



# Instruction Manual

Original Instruction Manual



**DCS9010**



**Important:**

Read this instruction manual carefully before putting the chain saw into operation and strictly observe the safety regulations!  
Keep this Instruction Manual!

## Thank you for purchasing a MAKITA product

We want you to be satisfied with your MAKITA product. You have decided to buy one of the most up-to-date chain saws.

The MAKITA chain saw DCS9010 is a high-efficiency, modern chain saw for professional application, which can be used for cutting strong wood. It is ideal for the use in forests and for cutting long wood in sawmills.

Due to its high-power driving mechanism it is most useful for cutting down strong trees. At the same time the chain saw is of a slim, practical design which allows to carry out tension releasing work without any difficulties.

The MAKITA DCS9010 is a high-efficiency universal chain saw for hard work in forests.

You have purchased a high-efficiency device of a new generation, which has the following outstanding characteristics:

- Excellent power to weight ratio, i. e. high engine power combined with low weight.
- A high torque at a low rate of revolutions as a result of a favorable stroke-bore ratio, a computer calculated cylinder design and an asymmetric combustion chamber.
- Consequently you can use a very wide speed range in which the engine has a high output. In addition, the chain saw has a low fuel consumption and as a result only a low emission of polluting substances.
- The intelligent, programme controlled ignition system works maintenance-free and allows easy starting, smooth idling and good running at all speeds.
- The modern light-weight driving mechanism guarantees fast speeding up, as well as a low rate of vibrations which is advantageous not only to the device but also to the operator.
- A particularly easy to service as well as operate, with ergonomically handle.

The following industrial property rights apply: US 5411382, EP 0440827, EP 0560201, GBM 8909508, GBM 8913638, GBM 9203378.

In order to guarantee the optimal function and performance of your power chain saw and to ensure your personal safety we would request you to perform the following:

**Read this instruction manual carefully before putting the chain saw into operation for the first time, and strictly observe the safety regulations! Failure to observe these precautions can lead to severe injury or death!**



### Intended use

#### Power chain saws

This power chain saw may be used only for sawing wood out of doors. It is intended for the following uses depending on its class:

- **Professional and mid-class:** Use on small, medium and large trees: felling, limb removal, cutting to length, thinning.
- **Hobbyklasse:** Occasional use on small trees, fruit-tree care, felling, limb removal, cutting to length.

#### Unauthorised users:

Persons who are not familiar with the Instruction Manual, children, young people, and persons under the influence of drugs, alcohol or medication must not use this saw.

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## Packing

The MAKITA DCS9010 will be delivered in a protective cardboard box to prevent transport damage.

Cardboard is a basic raw material and is consequently reusable or suitable for recycling (waste paper recycling).





- 1. MAKITA chain saw DCS9010
- 2. Guide bar
- 3. Saw chain
- 4. Chain protection cover
- 5. Assembly tool
- 6. Instruction manual (not shown)

In case that one of the parts listed should not be included in the delivery inventory, please, consult your sales agent.

### Symbols

You will notice the following symbols on the chain saw and in the instruction manual:

	Read instruction manual and follow the warnings- and safety precautions!		On/Off switch		Fuel and oil mixture
	Particular care and caution!		Stop engine!		Chain oil fill/oil pump
	Forbidden!		Carburetor adjustment		Working in winter
	Wear protective helmet, eye and ear protection!		Choke lever		First aid
	No smoking!		Wear protective gloves!		Recycling
	No open fire!		Chain brake		
	Engine-manual start		Caution, Kickback!		CE-Marking

# SAFETY PRECAUTIONS

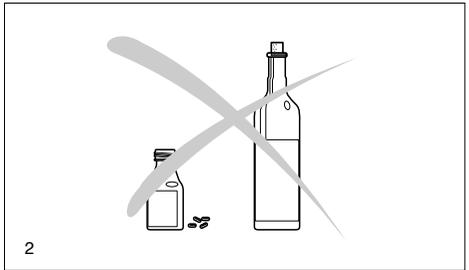
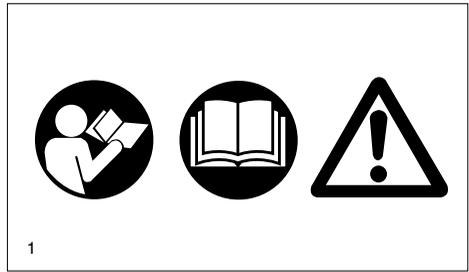
## General precautions

- **To ensure correct operation the user has to read this instruction manual** to make himself familiar with the characteristics of the chain saw. Users insufficiently informed will endanger themselves as well as others due to improper handling.
- It is recommended to lend the chain saw only to people who are experienced in working with chain saws. Always hand over the instruction manual.
- First users should ask the dealer for basic instructions to become familiarized with the characteristics of engine powered sawing or even attend a recognized course of instruction.

### NOTE:

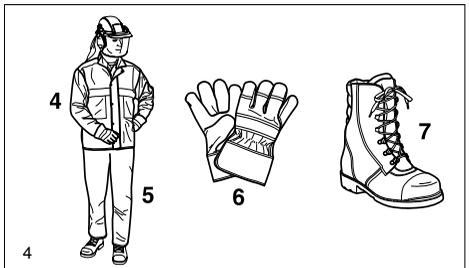
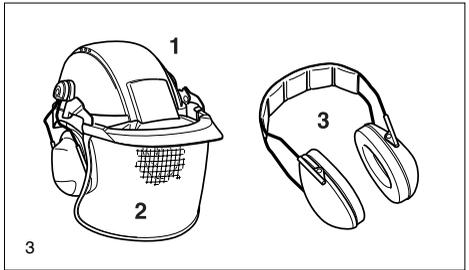
for inexperienced and first-time users we recommend the use of reduced-kickback saw chains for added safety (see "Kickback", page 6). Ask your MAKITA dealer.

- Children and young persons aged under 18 years must not be allowed to operate the chain saw. Persons over the age of 16 years may, however, use the chain saw for the purpose of being trained as long as they are under the supervision of a qualified trainer.
- Use chain saws always with the utmost care and attention.
- Operate the chain saw only if you are in good physical condition. If you are tired, your attention will be reduced. Be especially careful at the end of a working day. Perform all work calm and carefully. The user has to accept liability for others.
- Never use the chain saw after having consumed alcohol, drugs or medication.
- A fire extinguisher must be available in the near vicinity when working in easily inflammable vegetation or when it has not rained for a long time (danger of fire).



## Protective equipment

- **In order to avoid head, eye, hand or foot injuries as well as to protect your hearing the following protective equipment must be used during operation of the chain saw.**
- The kind of clothing should be appropriate, i. e. it should be tight-fitting but not be a hindrance. Do not wear jewellery or clothing which could become entangled with bushes or shrubs. If you have long hair, always wear a hairnet!
- It is necessary to wear a protective helmet whenever working with the chain saw. The **protective helmet (1)** is to be checked in regular intervals for damage and is to be replaced after 5 years at the latest. Use only approved protective helmets.
- The **face shield (2)** of the protective helmet (or the goggles) protects against sawdust and wood chips. During operation of the chain saw always wear a goggle or a face shield to prevent eye injuries.
- Wear adequate **noise protection equipment** (ear muffs (3), ear plugs, etc.). Octave brand analysis upon request.
- The **safety jacket (4)** is provided with special signal coloured shoulder straps and is comfortable and easy to care for.
- The **protective brace and bib overall (5)** is made of a nylon structure with 22 layers and protects against cuts. We strongly recommend its use.
- **Protective gloves (6)** made of thick leather are part of the prescribed equipment and must always be worn during operation of the chain saw.
- During operation of the chain saw **safety shoes or safety boots (7)** fitted with anti skid sole, steel toe caps and protection for the leg are always to be used. Safety shoes equipped with a protective layer provide protection against cuts and ensure a secure footing.

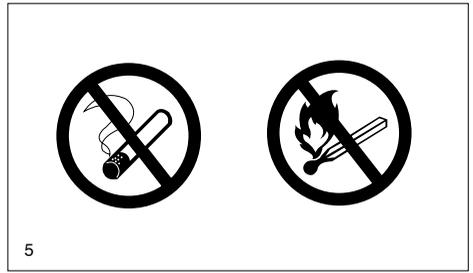


## Fuels / Refuelling

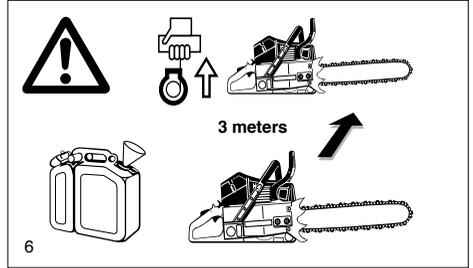
- Stop the engine before refuelling the chain saw.
- Do not smoke or work near open fires (5).
- Let the engine cool down before refuelling.
- Fuels can contain substances similar to solvents. Eyes and skin should not come in contact with mineral oil products. Always wear protective gloves when refuelling. Frequently clean and change protective clothes. Do not breathe in fuel vapors. Inhalation of fuel vapours can be hazardous to your health.
- Do not spill fuel or chain oil. When you have spilt fuel or oil immediately clean the chain saw. Fuel should not come in contact with clothes. If your clothes have come in contact with fuel, change them at once.
- Ensure that no fuel or chain oil oozes into the soil (environmental protection). Use an appropriate base.
- Refuelling is not allowed in closed rooms. Fuel vapors will accumulate near the floor (explosion hazard).
- Ensure to firmly tighten the screw caps of the fuel and oil tanks.
- Change the place before starting the engine (at least 3 m from the place of refuelling) (6).
- Fuel cannot be stored for an unlimited period of time. Buy only as much as will be consumed in the near future.
- Use only approved and marked containers for the transport and storage of fuel and chain oil. Ensure children have no access to fuel or chain oil.

## Putting into operation

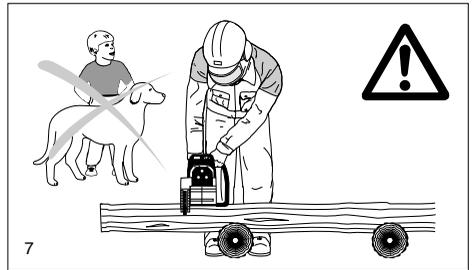
- **Do not work on your own. Another person must be nearby in case of emergencies** (within shouting distance).
- Ensure that there are no children or other people within the working area. Pay attention to any animals in the working area, as well (7).
- **Before starting work the chain saw must be checked for perfect function and operating safety according to the prescriptions.**  
Check especially the function of the chain brake, the correct mounting of the guide bar, the correct sharpening and tightening of the chain, the firm mounting of the sprocket guard, the easy motion of the throttle lever and the function of the throttle lever lock, the cleanliness and dryness of the handles, and the function of the ON/OFF switch.
- Put the chain saw only into operation if it is completely assembled. Never use the chain saw when it is not completely assembled.
- Before starting the chain saw ensure that you have a safe footing.
- Put the chain saw into operation only as described in this instruction manual (8). Other starting methods are not allowed.
- When starting the chain saw it must be well supported and securely held. The guide bar and chain must not be in contact with any object.
- **When working with the chain saw always hold it with both hands.** Take the back handle with the right hand and the tubular handle with the left hand. Hold the handles tightly with your thumbs facing your fingers.
- **CAUTION: When releasing the throttle lever the chain will keep on running for a short period of time** (free-wheeling).
- Continuously ensure that you have a safe footing.
- Hold the chain saw so that you will not breathe in the exhaust gas. Do not work in closed rooms (danger of being contaminated).
- **Switch off the chain saw immediately if you observe any changes in its operating behavior.**
- **The engine must be switched off before checking the chain tension, tightening the chain, replacing it or clearing malfunctions** (9).
- When the sawing device is hit by stones, nails or other hard objects, switch off the engine immediately and check the sawing device.
- When stopping work or leaving the working place switch off the chain saw (9) and put it down such that nobody is endangered.
- Do not put the overheated power chain saw in dry grass or on any inflammable objects. The muffler is very hot (danger of fire).
- **CAUTION:** Oil dropping from the chain or guide bar after having stopped the saw chain will pollute the soil. Always use an appropriate base.



