

HONDA

Power

Equipment

OPERATOR'S MANUAL

MULCHING KIT

for the

HRC7013ZXA and HRC7113TXA
MID-SIZED COMMERCIAL MOWER

with the

CD7048 (48") and CD7148 (48")
MOWER DECK

HONDA DEALER: PLEASE GIVE THIS PUBLICATION TO YOUR CUSTOMER

Thank you for purchasing a mulching kit for your Honda HRC7013ZXA/HRC7113TXA Commercial Mower.

This manual covers the operation, maintenance, and installation of the mulching kit. For your convenience, this manual also includes a parts description guide, and warranty service information.

Before installing or operating this equipment, read this operator's manual and the owner's manual supplied with the mower.

As you read this manual, you will find information preceded by a **NOTICE** symbol. That information is intended to help you avoid damage to your mulching kit, other property, or the environment.

The information in this operator's manual is limited in application to the Mulching Kits when installed and used on HRC7013ZXA and HRC7113TXA commercial mowers with the CD7048 (48") and CD7148 (48") mower decks respectively.

Left and right sides of this unit are determined from the operator's position on the mower, facing the direction of forward travel.

This manual is a permanent part of the mulching kit and must stay with it if resold.

All the information in this publication is based on the latest product information available at the time of printing. American Honda Motor Co., Inc. reserves the right to make changes at any time without notice and without incurring any obligation.

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A FEW WORDS ABOUT SAFETY

Your safety and the safety of others are very important. And using this mulching kit safely is an important responsibility.

To help you make informed decisions about safety, we have provided operating procedures and other information on labels and in this manual. This information alerts you to potential hazards that could hurt you or others.

Of course, it is not practical or possible to warn you about all the hazards associated with operating a mulching kit. You must use your own good judgement.

You will find important safety information in a variety of forms, including:

- **Safety Messages**—preceded by a safety alert symbol  and one of the following three words: **DANGER, WARNING, or CAUTION.**

These words mean:

DANGER

You **WILL** be **KILLED** or **SERIOUSLY HURT** if you don't follow instructions.

WARNING

You **CAN** be **KILLED** or **SERIOUSLY HURT** if you don't follow instructions.

CAUTION

You **CAN BE HURT** if you don't follow instructions

- **Safety Headings**—such as **IMPORTANT SAFETY INFORMATION**
- **Safety Sections**—such as **MULCHING KIT SAFETY**
- **Instructions**—how to install this mulching kit correctly and safely.

This entire manual is filled with important safety information—please read it carefully.

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BEFORE OPERATION

GENERAL

For your safety, and to prolong the service life of your equipment, always inspect the mulching kit parts before each use. Perform the *Before Mowing* checks listed in the mower's manual.

CHECK MOWING AREA

For your safety and the safety of others, always inspect the area before mowing.

Objects

Anything which can be picked up by the mower is a potential hazard to you and others. Always remove any large debris from the mowing area.

Remove motor vehicles or other objects from the mowing area to prevent them from getting damaged.

People and Pets

People and animals near the mowing area can move into your path. Clear the area of pets and people, especially children. Their safety is your responsibility.

PROTECTIVE CLOTHING

Be sure to wear protective clothing such as long pants and eye protection which can lower your risk of injury. Wear footwear that protects your feet. Wear ear protection to protect your hearing.

Do not wear loose fitting clothing, jewelry, scarves, ties, etc., which may get caught in moving parts. Tie up or restrain long hair.

Wear a dust mask when mowing in dusty conditions.

INSPECT THE MULCHING KIT

Park the mower on a flat, level surface. Turn the ignition switch key OFF, and remove the ignition key. Move the blade control lever OFF. Put on heavy gloves when working around the blades

Inspect the blades as described in the mower's owner's manual. Inspect the nuts, bolts and other hardware on the mulching kit.

IMPORTANT SAFETY INFORMATION

Before operating the mower with the mulching kit installed for the first time, please review the safety information in the mower owner's manual, and the previous chapter of this manual, *BEFORE OPERATION*.

For your safety, avoid starting or operating the mower's engine in an enclosed area such as a garage. When running, the mower's engine exhaust produces poisonous carbon monoxide gas which can collect rapidly in an enclosed area and cause illness or death.

The following precautions are suggested to help prevent accidents. A careful operator is the best operator. Most accidents can be avoided by observing certain precautions. Read the following precautions before operating the mower to help prevent accidents. Equipment should be operated only by those who are responsible and instructed to do so.

Operation

- Read the mower owner's manual carefully. Be thoroughly familiar with the controls and proper use of the mower. Know how to stop the mower and disengage the controls quickly.
- Refer to the mower owner's manual for detailed instructions on starting the engine and parking.
- If you strike a foreign object, move the blade control lever to OFF, and shut the engine OFF. Inspect for and repair any damage before operating the mower again.

MULCHING TIPS

Cutting Height

For best mulching performance, adjust the cutting height so the front is one position higher than the rear.

A cutting height setting of 2 inches is appropriate for most lawns during cool weather. A higher cut may be needed to protect the lawn during hot summer months. Consult a local nursery or lawn and garden center for advice about specific types of grasses and growing conditions in your area. Most grasses should be cut when they have grown to 1 inch above the recommended height. If your grass gets too tall, cut it back a little at a time, allowing a few days for the grass to recover between mowings. Avoid cutting more than one third of total grass height in any one mowing.

For best mulching results, mow the lawn frequently enough that you will need to cut off less than one inch. Frequent mowing, with light cuts, makes it easier for your mulching mower to turn grass clippings into fine particles that will fall through the turf and decompose quickly.

The 1/3 Rule

For best mulching results, no more than 1/3 of the grass blade should be cut off at one time. More than one cut may be required to follow this rule.

Cutting Width

For an even lawn finish, overlap each mowing swath by a few inches. If the grass is very tall or thick, use more overlap and a narrower mowing swath. If clogging or clumping occurs, you may also need to mow more slowly or raise the cutting height setting.

