

# OWNER'S MANUAL



# Welcome to the world of Mantis gardening!

Here's your new MANTIS Electric Tiller . . . the lightweight wonder that's "Changing the way we garden®."

Unlike big tillers, your MANTIS Electric Tiller weighs only 9 kg. So it lifts easily, handles smoothly, tills and weeds precisely. And, unlike other small tillers, it features serpentine tines that churn soil to 25 cm deep. It creates a soft, smooth seed bed, even in problem soil.

Once you know how to use your tiller correctly, we guarantee you'll love it. So first, please read this manual. It shows, step by step, how to use your tiller safely. Plus, it shows how the MANTIS Border Edger can make light work of your edging needs.

If you have questions about any topic in this Manual, or if you wish to order MANTIS Attachments contact your local authorized MANTIS dealer.



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# Safety rules and warnings



You will notice throughout this owners' manual, Safety Rules and Important Notes. Make sure you understand and obey these warnings for your own protection.

# A. Special safety information

A WARNING A DANGER A

ATTENTION: THIS SYMBOL POINTS OUT OUR IMPORTANT SAFETY INSTRUCTIONS.

A WARNING A DANGER A

TO REDUCE THE POTENTIAL FOR ACCIDENTS, COMPLY WITH THE SAFETY INSTRUCTIONS IN THIS MANUAL.

FAILURE TO COMPLY MAY RESULT IN SERIOUS PERSONAL INJURY, AND/ OR EQUIPMENT AND PROPERTY DAMAGE.

# B. Safety and warnings

A WARNING A DANGER A

IMPROPER USE OR CARE OF THIS TILLER OR FAILURE TO WEAR PROPER PROTECTION CAN RESULT IN SERIOUS INJURY.

READ AND UNDERSTAND THE RULES FOR SAFE OPERATION AND ALL INSTRUCTIONS IN THIS MANUAL.

WEAR HEARING AND EYE PROTECTION.

**▲** WARNING **▲** DANGER **▲** 

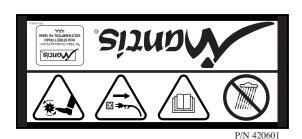
IF THE TILLER IS USED IMPROPERLY OR SAFETY PRECAUTIONS ARE NOT FOLLOWED, THE USERS RISK SERIOUS INJURY TO THEMSELVES AND OTHERS.

READ AND UNDERSTAND THIS MANUAL BEFORE ATTEMPTING TO OPERATE THIS TILLER.



### C. Safety label information

An important part of the safety system incorporated in this tiller are the warning and information labels found on various parts of the tiller. These labels must be replaced in time due to abrasion, etc. It is your responsibility to replace these labels when they become hard to read. The location and part numbers (P/N) of these labels are illustrated on pages 16 and 17.









CUTTING HAZARD; KEEP FEET AND HANDS AWAY FROM ROTATING TINES.



DO NOT USE IF ELECTRICAL CORDS ARE DAMAGED OR BROKEN



READ OWNER'S MANUAL BEFORE USING TILLER, OR PERFORMING ANY REPAIR OR MAINTENANCE. KEEP OWNERS MANUAL IN A SAFE PLACE.



DO NOT USE IN RAIN OR WET CONDITIONS



WEAR EAR AND EYE PROTECTION.



CORRECT ASSEMBLY.



INCORRECT ASSEMBLY.



DO NOT CARRY THE TILLER IN THIS POSITION.



### E. Warnings - do's

Read and understand the owner's manual. Pay particular attention to all sections regarding safety.

- 1. Always keep a firm grip on both handles while the tines are moving. BE AWARE!! The tines may coast after the triggers are released. Make sure tines have come to a complete stop before letting go of the tiller.
- 2. Always maintain a firm footing and good balance. Do not overreach while operating the tiller. Before you start to use the tiller, check the work area for obstacles that might cause you to lose your footing, balance or control of the machine.
- 3. Thoroughly inspect the area where equipment is to be used and remove all objects, which can be thrown by the machine.
- 4. Always keep area clear of children, pets, and bystanders.
- 5. Always stay alert. Watch what you are doing and use common sense. Do not operate unit when fatigued.
- 6. Always dress properly. Do not wear loose clothing or jewellery, they might get caught in moving parts. Use sturdy gloves. Gloves reduce the transmission of vibration to your hands. Prolonged exposure to vibration can cause numbness and other ailments.
- 7. While working, always wear substantial footwear and long trousers. Do not operate the equipment when barefoot or wearing open sandals.
- 8. Always wear eye protection. Eye protection must

- meet applicable CE standards.
- 9. Start the tiller carefully, according to the instructions on page 8.
- 10. Keep all nuts, bolts and screws tight to be sure the equipment is in safe working condition.
- 11. Use extreme caution when reversing or pulling the machine towards you.
- 12. Work only in daylight or good artificial light.
- 13. Always be sure of your footing on slopes.
- 14. Exercise extreme caution when changing direction on slopes.
- 15. Always keep a safe distance between two or more people when working together.
- 16. Always inspect your unit before each use and ensure that all handles, guards and fasteners are secure, operating, and in place. Be sure that all electrical cords are not damaged or broken.
- 17. Always maintain and examine your tiller with care. Follow maintenance instructions given in manual.
- 18. Always store tiller in a sheltered area (a dry place), not accessible to children.
- 19. Always stop the motor and unplug the power cord when carrying out maintenance and cleaning operations, when changing tools, and when being transported by means other than under its own power.

# F. Warnings - don'ts

- 1. Don't use tiller with one hand. Keep both hands on handles with fingers and thumbs encircling the grips when the tines are moving.
- 2. Don't overreach. Keep a good footing at all times.
- 3. Don't run with the machine, walk.
- 4. Don't work on excessively steep slopes.
- 5. Don't attempt to clear tines while they are moving. Never try to remove jammed material before unplugging the cord and making sure the tines have stopped completely.
- 6. Don't allow children or incapable people to operate this tiller.