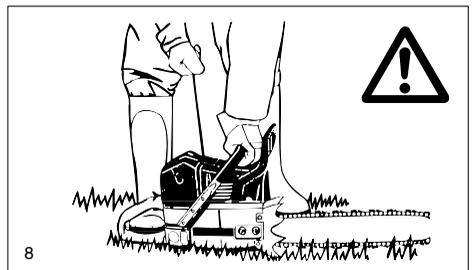
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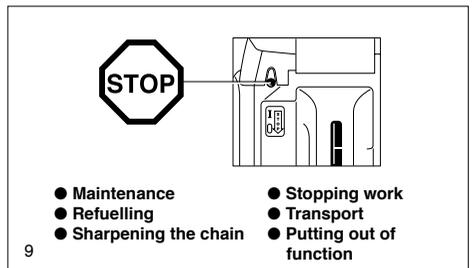
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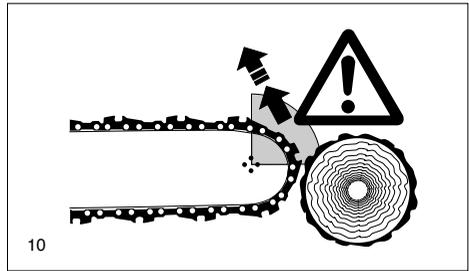
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## Kickback

- When working with the chain saw dangerous kickbacks may occur.
- Kickbacks are produced when the upper part of the end of the guide bar inadvertently touches wood or other hard objects (10).
- In this case the chain saw is thrown without any control and with high energy potentials in the direction of the user (**risk of injuries**).

**In order to prevent kickbacks follow the instructions given below:**

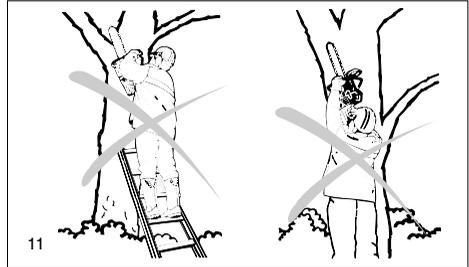
- When timber must be pierced for cutting it is urgently recommended to have these works carried out by specially trained people only.
- Never apply the end of the bar when starting to make a cut.
- Always observe the end of the guide bar. Be careful when continuing an already done cut.
- When starting to cut the chain must be running.
- Ensure that the chain is always sharpened correctly. Pay special attention to the height of the depth limiter.
- Never cut several branches at the same time. When cutting a branch ensure that no other branch is touched.
- When crosscutting a trunk be aware of the trunks next to it.



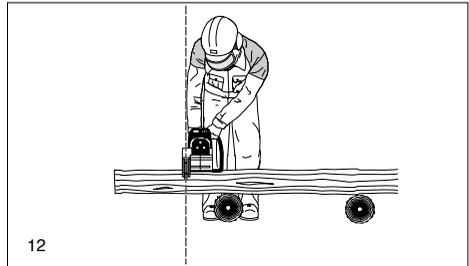
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## Working behavior/Method of working

- Only use the chain saw during good light and visibility periods. Be aware of slippery or wet areas, and of ice and snow (risk of slipping). The risk of slipping is extremely high when working on recently peeled wood (bark).
- Never work on unstable surfaces. Make sure that there are no obstacles in the working area, risk of stumbling. Always ensure that you have a safe footing.
- Never saw above your shoulder height (11).
- Never saw while standing on a ladder.
- Never climb up into trees to perform sawing with the chain saw.
- Never bend forward by far to perform sawing.
- Guide the chain saw in such a way that no part of your body is within the elongated swivelling range of the saw (12).
- Use the chain saw for sawing wood only.
- Avoid to touch the ground with the chain saw while it is still running.
- Never use the chain saw for lifting up or removing pieces of wood or other objects.
- Remove foreign bodies such as sand, stones and nails found within the working area. Foreign bodies may damage the sawing device and can cause dangerous kickbacks.
- When sawing precut timber use a safe support (sawing jack, 13). Do not ask anyone to hold the wood, and do not hold it with your foot.



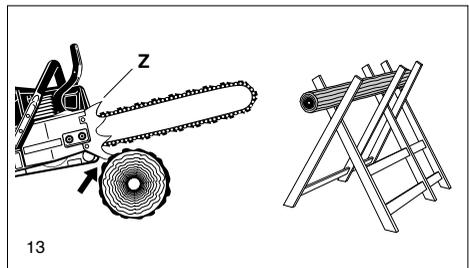
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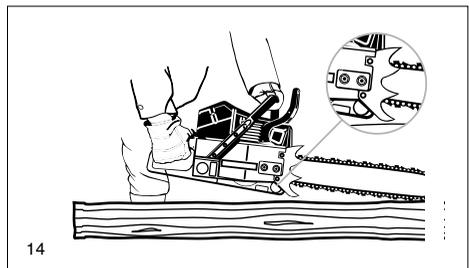
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**For cutting down trees or performing crosscuts the toothed ledge (13,Z) must be applied to the wood to be cut.**

- Before performing a **crosscut** firmly apply the toothed ledge to the timber, only then can the timber be cut with the chain running. For this the chain saw is lifted at the back handle and guided with the tubular handle. The toothed ledge serves as a center of rotation. Continue by slightly pressing down the tubular handle and simultaneously pulling backwards the chain saw. Apply the toothed ledge a little bit deeper and once again lift the back handle.
- **When the timber must be pierced for cutting or longitudinal cuts are to be performed it is urgently recommended to have these works carried out by specially trained persons only** (high risk of kickbacks).
- For performing **longitudinal cuts** (14) apply the sawing device at an angle which is as small as possible. Be very careful when carrying out this kind of work because the toothed ledge cannot be used.
- The sawing device must be running whenever you remove the chain saw from the timber.
- When performing several cuts the throttle lever must be released in between.



13



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- Be careful when cutting splintery wood. Cut pieces of wood may be pulled along (risk of injuries).
- When cutting with the bottom edge of the guide bar, the chain saw may be pushed in the direction of the user if the chain gets clamped. For this reason use the top edge of the bar whenever possible. The chain saw will then be pushed away from you (15).
- If the timber is not free of tension (16), first cut the pressure side (A). Then the crosscut can be performed on the tension side (B). Thus clamping of the guide bar can be avoided.

**CAUTION:**

**People cutting down trees or performing tension releasing works must be specially trained. High risk of injuries.**

- When releasing the tension, the chain saw should be supported on the trunk. Do not use the end of the bar for cutting (risk of kickbacks).
- Be aware of branches under tension. Do not cut free branches from below.
- Never perform tension releasing works while standing on the trunk.
- Before cutting down a tree ensure that
  - a) only those people are within the working area which are actually involved in cutting down the tree
  - b) every worker involved can withdraw without stumbling (the people should withdraw backwards in a diagonal line, i. e. at a degree of 45°).
  - c) the bottom part of the trunk is free from foreign bodies, underbrush and branches. Make sure to have a safe footing (risk of stumbling).
  - d) the next working place is at least 2 1/2 tree lengths away (17). Before cutting down the tree check the direction of fall and make sure that there are neither any people nor objects within a distance of 2 1/2 tree lengths.

**Judging the tree:**

Direction of hanging - loose or dry branches - height of the tree - natural hang over - is the tree rotten?

- Take into account the direction and the velocity of the wind. If strong gusts are occurring, do not perform any cutting down works.

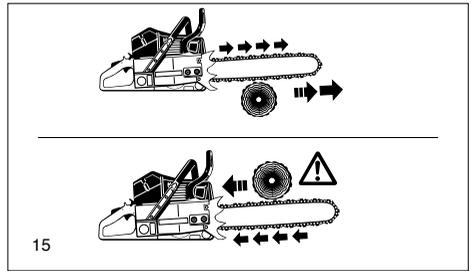
**Cutting the roots:**

Start with the strongest root. First perform the vertical and then the horizontal cut.

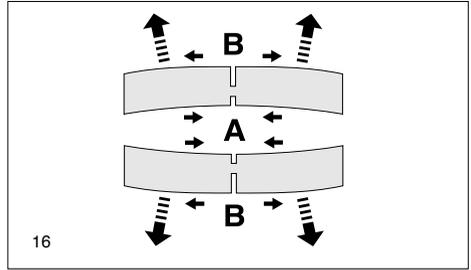
**Notching the trunk (A, 18):**

The notch determines the direction of fall and guides the tree. The trunk is notched perpendicular to the direction of fall and penetrates 1/3 - 1/5 of the trunk diameter. Perform the cut near the ground.

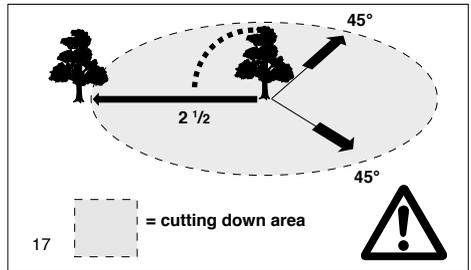
- When correcting the cut, always do so over the whole width of the notch.
- **Cut down** the tree (B, 19) above the bottom edge of the notch (D). The cut must be exactly horizontal. The distance between both cuts must be approx. 1/10 of the trunk diameter.
- The **material between both cuts** (C) serves as a hinge. Never cut it through, otherwise the tree will fall without any control. Insert felling wedges in time.
- Secure the cut only with wedges made of plastic or aluminium. Do not use iron wedges.
- When cutting down a tree always stay sideways of the falling tree.
- When withdrawing after having performed the cut, be aware of falling branches.
- When working on a sloping ground the user of the power chain saw must stay above or sideways of the trunk to be cut or the already cut down tree.
- Be aware of trunks which may roll towards you.



