Husqvarna®

Workshop manual

592 XP, 592 XPG

English

1490 - 004 - 02.11.2021

Contents

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

- Do not use accessories 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.
- Always use original spare parts and accessories.
- Use approved hearing protection. Noise from the product can result in permanent hearing loss.
- Be careful with the fuel. The fluid and its fumes are poisonous, can cause skin damage and is very flammable.
- The guide bar, saw chain, chain brake and clutch cover must be attached correctly before you start the product. If not, the clutch can become loose and cause injury.
- Adjust the saw chain before you use the product. Make sure that the saw chain does not move at idle speed.
- Not sufficient lubrication of the saw chain can result in the saw chain breaking. This can cause injury or death to the operator or other persons.
- After operation, do not touch the muffler until the temperature of the muffler has decreased. Risk of burn injuries.
- Use safety glasses when you do maintenance on springs that have tension. Make sure that the spring in the starter pulley does not eject and cause injury.
- Wear protective gloves when you replace the crankshaft bearings. The crankcase halves are hot, risk of burn injuries.
- Make sure that the chain brake is engaged when you remove the pressure spring on the chain brake. If the chain brake is not engaged, the pressure spring can eject and cause injury.
- After repair, examine the chain brake before you use the product. Obey the instructions in the chain brake chapter.

2.4 Symbols on the product

Stop.

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

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

Always wear approved protective helmet, approved hearing protection and eye protection.

This product complies with applicable EC Directives.

Noise emissions to the environment according to European Directive 2000/14/EC and New South Wales legislation "Protection of the Environment Operations (Noise control) Regulation 2017". Noise emission data can be found on the machine label and in the *Technical data* chapter.

Chain brake, engaged (right). Chain brake, disengaged (left).

Choke.

Air purge bulb.

Adjustment of the oil pump.

Fuel.

Chain oil.

If your product has this symbol it has heated handles.

yyyywwxxxx	The rating plate shows serial number **xxxx**. **yyyy** is the production year and **ww** is the production week.

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

2.5 Cutting equipment safety

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

WARNING: Do not install the cutting equipment until the product is assembled.

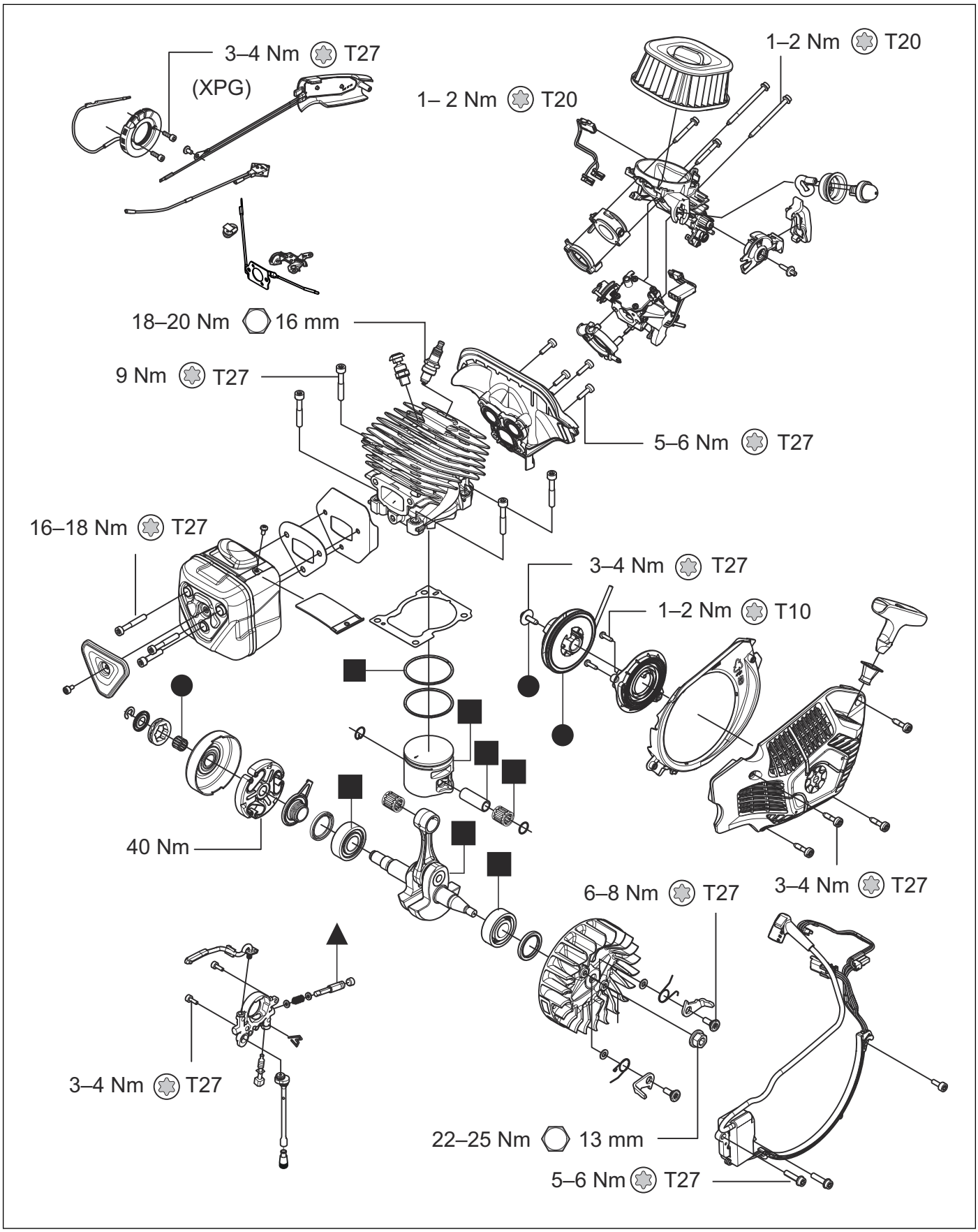
3 Prepare and do servicing on the product

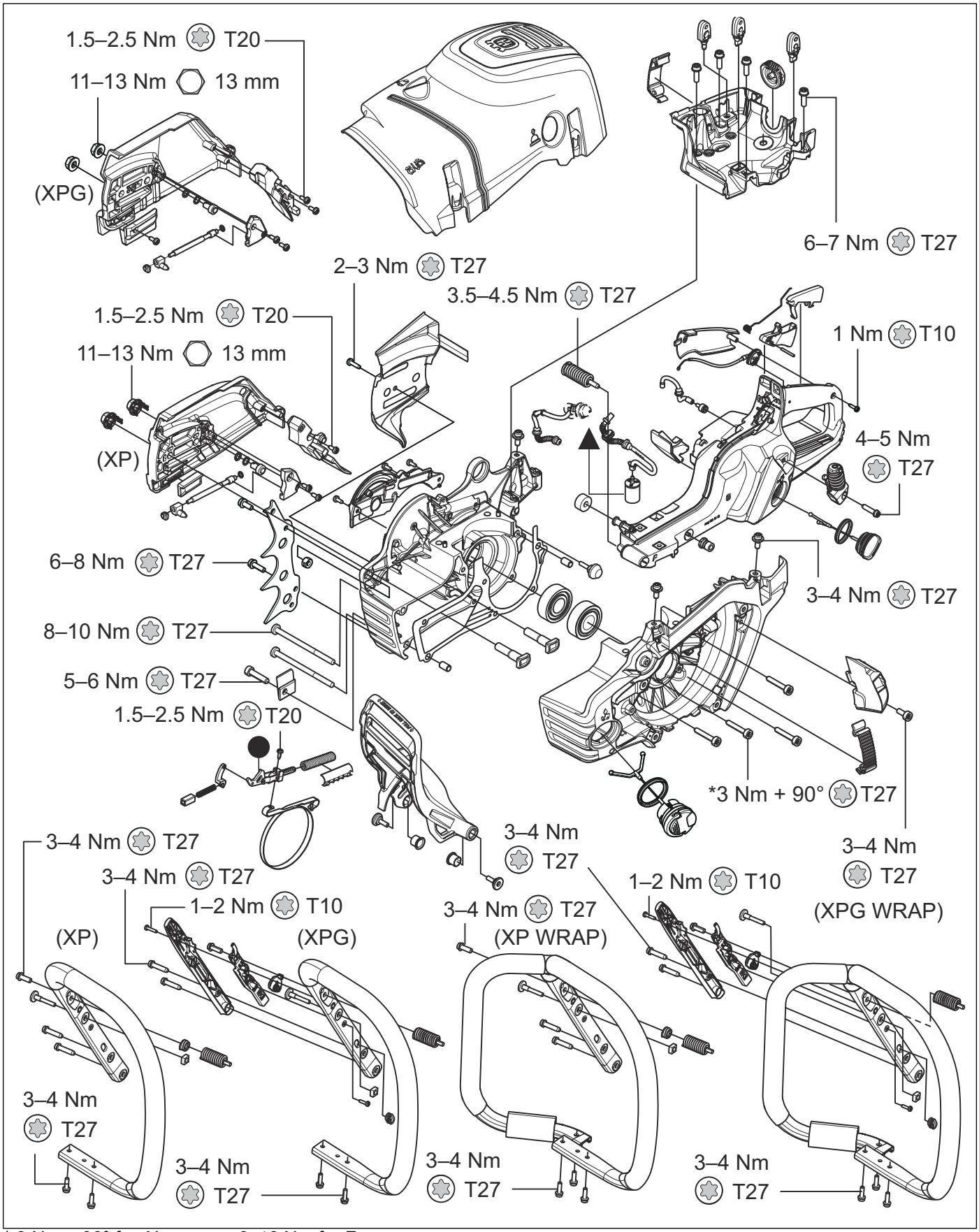
3.1 Maintenance schedule

Maintenance	Before operation	After 40 h	After 100 h
Clean the external surfaces.	After each operation.		
Clean the muffler, exhaust pipe and engine from dirt and unwanted lubricant.	After each operation.		
Make sure that the saw chain does not move at idle speed.	X		
Do a check of the stop switch.	X		
Do a check of the chain brake.	X		
Do a check of the chain drive sprocket.	X		
Sharpen the saw chain.	X		
Do a check of the tension of the saw chain.	X		
Do a check of the chain catcher.	X		
Turn the guide bar, do a check of the lubrication hole and clean the groove in the guide bar.	X		
Make sure that the guide bar and saw chain are sufficiently lubricated.	X		
Do a check of the throttle trigger lockout and the throttle trigger.	X		
Examine the engine, the fuel tank and the fuel lines for leaks.	X		
Tighten nuts and screws.	X		
Do a check of the engine oil level. Fill with oil if it is necessary.	X		
Examine the starter and the starter rope for wear and damage.		X	
Clean the air filter. Replace the air filter if it is necessary.		X	
Examine the vibration damping units for wear and damage.		X	
Examine the spark plug.		X	
Lubricate the needle bearing for the clutch drum.		X	
Clean the cooling system. Make sure to clean the flywheel fins.		X	
Clean the external surface of the carburetor and the area around it.		X	
Remove burrs from the edges of the guide bar.		X	
Clean the spark arrester screen. Replace the spark arrester screen if it is necessary.			X
Clean the inner surface of the fuel tank.			X
Clean the inner surface of the chain oil tank.			X
Examine the fuel filter for contamination and the fuel hose for damage. Replace the parts if it is necessary.			X
Examine the spark plug. Replace the spark plug if it is necessary.			X
Do a check of all cables and connections.			X
Do a check of the clutch assembly and the clutch drum for wear. Replace the parts if it is necessary.			X
Do a check of the brake band.			X
Clean the external parts of the carburetor.			X

4.1 Servicing data

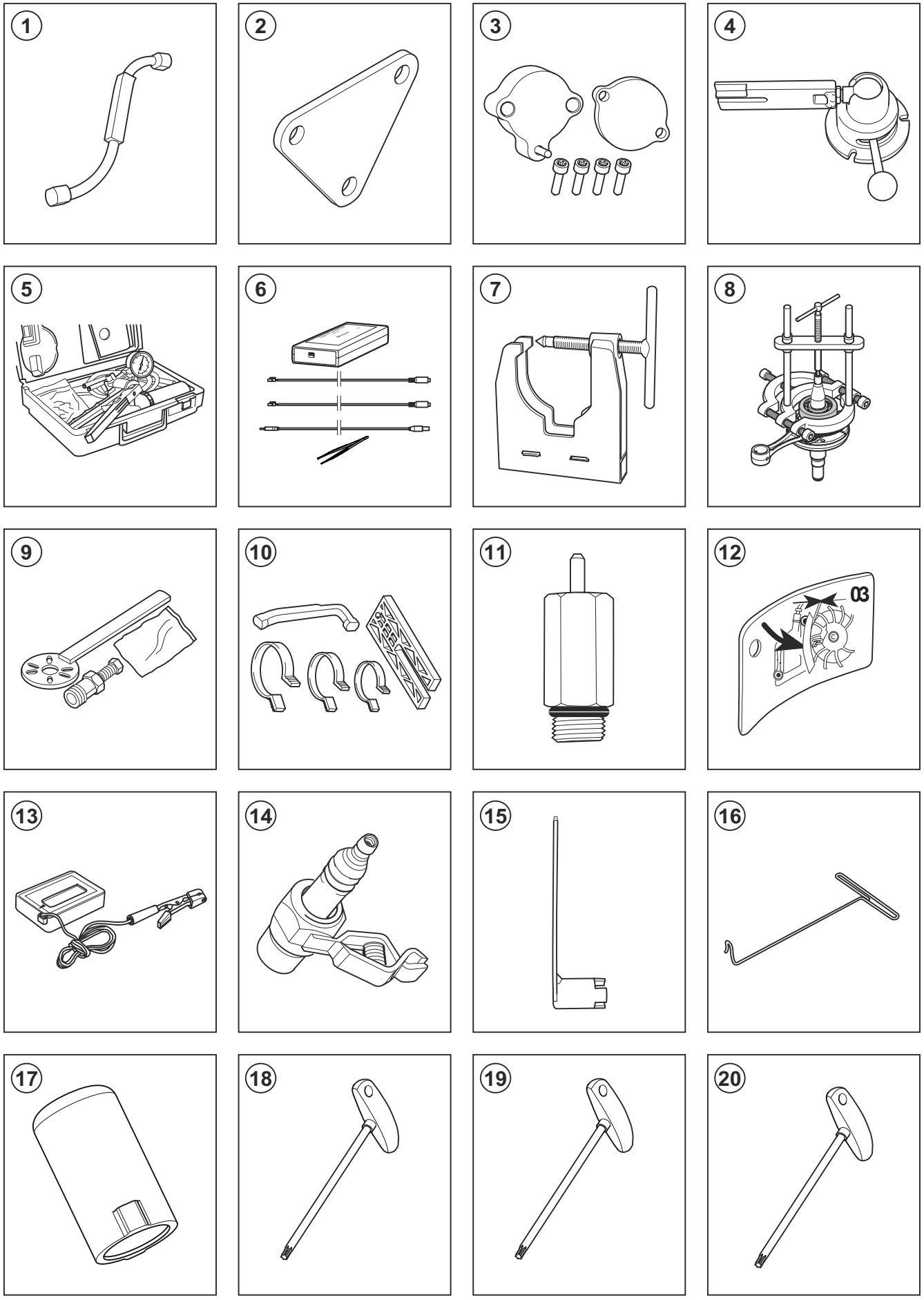
- ● Lubricate with grease.
- ■ Lubricate with two-stroke oil.
- ▲ Lubricate with chain oil.

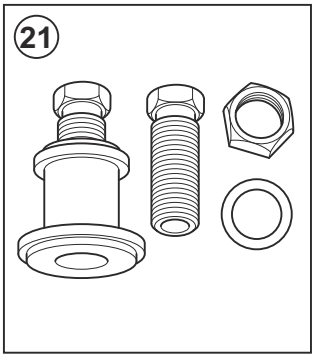


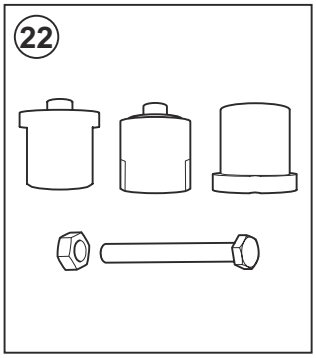


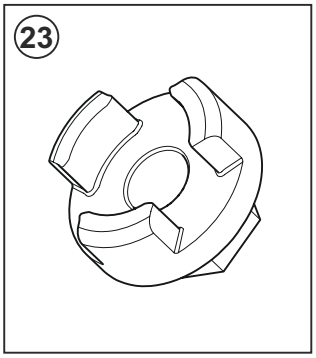
* 3 Nm + 90° for AL screws, 8–10 Nm for Fe screws.

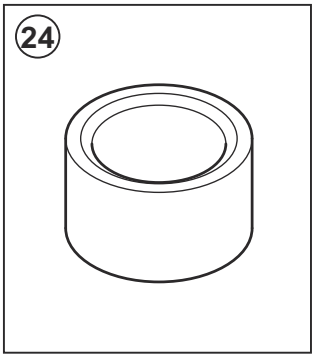
5.1 Servicing tools

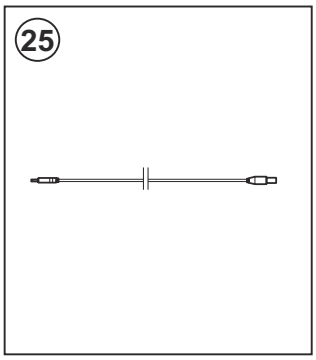












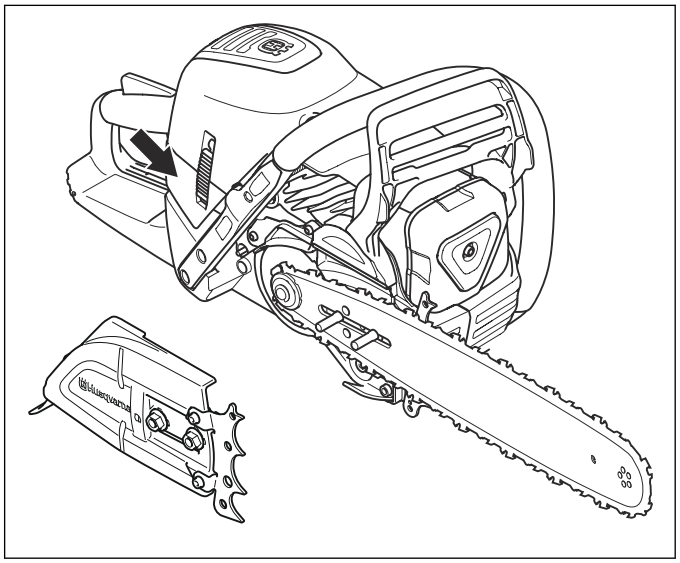
Item	Description	Use	Article number
1	Piston stop	To lock the crankshaft.	575 29 36-01
2	Cover plate for exhaust	To seal the exhaust port.	529 36 00-01
3	Cover plate for inlet	To seal the intake system.	529 59 27-01
4	Assembly fixture	To hold the product when you disassemble and assemble the product.	502 51 02-01
5	Pressure tester	To do a pressure test.	531 03 06-23
6	Common service tool (CST)	To do a check of the product and install updates to the firmware.	583 89 71-01
7	Crankcase disassemble tool, flywheel side	To disassemble the crankcase.	502 51 61-01
8	Puller	To remove the bearings from the crankshaft.	531 00 48-67
9	Flywheel puller kit	To remove the flywheel.	502 51 49-02
10	Piston assembly kit	To assemble the piston.	502 50 70-01
11	Adapter for pressure tester	To do a pressure test of the cylinder.	503 84 40-03
12	Air gap gauge	To measure the distance between the flywheel and the ignition module.	502 51 34-02
13	Tachometer	To measure RPM.	502 71 14-01
14	Test spark plug	To do a spark test.	502 71 13-01
15	Clutch tool	To remove the clutch.	502 52 22-01
16	Fuel filter hook	To pull out the fuel filter from the tank.	502 50 83-01
17	Pressing tool, seals	To install the crankcase bearing seals.	599 47 42-01
18	T-handle Torx, T27	To remove and install Torx screws.	502 71 27-03
19	T-handle Torx, T20	To remove and install Torx screws.	588 59 85-01
20	T-handle Torx, T10	To remove and install Torx screws.	588 52 41-01

Item	Description	Use	Article number
21	Crankshaft assembly tool	To assemble the crankshaft.	502 50 30-17
22	Mounting kit for bearings	To install the bearings on the crankshaft.	593 72 69-01
23	Clutch tool	To remove the clutch.	597 37 07-01
24	Seal ring guide	To install the seal ring.	599 47 43-01
25	Adapter cable CST	To connect the product to CST.	599 97 38-01

6 Function overview

6.1 Type plate and product serial number

The type plate or the laser printing shows the serial number. Supply the model name and the article number when you send an order for spare parts.



6.2 Fuel

This product has a two-stroke engine.

CAUTION: Incorrect type of fuel can result in engine damage. Use a mixture of gasoline and two-stroke oil.

6.2.1 Premixed fuel

Use Husqvarna premixed alkylate fuel of a good quality, for best performance and extension of the engine life. This fuel contains less harmful chemicals compared to regular fuel, which decreases harmful exhaust fumes. The quantity of remains after combustion is lower with this fuel, which keeps the components of the engine more clean.

6.2.2 To mix fuel

6.2.2.1 Gasoline

CAUTION: Do not use gasoline with an octane grade less than 90 RON/87 AKI. Use of a lower octane grade can cause engine knocking, which causes engine damages.

We recommend that you use gasoline of a higher octane grade for work with continuously high rpm. Limbing is an example of such work.

Use good quality unleaded gasoline with a maximum of 10% ethanol contents.

6.2.2.2 Two-stroke oil

CAUTION: Do not use two-stroke oil for water-cooled outboard engines, also referred to as outboard oil. Do not use oil for four-stroke engines.

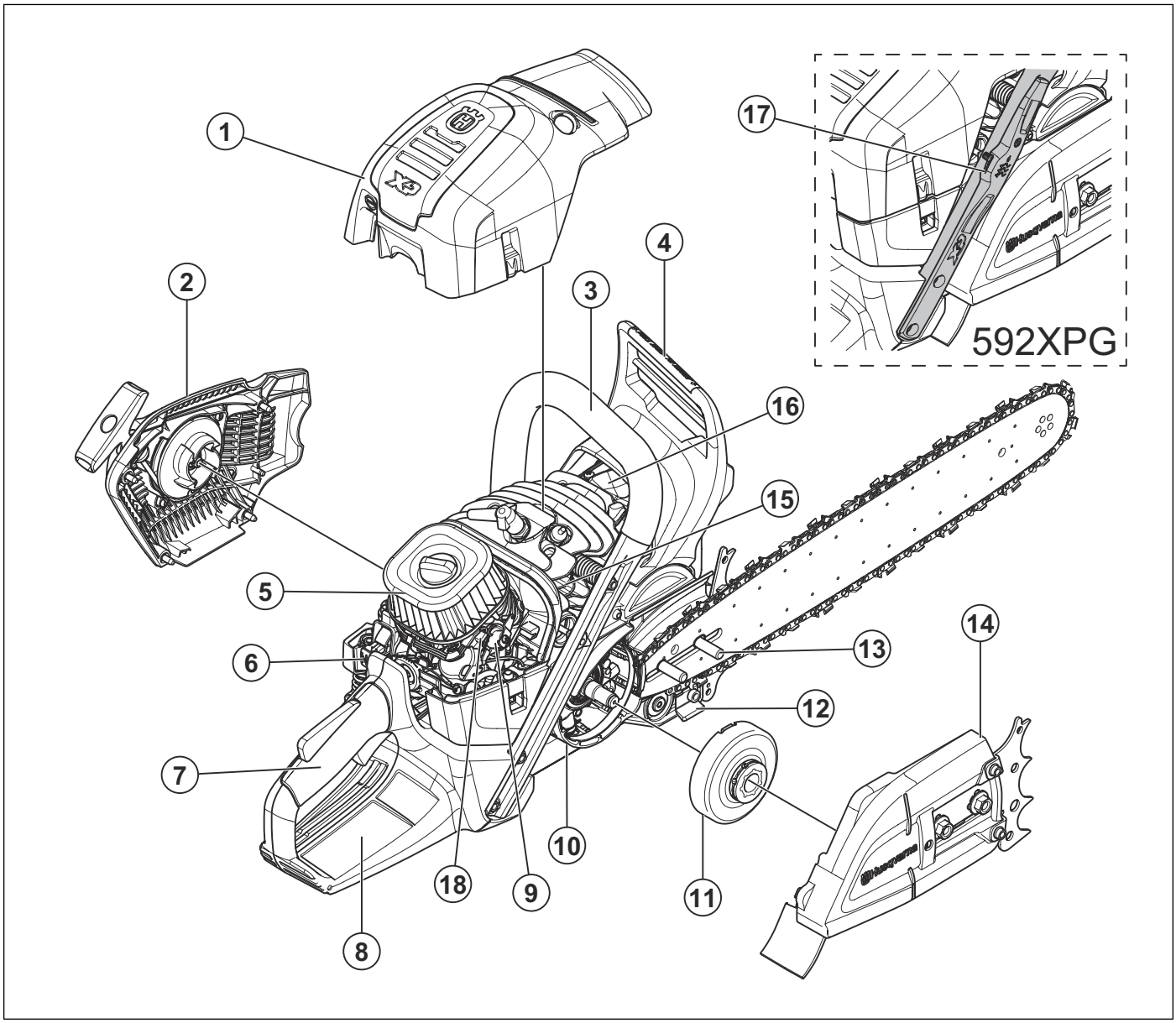
For best results and performance use Husqvarna two-stroke oil.

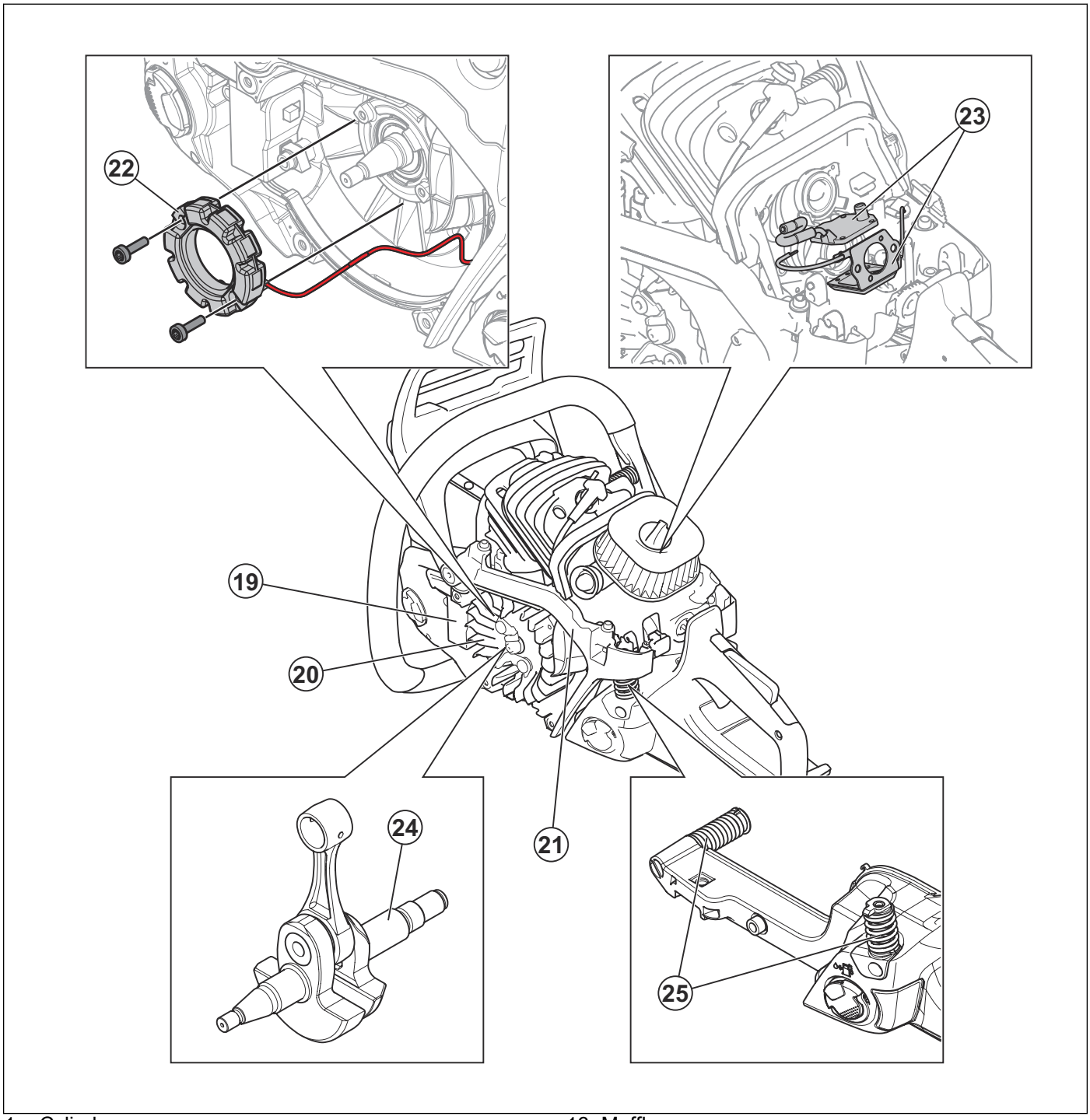
If Husqvarna two-stroke oil is not available, use a two-stroke oil of good quality for aircooled engines. Speak to your servicing dealer to select the correct oil.

6.2.2.3 To mix gasoline and two-stroke oil

Gasoline, liter	Two-stroke oil, liter
	2% (1:50)
5	0.10
10	0.20
15	0.30
20	0.40

7.1 Product overview for repair instructions





1. Cylinder cover
2. Starter unit
3. Front handle
4. Chain brake and front hand guard
5. Air filter
6. Start/stop switch
7. Rear handle
8. Right hand guard
9. Carburetor
10. Centrifugal clutch
11. Clutch drum
12. Chain catcher
13. Guide bar bolts
14. Clutch cover
15. Heat shield
16. Muffler
17. Heated handle control
18. Connector for CST
19. Ignition system
20. Flywheel
21. Crankcase
22. Generator
23. Thermostat and heating element
24. Crankshaft
25. Vibration damping units

7.2 To clean and examine the product parts

- Clean and examine all parts fully. You find more instructions in the chapter for each part if special tools or procedures are necessary.

- Replace damaged or defective parts.
- Always use original spare parts.

7.3 To connect the common service tool (CST)

Note: I can be necessary to install firmware to a new spare part. Make sure that you know the Husqvarna identification number (HID) of the new spare parts before you connect the product to common service tool (CST). The identification number is found on the spare part.

1. Start the common service tool (CST).
2. Connect the common service tool (CST) to the product with cable.
   a) Connect the correct adapter cable to the common service tool (CST).
   b) Connect the common service tool (CST) to the product servicing connector. Refer to *Product overview for repair instructions on page 13*.

   CAUTION: Do not disconnect the common service tool (CST) until the update is completed.

   c) Obey the instructions on the common service tool (CST).

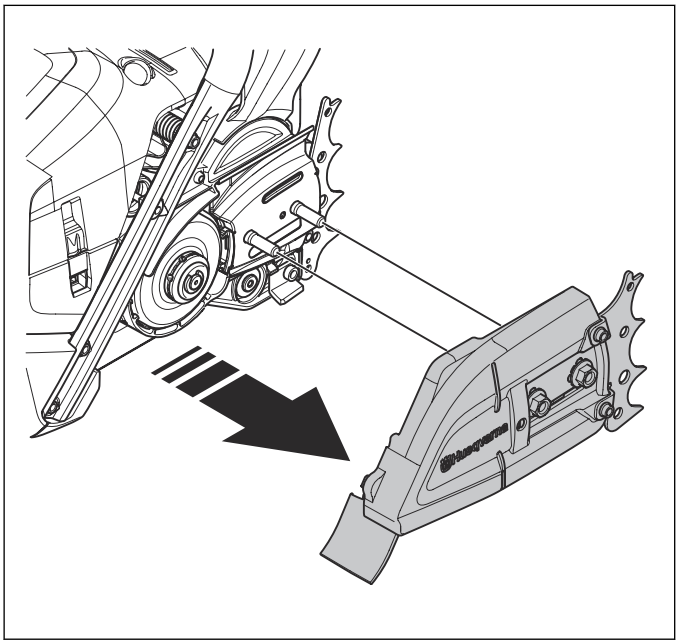
   CAUTION: Do not disconnect the common service tool (CST) until the update is completed.

7.4 Chain brake

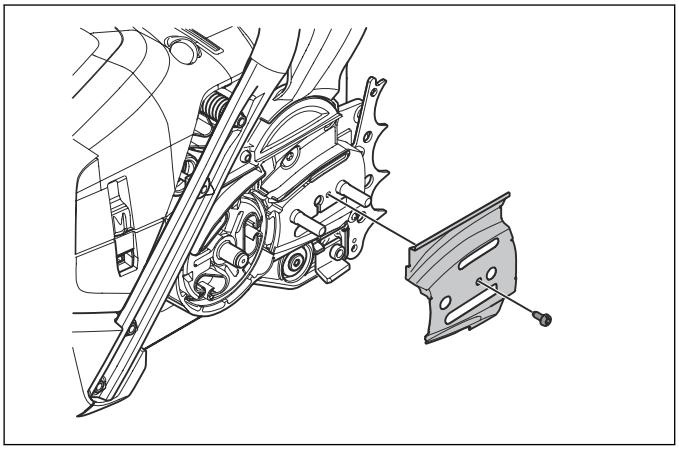
7.4.1 To disassemble and assemble the chain brake

WARNING: Make sure that the chain brake spring does not eject and cause injury. Use protective goggles.

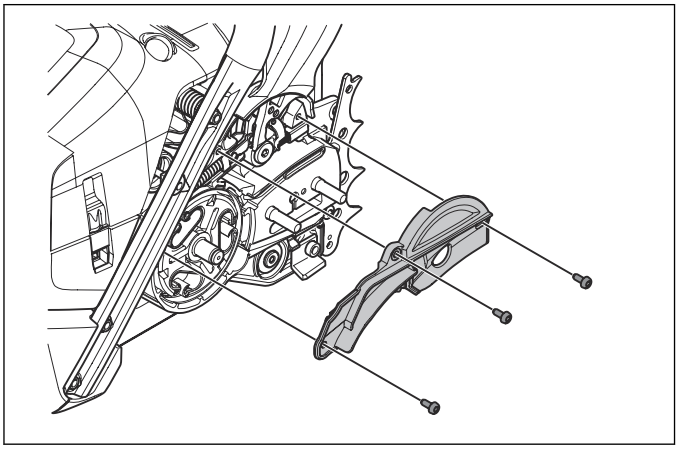
1. Remove the clutch cover.



