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4939 5855 01 (11/95)

Atlas Copco

Repair Instructions No.176.11/95 PN 2000-2/ MF/ MF2/ N/ SMF2/ spec.N

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Special Tools Required

- Mandril (diameter 9.5 mm), approx. 100 mm long.
- Assembly support in which the tool can be fixed vertically.

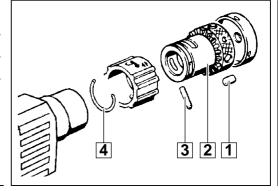
Important!

- Before beginning the maintenance work, perform an initial check with a high voltage test according to VDE (see chapter Electrical and Mechanical Test Instructions).
- Before all repair work, pull the power plug from the socket!

Disassembly

Dismantling the chuck

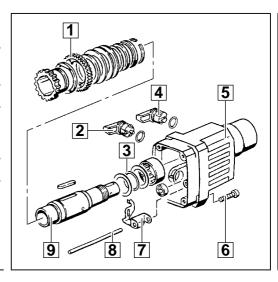
- 1 Lever off the spring washer (4) with aid of a screwdriver.
- 2 Remove the pin (3) and the roller (1).
- 3 Pull off the multi-function chuck (2).
- 4 Only applicable for PN 2000 spec. N: Remove the hammer chuck.



1

Dismantling the gear box

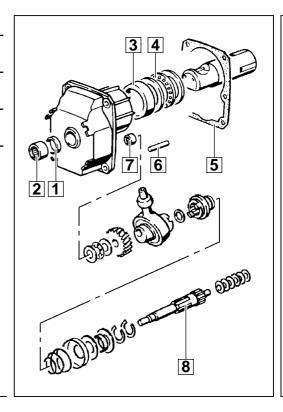
- 1 Insert the machine into the assembly support and remove the four screws (6).
- **2** Lever off the switch levers (2) and (4) with aid of a screwdriver.
- **3** Remove the gear box (5).
- 4 Remove the pin (8), the gear switch lever (7), and the O-ring (3) together with the discs.
- 5 Remove the gear wheel (1).
- 6 Remove the spindle sleeve (9).



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Dismantling the reduction gear

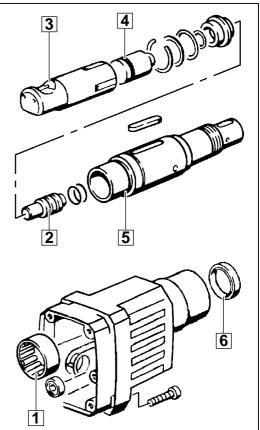
- 1 Remove the axial needle bearing (4).
- 2 Take out the complete reduction gear, then remove the reduction gear shaft (8).
- **3** Remove the needle bearing (2) and the sealing ring (1).
- **4** Remove the sleeve (7), the pin (6), and the bearing (3).
- **5** Remove the gasket (5).



3

Dismantling the cylinder

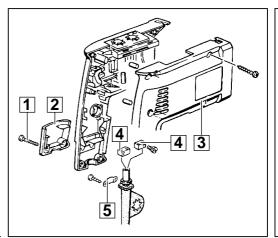
- 1 Remove he cylinder (3) together with the percussion body (4). Pull the percussion body (4) from the cylinder (3).
- **2** Press the snap die (2) from the drill spindle (5) with aid of a mandril. The spring ring, the washer, and the rubber ring are being destroyed.
- 3 Remove the sealing ring (6).
- 4 Remove the needle bearing (1).



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Dismantling the handle shells

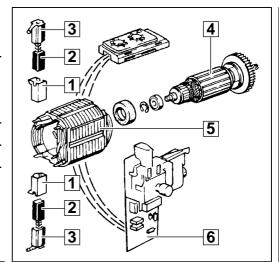
- **1** Unscrew and remove the service cover (2).
- 2 Loosen the screws of the cable clip (5), remove it and lay bare the power supply lead.
- 3 Loosen the connectors (4).
- 4 Unscrew and remove the housing (3).



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Dismantling the motor

- 1 Lever off the brush holder insulation (1) and the brush holders (3) together with the carbon brushes (2).
- 2 Only applicable for PN 2000 SMF2: Remove the switch (6) completely with the torque pre-setting dial and the torque switch.
- 3 Dismantle the switch.
- 4 Branch off the cords.
- 5 Remove the armature (4) together with the field (5) from the housing.



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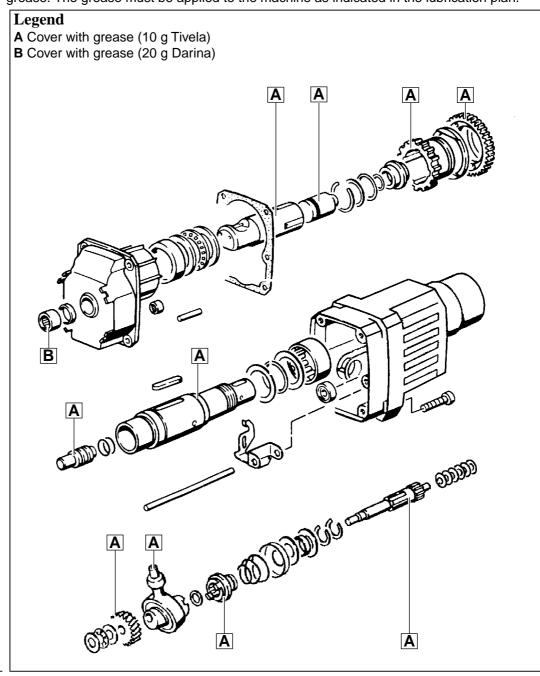
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Maintenance

