

Simplicity®

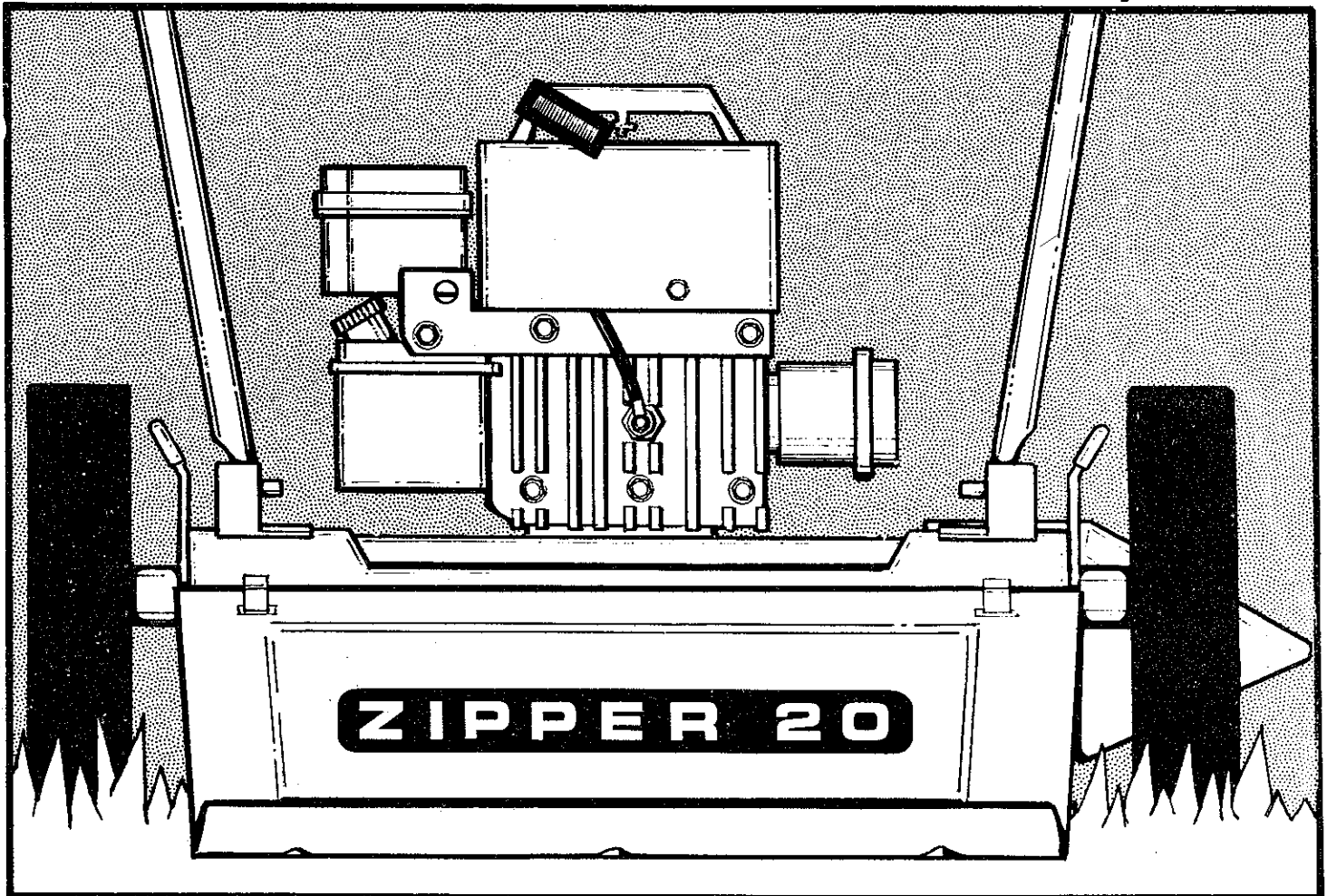
WALK BEHIND ROTARY MOWER

ZIPPER 20'' — MFG.NO. 1033

ZIPPER 22'' — MFG.NO. 1034

OPTIONAL GRASS BAG — MFG.NO. 1035

OWNERS MANUAL — w/illustrated parts list



1650

SER. FORM - 1609209
PRINTED IN U.S.A.

SAFETY PRECAUTIONS TO PROTECT YOURSELF AND OTHERS

TRAINING

Read the Operating and Service Instruction Manual carefully. Be thoroughly familiar with the controls and proper use of the equipment.

Never allow children or young teenagers to operate a power mower unless properly instructed.

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.

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.

Disengage self-propelling unit or drive clutch 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.

Never operate equipment in wet grass. Always be sure of your footing; keep a firm hold on handle and walk, never run.

OPERATION

Do not change engine governor settings or over-speed engine.

Do not put hands or feet near or under rotating parts. Keep clear of discharge opening at all times.

Stop blade (s) when crossing gravel drive, walks or roads.

After striking a foreign object stop the mower, remove spark plug wire from the plug. Thoroughly

inspect the mower for any damage, and repair the damage before restarting and operating the mower. **Check blade mounting bolt for tightness.**

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.

Keep washout ports and other mower housing service openings closed when mowing.

MAINTENANCE

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.

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.

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 safety operation.



CAUTION

1. Keep all shields in place.
2. Before leaving operator's position:
Shut off engine.
3. Wait for all movement to stop
before servicing machine.
4. Keep people and pets a safe
distance away from machine.



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.

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ASSEMBLY

The Zipper is packed with the handles folded against the housing and the deflector loose. If the grass bag kit is desired, it should be ordered under a separate manufacturers number (991035) and will be shipped in a separate package.

ASSEMBLE MOWER AS FOLLOWS:

1. Straighten upper and lower handles out and lock them in position with two wing nuts. (Figure 1) Use care not to loosen throttle control cable from clips on handles or kink throttle control cable when folding or unfolding.

