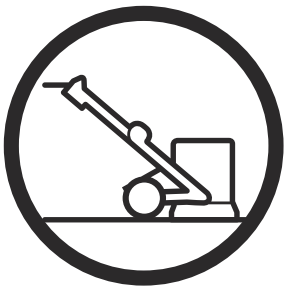
Husqvarna®

Workshop manual

PG 5, PG 5 S



English

2160 - 001 - 14.06.2023

Contents

1 Introduction
1.1 Document description..... 3
1.2 Target group.....3
1.3 Revisions.....3
1.4 Safety..... 3
1.5 Servicing tools.....3

2 Safety
2.1 Safety definitions.....4
2.2 General safety instructions.....4
2.3 Special safety instructions.....4
2.4 Symbols on the product..... 4

3 Servicing data
3.1 Symbols in the diagrams.....5
3.2 Tightening torques motor PG 5..... 6
3.3 Tightening torques motor PG 5 S.....7
3.4 Tightening torques grinding head 8
3.5 Tightening torques grinding head 9

4 Servicing tools
4.1 Servicing tools overview.....10
4.2 Servicing tools overview.....11

5 Product overview for repair and servicing
5.1 Component overview PG 5..... 12
5.2 Component overview PG 5..... 13
5.3 Component overview PG 5 S.....14
5.4 Component overview PG 5 S.....15
5.5 Component overview, electrical enclosure, single phase, 200-240V, 2.2kW, 10A.....16
5.6 Component overview, electrical enclosure, single phase, 200-240V, 4kW, 30A.....17
5.7 Component overview, electrical enclosure, 3-phase, 200-240V, 4kW, 16A..... 18
5.8 Component overview, electrical enclosure, 3-phase, 380-415V / 3-phase, 440-480V, 4kW, 16A.....19
5.9 Component overview motor connection box 220-240V 20
5.10 Component overview motor connection box 380-415V/440-480V 20

6 Repair and servicing
6.1 Motor.....21
6.2 Grinding head.....23
6.3 Radial shaft seal.....27
6.4 Belt tensioner..... 28
6.5 Primary belt..... 30
6.6 Hub assemblies.....31
6.7 Filter..... 39

7 Troubleshooting
7.1 To do a function test of the grinding head.....40
7.2 To do a function test of the electrical system..... 40
7.3 To do a function test of the motor..... 40
7.4 Frequency converter error codes - Faults..... 40
7.5 Frequency converter error codes - Minor Faults and Alarms..... 42
7.6 Frequency converter error codes - Drive Alarm, Faults , and Errors..... 43
7.7 Frequency converter error codes - Operation Errors..... 44
7.8 Frequency converter error codes - Auto Tuning Errors..... 44

8 Diagrams
8.1 Mist pump PG 5..... 46
8.2 Control panel.....47
8.3 Electrical enclosure..... 48

1 Introduction

1.1 Document description

This manual gives a full description of how to do maintenance and repair on the product. It also gives safety instructions that the personnel must obey.

1.2 Target group

This manual is for personnel with a general knowledge of how to do repair and do servicing. All personnel that do repair or do servicing on the product must read and understand the manual.

1.3 Revisions

Changes to the product can cause changes to the maintenance work and spare parts. Separate information is sent out for each change.

Read the manual together with all received information about changes to maintenance and spare parts for the product.

1.4 Safety

WARNING: All personnel that repair or do servicing on the product must read and understand the safety instructions in this workshop manual.

1.5 Servicing tools

The manual gives information about necessary servicing tools. Always use original tools from Husqvarna.

2 Safety

2.1 Safety definitions

Warnings, cautions and notes are used to point out specially important parts of the manual.

WARNING: Used if there is a risk of injury or death for the operator or bystanders if the instructions in the manual are not obeyed.

CAUTION: Used if there is a risk of damage to the product, other materials or the adjacent area if the instructions in the manual are not obeyed.

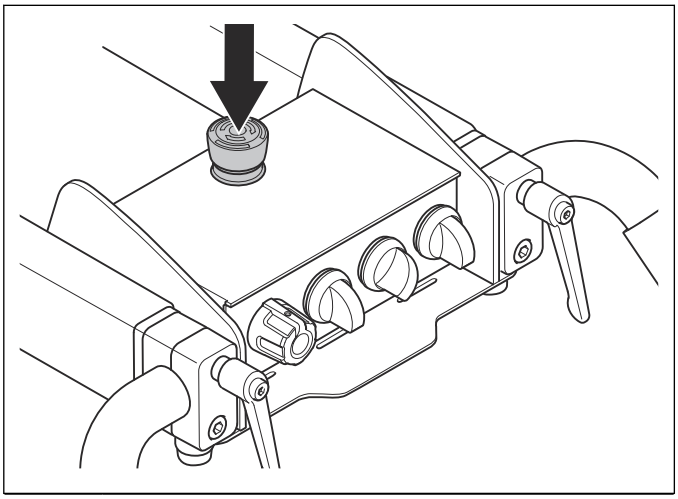
Note: Used to give more information that is necessary in a given situation.

2.2 General safety instructions

- Read and obey this workshop manual.
- Obey the local safety regulations when you repair or do servicing of the product.
- The safety equipment you use must obey local regulations.
- Use only the equipment that the manufacturer recommends.
- Use personal protective equipment.
- Use protective gloves and safety glasses. The safety glasses must obey the ANSI Z87.1 for US or EN166 for EU countries.
- Use earmuffs when the product is in operation.
- Always stop the product before you repair or do servicing of the product.
- Remove flammable materials from the work area. The product can cause sparks.
- Do not use the product if the power cord or cables are damaged.
- Disconnect the product from the mains socket.
- If possible, keep the power cord disconnected when you repair or do servicing of the product.
- Use cables adapted to outdoor operation.
- Do not touch the wires when the product is on. An electrical shock can cause injury.
- Do not point compressed air to your body. Compressed air can go into the blood stream.
- Always tighten the nuts and the bolts on the product correctly.
- Do not use the power cord to lift the product. Do not pull the power cord to disconnect the product.
- Do checks of the product for warning labels that are damaged. Replace the warning labels that are damaged.
- Always read the warning labels of product supplies.
- Obey the local waste regulations.

2.3 Special safety instructions

The product has an emergency stop button.



WARNING: Voltage remains in the product after the emergency stop button is pressed.

2.4 Symbols on the product

WARNING: Not careful or incorrect use can result in injury or death to the operator or others.

Read the manual carefully and make sure that you understand the instructions before you use the product.

Always put on hearing protection, eye protection and breathing protection.

WARNING! The dust can cause breathing problems. Use breathing protection. Do not breathe exhaust fumes. Always make sure that there is good airflow.

This product is in compliance with applicable EC directives.

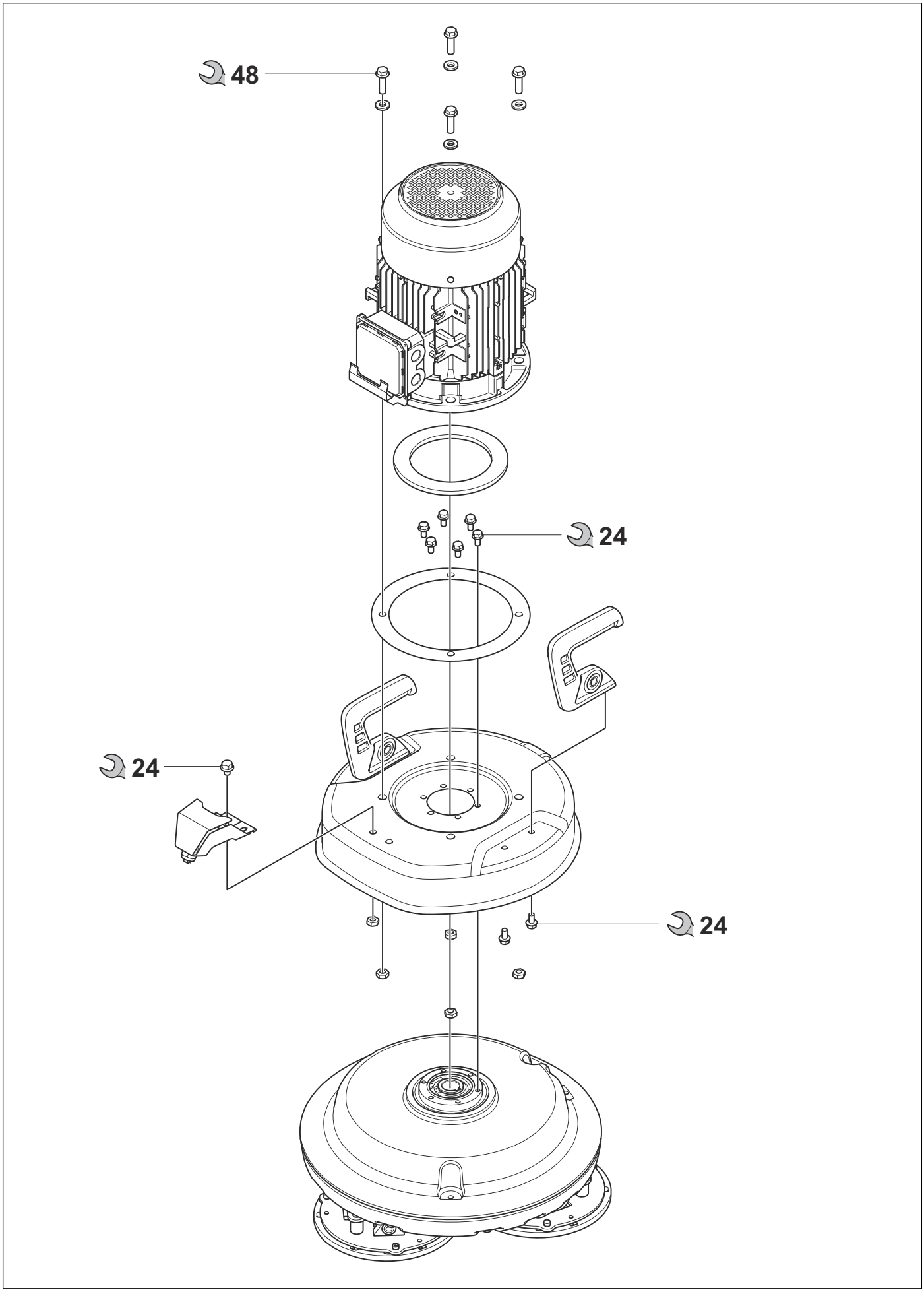
Note: Other symbols/decals on the product refer to special certification requirements for some markets.

