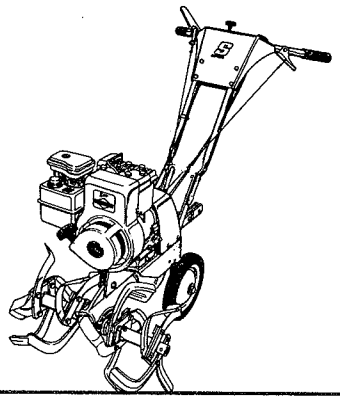
Simplicity®



OWNER'S MANUAL

MFG. NO. 702 3H. P. ROTICUL REVERSING TILLER

SIMPLICITY MANUFACTURING COMPANY, INC.

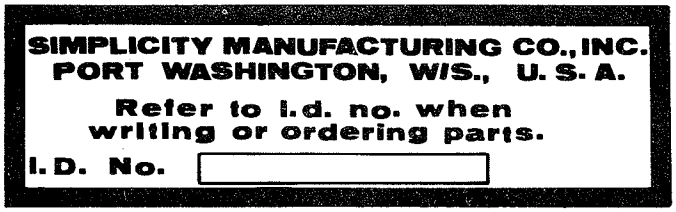
SER. FORM - OP50
LITHO IN U.S.A.

TO THE OWNER

You have made a wise choice in selecting the Simplicity Roticul. It has been specially designed to give lasting superior performance. Before attempting to operate the Roticul, study this manual thoroughly. Pay special attention to the safety rules. Your Simplicity equipment is designed with your safety in mind, but it is up to you to be an alert, safety conscious operator. Be sure anyone else who may operate the Roticul is also familiar with the operation and safety instructions. Your Simplicity Roticul requires only a minimum of care. Following the maintenance instructions carefully will assure you of maximum satisfactory service.

Thank you for taking time to read this manual. The time spent will pay big dividends in the extra time saving performance you receive from your Simplicity Roticul.

When ordering replacement parts for your Roticul be prepared to give your Simplicity dealer the identification number found on the identification plate shown below. It is located on the Roticul frame. We suggest that you locate the number and record it below for easy reference.



IDENTIFICATION PLATE

SIMPLICITY'S NEW EQUIPMENT WARRANTY

The Company warrants Simplicity products to be free from defects in material and workmanship, except the Company makes no warranty, express or implied, with respect to tires, engines, generators and voltage regulators, which are warranted by their respective manufacturers. Any part covered by this warranty which is proven defective within one year (45 days for equipment used for rental, municipal or commercial purposes) under normal use, from date of purchase, will be replaced without charge, provided such part is returned to the factory, (if requested), and is found to be defective upon examination at the factory. This warranty does not apply to any Simplicity products altered outside of the Simplicity factory. THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, PERFORMANCE, OR OTHERWISE. The Company's obligation under its warranty is strictly and exclusively limited to the replacement of such parts, and in no event shall the Company be liable for any other damages, whether direct, immediate, incidental, special, or consequential. Simplicity Manufacturing Company, Inc., reserves the right to modify or change specifications without prior notification. There are no warranties which extend beyond the description of any Simplicity product.

TABLE OF CONTENTS

SAFETY PRECAUTIONS TO PROTECT YOURSELVES AND OTHERS

Know the controls and how to stop quickly - **READ THE OWNER'S MANUAL.**

Do not allow children to operate the Roticul. Do not allow adults to operate it without proper instructions.

Clear the work area of objects which might be picked up and thrown.

Keep all nuts, bolts and screws tight to be sure equipment is in safe working condition.

Do not operate equipment when barefoot or wearing open sandals. Always wear substantial footwear.

Handle gasoline with care - it is highly flammable.

A. Use approved gasoline container.

B. Never remove cap or add gasoline to a running or hot engine or fill the fuel tank indoors. Wipe up spilled gasoline.

C. Open doors if the engine is run in a garage. Exhaust fumes are dangerous. Do not run engine indoors.

Never store equipment with gasoline in the tank inside a building where fumes may reach an open flame or spark.

Allow the engine to cool before storing in any enclosure.

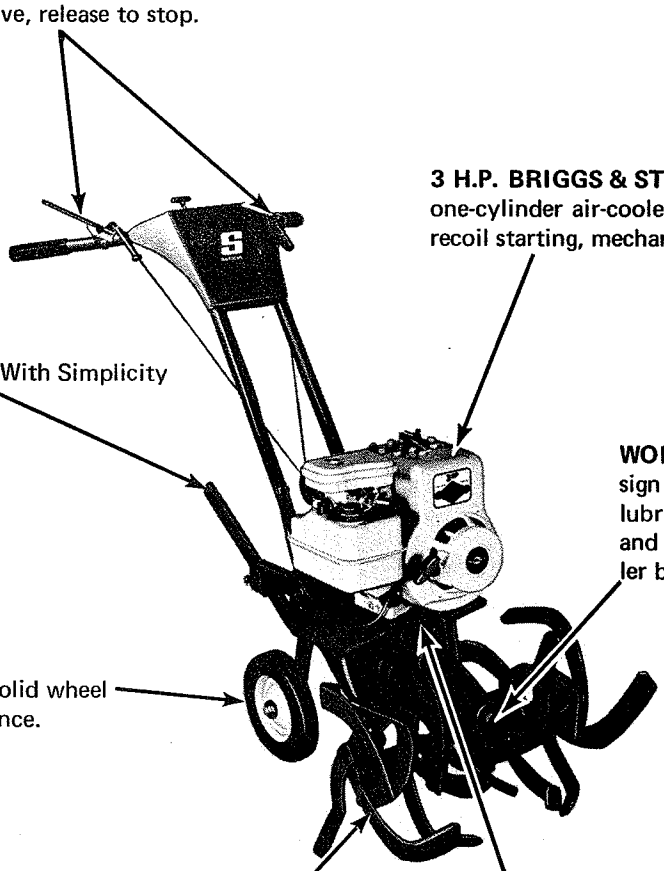
To reduce fire hazard keep the engine free of grass, leaves or excessive grease.

Release the clutch lever and stop the engine before cleaning the tines, removing obstacles, making adjustments, or when leaving the operating position.

Never allow children or pets to cross your path, or cause distractions in the area while operating.

Use caution to avoid slipping or falling, expecially when operating in reverse.

TOUCH-O-MATIC CLUTCH CONTROL. Simply squeeze the lever to engage the tiller drive, release to stop.



3 H.P. BRIGGS & STRATTON ENGINE. Four-cycle, one-cylinder air-cooled power with Lo-Tone muffler, recoil starting, mechanical governor.

ADJUSTABLE DEPTH BAR. With Simplicity quick-change feature.

WORM GEAR DRIVE. Unique design requiring special worm gear lubricant to eliminate maintenance and assure durability. Tapered roller bearings front and rear.

WHEELS. Solid rubber tires, solid wheel bearings requiring no maintenance.

HIGH-CARBON, FORGED STEEL TINES. Slashing type design, adjustable to 31-1/4 inches wide (with extensions). Slice into the hardest baked, crusty surface to 7 inches deep, kneading the soil with smooth, spading action, leaving a crumbly texture perfect for planting.

WELDED STEEL FRAME. Heavy-duty with rugged cross-bracing, yet compact and balanced for easy tilling.

TINE WARRANTY

Simplicity Manufacturing Company, Inc. warrants rotary tiller tines against breakage for the period not to exceed the normal life of the rotary tiller; and will replace broken tines directly to the customer at no charge; provided broken tines are returned prepaid to the Company's Service Department, Port Washington, Wisconsin

OPERATION

CONTROLS – HOW TO USE THEM

SPEED CONTROL LEVER: (Figure 1, Item A) The speed control lever is used to adjust the engine speed. Move it upward toward fast, or down toward slow to adjust the engine to the desired speed.

FORWARD CLUTCH LEVER: (Figure 1, Item B) To operate the Roticul in the forward (tilling) direction, squeeze the forward clutch lever located on the right handle. The Roticul may be inched by squeezing the clutch lever only part way down. Release the clutch lever to stop the Roticul.

REVERSE CLUTCH LEVER: (Figure 1, Item C) To operate the Roticul in reverse, squeeze the reverse clutch lever located on the left handle. The Roticul may be inched in reverse by squeezing the handle only part way.

DEPTH BAR: (Figure 1, Item D) The Roticul depth bar can be adjusted in various positions to give the desired tilling depth. For proper adjustment of the depth bar, see page 5.

