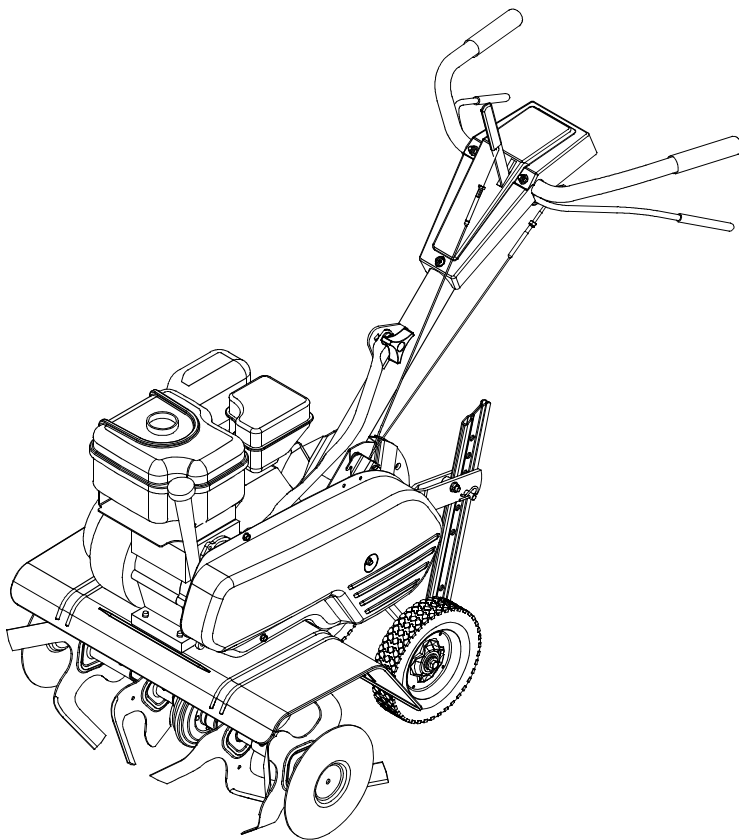




OPERATOR'S MANUAL



Front Tine Tiller Model Number 21A-392B401

IMPORTANT: READ SAFETY RULES AND INSTRUCTIONS CAREFULLY

Warning: This unit is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator. In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. A spark arrester for the muffler is available through your nearest engine authorized service dealer or contact the service department, P.O. Box 361131 Cleveland, Ohio 44136-0019.

MTD LLC P.O. BOX 361131 CLEVELAND, OHIO 44136-0019

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(11/01)

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FINDING MODEL NUMBER

This Operator's Manual is an important part of your new tiller. It will help you assemble, prepare and maintain the unit for best performance. Please read and understand what it says.



Before you start assembling your new equipment, please locate the model plate on the equipment and copy the information from it in the space provided below. The information on the model plate is very important if you need help from our Customer Support Department or an authorized dealer.

- You can locate the model number by looking down at the rear of the tiller. A sample model plate is explained below. For future reference, please copy the model number and the serial number of the equipment in the space below.



Copy the model number here: _____

Copy the serial number here: _____

ENGINE INFORMATION

The engine manufacturer is responsible for all engine-related issues with regards to performance, power-rating, specifications, warranty and service. Please refer to the engine manufacturer's Owner's/Operator's Manual packed separately with your unit for more information.

CALLING CUSTOMER SUPPORT

If you have difficulty assembling this product or have any questions regarding the controls, operation or maintenance of this unit, please call the Customer Support Department.



Call **1- (330) 220-4MTD (4683)** or **1- (800)-800-7310** to reach a Customer Support representative. Please have your unit's model number and serial number ready when you call. See previous section to locate this information. You will be asked to enter the serial number in order to process your call.

For more details about your unit, visit our website at www.yardman.com

SECTION 1: IMPORTANT SAFE OPERATION PRACTICES



WARNING: This symbol points out important safety instructions which, if not followed, could endanger the personal safety and/or property of yourself and others. Read and follow all instructions in this manual before attempting to operate this machine. Failure to comply with these instructions may result in personal injury. When you see this symbol— heed its warning.



WARNING: Engine exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to State of California to cause cancer and birth defects or other reproductive harm.

DANGER: This machine was built to be operated according to the rules for safe operation in this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. This machine is capable of amputating hands and feet. Failure to observe the following safety instructions could result in serious injury or death.

Training

1. Read, understand, and follow all instructions on the machine and in the manual(s) before attempting to assemble and operate. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
2. Be familiar with all controls and their proper operation. Know how to stop the machine and disengage them quickly.
3. Never allow children under 14 years old to operate this machine. Children 14 years old and over should read and understand the operation instructions and safety rules in this manual and should be trained and supervised by a parent.
4. Never allow adults to operate this machine without proper instruction.
5. Keep bystanders, helpers, pets and children at least 75 feet from the machine while it is in operation. Stop machine if anyone enters the area.
8. Extinguish all cigarettes, cigars, pipes and other sources of ignition.
9. Never fuel machine indoors.
10. Never remove gas cap or add fuel while the engine is hot or running.
11. Allow engine to cool at least two minutes before refueling.
12. Never over fill fuel tank. Fill tank to no more than ½ inch below bottom of filler neck to provide space for fuel expansion.
13. Replace gasoline cap and tighten securely.
14. If gasoline is spilled, wipe it off the engine and equipment. Move machine to another area. Wait 5 minutes before starting the engine.
15. Never store the machine or fuel container inside near an open flame, spark or pilot light (e.g. furnace, water or space heater, clothes dryer etc.).
16. Allow machine to cool 5 minutes before storing.

Preparation

1. Thoroughly inspect the area where the equipment is to be used. Remove all stones, sticks, wire, and other foreign objects which could be tripped over and cause personal injury.
2. Wear sturdy, rough-soled work shoes and close fitting slacks and shirt. Loose fitting clothes or jewelry can be caught in movable parts. Never operate this machine in bare feet or sandals.
3. Disengage clutch levers and shift (if provided) into neutral ("N") before starting the engine.
4. Never leave this machine unattended with the engine running.
5. Never attempt to make any adjustments while engine is running, except where specifically recommended in the operator's manual.
6. To avoid personal injury or property damage use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive. Serious personal injury can occur when gasoline is spilled on yourself or your clothes which can ignite. Wash your skin and change clothes immediately.
7. Use only an approved gasoline container.
1. Do not put hands or feet near rotating parts. Contact with the rotating parts can amputate hands and feet.
2. Do not operate machine while under the influence of alcohol or drugs.
3. Never operate this machine without good visibility or light. Always be sure of your footing and keep a firm hold on the handles.
4. Keep bystanders, helpers, pets, and children at least 75 feet from the machine while it is in operation. Stop the machine if anyone enters the area.
5. Be careful when tilling in hard ground. The tines may catch in the ground and propel the tiller forward. If this occurs, let go of the handle bars and do not restrain the machine.
6. Exercise extreme caution when operating on or crossing gravel surfaces. Stay alert for hidden hazards or traffic. Do not carry passengers.
7. Never operate the machine at high transport speeds on hard or slippery surfaces.
8. Exercise caution to avoid slipping or falling.
9. Look down and behind and use care when in reverse or pulling machine towards you.

10. Start the engine according to the instructions found in this manual and keep feet well away from the tines at all times.
 11. After striking a foreign object, stop the engine, disconnect the spark plug wire and ground against the engine. Thoroughly inspect the machine for any damage. Repair the damage before starting and operating.
 12. Disengage all clutch levers and stop engine before you leave the operating position (behind the handles). Wait until the tines come to a complete stop before unclogging the tines, making any adjustments, or inspections.
 13. Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.
 14. Muffler and engine become hot and can cause a burn. Do not touch.
 15. Use caution when tilling near fences, buildings and underground utilities. Rotating tines can cause property damage or personal injury.
 16. Do not overload machine capacity by attempting to till soil to deep at to fast of a rate.
 17. If the machine should start making an unusual noise or vibration, stop the engine, disconnect the spark plug wire and ground it against the engine. Inspect thoroughly for damage. Repair any damage before starting and operating.
 18. Keep all shields, guards and safety devices in place and operating properly.
 19. Never pick up or carry machine while the engine is running.
 20. Use only attachments and accessories approved by the manufacturer. Failure to do so, can result in personal injury.
 21. If situations occur which are not covered in this manual, use care and good judgment. Contact your dealer or telephone 1-800-800-7310 for assistance and the name of your nearest servicing dealer.
7. Never store the machine or fuel container inside where there is an open flame, spark or pilot light such as a water heater, furnace, clothes dryer etc.
 8. Always refer to the operator's manual for proper instructions on off-season storage.
 9. If the fuel tank has to be drained, do this outdoors.
 10. Observe proper disposal laws and regulations for gas, oil, etc. to protect the environment.