OPERATION

Blade Speed

For best performance, the blades must spin very fast. Always use the FAST throttle setting, and keep the engine running at or near maximum rpm. If you hear the engine speed decrease, mow more slowly, cut a narrower swath, or raise the cutting height setting.

Blade Sharpness

Keep the blades sharp. Sharp blades cut cleanly. Dull blades tear the grass, leaving shredded ends that turn brown.

Moisture

Always wait for wet grass to dry. Wet grass clippings will clog the mower deck and mulching blades, and collect in clumps on the lawn. If the soil is very dry, mowing can stir up a lot of dust. Besides being unpleasant to work in, too much dust will clog the air filter on the mower's engine. If dust is a problem, water your lawn the day before mowing. Mow when the grass dries, and the soil is still moist.

Mulching

Mulching cuts grass clippings and fallen leaves into fine particles that fall through the turf and decompose quickly. This returns nutrients to the soil and reduces the need for raking, bagging, and disposal. For best mulching results, mow the lawn frequently, cutting off less than one inch of grass each time. In growing season, you will probably need to mow the lawn twice a week. Heavy layers of leaves may be difficult to mulch. This mulching kit closes the discharge port in the mower deck in order to recirculate grass clippings through the special mulching blades. Periodically cleaning the accumulated grass clippings from the mower deck and lawn mower before using will help promote clipping recirculation.

Side-discharge or Bagging

For side-discharge or bagging operation, for best results you must remove mulching kit and install high-lift blades. (Page 18)

THE IMPORTANCE OF MAINTENANCE

Good maintenance is essential for safe, economical, and trouble-free operation.

To help you properly care for your mulching kit, the following pages include routine inspection procedures and simple maintenance procedures using basic hand tools. Other service tasks that are more difficult, or require special tools, are best handled by professionals and are normally performed by a Honda technician or other qualified mechanic.

WARNING

Improper maintenance, or failure to correct a problem before operation, can cause a malfunction in which you can be seriously hurt or killed.

Always follow the inspection and maintenance recommendations and schedules in this operator's manual and the owner's manual included with the power unit.

Remember that an authorized Honda servicing dealer knows your mulching kit best and is fully equipped to maintain and repair it.

To ensure the best quality and reliability, use only new, genuine Honda parts or their equivalents for repair and replacement.

Do not alter or modify the mulching kit. If you have any questions, contact your dealer.

MAINTENANCE

MAINTENANCE SAFETY

Some of the most important safety precautions follow. However, we cannot warn you of every conceivable hazard that can arise in performing maintenance. Only you can decide whether or not you should perform a given task.

WARNING

Failure to properly follow maintenance instructions and precautions can cause you to be seriously hurt or killed.

Always follow the procedures and precautions in this operator's manual and the owner's manual included with the power unit.

Safety Precautions

- Make sure the engine is off, blade control lever is in the OFF position and all moving parts have stopped before you begin any maintenance or repairs. This will eliminate several potential hazards:
 - **Carbon monoxide poisoning from engine exhaust.**
Be sure there is adequate ventilation whenever you operate the engine.
 - **Burns from hot parts.**
Let the engine and exhaust system cool before touching.
 - **Injury from moving parts.**
Do not run the engine unless the instruction tells you to do so. Even then, keep your hands, fingers, and clothing away. Do not run the engine when any protective guard or shield is removed.
- Read the instructions before you begin, and make sure you have the tools and skills required.
- To reduce the possibility of fire or explosion, be careful when working around gasoline. Use only a nonflammable solvent, not gasoline, to clean parts. Keep cigarettes, sparks, and flames away from all fuel-related parts.

MAINTENANCE ITEMS

BLADES

Inspect, check bolt tightness, remove, sharpen, or replace the blades as described in the owner's manual supplied with your mower. Always complete these steps before working around the mower blades:

1. Move the blade control to OFF.
2. Turn the ignition switch to OFF and remove the key.
3. Disconnect the spark plug cap.

When installing the blades, always use a torque wrench to tighten the bolts:

Blade Bolt Torque: 88-102 N•m (65-75 ft. lbs.)

Cleaning

Follow the guidelines in the owner's manual supplied with your mower to clean the mower deck.

INSTALLATION

THE IMPORTANCE OF INSTALLATION

For Your Safety

Proper installation is essential to your safety and the reliability of the machine. Any error or oversight while installing the mulching kit can result in faulty operation, damage to the machine, or injury to others.

WARNING

Improper installation can create an unsafe condition that can cause you or others to be seriously hurt or killed.

Follow the procedures and precautions in installation instructions and shop manuals carefully.

For Your Safety

Some of the most important general service safety precautions are given below. However, we cannot warn you of every conceivable hazard that can arise in performing this installation. Only you can decide whether or not you should perform a given task

WARNING

Failure to properly follow installation instructions and precautions can cause you to be seriously hurt or killed.

Follow the procedures and precautions in this manual carefully.

