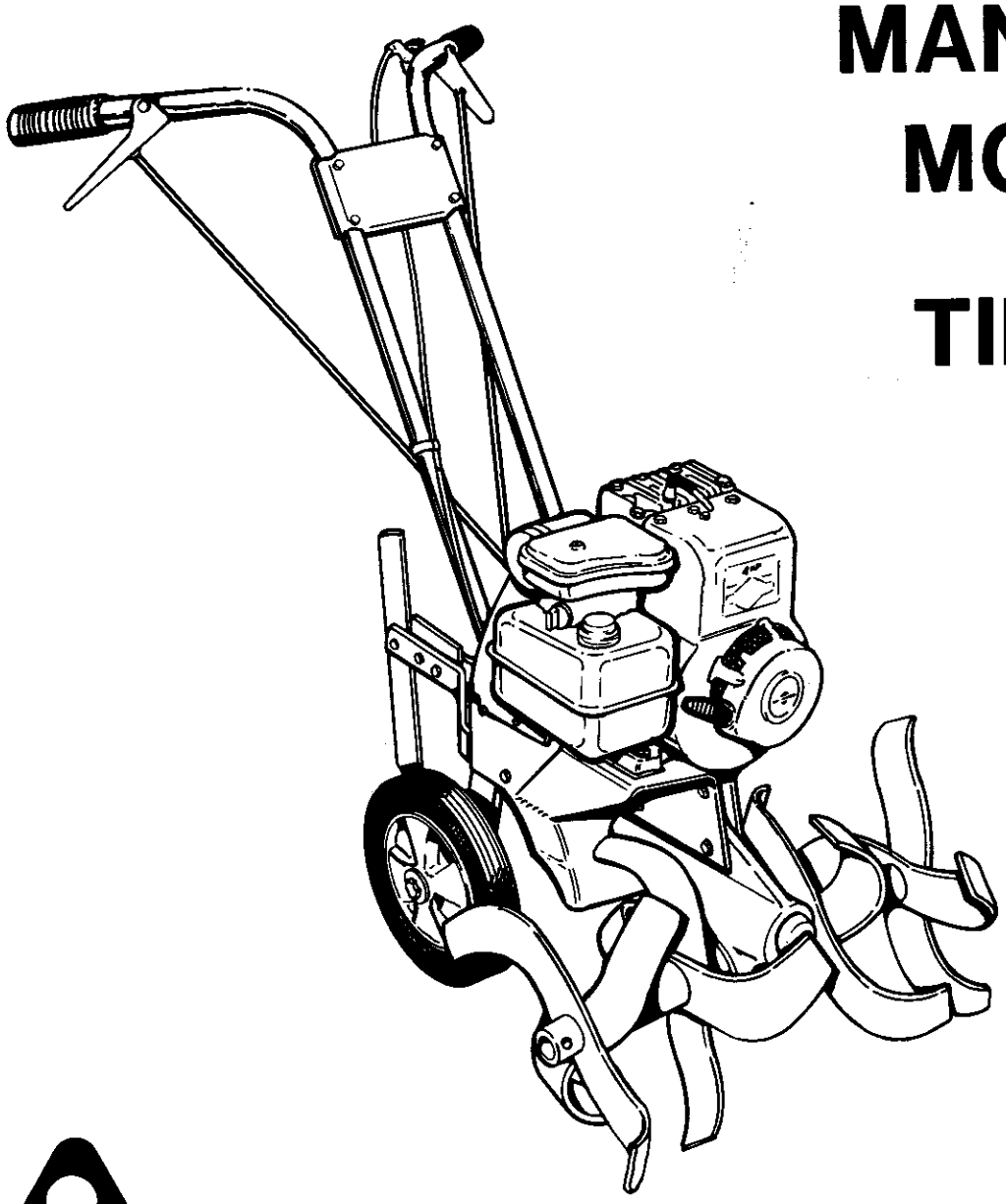
Simplicity®

OPERATOR'S MANUAL

MODEL 1004 TILLER



4 H.P. TILLER
MFG. NO. 1690238

CAUTION: Read Manual Thoroughly Before Operating

FORM – 1657225
PRINTED IN U.S.A.
768

Dear Customer,

Congratulations on your purchase of this walk behind rotary tiller. It has been carefully designed and built to give you years of dependable service. With proper care, it will help you do your tilling jobs efficiently.

To make sure you get the best use from your tiller, study this manual carefully. Make sure that it is assembled properly, and that all adjustments are done correctly. Be sure that you (and anyone who operates this machine) know how to use the machine safely. Read this manual thoroughly and become familiar with the controls of the machine before operating.

For your own safety as well as others, study the safety rules in this manual. Review this information often. It is there for your benefit and is important.

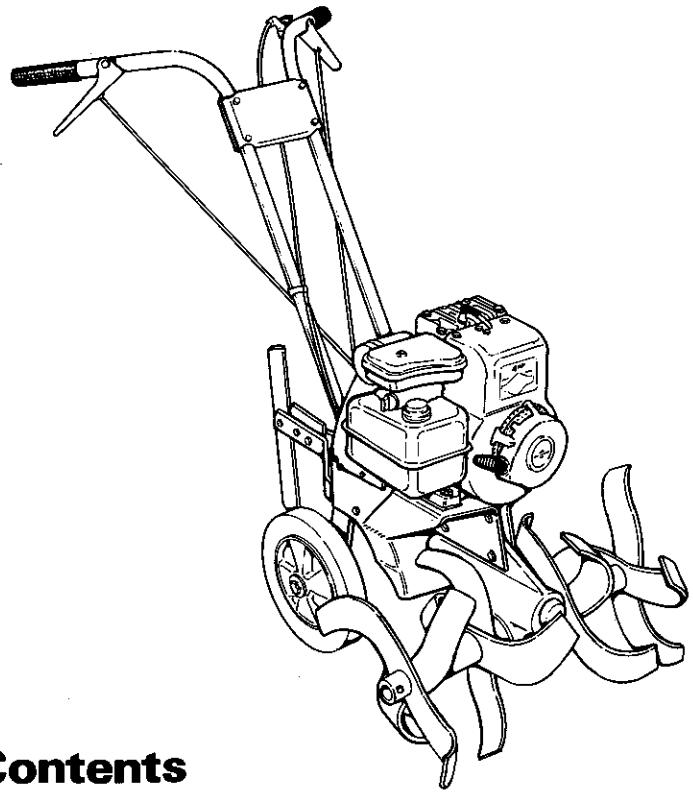
This manual tells how to assemble, service, operate and adjust your tiller. If any help is needed with any of these procedures, your dealer will be happy to help you.

Measurements are given in this manual with metric equivalents in parentheses. For example, behind the measurement 1/8 inch would appear: (3 mm). So, the metric equivalent of 1/8 inch is 3 millimeters.

These metric measurements are provided for your convenience as an aid in converting to the metric system. A list of metric terms and abbreviations used in this manual is provided below.

LIST OF ABBREVIATIONS OF METRIC TERMS

1. cc = cubic centimeter
2. kg = kilogram
3. kPa = kiloPascal
4. kph = kilometers per hour
5. kw = kilowatt
6. l = liter
7. mm = millimeter
8. N/m = Newton/meter



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WARNING

Read these safety rules and follow them closely. Failure to obey these rules could result in loss of control of vehicle, severe personal injury to yourself or bystanders, or damage to property or equipment affecting safety.

Safety Rules

⚠ *This notation preceding Cautions and Warnings in the text signifies important precautionary steps which, if not properly followed, could result in personal injury or damage to your equipment affecting safety.*

General

- Read the Operating and Service Instructions carefully. Be thoroughly familiar with the controls and the proper use of the equipment.
- Keep the area of operation clear of all persons, particularly small children and pets.
- Never allow children to operate the machine. Do not allow adults to operate it without proper instruction.

Preparation

- Handle gasoline with care – it is highly flammable.
  a. Use approved gasoline container.
  b. Never remove the cap of the fuel tank or add gasoline to a running or hot engine, or fill the fuel tank indoors. Wipe up spilled gasoline.
- Do not run the engine indoors. Exhaust fumes are dangerous.
- Wear heavy footwear. Do not operate tiller when barefoot or when wearing open sandals or canvas shoes.

Operation

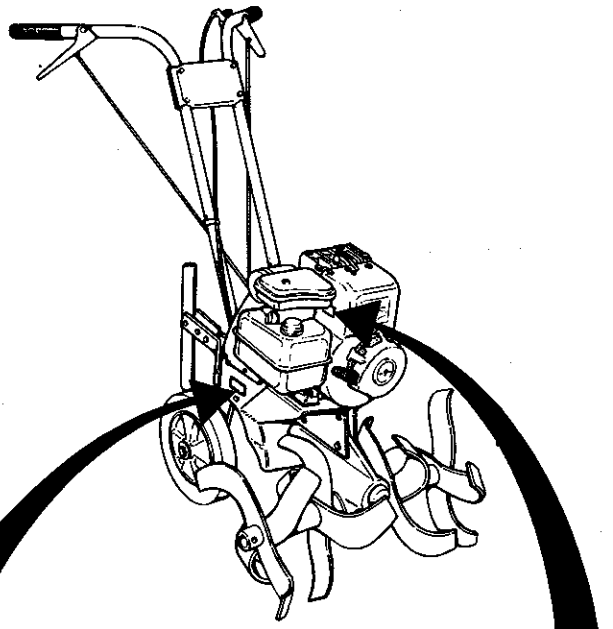
- Release the clutch levers and stop the engine before cleaning tines, removing obstacles, making adjustments, or when leaving the operating position.
- Use caution to avoid slipping or falling, especially when operating tiller in reverse.
- Stay alert for holes in the terrain and other hidden hazards.
- The tiller should be stopped and inspected for damage after striking a foreign object, and the damage should be repaired before restarting and operating the equipment.
- Never operate the rotary tiller without good visibility or light.

Maintenance and Storage

- Check bolts, engine mounting bolts, etc. at frequent intervals for proper tightness to be sure equipment is in safe working condition.
- Never store machine with fuel in the fuel tank inside a building where open flame or sparks are present. Allow engine to cool before storing in any enclosure.
- Always refer to operator's manual for important details if rotary tiller is to be stored for an extended period.