Your Responsibility

1. Restrict the use of this power machine to persons who read, understand and follow the warnings and instructions in this manual and on the machine.
2. The safety label on the tiller is reproduced below for your review. To ensure safe operation of the tiller, follow the instructions on all labels closely.



Maintenance & Storage

1. Never tamper with safety devices. Check their proper operation regularly.
2. Check bolts and screws for proper tightness at frequent intervals to keep the machine in safe working condition. Also, visually inspect machine for any damage.
3. Before cleaning, repairing, or inspecting, stop the engine and make certain the tines and all moving parts have stopped. Disconnect the spark plug wire and ground it against the engine to prevent unintended starting.
4. Do not change the engine governor settings or over-speed the engine. The governor controls the maximum safe operating speed of the engine.
5. Maintain or replace safety and instruction labels, as necessary.
6. Follow this manual for safe loading, unloading, transporting, and storage of this machine.

SECTION 2: ASSEMBLING YOUR TILLER

IMPORTANT: This unit is shipped without gasoline or oil in the engine. Be certain to service engine with gasoline and oil as instructed in the separate engine manual before operating your mower.

NOTE: Reference to right or left hand side of the tiller is observed from the operating position.

Removing Unit From Carton

- Remove staples, break glue on top flaps, or cut tape at carton end and peel along top flap to open carton.
- Remove loose parts if included with unit (i.e., operator's manual, etc.)
- Cut along corners, lay carton down flat, and remove packing material.
- Roll or slide unit out of carton and check carton thoroughly for loose parts.
- Extend control cables to the rear of the tiller and lay them on the floor. Be careful not to bend or kink control cables.

Loose Parts In Carton

Tailpiece and Depth Stake

NOTE: All hardware needed for assembly is attached to the loose parts or the tiller.

Before Assembly



WARNING: Disconnect the spark plug wire and ground it against the engine to prevent unintended starting.

Setting Up Your Tiller

Attaching The Tailpiece And Depth Stake

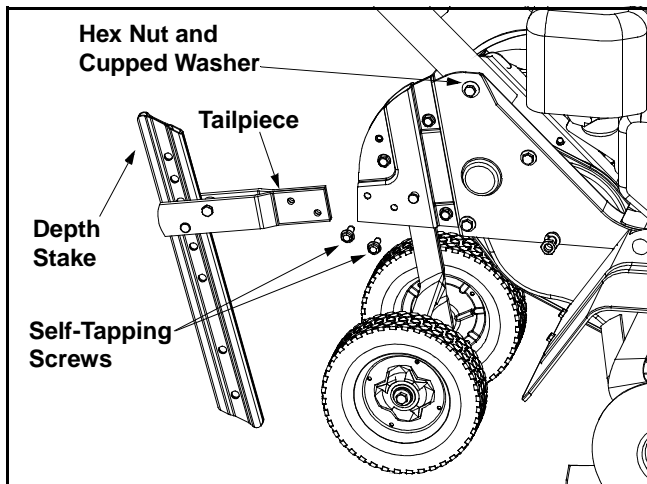


Figure 1

- Remove the two self-tapping screws on the frame and slide the tailpiece into the frame, with the lower hole in the tailpiece toward the front. See Figure 1.
- Secure tailpiece with screws just removed.

Attaching The Handle Assembly

- Remove the hex bolt and cupped washer from the top right side of the frame halves. Hold the cable guide bracket on the left side of the frame as it will fall when the bolt is removed. See Figure 1.
- Insert the handle assembly between the two frame halves and insert the hex bolt just removed through the frame halves, handle assembly, and into the cable guide bracket (notch in cable bracket goes over the flange on the frame). Tighten securely.
- Remove the handle knob and hardware from the handle brace. Insert the carriage screw through the welded bracket on the handle and into the end of the handle brace. See Figure 2.
- Secure with bell washer and handle knob.
- Select one of the three handle height positions (three notches in welded bracket), and tighten the handle knob to secure the handle in desired position. Make certain the carriage screw is seated securely into one of the three positions provided.

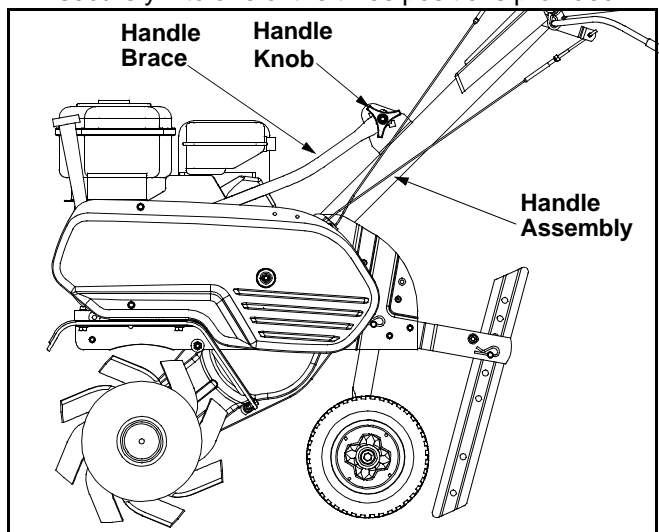


Figure 2

Attaching Clutch Control Cables

Attach the end of the forward clutch cable, which is located in the rear of the tiller, to the bracket underneath the handle assembly as follows:

- Loosen the hex nut on the threaded rod near the end of the cable and move it up the rod as far as it will go. See Figure 3.
- Unthread the rod from the rest of the cable and hook the "Z" end of the rod into the bracket underneath the handle assembly from the right hand side.

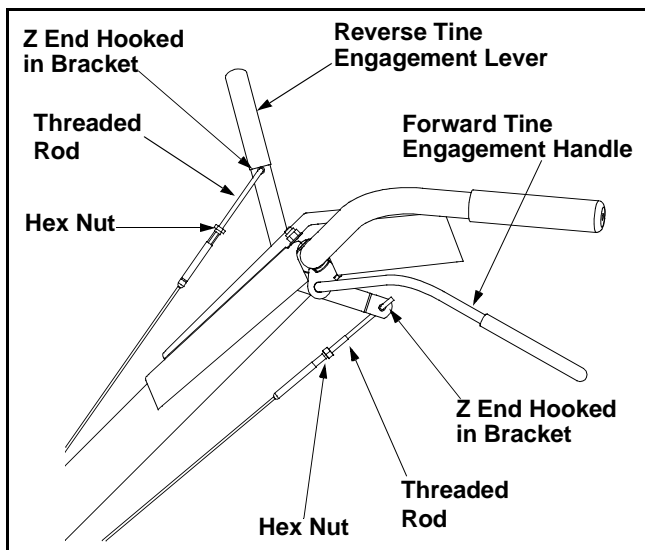


Figure 3

- Thread the rod back into the cable until the cable is straight. Do not tighten it enough to put any tension on the spring. See Figure 3.
- Thread the hex nut down against the end of cable. Use a pair of pliers and a wrench to lock the nut against the rod.

The reverse clutch cable is attached to the front of the tiller. Attach the end of the reverse cable to the reverse tine engagement handle above the handle assembly in the same manner as the forward cable. See Figure 3.

NOTE: Do not overtighten control cables. Too much tension may cause it to break when engaged.