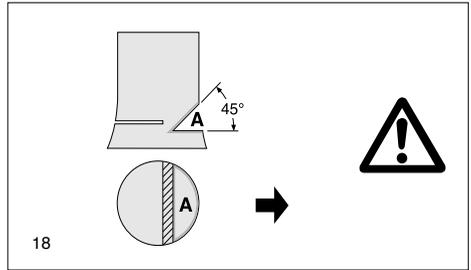
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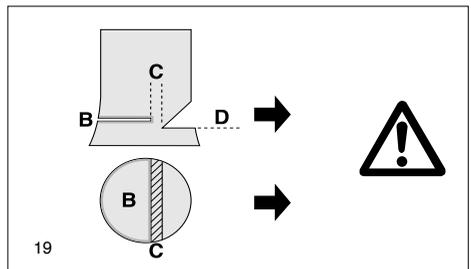
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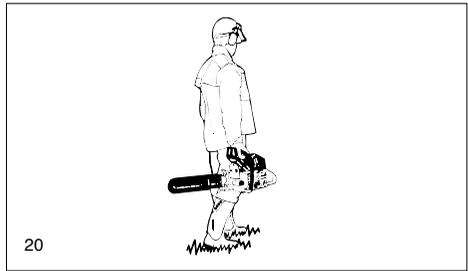
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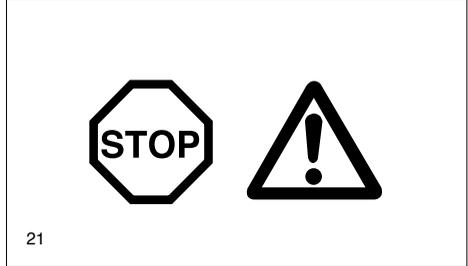
## Transport and storage

- When changing your position during work switch off the chain saw and actuate the chain brake in order to prevent an inadvertent start of the chain.
- Never carry or transport the chain saw with the chain running.
- When transporting the chain saw over long distances the guide bar protection cover (delivered with the chain saw) must be applied.
- Carry the chain saw with the tubular handle. The guide bar indicates backwards (20). Avoid to come in contact with the muffler (danger of burning).
- Ensure safe positioning of the chain saw during car transportation to avoid fuel or chain oil leakage.
- Store the chain saw safely in a dry place. It must not be stored outdoors. Keep the chain saw away from children.
- For storing the chain saw over a long period of time or shipping it the fuel and oil tanks must be completely emptied.



## Maintenance

- **Before performing maintenance works switch off the chain saw (21) and pull out the plug cap.**
- Before starting work always check the operating safety of the chain saw, in particular the function of the chain brake. Make sure that the chain is always sharpened and tightened correctly (22).
- Operate the chain saw only at a low noise and emission level. For this ensure the carburetor is adjusted correctly.
- Regularly clean the chain saw.
- Regularly check the tank cap for tightness.

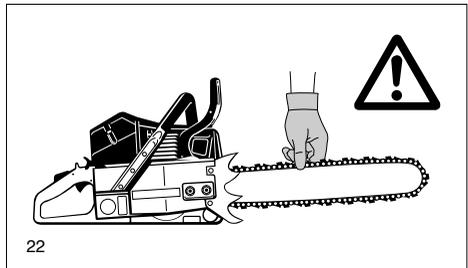


**Observe the accident prevention instructions issued by the trade federations and insurance companies. Do not perform any modifications on the chain saw. You will risk your safety.**

Perform only the maintenance and repair works described in the instruction manual. All other works must be carried out by the MAKITA service.

Use only original MAKITA spare parts and accessories.

Applying spare parts which are not original MAKITA parts or accessories and guide bar/chain combinations or lengths results in a high risk of accidents. For accidents and damage resulting from using sawing devices or accessories which have not been approved we cannot accept any responsibility.



## First aid

For the event of a possible accident, please, make sure that a first aid box is always immediately available in the near vicinity. Immediately replace any items used from the first aid box.

**Should you ask for help, please, give the following information:**

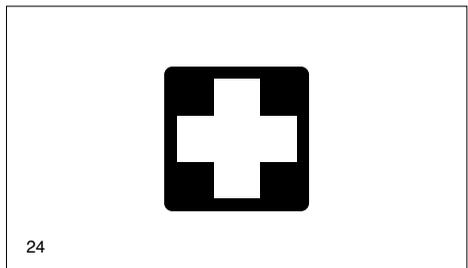
- place of accident
- what happened
- number of injured people
- kind of injuries
- your name!



## NOTE

Individuals with poor circulation who are exposed to excessive vibration may experience injury to blood vessels or the nervous system.

Vibration may cause the following symptoms to occur in the fingers, hands or wrists: "Falling asleep" (numbness), tingling, pain, stabbing sensation, alteration of skin colour or of the skin. **If any of these symptoms occur, see a physician!**



## Technical data

		DCS9010
Stroke volume	cm <sup>3</sup>	90
Bore	mm	52
Stroke	mm	42
Max. power at speed	kW / RPM	4.9 / 9,500
Max. torque at speed	Nm / RPM	5.8 / 6,500
Limit speed	RPM	13,500
Idling speed	RPM	2,200
Coupling speed	RPM	3,600
Sound pressure level $L_{pA, eq}$ per ISO 22868 <sup>1) 3) 4)</sup>	dB(A)	103 / $K_{pA} = 2,5$
Sound power level $L_{WA, eq}$ per ISO 22868 <sup>1) 4)</sup>	dB(A)	110 / $K_{WA} = 2,5$
Vibration acceleration $a_{hv, eq}$ per ISO 22867 <sup>1) 4)</sup>		
- Tubular handle	m/s <sup>2</sup>	7.0 / $K=2$
- Rear handle	m/s <sup>2</sup>	6.2 / $K=2$
Carburetor (diaphragm carburetor)	Type	TILLOTSON HS-295A
Ignition system	Type	electronic
Spark plug	Type	NGK BPMR 7A
Electrode gap	mm	0.5 - 0.8
or spark plug	Type	BOSCH WSR 6F
Fuel consumption at max. load per ISO 7293	kg/h	2.3
Specific consumption at max. load per ISO 7293	g/kWh	480
Fuel tank capacity	l	1.0
Chain oil tank capacity	l	0.4
Mixture ratio (fuel/two-stroke oil)		
- when using MAKITA oil		50:1
- when using Aspen Alkylat (two-stroke fuel)		50:1 (2%)
- when using other oils		50:1 (quality grade: JASO FC or ISO EGD)
Chain brake		engages manually or in case of kickback
Chain speed <sup>2)</sup>	m/s	21.2
Sprocket pitch	inch	3/8
Number of teeth	Z	7
Chain type (see the Extract from the spare-parts list)		
Pitch / Driving element strength	inch	3/8 / .058
Guide bar, length of a cut	cm	50 / 60 / 74
Guide-bar type (see the Extract from the spare-parts list)		
Weight (fuel tank empty, without chain and guide bar)	kg	8.2

<sup>1)</sup> Figures derived in equal part from idle and full-load operation.

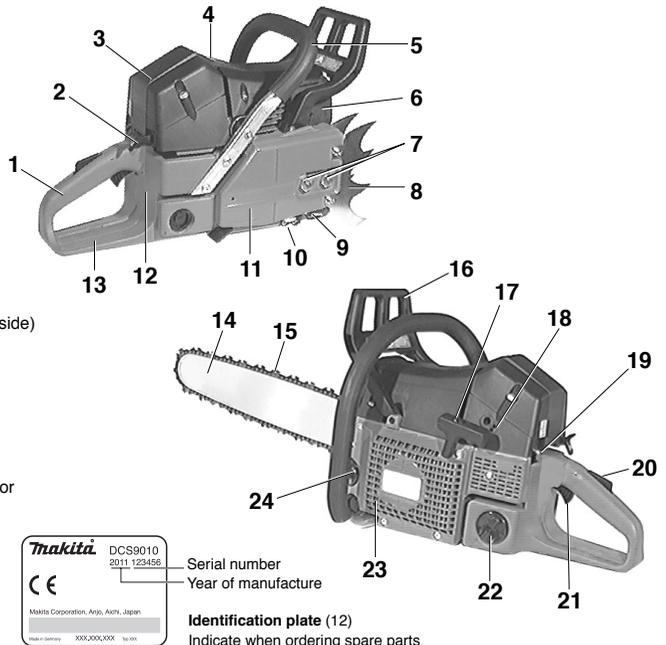
<sup>2)</sup> At max. power.

<sup>3)</sup> At the workplace.

<sup>4)</sup> Uncertainty (K=).

## Denomination of components

- 1 Handle
- 2 Choke
- 3 Cover for air filter/spark plug
- 4 Switch for use in winter
- 5 Tubular handle
- 6 Muffler
- 7 Fastening nuts
- 8 Spike bar
- 9 Chain catcher
- 10 Adjusting screw for oil pump (bottom side)
- 11 Sprocket guard
- 12 Identification plate
- 13 Hand guard
- 14 Guide bar
- 15 Chain
- 16 Hand guard
- 17 Starter grip
- 18 Adjusting screws "H-S-L" for carburetor
- 19 ON/OFF switch
- 20 Safety locking button
- 21 Throttle lever
- 22 Fuel tank cap
- 23 Fan housing with starting assembly
- 24 Oil tank cap



Serial number  
Year of manufacture

Identification plate (12)  
Indicate when ordering spare parts

## PUTTING INTO OPERATION

### Mounting the guide bar and chain

Use the universal wrench delivered with the chain saw for the following works.

Put the chain saw on a stable surface and carry out the following steps for mounting the guide bar and chain:

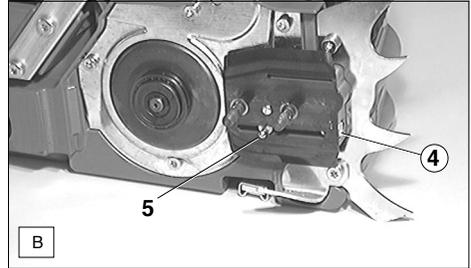


**CAUTION:** Before doing any work on the guide bar or chain, **always switch off the engine and pull the plug cap off the spark plug** (see "Replacing the spark plug"). **Always wear protective gloves!**

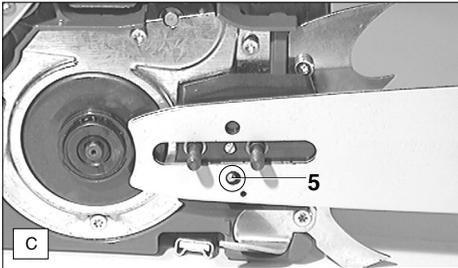
**CAUTION:** Start the chain saw only after having assembled it completely and inspected.



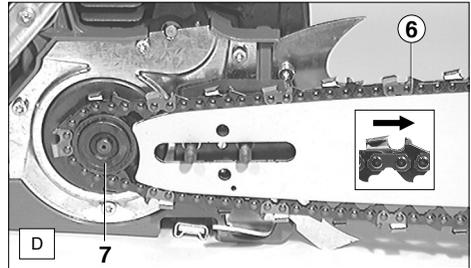
- Loosen the two fastening nuts (A/1).
- Pull off the sprocket guard (A/2).



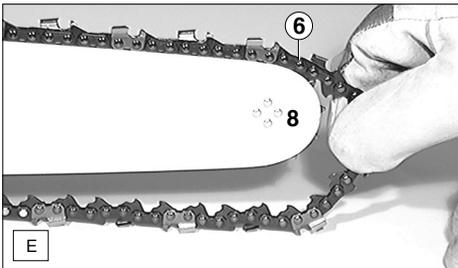
- Turn the chain adjusting screw (B/4) anti-clockwise until the pivot (B/5) is positioned approx. 2 cm in front of the left stop.



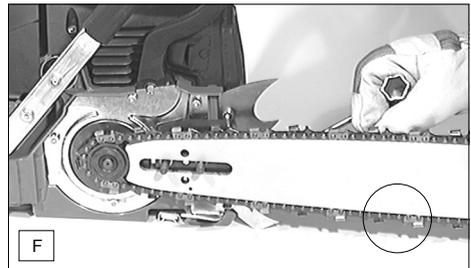
- Position the guide bar. Ensure the pivot (B/5, C/5) of the chain tightener is inserted into the bore (see circle) of the guide bar.



