

Workshop manual

K 540i



English

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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



WARNING: Read the warning instructions that follow before you use the product.

The service center that repairs the product must have safety devices that obey local regulations. Warnings and cautions are used to point out specially important parts of the workshop manual.

2.3 Special safety instructions

- Apply a new warning label if a warning symbol on the product is damaged or missing.
- Do not use accessories or spare parts that are not approved by the manufacturer. Do not do changes that are not approved by the manufacturer. This can cause injury or death to the operator or other persons.
- Use protective gloves and eye protection. Approved protective goggles must agree with the ANSI Z87.1 standard in the USA or EN 166 in EU countries.
- When you use compressed air, do not point the airflow in the direction of your body. Air can go into the blood circulation and kill you.
- Use approved hearing protection. Noise from the product can result in permanent hearing loss.
- The product can cause sparks. Do not operate the product near flammable materials.

2.3.1 To remove the battery

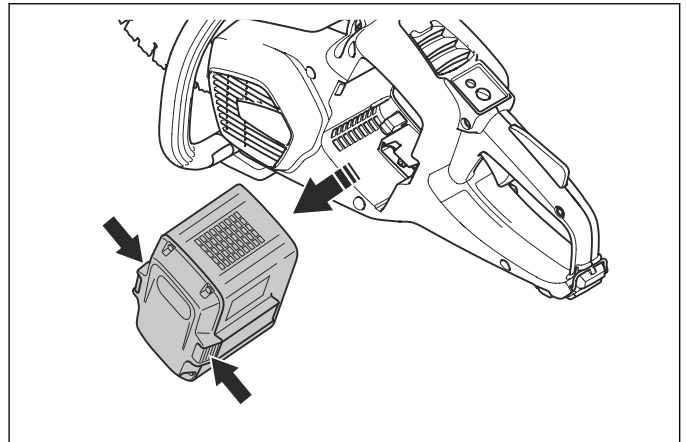


WARNING: Always remove the battery before you do repairs or do servicing on the product.



WARNING: Do not put the battery in the battery holder before the product is assembled.

- Push the battery release buttons and remove the battery.



2.4 Symbols on the product



WARNING: This product can be dangerous and cause serious injury or death to the operator or others. Be careful and use the product correctly.



Read the operator's manual carefully and make sure that you understand the instructions before you use this product.



Use approved protective helmet, hearing protection, eye protection and respiratory protection.



This product complies with applicable EC Directives.



Dust forms when cutting. The dust can cause injuries if inhaled. Use an approved respiratory protection. Always provide for good ventilation.



Sparks from the cutting blade can cause fire in fuel, wood, clothes, dry grass or other flammable materials.



WARNING! Kickbacks can be sudden, rapid and violent and can cause life threatening injuries. Read and understand the instructions in the manual before using the product.



Make sure that the cutting blade does not have cracks or other damages.



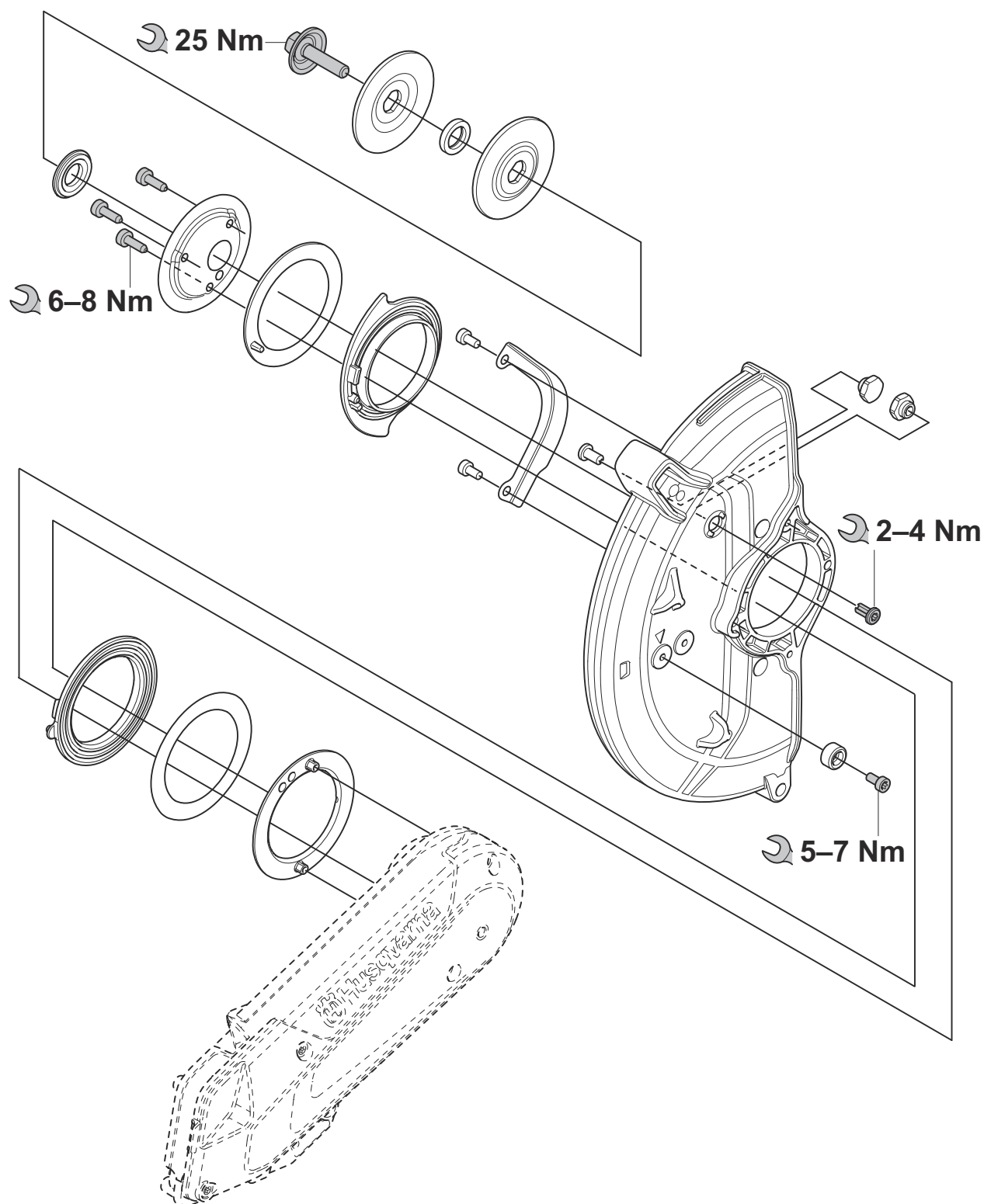
Do not use circular saw blades.

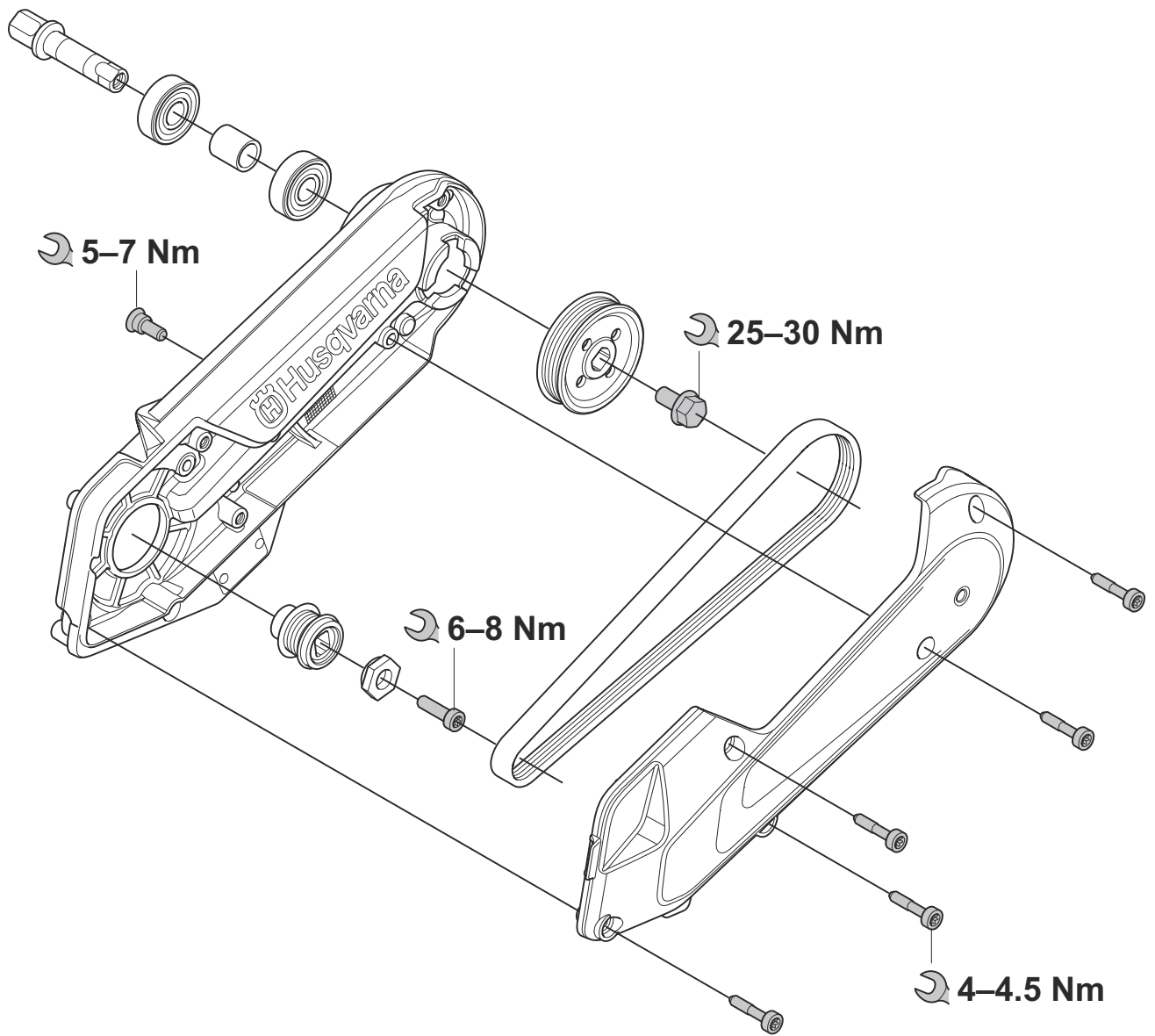


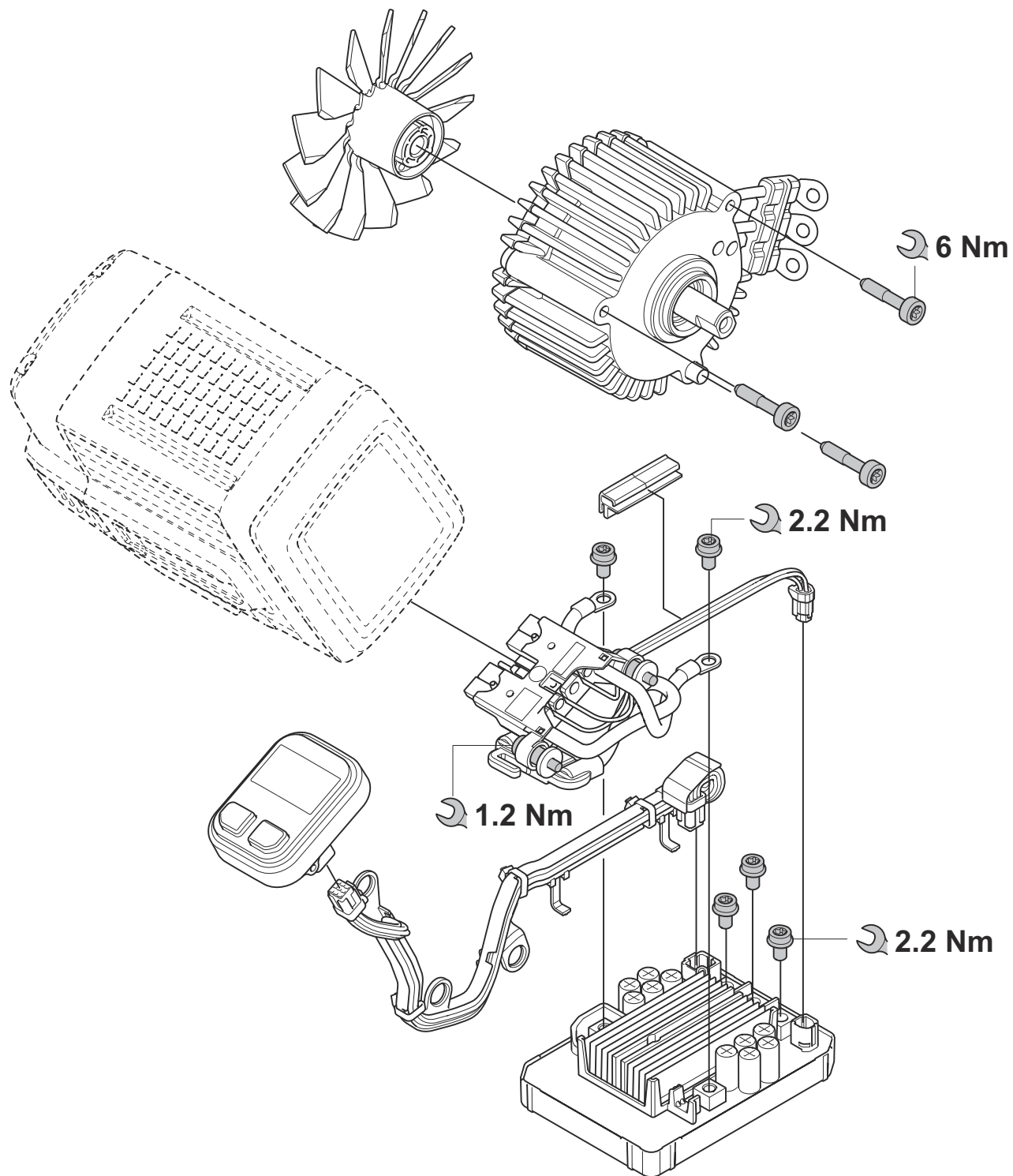
Environmental mark. The product or package of the product is not domestic waste. Recycle it at a recycling location for electrical and electronic equipment.

