

Instruction Manual (page 2-23)

Instructions d'emploi (page 24-45)

Gebruiksaanwijzing (bladzijde 46-67)

Important:

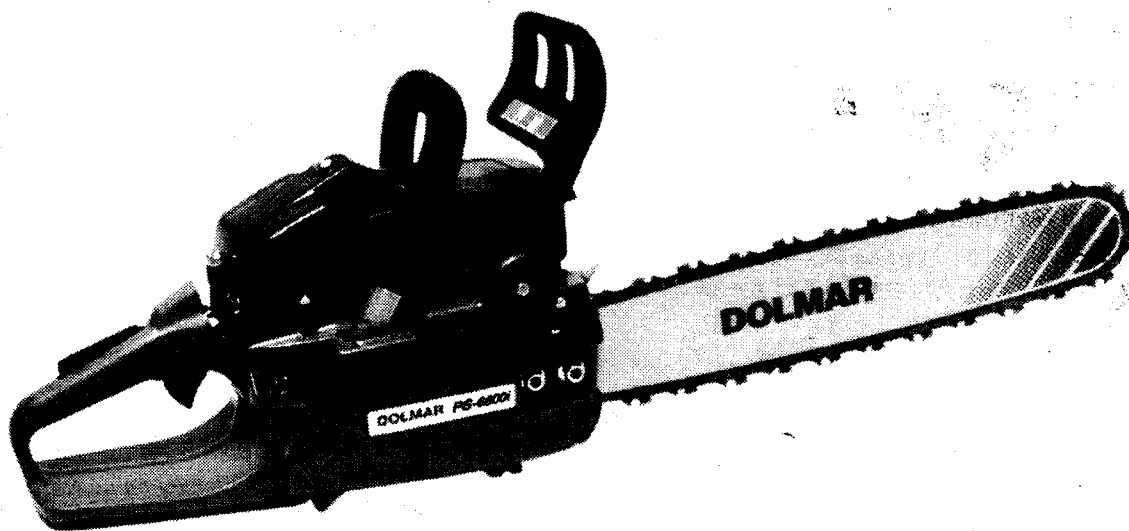
Read this instruction manual carefully before putting the chain saw into operation and strictly observe the safety regulations!
Keep this Instruction Manual!

Attention:

Lire attentivement ce manuel avant la première mise en service et observer absolument les prescriptions de sécurité!
Garder avec soins le manuel des instructions d'emploi!

Belangrijk:

Lees voor de eerste inbedrijfname deze gebruiksaanwijzing zorgvuldig door en neem alle veiligheidsvoorschriften in acht.
Gebruiksaanwijzing zorgvuldig bewaren!



PS-6000i, 6000i H

PS-6800i, 6800i H

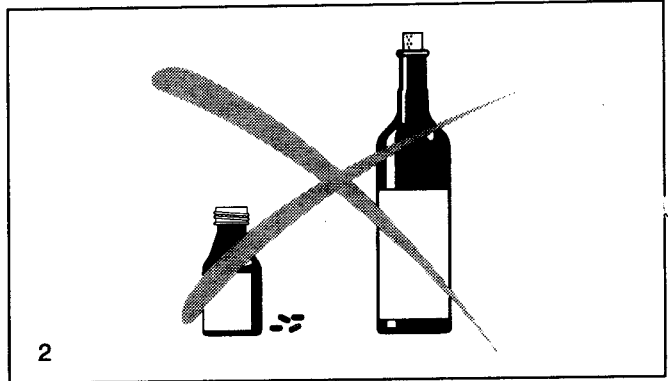
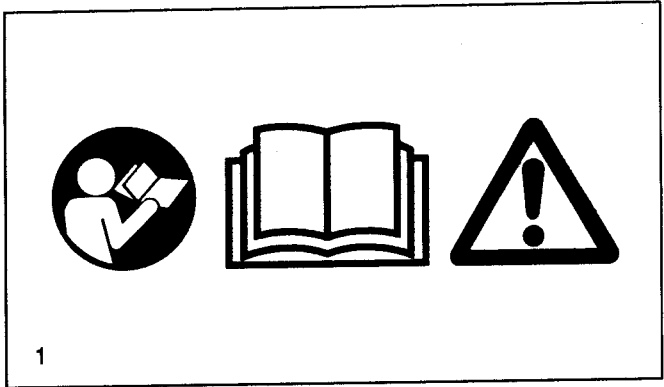
DOLMAR



SAFETY PRECAUTIONS

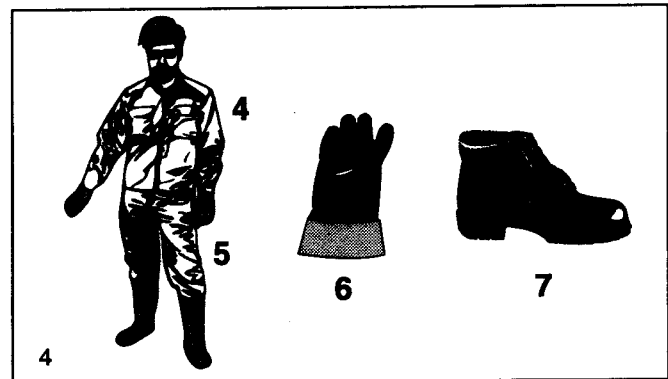
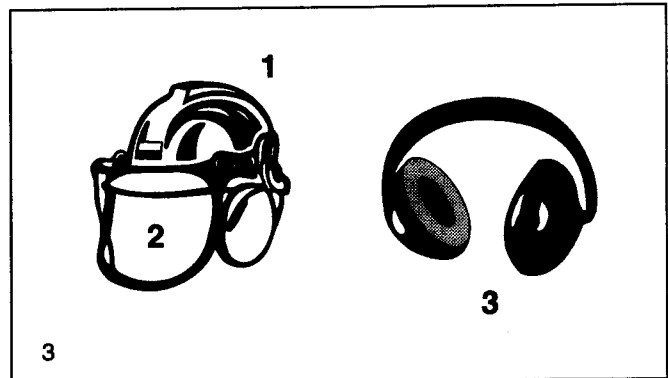
General precautions

- 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.
- 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 calmly and carefully. The user has to accept liability for others.
- Never use the chain saw after having consumed alcohol or drugs.
- A fire extinguisher must be available in the immediate vicinity when working in easily inflammable vegetation or when it has not rained for a long time (danger of fire).



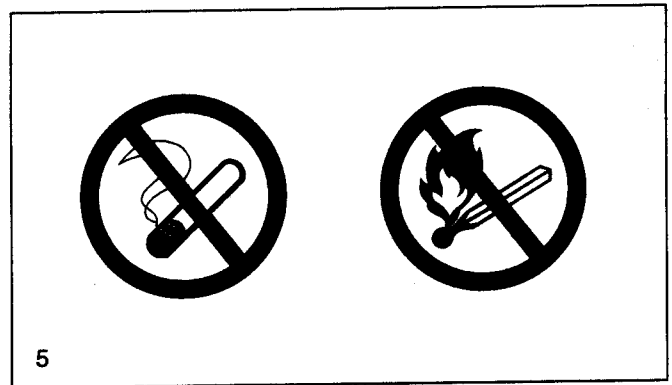
Protective equipment

- 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.
- 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.).
- 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 fabric 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 must always be worn. 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.
- 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 plugs 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.



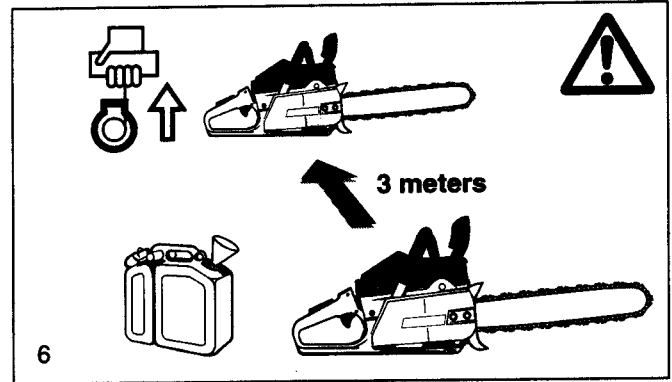
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Putting into operation

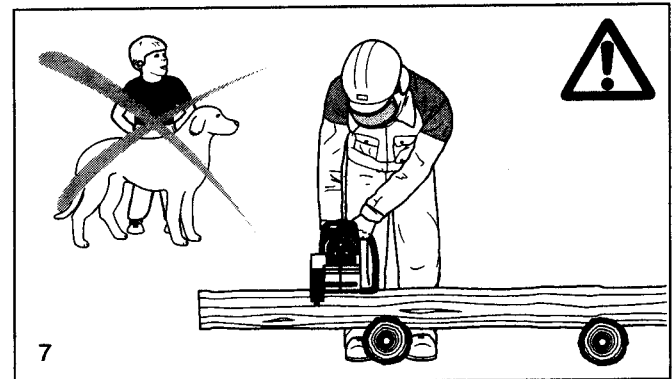
- **Do not work on your own. There must be someone around in case of an emergency.**
- Ensure that there are no children or other people within the working area. Pay attention to any animals in the working area, as well (7).
- **Before starting work the chain saw must be checked for perfect function 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.

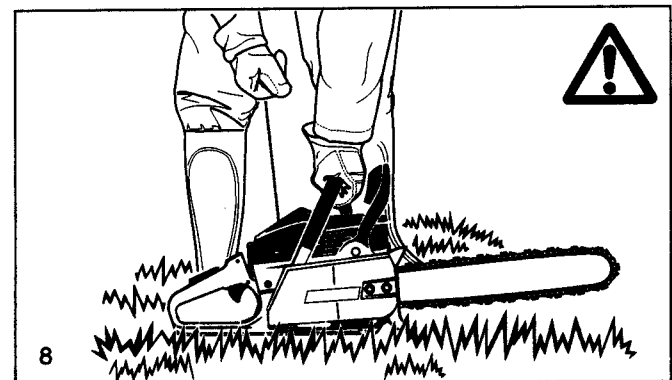
- Put the chain saw only into operation if it is completely assembled. Never use the chain saw when it is not completely assembled.
- Before starting the chain saw ensure that you have a safe footing.
- Put the chain saw into operation only as described in this instruction manual (8). Other starting 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 such that you will not breathe in the exhaust gas. Do not work in closed rooms (danger of poisoning).
- **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.**



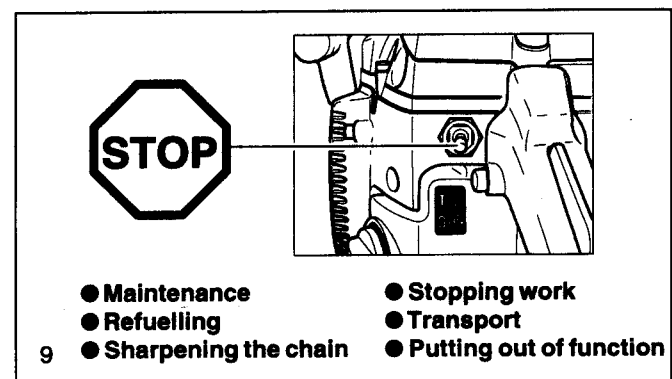
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- Be careful when cutting splintery wood. Cut pieces of wood may be pulled along (risk of injuries).
- When cutting with the upper edge of the guide bar, the chain saw may be pushed in the direction of the user if the chain gets clamped. For this reason use the lower edge of the bar whenever possible. The chain saw will then be pushed away from you (15).
- If the timber is under 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:

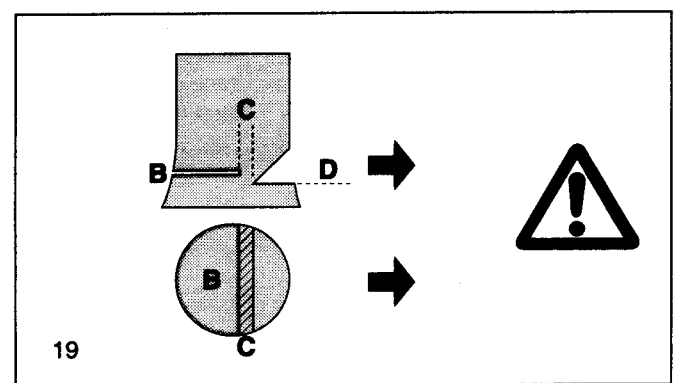
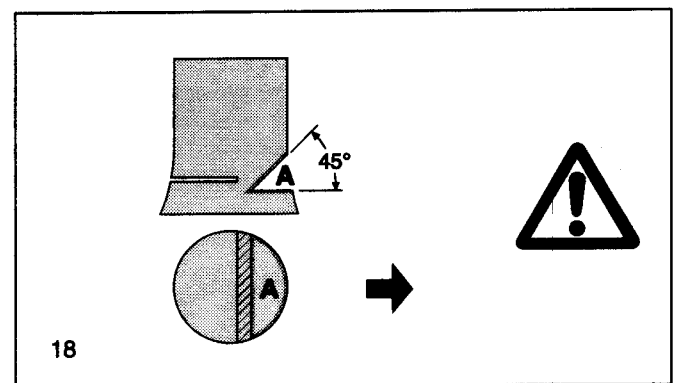
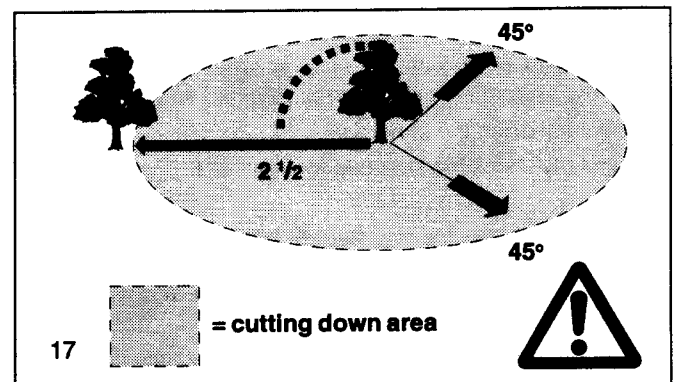
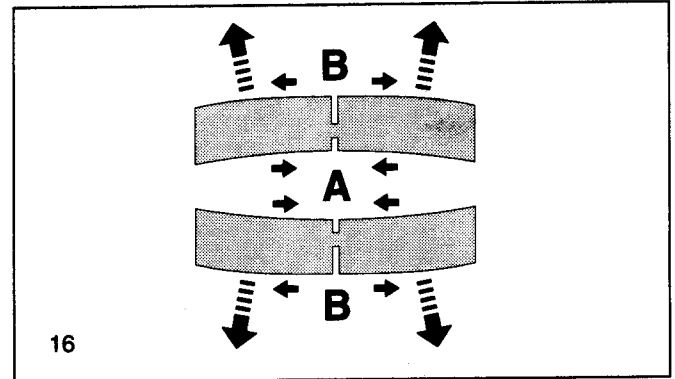
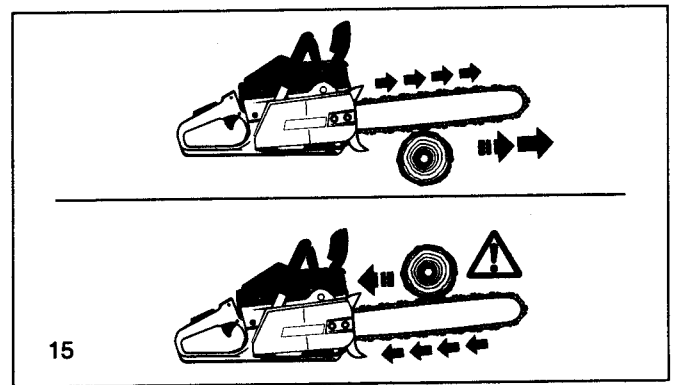
People felling trees or cutting of branches must be specially trained. High risk of injuries!

- When cutting of branches, the chain saw should be supported on the trunk. Do not use the end of the bar for cutting (risk of kickback).
- Be aware of branches under tension. Do not cut free branches from below.
- Never perform detensioning cuts 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 objects, 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 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 overhang - is the tree rotten?

- Take into account the direction and speed of the wind. If strong gusts are occurring, do not do any felling.
- **Cutting the roots:**
Start with the strongest root. First do the vertical and then the horizontal cut.
- **Notching the trunk (18, A):**
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 (19, B) 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. If the saw hits an iron wedge the chain can be seriously damaged or torn.
- When cutting down a tree always stay sideways of the falling tree.
- When withdrawing after having performed the cut, be alert for falling branches.
- When working on sloping ground the user of the chain saw must stay above or sideways of the trunk to be cut or the tree already cut down.
- Be alert for trunks which may roll towards you.

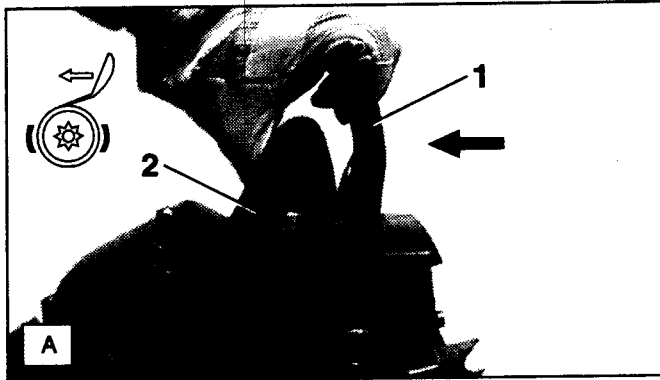


PUTTING INTO OPERATION

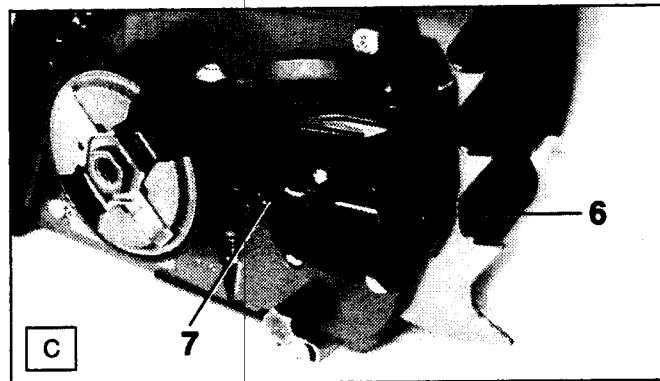
Mounting the guide bar and saw chain

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

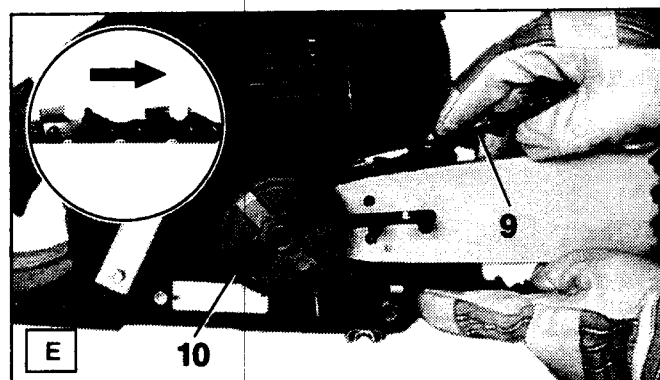
Put the chain saw on a stable surface and carry out the following steps for mounting the guide bar and chain:



- Always release the chain brake before removing or replacing the sprocket guard (B/4). To do so, pull the hand guard (A/1) towards the tubular handle (A/2) until you feel it catch.



- Turn the chain adjusting screw (C/6) to the left (counter-clockwise) until the pin (C/7) is at the left stop.

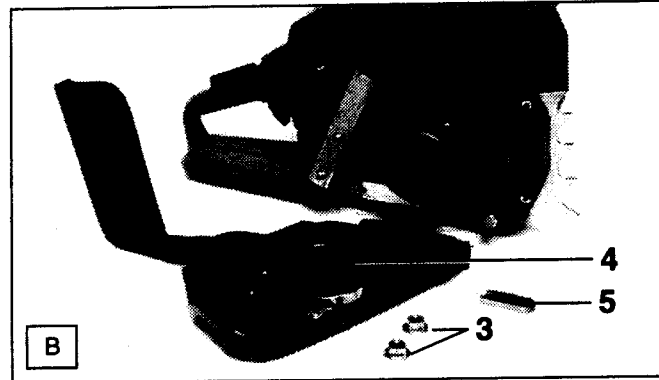


- Lift the chain (E/9) over the clutch drum and onto the sprocket (E/10). Using your right hand, guide the chain into the top guide groove on the guide bar (D/8). Note that the cutting edges along the top of the chain must point in the direction of the arrow!

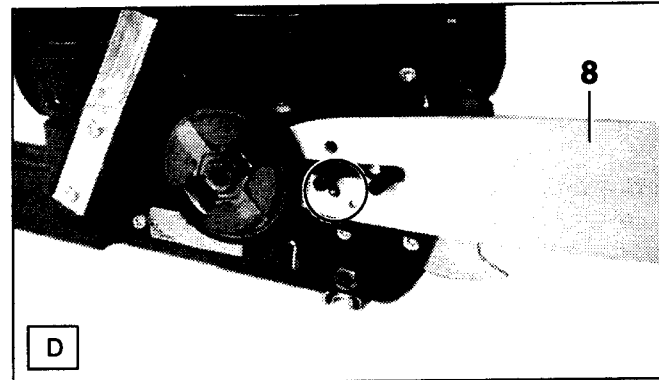


CAUTION: Before doing any work on the guide bar or chain, always switch off the engine and pull the plug cap off the spark plug (see "Replacing the spark plug"). Always wear protective gloves!

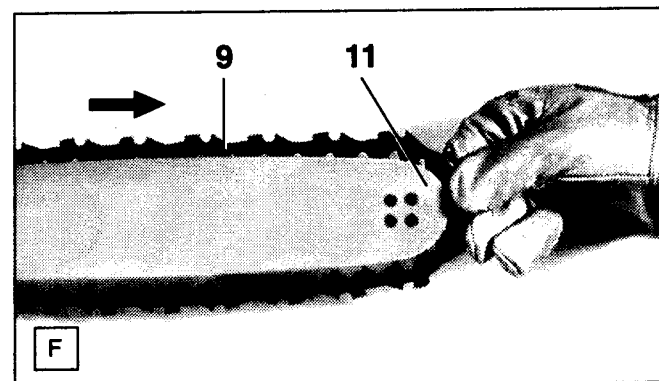
CAUTION: Start the chain saw only after having assembled it completely.



- Unscrew retaining nuts (B/3).
- Pull off the sprocket guard (B/4).
- Remove the plastic transport cover (B/5) and dispose of properly.

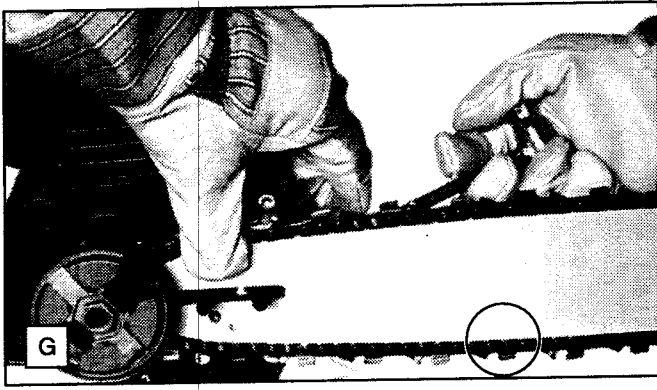


- Position the guide bar (D/8). Make sure that the pin (C/7) of the chain tightener is in the hole (circled) on the guide bar.



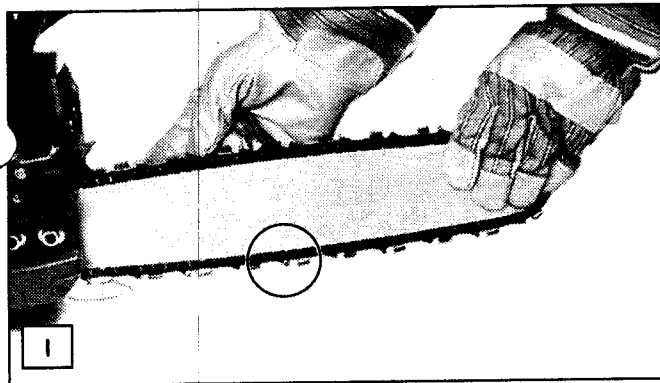
- Lead the chain (F/9) around the sprocket nose (F/11) of the guide bar.

NOTE: The chain should be easy to pull in the direction of the arrow. The clutch drum (E/10) should turn with the chain (the sprocket engages the chain).



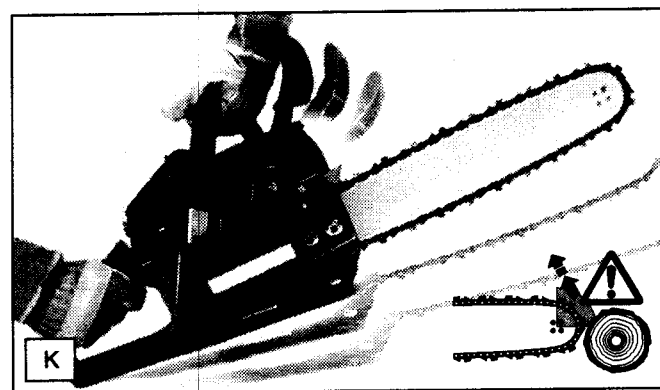
- Turn the chain tightener (C/6) to the right (clockwise) until the chain engages the guide groove of the bottom side of the bar (see circle). Press the guide bar against the housing with your left hand.

Tightening the saw chain



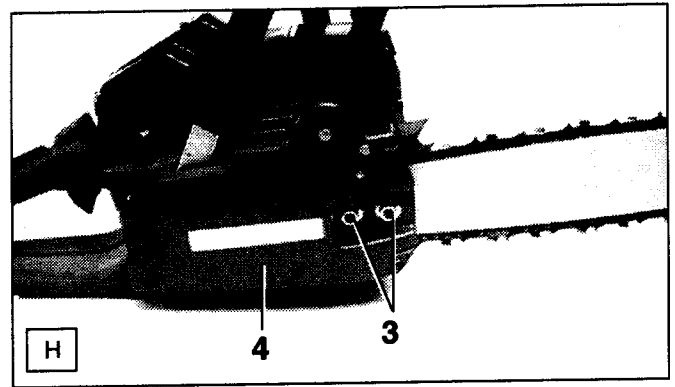
- Slightly lift the end of the guide bar and turn the chain adjusting screw (C/6) to the right (clockwise) until the chain rests against the bottom side of the guide bar.
- While still holding up the tip of the guide bar, tighten the retaining nuts (H/3) with the universal wrench.

