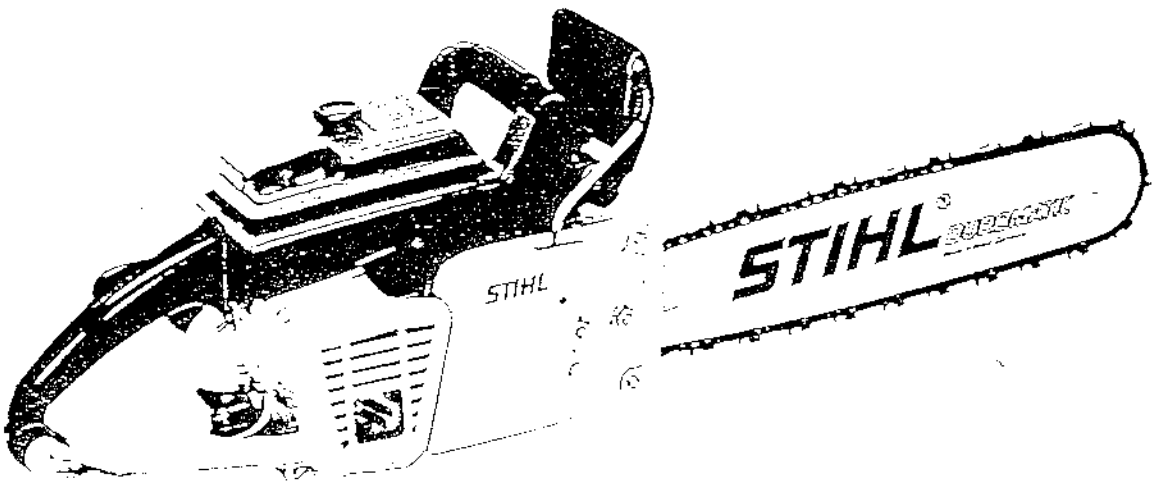
Instruction Manual/Owner's Manual 2 8. 12. 78

STIHL 041 AV

Attention! The use of chain saws may be hazardous. Read and follow carefully the operating and safety instructions of your owner's manual.



STIHL 041 AV, 041 AV electronic, 041 AV Super electronic, 041 AV electronic Quickstop

Instruction Manual
Sharpening and Maintenance of Saw Chains
and Spare Parts List

This booklet contains the operating instructions and parts list for all versions of the Series 041 power saws. Please read the operating instructions carefully before starting up for the first time. In doing this you will avoid mistreating the machine.

It is in your own interest to strictly observe the safety rules for accident prevention on page 6.

STIHL policy is one of continuous improvement. The right is reserved to change the design, technical specification and equipment of all models. You will appreciate that while every effort is made to ensure accuracy of data and illustrations in this booklet, we cannot accept liability for claims based on its contents.

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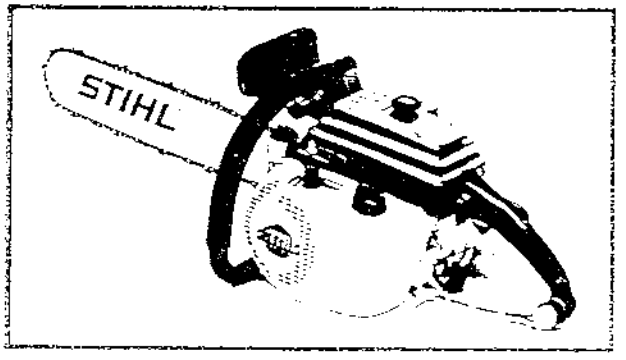


STIHL®

Andreas Stihl
Postfach 1760

D-7050 Waiblingen

Specifications

Engine

STIHL single cylinder two-stroke engine

Piston displacement:	61 cm^3 (3.72 cu.in)
	S = 72 cm^3 (4.4 cu.in)
Cylinder bore:	44 mm (1.73 in)
	S = 48 mm (1.89 in)
Piston stroke:	40 mm (1.57 in)

Ignition System 041 AV

Principle:	Magneto ignition with breaker points
Ignition timing:	2,4 . . . 2,6 mm (0.09 . . . 0.1 in) before top dead center
Breaker point gap:	0,3 . . 0,4 mm (0.012 . . . 0.016 in)

041 AV electronic

Principle:	Thyristor ignition system (breakerless)
Ignition timing:	2,5 mm (0.099 in) before top dead center at 6000 r.p.m.
Spark plug:	Bosch WSR 6 F or Champion RCJ 6 Y Heat value 175 Electrode gap 0,5 mm (0.02 in)
Spark plug thread:	M 14 × 1,25; 9,5 mm (0.37 in) long

Fuel System

Carburetor:	All position diaphragm carburetor with integral fuel pump
Air filter:	Flocked wire mesh flat filter
Fuel tank capacity:	0,62 l (1.31 pt)
Fuel mixture:	Mixing ratio 1:40 for STIHL two-stroke engine oil; 1:25 for other good-grade two-stroke engine oils

Cutting Attachment

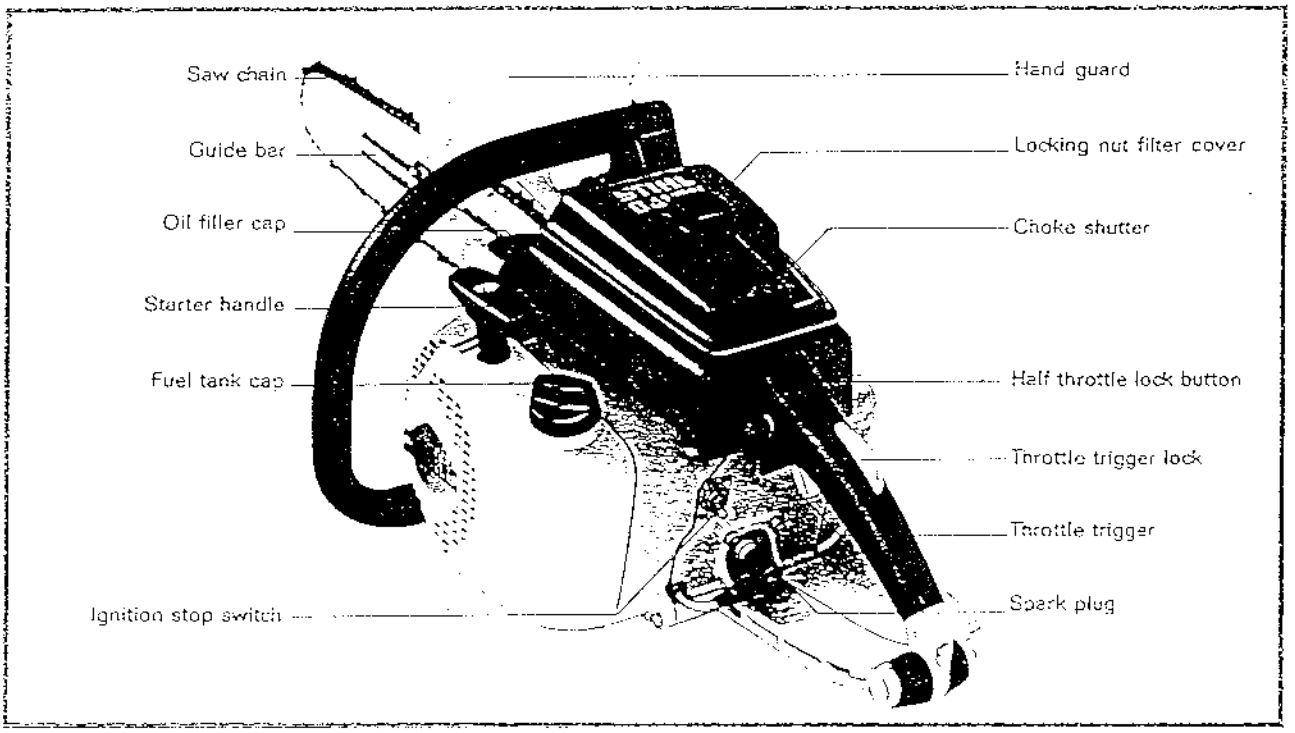
Guide bars:	Duromatic guide bars with stellite tipping at the bar head Rollomatic guide bars with star shaped roller nose
Bar lengths:	Duromatic 35, 40, 45 and 50 cm (14, 16, 18 and 20 in) Rollomatic 33, 37, 40 and 45 cm, (13, 15, 16 and 18 in)
Saw chain:	3/8" (9.32 mm) -Oilomatic-Rapid-Standard-, Rapid-Micro- and Rapid-Super chain -Oilomatic-Rapid-Standard and Rapid-Micro chain also in "S" (safety) version
Chain sprocket:	7 teeth for 3/8" pitch
Chain lubrication:	Fully automatic oil pump with adjustable oil quantity control
Oil tank capacity:	0.25 l (0.53 pt)

Weight of saw

with 33 cm (13 in) bar and chain

Standard version:	7,9 kg (17.4 lb)
Quickstop version:	8,2 kg (18.1 lb)
Super version:	8,1 kg (17.9 lb)

Condensed Operating Instructions



1. Fill in fuel mixture and chain lubricating oil; mount guide bar and saw chain.
2. On machines with chain brake move hand guard forward towards guide bar.
3. Move choke lever to "Choke" position and ignition switch away from "STOP".
4. Press throttle lock with the ball of your thumb and half throttle lock button with your thumb. This way the throttle trigger stays locked in half throttle position for starting
5. Start – as soon as engine fires open choke fully, even if engine dies and you have to repeat start.
6. Release half throttle lock button by brief throttling so that engine can idle. On machines with chain brake also pull back the hand guard towards handle bar.
7. Check chain lubrication; make a few test cuts.
8. Shut down engine, ignition switch to "STOP".

Fuel and Chain Lubricating Oil

The two-stroke engine is powered by a mixture of gasoline and engine oil.

Only use regular low-octane gasoline. Never use high octane fuel as it contains benzol which will permanently damage the carburetor diaphragm.

Only use STIHL two-cycle engine oil or other branded two-stroke engine oils for mixing. The recommended mixing ratio is 1:40 (1 part oil to 40 parts regular gasoline) for STIHL two-cycle engine oil or 1:25 for other branded two-stroke engine oils.

Important: Vigorously shake mixture in can before fueling.

The service life of the chain and guide bar depends to a great extent on good lubrication and the quality of the lubricating oil. Never use old oil. Always use the chain lubricating oil approved by STIHL and appointed dealers.

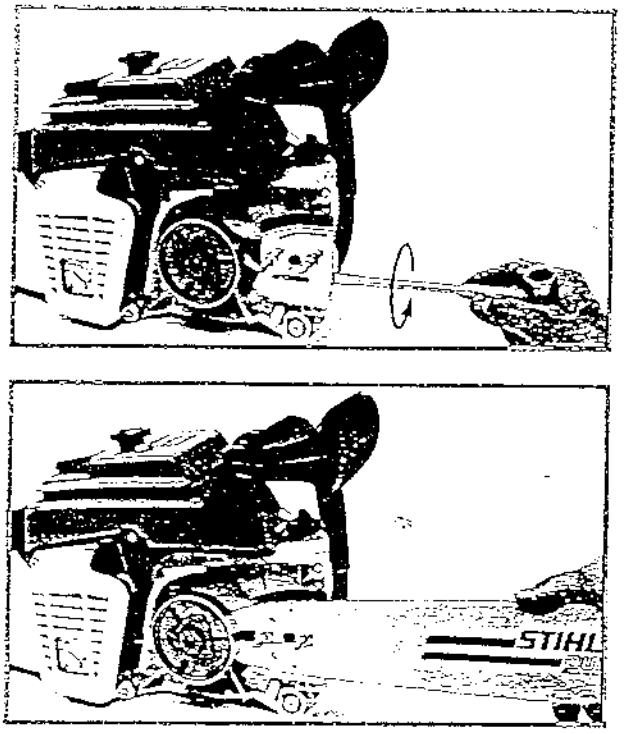
If special chain lubricating oil is not available, one of the high-duty, single-grade engine oils listed below may be used in an emergency, depending on the outside temperature.

Outside temperature +10 °C . . . +40 °C: SAE 30
Outside temperature +10 °C . . . —10 °C: SAE 20
Outside temperature —10 °C . . . —30 °C: SAE 20 W
or SAE 10 W

Always top up with chain lubricating oil when you refuel. Carefully clean the area around the filler caps before opening and make sure that no dirt falls into the tank while you are refueling.

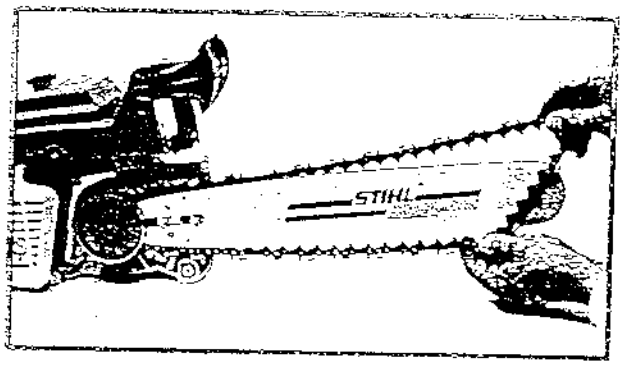
Installation of Bar and Chain

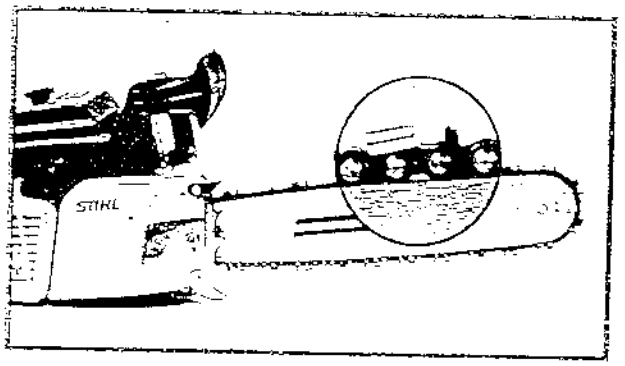
Top: Setting back the tensioning nut
Bottom: Mounting the guide bar



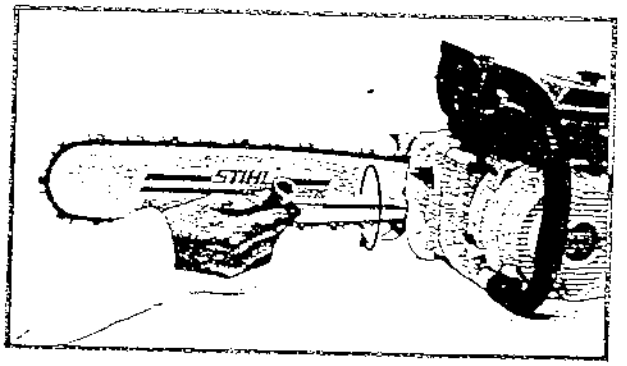
As a safety factor your power chain saw comes with bar and chain unmounted. To install the bar and chain, loosen both nuts at the sprocket cover. Remove sprocket cover with outer guide plate from the collar screws. The chain tensioning device is positioned in a groove under the collar screws. Move tensioning nut back to the limit stop in the direction of the chain sprocket by turning the lens-head screw counterclockwise with the screwdriver end of the combination wrench. Then place the bar over the two collar screws that the bolt of the chain tension adjusting nut extends into the hole under the slot for the collar screws.

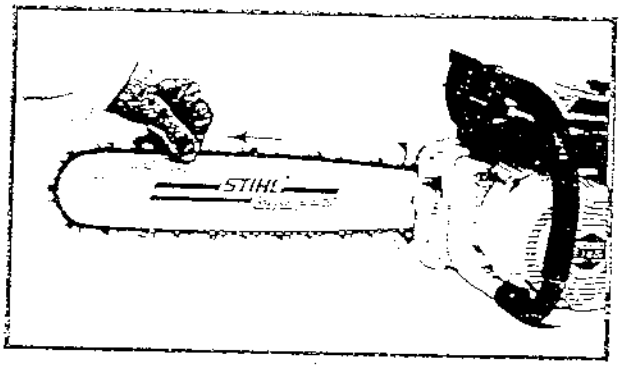
Top: Mounting the saw chain
Bottom: Cutting edges pointing towards the bar head





Top: Tensioning the saw chain
Bottom: Checking the chain tension





Loop the chain over the chain sprocket and fit it into the groove of the bar with the cutting edges of the chain at the top of the guide bar pointing towards the bar nose.

