AFSC 1.7Q; AFSC 18QSL

Repair instructions

Contents

1. Models described

These repair instructions describe how to repair the following models:

Model	Order number
AFSC 1.7Q	7 129 18 .. .. .
AFSC 18QSL	7 129 27 .. .. .

2. 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

3. 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.

4. Tools required

Standard tools		Special tools	
Outer puller	60x50 mm	Drawing-off socket cap	6 41 04 150 00 8
Arbor press		Chuck cone 16 mm	6 41 07 016 00 1
Punch	5 mm; 6 mm	Press-in fixture	6 41 22 127 00 0
Hot air gun		Assembly aid	6 41 22 122 00 0
Sleeve	6 mm inner diameter 16 mm outer diameter 34 mm inner diameter 42 mm outer diameter 56 mm inner diameter 70 mm outer diameter	Extractor tool	6 41 14 038 01 0
Soldering station			
Vice			
Torx	T15; T20		
Blade			
Circlip pliers			
Slotted screwdriver			

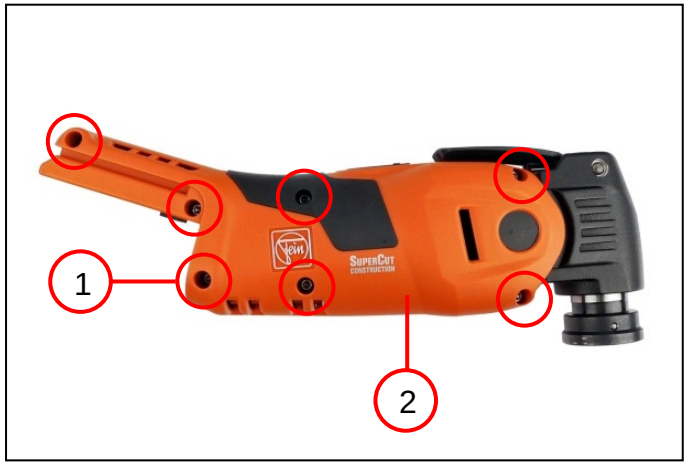
5. Lubricants and auxiliary substances required

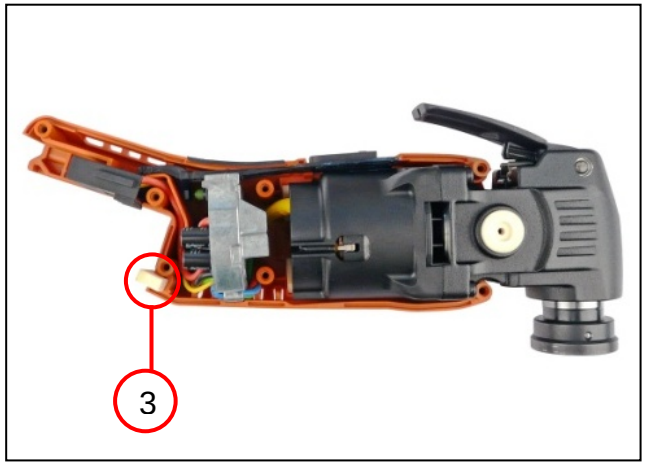
Lubricants

Grease	0 40 128 0300 0	4 g	Tool head

6. Removal

Removing the motor housing





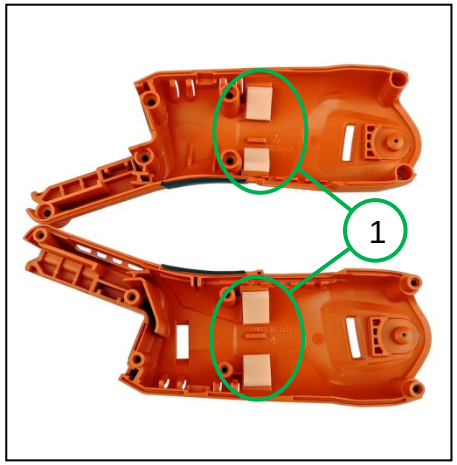
1. Cut through the type plate.
2. Unscrew the seven screws (1).
3. Remove half of the motor housing (2).
4. Remove the pressure piece (3).
5. Remove all components from the motor housing.

Tools:

- Blade
- Torx T15

6. Removal

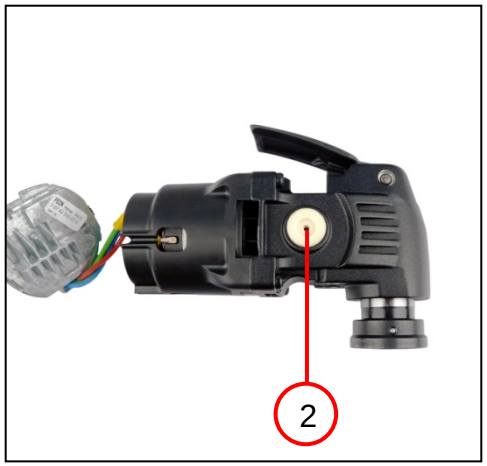
Removing the motor housing

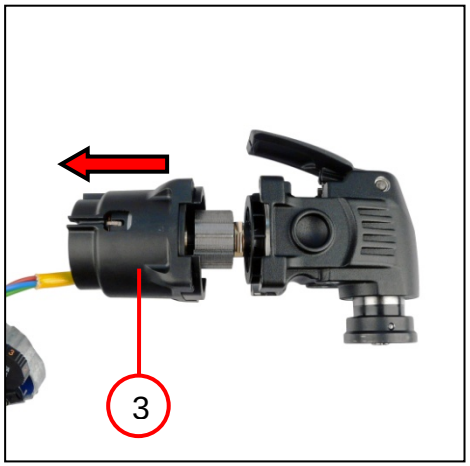


1. Remove the four pressure pieces (1).

6. Removal

Removing the stator





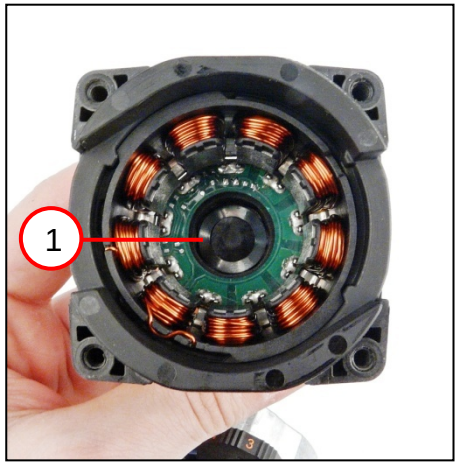
1. Unscrew the four screws (1).
2. Remove the pressure piece (2) [both sides].
3. Remove the housing (3).