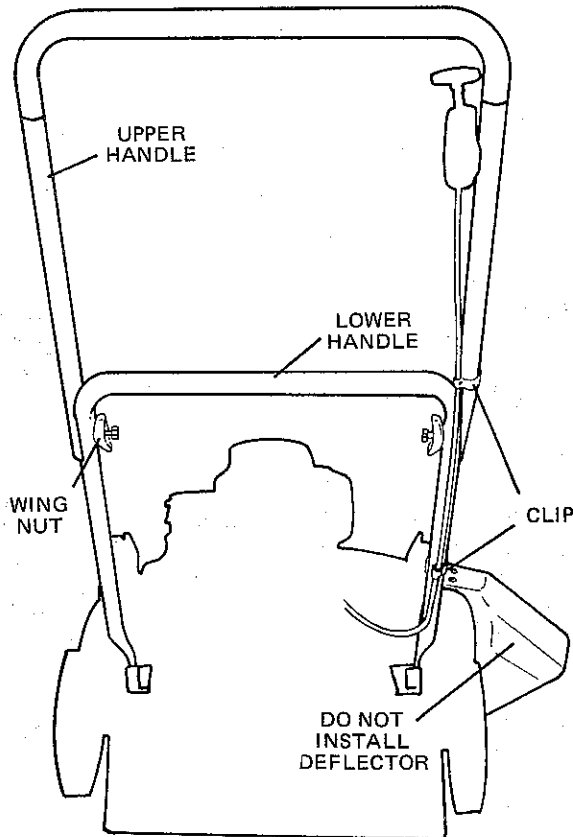


Figure 1

2. If the grass bag is used, the deflector should be mounted on top of the grass bag clip using two Phillips head screws, lockwashers and hex nuts (Figure 1). Use the holes nearest to hook for 22" mower and two farthest for 20" mower.

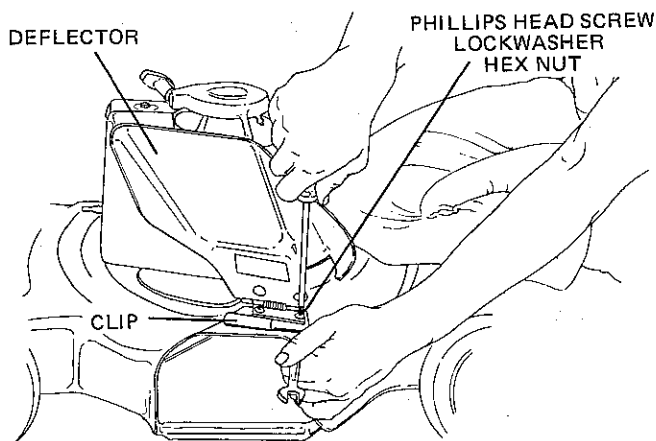


Figure 2

3. Using bag support handle attach grass bag to clip as illustrated in Figure 3. If the grass bag is not to be used, mount deflector without the clip using the same attaching parts. Mount deflector with lockwashers and nuts under housing.

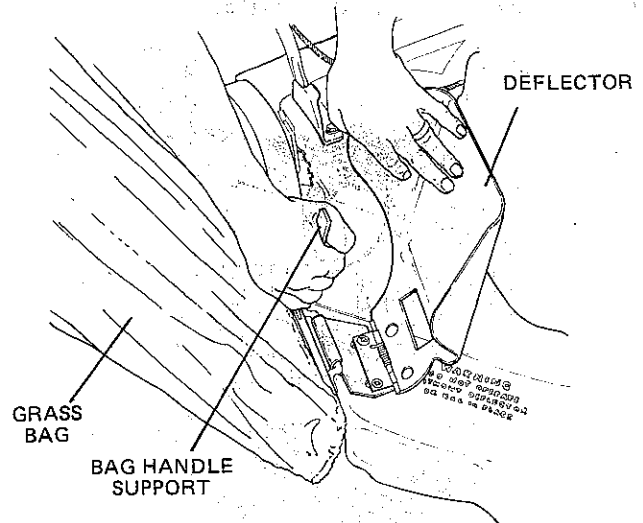


Figure 3

OPERATION

NOTE

Before starting engine, check all attaching parts for tightness.

BEFORE STARTING

1. Check throttle control adjustment. Place throttle control handle (Figure 4) rearward to STOP position and forward to START position.

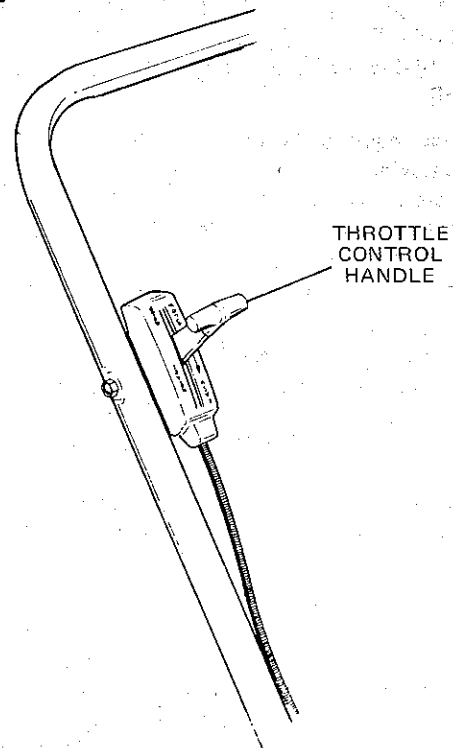


Figure 4

The carburetor lever should contact the stop switch as illustrated in Figure 5 when the handle is in the STOP position and should touch the boss as illustrated in Figure 6 when the handle is in the START position. If such contact is not made, refer to Throttle Control Adjustment section of this manual. Be sure casing clamp screw is tight (Figure 6).