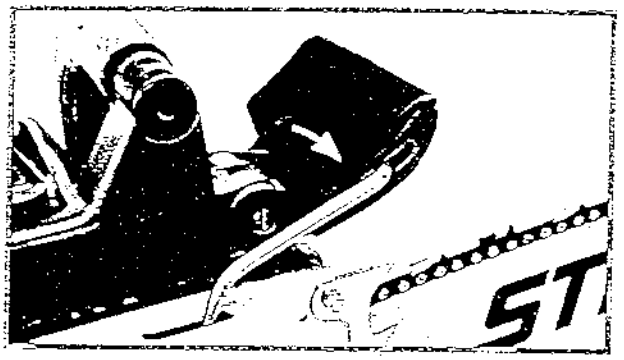
Re-assemble by reversing disassembly sequence and place chain sprocket cover on the collar screws. For the moment tighten the two nuts only slightly by hand

Then turn the chain tension adjustment screw clockwise while holding the nose of the bar up until all slack of the chain has been removed. Now tighten the nuts with the combination wrench with the bar nose still held up.

The chain tension is correct when the chain has a snug fit on the bar but can still be pulled easily around the bar by hand.

Chain brake

Chain brake actuated



The chain brake is a safety feature which greatly increases operator safety. It is actuated by the front hand guard.

Actuation of chain brake

If the hand guard moves towards the nose of the guide bar – e. g. if the saw kicks back – the direct transmission of torque between crankshaft and centrifugal clutch is instantly interrupted by the isolating clutch. At the same time the brake springs press the brake shoes against the clutch drum and the saw chain is brought to a halt within a fraction of a second.

Releasing the chain brake

The chain brake has to be released before work can be continued. To do this, pull hand guard back to the tubular handle. This automatically releases the brake shoes.

The isolating clutch mechanism will only engage when the engine is running at the prescribed idle speed. Correct idle adjustment is, therefore, extremely important.

Safety Precautions

All safety precautions that are generally observed when working with an axe or a hand saw must also be observed when working with chain saws. However, because of the much faster cutting and the high speed of the saw chain there are additional safety precautions that must be kept in mind when working with any chain saw.

Observe all safety precautions of your local trade union under all circumstances! In addition to the instructions in the individual paragraphs of the instruction manual please observe the following points:

Every first-time purchaser of a chain saw should be shown how to handle the tool by the salesman or attend one of the courses held for this purpose before using the saw.

Don't smoke when fueling and avoid spilling fuel. If you spill fuel wipe it off immediately and don't start the saw where you refueled it.

The STIHL chain saw is a one-man saw, therefore it is operated without assistance. No second person is allowed to stand within the operating area of the guide bar.

Always start your power saw on level ground with the chain brake locked (handguard forward on Quickstop models only). Keep the bar and chain from touching objects or the ground. Make sure you have secure footing and proper balance when starting your chain saw.

Check function of chain saw before starting up (throttle control, ignition stop switch).

If the chain saw is equipped with a safety chain brake (Quickstop), engage the brake mechanism before carrying the saw -- this will keep the saw chain firmly locked in position. If the chain saw has no safety chain brake, switch off the engine before carrying the saw. In either case a bar scabbard should be fitted over the chain to provide additional protection.

Keep both hands on your saw when cutting in order to have positive control of the saw at all times.

First place bumper spike firmly against the wood, then start cutting. If you cut without a bumper spike be careful that the saw does not jerk forward and make you lose your balance. Draw the saw out of the cut only with the chain running.

Work calmly. Before making the felling cut make sure no one will be endangered by the falling tree.

Always handle the chain saw in such a way as to keep your body clear of the reach of the cutting attachment.

When working in groups the next worker must be at a safe distance (at least $2^1/_2$ tree lengths) from the tree to be cut. Calls can be easily drowned by the noise of the engine.

Always stand aside of the falling tree when felling, then only step back sideways and watch for falling branches. The operator must look for a safe escape path.

Use only wooden, light metal or plastic wedges, never use steel wedges.

If an assistant has to push the tree to be felled, a pushing fork of sufficient length must be used.

Beware of flying splinters when cutting split timber.

Use safety chain when limbing and for cutting jobs where mainly plunge-cutting is done.

Pay particular attention on slippery ground, also on hillsides.

When felling on a slope and when cross-cutting laying trees on a hill the chain saw operator must always stand on the uphill side of the tree.

Wood on the ground or standing timber which is under tension has first to be cut on the compression side. Thereafter the cross-cut must be done from the tension side. Otherwise the bar will pinch or the saw may suddenly kick back.

Wear a safety helmet when felling. We recommend helmets with eye protection (against splinters). Garments should be adequately protective i. e. trim fitting gloves (chrome leather), snug fitting garments (coverall, no coat) and shoes with nonslip soles.

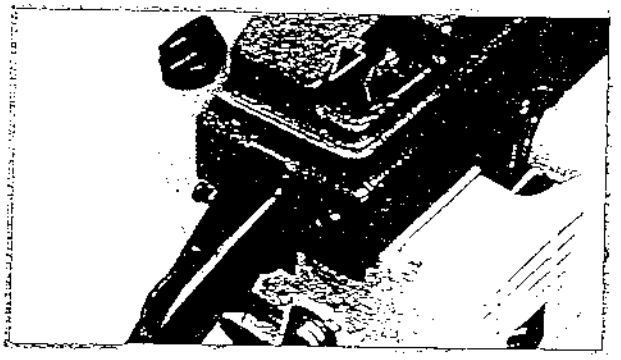
Protect your ears with ear plugs or other ear protectors.

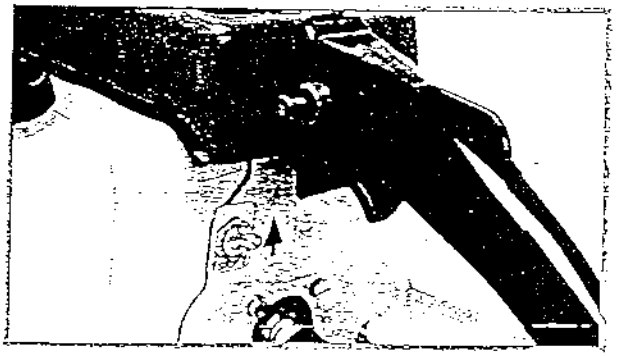
Always watch for proper tension, lubrication and sharpness of the saw chain.

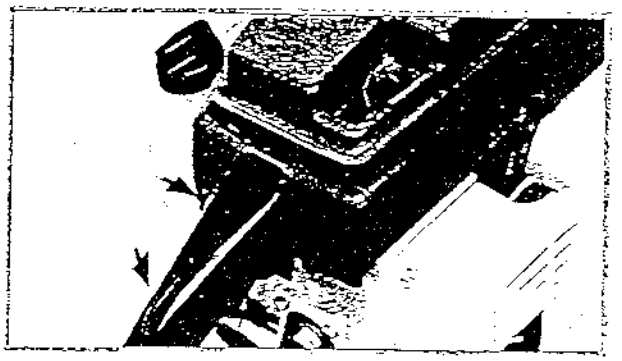
When checking the chain tension or when readjusting and changing the chain the motor must be stopped.

Starting

Top: Choke lever in "Choke" position.
Center: Ignition switch away from "STOP"
Bottom: Throttle trigger in half-throttle position







Start your saw without assistance of a second person. Keep other people clear of the general work area of the saw.

Place the chain saw on firm ground or other solid surface in an open area. Have a good balance and secure footing. Be absolutely sure that guide bar and chain are clear of you and all other obstruction and objects, including the ground. When engine starts (in half-throttle position), engine speed will be fast enough for the clutch to engage sprocket and turn the chain.

Starting procedure

1. Engage the chain brake on Quickstop machines by pushing the hand guard toward the bar nose.

2. Move ignition stop switch away from "STOP".

3. A cold engine, is started with the choke closed, slide choke lever to "CHOKE".

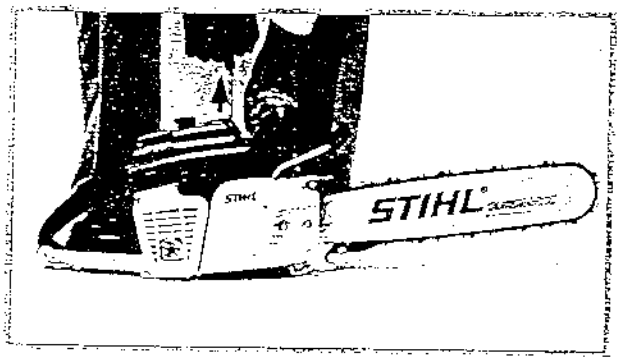
   A warm engine, or one that has only been stopped for a brief period, is started with the choke open — slide choke lever away from "CHOKE".

4. Set throttle trigger to half-throttle position: Depress at first safety throttle lock, then throttle trigger and half-throttle button. Next release throttle trigger and then half-throttle button.

5. Hold the front handle bar with your left hand and put your right foot through rear handle.

6. Pull starter grip slowly with your right hand until you feel the starter engage. Then make a short,

Starting



quick pull. Do not allow the grip to snap back, but guide the starter rope slowly back to permit the rope to rewind properly.

Crank until the engine fires. Then open choke (choke lever away from "CHOKE", if the saw is cold) and pull again. Failure to follow this procedure may result in injury to hand or fingers and may damage the starting mechanism.

7. As soon as engine is running, depress throttle trigger momentarily to release half-throttle button and allow the engine to run in idle speed.

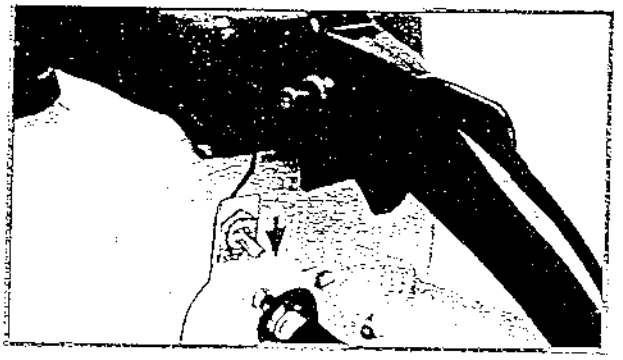
8. On Quickstop machines, disengage the chain brake before starting cutting work.

9. The engine is stopped by moving the ignition stop switch to the "STOP" position.

Hints for starting a chain saw:

When starting a cold engine only keep the choke closed until the engine begins to fire. Then open choke

Ignition switch in "STOP" position



fully – choke lever away from "CHOKE" – even if the engine stops and you have to repeat the starting procedure. If the choke is left closed, the combustion chamber will flood and stall the engine.

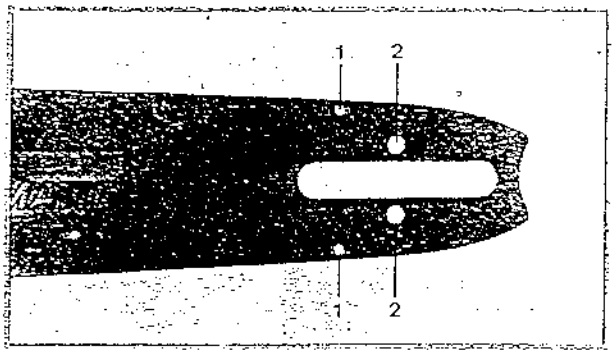
If you opened the choke after the engine fired and the engine still does not run after several attempts, it is already flooded. In such a case, remove, and dry off the spark plug. Clear the combustion chamber by cranking the engine over several times on the starter with the spark plug removed. The ignition stop switch should be off (move to "STOP") and the throttle in half-throttle position during this process.

At very low outside temperatures do not open the choke fully after starting. First allow engine to warm up for a brief period with very little throttle (release half-throttle button). Then release throttle trigger and open the choke.

A new engine or one which has been run until the fuel tank ist dry will not start first time after refueling because the carburetor's diaphragm pump has to be primed with fuel by cranking the engine over several times on the starter.

Cutting Attachment

1 Oil inlet bores
2 Centering bores



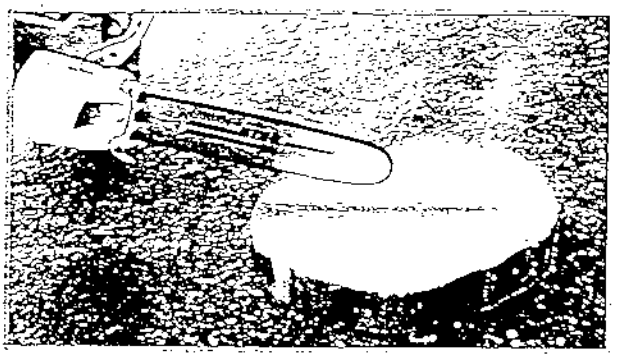
Guide bars

The nose and underside of the guide bar are subject to a particularly high rate of wear. To avoid one-sided wear, turn guide bar around every time you resharpen or replace the chain. Regular cleaning of the oil inlet bores and guide bar groove is also important.

The guide bar can be examined for signs of wear at the same time. A minimum groove depth must be maintained – see table below – in order to prevent the drive links fouling the bottom of the groove (the root of the cutter and the tie strap would no longer locate on the guide bar track). This depth should be measured at the spot where the bar is stressed most, i.e. the bar tip on Duromatic bars and the area where most of the cutting is done on Rollomatic bars. The guide bar must be replaced if the minimum depth cannot be maintained

Guide bar model	Groove gauge	Minimum groove depth
3001/02/03	1.65 mm (0.065 in)	7 mm (0.28 in)
3003	1.35 mm (0.053 in)	6 mm (0.24 in)
3005	1.35 mm (0.053 in)	4 mm (0.16 in)

Checking the chain lubrication



Chain lubrication

Never work without chain lubrication. Check chain lubrication and oil level of the oil tank for proper functioning every time you start cutting.

Hold chain saw with mounted cutting attachment over a light patch of ground. If an increasing film of oil can be seen while running the saw at a moderate throttle setting, the chain lubrication is operating correctly. Take care – the saw chain must not touch the ground

Breaking in the saw chain

Let your new chain saw and every new spare chain run without cutting for approx. 2–3 minutes. Ample lubrication during this time is important. Check chain tension after break-in!

Proper chain tension

Every time the cutting operation is finished the chain must be loosened. A chain correctly tensioned at

normal operating temperature would be highly stressed at an extreme temperature drop due to material shrinkage. This could cause the chain to break and also damage the crankshaft and bearings.

Therefore the chain must be tensioned — with engine stopped — every time you start cutting. The chain has the proper tension when it has a snug fit at the bottom side of the bar in the cold condition and can be easily pulled around the bar by hand. Be careful when doing so in order not to get hurt by the sharp cutting edges.

When the chain saw is operated at extremely low outside temperatures the correctly tensioned chain will begin to sag noticeably as it warms up to normal operating temperature. The chain must then be retensioned. However, after shutting down the chain saw, the chain must be immediately slackened off again. This is necessary to avoid contraction stress which would occur as the chain cools down to ambient temperature.

A new chain must be retensioned more often than a used one as it still stretches during break-in time.

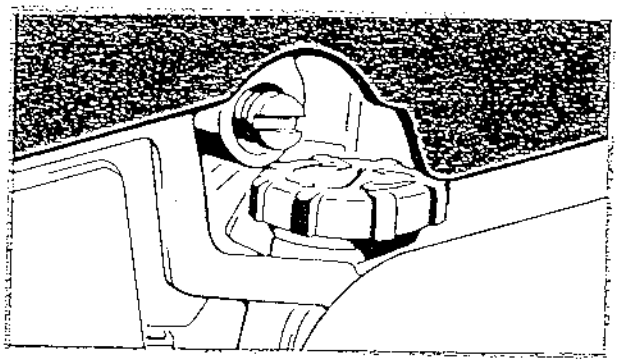
Chain sprocket

The stress and strain on the chain sprocket are particularly high. If the wear marks on the teeth are very pronounced, the sprocket should be replaced without delay. A worn sprocket decreases the service life of the saw chain.

The chain sprocket has to be replaced after wearing out two chains. The most economical way is to use two chains alternately on one chain sprocket.