Important Safety Precautions

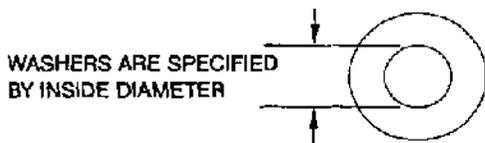
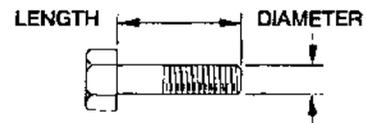
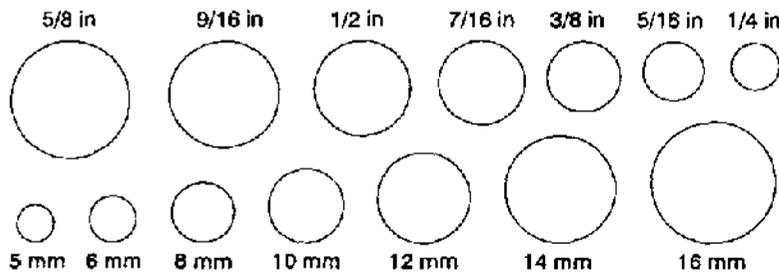
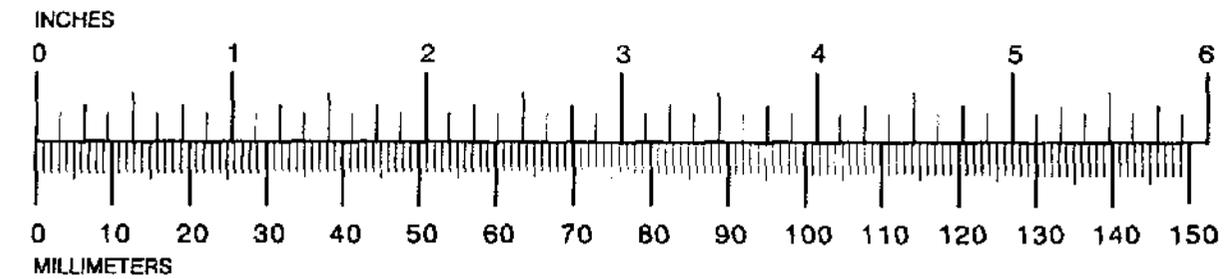
- Make sure you have a clear understanding of all basic shop safety practices and that you are wearing appropriate clothing and using safety equipment. When performing any service task, be especially careful of the following:
 - Read all the instructions before you begin and be sure you have the tools, the replacement or repair parts, and the skills required to perform the tasks safely and completely.
- Make sure the engine is off before you begin any servicing procedures, unless the instruction tells you to do otherwise. This will help eliminate several potential hazards:
 - Carbon monoxide poisoning from engine exhaust.**
Be sure there is adequate ventilation whenever you run the engine.
 - Burns from hot parts.**
Let the engine and exhaust system cool before touching.
 - Injury from moving parts.**
Do not run the engine unless the instruction tells you to do so. Even then, keep your hands, fingers, and clothing away. Do not run the engine when any protective guard or shield is removed.
- To reduce the possibility of a fire or explosion, be careful when working around gasoline or batteries. Use only a nonflammable solvent, not gasoline, to clean parts. Keep all cigarettes, sparks, and flames away from all fuel-related parts.

TORQUE VALUES

NUT AND BOLT DIAMETER	TORQUE VALUES		
	N·m	kg-m	ft-lb
3/8" x 3/4" Hex Head Bolt & 3/8" Flange Nut	45	4.6	33
Blade Bolt	88-102	9.0-10.4	65-75

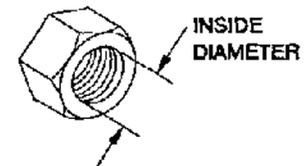
HARDWARE MEASURING CHART

How to measure hardware and components:



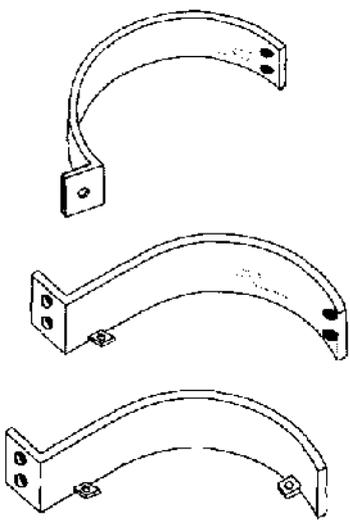
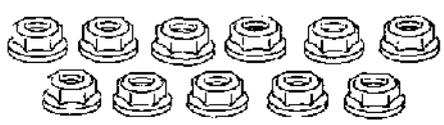
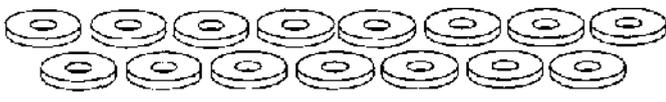
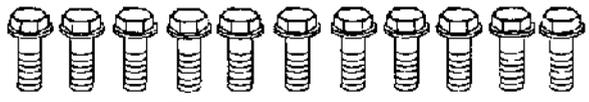
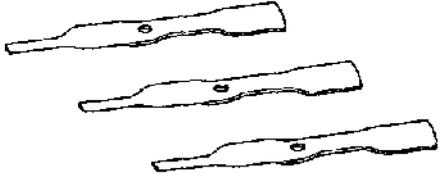
WASHERS ARE SPECIFIED BY INSIDE DIAMETER

NUTS ARE SPECIFIED BY INSIDE DIAMETER (AT THREAD DEPTH)



INSTALLATION

PARTS LIST

CD7048/CD7148 (48") Mulching Kit			
Illustration	Description	Qty	Part Number
	Swirl Guide "C"	1	These parts are not available separately from American Honda.
	Swirl Guide "B"	1	
	Swirl Guide "A"	1	
	3/8" Flange Nut	11	*
	7/16" Flat Washer	15	*
	3/8" x 3/4" Hex Bolt	11	*
	Mulching Blades	3	72511-VE4-840
	5/16" Mulching Collar	3	91568-VE4-840
	1/16" Spacer	3	72737-VE4-830

* Commercially Available

CHECK SPINDLE TYPE (HRC7013 only)

The HRC7013 uses two types of spindles, either **cast iron** or **aluminum**. Different hardware is used on each style of spindle, so you need to identify which type is used on your mower deck.

