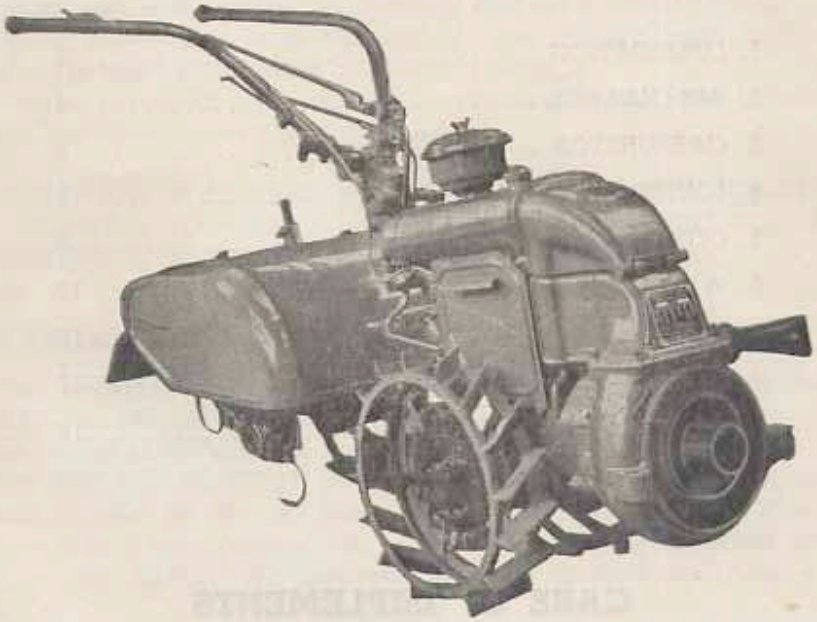
INSTRUCTION MANUAL

FOR THE

ORIGINAL SWISS ROTARY TILLER

SIMAR

Type 35 — 5 H. P.



UNITED STATES OF AMERICA DISTRIBUTOR

E. C. GEIGER CO.

NORTH WALES, PENNA.

Manufactured by SIMAR CO. Acacias, GENEVA, Switzerland

READ YOUR MANUAL

By reading your manual carefully before using your new Rotary Tiller, you will spare yourself costly experiences.

You will know how to keep your new machine in good condition for many years at lower costs.

You will do better work.

You will have greater satisfaction from it.

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CARE OF IMPLEMENTS

To protect the IMPLEMENTS against corrosion during the winter season, apply a coat of any well-known Rust Preventive on all shares and other bright steel parts, immediately after work is completed.

Never Put Your Hands or Feet Near the Springs and Tines When the Engine Is Running!

1. LUBRICATION

The ENGINE is **lubricated** only by the oil which is mixed with the gasoline.

Follow carefully the instructions given on the Gas Tank.

Mix 1 quart of first quality oil SAE No. 50 or 60 **with 4 gallons** "regular" gasoline.

Use a clean 5 gallon container and mix oil and gasoline well before pouring into tank. Shake can vigorously every time.

Do not vary this proportion of oil and gasoline, which is 1 part of oil for 16 parts of gasoline.

During the first 20 hours of work (break in period) use gasoline containing 1/3 more oil than mentioned above.

In other words, put 1 quart and the third of another quart of oil into the 5 gallon container before mixing with 4 gallons gasoline, during the first 20 hours of work. (This is approximately the equivalent of the use of 15 gallons of gasoline with 1/3 more oil than usual.)

By running your engine only a few minutes with gasoline containing not enough oil, you will damage the bearings and get a scored piston.

By running your engine with too much oil, you will get heavy carbon deposits on the spark plug, piston and exhaust ports.

By using a cheap or low grade of oil your engine will need a complete overhauling after a short period of time.

THE SIMAR CO. WILL TAKE NO RESPONSIBILITY FOR ACCIDENTS OR UNUSUAL WEAR TO PARTS DUE TO POOR OR INEFFICIENT OILAGE BY INOBSERVANCE OF THE ABOVE INSTRUCTIONS.

THE TRANSMISSION

The transmission should be filled with **oil of first quality No. 140 Gear Oil, SAE No. 140** (in very cold weather SAE No. 90 may be used).

On the receipt of the machine, and each time before working it:

CHECK THE OIL CONTENT OF THE TRANSMISSION, by pulling out the **dipstick** located on the left-hand side of the transmission. When the machine is in a level position the oil should normally reach **the pointed** mark on the dipstick rod and **must never** be allowed to fall below that mark.

