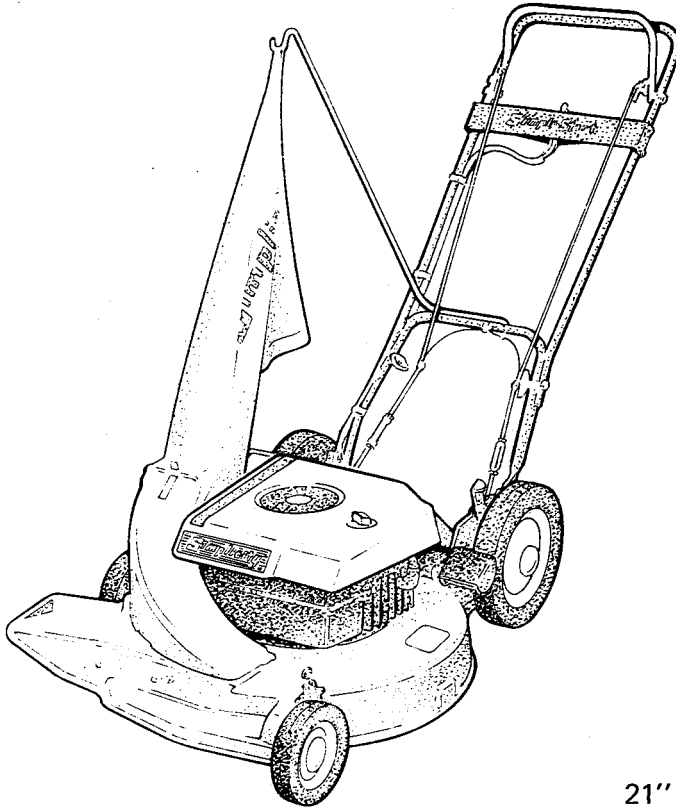


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Simplicity

OPERATOR'S MANUAL

MODELS 1021 & 1019



**CAUTION: Read Manual Thoroughly
Before Operating Mower**

- 21" SELF PROPELLED MOWER
MFG. NO. 1690132
- 21" SELF PROPELLED ELEC. START MOWER
MFG. NO. 1690133
- 21" PUSH MOWER
MFG. NO. 1690131
- 19" PUSH MOWER
MFG. NO. 1690130

**Models
1019
&
1021**

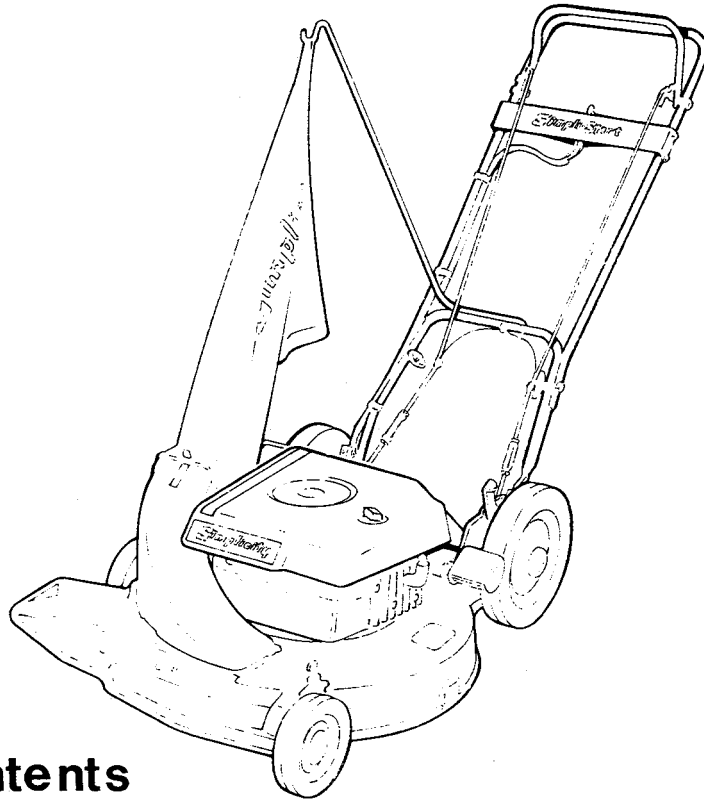


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WARNING

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.

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.

General

- Read the Operator's Manual carefully. Be thoroughly familiar with the controls and proper use of the equipment.
- Never allow children to operate a power mower.
- Keep the area of operation clear of all persons, particularly small children, and pets.

Preparation

- Thoroughly inspect the area where the equipment is to be used and remove all stones, sticks, wire, bones and other foreign objects.
- Do not operate equipment when barefoot or wearing open sandals. Always wear substantial footwear.
- Never operate equipment in wet grass. Always be sure of your footing; keep a firm hold on handle and walk, never run.
- Disengage self-propelling unit on units so equipped before starting engine.
- Never attempt to make a wheel height adjustment while engine is running.
- Mow only in daylight or in good artificial light.
- Check fuel before starting engine. Do not fill gasoline tank when engine is running or while engine is still hot. Wipe off any spilled gasoline before starting engine.

Operation

- Do not put hands or feet near or under rotating parts. Keep clear of discharge opening at all times.
- Stop engine when crossing gravel drive, walks or roads.
- After striking a foreign object stop the mower, remove spark plug wire and fasten away from the plug. Thoroughly inspect the mower for any damage, and repair the damage before restarting and operating the mower.
- Do not change engine governor settings or overspeed engine.

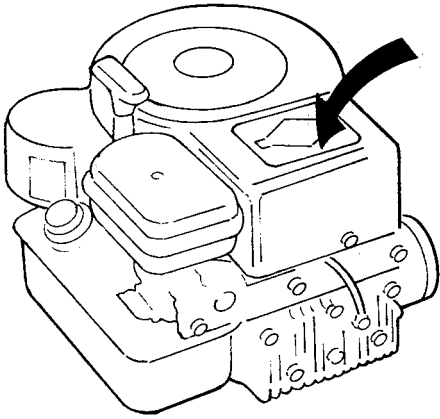
- If the equipment should start to vibrate abnormally, stop the engine and check immediately for the cause. Vibration is generally a warning of trouble.
- Stop engine whenever you leave the equipment, before cleaning mower housing, making any repair or inspection.
- When cleaning, repairing or inspecting, make certain blade and all moving parts have stopped. Disconnect spark plug wire and keep wire away from plug to prevent accidental starting.
- Do not run engine indoors.
- Shut engine off and wait until blade comes to a complete stop before removing grass catcher and/or unclogging chute.
- Mow across the face of slopes, never up-and-down. Exercise extreme caution when changing direction on slopes. Do not mow excessively steep slopes.
- Never operate mower without proper guards, plates or other safety protective devices in place.

Maintenance and Storage

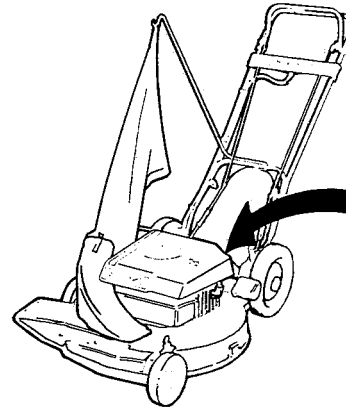
- Never store equipment with gasoline in the tank inside of a building where fumes may reach an open flame or spark. Allow engine to cool before storing in any enclosure.
- Check blade and engine mounting bolts at frequent intervals for proper tightness.
- Keep all nuts, bolts, and screws tight to be sure equipment is in safe working condition.
- To reduce fire hazard keep engine free of grass, leaves or excessive grease.
- Check grass catcher bags frequently for wear or deterioration. Replace with new bags for safe operation.

Mower Identification

When ordering replacement parts for your Simplicity mower, be prepared to give your dealer the identification numbers found on the mower and engine identification plates shown below. The identification plate for the mower is located in the rear, on top of the mower deck. The engine ID plate is located on the top of the engine blower housing. We suggest that you locate the numbers and record them below for easy reference.

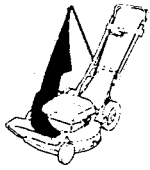


Engine I D

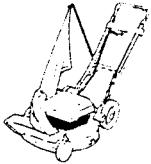


Mower I D

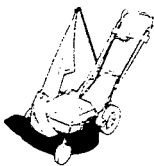
Owner Benefits



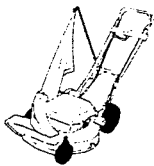
Grass Catcher fills completely to top, holds a full bushel. Large bag has a zipper for easy unloading. (Optional on 1019.)



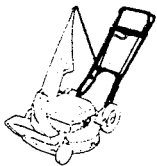
Briggs and Stratton easy-spin engine has an automatic choke, high-carbon nodular iron crankshaft, zinc flywheel key.



Magnesium deck is lighter, won't rust. Over 3" deep above blade for greater air mixing to spread clippings evenly. Deck extends well below blade all around for added safety.



Adjustable wheels have 6 positions for selecting cutting height from 7/8" to 2-7/8". No tools needed for instant cutting height adjusters.



Adjustable handle can be folded down to engine cover, moved forward to straight-up position and adjusted for height - all without tools.

