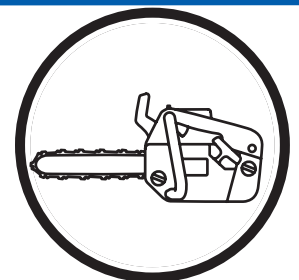


Workshop Manual
T525



English

Workshop Manual

Husqvarna T525

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Husqvarna AB has a policy of continuous product development and therefore reserves the right to modify the design and appearance of products without prior notice.

2 Introduction and safety regulations

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2 Introduction and safety regulations

2.1 General information

This Workshop Manual provides a comprehensive description of how to trouble shoot, repair and test the chain saw. A description of different safety measures that should be taken during repair work is also given.

2.2 Safety

Note! The section dealing with safety must be read and understood by all those carrying out repair work or service on the chain saw.

Warning symbols can be found in this Workshop Manual and on the chain saw. See "Symbols on the saw" and "Symbols in the Workshop Manual". If any warning symbol on the chain saw has been damaged or is missing, a new one must be fitted as soon as possible in order to achieve the highest degree of safety when using the chain saw.

2.3 Target group

This Workshop Manual is written for personnel who are assumed to have general knowledge of repairing and servicing chain saws.

The Workshop Manual must be read and understood by personnel who will carry out repair work and service on the chain saw. The manual is also suitable to use when training new employees.

2.4 Modifications

Modifications will be successively introduced on the chain saw during production. When these modifications affect service and/or spare parts, a separate service message will be sent out on each occasion. This means that in time this Workshop Manual will become out of date. In order to prevent this, the Manual should be read together with all service messages concerning the chain saw in question.

2.5 Tools

Special tools are required for some stages. All service tools are listed in the Workshop Manual. Usage is evident from the respective section.

Always use Husqvarna's original:

- Spare parts
- Service tools
- Accessories

2.6 Structure

This Workshop Manual can be used in two different ways:

- Repair of a specific system on the chain saw.
- Dismantling and assembling the entire chain saw.

Repair of a specific system

When a specific system on the chain saw must be repaired, do as follows:

1. Look up the page for the system in question.
2. Carry out the steps:
 - Dismantling
 - Cleaning and checking
 - Assembling

Dismantling and assembly of the entire chain saw

When taking apart and putting back together the whole chain saw, do as follows:

1. Look up the "Repair instructions" chapter, which deals with the Starter and carry out the instructions listed under the Dismantling heading.
2. Scroll forward in the manual and carry out the Dismantling in the order set out in the sections.
3. Go back to Starter and carry out the instructions under Cleaning and checking.
4. Scroll forward in the manual and carry out Cleaning and checking in the order set out in the sections.
5. Order or take out all requisite spare parts from the stores.
6. Look up the "Repair instructions" chapter, which deals with the Crankcase and carry out the instructions under Assembly.
7. Scroll backwards in the manual and carry out the Assembly in the order set out in the sections.

In order to increase the basic understanding, some sections include a Description of the unit in question.

2.7 Numbering

Position references to components inside the figures are designated A, B, etc.

The figures are numbered 1, 2 etc.

The position references and figure numbers restart in each new section.

2.8 General instructions

The workshop where the chain saw is to be repaired must be equipped with safety devices in accordance with local regulations.

No one may repair the chain saw without having read and understood the contents of this workshop manual.

This workshop manual contains the following boxes in relevant places.



WARNING!
The warning box warns of the risk of personal injury if the instructions are not followed.

NOTE!

This box warns of material damage if the instructions are not followed.

2.9 Special instructions

The fuel used for the chain saw has the following hazardous properties:

- The liquid and its fumes are poisonous.
- Can cause eye and skin irritation.
- Can cause breathing difficulties.
- Is very flammable.

When using compressed air, do not direct the jet towards the body. Air can penetrate into the blood circulation system, which entails mortal danger.

Use hearing protection when test running.

After test running, do not touch the muffler before it has cooled down. Risk of burns. Use protective gloves when working with mufflers.

Do not start the chain saw unless the bar, chain and clutch cover (chain brake) are fitted, otherwise the clutch may come loose and cause personal injury.

Insufficient chain lubrication can result in chain breakage, which can cause serious or even fatal injury.

Exercise care to ensure the spring does not fly out and cause personal injury. Use protective goggles. If the spring tension is activated on the starter pulley when it is to be taken up, the spring can fly out and cause personal injury.

Check that the brake is applied when removing the compression spring on the chain brake. Otherwise the compression spring can fly out and cause personal injury.

After repairing, check the chain brake. See "Assembling chain brake\Function check".

Keep in mind the fire risk. The chain saw may emit sparks, which cause ignition.

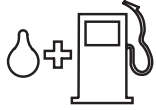
Check the chain catcher and replace it if it is damaged.

2.10 Symbols on the saw

The symbols below are embedded in the chain saw.



Choke control



Refuelling



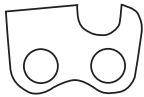
Stop button



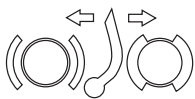
Filling up saw chain oil



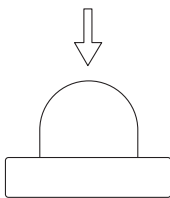
Handle insert size



Chain link



Chain brake



Air purge

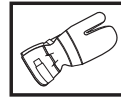


Adjustment of the oil pump

2.11 Symbols in the Workshop Manual



This symbol warns of personal injury when the instructions are not followed.


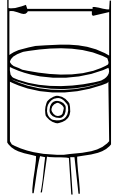
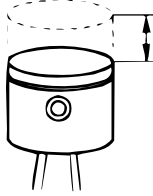
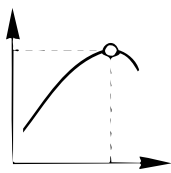


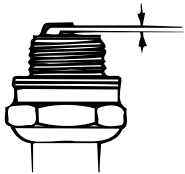
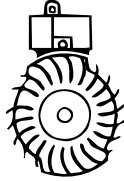

Use protective gloves.

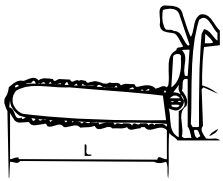

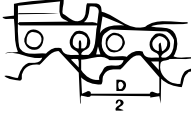
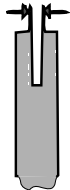


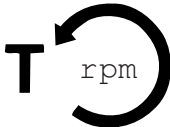
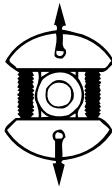

Use protective goggles.

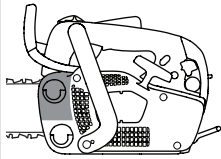
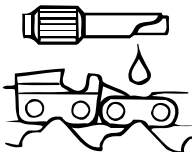
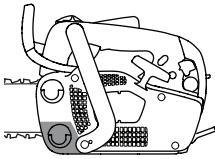
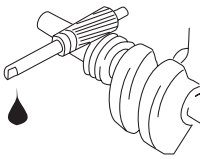
3 Technical data


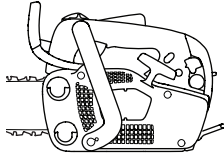
				
	Displacement cm ³ / cubic inch	Cylinder bore Ømm/Øinch	Length of stroke mm/inches	Max. output/speed kW/hp/rpm
T525	27.0/1.65	35/1.38	28/1.1	1.1/9500

				
	Electrode gap mm/inch	Air gap mm/inch	Carburettor type	
T525	0.65/0.026	0.4/0.016	Walbro WTA -37	

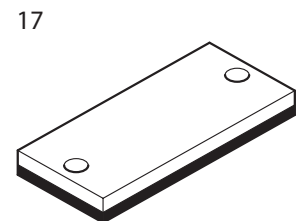
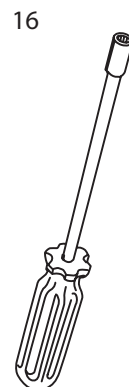
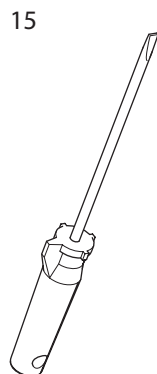
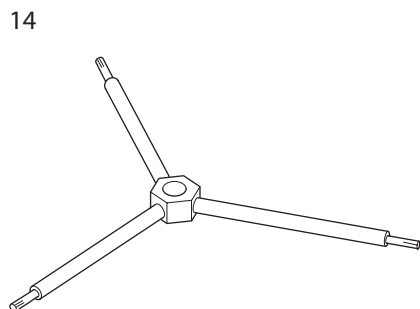
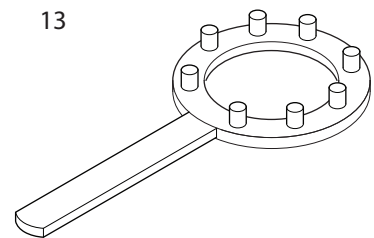
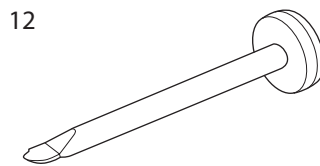
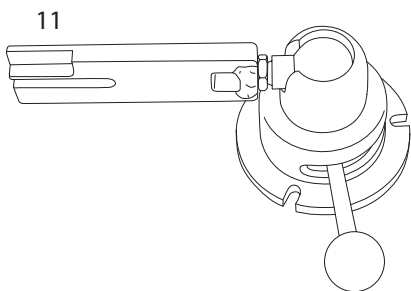
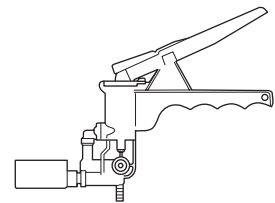
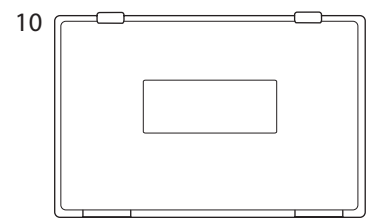
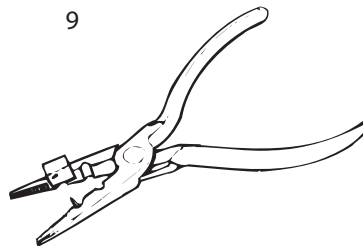
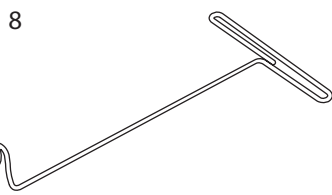
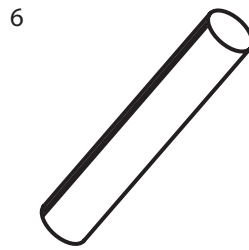
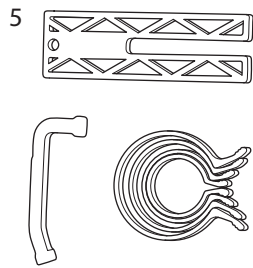
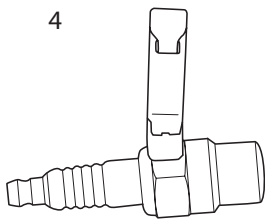
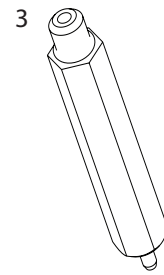
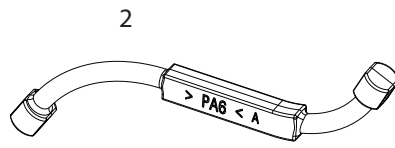
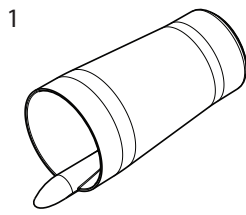
				
	Usable cutting length cm/inch	Chain speed at 133% of max. engine power speed m/s - rpm	Chain pitch mm/inches	Drive links mm/inches
T525	20-30/8-12	24.1m/s(0.375inch) 21.4m/s(0.25inch)	9.5/0.375 6.35/0.25	1.30/0.050

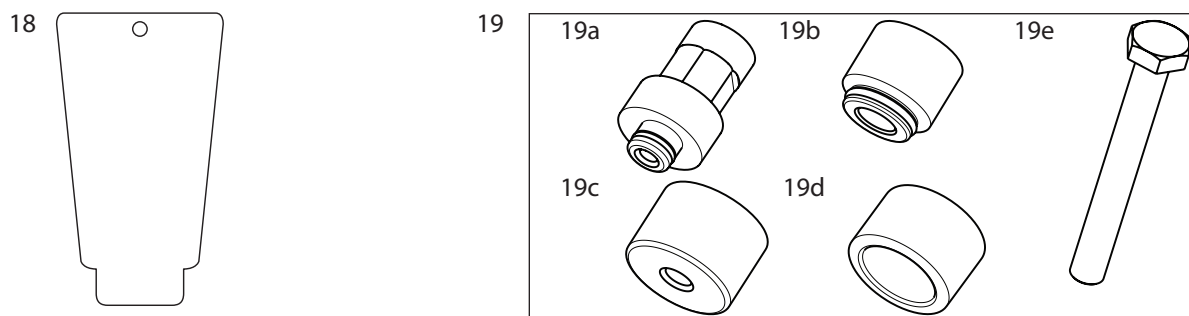
				
	Idle speed rpm	Engage speed rpm	Spark plug	
T525	2900	4150	NGK CMR6A	

				
	Volume fuel tank Litres/US pint	Capacity oil pump at 8000 rpm, ml/min	Volume oil tank Litres/US pint	Automatic oil pump
T525	0.19/0.4	3-9	0.17/0.36	YES

	 			
	Weight without bar and chain kg/lbs			
T525	2.7/5.96			

4 Service tools



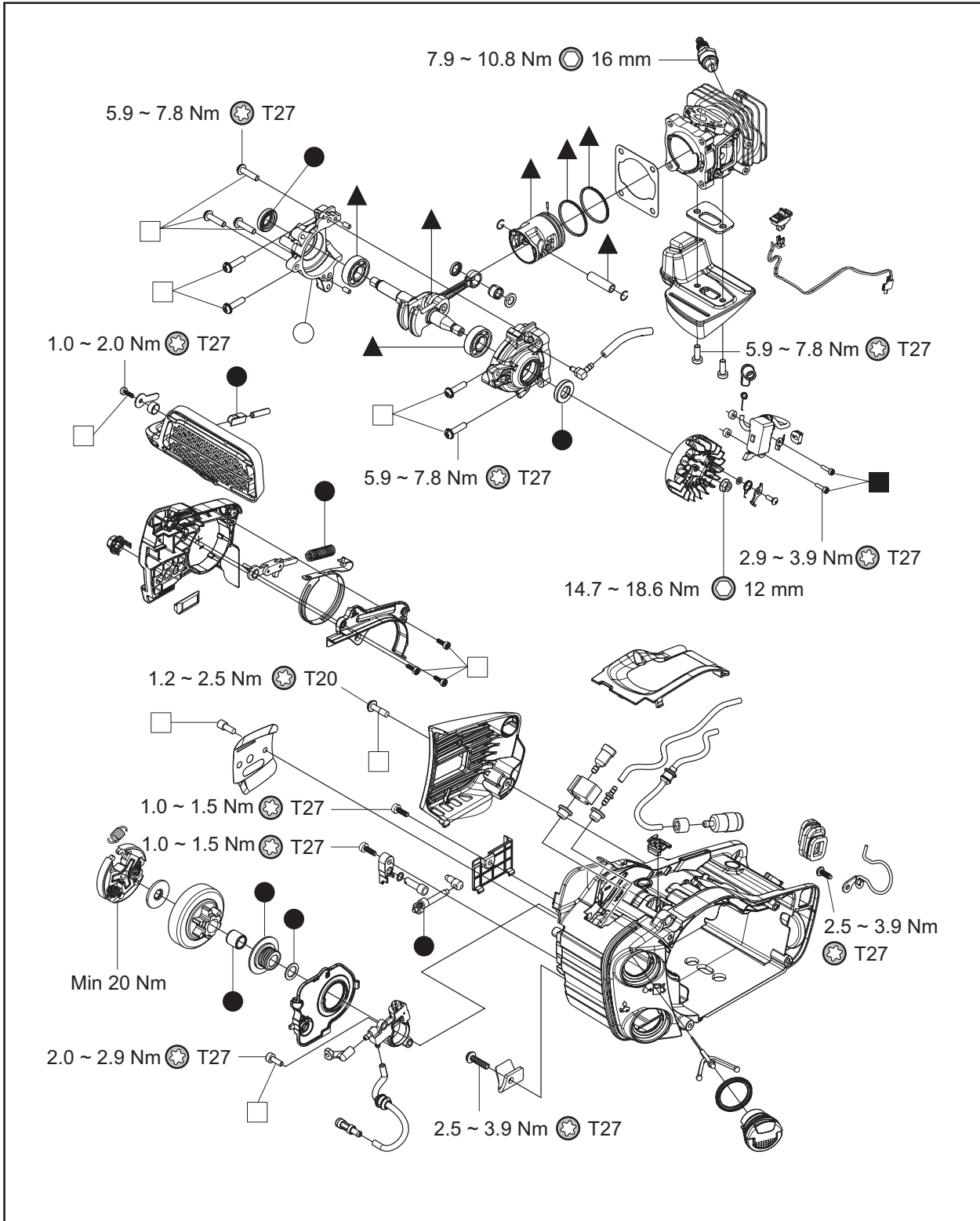


The tools listed here are the service tools required for this model of chain saw. In addition to these tools, a normal kit of hand tools is required.

Pos.	Description	Used for	Order No.
1	Assembling tool	Assembling the sealing ring	577 70 16-01
2	Piston stop	Lock crankshaft	575 29 36-01
3	Pressure tester	Pressure testing cylinder	576 38 48-01
4	Test spark plug	Checking the ignition module	502 71 13-01
5	Assembly kit, piston	Assembling the piston	502 50 70-01
6	Mandrel	Dismantling the flywheel	502 51 94-01
7	Feeler gauge	Setting, ignition module	514 24 41-01
8	Hook for fuel filter	Lifting out the fuel filter	502 50 83-01
9	Assembly pliers	Assembling the spark plug protector	502 50 06-01
10	Pressure gauge	Pressure testing	531 03 06-23
11	Assembly fixture	Securing the chain saw	502 51 02-01
12	Guide	Brake spring out or in	513 63 70-01
13	Flywheel tool	Remove the flywheel	504 91 08-03
14	Torx wrench	T20/T25/T27	578 28 90-01
15	Adjustment screwdriver	Adjustment of the carburettor	513 63 56-01
16	Adjustment screwdriver	Adjustment of the carburettor	530 03 55-60
17	Cover, exhaust	Cover plate sealing exhaust port	502 50 71-01
18	Rubber wedge	Cover plate sealing intake port	502 54 11-01
19	Mounting kit for bearings and sealing ring	Dismantling and assembling bearings and sealing ring	577 71 44-02
19a	Dismantling tool	Dismantling bearings and sealing ring	576 66 64-01*
19b	Assembling tool	Assembling the sealing ring	576 95 56-01*
19c	Dismantling tool	Dismantling bearings and sealing ring	576 95 46-01*
19d	Assembling tool	Assembling bearings	576 95 45-01*
19e	Dismantling tool	Dismantling bearings and sealing ring	725 23 80-51*

* Included in mounting kit 577 71 44-02 and can not be ordered separately.

5 Service data



Key

The numbers by the components to be assembled with screws state the tightening torque in Nm.

- ▲ = Lubricate with two-stroke oil.
- = Lubricate with grease.
- = Apply thread lock: Three bond #1322 or Loctite #262.
- = Apply thread lock: Three bond #1342 or Loctite #242.
- = Apply liquid gasket #1217F.

6 Safety equipment

List of contents

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6.10	Assembling the throttle lockout, throttle and spring	21
6.11	Assembling the belt eyelet	21

6 Safety equipment

6.1 Dismantling the chain brake



1

Release the brake by moving the kickback guard backwards.

Loosen the bar nut and remove the clutch cover, saw chain and bar. See Figure 1

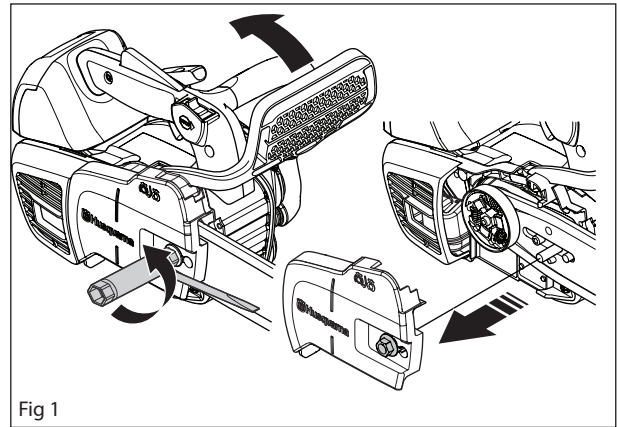


Fig 1

2

Activate brake tension by pulling back the knee joint as shown in Figure 2.

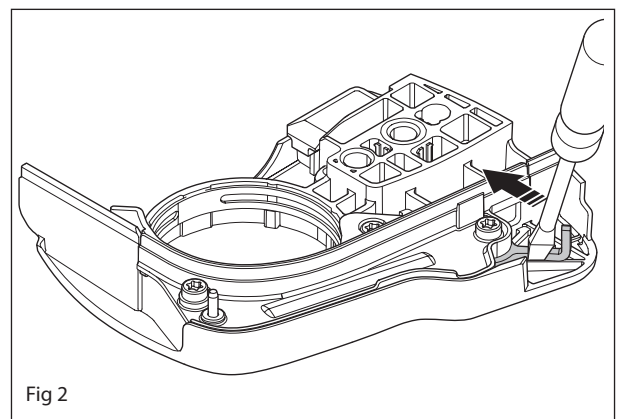


Fig 2



WARNING!

