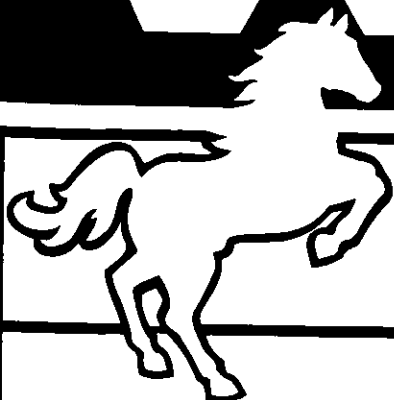


# WHITE



## OUTDOOR POWER



### ROTO BOSS 530 Rear Tine Tiller

**Model No.  
215-410-190**

Thank you for purchasing an American-built product.

**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 of White Outdoor Products, P.O. Box 361131, Cleveland, Ohio 44136-0019.

# INDEX

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# IMPORTANT

## RULES FOR SAFE OPERATION

 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 YOUR TILLER. FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY RESULT IN PERSONAL INJURY. WHEN YOU SEE THIS SYMBOL—  **HEED ITS WARNING.** 



**DANGER:** Your tiller 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. If you violate any of these rules, you may cause serious injury to yourself or others.

1. It is suggested that this manual be read in its entirety before attempting to assemble or operate this unit. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
2. Your tiller is a precision piece of power equipment, not a plaything. Therefore, exercise extreme caution at all times.
3. Read this owner's manual carefully. Be thoroughly familiar with the controls and the proper use of the equipment.
4. Never allow children to operate a power tiller. Only persons well acquainted with these rules of safe operation should be allowed to use your tiller.
5. No one should operate this unit while intoxicated or while taking medication that impairs the senses or reactions.
6. Keep the area of operation clear of all persons, particularly small children and pets.
7. Do not operate equipment when barefoot or wearing open sandals. Always wear substantial footwear.
8. Do not wear loose fitting clothing that could get caught on the tiller.
9. Do not start the engine unless the shift lever is in the neutral (N) position.
10. Do not stand in front of the tiller while starting the engine.
11. Do not place feet and hands on or near the tines when starting the engine or while the engine is running.
12. Never attempt to make a wheel or depth bar adjustment while the engine is running.
13. Do not leave the tiller unattended with the engine running.
14. Do not walk in front of the tiller while the engine is running.
15. Check the fuel before starting the engine. Gasoline is an extremely flammable fuel. Do not fill gasoline tank indoors, while the engine is running, or while the engine is still hot. Replace gasoline cap securely, and wipe off any spilled gasoline before starting the engine as it may cause a fire or explosion.
16. Do not run the engine while indoors. Exhaust gases are deadly poisonous.
17. Be careful not to touch the muffler after the engine has been running. It is hot.
18. Do not change the engine governor settings or overspeed the engine. Excessive engine speeds are dangerous.
19. Before any maintenance work is performed or adjustments are made, remove the spark plug wire and ground it on the engine block for added safety.
20. Use caution when tilling near buildings and fences. Rotating tines can cause damage or injury.
21. Before attempting to remove rocks, bricks and other objects from tines, stop the engine and be sure the tines have stopped completely. Disconnect the spark plug wire and ground to prevent accidental starting.
22. Check the tine and engine mounting bolts at frequent intervals for proper tightness.
23. Keep all nuts, bolts and screws tight to be sure the equipment is in safe working condition.
24. Never store the equipment with gasoline in the tank inside of a building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.

# ASSEMBLY INSTRUCTIONS

**NOTE:** This unit is shipped **WITHOUT GASOLINE or OIL.** After assembly, see separate engine manual for proper fuel and engine oil recommendations.

**NOTE:** Left and right is determined from the operator's position, standing behind the tiller.

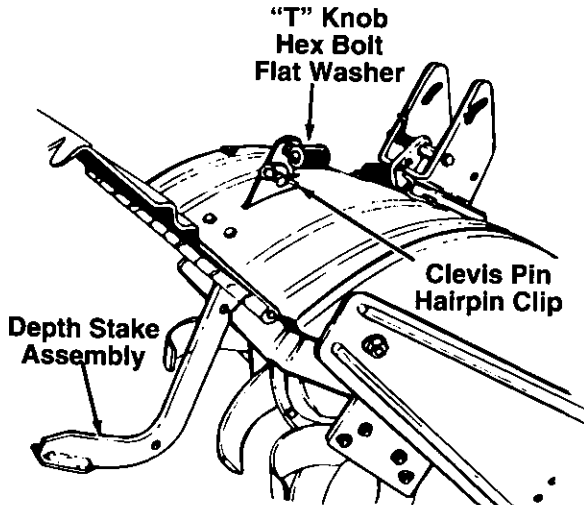


FIGURE 1.

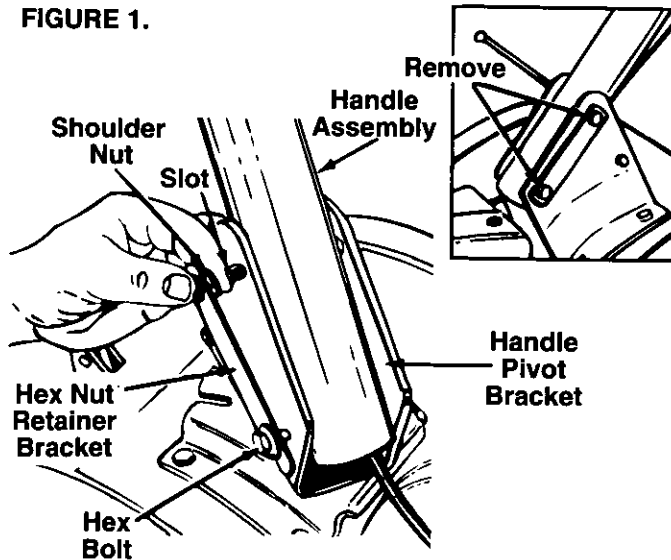


FIGURE 2.

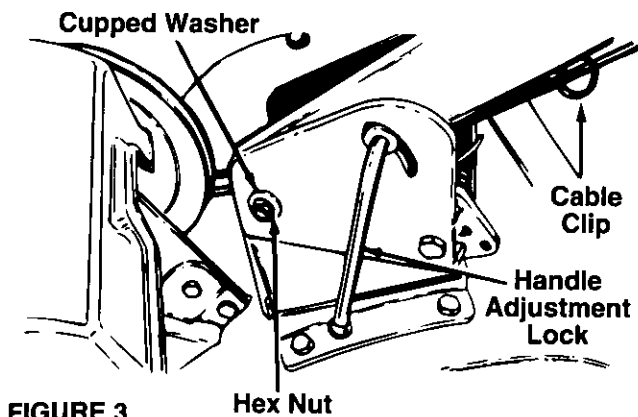


FIGURE 3.