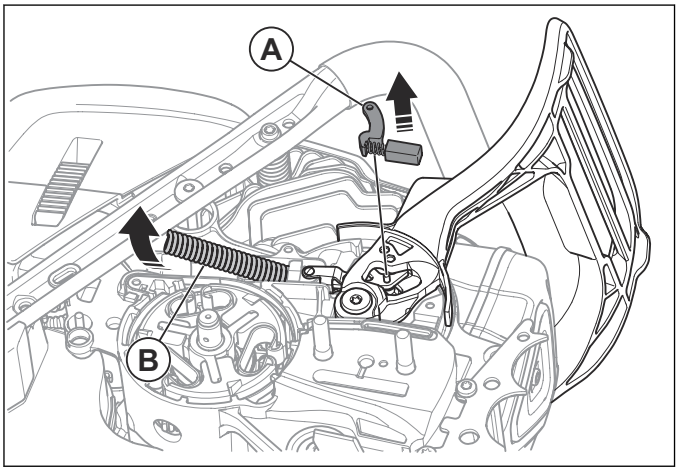
2. Remove the clutch drum. Refer to *To remove and install the centrifugal clutch on page 29*.
3. Remove the screw and the guide bar plate.



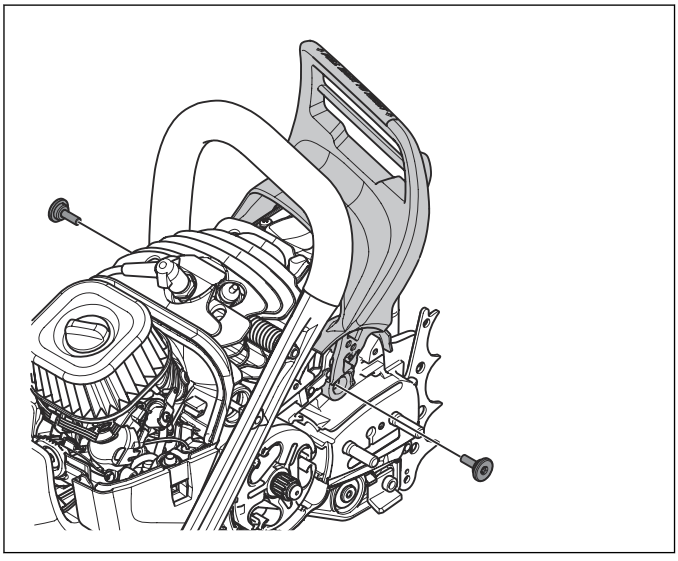
4. Remove the 3 screws and the chain brake cover.



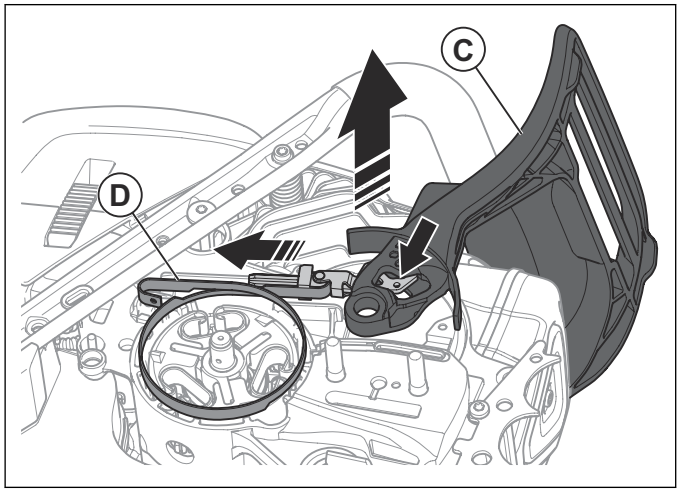
5. Remove the knee joint unit (A).



6. Remove the chain brake spring (B).
   a) Hold one hand above the chain brake spring.
   b) Carefully pull out the chain brake spring with a screwdriver.
7. Remove the 2 screws.



8. Remove the handguard (C) and the brake band assembly (D).

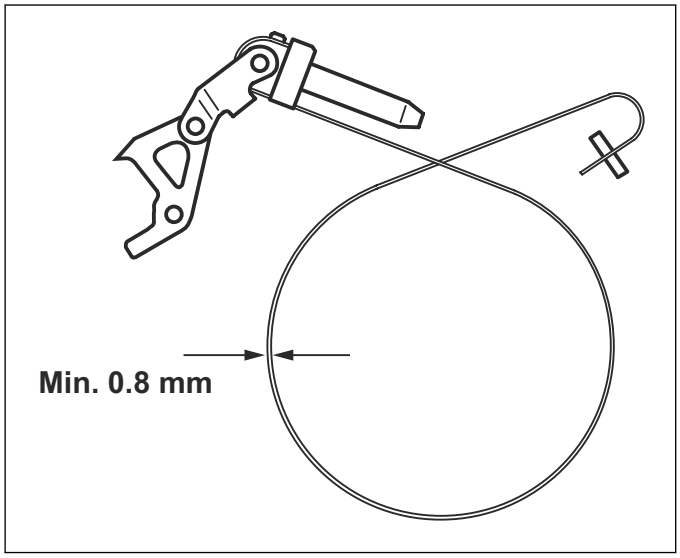


9. Remove the brake band assembly from the handguard.
10. Assemble in the opposite sequence.

Note: It is easier to install the chain brake spring if you remove the front handle. Refer to *To remove and install the front heated handle on page 19*.

7.4.2 To clean and examine the chain brake

1. Carefully clean and examine all parts of the chain brake. Replace damaged parts.
2. Measure the thickness of the brake band. The thickness of the brake band must be minimum 0.8 mm at the most worn point.



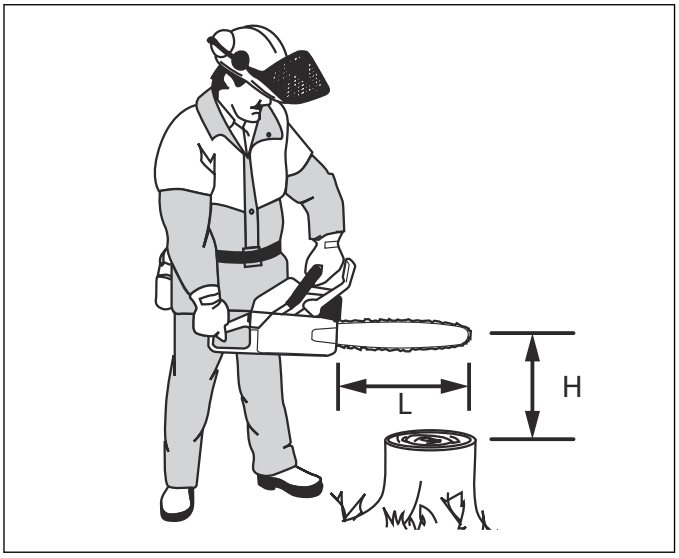
3. Lubricate the knee joint with grease.

7.4.3 To do a function test of the chain brake

1. Hold the product with 2 hands above a stump or other stable surface.

WARNING: The engine must be off.

2. Release the front handle. The guide bar tip falls onto the stump.



Guide bar length, L	Height, H
15 inch	30-40 cm

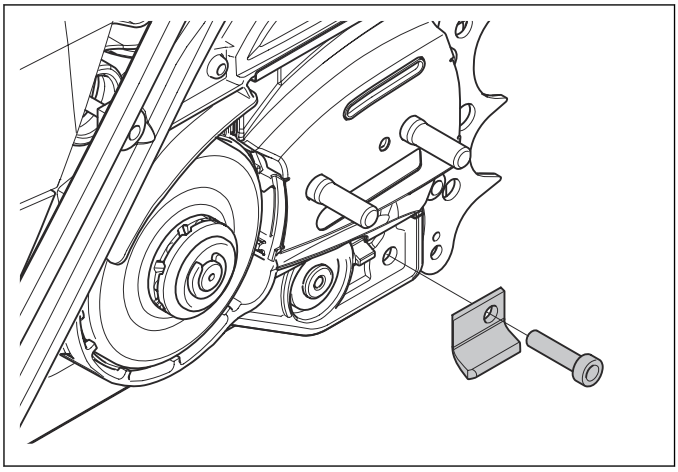
3. Make sure that the chain brake engages when the guide bar tip hits the stump.

7.5 Chain catcher

7.5.1 To replace the chain catcher

WARNING: You must always replace a worn chain catcher with a new one. Always use original spare parts.

1. Remove the clutch cover.
2. Remove the screw and the chain catcher.



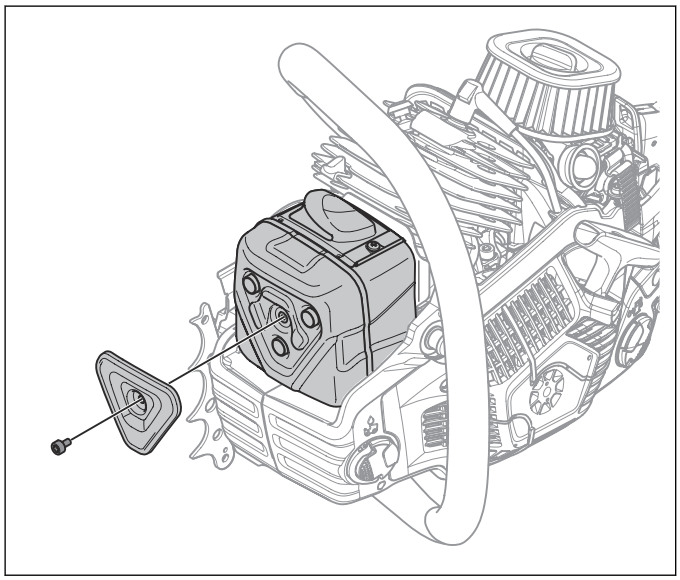
3. Replace the chain catcher with a new one.
4. Install the clutch cover.

7.6 Muffler

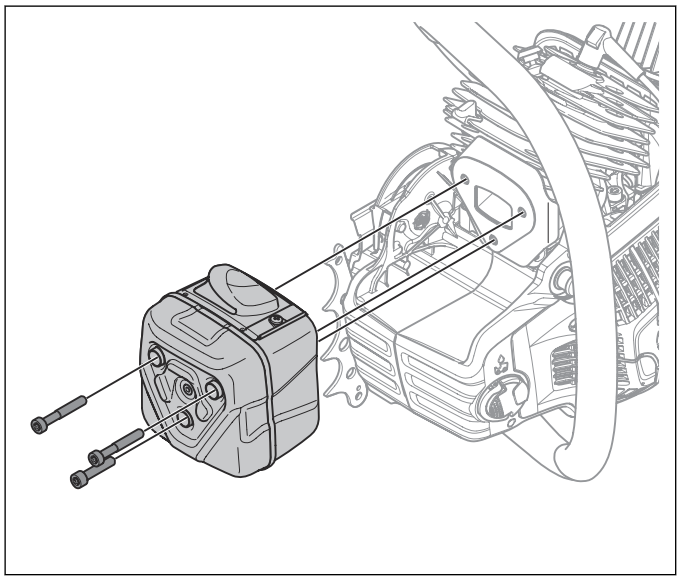
7.6.1 To remove and install the muffler

WARNING: Do not touch a hot muffler. Risk of burn injuries.

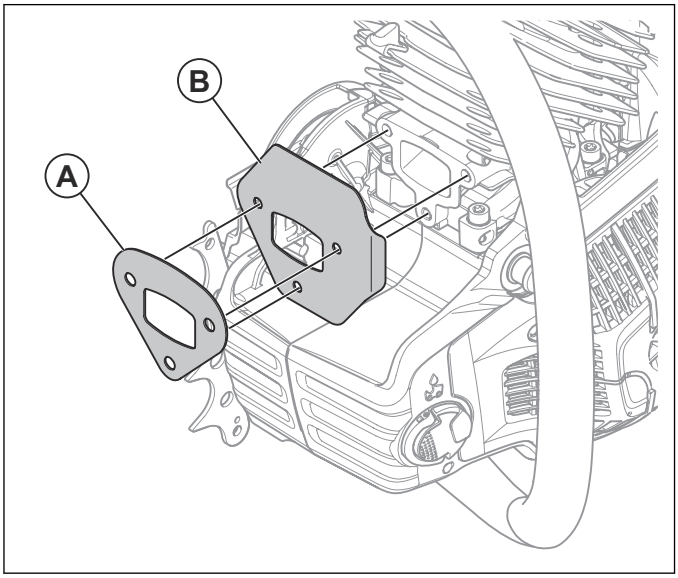
1. Remove the screw and the muffler cover.



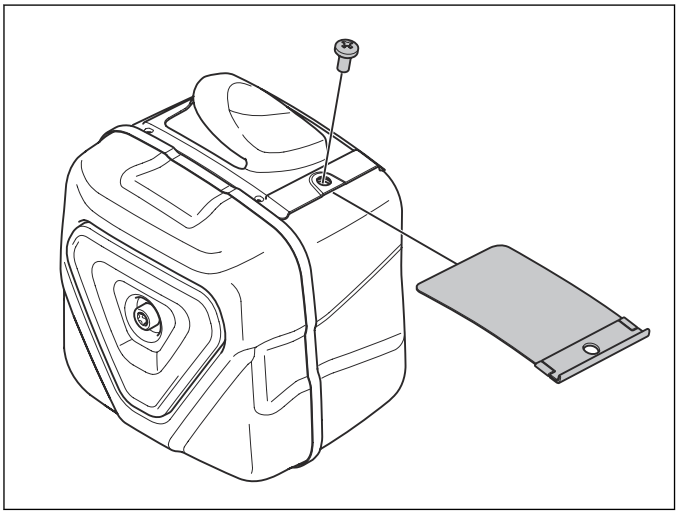
2. Remove the 3 screws and the muffler.



3. Remove the gasket (A) and the heat shield (B).



4. Remove the screw and pull out the spark arrester screen.



5. Install in the opposite sequence.

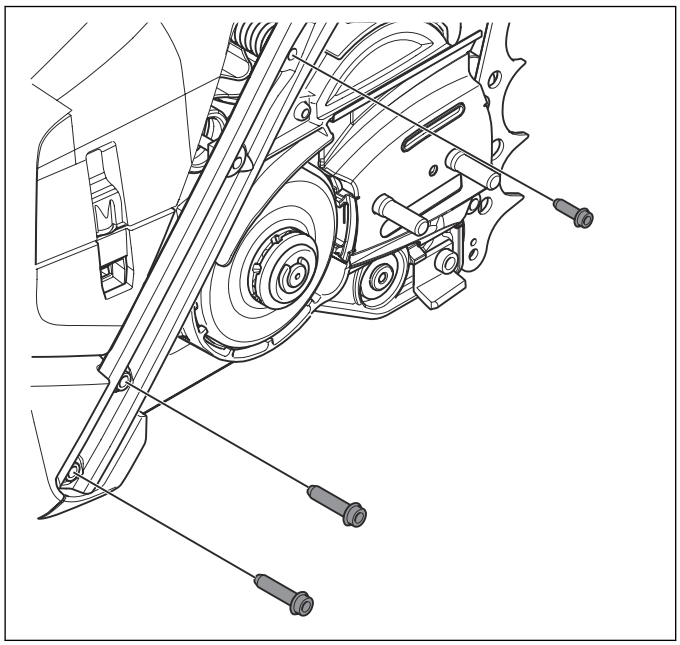
7.6.2 To clean and examine the muffler

1. Clean all components. Clean the contact surfaces of the gasket, the heat shield and the cylinder.
2. Examine the spark arrester screen for damage.
3. Examine the muffler for damage.
4. Examine the gasket for damage.
5. Replace all damaged parts.

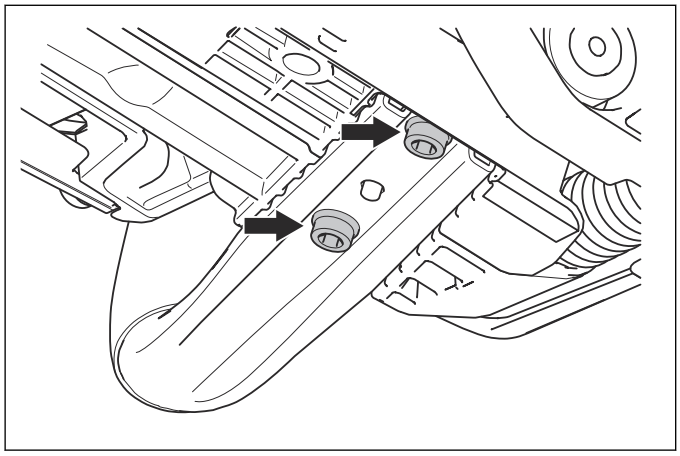
7.7 Handles

7.7.1 To remove and install the front handle

1. Remove the 3 screws.



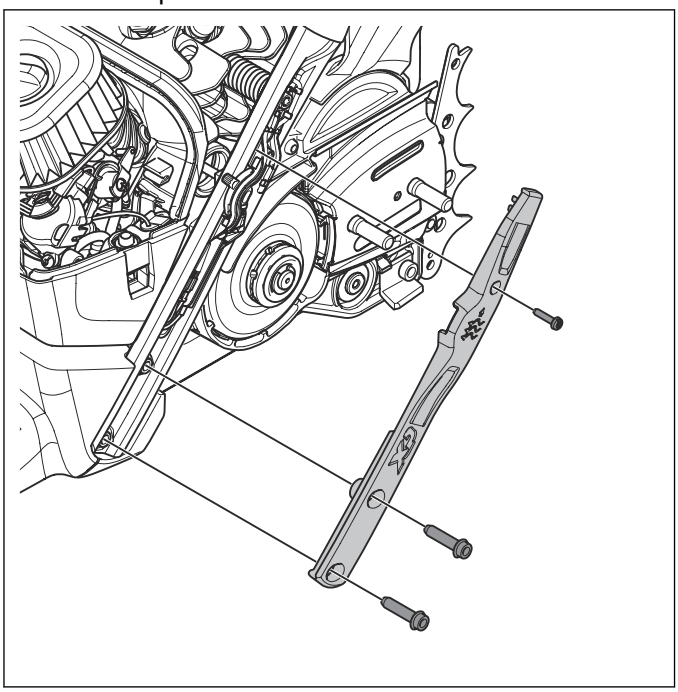
2. Remove the 2 screws.



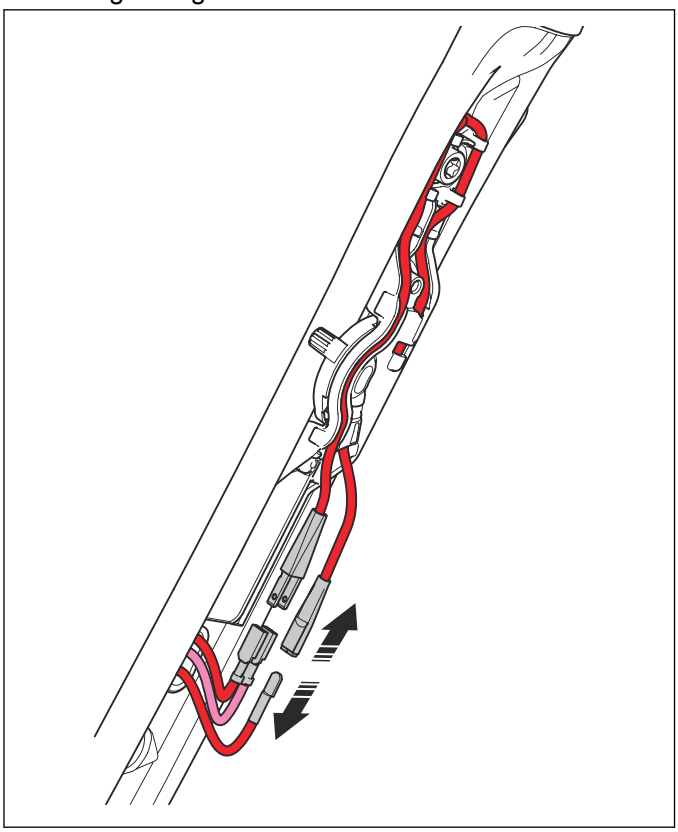
3. Remove the front handle from the product.
4. Install the opposite sequence.

7.7.2 To remove and install the front heated handle

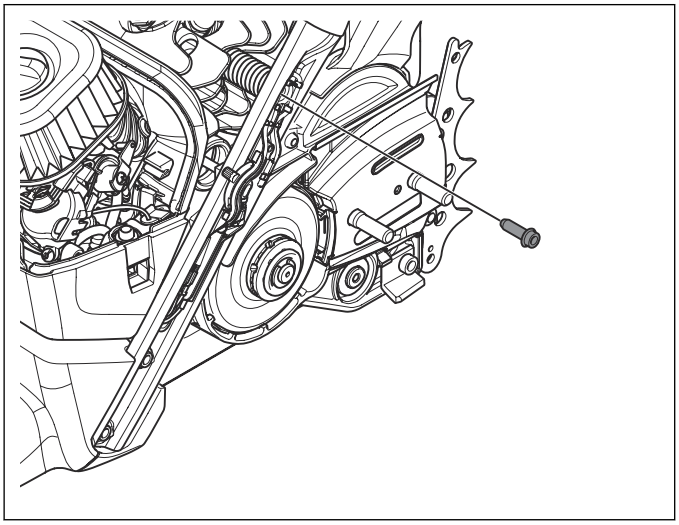
1. Remove the 3 screws and the front heated handle cover on products with a heated front handle.



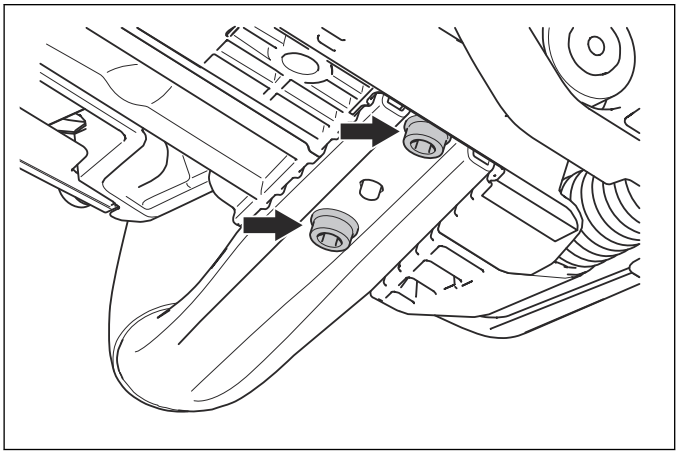
2. Disconnect the 3 connectors and pull out the wires through the grommet.



3. Remove the screw to the vibration damping unit.



4. Remove the 2 screws.

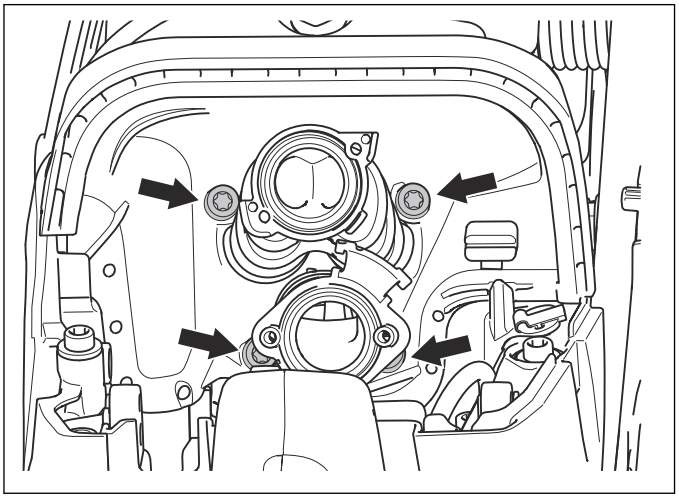


5. Remove the front heated handle from the product.
6. Install the opposite sequence.

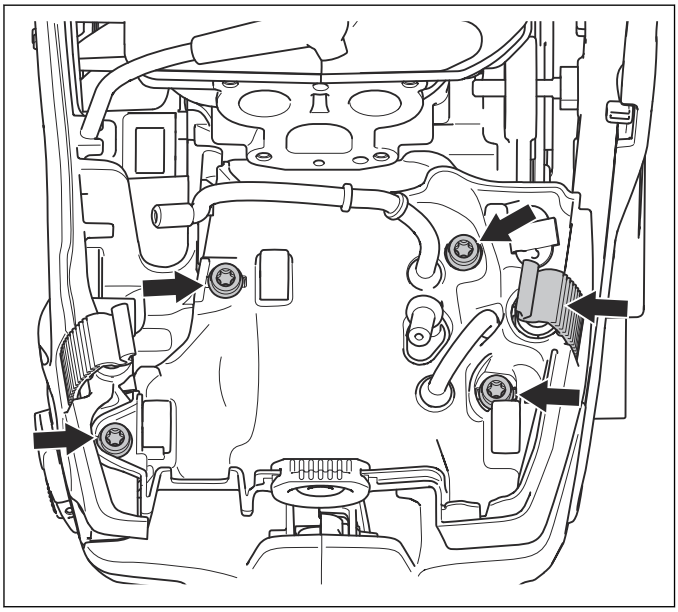
7.7.3 To remove and install the rear heated handle

1. Remove the cylinder cover.
2. Remove the air filter. Refer to *To remove and install the air filter on page 31*.
3. Remove the air filter holder and the carburetor. Refer to *To remove and install the carburetor on page 33*.

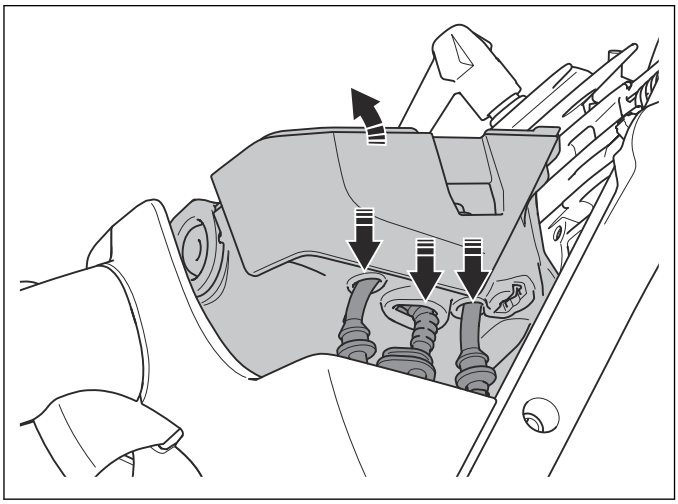
4. Remove the 4 screws and the heat shield.



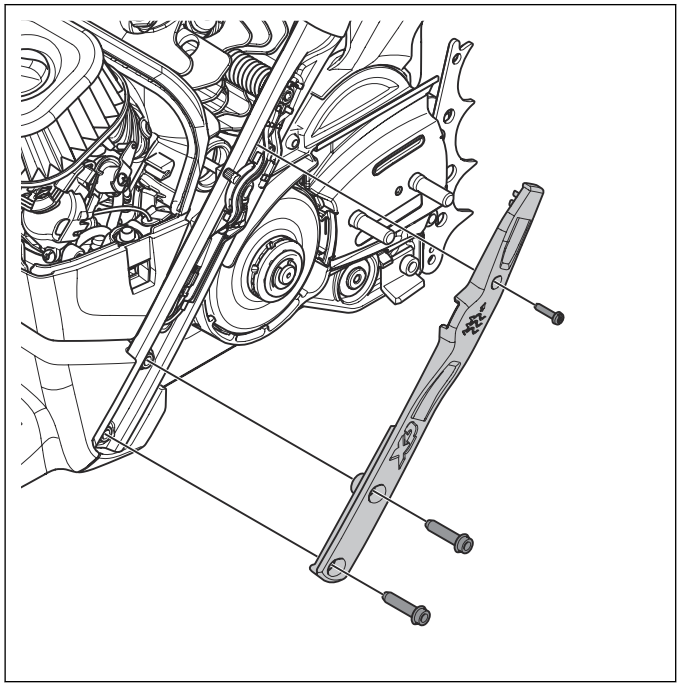
5. Remove the snap lock and the 4 screws.



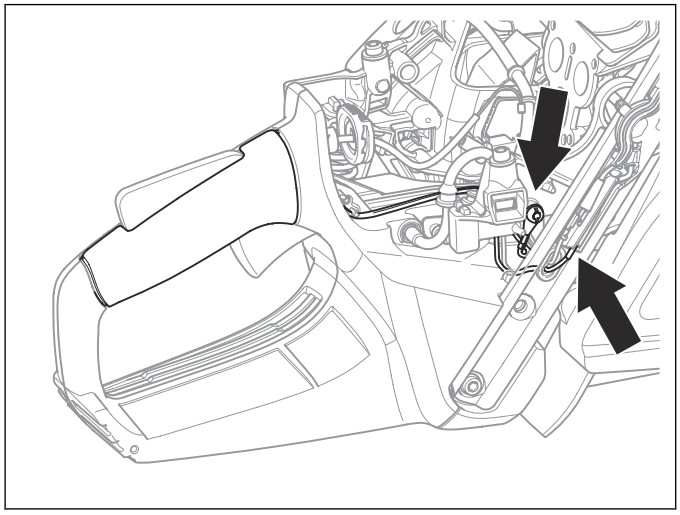
6. Remove the carburetor bottom plate and pull out the 3 hoses.



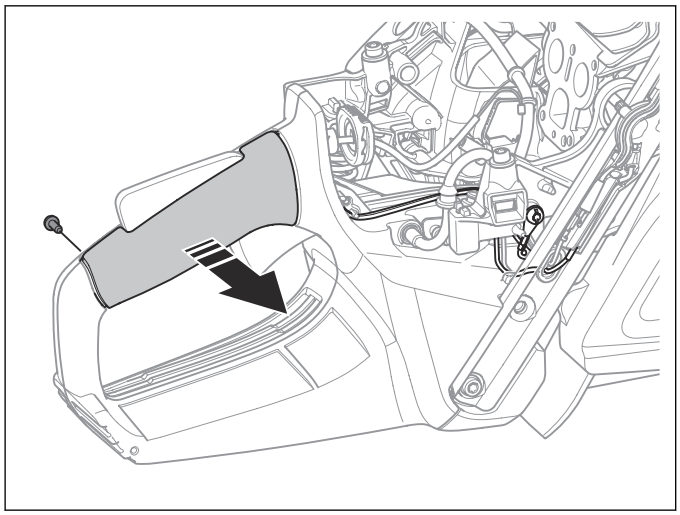
7. Remove the 3 screws and the front heated handle cover.



8. Disconnect the wires to the rear heated handle.



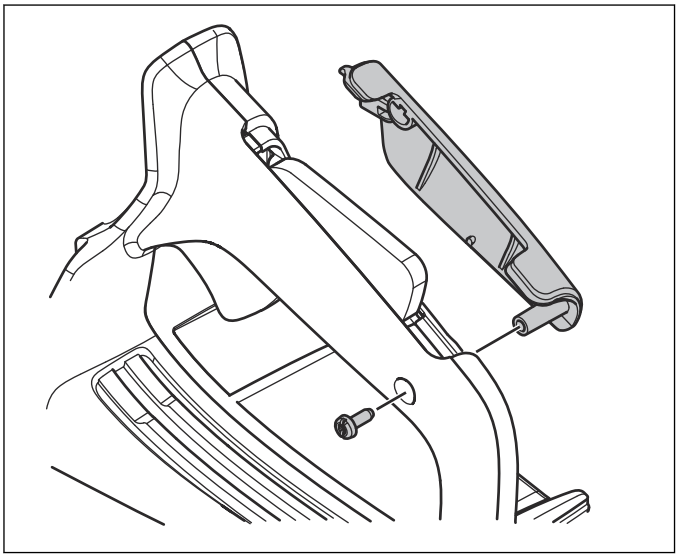
9. Remove the screw and pull out the rear heated handle.



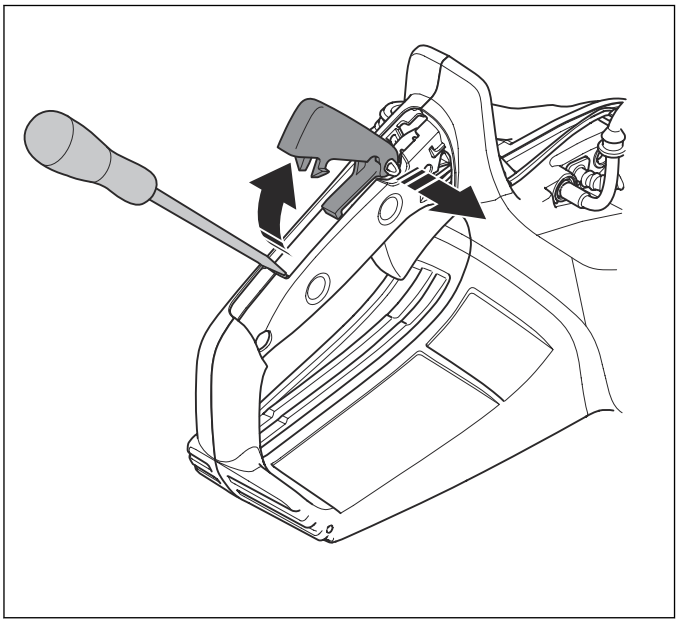
10. Install in the opposite sequence.

7.7.4 To disassemble and assemble the rear handle

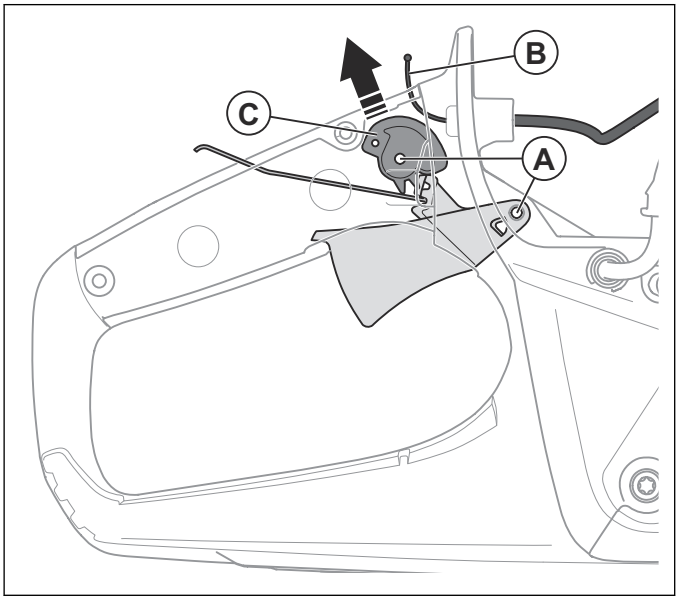
1. Remove the screw and the handle cover.



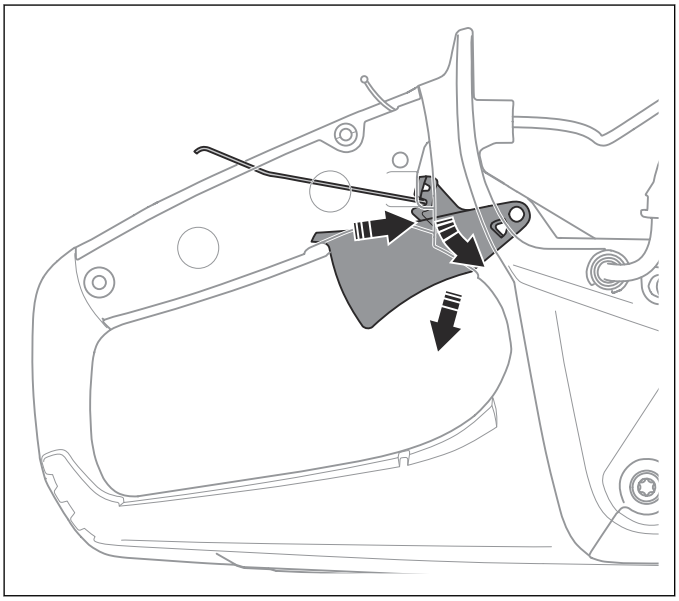
2. Use a flat screwdriver to push out and remove the throttle trigger lockout.