Final Clutch Adjustment

To check the clutch cables, proceed as follows:

- Disconnect the spark plug wire and move it away from the spark plug to prevent accidental starting.
- Engage and release the forward tine engagement handle, then the reverse tine engagement lever. If an excessive noise is heard when releasing either the tine drive clutch handle or lever, the cable may be too loose. Adjust either the forward or reverse clutch cable by loosening the hex nut, threading the rod into the cable one or two turns, then retightening the nut. See Figure 4.
- With tine engagement handles in neutral, pull the starter rope several times. **The tines should not turn.** If they turn forward, loosen the hex nut on the forward cable. If they turn toward the rear, loosen the hex nut on the reverse cable and unthread the rod from the cable two or three turns. Retighten the hex nut and check again for correct adjustment.

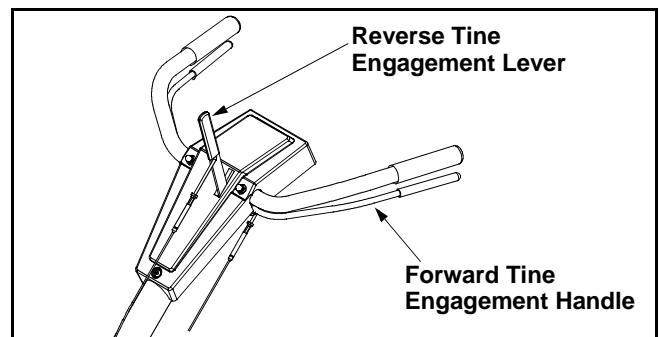


Figure 4

SECTION 3: KNOW YOUR TILLER

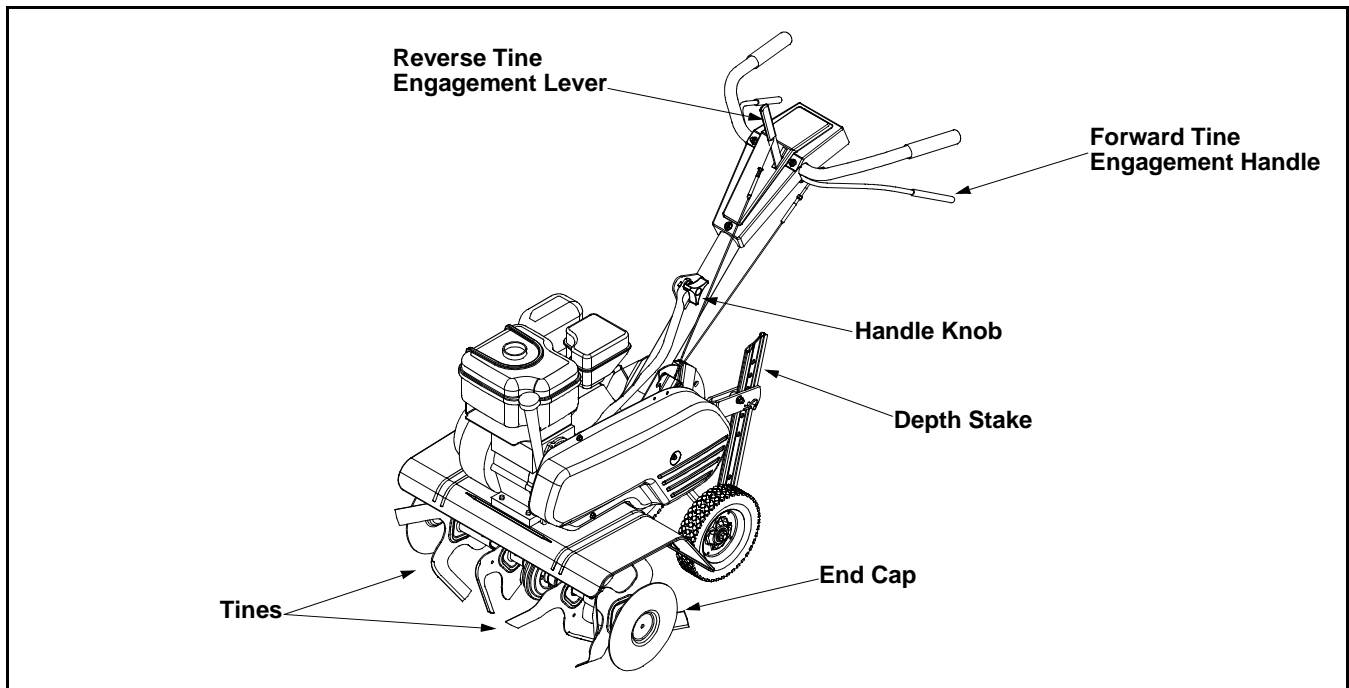


Figure 5



WARNING: Read, understand, and follow all instructions and warnings on the machine and in this manual before operating.

Forward Tine Engagement Handle

The forward tine engagement handle is located beneath the tiller handle. Squeezing the handle up against the tiller handle engages the tines. Release the handle to stop the tines. See Figure 5.

Reverse Tine Engagement Lever

The reverse tine engagement lever is located on top of the handle panel. Pull the lever to the rear to move the tines in reverse. Release the lever to stop the reverse tine drive. See Figure 5.

NOTE: *Never engage both the forward and reverse tine controls at the same time. Engaging both forward and reverse tine drives at the same time could damage the belt drives and cause the engine to stall.*

Depth Stake

The depth stake is located in the rear of the tiller and it controls the tilling depth. See the Operating Your Tiller section for more details.

Tines And End Caps

The tilling tines and end caps are used to cultivate,

furrow, and prepare your garden for seeding. The end caps are used to avoid tilled soil from overflowing onto unwanted areas.

Handle Knob

The handle knob is attached to the handle brace and it is used to adjust the height of the handle to three different settings.

Throttle Control

The throttle control lever is located on the engine. It controls the engine's speed and stops the engine.

- With the throttle control pushed completely forward, the carburetor is in START or FAST position. Use maximum engine speed for deep tilling.
- Pull the throttle control back to reduce engine speed to IDLE. Throttle control should be at IDLE for transporting the tiller.
- Pull the throttle completely back to stop the engine.

Choke Lever

The choke lever is located near the throttle control. It is used to enrich the fuel mixture when starting a cold engine.

Engine Controls

See the separate engine manual for the location and function of other controls on the engine.

SECTION 4: OPERATING YOUR TILLER



WARNING: Read, understand, and follow all instructions and warnings on the machine and in this manual before operating.

Before Starting

Gas And Oil Fill-Up

Service the engine with gasoline and oil as instructed in the separate engine manual packed with your tiller. Read instructions carefully.



WARNING: Use extreme care when handling gasoline. Gasoline is extremely flammable and the vapors are explosive. Never fuel machine indoors or while the engine is hot or running.

Starting Engine



WARNING: Be sure no one is standing in front of the tiller while the engine is running or being started.

- Attach spark plug wire to spark plug. Make sure the metal cap on the end of the spark plug is fastened securely over the metal tip on the spark plug.
- Make certain the tine engagement controls are in the neutral position.
- Place the throttle control in the FAST position.
- Move choke lever to CHOKE position. A warm engine requires little or no choke.
- Grasp starter handle and pull rope out slowly until engine reaches start of compression cycle (rope will pull slightly harder at this point). Let the rope rewind slowly.
- Pull rope with a rapid, continuous, full arm stroke. Keep a firm grip on starter handle. Let rope rewind slowly. Do not let starter handle snap back against starter. Repeat until engine starts.
- When engine starts, move choke lever on engine halfway between CHOKE and RUN. As the engine warms up, move the lever to RUN position.

Stopping Engine

- Move throttle control lever to STOP or OFF position.

- Disconnect spark plug wire from spark plug and ground against the engine.

Using Your Tiller

Your tiller is a precision built machine designed for seed bed preparation, cultivating, furrowing, and mulching. It is engineered to minimize the hardest work in the vegetable or flower garden, to till the soil for planting and cultivating, and to perform many other useful labor saving tasks in the garden.