Identification

When ordering replacement parts for your rotary tiller, be prepared to give your dealer the identification number found on the identification plate shown below.



SIMPLICITY MANUFACTURING CO.
A DIVISION OF ALLIS-CHALMERS CORPORATION
PORT WASHINGTON, WI U.S.A.
Refer to ID no. when writing or ordering parts
ID NO. [redacted]

ROTARY TILLER IDENTIFICATION PLATE

MODEL	TYPE	CODE

ENGINE IDENTIFICATION PLATE

Accessories and Attachments

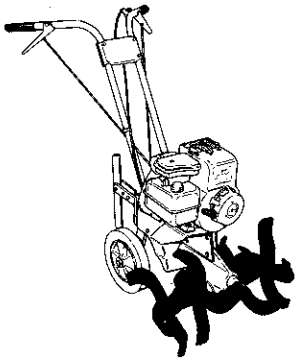
There are several optional accessories and attachments for your rotary tiller. They will make your tilling jobs easier. See your dealer if you wish to purchase any of the following:

TINE EXTENSION KIT — increases tilling width 6.5 inches (165 mm) each side.

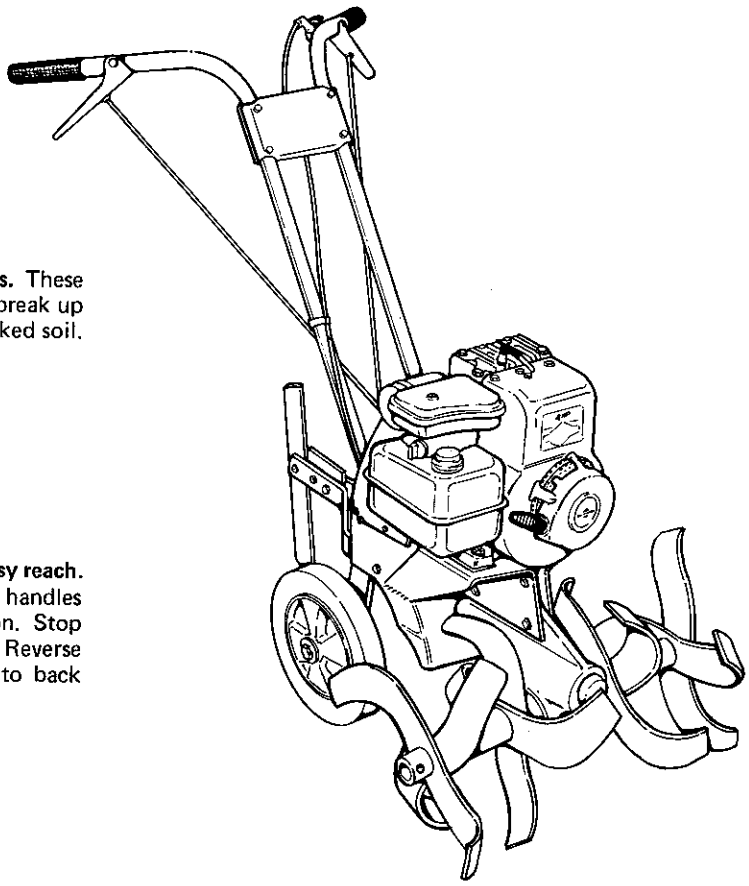
FURROW OPENER — digs furrows for crops which must be planted in rows.

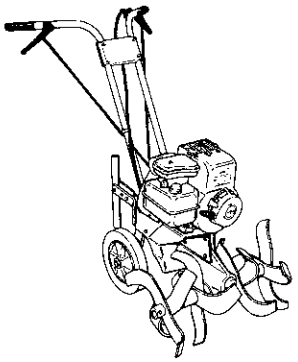
WORM GEAR OIL — special lubricant for worm gear drive.

Owner Benefits

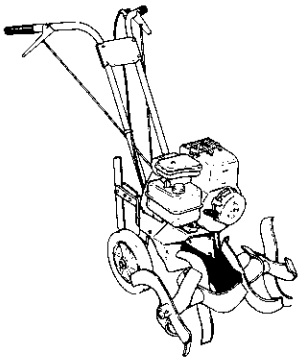


All welded steel tines. These self-sharpening tines break up turf or previously worked soil.

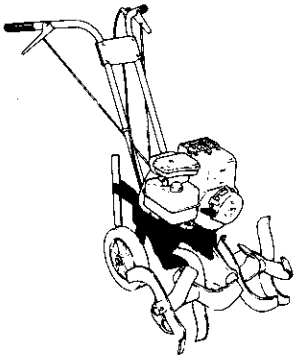




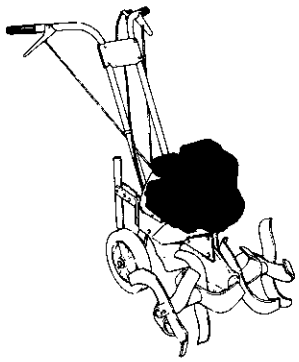
All controls within easy reach. Controls mounted on handles regulate tine direction. Stop tilling when released. Reverse drive makes it easy to back away from obstacles.



Dependable transmission with cast iron housing. Rugged worm and gear drive with Touch-O-Matic clutch.



Chassis is made of electrically welded steel, mounted on easy rolling semi-pneumatic rubber tires.



New Briggs & Stratton 4 horsepower engine has Easy-Spin starting. Horizontal crankshaft and upward angled, side pull recoil starter are designed for easy, natural motion. No mixing of oil and gasoline. Muffler is quiet, low back pressure type.

Operation

CONTENT OF SECTION

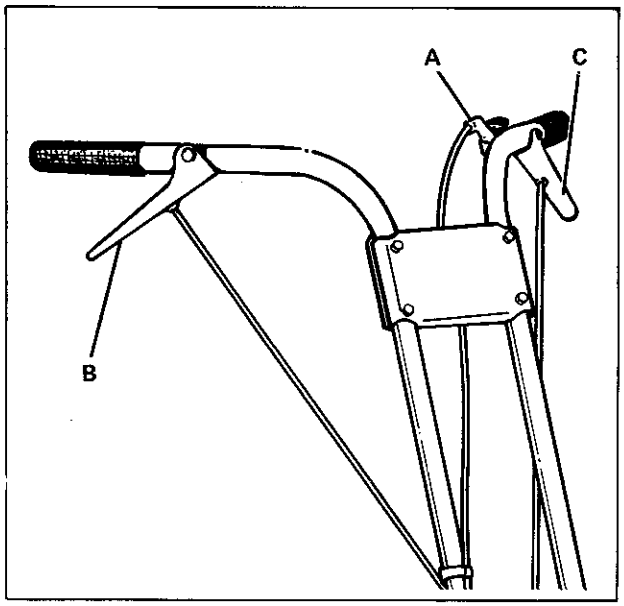
A brief description of the rotary tiller controls, followed by the basic operating procedures, is given in this section to help you get to know your rotary tiller and how to operate it safely and efficiently.

ROTARY TILLER CONTROLS

The rotary tiller is operated using controls located on the handle bars. Figure 1 shows the location, name and function of these controls. The control names given in figure 1 are used throughout this manual.

⚠ WARNING

Before attempting to inspect, adjust or service the rotary tiller make sure the engine is stopped and the spark plug wire disconnected.



CHECKS BEFORE STARTING

The checks listed below should be performed before each use of the rotary tiller.

1. Read this manual. Be sure you follow all safety precautions, and know the location and use of operating controls.
2. Be sure that all safety guards are in place and that all nuts, bolts, and spring clips are secure. Be sure tilling depth and width adjustments fit the job to be done.
3. Refer to Normal Care section of this manual to determine and perform any needed care for your rotary tiller.

⚠ WARNING

Gasoline is highly flammable and must be handled with care. Never fill the tank when the engine is still hot from recent operation. Do not allow open flame, smoking or matches in the area. Avoid overfilling and wipe up any spills.

4. Remove fuel tank filler cap (item A, figure 2) and fill completely with clean, fresh leaded or non-leaded "Regular" grade automotive gasoline. Replace fill cap securely.

Item	Name	Function
A	**Throttle Lever**	Used to adjust engine speed or stop engine.
B	**Forward Clutch Lever**	Controls forward action of tiller. Squeeze lever for use. Release to stop.
C	**Reverse Clutch Lever**	Controls reverse action of tiller. Squeeze lever for use. Release to stop.

Figure 1. Locations and Functions of Controls

5. Clear the area you intend to till of all items that may be caught in or thrown by the rotary tiller.

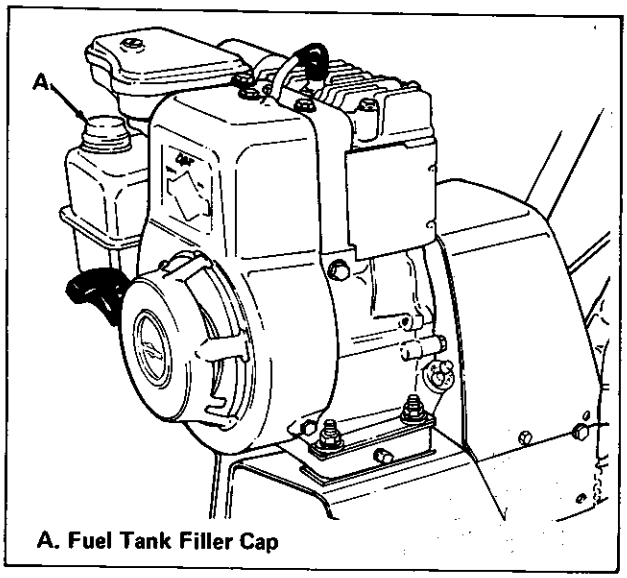


Figure 2. Fuel Tank and Filler Cap

ENGINE AND TILLER OPERATION

Details for tiller operation are given in paragraphs that follow. Study all of these paragraphs.

STARTING THE ROTARY TILLER

1. Move throttle lever halfway between the STOP and FAST positions.
2. Pull choke (item A, figure 3) fully outward.
3. Grasp the recoil starter handle firmly in your right hand and pull straight out to start the engine.

