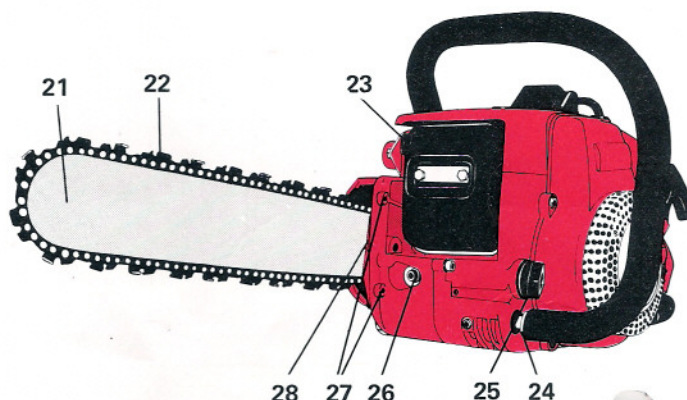
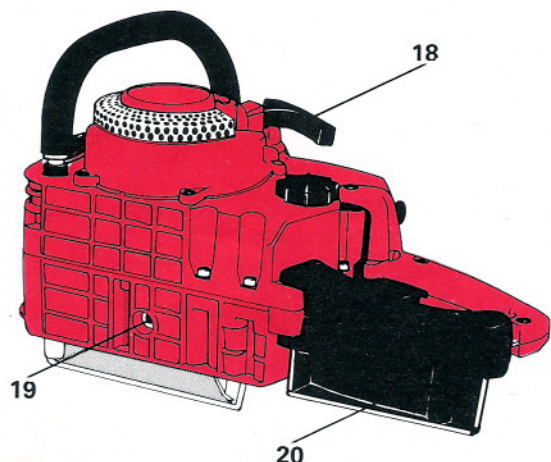
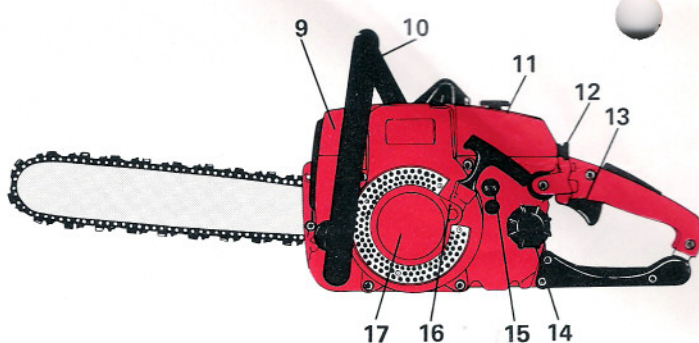
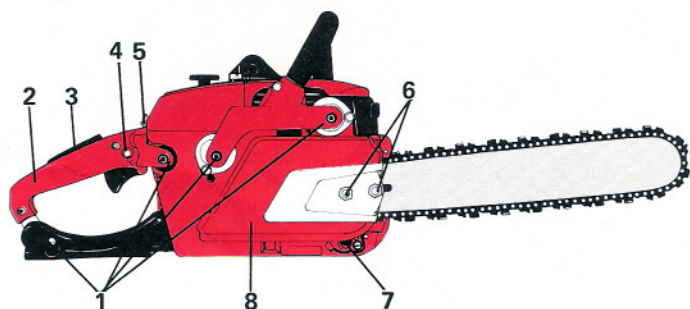


Read this manual before using your new Jonsereds 49 SP



General description of JONSEREDS 49SP



1. Anti-vibration mounts. 2. Rear handle. 3. Throttle safety catch. 4. Throttle catch for starting. 5. Stop switch. 6. Bar mounting studs. 7. Oil strainer cap with safety chain-guard pin. 8. Clutch guard. 9. Cylinder cover. 10. Front handle. 11. Air filter cover. 12. Choke control. 13. Throttle trigger. 14. Fuel tank cap. 15. Adjusting screws for carburetor. 16. Lubrication hole for starter spring. 17. Recoil starter. 18. Starter handle. 19. Adjusting screw for oil pump feed. 20. Guard for right hand. 21. Chain bar. 22. Saw chain. 23. Muffler. 24. Built-in vibration damper. 25. Oil tank cap. 26. Oil pump. 27. Drillings for bucking spike. 28. Chain tension adjusting screw.

Jonsereds 49 SP is powered by a single-cylinder, air-cooled, two-cycle engine of the loop scavenging type.

The ignition system consists of a flywheel magneto made by Pagani. The ignition coil is separately located outside the flywheel.

The fuel tank has a check valve to prevent pressure or vacuum build-up in the tank.