- 7. Don't operate while under the influence of alcohol or drugs.
- 8. Don't attempt to repair this tiller. Have repairs made by a qualified dealer or repairman. See that only original MANTIS parts are used.
- 9. Don't run the tiller in rain or wet conditions.
- 10. Don't allow children or people unfamiliar with these instructions to use the machine. Local regulations can restrict the age of the operator.
- 11. Don't pick up or carry the machine while the motor is running.



# **▲** WARNING **▲** DANGER **▲**

# IMPROPER ASSEMBLY OF THIS TILLER CAN RESULT IN SERIOUS INJURY. MAKE SURE TO FOLLOW ALL INSTRUCTIONS CAREFULLY.

### A. Parts

Your MANTIS Electric Tiller comes partially assembled. You must install only the handlebars, the handle brace, and the tines. This will take just a few minutes if you follow the directions.

First, take all items out of the carton. But do not remove the cardboard from around the tiller's base.

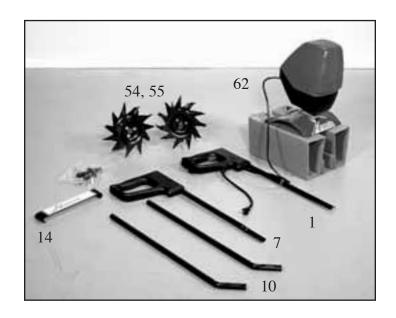
The list below, shows the parts that come with your tiller. Check to make sure you have them.

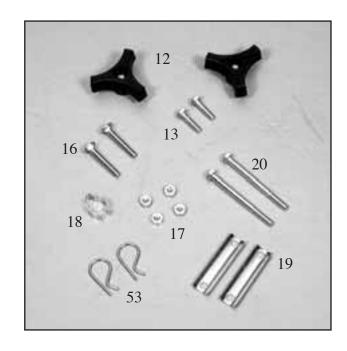
The bag of hardware is in the plastic bag containing the owner's manual and video.

To assemble your MANTIS Electric Tiller, you'll need two 7/16" (11 mm) wrenches. We suggest that you install all nuts and bolts only "finger tight" — that is, one-half to one full turn — until you've completed assembly. The nuts are self locking, but you must use a wrench to tighten them completely.

04	Denemination	*IZ
Qty.	Description	*Key no.
1	Upper handle assembly	7
1	Upper handle trigger assembly	1
2	Lower handles	10
1	Pair tiller/cultivator Tines	54/55
1	Motor assembly (includes fender	
	guard, worm gear transmission	
	& complete housing)	62**
1	Handle brace	14
1	Bag of hardware containing:	
2	Round head square neck bolts	16
4	Lock nuts	17
2	Bolts (7.6 cm long)	20
2	Tine retaining pins	53
2	Handle clamps	19
2	Bolts (2.5 cm long)	13
2	Knobs	12
2	Cable clamp	18

<sup>\*</sup>These numbers are the same numbers shown on the parts layout on pages 16 and 17.





<sup>\*\*</sup>This key no. is for assembly purposes only.

### B. Lower handle assembly

To identify part numbers, see page 5 and 17.

- 1. Use the protective cardboard sleeve to stabilize your tiller. Stand the motor assembly (no. 62) up. (Picture 1)
- 2. Lay the handle parts within easy reach. You'll need one of the handle clamps (no. 19) and one of the lower handles (no. 10). Note that the lower handles have a short leg on one end.
- 3. Fit the handle clamp along the outside of the short leg. Line up the holes on the clamp and the leg.
- 4. Choose one of the two 3-inch bolts (no. 20). Slide it through the first set of holes near the elbow where the lower handle curves. (Picture 2)
- 5. Now slide the other lower handle onto the 3-inch bolt. Fit the other clamp onto this other handle's short leg. Add a nut and tighten finger tight. (Picture 3)
- 6. Locate the worm gear housing. It starts just above and extends down through the tiller's red fender guard. You'll notice that there's a recessed channel on either side of the housing's top. (Picture 4.)
- 7. Take the lower handles that you've just put together. Slide them into the two recessed channels.(Picture 5.)

Make sure you insert them from the rear of the tiller so that the bolt fits along the back of the housing.

8. Slide the second 3-inch bolt through the second set of holes in the short legs and clamps. Add a nut and tighten finger tight.

NOTE: THE NUTS ARE SELF LOCKING, BUT YOU MUST USE A WRENCH TO TIGHTEN THEM COMPLETELY.



Picture 4



Picture 1



Picture 2



Picture 3



Picture 5



# C. Upper handle assembly

- 1. Attach the upper handle assembly (no. 1) the handle with the power cord to the right lower handle (no. 10) and secure with the handle knob (no. 53). (Picture 1 and 2)
- 2. Follow the same steps to install the left upper handle onto the left lower handle. (Picture 3)
- 3. Use the clip (no. 18) to secure the power cord in place on the lower handle. (Picture 4)
- 4. Now install the handle brace (no. 14). Line it up with the holes on the upper handles. Then insert a bolt (no. 13) and a lock nut (no. 17) on either side (Picture 5)
- 5. Use a wrench to tighten Bolt (no. 13) and lock nuts (no. 17).
- 6. Now use wrench to tighten all nuts and bolts firmly and securely.

A WARNING A DANGER A

FOR PROPER INSTALLATION - THE HANDLE WITH THE THROTTLE MUST BE ATTACHED TO THE RIGHT SIDE LOWER HANDLE.