3. Remove the pins (A).



4. Remove the throttle wire (B) from the lever for the throttle wire (C).
5. Pull up the lever for the throttle wire.
6. Remove the throttle trigger.



   a) Push the throttle trigger forward.
   b) Pull the rear end of the throttle trigger down and rearward.

7. Assemble in the opposite sequence.

7.7.5 To clean and examine the handle and throttle trigger

1. Carefully clean and examine all parts.
2. Replace parts that are damaged. Always use original spare parts.
3. Make sure that the spring in the throttle trigger is not damaged and keeps all its tension.

7.7.6 To replace the throttle wire

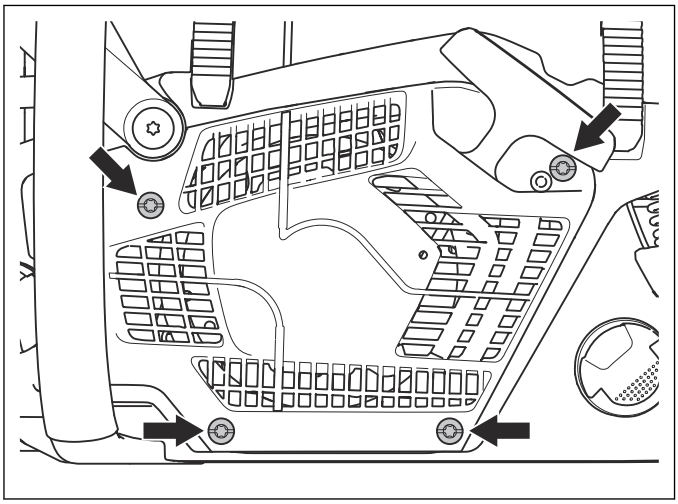
1. Disassemble the rear handle. Refer to *To disassemble and assemble the rear handle on page 21*.
2. Remove the cylinder cover.
3. Remove the throttle wire from the carburetor. Refer to *To remove and install the carburetor on page 33*.
4. Remove the throttle wire.
5. Install in the opposite sequence.

7.8 Starter

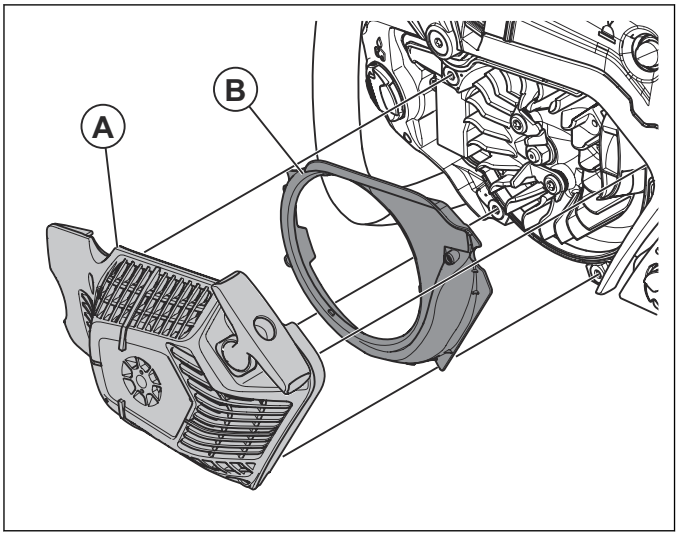
7.8.1 To disassemble the starter unit

WARNING: Use protective glasses. The recoil spring can eject and cause injuries.

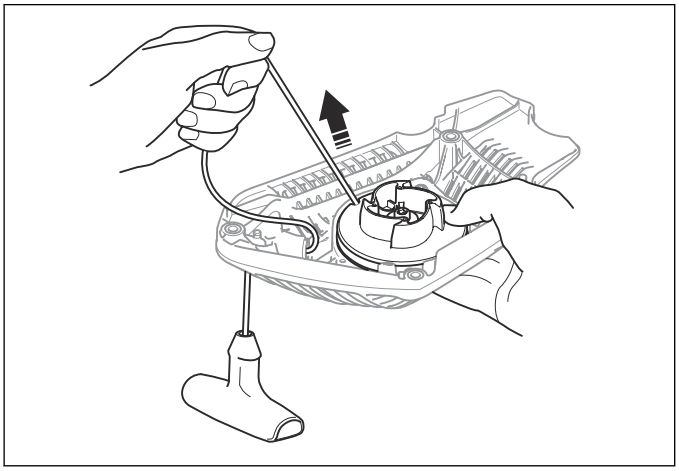
1. Loosen the 4 screws.



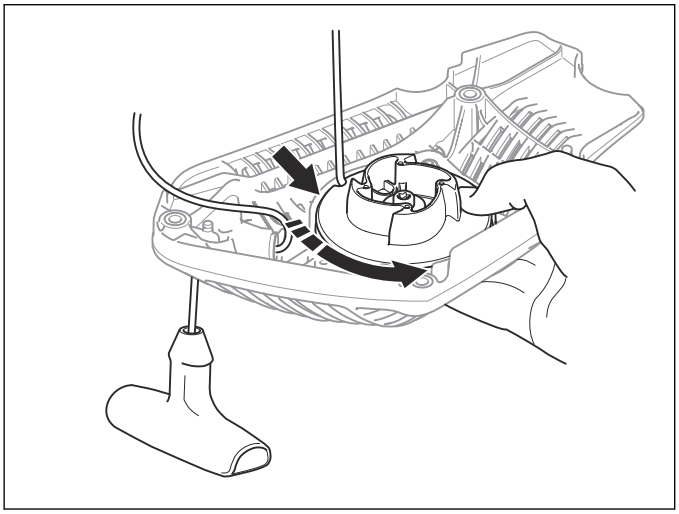
2. Remove the starter unit (A).



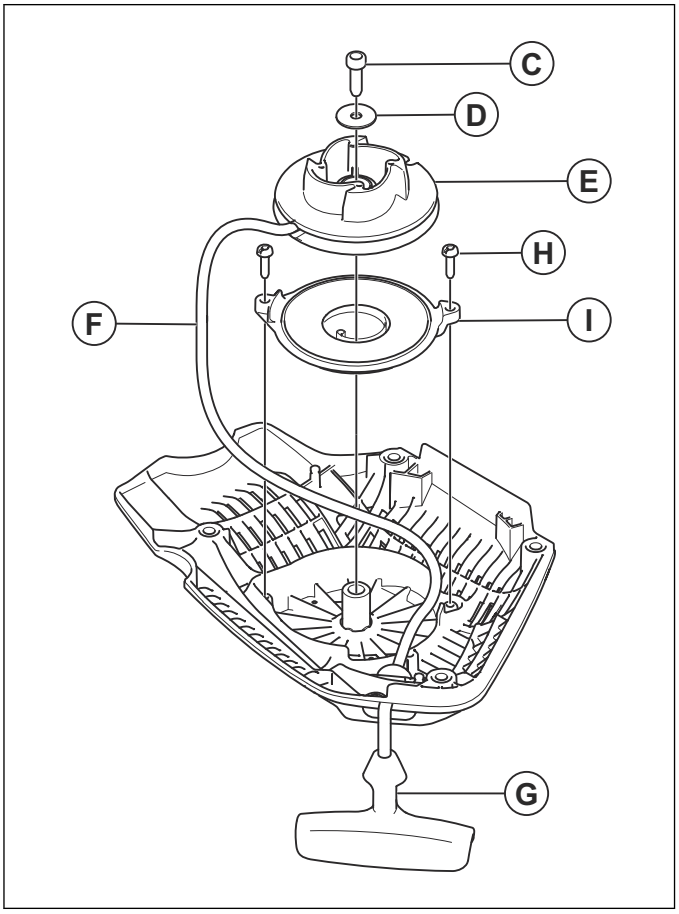
3. Remove the cooling air conductor (B) from the starter unit.
4. Pull out the rope approximately 30 cm /12 in and put it into the notch in the pulley.



5. Let the pulley rotate slowly rearward to release the tension of the recoil spring.



6. Remove the screw (C) and washer (D). Lift the starter pulley (E).



7. Cut off the starter rope (F).
8. Use pointed pliers to pull out the ends of the starter rope from the handle (I) and starter pulley.
9. Remove the two screws (G).
10. Remove the spring cassette (H).

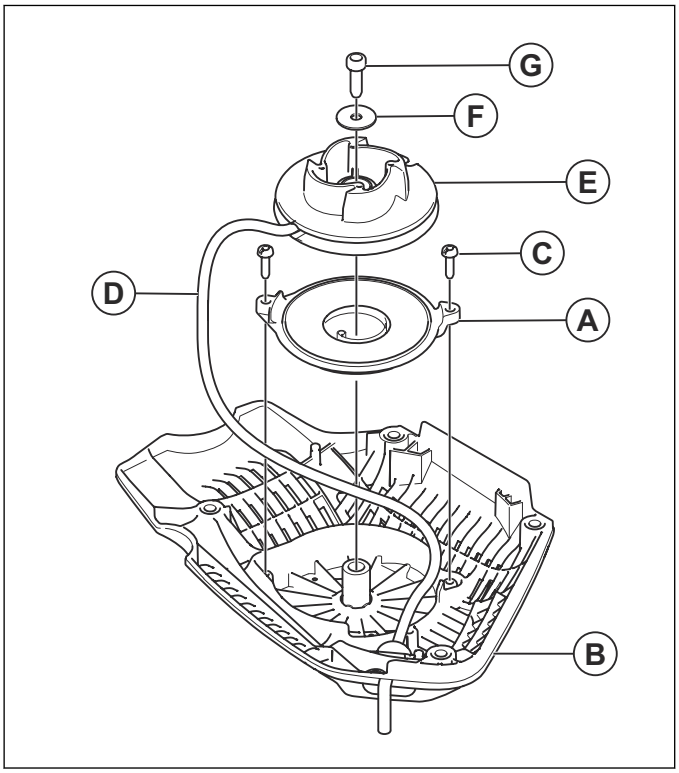
7.8.2 To clean and examine the starter unit

- Clean all components.
- Examine the starter rope. Replace the starter rope if it is damaged.
- Examine the starter pulley. Replace damaged parts.
- Make sure that the start pawls on the starter pawl assembly are not damaged. Make sure that the starter pawl springs on the starter pawl assembly are attached correctly and move freely.
- Lubricate the starter pawls on the starter unit.
- Lubricate the starter spring.

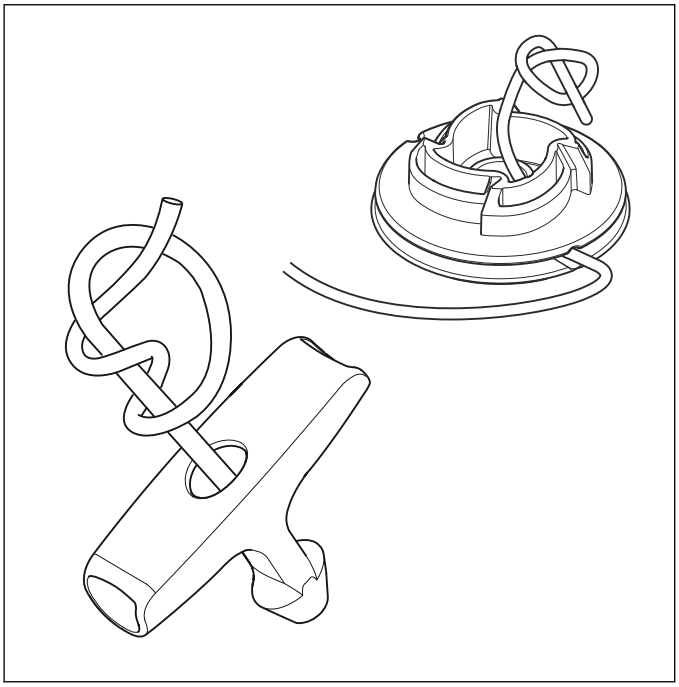
7.8.3 To assemble the starter

WARNING: Use protective glasses. The spring in the starter pulley can eject and cause injury.

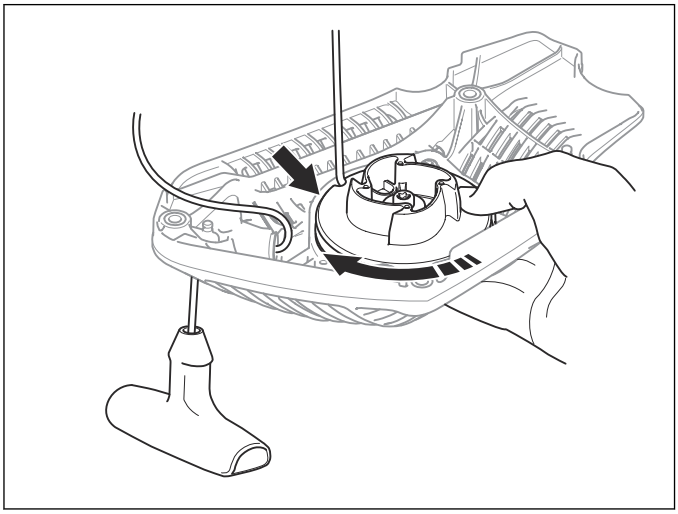
1. Put the spring cassette (A) in the starter housing (B).



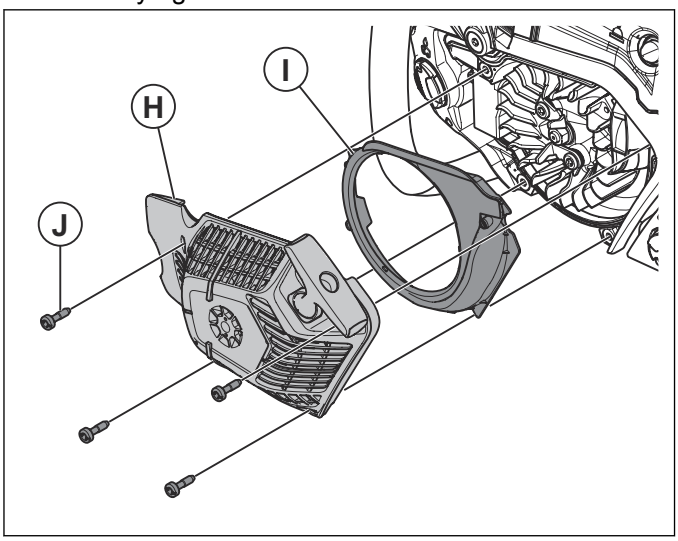
2. Tighten the two screws (C) to the correct torque. Refer to *Servicing data on page 7*.
3. Put the end of the starter rope (D) through the hole in the starter pulley (E). Use pointed pliers to pull out the starter rope from the starter pulley.
4. Put the starter rope through the starter housing (B).
5. Put the starter rope through the starter rope handle and make a knot as the illustration shows.



6. Put the starter pulley (E) on the spring cassette (B) and attach the washer (F) and the screw (G).
7. Pull the starter rope up into the notch in the starter pulley. Use your thumb and turn the starter pulley clockwise to wind the rope on the starter pulley. Make sure that you can turn the starter pulley ½ turn more when you pull out the starter rope fully.



8. Pull the starter rope to make it straight, remove your thumb and let the starter rope wind up.
9. Attach the starter (H) and the cooling air conductor (I) on the crankcase. Pull the starter rope lightly to make sure that the starter pulley is attached correctly against the crankcase.



10. Tighten the 4 screws (J) to the correct torque. Refer to *Servicing data on page 7*.

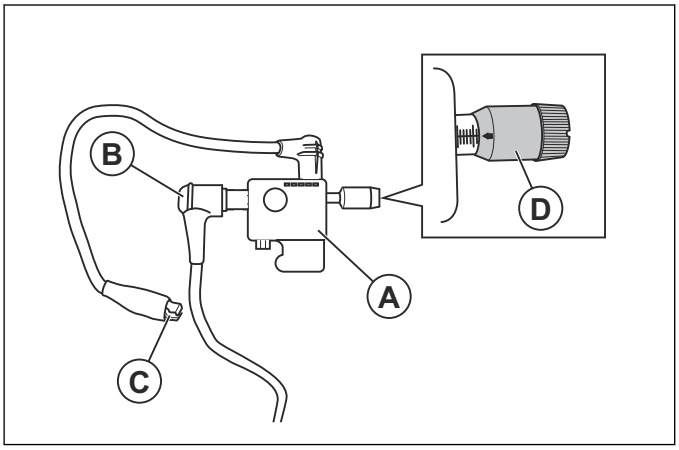
7.9 Ignition system

7.9.1 To do a spark test

1. Remove the spark plug from the cylinder.
2. Connect the spark plug to the spark plug cap.
3. Make sure that the stop switch on the throttle handle is in the start position.
4. Hold the spark plug against the cylinder and pull the starter rope handle. If the ignition operates correctly, you will see a spark between the electrodes on the spark plug.

WARNING: To prevent the risk of fire, do not hold the spark plug near the spark plug hole.

5. If no spark occurs, remove the spark plug and connect the ignition tester (A) to the spark plug cap (B). Refer to *Servicing tools on page 9*.



6. Connect the ground cable (C) to 1 of the cooling fins on the cylinder.
7. Use the knob (D) to adjust the distance between the 2 electrodes to 0.5 mm.

Note: 1 mark on the scale is 1 mm.

8. Pull the starter rope handle.
9. Do 1 of the steps that follow.
   a) If a spark occurs between the electrodes on the ignition tester, replace the spark plug.
   b) If there is no spark between the electrodes on the ignition tester, do a test of the ignition module. Refer to *To do a test of the ignition module on page 24*.

7.9.2 To do a test of the ignition module

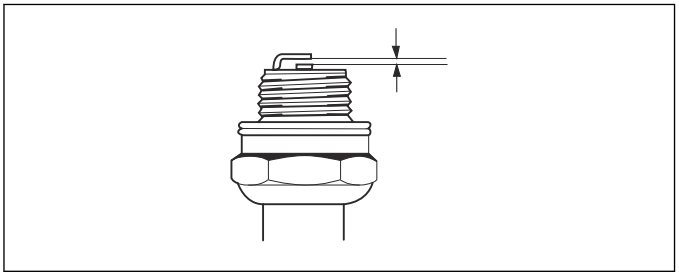
If there is a fault in the ignition system, do a test of the ignition module.

1. Remove the cylinder cover.
2. Remove the spark plug cable.
3. Remove the spark plug from the cylinder.
4. Attach the test spark plug onto the cylinder.
5. Connect a test spark plug to the spark plug cable. Refer to *Servicing tools on page 9*.
6. Pull the starter rope handle. If a spark occurs, the spark plug is damaged. If no spark occurs, the ignition module is damaged. Replace the damaged part.

7.9.3 To examine the spark plug

CAUTION: Use resistor spark plugs to prevent problems during operation and permanent damage to the ignition system. Only use spark plugs recommended by Husqvarna, refer to the operator's manual.

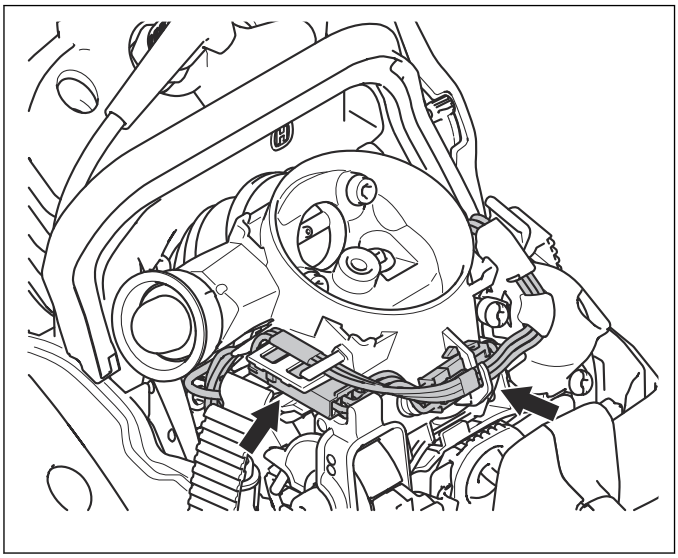
- Examine the spark plug if the engine is low on power, is not easy to start or does not operate correctly at idle speed.
- To decrease the risk of unwanted material on the spark plug electrodes, obey these instructions:
  a) Make sure that the idle speed is correctly adjusted.
  b) Make sure that the fuel mixture is correct.
  c) Make sure that the air filter is clean.
- If the spark plug is dirty, clean it and make sure that the electrode gap is correct, refer to *Technical data on page 60*.



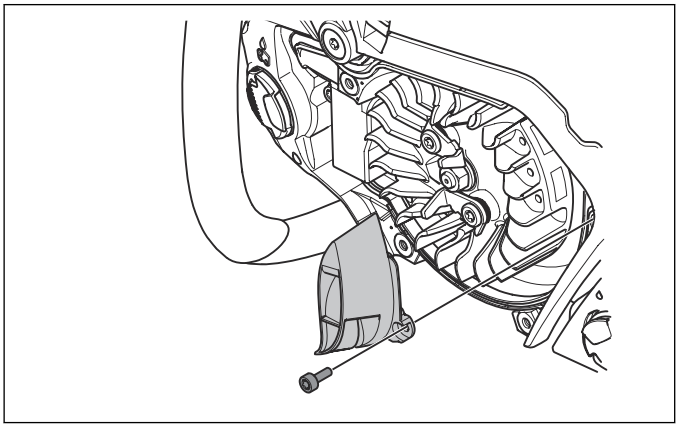
- Replace the spark plug if it is necessary.

7.9.4 To remove the ignition system

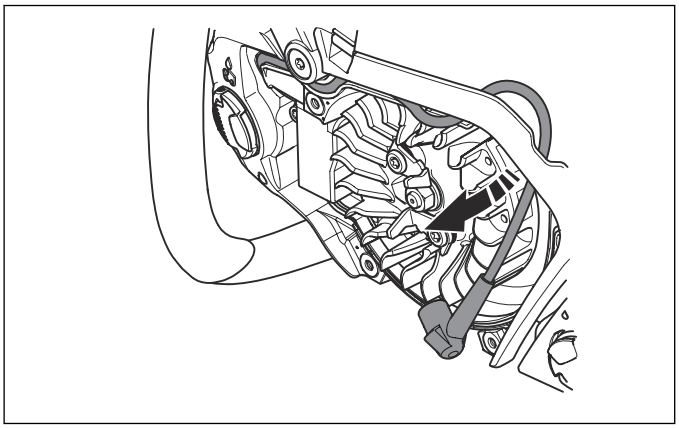
1. Remove the cylinder cover.
2. Remove the air filter.
3. Disconnect the connectors and wires on the air filter holder.



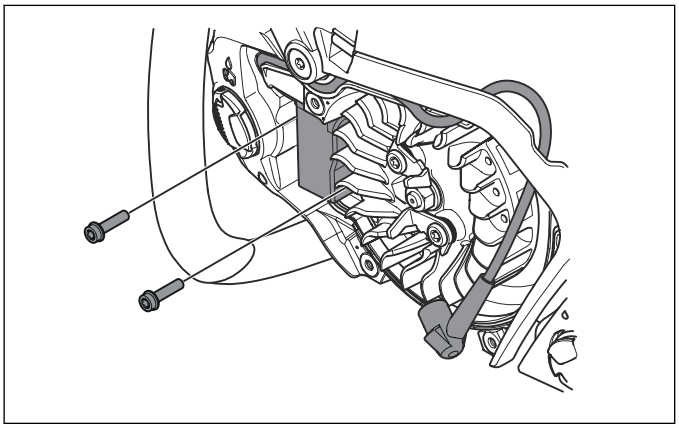
4. Disconnect the spark plug cap from the spark plug.
5. Remove the starter unit. Refer to *To disassemble the starter unit on page 22*.
6. Remove the screw and the air nozzle.



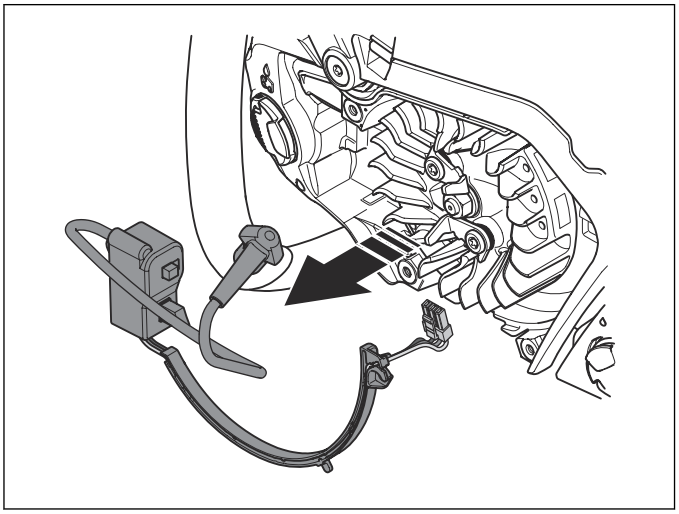
7. Pull out the spark plug cable.



8. Remove the 2 screws.



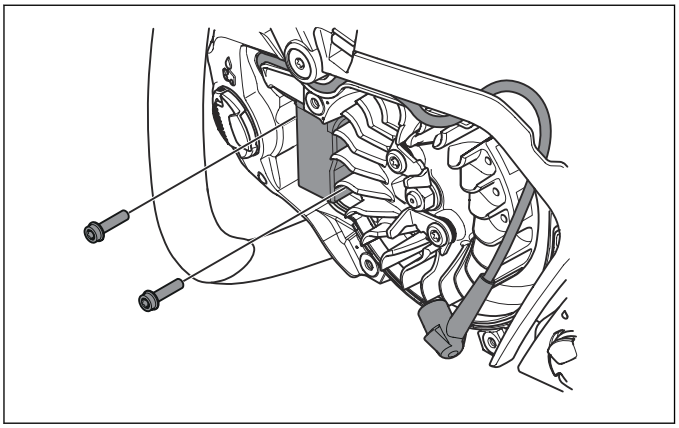
9. Remove the cable holder, the cables and the ignition module.



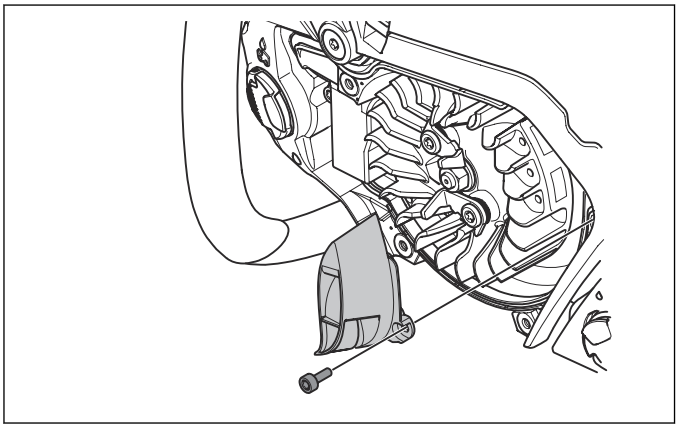
10. Remove the cables from the cable holder if it is necessary.

7.9.5 To install the ignition system

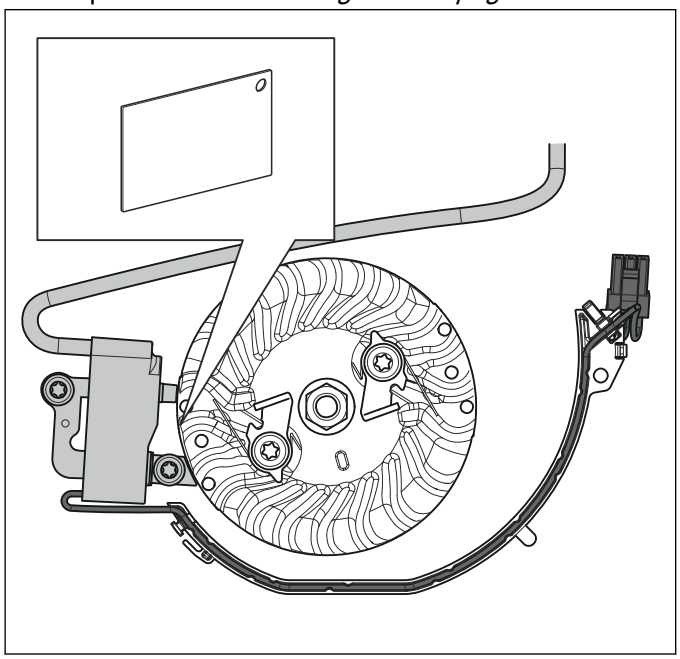
1. Assemble the cables in the cable holder, if it is necessary.
2. Attach the cable holder to the crankcase.
3. Attach the ignition module to the crankcase. Do not tighten the screws fully.



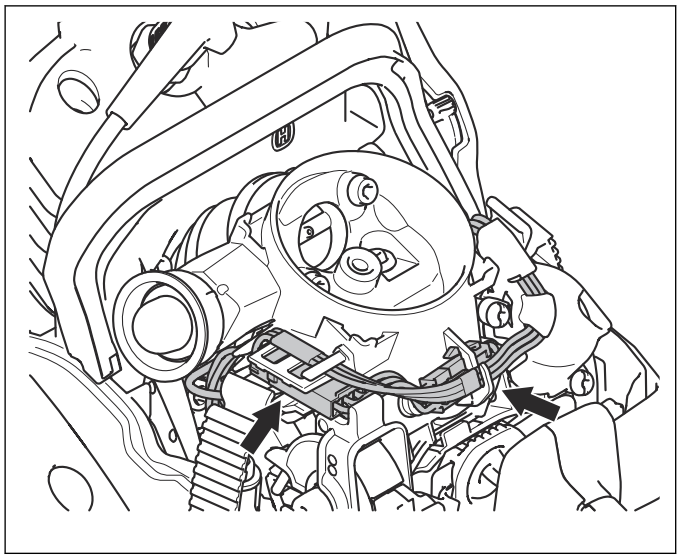
4. Put the spark plug cable through the crankcase. Make sure that the spark plug cable is in the correct position on the crankcase.
5. Attach the air nozzle.



6. Put a clearance gauge between the ignition module and the flywheel. Tighten the screw to the correct torque. Refer to *Servicing data on page 7*.



7. Connect the spark plug cap to the spark plug.
8. Connect the connectors and wires on the air filter holder.



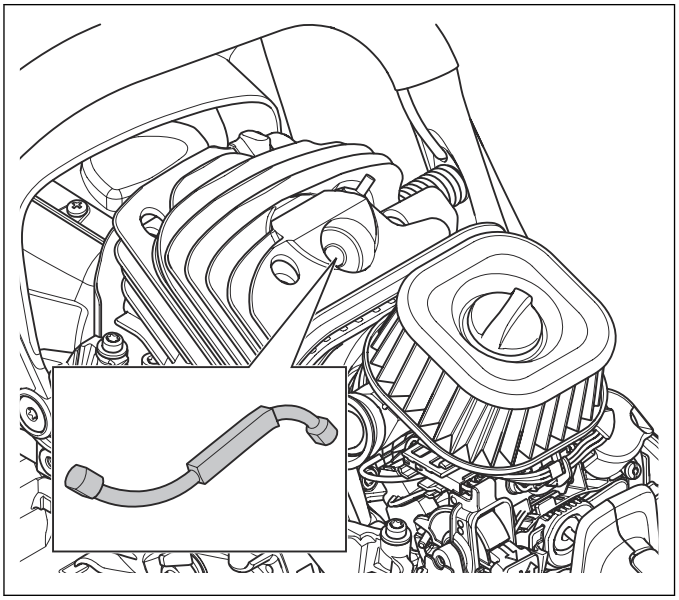
9. Install the air filter.
10. Connect the product to the common service tool (CST) and install new firmware.
11. Install the cylinder cover.

7.10 Flywheel

7.10.1 To remove the flywheel

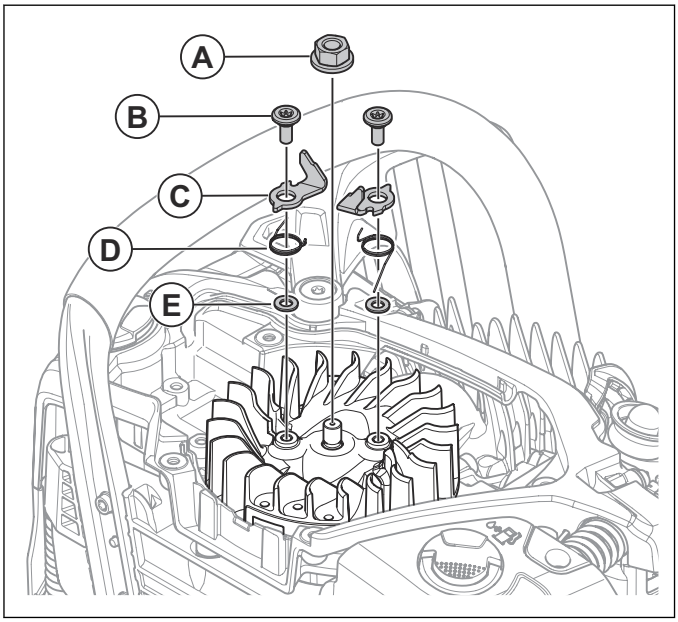
1. Remove the cylinder cover.
2. Remove the starter unit and cooling air conductor. Refer to *To disassemble the starter unit on page 22*.
3. Make sure that the area around the spark plug is clean.