The carburetor is an all-position Tillotson diaphragm type. Lubrication of chain and bar is by an automatic pump with adjustable oil feed.

The starter is made up of a recoil unit with a nylon rope and rewind spring.

Chain pitch $\frac{3}{8}$ " or 0.325 inch.

Drive link gauge 0.058 inch (i.e. thickness 1.47 mm).

Chain speed 3540 feet per minute (18 m/sec.) at 8000 rpm with an eight-tooth sprocket.

Engine displacement 3 cu in (49 cc).

Compression ratio 9:1.

Bore×stroke=1.732×1.260 inch (44×32 mm).

Fuel tank capacity $1\frac{3}{4}$ US pints (0.8 liter).

Oil tank capacity $\frac{3}{4}$ US pint (0.3 liter).

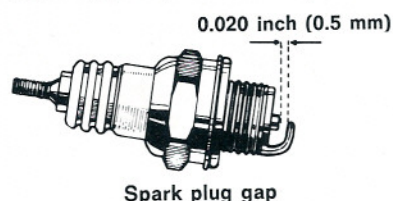
Engine maintenance

The engine is tested and preset at the factory.

During its first 10 to 15 hours of operation the engine should not be run continuously under maximum load. Cutting should, however, always be carried out at full engine speed.

Clean the cooling fins and air intake screen regularly or the engine will run hot and be damaged by overheating.

Check the spark plug about every second week. The gap between the electrodes should be 0.020 inch (0.5 mm). The spark plug has a relative short service life in a two-cycle engine. The manufacturers recommend spark plug replacement every 75 hours of operation. Make sure you get the right spark plug with the correct heat value, i.e. the same type as that originally installed by the factory.

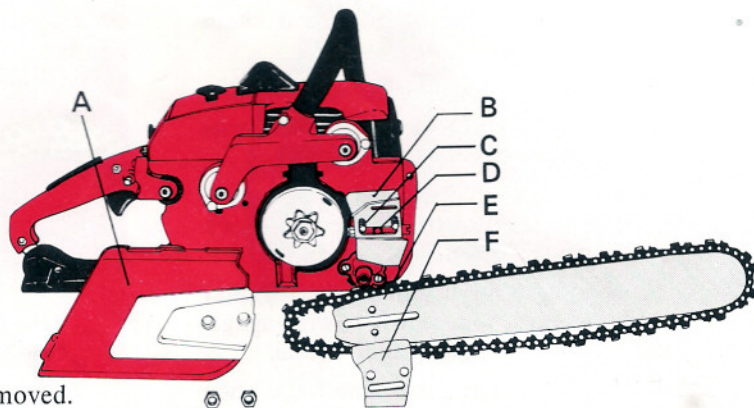


Spark plug gap

Remove the fan cover and cylinder cover once a week to clean the cylinder fins.

Bar and chain installation

- A. Clutch guard.
- B. Inner bar plate.
- C. Bar mounting studs.
- D. Chain tension pin.
- E. Oil hole.
- F. Outer bar plate.



The saw is supplied with the chain and bar removed.

Follow these steps for installation of the chain and bar.

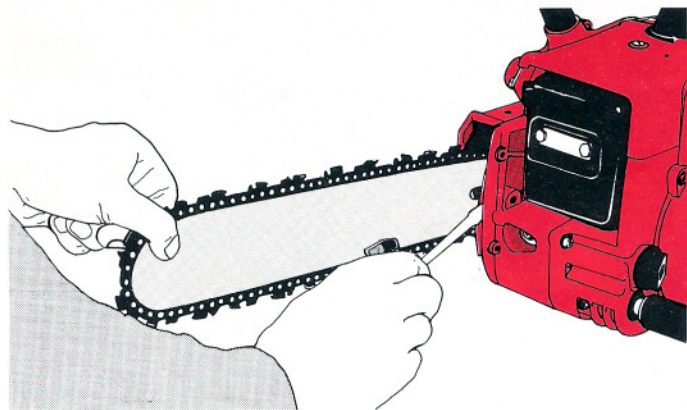
Remove the clutch guard (A) and the outer bar plate (F). Check that the oil hole (E) in the bar is clear through to the chain.

Fit the chain on the bar and over the sprocket. Then put the bar over its mounting studs (C). Check that cutter edges are facing forward on top of bar.

Make sure that the chain tension pin (D) fits into the hole in the bar. Replace the outer bar plate (F) and the clutch guard (A). Tighten the two bar nuts finger-tight, just enough to keep the bar in position.

Hold the bar tip up, and tension the chain by turning the adjusting screw clockwise. There should be a light tension in the chain, but it should still move around the bar freely when pulled by hand.