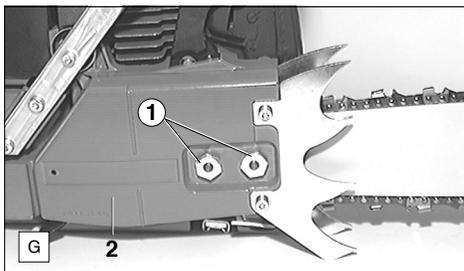
- Put the chain (D/6) onto the sprocket (D/7) and insert it into the guide groove of the guide bar. The cutting edges of the top side of the bar must be oriented in the direction of the arrow.



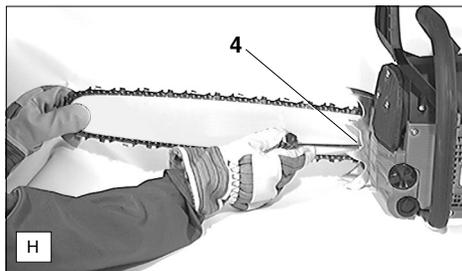
- Lead the chain (E/6) around the sprocket nose (E/8) of the guide bar.



- Turn the chain tightener (B/4) to the right (clockwise) until the chain is in gear with the guide groove of the bottom side of the bar (see circle). Press the guide bar with your left hand against the casing.



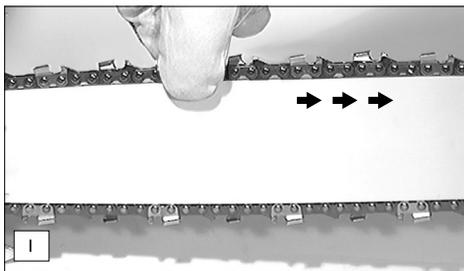
- Position the sprocket guard (G/2).  
Manually tighten the two fastening nuts (G/1).



### Tightening the chain

- Slightly lift the end of the guide bar and turn the chain adjusting screw (H/4) to the right (clockwise) until the chain rests against the bottom side of the guide bar.
- Continue to lift the guide bar end and firmly tighten the two fastening nuts (G/1) by means of the universal wrench.

### Checking the chain tension



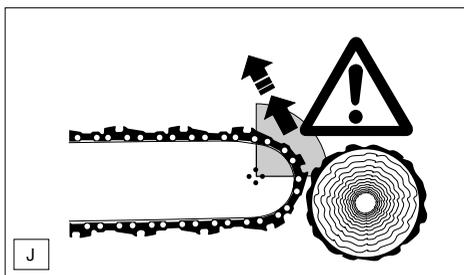
- The tension of the chain is correct if the chain rests against the bottom side of the guide bar and can still be easily turned by hand.
- While doing so the chain brake must be released.
- Check the chain tension in short intervals because new chains tend to elongate.
- When checking the chain tension the engine must be switched off.

### NOTE:

It is recommended to use 2-3 chains alternatively.

In order to guarantee a uniform wear of the guide bar the bar should be turned over whenever replacing the chain.

### Chain brake



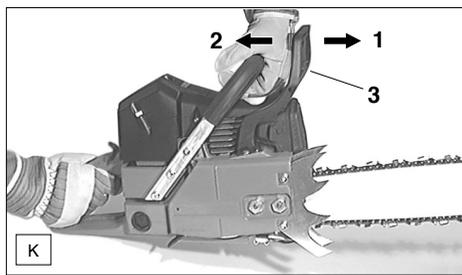
The DCS9010 comes with an inertia chain brake as standard equipment. If kickback occurs due to contact of the guide-bar tip with wood (see SAFETY PRECAUTIONS, page 6), the chain brake will stop the chain through inertia if the kickback is sufficiently strong.

The chain will stop within a fraction of a second.

**The chain brake is installed to block the saw chain before starting it and to stop it immediately in case of an emergency.**

**IMPORTANT: NEVER run the saw with the chain brake activated** (except for testing, see "Testing chain brake")! **Doing so can very quickly cause extensive engine damage!**

**ALWAYS release the chain brake before starting the work!**



### Engaging the chain brake (braking)

If the kickback is strong enough the sudden acceleration of the guide bar combined with the inertia of the hand guard (K/3) will **automatically** actuate the chain brake.

When actuating the chain brake **manually**, press the hand guard (K/3) with your left hand in the direction of the guide bar end (arrow 1).

### Releasing the chain brake

Pull the hand guard (K/3) in the direction of the tubular handle (arrow 2) until it will engage noticeably. Now the chain break is released.

## Fuels / Refuelling



Fuel	50:1	50:1
		
1000 cm <sup>3</sup> (1 litre)	20 cm <sup>3</sup>	20 cm <sup>3</sup>
5000 cm <sup>3</sup> (5 litre)	100 cm <sup>3</sup>	100 cm <sup>3</sup>
10000 cm <sup>3</sup> (10 litre)	200 cm <sup>3</sup>	200 cm <sup>3</sup>

**CAUTION: This saw is powered by mineral-oil products (gasoline and oil). Be especially careful when handling gasoline. Avoid all flame or fire. Do not smoke (explosion hazard).**

### Fuel mixture

This tool is powered by a high-performance air-cooled two-stroke engine. It runs on a mixture of gasoline and two-stroke engine oil.

The engine is designed for unleaded regular gasoline with a min. octane value of 91 ROZ. In case no such fuel is available, you can use fuel with a higher octane value. This will not affect the engine.

**In order to obtain an optimum engine output and to protect your health and the environment use unleaded fuel only.**

To lubricate the engine, use a synthetic oil for two-stroke air-cooled engines (quality grade JASO FC or ISO EGD), which has to be added to the fuel. The engine has been designed for use of MAKITA high-performance two-stroke engine oil and a mixture ratio of only 50:1 to protect the environment. In addition, a long service life and reliable operation with a minimum emission of exhaust gases are ensured.

MAKITA high-performance two-stroke engine oil is available in the following sizes to suit your individual requirements:

- 1 l order number 980 008 607
- 100 ml order number 980 008 606

In case MAKITA high-performance two-stroke engine oil is not available, it is urgently recommended to use a mixture ratio of 50:1 with other two-stroke engine oils, as otherwise optimum operation of the engine cannot be guaranteed.



**Caution: Do not use ready-mixed fuel from petrol stations.**

### The correct mixture ratio:

- 50:1** when using MAKITA high-performance two-stroke engine oil, i. e. mix 50 parts gasoline with 1 part oil.
- 50:1** when using other synthetic two-stroke engine oils (quality grade JASO FC or ISO EGD), i. e. mix 50 parts gasoline with 1 part oil.

### NOTE:

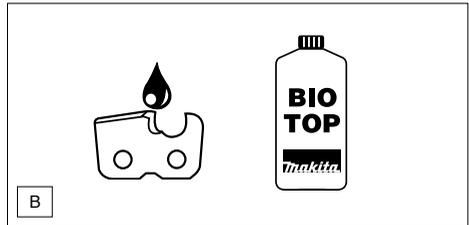
For preparing the fuel-oil mixture first mix the entire oil quantity with half of the fuel required, then add the remaining fuel. Thoroughly shake the mixture before filling it into the chain saw tank.

**It is not wise to add more engine oil than specified to ensure safe operation. This will only result in a higher production of combustion residues which will pollute the environment and clog the exhaust channel in the cylinder as well as the muffler. In addition, fuel consumption will rise and performance will decrease.**

## The Storage of Fuel

Fuels have a limited storage life. Fuel and fuel mixtures age through evaporation, especially at high temperatures. Aged fuel and fuel mixtures can cause starting problems and damage the engine. Purchase only that amount of fuel, which will be consumed over the next few months. At high temperatures, once fuel has been mixed it should be used up in 6-8 weeks.

**Store fuel only in proper containers, in dry, cool, secure locations!**



### Chain oil

Use an oil with adhesive additive for lubricating the chain and guide bar. The adhesive additive prevents the oil from being flung off the chain too quickly.

We recommend the use of chain oil which is bio-degradable in order to protect the environment. The use of bio-degradable oil may even be required by local regulations.

The chain oil BIOTOP sold by MAKITA is made of special vegetable oils and is 100% bio-degradable. BIOTOP has been granted the "blue angel" (Blauer Umweltschutz-Engel) for being particularly environment-friendly (RAL UZ 48).

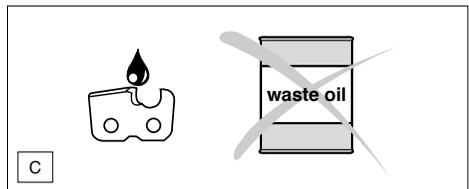
BIOTOP chain oil is available in the following sizes:

- 1 l order number 980 008 610
- 5 l order number 980 008 611

Bio-degradable oil is stable only for a limited period of time. It should be used within 2 years from the date of manufacture (printed on the container).

### Important note on bio-degradable chain oils:

If you are not planning to use the saw again for an extended period of time, empty the oil tank and put in a small amount of regular **engine oil** (SAE 30), and then run the saw for a time. This is necessary to flush out all remaining bio-degradable oil from the oil tank, oil-feed system, chain and guide bar, as many such oils tend to leave sticky residues over time, which can cause damage to the oil pump or other parts. The next time you use the saw, fill the tank with BIOTOP chain oil again.



### NEVER USE WASTE OIL

Waste oil is very dangerous for the environment.

Waste oil contains high amounts of carcinogenic substances. Residues in waste oil result in a high degree of wear and tear at the oil pump and the sawing device.

In case of damage caused by using waste oil or inappropriate chain oil the product guarantee will be null and void.

Your salesman will inform you about the use of chain oil.

## AVOID SKIN AND EYE CONTACT



Mineral oil products as well as oils degrease your skin. If your skin comes in contact with these substances repeatedly and for a longer period of time, it will desiccate. Various skin diseases may result. In addition, allergic reactions are known.

Eyes can be irritated by contact with oil. If oil comes into your eyes, immediately wash them with clear water.

If your eyes are still irritated, go to see a doctor.

## Refuelling



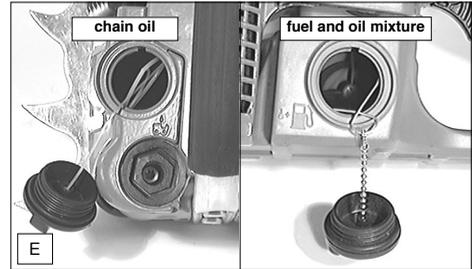
### FOLLOW THE SAFETY PRECAUTIONS

Be careful and cautious when handling fuels.

The engine must be switched off.

- Thoroughly clean the tanks around the screw caps to prevent dirt from entering the fuel or oil tank.
- Unscrew the cap and fill in fuel or chain oil until it reaches the bottom edge of the filler socket. Be careful when refilling. Do not spill fuel or oil.
- Tightly screw on the cap.

Clean screw cap and tank after refuelling.



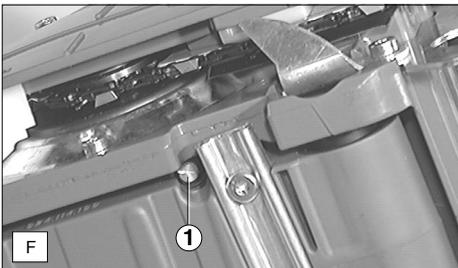
## Lubricating the chain



In order to ensure sufficient lubrication of the chain there must always be enough oil in the tank. Its contents is sufficient for approx. 1/2 hour of continuous operation.

