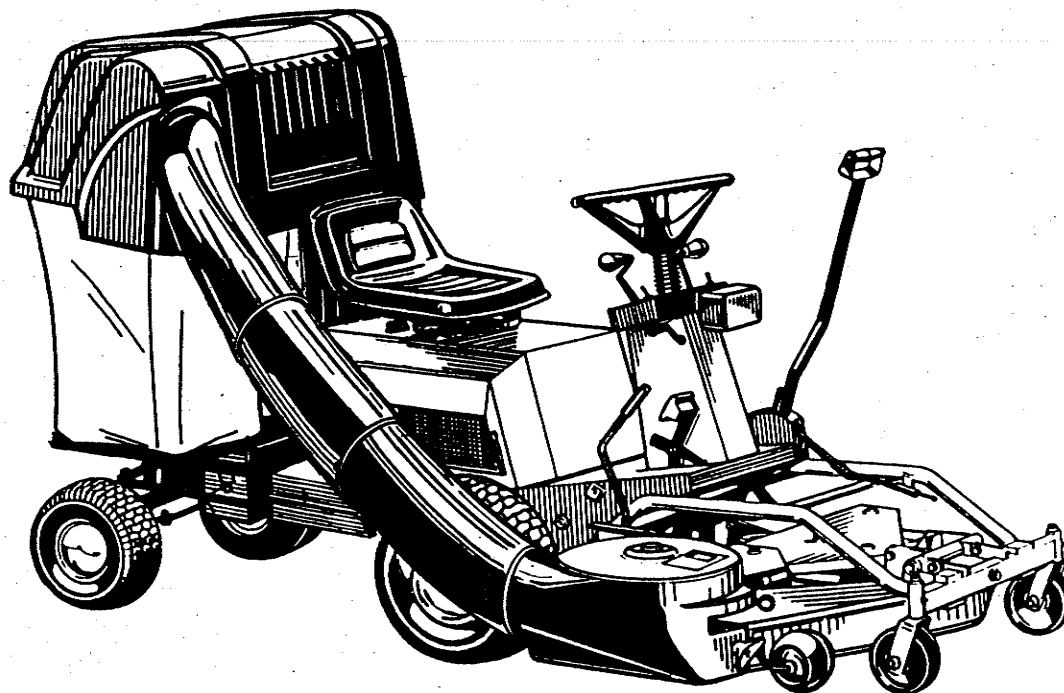


# OPERATOR'S MANUAL




## Turbo Twin Bag Grass Collector



FORM - 1704958  
PRINTED IN U.S.A.  
2/90

FOR FRONT-CUT RIDERS  
WITH 42" MOWER  
MFG. NO. 1691792

**TORQUE SPECIFICATIONS FOR  
STANDARD MACHINE HARDWARE  
TOLERANCE ± 20%**

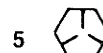
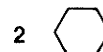
SIZE	SAE GRADE #2 	SAE GRADE #5 	SAE GRADE #8 
8-32	19 In. Lbs.	30 In. Lbs.	41 In. Lbs.
8-36	20 "	31 "	43 "
10-24	27 "	43 "	60 "
10-32	31 "	49 "	68 "
1/4-20	66 "	8 Ft. Lbs	12 Ft. Lbs.
1/4-28	76 "	10 "	14 "
5/16-18	11 Ft. Lbs	17 "	25 "
5/16-24	12 "	19 "	25 "
3/8-16	20 "	30 "	45 "
3/8-24	23 "	35 "	50 "
7/16-14	30 "	50 "	70 "
7/16-20	35 "	55 "	80 "
1/2-13	50 "	75 "	110 "
1/2-20	55 "	90 "	120 "
9/16-12	65 "	110 "	150 "
9/16-18	75 "	120 "	170 "
5/8-11	90 "	150 "	220 "
5/8-18	100 "	180 "	240 "
3/4-10	160 "	260 "	386 "
3/4-16	180 "	300 "	420 "
7/8-9	140 "	400 "	600 "
7/8-14	155 "	440 "	660 "
1-8	220 "	580 "	900 "
1-12	240 "	640 "	1,000 "

**NOTE:**

1. These torque values are to be used for all *Simplicity* hardware excluding: locknuts, self-tapping screws, thread forming screws, sheet metal screws and socket head setscrews.
2. Recommended seating torque values for locknuts:
  - a. For prevailing torque locknuts - use 65% of grade 5 torques.
  - b. For flange whizlock nuts (and screws) - use 135% of grade 5 torques.
3. Unless otherwise noted on assembly drawings all torque values must meet this specification.