4. Remove the spark plug and put a piston stop in the spark plug hole.

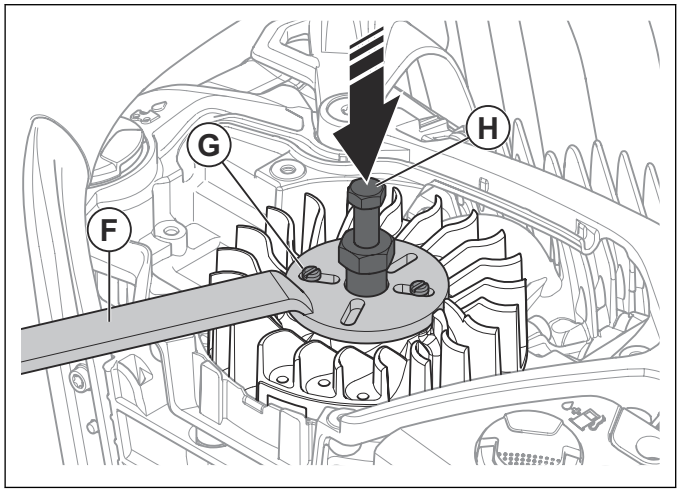


5. Loosen but do not remove the screws that hold the ignition module.

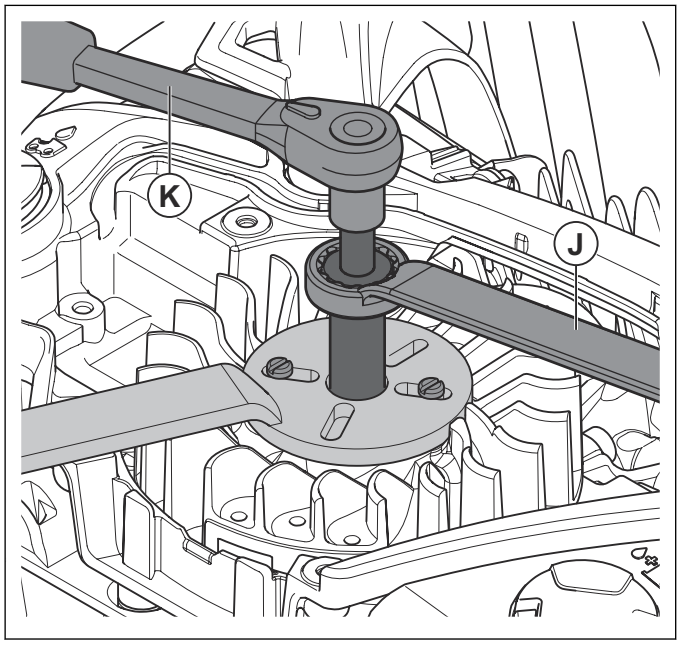
6. Remove the flywheel nut (A). Remove the screws (B), the starter pawls (C), the springs (D) and the washers (E).



7. Use the flywheel puller kit to remove and install the flywheel. Refer to *Servicing tools on page 9*. Put the tool (F) supplied with the flywheel puller kit in the center of the flywheel and attach the screws (G) in the holes for the start pawls. Attach the screw press (H) on the crankshaft.



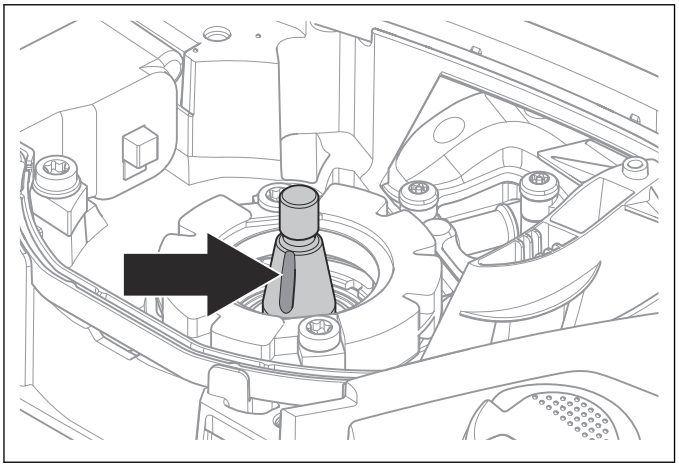
8. Use a wrench (J) to lock the outer socket of the screw press. Use a socket wrench (K) to tighten the screw in the center of the screw press until the flywheel releases.



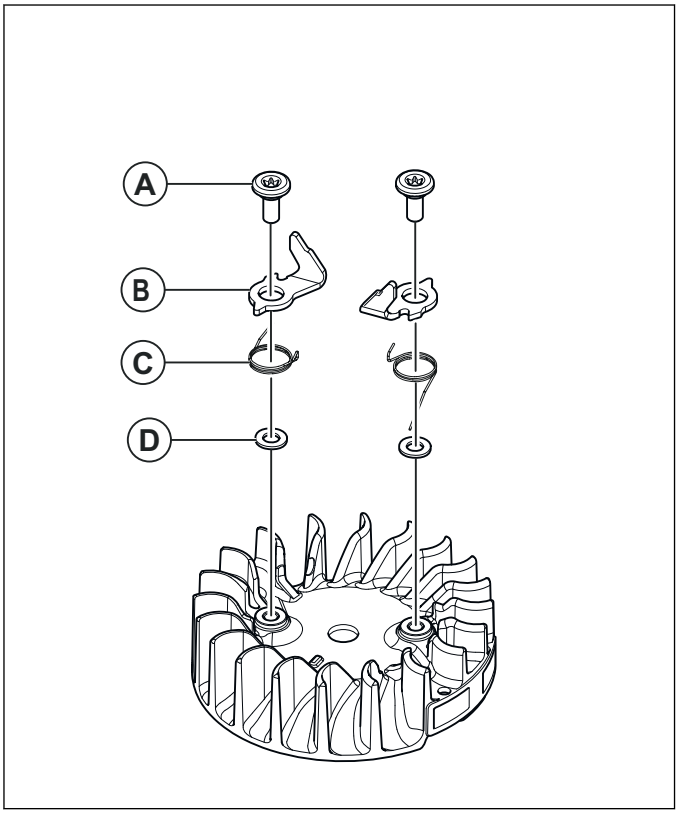
Note: If the flywheel does not release, hit lightly with a hammer on the screw to the flywheel. At the same time lift the tool handle slightly to tilt the product.

7.10.2 To install the flywheel

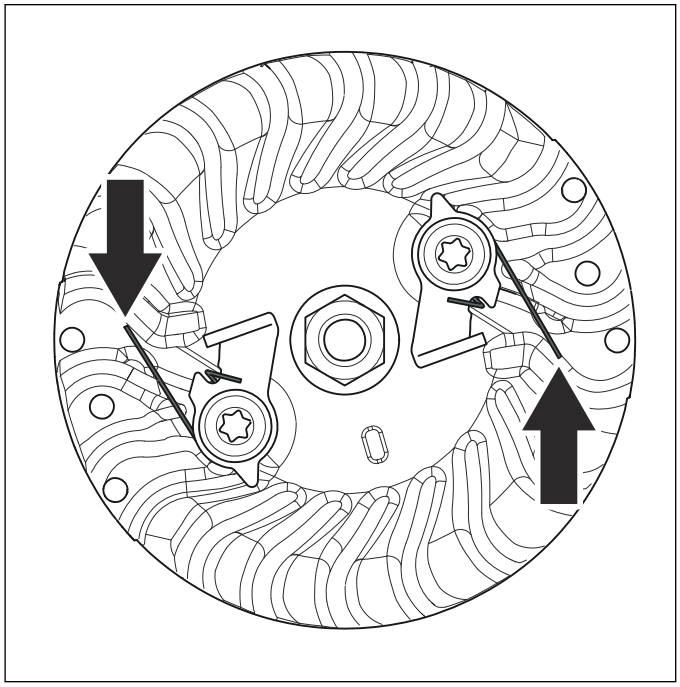
1. Clean the crankshaft.
2. Put the flywheel on the crankshaft. Turn the flywheel until the key goes into the key slot on the shaft.



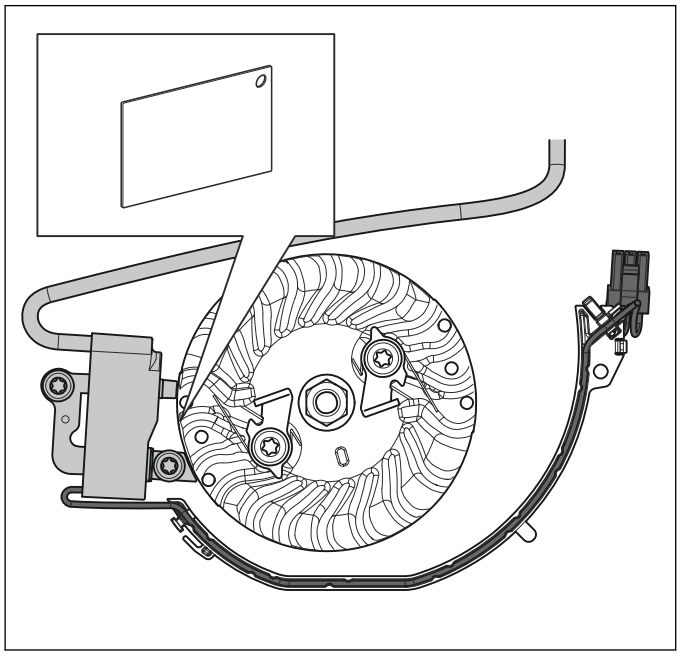
3. Turn the flywheel to align the magnets with the ignition module.
4. Attach the flywheel nut and tighten it to the correct torque, refer to *Servicing data on page 7*.
5. Install the screws (A), the starter pawls (B), the springs (C), and the washers (D).



6. Make sure that you install the springs in the correct position, as shown in the illustration.



7. Put the clearance gauge between the flywheel and the ignition module. Refer to *Servicing tools on page 9*.

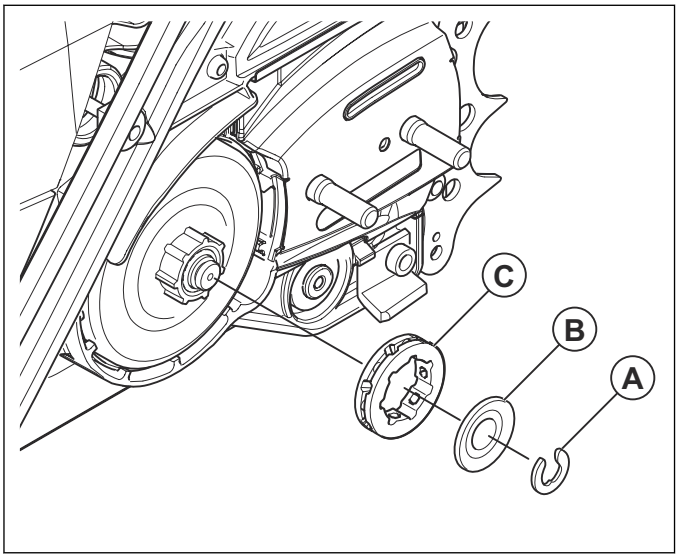


8. Tighten the 2 screws that hold the ignition module to the correct torque. Refer to *Servicing data on page 7*.
9. Remove the clearance gauge.
10. Install the cooling air conductor and starter unit on the product.
11. Install the spark plug in the cylinder. Connect the spark plug cap to the spark plug.
12. Install the cylinder cover.

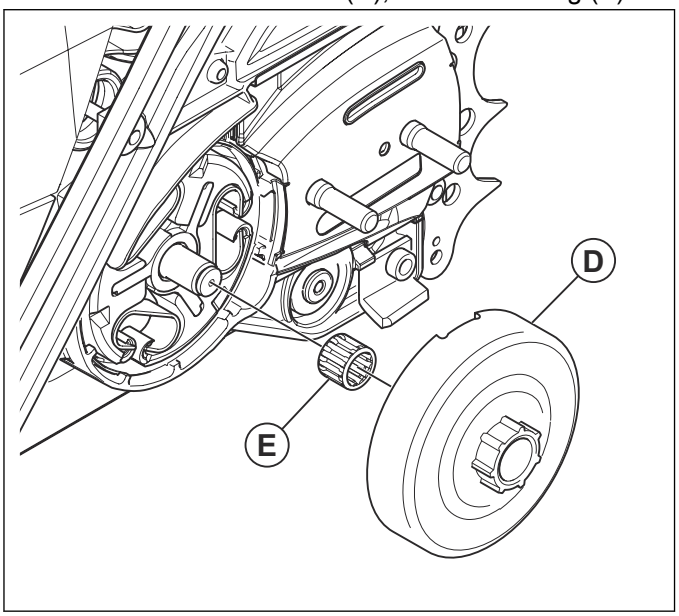
7.11 Centrifugal clutch

7.11.1 To remove and install the centrifugal clutch

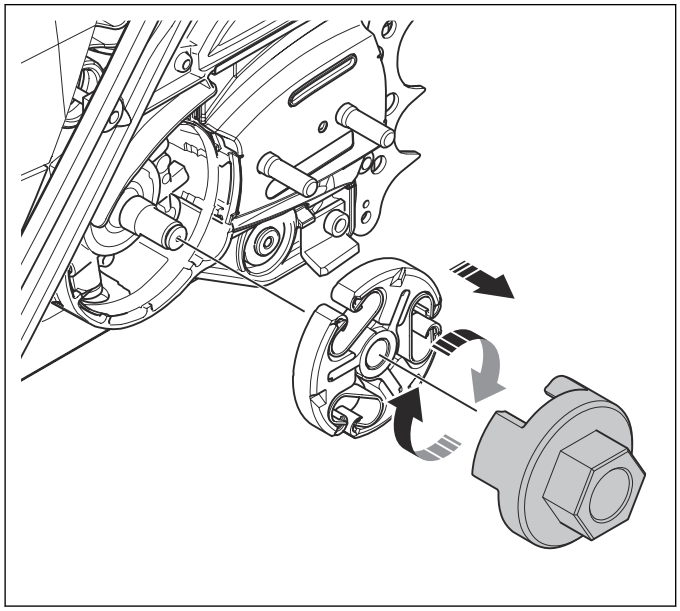
1. Disengage the chain brake.
2. Remove the clutch cover.
3. Remove the guide bar and saw chain.
4. Remove the snap ring (A), washer (B) and drive sprocket (C).



5. Remove the clutch drum (D), and the bearing (E).



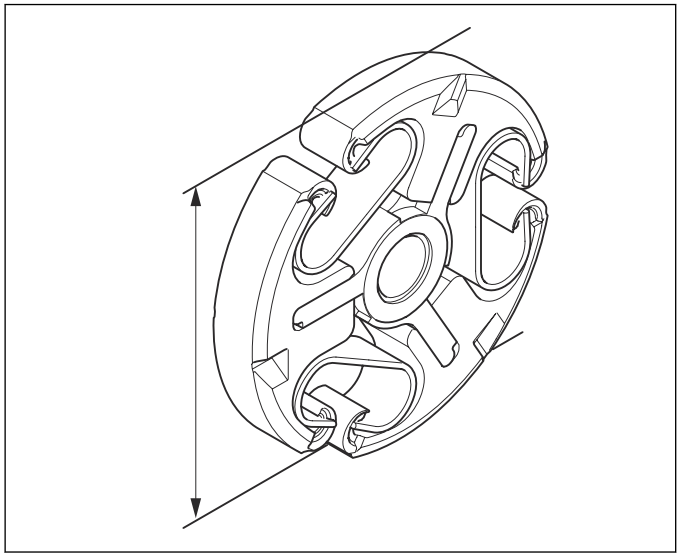
6. Remove the centrifugal clutch. Refer to *Servicing tools on page 9*.



7. Install in the opposite sequence.

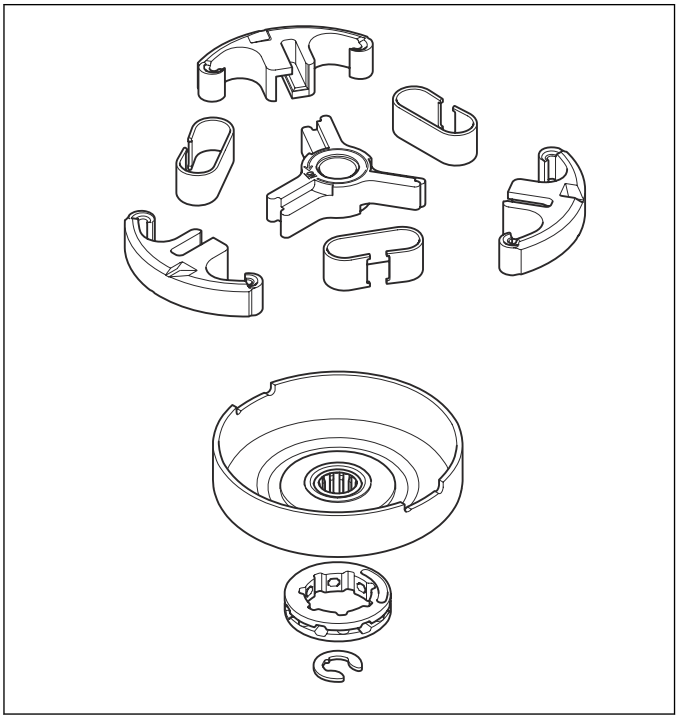
7.11.2 To clean and examine the centrifugal clutch

1. Measure the diameter of the clutch shoes across the full clutch hub. Replace the clutch if the diameter is less than 65 mm.



2. Carefully remove the centrifugal clutch springs with pliers.

3. Clean and examine all parts. Replace damaged parts. Always use the original spare parts.



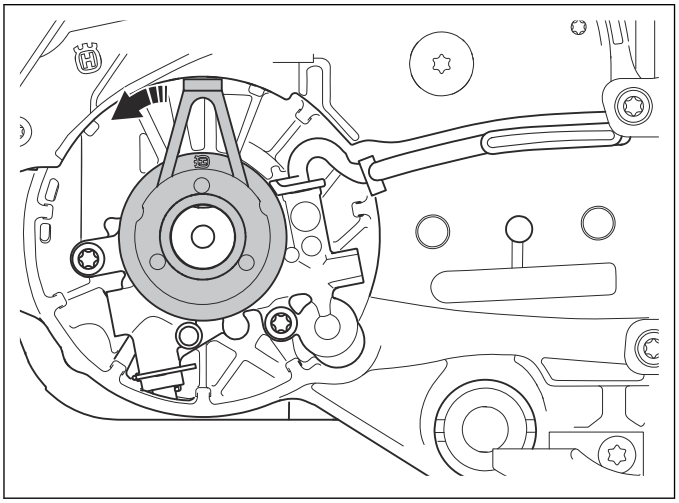
7.12 Lubrication system

7.12.1 To remove and install the lubrication system

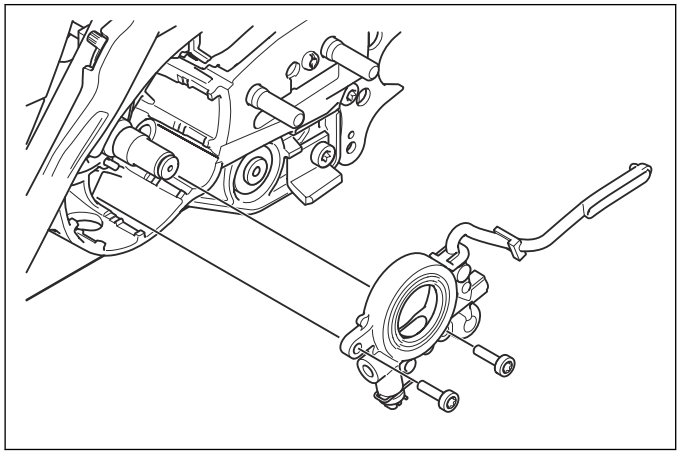
WARNING: The saw chain can break if the lubrication is not sufficient.

The lubrication system has an oil pump, a suction hose with filter and an oil hose with an integrated filter.

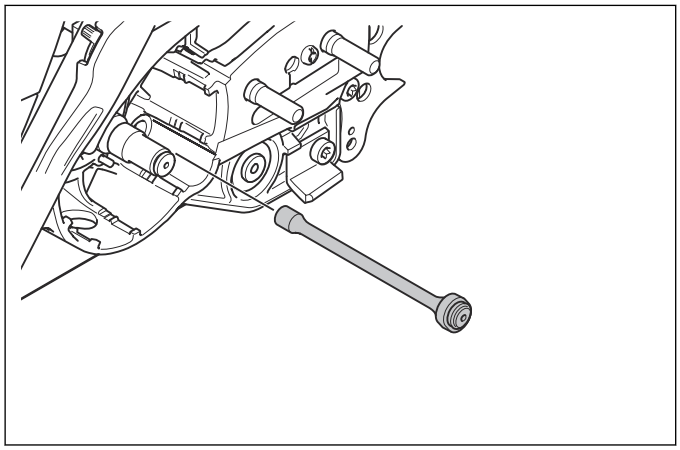
1. Drain the oil from the oil tank.
2. Remove the clutch cover.
3. Remove the centrifugal clutch. Refer to *To remove and install the centrifugal clutch on page 29*.
4. Remove the chain brake. Refer to *To disassemble and assemble the chain brake on page 15*.
5. Turn the oil pump gear counterclockwise until it is loose and remove it.



6. Remove the 2 screws and the oil pump housing.



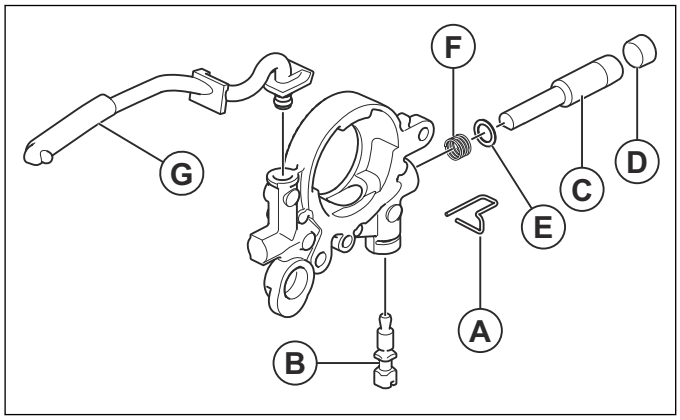
7. Pull out the suction hose from the crankcase.



8. Install in the opposite sequence.

7.12.2 To disassemble and examine the lubrication system

1. Remove the lubrication system. Refer to *To remove and install the lubrication system on page 30*.
2. Remove the clip (A) and the adjustment screw (B).



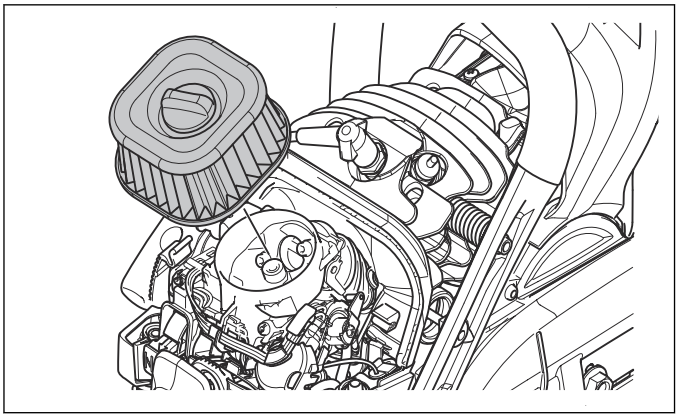
3. Push the pump piston (C) with a pair of pliers to remove the cover plug (D).
4. Pull out the washer (E) and the spring (F).
5. Remove the oil hose (G).
6. Clean and examine all parts carefully. Replace damaged parts. Always use the original spare parts.
7. Use chain oil to lubricate all moving parts.

8. Install in the opposite sequence.

7.13 Air filter

7.13.1 To remove and install the air filter

1. Remove the cylinder cover.
2. Turn the knob and remove the air filter from the air filter holder.



3. Install in the opposite sequence.

7.13.2 To clean and examine the air filter

1. Examine the air filter.
2. Clean the air filter if it is dirty. Shake the air filter and use compressed air to remove dirt particles.
3. Replace the air filter if it is damaged.

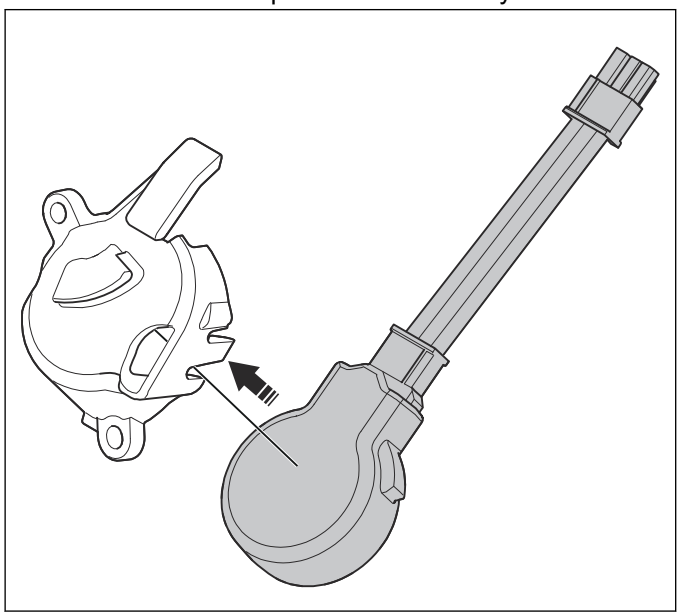
7.14 Husqvarna connectivity device

7.14.1 To install and remove the Husqvarna® Connectivity Device

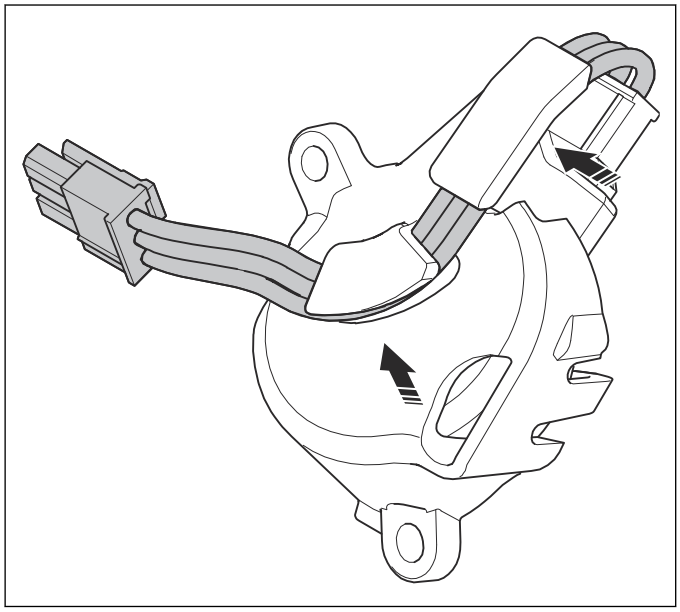
The Husqvarna® Connectivity Device is an accessory that enables digital services from the Husqvarna® Fleet Services and Husqvarna® Connect apps. Instructions on how to use the Husqvarna® Connectivity Device are found in the respective app.

Note: The Husqvarna® Connectivity Device has a built-in battery that cannot be replaced. Replace the Husqvarna® Connectivity Device unit if it is necessary.

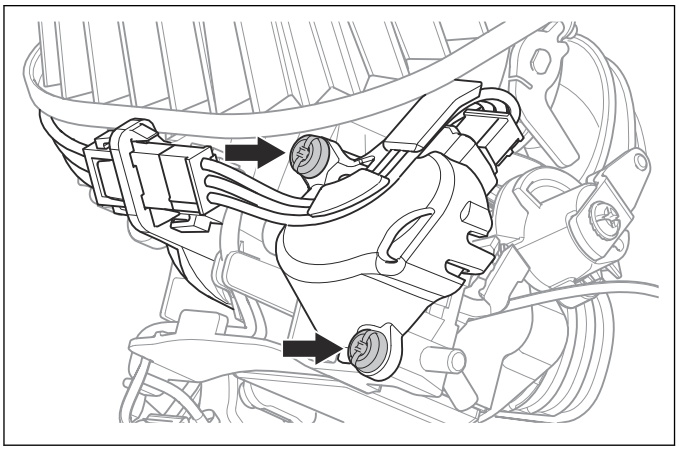
1. Remove the cylinder cover.
2. Put the Husqvarna® Connectivity Device in the holder for the Husqvarna® Connectivity Device.



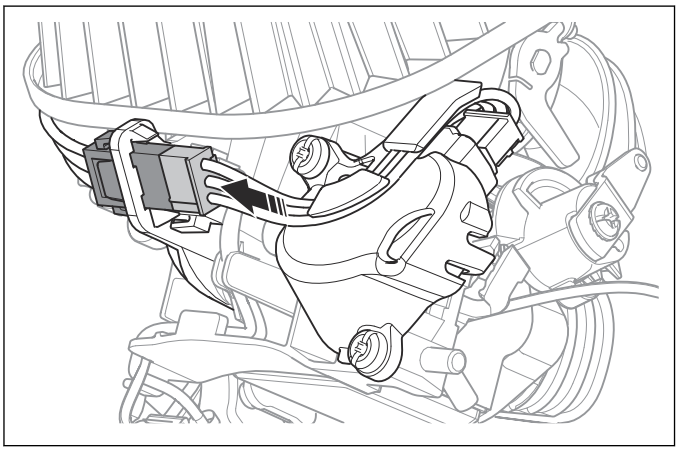
3. Attach the wires to the holder for the Husqvarna® Connectivity Device.



4. Put the holder for the Husqvarna® Connectivity Device on the air filter holder and install the 2 screws.



5. Connect the connector.



6. Remove in the opposite sequence.

7.15 Carburetor

7.15.1 Carburetor design

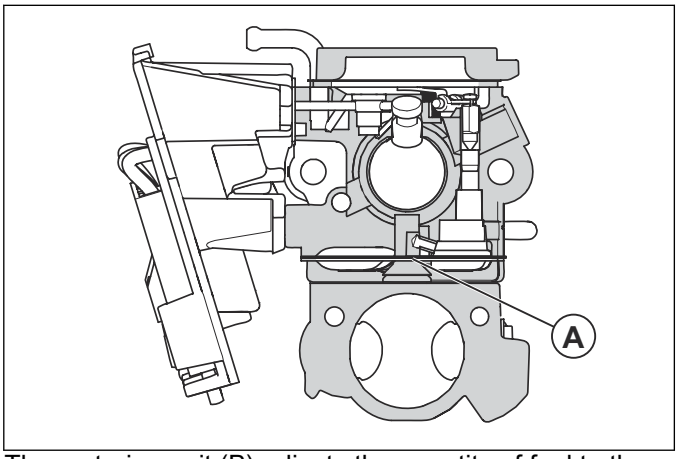
WARNING: Fuel and the fumes from the fuel are poisonous, can cause skin irritation and are very flammable.

Note: The illustrations that follow does not show the correct carburetor used in this product. The illustrations only show the general function of a carburetor.

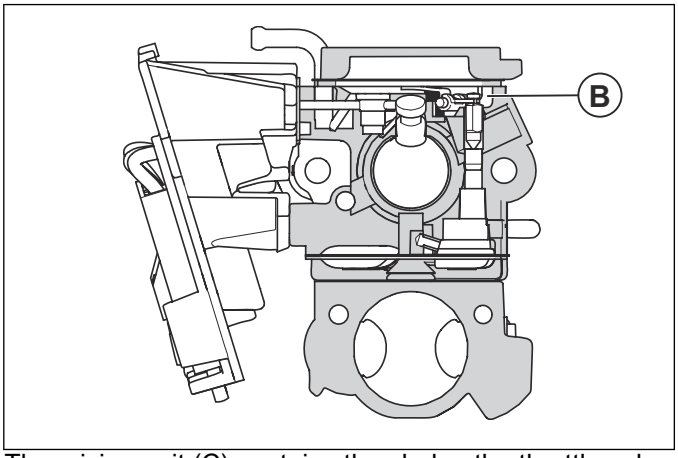
The carburetor has 3 primary systems:

- The pump unit.
- The metering unit.
- The mixing unit.

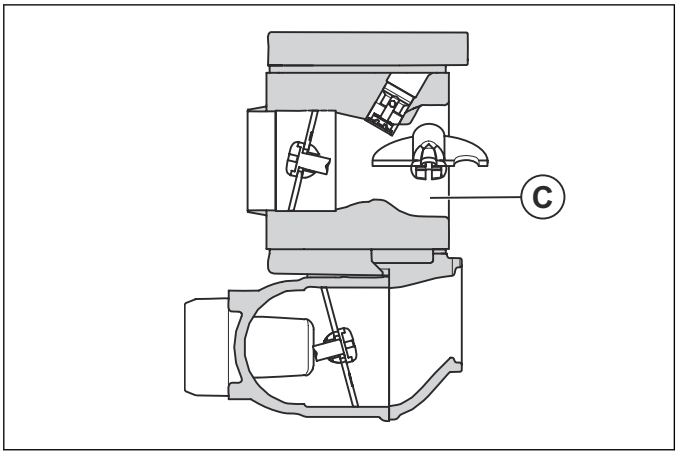
The pump unit (A) moves the fuel from the fuel tank to the metering unit in the carburetor. One side of the pump diaphragm is connected to the crankcase and moves with the pressure changes in the crankcase. An inlet and outlet valve in the diaphragm moves the fuel through a filter screen to the inlet needle.



The metering unit (B) adjusts the quantity of fuel to the correct quantity for the speed and the power output.



The mixing unit (C) contains the choke, the throttle valve and the diffuser jets. Here air is mixed with the fuel to give a fuel/air mixture that can be burned in the combustion chamber of the engine.

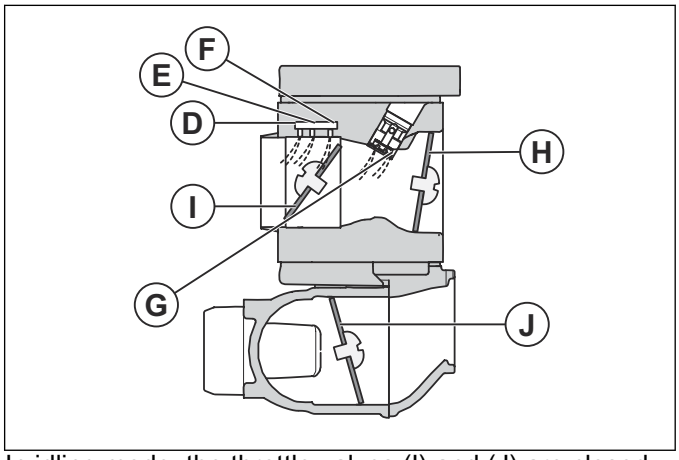


7.15.2 Carburetor function

The carburetor operates differently in the following modes:

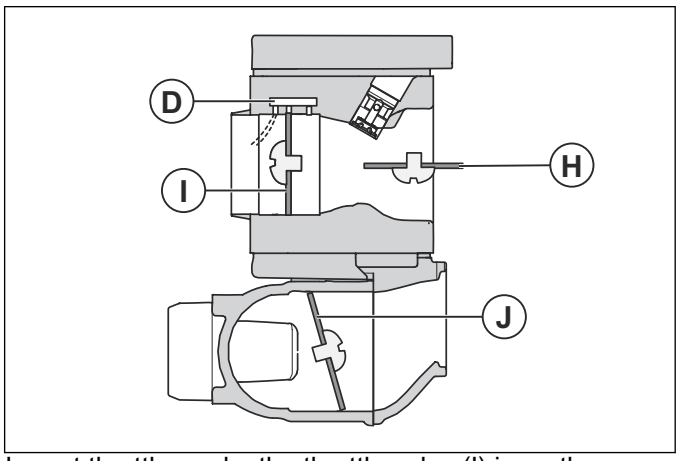
- Cold start mode
- Idling mode
- Part throttle mode
- Full throttle mode

In cold start mode the choke valve (H) is completely shut. This increases the vacuum in the carburettor and fuel is easier to suck from all the diffuser jets (D), (E), and (F). The throttle valve (I) is partly open. The air throttle valve (J) is closed.