ENGINE SHUT OFF: (Figure 1, Item E) When the engine shut off switch is pushed down against the spark plug, the engine will stop. Before attempting to start the engine, always be sure that the shut off switch is pulled away from the spark plug.

FUEL TANK FILLER CAP: (Figure 2, Item A) Turn the filler cap counter-clockwise to remove it. Fill the tank with clean, fresh, leaded or non-leaded regular automotive grade gasoline. **CAUTION: GASOLINE IS HIGHLY FLAMMABLE. AVOID OVER FILLING, WIPE UP ANY SPILLED FUEL. ALLOW NO OPEN FLAME, SMOKING OR MATCHES NEAR THE AREA WHEN REFUELING.** Replace the filler cap securely. Store gasoline only in small quantities. Prolonged storage produces gum, and harmful deposits. If it is necessary to store gasoline for a long period of time, add Sta-Bil brand gasoline stabilizer, available at your Simplicity dealer.

CHOKE CONTROL: (Figure 2, Item B) The choke may be pulled out to increase the amount of fuel entering the engine for starting and engine warm up. After the engine has started, push the choke in slowly. When the engine is cold, it may be necessary to leave the choke pulled out slightly for three or four minutes while the engine warms up. Never operate the engine with the choke out, after it has had sufficient time to warm up. About five minutes should be sufficient even when the engine is cold.

STARTING HANDLE: (Figure 2, Item C) Pulling on the starter handle rotates the engine for starting. When starting the engine grasp the recoil starter handle firmly in your right hand, and pull sharply straight out.

BEFORE OPERATING THE ROTICUL

Though your Simplicity dealer may have performed the before starting checks listed below, we suggest that you personally check each one so that you will become familiar with them, and also to insure that your Roticul is ready to operate the first time you use it.

CRANKCASE OIL: Before starting the engine, insure the engine crankcase is filled with the correct grade and weight of oil. (See page 8, in the Maintenance section of this manual for instructions on checking the oil and the correct oil to use.)

FUEL SUPPLY: Fill the fuel tank completely with clean, fresh, leaded or non-leaded regular grade automotive gasoline. Do not mix oil with gasoline. Premium gasolines are not recommended as they increase carbon deposits in the engine. **CAUTION: GASOLINE IS HIGHLY FLAMMABLE. NEVER ALLOW ARTICLES SUCH AS LIGHTED MATCHES OR CIGARETTES WHICH COULD CAUSE IT TO IGNITE NEAR OPEN GASOLINE CONTAINERS. DO NOT OVERFILL. WIPE UP ANY SPILLED FUEL. BE SURE THE ENGINE IS NOT RUNNING WHEN ADDING FUEL.**

WORM DRIVE HOUSING: The worm drive housing should be checked to insure it is filled to the check plug with special worm gear oil available from your Simplicity dealer.

AIR CLEANER: (Figure 15, Item A) Be sure that the air cleaner element is in place and properly sealed. If it is dirty, clean or replace it according to the instructions on page 7 in the Maintenance section of this manual.

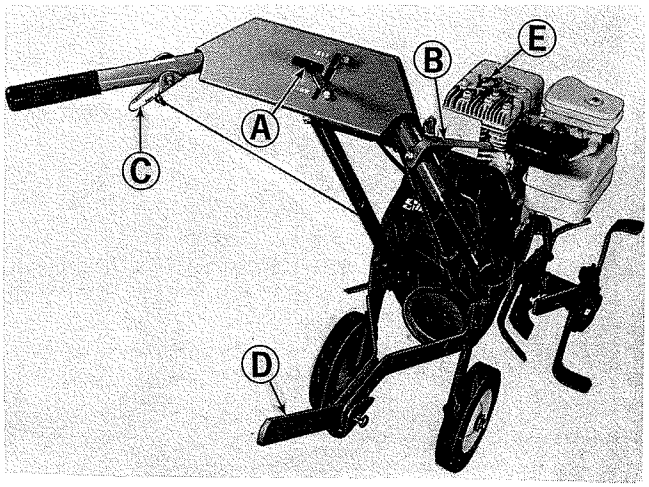


Figure 1. Roticul controls.

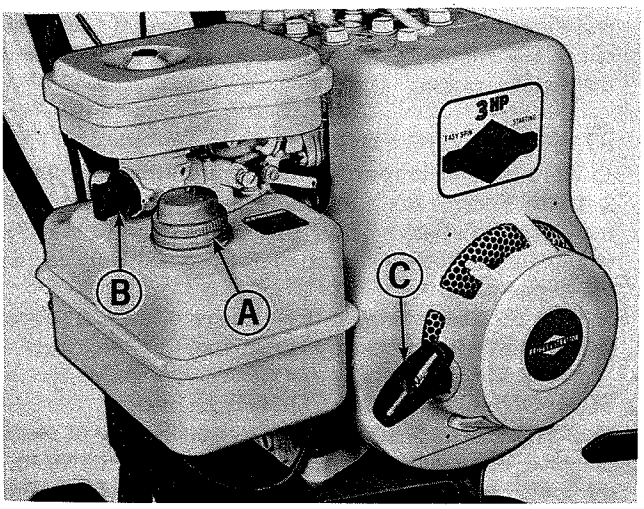


Figure 2. Roticul engine controls.

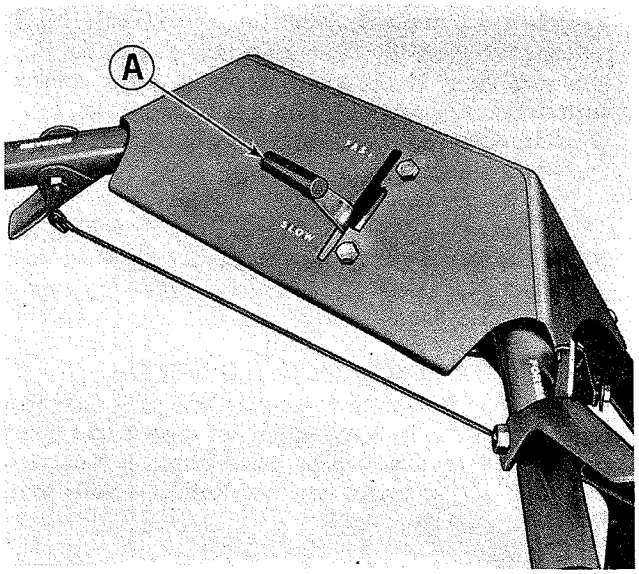


Figure 3. Roticul handles.

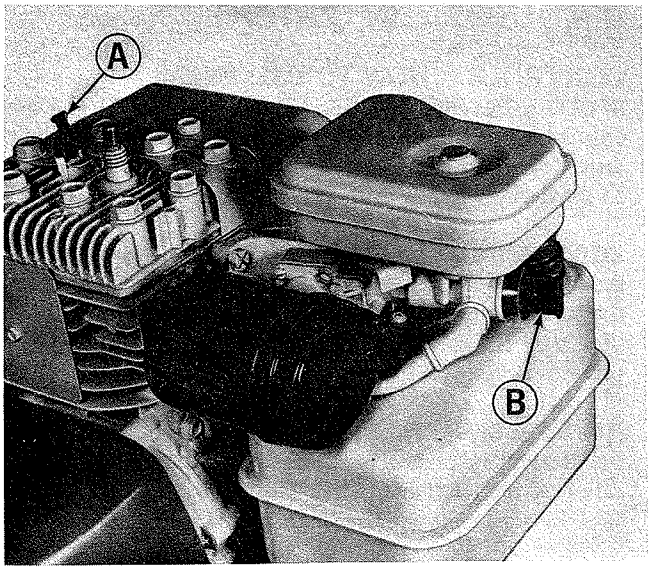


Figure 4. Engine seen from right rear.

WHEEL POSITION: Check to be sure that the wheels are mounted in the lower holes of the frame legs as shown in Figure 5, Item A.

TINE WIDTH: Before using the tiller, adjust the tines to the desired width as explained under Setting Tine Width on page 5.

DEPTH BAR: Adjust the depth bar as explained on page 5 under Depth Bar Setting.

STARTING THE ENGINE

1. See figure 3. Place the speed control lever (A) 1/3 to 1/2 way between the slow and fast position as shown.
2. See figure 4. Insure that the engine stop switch (A) is pulled up away from the spark plug.
3. Pull the choke control (B) out to the choke position as shown in figure 4.
4. Grasp the recoil starter handle (Figure 2, Item C) in your right hand and pull sharply straight out to start the engine. After the engine starts slowly push the choke control to the off position. If the engine fails to start after four or five pulls, it may be flooded. Return the choke to the off position, and pull the recoil starter handle to clear the excess fuel. Always return the handle by hand. Do not release the handle with the rope extended.

