



Applies to:

KBU 35 PQ; KBU 35 PQW; JMU 137 PQW



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10 Inspection following repairs88





1 Models described

These repair instructions describe how to repair the following models:

| Model | Material number |
|-------------|-----------------|
| KBU 35 PQ | 7 270 71 |
| KBU 35 PQW | 7 270 72 |
| JMU 137 PQW | 7 270 73 |





2 Technical data

Technical data

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

Troubleshooting

Troubleshooting for all devices can be found in the FEIN electronic information system.

Specific test specifications and measured values

Up-to-date test data for all devices can be found in the FEIN electronic information system.

Special tools, lubricants and auxiliary substances

The special tools catalogue and the lubricants and container sizes available from FEIN can be found in the FEIN electronic information system.

Lists of spare parts

Lists of spare parts and exploded views are available online in our spare parts catalogue, which can be accessed via the FEIN website.

Connection diagram

Lists of spare parts and exploded views can be found in the FEIN electronic information system.





3 Symbols used

| | |
|---|---|
|  | Refers to measures for avoiding the risk of injuries. |
|  | Caution: Crushing hazard |
|  | Refers to information or instructions that should be followed. Non-observance can result in damage or malfunctions. |
|  | Read the operating instructions. |
|  | Indicates notes that provide information or instructions that may provide a better understanding and contribute to the more effective use of the product. |
|  | Part of the navigation interface. |





4 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.



INFORMATION

Read the operating instructions for the product before carrying out the repair work.

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.

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

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

The relevant accident prevention regulations are to be observed during commissioning.

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

Disclaimer

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5 Safety instructions

5.1 Structure

| |
|---|
|  SIGNAL WORD FOR THE DANGER CLASSIFICATION. |
| Type and source of the danger. Possible consequences. Measure that must be taken in order to avoid this danger. |

5.2 Danger classification

Warning

This warning refers to a dangerous situation. If the situation is not avoided, this may result in severe injuries or death.

| |
|---|
|  WARNING! |
| Type and source of the danger. Possible consequences. Measure that must be taken in order to avoid this danger. |

Caution

This warning refers to a potentially dangerous situation. If the situation is not avoided, this may result in slight or minor injuries. This may also be used as a warning against material damage.

| |
|---|
|  CAUTION! |
| Type and source of the danger. Possible consequences. Measure that must be taken in order to avoid this danger. |

Please note

Indicates a potentially harmful situation. If this situation is not avoided, the product or an object in its environment could be damaged.

| |
|--|
|  PLEASE NOTE! |
| Type and source of the danger. Damage to the product or its environment. Measure that must be taken in order to avoid this danger. |





5.3 Information

Indicates notes that provide information or instructions that may provide a better understanding and contribute to the more effective use of the product.

| |
|--|
|  INFORMATION |
| Tip |





6 Tools, lubricants and auxiliary substances required

6.1 Standard tools

| | |
|---|--|
| Cross-tip screwdriver | PH2 |
| Torx | T20 |
| Slotted screwdriver | 125x7 |
| Socket head wrench set | |
| Circlip pliers | |
| Plastic hammer | |
| Arbor press | |
| Long-nosed pliers | |
| Combination pliers | |
| Socket wrench | 7 mm |
| Sleeve | 5 mm inner diameter 16 mm outer diameter; 13 mm inner diameter 26 mm outer diameter; 7 mm inner diameter 18 mm outer diameter; 7 mm inner diameter 13 mm outer diameter; 10 mm inner diameter 23 mm outer diameter; 26 mm inner diameter 30 mm outer diameter; 17 mm inner diameter 25 mm outer diameter; 5 mm inner diameter 15 mm outer diameter; 16 mm inner diameter 25 mm outer diameter; 10 mm inner diameter 24 mm outer diameter; 26 mm inner diameter 42 mm outer diameter |
| Torque wrench with hexagon socket fixture | 2.5 mm |





6.2 Special tools

| | | | |
|------------------------|----------|----|------------------|
| Assembly aid | | | 6 41 22 121 01 0 |
| Drawing-off socket cap | | | 6 41 04 150 00 0 |
| Chuck cone | 19 | mm | 6 41 07 019 00 7 |
| | diameter | | 6 41 07 026 00 0 |
| | 26 | mm | |
| | diameter | | |

6.3 Lubricants and auxiliary substances required

| | | | |
|--------|-----------------|------|---------|
| Grease | 0 401 18 0300 9 | 45 g | Gearbox |
|--------|-----------------|------|---------|





7 Test and diagnostics options

Not currently available.

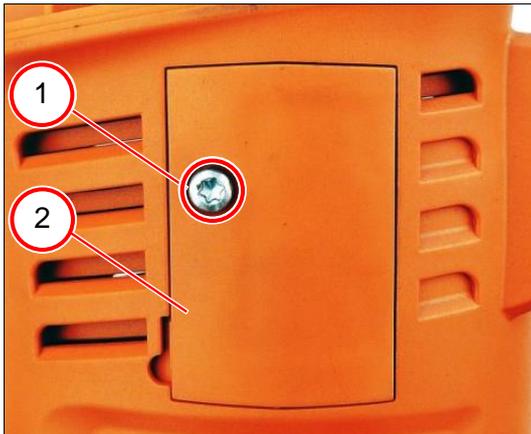


8 Removal

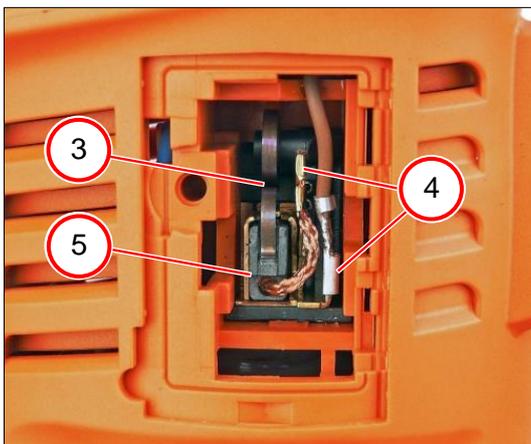
8.1 Removing the carbon brushes

Tools:

- Torx T15
- Assembly aid



1. Unscrew the screw (1).
2. Remove the cover (2).



3. Lift up the spring (3).
4. Pull off the two plugs (4).
5. Remove the carbon brush (5).
6. Repeat steps 1 to 5 on the opposite side of the machine.

8.2 Disassembling the drill jig

8.2.1 Removing the container



i INFORMATION

Tip

Fluid may be present in the container.

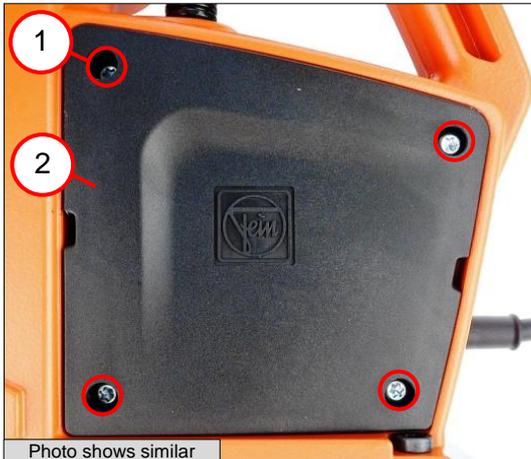
- Always drain the container (1) before disassembly.

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

8.2.2 Removing the electronics

Tools:

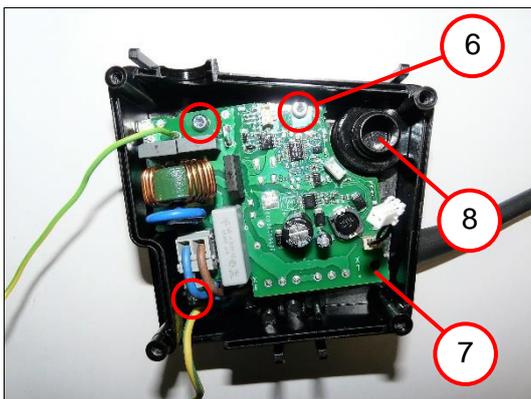
- Torx T20; T15



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



3. Unscrew the two screws (3).
4. Remove all of the cables.
5. Open the four retaining brackets (4).
6. Remove the protective hose (5).



7. Unscrew the three screws (6).
8. Remove the electronics (7).
9. Remove the plug (8).

8.2.3 Removing the drill motor

Steps that must be completed:

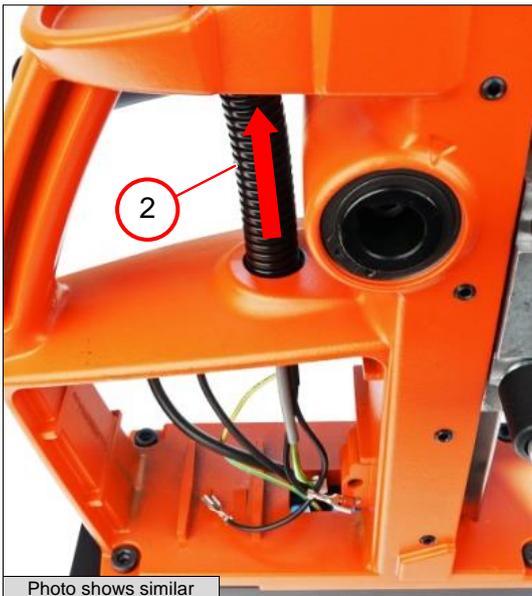
- Removing the electronics

Tools:

- PH2 cross-tip screwdriver



1. Unscrew the Phillips head screw (1).



2. Remove the protective hose (2).

Photo shows similar



Photo shows similar

CAUTION!

Crushing hazard around the drill motor

Crushing can occur.

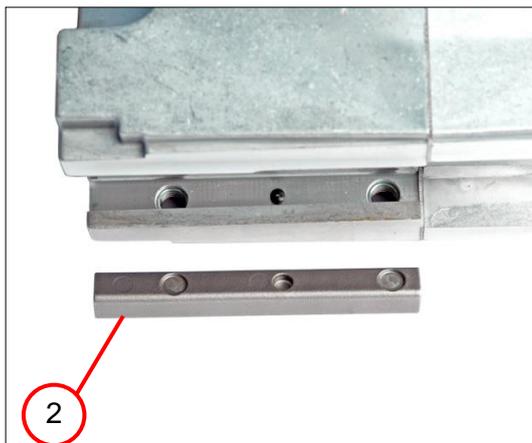
Move the drill motor down using the spider, before the two levers (3) are unscrewed.