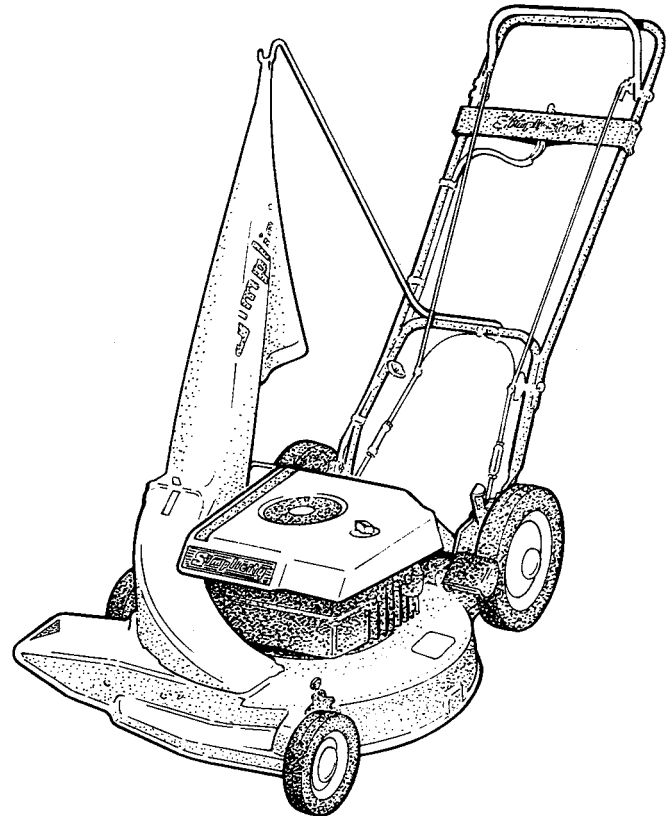
Sealed ni-cad battery can be tipped without danger of spilling acid. Requires no maintenance other than charging. (Electric start models only).

Through-deck catching and right front corner discharge permits mowing at 20% lower blade tip speed.

Vertical pull manual starter is geared to reduce pull force by 25%-naturally easier and safer than side-pull starters. (On manual mowers only).

Pre-stressed blade is clamped in a rigid stiffener to reduce flutter and fatigue failure.

1019 & 1021 Walk Behind Mower



Mulching baffle is easily installed, cuts and recuts grass, making mulch for your lawn.

Ignition Key starts and stops engine with no effort. Removable to prevent unauthorized starts. (Electric start models only).

Speed control selector gives one simple control for fuss-free engine performance.

Rear wheel drive enables mower to climb a 40° slope, without slipping to prevent wheel marks on lawn. (Self propelled models only).

Touch-a-matic control bar gives soft clutch action for unmarked lawns.

Assembly

CONTENT OF SECTION

Procedures necessary to complete the assembly of the mower are provided in this section.

ASSEMBLY OF HANDLE AND CONTROLS

The mower handle and controls (self-propelled models) are removed from the mower for shipping. To assemble the mower handle and controls, proceed as follows:

The mower handle is attached to the mower by means of two pins and spring clips. There are two holes in each tip of the mower handle. By placing the pins in the lower set of holes, the mower handle is suited to short operators. Placing the pins in the upper set of holes makes the handle height suitable for medium to tall operators. Choose the set of holes which will be appropriate for your needs.

1. Tighten the wing nuts on the handle in its unfolded position.
2. Remove the spring clips from the pins in the rear wheel brackets, as shown in figure 1.

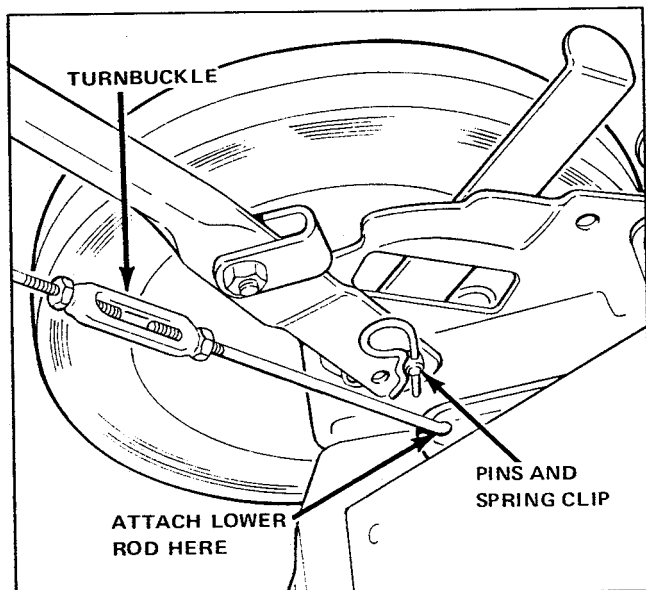


Figure 1. Installing Handle

3. Install the handle on the pins, with the handle locks positioned over the top of the wheel brackets. (See figure 1).
4. Replace the spring clips through the pins to attach the handle to the rear wheel brackets.

On self-propelled models, the drive engaging rods must be attached to the driveshaft bellcranks. To assemble the engaging rods, proceed as follows:

1. Unscrew the turnbuckles on the lower engaging rods so that the lower rod is free from the upper rod.
2. Slip the hooks in the lower engaging rods through the slots in the driveshaft bellcranks as shown in Figure 1.
3. Attach the rod spring to the loops in the upper engaging rods as shown in figure 2.

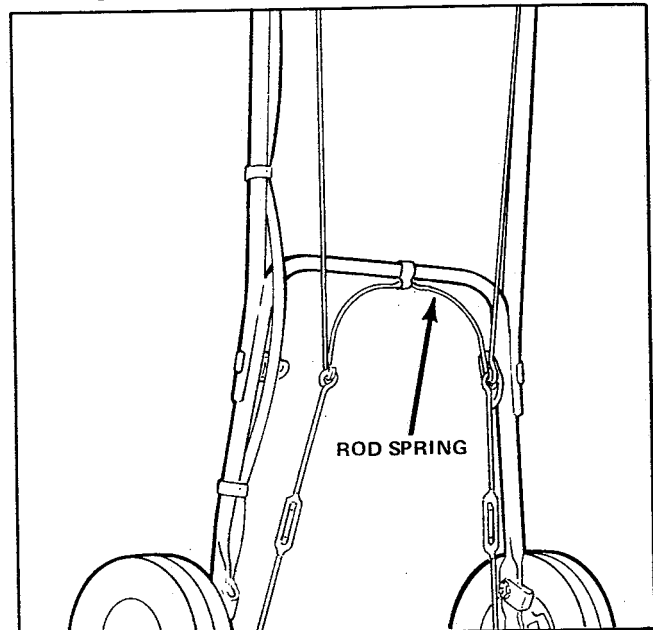


Figure 2. Attaching Rod Spring

4. Reassemble the engaging rod turnbuckles, tightening them so that the driver wheels are approximately 1/4 inch from each rear wheel. (See figure 4).
5. Tighten the locknuts on each end of the turnbuckles to prevent them from loosening.

On electric start models, the wiring harness must be connected to the handle and ignition switch. To connect the wiring harness, proceed as follows:

1. Attach the wiring harness to the lower and upper handles as shown in figure 3 with the cable clamps provided.
2. Slip the harness through the cable clip on the mower housing (figure 4).

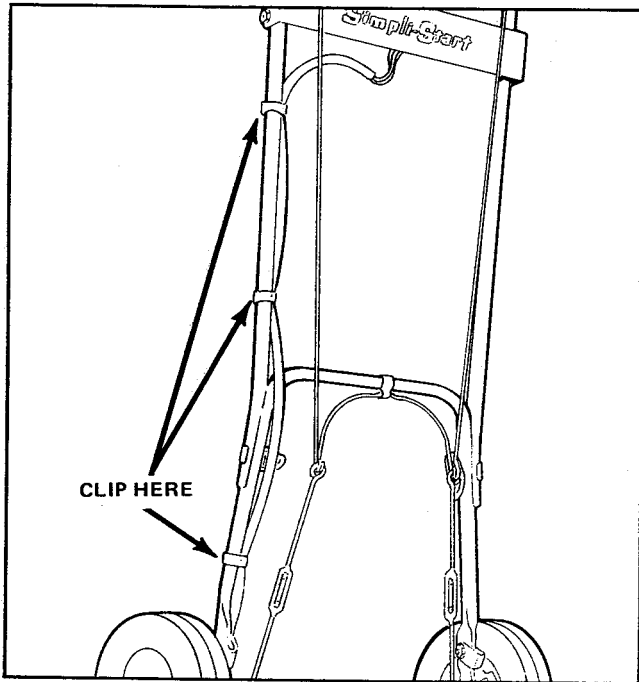


Figure 3. Attaching Harness

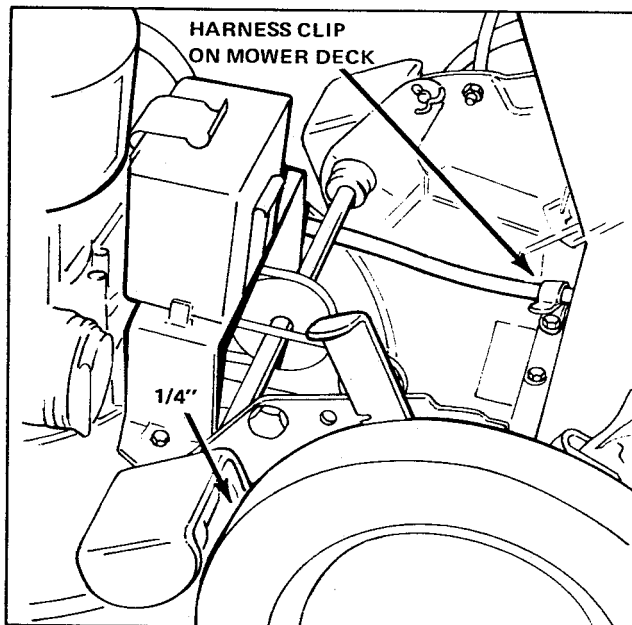


Figure 4. Installing Harness in Clip

3. Attach the three wire plug to the ignition switch (see figure 5).
4. Insert the charging plug into the slot on the handle crosspiece next to the ignition switch (see figure 5).