**BOLT HEAD MARKING**

**S.A.E. GRADE:**



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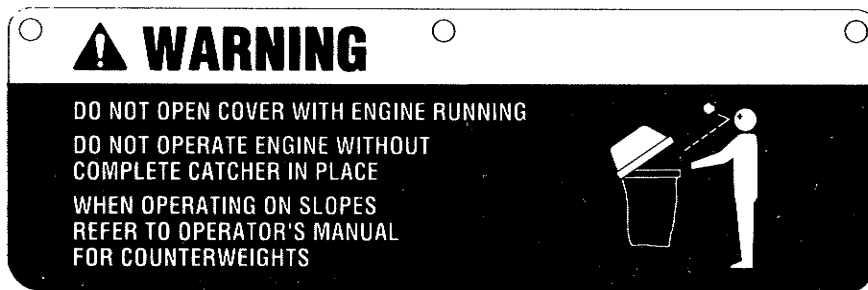
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## Recommended Accessories


On slopes over 15% (8.5°), use two front wheel weights (1690555). Always mow up and down the face of slopes, never across the face. Never mow on slopes greater than 30% (16.7°).

## Safety Decals



## Safety Rules



Read these safety rules and the safety rules in your rider Operator's Manual and follow them closely. Failure to obey these rules could result in loss of control of vehicle, severe personal injury to yourself, or damage to property or equipment. The triangle  in the text signifies important cautions or warnings which must be followed.

1. Know the controls and how to stop the rider quickly. READ THE TRACTOR'S OPERATOR'S MANUAL.
2. Shut the engine (motor) off before attaching, adjusting or disconnecting the collection system.
3. Check the grass catcher frame to make sure it is attached securely to rider.
4. Look behind to make sure the area is clear before backing up.
5. **CAUTION:** For added rider stability and to prevent tipping or loss of control;
  - a. DO drive in reduced speed on uneven ground and when turning corners.
  - b. Reduce loads on hillsides. It is recommended that the Collection System be kept only half full when negotiating any slopes. Start mowing on slopes when the Collection System is empty.
  - c. Mow up and down the face of slopes: **never across the face of any slope.**
6. **CAUTION:** Objects may be thrown from mower. For your safety.
  - a. DO NOT open the cover while the mower blades are turning. Shut off the engine before removing the grass chute.
  - b. Be sure the complete Collection System is in place (cover secure and grass chute connected) before operating the mower.
  - c. DO check the cover and bags frequently for wear and tear. Replace with the new cover for safety protection.
7. For best results when mowing grass: Set the mower to cut off from 1 to 2 inches of grass (leave 1-1/2" of grass). If grass is exceptionally tall, set your mower as high as possible for first cutting. Lower cutting height at succeeding cuttings until proper height is reached. It may be necessary to mow tall grass at a slower rider ground speed (keep engine at full throttle).



### WARNING

Do not operate the rider unless the entire grass catcher system or mower discharge deflector is properly installed.



### WARNING

Before raising cover, disengage mower, turn off engine and remove the key. Do not remove catcher tube from adapter or cover while mower is running.

## Assembly

### ATTENTION SETUP PERSONNEL:

As setup personnel you have the obligations to know the product better than the customer. This includes safety related items. Prior to setup, thoroughly familiarize yourself with the Operator's Manual. Pay special attention to all safety warnings. Remember, it is your responsibility to set up the product safely and to know it well enough to be able to instruct a customer in the safe use of this power unit.

It is possible during setup to place yourself in a position which is more hazardous than when the unit is in operation. Safety is a matter of common sense . . . A matter of thinking before acting. Most shops have specific safety practices. Follow them. The precautions listed in the Operator's Manual should not supersede existing practices but should be considered as supplemental information.

### NOTE

After first-time installation, many of following assembly steps will have been performed. For installation and removal, follow only those steps required for removing grass bags, tube assembly, and turbo housing (see turbo Operator's Manual).