STOPPING THE ENGINE

1. Move the engine speed control lever to the slow position.
2. If the Roticul has been operating under full load, allow the engine to idle for about a minute to reduce the engine temperature. Stopping a hot engine too suddenly can damage engine parts.
3. Push the engine stop switch (Figure 4, Item A) down against the spark plug to stop the engine.

SOIL CONDITIONS REQUIRED

Moisture content of the soil will affect the quality of seedbed prepared when using the Roticul. It is not advisable to till soil which is too moist or forms large clods or balls of mud when tilled. Heavy clay soils tend to stay wet longer, and form harder larger clods when tilled too wet, than lighter textured sandy or well developed dark soils, which are high in organic material. For this reason it is more important not to till clay soils too early in the spring or after a rain.

DETERMINING TILLING PATTERN

Before beginning to till any area, the operator should determine the best tilling pattern. The size, shape, terrain, and obstructions of the area to be tilled should be considered. Usually it is best to till the longest direction of the area to minimize turning.

SEEDBED CONDITIONS DESIRED

TILLING DEPTH

The most desirable tilling depth for an area will vary according to its intended use. If seeds are to be planted, consideration should be given to the depth required to kill competing plant life, mix fertilizer and prepare a good seedbed. In gen-

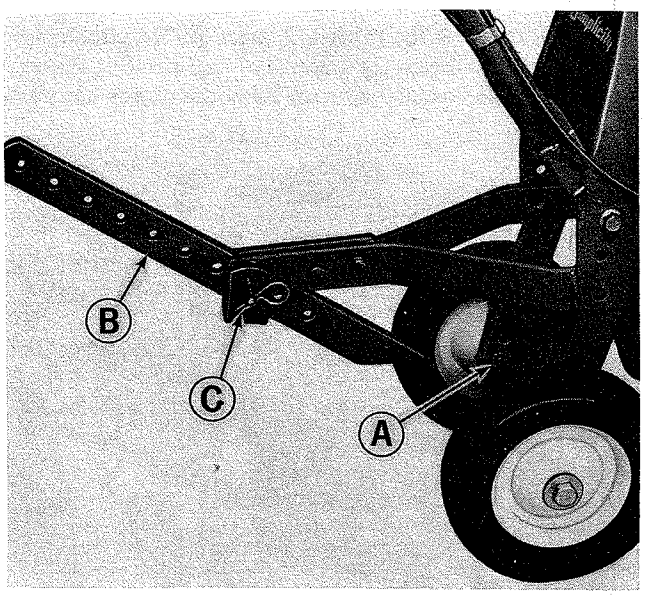


Figure 5. Depth bar seen from right side.

eral, larger seeds should be planted deeper than smaller seeds. For example, corn is often planted 2" to 3" deep, whereas, the much smaller grass seed may be planted within the top 1/2" of soil. A good seedbed for grass seed can often be made by tilling only 2" to 3" deep. When planting larger seeds such as corn, a tilling depth of 5 or more inches may be desirable.

CLOD SIZE

The seedbed must be fine enough to insure that the planted seed makes good contact with the soil to germinate. Smaller seeds usually require a finer seedbed than larger ones. In many cases, more than one pass of the tiller will be required to prepare a seed bed of proper depth and texture.

PREPARING THE ROTICUL

CAUTION: DO NOT ATTEMPT TO INSPECT, ADJUST, OR SERVICE THE ROTICUL WHILE THE ENGINE IS RUNNING.

DO THE FOLLOWING:

1. Read this manual carefully. Be sure you are familiar with the safety precautions, controls, and operating instructions.
2. Perform the Before Starting Checks listed on page 3..
3. Check the condition of the tiller tines. Clean the tine shaft of any foreign material, and tighten any loose tine mounting bolts.
4. Clear the area to be tilled of all wire and other debris which may be caught in or damage the tiller tines.

SETTING TINE WIDTH

Figure 6 shows the Roticul with the standard tine arrangement which gives a tilling width of 21-1/4". The two outer sets of tines can be removed to narrow the width to 12" if desired. Simply remove the mounting pins (Figure 6, Item A) on each side of the Roticul, then remove the outer set of tines. Figure 7 shows the Roticul with the outer set of tines removed to give a tilling width of 12".

Additional widths of 8-1/2" and 18-1/2" are illustrated in Figure 8. To accomplish these widths, the tine bolts must be

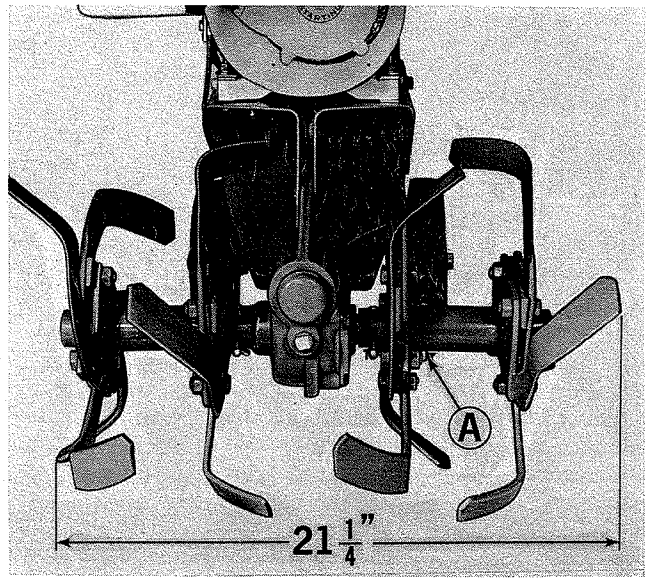


Figure 6. Roticul set up with standard tine arrangement.

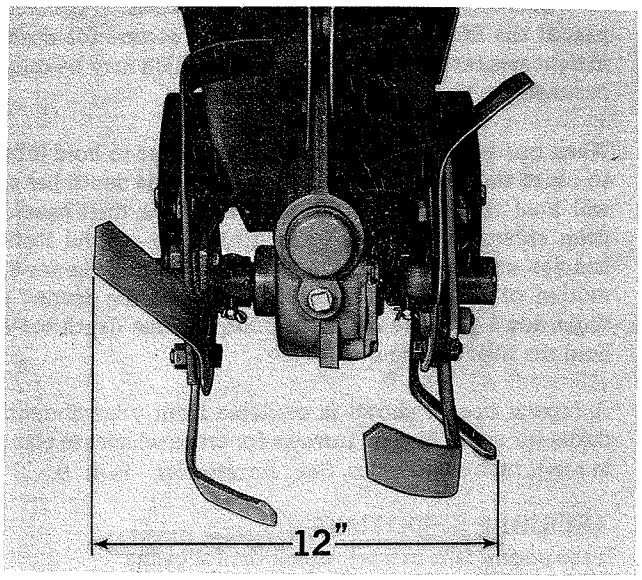


Figure 7. Roticul with outer tines removed.

removed and the tines switched so the outer tines face inward, rather than the normal outward position. Always be sure when rearranging tines, that the sharpened edges face forward. A set of tine extensions is available to extend the width to 31-1/4". See your Simplicity dealer for these.

DEPTH BAR SETTING

See figure 5. The setting of the depth bar (B) determines the depth of tilling. To till 4" to 6" deep, install the depth bar mounting pin (C) in the second or third hole from the top. Simply pull out the hair pin cotter to change the pin location. Be sure to install the bar with the digging tip as shown. The deeper the depth bar is set into the soil, the deeper the tines will dig.

OPERATING THE ROTICUL

The Roticul is scientifically designed to cultivate the soil with a minimum of physical effort on the part of the operator. When operating for the first time, proceed slowly and carefully to get the feel. Experience will determine the best handle height, pressure and depth bar setting for the operator.

Do not till when the soil is very wet. This causes lumps which are difficult to work up. If the soil is extremely hard and dry, it may be desirable to cross till an area at shallow depth at

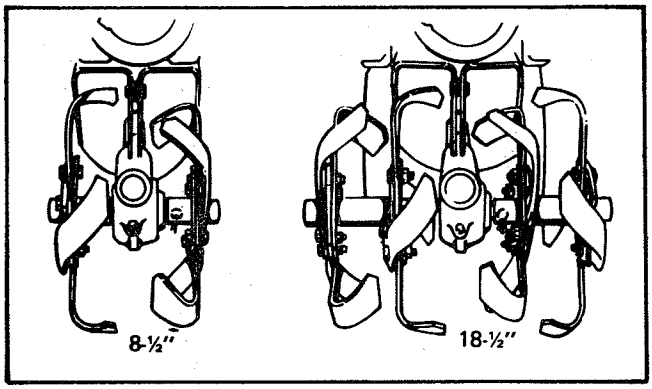


Figure 8. Tine widths changed by turning tines inward.

first, then till in the direction of planting rows on the second pass at the final depth. Use the Roticul reverse for working in tight areas and to dislodge any rocks which may be caught between the tines and worm gear housing.