Wheel Position

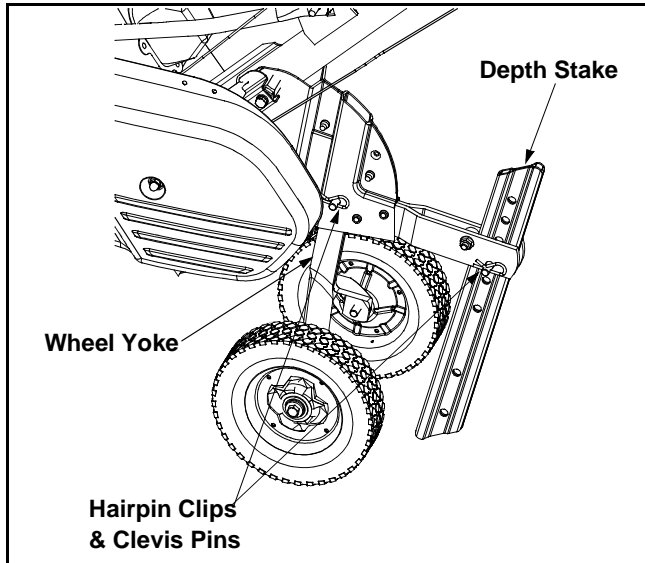


Figure 6

The tiller is shipped with the wheels adjusted such that the unit sits level. While tilling, as the tines enter the ground and the front of the tiller lowers, the wheels must be raised to level the unit, which is essential for proper engine operation. This adjustment is made by removing the clevis pin and hairpin clip from wheel yoke, raising the wheels to the desired height, and replacing the clevis pin and hairpin clip. See Figure 6.

Removing End Caps

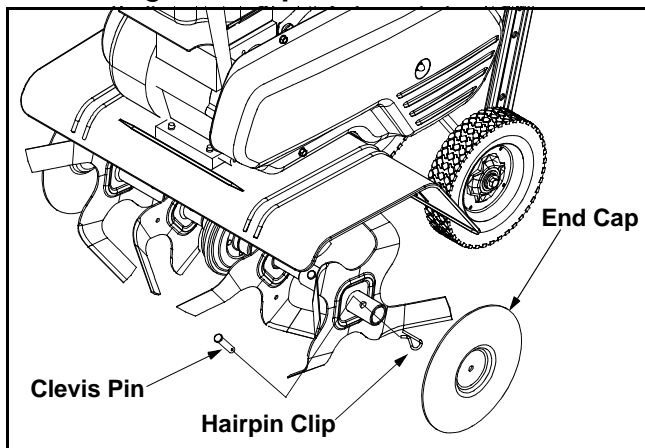


Figure 7

The end caps are used to avoid tilled soil from overflowing onto unwanted areas. They are removable from the outer axle by removing the hairpin clip and clevis pin that secures each end cap. Slide end cap off the axle. See Figure 7.

Controlling Speed And Tilling Depth

Wheel Yoke Adjustment

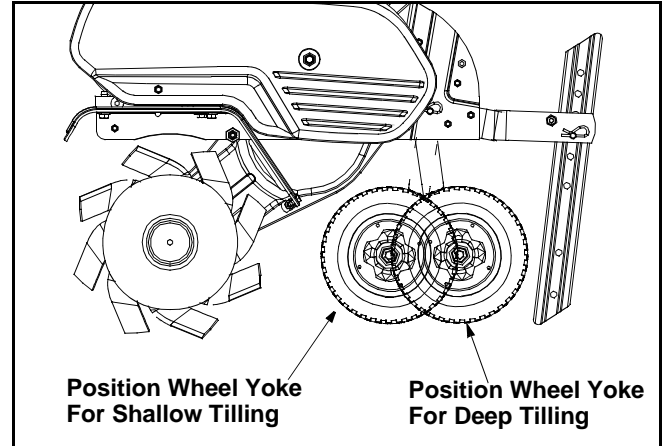


Figure 8

Place wheel yoke so that the wheels are forward (nearest point between wheels and tines) for shallow tilling, cultivating, and transport. The forward speed will increase. Turn yoke around (farthest point from the tines) for deep tilling. Forward speed will decrease in this position. See Figure 8.

Depth Stake Adjustment

The depth stake acts as a brake for the tiller and controls the depth and speed at which the machine will operate. Remove the clevis pin and hairpin clip to raise or lower depth stake. Refer to Figure 6.

By increasing the depth of the depth stake, the forward speed of the machine is reduced, and the working depth is increased. When the depth stake is raised, the working depth of the machine is reduced and the forward speed is increased. The working depth of the machine may be predetermined by setting the depth stake and wheels so that the wheels are about four inches from the ground when the tines and depth stake are resting on the ground. This setting will permit a working depth of about four inches. When presetting the working depth, the handles should be adjusted so the hand grips are a little above waist height because the tiller will be lower when the tines and depth stake penetrate the ground. See Figure 9.

When tilling, leave approximately 8 inches of untilled soil between the first and second tilling paths, then make the third path between the first and second. In some soils, the desired depth is obtained by going over the garden two or three times. In the latter case, the depth stake should be lowered before each succeeding pass over the garden. Passes should be made across the length and width of the garden alternately. Rocks

which are turned up should be removed from the garden area. See Figure 10.

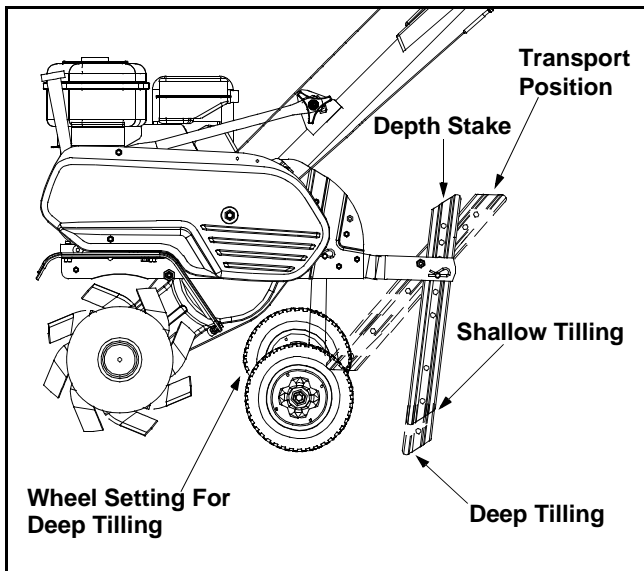


Figure 9

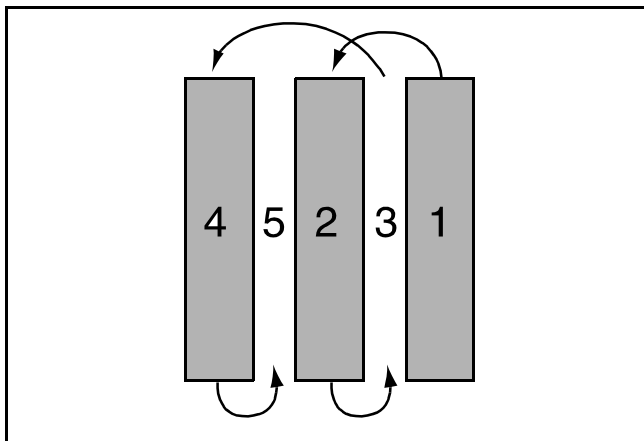


Figure 10

Handle Pressure

Further control of tilling depth and travel speed can be obtained by variation of pressure on the handles.

- A downward pressure on the handles will reduce the working depth and increase the forward speed.
- An upward pressure on the handles will increase the working depth and reduce the forward speed.

The type of soil and working conditions will determine the actual setting of the depth stake and the handle pressure required.

Transporting The Tiller

To transport the tiller to or from the garden, pivot the depth stake forward and out of the way. With the throttle control in SLOW position, the unit will walk freely on the lawn. If the operator does not allow the tiller to move freely, the unit will start to till the surface. Refer to Figure 9

Cultivating

For cultivating, a two to three inch depth is desirable. Setting the wheels and depth stake so that the wheels are about two inches above the ground while the tiller is resting on the tines and depth stake will allow the machine to work at cultivating depth. The throttle should be set to control forward movement to a slow walking speed. With the outer tine installed, the working width of the machine is 22 or 24 inches. For cultivation, this may be reduced to 13 inches by removing the outer tines. Refer to the Adjustment Section. When laying out plant rows, be sure to allow enough width to permit cultivation between the rows. In growing corn or similar crops, check-row planting will permit cross cultivation and practically eliminate hand hoeing. See Figure 11.