Oil Quantity Control

Oil quantity control knob



The chain oil delivery of the oil pump is adjusted to the standard cutting equipment of 35 cm (14 ") bar length.

For other bar lengths it can be adjusted at the control knob to deliver the required amount of lubricant.

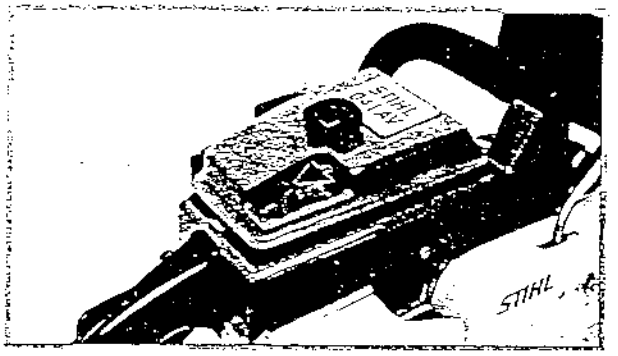
For this adjustment turn control knob at the laterally cast bosses with a screwdriver. Insert the screwdriver through the lateral recess of the handle frame in order to reach the control knob.

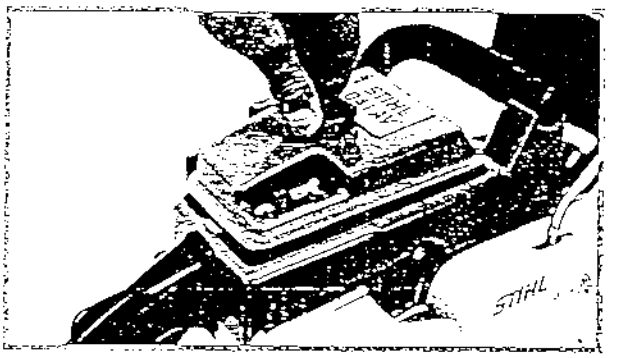
Clockwise turning (broad end of arrow) increases the oil flow, counter-clockwise (small end of arrow) decreases the flow.

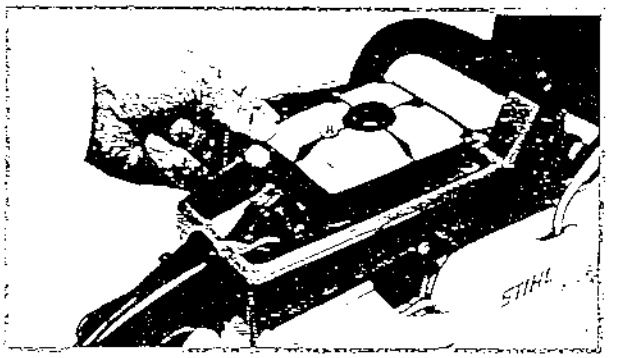
Be careful, a fraction of a turn is sufficient, in order to avoid damage to the oil pump.

Air Filter

Top: Choke valve closed – lever in "Choke" position
Center: Releasing quick-action catch
Bottom: Removing air filter







The air filter's function is to intercept dust and dirt in the combustion air and thus reduce wear on engine components.

Clogged air filters have a detrimental effect on engine performance, increase fuel consumption and make starting more difficult.

The air filter must be cleaned daily – or more frequently in very dusty operating conditions.

Clean area around filter before removing. Close choke valve – choke lever to "Choke" – to make sure that no dirt can get into the carburetor.

Filter cover and the air filter itself can be removed after releasing the quick-action catch.

For occasional cleaning it is sufficient to knock out the filter element on the palm of the hand and clean it with a soft brush. However, the air filter should be washed in clean gasoline at least once daily.

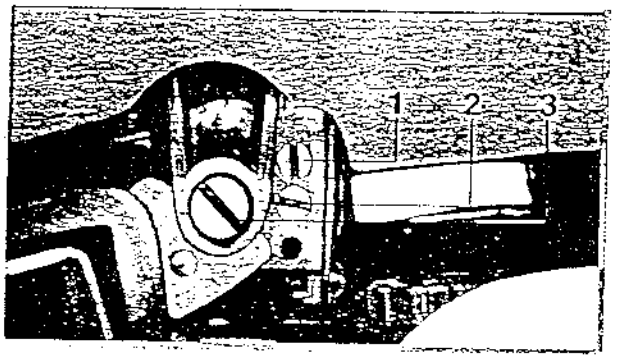
Wire brushes, cleaning rags or compressed air must not be used for cleaning as they damage the flock coating of the elements. Always renew air filters with worn coatings.

Refit air filter in reverse sequence.

It is advisable to carry a spare filter with you at all times and clean the dirty filter in the workshop

Carburetor

1 = High speed adjustment screw H
2 = Low speed adjustment screw L
3 = Idle speed adjustment screw



The carburetor needs no maintenance. It is positioned under the filter housing and the air filter protecting it against dirt, dust and moisture.

The carburetor was adjusted at the factory for maximum performance under average cutting conditions. Due to local conditions (at high altitudes or near sea level) it may be necessary to re-adjust the carburetor. This must be done at the two adjustment screws and the idle speed regulating screw.

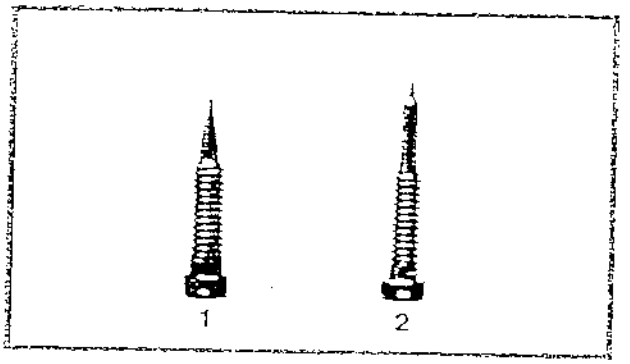
To Adjust the Carburetor

The factory setting is as follows:
Main Adjustment Screw H: 3/4 of a turn open
Idle Adjustment Screw L: 1 3/4 of a turn open
(Measured from closed position of the adjustment screws in the carburetor.)

Carefully turn the two adjustment screws clockwise until a resistance is felt!

Use this basic adjustment as a guide when adjusting your carburetor

1 = High speed adjustment screw H
2 = Low speed adjustment screw L



Be certain not to mix up the adjustment screws!

Main adjustment screw: short
Idle adjustment screw: long

Check the carburetor adjustment when engine is warm and with a clean air filter.

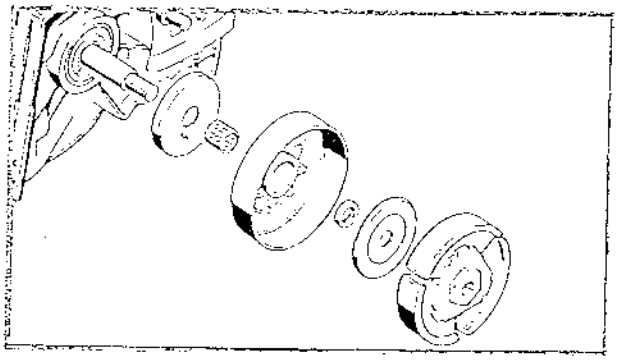
How to Correct Various Carburetor Problems

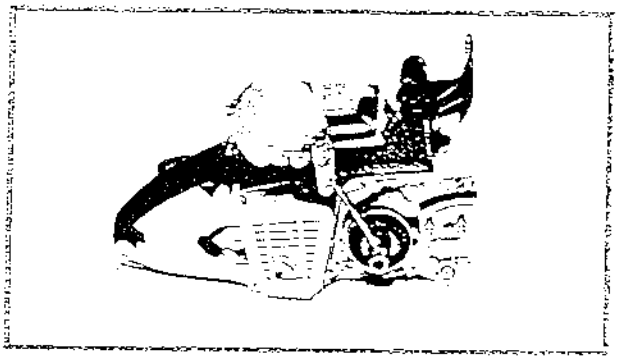
If engine stops when idling:
With engine running turn idle speed regulating screw clockwise (chain should not rotate).
If chain turns when engine is idling:
Turn idle speed regulating screw counter-clockwise.
If the speed is irregular when idling:
Slightly adjust idle adjustment screw. You get a leaner mixture by turning it clockwise and a richer mixture by turning it counter-clockwise.

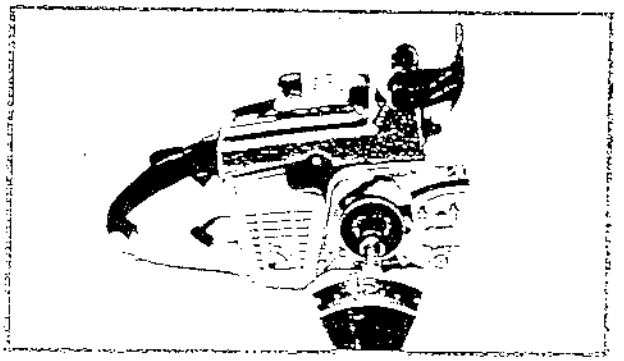
Carburetor repairs should be done by your STIHL dealer. You should take advantage of his well-trained personnel. Moreover, he will have all the necessary machines to make such repairs

Replacing the Chain Sprocket

Top: Individual parts in correct sequence
Center: Tightening the carrier with combination wrench
Bottom: Tightening the carrier with torque wrench







Machines without chain brake

First remove sprocket cover and bar and chain. Thereafter loosen and unscrew spark plug with combination wrench.

Insert locking screw into cylinder and tighten by hand. Turn crankshaft in clockwise direction until piston butts against locking screw thus locking the crankshaft. Now loosen clutch carrier with combination wrench.

Attention! Clutch carrier thread is left-hand thread-loosen in clockwise direction!

After unscrewing the clutch one can pull the guide washer, chain sprocket, spacer ring, needle cage and cover disc from the crankshaft.

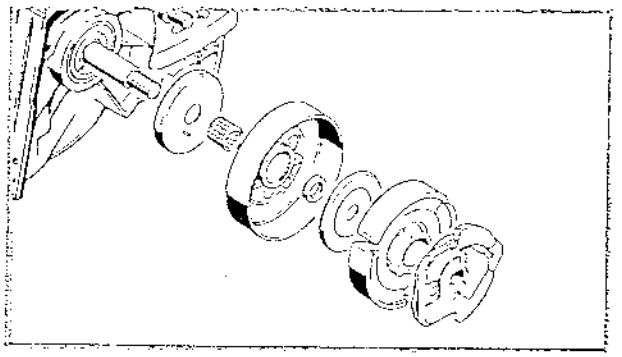
Clean crankshaft end, wash needle cage in clean gasoline and apply some ball bearing grease.

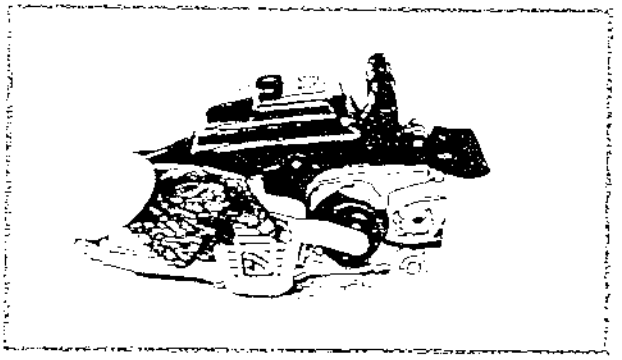
Remounting of the sprocket must be done in reverse sequence. Before mounting the cover disc check to make sure that the pressed in pin is in proper working condition. If the pin is damaged or broken then it must be replaced. Furthermore care has to be taken during assembly that on one hand the cylindrical pin engages into the boring of the worm and on the other hand the pin also extends into the boring provided in the sprocket.

Once the clutch is placed on the crankshaft tighten the carrier with a torque of 4,0 kpm (39,2 Nm). This is most practically done with a special torque wrench.

Finally remove locking screw and insert and tighten spark plug again.

Top: Individual parts in correct order (Quickstop)
Bottom: Tightening the driving disc





Machines with chain brake

The preliminary operations, including insertion of locking screw, are the same as for machines without chain brake. However, before removing the chain sprocket cover, release the chain brake (pull hand guard towards tubular handle).

Now unscrew driving disc with special wrench

Caution: The driving disc has a left-hand thread – unscrew in clockwise direction.

The centrifugal clutch spider runs on the hub of the driving disc. The whole clutch comes off the crankshaft when the driving disc is unscrewed. Thrust washer, chain sprocket, spacer washer and needle cage can then be pulled off the crankshaft.

Clean crankshaft and wash other parts in clean gasoline. Lubricate needle cage with anti-friction bearing grease.

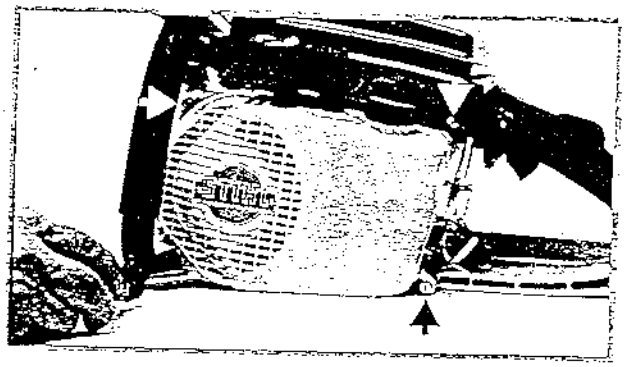
The reverse sequence is used for assembly of the new chain sprocket. Before installing the cover plate, check that press-fitted driving pin is in good condition. If it is damaged, loose or broken, fit a new cover plate. Moreover, make sure during assembly that the driving pin is located in the worm bore and the bore in the chain sprocket.

Fit centrifugal clutch on hub of driving disc so that spring recesses in flyweights face away from the disc. Once the clutch is installed on the crankshaft, tighten the driving disc securely

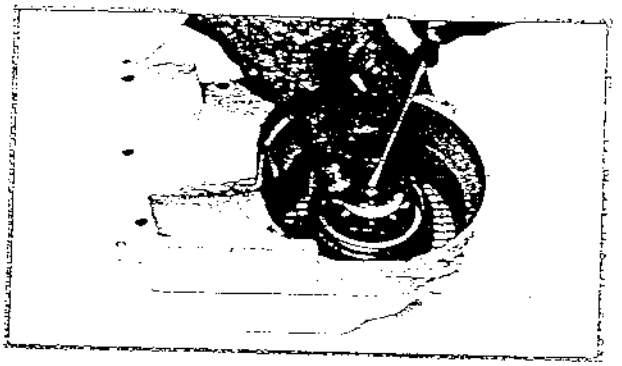
Finally, remove locking screw, insert and tighten down spark plug. When fitting chain sprocket cover make sure that actuating lever engages in recess on hand guard.

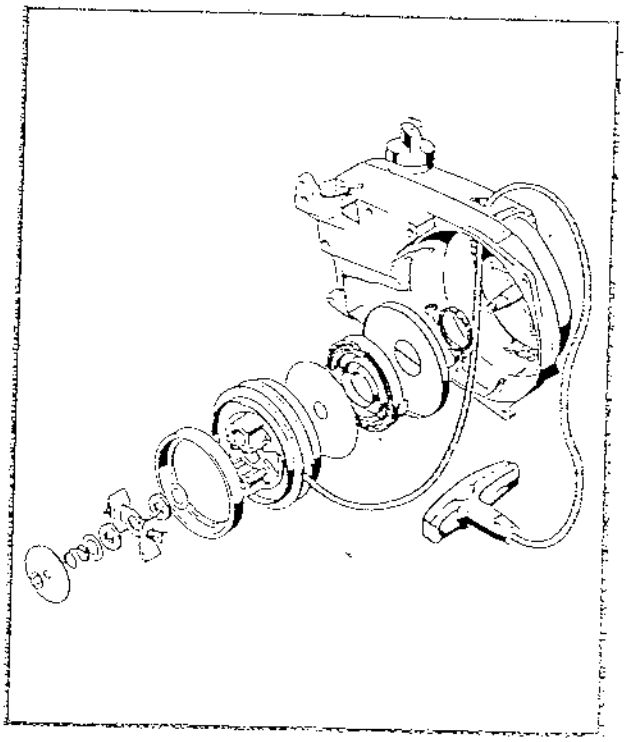
Rewind Starter

Loosening the fastening screws



Top: Prying off the lock washer
Bottom: Component parts in proper sequence





Replacing a broken starter rope

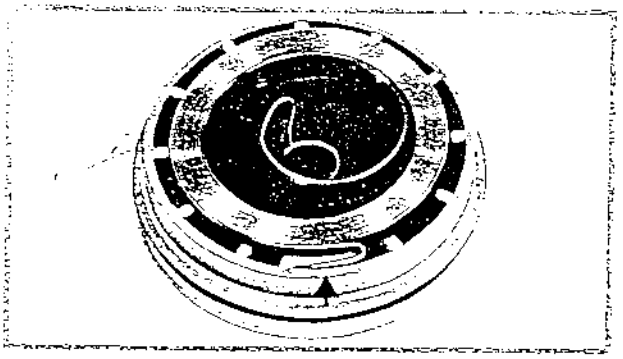
First unscrew the 4 cyl. head screws M 5 with which the fan housing is fastened. Now disconnect fuel line from elbow connector. Thereafter the complete fan housing can be removed.