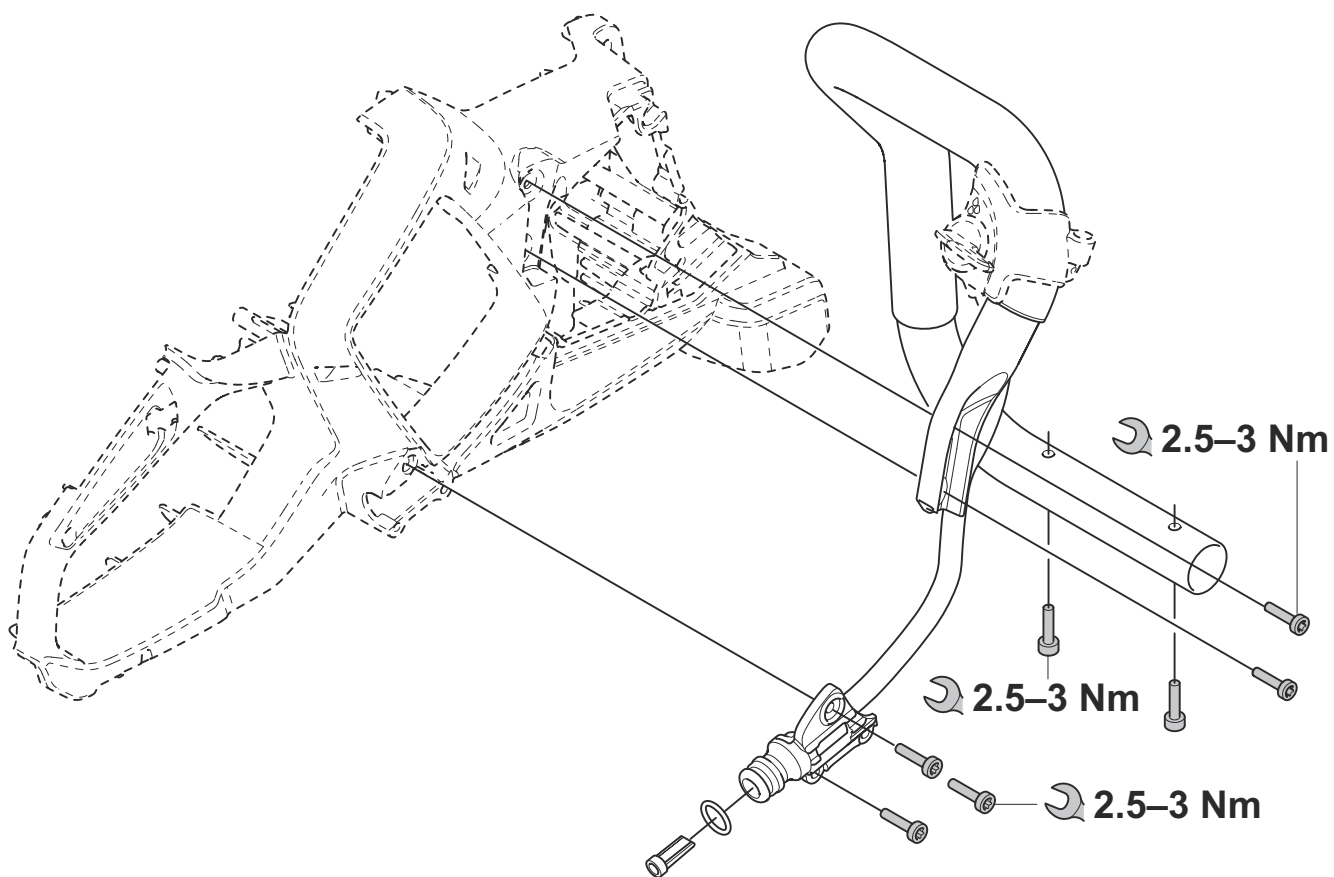
Note: Other symbols/decals on the product refer to certification requirements for some markets.

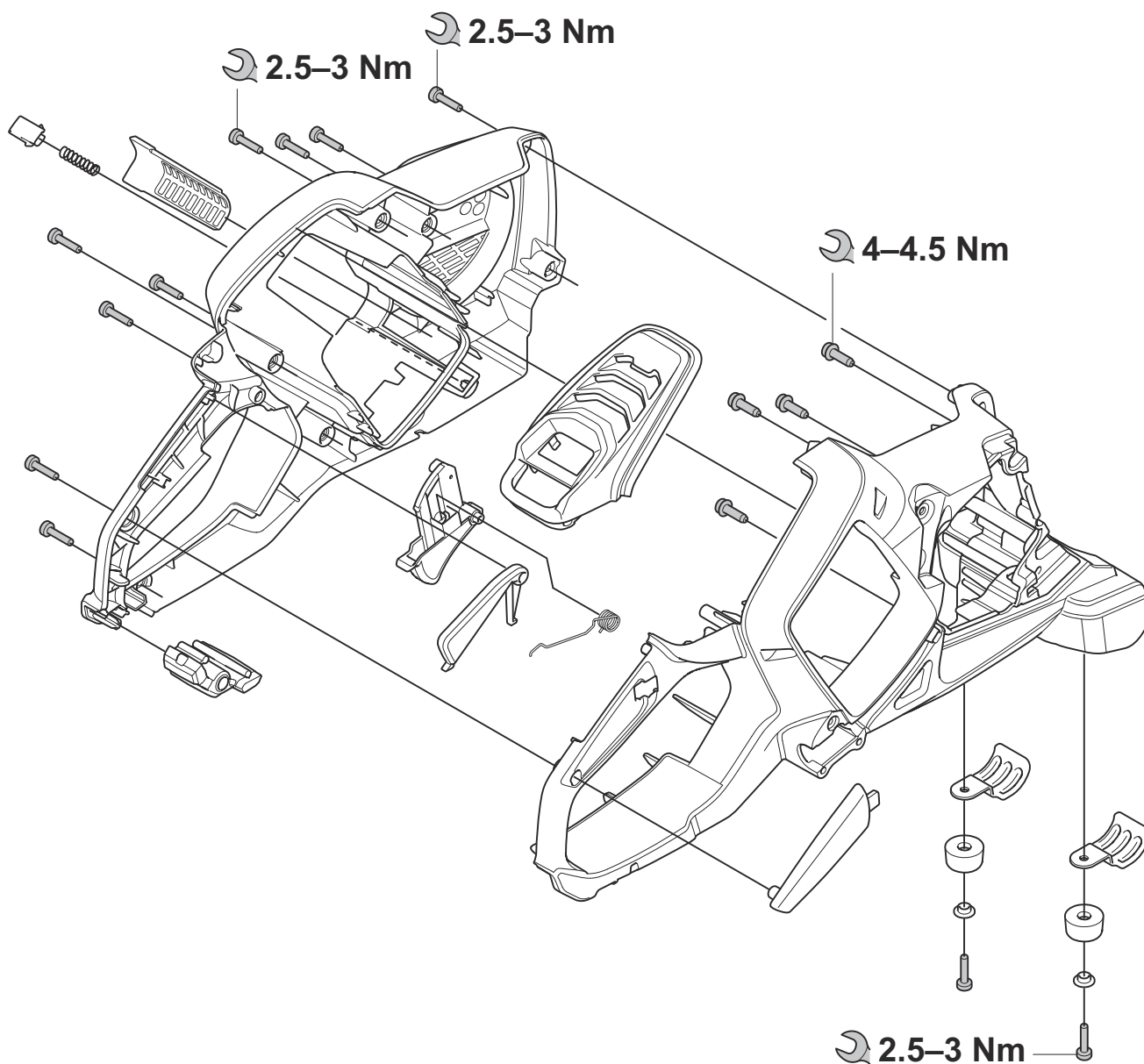
3 Tightening torques



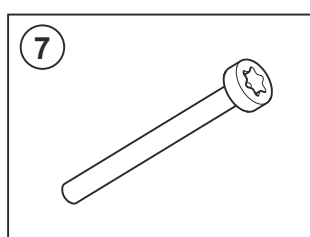
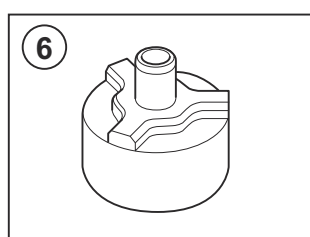
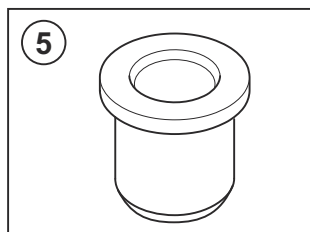
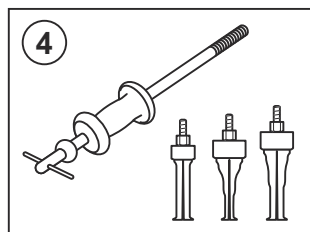
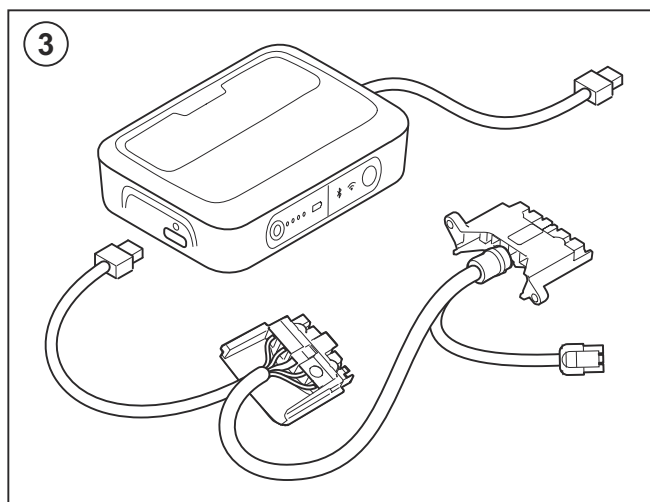
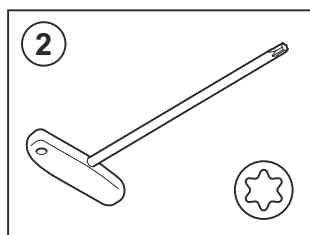
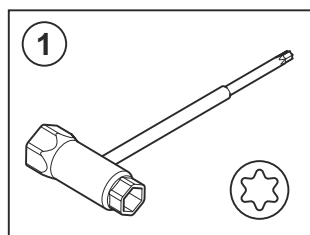






