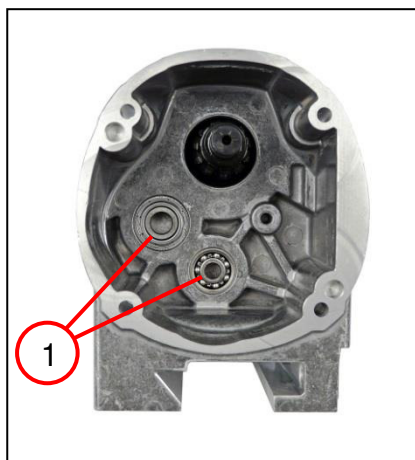
1. Remove the seal (1).
2. Remove the two straight pins (2).
3. Pull off the grooved ball bearing (3).
4. Remove the gear-wheel (4).
5. Remove the circlip (5).
6. Remove the gear-wheel (6).
7. Remove the gear-wheel (7).

Tools:

- Drawing-off socket cap
- Chuck cone 24 mm
- Combination pliers
- Circlip pliers

Removal

Removing the gearbox housing



1. Remove the two grooved ball bearings (1).
2. Remove the sleeve (2).
3. Unscrew the hose socket (3).
4. Remove the circlip (4).
5. Press out the shaft (5).

Tools:

- Slide hammer
- Inner puller
- Socket wrench
- Socket wrench insert, 7 mm
- Circlip pliers
- Arbor press
- Sleeve
44 mm inner diameter
50 mm outer diameter



Removal

Removing the gearbox housing



1. Remove three sealing rings (1).



Removal

Removing the gearbox housing



1. Remove the circlip (1).
2. Press down on the grooved ball bearing (2).

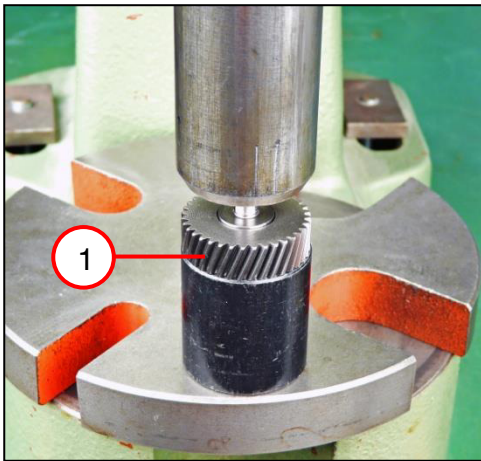
Tools:

- Circlip pliers
- Arbor press
- Sleeve
39 mm inner diameter
42 mm outer diameter



Removal

Removing the gear-wheel



1. Press down on the gear-wheel (1).

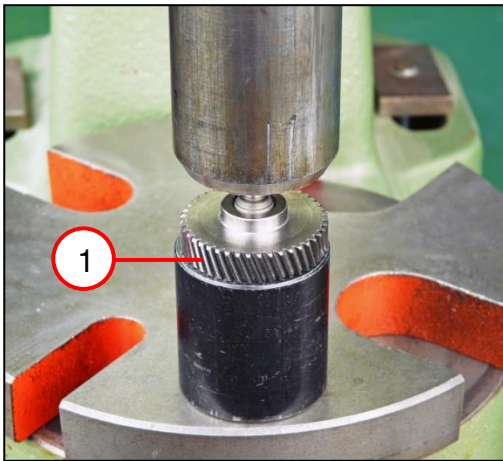
Tools:

- Arbor press
- Sleeve
22 mm inner diameter
37 mm outer diameter



Removal

Removing the gear-wheel



1. Press down on the gear-wheel (1).

Tools:

- Arbor press
- Sleeve
27 mm inner diameter
36 mm outer diameter



Removal

Removing the holder



1. Remove the circlip (1).
2. Remove the nut (2).

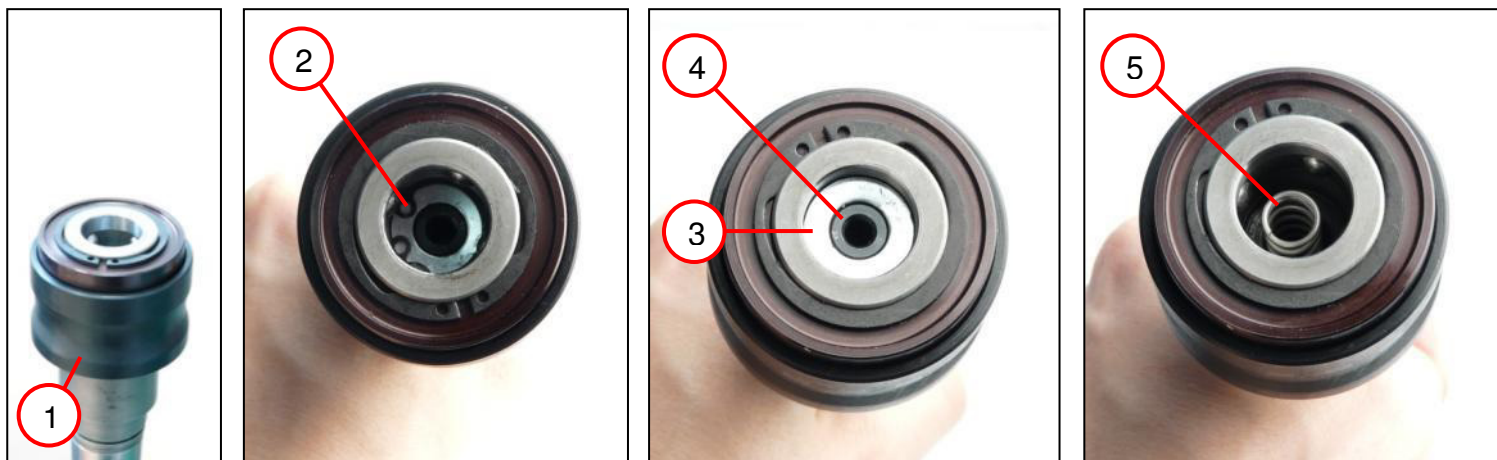
Tools:

- Circlip pliers



Removal

Fitting the holder



1. Push up outer sleeve (1) and hold.
2. Remove the circlip (2).
3. Remove the disc (3).
4. Remove the sleeve (4).
5. Remove the spiral spring (5).

Tools:

- Circlip pliers



Removal

Fitting the holder



1. Remove the circlip (1).
2. Remove the cover (2).

CAUTION!

Risk of injury due to tensioned spiral spring.

☞ When loosening circlip, hold cover with hand.

3. Remove the spiral spring (3).
4. Remove the sleeve (4).
5. Remove four balls (5).

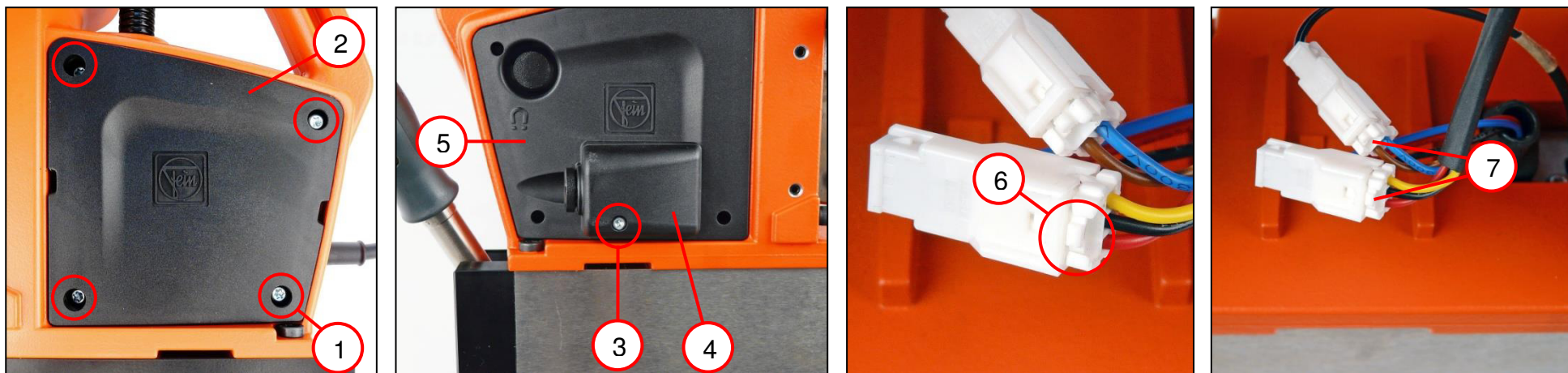
Tools:

- Circlip pliers



Removal

Removing the electronics



1. Unscrew the four screws (1).
2. Remove the cover (2).
3. Unscrew the screw (3).
4. Remove the cover (4).
5. Remove the cover (5).
6. Press and hold the lock (6).
7. Remove the two plugs (7).

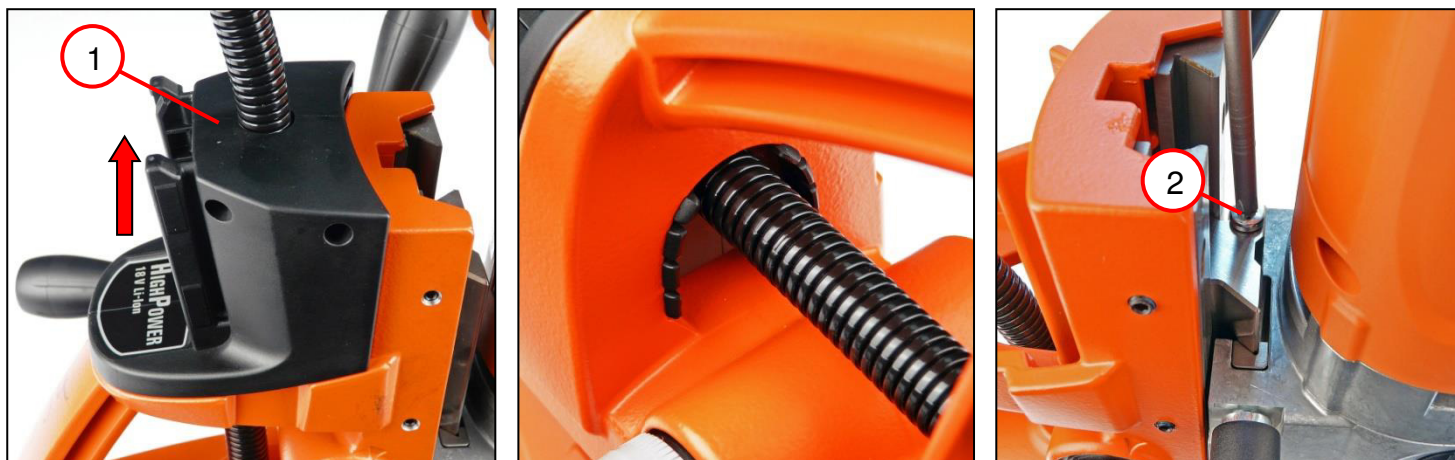
Tools:

- Torx T20; T15



Removal

Removing the drill motor



1. Remove the housing (1).
 - ☞ Pay attention to the clips on the bottom.
2. Unscrew the flat headed screw (2).

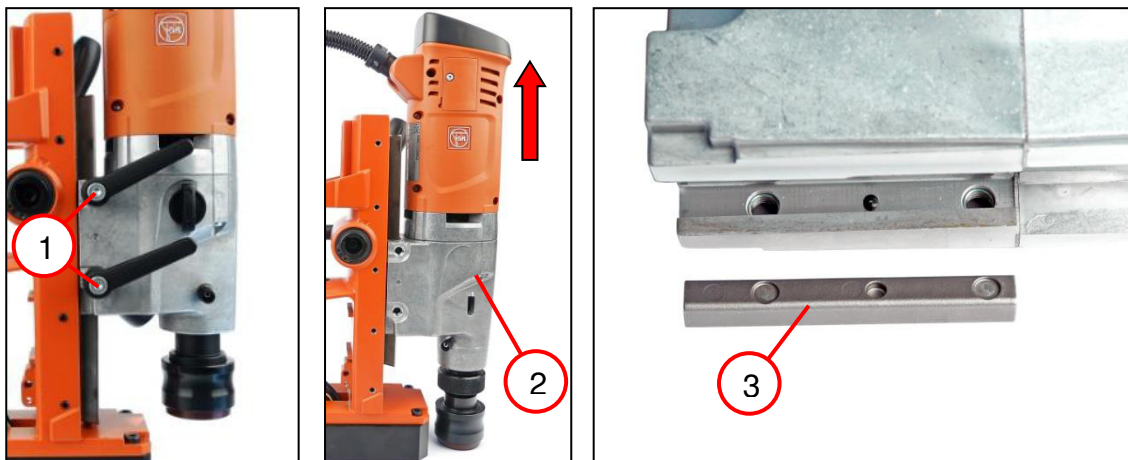
Tools:

- PH2 cross-tip screwdriver



Removal

Removing the drill motor



Crushing hazard around drill motor!

☞ The drill motor will rapidly slide downwards once the two screws (1) have been loosened.

1. Unscrew the two levers (1).
2. Remove the drill motor (2).
3. Remove the pressure piece (3).

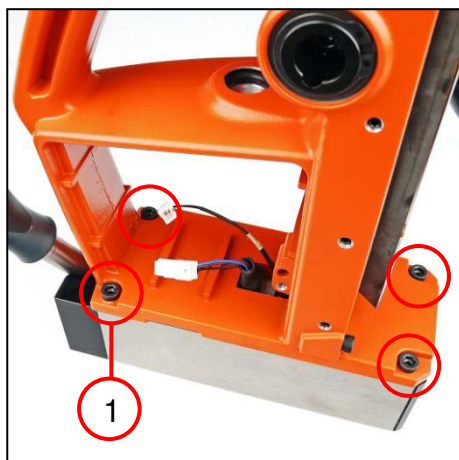
Tools:

- Socket head wrench, 4 mm



Removal

Removing the magnetic foot



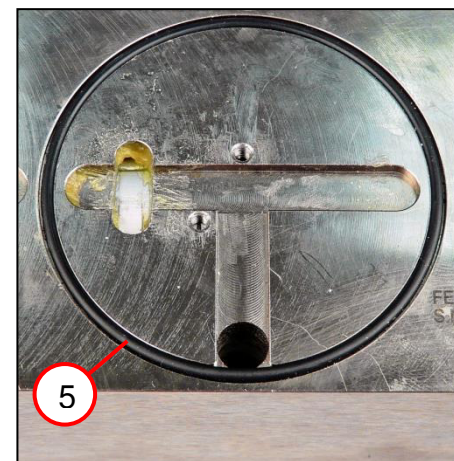
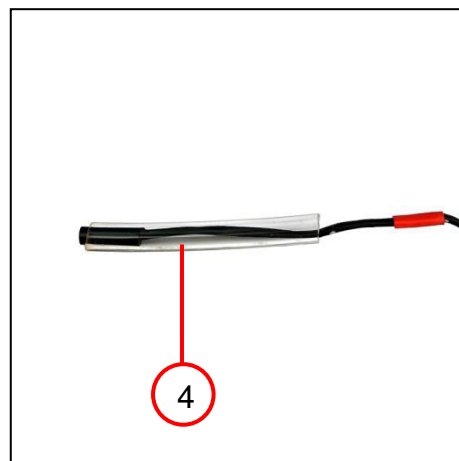
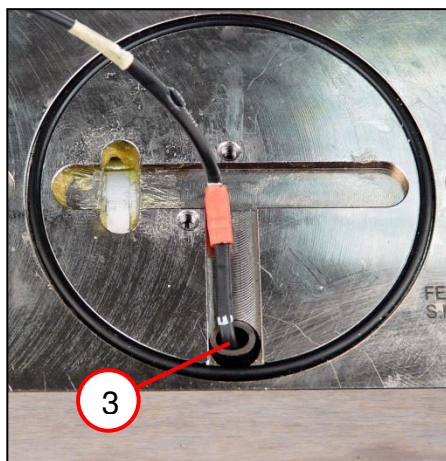
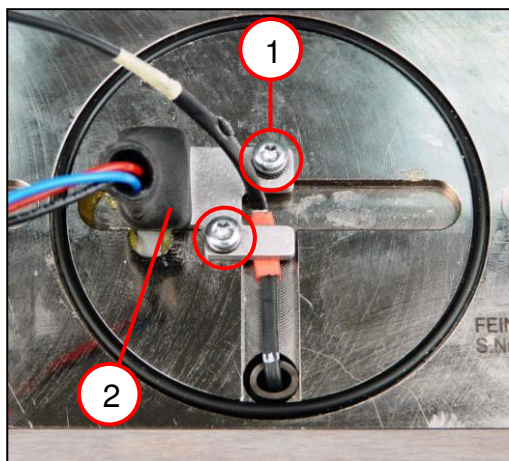
1. Unscrew the four screws (1) and remove the magnetic foot.

Tools:

- Socket head wrench, 5 mm

Removal

Removing the magnetic foot



1. Unscrew the two screws (1).
2. Remove the switch (2).
3. Remove the sensor (3).
4. Remove the hose (4).
5. Remove the sealing ring (5).

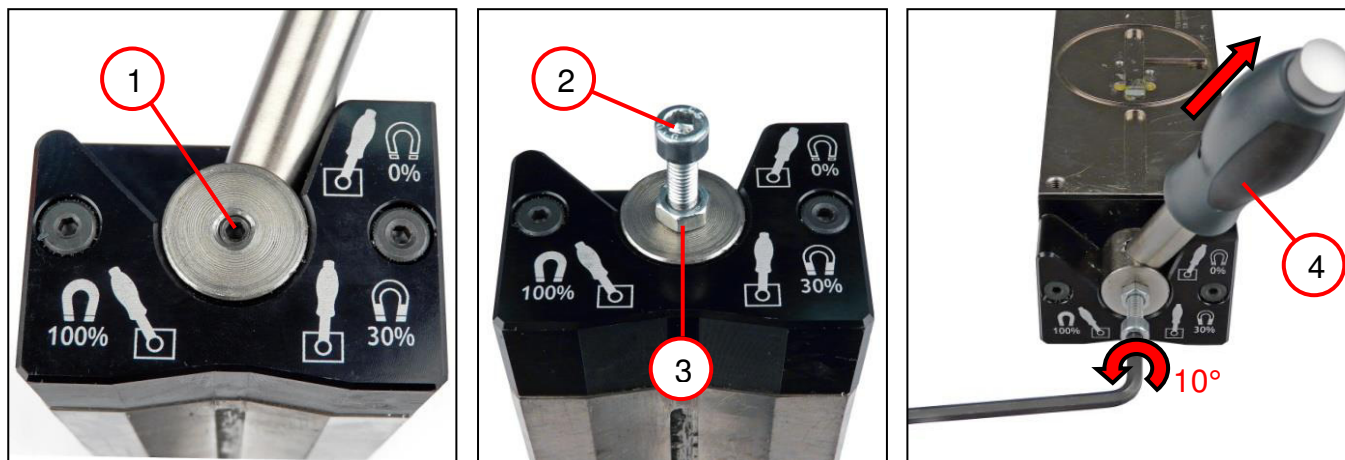
Tools:

- Torx T10



Removal

Removing the magnetic foot



1. Place the magnet on a steel plate.
2. Unscrew the set screw (1).
3. Screw in the screw (2) to max. 5 mm.
4. Tighten the lock nut (3).
5. Turn the screw anticlockwise.
6. Pull out lever (4).

Tools:

- Socket head wrenches
3 mm; 5 mm
- Assembly aid
-M5x30 screw
-M5 nut



Removal

Removing the connecting cable



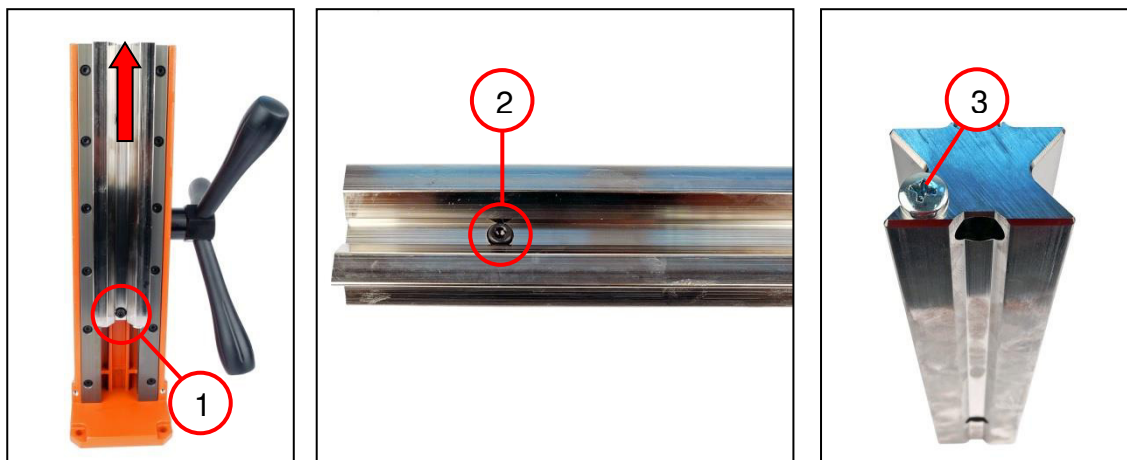
1. Remove the sealing ring (1).

