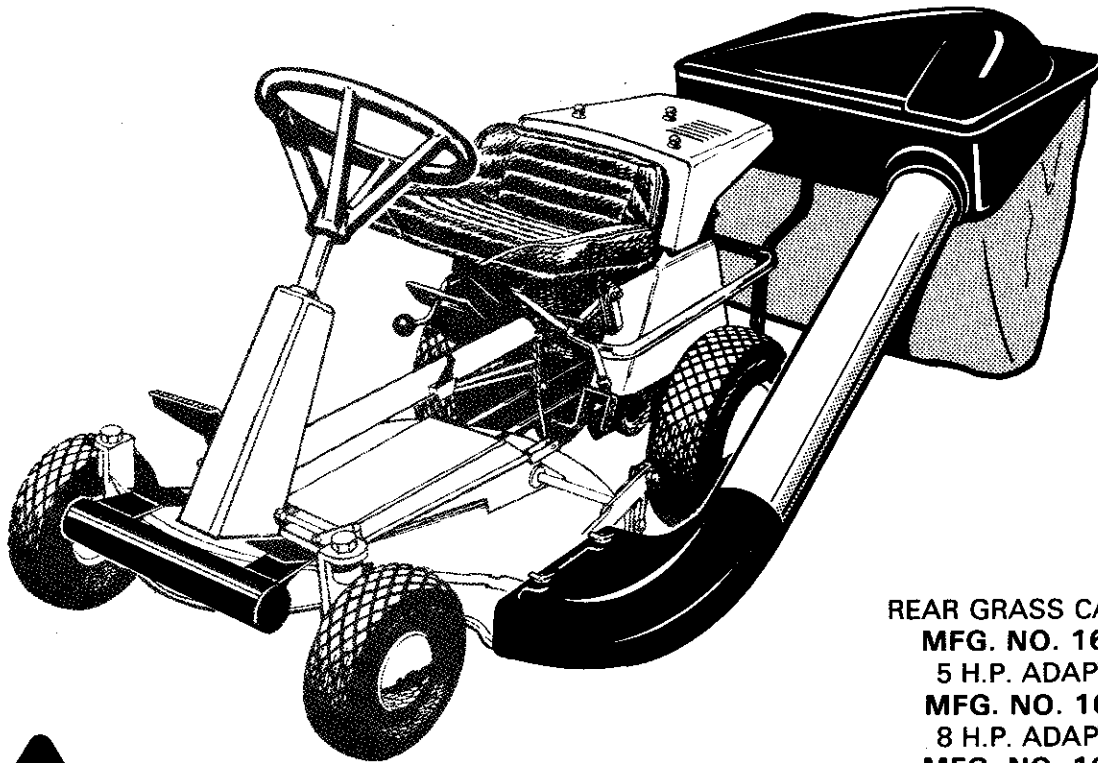


OPERATOR'S MANUAL

REAR GRASS CATCHER



REAR GRASS CATCHER
MFG. NO. 1690180
5 H.P. ADAPTER KIT
MFG. NO. 1600331
8 H.P. ADAPTER KIT
MFG. NO. 1600408



**CAUTION: READ MANUAL THOROUGHLY
BEFORE OPERATING REAR GRASS CATCHER**

FORM — 1657768
PRINTED IN U.S.A.
771

Dear Customer,

Congratulations on your selection of this grass catcher attachment for your riding mower. It has been carefully designed and built to give you years of dependable service.

To ensure the best value and use from your grass catcher, read this manual carefully. Make sure that the grass catcher is assembled and installed properly. Be certain that you (and anyone who operates this machine) know how to use the machine safely. Read this manual and the riding mower manual thoroughly and become familiar with the controls of the machine before operating.

For your safety and that of others, study the safety rules in this manual and those in your riding mower manual. Review the information often; it is there for your benefit and it is important.

This manual provides you with assembly, installation, normal care, and operation instructions for your grass catcher. If any help is needed with any of these procedures, your dealer will be happy to help you.

