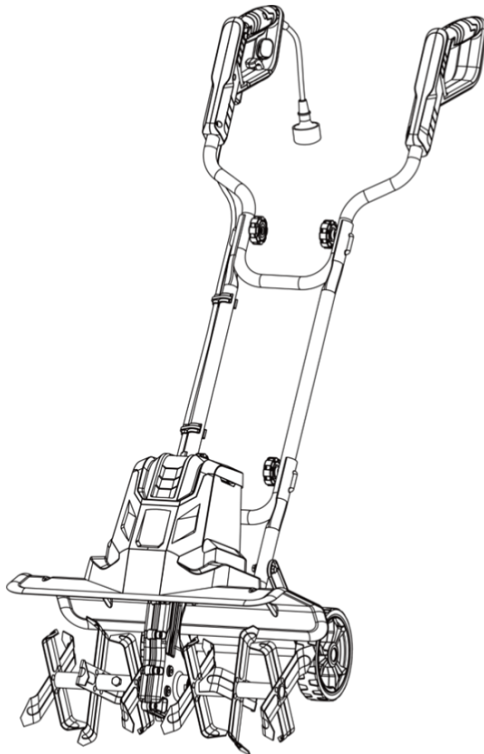


BILT HARD®

TOA-0454(13.5Amp 16inch) Electric Tiller

TOA-0455(14Amp 18inch) Electric Tiller

Owner's Manual



Using tips:
Video on Youtube



inquiry@bilthardusa.com

Customer Support (888)680-2849

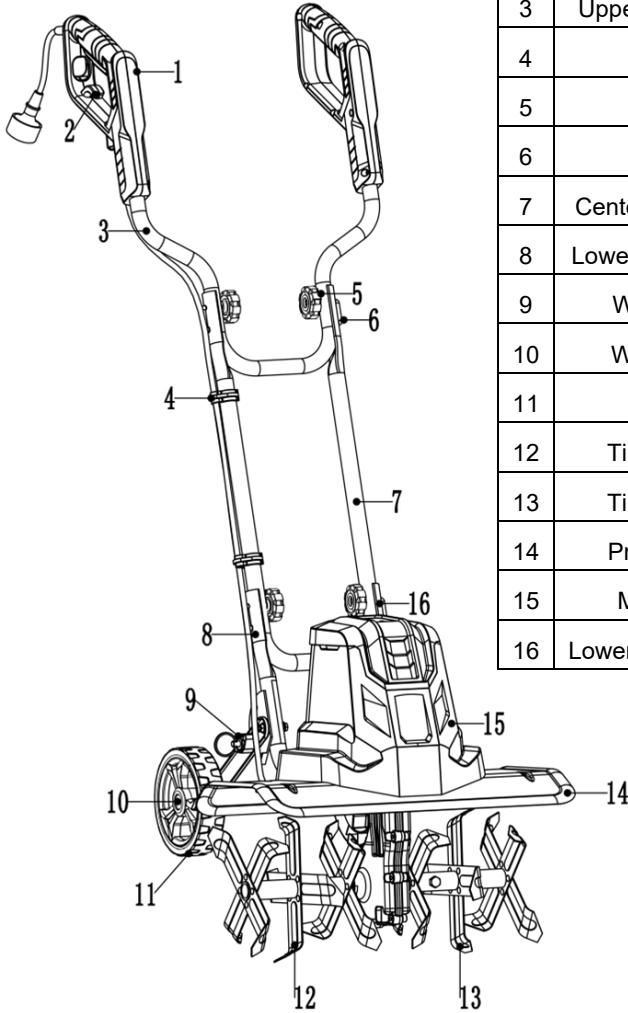
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SPECIFICATIONS

Spec./Model	TOA-0454	TOA-0455
Motor	120V, 60Hz, 13.5A	120V, 60Hz, 14A
No-load Speed	390±10% RPM	390±10% RPM
Working Width	16 inch	18 inch
Working Depth	8 inch	8 inch
Blade Diameter	8 inch	8 inch
Power Cable Length	7.8 inch	7.8 inch
Product Weight	22.93 lbs	23.48 lbs