Chain brake



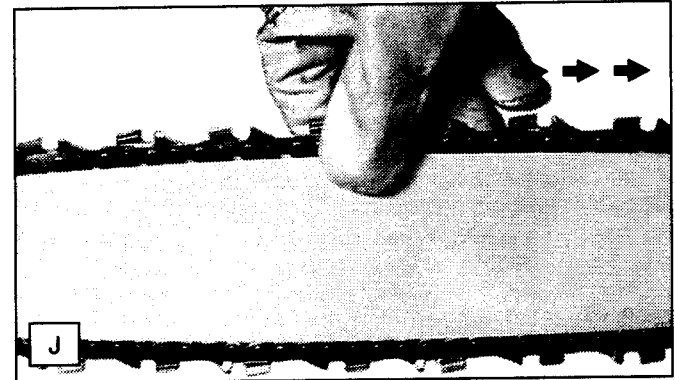
The DOLMAR models comes with an inertia chain brake as standard equipment. The chain brake engages automatically in case of kickback, which is caused by the tip contacting wood while the saw is running (see "SAFETY PRECAUTIONS", Page 6). The chain will stop within a fraction of a second.

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



- Replace the sprocket guard (H/4).
- Manually tighten the retaining nuts (H/3).

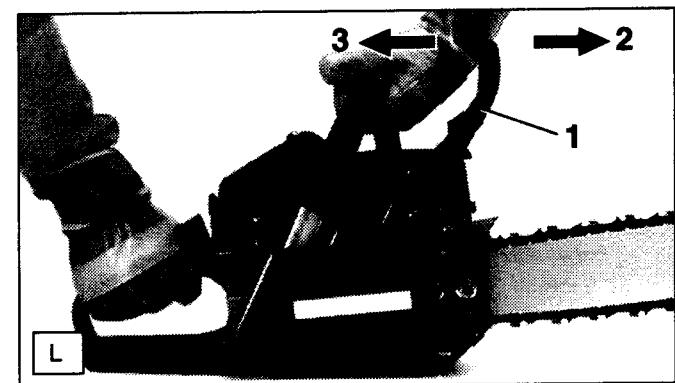
Checking the chain tension



- 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 frequently - new chains tend to get longer during use!
- 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 uniform wear of the guide bar the bar should be turned over whenever replacing the chain.



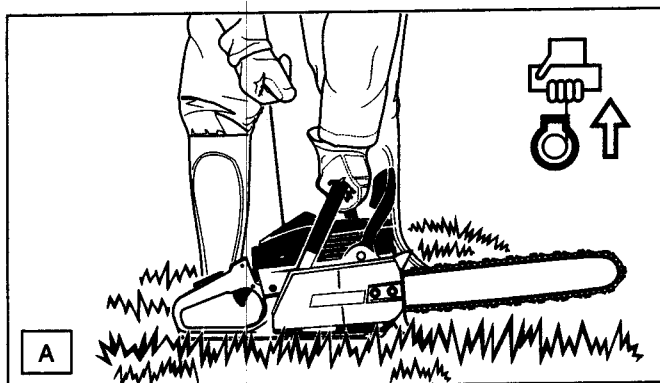
Engaging the chain brake (braking)

In case of kickback the chain brake is engaged **automatically** by inertia motion of the hand guard (L/1). To engage the chain brake **manually**, simply push the hand guard (L/1) forward (towards the tip of the saw) with your left hand (arrow 2).

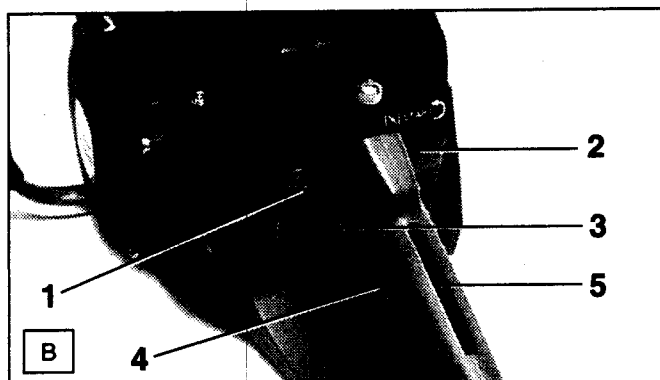
Releasing the chain brake

Pull the hand guard (L/1) towards you (arrow 3) until you feel it catch. The brake is now released.

Starting the engine



Cold-starting



- Put the short-circuit ignition switch in the "I" position (B/1).
- Turn the choke switch (B/2) up (opens injection valve).
- Grasp handle (hand pressure actuates the grip throttle lever lock (B/5)).
- Depress the half-throttle lock button (B/3) and hold.
- Press the throttle (B/4) all the way and release (throttle will be held at half-throttle by the lock button (B/3)).

Note: If the temperature is below -15° C (5° F) start at full throttle.

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

- Turn the choke switch (B/2) back down after the engine catches or after the first audible ignitions.
- If the engine has not yet started, keep pulling the starter cable until it does.
- As soon as the engine is running, press the throttle (B/4) to release the half-throttle lock (B/3), allowing the engine to 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.

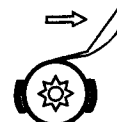


Warm-starting

- As described above for cold starting, but without using the choke (B/2). The choke will remain turned down.

Starting under special conditions

In conditions of high ambient temperature and when the engine has been stopped for only a short period following full-load operation, if a fuel with a low boiling point is used (winter fuel),



- Move at least 3m away from the place where you fuelled the saw.
- Make sure you have a good footing, and place the saw on the ground in such a way that the chain is not touching anything.
- Engage the chain brake (lock).
- Hold the tubular handle tightly with one hand and press the chain saw to the ground.
- Steady the rear handle by standing in the hand guard.

and at high altitudes especially, the heat could prevent the engine from starting immediately. If this happens, proceed as follows:

- Turn the choke switch (B/2) up and start the engine at half-throttle position as described under "Cold-starting".
- When the engine has started, **release the chain brake immediately** and gun the engine all the way several times until it runs smoothly.
- Now turn the choke switch (B/2) back down.

If the engine won't start

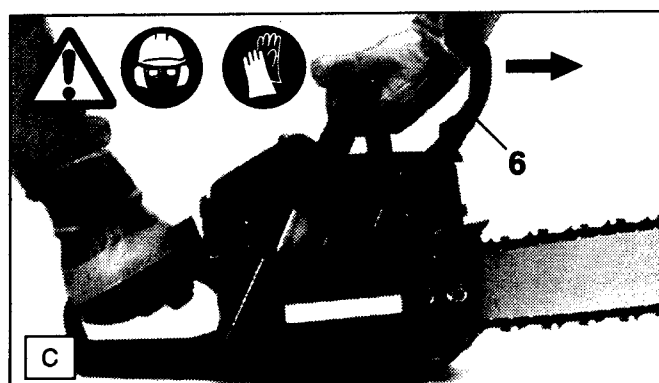
If the engine refuses to start even after a number of tries, check the spark plug (see the section on "Replacing the spark plug").

Stopping the engine



- Put the short-circuiting switch (B/1) 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.

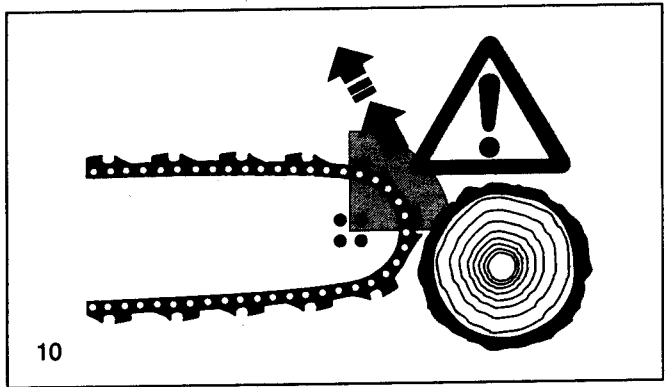
IMPORTANT: If the chain does not stop immediately when you test the chain brake, do NOT use the chain saw. Take the chain saw to a DOLMAR service center.

Kickback

- When working with the chain saw dangerous kickbacks may occur.
- Kickback occurs when the upper part of the end of the guide bar inadvertently touches wood or other hard objects (10).
- This causes the saw to be thrown back toward the user with great force and out of control. **Risk of injury!**

In order to prevent kickback, follow these rules:

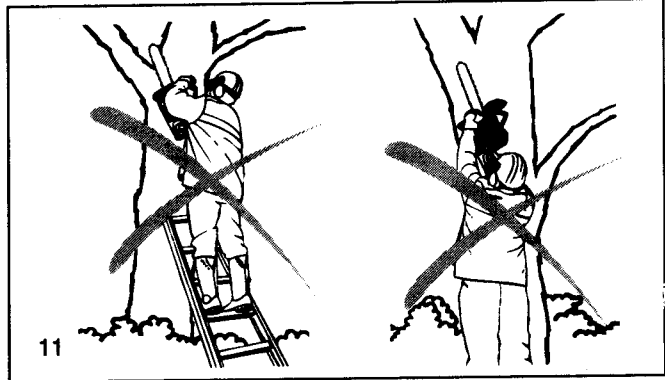
- Only specially-trained persons should perform plunge cuts, i.e., piercing timber or wood with the tip of the saw!
- Never apply the end of the bar when starting to make a cut.
- Always observe the end of the guide bar. Be careful when continuing an already started cut.
- When starting to cut the chain 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 no other branch is touched.
- When crosscutting a trunk be aware of the trunks next to it.



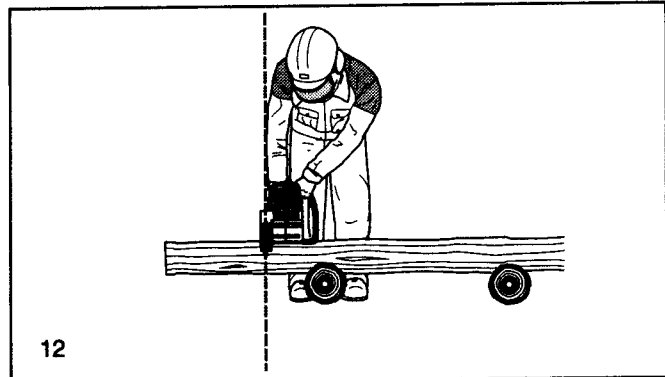
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Working behavior/Method of working

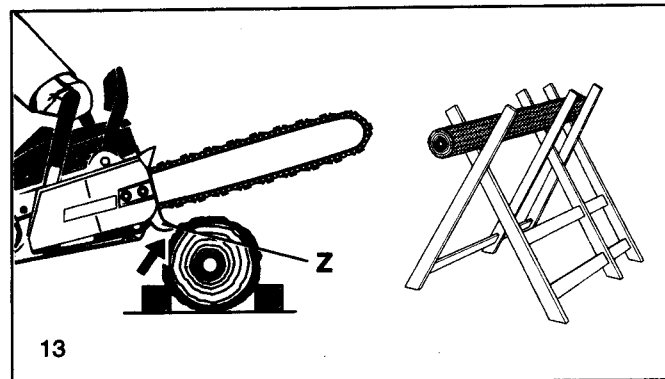
- Only use the chain saw during good light and visibility periods. Be aware of slippery or wet areas, and of ice and snow (risk of slipping). The risk of slipping is extremely high when working on recently peeled wood (bark).
- Never work on unstable surfaces. Make sure that there are no obstacles in 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 (11).
- Never climb up into trees to perform sawing with the chain saw.
- Do not work leaning too far over.
- 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 touching 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 objects such as sand, stones and nails found within the working area. Foreign objects may damage the sawing device and can cause dangerous kickback.
- When sawing pre-cut timber use a safe support (sawing jack, 13). Do not steady the workpiece with your foot, and do not allow anyone else to hold or steady it.
- Secure round pieces against rotation.



11



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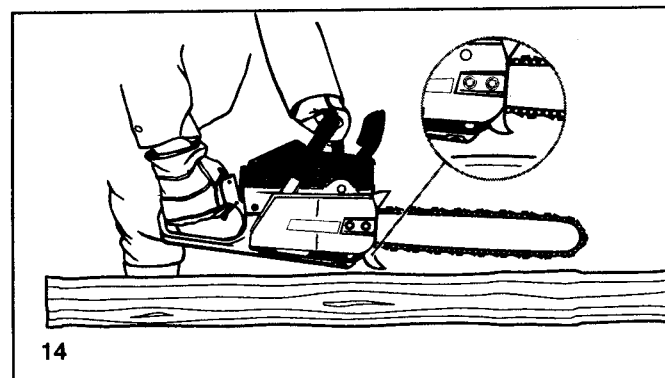
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- **For cutting down trees or performing crosscuts the spike bar (13, Z) must be applied to the wood to be cut.**

- Before performing a crosscut firmly apply the spike bar 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 spike bar serves as a centre of rotation. Continue by slightly pressing down the tubular handle and simultaneously pulling back the chain saw. Apply the spike bar 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 this carried out by specially trained persons only (high risk of kickback).**

- Do **longitudinal - lengthwise - cuts** at the lowest possible angle (14). Be very careful when doing this type of cut, as the spike bar cannot grip.
- The saw must be running whenever you remove the chain saw from the wood.
- When performing several cuts the throttle lever must be released in between.



14

Instruction Manual (page 2-23)

Instructions d'emploi (page 24-45)

Gebruiksaanwijzing (bladzijde 46-67)

Important:

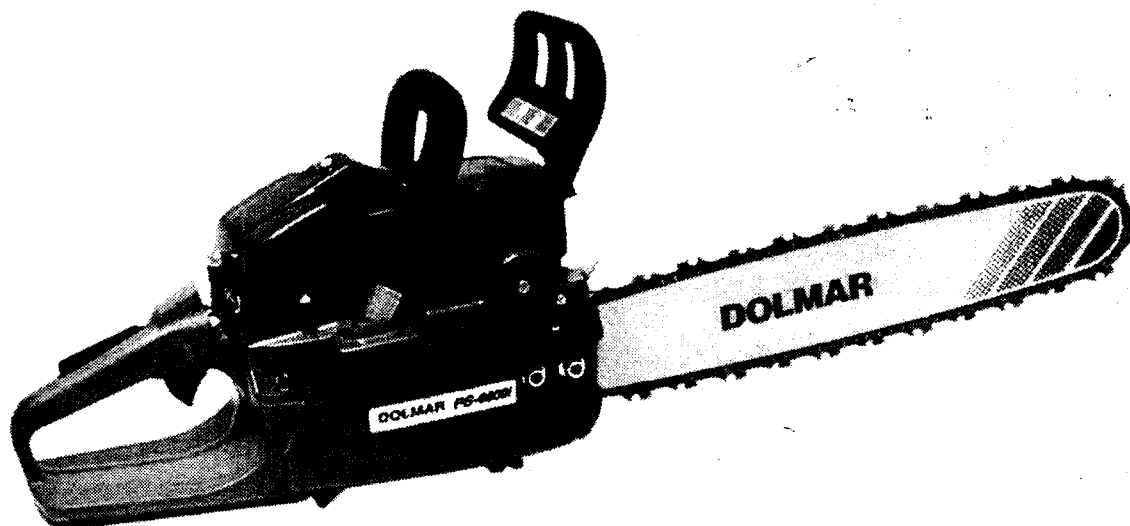
Read this instruction manual carefully before putting the chain saw into operation and strictly observe the safety regulations!
Keep this Instruction Manual!

Attention:

Lire attentivement ce manuel avant la première mise en service et observer absolument les prescriptions de sécurité!
Garder avec soins le manuel des instructions d'emploi!

Belangrijk:

Lees voor de eerste inbedrijfname deze gebruiksaanwijzing zorgvuldig door en neem alle veiligheidsvoorschriften in acht.
Gebruiksaanwijzing zorgvuldig bewaren!



PS-6000i, 6000i H

PS-6800i, 6800i H

DOLMAR



Thank you for purchasing a DOLMAR product!

Congratulations on choosing a DOLMAR chain saw! We are confident that you will be satisfied with this modern piece of equipment. As the world's oldest manufacturer of chain saws - we got our start in 1927 - we have the longest experience in the industry. This experience shows in every detail of every DOLMAR chain saw.

The DOLMAR 6000i and 6800i are high-performance all-purpose chain saws for professional forestry use. They have plenty of power for felling and bucking large trees, but with their compact, ergonomic design they are handy enough for debranching work as well.

The DOLMAR 6000i and 6800i saws feature high-performance engines with specially design combustion chamber, overflow ducts, intake area and muffler for high torque even at low speeds and over a wide speed range.

The automatic chain lubrication with variable-flow oil pump and maintenance-free electronic ignition ensure trouble-free operation, while the hand-saving anti-vibration system and ergonomic grips and controls make work easier, safer, and less tiring for the user.

DOLMAR chain saws are equipped with the latest safety features and meet all national and international standards. These features include: hand guards on both handles, grip throttle lever lock, chain catch, safety saw chain, and chain brake. The chain brake is actuated automatically in case of kickback and stops the chain in a fraction of a second.

In order to ensure the proper functioning and performance of your new chain saw, and to safeguard your own personal safety, it is imperative that you read this instruction manual thoroughly before operation. Be especially careful to observe all safety precautions!



EU Conformity Declaration

The undersigned, Junzo Asada and Reinhart Dörfelt, as authorized by DOLMAR GmbH, declare that the DOLMAR machines,

Type	EU prototype test certificate No.
PS-6000i	K-EG 230
PS-6800i	K-EG 229

manufactured by DOLMAR GmbH, Jenfelder Str. 38, 22045 Hamburg, Germany, conforms to the basic safety and health requirements of the applicable EU guidelines, as modified by 93/68/ EWG:

EU Machine guideline 89/392/ EWG (modified by 91/368/ EWG and 93/44/ EWG)

EU EMC guideline 89/336/ EWG (modified by 91/263/ EWG and 92/31/ EWG)

The most important standards applied to properly meet the requirements of the above EU guidelines were: EN 608, EN 50081-1, EN 50082-1, DIN VDE 0879 T1.

EU prototype testing was carried out by: DPLF (Deutsche Prüfstelle für Land- und Forsttechnik), Prüf- und Zertifizierungsstelle, Weißensteinstraße 70/72, D-34131 Kassel (Germany).

Hamburg, 15.3.1995
For DOLMAR GmbH

Junzo Asada
Managing Director

Reinhart Dörfelt
Managing Director

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Packing

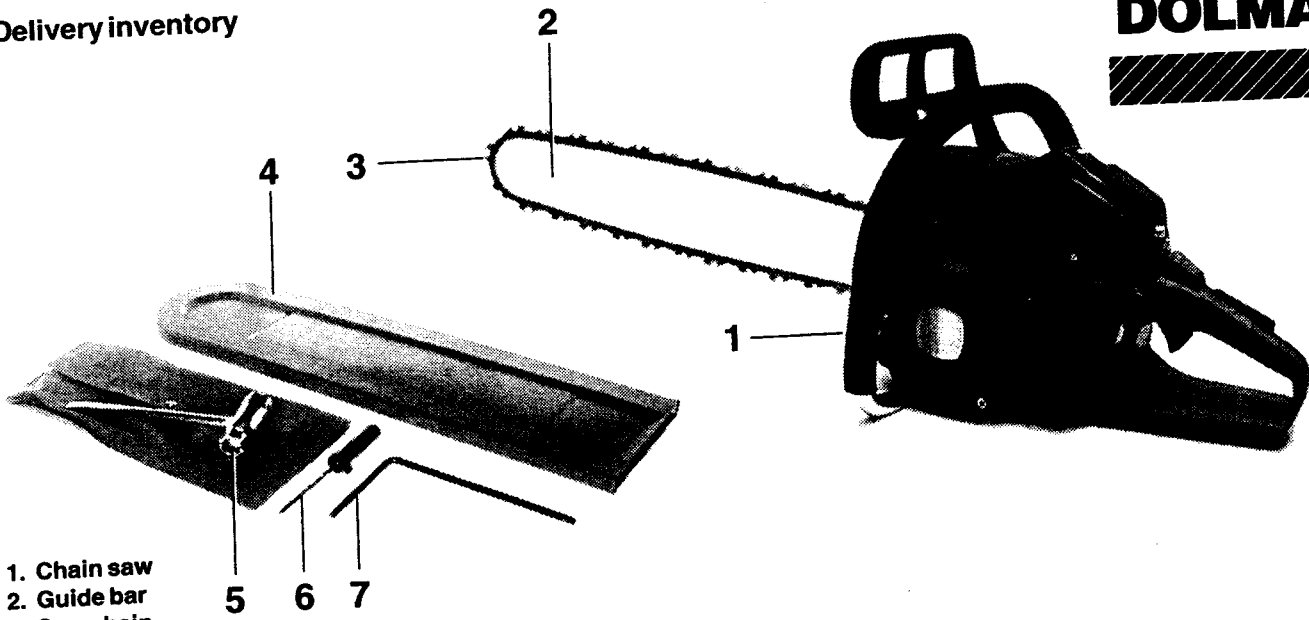
Your DOLMAR chain saw comes delivered in a protective cardboard box to protect against shipping damage.

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



Delivery inventory

DOLMAR



1. Chain saw
2. Guide bar
3. Saw chain
4. Chain protection cover
5. Universal wrench
6. Screwdriver for carburetor adjustment
7. Offset screwdriver
8. Instruction manual (not shown)

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

Symbols

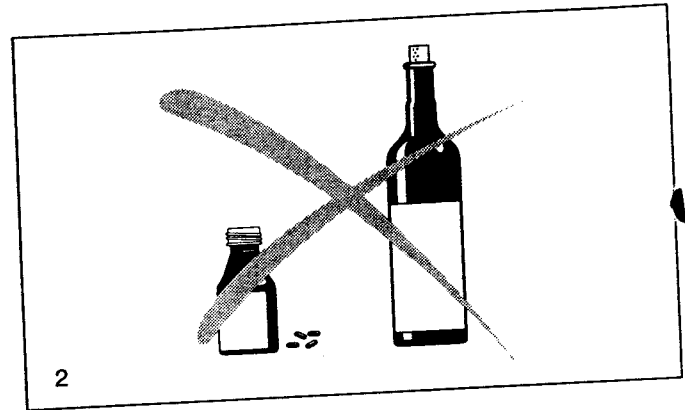
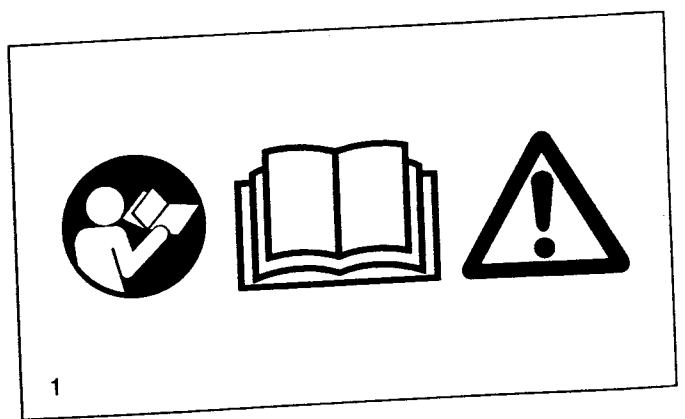
You will notice the following symbols on the chain saw and in the instruction manual:

		Read instruction manual and follow the warning- and safety precautions!		Chain brake
		Particular care and caution!		Caution, kickback!
		Forbidden!		Fuel and oil mixture
		Wear protective helmet, eye and ear protection!		Carburetor adjustment
		No smoking!		Chain oil fill/oil pump
		No open fire!		Working in winter
		On/Off (I/O) switch		Handle heating
		Engine - manual start		First aid
		Choke switch		Recycling
		Emergency stop!		CE-Marking
		Wear protective gloves!		

SAFETY PRECAUTIONS

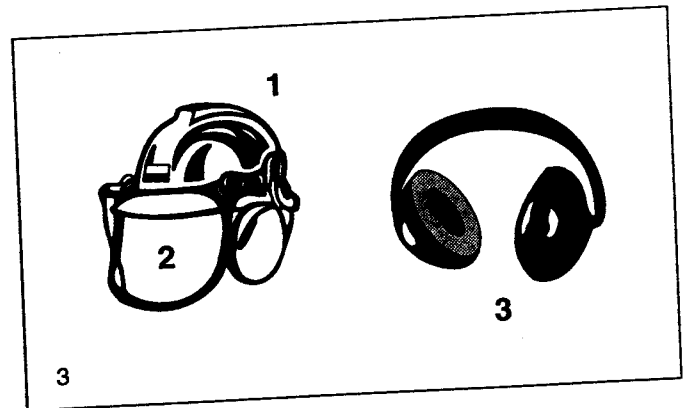
General precautions

- 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.
- 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 calmly and carefully. The user has to accept liability for others.
- Never use the chain saw after having consumed alcohol or drugs.
- A fire extinguisher must be available in the immediate vicinity when working in easily inflammable vegetation or when it has not rained for a long time (danger of fire).



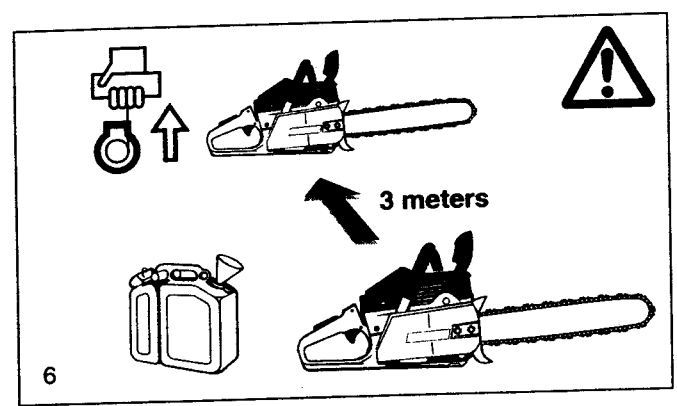
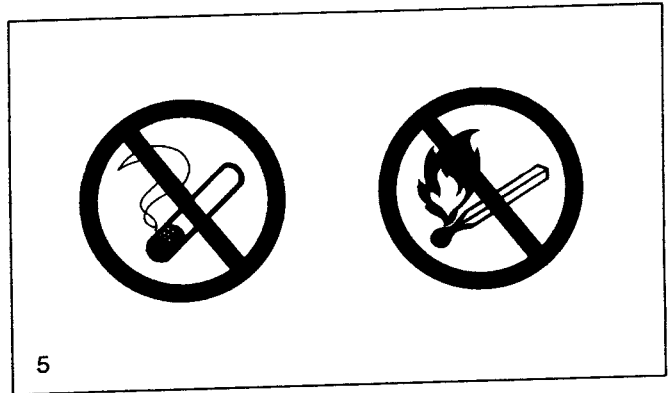
Protective equipment

- 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.
- 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.).
- 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 fabric 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 must always be worn. 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.
- 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 plugs 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.