When operating the Roticul, do not attempt to hold it back to cause the tines to dig. Rather, adjust the depth bar so it will hold the tiller back for you. When the tines have dug deep enough in an area, raise up slightly on the Roticul handles and the tiller will move ahead. To stop the forward motion of the tiller and cause the tines to dig deeper, put slight down pressure on the handles and the depth bar will hold the tiller in place.

A furrow opener shovel is available from your Simplicity dealer for use in digging furrows for crops which are planted in rows, such as potatoes. See Accessories, Page 9.

TROUBLE SHOOTING

If the engine fails to start, check the following:

1. The fuel tank must be full.
2. Throttle lever is set at 1/3 to 1/2 open.
3. Spark plug cable is securely connected and the **STOP** button is pulled away from the spark plug.
4. Choke plunger is pulled out to choke position or in the off position if engine appears to be flooded. To start a flooded engine push the choke in and pull the starter rope several times to clear excess fuel.

If belt slippage occurs, check the following:

1. Belts may be stretched or worn excessively.
2. Belts may be greasy or oily. If so, use Energene or a similar cleaning fluid on a rag to clean. An alternate method is to sprinkle a handful of Drizit or Kittylitter compound on the belt while it is running.
3. Pulleys may be misaligned.
4. Belt tension adjustment may be required. See Adjustments.

ADJUSTMENTS

FORWARD DRIVE CLUTCH

If the tiller tines will not drive when the forward drive clutch is engaged or will not stop turning when the clutch lever is released, adjust the forward clutch.

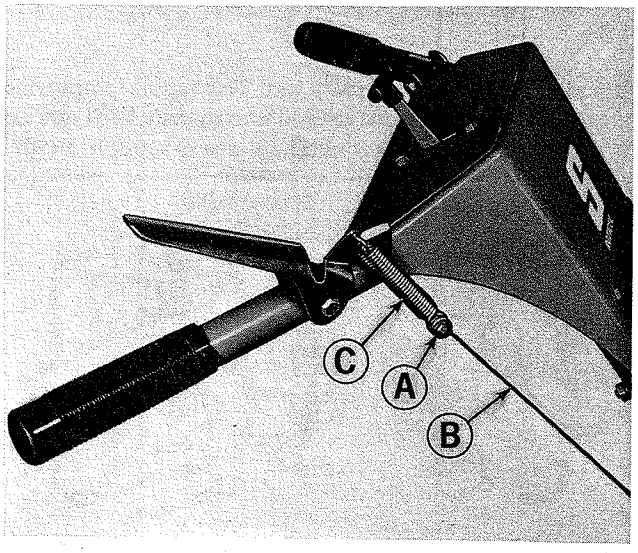


Figure 9. Forward drive clutch adjustment.

See figure 9. To tighten the forward clutch loosen set screw (A), and push wire (B) further up into spring (C). To place less tension on the forward drive clutch, pull wire (B) out of spring (C) slightly. Tighten set screw (A) to hold wire (B) in

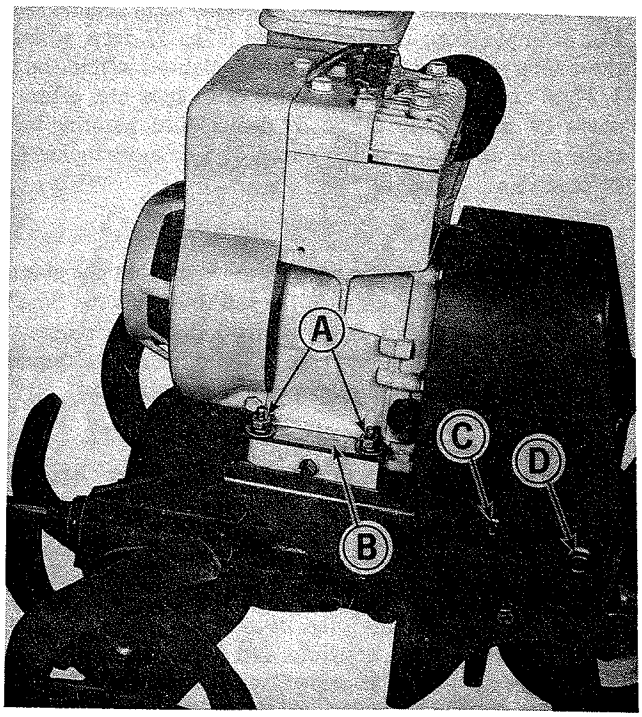


Figure 10. Roticul shown from left side.

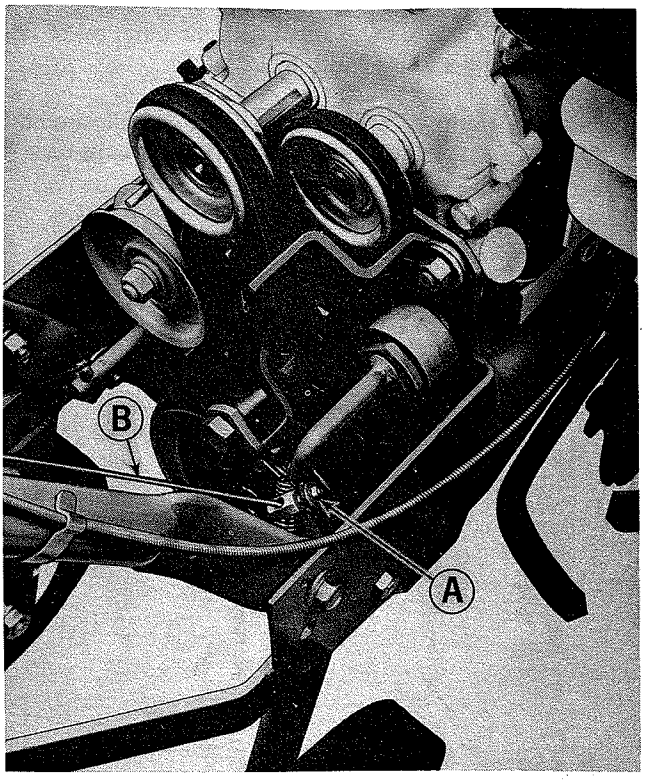


Figure 11. Roticul drive shown with drive cover removed.

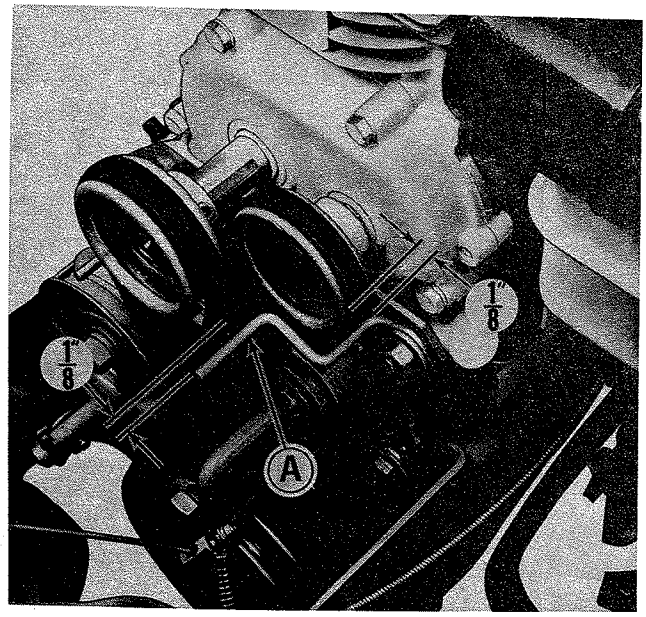


Figure 12. Belt stops shown with cover removed.

the position you have set it at and start the Roticul to check your adjustment.

See figure 10. After some use the Roticul drive belts may become worn and stretch enough so that proper adjustment can no longer be made. It may be necessary to place additional shims under the engine to compensate for the additional belt length. Remove the nuts at (A) and place additional shims (B) under the engine. There are shims on both sides of the engine. Be sure to tighten nuts (A) securely after moving the shims.