During this procedure check whether there is enough the chain oil in the tank and refill if necessary. **Do this only with the engine turned off!**

## Adjusting the chain lubrication

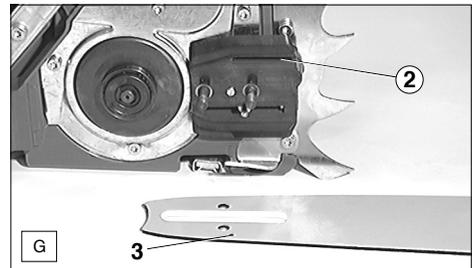


The engine must be switched off.

The oil pump can be regulated with the adjusting screw (F/1). The adjusting screw is mounted on the bottom side of the casing. The oil pump has been adjusted to a medium feed quantity by MAKITA.

For changing the feed quantity use the universal wrench and adjust the adjusting screw (F/1) in the following way:

- turn to the right to reduce the quantity
- turn to the left to increase the quantity.



To guarantee a troublefree operation of the oil pump the oil guide groove at the crank case (G/2) and the oil inlet bore in the guide bar (G/3) must be cleaned regularly.

### Note:

After the saw has been turned off it is normal for residual chain oil to drip from the oil feed system, the guide bar and the chain for a time. This does not constitute a defect!

Place the saw on a suitable surface.

## Starting the engine



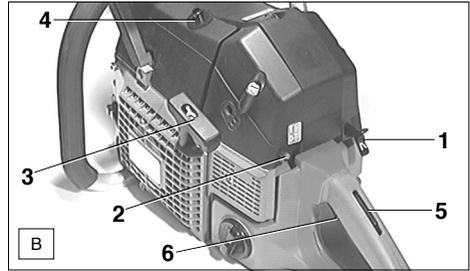
- Move at least 3m away from the place where you fuelled the saw.
- Ensure to have a safe footing and put the chain saw on the floor such that the sawing device is in contact with any object.
- Actuating the chain brake (blocking).
- Hold the tubular handle tightly with one hand and press the chain saw to the ground.
- Put your tip-toe in the back hand guard.

### Cold-starting:

Pull the choke (B/1) out until it audibly clicks. This simultaneously actuates the half-throttle lock.

Put the short-circuiting switch (B/2) in position "I" (START).

Slowly pull out the starter cable (B/3) until you notice resistance (the piston is positioned before the top dead centre).



Push the starting valve (B/4) (option).

**Now pull the starter cable with a fast and forceful movement until you hear the first ignition.**

**CAUTION:** Do not pull out the starter cable more than approx. 50 cm, and lead it back by hand.

Push the starting valve (B/4) (option).

**Depress the choke (B/1) and pull the starter cable again.**

As soon as the engine is running, grasp the rear handle (this actuates the grip safety (B/5)) and tap the throttle (B/6). This will release the half-throttle lock and the engine will run in idle.

**CAUTION:** As soon as the engine is started it must be put in idle to prevent the chain brake from being damaged.

Now release the chain brake.



### Warm starting:

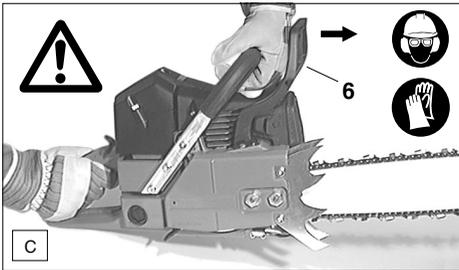
As described for cold starting, except before starting pull the choke (B/1) all the way out and back in one time, in order to activate the half-throttle lock. If the engine doesn't start after 2 or 3 pulls, repeat the entire starting procedure as described for cold starting.

### Stopping the engine



Put the short-circuiting switch (B/2) in position "O" (STOP).

### Checking the chain brake

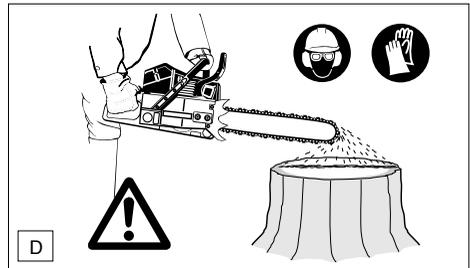


**Do not work with the chain saw without first checking the chain brake!**

- Start the engine as described (make sure you have a good footing, and place the chain saw on the ground in such a way that the guide bar is free of contact).
- Grasp the tubular handle firmly with one hand and hold the grip with the other.
- With the engine running at moderate speed, press the hand guard (C/6) in the direction of the arrow with the back of your hand until the chain brake engages. The chain should stop immediately.
- Immediately release the throttle and release the chain brake.

**IMPORTANT:** If the chain does not stop immediately when you test the chain brake, do NOT use the chain saw. Take the chain saw to a MAKITA service center.

### Checking the chain lubrication



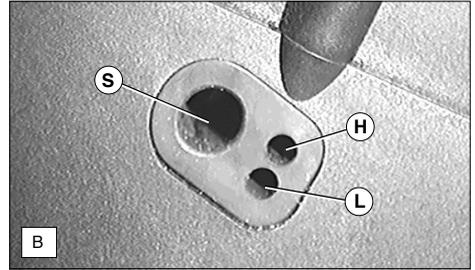
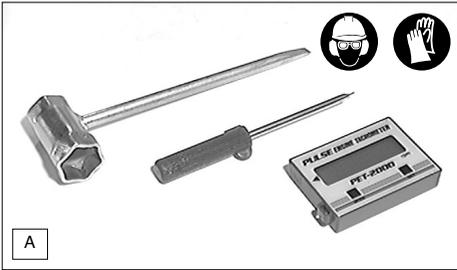
Never work with the chain saw when a sufficient chain lubrication is not guaranteed. Otherwise the service life of the sawing device will be reduced. Before starting work check the oil level in the tank and the oil feeding.

Check the oil feed quantity as described below:

- Start the chain saw.
- Hold the running chain saw approx. 15 cm above a trunk or the ground (use an appropriate base).

If the lubrication is sufficient, you will see a light oil trace because oil will be centrifuged from the sawing device. Pay attention to the direction the wind is blowing and avoid unnecessary exposure to the oil spray!

## Adjusting the carburetor (only for EU-countries)



### CAUTION:

Do not adjust the carburetor until the machine has been completely assembled and checked! Do not adjust the carburetor without a tachometer!

Carburetor adjustment is necessary for optimum engine performance, for safer and more economical operation. Adjust the carburetor only with the engine warm, a clean air filter, and properly installed cutting tool.

Carburetor adjustment may be done only by a MAKITA service centre. Improper adjustment can cause damage to the engine.

In order to comply with new emissions legislation, limits have been placed on the carburetor adjusting screws (H) and (L).

This limitation (to about 180 degrees) prevents an excessively rich mixture. This in turn ensures compliance with emissions rules as well as optimum engine performance and economical fuel consumption.

You will need a tachometer (part No. 950 233 210) for optimum adjustment. Exceeding the maximum permissible speed can lead to overheating and under-lubricating, and damage to the engine!

Factory setting of adjusting screws (H) and (L): Turned out almost all the way (counterclockwise).

Use a screwdriver (blade width 4 mm, part No. 944 340 001) to adjust the screws.

For proper adjustment, proceed as follows:

### Checking adjusting screw (H)



Before starting the engine make sure that adjusting screw (H) is turned out counterclockwise until it reaches a noticeable stop.

The limitations do not prevent excessively lean running!

1. Start engine and let it warm up (3-5 minutes)
2. Set idle
3. Check acceleration
4. Set maximum permissible speed
5. Check idle speed

### 2. Set idle



Set the idle speed per the technical specifications. Turning the adjusting screw (S) in (clockwise) increases the idle speed. Turning it out (counter-clockwise) lowers the idle speed. **The cutting tool must not rotate!**

### 3. Check acceleration



When the throttle is pressed, the engine should go smoothly from idle to high speed.

Turn adjusting screw (L) out (counterclockwise) in small increments until acceleration is good.

### 4. Set maximum permissible speed



Set the maximum speed by minimal adjustments of the adjusting screw (H) in accordance with the technical specifications. Turning the adjusting screw (H) clockwise increases the speed. **Never exceed the maximum permissible speed!**

For units with electronic engine speed limitation: No tachometer is necessary to determine the maximum permissible speed, since exceeding this speed will result in clearly audible ignition misses!

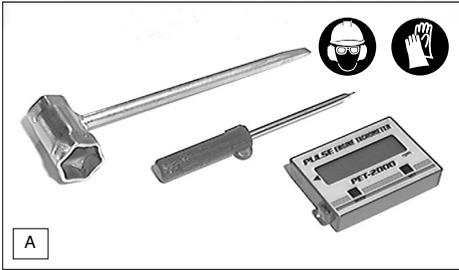
### 5. Check idle speed



Check the idle speed after setting the top speed (the cutting tool must not rotate!).

Repeat the adjustment procedure starting at Step 2, until the engine runs with the correct idle speed, good acceleration, and maximum permissible speed.

## Adjusting the carburetor (only for not EU-countries)



**Carburetor adjustment is necessary for optimum engine performance, for safer and more economical operation. The engine should be warm, the air filter clean, and the chain properly tensioned. Have carburetor adjustment done by an authorised MAKITA service centre.**

The carburetor is factory-adjusted for the air pressure at sea level. At other elevations or under other conditions of weather, temperature, or humidity, or when breaking in a new engine, it may be necessary to make slight adjustments to the carburetor.

**You will need a tachometer (part No. 950 233 210) for optimum adjustment.**

**Do not go below the specified setting of the main nozzle (H). Doing so may cause engine damage due to overheating and insufficient lubrication!**

Use the supplied carburetor screwdriver for carburetor adjustment. It has a moulded-on projection that aids in adjusting.

Before undertaking the adjustment, run the engine for 3-5 minutes to warm it up, but not at high speed!

**For proper adjustment, proceed as follows:**

1. Basic setting (engine off)  
Start engine and warm up.
2. Set idle
3. Check acceleration
4. Check top speed
5. Check idle speed

Repeat steps 2-5 until you get the right idle speed, good acceleration and maximum permissible

### 1. Basic setting

Carefully turn the adjusting screws for the main nozzle (H) and idle nozzle (L) clockwise until you feel a stop.

Turn adjusting screws (H) and (L) 1 turn counter-clockwise.

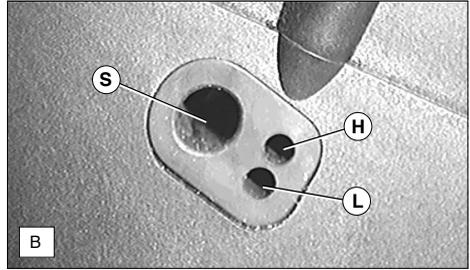
### 2. Set idle

Set the idle speed per the technical specifications.

Turning the adjusting screw (S) in (clockwise) increases the idle speed. Turning it out (counter-clockwise) lowers the idle speed. In no case should the chain move.

### 3. Check acceleration

When the throttle is pressed, the engine should go smoothly from idle to high speed. If this is too slow, turn the adjusting screw (L) in small (max. 1/8 turns) increments counter-clockwise.



### 4. Check top speed

The basic setting H=1 and L=1 gives a maximum speed of about 13,000 rpm. For higher speed (electronically limited to 13,500 rpm), turn the adjusting screw (H) a maximum 1/8 turn clockwise. The top speed in the governor can be clearly heard from the ignition misses. **Note:** Since there is an electronic speed governor (limiter) at 13,500 rpm that cuts off the ignition current, the top speed cannot be read from the tachometer. **Important: To prevent engine damage, never go below setting (H) 7/8 turns.**

### 5. Check idle speed

Check the idle speed after setting the top speed (the chain must not move).