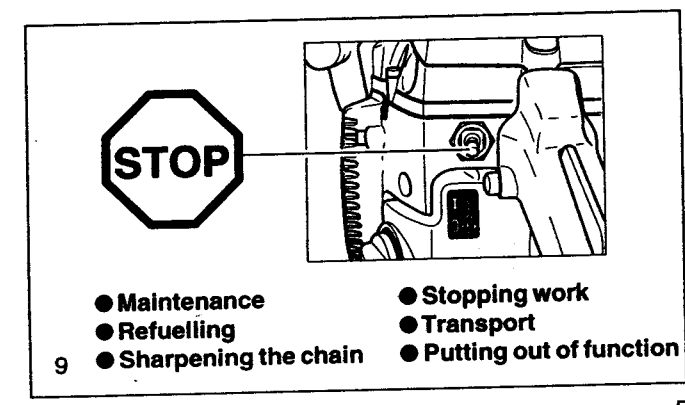
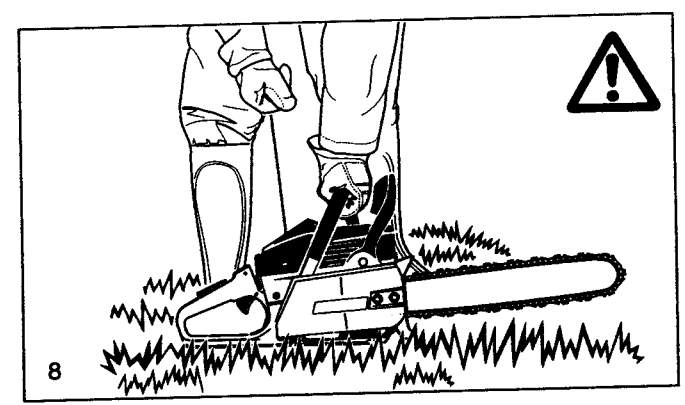
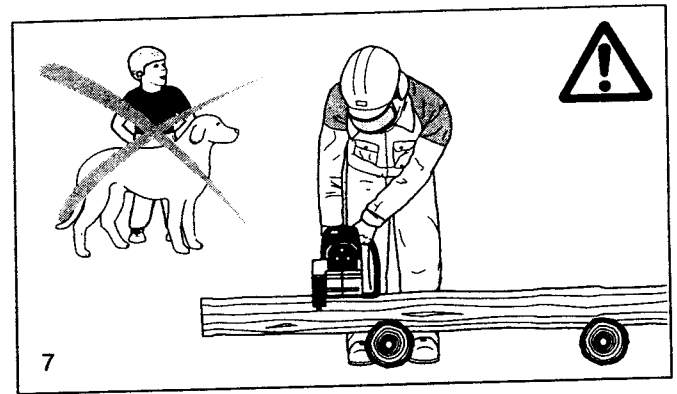


Putting into operation

- **Do not work on your own. There must be someone around in case of an emergency.**
- 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 such that you will not breathe in the exhaust gas. Do not work in closed rooms (danger of poisoning).
- **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.**

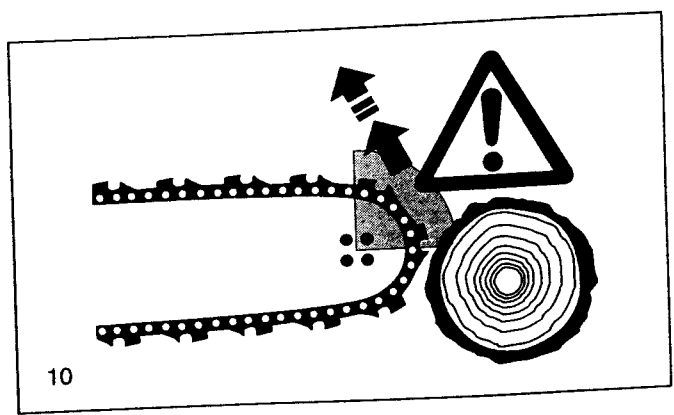


Kickback

- When working with the chain saw dangerous kickbacks may occur.
- Kickback occurs when the upper part of the end of the guide bar inadvertently touches wood or other hard objects (10).
- This causes the saw to be thrown back toward the user with great force and out of control. **Risk of injury!**

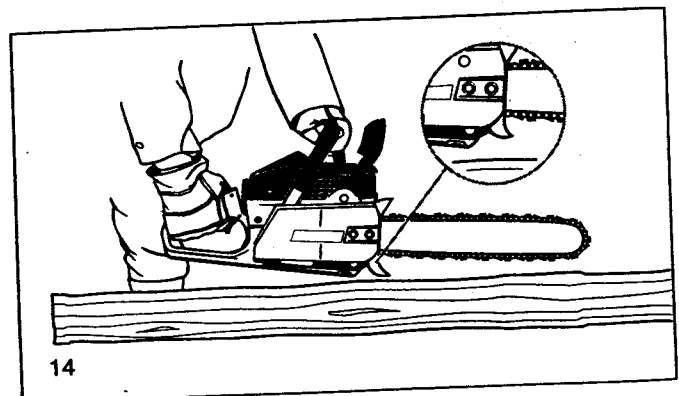
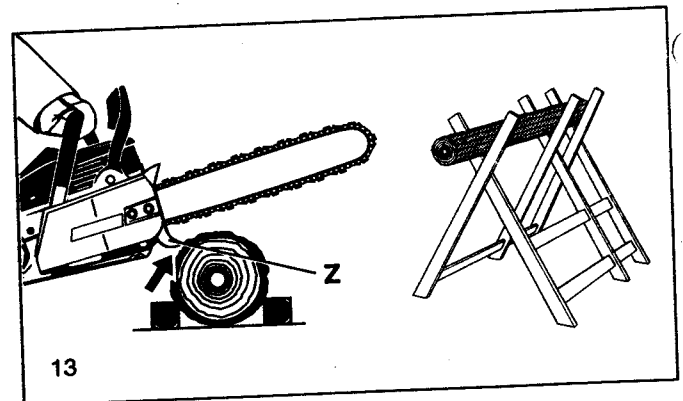
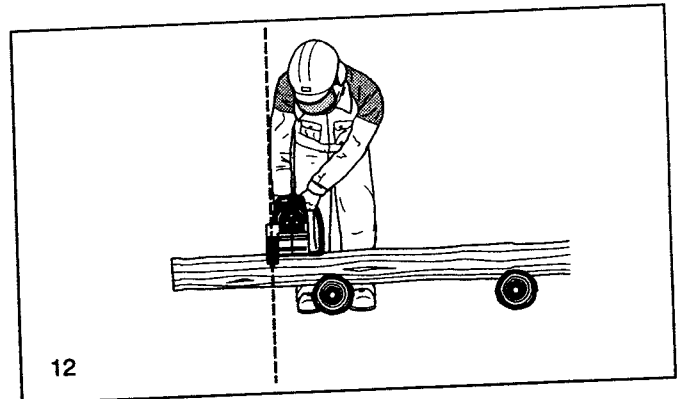
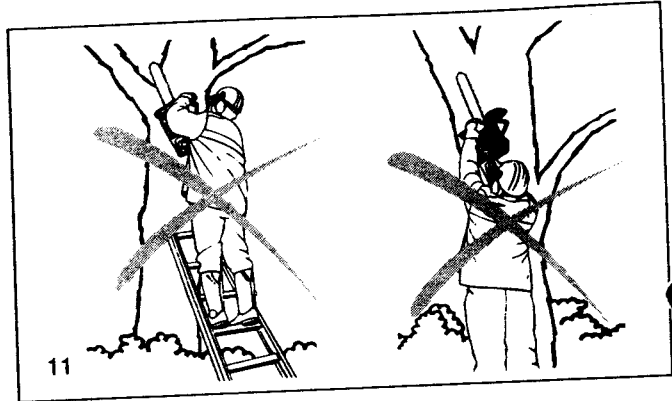
In order to prevent kickback, follow these rules:

- Only specially-trained persons should perform plunge cuts, i.e., piercing timber or wood with the tip of the saw!
- 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 started 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 no other branch is touched.
- When crosscutting a trunk be aware of the trunks next to it.



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 (11).
- Never climb up into trees to perform sawing with the chain saw.
- Do not work leaning too far over.
- 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 touching 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 objects such as sand, stones and nails found within the working area. Foreign objects may damage the sawing device and can cause dangerous kickback.
- When sawing pre-cut timber use a safe support (sawing jack, 13). Do not steady the workpiece with your foot, and do not allow anyone else to hold or steady it.
- Secure round pieces against rotation.



- **For cutting down trees or performing crosscuts the spike bar (13, Z) must be applied to the wood to be cut.**
- Before performing a crosscut firmly apply the spike bar 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 spike bar serves as a centre of rotation. Continue by slightly pressing down the tubular handle and simultaneously pulling back the chain saw. Apply the spike bar 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 this carried out by specially trained persons only (high risk of kickback).**
- Do longitudinal - lengthwise - cuts at the lowest possible angle (14). Be very careful when doing this type of cut, as the spike bar cannot grip.
- The saw must be running whenever you remove the chain saw from the wood.
- When performing several cuts the throttle lever must be released in between.

- Be careful when cutting splintery wood. Cut pieces of wood may be pulled along (risk of injuries).
- When cutting with the upper 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 lower edge of the bar whenever possible. The chain saw will then be pushed away from you (15).
- If the timber is under 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 felling trees or cutting of branches must be specially trained. High risk of injuries!

- When cutting of branches, the chain saw should be supported on the trunk. Do not use the end of the bar for cutting (risk of kickback).
- Be aware of branches under tension. Do not cut free branches from below.
- Never perform detensioning cuts 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 objects, 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 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 overhang - is the tree rotten?

- Take into account the direction and speed of the wind. If strong gusts are occurring, do not do any felling.

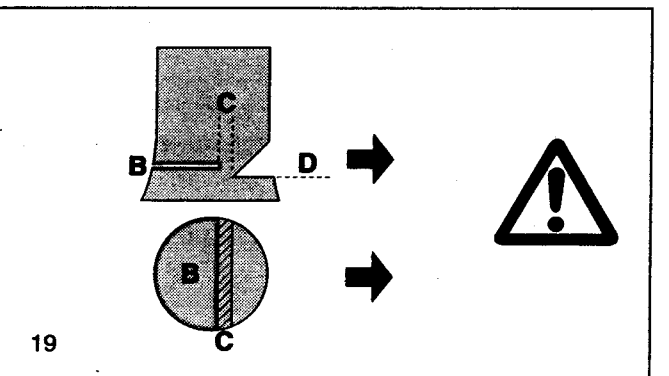
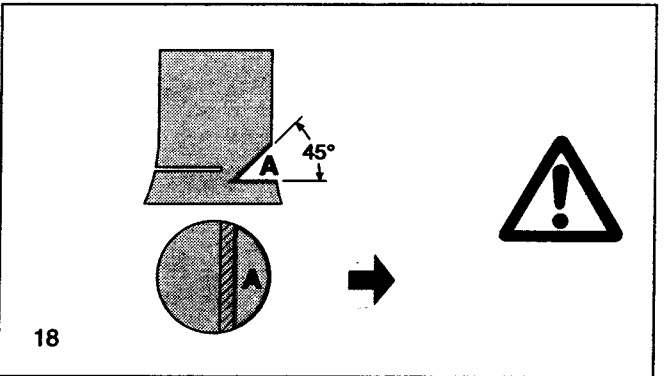
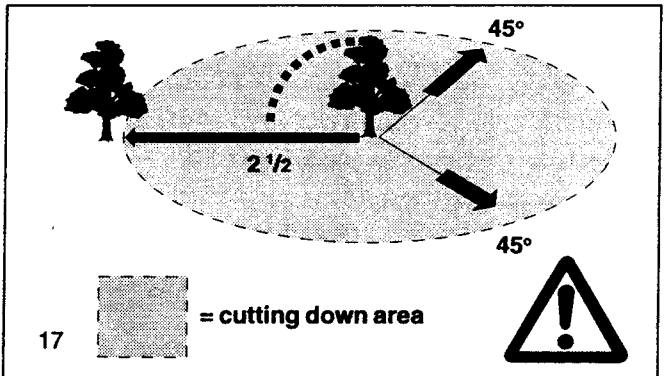
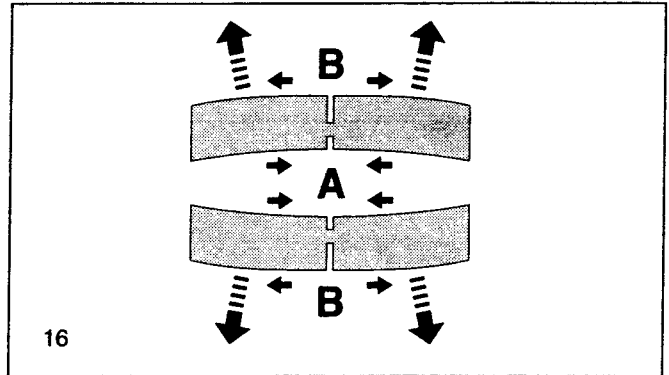
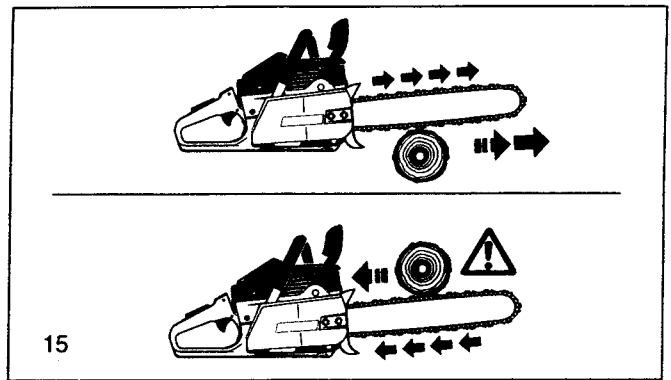
Cutting the roots:

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

Notching the trunk (18, A):

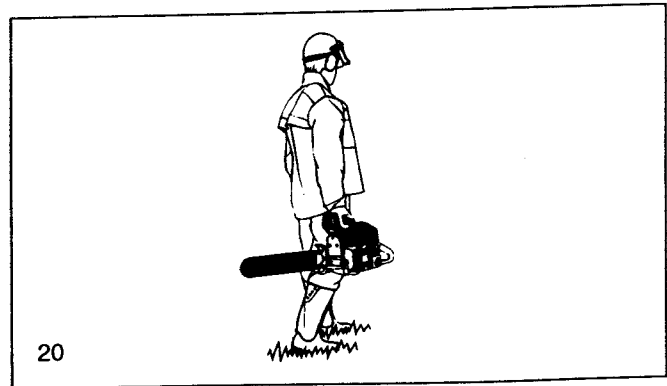
The notch determines the direction of fall and guides the tree. The trunk is notched perpendicular to the direction of fall and penetrates 1/3 - 1/5 of the trunk diameter. Perform the cut near the ground.

- When correcting the cut, always do so over the whole width of the notch.
- **Cut down** the tree (19, B) 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. If the saw hits an iron wedge the chain can be seriously damaged or torn.
- When cutting down a tree always stay sideways of the falling tree.
- When withdrawing after having performed the cut, be alert for falling branches.
- When working on sloping ground the user of the chain saw must stay above or sideways of the trunk to be cut or the tree already cut down.
- Be alert for trunks which may roll towards you.



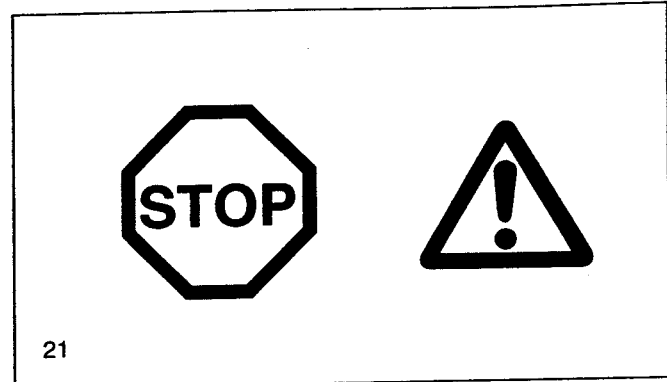
Transport and storage

- When changing your location 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 points backwards (20). Avoid coming in contact with the muffler (danger of burns).
- 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.
- Before 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 work 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.

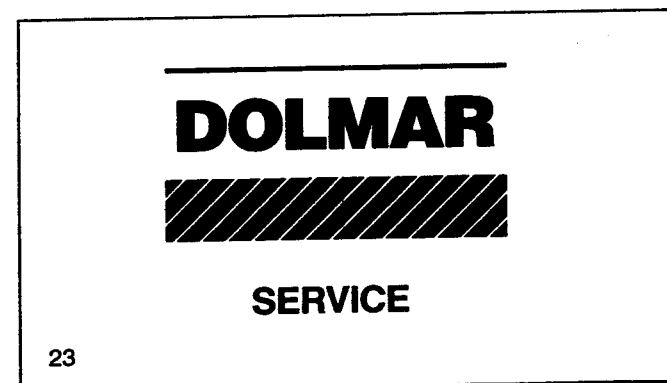
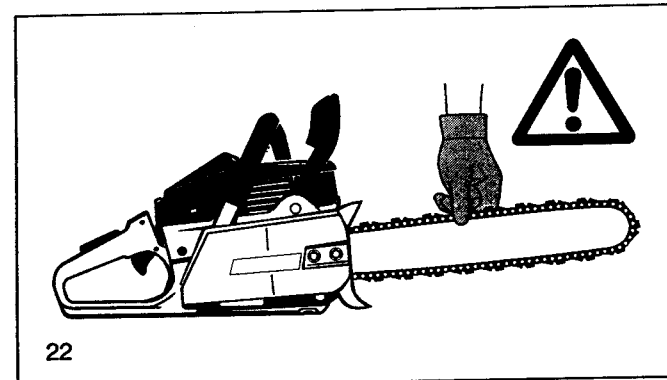


Observe the accident prevention instructions issued by trade associations and insurance companies. Do not perform any modifications on the chain saw. You will put your safety at risk.

Perform only the maintenance and repair works described in the instruction manual. All other work must be carried out by DOLMAR Service.

Use only original DOLMAR spare parts and accessories.

Using spare parts other than original DOLMAR parts or accessories and guide bar/chain combinations or lengths which are not approved bring a high risk of accidents. We cannot accept any responsibility for accidents and damage resulting from using sawing devices or accessories which have not been approved.

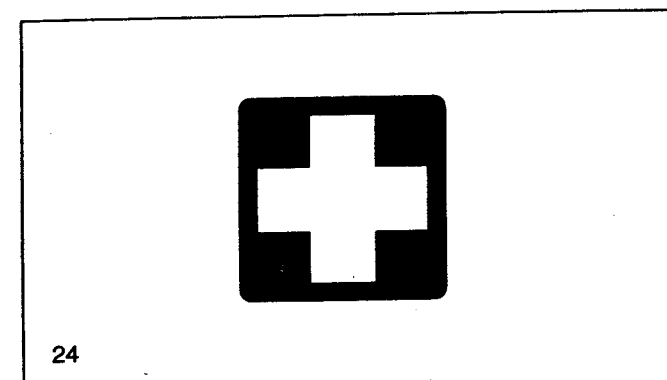


First aid

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

When calling for help, give the following information:

- Place of the accident
- What happened
- Number of injured people
- Kind of injuries
- Your name!



Technical data

		PS-6000, PS-6000i H	PS-6800i, PS-6800i H
Stroke volume	cm ³	60	68
Bore	mm	46	49
Stroke	mm	36	36
Max. power at speed	kW / RPM	3.1 / 9,000	3.6 / 9,000
Max. torque at speed	Nm / RPM	3.7 / 6,000	4.2 / 6,500
Idling speed / max. engine speed with bar and chain	RPM	2,400 / 13,000	2,400 / 12,500
Clutch engagement speed	RPM	3,500	3,500
Sound pressure level L _{PA av} at the workplace per ISO 7182 ¹⁾	dB (A)	102	102
Sound power level L _{WA av} per ISO 9207 ¹⁾	dB (A)	112	112
Vibration acceleration a _{h,w av} per ISO 7505 ¹⁾			
- Tubular handle	m/s ²	4.2	4.0
- Rear handle	m/s ²	5.5	5.2
Carburetor (diaphragm carburetor)	Type	TILLOTSON HS-236	TILLOTSON HS-236
Ignition system	Type	electronic	electronic
Spark plug	Type	BOSCH WSR 6F	BOSCH WSR 6F
Electrode gap	mm	0.5	0.5
Fuel consumption at max. load per ISO 8893	kg/h	1.49	1.73
Specific consumption at max. load per ISO 8893	g/kWh	484	471
Fuel tank capacity	l	0.8	0.8
Chain oil tank capacity	l	0.4	0.4
Mixture ratio (fuel/two-stroke oil)			
- when using DOLMAR oil		50:1	50:1
- when using other oils		40:1	40:1
Chain brake		engages manually or in case of kickback	
Chain speed ²⁾	m/s	20	20
Sprocket pitch	inch	3/8	3/8
Number of teeth	Z	7	7
Chain type (see the Extract from the spare-parts list)			
Pitch / gauge	inch	3/8 / .058	3/8 / .058
Guide bar, length of a cut	cm	38 / 45 / 53	38 / 45 / 53
Guide-bar type (see the Extract from the spare-parts list)			
Weight (fuel tank empty, without chain and guide bar)	kg	6,6	6,6

¹⁾ Figures derived in equal part from idle, full-load, and racing speed operation.

²⁾ At max. power

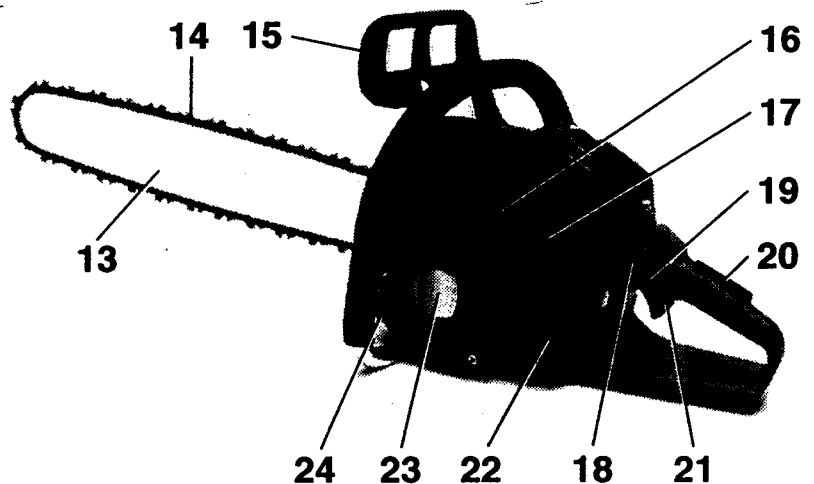
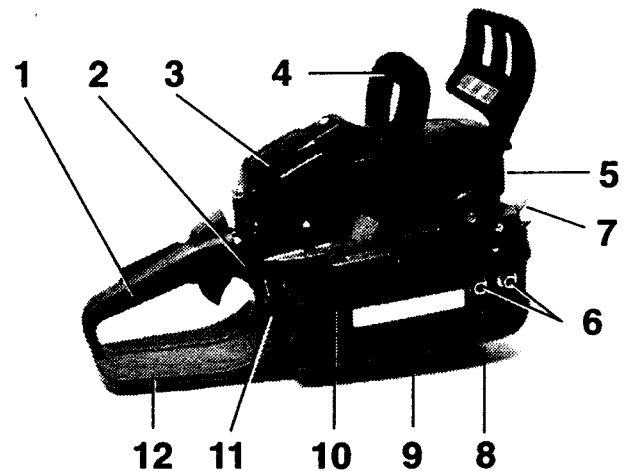
Denomination of components



Identification plate (11)

Indicate when ordering spare parts

- 1 Handle
- 2 Choke
- 3 Filter cover
- 4 Tubular handle
- 5 Muffler
- 6 Retaining nuts
- 7 Spike bar
- 8 Chain catcher
- 9 Adjusting screw for oil pump (bottom side)
- 10 Sprocket guard
- 11 Identification plate
- 12 Hand guard
- 13 Guide bar
- 14 Saw chain
- 15 Hand guard (release for chain brake)
- 16 Starter grip
- 17 Adjusting screws "S-L-H" for carburetor
- 18 I/STOP-switch
- 19 Stop knob for halfway throttle
- 20 Safety locking button
- 21 Throttle lever
- 22 Fuel tank plug
- 23 Fan housing with starting assembly
- 24 Oil tank plug



PUTTING INTO OPERATION

Mounting the guide bar and saw chain

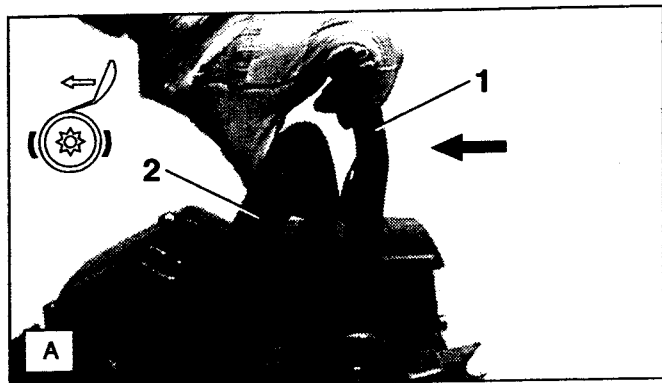
Use the universal wrench delivered with the chain saw for the following work.

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

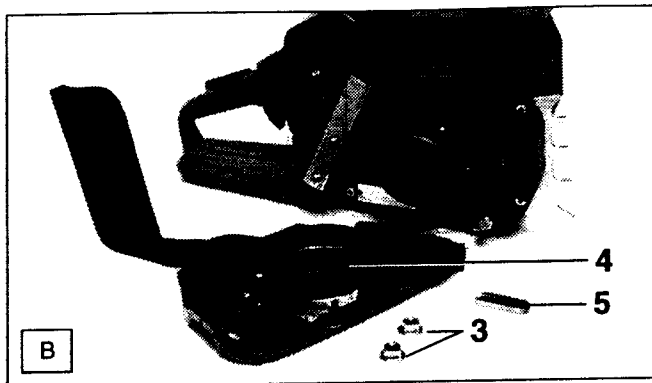


CAUTION: Before doing any work on the guide bar or chain, always switch off the engine and pull the plug cap off the spark plug (see "Replacing the spark plug"). Always wear protective gloves!

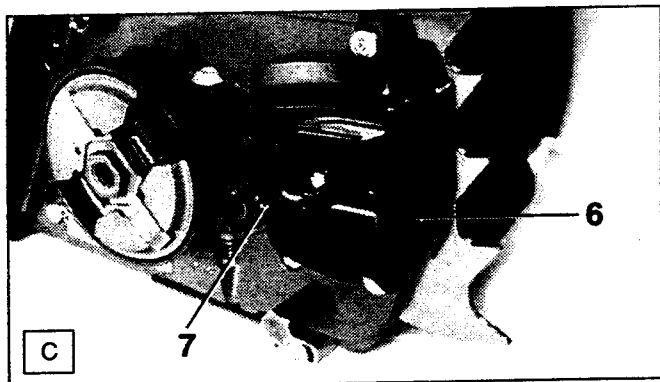
CAUTION: Start the chain saw only after having assembled it completely.



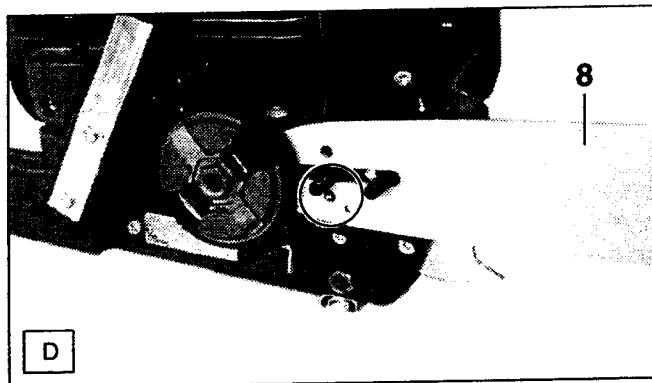
- Always release the chain brake before removing or replacing the sprocket guard (B/4). To do so, pull the hand guard (A/1) towards the tubular handle (A/2) until you feel it catch.



