

HONDA

Riding Mower HT-R3009



OWNER'S MANUAL

Thank you for purchasing a Honda riding mower.

This manual covers the operation and maintenance of the Honda HT-R3009 riding mower, type SA (side discharge).

Honda Motor Co., Ltd. reserves the right to make changes at any time without notice and without incurring any obligation.

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This manual should be considered a permanent part of the riding mower and should remain with the riding mower when sold.

Pay special attention to statements preceded by the following words:

WARNING: Indicates a strong possibility of severe personal injury or loss of life if instructions are not followed.

CAUTION: Indicates a possibility of personal injury or equipment damage if instructions are not followed.

NOTE: Gives helpful information.

If a problem should arise, or if you have any questions about the riding mower, consult an authorized Honda dealer.

WARNING: Honda riding mowers are designed to give safe and dependable service if operated according to instructions. Read and understand the Owner's Manual before operating the Riding Mower. Failure to do so could result in personal injury or equipment damage.

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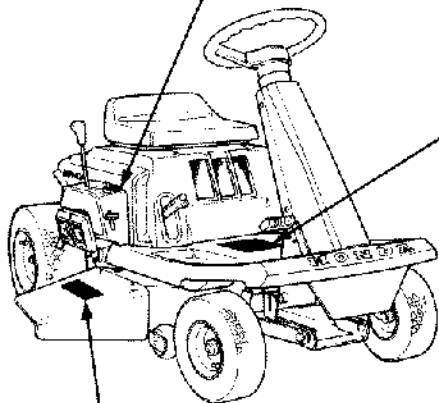
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1. WARNING LABEL LOCATIONS

WARNING

PARKING BRAKE MUST BE RELEASED WHEN WARNING BUZZER SOUNDS TO AVOID POSSIBLE BRAKE FAILURE.



WARNING

- KEEP HANDS AND FEET AWAY FROM MOWER OR DISCHARGE GUARD WHILE BLADE IS TURNING.
- DO NOT OPERATE MOWER WITHOUT DISCHARGE GUARD.
- CLEAR LAWN OF DEBRIS AND OBJECTS.
- DO NOT MOW NEAR PEOPLE OR PETS. OBJECTS MAY BE THROWN FROM MOWER.

WARNING

KEEP HANDS AND FEET AWAY FROM ANY PART OF MOWER DECK WHILE BLADE IS TURNING.



WARNING

- READ OWNER'S MANUAL BEFORE OPERATING.
- OPERATOR ONLY. DO NOT CARRY PASSENGERS.
- MAXIMUM SAFE OPERATING ANGLE 10 DEGREES. (17% GRADE)

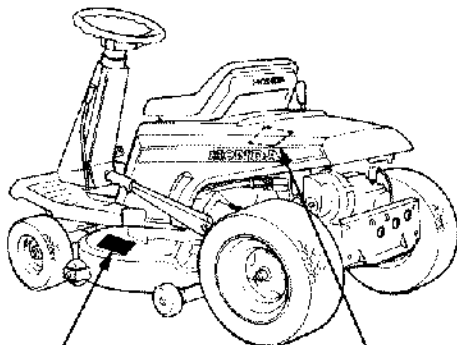


- REDUCE SPEED WHEN TURNING OR OPERATING ON SLOPES.
- STOP ENGINE BEFORE REMOVING GRASS CATCHER OR CLEANING DISCHARGE CHUTE.
- KEEP ALL SHIELDS AND SAFETY DEVICES IN PLACE.
- KEEP PEOPLE AND PETS AT A SAFE DISTANCE WHILE OPERATING.
- THIS RIDING MOWER IS NOT LEGAL FOR USE ON PUBLIC STREETS OR HIGHWAYS.

OPERATION

- | | |
|---|---|
| STARTING ENGINE | OPERATING |
| 1. MOVE PTO LEVER TO "OFF". | 1. DEPRESS BRAKE AND SHIFT TRANSMISSION SHIFT LEVER TO DESIRED SPEED RANGE. |
| 2. MOVE TRANSMISSION SHIFT LEVER TO "N". | 2. RELEASE BRAKE PEDAL TO START MOWER MOVING. |
| 3. MOVE THROTTLE LEVER TO "START (CHOKE)". | 3. RELEASE PARKING BRAKE. |
| 4. TURN IGNITION KEY TO "START" AND ALLOW ENGINE TO WARM UP. | STOPPING ENGINE |
| 5. SET THROTTLE LEVER BETWEEN  AND  . | 1. MOVE PTO LEVER TO "OFF" AND TRANSMISSION SHIFT LEVER TO "N". |
| | 2. SET PARKING BRAKE. |
| | 3. TURN IGNITION KEY TO "OFF". |

HONDA MOTOR CO., LTD. MADE IN JAPAN



WARNING

GASOLINE IS FLAMMABLE. STOP ENGINE, AVOID HEAT, SPARKS, AND OPEN FLAME WHEN REFUELING.

2. GENERAL SAFETY

RIDING MOWER SAFETY

WARNING Operating a riding mower requires special efforts on your part to ensure your safety and the safety of others. Know these requirements before you operate the riding mower.

SAFE OPERATING RULES

- Always make a pre-operation inspection (page 14) before you operate the riding mower; you may prevent an accident or equipment damage.
- All parts, especially guards and shields, should be in good condition, and securely fastened in place.
- Be sure all nuts, bolts and screws are tight; especially the blade mounting bolts.
- Do not remove any guards, warning labels, shields or safety devices; they are installed for your safety.
- Know how to stop the engine and blade quickly. Thoroughly understand operation of all controls.
- Never permit anyone to operate the riding mower without proper instructions.
- Do not allow passengers to ride on the mower or any of its attachments.
- Children should not be permitted to operate this riding mower.
- Because of the danger of carbon monoxide poisoning, do not run the engine indoors.
- To prevent serious injury, never put your hands or feet under the cutter deck.
- Do not operate the riding mower while barefoot. Wear sturdy shoes or boots and clothing that is not loose.

-
- Be alert. Do not operate the riding mower when you are tired, ill or under the influence of alcohol or drugs.
 - Mow only in daylight or good artificial light.
 - Watch out for and avoid rocks, roots, holes and other obstacles.
 - If you hit an object, stop and inspect the riding mower: fix any damage before you operate the mower again.
 - Replace damaged, worn or broken parts immediately.
 - Do not operate near the edge of a ditch or an embankment.

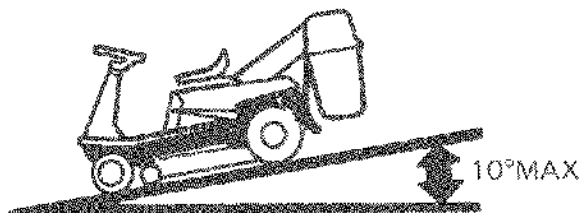
BEFORE MOWING

- Before mowing, always clear the lawn of stones, sticks or other debris. These objects could be thrown out by the spinning blade and cause an injury or equipment damage.
- Select a safe operating speed (gear position) for the area to be mowed. 5th gear should be used only while driving to and from the storage area.
- Always ensure that the area in front of and behind the riding mower is clear of people, pets and debris before starting.
- Be very careful when you operate the riding mower in Reverse.
- Do not mow in Reverse unless it is absolutely necessary.

OPERATION ON SLOPES

- This riding mower is intended for use on relatively flat terrain. Do not use on sloped surfaces exceeding 10 degrees (17% grade). This angle may be further reduced by the condition and type of surface.

Maximum safe operating angle



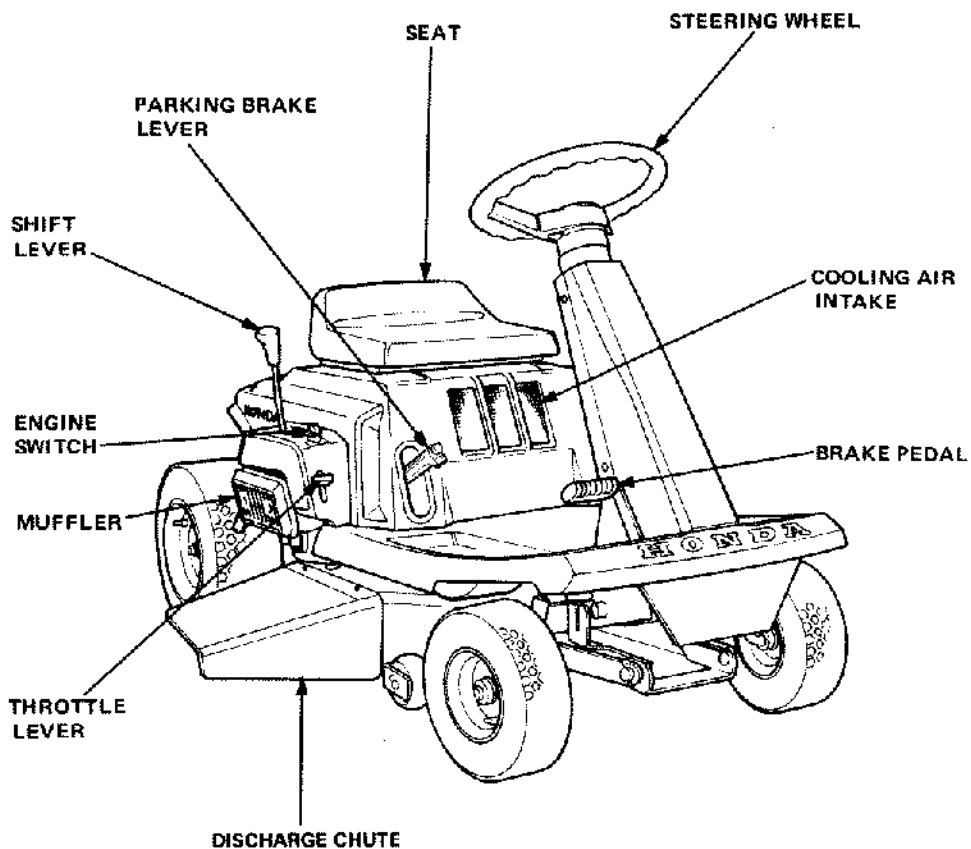
MAXIMUM 10° (17% GRADE)

-
- If mowing on a sloping surface, always drive up and down the face of the grade. Never turn or drive across the face of the slope.
 - To prevent loss of control or overturning, always reduce speed and exercise extreme caution when operating on sloping or uneven surfaces.
 - Avoid turning or stopping on sloping surfaces; see page 27 for special instructions.
 - Do not back down or rapidly accelerate up a sloping surface; see page 27 for special instructions.
 - When mowing on slopes, empty the grass bags when they are half full. On a slope, the weight of full bags may cause the mower to tip over.

CLEANING AND STORAGE

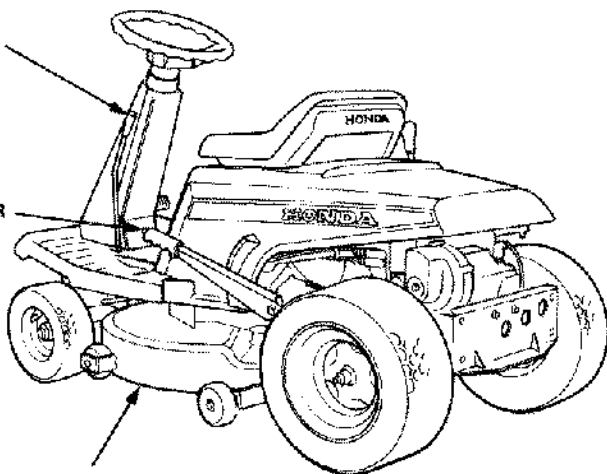
- Leaves, grass clippings, oil and other combustible materials can become a fire hazard. Be sure to keep the engine compartment, the upper cutter deck surfaces and the belt and pulley areas clean.
- Stop the engine before removing the grass bags or cleaning the discharge chute.
- Check the condition of the grass catcher bags frequently. For your safety, replace any bag that is worn or deteriorated.
- Always empty the grass catcher bags when mowing is completed. Damp, decomposing grass clippings generate heat and can become a fire hazard.
- To reduce the possibility of fire, allow the engine and exhaust system to cool before storing the mower in an enclosed space or near combustible materials.