## UNPACKING

1. Remove loose parts and tiller from carton. Make certain all parts and literature have been removed from the carton before the carton is discarded.
2. Extend the control cable and lay on the floor. Be careful not to bend or kink control cable.

**NOTE:** All hardware needed for assembly is in place on the loose parts, or on the tiller.

## ATTACHING THE DEPTH STAKE ASSEMBLY

1. Tip the tiller forward so it rests on engine base. See figure 1.
2. Unthread the knob from the top of the depth stake, and remove the flat washer and hex bolt. Remove the hairpin clip from the clevis pin.
3. Raise the tine shield hinge flap assembly. Insert the depth stake assembly up through the tine shield assembly as shown in figure 1.
4. Insert clevis pin through the tine shield and depth stake assemblies. Secure with hairpin clip.
5. Insert hex bolt into the upper hole of the depth stake assembly. Place flat washer onto the hex bolt, then thread small "T" knob onto the hex bolt. Tighten securely.
6. Tip the tiller back down so it rests on the tines.

## ATTACHING THE HANDLE ASSEMBLY

1. Remove the hardware from the handle pivot bracket as shown in figure 2, inset.
2. Place hex nut retainer bracket on hex bolt, using the round hole in retainer bracket.
3. Place handle assembly in position in the handle pivot bracket. Line up the holes in handle assembly with the holes (and slots) in the pivot bracket. See figure 2.
4. Insert hex bolt (with hex nut retainer attached) through bottom holes on the handle pivot bracket and handle assembly. Head of hex bolt should be to the right hand side of the unit.
5. Place shoulder nut between hex nut retainer bracket and pivot bracket. See figure 2.
6. Secure bottom of handle by placing belleville washer (cupped side against the pivot bracket) and hex nut on hex bolt. Do not tighten at this time. See figure 3.
7. Insert handle adjustment lock through handle pivot bracket and handle assembly. Thread end of handle adjustment crank into shoulder nut.
8. Pivot handle assembly into position desired. Tighten securely the bottom bolt and nut. Tighten the handle adjustment lock.

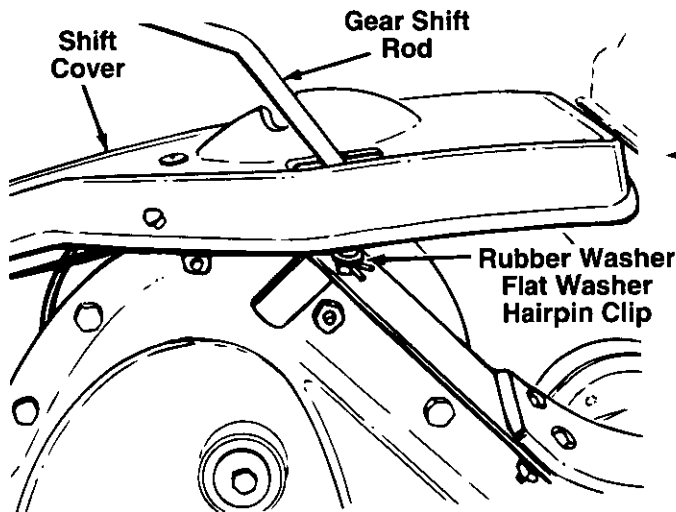


FIGURE 4.

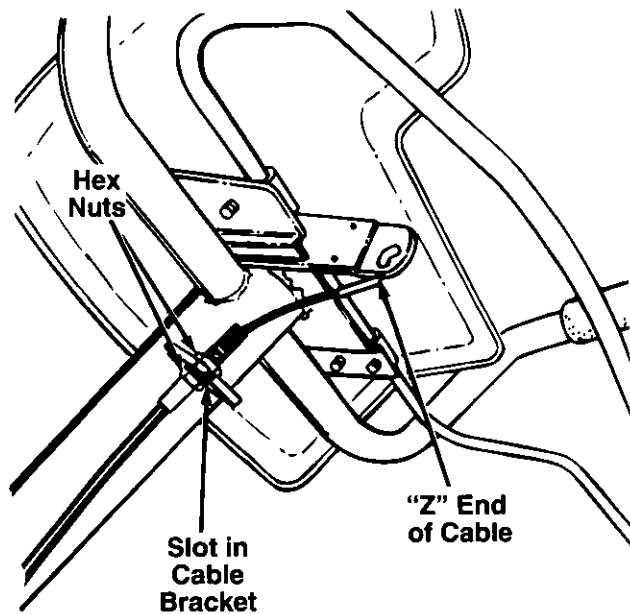


FIGURE 5.—Viewed beneath handle panel.

## ATTACHING THE GEAR SHIFT ROD

1. Remove the hairpin clip, flat washer and rubber washer from the end of the gear shift rod. Slide the rod down through the bracket on the front of the handle assembly.
2. Insert the end of the gear shift rod through the opening in the top of the shift cover, and into the shift bracket. See figure 4. Secure with rubber washer, flat washer and hairpin clip.
3. Snap the plastic bushing down into the bracket on the front of the handle assembly.

## ATTACHING THE CLUTCH CABLE

1. Route the clutch cable through the cable clip underneath the handle. Refer to figure 3. Remove one hex nut from the threaded casing on the end of the cable. See figure 5.
2. Slip the wire through the slot on the cable bracket underneath the handle. 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.
3. Pull the cable upwards to obtain slack, and hook the "Z" end of the cable into the bracket on the clutch control (beneath the handle panel) as shown in figure 5 (from right to left). Thread the hex nut back onto the end of the cable casing.

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

## FINAL CLUTCH ADJUSTMENT

**IMPORTANT:** Service the engine with oil and gasoline before checking this adjustment. Refer to the separate engine manual packed with your tiller.

1. 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.
2. 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. See figure 5. Tighten the upper hex nut against the bracket.

3. 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.
4. **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.

**NOTE:** If additional adjustment is required, it may be necessary to remove three self-tapping screws 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 12 p.s.i. (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.

To shift into **forward wheels and tine drive**, engage the clutch handle about halfway while pushing forward on the gear selection handle, which allows the gears necessary for both drive operations to synchronize. Release the clutch handle as the gear selector moves into the proper position.