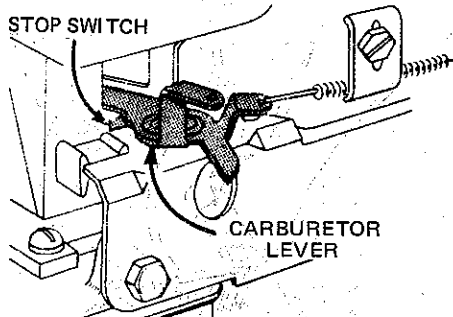


Figure 5

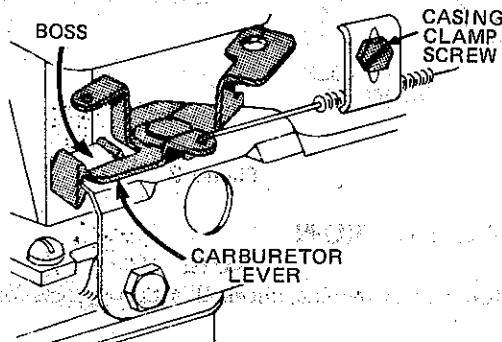


Figure 6

WARNING

REMOVE SPARK PLUG WIRE FROM SPARK PLUG AND SET THROTTLE CONTROL HANDLE IN STOP POSITION WHEN PERFORMING ANY SERVICE TO THE MOWER.

2. Check engine oil by removing oil fill plug (Figure 7). Before removing plug, clean area around plug to prevent dirt from entering oil fill hole. Engine should be in a level position when checking oil. Oil level should be to the point of overflowing. If required to add oil, refer to Maintenance section of this manual for oil type.

3. Check fuel supply by removing fuel fill cap (Figure 7). Tank should be completely full. If required to add fuel, add clean, fresh, lead-free or leaded, "regular" gasoline.

CAUTION: DO NOT MIX OIL WITH GASOLINE.

Store gasoline in small quantities using STA-BIL brand gasoline stabilizer, available at your Simplicity dealer.

4. Check cutting height. Most lawns should be mowed to keep height of grass between 2 to 2-1/2 inches. Never mow more than one-third off the grass height or a maximum of one inch per mowing. For extremely tall grass set the cutting height at maximum for the first mowing, then reset to the desired height and mow again. Refer to Adjustment section of this manual for cutting height adjustment.

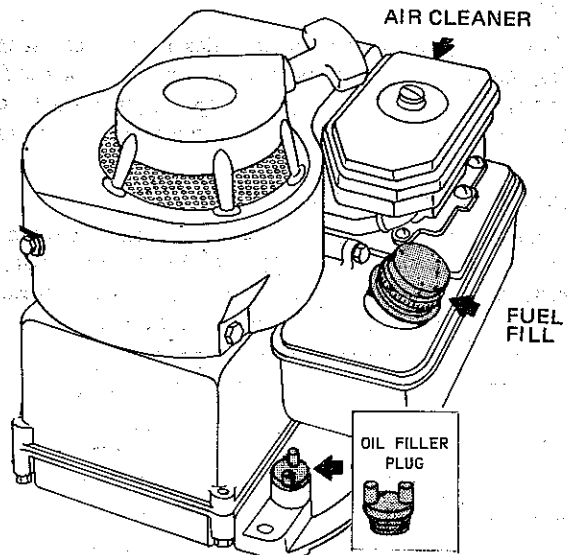


Figure 7

WARNING

NEVER CHANGE CUTTING HEIGHT SETTING WHILE MOWER IS RUNNING. PLACE THROTTLE CONTROL HANDLE AT STOP AND REMOVE SPARK PLUG WIRE BEFORE RESETTING.

STARTING

1. Locate mower. Move the mower on a drive, sidewalk, or an area where the grass has been mowed. The engine will not start if the blade is in deep grass.
2. Set controls. Move the throttle control handle forward to the START position (Figure 4) and replace the spark plug wire. Be sure spark plug contacts are clean.

NOTE

Be sure air cleaner is installed and secured on engine before starting.

3. Start engine.
 - a. Place left foot on mower deck and keep right foot well away from mower.
 - b. Grasp starter handle firmly with right hand (Figure 8) and pull sideways rapidly. Return handle SLOWLY to engine.

CAUTION: DO NOT RELEASE THE HANDLE WITH THE ROPE EXTENDED.

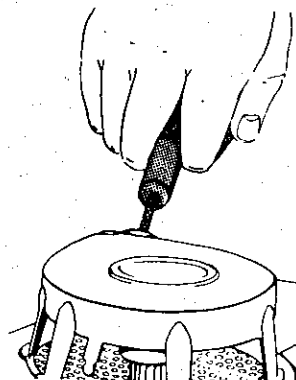


Figure 8

- c. If engine does not start, it may be flooded. Move throttle control handle (Figure 4) rearward to **STOP** position, and pull starter six times. Move throttle control handle forward to **START** position again and start engine. If engine still does not start, refer to Adjustments section of this manual for carburetor needle valve adjustment.

OPERATING

1. **Engine speed.** The throttle control handle (Figure 4) may be set anywhere in the mow range to suit varying mowing conditions. For mowing, average engine speed is from three-quarters to full. For cleaning leaves or bagging litter, run at full speed for greater blowing action.

2. Mowing Suggestions

- For the first use of the mower, choose a smooth, level area. Cut long, straight strips overlapping slightly. After getting used to the operation, proceed to inclines or rough ground.
- 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.
- Guide the left side of the mower along trees, posts or other obstacles and follow the contour as closely as possible.
- For heavy growth, raise the height setting (See Adjustments Section) to the highest cutting position, recut at desired position.
- 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.
- 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 patterns occasionally to eliminate matting, graining and a corrugated appearance. See diagrams (Figure 9).

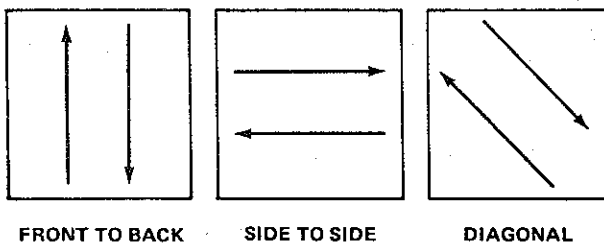


Figure 9

STOPPING

Allow engine to operate at slow speed a few minutes before completely stopping. Move the throttle control handle (Figure 4) rearward to the **STOP** position. Remove spark plug wire from spark plug.

ADJUSTMENTS

CUTTING HEIGHT

WARNING

BE SURE THROTTLE CONTROL HANDLE IS IN STOP POSITION AND SPARK PLUG WIRE IS OFF SPARK PLUG.