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

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

LIST OF ABBREVIATIONS OF METRIC TERMS

1. N · m = newton-metres
2. mm = millimetre

Grass Catcher

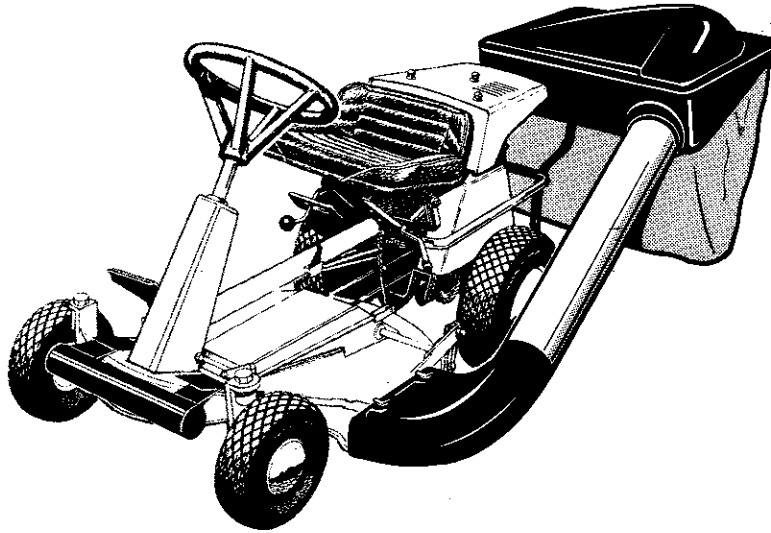


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WARNING

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

Safety Rules



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

General

- Read the Operating and Service Instructions carefully. Be thoroughly familiar with the controls and the proper use of the equipment.
- Make Sure:
 - a. unit is in good operating condition,
 - b. all safety devices and shields are in place and in good working order, and
 - c. all adjustments (cutting height, etc.) have been made.
- Use only attachments or accessories designed for your machine. See your dealer for a complete list of recommended attachments or accessories.
- When using mower, never direct discharge of material toward bystanders nor allow anyone near the vehicle while in operation.
- Never allow children to operate the machine. Do not allow adults to operate it without proper instruction.
- Do not carry passengers.
- Keep the area of operation clear of all persons, particularly small children, and pets.

Preparation

- Handle gasoline with care — it is highly flammable.
 - a. Use approved fuel container.
 - b. Never add fuel to a running engine or hot engine.
 - c. Fill fuel tank outdoors with extreme care. Never fill fuel tank indoors.
 - d. Replace gasoline cap securely and wipe up spilled fuel.
- Do not run the engine indoors. Exhaust fumes are deadly.
- Clear the work area of objects which might be picked up and thrown.
- Disengage mower drive clutch and shift into neutral before attempting to start the engine.
- Wear heavy footwear. Do not operate unit when barefoot or when wearing open sandals or canvas shoes.

Operation

- Disengage power to mower and stop the engine before leaving the seat.
- Disengage power to mower and stop the engine before making any repairs or adjustments.
- Stay alert for holes in the terrain and other hidden hazards. Be extra careful when operating on wet or slippery surfaces.

- Be especially careful not to touch tractor or attachment parts which might be hot from operation. Allow such parts to cool before attempting to maintain, adjust or service.
- Shut the engine off when unclogging mower chute.
- Disengage power to mower when transporting or not in use.
- Do not engage mower clutch while mower is in transport position.
- The rider and mower should be stopped and inspected for damage after striking a foreign object, and the damage should be repaired before restarting and operating the equipment.
- Keep the vehicle and mower in good operating condition, and keep safety devices in place.
- When using the vehicle with mower, proceed as follows:
 - a. Mow only in daylight or in good artificial light.
 - b. Never operate without the mower clutch safety interlock switch properly attached and working.
 - c. Check the blade mounting bolt(s) for proper tightness at frequent intervals.
- Do not stop or start suddenly when going uphill or downhill. Mow up and down the face of slopes; never across the face.
- Reduce speed on slopes and in sharp turns to prevent tipping or loss of control. Use extreme caution when changing direction on slopes.
- If equipment begins to vibrate abnormally, disengage power to attachment and stop engine at once. Inspect for damage and correct before starting engine again.
- Use care when pulling loads or using heavy equipment.
 - a. Use only drawbar hitch point.
 - b. Limit loads to those you can safely control.
 - c. Do not turn sharply. Use care when backing.
 - d. Use counterweight(s) or wheel weights when suggested in the operator's manual.
- Take all possible precautions when leaving the vehicle unattended, such as disengaging the mower clutch, lowering the mower, shifting into neutral, setting the parking brake, stopping the engine, and removing the key.
- Watch out for traffic when crossing or near roadways.

Maintenance and Storage

- Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
- Do not change the engine governor settings or overspeed engine.
- To reduce fire hazard, keep the engine free of grass, leaves, or excessive grease.
- Never store the 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.

Accessories and Attachments

Optional accessories or attachments are available for your riding mower through your dealer. See your dealer if you wish to purchase any of the following:

REAR WHEEL WEIGHTS — improve traction and stability, especially on slopes.

FRONT COUNTERWEIGHT — improves stability and handling. Required when using the grass catcher attachment.

Models illustrated in this manual may vary slightly from the model you have.

Installation

CONTENT OF SECTION

The rear mounted grass catcher attachment is designed for both the 5 h.p. and the 8 h.p. 2-speed rear engine riding mowers. But before the grass catcher can be installed on either riding mower, the appropriate adapter kit must first be installed on your mower.

Follow all instructions in the order given and work carefully as you proceed. This section guides you in installing the correct adapter on your riding mower and then the grass catcher attachment itself. It also instructs you in removing the grass catcher from your riding mower.

INSTALLATION

First turn to the Assembly Section of this manual and assemble all the grass catcher parts that can be assembled before installation. For shipping purposes, the grass catcher has been disassembled. Sort all hardware and parts according to size and type and proceed as instructed in the Assembly Section. To avoid unnecessary confusion, keep the parts and hardware from your adapter kit separate from those of the grass catcher attachment.

Then return to this section and select the installation instructions for the adapter kit designed for your riding mower. After the adapter parts are in place, proceed to the instructions for installing the grass catcher attachment.

5 H.P. GRASS CATCHER ADAPTER

This grass catcher adapter kit is designed for the 5 h.p. rear engine rider with left-hand discharge, 26 inch mower. Once in place, the grass catcher attachment can then be installed. To install the adapter proceed as follows:

⚠ WARNING

For your personal safety disengage the mower, stop engine, set parking brake, and remove key. Never attempt any work on your riding mower without following all safety precautions.