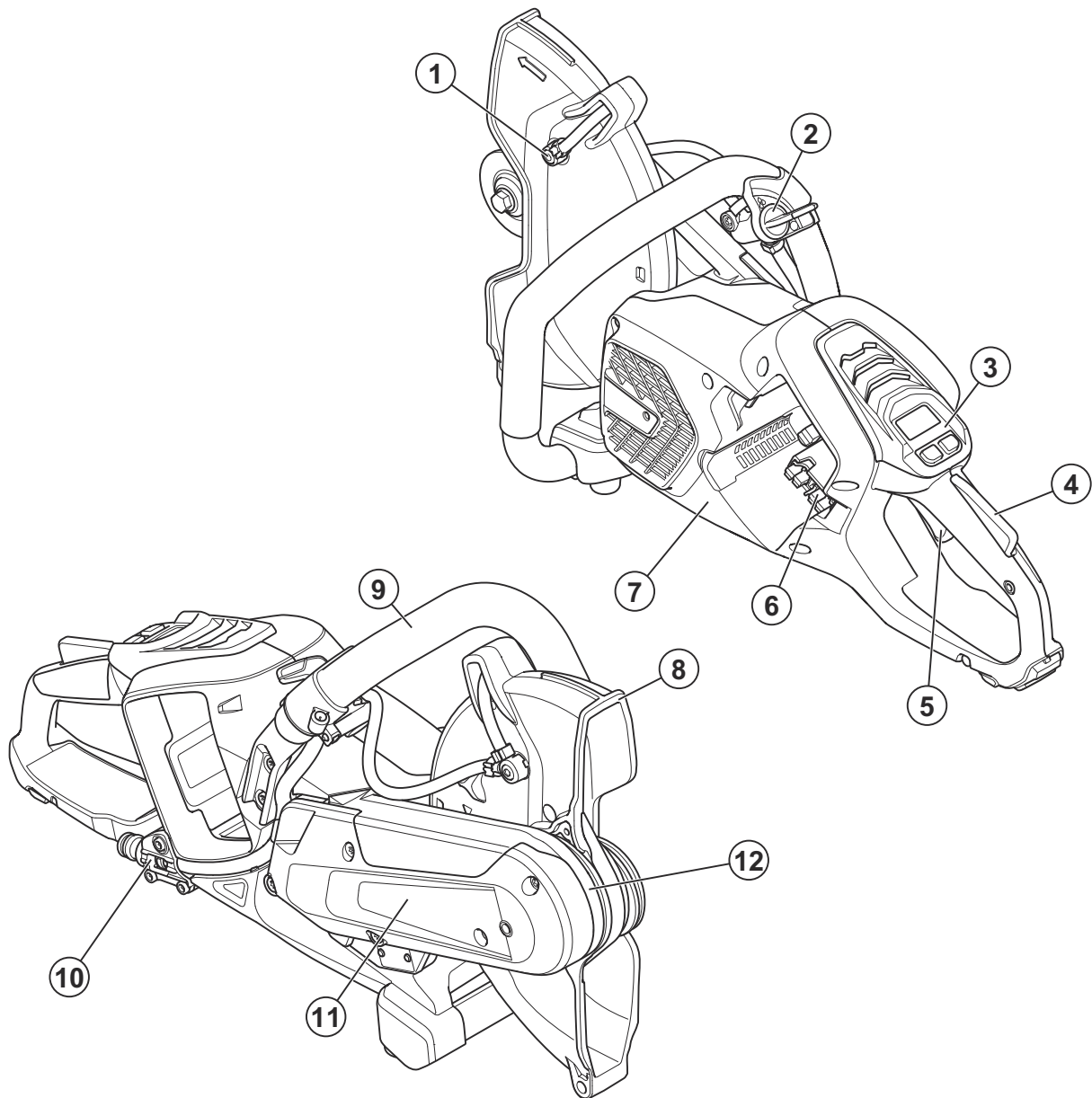


4 Servicing tools overview



Number	Description	Use	Article No./Source
1	Combination wrench	General	506 38 26-01
2	T-handle Torx T27	General	502 71 27-02
3	Service Interface Kit	To connect the product to the Husqvarna Service Hub (ROW).	598 07 28-02
3	Service Interface Kit	To connect the product to the Husqvarna Service Hub (US/CA).	598 07 28-05
3	Service Interface Kit	To connect the product to the Husqvarna Service Hub (Japan).	598 07 28-07
4	Internal bearing extractor	To remove the bearings from the gearbox.	N/A
5	Mandrel	To install the bearings in the cutter arm.	537 56 39-01
6	Fixture	To install the bearings in the cutter arm.	537 56 40-01
7	Screw	To install the bearings in the cutter arm.	725 24 62-51

5 Product overview



1. Water nozzle
2. Water valve
3. Control panel
4. Power trigger lockout
5. Power trigger
6. Battery connector
7. Left handle half
8. Blade guard
9. Front handle
10. Water inlet with filter
11. Belt cover
12. Cutter arm

6 Troubleshooting

6.1 To troubleshoot the product

1. Do the steps that follow and make a note of all the faults you find:
 - a) Do a visual inspection of the product, refer to *To do a visual inspection of the product on page 13*.
 - b) Do a function test of the product, refer to *To do a function test of the product on page 13*.
 - c) Connect the product to Husqvarna Service Hub, refer to *To connect the product to the Husqvarna Service Hub on page 13*.
2. Refer to *Troubleshooting on page 15* and *LED indicators on the control panel on page 16* to correct the faults you find.
3. Do a function test again to make sure that the product operates correctly. Refer to *To do a function test of the product on page 13*.

6.1.1 To do a visual inspection of the product

1. Do a check of the blade guard. Replace the blade guard if it is damaged, refer to *To disassemble and assemble the blade guard on page 26*.
2. Do a check of the handle halves. Replace the handle halves if they are damaged, refer to *Product overview on page 12*.
3. Do a check of the front handle. Replace the front handle if it is bent or damaged, refer to *To remove and install the front handle on page 20*.
4. Do a check of the water valve. Replace the water valve if it is damaged, refer to *To remove and install the wet system on page 19*. Not applicable for K 1 PACE RAIL.
5. Do a check of the ground support. Replace the ground support if it is damaged, refer to *To remove and install the front handle on page 20*.
6. Do a check of the cutter arm. Replace the ground support if it is damaged, refer to *To remove and install the cutter arm on page 27*.
7. Make sure that all screws are installed. Tighten all screws to the correct torque, refer to *Tightening torques on page 6*.

6.1.2 To do a function test of the product

- Make sure that the battery fits in the product. If the battery does not fit, make sure that the battery is not damaged.
- Do a check of the water nozzle and make sure that water sprays from the water nozzle in the blade guard. If water does not spray, refer to *Troubleshooting on page 15*.

- Push the On/Off-button and make sure that the battery indicator comes on. If the battery indicator does not come on, refer to *Troubleshooting on page 15*.
- Make sure that no warning indicators or X-Halt light comes on or start to flash when you push the On/Off-button. If a warning indicator or X-Halt light comes on or start to flash, refer to *LED indicators on the control panel on page 16*.
- Make sure that the blade shaft turns when you pull the power trigger. If the blade shaft does not turn, refer to *Troubleshooting on page 15*.
- Start the product and keep it on for 15 seconds. Make sure that no vibrations or unusual noises come from the product and that the warning indicators stay off. If unusual vibrations or noises come from the product or if a warning indicator comes on, refer to *Troubleshooting on page 15*.

6.1.3 To troubleshoot the product with the Husqvarna Service Hub

The Husqvarna Service Hub is used with a computer (not included) to troubleshoot the product and to update the software in the product.

You must always connect the product to the Husqvarna Service Hub when you troubleshoot the product, also when the problem is a visual damage on the product.

1. Connect the product to the Husqvarna Service Hub. Refer to *To connect the product to the Husqvarna Service Hub on page 13*.
2. Read the error codes in the Husqvarna Service Hub.
3. Use the Husqvarna Service Hub to update the software of the product.
4. Do a diagnostic test in Husqvarna Service Hub.

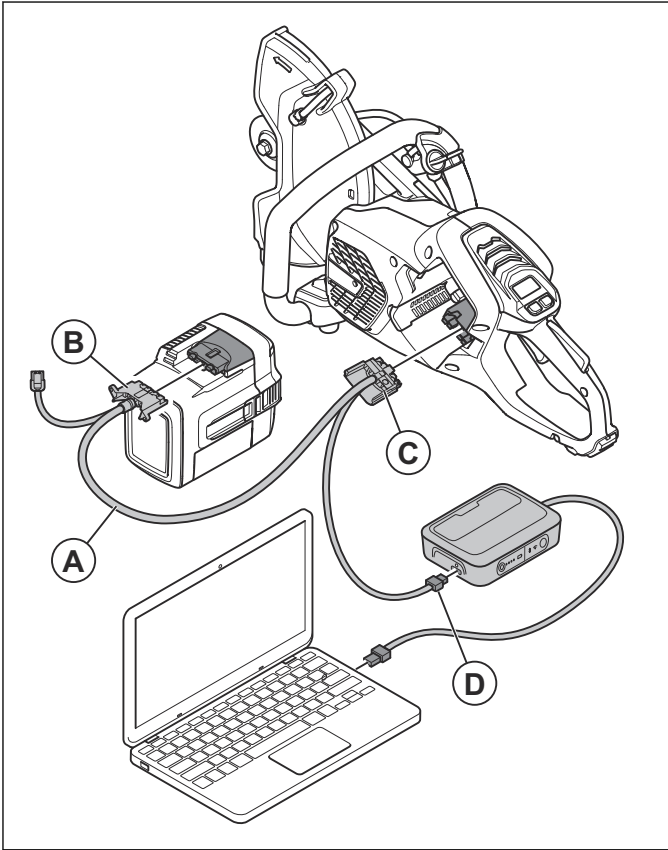
6.1.4 To connect the product to the Husqvarna Service Hub



WARNING: The product can start when it is connected to the Husqvarna Service Hub. Always remove the cutting blade before you

connect the product to the Husqvarna Service Hub.

1. Connect the adapter cable (A) from the service interface kit to the battery (B) and the product (C).



2. Connect the cable to the Husqvarna Service Hub (D).

3. Connect the Husqvarna Service Hub to the computer.

6.1.5 Troubleshooting of the Husqvarna Service Hub

If there is no signal to the Husqvarna Service Hub when it is connected to the product, do the procedure that follows.

1. Make sure that the connectors on the battery and on the product are clean and not damaged. Replace the battery or control unit on the product if there is damage.
2. Make sure that the cable connected to the computer that runs the Husqvarna Service Hub is clean and not damaged. Replace the cable if it is damaged.
3. Restart the computer.
4. Install the software again.

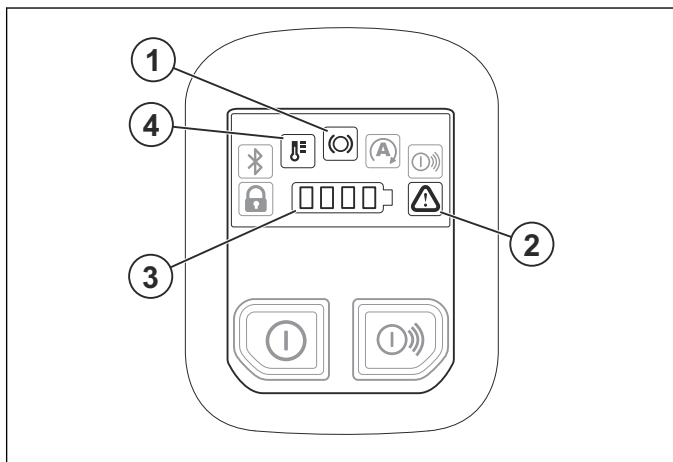
6.1.6 Troubleshooting

Problem	Cause	Solution
The product does not start. No LEDs come on when you push the On/Off button on the product.	The battery is damaged.	Do a test with a different battery.
	The plug between the battery and the product is damaged.	Make sure that the power connectors between the battery and the product are not dirty or damaged.
	The battery is not correctly installed in the product.	Remove the battery and install it correctly.
	The control unit is damaged.	Replace the control unit, refer to <i>To remove and install the control unit on page 22</i> . Connect the product to Husqvarna Service Hub and refer to the spare part change flow.
	The control panel is damaged.	Replace the control panel, refer to <i>To remove and install the control panel on page 22</i> . Connect the product to Husqvarna Service Hub and refer to the spare part change flow.
	The cables between the control unit and the control panel are damaged.	Replace the cables between the control unit and the control panel, refer to <i>To remove and install the cable assembly on page 21</i> .
	The cables between the control unit and the main switch are damaged.	Replace the cables between the control unit and the main switch, refer to <i>To remove and install the cable assembly on page 21</i> .
	A fuse is blown.	Do a test of the fuse. If the fuse is broken, replace the control unit and the fuse, refer to <i>To remove and install the control unit on page 22</i> .
The product is on, but a warning indicator or a X-Halt indicator is on or flashes.	There is an error in the product.	Refer to <i>LED indicators on the control panel on page 16</i> .
The product is on but the motor does not start when you push the power trigger.	The power trigger is damaged.	Start the product and pull the power trigger again with less load. Do a test of the power trigger in the Husqvarna Service Hub.
	The cables in the motor is damaged.	Replace the motor, refer to <i>To remove and install the motor on page 24</i> .
	The motor is damaged.	Replace the motor, refer to <i>To remove and install the motor on page 24</i> .
The motor is on but the blade shaft does not rotate.	The drive belt is damaged or worn.	Replace the drive belt, refer to <i>To replace the drive belt on page 23</i> .
An unusual noise comes from the front bearings.	The bearings are damaged or worn.	Replace the bearings, refer to <i>To remove the cutter arm bearings on page 27</i> and <i>To install the cutter arm bearings on page 27</i> .
There are unusual vibrations when the product is on.		
The product makes a sudden movement when you push the power trigger, then immediately stops.	There is a short circuit in the control unit.	Replace the control unit, refer to <i>To remove and install the control unit on page 22</i> . Connect the product to Husqvarna Service Hub and refer to the spare part change flow.