3 Servicing data

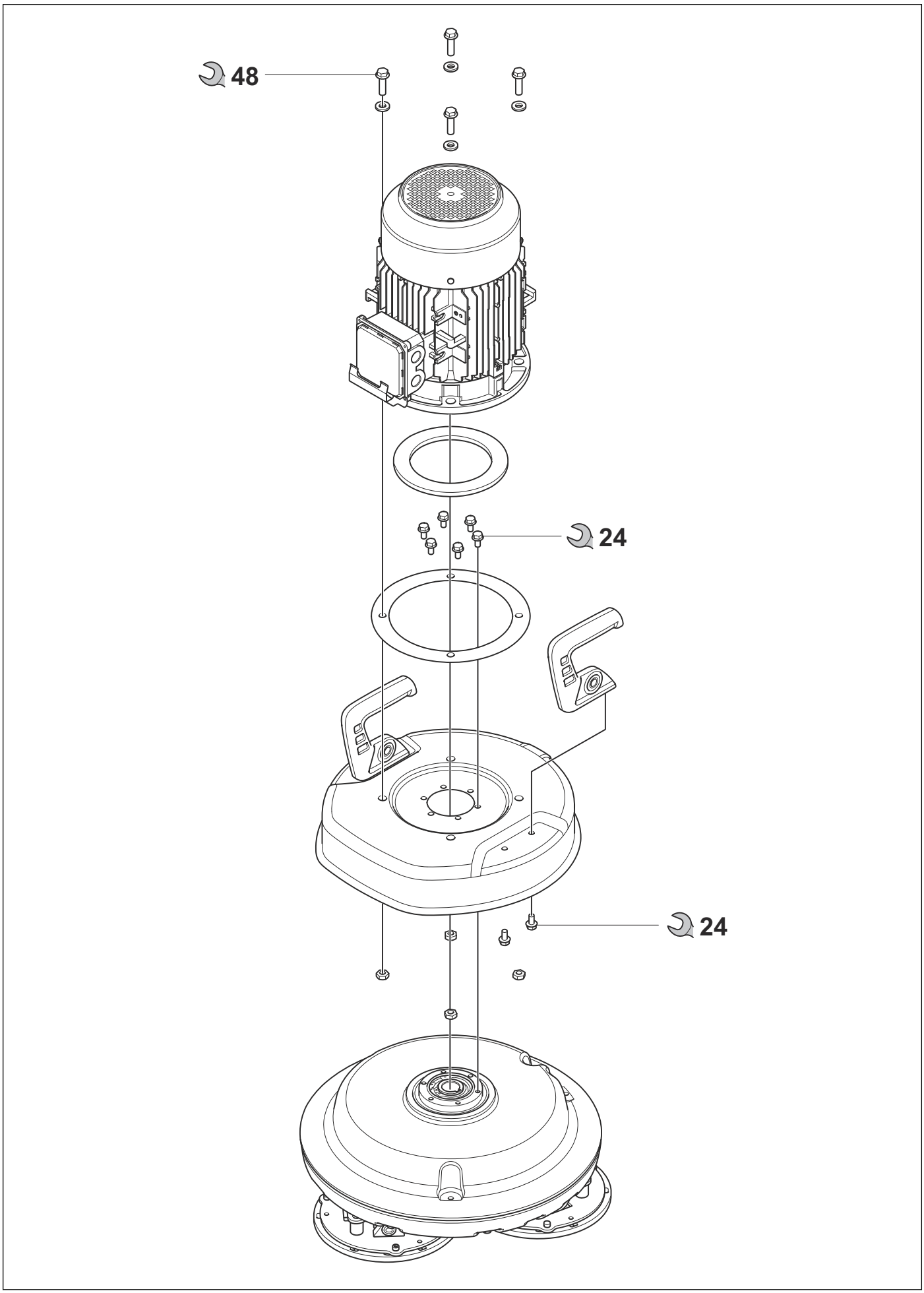
3.1 Symbols in the diagrams

Tightening torque, Nm

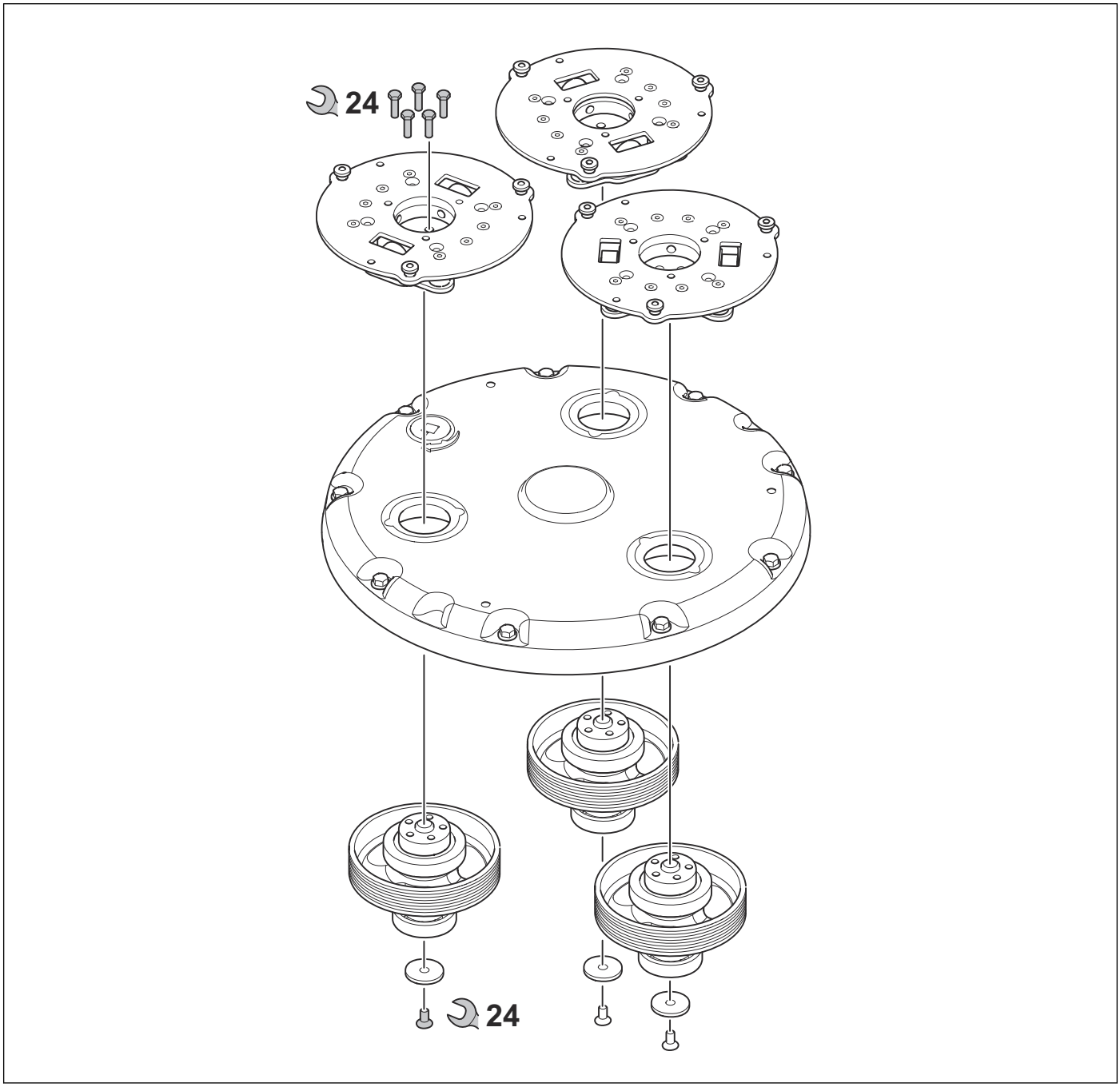
3.2 Tightening torques motor PG 5



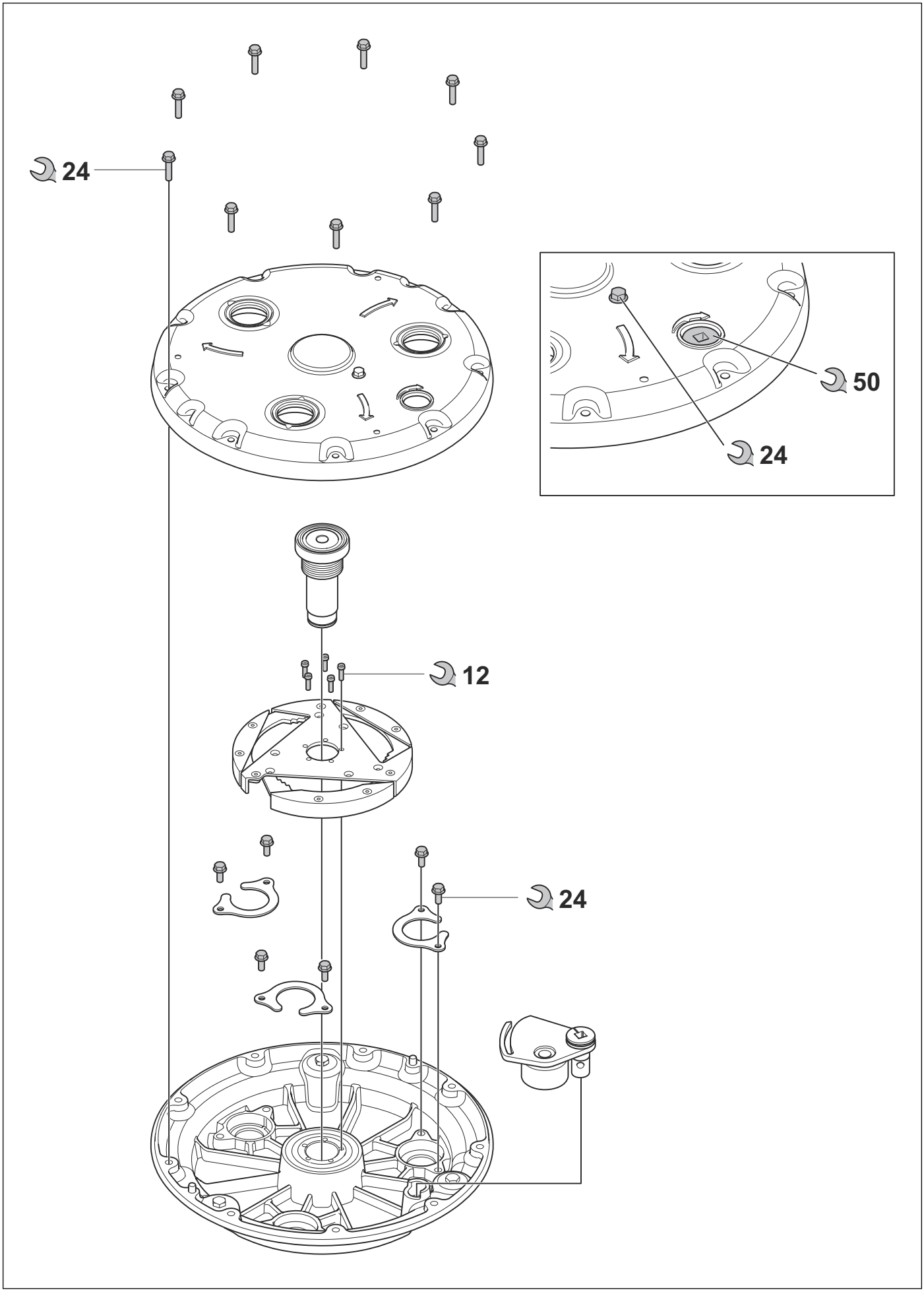
3.3 Tightening torques motor PG 5 S



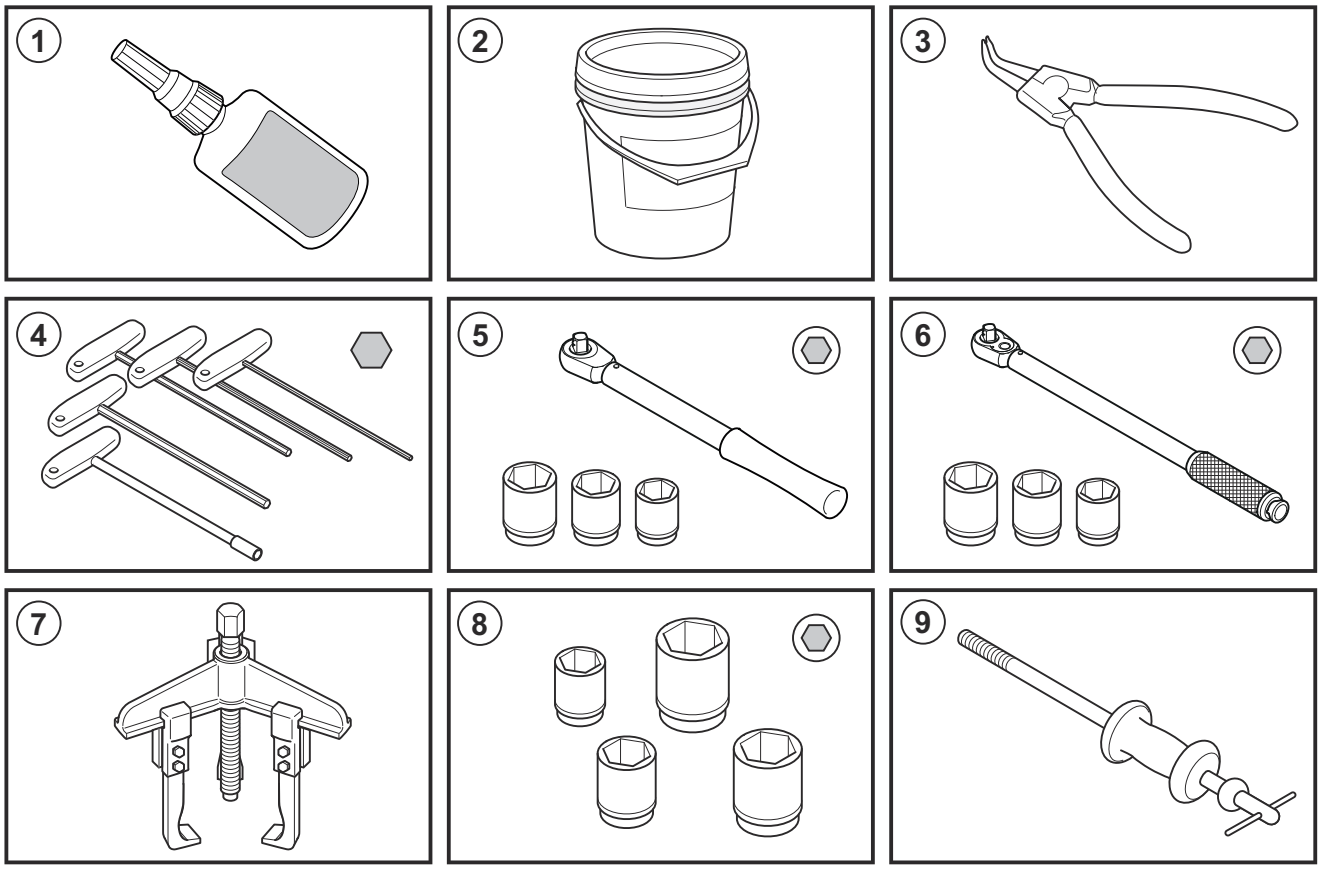
3.4 Tightening torques grinding head



3.5 Tightening torques grinding head

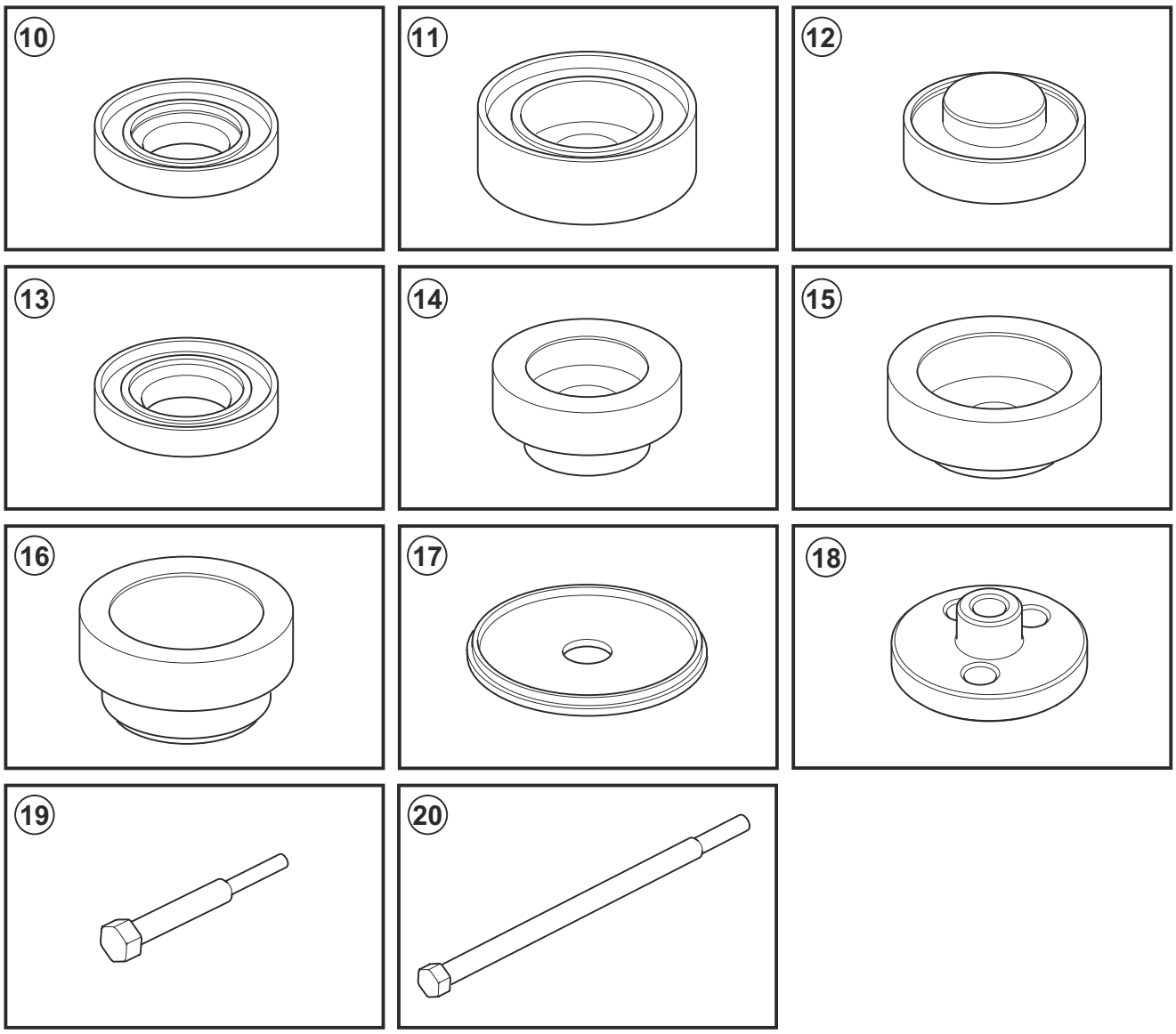


4.1 Servicing tools overview



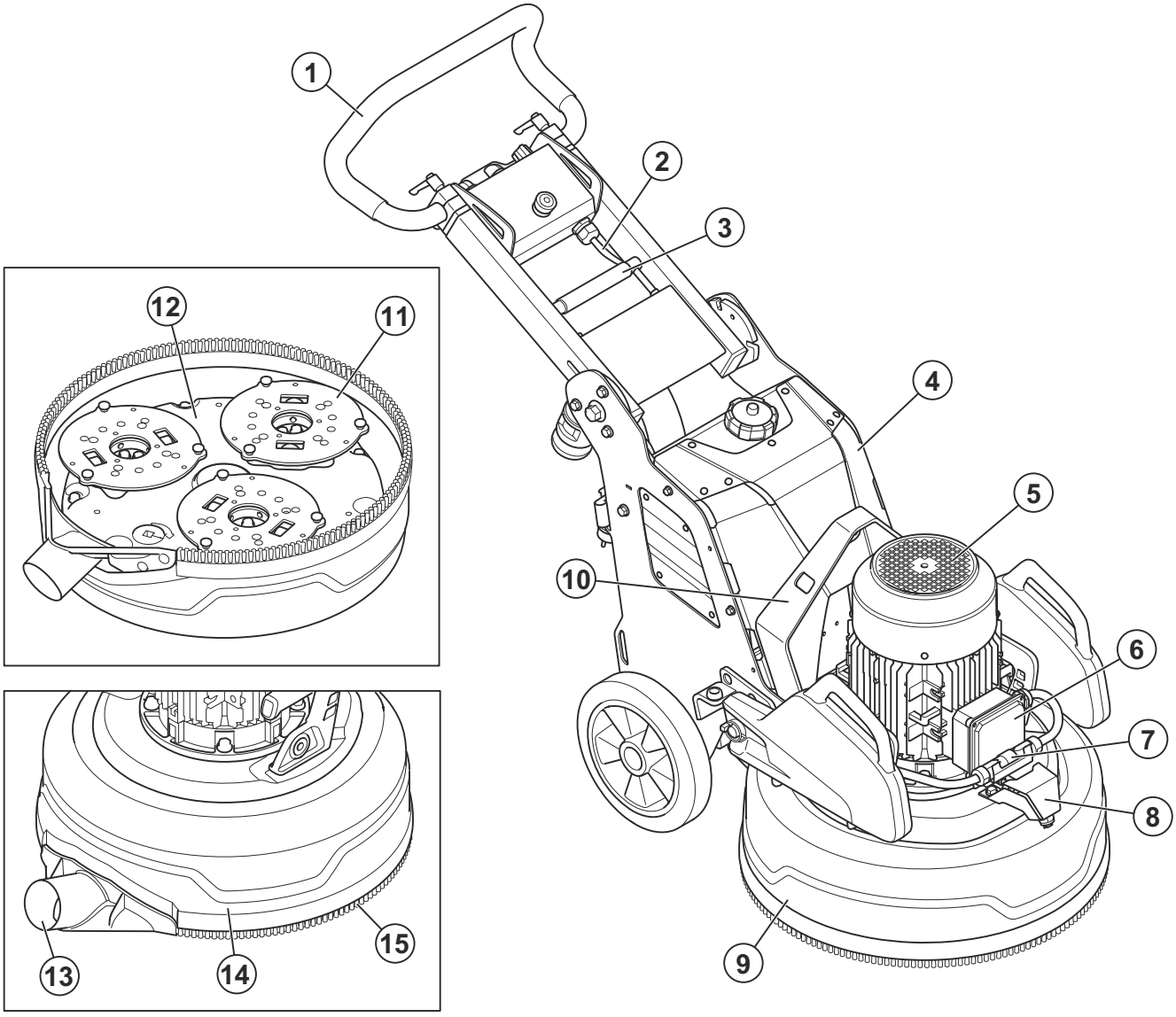
Position	Designation	Used for	Order No./Source
1	Adhesive for threads	–	Amprobe 37XR-A
2	Grease	To assemble the motor and grinding head	Loctite 243
3	Circlip pliers	General	–
4	Hex key, kit 2.5–10 mm	General	525 45 52-01
5	Socket wrench	General	531 11 95-32
6	Torque wrench 11–110 Nm	General	–
7	Inner puller	To remove the bearing housing from the motor plate	There are many manufacturers, for example, KUKKO.
8	Socket 8–18mm	General	–
9	Slide hammer	To remove the top belt wheels	584 39 99-01

4.2 Servicing tools overview



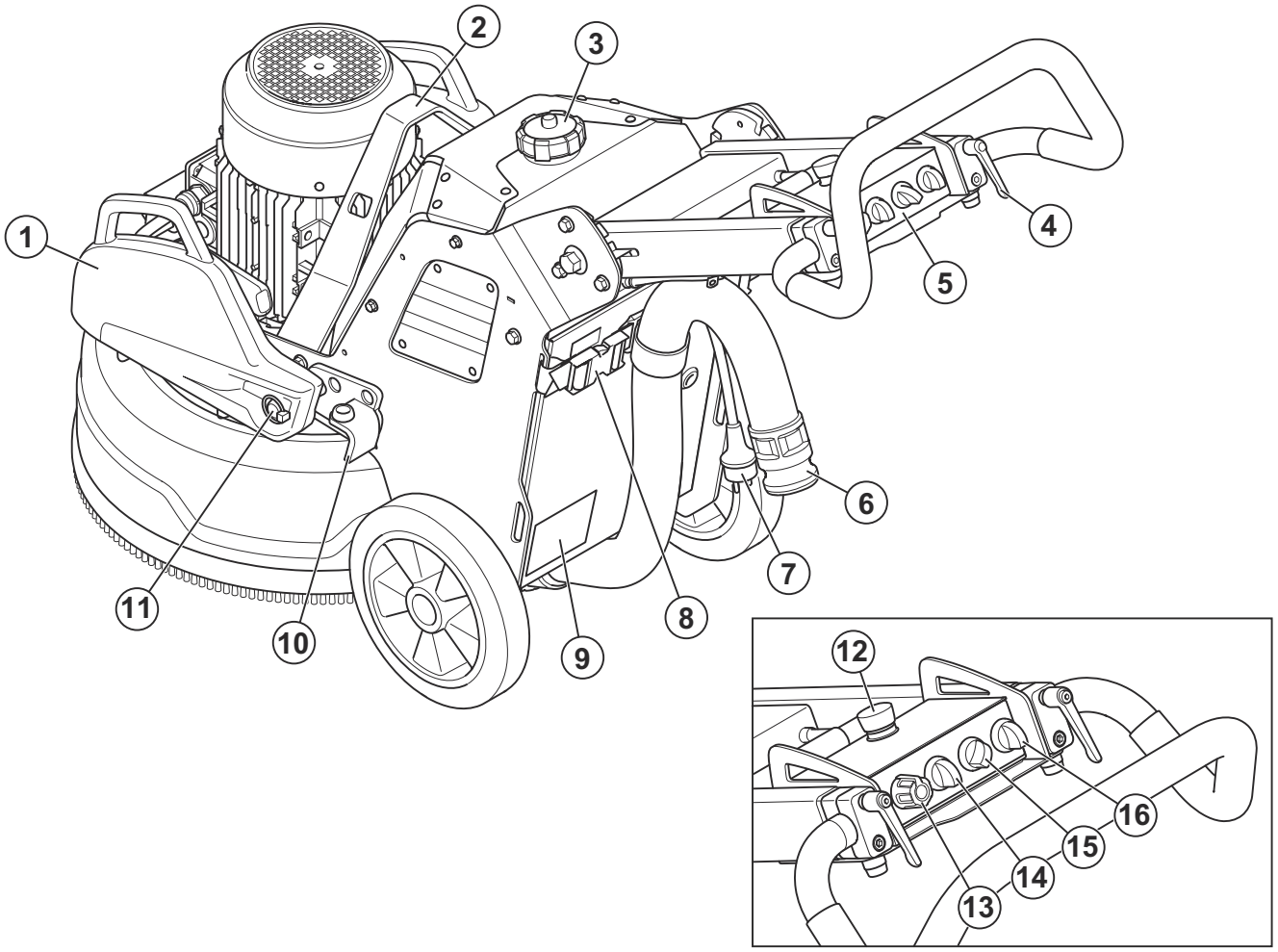
Position	Designation	Order No./Source
10	Press tool for the hub assembly	597 88 71-01
11	Press tool for the hub assembly	597 88 72-01
12	Tool for the idler pulley	597 88 73-01
13	Center pulley tool	597 98 76-01
14	Press tool for the center hub	597 98 77-01
15	Press tool for the top housing	597 98 78-01
16	Support tool for the top housing	597 96 67-01
17	Press tool for the radial seal	597 98 79-01
18	Hub removal adapter	593 58 39-01
19	Removal tool for the grinding head	593 54 45-01
20	Motor removal tool	597 25 55-01

5.1 Component overview PG 5



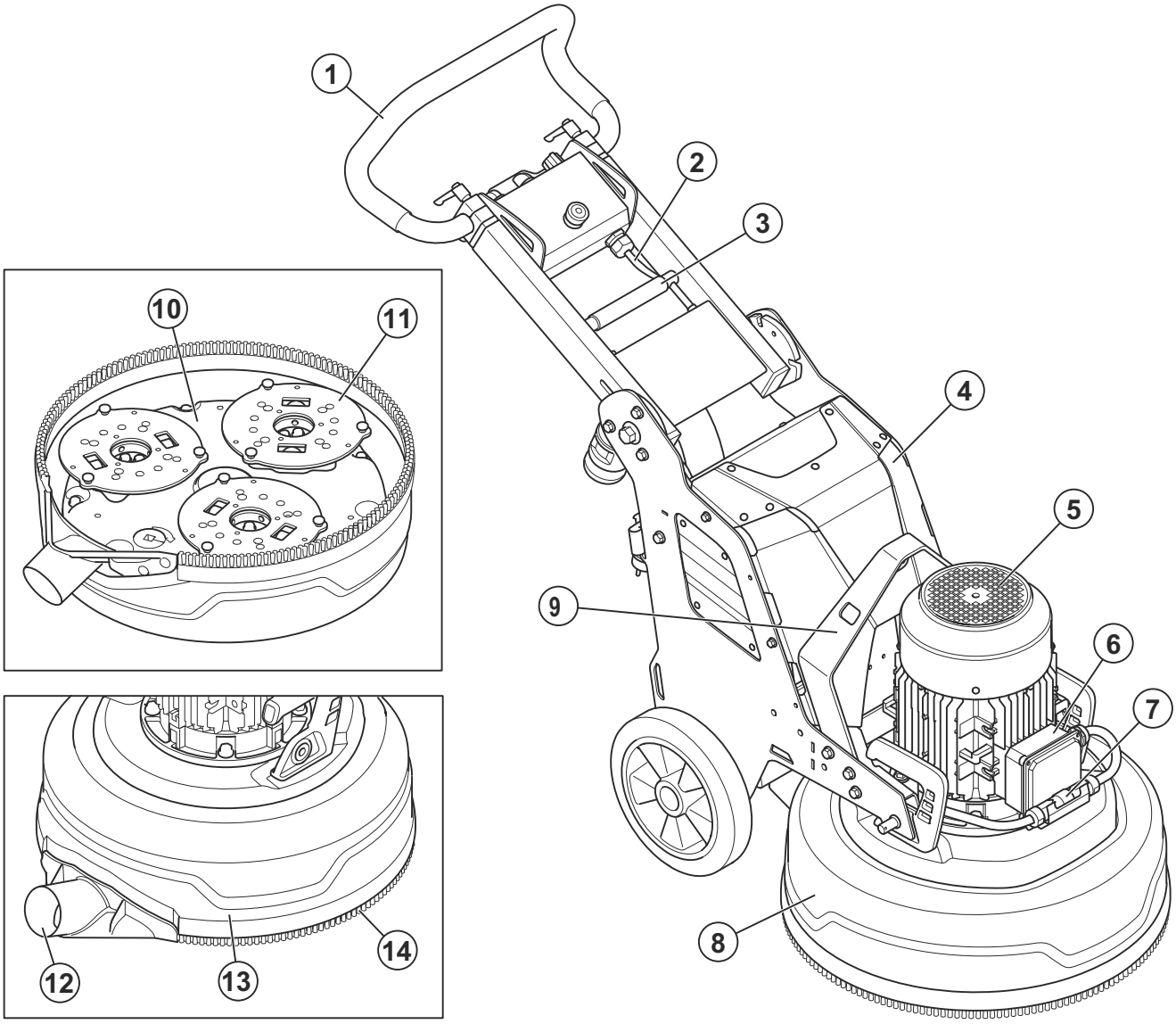
1. Handlebar
2. Connection for motor cable
3. Lock lever for handle adjustment
4. Electrical enclosure
5. Grinding disc motor
6. Motor connection box
7. Electric connection
8. Nozzle for mist cooler system
9. Grinding head
10. Lifting eye
11. Grinding disc
12. Grinding head
13. Connection for dust extractor
14. Cover
15. Dust skirt

5.2 Component overview PG 5



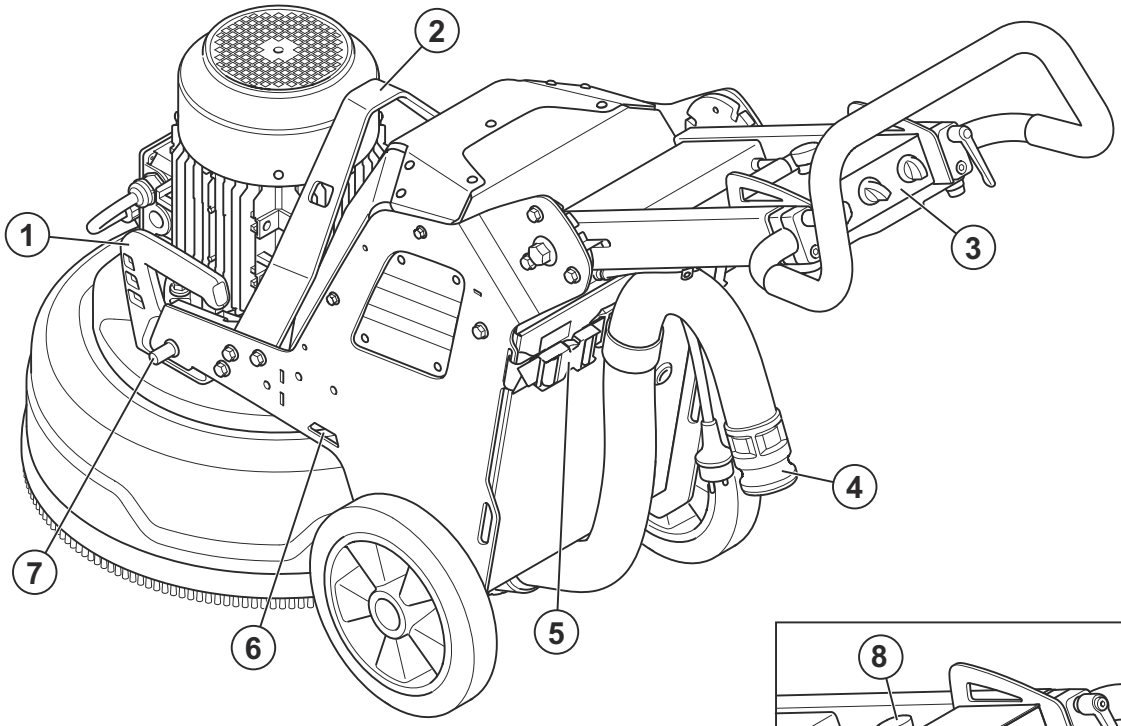
1. Weight
2. Lifting eye
3. Water tank
4. Lock knobs for handlebar adjustment
5. Control panel
6. Connection for dust extractor
7. Power plug
8. Suspension device for dust extractor and power cord
9. Type plate
10. Holder for the weight
11. Weight lock
12. Emergency stop button
13. Knob for direction of rotation and speed, grinding disc
14. Grind Stop/Run/Mist
15. Increase or decrease water supply
16. ON/OFF switch

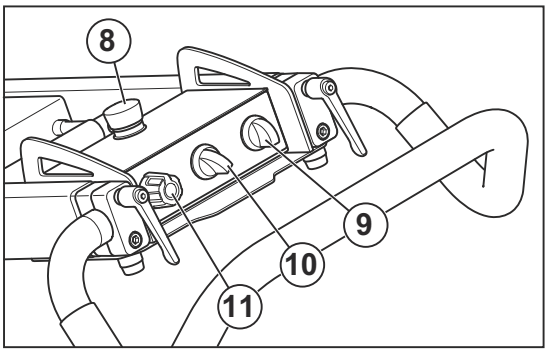
5.3 Component overview PG 5 S



1. Handlebar
2. Connection for motor cable
3. Lock lever for handle adjustment
4. Electrical enclosure
5. Grinding disc motor
6. Motor connection box
7. Electric connection
8. Grinding head
9. Lifting eye
10. Grinding head
11. Grinding disc
12. Connection for dust extractor
13. Cover
14. Dust skirt

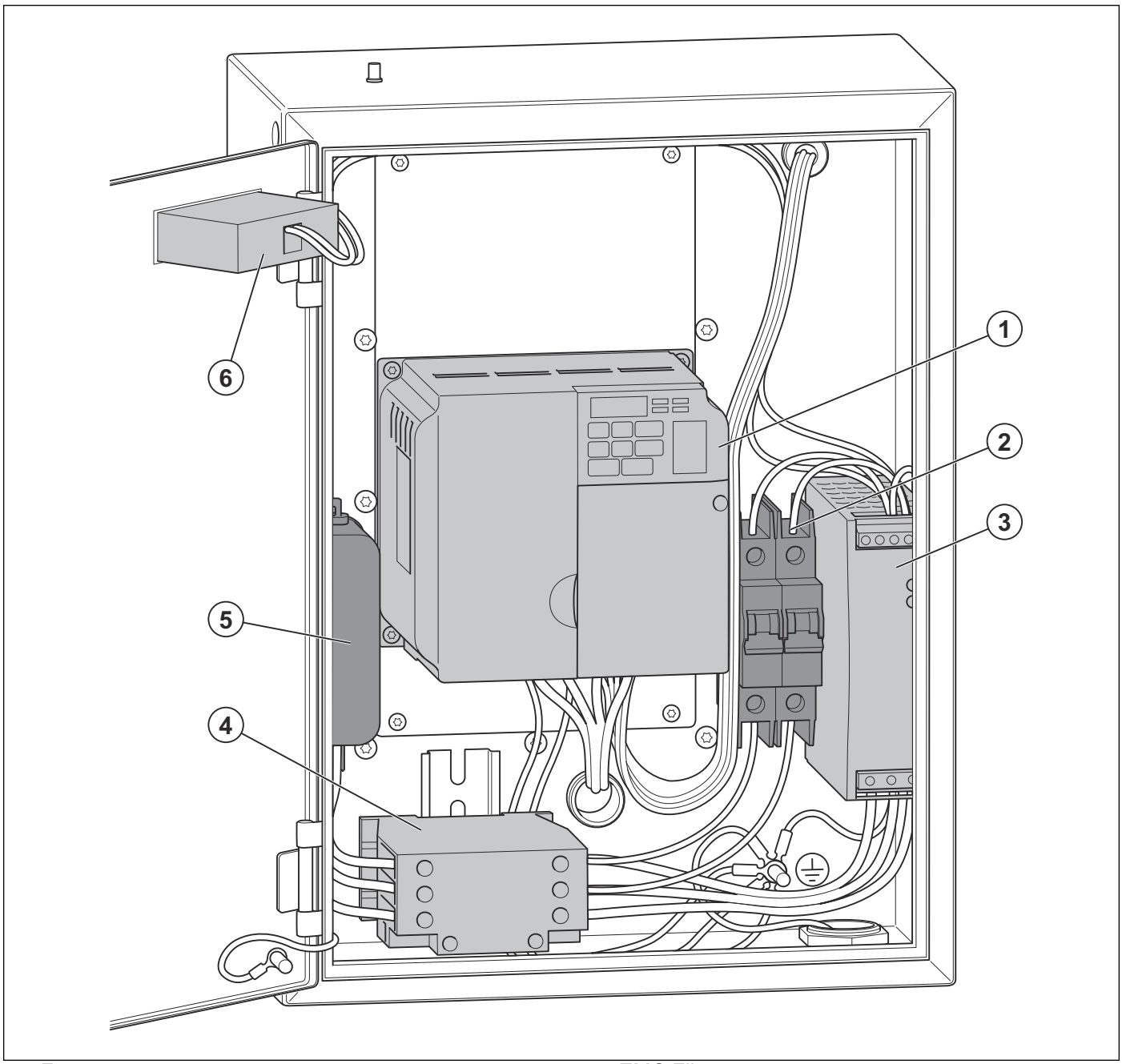
5.4 Component overview PG 5 S





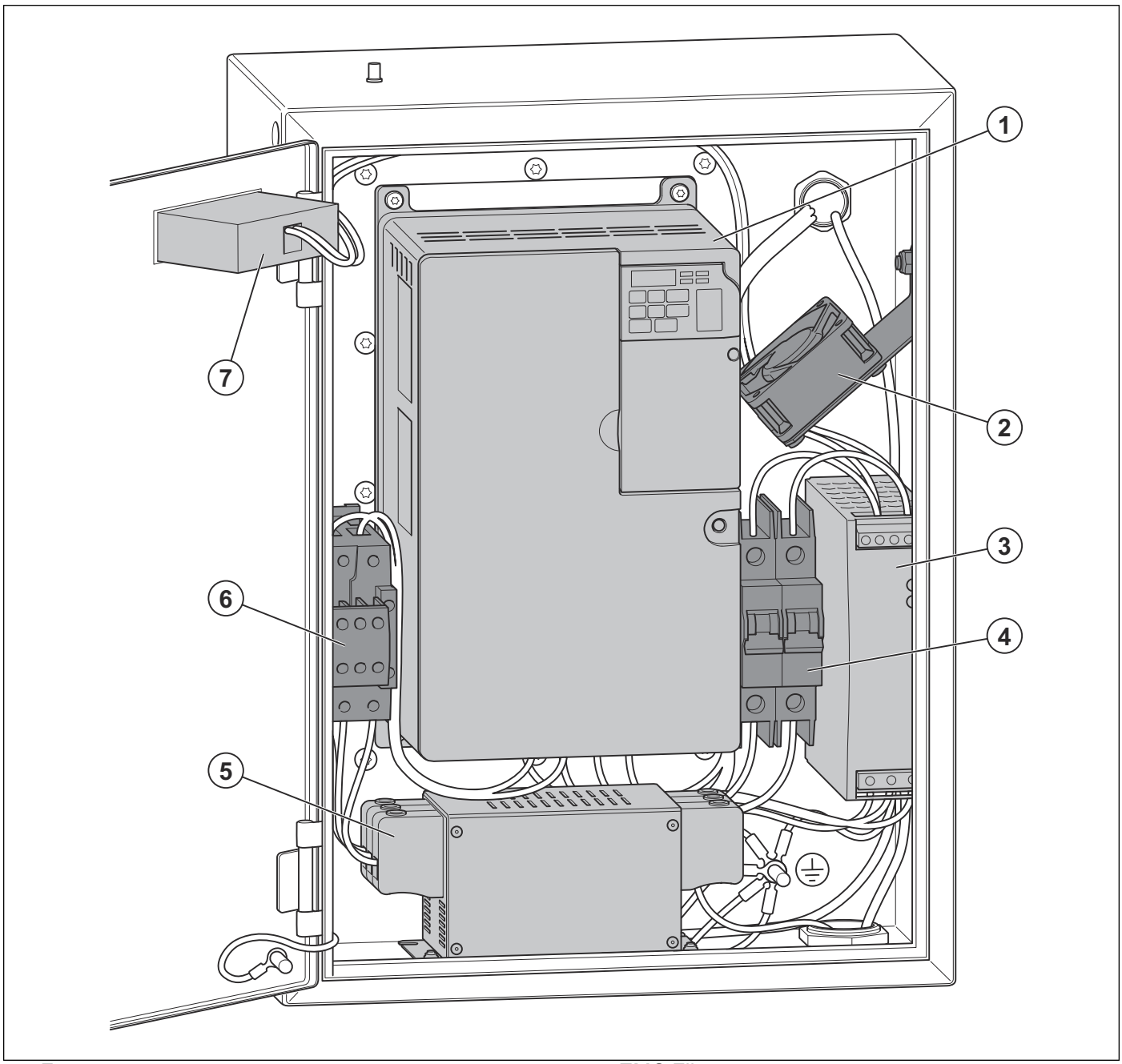
1. Lift handle for grinding head
2. Lifting eye
3. Control panel
4. Connection for dust extractor
5. Suspension device for dust extractor and power cord
6. Hole for strap
7. Lock bolt, attaches the motor and grinding head
8. Emergency stop button
9. ON/OFF switch
10. STOP/RUN switch
11. Knob for direction of rotation and speed, grinding disc