NOTE:

If the engine fails to start after 4 or 5 pulls it may be flooded. Return the choke to OFF position and pull recoil starter handle to clear the excess fuel.

4. After the engine starts, push choke knob fully in.
5. After engine starts, move throttle lever 3/4 forward.
6. Always return starting handle by hand; do not release handle with rope extended.
7. To stop the engine, pull the throttle lever all the way back, and down to the STOP position.

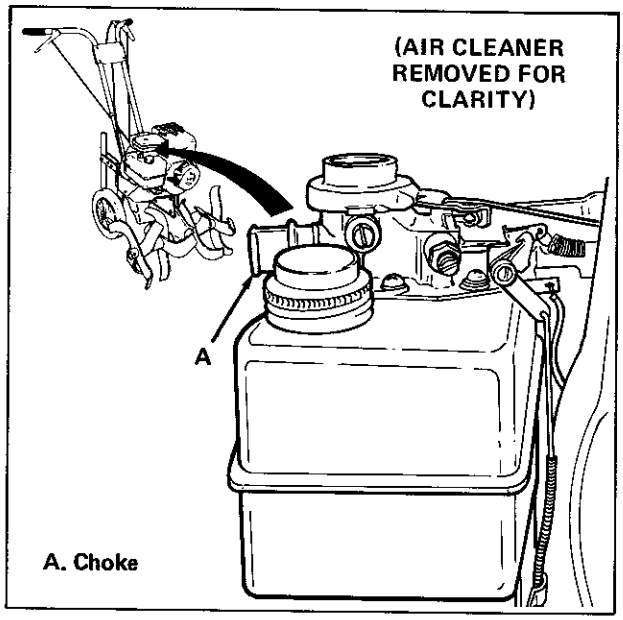


Figure 3. Choke

TILLER OPERATION

NOTE:

Never grip both forward and reverse clutch levers at the same time.

To transport tiller from one work area to another without tilling, slow the engine, raise depth bar to highest position, and engage the clutch. The tiller will move slowly across the ground without tilling.

For tilling, adjust the depth bar for the desired tilling depth. Then adjust the engine speed to fit the soil conditions and engage the forward clutch by squeezing the lever on the right handle. The tines will begin rotating, tilling the soil and also pulling the tiller forward.

Forward speed of the tiller and the tilling depth are closely related. When the forward speed is too fast, the tilling depth is shallow. The depth bar controls the tilling depth by creating a drag that slows the forward motion of the tiller. You can vary the drag created by the depth bar with slight upward or downward pressure on the handles. Downward pressure increases the drag to reduce forward speed. Upward pressure produces the opposite results. Note that only slight pressures are required.

Do not attempt to slow the forward speed by pulling back on the handles. Doing so will create upward pressure on the handles, reducing depth bar drag and adding to the original problem. Let the depth bar do its job. If it is properly adjusted and used, you need do little more than guide the machine.

Experience will help you learn the correct use of the depth bar. When you begin, proceed slowly and carefully to get the feel of the machine. Remember that the desired depth will not be reached until the tiller moves forward and the depth bar enters a previously tilled area. As you proceed, experiment with the clutch lever so you learn to gauge the responses needed in close areas.

NOTE

When striking a foreign object, stop the tiller by releasing your hand grip on the clutch lever. Stop the engine. Thoroughly inspect the rotary tiller for any damage before restarting and operating the rotary tiller.

TILLING HINTS

One of many tilling considerations is to adjust engine speed to fit both the soil condition and the job. When doing seedbed preparation, you will normally want to use full or nearly full engine power. When cultivating between rows of plants, control is most important and a much slower speed is desired.

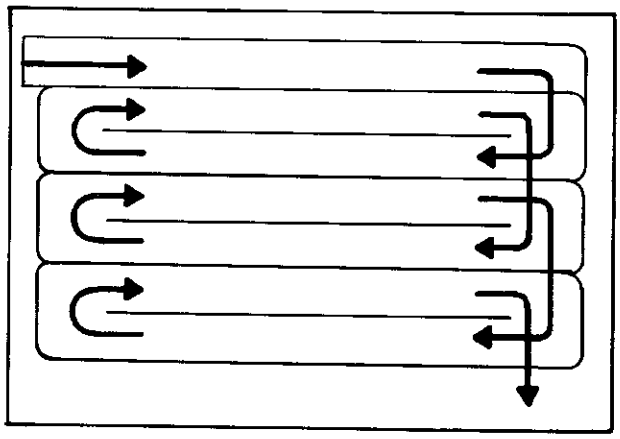
You will want to till to a depth that suits the seed you will plant. As a rule, till at least 2 inches (50 mm) deeper than the normal planting depth for the seed. The usual planting depth for corn, as an example, is 2 to 3 inches (50 to 76.2 mm). Using the rule above for this example, till the soil to a depth of 5 inches (127 mm) or more.

Plan ahead and determine the best tilling pattern before you start. Consider the size and shape of the area to be tilled. Keep in mind the hardness of the soil. Under normal conditions, tilling is best done by making long passes alongside previous ones (item A, figure 4). In hard-packed soil, steering problems can be reduced by skipping one tiller width from the previous one (item B).

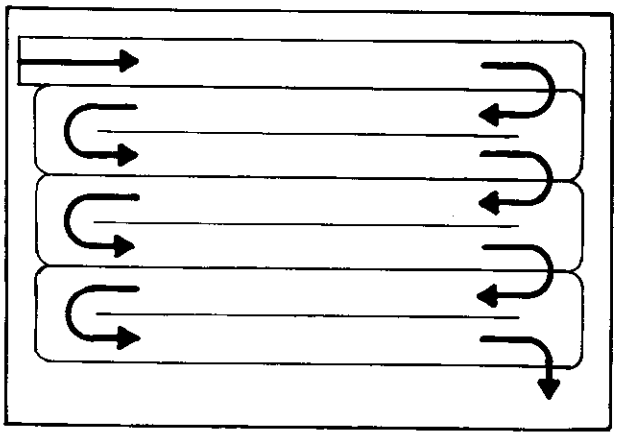
In places where rows are slightly wider than tiller tines, it is possible to wiggle front of tiller back and forth slightly as the tiller moves forward, to enable the tines to pick up the small area that would have been missed.

Turning the tiller around at the end of a row, or for the next pass in the opposite direction is best learned by experience. One method is to disengage the tiller, lift up on the handle bars and pivot the tiller on the tines. A combination of the forward and reverse clutch together with pivoting of the handle bars may be used.

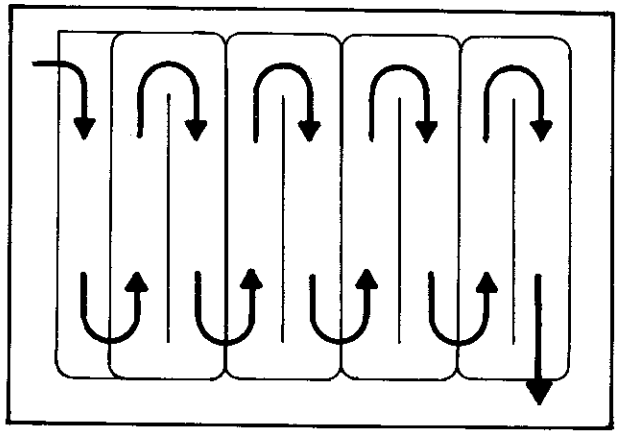
Do not till when the soil is very wet. This causes lumps which are difficult to remove. Soil that is moist enough to roll into a ball is too wet. If the soil is extremely hard and dry, it may be desirable to cross-till an area (item C, figure 4) at shallow depth first, then till deeper in the direction of planting rows at desired depth. Soil that is tilled at scheduled intervals is usually much easier to till.



B



A



C

Figure 4. Tilling Patterns

Normal Care

CONTENT OF SECTION

Your rotary tiller was designed and built to provide years of service with only minor care. Certain tasks, however, must be performed to keep the tiller in good operating condition and to avoid costly repairs. This section describes and provides procedures for the necessary care of your rotary tiller.

SCHEDULED CARE

A schedule for routine care is provided in figure 5. Your dealer has performed the tasks required before the first use of the rotary tiller. We suggest that you at least check these items to insure that the tiller is ready for use. Performing the checks will also help you become familiar with the care of the rotary tiller.

All other scheduled care is performed after operating the rotary tiller for a specific amount of time. See figures 5 through 11. Remember to perform the "every 25-hour check" when you perform the "every 100-hour check."

Because the schedule is based on operating time, it will be necessary to estimate and keep a record of all operating time. A Maintenance Record (at the end of this section) is provided to help you keep a record of all operating hours and maintenance repair actions.

NORMAL STORAGE

To protect your rotary tiller, store it in an enclosed dry area. Do not store it in an enclosure where fumes from the fuel tank could reach an open flame without first draining the fuel tank.

If you do not intend to use your tiller for 30 days or more, follow the off-season storage instructions given in the paragraph below.

OFF-SEASON STORAGE

1. Drain the fuel tank completely by running the engine until it stops. If desired, fuel can be stored in containers or in the tank by using a gasoline stabilizer. Follow the directions on the can. This additive prevents formation of gum and varnish for up to one year and provides easier starting and a clean fuel system.
2. Change oil. (See figure 7 in this manual for instructions.)
3. Remove spark plug, pour 1 oz. 10W-30 oil into cylinder through plug hole. Crank engine a few times to distribute oil. Reinstall plug.
4. Clean dirt and chaff from entire tiller including cylinder and tine assembly.
5. Store tiller in a dry place.
6. At the end of the storage period follow instructions below:

STARTING AFTER STORAGE

1. Clean engine fins and air filter. (See figure 10 in this manual for instructions.)
2. Remove spark plug and wipe dry. Crank engine several times to blow excess oil out of plug hole. Reinstall the plug.
3. Fill fuel tank with fresh gasoline (unless a fuel stabilizer was used).
4. Start engine outdoors. Do not run engine at high speeds immediately after starting.