Problem	Cause	Solution
The speed of the motor is irregular.	The control panel is damaged.	Replace the control panel, refer to <i>To remove and install the control panel on page 22</i> .
	The power trigger is damaged.	Replace the power trigger, refer to <i>To remove and install the power trigger and the power trigger lockout on page 21</i> .
The product stops when you apply work load.	There is too much work load on the product.	Start the product again and apply less work load.
The product does not connect to the Husqvarna Service Hub.	The control unit is damaged.	Replace the control unit, refer to <i>To remove and install the control unit on page 22</i> . Connect the product to Husqvarna Service Hub and refer to the spare part change flow.
	The adapter cable is damaged.	Do a check of the adapter cable.
	The interface box is damaged.	Use a different interface box.
The water nozzle does not spray water on the diamond blade.	The water nozzle on the blade guard is blocked.	Do a check of the water nozzle on the blade guard. Clean the water nozzle on the blade guard if it is necessary.
	The water hose is blocked.	Do a check of the water hose. Make sure that there is no blockage.
	The filter is clogged.	Do a check of the water inlet filter. Clean the water inlet filter if it is necessary.

6.1.7 LED indicators on the control panel

The LED indicators on the control panel show the state of charge of the battery and if there are problems with the product.



LED indicator	Indication	Cause	Solution
1	The indicator flashes.	The X-Halt function is engaged.	Wait for the product to cool down and the X-Halt function to disengage.
	The indicator is on.	You must do servicing of the X-Halt function.	Replace the drive belt, refer to <i>To replace the drive belt on page 23</i> . Reset the X-Halt light in the Husqvarna Service Hub.
2	The indicator flashes.	There is a battery error.	Pull the power trigger 1 time to reset the error warning. If the error warning comes back, do a test with a different battery.
		Overcurrent	Do a check of the cable harness to see if there is a short circuit. Replace the cable harness if it is necessary. Refer to <i>To remove and install the cable assembly on page 21</i> .
			Do a check of the motor to see if there is a short circuit. Replace the motor if it is necessary. Refer to <i>To remove and install the motor on page 24</i> .
		The power trigger is engaged when the product starts.	Release the power trigger and start the product.
	The indicator is on.	The control unit is damaged.	Replace the control unit, refer to <i>To remove and install the control unit on page 22</i> . Use the spare part change flow in the Husqvarna Service Hub.
3	All 4 indicators flash.	The software is not loaded on the control unit.	Connect the product to the Husqvarna Service Hub and load the software on the control unit.
		The software is not loaded on the control panel.	Connect the product to the Husqvarna Service Hub and load the software on the control panel.
		The product does a Firmware Over-the-Air (FOTA) update.	Let the FOTA update finish.
2 and 3	Indicator no. 2 and the first LED on indicator no. 3 flash.	The battery level is low.	Charge the battery.
2 and 4	Indicator no. 2 flashes and indicator no. 4 is on.	Temperature deviation.	The product is too hot or too cold.

7 Maintenance

7.1 Maintenance schedule

* =Service done by Husqvarna approved service center.

X = Maintenance done by the operator.

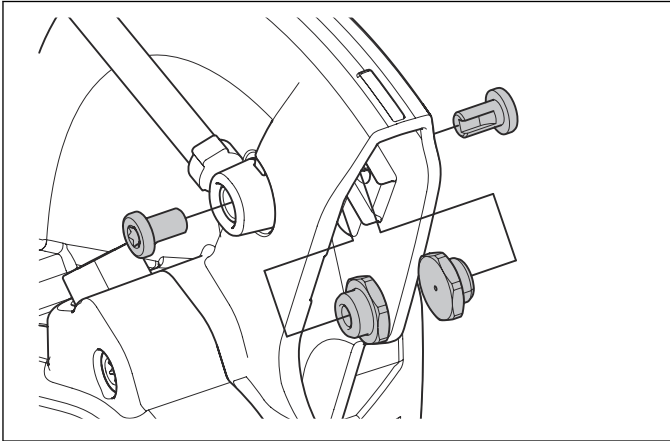
Maintenance	Before use	Monthly	Each 50 h
Clean the external parts of the product.	X		
Make sure that the power trigger and the power trigger lockout function correctly from a safety point of view.	X		
Do a check of the cutting blade. Look for cracks and make sure that the cutting blade is not unusually worn. Replace if necessary.	X		
Clean the fan housing on the product.	X		
Make sure that the screws and nuts are tight.	X		
Make sure that the control panel works correctly and that it is not damaged.	X		
Do a check of the connections between the battery and the product. Do a check of the connection between the battery and the battery charger.		X	
Blow through the product and battery soft with compressed air.		X	
Change the belt. Refer to <i>To replace the drive belt on page 23</i> .			*
Do a check of the forward bearings and make sure that they rotate freely and do not make unusual noise. Refer to <i>Troubleshooting on page 15</i> .			*
Do a check of the battery contacts.			*

8 Repair instructions

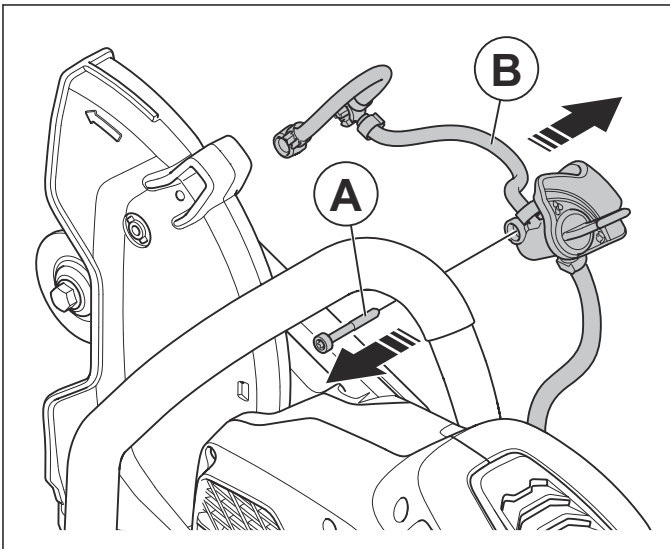
8.1 Wet system

8.1.1 To remove and install the wet system

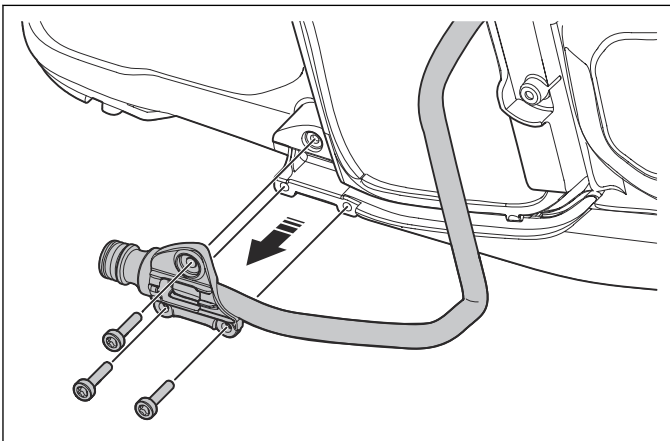
1. Remove the cover on the cutter arm. Refer to *Product overview on page 12*.
2. Remove the screws that hold the spray nozzles.



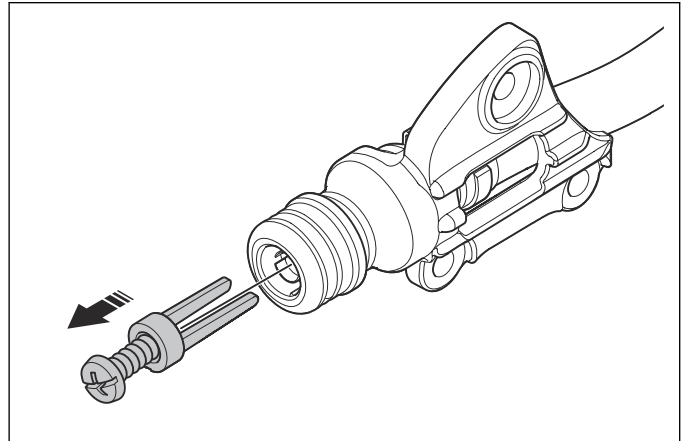
3. Loosen the screw (A) and remove the water valve (B).



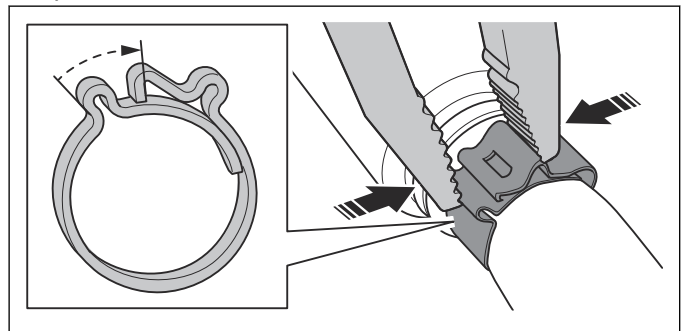
4. Remove the water inlet assembly.



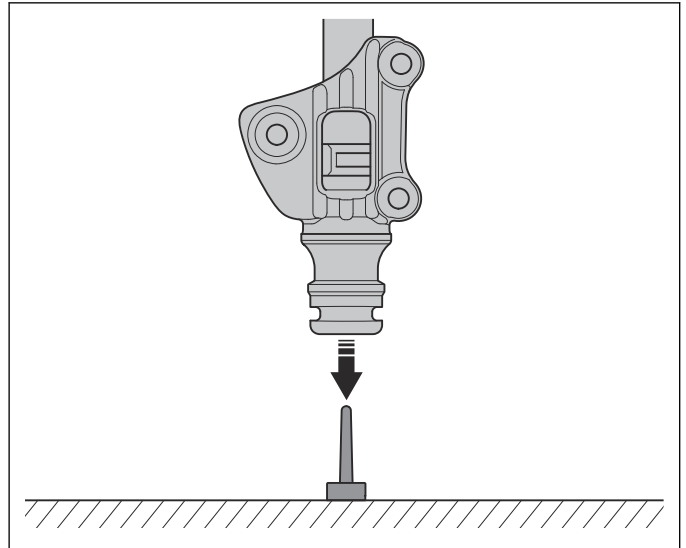
5. Use a wood screw to remove the filter.



6. Open the hose clip with a screwdriver and a pair of pliers.



7. Install in the opposite sequence. Put the filter on a flat surface and push the connector onto the filter.

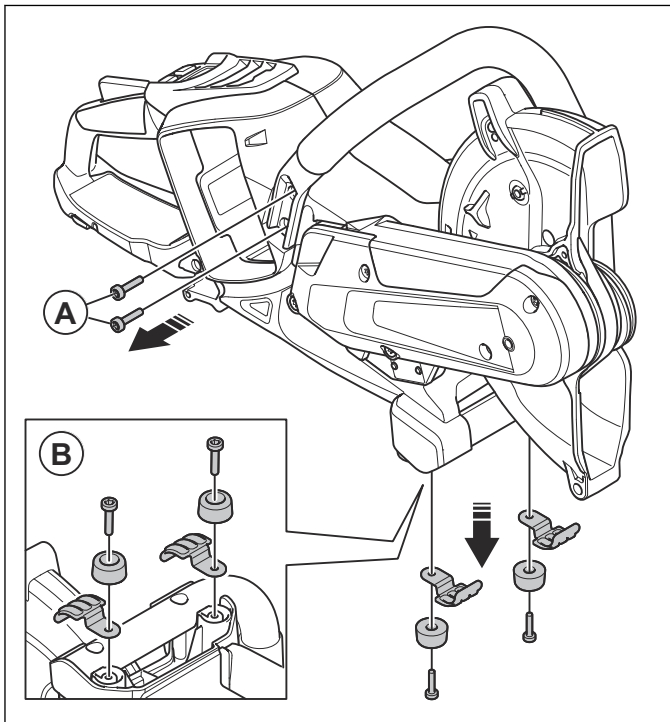


CAUTION: Install new hose clips when you install the wet system.