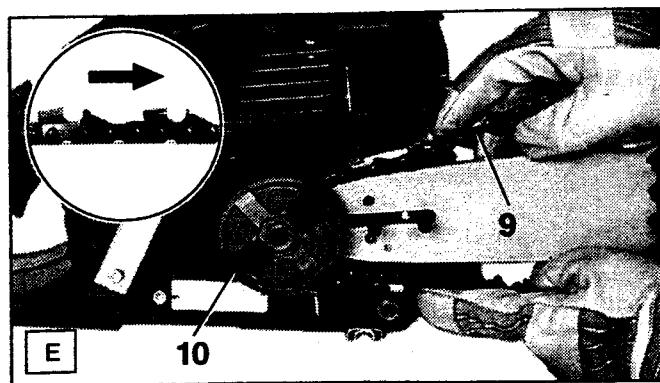
- Unscrew retaining nuts (B/3).
- Pull off the sprocket guard (B/4).
- Remove the plastic transport cover (B/5) and dispose of properly.



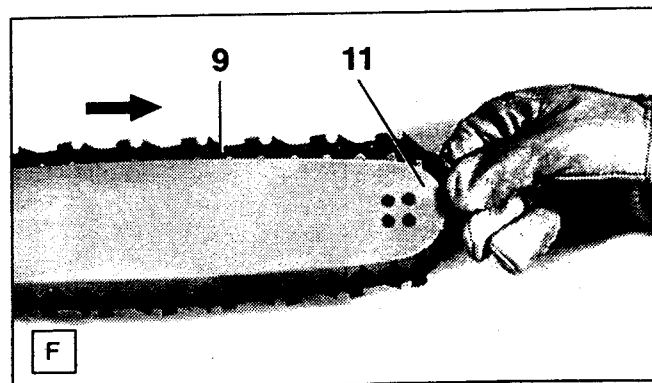
- Turn the chain adjusting screw (C/6) to the left (counter-clockwise) until the pin (C/7) is at the left stop.



- Position the guide bar (D/8). Make sure that the pin (C/7) of the chain tightener is in the hole (circled) on the guide bar.

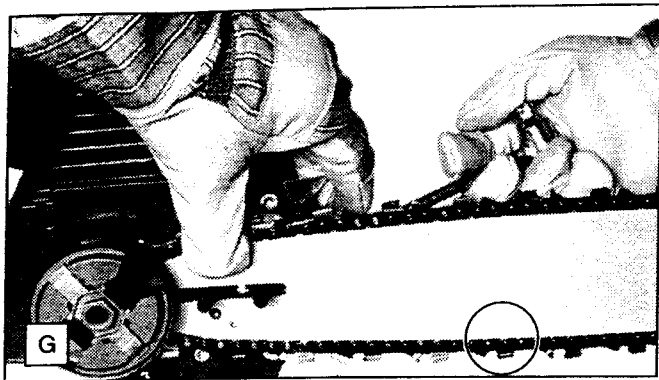


- Lift the chain (E/9) over the clutch drum and onto the sprocket (E/10). Using your right hand, guide the chain into the top guide groove on the guide bar (D/8). Note that the cutting edges along the top of the chain must point in the direction of the arrow!



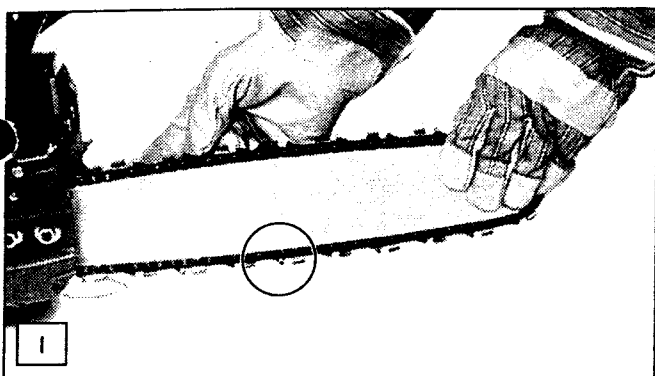
- Lead the chain (F/9) around the sprocket nose (F/11) of the guide bar.

NOTE: The chain should be easy to pull in the direction of the arrow. The clutch drum (E/10) should turn with the chain (the sprocket engages the chain).

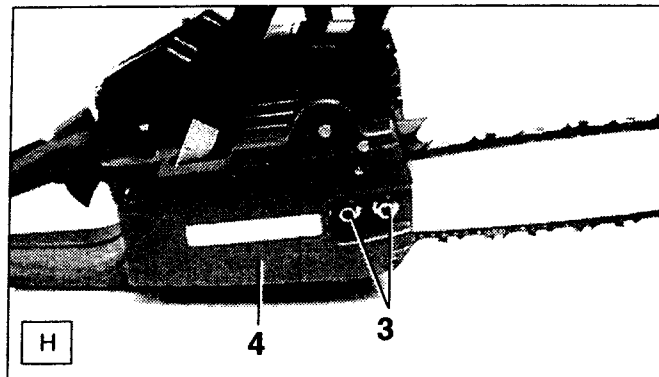


- Turn the chain tightener (C/6) to the right (clockwise) until the chain engages the guide groove of the bottom side of the bar (see circle). Press the guide bar against the housing with your left hand.

Tightening the saw chain



- Slightly lift the end of the guide bar and turn the chain adjusting screw (C/6) to the right (clockwise) until the chain rests against the bottom side of the guide bar.
- While still holding up the tip of the guide bar, tighten the retaining nuts (H/3) with the universal wrench.



- Replace the sprocket guard (H/4).
- Manually tighten the retaining nuts (H/3).

Checking the chain tension

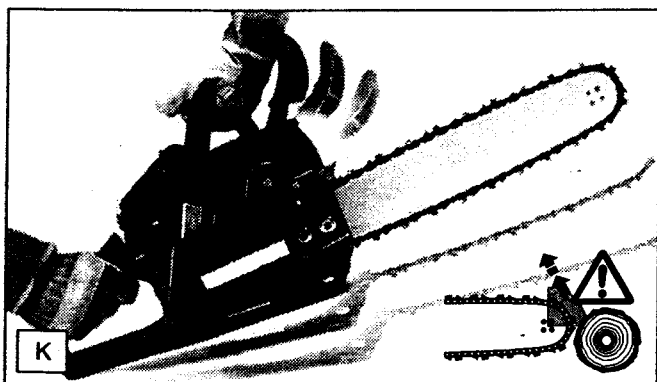


- The tension of the chain is correct if the chain rests against the bottom side of the guide bar and can still be easily turned by hand.
- While doing so the chain brake must be released.
- Check the chain tension frequently - new chains tend to get longer during use!
- When checking the chain tension the engine must be switched off.

NOTE:

It is recommended to use 2-3 chains alternatively. In order to guarantee uniform wear of the guide bar the bar should be turned over whenever replacing the chain.

Chain brake



The DOLMAR models comes with an inertia chain brake as standard equipment. The chain brake engages automatically in case of kickback, which is caused by the tip contacting wood while the saw is running (see "SAFETY PRECAUTIONS", Page 6). 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.



Engaging the chain brake (braking)

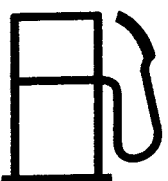

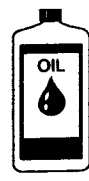
In case of kickback the chain brake is engaged automatically by inertia motion of the hand guard (L/1). To engage the chain brake manually, simply push the hand guard (L/1) forward (towards the tip of the saw) with your left hand (arrow 2).

Releasing the chain brake

Pull the hand guard (L/1) towards you (arrow 3) until you feel it catch. The brake is now released.

Fuels/Refuelling



Gasoline	50:1	40:1
		
1000 cm ³ (1 litre)	20 cm ³	25 cm ³
5000 cm ³ (5 litre)	100 cm ³	125 cm ³
A 10000 cm ³ (10 litre)	200 cm ³	250 cm ³

Fuel mixture

The engine of the chain saw is a high-efficiency 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.

For lubricating the engine use a two-stroke engine oil (quality grade: TC-3), which is added to the fuel. The engine has been designed for use of DOLMAR 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.

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

- 1 l order number 980 008 107
- 100 ml order number 980 008 106

In case DOLMAR high-performance two-stroke engine oil is not available, it is urgently recommended to use a mixture ratio of 40:1, as otherwise optimum operation of the engine cannot be guaranteed.

The correct mixture ratio:

- 50:1** when using DOLMAR high-performance two-stroke engine oil, i. e. mix 50 parts gasoline with 1 part oil.
- 40:1** when using other two-stroke engine oils, i. e. mix 40 parts gasoline with 1 part oil.

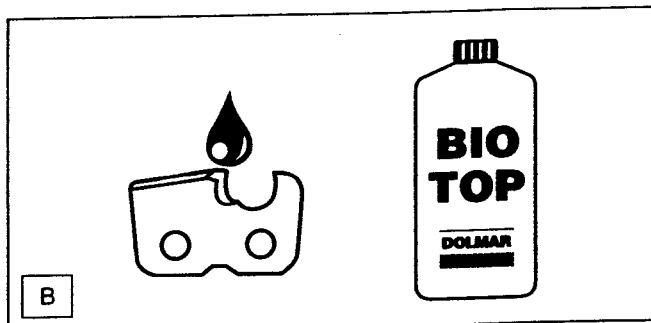
NOTE:

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.

NOTE:

Fuel cannot be stored for an unlimited period of time. Buy only as much as will be consumed in 4 weeks. Use only approved and marked containers for transport and storage.



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 DOLMAR 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 980 008 210
- 5 l order number 980 008 211
- 20 l order number 980 008 213

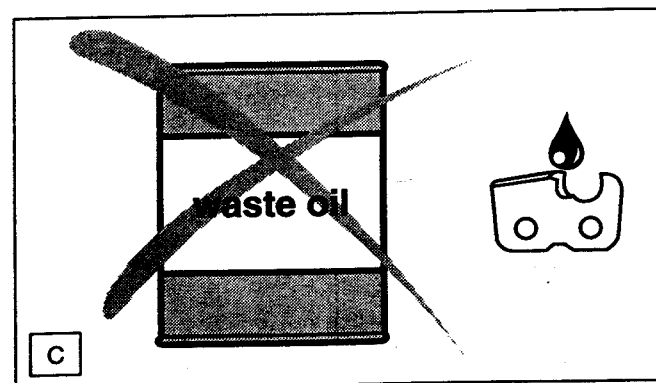
Bio-degradable oil is stable only for a limited period of time. It should be used within 2 years from the date of manufacture (printed on the container).

Important note on bio-degradable chain oils:

If you are not planning to use the saw again for an extended period of time (longer than the expiration date of the chain oil), 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 degrease your skin. If your skin comes in contact with these substances repeatedly and for an extended period of time, it will desiccate. Various skin diseases may result. In addition, allergic reactions are known to occur. 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, see a doctor immediately!

Refuelling



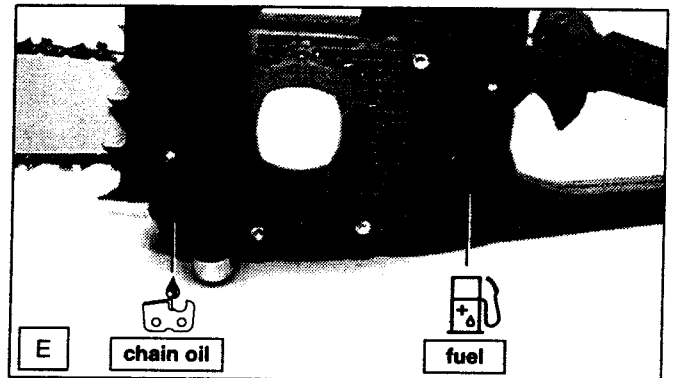
FOLLOW THE SAFETY PRECAUTIONS!

Be careful and cautious when handling fuels.

The engine must be switched off!

- Thoroughly clean the area around the plugs, to prevent dirt from getting into the fuel or oil tank.
- Unscrew the plug and fill the tank with fuel (fuel/oil mixture) or chain oil as the case may be. Fill up to the bottom edge of the filler neck. Be careful not to spill fuel or chain oil!
- Tightly screw on the plug.

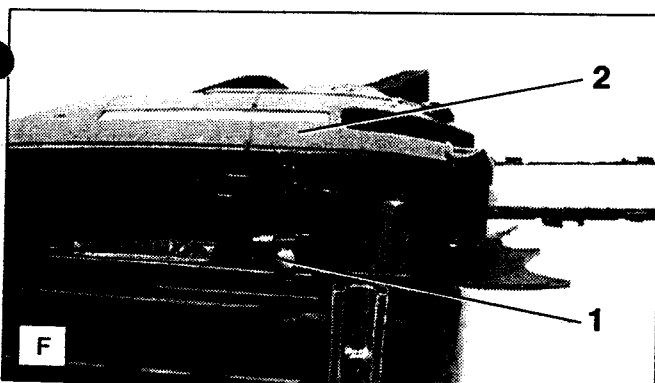
Clean screw plug and tank after refuelling.



Lubricating the chain

During operation there must always be sufficient chain oil in the chain-oil tank to provide good chain lubrication. One filling is sufficient for about one half-hour of continuous operation.

Adjusting the chain lubrication

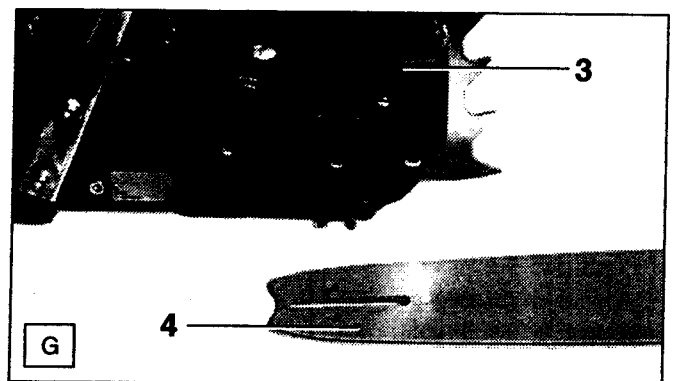


The engine must be switched off.

You can adjust the oil pump feed rate with the adjusting screw (F/1). The adjusting screw is located in the housing underneath the sprocket guard (F/2). It is accessible from below.

The oil pump comes factory-set to a medium feed rate.

Note: To set from minimum to maximum oil supply, turn the adjusting screw (F/1 with adjustment markings) max. a 1/4-turn.

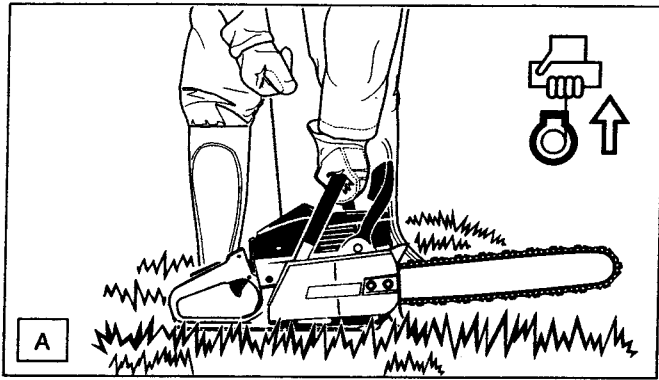


To ensure troublefree operation of the oil pump the oil guide groove at the crank case (G/3) and the oil inlet bore in the guide bar (G/4) must be cleaned regularly.

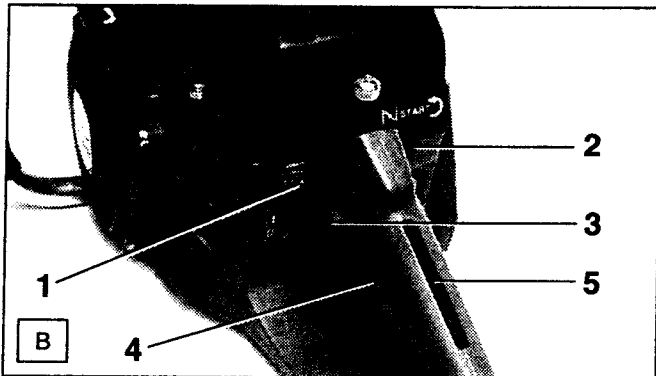
To change the feed quantity use the universal wrench and adjust the adjusting screw (F/1) in the following way:

- Turn to the right to reduce the feed rate.
- Turn to the left to increase the feed rate.

Starting the engine



Cold-starting



- Put the short-circuit ignition switch in the "I" position (B/1).
- Turn the choke switch (B/2) up (opens injection valve).
- Grasp handle (hand pressure actuates the grip throttle lever lock (B/5)).
- Depress the half-throttle lock button (B/3) and hold.
- Press the throttle (B/4) all the way and release (throttle will be held at half-throttle by the lock button (B/3)).

Note: If the temperature is below -15°C (5°F) start at full throttle.

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

- Turn the choke switch (B/2) back down after the engine catches or after the first audible ignitions.
- If the engine has not yet started, keep pulling the starter cable until it does.
- As soon as the engine is running, press the throttle (B/4) to release the half-throttle lock (B/3), allowing the engine to 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.

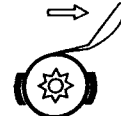


Warm-starting

- As described above for cold starting, but without using the choke (B/2). The choke will remain turned down.

Starting under special conditions

In conditions of high ambient temperature and when the engine has been stopped for only a short period following full-load operation, if a fuel with a low boiling point is used (winter fuel),



- Move at least 3m away from the place where you fuelled the saw.
- Make sure you have a good footing, and place the saw on the ground in such a way that the chain is not touching anything.
- Engage the chain brake (lock).
- Hold the tubular handle tightly with one hand and press the chain saw to the ground.
- Steady the rear handle by standing in the hand guard.

and at high altitudes especially, the heat could prevent the engine from starting immediately. If this happens, proceed as follows:

- Turn the choke switch (B/2) up and start the engine at half-throttle position as described under "Cold-starting".
- When the engine has started, **release the chain brake immediately** and gun the engine all the way several times until it runs smoothly.
- Now turn the choke switch (B/2) back down.

If the engine won't start

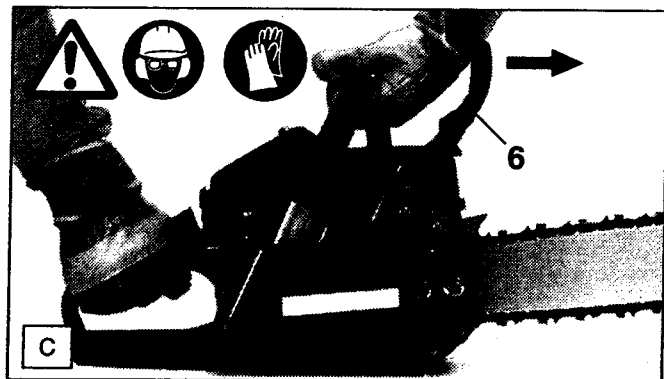
If the engine refuses to start even after a number of tries, check the spark plug (see the section on "Replacing the spark plug").

Stopping the engine



- Put the short-circuiting switch (B/1) in position "O" (STOP).

Checking the chain brake

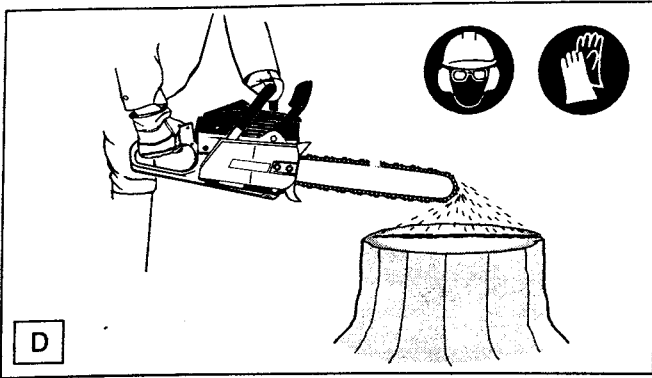


Do not work with the chain saw without first checking the chain brake!

- 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 DOLMAR service center.

Checking the chain lubrication



Never work with the chain saw without sufficient chain lubrication. Otherwise the service life of the chain and guide bar will be reduced.

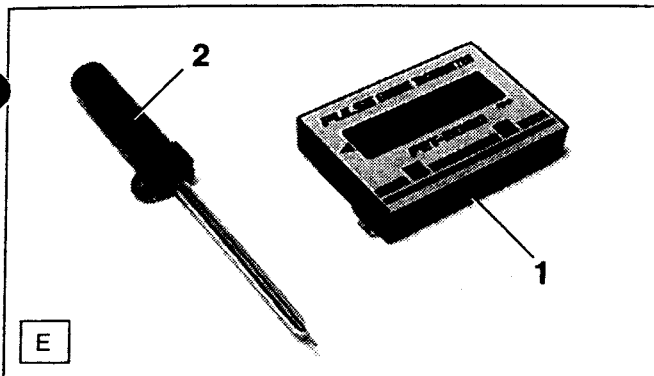
Before starting work check the oil level in the tank and the oil feed.

Check the oil feed rate 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 flung off the sawing device.

Adjusting the carburetor



CAUTION:

Optimum performance can only be achieved if the carburetor is adjusted correctly. For this work, which should be carried out by an expert, the engine must be warmed up and the air filter clean.

The carburetor has been adjusted by DOLMAR on the basis of atmospheric pressure conditions at sea level. Other atmospheric pressure conditions or the running-in process of a new engine may require readjustment of the carburetor.

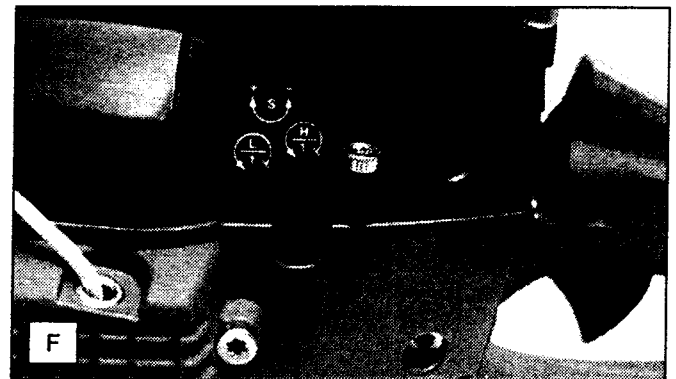
It is urgently recommended to use a revolution indicator (E/1) (order number 950 233 210) in order to achieve a correct adjustment of the carburetor.

Adjust the carburetor with the screwdriver (E/2) provided in the assembly tool kit. It has a molded-on lug to assist in adjustment. Before adjusting the carburetor the engine must be warmed up for a period of 3-5 min.



For adjusting the carburetor correctly the following steps must be carried out:

1. Warm up engine
2. Switch off engine
3. Basic adjustment
4. Start engine
5. Set idle speed
6. Adjust speed
7. Check idling speed
8. Check acceleration
9. Check max. speed or output
10. Repeat adjustment procedure starting with step 5, until idling speed, max. speed and acceleration are reached with the adjustment made.



Basic adjustment (step 3)



- First, carefully turn the 2 adjusting screws for the main jet (H) and the idle jet (L) to the right (clockwise) until you feel them stop.
- Now turn both screws one turn to the left (counter-clockwise).

Set idle speed (step 5)



- If the chain turns when the engine is idling, unscrew the throttle-valve stop screw (S) until the chain stops. If the engine runs unevenly, screw the screw (S) back in.
- Idling speed should be 2,400 rpm.

Adjust speed (output) (step 6)

- Adjust the speed by adjusting the main jet screw (H) to 13,000 rpm for PS-6000i and 12,500 rpm for PS-6800i.

Check idle speed (item 7)

- After having adjusted the max. speed ensure the idle speed is set to 2,400 rpm. (the chain must not turn). Use the idle jet screw (L) to regulate it. Turn in the screw (L) to speed up, and turn out the screw (L) to speed down the engine.

Check acceleration (item 8)

- Now check the acceleration, i. e. the time necessary for speeding up from idle speed to max. speed. To do this, press the throttle lever hard.
- If the acceleration is too low, turn out the idle jet screw (L) approx. 1/8 rotation.

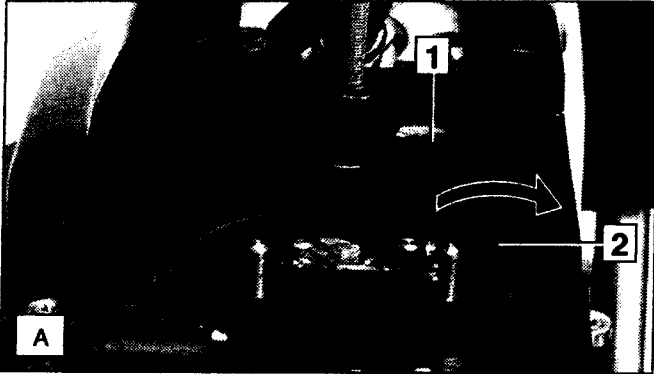
Working in winter



In order to prevent carburetor icing in conditions of low temperature combined with high humidity, and in order to get up to operating temperature faster in subfreezing temperatures, heated air can be taken from the cylinder.

At temperatures above freezing the carburetor must NOT be fed heated air.

Failure to follow these instructions can lead to damage to the cylinder and piston!



- Remove the filter cover and air filter (see "Cleaning the air filter").
- For hot air to be inducted from the cylinder, the opening to the cylinder (A/1) must be unblocked.
- To do this, use the carburetor screwdriver (A/2) to turn the slide flap all the way to the right (clockwise - see arrow).
- Reinstall the air filter and filter cover.

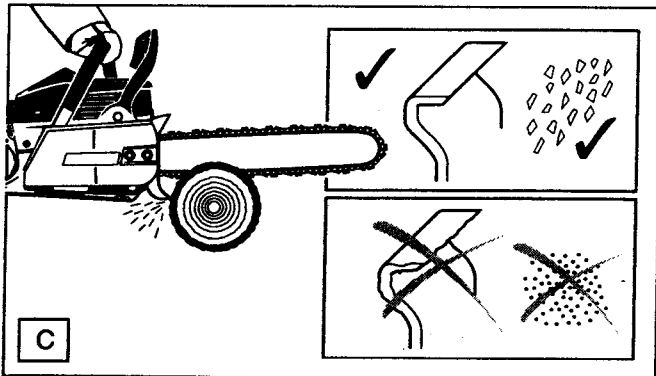
MAINTENANCE

Sharpening the saw 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!