3. Unscrew the two levers (3).

8.2.3 Removing the drill motor



4. Lift the drill motor (1) out of the guide.



5. Remove the pressure piece (2).

8.2.4 Removing the magnetic foot

Steps that must be completed:

- Removing the electronics

Tools:

- Socket head wrench, 5 mm



1. Unscrew the four screws (1).
2. Remove the magnetic foot (2).

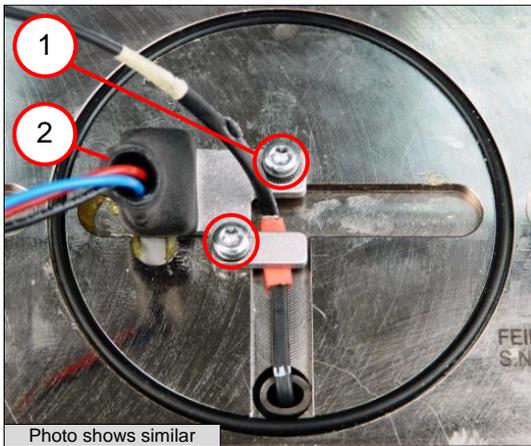
8.2.5 Removing the magnetic foot

Steps that must be completed:

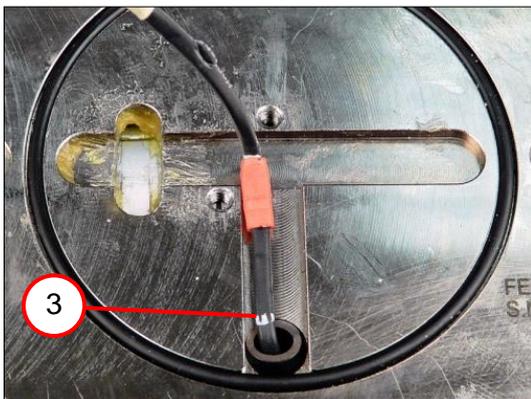
- Removing the electronics
- Removing the magnetic foot

Tools:

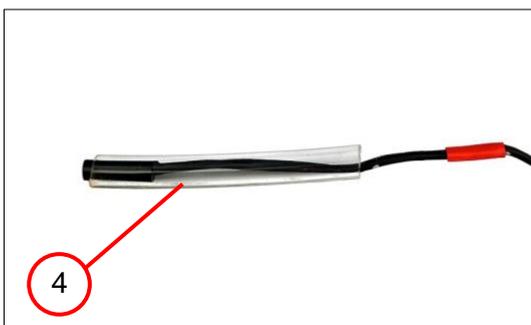
- Torx T10
- Socket head wrench, 3 mm; 5 mm
- Assembly aid
 - M5x30 screw
 - M5 nut



1. Unscrew the two screws (1).
2. Remove the switch (2).

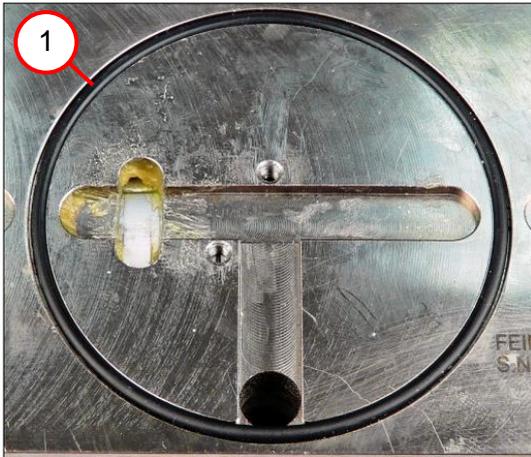


3. Remove the sensor (3).

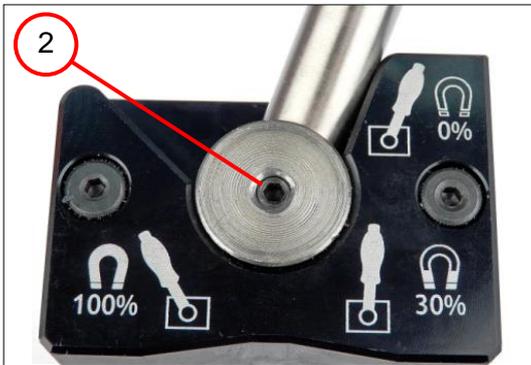


4. Remove the hose (4).

8.2.5 Removing the magnetic foot

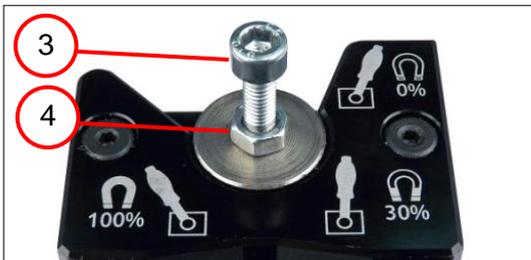


5. Remove the sealing ring (1).



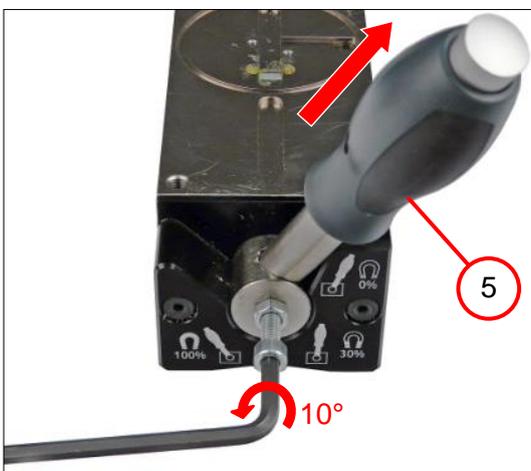
6. Place the magnet on a steel plate.

7. Unscrew the set screw (2).



8. Screw in the screw (3) to max. 5 mm.

9. Tighten the lock nut (4).



10. Turn the screw anticlockwise.

11. Pull out the lever (5).

8.2.6 Removing the sealing ring

Steps that must be completed:

- Removing the electronics



1. Remove the sealing ring (1).

8.2.7 Removing the guide

Steps that must be completed:

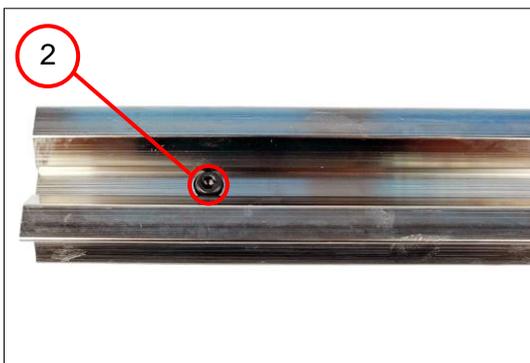
- Removing the electronics
- Removing the drill motor

Tools:

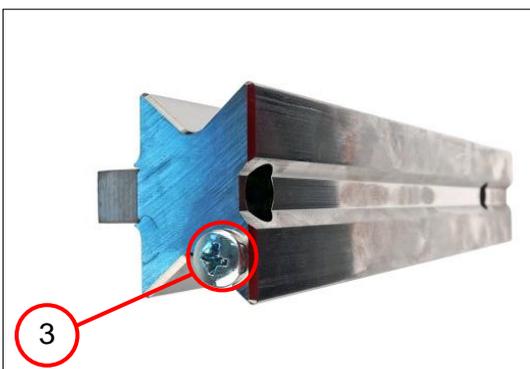
- Socket head wrench, 4 mm; 2.5 mm; 3 mm
- PH2 cross-tip screwdriver
- Torx T10



1. Unscrew the screw (1).
2. Move the guide upwards using the spider.
3. Remove the guide.

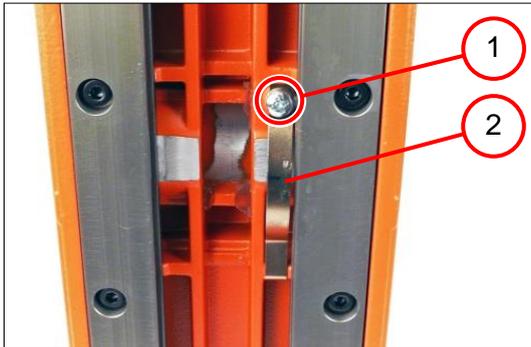


4. Unscrew the screw (2).



5. Unscrew the flat headed screw (3).

8.2.7 Removing the guide

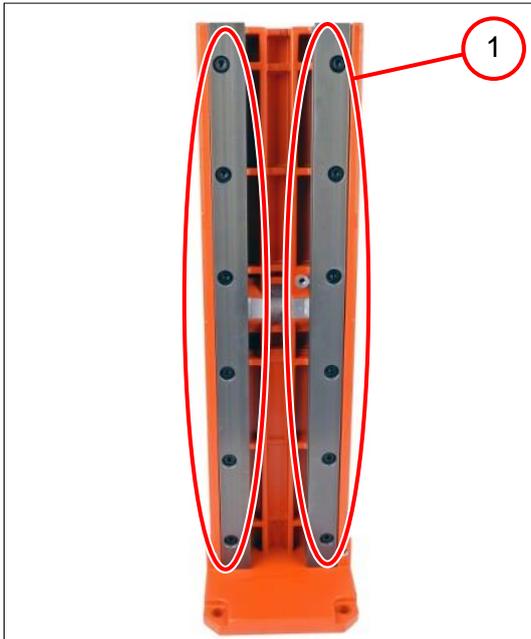


6. Unscrew the screw (1).
7. Remove the leaf spring (2).

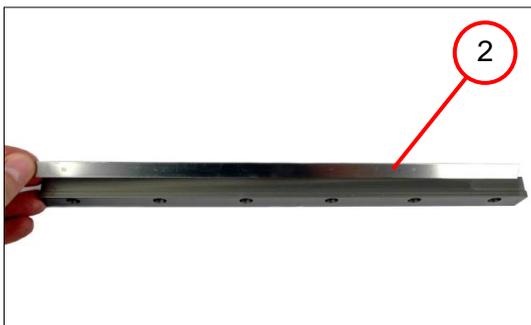


8. Unscrew the six set screws (3).

8.2.7 Removing the guide



9. Unscrew the twelve screws (1).
10. Remove the two guide strips.



11. Remove the pressure piece (2).

8.2.8 Removing the spider

Steps that must be completed:

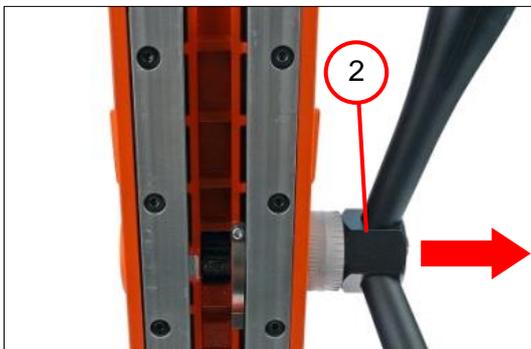
- Removing the electronics
- Removing the drill motor
- Removing the guide

Tools:

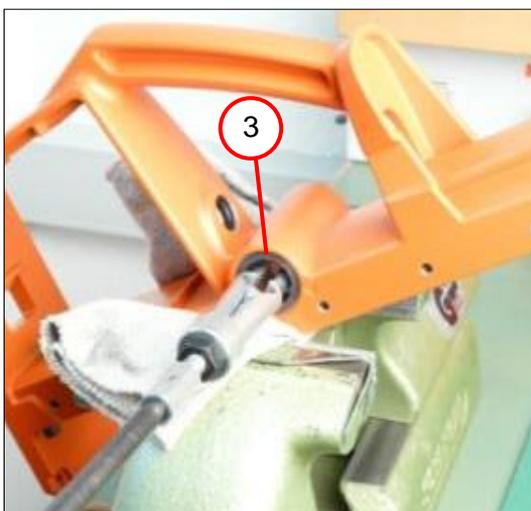
- Circlip pliers
- Inner bearing puller, 18–22 mm
- Slide hammer



1. Remove the circlip (1).



2. Pull out the spider (2).



3. Remove bush (3).
4. Repeat step 3 on the opposite side of the machine.

8.2.9 Removing the spider

Steps that must be completed:

- Removing the electronics
- Removing the drill motor
- Removing the guide
- Removing the spider

Tools:

- Socket head wrench, 5 mm



1. Remove the disc (1).



2. Unscrew the screw (2).
3. Remove the shaft.



4. Remove the scale (3).
5. Unscrew the three handles (4).

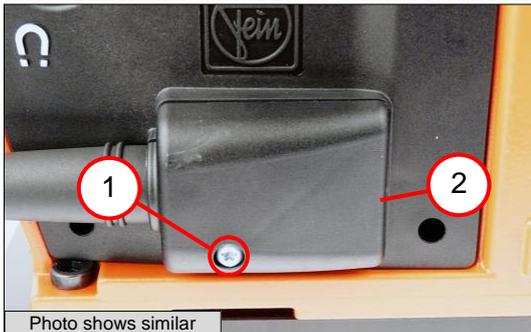
8.3 Removing the network cable

Steps that must be completed:

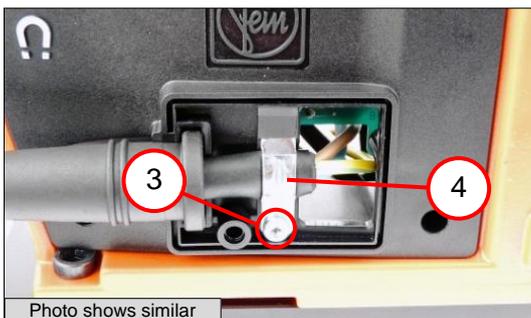
- Removing the electronics

Tools:

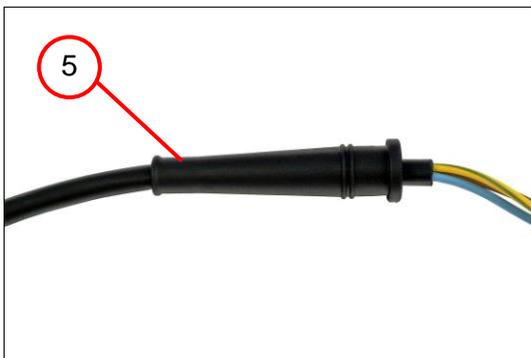
- Torx T20



1. Unscrew the screw (1).
2. Remove the cover (2).



3. Unscrew the screw (3).
4. Remove the cable clamping piece (4).



5. Remove the protective hose (5).

8.4 Removing the motor housing

8.4.1 Removing the control panel

Tools:

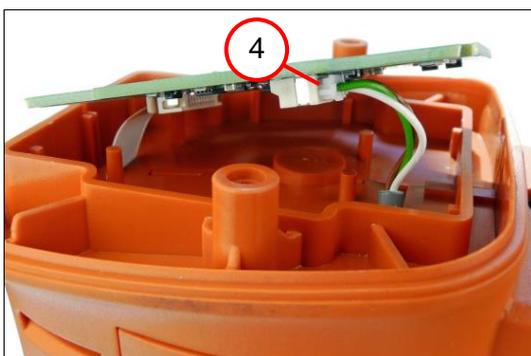
- Torx T20



1. Unscrew the two screws (1).
2. Remove the cover (2).

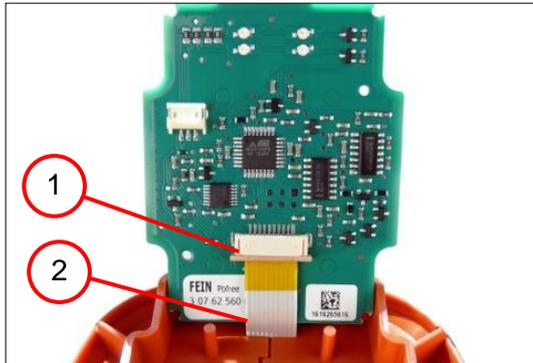


3. Remove switch insert (3).



4. Pull off the plug (4).

8.4.1 Removing the control panel



5. Open the lock (1).
6. Disconnect the ribbon cable (2).

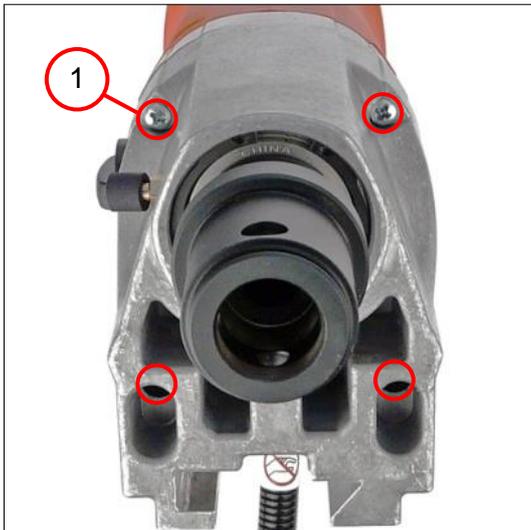
8.4.2 Removing the gearbox housing

Steps that must be completed:

- Removing the electronics
- Removing the drill motor

Tools:

- Torx T20
- Plastic hammer



1. Unscrew the four screws (1).



2. Remove the gearbox housing (2).

8.4.3 Removing the intermediate gearbox

Steps that must be completed:

- Removing the carbon brushes
- Removing the electronics
- Removing the drill motor
- Removing the gearbox housing



1. Remove the intermediate gearbox (1).

8.4.4 Removing the housing

Steps that must be completed:

- Removing the carbon brushes
- Removing the electronics
- Removing the drill motor
- Removing the gearbox housing
- Removing the intermediate gearbox

Tools:

- Torx T20
- Blade



1. Remove the air guide ring (1).



2. Cut up the information sign.



3. Unscrew the five screws (2).
4. Remove the motor housing (3).

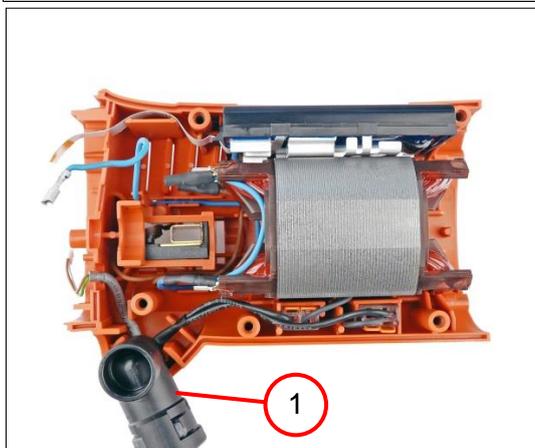
8.4.5 Removing the connecting piece

Steps that must be completed:

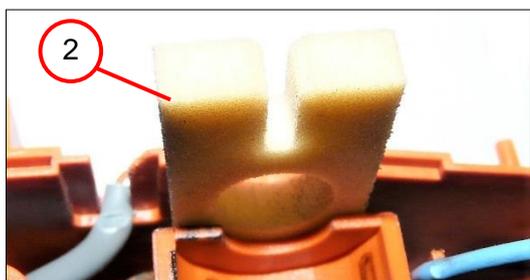
- Removing the carbon brushes
- Removing the electronics
- Removing the drill motor
- Removing the gearbox housing
- Removing the intermediate gearbox
- Removing the housing

Tools:

- Torx T20



1. Remove the connecting piece (1).



2. Remove the felt piece (2).

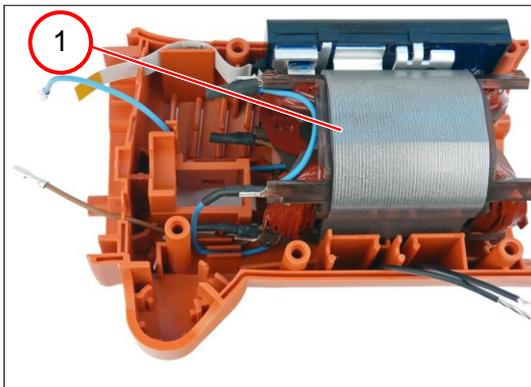


3. Remove the connecting piece (3).

8.4.6 Removing the stator

Steps that must be completed:

- Removing the carbon brushes
- Removing the electronics
- Removing the drill motor
- Removing the gearbox housing
- Removing the intermediate gearbox
- Removing the housing

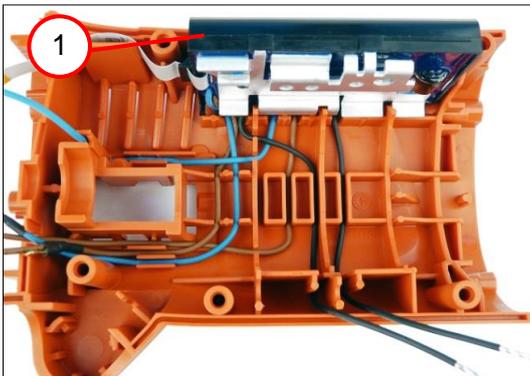


1. Remove the stator (1).

8.4.7 Removing the drill motor electronics

Steps that must be completed:

- Removing the carbon brushes
- Removing the electronics
- Removing the drill motor
- Removing the gearbox housing
- Removing the intermediate gearbox
- Removing the housing
- Removing the stator



1. Remove the electronics (1).

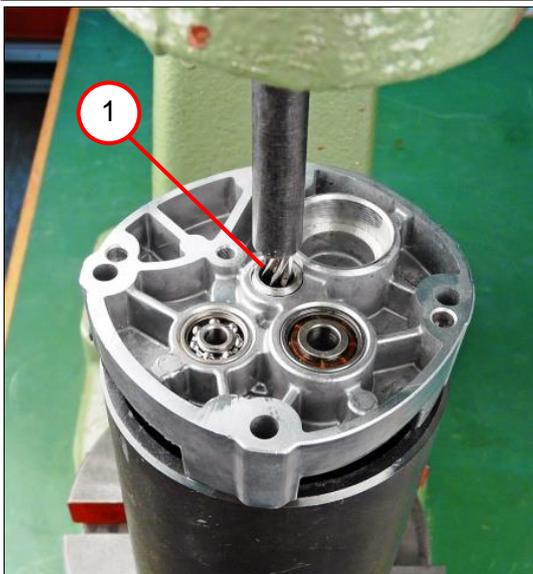
8.4.8 Removing the armature

Steps that must be completed:

- Removing the carbon brushes
- Removing the electronics
- Removing the drill motor
- Removing the gearbox housing
- Removing the intermediate gearbox

Tools:

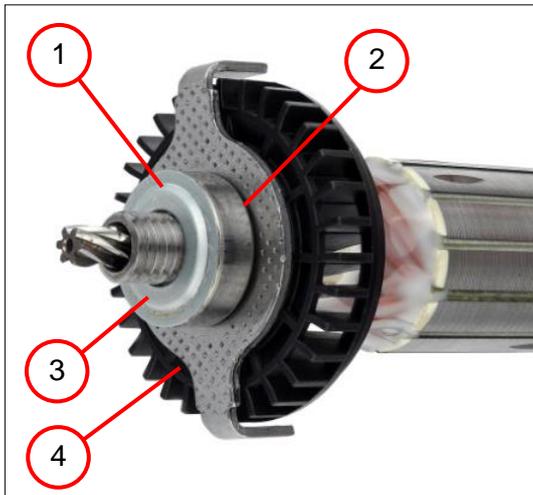
- Arbor press
- Punch, 10 mm
- Drawing-off socket cap
- Chuck cone 26 mm
- Chuck cone 19 mm



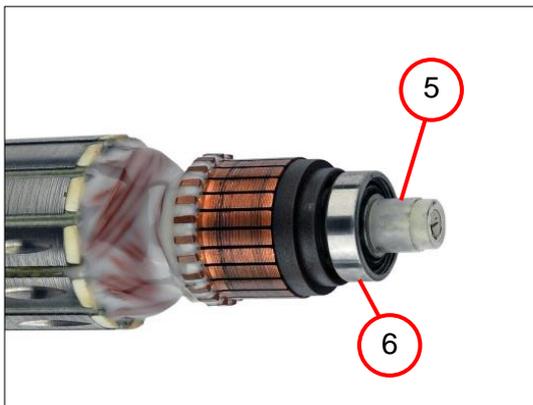
2. Press out the armature (1).



8.4.8 Removing the armature



3. Remove the sealing ring (1).
4. Remove the grooved ball bearing (2) together with the sealing ring (3).
5. Remove the plate (4).



6. Remove the magnet (5).
7. Pull off the grooved ball bearing (6).

8.5 Removing the gearbox housing

8.5.1 Removing the holder

Tools:

- Circlip pliers



! CAUTION!

Risk of injury due to tensioned spiral springs.

Injuries can occur.

When opening the circlip (1), hold the cover with your hand.