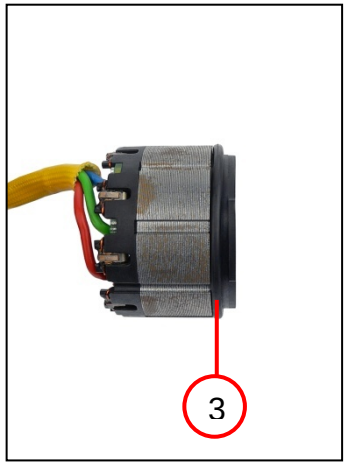
Tools:

- Torx T20

6. Removal

Removing the stator





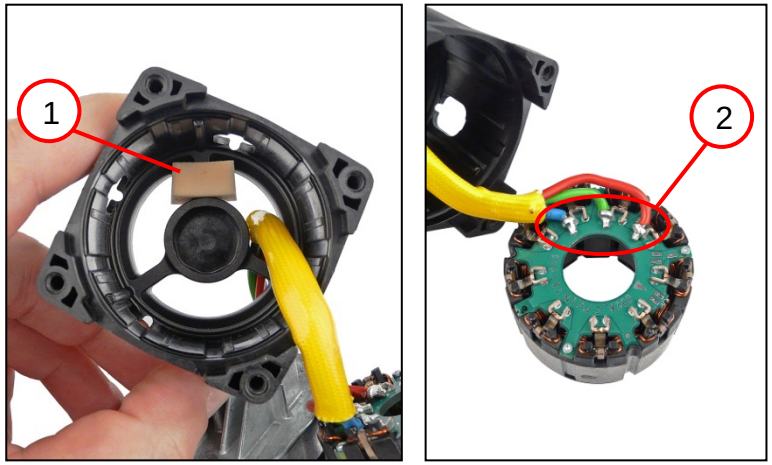
1. Remove the disc (1).
2. Tap the stator out of the housing.
3. Turn the air guide ring (2) anticlockwise and remove it.
4. Remove the sealing ring (3).

Tools:

- Sleeve
  56 mm inner diameter
  70 mm outer diameter

6. Removal

Removing the motor housing



1. Remove the pressure piece (1).
2. Unsolder the three cables (2).

Tools:

- Soldering station

6. Removal

Removing the motor housing

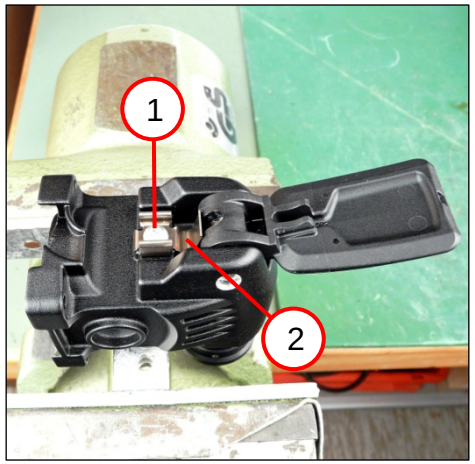
1. Open the lever.
2. Place the extractor tool on the armature.
3. Heat the tool head with a hot air gun [600 °C] on the right and left sides at an angle of 45 degrees for 10 seconds.
4. Pull the armature out of the tool head.
5. Remove the needle bearing (1).

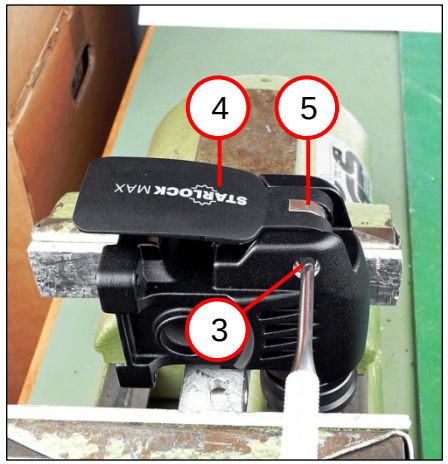
Tools:

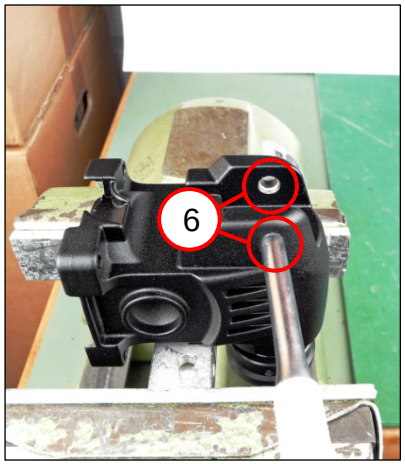
- Press-in fixture
- Extractor tool
- Hot air gun
- Vice

6. Removal

Removing the tool head







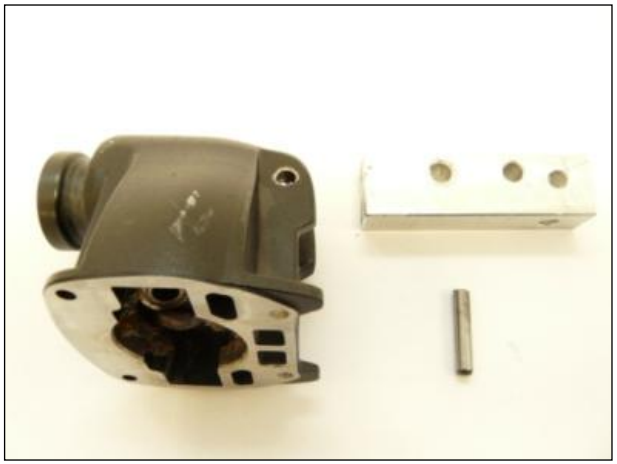
1. Unscrew the fillister head screw (1).
2. Remove the locking spring (2).
3. Remove pin (3).
4. Remove lever (4).
5. Remove the eccentric ring (5).
6. Remove the bushes (6).