PARTS LIST



#	Part Name	Qty/Set
1	Main Switch Handle	1
2	Cord Retainer	1
3	Upper Handle Section	1
4	Cable Clip	2
5	Wing Nut	4
6	J Bolt	4
7	Center Handle Section	1
8	Lower Handle Section I	1
9	Wheel Lock Pin	1
10	Wheel Hub Cap	2
11	Wheel	2
12	Tine Assembly 1	1
13	Tine Assembly 2	1
14	Protective shield	1
15	Motor Housing	1
16	Lower Handle Section II	1

SAFETY SYMBOLS

Some of the following symbols may be used on this product. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the product better and safer.



Precautions that involve your safety.



Read the instruction manual and follow the warning and safety instructions!



SWITCH OFF! Remove plug from outlet immediately if the cable is damaged or cut.



SWITCH OFF! Remove plug from outlet before cleaning or maintenance.



Do not use in wet weather conditions.



Wear eye and ear protection.



Keep bystanders at a safe distance.



DANGER! Rotating blades. Keep hands and feet at a safe distance.



DANGER! Beware of being hit by thrown objects.



Waste electrical products should not be disposed of with household waste.

Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice.

SAFETY WARNINGS



IMPORTANT SAFETY WARNINGS



REDUCE RISK OF INJURY: Before any use be sure everyone using this product reads and understands all safety instructions and other information contained in this manual.



CAUTION: Wear appropriate personal hearing protection during use. Under some conditions and duration of use, noise from this product may contribute to hearing loss.



Save these instructions and review frequently prior to use and in instructing others.



WARNING: When using electric gardening appliances, basic safety precautions should always be followed to reduce risk of fire, electric shock, and personal injury, including the following instructions.

GENERAL SAFETY

CHECK FOR DAMAGED PARTS

Before further use of the product, any part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other condition that may affect its operation. Any part that is damaged should be properly repaired or replaced.

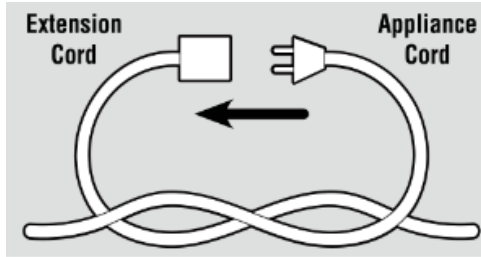
1. **AVOID DANGEROUS ENVIRONMENTS** - Don't use this product in rainy, stormy, damp or wet locations. Do not operate in gaseous or explosive atmospheres. Motors in these products normally spark, and the sparks might ignite fumes.
2. **KEEP CHILDREN AWAY** - All visitors, children and pets should stay at a safe distance from the work area.
3. **DRESS PROPERLY** - Don't wear loose clothing or jewelry and wear protective hair covering to contain long hair. They can be caught in moving parts. Use of rubber gloves and substantial footwear is recommended when working outdoors.
4. **USE SAFETY GLASSES** - Wear safety glasses with side shields or goggles that are marked to comply with ANSI Z87.1 standard when operating this product. Use face or dust mask if the environment is dusty.
5. **DOUBLE INSULATION** - The Tiller has double insulation. This means that all external metal parts are insulated from the electrical supply. This is achieved by introducing an insulation layer between electrical and mechanical parts. Double insulation guarantees you the greatest possible safety.

6. **EXTENSION POWER CORD** - Make sure your extension power cord is in good condition. When using an extension power cord be sure it is heavy enough to carry the current your product will draw. An undersized extension power cord will cause a drop in line voltage resulting in loss of power and overheating. The following table shows the correct size to use depending on power cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the power cord.