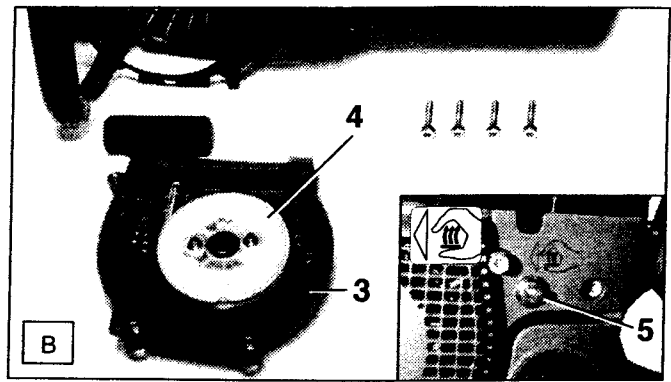
The chain needs sharpening when:

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

Important: Sharpen frequently, but without removing too much metal!

Generally, 2 or 3 strokes of the file will be enough.

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



To get up to operating temperature faster (thus reducing wear and tear as well as fuel consumption), you can install a cover (B/3) inside the fan housing (B/4):

- Remove fan housing (see "Replacing the starter cable").
- Position cover (B/3) in housing as shown in Fig. B.
- Replace fan housing (when doing this, it may be necessary to pull the starter cable lightly so that the cable pulley catches).

IMPORTANT:

At temperatures above 0° C (32° F), the cylinder opening must be closed and the cover must be removed from the fan housing.

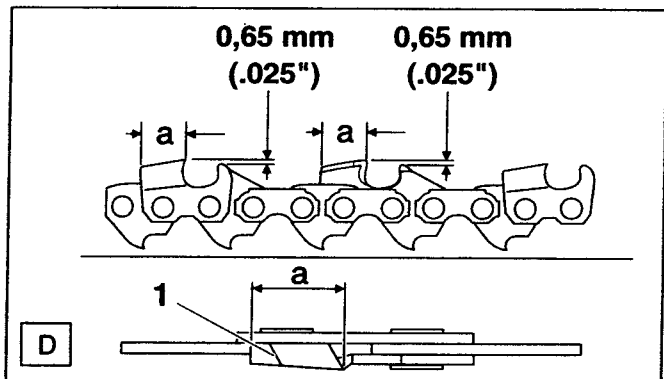
Handle heating

(electric, special equipment for model 6000i H and 6800i H)

The electrically heated handles are activated by pushing the switch (B/5).

Switch forward - ON

Switch back - OFF



Proper sharpening:

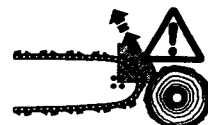
CAUTION:

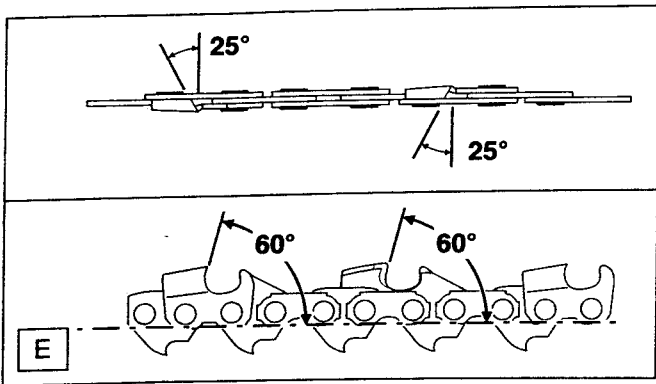
Use only chains and guide bars designed for this saw (see the Extract from the spare-parts list)!

- All cutters must be of the same length (dimension a). Cutters with different lengths result in rough running of the chain and can cause cracks in the chain.
- The marking (D/1) on the cutter shows the minimum cutter length. Do not resharpen the chain when the minimum cutter length has been reached; at this point, the chain must be replaced (see the Extract from the spare-parts list and "Replacing the saw chain").
- The depth of the cut is determined by the difference in height between the depth limiter (round nose) and the cutting edge.
- The best results are obtained with a depth-limiter depth of 0.65 mm (.025").

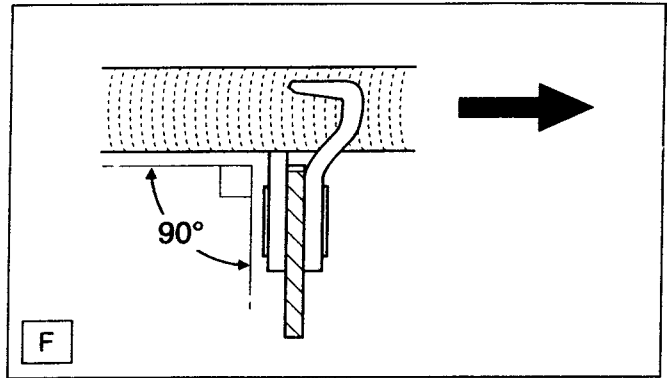
CAUTION:

Excessive depth increases the risk of kickback!





- All cutters must be sharpened to the same angle, 25°. Different angles result in a roughly, irregularly running chain, increase wear and tear and cause chain beakage.
- The 60° front rake of the cutter results from the cut depth of the round file. If the proper file is used in the right manner, the correct front rake will be obtained automatically.

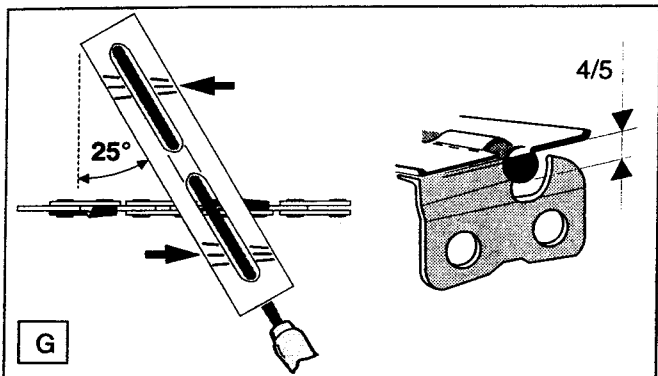


Files and how to work with them

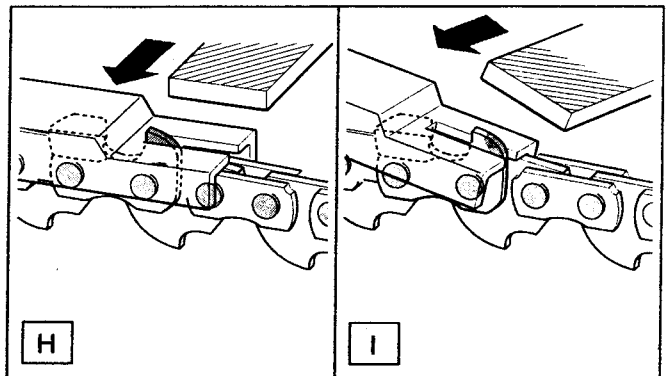
Use a special round file for chains for sharpening the chain. File the first cutter half with a 5.5 mm dia. round saw-chain file, then switch to a 4.8 mm dia. file.

Normal round files are not appropriate for this work. See "Accessories" for the order number.

- 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 standard for all other cutters of the chain.
- Always guide the file as in Fig. F shown (90° to the guide bar).



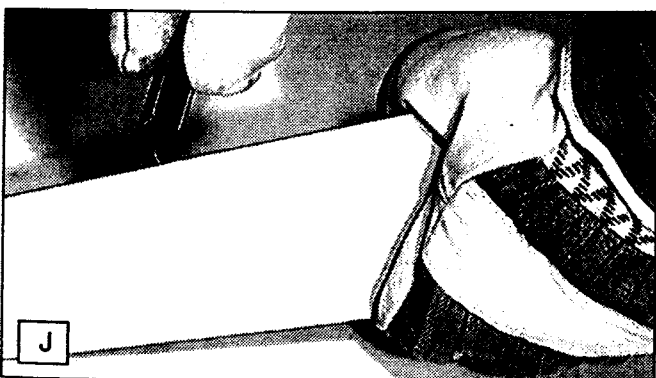
- The file holder makes file guidance easier. It is marked for the correct 25° sharpening angle (keep the marks parallel with the chain when filing, see illustration) and limits the cut depth to the correct 4/5 of the file diameter. See "Accessories" for the order number.



- After having sharpened the chain, the height of the depth limiter must be checked by means of a chain gauge. See "Accessories" for the order number.
- Correct even the smallest excess height with a special flat file (H). See "Accessories" for the order number.
- Round off the front of the depth limiter (I).

Cleaning the guide bar

CAUTION:
Protective gloves must be worn.



Regularly inspect the bearing surfaces of the guide bar for damage, and clean them with a suitable tool.

Manual # 346

Machine type - 701 chainsaw large 2 stroke
0729 chainsaw small 2 stroke.

Chain Saw Safety Manual

SCANNED

Safety Precautions



Because a chainsaw is a high-speed wood-cutting tool some **special safety precautions** must be observed in addition to those that generally apply when working with an axe or hand saw.



It is important that you read and understand the owner's manual before using your chainsaw for the first time. Non-observance of the

following safety precautions may cause serious or even fatal injury.

Always observe local safety regulations, standards and ordinances.

If you have never used this chainsaw model before:

Have your STIHL dealer show you how to operate your chainsaw or attend a special course of training in chainsaw operation.

Minors should never be allowed to use a chainsaw.

Children, bystanders and animals should not be allowed in the area where a chainsaw is in use.

The chainsaw user is responsible for accidents or risks involving third parties or their property.

Do not lend or rent your chainsaw without the owner's manual. Be sure that anyone using your saw understands the information contained in this manual.

You must be in good physical condition and mental health and not under the influence of any substance (drugs, alcohol) which might impair vision, dexterity or judgment.

STIHL recommends only **guide bars, saw chains and chain sprockets** supplied by STIHL and explicitly approved for your chainsaw model by STIHL (see specifications and sales documentation).

The characteristics of these components are specifically designed to match your chainsaw model and meet your performance requirements (cutting capacity, vibration, kickback behavior).

Only use **attachments** supplied by STIHL or explicitly approved for your chainsaw model by STIHL. Other attachments must not be used because of the increased risk of accidents and negative effects on the chainsaw.

Never attempt to **modify** your chainsaw in any way since this can be extremely dangerous and result in serious or fatal injury. STIHL cannot accept any liability for personal injury or damage to property caused by modifications to the chainsaw, using attachments not approved by STIHL or non-approved guide bars and saw chains.

Clothing and equipment

Wear proper protective clothing and equipment.



Clothing must be sturdy and snug-fitting, but allow complete freedom of movement. Wear overalls with a cut-retardant inlay - a STIHL safety overall is

recommended.

Do not wear loose-fitting garments, scarves, jewelry or anything that could restrict movement or become entangled with the saw, wood or brush. Confine long hair (e.g. with a hair net).



Wear steel-toed **safety boots** with non-slip soles.



Wear a **safety hard hat** to protect your head.
Wear **safety glasses** and **sound barriers**, i.e. ear plugs or ear muffers.



Wear **heavy-duty, non-slip gloves**, preferably made of chrome leather.

STIHL offers a comprehensive range of safety clothing and equipment.

Transporting the chainsaw

Always engage the chain brake and fit the chain guard (scabbard) before carrying the saw short distances. Also stop the engine before carrying the saw longer distances (more than about 50 m).

Always carry the saw by the front handle – with the hot muffler away from your body – the guide bar must point to the rear. To avoid serious burn injuries, avoid touching hot parts of the machine, especially the surface of the muffler.

Transporting by vehicle: When transporting in a vehicle, properly secure your saw to prevent turnover, fuel spillage and damage.

When your saw is not in use, put it down in a safe place so that it does not endanger anybody.

Fueling



Gasoline is an extremely flammable fuel. Keep clear of naked flames and fire. Do not spill any fuel.

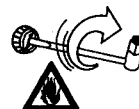
Stop the engine before refueling.

Do not refuel while the engine is still hot since fuel may overflow and catch fire.

In order to reduce risk of burns or other personal injury from escaping gas vapor and fumes, unscrew the fuel cap carefully to allow any pressure build-up in the tank to release slowly.

Fuel your chainsaw in a well-ventilated area, outdoors only. If you spill fuel, wipe the saw immediately - if fuel gets on your clothing, change immediately.

A number of different filler caps are installed as standard at the factory.



After fueling, tighten the screw cap as firmly as possible by hand




Place the cliplock filler cap (bayonet-type) in position, turn as far as stop and fold the cliplock down.

This helps reduce the risk of unit vibrations causing an improperly tightened fuel cap to loosen or come off and spill quantities of fuel.

To avoid risk of serious or fatal burn injuries, check for leakage. If fuel leakage is found, do not start or run the engine until leak is fixed.

Before starting

Check that saw is properly assembled and in good condition - refer to appropriate chapters in the owner's manual:

- Check operation of chain brake
- Correctly mounted guide bar
- Correctly tensioned chain
- Correctly tensioned chain
- Smooth action of throttle trigger and throttle trigger interlock - throttle trigger must return automatically to idle position
- Master control/stop switch must move easily to **STOP** or 
- Check that spark plug boot is secure
 - a loose boot may cause arcing that could ignite combustible fumes and cause a fire
- Never attempt to modify the controls or safety devices
- Keep the handles dry and clean – free from oil and pitch – for safe control.

To reduce risk of personal injury, do not operate your saw if it is damaged or not properly assembled.

Starting the engine

Start the engine at least 3 meters (10 feet) from the fueling spot, outdoors only.

Your chain saw is a one-person saw. Do not allow other persons near the running chainsaw. Start and operate your saw without assistance.

To reduce risk of chain rotation and personal injury, lock the chain with the chain brake before starting.

Do not drop start the chainsaw. The correct starting procedure is described in your owner's manual.

When the engine is running:

Note that the chain continues to rotate for a short period after you let go of the throttle trigger.

To reduce risk of fire, keep hot exhaust gases and hot muffler away from easily combustible materials (e.g. wood chips, bark, dry grass, fuel).

Operate your chainsaw so that it produces a minimum of noise and emissions – do not run engine unnecessarily, accelerate the engine only for cutting.

During operation



Your chainsaw produces toxic exhaust fumes as soon as the engine is running. These fumes may be colorless and odorless. Never run the engine indoors or in poorly ventilated locations, even if your model is equipped with a catalytic converter.

To reduce the risk of serious or fatal injury from breathing toxic fumes, ensure proper ventilation when working in trenches, hollows or other confined locations.



To reduce risk of fire, do not smoke while operating or standing near your chainsaw. Note that combustible fuel vapor may escape from the fuel system.

Do not work alone – keep within calling distance of others in case help is needed.

If you get tired, take a break in good time.



The use of this machine may produce dust (sawdust), vapor (oil mist from chain lubrication) and smoke containing chemical substances. Such substances may cause serious injuries and health problems, i.e. respiratory diseases, cancer, genetic or hereditary defects.

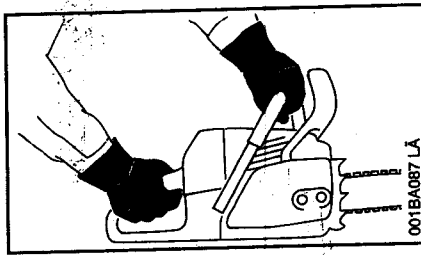
If you are not aware of the possible risks associated with dust, vapor and smoke emissions, ask your employer or the responsible authority to provide the relevant information.

If a high level of dust, vapor or smoke cannot be avoided in spite of using appropriate working techniques, you should wear a respirator approved for the substance concerned. This also applies to helpers.

General precautions:

Be particularly alert and cautious when wearing hearing protection because your ability to hear warnings (shouts, alarms, etc.) is restricted.

In the event of impending danger or in an emergency, switch off the engine immediately by moving the Master Control/stop switch to  or .



Always hold your saw firmly with both hands - right hand on the rear handle, even if you are left-handed. To ensure safe control, wrap your fingers tightly around the front handle and control handle.

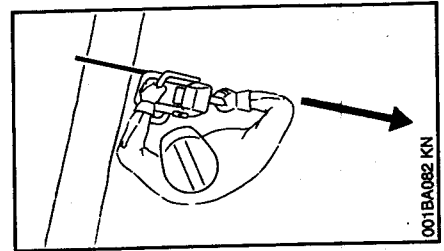
Take special care to maintain good footing.

Run the engine at full throttle, engage the spiked bumper firmly in the wood and then start cutting.

Do not operate your chainsaw with the starting throttle lock engaged. Engine speed cannot be controlled with the throttle trigger in this position.

If your chainsaw is subjected to unusually high loads for which it was not designed (e.g. heavy impact or a fall), always check that it is in good condition before continuing cutting work.

Check the fuel system for leaks and make sure the safety devices are working properly. Do not continue operating your saw if it is damaged. In case of doubt, have saw checked by your STIHL servicing dealer.



Position the saw so that your body is clear of the cutting attachment.

Always pull the saw out of the cut with the chain running.

Never work without the spiked bumper - the saw may pull you forwards and off balance.

Work calmly and carefully - in daylight conditions and only when visibility is good - ensure you do not endanger others - stay alert at all times.

Use the shortest possible guide bar: The chain, guide bar and chain sprocket must match each other and your saw.

Make sure that the idle speed is properly adjusted: The chain must stop rotating when you release the throttle trigger.

Check idle speed adjustment regularly. If the chain rotates, have the saw checked by your STIHL dealer.

Take special care in slippery conditions – damp, snow, ice, on slopes, uneven ground and freshly debarked logs.

Always use a lift bucket when working at heights.

Never work on a ladder, in a tree or on any other insecure support.

Do not work above shoulder height.

Never operate the saw with one hand.

Use your saw for cutting wood or wooden objects only. It is not designed for prying or shoveling away limbs, roots or other objects.

Make sure your saw does not touch any foreign materials:

Stones, nails, etc. may be flung off, damage the saw chain or cause the saw to kick back unexpectedly.



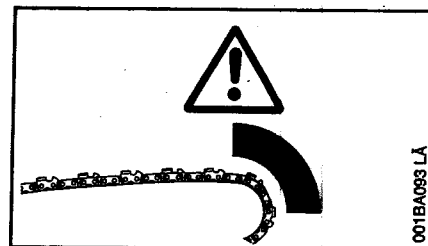
General working techniques

If on a slope, stand on the uphill side of the log. Watch out for rolling logs.

Avoid stumbling on stumps, roots, rocks or in ditches.

Do not stand on a log while limbing it – do not underbuck freely hanging limbs.

Take special care when cutting shattered wood – sharp slivers of wood may be caught and flung in your direction.



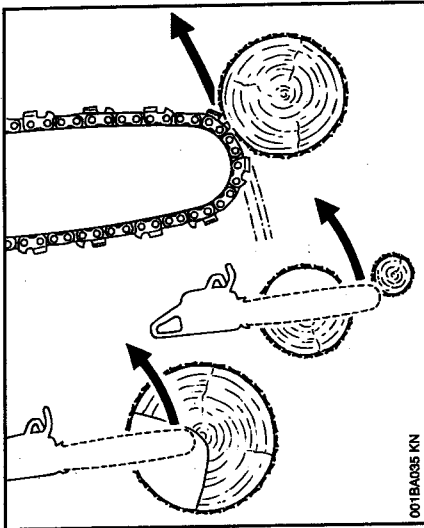
Dangers of kickback



Kickback can result in serious or fatal injury.

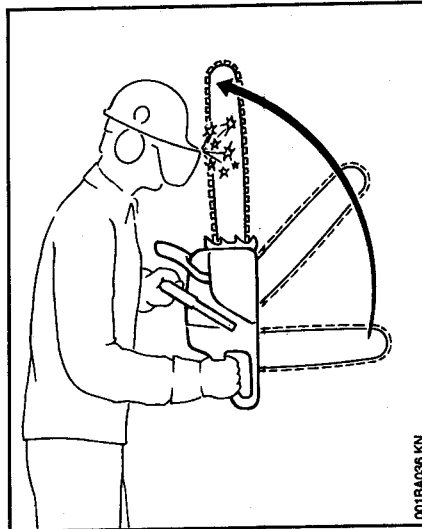
Kickback occurs when the saw is suddenly thrown up and back in an uncontrolled arc towards the operator, e.g.

- when the upper quadrant of the bar nose unintentionally contacts wood or another solid object,
- when the chain at the nose of the guide bar is pinched in the cut,
- when another limb is touched accidentally during limbing.



To reduce the risk of kickback

- Hold the chainsaw firmly with both hands and maintain a secure grip.
- Always cut at full throttle.
- Be aware of the location of the guide bar nose at all times.
- Do not cut with the bar nose.
- Take special care with small, tough limbs, they may catch the chain.
- Never cut several limbs at once.
- Do not overreach.
- Never cut above shoulder height.



Quickstop chain brake:

This device reduces the risk of injury in certain situations - it cannot prevent kickback. If activated, the brake stops the saw chain within a fraction of a second - for a description of this device refer to chapter "Chain Brake" in this manual.

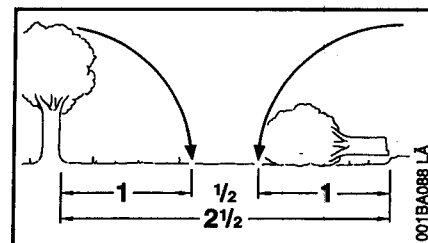
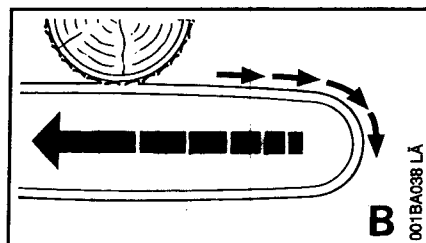
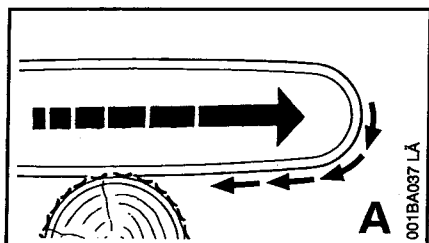
Cutting attachment:

The risk of kickback can be reduced by using correctly sharpened low-kickback chains and narrow radius guide bars.

STIHL offers a full line of special reduced kickback chains and bars.

The best method of avoiding kickback is to work cautiously and avoid situations which could cause kickback.

- Use extreme caution when re-entering a previous cut.
- Do not attempt plunge cuts if you are not experienced in this cutting technique.
- Be wary of position of log and forces that may cause the cut to close and pinch the chain.
- Always cut with a correctly sharpened, properly tensioned chain - the depth gauge setting must not be too large.



Avoid pull-in and pushback

A = Pull-in

Pull-in occurs when the chain on the bottom of the bar is suddenly pinched, caught or encounters a foreign object in the wood. The reaction of the chain pulls the saw forward.

Always hold the spiked bumper securely against the tree or limb.

B = Pushback

Pushback occurs when the chain on the top of the bar is suddenly pinched, caught or encounters a foreign object in the wood. The reaction of the chain drives the saw straight back toward the operator.

Felling and limbing

Do not attempt felling or limbing unless you have been trained in the necessary techniques.

Before felling a tree, check the following points:

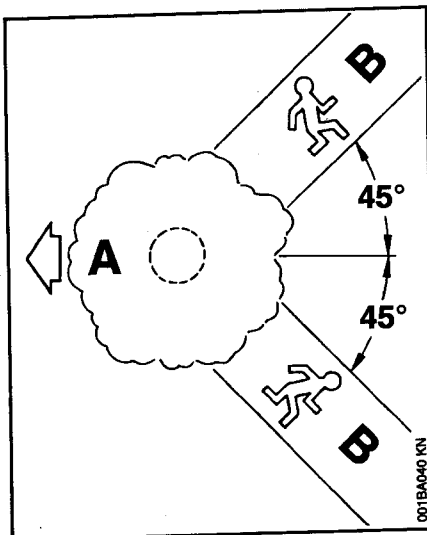
- No-one in the felling area – other than helpers.
- Paths of escape for everyone free from obstacles – opposite to fall of tree, at angle to rear.
- Work area at tree base free from obstacles.
- Safe footing for all persons concerned.

Pay special attention to the following points:

- The natural lean of the tree.
- Any unusually heavy limb structure.
- The wind direction and speed – do not fell in high winds.
- Maintain a distance of at least $2\frac{1}{2}$ tree lengths from next felling site.
- Make sure no-one is endangered by falling tree – the noise of your engine may drown any warning calls.

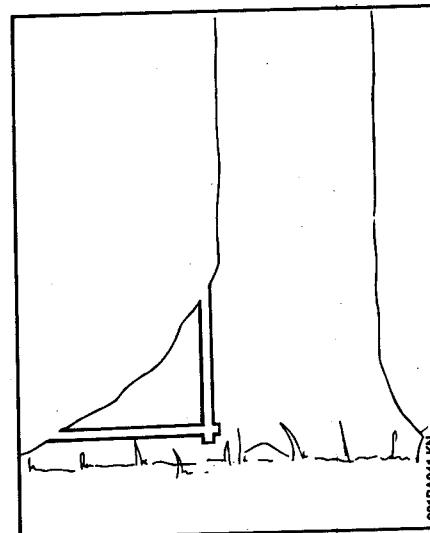
Felling:

- First clear the tree base and work area from interfering limbs and brush.
- Clean lower portion of tree base with an axe. Sand, stones and other foreign objects will dull the saw chain.
- Determine the direction of fall.
- Establish paths of escape for everyone concerned – opposite to direction of fall at about 45° .

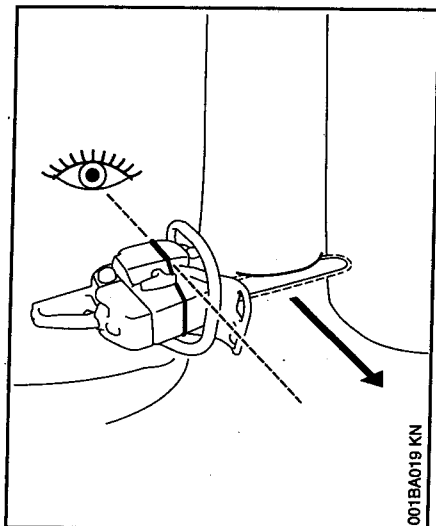


A = Direction of fall
B = Escape paths

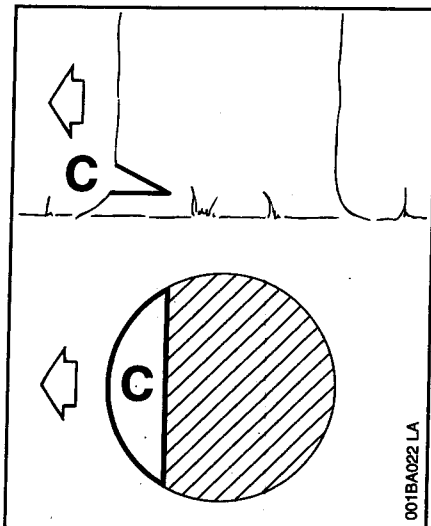
- Remove all obstacles from escape paths.
- Place all tools and equipment a safe distance away from the tree, but not on the escape paths.
- Always keep to the side of the falling tree. When the tree starts to fall, withdraw the bar, shut off the engine and walk away on the preplanned escape path.
- Watch out for falling limbs.