1. Following the instructions and safety warnings in your riding mower Operator's Manual, remove the mower housing from the riding unit.

2. Following the instructions and safety warnings in your riding mower Operator's Manual, remove the blade from the mower. (Note that the blade capscrew has a left-hand thread.)

⚠ CAUTION

Do not handle the sharp blade with bare hands. Careless or improper handling may result in serious injury.

3. Place the special blade provided onto the shaft so that the lift plates (item A, figure 1) point toward the housing. Then place the blade stiffener (item B) on the shaft centered over the blade. To help align the stiffener and blade, capscrews or pegs may temporarily be inserted through the guide holes.

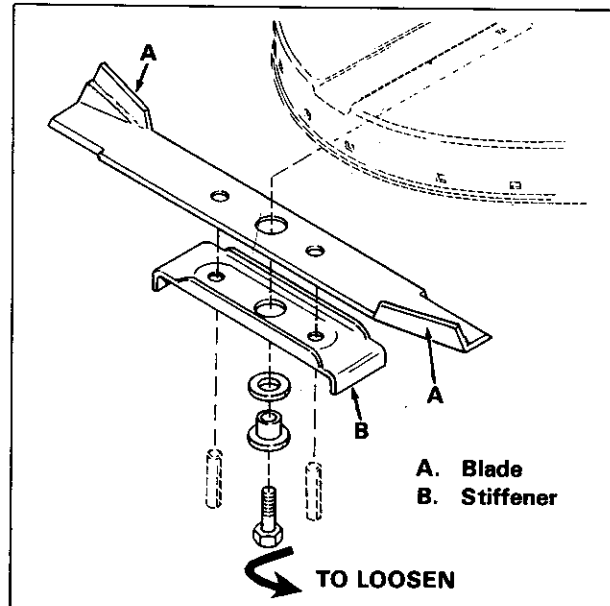


Figure 1

4. Install the blade and stiffener with the original hardware in the same order: first the shoulder washer, then the dished washer and the capscrew.

⚠ CAUTION

The blade mounting capscrew must be installed with washers and torqued to 80 foot-pounds (108 N-m).

5. Following the instructions in your riding mower Operator's Manual, completely reinstall the mower on the riding unit.
6. Remove the three carriage bolts (items A, figure 2) and hardware and remove the grass deflector (item B) from the mower. Two of the nuts and lockwashers will be used later, but the remaining hardware can be stored with the deflector.

⚠ WARNING

For your safety and that of others, never operate the riding mower unless the original grass deflector or the complete grass catcher and adapter unit is in place.

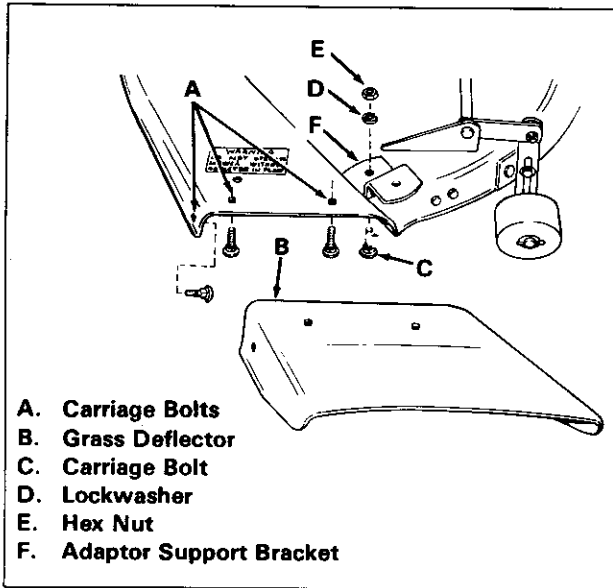


Figure 2

7. Using the 5/16 inch carriage bolt, lockwasher, and nut (items C, D, and E) provided in the kit, install the adapter support bracket (item F) snug but not tight (the bracket will be tightened fully at step 12).
8. Next, remove the three wing screws holding the engine hood and remove the hood.

⚠ WARNING

To prevent personal injury, do not attempt to remove the exhaust deflector or install new deflector if the engine is still hot from operation. Serious burns can result from touching a hot exhaust deflector.

9. Remove the original exhaust deflector and install the new exhaust deflector (item A, figure 3) to direct the exhaust to the side instead of rearward.

