

4-Cycle Tiller Fueling & Starting

4-CYCLE TILLER FUELING AND OIL ONLY

IMPORTANT!

It is normal for your 4 stroke engine to smoke for the first minute or two of operation. It is not necessary for this to occur every time. This is a result of the oil being pulled through the engine for lubrication.

- Rock the tiller forward so that it rests on the fuel tank.
- It is important to position the tiller as shown in **Figure 1** so the oil will properly fill the crankcase. Failure to do so will cause engine damage.
- Remove the oil plug.
- Pour in 2.7 fl. oz. of approved, 4-cycle engine oil.
- **Always check the oil level before each use.** The oil level should reach the inner first thread of the reservoir. Do not overfill.
- Replace the oil plug.
- Return the unit to the upright position and put the kickstand down.

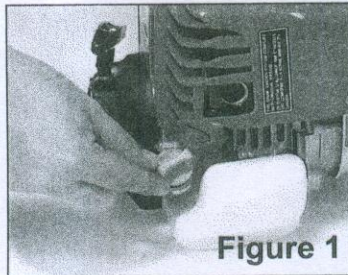
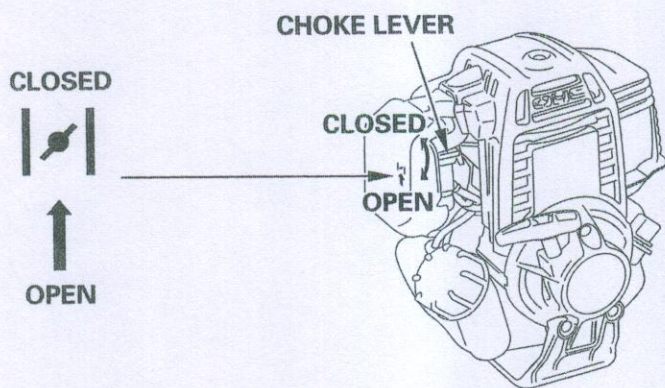


Figure 1

Fueling your tiller is easy. Unscrew the gas cap and fill the tank about four-fifths of the way with 89 octane unleaded gasoline. Remember to always drain the gas when transporting the unit from one location to another.



4-CYCLE TILLER STARTING ONLY

Starting the engine for the first time, or “cold starting”, is easy.

- Make sure the start/stop switch on the throttle handle is in the start position, which is indicated by the “I” symbol.
- Close the choke by moving the choke lever to the up (closed) position.
- Press the primer bulb approximately 6 times until the bulb is filled with gas. Once it is filled, press it two more times.
- Pull the starter cord lightly until you feel resistance, then give it a short, brisk pull. Your tiller should start immediately. Do not pull the cord all the way out, and do not let it snap back into the starter housing.
- Once it is running, move the choke to the down (open) position.
- To stop the engine, simply push the start/stop switch to the stop position, which is indicated by the “O” symbol.
- To start a warm engine, follow the same procedure, but leave the choke lever in the down position and do not pump the primer bulb.
- Before using the tiller, let the engine run for a minute to warm up. Before shutting it down, let the engine run idle briefly to cool down.



Switch

IMPORTANT NOTE:

Check the oil level in the engine before each use. If oil is low see your 4 Stroke Tiller Engine Manual and information at left for details.

Never use starting fluids, as they will cause permanent engine damage, and void the warranty. Before you use the tiller, read the Safety & Warning rules on pages 3-5.

⚠ WARNING • DANGER ⚠

ALTERNATIVE FUELS, SUCH AS E-15 (20% ETHANOL), E-85 (85% ETHANOL) OR ANY FUELS NOT MEETING HONDA REQUIREMENTS ARE NOT APPROVED FOR USE IN GASOLINE ENGINES. USE OF ALTERNATIVE FUELS MAY CAUSE PERFORMANCE PROBLEMS, LOSS OF POWER, OVERHEATING, FUEL VAPOR LOCK AND UNINTENDED MACHINE OPERATION, INCLUDING, BUT NOT LIMITED TO, IMPROPER CLUTCH ENGAGEMENT. ALTERNATIVE FUELS MAY ALSO CAUSE PREMATURE DETERIORATION OF FUEL LINES, GASKETS, CARBURETORS AND OTHER ENGINE COMPONENTS.

