



## REPAIR INSTRUCTIONS

**Cat. No. 5337-20**  
3/4" Hex Demolition Hammer

**Cat. No. 5340-20**  
2" Spline Rotary Hammer



**MILWAUKEE ELECTRIC TOOL CORPORATION**

13135 W. LISBON ROAD • BROOKFIELD, WISCONSIN 53005-2550

58-92-5300 d3

032005

**Special Tools  
Require**

- Forcing discs
- Hex key 4 mm
- Hex key 5 mm
- Sleeve
- Pin-type face spanner

61-10-0011

61-10-0013

61-10-0012



61-10-0011



61-10-0012

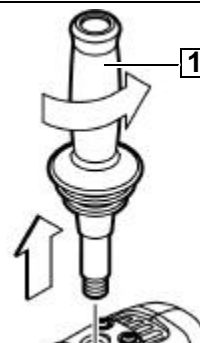


61-10-0013

## Disassembly

**Removing the  
auxiliary handle**

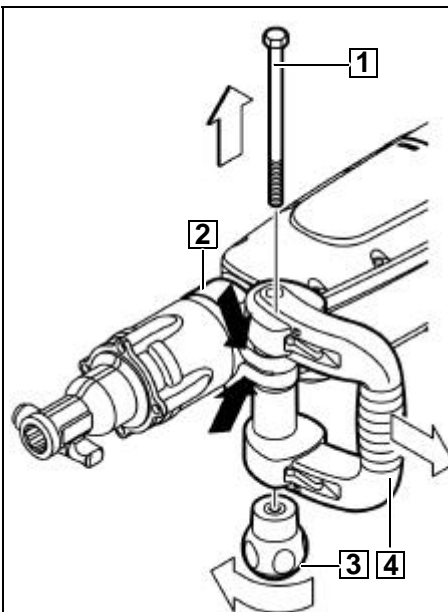
- 1** Remove handle (1) by turning it counter-clockwise.



**1**

**Disassembling  
the handle**

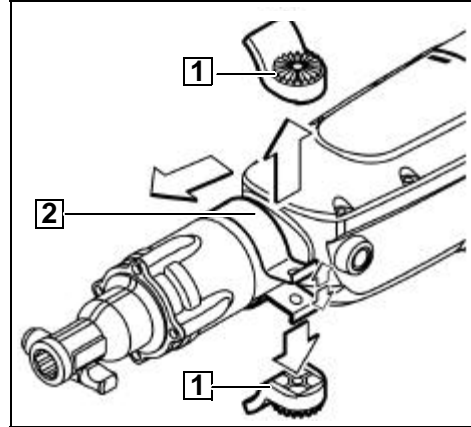
- 1** Unscrew knob (3) and remove screw (1).
- 2** Press spring ring (2) in direction of arrows and remove handle (4).



**2**

**Removing the  
spring ring**

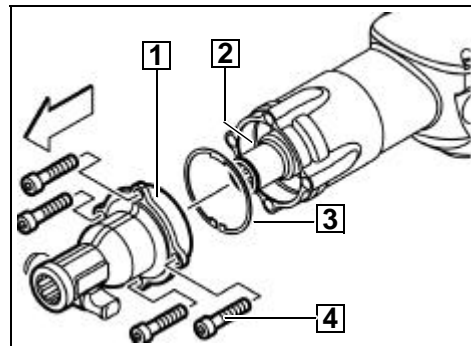
- 1** Remove both retainers (1).
- 2** Slightly spread spring ring (2) and pull it off the machine towards the front.



**3**


**Removing the  
nose piece as-  
sembly**

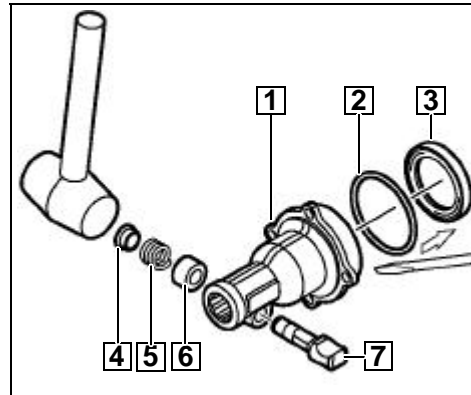
- 1** Remove four screws (4) with an 6mm hex key and remove nose piece assembly (1).
- 2** Remove retaining ring (3) from gear box (2).



**4**

**Disassembling  
the nose piece  
assembly**

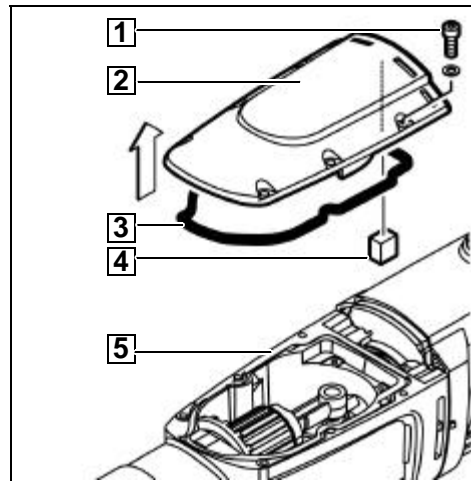
- 1** Drive/press out latch bar (7) and remove the following parts:
    - latch (4)
    - spring (5)
    - sleeve (6).
  - 2** Pry off seal ring (3) and the O-ring (2) from nose piece (1) with a screwdriver.
-  Drive out nose piece latch bar with 3/8" (10mm) piece of round bar stock.



**5**

**Disassembling  
the gear box cov-  
er**


- 1** Remove six 4mm hex screws (1) with washers from gear box cover (2).
- 2** Remove felt (4) from gear box cover.
- 3** Remove gasket (3) from groove of the gear box (5).

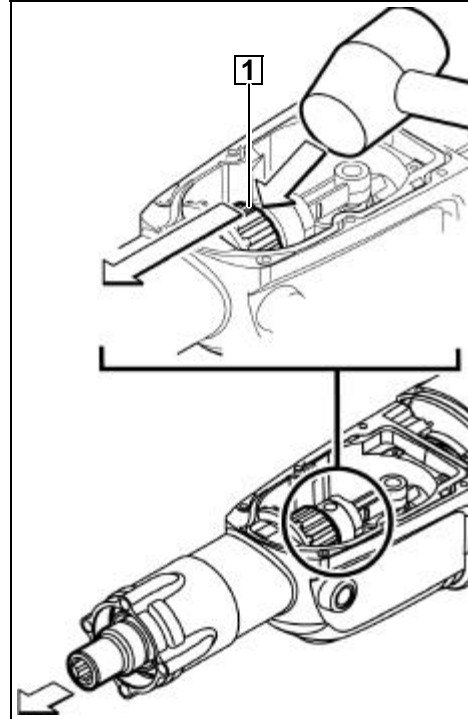


**6**

**Combined  
drill/chisel  
hammer:**

**Removing  
the spindle**


- 1 Drive out the complete spindle assembly with light taps on rear spindle spline end (1) with a plastic face hammer.
-  Tap spline area of spindle assembly, do not strike piston assembly.

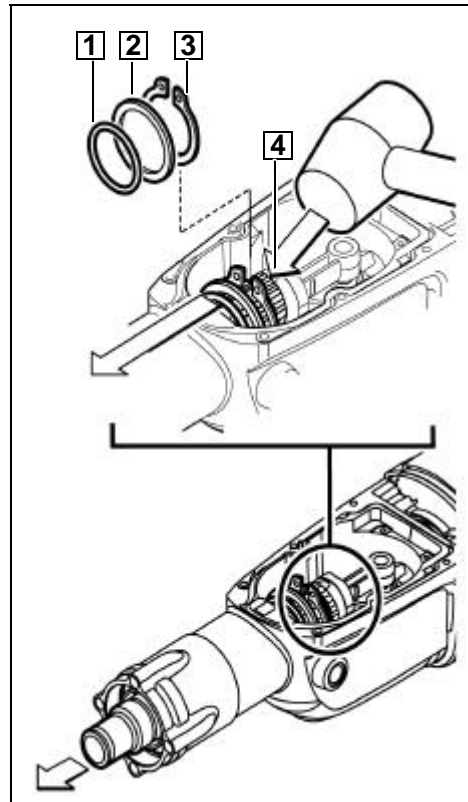


7

**Chisel  
hammer:**

**Removing  
the spindle**

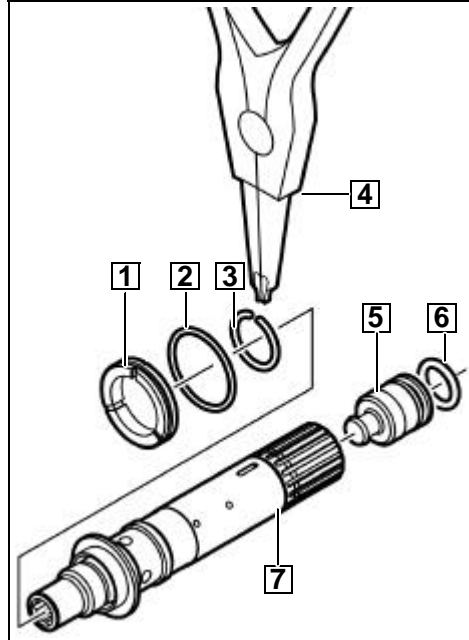
- 1 Remove retaining ring (3) with retaining ring pliers from the spindle groove.
- 2 Drive out the complete spindle assembly with light taps on the rear spindle end (4) with a plastic face hammer.
- 3 Remove retaining ring (3), washer (2) and O-ring (1) from gear box.
-  Tap spline area of spindle assembly, do not strike piston assembly.