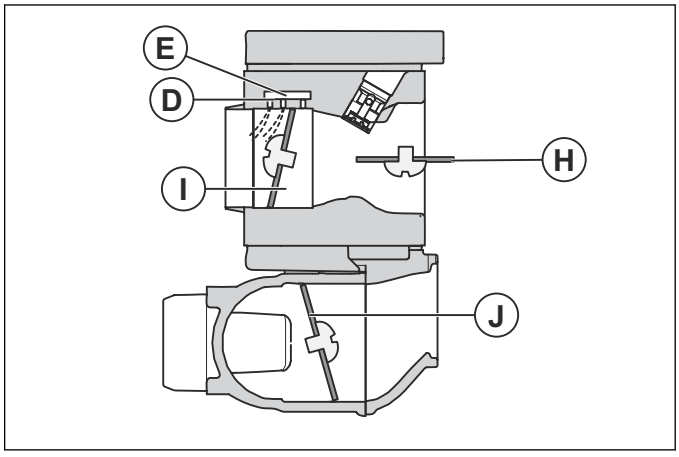


In idling mode, the throttle valves (I) and (J) are closed and the choke valve (H) is open.

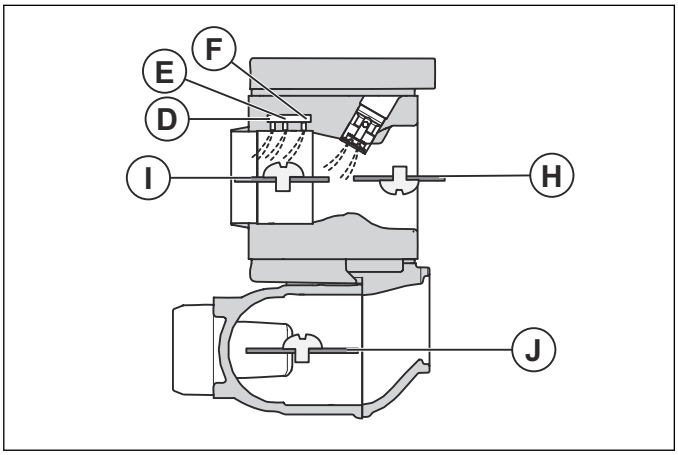
Air is sucked in through an aperture in the throttle valve and a small amount of fuel is supplied through the diffuser jet (D).



In part throttle mode, the throttle valve (I) is partly open and the choke valve (H) is fully open. Fuel is supplied through the diffuser jets (D) and (E). The air throttle valve (J) starts to open.

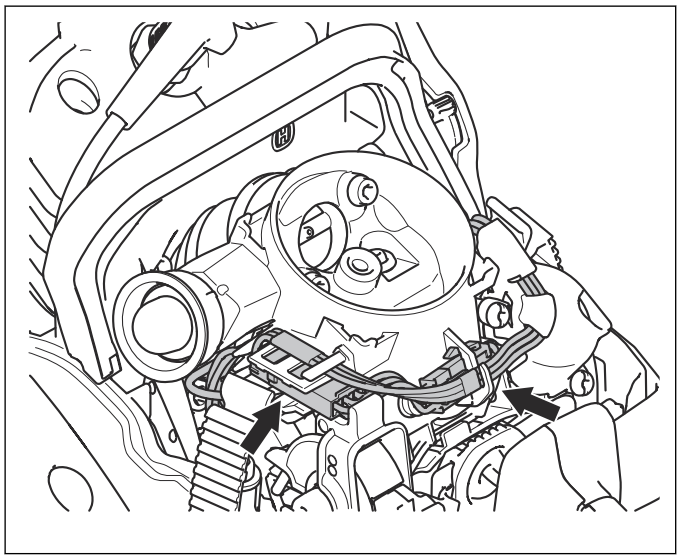


In the full throttle mode both valves are open and fuel is supplied through all four diffuser jets (D, E, F and G). The air throttle valve (J) is fully open.



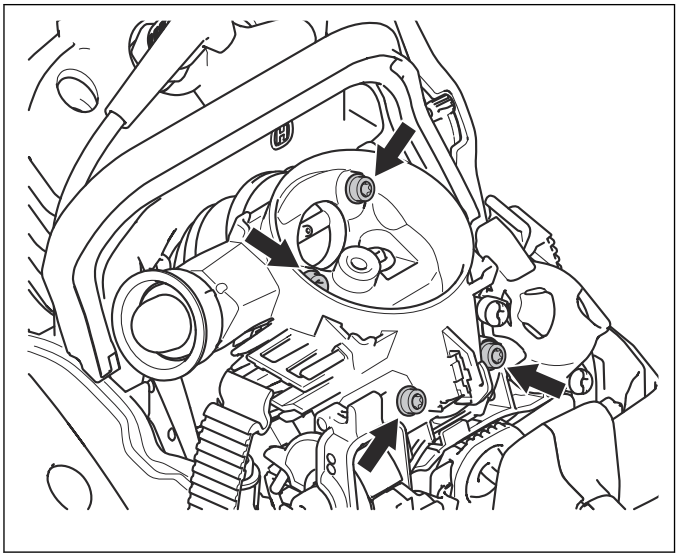
7.15.3 To remove and install the carburetor

1. Remove the cylinder cover.
2. Remove the spark plug cap and the spark plug.
3. Remove the air filter from the air filter holder. Refer to *To remove and install the air filter on page 31*.
4. Disconnect the connectors on the air filter holder.

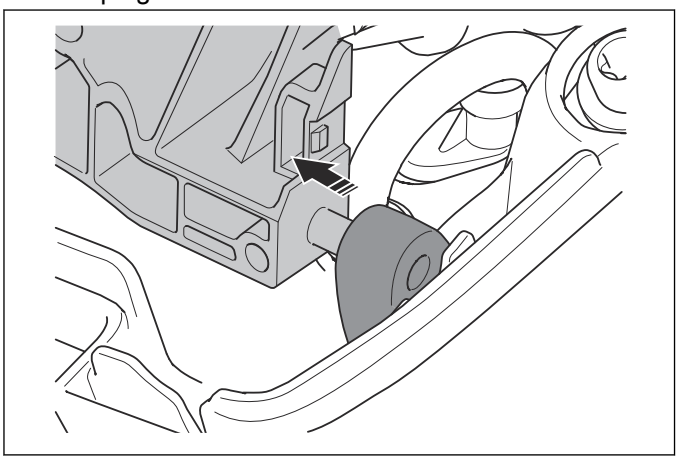


5. Remove the connectors and wires from the air filter holder.

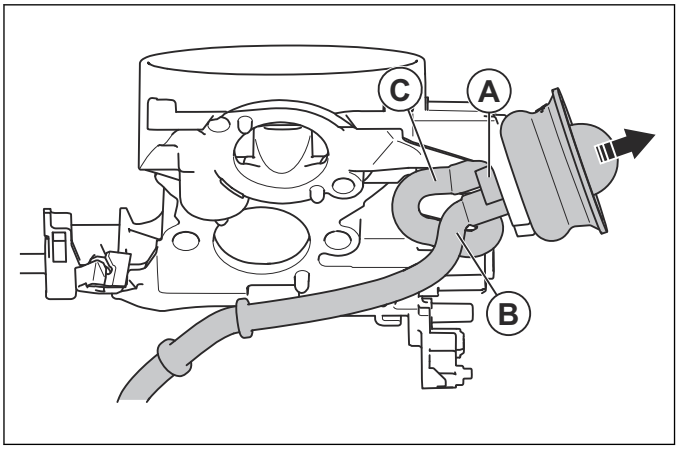
6. Remove the 4 screws on the air filter holder.



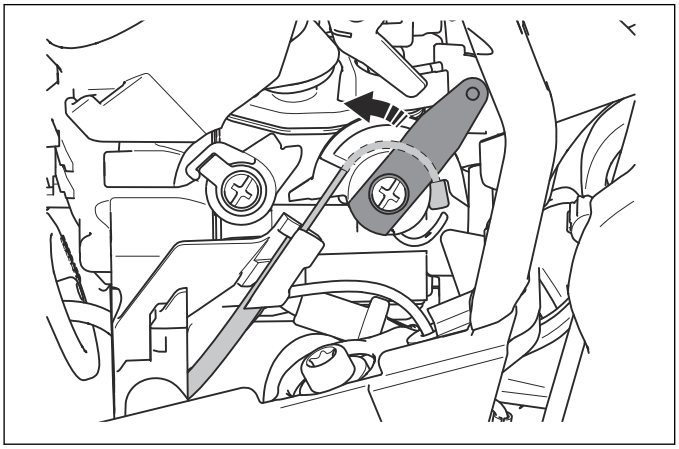
7. Remove the air filter holder from the 2 vibration damping units.



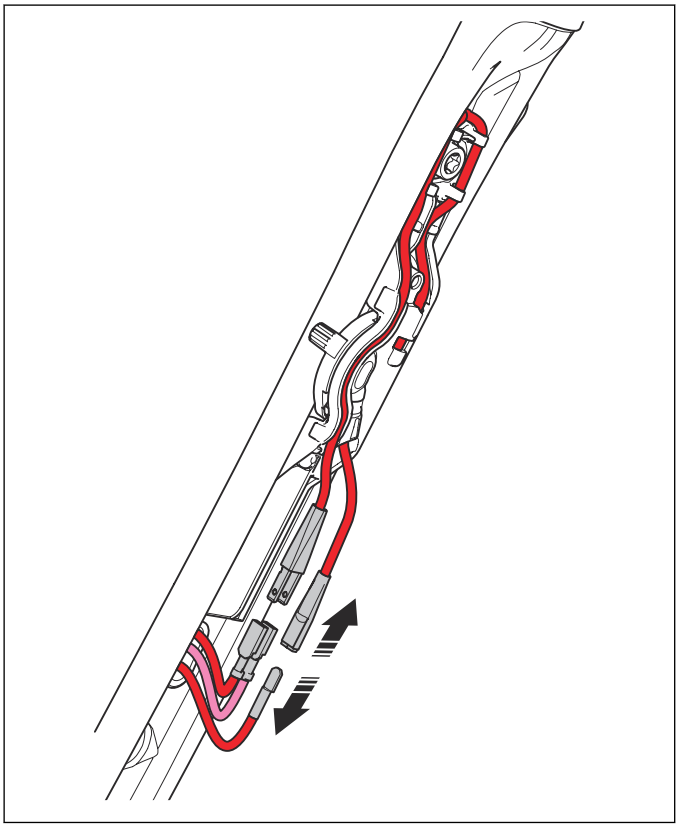
8. Push the snap locks (A) to remove the air purge bulb.



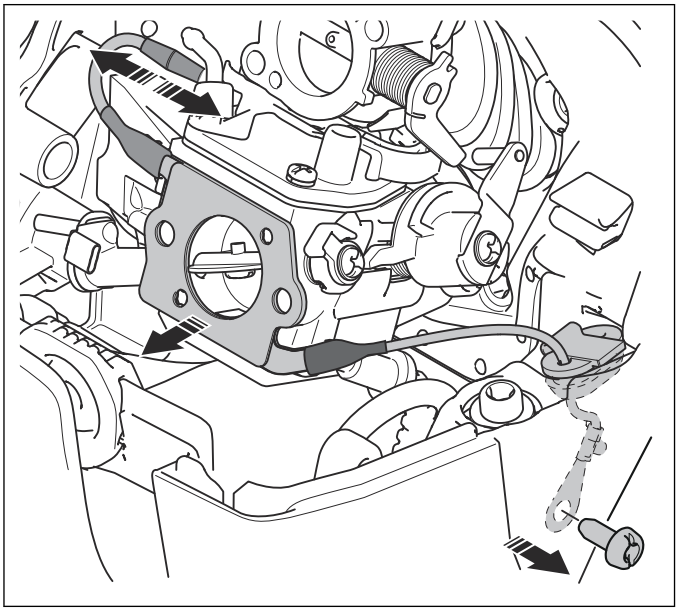
9. Remove the suction hose (B) and return hose (C) from the air purge bulb.
10. Remove the air filter holder.
11. Disconnect the throttle wire.



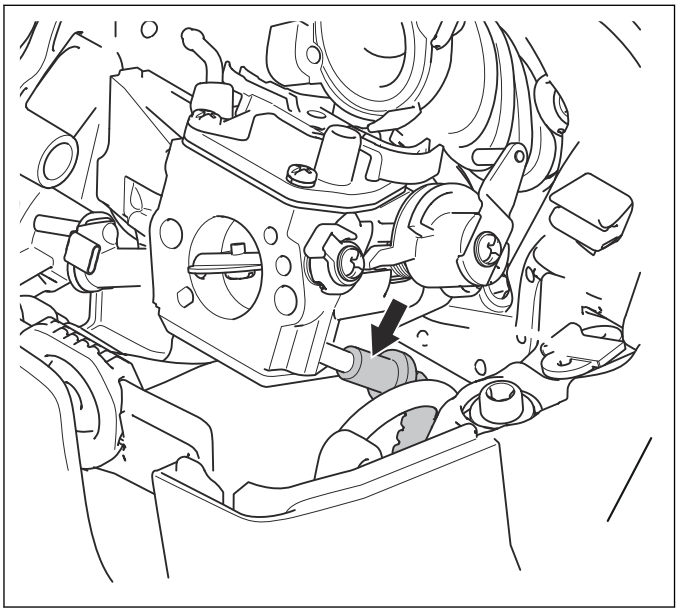
12. Disconnect the thermostat wires in the front handle.



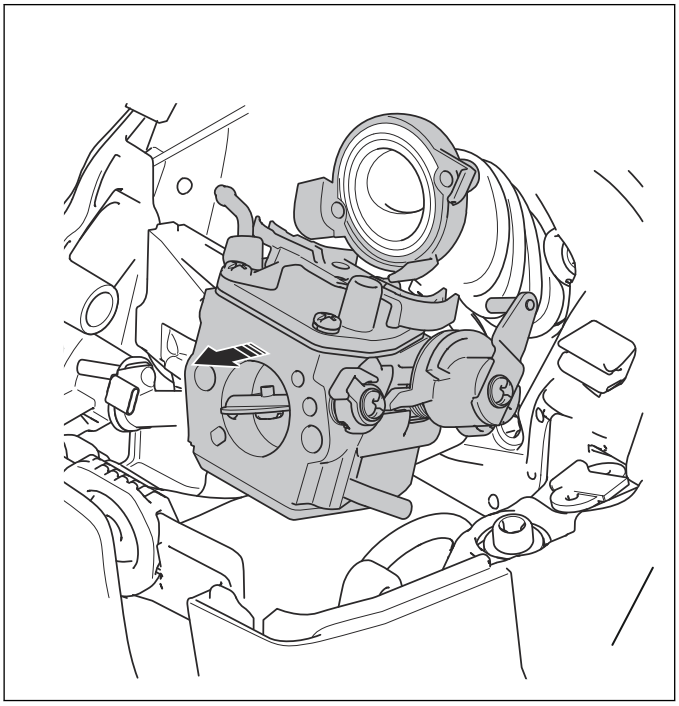
13. Disconnect and remove the heating element.



14. Disconnect the fuel hose.



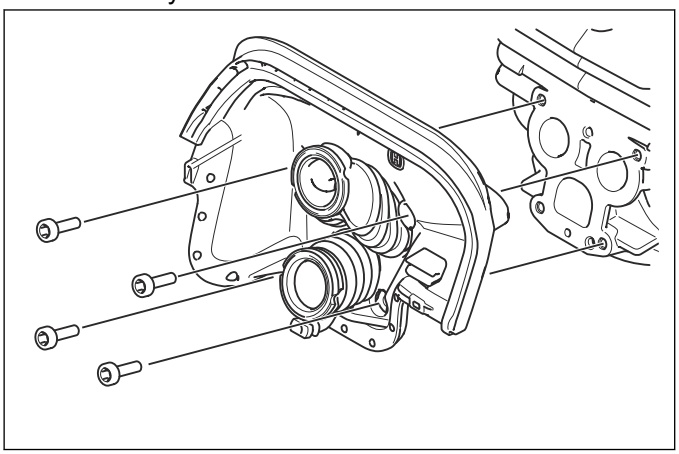
15. Remove the carburetor.



16. Install in the opposite sequence.

7.15.4 To examine the inlet pipe

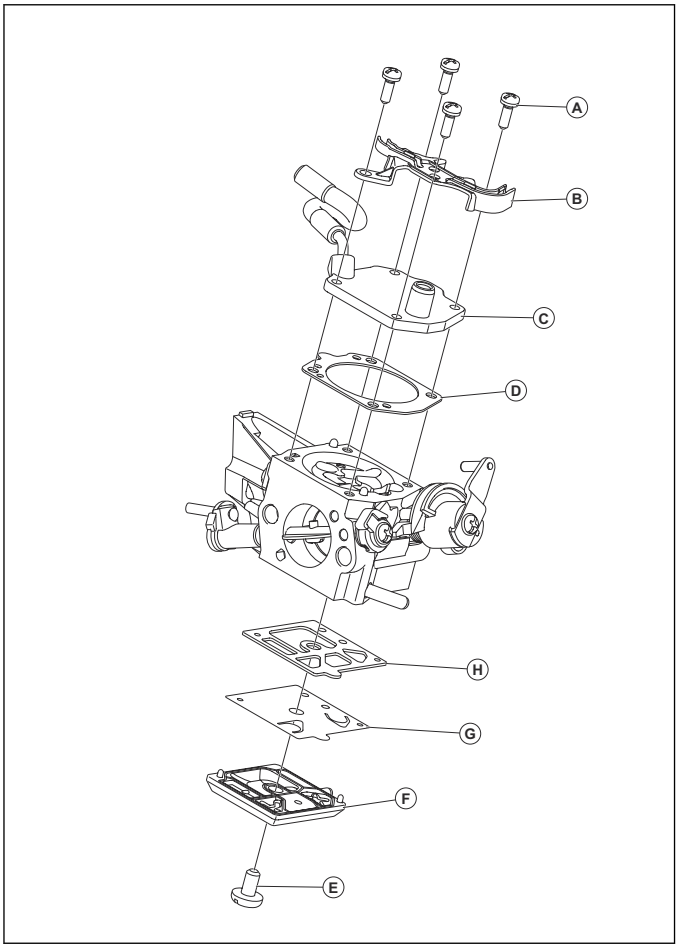
1. Remove the 4 screws and remove the inlet pipe from the cylinder.



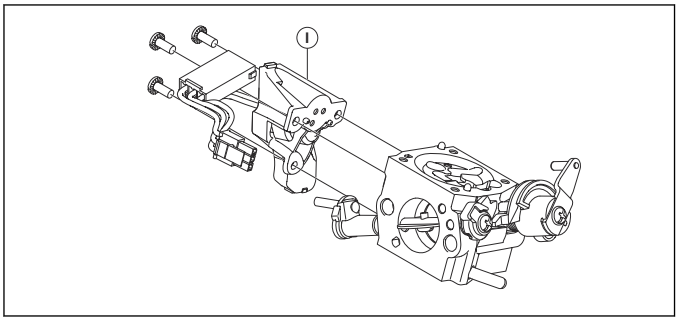
2. Remove the carburetor heat shield and support sleeve from the inlet pipe.
3. Examine the parts for damage. Replace damaged parts.
4. Install in the opposite sequence.

7.15.5 To disassemble the carburetor

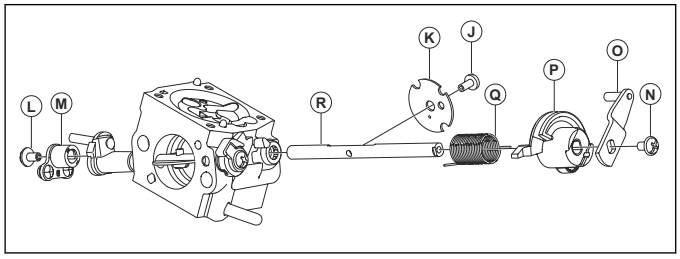
1. Remove the carburetor. Refer to *To remove and install the carburetor on page 33*.
2. Remove the four screws (A).



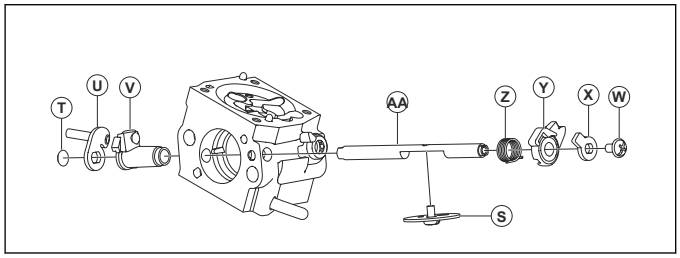
3. Remove the wire holder (B), the metering cover (C) and the metering gasket (D).
4. Remove the screw (E) and the pump cover (F).
5. Remove the pump diaphragm (G) and the gasket (H).
6. Remove the 3 screws and the AutoTune™ unit (I).



7. Remove the screw (J) and the throttle plate (K).



8. Remove the screw (L) and the collar (M).
9. Remove the screw (N), the lever (O), the lever for the throttle wire (P), the return spring (Q) and the throttle shaft (R).
10. Remove the screw and the choke plate (S).



11. Remove the screw (T), the choke lever (U) and the collar (V).
12. Remove the screw (W), the washer (X), the lever (Y), the return spring (Z) and the choke shaft (AA).
13. Assemble in the opposite sequence.

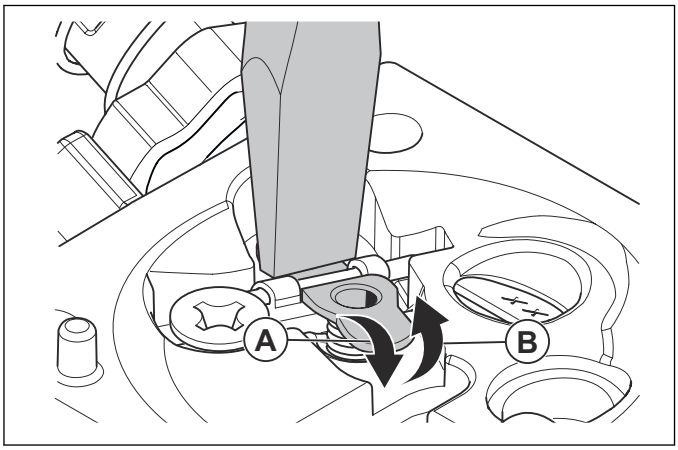
7.15.6 To clean and examine the carburetor

1. Clean all parts in clean gasoline. Use compressed air to dry the gasoline. Point the air through all channels in the carburetor housing and make sure that the channels are not blocked.
2. Make sure that there is no play on the throttle valve and the shafts of the choke valve.
3. Examine all parts for damage and wear. Replace the parts that show sign of damage.
4. Use the Engine Diagnostic Tool to examine the AutoTune™ unit. Refer to *Adjustment of the AutoTune™ unit on page 37*.

7.15.7 To adjust the metering lever

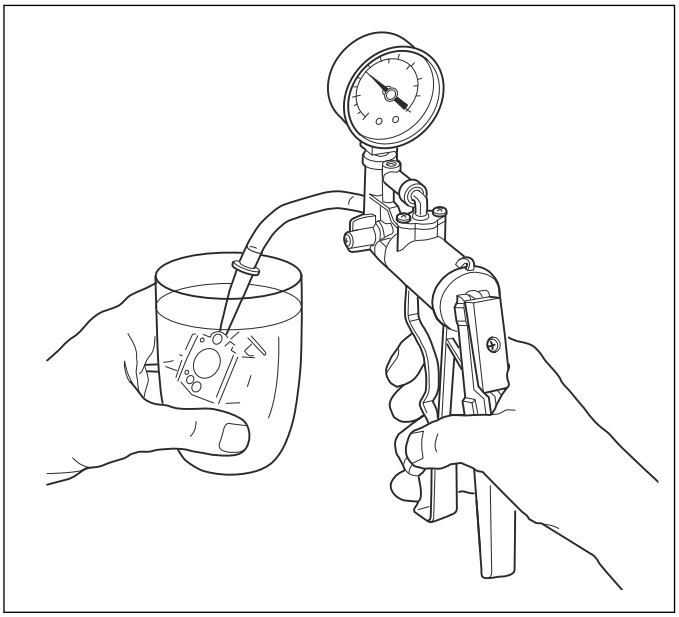
The distance between the metering lever and the gasket surface of the carburetor housing must be 0.55 mm. Adjust the distance if it is more or less than 0.55 mm.

- Move the end of the metering lever down (A) to decrease the distance. Move the end of the metering lever up (B) to increase the distance.



7.15.8 To do a pressure test of the carburetor

1. Remove the carburetor. Refer to *To remove and install the carburetor on page 33*.
2. Make sure that the carburetor is correctly assembled. Refer to *To remove and install the carburetor on page 33*.
3. Connect the pressure tester to the fuel inlet on the carburetor. Increase the pressure to 50kPa. Refer to *Servicing tools on page 9*.



4. Lower the carburetor in a container with gasoline to find leaks.
5. Make sure that there are no leaks.

7.15.9 Troubleshooting leakage

Fault	Cause
Leakage in the diffuser jets	The needle valve
Leakage in the impulse pipe	The pump gasket
Leakage in the ventilation hole on the metering unit	The control gasket

7.15.10 Adjustment of the AutoTune™ unit

Note: The product adjusts the tune automatically and will be fully adjusted after some minutes of standard operation.

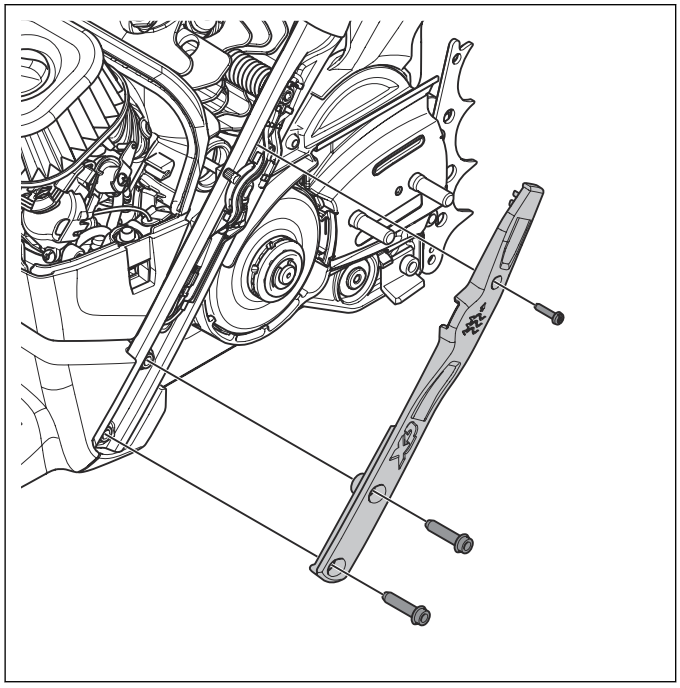
The high speed part is adjusted during loaded operation, such as cutting and felling.

The idle part is adjusted when you operate the product at idle speed.

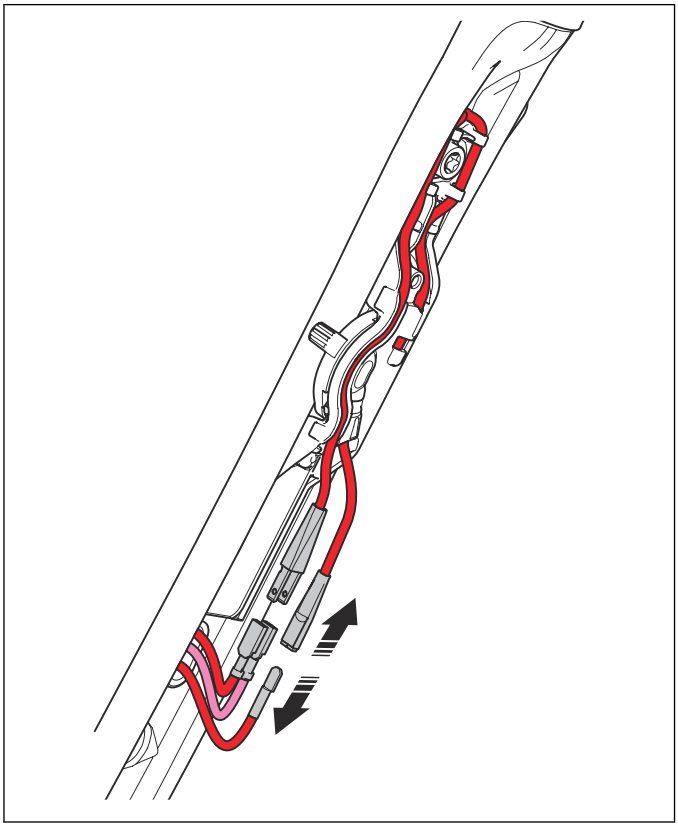
7.15.11 To disassemble and assemble the thermostat and heating element

For models with a thermostat and heating element.

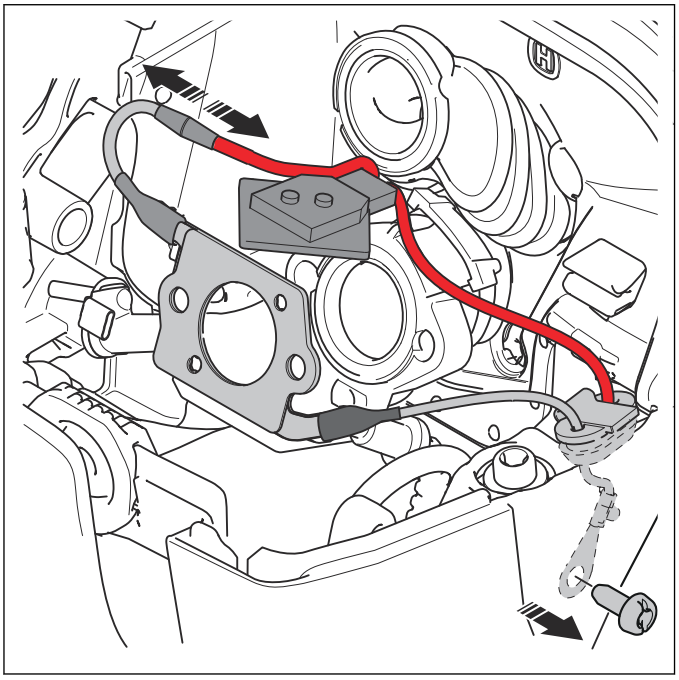
1. Remove the cylinder cover.
2. Remove the 3 screws and the cover for the heated handle.



3. Disconnect the 3 wires.



4. Pull out the 3 wires from the handle.
5. Remove the air filter.
6. Remove the air filter holder and the carburetor. Refer to *To remove and install the carburetor on page 33*.
7. Pull the red and the black wire up through the carburetor bottom plate. Disconnect the wires from the heating elements.

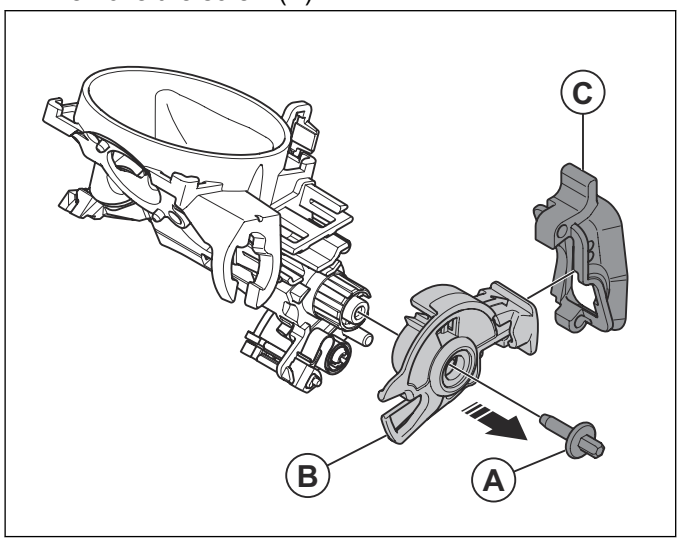


8. Replace the thermostat and heating elements.
9. Assemble the thermostat and heating element in the opposite sequence to how it was disassembled.

7.16 Start/stop switch

7.16.1 To remove and install the start/stop switch

1. Remove the cylinder cover.
2. Remove the air filter.
3. Remove the air filter holder. Refer to *To remove and install the carburetor on page 33*.
4. Remove the screw (A).

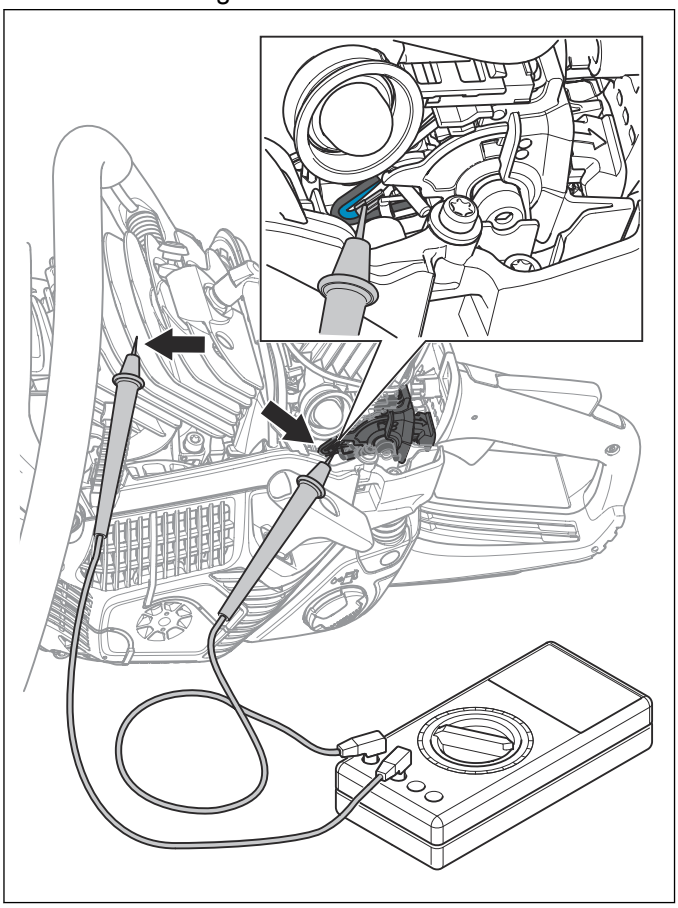


5. Remove the start/stop switch (B) and the rubber sealing (C).
6. Remove the rubber sealing from the start/stop switch.
7. Install in the opposite sequence.

7.16.2 To do a function test of the start/stop switch

1. Remove the cylinder cover.
2. Clean the surfaces where you will measure the resistance.

3. Connect a multimeter to the blue cable and the cylinder to measure the resistance. The resistance must not be higher than 0.5 Ω.