Repeat the adjustment procedure starting at Step 2, until the engine runs with the correct idle speed, good acceleration, and top speed.



## Working in winter



In order to prevent carburetor icing in winter, warm air can be led from the cylinder to the carburetor.

- Use the universal wrench to turn the button (G/1) completely to the right.
- Now the carburetor heating is actuated.

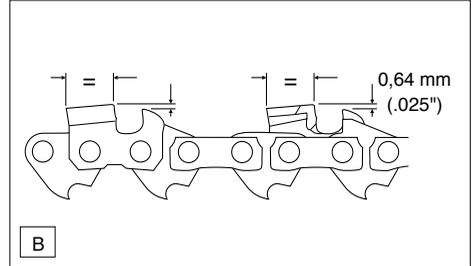
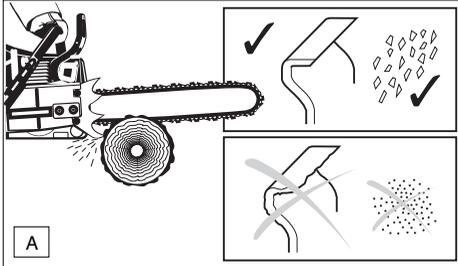
If the temperature is above 0° C, the carburetor heating must be switched off.

**Not following this instruction may result in damage at the cylinder and piston.**

## MAINTENANCE

### Sharpening the chain

**CAUTION:** Before doing any work on the guide bar or chain, always switch off the engine and pull the plug cap off the spark plug (see "Replacing the spark plug"). Always wear protective gloves!



#### Sharpen the chain if

- The sawdust produced when sawing humid wood looks like wood flour.
- The chain penetrates the wood only under great pressure.
- The cutting edge is visibly damaged.
- The sawing device is pulled to the left or right when sawing. This is caused by an unequal sharpening of the chain.

**Important: Sharpen regularly, but only slightly.**

Generally 2-3 touches are enough.

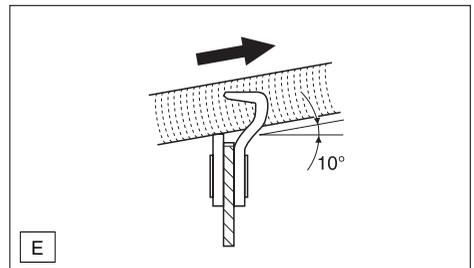
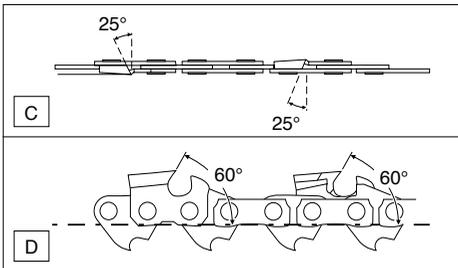
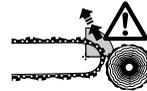
Have the chain resharpened in a service centre when you have already sharpened it yourself several times.

#### Characteristics of a correctly sharpened chain (type 099):

- All cutters must be of the same length (≅). Cutters with different lengths result in a rough running of the chain and produce cracks in the chain.
- The best cutting results are achieved with a depth limiter distance of 0.64 mm (.025"). The distance between the depth limiter and the cutting edge determines the depth of the cut.

#### CAUTION:

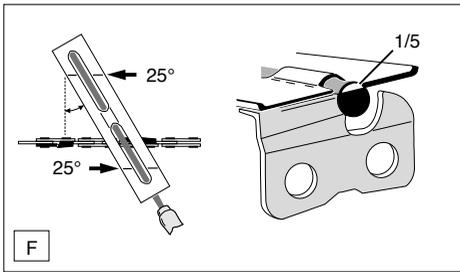
**If the distance is too wide, the risk of kickbacks increases.**



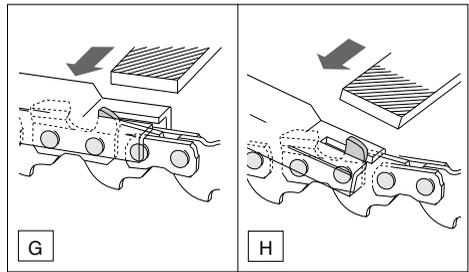
- The sharpening angle of 25° must be equal for all cutters. Different angles result in a roughly, irregularly running chain, increase wear and tear and cause chain ruptures.
- The front rake of 60° depends on the cut depth of the round file. If the file to be used is guided correctly, the correct front rake results automatically.

#### Files and how to work with them

- Sharpen using a special file holder with a saw chain round file. Normal round files are not appropriate for this work. For the order number see accessories.
- File the first cutter half with a 5.5 mm dia. special round file, then switch to a 4.8 mm dia. file.
- The file should cut only when pushed forwards (arrow). Lift the file when leading it backwards.
- First sharpen the shortest cutter. The length of this cutter is then the nominal value for all other cutters of the chain.
- Replaced cutters must be exactly adapted to the shape of the other cutters. This is also true for the depth gauges.
- Always guide the file horizontally (10° to the guide bar).



- The file holder makes it easier to guide the file, carries markings for a correct sharpening angle of 25° and limits the cut depth (4/5 of the file diameter). For the order number see accessories.
- When filing the markings must be parallel to the chain.



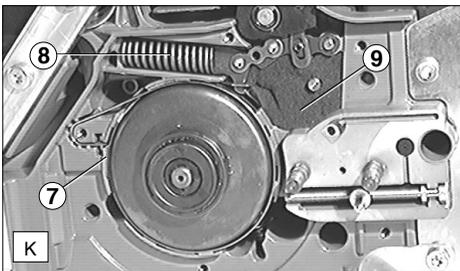
- After having sharpened the chain, the height of the depth limiter must be checked by means of a chain gauge. For the order number see accessories.
- Correct even the smallest projections with a special flat file (G).
- Round off the front of the depth limiter (H).

### Cleaning the guide bar

**CAUTION:**  
Protective gloves must be put on.



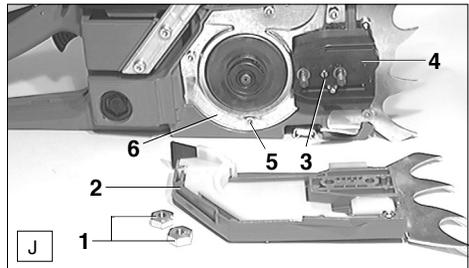
The bearing surfaces of the guide bar must be regularly cleaned and checked for damage.



- Clean the inside, in particular the brake band area (K/7), with a brush.
- NOTE:** Do not clean the brake mechanism, in particular the spring (K/8), because it could jump out of its guide.
- NOTE:** Do not remove the foam material (K/9).
- Remount the protective plate and the guide plate.
- After mounting carry out a functional check of the chain brake (see **Checking the chain brake**).

### Clean the chain brake band

**CAUTION:** In any case actuate the chain brake (blocking) and put on protective gloves. Do not actuate the chain brake when cleaning.



- Loosen the fastening nuts (J/1).
- Pull off the sprocket guard (J/2).
- Loosen the screw (J/3) and remove the guide plate (J/4).
- Loosen the four screws (J/5) and **carefully** remove the protective plate (J/6).

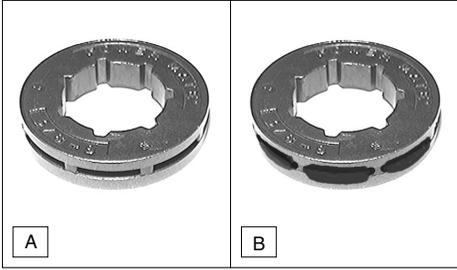
**NOTE:** Ensure the pressure spring (K/8) cannot jump out. Secure the pressure spring in position before cleaning.

**Makita** SERVICE

**NOTE:**

The chain brake is a very important safety device and like any other component subject to normal wear and tear. It is recommended to have it checked and maintained regularly for your own safety by a MAKITA service centre.

## Checking the sprocket



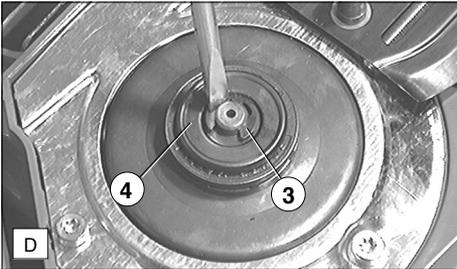
Check the sprocket before mounting a new chain (A).  
Worn out sprockets (more than 0,2 mm) (B) may damage the new chain and must therefore be replaced.

## Replacing the sprocket

**CAUTION:**  
Protective gloves must be put on.



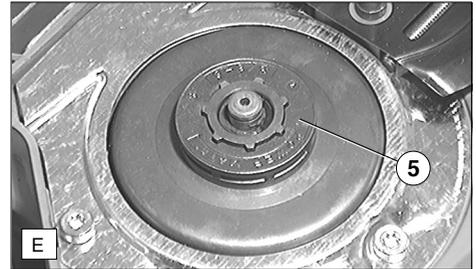
- Loosen the fastening nuts (C/1).
- Pull off the sprocket guard (C/2).



- Use the universal wrench to remove the locking washer (D/3).

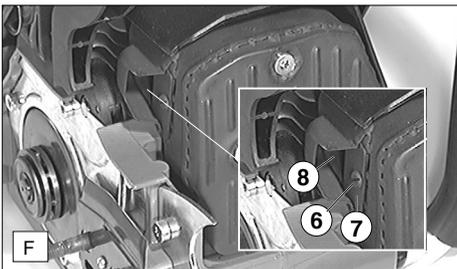
### CAUTION:

The locking washer might jump out on removing.  
- Remove the thrust washer (D/4) underneath it.



- Take off the sprocket (F/5) from the clutch drum.
- Position the new, slightly oiled sprocket and remount all parts in the reverse order.

## Replacing/cleaning the spark arrester screen

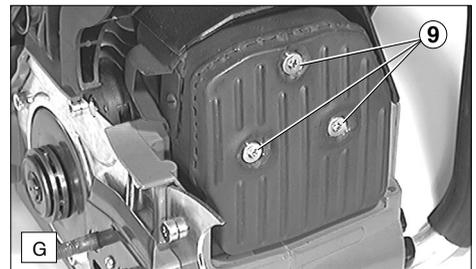


The spark arrester screen should be checked and cleaned regularly.

- Remove the screw (F/6), deflector plate (F/7) and arrester screen (F/8).

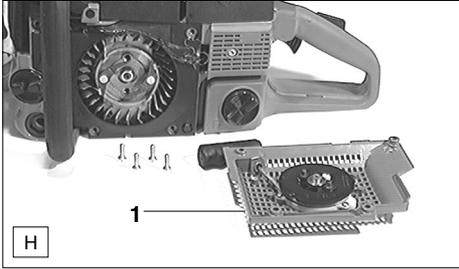
**Caution:** Do not use sharp or pointed objects for screen cleaning. Damaged or misformed screen wires may result.

