



Rear Tine Tiller Model RB-530

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 44136-9722.

WHITE OUTDOOR PRODUCTS COMPANY P.O. BOX 361131 CLEVELAND, OHIO 44136-9722

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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 standing in the operating position behind the unit and looking down at the frame on the right side. 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.

(Model Number)

(Serial Number)

Copy the model number here:

WHITE OUTDOOR
PRODUCTS COMPANY
P.O. BOX 361131
CLEVELAND, OHIO 44136

COPY the serial number here:

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 Dealer Referral Line.



Call **1- (800)-949-4483** to reach the Customer Dealer Referral Line. Please have your unit's model number and serial number ready when you call. See previous section to locate this information.

For more details about your unit, visit our website at www.whiteoutdoor.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 and throwing objects. Failure to observe the following safety instructions could result in serious injury or death.

TRAINING

- 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.
- 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.
- 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.

PREPARATION

- 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.
- Wear sturdy, rough-soled work shoes and closefitting slacks and shirts. Loose fitting clothes or jewelry can be caught in movable parts. Never operate this machine in bare feet or sandals.
- 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.

- a. Use only an approved gasoline container.
- b. Extinguish all cigarettes, cigars, pipes, and other sources of ignition.
- c. Never fuel machine indoors.
- d. Never remove gas cap or add while the engine is hot or running.
- e. Allow engine to cool at least two minutes before refueling.
- f. Never over fill fuel tank. Fill tank to no more than 1/2 inch below bottom of filler neck to provide space for fuel expansion.
- g. Replace gasoline cap and tighten securely.
- If gasoline is spilled, wipe it off the engine and equipment. Move machine to another area. Wait 5 minutes before starting the engine.
- Never store the machine or fuel container inside where there is an open flame, spark, or pilot light (e.g. furnace, water heater, space heater, clothes dryer, etc.)
- j. To reduce a fire hazard, keep machine free of grass, leaves, or other debris build-up. Clean up oil fuel spillage and remove any fuel soaked debris.
- k. Allow machine to cool at least 5 minutes before storing.

OPERATION

- Do not put hands and feet near rotating parts. Contact with the rotating parts can amputate fingers, 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.

- 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 handlebars 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, 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 1-800-949-4483 for assistance and the name of your nearest servicing dealer.

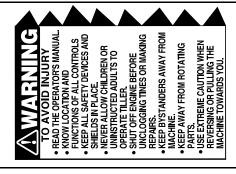
Maintenance And Storage

- 1. Never tamper with safety devices. Check their proper operation regularly.
- 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.
- 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.
- 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.



WARNING - YOUR RESPONSIBILITY: 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.

NOTE: Not all safety labels shown may apply to your tillers.





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 machine.

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 cable and lay on the floor. Be careful not to bend or kink control cable.

Loose Parts In Carton

- Depth Stake
- Handle Assembly
- Shift Rod

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

Disconnecting Spark Plug Wire

Before setting up your tiller, disconnect the spark plug wire from the spark plug and ground to a stud on the engine.

Attaching The Depth Stake Assembly

- Tip the tiller forward so it rests on front counterweight.
- Unthread the "T" knob from the top of the depth stake, and remove the flat washer and hex bolt.
 Remove the hairpin clip from the clevis pin.
 See Figure 1
- Raise the tine shield hinge flap assembly. Insert the depth stake assembly in the slot (under the tine shield) and up through the tine shield assembly.
- Insert clevis pin through the tine shield and depth stake assemblies. Secure with hairpin clip.
- Insert hex bolt into the top hole of the depth stake assembly. Place flat washer on the hex bolt and thread "T" knob onto the hex bolt. Tighten securely. See Figure 1.
- Tip the tiller back down so it rests on the tines.

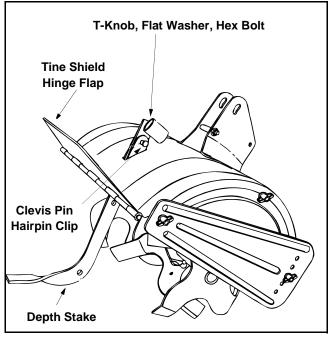


Figure 1

Attaching the Handle Assembly

- Remove the handle adjustment lock, flange nut retainer bracket, shoulder bolt and lock nut from the pivot bracket.
- Place the handle assembly in position in the handle pivot bracket lining the upper holes in the handle with the slots in the pivot bracket. See Figure 2.