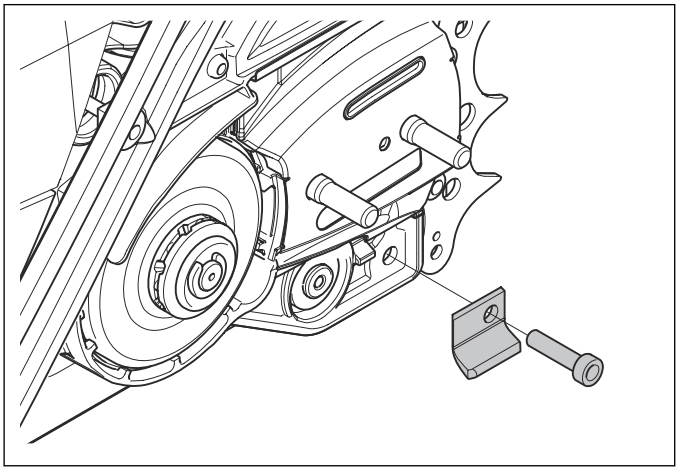


Note: The start/stop switch must be in the ON position to give the correct indication. The start/stop switch is in the ON position when you hold the button down.

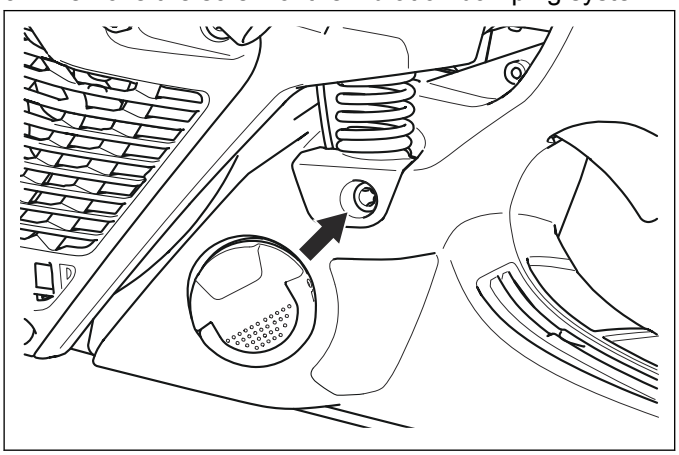
7.17 Fuel tank

7.17.1 To remove and install the fuel tank

1. Drain the fuel tank.
2. Remove the chain brake system. Refer to *To disassemble and assemble the chain brake on page 15*.
3. Remove the cylinder cover.
4. Remove the spark plug cap and the spark plug.
5. Remove the air filter. Refer to *To remove and install the air filter on page 31*.
6. Remove the air filter holder and the carburetor. Refer to *To remove and install the carburetor on page 33*.
7. Remove the screw and the chain catcher.

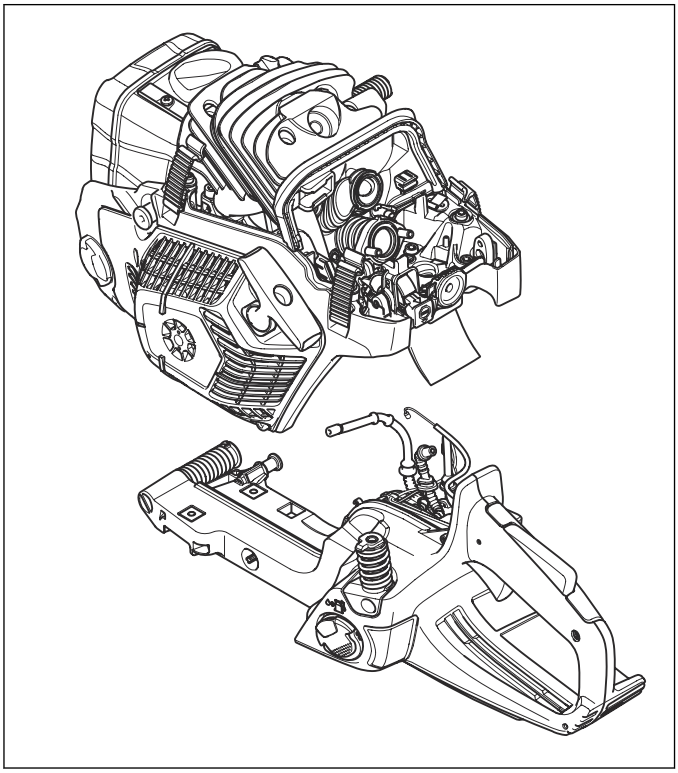


8. Remove the front handle. Refer to *To remove and install the front heated handle on page 19*.
9. Remove the screw of the vibration damping system.



10. Remove the fuel hose and disconnect the wires from the heated handles. Refer to *To remove and install the carburetor on page 33*.

11. Remove the tank unit.

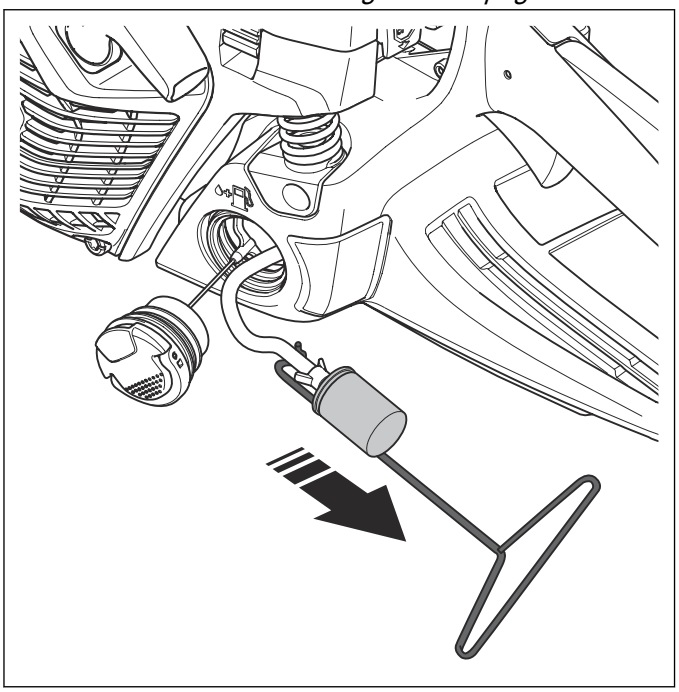


CAUTION: Be careful not to cause damage to the hoses when you lift the saw from the tank unit.

12. Install in the opposite sequence.

7.17.2 To replace the fuel filter

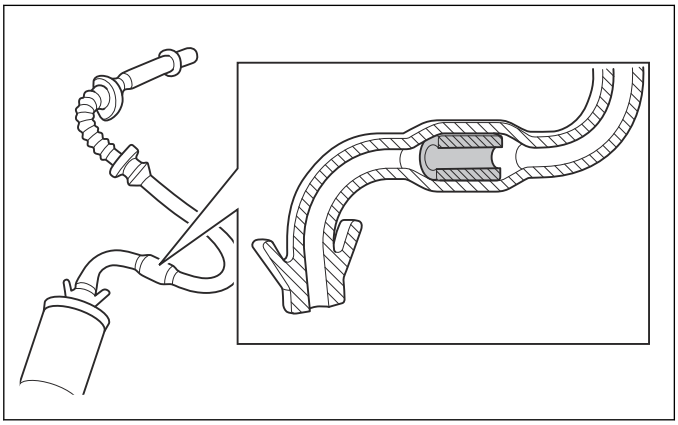
1. Remove the fuel tank cap.
2. Use a fuel filter hook to pull out the fuel hose and the fuel filter. Refer to *Servicing tools on page 9*



3. Remove the fuel filter.
4. Attach a new fuel filterto the fuel hose.
5. Install the fuel tank cap.

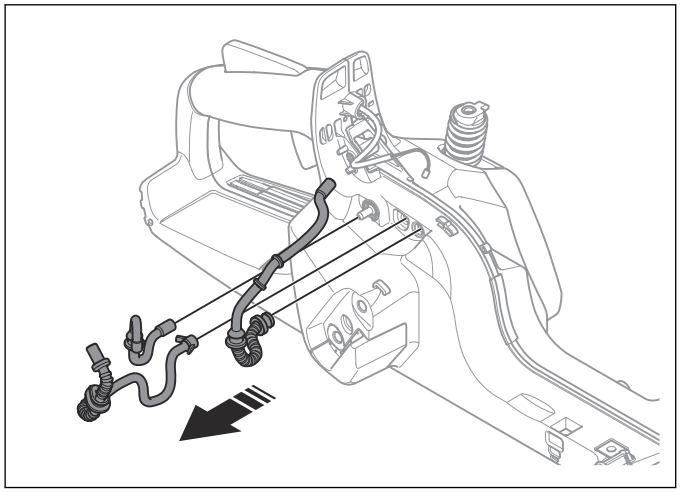
7.17.3 Magnetic tube in the fuel hose

Products with AutoTune™ have a magnetic tube in the fuel hose. This prevents magnetic particles in the fuel to cause damage to the AutoTune™ system.



7.17.4 To replace the fuel hoses

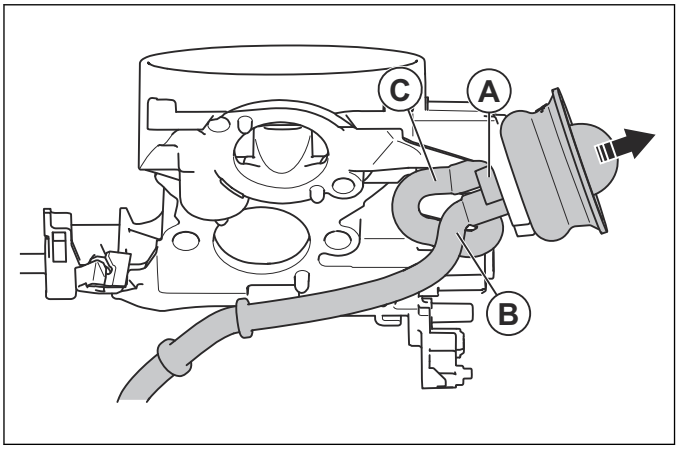
1. Remove the fuel tank. Refer to *To remove and install the fuel tank on page 39*.
2. Remove the fuel filter. Refer to *To replace the fuel filter on page 40*.
3. Pull out and remove the 3 hoses from the fuel tank.



4. Install in the opposite sequence.

7.17.5 To replace the air purge bulb

1. Disassemble the cylinder cover and the air filter.
2. Push the snap locks (A) to remove the air purge bulb from the air filter holder.



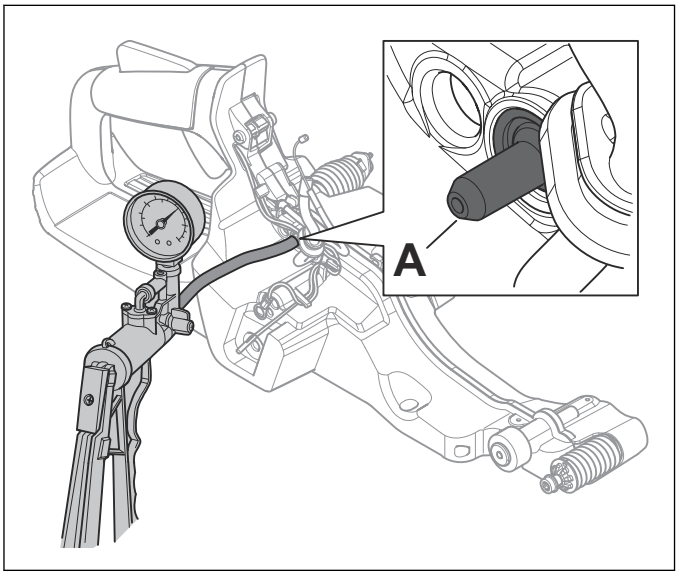
3. Loosen the suction hose (B) and the return hose (C) from the air purge bulb.
4. Replace the air purge bulb.
5. Install in the opposite sequence.

7.17.6 Air pressure in the fuel tank

The two-way tank valve has a controlled opening pressure in the two directions. The controlled opening prevents positive pressure or vacuum in the fuel tank, and fuel leakage. Positive pressure, vacuum and fuel leakage decreases engine performance.

7.17.6.1 To do a pressure test of the fuel tank

1. Remove the fuel tank cap and drain the fuel tank.
2. Pull out and remove the fuel hose.
3. Connect the pressure tester to the tank valve (A).

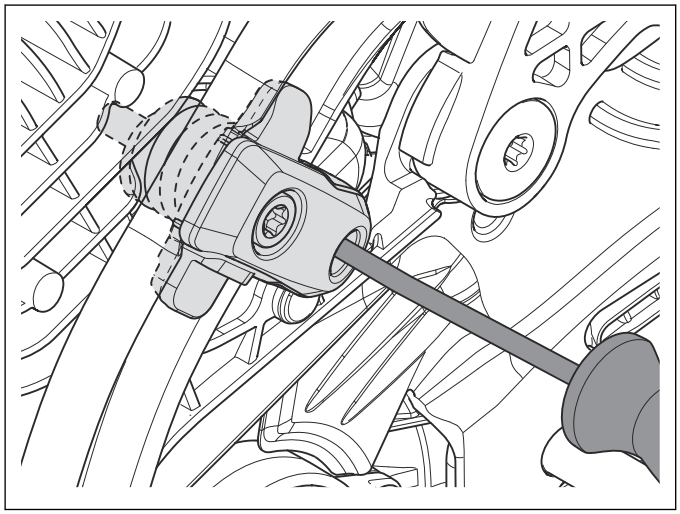


4. Do a test of the negative pressure in the fuel tank.
   a) Use the pressure tester in vacuum mode to decrease the pressure in the fuel tank.
   b) The pressure must be between 0.10–0.45 bar.
5. Do a test of the positive pressure in the fuel tank.
   a) Use the pressure tester in pressure mode increase the pressure in the fuel tank.
   b) The pressure must stop at max. 0.07 bar.
6. Install the fuel tank cap.

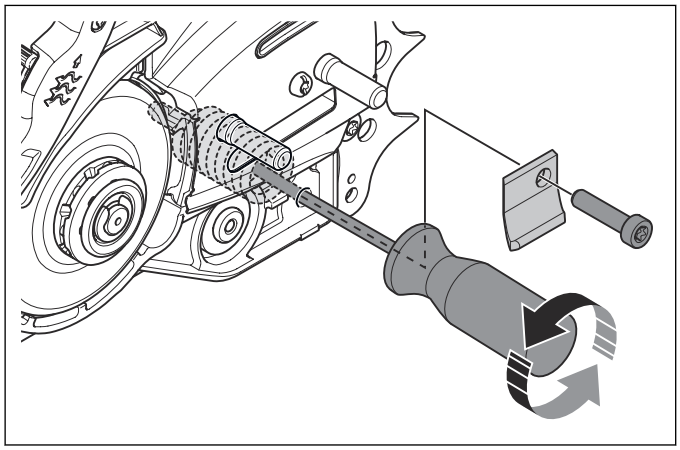
7.18 Vibration damping system

7.18.1 To disassemble and assemble the vibration damping system

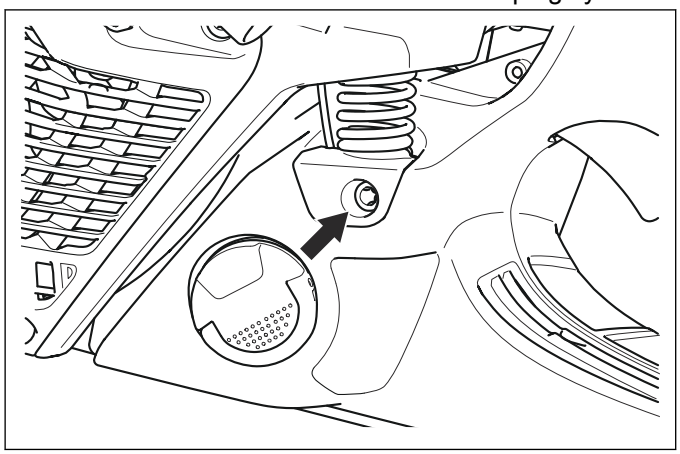
1. Use a Torx to remove the vibration damping unit from the cylinder.



2. Remove the chain catcher to get access to the vibration damping unit.



3. Remove the screw of the vibration damping system.

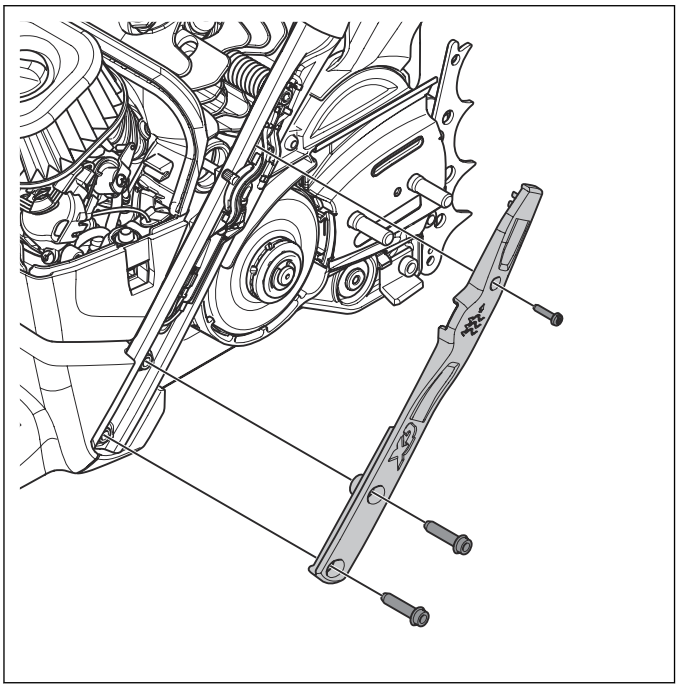


4. Assemble in the opposite sequence.

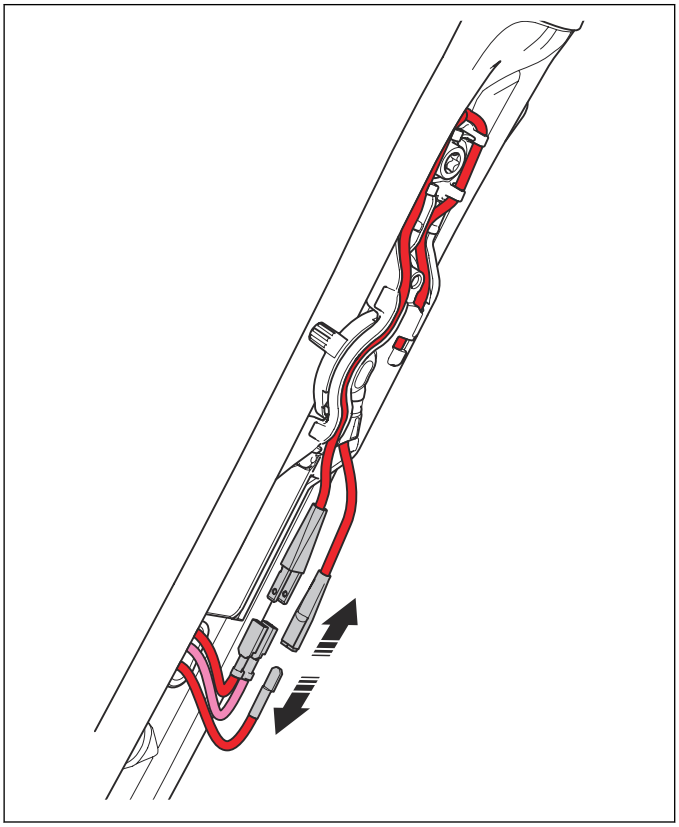
7.19 Generator

7.19.1 To remove and install the generator

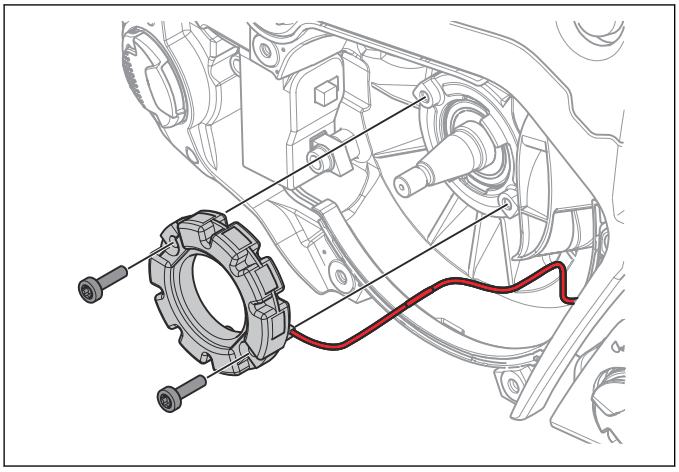
1. Remove the tank unit. Refer to *To remove and install the fuel tank on page 39*.
2. Remove the starter unit. Refer to *To disassemble the starter unit on page 22*.
3. Remove the flywheel. Refer to *To remove the flywheel on page 26*.
4. Remove the screws and the front heated handle cover.



5. Disconnect the generator wire.

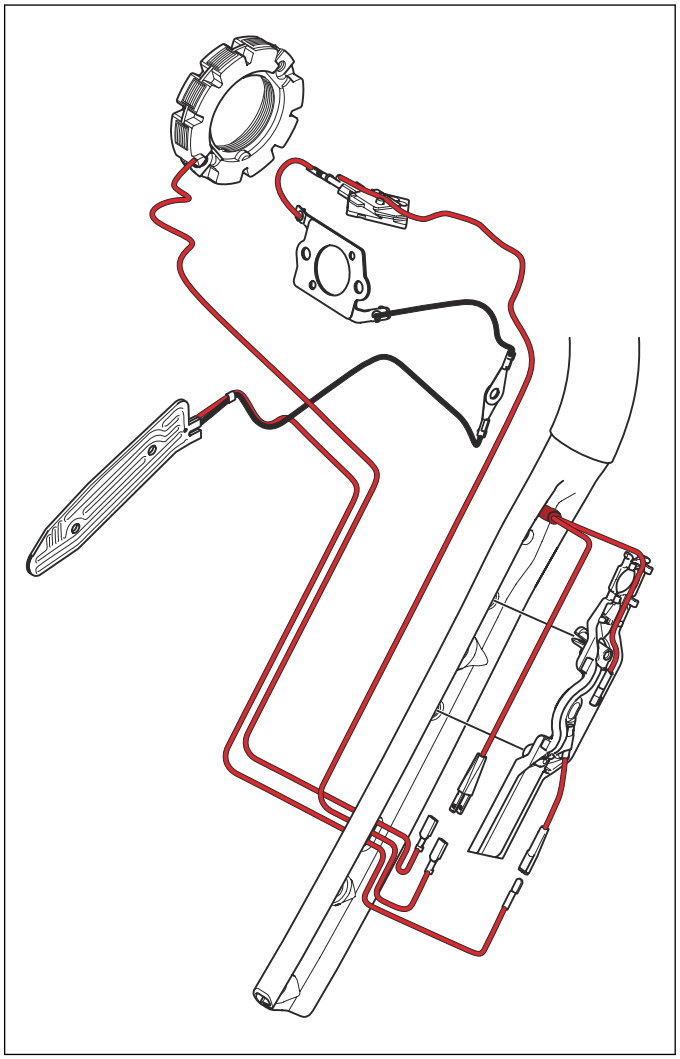


6. Remove the screws.



7. Remove the generator.
8. Install in the opposite sequence.

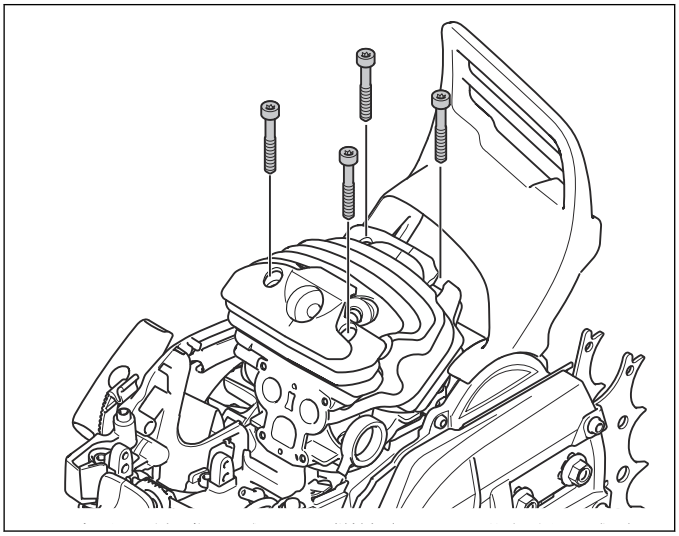
7.19.2 Product overview of the generator cables



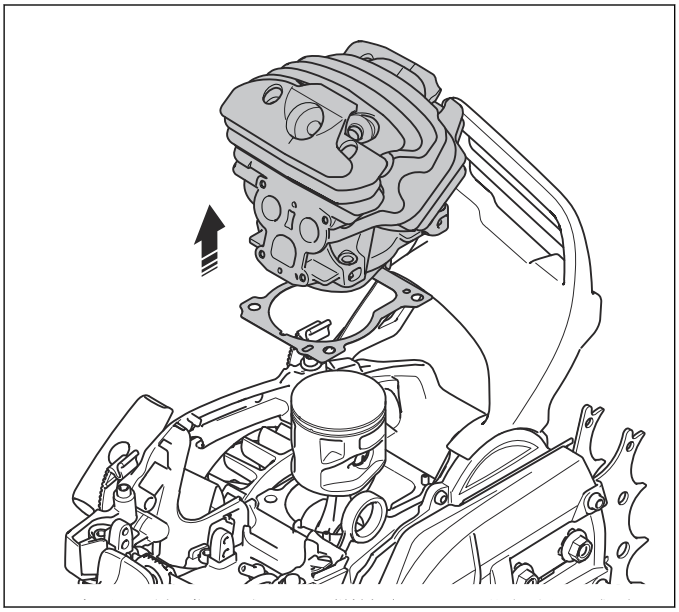
7.20 Cylinder and piston

7.20.1 To remove the cylinder and piston

1. Remove the cylinder cover.
2. Remove the carburetor. Refer to *To remove and install the carburetor on page 33*.
3. Remove the carburetor heat shield and inlet pipe. Refer to *To examine the inlet pipe on page 35*.
4. Remove the muffler. Refer to *To remove and install the muffler on page 17*.
5. Remove the spark plug cap.
6. Remove the 4 screws.



7. Remove the cylinder and the cylinder base gasket.

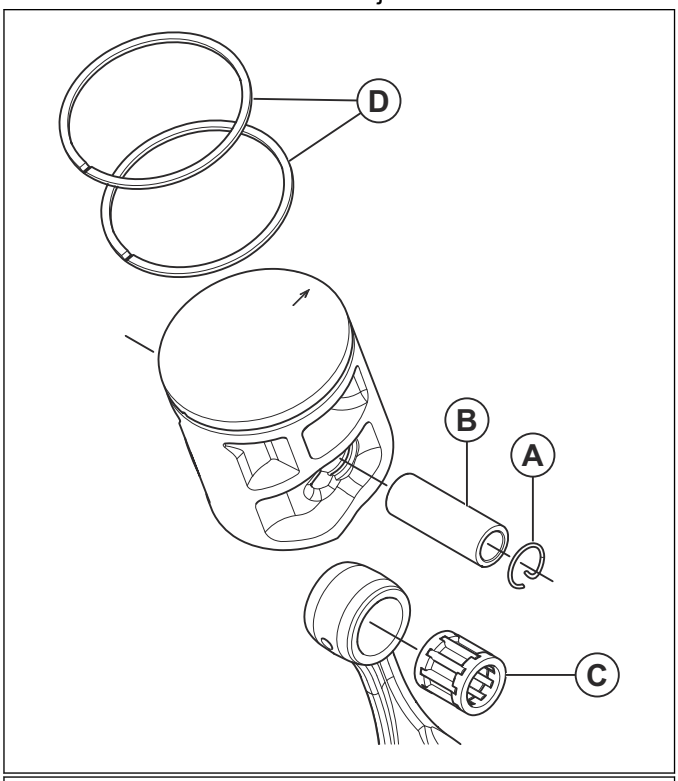


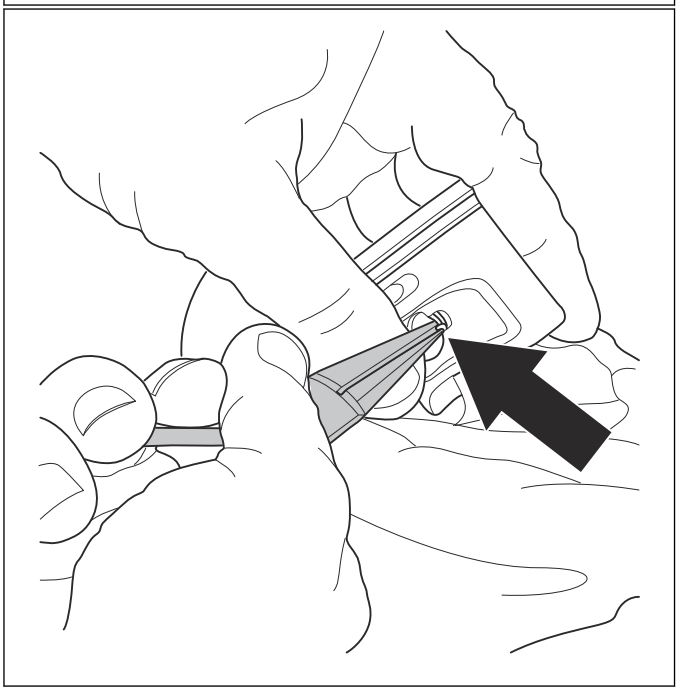
CAUTION: Make sure that the piston does not move. The guide pin can cause damage to the piston if it falls.

CAUTION: Make sure that no dirt or unwanted particles go into the crankcase.

8. Put a cover on the crankcase opening.

9. Use pointed pliers to remove the G snap ring (A) from the pin. Keep your thumb on the snap ring to make sure that it does not eject.





CAUTION: Make sure that you do not cause damage to the groove.

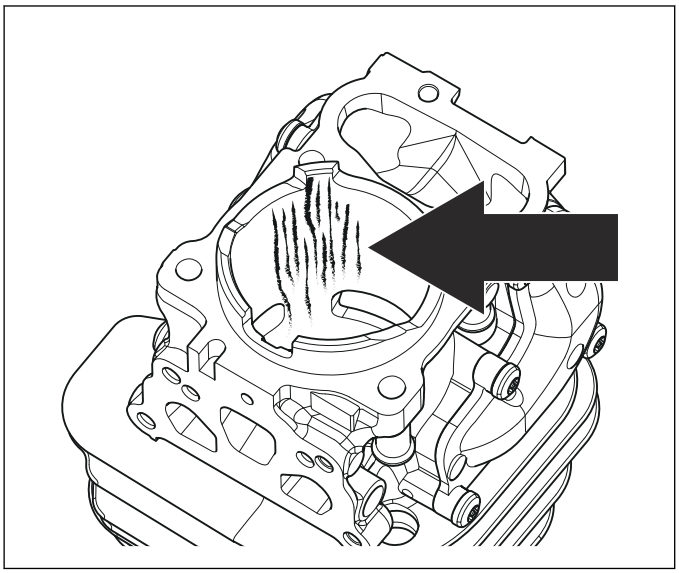
10. Push out the piston pin (B).
11. Remove the piston.
12. Remove the needle bearing (C). Replace the needle bearing if it is damaged or worn.
13. Remove the piston rings (D).

7.20.2 To clean the cylinder and piston

1. Clean the piston crown.
2. Clean the top of the cylinder bore.
3. Clean the cylinder exhaust port.
4. Clean the bottom of the cylinder and the bottom of the crankcase. Remove all gasket particles and dirt particles.
5. Clean the cooling fins.

7.20.3 To examine the cylinder

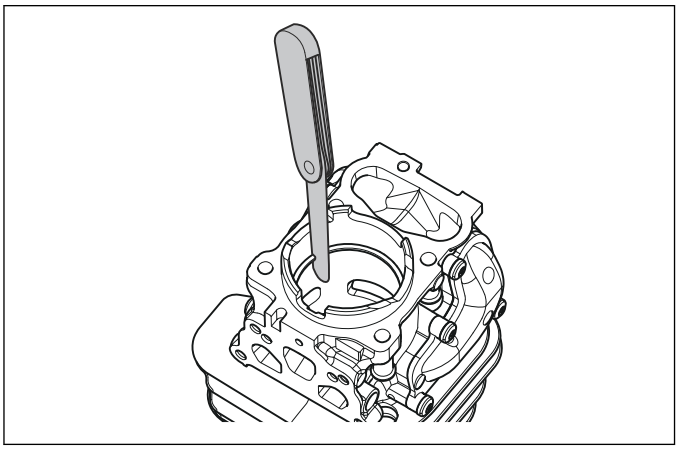
1. Make sure that the surface layer of the cylinder is not worn, especially in the top end of the cylinder.
2. Make sure that the cylinder does not have score marks.



7.20.4 To examine the piston

1. Make sure that the piston pin bearing is not damaged.
2. Make sure that the piston pin does not have damages on the running surface for the bearing.
3. Make sure that the piston ring can move freely in the groove.

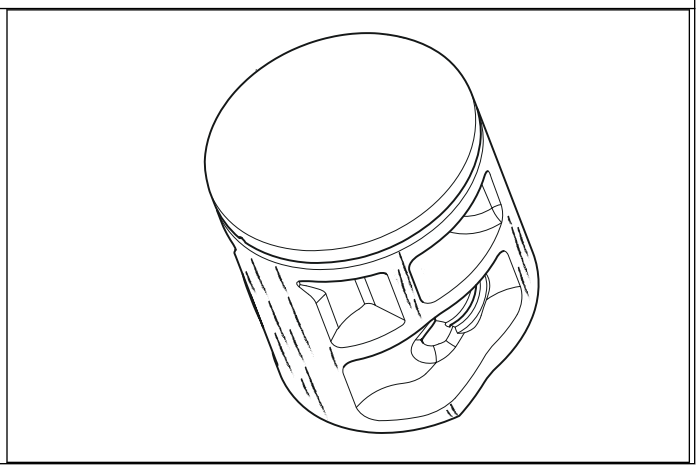
4. Put the piston ring in the cylinder and measure the ring gap with a feeler gauge. The space must not be more than 1 mm.

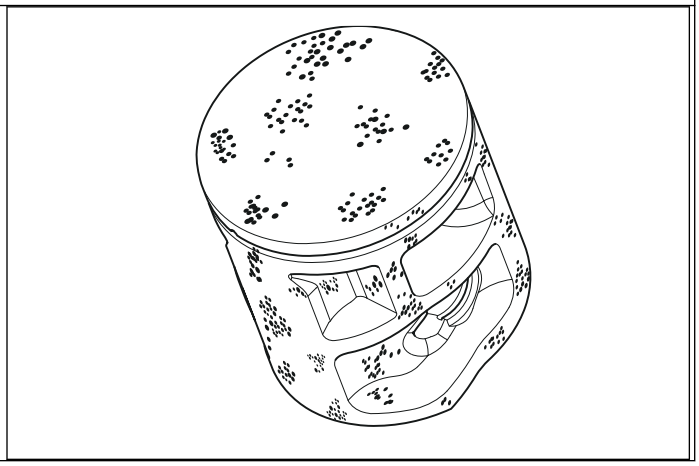


7.20.5 To examine the piston rings

1. Examine the piston rings for damage.
2. Replace damaged piston rings.

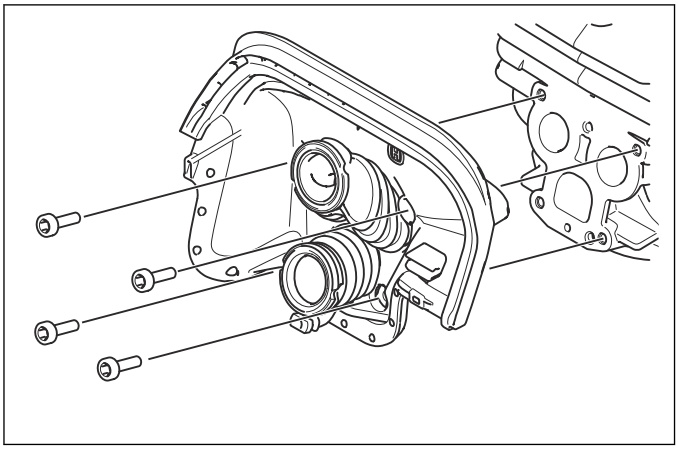
7.20.6 Piston damages

Score marks on the piston	
Incorrect carburetor setting. Too high speed.	
Too low octane fuel.	
The fuel has a too low octane grade.	