**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.

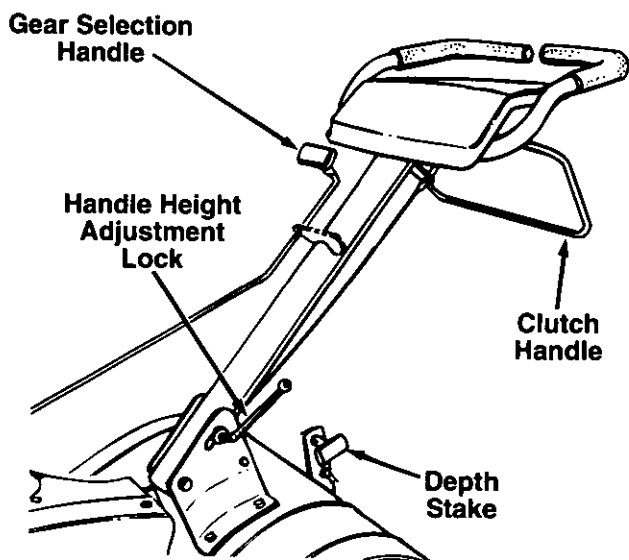


**WARNING:** Make certain unit is in **NEUTRAL** when starting the engine.

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## CONTROLS

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**FIGURE 6.**

### 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 shift cover points to the area of the operating mode desired. See figure 6.

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

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

### CLUTCH HANDLE

The clutch handle is located beneath the handle. See figure 6. Squeezing the clutch handle against the handle engages the wheel and tine drive mechanisms.

### THROTTLE CONTROL

The throttle control lever is located on the engine. It controls the engine speed and stops the engine. See figure 7.

### DEPTH STAKE

The depth stake controls the tilling depth. Refer to "How to Use Your Tiller" section on page 7.

### HANDLE ADJUSTMENT (See Figure 6)

The handle may be adjusted to the height desired. Loosen the handle height adjustment lock a few turns. Pivot handle up or down to desired position. Tighten lock.

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## OPERATION

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**NOTE:** Engine is shipped without oil.

### BEFORE STARTING

1. **Service engine with oil** as instructed in the separate engine manual packed with your unit.
2. Fill fuel tank with clean, fresh, lead-free, low-lead or regular grade leaded gasoline.
3. Be certain to check clutch adjustment as described in final clutch adjustment in Assembly Instructions.

### TO START ENGINE

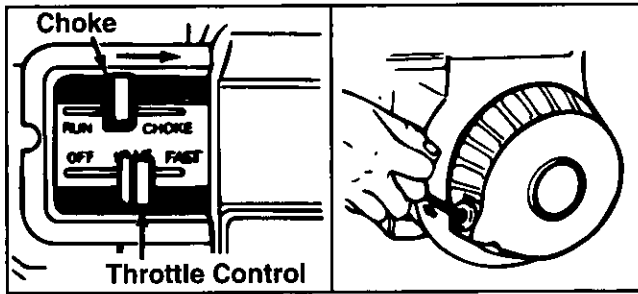
**NOTE:** When pushing the unit with the engine off, you will hear a ratcheting sound (gear noise) which is normal.



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

1. Place gear selection lever in NEUTRAL.
2. Place the throttle control lever in START position. See figure 7.
3. Move choke lever to CHOKE position.

**NOTE:** A warm engine may not require choking.



**FIGURE 7.**

4. Stand at side of tiller. Grasp the starter handle and pull out slowly, until it pulls slightly harder. Let rope rewind slowly.
5. Pull starter handle rapidly. Do not allow handle to snap back. Allow it to rewind slowly while keeping a firm hold on the starter handle.
6. Repeat steps 4 and 5 until engine starts.
7. As engine warms up and begins to operate evenly, move choke lever gradually to RUN position. If engine falters, return to choke position, then slowly move to RUN position. Refer to engine manual for additional engine information.

## TO STOP ENGINE

1. Move throttle control to OFF position.
2. 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.

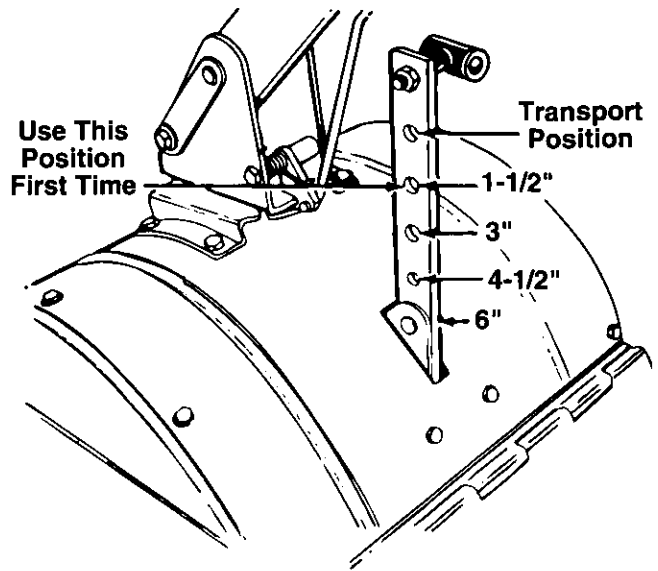
## HOW TO USE YOUR TILLER



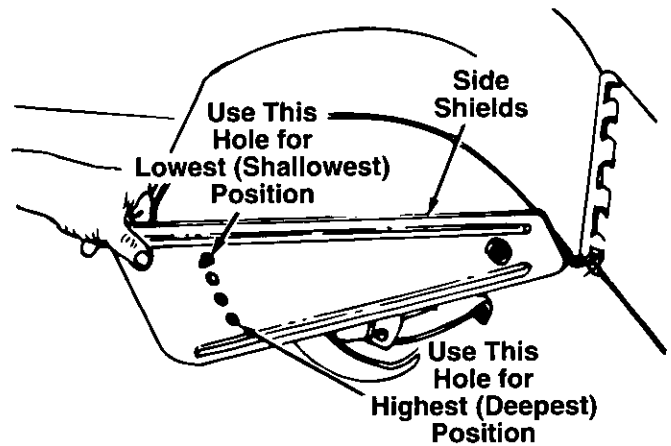
**WARNING:** When operating the tiller for the first time, use the depth stake setting that gives 1-1/2 inches of tilling depth (second hole from the top). Refer to figure 8.

Tilling depth is controlled by the depth stake which can be adjusted to five different settings. See figure 8. Adjust the side shields as shown in figure 9, as you adjust the depth stake. Be certain spark plug wire is disconnected and grounded against the engine.

1. When using the tiller for the first time, use the second adjustment hole from the top (1-1/2" of tilling depth). See figure 8.



**FIGURE 8.**



**FIGURE 9.**

2. When breaking up sod and for shallow cultivation, use the setting which gives 1-1/2" 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.
3. 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.
4. To transport tiller, lower the depth stake (use top adjustment hole).

To adjust the depth stake, remove the clevis pin and hairpin clip. See figure 8. Move the depth stake to the desired setting.

To adjust the side shields, remove the hex nut and cupped washer from the front and loosen the rear nut. See figure 9. Pivot the side shield to the desired position. Replace hex nut and cupped washer. Tighten securely.