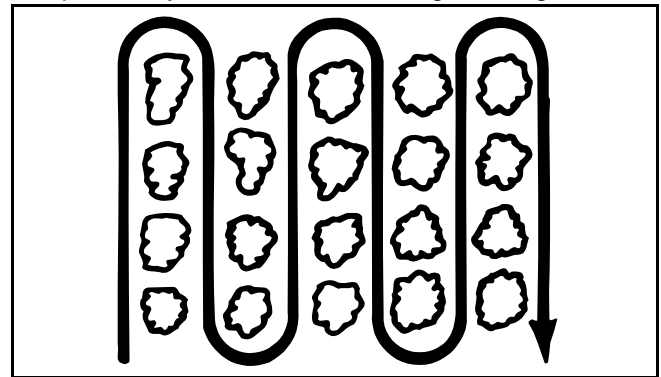


Figure 11

The tiller has many uses other than tilling and cultivating a garden. One of these is the preparation of lawn area for seeding. The tiller will prepare a deep seed bed which will be free of hard untilled spots, allowing a better stand of grass to grow. The tiller is very useful for loosening hard soil for excavation with a shovel. No tedious hand work will be necessary. Your tiller may be used for mixing compost in the pile, or for mixing it with the soil in your garden. This should be done after the soil has been broken to the full working depth. The compost should be worked in to a depth of six to seven inches. This may be done by working the length of the garden, and then by making separate passes across its width. The addition of decayed organic matter will substantially increase the fertility of your garden. For proper decaying action, fertilizer should be applied and worked in with the mulch materials. Breaking up leaves and straw and mixing it with several inches of soil causes the soil to hold moisture longer and allows proper aeration of the plant root system. This retards the growth of weeds.

SECTION 5: MAKING ADJUSTMENTS



WARNING: Disconnect the spark plug wire and ground it against the engine before performing any adjustments.

Engine Adjustment

Refer to the separate engine manual for engine adjustment instructions.

Wheel Adjustment

To adjust the wheel yoke and wheel position, refer to the Operating Section.

Depth Stake Adjustment

To adjust the depth stake to a desired position, refer to the Operating Section.

Clutch Control Adjustment

Periodic adjustment of the belt tension may be required due to normal stretch and wear on the belt. To adjust the clutch control lever, refer to the Assembly Section.

Tine Width Adjustment

The tilling width of the unit is 22 inches. Tilling width can be increased to 24 inches by removing the clevis pins and hairpin clips, sliding the outer tine out one inch, and securing in this position with the clevis pins and hairpin

clips. For cultivation, reduce the tine width to 13 inches by removing the outer tines completely. See Figure 12.

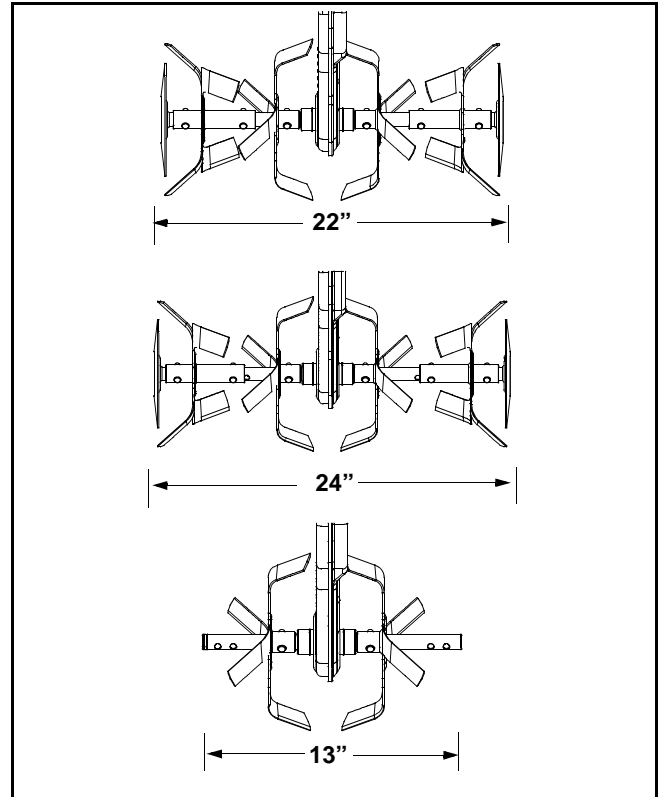


Figure 12

SECTION 6: MAINTAINING YOUR TILLER



WARNING: Disconnect the spark plug wire and ground it against the engine before performing any repairs or maintenance.

Engine

Refer to the separate engine manual for engine maintenance instructions.

Maintain **engine oil** as instructed in the separate engine manual packed with your unit. Read and follow instructions carefully.

Service **air cleaner** every ten hours under normal conditions. Clean every hour under extremely dusty conditions. Poor engine performance and flooding usually indicates that the air cleaner should be serviced. To service the air cleaner, refer to the separate engine manual packed with your unit.

IMPORTANT: Never run your engine without air cleaner completely assembled.

The **spark plug** should be cleaned and the gap reset every 25 hours of engine operation. Spark plug

replacement is recommended at the start of each tiller season; check engine manual for correct plug type and gap specification.

Clean the engine regularly with a cloth or brush. Keep the cooling system (blower housing area) clean to permit proper air circulation which is essential to engine performance and life. Be certain to remove all dirt and combustible debris from muffler area.

Lubrication

Transmission

The transmission is pre-lubricated and sealed at the factory. It requires no checking unless the transmission is disassembled. See an authorized service dealer if the transmission is disassembled.

Tine Engagement Handle/Lever

Lubricate the pivot points on the tine handle/lever and the cable at least once a season with light oil. The controls must operate freely in both directions.

Pivot Points

Lubricate all pivot points and linkages at least once a season with light oil.

Tine Shafts

Remove tine assemblies and lubricate the tine shafts at least once a season.

Wheel Shafts

Remove wheel assemblies and lubricate the axle shafts at least once a season.

Cleaning Tine Area

Clean the underside of the tine shield after each use. The dirt washes off the tines easier if washed off immediately instead of after it dries.

Belt Replacement

Reverse Drive Belt

- Disconnect and ground the spark plug wire against the engine.
- Remove the two hex washer screws from the front of the belt cover and remove the lock nut and flat washer from the side of the belt cover.
- Remove the belt cover. See Figure 13.

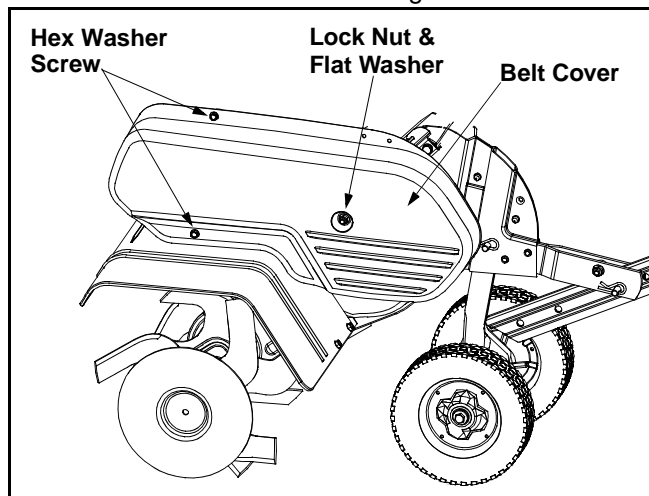


Figure 13

- Lift the belt off the transmission pulley.
- Remove the hex nut which secures the reverse idler pulley to the idler bracket. Slide idler pulley out and remove the belt. See Figure 14.
- Reassemble the new belt following instructions in reverse order. Make certain the reverse drive belt is assembled with the wide side of the belt against the transmission and engine pulleys. Be certain to adjust the clutch control as instructed in the Assembly Section.