Tools:

- Slotted screwdriver

Removal

Removing the guide



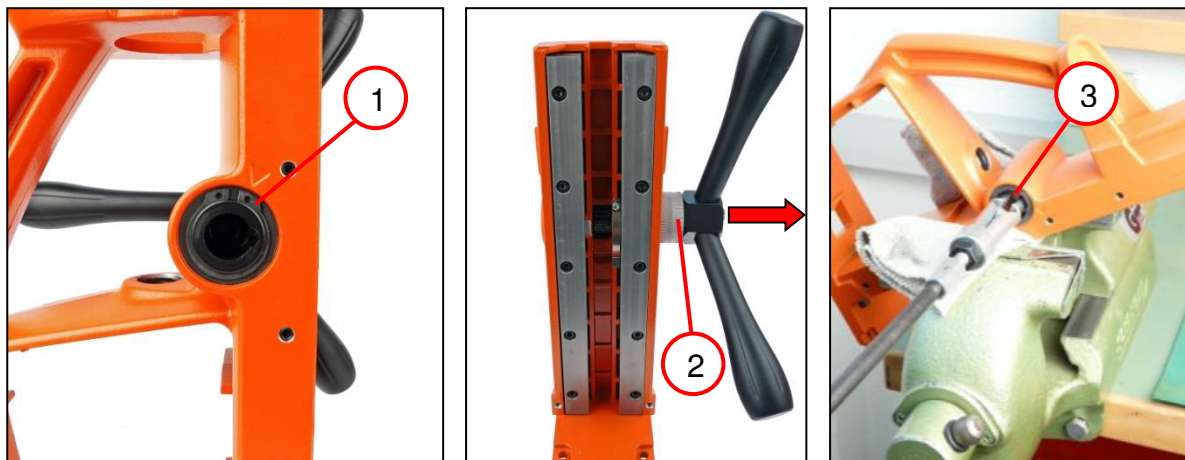
1. Unscrew the screw (1).
2. Move the guide upwards using the spider.
3. Remove the guide.
4. Unscrew the screw (2).
5. Unscrew the flat headed screw (3).

Tools:

- Socket head wrench, 4 mm
- PH2 cross-tip screwdriver

Removal

Removing the guide



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

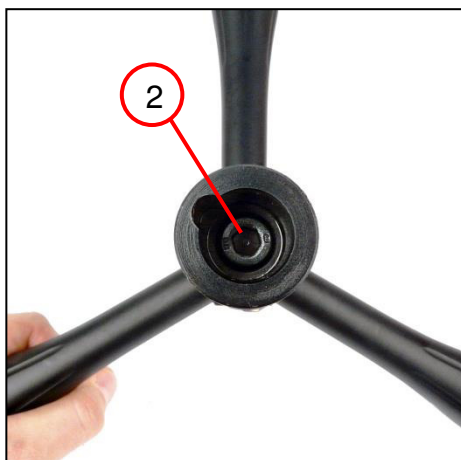
Tools:

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



Removal

Removing the guide



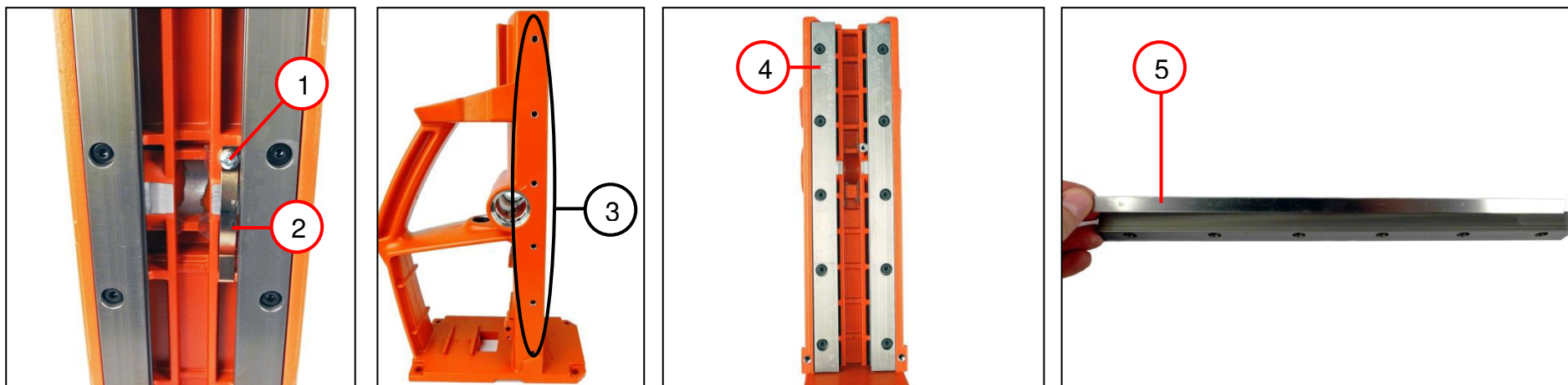
1. Remove the disc (1).
2. Unscrew the screw (2) and remove the shaft.
3. Remove scale (3).
4. Unscrew the three handles (4).

Tools:

- Socket head wrench, 5 mm

Removal

Removing the guide



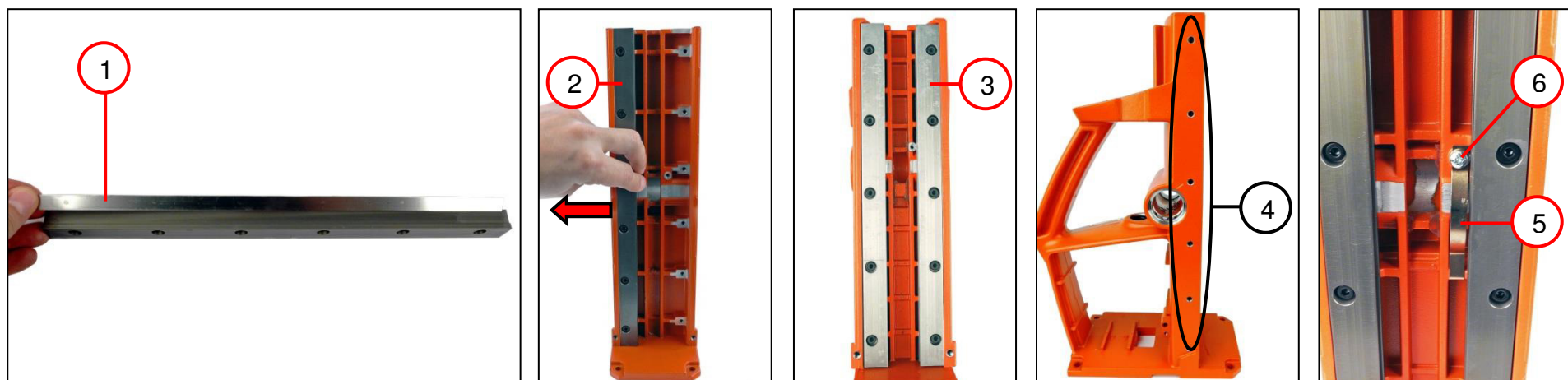
1. Unscrew the fillister head screw (1).
2. Remove the leaf spring (2).
3. Unscrew the five set screws (3).
4. Unscrew the five screws and remove the guide strip (4) [on both sides].
5. Remove the pressure piece (5).

Tools:

- Torx T10
- Socket head wrenches, 2.5 mm; 3 mm

Fitting

Fitting the guide



1. Place the pressure piece (1) in the correct position.
2. Position the guide strip (2) and press onto the housing.
3. Insert the five cylinder head screws.
4. Position the guide strip (3) and press onto the housing.
5. Insert the five cylinder head screws.
6. Insert the five 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) [$1.1 \text{ Nm} \pm 0.15 \text{ Nm}$].

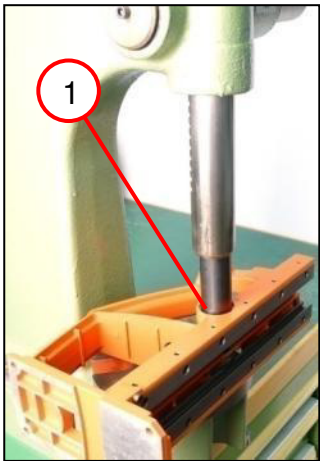
Tools:

- Socket head wrenches,
3 mm; 2.5 mm
- Torx T10



Fitting

Fitting bushes



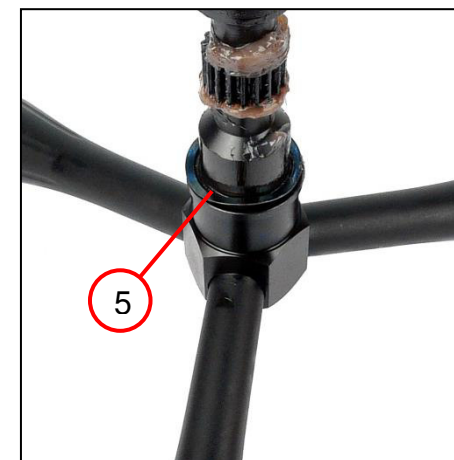
1. Press in the bushes (1) on both sides.

Tools:

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

Fitting

Fitting the spider



1. Screw in the three handles (1).
2. Position the scale (2).
 ☞ Note the unit of measurement of the scale.
3. Position the shaft (3).
4. Screw in the cylinder head screw (4) [8.0 Nm ± 0.5 Nm].
5. Position the disc (5).
6. Coat the shaft with grease.

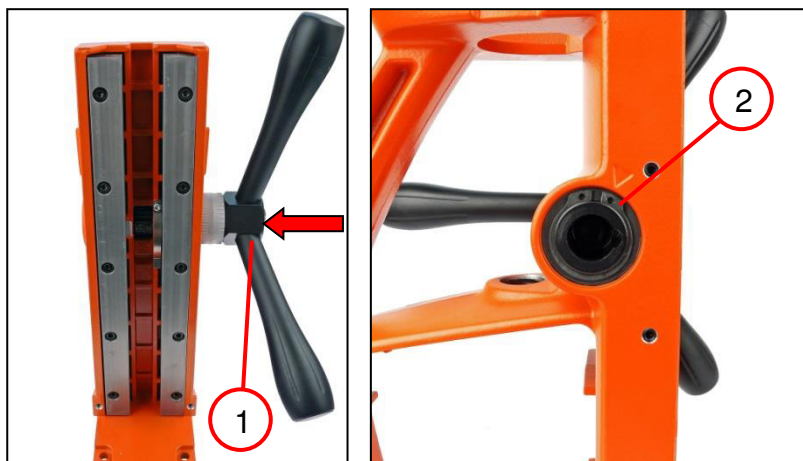
Tools:

- Socket head wrench,
5 mm



Fitting

Fitting the spider



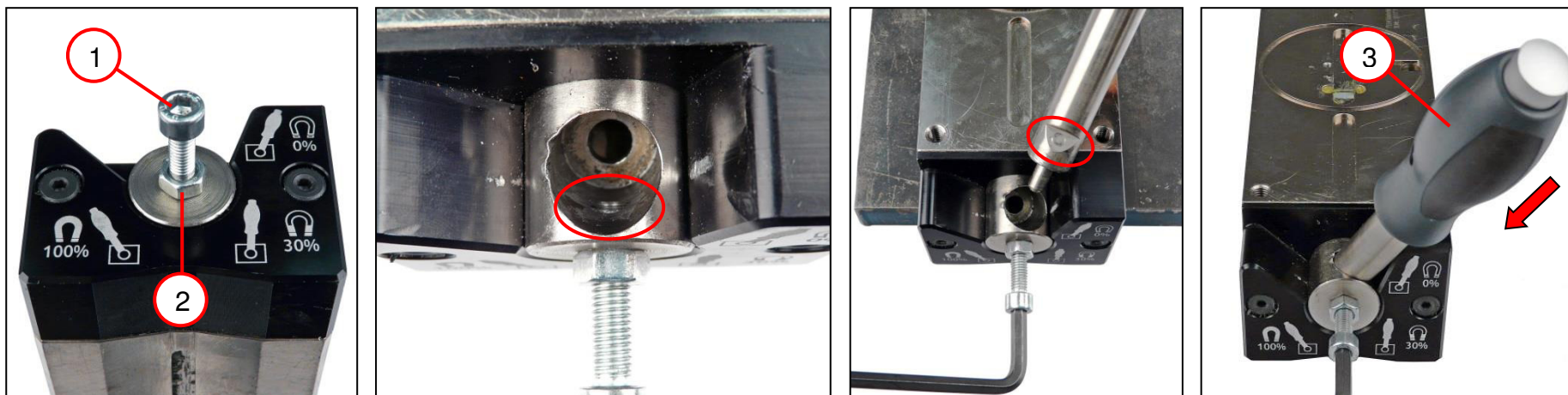
1. Position the spider (1).
2. Fit the circlip (2).