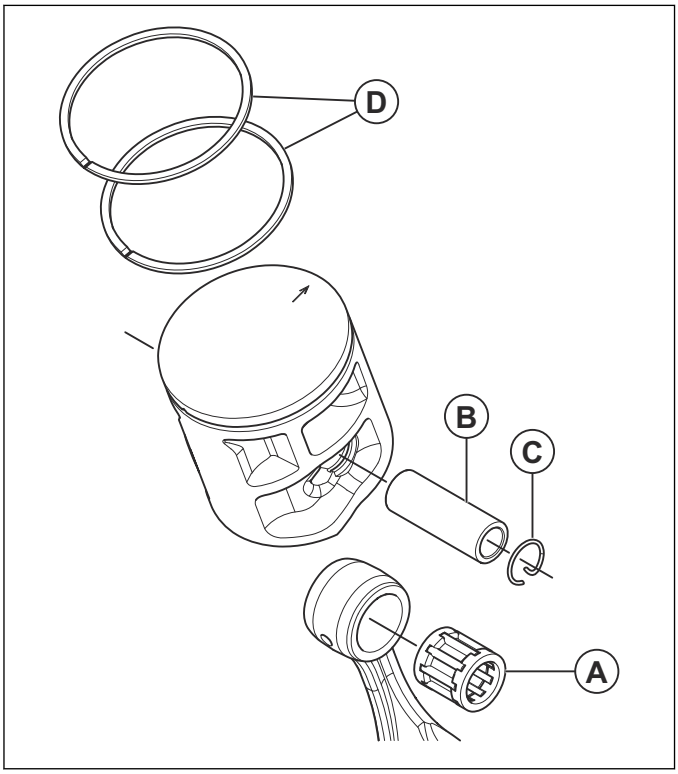
Carbon build-up	
Incorrect carburetor setting. Too low speed.	
Too much or incorrect oil in the fuel.	

7.20.7 To install the cylinder and piston

1. Attach the carburetor heat shield to the inlet pipe. Tighten the screws to the correct torque. Refer to *Servicing data on page 7*.



2. Lubricate the needle bearing (A) and put it into the connecting rod. Make sure the bearing moves freely in the connecting rod.



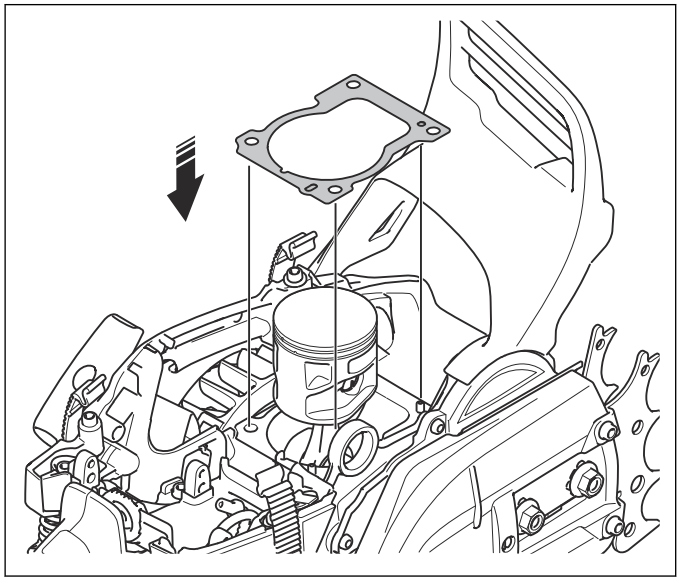
3. Put the piston on the connecting rod.

CAUTION: The arrow at the piston top must be turned in the direction of the exhaust port.

4. Push in the piston pin (B) and attach the G snap ring (C).

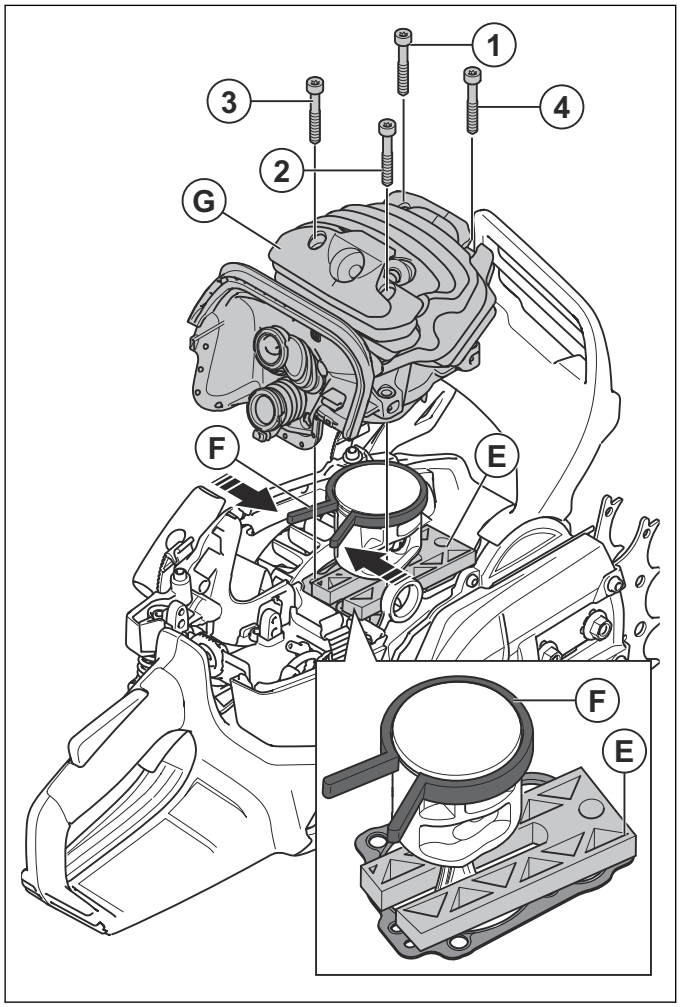
Note: Always use a new G snap ring.

5. Lubricate the piston and piston rings (D).
6. Carefully attach the piston rings (D) on the piston. Make sure that you do not cause damage to the piston ring or the piston.
7. Put a new cylinder base gasket on the crankcase.



Note: Make sure that the gasket is not used and do not have signs of damage or wear.

8. Attach the support plate (E) from the piston assembly kit. Refer to *Servicing tools on page 9*.



9. Use a clamp (F) from the piston assembly kit to compress the piston ring and carefully push the piston into the cylinder opening. Refer to *Servicing tools on page 9*.

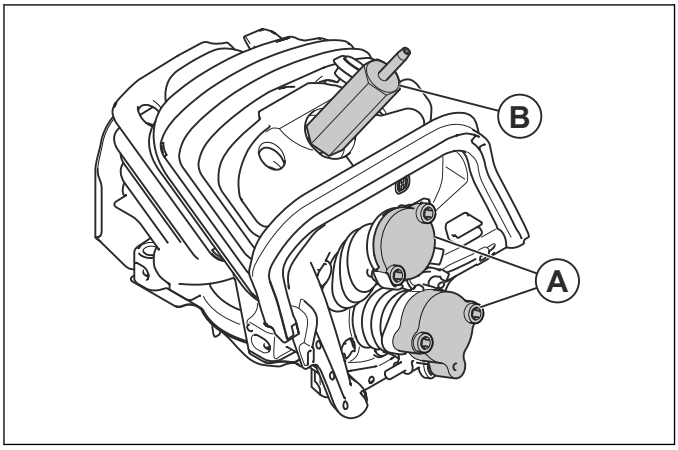
10. Attach the cylinder (G) to the crankcase. Install the 4 screws (B). Tighten the screws in the correct sequence as the illustration shows. Refer to *Servicing data on page 7* for the correct torque.

    Note: When you operate the product, the torque of the cylinder screws decreases.

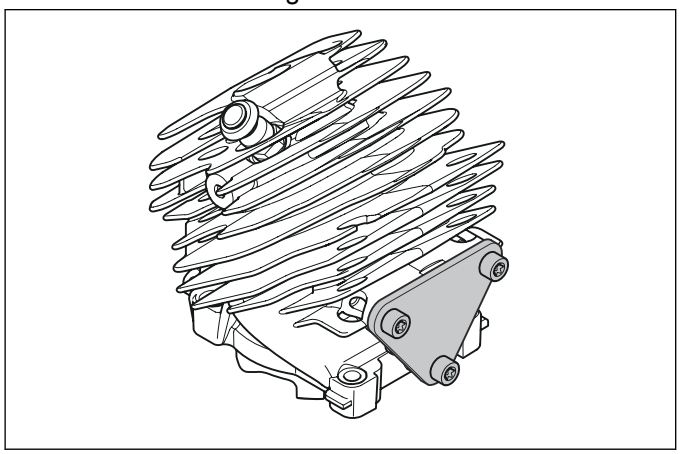
11. Install the cylinder cover support.
12. Connect the spark plug cap to the spark plug.
13. Install the muffler. Refer to *To remove and install the muffler on page 17*.
14. Install the carburetor. Refer to *To remove and install the carburetor on page 33*.
15. Install the cylinder cover.

7.20.8 To do a pressure test of the cylinder

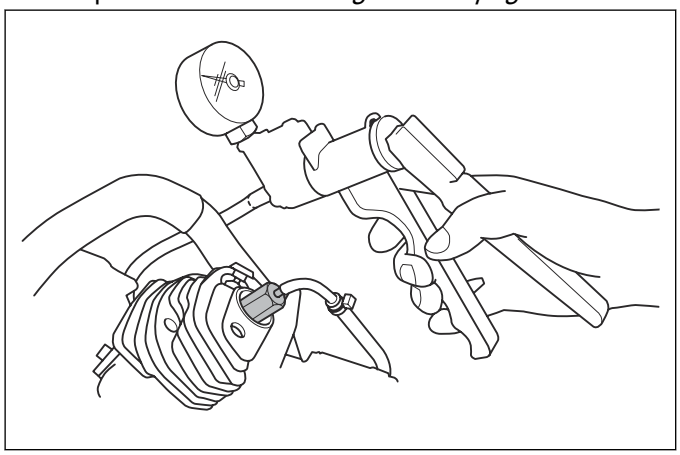
1. Remove the cylinder cover.
2. Remove the air filter.
3. Remove the air filter holder and the carburetor. Refer to *To remove and install the carburetor on page 33*.
4. Remove the spark plug.
5. Attach the inlet cover (A) and the spark plug adapter (B). Refer to *Servicing tools on page 9* for the correct cover and adapter.



6. Loosen the screws on the muffler and attach the outlet cover. Refer to *Servicing tools on page 9* for the correct cover. Tighten the screws for the muffler.



7. Connect the pressure tester to the spark plug adapter. Refer to *Servicing tools on page 9*.



8. Increase the pressure to 0.8 bar. Wait for 30 seconds. Make sure the pressure does no decrease to less than 0.6 bar. Remove the covers from the muffler and the carburetor, tighten the bolts to the correct torque. Remove the spark plug adapter and attach the spark plug.

CAUTION: Make sure the inlet manifold is attached correctly after the pressure test. An incorrectly attached inlet manifold will cause damage to the product.

7.21 Crankshaft and crankcase

7.21.1 To get access to the crankshaft and crankcase

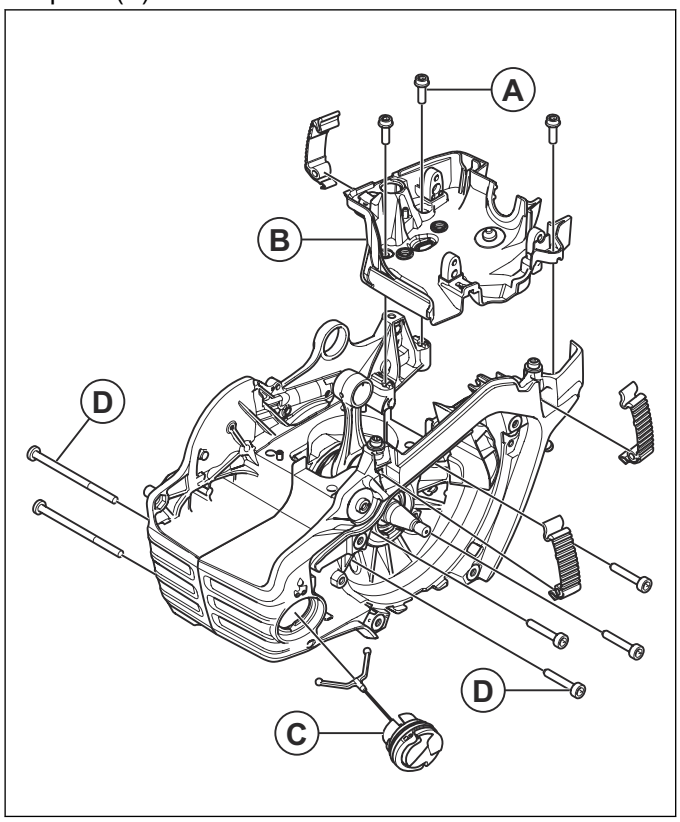
1. Remove the guide bar and saw chain.
2. Drain the oil and the fuel.
3. Remove the cylinder cover.
4. Remove the spark plug.
5. Remove the chain brake system. Refer to *To disassemble and assemble the chain brake on page 15*.

6. Remove the chain catcher. Refer to *To replace the chain catcher on page 17*.
7. Remove the centrifugal clutch. Refer to *To remove and install the centrifugal clutch on page 29*.
8. Remove the lubrication system. Refer to *To remove and install the lubrication system on page 30*.
9. Remove the muffler. Refer to *To remove and install the muffler on page 17*.
10. Remove the front handle. Refer to*Handles on page 18*.
11. Remove the starter. Refer to *To disassemble the starter unit on page 22*.
12. Remove the air filter. Refer to *To remove and install the air filter on page 31*.
13. Remove the air filter holder and the carburetor.. Refer to *To remove and install the carburetor on page 33*.
14. Remove the ignition module. Refer to *To remove the ignition system on page 25*.
15. Remove the flywheel. Refer to *To remove the flywheel on page 26*.
16. Remove the fuel tank. Refer to *To remove and install the fuel tank on page 39*.
17. Remove the generator on models with heated handles. Refer to *To remove and install the generator on page 42*.
18. Remove the cylinder and the piston. Refer to *To remove the cylinder and piston on page 43*.

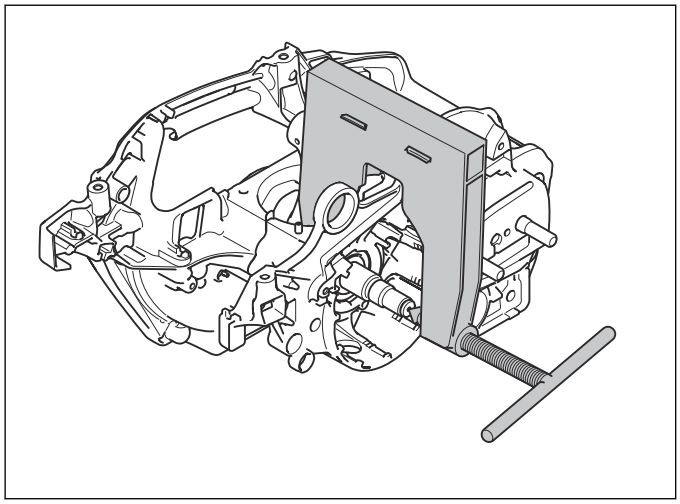
Note: Make sure that no dirt or object can come into the bearings.

7.21.2 To disassemble the crankcase

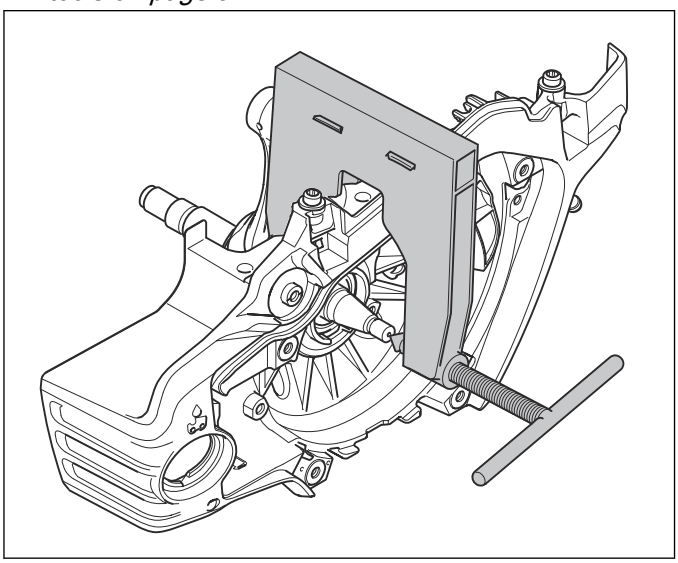
1. Remove the 3 screws (A) and the carburetor bottom plate (B).



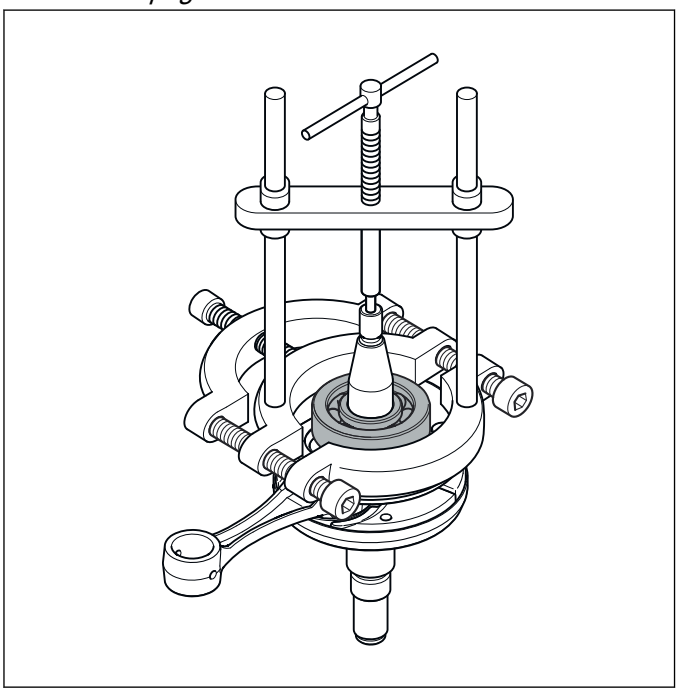
2. Remove the oil tank cap (C).
3. Remove the 6 screws (D).
4. Attach the crankcase disassemble tool on the clutch side of the crankshaft and remove the clutch side of the crankcase. Refer to *Servicing tools on page 9*.



5. Attach the crankcase disassemble tool on the flywheel side of the crankshaft and remove the crankshaft from the crankcase. Refer to *Servicing tools on page 9*.



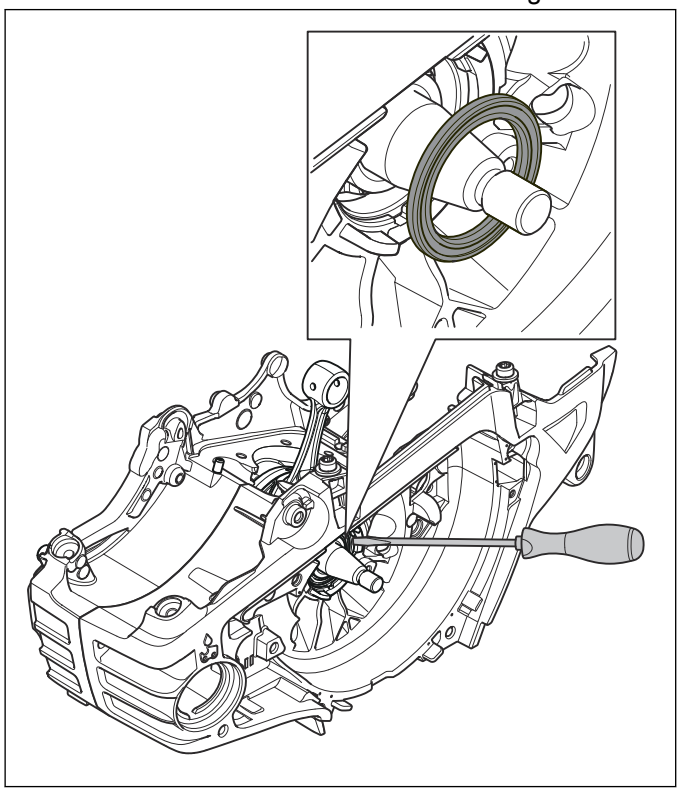
6. If the bearing is attached to the crankshaft, use a puller tool to remove the bearing. Refer to *Servicing tools on page 9*.



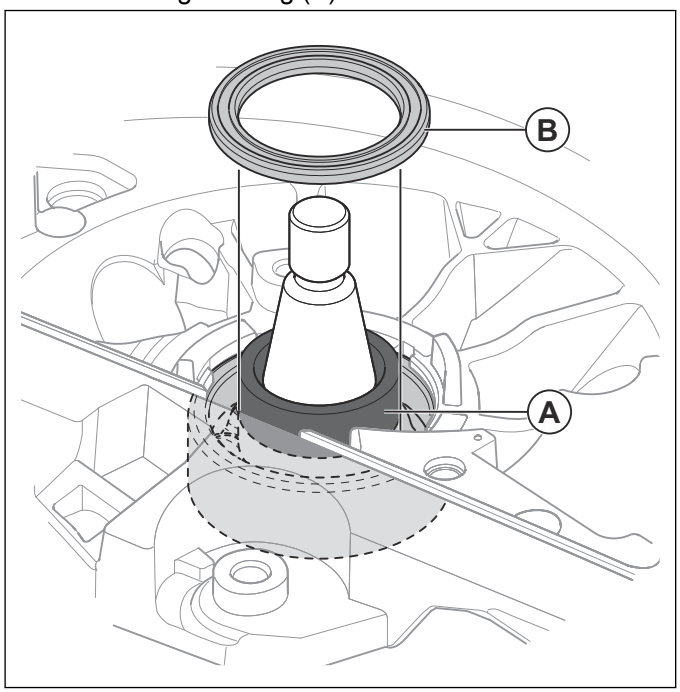
7.21.3 To replace the seal rings

Note: Hold the outer part of the bearing when you replace the seal ring. Make sure that the bearing does not move.

1. To replace the seal ring on the flywheel side.
   a) Remove the starter unit. Refer to *To disassemble the starter unit on page 22*.
   b) Remove the flywheel. Refer to *To remove the flywheel on page 26*.
2. To replace the seal ring on the clutch side.
   a) Remove the centrifugal clutch. Refer to *To remove and install the centrifugal clutch on page 29*.
   b) Remove the oil pump. Refer to *To remove and install the lubrication system on page 30*.
3. Use a screwdriver to remove the seal ring.

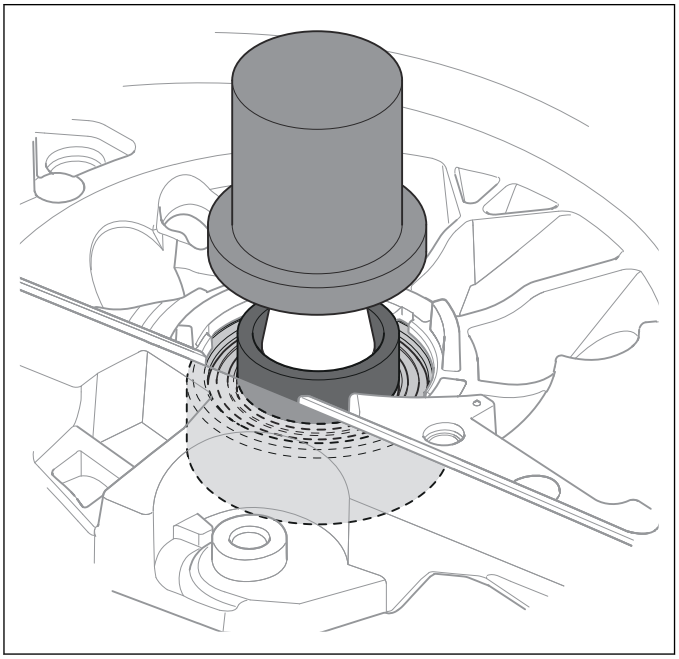


4. Attach the guide ring (A) on the crankshaft axle.



5. Lubricate the new seal ring (B) with two-stroke oil.
6. Put the seal ring on the guide ring.

7. Use the press tool to push the new seal ring to the correct position. Refer to *Servicing tools on page 9*



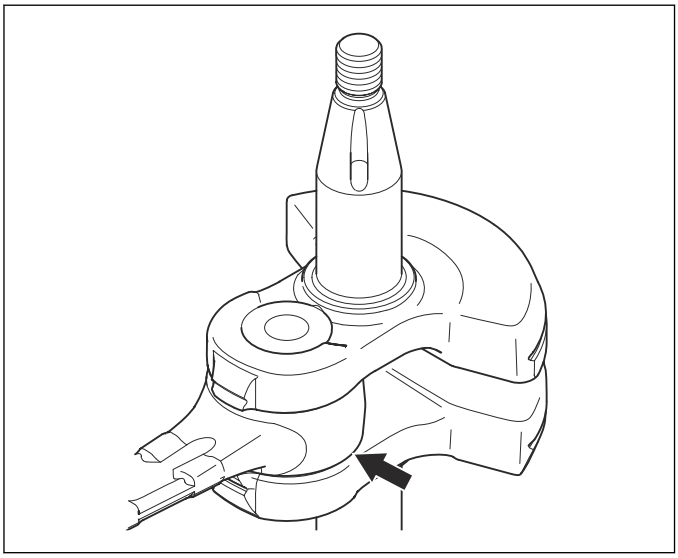
8. Remove the seal ring tool and the guide ring.
9. Install in the opposite sequence.

7.21.4 To clean and examine the crankshaft and crankcase

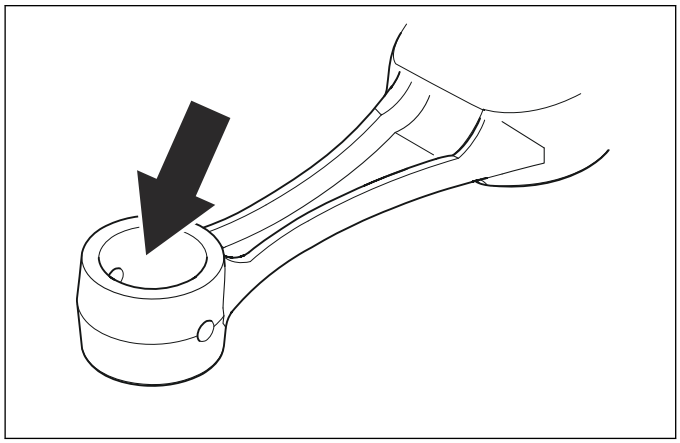
CAUTION: Make sure that dirt and unwanted particles do not go into the crankcase and into the bearings.

Clean all components and remove gasket particles from the mating surfaces of the crankcase halves.

1. Make sure that the crankpin bearing does not have radial play. Axial play is permitted.
2. Make sure that the crankpin bearing is not worn or has discoloration on the sides.



3. Make sure that the bearing surfaces in the small end of the connecting rod are not worn or have discoloration.

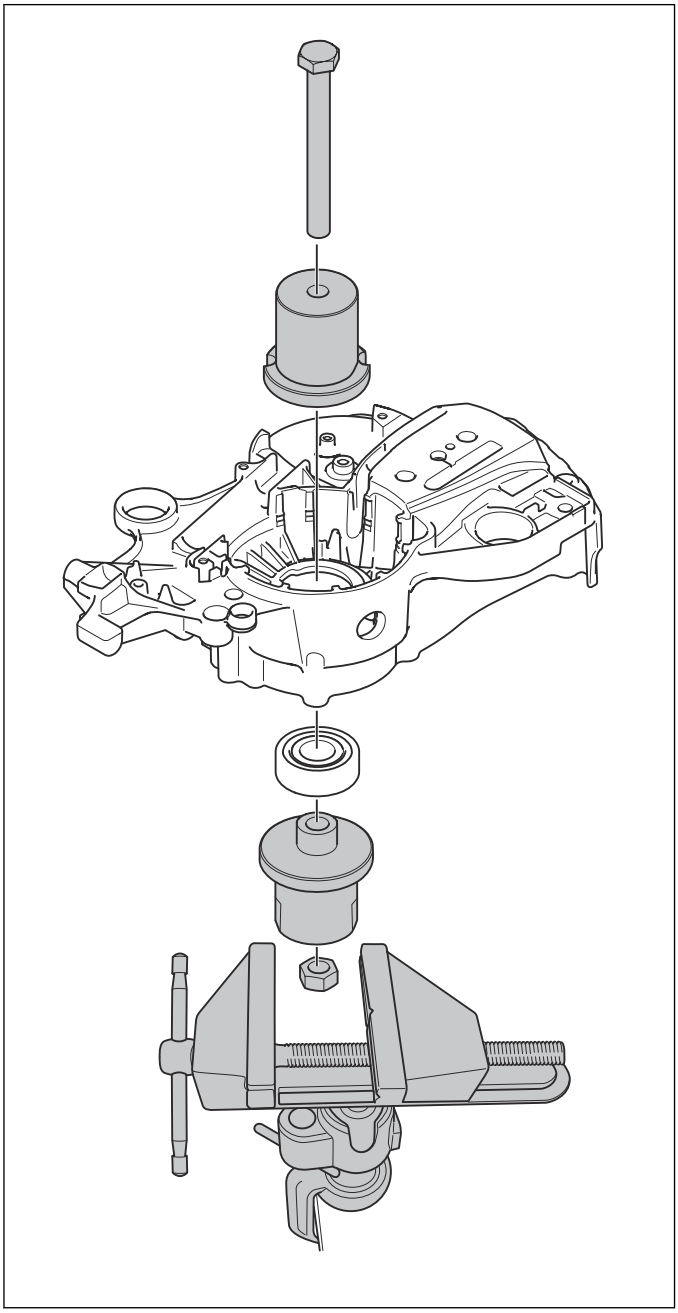


4. Make sure that the crankpin bearing is attached correctly and does not have radial play. Make sure the crankpin bearing is lubricated.
5. Make sure that the crankcase has no cracks.

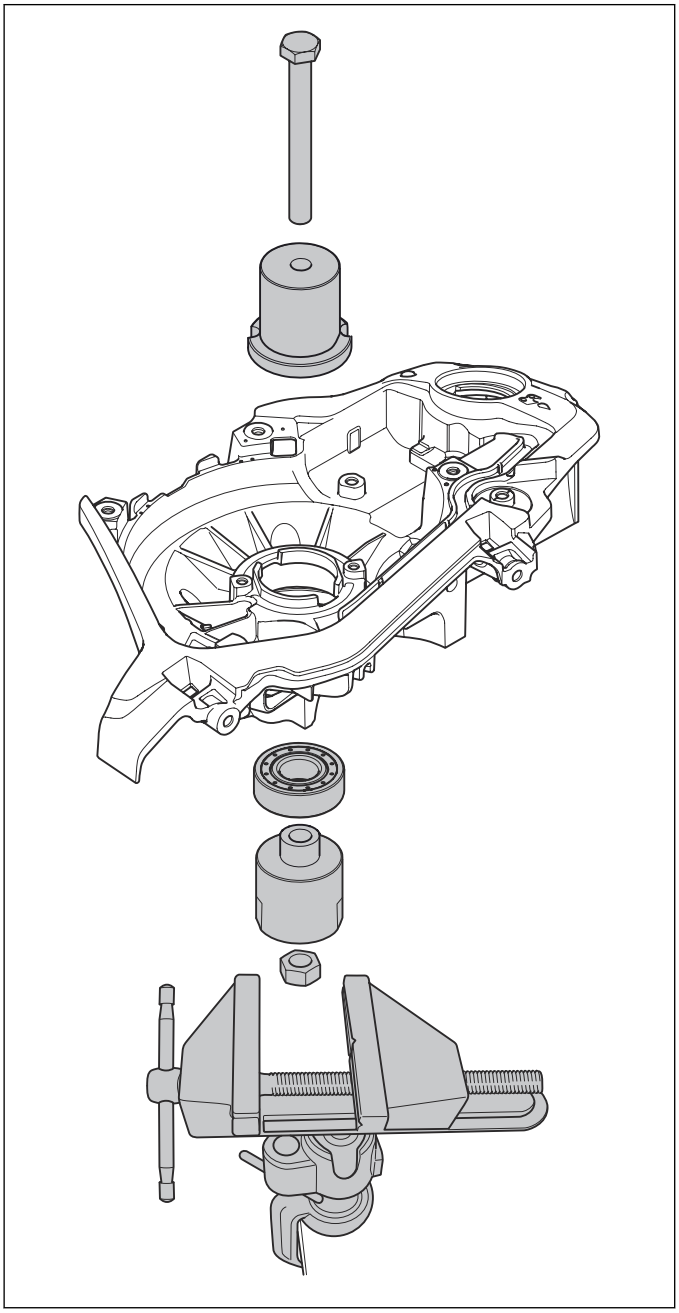
7.21.5 To assemble the crankcase

1. Put the guide shaft in a vise. Refer to *Servicing tools on page 9*.

a) On the clutch side.



b) On the flywheel side.



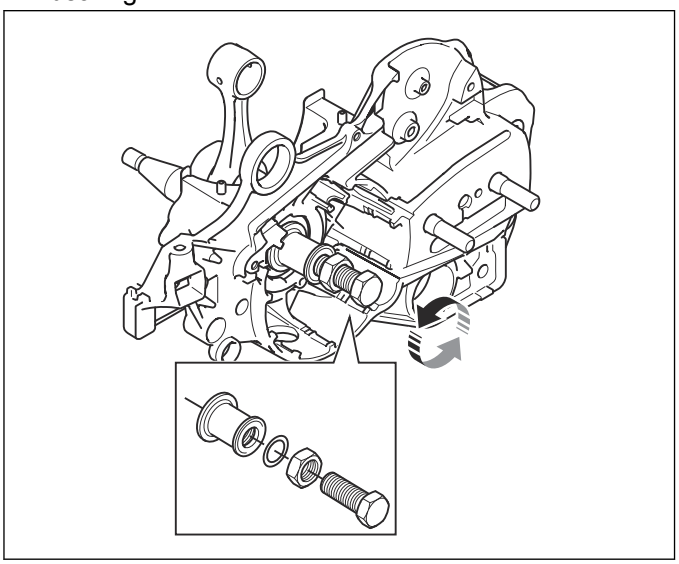
2. Put the bearing on top of the guide shaft with the sealing up.
3. Attach the bearing with the sleeve, the screw and the nut.