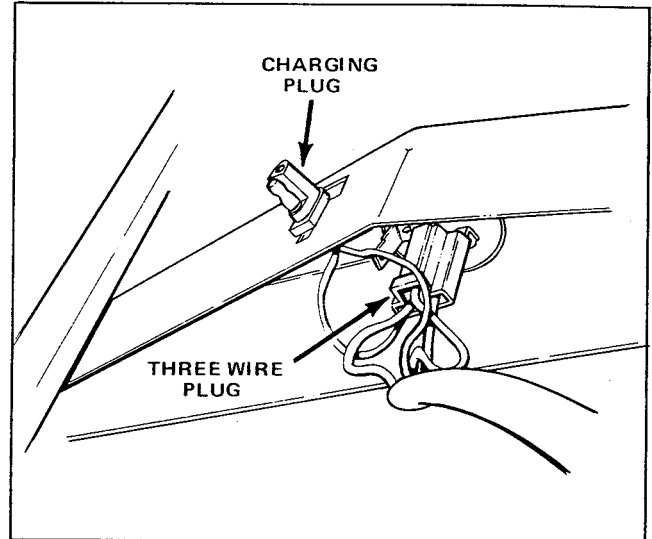


Figure 5. Installing Plug

NOTE

The sealed battery requires no water or liquid electrolyte. It can be stored or placed in any position without danger of spillage. The only attention required is periodic recharging. It need not be recharged during the off-season, and prolonged storage will cause no harm. If the battery has not been used for an extended period, or if it is new, it should be charged for 24 hours to restore its full charge.

NOTE

The engine must be filled with oil before it is started. See the procedure shown in the Normal Care section of this manual for checking the oil level.

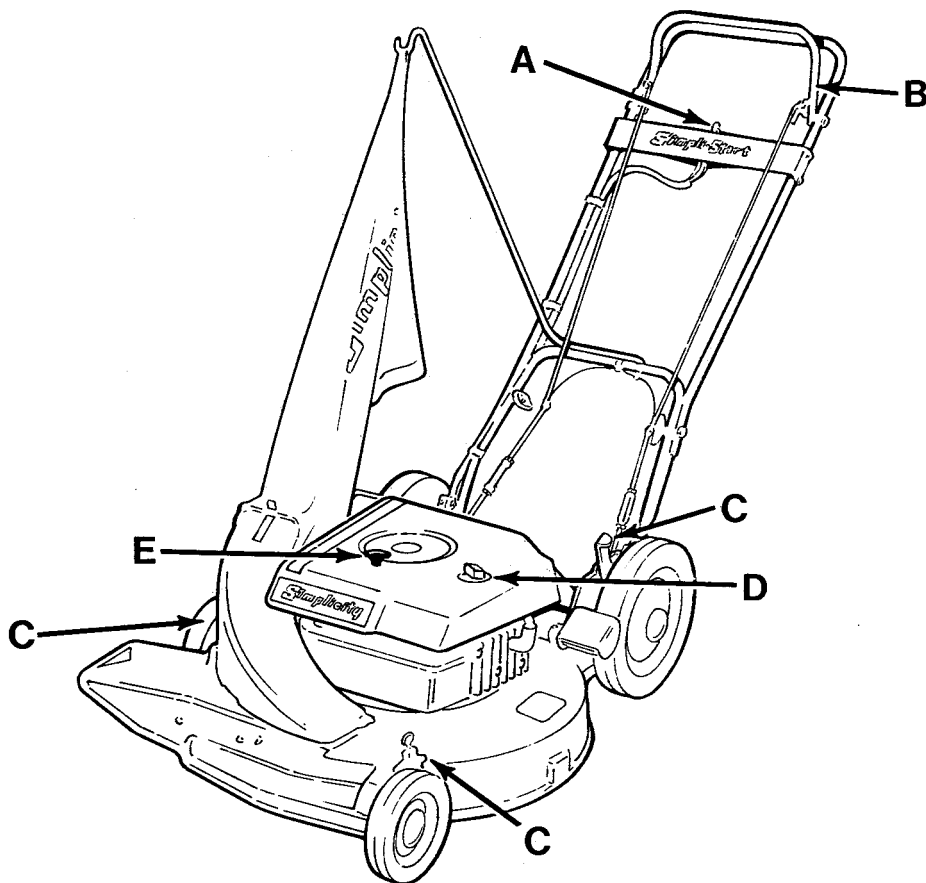
Operation

CONTENT OF SECTION

This section provides operating procedures for your rotary mower. A brief description of the Mower Controls is followed by Preparing the Mower for Use, and basic Operating Procedures.

MOWER CONTROLS

Figure 6 shows the location, name and function of each of the mower controls. The control names given in figure 6 are used throughout the manual.



Item	Name	Function
A	Ignition Switch (Elec. Start Only)	Operates with key to start, run or turn off engine.
B	Control Bar (Self-propelled Models only)	Engages and disengages power to the rear driving wheels.
C	Height Adjusters	Control the mowing height of the mower, adjustable to 2-7/8 inch cutting height.

Item	Name	Function
D	Speed Control Knob	Controls the engine speed for heavy or light jobs. Engages the choke for easy starting, and stops the engine when desired.
E	Starter Handle (Manual Start only)	Starts the mower engine by pulling upward.

Figure 6. Location and Function of Controls

PREPARING THE MOWER FOR USE

The clippings from your lawn can be collected in the grass catcher bag, dispersed to the side, or chopped finely and left as a mulch for your lawn.

In the spring and early summer, when the growth is heavy, it is recommended that you collect the clippings from your lawn, leaving it neat and clean, with no fear of smothering new growth. To do this, install the grass catcher.

INSTALLING GRASS CATCHER

1. Remove the spark plug wire and tie it away from the spark plug wire. (See figure 7).
2. If the mower deck plate is installed, remove it by taking off the wing screw at the front of the plate and sliding it out from the two spring bolts on the mower deck.

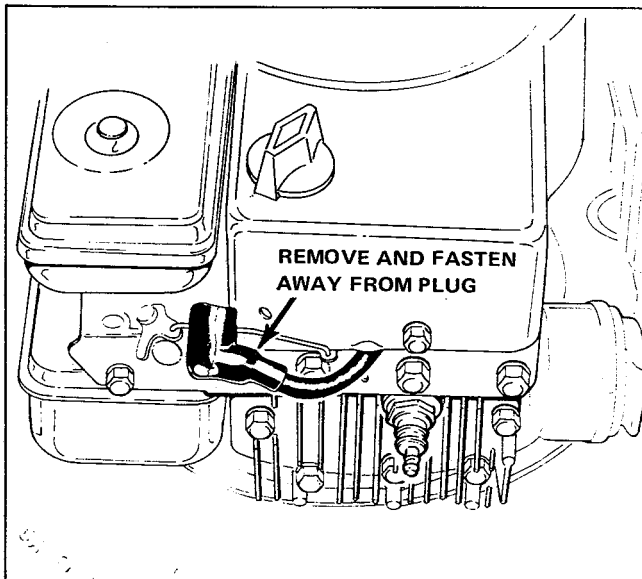


Figure 7. Remove Spark Plug Wire

3. Install the grass deflector plate in the mower deck by sliding the slot under the front spring bolt. (See figure 8).
4. Insert and tighten finger tight the wing screw provided through the mower deck into the grass deflector plate. (See figure 8).
5. Install the grass chute over the opening in the mower deck by sliding both slots under the spring bolts, and tightening the wing screw finger tight into the mower deck (see figure 9).

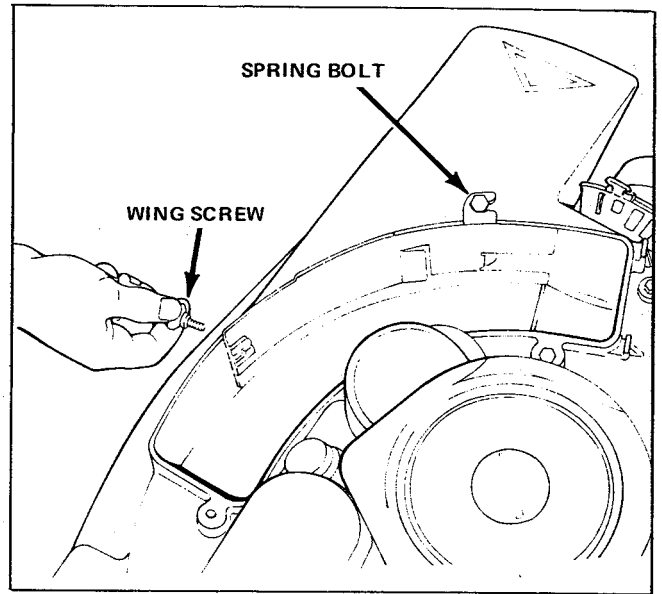


Figure 8. Remove Grass Deflector Plate

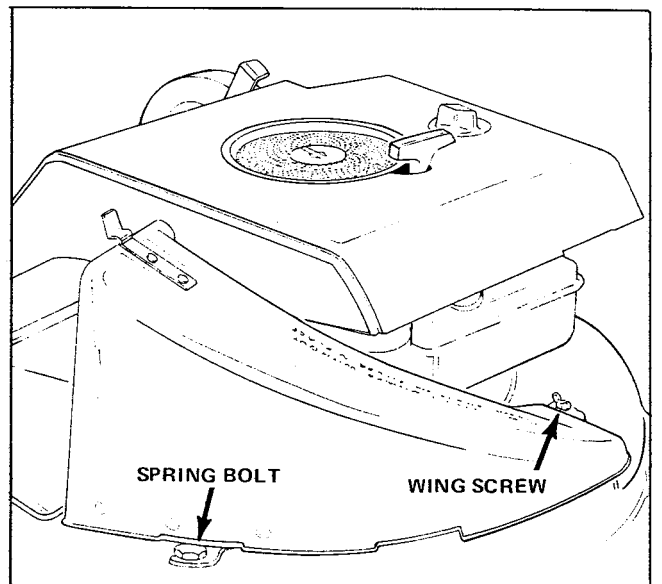


Figure 9. Attaching Grass Chute

6. Insert the leg of the bag support rod through the left hole in the handle crossbar, and attach it with the spring clip provided through the hole in the rod. (See figure 10). Make sure bag support rod is underneath control rod.
7. Attach the grass bag to the grass chute by inserting the bottom of the bag reinforcing loop into the slots on the mower deck (see figure 11), and push the top of the reinforcing loop under the spring clip on the top of the grass chute.
8. Attach the zipper end of the grass bag to the bag support rod with the loop sewn into the edge of the bag.

