Repair instructions

ABLK 1.3E/TSE, 1.6E

Contents

1. Models described

These instructions describe how to repair the following models:

Model	Order no.
ABLK 1.3 TE	713203
ABLK 1.3 CSE	713202
ABLK 1.6 E	713201

2. Technical data

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

Test data
Up-to-date test data for all models can be found on the FEIN Extranet (Customer Service → Repair Guides).

Lubricants
Lubricants and container sizes available from FEIN can be found on the FEIN Extranet (Customer Service → Repair Guides).

Lists of spare parts
Lists of spare parts and exploded views are available online at www.fein.com

3 Provisions

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.

Only use original FEIN spare parts!

The relevant accident prevention regulations of the employers' liability insurance associations are to be observed when commissioning.

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

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

4. Tools required

Standard tools

Open-ended spanner WAF 30
Plastic hammer
Slotted screwdriver, Torx 15
Flat nose pliers
Long-nosed pliers
Circlip pliers
Punch
Arbor press
Cable hooks
Slide gauge
Feeler gauge
Hot air gun

Special tools

Drawing-off socket cap	6 41 04 150 00 8
Chuck cone 26 mm	6 41 07 026 00 0
Extractor tool	6 41 14 033 00 0
Press-in fixture	6 41 22 108 00 0

5. Lubricants and auxiliary substances required

Lubricants

Grease	0 40 108 0400 8	15 g	Gearbox, needle bearing, ball bearing
Grease	0 40 119 0500 7		Sliding surfaces of plunger, con rod, punch

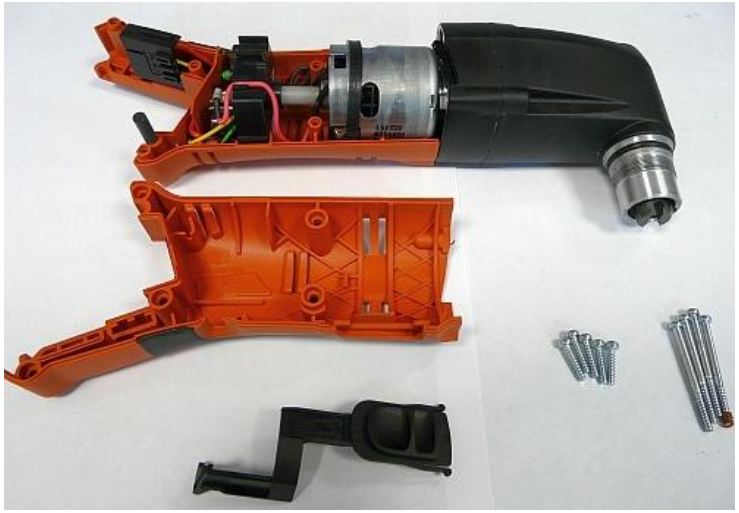
Auxiliary substances

Loctite 574	Between gearbox head and intermediate bearing

6. Disassembly - Preparation

1. Press releasing button and pull out battery.

6.1. Disassembly - Motor

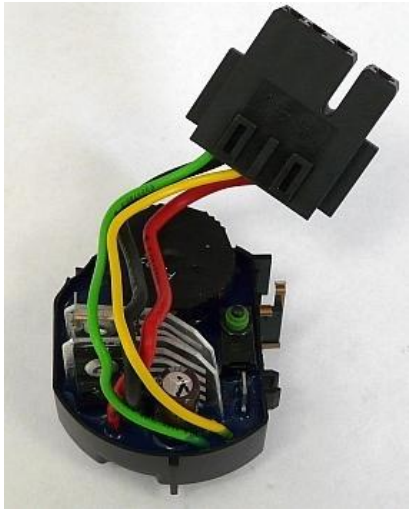


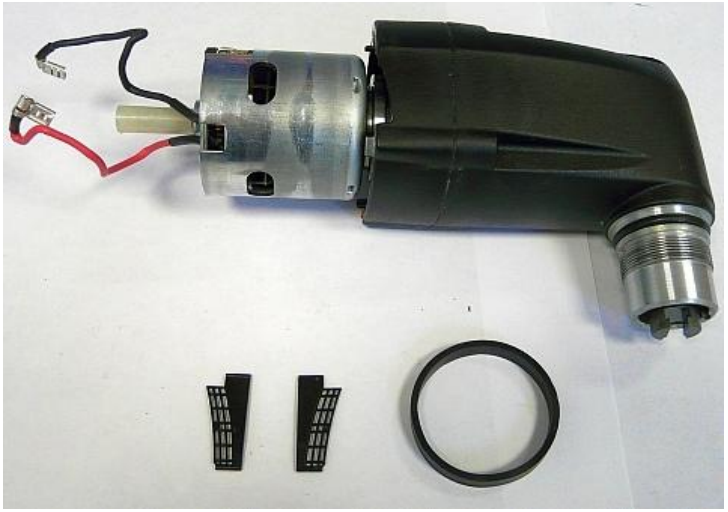
1. Remove screws from gearbox head.
2. Remove screws from motor housing.
3. Remove upper section of housing.
4. Remove control rod.
5. Remove electronics from lower section of housing together with motor and gearbox head.