7

**Disassembling  
the spindle**


- 1 Remove thrust collar (1) from spindle (7).  
Remove O-ring (2) from thrust collar (1).
- 2 Drive out ram (5) from spindle (7) by tapping it lightly with a plastic face hammer. Remove O-ring (6) from ram body (5).
- 3 Remove retaining ring (3) from spindle (7).

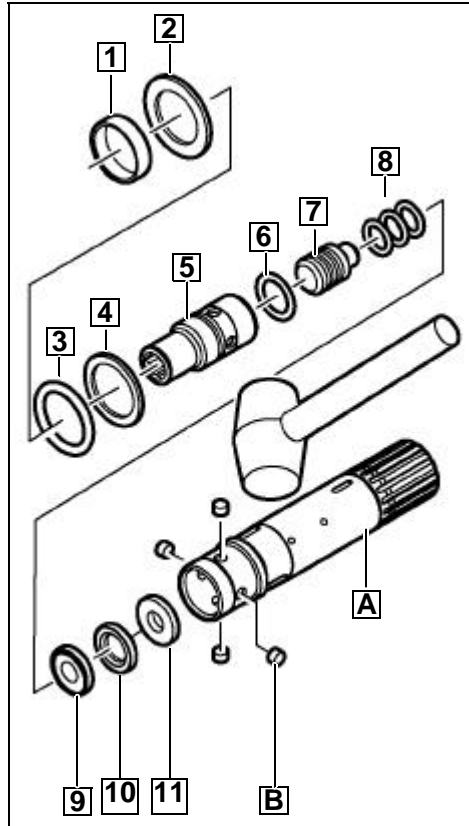


8

**Disassembling  
the spindle**

- 1 Remove following parts from spindle (A):
  - roller race (1)
  - washer (.154 thick) (2)
  - spindle sleeve o-ring (3)
  - attachment washer (.118 thick) (4).
- 2 Remove four rollers (B) with a magnetic screwdriver from spindle (A).
 

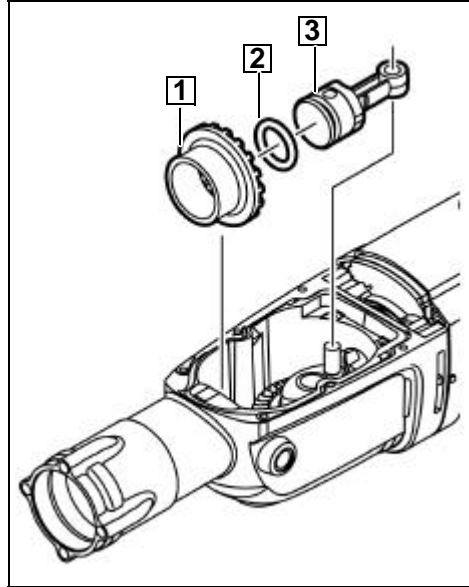
 Should rollers (B) be stuck, tap around them with light blows with a plastic face hammer to help expel them.
- 3 **Combined drill/chisel hammer:** pull striker guide (5) (with hexagon socket) from spindle (A).  
**Chisel hammer:** remove striker guide (5) (without hexagon socket) from spindle (A).
- 4 Remove the following parts from striker guide (5):
  - striker (7)
  - O-ring (6).
 Remove three O-rings (8) from striker (7).
- 5 Remove thrust collar (9), back pressure o-ring (10) and thrust washer (11) from spindle (A).



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**Removing the piston assembly**

- 1** Bring piston (3) into the upper dead center position and remove it from gear. Remove O-ring (2) from piston (3).
- 2 Combined drill/chisel hammer:** Additionally remove spindle bevel gear (1).

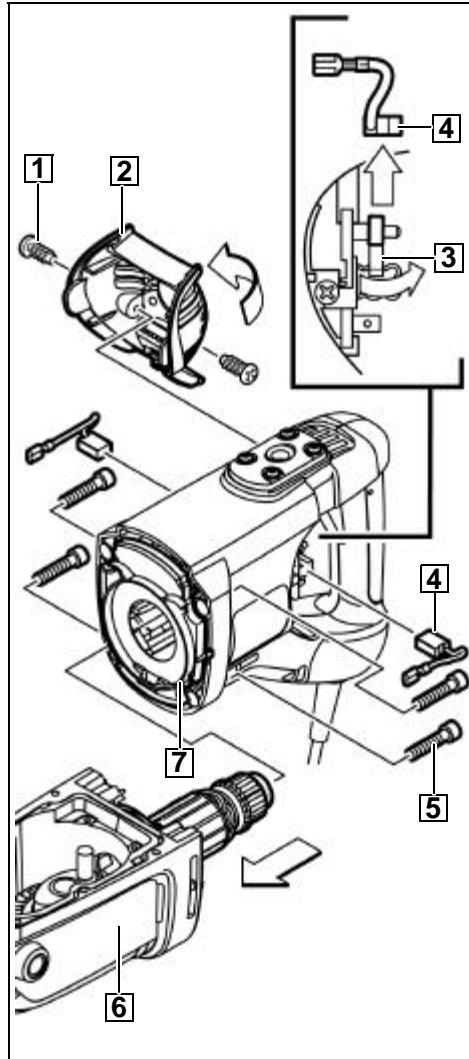


**10**

**Disassembling the motor housing**


- 1** Remove two screws (1) from service cover (2) and pull out service cover (2) in direction of arrow.
- 2** Lift springs (3) on both sides of carbon brush cover and pull carbon brush out (4). Remove carbon brush lead.
- 3** Remove four hex head screws (5) from the motor housing.
- 4** Remove air deflecting ring (7) from motor housing.
- 5** Pull gear box (6) with armature from motor housing.

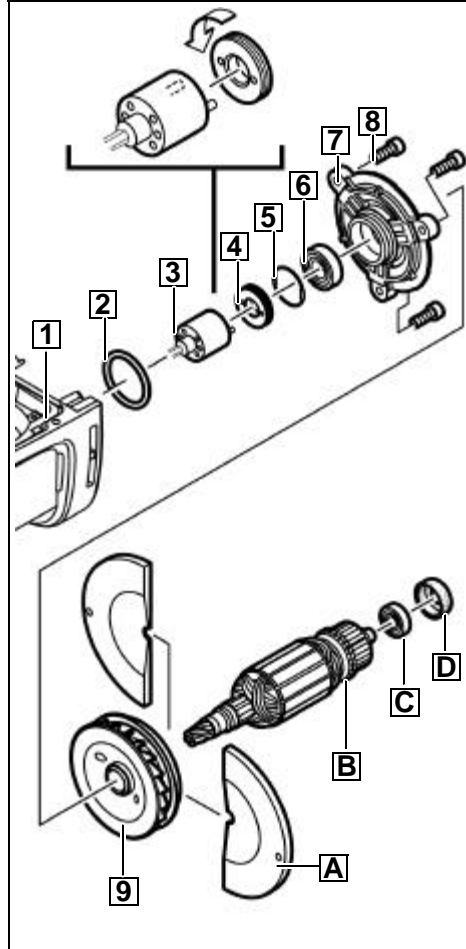
**Note:** Carbon brush set consists of two brushes, one brush has a secondary lead incorporated into it. This lead must be disconnected from the electronic module at this time.



**11**




**Disassembling the armature**

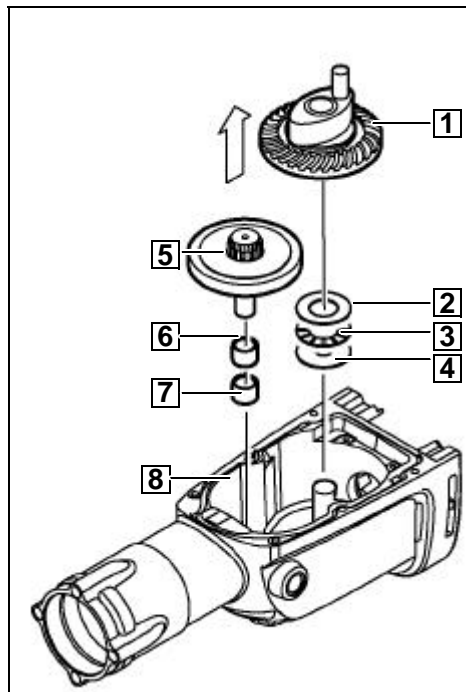
- 1** Remove three hex head screws (8) from bearing end plate (7) and pull complete armature assembly (B) with bearing end plate (7) from gear box (1).
  - 2** Remove o-ring (2) from gear box (1).
  - 3** Insert pin-type face spanner (service tool 61-10-0012) (3) into seal nut (4) and remove seal nut (4) counter-clockwise. Remove bearing end plate (7) from armature assembly.
  - 4** Remove retaining ring (5) from bearing end plate (7) and press out bearing (6).
  - 5** Separate fan (9) from armature (B) with forcing discs (A).
  - 6** Remove bearing cup (D) and press off bearing (C).
-  If armature fan requires removal, use service fixture 61-10-0011 as illustrated, (follow fan reassembly procedure).