## Checking the muffler screws

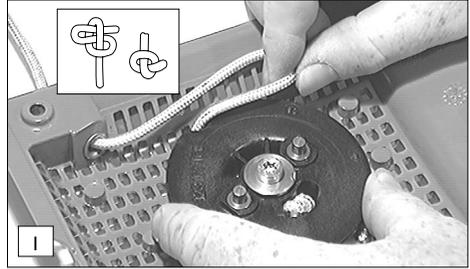


- Regularly check the three fastening screws (G/9) for tightness.

## Replacing the starter cable



- Demount the fan housing (H/1) (4 screws).
- The cable drum must not be demounted.
- Remove the old cable.
- Mount the new cable (ø 4x1000 mm) and tie it up in a **simple knot** in the drum, and in a knot **with a loop** in the starter grip. The end of the cable must not project the drum.

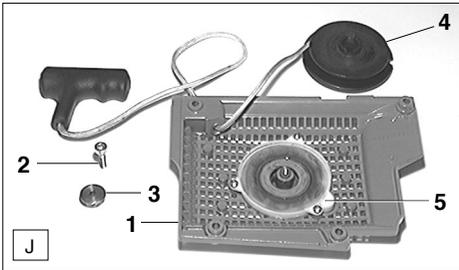


- Wind the cable around the drum as far as possible. Then pull the cable with the starter grip approx. 50 cm out of the drum, hold the drum tightly and wind the cable once again around the drum.
- Release the drum and let the cable wind up by means of the spring tension. The starter grip must now stand upright at the outside of the starter casing.

### NOTE:

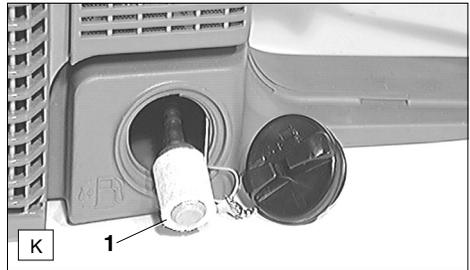
**When the starter cable has been completely pulled out, it must be possible to turn the cable drum against the spring tension through 1/4 rotation.**

## Replacing the return spring



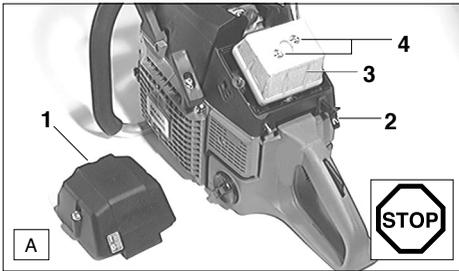
- Demount the fan housing (J/1).
- Loosen the screw with the star-shaped recess (J/2) on the pivot.
- Pull off the pivot (J/3).
- Remove the cable drum (J/4).
- Demount the spring cover (J/5) (3 screws).
- Slightly knock the hollow side of the fan housing on wood while holding it tightly. Thus the old spring will jump out and release.
- The new spring is delivered in a box, under full tension. For mounting the whole box is pressed into the fan housing and the wire ring is stripped off (a spring which has jumped out is remounted by turning it clockwise into the housing).

## Replacing the suction head

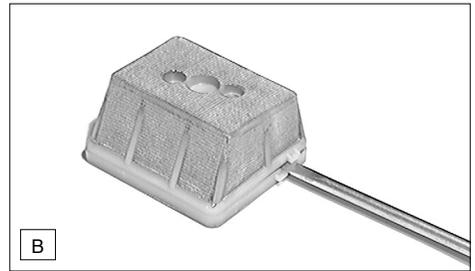


- Pull the suction head by means of a bent wire through the tank opening.
- The felt filter (K/1) of the suction head can be clogged.
- It is recommended to replace the suction head once every three months in order to guarantee an unimpeded fuel flow to the carburetor.

## Cleaning the air filter



- Demount the filter cover (A/1) (2 screws).  
**Caution:** Pull the choke (A/2) to shut the choke shutter and to prevent dirt particles from entering the carburetor.
- Loosen the two screws (A/4) and remove the air filter (A/3) from the intake stack.



- Position a screw driver between the two latches and separate the upper and lower part by turning it.
- Clean the air filter with a soft brush.
- If the filter is very dirty, clean it in lukewarm soapsuds with standard detergent.
- Let the air filter **dry completely**.
- Assemble the upper and lower part and put them on the intake stack. Firmly tighten the screws (A/4).

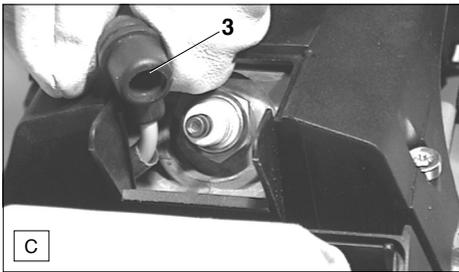
If the filter is very dirty, clean it frequently (several times a day), because only a clean air filter guarantees full engine power.

### CAUTION:

**Replace damaged air filters immediately.**

**Torn off pieces of cloth may destruct the engine.**

## Replacing the spark plug



### CAUTION:

**Do not touch the spark plug or plug cap if the engine is running** (high voltage).

**Switch off the engine before starting any maintenance work.**

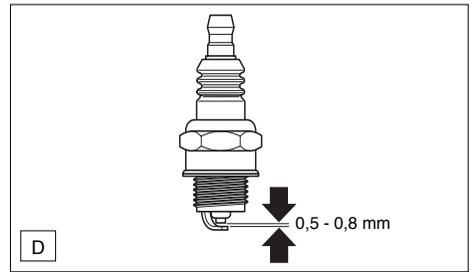
**A hot engine can cause burns. Wear protective gloves!**

The spark plug must be replaced in case of a damage of the insulating body, consumption of the electrodes or if the electrodes are very dirty or oily.

- Loosen both screws of the filter cover (A/1) and remove the filter cover (see fig. clean air filter).
- Pull off the plug cap (C/3) from the spark plug. Only use the universal wrench delivered with the chain saw for demounting.
- Mount the new spark plug in the reverse order.

**CAUTION:** Use only the following spark plugs:

**NGK BPMR 7A or BOSCH WSR 6F.**



### Electrode gap

The electrode gap must be 0.5 - 0.8 mm.

### Checking the ignition spark

- Press the loosened spark plug with the firmly connected ignition cable against the cylinder by means of insulated pliers (not near the spark plug opening).
- ON/OFF switch in START position "I".
- Start the engine by forcefully pulling out the starter cable.

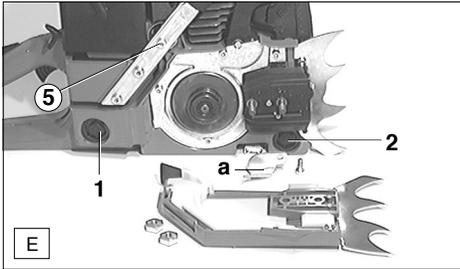
If the function is correct, an ignition spark must be visible near the electrodes.

## Replacing the vibration dampers

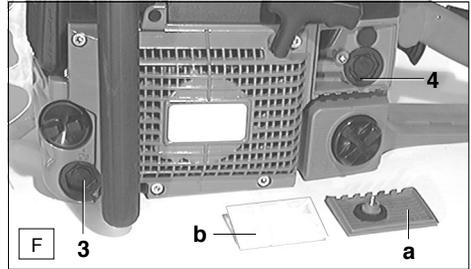
**CAUTION:** Always switch off the engine and pull the plug cap off the spark plug (see "Replacing the spark plug"). Always wear protective gloves!

**CAUTION:** Start the chain saw only after having assembled it completely and inspected!

Always replace all five vibration dampers.

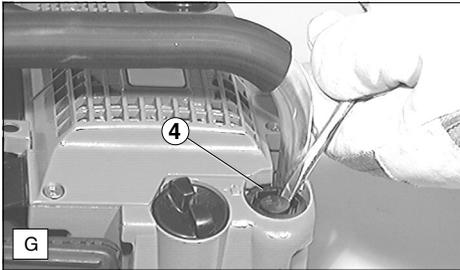


- The vibration damper (E/1) is installed next to the identification plate.
- The vibration damper (E/2) is installed underneath the guide bar support. The chain catch (a) must be removed.
- The vibration damper (E/5) is installed under the mounting arm of the tubular handle.

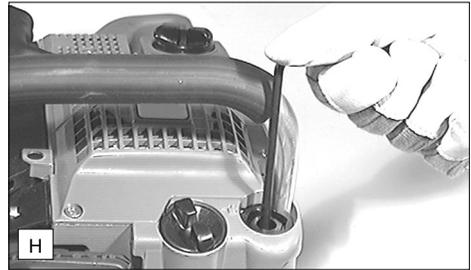


- The vibration damper (F/3) is installed underneath the oil tank cap.
- The vibration damper (F/4) is installed underneath the pre-filter. The cover (a) and pre-filter (b) must be removed.

## Replacing vibration dampers 1 - 4

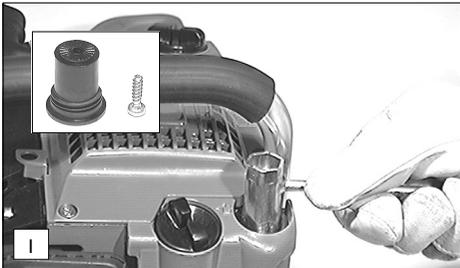


- Put the saw chain on its side and carefully remove the protective cover (G/4) by means of the universal wrench.



- Use the offset screw driver to loosen the screw inside.

## Replacing vibration damper 5



- Carefully demount the vibration damper by means of the universal wrench.
- The vibration damper is mounted in the reverse order.



- Demount the tubular handle (a) (5 screws).
- Use the socket wrench (accessories, not delivered with the chain saw) to demount the vibration damper carefully.
- The new vibration damper is mounted in the reverse order.

## Instructions for periodic maintenance

To ensure long life, prevent damage and ensure the full functioning of the safety features the following maintenance must be performed regularly. Guarantee claims can be recognized only if this work is performed regularly and properly. Failure to perform the prescribed maintenance work can lead to accidents!

The user of the chain saw must not perform maintenance work which is not described in the instruction manual. All such work must be carried out by a MAKITA service centre.

			Page
<b>General work</b>	Chain saw	Clean the outside and check for damage. In case of any damage have it immediately repaired by a service centre.	18
	Sprocket Chain brake	Replace in time. Have it regularly checked by a service centre.	
<b>Before each start</b>	Chain	Check for damage and sharpness. Resharpener regularly, replace in time. Check the chain tension.	16-17
	Guide bar	Check for damage.	11
	Chain lubrication Chain brake ON/OFF switch, Safety locking button	Functional check. Functional check.	13-14 14
	Throttle lever Fuel/oil tank plug	Functional check.  Check for tightness.	14
<b>Every day</b>	Air filter Guide bar	Clean. Check for damage, clean oil intake bore. Turn it over so that the bearing surfaces are equally worn. Replace in time.	20 13
	Guide bar support Idling speed	Clean, in particular the oil guide groove. Check (chain must not run).	13 15
<b>Every week</b>	Fan housing	Clean to ensure a perfect cooling air supply. For this the fan housing must be demounted.	19
	Carburetor interior and cylinder ribs	Clean, for this demount cover and protective cover.	17
	Chain brake	Clean the brake band (sawdust, oil)	20
	Spark plug	Check and replace if necessary.	18
	Muffler	Tighten fastening screws. Clean spark arrester screen	21
	Vibration damper	Check.	21
	Chain guide Screws and nuts	Check. Check their condition and that they are firmly secured.	
<b>Every 3 months</b>	Suction head Fuel/Oil tank	Replace. Clean.	19
	Chain saw	Check at an authorized service centre	
<b>Annually</b>	Chain saw	Check at an authorized service centre	
<b>Storage</b>	Guide bar/chain	Demount, clean and oil slightly. Clean the guide groove of the guide bar.	17
	Fuel/oil tank	Empty and clean.	
	Oil pump	Clean.	
	Carburetor	Run empty.	