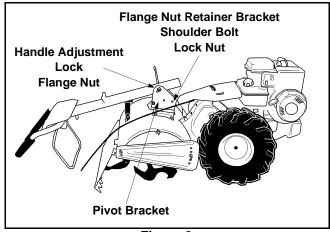


Figure 2

 Lift up the handle assembly and align the bottom holes in the handle assembly with the holes in the pivot bracket. Insert hex bolt (with hex nut retainer attached through the round hole). The head of hex bolt and retainer bracket should be to the right hand side of the unit. See Figure 3.

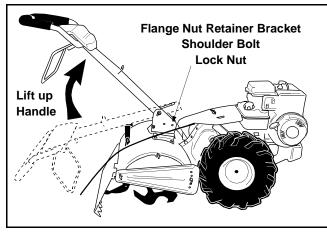


Figure 3

- Place the hex opening of the hex nut retainer bracket over the flange nut securing the handle adjustment lock and install the lock nut on the lower shoulder bolt. See Figure 4.
- Pivot handle assembly into the highest position possible. Tighten the bottom bolt and nut securely.
 Tighten the handle adjustment lock.

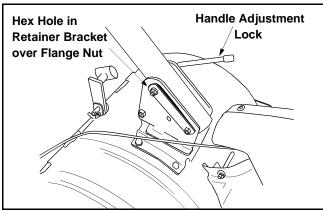
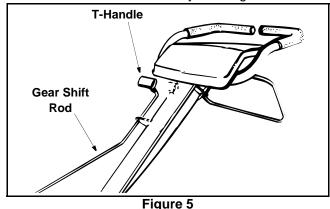


Figure 4

Attaching The Gear Shift Rod

 Remove the T-handle, nut, hairpin clip, flat washer and rubber washer from the end of the gear shift rod. Slide the rod up through the bracket on the front of the handle assembly. See Figure 5.



 Insert the end of the gear shift rod through the opening in the top of the shift cover, and into the shift bracket. Secure with rubber washer first, then flat washer and hairpin clip. See Figure 6.

Install the nut and T-handle on the gear shift rod.

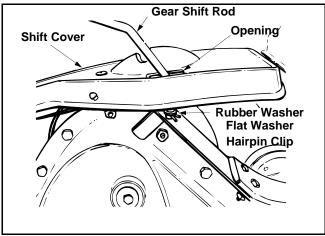


Figure 6

Attaching The Clutch Cable

 Route the clutch cable underneath the handle and through the cable clip. Be careful not to bend or kink the cable. See Figure 7.

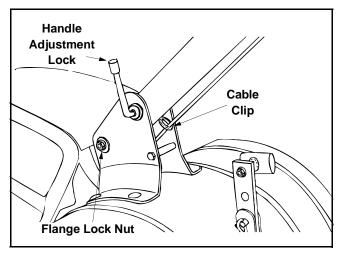


Figure 7

- Remove one hex nut from the threaded casing on the end of the cable and slip the wire up through the slot on the cable bracket underneath the handle.
 See Figure 8.
- Push the end of the casing up through the cable bracket. Rethread the hex nut on the end of the cable. Do not tighten at this time.
- Pull the cable upwards to obtain slack and from right to left hook the "Z" end of the cable into the bracket on the clutch control (beneath the handle panel). Tighten the nut against the cable bracket. See Figure 8.

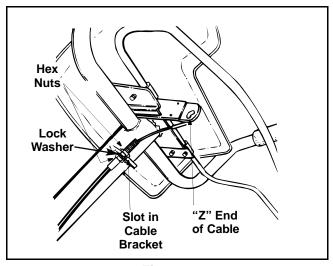


Figure 8

NOTE: Do not overtighten control wire. Too much tension may cause it to break.

Final Clutch Adjustment

 Position the tiller so the front counterweight is against a solid object, such as a wall. With the gear selection lever in NEUTRAL, start the engine.

NOTE: Keep hands out of belt area while unit is operating.

 Standing on the right side of the tiller, visually examine the belt (inside the belt cover). It should not be turning.

If the belt turns with the unit in neutral, adjust by moving the hex nut below the cable bracket down a

- few turns. Tighten the upper hex nut against the bracket. See Figure 8.
- Now move the shift lever to FORWARD (Wheels Forward) position. Carefully engage the clutch by squeezing the clutch handle against the handle. The wheels should spin.
- If the wheels do not spin with the unit in forward, adjust by moving the hex nut which is above the cable bracket up a few turns. Tighten the bottom hex nut against the bracket.

Recheck both adjustments and readjust as necessary. Make certain hex nuts at cable bracket are tight (do not overtighten control cable).

NOTE: If additional adjustment is required, it may be necessary to remove the belt cover and move the hex nuts at the other end of the clutch cable to increase belt tension.