5.5 Component overview, electrical enclosure, single phase, 200-240V, 2.2kW, 10A



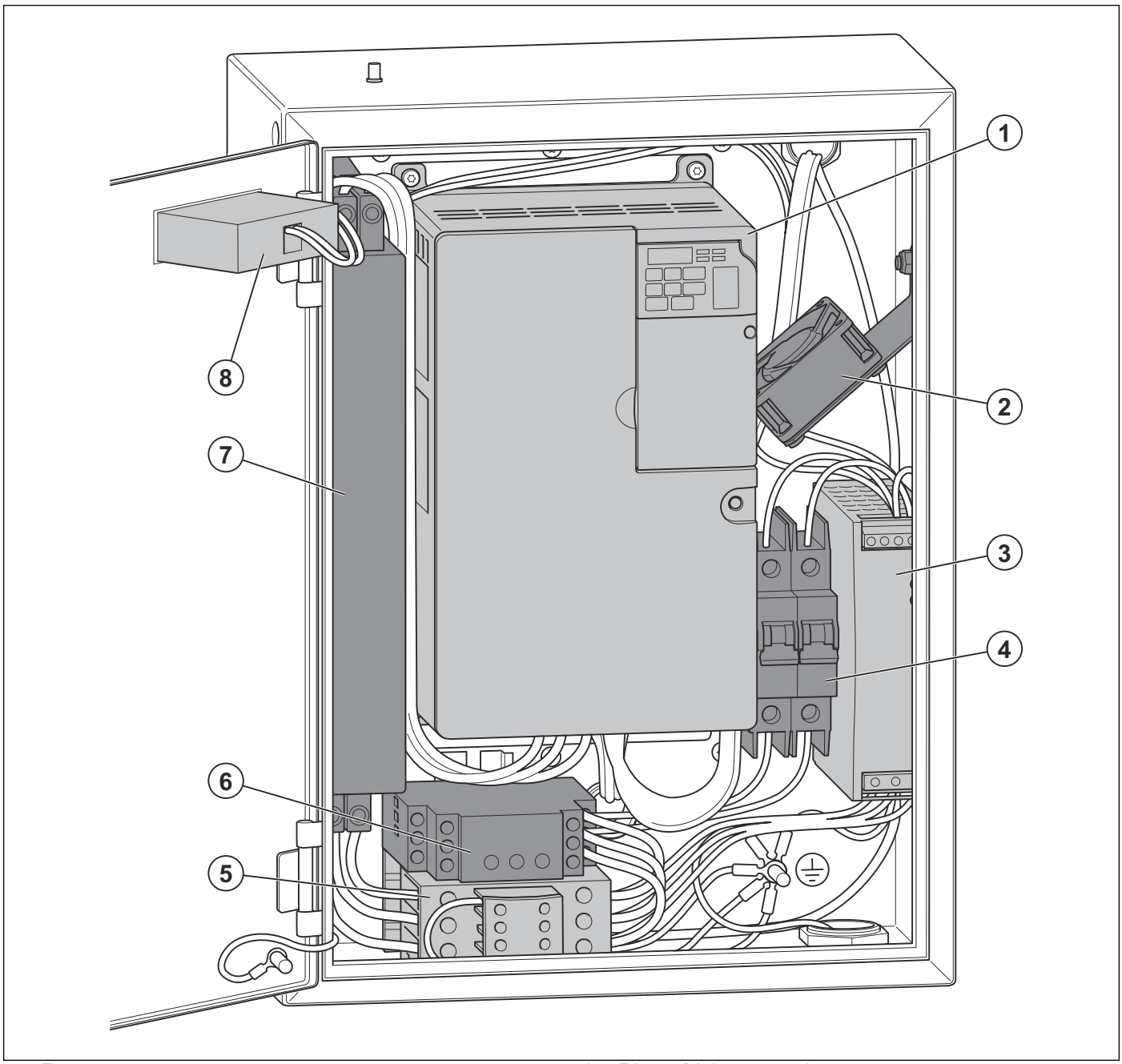
1. Frequency converter
2. MCB
3. Transformer 24 V DC
4. Contactors
5. EMC Filter
6. Hour meter

5.6 Component overview, electrical enclosure, single phase, 200-240V, 4kW, 30A



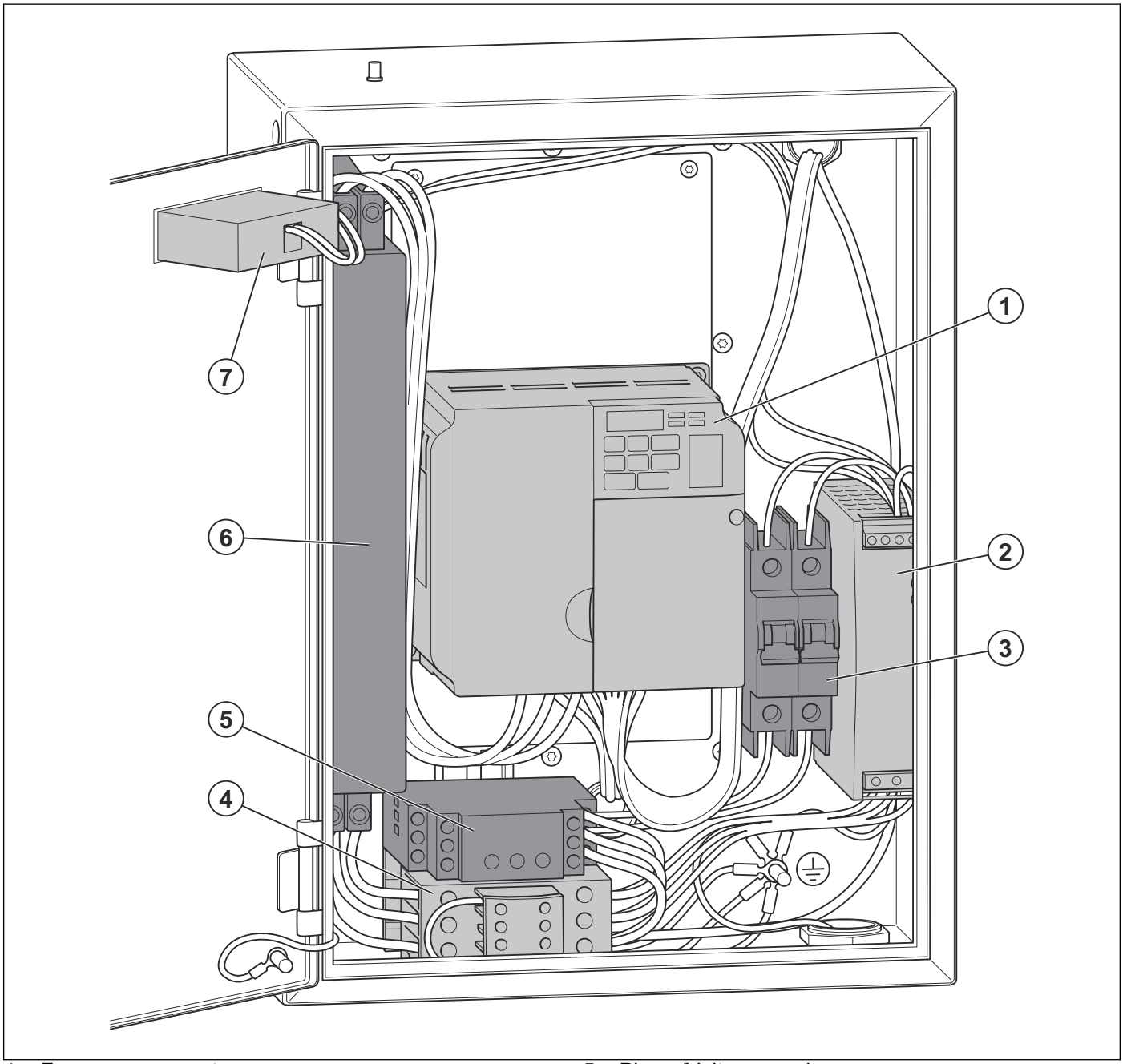
1. Frequency converter
2. Fan
3. Transformer 24 V DC
4. MCB
5. EMC Filter
6. Contactors
7. Hour meter

5.7 Component overview, electrical enclosure, 3-phase, 200-240V, 4kW, 16A



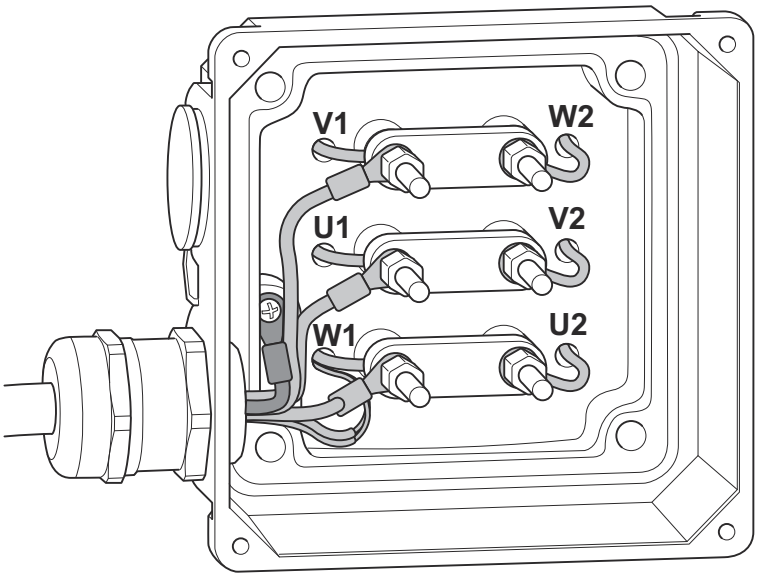
1. Frequency converter
2. Fan
3. Transformer 24 V DC
4. MCB
5. Contactors
6. Phase/Voltage monitor
7. EMC filter
8. Hour meter

5.8 Component overview, electrical enclosure, 3-phase, 380-415V / 3-phase, 440-480V, 4kW, 16A

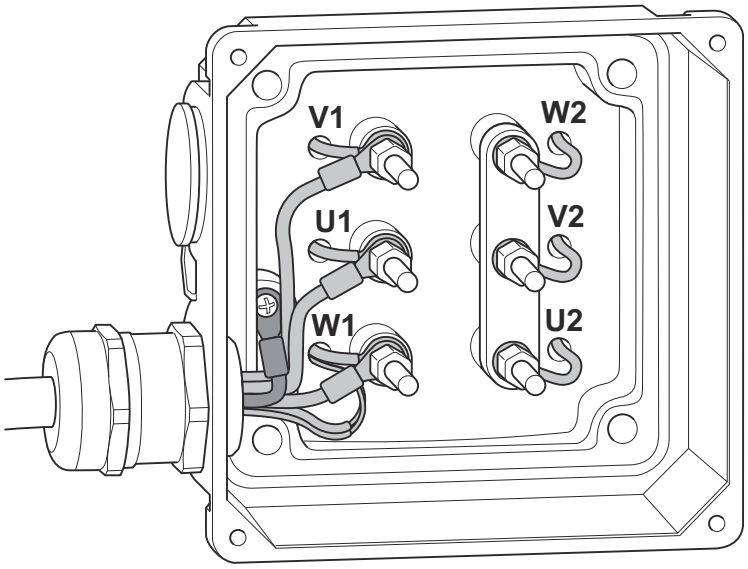


1. Frequency converter
2. Transformer 24 V DC
3. MCB
4. Contactors
5. Phase/Voltage monitor
6. EMC filter
7. Hour meter

5.9 Component overview motor connection box 220-240V



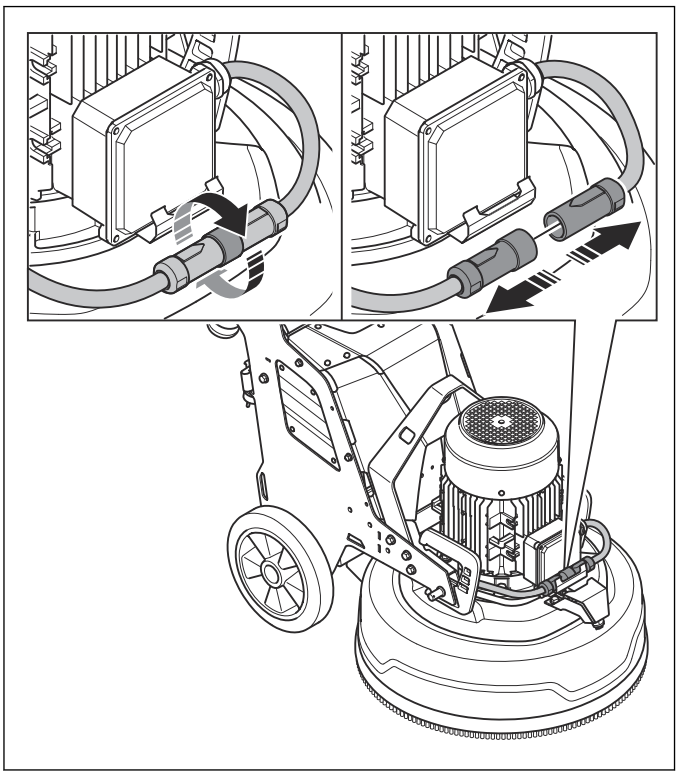
5.10 Component overview motor connection box 380-415V/440-480V



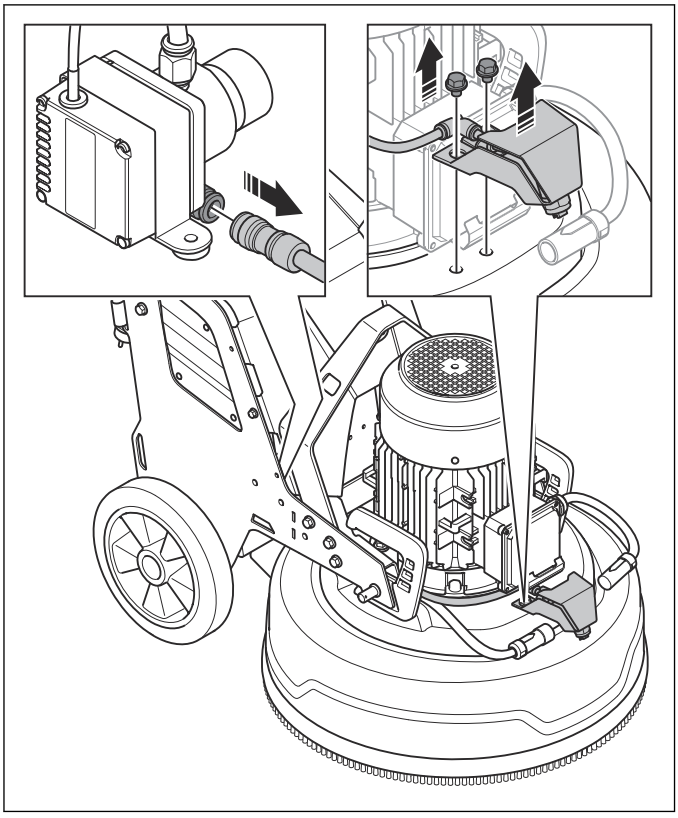
6.1 Motor

6.1.1 To remove the motor and grinding head

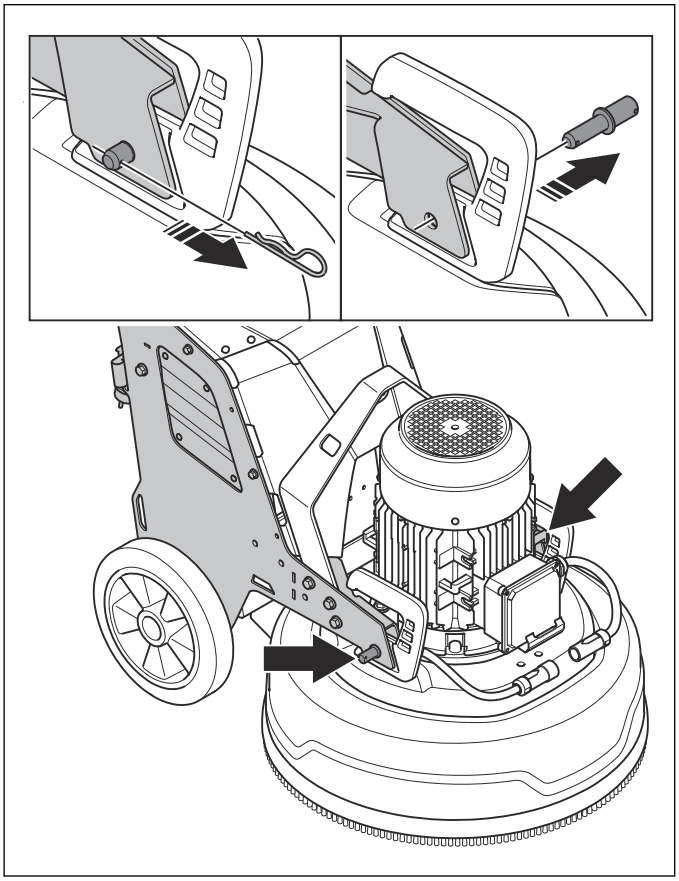
1. Disconnect the cable.



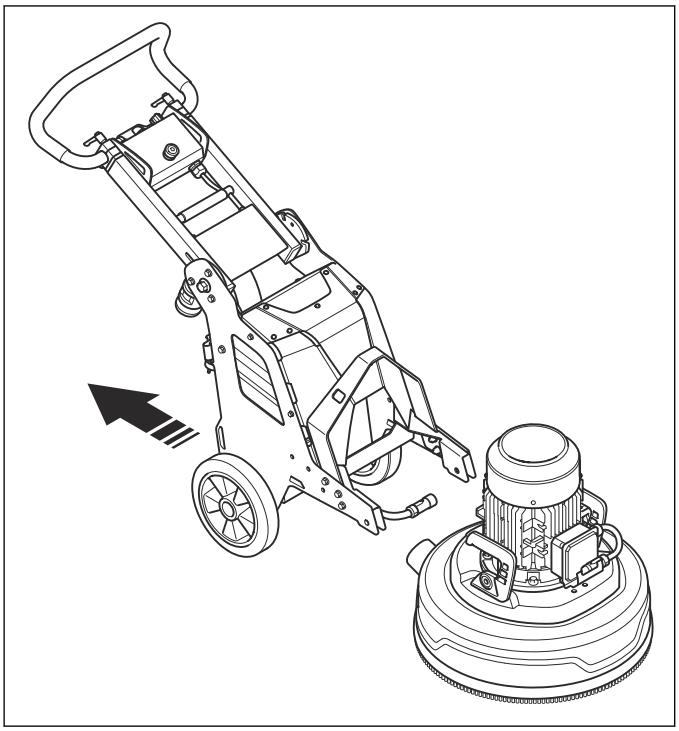
2. Remove the water hose and the mist nozzle (only for PG 5).



3. Remove the spring locking pin and the retaining pin.

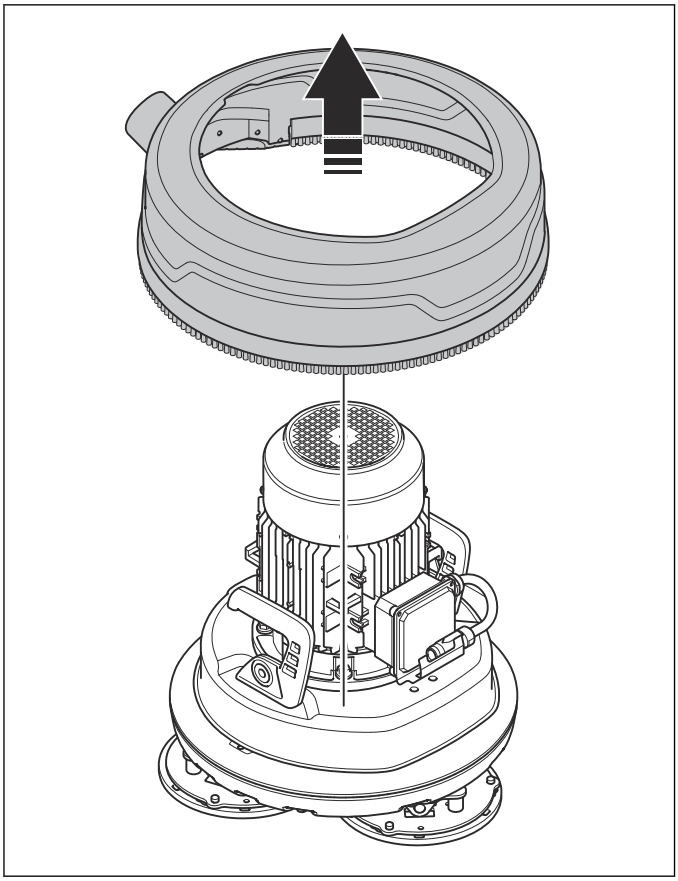


4. Remove the motor and grinding head from the frame.

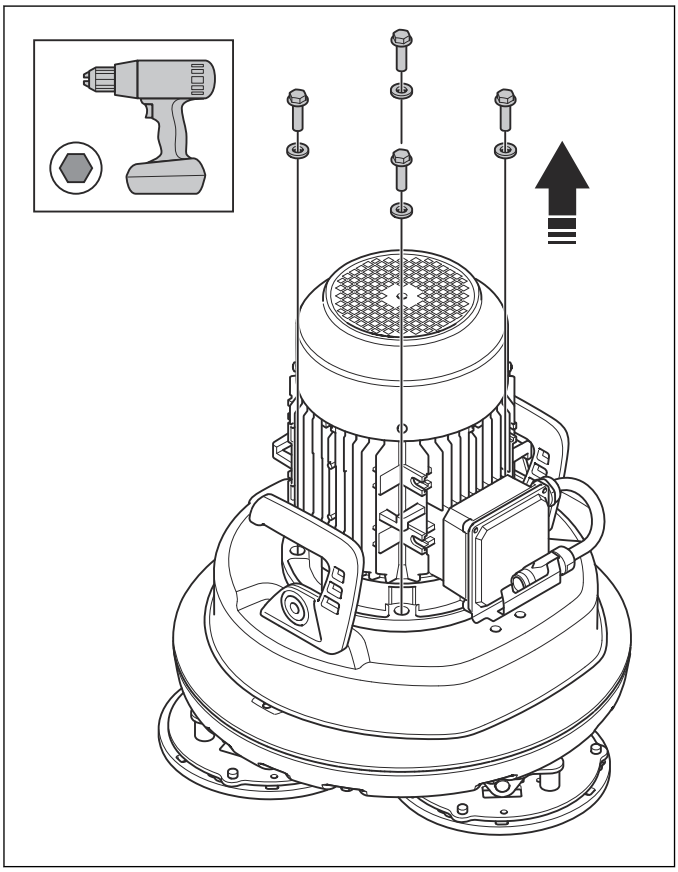


6.1.2 To remove the motor from the grinding head

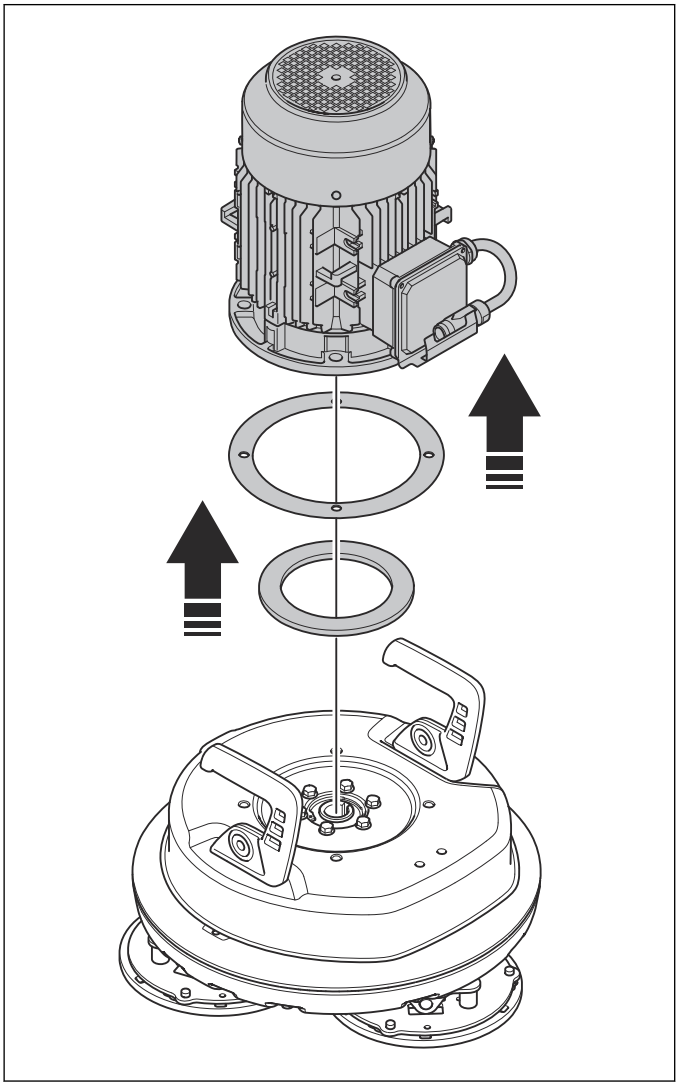
1. Remove the grinding head cover.