## Service, spare parts and guarantee

### Maintenance and repair

The maintenance and repair work of modern engines as well as all safety related assemblies require qualified technical training and the availability of a workshop equipped with special tools and testing devices.

We therefore recommend you to consult a MAKITA service centre for the performance of all work not described in this instruction manual.

The MAKITA service centres are provided with all the necessary equipment and skilled and experienced personnel to work out correct customer solutions and to advise you in all matters accordingly.

## Spare parts

A reliable and continuous operation as well as the safety of your chain saw depend among others on the quality of the spare parts used. Use only original MAKITA parts, marked



Only original spare parts and accessories guarantee the highest quality in material, accuracy to size, function and safety.

Original spare parts and accessories can be obtained from your local dealer. He will also have the spare part lists to determine the required spare part numbers, and will be constantly informed about the latest improvements and also about spare part innovations. To find your local distributor, please visit [www.makita-outdoor.com](http://www.makita-outdoor.com)

Please, take in mind that in case foreign spare parts are used instead of original MAKITA spare parts this will automatically invalidate the MAKITA product guarantee.

## Guarantee

MAKITA guarantees the highest quality and will therefore reimburse all costs for mending through replacement of damaged parts as a result of material or production faults, which occur within the guarantee time after purchase.

Please, note that in some countries particular guarantee conditions may exist. In case of any doubts, please, contact your salesman who is responsible for the guarantee of a product.

We ask for your understanding that we cannot accept any responsibility for damage caused by:

- Disregard of the instruction manual.
- Non-performance of the required maintenance and cleaning instructions.
- Wrong carburetor adjustment.
- Normal wear and tear.
- Obvious overload due to permanent excess of the upper limits of capacity.
- Use of guide bars and chains which have not been approved.
- Use of guide bar and chain lengths which have not been approved.
- Use of force, improper use, misuse or accidents.
- Overheating due to dirt on the cylinder ribs and the fan housing.
- Works on the chain saw by unskilled persons or performance of inappropriate repairs.
- Use of unsuitable spare parts or parts which are not original MAKITA parts, as far as they have caused the damage.
- Use of unsuitable or old oil.
- Not tightening external screw connections in time.
- Damage related to conditions arising from lease or rent contracts.
- Damages caused by disregarding loose outer bolted connections.

Cleaning, servicing and adjustment works are not covered by the guarantee. All repairs covered by the guarantee are to be performed by a MAKITA service centre.

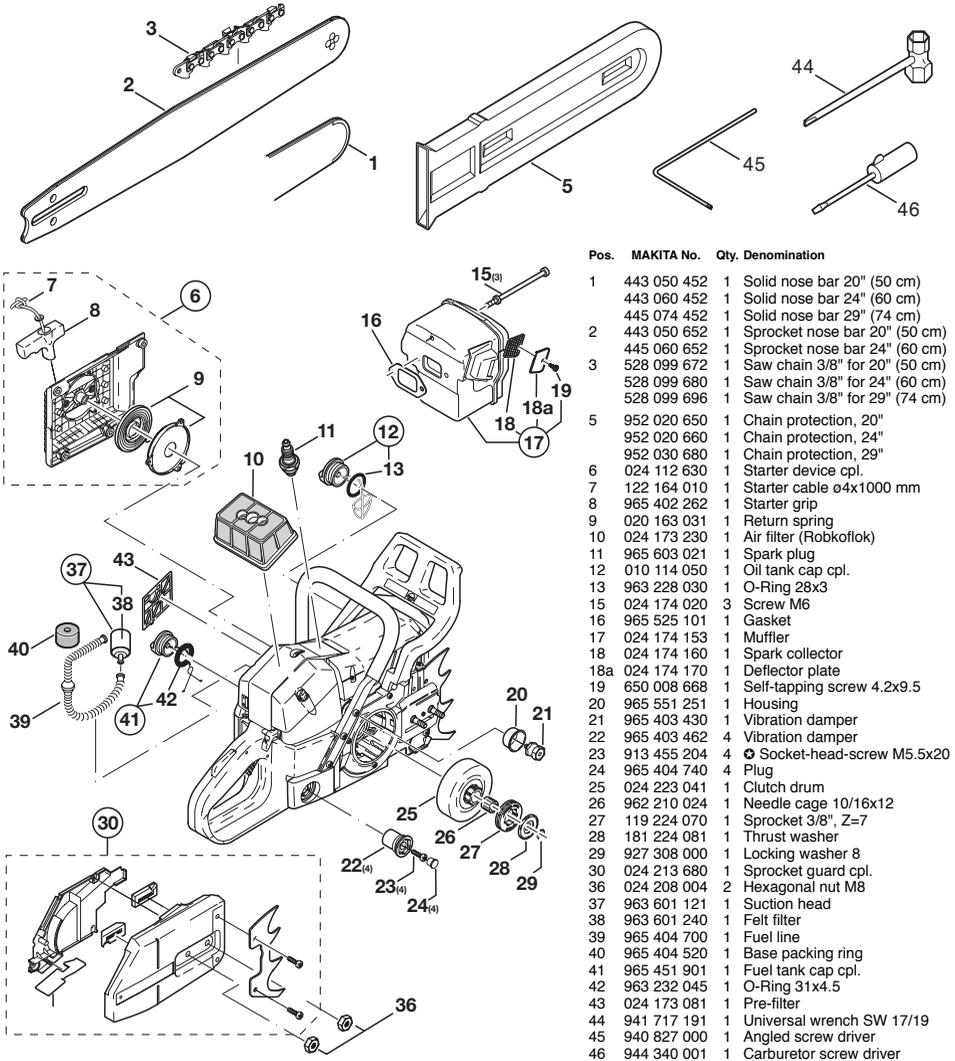
## Troubleshooting

Malfunction	System	Observation	Cause
Chain does not run	Chain brake	Engine runs	Chain brake actuated.
Engine does not start or only with difficulties	Ignition system	Ignition spark No ignition spark	Malfunction in fuel supply system, compression system, mechanical malfunction. STOP switch actuated, malfunction or short circuit in cabling, plug cap, spark plug or ignition module defective.
	Fuel supply	Fuel tank is filled	Choke in wrong position, carburetor defective, suction head dirty, fuel line bent or interrupted.
	Compression system	Inside Outside	Cylinder base packing ring defective, radial shaft packings defective, cylinder or piston rings defective Spark plug does not seal.
	Mechanical malfunction	Starter does not engage	Spring in starter broken, broken parts inside the engine.
Warm start difficulties	Carburetor	Fuel tank is filled Ignition spark	Wrong carburetor adjustment.
Engine starts, but dies immediately	Fuel supply	Fuel tank is filled	Wrong idling adjustment, suction head or carburetor dirty. Tank venting defective, fuel line interrupted, cable defective, STOP switch defective, starting valve dirty.
Insufficient output	Several systems may be involved simultaneously	Engine is idling	Air filter dirty, wrong carburetor adjustment, muffler clogged, exhaust channel in cylinder clogged.
No chain lubrication	Oil tank/pump	No oil on the chain	Oil tank empty. Oil guide groove dirty.

## Extract from the spare parts list

Use original MAKITA spare parts only. For performance of repairs and replacement of other parts your MAKITA service centre should be consulted.

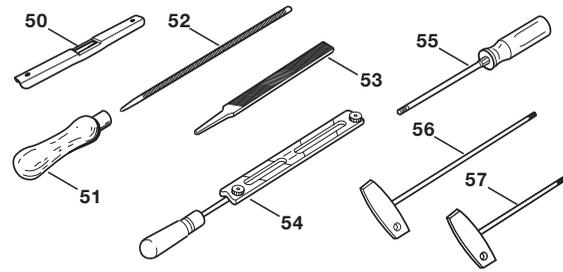
DCS9010



Pos.	MAKITA No.	Qty.	Denomination
1	443 050 452	1	Solid nose bar 20" (50 cm)
	443 060 452	1	Solid nose bar 24" (60 cm)
	445 074 452	1	Solid nose bar 29" (74 cm)
2	443 050 652	1	Sprocket nose bar 20" (50 cm)
	445 060 652	1	Sprocket nose bar 24" (60 cm)
3	528 099 672	1	Saw chain 3/8" for 20" (50 cm)
	528 099 680	1	Saw chain 3/8" for 24" (60 cm)
	528 099 696	1	Saw chain 3/8" for 29" (74 cm)
5	952 020 650	1	Chain protection, 20"
	952 020 660	1	Chain protection, 24"
	952 030 680	1	Chain protection, 29"
6	024 112 630	1	Starter device cpl.
7	122 164 010	1	Starter cable ø4x1000 mm
8	965 402 262	1	Starter grip
9	020 163 031	1	Return spring
10	024 173 230	1	Air filter (Robkoflok)
11	965 603 021	1	Spark plug
12	010 114 050	1	Oil tank cap cpl.
13	963 228 030	1	O-Ring 28x3
15	024 174 020	3	Screw M6
16	965 525 101	1	Gasket
17	024 174 153	1	Muffler
18	024 174 160	1	Spark collector
18a	024 174 170	1	Deflector plate
19	650 008 668	1	Self-tapping screw 4.2x9.5
20	965 551 251	1	Housing
21	965 403 430	1	Vibration damper
22	965 403 462	4	Vibration damper
23	913 455 204	4	Socket-head-screw M5.5x20
24	965 404 740	4	Plug
25	024 223 041	1	Clutch drum
26	962 210 024	1	Needle cage 10/16x12
27	119 224 070	1	Sprocket 3/8", Z=7
28	181 224 081	1	Thrust washer
29	927 308 000	1	Locking washer 8
30	024 213 680	1	Sprocket guard cpl.
36	024 208 004	2	Hexagonal nut M8
37	963 601 121	1	Suction head
38	963 601 240	1	Felt filter
39	965 404 700	1	Fuel line
40	965 404 520	1	Base packing ring
41	965 451 901	1	Fuel tank cap cpl.
42	963 232 045	1	O-Ring 31x4.5
43	024 173 081	1	Pre-filter
44	941 717 191	1	Universal wrench SW 17/19
45	940 827 000	1	Angled screw driver
46	944 340 001	1	Carburetor screw driver

**Accessories** (not delivered with the chain saw)

50	953 100 090	1	Chain gauge 3/8"
51	953 004 010	1	File handle
52	953 003 040	1	Round file ø 5.5 mm
52	953 003 070	1	Round file ø 4.8 mm
53	953 003 060	1	Flat file
54	953 009 000	1	File holder (with round file ø 5.5)
-	953 007 000	1	File block for guide bar
55	944 500 860	1	⊕ Screw driver
56	944 500 862	1	⊕ Screw driver 200 mm
57	944 500 861	1	⊕ Screw driver 100 mm
-	944 602 000	1	Piston stop
-	944 500 621	1	Socket wrench (for vibration damper)
-	949 000 035	1	Combined can (for 5l fuel, 2.5l oil)







To find your local distributor,  
please visit [www.makita-outdoor.com](http://www.makita-outdoor.com)



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Specifications subject to change without notice

Form: 995 707 561 (2.11 GB)