TIRE PRESSURE

The tires on your unit may be over-inflated for shipping purposes. Reduce the tire pressure before operating the unit. Recommended operating tire pressure is approximately 14 p.s.i. on 14 inch tires and 20 p.s.i. on 16 inch tires. (Check sidewall of tire for tire manufacturer's recommended pressure).



WARNING: Maximum tire pressure under any circumstances is 30 p.s.i. Equal tire pressure should be maintained on both tires.

SECTION 3: KNOW YOUR TILLER

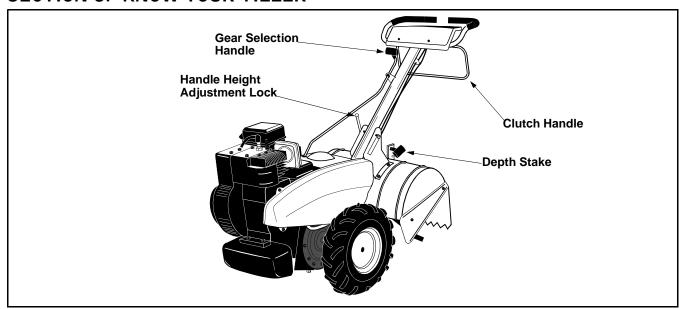


Figure 9

Read this operator's manual and guidelines before operating your tiller. Compare the illustrations in this manual with your unit to familiarize yourself with the location of various controls and adjustments. Save this manual for future reference.

Gear Selection Handle

The gear selection handle is located on the front of the handle assembly. It is used to select NEUTRAL, REVERSE, or one of the FORWARD modes.

This tiller is designed for the gear selection handle to be moved while the engine is running. (It will be difficult to obtain all four positions with the engine off.) Pull or push the handle so that the indicator on top of the shift cover points to the area of the operating mode desired. See Figure 9.

NOTE: If difficulty is encountered in moving the gear selection handle, refer to following helpful hints.

To shift into forward or reverse wheel drive, move tiller forward slightly, then backward, to allow the gears to synchronize.

To shift into forward and tine drive, push forward slightly on the gear selection handle and slowly engage the clutch handle allowing the gears to synchronize. To stop forward movement and tine drive, release the clutch handle. Do not shift gears with the clutch handle engaged except when engaging the tines.

Reverse - Reverse wheel drive only.

Neutral - Transmission is in neutral.

Forward Modes:

Wheels Forward - Forward wheel drive only.

Tines Reverse - Forward wheel drive and reverse tine drive.



WARNING: Make certain unit is in NEUTRAL when starting the engine.

Clutch Handle

The clutch handle is located beneath the handle. Squeezing the clutch handle against the handle engages the wheel and tine drive mechanisms. See Figure 9.

Throttle Control

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

Choke Lever

The choke lever is located on the engine. It is used to enrich the fuel mixture in the carburetor when starting a cold engine.

Depth Stake

The depth stake controls the tilling depth. Refer to Setting The Depth in the Operating Section.

Handle Adjustment

The handle may be adjusted to the height desired by loosening the handle height adjustment lock a few turns. Pivot handle up or down to desired position. Tighten lock. See Figure 9.

SECTION 4: OPERATING YOUR TILLER

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: Never fill fuel tank indoors with engine running or until the engine has been allowed to cool for at least two minutes after running.

Starting Engine

NOTE: When pushing the unit with the engine off, you will hear a ratcheting sound (gear noise) which is normal.



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 certain the metal cap on the end of the spark plug is fastened securely over the metal tip on the spark plug.
- Place gear selection lever in NEUTRAL.
- Place the throttle control lever in FAST (Rabbit) position and move choke lever to CHOKE position.

NOTE: A warm engine may not require choking.

- Stand at side of tiller, grasp the starter handle, and pull out slowly until it pulls slightly harder. Let rope rewind slowly.
- Pull starter handle rapidly and do not allow handle to snap back. Allow it to rewind slowly while keeping a firm hold on the starter handle.
- Repeat these steps until engine starts.
- As engine warms up and begins to operate evenly, move choke lever gradually to RUN position. If

- engine falters, return to choke position and then slowly move to RUN position.
- Refer to engine manual for additional engine information.

Stopping Engine

- Move throttle control to STOP or OFF position.
- Disconnect spark plug wire and ground to prevent accidentally starting while equipment is unattended.

NOTE: After the first ten hours of operation, recheck the clutch adjustment. Refer to final clutch adjustment in Assembly Instructions.

IMPORTANT: When operating the tiller for the first time, use the depth stake setting that gives 1 inch of tilling depth (second hole from the top). See Figure 10.