1. Open the rear platform to access hardware used to secure the latch rod. Remove lockwasher and nut (early models) or flange locknut (later models) from underside of platform. Remove 3/4" carriage bolt and install platform bracket (A, figure 1) with new 5/16-18 x 1" carriage bolts (B, from top side). Reposition clip over latch rod and secure with large flat washer (C, 1-1/4" O.D.), and existing hardware.
2. Install 1/4-20 x 5/8" capscrews (D, figure 1) through side of platform bracket and platform and secure with flat washer (E), lockwasher (F), and nut (G).

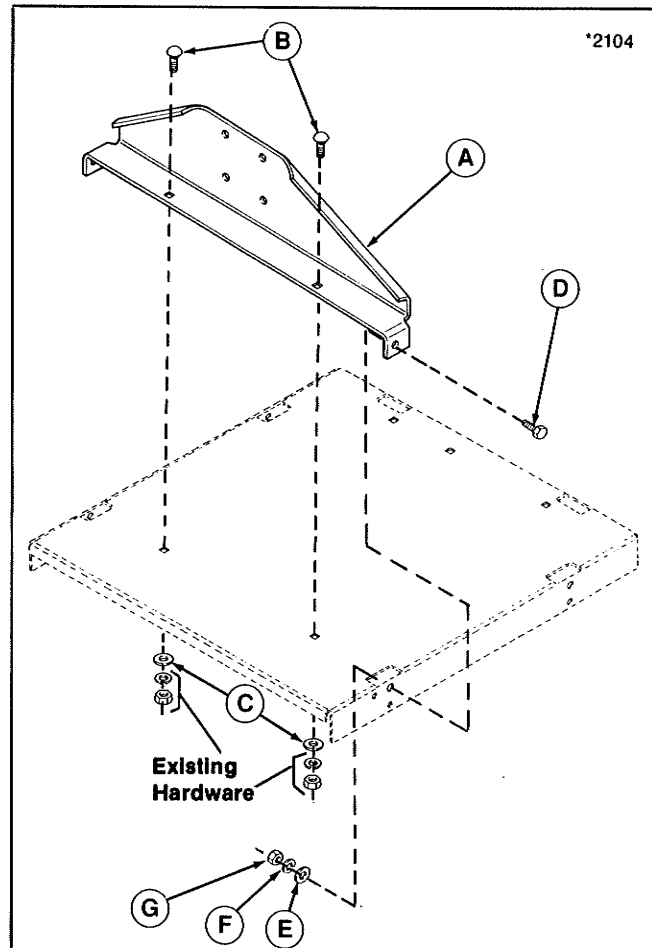
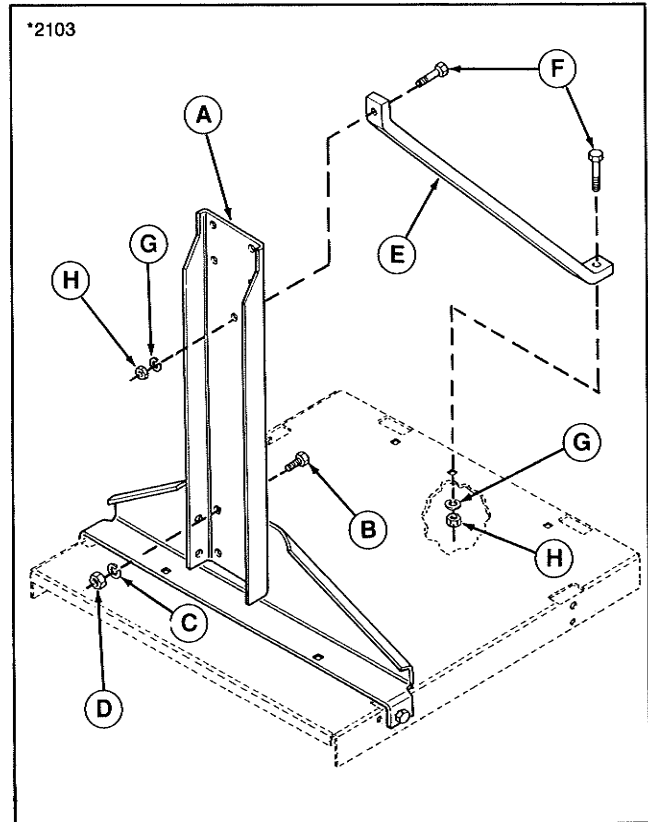


Figure 1.