Note: The vise, the screw and the nut are not necessary when you use a press.

CAUTION: Make sure that dirt and unwanted particles do not go into the bearing.

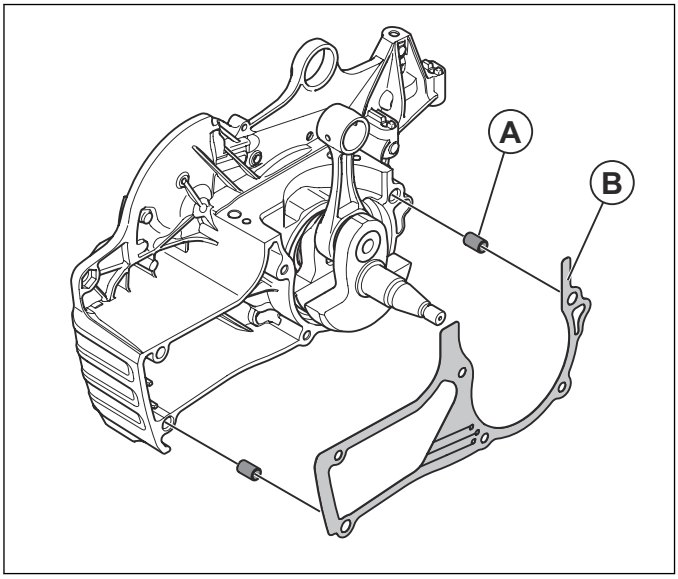
CAUTION: Make sure that you do not put the force only on the inner ring when you use the press.

4. Use the rear side of the sleeve and pull the crankshaft into the crankcase half on the clutch side. Pull until the crankshaft shoulder touches the main bearing.

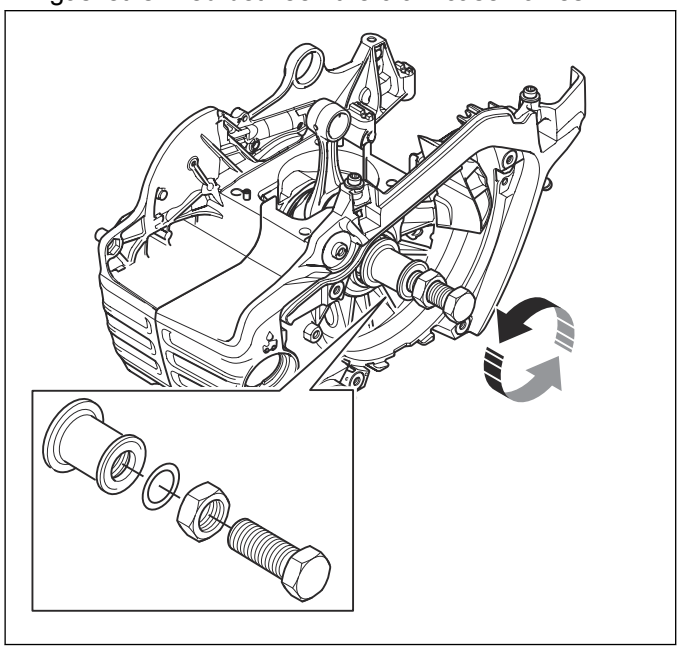


Note: Make sure that you keep the crankshaft in the correct position.

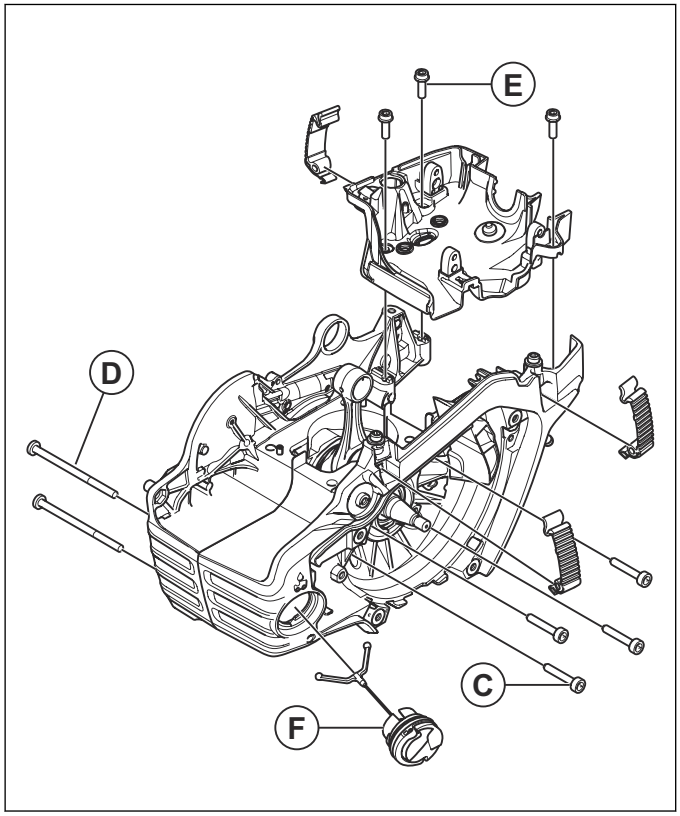
5. Put the 2 guide bushings (A) in the crankcase half on the clutch side. Attach the gasket (B) between the crankcase halves.



6. Use the crankshaft assembly tool, refer to *Servicing tools on page 9*. Turn the sleeve and push the crankcase half of the flywheel side. Push until the gasket is fixed between the crankcase halves.



7. Install the 4 new aluminum screws (C) and t + 90°. Refer to *Servicing data on page 7*. Make sure that the crankshaft rotate freely.



CAUTION: Do not reuse the aluminum screws.

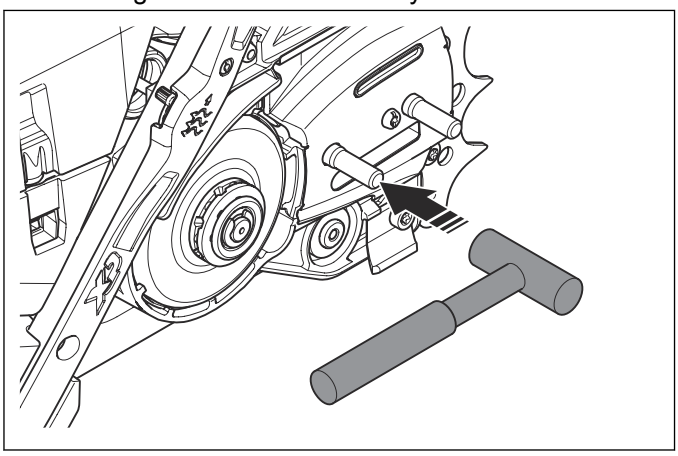
a) Torque the screws to 3 Nm in a crosswise sequence.
b) Torque the screws 90° more.

8. Install the 2 screws (D). Tighten them in turn to the correct torque. Refer to *Servicing data on page 7*.
9. Carefully cut off the gasket along the cylinder interface. Make sure that you do not cause damage to the crankcase surface.
10. Assemble the carburetor bottom plate to the crankcase and tighten the four screws (E) to the correct torque. Refer to *Servicing data on page 7*. Make sure that the crankshaft rotates freely.
11. Install the oil tank cap (F).
12. Assemble the remaining parts as given in *To get access to the crankshaft and crankcase on page 47*.

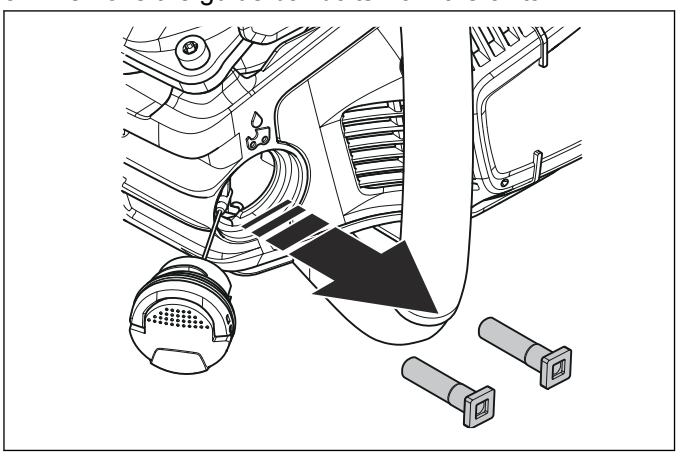
7.22 Guide bar bolts

7.22.1 To remove the guide bar bolts

1. Drain the oil tank.
2. Remove the clutch cover.
3. Remove the guide bar and saw chain.
4. Hit the guide bar bolts until they fall into the oil tank.

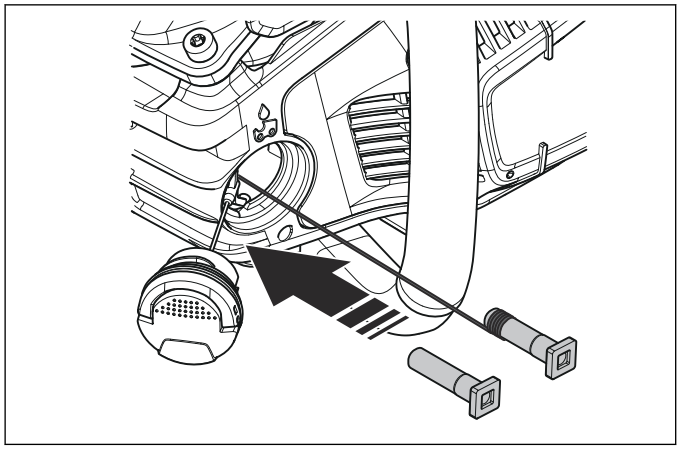


5. Remove the guide bar bolts from the oil tank.

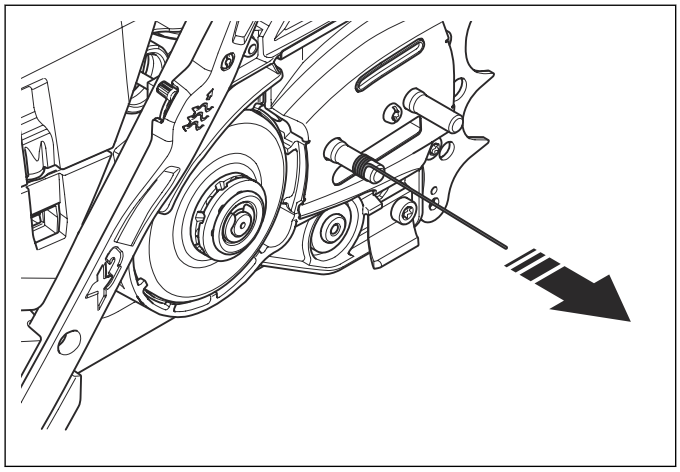


7.22.2 To install the guide bar bolts

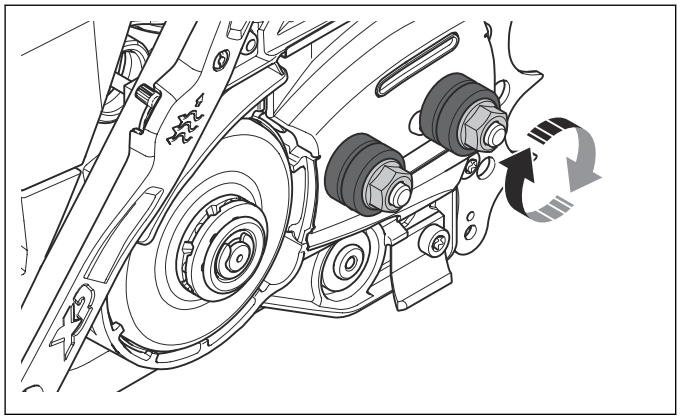
1. Attach a steel wire to the thread of a guide bar bolt.



2. Put the steel wire through the oil tank and through the hole for the guide bar bolt.
3. Pull the steel wire to pull out the guide bar bolt.



4. Make sure that the square head of the guide bar bolt is correctly attached in the oil tank.
5. Put 2 spacers on each guide bar bolt.



6. Attach a nut to each guide bar bolt and tighten the nuts until the guide bar bolts are tightly attached to the crankcase.

Note: Fill the tank with chain oil before you operate the product.

7.23 To repair a damaged thread

A damaged thread can be repaired with a thread insert.

Note: For aluminum threads, use helicoil and metric screws. Refer to the manufacturer's manual for more information.

1. Use the applicable drill bit to make a new hole that removes the damaged threads.

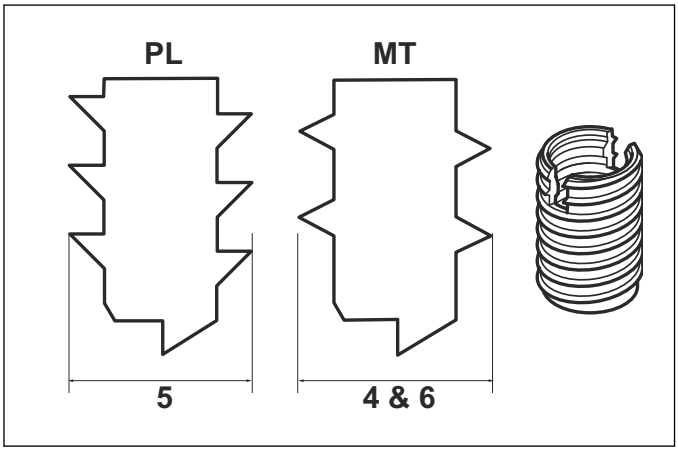
   Note:

   If you have a MT6 screw, use a 7.1 mm diameter drill bit.

   If you have a MT4 screw, use a 5.1 mm diameter drill bit.

   If you have a PL5 screw, use a 6.1 mm diameter drill bit.

2. Attach the thread insert with the sharp part of the thread insert first.



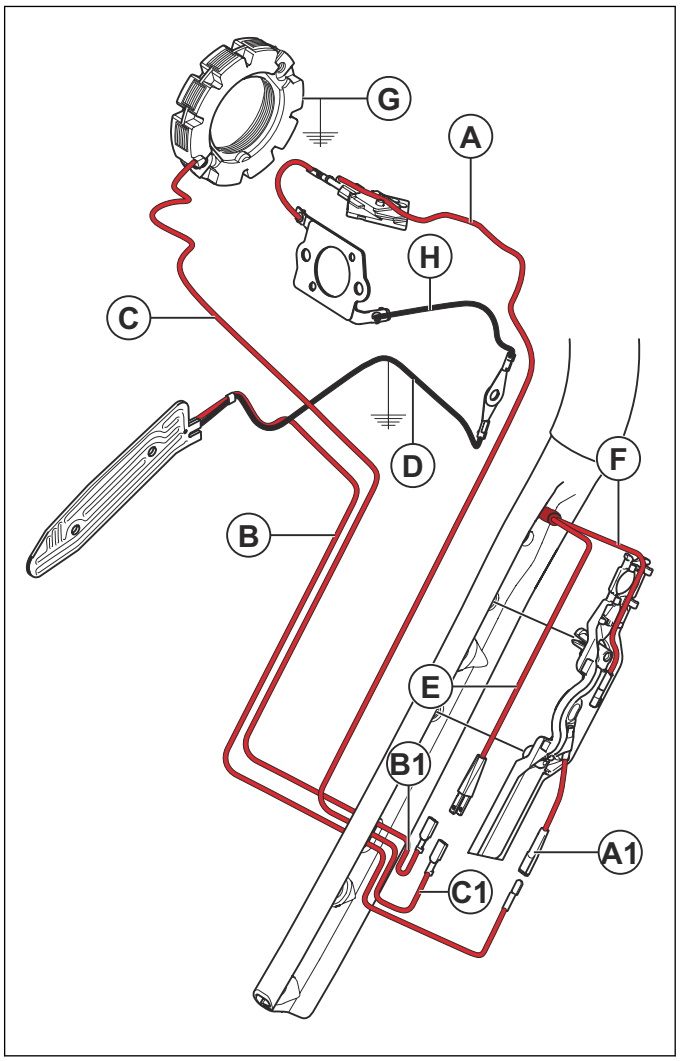
3. Attach the thread insert with an applicable screw and wrench.

8.1 Troubleshooting

You can do the troubleshooting procedure with most components attached to the product. Tools necessary for the troubleshooting procedure is:

- Ammeter
- Ohmmeter
- Cooling spray

The most common fault is oxidisation of the heating element contacts in the rear handle and the switch contact.



8.2 To troubleshoot the heating element in the front handle

1. Measure the resistance between point (E) and (F). The resistance for heating element must be 3.0-4.0 Ω.
2. Replace the front handle if the resistance is less than 3.0 Ω or more than 4,0 Ω.

8.3 To troubleshoot the heating element in the rear handle

1. Disconnect the cable connection at (B1) and (D1).
2. Clean the contacts (B1) and (D1).
3. Measure the resistance between point (B1) and (D1). The resistance for heating element must be 0,8-1,0 Ω.
4. Replace the heating element if the resistance is less than 0.8 Ω or more than 1,0 Ω.

8.4 To troubleshoot the generator

1. Measure the resistance in the generator between point (A1) and (G). The resistance for generator must be 0.5 Ω.
2. Replace the generator if the resistance is more than 0.5 Ω.

8.5 To troubleshoot the heating element and thermostat

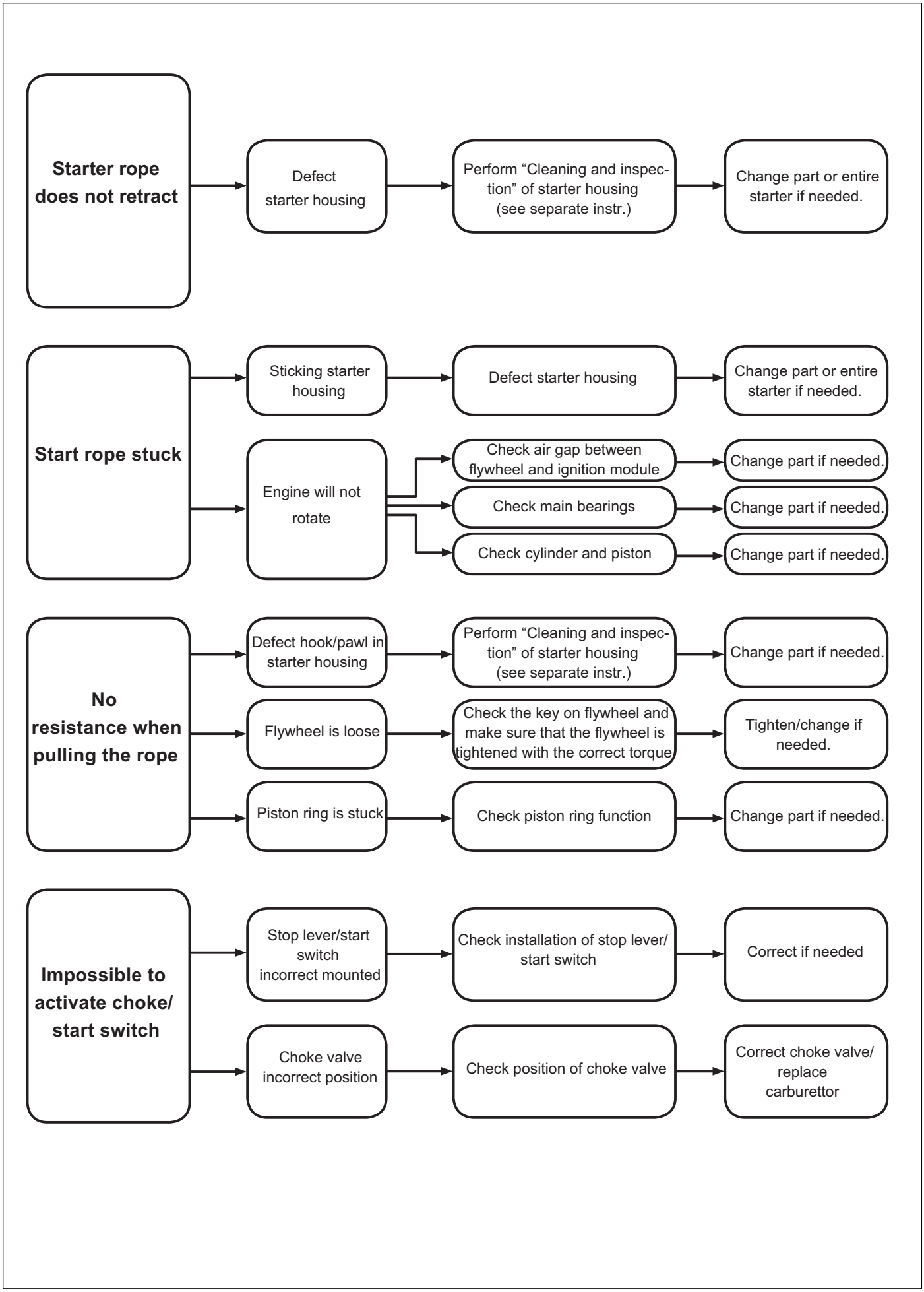
1. Disconnect the earth cable (H).
2. Measure with the ohmmeter between (H) and (C1).
3. The ohmmeter must show 0.0 Ω at an air temperature of 15 C° or more. Replace the heating element and thermostat if the resistance is less or more than 0.0 Ω.

   Note: You must replace the heating element and thermostat at the same time.

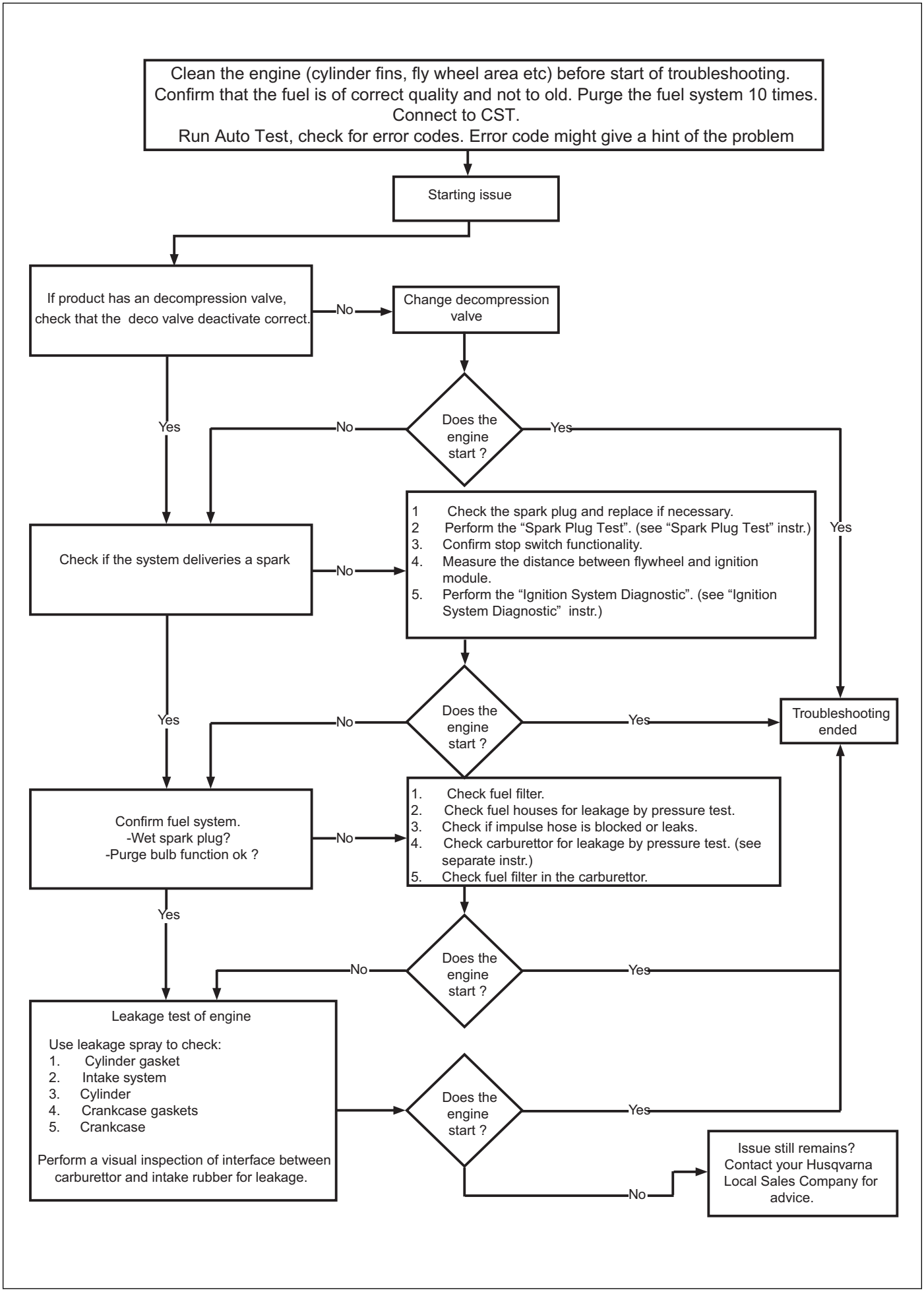
4. Cool the thermostat with a cooling spray. The ohmmeter must show 8.0 Ω. Replace the heating element and thermostat if the resistance is less or more than 8.0 Ω.

   Note: You must replace the heating element and thermostat at the same time.

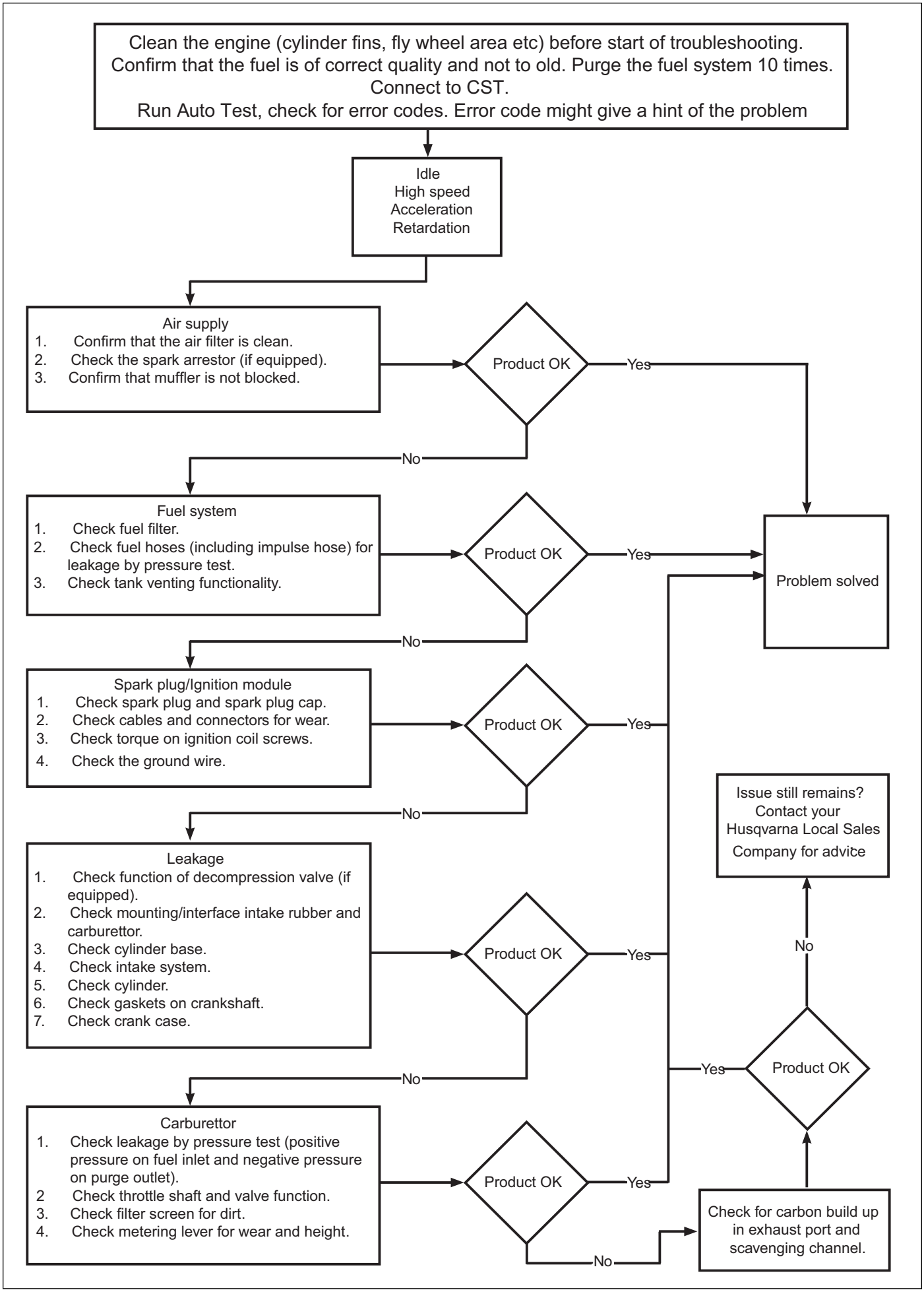
8.6 Troubleshooting diagram



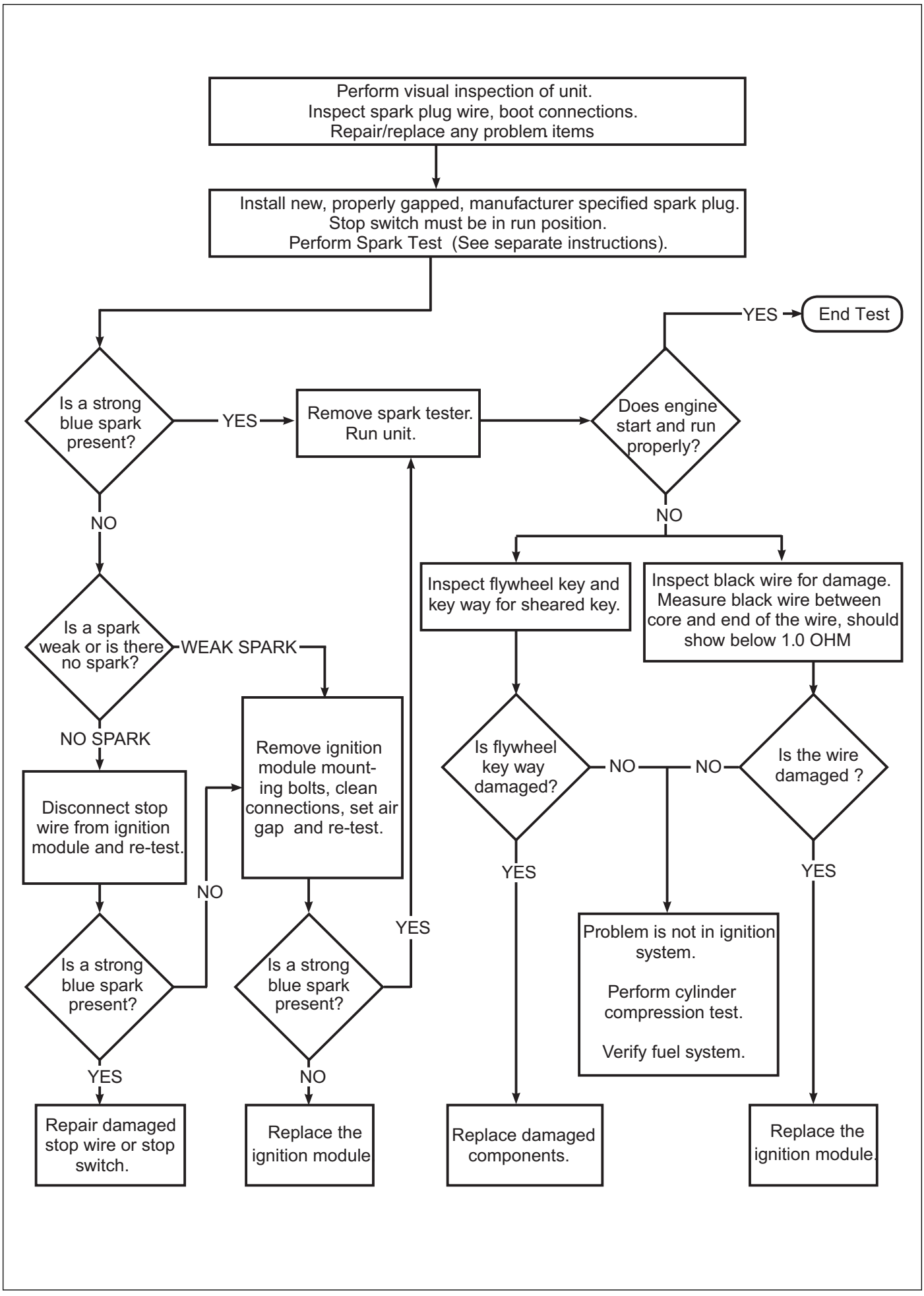
8.7 Engine running issue



8.8 Engine running issue



8.9 Ignition System Diagnostic Flow Chart



9.1 Technical data

	Husqvarna 592 XP	Husqvarna 592 XPG
Engine		
Cylinder displacement, cm^3	92.7	92.7
Idle speed, rpm	2800	2800
Maximum engine power acc. to ISO 8893, kW/hp @ rpm	5.6/7.6 @ 9600	5.6/7.6 @ 9600
Ignition system[1]		
Spark plug	NGK CMR6H	NGK CMR6H
Electrode gap, mm	0.5	0.5
Fuel and lubrication system		
Fuel tank capacity, liter/cm^3	0.86/860	0.86/860
Oil tank capacity, liter/cm^3	0.42/420	0.42/420
Type of oil pump	Adjustable	Adjustable
Weight		
Weight, kg	7.4	7.6
Noise emissions[2]		
Sound power level, measured dB(A)	118	118
Sound power level, guaranteed L_{WA} dB(A)	119	119
Sound levels[3]		
Equivalent sound pressure level at the operator's ear, dB(A)	112	112
Equivalent vibration levels, a $_{hveq}$[4]		
Front handle, m/s^2		
Rear handle, m/s^2		
Saw chain/guide bar		
Type of drive sprocket/number of teeth	Rim/7	Rim/7
Saw chain speed at 133% of maximum engine power speed, m/s.	30.6	30.6

[1] Always use the recommended spark plug type! Use of the wrong spark plug can damage the piston/cylinder.
[2] Noise emissions in the environment measured as sound power (LWA) in conformity with EC directive 2000/14/EC.
[3] Equivalent sound pressure level, according to ISO 22868, is calculated as the time-weighted energy total for different sound pressure levels under various working conditions. Typical statistical dispersion for equivalent sound pressure level is a standard deviation of 1 dB (A).
[4] Equivalent vibration level, according to ISO 22867, is calculated as the time-weighted energy total for vibration levels under various working conditions. Reported data for equivalent vibration level has a typical statistical dispersion (standard deviation) of 1 m/s^2.

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