Setting The Depth

Tilling depth is controlled by the depth stake which can be adjusted to five different settings. Adjust the side shields as the depth stake is being adjusted.



WARNING: Do not at any time make any adjustments without first stopping engine and disconnecting spark plug wire.

 When using the tiller for the first time, use the second adjustment hole from the top (1" of tilling depth). See Figure 10.

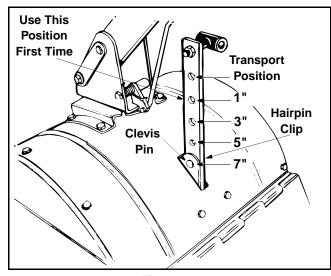


Figure 10

- When breaking up sod and for shallow cultivation, use the setting which gives 1" of tilling depth (second hole from the top). Place the side shields in their lowest position. For further depth, raise the depth stake and side shields and make one or two more passes over the area.
- When tilling loose soil, depth stake may be raised to its highest position (use bottom adjustment hole)

- to give the deepest tilling depth. Raise the side shields to their highest position.
- To transport tiller, lower the depth stake (use top adjustment hole).

To adjust the depth stake, remove the clevis pin and hairpin clip. Move the depth stake to the desired setting. Secure with the clevis pin and hairpin clip. See Figure 10.

To adjust the side shields, remove the wing nuts. Move the side shield to the desired position. Replace the wing nuts. Tighten securely. See Figure 11.

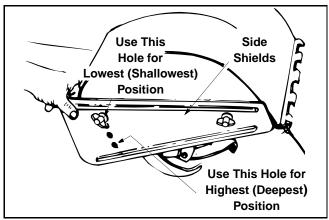


Figure 11

Operating the Tiller

- Select the depth stake setting.
- Start engine as instructed in the previous section Starting Engine.
- Move gear selection handle to one of the forward modes or reverse. A partial engagement may be necessary when engaging tines.



WARNING: Do not move the gear selection handle with the wheels or tines engaged. Make certain the unit is stopped completely before changing the gear selection.

• Squeeze the clutch handle against the upper handle to engage the wheels and tines.

NOTE: Make certain the gear selection indicator is correctly positioned before engaging the clutch handle. If it is between gears, the engine will stall.

To transport tiller, **do not** engage the tines. Select the wheel drive only.



WARNING: Do not push down on the handles so that the wheels are lifted off the ground while using the tine drive or the tiller could move backward and cause personal injury.

For best results, it is recommended the garden be tilled twice (lengthwise, then widthwise) to pulverize the soil.

SECTION 5: ADJUSTING YOUR TILLER

Handle Adjustment

The handle height may be adjusted. Refer to the Know Your Tiller Section.

Belt Tension Adjustment

Periodic adjustment of the belt tension may be required due to normal stretching and wearing of the belt. Adjustment is needed if the tines or wheels seem to hesitate while turning, but the engine maintains the same speed.

To adjust the tension on the belt, refer to Final Clutch Adjustment in the Assembly Section.

Carburetor Adjustment



WARNING: If any adjustments are made to the engine while the engine is running, (e.g. carburetor), disengage all clutches and tines. Keep clear of all moving parts. Be careful of heated surfaces and muffler.

Never make unnecessary adjustments. The factory settings are correct for most applications. If adjustments are needed, refer to the separate engine manual packed with your tiller.

SECTION 6: MAINTAINING YOUR TILLER



WARNING: Always stop engine and disconnect spark plug wire before cleaning, lubricating or doing any kind of maintenance on your machine.

Lubrication

Transmission: The transmission is pre-lubricated and sealed at the factory. See an authorized serviced dealer if service is required.

Clutch Handle: Lubricate the pivot point on the clutch handle and the cable at least once a season with light oil. The control 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.

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.
- 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.

Cleaning The Tine Area

Clean the underside of the tine shield after each use. The dirt washes off the tines easier if rinsed off immediately instead of after it dries. Always towel dry the tiller afterwards and apply a light coat of oil or silicone to prevent rusting or water damage.

IMPORTANT: Never use a pressure washer to clean your tiller. Water can penetrate tight areas of the tiller and its chaincase and cause serious damage to the unit.

Tires

Recommended operating tire pressure is approximately 14 p.s.i. on 14 inch tires and 20 p.s.i. on 16 inch tires. (Check sidewall of tire for tire manufacturer's recommended pressure). Maximum tire pressure under any circumstances is 30 p.s.i. Equal tire pressure should be maintained on both tires.

When installing a tire to the rim be certain rim is clean and free of rust. Lubricate both the tire and rim generously. Never inflate to over 30 p.s.i. to seat beads.