Tools:

- Circlip pliers

Fitting

Fitting the magnetic foot



1. Place the magnet on a steel plate.
2. Screw in the assembly aid (1).
 - ☞ Screw in the screw to max. 5 mm. Failure to do so will mean that the lever can no longer be fitted.
3. Tighten the lock nut (2).
4. Turn the screw anticlockwise.
 - ☞ Turn to the "30%" position.
5. Fit the lever (3) in the correct position.

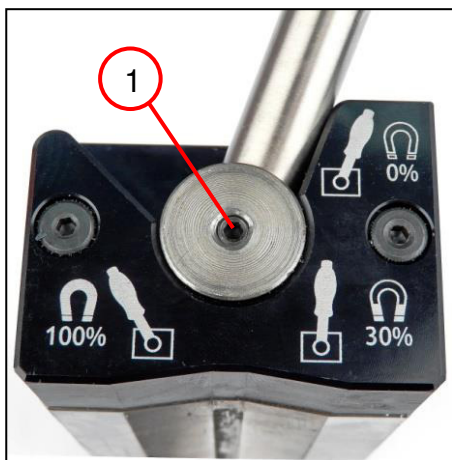
Tools:

- Assembly aid
- M5x30 screw
- M5 nut
- Socket head wrench, 5 mm



Fitting

Fitting the magnetic foot



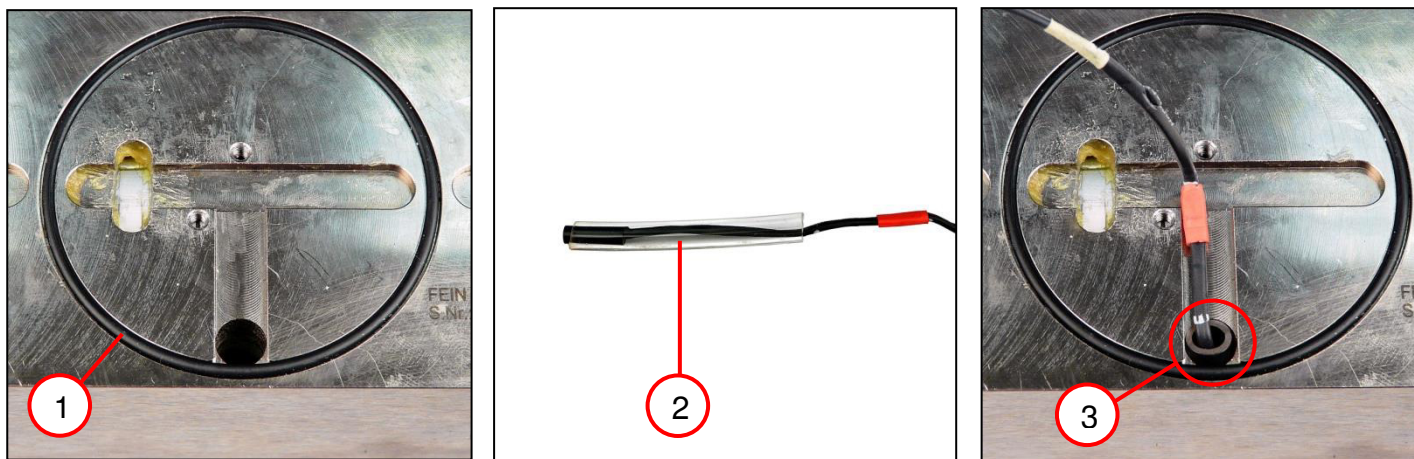
1. Remove the assembly aid.
2. Screw in the set screw (1).

Tools:

- Assembly aid
- M5x30 screw
- M5 nut
- Socket head wrench, 3 mm

Fitting

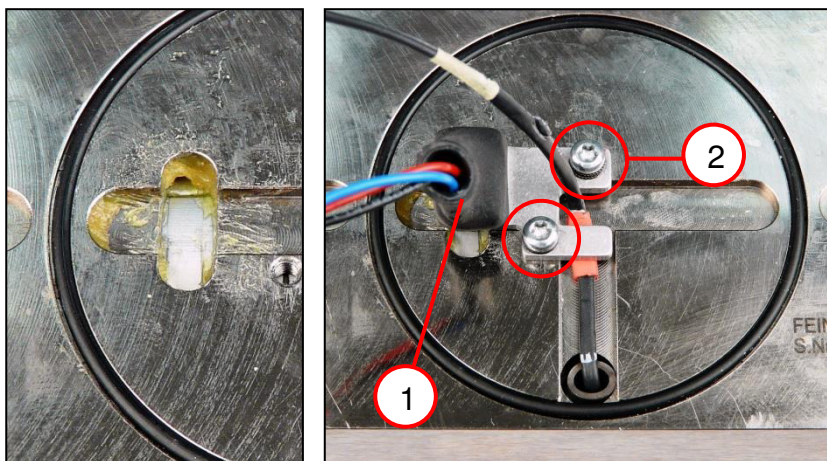
Fitting the magnetic foot



1. Grease the sealing ring (1).
2. Position the sealing ring (1).
3. Insert the sensor into the hose (2).
4. Place the sensor in the hole (3).

Fitting

Fitting the magnetic foot



1. Coat the contact surface with grease.
2. Position the switch (1).
3. Screw in the two screws (2) with lock washer [0.7 Nm \pm 0.1 Nm].

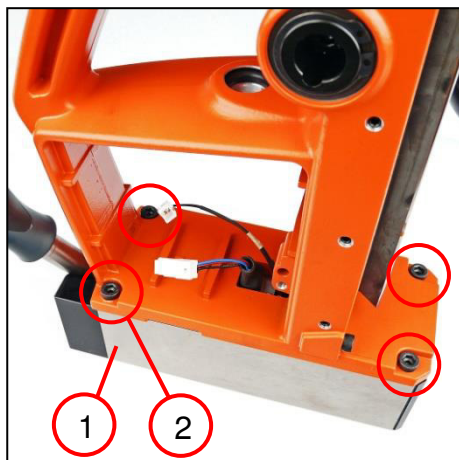
Tools:

- Torx T10



Fitting

Fitting the magnetic foot



1. Position the magnet (1).
2. Screw in the four screws (2) [8.0 Nm ± 0.5 Nm].

Tools:

- Socket head wrench, 5 mm



Fitting

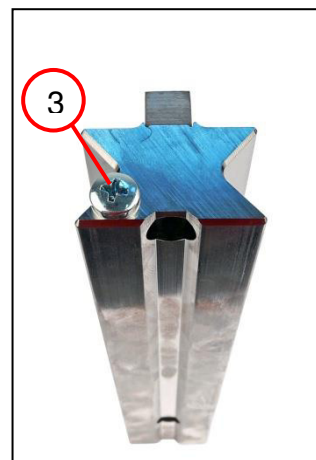
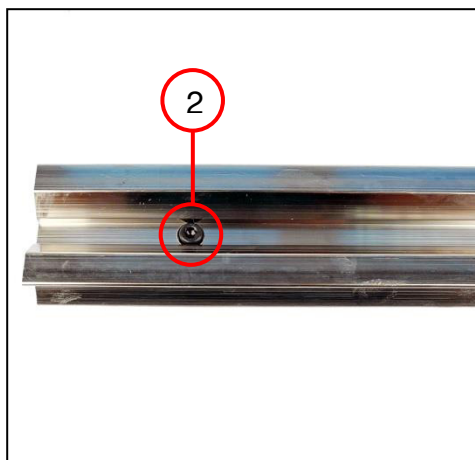
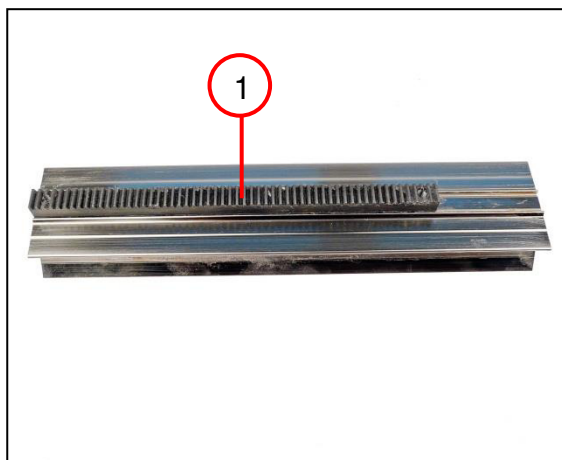
Fitting the sealing ring



1. Grease the sealing ring (1).
2. Position the sealing ring (1).

Fitting

Fitting the guide



1. Position the gear rack (1).
2. Screw in the screw (2) [3.0 Nm ± 0.3 Nm].
3. Screw in the flat headed screw (3) [1.2 Nm ± 0.15 Nm].
 ☞ Check the position.
4. Apply a layer of grease to the gear rack.
5. Coat the guide with grease.
6. Slide the guide into the guide strip.
7. Use the spider to move the guide downwards.
8. Screw in the screw (4) [3.0 Nm ± 0.3 Nm].