Picture 1



Picture 2



Picture 3



Picture 4



Picture 5



### D. Assemble the tines for tilling

Assembling the tines for tilling

- 1. Remove the cardboard from around your Tiller's base.
- 2. Slide the tines onto the axle shafts. The "D" hole goes on the outside.
- 3. Make sure you've installed the tines properly for tilling. Liken the tines to your fingers. When your palm faces the ground, your fingers curl down. Stand behind the Tiller and hold your hand next to the tines. Do the tine blades curl down, as your fingers do? If so, they are in the *tilling* position. (To switch to the cultivating position, see page 12.)
- 4. To secure each tine to the axle, insert a tine retaining pin.



### **IMPORTANT NOTE:**

Before you use your MANTIS tiller, read the safety rules & warnings on pages 2-4.

# Before you begin tilling

# A. Starting

Starting your MANTIS Electric Tiller is easy.

- 1. Simply loop your extension cord through the built-in extension cord holder. This is provided to secure the extension cord and help prevent it from becoming detached.
- 2. Connect the extension cord to the power cord on the tiller. (Picture 1)
- 3. Plug the extension cord into an outlet.
- 4. Pick a speed. (Picture 2)
- 5. Squeeze the triggers to begin tilling. (Picture 3)



Picture 1



Picture 2



Picture 3



# B. Getting your tiller to the garden

Walk it. (Picture 3)

Put the tiller in 1st speed; you can "walk" it to your garden. Just squeeze the triggers and let the tiller "tiptoe" across your yard on its tines. It won't hurt your lawn or driveway. (Picture 1)

## Carry It.

Make sure the power cord is unplugged from the extension cord. Then use one hand to grasp the convenient carrying handle. Use the other hand to hold the handlebars. (Picture 2) Then lift your tiller and carry it to your garden. Since it weighs only 21 pounds, it won't strain your muscles or tire you out!

#### Take It for a Ride.

You can easily transport your MANTIS Electric Tiller to a friend's or relative's house. Simply fold down the handles, then store your tiller in the trunk of your automobile or truck. It fits easily. And you can put it in and take it our without straining your back.

# A WARNING A DANGER A

NEVER CARRY YOUR TILLER AS THE PERSON IN PICTURE 4 IS DOING. IF YOU DO, AND THE TINES ENGAGE, YOU COULD SUFFER SERIOUS INJURY.



Picture 3



Picture 1



Picture 2



Picture 4



# A WARNING A DANGER A

THE OPERATOR OF THIS TILLER IS RESPONSIBLE FOR ACCIDENTS OR HAZARDS OCCURRING TO HIMSELF, OTHER PEOPLE OR THEIR PROPERTY.

# A. Now you're ready to use your MANTIS Electric Tiller

If you've seen other tillers, your MANTIS Electric Tiller may surprise you. It tills best when you pull it backward! When you pull your MANTIS Electric Tiller backward, you give extra resistance to the tines, so they dig deeper. (Picture 1).

What's more, when you go backward, you erase footprints. So your soil stays light and fluffy. While other tillers, by contrast, you walk right over the soil you've just tilled, packing it down.



Picture 1

# B. Run your MANTIS Electric Tiller like a vacuum

Place your tiller at the head of the row or area you want to till. Turn it on. Then use an easy rocking motion. First, pull your Tiller backward. Then use an easy rocking motion. Again, pull your tiller backward. Then let it move forward just a little bit. Then pull it backward again. This will help you till deeper.

Keep repeating these steps until you've tilled an entire row. Start again on the next row. It's a lot like running a vacuum. (Picture 2)



Picture 2

# C. 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. (Picture 3)

### For shallow tilling:

Switch the tines to the cultivating position. (See pg. 12 to learn how) Then move you 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.



Picture 3



### D. Your MANTIS Electric Tiller handles special tilling projects

Want to turn part of your lawn into a colorful flower border?

Your MANTIS Electric 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, it will work them into the soil. Pretty soon, you'll have a soft, fresh planting bed.

# Tilling/cultivating

# A WARNING A DANGER A

IFYOUR TINES GET JAMMED OR ENTANGLED, TURN OFF THE TILLER AT ONCE. REMOVE THE OBSTRUCTION ONLY WHILE THE TILLER IS UNPLUGGED.

NEVER TRY TO REMOVE AN OBSTRUCTION WHILE THE TILLER IS IN THE ON POSITION OR PLUGGED IN. SERIOUS INJURY CAN RESULT.

### A. How About a family-size vegetable garden?

Nowadays many gardeners prefer small gardens — especially in the suburbs, where space is at a premium. But, if you're fortunate enough to own a large lot, you can create a bigger garden — a half acre or more. Here's how:

1. First, hire someone with a tractor or big tiller to break ground for you. This is a one-time-only investment that's well worth the small cost.

2. Then, use your tiller to break up any remaining clumps of soil or sod. Unlike a tractor or big tiller, your MANTIS Electric Tiller is a precision tool. It will pulverize your soil into a smooth seed bed.

# B. Your MANTIS Electric 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, only 2" to 3" (5.09 cm to 7.62 cm) deep.

First, you must switch the tines to the weeding position. This takes less than a minute.

Then, your MANTIS Electric 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.



# C. How to switch from tilling to cultivating position

- 1. Make sure your Tiller is off and unplugged.
- 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. Place the left side tine onto the right-side axle. The "D" hole should be to the outside.
- 5. Here is how to make sure you've installed the tines properly. Stand behind the tiller and hold your hand, palm up, next to the tines. Do the tine points curl up, as your fingers do? If so, they are in the correct cultivating position. (See photos below)
- 6. Reinsert the pins.