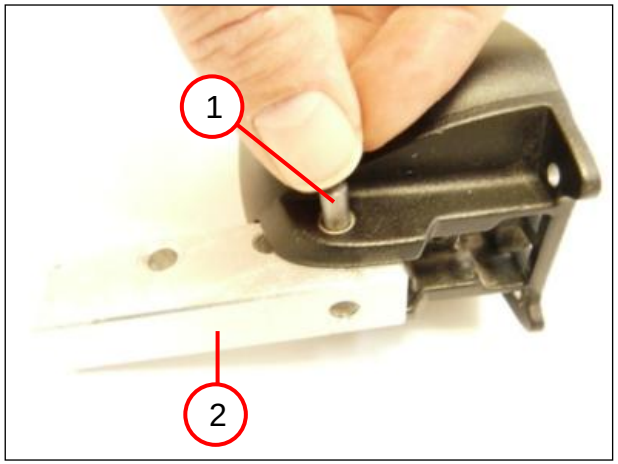
Tools:

- Assembly aid
- Vice
- Punch 5 mm
- Punch 6 mm
- Torx T20

6. Removal

Removing the tool head [applies to: AFSC 1.7Q]





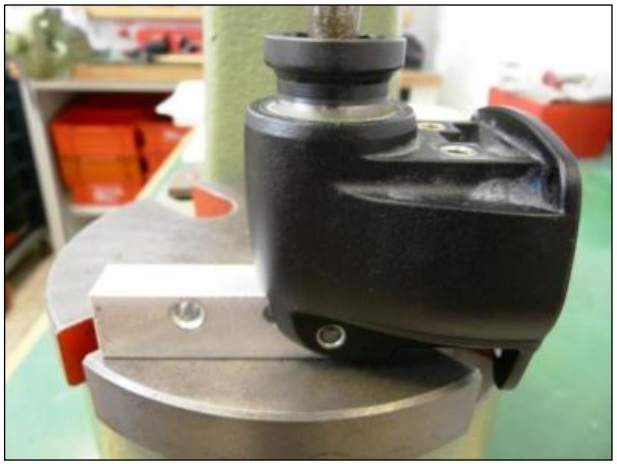
1. Position the assembly aid (1).
2. Press in the pin (2).

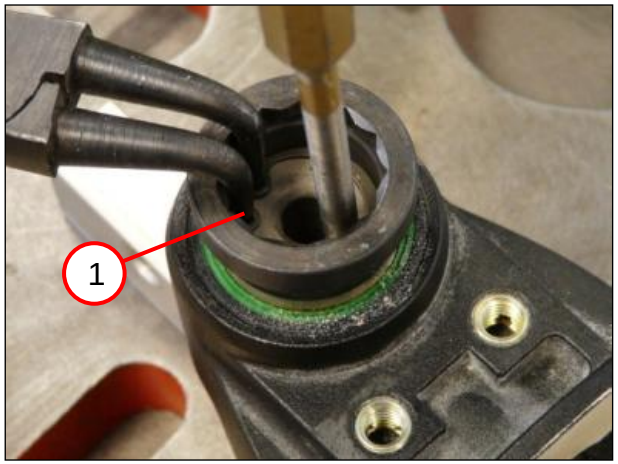
Tools:

- Assembly aid

6. Removal

Removing the tool head [applies to: AFSC 1.7Q]





NOTE
Risk of injury due to tensioned cup spring package.

☞ When undoing the circlip, push the cup spring package down onto the arbor press using a punch.

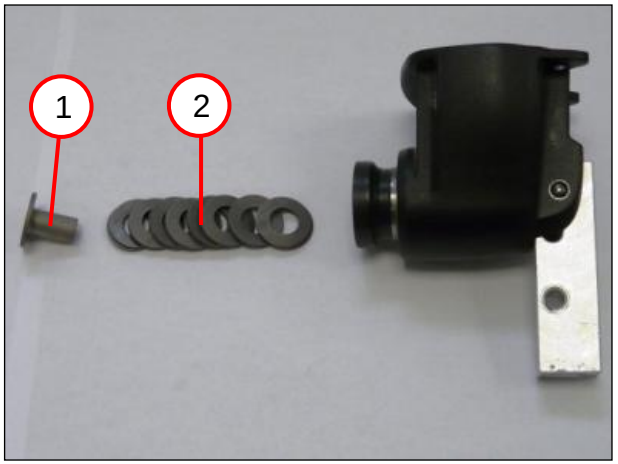
1. Push the cup spring package down.
2. Remove the circlip (1).