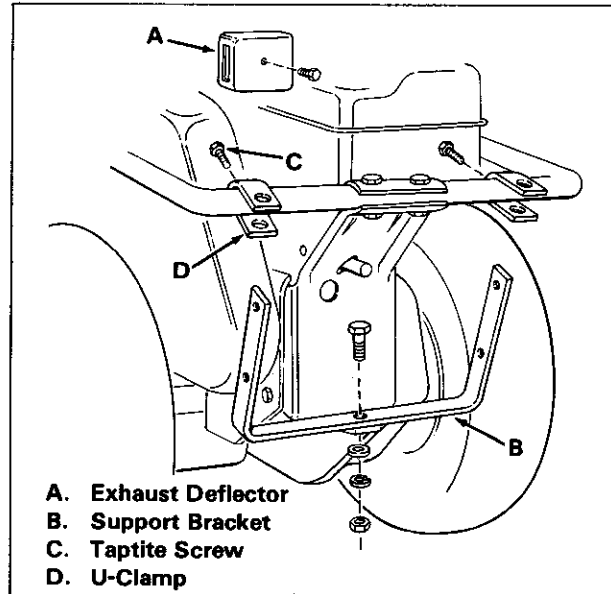


Figure 3

10. Install the support bracket (item B) on the riding mower drawbar using the remaining 1 inch (25.4 mm) long capscrew with washer, lockwasher, and nut as shown in figure 3.
11. If not already assembled, the remaining two taptite screws (item C) can be started into the U clamps (item D). The clamps can then be placed temporarily on the guard rail above the support bracket posts as shown here, or set aside until actually installed later.
12. Use the two original sets of lockwashers and nuts (items B and C, figure 4), noted in step 6, to install the two 1 inch (25.4 mm) long carriage bolts (item A) provided with the grass catcher attachment as shown. Align the support bracket (item F) to fit the adapter (item D) and tighten bracket in place. The adapter is then slipped on the bolts over the hex nuts and held with the wing nuts (item E).
13. Reinstall the engine hood with the three wing screws. At this point you are ready to install the rest of the rear grass catcher attachment. Ignore the instructions for the 8 h.p. adapter kit and proceed directly to the instructions in this section for installing the rear grass catcher attachment itself.

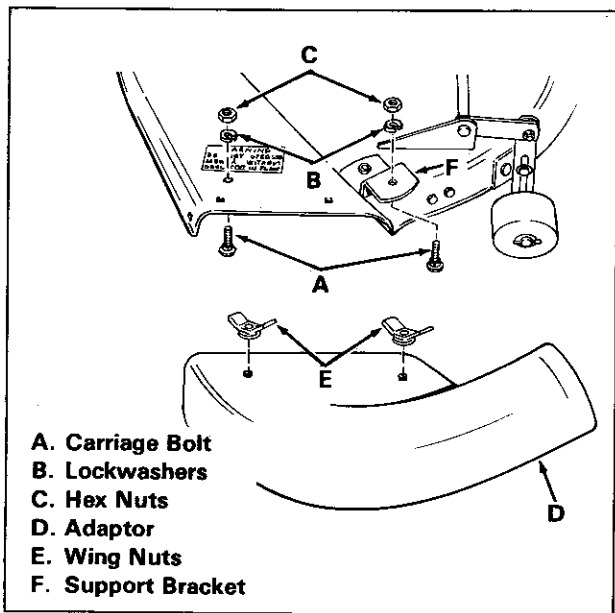


Figure 4

8 H.P. GRASS CATCHER ADAPTER

This grass catcher adapter kit is designed for the 8 h.p., 2-speed, rear engine rider with left-hand discharge, 30 inch mower. Once in place, the grass catcher attachment can then be installed. To install the adapter kit proceed as follows:

⚠ WARNING

For your personal safety disengage the mower, stop engine, set parking brake, and remove key. Never attempt any work on your riding mower without following all safety precautions.

1. Press the button plugs (items A, figure 5) into the ends of the rear tube (item B).

⚠ CAUTION

You are working in the engine and muffler area. To avoid possible burns, allow the engine and muffler to cool (if hot) before proceeding.

2. Using the two 1 1/2 inch (38mm) long cap-screws with lockwashers and nuts (items C, D, and E), install the rear tube at the top of the drawbar support as shown.
3. Install the support bracket (item F) on the drawbar hitch using the 1 inch (25.4 mm) capscrew with washer, lockwasher, and nut.

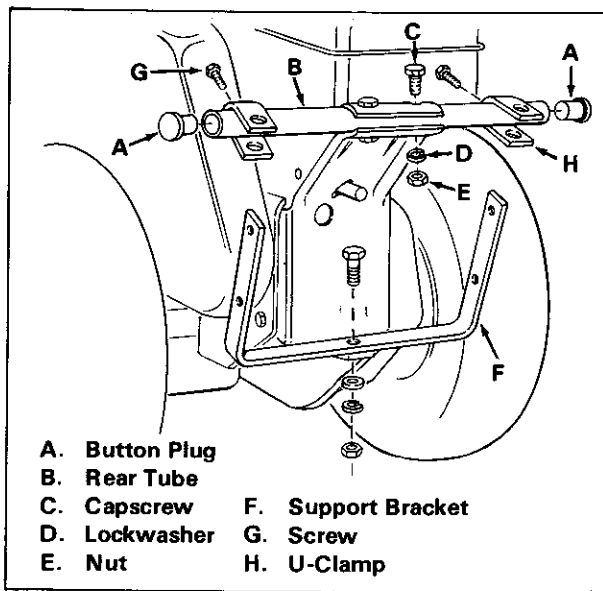


Figure 5

4. If not already assembled, the two tapite screws (item G) can be started into the U clamps (item H). The clamps can then be placed temporarily on the rear tube above the support bracket posts as shown here, or set aside until actually installed later.
5. Following the instructions and safety warnings in your riding mower Operator's Manual, remove the mower housing from the riding unit.
6. Following the instructions and safety warnings in your riding mower Operator's Manual, remove the blade from the mower. (If desired the blade can remain on the mower.)

⚠ CAUTION

Do not handle the sharp blade with bare hands. Careless or improper handling may result in serious injury.