Pry off the lock washer with a screw driver from the starter shaft, thereby holding on to the retainer washer to avoid that it jumps out and not to loose the friction spring which is situated underneath. The component parts of the starter device can now be dismantled one after the other.

Remove broken rope from rope pulley and insert new starter rope with 4.5 mm (0.18 in) in diameter and a length of 1000 mm (40 in) and secure it with a simple knot in the pulley. Insert the other end of the rope through the rope bushing in the fan housing and secure it in the handle grip with a double knot. The starter rope is not coiled.

Put rope pulley — with inserted recoil spring and cover — onto the oiled starter shaft. Thereby care

Inserted rewind spring



has to be taken that the inner eye of the recoil spring is hooked into the recess of the annular rib provided in the fan housing cover. Now mount the remaining component parts of the starter device in correct sequence.

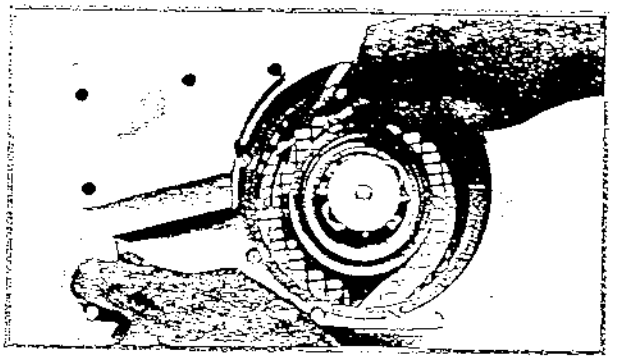
It is important that the two plastic washers (friction washers) are mounted on top and below the friction shoe system. The friction shoe system is correctly mounted if the lugs at the spring retainers are pointing in clockwise direction. Secure rope pulley with lock washer and tension recoil spring.

Replacing a broken rewind spring

The recoil spring is supplied ready for mounting, tightened with a wire, and should be applied with some drops of oil prior to assembly.

Insert recoil spring into the starter pulley in such a way that the outer spring end is guided over the cast lug at the rope pulley. Thereby the wire lock is removed from the spring. Should the spring jump out during assembly operation then it must be inserted again

Tensioning the rewind spring



into the rope pulley winding from the outside in. Press cover onto the rope pulley and mount pulley again.

Tensioning of the recoil spring.

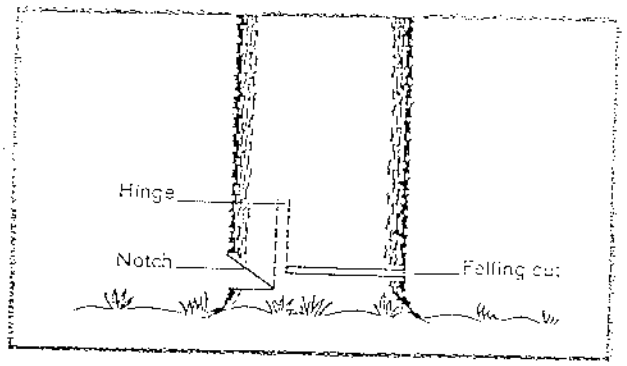
Hold the fully uncoiled rope close to the pulley. Now turn the rope pulley by means of the rope 6 turns in clockwise direction. Thereby the recoil spring is being tensioned. Hold rope pulley tightly, untwist rope and pull it out completeley.

Let go rope rotar and let rope slowly recoil itself which is done automatically by spring tension.

The recoil spring is correctly tensioned if the starter grip is firmly pulled into the rope bushing and does not tilt sideways. At fully pulled out starter rope one must still be able to turn the rope pulley at least half a turn before it reaches max. spring tension. If this is not the case pull out starter rope, hold pulley and unwind one rope winding.

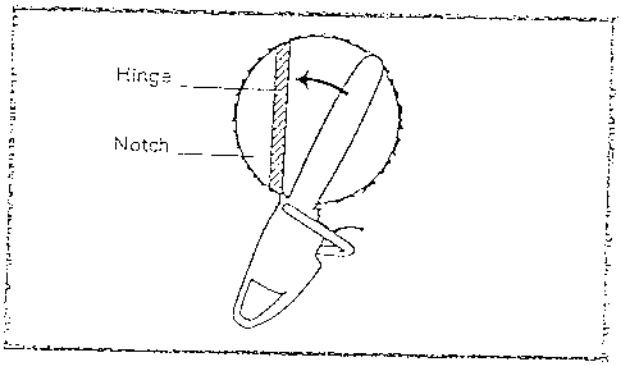
An extremely tensioned spring causes breakage!

Felling Instructions

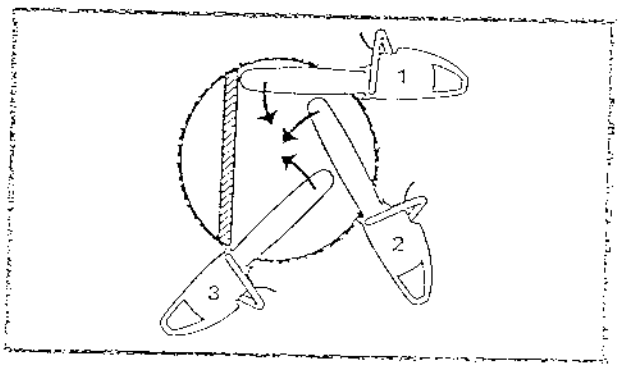


First determine direction of fall of the tree to be cut. Then remove all impeding limbs and brush and clean the butt end of log with the axe. Sand, small stones and other foreign matter will dull your chain. If necessary remove the bark from around the tree where it is to be cut. The better you clean the tree, the longer the chain life will be.

Then cut off the larger buttresses, smaller buttresses not impeding your work may be cut off later on. First cut off the largest buttress to get evenly high cutting faces



The direction of fall is controlled by the notch. Notch the tree as low as possible and at a right angle to the direction of fall. The notch should be about 1/5 of tree diameter and should never be higher than its depth Notch the tree as exactly as possible!



After having finished the notch make the so-called splint cuts at either side of the tree and at a right angle to the notch; these cuts are necessary mainly for coniferous trees to be cut in summer. These splint cuts prevent a splitting of the splint wood when the tree falls. Do not make splint cut deeper than bar width. Cut it in the same plane as the following felling cut.

Make the felling cut exactly horizontally and higher than the base of the notch. On a small tree put the bumper of the saw to the log directly behind the hinge and move the bar in an arc around this fulcrum to get a fan-like cut. Thereby, the bumper will roll on the log.

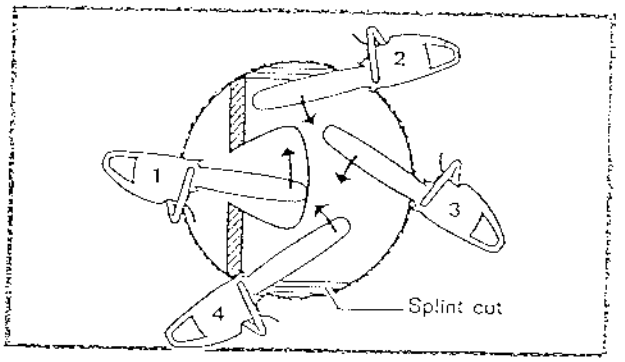
Leave an uncut section of wood of about $^1/_{10}$ of tree diameter to act as a hinge. Never cut through to notch, otherwise you don't have the direction of fall under control any longer! Drive wedges into the felling cut in due time!

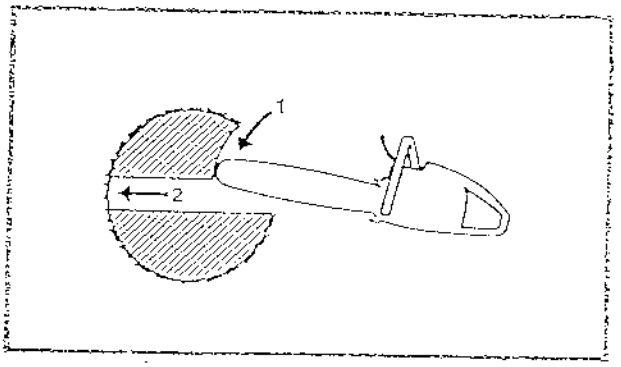
To fell trees with a diameter exceeding the bar length of the power saw you have to make a series of fan-like cuts. Start the first cut with the bar head cutting into the tree just in front of the hinge. Use the bumper to act as a fulcrum and change fulcrum as little as possible. Leave the guide bar in the cut to move the saw to the next fulcrum. Otherwise the cutting direction could be changed too easily. The final cut must be made with the guide bar engaging directly behind the hinge. Move the bar in an arc leaving an equal amount of wood as a hinge. It is very important that you always hold bar in horizontal position when cutting.

When felling very big trees it may happen that the centre of the tree is not cut through when you have finished the series of fan-like cuts. This can be avoided by boring into the centre of the notch (centre cut) before making the felling cut. Trees, where felling is critical (oak, beech) may also require a boring cut into the centre to have better control of the direction of fall.

In soft leaf wood the boring cut is sometimes made to relieve the tension in the log, otherwise splinters may be torn out of the log in the middle of the hinge.

For felling leaning trees, make notch a little deeper than usual. In this case the splint cuts must be very exact and sufficiently deep. To make the felling cut, bore into the log parallel to the hinge and cut towards





the outside and against the direction of fall. Leave a small piece of the log as a support and cut off this piece with a short cut from the outside afterwards.

The plunge cut is needed mainly for cutting into the centre of a log or for felling leaning trees. To make the plunge cut, press nose of bar into the log until guide bar is in the wood double its width. Then you can make the boring cut.

Never forget the safety rules!

General Maintenance

To increase the service life of the tool and to assure trouble-free operation few maintenance in regular intervals is necessary:

At the end of each working day clean the machine from saw dust and dirt. Also clean guide bar, saw chain and air filter. Make sure that the cutting tool is in proper operation condition.

Refill the fuel tank and store the tool in a dry place.

If you let your chain saw sit idle for a longer period you should additionally protect the engine against corrosion. While stopping the engine inject preservative oil through the carburetor.

You need not rinse the engine before starting again; just shake the fuel in the tank thoroughly. If engine does not start immediately spray some gasoline over the air filter.

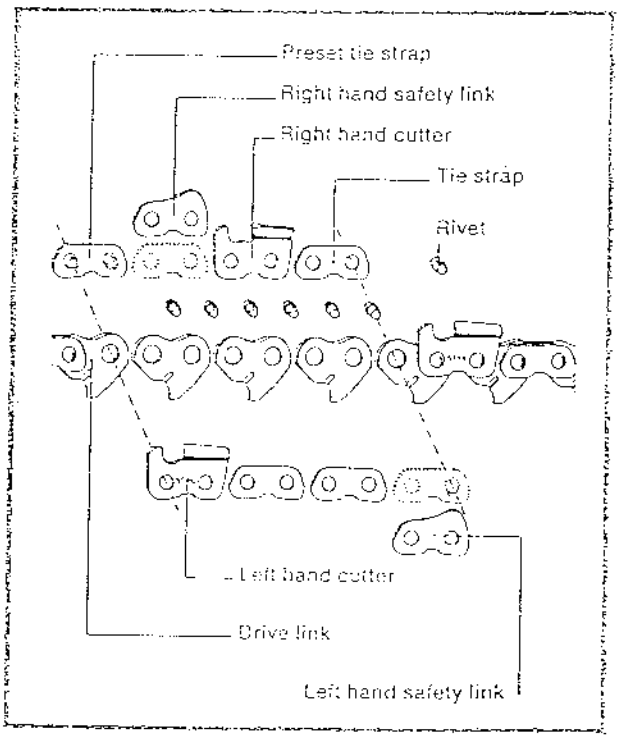
After the break-in period of about 20–30 operating hours all screws and nuts of the tool except for the carburetor screws must be checked for tight seat and must be retightened

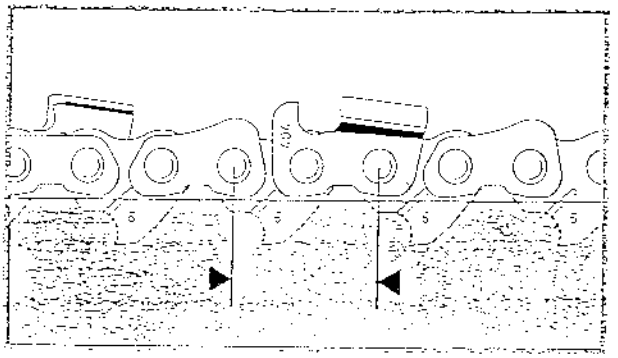
The electrode gap of the spark plug is 0,5 mm (0.2 in) and should be checked with a feeler gauge from time to time and adjusted if necessary. If electrodes of the spark plugs are badly burned replace spark plugs.

Rinse fuel tank with clean gasoline every 50 operating hours, if necessary also clean strainer of the pick-up body

Sharpening and Maintenance of Saw Chain

Top: Assembly sequence of saw chain
Bottom: Determination of pitch





Description of the chains

STIHL saw chains are 3-link chains and are always assembled according to one principle. The individual components of a chain are shown in the opposite illustration. One distinguishes between chipper chain, semi-chisel chain and full chisel chain. The STIHL designations for these chains are: **Oilomatic standard-, oilomatic micro- and oilomatic super** chain which are available in standard form or as safety chain.

An important distinguishing mark of the saw chains is the chain pitch. In order to determine the pitch one measures the distance from one rivet to the one after the next. This measurement must be divided by 2. The result is the pitch which according to international standards is generally specified in inch units (6.35 mm = 1/4").

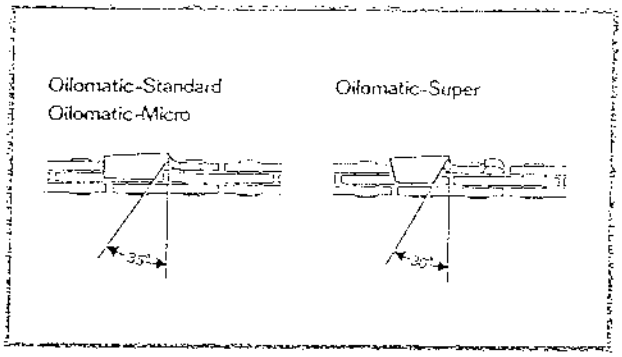
Like any other cutting tool the saw chain is subject to normal wear. A correctly sharpened chain slices the wood easily at low feeding power. Therefore never try to work with a dull or damaged chain

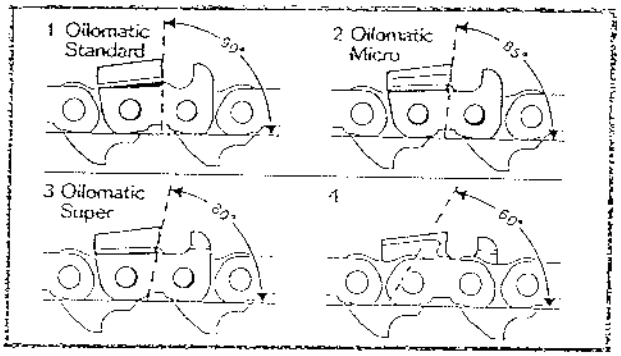
To achieve proper sharpness of the chain it is necessary to know some important measurement specifications which are described in the following paragraphs.