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**Removing the crank wheel**


- 1** Remove following parts from gear box (8):
    - crank wheel (1)
    - thrust washer (2)
    - thrust bearing (3)
    - thrust washer (4).
  - 2 Combined drill/chisel hammer:**  
Additionally remove clutch (5) from gear box (8). Remove needle bearings (6) and (7) from gear box (8).
-  The **chisel hammer** does not have a clutch (5) and needle bearings (6) and (7)!
-  Needle bearings (6) and (7) are caged bearings. To remove, just lift out of gear box. Care should be taken not to damage bearings when servicing the machine.
-  **Do not** wash clutch gear assembly (5). (Wipe off with a clean dry rag **ONLY**).

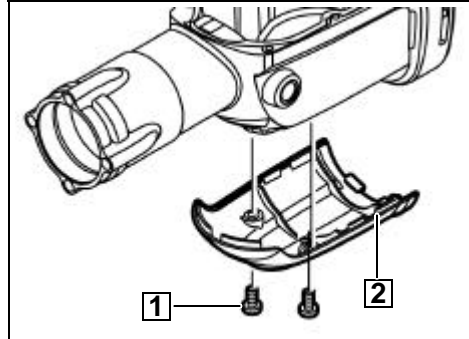


13

**Removing the gear cover**

- 1 Remove two screws (1) and remove gear cover (2).

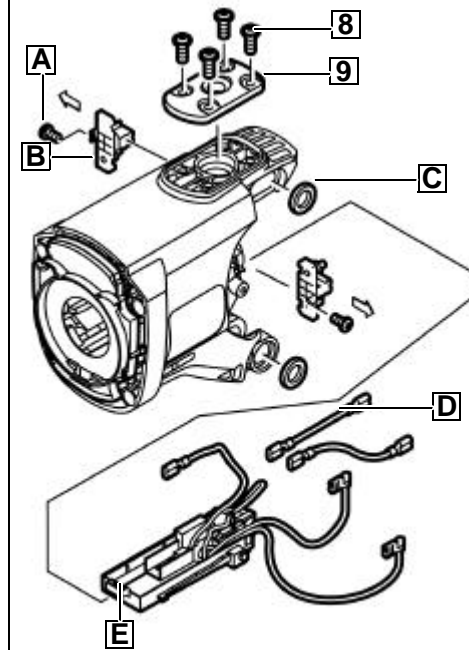
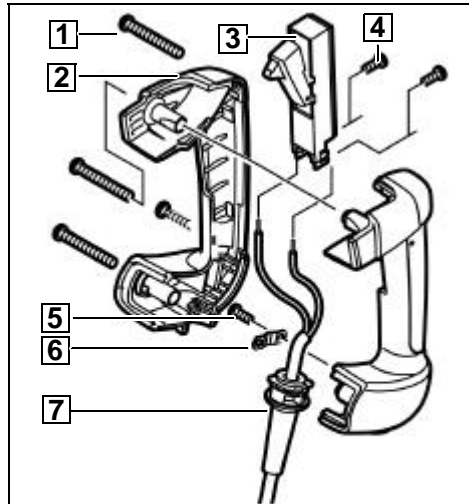
 The exposed plane surface serves only for manufacturing the gear box and has no other function!



14

**Disassembling the electronic component**

- 1 Remove four screws (1) from handle and remove handle half (2).
- 2 To remove cord leads, remove two screws (4) from the switch.
- 3 Remove screws (5) from cord clamp (6) and remove cord (7).
- 4 Remove the following parts:
  - four O-rings (C)
  - two wires (D)
  - two screws (A)
  - two carbon brush holders (B)
  - electronic part (E)
  - four screws (8)
  - side handle plate (9)




15




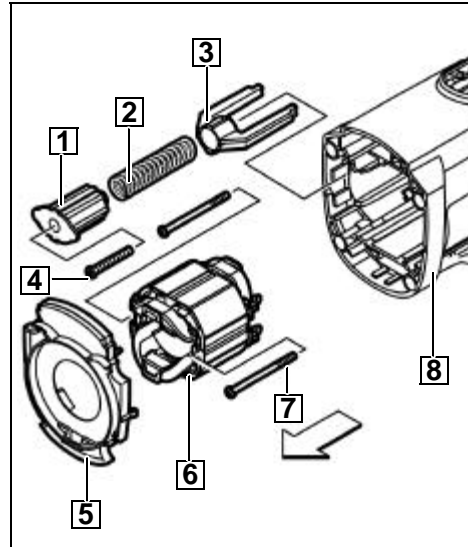
**Removing the  
anti-vibration  
mechanism  
and the field**

- 1** Remove air deflector ring (5).
- 2** Remove screw (4). Remove the following parts of the anti-vibration mechanism from motor housing (8):
  - vibration spring cover (1)
  - spring (2)
  - vibration lever (3).

 **Caution:** Screw (4) and vibration spring cover (1) are under spring pressure.

- 3** Remove two screws (7) and remove field (6) from motor housing (8).

 Should the field be stuck, tap the motor housing (8) lightly with a plastic face hammer.



## Maintenance

<b>General</b>	It is recommended that maintenance be performed on the machine at regular intervals or when the carbon brushes reach end of life.
<b>Cleaning</b>	Clean all parts – with the exception of the electrical parts and clutch with cold cleaning agent. Caution! No cleaning agent should penetrate into the bearing. Clean the electrical parts with a dry brush.
<b>Check for wear</b>	Check disassembled parts for wear (visual inspection) and replace worn parts.
<b>Electrical tests</b>	Before reassembling, perform an electrical test on all relevant parts. Refer to the electrical instructions in the Repair Instructions-General Notes, No. 58-92-0001.
<b>Lubrication</b>	Each time maintenance is performed, the machine is to be lubricated as stated in the lubrication notes. After the machine is fully disassembled, completely remove the old grease and replace with new grease. The grease must be applied to the machine as indicated in the lubrication notes. Refer to the current service parts list for all components in service maintenance kit.

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**Maintenance Kit No. 14-46-0041 contains three (3) different greases:**

Type 'P' grease (2 - 100g tubes)

Type 'L' bit grease (1 - 20g tube)

Type 'Q' grease (1 - 45g tube)

**OR**

Type 'P' grease (2 - 100g tubes)

Type 'L' bit grease (1 - 20g tube)

Type 'Q2' grease (1 - 45g tube)

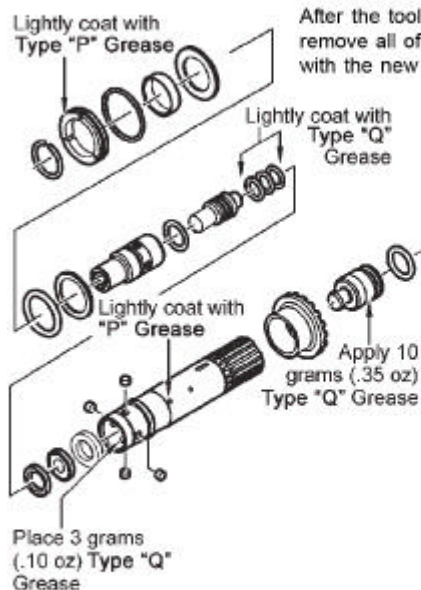
Check your maintenance kit and determine if there is 'Q' or Q2" grease and follow the instructions for the tool that you have located on pages 11 and 12.

## Lubrication: Combined drill/chisel hammer (5340-20)

### MAINTENANCE KIT CONTAINING "Q" GREASE, FOLLOW THESE INSTRUCTIONS

#### LUBRICATION NOTES:

Lubrication of this tool should be performed at regular intervals or when the carbon brushes switch off at the latest.

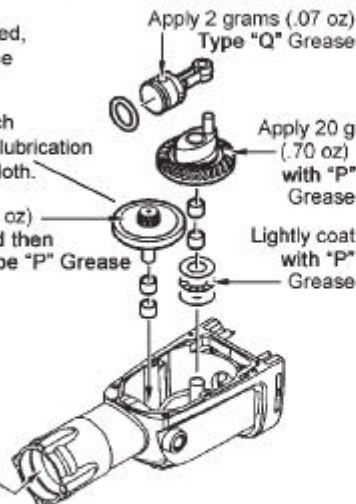


After the tool is completely disassembled, remove all of the old grease and replace with the new grease as indicated.

Do not wash-up clutch assembly. Wipe old lubrication off with a clean, dry cloth.

Place 30 grams (1.25 oz) Type "Q" Grease and then 80 grams (2.8 oz) Type "P" Grease

Place 50 grams (1.75 oz) Type "P" Grease



#### LUBRICATION CHART

LUBRICATION DESCRIPTION	CATALOG NUMBER	QTY. NEEDED
◆ Type "P" Grease (100 g tube)	49-08-5350	2
◆ Type "Q" Grease (45 g tube)	49-08-4255	1
◆ Type "L" Bit Grease (20 g tube)	49-08-5383	1

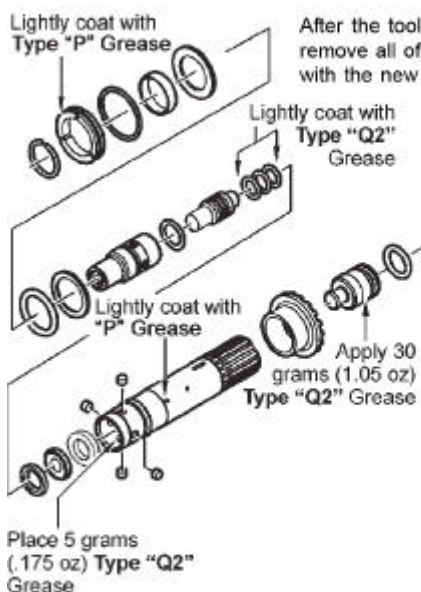
Approximately 150 grams (5.3 oz) of Type "P" Grease and 45 grams (1.75 oz) of Type "Q" Grease will be needed in total.