Tighten the two bar nuts securely with the universal wrench supplied.



Never use the saw with a chain that is too slack.

To install and tension the chain, always use the universal wrench.



Fuel mix

The fuel tank capacity is $1\frac{3}{4}$ US pints (0.8 liter). The octane rating of the fuel should be about 85.

Contact your Jonsereds dealer concerning the grade of oil to be used when preparing the fuel mixture.

Prepare the fuel mixture in a separate gas can, and shake well before filling the tank. Make sure the can is free from impurities. Use a funnel with filter when filling the tank.



Chain lubrication

The oil tank capacity is $\frac{3}{4}$ US pint (0.3 liter). Chain lubrication is automatic. There is no risk of the chain running without oil. Always use special saw chain oil with good adhesion.

Choose the right grade of oil, i.e. with suitable viscosity for the time of the year.

Never use oil which is too thin for the climate.

When filling the oil tank, check for impurities in the oil which can ruin the oil pump.

The use of waste oil for chain lubrication is absolutely prohibited!

Starting the engine

Read about "Fuel mix" and "Chain lubrication" on page 3 before filling the tanks with fuel mixture and chain lubrication oil.

See that the ignition switch is not in the "Stop" position.

Place the saw on the ground. Make sure that no stones or twigs are in contact with the chain.

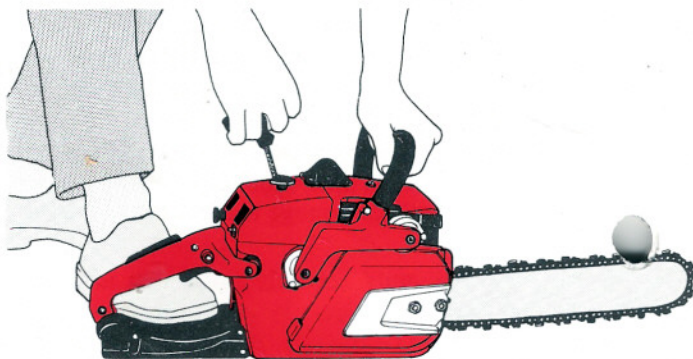
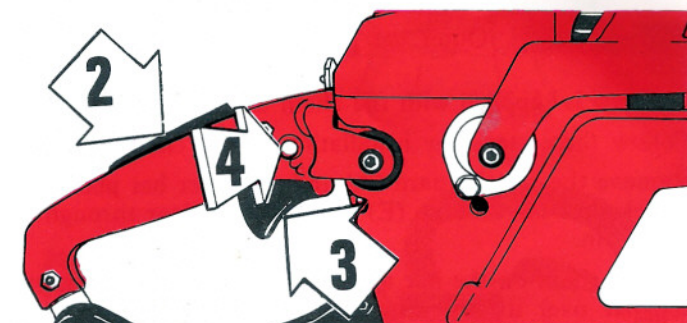
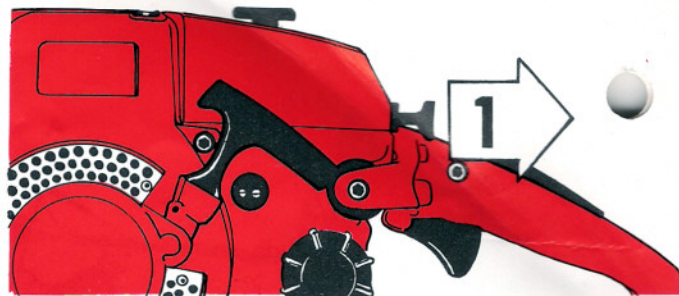
Pull out the **choke control (1)** all the way. Press down the **safety catch (2)** and squeeze the **throttle trigger (3)**. Lock the trigger in this position with the **throttle catch (4)**.

Insert your foot in the rear handle. Pull out the starter rope about 4 inch (10 cm) until the starter pawls engage. Pull the starter handle with a smooth, rapid stroke.

Push the choke control in as soon as the engine fires. Then pull the starter handle again to start the engine.

When the engine starts, squeeze the throttle trigger to release the throttle catch, and the engine runs at idle speed.

To start a warm engine, leave the choke control pushed in and the throttle trigger in idle position.



Carburetor

Fuel adjustment is made with three screws (H, L and T).

H=High speed fuel adjustment needle.

L=Low speed fuel adjustment needle.

T=Idle speed adjustment screw.

Rough adjustment. Carefully turn the fuel adjustment needles H and L all the way in, then back them up one full turn (counter-clockwise).