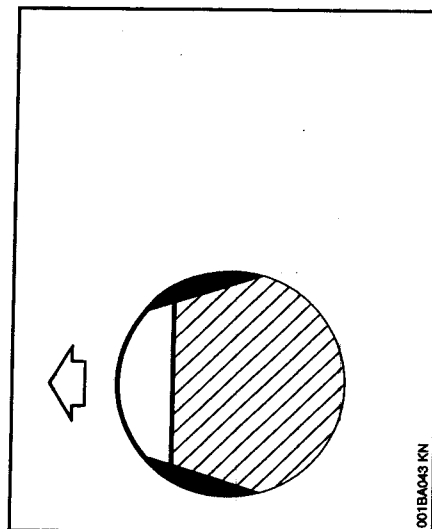
Remove large buttress roots: Make vertical cut first, then horizontal.



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Check direction of fall with gunning sight

When making the felling notch, make use of the gunning sight on the shroud and housing to check the planned direction of fall.

Position your saw so that the gunning sight points in exactly in the direction you want the tree to fall.

Note: There are a number of factors that may affect and change the intended direction of fall, e.g. wind, lean of tree, sloping ground, one-sided limb structure, decay, snow load, etc.

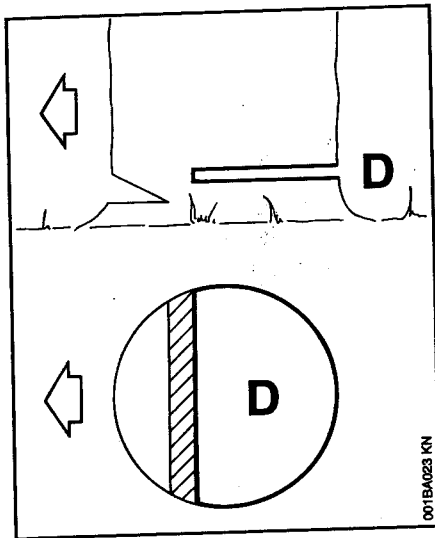
C = Felling notch - determines direction of fall

- Make notch very carefully.
- At a right angle to planned direction of fall.
- As close to ground as possible.
- Cut to a depth of about $\frac{1}{5}$ of the trunk diameter.
- Height of notch opening must never be more than depth.

Making sapwood cuts

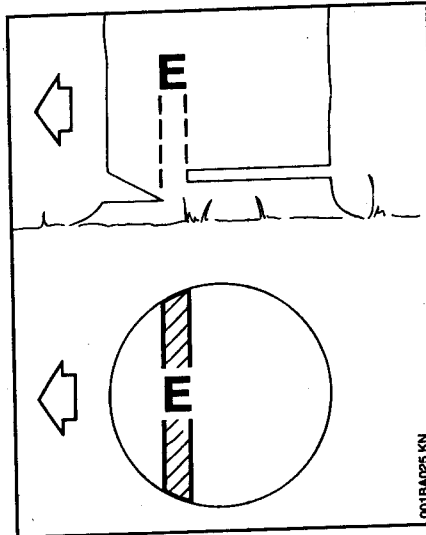
This is especially important in soft wood in summer – it helps prevent sapwood splintering when the tree falls.

- At both sides of the trunk.
- At same height as subsequent felling cut.
- Leave approx. $\frac{1}{10}$ of diameter of trunk uncut. On large diameter trees, cut to no more than width of guide bar.



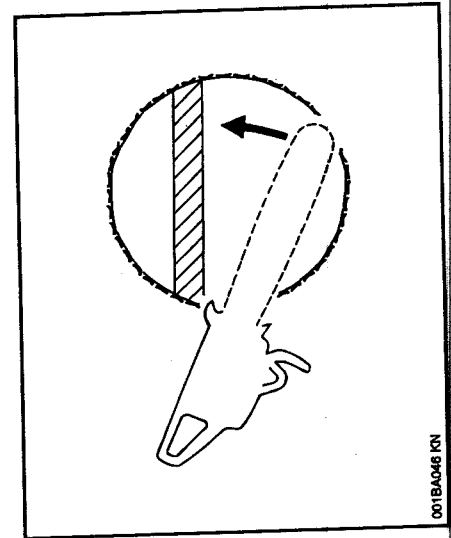
D = Felling cut

- Slightly higher than bottom of felling notch.
- Cut horizontally.
- Leave approx. $\frac{1}{10}$ of tree diameter uncut. This is the hinge.
- Drive wedges into the felling cut in good time - use only wooden, aluminum or plastic wedges - never steel, which can damage the chain and cause kickback.



E = Hinge

- Helps control the falling tree.
- Do not cut through the hinge - you could lose control of the direction of fall - this could result in an accident.



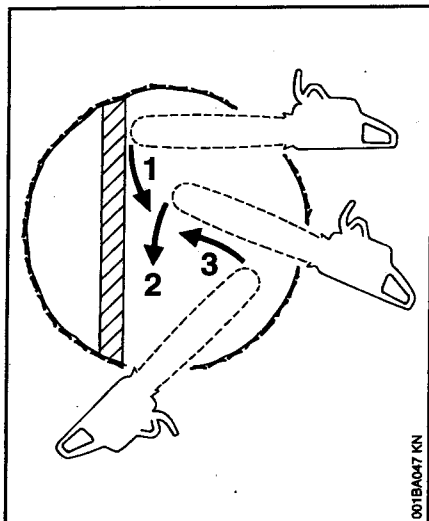
**Small diameter trees:
simple fan cut**

Apply the spiked bumper behind the hinge - pivot the saw around this point - only as far as the hinge. The spiked bumper rolls against the trunk.

Large diameter trees:

If the diameter is greater than the length of the guide bar -
use sectioning method.

Use the spiked bumper as a pivot -
avoid repositioning the saw more than necessary.



First cut (1):

Nose of guide bar should enter wood just behind the hinge – hold the saw horizontally and swing it as far as possible. When repositioning for the **next cut (2)**, keep the guide bar fully engaged in the kerf to keep felling cut straight – apply the spiked bumper.

Last cut (3):

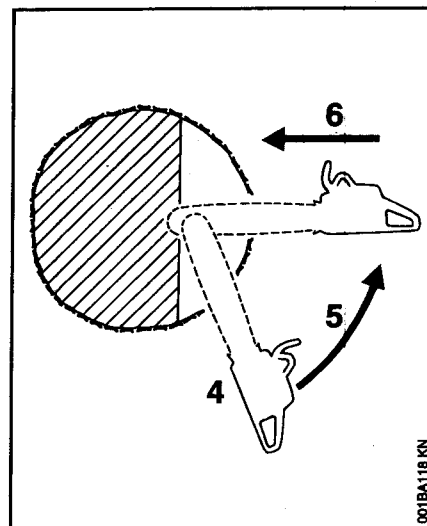
Apply the spiked bumper as for the simple fan cut – do not cut through the hinge!

If the saw begins to pinch: Stop the engine – insert a wedge in the cut – if necessary, use block and tackle, cable winch or tractor.

Plunge-cut method

- For heartwood cut.
- For felling leaners.
- For relieving cuts during bucking.
- For DIY projects.

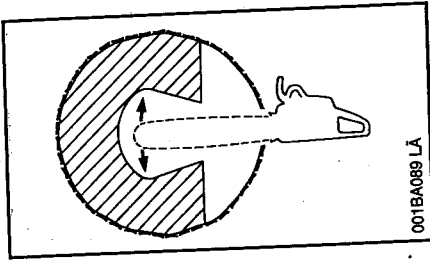
Use a low kickback chain and exercise particular caution.



Begin cut (4) by applying lower portion of the guide bar nose – do not use upper portion because of risk of kickback. Cut until depth of kerf is twice the width of the guide bar.

Swing saw slowly (5) into plunge-cutting position: Take care because of the risk of kickback or pushback.

Make the plunge cut (6) very carefully. Danger of pushback.



001BA089 LA

Heartwood cut

Enlarge the plunge cut to both sides as shown

- if tree diameter is more than twice the length of the guide bar.
- if a large portion of heartwood remains uncut on large diameter trees.
- on trees that are difficult to fell (oak, beech), to prevent heartwood splintering and maintain planned direction of fall.
- on soft deciduous trees to relieve tension in lying log and prevent slivers in the center of the hinge being torn out of the log.

Exercise extreme caution:

- with leaners
- with trees that have fallen unfavorably between other trees and are under strain
- when working in blowdown areas.

Do not work with the chainsaw in such circumstances – Use block and tackle, cable winch or tractor.

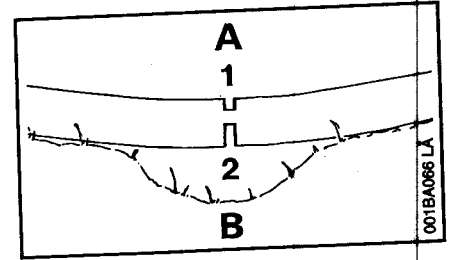
Pull out exposed and cleared logs. Select clear area for cutting.

When felling in the vicinity of roads, railways, power lines, etc.

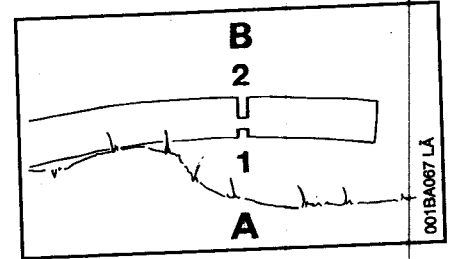
Take extra precautions. If necessary, inform the police, utility company or railway authority.

When limbing

- Use a low kickback chain.
- Work with the saw supported wherever possible.
- Do not work with the bar nose.
- Watch for limbs which are under tension.
- Never attempt to cut several limbs at once.



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Lying or standing logs under tension

Always start relieving cut (1) at the compression side (A).

Make relieving cut (1) and then perform bucking cut (2) at the tension side (B) – the saw will otherwise pinch or kick back.

If not otherwise possible, make the bucking cut from the bottom upwards (underbuck) – be wary of pushback.

Lying logs must not touch the ground at the point where the cut is made – this will damage the chain.

When cutting small logs

- Use a sturdy and stable support - sawhorse.
- Never hold the log with your leg or foot.
- Never allow another person to hold the log or help in any other way.

Vibrations

Prolonged use of the unit may result in vibration-induced circulation problems in the hands (whitefinger disease).

No general recommendation can be given for the length of usage because it depends on several factors.

The period of usage is prolonged by:

- Hand protection (wearing warm gloves)
- Operation with frequent breaks

The period of usage is shortened by:

- Any personal tendency to suffer from poor circulation (symptoms: frequently cold fingers, itching)
- Low outside temperatures
- Gripping force (a tight grip hinders circulation)

Continual and regular users should monitor closely the condition of their hands and fingers. If any of the above symptoms appear, seek medical advice.

Maintenance and Repairs

Service the machine regularly. Do not attempt any maintenance or repair work not described in your owner's manual.

Have all other work performed by your STIHL dealer. Only use genuine STIHL replacement parts. Never modify your machine in any way as this could result in serious injury.

Always shut off the engine

- before checking chain tension
- before retensioning the chain
- before replacing the chain
- before rectifying problems

Check the chain catcher – and replace it if damaged.

Observe sharpening instructions for safe and correct handling of saw chain and guide bar.

Keep the chain in good condition at all times. It must be properly sharpened, tensioned and well lubricated.

Always change the chain, guide bar and sprocket in good time.

Check condition of clutch drum periodically.

Check the fuel tank for leaks at short regular intervals.

Do not touch a hot muffler. Check condition of muffler at regular intervals to reduce the risk of fires and damage to hearing. Do not operate your machine if the muffler is damaged or missing.

Use only a spark plug of the type approved by STIHL and make sure it is in good condition (see chapter "Specifications"). Inspect ignition lead (insulation in good condition, secure connection).

To reduce the risk of fire and burn injury as a result of sparking outside the cylinder, move the stop switch to STOP before turning the engine over on the starter with the spark plug boot removed or the spark plug unscrewed.

Store fuel and chain lubricant in properly labelled, safety-type canisters only. Take care when handling gasoline. Avoid direct contact with the skin and avoid inhaling fuel vapour.

To reduce the risk of injury, shut down your chainsaw immediately in the event of a chain brake malfunction. Take the saw to your STIHL dealer. Do not use your chainsaw until the fault has been fixed (see chapter "Chain Brake").

Maintenance Chart

Please note:

Different models may have different parts and controls.

		before starting work	after finishing work or daily	after each refueling stop	weekly	monthly	if faulty	if damaged	as required	see page:
Complete machine	Visual inspection (condition, leaks)	x		x						
	Clean		x							
Throttle trigger, throttle trigger interlock, Master Control, depending on model	Check operation	x		x						
Chain brake	Check operation	x		x						
	Clean by STIHL dealer									
Filter in fuel tank	Check								x	
	Clean, Replace filter element					x				
Fuel tank	Clean							x		
Chain oil tank	Clean					x				
Chain lubrication	Check					x				
Saw chain	Inspect, also check sharpness	x								
	Check chain tension	x		x						
	Sharpen			x						
Guide bar	Check (wear, damage)	x							x	
	Clean and turn over									
	Deburr				x		x			
Chain sprocket	Replace									
	Check				x			x	x	
Air filter	Clean	x					x			
	Replace									
Cooling inlets	Clean		x					x		
Cylinder fins	Clean									
Carburetor	Check idle adjustment – chain must not turn	x		x		x				
	Readjust idle									
Spark plug	Replace								x	
All accessible screws and nuts (not adjusting screws)	Retighten						x			
Rubber vibration buffers	Have replaced by STIHL dealer								x	
Muffler	Inspect					x		x		
	Inspect spark arrestor screen	x								
	Clean or replace spark arrestor screen									
Chain catcher	Check	x						x	x	
	Replace							x		

Makita®

0701031

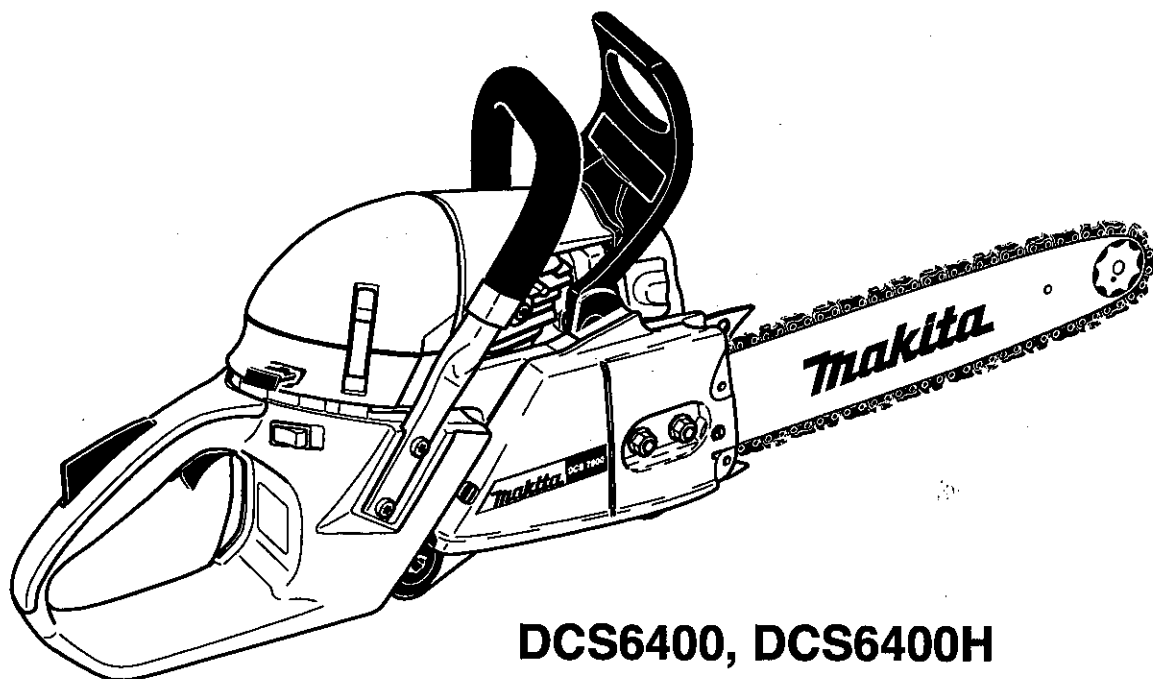
Instruction Manual

Machine Type: 701

Machine Type NO. - chain saw Large 2 stroke.

Manual NO. - 422

R/A NO. - 275



DCS6400, DCS6400H

DCS6401, DCS6401H

DCS7300, DCS7300H

DCS7301, DCS7301H

DCS7900, DCS7900H

DCS7901, DCS7901H

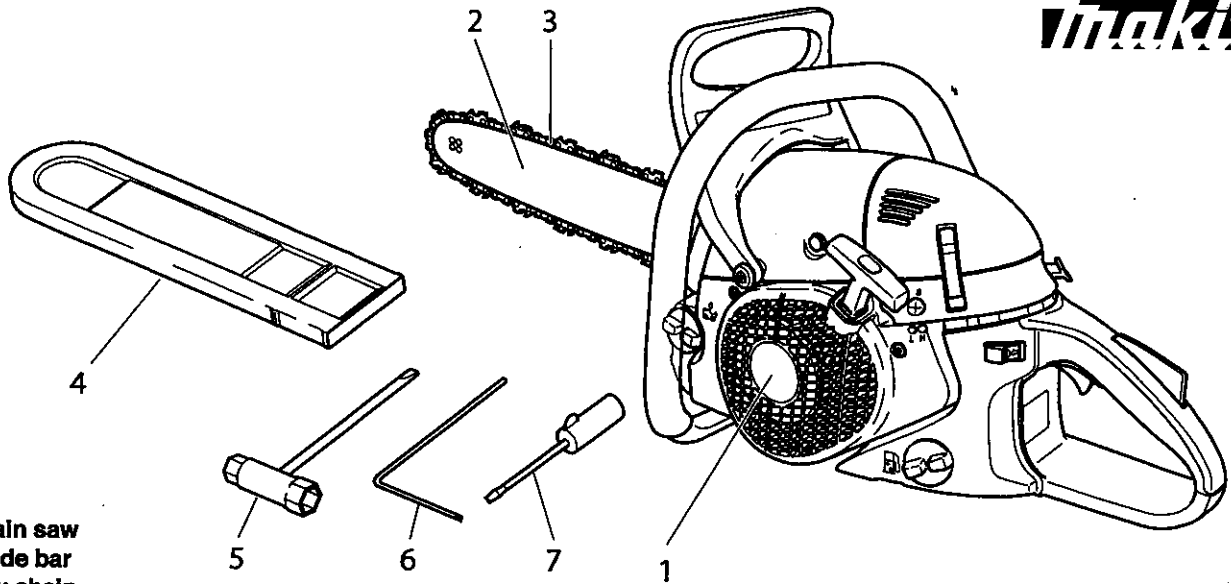


Important:

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

Keep this instruction manual!

Delivery inventory



1. Chain saw
2. Guide bar
3. Saw chain
4. Chain protection cover
5. Universal wrench
6. Offset screwdriver
7. Screwdriver for carburetor adjustment
8. Instruction manual (not shown)

In case 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 saw and in the Instruction Manual:

	Read instruction manual and follow the warning- and safety precautions!		Caution, kickback!
	Particular care and caution!		Chain brake
	Forbidden!		Fuel and oil mixture
	Wear protective helmet, eye and ear protection!		Working in summer / winter
	Wear protective gloves!		Handle heating
	No smoking!		Carburetor adjustment
	No open fire!		Chain oil fill/oil pump
	Stop engine!		Saw chain oil adjustment screw
	Push the starting valve		First aid
	Start engine		Recycling
	Off switch		CE - Marking

SAFETY PRECAUTIONS

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.

General precautions

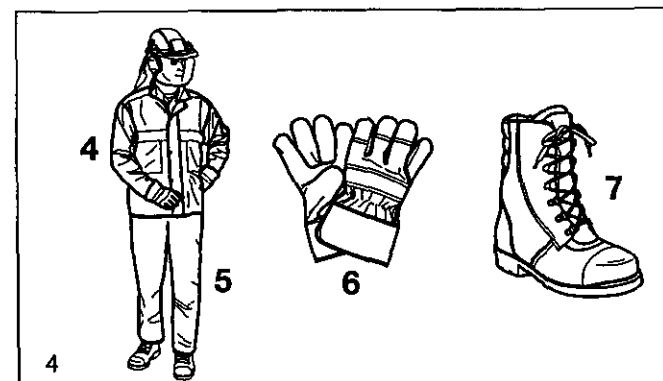
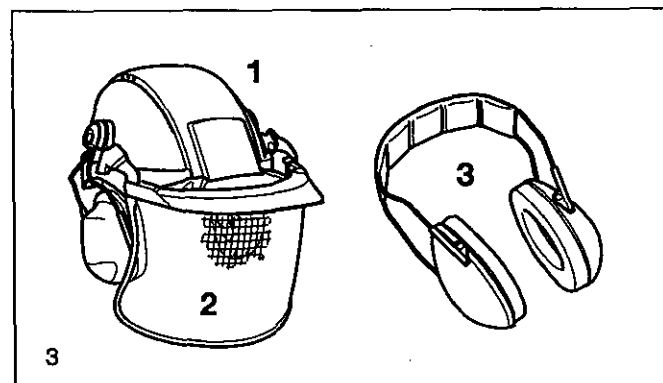
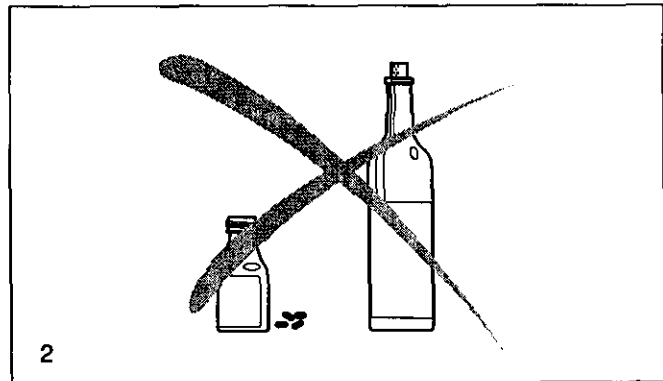
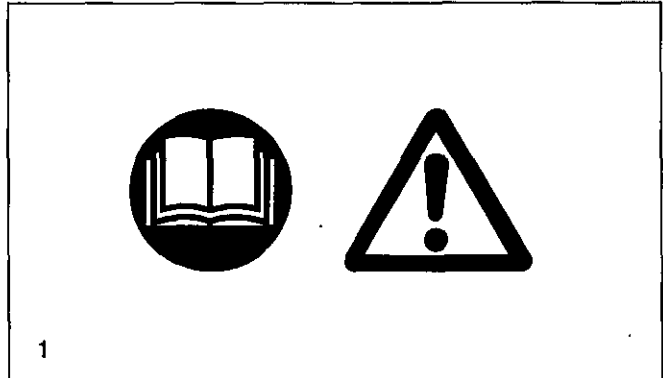
- To ensure correct operation the user has to read this instruction manual to make himself familiar with the characteristics of the chain saw. Users insufficiently informed will endanger themselves as well as others due to improper handling.
- It is recommended to lend the chain saw only to people who 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.
- 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 calmly 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 immediate 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 band 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 fabric 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 must always be worn. Safety shoes equipped with a protective layer provide protection against cuts and ensure a secure footing.