The sharpening angle

The oilomatic standard and oilomatic micro chains must have a sharpening angle of 35 degrees, this sharpening angle also is the factory setting. A sharpening angle of 30 degrees is recommended when cutting in hard or frozen wood. Oilomatic super chains, however, have a normal sharpening angle of 30 degrees.

Top: Sharpening angle
Center: 1–3 = side plate angle
4 = top plate cutting angle
Bottom: Specification of file diameters





Chain pitch	Files ⓘ	File no.
1/4" (6,35 mm)	3,5 mm	0811 411 8068
.325" (8,25 mm)	4,8 mm	0811 411 8088
3/8" (9,32 mm) *	5,5 mm	0811 411 8108
.404" (10,26 mm) *	5,5 mm	0811 411 8108
1/2" (12,7 mm)	6,3 mm	0811 411 8118

* If the cutter is filed half way back one must use a round file diameter 4,8 mm (0.187 in) on oilomatic standard and oilomatic micro chain

Be sure to maintain this sharpening angle on all cutters. Different angle settings will cause rough and uneven chain rotation, increase the wear and finally lead to chain breakage. When sharpening by hand file the cutting edge only from the inside to the outside.

Side plate angle

The front cutting edge of the chain cutter is called side plate edge. Therefore its angle toward the gliding surface of the cutter tooth is called side plate angle. The following side plate angles are recommended: Oilomatic standard chain 90 degrees, oilomatic micro chain 85 degrees, oilomatic super chain 80 degrees. These sharpening angles are obtained automatically if a file holder is used with the recommended chain and this file holder is used correctly when filing.

Top plate cutting angle

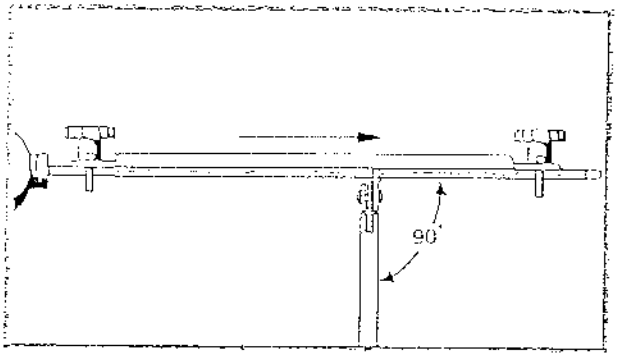
The top plate cutting angle of 60 degrees is true for all kinds of chain. When using the file holder properly or when sharpening with another STIHL sharpening tool this top plate cutting angle is obtained automatically.

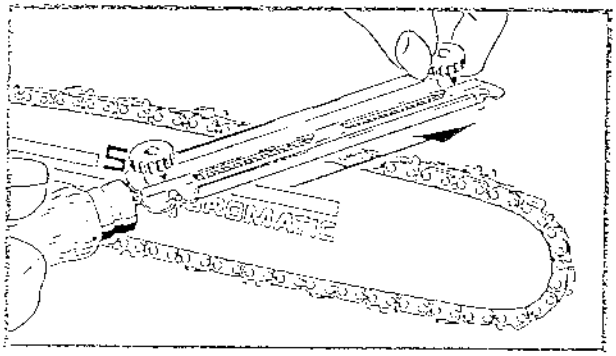
Sharpening the cutting edge

For sharpening only special chain sharpening files have to be used depending on the respective chain pitch. Regular work shop files are not suitable because of their shape and cut. The easiest way to file a saw chain correctly is to use a file holder or a filing tool.

All cutters must be of same length! Due to the in-

Top: File position on oilomatic standard chain
Bottom: Sharpening with file holder

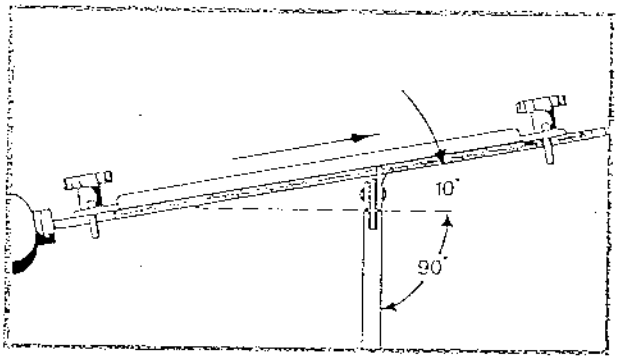




clined shape (clearance angle) of the top plate different cutter heights are the unequal result of cutter lengths. Varying cutter heights, however, cause chain chatter and finally lead to chain breakage.

Cutters must be controlled with a slide caliper as equal cutter lengths are most important. The shortest cutter which is found has to be sharpened first and is then used as reference for all the others. All cutters therefore must be filed back to this length. First sharpen all cutters of one side and then sharpen the others.

File position on oilomatic micro and oilomatic super chain



When sharpening oilomatic standard chain the file must be guided parallel to the top plate and at a 90 degree angle towards the lateral surfaces of the chain links.
When sharpening oilomatic micro chain and oilomatic super chain, however, the file and the file holder must be guided in such a way that it is held at a 10 degree angle to the top of the cutter. Consequently these chains must be filed by 10 degrees from bottom to top. A file holder must be used when sharpening oilomatic super chain by hand.

File evenly and keep in mind that the file **works only on forward stroke!** Lift file somewhat on backward stroke. Don't touch tie straps and drive links. Deburr cutting edge with a piece of hard wood.

To avoid one-sided wear it is recommended to rotate the file at regular intervals.

Important: Sharpen often and take away a minimum of material! Normally 2—3 filing strokes are sufficient.

The easiest way to sharpen the chain is with a STIHL electric chain sharpener.

Top: Table of recommended depth gauge settings
Center: Depth gauge gap
Bottom: Correcting depth gauge

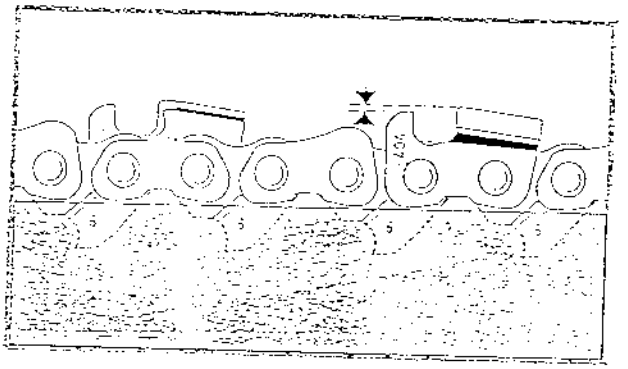
Depth gauge setting

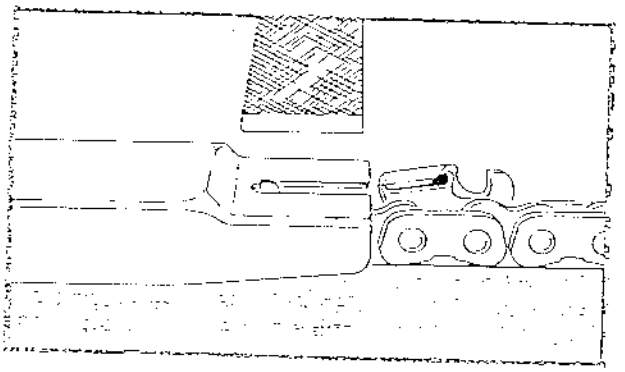
The depth gauge controls the depth of the cutter bite and therefore the size of the chip. Cutting performance and chain life therefore are also influenced by the gap between depth gauge and cutting edge. This gap differs with each chain pitch. For proper setting use the respective filing gauge.

These settings produce the best cutting results. When cutting soft wood in warm weather the depth gauge clearance can be lowered by 0,2 mm.

As the depth gauge setting is decreased when sharpening the cutter the height of the depth gauge must be checked after filing and if necessary reset. If the depth gauge overlaps the slot provided in the filing gauge then it must be lowered by means of flat or triangular file. Finally the depth gauge must be rounded off was well.

Chain pitch	Gap	Filing gauge
1/4" (6,35 mm)	0,65 mm	1110 893 4000
.325" (8,25 mm)	0,65 mm	1110 893 4000
3/8" (9,32 mm)	0,65 mm	1110 893 4000
.404" (10,26 mm)	0,8 mm	1106 893 4000
1/2" (12,7 mm)	0,8 mm	1106 893 4000
1/2" (12,7 mm)	1,2 mm	
on chain saw 090 G		1106 893 4010





General chain maintenance

The chain maintenance starts at the very moment the chain is put onto the guide bar and chain sprocket. Most important are **correct chain tension and sufficient lubrication.** See also paragraph 'Cutting Attachment'.

After sharpening of the chain clean it throughly in gasoline to remove filings and abrasive dust. Then soak chain in an oil bath. If a saw has not been used for an extended period, clean chain with a brush and soak in oil-kerosene bath. You can use the plastic chain box for this purpose.

When sharpening and cleaning the chain also watch for cracks in the chain links and for damaged rivets. Replace damaged or worn chain parts. The newly assembled chain parts must be adjusted in shape and size to the originals and must therefore be corrected accordingly

The breaking and riveting of chain is best done with the STIHL rivet spinner.

Tools for chain maintenance

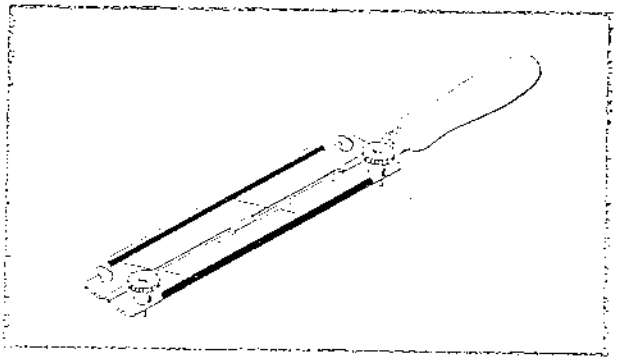
The sharpening grid which is provided with markings of the sharpening angles is fastened to the guide bar with a magnet

The file holder also provided with markings of the sharpening angles to make chain sharpening easy

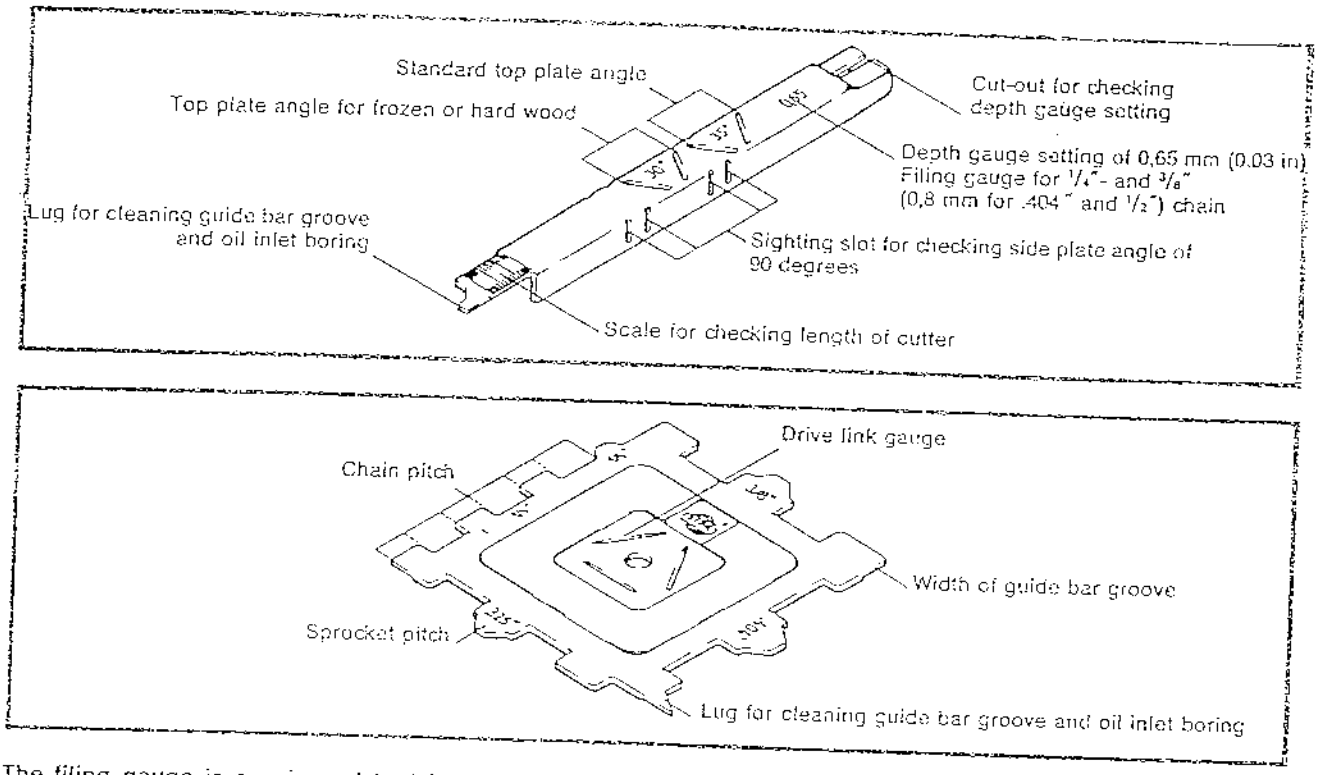
Instructions for the use of the STIHL-"Feilgenau", the STIHL HOS electric chain sharpener and USG or the STIHL rivet spinner can be found in the instruction manuals of the respective tools

Top: Table with file holder order numbers
Bottom: STIHL file holder

Chain pitch	Chain type	File holder
1/4" (6,35 mm)	Standard	5605 750 4310
1/4" (6,35 mm)	Micro	5605 750 4320
.325" (8,25 mm)	Micro	5605 750 4325
.325" (8,25 mm)	Super	5605 750 4340
3/8" (9,32 mm)	Standard	5605 750 4330
3/8" (9,32 mm)	Micro	5605 750 4330
3/8" (9,32 mm)	Super	5605 750 4335
.404" (10,26 mm)	Standard	5605 750 4330
.404" (10,26 mm)	Micro	5605 750 4330
.404" (10,26 mm)	Super	5605 750 4335



Top: STIHL filing gauge
Bottom: STIHL reference gauge



The filing gauge is a universal tool for checking the setting of top and side plate angles as well as the depth gauge clearance and the cutter length. Furthermore, it serves for cleaning of the groove and oil inlet bores of the guide bar.

The reference gauge 0000 893 4105 is used to determine the pitch of chain and chain sprocket. Furthermore, one can measure the drive link gauge of each chain, the width and depth of the bar groove and clean the groove and the oil inlet bore of the guide bar.

Spare Parts List

The following spare parts list will help you when you have to order spare parts. When you are going through this spare parts list you will find the illustrations on the left side and the corresponding text on the right side.

There are 9 different illustrations and texts which have the following headings:

A) Crankcase, Cylinder with piston
B) Oil pump, Chain sprocket, Clutch
C) Clutch (Chain brake), Chain sprocket cover
D) Ignition systems, Fanwheel
E) Fan housing cover, Rewind starter, Pick-up body
F) Filter housing, Air filter
G) Carburetor
H) Handle frame, Shroud
I) Tools, Extras

The texts for the different illustrations are listed in the following 4 columns:

In the first column on the left side you will find the index number under which the required item can be found on the illustration.

The next column contains the part number of the respective part and the third column indicates the quantity of how many times the part is needed. The fourth column shows the part name.

When ordering spare parts please mention the part number, the required quantity and the part name.

Furthermore, don't forget to mention also the model and the machine number of your power saw as well as your exact address.

For ordering spare parts fill in below the model name of your power tool, the machine number as well as the part number of your chain and guide bar.

This makes ordering of a new chain and bar easier as both parts are wearing parts. The part numbers for the standard chain and guide bar are already filled in below. In case you have, however, choosen other different executions you will find the order no. of the chain on the chain box and the guide bar number on the bar carton.

When purchasing these parts it is sufficient to just mention the model (for example the 041 AV) and the respective part number.