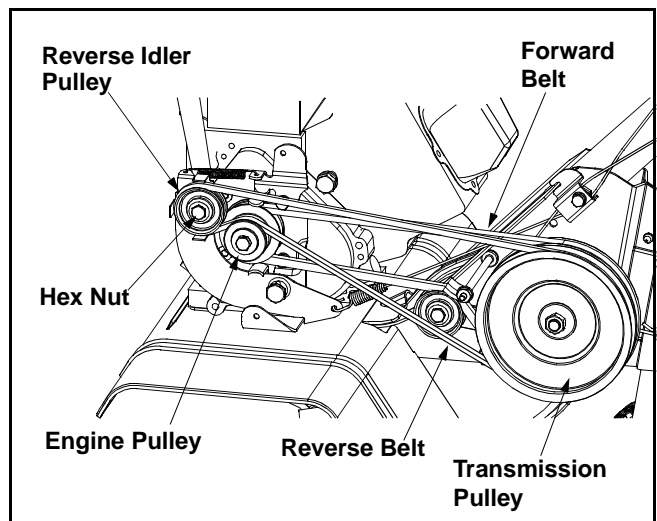


Figure 14

Forward Drive Belt

- Remove the reverse drive belt as instructed in the previous section.
- Remove the belt keeper from the idler pulley by removing the idler pulley nut. See Figure 15.
- Lift belt off the idler pulley and transmission pulley and remove bolt from engine pulley.
- Push reverse idler pulley bracket forward and remove engine pulley and belt.
- Reassemble the new belt following instructions in reverse order. Make certain the forward drive belt is assembled with the wide side of the belt away from the transmission and engine pulleys. Be certain to adjust the clutch control as instructed in Assembly Section.

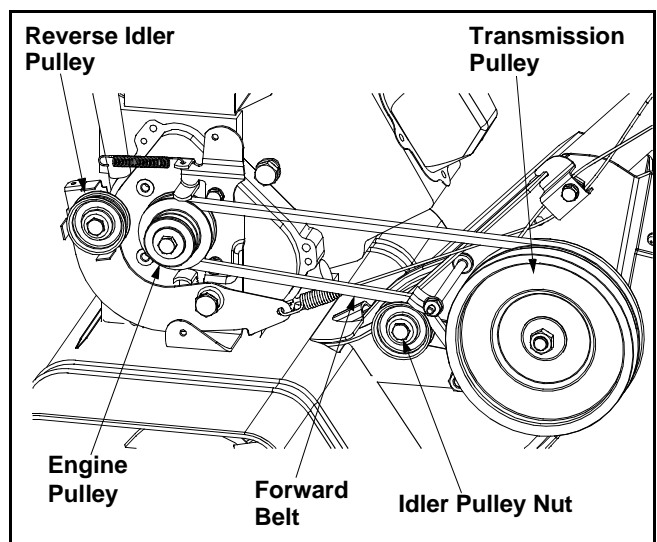


Figure 15

Off-Season Storage

If the tiller will not be used for a period longer than 30 days, the following steps should be taken to prepare the tiller for storage.

- Clean the exterior of engine and the entire tiller thoroughly. Lubricate the tiller as described in the lubrication instructions.
- We do not recommend the use of pressure washers to clean your unit. They may cause damage to electric components, spindles, pulleys, bearings or the engine. The use of pressure washers will result in shortened life and reduce serviceability.
- Refer to the engine manual for correct engine storage instructions.

- Wipe tines with oiled rag to prevent rust.
- Store tiller in a clean, dry area. Do not store next to corrosive materials, such as fertilizer.

NOTE: *When storing any type of power equipment in an unventilated or metal storage shed, care should be taken to rustproof the equipment. Using a light oil or silicone, coat the equipment and especially any springs, bearings, and cables.*