Care Required	See Figure	Schedule			
		Before First Use	Every 5 Hours	Every 25 Hours***	Every 100 Hours
Check Engine Oil Level	6	•	•		
Change Engine Oil*	7			•	
Check Worm Gear Oil	8			•	
Lubrication	9			•	
Clean Engine and Air Filter**	10			•	
Clean and Gap Spark Plug	11				•

*Change original oil after first 5 hours of operation.
***Or yearly, whichever occurs first.
**More often under dirty or dusty conditions.

Figure 5. Summary of Scheduled Care

NOTE

Engine should be level.

1. Clean area around oil fill plug.
2. Remove oil fill plug.
3. Oil level should be almost to top of fill plug hole. If not, add oil. Use same weight and grade oil used at last change.
4. Install and tighten oil fill plug.

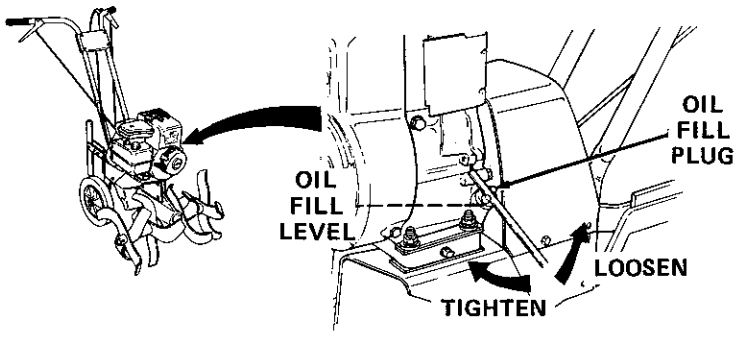


Figure 6. Check Engine Oil Level (5-Hour Care)

NOTE

Change oil while engine is still warm from operation and the tiller is parked on a level surface.

1. Remove dirt around engine oil fill plug.
2. Remove engine oil fill plug by turning counterclockwise.
3. Remove oil drain plug and allow oil to drain from engine. Tip unit to left to be sure that oil is completely drained.
4. Replace oil drain plug securely.
5. Fill with SAE 30 grade MS oil until level with top of neck. Crankcase capacity is 1-1/4 pints (.6 liter).
6. Reinstall engine oil fill plug securely.

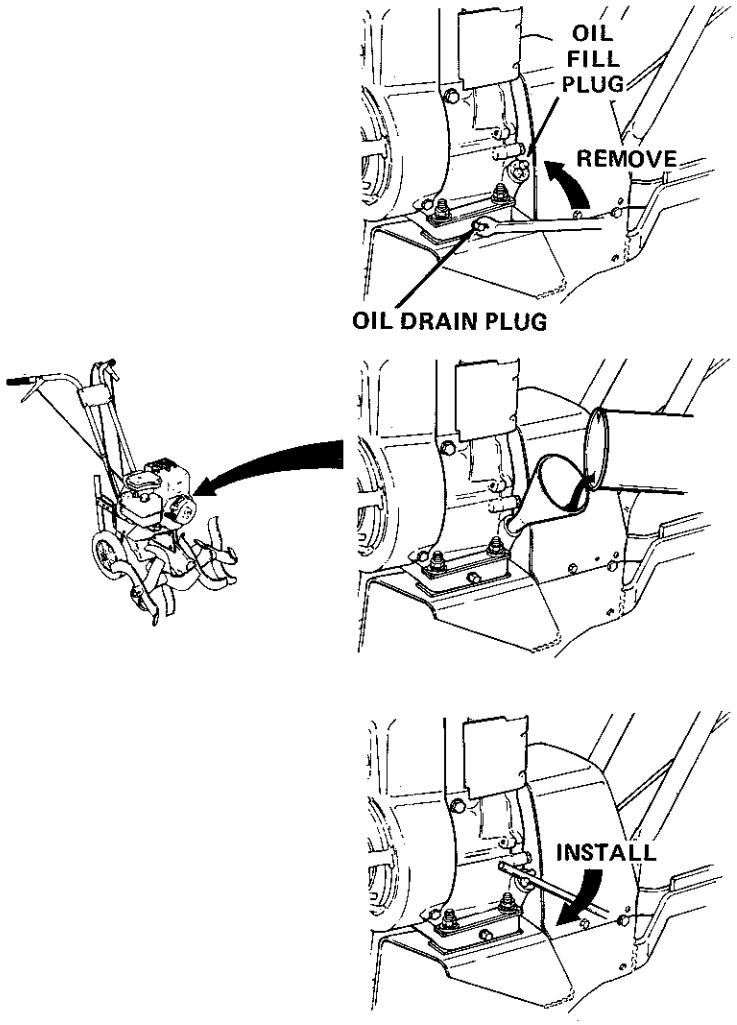


Figure 7. Change Engine Oil (25-Hour Care)

Check and add worm drive housing gear oil as follows:

1. Remove worm gear housing oil filler plug.

NOTE

There is a breather in a vent hole located at rear of worm drive housing. Do not remove this breather for any reason.

2. Oil level should be level with plug hole when tines are resting on ground. If not, add special worm gear oil (see Accessories section of this manual) through plug hole until full. Oil should be level with plug hole. Do not overfill.

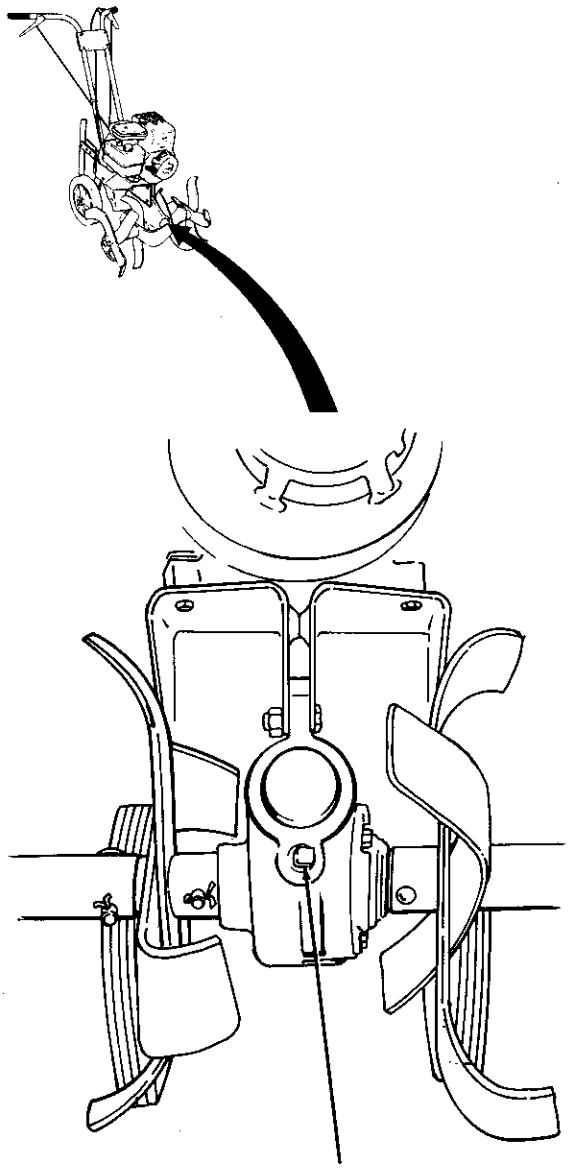
NOTE

Damage to the worm gear drive which results from use of any lubricant other than a special worm gear oil as specified by the manufacturer, or its equivalent, will automatically invalidate the warranty.

3. Tighten filler plug securely.

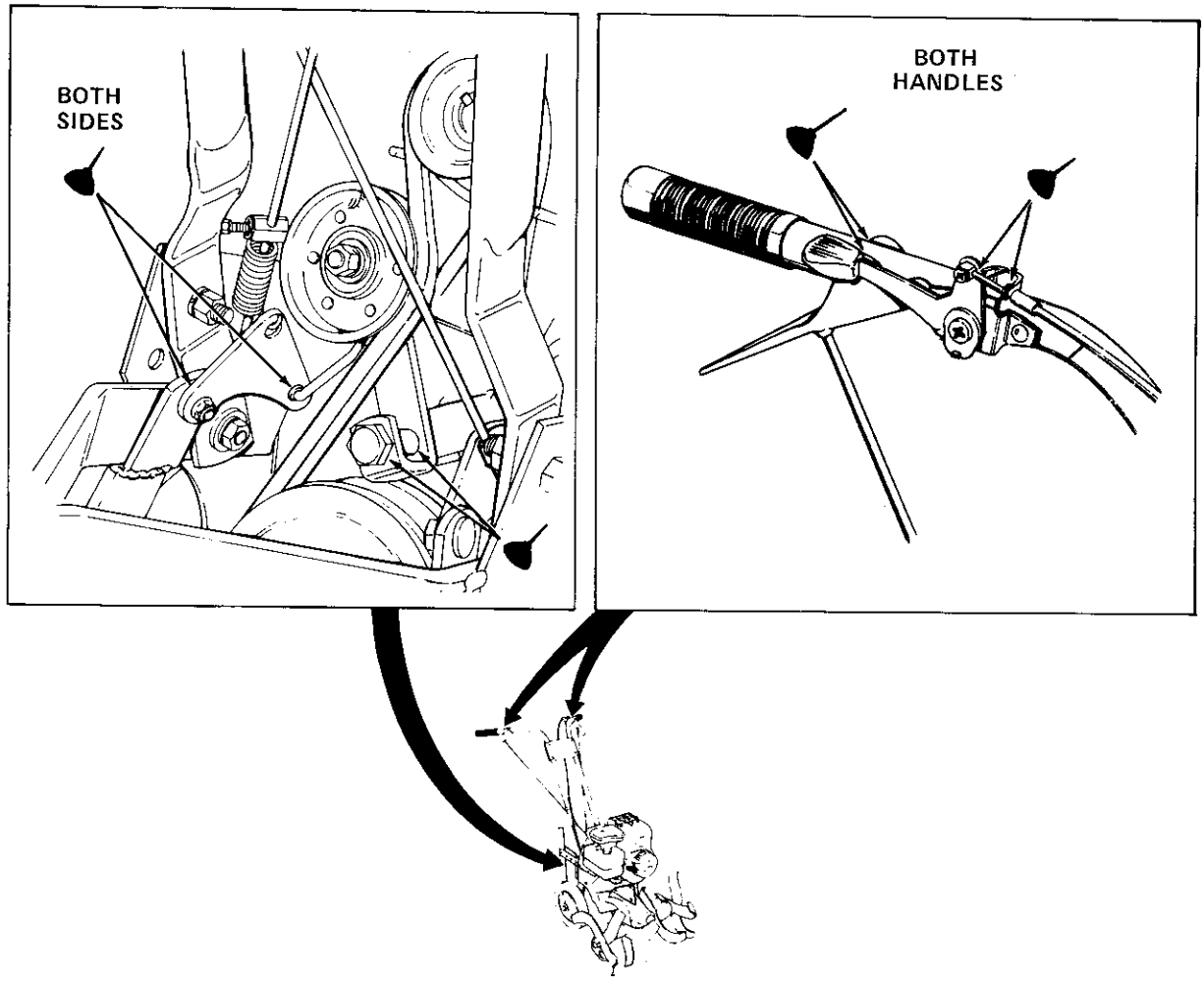
NOTE

The worm drive housing may become quite warm while operating. This is completely normal and no harm to gears will occur if the housing is kept filled as specified with the special worm gear oil.