Tool:

- Screwdriver
  Torx 15

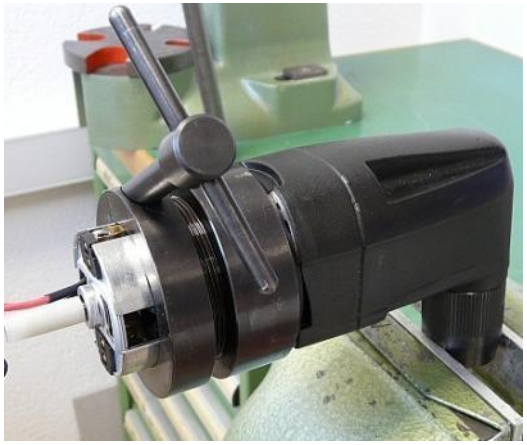
6.1. Disassembly - Motor





1. Pull off motor plug on electronics.
2. Take off rubber ring.
3. Remove protective grille.

6.2. Disassembly – Motor / gearbox



1. Heat intermediate bearing.
2. With extractor tool, separate motor from intermediate bearing.

NOTE
Heat intermediate bearing before separating from motor.

Tool:

-Extractor tool
6 41 14 033 00 0
-Hot air gun

6.2. Disassembly – Motor / gearbox

1. Pull intermediate bearing off gearbox head.
2. Remove intermediate gear shaft.
3. Remove sealing ring from intermediate bearing.

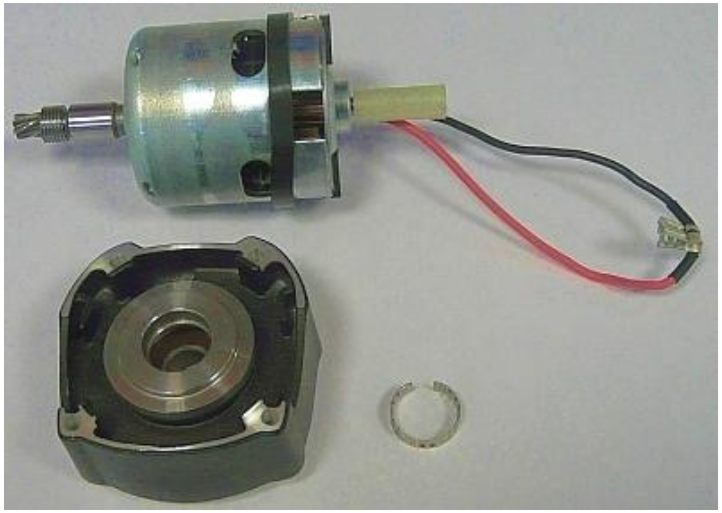
6.3. Disassembly – Motor

1. Pull ball bearing off motor.
2. Remove bearing bush and tolerance ring.

Tool:

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

6.3. Disassembly – Motor



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

6.4. Disassembly - Gear-wheel / eccentric shaft

1. Remove circlip, gear-wheel and feather key.
2. Remove circlip and drive eccentric shaft and drive out of gearbox housing by tapping gently with hammer.

Tool:

-Circlip pliers
- Plastic hammer

6.5. Disassembly - Gearbox housing / plunger (ABLK 1.3.TE/CSE)



1. Remove retainer nut with open-ended spanner (WAF 30).
2. Carefully remove plunger from gearbox housing.

Tool:

- Open-ended spanner, WAF 30

6.5. Disassembly - Plunger (ABLK 1.3TE/CSE)

1. Loosen retainer nut and remove cutting head with punch and plunger.
2. Remove plunger and punch from cutting head.

Tool:

- Screwdriver
- Punch

6.6. Disassembly - Gearbox housing / plunger (ABLK 1.6E)

1. Loosen retainer nut and remove cutting head with die and punch.
2. Take punch out of cutting head and remove from lower section of plunger.

Tool:

-Open-ended spanner WAF 30

6.6. Disassembly - Cutting head (ABLK 1.6E)

1. Remove screw (with O-ring).
2. Remove die from cutting head.

7. Assembly

7.1. Assembly - Complete plunger (ABLK 1.3.TE/CSE)



1.Connect upper and lower sections of plunger.
2.Connect punch to upper and lower sections of plunger.
3.Insert assembled plunger into die.
4.Coat sliding surface between punch and die with Molykote paste.