- Lift front or rear of mower a few inches off of ground and push adjusting arm (Figure 10) out of adjusting plate notch toward wheel.

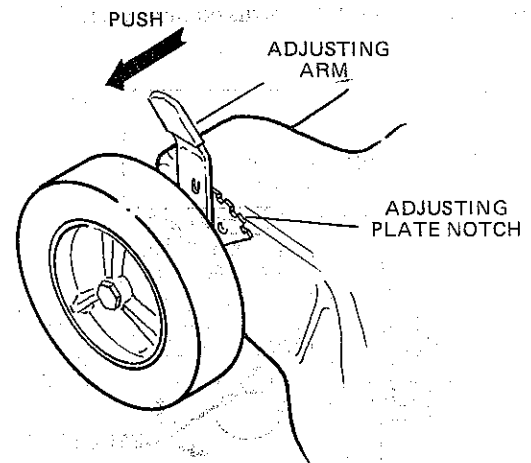


Figure 10

- Raise or lower wheel assembly as desired moving the adjusting arm. Firmly position arm in adjusting plate notch.
- Repeat procedure for remaining wheels making sure adjusting arms are in the same notches and firmly seated.
- Move mower over a flat surface and check that four wheels are moving and that housing is level.

THROTTLE CONTROL

Check carburetor lever operation as instructed in the Operation, Before Starting section of this manual. If the required contact is **NOT** made, adjust the carburetor lever as follows:

- Loosen casing clamp screw (Figure 11).

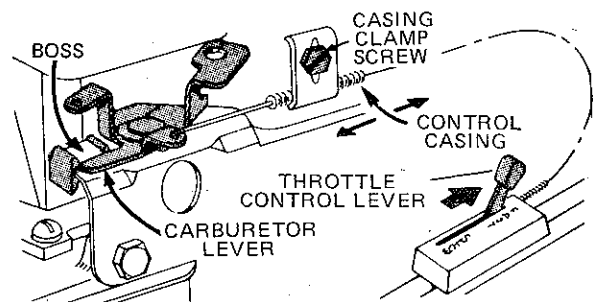


Figure 11

- Place throttle control lever forward to **FAST** position.
- Move control casing forward or backward until carburetor lever touches boss as shown in Figure 11.
- Retighten casing clamp screw.
- Make sure engine stops when moving control lever to **STOP** position.

CARBURETOR

Minor carburetor adjustment may be required to compensate for differences in fuel, temperature, altitude and load.

All carburetor adjustments should be made with the air cleaner on engine. Air cleaner mounting screw **MUST** be in carburetor when engine is run. Best adjustment is made with a fuel tank half full of gasoline.

Adjust carburetor as follows:

1. Start engine and run long enough to warm it to operating temperature. If engine is out of adjustment so that it will not start, close the needle valve by turning it clockwise. Then open needle valve 1-1/2 turns counterclockwise. (Figure 12)

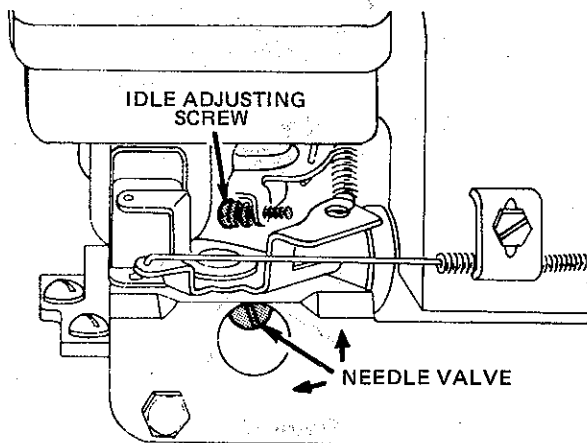


Figure 12

2. Move throttle control handle to normal operating speed. See Operation, Engine Speed paragraphs.

- Turn needle valve in clockwise until engine starts to lose speed (lean mixture).
- Then slowly turn needle valve out counterclockwise past the point of smoothest operation until engine just begins to run unevenly (rich mixture).
- Turn needle valve back in clockwise very slowly till engine runs evenly.
- Final adjustment of the needle valve should be slightly to the rich side (turn counterclockwise) of the mid-point.

3. Move engine control to **SLOW**. Turn idle adjusting screw until a fast idle speed is obtained (1750 R.P.M.).

4. To check adjustment move engine control from **SLOW** to **FAST** speed. Engine should accelerate smoothly. If engine tends to stall or die out, increase idle speed or re-adjust carburetor, usually to a slightly richer mixture.

MAINTENANCE

WARNING

BEFORE ANY MAINTENANCE IS PERFORMED, BE SURE THROTTLE CONTROL HANDLE IS IN STOP POSITION AND SPARK PLUG WIRE IS OFF SPARK PLUG.

AFTER EACH USE

NOTE

Allow engine to cool before cleaning.

1. **WASH** top of mower and underside of deck with garden hose.

2. **INSPECT BLADE** closely after each use. Sharpen and remove small nicks with a file or stone. Deep nicks in the cutting edge can only be corrected by grinding, which requires that the blade be removed and balanced. See Blade Repair or Replacement for sharpening and balancing.

CAUTION: IF BLADE VIBRATES SEVERELY DURING OPERATION, IT IS UNBALANCED AND MUST BE BALANCED BEFORE FURTHER USE.

AFTER 5 HOURS

- CHECK OIL** level before starting engine and after every 5 hours of use (See Before Starting).
- CHANGE OIL** after first 5 hours of operation and thereafter change every 25 hours (See After 25 Hours).

AFTER 25 HOURS

- CHANGE OIL** every 25 hours after first change of 5 hours. Oil may be drained through oil drain on bottom of engine (Figure 13) or oil fill hole. When draining through oil fill hole, empty fuel tank or keep engine spark plug side up.