Minimum Gage for Cord Sets						
Volts	Total Length of cord in Feet					
120V	0-25	26-50	51-100	101-150		
240V	0-50	51-100	101-200	201-300		
Ampere Rating			American wire Gage			
More Than	Not More Than					
0	-	6	18	16	16	14
6	-	10	18	16	14	12
10	-	12	16	16	14	12
12	-	16	14	12	Not Recommended	

7. **WARNING** - Use outdoor extension power cords marked SW-A, SOW-A, STW-A, STOW-A, SJW-A, SJTW-A, or SJTOWA. These power cords are rated for outdoor use and reduce the risk of electric shock.
8. It is possible to tie the extension power cord and power cord in a knot to prevent them from becoming disconnected during use. Make the knot as shown, then connect the plug end of the power cord into the receptacle end of the extension

power cord. This method can also be used to tie two extension power cords together.



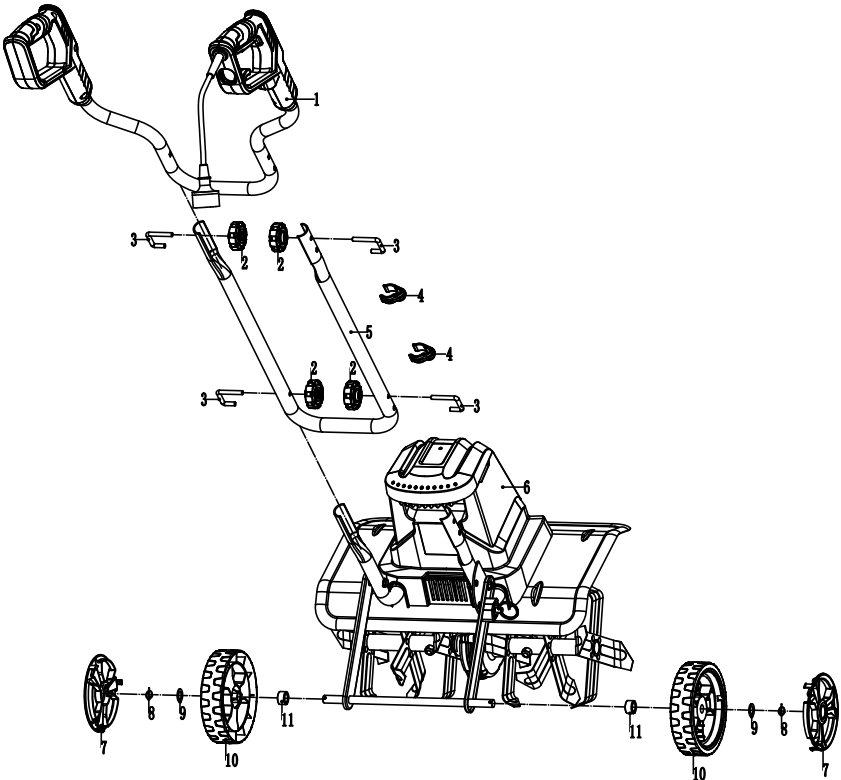
9. Be aware of the extension power cord while operating the Tiller. Be careful not to trip on the power cord. Always guide the power cord away from the tines.
10. **OVERHEAT PROTECTION** - If the Tiller is blocked by a foreign object or if the motor is overloaded, the motor will switch off automatically by the protection device. Release the trigger lever and wait for the motor to cool down (approx. 5 minutes) before starting the Tiller again.
11. **GROUND FAULT CIRCUIT INTERRUPTER (GFCI)** protection should be provided on the circuit or outlet to be used for the Tiller/cultivator. Receptacles are available having built-in GFCI protection and may be used.
12. Disconnect power supply when not in use or when servicing or cleaning. Do not leave unattended.
13. **DON' T ABUSE POWER CORD** - Never carry this product by the power cord or yank the power cord to disconnect from the receptacle. Keep power cord from heat, oil, and sharp edges.
14. **USE RIGHT APPLIANCE** - Do not use this product for any job except that for which it is intended.
15. **DON' T OVERREACH** - Guide the Tiller at a walking pace only. Keep proper footing and balance at all times.
16. **LIGHTING** - Only operate your Tiller in daylight or good artificial light.
17. **STORE IDLE UNIT INDOORS** - When not in use, the Tiller should be stored indoors in a dry area out of children's reach.