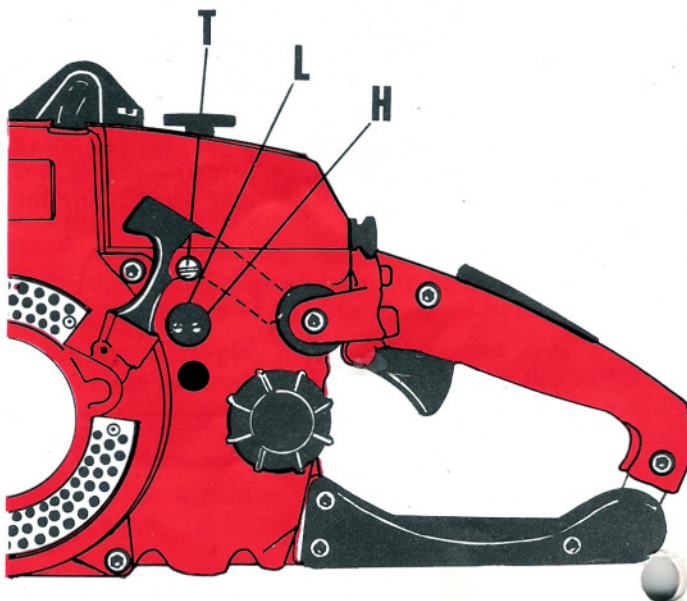
Caution! Do not attempt to twist the needles too hard since this could damage the needles and their seats beyond repair.

Fine adjustment. Start the engine. Adjust to correct idle speed by turning the idle screw (T) until the engine idles as fast as possible without the chain moving. There must always be a safe margin between engine idle speed and clutch engagement speed.

If the engine falters or hesitates to accelerate when the throttle is quickly squeezed, slowly turn the low speed needle (L) counter-clockwise in small steps, checking the acceleration. The setting of the high speed needle (H) also affects acceleration. For good idle, do not open the low speed needle (L) more than necessary.

If the engine tends to race, open the high speed needle (H) slightly (i.e. turn counter-clockwise). Smoky exhaust gases indicate too rich a setting. After final adjustments, the needle (H) must be at least $\frac{3}{4}$ turn from the bottom, and the needle (L) at least 1 turn from the bottom. A leaner setting results in the engine racing and possible seizing.

Note. Always make sure that the air filter is clean before carrying out carburetor adjustments.

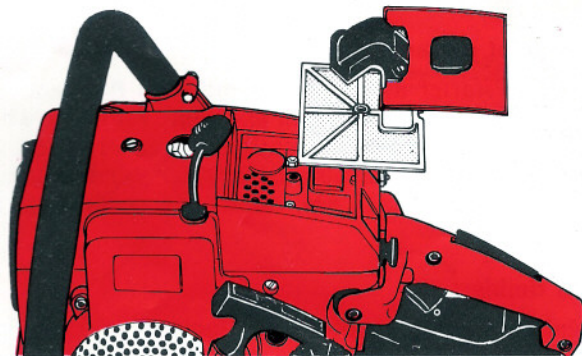


Fuel filter

On the end of the gasoline hose inside the tank there is a plummet which also functions as a fuel filter. For cleaning or replacement, pull out the plummet through the fuel tank filler opening.

Air filter

Clean the air filter once daily with soapy water, gasoline or kerosene to ensure that the engine always gets the correct fuel/air mixture. A clogged air filter interferes with smooth running and increases gas consumption.



Oil pump

Chain and bar lubrication is automatic. Normally the oil pump requires no attention. However, clean oil and a clean oil tank are necessary to ensure trouble-free function. Use only approved chain saw oil.

See the arrow for the position of the oil pump.

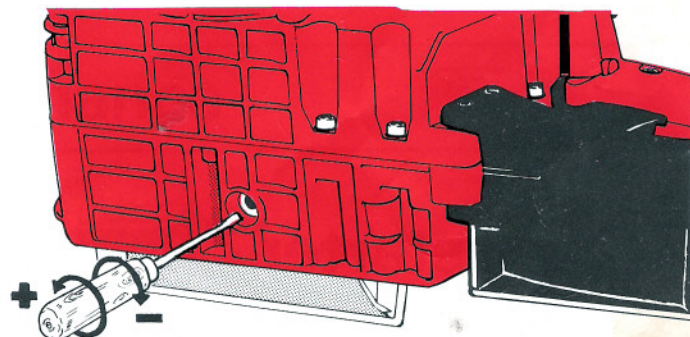
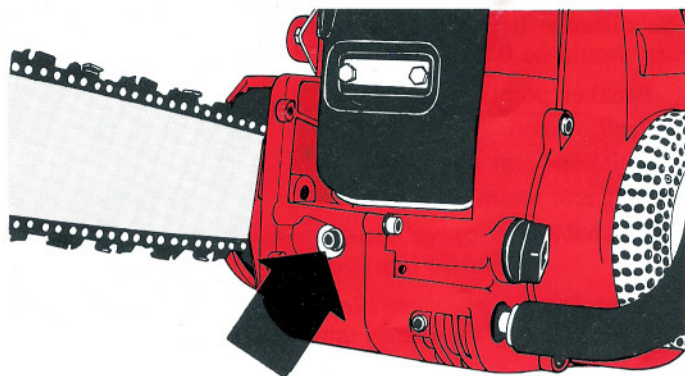
The flow of oil to the chain can be regulated by an adjusting screw accessible through the opening under the saw. See the figure.