# D. Now You're Ready to cultivate or weed.

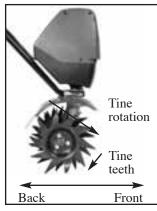
Guide your tiller where you want to weed and start it up. Pull your tiller backward slowly, then let it move forward a bit, in a gentle rocking motion. Watch it slice, shred, and bury those weeds!

Got tough weeds? Select a slower speed to slow your Tiller down. Then work back and forth until your Tiller chops up the weeds. It's easy and effective!

Remember, any tiller will tangle in tall grass, stringy vines, or super-big weeds. So, if you have a "backyard jungle," first use a knife, pruner, or brush cutter to chop up the overgrowth. If the tines become tangled anyway, turn the motor and unplug the tiller before trying to clear them.

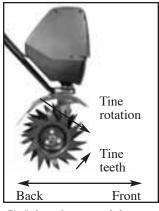
The optional tine Detangler (Item no. 1322) will clear tines in a jiffy. Contact your local authorized MANTIS dealer.





**Tilling position** 

Tine teeth point in the same direction as the rotation of the tine; or toward the front of the Tiller, away from the operator.



**Cultivating position** 

Tine teeth point in the opposite direction as the rotation of the tine. Tines point toward the back of the tiller, or toward the operator.

### E. Your MANTIS Electric Tiller will weed between narrow rows!

Your MANTIS Electric Tiller is a precision weeder that easily fits in tight places. So don't be afraid to weed anywhere: between plants and shrubs; in corners; against fences; on raised beds; in wide rows; even in very narrow rows. Your MANTIS Electric Tiller weeds 25\* to23 cm wide. So you can run it in a tightly planted garden without damaging your delicate plants. That's good news for suburban gardeners, who often have to plant rows close together!





<sup>\*</sup>With optional Planter/ Furrower attachment (Item no. 6222.)

# Using the Border Edger attachment

Your MANTIS Electric Tiller has been designed and built to accept a wide range of MANTIS Electric Tiller attachments to increase its usefulness in your lawn and garden. And, all MANTIS Electric Tiller Attachments have been designed for quick and easy attachment to the tiller or engine.

### The Border Edger (Item no. 3222)

The most popular attachment, the Border Edger can be used to cut clean, neat edges along walkways, or around trees, shrubs, and garden beds.

The Border Edger has two parts: a wheel and a hardened steel blade, with pointed tines.

# How to install the Border Edger

The following instructions refer to "right" and "left" axles. Assume that you're standing behind your Tiller, as you would for tilling and cultivating.



Picture 1

Some areas of your yard may harbor roots and other underground obstructions. In places like this you'll want to edge your borders shallowly (2.5 to 5 cm deep). Here's how to install the Border Edger for shallow edging:

- 1. First remove your tilling/cultivating tines.
- 2. Then slide the edger's wheel onto the right axle.
- 3. Now slide the Edger blade onto the left axle. The blade's angled face should hit the ground when you spin the blade forward. (Picture 2)
- 4. Insert retaining pins on both left and right axles.

Around walkways and garden beds, you'll want to edge more deeply (7.5 to 10 cm deep). Here's how to install the Border Edger for that purpose:

- 1. Remove the tilling/cultivating tines.
- 2. Slide the edger's blade onto the right axle. The

blade's pointed face should hit the ground when you spin the blade forward. (Picture 1)

- 3. Slide the wheel onto the left axle.
- 4. Insert retaining pins on both sides.

### How to use the Border Edger

- 1. Position your MANTIS Electric Tiller so that the edger blade is right along the garden edge and the wheel is outside (on the lawn, on the sidewalk, wherever). (Picture 2)
- 2. Start your tiller and pull your MANTIS backward along the garden edge.

### The Border Edger can handle special projects!

- 1. Install the Edger for deep edging, as directed above. Then use it to cut sod strips.
- 2. Edge and weed at the same time! Just attach the edger blade on one axle and a tiller tine on the other axle, "Mix and match" blades; don't be afraid to experiment.

#### **IMPORTANT NOTE:**

If you do a lot of edging, you'll appreciate the MANTIS Wheel Set (Itemno. 9222.) It gives you added stability, for even easier handling.

To order the Wheel Set, or any MANTIS attachment, contact your local authorized MANTIS dealer.



Picture 2



# Troubleshooting

### A. What to do if your Electric Tiller stops running

- 1. If nothing happens when you squeeze the triggers, make sure the tiller is plugged in or that the cord is not damaged.
- 2. If it still does not work, unplug the Electric Tiller from the power source.
- 3. Inspect the tines to make sure your tines are clear of rocks or debris. Clear any debris that may be preventing the tines from spinning.
- 4. Remove the tines to make sure all of the debris has been cleared.
- 5. Check the circuit breaker on the Electric Tiller. Make sure the button hasn't popped.
- 6. If the button has popped, press the button back in. If the circuit breaker button doesn't stay in, wait approximately 30 seconds and retry. (Picture 1)

7. Make sure that the circuit breaker hasn't been tripped at your power source: whether it's your house, a generator, or an outdoor outlet.



Picture 1

### B. How to reseat the motor housing

At some point, you may find that the tines won't turn when you squeeze the throttle. This may mean the motor isn't sitting all the way down on the worm gear housing.

Perhaps you've been using your Tiller for several years. The housing screw bolt (Key no. 22) may have come loose and lifted the motor up.

If this happened you'll notice a gap between the bottom of the bottom housing (Key no. 24) and the top of the worm gear housing. (Picture 2)

To fix this, loosen the housing screw. Take the motor and housing off the worm gear housing. Notice the hex head on top of the drive shaft (Key no. 21). Inside the bottom housing, you'll find the coupler driver (Key no. 26). Make sure the hex head lines up with the coupler driver inside the bottom housing.

Then put the motor back on the worm gear housing.