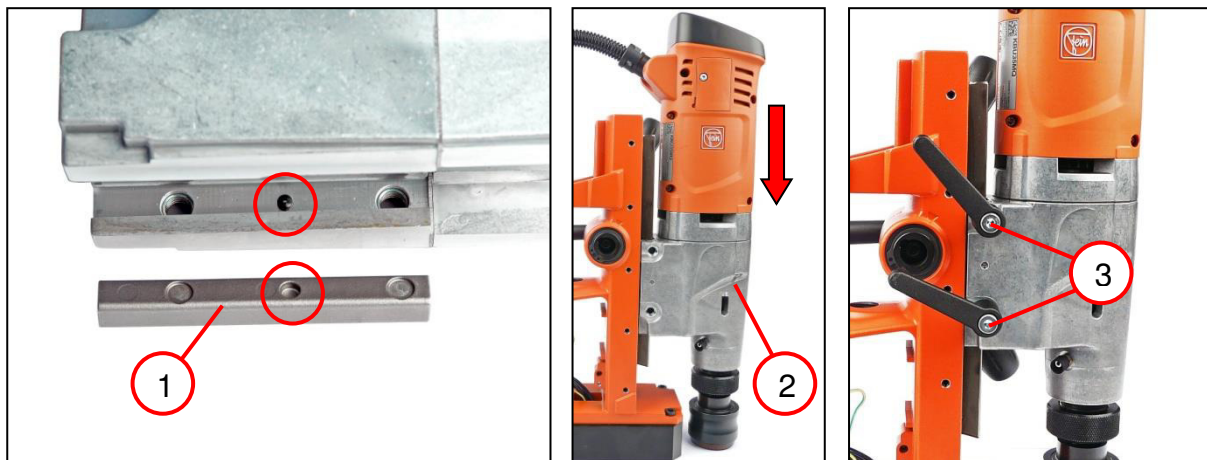
Tools:

- PH2 cross-tip screwdriver
- Socket head wrench, 4 mm



Fitting

Fitting the drill motor



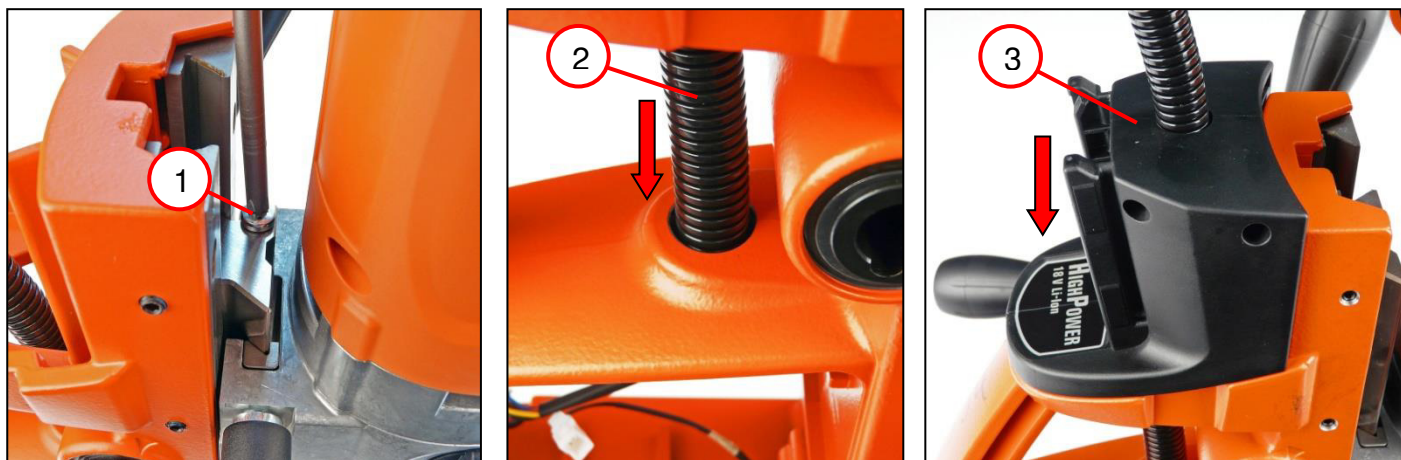
1. Insert the pressure piece (1) in the correct position.
2. Slide the drill motor (2) onto the guide.
3. Screw in the two levers (3).

Tools:

- Socket head wrench,
4 mm

Fitting

Fitting the drill motor



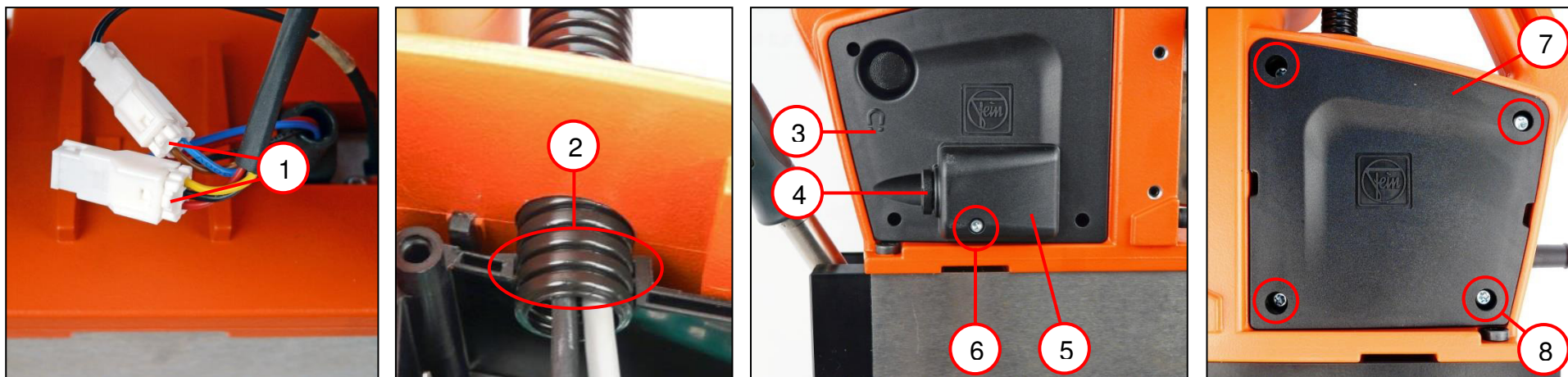
1. Screw in the flat headed screw (1).
2. Fit the protective hose (2).
3. Position the housing (3).

Tools:

- PH2 cross-tip screwdriver

Fitting

Fitting the electronics



1. Insert the two plugs (1).
2. Place the protective hose in the recess (2).
3. Fit the cover (3) in the correct position.
4. Insert plug (4).
5. Position the cover (5).
6. Screw in the screw (6) [0.9 Nm ± 0.1 Nm].
7. Fit the cover (7) in the correct position.
8. Screw in the four screws (8) [2.7 Nm ± 0.3 Nm].

Tools:

- Torx T15; T20



Fitting

Setting the guide



1. Move drill motor (1) into upper position.
2. Tighten the top three set screws (2) [sequence: Top to bottom] to 1.4 Nm each.

Tools:

- Torque wrench with hexagon socket fixture, 2.5 mm



Fitting

Setting the guide



Photo shows similar product

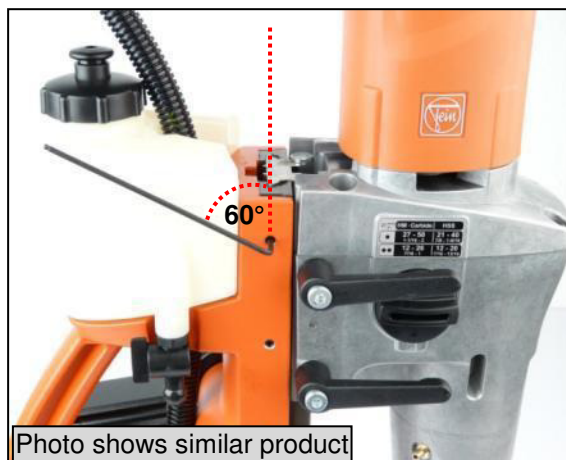


Photo shows similar product

1. Turn tightened set screws 60° anticlockwise.

Tools:

- Socket head wrench,
2.5 mm



Fitting

Setting the guide



1. Move drill motor (1) into lower position.
2. Tighten bottom two set screws (2) to 1.4 Nm each [sequence: Top to bottom].

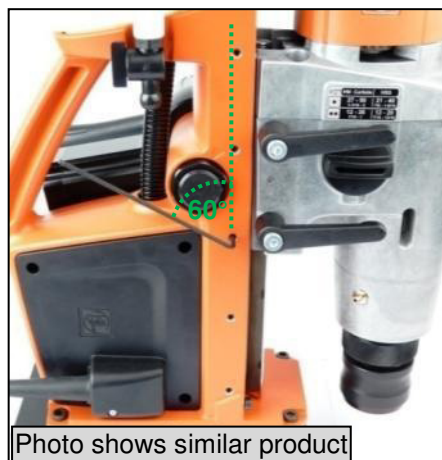
Tools:

- Torque wrench with hexagon socket fixture, 2.5 mm



Fitting

Setting the guide



1. Turn tightened set screws 60° anticlockwise.

Tools:

- Socket head wrench,
2.5 mm



Fitting

Setting the guide



1. Striking the guide hard (1), hammer play out of guide strip.

- ☞ Tap on side opposite set screws.
- ☞ Position the plastic hammer at the height of the set screws.
- ☞ If the guide does not run smoothly, turn the set screws anticlockwise in steps of 10°.
- ☞ If the guide moves too readily, turn the set screws clockwise in steps of 10°.
- ☞ Repeat the process after undoing or tightening the set screws.

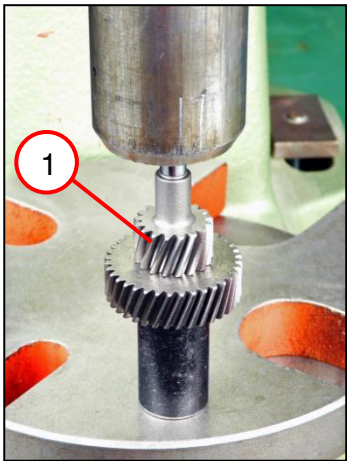
Tools:

- 2x plastic hammer



Fitting

Fitting the gear-wheels



1. Press the gear-wheel [z=36] onto the toothed shaft [z=17] (1).

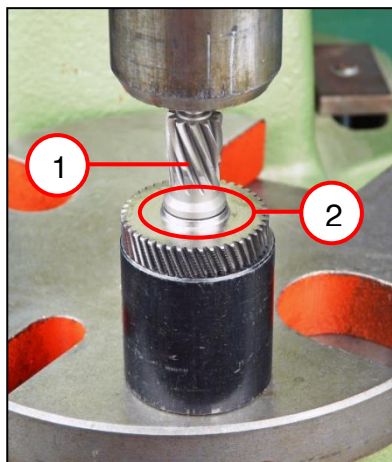
Tools:

- Arbor press
- Sleeve 17 mm inner diameter
25 mm outer diameter



Fitting

Fitting the gear-wheels



1. Press the gear-wheel [z=43] onto the toothed shaft [z=11] (1).

☞ Note the position of the gear-wheel. The smaller section (2) points towards the teeth on the shaft.