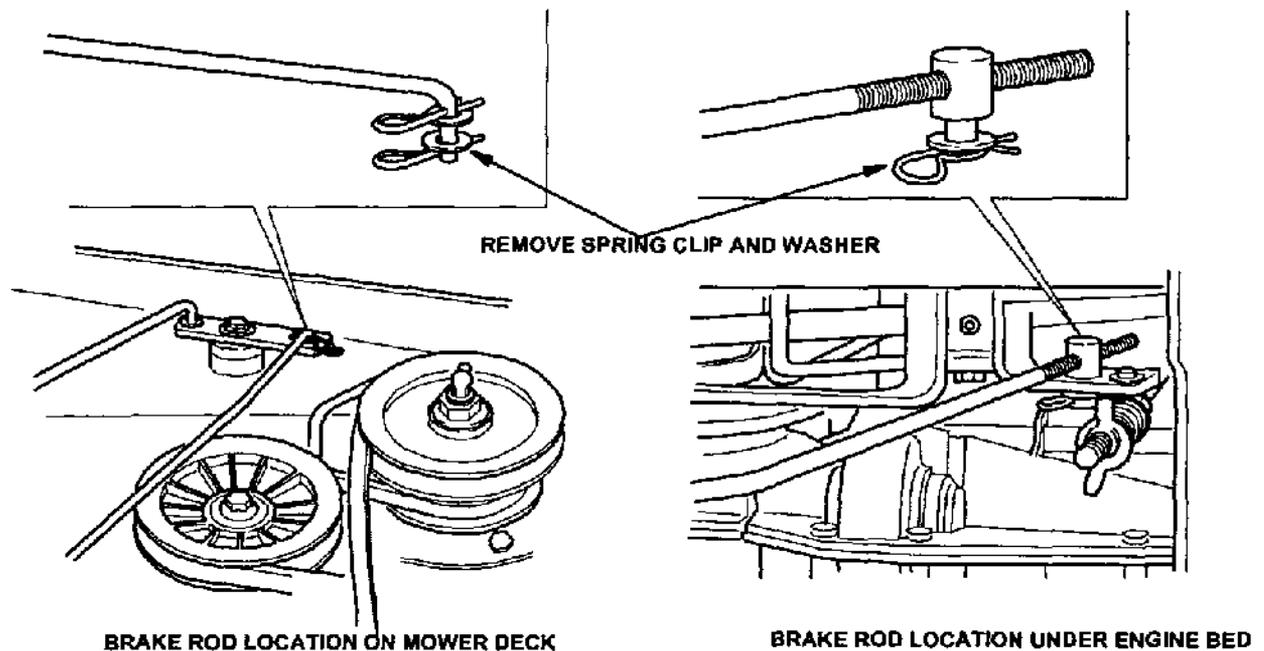
1. Remove the belt cover from the top of the mower deck. Cast iron spindles have grease (Zerk) fittings on the top of the spindle shaft, while aluminum spindles do not.

REMOVE MOWER DECK

HRC7013 (hydrostatic drive): Follow the instructions in the power unit owner's manual or the HRC7013 shop manual and remove the mower deck from the power unit. When the mower deck is removed, skip ahead to *Install Mulching Kit* on page 13.

HRC7113 (TruGear™): Use the following procedure.

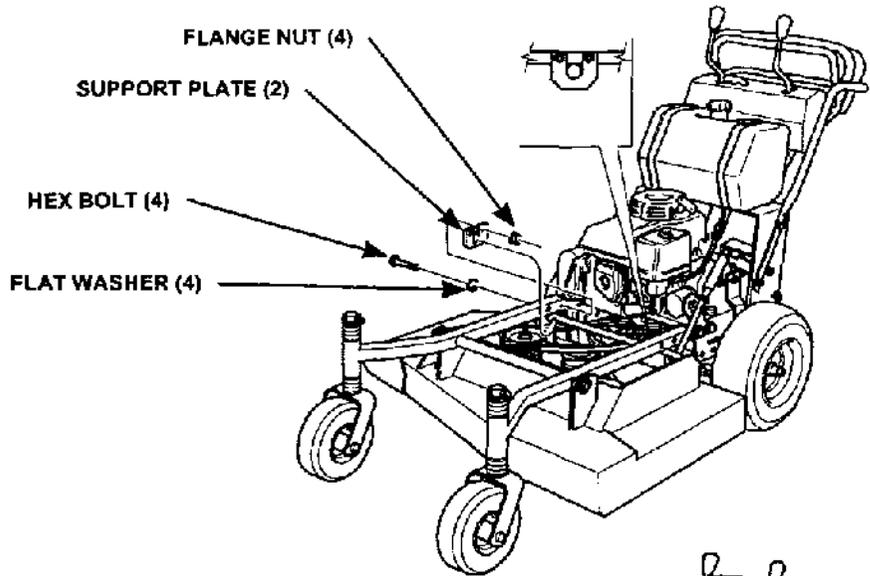
1. Park the unit on a flat, level surface. Move the blade control lever to OFF, put the transmission in NEUTRAL, turn the engine switch to OFF and remove the key. Disconnect the spark plug cap to prevent accidental starting. Remove the belt cover. Remove the three spring clips and flat washers from both ends of the brake rod. Remove the brake rod



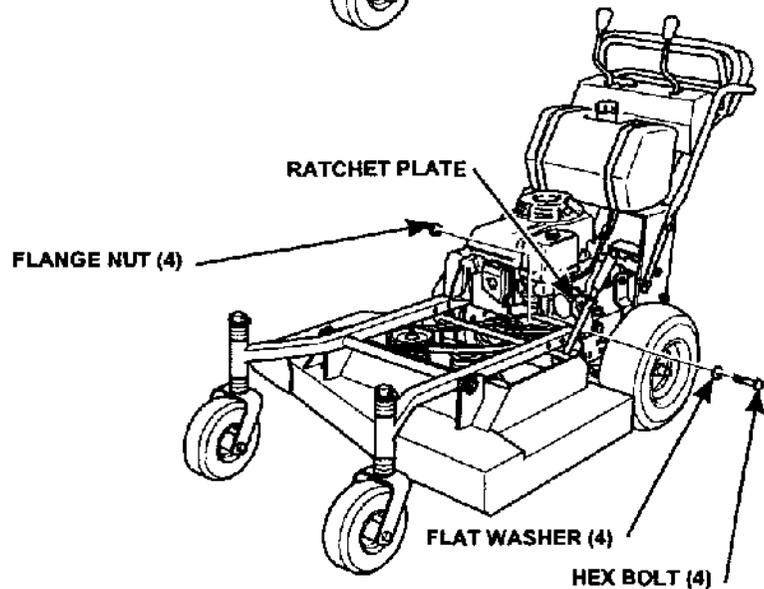
INSTALLATION

- Support the front and rear of the mower deck with a suitable block of wood. Turn the front wheels as shown to provide room to move the deck when it is removed.