- A. Platform Bracket
- B. Carriage Bolt, 1"
- C. Flat Washer, 1-1/4" O.D.
- D. Capscrew, 5/8"
- E. Flat Washer
- F. Lockwasher
- G. Nut

3. Install upright support (A, figure 2) to platform bracket with four 3/8-16 x 1" capscrows (B, from rear), lockwashers (C), and nuts (D).
4. Install brace (E, figure 2) to upright support with 5/16-18 x 1-1/4" capscrows (F), lockwashers (G), and nuts (H).

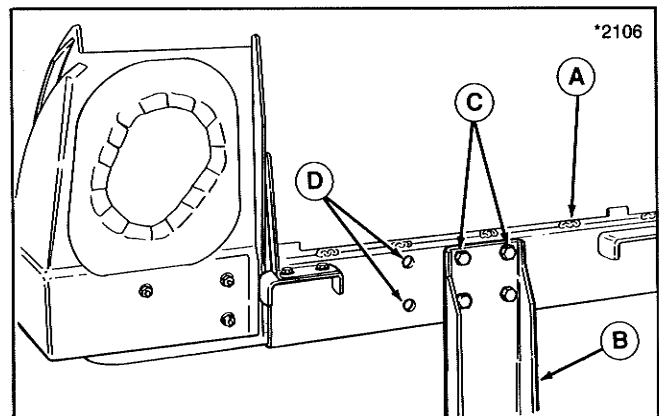


**Figure 2.**  
**A. Upright Support**  
**B. Capscrow, 1"**  
**C. Lockwasher**  
**D. Nut**  
**E. Brace**  
**F. Capscrow, 1-1/4"**  
**G. Lockwasher**  
**H. Nut**

**NOTE**

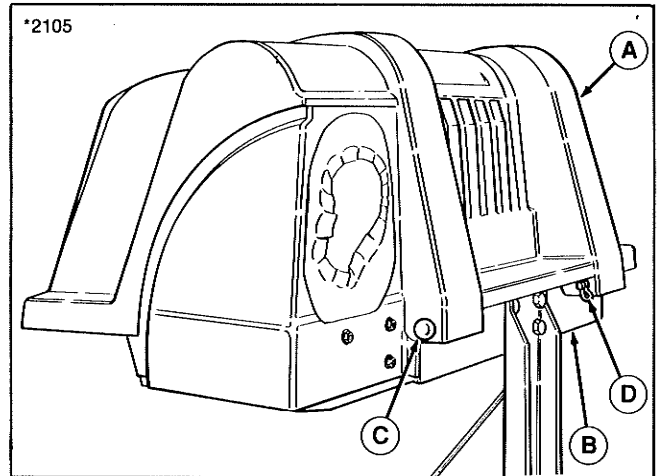
Cover and bag support are packaged as an assembly with long clevis pins and clips. It may be easier to separate components for the following step.

5. Install horizontal bag support (A, figure 3) to upright (B) with four 3/8-16 x 7/8 capscrows (C) and flange locknuts. Install capscrows from the front and tighten when upright and support are square. Note that the open set of holes (D) is toward the discharge side of mower.