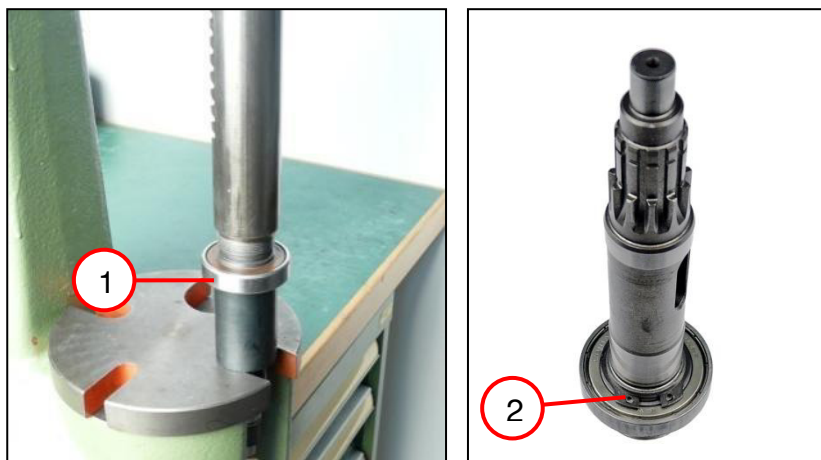
Tools:

- Arbor press
- Sleeve 16 mm inner diameter
25 mm outer diameter



Fitting

Fitting the drill shaft



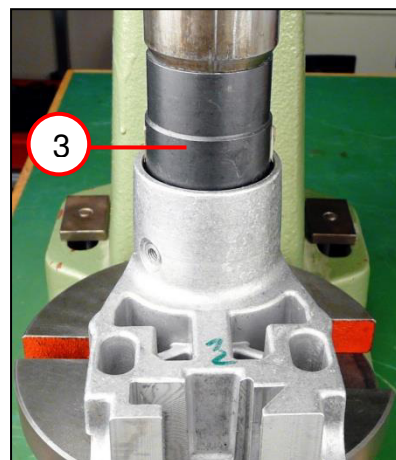
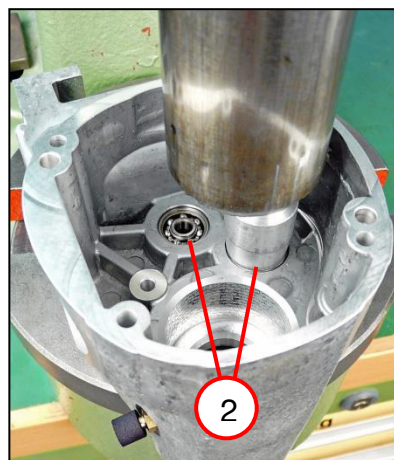
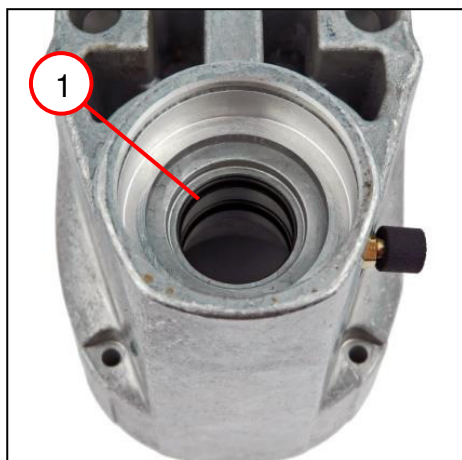
1. Press on the grooved ball bearing (1).
2. Fit the circlip (2).

Tools:

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

Fitting

Fitting the gearbox housing



1. Apply a layer of grease to the three sealing rings (1).
2. Fit the three sealing rings (1).
3. Press in the grooved ball bearings (2).
4. Coat the shaft (3) with grease.
5. Press in the shaft (3).
6. Fit the circlip (4).

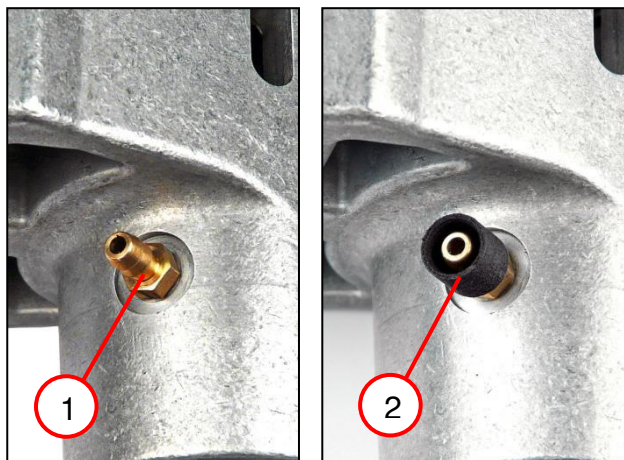
Tools:

- Arbor press
- Sleeve 7 mm inner diameter
18 mm outer diameter
- Sleeve Inner dia. 5 mm
Outer dia. 15 mm
- Circlip pliers
- Sleeve 41 mm inner diameter
31 mm outer diameter



Fitting

Fitting the gearbox housing



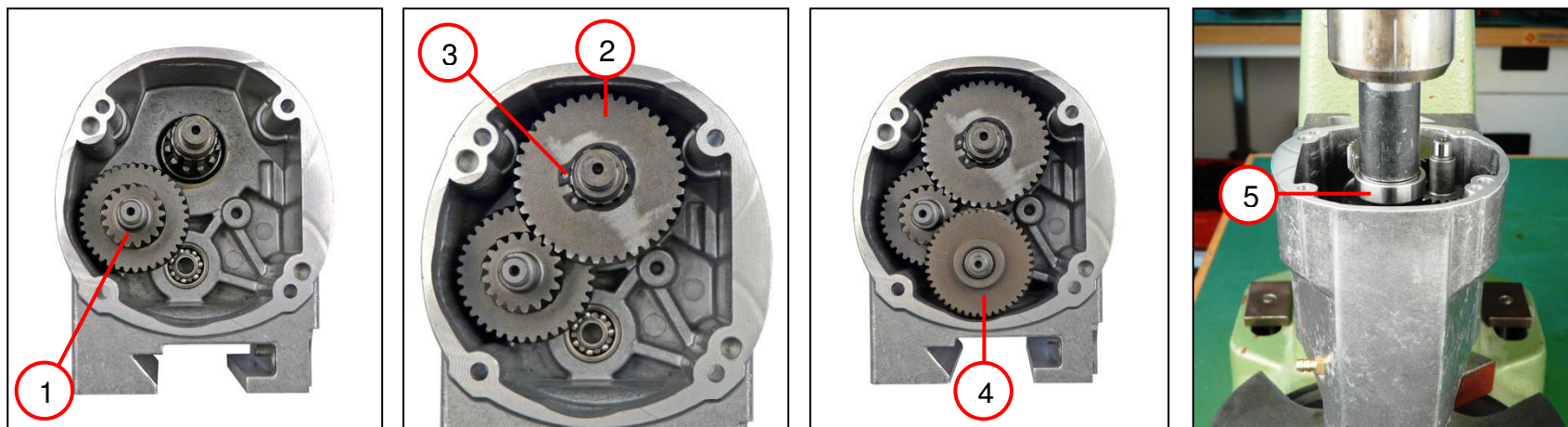
1. Fit the hose socket (4) [$1.8 \text{ Nm} \pm 0.25 \text{ Nm}$].
2. Fit the sleeve (5).

Tools:

- Socket wrench insert, 7 mm
- Socket wrench

Fitting

Fitting the gearbox housing



1. Insert the gear-wheel (1).
2. Insert the gear-wheel (2).
3. Fit the circlip (3).
4. Insert the gear-wheel (4).
5. Press on the grooved ball bearing (5).

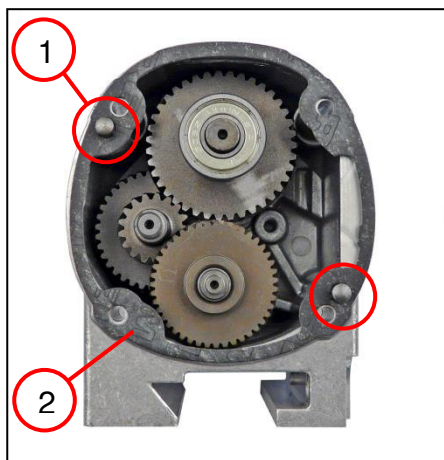
Tools:

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



Fitting

Fitting the gearbox housing



1. Fit the two pins (1).
2. Place the seal (2) in the correct position.
3. Fill the gearbox (3) with grease.

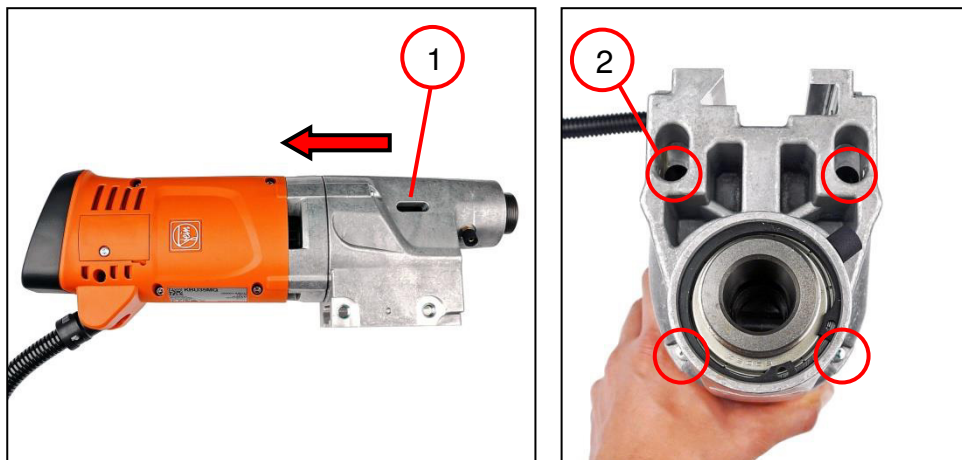
Tools:

- Combination pliers



Fitting

Fitting the gearbox housing



1. Place the gearbox housing on the drill motor.
2. Screw in the four screws (2) [3.0 Nm ± 0.3 Nm].

Tools:

- Torx T20



Fitting

Fitting the holder



1. Insert the spiral spring (1).
2. Position the sealing ring (2).
3. Position the disc (3).
4. Fit the circlip (4).

Tools:

- Circlip pliers
- Punch, 6 mm diameter

Fitting

Fitting the holder



1. Insert the four balls (1) in shaft.
 ☞ Fix balls with a drop of grease.
2. Place the sleeve (2) on the shaft in the correction position.
3. Place the sleeve (3) on the shaft in the correction position.
4. Insert the spiral spring (4).
5. Position the sleeve (5).
6. Fit the circlip (6).

Tools:

- Circlip pliers
- Grease



Fitting

Fitting the holder



1. Grease the sealing ring (1).
2. Fit the sealing ring (1).
3. Slide nut (2) over shaft.
4. Secure circlip (3) on shaft.

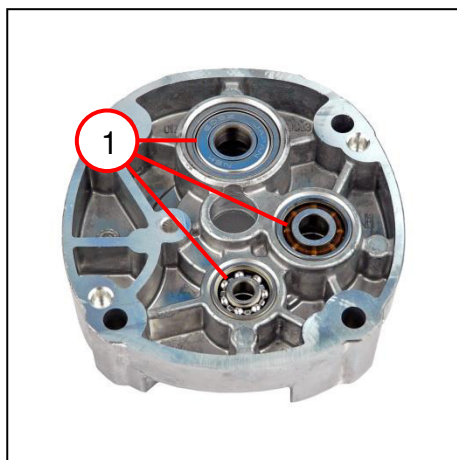
Tools:

- Circlip pliers



Fitting

Fitting the intermediate gearbox



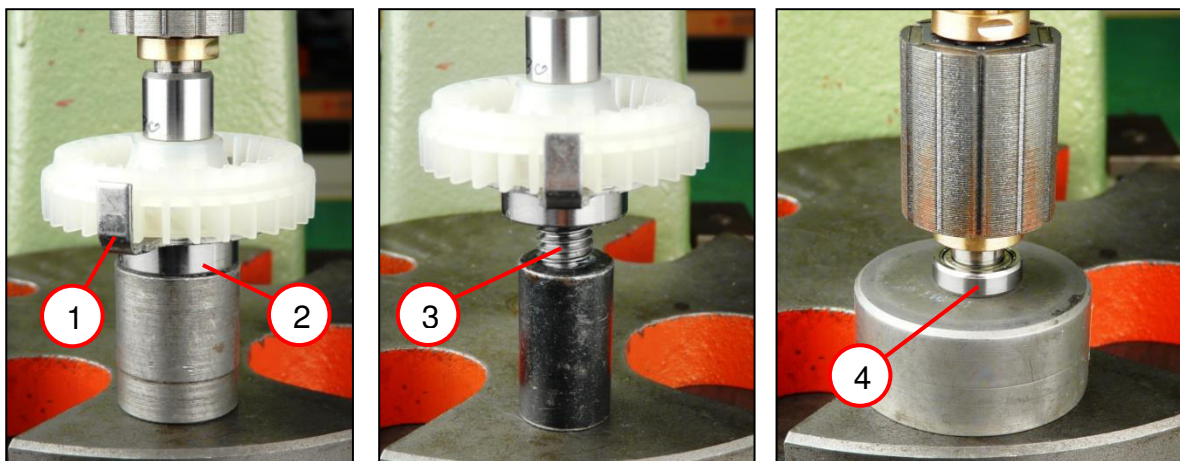
1. Press in the three grooved ball bearings (1).
2. Coat the three bearings with grease.