18. **MAINTAIN UNIT WITH CARE** - Keep clean for best performance and to reduce the risk of injury. Inspect extension power cord periodically and replace if damaged. Keep handles dry, clean and free from oil.
19. **POLARIZED PLUGS** - To reduce the risk of electric shock, this product has a polarized plug. Polarized connections will fit together only one way. Make sure that the receptacle end of the extension power cord has large and small blade slot widths. If the plug does not fit fully into the extension power cord, reverse the plug. If it still does not fit, obtain a suitable extension power cord. If the extension power cord does not fit fully into the outlet, contact a qualified electrician to install the proper outlet. Do not change the plug on the tool or the extension power cord in any way.
20. Do not operate the Tiller/cultivator on a slope that is too steep for safe operation. When on slopes, slow down and make sure you have good footing.
21. Before starting the Tiller/cultivator make sure the Tiller are not touching any object and are free to move.
22. Grip the guide bar firmly with both hands. Never operate the Tiller/cultivator with one hand.
23. **CAUTION** - The Tiller may bounce upward and/or jump forward if the tines strike extremely hard packed soil, frozen ground, or buried obstacles such as large stones, roots or stumps.
24. **STAY ALERT** - Do not operate the Tiller when you are tired or under the influence of drugs or medication.
25. **WARNING** - Do not operate the Tiller/cultivator near underground electrical cables, telephone lines, pipes or hoses.
26. If the Tiller strikes a foreign body, turn it off immediately, wait for the tines to stop and check for damage. If necessary, repair before restarting.
27. If the Tiller starts to vibrate abnormally, turn it off immediately and check for the cause. Vibration is generally a warning of trouble.

28. **DANGER: RISK OF CUT** -Wear gloves and use caution when cleaning or performing maintenance on the Tiller/cultivator.
29. Always turn off the Tiller, disconnect from the power supply and wait until the tines come to a complete stop before carrying out any maintenance or repairs.
30. **CAUTION** - Tines do not stop immediately after the Tiller/cultivator is turned off.
31. **CAUTION** - Risk of injury. Do not put hands, feet or any body part or clothing near the rotating tines.
32. **WARNING** - Some dust and debris created by the use of this tool could contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Some examples of these chemicals are:
 - Chemicals in fertilizers
 - Compounds in insecticides, herbicides, and pesticides
 - Arsenic and chromium from chemically treated lumber. Your risk from exposure to these chemicals varies, depending on how often you do this type of work. To reduce your exposure, work in a well-ventilated area and with approved safety equipment such as dust masks that are specially designed to filter out microscopic particles.

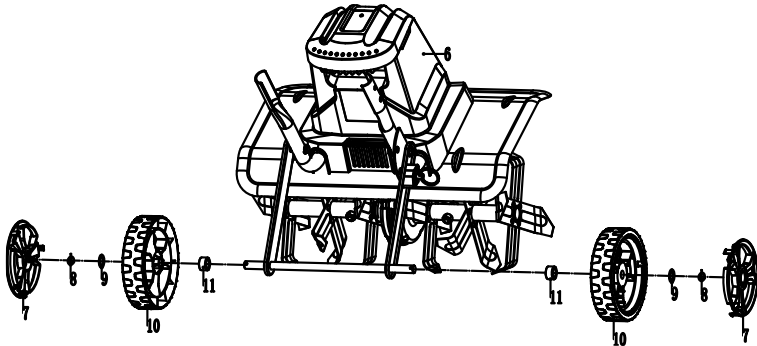
ASSEMBLY

- | | |
|--------------------------|------------------|
| 1. Upper Handle Section | 2. Wing Nut |
| 3. J Bolt | 4. Cable Clip |
| 5. Center Handle Section | 6. Motor Housing |
| 7. Wheel Hub Cap | 8. Ring Pin |
| 9. Washer | 10. Wheel |
| 11. Shaft Sleeve | |