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



3. Remove the spring (3).

8.5.1 Removing the holder

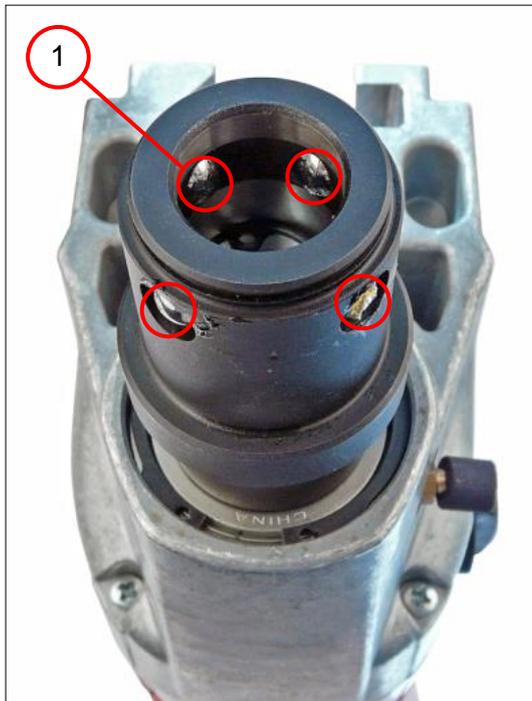


4. Remove the sleeve (1).



5. Remove the bush (2).

8.5.1 Removing the holder



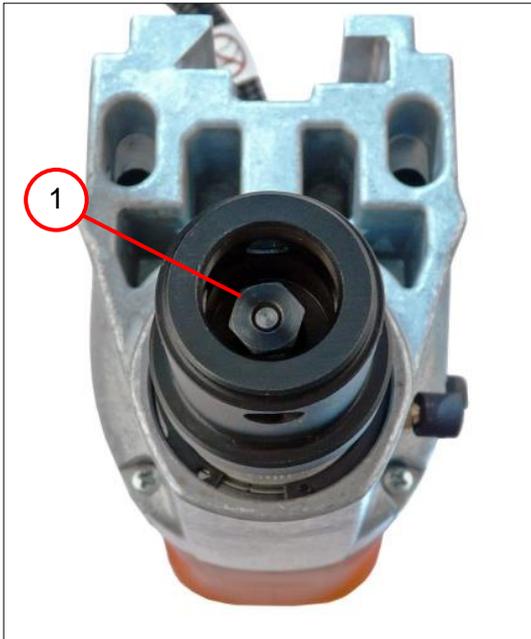
6. Remove the four balls (1).



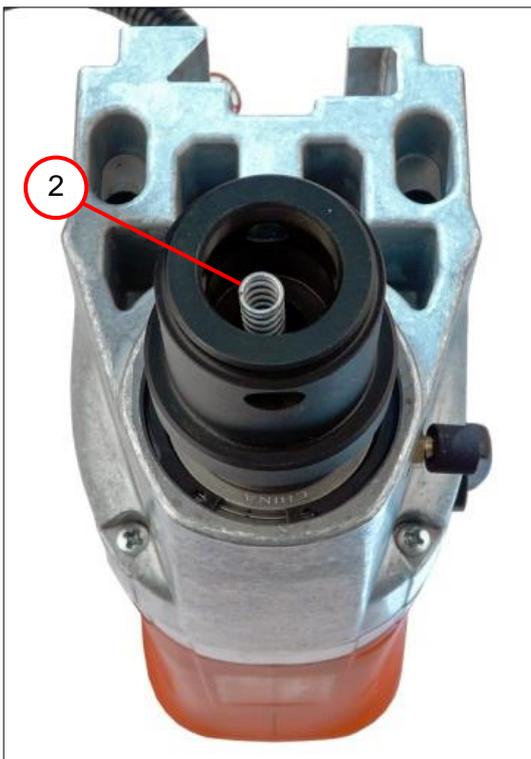
7. Remove the circlip (2).

8. Remove the disc (3).

8.5.1 Removing the holder



9. Remove the plunger (1).



10. Remove the spiral spring (2).

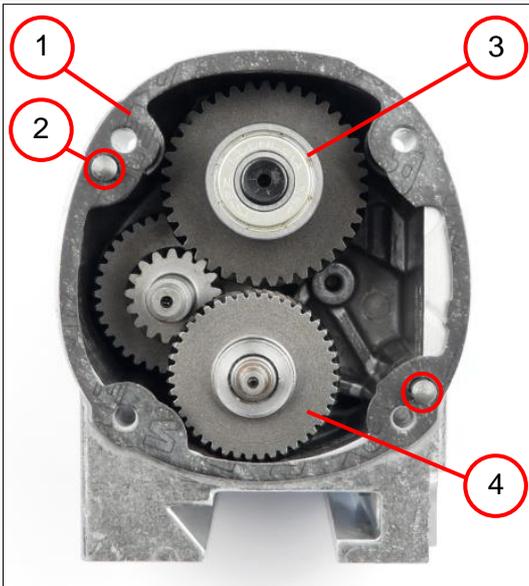
8.5.2 Removing the gearbox parts

Steps that must be completed:

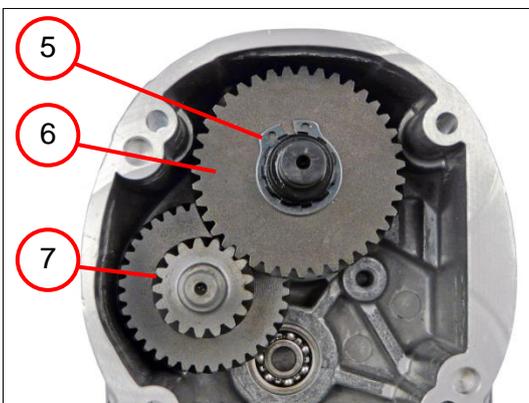
- Removing the electronics
- Removing the drill motor
- Removing the gearbox housing

Tools:

- Drawing-off socket cap
- Chuck cone 24 mm
- Combination pliers
- Circlip pliers
- Slide hammer
- Inner puller



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).

8.5.2 Removing the gearbox parts



8. Remove the two grooved ball bearings (1).

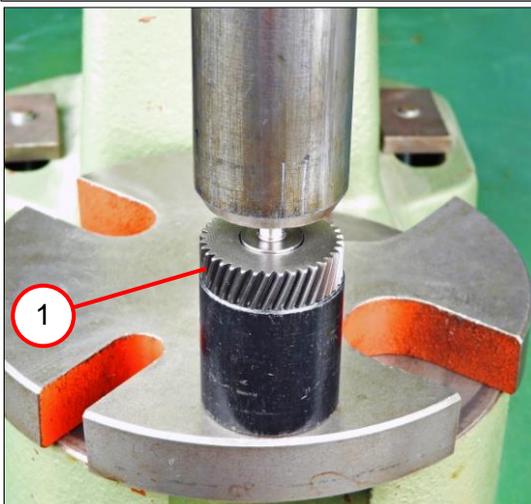
8.5.3 Removing the gear-wheels

Steps that must be completed:

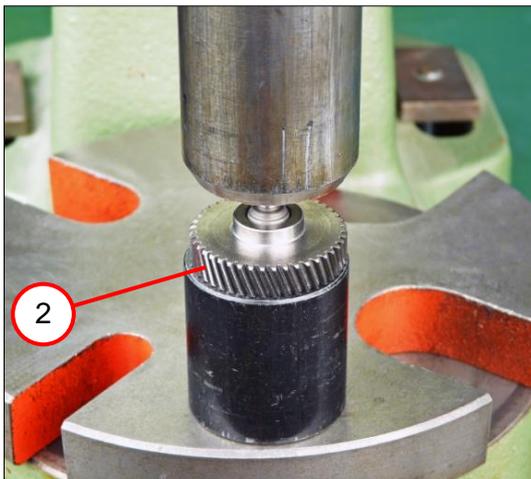
- Removing the electronics
- Removing the drill motor
- Removing the gearbox housing
- Removing the gearbox parts

Tools:

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



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



2. Press down on the gear-wheel (2).

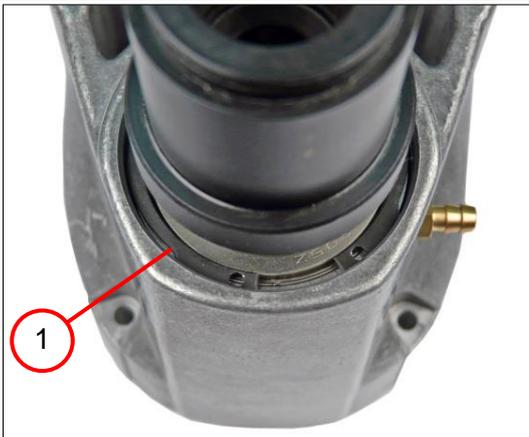
8.5.4 Removing the shaft

Steps that must be completed:

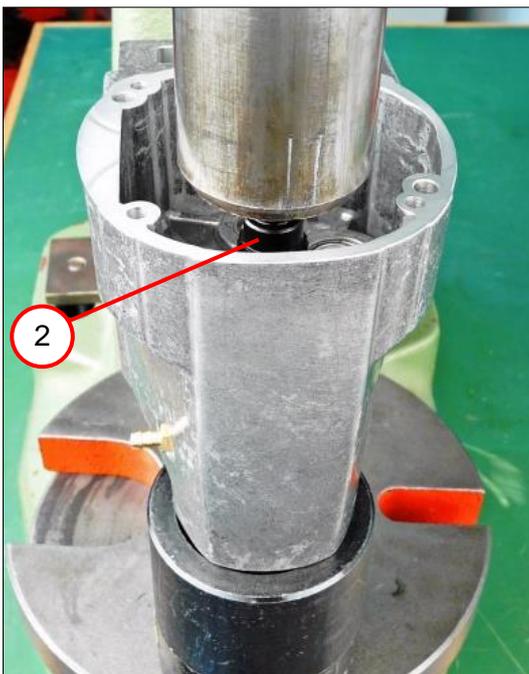
- Removing the electronics
- Removing the drill motor
- Removing the gearbox housing
- Removing the holder

Tools:

- Circlip pliers
- Arbor press
- Sleeve 44 mm inner diameter
55 mm outer diameter



1. Remove the circlip (1).



2. Press out the shaft (3).

8.5.5 Removing the shaft

Steps that must be completed:

- Removing the electronics
- Removing the drill motor
- Removing the gearbox housing
- Removing the holder
- Removing the shaft

Tools:

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



1. Remove the circlip (1).



2. Press down on the grooved ball bearing (2).

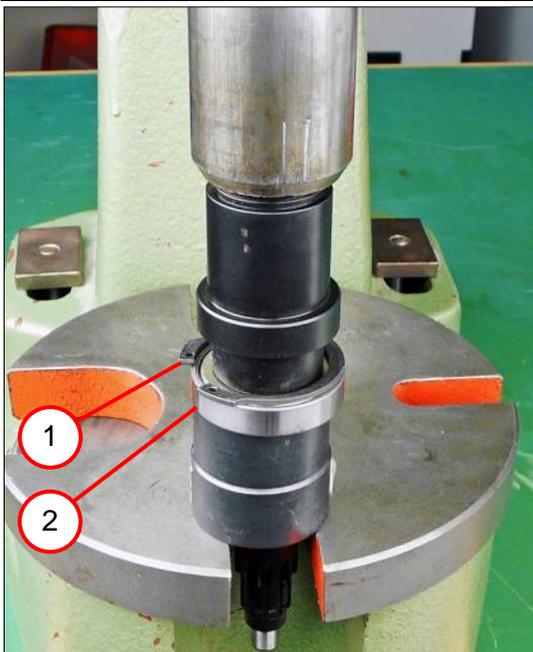
9 Fitting

9.1 Fitting the gearbox housing

9.1.1 Fitting the shaft

Tools:

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



1. Place the circlip (1) on the shaft.



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

9.1.2 Positioning the shaft

Steps that must be completed:

- Fitting the shaft

Tools:

- 7 mm socket wrench
- Arbor press
- Circlip pliers

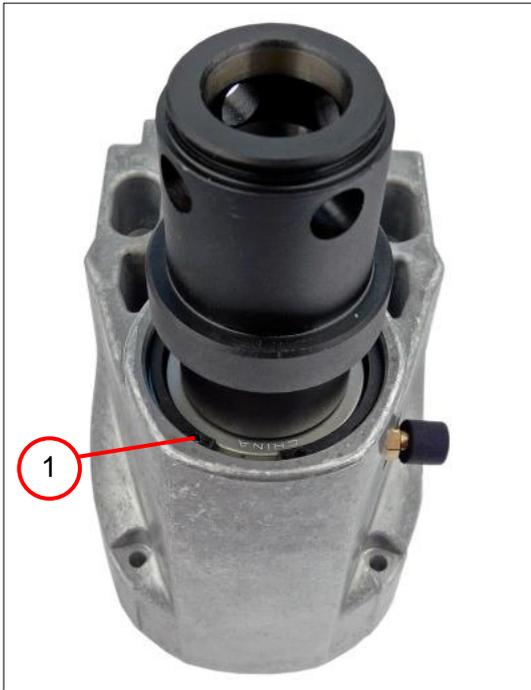


1. Fit the two sealing rings (1).
2. Apply a layer of grease to the two sealing rings (1).
3. Screw in the hose socket (2).
4. Fit the sleeve (3).