◆=Component of the 14-46-0041 Maintenance Set.

### MAINTENANCE KIT CONTAINING "Q2" GREASE, FOLLOW THESE INSTRUCTIONS

#### LUBRICATION NOTES:

Lubrication of this tool should be performed at regular intervals or when the carbon brushes switch off at the latest.

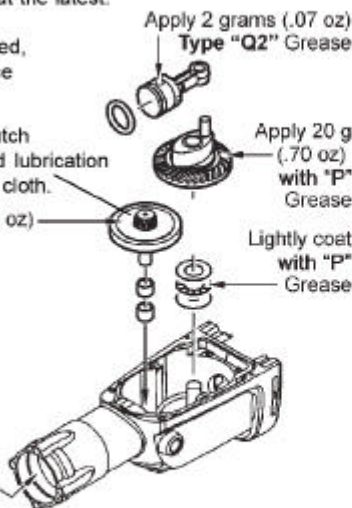


After the tool is completely disassembled, remove all of the old grease and replace with the new grease as indicated.

Do not wash-up clutch assembly. Wipe old lubrication off with a clean, dry cloth.

Place 80 grams (2.8 oz) Type "P" Grease

Place 50 grams (1.75 oz) Type "P" Grease



#### LUBRICATION CHART

LUBRICATION DESCRIPTION	CATALOG NUMBER	QTY. NEEDED
◆ Type "P" Grease (100 g tube)	49-08-5350	2
◆ Type "Q2" Grease (45 g tube)	49-08-5345	1
◆ Type "L" Bit Grease (20 g tube)	49-08-5383	1

Approximately 150 grams (5.3 oz) of Type "P" Grease and 37 grams (1.32 oz) of Type "Q2" Grease will be needed in total.

◆=Component of the 14-46-0041 Maintenance Set.

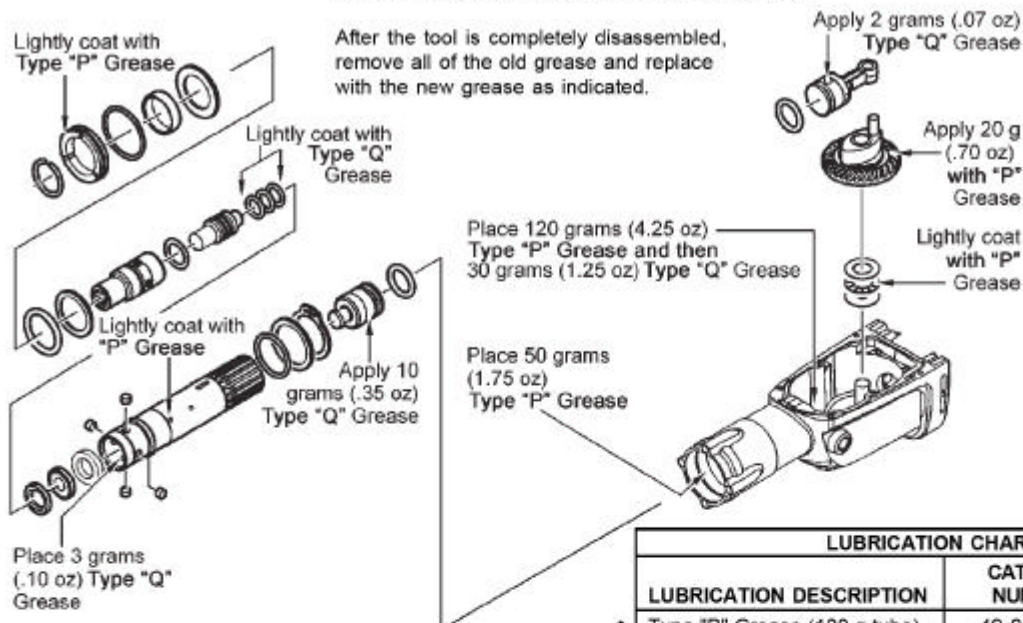
## Lubrication: Chisel hammer (5337-20)

### MAINTENANCE KIT CONTAINING "Q" GREASE, FOLLOW THESE INSTRUCTIONS

#### LUBRICATION NOTES:

Lubrication of this tool should be performed at regular intervals or when the carbon brushes switch off at the latest.

After the tool is completely disassembled, remove all of the old grease and replace with the new grease as indicated.



Approximately 190 grams (6.7 oz) of Type "P" Grease and 45 grams (1.75 oz) of Type "Q" Grease will be needed in total.

LUBRICATION CHART		
LUBRICATION DESCRIPTION	CATALOG NUMBER	QTY. NEEDED
◆ Type "P" Grease (100 g tube)	49-08-5350	2
◆ Type "Q" Grease (45 g tube)	49-08-4255	1
Type "L" Bit Grease (20 g tube)	49-08-5383	1

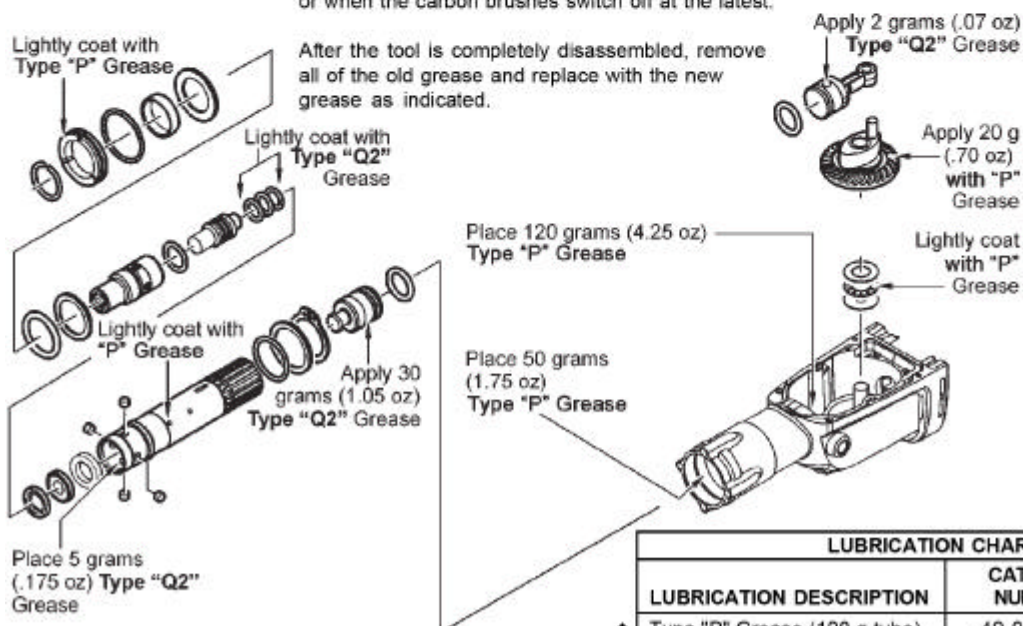
◆=Component of the 14-46-0041 Maintenance Set.

### MAINTENANCE KIT CONTAINING "Q2" GREASE, FOLLOW THESE INSTRUCTIONS

#### LUBRICATION NOTES:

Lubrication of this tool should be performed at regular intervals or when the carbon brushes switch off at the latest.

After the tool is completely disassembled, remove all of the old grease and replace with the new grease as indicated.