Remove the four bolts from the two rear support plates. Remove the two plates.



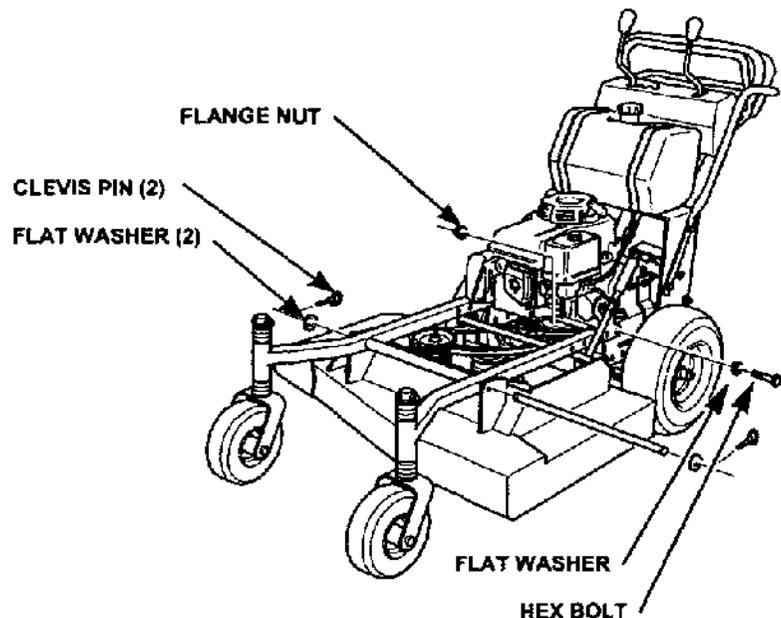
- Remove the front bolt, washer and nut from the height adjustment ratchet plate.



- Remove the rear bolt, washer and nut from the height adjustment ratchet plate.

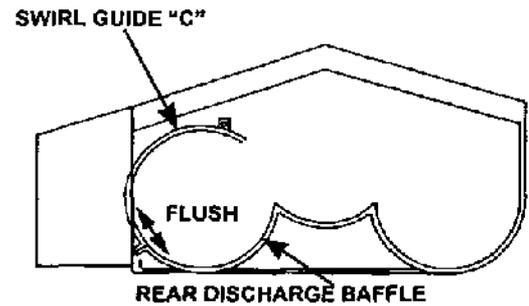
Remove the clevis pin and flat washer from one side of the front attachment rod. Remove the rod from the mower deck and frame.

- Remove the mower deck belt from the engine crankshaft pulley.

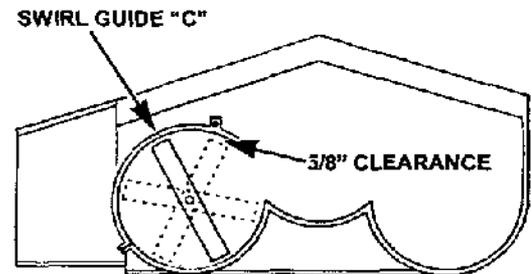


INSTALL MULCHING KIT

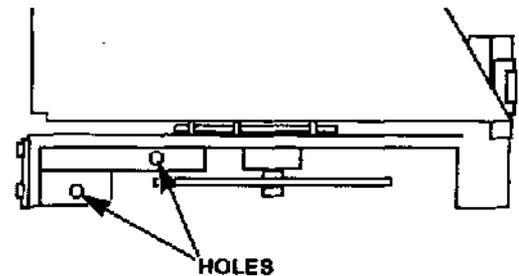
1. Turn the mower deck upside down. Temporarily set swirl guide C into the mower deck on the discharge side.



2. Align swirl guide C so the bend in swirl guide C is flush with the bend in the rear discharge baffle.
3. Adjust swirl guide C so there is approximately 5/8" from the blade tip to the inside edge of the swirl guide.
4. Rotate the blade tip to make sure there is approximately 5/8" clearance through the entire arc of blade movement.

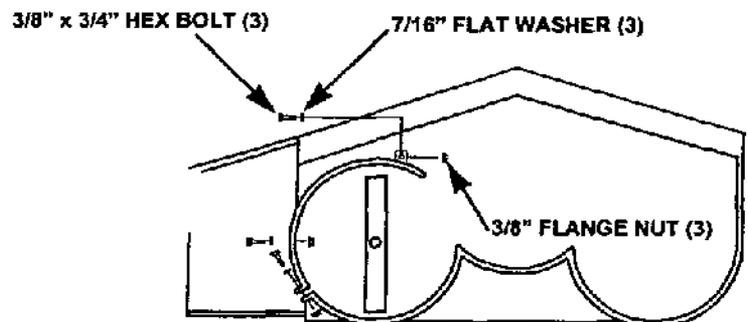


5. Using a pencil or scribe, mark the three locations for drilling. Some mower decks have pilot holes and will not require scribing.
6. Remove swirl guide C and the right side blade (nearest the discharge guard).
7. Wear eye protection when drilling. Center punch and drill the three marked locations. Drill the holes into the rear discharge baffle first.