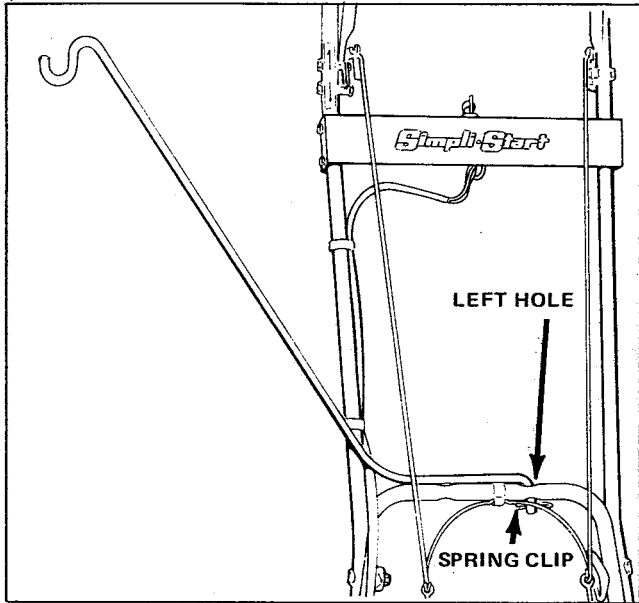


Figure 10. Installing Bag Support

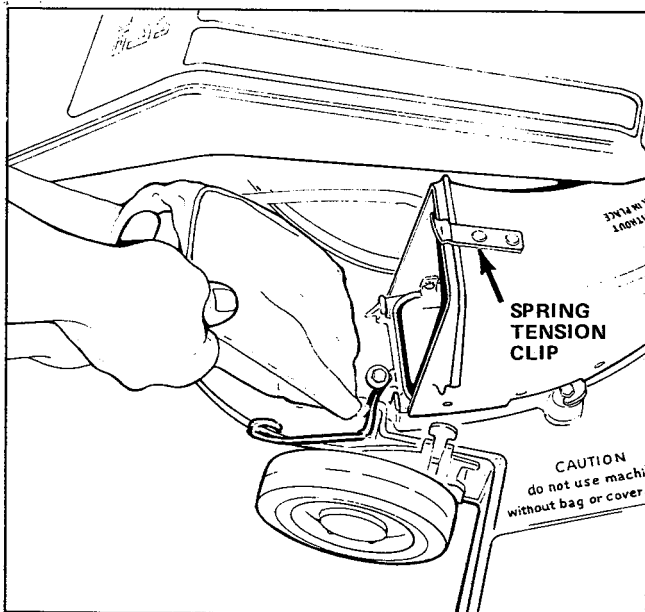


Figure 11. Attaching Grass Bag

9. Replace the spark plug wire onto the plug.



WARNING

Whenever removing the grass bag to empty it, always stop the mower engine before removing the bag. Never operate the mower without either the grass chute and grass bag or the mower deck plate installed on the mower.

Using Mower as Mulcher

As the summer progresses, the growth of grass becomes lighter and drier. The clippings can be left on the lawn without affecting its appearance or growth. Your mower can be used as a mulcher, chopping the clippings finely and spreading them evenly over the lawn. The clippings will add valuable nutrients to the soil and act as a mulch, preserving moisture in the soil.

To use your mower as a mulcher, install the grass deflector plate (see figure 8) and the mower deck plate.

To install the mower deck plate, slide the two slots under the two spring bolts and insert and tighten the wing nut through the deck plate into the mower deck (see figure 12).

Dispersing Clippings

Clippings can be dispersed on the lawn through the discharge deflector. This is done by using the mower deck plate only on the mower (see figure 12).

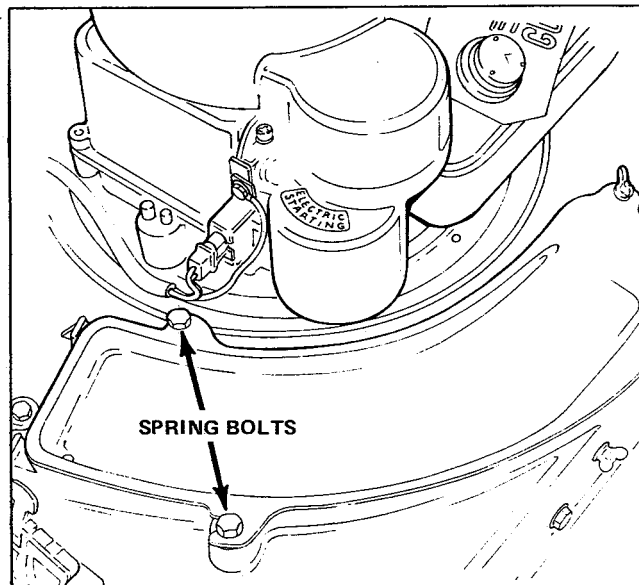


Figure 12. Installing Mower Deck Plate

OPERATING PROCEDURES

The rest of this section tells you how to operate your mower. The directions assume that the mower is working properly. If your mower does not perform satisfactorily during operation, refer to the Troubleshooting section of this manual.

The directions in this section have been arranged so that you learn the basic operating procedures safely and efficiently. When operating the mower for the first time, study and be familiar with the following operating directions in the order given:

- Location and Function of Controls
- Checks Before Starting
- Starting the Engine
- Starting the Mower in Motion
- Stopping the Engine

NOTE

When using the mower for the first time, choose a smooth, level area, cutting straight strips overlapping slightly. After you get used to operating it, proceed to slopes or rough ground.

Before starting any operation it is essential that you review and become completely familiar with the Safety Rules on page 2.

Checks Before Starting

The checks below should be performed before starting the engine for the first time. Repeat these checks each time you use the mower to be sure that it is ready for use.

1. Refer to the Normal Care section of this manual to determine and perform needed care.



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.

2. Check the fuel tank. If you need more fuel, fill the tank as follows:

- a. Remove the fuel cap (see figure 12).
- b. Fill the fuel tank completely with clean, fresh, leaded or non-leaded regular grade gasoline.
- c. Replace and tighten fuel cap.

3. On self-propelled models, be sure that the drive is disengaged before attempting to start the engine.

Starting the Engine

To start the mower engine, proceed as follows:

1. Place the mower on a flat surface in an open area.



WARNING

Do not start or run the engine in an enclosed area. Open doors if in garage — exhaust fumes are dangerous.

2. Turn the speed control knob to the “START” position. This sets the choke in the engine carburetor.
3. On electric start models, insert the key into the ignition switch and turn it clockwise to “START”. Release the key as soon as the engine starts, it will return to the “ON” position.



CAUTION

4. On manual start models, place one foot on the left side of the mower deck where indicated, keeping the other foot well clear of the underside of the mower.

Grasp the starter handle firmly with one hand and pull upward. Return the handle to the engine cover, then release it. **DO NOT RELEASE THE HANDLE WITH THE ROPE EXTENDED.**

5. When the engine starts, turn the speed control knob to the engine speed you desire, usually around the “MOW” position. Warm up the engine for a minute before starting to mow.

Starting the Mower in Motion

On self-propelled models, pull the control bar toward the mower handle to start the mower in motion. To stop mower motion, release the control bar, and the drive to the mower wheels will disengage immediately.

Stopping the Engine

On electric start models the engine can be stopped by turning the key to the "OFF" position. Remove the key from the ignition switch to prevent unauthorized or accidental starting.

On manual start models, turn the speed control knob to the "STOP" position to stop the engine.



CAUTION

Keep feet and hands away from mower housing and hot engine.

Mowing Hints

Before mowing an area, clean it of all sticks, stones, etc. For mowing, average engine speed is from three-fourth to full. For cleaning leaves or bagging litter, run at full speed for greater blowing action.

Approach sunken flower beds, edges of drives and walks headon. Let front of mower extend over the edge slightly on each pass. Overhanging grass will be cut cleanly.

For heavy growth, raise the height setting (See Adjustments) to the highest cutting position, then mow the area again at the desired height.

Wet, thick or heavy grass: if mowing without the catcher assembly, start at the outer edge of the area and mow counterclockwise so that clippings are always deposited on cut grass. Less engine power is required and a more even cut free of streaks will result.

Height setting: On thick or springy grass, do not set the cutting height too low. The wheels may sink into the lawn, resulting in too short a cut.

For best appearance, new grass should be cut in the afternoon or evening when it is free of moisture.

Change mowing patterns occasionally to eliminate matting, graining and a corrugated appearance.

Guide the left side of the mower along trees, posts, or other obstacles and follow the contour as closely as possible.

Normal Care

CONTENT OF SECTION

Your mower has been designed and built to give you years of service with only minor care. Certain tasks, however, must be performed to keep the mower in good operating condition and to avoid costly repairs. This section shows you how to provide the necessary care for your mower.