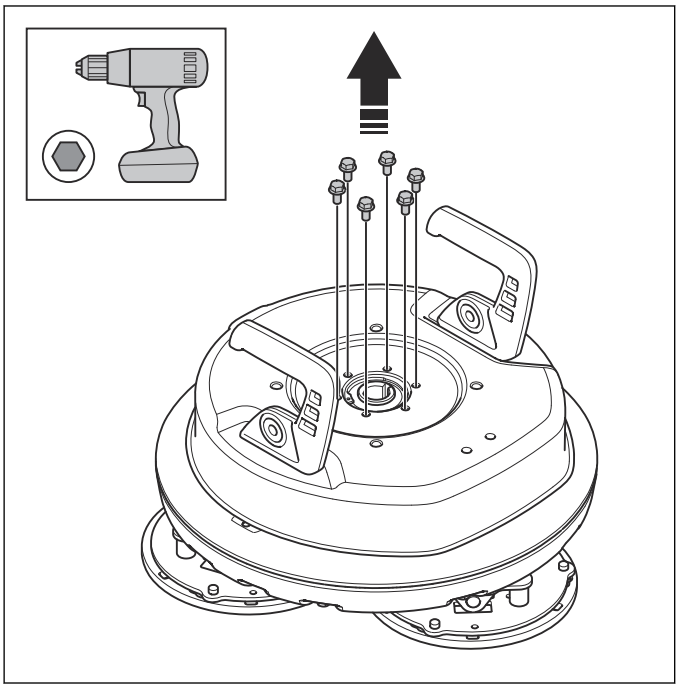
2. Remove the 4 screws and the 4 washers.



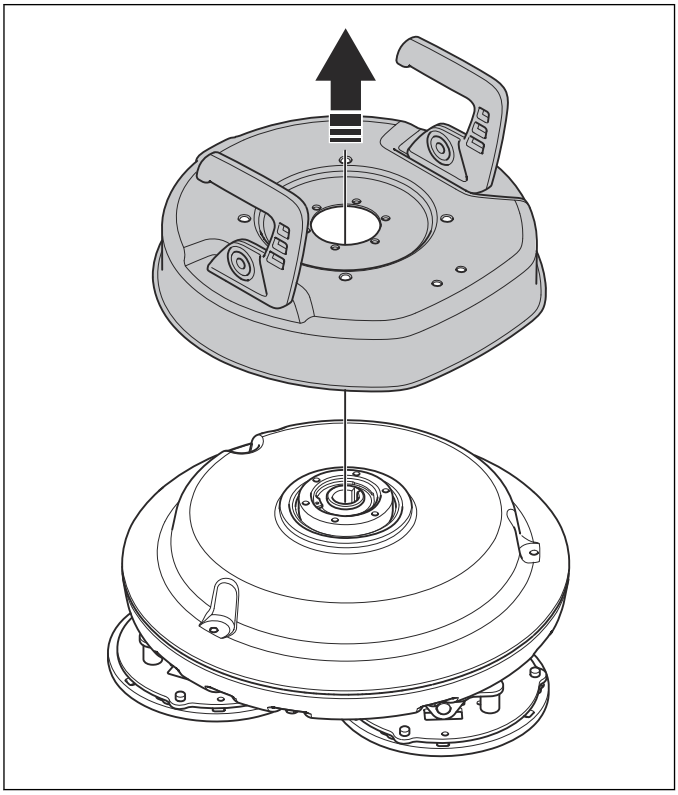
3. Remove the motor from the grinding head.



4. Remove the 6 screws.



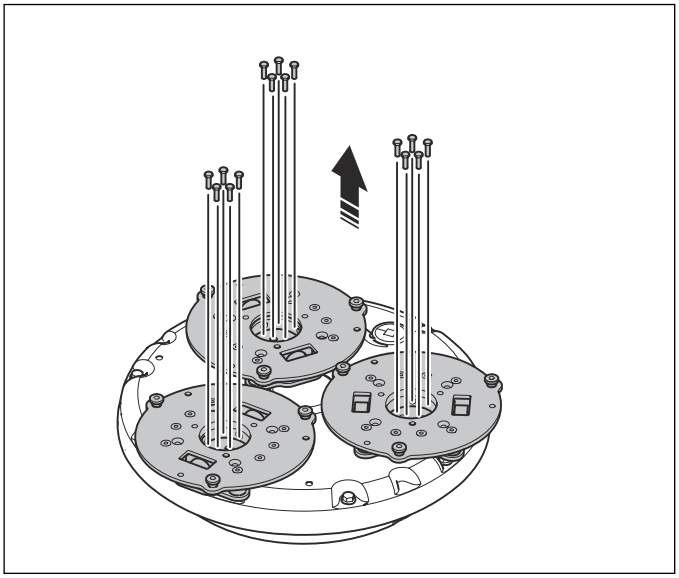
5. Remove the motor bracket.



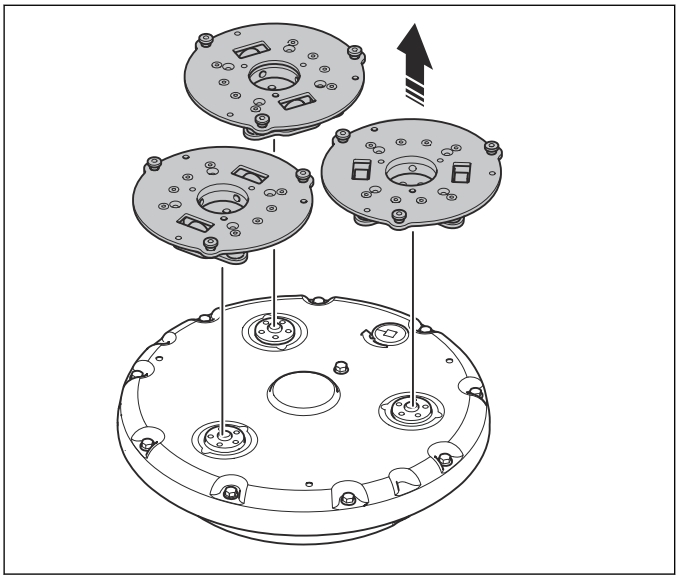
6.2 Grinding head

6.2.1 To remove the tool holders

1. Remove the center screws from the tool holders.

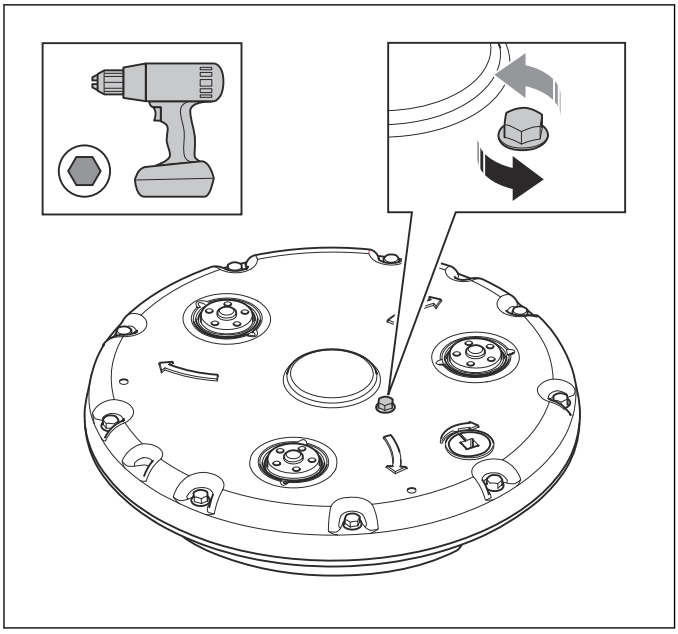


2. Remove the tool holders from the grinding head.

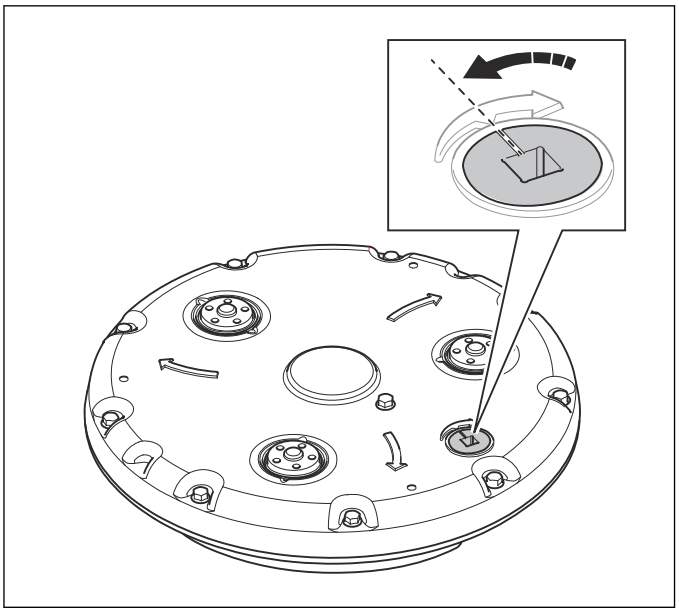


6.2.2 To open the grinding head

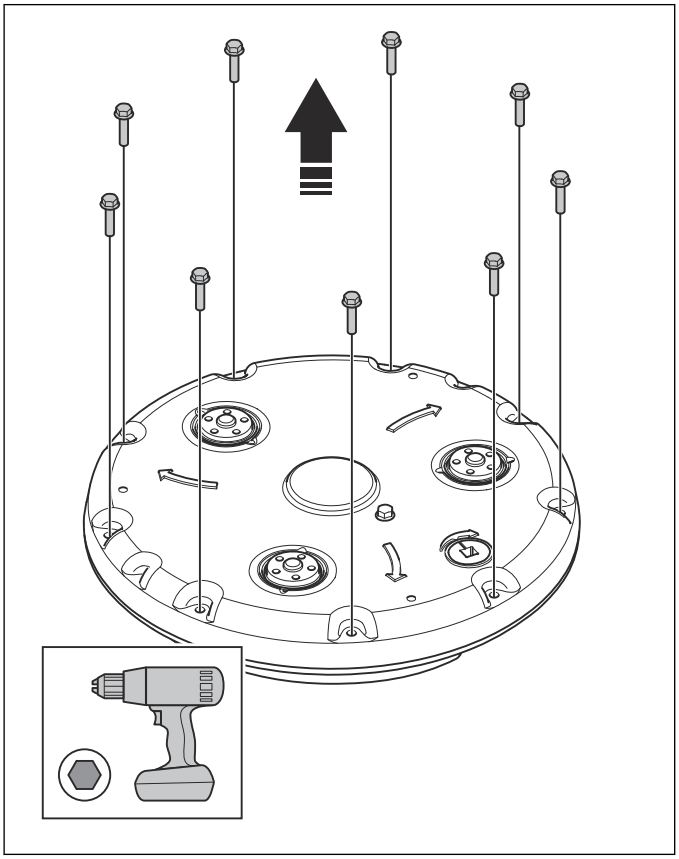
1. Loosen the belt tensioner screw.



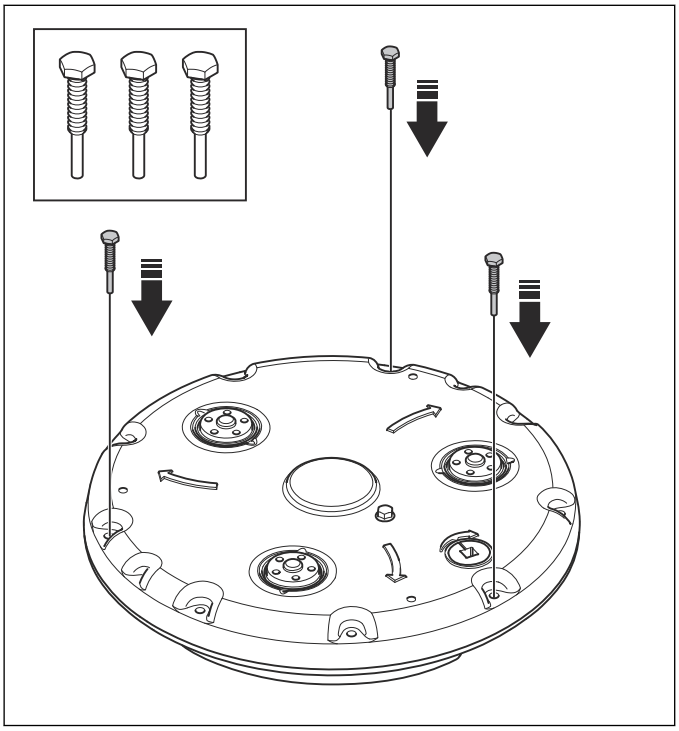
2. Make sure that the line on the belt tensioner aligns with mark on the arrow.



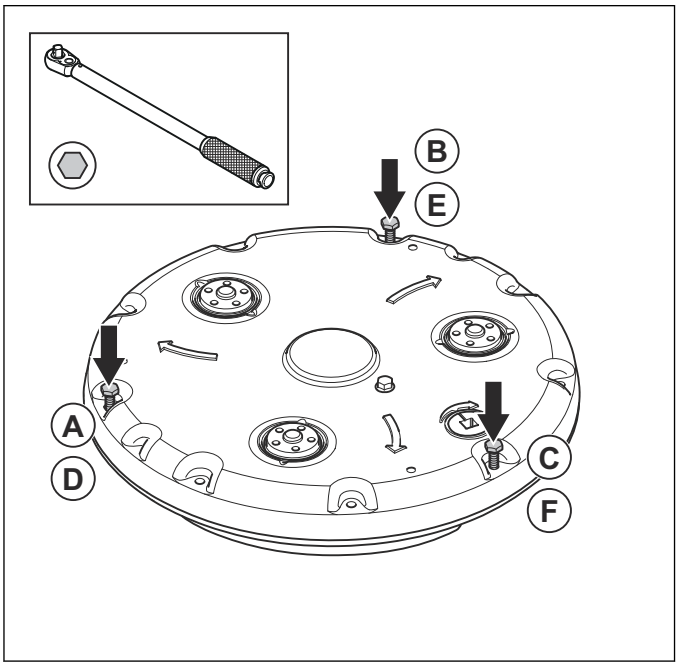
3. Remove the 9 screws from the lid.



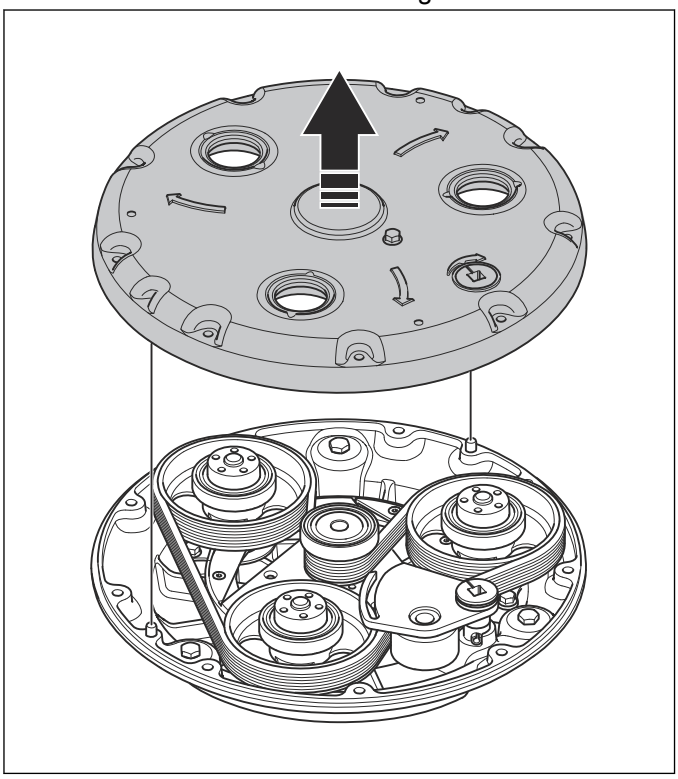
4. Put a removal tool for the grinding head in 3 of the holes. Refer to *Servicing tools overview on page 11*.



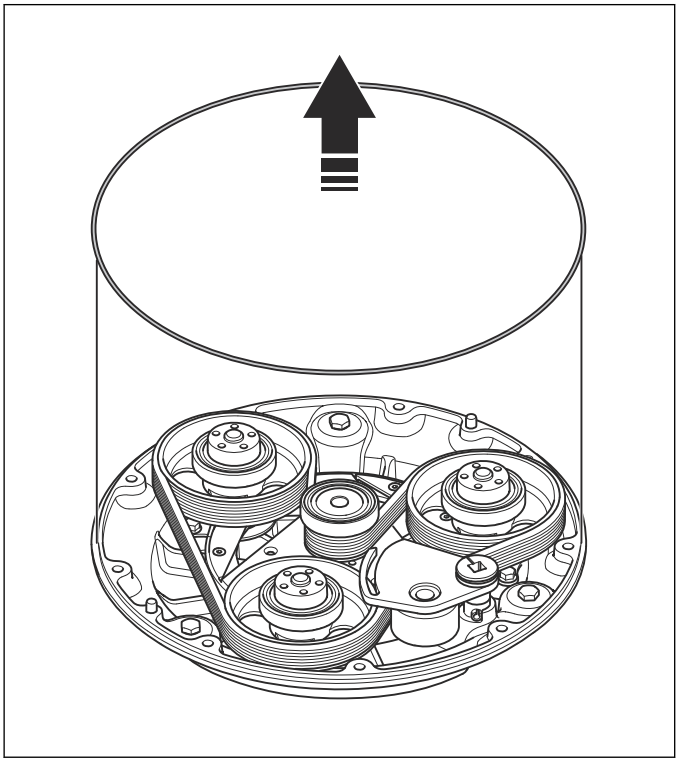
5. Tighten the removal tools for the grinding head. Refer to the picture and tighten in sequence from A to F.



6. Remove the lid from the housing.



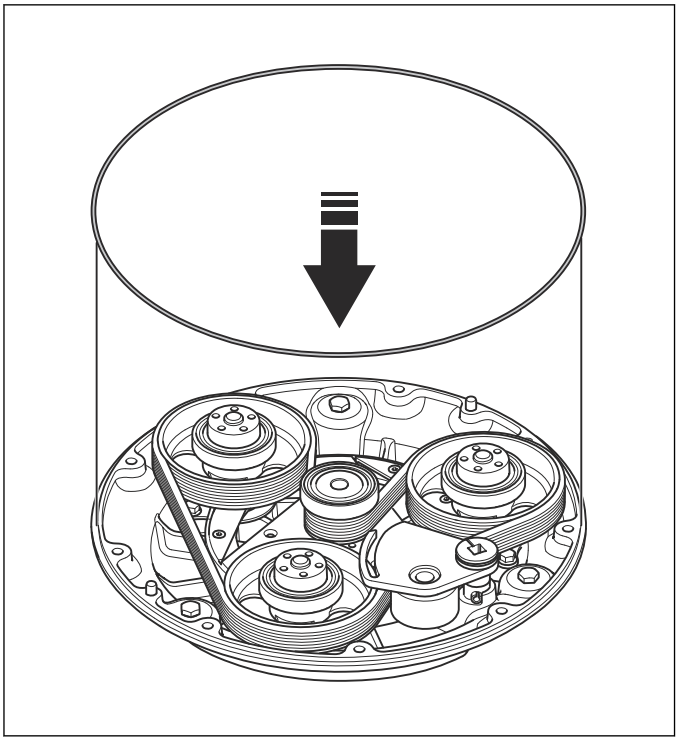
7. Remove the O-ring from the housing.



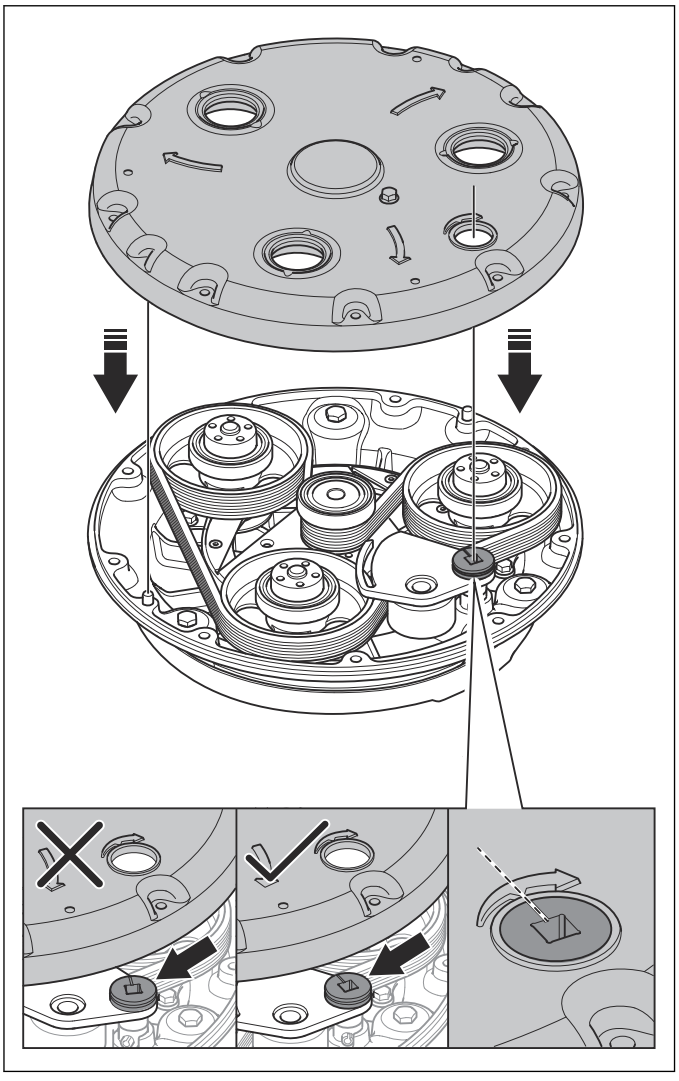
8. Discard the O-ring.

6.2.3 To close the grinding head

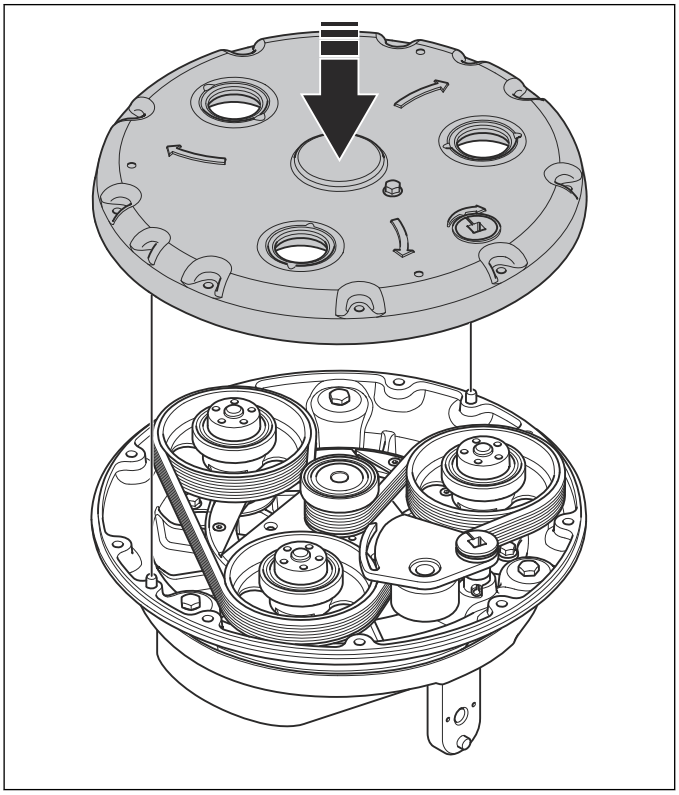
1. Install the new O-ring on the housing.



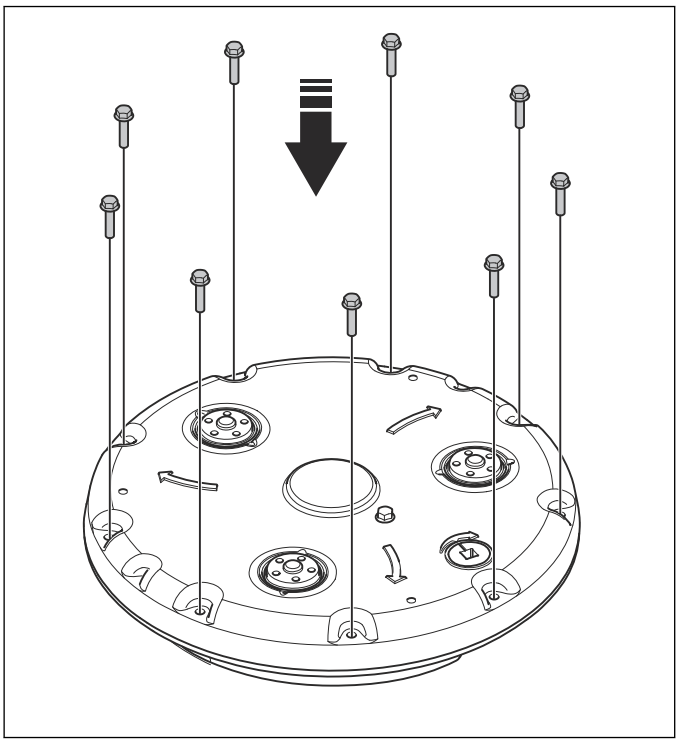
2. Make sure that the line on the belt tensioner aligns with the mark on the arrow.



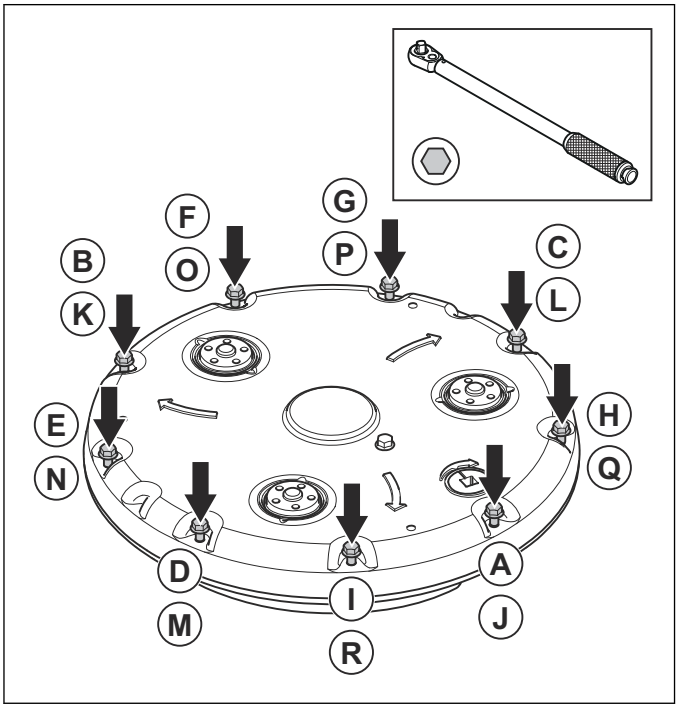
3. Put the lid on the housing.