The oil pump is factory-set for normal lubrication.

For normal setting, first turn the adjusting screw clockwise as far as it will go. (In this position the oil flow is shut off.) Then back the screw off approximative $1\frac{1}{2}$ to 2 turns.

Never tighten the adjusting screw beyond the point of resistance.

The oil feed setting should be such that the oil and the fuel tanks run empty at the same time.

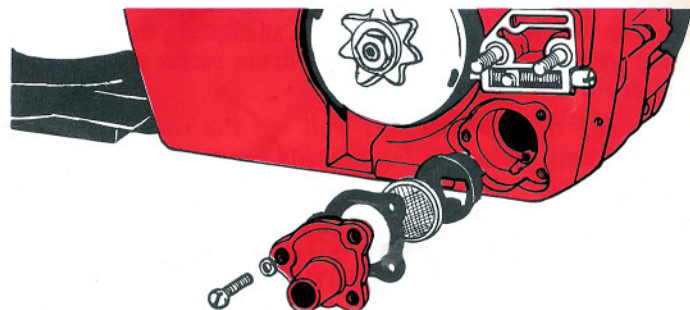


Oil strainer

A clogged strainer screen is easily cleaned as follows.

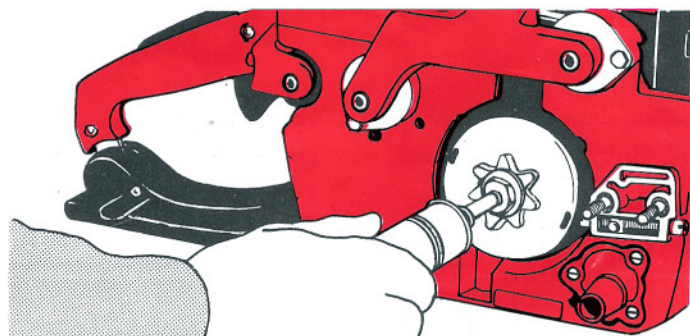
Remove the strainer cap and the screen. Drain off the remaining oil. Clean the screen. Fill the oil tank half full with fuel mixture or kerosene and shake thoroughly. Drain off, and fill the oil tank with fresh saw chain oil. Check that the chain lubrication system is in working order.

Never use waste oil!



Clutch

The clutch drum bearing should be lubricated regularly. Use a grease gun. See figure. Before greasing, make sure the lubrication hole is free from dirt.



Ignition system

Breaker point gap adjustment

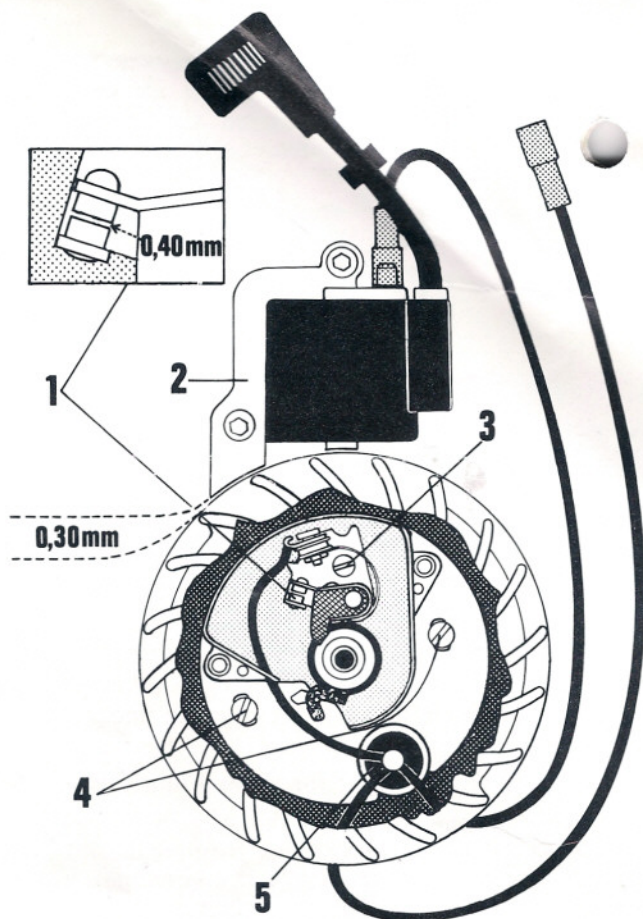
Remove the starter assembly, the magneto flywheel, and the cover over the breaker point assembly. Fit the flywheel nut and turn the crankshaft until the breaker points are at their widest distance apart. The gap should then be 0.016 inch (0.4 mm). If not, adjust the position of the fixed point.