WARNING: Never exceed the maximum inflation pressure shown on the sidewall of the tire.

Belt Replacement

- Disconnect and ground the spark plug wire against the engine.
- Remove two torx head screws from the top of belt cover.
- Remove two hex cap nuts and flat washers from front side of the belt cover. Remove the hex nut and flat washer at the back of the cover.
- Remove the belt keeper assembly located behind the engine pulley by removing two hex bolts and lock washers. See Figure 12.

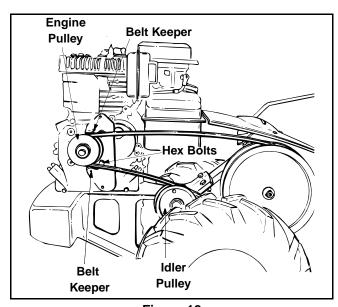


Figure 12

Remove belt and reassemble new belt, following instructions in reverse order.

NOTE: Upon reassembly, make certain the belt is routed over the idler pulley and inside of belt keepers by engine pulley.

Off-season Storage

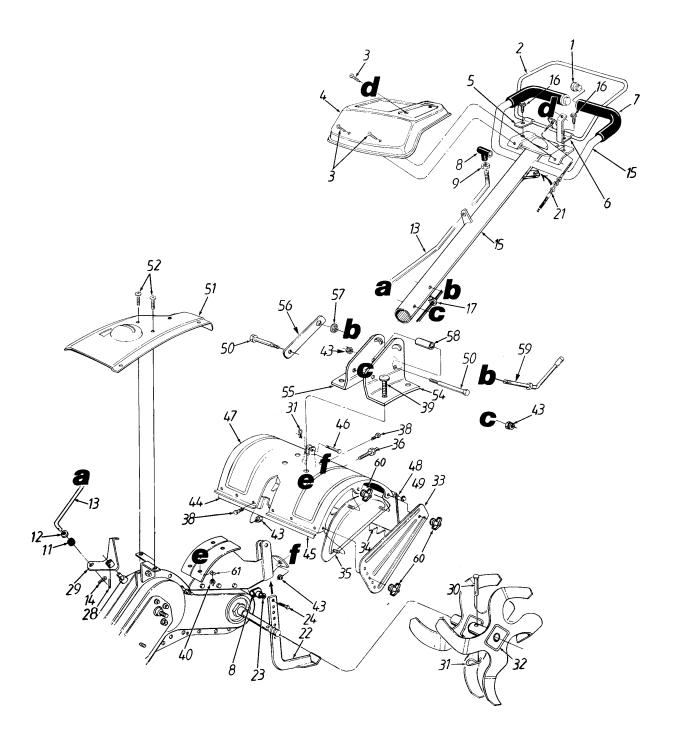
- Clean the exterior of engine and the entire tiller thoroughly. Lubricate the tiller as described in the Lubrication Section.
- Refer to the engine manual for correct engine storage instructions.
- Wipe tines with oiled rag to prevent rust.
- Store tiller in a clean, dry area. Do not store next to corrosive materials, such as fertilizer.

SECTION 7: TROUBLESHOOTING

Trouble	Possible Cause(s)	Corrective Action
Engine fails to start	 Fuel tank empty or stale fuel. Throttle control lever not in correct starting position. Blocked fuel line. Dirty air cleaner. Choke not in ON position. Spark plug wire disconnected. Faulty spark plug. Engine flooded. 	 Fill tank with clean, fresh gasoline. Fuel will not last over thirty days unless a fuel stabilizer is used. Move throttle lever to start position. Clean fuel line. Refer to the separate engine manual. Move switch to ON position. Connect wire to spark plug. Clean, adjust gap or replace. Refer to the separate engine manual.
Engine runs erratic	 Unit running on CHOKE. Spark plug wire loose. Blocked fuel line or stale fuel. Vent in gas cap plugged. Water or dirt in fuel system. Dirty air cleaner. Carburetor out of adjustment. 	 Move choke lever to OFF position. Connect and tighten spark plug wire. Clean fuel line; fill tank with clean, fresh gasoline. Fuel will not last over thirty days unless a fuel stabilizer is used. Clear vent. Drain fuel tank. Refill with fresh fuel. Refer to the separate engine manual. Refer to the separate engine manual.
Engine overheats	 Engine oil level low. Dirty air cleaner. Air flow restricted. Carburetor not adjusted properly. 	 Fill crankcase with proper oil. Refer to the separate engine manual. Refer to the separate engine manual. Adjust carburetor as instructed in separate engine manual.
Tines do not engage	 Foreign object lodged in tines. Tine clevis pin(s) missing. Pulley and idler not in correct adjustment. Not shifting properly. Control cable not adjusted properly. Belt worn and/or stretched. 	 Dislodge foreign object. Replace tine clevis pin(s). Take unit to authorized service dealer. Refer to controls section of operator's manual for proper shifting procedures. Adjust control cable. Replace belt.
Wheels do not engage	 Clevis pin missing. Tiller is not being shifted properly. Control cable not adjusted properly. Belt worn and/or stretched. 	 Replace clevis pin. Refer to controls section of operator's manual for proper shifting procedures. Adjust control cable. Replace belt.