Exercise care to ensure the spring does not fly out and cause personal injury. Wear protective goggles.

3

Remove the cover by loosening the three screws as outlined in Figure 3.

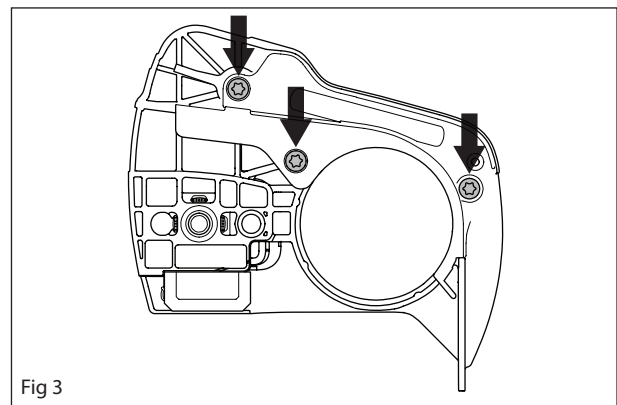


Fig 3

4

Insert a screwdriver in the spring and carefully prise upwards until the spring is released and slides onto the screwdriver. See Figure 4.

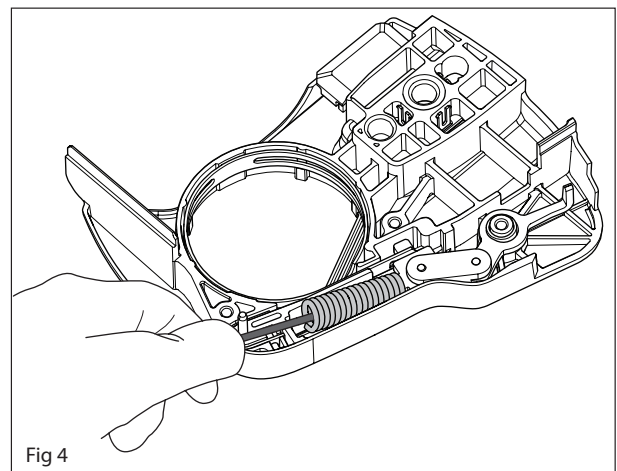


Fig 4

5

Remove the knee joint with the attached brake band from its attachment in the clutch cover.

Cleaning and checking

- Clean and check carefully all components. Parts must be replaced if cracked or show signs of other defects. Always use original spare parts.
- Measure the thickness of the chain brake band. It must not be less than 0.6 mm at any point. See figure 5.
- Lubricate the knee joint with grease.

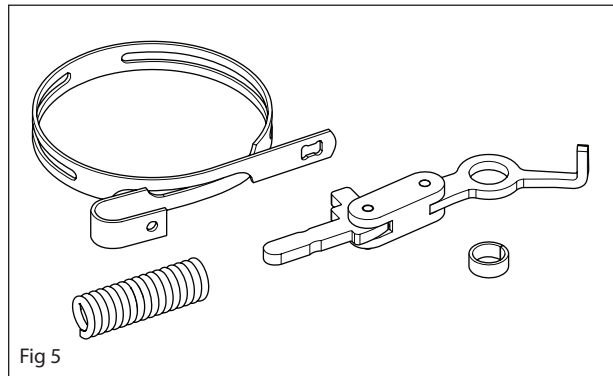


Fig 5

6.2 Assembling the chain brake

1

Place the knee joint with the fitted brake band in its groove in the clutch cover as outlined in Figure 6. The space for the spring in the cover must be lubricated with grease.

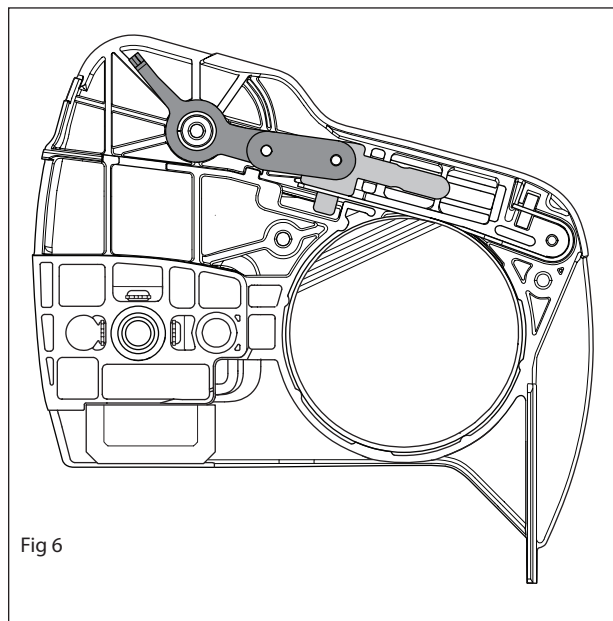


Fig 6

2

Make sure the brake band is fitted to the hooks in the clutch cover. See Figure 7.

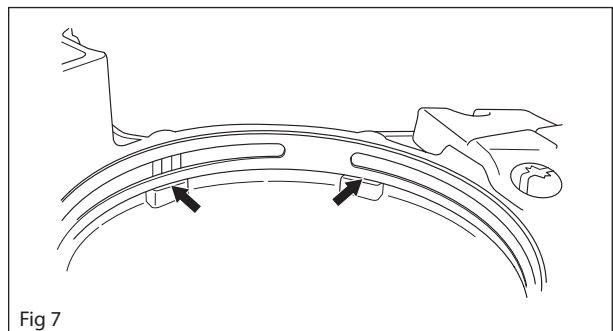


Fig 7

3

Compress the spring with a wide screwdriver and press it down with your thumb. See Figure 8.

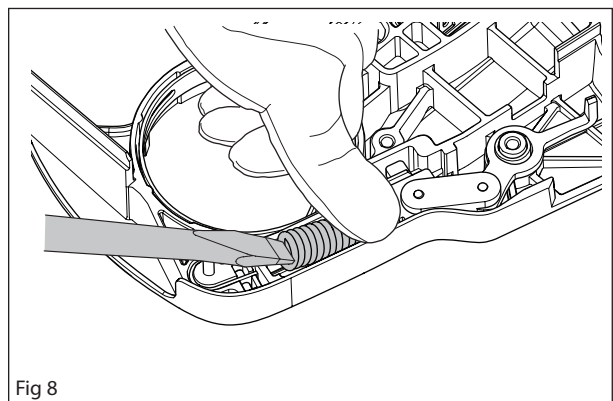


Fig 8

4

Fit the cover over the brake spring and screw the screws back in place. See Figure 3 "Dismantling the chain brake".

5

Tighten the chain brake by using the saw's front hand guard as a tool. Align the front section of the clutch cover with the front hand guard. Then pull the front hand guard back to disengage the brake. See Figure 9

Assemble the following parts:

- Guide bar.
- Saw chain.
- Clutch cover.

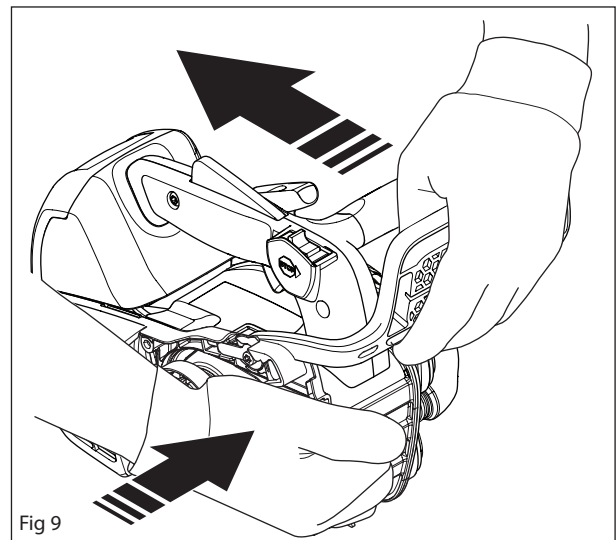


Fig 9

6.3. Dismantling the muffler



WARNING!
Do not touch the muffler before it has cooled down. Risk of burns.

1

Release the brake by moving the front hand guard backwards. Loosen the bar nut and remove the clutch cover, saw chain and bar. See Figure 10.

2

Remove the cylinder cover. See Figure 10.

3

Remove the pump cover. See Figure 10

4

Loosen the screws holding the muffler to the cylinder and remove the muffler. See figure 11.

Cleaning and checking

- Clean and check all components carefully. Parts must be replaced if cracked or show signs of other defects.
- Always use original spare parts. The spark arrestor mesh is best cleaned with a wire brush. The mesh must be replaced if it is damaged. The saw will overheat if the mesh is clogged resulting in damage to the cylinder.
- Never use a saw with a muffler in bad condition.

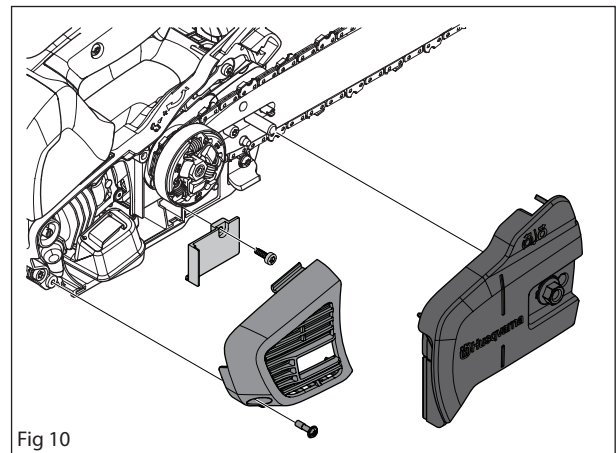


Fig 10

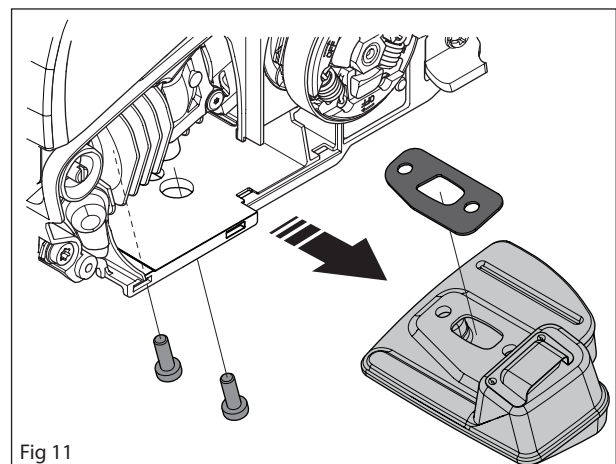


Fig 11

6.4 Assembling the muffler

1

Attach the muffler to the cylinder with the two screws as outlined in Figure 11.

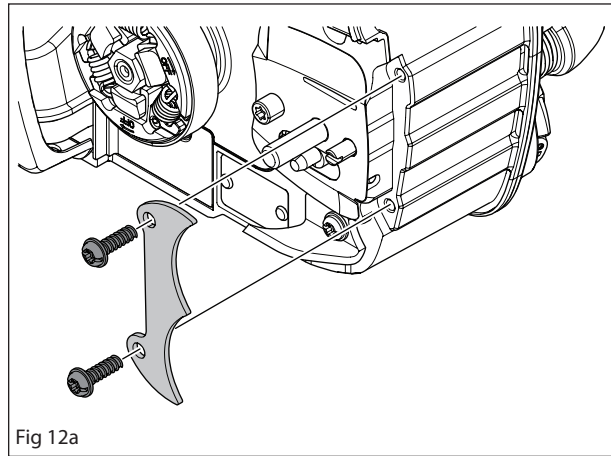
2

Attach the pump cover, cylinder cover and clutch cover. See Figure 10.

6.5A Assembling the spike bumper (accessories)

The spike bumper is not fitted at the time of delivery.

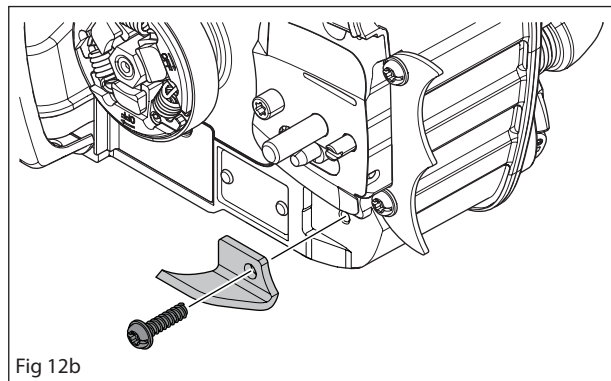
- 1
Release the brake by moving the kickback guard backwards. Loosen the bar nut and remove the clutch cover, saw chain and bar.
- 2
Fit the spike bumper as outlined in Figure 12a. Then fit the saw chain, the bar and the clutch cover.



6.5B Replacing the chain catcher

A worn chain catcher must always be replaced with a new one.

- 1
Release the brake by moving the kickback guard backwards. Loosen the bar nut and remove the clutch cover, saw chain and bar.
- 2
Loosen the screw and replace the chain catcher with a new one as shown in Figure 12b. Tightening torque 2.5 - 3.9 Nm.



6.6 Dismantling the stop switch

1

Dismantle the start/stop switch with a screwdriver. See Figure 13.

2

Check that the stop switch is intact.

Cleaning and checking

- Clean and check carefully all components. Parts must be replaced if cracked or show signs of other defects. Always use original spare parts.

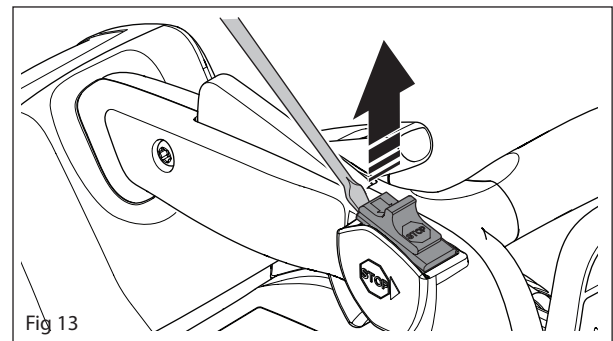


Fig 13

6.7 Assembling the stop switch

1

Fit the cables. See Figure 14

2

Press the stop switch into its holder as outlined in Figure 15.

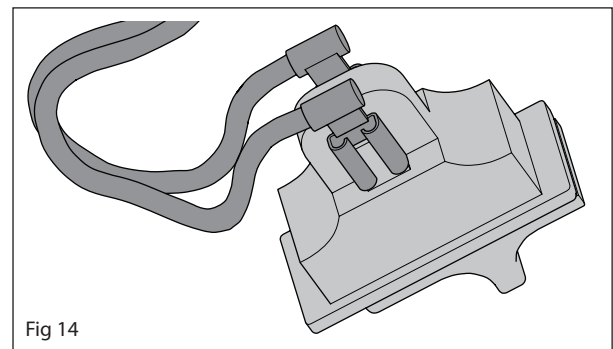


Fig 14

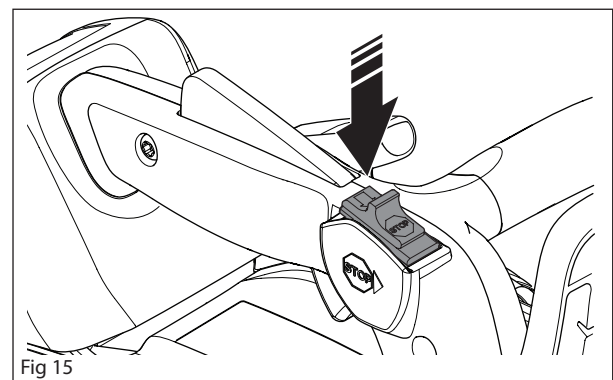


Fig 15

6.8 Resistance test - stop function

1

Dismantle the stop switch. See section 6.6 Dismantling the stop switch.

2

Clean the contact areas and test the resistance.

3

Connect a multimeter to the ignition switch's cable connectors. See Figure 16.

NOTE! The power switch must be held in the "Stop" position to get the correct reading.

The resistance must not exceed 0.2 Ohm with the stop switch is placed in the "Stop" position.

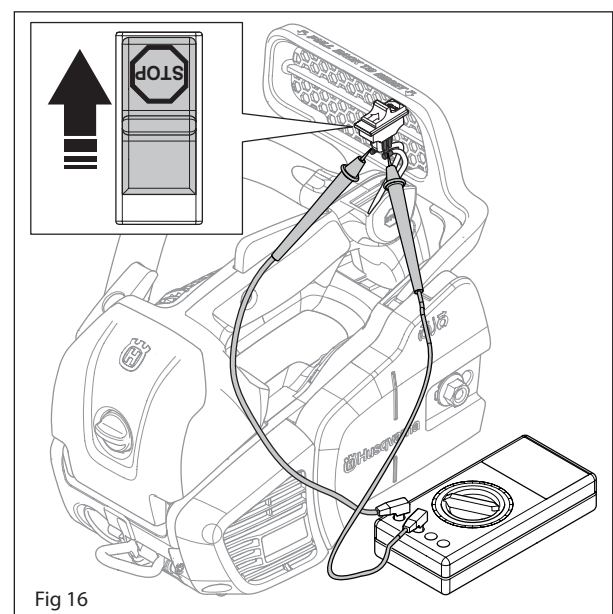


Fig 16

6.9 Dismantling the throttle lockout, throttle and spring

1

Release the chain brake by moving the kickback guard backwards.

2

Dismantle the handle half by loosening the screws as outlined in Figure 17.

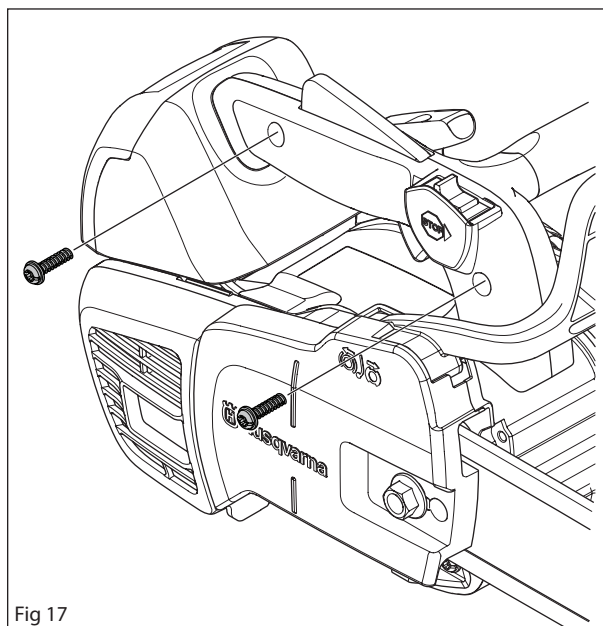


Fig 17

3

Pull the stop switch up as outlined in Figure 18.

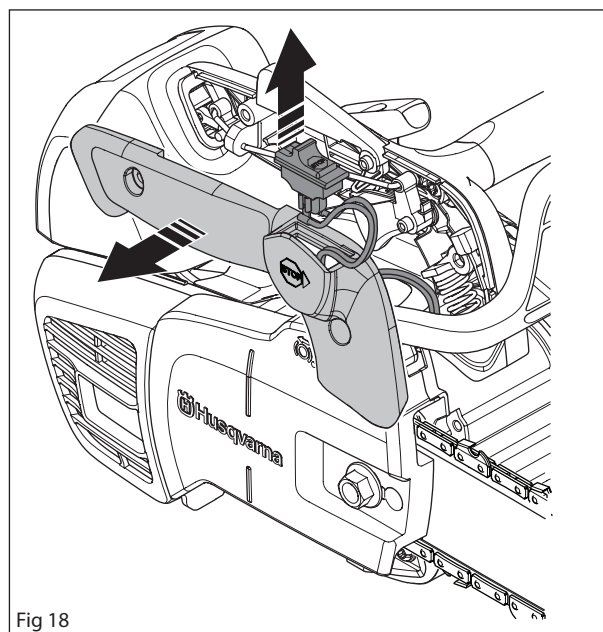


Fig 18

4

Lift off the throttle lockout, throttle rod, throttle control, spring and sealing and the throttle from their attachments in the handle. See figure 19.

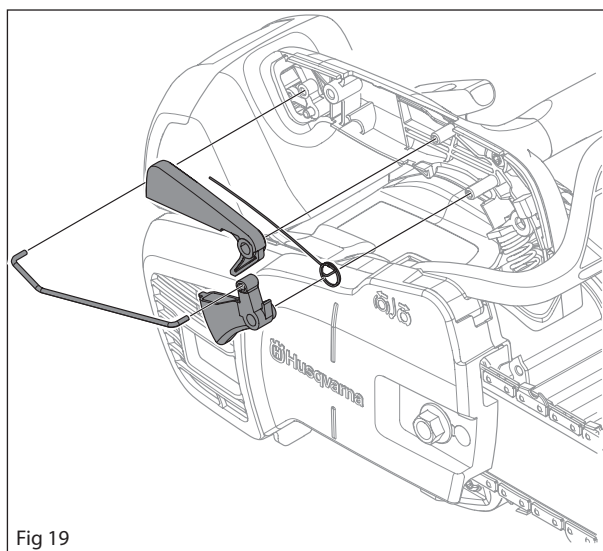


Fig 19

Cleaning and checking

1. Clean and check carefully all components. Parts must be replaced if cracked or show signs of other defects. Always use original spare parts.
2. Check that the recoil spring is intact and retains all its tension.

6.10 Assembling the throttle lockout, throttle and spring

1

Do the procedure in chapter 6.9 Dismantling the throttle lockout, throttle and spring in the reverse order.