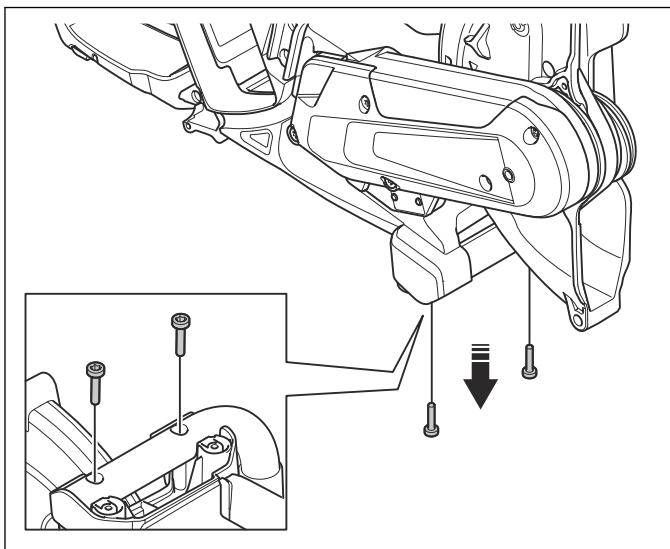
8.2 Handles

8.2.1 To remove and install the front handle

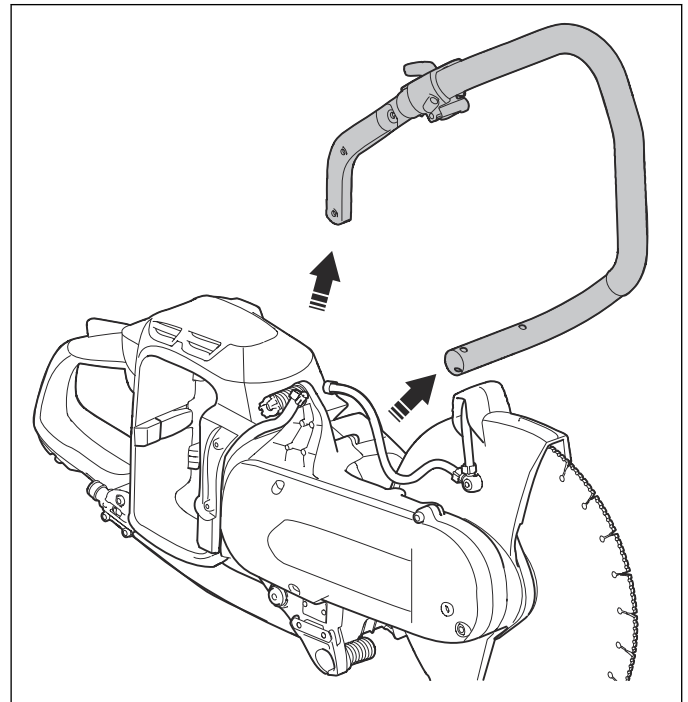
1. Remove the wet system. Refer to *To remove and install the wet system on page 19*.
2. Remove the 2 screws (A) on the side of the front handle.



3. Remove the 2 screws and the ground support (B).
4. Remove the 2 screws at the bottom of the front handle.



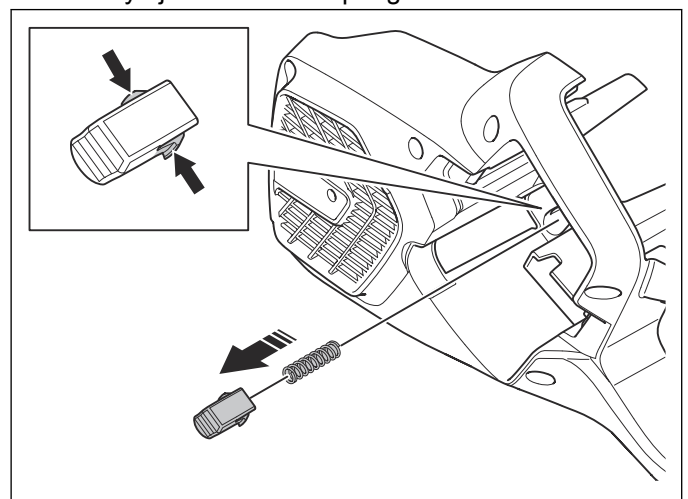
5. Remove the front handle.



6. Install in the opposite sequence.

8.2.2 To remove and install the battery ejector

1. Remove the left handle half. Refer to *Product overview on page 12*.
2. Push the clips on the battery ejector and remove the battery ejector and the spring.

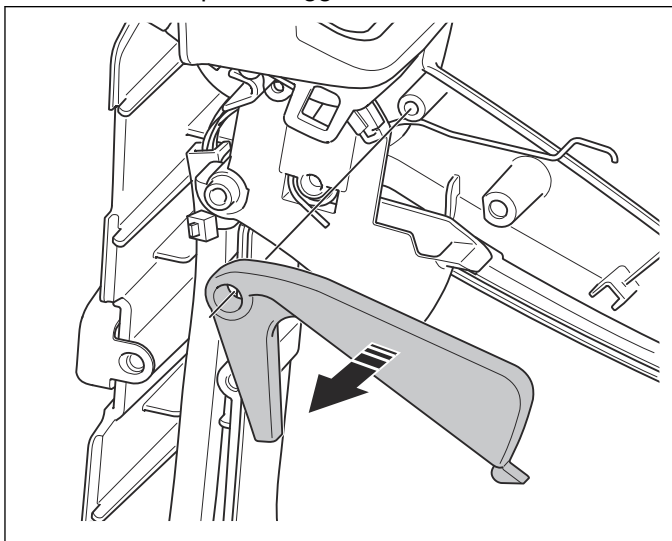


3. Install in the opposite sequence.

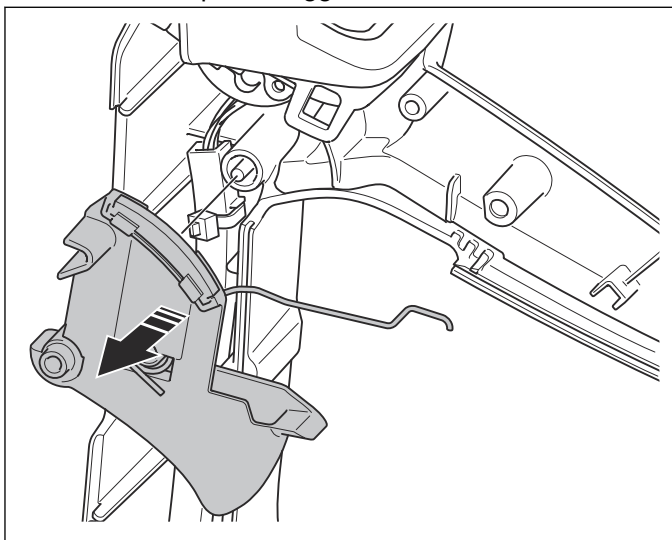
8.3 Power trigger and power trigger lockout

8.3.1 To remove and install the power trigger and the power trigger lockout

1. Remove the left handle half. Refer to *Product overview on page 12*.
2. Remove the power trigger lockout.

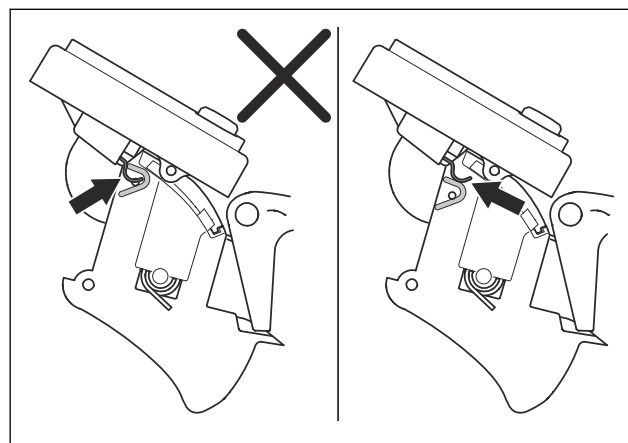


3. Remove the power trigger.



4. Install in the opposite sequence.

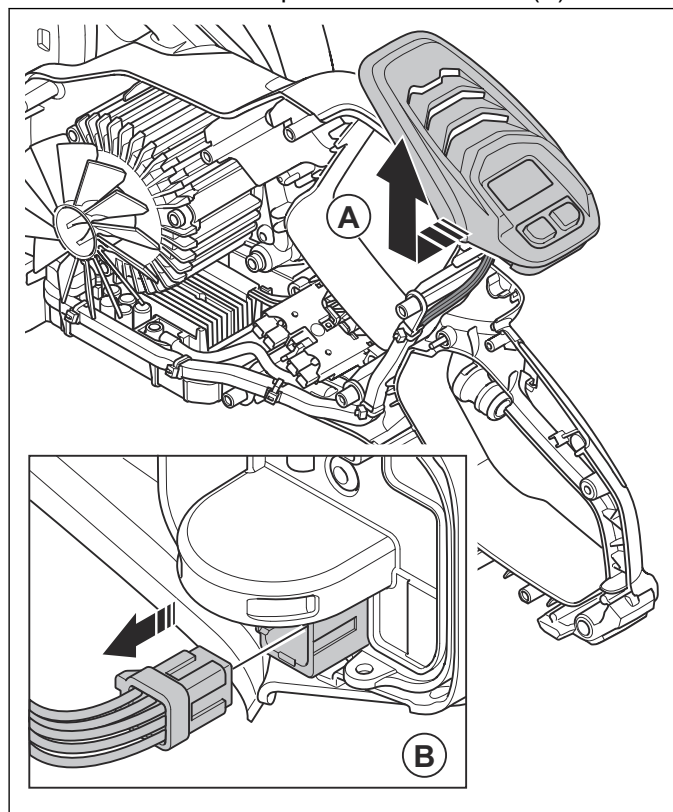
Note: Make sure that the microswitch lever on the control panel is above the power trigger.



8.4 Cable assembly

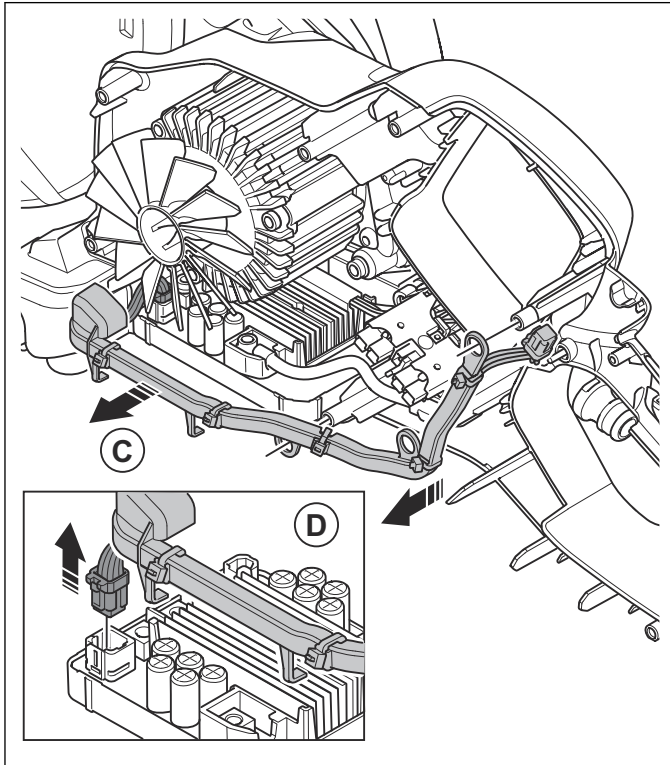
8.4.1 To remove and install the cable assembly

1. Remove the left handle half. Refer to *Product overview on page 12*.
2. Loosen the control panel from the cover (A).



3. Disconnect the cable connector (B) and remove the control panel.

4. Remove the cable assembly (C).

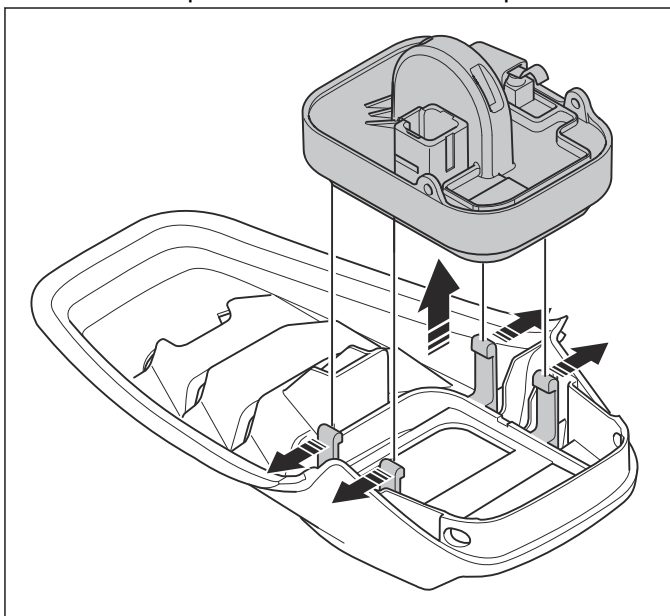


5. Disconnect the cable connector (D).
6. Install in the opposite sequence.

8.5 Control panel

8.5.1 To remove and install the control panel

1. Remove the left handle half. Refer to *Product overview on page 12*.
2. Remove the control panel from the cable assembly. Refer to *To remove and install the cable assembly on page 21*.
3. Push the clips and remove the control panel.