To fill the transmission, remove the Filling Plug painted RED situated on the lower handle support, on the right-hand side.

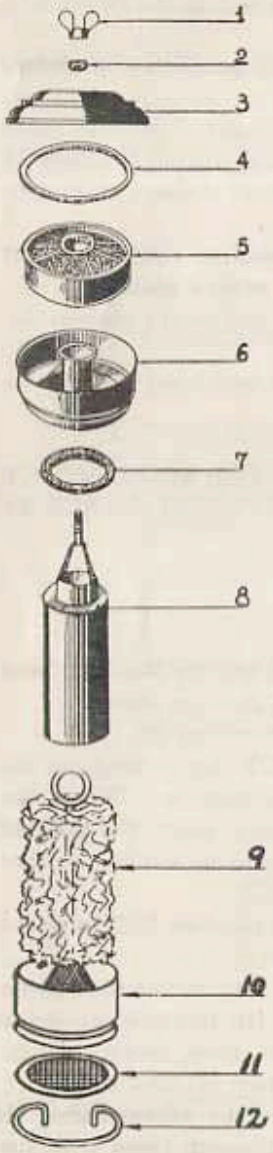
Occasionally drain the transmission by means of the hexagon headed drain plug, situated underneath the transmission casing. Do this just after the machine has been working, when the oil will drain more freely. Drain thoroughly, flush with flush oil and refill with **fresh** gear oil SAE No. 140.

Further LUBRICATION is required on the **ratchets** of the **wheel hubs.** If those ratchets get tight from not being kept clean, unloosen them with the

help of **penetrating** oil and recoil them. All moving parts, levers, etc., need a few drops of oil from time to time.
GREASE THE NIPPLES OF THE WHEEL HUBS and **steering swivel** with the **Grease Gun** (in tool bag) every **TEN** hours of operation.

2. AIR CLEANER (Fig. 1)

IT IS IMPORTANT TO GIVE THE AIR CLEANER SYSTEM VERY CLOSE ATTENTION.



(FIG. 1)

In the two cycle engine the air, after being mixed with gasoline and oil goes directly into the crankcase. If the air **carries some dust,** this dust will form **a grinding compound,** which will wear the ball and roller bearings, also the wrist pin, cylinder and piston.

(See fig. 1)

The Felt Ring No. 7 should always stay in good order so that no air can be admitted otherwise than through the oil filter.

Underneath the oil bath No. 6 is an **oil soaked excelsior air cleaner** (9). This excelsior should be checked frequently, if **the top portion becomes** dirty the entire amount of **excelsior should be renewed with fresh oil soaked excelsior** and the OIL BATH AIR CLEANER SERVICED as described below:

The element No. 5 should be rinsed in Kerosene and excess shaken off.

The reservoir No. 6 should be cleaned with Kerosene and wiped dry, then **fresh OIL SAE No. 50** added to the line marked with an arrow.

Under normal operating condition this cleaner should be serviced at least every 40 hours of operation.

When working the machine **under severe dust conditions, the air cleaner should be taken apart and serviced every 10 hours of operation.**

In the event the **Excelsior becomes dry,** it should be renewed as described above.

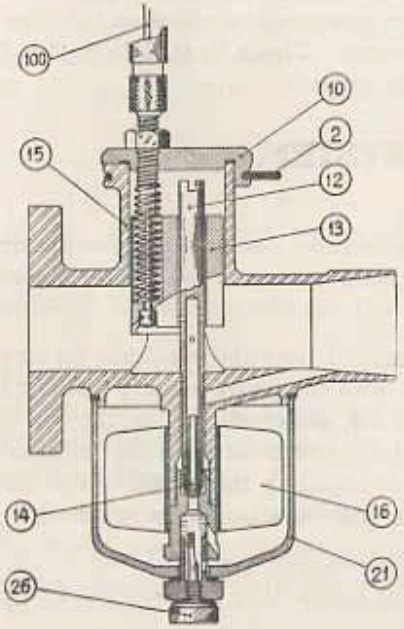
3. CARBURETOR

(fig. 2) (The following descriptive numbers are all in fig. 2)
The EXAIR carburetor is specially made for the Simar engine by Simar and is very simple. It has a center jet and is the float feed type.
Throttle (13) adjustment is regulated by the hand operated cable (100).
Idling can be adjusted with the screw (below cable (100),) on carburetor cover (10). Be sure to loosen locknut before adjusting and tighten same after adjustment is made.