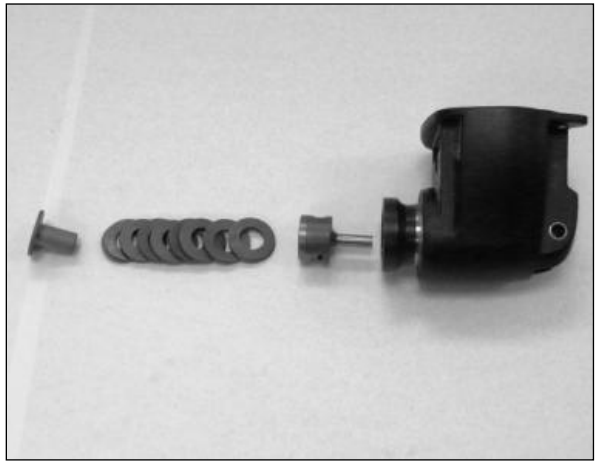
Tools:

- Assembly aid
- Arbor press
- Punch 6 mm
- Circlip pliers

6. Removal

Removing the tool head [applies to: AFSC 1.7Q]





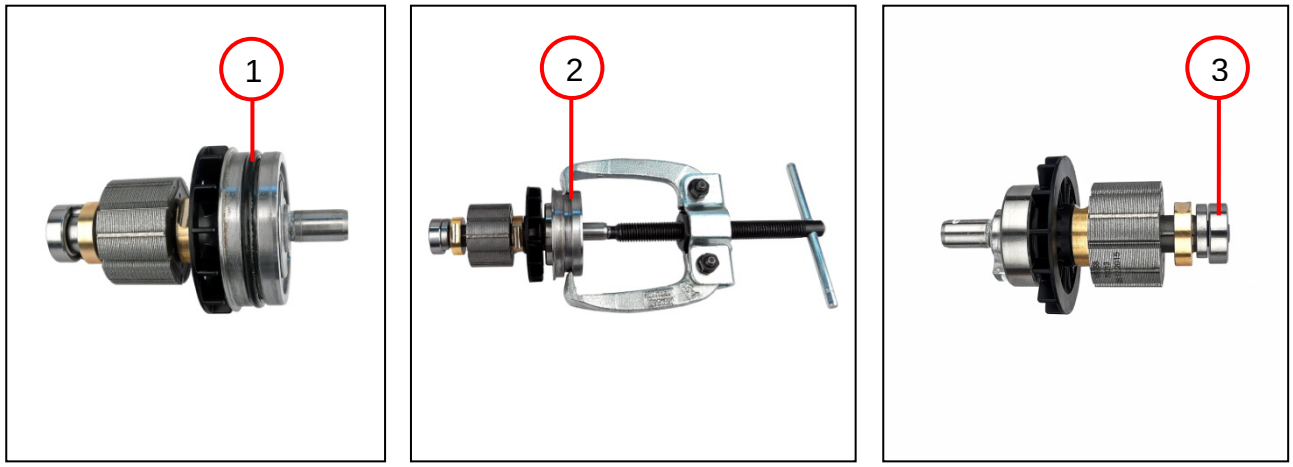
1. Take out the sleeve (1).
2. Remove the cup spring package (2).
3. Press out the pin (3).
4. Press out the pressure piece (4).

Tools:

- Assembly aid
- Punch 5 mm
- Torx T20

6. Removal

Removing the motor housing



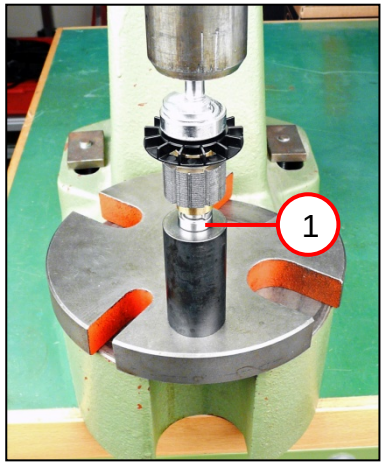
1. Remove the sealing ring (1).
2. Remove the bearing bush (2).
3. Pull off the grooved ball bearing (3).

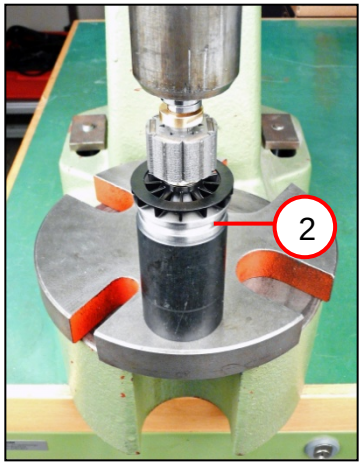
Tools:

- Outer puller 60x50 mm
- Drawing-off socket cap
- Chuck cone 16 mm

7. Fitting

Fitting the gearbox housing





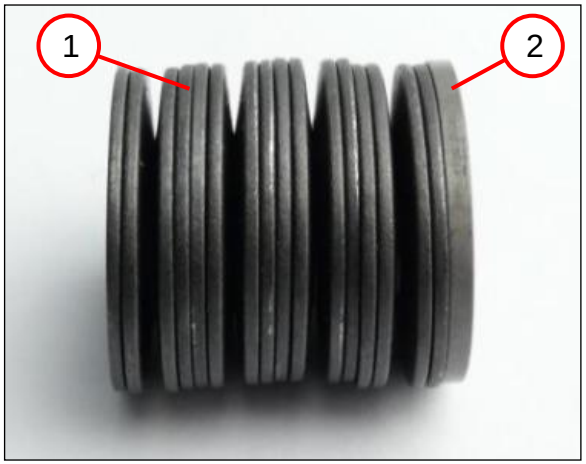
1. Press on the grooved ball bearing (1).
2. Press the bearing bush (2) into the correct position.
3. Grease the sealing ring (3).
4. Position the sealing ring (3).
   ☞ Replace the sealing ring during each fitting.