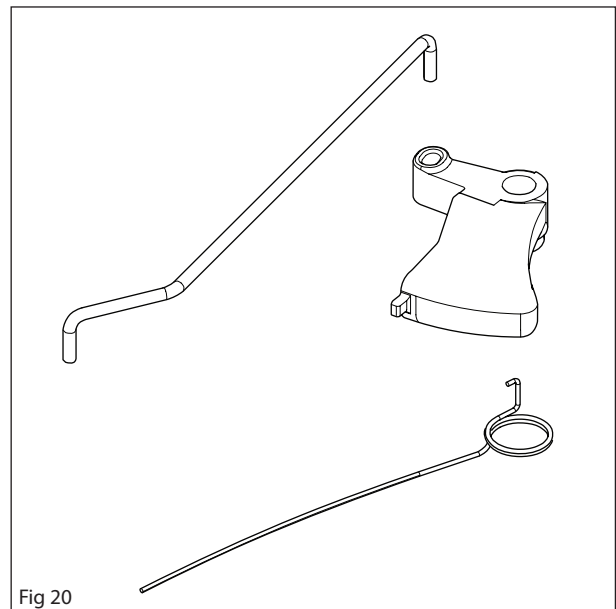


Fig 20

6.11 Assembling the belt eyelet

The chain saw is fitted with two eyes at the rear edge of the chain saw housing, a rope eye and a belt attachment eye. The belt attachment eye is not fitted on delivery.

1

Remove the cylinder cover. See Figure 21.

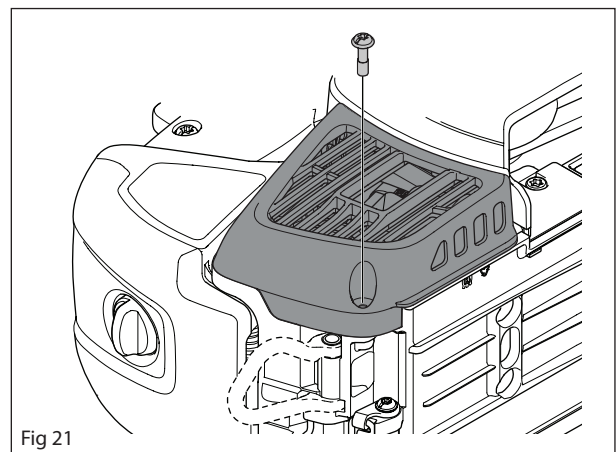


Fig 21

2

Fit the belt attachment eye in its mounting as outlined in Figure 22. Insert the screw through both eyes and tighten. Tightening torque of 1.5 - 2 Nm.

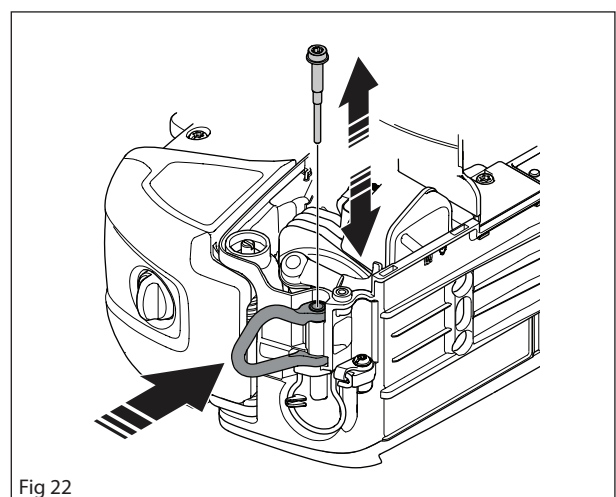


Fig 22

7 Repair instructions

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7 Repair instructions

7.1 Dismantling the starter



1
Loosen the screws that hold the starter against the crankcase and remove the starter. See Figure 1.

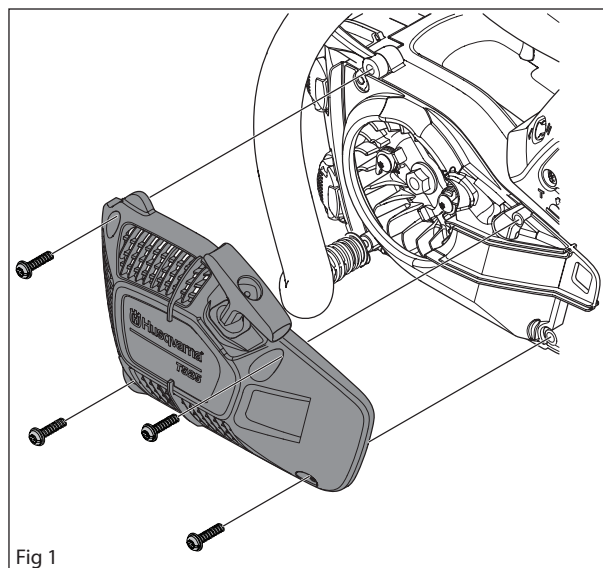


Fig 1

2
Pull out the cord about 30 cm and release the tension in the recoil spring by letting the starter pulley slowly rotate anti-clockwise. See Figure 2.



WARNING!
If the spring tension is activated on the starter pulley, the spring can fly out and cause personal injury. Use protective goggles.

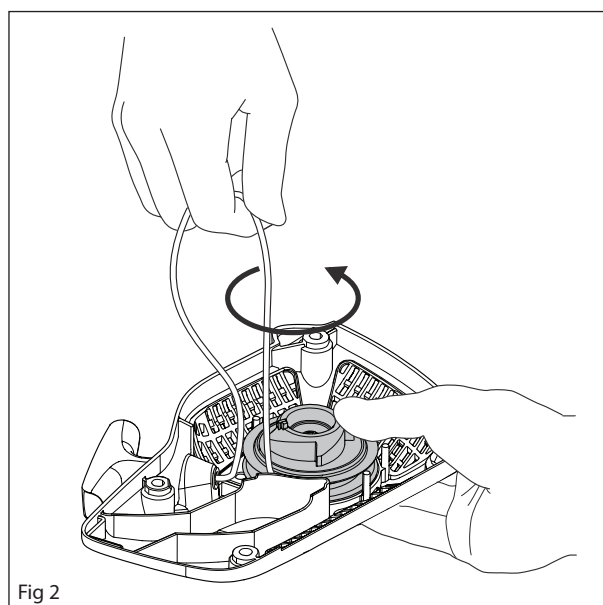


Fig 2

3
Make sure the starter pulley is not tensioned. Then loosen the screw in the centre of the starter pulley and remove the sprocket and the spring cassette. See Figure 3.

Cleaning and checking

Clean all components and check that

- The starter cord is not damaged.
- That the starter pawls on the flywheel are intact, i.e. that they spring back to the centre and move easily.
- Lubricate the recoil spring with a light oil.

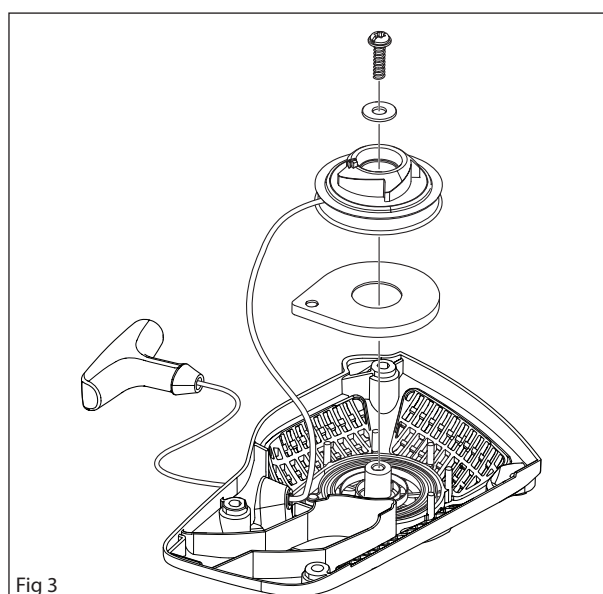


Fig 3

7.2 Replacing a broken or worn starter cord

When the starter cord is worn and must be replaced, the tension in the recoil spring must be released.

1

Pull out the starter cord about 30 cm. Release the tension in the recoil spring by letting the starter pulley rotate anti-clockwise. See Figure 4.



WARNING!

If the spring tension is activated on the starter pulley, the spring can fly out and cause personal injury. Use protective goggles.

2

Push the free end of the cord in the hole in the starter pulley. Take hold of the end with pointed pliers inside the pulley and pull out the cord. See Figure 5.

3

Pull out the cord through the hole in the housing and fit the handle and secure it with a double knot. See Figure 5.

Do a cord tension check before fitting the starter to the crankcase.

Cleaning and checking

- Clean and check carefully all components. Worn or damaged parts must be replaced. Lubricate the recoil spring with a light oil.

7.3 Tensioning the recoil spring

1

Twist the starter cord around the starter pulley about three times and fasten the screw in the centre of the starter pulley. Pull out the starter cord in the sprocket and turn the starter pulley about 3 turns clockwise. See Figure 6.

2

Stretch the cord with the starter handle. Remove your thumb and let the cord spin back as outlined in Figure 7. Check that the starter pulley can be turned at least a further 1/2 turn when the starter cord is pulled all the way out.

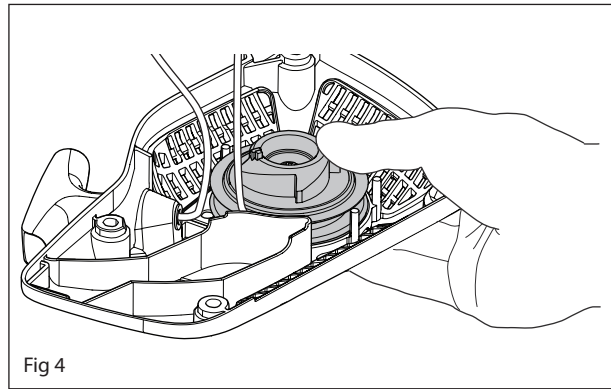


Fig 4

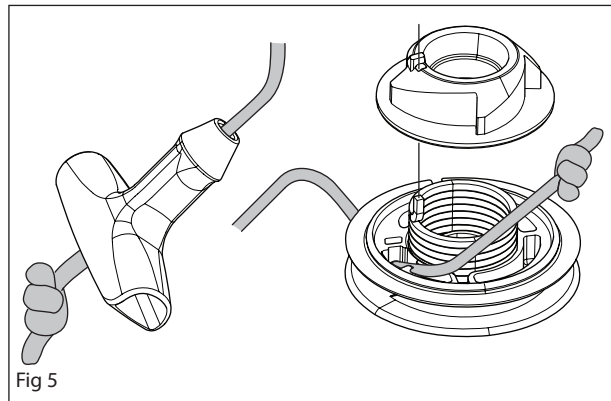


Fig 5

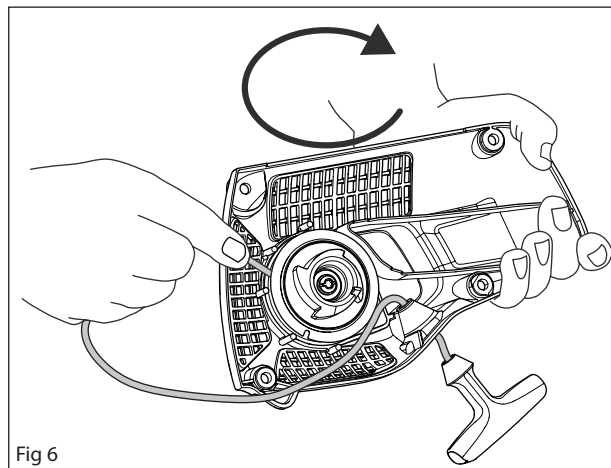


Fig 6

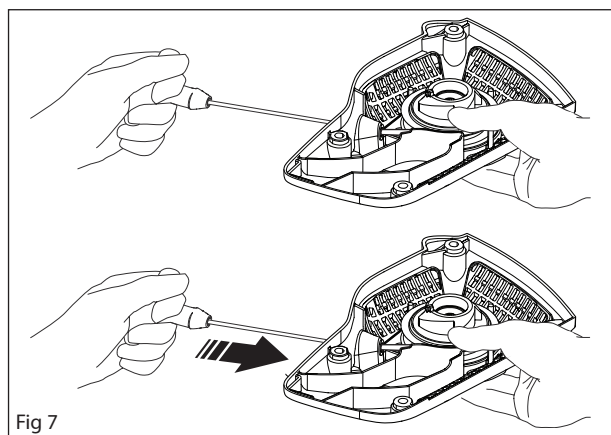


Fig 7

7.4 Replacing a broken recoil spring



WARNING!
Exercise care to ensure the spring does not fly out and cause personal injury. Wear protective goggles.



- 1
Loosen the screw as outlined in Figure 8 and remove the starter pulley and the spring cassette.
- 2
Replace the faulty spring cassette.

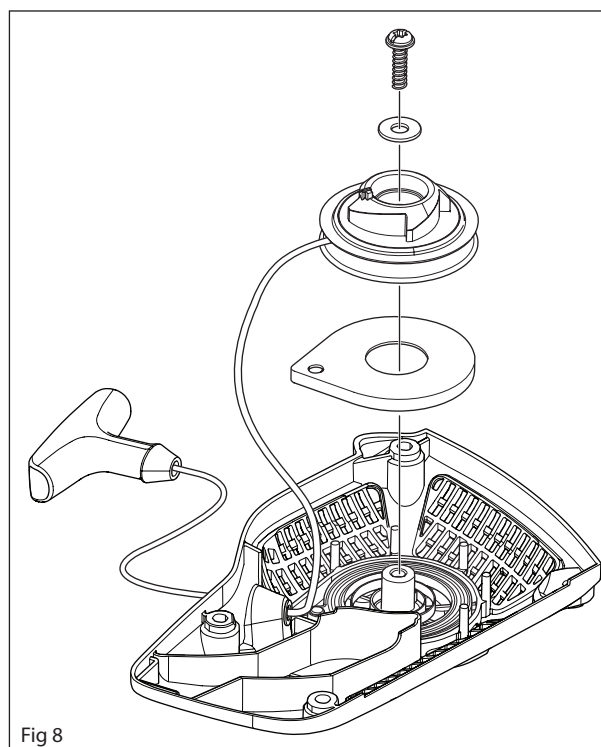


Fig 8

7.5 Assembling the starter unit

- 1
Refit the starter against the crankcase and tighten the screws as outlined in Figure 9. Tightening torque 2.5 - 3.9 Nm.

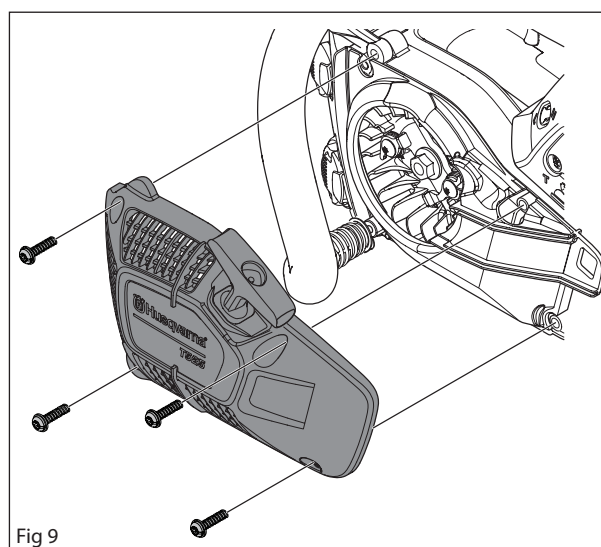


Fig 9

7.6 Testing the ignition module

In case of a fault in the ignition system, the ignition module must be tested before the ignition system is dismantled.

Check the ignition module as follows:

- Unscrew the spark plug. Fit the 507 71 13-01 spark plug to the ignition cable and connect the cabling used to test the 577 83 18-01 ignition module as outlined in Figure 10.
- Turn over the engine with the starter cord.
- If a spark appears on the test spark plug, the ignition module is not faulty.

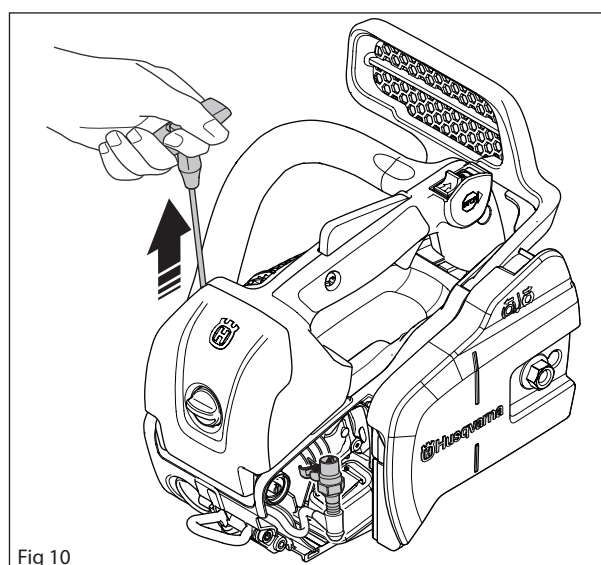


Fig 10

7.7 Dismantling the ignition module and flywheel

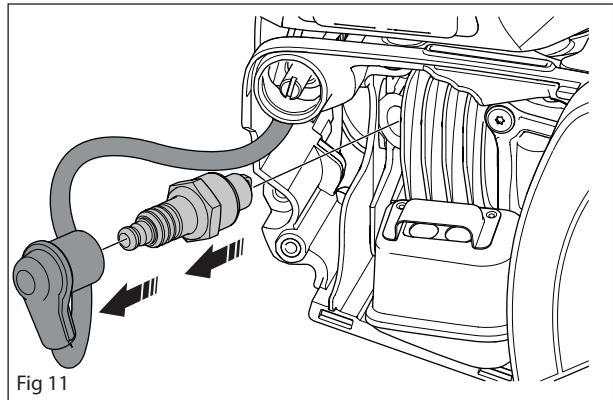
1

Dismantle the following:

- Remove the cylinder cover.
- Detach the spark plug cable.
- Remove spark plug
- Remove the starter and air guide rail.
- Remove the flywheel cover

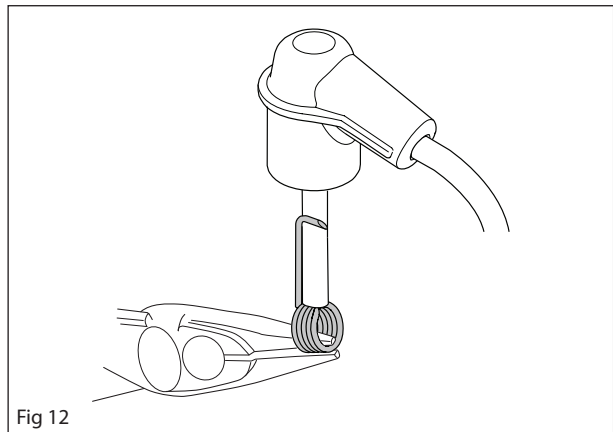
2

Remove the spark plug cap and spark plug. See Figure 11 .



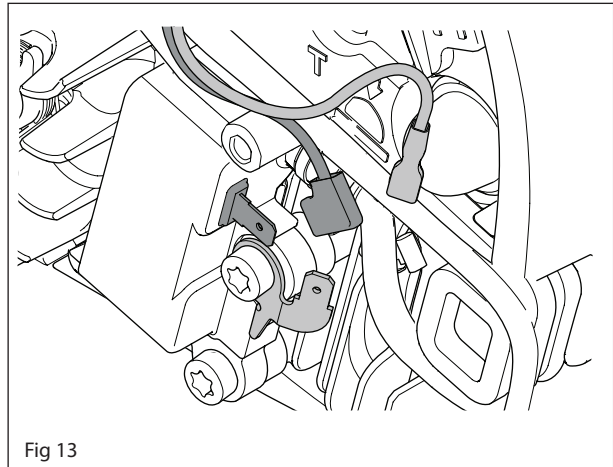
3

Grip the spring with a pliers and pull the ignition cable out through the spark plug cap. see Figure 12. Pour a little soap and water in the spark plug cap to facilitate this step..



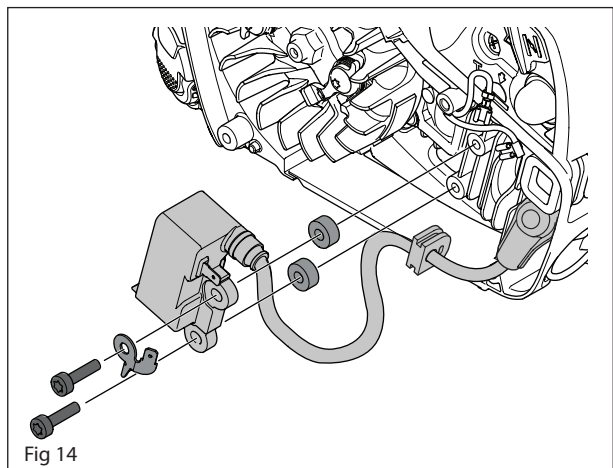
4

Detach the cables on the ignition module. See Figure 13.



5

Remove the ignition module. See Figure 14.



7

Knock out a few of the pins in the tool if it does not match up with the flywheel. Press against the flywheel while the flywheel nut is loosened using a suitable socket spanner. See figure 15.

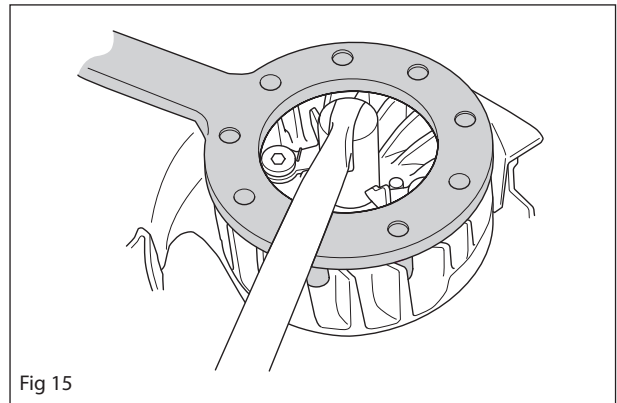


Fig 15

8

Screw the mandrel on the crank shaft journal. Screw in until 1-2 threads are left on the flywheel. Knock on the mandrel with a suitable metal hammer while at the same time pulling the flywheel outward until it comes off the shaft. See Figure 16. Then remove the mandrel.