OIL FILLER PLUG

Figure 8. Worm Gear Oil (25-Hour Care)



NOTE

Use only small quantities of oil. Additional oil collects dirt and causes extra wear.

NOTE

Do not oil wheel bearings or spill oil on belts.

Symbol	Use	Apply With	Procedure
	Medium weight (SAE 30) oil	Oil can	1. Brush and wipe dirt and grass from area. 2. Apply a few drops of oil. 3. Wipe up any drips or spills.

Figure 9. Lubrication (25-Hour Care)

1. Clean all dirt and grass from engine fins. Remove cover as necessary.

2. Clean engine air filter.

   A. Remove screw.

   B. Lift filter from engine.

   C. Take apart air filter.

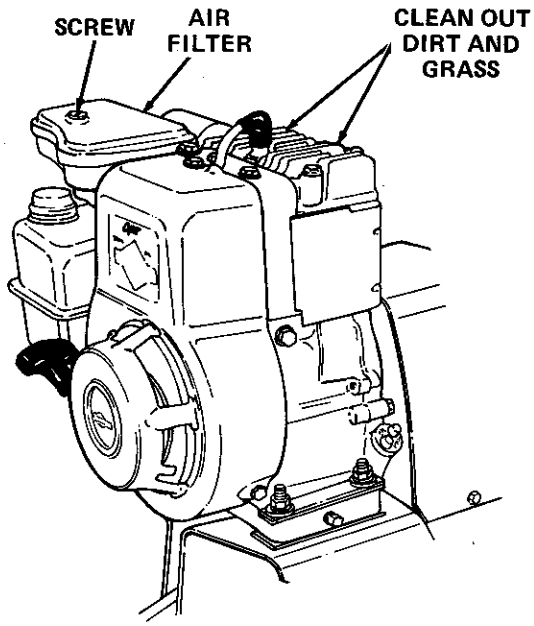
   D. Wash foam with kerosene or soap and water.

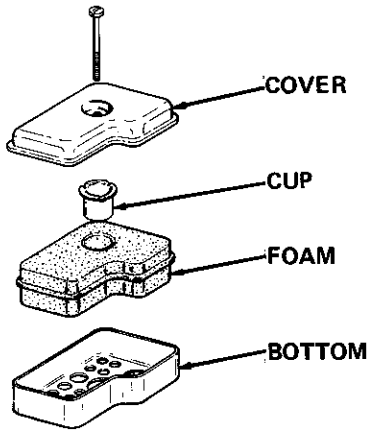
   E. Wrap foam in cloth and squeeze dry. Dry foam thoroughly.

   F. Soak foam with lightweight oil; squeeze several times to spread oil evenly and to remove excess.

   G. Assemble air filter. Make sure foam extends over lip at bottom.

   H. Install clean air filter on engine. Secure with screw.





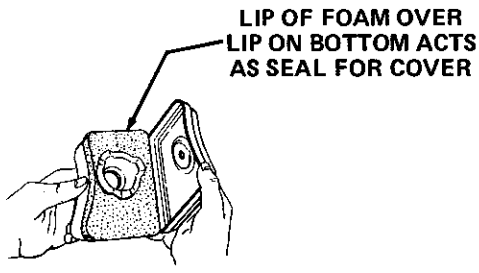
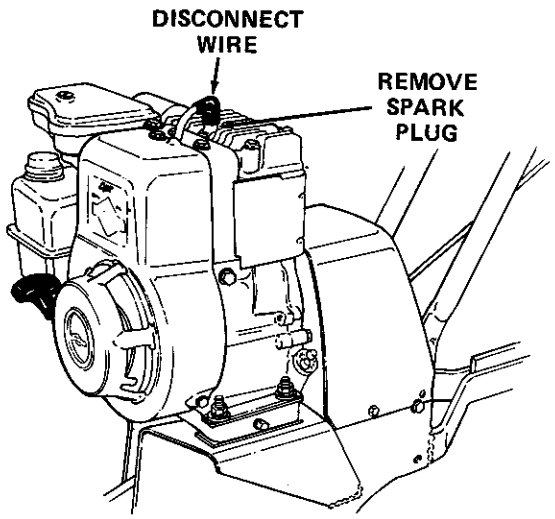


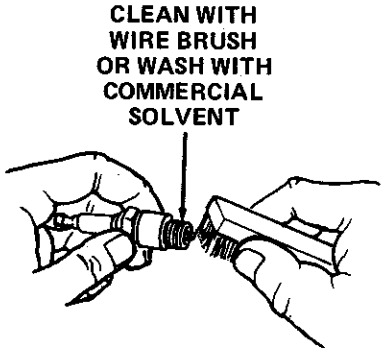
Figure 10. Clean Engine and Air Filter (25-Hour Care or As Required)



1. Disconnect wire and remove spark plug.

NOTE

Do not clean spark plug by sand-blasting; sand or grit that remains on plug may damage engine.



2. Clean spark plug. If plug shows signs of defects, it should be replaced with a new plug.

3. Set gap at .030 inch (.76 mm).

4. Install spark plug in engine and reconnect wire.

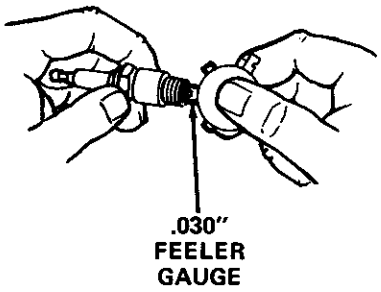


Figure 11. Clean or Replace Spark Plug (100-Hour Care)

Maintenance Record

Date	Hours Used	Lubrication	Maintenance/Repair

Figure 12. Maintenance Record

Maintenance Record

Date	Hours Used	Lubrication	Maintenance/Repair

Figure 12. Maintenance Record

Troubleshooting

CONTENT OF SECTION

This section of the manual tells you how to troubleshoot some of the more common and easily corrected rotary tiller problems. For problems not covered in this manual, it is recommended that you contact your dealer.

TROUBLESHOOTING PROCEDURES

Troubleshooting procedures are provided in figure 13. To use these procedures, first locate the problem description that best describes the trouble that you have encountered. Check the possible causes one at a time in the order that they are listed. Correct any problems that are found and try to operate the rotary tiller again to see if you have eliminated the trouble.

⚠ WARNING

For your safety, do not try to adjust or repair the rotary tiller with the engine running. Always remove the spark plug wire before beginning maintenance to prevent accidental starting of the engine.

Problem	Cause/Remedy
1. Engine fails to start.	A. Fuel tank may be empty. B. Throttle lever is not set to half open. C. Spark plug wire is not securely connected. D. Choke plunger is not pulled out to CHOKE position. E. Engine flooded. To clear a flooded engine, push choke in and pull starter rope several times to clear engine of excess fuel. F. No spark. Check points and plug. G. Water in fuel. Old stale gas. Drain fuel tank and refill with fresh fuel.
2. Engine starts hard or runs poorly.	A. Fuel mixture too rich. Be sure choke is off. Clean air filter. B. Bad points. Replace points. C. Carburetor needs adjustment. Refer to Carburetor Adjustment section of this manual. D. Spark plug faulty, fouled, or poorly gapped. Remove and check.
3. Engine exhaust is black or smoky.	A. Dirty air filter. Clean filter. B. Check carburetor adjustment.
4. Belt slippage occurs:	A. Belts may be stretched or worn excessively. Replace belts. B. Belts may be greasy or oily. Clean belts. C. Pulleys may be misaligned. Refer to Pulley Alignment in Adjustments section of this manual. D. Belt tension may be too loose. Refer to Clutch and Belt Tension in Adjustments section of this manual.

Figure 13. Troubleshooting Procedures

Problem	Cause/Remedy
5. Rotary tiller does not operate.	A. Rotary tiller drive belt broken. Replace. B. Spring for idler pulley broken or missing. Replace.
6. Tills too shallow.	A. Ground too hard. Make several passes, tilling deeper on each pass. B. Depth bar set improperly. Check.
7. Tiller leaves ground rough with large clods.	A. Ground too wet. Wait until it does not ball up. B. Tilling too deep for one pass. Raise depth bar.

Figure 13. Troubleshooting Procedures (Cont'd.)

Adjustments

CONTENT OF SECTION

There are a number of adjustments that can be made to keep the rotary tiller in good operating order. This section tells you how to make the adjustments.

⚠ WARNING

For your safety, do not try to adjust or repair the rotary tiller with the engine running. Always remove the spark plug wire before beginning maintenance to prevent accidental starting of the engine.

ADJUSTMENT PROCEDURES

Generally, adjustments are made after assembly and thereafter only when needed. For access to some adjustment points, the belt guard (item A, figure 14) may need to be removed. To remove the belt guard, remove the two screws, one on each side (item B) and loosen (from inside) nut and flanged capscrew (item C).