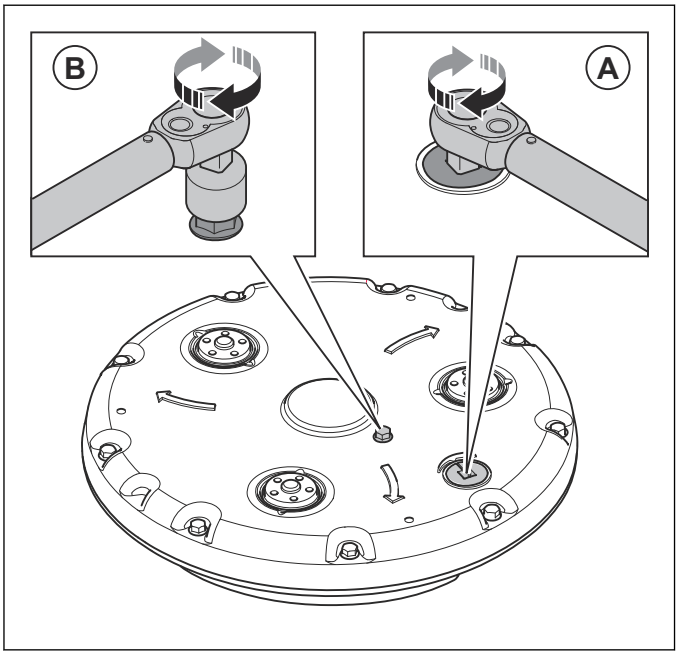
4. Put the 9 screws in the 9 holes.



5. Tighten the screws. Use a torque wrench. Refer to the picture and tighten in sequence from A to R.



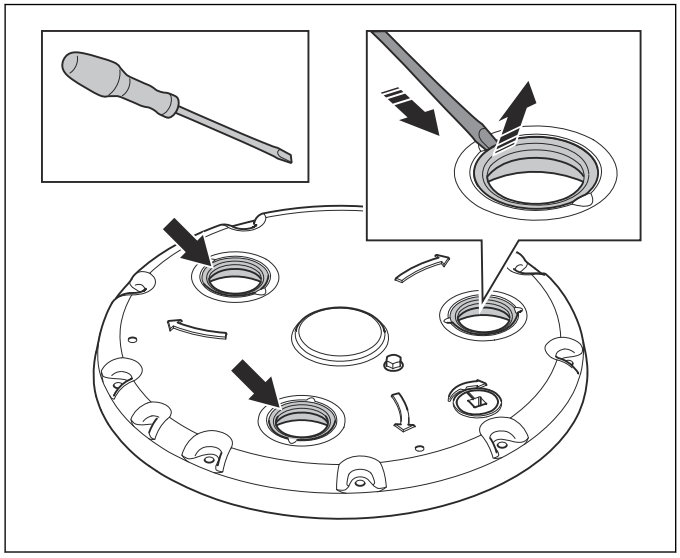
6. Use torque wrenches to adjust the belt tensioner. Hold the belt tensioner (A) with a torque of 50 Nm and tighten the locknut (B) with a torque of 24 Nm.



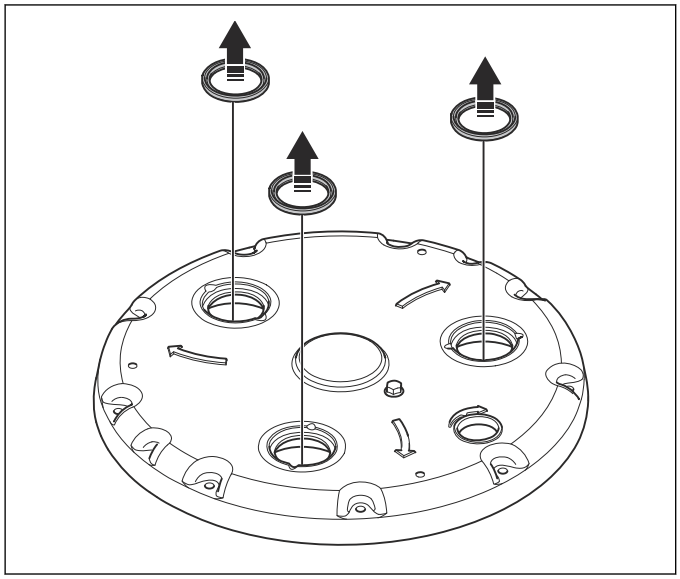
6.3 Radial shaft seal

6.3.1 To remove the radial shaft seals

1. Remove the radial shaft seals. Use a screwdriver.

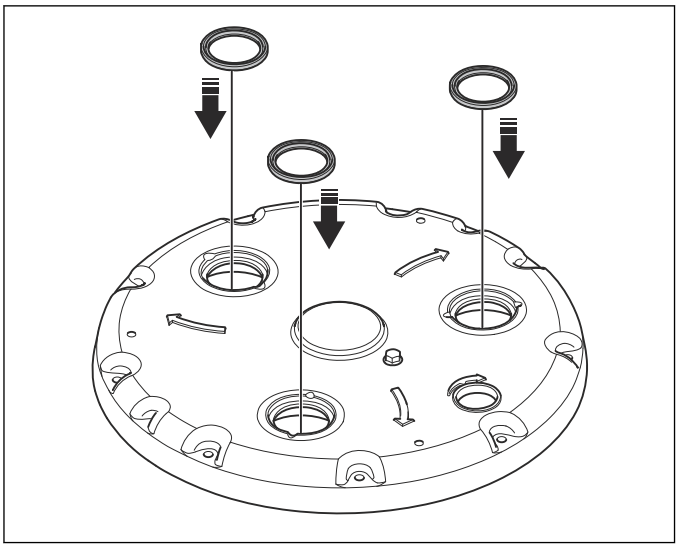


2. Discard the radial shaft seals.



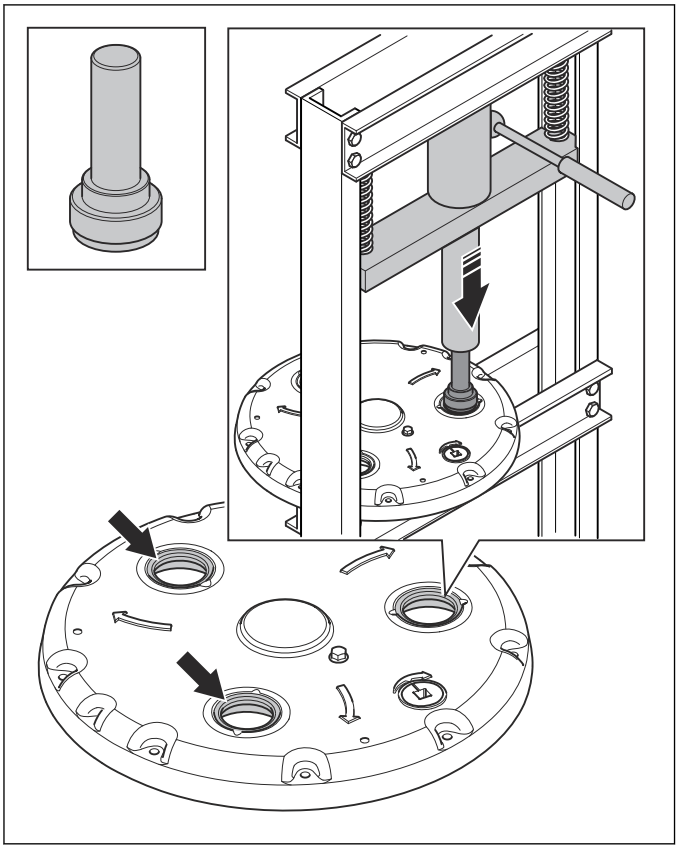
6.3.2 To install the radial shaft seals

1. Put 3 new radial shaft seals on top of the holes in the lid.

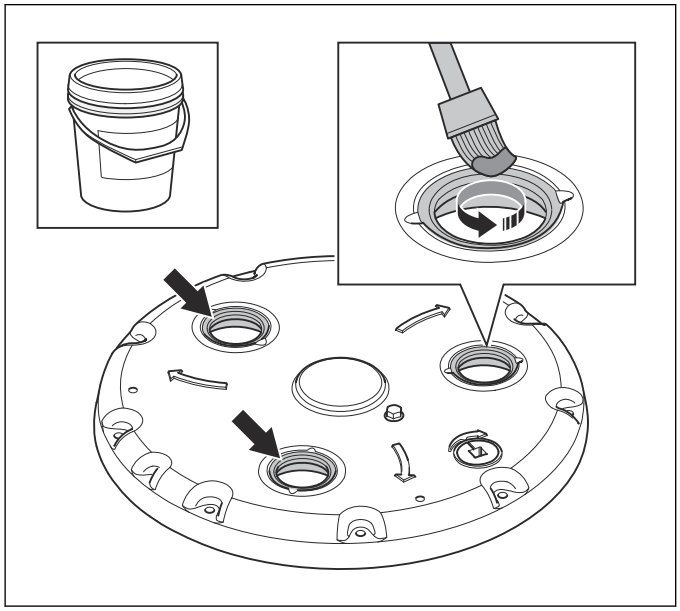


Note: Make sure that the flat side of the radial shaft seal points down in the lid. Refer to the picture.

2. Push the radial shaft seals into the holes. Use a press and a press tool for the radial seals. Refer to *Servicing tools overview on page 11*.



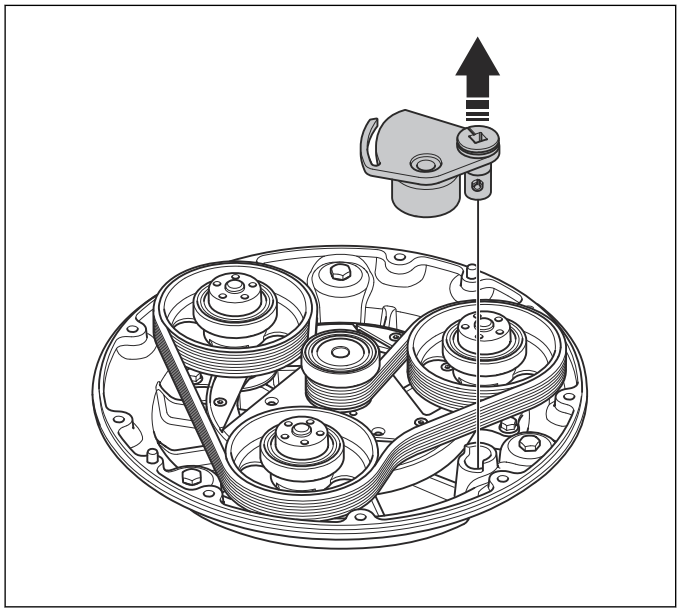
3. Apply grease. Refer to *Servicing tools overview on page 10*.



6.4 Belt tensioner

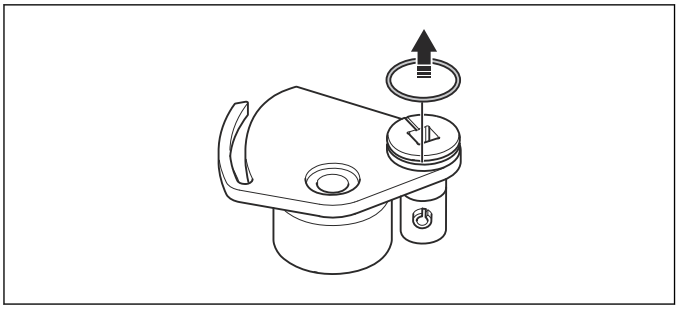
6.4.1 To remove the belt tensioner

1. Remove the belt tensioner from the housing.

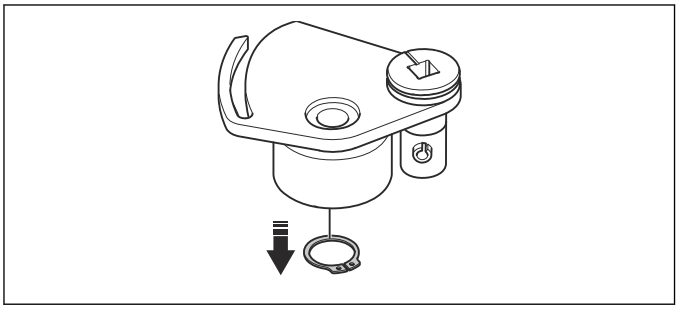


6.4.2 To disassemble the belt tensioner

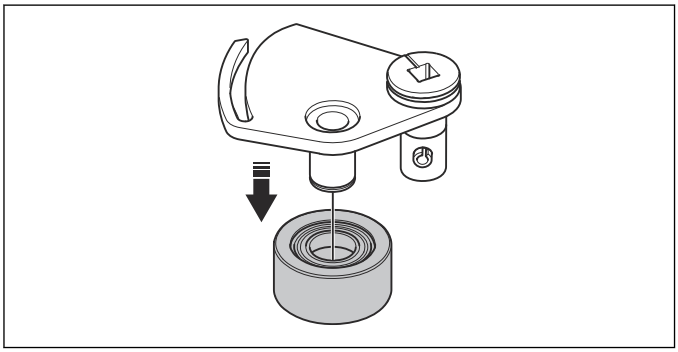
1. Remove the O-ring from the belt tensioner.



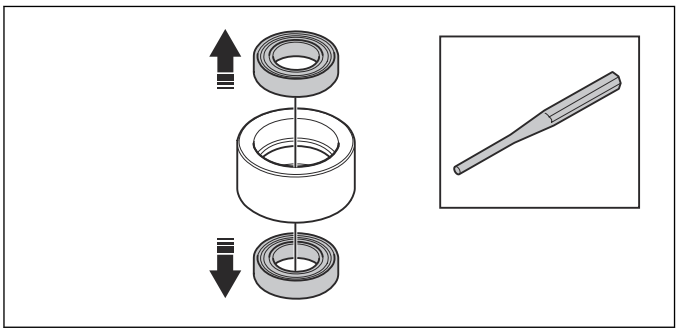
2. Remove the snap ring from the belt tensioner.



3. Remove the idler pulley from the belt tensioner.

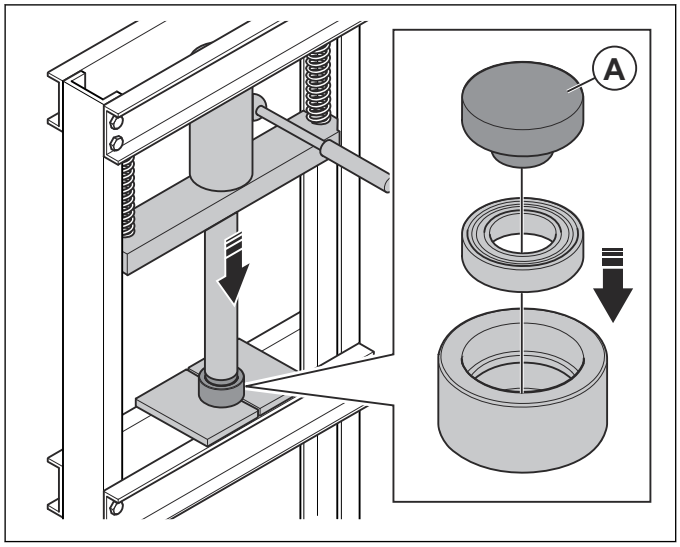


4. Remove the bearings from the idler pulley. Use a mandrel.

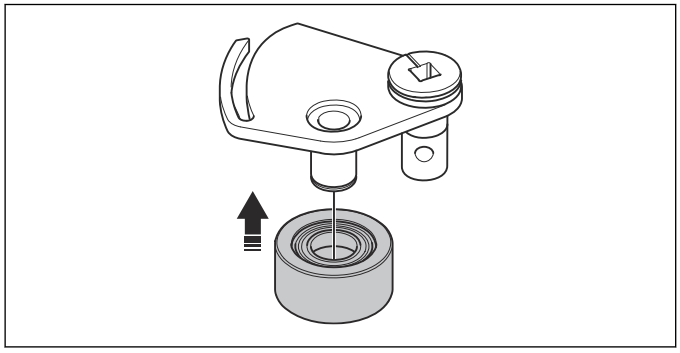


6.4.3 To assemble the belt tensioner

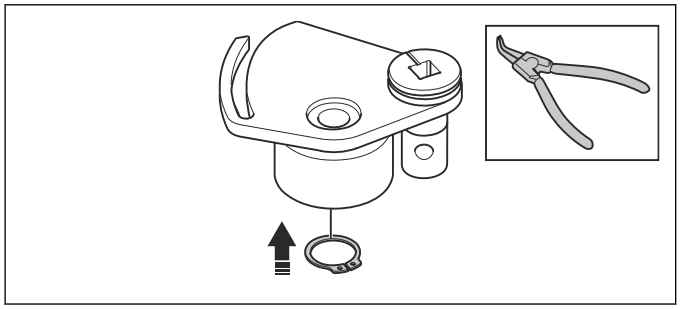
1. Push the bearings into the idler pulley. Use a bearing press tool (A). Refer to *Servicing tools overview on page 11*.



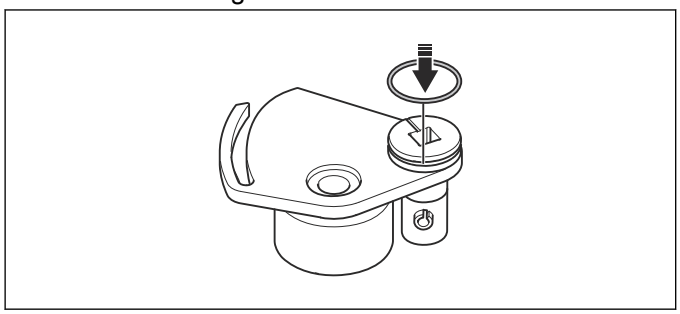
2. Install the idler pulley on the belt tensioner.



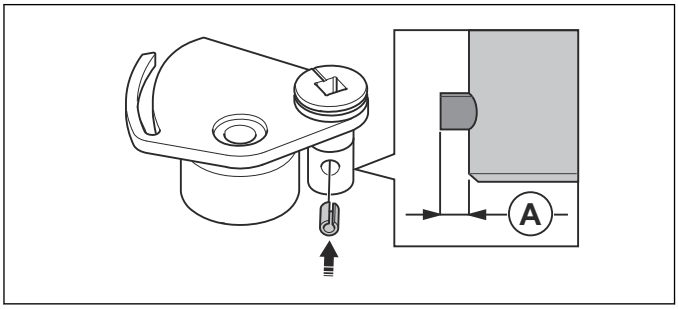
3. Put the snap ring on the belt tensioner.



4. Install the O-ring on the belt tensioner.

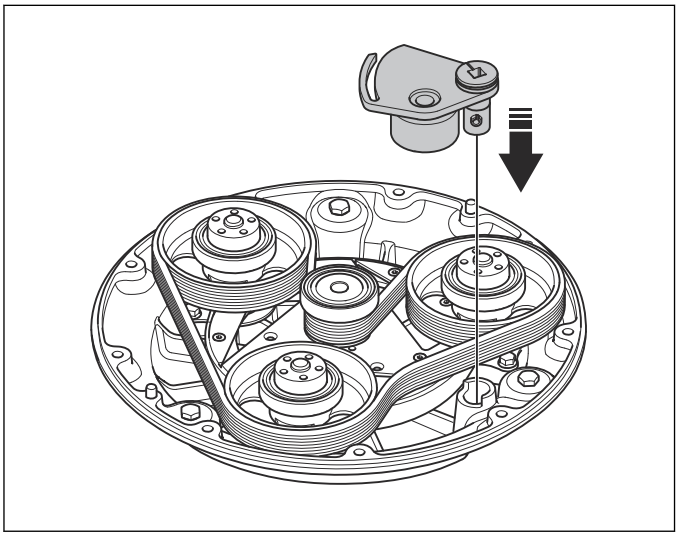


5. Make sure that the spring pin points out 5 mm (A).



6.4.4 To install the belt tensioner

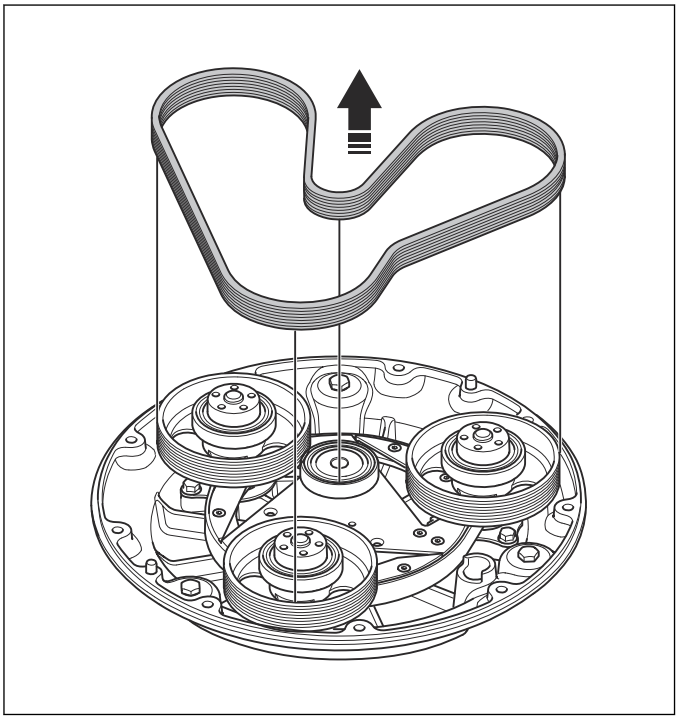
1. Install the belt tensioner in the housing.



6.5 Primary belt

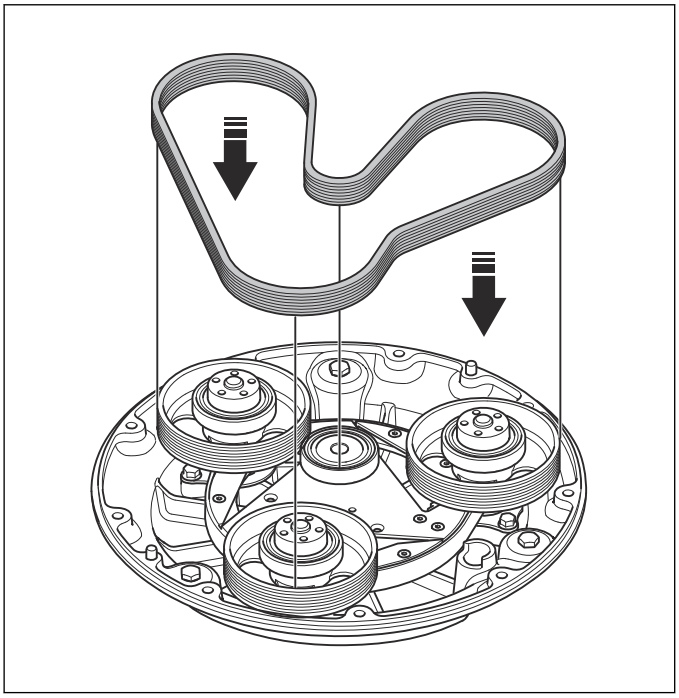
6.5.1 To remove the primary belt

- Remove the primary belt from the housing.



6.5.2 To install the primary belt

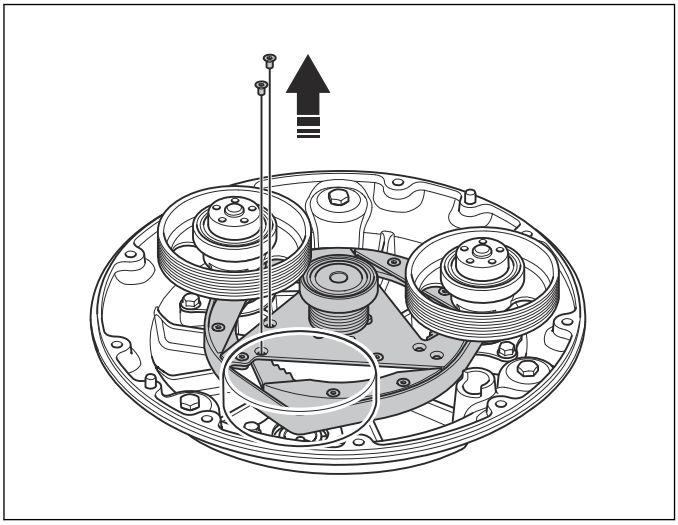
1. Remove the belt tensioner from the housing. Refer to *To remove the belt tensioner on page 28*.
2. Install the primary belt in the housing.



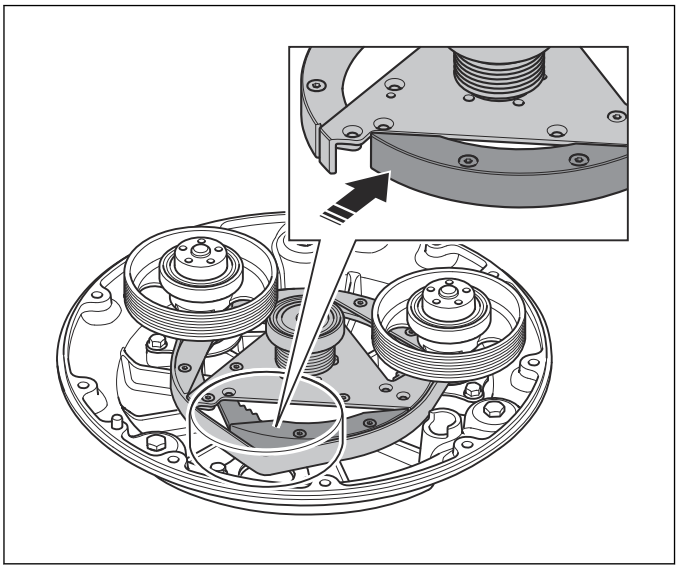
6.6 Hub assemblies

6.6.1 To remove the hub assemblies

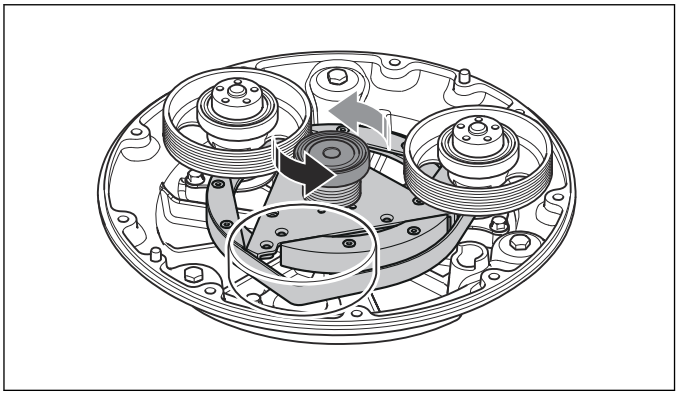
1. Remove the 2 screws from the locking plate.