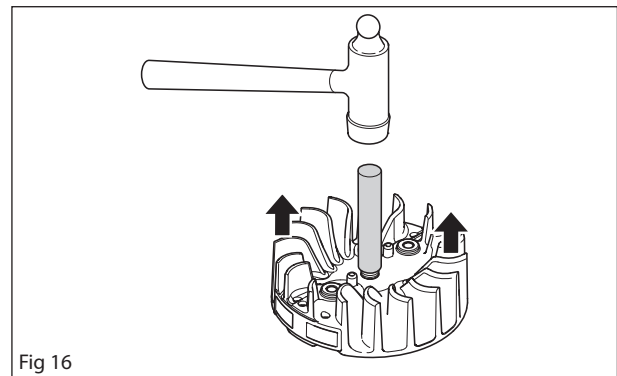


Fig 16

Cleaning and checking

- Clean all parts, especially the tapers on the flywheel and axle.
- Check the flywheel for cracks and any other damage.

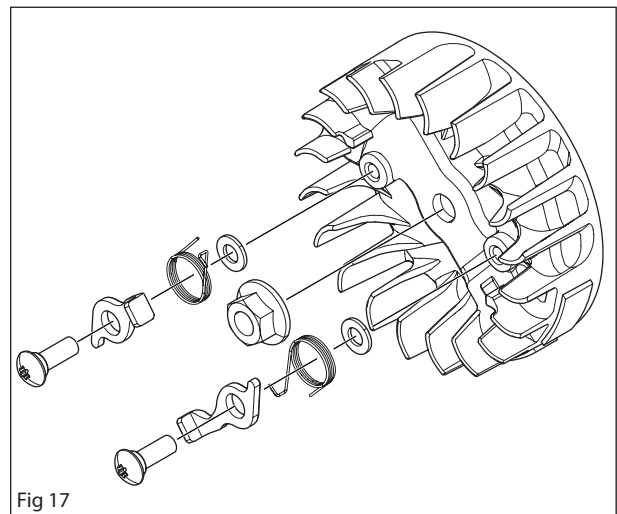
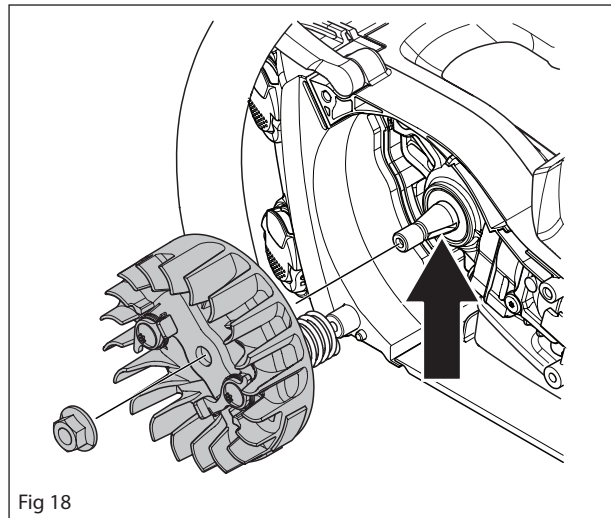


Fig 17

7.8 Assembling the ignition module and the flywheel

1

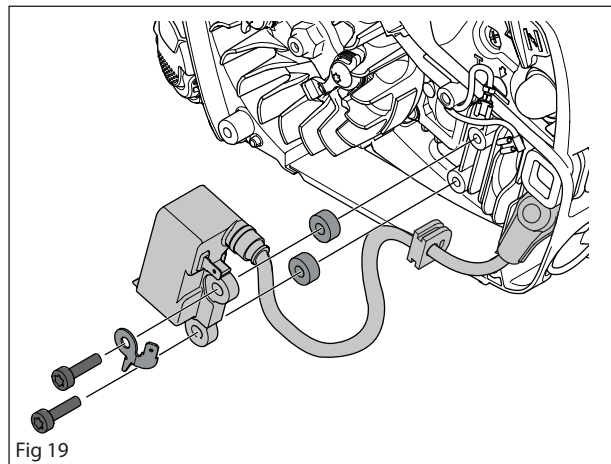
Fit the flywheel onto the crankshaft journal. Turn the flywheel until the key fits into the key slot on the axle. See figure 18.



The ignition module must be fitted as follows:

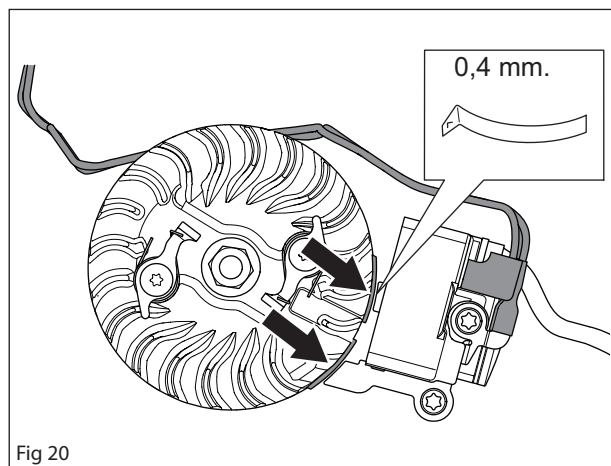
2

Pull the ignition module cabling through the crankcase and place the ignition module in position. See Figure 19.



3

Turn the flywheel so that the magnets are aligned with the ignition module and place the plastic feeler gauge, 514 24 41-01, between the lugs on the ignition module and the flywheel magnets. See Figure 20.

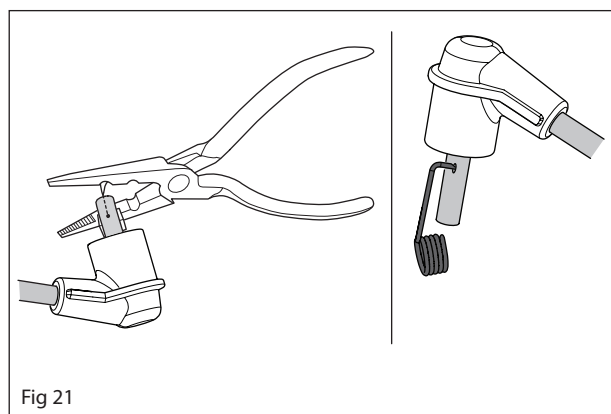


4

Tighten the screws for the ignition module and remove the plastic feeler gauge.

5

Fit the spark plug cap on the ignition cable. Note! When fitting a new ignition module a hole has to be made in the ignition cable for the spring. Use the assembly pliers, 502 50 06-01. See Figure 21.



6

Pull the ignition cable through the tank unit to the spark plug.

7

Attach the:

- Starter unit
- Stop switch
- Spark plug
- Spark plug cable
- Cylinder cover

7.9 Dismantling the centrifugal clutch

1

Release the brake by moving the kickback guard backwards.

Loosen the bar nut and remove the clutch cover, saw chain and bar. See Figure 22.

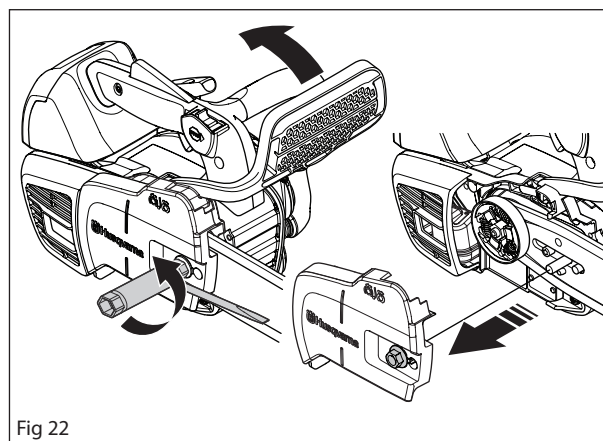


Fig 22

2

Dismantle the cylinder cover, remove the spark plug cap and unscrew the spark plug. Insert the plastic piston stop, 575 29 36-01, to lock the crankshaft. See Figure 23.

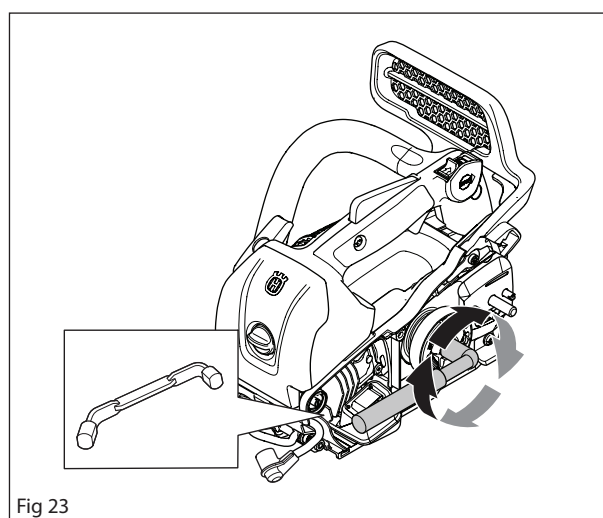


Fig 23

3

Loosen the clutch using a 13 mm socket spanner. Turn the clutch clockwise. See Figure 23.

4

Break apart the clutch as shown in Figure 24.

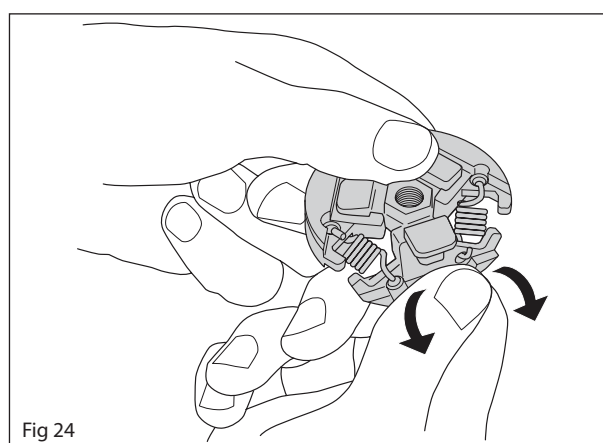


Fig 24

NOTE!

Be careful with the clutch springs, as opening them too much can result in material damage.

Cleaning and checking

- Clean and check all parts carefully. Parts must be replaced if cracked or show signs of other defects. Always use original spare parts.
- Check the thickness of the clutch shoes by measuring them with slide callipers across the whole clutch hub. If the thickness is below 52,5 mm, the entire clutch must be replaced. See Figure 25.

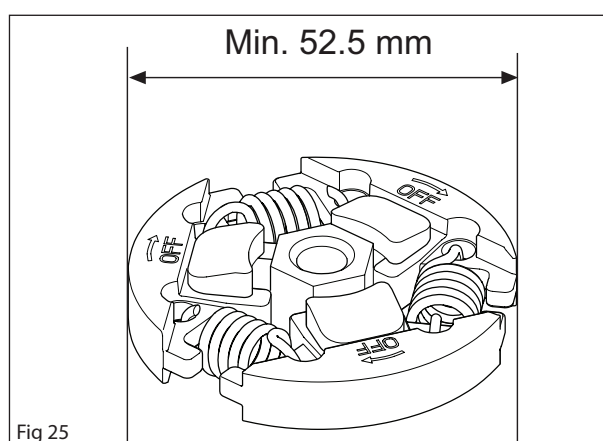


Fig 25

7.10 Assembling the centrifugal clutch

1

Hook the springs into the clutch shoes. Press in the clutch hub from above while bending back the clutch shoes around the clutch hub as shown in Figure 26.

2

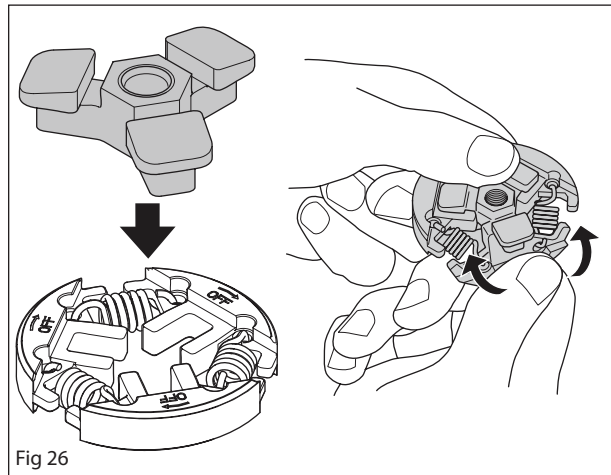
Screw in the clutch (anti-clockwise) until it stops. Then tighten the clutch using a 13 mm socket spanner. Tightening torque of 23.5 Nm. See Figure 23.

3

Remove the piston stop and fit the spark plug and spark plug cap. Tightening torque for the spark plug is 7.9 - 10.8 Nm.

4

Assemble the cylinder cover, saw bar, saw chain and clutch cover.



7.11 Dismantling the oil pump and screen

1

Empty and clean the oil tank.

Dismantle the centrifugal clutch. See the "Dismantling the centrifugal clutch" chapter. Dismantle the clutch drum and the needle bearing.

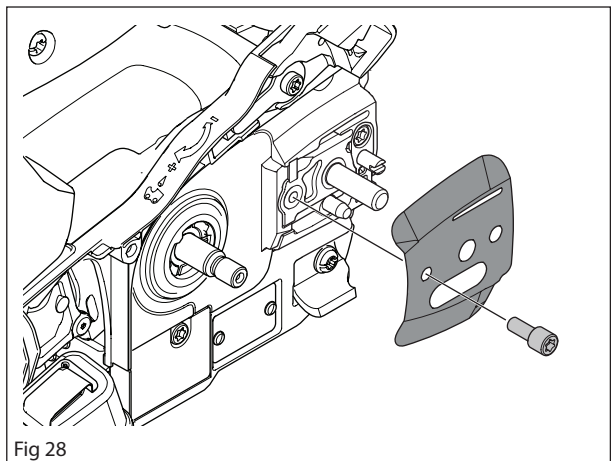
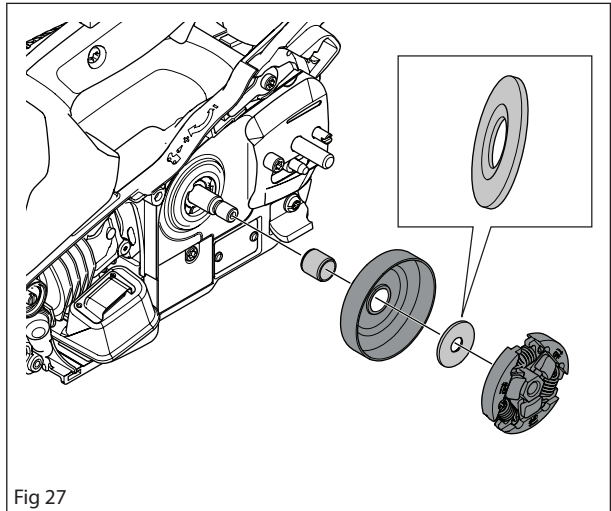
Note! The chamfering of the washer must be turned towards the engine.

Make a note of how the chamfering of the washer is put when you disassemble. Make sure to put the chamfering of the washer turned towards the engine when the product is assembled.

See Figure 27.

2

Loosen the screw as outlined in Figure 28 and remove the chain guide plate.



3
Remove the pump drive wheel and pump cover.
See Figure 29.

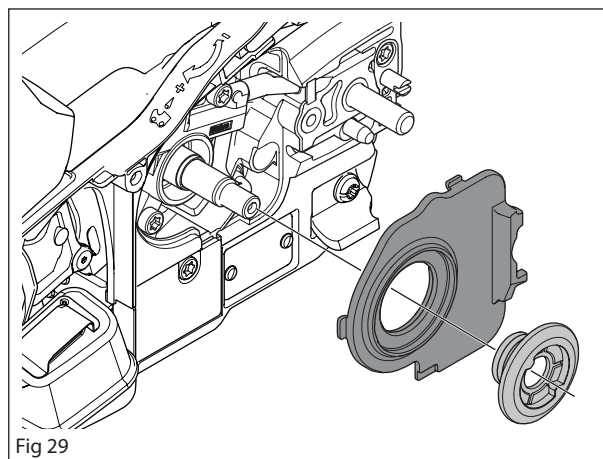


Fig 29

4
Remove the oil tank cap. Pull out the oil hose and
remove the oil filter. See Figure 30.

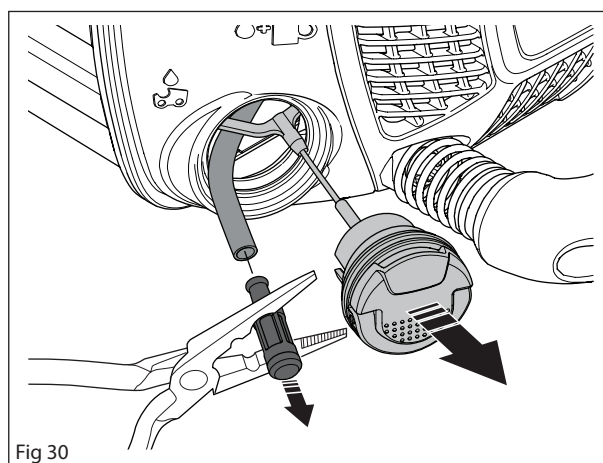


Fig 30

5
Loosen the screws and remove the oil system. See
Figure 31.

Cleaning and checking

- Clean and check all parts carefully. Parts must be replaced if cracked or showing signs of other defects. Always use original spare parts.
- Lubricate all moving parts with saw chain oil.

7.12 Assembling the oil pump and screen

1
Attach the oil filter. See Figure 30. Refit the oil system as outlined in Figure 31. Tighten the screws, using a tightening torque of 2.0 - 2.9 Nm.

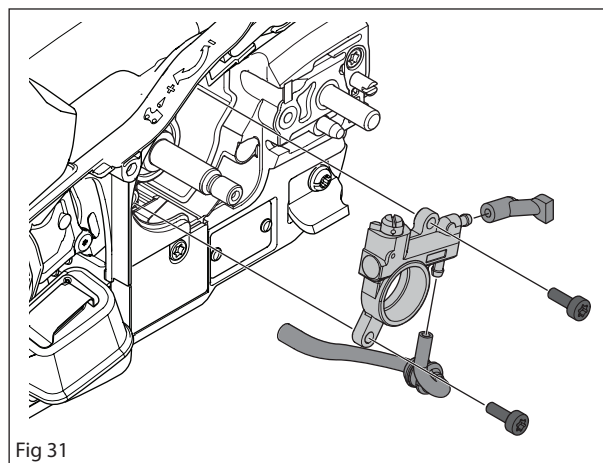


Fig 31

2
Assemble the pump drive wheel and pump cover as outlined in Figure 34. Assemble the chain guide plate, needle bearing, clutch drum and centrifugal clutch as outlined in Figures 28 and 27.

3
Adjust the oil pump.
The adjuster screw for the oil pump is located at the top of the saw. See Figure 32.

4
Fit the bar, the saw chain and the clutch cover.

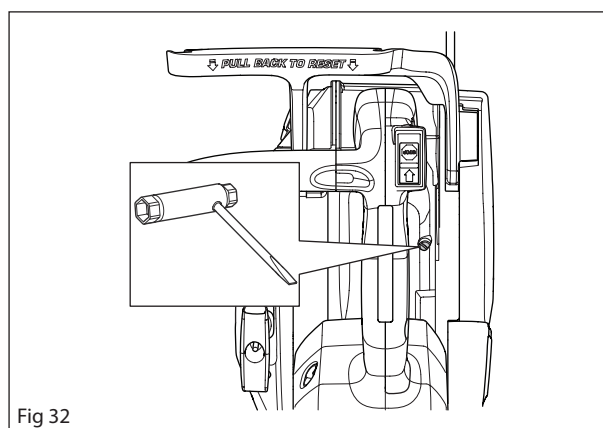



Fig 32



WARNING!
Insufficient lubrication of the chain can result in chain breakage, which can cause serious personal injury.

7.13 Carburettor

**WARNING!**

The fuel used in the chain saw has the following hazardous properties:

1. The fluid and its vapour are poisonous.
2. Can cause skin irritation.
3. Is highly inflammable.

Description

The images for this description do not correspond to the carburettor on the chain saw. They purely show the principle for the design and function. The carburettor is based on three sub-systems:

Metering unit

The needles and the fuel's control functions are located in the metering unit (A). Here the correct fuel amount is adjusted for the current speed and power output. See Figure 33.

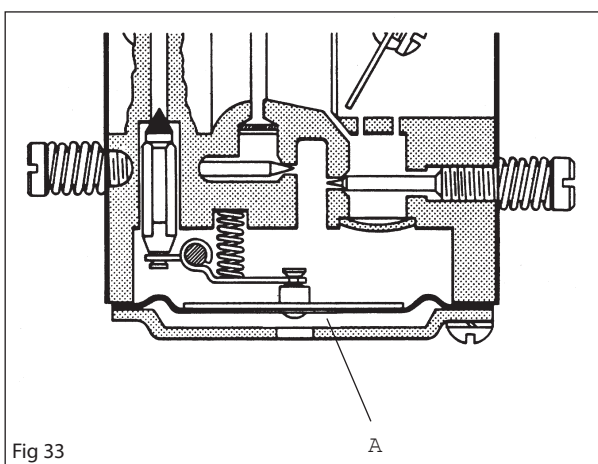


Fig 33

Mixing venturi

The mixing venturi houses (B) the choke, throttle valve and diffuser jets. Here, air and fuel are mixed to create a fuel-air mix that can be ignited by the ignition spark. See Figure 34.