Ignition timing

The ignition timing is set at the factory to 0.080 inch (2 mm) before TDC. Turn the magneto mounting plate against the crankshaft's normal direction of rotation to advance the ignition timing. To retard the timing, turn the plate in the **same** direction as that of the crankshaft.

The distance between the flywheel and the ignition coil core should be 0.012 to inch (0.30 mm).

1. Breaker points.
2. Ignition coil.
3. Breaker point screw.
4. Magneto mounting plate screws.
5. Capacitor.



Recoil starter

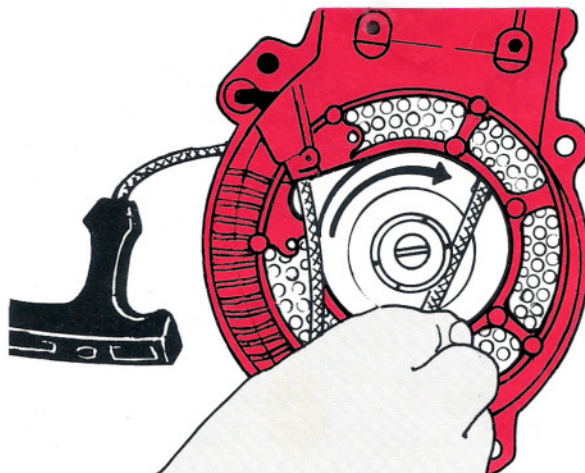
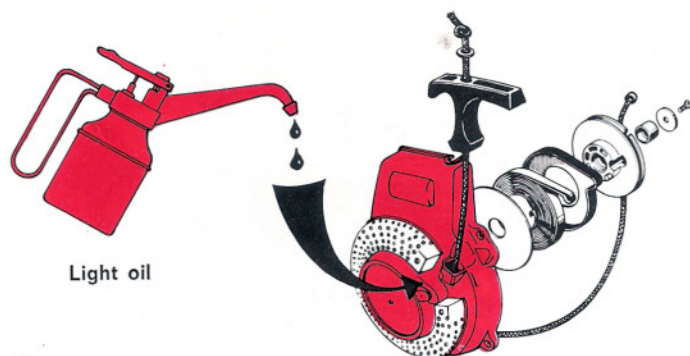
To replace the starter spring or the nylon rope, remove the center screw and lift out the rope drum and return spring assembly.

Install the starter rope as shown in the figure.

Fit the spring to the underside of the drum and place the parts in the fan housing. Tension the spring after assembling by inserting the rope in the drum recess and turning the drum clockwise.

Replacing the fan housing: Pull out the rope about 1½ feet (50 cm). Place the fan housing over the flywheel and let the rope rewind itself. The starter pawls will then engage correctly.

Lubricate the return spring through the hole in the fan housing. Use light oil of the ATF type.

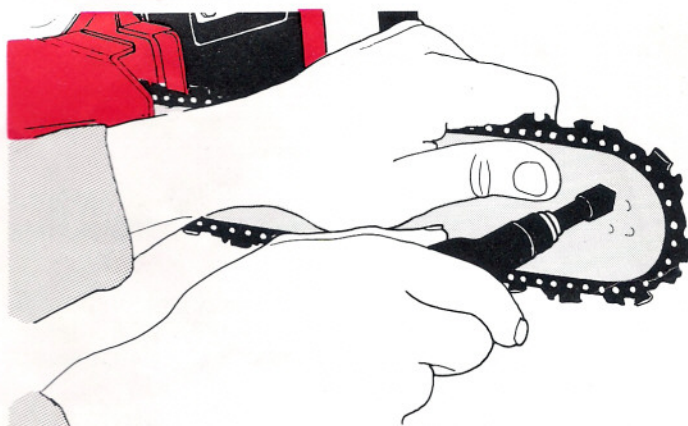


Chain bar maintenance

Roller nose bars should be lubricated with automotive grease or SAE 140 transmission lubricant when fueling, or at least twice per day. Use a grease gun. See figure.