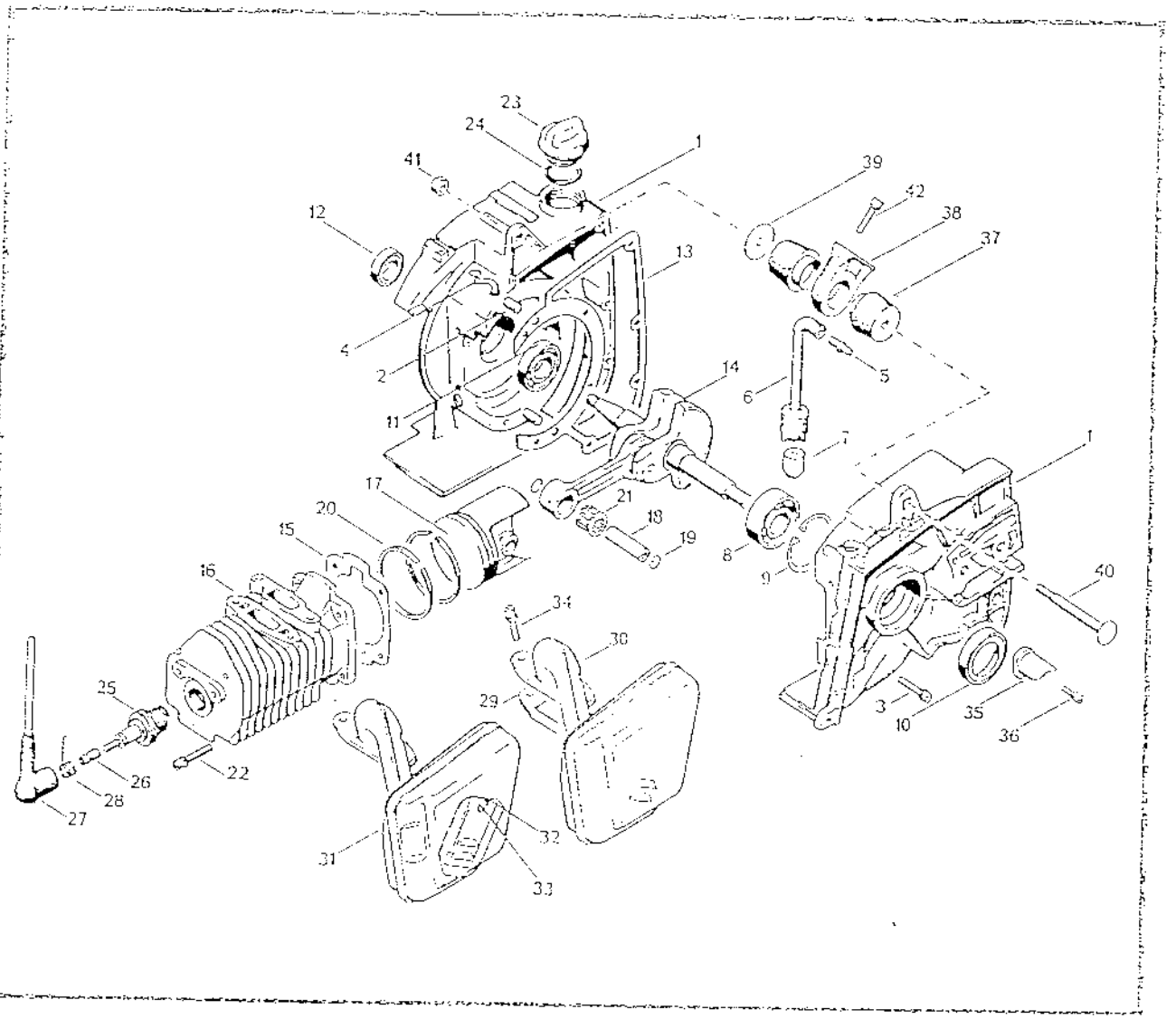
The machine number can be found at the crankcase beside the oil filler cap.

Model			
Machine number			
Chain part number			
Guide bar number			
Standard chain 40 cm (16 in)	3625	000	0060
Standard bar 40 cm (16 in)	3003	000	9213

Guarantee for repairs can only be given if the repair work is done by an authorized STIHL-Service Shop using original STIHL spare parts.

Illustration A

Crankcase, Cylinder with piston, Muffler



Text to illustration A

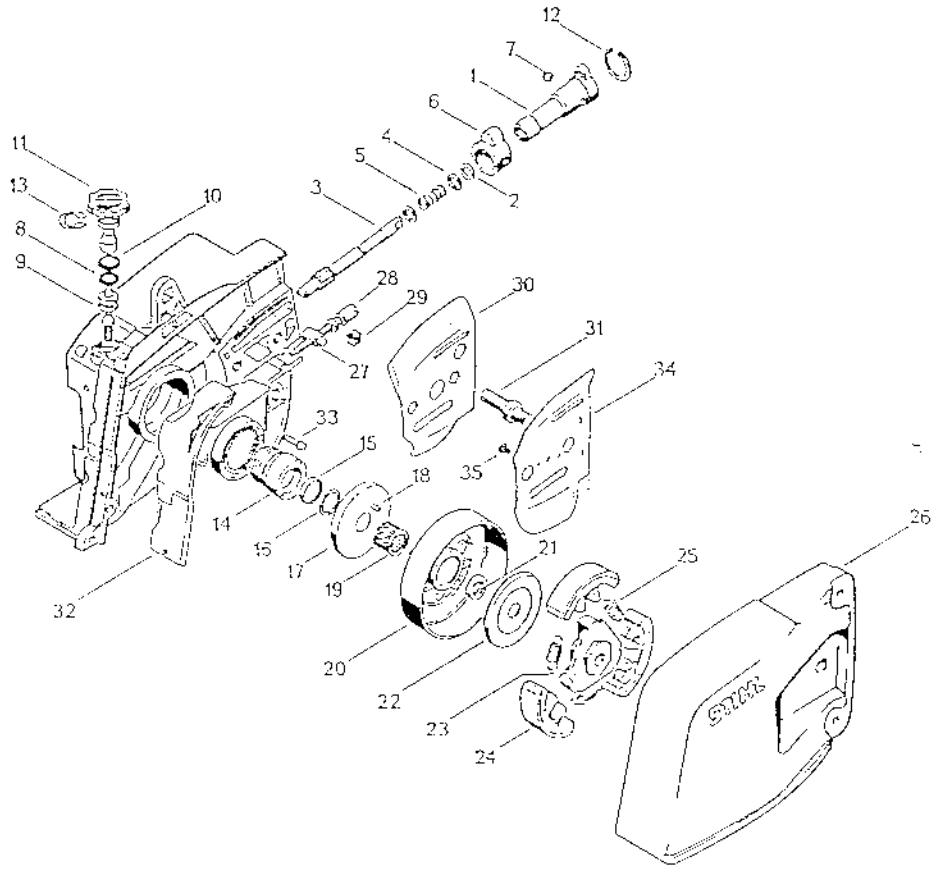
Crankcase, Cylinder with piston, Muffler

Ind.-No	Part Number	Quantity	Part Name
1	1110 020 2102	1	Crankcase including Index-No. 2 to 5
2	9371 470 3120	2	Cylindrical pin 6 m 6 × 20
3	9048 216 1010	8	Cylinder-head screw M 5 × 18 Z
4	1110 122 3900	1	Elbow nipple
5	0000 988 5202	1	Hose nipple
6	1110 647 9400	1	Hose
7	1106 640 3801	1	Pickup body
8	9503 003 0340	1	Grooved ball bearing 6202 C 3
8	9503 003 0341	1	Grooved ball bearing 6202 C 3 JH (1)
9	9456 621 3850	1	Retaining ring 35 × 1,5
10	9629 003 2850		Oil seal AD 25 × 37 × 7
11	9503 003 0310	1	Grooved ball bearing 6002 C 3
12	9640 003 1570	1	Oil seal BS 15 × 24 × 7
13	1110 029 0500	1	Gasket
14	1110 030 0400	1	Crankshaft
15	1110 029 2300	1	Cylinder gasket
15	1110 029 2301	1	Cylinder gasket (1)
16	1110 020 1210	1	Cylinder with piston
16	1110 020 1203	1	Cylinder with piston (1) including Index-No. 17 to 20
17	1110 030 2000	1	Piston B including Index-No. 18 to 20
17	1110 030 2003	1	Piston B (1) including Index-No. 18 to 20
17	1110 030 2005	1	Piston C including Index-No. 18 to 20
18	1110 034 1500	1	Piston pin 10 × 32
18	1110 034 1502	1	Piston pin 10/6 × 35 (1)
19	9462 650 1000	2	Retaining ring A 10
20	1110 034 3000	2	Piston ring
20	1110 034 3002	2	Piston ring (1)
21	9512 003 2340	1	Needle cage 10 × 14 × 13
	0000 953 0814	4	Stud (1)
	9281 021 0120	4	Washer A 5,3 (1)
	9210 260 0700	4	Hex. nut M 5 (1)
22	9036 341 1010	4	Socket-head screw M 5 × 18 Z
23	1114 640 3600	1	Oil filler cap including Index-No. 24
24	9645 945 2150	1	"O" ring 20 × 2,5
			Spark plug
25	1110 400 7005	1	Bosch WSR 6 F including Index-No. 25
25	1113 400 7000	1	Champion RCJ 6 Y
26	1106 405 6500	1	Connecting nut
27	1106 405 1000	1	Spark plug terminal
28	0000 998 0603	1	Hook-on spring
29	1110 149 0600	1	Exhaust gasket
29	1110 149 0601	1	Exhaust gasket (1)
30	1110 140 0606	1	Muffler
30	1110 140 0613	1	Muffler including Index-No. 32 and 33
31	1110 140 0614	1	Muffler with spark arrestor (1) including Index-No. 32 and 33
32	1110 141 9005	1	Screen
33	9099 021 0810	1	Screw B 4,2 × 9,5
34	9036 341 0980	2	Socket-head screw M 5 × 16 Z
35	1114 656 7700	1	Chain arrestor bolt (Extras)
36	9021 319 0670	1	Cylinder-head screw M 4 × 14 Z1
37	1110 790 9900	2	Rubber buffer
38	1110 791 5400	1	Support
39	0000 958 0502	1	Washer
40	0000 951 8210	1	Flat-head screw
41	9214 320 0700	1	Retaining nut 5
42	9048 216 1010	2	Cylinder-head screw M 5 × 18 Z

(1) only 641 AV Super electronic

Illustration B

Oil pump, Chain sprocket, Clutch



Text to illustration B

Oil pump, Chain sprocket, Clutch

Ind.-No.	Part Number	Quantity	Part Name
	1110 640 3200	1	Oil Pump consisting of Index No. 1 to 7
1	1110 640 3000	1	Pump housing
2	9646 945 0340	1	"O" ring 6×1,5
3	1110 647 0601	1	Pump piston
4	0000 956 0602	2	Washer
5	0000 997 0805	1	Helical spring
6	1110 647 9000	1	Rubber ring
7	0000 963 0501	2	Bushing
8	9646 945 0490	1	"O" ring 7×1,5
9	1110 647 4800	1	Control bolt
10	9646 945 0590	1	"O" ring 8×2
11	1110 647 4900	1	Control knob
12	9456 621 2140	1	Retaining ring 20×1
13	9460 624 0600	1	Retaining washer 8
14	1110 640 7100	1	Worm gear including Index-No. 15 and 16
15	9643 003 1160	1	Sealing
16	1110 647 9705	1	Ring
17	1110 030 7500	1	Cover plate including Index-No. 18
18	9371 651 1360	1	Cylindrical pin
19	9512 003 3000	1	Needle cage
20	1113 640 2000	1	Chain sprocket 3/8" (9,32 mm) pitch
21	0000 961 1001	1	Ring
22	1110 162 8900	1	Washer

Ind.-No	Part Number	Quantity	Part Name
	1110 160 2000	1	Clutch consisting of Index-No. 23 to 25
23	1113 162 3205	1	Clutch carrier
24	1110 160 1500	3	Clutch shoe
25	0000 997 5811	3	Clutch spring
26	1110 648 0406	1	Chain sprocket cover
27	1110 664 1500	1	Adjusting nut
28	1110 664 1600	1	Adjusting screw
29	1110 021 9000	1	Clamp
30	1113 664 1001	1	Inner guide plate
31	1110 664 2400	2	Collar screw
32	1110 656 1502	1	Plastic guard
33	9044 319 0660	1	Cylinder-head screw M 4×12 Z4/1
34	1113 664 1100	1	Outer guide plate
35	9441 065 1910	2	Notched pin 3×8

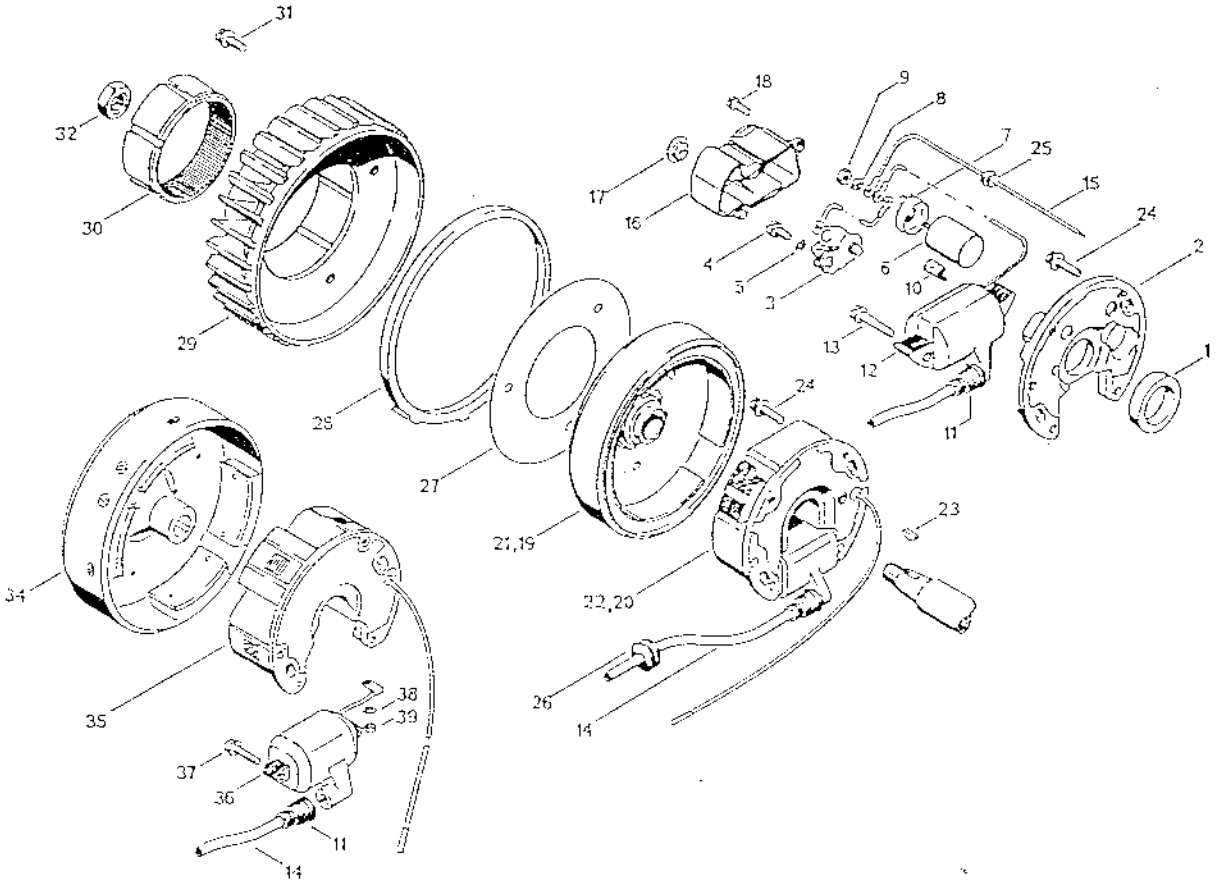
Text to illustration C

Clutch (chain brake), Chain sprocket cover

Ind. No	Part Number	Quantity	Part Name
1	0000 961 1001	1	Ring
2	1110 162 6900	1	Washer
	1113 160 2000	1	Clutch (chain brake) consisting of Index-No. 3 to 5
3	1113 160 2300	1	Clutch carrier
4	1110 160 1500	3	Clutch shoe
5	0000 997 5811	3	Clutch spring
	1113 160 3400	1	Driving disc consisting of Index-No. 6 to 10
6	1113 162 3601	1	Driving disc
7	1113 162 3901	1	Sliding shift
8	1113 160 4000	1	Locking slide including Index-No. 9 and 10
9	1113 162 7801	1	Spring
10	1113 162 1200	1	Rivet
	1110 640 1701	1	Chain sprocket cover (chain brake) consisting of Index-No. 11 to 23
11	1110 640 1700	1	Chain sprocket cover including Index-No. 12
12	0000 971 0608	1	Pin
13	1113 640 4901	1	Cover plate
14	1113 640 2801	1	Brake shoe
15	1110 640 2301	1	Cam
16	0000 997 1100	1	Helical spring
17	0000 997 0900	1	Helical spring
18	9079 319 0950	2	Screw M 5 X 10
19	1113 664 1100	1	Outer side plate
20	9441 065 1910	2	Slotted pin 3 X 8
21	1110 664 0501	1	Spiked bumper
22	9008 319 0950	2	Hex. head screw M 5 X 12
23	9214 320 0700	2	Retaining nut M 5
24	9220 260 1100	2	Hex. nut M 8
25	1110 791 3900	1	Support
26	9048 216 1010	2	Cylinder head screw M 5 X 18 Z
27	1114 792 9101	1	Hand guard
28	1113 791 8200	1	Leg spring
29	0000 951 2902	1	Lens head screw M 5 X 3,2 X 12