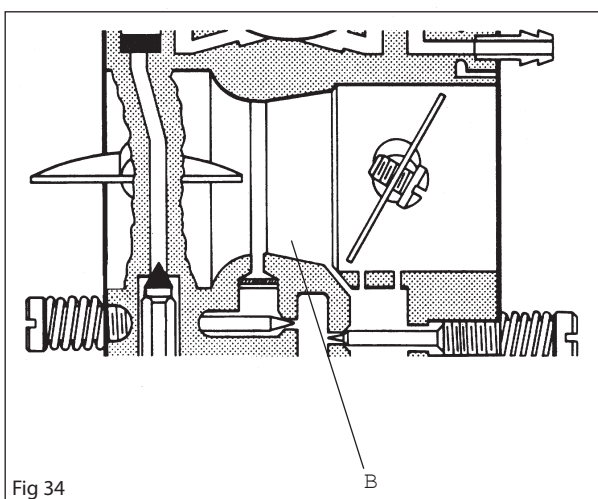


Fig 34

Pump unit

In the pump unit (C) fuel is pumped from the fuel tank to the carburettor's metering unit. One side of the pump diaphragm is connected to the crankcase and pulses in time with the pressure changes in the crankcase. The other side of the diaphragm pumps the fuel. See Figure 35.

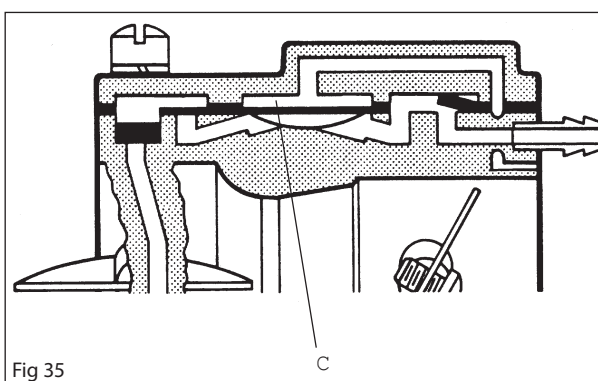


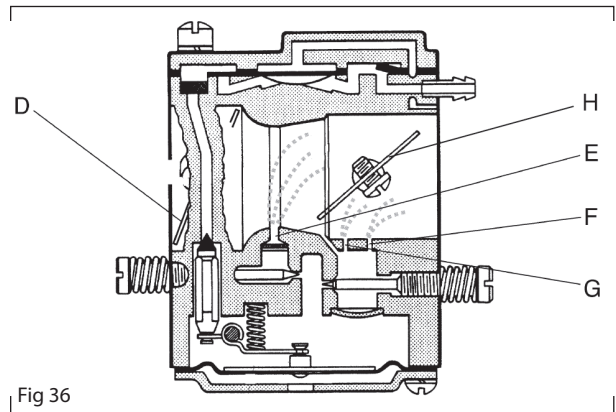
Fig 35

Function

The carburettor functions differently in the following modes:

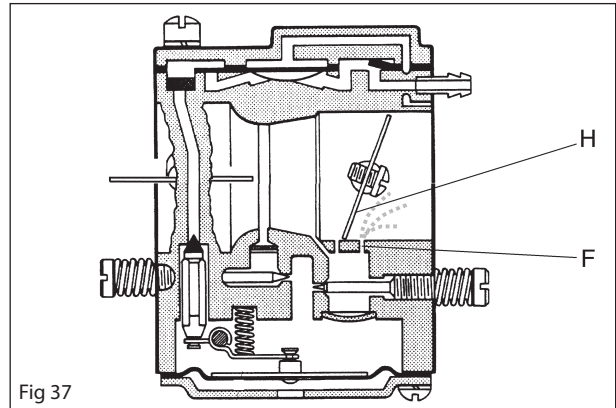
Cold start mode

In cold start mode the choke valve (D) is completely shut. This increases the vacuum in the carburettor and fuel is easier to suck from all the diffuser jets (E, F and G). Throttle valve (H) is partly open. See Figure 36.



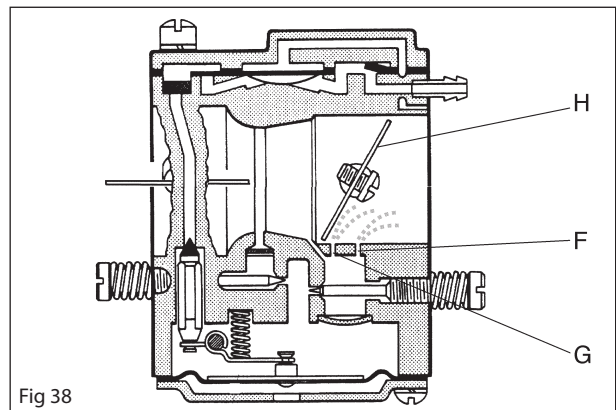
Idle mode

In idle mode throttle valve (H) is shut. Air is sucked in through an aperture in the throttle valve and a small amount of fuel is supplied through the diffuser jet (F). See Figure 37.



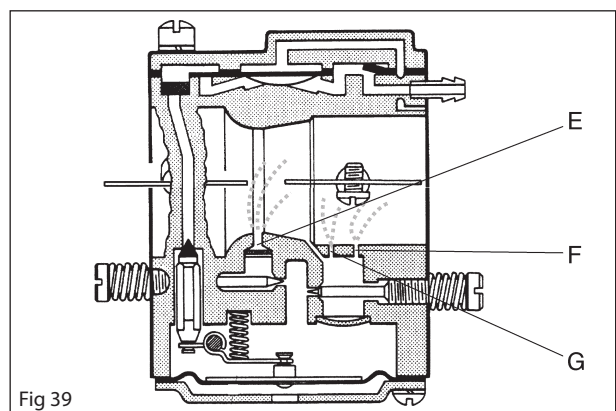
Part throttle mode

In part throttle mode the throttle valve (H) is partly open. Fuel is supplied through the diffuser jets (F and G). See Figure 38.



Full throttle mode

In full throttle mode both valves are open and fuel is supplied through all three diffuser jets (E, F and G). See Figure 39.



Dismantling the carburettor

1

Dismantle the air filter and air filter cover. See Figure 40.

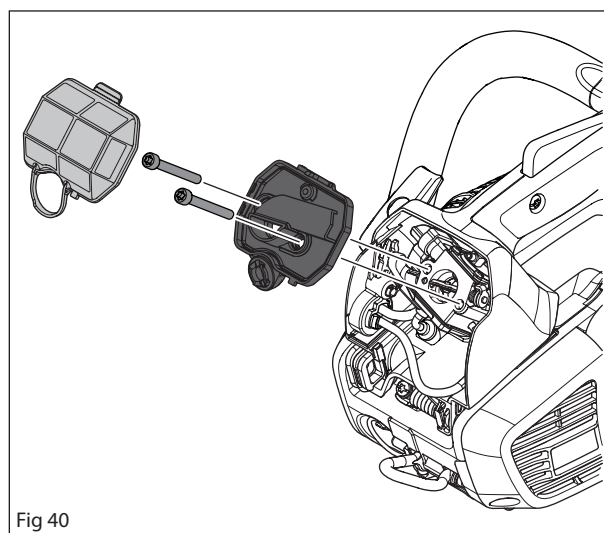


Fig 40

2

Loosen suction hose (A). Pull out the purge (B). To remove the carburetor (C), remove the carburetor from the chassis and remove the link rod (D). See Figure 41.

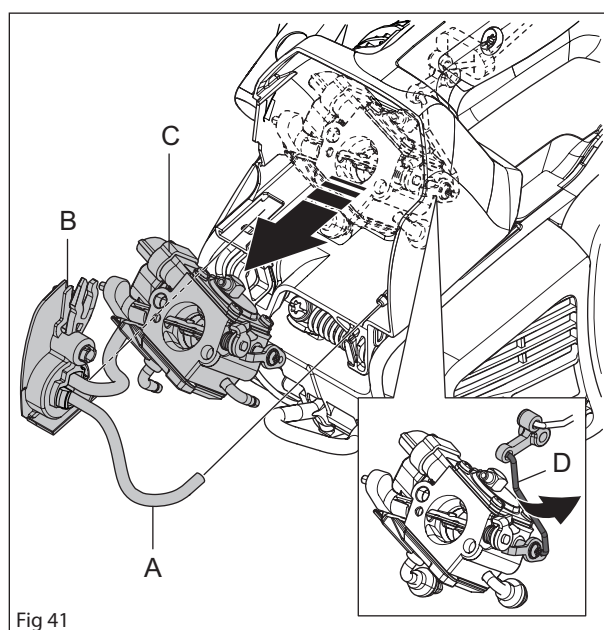


Fig 41

3

Loosen the screws (A) and the washers (B).
Remove top cover (C).
Remove control diaphragm (D).
Remove gasket (E).
See Figure 42.


4

Loosen the screw (F) and lift out the needle valve (J) with the lever arm (G), the axle (H) and the spring (I). See Figure 42.


5

Loosen the screw (AC) and dismantle the cover (Z). Carefully remove the gasket (Y) and the diaphragm (X). See Figure 42.

Cleaning and checking

	<p>WARNING! The fuel used for the chain saw has the following hazardous properties:</p> <ol style="list-style-type: none"> 1. The liquid and its fumes are poisonous. 2. Can cause skin irritation. 3. Is very flammable.
---	---

Clean all units in clean petrol.

	<p>WARNING! Never direct the compressed air jet towards the body. Air can penetrate into the blood circulation, which means mortal danger.</p>
---	---

Use compressed air to dry the petrol on the components. Direct the air through all channels in the carburettor housing and ensure that they are not blocked. Check the following:

1. That the gasket, pump and control diaphragms are undamaged, as well as the gasket between the carburettor body and the autotuner.
2. That there is no play on the throttle valve and choke valve shafts.
3. That the needle valve (J) and its lever arm (G) are not worn. See Figure 42.
4. That the fuel screen is intact and clean.
5. That the inlet manifold is undamaged.

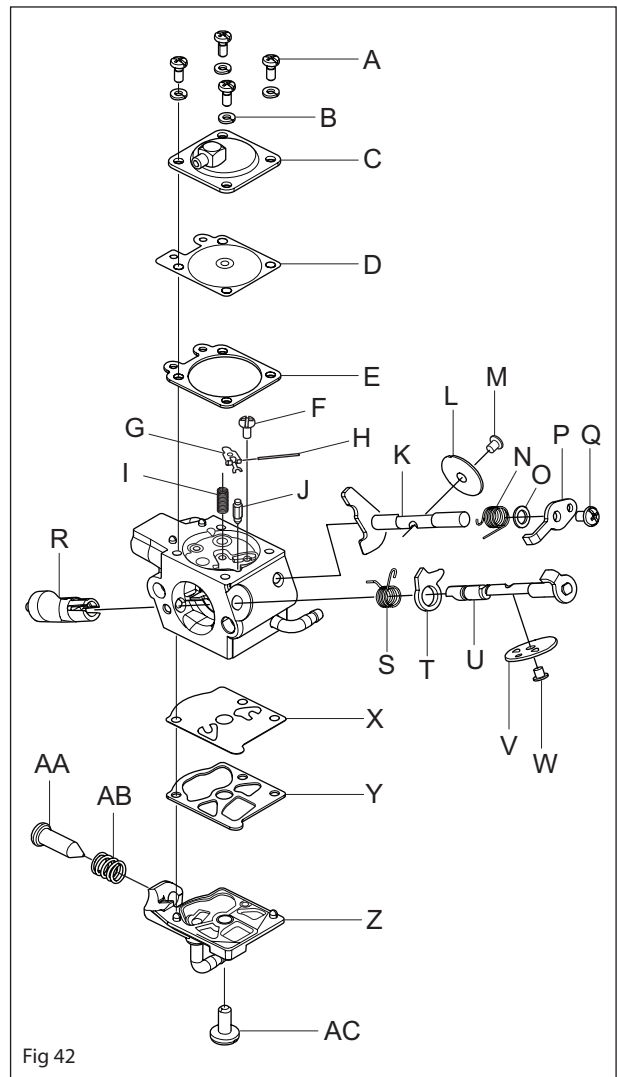
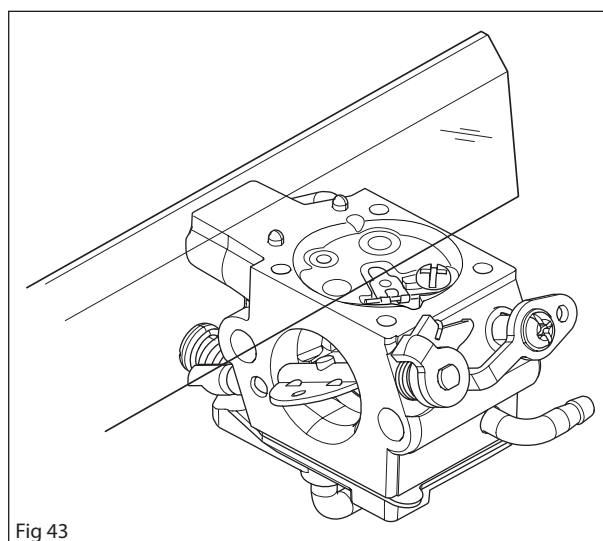


Fig 42

Assembling the carburettor

Observe cleanliness when assembling the carburettor. The slightest contamination can cause malfunctions.

1. If throttle and choke valves with shafts, lever arms and springs have been removed, these must be assembled. The springs are tightened 1-2 turns. Lubricate the shaft bearings using a light oil.
2. Fit the fuel screen by using the handle of a small screwdriver.
3. Assemble membrane (X) with gasket and screw tight the pump cover (Z). See Figure 42.
4. Fit the needle valve (J) with lever arm (G), axle and spring. Screw in the screw (F). See Figure 42.
5. Check using a ruler or the like that the lever arm is level with the cover. The lever arm can be bent if necessary. See Figure 43.
6. Fit the control diaphragm (D) with gasket (E) and cover (C). See Figure 42.
7. Do a pressure test.



Pressure testing the carburettor

Pressure testing should be carried out with the carburettor fully assembled. The test must always be done after the carburettor has been repaired, but can also be carried out when troubleshooting before the carburettor is taken apart.

Test 1

See Figure 44 and carry out the following check:

1. Connect pressure tester to the carburettor fuel inlet.
2. Lower the carburettor into a beaker of water.
3. Pump up the pressure to 20 kPa.
4. No leakage is permitted. If a leakage occurs refer to the table below.

Leak in	Fault with
Diffuser jets Leak in the impulse pipe Ventilation hole above metering unit	Needle valve Pump diaphragm Control diaphragm

Test 2

1. Plug the connections to the fuel inlet.
2. Create a vacuum to the purge nipple on the carburettor. No leakage is permitted. In the case of leakage, leakage spray can be used even if it is difficult. Try and identify where the spray is sucked in. It can be used to show leakages in main jets, idling needles, measuring cover gaskets and measuring diaphragms.

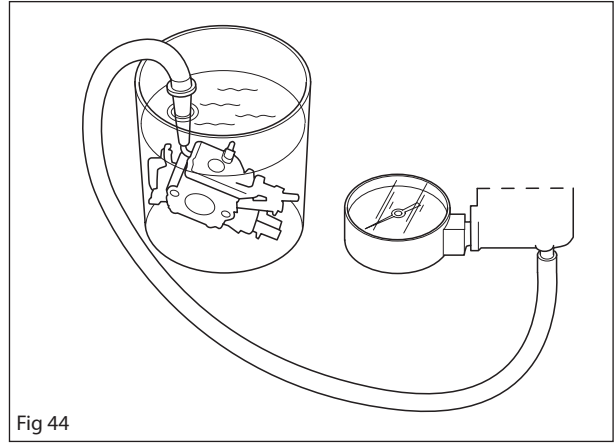


Fig 44

Assemble on the saw

1
Hook the link rod (D) to the carburetor as outlined in Figure 45. Attach the two inlet manifolds to their corresponding grommet. Slide the purge (B) into place. Attach the suction hose (A) as outlined in Figure 45. Make sure to attach the fuel hose (E) to the carburetor guide correctly as outlined in Figure 45..

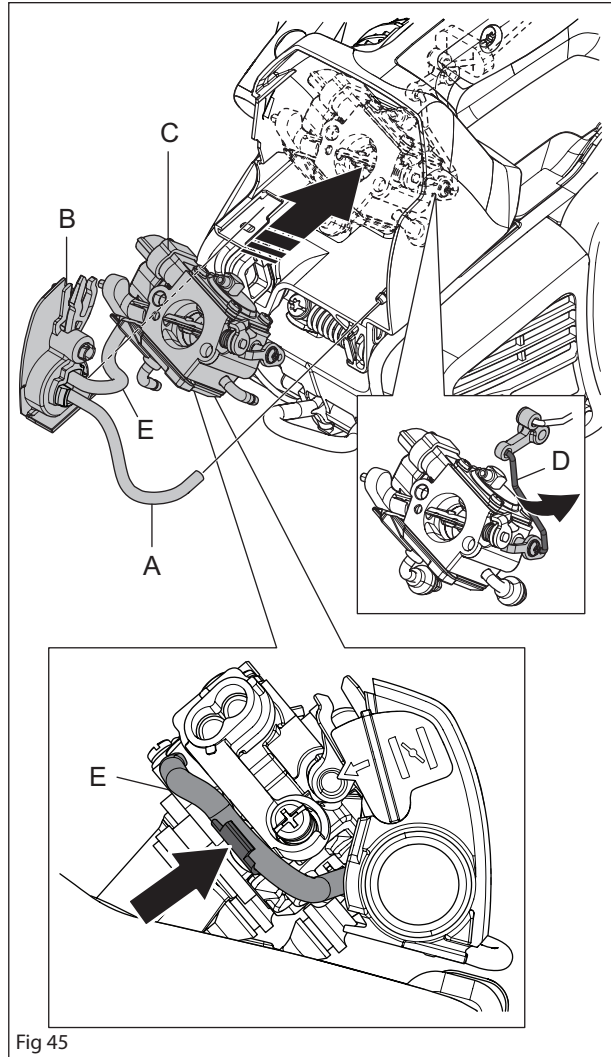


Fig 45

2
Attach the air filter. See Figure 46. Attach the air filter cover.

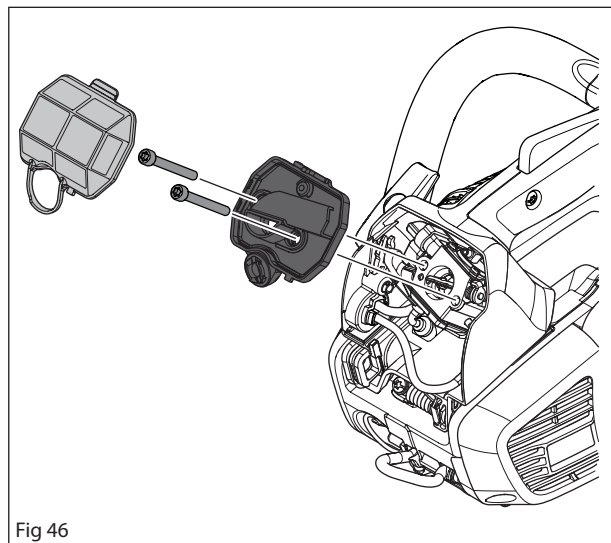


Fig 46

7.14 Dismantling the intake system

1. Remove the air filter cover, cylinder cover.
2. Remove the screw (A).
3. Remove the bolt (B).
4. Remove the antivibration element (C).

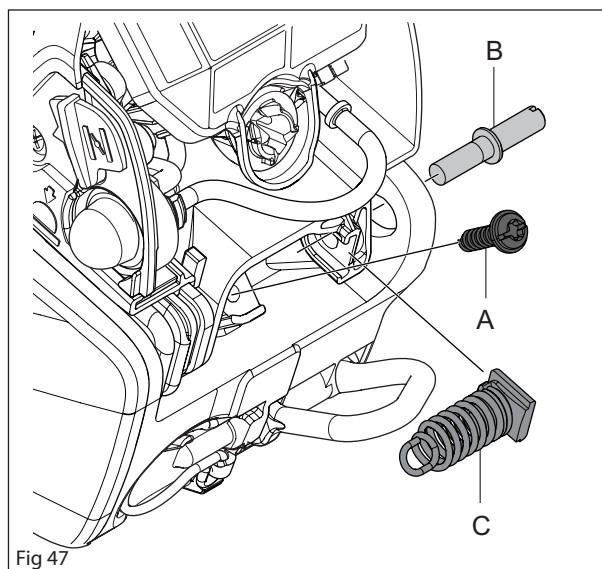


Fig 47

5. Remove the two screws holding the grip cover. Remove the grip holder. See Figure 48.

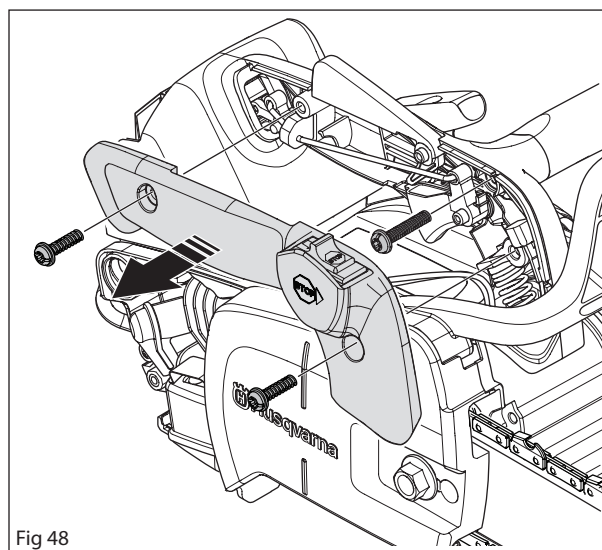


Fig 48

6. Remove the screw and the front handle. Remove the antivibration element. See Figure 49.

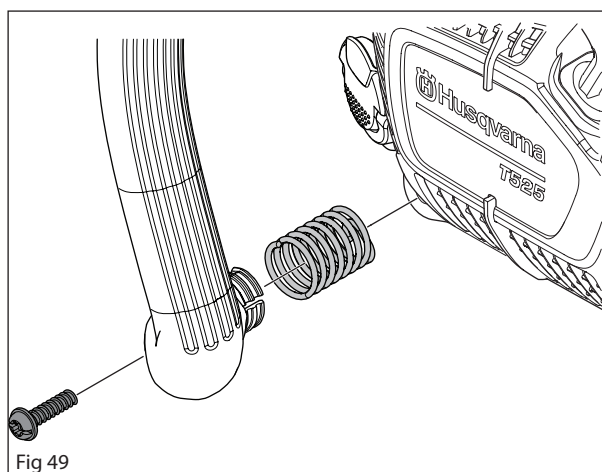


Fig 49

7. Remove the throttle components.
8. Remove the air filter
9. Remove the carburetor.
10. Remove the engine case cover.

11. Press down the inlet pipe through the right handle and pull up the right handle. Disconnect all the hoses. See Figure 50.