3. COMPONENT IDENTIFICATION



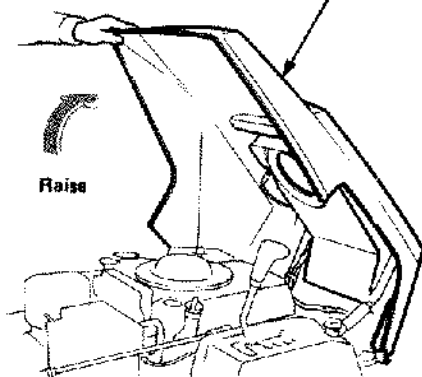
**POWER TAKE-OFF
(P.T.O) LEVER**

**DECK HEIGHT
ADJUSTING LEVER**



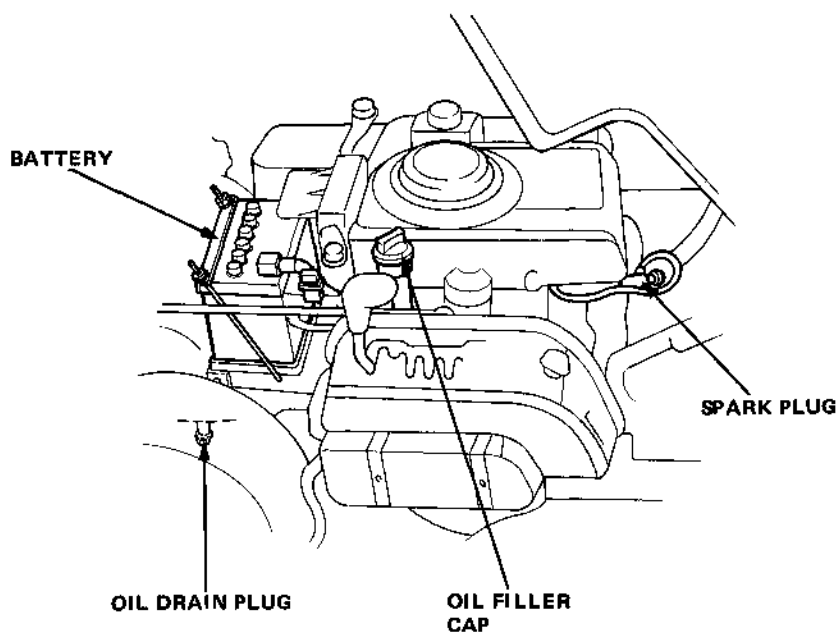
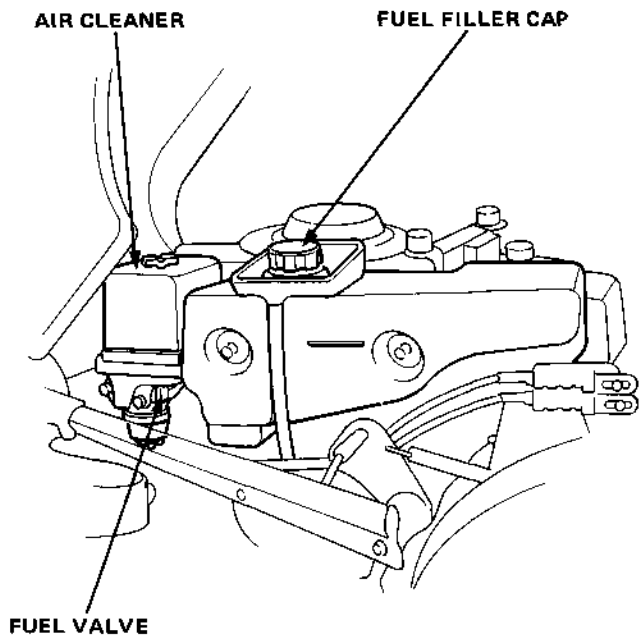
CUTTER DECK

REAR BODY



Raise

Engine compartment



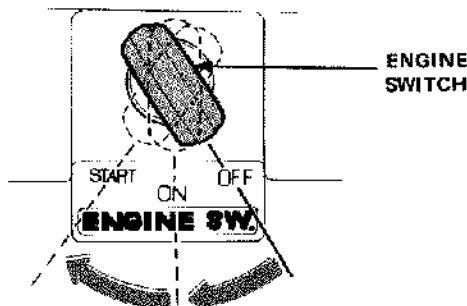
4. CONTROLS

1. Engine switch

WARNING Always remove the key from the engine switch whenever the riding mower is unattended to prevent children or unauthorized persons from starting the engine.

This riding mower is equipped with an automotive type ignition switch, which controls all the electrical circuits. The switch is located on the right-hand side in front of the gear shift lever.

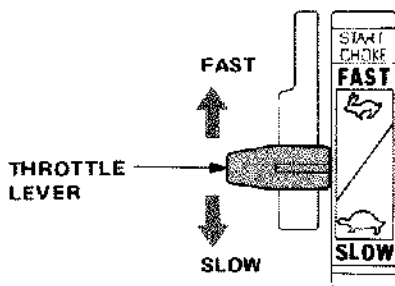
Key positions: "START" to start the engine
"ON" to run the engine after starting
"OFF" to stop the engine.



NOTE: The starter motor will not work unless the shift lever is in NEUTRAL and the P.T.O lever is in the OFF (Disengaged) position.

2. Throttle lever

The throttle lever controls engine speed from SLOW (idle) to FAST (max speed). START (CHOKE) is for starting a cold engine.

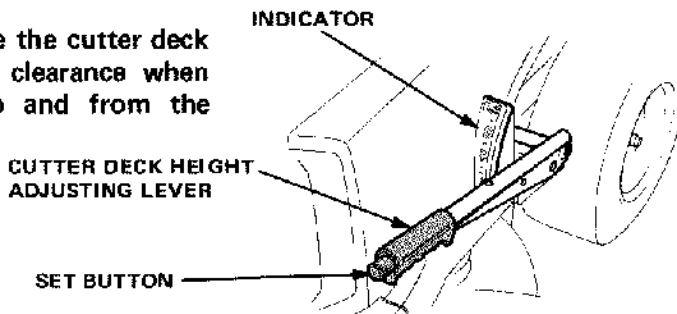


3. Cutter deck height adjusting lever

This lever is used for setting grass cutting height. To adjust the cutting height, press the set button, raise or lower the lever until the desired cutting height is indicated, and then release the set button.


Cutting height: 1, 1-½, 2, 2-½, 3, 3-½ in.

CAUTION: Fully raise the cutter deck for maximum ground clearance when driving the tractor to and from the mowing area.



4. Shift lever

This lever is used to select one of the five forward speeds, neutral, or reverse. The drive clutch automatically disengages while the lever is being moved. The clutch will then engage automatically when put into gear unless the brake pedal is depressed.

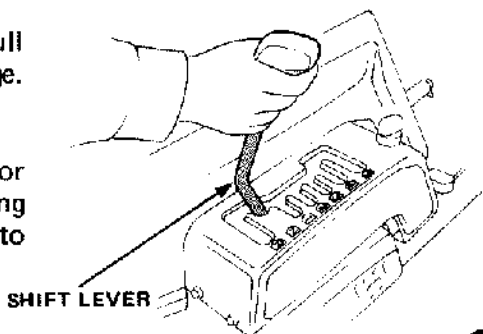
 Do not operate the shift lever on a slope.

CAUTION: Bring the riding mower to a complete stop before shifting from a forward speed to reverse, or from reverse to a forward speed. Shifting between forward and reverse speeds while the riding mower is moving can cause transmission damage.

When shifting from one forward speed range to another while moving, do not force the shift lever and do not shift up or down more than one slot at a time.

NOTE: The riding mower will pull away from a stop in any speed range. No shifting is necessary.

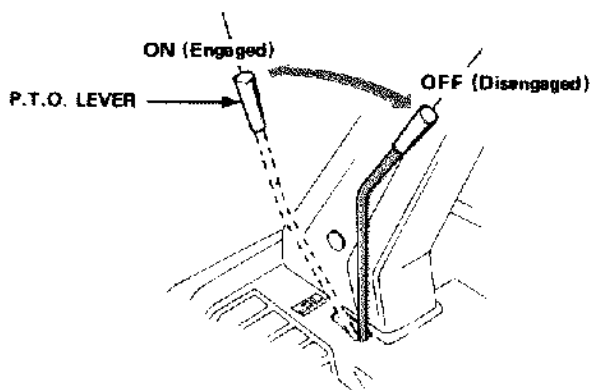
5th speed is not recommended for mowing but may be used for driving the riding mower from one area to another.



5. Power Take-Off (P.T.O.) lever

This lever engages and disengages the power take-off clutch to drive the blade.

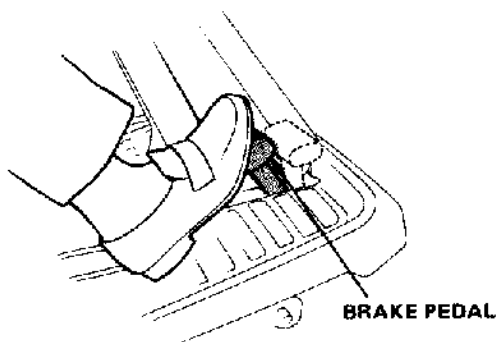
Lever positions: ON (Engaged) Blade turns
OFF (Disengaged) Blade stops



NOTE: An interlock switch prevents the engine from starting unless the P.T.O. lever is in the OFF position.

6. Brake pedal

Depressing the pedal will first disengage the riding mower drive clutch. As you continue to depress the pedal, the brake will be applied to stop the riding mower.



When the pedal is released, the clutch will engage automatically.

7. Parking brake lever

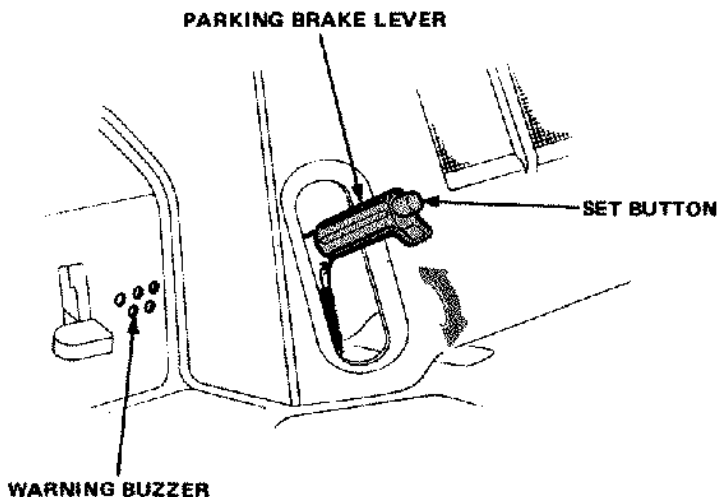
This lever is used to set the brake when the riding mower is parked. Pull the lever fully up until the ratchet locks.

NOTE: The parking brake lever does not operate the automatic clutch. Always put the transmission in neutral, or turn off the engine switch before setting the parking brake. A warning buzzer will sound if the parking brake is engaged while the transmission is in gear and the engine switch is ON.


CAUTION: When washing the riding mower, do not allow water to get into the warning buzzer holes.

To release, pull the lever up slightly and press the lever set button, lower the lever while holding the button in.

WARNING: Operating the riding mower with the parking brake set will result in severe damage to the brake lining, and could lead to a complete brake system failure.