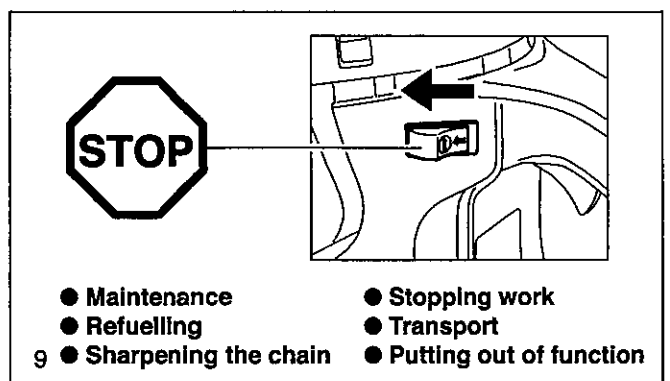
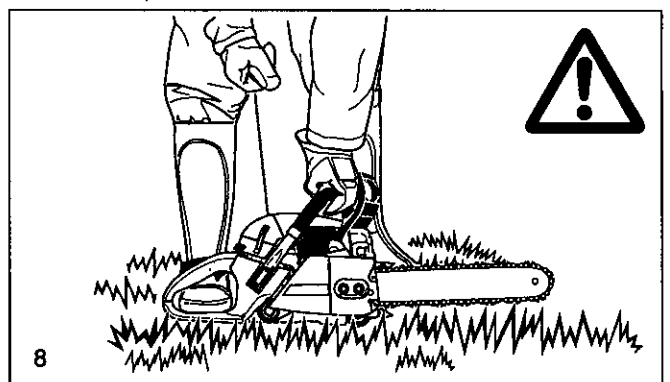
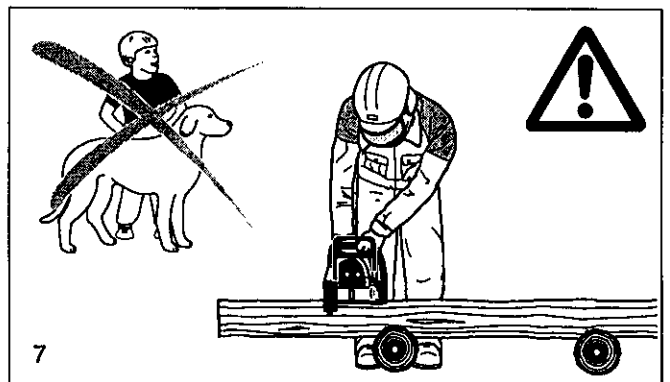
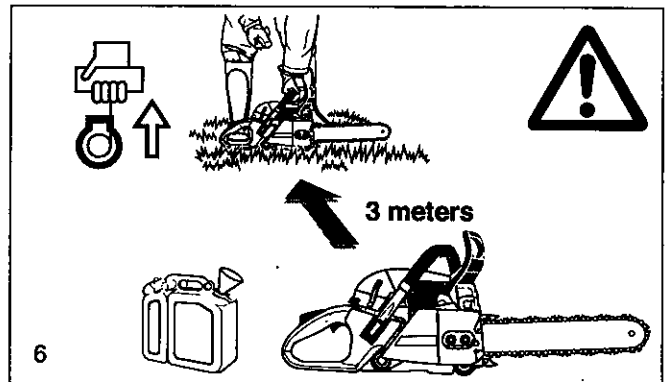
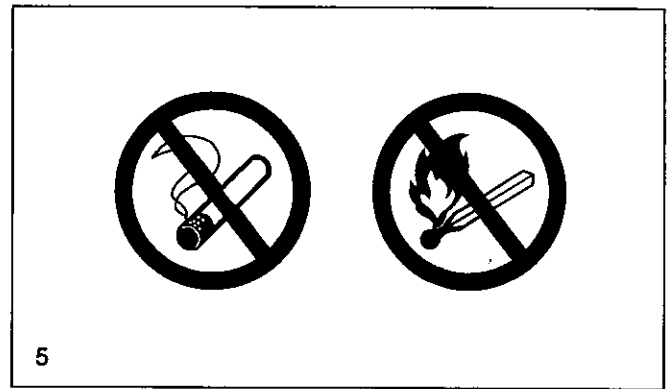


Fuels / Refuelling

- 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 plugs 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 such that you will not breathe in the exhaust gas. Do not work in closed rooms (danger of poisoning).
- **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.**



Kickback

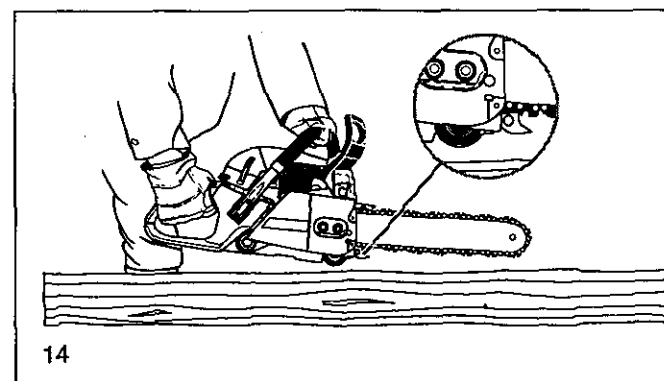
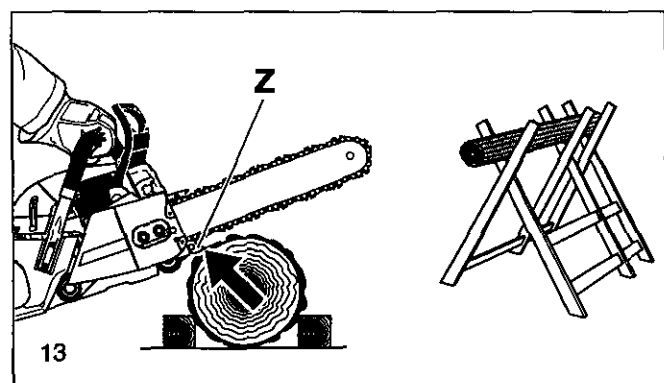
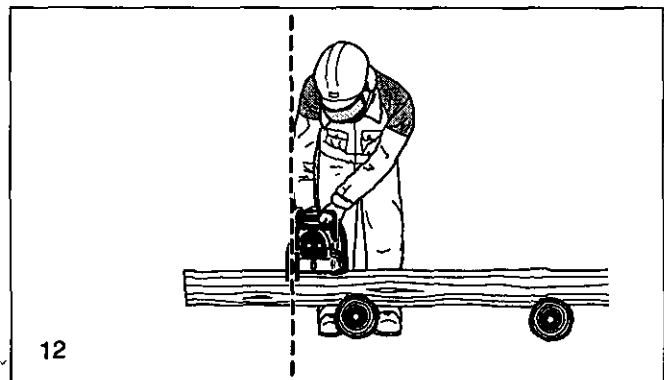
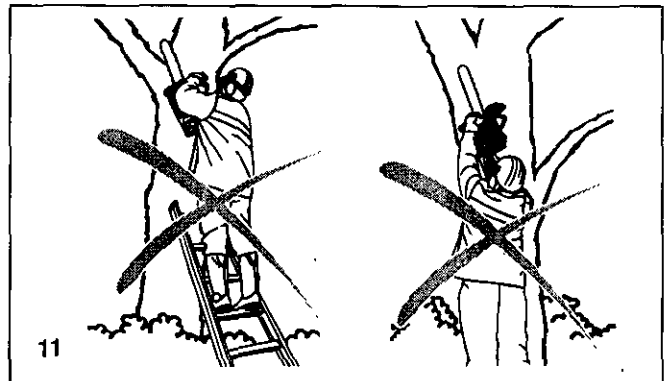
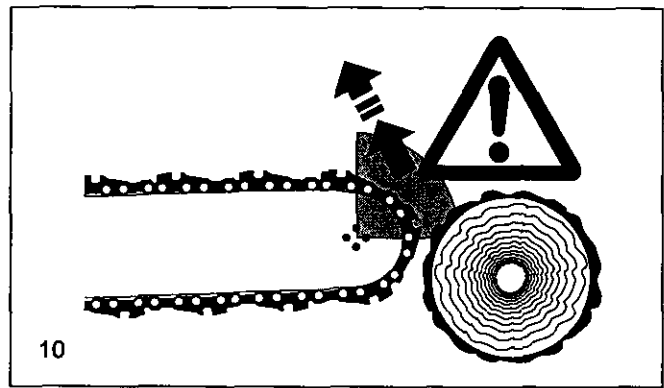
- When working with the chain saw dangerous kickbacks may occur.
- Kickback occurs when the upper part of the end of the guide bar inadvertently touches wood or other hard objects (10).
- This causes the saw to be thrown back toward the user with great force and out of control. **Risk of injury!**

In order to prevent kickback, follow these rules:

- Only specially-trained persons should perform plunge cuts, i.e., piercing timber or wood with the tip of the saw!
- 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 started 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.

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 (11).
- Never climb up into trees to perform sawing with the chain saw.
- Do not work leaning too far over.
- 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 touching 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 objects such as sand, stones and nails found within the working area. Foreign objects may damage the sawing device and can cause dangerous kickback.
- When sawing precut timber use a safe support (sawing jack, 13). Do not steady the workpiece with your foot, and do not allow anyone else to hold or steady it.
- Secure round pieces against rotation.
- **For cutting down trees or performing crosscuts the spike bar (13, Z) must be applied to the wood to be cut.**
- Before performing a crosscut firmly apply the spike bar 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 spike bar serves as a centre of rotation. Continue by slightly pressing down the tubular handle and simultaneously pulling back the chain saw. Apply the spike bar 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 this carried out by specially trained persons only (high risk of kickback).**
- Do longitudinal - lengthwise - cuts at the lowest possible angle (14). Be very careful when doing this type of cut, as the spike bar cannot grip.
- The saw must be running whenever you remove the chain saw from the wood.
- When performing several cuts the throttle lever must be released in between.



- Be careful when cutting splintery wood. Cut pieces of wood may be pulled along (risk of injuries).
- When cutting with the upper 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 lower edge of the bar whenever possible. The chain saw will then be pushed away from you (15).
- If the timber is under 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 felling trees or cutting of branches must be specially trained. High risk of injuries!

- When cutting of branches, the chain saw should be supported on the trunk. Do not use the end of the bar for cutting (risk of kickback).
- Be aware of branches under tension. Do not cut free branches from below.
- Never perform detensioning cuts 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 objects, 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 people nor objects within a distance of 2 1/2 tree lengths.

Judging the tree:

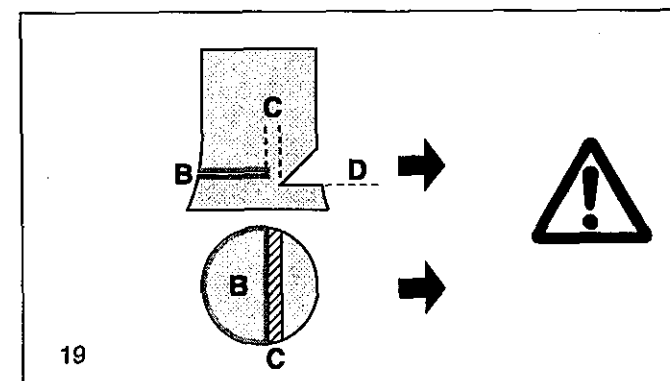
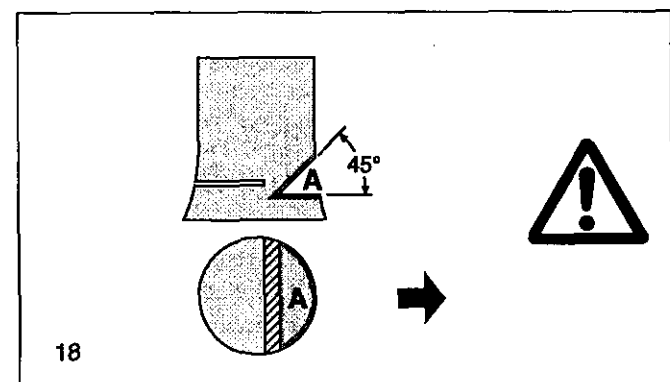
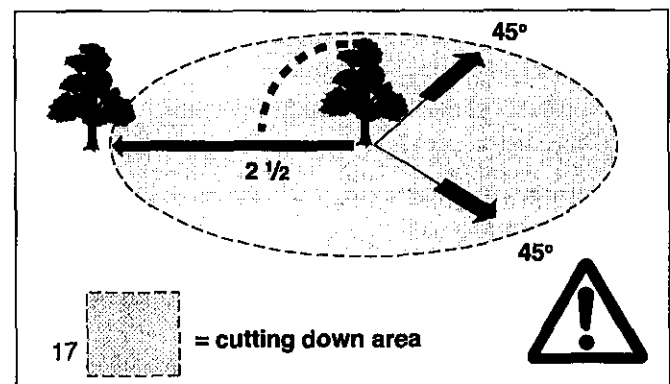
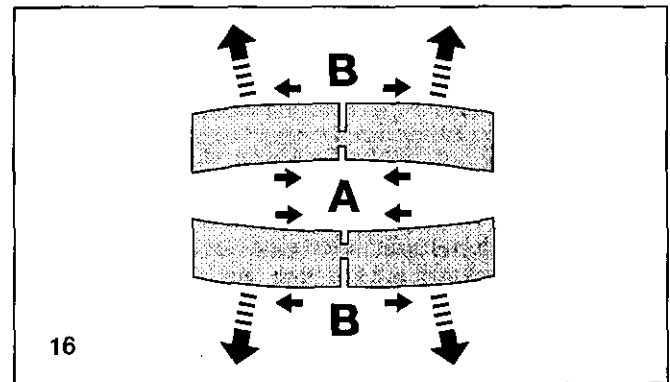
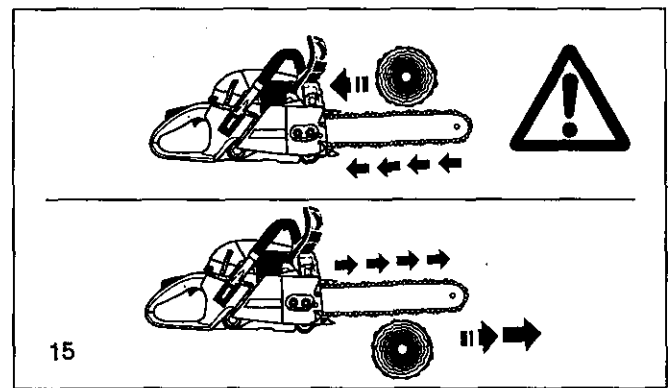
Direction of hanging - loose or dry branches - height of the tree - natural overhang - is the tree rotten?

- Take into account the direction and speed of the wind. If strong gusts are occurring, do not do any felling.

Cutting the roots:

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

- **Notching the trunk (18, A):**
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 (19, B) 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. If the saw hits an iron wedge the chain can be seriously damaged or torn.
- When cutting down a tree always stay sideways of the falling tree.
- When withdrawing after having performed the cut, be alert for falling branches.
- When working on sloping ground the user of the chain saw must stay above or sideways of the trunk to be cut or the tree already cut down.
- Be alert for trunks which may roll towards you.



Transport and storage

- When changing your location 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 points backwards (20). Avoid coming in contact with the muffler (danger of burns).
- 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.
- Before 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 work 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 trade associations and insurance companies. Do not perform any modifications on the chain saw. You will put your safety at risk.

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

Use only original MAKITA spare parts and accessories.

Using spare parts other than original MAKITA parts or accessories and guide bar/chain combinations or lengths which are not approved bring a high risk of accidents. We cannot accept any responsibility for accidents and damage resulting from using sawing devices or accessories which have not been approved.

First aid

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

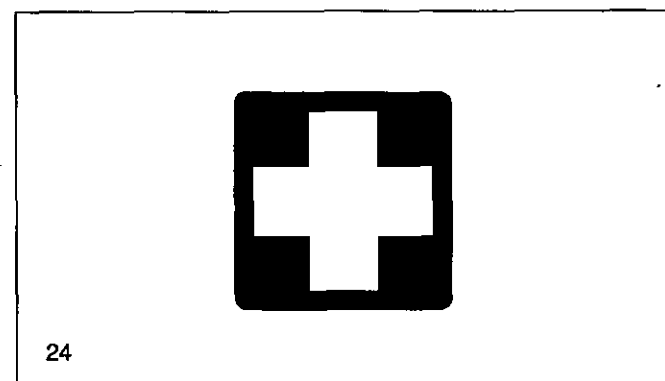
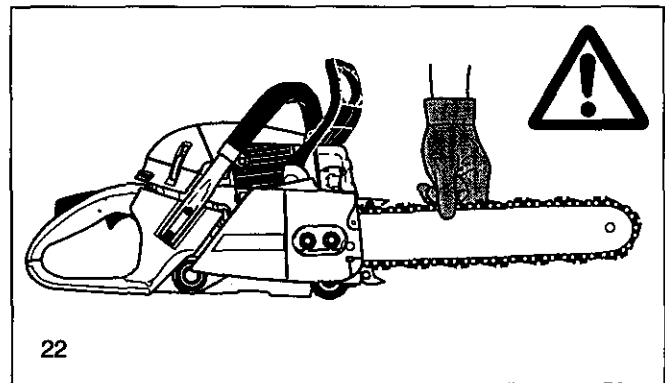
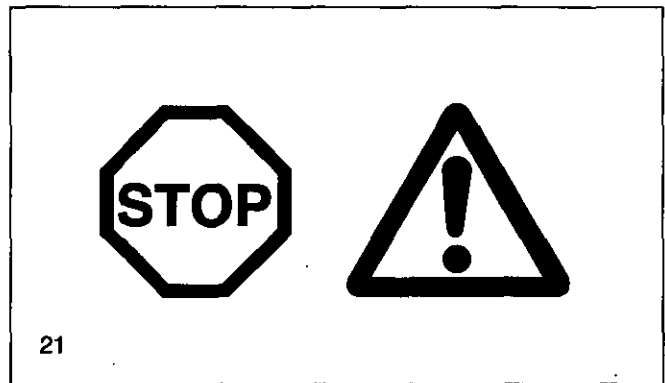
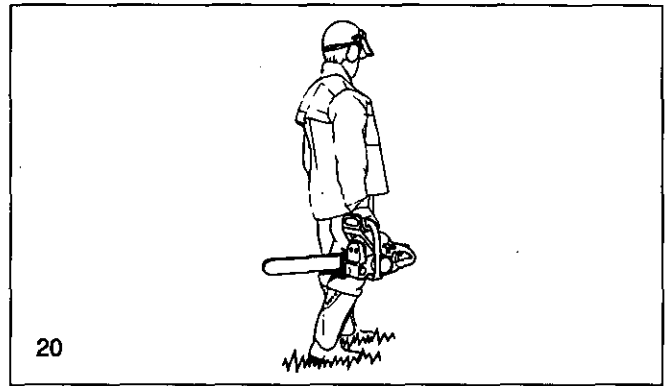
When calling for help, give the following information:

- Place of the 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

		DCS6400 / H DCS6401 / H	DCS7300 / H DCS7301 / H	DCS7900 / H DCS7901 / H
Stroke volume	cm ³	64	72.6	78.5
Bore	mm	47	50	52
Stroke	mm	37	37	37
Max. power at speed ³⁾	kW / 1/min	3.5 / 9,000	4.2 / 9,500	4.6 / 9,500
Max. torque at speed ³⁾	Nm / 1/min	4.2 / 6,500	4.8 / 7,000	5.2 / 7,000
Idling speed / max. engine speed with bar and chain	1/min	2,500 / 13,500	2,500 / 13,500	2,500 / 13,500
Clutch engagement speed	1/min	3,200	3,200	3,200
Sound pressure level at the workplace L _{PA,av} per ISO/CD 22868 ¹⁾	dB (A)	104.3	104.3	104.3
Sound power level L _{WA,av} per ISO/CD 22868 ¹⁾	dB (A)	113.3	113.3	113.3
Vibration acceleration a _{h,w,eq} per ISO 22867 ¹⁾				
- Tubular handle	m/s ²	5.9	6.2	6.6
- Rear handle	m/s ²	3.6	4.1	4.5
Carburetor (diaphragm carburetor)	Type	ZAMA		
Ignition system	Type	electronic		
Spark plug	Type	NGK BPMR 7A / BOSCH WSR 6F		
Electrode gap	mm	0.5		
Fuel consumption at max. load per ISO 7293 ³⁾	kg/h	1.72	2.33	2.3
Specific consumption at max. load per ISO 7293 ³⁾	g/kWh	500	510	505
Fuel tank capacity	l	0.75		
Chain oil tank capacity	l	0.42		
Mixture ratio (fuel/two-stroke oil)				
- when using MAKITA oil		50 : 1		
- when using other oils		40 : 1		
Chain brake		engages manually or in case of kickback		
Chain speed ²⁾	m/s	19.74	20.83	20.83
Sprocket pitch	inch	3/8		
Number of teeth	Z	7		
Chain type see the Extract from the spare-parts list		099		
Pitch / gauge	inch	3/8 / .058		
Guide bar, length of a cut	cm	38 / 45 / 50 / 60 / 70		
Guide-bar type see the Extract from the spare-parts list				
Weight (fuel tank empty, without chain and guide bar)	kg	6.3	6.3	6.3

¹⁾ Figures derived in equal part from idling, full-load and racing speed.

²⁾ At max. power

³⁾ For models without starting valve

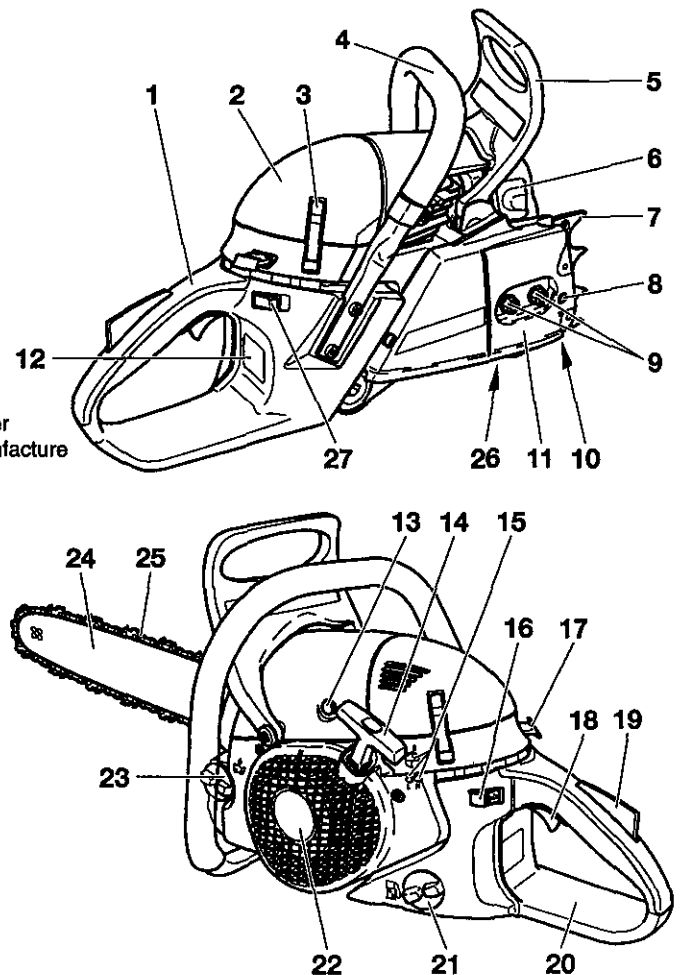
Denomination of components

- 1 Handle
- 2 Filter hood
- 3 Filter hood clip
- 4 Tubular handle
- 5 Hand guard (release for chain brake)
- 6 Muffler
- 7 Spike bar
- 8 Chain tensioning screw
- 9 Retaining nuts
- 10 Chain catch
- 11 Sprocket guard
- 12 Identification plate
- 13 Starting valve (option)
- 14 Starter grip
- 15 Adjusting screws for carburetor
- 16 I/STOP-switch
- 17 Choke switch and half-throttle lock
- 18 Throttle lever
- 19 Safety locking button
- 20 Rear hand guard
- 21 Fuel tank cap
- 22 Fan housing with starting assembly
- 23 Oil tank cap
- 24 Guide bar
- 25 Chain
- 26 Adjusting screw for oil pump (bottom side)
- 27 Switch for handle heating (only on type "H" models)

Identification plate (12)
Indicate when ordering spare parts



Serial number
Year of manufacture



PUTTING INTO OPERATION



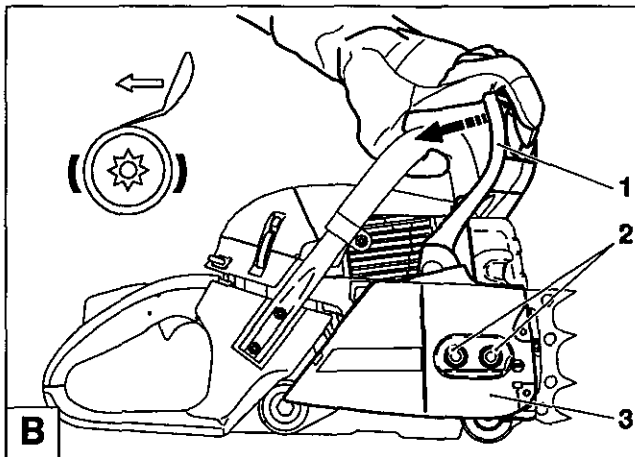
CAUTION:

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.

A



Mounting the guide bar and saw chain

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

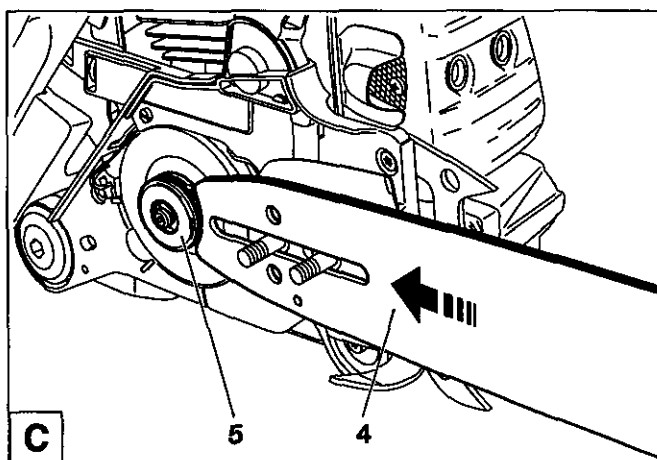
Put the chain saw on a stable surface and carry out the following steps for mounting the guide bar and saw chain:

Release the chain brake by pulling the hand guard (1) in direction of arrow.

Unscrew retaining nuts (2).

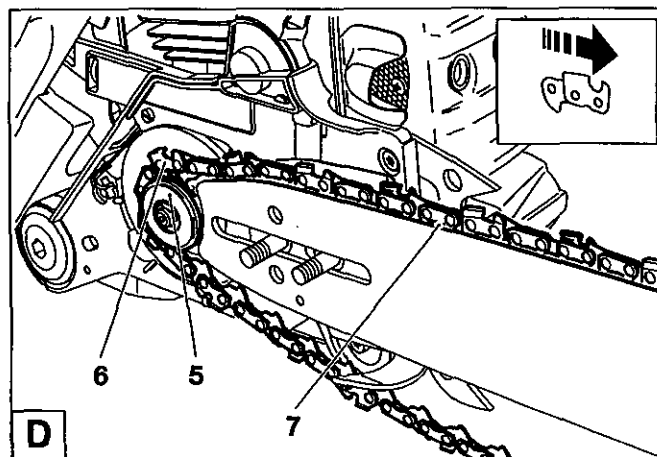
Pull off the sprocket guard (3).

B



Position the guide bar (4) and push against the sprocket (5) as shown by the arrow.

C



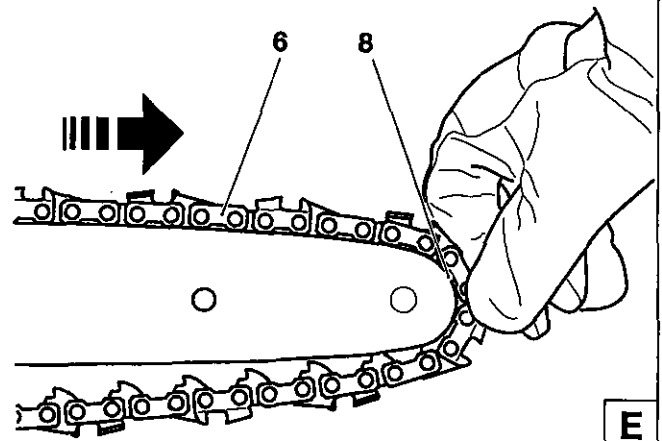
Lift the chain (6) over the sprocket (5). Using your right hand, guide the chain into the top guide groove on the guide bar (7).

CAUTION:

Note that the cutting edges along the top of the chain must point in the direction of the arrow!

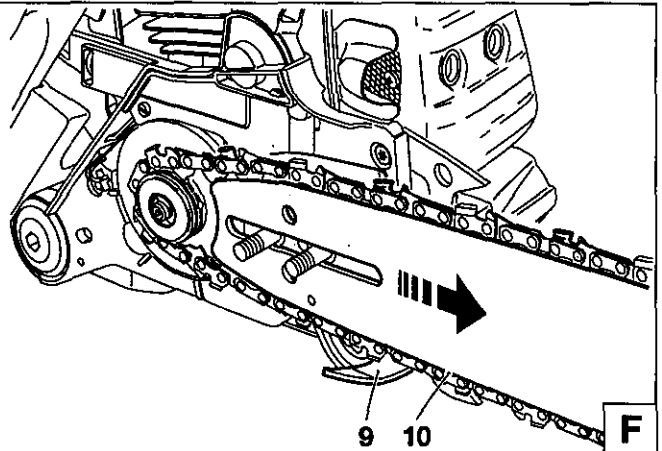
D

Pull the chain (6) around the sprocket nose (8) of the guide bar in the direction of the arrow.

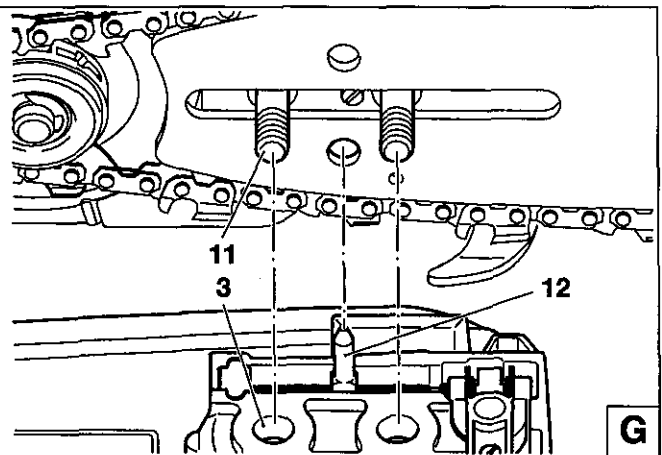


Guide the chain over the chain catch (9).