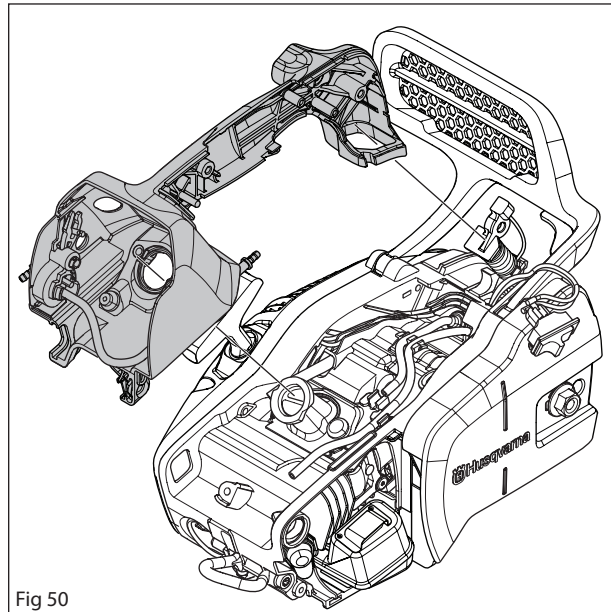


Fig 50

12. Remove the inlet pipe. Remove the screws and lift up the intake manifold. See Figure 51.

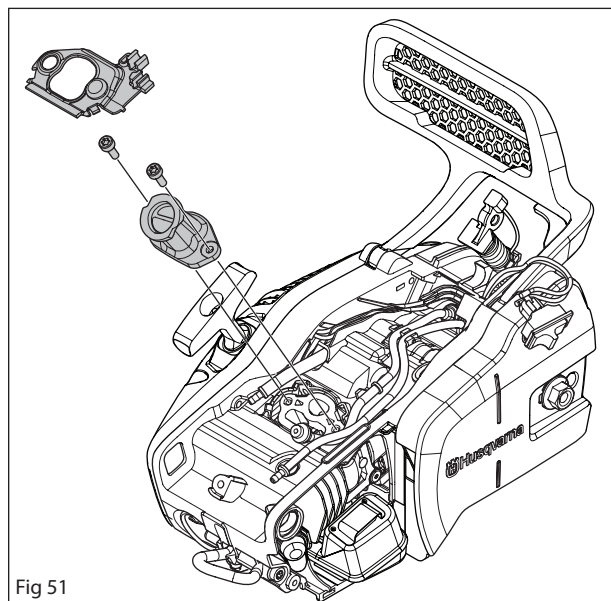


Fig 51

Cleaning and checking

Clean and check all parts carefully. Parts must be replaced if cracked or show signs of other defects. Always use original spare parts. See Figure 52.

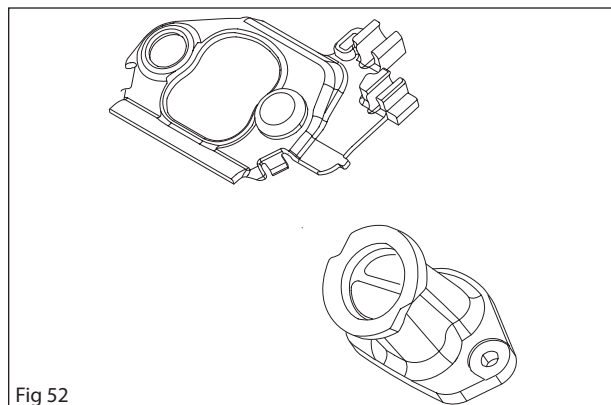


Fig 52

7.15 Assembling the intake system

NOTE!

It is very important that the intake system is sealed. Otherwise the engine may seize up.

Follow the chapter 7.14 Dismantling the intake system in the reverse order. Make sure to use the correct torque. See chapter 5 Service data.

7.16 Dismantling the tank unit

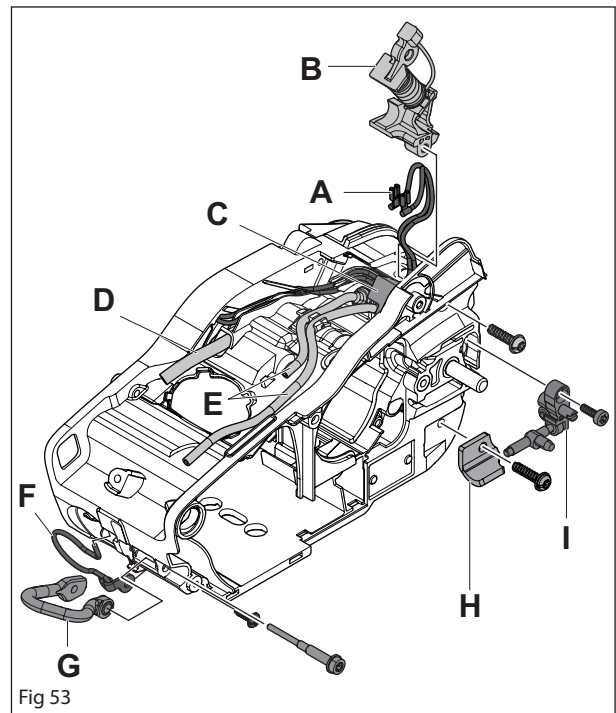


WARNING!

The fuel used for the chain saw has the following hazardous properties:

1. The liquid and its fumes are poisonous.
2. Can cause skin irritation.
3. Is very flammable.

1. Follow the instructions in chapter 7.24 Dismantling the piston and cylinder, step 1 - 8.
2. Remove the following (See Figure 53):
 - Ignition cables (A).
 - Antivibration element (B).
 - Foam cover (C).
 - Impulse hose (D).
 - Fuel hose and oil hose (E).
 - Loop (F).
 - Harness loop (G).
 - Chain catcher (H).
 - Chain tensioner (I).



7.17 Assembling the tank unit

Follow the instructions in the chapter 7.16 in the reverse order. Make sure to use the correct torque. See chapter 5 Service data.

7.18 Aerating the fuel tank

The two-way valve has the following properties:

- Checks opening pressure in both directions, which prevents a positive pressure or a vacuum developing in the fuel tank and impairing engine performance. This also prevents fuel leakage.
- Opening pressure outwards:
4.9 – 29.4 kPa (0.05 – 0.3 bar).
- Opening pressure inwards (vacuum):
Max. 3.9 kPa (0.04 bar).

Remove the cover using a flat screwdriver. Remove the foam cover. Remove the tank venting valve using a plier. See Figure 54a.

Test

Opening pressure outwards:

1. Open the fuel cap and leave it open during the entire test. Empty the tank of fuel.
2. Connect the 531 03 06-23 pressure gauge (see Figure 54b) to the tank valve.
3. Switch the pressure gauge to vacuum mode.
4. After pumping, the indicator must be between 4.9 - 29.4 kPa.

Opening pressure inwards:

1. Open the fuel cap and leave it open during the entire test. Empty the tank of fuel.
2. Connect the 531 03 06-23 pressure gauge (see Figure 54b) to the tank valve.
3. Switch the pressure gauge to pressure mode.
4. After pumping, the indicator must stop at max. 3.9 kPa.

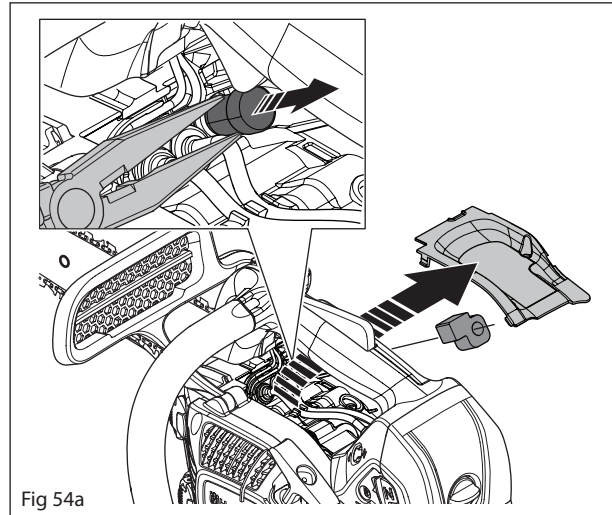


Fig 54a

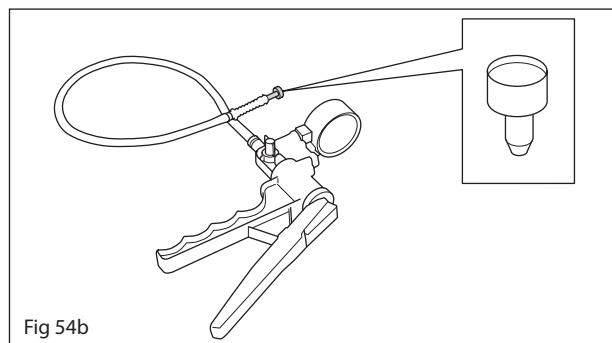


Fig 54b

7.19 Replacing the fuel filter

NOTE!

Fluted pliers may not be used with the fuel hose. They can cause material damage resulting in damage to the fuel hose.

1
When replacing the fuel filter, the old fuel filter must be taken out of the tank unit using the special 502 50 83-01 tool.

2
Pull out the fuel hose from the tank unit so that the fuel filter can be removed. See Figure 55.

3
Fit the new fuel filter and refit the fuel hose with filter in the tank unit.

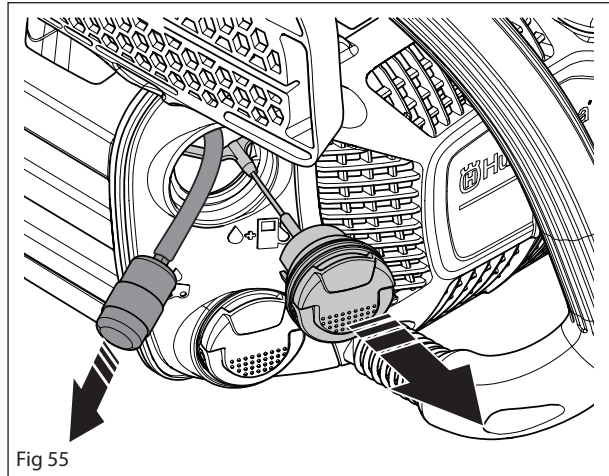


Fig 55

7.20 Replacing the suction hose/return hose

1
Dismantle the filter cover and the air filter.

2
Unsnap the return hose and the suction hose from the fuel pump and the carburettor and the tank unit. Replace hoses if necessary.

7.21 Replacing the fuel pump

1
Unsnap the suction hose (D) and return hose (C) from the fuel pump (A). See Figure 56.

2
Pull out the fuel pump attachment (B). See Figure 56.

3
Press in the hooks to unsnap the fuel pump from the fuel pump attachment. See Figure 56.

4
Fit the new fuel pump to the attachment.

5
Refit the fuel pump attachment. See Figure 56. Attach the suction hose (D) and return hose (C) to the fuel pump.

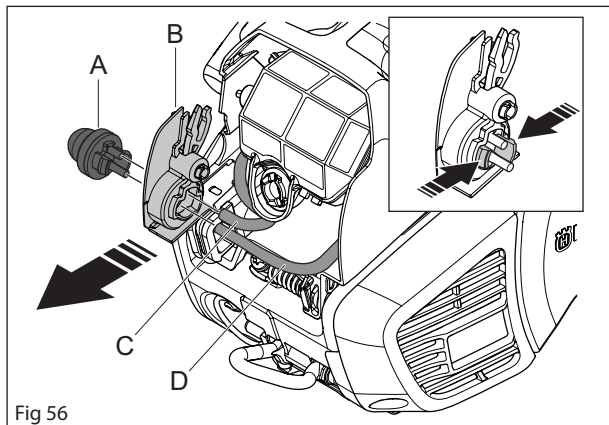


Fig 56

NOTE!

Fluted pliers may not be used with the fuel hose. They can cause material damage resulting in damage to the fuel hose.

7.22 Replacing the fuel hose

1

Remove the air filter cover, air filter and carburetor. Remove the fuel filter as outlined in Figure 55.

2

Carfully pry open the engine case cover with a flat screwdriver. See Figure 57.

3

Remove the two parts of the fuel hose as outlined in Figure 58.

4

When assembling, make sure that the fuel hose is fitted into the groove as outlined in Figure 58.

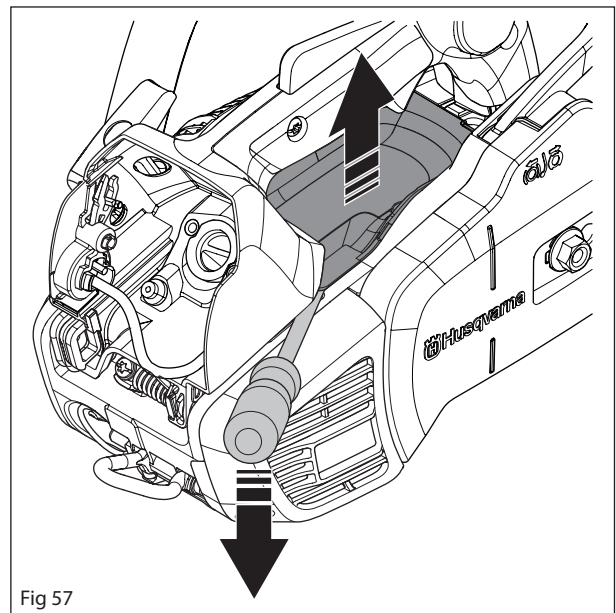


Fig 57

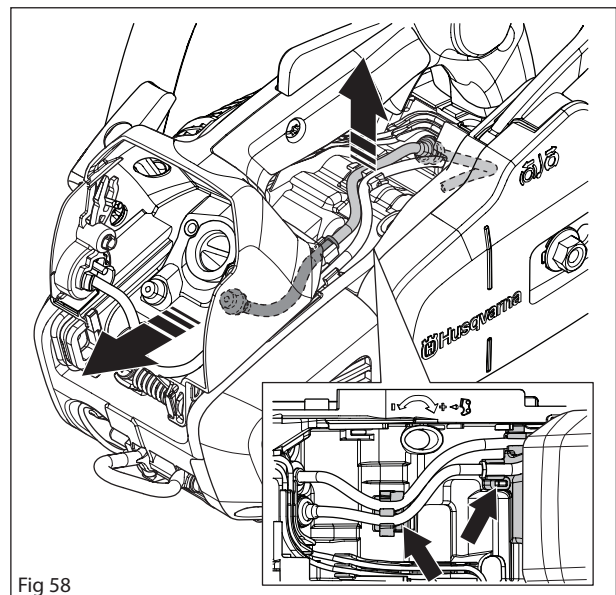


Fig 58

7.23 Vibration damping system

The vibration damping system consists of three antivibration element. See Figure 59.

Dismantling the dampers

Make sure to dismantle the dampers in the order that follows.

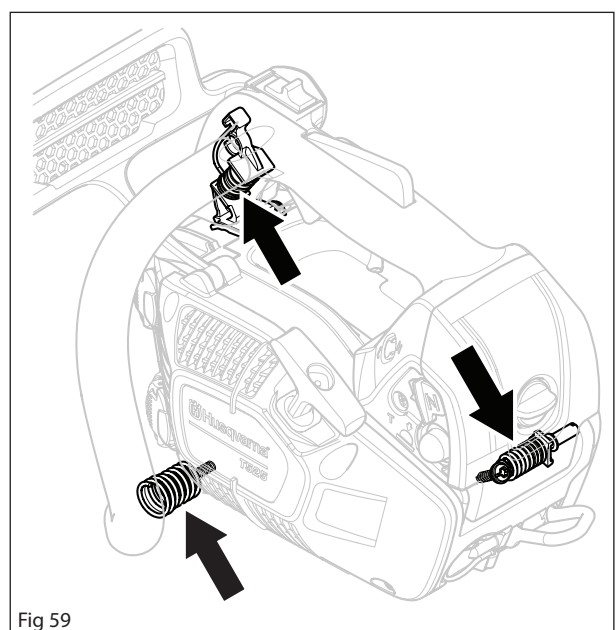
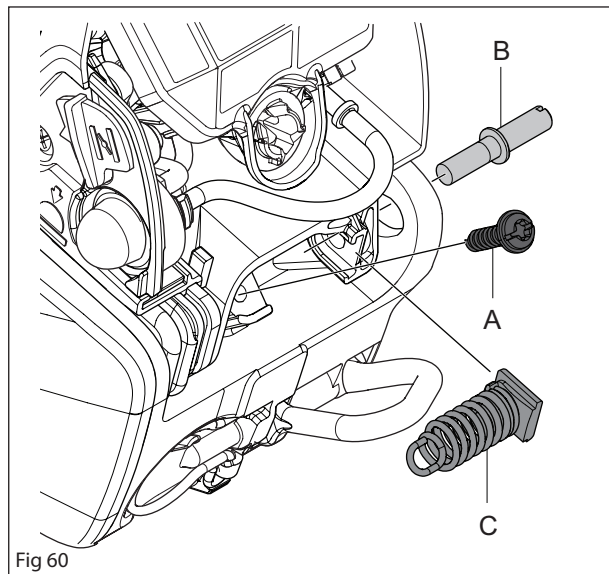


Fig 59

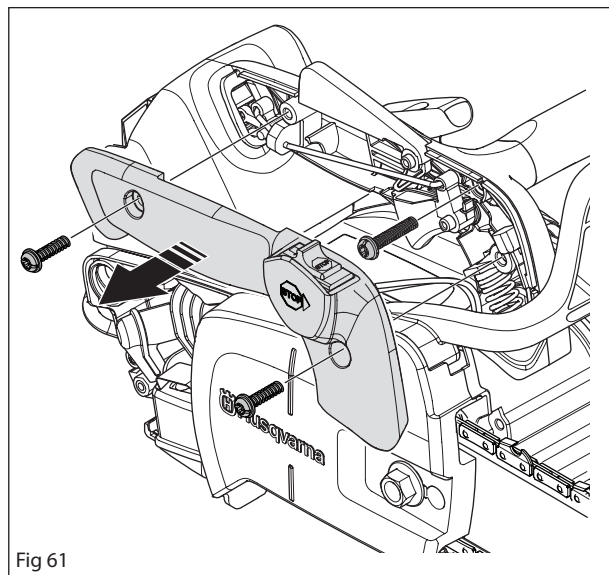
Dismantling rear damper

1. Remove the air filter cover, cylinder cover
2. Remove the screw (A).
3. Remove the bolt (B).
4. Remove the antivibration element (C).

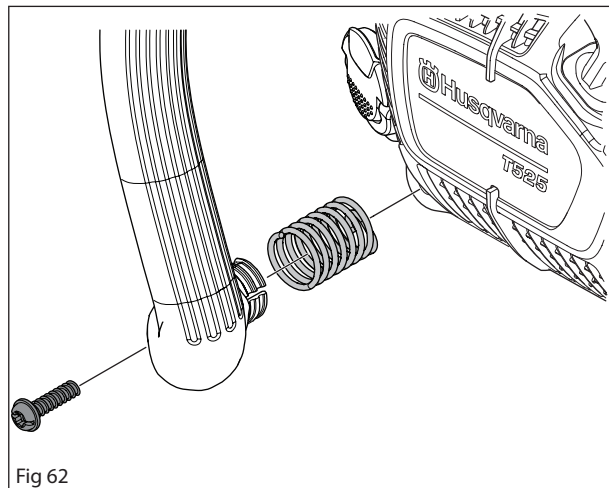


Dismantling bottom damper

1. Remove the two screws holding the grip cover. Remove the grip holder. See Figure 61.
2. Remove the screw holding the front handle. See Figure 61.



3. Remove the screw and the front handle. Remove the antivibration element. See Figure 62.



Dismantling top damper

1. Remove the throttle components.
2. Remove the air filter.
3. Remove the carburetor.
4. Remove the engine case cover.
5. Press down the inlet pipe through the right handle and pull up the right handle. Disconnect all the hoses. See Figure 63.