If you've followed these steps properly, there will be no gap between the bottom housing and the worm gear housing. (Picture 3) Make sure you tighten the housing screws!



Picture 2



Picture 3

# C. The tines don't seem to dig like they used to

If the tines are not performing as they did when you first bought the tiller, inspect them for excessive wear. If they are worn, you can order a new pair direct from MANTIS.

To order replacement tines contact your local authorized MANTIS dealer.

#### **IMPORTANT NOTE:**

To keep your MANTIS Electric Tiller running as efficiently as possible, always make sure the tines are clear of rocks and debris.

If you continue to experience problems, contact your local authorized MANTIS dealer.



# A. How to check the grease level inside the worm gear housing

When we built your MANTIS Electric Tiller, we lubricated the worm gear housing thoroughly.

It is imperative that you inspect the grease level once a year. Simply remove the cover plate on the worm gear housing. (Picture 1) Then check to make sure the grease comes almost to the top of the housing. If it doesn't, add lithium no. 0 grease (Item M9985.) This is the only way to add grease to the worm gear housing. (Picture 2) To purchase MANTIS grease, contact your local authorized MANTIS dealer.

Please do not overfill. Too much grease can create pressure, which could cause seals to fail or the clutch to slip.



Picture 1



Picture 2

# **S**torage

- 1. Clean dirt, grass and other materials from the entire machine.
- 2. Wipe the tines with oil or spray them with WD-40, to prevent rusting.
- 3. Check the grease level in the gear housing, as described on page 13.
- 4. Order new parts to replace any that are badly worn or broken. Contact your local authorized MANTIS dealer.
- 5. Store your tiller in a clean, dry place. You can store with the handles in an extended position (Picture 3) or folded down. (Picture 4)
- 6. To fold down the handles, follow these easy steps: Loosen the handle knobs (no. 12), fold the handles forward or back. (Picture 4) Tighten knob securely. Your handles are now folded and ready to store in a smaller area.

### **IMPORTANT NOTE:**

Handles can fold back or forward. When folding handles back, as show in picture no. 4, be careful not to damage the 3-speed switch.