Illustration D

Ignition systems, Fanwheel



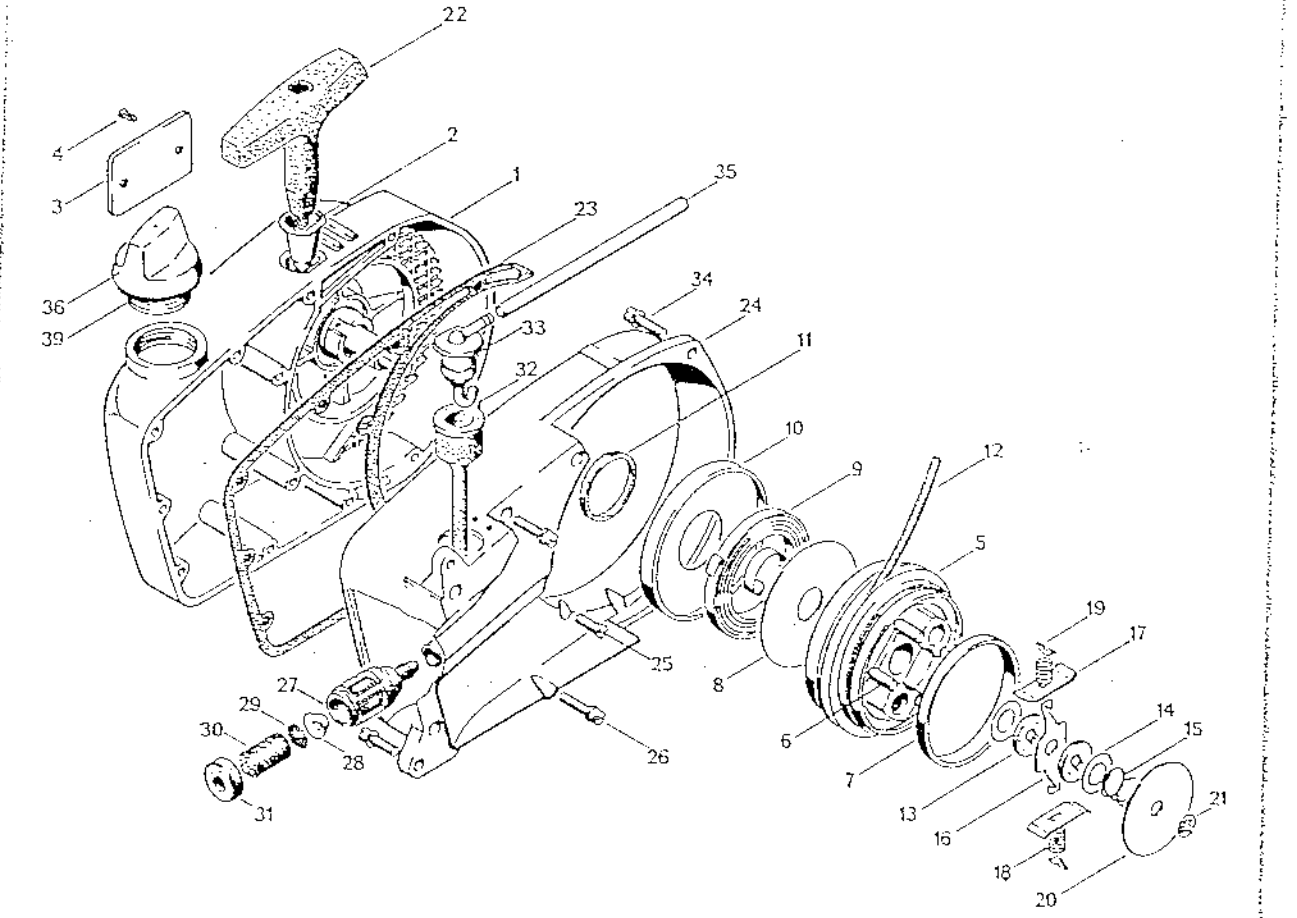
Text to illustration D

Ignition systems, Fanwheel

Ind.-No.	Part Number	Quantity	Part Name
1	0000 992 5740	1	Sealing ring (for 041 AV)
	1110 400 0511	1	Magneto 041 AV including Index-No. 2 to 19
2	1110 400 0812	1	Stator plate including Index-No. 3 to 18
3	1115 400 2000	1	Set of points
4	9041 216 0630	1	Cylinder-head screw M 4 X 8
5	9322 630 0100	1	Spring washer A 4
6	1115 404 3400	1	Condenser
7	1115 404 8800	1	Cap
8	9321 630 0080	1	Lock washer B 3
9	9210 260 0400	1	Hexagonal nut M 3
10	1110 404 4200	1	Felt wick
11	0000 989 1010	1	Grommet
12	1115 404 3200	1	Armature
13	9110 313 0700	2	Cylinder-head screw M 4 X 16
14	1110 405 0600	1	High tension lead (290 mm)
15	1110 440 1102	1	Ground lead
16	1115 400 8200	1	Dust protecting cap including Index-No. 17
17	1110 145 9001	1	Plug
18	9047 319 0340	2	Cylinder-head screw M 3 X 8 Z
19	1110 400 1205	1	Flywheel
20	1110 400 0506	1	Magneto for 041 AV electronic quickstop (Bosch) consisting of Index-No. 21 and 22
21	1110 400 1206	1	Flywheel
22	1110 400 0807	1	Armature plate
23	9482 435 0030	1	Woodruff key 2 X 3,7
24	9021 319 0670	2	Cylinder-head screw M 4 X 14 Z1
25	0000 989 0804	1	Grommet
26	0000 989 0801	2	Grommet
27	1110 089 0500	1	Gasket
28	1110 085 8902	1	Sealing ring
29	1110 080 0500	1	Fanwheel consisting of Index-No. 30
30	0000 961 5116	1	Ring
31	9048 319 0700	3	Cylinder-head screw M 4 X 16 Z4
32	9210 261 1140	1	Nut M 8 X 1
33	1110 400 0507	1	Magneto for 041 AV electronic (SEM) consisting of Index-No. 34 to 39, 11 and 14
34	1110 400 1207	1	Flywheel
35	1110 400 0808	1	Armature plate consisting of Index-No. 36 to 39, 11 and 14
36	1110 404 3210	1	Ignition coil
37	9048 319 0680	2	Cylinder-head screw M 4 X 16 Z4
38	9291 021 0080	1	Washer A 3,2
39	9210 260 0400	1	Nut M 3

Illustration E

Fan housing cover, Rewind starter, Pick-up body



Text to illustration E

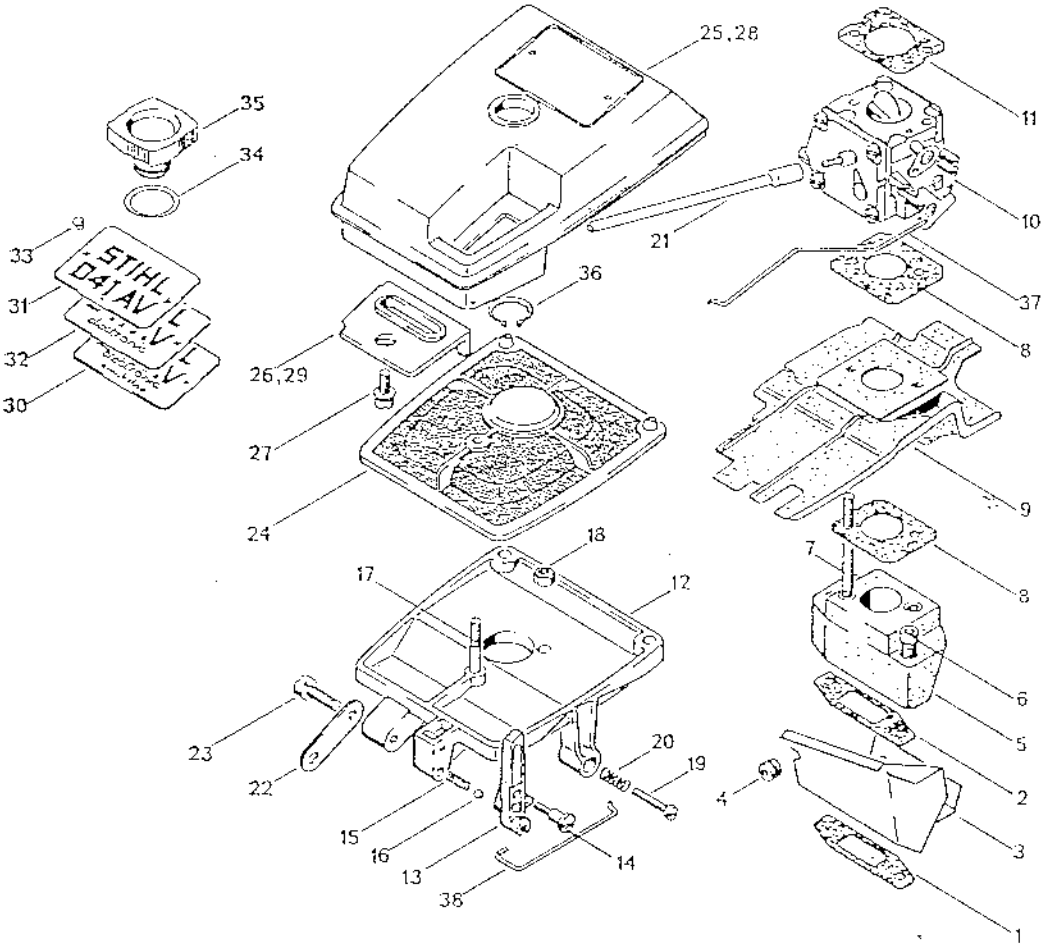
Fan housing cover, Rewind starter, Pick-up body

Ind.-No	Part Number	Quan-tity	Part Name
	1110 080 2810	1	**Fan housing cover with rewind starter** consisting of Index-No. 1 to 22
1	1110 080 2800	1	Fan housing cover including Index-No. 2 to 4
2	1110 084 9102	1	Bushing
3	0000 967 2020	1	Stihl emblem
4	9441 065 1270	2	Slotted pin 2,6×6
5	1110 190 1001	1	Rope rotor including Index-No. 6 and 7
6	1106 195 9800	4	Notched pin
7	1110 195 9301	1	Ring
8	1111 195 9005	1	Washer
9	1111 195 1600	1	Rewind spring
10	1111 195 1300	1	Cover
11	0000 968 2405	1	Felt ring
12	1107 195 8200	1	Starter rope 4,5×1000 mm
13	1106 195 9001	2	Washer
14	0000 958 1010	2	Washer
	1106 190 4600	1	Friction shoe consisting of Index-No. 15 to 19
15	1106 195 2900	1	Brake spring
16	1106 195 3000	1	Brake lever
17	1106 195 5000	2	Friction shoe plate
18	1106 195 5100	2	Friction shoe spring
19	1106 195 1700	2	Spring retainer plate
20	1106 195 3200	1	Check plate
21	9460 624 0500	1	Retaining washer 5
22	1110 195 3400	1	Starter grip
23	1110 359 0701	1	Gasket
24	1110 084 1000	1	Fan housing
25	9062 319 0660	2	Countersunk screw M 4×12
26	9048 319 0660	9	Cylinder-head screw M 4×12 Z4

Ind.-No.	Part Number	Quan-tity	Part Name
	1115 350 3501	1	**Pick-up body** consisting of Index-No. 27 to 31
27	1111 350 3500	1	Pick-up body
28	1111 358 9100	1	Insert
29	1111 358 9300	1	Strainer
30	1110 358 1800	1	Filter
31	1111 358 2500	1	Cap
32	1113 358 7700	1	Hose
33	1110 350 1200	1	Fuel outlet fitting
34	9048 216 1010	4	Cylinder-head screw M 5×18 Z
35	1110 141 8600	1	Fuel line
36	1110 350 0500	1	Fuel filler cap including Index-No. 39
39	9545 945 2820	1	"O" ring 25×2,5