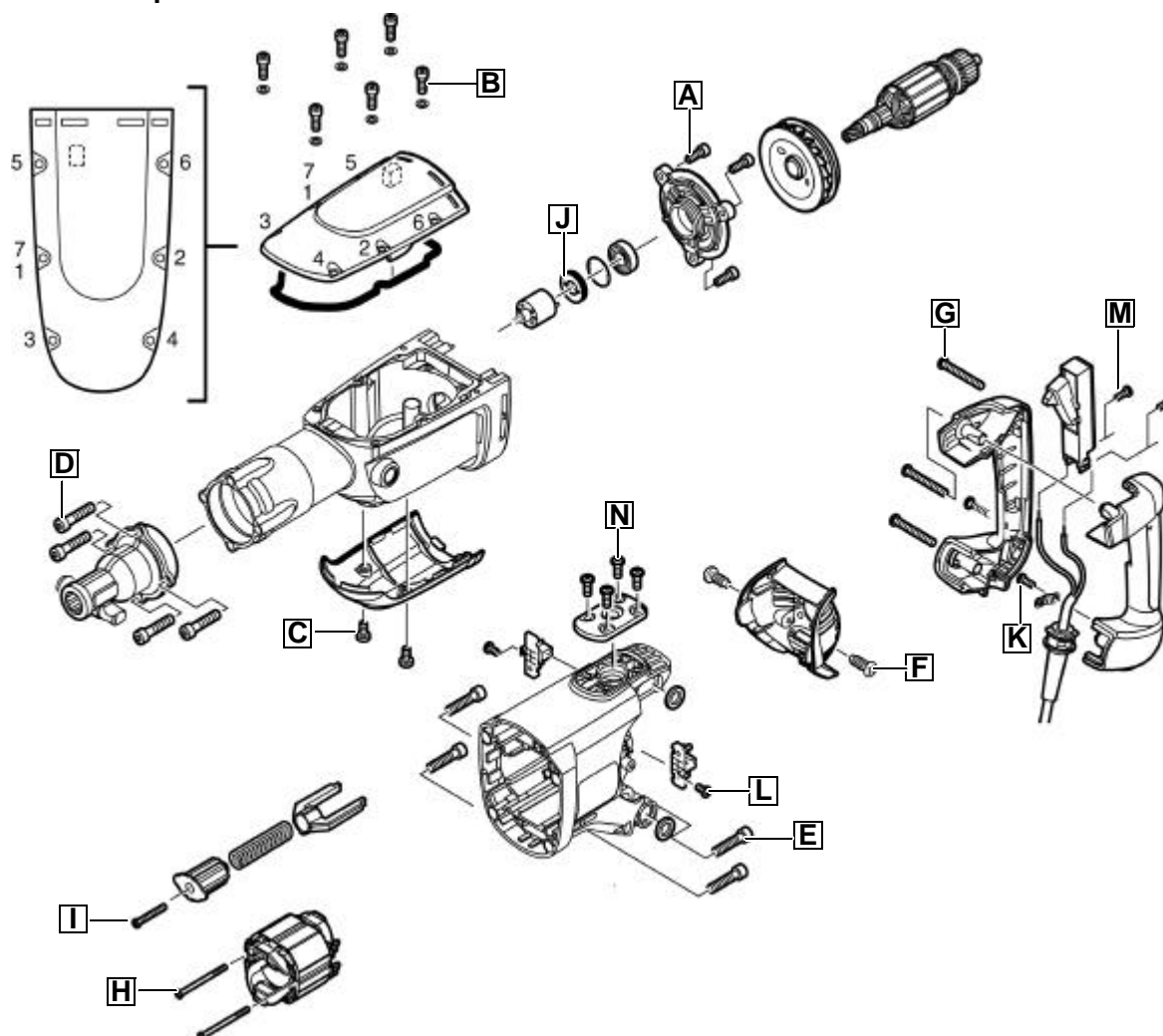
Approximately 190 grams (6.7 oz) of Type "P" Grease and 37 grams (1.32 oz) of Type "Q2" Grease will be needed in total.

LUBRICATION CHART		
LUBRICATION DESCRIPTION	CATALOG NUMBER	QTY. NEEDED
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Type "L" Bit Grease (20 g tube)	49-08-5383	1

◆=Component of the 14-46-0041 Maintenance Set.



**Sequence and torques of the screws:**



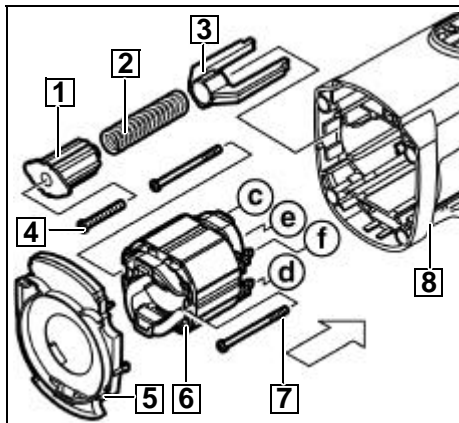
SEQUENCE AND TORQUES OF SCREWS			
	Fastener/Part Description	Torque (Nm)	Torque (Lbs-In)
A 1)	Bearing End Plate Screws	4	35
B 1)	Upper Gear Box Cover Screws	4.5	40
C	Lower Gear Box Cover Screws	3	27
D 1)	Nose Piece Screws	18	159
E 1)	Motor Housing Screws	13	115
F	Servicing Lid Screws	1.3	12
G	D-Handle Screws	3	27
H	Field Screws	2	18
I	Anti-Vibration Mechanism Scr.	3	27
J	Seal Nut	16	141
K	Strain Relief Clamp Screws	1.3	12
L	Carbon Brush Holders	1.3	12
M	Switch Screws	0.5	4
N	Side Handle Plate Screws	4	35

1) Apply blue Loctite® ThreadLocker 242 or equivalent.

## Assembly

### Installing the anti-vibration mechanism and field

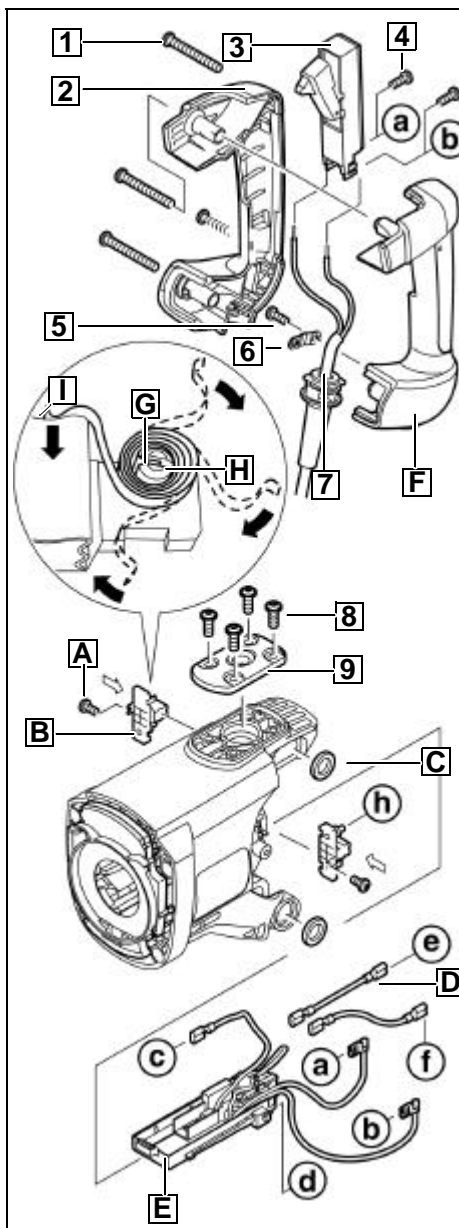
- 1 Install field (6) into motor housing (8) and secure it with two screws (7) (torque = 2 Nm / 18 in. lbs.).
- 2 Install the following parts of anti-vibration mechanism into motor housing (8):
  - vibration lever (3)
  - spring (2)
  - vibration spring cover (1).
- 3 Tighten anti-vibration mechanism with screw (4) (torque = 3 Nm / 27 in. lbs.).
- 4 Install air deflector ring (5) into motor housing (8). Mind the right position!



1

### Assembling the electronic component

- 1 Install the following parts:
  - side handle plate (9)
  - side handle screws (8) (torque = 4 Nm / 35 in. lbs.)
  - dial switch (E)
  - two carbon brush holders (B)
- Insert end of flat spiral spring (G) into slot (H) in pin of carbon brush holder as indicated in the enlargement of the figure (meaning: hook flat spiral spring (G) into pin in the "11 o'clock" position!). Tension flat spiral spring by 1 turn in a clockwise direction. Afterwards position other spring end (I) onto carbon brush holder ("ready position").
  - two switch screws (4) (torque = 0.5 Nm / 4 in. lbs.)
  - two wires (D)
  - four O-rings (C).
- Take care that no wires are jammed or pinched.
- All wires must be correctly installed between the cable entry lugs (refer to wiring instructions).
- 2 Install switch (3) into handle half (F).
- 3 Install cord (7) and secure cord clamp (6) with screws (5) (torque = 1.3 Nm / 12 in. lbs.).
- 4 Connect cord leads (7) to switch (3) and secure screws (4) (torque = 0.5 Nm / 4 in. lbs.).
- 5 Install handle half (2) and secure handle half with four screws (1) (torque = 3 Nm / 27 in. lbs.).



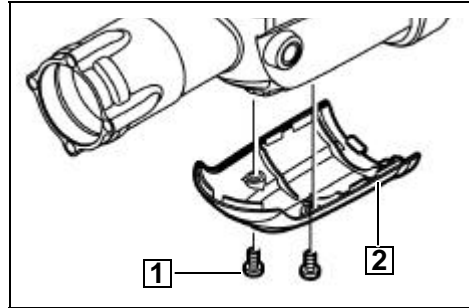
2

### CAUTION:

Always refer to and follow the most current service parts list wiring instructions for tool being repaired.

**Installing the  
gear box cover**

- 1** Secure gear box cover (2) with two screws (1) onto the gear box (torque = 3 Nm / 27 in. lbs.).



**3**

**Combined  
drill/chisel  
hammer:**


- 1 Combined drill/chisel hammer:** Place caged needle bearings (1) into lubricated steel sleeve in gear box (2).

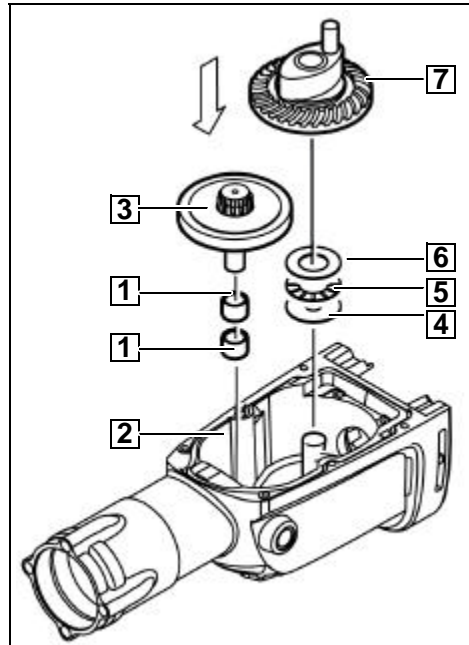
- 2** Install clutch assembly (3) into gear box (2) in direction of arrow.