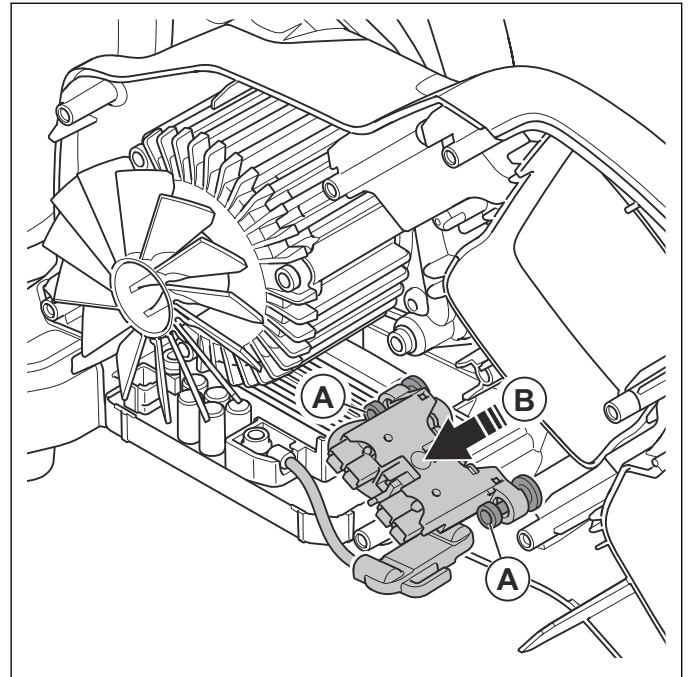
4. Install in the opposite sequence.

Note: When you install a new control panel, you must use the Husqvarna Service Hub to update the digital twin with the new Husqvarna Identification Number for the control panel and update the software.

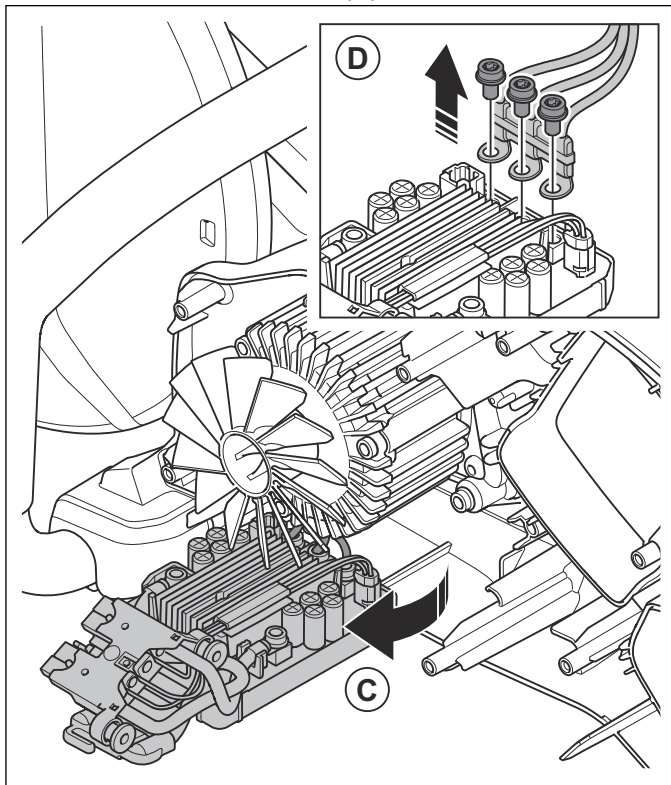
8.6 Control unit

8.6.1 To remove and install the control unit

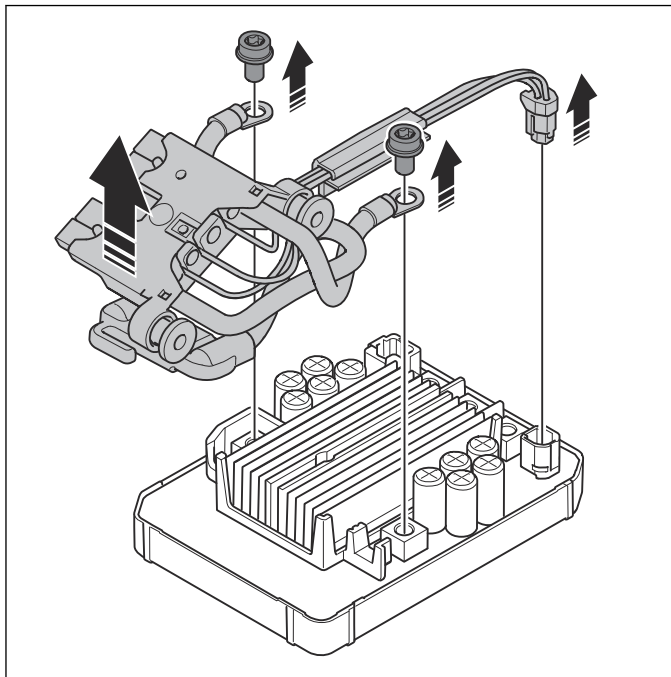
1. Remove the cable assembly. Refer to *To remove and install the cable assembly on page 21*.
2. Loosen the 2 screws (A) and carefully pull out the battery connector (B).



3. Turn the control unit (C) and remove the 3 screws and the cable connector (D).



4. Remove the 2 screws and the battery connector.



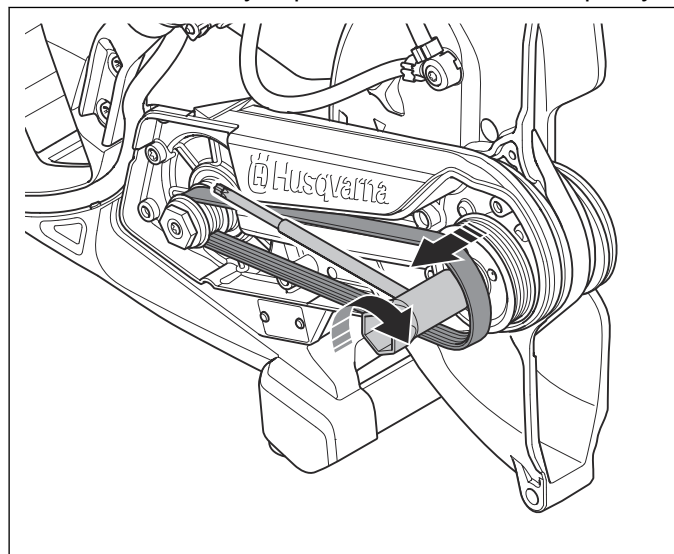
5. Install in the opposite sequence.

Note: When you install a new control unit, you must use the Husqvarna Service Hub to update the digital twin with the new HID for the control unit and update the software.

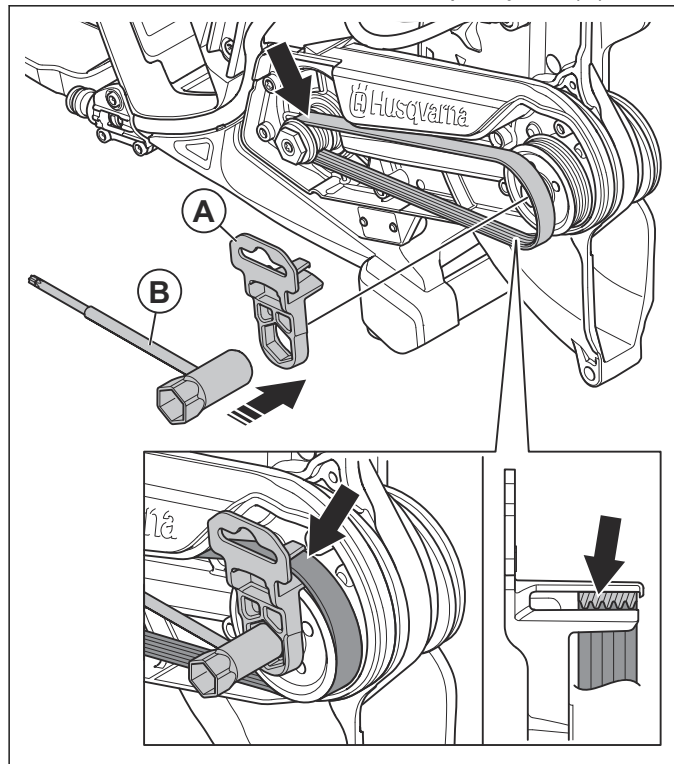
8.7 Drive belt

8.7.1 To replace the drive belt

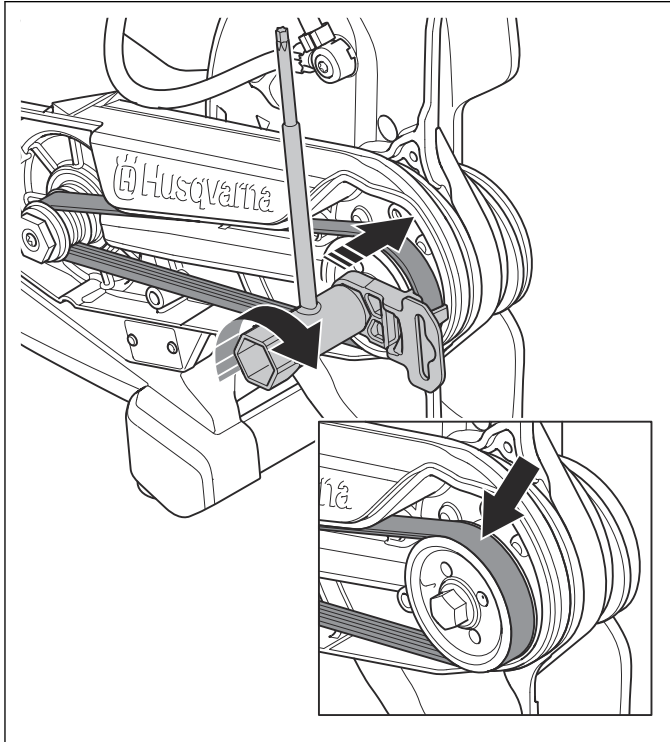
1. Remove the belt guard. Refer to *Product overview* on page 12.
2. Use a combination wrench to turn the pulley clockwise while you pull the drive belt off the pulley.



3. Put a new drive belt around the rear pulley.
4. Put the belt tool (A) on top of the front pulley. Make sure that the belt fits into the groove of the belt tool. Put a combination wrench on the pulley nut (B).

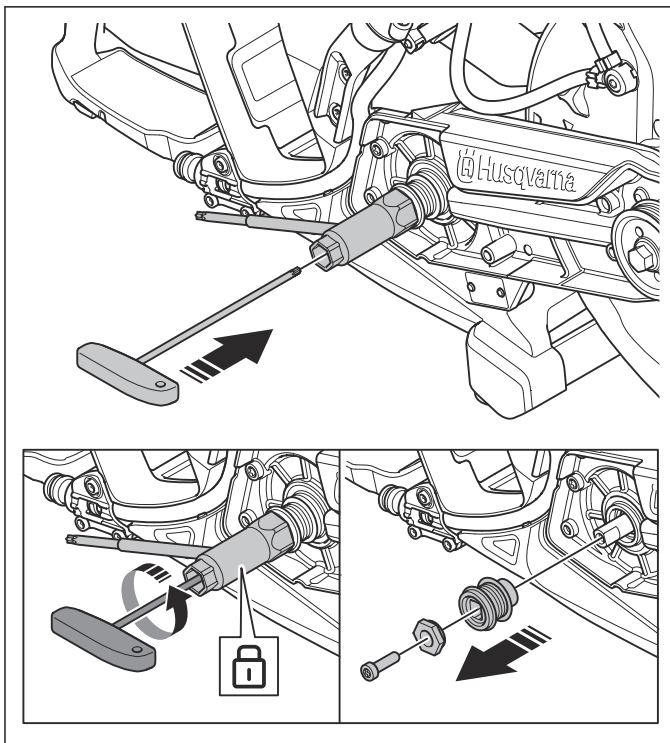


5. Use the combination wrench to turn the pulley clockwise while you push the drive belt onto the pulley.



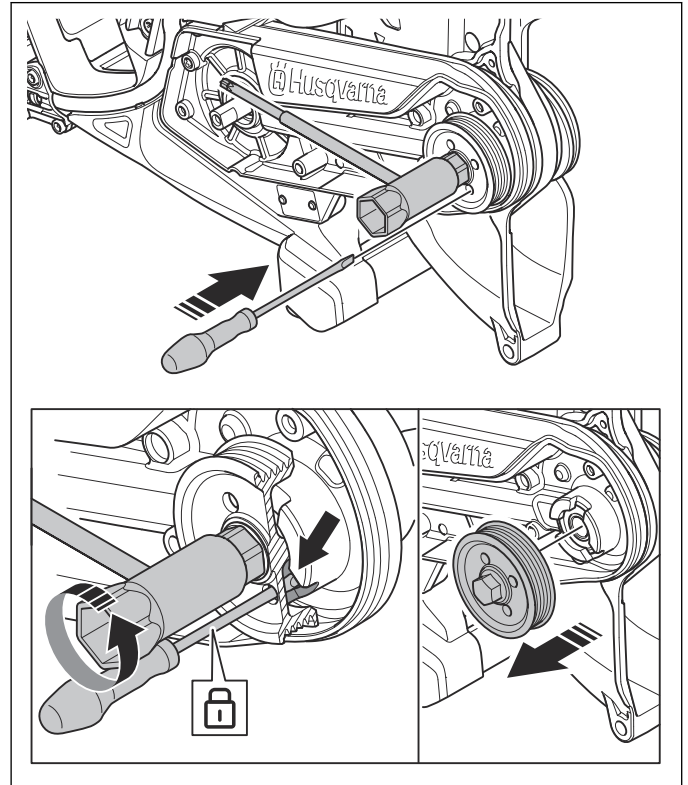
8.7.2 To remove and install the pulleys

1. Remove the belt guard. Refer to *To replace the drive belt on page 23*.
2. Lock the motor shaft with a combination wrench.