- Use a 7/16" inch drill bit
- Remove burrs from drilled holes

8. Install swirl guide C using three 3/8" x 3/4" hex head bolts, three 7/16" flat washers and three 3/8" flange nuts. **Do not tighten.**



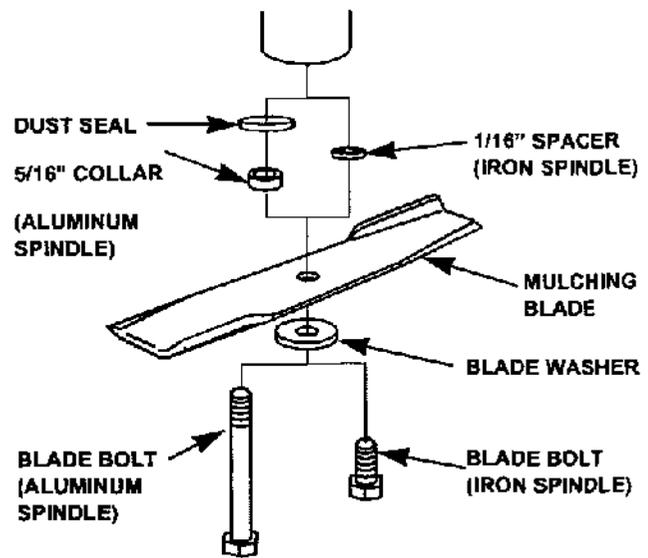
INSTALLATION

9. Install the mulching blade with appropriate spacer or collar on the far right blade spindle. Wear gloves while handling the blade. Retain the original spacer for mulch kit removal.

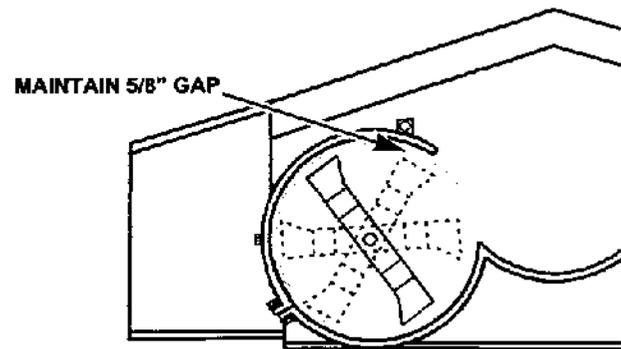
For cast iron spindles, use the 1/16" spacer.

For aluminum spindles, use the 5/16" collar, and the dust seal. The dust seal should have been installed per the HRC7013 Product Improvement Campaign (see *Commercial Mower Service Bulletin #14*).

Torque the blade bolt to 88-102 N·m (65-75 ft.-lbs.).

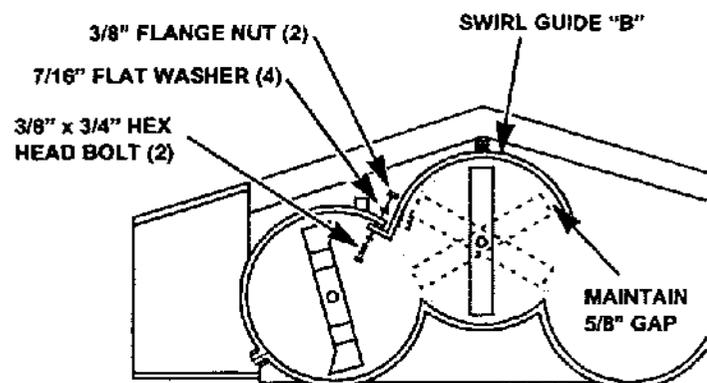


10. Tighten the swirl guide C three 3/8" x 3/4" hex head bolts while maintaining 5/8" spacing between blade tip and swirl guide C. Tighten bolts to 45 N·m (33 ft.-lbs.).



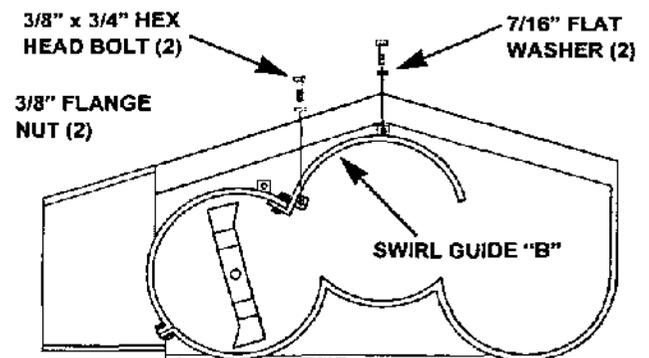
11. Attach swirl guide B to the inside of swirl guide C using two 3/8" x 3/4" hex head bolts, four 7/16" flat washers and two 3/8" flange nuts. Make sure swirl guide B is placed inside the curve of swirl guide C. Install bolts so the heads are on the inside curve.

12. Adjust swirl guide B so there is approximately 5/8" clearance between the blade tip and the front of swirl guide B. Make sure the 3/8" x 3/4" bolts connecting swirl guide B to C are tight.

