

FEIN Repair Tools




ASW 9 - 10













FEIN Repair Tools



Technical data

		ASW 9-10	ASW 9-10	ASW 9-10
		7 112 08	7 112 09	7 112 00
U	V	9.6	9.6	9.6
n_0	/min	330	330	330
M	Nm	2-10	2-10	2-10
		1/4"	–	–
		–	1/4"	3/8"
	kg ^A	1.42	1.42	1.42
L_{WA}	dB	80	80	80
K_{WA}	dB	3	3	3
L_{pA}	dB	69	69	69
K_{pA}	dB	3	3	3
a	m/s^2	0.4	0.4	0.4
K_a	m/s^2	1.5	1.5	1.5

Symbol, character	Explanation
	Do not touch the rotating parts of the power tool.
	Be absolutely sure to read the enclosed documentation such as the Instruction Manual and the General Safety Instructions.
	Before commencing this working step, remove the battery from the power tool. Otherwise there is danger of injury if the power tool should start accidentally.
	Use eye-protection during operation.
	Use ear protection during operation.
CE	Confirms the conformity of the power tool with the directives of the European Community.
	Worn out power tools and other electrotechnical and electrical products should be sorted separately for environment-friendly recycling.
	Do not dispose of batteries in the household waste. Used batteries can be returned to FEIN for recycling.
\varnothing	Diameter of a round part
	Tool holder: Hexagon socket
	Tool holder: External square drive
	Weight according to EPTA-Procedure 01/2003

Character	Unit of measure, international	Unit of measure, national	Explanation
U	V	V	Electrical voltage
n_0	/min	rpm	No-load speed
M	Nm	Nm	Torque
$M...$	mm	mm	Size of metric thread
L_{WA}	dB	dB	Sound power level
L_{pA}	dB	dB	Sound pressure level
$K...$			Uncertainty
a	m/s^2	m/s^2	Acceleration
	m, s, kg, A, mm, V, W, Hz, N, °C, dB, /min, m/s ²	m, s, kg, A, mm, V, W, Hz, N, °C, dB, /min, m/s ²	Basic and derived units of measure from the international system of units SI.



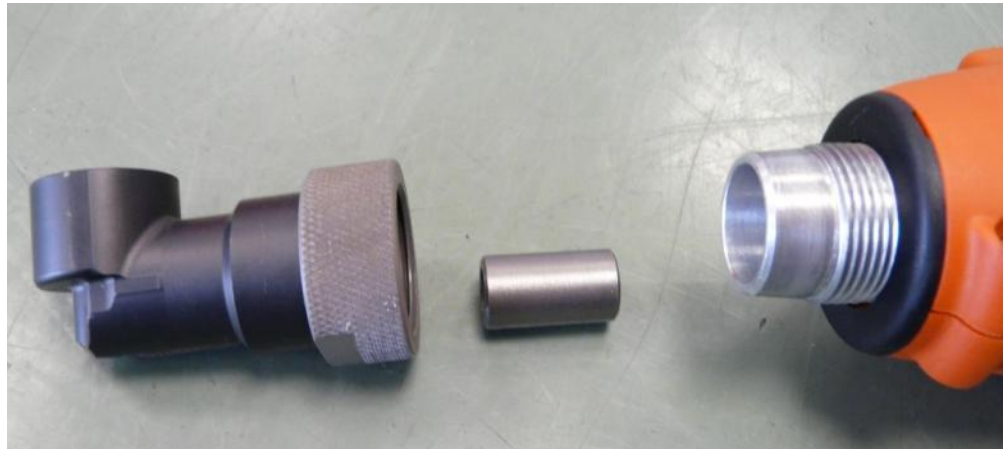
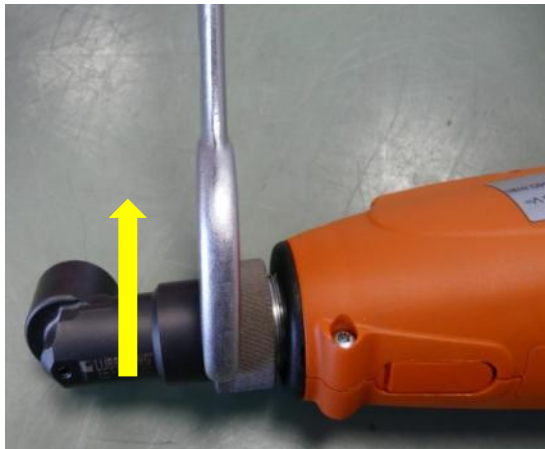
Table of contents