**Figure 3.**  
**A. Bag Support**  
**B. Upright**  
**C. Capscrows, 3/8-16 x 7/8**  
**D. Open Set of Holes**

6. Reinstall grass catcher cover (A, figure 4) to support (B) and secure with clevis pins (C) and clips (D).

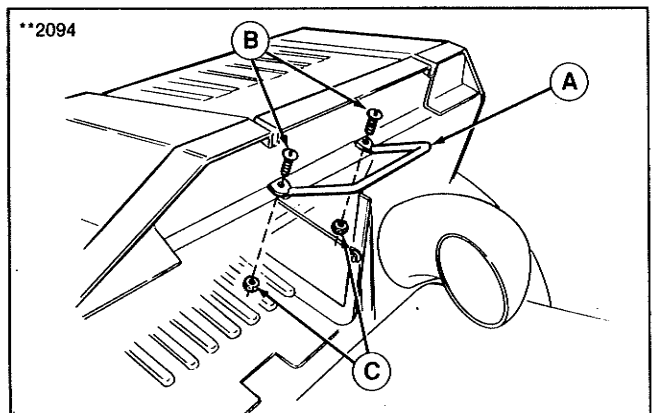


**Figure 4.**

**A. Cover**  
**B. Support**

**C. Clevis Pin**  
**D. Clip**

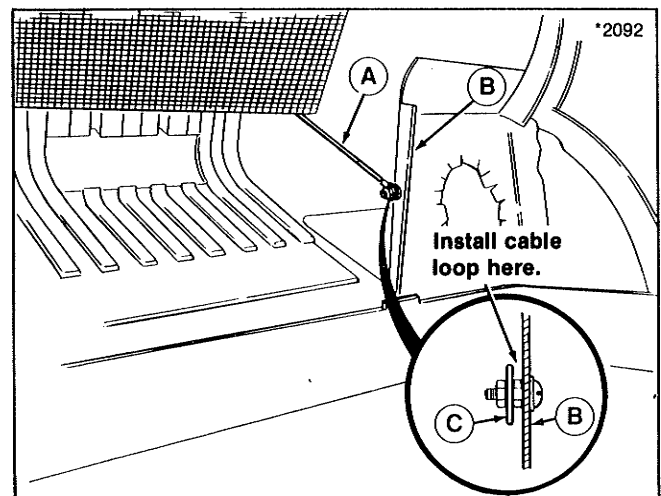
7. Install handle (A, figure 5) to rear surface of lid with offset toward the rear. Secure with two 10-32 x 1/2 truss screws (B) and 10-32 nut/washer assemblies (C).



**Figure 5.**

**A. Handle**  
**B. Truss Screw**  
**C. Nut/Washer Assemblies**

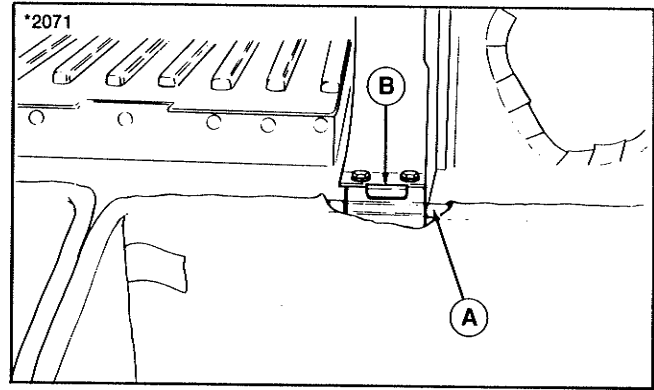
8. Open cover and fasten cable (A, figure 6) to tube support (B) to prevent cover from going overcenter when opened. Loop end of cable fits over washer (C).



**Figure 6.**

**A. Cable**  
**B. Support**  
**C. Washer**

- Open grass bag cover and install grass bag frames (A, figure 7) to support brackets (B). Make sure cover handle latches to grass bag frames.