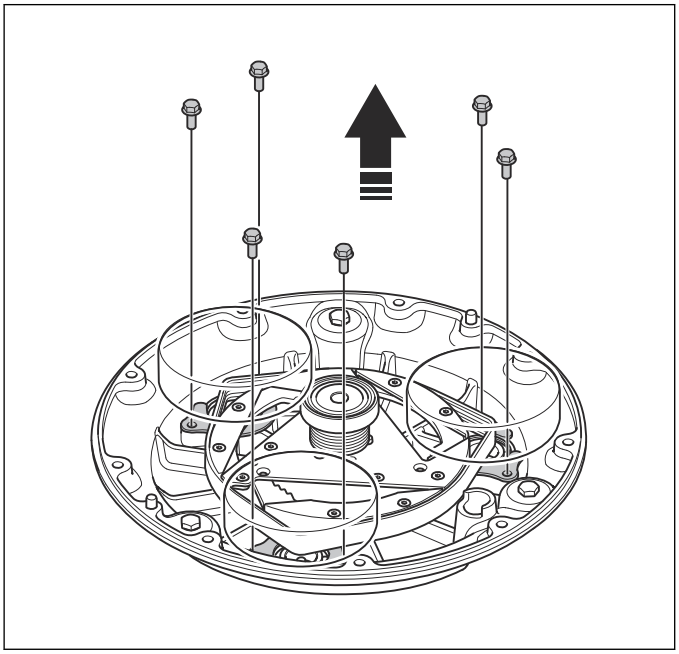
2. Release the locking plate.



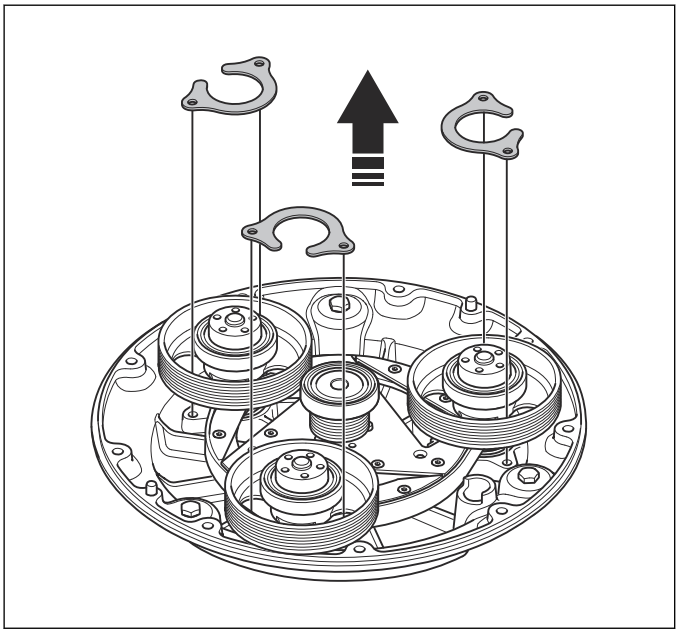
3. Turn the secondary pulley into a position where you can get access to the screws for the washers.



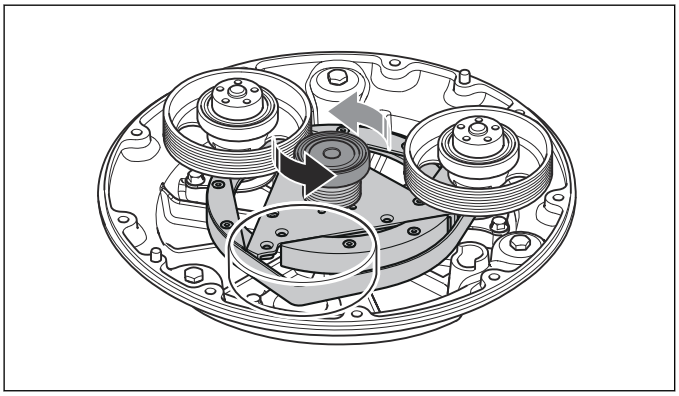
4. Remove the 6 screws.



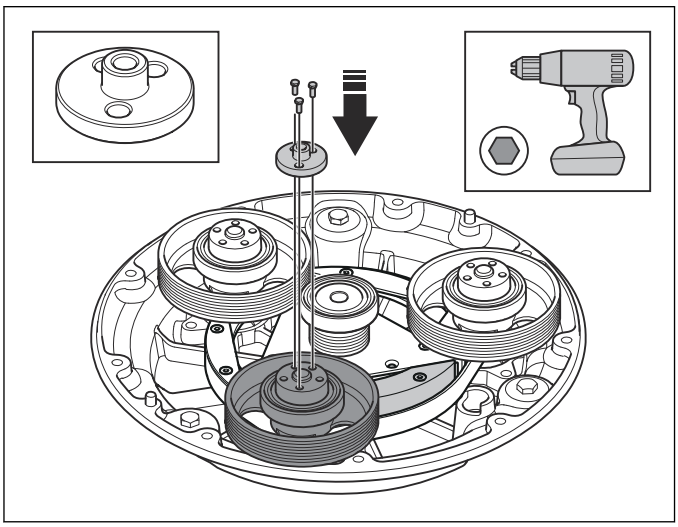
5. Remove the 3 washers.



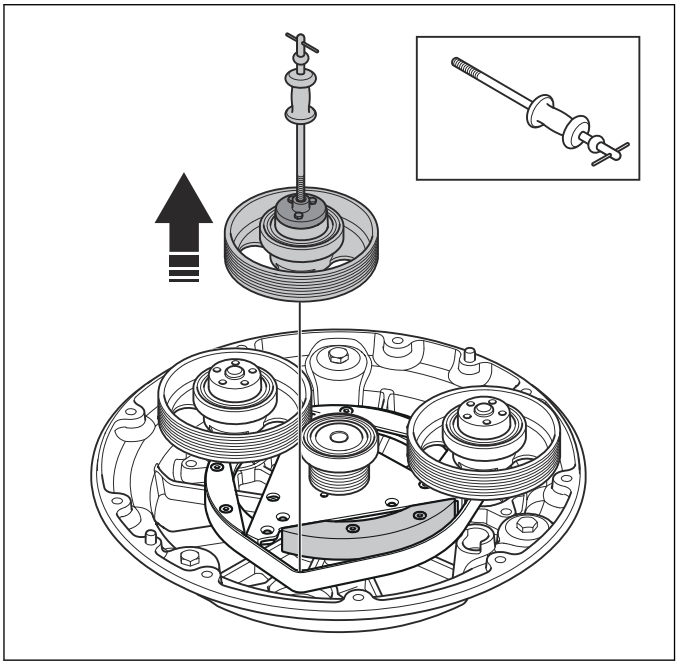
6. Turn the secondary pulley into a position where you can remove 1 hub assembly.



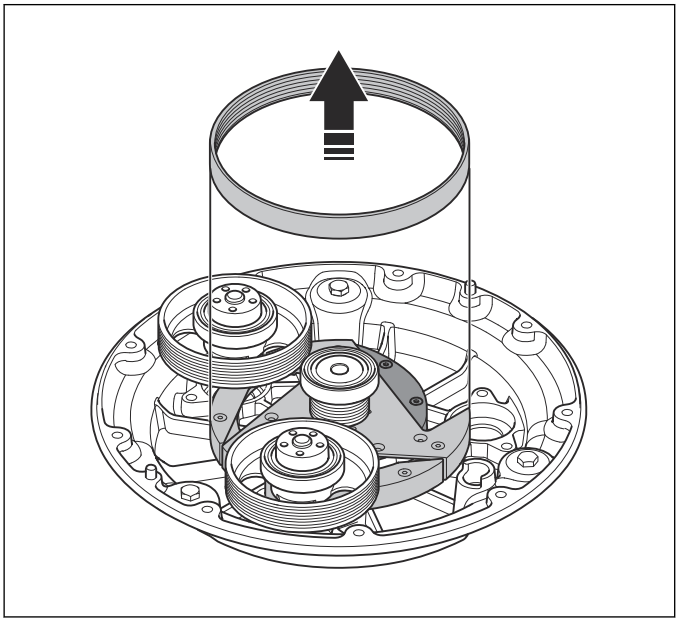
7. Remove 1 hub assembly. If the hub assembly cannot be removed by hand, put an adapter on the hub shaft. Refer to *Servicing tools overview on page 10*



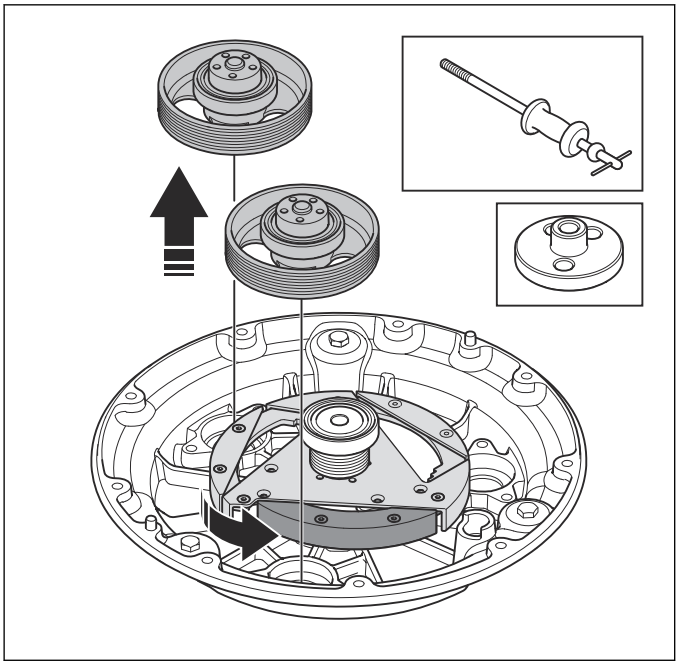
8. Put a sliding hammer on the adapter and remove the hub assembly.



9. Remove the secondary belt.

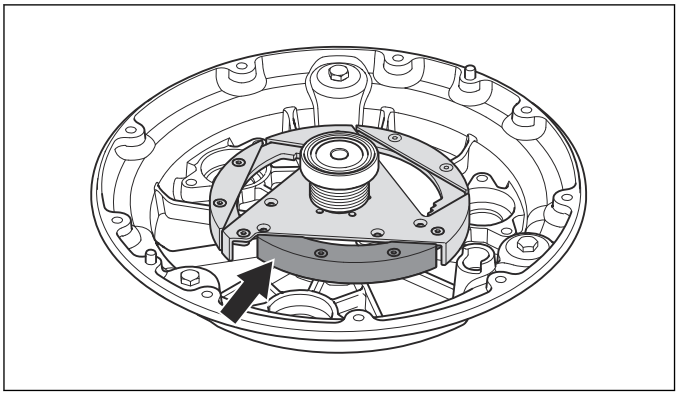


10. Remove the 2 remaining hub assemblies.

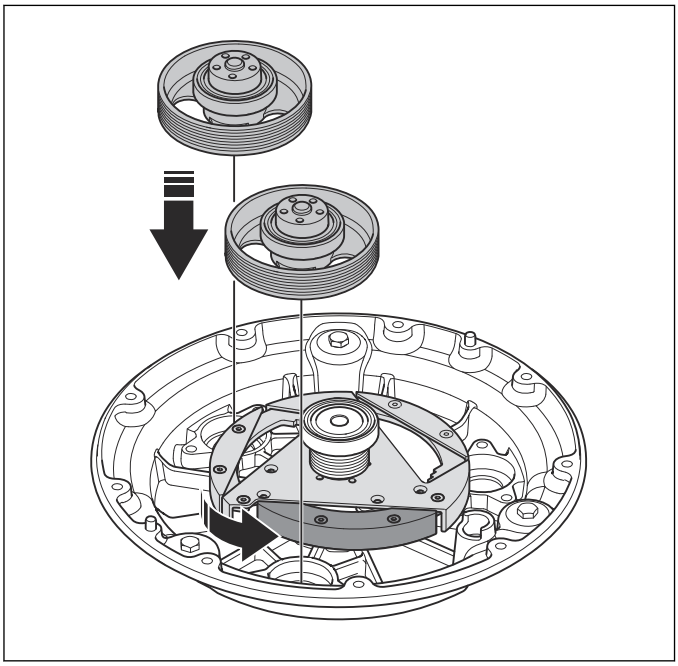


6.6.2 To install the hub assemblies

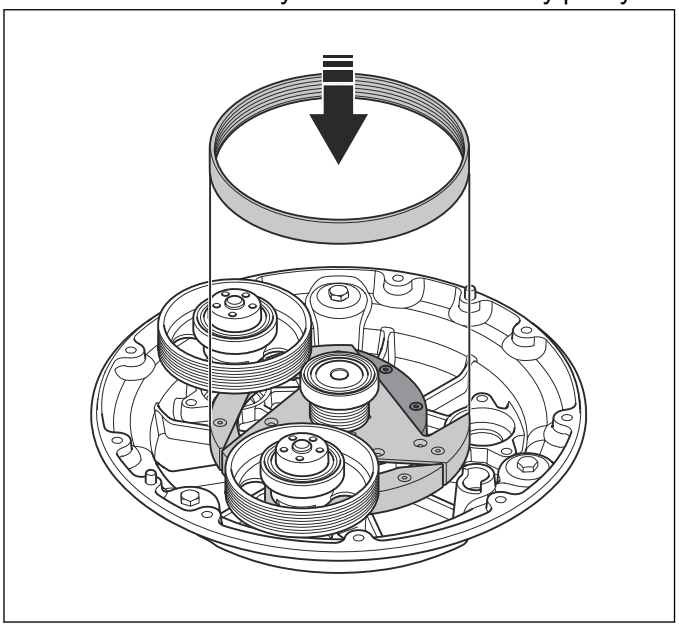
1. Push 1 side of the secondary pulley to its inner position where you can install the hub assemblies in the housing.



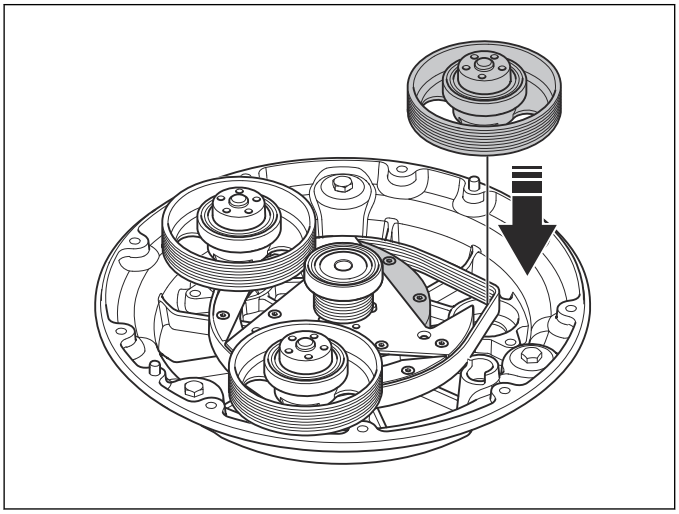
2. Move the secondary pulley into a position where you can install the hub. Install 2 hub assemblies in the housing.



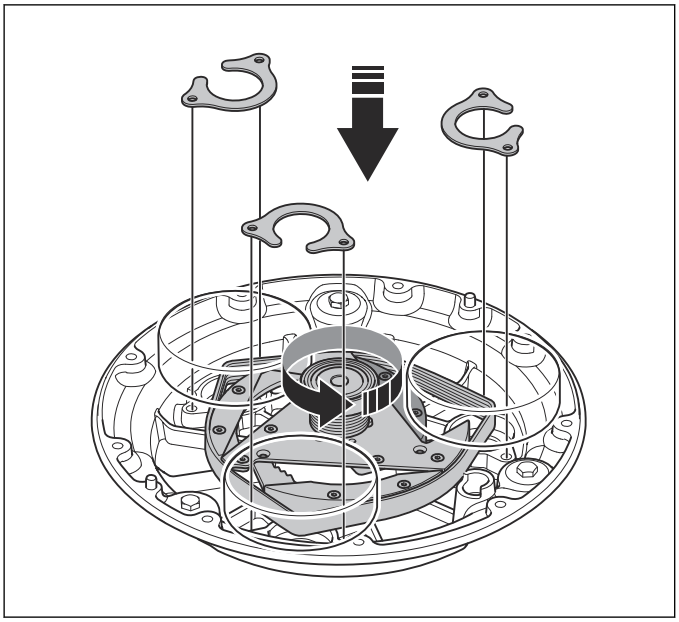
3. Install the secondary belt on the secondary pulley.



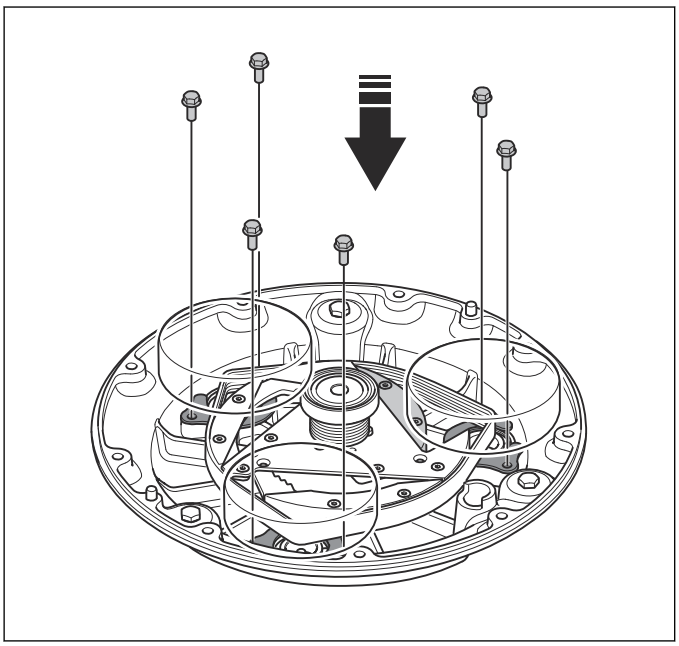
4. Install the third hub assembly in the housing.



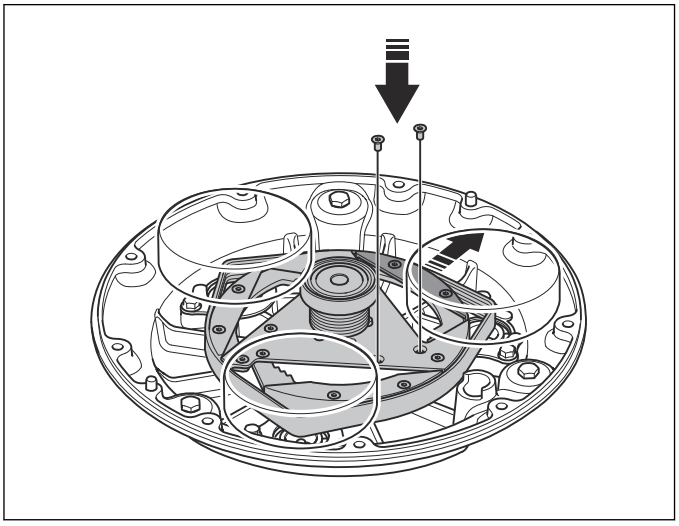
5. Put the 3 washers on the shafts.



6. Install the screws in the washers.

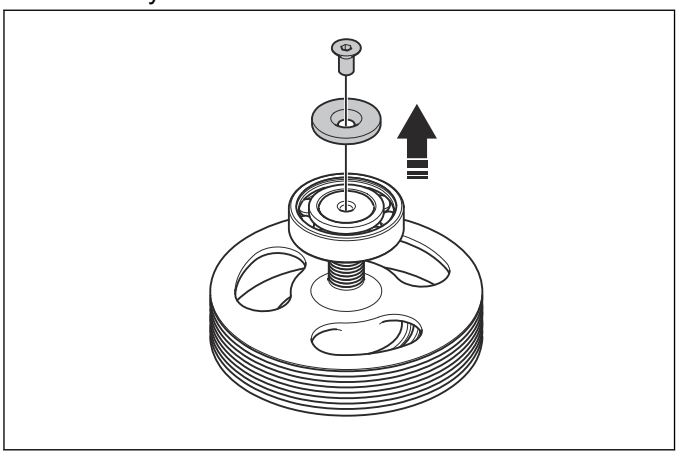


7. Put the belt tensioner in the outer position. Pull out the secondary belt and attach the belt tensioner.

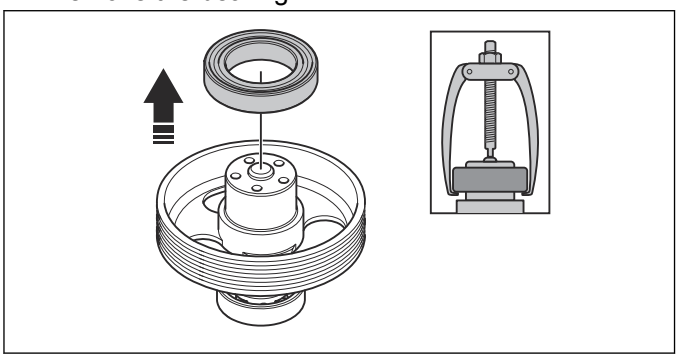


6.6.3 To disassemble the hub assembly

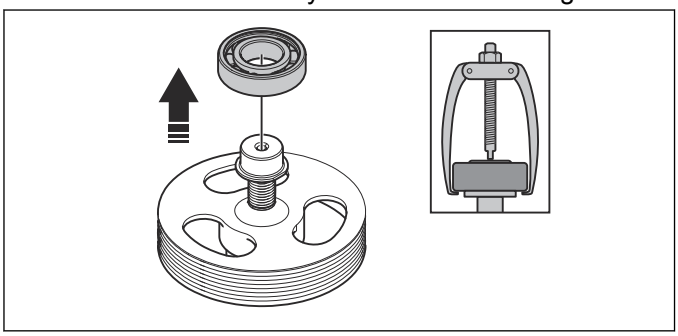
1. Remove the screw and washer from the hub assembly.



2. Remove the bearing.

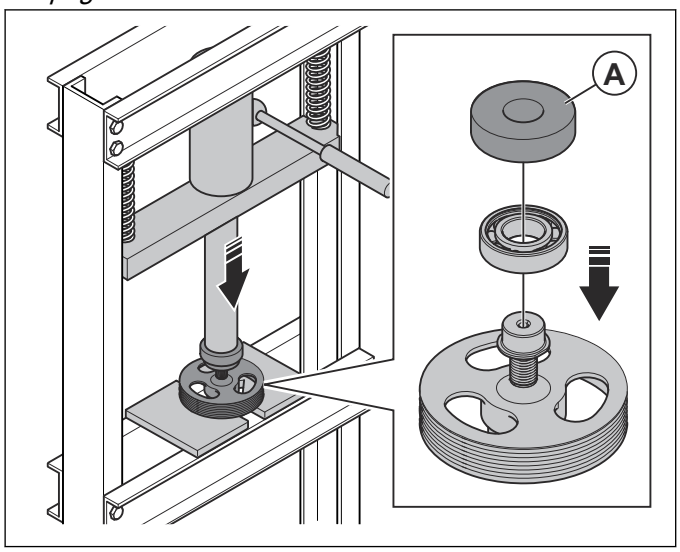


3. Turn the hub assembly. Remove the bearing.

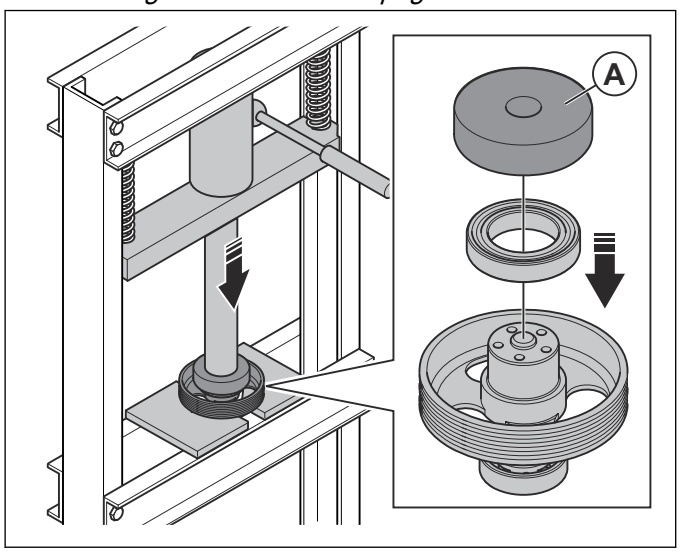


6.6.4 To assemble the hub assembly

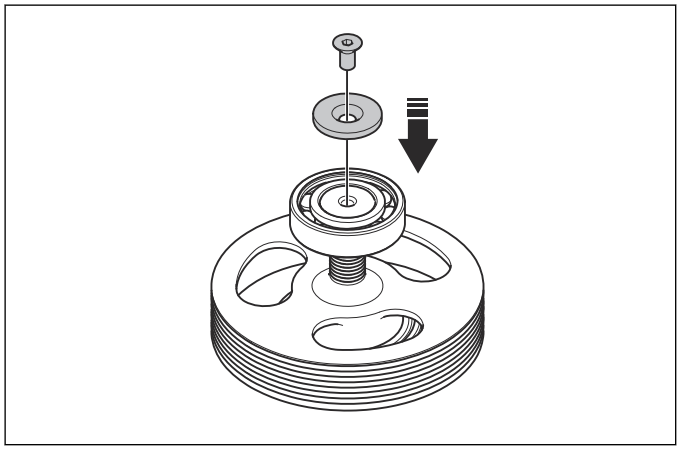
1. Push the bearing onto the hub assembly. Use a press tool (A). Refer to *Servicing tools overview on page 11*.



2. Turn the hub assembly and push the bearing onto the hub assembly. Use a press tool (A). Refer to *Servicing tools overview on page 11*.