Grease:

- Tube 85g
  3 21 60 003 19 8

7.1. Assembly - Die and plunger / gearbox housing (ABLK 1.3 TE/CSE)

1. Insert fully assembled die into gearbox housing.
2. Fix die in place with retainer nut.

7.2. Assembly - Die / punch / gearbox housing (ABLK 1.6E)

1. Fit punch in lower section of plunger and insert in pre-fitted cutting head.
2. Slide retainer nut over cutting head and screw down to gearbox housing.

Tool:

- Open-ended spanner WAF 30

7.2. Assembly - Cutting head (ABLK 1.6E)



1. Insert die in cutting head - !!! Only fits in one position !!!
2. Fit screw (with O-ring) in cutting head.

Tool:

-Socket wrench
6 mm

7.3. Assembly - Eccentric shaft

1. Fit drive together with needle sleeve in plunger.
2. Insert eccentric shaft into gearbox housing.
   (Eccentric shaft must engage in drive)
3. Fit circlip.

Tool:

- Straight long-nosed pliers
- Circlip pliers

7.4. Assembly – Gear-wheel / intermediate gear

1. Fit feather key and gear-wheel on eccentric shaft and fit circlip.
2. Insert disc.
3. Fit intermediate gear shaft.

Tool:

- Flat nose pliers
- Circlip pliers

7.5. Assembly – Motor / intermediate bearing

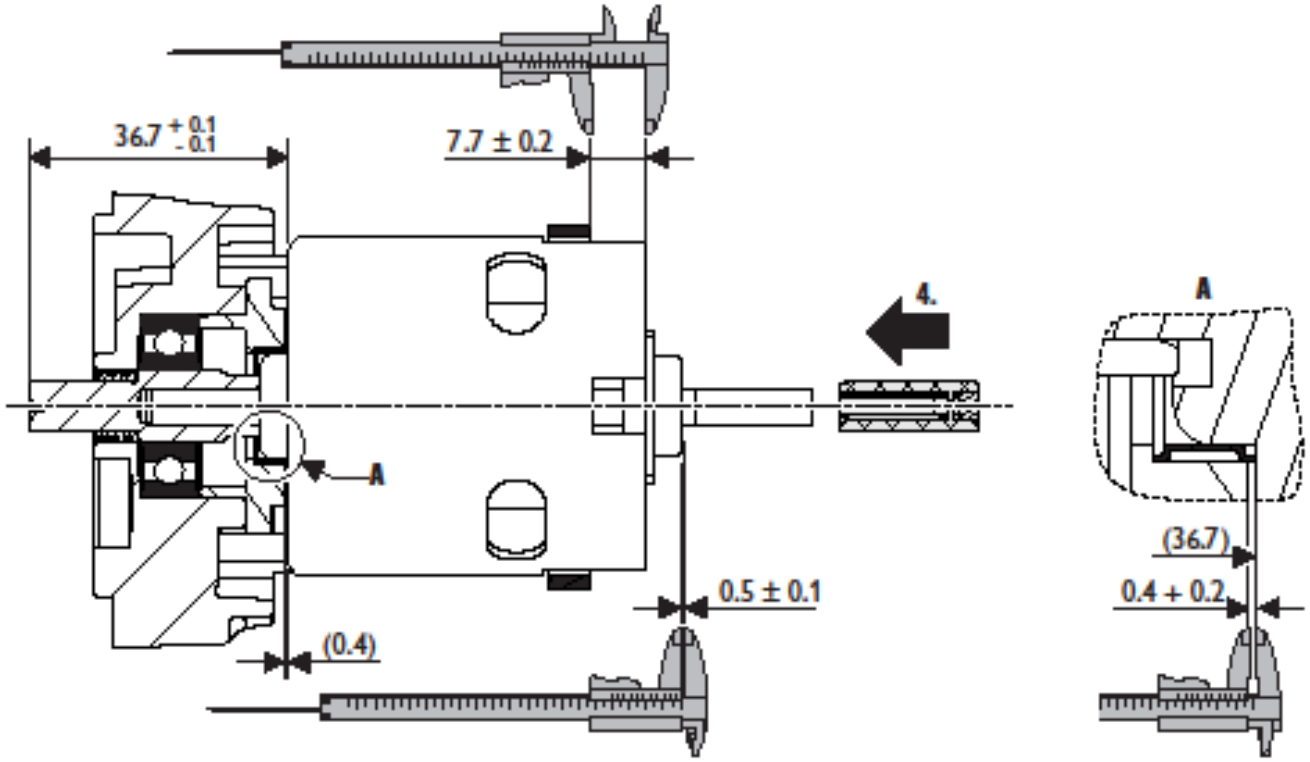
1. Fit tolerance ring in bearing bush.
2. Press motor true to size into intermediate bearing.
3. Press magnet true to size on to motor.