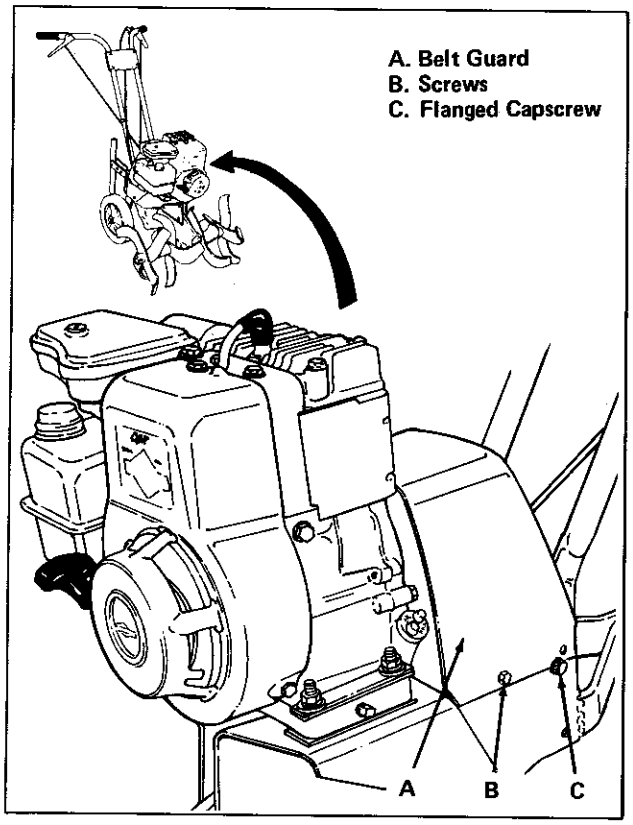


Figure 14. Belt Guard Removal

BELT STOPS

To adjust belt stops, do the following :

1. Push both idler pulleys together with one hand to firmly seat belts.
2. Measure gap between belt stop (item A, figure 15) and both forward and reverse belts. The smallest gap should be 1/8 inch (3 mm). If not, loosen capscrew (item B), adjust belt stop and then tighten capscrew securely.
3. Repeat procedure for both belt stops.

NOTE

If tines will not stop turning after clutch lever is released, belt stops may be too far from belts and not declutching belt as required when clutch handle is released.

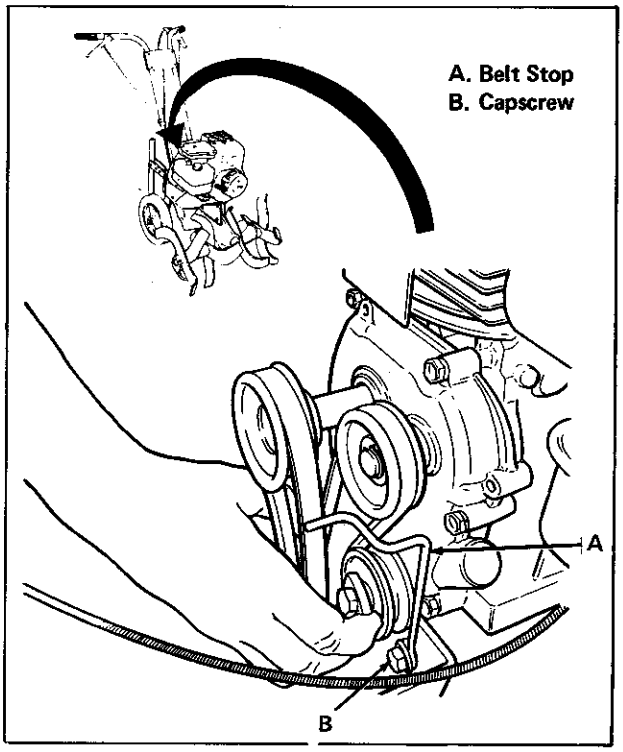


Figure 15. Belt Stops

CLUTCHES

The two clutch handles operate separate idler pulleys. When a clutch handle is squeezed to engage the clutch, the idler pulley (items A and B, figure 16) must move against and tighten the related belt. Power should then be transferred from an engine pulley to the driven pulley without belt slippage.

If a clutch is not disengaging properly or if belt slippage occurs when the clutch is engaged, adjust the clutch as follows:

1. Loosen setscrew (item C).
2. Slide wire clamp (item D) up clutch rod (item E) to increase belt tension or down rod to decrease belt tension.
3. Retighten setscrew.
4. Check and, if necessary, repeat adjustment until operation of clutch is good.

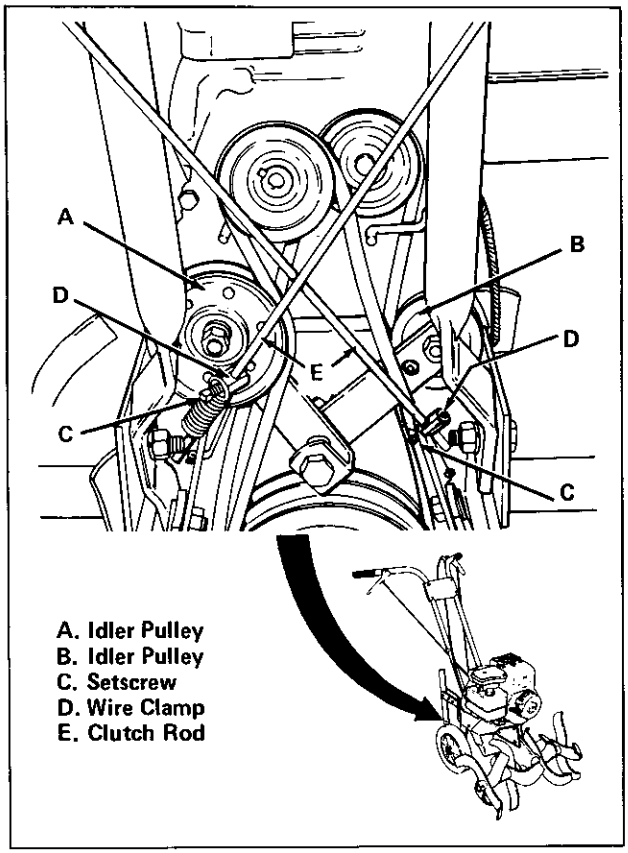


Figure 16. Clutch Adjustments

BELT TENSION

Normally, belt tension can be adjusted by increasing control rod tension (moving wire clamp further up control rod). After some use, belts may stretch so that this adjustment cannot be made. If this occurs, loosen four engine mounting nuts, (item A, figure 17), slide one or more slotted shims out (item B) that have been stored under the mounting nuts (item A). Insert the shims between the engine and the frame (item C). Tighten engine mounting nuts (item A) securely. Then readjust clutch as described in the Clutch Adjustment section.

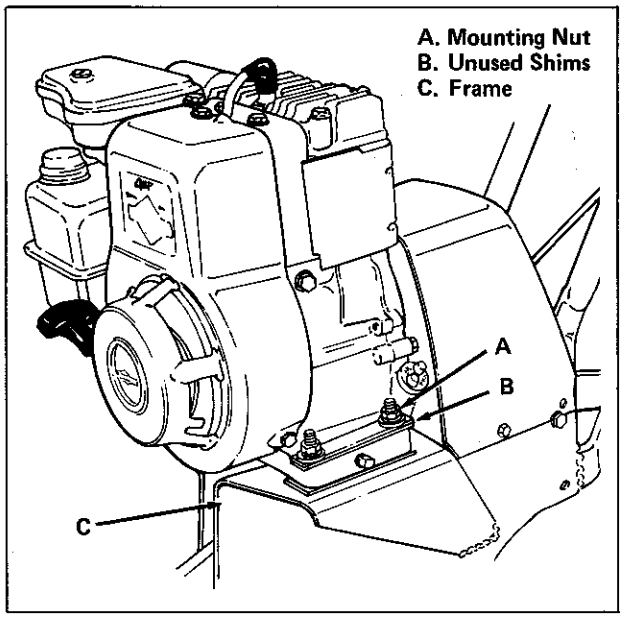


Figure 17. Belt Tension

DEPTH BAR

The depth bar (item A, figure 18) setting determines the depth of tilling. To till 4 to 6 inches (101 to 152 mm) deep, install the bar mounting pin (item B) in the second or third hole from the top. Pull out the hairpin clip to change pin location. Be sure to install the digging tip (item C) as shown. The deeper the depth bar is set into the soil, the deeper the tines will dig.

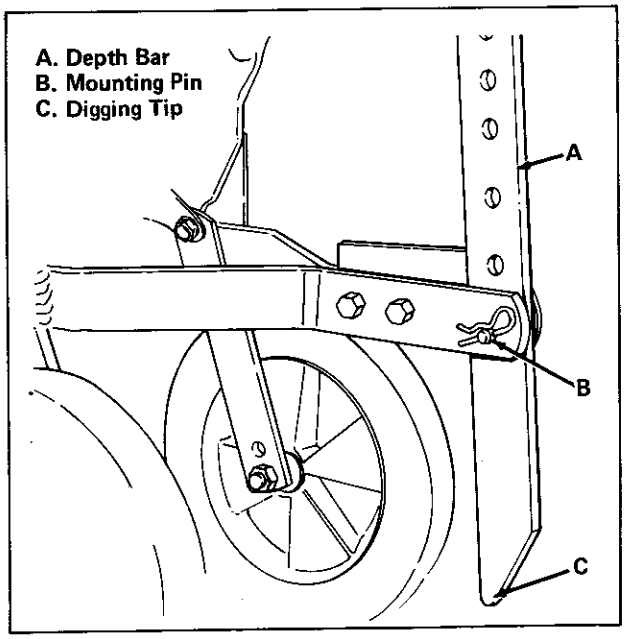


Figure 18. Depth Bar

CARBURETOR ADJUSTMENTS

Carburetors are adjusted by manufacturer and normally do not need adjustment unless they have been disassembled.

INITIAL ADJUSTMENT

Close needle valve (item A, figure 19) (turn clockwise), then open 1-1/2 turns (turn counterclockwise). This initial adjustment will permit the engine to be started and warmed up before making final adjustment.

FINAL ADJUSTMENT

With engine at full speed close the needle valve (item A) until engine starts to lose speed (lean mixture). Then slowly open needle valve (item A) past the point of smoothest operation. Then reset needle valve midway between these two points.

Put throttle lever in SLOW position. Turn idle adjusting screw (item B) until smooth idle is obtained.