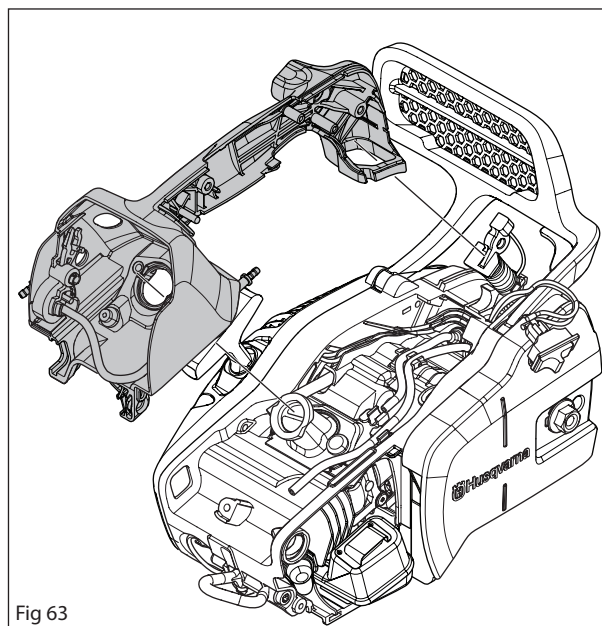


Fig 63

6. Remove the safety wire (B). See Figure 64a.
7. Twist the upper spring holder (A) and anti-vibration element (C) until it separates from the lower spring holder (D). See Figure 64a.

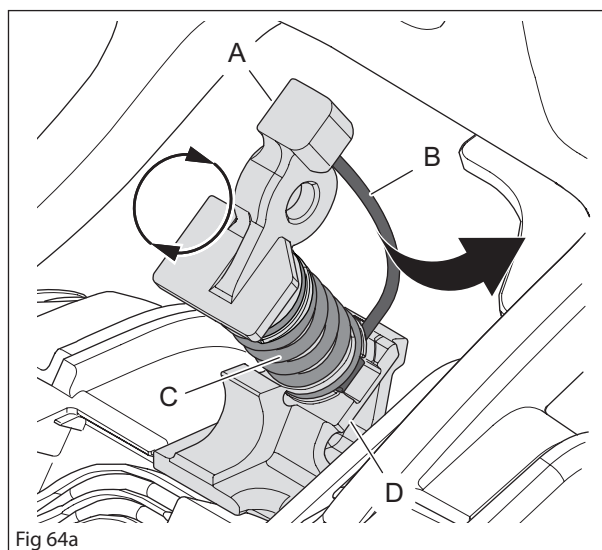


Fig 64a

Dismantling top damper (alternative)

The whole antivibration section (A, B, C and D , see Figure 64a) can be removed.

1. Remove the throttle components.
2. Remove the air filter.
3. Remove the carburetor.
4. Remove the engine case cover.
5. Press down the inlet pipe through the right handle and pull up the right handle. Disconnect all the hoses. See Figure 63.
6. Remove the clutch cover and the hand guard assembly.
7. Remove the screw and lift the antivibration element assembly. See Figure 64b.

Cleaning and checking

Clean and inspect all parts.

Assembly

1. Assemble the parts in the reverse order. Make sure to use the correct torque. See Service Data.

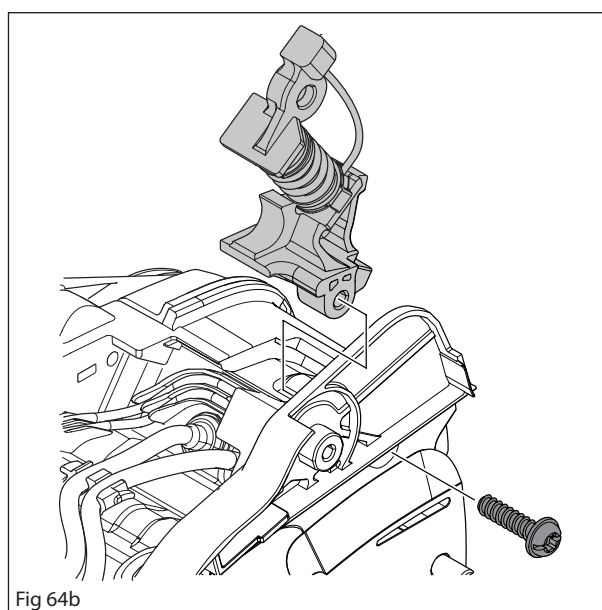


Fig 64b

7.24 Dismantling the piston and cylinder

1

Dismantle the following:

- Air filter cover and air filter
- Carburetor
- Starter assembly
- Clutch cover
- Cylinder cover
- Muffler
- Engine case cover
- Front Handle
- Handle
- Rear and bottom anitvibration elements
- Spark plug

See Figure 65.

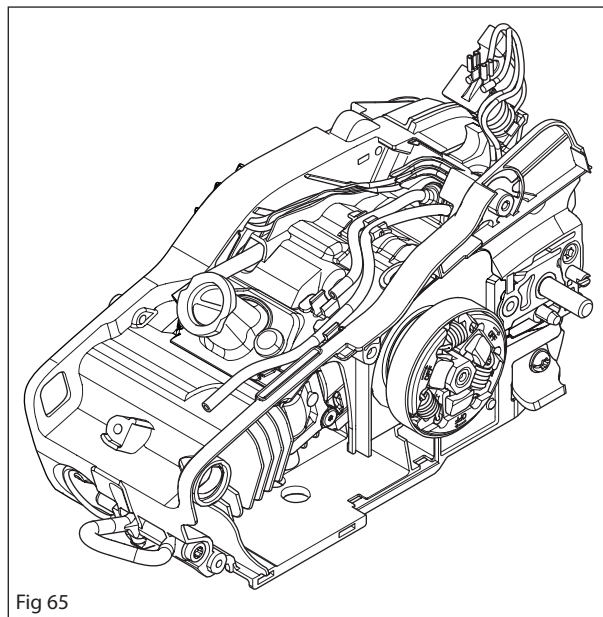


Fig 65

2

Remove the two screws and remove the ignition module. See Figure 66.

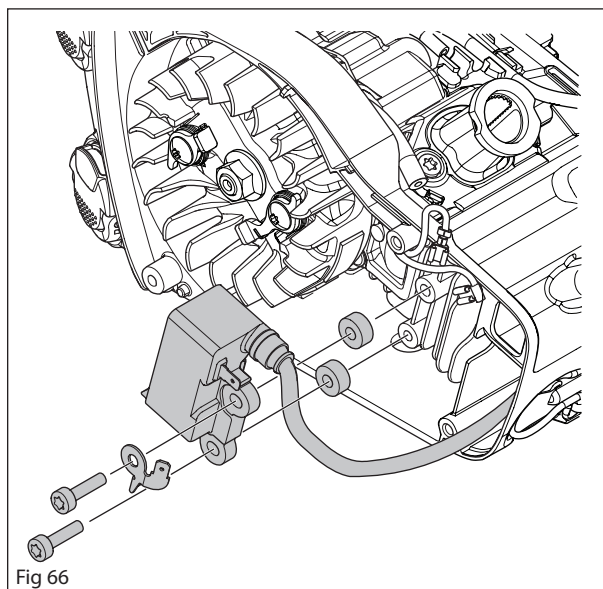


Fig 66

3

Insert the piston stop 575 29 36-01. Use a 13 mm socket spanner to remove the clutch. See Figure 67.

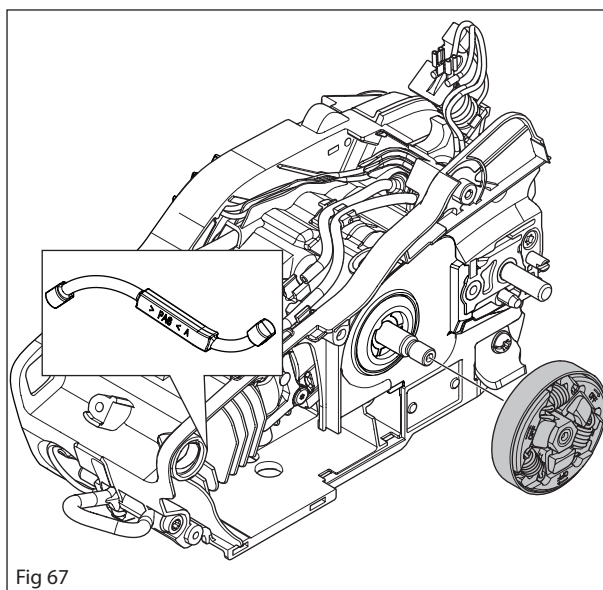
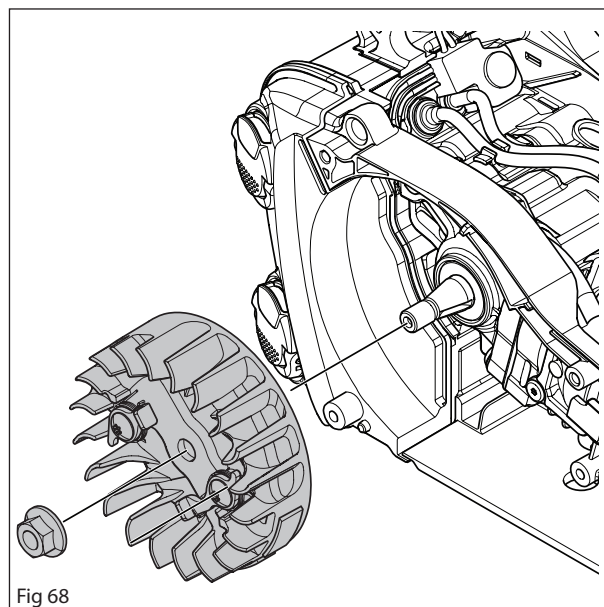


Fig 67

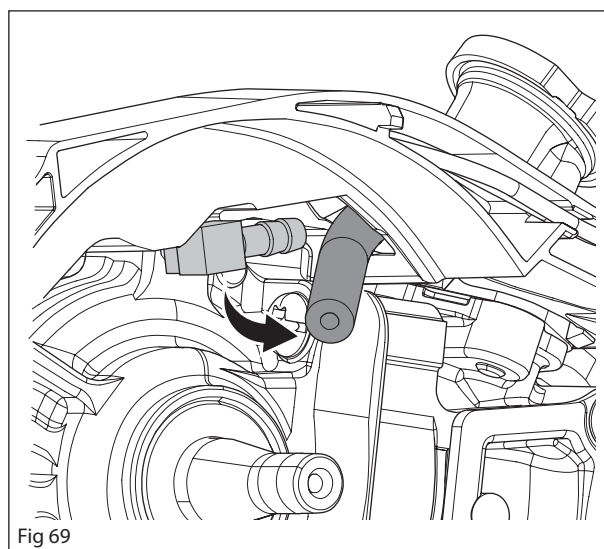
4

Use the special tool 502 51 94-01 to remove the flywheel. See Figure 68. Follow the instructions in chapter 7.7 Dismantling the ignition module and flywheel.



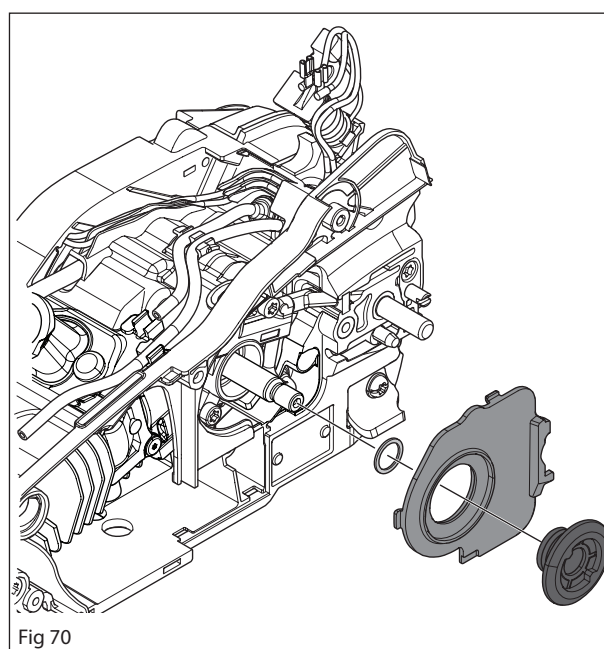
5

Remove the impulse hose from the joint. See Figure 69.



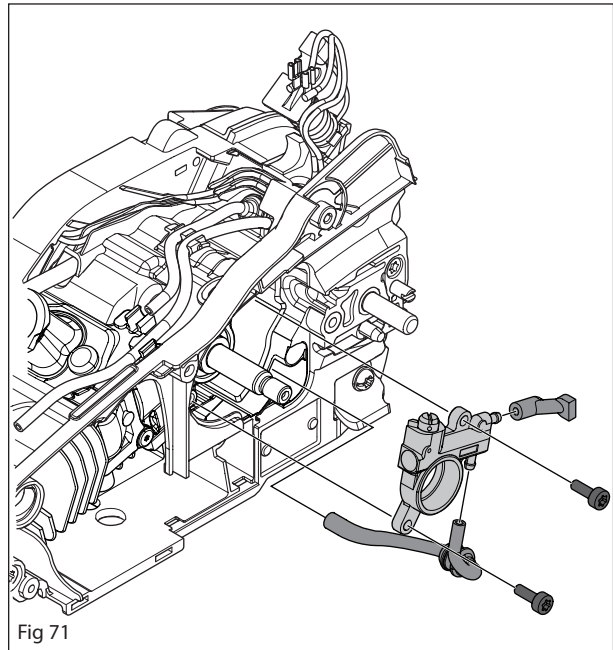
6

Remove the pump drive wheel and pump cover. See Figure 70.



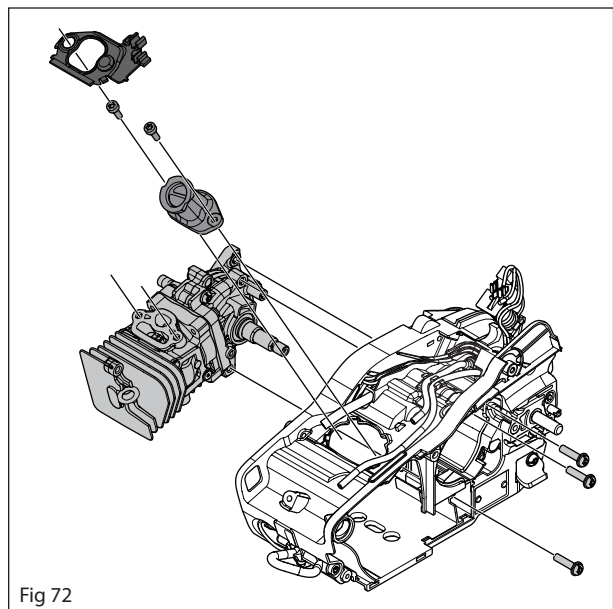
7

Remove the screws and remove the oil system.
See Figure 71.



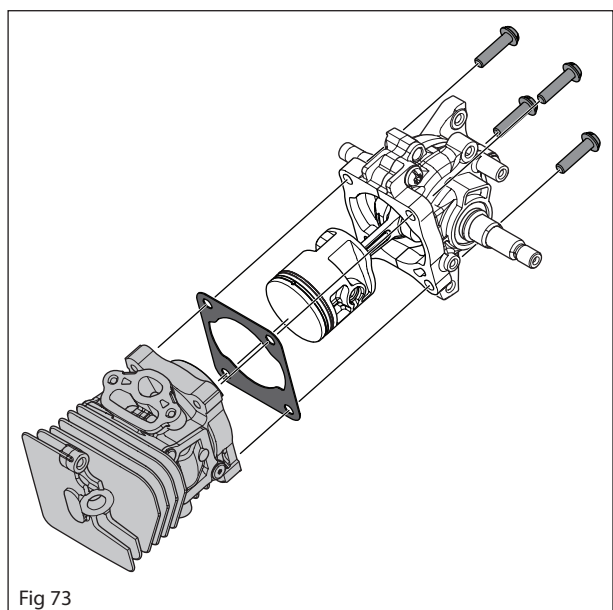
8

Remove the inlet pipe cover.
Loosen the screws holding the inlet pipe and re-
move the inlet pipe.
Remove the screws attaching the the crankcase
and cylinder to the chassis.
Remove the crankcase and cylinder. See Figure 72.



9

Loosen the four cylinder screws and carefully pull
out the cylinder and the gasket. See Figure 73.



10

Remove the screws holding the crankcase parts. Carefully pull the crankcase halves apart. Two guide pins keep the crankcase halves together. Lift out the connecting rod with the piston. See Figure 74.

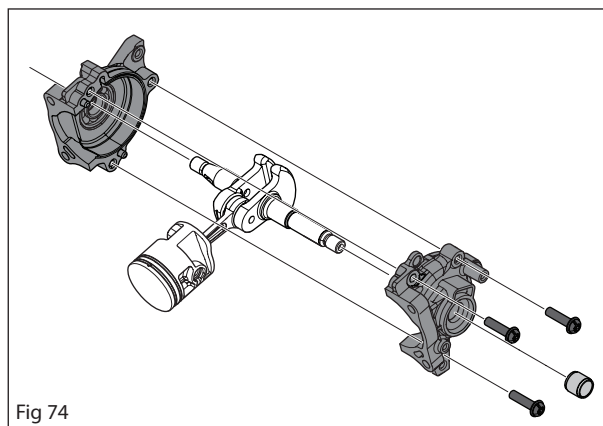


Fig 74

11

Use a flat screwdriver to remove the circlips from the gudgeon pin. Press out the gudgeon pin and lift off the piston from the connecting rod. Remove the gudgeon pin bearing using a plier and replace it with a new one. See Figure 75.

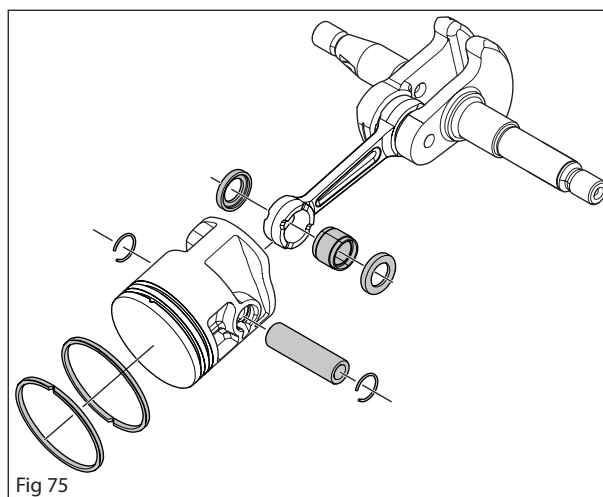


Fig 75

Cleaning and checking

Clean all parts, and scrape off all gasket remains and soot from the following components:

- The piston crown
- Top of the cylinder bore (inside)
- The cylinder exhaust port
- The base of the cylinder and/or crankcase

Check the following:

- That the cylinder's surface coating is not worn. Especially the upper part of the cylinder.
- That the cylinder does not have any chafe or cutting marks.
- That the piston is free from cutting marks. Minor scratches can be polished off using fine emery paper.
- That the piston ring is not welded to its track.
- Remove the piston ring from the piston to measure the wear. Use the base of the piston to push the piston ring down into the cylinder. The opening in the ring must not exceed 1 mm. Put the piston ring back into the piston slot and make sure it is the right way around. See Figure 76.

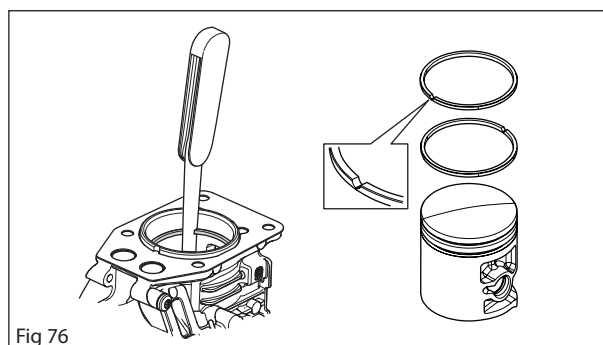


Fig 76

Faults and causes

Score marks on the piston (A).

1. Leakage, check not carried out.
2. Too low octane rating in the petrol.
3. Too little or incorrect oil in the fuel.

Carbon deposits (B)

1. Too much or incorrect oil in the fuel.

Piston ring breakage

1. Piston ring worn out.
2. Oversized piston ring groove.

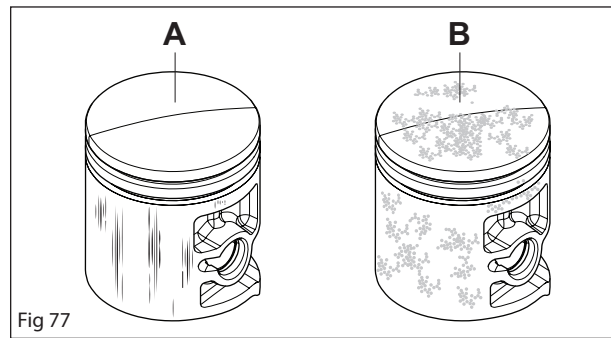


Fig 77

7.25 Assembling the piston and cylinder

1
Oil the gudgeon pin bearing with two-stroke oil and fit it to the connecting rod.

2
Fit the piston with the arrow facing the exhaust port, slide in the gudgeon pin and fit the circlips in place. See Figure 78. NOTE! Use new circlips.

3
Oil the piston and piston ring with two-stroke oil.

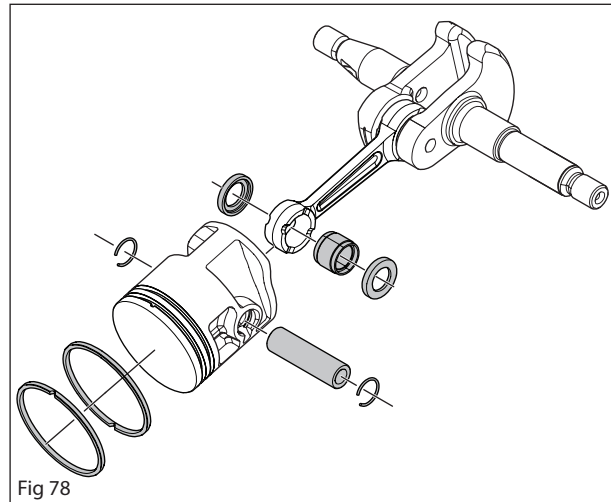


Fig 78

4
Lubricate a new cylinder base gasket with chain-saw oil and put it in place. Compress the piston ring and carefully push the piston into the cylinder opening. See Figure 79.