REVERSE DRIVE CLUTCH

After a period of use the reverse drive clutch may require adjustment. See figure 10. Remove capscrew (C) and loosen capscrew (D) slightly so the belt drive cover can be removed.

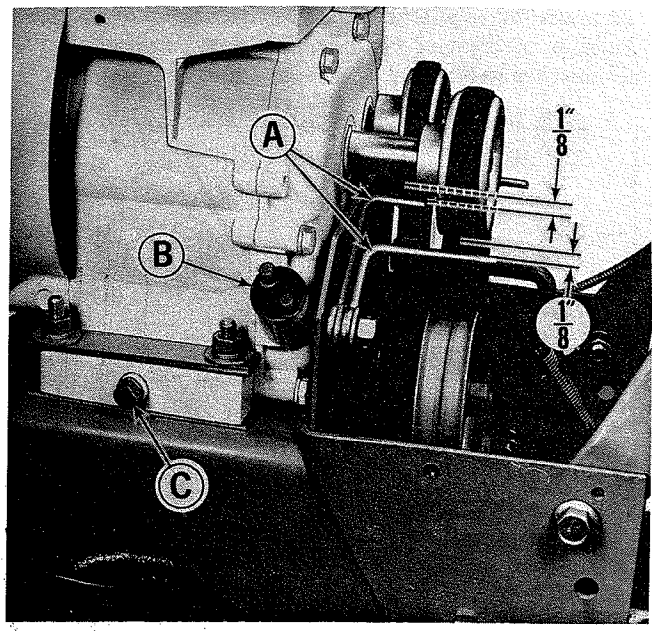


Figure 13. Left side of Roticul with belt drive cover removed.

See figure 11. Loosen set screw (A) slightly and push wire (B) further through the wire clamp to increase belt tension. After making the adjustment, tighten set screw (A) and start the Roticul to check your adjustment. See figure 10. Replace the belt drive cover and capscrews (C), and tighten capscrews (D) securely.

BELT STOP ADJUSTMENT

If the Roticul tines will not stop turning when the forward and reverse drive clutch levers are released, the belt stops may need adjusting. See figure 10. Remove capscrew (C), and loosen capscrew (D) to remove the belt drive cover.

See figures 12 and 13. With the drive clutches engaged, the belt stops (A) should be about 1/8" from the belts. If adjustment is required, loosen the belt stop mounting bolts, and position the belt stops so that there is 1/8" clearance between them and the belt. Tighten the belt stop mounting bolts securely after the adjustment has been made.

MAINTENANCE

Refer to your Briggs and Stratton manual for more complete instructions on servicing the engine.

ORDERING REPLACEMENT PARTS

Replacement parts required for performing maintenance services or repair work should be purchased from your Simplicity dealer. When ordering parts, be prepared to give him the identification number of your Roticul. If you have not already recorded this number on the inside front cover of this manual, we suggest that you do so now for convenient future reference.

AFTER EACH USE

Inspect the Roticul thoroughly looking for loose or missing bolts, pins or spring clips, oil leaks, worn parts, etc. Check the tine mounting bolts to be sure they are tight. Also check the tine shaft for wire, chain, or other foreign material which may interfere with proper tilling, or cause damage to the Roticul. Clean or repair the Roticul as needed, to insure it is ready to use the next time you need it.

EVERY FIVE HOURS OF OPERATION

WORM DRIVE LUBRICATION

Every five hours of operation, or oftener if any oil leaks are observed, the worm gear drive oil should be checked. See figure 14. Remove plug (A), the oil should be to the bottom threads of the plug hole when the Roticul is setting on a level surface. If oil is required, add Simplicity Worm Gear Oil. **CAUTION: DO NOT USE ORDINARY TRANSMISSION OIL. ANY OTHER OIL EXCEPT SIMPLICITY WORM GEAR OIL MAY CAUSE GEAR FAILURE.** To add oil, tip the Roticul back until the handles rest on the ground. Remove the filler plug and add worm gear oil through the plug hole. Fill until the oil is level with the plug hole when the tines are resting on the ground. Do not overfill. Replace plug (A) and tighten securely. **NOTE: DAMAGE TO THE WORM GEAR DRIVE WHICH RESULTS FROM USE FROM ANY OTHER LUBRICANT THAN SIMPLICITY BRAND SPECIAL WORM GEAR OIL WILL AUTOMATICALLY INVALIDATE THE WARRANTY.**

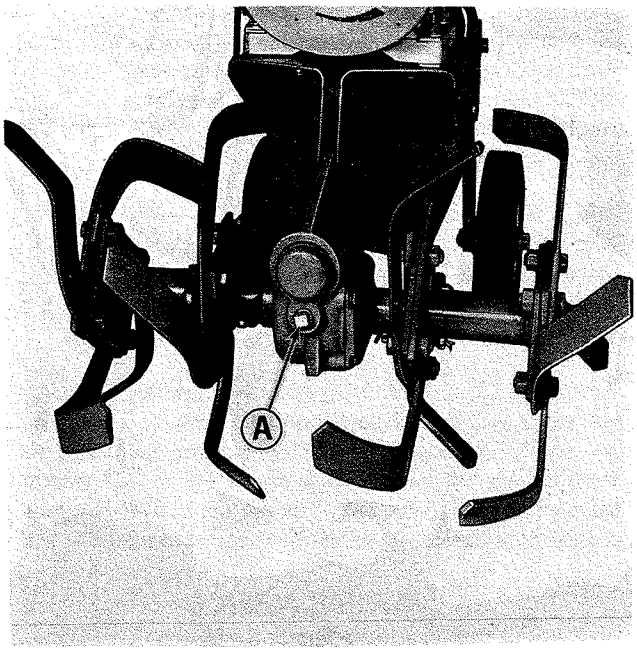


Figure 14. Worm gear drive oil level check plug.

CHECK ENGINE CRANKCASE OIL

See figure 13. Each time fuel is added or at least once every five hours of operation, the engine crankcase oil level should be checked. See figure 13. Remove all dirt from around filler plug (B), then remove the filler plug by turning it counterclockwise. The crankcase oil level should be maintained full to the point of over flowing. If oil is required, add the same grade and weight of oil, which is already in the engine crankcase.

EVERY 25 HOURS OF OPERATION

CHANGE ENGINE OIL

After the first five hours of operation, and thereafter, every 25 hours of operation, the engine crankcase oil should be changed.

See figure 13. While the engine is warm, remove the drain plug (C) and drain the oil from the engine crankcase. Replace the drain plug. Remove oil filler cap (B) and refill the crankcase with new oil, which is classified for service SC or SD, or MS. Nothing should be added to the recommended oil.

SUMMER	WINTER
(Above 40°F.) Use SAE 30	(Under 40°F.) Use SAE 5W-20 or SAE 5W-30
If not available Use SAE 10W-30 or SAE 10W-40	If not available, Use SAE 10W or SAE 10W-30 Below 0°F Use SAE 10W or SAE 10W-30 Diluted 10% with Kerosene

CLEAN AND RE-OIL AIR CLEANER

Every 25 hours or more often under dusty operating conditions the engine air cleaner should be serviced. See figures 15 and 16.

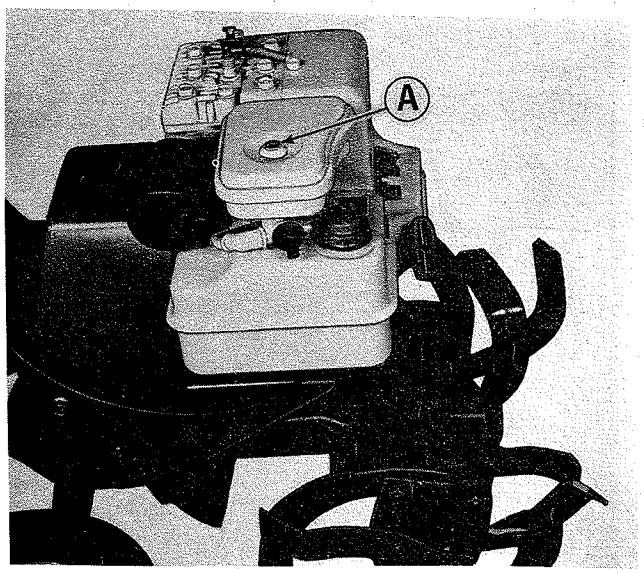


Figure 15. Right side of Roticul.