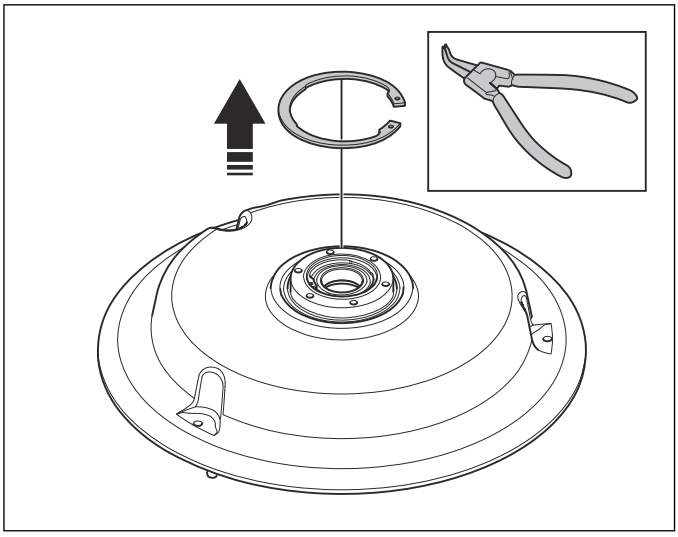


3. Install the washer and screw on the hub assembly.

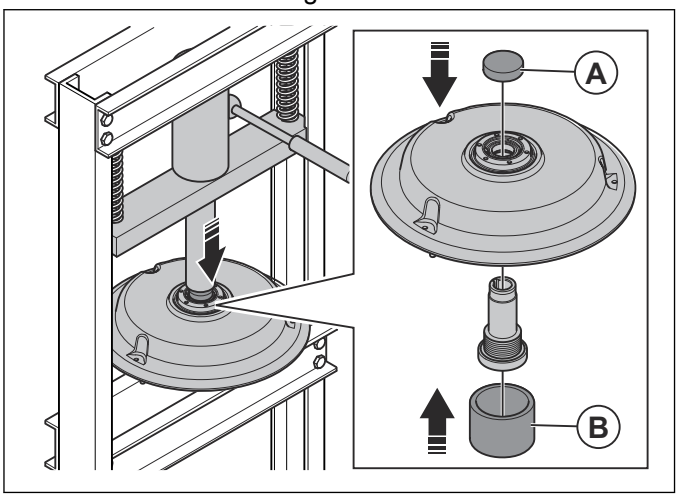


6.6.5 To disassemble the secondary pulley

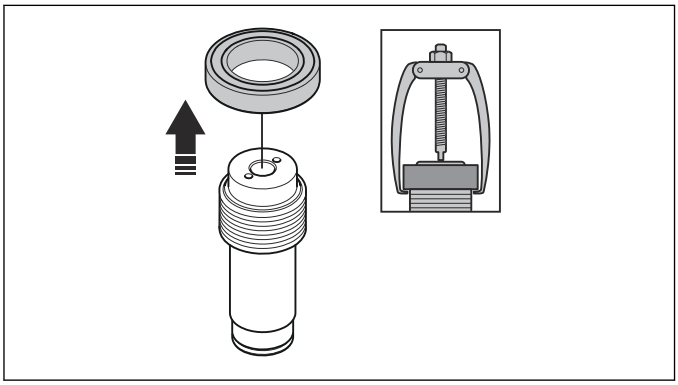
1. Remove the snap ring from the secondary pulley.



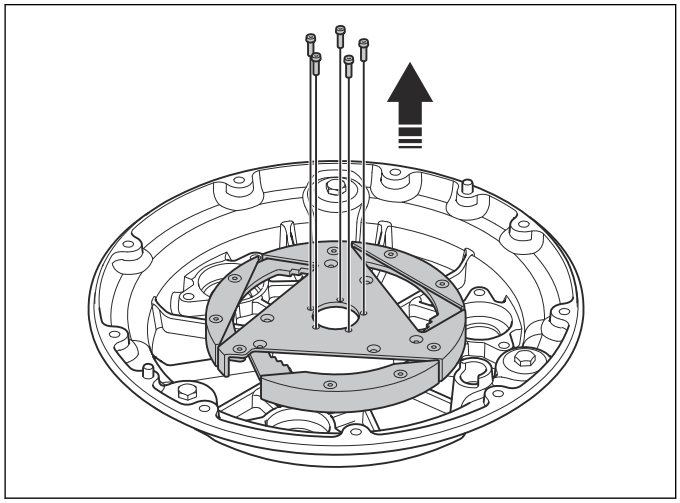
2. Push the pulley center. Use a mandrel with a diameter of 32–38 mm. Use a support with minimum inner diameter 80 mm, maximum outer diameter 112 mm and minimum height 140 mm.



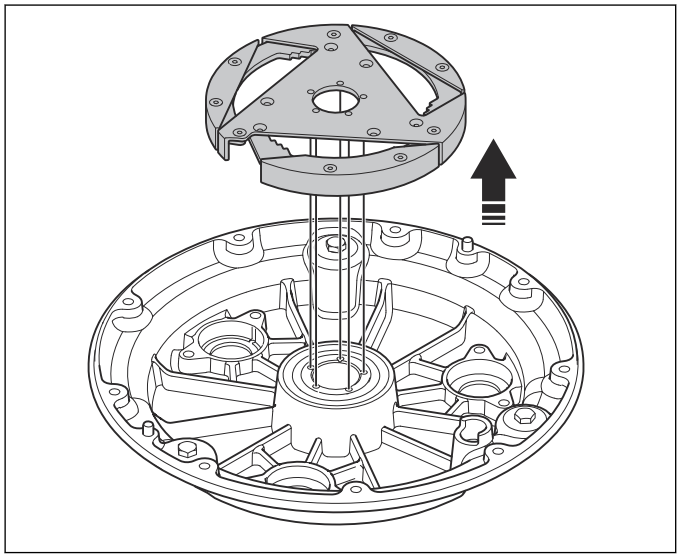
3. Remove the bearing from the pulley center.



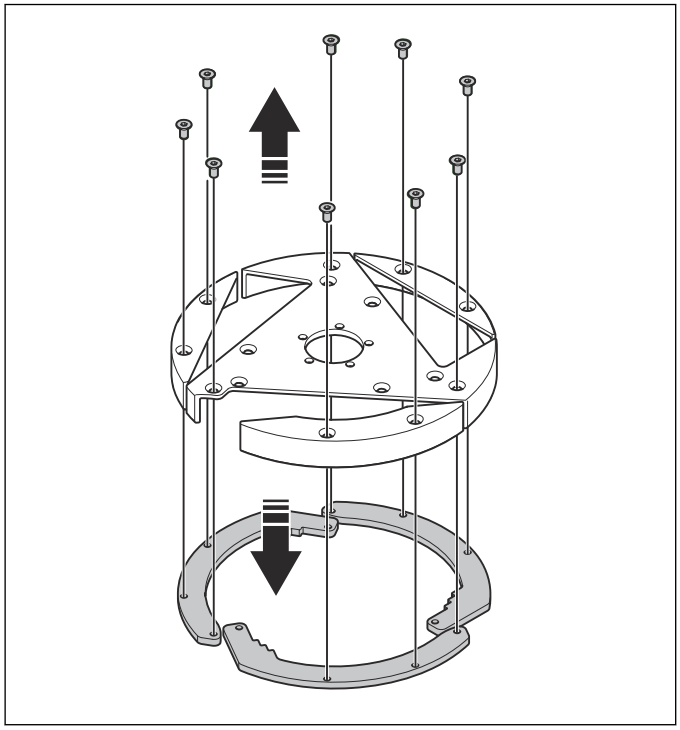
4. Remove the 5 screws from the center of the secondary pulley.



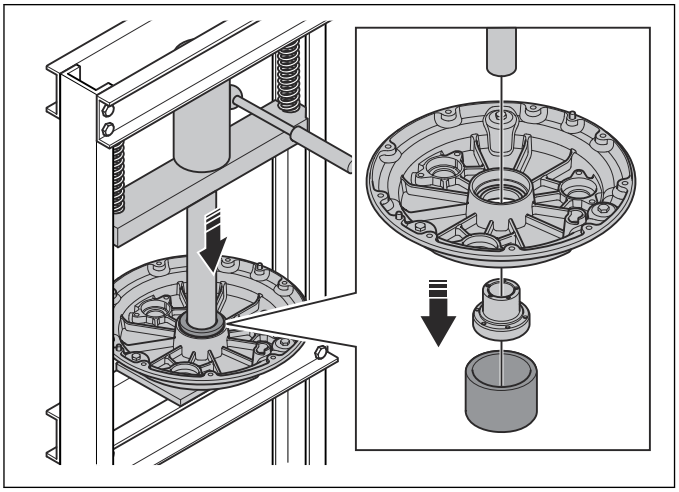
5. Remove the secondary pulley.



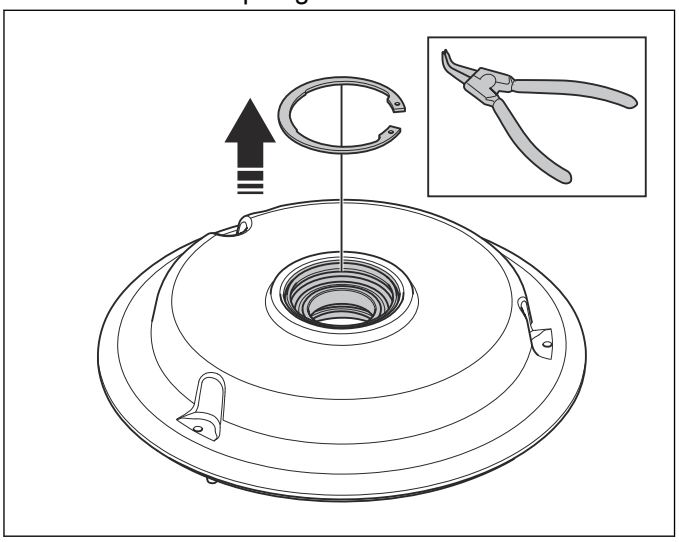
6. Remove the 9 screws that hold the locking plates and remove the locking plates.



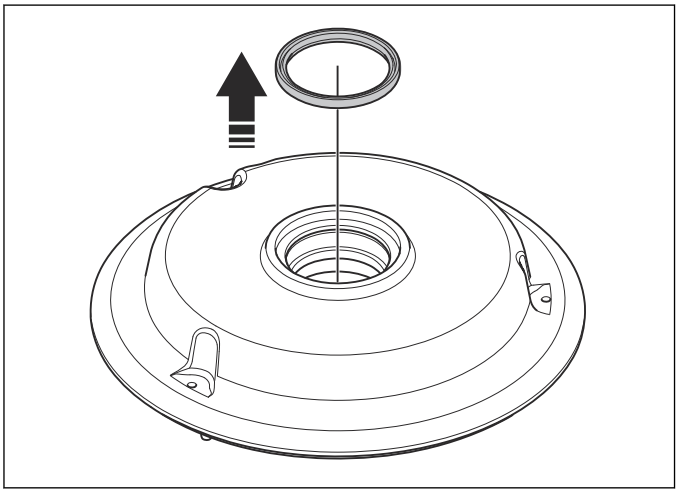
7. Remove the center hub. Use a support with a minimum diameter of 121 mm.



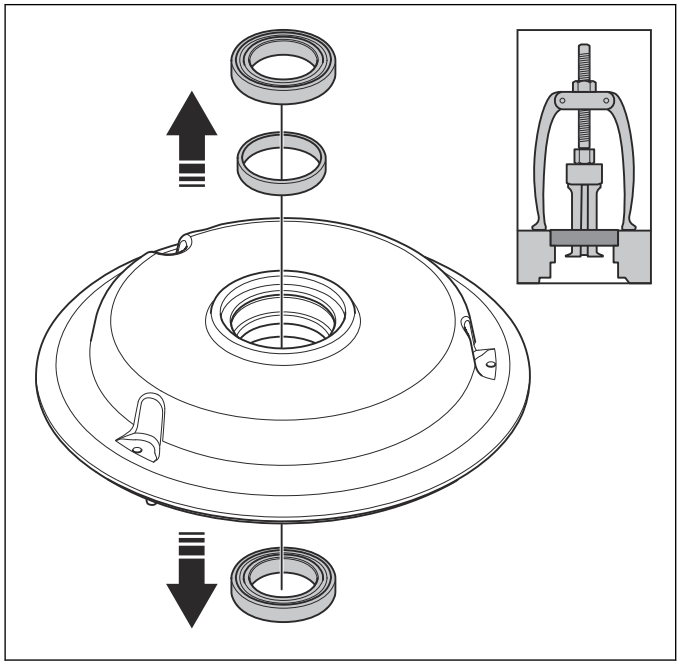
8. Remove the snap ring.



9. Remove the radial seal.

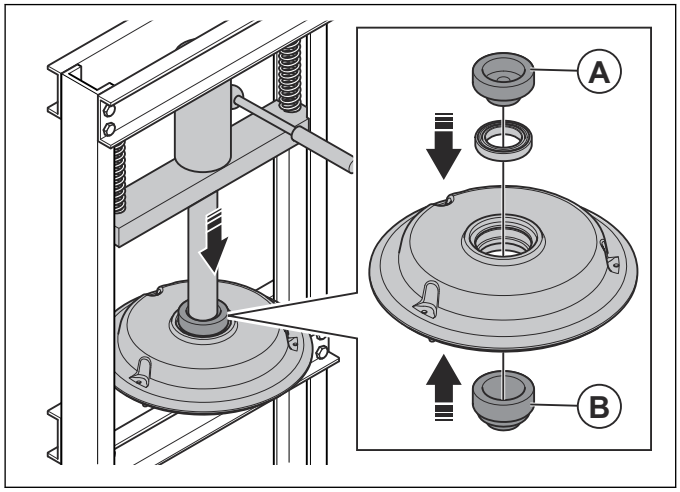


10. Remove the bearings and spacer.

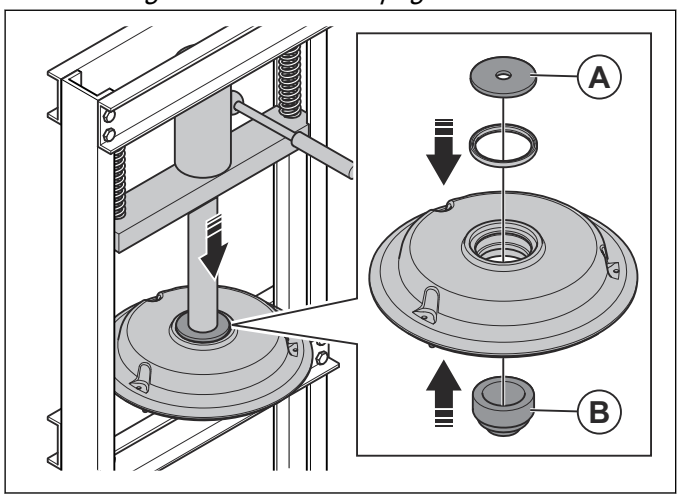


6.6.6 To assemble the secondary pulley

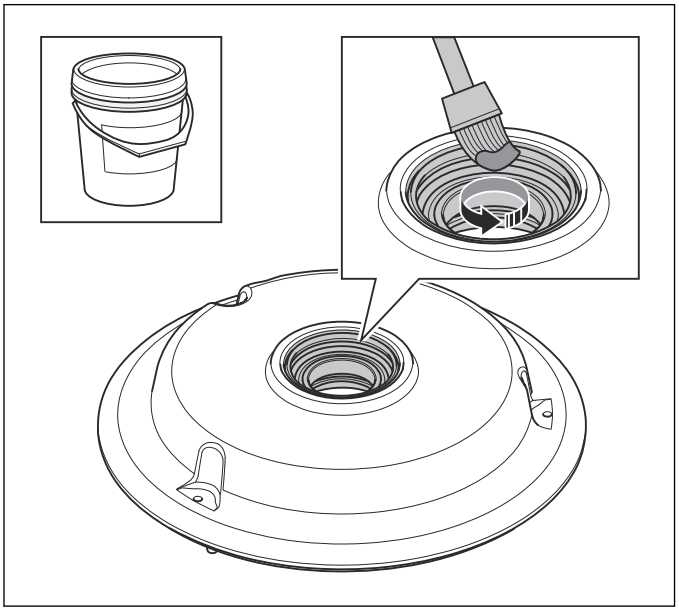
1. Push the bearing into the bottom of the housing. Use a press tool (A) and a support tool (B). Refer to *Servicing tools overview on page 11*



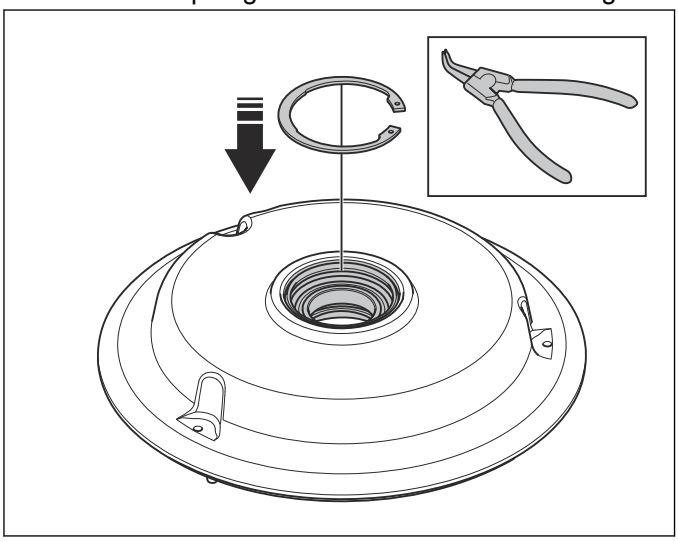
2. Push the radial seal into the bottom of the housing. Use a press tool (A) and a support tool (B). Refer to *Servicing tools overview on page 11*



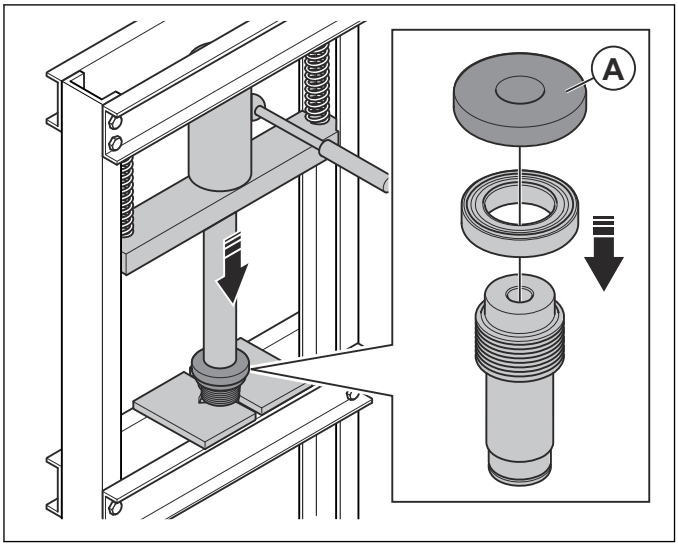
3. Put grease on the edge of the hole. Refer to *Servicing tools overview on page 10*.



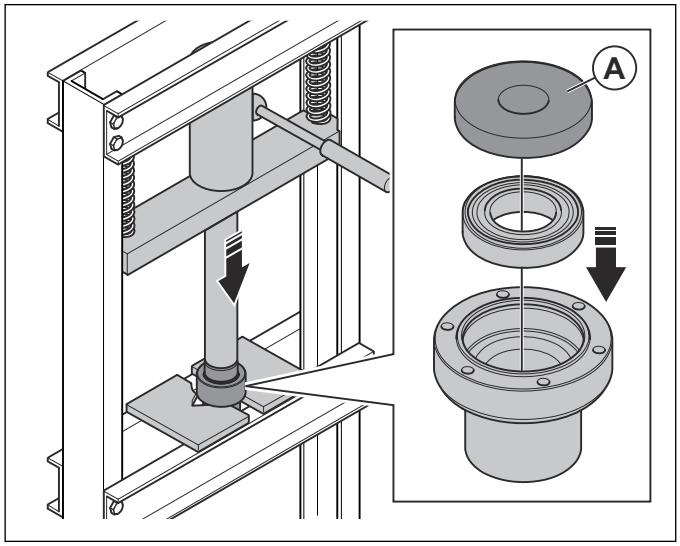
4. Install a snap ring into the bottom of the housing.



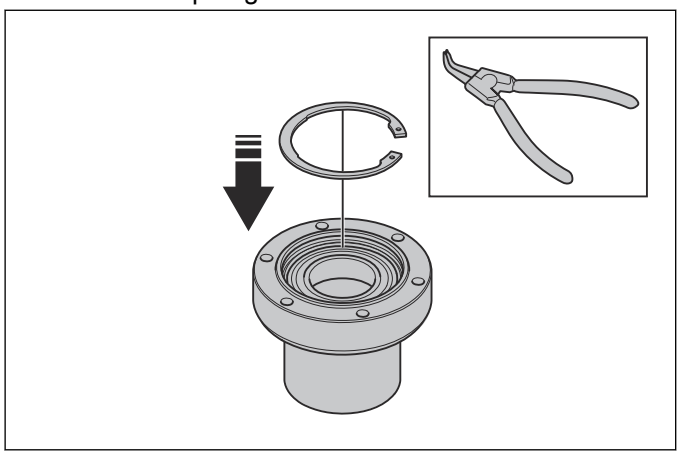
5. Push the bearing onto the pulley center. Use a center pulley tool (A). Refer to *Servicing tools overview on page 11*.



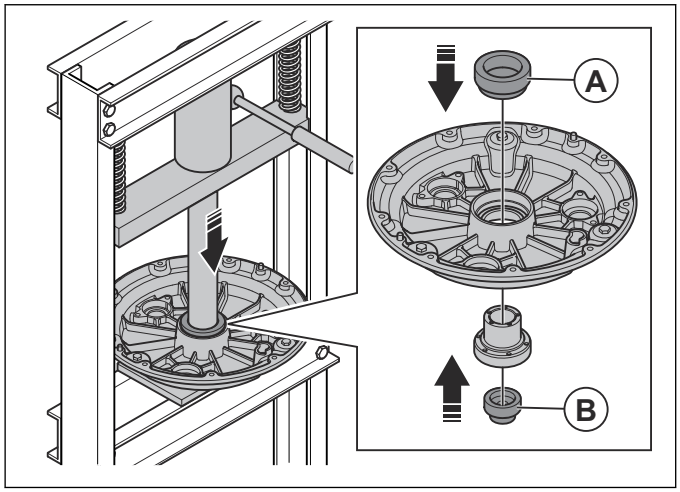
6. Push the bearing into the center hub. Use a center pulley tool (A).



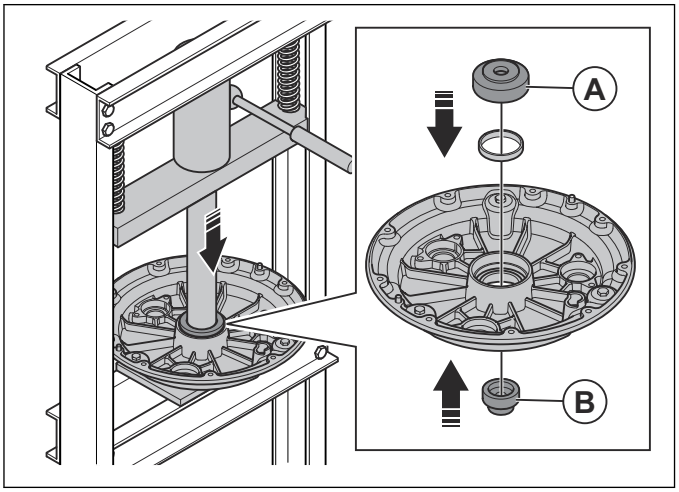
7. Install a snap ring into the center hub.



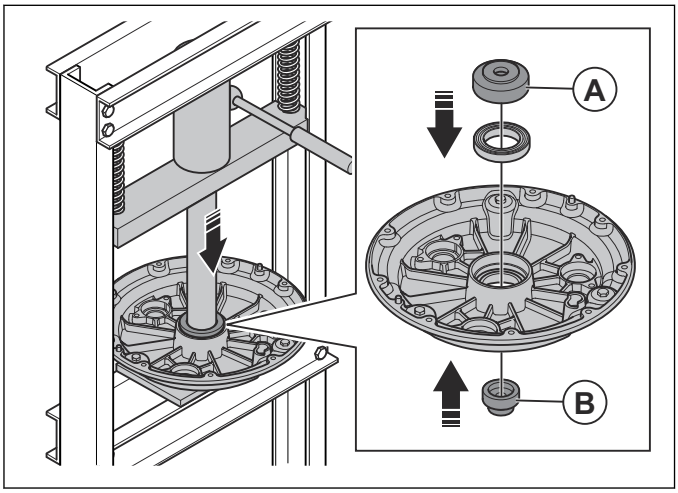
8. Push the center hub into the housing. Use a mandrel tool (A) and a support tool (B).



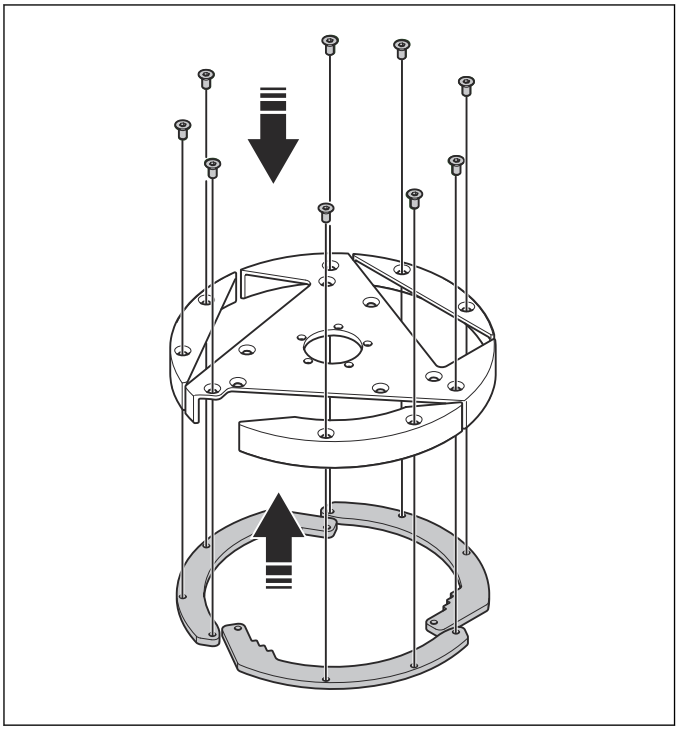
9. Push the spacer into the housing. Use a mandrel tool (A) and a support tool (B).