To remove the jet (14) remove locking spring (2), pull up the carburetor cover (10) with the cable (100) and the throttle valve (13).
With help of the locking spring (2) or with a small screw driver, unscrew the **jet tube** (12).

To unscrew the jet (14) from the jet tube, access to this is through the opening which is cast in the float cup (21).

These operations are very well illustrated on the parts list of Carburetor EXAIR B 23.



(FIG. 2)

Never use a **metal point** to clean the jet.
To drain the carburetor float cup, open screw (26).

Never Put Your Hands or Feet Near the Springs and Tines When the Engine Is Running!

To flood carburetor, push on the **tickler** to the float.

If this is done too many times and **if the engine does not start,** it is probable that **the engine is flooded** with too much gasoline.

If this happens, open **the drain cock** situated underneath the crankcase, drain the carburetor float cup [opening screw (26)], and turn the starting pulley two or three times by hand. Then close the drain cock.

Never run the engine with the drain cock open.

The crankcase drain cock is closed when the slot is in a horizontal position (—).

To take off the carburetor float cup (21), loosen both nuts of the carburetor flange, on the inlet manifold, push back the complete carburetor and turn it towards you.

FUEL FILTER

To prevent any impurity in the fuel from being admitted to the carburetor, **a fuel filter is provided,** situated immediately **below the Gas Tank Shut off Valve.** The sieve of this filter should be cleaned periodically, its choking having the same consequence of starving and overheating the engine as is the case when using too small a carburetor jet.

To clean the fuel filter, unscrew the union on the pipe leading from the shut off valve to the carburetor. **Check Vent Hole in Gas Tank Cap**. If you cannot blow through hole, open it.

4. IGNITION SYSTEM

MAGNETO

The Magneto is specially designed for the Simar rotary tillers.

The timing of the magneto is exactly set during the engine test on the dynamometer stand.

If this magneto is removed from the machine for any reason, it is very important to set it back with the gears exactly in their previous position.

Two similar numbers are punched: one on the fan fly wheel, the other on the fan case (under the arrow indicating the rotation of the engine). When these two numbers are together, **the points** in the magneto should just start to break. The engine will then be properly timed.

The space between the magneto points should be 12/1000 of an inch.

The space between the spark plug points should be 20/1000 of an inch.

SPARK PLUG

The machines are usually delivered with a normal spark plug recommended for two cycle engines, **Champion C 7.**

If after a certain period it is noticeable that the spark plug is **damaged by heat** (porcelain destroyed, engine running by self ignition) replace the old one with a new **"colder" spark plug,** by example a **Champion 7.**

If on the contrary the spark plug carbonizes too quickly (dirty black porcelain, poor spark) put a new **"hotter" spark plug** in, by example a **Champion C 15.**

IF ENGINE RUNS TOO HOT, Check the Following:

a. The exhaust ports for carbon deposit, by removing the exhaust manifold. Clean ports if necessary. If very dirty, remove the cylinder, clean the engine thoroughly.

b. If cylinder cooling ribs are filled up with dirt coming from the fan. Clean same.

c. If fuel filter or carburetor jet is dirty, then the mixture of gasoline is too lean for the engine, making it run hot.

d. If additional air comes into the engine from outside sources other than the air filter. (mixture would be lean).

e. If jet is too small. (mixture would be lean).

f. If timing is too late. (Engine would run too hot).

g. If there is not enough oil in the transmission, the gears will get tight by running too hot, and over load the engine.

SEE ALSO REMEDY SERVICE CHART — Pages 14-16.

5. CONTROLS

TO PREVENT ACCIDENTS, FAMILIARIZE YOURSELF WITH ALL THE CONTROLS.

By LIFTING the red painted lever, you engage the gears **for the wheel drive.**

TO STOP the machine, close the throttle lever and **push down the RED lever.** Then open the throttle again to idle the engine.

By LIFTING the GREEN painted lever, situated on the right side of the handle bars, **you engage the miller.**

Do this operation only when the machine is moving forward.

It is strongly recommended to engage the miller only when the rear of the machine is maintained off the ground and to bring the miller in contact with the ground **progressively,** while opening the throttle.

Never engage the forward or miller gears with a racing engine.

By PUSHING down the green painted lever you disengage the miller.

Always disengage the miller before turning at the end of a row.

IT IS EXTREMELY DANGEROUS TO MANEUVER THE MACHINE AT THE END OF A ROW WITHOUT **HAVING PUSHED DOWN THE GREEN LEVER TO DISENGAGE THE MILLER.**

POSITION OF HANDLES

In working position of the machine, the operator should have his arms straight along his body.