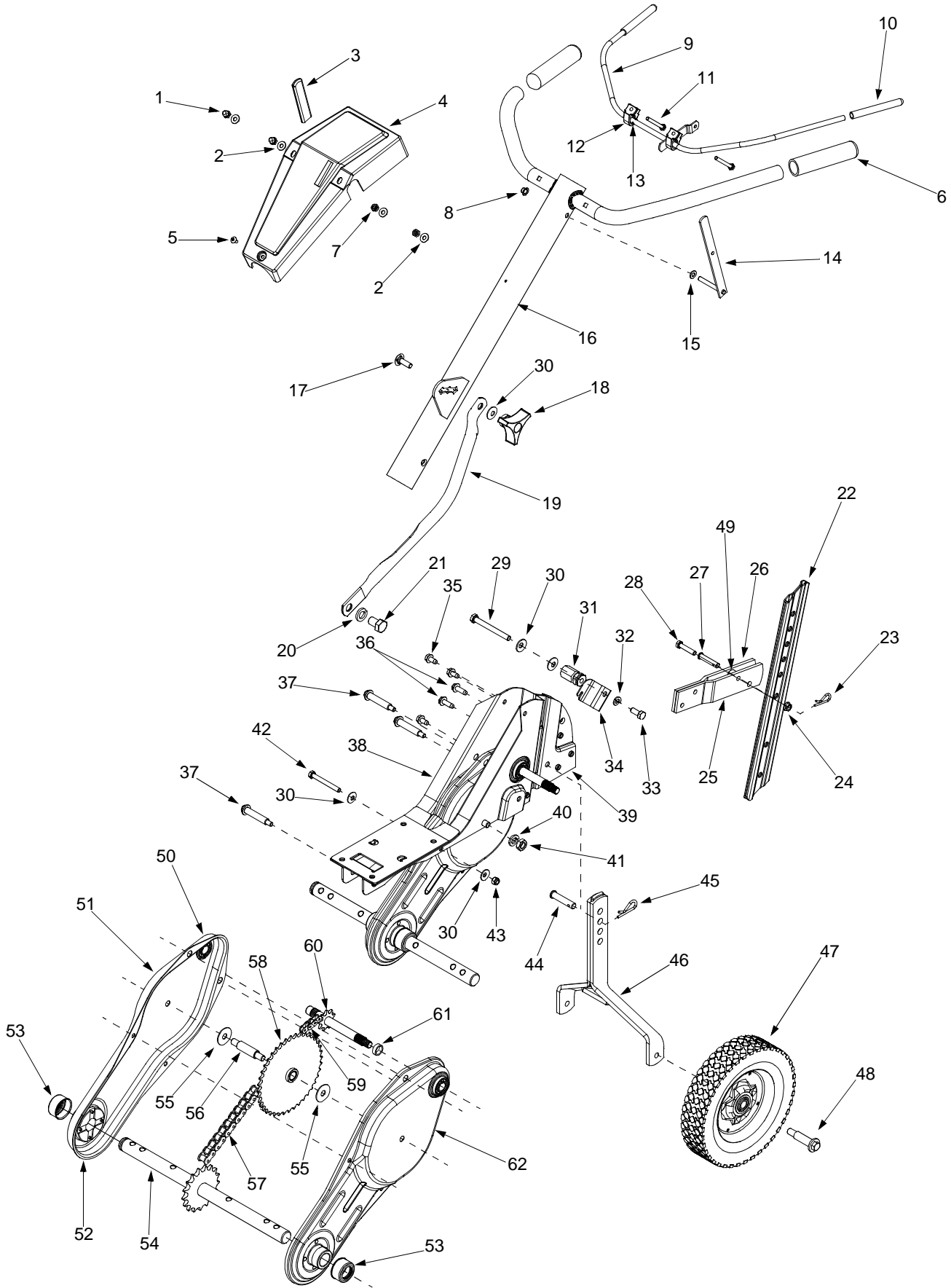
SECTION 7: TROUBLESHOOTING

Problem	Cause	Remedy
Engine fails to start	<ol style="list-style-type: none"> 1. Spark plug wire disconnected. 2. Fuel tank empty or stale fuel. 3. Throttle control lever not in correct starting position. (If Equipped) 4. Choke not in ON position. 5. Blocked fuel line. 6. Faulty spark plug. 7. Engine flooded 	<ol style="list-style-type: none"> 1. Connect wire to spark plug. 2. Fill tank with clean, fresh gasoline. 3. Move throttle lever to start position. 4. Move switch to ON position. 5. Clean fuel line. 6. Clean, adjust gap, or replace. 7. Wait a few minutes to restart, but do not prime.
Engine runs erratic	<ol style="list-style-type: none"> 1. Spark plug wire loose. 2. Unit running on CHOKE. 3. Blocked fuel line or stale fuel. 4. Vent in gas plugged. 5. Water or dirt in fuel system. 6. Dirty air cleaner. 7. Carburetor out of adjustment. 	<ol style="list-style-type: none"> 1. Connect and tighten spark plug wire. 2. Move choke lever to OFF position. 3. Clean fuel line; fill tank with clean, fresh gasoline 4. Clear vent. 5. Drain fuel tank. Refill with fresh fuel. 6. Clean air cleaner. 7. Adjust carburetor.
Engine overheats	<ol style="list-style-type: none"> 1. Engine oil level low. 2. Dirty air cleaner. 3. Air flow restricted. 4. Carburetor not adjusted properly. 	<ol style="list-style-type: none"> 1. Fill crankcase with proper oil. 2. Clean air cleaner. 3. Remove blower housing and clean. 4. Adjust carburetor.
Tines do not engage	<ol style="list-style-type: none"> 1. Foreign object lodged in tines. 2. Tine clevis pin(s) missing. 3. Pulley and idler not in correct adjustment. 4. Control cable not adjusted properly. 5. Belt worn and/or stretched. 	<ol style="list-style-type: none"> 1. Dislodge foreign object. 2. Replace tine clevis pin(s). 3. Take unit to authorized service dealer. 4. Adjust control cable. 5. Replace belt.

NOTE: *For repairs beyond the minor adjustments listed above, contact your nearest authorized service dealer.*

Notes

Model 392



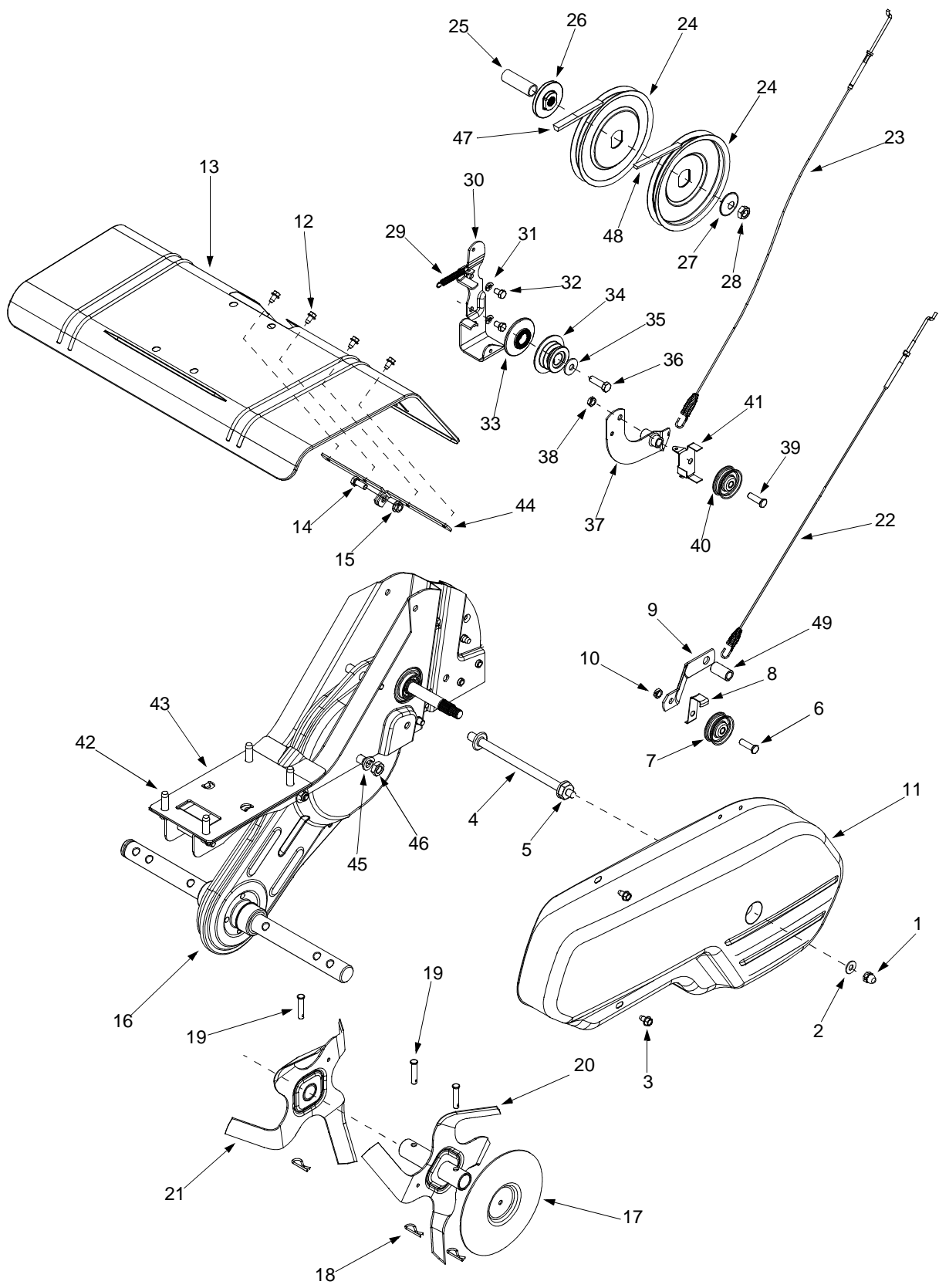
Model 392

Ref. No.	Part No.	Part Description	Ref. No.	Part No.	Part Description
1.	712-0442	Acorn Lock Nut 1/4-20	32.	736-0119	L-Wash. 5/16" I.D.
2.	736-3020	Flat Washer .271" I.D. x .630" O.D.	33.	710-3008	Hex Bolt 5/16-18 Gr. 5
3.	720-0270A	Reverse Handle Grip	34.	786-0129	Cable Guide Bracket
4.	731-1600	Handle Cover	35.	710-0604A	Hex Wash Screw 5/16-18 x .62"
5.	710-0779A	Truss Mach. Scr. #10 x 1/2" Lg.	36.	710-0602	Hex Wash. Hd. TT-Tap Scr.
6.	720-0274	Grip-Handle	37.	738-0934	Shdl. Bolt 5/16-18
7.	712-0287	Hex Nut 1/4-20 Gr.2	38.	786-0138A	Frame (R.H.)
8.	726-0135	Cap Speed Nut	39.	786-0139A	Frame (L.H.)
9.	686-0083	Clutch Handle Assembly	40.	736-0171	Lock Washer 7/16
10.	720-0269	Grip-Clutch	41.	712-0240	Jam Nut 7/16-20 Gr. 2
11.	710-0641	Hex Bolt 1/4-20 x 2.25" Lg. Gr.5	42.	710-0176	Hex Bolt 5/16-18 x 2.75" Lg.
12.	731-1645A	Clutch Handle Holder	43.	712-0429	Hex Nut 5/16-18 Thd.
13.	736-0140	Flat Washer .385" I.D. x .62" O.D.	44.	711-0415	Clevis Pin
14.	686-0014A	Reverse Handle Ass'y	45.	714-0149B	Cotter Pin
15.	736-0264	Flat Washer .344" I.D. x .62" O.D.	46.	686-0081A	Wheel Hanger Brkt. Assy
16.	649-0022B	Handle Assembly Comp.	47.	734-1566	Wheel Ass'y 8" x 1.75"
17.	710-1236	Carriage Screw 5/16-18 x 1.0	48.	738-0929	Shoulder Screw .496 x 1.445
18.	720-0195	Hand Knob	49.	750-0890	Spacer
19.	749-1401	Handle Brace	50.	686-0091	Chain Case Assembly Complete
20.	736-0921	Lock Washer 1/2	51.	686-0090	Chain Case RH
21.	710-3194	Hex Bolt 1/2-20 Gr. 5	52.	721-0215	Gasket
22.	786-0005	Depth Bar	53.	721-0378	Shaft Seal 1.0
23.	714-0149B	Cotter Pin	54.	686-0010	Shaft Assembly
24.	712-3004A	Hex Flange L-Nut 5/16-18	55.	736-0406	Flat Washer .442 ID x 1.38 OD
25.	786-0003	Tail Piece Bracket (L.H.)	56.	738-0843	Jack Shaft
26.	786-0004	Tail Piece Bracket (R.H.)	57.	713-0328	Chain #50 x 46 Links
27.	711-0415	Clevis Pin	58.	613-0001A	Sprocket Assembly
28.	710-0805	Hex Bolt 5/16-18 x 1.5" Lg.	59.	713-0312	Chain #420 x 46 Links
29.	710-0189	Hex Bolt 5/16-18 x 3" Lg.	60.	613-0003A	Input Shaft Assembly
30.	736-0242	Wash. Bell. .340" I.D. x .872" O.D.	61.	750-0896	Input Shaft Spacer
31.	711-1036A	Spec. Hex Nut	62.	686-0089	Chain Case LH

NOTE: For **painted parts**, please refer to the list of color codes below. Please add the applicable color code, wherever needed, to the part number to order a replacement part. For instance, if a part numbered 700-xxxx is painted Yard-Man Green, the part number to order would be 700-xxxx-0665.