SCHEDULED CARE

A schedule for routine care is provided in figure 14. Some of the schedule requirements are based on operating hours. To calculate the number of hours your mower has been used, determine the normal time it takes for your regular mowing jobs. Multiply this time by the number of times you have performed the job and add any unusual operating time to estimate the total operating time.

A maintenance record (figure 29) is provided at the rear of this manual. Use this record to document all operating hours and repair or servicing actions for the mower.

NORMAL STORAGE

To protect your mower, 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.

OFF-SEASON STORAGE

When the mower is to be stored for two months or longer, take the following precautions:

1. Clean the machine thoroughly.
2. Remove all fuel from the fuel tank.
3. Run the engine until it stops from lack of fuel.
4. Change engine oil while the engine is still warm.
5. Remove spark plug. Pour one ounce (two to three tablespoons) of SAE 30 motor oil into chamber through spark plug hole. Crank engine a few times to distribute oil. Reinstall spark plug.
6. After checking blade for sharpness and balance, apply a thin coat of oil to prevent rust forming.

To save space while the mower is being stored, the mower handle can either be stored in a vertical position, or folded over the top of the mower engine.

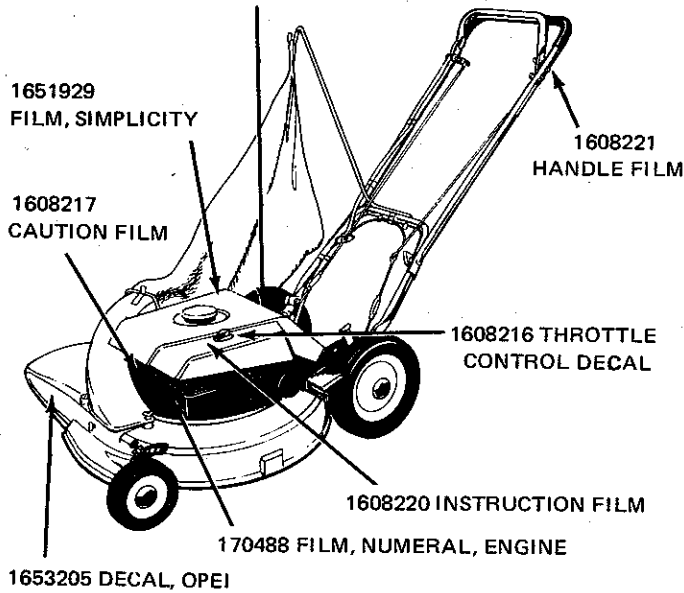
To raise the handle to the vertical position, lift the handle locks on the bottom ends of the handle, and raise the handle to the vertical position.

Care Required	See Figure	Schedule			
		Before Each Use	After Each Use	** Every 25 Hours	*** End Of Mowing Season
Check mower and engine	15	•			
Clean underside of mower and grass catcher bag, if used.	16		•		
Clean engine and air filter	17			•	•
Change engine oil*	18			•	•
Lubricate handle pivots and height adjuster	20			•	•
Clean/sharpen mower blade	19			•	•
Clean or replace spark plug	21				•

* Change original engine oil after first 5 hours of operation
 ** More often in hot (over 70°F) weather or dusty operating conditions.
 *** More often under heavy use.

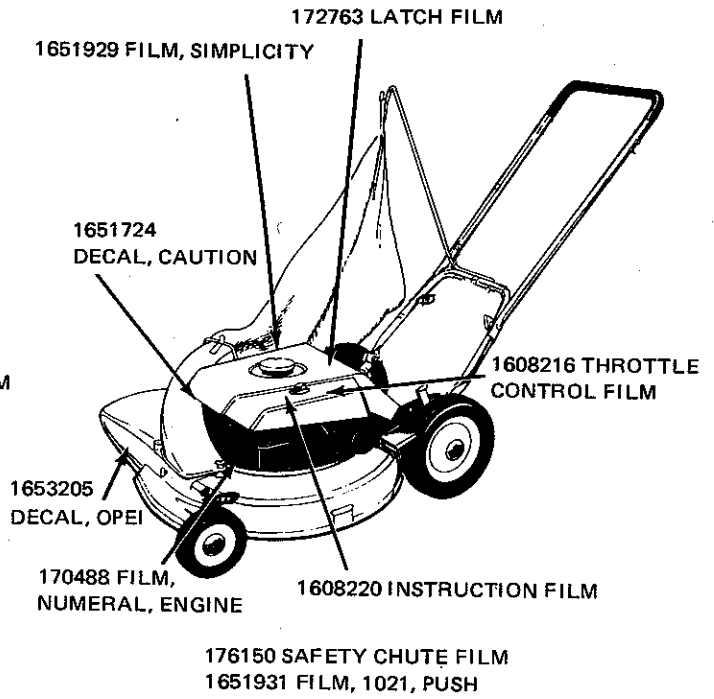
Figure 13. Summary Of Scheduled Care

21" SELF-PROPELLED MOWERS

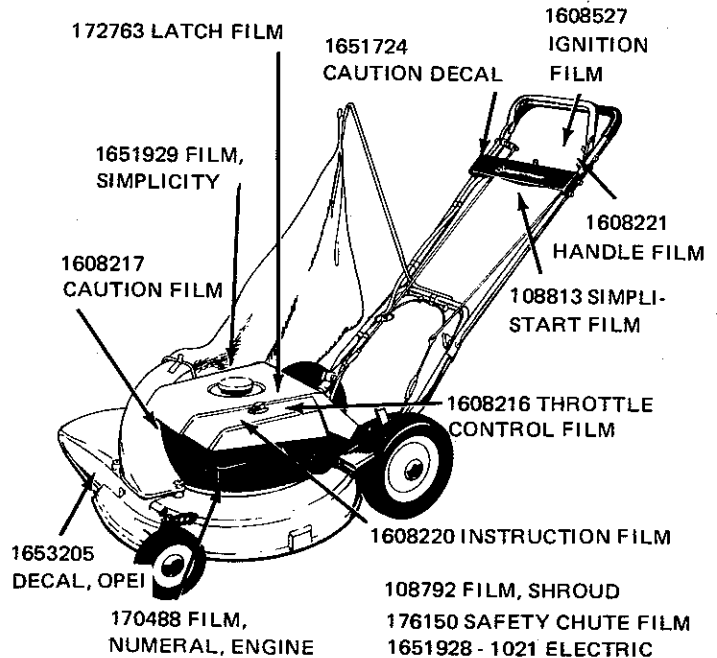


- 108772 FILM, SHROUD
- 1651930 FILM, 1021, SELF-PROP.
- 176150 SAFETY CHUTE FILM

21" PUSH MOWERS



21" SELF-PROPELLED, ELECTRIC MOWERS



Clean all dirt and grass from underside of mower, discharge chute, and grass catcher bag.



WARNING

Disconnect spark plug wire and fasten it away from the spark plug before tipping the mower to work underneath it.

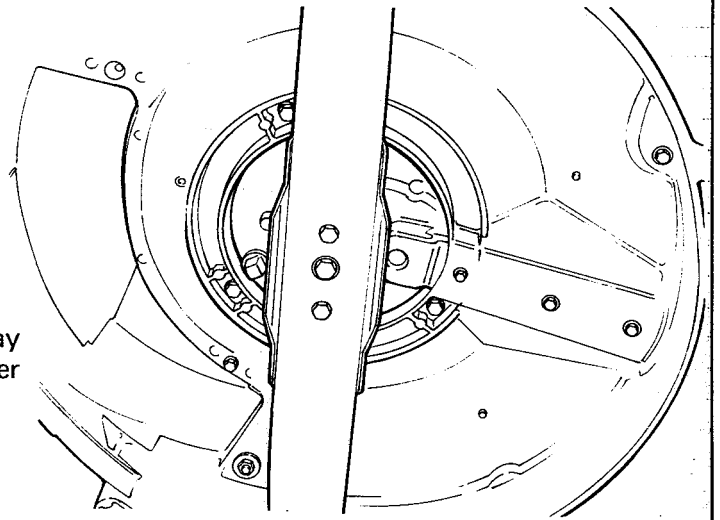


Figure 16. Clean Mower (After Each Use)

1. Clean all dirt and chaff from engine fins. Remove engine blower housing as necessary.

2. Clean air filter.

- A. Remove screw on top of air filter, and remove air filter.
- B. Wash foam filter with kerosene or soap and water.
- C. Dry foam element thoroughly.
- D. Soak foam with engine oil, squeezing it several times to distribute oil through foam and to wring out excess.
- E. Reassemble air filter.

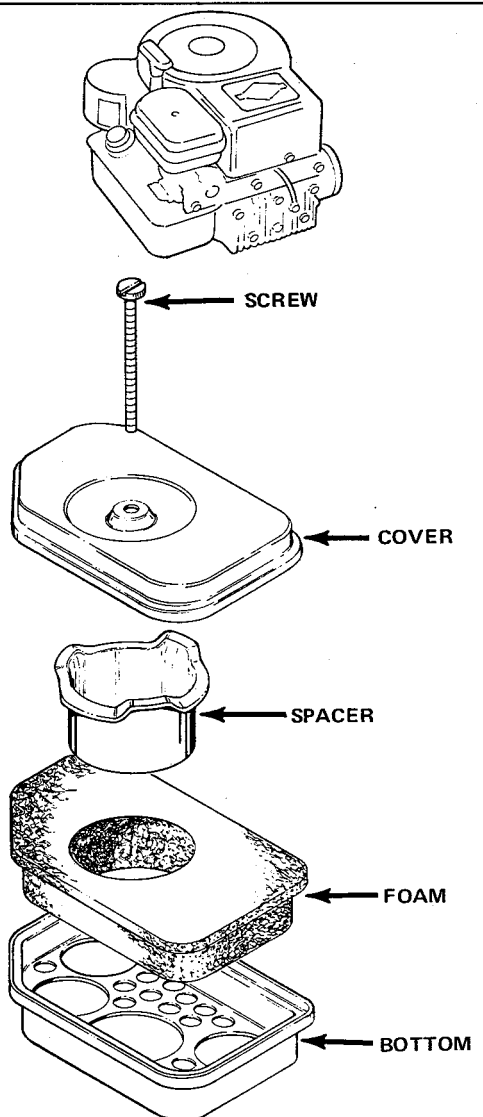


Figure 17. Clean Engine and Air Filter (25-Hour Care)

NOTE

Change engine oil while engine is still warm.