5. Press in the shaft (4).

9.1.2 Positioning the shaft

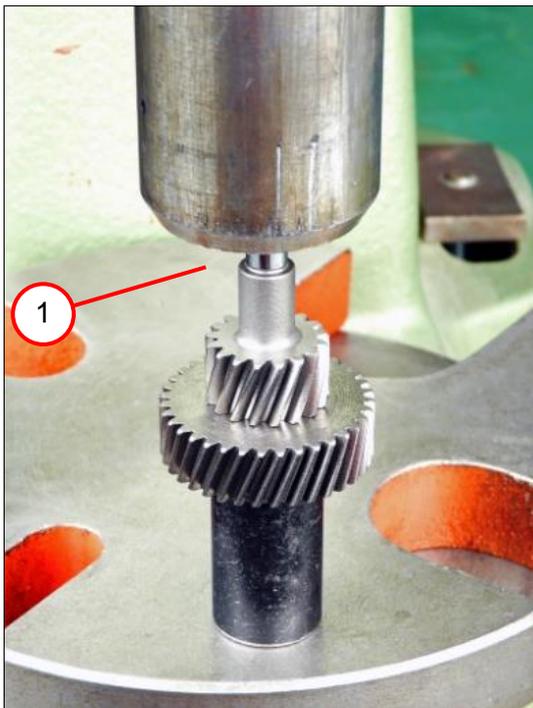


6. Fit the circlip (1).

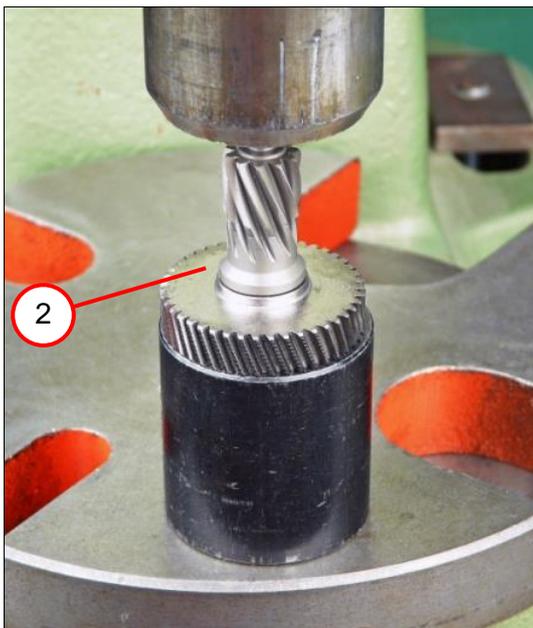
9.1.3 Fitting the gear-wheels

Tools:

- Arbor press
- Sleeve 17 mm inner diameter
25 mm outer diameter
- Sleeve 16 mm inner diameter
25 mm outer diameter



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



2. Press the gear-wheel [z=43] onto the toothed shaft [z=11] (2).

9.1.4 Fitting the gearbox parts

Steps that must be completed:

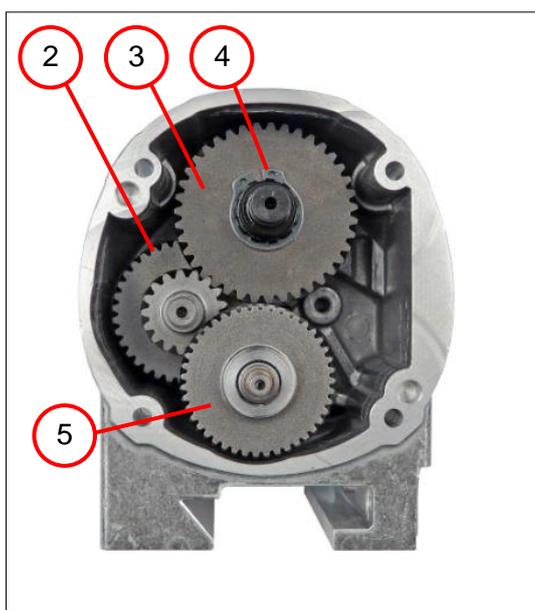
- Fitting the shaft
- Positioning the shaft
- Fitting the gear-wheels

Tools:

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

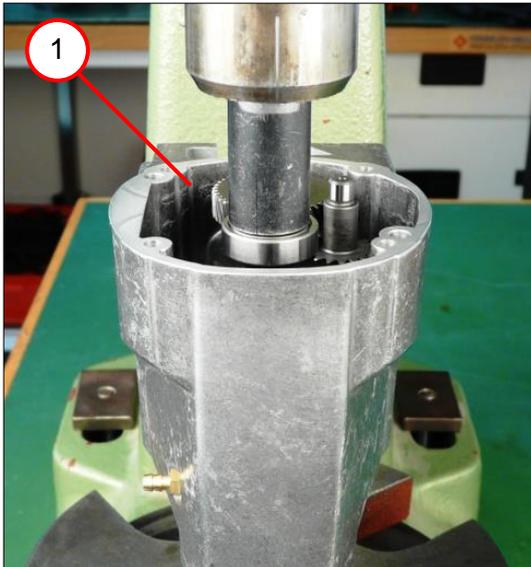


1. Press in the grooved ball bearings (1).

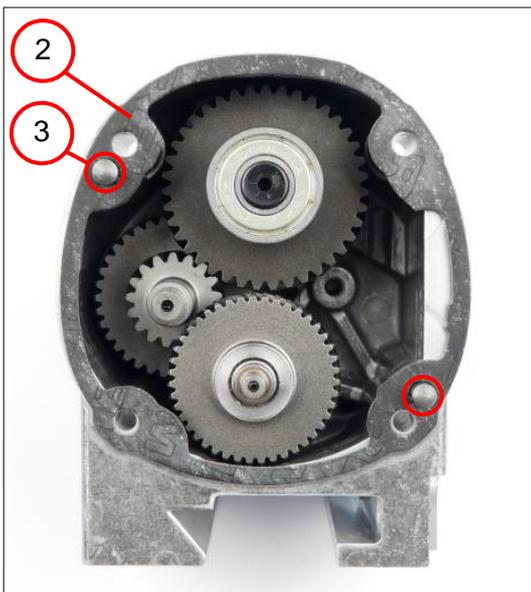


2. Insert the gear-wheel (2).
3. Insert the gear-wheel (3).
4. Fit the circlip (4).
5. Insert the gear-wheel (5).

9.1.4 Fitting the gearbox parts



6. Fit the grooved ball bearing (1).



1. Position the two straight pins (3).
2. Position the seal (2).
3. Fill the gearbox with 45 g grease.

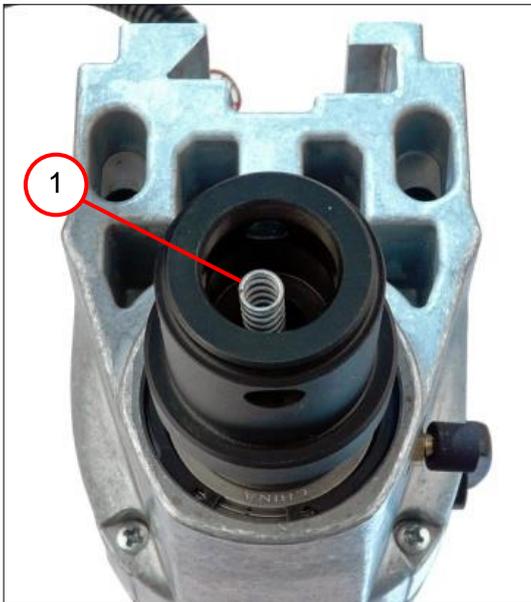
9.1.5 Fitting the holder

Steps that must be completed:

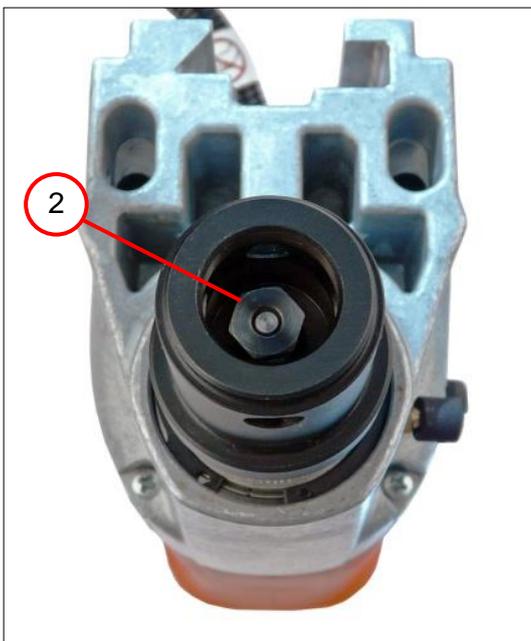
- Fitting the shaft
- Positioning the shaft
- Fitting the gearbox parts

Tools:

- Circlip pliers



1. Position the spiral spring (1).



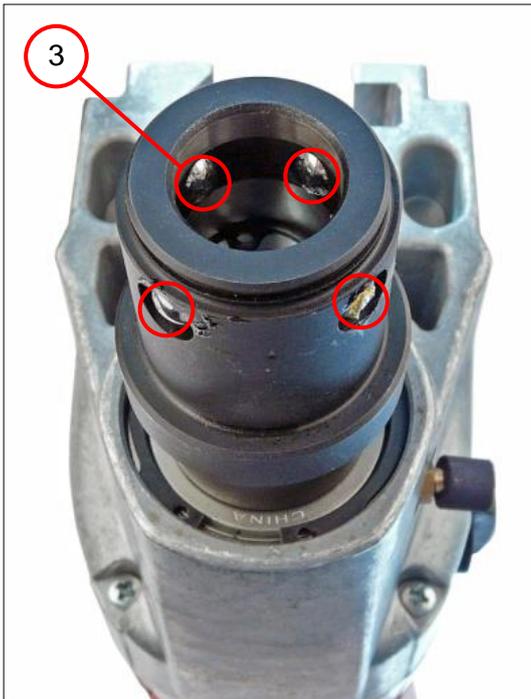
2. Position the plunger (2).



9.1.5 Fitting the holder



3. Position the disc (1).
4. Fit the circlip (2).



5. Apply a layer of grease to the four balls (3).
6. Position the four balls (3).



9.1.5 Fitting the holder



7. Position the bush (1).



8. Position the sleeve (2).

9.1.5 Fitting the holder



9. Position the spring (1).



10. Position the sleeve (2).

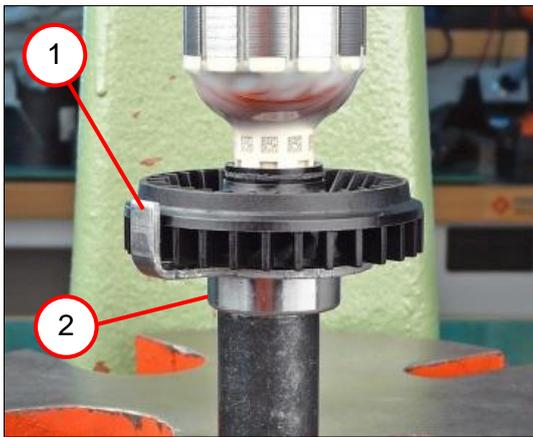
11. Fit the circlip (3).