1. Remove the air cleaner holding screw, (Figure 15, Item A).
2. Remove the air cleaner carefully to prevent dirt from entering the carburetor.
3. Take the air cleaner apart as shown in figure 16.
4. Wash the foam element and kerosene in liquid detergent and water to remove dirt.
5. Wrap the foam in cloth and squeeze dry.
6. Saturate the foam in engine oil. Squeeze to remove excess oil.
7. Assemble the parts. Install the air cleaner on the engine and secure with the mounting screw (Figure 15, Item A).

CLEAN THE ENGINE COOLING SYSTEM

Grass or chaff may clog the cooling system after prolonged service. Continued operation of a clogged cooling system may cause severe overheating and possible engine damage. Every 25 hours the engine fin should be checked for any sign of a buildup of grass or chaff, which may decrease air flow through the engine fins.

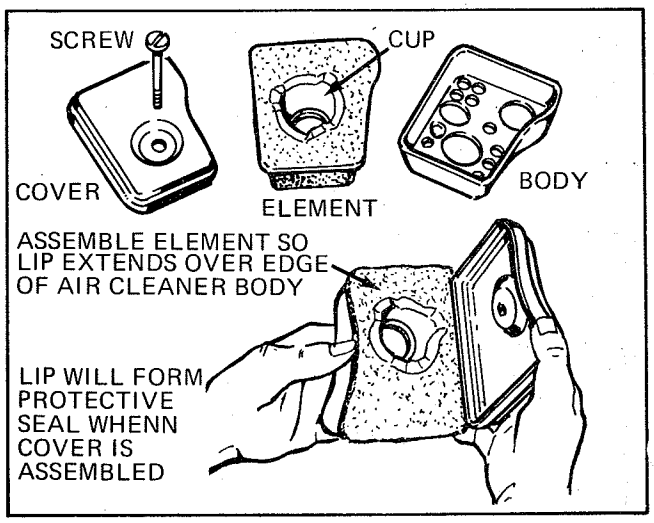


Figure 16. Air cleaner disassembled.

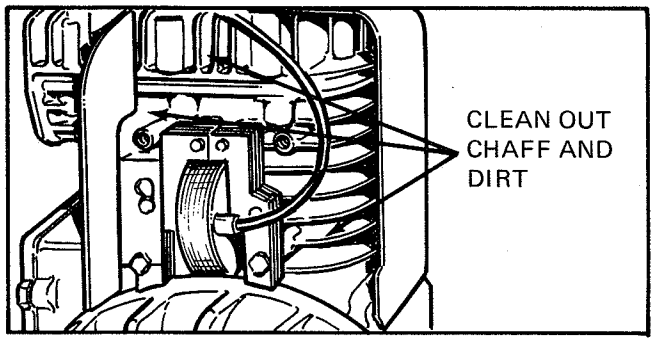


Figure 17. Engine with blower housing removed.

See figure 17. If any sign of a buildup of dirt, chaff or grass is noted, remove the blower housing and clean the engine fins.

EVERY 100 HOURS OF OPERATION

CLEAN OR REPLACE SPARK PLUG

See figure 18. After every 100 hours of operation the spark plug should be removed, cleaned and gapped at .030". **CAUTION: BLAST CLEANING OF SPARK PLUGS IN MACHINES THAT USE ABRASIVE GRIT IS NOT RECOMMENDED. SPARK PLUGS SHOULD BE CLEANED BY SCRAPING OR WIRE BRUSHING AND WASHING WITH A COMMERCIAL SOLVENT OR GASOLINE.** When the spark plug is worn out it should be replaced.

OUT OF SERVICE PROTECTION (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 Sta-Bil brand gasoline stabilizer, available at your Simplicity dealer. Add a can capful to the fuel in the tank or follow the directions on the can for containers of other capacity. This additive prevents formation of gum and varnish for up to one year, providing easier starting and a clean fuel system.
2. Drain and refill the crankcase while the engine is warm.
3. Remove the spark plug, pour one ounce of 10W30 oil into the cylinder through the plug hole. Crank the engine a few times to distribute oil. Reinstall the spark plug.
4. Clean dirt and chaff from the cylinder head fins and engine housing.

ACCESSORIES

AVAILABLE FROM YOUR SIMPLICITY DEALER

MFG. NO. 212 - TINE EXTENSION SET

The set consists of a left hand and a right hand tine assembly with mounting pins and spring clips. Mount the long hub of each tine over the outside end of the standard tine assembly and install the pin and spring clip. Be sure that the sharpened edges of the tines on top face forward. This set increases the effective tilling width to 31-1/4 inches.

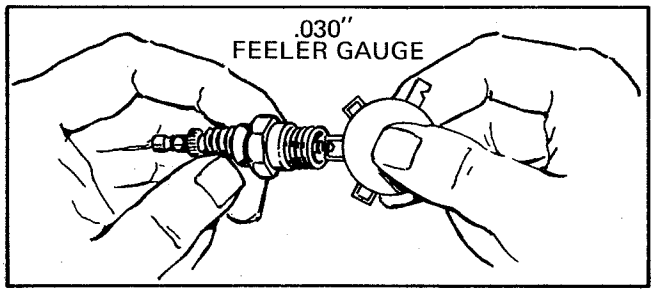


Figure 18. Setting spark plug gap.

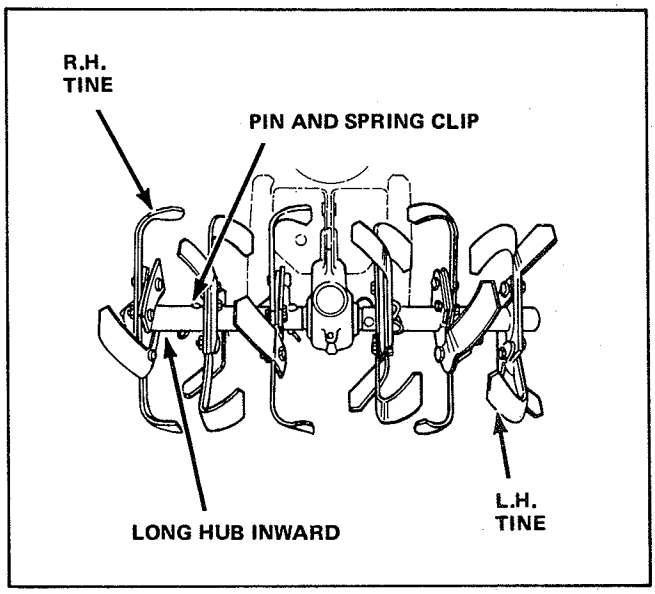


Figure 19. Tine extensions installed (Accessory)

MFG. NO. 340 - 8 INCH FURROW OPENER

The furrow opener is intended for digging furrows for crops which must be planted in rows. To install, proceed as follows:
1. Remove the depth bar, turn it upside down and bolt it to the tool holder (A) with the carriage bolts, washers and nuts provided.
2. Remove the stop plate from between the frame supports and install the extension support (B) with the old hardware.
3. Position the depth bar in the extension support and reinstall the depth bar clamp using the pin and spring clip provided. Bolt the furrow opener to the tool holder as shown.

MFG. NO. 281 - WORM GEAR OIL

Case of 12 cans of special Simplicity Worm Gear Oil for Roticuls.