To operate the tiller:

1. Select the depth stake setting.
2. Start engine as instructed on page 6.
3. Move gear selection handle to one of the forward modes or reverse.



**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.**

4. Squeeze the clutch handle against the 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.

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## ADJUSTMENTS

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### HANDLE ADJUSTMENT

The handle height may be adjusted. Refer to the Control section for details of handle adjustment.

### BELT TENSION ADJUSTMENT

Periodic adjustment of the belt tension may be required due to normal stretch and wear on 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 Assembly Instructions.

### 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.

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## LUBRICATION

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**Transmission**—The transmission is pre-lubricated and sealed at the factory. It requires no checking unless the transmission is disassembled. To fill with grease, lay the right half of the transmission on its side. Add 22 ounces of Benalene #372-0 grease. Assemble the left half to it. This grease can be obtained at your nearest authorized dealer. Order part number 737-0223.

**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.

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## MAINTENANCE

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**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.

### CLEANING THE 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.

## TIRES

Recommended operating tire pressure is approximately 12 p.s.i. (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:** Excessive pressure (over 30 p.s.i.) when seating beads may cause tire/rim assembly to burst with force sufficient to cause serious injury.

## BELT REPLACEMENT



**CAUTION:** Do not use an off-the-shelf belt.

Your tiller has been engineered with a belt made of special material (Kevlar Tensile) for longer life and better performance. It should not be replaced with an off-the-shelf belt.

If belt replacement is required, order belt or belts by part number from your nearest authorized dealer.  
Part No. 754-0438—"V" Belt

1. Disconnect and ground the spark plug wire against the engine.
2. Remove the belt cover from the left side of the tiller as follows.
  - a. Remove two torx head screws from the top of belt cover.
  - b. 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.
3. Remove the belt keeper assembly located behind the engine pulley by removing two hex bolts and lock washers. See figure 10.
4. Remove belt. 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. See figure 10.

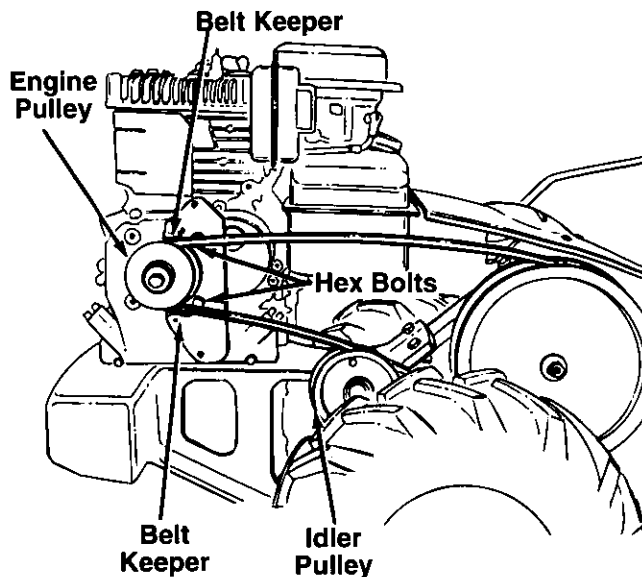


FIGURE 10.

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## OFF-SEASON STORAGE

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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.

1. Clean the exterior of engine and the entire tiller thoroughly. Lubricate the tiller as described in the lubrication instructions.
2. Refer to the engine manual for correct engine storage instructions.
3. Wipe tines with oiled rag to prevent rust.
4. 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, especially any springs, bearings and cables.