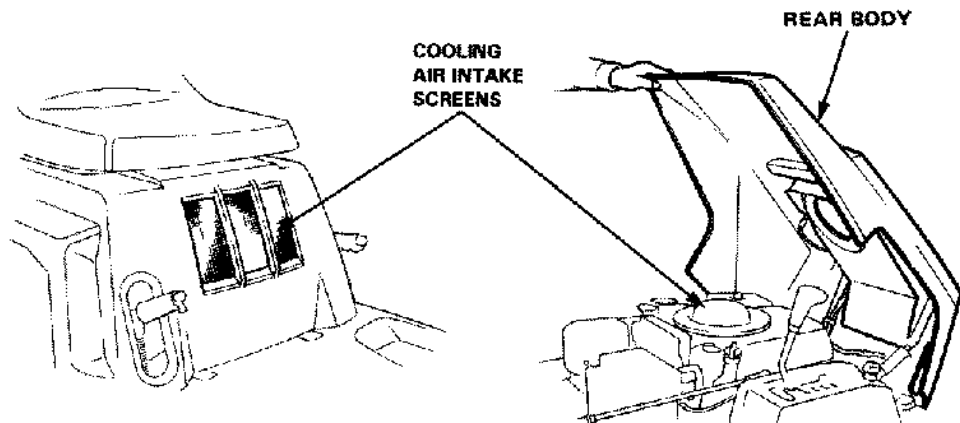


5. PRE-OPERATION CHECKS

 To prevent accidental start-up, remove the engine switch key, and disconnect the spark plug cap before performing the pre-operation inspection.

1. Make sure the cooling air intake screens are clean.

CAUTION: If the cooling air intake screens are blocked the engine may overheat.



2. Check the engine oil level

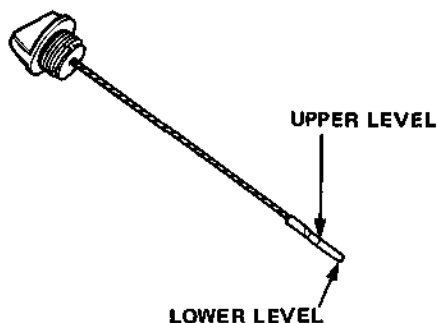
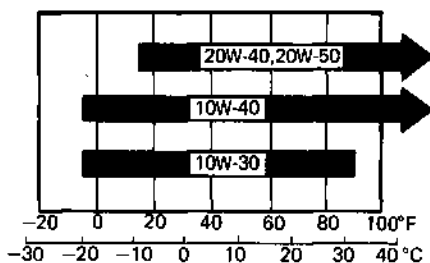
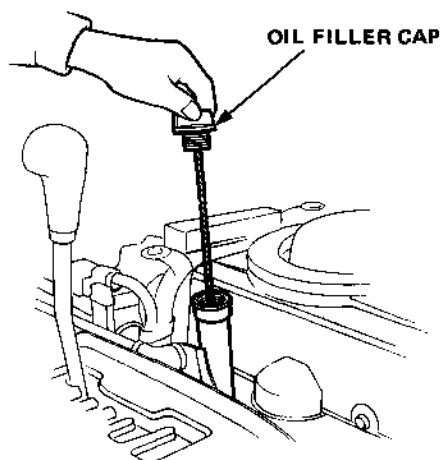
CAUTION:

- Engine oil is a major factor affecting engine performance and service life. Non-detergent oil and 2-stroke engine oil are not recommended.
- Running the engine with insufficient oil can cause serious engine damage.

- a. Place the riding mower on a level surface.
- b. Lift the rear body, wipe dust and dirt from around the oil filler cap, remove the cap and wipe the dipstick clean.
- c. Insert the dipstick into the oil filler neck, but do not screw it in.
- d. Check the oil level shown on the dipstick. If near or below the lower level mark, fill to the upper level mark with the recommended oil.

Use Honda 4-stroke oil, or an equivalent high detergent, premium quality motor oil certified to meet or exceed U.S. automobile manufacturers' requirements for service classification SE or SF (Motor oils classified SE or SF will show this designation on the container).

SAE 10W-40 is recommended for general, all-temperature use.



3. Check the fuel level

Raise the rear body and check the fuel level.

Refill the tank to the upper level mark if necessary.

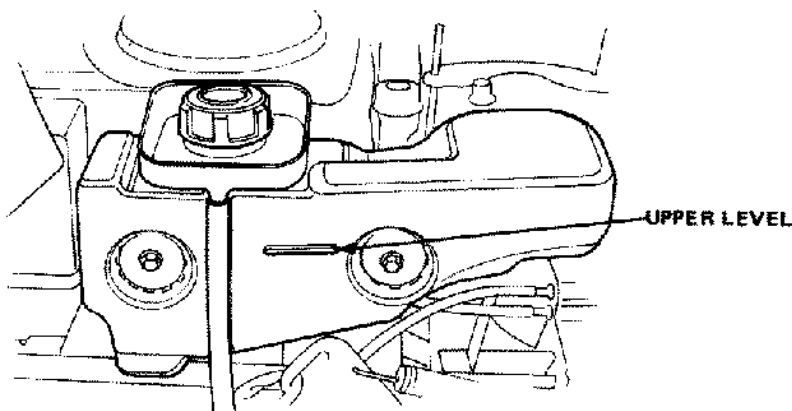
Use automotive gasoline with a pump octane number ($\frac{R + M}{2}$) of 86 or higher, or a research octane number of 91 or higher (unleaded is preferred to minimize combustion chamber deposits).

Never use an oil/gasoline mixture or dirty gasoline. Avoid getting dirt, dust or water in the fuel tank.

After refueling, be sure to tighten the fuel tank cap firmly.

CAUTION

- Gasoline is extremely flammable and explosive under certain conditions. Refuel in a well ventilated area with the engine stopped.
- Do not smoke or allow flames or sparks in the area where the riding mower is refueled or where gasoline is stored.
- Be careful not to spill fuel when refueling. Fuel vapor or spilled fuel may ignite. Wipe up any spilled fuel immediately, and make sure the area is dry before starting the engine.
- Do not overfill the tank. Fuel may expand and overflow. Make sure the filler cap is securely closed after refueling.



GASOLINES CONTAINING ALCOHOL

If you decide to use a gasoline containing alcohol ("gasohol"), be sure its octane rating is at least as high as that recommended by Honda. There are two types of "gasohol": that containing ethanol, and that containing methanol. Do not use gasohol that contains more than 10% ethanol. Do not use gasoline containing methanol (methyl or wood alcohol) that does not also contain cosolvents and corrosion inhibitors for methanol. Never use gasoline containing more than 5% methanol, even if it has cosolvents and corrosion inhibitors.

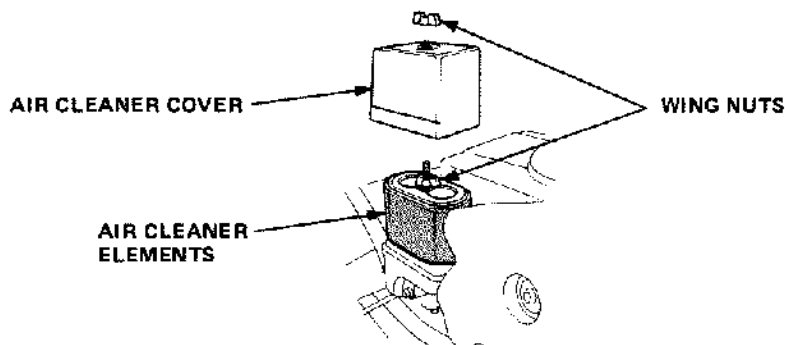
NOTE:

- Fuel system damage or engine performance problems resulting from the use of such fuels are not covered under Power Equipment Warranties. Honda cannot endorse the use of fuels containing methanol since evidence of their suitability is as yet incomplete.
- Before purchasing fuel from an unfamiliar station, try to confirm whether the fuel contains alcohol, and to what percentage. If you notice any undesirable operating symptoms after using a gasoline that contains alcohol, or one that you think contains alcohol, switch to a gasoline that you know does not contain alcohol.

4. Check the air cleaner elements

1. Raise the rear body.
2. Remove the two wing nuts to remove the air cleaner cover and air cleaner elements.

If the elements are dirty, follow the cleaning procedure described on page 38.

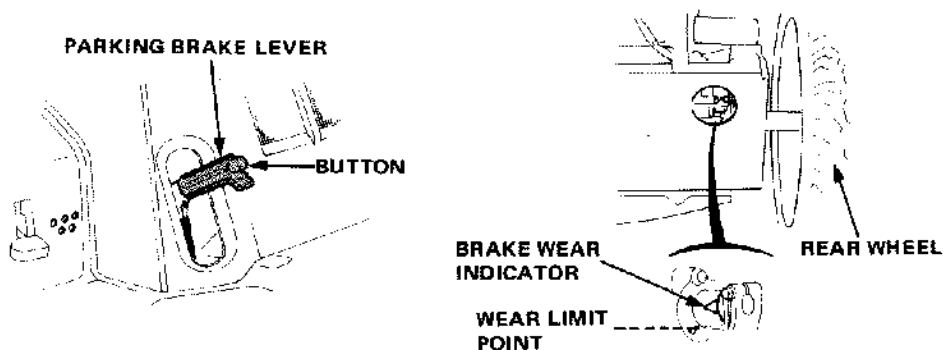


5. Check brake lining wear

Inspect brake lining condition every time the riding mower is used.

Firmly set the parking brake, and then check the position of the brake wear indicator. If the indicator is near the wear limit, take the riding mower to an Authorized Honda Power Equipment Dealer for repair.

CAUTION: Under no circumstances should the riding mower be operated if the brake lining is at the service limit.



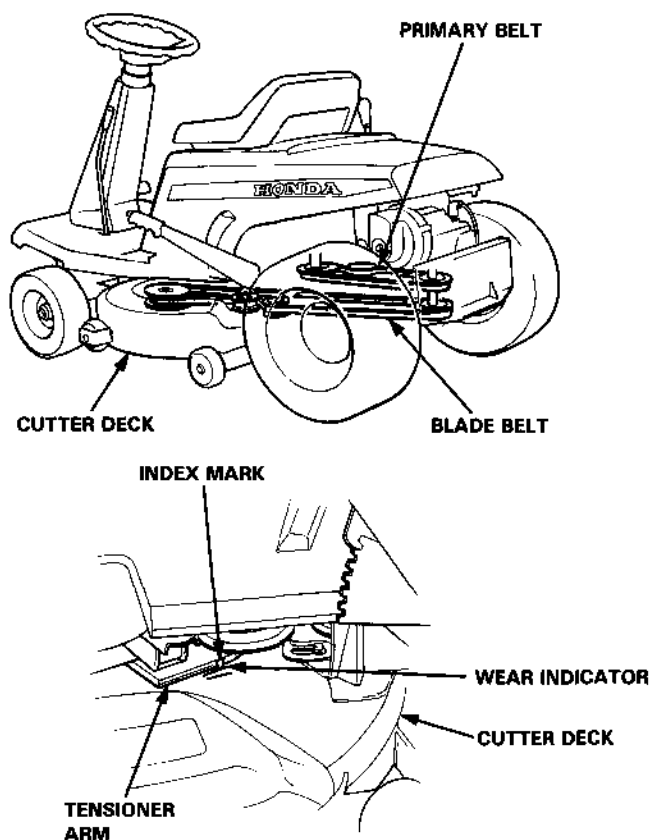
6. Primary belt and blade belt inspection

■ Wear or damage

1. Lower the cutter deck as far as it will go with the cutter deck height adjusting lever.
2. Inspect both belts for wear and damage. If the belts are worn or damaged, replace them according to the instructions on pages 44 and 45.

■ Blade belt tension

1. Move the P.T.O. lever to the ON (Engaged) position.
2. Raise the cutter deck as far as it will go with the cutter deck height adjusting lever.
3. If the index mark on the tensioner arm aligns with or goes inward past the wear indicator on the cutter deck, adjust the belt tension according to the instructions on page 44.

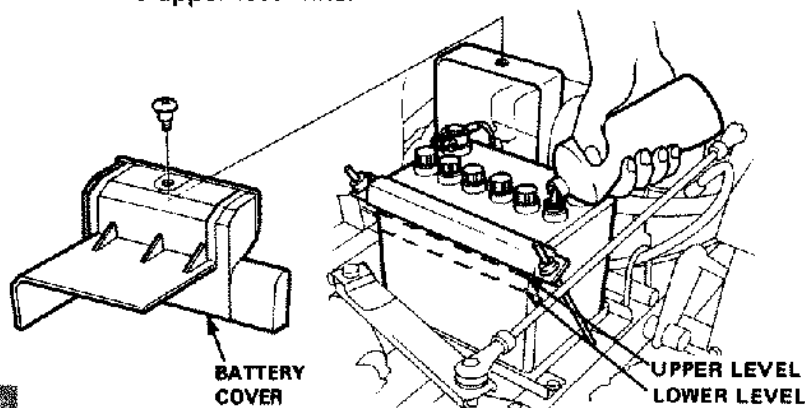


7. Check the battery

Raise the rear body, remove the battery cover and check the battery electrolyte level.