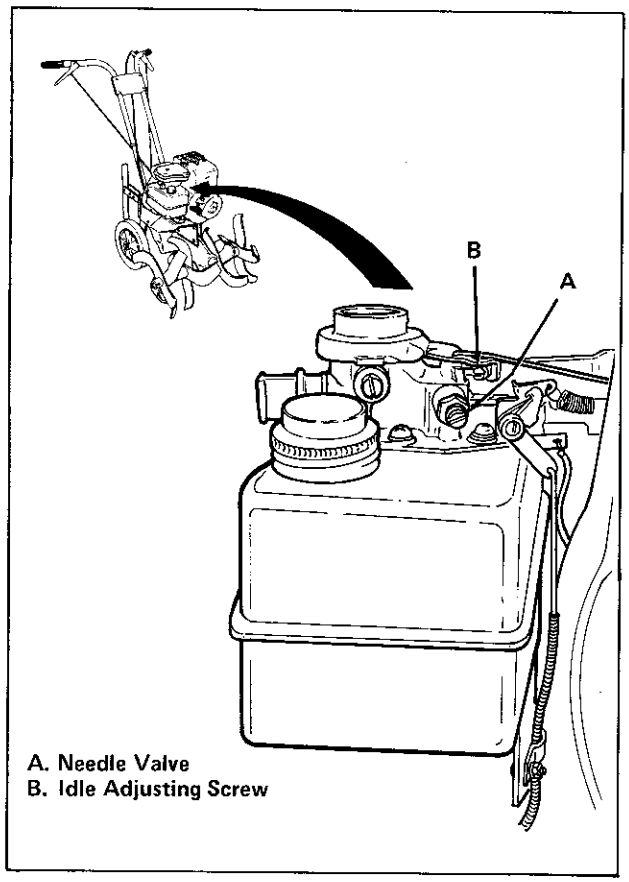


Figure19. Carburetor Adjustment

PULLEY ALIGNMENT

Check location of two engine pulleys (items A and B, figure 20). Reverse pulley (item B) should be 1/32 inch (.8 mm) from shaft seal. A distance of 1-1/2 inches (38 mm) from center to center of two drive pulleys is correct. Loosen engine pulley setscrew and adjust as required. Be sure engine pulley setscrews are tightened securely.

Visually check alignment of pulleys (items A, B and D). If pulleys are not aligned properly, loosen setscrew in worm gear drive pulley (item D) and move forward or backward as required. Tighten setscrew securely.

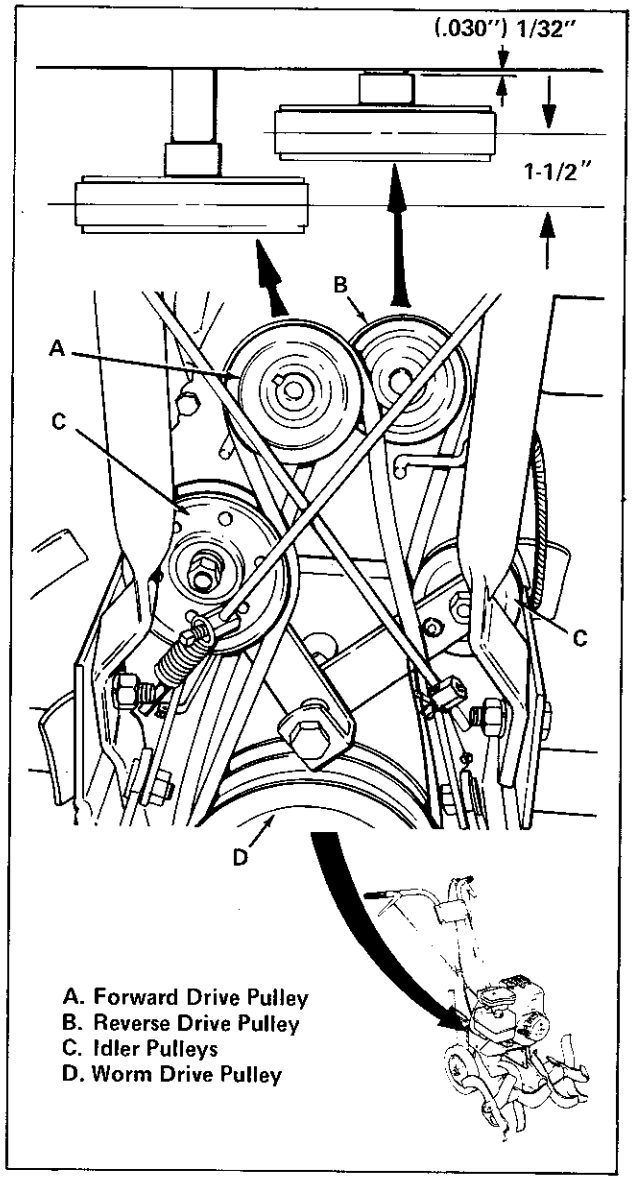


Figure 20. Pulley Alignment

Assembly

CONTENT OF SECTION

Before your rotary tiller can be used it must be assembled. This section tells you how to assemble your tiller.

1. Carefully remove all items from the shipping carton.
2. Sort out all items from the hardware skin package and arrange items by type and size.

HANDLE BAR ASSEMBLY

1. Remove pulley belt cover.
2. Install left handle (the one with REVERSE clutch decal). Align bottom hole (item A, figure 21) of handle with hole in frame (item B) and insert bolt (item C) through frame and handle bar. Add flat washer (item D) and lockwasher (item E). Screw on nut (item F) only finger tight.

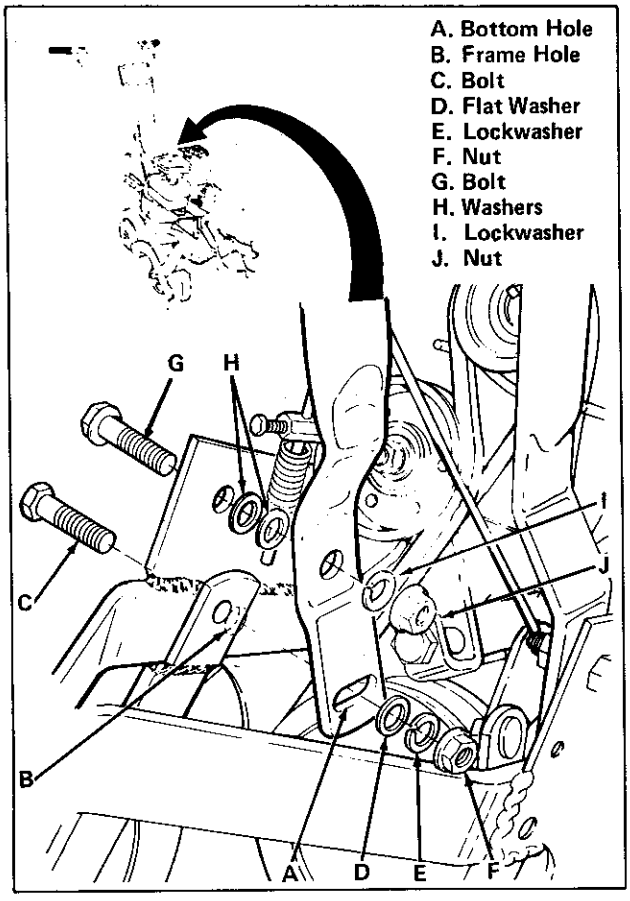


Figure 21. Left Handle Bar Assembly

3. Insert bolt (item G) in top hole of left handle through frame. Add two washers (item H) between frame and handle. Slide on lockwasher (item I) and nut (item J). Tighten nut finger tight.
4. Repeat steps 2 and 3 for right handle. Tighten all nuts finger tight.
5. Notice that the bottom holes (item A) in the handle bars have slotted holes to adjust handle bar height. Select the height you desire, and securely tighten all four bolts.

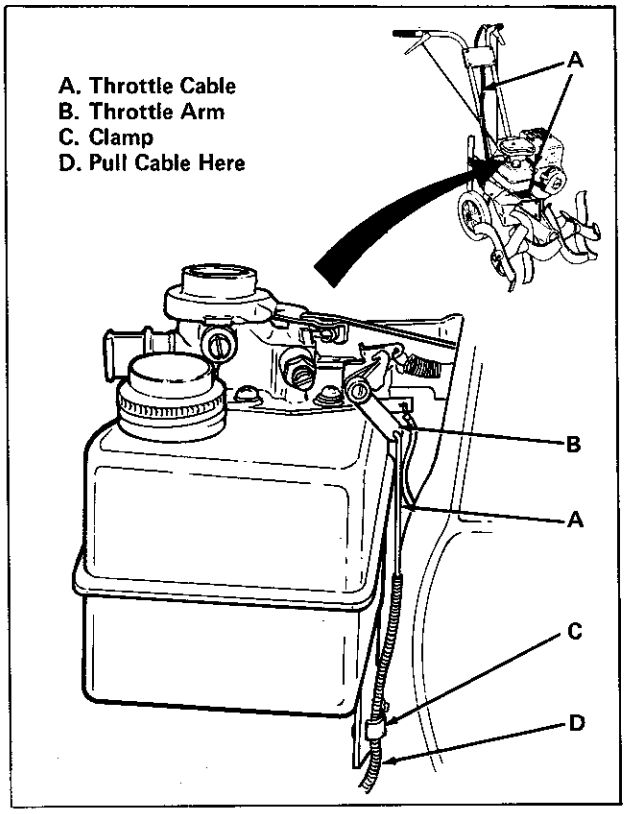


Figure 22. Throttle Cable Assembly

THROTTLE CABLE ASSEMBLY

1. Push throttle control lever (on left handle bar) all the way down to STOP position.
2. Hook throttle cable (item A, figure 22) to throttle arm (item B).
3. Loosen clamp (item C) and put cable under the clamp. Pull cable down (item D) as far as it will go. Tighten clamp securely.
4. Install cable clip (item A, figure 23) to hold throttle cable on right handle bar.