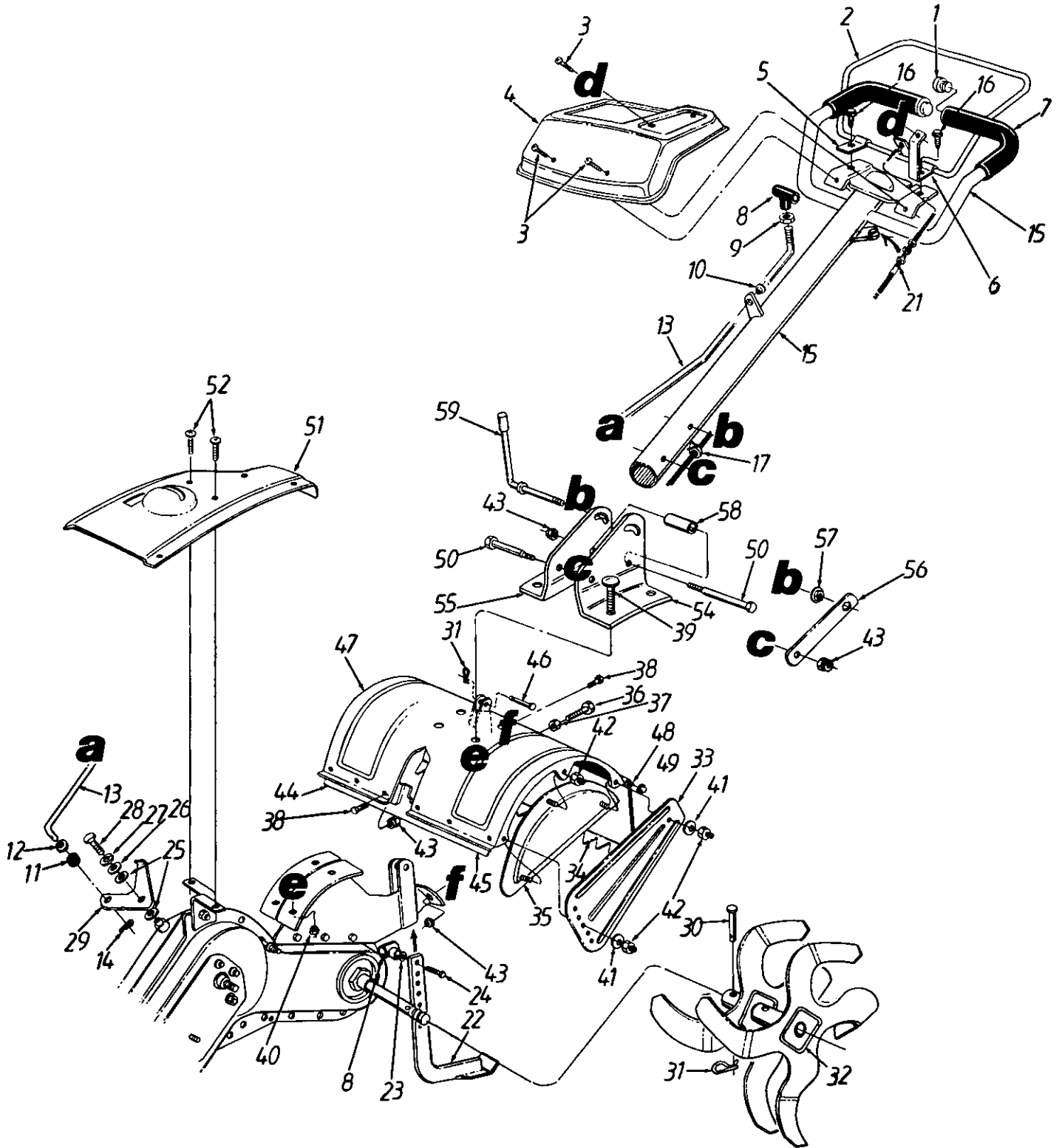


# TROUBLE SHOOTING GUIDE

| Trouble               | Possible Cause(s)  | Corrective Action  |
|-----------------------|--|--|
| Engine fails to start | <ol style="list-style-type: none"> <li>1. Cold engine not choked.</li> <li>2. Fuel tank empty, or stale fuel.</li> <li>3. Throttle control lever not in starting position.</li> <li>4. Spark plug wire disconnected.</li> <li>5. Faulty spark plug.</li> <li>6. Engine flooded.</li> </ol>     | <ol style="list-style-type: none"> <li>1. Move choke lever to CHOKE position.</li> <li>2. Fill tank with clean, fresh gasoline.</li> <li>3. Move throttle lever to START position.</li> <li>4. Connect wire to spark plug.</li> <li>5. Clean, adjust gap or replace.</li> <li>6. Crank engine with throttle in FAST position.</li> </ol>   |
| Engine runs erratic   | <ol style="list-style-type: none"> <li>1. Unit running on CHOKE.</li> <li>2. Spark plug wire loose.</li> <li>3. Stale fuel.</li> <li>4. Vent in gas cap plugged.</li> <li>5. Water or dirt in fuel system.</li> <li>6. Dirty air cleaner.</li> <li>7. Carburetor out of adjustment.</li> </ol> | <ol style="list-style-type: none"> <li>1. Move choke lever to OFF position.</li> <li>2. Connect and tighten spark plug wire.</li> <li>3. Fill tank with clean, fresh gasoline.</li> <li>4. Clear vent.</li> <li>5. Drain fuel tank. Refill with fresh fuel.</li> <li>6. Clean air cleaner as instructed in separate engine manual.</li> <li>7. Adjust carburetor as instructed in separate engine manual.</li> </ol> |
| Engine overheats      | <ol style="list-style-type: none"> <li>1. Engine oil level low.</li> <li>2. Air flow restricted.</li> <li>3. Carburetor not adjusted properly.</li> </ol>  | <ol style="list-style-type: none"> <li>1. Fill crankcase with proper oil.</li> <li>2. Remove blower housing and clean as instructed in separate engine manual.</li> <li>3. Adjust carburetor as instructed in separate engine manual.</li> </ol>   |
| Tines do not engage   | <ol style="list-style-type: none"> <li>1. Foreign object lodged in tines.</li> <li>2. Tine clevis pin(s) missing.</li> <li>3. Control cable not adjusted properly.</li> <li>4. Belt worn and/or stretched.</li> </ol>  | <ol style="list-style-type: none"> <li>1. Dislodge foreign object.</li> <li>2. Replace tine clevis pin(s).</li> <li>3. Adjust control cable (see Adjustment Section).</li> <li>4. Replace belt.</li> </ol>   |
| Wheels do not engage  | <ol style="list-style-type: none"> <li>1. Control cable not adjusted properly.</li> <li>2. Belt worn and/or stretched.</li> </ol>  | <ol style="list-style-type: none"> <li>1. Adjust control cable (see Adjustment Section).</li> <li>2. Replace belt.</li> </ol>  |

NOTE: For repairs beyond the minor adjustments listed above, please contact your local service dealer.