Tools:

- Sleeve 5 mm inner diameter
16 mm outer diameter
- Sleeve 7 mm inner diameter
18 mm outer diameter
- Sleeve 10 mm inner diameter
23 mm outer diameter

Fitting

Fitting the armature



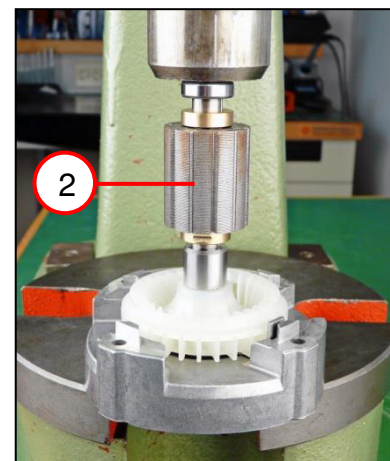
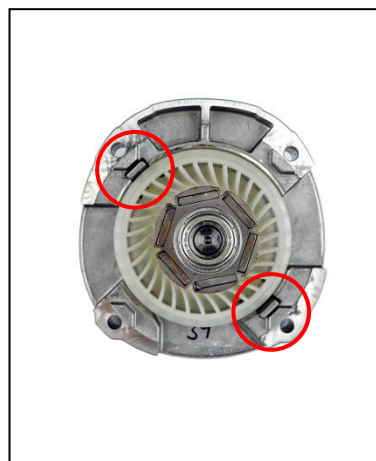
1. Position the plate (1).
2. Press on the grooved ball bearing (2).
3. Press on the sealing ring (3).
4. Press on the grooved ball bearing (4).

Tools:

- Arbor press
- Sleeve 13 mm inner diameter
26 mm outer diameter
- Sleeve 7 mm inner diameter
13 mm outer diameter

Fitting

Fitting the armature



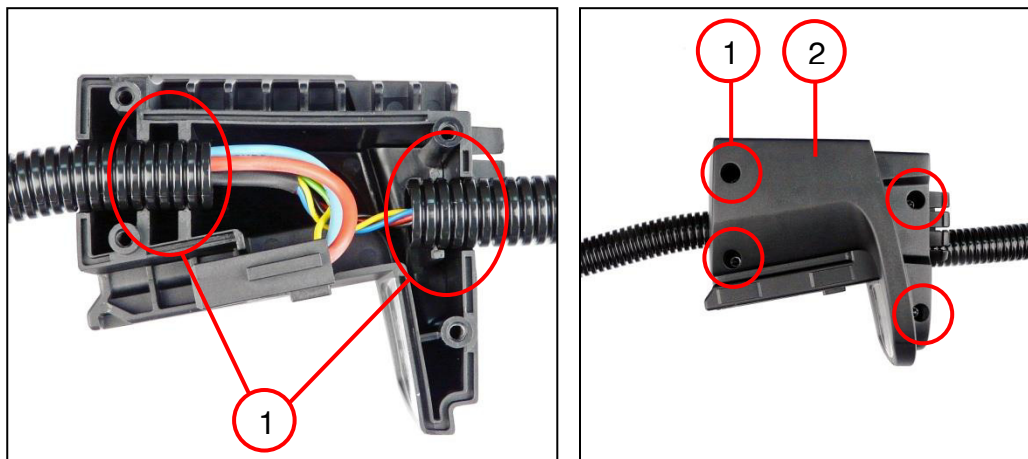
1. Apply a layer of grease to the sealing ring.
2. Position the sealing ring (1).
3. Press in the armature (2).

Tools:

- Arbor press

Fitting

Removing the motor housing



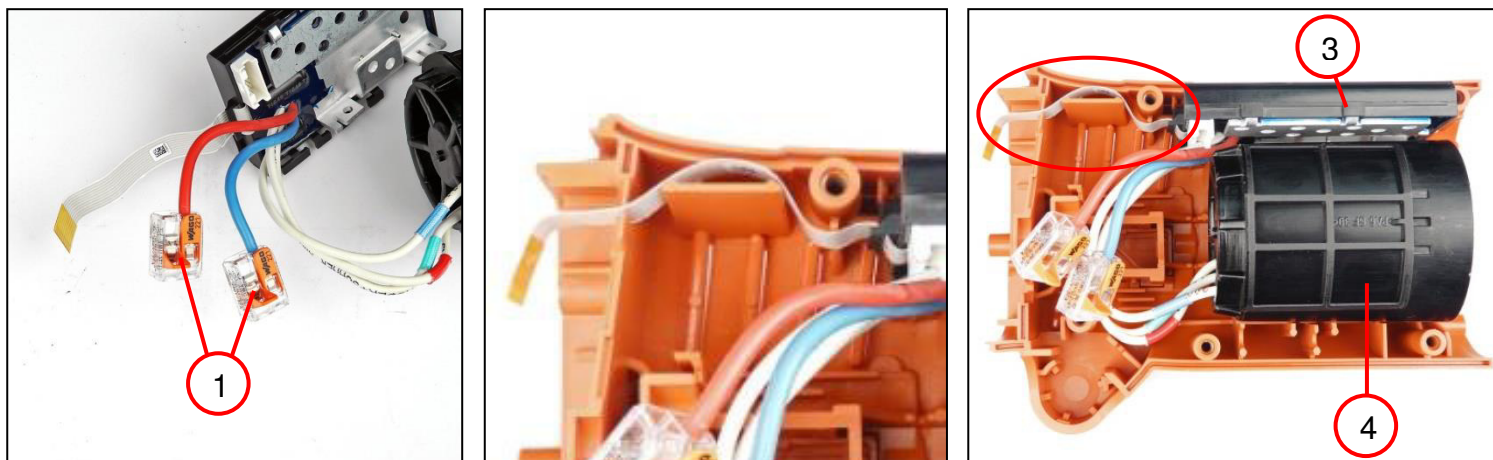
1. Place the protective hose (1) in the recess.
 - ☞ Place the protective hose downstream of the second groove.
 - ☞ Install the cables in a large radius.
2. Position the housing (2).
3. Screw in the four screws (3) [0.9 Nm \pm 0.1 Nm].

Tools:

- Torx T15

Fitting

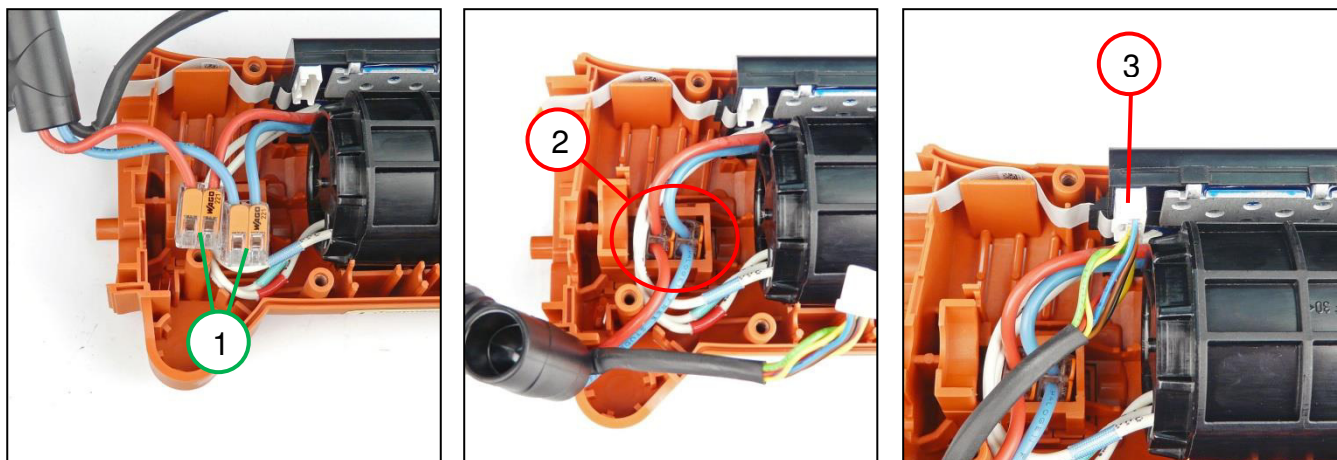
Fitting the electronics



1. Connect the cables to the terminals (1).
2. Place the electronics (2) in the correct position.
 - ☞ Do not damage the ribbon cable.
3. Correctly position the stator (3).

Fitting

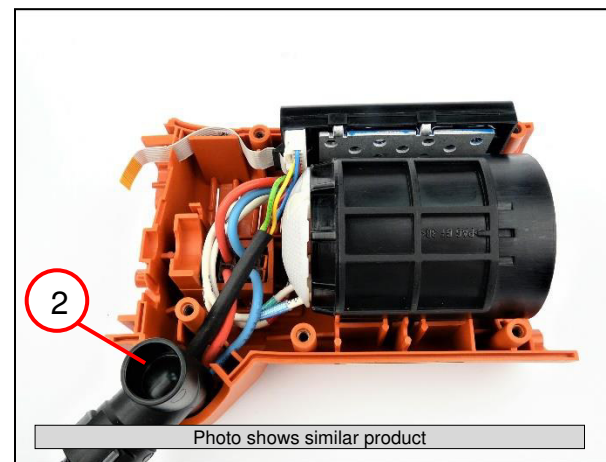
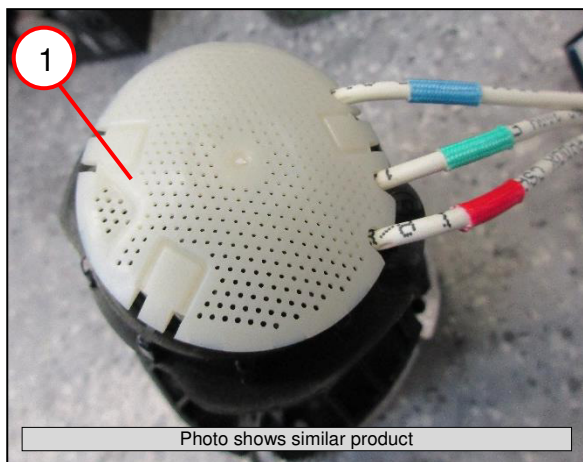
Fitting the electronics



1. Connect the cables to the terminals (1) as shown in the connection diagram.
2. Place the terminals in the recess (2).
3. Connect the plug (3).
 - ☞ Ensure that the cable is strain-relieved.