The electrolyte level must be maintained between the upper and lower level lines on the side of the battery.

If the electrolyte level is low, remove the battery filler caps and carefully add distilled water to the upper level line.



- The battery contains sulfuric acid. Avoid contact with skin, eyes or clothing.

Antidote: **EXTERNAL** — Flush with water.

INTERNAL — Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg or vegetable oil. Call a physician immediately.

EYES — Flush with water and get prompt medical attention.

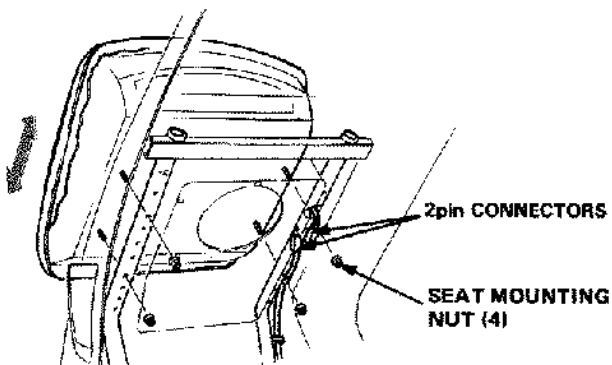
- Batteries produce explosive gases. Keep sparks, flames and smoking materials away. Always shield the eyes when working near batteries.

CAUTION:

- Use only distilled water in the battery. Tap water will shorten the service life of the battery.
- Do not fill the battery beyond the **UPPER** level. If overfilled, electrolyte may overflow and corrode mower components. Immediately wash off any spilled electrolyte.

8. Adjust the seat position

1. Raise the rear body.
2. Disconnect the 2pin connectors.
3. Loosen the four seat mounting nuts.
4. Move the seat to a position that allows you to reach all controls easily and comfortably.
5. Tighten the seat mounting nuts securely. Be sure to re-connect the 2pin connectors.



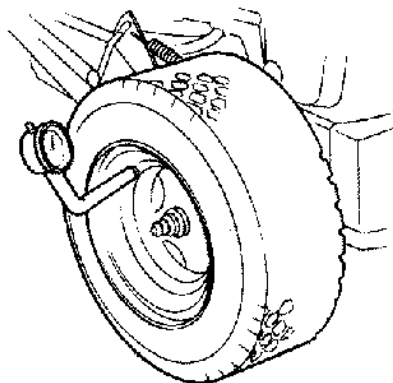
9. Check the tire pressure

CAUTION: Improper inflation may lead to premature tire failure. Never exceed the manufacturer's maximum tire pressure specification.

Check the tire pressure with an air pressure gauge.


Pressure: Front 0.9 – 1.1 kg/cm² (12.8 – 15.6 psi)

Rear 0.6 – 0.8 kg/cm² (8.5 – 11.4 psi)

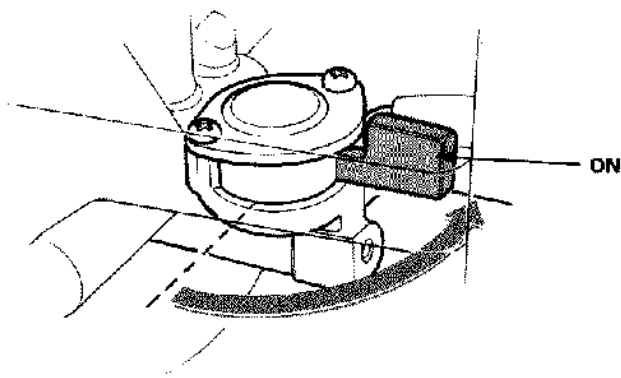


6. OPERATION

Starting the engine

 Exhaust gas contains poisonous carbon monoxide gas. Never run the engine in an enclosed area. Be sure to provide adequate ventilation.

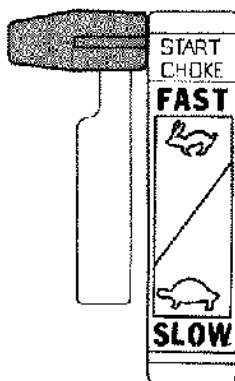
1. Turn the fuel valve ON.



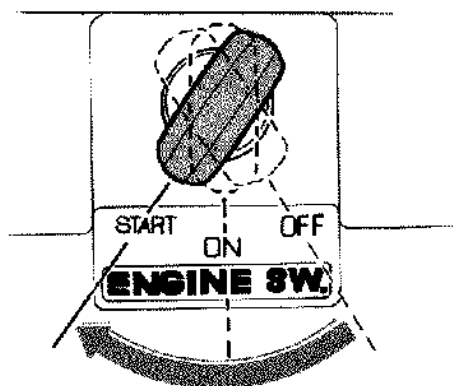
2. Sit on the seat and check that the parking brake lever is set, the transmission is in neutral and the P.T.O. lever is in the OFF (Disengaged) position.
3. Move the throttle lever to the START (CHOKE) position.

NOTE: When the engine is warm or the air temperature is high, move the throttle to SLOW.

START
(CHOKE)



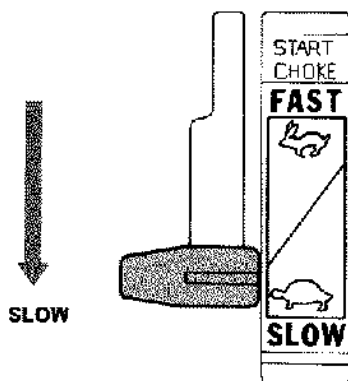
4. Turn the engine switch to START.



CAUTION: Do not use the starter motor for more than 5 seconds. If the engine fails to start, release the key, and wait at least 10 seconds before operating the starter motor again.

5. After the engine starts, let the engine switch return to ON.

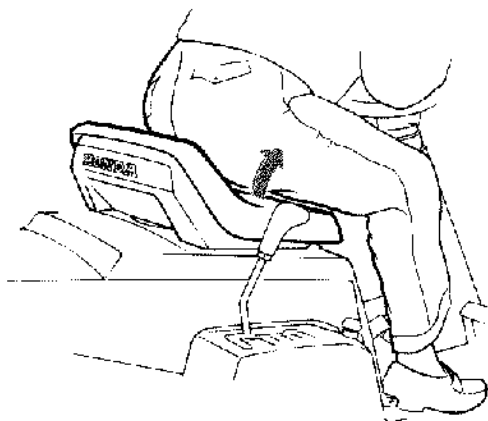
6. After the engine warms up, move the throttle lever to the SLOW position.



7. Seat safety switch operation check.

1. Move the P.T.O. lever to ON (Engaged).
Rise off the seat — the engine should stop immediately.
2. Return the P.T.O. lever to OFF (Disengaged) and restart the engine.
Release the parking brake and place the shift lever in the 1st speed range.
While driving slowly, rise off the seat — the engine should stop immediately.

Perform this check on level ground, never on a slope.



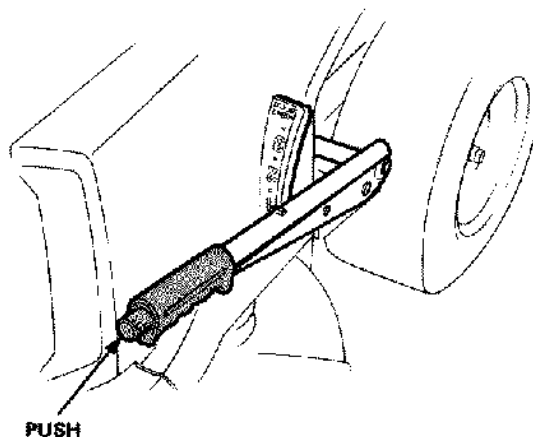
Mowing

WARNING: Before operating this riding mower you should read and understand the safe operating rules. See page 4.

CAUTION: In tall grass, first mow with the cutter deck fully raised (3½ in); this will expose any hidden obstacles. When you are sure the area is completely cleared, re-mow at the desired height.

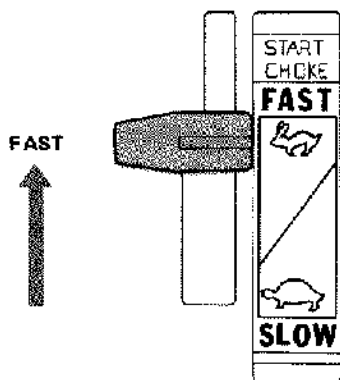
NOTE: For best results, wait until the lawn is dry before mowing.

1. Set the cutter deck height adjusting lever to the desired cutting height.



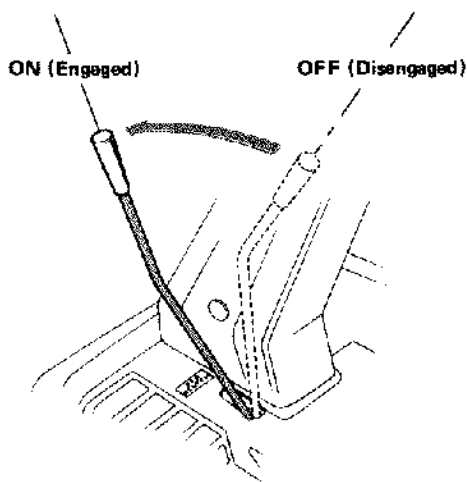
2. Move the throttle lever to the FAST position.

CAUTION: When mowing over rough ground or on hillsides, select the gear that will give a safe ground speed when the engine is operating at full throttle.



NOTE: The riding mower can be operated at intermediate throttle settings if desired, but always maintain sufficient engine speed for good pulling power and efficient blade operation. Use the shift lever to select the desired driving speed range.

3. Move the P.T.O. lever to the ON (Engaged) position.

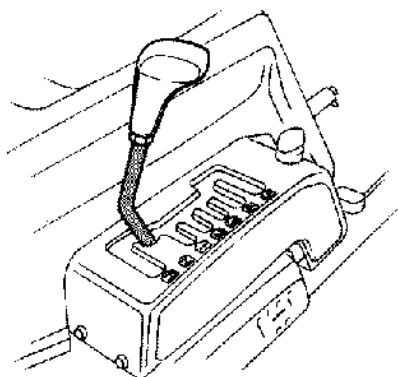


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4. Move the shift lever to select the desired gear position. The clutch will engage automatically in about one second.

CAUTION: If clutch engagement occurs immediately or takes longer than one second, have the riding mower serviced by your HONDA dealer.

WARNING

- Be sure the area behind the mower is clear of people, pets and other obstacles before backing up.
- Operate the mower at low speed until you become familiar with all of its operating characteristics.



CAUTION If possible, avoid stopping the riding mower while driving uphill. However, if it is necessary to stop, follow this special procedure:

UPHILL STARTING PROCEDURE

- A. Set parking brake.
- B. Apply pressure to the brake pedal.
- C. Move the throttle lever to mid range.
- D. Shift the transmission to 1st gear position.
- E. Release the brake pedal.
- F. Wait until the clutch engages.
- G. Then release the parking brake lever.

CAUTION If the parking brake lever is released before the brake pedal, the riding mower may roll downhill before the clutch engages. This may cause the riding mower to tip over.

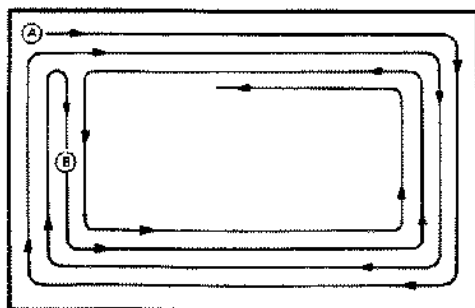
5. Cutting Patterns



These cutting patterns are only recommended for a flat, level lawn surface. See safe operating rules page 4.