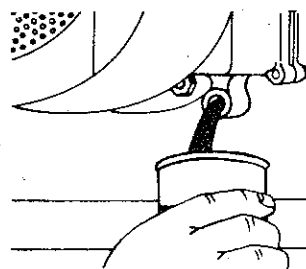
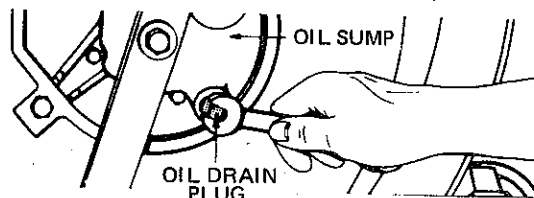


Figure 13

To drain completely, always place engine level when draining through bottom. Change oil when engine is warm. Use SAE 30 oil and change more often under dusty or dirty conditions. See Figure 7 for location of oil fill plug. Oil capacity is 1-1/4 pints.

2. **CLEAN AIR CLEANER** and re-oil element every 25 hours. Clean every few hours under extremely dusty conditions. Poor engine performance and flooding usually indicate that the air cleaner should be serviced.

Clean air cleaner as follows:

- Remove screw.
- Remove air cleaner carefully to prevent dirt from entering carburetor.
- Take air cleaner apart and clean. (Figure 14).
 - WASH** foam element in Kerosene or a liquid detergent and water to remove dirt.
 - DRY** foam completely by wrapping and squeezing in a cloth.

c. **SOAK** foam with engine oil. Squeeze to distribute and remove excess oil.

4. Reassemble parts and fasten to carburetor.

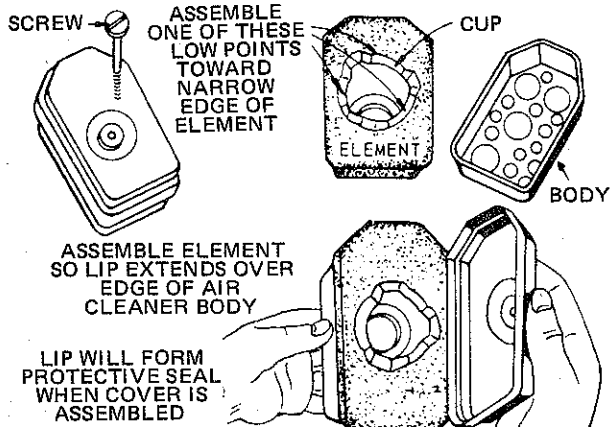


Figure 14

3. **CLEAN COOLING SYSTEM.** Grass, chaf or dirt may clog the rotating screen and the air cooling system, (Figure 15), especially after prolonged service cutting dry grasses. To avoid overspeeding, overheating and engine damage, remove the blower housing and clean the area shown. This should be a regular maintenance operation.

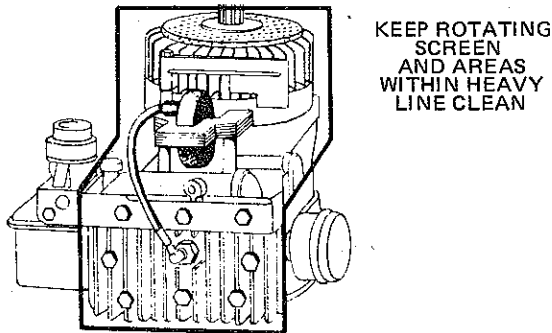


Figure 15.

Remove blower housing by removing three screws labeled "A" on Figure 16. Lift housing to remove.

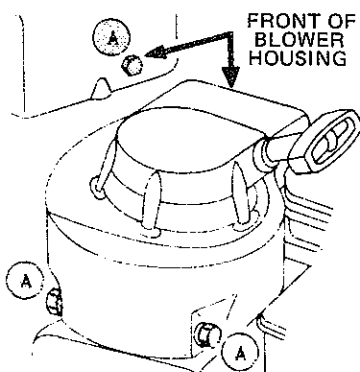


Figure 16

EVERY 100 HOURS OR ONCE A YEAR

CLEAN OR REPLACE SPARK PLUGS

1. Plugs may be cleaned by scraping or wire brushing and washing in a solvent or gasoline. Set gap to 0.030 inch.

CAUTION: DO NOT BLAST CLEAN PLUGS, AS ABRASIVE PARTICLES LEFT ON PLUGS MAY DAMAGE ENGINE.

2. Recommended replacement spark plugs are as follows:

Spark Plug Type	AC	Autolite	Champion
Short Plug	CS-45	A7N	CJ-8
Long Plug	GC-46	A71	J-8

Set gap for the above plugs at 0.030 inch.

BLADE REPAIR OR REPLACEMENT

1. Do not attempt to remove the blade until you have the correct size box, socket or open end wrenches for the blade mounting bolts. (Figure 17)

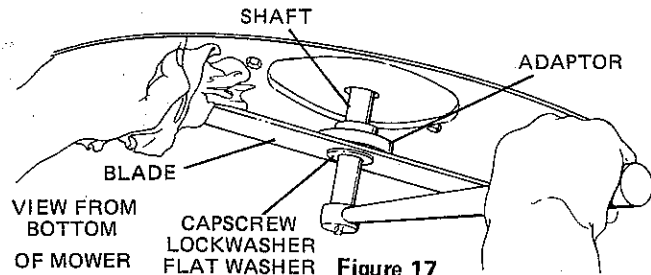


Figure 17

2. Disconnect spark plug wire and tip mower up with the gas tank low and spark plug high.
3. Remove capscREW, lockwasher and flat washer attaching blade to engine shaft and adapter (Figure 17).
4. Carefully remove blade, adapter and key from engine shaft.
5. To sharpen blade, clamp it in a vise and use a 10 inch file along original bevel.
6. To balance blade, insert a knife blade or small rod through center hole and note low or heavy side of blade. File heavy side until blade balances evenly.

CAUTION: HANDLE BLADE WITH CARE TO AVOID INJURY.

7. Clean blade and adapter. Inspect key and engine shaft keyway for damage. Replace key as required.
8. Install key, adapter and blade on engine shaft, being sure blade lift tabs are toward the engine. Secure blade assembly to shaft with flatwasher, lockwasher, and capscREW. Using a wood block or wedge to keep blade from turning, torque capscREW to 30 foot-pounds.
9. Rotate the blade counter-clockwise by hand to be sure it clears the housing all around and the tips are running true. Tip mower back down on wheels.