NOTE
Dimensions are shown in the drawing on the next page.

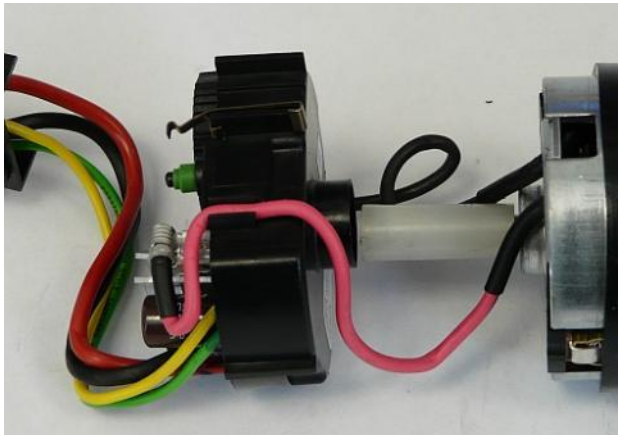
Tool:

- Screwdriver Torx 15
- Feeler gauge
- Press-in fixture 6 41 22 108 00 0

7.5. Assembly – Motor / intermediate bearing

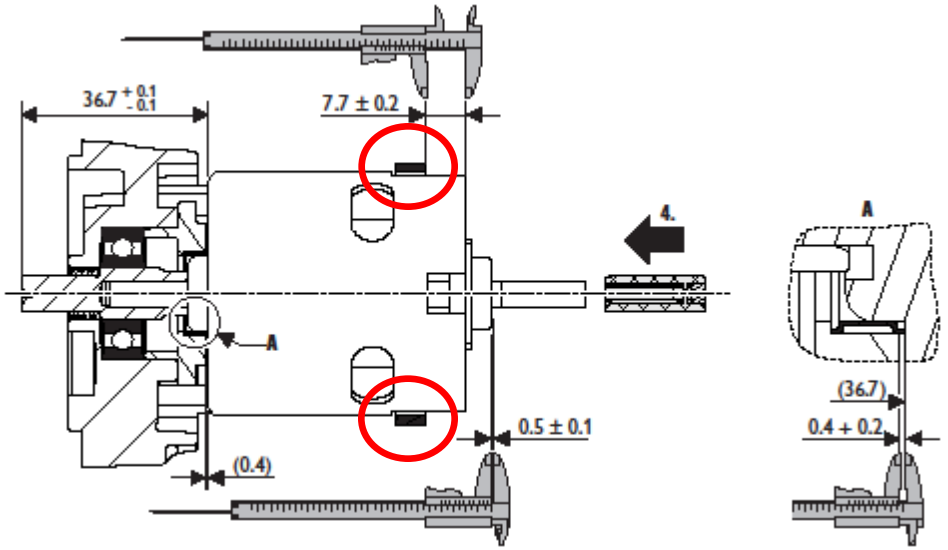


7.6. Assembly – Motor



1. Connect motor cable on electronics.

7.6. Assembly – Motor

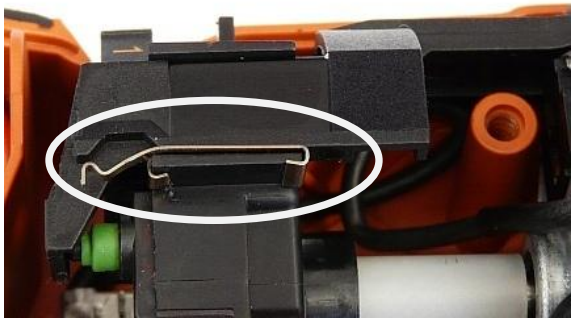


1. Check dimensional accuracy of rubber ring on motor.

Tool:

- Slide gauge

7.7. Assembly – Motor / motor housing



1. Insert the motor with the intermediate bearing into lower section of housing.
   Note correct cable routing.
2. Insert control rod.
   Ensure that control rod is under spring.

Tool:

- Cable hooks

7.8. Assembly – Motor / gearbox

1. Fit upper section of housing and screw in place.
2. Seal sealing surface between intermediate bearing and gearbox head with Loctite 574.
3. Please sealing ring on intermediate bearing.
4. Fit gearbox head on intermediate bearing and screw in place.
5. Fit holding down device.
6. Perform function check.

Tool:

-Torx 15 screwdriver
-Loctite 574

8 Connection diagram