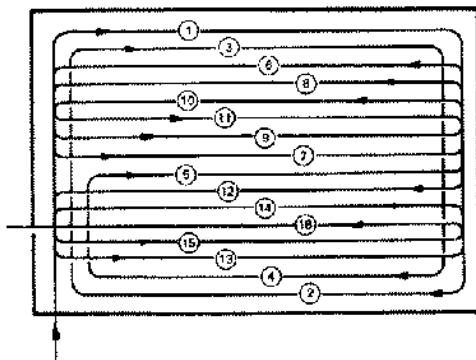
- In a small area

First make 2 or 3 turns in a clockwise direction; then turn around and continue cutting in the reverse direction.



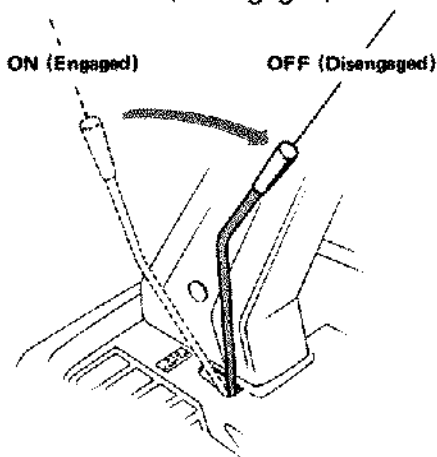
- In a large area

The first round of cuts is the key to making a neat finish. First, make 2 or 3 turns in a clockwise direction. As you reach the center of the area, turn to the right and continue cutting in the reverse direction until you have finished the upper half of the area. Cut the grass in the remaining half in a counterclockwise direction.



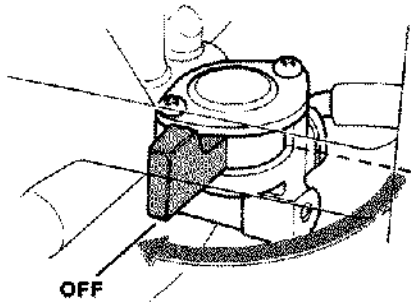
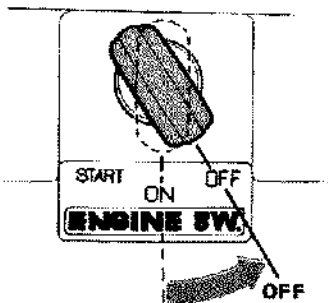
Stopping the engine

- In an emergency;
Turn the engine switch OFF.
- In normal use;
(1) Move the P.T.O. lever to OFF (Disengaged).



- (2) Move the shift lever to the Neutral position.
- (3) Set the parking brake.
- (4) Turn the engine switch OFF.
- (5) Turn the fuel valve OFF

Warning Always remove the key from the engine switch whenever the riding mower is unattended to prevent children or unauthorized persons from starting the engine.



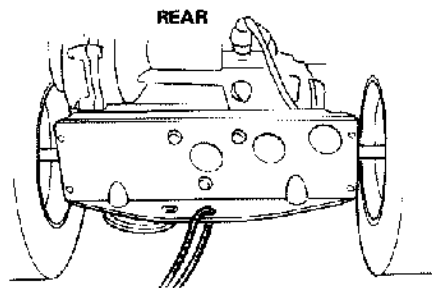
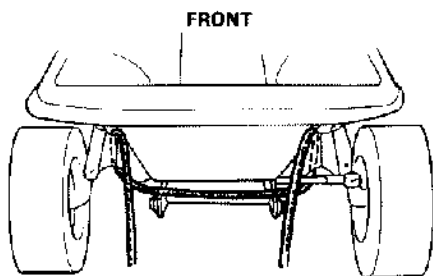
7. TRANSPORTING/STORAGE

Transporting

Transport the riding mower on a flat, level heavy-duty trailer. Set the parking brake lever and tie the riding mower down securely, using the tie down points shown below.

WARNING: Spilled fuel may ignite. To avoid fuel and oil spillage, keep the riding mower level when transporting.

CAUTION: Do not pull the riding mower behind any other vehicle, and do not use the riding mower to push another vehicle.

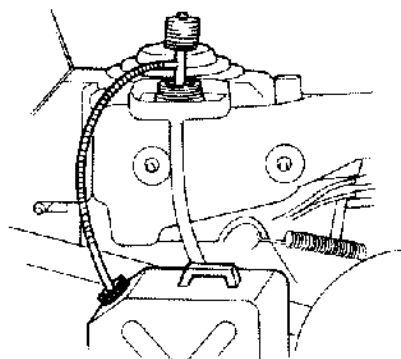


Preparation for storage

CAUTION: If the riding mower has been running, the engine will be very hot; allow to cool before proceeding.

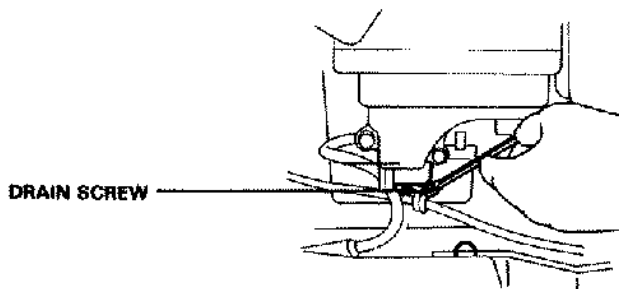
The following steps should be taken to protect the riding mower whenever it will be stored for longer than 30 days.

1. Drain all gasoline from the fuel tank into an approved gasoline container.



Turn the fuel valve ON, loosen the carburetor drain screw, and drain the fuel into an approved gasoline container. After draining tighten the drain screw securely.

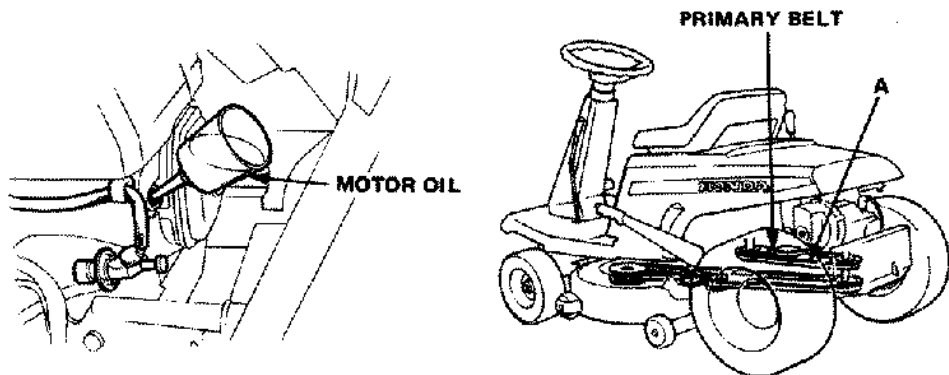
 Gasoline is extremely flammable and explosive under certain conditions. Do not smoke or allow flames or sparks in the area.



2. Change the engine oil (see page 37).

NOTE: If the riding mower will be stored for longer than 3 months, raise the rear body and remove the spark plug and pour three tablespoons (approximately 1 oz.) of clean motor oil into the cylinder.

Place the P.T.O. lever in the OFF position and the shift lever in the N position. With the parking brake applied, lower the cutter deck to the bottom. Reaching from the rear of the mower, grasp the primary belt at point A, and slowly pull it toward you to turn the engine. Reinstall the spark plug.

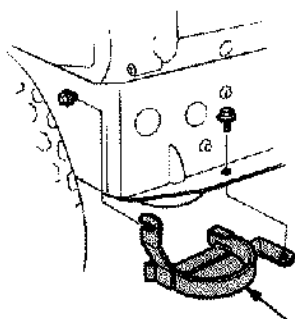


CAUTION: Be sure to wear heavy gloves when pulling the primary belt. If the riding mower has been running, the engine will be very hot. Allow it to cool before proceeding.

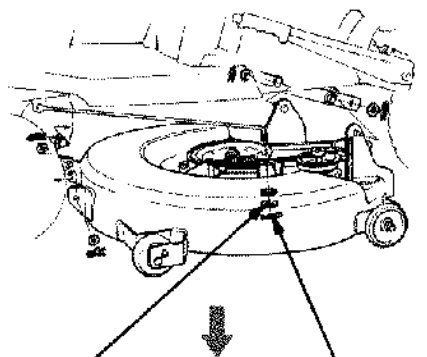
3. Remove the battery and store in a cool, dry place. Recharge it once a month.

4. Remove the cutter deck:

- Lower the cutter deck and be sure the P.T.O. lever is in the OFF position.
- Remove the belt stopper.
- Remove the 7 mm lock pin and washer from the P.T.O. clutch rod.
- Remove the four 14 mm lock pins and washers from the front and rear of the cutter deck.
- Remove the blade belt from the transmission pulley.
- Turn the front wheels all the way to the left, and then remove the cutter deck from the right side.

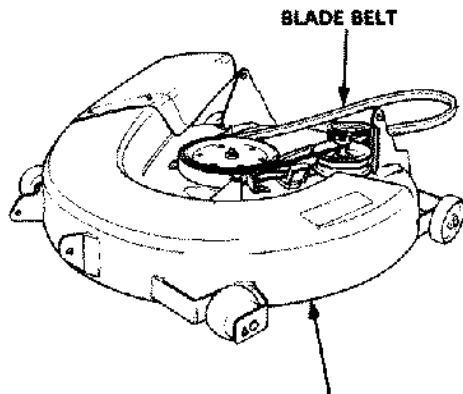


BELT STOPPER



WASHER

7 mm LOCK PIN

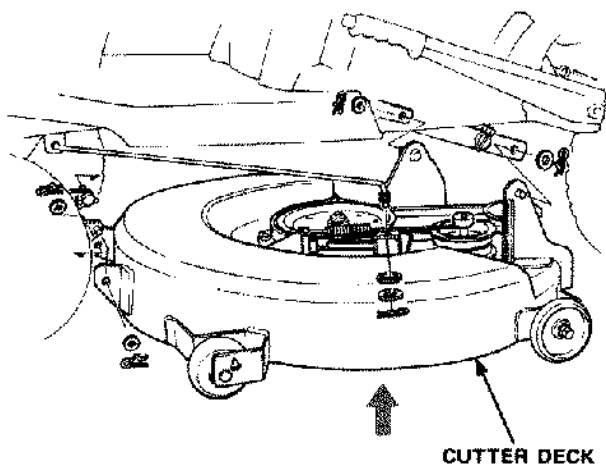


BLADE BELT

CUTTER DECK

CAUTION: When the cutter deck is removed, the return spring will cause the deck height adjusting lever to snap upward when the release button is pressed. Hold the lever firmly, and carefully return it to the **UPPER** position after removing the deck.

5. Turn the cutter deck upside down. Clean the underside of the deck with water, and dry thoroughly.
6. For longer service and greater efficiency, keep the underside of the mower housing clean and free of accumulated grass clippings by washing it down with a hose after use and/or cleaning it with a wire brush and scraper. Remove any rust and apply a rust-resistant paint. Cleaning and rust prevention are especially important before seasonal storage.
7. Reinstall the cutter deck by reversing the removal procedure.



8. Store the riding mower on a level surface in a dry, dust-free area with the parking brake lever set.
9. Cover the riding mower to keep out dust.
10. Check tire air pressure regularly during storage and inflate if necessary.

Removal from storage

1. Check the battery electrolyte level (see p. 20). Fully recharge the battery, and install it in the riding mower.
2. Remove the spark plug and check that it is clean and properly gapped (see p.39).
Turn the engine a few revolutions with the starter motor before reinstalling the spark plug.
3. Thread the spark plug in as far as possible by hand, then tighten it 1/8 to 1/4 turn further with the plug wrench.
4. Check the engine oil level (see p. 15).
5. Fill the fuel tank, and start the engine by following the starting instructions (see p. 22).

NOTE: If the cylinder was coated with oil, the engine will smoke at start up; this is normal.