9.2 Fitting the motor housing

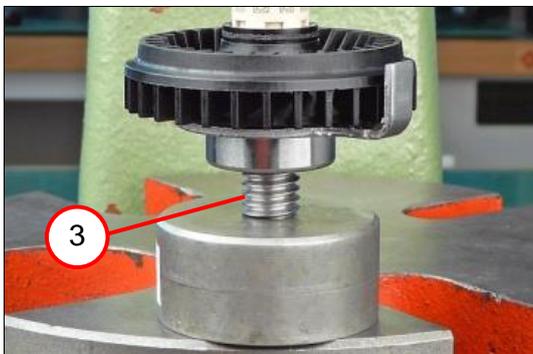
9.2.1 Fitting the armature

Tools:

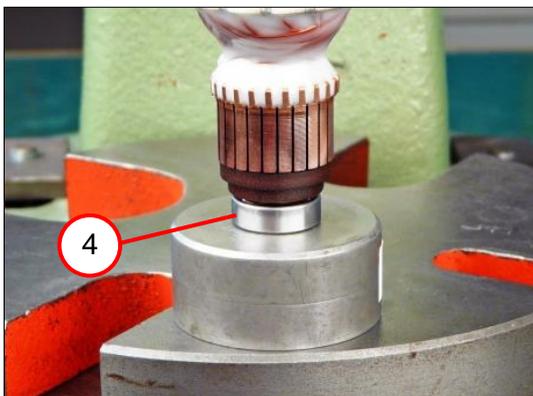
- Arbor press
- Sleeve 13 mm inner diameter
26 mm outer diameter
- Sleeve 7 mm inner diameter
13 mm outer diameter



1. Position the plate (1).
2. Press on the grooved ball bearing (2).



3. Position the sealing ring (3).

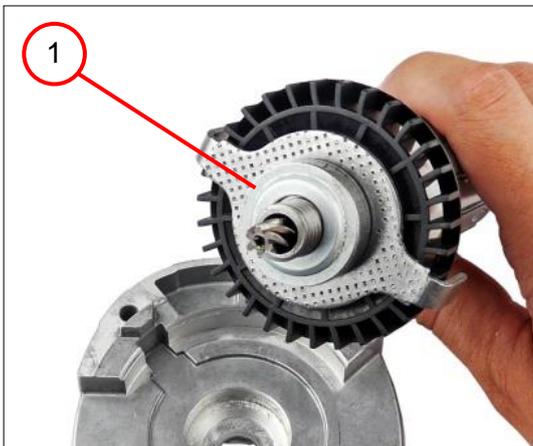


4. Press on the grooved ball bearing (4).

9.2.1 Fitting the armature



5. Apply a layer of grease to the sealing ring.

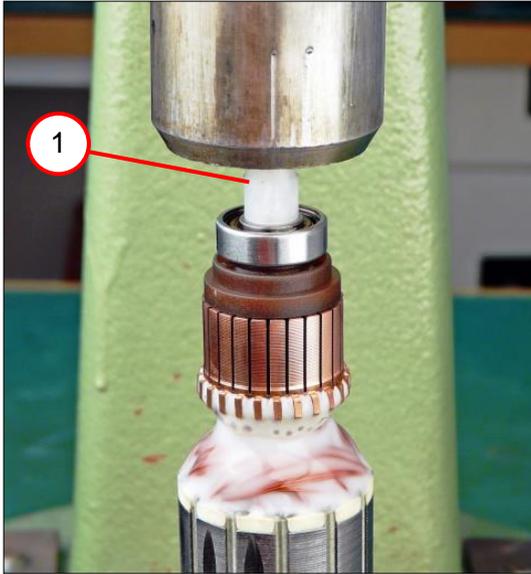


6. Position the sealing ring (1).



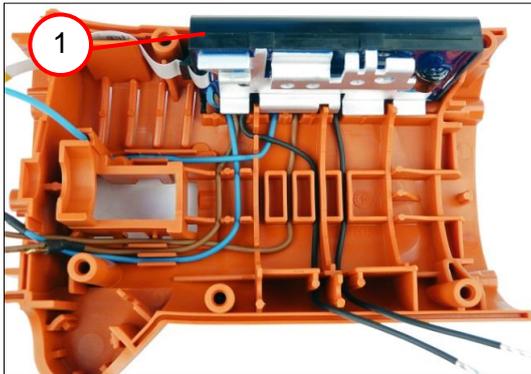
7. Press in the armature (2).

9.2.1 Fitting the armature



1. Press on the magnet (1).

9.2.2 Fitting the drill motor electronics

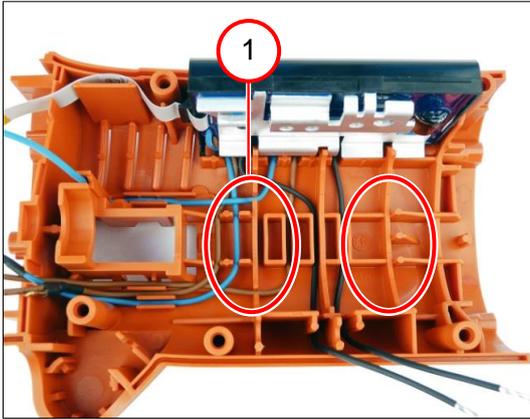


1. Position the electronics (1).
2. Route the cables as shown in the connection diagram.

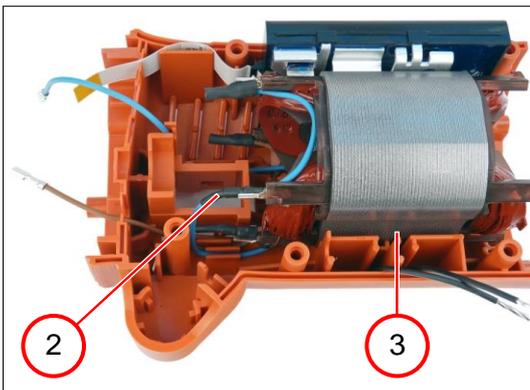
9.2.3 Fitting the stator

Steps that must be completed:

- Fitting the drill motor electronics



1. Connect the cables (2) to the stator as shown in the connection diagram.

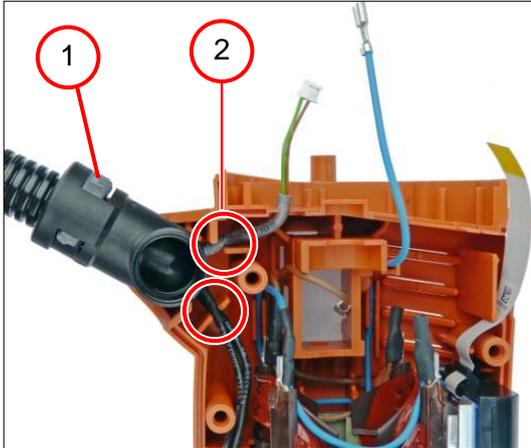


2. Position the stator (3) in the opening (1) in the correct position.

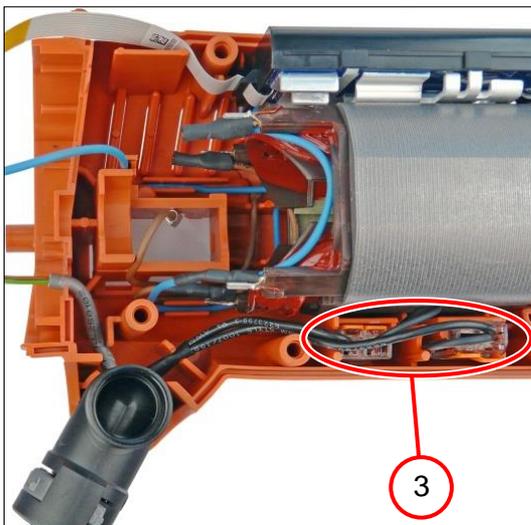
9.2.4 Fitting the connecting piece

Steps that must be completed:

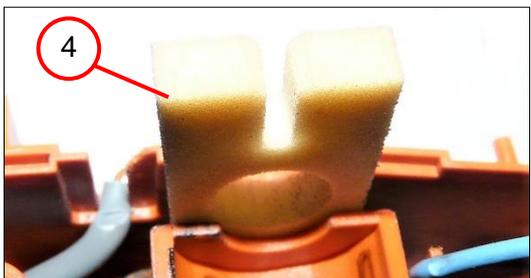
- Fitting the drill motor electronics
- Fitting the stator



1. Position the connecting piece (1).
2. Lay the two connecting cables (2).



3. Connect the cables (3) to the connectors as shown in the connection diagram.
4. Position the connectors in the respective opening.



5. Position the felt piece (4).

9.2.5 Fitting the housing

Steps that must be completed:

- Fitting the drill motor electronics
- Fitting the stator
- Fitting the connecting piece

Tools:

- Torx T20



1. Position the housing half (1).
2. Screw in the five screws (2).



3. Position the air guide ring (3).

9.2.6 Fitting the intermediate gearbox

Steps that must be completed:

- Fitting the drill motor electronics
- Fitting the stator
- Fitting the connecting piece
- Fitting the housing



1. Position the intermediate gearbox (1).

9.2.7 Fitting the gearbox housing

Steps that must be completed:

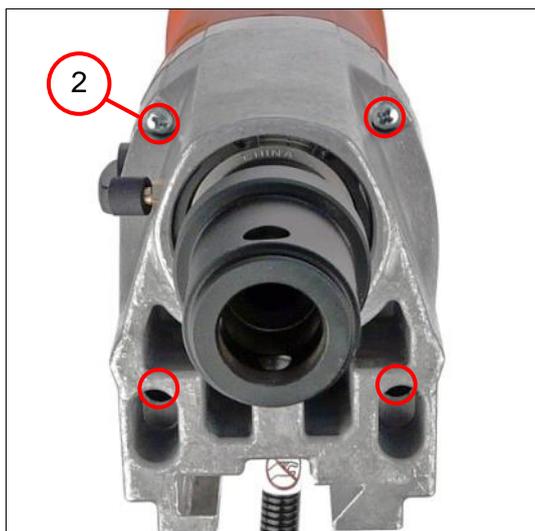
- Fitting the drill motor electronics
- Fitting the stator
- Fitting the connecting piece
- Fitting the housing
- Fitting the intermediate gearbox

Tools:

- Torx T20



1. Place the gearbox housing (1) on the drill motor.



2. Screw in the four screws (2).

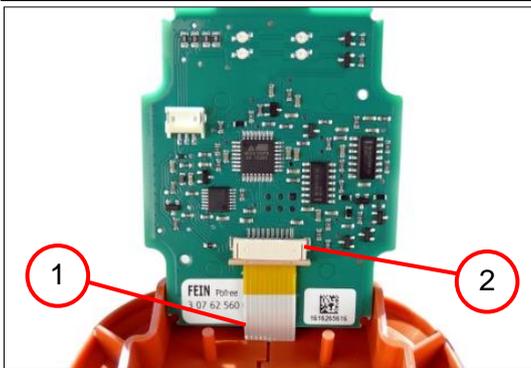
9.2.8 Fitting the control panel

Steps that must be completed:

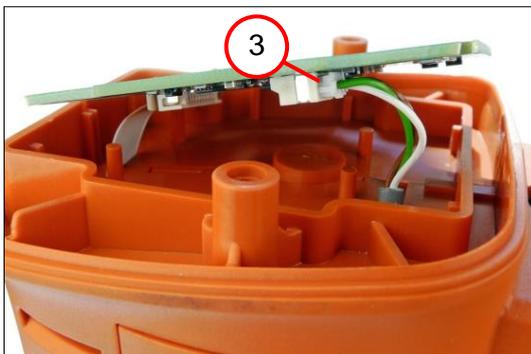
- Fitting the drill motor electronics
- Fitting the stator
- Fitting the connecting piece
- Fitting the housing

Tools:

- Torx T20



1. Connect the ribbon cable (1).
2. Close the lock (2).



3. Position the plug (3).



4. Position the switch insert (4).

9.2.1 Fitting the armature



5. Position the cover (1).
6. Screw in the two screws (2) [2.0 Nm ± 0.3 Nm].



9.3 Assembling the drill jig

9.3.1 Fitting the spider

Tools:

- Socket head wrench, 5 mm



1. Screw in the three handles (1).
2. Position the scale (2).

i INFORMATION

Note the unit of measurement of the scale.