General	It is recommended to regularly submit the tool to maintenance, or as soon as the hammer mechanism gets weak, or when the carbon brushes switch off. When carrying out maintenance all parts of the maintenance set must be exchanged. Use the respective maintenance set provided for each machine.
Cleaning	Clean all parts – with the exception of the electrical parts – with cold cleaning agent. Caution! No cleaning agent should penetrate into the bearing. Clean the electrical parts with a dry brush.
Check for wear	Check the disassembled parts for wear (visual inspection) and replace worn parts.
Electrical tests	Before reassembling, perform an electrical test on all relevant parts (see chapter Electrical and Mechanical Test Instructions).

Lubrication

Each time maintenance is performed, the machine is to be lubricates as stated in the lubrication plan. 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 plan.



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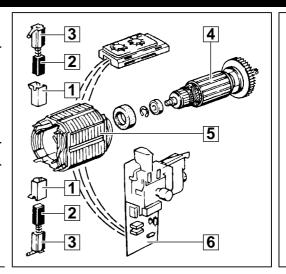
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Assembly

Mounting the armature

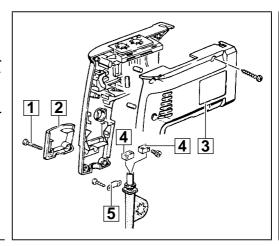
- 1 Insert the armature (4) together with the field (5) into the housing.
- 2 Only applicable for PN 2000 SMF2:
 nsert the complete switch (6), with the torque pre-setting dial and the torque switch into the housing. Insert the cords into the provided reliefs and connect them according to the wiring diagram.
- 3 Mount the switch.
- 4 Insert the brush holder insulations (1) and the brush holders (3) together with the carbon brushes (2) into the housing.



1

Assembling the housing

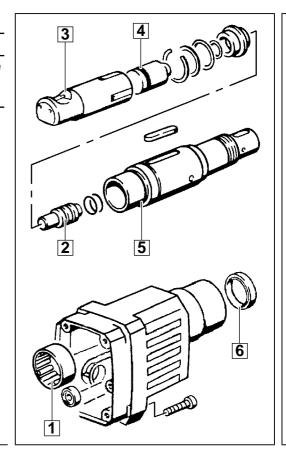
- 1 Fit the housing (3) and fasten it with screws. Take care that no cables are squeezed or jammed.
- **2** Fix the power supply lead with the connectors (4) and fasten the cable clip (5) with screws.
- 3 Screw down (1) the service cover (2).



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Mounting the cylinder

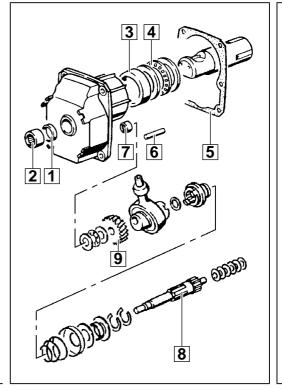
- **1** Mount the needle bearing (1).
- 2 Insert the sealing ring (6).
- 3 Insert the snap die (2), the rubber ring, the washer, the spring ring, and the drill spindle (5).
- 4 Insert the cylinder (3) as shown in illustration. Insert the percussion body (4) into the cylinder (3).



3

Assembling the reduction gear

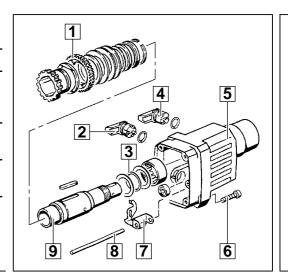
- 1 Mount the bearing (3) and the gasket (5).
- 2 Insert the pin (6) and the sleeve (7).
- 3 Mount the sealing ring (1) and the needle bearing (2).
- Press the reduction gear wheel (9) onto the wobble gear drive. The end play must be 0.05 + 0.03 mm.
- 4 Mount the reduction gear complete with the reduction gear shaft (8). Insert the disc springs opposite each other (see illustration).
- **5** Mount the axial needle bearing (4).



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Mounting the gear box

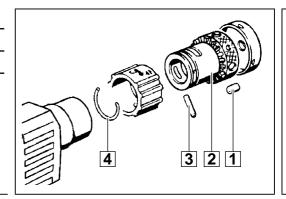
- 1 Insert the spindle sleeve (9) into the gear box.
- 2 Fit the gear wheel (1).
- 3 Insert the O-ring (3) together with the discs. Mount the gear switch lever (7) and the pin (8).
- **4** Place the complete gear box (5) onto the motor housing.
- 5 Insert new switch levers (2) and (4) into the gear box.
- **6** Fit the gear box (5) to the motor housing and fasten with the four screws (6).



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Mounting the chuck

- 1 Mount the multi-function chuck (2).
- 2 Insert the tension pin (3) and the roll (1).
- 3 Insert the spring washer (4).
- 4 Only applicable for PN 2000 spec. N: Mount the hammer chuck.





Test Run

Check the direction of rotation!

Let the machine run-in.

Electrical Test

Perform an electrical test on the machine (see chapter Electrical and Mechanical Test Instructions).