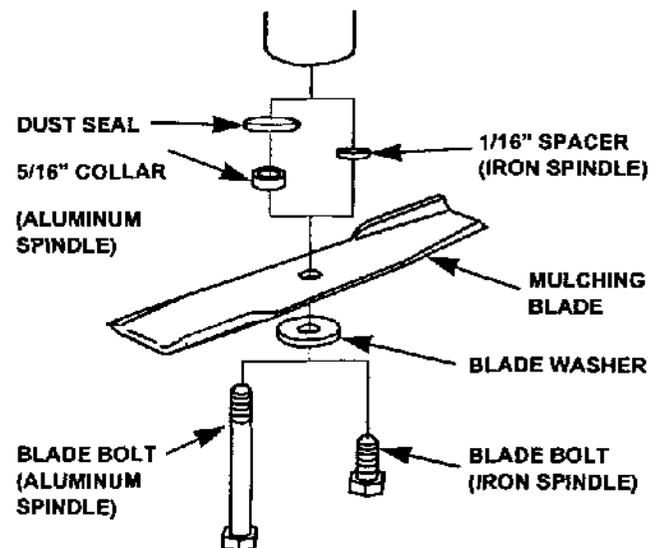


INSTALLATION

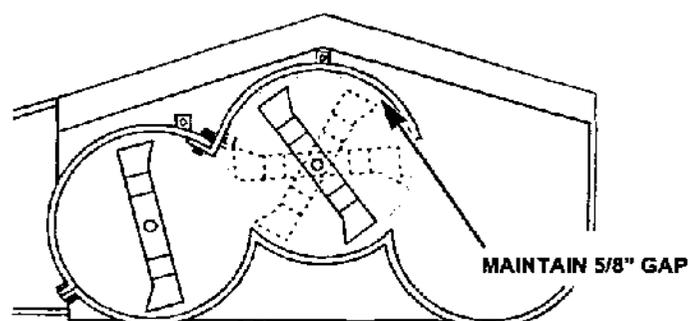
13. Scribe or pencil a mark at the locations for drilling the holes for swirl guide B. Some mower decks have pilot holes and will not require scribing.
14. Wear eye protection when drilling. Remove swirl guide B and the middle blade. Center punch and drill holes at the marked locations.
 - Use a 7/16" drill bit
 - Remove burrs from drilled hole
15. Install swirl guide B using two 3/8" x 3/4" hex head bolts, two 7/16" flat washers and two 3/8" flange nuts. **Do not tighten.**



16. Install mulching blade with the appropriate spacer or collar and tighten the blade bolt to 88-102 N•m (65-75 ft.-lbs.). Retain unused hardware.



17. Tighten swirl guide B, while maintaining the 5/8" clearance between swirl guide B and the blade tip. Tighten the four 3/8" x 3/4" hex head bolts to 45 N•m (33 ft.-lbs.). Make sure the mulching blades rotate freely without touching either swirl guide.



INSTALLATION

18. Attach swirl guide A to swirl guide B using two 3/8" x 3/4" hex head bolts, four 7/16" flat washers and two 3/8" flange nuts. Swirl guide A should be positioned so it fits inside the curve of swirl guide B, where the two swirl guides bolt together.

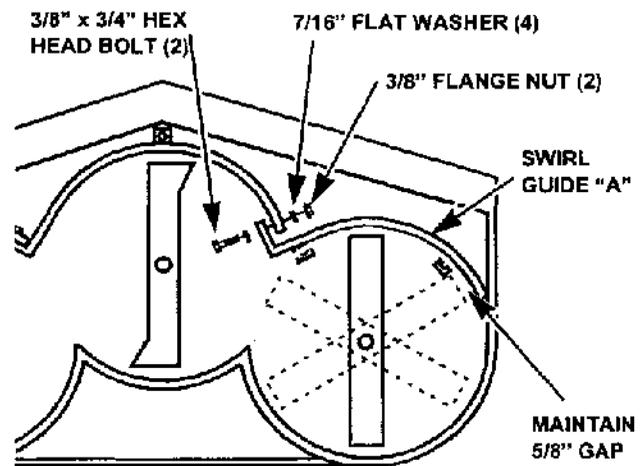
19. Adjust swirl guide A so there is approximately 5/8" clearance between the blade tip and swirl guide A through the entire arc of blade movement. Make sure the 3/8" x 3/4" bolts connecting swirl guide A to B are tight.

20. Scribe or pencil a mark at the locations for drilling holes for swirl guide A. Remove swirl guide A and the far left blade. Some mower decks have pilot holes.

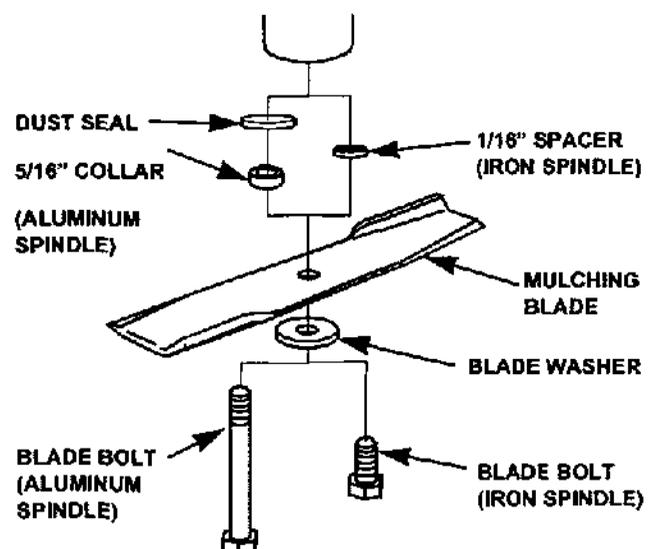
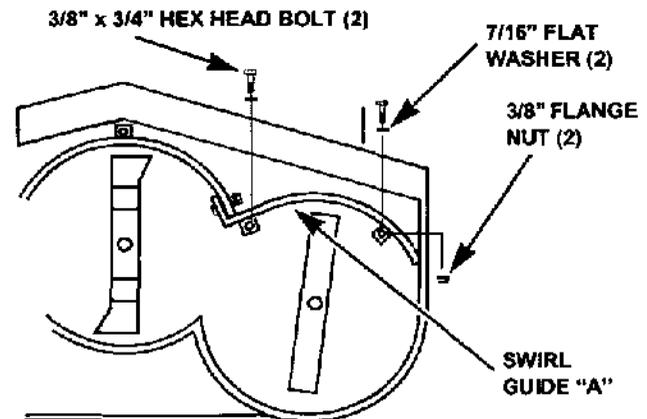
21. Wear eye protection when drilling. Center punch and drill the marked location.