# Model 410



# Model 410

## PARTS LIST FOR MODEL 410 REAR TINE TILLER

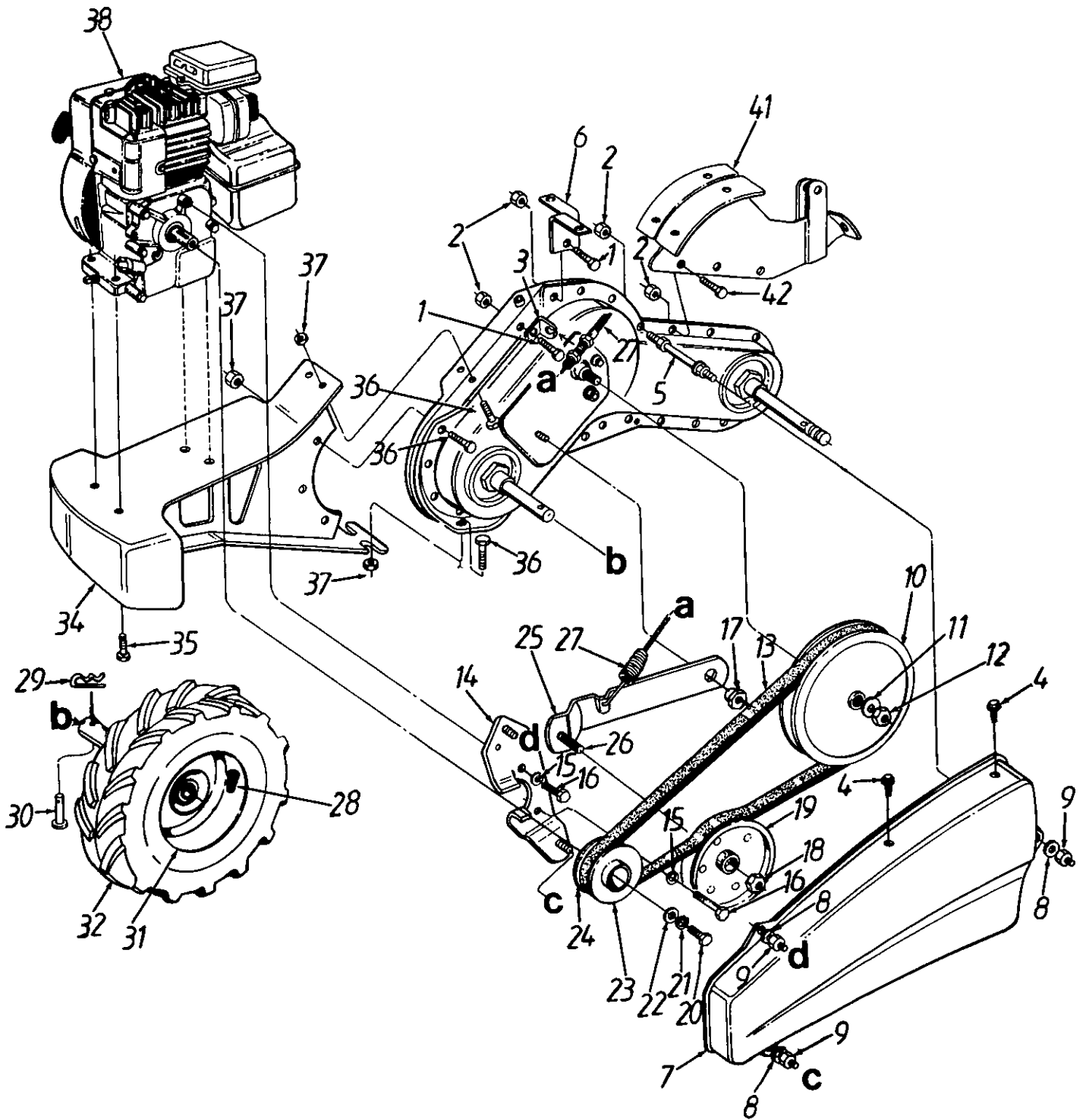
| REF. NO. | PART NO.  | CODE                               | DESCRIPTION                                | REF. NO. | PART NO.  | CODE                             | DESCRIPTION                       |
|----------|-----------|------------------------------------|--|----------|-----------|----------------------------------|-----------------------------------|
| 1        | 735-0246  | N                                  | Vinyl End Plug                             | 32       | 642-0015  |                                  | Tine Ass'y.—L.H.                  |
| 2        | 647-0014  |                                    | Clutch Control Ass'y.                      |          | 642-0016  |                                  | Tine Ass'y.—R.H. (Not Shown)      |
| 3        | 710-1017  |                                    | Torx Mach. AB-Tap Scr. 1/4 x .62" Lg.      | 33       | 786-0090  |                                  | Side Shield                       |
| 4        | 786-0131  |                                    | Handle Cover                               | 34       | 786-0113  |                                  | Rear Tine Shield                  |
| 5        | 786-0098  |                                    | Retaining Brkt.—R.H.                       | 35       | 686-0044  |                                  | End Cover Ass'y.                  |
| 6        | 786-0118  |                                    | Retaining Brkt.—L.H.                       | 36       | 710-0528  |                                  | Hex Cap Bolt 5/16-18 x 1.25" Lg.  |
| 7        | 720-0278  |                                    | Grip (2 Req'd.)                            | 37       | 712-0267  |                                  | Hex Nut 5/16-18 Thd.              |
| 8        | 720-0210A |                                    | Knob                                       | 38       | 710-0118  |                                  | Hex Bolt 5/16-18 x .75" Lg.       |
| 9        | 712-3008  |                                    | Hex Jam Nut 3/8-16 Thd.                    | 39       | 710-3097  |                                  | Carriage Bolt 3/8-16 x 1" Lg.     |
| 10       | 735-0228  |                                    | Bushing 3/8" I.D.                          | 40       | 712-0130  |                                  | Hex Ins. L-Nut 3/8-16 Thd.        |
| 11       | 735-0127  |                                    | Rubber Washer                              | 41       | 736-0242  |                                  | Bell-Wash. .345" I.D. x .88" O.D. |
| 12       | 736-0204  |                                    | FI-Wash. .344" I.D. x .6" O.D.             | 42       | 712-0419  |                                  | Hex Cap L-Nut 5/16-18 Thd.        |
| 13       | 747-0902  |                                    | Gear Shift Rod                             | 43       | 712-3004A |                                  | Hex Flange Top L-Nut 5/16-18 Thd. |
| 14       | 714-0104  |                                    | Hairpin Clip                               | 44       | 786-0076  |                                  | Tine Shield Brkt.—R.H.            |
| 15       | 649-0006  |                                    | Handle Ass'y.                              | 45       | 786-0077  |                                  | Tine Shield Brkt.—L.H.            |
| 16       | 710-0599  |                                    | Hex Wash. Hd. TT-Tap Scr. 1/4-20 x .5" Lg. | 46       | 711-0415  |                                  | Clevis Pin .375" Dia.             |
| 17       | 726-0330  | Cable Clip                         | 47   | 786-0085 |           | Tine Shield                      |                                   |
| 21       | 746-0916  | Clutch Cable                       | 48   | 747-0432 |           | Tiller Flap Rod                  |                                   |
| 22       | 786-0120  | Depth Bar                          | 49   | 726-0106 |           | Cap Speed Nut                    |                                   |
| 23       | 736-0117  | FI-Wash. 3/8" I.D. x 5/8" O.D.     | 50   | 710-0189 |           | Hex Bolt 5/16-18 x 3" Lg.        |                                   |
| 24       | 710-0216  | Hex Bolt 3/8-16 x .75" Lg.         | 51   | 786-0101 |           | Shift Cover                      |                                   |
| 25       | 717-0234  | Washer 1" O.D. (Hdn.)              | 52   | 710-1017 |           | Torx Mach. AB-Tap Scr. 1/4 x .6" |                                   |
| 26       | 736-0173  | FI-Wash. .281" I.D. x .73" O.D.    | 54   | 786-0109 |           | Handle Brkt.—L.H.                |                                   |
| 27       | 736-0329  | L-Wash. 1/4" I.D.*                 | 55   | 786-0108 |           | Handle Brkt.—R.H.                |                                   |
| 28       | 710-0751  | Hex Bolt 1/4-20 x .62" Lg. (Gr. 5) | 56   | 784-0191 |           | Hex Nut Retainer Brkt.           |                                   |
| 29       | 786-0095  | Shift Brkt.                        | 57   | 712-0379 |           | Hex Flange Nut 3/8-24 Thd.       |                                   |
| 30       | 711-0415  | Clevis Pin                         | 58   | 750-0885 |           | Spacer .322 Dia.                 |                                   |
| 31       | 714-0149B | Hairpin Clip                       | 59   | 784-0190 |           | Handle Adjustment Crank          |                                   |

\*For faster service obtain standard nuts, bolts and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.