WARNING

Before working on or near mower blade, make sure the key is removed from the ignition switch on electric start models and the speed control knob is turned to stop on manual start models. Remove the spark plug wire and fasten it away from the plug.

1. Remove drain plug from underside of engine and drain oil into a container.
2. Install and tighten drain plug.
3. Remove fill plug.

NOTE

To avoid engine damage, use only high quality detergent oil of the correct weight and grade. The grade (service) marking on the can may be MS, SE, SC, or SD. Use SAE 30 or SAE 10W-30.

4. Add new oil until the fill pipe is about to overflow. The oil capacity is about 1-1/4 pints.
5. Install and tighten fill plug.

NOTE

DO NOT POLLUTE: Dispose of drain oil properly.

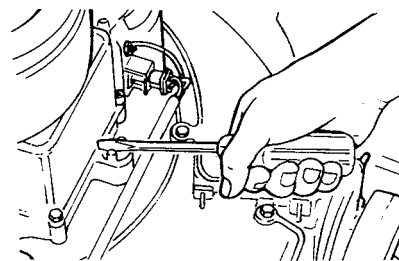
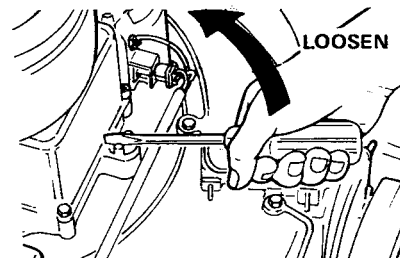
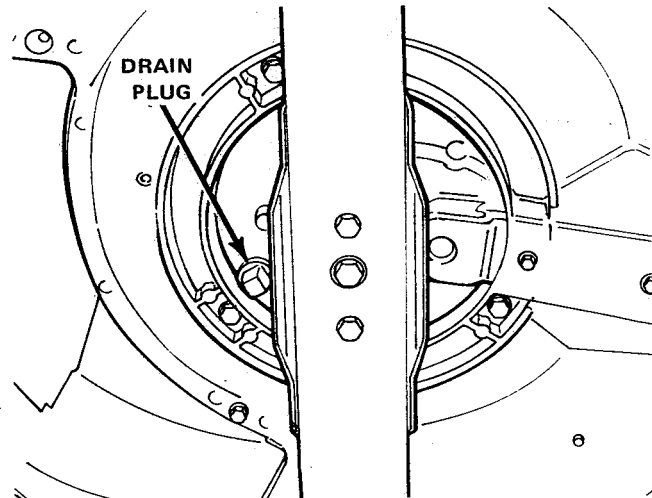
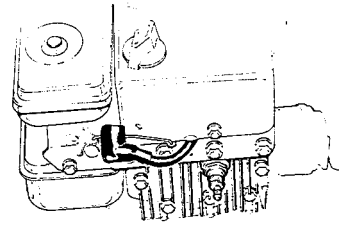


Figure 18. Change Engine Oil (25-Hour Care)

1. Check the mower blade. It should be sharp and free of nicks and dents. If not, sharpen the blade as follows:



CAUTION

Use extreme care when handling mower blade. Careless or improper handling could result in serious injury.

2. To remove the blade for sharpening, use a wooden block to restrict blade from rotating while removing the blade mounting capscrews. Use a box-end wrench if available.
3. Use a file to sharpen blade to fine edge along the original bevel. Remove all nicks and dents in blade edge. If blade is severely damaged, it should be replaced.
4. Check and balance blade. Use a balancing machine or the fixture shown. File material off heavier end of blade until it is balanced.



CAUTION

Blade mounting capscrews must be installed with lockwashers and carefully tightened. Torque the blade mounting capscrews to 17 to 20 foot-pounds.

5. Install the blade with the tabs pointing up toward deck. Use a wooden block to hold blade while installing and tightening blade mounting capscrews and lockwashers.

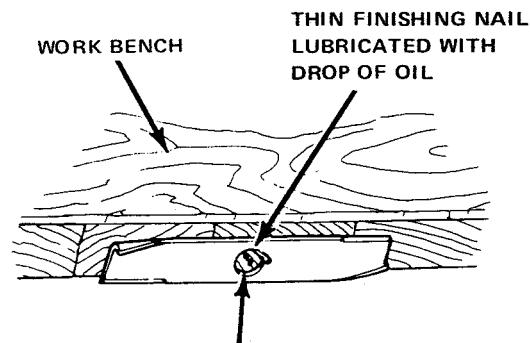
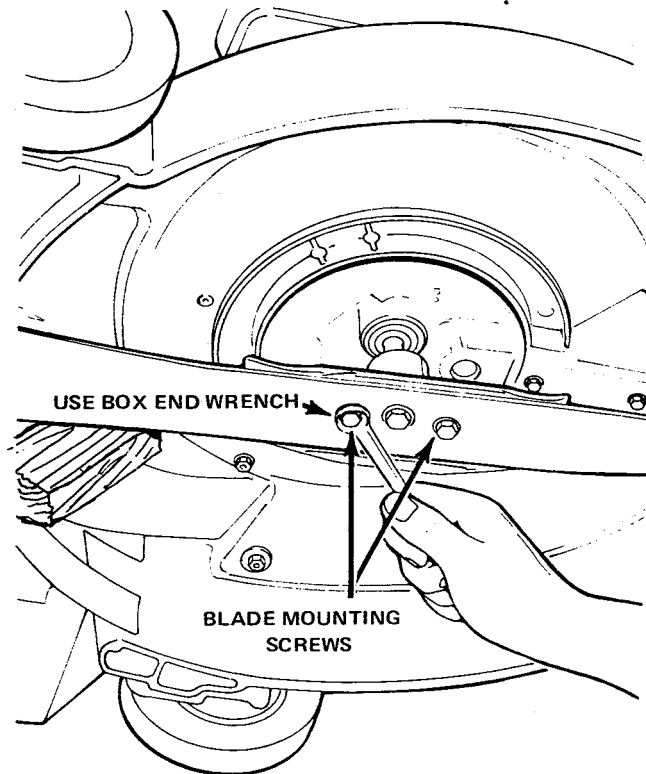


Figure 19. Check, Balance, Sharpen Mower Blade (Yearly Care)

1. Put a few drops of oil on:
 - A. Height Adjusters
 - B. Handle Pivots
 - C. Clutch Handle Pivots (Self-propelled Models)
2. Wipe off any excess oil.

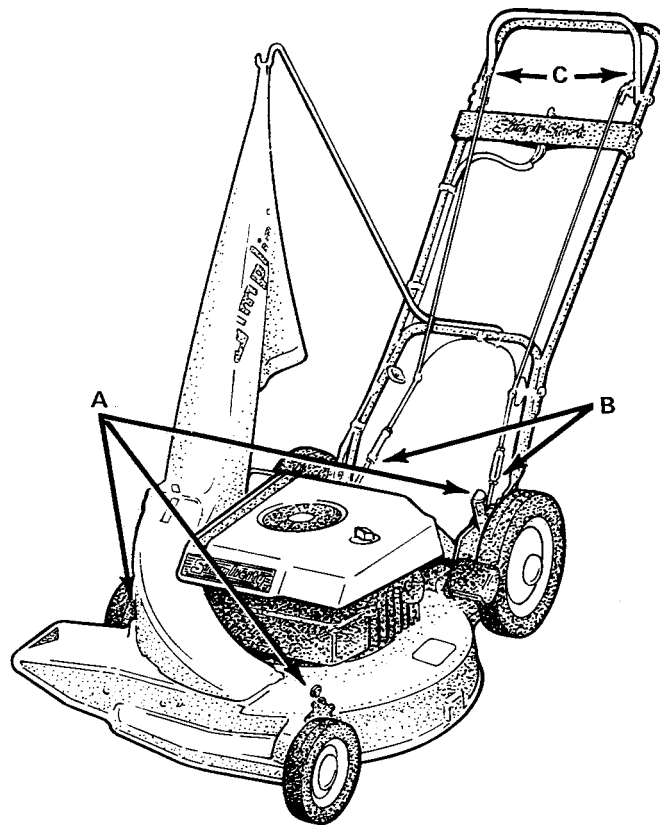


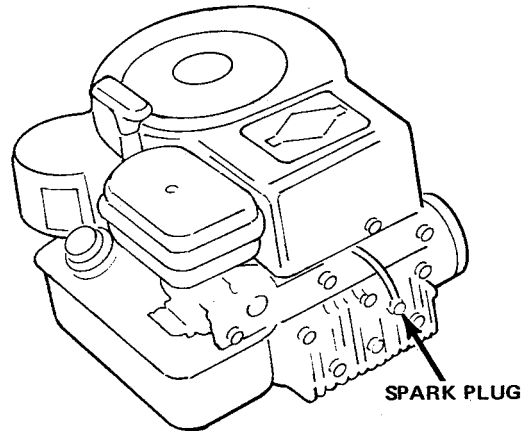
Figure 20. Lubricate Mower

1. Remove spark plug.

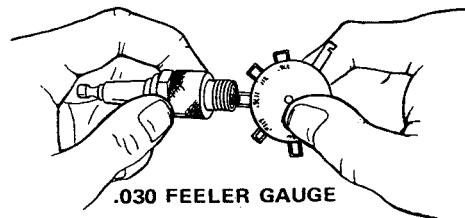
NOTE

Do not clean spark plug by sandblasting; 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.
4. Install spark plug in engine and reconnect wire.