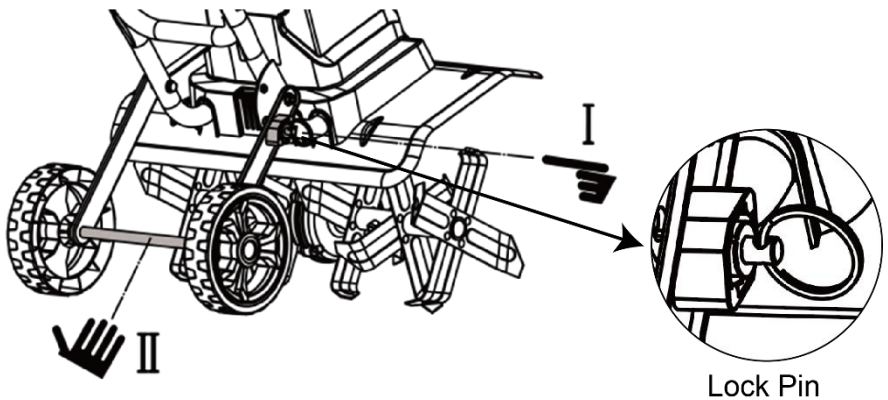


This product must be assembled correctly before use.

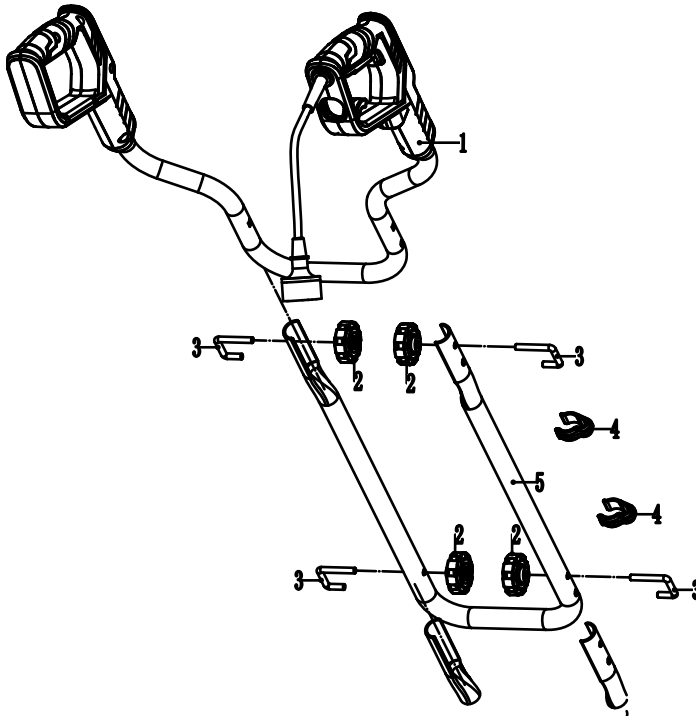
1. First, insert the shaft sleeve(11) into the shafts on both sides of the wheel frame, then insert the wheel(10) into the shaft of the wheel frame, and finally insert the washer(9) into the shaft of the wheel frame and fix it with a ring pin(8). Press the wheel hub(7) cap into the wheel and cover the ends of the axles. You may use a hammer to seat them securely into the wheels.



2. To lower wheel frame. Lower the wheel frame (Step I) and pull out the lock pin on lower handle section (Step II). Align lock pin to the hole in wheel frame then release it to lock the wheel frame in position.