**Figure 7.**

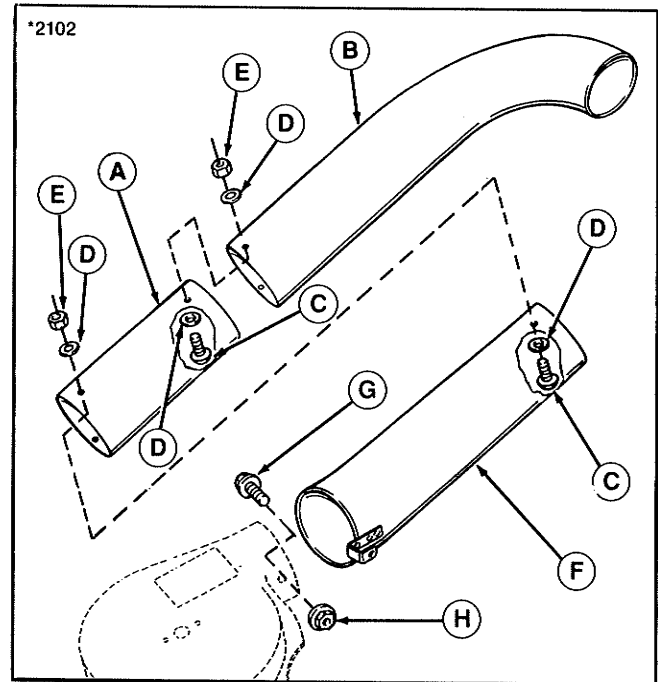
**A. Grass Bag Frame**

**B. Support Frame**

- Install the turbo according to instructions in the turbo Operator's Manual. Note that the belt cover and idler pulley mounting hardware for the turbo installation is packaged with the twin bagger.
- Assemble the middle tube (A, figure 8) to the upper tube (B) with 10-32 x 1/2" trusshead screws (C, from inside), flat washers (D), and nut/washer assemblies (E).
- Assemble the lower tube (F, figure 8) to assembled upper tube with 10-32 x 1/2" trusshead screws (C, from inside), flat washers (D), and nut/washer assemblies (E).
- Install the 1/4-20 x 5/8" roundhead bolt (G, figure 8) through the inside of turbo housing discharge as shown in figure 11. Secure with 1/4-20 locknut (H).

On turbo housing without the pre-drilled hole (Mfg. No. 1691260 and early model 1691810), a 9/32" hole must be drilled as shown in figure 9.

- Apply dry talc power to rubber seal at cover opening. Install tube assembly as far as possible into cover opening so that lower tube can be installed at blower opening. Latch lower tube clip onto bolt and nut (installed in step 13).



**Figure 8.**

**A. Middle Tube**

**B. Upper Tube**

**C. Trusshead Screw, 1/2"**

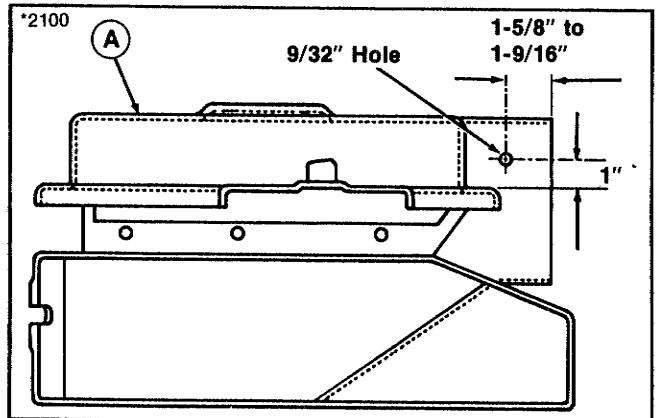
**D. Flat Washer**

**E. Nut/Washer Assembly**

**F. Lower Tube**

**G. Roundhead Bolt, 5/8"**

**H. Locknut**



**Figure 9.**

**A. Turbo Housing**



## Operation and Storage



### WARNING

For safety reasons grass and debris are to be removed only after engine is shut off, key removed, and all moving parts stopped.



### WARNING

Before raising cover, shut off engine, remove key, and set parking brake.

### BEFORE OPERATION

Clear the lawn of all sticks, stones, wire and other debris which may be caught or thrown by the mower blades.

Clean the tube with mild detergent (other products may damage tube). Inspection windows can be removed to be cleaned. Make sure windows are securely in place before operating.

Check grass condition. If wet, wait until later in the day. If grass is wet plugging may occur.

For efficient bagging, air circulation under the mower deck, through the chute and into the bag is very important. For this reason, you should remove grass and debris from underside of mower deck, discharge chute and screen inside cover.

The blower housing and tube should be removed for cleaning. Remove the tube by unlatching the lower tube clip from blower housing.

If desired, the bags can be lined with 30 gallon trash bags for easy disposal.

Inspect the grass bags for wear or damage. Make sure that there is a snug fit between mower deck, blower housing, tubes, and grass bag cover.

### OPERATION

Grass should be cut often, and not too short. If grass is too long or lush it may be necessary to keep ground speed to a minimum or to cut only half the width to prevent clogging. If grass is high, operate with mower in high cutting position. Cut the grass again in lower cutting position, if desired.

To check if grass is flowing up tube, view tube through rear inspection window. Do not open cover with mower engaged.

To check if grass bags are full, reach back and feel top of right bag (left bag will fill first) or view tube discharge through front inspection window in cover.

If a large amount of cut grass is spilling out from under deck, the tube may be plugged or grass bags are full. Shut off rider, disengage PTO, and allow all moving parts to stop before disconnecting tube.