To set the handles at the required height, RELEASE on each handle bar the two bolts which tighten the handle unions.

To set the handles at the required width, RELEASE on each handle bar union the bolt of the ratchet fitting.

SIDEWISE STEERING POSITIONS:

A new Simar patented development to give the operator better ease of handling the machine, and very great accurate maneuverability when walking in the opposite rows.

By LIFTING the lever in the center of the handles, you can set the handle bars in the following positions:

Position No. 1:

35° right or left, to walk beside the tilled area, behind the miller, on the right or the left of the machine.

Position No. 2:

You can set the handle bars at a 90° angle to the machine to walk in the opposite row, left or right of the machine, but at the side of the miller. In order to use this position at 90° to the machine, the handles have to be set correctly as follows:

(a) Set the handles in the position at 90° to the machine (right or left).

(b) Loosen the tightening bolts and the ratchet bolt of the handle situated forward only. Set the handle bars at the required height for the operator and as nearly a 90° angle as possible in relation to the machine. Tighten the three bolts.

(c) Turn the handle bars around the machine in the opposite locked position No. 2, and then set the other handle bars as described under (b).

You now have each handle bar correctly set, so that the one which is forward will always be at 90° to the machine and at the required height, the left side position as well as the right side position.

THIS IS THE POSITION FOR BETTER EASE OF HANDLING THE MACHINE WHEN WALKING IN THE OPPOSITE ROW.

The foregoing recommendations are for shallow cultivation and not recommended for deep tillage.

DEPTH CONTROL OF MILLER (Fig. 3)

To regulate the depth of the tillage, of the rotary tiller, and to avoid the machine slipping forward, the bar at bottom front end of the miller transmission box has to be used. This bar is called the Depth Bar (see fig. 3) and can be set at different distances from the miller gear box by setting the Depth Setting Pin in the corresponding hole of the Depth Bar.

To remove the Depth Setting Pin, first twist it back and then slip it out.

Shallow tillage is obtained by lowering the depth bar away from the miller gear box.

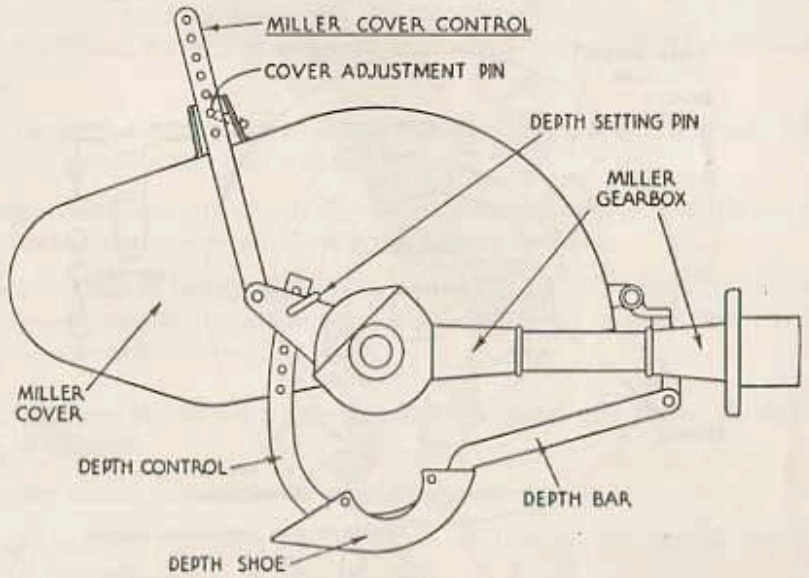
Deep tillage is obtained by pulling the depth bar against the gear box.

If the depth bar is not correctly regulated, two different kinds of trouble may develop.

If the machine jumps forward, the depth shoe **is too close** to the miller gear box, and does not "brake" enough.

If the machine slips on the ground, and does not go forward, the depth shoe is **too deep,** too far from the miller gear box and "brakes" too much.

In each of these situations, it is sufficient to correct the position of the depth shoe **from one to two holes** in the depth bar to avoid these inconveniences.