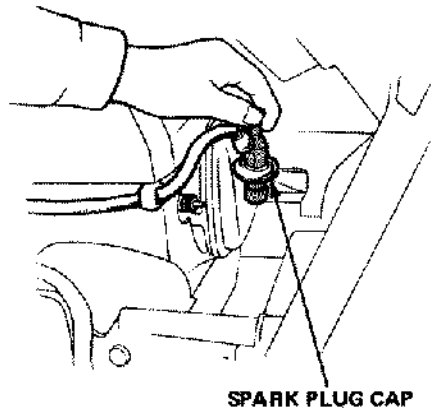
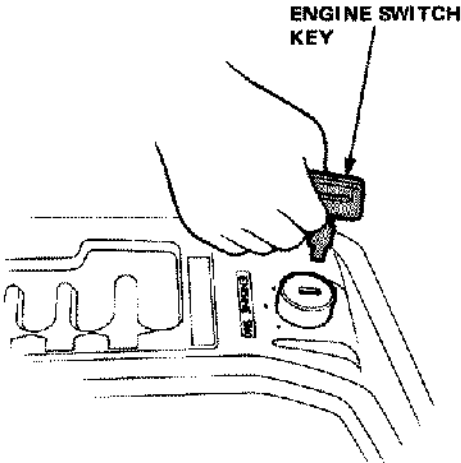
8. MAINTENANCE



- Shut off the engine and set the parking brake before performing any maintenance.
- To prevent accidental start-up, remove the engine switch key and disconnect the spark plug cap.
- The riding mower should be serviced by an authorized HONDA dealer unless the owner has proper tools and service data and feels he is mechanically qualified.

CAUTION: Use only genuine Honda parts or their equivalent for maintenance or repair. Replacement parts which are not of equivalent quality may damage the riding mower.

Periodic inspection and adjustment of the Honda HT-R3009 is essential if high level performance is to be maintained. Regular maintenance will also ensure a long service life. The required service intervals and the kind of maintenance to be performed are described on the following page.



MAINTENANCE SCHEDULE

REGULAR SERVICE PERIOD Performed at every indicated month or operating hour interval, whichever comes first.		EACH USE	FIRST 3 MONTHS OR 20 HRS	EVERY 6 MONTHS OR 50 HRS	EVERY YEAR OR 100 HRS	EVERY 3 YEARS OR 300 HRS
ITEM						
Engine oil	Check level	○				
	Change		○		○	
Air cleaner	Check	○				
	Clean			○*		
Seat switch operation	Check	○			●	
Cooling air intake	Clean	○				
Parking brake buzzer operation	Check	○		●		
Battery electrolyte	Check level	○				
	Check level and gravity			●		
Tire pressure	Check	○				
Blade belt	Check	○				
	Adjust		○	○		
Primary belt	Check	○				
Grass bag (optional part)	Clean	○				
Foot brake	Check	○				
Blade bolt tightness and blade condition	Check		●	●		
Brake and clutch (fasteners tightness)	Check		●		●	
Parking brake	Check			●		
Spark plug	Clean-Readjust				○	
Spark arrester (optional part)	Clean				○	
Drive clutch	Check-Adjust				●	
Fuel tank and filter	Clean				●	
Throttle cable	Check-Adjust				●	
Front axle	Grease				●	
Fuel line	Check (Replace if necessary)					●
Valve clearance	Check-Readjust					●
Engine fins and shroud	Clean					●

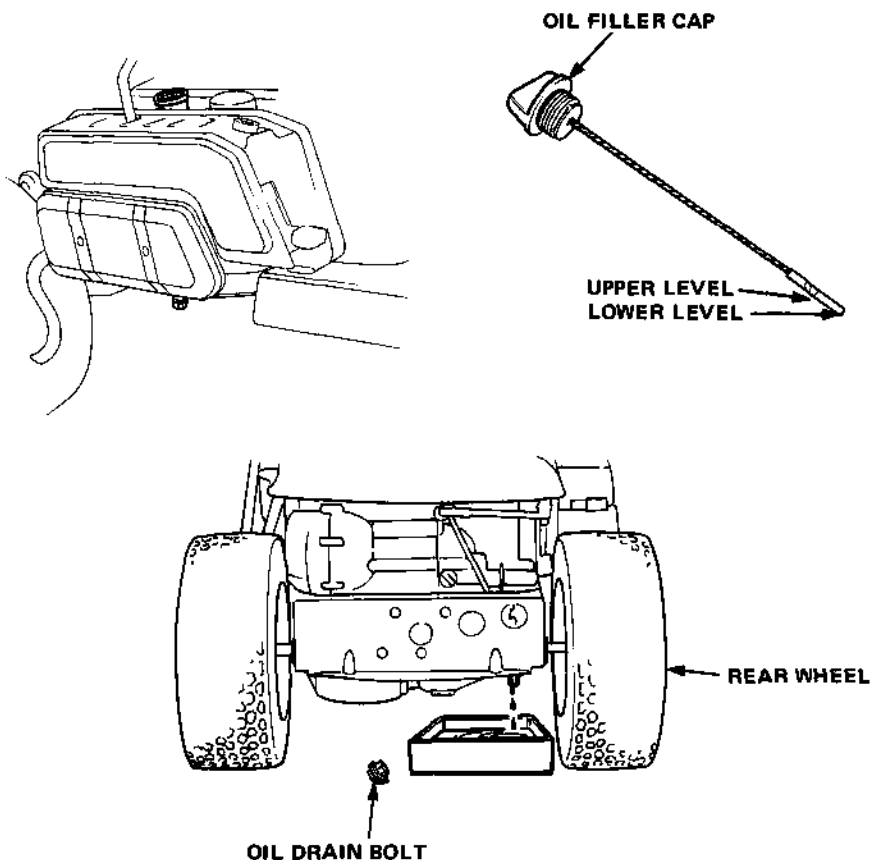
NOTE: * Service the air cleaner more frequently when used in dusty areas.
 ● These items should be serviced by an authorized Honda dealer, unless the owner has proper tools and is mechanically proficient. See the Honda Shop Manual.

1. Engine oil change

NOTE: Drain the oil while the engine is still warm to assure rapid and complete draining.

1. Raise the rear body.
2. Remove the oil filler cap and the drain plug, and drain the oil into a suitable container.
3. Retighten the drain bolt securely.
4. Refill to the upper level mark on the dipstick with the recommended oil (see p. 15). Tighten the oil filler cap securely.

OIL CAPACITY: 1.1ℓ (1.2 US qt)



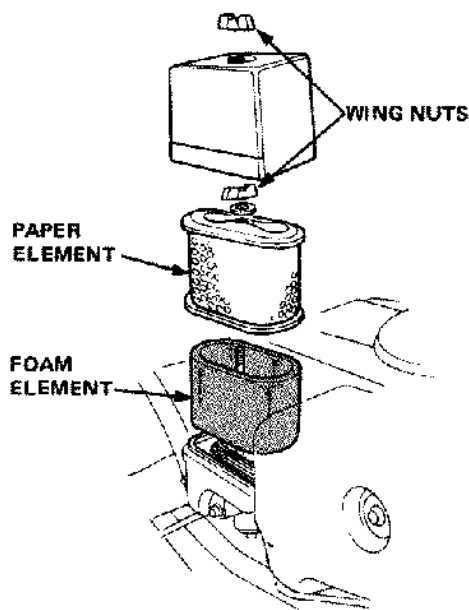
2. Air cleaner service

A dirty air cleaner will restrict air flow to the carburetor. To prevent carburetor malfunction, service the air cleaner regularly. Service more frequently when operating the riding mower in extremely dusty areas.

CAUTION: Never use gasoline or low flash point solvents for cleaning the air cleaner element. A fire or explosion could result.

CAUTION: Never run the engine without the air cleaner. Rapid engine wear will result.

1. Raise the rear body.
2. Remove the wing nuts and the air cleaner cover. Remove the elements and separate them. Carefully check both elements for holes or tears and replace if damaged.
3. Foam element: Clean in warm soapy water, rinse and allow to dry thoroughly. Or clean in high flash-point solvent and allow to dry. Dip the element in clean engine oil and squeeze out all the excess. The engine will smoke during initial start-up if too much oil is left in the foam.
4. Paper element: Tap the element lightly several times on a hard surface to remove excess dirt, or blow compressed air through the filter from the inside out. Never try to brush the dirt off; brushing will force dirt into the fibers.

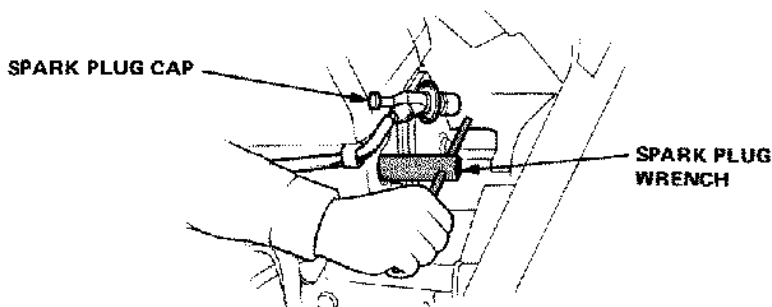


3. Spark plug service.

Recommended spark plug: **BPR5ES (NGK)**
W16EPR-U (ND)

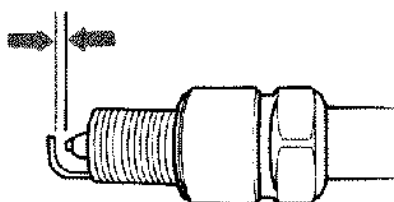
To ensure proper engine operation, the spark plug must be properly gapped and free of deposits.

1. Raise the rear body and remove the spark plug cap.
2. Clean any dirt from around the spark plug base.
3. Use a spark plug wrench to remove the spark plug.

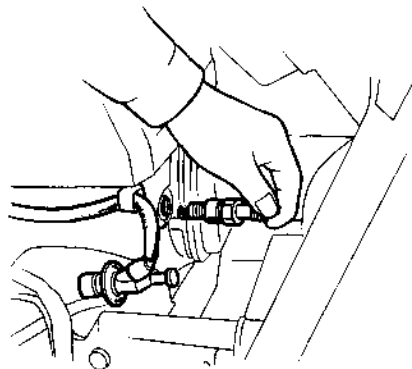


4. Visually inspect the spark plug. Discard it if the insulator is cracked or chipped. Clean the spark plug with a wire brush if it is to be reused.
5. Measure the plug gap with a feeler gauge.
The gap should be 0.7 — 0.8 mm (0.028 — 0.031 in). Correct as necessary by carefully bending the side electrode.

0.7 — 0.8 mm
(0.028 — 0.031 in)



6. Thread the plug in by hand to prevent cross threading.



7. After a new spark plug has been seated by hand, it should be tightened 1/2 turn with a wrench to compress its washer.

If a used plug is being reinstalled, it should only require 1/8 to 1/4 turn after being seated.

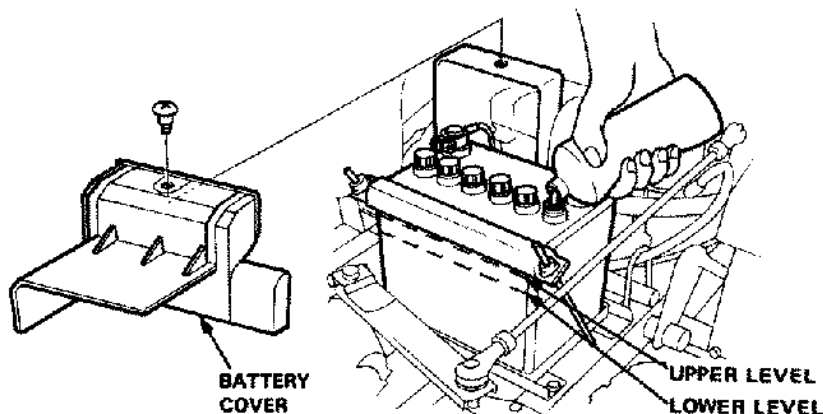
CAUTION:

- The spark plug must be securely tightened. An improperly tightened plug can become very hot and possibly damage the engine.
- Never use a spark plug with an improper heat range.