Pull the guide bar as shown by the arrow to take the slack out of the chain, so that it comes up to the bottom edge of the guide bar (10).



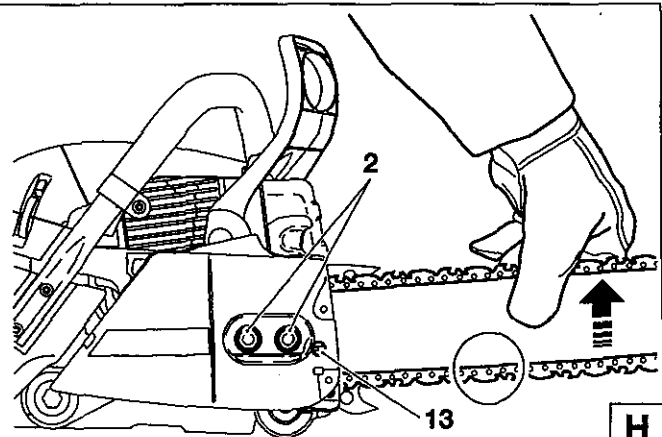
Line up the holes in the sprocket guard (3) with the bolts (11).
Turn the chain tensioning screw (H/13) until the chain tensioning bolt (12) is aligned with the hole in the guide bar.
Replace the sprocket guard.
Manually tighten the retaining nuts (H/2).

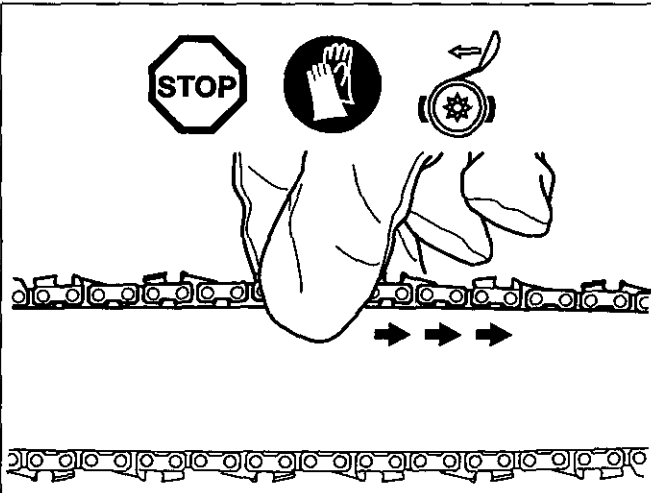


Tightening the saw chain

Slightly lift the end of the guide bar and turn the chain adjusting screw (13) to the right (clockwise) until the chain rests against the bottom side of the guide bar.

While still holding up the tip of the guide bar, tighten the retaining nuts (2) with 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.

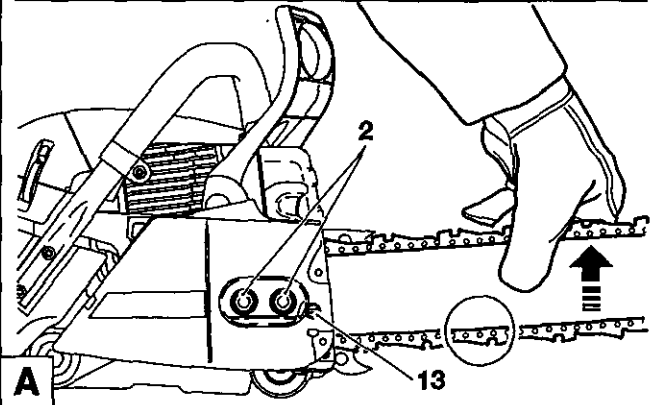
Check the chain tension frequently - new chains tend to get longer during use!

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 uniform wear of the guide bar the bar should be turned over whenever replacing the chain.



Retightening the saw chain

Loosen the nuts (2) about one turn with the universal wrench. Raise the tip of the guide bar a little and turn the chain tensioning screw (13) to the right (clockwise) until the saw chain is again up against the bottom edge of the guide bar (see circle).

While keeping the tip of the guide bar raised, tighten the nuts (2) again with the universal wrench.

Chain brake

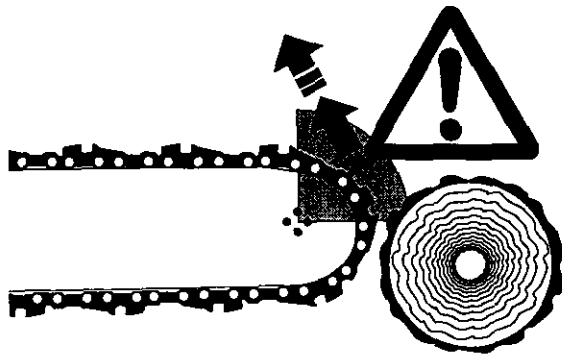
The DCS comes with an inertia chain brake as standard equipment. If kickback occurs due to contact of the guide-bar tip with wood (see SAFETY PRECAUTIONS, page 6), the chain brake will stop the chain through inertia if the kickback is sufficiently strong.

The chain will stop within a fraction of a second.

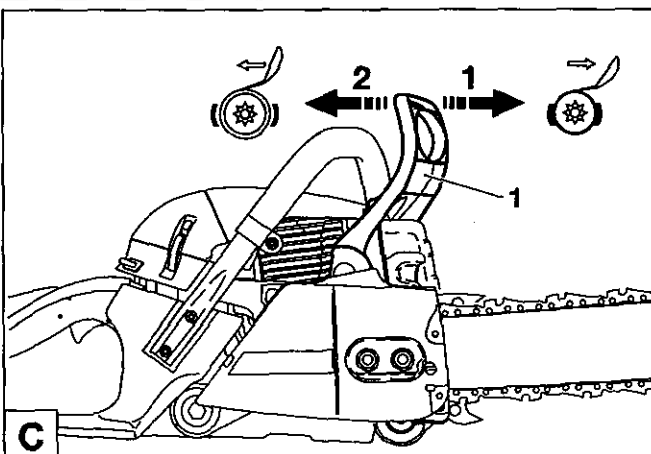
The chain brake is installed to block the saw chain before starting it and to stop it immediately in case of an emergency.

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!



B



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 (1) will **automatically** actuate the chain brake.

To engage the chain brake **manually**, simply push the hand guard (1) forward (towards the tip of the saw) with your left hand (arrow 1).

Releasing the chain brake

Pull the hand guard (1) towards you (arrow 2) until you feel it catch. The brake is now released.

C

Fuel

CAUTION:

This saw is powered by mineral-oil products (gasoline (petrol) and oil).

Be especially careful when handling gasoline (petrol).

Avoid all flame or fire. Do not smoke (explosion hazard).

Fuel mixture

The engine of the chain saw is a high-efficiency 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.

For lubricating the engine use a two-stroke engine oil (quality grade: JASO FC or ISO EGD), which is 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 40:1 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:

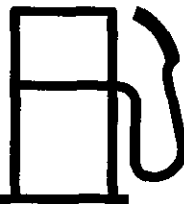


50:1 when using MAKITA high-performance two-stroke engine oil, i. e. mix 50 parts gasoline with 1 part oil.

40:1 when using other two-stroke engine oils, i. e. mix 40 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.



Gasoline	50:1	40:1
		
1000 cm ³ (1 litre)	20 cm ³	25 cm ³
5000 cm ³ (5 litres)	100 cm ³	125 cm ³
10000 cm ³ (10 litres)	200 cm ³	250 cm ³

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. Therefore fuel and fuel mixtures, which have been stored for too long, can cause starting problems. Purchase only that amount of fuel, which will be consumed over the next few months.

Store fuel safely in a dry place in approved containers only.

AVOID SKIN AND EYE CONTACT

Mineral oil products degrease your skin. If your skin comes in contact with these substances repeatedly and for an extended period of time, it will desiccate. Various skin diseases may result. In addition, allergic reactions are known to occur.

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, see a doctor immediately!

D

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).

E

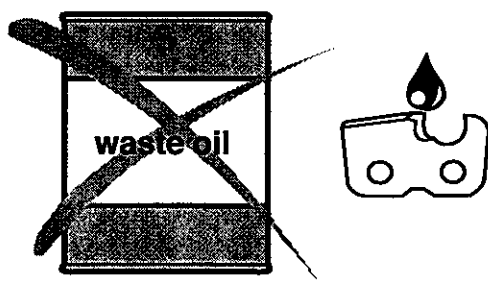
Important note on bio-degradable chain oils

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 dam-

age to the oil pump or other parts.

The next time you use the saw, fill the tank with BIOTOP chain oil again. 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.



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

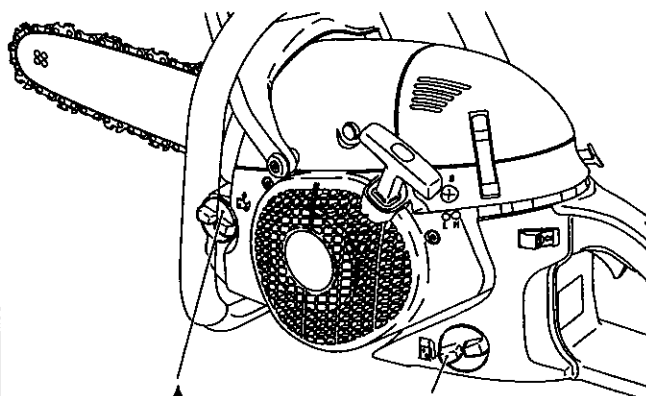
Mineral oil products degrease your skin. If your skin comes in contact with these substances repeatedly and for an extended period of time, it will desiccate. Various skin diseases may result. In addition, allergic reactions are known to occur.

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, see a doctor immediately!

A

Refuelling



chain oil

fuel/oil mixture

FOLLOW THE SAFETY PRECAUTIONS!

Be careful and cautious when handling fuels.

The engine must be switched off!

Thoroughly clean the area around the caps, to prevent dirt from getting into the fuel or oil tank.

Unscrew the cap and fill the tank with fuel (fuel/oil mixture) or chain oil as the case may be. Fill up to the bottom edge of the filler neck. Be careful not to spill fuel or chain oil!

Tightly screw on the cap.

Clean screw cap and tank after refuelling.

Lubricating the chain



During operation there must always be sufficient chain oil in the chain-oil tank to provide good chain lubrication. One filling is sufficient for about one half-hour of continuous operation. While working make sure there is enough chain oil in the tank. If necessary, add oil. **The engine must be switched off!**

B

Checking the chain lubrication

Never work with the chain saw without sufficient chain lubrication. Otherwise the service life of the chain and guide bar will be reduced. Before starting work check the oil level in the tank and the oil feed.

Check the oil feed rate as described below:

Start the chain saw (see „Starting the engine“).

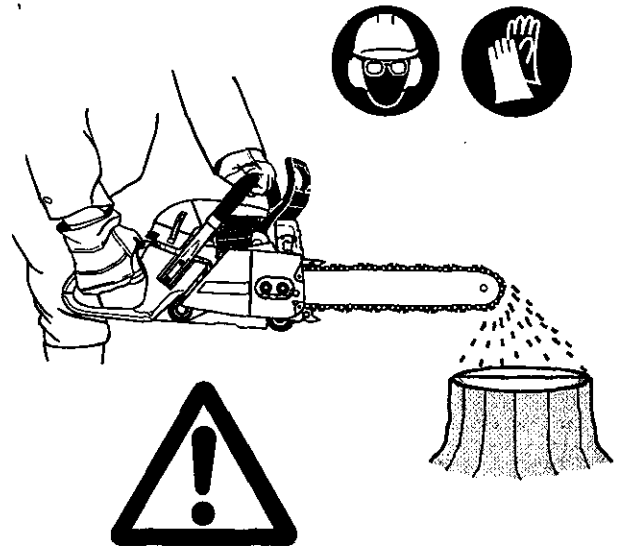
Hold the running chain saw approx. 15 cm above a trunk or the ground (use an appropriate base).

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

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.



C

Adjusting the chain lubrication

The engine must be switched off.



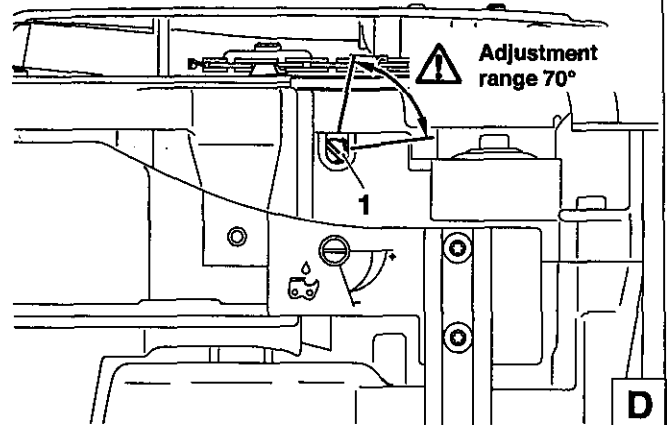
You can adjust the oil pump feed rate with the adjusting screw (1). The adjusting screw is on the bottom side of the housing.

The oil pump comes factory-set to a medium feed rate.

To change the feed quantity use the screwdriver and adjust the adjusting screw in the following way:

- Turn to the right to reduce the feed rate.
- Turn to the left to increase the feed rate.

Even very small adjustments to the adjusting screw (1) can influence the oil flow rate. While working make sure there is enough chain oil in the tank. If necessary, add oil.



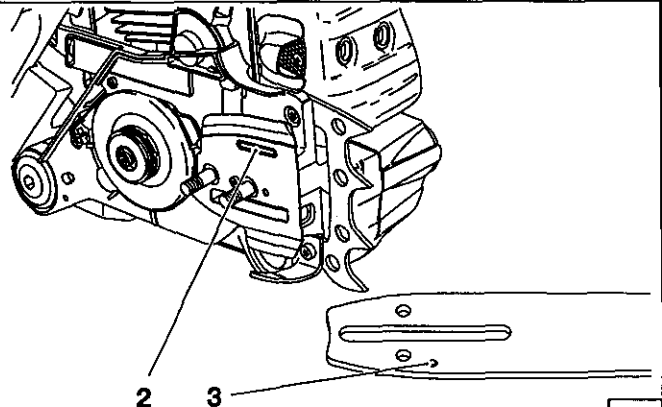
D

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

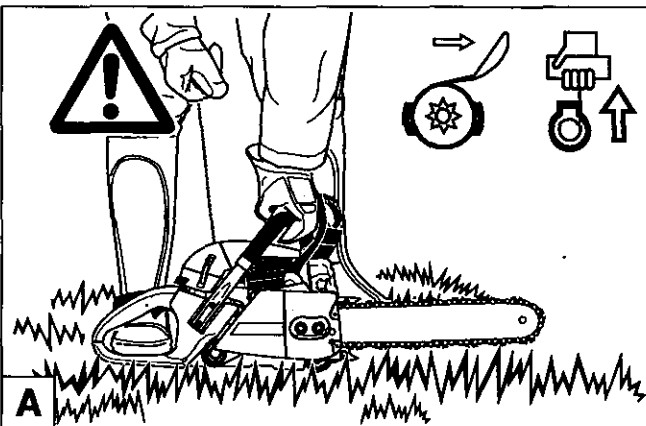
Note:

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.



E



Starting the engine

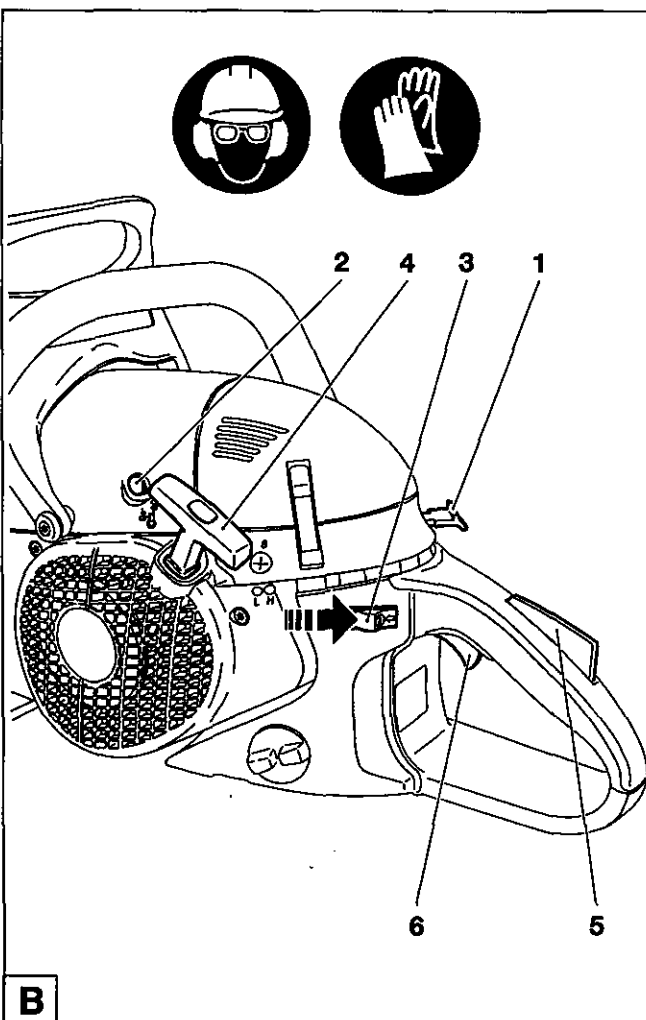
Start the chain saw only after having assembled it completely and inspected.

Move at least 3m away from the place where you fuelled the saw.

Make sure you have a good footing, and place the saw on the ground in such a way that the chain is not touching anything. Engage the chain brake (lock).

Hold the tubular handle tightly with one hand and press the chain saw to the ground.

Steady the right foot by standing in the rear handle.



Cold-starting:

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

Move the I/STOP ignition switch (3) as shown by the arrow.

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

Push the starting valve (2) (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 (2) (option).

Depress the choke (1) and pull the starter cable again. As soon as the engine is running, grasp the rear handle (this actuates the grip safety (5)) and tap the throttle (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.

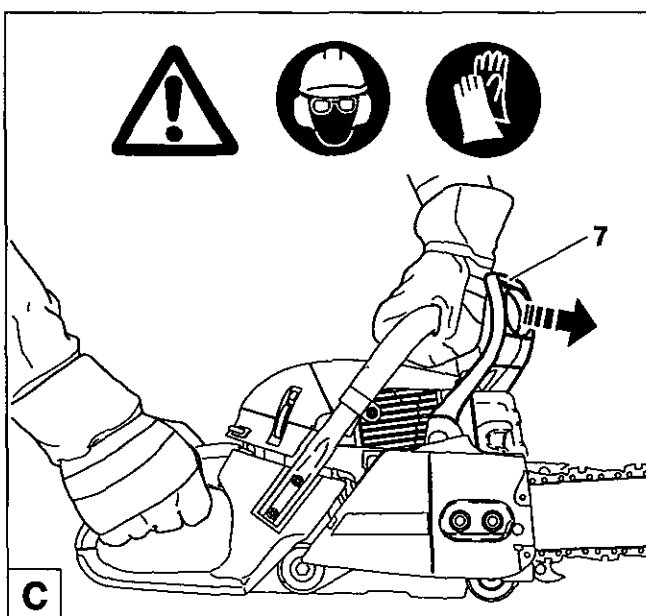
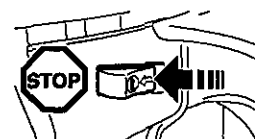


Warm starting:

As described for cold starting, except before starting pull the choke (1) all the way out and back in one time, in order to activate the half-throttle lock.

Stopping the engine

Move the I/STOP ignition switch to the "STOP" position.



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 (7) 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.

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.

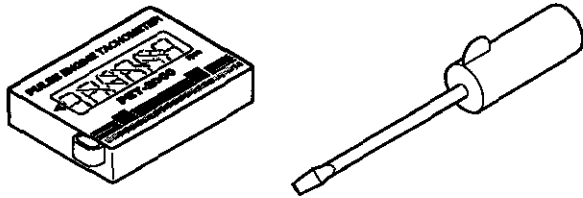
Carburetor adjustment may be done only by a MAKITA service centre. Improper adjustment can cause damage to the engine.

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.

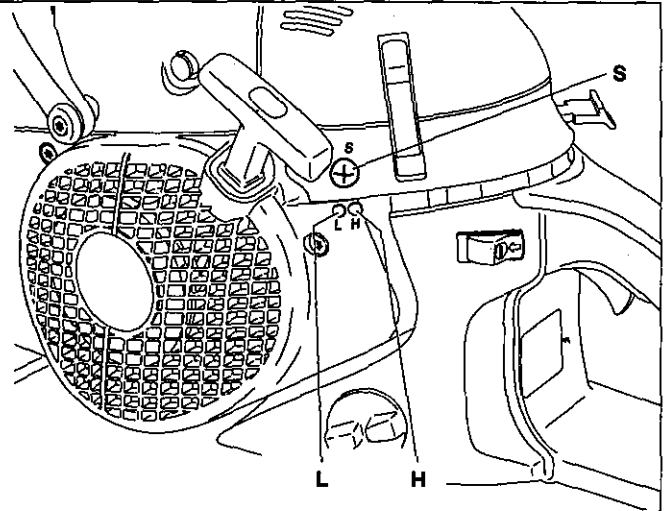
For proper adjustment, proceed as follows:

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 (under-lubricated) running!

1. Start engine and let it warm up (3-5 minutes)
2. Set idle
3. Set maximum permissible speed
4. Check acceleration
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 (counterclockwise) lowers the idle speed. The cutting tool must not rotate!

3. 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!

4. 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.

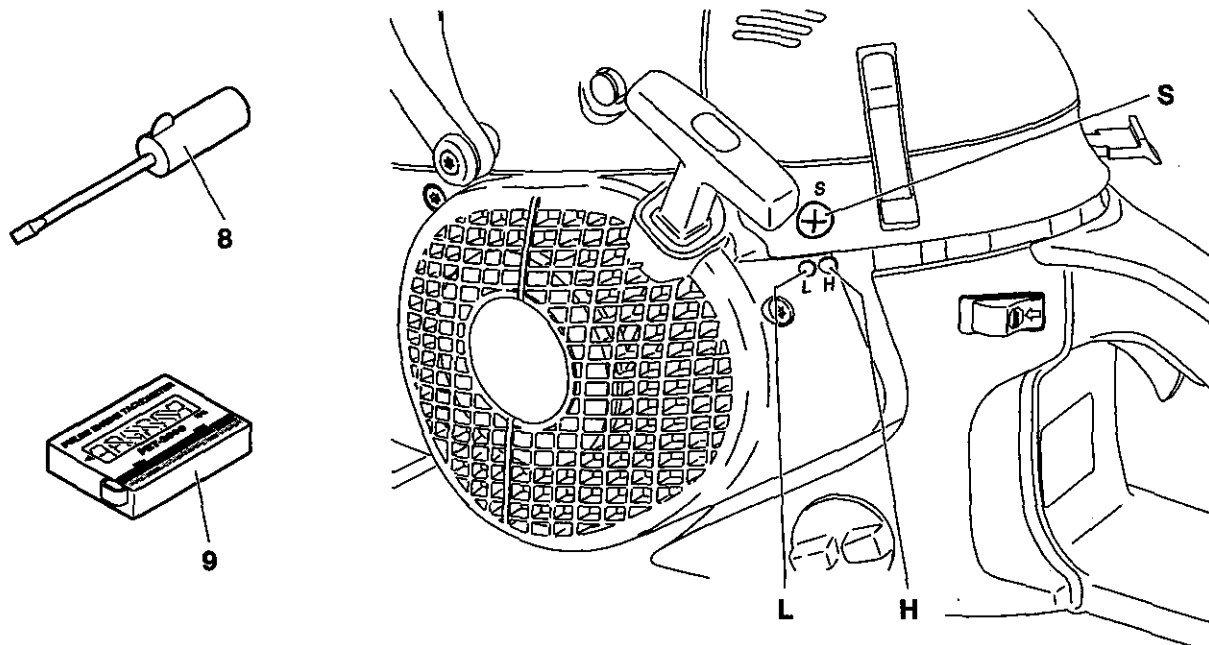
5. Check idle speed



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 (9, 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 (8) 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 top speed

4. Check acceleration

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 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 1/4 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) 3/4 turns.**

4. 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.

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 conditions of low temperature combined with high humidity, and below + 5°C in order to get up to operating temperature faster, heated air can be taken from the cylinder.


Remove the filter hood (see „Cleaning air filter“)

Remove the insert (10) and insert it as shown in position B for cold-weather operation.

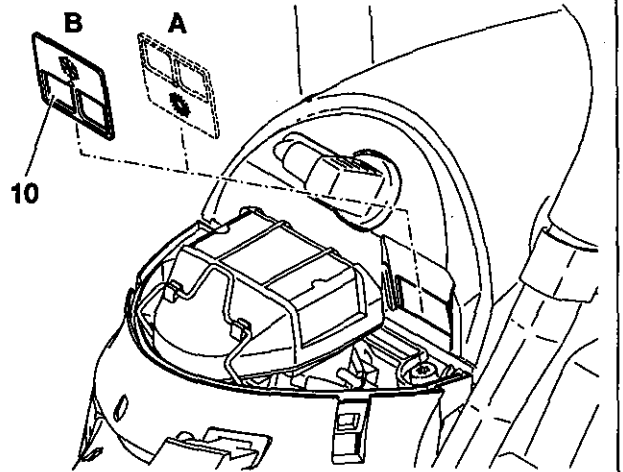
At temperatures above + 5°C the carburetor must NOT be fed heated air. Failure to follow these instructions can lead to damage to the cylinder and piston!

At temperatures over +5°C place the insert in position A for normal operation.

Position A  - Normal operation

Position B  - Cold-weather operation

Reinstall the filter hood.



C

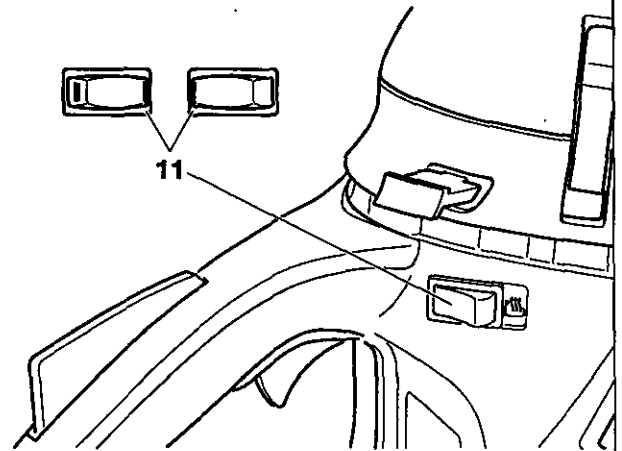
Handle heating

(only DCS6400H, DCS6401H, DCS7300H, DCS7301H, DCS7900H, DCS7901H)

The electrically heated handles are activated by pushing the switch (11).

On: red marking on switch visible

Off: red marking on switch not visible



D