7. Install the lift plates (item A, figure 6) provided with the grass catcher attachment on the blade using 5/8 inch (16 mm) long cap-screws with locknuts. Be sure the beveled edge of lift plates faces the hub of mower blade.

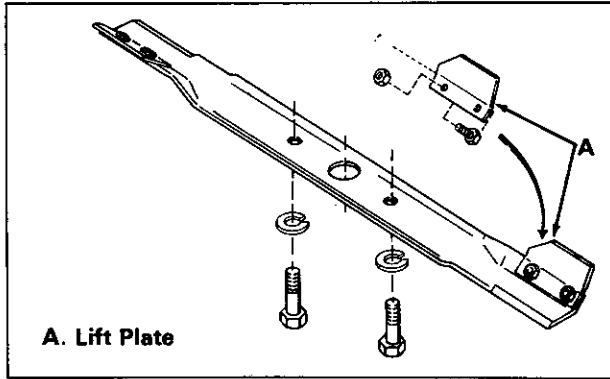


Figure 6

! WARNING

The blade mounting capscrews must be installed with lockwashers and torqued to 32 foot-pounds (43 N.m).

8. If the blade was removed from your mower follow the instructions and safety warnings in your riding mower Operator's Manual to reinstall it.
9. Following the instructions and safety warnings in your riding mower Operator's Manual, reinstall the mower on the riding unit.
10. With the mower reinstalled, remove the two carriage bolts holding on the grass deflector and remove the grass deflector. Two of the nuts and lockwashers just removed will be used in the next step.
11. Use the two original sets of lockwashers and nuts (items B and C, figure 7), noted in step 10, to install the two 1 inch (25.4 mm) long carriage bolts (item A) provided with the grass catcher attachment as shown. The adapter (item D) is then slipped on the bolts over the hex nuts and held with the wing nuts (item E).

At this point you are ready to install the rest of the rear grass catcher attachment. Proceed directly to the following instructions in this section for installing the rear grass catcher attachment itself.

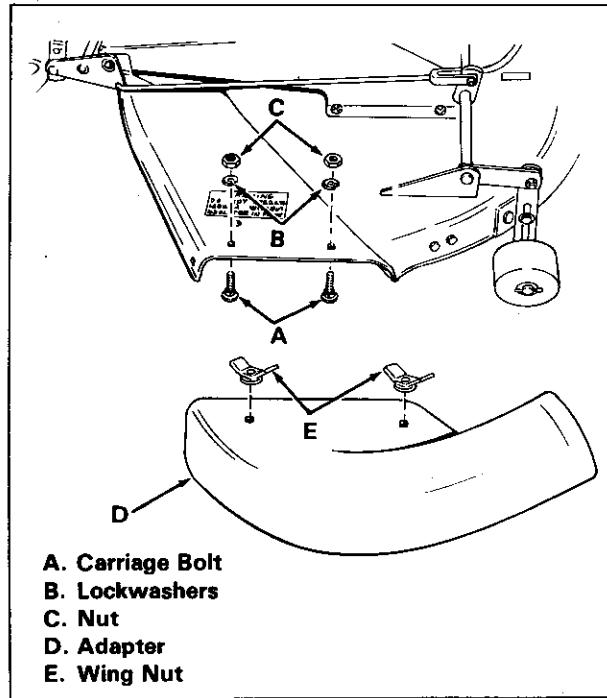


Figure 7

INSTALLING GRASS CATCHER ATTACHMENT

At this stage in the installation procedures, the remaining parts to be installed are the same for both the 5 and 8 h.p. riding mowers. Use the following instructions to complete the grass catcher attachment installation for both the 5 and 8 h.p. riding mowers. (Illustrations may vary slightly from your model.)

1. At the rear of the riding mower, slip the vertical supports (item A, figure 8) through the U-clamps (item B) and align the bolt holes in the vertical support with those in the support bracket (item C) attached to the drawbar. Install the vertical supports with the bend to the rear as shown.
2. Use the four curved head bolts (item D) with lockwashers and nuts (items E and F) to install the vertical supports. The cap screw holding the support bracket to the drawbar can be loosened to make installation easier (Remember to retighten this cap screw if loosened).