Illustration F

Filter housing, Air filter



Text to illustration F

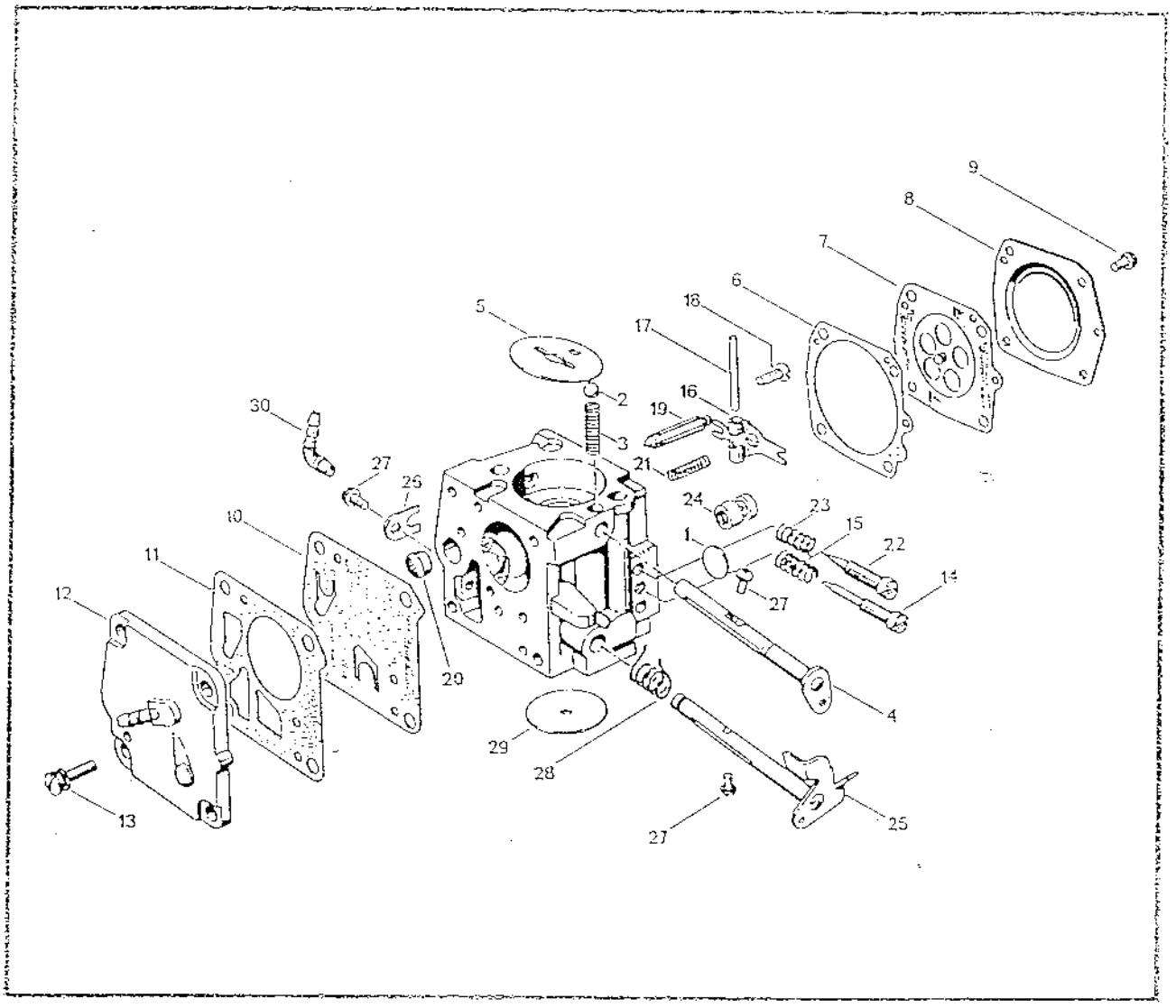
Filter housing, Air filter

Ind. No.	Part Number	Quantity	Part Name
1	1110 129 1401	1	Gasket 0.5 mm (0.02 in)
1	1110 129 1404	1	Gasket 0.6 mm (0.02 in) (1)
2	1110 129 1403	1	Gasket 1.6 mm (0.06 in)
2	1110 129 1402	1	Gasket 1.6 mm 0.06 in) (1)
3	1110 146 7401	1	Deflecting plate
3	1110 146 7402	1	Deflecting plate (1)
4	0000 989 0802	1	Grommet
5	1110 120 2201	1	Flange
5	1110 120 2202	1	Flange (1)
6	9036 341 1070	2	Socket-head screw M 5×30 Z1
7	9123 319 0890	2	Stud M 5×58
8	1111 129 1100	2	Gasket
9	1110 141 3000	1	Insulating plate
10	1110 120 0609	1	Carburetor HS 138 A
11	1110 149 1200	1	Gasket
12	1110 140 2815	1	Filter housing including Index-No. 12 to 15
13	1111 185 3000	1	Choke lever
14	0000 951 2500	1	Lens-head screw
15	0000 997 0326	1	Helical spring
16	9515 003 1720	1	Ball 4 mm III
17	9121 347 1080	1	Stud M 5×35
18	9215 261 0700	2	Retaining nut 5
19	1110 122 6201	1	Idle speed regulating screw
20	0000 997 0626	1	Helical spring
21	1113 141 8601	1	Impulse hose
22	1110 148 4000	1	Strap
23	9043 216 1010	1	Cylinder-head screw M 5×18 Z
24	1110 120 1601	1	Air filter
26	1110 141 1101	1	Insert (2)
25	1110 140 1002	1	Filter cover (2) including Index-No. 26 and 27
27	9044 319 0660	1	Cylinder-head screw M 4×12 Z4
28	1110 140 1003	1	Filter cover (1) including Index-No. 27 and 29
29	1110 141 1103	1	Insert (1)
			Model plate
30	0000 967 1551	1	041 AV electronic quickstop
31	0000 967 1549	1	041 AV
32	0000 967 1550	1	041 AV electronic
	0000 967 1571	1	041 AV Super electronic *
	0000 967 1586	1	041 AV quickstop *
33	0000 974 1000	2	Pin 3×6
34	0000 958 1705	1	Washer
35	1110 140 9500	1	Nut
36	9455 621 1670	1	Retaining ring 16×1
37	1110 182 1504	1	Throttle rod
38	1110 185 1904	1	Choke rod

(1) only 041 AV Super
(2) only 041 AV
* not illustrated

Illustration G

Carburetor



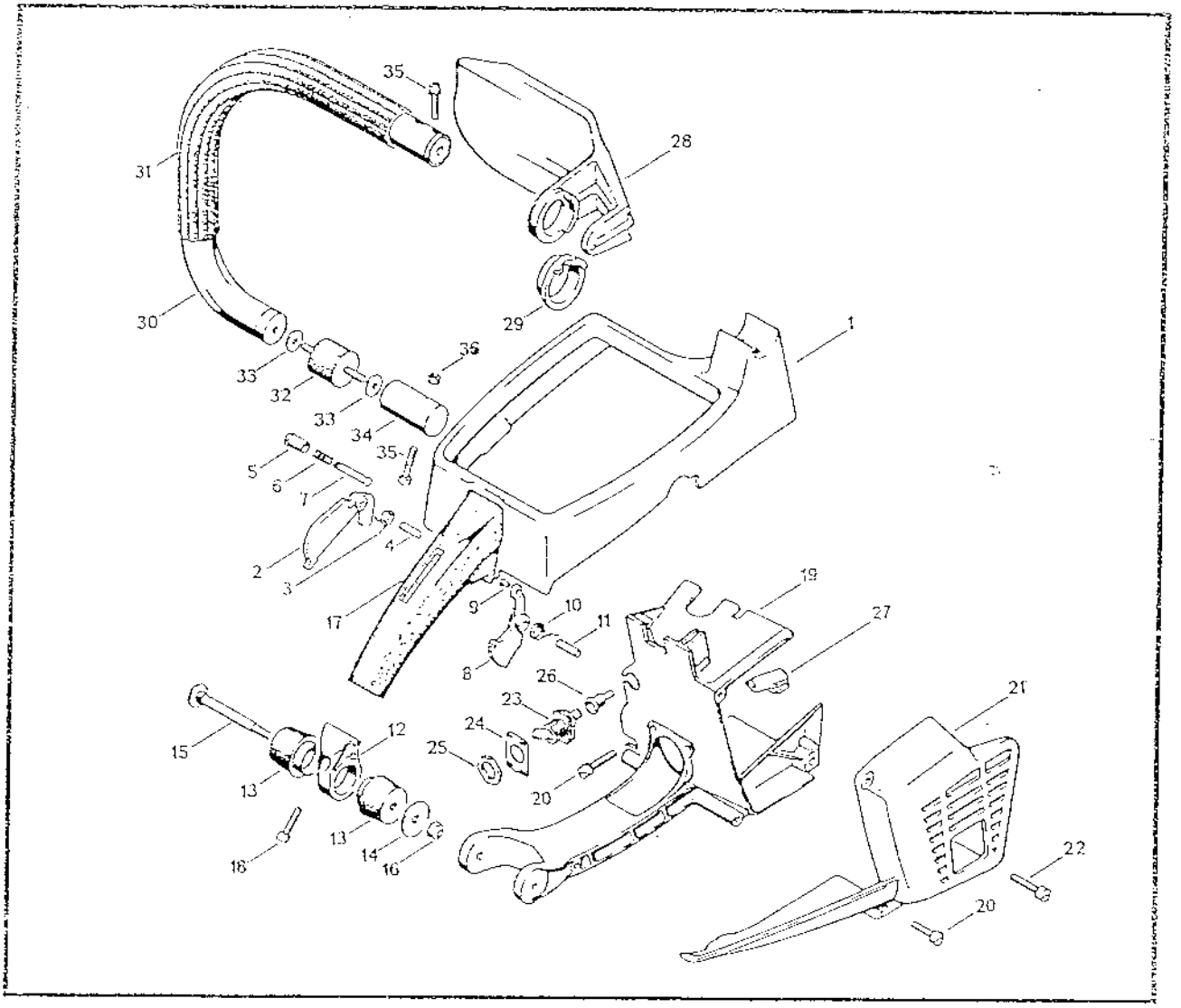
Text to illustration G

Carburetor

Ind.-No.	Part Number	Quantity	Part Name
	1110 120 0609	1	**Tillotson carburetor HS 138 A** including Index-No. 1 to 30
1	1110 122 9410	1	Body channel cup plug
2	1110 122 4200	1	Ball
3	1110 122 3000	1	Spring
4	1111 120 7200	1	Choke shaft with lever
5	1115 121 2900	1	Choke shutter
6	1110 129 0900	1	Gasket
7	1110 121 4700	1	Metering diaphragm
8	1110 121 0811	1	Cover
9	1106 122 7400	4	Retaining screw
10	1110 121 4801	1	Fuel pump diaphragm
11	1110 129 1110	1	Gasket
12	1110 121 0815	1	Cover
13	1110 122 7700	4	Lens-head screw
14	1110 122 6800	1	Idle adjustment screw
15	1110 122 3030	1	Spring
16	1110 121 5000	1	Inlet control lever
17	1110 121 9200	1	Axle
18	1110 122 7800	1	Lens-head screw
19	1110 121 5100	1	Inlet needle
20	1110 121 7810	1	Strainer
21	1110 122 3020	1	Spring
22	1111 122 6700	1	Main adjustment screw
23	1106 122 3000	1	Spring
24	1111 121 5400	1	Valve jet
25	1111 120 7100	1	Throttle shaft with lever
26	1110 122 9300	1	Clip
27	1110 122 7400	3	Button-head screw
28	1110 122 3200	1	Spring
29	1115 121 3300	1	Elbow fitting
30	1110 122 3900	1	Throttle shutter

Illustration H

Handle frame, Shroud



Text to illustration H

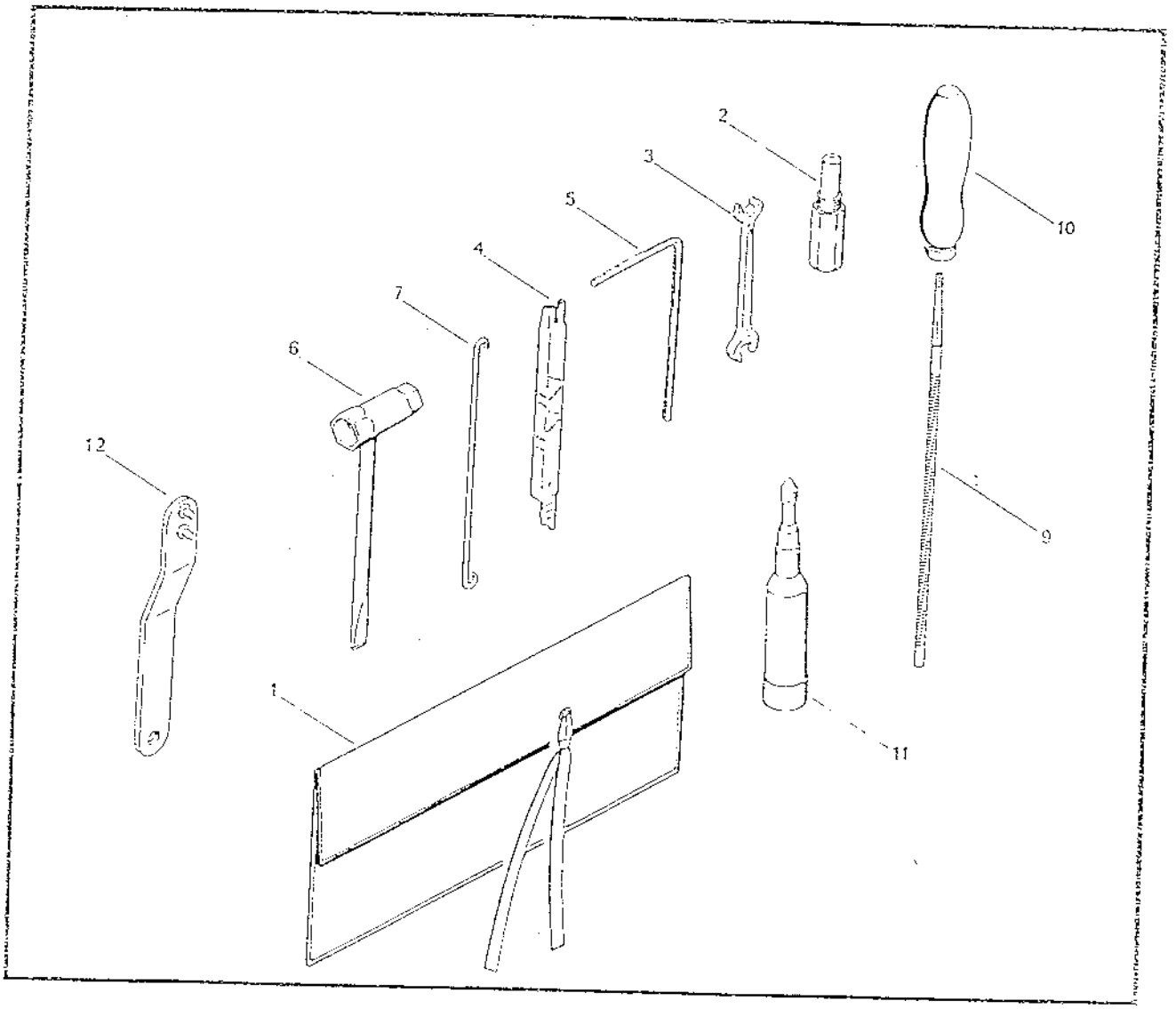
Handle frame, Shroud

Ind.-No.	Part Number	Quan-tity	Part Name
1	1110 791 4901	1	**Handle frame**
1	1110 791 4902	1	Handle frame (Japan)
2	1110 182 0800	1	Lever
3	0000 998 1001	1	Leg spring
4	9373 470 2120	1	Cylindrical pin 4 h 11 × 18
5	1111 182 9300	1	Half throttle lock button
6	0000 997 0603	1	Helical spring
7	1114 182 8900	1	Bolt
8	1110 180 1501	1	Throttle trigger including Index-No. 9
9	9415 415 2240	1	Hollow rivet 3 × 0,3 × 5
10	0000 998 1105	1	Hook-on spring
11	9373 542 2510	1	Cylindrical pin 5 h 11 × 18
12	1110 791 7610	1	Support
13	1110 790 9900	2	Rubber buffer
14	0000 958 0502	1	Washer
15	0000 951 8210	1	Flat-head screw M 5
16	9214 320 0700	1	Retaining nut M 5
17	1110 791 2201	1	Handle hose
18	9048 216 1010	3	Cylinder-head screw M 5 × 18 Z
19	1110 080 1610	1	**Shroud**
20	9048 216 1010	7	Cylinder-head screw M 5 × 18 Z
21	1110 146 6005	1	Guard
22	9048 216 1050	1	Cylinder-head screw M 5 × 25 Z4
23	1110 430 0202	1	Ignition stop switch
24	0000 967 3506	1	Plate
25	9211 260 1430	1	Hexagonal nut M 12 × 0,75
26	1110 432 9200	1	Grommet
27	0000 989 0502	1	Clamp
28	1111 792 9100	1	Guard
29	1110 792 2200	1	Insert
30	1110 790 1716	1	Handle bar including Index-No. 31
31	1110 791 2001	1	Handle bar hose
32	1110 790 9600	1	Rubber bearing
33	9466 648 0620	3	Cup spring
34	1110 791 5410	1	Support
35	9036 341 1020	3	Socket-head screw M 5 × 50 Z1
36	9214 320 0700	1	Retaining nut M 5
37	1110 790 3611	1	Wrap around handle bar * including Index-No. 38 and 39
38	1110 791 2002	1	Handle hose *
39	1110 791 2003	1	Handle hose *
40	1110 790 9600	1	Annular buffer *
41	1110 791 5405	1	Clamp *
42	9466 648 0620	3	Spring washer *

* not illustrated

Illustration 1

Tools, Extras



Text to illustration 1

Tools, Extras

Ind. No.	Part Number	Quantity	Part Name
	1110 890 1410		Set of tools consisting of Index-No. 1 to 7
1	0000 891 0800	1	Tool kit
2	1107 191 1201	1	Crankshaft locking screw
3	0811 012 1152	1	Wrench 8 X 10
4	1110 893 4000	1	Filing gauge
5	0811 270 1080	1	Screwdriver 4 X 70 X 130
6	1110 890 3401	1	Combination wrench
7	1110 893 8800	1	Hook
	1110 890 1411		Set of tools (Quickstop) consisting of Index-No. 1 to 7 and 12
12	1113 890 3600	1	Wrench
			Extras
9	0811 411 8108	1	Round file 5,6 X 203
10	0811 490 7860	1	File handle A 100
11	1108 890 2500	1	Grease gun
	1110 900 5011	1	STIHL Repair Kit 041, 041 AV *
	1110 007 1050	1	Set of gaskets 041, 041 AV *
	3003 000 9213	1	Standard bar 40 cm (16 in) *
	3625 000 0060	1	Standard chain 40 cm (16 in) *
	0000 792 9104	1	Chain guard *

* not illustrated

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