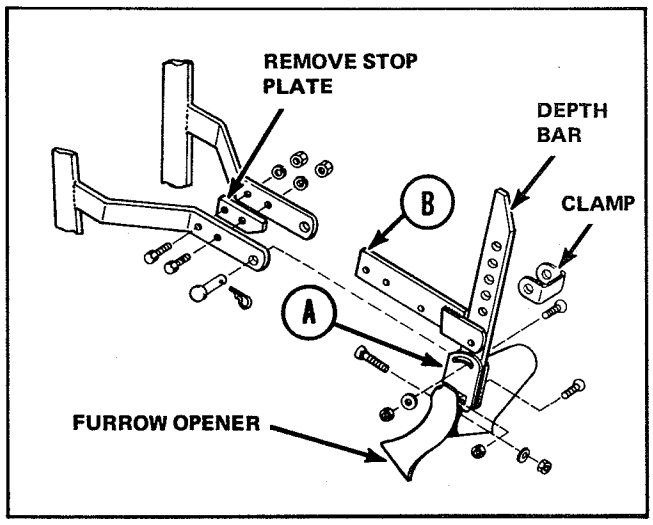


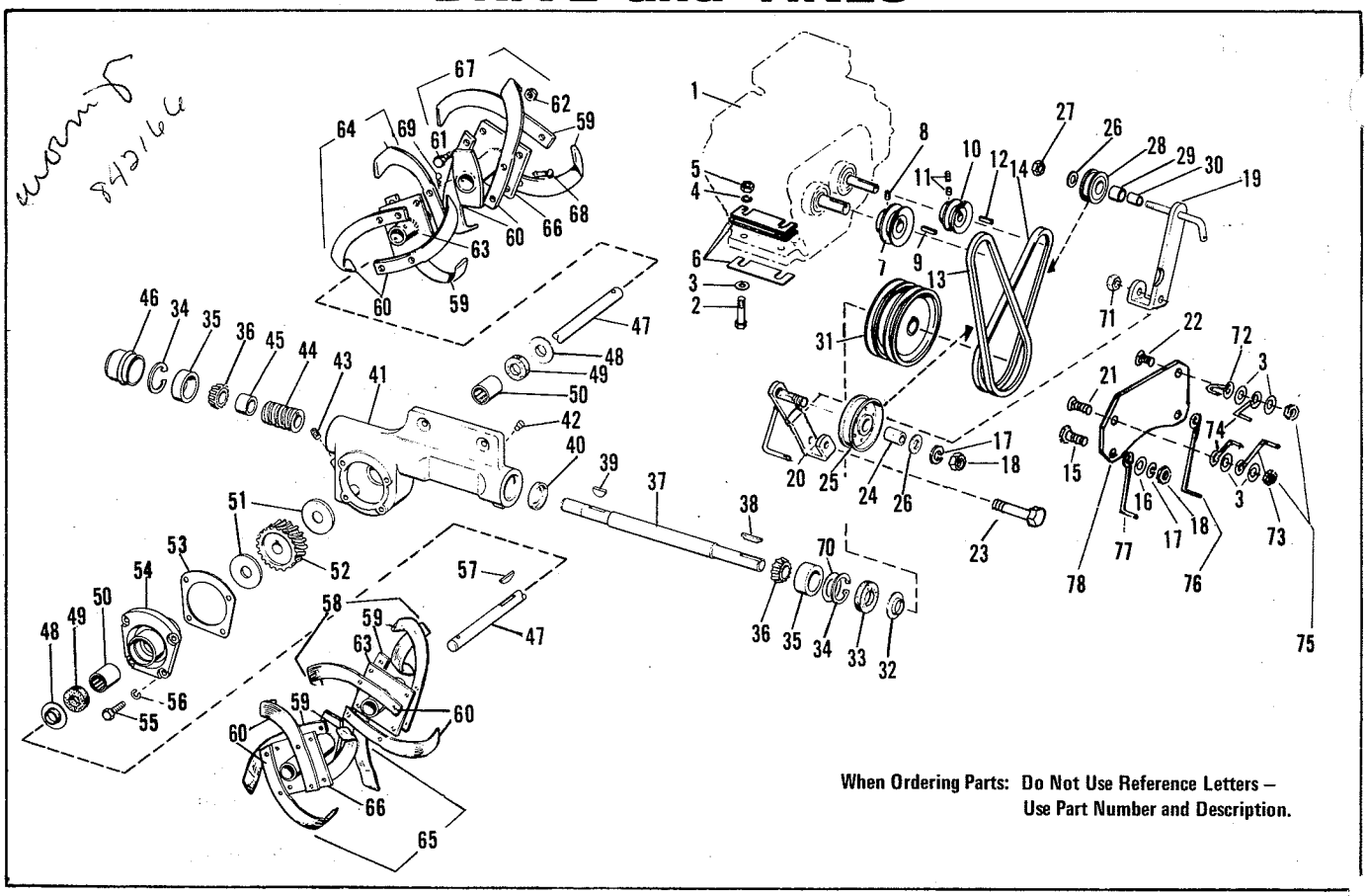
Figure 20. Furrow opener (Accessory)

SPECIFICATIONS

ENGINE	
Make	Briggs and Stratton
Model No.	80292
Cycles	4
Cylinders	1
Bore	2-3/8 Inches
Stroke	1-3/4 Inches
Displacement	7.75 Cu. In.
Crankshaft Plane	Horizontal
Starter	Manual Rewind Up-Angle Side Pull
Choke	Manual
Governor	Remote Controlled Mechanical
Ignition	Patented, High-Tension Magneto with Ceramic Magnets
Lubrication	Gear Impeller System - 40% Slope Operation
Crankcase Capacity	1-1/4 Pints
Fuel Capacity	2 Quarts
Air Cleaner	Sealed Joint Housing, Reusable Oiled Foam Element
Muffler	Quiet, Low Back Pressure Type, Side Discharge
TRANSMISSION	
Type	Worm and Gear
Material	Worm - Carburized Steel; Gear - Bronze
Bearings	Front - Tapered Roller Bearing; Rear - Tapered Roller Bearing
Seals	Double Lip - Dirt Excluding
Lubrication	Special Simplicity Worm Gear Oil
Housing	Cast Iron
Clutch	Touch-O-Matic V-Belt

TINES	
Type	Slashing
Material	Forged, High-Carbon Steel
Tilling Width	21-1/4 In. Standard, 31-1/4 In. with Tine Extensions
Tilling Depth	0 to 7 Inches, Adjustable
Attachments	To Hub - Bolted; To Shaft - Pin and Spring Clip
Drive	Inner - Pin Type Floating Drive Outer - Pin and Torsion Plate Floating Drive
Speed	75 RPM at Full Engine Speed
DEPTH BAR	
Attachment	Pin and Spring Clip
Adjustment	0 to 7 Inches Tilling Depth
CONTROLS	
Location	Forward Clutch - Right Handle, Top Reverse Clutch - Left Handle, Bottom Throttle - Center panel Rewind Starter and Choke - On Engine
CHASSIS	
Frame	Heavy Duty, Electrically Welded with Cross Bracing
Tires	8 x 1.75 Solid Rubber
Wheel Bearings	Solid, Sintered Iron
OVERALL DIMENSIONS	
Length	51 Inches
Width	26 Inches (Without Tine Extensions)
Height	To Top of Handle - 38-1/4 Inches To Top of Engine - 27-3/4 Inches
Weight	128 Lb.