The complete nose roller can also be soaked in a pan of oil overnight.

Motor oil is recommended for the nose roller in winter use.



Running in a new chain

Soak the chain in saw chain oil.

Install the chain as described on page 3. Start the engine and let the chain run slowly for a few minutes.

Check that the oil pump is delivering oil.

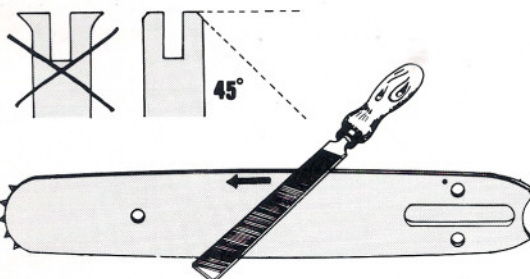
Stop the engine and adjust the chain tension. Start the engine and warm up the chain by making four or five cuts in a sapling.

Stop the engine. Allow the chain to cool down, and re-adjust chain tension.

Continue adjusting until the chain does not stretch any more.

The chain must always be **cold** when carrying out this adjustment.

Never touch the chain while the engine is running!



Turn the bar over every workday to equalize wear on rails. Clean out the bar groove and oil holes.

File the edges of the bar rails once every week to maintain a proper shape free from burr. See figure.

Never use a badly worn bar. It will shorten chain service life.

Chain filing and maintenance

The chain can be sharpened with the chain fitted on the bar, but it should then be given a little extra tension.

The chain supplied has a top plate filing angle of 30° which is suitable for most types of wood. Maintain this angle until the chain cannot be filed back any more.

Using a file holder makes it easier to obtain the correct angles. If the angle index of the file holder is kept parallel with the bar, a top plate filing angle of 30° is automatically obtained. By pressing the flat side of the file holder against the cutter top plate, the file will automatically be at the correct height.

File the chain to an 85° side plate angle, i.e. inclined slightly forward.

Use a $\frac{7}{32}$ " file (5.5 mm) for a $\frac{3}{8}$ " chain, and a $\frac{3}{16}$ " file (4.8 mm) for a 0.325" chain.

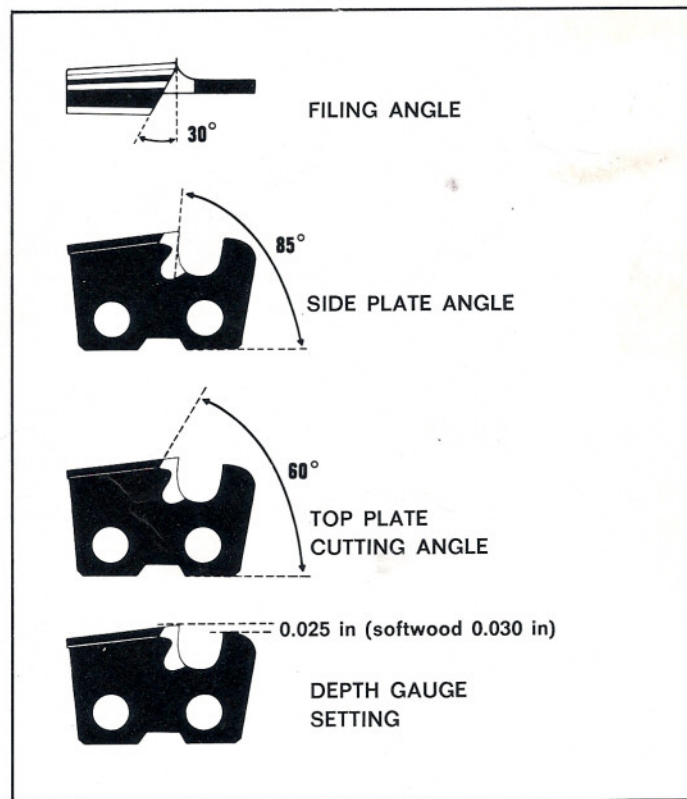
Hold the file horizontally, and file away from you. Apply pressure on the forward strokes only.

After sharpening all the cutters, check and adjust the depth gauge setting. The chain supplied has a depth gauge setting of 0.025 inch (0.65 mm) which can be increased to 0.030 inch (0.75 mm) when cutting softwood.