FORWARD CONTROL ROD ASSEMBLY

1. Insert forward control rod (item C, figure 23) through control lever (item B).
2. Hook spring (item A, figure 24) in top hole of bellcrank (item E).
3. Slip wire clamp (item B) on end of control rod (item C).
4. Feed control rod (item C) through spring and hook other end of spring over setscrew (item D) in wire clamp.
5. With control lever completely down, position idler pulley 1/4" from left frame. Tighten setscrew. Be sure control rod is to the outside of its bellbrank (item E).
6. For further clutch adjustment, see Adjustment Section.

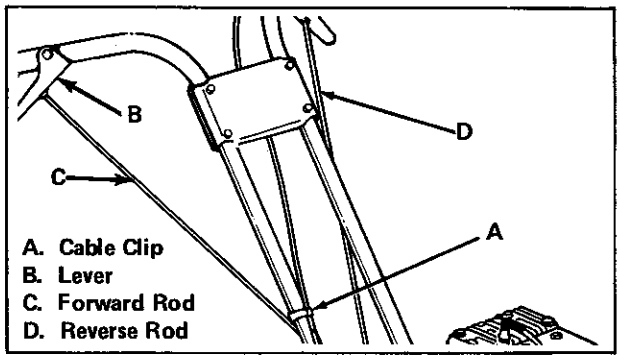


Figure 23. Cable Clip

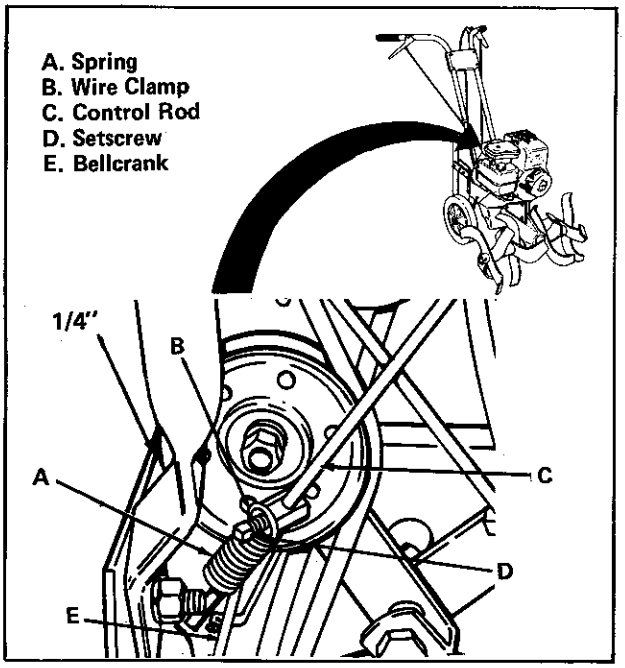


Figure 24. Forward Control Rod Assembly

REVERSE CONTROL ROD ASSEMBLY

1. Insert reverse control rod (item D, figure 23) through control lever on the left handlebar.
2. The setscrew with washer and the wire clamp (items B and C, figure 25) for the reverse control rod are preassembled on the right bellcrank (item D). Loosen the setscrew only enough to slip end of control rod (item A, figure 25) through the wire clamp. The control rod must be on the outside of its bellcrank.
3. With handlebar control lever completely down and reverse idler pulley (item E) resting against the right frame, tighten the setscrew to hold control rod in place.
4. If further clutch adjustment is necessary, see Adjustment Section.

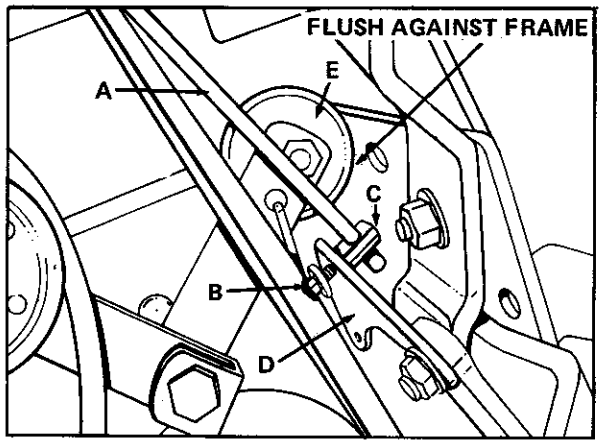


Figure 25. Reverse Control Rod Assembly

TINE AND DEPTH BAR ASSEMBLY

1. Tip the tiller backward so it rests on handle bars. Slide tines on rotor shaft. Secure with pin (item A, figure 26) and cotter pin (item B). Be sure that cutting edges of the tines are on the forward leading edge as rotor turns.
2. Install depth bar (item A, figure 27) to rear of frame with pin and cotter pin (item B). Digging tip of bar should be installed as shown (item C).
3. Adjust the depth bar. (See Adjustment Section.)

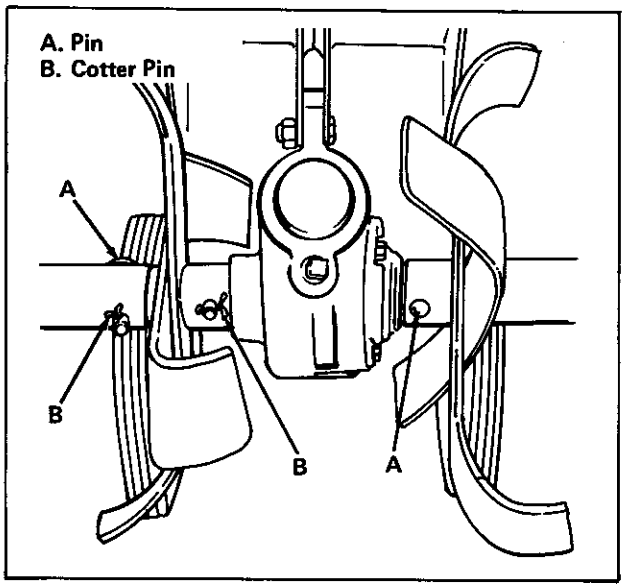


Figure 26. Tine Assembly

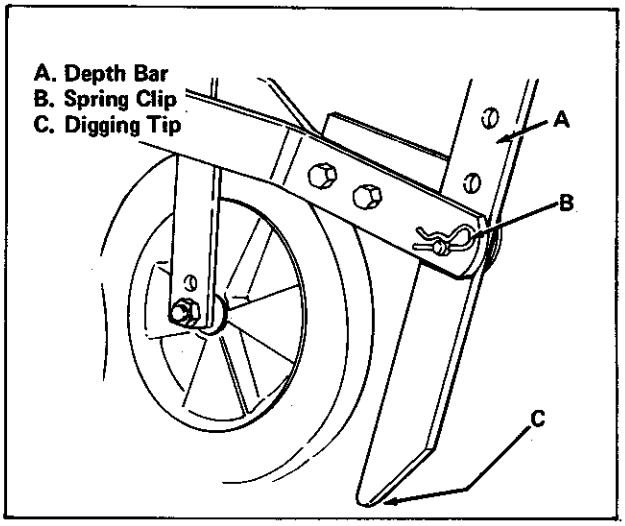


Figure 27. Depth Bar

4 H.P. TILLER SPECIFICATIONS

ENGINE	MAKE: BRIGGS & STRATTON	■ MODEL NO: 111292 ■ CYCLES: 4 ■ CYLINDERS: 1 ■ BORE: 2-25/32 Inches (70 mm) ■ STROKE: 1-7/8 Inches (47.6 mm) ■ DISPLACEMENT: 11.44 Cu. In. (188 cc) ■ CRANKSHAFT PLANE: Horizontal
	Starter	Manual Rewind Easy-Spin
	Choke	Manual
	Governor	Air Vane
	Ignition	Magneto
	Lubrication	Splash System
		CRANKCASE CAPACITY: 1-1/4 Pins (0.5 l)
	Fuel Capacity	2 Quarts (1.9 l)
	Air Cleaner	Reusable Oiled Foam Element
	Muffler	Quiet, Low Back Pressure Type, Side Discharge
TRANSMISSION	Type	Worm and Gear
	Material	WORM: Steel
		GEAR: Bronze
	Bearings	FRONT: Tapered Roller Bearing
		REAR: Tapered Roller Bearing
		TINE SHAFT: Needle Roller Bearings
	Seals	Double Lip – Dirt Excluding
	Lubrication	Special Worm Gear Oil, 8 oz. (236 milliliters)
	Housing	Cast Iron
	Speeds	One Forward, One Reverse
	Clutch	Touch-O-Matic V-Belt
TINES	Type	Self-Sharpening
	Material	Forged, High-Carbon Steel
	Tilling Width	24 Inches (609 mm) Standard. 35 Inches (889 mm) with Tine Extensions
	Tilling Depth	0 to 6-3/4 Inches (0 to 171 mm), Adjustable
	Attachment	TO SHAFT: Pin and Cotter Pin
	Speed	75 RPM at Full Engine Speed
DEPTH BAR	Type	Adjustable – Pivots in Reverse
	Attachment	Pin and Spring Clip
CONTROLS	Location	FORWARD CLUTCH: Right Handle
		REVERSE CLUTCH: Left Handle
		THROTTLE: Left Handle
		REWIND STARTER AND CHOKE: On Engine
	Handles	HEIGHT: Adjustable.
CHASSIS	Frame	Electrically Welded Steel
	Tires	10 x 1.75 (254 x 44 mm) Semi-Pneumatic
OVERALL DIMENSIONS	Length	45 Inches (1143 mm)
	Width	26 Inches (660 mm) (without Tine Extensions)
	Height	TO TOP OF HANDLE: 38-1/4 Inches (971 mm)
		TO TOP OF ENGINE: 26-1/2 Inches (683 mm)
	Weight	NET (DRY): 100 Lbs. (45.5 kg)

PARTS MANUAL AVAILABLE FOR MODEL 1004 TILLER

You can order a parts manual for your **Model 1004 Tiller** and accessories. Check the box below for the parts manual, enclose the form with a check or money order made out to SIMPLICITY in an envelope, and send them to:

Simplicity Manufacturing Co.
500 N. Spring Street
Port Washington, WI 53074

Parts manual TP-390 contains the **Model 1004 Tiller** and accessories.

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☐ I would like a parts manual (TP-390) for my **Model 1004 Tiller** and accessories. I am enclosing a check or money order for $2.00.

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