DRIVE and TINES

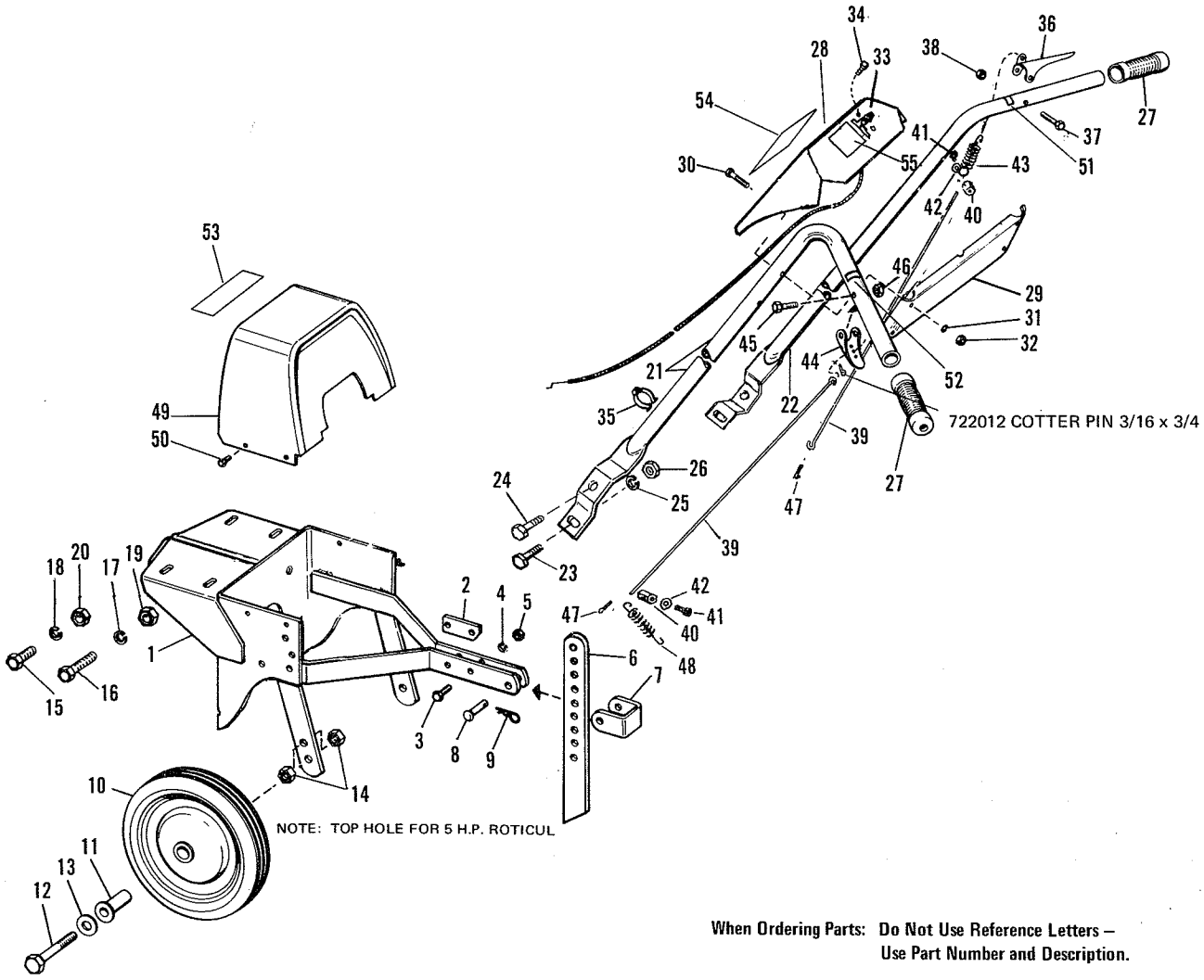


When Ordering Parts: Do Not Use Reference Letters – Use Part Number and Description.

Ref. No.	Part No.	Description	Quan. Req.
1		Engine	1
2	705020	Hex. Hd. Capscrew 5/16"- 18 N.C. x 2" lg.	4
3	719002	Plain Washer 5/16"	12
4	720001	Lock Washer 5/16"	4
5	717001	Hex. Nut Full 5/16"- 18	4
6	118463	Shim	6
7	118027	Pulley, Engine	1
8	713504	Set Screw 5/16"- 18 N.C. x 3/8" lg.	1
9	8221042	Key, Sq.	1
10	118457	Pulley Engine	1
11	713503	Set Screw 5/16"- 18 N.C. x 5/16" lg.	2
12	725007	Key	1
13	118494	Belt, "V" Reverse	1
14	*164146	Belt "V" Forward	1
15	705005	Hex. Hd. Capscrew 3/8" - 18 N.C. x 1" lg.	2
16	719001	Plain Washer 3/8"	2
17	720002	Lock Washer 3/8"	3
18	717003	Hex. Nut, Full 3/8"- 16	3
19	118408	Lever Assembly-Idler	1
20	172751	Lever Assembly-Idler	1
21	703003	Carriage Bolt 3/8"- 16 x 1	2
22	705009	Hex. Hd. Capscrew 3/8"- 16 N.C. x 1-1/2" lg.	1
23	171336	Pivot Bolt	1
24	118335	Spacer	1
25	154534	Pulley, Idler	1
26	719002	Plain Washer 5/16"	1
27	717524	Nut, Lock 3/8"- 16 N.C.	1
28	101002	Pulley, Idler Assembly	1
29	8161243	Bushing	1
30	8191020	Spacer	1
31	171987	Pulley, Driven	1
32	118400	Shield	1
33	118393	Oil Seal	1
34	118396	Snap Ring	2
35	154393	Cup, Bearing	2
36	154486	Bearing, Roller	2
37	170888	Shaft, Worm	1
38	118439	Key	1
39	725502	Key	1

Ref. No.	Part No.	Description	Quan. Req.
40	118399	Cup	1
41	118392	Housing, Worm Drive	1
42	118462	Plug, Vent	1
43	726003	Plug, Pipe 3/8"	1
44	118492	Worm, R.H.	1
45	118398	Spacer	1
46	154487	Cap, Hub	1
47	118021	Shaft, Worm Gear	1
48	118403	Shield	2
49	118118	Seal, Oil	2
50	118020	Bearing, Needle	2
51	118315	Washer, Thrust	2
52	118022	Gear, Worm, R.H.	1
53	118024	Gasket	1
54	118402	Cover	1
55	715018	Hex. Hd. Capscrew 1/4"-20 N.C. x 5/8" lg.	4
56	720003	Lock Washer 1/4"	4
57	725005	Woodruff Key	1
58	118083	Left Hand Inner Tine Assembly	1
59	8152001	Left Hand Tine Blade	8
60	8152002	Right Hand Tine Blade	8
61	706009	Hex. Capscrew, 7/16"- 20 x 1-1/4"	32
62	717512	Hex. Nut, Full, 7/16"- 20	32
63	118084	Inner Tine Plate Assembly	2
64	118120	Right Hand Inner Tine Blade Assembly	1
65	105288	Blade Assembly, Left Hand Tine	1
66	105286	Plate Assembly, Tine Extension	1
67	105289	Blade Assembly, Right Hand Tine	1
68	118053	Pin	4
69	722009	Pin, Cotter, 1/8" x 3/4"	4
70	170885	Backing Ring or 171762 Backing Ring	1
71	718033	Nut, Whiz-Lock	1
72	106347	Belt Stop	1
73	172844	Belt Stop	1
74	172845	Belt Stop	2
75	717510	Lock Nut 3/8"- 16	2
76	106707	Belt Stop	1
77	165044	Belt Stop	1
78	172846	Plate	1

FRAME, HANDLES and CONTROLS



When Ordering Parts: Do Not Use Reference Letters – Use Part Number and Description.

Ref. No.	Part No.	Description	Quan. Req.
1	170879	Body Assembly	1
2	718033	Stop Plate	1
3	705009	Hex Capscrew, 3/8"-16 x 1-1/2	2
4	720002	Lock Washer, 3/8"	2
5	717003	Hex. Nut, Full, 3/8-16	2
6	118081	Depth Bar	1
7	118447	Clamp	1
8	105249	Pin, Inner	1
9	8161045	Spring Clip	1
10	118469	Wheel & Tire Assembly	2
11	118132	Wheel Bushing	4
12	715108	Hex. Capscrew, 1/2"-13 x 3"	2
13	719004	Plain Washer, 1/2"	2
14	717017	Hex. Jam Nut, 1/2"-13	4
15	705004	Hex. Capscrew, 3/8"-16 x 3/4"	1
16	715011	Hex. Capscrew, 7/16"-20 x 1-1/4"	2
17	720006	Lock Washer, 7/16"	2
18	720002	Lock Washer, 3/8"	1
19	717009	Hex. Nut, Full, 7/16"-20	2
20	717003	Hex. Nut, Full, 3/8"-16	1
21	118466	Handle, L.H.	1
22	118467	Handle, R.H.	1
23	705016	Hex. Capscrew, 3/8"-16 x 1-1/4"	2
24	715061	Hex. Screw, Whiz-Lock, 3/8"-16 x 1"	2
25	720002	Lock Washer, 3/8"	4
26	717003	Hex. Nut, Full, 3/8"-16	4
27	106558	Grip	2
28	170923	Control Housing Assembly	1

Ref. No.	Part No.	Description	Quan. Req.
29	118298	Cover, Upper Handle	1
30	705025	Hex. Capscrew, 1/4"-20 x 1-1/2"	4
31	720003	Lock Washer, 1/4"	4
32	717005	Hex. Nut, Full, 1/4"-20	4
33	172925	Throttle Control Assembly	1
34	714016	Hex. Screw, Self-Tapping, 1/4"-20 x 1/2"	2
35	8061108	Cable Clip	1
36	118431	Grip, Clutch	1
37	705025	Hex. Capscrew, 1/4"-20 x 1-1/2"	1
38	717513	Hex. Nut, Full Lock, 1/4"-20	1
39	172924	~~ROD~~ CABLE	2
40	161092	Clamp, Wire	2
41	713013	Set Screw, Sq. Hd., No.10-24 x 5/8"	2
42	719008	Washer, No. 10 Flat	2
43	121037	Spring	1
44	118449	Grip, Clutch	1
45	705025	Hex. Capscrew, 1/4"-20 x 1-1/2"	1
46	717513	Hex. Nut, Full Lock, 1/4"-20	1
47	722011	Cotter Pin, 3/16" x 1"	2
48	118495	Spring	1
49	170359	Cover	1
50	715067	Screw, Washer Hd., Taptite, 1/4"-20 x 3/8"	2
51	118484	Film, Tiller Clutch	1
52	118485	Film, Tiller Clutch	1
53	155061	Film, Simplicity	1
54	118482	Emblem -"S"	1
55	174796	Decal, Throttle	1
*	174806	Plate, Serial No.	1

 * Not Illustrated