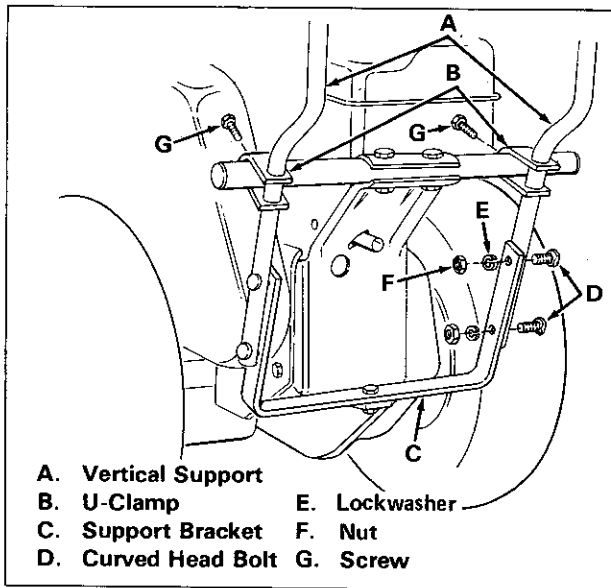


Figure 8

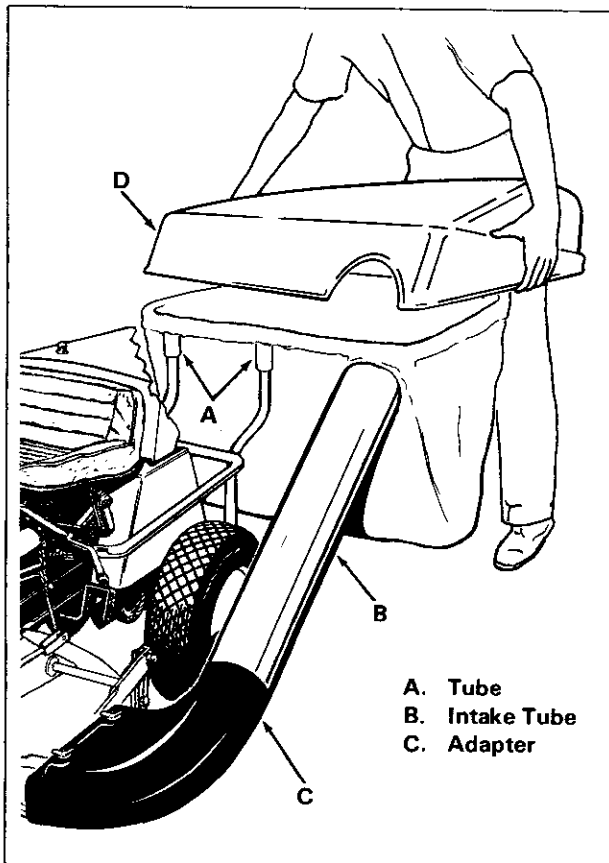


Figure 9

3. The previously assembled grass bag is now installed by slipping the two tubes (item A, figure 9) of the bag support onto the vertical supports just installed.

4. Tighten the screws (item G, figure 8) in the U-clamps to hold the vertical supports.

5. From the outside of the bag, slide one end of the previously assembled intake tube (item B, figure 9) up through its opening in the bag far enough to be installed on the adapter (item C). Push the tube onto the adapter fully to the ridge on the adapter (or as far as it will go).

6. Install the cover (item D) on the grass bag, pressing down firmly on the cover to lock the clips on the underside of cover onto the frame.

REQUIRED ACCESSORY

A front counterweight (figure 10) should be installed on the riding mower when operating with the grass catcher. Otherwise the weight of the grass catcher and its contents may affect the steering ability of the riding mower and its stability when on slopes. See your dealer to purchase the front counterweight.

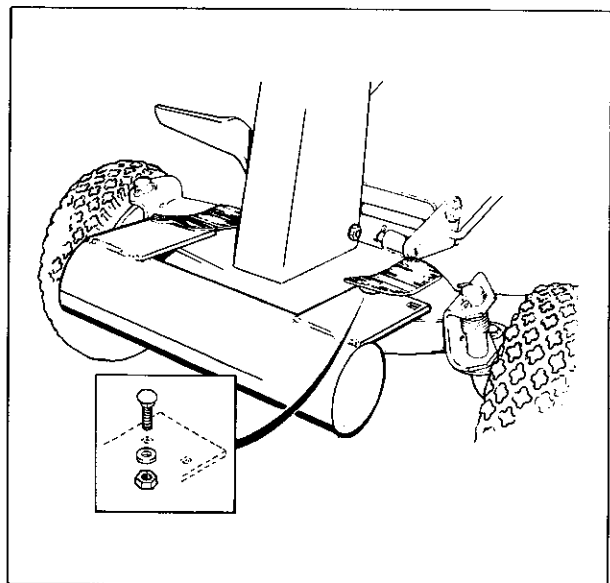


Figure 10

REMOVING GRASS CATCHER

If desired some of the grass catcher attachment and adapter kit parts can remain on your riding mower. The following instructions thus give you the choice of removing or not removing certain parts from your unit while at the same time providing the sequence for completely removing all parts. The instructions are for both 5 and 8 H.P. models unless noted.

WARNING

For your personal safety, disengage the mower, stop engine, set parking brake, and remove key. Never attempt any work on your riding mower without following all safety precautions.

1. Lift the cover off bag assembly. Clips on underside of cover will unlock from bag frame as you lift.
2. Slide intake tube up into bag to remove from adapter and then remove tube from bag opening.
3. Lift grass bag and frame off the vertical supports.
4. If desired loosen the U-clamp screws and unbolt and remove the vertical supports and the U-clamps.
5. If desired unbolt the support bracket and remove it from drawbar.
6. ON 8 H.P. MODELS ONLY remove the rear tube (item B, figure 5) if desired.

WARNING

To prevent possible injury, never operate the riding mower unless the grass catcher attachment is fully connected or the original grass deflector is reinstalled.

7. Remove the wing nuts holding grass catcher adapter and remove adapter.
8. ON 8 H.P. MODELS ONLY the mower grass deflector can be reinstalled on the adapter hardware and the wing nuts used to hold it in place. If desired though the adapter hardware can be removed and the two shorter, original carriage bolts installed to secure the deflector with the original large washers, lockwashers, and nuts.
9. ON 5 H.P. MODELS ONLY remove the two bolts which held the adapter. If desired the adapter support bracket (item F, figure 2) can be removed. Reinstall the grass deflector with the three original carriage bolts and large washers, lockwashers, and nuts (see figure 2).
10. The lift blade and stiffener on 5 H.P. models and the lift plates on the blade on 8 H.P. models do not have to be removed. If you desire to remove them then remove the mower from your riding unit according to the instructions in the riding mower Operator's Manual and reverse the instructions for installing the 5 H.P. blade and stiffener and the 8 H.P. lift plates provided in this manual.