WIRE BRUSH OR WASH WITH COMMERCIAL SOLVENT



.030 FEELER GAUGE

Figure 21. Clean or Replace Spark Plug (Yearly Care)

BELT REPLACEMENT (Self-Propelled Models Only)

To replace the drive belt on self-propelled models, proceed as follows:

1. Swing engine cover up.
2. Disconnect the spark plug wire and fasten it away from the plug. Lift the mower up from its proper side. Remove the capscrew holding on the belt shield (figure 22).
3. Push the spring-loaded vertical idler pulley arm forward and slip the old belt up off the horizontal pulley.
4. Slide the belt shield out toward the mower blade.
5. Slip the old belt off the engine drive pulley and remove it from the mower deck.
6. Insert the new belt through the mower deck opening. Place the belt onto the engine drive pulley, making sure that it is seated properly in the pulley groove.
7. Keep tension on the belt while tipping the mower back on its wheels so that the belt does not slip from mower drive pulley.
8. Run the belt under the shaft pulley and idler pulley, then around to the top horizontal pulley. Make certain that the belt is properly installed, as in figure 23.

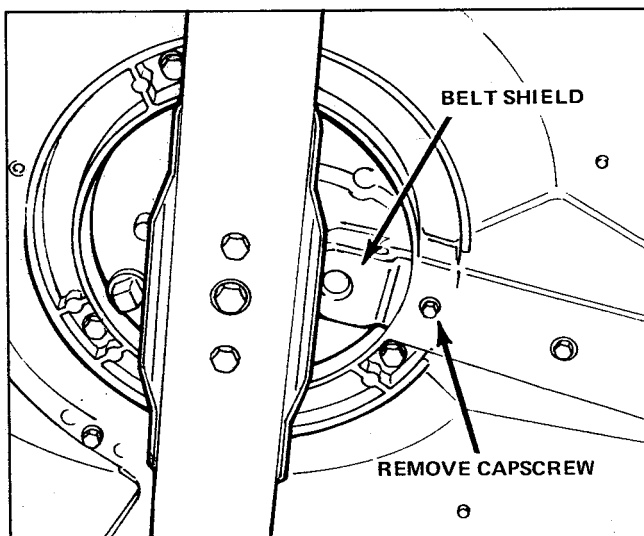


Figure 22. Removing Belt Shield

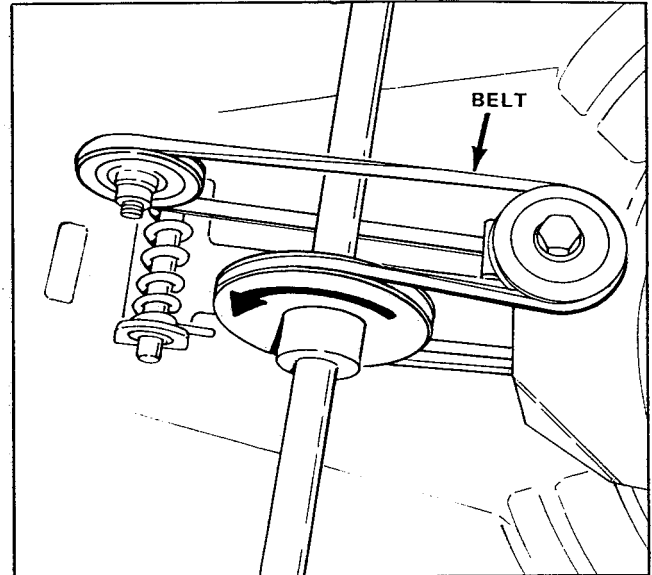


Figure 23. Belt Installation

9. Tip the mower back up from the proper side, checking that the drive belt is properly seated in the drive pulley groove. Replace the belt shield and capscrew.
10. Test for proper installation by cranking the engine over and watching the rotation of the roller shaft. It should rotate in a clockwise direction when viewed from the left side.
11. Replace spark plug wire.

Recharging Battery (Electric Start Models Only)

The sealed, ni-cad battery requires no water or liquid electrolyte. It can be stored or placed in any position with no danger of damage. The only attention required is that of periodic recharging. It need not be recharged during the off-season. Prolonged storage will cause no harm.

NOTE

When the battery charge is too weak to crank the engine, do not continue the attempt to start or serious damage to the battery may result, the battery should then be recharged.

1. If the battery has not been used for an extended period of time (brand new in the carton, off-season storage etc.), charge it for 14-24 hours to restore full charge (see figure 24).
2. Charge the battery as needed during the cutting season for 14-24 hours when it no longer cranks the engine adequately.

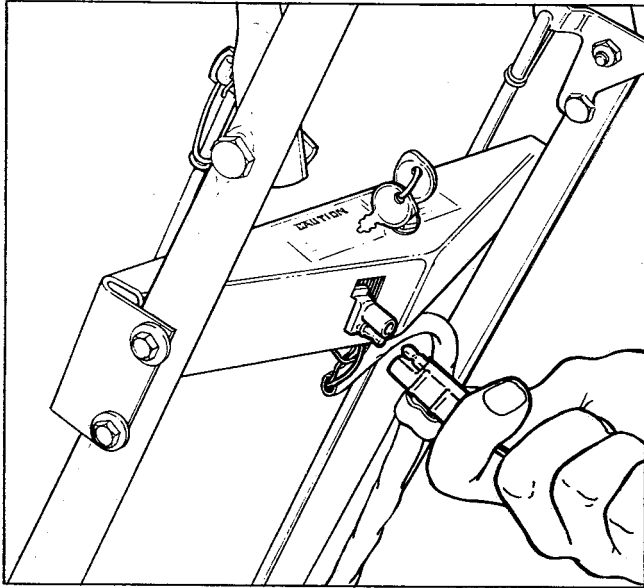


Figure 24. Attaching Charger

3. The battery can be charged for 14-24 hours before and after off-season storage.
4. Store the battery in a cool place. Storage temperatures of 100°F or more accelerate self-discharge and should be avoided.
5. The battery has built-in protection against overcharge and will not be damaged if left on charge for extended periods. Charging longer than 24 hours should be unnecessary.
6. Charging is most effective at or near room temperature (75°F). Charging at sub-zero temperatures is not detrimental but requires more time. Charging at elevated temperatures can be harmful.

**CAUTION**

Use only the charger supplied with your mower. Other chargers may permanently damage the battery.

Troubleshooting

CONTENT OF SECTION

This section provides troubleshooting and repair instructions for the more common and easily corrected problems. For other problems, it is recommended that you contact your dealer.



WARNING

To avoid serious injury, perform maintenance on the mower only when the engine is stopped. On electric start models, remove the key from

the ignition switch. On manual start models, make sure that the speed control knob is placed in the stop position.

TROUBLESHOOTING PROCEDURES

Troubleshooting procedures are provided in figure 25. To use these procedures, first locate the problem that you have encountered listed in the left column. Check the possible causes (in the right column) one at a time in the order that they are given. Correct any problems that are found and operate the mower again to be sure that you have eliminated the trouble.

Problem	Cause
1. Engine will not start.	<ul style="list-style-type: none"> A. No fuel in tank. Refill tank B. Speed control not on "Start"; reposition. C. Spark plug wire not connected; reconnect. D. Ignition wire not connected fully. Check all connections. E. Engine flooded. Turn speed control knob to "STOP", crank six times, then attempt to start engine with speed control on "START". F. Sheared flywheel key.
2. Mower will not drive (self-propelled only).	<ul style="list-style-type: none"> A. Drive rollers slipping at the tires. Adjust the control rod turnbuckles. B. Drive belt slipping. Clean belt C. Drive belt broken; replace with proper belt.
3. Mower cut uneven	<ul style="list-style-type: none"> A. Wheels not leveled properly. Check wheel adjustments. B. Mower blade dull. Check/resharpen.
4. Mower vibrates excessively	<ul style="list-style-type: none"> A. Blade mounting screws are loose. Tighten to 17 to 20 foot-pounds. B. Engine crankshaft bent. C. Out of balance blade.

Figure 25. Troubleshooting Procedures

Adjustments

CONTENT OF SECTION

This section of the manual shows you how to adjust your mower's cutting height, self-propelling control, and handle height.

MOWING HEIGHT ADJUSTMENT

Mowing height is controlled by moving the adjustable wheels up or down, enabling the mower to cut as low as 7/8 inch or as high as 2-7/8 inches.

The front wheels are individually adjusted by rotating the spring tabs to the desired height. The rear wheels are both adjusted by moving the adjuster arm up or down. Both spring tabs and the rear adjuster arm should be in the same notch to keep the mower level (see figure 26).