**NOTE:** Specifications subject to change without notice or obligation.

| Part No. | Description                 |
|----------|-----------------------------|
| 777-1667 | "530" Belt Guard Label      |
| 777-1672 | Gear Selection Label        |
| 777-1673 | F-N-R Label                 |
| 777-1669 | Operating Instruction Label |
| 777-9675 | Tilling Depth Label         |
| 777-1678 | Handle Panel Label          |

# Model 410

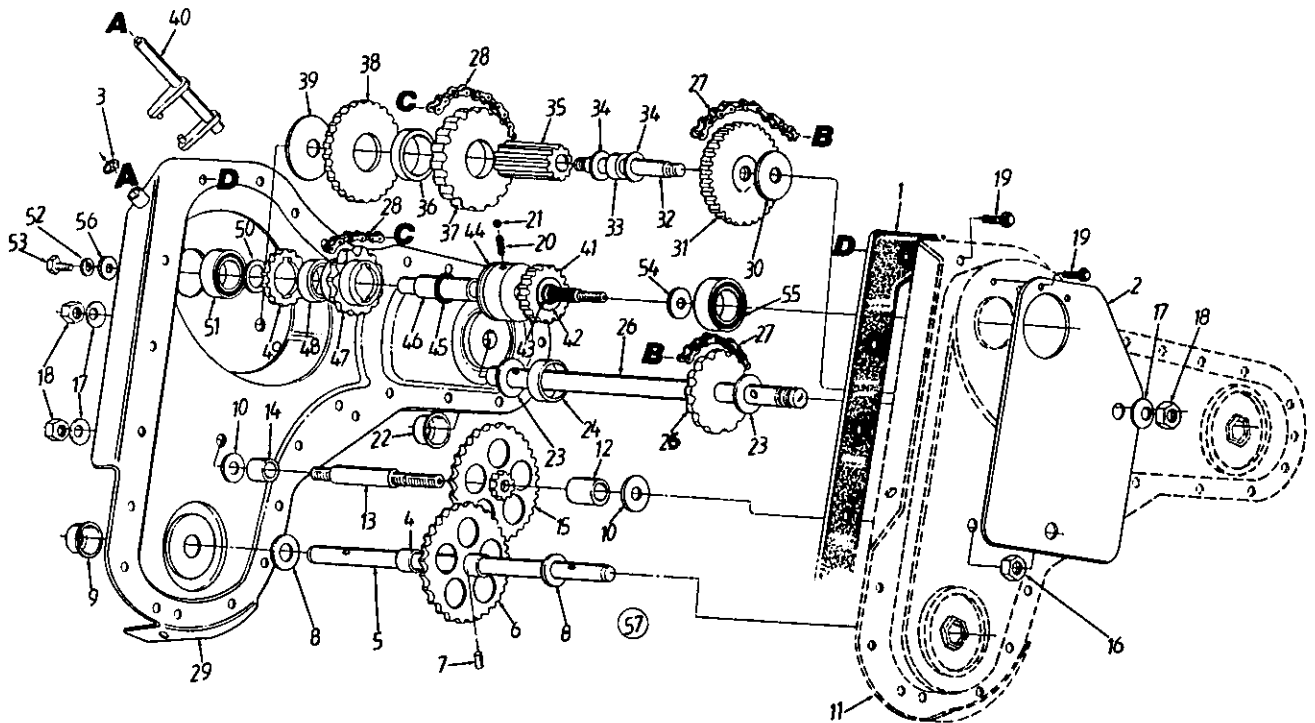


# Model 410

## PARTS LIST FOR MODEL 410 REAR TINE TILLER

| REF. NO. | PART NO.  | CODE | DESCRIPTION                             | REF. NO. | PART NO.  | CODE | DESCRIPTION                         |
|----------|-----------|------|---|----------|-----------|------|-------------------------------------|
| 1        | 710-0118  |      | Hex Bolt 5/16-18 x .75" Lg.             | 21       | 736-0217  |      | L-Wash. 3/8" I.D.                   |
| 2        | 712-3004A |      | Hex Flange Top L-Nut 5/16-18 Thd.       | 22       | 736-0258  |      | FI-Wash. 3/8" I.D. x 1" O.D.        |
| 3        | 786-0107  |      | Cable Mtg. Bracket                      | 23       | 756-0972  |      | Outer Engine Pulley Half            |
| 4        | 710-1017  |      | Torx Mach. AB-Tap Scr.<br>1/4 x .6" Lg. | 24       | 756-0971  |      | Inner Engine Pulley Half            |
| 5        | 738-0899  |      | Belt Cover Bolt                         | 25       | 786-0080  |      | Idler Bracket                       |
| 6        | 786-0117  |      | Shift Cover Bracket                     | 26       | 710-0723  |      | Hex Bolt 3/8-16 x 1.25" Lg.         |
| 7        | 786-0100  |      | Belt Cover                              | 27       | 746-0916  |      | Clutch Cable                        |
| 8        | 736-0142  |      | FI-Wash. .281" I.D. x .5" O.D.          | 28       | 734-0255  |      | Air Valve                           |
| 9        | 712-0392  |      | Hex Cap Nut 1/4-28 Thd.                 | 29       | 714-0104  |      | Hairpin Clip                        |
| 10       | 756-0634  |      | Flat Pulley 8" O.D.                     | 30       | 711-1017  |      | Clevis Pin                          |
| 11       | 736-0105  |      | Bell-Wash. .38" I.D. x .88" O.D.        | 31       | 634-0112  |      | Rim Only                            |
| 12       | 712-0130  |      | Hex Ins. L-Nut 3/8-16 Thd.              | 32       | 634-0110  |      | Wheel Ass'y. Comp.—R.H.             |
| 13       | 754-0438  |      | "V"-Belt                                |          | 634-0111  |      | Wheel Ass'y. Comp.—L.H.             |
| 14       | 686-0031  |      | Belt Keeper Brkt.                       | 34       | 734-1796  |      | Tire Only                           |
| 15       | 736-0119  |      | L-Wash. 5/16" I.D.                      | 35       | 619-0009  |      | Frame Counterweight                 |
| 16       | 710-0237  |      | Hex Bolt 5/16-24 x .62" Lg.             |          | 710-1007  |      | Hex L-Wash. TT-Tap Scr. 3/8-16 Thd. |
| 17       | 738-0876  |      | Shld. Nut                               | 36       | 710-3002  |      | Hex Bolt 5/16-18 x 1" Lg. (Gr. 5)   |
| 18       | 712-0266  |      | Hex Jam L-Nut 3/8-16 Thd.               | 37       | 712-3004A |      | Hex Flange L-Nut 5/16-18 Thd.       |
| 19       | 756-0405  |      | FI-Idler w/Flanges                      | 38       | —         |      | Engine                              |
| 20       | 710-0152  |      | Hex Bolt 3/8-24 x 1" Lg.                | 41       | 686-0043  |      | Tine Shield Brkt. Ass'y.            |
|          |           |      |   | 42       | 710-3038  |      | Hex Bolt 5/16-18 x 7/8" Lg.         |