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 capfull to 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 crankcase while engine is warm.
3. Remove spark plug, put 1 oz. SAE-30 oil into cylinder through plug hole. Crank engine a few times to distribute oil. Re-install plug.
4. Clean dirt and chaff from cylinder head fins and engine housing.



PROBLEM	PROBABLE CAUSE	REMEDY
Engine fails to start	Inadequate fuel Throttle control not at START position. Spark plug wire not connected Engine flooded	Fill tank (See Before Starting) Position control at START Connect wire. Clean contacts. Clear carburetor of excess fuel (See Start Engine)
Mower blade does not turn.	Broken key Blade adapter loose or broken	Replace key. Replace adapter or torque to 30 ft.-lbs.
Mower blade vibrates	Unbalanced blade	Balance blade (See Blade Repair)

SPECIFICATIONS

The following specifications apply to both 20" (Mfg. No. 1033) and 22" (Mfg. No. 1034) hand propelled, manual start mowers.

ENGINE

Manufacturer	Briggs & Stratton, Model 92902
Horsepower	3.5
Type	4 Cycle, air cooled
Cylinders	One
Bore	2-9/16 Inches
Stroke	1-3/4 Inches
Displacement	9.02 Cu. Inches
Oil Capacity	1-1/4 Pints
Fuel Capacity	1 Quart
Air Cleaner	Oil Foam
Governor	Air Vane
Choke	Automatic with Purge Position
Ignition	High Tension Magneto
Muffler	Quiet with Low Back Pressure
Start	Manual, Horizontal Rewind

MOWER

Housing Discharge	Right, Center
Grass Catcher Location	Right

WHEELS

Arrangement	In-line
Material	Plastic, Integral Bearings
Diameter (Front and Rear)	7 Inches

ADJUSTERS

Cutting Height	Fingertip, 7 Position from 1.5 to 3.9 Inches
Handle	One position, Fold for storage

DIMENSIONS

	20" Mfg. No. 1033	22" Mfg. No. 1034
Length	57.8 In.	60.0 In.
Width (without catcher)	27.0 In.	28.5 In.
Width (with catcher)	45.0 In.	46.5 In.
Height	38.0 In.	38.0 In.
Weight	54-1/2 Lbs.	57-3/4 Lbs.

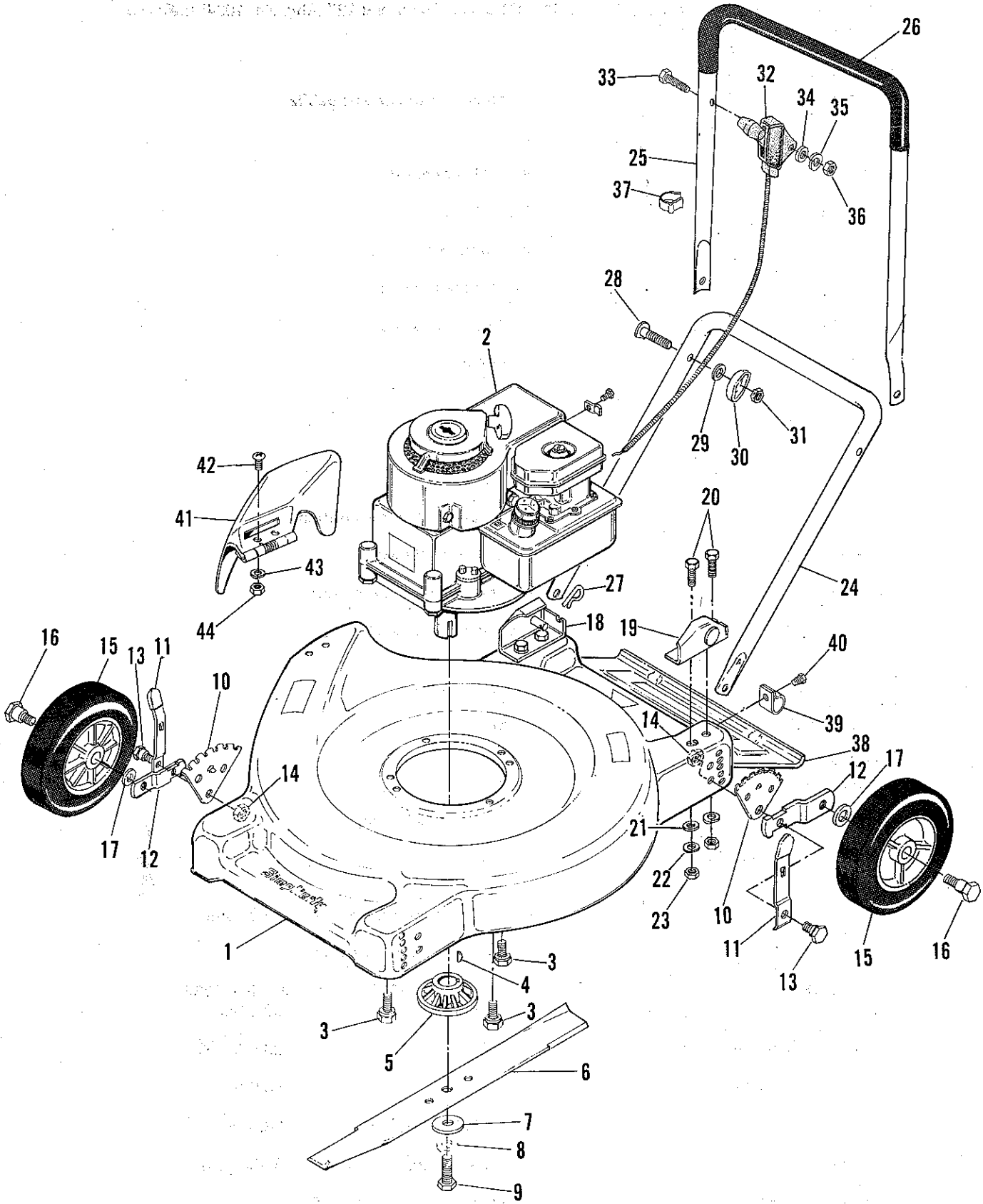
GRASS CATCHER

Optional	Optional
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EXPLODED VIEW - 20", 22" ZIPPER