**Installing the  
clutch and crank  
assembly**

- 3** Install the following pre-lubricated parts over stationary axle inside gear box (2).
  - thrust washer (4)
  - thrust bearing (5)
  - thrust washer (6)

- 4** Install crank wheel assembly (7) over gear box axle assembly.

 The static slip of the clutch is pre-set. If the rotational movement of the bit is blocked, the clutch protects the rotary hammer. The clutch limits the maximum torque of the tool. See instructions for checking the static slip of the clutch.



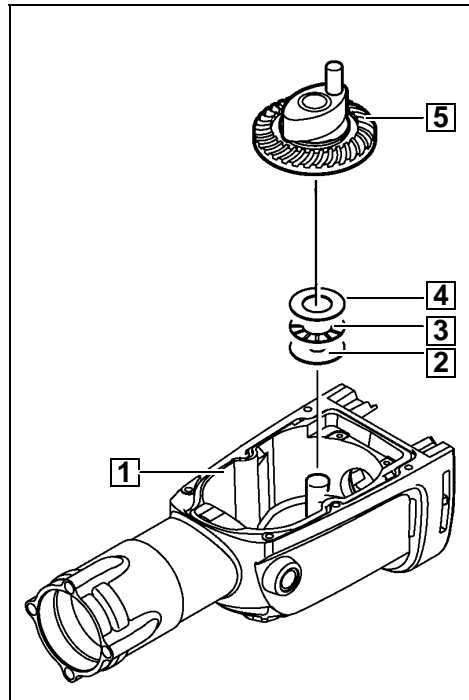
**4**

**Chisel ham-  
mer:**

- 1** Install the following pre-lubricated parts over stationary axle inside gear box (1).
  - thrust washer (2)
  - thrust bearing (3)
  - thrust washer (4)


**Installing the  
crank assembly**

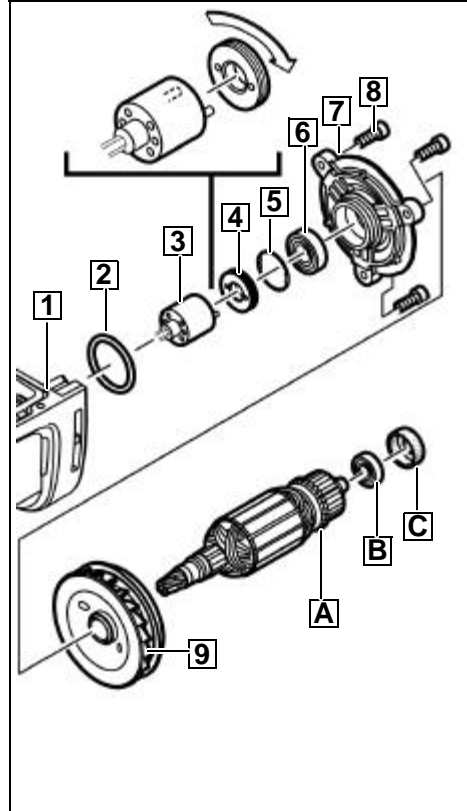
- 2** Install crank wheel assembly (5) over gear box axle assembly.



**4**

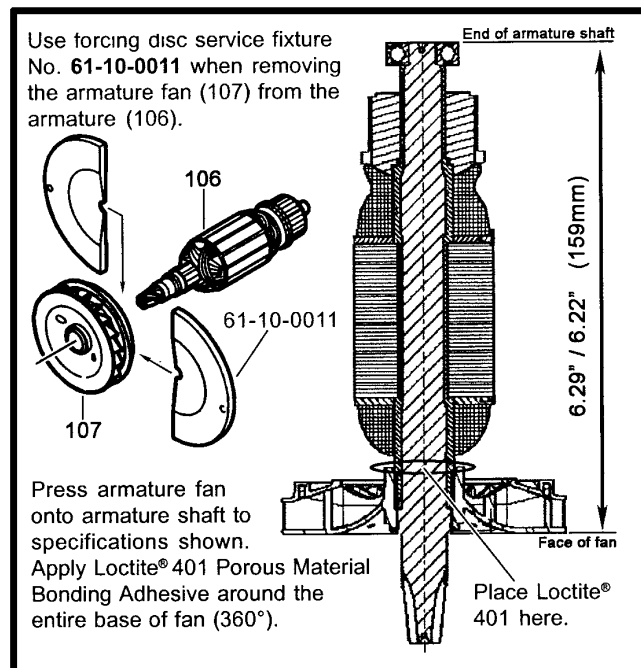
**Assembling the armature**

- 1** Press bearing (B) onto armature shaft and install bearing cup (C) into rear bearing bore of motor housing (not shown).
- 2** See illustration below:  
 Refer to chart "A" below when removing or installing the armature fan. It is very important to press armature fan to dimension shown, then apply Loctite® 401 Porous Material Bonding Adhesive around the entire base of fan (360°). Allow the bonding agent to cure completely per manufacturers instructions.
- 3** Press bearing (6) into bearing end plate (7) and install locking ring (5).
- 4** Install bearing end plate assembly (7) onto the armature shaft.
- 5** Screw in the seal nut (4) with the pin-type face spanner (3) [61-10-0012] (torque = 16 Nm / 141 in. lbs.).
- 6** Install o-ring (2) into gear box (1).
- 7** Apply Blue Loctite® to the three screws (8).  
Install bearing end plate with armature assembly (A) into rear bearing bore in gear box (1) and tighten the three screws (8) (torque = 4 Nm / 35 in. lbs.).



**5**



**Chart "A"**

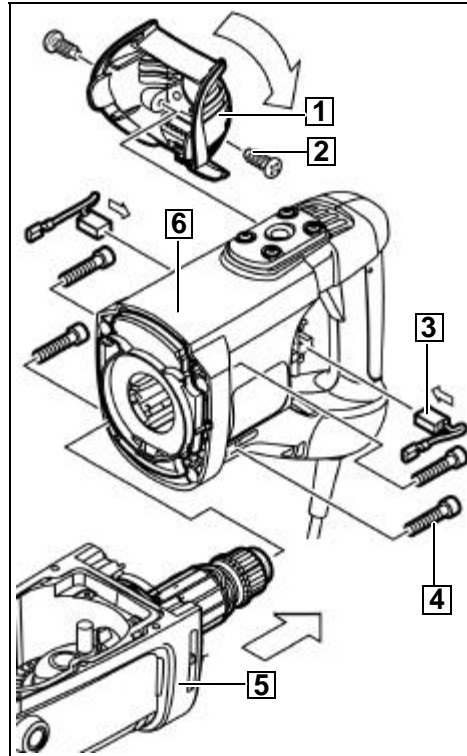


Apply blue Loctite® ThreadLocker 242 adhesive, or the equivalent, to ALL #1202 and #1203 screws prior to reassembly.




**Installing the  
motor housing**

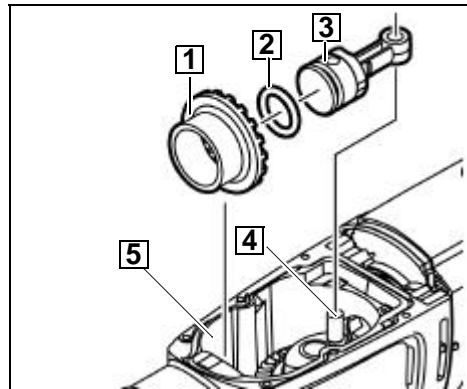
- 1** Apply Blue loctite® onto four screws (4). Install gear box and armature (5) into motor housing (6) and tighten the four screws (4) cross-wise (torque = 13 Nm / 115 in. lbs.).
  - 2** Install and connect carbon brushes (3) on both sides (refer to wiring instruction bulletin).
  - 3** Install service cover (1) and secure it with two screws (2) (torque = 1.3 Nm / 12 in. lbs.).
-  Slant service lid (1) slightly when installing and tighten screws (torque = 1.3 Nm / 12 in. lbs.).
-  Note: Carbon brush set consists of two brushes, one brush has a secondary lead incorporated into it. This lead must be connected to the electronic module at this time.



**6**

**Installing  
the piston**

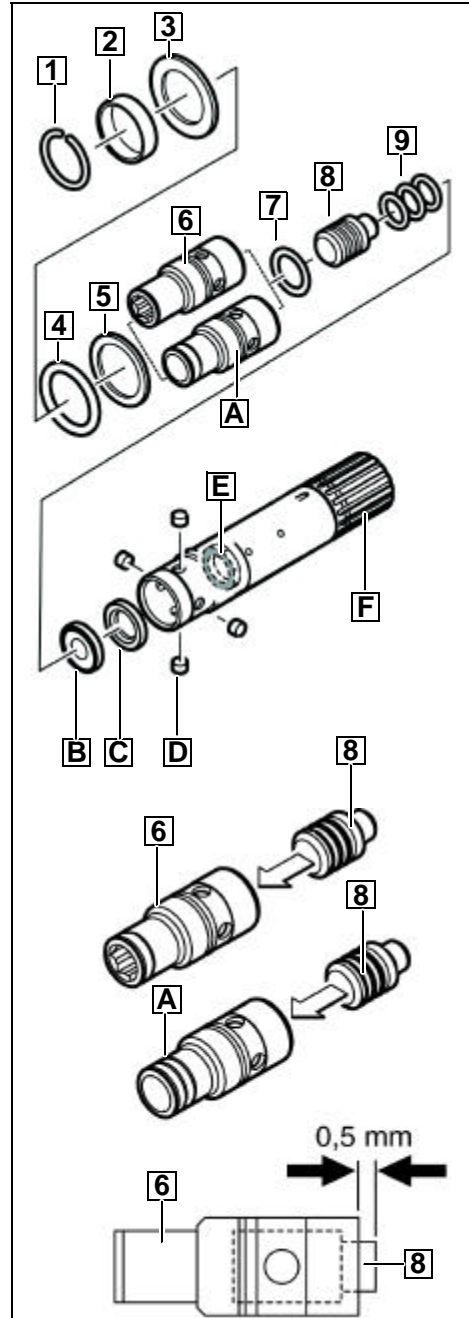
- 1 Combined drill/chisel hammer:**  
Install spindle bevel gear (1) into gear box (5).
  - 2** Install O-ring (2) onto piston (3).
  - 3** Install piston assembly (3) over crank-wheel pin (4).
-  Refer to lubrication chart for type and amount of lubrication for hammer being serviced.