# Model 410



## PARTS LIST FOR MODEL 410 REAR TINE TILLER

| REF. NO. | PART NO. | CODE | DESCRIPTION                                | REF. NO. | PART NO.  | CODE | DESCRIPTION                       |
|----------|----------|------|--|----------|-----------|------|-----------------------------------|
| 1        | 721-0295 |      | Chain Case Gasket                          | 29       | 686-0038  |      | Gear Case Ass'y. Half—R.H.        |
| 2        | 786-0086 |      | Reinforcement Plate                        | 30       | 736-0406  |      | FI-Wash. 7/16" I.D. x 1-3/8" O.D. |
| 3        | 716-0865 |      | Snap Ring                                  | 31       | 617-0002  |      | Gear and Sprocket Ass'y.          |
| 4        | 750-0938 |      | Spacer .735" I.D. x .886" O.D.             | 32       | 738-0884  |      | Jack Shaft 5" Lg.                 |
| 5        | 711-1015 |      | Wheel Shaft                                | 33       | 750-0931  |      | Spacer .636" I.D. x .86" O.D.     |
| 6        | 717-1406 |      | Spur Gear 46T                              | 34       | 736-0302  |      | FI-Wash. .63" I.D. x .94" O.D.    |
| 7        | 715-0215 |      | Pin Type "E" Grooved                       | 35       | 717-1411  |      | Spur Gear 10T                     |
| 8        | 736-0351 |      | FI-Wash. .76" I.D. x 1.5" O.D.             | 36       | 750-0930  |      | Spacer 1.5" I.D. x 1.76" O.D.     |
| 9        | 784-0166 |      | Dust Cover Ass'y. .75" Shaft               | 37       | 713-0436  |      | Sprocket—#41 Chain                |
| 10       | 736-0406 |      | FI-Wash. 7/16" I.D. x 1-3/8" O.D.          | 38       | 717-1405  |      | Reverse Gear 46T                  |
| 11       | 686-0039 |      | Gear Case Ass'y. Half—L.H.                 | 39       | 736-0518  |      | Thrust Wash. .445" I.D. x 1.92"   |
| 12       | 750-0935 |      | Spacer .635" I.D. x 1" O.D. x .78          | 40       | 618-0105  |      | Shifter Ass'y.                    |
| 13       | 738-0885 |      | Jack Shaft 2.06" Lg.                       | 41       | 717-1409  |      | Spur Gear 17T                     |
| 14       | 750-0936 |      | Spacer .635" I.D. x 1" O.D. x .37" Thk.    | 42       | 736-0442  |      | FI-Wash. .69" I.D. x 1.06" O.D.   |
| 15       | 617-0004 |      | Gear Idler Ass'y.                          | 43       | 716-0234  |      | Retaining Ring .669" Shaft        |
| 16       | 712-3067 |      | Hex Patch L-Nut 7/16-20 Thd.               | 44       | 718-0234  |      | Clutch Collar                     |
| 17       | 736-0407 |      | Bell-Wash. .45" I.D. x 1" O.D.             | 45       | 716-0235  |      | Retaining Ring .875" Shaft        |
| 18       | 712-0378 |      | Hex Nut 7/16-20 Thd.                       | 46       | 711-0952  |      | Drive Shaft                       |
| 19       | 710-0599 |      | Hex Wash. Hd. TT-Tap Scr. 1/4-20 x .5" Lg. | 47       | 713-0435  |      | Sprocket 11T                      |
| 20       | 732-0863 |      | Spring Detent                              | 48       | 750-0928  |      | Neutral Spacer                    |
| 21       | 741-0862 |      | Ball Detent                                | 49       | 717-1408  |      | Spur Gear 16T                     |
| 22       | 784-0167 |      | Dust Cover Ass'y. 1" Shaft                 | 50       | 736-0336  |      | FI-Wash. 5/8" I.D. x 1" O.D.      |
| 23       | 736-0163 |      | Thrust Wash. 1.03" I.D. x 1.62"            | 51       | 741-0124  |      | Ball Bearing .669" I.D.           |
| 24       | 750-0570 |      | Spacer 1" I.D. x 2" O.D. x .5" Thk.        | 52       | 736-00329 |      | L-Wash. 1/4" I.D.                 |
| 26       | 611-0021 |      | Tine Shaft Ass'y.                          | 53       | 710-0258  |      | Hex Bolt 1/4-20 x .62" Lg.        |
| 27       | 713-0226 |      | Chain #50 5/8" Pitch x 52 Links—Endless    | 54       | 736-0511  |      | FI-Wash. .635" I.D. x 1" O.D.     |
| 28       | 713-0223 |      | Chain—#41 1/2" Pitch x 30 Links—Endless    | 55       | 741-0563  |      | Ball Bearing                      |
|          |          |      |  | 56       | 736-0512  |      | FI-Wash. .281" I.D. x .875" O.D.  |
|          |          |      |  | 57       | 686-0040  |      | Gear Case Ass'y. Comp.            |
|          |          |      |  | 58       | 718-0227  |      | Key—Drive Shaft (Not Shown)       |

**THE WHITE OUTDOOR PRODUCTS CUSTOMER CARE  
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**TWO YEAR CONSUMER WARRANTY ON NORMAL WEAR PARTS WITH NINETY DAY NO FAULT PROTECTION:** All normal wear part failures will be covered on this product for a period of ninety days regardless of cause. After ninety days but within the two year warranty period, normal wear parts failures will be covered if caused by defects in material or workmanship of other component parts. Normal wear parts are defined as belts, blades, blade adapters, grass bags, rider deck wheels, seats and 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, please check the Yellow Pages or contact the customer service department of White Outdoor Products Company, PO Box 361131, Cleveland, Ohio, 44136-0019, phone (216)225-8883. The return of a complete unit will not be accepted by the factory unless prior written permission has been extended by the service department of White Outdoor Products Company.

**TRANSPORTATION CHARGES:** transportation charges for the movement of any power equipment unit or attachment are the responsibility of the purchaser. Transportation charges for any parts submitted for replacement under this warranty must be paid by the purchaser unless such return is requested by White Outdoor Products Company.

**UNITS EXPORTED OUT OF THE UNITED STATES:** White Outdoor Products Company 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 Products.

**OTHER WARRANTIES:**

1. The engine or component parts thereof carry separate warranties from their manufacturers. Please refer to the applicable manufacturer's warranty on these items.
2. Log splitter pumps, valves and cylinders or component parts thereof are covered by a one year warranty.
3. Batteries are covered by a 90 day replacement warranty.
4. All other warranties, express or implied, including any implied warranty of merchantability or fitness for a particular purpose are hereby expressly disclaimed in their entirety.
5. The provisions as set forth in this warranty provide the sole and exclusive remedy of White Outdoor Products Company's obligations arising from the sales of its products. White Outdoor Products Company will not be liable for incidental or consequential loss or damage.

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Note: this warranty does not cover routine maintenance items such as lubricants, filters, blade sharpening and tune-ups, or adjustments such as brake adjustments. Nor does this warranty cover normal deterioration of the exterior finish due to use or exposure.



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