⚠ WARNING

Do not operate the engine in a confined space where dangerous carbon monoxide fumes can collect.

⚠ WARNING

Fuel is extremely flammable. Handle it with care. Keep away from ignition sources. Do not smoke while fueling your equipment

⚠ WARNING

Avoid accidental blade engagement. Do not squeeze the throttle trigger when starting. Maintain proper idle speed adjustment (2500-3100 rpm)

4-Cycle Tiller Operation

⚠ WARNING

If engine does not stop when switch is put in the stop position, release the throttle and allow engine to idle. Put the tiller down and slide the choke lever to the cold start (closed) position. Do not use again before product is serviced.

A SPECIAL FEATURE

Note: With the idle set properly and the engine running

Even when the engine is running, the tines won't turn unless you squeeze the throttle trigger on the handlebars. When you release the throttle trigger, the tines will stop.

A TIP FOR EXTENDING YOUR ENGINE'S LIFE

After you start the engine, let your tiller warm up for two to three minutes before you use it. Then, before you put your

tiller away, let it idle for a minute to give the engine a chance to cool down.

OPERATION

With engine running, and both hands on the handles, hold down the throttle lockout trigger (**Figure 1**), then squeeze the throttle trigger gradually to increase the engine speed and engage the tines.

NOTE: This step must be repeated each time your tiller trigger is released.

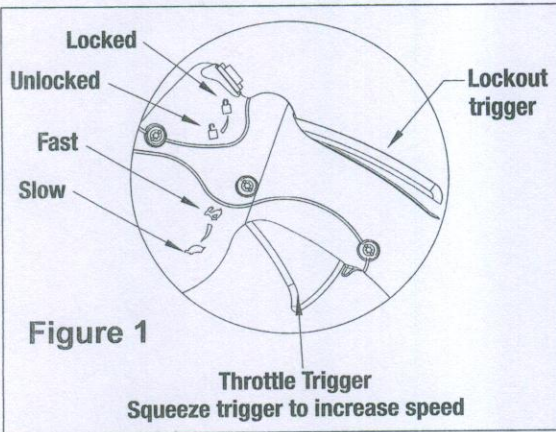


Figure 1

Throttle Trigger
Squeeze trigger to increase speed

⚠ WARNING

Read the instructions carefully. Be familiar with the controls and the proper use of the equipment.

NOW YOU'RE READY TO USE YOUR MANTIS TILLER.

If you've used other tillers, your MANTIS Tiller may surprise you. It tills best when you pull it backward! When you pull your MANTIS Tiller backward, you give extra resistance to the tines, so they dig deeper. (**Figure 2**)

In addition, when you go backward, you erase your footprints, so your soil stays light and fluffy. With other tillers, by contrast, you walk right over the soil you've just tilled, packing it down, so it's less plantable.

RUN YOUR MANTIS TILLER LIKE A VACUUM CLEANER

Place your Tiller at the head of the row or area you want to till, and start it up. Begin with an easy rocking motion, and pull the Tiller backward. Then repeat rocking motion, and pull it backward again. Then, let it move forward just a little bit, before pulling it

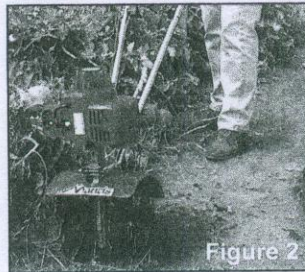


Figure 2

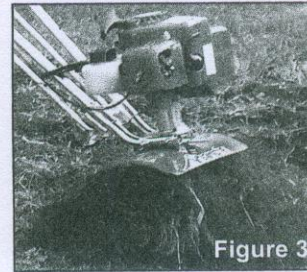


Figure 3

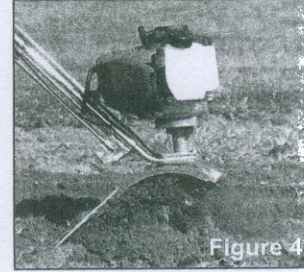


Figure 4

backward again. This will help you till deeper. Keep repeating these steps until you've tilled an entire row, then start again on the next row. It's much like running a vacuum cleaner! (**Figure 3**)

You can even control depth.

For deeper tilling:

Move your Tiller slowly back and forth, as you would a vacuum cleaner. Work the same area over and over until you've dug to your desired depth. (**Figure 4**)

For shallow tilling:

Switch the tines to the cultivating position (See page 12 to learn how). Then move your Tiller quickly over your soil surface.