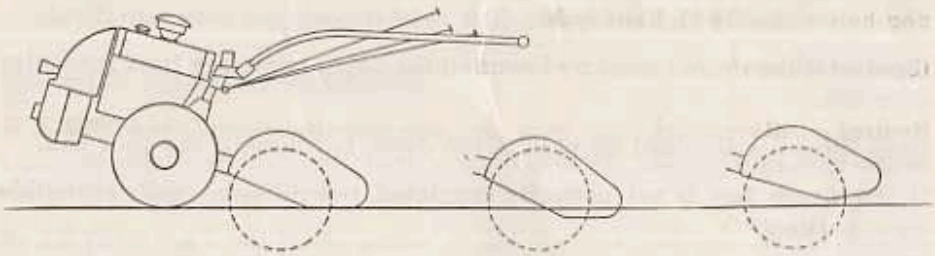


(FIG. 3)

Never Put Your Hands or Feet Near the Springs and Tines When the Engine Is Running!

MILLER COVER ADJUSTMENT (Fig. 4)

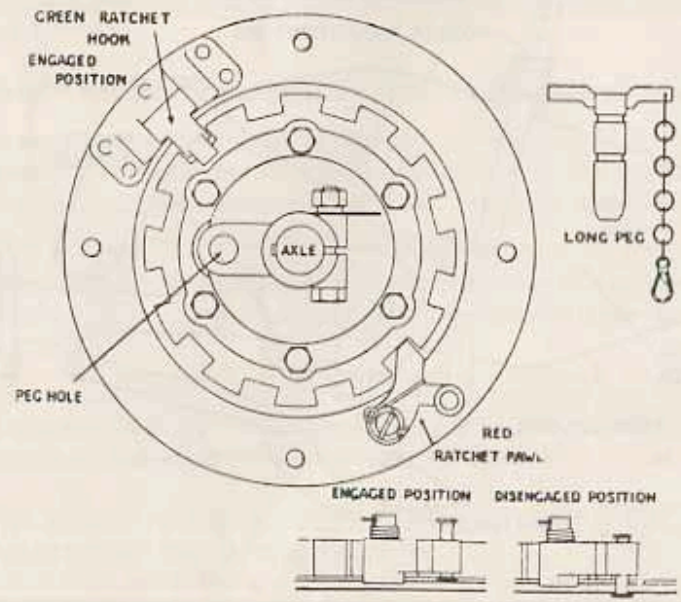
Protruding above the miller cover is a perforated bar (see fig. 3) on which the miller cover is held secure by means of a twisted pin. The miller cover can be so adjusted that its sides **are level with the ground,** thus preventing projection of soil sideways. (see fig. 4).



(Correct Position) (FIG. 4) (Incorrect Positions)

6. WHEELDRIVE (Fig. 5)

The wheels are mounted on hubs of special design enabling them to be connected with the wheelshaft in different ways and also to connect the wheelshaft in bottom or top speed or to disconnect it entirely. (see fig. 5).



(FIG. 5)

Top speed:

The top speed is engaged when **the LONG PEG is fully inserted** in the peg hole of **the RIGHT hand hub.**
(Speed for light surface cultivation or road transportation.)

Low speed:

The low speed is engaged when **the LONG PEG is fully inserted** in the peg hole of **the LEFT hand hub.**

(Speed for heavy and normal deep tillage.)

Neutral position: Can be obtained **by half way insertion of the LONG PEG** in one or the other hub.

NOTE: The SHORT PEG must always be inserted in the peg hole left empty by the long peg, thus **to prevent dust entering into the wheelshaft.**

WHEEL DRIVE COMBINATIONS:

Located in the wheel hub is a GREEN RATCHET HOOK and a RED RATCHET PAWL.

When the Green Hook is engaged in the square part of the hub that particular wheel is in **positive drive** with the transmission.
When the Green Hook is disengaged that wheel is **in ratchet for differential action.**

When both the Green Hook and Red Ratchet Pawl are disengaged, the entire wheel **is in neutral** and will not drive.

For normal tilling both wheels should be engaged in positive (Green Hook down), otherwise the machine will not handle properly.

For light tilling or cultivating one wheel could be in positive drive (Green Hook down), and the other in ratchet (Green Hook up and Red Pawl engaged), for ease of turning.

NEVER engage the Miller in the ground if at least one Green Hook is not engaged (down).

The miller would then fling the machine forward.

For good and easy handling of the Ratchets, they should be greased every 10 hours of operation.

If they get tight they can be loosened with penetrating oil.
Grease nipples are on each wheel hub. They have to be greased every 10 hours of operation with the Grease Gun.