3. Use a torx key to remove the screw, the washer and the pulley.

4. Lock the blade shaft with a screwdriver.



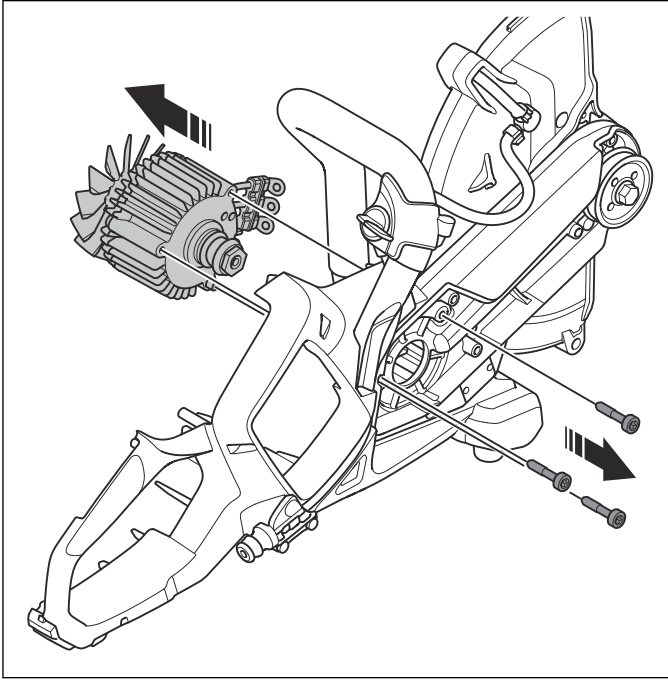
5. Use a combination wrench to remove the pulley.
6. Install in the opposite sequence.

8.8 Motor

8.8.1 To remove and install the motor

1. Remove the left handle half. Refer to *Product overview on page 12*.
2. Remove the cable assembly. Refer to *To remove and install the cable assembly on page 21*.
3. Remove the control unit. Refer to *To remove and install the control unit on page 22*.
4. Remove the drive belt. Refer to *To replace the drive belt on page 23*.

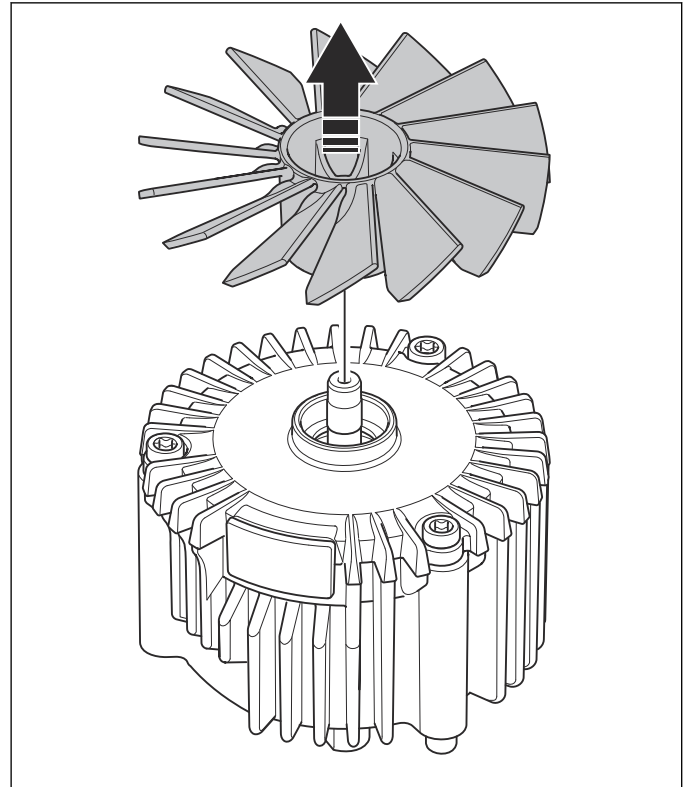
5. Remove the 3 screws and the motor.



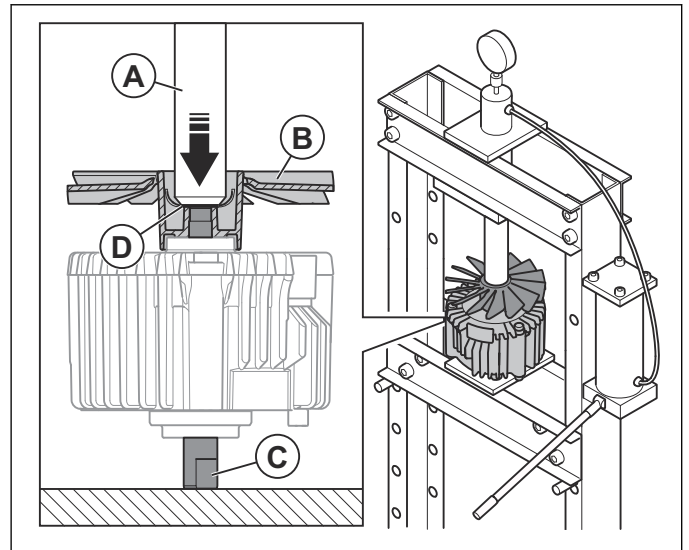
6. Install in the opposite sequence.

8.8.2 To replace the fan

1. Remove the fan.



2. Use a hydraulic press and a mandrel (A) to install a new fan (B). Push the inner ring of the fan against the motor shaft (C).



CAUTION: Do not push the blades of the fan.



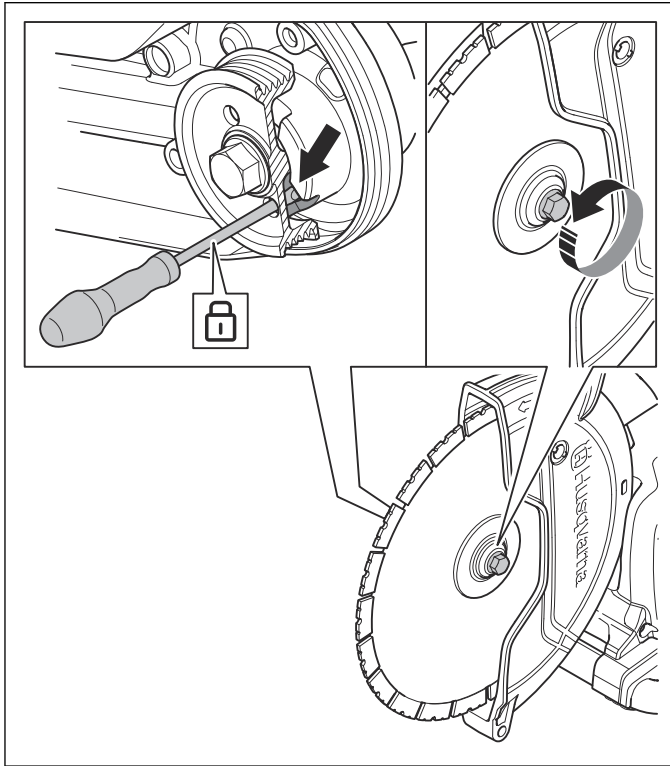
CAUTION: Do not push against the motor cover.

3. Push the fan until the inner ring (D) is flush with the edge of the shaft.

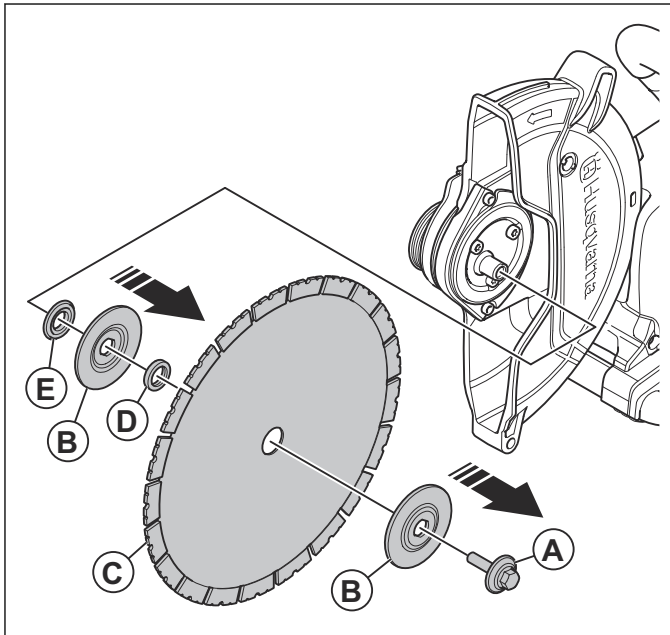
8.9 Blade guard

8.9.1 To disassemble and assemble the blade guard

1. Remove the wet system. Refer to *To remove and install the wet system on page 19*.
2. Lock the belt pulley with a screwdriver and loosen the screw.