MFG. NO. 991033 - 20"

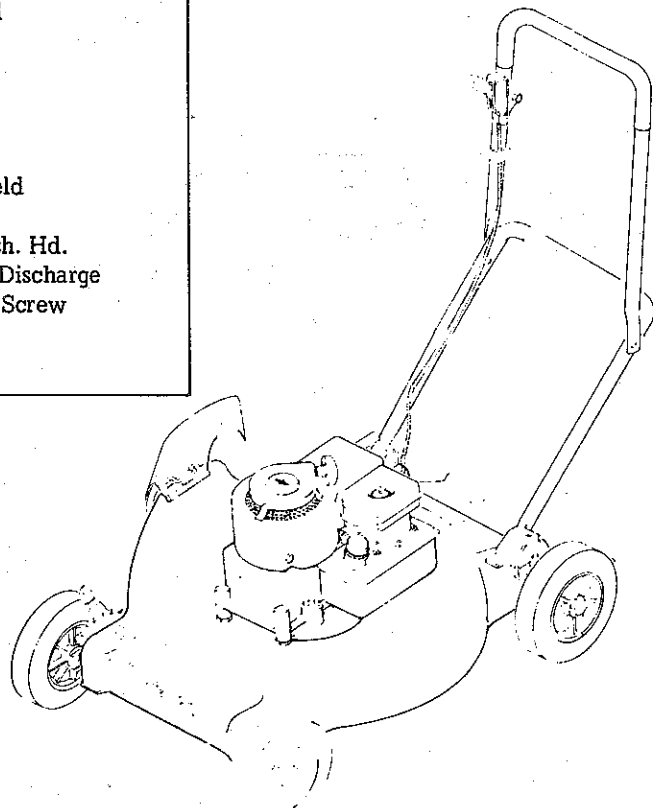
MFG. NO. 991034 - 22"



Ref. No.	Part No. 20"	Part No. 22"	Qty. Req.	Description
1	1609033	1609212	1	Housing Assembly
2	1609035	1609035	1	Engine 3.5 HP
3	928696	928696	3	Screw Hex w/Tooth Lockwasher
4	910224	910224	1	Key
5	1609026	1609026	1	Adaptor (Blade)
6	1609019	1609020	1	Blade
7	924356	924356	1	Washer - Plain
8	916965	916965	1	Lockwasher
9	922128	922128	1	Capscrew
10	1609036	1609036	4	Quadrant - Height Adjuster
11	1609037	1609037	4	Handle Assy. - Height Adjuster
12	1609038	1609038	4	Arm - Height Adjuster
13	1609034	1609034	4	Shoulder Bolt
14	923428	923428	4	Locknut
15	1609027	1609027	4	Wheel & Tire Assembly
16	1609030	1609030	4	Shoulder Bolt
17	156065	156065	4	Washer - Plain
18	1609084	1609084	1	Bracket Assy. R.H.
19	1609083	1609083	1	Bracket Assy. L.H.
20	921959	921959	4	Capscrew Hex Hd.
21	917377	917377	2	Washer - Plain
22	916964	916964	4	Lockwasher
23	916622	916622	4	Hex Nut, Full
24	1609028	1609028	1	Handle - Lower
25	1609029	1609029	1	Handle - Upper
26	108793	108793	1	Tubing - Handle
27	918451	918451	2	Cotter Pin
28	108778	108778	2	Curved Hd. Bolt
29	917377	917377	2	Washer - Plain
30	108848	108848	2	Wing Nut
31	923362	923362	2	Hex Nut - Lock
32	1609025	1609025	1	Throttle Control
33	919316	919316	1	Capscrew
34	918264	918264	1	Washer - Plain
35	916964	916964	1	Lockwasher
36	916622	916622	1	Hex Nut
37	1609045	1609045	2	Clip
38	1609085	1609086	1	Rear Safety Shield
39	1609039	1609039	2	Clamp - Tube
40	928695	928695	2	Screw - Hex Wash. Hd.
41	1609066	1609066	1	Deflector Assy. Discharge
42	926025	926025	2	Rd. Hd. Phillips Screw
43	916964	916964	2	Lockwasher
44	916622	916622	2	Hex Nut