Always operate with throttle at full speed.

### EMPTYING THE BAGS

#### NOTE

Tilt seat up to allow cover to remain in "up" position.

Raise the cover. If a plastic liner was not used, unhook the bag and turn inside down to empty (use handle on bottom).

If plastic liner was used, first tie up top of liner. Then, either pull the liner out, or turn the bag upside down and allow the filled liner to slide out.

### STORAGE

1. Clean the grass catcher thoroughly.
2. If paint has been scratched on metal parts, coat with paint or oil.
3. Store in a dry area. Hang the bags to dry. Always store away from moisture.

## Troubleshooting

This section provides troubleshooting instructions for the more common and easily corrected problems. See Table 1. For problems not covered, see your dealer.



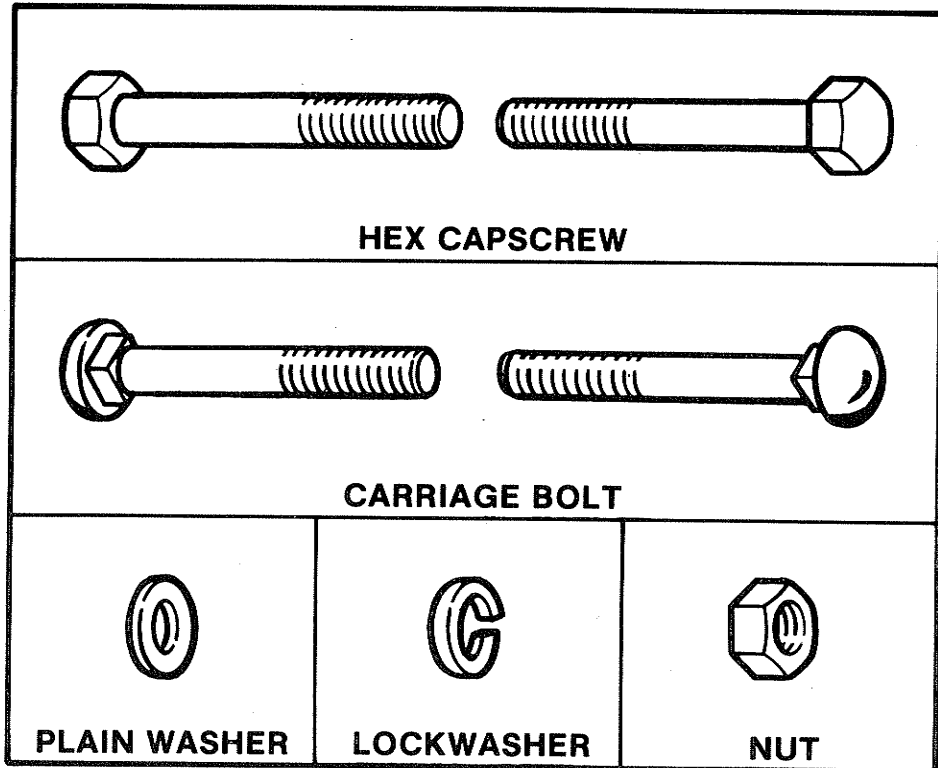
### WARNING

To avoid serious injury, perform maintenance on the grass catcher only after stopping the engine and waiting for all moving parts to come to a complete stop. Always remove the ignition key before beginning the maintenance to prevent accidental starting of the engine. Disconnect the spark plug wire and fasten away from plug.

Problem	Cause/Remedy
<p><b>1. Leaves and grass not being completely picked up.</b></p>	<ul style="list-style-type: none"> <li>A. Engine speed too slow. Run at full throttle.</li> <li>B. Ground speed too fast. Use lower speed.</li> <li>C. Discharge tube plugged. Stop engine and remove key. Then remove and unplug discharge tube.</li> <li>D. Blades not tight. Torque to 60 ft. lbs.</li> <li>E. Mower not level. See Operator's Manual to level mower.</li> <li>F. Belt slipping. See rider Operator's Manual for adjustment.</li> </ul>
<p><b>2. Grass catcher discharge tube or mower plugs easily.</b></p>	<ul style="list-style-type: none"> <li>A. Bags full. Empty bags.</li> <li>B. Grass too high. Reduce rider ground speed, reduce cutting width or raise mower adjustment for the first pass, lower it for the second pass.</li> <li>C. Grass or leaves too wet. Wait for drier conditions.</li> <li>D. Build-up of cut grass in mower or adapter. Clean thoroughly.</li> <li>E. Screen in grass bag cover clogged. Remove cover and clean screens.</li> <li>F. Belt slipping. See rider Operator's Manual for adjustment.</li> <li>G. Engine not running at full throttle. Use hydro or gear lever to control ground speed and keep engine at full throttle.</li> </ul>