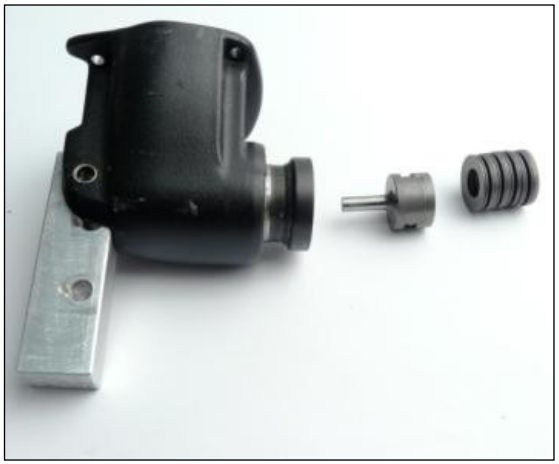
Tools:

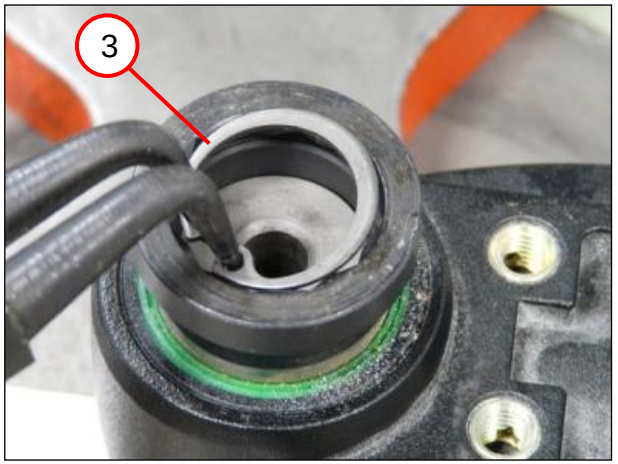
- Arbor press
- Sleeve
  6 mm inner diameter
  16 mm outer diameter
- Sleeve
  34 mm inner diameter
  42 mm outer diameter

7. Fitting

Removing the tool head [applies to: AFSC 1.7Q]







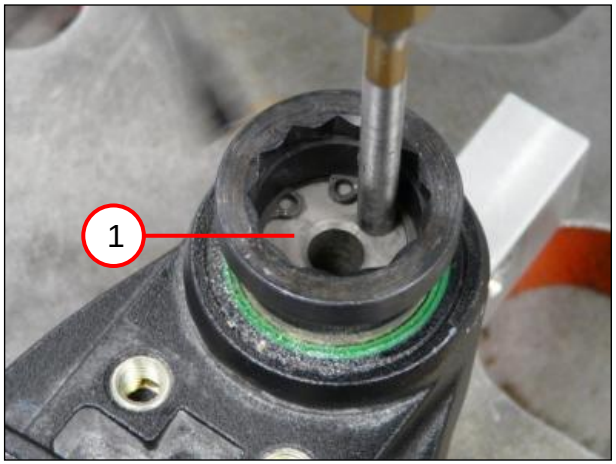
1. Place the cup springs (1) in the correct position on the sleeve (2).
2. Fit the circlip (3).

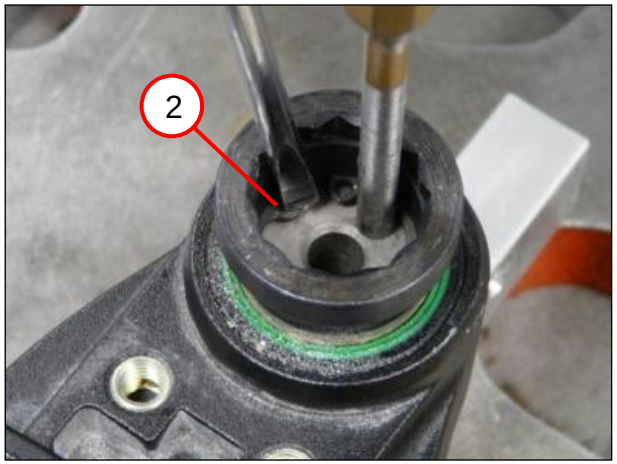
Tools:

- Circlip pliers
- Assembly aid

7. Fitting

Removing the tool head [applies to: AFSC 1.7Q]





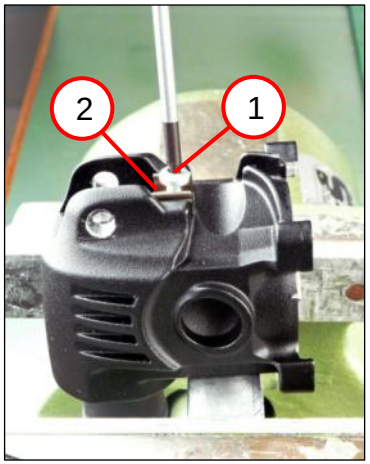
1. Tension the cup spring package (1).
2. Push the circlip (2) in the appropriate groove.
   ☞ The circlip must audibly click into place.

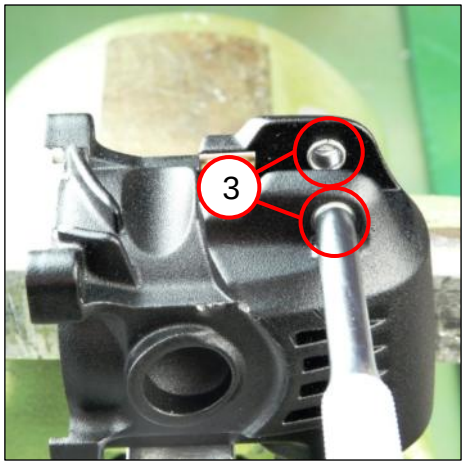
Tools:

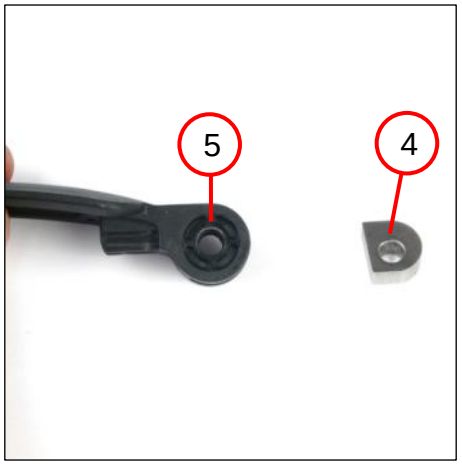
- Arbor press
- Punch 6 mm
- Slotted screwdriver