3. Attach the center handle section to the lower handle sections and upper handle section, using the J bolts(3) and wing nuts(2) to fix them. Use the two supplied cable clips(4) to secure the power cord.

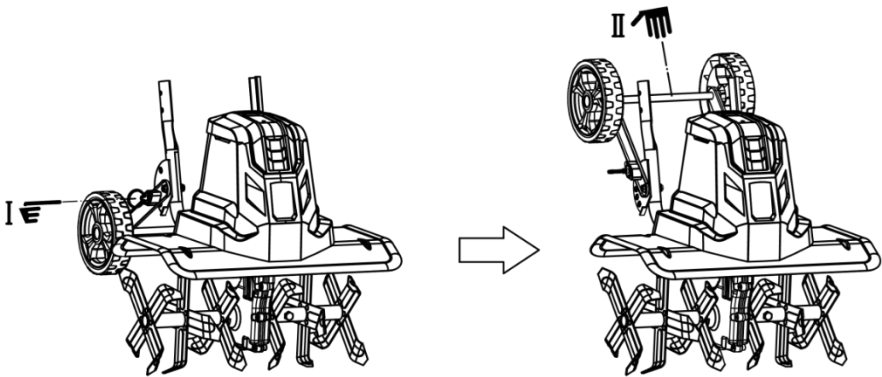


4. **WARNING** - If any parts are damaged or missing do not operate this product until the parts are replaced. Failure to heed this warning could result in serious personal injury.
5. **WARNING** - Do not attempt to modify this product or create accessories not recommended for use with this product. Any such alteration or modification is misuse and could result in a hazardous condition leading to possible serious personal injury.
6. Complete the assembly. Failure to comply could result in accidental starting and possible serious personal injury.

OPERATING

Starting

Make sure the wheel frame is raised before you start the Tiller. To raise the frame, pull out the lock pin (Step I); rotate the wheel frame upward, release the lock pin (Step II). The wheel frame will be locked in place by the lock pin.



Secure the extension power cord into the cord retainer. The loop of the extension power cord must be long enough for the cord retainer to freely slide from one side to the other. Plug the extension power cord into the power cord plug in the Tiller.

Use the Tiller for breaking sod, preparing seed beds, and for cultivating gardens and flower beds. The Tiller can also dig small holes for planting saplings or potted plants.

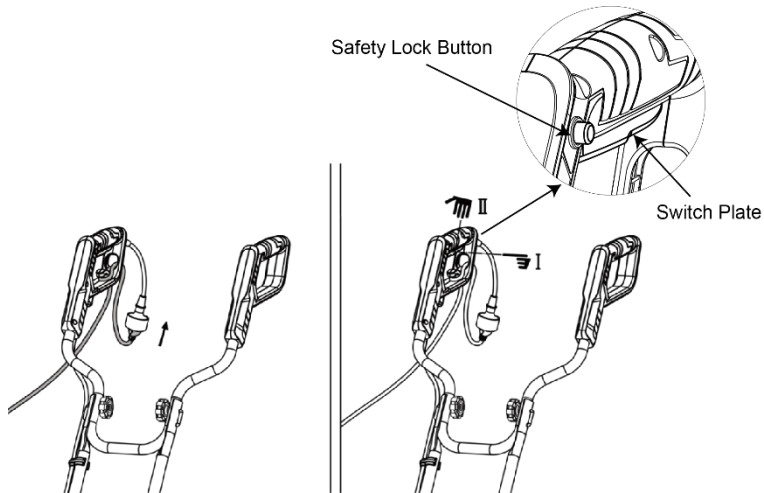
Move the Tiller to the work area prior to starting the motor.

To lower the wheel frame, pull the lock pin on back of motor housing to release the frame. Lower the wheel frame Align lock pin to the hole in wheel frame then release it to lock

the wheel frame in position.

Hold the Tiller firmly while starting. The tines will pull the Tiller forward during operation. Lower the tines slowly with the guide bar.