Fitting

Fitting the electronics



1. Attach the protective grille (1).
2. Position the connecting piece (2).



Fitting

Fitting the intermediate gearbox



1. Position the housing (1).
2. Screw in the five screws (2) [3.0 Nm \pm 0.3 Nm].
3. Position the air guide ring (3).
4. Fit the intermediate gearbox (4) with armature.

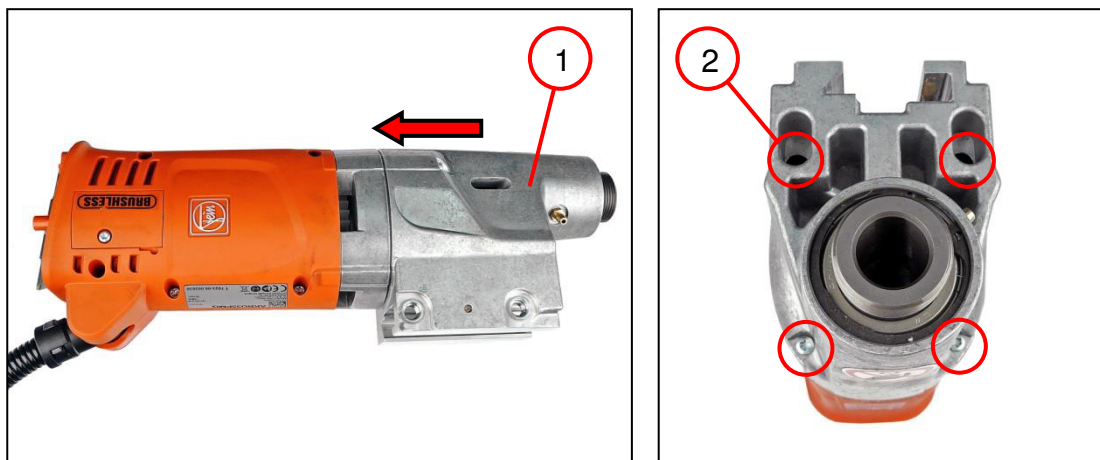
Tools:

- Torx T20



Fitting

Fitting the gearbox housing



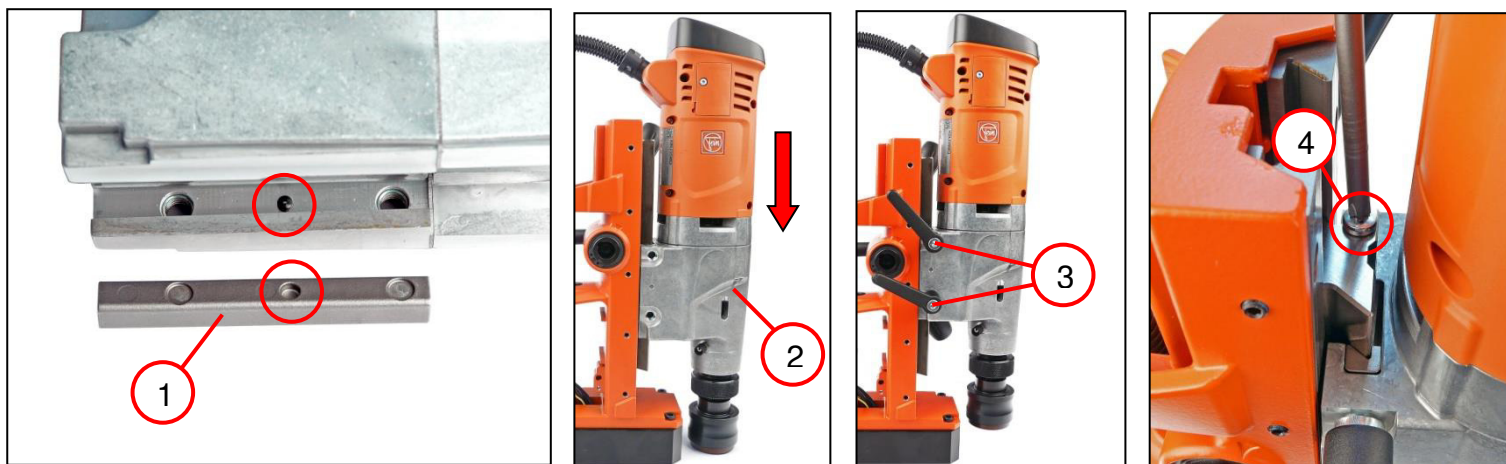
1. Place the gearbox housing (1) on the drill motor.
2. Screw in the four screws (2) [3.0 Nm ± 0.3 Nm].

Tools:

- Torx T20

Fitting

Fitting the gearbox housing



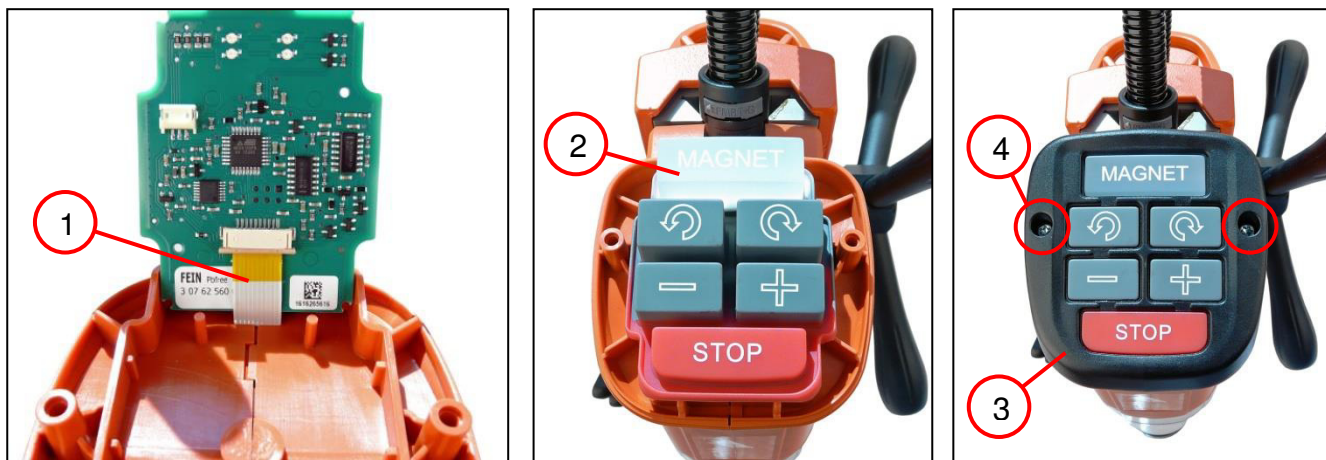
1. Insert the pressure piece (1).
2. Slide the drill motor (2) into the guide.
3. Screw in the two levers (3).
4. Screw in the fillister head screw (4).

Tools:

- PH2 cross-tip screwdriver

Fitting

Removing the control panel



1. Insert the ribbon cable (1) and connect the plug.
2. Add the switch insert (2).
3. Position the cover (3).
4. Screw in the two screws (4) [2.0 Nm ± 0.3 Nm].

Tools:

- Torx T20

AKBU 35 PMQ; AKBU 35 PMQW; AJMU 137 PMQW

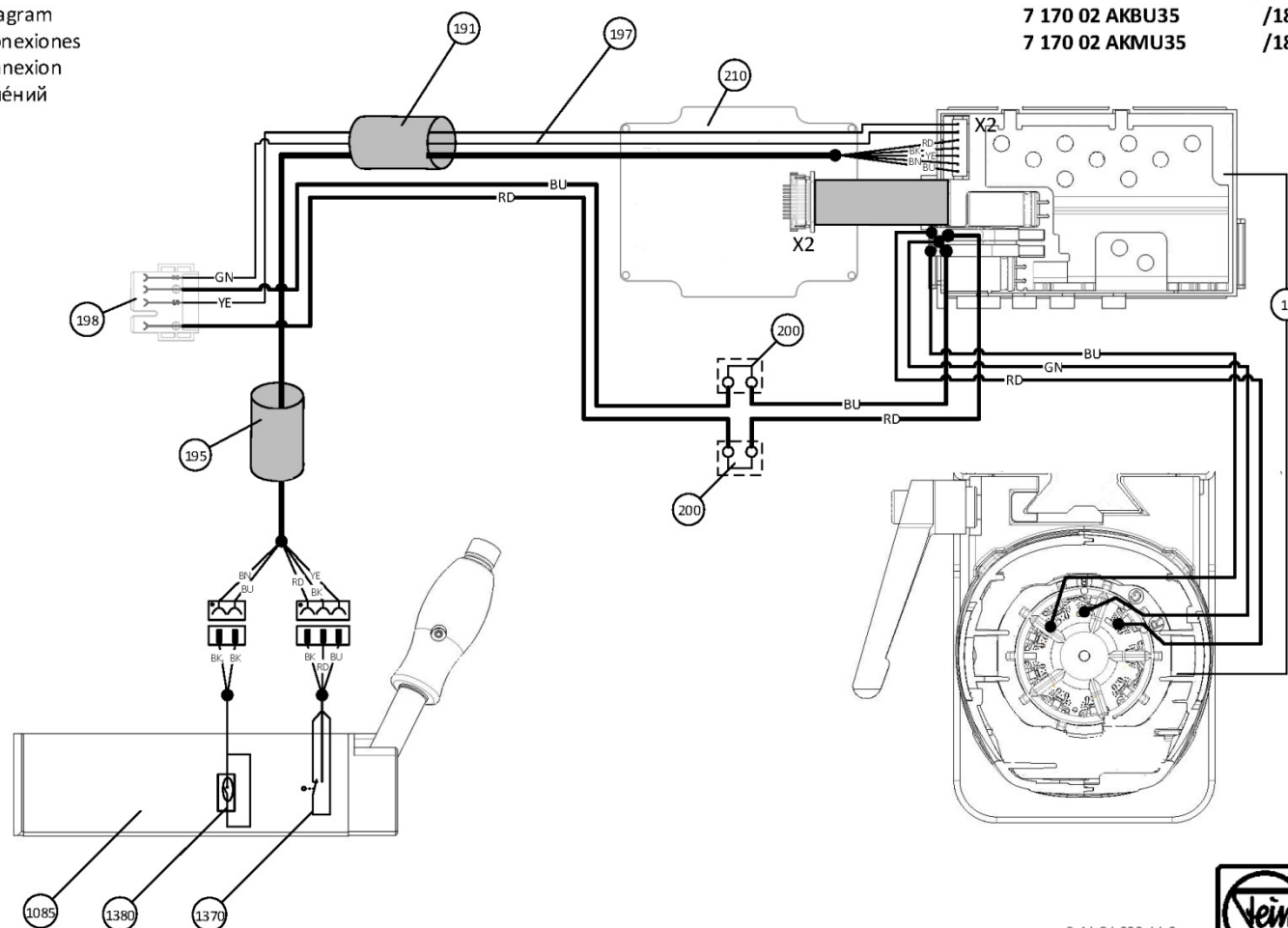


Connection diagram

Anschlussplan

Connection diagram
Esquemade conexiones
Schémade connexion
Схема соединений
接线图

7 170 01 AKBU 35 / 18V
7 170 02 AKBU35 / 18V
7 170 02 AKMU35 / 18V



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08.06.2017