1. Removing and refitting the angled head
2. Disassembling the tool / motor housing
3. Disassembling the tool / clutch
4. Removing the clutch
5. Removing the circuit board
6. Removing the transmission
7. Removing the motor
8. Miscellaneous assembly information
9. Frequently used spare parts

FEIN Repair Tools



1. Removing the angled head



1. Use open-ended spanner (size 27) to remove retainer nut, then fully unscrew angled head
2. Remove angled head and take out drive

Tool:
- Size 27 open-ended spanner



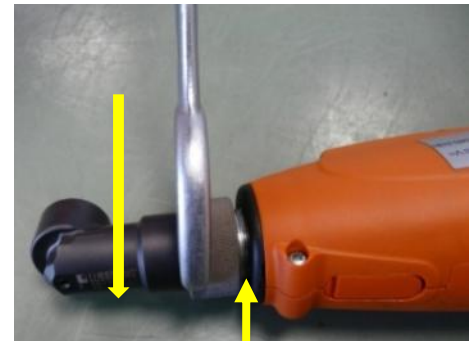
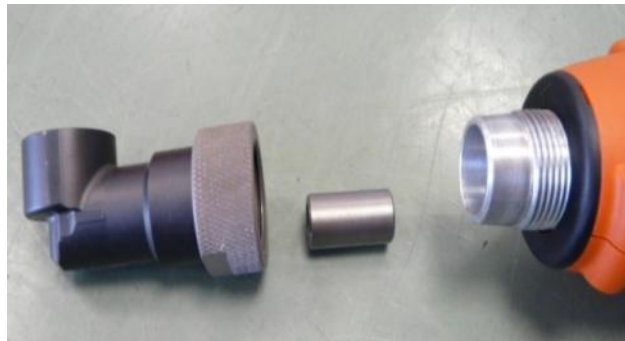
1. Refitting the angled head

When refitting the transmission head, always note:

1. Tighten the retainer nut by hand, as far as it will go, in the direction of the arrow
2. Fit the drive
3. Fully screw transmission head on to the tool as far as it will go. As the limit position is not necessarily the desired working position, you may have to move the transmission head into the correct position.

This is done as follows:

Move transmission head into desired position by rotating in opposite direction, loosen retainer nut and tighten hand-tight by rotating towards tool with open-ended spanner (size 27). There should be a small gap between the retainer nut and the tool housing.



Gap

FEIN Repair Tools



1. Refitting the angled head



Transmission head tightened as far as it will go



Transmission head moved into desired working position by rotating backwards – when the product leaves the factory the tool holder is always in line with the pushbuttons



2. Disassembling the tool / motor housing



1. Remove coding ring
2. Loosen screws
3. Lift off top part of motor housing

Tool:

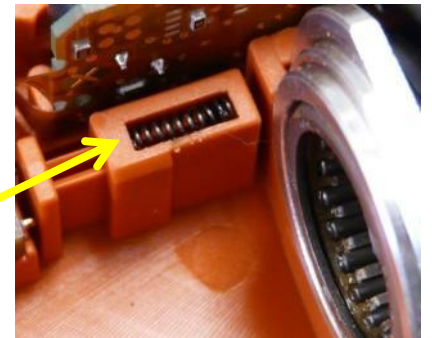
- Slotted screwdriver
- Cross-tip screwdriver PZ 1



3. Disassembling the tool / clutch



1. Carefully take out the electronic strip, being careful not to bend it
2. Use a screwdriver to lift up the clutch
3. Use pliers to remove the slide switch. Please note: Under the slide switch is a small spring. This is important to the function of the tool - don't lose it!!!!!!