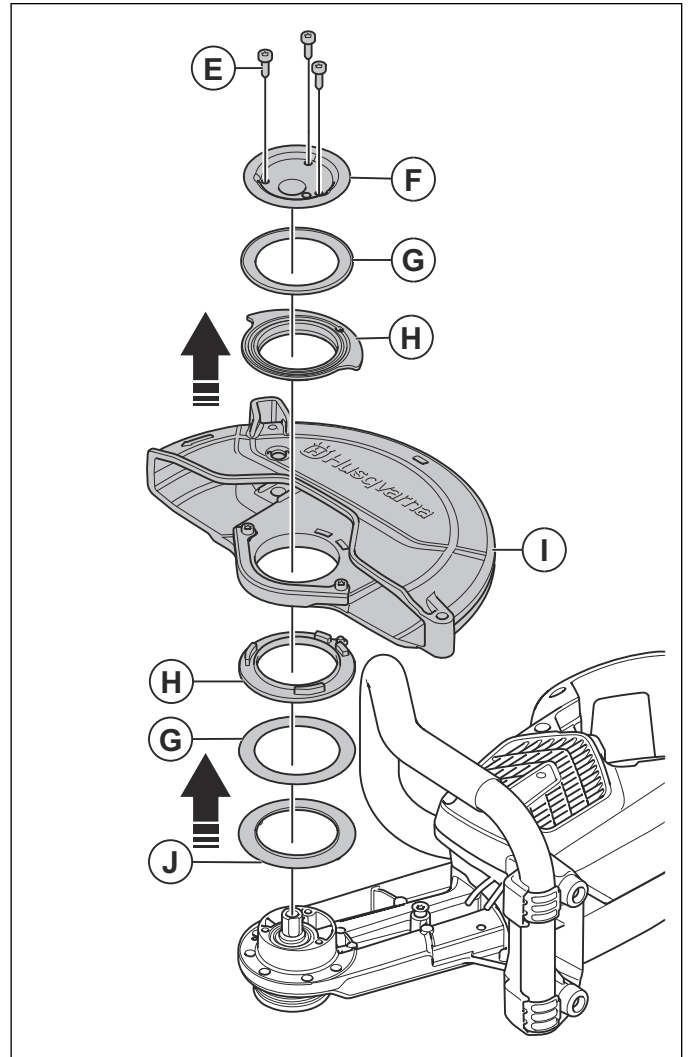


3. Remove the screw and washer (A), the 2 flange washers (B), the blade (C), the arbor bushing (D) and the bushing (E).

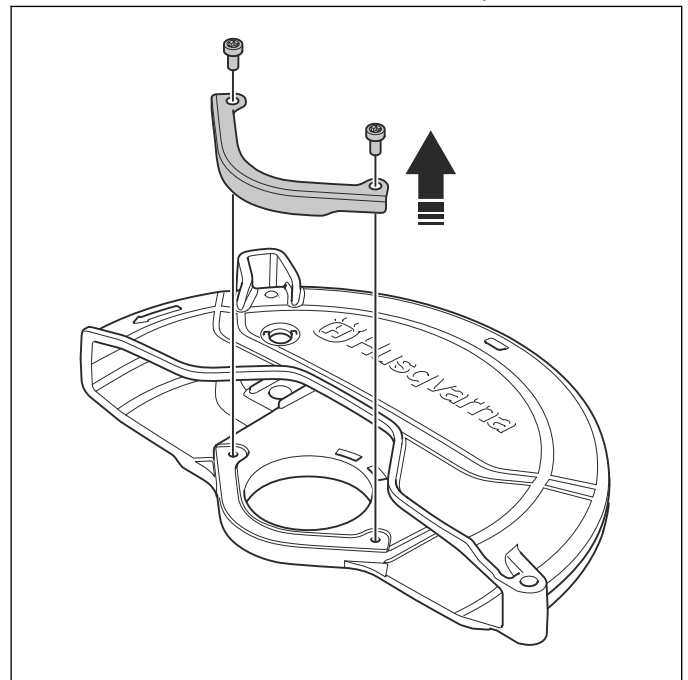


4. Remove the front pulley. Refer to *To remove and install the pulleys on page 24*.

5. Remove the 3 screws (F), the disc (G), the 2 shims (H), the 2 seals (I), the blade guard (J) and the shim holder (K).



6. Remove the 2 screws and the wear protection.

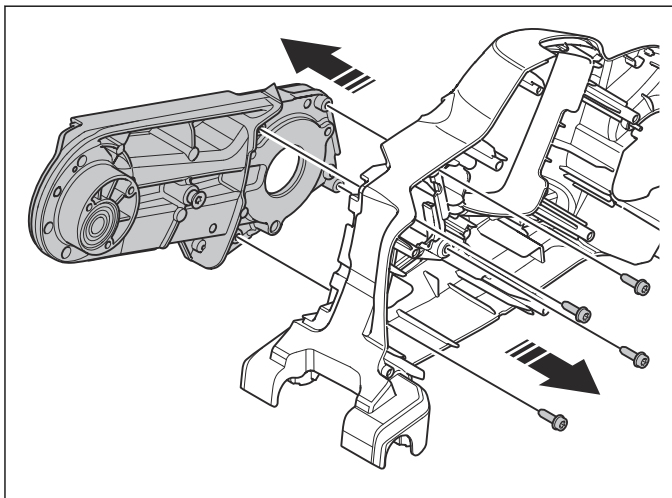


7. Install in the opposite sequence.

8.10 Cutter arm

8.10.1 To remove and install the cutter arm

1. Remove the cable assembly. Refer to *To remove and install the cable assembly on page 21*.
2. Remove the control unit. Refer to *To remove and install the control unit on page 22*.
3. Remove the drive belt. Refer to *To replace the drive belt on page 23*.
4. Remove the motor. Refer to *To remove and install the motor on page 24*.
5. Remove the blade guard. Refer to *To disassemble and assemble the blade guard on page 26*.
6. Remove the 4 screws and the cutter arm.

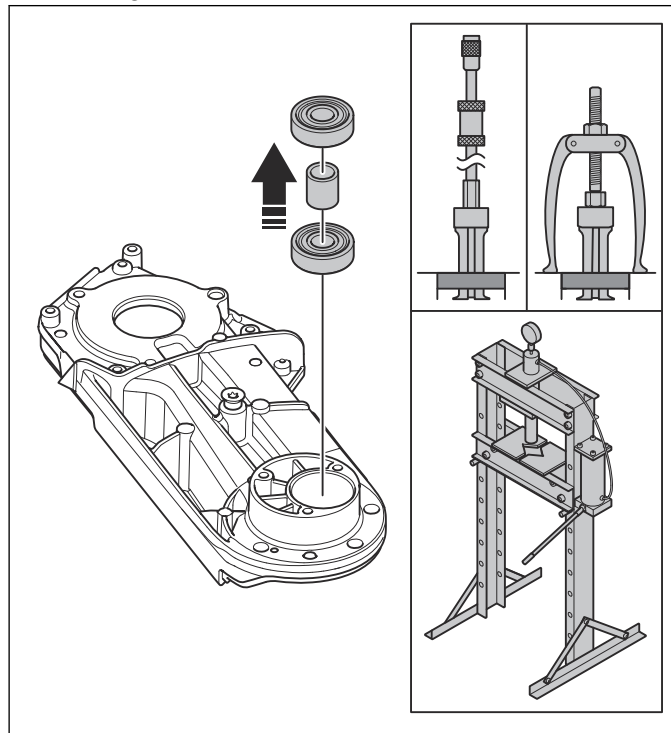


7. Install in the opposite sequence.

8.10.2 To remove the cutter arm bearings

1. Remove the cable assembly. Refer to *To remove and install the cable assembly on page 21*.
2. Remove the control unit. Refer to *To remove and install the control unit on page 22*.
3. Remove the drive belt. Refer to *To replace the drive belt on page 23*.
4. Remove the motor. Refer to *To remove and install the motor on page 24*.
5. Remove the blade guard. Refer to *To disassemble and assemble the blade guard on page 26*.
6. Remove the cutter arm. Refer to *To remove and install the cutter arm on page 27*.

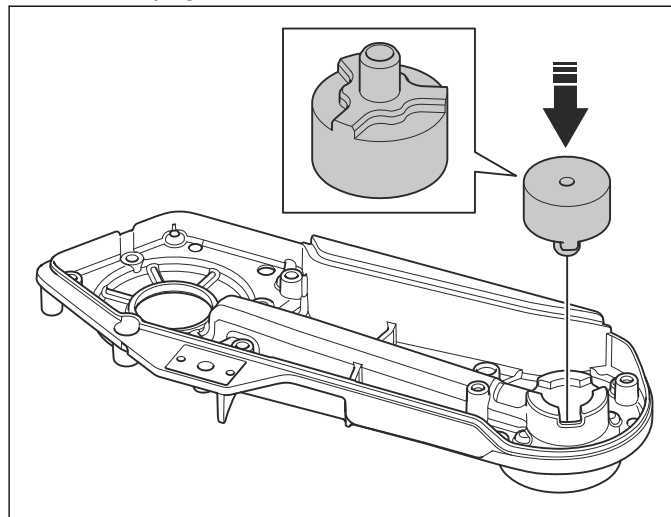
7. Do 1 of the 3 steps that follow to remove the bearings:



- a) Use an internal bearing puller and a slide hammer.
- b) Use an internal bearing puller and a puller.
- c) Use a hydraulic press and a mandrel.

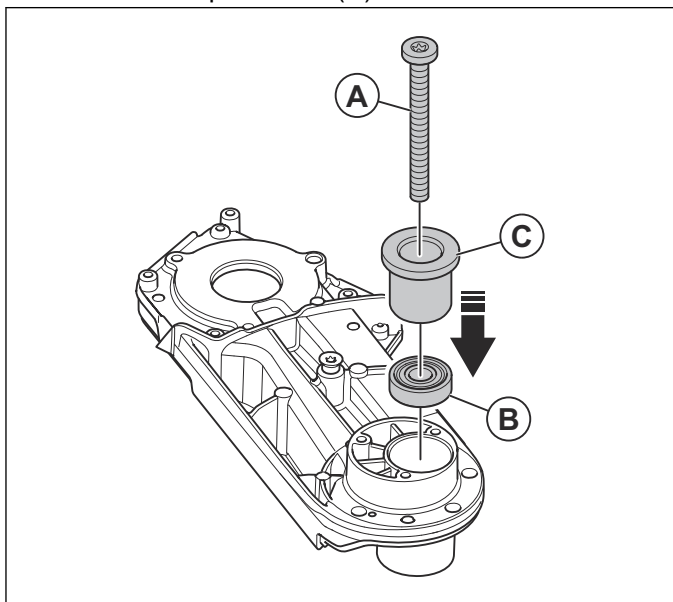
8.10.3 To install the cutter arm bearings

1. Put the fixture in the cutter arm. Refer to *Servicing tools on page 3*.



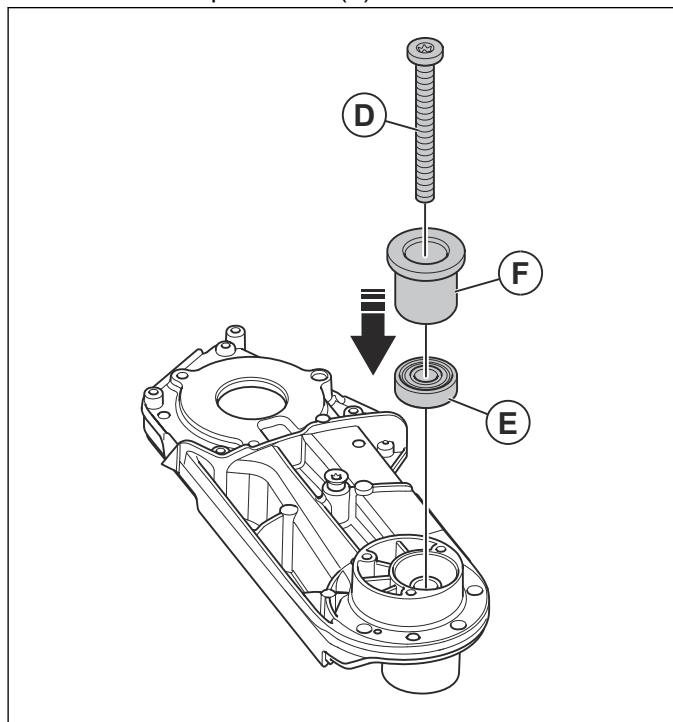
2. Turn the cutter arm around and put the first bearing in the cutter arm.
3. Put the special tool on the bearing. Refer to *Servicing tools overview on page 11*.
4. Do one of the steps that follow to install the bearing:
 - a) Use a hydraulic press to install the bearing with the special tool.

- b) Tighten the screw (A) to push the bearing (B) with the special tool (C).



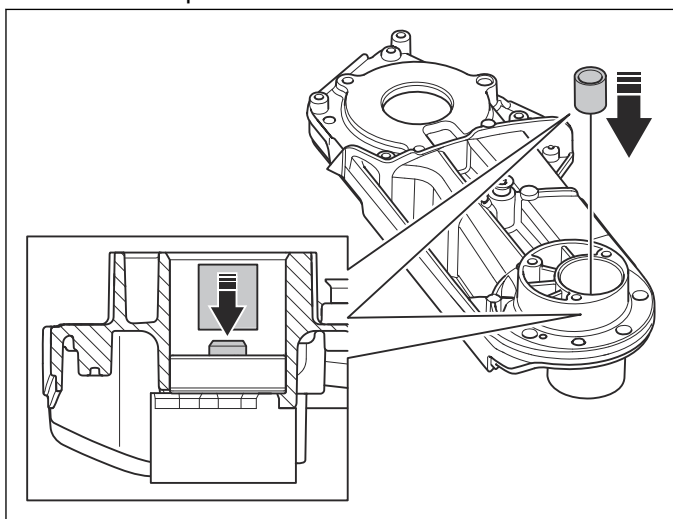
Note: The bearing will not go to the bottom of the bearing housing.

- b) Tighten the screw (D) to push the bearing (E) with the special tool (F).



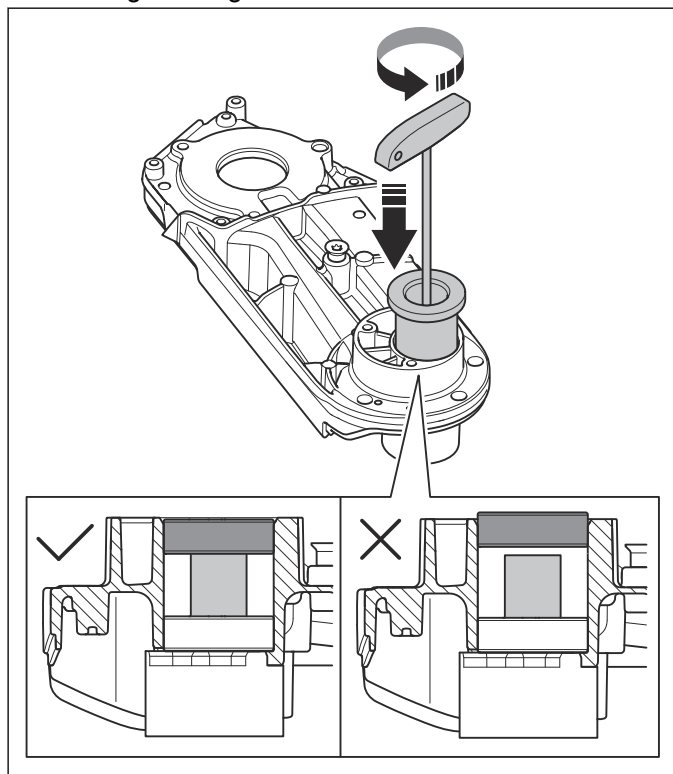
Note: The bearing will not go to the bottom of the bearing housing.

5. Install the spacer.



6. Put the second bearing in the cutter arm.
7. Put the special tool (F) on the bearing. Do one of the steps that follow to install the bearing:
- a) Use a hydraulic press to install the bearing with the special tool.

8. Make sure that the second bearing is flush with the bearing housing.





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