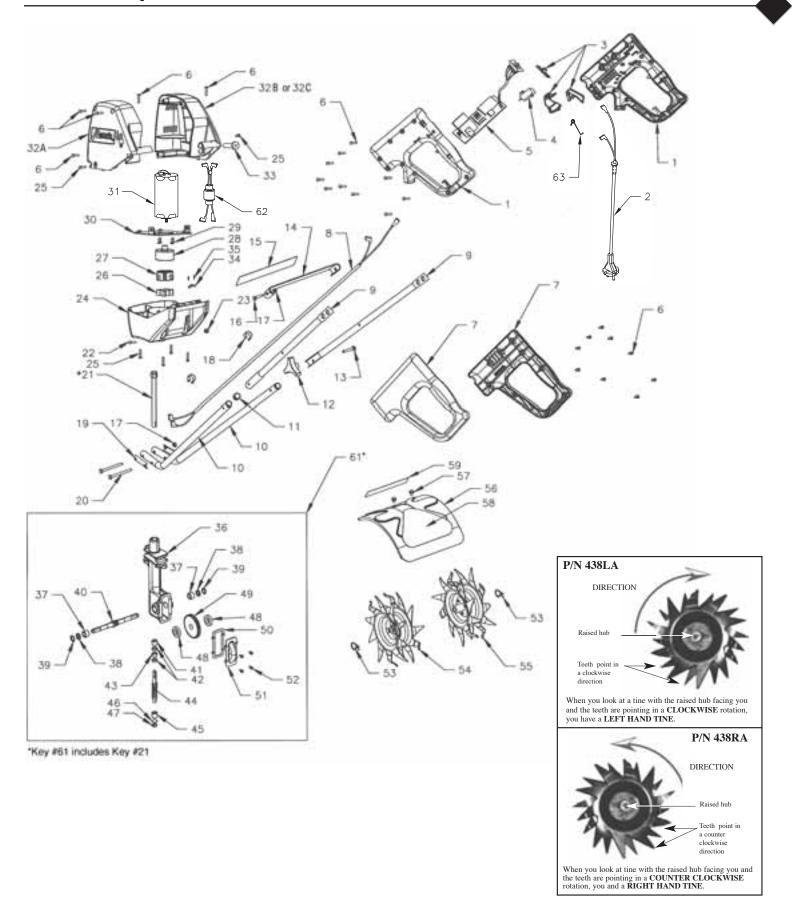
Picture 3



Picture 4



# Parts explosion





# Parts list

Key No.	Part No.	Qty.	Description	Key No.	Part No.	Qty	Description
1	420200	1	Handle, Right Side Assy	32C	420145	1	Right Housing 230v w/o Circuit Breaker
2	420115	1	Power Cord	1			(can be sold as a replacement part)
3	420203	1	Trigger, Trigger lock, Button	33	420138	1	Circuit Breaker
4	3033	1	Switch Normally Open	34	3016	1	Strain Relief
5	420124 310500	1 24	Assembled PC Board w/Switch #8-11 x 3/4 Combo SI Torx T-20 Pan	35	3041	2	3.5 x 13mm Ph Pan Metric Tapping Screw DIN 7981, Steel, Zinc
U	310300	24	Steel Plastite 45-1 Case Harden	36	466	1	Worm Gear Housing
7	420207	1	Handle, Left Side Assy	37	432	2	Worm Gear Housing  Worm Gear Bearing
8	420207	1	Motor Cord	38	434	2	Bearing Seal
9	420137	2	Handle Upper FDH- Black	39	435	2	Bearing Seal Retainer
10	420213	2	Handle Lower FDH- Black	40	431		Tine Shaft
						1	
11	400230	2	Plug Handle	41	423	1	Roller Bearing
12	400510	2	Handle Knob	42	425	2	Worm Bearing Race
13	400509	2	Bolt	43	424	1	Worm Thrust Bearing
14	420113	1	Handle Brace	44	400204	1	Worm
15	420602	1	Label Brace Elec. Tiller	45	458	1	Roller Bearing
16	410	2	Cap Screw 1/4-20 x 1" Lg.	46	426	1	Worm Disk
17	972	4	Locknut 1/4-20	47	428	1	Retaining Ring
18	478	2	Cable Clamp	48	430	2	Worm Gear Thrust Washer
19	377	2	Handle Clamp	49	400205	1	Worm Gear
20	470	2	1/4-20 x 3" Bolt	50	436	1	Gasket
21	468	1	Drive Shaft (Also in Key #61)	51	437A	1	Housing Cover
22	420513	1	8-32 x 7/8 6-Lobe Torx Equiv Pan	52	651	4	Rd. Hd. Self Tapping Screw
			M/S, with T-20 Driver Size	53	418-1	2	Tine Retaining Hair Pin
23	420514	1	8-32 Hex Machine Screw Nuts,	54	438LA	1	Tine Assembly (L.H.)
			Steel, Zinc	55	438RA	1	Tine Assembly (R.H.)
24	420134	1	Bottom Housing	56	465	1	Fender Guard
25	420512	6	10-32 x 1/2 6-Lobe Torx Equiv Pan	57	140	2	Bolt 1/4-20 x 3/8" Lg.
			M/S, with Spec T-20 Driver Size	58	420600	1	Warning Fender Label
26	420224	1	Coupler Driver	59	4058	1	Mantis Label
27	420222	1	Coupler Shock Absorber	61	400011	1	Electric Tiller Trans w/ drive shaft
28	420223	1	Coupler Housing	62	420147	1	Ferrite Core Assembly
29	420511	4	1/4-20 x 1/2 Socket Head Cap Screw,	63	420110	1	Spring
			Plain Steel	64	420139	1	Conversion Cord (Not Shown)
30	420107	1	Motor Mounting Plate				
31	420910	1	230V PM Motor	1			
32A	420132	1	Left Housing Half	1			
32B	420142	1	Right Housing Half w/230v Circuit Breaker	1			



# **MANTIS®**

**EG-KONFORMITÄTS-ERKLÄRUNG** DE **ES DECLARACION DE CONFORMIDAD CEE DÉCLARATION DE CONFORMITÉ CE** FR DICHIARAZIONE DI CONFORMITÀ CEE IT **EC DECLARATION OF CONFORMITY** SE EG FÖRSÄKRAN OM ÖVERENSSTÄMMELSE GB NL EG CONFORMITEITSVERKLARING DK EU OVERENSSTEMMELSESERKLÆRING NO EU OVERENSSTEMMELSESERKLÆRING FI EY-VAATIMUSTENMUKAISUUSVAKUUTUS

erklären in alleiniger Verantwortung, dass die elektrische 230-V-, 50-Hz-Gartenfräse mit einer installierten DE Wir **Mantis** 1028 Street Rd. Nettoleistung von 0,78 kW:

FR Southampton, déclarons sous notre seule responsabilité que la motobêche électrique 230 V, 50 Hz d'une puisssance installée Nous,

PA. 18966 nette de 0.78 kW:

GB We. USA declare on our sole responsibility that the 230V, 50Hz Electric Tiller with net installed power of 0,78kW: NL

verklaren als enige verantwoordelijke dat de elektrische grondbewerker van 230 V, 50 Hz met netto Wij,

geinstalleerd vermogen van 0,78 kW:

Sarjanumero/-numerot: ks. työkalua

**ES** declaramos por responsabilidad exclusiva que la excavadora eléctrica de 230 voltios, 50 Hz con una potencia Nosotros,

neta instalada de 0.78 kW:

dichiariamo sotto la nostra unica responsabilità che il dissodatore elettrico da 230 V, 50 Hz con potenza netta IT Noi,

all'installazione di 0.78 kW:

förklarar på eget ansvar att elektrisk jordfräs, 230 V, 50 Hz, med installerad nettoeffekt på 0,78 kW: SE Vi,

erklærer under eneansvar, at den 230V, 50Hz elektriske fræser med nettoinstalleret effekt på 0,78kW:

Valmistusvuosi:

ks. työkalua

erklærer på eget ansvar at den 230-volts, 50 Hz elektriske jordfreseren med nettinstallert strøm på 0,78 kW: NO Vi, ilmoitamme omalla yksinomaisella vastuullamme, että sähköivrsin, 230 V, 50 Hz, jonka asennettu nettoteho on 0,78 kW: FI Me.

DE Modell: Seriennummer(n): siehe auf dem Gerät Konstruktionsjahr: siehe auf dem Gerät FR Modèle: Numéro(s) de série: voir sur l'appareil Année de construction: voir sur l'appareil Serial number(s): GB Model: 7252 see tool Year of manufacture: see tool serienummer(s): NL model: zie op het apparaat constructiejaar: zie op het apparaat Número(s) de serie: **ES** Modelo: véase en la máquina Año de fabricación: véase en la máquina IT Modello: Numero(i) di serie: vedi la targhetta sull'apparecchio Anno di costruzione: verdi la targhetta sull'apparecchio modell: serienummer: se apparat konstruktionsår: se apparat DK se apparatet konstruktionsår: se apparatet model: serienummer: NO model: seriennummer: se apparatet konstruksionsår: se apparatet