To start the Tiller, press and hold the safety lock button (I) on the safety switch, and at the same time, turn the switch plate (II). The motor will start and the tines will begin to rotate. To stop the Tiller, simply release the switch plate.



To break the grass or plow deeply, let the rake teeth pull the Tiller forward to a place beyond arm reach, and then firmly pull it towards oneself. By repeatedly pushing it forward and backward, you will get the best results.

Operating

For breaking sod or deep tilling, allow the tines to pull the Tiller forward to the end of your arm's reach, then firmly pull it back toward yourself. You will achieve the best results by repeatedly allowing it to move forward and pulling it back.

By pulling the Tiller back towards yourself, the tines will dig deeper and more aggressively.

To prevent tripping, take extra precautions when moving backwards and when pulling the Tiller back toward yourself.

If the Tiller digs deep enough to stay in one spot, gently rock it side to side until it starts moving forward again.

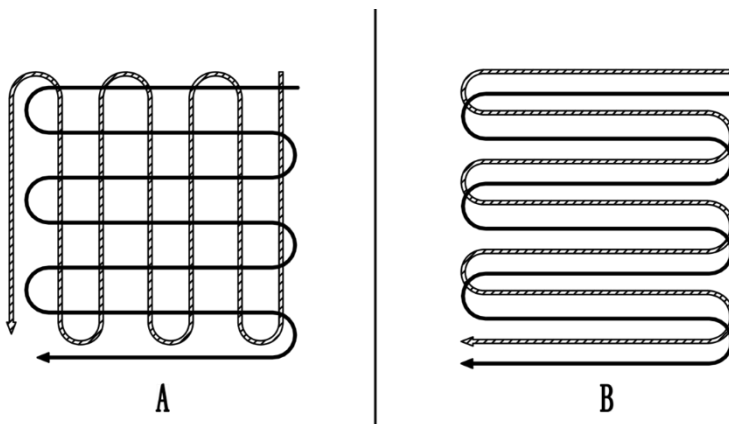
Never pass the Tiller over the extension power cord. Make sure the power cord is always in a safe position behind you.

When working on inclines always stand diagonally to the incline to retain a firm, safe footing. Do not work on extremely steep slopes.

For preparing seed beds, we recommend using one of these tilling patterns:

Tilling Pattern A– Make two passes over area to be tilled, the second at a right angle to the first.

Tilling Pattern B– Make two passes over area to be tilled, the second overlapping the first.



Before use, remove any visible stones or other foreign bodies from the area.

CAUTION: Before moving the Tiller from one area to another switch off the motor and wait for the tines to come to a complete stop. Be careful not to let the tines touch the

ground while moving the Tiller. The tines as well as the unit itself may be damaged even if the motor is switched off.

Clearing foreign objects:

During operation a stone or root could become lodged in the tines, or tall grass or weeds may become wrapped around the tine shaft. To clear the tines or tine shaft release the trigger lever, wait for the tines to come to a complete stop and unplug the Tiller. Dislodge or remove the foreign matter from the tines or tine shaft. To simplify removal of tall grass or weeds from the tine shaft, remove one or more of the tines. See Tine Removal and Installation.

MAINTENANCE

Before carrying out maintenance operations, disconnect power supply.

Before each use check the extension power cord for signs of damage or ageing. Replace the cable if it is cracked, split or otherwise damaged. Check the condition of the tines and ensure that all threaded connections are securely tightened. If the tines become dull or blunt, sharpen or replace them.

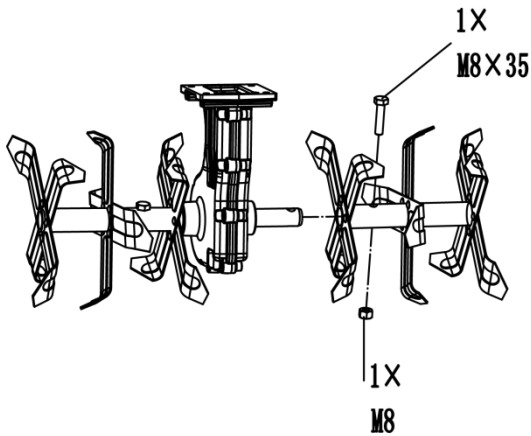
Once per season lubricate the tines and shaft. At the end of the season, check the Tiller for damage prior to storing. Repair or replace damaged or broken parts.