4. Battery electrolyte level check

Raise the rear body, remove the battery cover and check the electrolyte level in each battery cell. Fill the battery with distilled water to the upper level line. Never overfill the battery.

Any corrosion around the positive and negative terminals should be washed off with a solution of baking soda and warm water. Dry the terminals and retighten the terminal bolts if necessary, then coat the terminals with grease.



- The battery contains sulfuric acid. Avoid contact with skin, eyes or clothing.

Antidote: **EXTERNAL** — Flush with water.

INTERNAL — Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg or vegetable oil. Call a physician immediately.

EYES — Flush with water and get prompt medical attention.

- Batteries produce explosive gases. Keep sparks, flames and cigarettes away. Always shield the eyes when working near batteries.

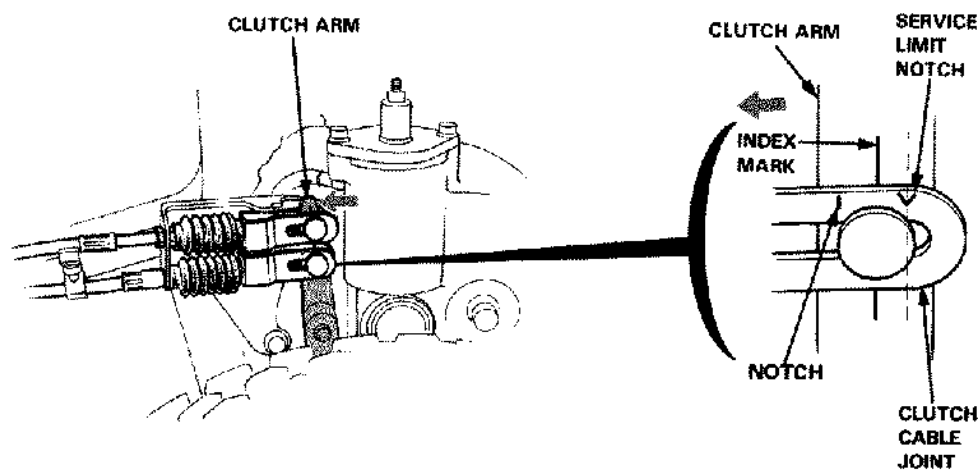
CAUTION:

- Use only distilled water in the battery. Tap water will shorten the service life of the battery.
- Do not fill the battery beyond the **UPPER** level. If overfilled, electrolyte may overflow and corrode mower components. Immediately wash off any spilled electrolyte.

5. Drive clutch inspection

1. Place the shift lever in the "2" position.
2. Using light pressure, push the clutch arm toward the front of the riding mower until you feel resistance. At this point the index mark on the clutch arm should be between the two notches on the clutch cable joint. If the index mark moves past the service limit notch, the clutch disk may be worn out; consult your authorized Honda dealer.

NOTE: Do not force the clutch arm during this inspection, or a false failure indication will result.



6. Wheel removal



- Do not attempt to remove a wheel unless the riding mower is on firm and level ground.
- Do not attempt to remove or replace a tire unless you have the equipment and knowledge to do so properly.

Block the wheels securely.

Front wheel

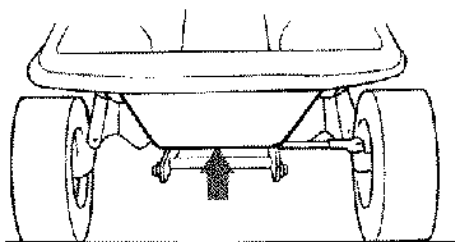
1. Remove the 17 mm circlip. Raise the wheel off the floor using a jack and then remove the wheel.

Rear wheel

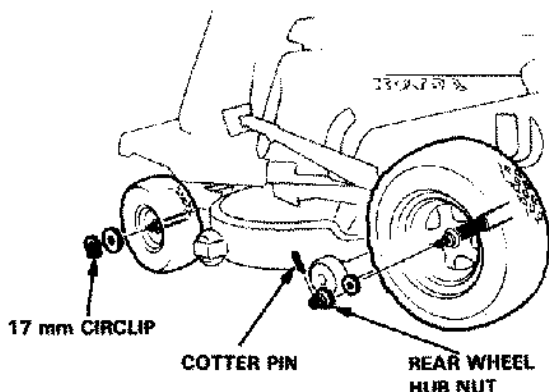
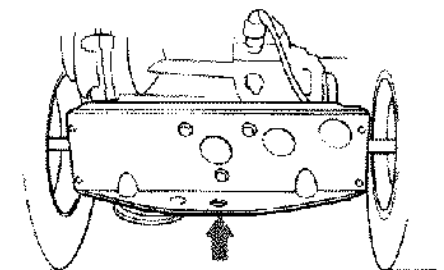
1. Remove the cotter pin and then remove the wheel hub nut with a 19 mm socket.
2. Raise the wheel off the floor using a jack and remove the wheel.

NOTE: Before installing the rear wheel, apply a light coating of grease to the splined axle shaft.

FRONT



REAR





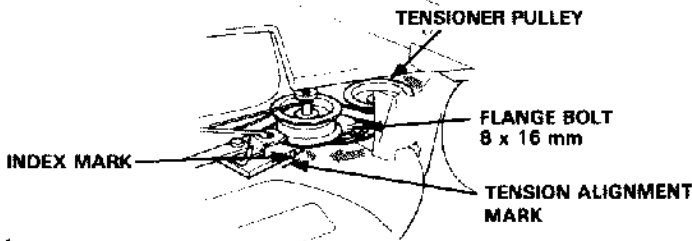
Never attempt to change a belt while the engine is running. Remove the engine key from the ignition and disconnect the spark plug cap to prevent accidental start up.

CAUTION: Wear heavy gloves to protect your hands when replacing belts or when working with the cutter blade.

7. Blade belt adjustment/replacement

■ Adjustment

1. Set the steering wheel in the straight-ahead position.
2. Move the P.T.O. lever to the ON (Engaged) position.
3. Lower the cutter deck as far as it will go with the cutter deck height adjusting lever.
4. Loosen the 8 x 16 mm flange bolt, and pull the tensioner pulley outward until the index mark on the arm aligns with the tension alignment mark on the cutter deck. Hold the tensioner pulley in place, and retighten the bolt.

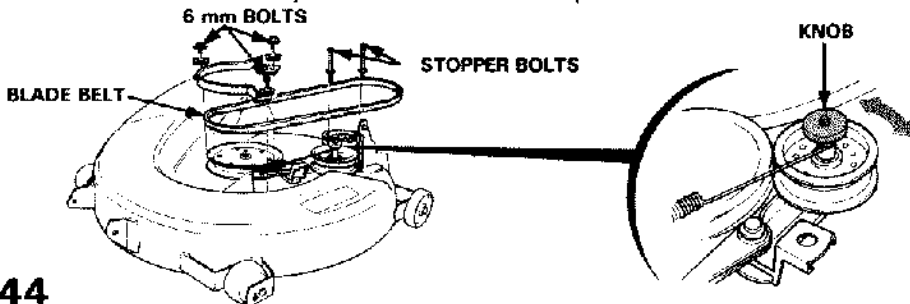


■ Replacement

1. Remove the cutter deck from the riding mower according to the instructions on page 32.
2. Remove the three 6 mm bolts and the two stopper bolts shown below.
3. Grasp the knob on the tensioner pulley firmly, pull the tensioner arm outward and then remove the blade belt.

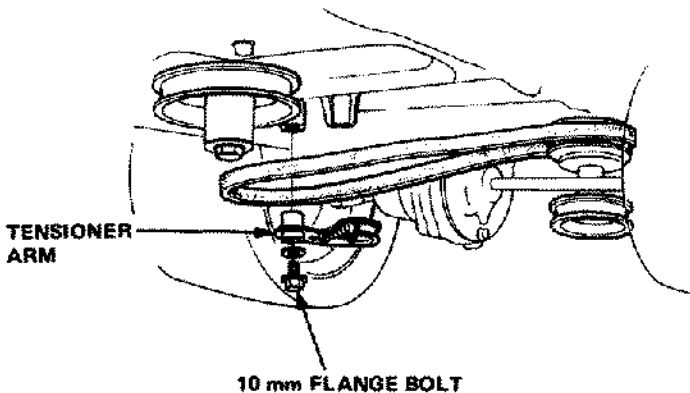
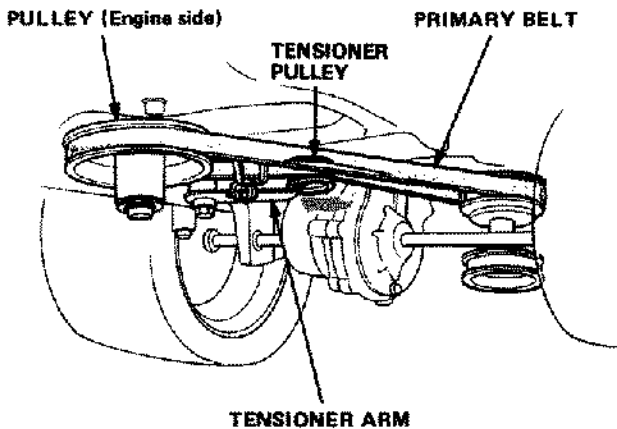
CAUTION: Don't put your hands between the pulleys, and don't let the tensioner pulley snap back; return it slowly.

4. To install a new belt, reverse the removal procedure.



8. Primary belt replacement

1. Remove the cutter deck (see p. 32).
2. Remove the primary belt from the pulley on the belt tensioner arm while pressing out on the arm by hand. Then, remove the primary belt from the pulley on the engine.
3. Remove the tensioner arm by removing the 10 mm bolt and remove the primary belt by pulling it out by hand.
4. Install a new primary belt. Install the remaining parts in the reverse order of removal.



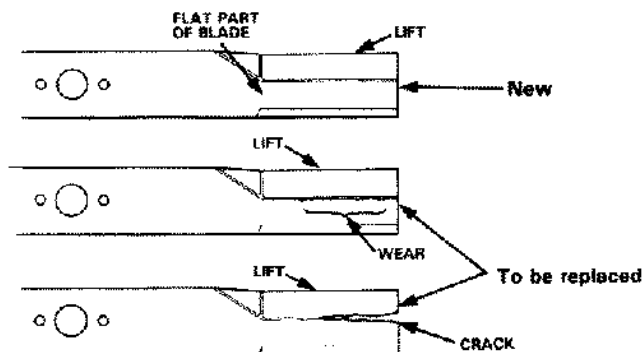
9. Blade inspection and sharpening

CAUTION: Always wear heavy gloves to protect your hands when working with the cutter blade.

Blade inspection

1. Remove the cutter deck from the riding mower (see p. 32).
2. Inspect the blade for cracks, bends or signs of wear. If the blade is bent, damaged or badly worn, replace it.

CAUTION: Use only genuine Honda replacement blades or their equivalent.

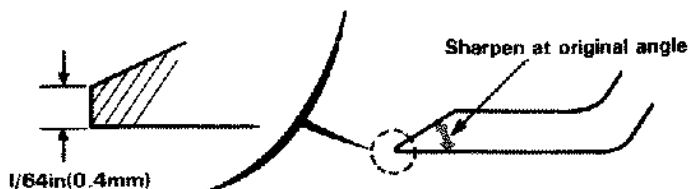


Blade sharpening

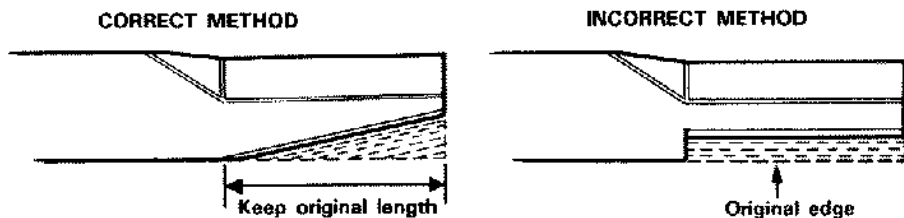
1. Remove the cutter deck (see p.32), and turn it upside down.
2. Remove the blade bolts and the blade.