7. STARTING AND WORKING

STARTING

a. Fill tank with gasoline, mixed with oil as indicated on the gas tank Instruction plate.
b. Check that the gears and miller are disengaged by PUSHING down the RED lever and the GREEN lever.
c. Open the fuel valve.
d. Flood the carburetor.
e. Adjust throttle control about 1/3 of the way open.
f. Insert the end of strap in the starting pulley and wrap several coils **clockwise.**
g. Put left foot on engine case and pull strap vigorously in a straight line with pulley.
h. When engine has started, regulate idling. Secure strap on handle bar.

TO STOP THE ENGINE

a. Close throttle, and do not forget to shut the fuel valve.

WORKING

Engage one or the other speed. (Hard and normal work, Long Peg in the peg hole of the LEFT hand wheel hub.)
Engage the hubs as described under "Wheel Drive Combinations", page 9. (Both Green Hooks down for heavy and normal work.)
Adjust the height of Handle Bars.
Adjust the Depth Bar. (See "Depth Control of Miller", page 8.)
Adjust the miller cover. (See fig. 4)
Start engine.

TO START WORKING

Speed the engine slightly, **first lift the RED lever** to engage forward speed.

It is not necessary and not desirable to "slam" in any of these levers. They are so made, that they will engage with a normal movement.

Only after the forward speed is engaged, engage miller by lifting the GREEN lever, accelerate the engine and **progressively** bring the miller in contact with the ground.

Move the steering handles sideways to avoid walking on the tilled soil. The operations as described herewith should be done one after the other without interruption or hesitation. After a while they will **become quite natural.**

TO STOP THE MACHINE

Reduce the engine speed, then push down FIRST the RED clutch lever, then the GREEN lever.

TO TURN AT THE END OF A ROW

Throttle down engine, **disengage the miller** by pushing down the Green lever.

Lift the rear of the machine off the ground, walk the machine around briskly pivoting on its own wheelbase.

Put more weight on one arm of the handle bars to free the wheel on the outside of the turn.

Turning will be easier if you bring the handles back in the center position.

To turn with help of the differential action of the Red Ratchet Pawl: Before the turn, stop the machine in order to lift the Green Hook of the wheel you want inside of the turn, if it is not already done. (By example for light tillage or cultivating.) Then turn the machine as described above.

IT IS EXTREMELY DANGEROUS TO MANEUVER THE MACHINE AT THE END OF A ROW **WITHOUT HAVING PUSHED DOWN** THE GREEN LEVER TO DISENGAGE THE MILLER.

TO GUIDE THE MACHINE

The operator should look ahead at some fixed object in order to keep in a straight line.

WHEN WORKING ACROSS A SLOPE

Always begin at the top and have the handles in working position on the low side of the slope.

WORKING ON UNEVEN GROUND

Where the machine is to be used on land recently ploughed, it is important to work across the furrow instead of following the same direction as the plough. This makes the machine easier to control and also breaks up any "pan" created by the action of the plough.

Never Put Your Hands or Feet Near the Springs and Tines When the Engine Is Running!

TURNING OF CROP — FARMYARD MANURE

CLEANING WEEDS FROM SOIL

The standard equipment of the machine **is No. 1 tines** which are for general purpose work. For special kind of work, mixing manure, turning crops, or cleaning of the land, **the miller may get clogged.** To avoid this inconvenience special **"Knife" Tines** are recommended. They are available through your dealer.

ROAD TRAVEL

When running the machine on roadway under its own power, avoid opening the throttle too wide, as this will only result in excessive vibration and ruin your engine.

DON'T - - -

DON'T overload during early life of engine,. **keep on light work for the first 20 hours.** Watch your engine, don't race it, don't let it become too hot, don't let it ping by overloading at low engine speed.
Stop it at least ten minutes each working hour. The good care you will give it during the first 20 hours will give your engine a much longer life.

DON'T run the engine on fuel not mixed with the correct proportion of oil. For the first 20 hours of work, mix 1 quart and a 1/3 of a quart of oil, SAE 60, with 4 gallons of "regular" gasoline.

DON'T start working without having checked the cleanliness of the excelsior in the air filter (by lifting the oil bath), and check the oil level in the transmission by pulling out the dipstick located on the left-hand side of the machine.

DON'T race the engine without a load. It is particularly harmful to do this when the engine is cold.

DON'T put the machine to work immediately after starting engine; let it warm up first.

DON'T engage or disengage the gears when engine is racing or when miller is in contact with the ground.

DON'T in any event work the machine with the crankcase drain cock open. (Drain cock is shut when the slot is horizontal). (—).