3. Position the shaft (3).
4. Coat the shaft (3) with grease.
5. Position the disc (4).



6. Screw in the cylinder head screw (5) [8.0 Nm ± 0.5 Nm].



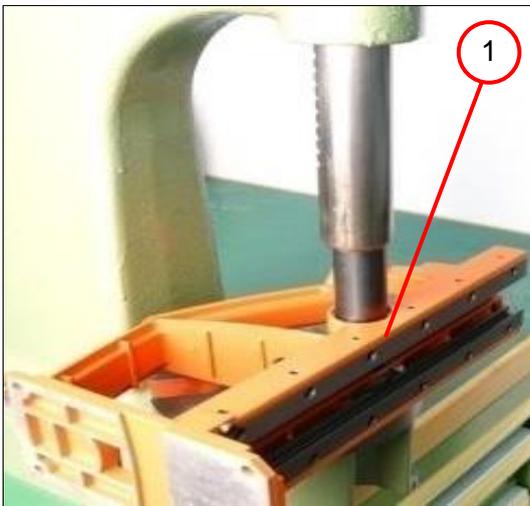
9.3.2 Positioning the spider

Steps that must be completed:

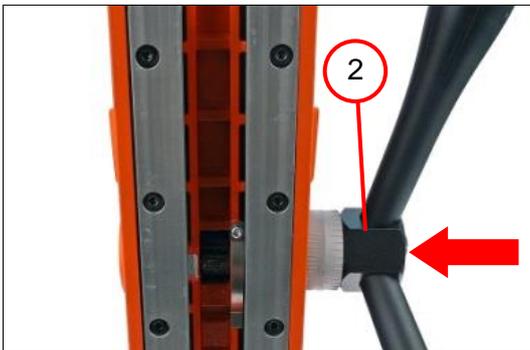
- Fitting the spider

Tools:

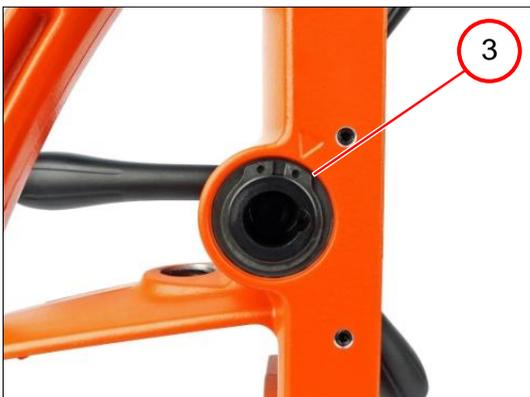
- Arbor press
- Sleeve
26 mm inner diameter
30 mm outer diameter
- Circlip pliers



1. Press in the bush (1).
2. Repeat step 1 on the opposite side of the machine.



3. Position the spider (2).



4. Fit the circlip (3).

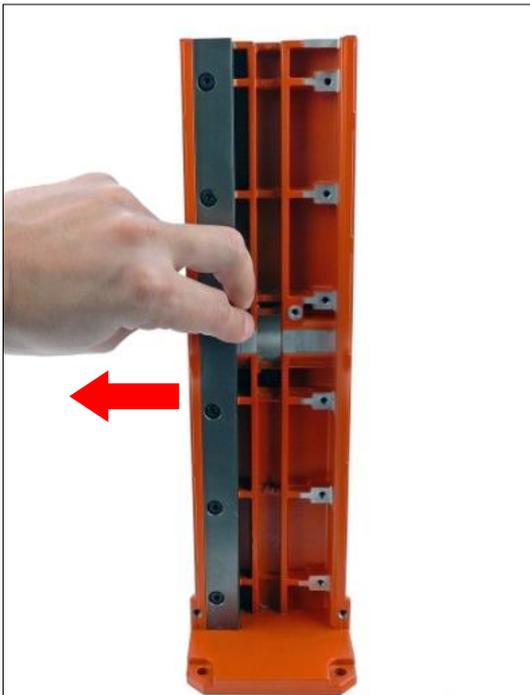
9.3.3 Fitting the guide

Tools:

- Socket head wrench, 2.5 mm; 3 mm; 4 mm
- Torx T10
- PH2 cross-tip screwdriver



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



2. Position the guide strip (2) and press it onto the housing.
3. Insert the six cylinder head screws.

9.3.3 Fitting the guide



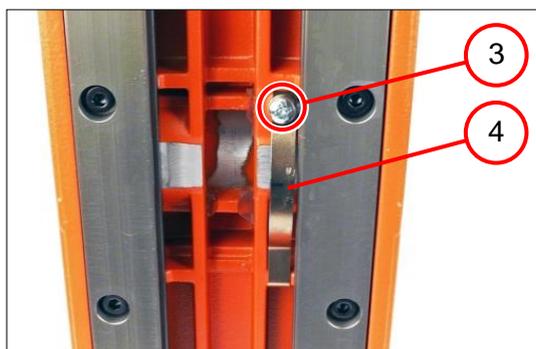
4. Position the guide strip (1) and press it onto the housing.
5. Insert the six cylinder head screws.



6. Position the six set screws (4).

i INFORMATION

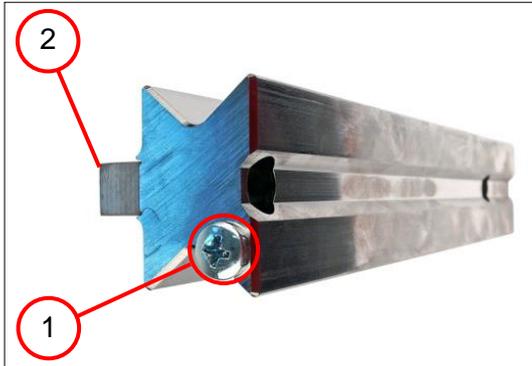
The guide clearance is adjusted after installation of the drill motor.



7. Position the leaf spring (3).
8. Screw in the screw (4) [1.1 Nm ± 0.15 Nm].



9.3.3 Fitting the guide



9. Screw in the flat headed screw (1) [$1.2 \text{ Nm} \pm 0.15 \text{ Nm}$].

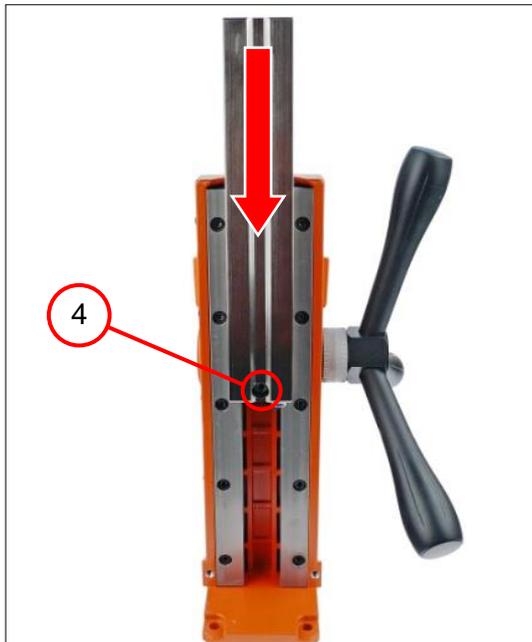
i INFORMATION

Note the position of the flat headed screw (1).

10. Position the gear rack (2)



11. Screw in the screw (3) [$3.0 \text{ Nm} \pm 0.3 \text{ Nm}$].



12. Apply a layer of grease to the gear rack.

13. Coat the guide with grease.

14. Slide the guide into the guide strip.

15. Use the spider to move the guide downwards.

16. Screw in the screw (4) [$3.0 \text{ Nm} \pm 0.3 \text{ Nm}$].



9.3.4 Fitting the sealing ring

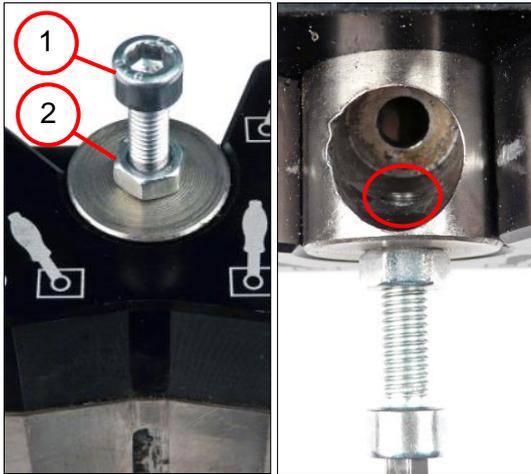


1. Grease the sealing ring (1).
2. Position the sealing ring (1).

9.3.5 Fitting the magnetic foot

Tools:

- Assembly aid
- M5x30 screw
- M5 nut
- Socket head wrench, 5 mm
- Torx T10

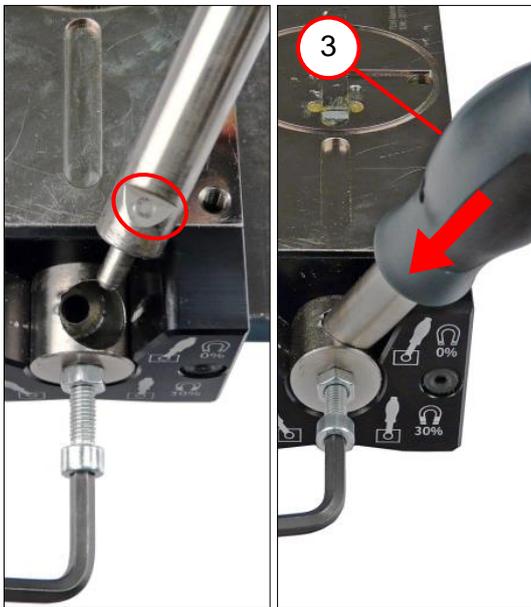


1. Place the magnet on a steel plate.
2. Screw in the screw (1).

i INFORMATION

Screw in the screw by max. 5 mm as, otherwise, the lever (3) cannot be fitted.

3. Tighten the lock nut (2).



4. Turn the screw anticlockwise.

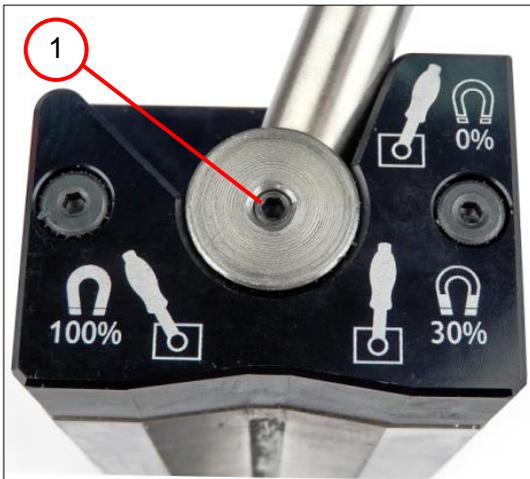
i INFORMATION

Turn to the "30%" position.

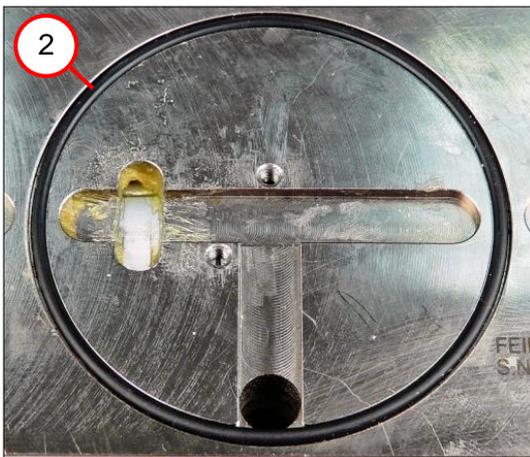
5. Position the lever (3).