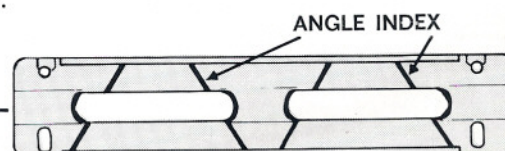
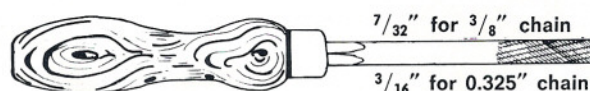
To ensure the same depth gauge setting on all the links, use a file jointer designed for a $\frac{3}{8}$ " or 0.325" chain respectively.

Never rivet a chain yourself. Contact a service workshop with the special tools for this kind of work.

If any of the links have to be replaced, new links must be filed back to the same size as the other links.

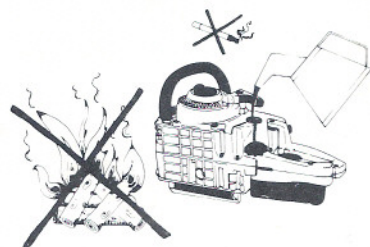
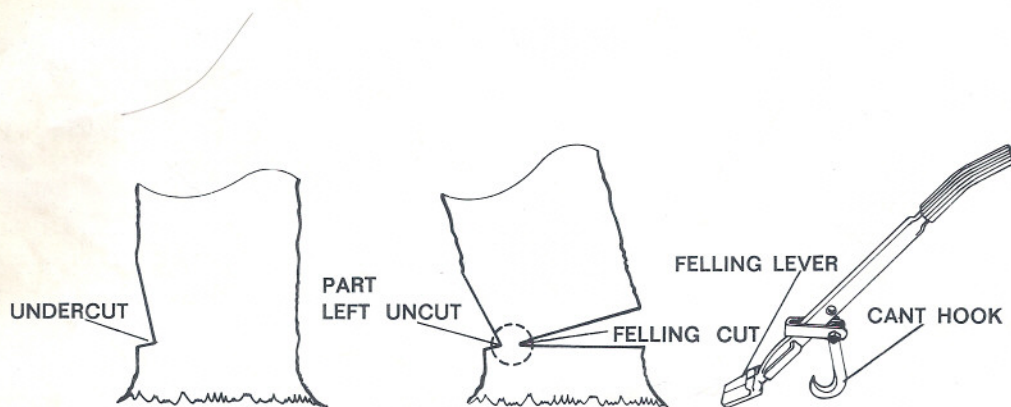


Always keep the cutters well sharpened, file lightly but frequently.



Safety precautions

1. Make sure you know the regulations governing the use of chain saws in your country.
2. The operator must be fully instructed about the operation and maintenance of the chain saw before using it.
3. The centrifugal clutch must be adjusted to provide a safe margin between idle speed and clutch engagement speed. Never use a saw with a chain that creeps at idle speed.
4. Before starting the engine, make sure that the saw is standing firmly on the ground and that there is no risk of the chain coming into contact with any obstruction.
5. Never adjust the bar or chain while the engine is running.
6. When felling a tree make sure the undercut is sufficiently deep.
7. If the undercut is made with the chain saw, make sure that both cuts are made to the same depth. This is facilitated by making the top cut first.
8. Never make the felling cut below the level of the undercut. A small section of wood should be left uncut to act as a hinge while the tree is falling. This permits the tree to fall in the desired direction. Therefore, do not cut all the way through to the undercut, or you will lose control over the direction of fall.
9. Use a felling lever. This should be inserted into the felling cut as soon as the bar has reached sufficient depth.
10. Include a felling lever and a cant hook in your equipment.
11. Before felling a tree, make sure that nobody is standing nearby. When shouting a warning, remember that it may be drowned by the noise of the saw engine.
12. When sawing with the top side of the bar the saw may kick back, particularly when starting to cut. Cutting should always be done at full throttle. This danger is also present if the chain at the top side of the bar catches in a cut while sawing with the bottom side of the bar. Carry out cutting in such a way that this does not happen.
13. When carrying the saw between cuts, hold it with one hand with the bar pointing forward and with the chain disengaged at idle speed. When carrying an idling saw, keep your finger away from the throttle trigger.
14. When the saw is being transported, the chain should be removed or securely covered.
15. Keep smokers and flames away from saw while fueling or carrying out fuel adjustments. Do not fill the fuel tank while the engine is running.
16. Move the saw five or ten feet away from refueling area to avoid the risk of spilled fuel being ignited by exhaust flames.
17. Do not store the saw or fuel in the house or in any place where there is a fire hazard. Store fuel in approved gas cans (not glass or plastic containers). Remember that gasoline fumes in empty cans are highly explosive.
18. Never start the engine indoors. Exhaust gases are poisonous.



Your Jonsereds dealer

Jonsereds

Jonsereds AB, Chain Saw Division, S-433 01 Partille, Sweden.