DON'T let anybody come near the machine when at work.

DON'T **ever put your hands near the tines when engine is running!**

TO INCREASE THE LIFE OF SPRINGS AND TINES

The most important recommendation is **to avoid letting the miller into the ground suddenly** with the engine racing and the miller engaged. You must **bring the miller progressively** in contact with the ground while opening the throttle, until it is working at the required depth.
Do not attempt to work the machine too deeply in top gear; this gear is intended for surface tilling.
Always engage the low speed for deep tillage or hard soil condition.
When operating the machine, the operator should **set the handle bars** so that his arms are fully extended downwards and not bent at the elbow. In this way **he is able to react more readily** to the shock of meeting any obstruction hidden in the soil. (Big stones by example.)

TO AVOID BAD ACCIDENTS **NEVER** LET THE MILLER RUNNING WHEN NOT WORKING THE SOIL.

Always declutch the miller before turning the machine at the end of a row.

8. REMEDY SERVICE CHART—For Difficult Starting and Unsatisfactory Running.

Symptom — Flooded engine (Excess oil mixture in crankcase).
Remedy — Open the drain cock situated underneath the crankcase. Turn the starting pulley by hand or with the strap, until oil mixture is drained from crankcase.

Symptom — Spark plug defective or dirty.
Remedy — If defective, replace it. If dirty, clean thoroughly with gasoline and a coarse brush, or with a spark plug cleaning machine.
Adjust points to correct gap by using a gauge. (.020").

Symptom — Continual dirty plug, black and greasy procelain, needs cleaning often.
Remedy — Your plug is probably the type that is too "cold". Replace your plug with a "hotter" one. By example if you are using a Champion 7 use a Champion C-7.

Symptom — Worn out plug, porcelain clear pale light brown, partially broken or bubbled. Pre-ignition, the engine still runs after disconnecting the spark plug wire.
Remedy — Your plug is probably the type that is too 'hot". Replace your plug with a colder one. By example switch from a Champion C-7 to a Champion 7.
Remove carbon from exhaust ports, piston head, and cylinder head. Check the quality of oil you are using in the mixture of gasoline-oil.

Symptom — The spark plug is good, clean and not wet. The engine is not flooded, but you still have no spark. (To see if there is any spark, you put the spark plug in contact with a part of the cylinder or hood, with the connection wire on, turn the starting pulley, watching and listening for a spark at the plug points.)

Remedy—You may have: Faulty high tension lead. Dirty, worn out or displaced magneto points. If you are used to checking a magneto, check the points. If not let a qualified worker do the repair. If points are good, connection wire, etc., but there is still no spark, let a qualified repair shop or your SIMAR dealer check the magneto.

Symptom — The spark is good, the engine still does not start: You have too much gas or not enough. TOO MUCH: The engine is continually flooded. Spark plug "wet", each time you open the drain cock, a lot of gas and oil comes out.

Remedy—"Dry" the engine by opening the crankcase drain cock, and if necessary remove spark plug. Turn pulley. Close the drain cock and replace spark plug. Try to start.

Symptom — The engine is flooded again.

Remedy — The carburetor float may not close the gas inlet. (Gas leaks from carburetor). Or the central jet is unscrewed. Or the jet is too big. Or the air choke may be closed or clogged. Or the excelsior is packed too tight. Or the air filter system may be clogged.

Symptom — NOT ENOUGH GASOLINE; the engine started for a few revolutions, then stops.

Remedy — Check vent hole in gas tank cap. If you cannot blow air through hole, open it. Verify the contents of the tank! If full, unscrew the union of the gas line on the carburetor. If gasoline does not come, the trouble is somewhere between tank and carburetor. Fuel filter in tank valve union is clogged. Pipe is clogged or damaged.

Symptom — If gasoline comes normally at the end of the fuel line, the trouble is in the carburetor.

Remedy — Carburetor float system clogged. Or jet is dirty. Clean it, but never with a metal point. Because you will wear out seat and enlarge hole. Check the connections between carburetor and cylinder for the possibility of an air inlet leak.

Symptom — The engine spits and possibly stops (In its break-in period):

Remedy — The piston might tighten. Allow the engine to cool, inject lubrication oil in cylinder by the spark plug hole. Try to ease the piston. If unsuccessful, send the machine to your SIMAR dealer.
Probable Cause: Insufficient oil or oil of an inferior quality, or overloading of engine in the first working hours. Or mixture too lean. (See explanations under "Not enough gasoline").