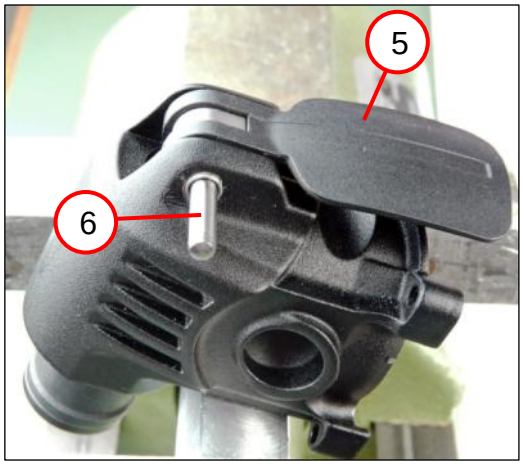
7. Fitting

Fitting the tool head









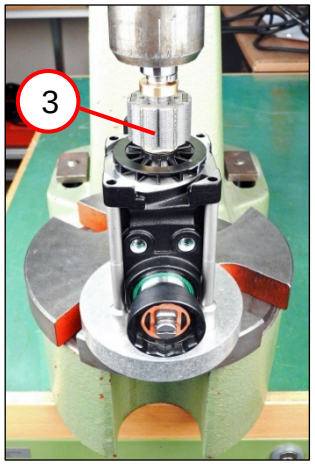
1. Position the locking spring (1).
2. Screw in the fillister head screw (2) [$2.0^{\pm 0.1}$ Nm].
3. Fit two bushes (3).
   ☞ Press in bushes until they are flush with the inside.
4. Insert the eccentric ring (4) into the lever (5) in the correct position.
5. Position the lever (5).
6. Press in the straight pin (6).

Tools:

- Assembly aid
- Vice
- Punch 5 mm
- Punch 6 mm
- Torx T20

7. Fitting

Fitting the tool head



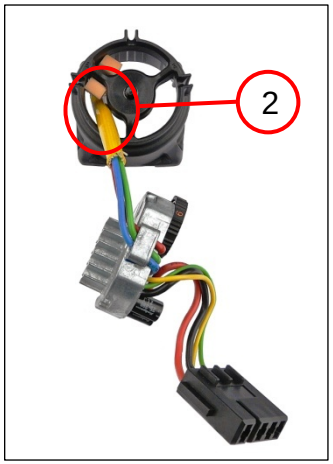
1. Fill the tool head with grease.
   ☞ Make sure that the inside of the yoke is well-greased.
2. Position the needle bearing (1).
3. Align the yoke (2) and the needle bearing so that they are central.
4. Position the rotor and check it works correctly.
5. Press in the rotor (3).

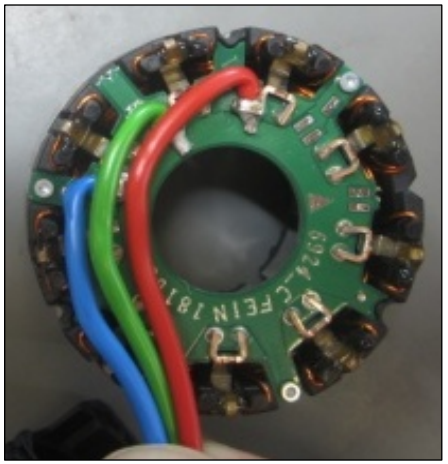
Tools:

- Arbor press
- Press-in fixture

7. Fitting

Fitting the tool head





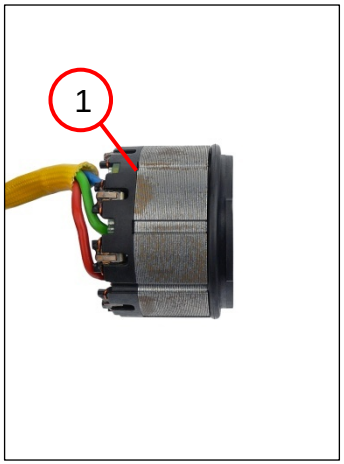
1. Place the pressure piece (1) in the correct position.
2. Push the cable (2) through the housing.
3. Solder the cables (3) as shown in connection diagram.
4. Bend the cables inwards.
   - ☞ Arrange the cables in the following order: Red, green and blue.
   - ☞ The cables should not protrude beyond the field coil.
5. Push on the protective hose as far as the connection for the blue cable.

Tools:

- Soldering station

7. Fitting

Fitting the tool head



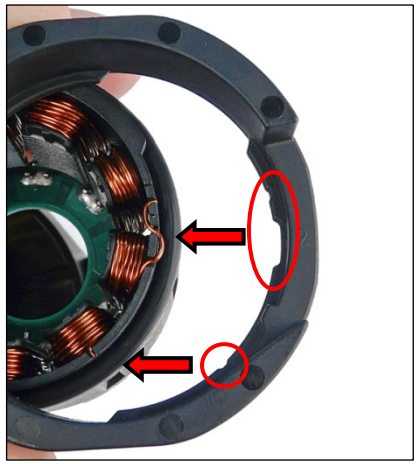
1. Coat the sealing ring (1) with oil.
2. Position the sealing ring (1).
   ☞ Replace the ring during each fitting.