CAUTION: Always clean the Tiller after each use. Failure to carry out proper cleaning can result in damage to the Tiller or result in poor performance.

Clean the underside of the motor support plate and housing around the tines with a scrub brush, and a soft cloth dampened with a mild soap and water mixture. **Never use a water hose to clean the Tiller!** To remove soil and debris from the transmission and tines, use a stiff brush or a dampened cloth. Clean the vents on the motor housing and remove any remaining grass or dirt. Once cleaned, wipe the tines and shaft dry and apply a light coat of oil to prevent rust.

Tines Removal and Installation: Worn tines invite poor performance and overload of the motor. Check tines before each use. Sharpen or replace the tine assemblies with new ones when necessary.

WARNING: Injury can occur while working on the tines. Wear protective gloves.

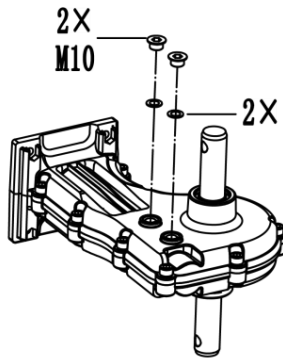


To remove the complete tine assemblies from the shaft, remove the M8 X 35 hex head bolt from the shaft. Remove the tine assembly from the shaft. Reverse above steps to install tines.

Replace worn or damaged parts with original replacement parts only. Parts from another Tiller may not fit properly causing an unsafe situation.

Make sure all protective devices are secure and in good condition. Repair or replace if necessary.

Lubrication The tines drive transmission case has grease installed at the factory. It is not required that the grease level be checked nor recommended that grease be added during the first 2 years of use. After the second season of use, follow the directions as described below:



Drain screw plugs are located on the right side of transmission housing. Lay the Tiller on its left side and clean the transmission of dirt and debris prior to removing the drain screw plugs. If necessary, remove tine assemblies to have better access to the drain screw plug. Use a 5mm hex key to unscrew the plugs.

Using a squeeze bottle or tube, add approximately 2.4 oz. (70ml) of auto gear lube. Do not overfill. When completed, reinstall both drain screw plugs into the transmission.

TROUBLESHOOTING

Problem	Possible Causes	Remedy
Motor does not start	Unit not plugged in No electricity Defective cable Defective safety switch/plug Overheat protection activated	Plug in the unit Check power supply Check power cable. Repair or replace if required Arrange for repair 1. Working depth too large, set to a shorter depth. 2. Blades blocked, remove the blockage. 3. Soil too hard, select correct work depth and move forward and backward several times while slowing down the operation speed. Wait until the motor cools down for about 5 minutes before further use.
Abnormal noises	Blade is jammed Lubrication running out Bolts, nuts or other components are loose.	Switch off. Wait till tines come to a complete stop. Remove jammed objects. Tiller must be repaired. Tighten all components. Arrange for repair if noises continue.
Abnormal vibrations	Blades damaged or worn Working depth too large	Replace damaged or worn blades. Set to correct working depth.
Poor results	Working depth too small Worn blades	Set to correct working depth. Replace damaged or worn blades.

STORAGE

Store the Tiller in a dry, clean area out of reach of children.

During extended periods of storage, ensure that the Tiller is protected against corrosion and frost.。

At the end of the season, or if the Tiller is not being used for longer than a month, wipe over all metal surfaces with an oil impregnated cloth to protect them from corrosion or spray with a fine coat of oil. Fold the guide bar down and store the Tiller in a suitable place.