For Big Weeds or Tough Roots:

Let your Tiller rock back and forth over the tough spot until the tines slice through the weed or root.

Your MANTIS Tiller Handles Special Tilling Projects:

Want to turn part of your lawn into a colorful flower border? Your MANTIS Tiller makes it easy! Just run your Tiller back and forth until the sod begins to break up. Then continue tilling. Your Tiller will chop the clumps of sod until they're fine then work them into the soil. Pretty soon, you'll have a soft, fresh planting bed.

⚠ WARNING ⚠

ALWAYS MAKE SURE THE HANDLE KNOBS ARE SECURE BEFORE STARTING YOUR MANTIS TILLER.

Contact us at www.mantis.com

4-Cycle Tiller Operation (Continued)

WARNING

Never try to remove an obstruction while the engine is running. Serious injury can result. If your tines get jammed or entangled, shut off the engine at once. Remove the obstruction while the engine is off.

WARNING

The operator of this tiller is responsible for accidents or hazards occurring to himself, other people or their property.

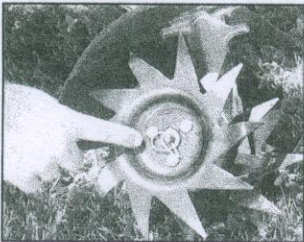


Figure 1

YOUR MANTIS TILLER MAKES WEEDING A PLEASURE!

As a tiller, your MANTIS Tiller works the soil down to 10" (25.4 cm) deep. But, as a cultivator it gently cultivates the surface to just 2" to 3" (5.09 cm to 7.62 cm) deep.

To change to cultivating mode, switch the tines to the weeding (or cultivating) position as described at right. This takes less than a minute.

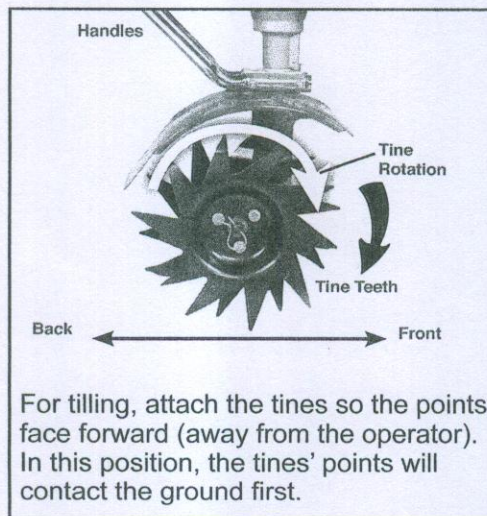
In this configuration, your MANTIS Tiller's sharp "tine teeth" will slice up those pesky weeds, burying them as you go along. And since the tines in this position won't dig too deep, they won't hurt your plants' precious root systems.

The result? Your Tiller will cut your weeding time in half and turn a tiresome chore into a pleasure.

HOW TO SWITCH FROM TILLING TO CULTIVATING POSITION

1. Make sure your Tiller is off.
2. Remove the retaining pins from the tines.
3. Remove the tines from the axle.
4. Place the right-side tine onto the left-side axle, then place the left side tine onto the right-side axle. The "D" hole should be to the outside when the tines are positioned correctly.
5. Reinsert the pins. (Figure 1)

Tilling Position



Cultivating Position

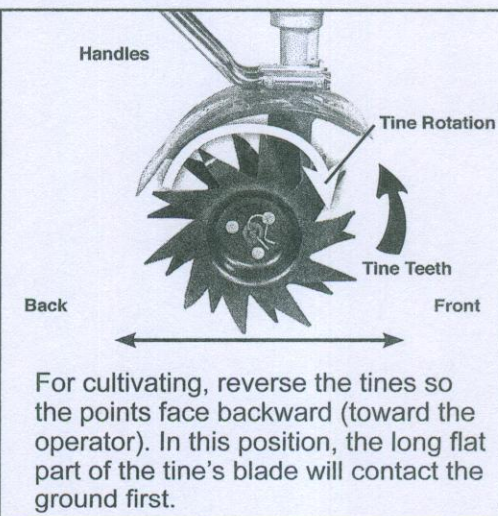


Figure 1