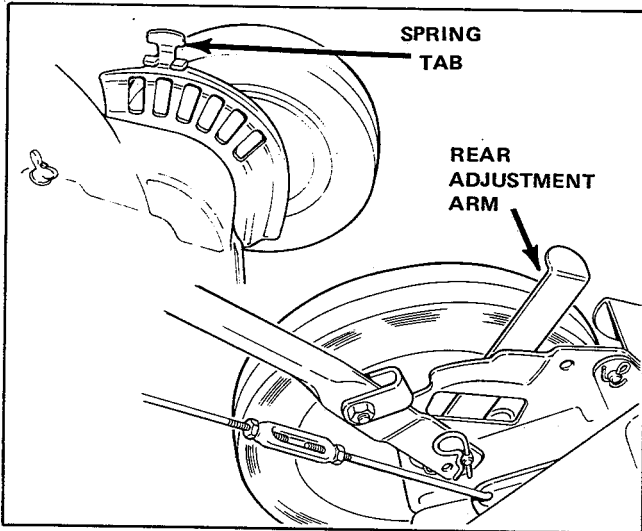


Figure 26. Mowing Height Adjustment

Touch-A-Matic Control Adjustment

(Self-Propelled Models Only)

Adjustment of the control rod turnbuckles may be necessary if one or both of the drive wheels slips when the control is fully engaged. To adjust the control rods, proceed as follows:

1. Determine which wheel is slipping. Loosen the locknuts on the control rod turnbuckle on that side (See figure 27).
2. Tighten the turnbuckle two turns at a time, checking for proper adjustment each time. The roller should indent the wheel approximately 3/16 inch when the drive is engaged fully.

3. When the adjustment is satisfactory, retighten the locknuts.

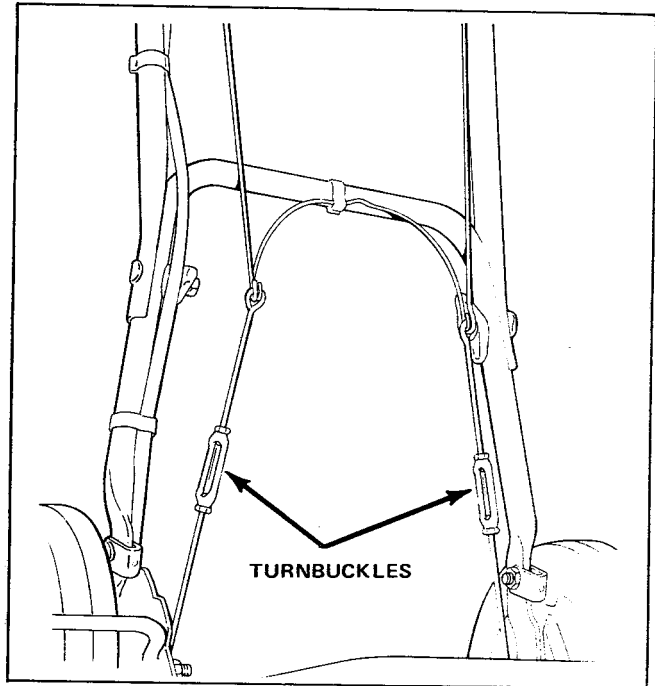


Figure 27. Adjusting Control Linkage

HANDLE ADJUSTMENT

The handle ends have two holes in each end. By placing the handle retaining pins through the forward holes, the handle height is convenient for medium to tall operators. Placing the pins through the rear holes lowers the handle height for short operators (see figure 28).

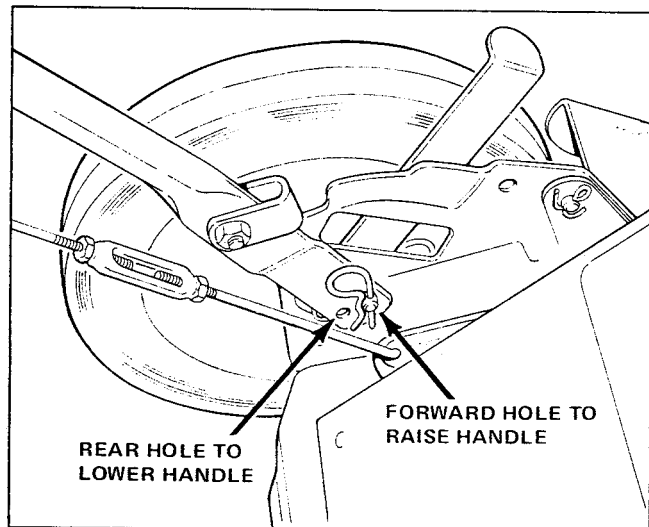


Figure 28. Handle Adjustment

Specifications

19 AND 21 INCH ROTARY MOWER SPECIFICATIONS			21" HAND-PROPELLED MANUAL START	21" SELF-PROPELLED MANUAL START	21" SELF-PROPELLED ELECTRIC START	19" HAND-PROPELLED MANUAL START	
ENGINE	MAKE	Model No. 92908	●			●	
	BRIGGS & STRATTON	Model No. 92998		●			
		Model No. 92995				●	
	HORSEPOWER: 3½						
	CYCLES: 4		Sealed Air Cleaner (Oiled Foam)				
	CYLINDER: 1		Air Vane Governor				
BORE: 2-9/16"		Automatic Choke w/ Positive Purge					
STROKE: 1-3/4"		High-Tension Magneto Ignition					
DISP: 9.02 Cu. In.		Quiet Muffler with Low Back Pressure	●	●	●	●	
OIL CAPACITY: 1-1/4Pts.		High-Carbon Nodular Iron Crank Shaft					
FUEL CAPACITY: 1 Qt.		Zinc Flywheel Key					
MANUAL STARTER	Geared Re-Wind, Vertical Pull		●	●		●	
ELECTRIC STARTER	BATTERY: Sealed Ni-Cad Type VOLTAGE: 14.4 (Nominal) CURRENT CAPACITY: .6 Amp Hr. CHARGING: Trickle - 100 Milliamps (Furnished) STARTS PER CHARGE: Up to 100				●		
MOWER HOUSING	MATERIAL: Die Cast Magnesium		●	●	●	●	
	DISCHARGE LOCATION: Right Front Corner						
	CATCHER LOCATION: Through Deck						
	DECK DEPTH: 3-3/8" Above Blade		●	●	●		
	DECK DEPTH: 3-1/4" Above Blade					●	
TRIM OVERHANG: 2" (Left Side Only)		●	●	●			
TRIM OVERHANG: 1-1/2" (Left Side Only)					●		
BLADE AND DRIVE	Austempered Steel, Pre-Stressed Blade Direct Drive		●	●	●	●	
WHEELS	ARRANGEMENT: Staggered		●	●	●	●	
	MATERIAL: Steel, Ball Bearing Mounted with Felt Seals			●	●		
	MATERIAL: High-Density Plastic, Integral Bearings, Graphite Impregnated		●			●	
	DIAMETER - FRONT WHEELS: 6"		●	●	●	●	
	DIAMETER - REAR WHEELS: 10"		●	●	●		
DIAMETER - REAR WHEELS: 8"					●		
HEIGHT ADJUSTERS	TYPE: 3-Point, Fingertip Adjusted POSITIONS: 6 MATERIAL: Steel-On-Steel, All Positions CUTTING HEIGHT: 7/8" to 2-7/8"		●	●	●	●	
HANDLE	OPERATING POSITIONS: 2-Handle Height Adjustable to 2 Positions STORAGE POSITIONS: 2-Stand up or Fold		●	●	●	●	

**19 AND 21 INCH ROTARY MOWER
SPECIFICATIONS**

		21" HAND-PROPELLED MANUAL START	21" SELF-PROPELLED MANUAL START	21" SELF-PROPELLED ELECTRIC START	19" HAND-PROPELLED MANUAL START
SELF PROPELLED REAR WHEEL DRIVE	CLUTCH TYPE: 1-1/8" Dia. Friction Roller, Herring-bone, Self-cleaning				
	CLUTCH ACTION: Soft		•	•	
	CONTROL: Dead-man Control				
	SPEED RANGE, GOVERNED: 2.16 to 2.75 MPH				
	SPEED RANGE, TOUCHMATIC: 0 to Maximum				
DIMENSIONS	LENGTH (HANDLE IN HIGH POSITION): 59"	•	•	•	
	LENGTH (HANDLE IN HIGH POSITION): 53-1/4"				•
	LENGTH (HANDLE IN VERTICAL POSITION OR FOLDED): 33-1/4"	•	•	•	
	LENGTH (HANDLE IN VERTICAL POSITION OR FOLDED): 32-1/2"				•
	WIDTH (WITHOUT GRASS CATCHER): 28"	•	•	•	
	WIDTH (WITHOUT GRASS CATCHER): 26-1/4"				•
	WIDTH (WITH GRASS CATCHER): 31-3/4"	•	•	•	
	WIDTH (WITH GRASS CATCHER): 30-1/4"				•
	HEIGHT (HANDLE IN HIGH POSITION): 39.5"	•	•	•	•
	HEIGHT (HANDLE IN VERTICAL POSITION): 49-1/4" (Low Cut Setting)	•	•	•	
	HEIGHT (HANDLE IN VERTICAL POSITION): 50-1/2" (Low Cut Setting)				•
HEIGHT (HANDLE FOLDED): 21"	•	•	•		

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

Maintenance Record

Date	Hours Used	Oil Change	Air Cleaner Service	Lubrication	Maintenance/Repair

Figure 29. Maintenance Record

PARTS MANUAL AVAILABLE FOR SYSTEM 1000 MOWERS

You can order a parts manual for your mower and attachments. 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-293 contains all walk-behind mowers, 19" grass catcher, and leaf bag attachment.

----- CUT HERE -----

I would like a parts manual (TP-293) for my System 1000 mower and attachments. I am enclosing a check or money order for \$2.00.

NAME _____ Mower No. _____

STREET OR RFD _____

CITY _____ STATE _____ ZIP _____

(Allow Two To Three Weeks For Delivery)

Send this form with your check or money order to:

SIMPLICITY MANUFACTURING CO.
ATTN: CUSTOMER PUBLICATIONS
500 N. SPRING STREET
PORT WASHINGTON, WI 53074