**7**

**Assembling  
the spindle**

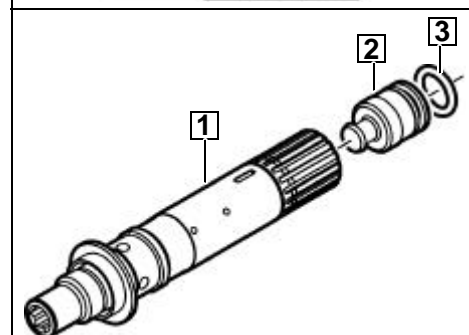
- 1 Install washer (E) and the back pressure o-ring (C) into spindle (F).
- 2 Install three o-rings (9) onto striker (8).
- 3 **Combined drill/chisel hammer:**  
Install o-ring (7) onto striker guide (6).  
Insert striker (8) into striker guide (6) (with hex socket, 1 outer ring).  
**Chisel hammer:**  
Install o-ring (7) onto the striker guide (A).  
Install striker (8) into striker guide (A) (without hex socket, 2 outer rings).
- 4 Install striker guide assembly 6,7,8,9 or A,7,8,9 into spindle (F) facing thrust collar (B).
- 5 Install four rollers (D) into spindle (F).
- 6 Install the following parts onto spindle (F):
  - attachment washer (5), .118 thick
  - o-ring (4)
  - washer (3), .154 thick
  - roller race (2)
  - retaining ring (1).



8

**Assembling ram  
into the spindle**

- 1 Install o-ring (3) onto ram (2). Lubricate ram prior to assembly.
- 2 Install ram (2) into spindle (1).
- 3 Lubricate front of gear box per lubrication chart specifications prior to installing spindle assembly.



9

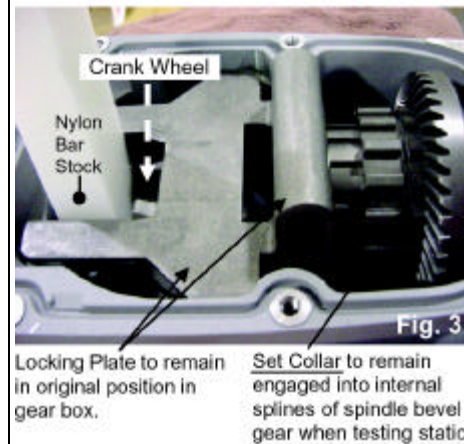
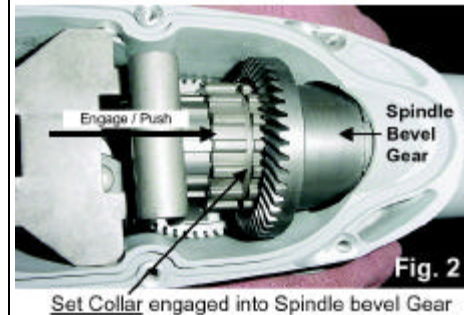
**SDS Max  
combined  
drill/chisel  
hammer:**

**To check static  
slip of clutch**

- 1 Secure hammer gear box in a machinists vise.
- 2 Install service fixture #61-10-2060 into front spindle.
- 3 Engage / lock external splines of set collar into internal splines of spindle bevel gear (figs. 2 and 3).
- 4 Install a piece of nylon bar stock or equivalent material, approximately 3/4" x 1-1/8" in between locking plate and gear box. Turn service fixture slowly clockwise until nylon bar stock is wedged tight between wall of gear box and crank wheel, as shown (fig. 3). Once crank wheel has been secured, continue to turn torque wrench in a clockwise direction until clutch slips.
- 5 Clutch must slip at 96-140 ft. lbs. (130-190 Nm.) at spindle, checked clockwise as viewed from the front of the tool. (Refer to note below).

**Note: If the static slip of the clutch doesn't fall between the listings, do the following:**

Run the tool at the highest speed ("G" on the dial switch) for 10 minutes. Immediately remove gear box cover and insert recommended nylon / plastic block into gear box to prevent gears from rotating. Turn the torque wrench clockwise and slip the clutch 8 times before actual slip torque readings are taken. Take an additional 8 slip torque readings and determine the average of the 8 readings. The average should be within the torque range specified.

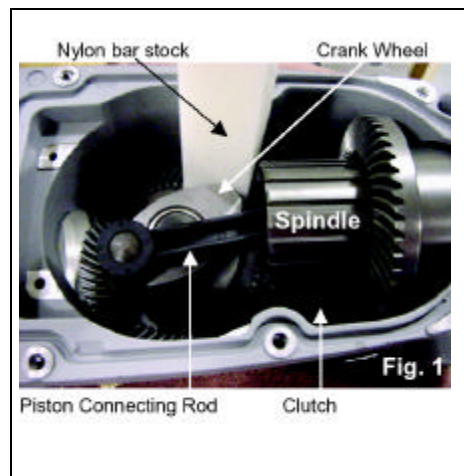


**10**

**Spline ham-  
mer:**

**To check static  
slip of clutch**

- 1 Install service fixture #61-10-2065 into front spindle.
- 2 Install a piece of nylon bar stock or equivalent material, approximately 3/4" x 1-1/8" into gear box on the opposite side of piston connecting rod. Turn service fixture slowly clockwise until nylon bar stock is wedged tight between wall of gear box and crank wheel, as shown (fig. 1). Once crank wheel has been secured, continue to turn torque wrench in a clockwise direction until clutch slips.
- 3 Clutch must slip at 96-140 ft. lbs. (130-190 Nm.) at spindle, checked clockwise as viewed from the front of the tool. (Refer to note above).

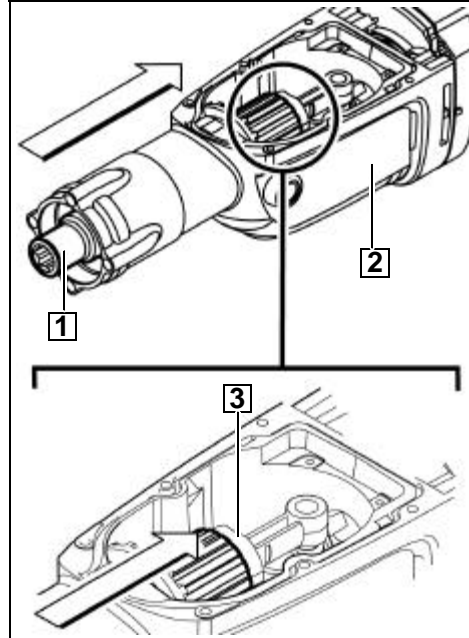


**10**

**Combined  
drill/chisel  
hammer:**

**Installing the  
spindle**

- 1 Install complete spindle assembly (1) into gear box (2) as far as it will go, aligning external splines on spindle (1) with internal splines of previously installed spindle bevel gear.
- ✎ Piston assembly (3) must enter the rear/end of spindle (1)!
- ✎ Spindle (1) gets the necessary lubrication when it is inserted into gear box (2).

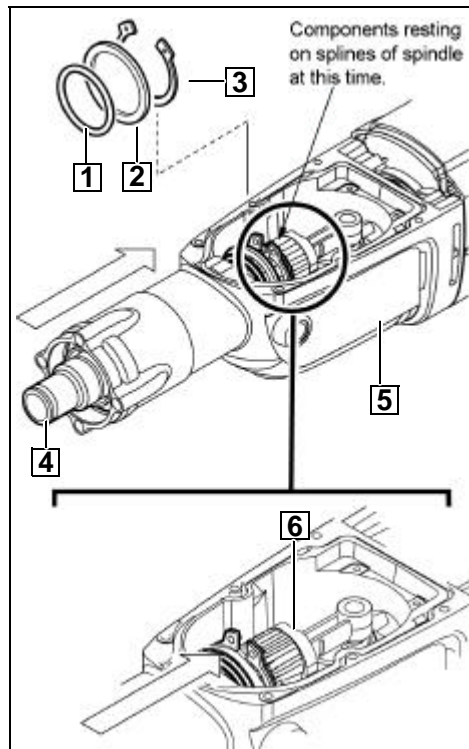


**11**

**Chisel  
hammer:**

**Installing the  
spindle**


- 1 To prepare, place o-ring (1), attachment ring (2) and locking ring (3) into gear box (5).
- 2 Install complete spindle assembly (4) into gear box (5) and lead it through o-ring (1), attachment ring (2) and locking ring (3).
- ✎ Spindle (4) gets the necessary lubrication when it is inserted into gear box (5).
- 3 Insert spindle (4) as far as it will go.
- ✎ Piston (6) must enter the rear/end of spindle!
- 4 Install retaining ring (3) completely into spindle groove.
- ✎ The retaining ring (3) must audibly engage into the spindle groove!
- ✎ Retaining ring (3) must be spread slightly when installing spindle assembly.