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

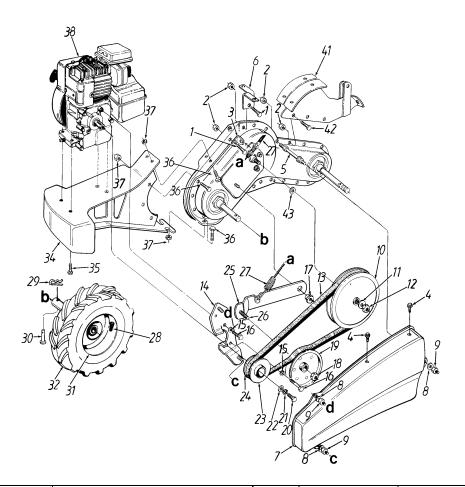
Notes



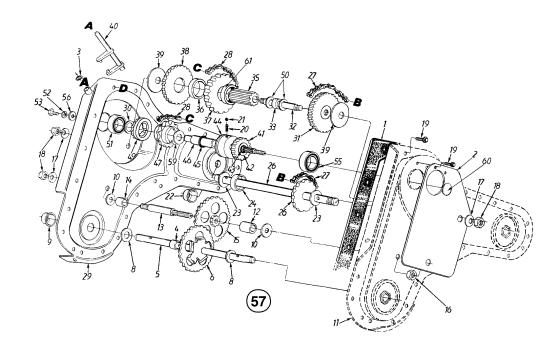
Ref. No.	Part No.	Part Description	Ref. No.	Part No.	Part Description
1.	735-0246	Vinyl End Plug	39.	710-3097	Carriage Bolt 3/8-16 x 1" Lg.
2.	647-0014	Clutch Control Ass'y.	40.	712-0798	Hex Ins. L-Nut 3/8-16 Thd.
3.	710-1017	Torx Mach Screw 1/4 x .62"	43.	712-3004A	Hex Flange Top L-Nut 5/16-18
4.	786-0131	Handle Cover	44.	786-0076	Tine Shield Brkt. R.H.
5.	786-0098	Retaining Brkt. R.H.	45.	786-0077	Tine Shield Brkt. L.H.
6.	786-0118	Retaining Brkt. L.H.	46.	711-0415	Clevis Pin .375" Dia.
7.	720-0278	Grip	47.	786-0085	Tine Shield
8.	720-0210A	Knob	48.	747-0432	Tiller Flap Rod
9.	712-3008	Hex Jam Nut 3/8-16 Thd.	49.	726-0106	Cap Speed Nut
11.	735-0127	Rubber Washer	50.	710-0189	Hex Bolt 5/16-18 x 3" Lg.
12.	736-0204	FI-Wash344" I.D. x .6" O.D.	51.	786-0101B	Shift Cover
13.	747-0902	Gear Shift Rod	52.	710-1017	Torx Mach. AB-Tap Scr. 1/4 x .6"
14.	714-0104	Hairpin Clip	54.	786-0109	Handle Brkt. L.H.
15.	649-0017	Handle Ass'y.	55.	786-0108	Handle Brkt. R.H.
16.	710-0896	Tap Scr. 1/4-14 x 5/8" Lg.	56.	784-0191	Hex Nut Retainer Brkt.
17.	726-0330	Cable Clip	57.	712-0379	Hex Flange Nut 3/8-24 Thd.
21.	746-0916	Clutch Cable	58.	750-0885	Spacer .322 Dia.
22.	786-0120	Depth Bar	59.	784-0190	Handle Adjustment Crank
23.	736-0117	FI-Wash. 3/8" I.D. x 5/8" O.D.	60.	712-0421	Knob 5/16-18 Thd.
24.	710-0253	Hex Bolt 3/8-16 x 1" Lg.*	61.	736-0169	L-Washer 3/8" I.D.
28.	715-0120	Spiral Pin 3/16" x 1"		777D03392	Label: WOP Handle Panel
29.	686-0095	Shift Crank Ass'y.		777D03395	Label: WOP Belt Guard
30.	711-0415	Clevis Pin		777D04012	Label: WOP Engine
31.	714-0149B	Hairpin Clip		777S30038	Label: Rear Tine Warning
32.	642-0015	Tine Assembly L.H.		777120765	Label: R N F T
	642-0016	Tine Assembly R.H.		777120358	Label: Place Hand Here
33.	786-0090	Side Shield		777120330	Label: Operating Instructions
34.	786-0113	Rear Tine Shield			_
35.	686-0044A	End Cover Ass'y.		777120779	Label: Shift Cover
36.	738-0849	Hex Cap Bolt 5/16-18 x 1.25" Lg.		777120781	Label: FNR Front Handle
38.	710-0376	Hex Bolt 5/16-18 x .75" Lg.	_		