- Use a 7/16" drill bit
- Remove burrs from drilled holes

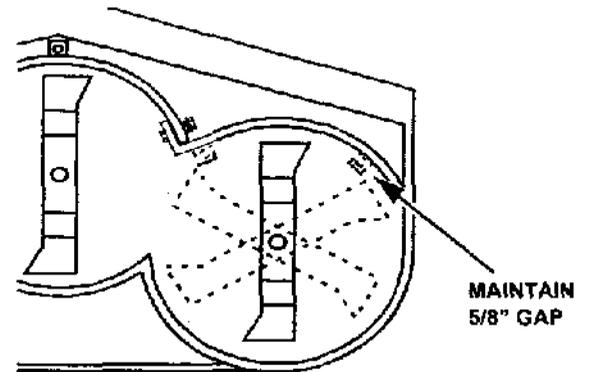
22. Install swirl guide A using two 3/8" x 3/4" hex head bolts, two 7/16" flat washers and two 3/8" flange nuts. **Do not tighten.**



23. Install the mulching blade with the appropriate collar or spacer and tighten the blade bolt to 88-102 N•m (65-75 ft. lbs.). Retain unused hardware.



24. Tighten the bolts for swirl guide A while maintaining 5/8" clearance between the inside of both swirl guide A and B and the blade lips. Torque the four 3/8" x 3/4" bolts to 43 N·m (31 ft. lbs.). Make sure all three blades rotate freely without touching the swirl guides.



25. Reattach mower deck to the power unit.

HRC7013: See the owner's manual for detailed mower deck installation instructions.

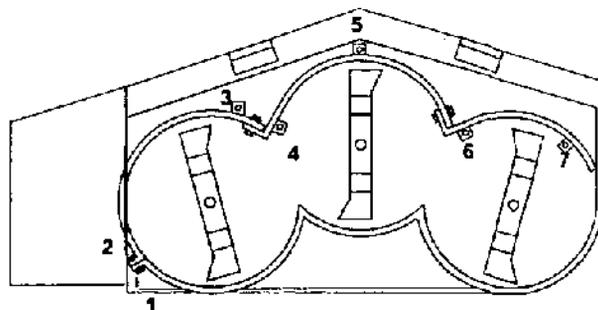
HRC7113: Installation is the reverse of removal; refer to the removal instructions on page 11.

REMOVAL

REMOVING THE MULCHING KIT

For side-discharge or for bagging grass, the mulching kit must be removed and the standard blades installed.

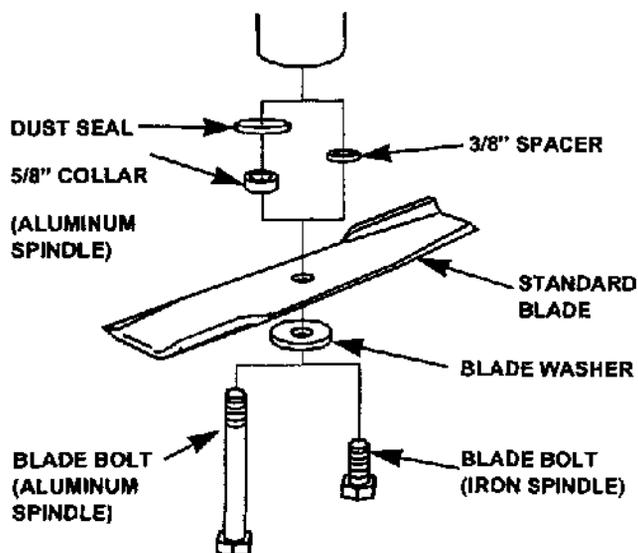
1. Raise and block the front end of the mower.
2. Remove the three mulching blades and the three collars or spacers.
3. Loosen and remove the seven 3/8" hex head bolts holding the three swirl guides to the deck. Loosen the bolts in the order shown.
4. Remove all three swirl guides as a single unit.



5. Install standard blades using the standard collars. Be sure to use the standard collars to maintain correct cutting height.

Torque the blade bolts to 88-102 N·m (65-75 ft.-lbs.).

6. Reposition the height adjusters to the same setting.



HONDA PUBLICATIONS

An owner's manual, shop manual and parts listing are available for your mower. Contact your authorized servicing Honda mower dealer to order any of these publications.

WARRANTY SERVICE INFORMATION

Honda Power Equipment dealership personnel are trained professionals. They should be able to answer any question you may have. If you encounter a problem that your dealer does not solve to your satisfaction, please discuss it with the dealership's management. The Service Manager or General Manager can help. Almost all problems are solved in this way.

If you are dissatisfied with the decision made by the dealership's management, contact the Honda Power Equipment Customer Relations Office.

You can write to:

American Honda Motor Co., Inc.
Power Equipment Division
Customer Relations Office
4475 River Green Parkway
Duluth, GA 30096-2565

Or telephone:

(770) 497-6400 weekdays, 8:30 a.m. - 5:00 p.m. EST

When you call or write, please provide us the following information:

- Serial number of your mower
- Name of the dealer who sold you the mower and mulching kit
- Name and address of the dealer who services your mower
- Date of purchase
- Your name, address, and telephone number
- A detailed description of the problem

Current customer service contact information:

United States, Puerto Rico, and U.S. Virgin Islands:

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American Honda Motor Co., Inc.
Power Equipment Division
Customer Relations Office
4900 Marconi Drive
Alpharetta, GA 30005-8847

Or telephone: (770) 497-6400 M-F, 8:30 am - 5:00 pm EST

When you write or call, please provide the following information:

- Model and serial numbers
- Name of the dealer who sold the Honda power equipment to you
- Name and address of the dealer who services your equipment
- Date of purchase
- Your name, address, and telephone number
- A detailed description of the problem

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