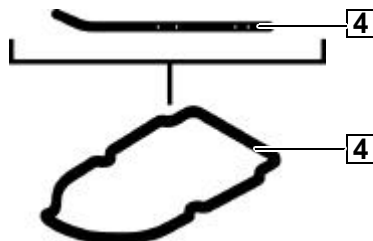


**11**


**Installing the  
top gear box cover**

- 1 Install gasket (4) into gear box (6). Mind the right position!


 Gasket (4) is pre-formed and fits the groove of gear box (6) exactly!



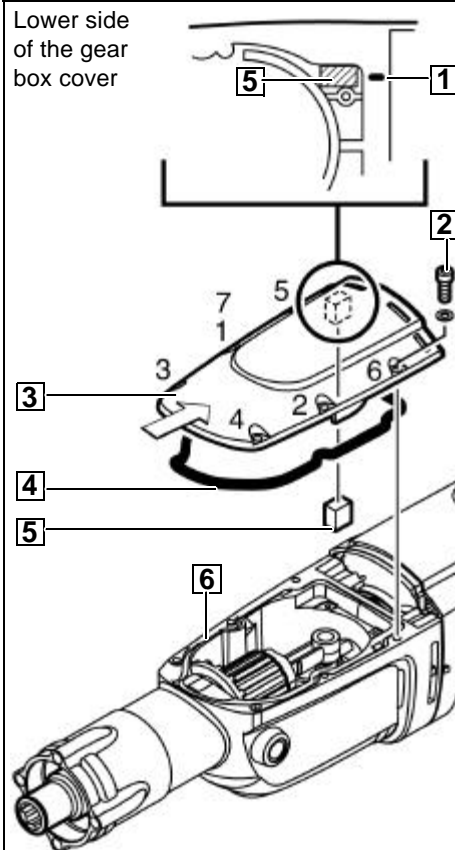
- 2 Place felt (5) into the top gear box cover (3). Mind the right position! It serves to vent the gear box!

 The felt (5) must be placed in relief (1) of the lower part of the gear box cover (3)! See illustration.

- 3 Install six screws with washers (2) into gear box cover (3) and tighten. (torque = 4.5 Nm / 40 in. lbs.).

 The six screws must be tightened according to indicated numbers (1 – 7) in ascending sequence! Push the cover (3) slightly in direction of arrow!

Lower side  
of the gear  
box cover




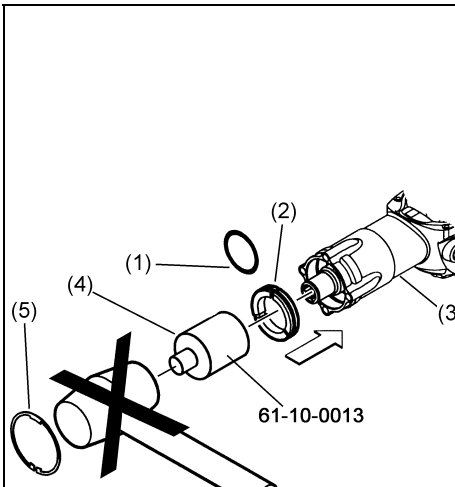
12

**Installing the  
thrust collar**

- 1 Install o-ring (1) onto thrust collar (2).



- 2 Position thrust collar assembly (1,2) into gear box (3) until the outside face of the thrust collar assembly is flush with the face of the gear box. Place the open end of service fixture (4), 61-10-0013, over the spindle assembly and gently push the thrust collar into the gear box.

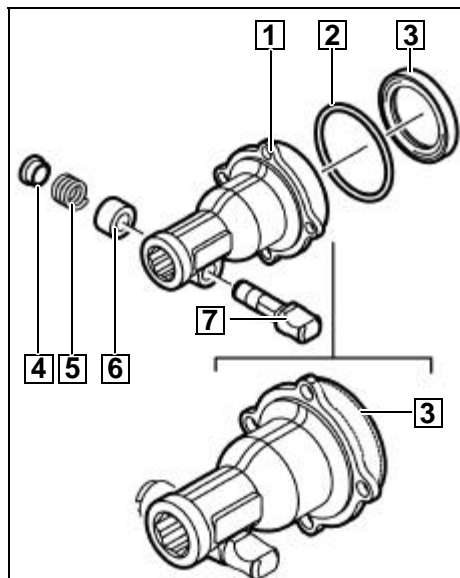
 The internal retaining ring groove must be visible after thrust ring (2) has been installed, if it is not, the spindle assembly may have been assembled incorrectly or is in a bind.



13


**Installing the  
nose piece as-  
sembly**

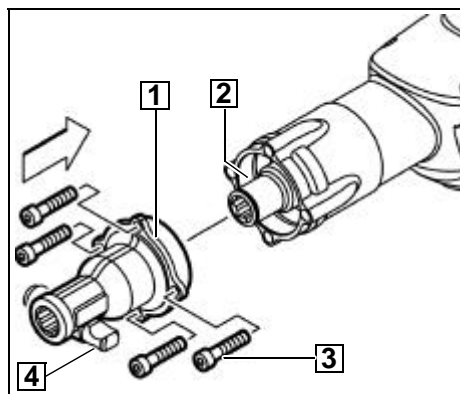
- 1** Install o-ring (2) and seal ring (3) into the nose piece assembly (1).  
 Install seal ring (3) into the right position: The sealing lips must face the outside!  
 Seal ring (3) must be pressed flush to nose piece (1), otherwise it will wear very quickly!
- 2** Install latch bar (7) into nose piece (1) and insert the sleeve (6) and the spring (5) on the other side.
- 3** Install latch assembly (4).



**14**

**Installing the  
nose piece as-  
sembly**

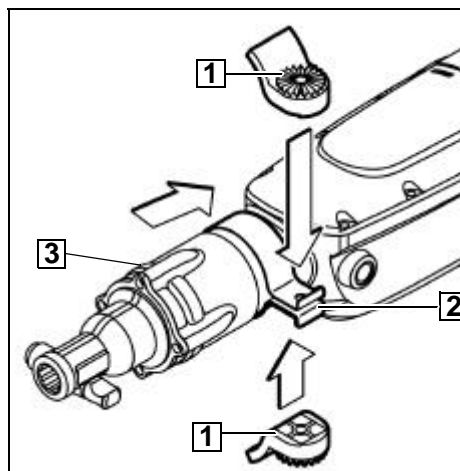
- 1** Apply Blue Loctite® Threadlocker Adhesive 242 to each of the four screws (3).
- 2** Install nose piece (1) into gear box (2) in direction of arrow.  
 Latch bar (4) (lever side) to face right side of gear box (as viewed from the front of the machine).
- 3** Install four screws (3). (torque = 18 Nm. / 159 in. lbs.).



**15**

**Installing the  
Spring Ring**

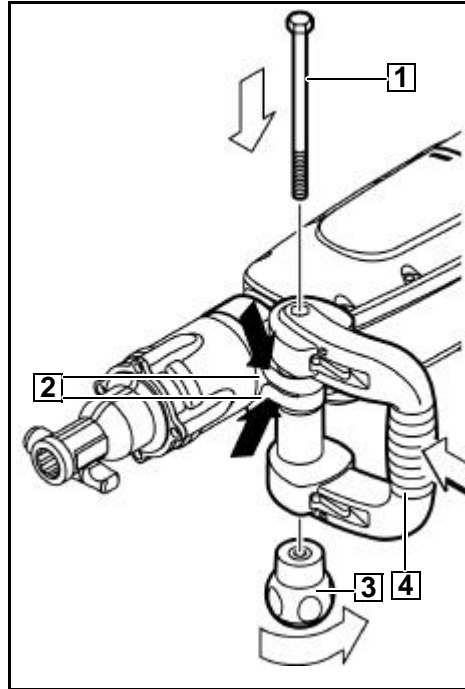
- 1** Install spring ring (2) over the gear box (3) from the front and install both retainers (1).



**16**

**Installing  
the handle**

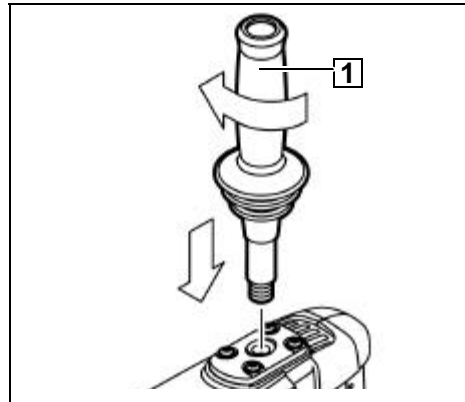
- 1** Press retainers (2) together on both sides and install the handle (4).
- 2** Insert screw (1) in direction of arrow and screw down knob (3).



**17**

**Installing the  
auxiliary handle**

- 1** Install the auxiliary handle (1).



**18**

**TEST RUN -**

Run tool for a 5 minute run-in period.

**ELECTRICAL TEST -**

Perform electrical test on tool per Electrical and Mechanical Test Instructions, 58-92-0001.