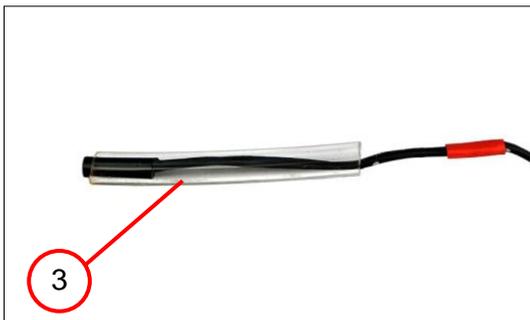
9.3.5 Fitting the magnetic foot



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



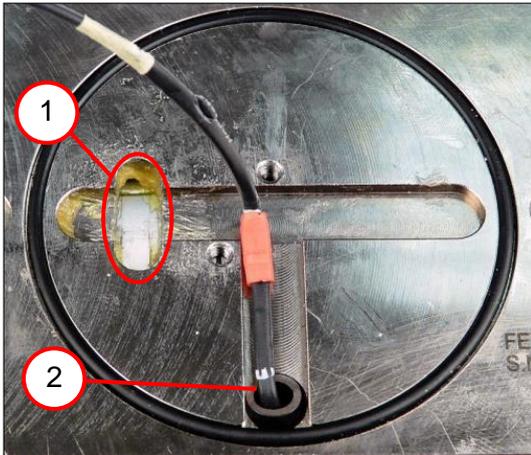
8. Grease the sealing ring (2).
9. Position the sealing ring (2).



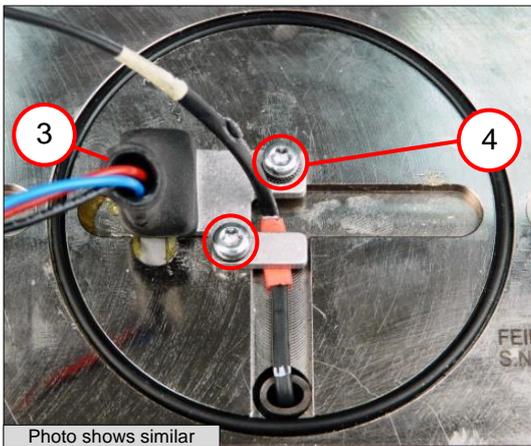
10. Insert the sensor into the hose (3).



9.3.5 Fitting the magnetic foot



11. Coat the contact surface (1) with grease.
12. Place the sensor in the hole (2).



13. Position the switch (3).
14. Screw in the two screws (4) with circlip [0.7 Nm \pm 0.1 Nm].

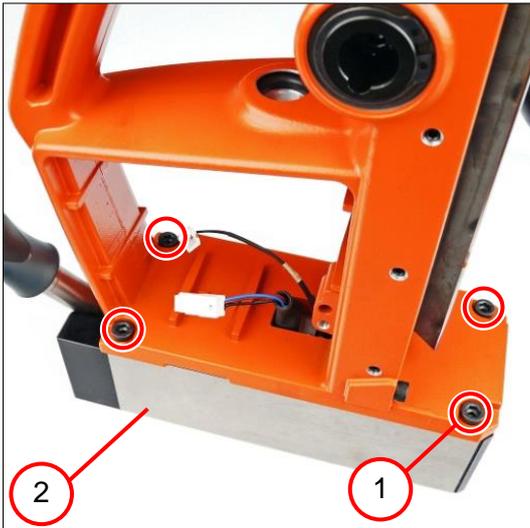
9.3.6 Positioning the magnetic foot

Steps that must be completed:

- Fitting the magnetic foot

Tools:

- Socket head wrench, 5 mm



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

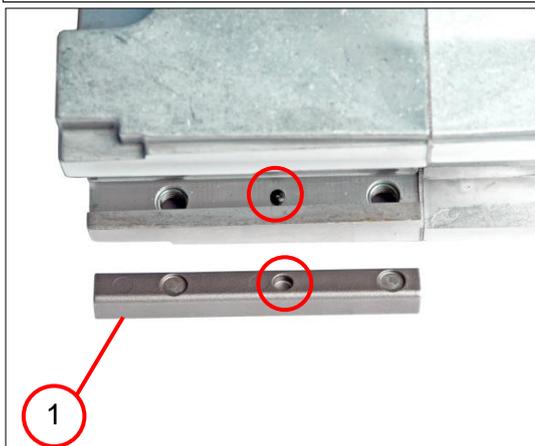
9.3.7 Fitting the drill motor

Steps that must be completed:

- Fitting the guide

Tools:

- Socket head wrench, 4 mm



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



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

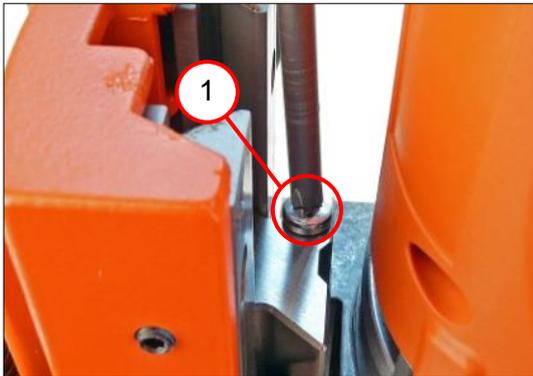


3. Screw in the two levers (3).

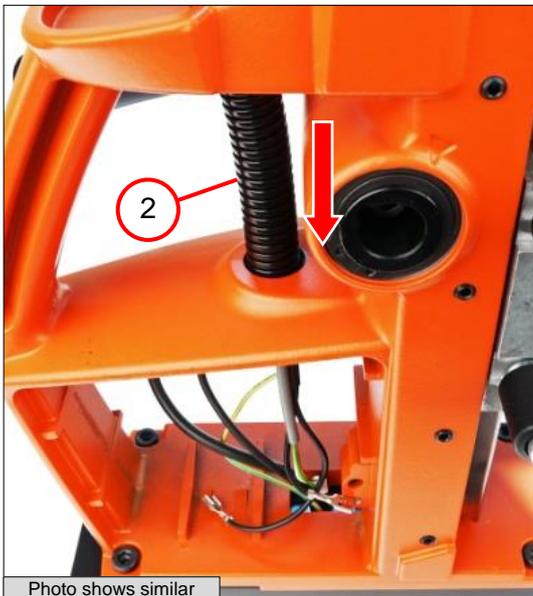
9.3.7 Fitting the drill motor

Tools:

- PH2 cross-tip screwdriver



1. Screw in the fillister head screw (1).



2. Fit the protective hose (2).

Photo shows similar

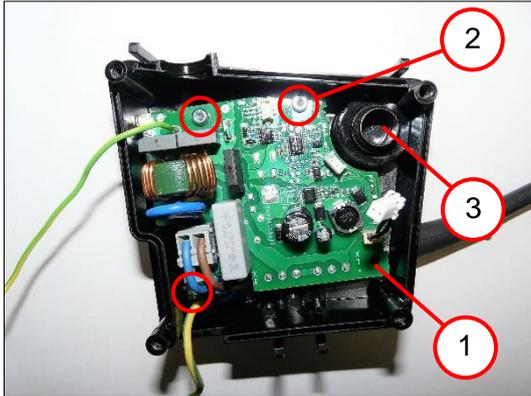
9.3.8 Fitting the electronics

Steps that must be completed:

- Fitting the network cable

Tools:

- Torx T15; T20



1. Position the electronics (1).
2. Screw in the three screws (2) [0.9 Nm \pm 0.15 Nm].
3. Position the plug (3).



4. Position the protective hose (4).
5. Position the cover (5).
6. Connect all cables as shown in the connection diagram.



7. Position the cover (6).
8. Screw in the four screws (7) [2.7 Nm \pm 0.3 Nm].

9.3.9 Fitting the container

Steps that must be completed:

- Fitting the guide
- Fitting the drill motor



1. Position the container (1).
2. Position the hose (2).

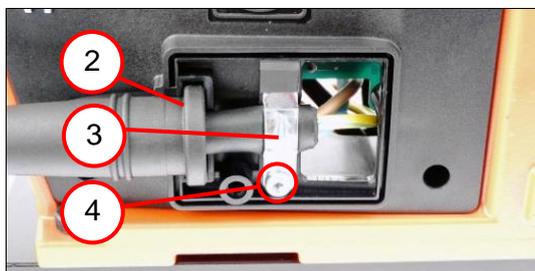
9.4 Fitting the network cable

Tools:

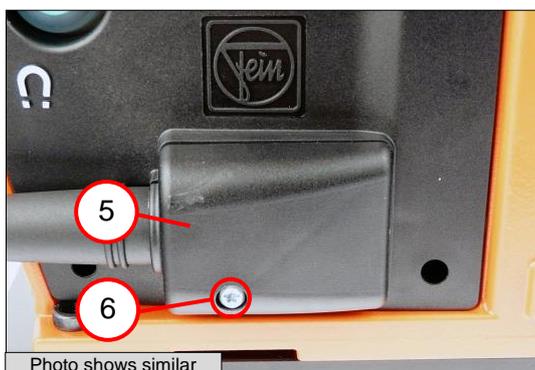
- Torx T20



1. Position the protective hose (1).



2. Position the cable (2).
3. Position the cable clamping piece (3).
4. Screw in the screw (4) [0.9 Nm \pm 0.1 Nm].



5. Position the cover (5).
6. Screw in the screw (6) [0.9 Nm \pm 0.1 Nm].

Photo shows similar

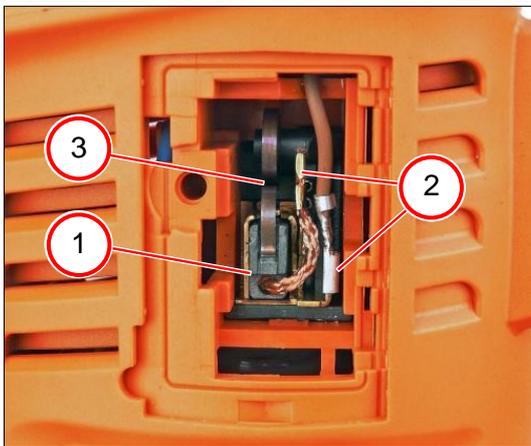
9.5 Fitting the carbon brushes

Steps that must be completed:

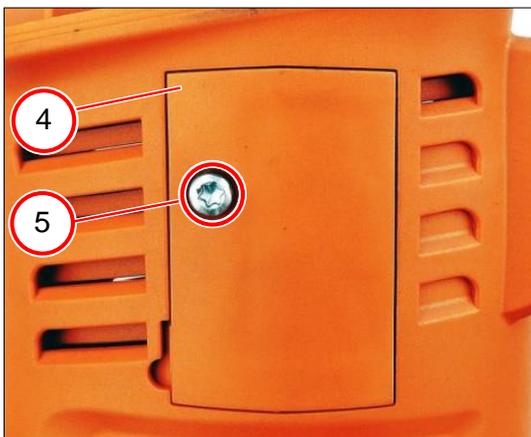
- Fitting the drill motor electronics
- Fitting the stator
- Fitting the connecting piece
- Fitting the housing
- Fitting the intermediate gearbox

Tools:

- Assembly aid
- Torx T15



1. Position the carbon brush (1).
2. Position the two plugs (2).
3. Position the spring (3).



4. Position the cover (4).
5. Screw in the screw (5).
6. Repeat steps 1 to 5 on the opposite side of the machine.



9.6 Setting the guide

Tools:

- Torque wrench with hexagon socket fixture, 2.5 mm
- Socket head wrench, 2.5 mm
- 2 x plastic hammer



Photo shows similar

1. Move the drill motor (1) into the upper position.
2. Tighten the top three set screws (2) [1.4 Nm].

i INFORMATION

Note the sequence.

Tighten the set screws from top to bottom.



Photo shows similar

3. Turn the tightened set screws 60° anticlockwise.





9.6 Setting the guide



Photo shows similar

4. Move the drill motor (1) into the upper position.
5. Tighten the bottom two set screws (2) [1.4 Nm].

i INFORMATION

Note the sequence.

Tighten the set screws from top to bottom.



Photo shows similar

6. Turn the tightened set screws 60° anticlockwise.





9.6 Setting the guide



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

i INFORMATION

Note the procedure:

- Tap on the side opposite the 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 increments of 10°.
- If the guide moves too readily, turn the set screws clockwise in increments of 10°.
- Repeat the process after undoing or tightening the set screws.





10 Inspection following repairs

Not currently available.