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 Oyster Gray, the part number to order would be 700-xxxx-0662.

Oyster Gray: 0662 Powder Black: 0637 Red Metallic: 0650



Ref. No.	Part No.	Part Description	Ref. No.	Part No.	Part Description
1.	710-3008	Hex Bolt 5/16-18 x .75" Lg.	24.	756-0971	Inner Engine Pulley Half
2.	712-3004A	Hex Top L-Nut 5/16-18 Thd.	25.	786-0080	Idler Bracket
3.	786-0107	Cable Mtg. Bracket	26.	710-0723	Hex Bolt 3/8-16 x 1.25" Lg.
4.	710-1017	Torx Mach. Screw 1/4 x .6" Lg	27.	746-0916	Clutch Cable
5.	738-0899	Belt Cover Bolt	28.	734-0255	Air Valve
6.	786-0117	Shift Cover Bracket	29.	714-0104	Hairpin Clip
7.	786-0100	Belt Cover	30.	711-1017	Clevis Pin
8.	736-0142	Fl-Wash281" I.D. x .5" O.D.	31.	634-0112	Rim Only (14")
9.	712-0392	Hex Cap Nut 1/4-28 Thd.		634-0108	Rim Only (16")
10.	756-0634	Flat Pulley 8" O.D.	32.	634-0110	Wheel Ass'y. Comp. R.H. (14")
11.	736-0105	Bell-Wash38" I.D. x .88" O.D.		634-0111	Wheel Ass'y. Comp. L.H. (14")
12.	712-0379	Hex Flange Nut.		634-0106	Wheel Ass'y. Comp. R.H. (16")
13.	754-0438	"V"-Belt		634-0107	Wheel Ass'y. Comp. L.H. (16")
14.	686-0031A	Belt Keeper Brkt.		734-1796	Tire Only (14")
15.	736-0119	L-Wash. 5/16" I.D.		734-0808	Tire Only (16")
16.	710-0237	Hex Bolt 5/16-24 x .62" Lg.	34.	619-0009	Frame Counterweight
17.	738-0876	Shld. Nut	35.	710-1007	Hex TT-Tap Scr. 3/8-16 Thd.
18.	712-0266	Hex Jam L-Nut 3/8-16 Thd.	36.	710-0376	Hex Bolt 5/16-18 x 1" Lg.
19.	756-0405	FI-Idler w/Flanges	37.	712-3004A	Hex Flange L-Nut 5/16-18 Thd.
20.	710-0152	Hex Bolt 3/8-24 x 1" Lg.	41.	686-0043A	Tine Shield Brkt. Ass'y.
21.	736-0217	L-Wash. 3/8" I.D.	42.	710-3038	Hex Bolt 5/16-18 x 7/8" Lg.
22.	736-0258	FI-Wash. 3/8" I.D. x 1" O.D.	43.	736-0256	Flat Washer .635 I.D. x .930 O.D
23.	756-0972	Outer Engine Pulley Half			