- ...beschrieben in der beigelegten Dokumentation, mit den grundlegenden Gesundheits- und Sicherheitsanforderungen der Maschinenrichtlinie 98/37/EG, der Richtlinie zur DE elektromagnetischen Kompatibilität 89/336/EWG und ihrer derzeit geltenden Nachträge, der Niederspannungsrichtlinie 73/23/EWG übereinstimmt und der Lärmschutzrichtlinie 2000/14/EG (das Verfahren zur Bewertung der Konformität ist in Anhang VI beschrieben)
- ... décrite dans les documents ci-joints est conforme aux exigences essentielles de santé et de sécurité de la directive sur les machines 98/37/CE, à la directive de compatibilité électromagnétique 89/336/CEE et amendements en vigueur, à la directive basse tension 73/23/CEE et à la directive sur les niveaux sonores 2000/14/CE. (La procédure d'évaluation de conformité est incluse à l'annexe VI)
- ....described in the accompanying documentation conforms to the Essential Health and Safety Requirements of the Machinery Directive 98/37/EC, Electromagnetic GB Compatibility Directive 89/336/EEC and current amendments, Low Voltage Directive 73/23/EEC, Sound Directive 2000/14/EC (conformity assessment procedure is Annex
- ...beschreven in de bijgevoegde documentatie voldoet aan de Essentiële gezondheids- en veiligheidsvereisten van de EG-machinerichtlijn, 98/37/EC, de EG-NL elektromagnetische compatibiliteitsrichtlijn 89/336/EEC, en huidige wijzigingen daarvan, EG-laagspanningsrichtlijn 73/23/EEC, EG-geluidsrichtlijn, 2000/14/EC (conformiteitsbeoordelingsprocedure was Bijlage VI)
- ES ...según se describe en la documentación anexa cumple con los requisitos esenciales de la Directriz 98/37/EC de Salubridad y Seguridad de la Maquinaria, Directriz 89/336/EEC de Compatibilidad Electromagnética, y sus enmiendas actualizadas, Directriz 73/23/EEC del Bajo Voltaje, Directriz 2000/14/EC de Nivel de Ruido (en el proceso de evaluación de su conformidad es el anexo VI)
- ..descritta nella documentazione in dotazione, è conforme a quanto prescritto in materia di Sicurezza e Sanità dalla Direttiva sui macchinari 98/37/EC, dalla IT Direttiva sulla compatibilità elettromagnetica 89/336/EEC e relativi emendamenti, dalla Direttive sulle basse tensioni 73/23/EEC e dalla Direttiva sulle emissioni acustiche 2000/14/EC (la procedura di valutazione della conformità è riportata all'Appendice VI)
- ... som beskrivs i bifogade dokumentation överensstämmer med väsentliga hälso- och säkerhetskrav i maskindirektivet 98/37/EG, direktivet för elektromagnetisk SE kompatibilitet 89/336/EEG och aktuella ändringar, lågspänningsdirektivet 73/23/EEG, ljuddirektivet 2000/14/EG (och bedömning av överensstämmelse görs enligt Bilaga VI)
- ...beskrevet i den medfølgende dokumentation overholder betinget sundheds- og sikkerhedskrav i maskineridirektivet 98/37/EU, direktivet for elektromagnetisk DK kompatibilitet 89/336/EEU og aktuelle ændringer, direktivet for lavspænding 73/23/EEU, lyddirektivet 2000/14/EU (overensstemmelsesvurderingsprocedure er
- NO ...beskrevet i vedlagte dokumentasjon, samsvarer med viktige krav til helse og sikkerhet i maskindirektiv 98/37/EU, direktiv for elektromagnetisk kompatibilitet 89/336/EEC og gjeldende tilføyelser, lavstpenningsdirektiv 73/23/EEC, støydirektiv 2000/14/EU (vurderingsprosedyre for overensstemmelse er vedlegg VI)
- FΙ ...joka on kuvattu oheisissa asiakirjoissa, täyttää koneita koskevan direktiivin 98/37/EY ja sähkömagneettista yhteensopivuutta koskevan direktiivin 89/336/ETY olennaiset terveys- ja turvallisuusvaatimukset, mukaan lukien nykyiset muutokset, pienjännitedirektiivin 73/23/ETY ja ulkona käytettävien laitteiden melupäästöjä koskevan direktiivin 2000/14/EY vaatimukset (vaatimustenmukaisuuden arviointimenetelmä on liite VI).



DK

FI

Malli:

Vi,

DE	Modell	Schalldruckpegel an Bedienerposition dB (A)	Schalleistungspegel (gemessen) dB (A)	Schalleistungspegel (garantiert) dB (A)	Schwingungs- messungen m/s²
FR	Modèle	Pression sonore au poste de l'opérateur dB (A)	Niveau sonore (mesuré) en dB (A)	Niveau sonore (garanti) en dB (A)	Mesure des vibrations en m/s²
GB	Model	Sound Pressure at the operator position dB (A)	Sound Power Level (measured) dB (A)	Sound Power Level (guaranteed) dB (A)	Vibration measurements m/s <sup>2</sup>
NL	Model	Geluidsdruk bij de plaats van de operator dB (A)	Geluidsvermogenniveau (gemeten) dB (A)	Geluidsvermogenniveau (gegarandeerd) dB (A)	Trillingmetingen m/s <sup>2</sup>
ES	Modelo	Presión del ruido en la posición del operario dB (A)	Nivel de potencia del ruido (medido) dB (A)	Nivel de potencia del ruido (garantizado) dB (A)	Medición de la vibración m/s2
IT	Modello	Pressione acustica presso l'operatore dB (A)	Livello di potenza acustica (misurato) dB (A)	Livello di potenza acustica (garantito) dB (A)	Misura delle vibrazioni m/s²
SE	Modell	Ljudtryck vid användarposition dB (A)	Ljudeffektnivå (mätvärde) dB (A)	Ljudeffektnivå (garanterad) dB (A)	Vibrationsmätningar m/s²
DK	Model	Lydtryk ved førerposition dB (A)	Lydeffektniveau (målt) dB (A)	Lydeffektniveau (garanteret) dB (A)	Vibrationsmål m/s²
NO	Modell	Lydtrykk ved bruker- posisjon dB (A)	Støy fra strøm Nivå (målt) dB (A)	Støy fra strøm Nivå (garantert) dB (A)	Vibrasjonsmåling m/s²
FI	Malli	Äänenpaine käyttäjän asemassa dB (A)	Äänitehotaso (mitattu) dB (A)	Äänitehotaso (taattu) dB (A)	Tärinän mittaukset m/s²
	7252	83	83	87	8.9