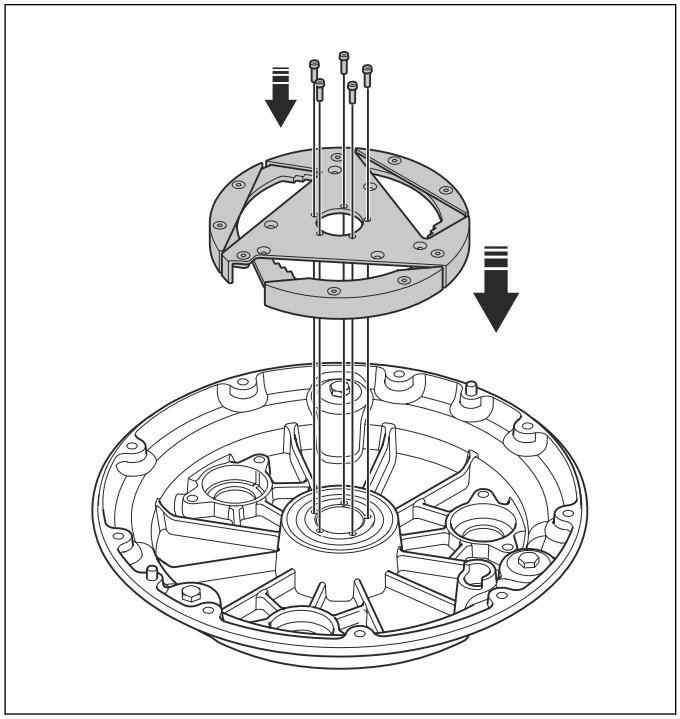
10. Push the bearing into the housing. Use a mandrel tool (A) and a support tool (B).



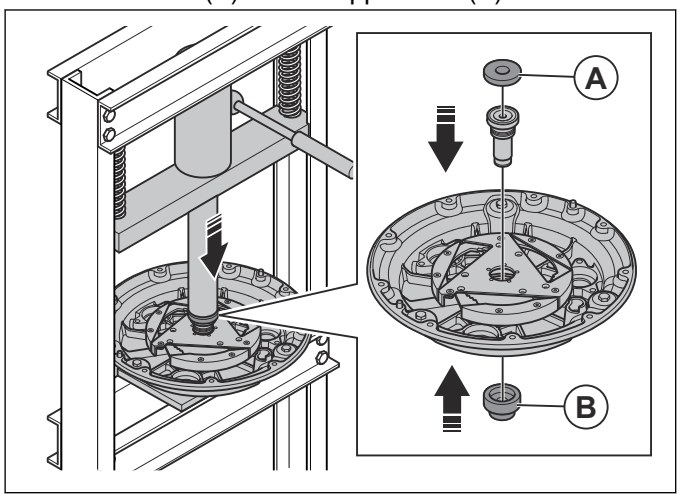
11. Attach the locking plate into the secondary pulley.



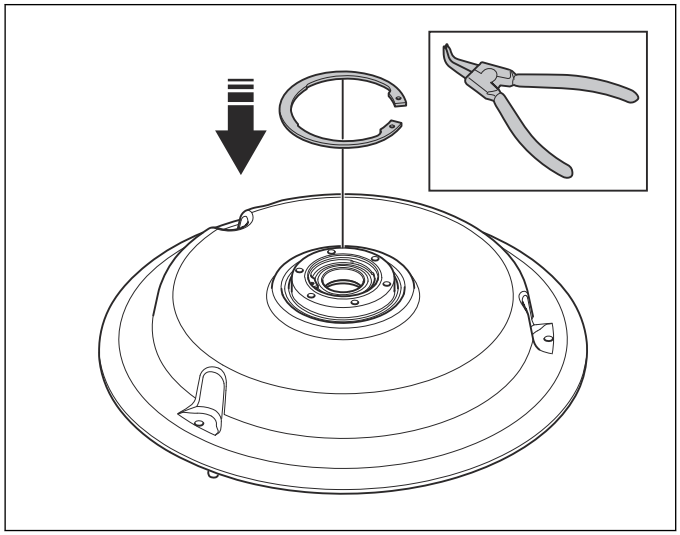
12. Put the secondary pulley on the housing.



13. Install the center pulley into the housing. Use a mandrel tool (A) and a support tool (B).



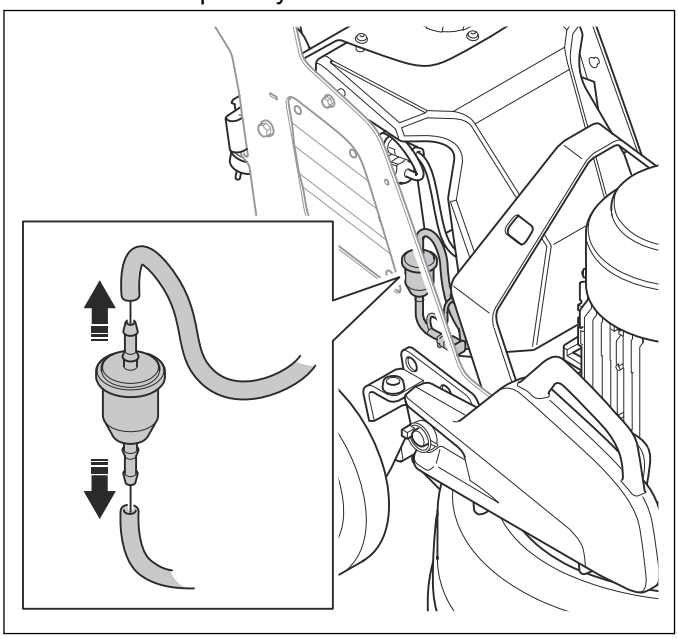
14. Install a snap ring into the bottom of the housing. Refer to *Servicing tools overview on page 10*.



6.7 Filter

6.7.1 To examine and replace primary filter

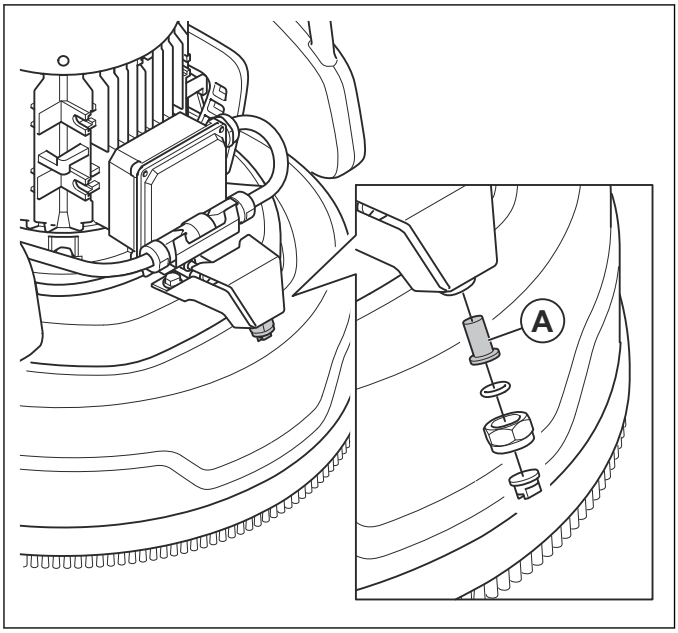
1. Remove the primary filter.



2. Do an inspection of the filter.
3. If it is necessary, replace the filter.

6.7.2 To examine and clean the secondary filter

1. Remove the secondary filter (A).



2. Do an inspection of the filter.
3. If it is necessary, clean the filter.

7.1 To do a function test of the grinding head

1. Put the product down to get access to the grinding disc.
2. Rotate the grinding disc by hand. Make sure that it can move freely and stable without friction and noise.
3. Examine the brush strip.
4. Examine all parts of the vibration damping system.
5. Examine the tool holder for wear.
6. Tighten the screws.
7. Put the product back to its upright position.

7.2 To do a function test of the electrical system

1. Put the product in upright position.
2. Examine the external cable, plug and connectors.
3. Connect the product to a power outlet with the correct voltage and rated value of the fuse.
4. Make sure the hour meter shows the correct run time.

7.3 To do a function test of the motor

1. Push the handle down to release the pressure between the grinding head and the floor. Make sure the grinding head touches the floor.
2. Turn the on/off switch to "1" to start the motor. The motor must then be at its operation speed in less than 5 seconds.
3. Examine the product for noise and vibrations while the motor operates.
4. Let the motor operate for approximately 1 minute. Examine the hour meter.
5. Push the emergency stop button.
6. Start the motor again. Stop it with the on/off switch.

7.4 Frequency converter error codes - Faults

When the drive detects a fault, the ALM indicator LED:s do not flash but remain lit. If the LED:s flash the drive has detected a minor fault or alarm. Refer to *Frequency converter error codes - Minor Faults and Alarms on page 42* for more informartion. Conditions such as overvoltage or external faults can trip both faults and minor faults, therefore it is important to note wheter the LED:s remain li or if the LED:s flash.

Note: The page numbers in the tables refer to the Yaskawa manual.

Digital operator display	Name	Page
bUS	Option Communication Error	267
CE	MEMOBUS/Modbus Communication Error	267
CF	Control Fault	267
CoF	Current Offset Fault	267
CPF02	A/D Conversion Error	268
CPF03	PWM Data Fault	268
CPF06	Drive Specification Mismatch during Terminal Board or Control Board Replacement	268
CPF07	Terminal Board Communication Fault	268
CPF087	EEPROM Serial Communications Fault	268
CPF11	RAM Fault	268
CPF12	Flash Memory Fault	268
CPF§13	Watchdog Circuit Exception	269
CPF14	Control Circuit Fault	269
CPF16	Clock Fault	269
CPF17	Timing Fault	269
CPF18	Control Circuit Fault	269

Digital operator display	Name	Page
CPF19	Control Circuit Fault	269
CPF20 or CPF21 [1]	RAM Fault	269
	FLASH Memory Fault	269
	Watchdog Circuit Exception	269
	Cloack Fault	269
CPF22	A/D Conversion Error	269
CPF23	PWM Feedback Data Fault	269
CPF24	Drive capacity Signal Fault	270
CPF25	Terminal Board Not Connected	270
dEv	Excessive speed Deviation (for Simple V7f with PG)	270
dWAL	Drive WorksEZ Program Error Output	270
dWFL	Drive Works EZ Fault	270
E5	MECHATROLINK Watchdog Timer Error	270
EF0	Option External Fault	270
EF1 to EF7	External Fault (input terminal S1 to S7)	270
Err	EEPROM Write Error	271
FbH	Excessive PID Feedback	271
FbL	PID Feedbacl Loss	271
GF	Ground Fault	271
LF	Output Phase Loss	272
LF2	Current Imbalance	272
nSE	Node Setup Error	272
oC	Overcurrent	272
oFA00 [2]	Option Card Connection Error	273
oFA01 [3]	Option Unit Fault	273
oFA03	Option Card Fault	273
oFA04	Option Card Fault	273
oFA30 to oFA43	Option Card Fault	273
oH	Heatsink Overheat	274
oH1	Heatsink Overheat	274
oH3	Motor Overheat 1 (PTC input)	274
oH4	Motor Overheat 2 (PTC Input)	275
oL1	Motor Overload	275
oL2	Drive Overload	275

[1] Displayed as CPF20 when it occurs at drive power up. When one of the faults occurs after successfully start of the drive, the display will show CPF21.
[2] Uv1 and Uv2 faults are not saved to the fault history.
[3] Uv1 and Uv2 faults are not saved to the fault history.

Digital operator display	Name	Page
oL3	Overtorque Detection 1	276
oL4	Overtorque Detection 2	276
oL5	Mechanucal Weakening Detection 1	276
oL7	High Slip Braking oL	276
oPR	Operator Connection Fault	277
oS	Overspeed (for Simple V/f With PG)	277
ov	Overvoltage	277
PF	Input Phase Loss	278
PGo	PG Disconnect (for Simple V/f with PG)	278
rH	Dynamic Braking Resistor	278
rr	Dynamic Braking Transistor	279
SC [4]	IGBT Short Circuit	279
SEr	Too Many Speed Search Restarts	279
STo	Pull-Out Detection	279
UL3	Undertorque Detection 1	279
UL4	Undertorque Detection 2	280
UL5	Mechanical Weakening Detection 2	280
Uv1 [5]	Undervoltage	280
Uv2 [6]	Control Power Supply Undervoltage	280
Uv3	Soft Charge Circuit Fault	280

7.5 Frequency converter error codes - Minor Faults and Alarms

When a minor fault or alarm occurs, the ALM LED flashes and the text display shows an alarm code. A fault has occured if the text remains lit and does not flash. Refer to Alarm detection on page 282 in the Yaskawa manual. An overvoltage situation, for example, can trigger both faults and minor faults. It is therefore important to note wheter the LED:s remain lit or if the LED:s flash.

Note: The page numbers in the tables refer to the Yaskawa manual.

[4] Available in drive software versions PRG: 1020 and later.
[5] Uv1 and Uv2 faults are not saved to the fault history.
[6] Uv1 and Uv2 faults are not saved to the fault history.

Digital operator display	Name	Minor Fault Output (H2-☐☐=10)	Page
AEr	Station Address Setting Error (CC-Link, CANopen, MECHATROLINK)	YES	282
bb	Drive baseblock	No output	282
bUS	Option Card Communication Error	YES	282
CALL	Serial Communication Transmission Error	YES	282
CE	MEMOBUS/Modbus Communication Error	YES	283
CrST	Can Not Reset	YES	283
CyC	MECHATROLINK/Modbus Communication Error	YES	283
dEV	Excessive Speed Deviation (for Simple V/f with PG)	YES	283
dnE	Drive Disabled	YES	284
dWAL	DriveWorksEZ Alarm	YES	270
E5	MECHATROLINK Watchdog Timer Error	YES	284
EF	Run Command Input Error	YES	284
EF0	Option Card External Fault	YES	284
EF1 to EF7	Extrenal Fault (input terminal S1 to S7)	YES	284
FbH	Excessive PID Feedback	YES	285
FbL	PID Feedback Loss		285
Hbb	Safe Disable Signal Input	YES	285
HbbF	Safe Disable Signal Input	YES	285
HCA	Current Alarm	YES	285
LT-1	Cooling Fan Maintenance Alarm	No output	286
LT-2	Capacitor Maintenance Alarm	No output	286
LT-3	Soft Charge Bypass Relay Maintenance Time	No output	286
LT-4	IGBT Maintenance Time (50%)	No output	286
oH	Heatsink Overheat	YES	286
oH2	Drive Overheat	YES	287
oH3	Motor Overheat	YES	287
oL3	Overtorque 1	YES	287
oL4	Overtorque 2	YES	287
oL5	Mechanical Weakening Detection 1	YES	288
oS	Overspeed (for Simple V/f with PG)	YES	288
ov	Overvoltage	YES	288
PASS	MEMOBUS/Modbus Test Mode Complete	No output	288
PGo	PG Disconnect (for Simple V/f with PG)	YES	288
rUn	During Run 2, Motor Switch Command Input	YES	289

7.6 Frequency converter error codes - Drive Alarm, Faults , and Errors

Note: The page numbers in the tables refer to the Yaskawa manual.

Digital operator display	Name	Minor Fault Output (H2-☐☐=10)	Page
SE	MEMOBUS/Modbus Test Mode Fault	YES	289
TrPC	IGBT Maintenance Time (90%)	YES	289
UL3	Undertorque 1	YES	289
UL4	Undertorque 2	YES	289
UL5	Mechanical Weakening Detection 2	YES	280
Uv	Undervoltage	YES	290

7.7 Frequency converter error codes - Operation Errors

Note: The page numbers in the tables refer to the Yaskawa manual.

Digital operator display	Name	Page
oPE01	Drive Unit Setting Error	291
oPE02	Parameter Setting Range Error	291
oPE03	Multi-Function Input Setting Error	291
oPE04	Terminal Board Mismatch Eror	292
oPE05	Run Command Selection Error	292
oPE07	Multi-Function Analog Input Selection Error	292
oPE08	Parameter Selection Error	293
oPE09	PID Control Selection Error	293
oPE10	V/f Data Setting Error	294
oPE11	Carrier Frequency Setting Error	294
oPE13	Pulse Train Monitor Selection Error	294

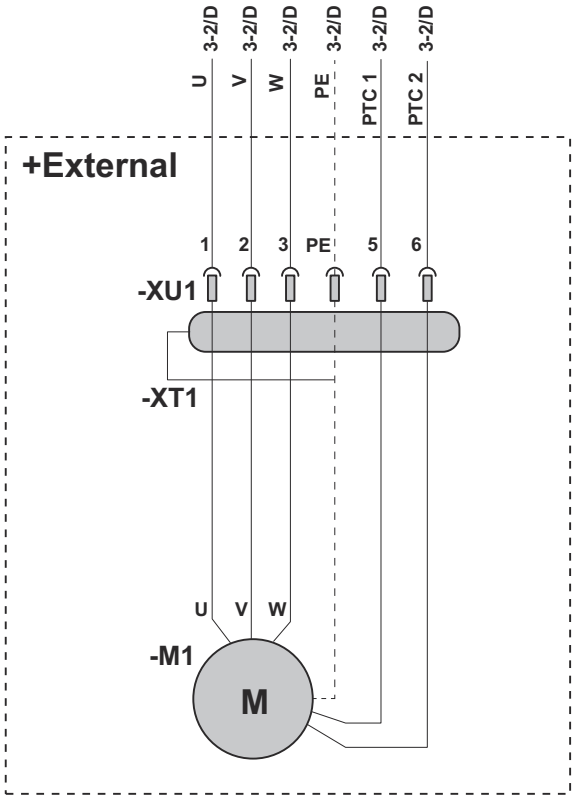
7.8 Frequency converter error codes - Auto Tuning Errors

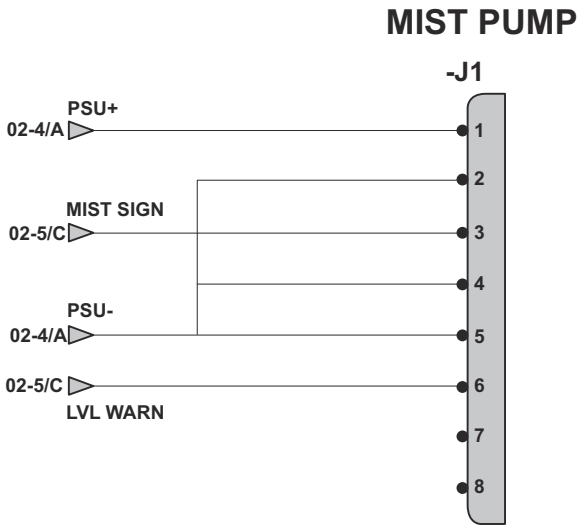
Note: The page numbers in the tables refer to the Yaskawa manual.

Digital operator display	Name	Page
End1	Excessive V/f Setting	295
End2	Motor Iron Core Saturation Coefficient Error	295
End3	Rated Current Setting Alarm	295
ER-01	Motor Data Error	295
ER-02	Alarm	295
ER-03	Stop Button Input	296
ER-04	Line-to-Line Resistance Error	296
ER-05	No-Load Current Error	296

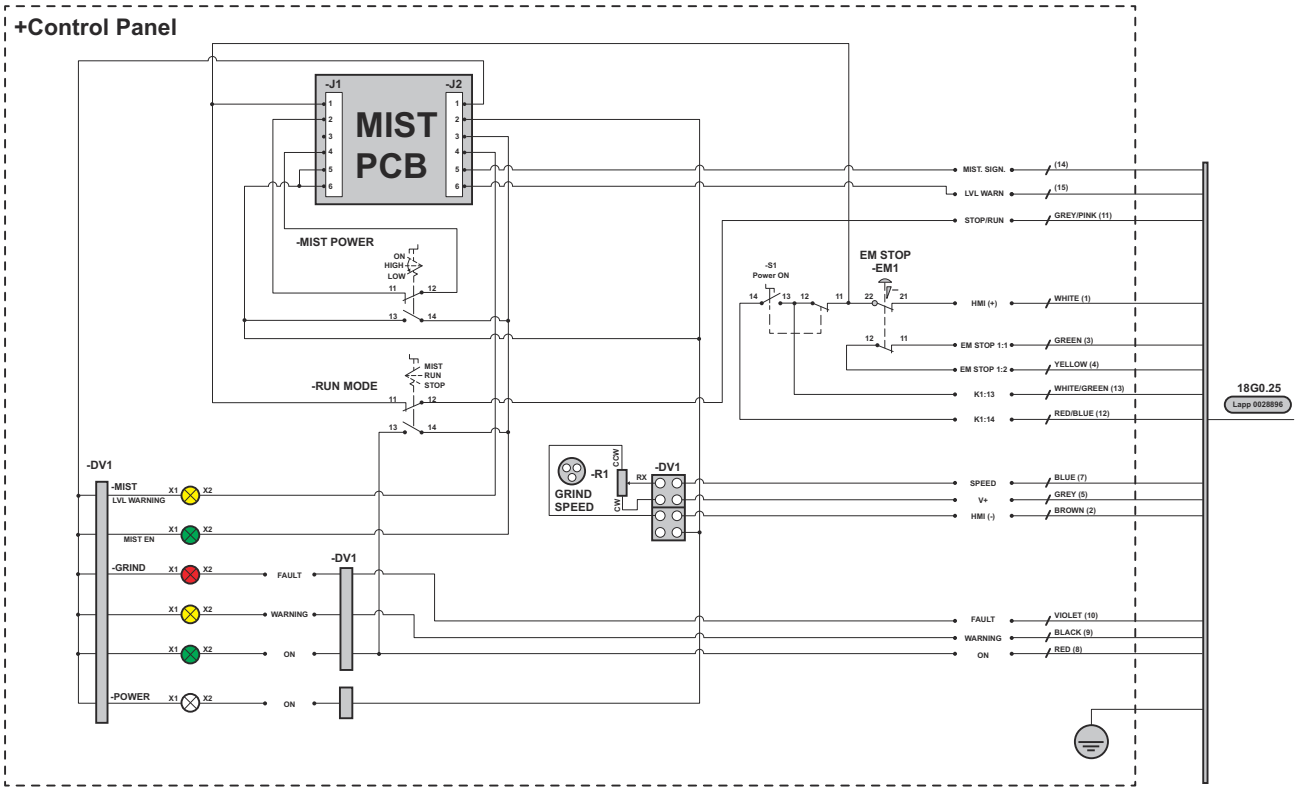
Digital operator display	Name	Page
ER-08	Rated Slip Error	296
ER-09	Acceleration Error	296
ER-11	Motor Speed Error	296
ER-12	Current Detection Error	296

8.1 Mist pump PG 5

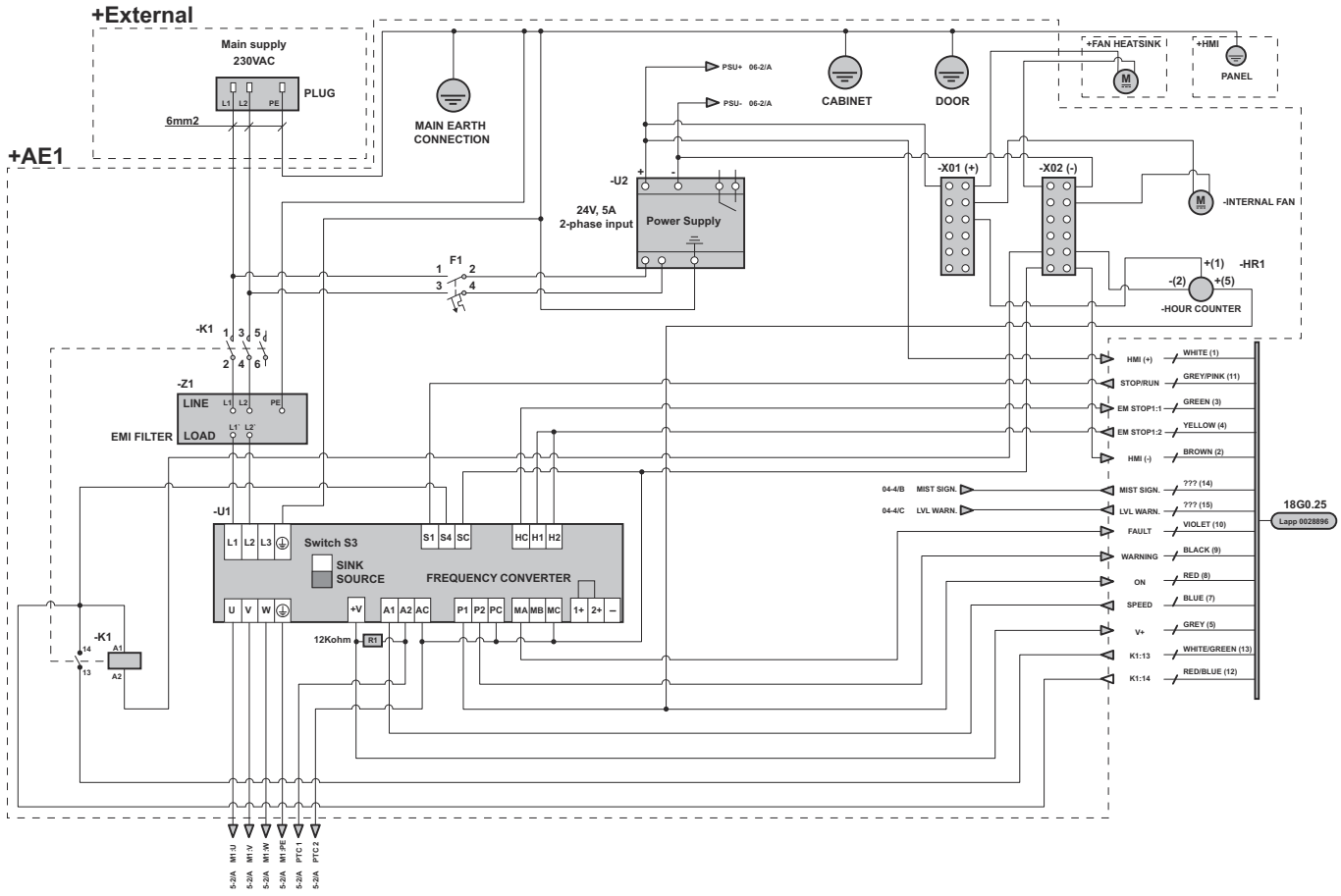




8.2 Control panel



8.3 Electrical enclosure



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