Tool:

- Slotted screwdriver
- Pliers



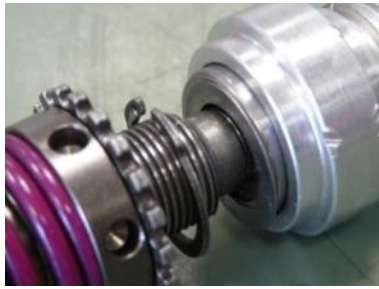
3. Disassembling the tool / clutch



1. Lift out the clutch



4. Removing the clutch



1. Remove the circlip
2. Lift the head out of the flange
3. Remove circlip at the bearing – to reassemble, always use a new circlip!!!!
4. Remove spacers, ball bearing and circlip
5. Fully unscrew adjusting ring – release the spring

Tool:

- Internal circlip pliers
- External circlip pliers
- Square special spanner
(supplied as standard with tool)



4. Removing the clutch



Before you can remove the circlip from the aluminium flange, you must release the spring with the adjusting ring up to its limit position. This will create enough space for you to reach the circlip with a pair of circlip pliers. However, a pair of standard circlip pliers must be ground down (picture on right).

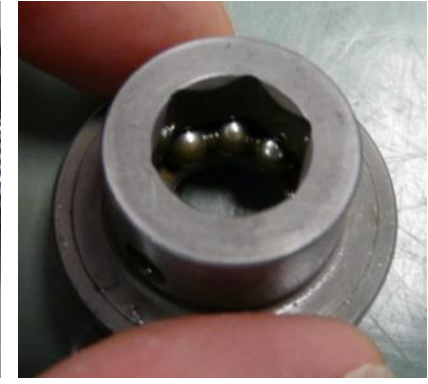
4. Removing the clutch



1. Remove adjusting ring, thrust ring and pressure spring from head
2. Lift thrust ring and remove the 3 outer balls and 6 inner balls (Ø 5 mm)



4. Removing the clutch

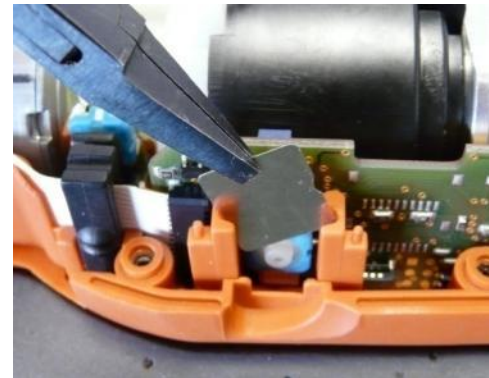
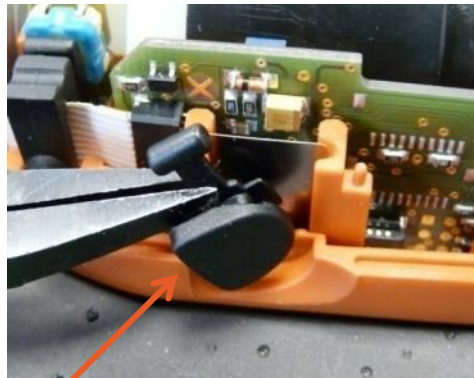


1. Remove balls from the cam ring through the hole (9 x Ø 4 mm) – this is easier if you remove the grease from the cam ring first. You must remove at least 6 balls through the hole before you can remove the cam ring with the other 3 balls





5. Removing the circuit board



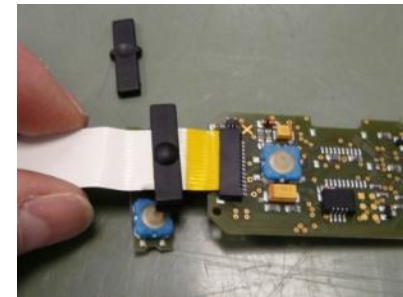
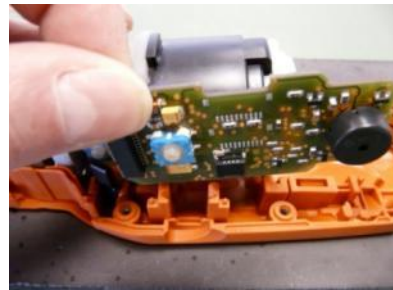
1. Remove both pushbuttons
2. Remove the leaf spring

Tool:

- Flat nose pliers



5. Removing the circuit board



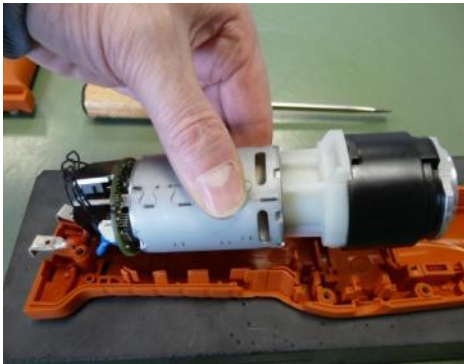
1. Remove ribbon cable from the connector on the motor circuit board
2. Remove circuit board and ribbon cable from the motor housing –
!!! Important – this is only possible when the motor and transmission are raised, as some components on the circuit board are located under the transmission when assembled !!!
3. Pull ribbon cable out of connector on circuit board

Tool:

- Flat nose pliers may be required



6. Removing the transmission



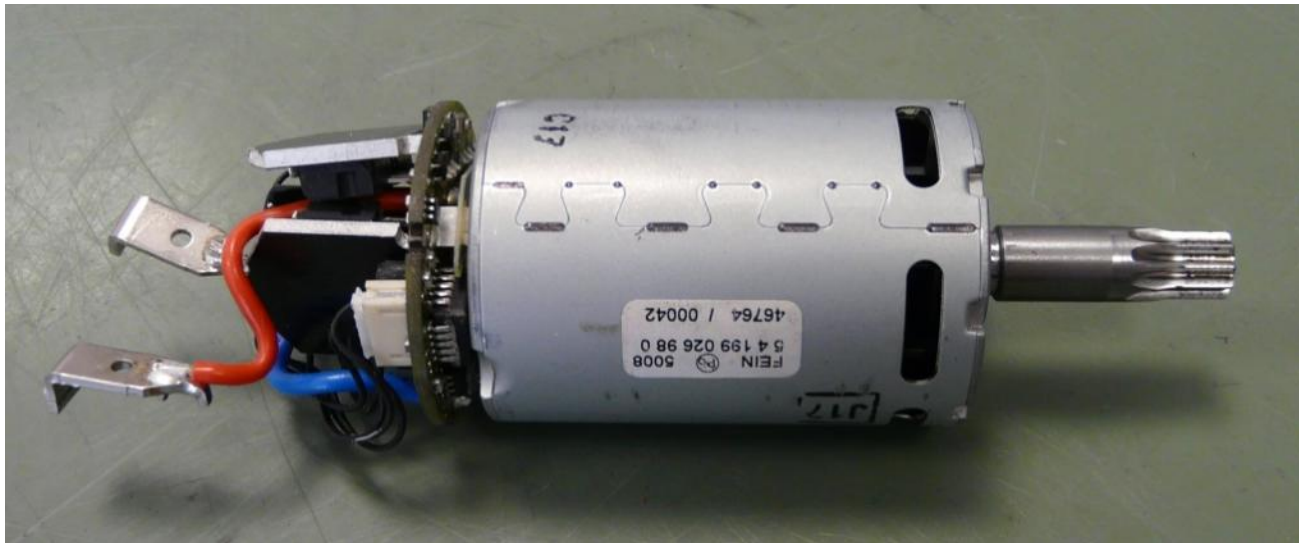
1. Remove the motor/transmission unit from the motor housing
2. Remove the planetary gears – remember the flange is part of the transmission and must be replaced when the transmission is replaced (supplied along with new transmission)
3. Remove the needle bearing and bush

Tool:

- Torx 10 screwdriver



7. Removing the motor

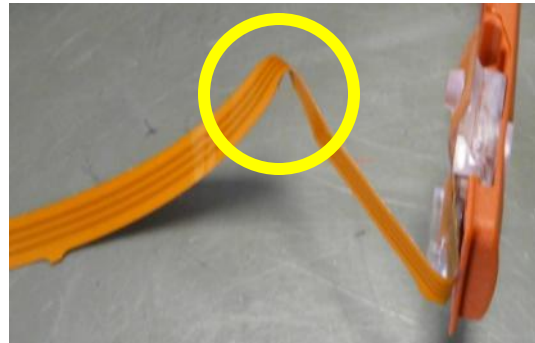
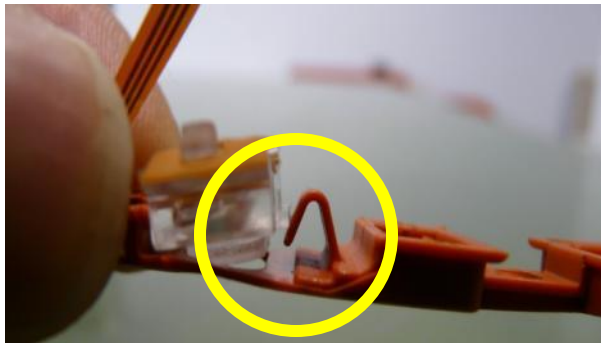


The motor is only available as a complete spare part including the electronics



8. Miscellaneous assembly information

Fitting the electronic strip

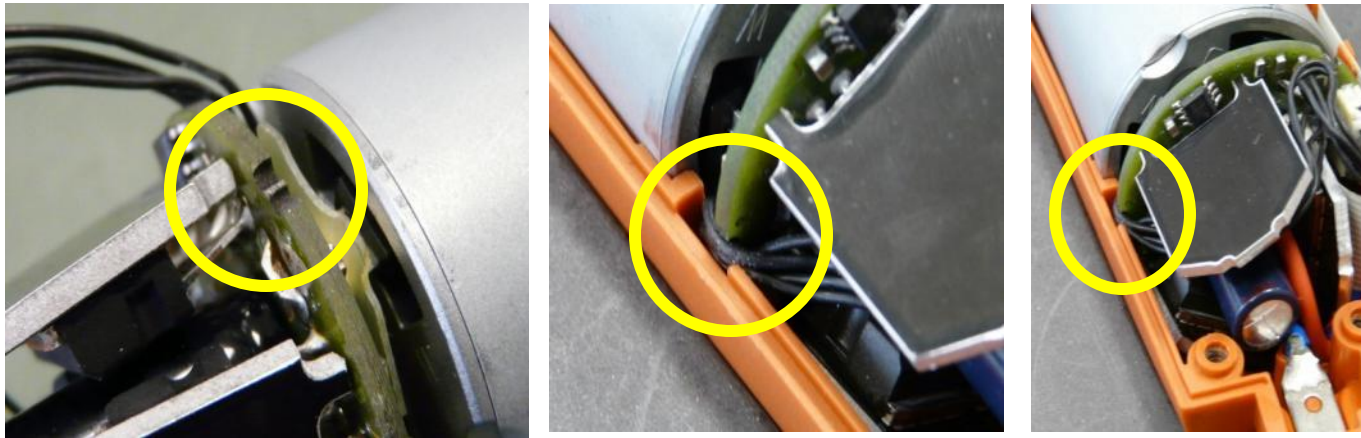


If the electronic strip and LEDs need to be replaced, first remove the defective electronic strip from the holder. To do this, carefully bend back the plastic hook and remove the display unit (left). Then insert the new display unit into the holder. The electronic strip is bent (centre) in order to insert it correctly into the tool. When fitting, make sure the bend is not too sharp as this could break the contacts (right)



8. Miscellaneous assembly information

Fitting the motor and electronics



On the side edge of the motor electronics are two small cut-outs for laying the black cables for the Hall sensors (left).

As there is very little room between the electronics and the housing wall, the cables must be laid very precisely in the cut-outs (centre and right).

If the cables are damaged when you insert them or when you refit the top part of the housing, the tool will not work correctly or may not work at all (Hall sensors).

8. Miscellaneous assembly information

Fitting the torque shut-off lever



Under the torque shut-off lever is a small spring.

To move the lever back into its original position, the spring must sit between the rear projection of the lever and the housing wall. To do this, push the spring back with a small screwdriver. Then insert the lever and push down with two fingers, as the spring will try to push the lever back out again. As you insert the clutch the lever must be constantly held down with one finger to prevent it jumping out and avoid losing the spring.



9. Frequently used spare parts

Motor plus electronics assembly	5 4 199 026 990
Transmission	3 01 09 174 030
Electronics assembly	3 07 62 370 990
LED electronic strip	3 07 62 377 020
Connecting cable	3 07 19 666 000