Operation

CONTENT OF SECTION

This section instructs you on how to check the grass catcher before operation and how to operate and empty the grass catcher attachment.

CHECKS BEFORE STARTING

The checks listed below should be performed before each use of the grass catcher.

1. Be sure you are familiar with the safety precautions, controls and operation of the riding mower. Read the riding mower Operator's Manual very carefully.
2. Check the mower and grass catcher to be sure they are properly installed and to be sure that all nuts, bolts and pins are securely fastened.

CAUTION

For your safety and that of others never operate the mower unless the deflector or the entire grass catcher is in place.

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

OPERATING THE GRASS CATCHER

WARNING

Do not work around the mower housing or grass catcher until you are certain that the mower blades have stopped rotating. Never operate the unit with the grass bag, grass bag cover or discharge tube removed.

The grass catcher collects grass or leaves as they are discharged from the mower. It is operated by running the riding mower. Consult the riding mower Operator's Manual if you have any questions on mower operation.

During operation, it is necessary to check the bag contents at intervals. If the bag is full or nearly full, empty it as described in the procedure at the end of this section. Otherwise, the bag can overflow and quickly cause filling and plugging of the discharge tube and mower.

Filling of the bag or plugging of the mower is easily detected if the plastic tube is kept reasonably clean. Simply watch the flow of grass through the tube as you mow.

Under average dry conditions, grass can be collected while mowing in the normal manner; that is, with normal engine and ground speeds. When the grass is heavy but of normal height, run the engine at full speed and slow down the riding mower ground speed by using low gear.

Do not try to collect damp or wet grass. Wet grass will stick to the mower. Wait until dew or rain has evaporated before mowing.

When collecting leaves or mowing tall grass, adjust the mower to highest cutting height and make one pass over the area to be cleared. Then lower the mower and make a second pass to complete the mowing. In extremely tall or heavy grass, it may also be necessary to cut only half the width of the mower to prevent clogging of the mower and grass catcher.

OPERATION ON SLOPES

For your personal safety, never attempt to operate the riding mower and grass catcher on excessively steep slopes. Always mow up and down the face of slopes, and never across the face.

Use two rear wheel weights when mowing on slopes over 15 per cent (8.5 degrees). A front counterweight is required when mowing with the grass catcher installed. The front counterweight helps offset the weight of the grass catcher behind the riding mower and, especially on slopes, improves steering and stability. Do not operate the riding mower on slopes greater than 30 per cent (16.7 degrees).

EMPTYING THE GRASS CATCHER

WARNING

Before emptying grass catcher, always disengage mower, place transmission in neutral, apply parking brake, stop engine, and remove key.

To empty the grass catcher, pull up on cover to un-snap clips. Remove cover and set it aside. Then lift grass bag assembly off the vertical supports, folding the bag back as necessary to clear discharge tube. Turn the bag assembly over to empty it and then reinstall it. Tap the cover a few times to remove any material on the inside. Then place the cover back over the bag assembly and push down firmly to lock clips to bag frame.

Normal Care

CONTENT OF SECTION

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

SCHEDULED CARE

Before each use, check the grass catcher to be sure that it is properly assembled and installed. Be sure that all screws, nuts and spring clips are securely fastened.

After each use, empty the grass catcher as described in the operation section. If the bag is wet,

dry it. Store the grass catcher on or off the tractor in a dry enclosed area.

OFF-SEASON STORAGE

To protect your grass catcher, store it in an enclosed, dry area. If stored in a garage, keep the bag assembly on a shelf or hang it on a wall where the bag will not come in contact with water or snow. Store the cover and intake tube in a similar manner to prevent breakage. To prepare the unit for off-season storage, proceed as follows:

1. Remove unit from riding mower. (See procedure in installation section of this manual.)
2. Clean unit to remove all grass and dirt.
3. Coat all bare metal surfaces with paint or a light coat of oil to prevent rusting.

Troubleshooting

CONTENT OF SECTION

This section provides troubleshooting instructions for the more common and easily corrected problems.

WARNING

To avoid serious injury, perform maintenance on the grass catcher only after stopping the riding mower 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.

TROUBLESHOOTING PROCEDURES

Troubleshooting procedures are provided in figure 11. To use these procedures, first locate the problem description that best describes the trouble that you have encountered. Check the possible causes one at a time in the order that they are listed. Correct any problems that are found and operate the grass catcher again to verify that you have eliminated the trouble.