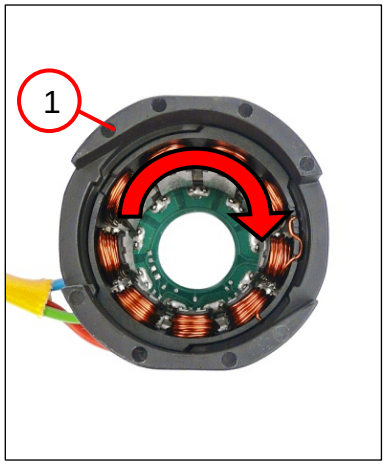
Tools:

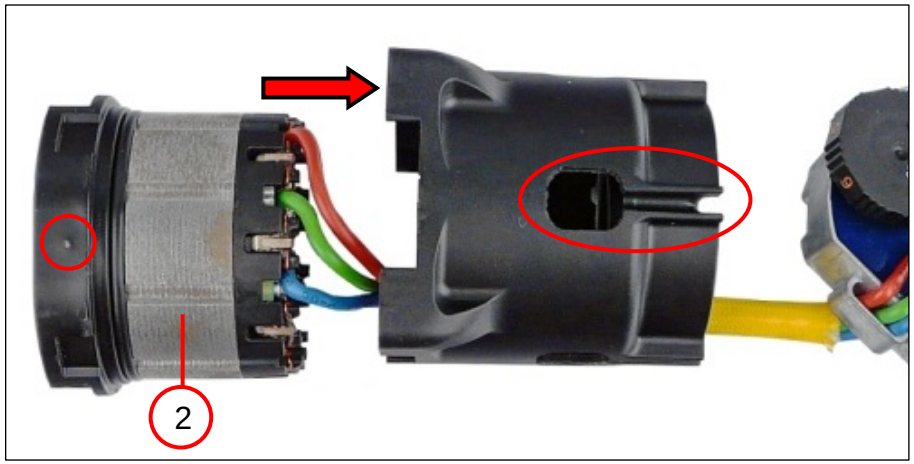
- Soldering station

7. Fitting

Fitting the tool head







1. Fit the air guide ring (1) in the correct position.
   ☞ Turn the air guide ring carefully clockwise up to the stop.
2. Fit the stator (2) in the correct position.
   ☞ Make sure that the cables are not tangled.

7. Fitting

Fitting the tool head

1. Position the disc (1).

Caution: Magnetic field!
Damage caused by metal foreign bodies on the rotor.
☞ Clean the rotor before the housing is fitted.

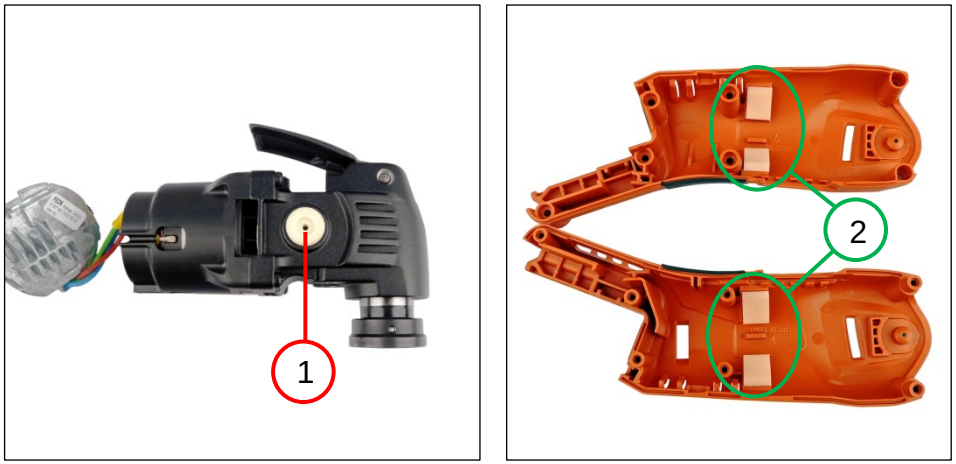
2. Push the housing (2) into the correct position on the tool head.
3. Turn the housing anticlockwise.
4. Screw in the four screws (3) [$4.0^{\pm 0.1}$ Nm].

Tools:

- Torx T20

7. Fitting

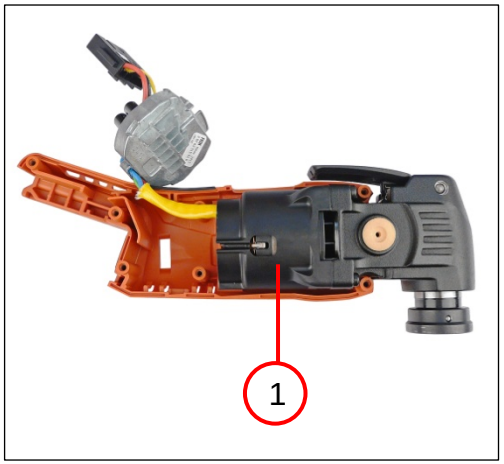
Fitting the tool head

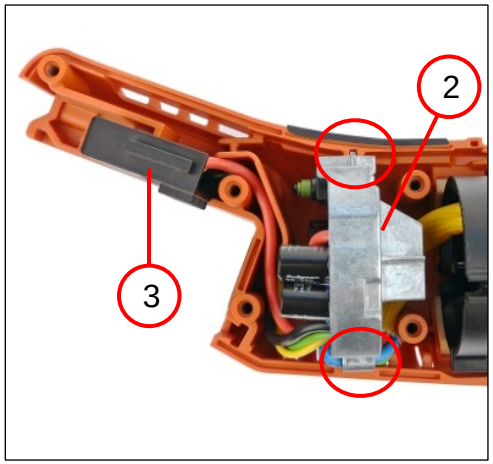


1. Position the pressure piece (1) [both sides].
2. Adhere the four pressure pieces (2) to the motor housing.
   ☞ Clean and remove the grease from the adhesive areas first.