5
Attach the cylinder. The cylinder screws must be tightened crosswise with a tightening torque of 6.9 - 8.8 Nm.

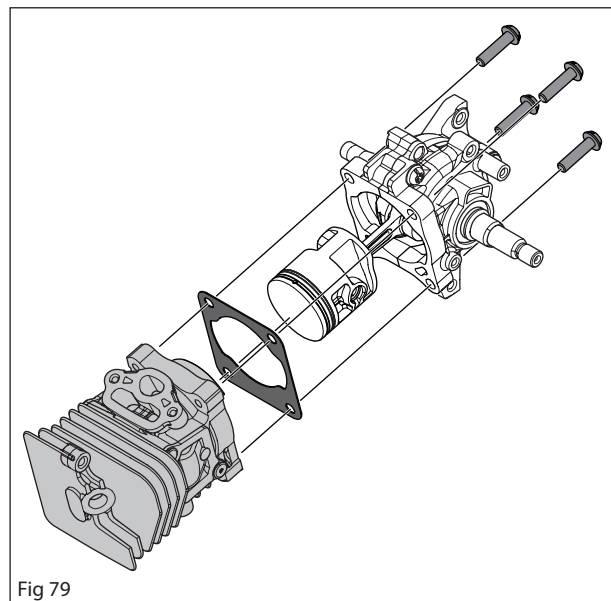


Fig 79

Assemble the saw by following the steps in the chapter 7.24 Dismantling the piston and the cylinder in the reverse order. Make sure to use the correct torque. See Service data.

7.26 Pressure testing the cylinder

Remove the following parts before you do a pressure test of the crankcase and cylinder:

- Clutch cover
- Air filter cover
- Air filter
- Muffler

1

Slide the cover plate (A) (502 54 11-02) under the carburetor and tighten, using the carburetor screws (B) as outlined in Figure 80.

2

Attach the cover plate (C) (502 50 71-01) at the cylinder with the muffler screws and tighten.

3

Remove the spark plug and screw in the 576 38 48-01 pressure tester (D). Connect the 531 03 06-23 pressure gauge (E). See Figure 80.

4

Pump up the pressure to 80 kPa (0.8 bar). Wait 30 seconds and make a reading. The pressure must not fall below 60 kPa (0.6 bar).

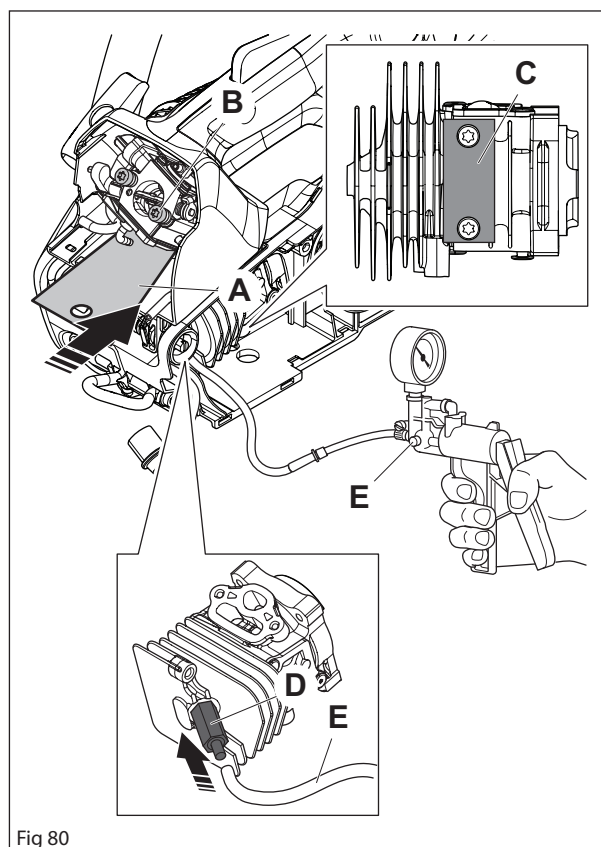


Fig 80

7.27 Dismantling the crankcase and crankshaft

1

Dismantle the saw by following the steps in the chapter 7.24 Dismantling the piston and the cylinder step 1 - 10.

Carefully pull the crankcase halves apart. Two guide pins keep the crankcase halves together. Lift out the connecting rod with the piston. See Figure 81.

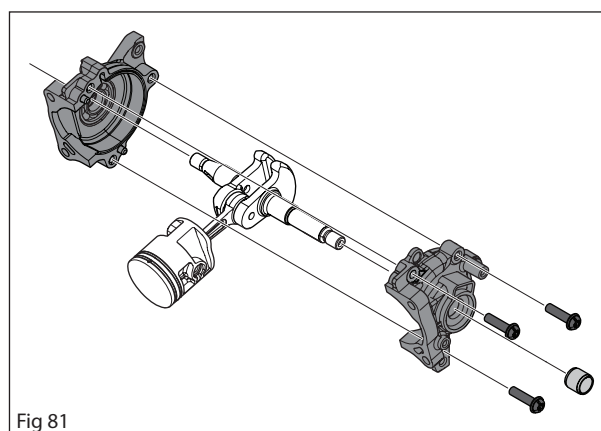
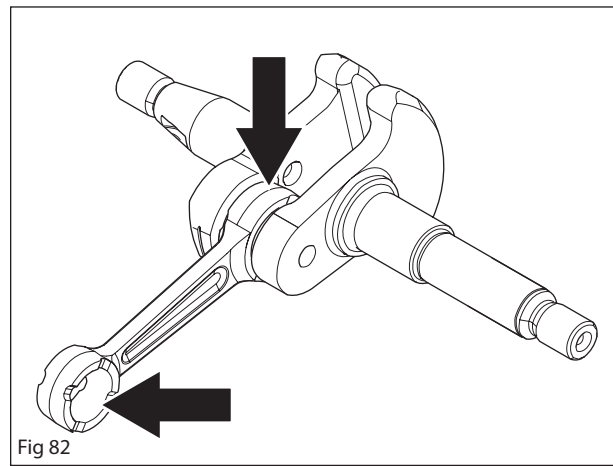


Fig 81

Cleaning and checking

Clean all parts and scrape off all gasket remains from the contact surfaces on the crankcase halves. Check the following:

- That the big-end bearing does not have any radial play. Axial play is permitted. See Figure 82.
- That the big-end bearings do not have any score marks or are discoloured on the sides.
- That the bearing surface for the gudgeon pin bearing does not have any score marks or is discoloured. See Figure 82.
- That the crankshaft bearing has no play or knocks.
- That the sealing surfaces of the sealing rings fitted against the crankshaft are not worn.
- That the crankcase is not cracked.



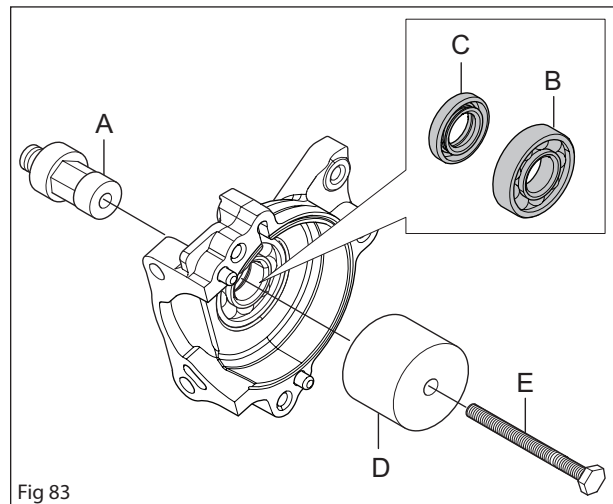
2

Use the 576 66 64-01 (A), 576 95 46-01 (D) and 725 23 80-51 (E) tools to dismantle the crankcase bearing (B) and sealing ring (C). Fit the service tool as outlined in Figure 83.

Note! These tools are included in mounting kit 577 71 44-01 and can not be ordered separately.

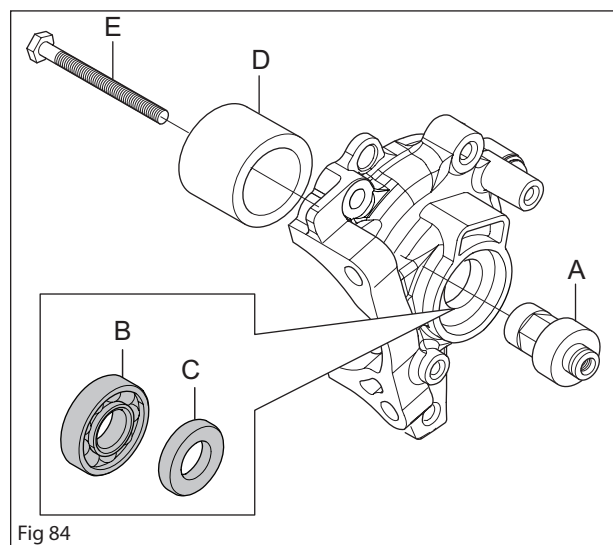
3

Tighten with a suitable socket spanner until the crankcase bearing (B) and sealing ring (C) come away from the crankcase half.



4

Carry out the same steps as in step 2 for the second crankcase half. See Figure 84.



7.28 Replacing the crankshaft bearing and sealing ring

1

Use the 576 66 64-01 (A), 576 95 45-01 (F) and 725 23 80-51 (E) tools to assemble the crankcase bearing (B) and sealing ring. Fit the service tool as outlined in Figure 85. Tighten with a suitable socket spanner until the roller bearing snaps in place.

Note! These tools are included in mounting kit 577 71 44-01 and can not be ordered separately.

2

Carry out the same steps as in step 1 for the second crankcase half. See Figure 86.

3

Use the 576 66 64-01 (A), 576 95 56-02 (G) and 725 23 80-51 (E) tools to assemble the sealing ring (C). Fit the service tool as outlined in Figure 87. Tighten with a suitable socket spanner as far as possible.

4

Carry out the same steps as in step 3 for the second crankcase half. See Figure 88.

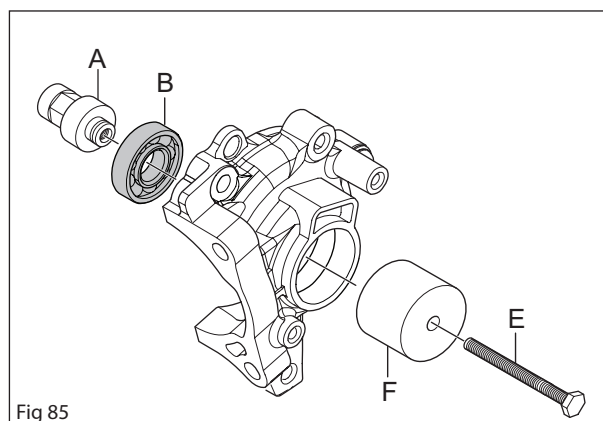


Fig 85

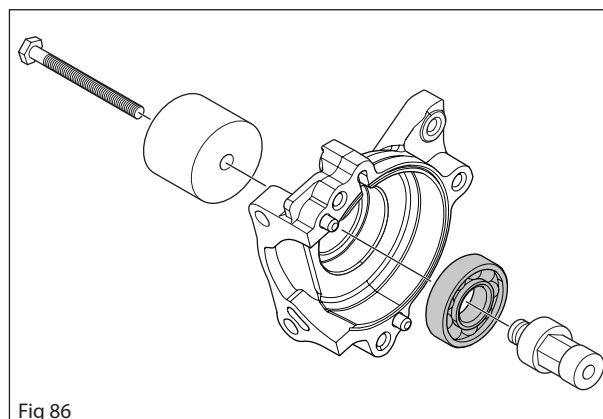


Fig 86

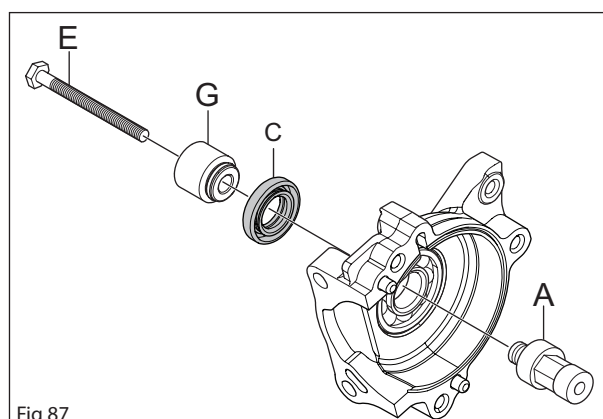


Fig 87

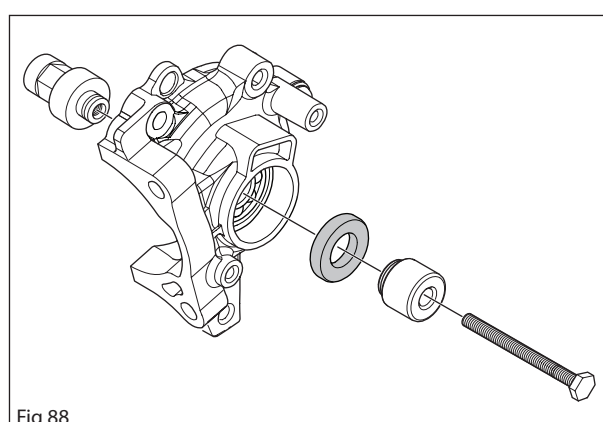
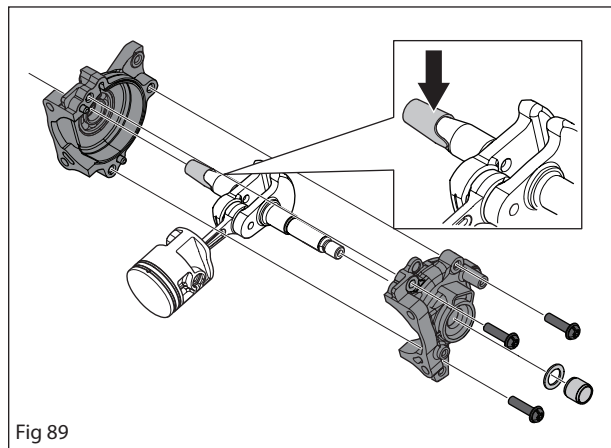


Fig 88

5

Place the guide pin in the crankcase half of the flywheel. Fit the 577 70 16-01 assembling tool to the crankshaft journal. See Figure 89.



6

Put the crankshaft in position and fit the other crankcase half. Apply liquid gasket between the surfaces of the crankcase. See Figure 90.

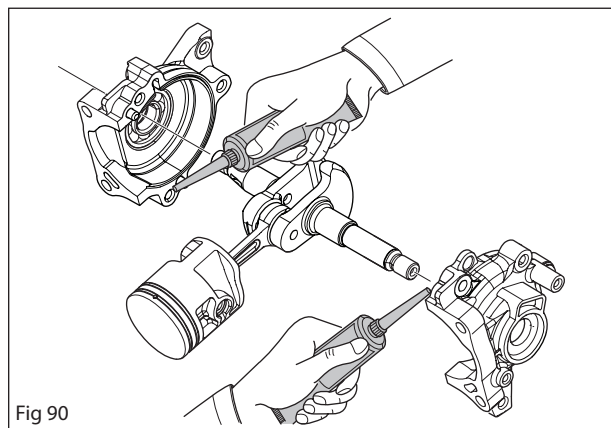
7

Screw in the three screws. Tighten them alternately. Tightening torque of 7-9 Nm.

Note! Remove the protective sleeve from the crankshaft journal after assembling the crankcase halves.

NOTE!

Take care to prevent any dirt and foreign particles from entering the crankcase.



8

Assemble the chain saw by following the steps in the chapter 7.24 Dismantling the piston and the cylinder in the reverse order. Make sure to use the correct torque. See Service data.

7.30 Repairing damaged threads

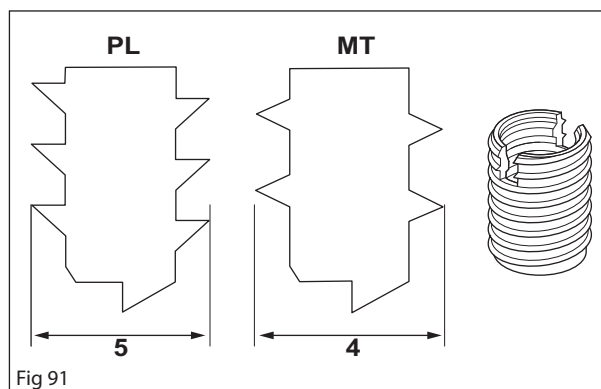
Damaged threads can be repaired using a threading plug. The slotted section in the thread plug is screwed in place first as this is the cutting part.

Request to repair a thread where a PL5 screw was used. First drill with a 6.1 mm bit and then screw in the thread plug using a suitable screw and spanner.

If a thread for an MT4 screw must be repaired, first drill with a 5.1 bit and then screw in the thread plug using a suitable screw and spanner.

This type of thread plug is ideal for plastic and magnesium but cannot be used to repair aluminium threads, where helicoil and metric screws must be used instead. Check the manufacturer's manual for thread information.

Part No.	Description
578 12 03-01	M5
503 27 39-01	PL5
503 27 31-01	MT4



8 Troubleshooting

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8.2	Troubleshooting techniques	61

8.1 Troubleshooting

The different faults which may occur on the chain saw are divided into four groups. Within each group possible operating faults are listed to the left while the probable fault alternatives are listed to the right. The most likely fault is listed first, etc.

Starting

Starting difficulties	Adjust the L-screw Clogged air filter Choke does not work Worn choke shaft Worn choke valve The fuel filter is clogged The fuel hose is clogged Piston ring is stuck Blocked impulse channel
The carburettor leaks fuel	Loose or defective fuel hose Hole in the membrane Worn needle/needle tip Control system is binding Control system set too high Leaking control system (air or fuel) The cover on the carburettor pump side is loose
Floods when the engine is not running	Worn needle/needle tip Control system set too high Control system is binding

Runs in idle with closed L-screw	Worn needle/needle tip Leaking diaphragm/cover plate Control system is binding Worn lever arm in the control system Faulty diffuser jet
Irregular idling	The fuel filter is clogged The fuel hose is clogged Leaking inlet hose (rubber) Loose clamping screws carburettor Worn throttle valve shaft The throttle valve screw is loose The throttle valve is worn Control system is binding Leaking control system (air or fuel) The control system's centre knob is worn Hole in the membrane Leaking diaphragm/cover plate Crankcase leak
The L-screw needs constant adjustment	The fuel hose is clogged Control system set too high Control system is binding Leaking control system (air or fuel) Leaking diaphragm/cover plate Faulty diffuser jet Crankcase leak
Too much fuel on idling	Control system set too high Control system is binding Control system damaged Worn needle/needle tip Leaking diaphragm/cover plate Incorrectly fitted control system

Idling (low speed)

Does not run at idling	Adjust the L-screw Leaking inlet hose (rubber) Loose clamping screws carburettor Loose or defective fuel hose The fuel filter is clogged The fuel hose is clogged Tank venting clogged The throttle valve shaft is inert Throttle stay is binding Defective throttle return spring Bent valve shaft stop Faulty diffuser jet
Too high idling speed	Adjust the L-screw Worn needle/needle tip Control system set too high Worn lever arm in the control system Leaking diaphragm/cover plate Control system is binding

High speed

Does not run at full throttle	Adjust the H-screw Blocked air filter Tank venting clogged The fuel filter is clogged The fuel hose is clogged Loose or defective fuel hose Impulse channel leaking Blocked impulse channel The cover on the carburettor pump side is loose Faulty pump diaphragm Leaking inlet hose (rubber) Loose clamping screws carburettor Control system set too low Control system damaged Control system incorrectly assembled Leak in control membrane/cover plate Control system is binding Clogged muffler
Low on power	Adjust the H-screw Tank venting clogged The fuel filter is clogged Impulse channel leaking Blocked impulse channel The cover on the carburettor pump side is loose Faulty pump diaphragm Blocked air filter Control system is binding Leaking control system (air or fuel) Control system incorrectly assembled Loose diaphragm rivet Hole in the membrane Leak in control membrane/cover plate

Will not "four stroke"	Tank venting clogged The fuel filter is clogged The fuel hose is clogged Loose or defective fuel hose Impulse channel leaking Blocked impulse channel The cover on the carburettor pump side is loose Faulty pump diaphragm Leaking inlet hose (rubber) Loose clamping screws carburettor Control system set too low Leaking control system (air or fuel) Control system incorrectly assembled Loose diaphragm rivet Hole in the membrane Leak in control membrane/cover plate
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Acceleration and retardation

Does not accelerate	Adjust the L-screw Adjust the H-screw Blocked air filter Tank venting clogged The fuel filter is clogged The fuel hose is clogged Loose or defective fuel hose Blocked impulse channel The cover on the carburettor pump side is loose Faulty pump diaphragm Leaking inlet hose (rubber) Loose clamping screws carburettor Control system set too low Control system incorrectly assembled Control system is binding Faulty diffuser jet Clogged muffler
The engine stops when releasing the throttle	Adjust the L-screw Adjust the H-screw Faulty pump diaphragm Control system set too high Control system is binding Faulty diffuser jet
Too rich acceleration	Adjust the L-screw Adjust the H-screw Blocked air filter Faulty pump diaphragm Faulty diffuser jet

8.2 Troubleshooting techniques

In addition to faults given in the above schematic, troubleshooting can be carried out on a specific component or specific chain saw system.

The different procedures are described in respective sections, see the list of contents, and are as follows:

- Function check of chain brake
- Resistance testing the stop plate
- Pressure testing the carburettor
- Pressure testing the decompression valve
- Pressure testing the cylinder



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