DE	Name, Vorname:	Bryan, Stuart	DE	Stellung:	Präsident
FR	Nom, Prénom :	Bryan, Stuart	FR	Poste :	Président
GB	Surname, First Name:	Bryan, Stuart	GB	Position:	President
NL	Naam, Voornaam:	Bryan, Stuart	NL	Positie:	President
ES	Apellido, Nombre:	Bryan, Stuart	ES	Posición:	Presidente
IT	Cognome, Nome:	Bryan, Stuart	IT	Posizione:	Presidente
SE	Namn, Förnamn:	Bryan, Stuart	SE	Position:	President
DK	Navn, Fornavn:	Bryan, Stuart	DK	Stilling:	Direktør
NO	Navn, Fornavn:	Bryan, Stuart	NO	Stilling:	President
FI	Sukunimi, etunumi:	Bryan, Stuart	FI	Asema:	Toimitusjohtaja

### SOUTHAMPTON, PA. USA January 6, 2004 Stuart Bryan

DEOrt. Datum, UnterschriftGBPlace, Date, SignatureESLugar y fecha, FirmaSEOrt, Datum, UnderskriftFRLieu, Date, SignatureNLPlaats, Datum, HandtekeningITLuogo e date, FirmaDKSted, dato, UnderskriftNOSted, og, UnderskriftFIPaikka, Päivämäärä, Allekirjoitus



Shout M. By

# For repair or refunds!

Please, provide the following information if you return a product for repair or if you request a refund.					
Name:					
Address:	City, Postcode:				
Phone (day):	Phone (evening):				
Customer No:					
(not necessary but helpful)  Product(s) being returned:					
For					
Refund:  If you are requesting a refund, please tell us why:  □ Product is different than I expected  □ Not satisfied with performance  □ Not satisfied with quality  □ Other	Repair:  If you return a product or part for repair or for a cost estimate, please indicate what could be damaged.				

Disassemble the machine or part and wrap it in a sturdy box; send it back to us. Thank you.





# The Mantis promise

Try any product you buy from Mantis with NO-RISK! If you're not completely satisfied, send it back to us within 100 days for a complete, no-hassle refund. All you have to pay is the return insured postage.

#### **Tines Guaranteed**

Our tines not only work better than the rest: they're also guaranteed for 5 years against breakage. If any tine breaks in normal use, send the broken tine back to us and we'll send you a replacement tine FREE!

#### **Two-year Warranty**

All components of the Mantis Tiller/Cultivator are warranted for a period of two full years from the date of purchase. If any part fails to work because of defects in materials or workmanship, we will repair or replace the part at no charge to you.

#### Lifetime Service

If you ever need Mantis parts, we'll get them right out to you. Usually shipped within 48 hours (and, if a major repair is ever required, we'll do it quickly and reasonable).

### Please have this information when you call:

- 1. Date of purchase
- 2. Date machine was first used
- 3. Serial Number, located on top of engine
- 4. Customer number, if available

#### Please Call us First!

If you are having any trouble with any Mantis product, please call us. Ask for the Customer Service Dept. Usually, we can solve most problems over the phone.

#### **Mantis GmbH**

Europa-Strasse 31 CH-8152 Glattbrugg Tel.: 0800-110 111

Fax: 0800-110 222 Email: info@mantis.ch

### **Mantis Deutschland GmbH**

Industriehof Trecknase 10 D-42897 Remscheid Tel.: 0180-3000 208\* Fax: 0180-3000 209

Email: info@mantis-europe.de

\*(9 Cent/Min.)

# Limited warranty information for Mantis tiller

Mantis extends only to the original consumer purchaser a limited warranty against defects in material and workmanship for a period of two years from date of purchase. This warranty covers all portions of the Mantis Tiller.

Mantis will repair or, at its option, replace any defective part or parts of the product free of charge. In the event of a defect or malfunction, the purchaser must return the product to Mantis.

Mantis assumes no responsibility in the event that the product was assembled or used in contravention of any assembly, care, safety, or operating instructions contained in the Owner's Manual; was not used with reasonable care; or was used for other than normal and intended purposes.

Mantis makes no express warranties or representation except those contained herein. The duration of any implied warranty, including merchantability and fitness for a particular purpose, is limited to the duration of the express warranty. Mantis disclaims all liability for indirect and/or consequential damages.

Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so that above limitations and exclusions may not apply to you. This warranty gives you specific legal rights.

#### If you need to return a product - call first

Very few customers ever need to return a Mantis product, but just in case you have to ...here are some simple instructions that will help us serve you quicker and better.

Please clean the product if it has been used.

Give us as much information as possible, so that we can help you as quickly as possible.

Please provide information requested on form and send the completed form with your product.

#### **Mantis France SARL**

20, rue des Garennes F-57155 Marly

Tél.: 0810 21 18 65 Fax: 0387 62 88 89 Email: info@mantis.fr

#### **Mantis UK Limited**

Orchard House Hempshaw Lane Stockport, Cheshire SK1 4LH

Tel.: 08454-58 58 68 Fax: 0161 477 9144

Email: info@mantis-uk.co.uk

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