**Table 1. Troubleshooting**

# STANDARD FASTENER IDENTIFICATION CHART



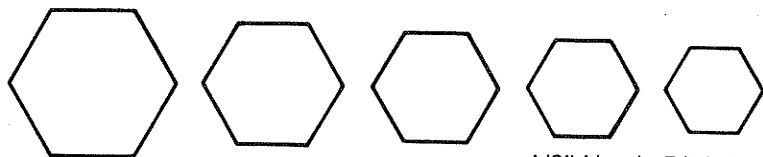
Hardware sizes are given in the illustrations throughout this manual.

If a washer or nut is identified as "washer, 1/2" or "nut, 1/2", this means the inside diameter is 1/2 inch.

If a screw is identified as "screw, 1/2 x 2", this means the shaft diameter is 1/2 inch and the shaft of the screw is 2 inches long. If a screw is identified as "screw, 1/2-16 x 2", the number "16" means that the screw has 16 threads per inch.

## HEX CAPSCREW IDENTIFICATION

Shown below are actual size hex heads for standard screw sizes. Example: a 1/4" screw has a 7/16" head and thus requires a 7/16" wrench. To measure length, use the scale below.



3/4" Head screw with 1/2" S.D.

5/8" Head screw with 7/16" S.D.

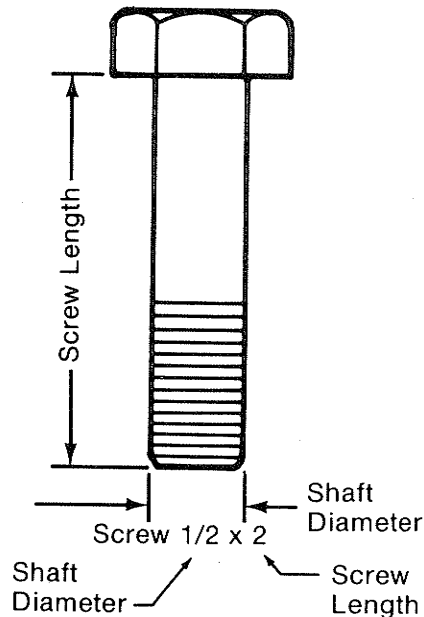
9/16" Head screw with 3/8" S.D.

1/2" Head screw with 5/16" S.D.

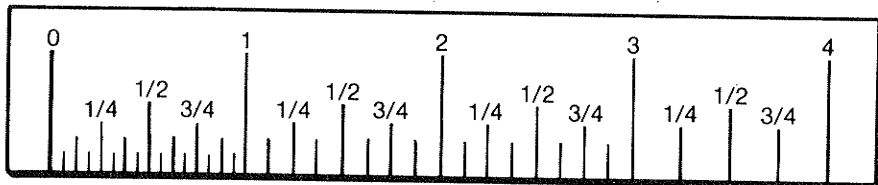
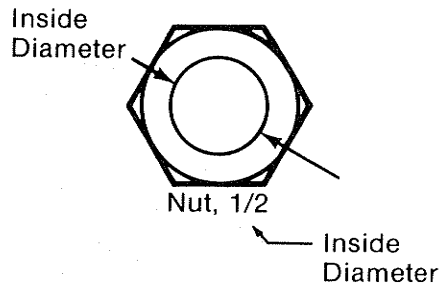
7/16" Head screw with 1/4" S.D.

S.D. = Shaft Diameter

## SAMPLE: SCREW IDENTIFICATION



## SAMPLE: NUT IDENTIFICATION



## WASHER AND NUT IDENTIFICATION

Place the washer or nut on the above scale to determine inside diameter. The actual inside diameter can vary 1/16 inch. Use the scale for comparison.



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