7. Fitting

Fitting the tool head

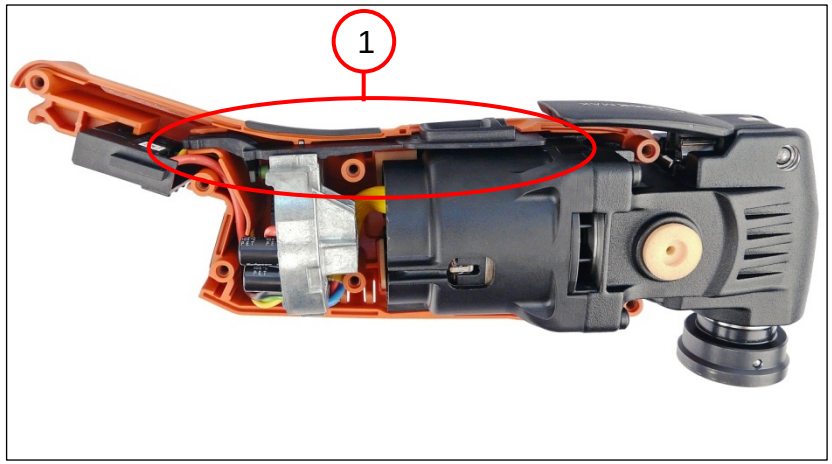




1. Insert the motor (1) with the tool head.
2. Insert the electronics (2).
3. Position the plug (3).

7. Fitting

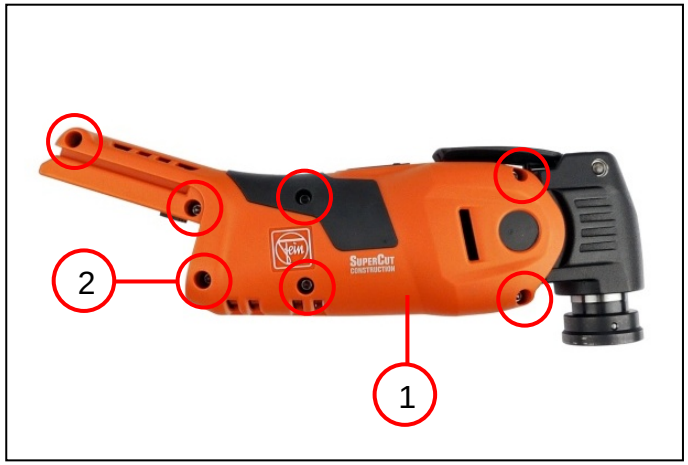
Fitting the tool head



1. Insert the slide switch (1).

7. Fitting

Fitting the tool head



1. Position the motor housing half (1).
2. Screw in the seven screws (2) [$1.5^{\pm 0.1}$ Nm].
3. Place the pressure piece (3) in the correct position.

Tools:

- Torx T15

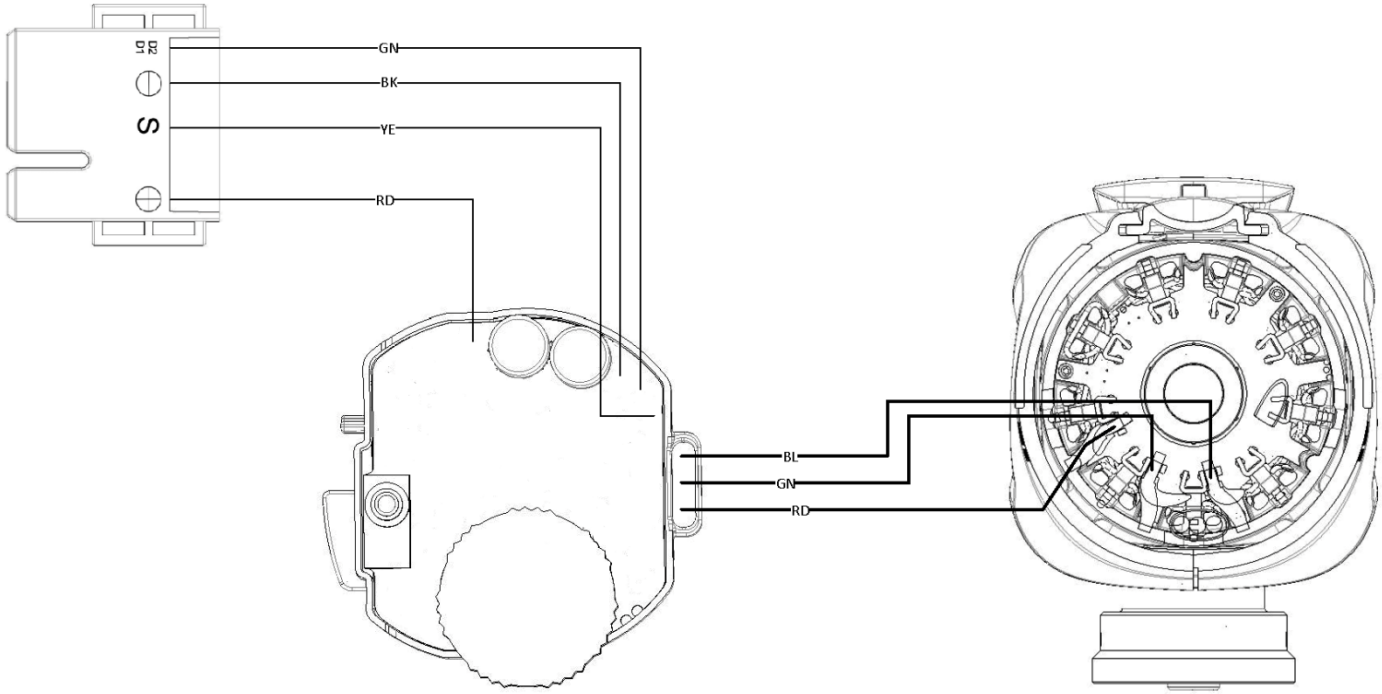
8. Troubleshooting

Currently unavailable

9. Connection diagram

Anschlussplan
Connection diagram
Esquemade conexiones
Schémade connexion
Схéма соединéний
接线图

7 129 17 – AFSC18Q / 18V
7 129 18 – AFSC1.7 / 18V
7 129 27 – AFSC18QSL / 18V
7 129 27 – AFSC18QSL / 18V
7 136 01 – AFSC18 / 18V
7 136 02 – AFSC18L / 18V



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21.06.2017