**PARTS LIST
20", 22" ZIPPER**

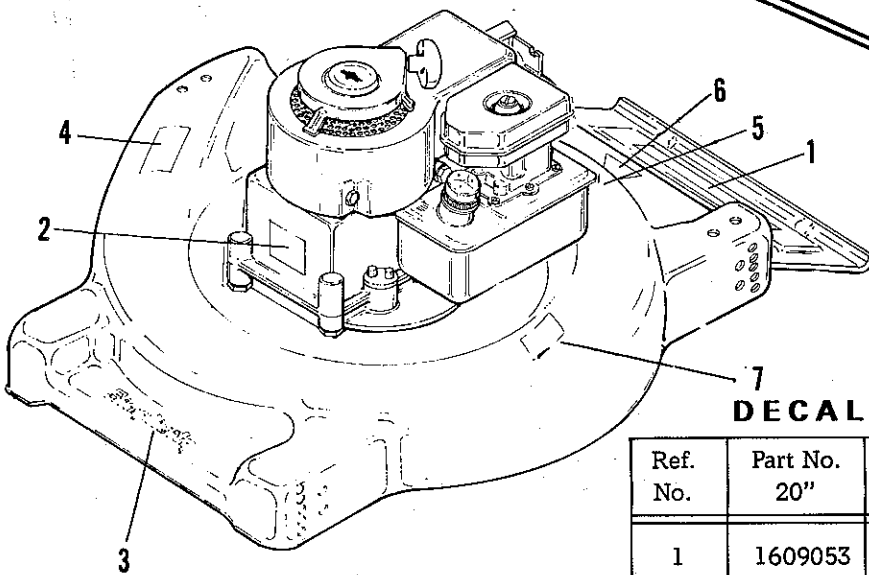
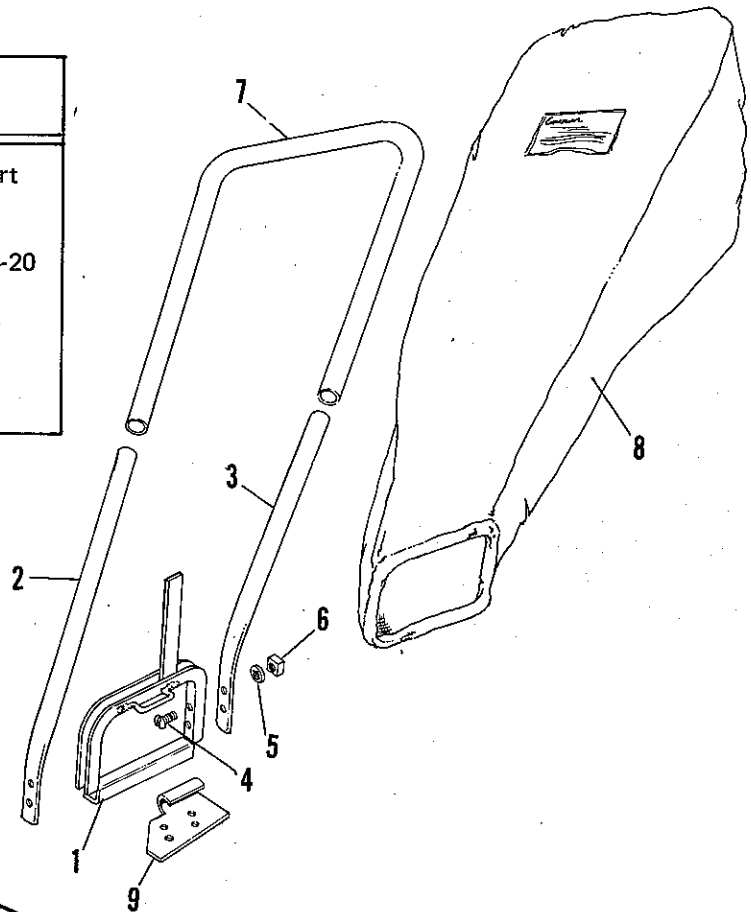
**MFG. NO. 991033 - 20"
MFG. NO. 991034 - 22"**



GRASS BAG DWG. - PARTS LIST

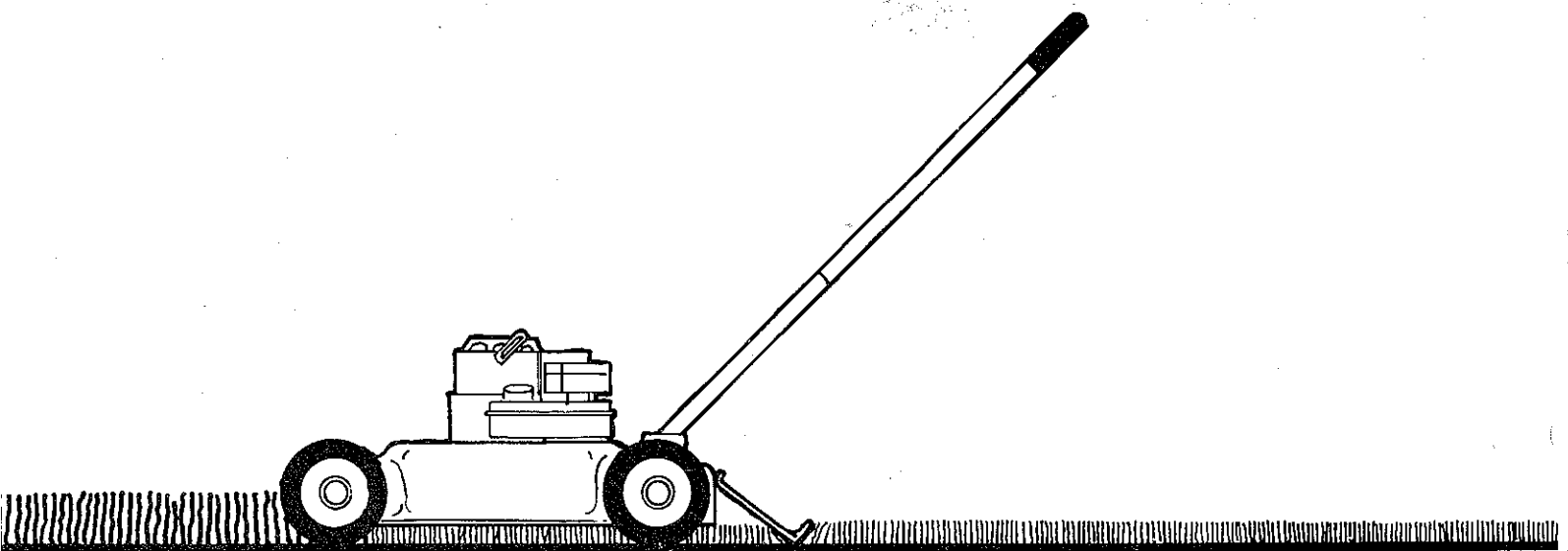
MFG. NO. 991035

Ref. No.	Part No.	Qty. Req.	Description
1	1609133	1	Frame - Bag Support
2	1609235	1	Rod - Bag (Long)
3	1609236	1	Rod Bag (Short)
4	907722	4	Rd. Hd. Screw, 1/4-20
5	916964	4	Lockwasher
6	916622	4	Hex Nut
7	1609237	1	Tubing Bag
8	1609238	1	Grass Bag
9	1609063	1	Clip



DECALS - DWG. - PARTS LIST

Ref. No.	Part No. 20"	Part No. 22"	Qty. Req.	Description
1	1609053	1609054	1	Decal (Zipper)
2	1609159	1609158	1	Decal (20 or 22)
3	106719	106719	1	Film "Simplicity"
4	1609192	1609192	1	Decal "Bag in Place"
5	176700	176700	1	Decal - O.P.E.I.
6	176720	176720	1	Decal - Caution
7	1609160	1609160	1	Decal - "Place Foot ..."



SIMPLICITY MANUFACTURING COMPANY, INC.