Yard-Man Green: 0665
 Yard-Man Yellow: 0674
 Powder Black: 0637

Model 392



Model 392

Ref. No.	Part No.	Part Description	Ref. No.	Part No.	Part Description
1.	712-0392	Hex L-Stop nut 1/4-28	25.	750-0892	Spacer .64" Dia. x 2.4" Lg.
2.	736-3020	Flat Wash. .266" I.D. x .625" O.D.	26.	748-0350	Pulley Mounting Adapter
3.	710-0599	Hex Washer Screw 1/4-20 x .5"	27.	736-0112	Bell-Wash. .525" I.D. x 1.5" O.D.
4.	711-0920	Belt Cover Bolt	28.	712-3029	Hex Jam Nut 1/2-20 Thd. (Gr. 5)
5.	712-3004A	Hex Flange Top L-Nut 5/16-18	29.	732-0697	Return Spring
6.	710-0723	Hex Hd. Scr. 3/8-16 x 1.25" Lg.	30.	786-0040B	Reverse Bracket
7.	756-0313	FI-Idler 2.12" O.D.	31.	736-0119	Lock Washer 5/16
8.	786-0149	Idler Belt Keeper	32.	710-0237	Hex Cap Screw 5/16-24 x .625
9.	786-0144	Idler Bracket	33.	756-0971	Inner Engine Pulley Half
10.	712-0266	Hex Cent. Jam Nut 3/8-16 Thd.	34.	756-0600	Outer Engine Pulley Half
11.	786-0057	Belt Cover	35.	736-0452	Bell Washer .396" I.D. x 1/14" O.D.
12.	710-0599	Hex Washer Screw 1/4-20 x .5"	36.	710-0152	Hex Cap Screw 3/8-24 x 1.0
13.	786-0043A	Tine Shield	37.	686-0013	Reverse Arm Assembly
14.	710-3008	Hex Hd. Cap Scr. 5/16-18 x .75" Lg	38.	712-0266	Hex Cent. Jam Nut 3/8-16 Thd.
15.	712-3004A	Hex Flange Top L-Nut 5/16-18	39.	710-0723	Hex Cap Bolt 3/8-16 x 1.25"
16.	686-0091	Chain Case Assembly Complete	40.	756-0313	FI-Idler 2.12" O.D.
17.	686-0106	Tine Disc Ends	41.	786-0041	Belt Keeper
18.	714-0149B	Internal Cotter Pin	42.	710-0502A	Hex Washer Screw 3/8-16 x 1.25"
19.	711-0415	Clevis Pin	43.	786-0145A	Engine Plate
20.	642-0023	Outer Tine Assembly L.H.	44.	786-0053	Tine Shield Bracket
	642-0024	Outer Tine Assembly R.H.	45.	736-0171	L-Wash. 7/16" I.D.
21.	642-0003	Inner Tine Assembly L.H.	46.	712-0240	Hex Nut 7/16-20 Thd.
	642-0002	Inner Tine Assembly R.H.	47.	754-0428	V-Belt (Forward)
22.	746-0918	Forward Clutch Cable	48.	754-0429	V-Belt (Reverse)
23.	746-0953	Reverse Clutch Cable	49.	738-0102	Shld. Bolt
24.	756-0585	FI-Pulley 6" Dia.			

NOTE: For **painted parts**, please refer to the list of color codes below. Please add the applicable color code, wherever needed, to the part number to order a replacement part. For instance, if a part numbered 700-xxxx is painted Yard-Man Green, the part number to order would be 700-xxxx-0665.

Yard-Man Green: 0665

Yard-Man Yellow: 0674

Powder Black: 0637

MANUFACTURER'S LIMITED WARRANTY FOR:



The limited warranty set forth below is given by MTD LLC with respect to new merchandise purchased and used in the United States, its possessions and territories.

MTD LLC warrants this product against defects for a period of two (2) years commencing on the date of original purchase and will, at its option, repair or replace, free of charge, any part found to be defective in materials or workmanship. This limited warranty shall only apply if this product has been operated and maintained in accordance with the Operator's Manual furnished with the product, and has not been subject to misuse, abuse, commercial use, neglect, accident, improper maintenance, alteration, vandalism, theft, fire, water, or damage because of other peril or natural disaster. Damage resulting from the installation or use of any accessory or attachment not approved by MTD LLC for use with the product(s) covered by this manual will void your warranty as to any resulting damage.

Normal wear parts or components thereof are subject to separate terms as follows: All normal wear parts or component failures will be covered on the product for a period of 90 days regardless of cause. After 90 days, but within the two year period, normal wear part failures will be covered ONLY IF caused by defects in materials or workmanship of OTHER component parts. Normal wear parts and components include, but are not limited to: batteries, belts, blades, blade adapters, grass bags, rider deck wheels, seats, snow thrower skid shoes, shave plates, auger spiral rubber, tires.

HOW TO OBTAIN SERVICE: Warranty service is available, WITH PROOF OF PURCHASE, through your local authorized service dealer. To locate the dealer in your area, check your Yellow Pages, or contact MTD LLC at P.O. Box 361131, Cleveland, Ohio 44136-0019, 1-800-800-7310, 1-330-220-4683 or log on to our Web site at www.yardman.com.

This limited warranty does not provide coverage in the following cases:

- a. The engine or component parts thereof. These items carry a separate manufacturer's warranty. Refer to the applicable manufacturer's warranty for terms and conditions.
- b. Log splitter pumps, valves, and cylinders have a separate one year warranty.
- c. Routine maintenance items such as lubricants, filters, blade sharpening, tune-ups, brake adjustments, clutch adjustments, deck adjustments, and normal deterioration of the exterior finish due to use or exposure.
- d. MTD LLC does not extend any warranty for products sold or exported outside of the United States, its possessions and territories, except those sold through MTD LLC's authorized channels of export distribution.
- e. Parts that are not genuine MTD parts are not covered by this warranty.
- f. Service completed by someone other than an authorized service dealer is not covered by this warranty.
- g. Transportation charges and service calls are not covered.

No implied warranty, including any implied warranty of merchantability of fitness for a particular purpose, applies after the applicable period of express written warranty above as to the parts as identified. No other express warranty, whether written or oral, except as mentioned above, given by any person or entity, including a dealer or retailer, with respect to any product, shall bind MTD LLC. During the period of the warranty, the exclusive remedy is repair or replacement of the product as set forth above.

The provisions as set forth in this warranty provide the sole and exclusive remedy arising from the sale. MTD LLC shall not be liable for incidental or consequential loss or damage including, without limitation, expenses incurred for substitute or replacement lawn care services or for rental expenses to temporarily replace a warranted product.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you.

In no event shall recovery of any kind be greater than the amount of the purchase price of the product sold. **Alteration of the safety features of the product shall void this warranty.** You assume the risk and liability for loss, damage, or injury to you and your property and/or to others and their property arising out of the misuse or inability to use the product.

This limited warranty shall not extend to anyone other than the original purchaser or to the person for whom it was purchased as a gift.

HOW STATE LAW RELATES TO THIS WARRANTY: This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.