Ref. No.	Part No.	Part Description	Ref. No.	Part No.	Part Description
1.	721-0295	Chain Case Gasket	31.	617-0002	Gear and Sprocket Ass'y.
2.	786-0086	Reinforcement Plate	32.	738-0884	Jack Shaft 5" Lg.
3.	716-0865	Snap Ring	33.	750-0931	Spacer .636" I.D. x .86" O.D.
4.	750-0938	Spacer .735" I.D. x .886" O.D.	35.	717-1411	Spur Gear 10T
5.	611-0058	Wheel Shaft	36.	750-0930	Spacer 1.5" I.D. x 1.76" O.D.
6.	717-1458	Spur Gear 46T	37.	713-0436	Sprocket—#41 Chain
8.	736-0351	FI-Wash76" I.D. x 1.5" O.D.	38.	717-1405	Reverse Gear 46T
9.	721-0379	Shaft Seal	39.	736-0518	Thrust Wash445" I.D. x 1.92"
10.	736-0518	Thr.Wash445 I.D.x1.92 O.D.x	40.	618-0245B	Shifter Ass'y.
11.	686-0039	Gear Case Ass'y. Half L.H.	41.	717-1409	Spur Gear 17T
12.	750-0935	Spacer .635" I.D. x 1" O.D. x .78	42.	736-0442	FI-Wash69" I.D. x 1.06" O.D.
13.	738-0885	Jack Shaft 2.06" Lg.	43.	732-0614	Wire Ring
14.	750-0936	Spacer .635" I.D. x 1" O.D. x .37"	44.	718-0234	Clutch Collar
15.	617-0004	Gear Idler Ass'y.	45.	716-0235	Retaining Ring .875" Shaft
16.	712-3067	Hex Patch L-Nut 7/16-20 Thd.	46.	711-1087	Drive Shaft
17.	736-0407	Bell-Wash45" I.D. x 1" O.D.	47.	713-0435	Sprocket 11T
18.	712-0378	Hex Nut 7/16-20 Thd.	49.	717-1451A	Spur Gear 16T
19.	710-0896	Hex Washer Screw 1/4-20 x .5"	50.	736-0336	FI-Wash. 5/8" I.D. x 1" O.D.
20.	732-0863	Spring Detent	51.	741-0124	Ball Bearing .669" I.D.
21.	741-0862	Ball Detent	52.	736-0329	L-Wash. 1/4" I.D.
22.	721-0378	Shaft Seal	53.	710-0258	Hex Bolt 1/4-20 x .62" Lg.
23.	736-0163	Thrust Wash. 1.03" I.D. x 1.62"	55.	741-0563	Ball Bearing
24.	750-0570	Spacer 1" I.D. x 2" O.D. x .5" Thk.	56.	736-0512	FI-Wash281" I.D. x .875" O.D.
26.	611-0021	Tine Shaft Ass'y.	57.	686-0094	Gear Case Ass'y. Comp.
27.	713-0226	Chain #50 5/8" Pitch x 52 Links	58.	718-0237	Key Drive Shaft
28.	713-0233	Chain #41 1/2" Pitch x 30 Links	59.	736-0265	FI-Wash88" I.D. x 1.5" O.D.
29.	686-0038	Gear Case Ass'y. Half R.H.	60.	726-0331	Button Plug
30.	736-0541	Fl-Wash. 7/16" I.D. x 1-3/8" O.D.	61.	750-0987	Spacer 1.52" I.D.

MANUFACTURER'S LIMITED WARRANTY FOR:



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

White Outdoor Products Co. warrants this product against defects in material and workmanship 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 material 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 White Outdoor Products Co. for use with the product(s) covered by this manual will void your warranty as to any resulting damages.

Normal wear parts or components thereof are subject to separate terms as follows: All normal wear part 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 material or workmanship of OTHER component parts. Normal wear parts and components include, but are not limited to, belts, blades, blade adapters, grass bags, rider deck wheels, seats, snow thrower skid shoes, shave plates and tires. Batteries are covered by a 90-day limited replacement warranty.

HOW TO OBTAIN SERVICE: Warranty service is available, WITH PROOF OF PURCHASE THROUGH YOUR LOCAL WHITE OUTDOOR DEALER. To locate the dealer in your area, please check for a listing in the Yellow Pages or contact the Customer Dealer Referral Line of White Outdoor Co. by calling 1-330-225-8883 or writing to P.O. Box 361131, Cleveland, Ohio 44136-0019.

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. Please refer to the applicable manufacturer's warranty on these items.
- b. Routine maintenance items such as lubricants, filters, blade sharpening and tune-ups, or adjustments such as brake adjustments, clutch adjustments or deck adjustments; and normal deterioration of the exterior finish due to use or exposure.

- Log splitter pumps, valves and cylinders have a separate one year warranty.
- d. White Outdoor Co. does not extend any warranty for products sold or exported outside of the United States of America, its possessions and territories, except those sold through White Outdoor Co. authorized channels of export distribution.

No implied warranty, including any implied warranty of merchantability or 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 or guaranty, 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 White Outdoor Co. During the period of the Warranty, the exclusive remedy is repair or replacement of the product as set forth above. (Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.)

The provisions as set forth in this Warranty provide the sole and exclusive remedy arising from the sales. White Outdoor Co. shall not be liable for incidental or consequential loss or damages including, without limitation, expenses incurred for substitute or replacement lawn care services, for transportation or for related expenses, or for rental expenses to temporarily replace a warranted product. (Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation 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 use or misuse or inability to use the product.

This limited warranty shall not extend to anyone other than the original purchaser, original lessee or 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.

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