Problem	Cause/Remedy
<p>1. Grass or leaves not being completely picked up.</p>	<p>A. Engine speed too slow. Run at 2/3 to full throttle.</p> <p>B. Ground speed too fast. Use low gear.</p> <p>C. Mower drive belt oily or worn. Clean or replace belt as necessary.</p> <p>D. Intake tube plugged. Stop engine and remove key. Then remove and unplug intake tube.</p> <p>E. Using wrong mower blade. Install blade with lift plates supplied with grass catcher (5 h.p. models) or install lift plates supplied (8 h.p. models).</p>
<p>2. Grass catcher intake tube or mower plugs easily.</p>	<p>A. Grass or leaves too wet. Wait for drier conditions.</p> <p>B. Grass too high. Reduce riding mower ground speed, reduce cutting width or raise mower adjustment for the first pass, lower it for the second pass.</p> <p>C. Bag is full of cut grass. Empty bag.</p> <p>D. Using wrong mower blade. Install blade with lift plate supplied with grass catcher (5 h.p. models) or install lift plates supplied (8 h.p. models).</p> <p>E. Build-up of cut grass in mower or adapter. Clean thoroughly.</p>

Figure 11

Assembly

CONTENT OF SECTION

To be ready for installation, some parts of the grass catcher attachment must first be assembled. This section contains the necessary instructions for assembling the grass catcher intake tube, cover, and bag. Only parts and hardware shipped with the grass catcher attachment should be used to complete the instructions in this section.

ASSEMBLING GRASS CATCHER INTAKE TUBE

To assemble the grass catcher intake tube proceed as follows:

1. Roll the polyethylene material into a tube (item A, figure 12), aligning the holes as shown.
2. Place a plain washer (item C) on one of the 1/2 inch (13 mm) long screws (item B) and insert the screw through aligned holes in tube from the inside.
3. Secure the screw with another washer, internal tooth lockwasher (item D), and nut (item E).
4. Repeat steps 2 and 3 for the remaining eight holes in the intake tube.

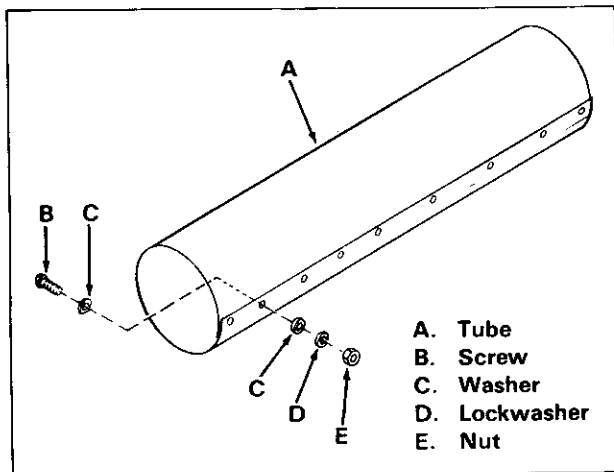


Figure 12

ASSEMBLING GRASS CATCHER COVER

Four clips have to be installed on the cover to hold the cover to the grass catcher support frame. Install these clips as shown in figure 13, using 1/2 inch (13

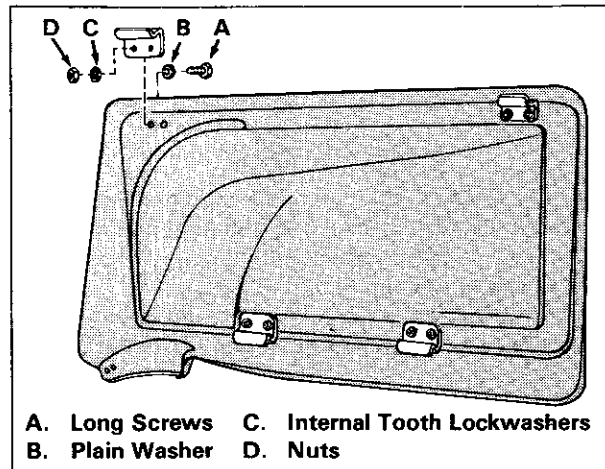


Figure 13

mm) long screws (item A), plain washers (item B), internal tooth lockwashers (item C), and nuts (item D).

ASSEMBLING GRASS CATCHER BAG

The bag for the grass catcher attachment must be assembled onto the bag support frame. With the zipper completely open, insert the vertical posts of the support frame through the two openings in the bag as shown in figure 14. Then fold the zipper edges together over the support frame and zip bag completely closed.

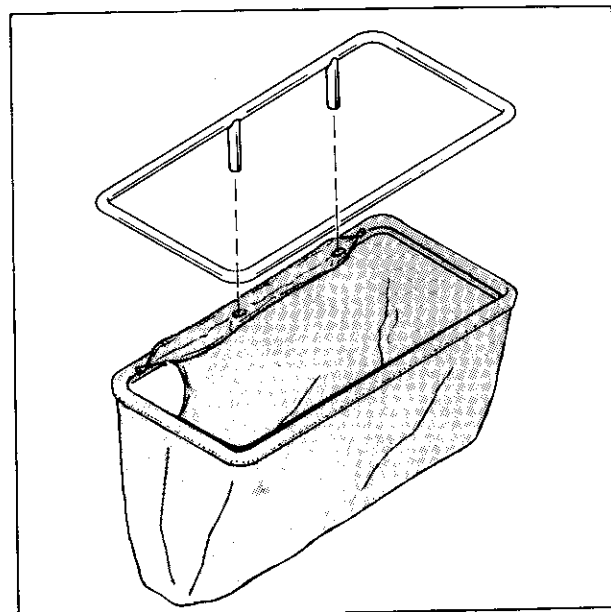


Figure 14

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