Symptom — The engine sluggishly misfires, probably mixture too rich.

Remedy — See explanations under "Too much gasoline".

Symptom — Heavy blue smoke (Excess of oil in fuel).

Remedy — Too much oil mixed with gas. Check the inscription on gas tank for the right proportions. Shake the machine to stir up contents of the fuel tank. Or the air inlet may be obstructed in the air cleaner. The excelsior is packed too tightly or excessively soaked with oil.

Symptom — The engine knocks. Pre-ignition.

Remedy — Remove carbon from cylinder, exhaust ports, piston. Check spark timing as explained under "MAGNETO", page 6. Also check spark plug as explained under "SPARK PLUG", page 6.

Symptom — Play in crankshaft bearings, indicated by abnormally loose flywheel shaft.

Remedy — Send engine unit to your SIMAR dealer. Probable cause: Very old engine, or neglect of air cleaner, insufficient lubrication, or bad quality oil, resulting in engine wear.

Symptom — Lack of compression.

Remedy — Piston rings stuck: Clean engine. Or drain cock open (I). Close it (—). Or leakage from cylinder or crankcase gaskets; check gaskets, tighten nuts. Or too much play between piston and cylinder. See your SIMAR dealer.

Symptom — Engine running too hot.

Remedy — See "Engine running too hot, page 7.

The carbon should be removed from the engine **at least two to three times a year.** This is done by lifting the cylinder head and scraping the walls of the combustion chamber, and cleaning the exhaust ports and the top of the piston.

IN NORMAL CONDITIONS THE EXHAUST GAS MUST BE SLIGHTLY BLUE TO INDICATE GOOD LUBRICATION.

9. RECOMMENDATIONS FOR THE USE OF SIMAR ROTARY TILLERS

The threads used throughout the machines are METRIC. Do not attempt to fit other types of nuts, screws or studs.

When work is completed and the machine is put away for a time, it should be thoroughly cleaned and examined, and any parts subject to rust should be coated with grease; also tighten any nuts, screws, bolts, etc., which may have become loose as a result of vibration. This simple operation **of cleaning the machine frequently draws attention to small defects which, when neglected, might result in accident or damage when using the machine later on.**

It is a good plan **always to keep on hand a reserve** supply of the working tools, such as the **miller springs and tines;** and avoid delays during critical periods, when it is essential to get ground prepared quickly.

To have insufficient LUBRICATION, to use a BAD quality oil, or to NEGLECT the recommendations for keeping a clean air filter, will have the immediate result of quickly wearing out the engine or the transmission. As soon as any wear starts at any place in the engine, coming from poor lubrication, this wear will develop very quickly and the machine will become useless.

We insist on the foregoing recommendations in order that your machine stays in good working condition and **gives you good satisfaction.**

A lot of different work can successfully be done with your machine. It is up to you to know **how to adapt your machine to the ground** which you work it in.

IMPORTANT RECOMMENDATIONS

(1) For any information refer to your SIMAR dealer or distributor.

(2) Explain clearly what you want explained.

(3) Give clearly your exact address, to get an answer with the least delay.

(4) Remember that the LEFT and RIGHT of the machine are YOUR left and YOUR right in working position, at the handle bars.

(5) IF YOU ORDER PARTS—Write clearly and **indicate the exact number of the part** according to the **parts list of YOUR machine,** with **the TYPE of your machine** and its **serial number** indicated on the plate which is on the front of the machine.

REMEMBER

If Spring and Tine Breakage is Excessive . . . or

If the Regular Hook Tine (No. 1) becomes clogged or Tangled — Remedy this Condition by Using the Knife Tine Available Through Your Dealer.

Also . . . To avoid Excessive Tool Breakage **Never Force Your Machine Into Hard Ground.** Let It Dig Gradually.

— GUARANTEE —

All SIMAR Rotary Tillers are guaranteed for ONE YEAR from the date of purchase. However, the responsibility of the Company is limited to the replacement of the parts found to be defective. The defective part remains the property of the Company. The Company accepts no responsibility for any loss or damage which might happen directly or indirectly by cause of the defective material. This guarantee does not cover normal wear or damage caused by neglect. In the event of the machine being altered, modified, used for other than normal use, or any part altered, this guarantee is not applicable.

Proprietory articles such as magnetos, sparking plugs, etc., not manufactured by the Company, are not included in the Company's Guarantee, but every endeavor is made to use only the best articles of their respective kinds, and the most suitable types for their purpose.