CAUTION: To avoid damaging the blade, be sure to hold it securely while dressing or resharpening it.

3. Maintain the original cutting edge bevel when resharpening or dressing the blade. Leave a 1/64 inch (0.4mm) flat face on the cutting edge; a razor-sharp edge will chip easily, and will become dull quickly.

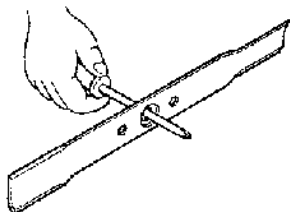


4. When resharpening, do not file the blade parallel to the original edge. Instead, file the blade on an angle as shown, and do not extend the cutting edge any farther toward the center of the blade. Be sure to remove equal amounts of material from each end of the blade to maintain proper balance.



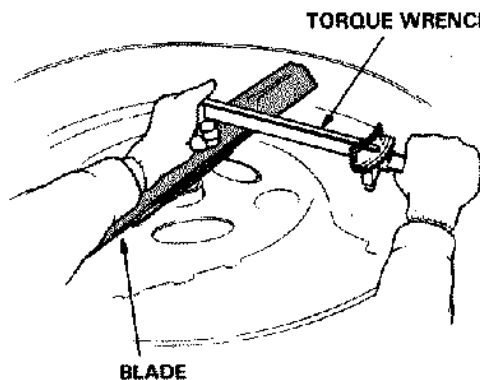
5. After sharpening, test the blade's balance using a screwdriver as shown. If either side dips slightly below horizontal, file that side. Replace the blade if it dips excessively.

CAUTION: An unbalanced blade will cause abnormal vibration, and eventual mower damage.



6. Clean any dirt and grass from around the blade shaft and inside the deck.
7. Install the blade. Tighten the bolts securely and install the mower deck.

Blade bolt tightening torque: 8.0—9.0 Kg-m (57.9—65.1 ft-lb)



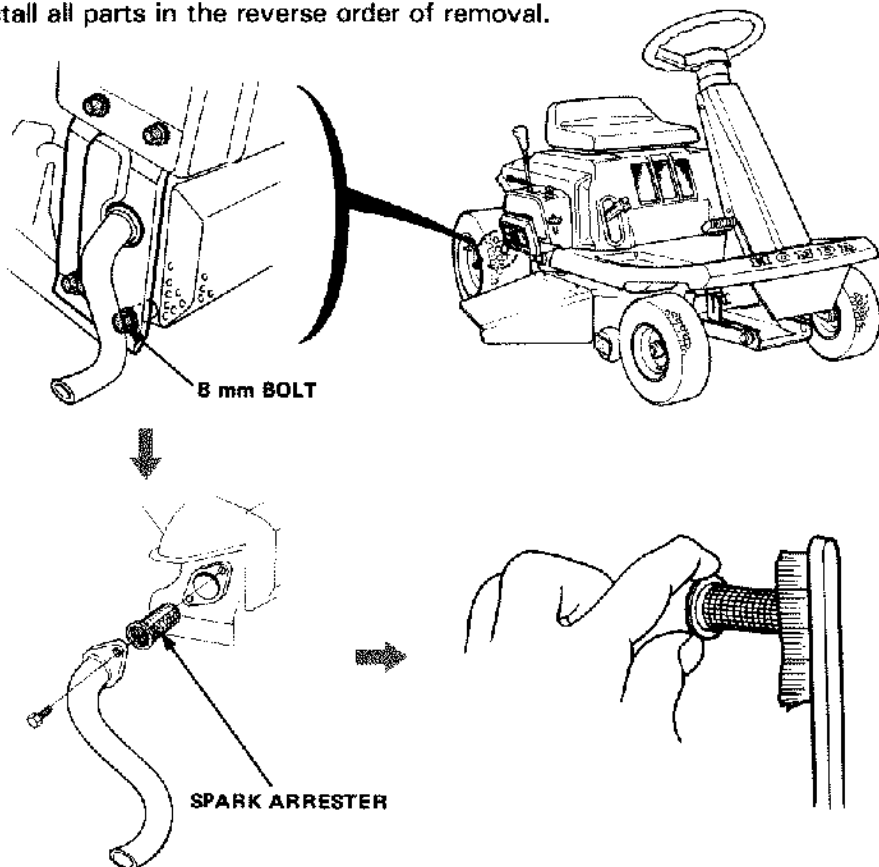
10. Spark arrester maintenance (optional part)

CAUTION: If the riding mower has been running, the muffler will be hot. Allow it to cool before proceeding.

1. Remove the three 6 mm bolts and 8 mm bolt that hold the shift lever guide stay, and then remove the stay.
2. Remove the two 6 mm bolts from the exhaust pipe tip. Remove the exhaust pipe tip and spark arrester (be careful not to damage the spark arrester screen).
3. Use a wire brush to remove carbon deposits from the spark arrester screen.

NOTE: Inspect the spark arrester screen for breaks or tears. Replace it if necessary.

4. Reinstall all parts in the reverse order of removal.



9. TROUBLESHOOTING

Engine fails to start;

1. No fuel. —————→ Add fuel.
2. Shift lever in gear. —————→ Position shift lever in NEUTRAL.
3. P.T.O. lever engaged. —————→ Position blade (P.T.O.) lever in DISENGAGE.
4. Spark plug faulty or —————→ Regap plug or replace (see p. 39).
improperly gapped.
5. Spark plug wire loose —————→ Check spark plug wire.
or disconnected.
6. Fuel not reaching —————→ Check the position of the fuel valve
carburetor. (see p. 22). If that's not the problem,
see your authorized HONDA dealer.
7. Discharged battery or —————→ Charge battery or retighten terminal.
loose terminal. (see p. 41).

Engine loses power;

1. Dirty air cleaner elements. —————→ Clean or replace elements (see p. 38).
2. Spark plug faulty or —————→ Regap plug or replace. (see p. 39).
improperly gapped.
3. Engine overloaded. —————→ Shift to lower speed.

Engine overheats;

1. Cooling air intake plugged. —————→ Clean cooling air intake (see p. 14).
2. Engine overloaded. —————→ Shift to lower speed.
3. Low engine oil level. —————→ Fill with recommended oil (see p. 37).
4. Spark plug improperly —————→ Regap plug or replace (see p. 39)
gapped.
5. Cooling fan damage —————→ See your authorized HONDA dealer.

Erratic operation;

1. Dirty fuel. —————> See your HONDA dealer.
2. Dirty air cleaner elements. —————> Clean air cleaner elements. (see p. 38).
3. Spark plug faulty or —————> Regap plug or replace. (See p. 39).
improperly gapped.

Excessive vibration;

1. Loose blade or engine —————> Retighten blade bolts or engine
mounting hardware. mounting hardware.
2. Blade damaged or out of —————> Replace blade.
balance.

Battery will not charge;

1. Dead cell in battery. —————> Replace battery.
2. Loose electrical connec- —————> Check connections and lines.
tions or broken wire.

Uneven mowing;

1. Riding mower speed too fast —————> Shift to lower speed.
2. Grass accumulation —————> Clean deck inside (see p. 33).
inside deck.
3. Dull blade. —————> Sharpen blade or replace.
4. Tires improperly inflated. —————> Check tire inflation (see p. 21).
5. Mower not level. —————> Check cutter deck mounting.
See your authorized HONDA dealer.
6. Wrong cutter deck height. —————> Change to proper height.
7. Chute clogged (if equipped —————> Empty grass bag and chute.
with optional grass bag).

Clogged cutter deck discharge chute.

1. Wrong blade. —————> Use genuine Honda blade or equivalent.
2. Deck too low. —————> Raise deck and adjust deck height properly.
3. Engine overloaded. —————> Operate at full throttle. Use lower speed range. Set cutter deck higher than desired height for first pass, then cut to desired height on second pass.
4. Grass bags full —————> Empty grass bags.
(Optional part).

Blade does not rotate or stop.

1. Blade belt worn or broken. —————> Replace with new belt (see p. 44).
2. P.T.O. lever malfunction —————> See your authorized HONDA dealer.

Riding mower does not move, or clutch does not engage properly when the transmission is shifted into gear.

1. Faulty clutch assy. —————> See your authorized HONDA dealer.
2. Transmission does not —————> See your authorized HONDA dealer.
shift gear.
3. Abnormal clutch engage- —————> See your authorized HONDA dealer.
ment.

10. SPECIFICATIONS

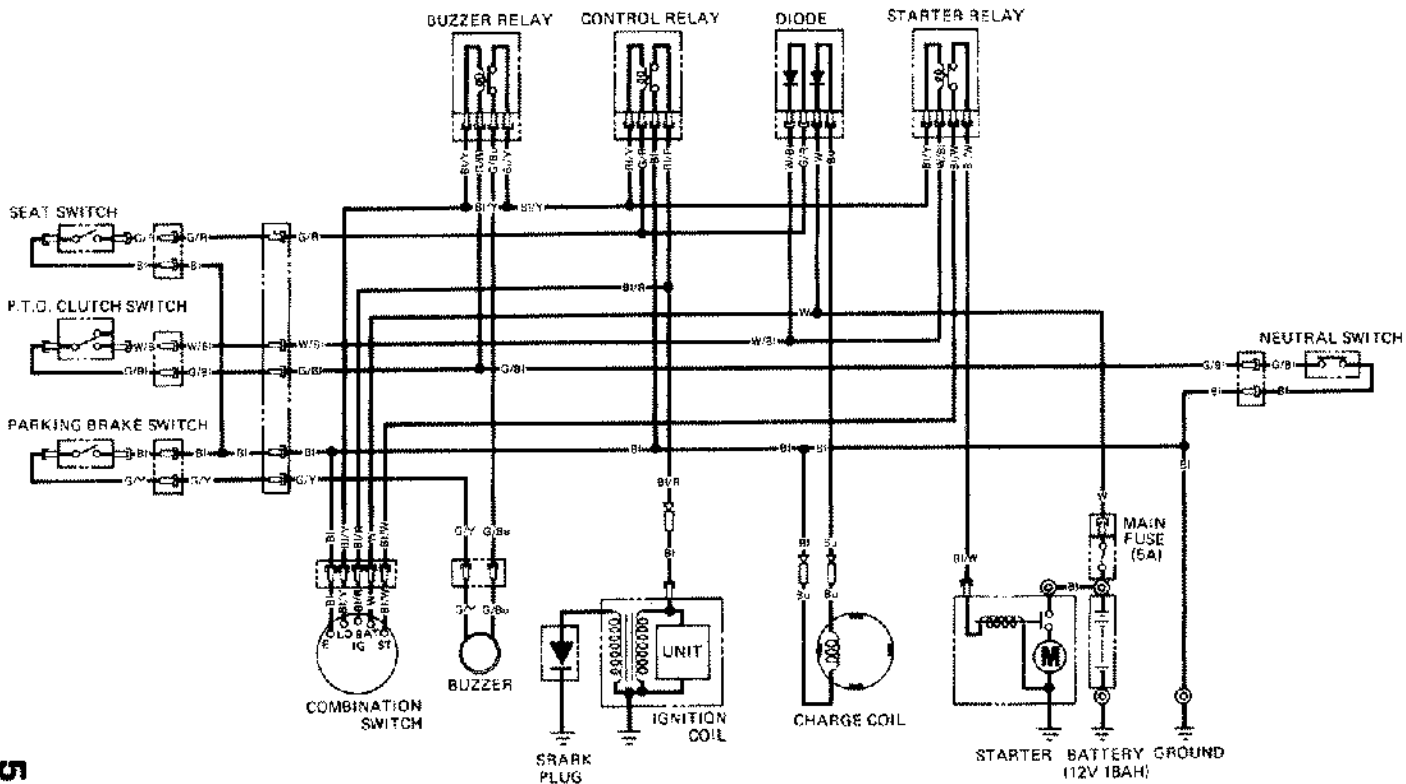
MODEL	HT-R3009
Power products description code	MA1T
ENGINE	
Model	GXV270
Type	4-stroke, overhead valve, 1 cylinder
Displacement	270 cm ³ (16.5 cu in)
Bore and stroke	77 x 58 mm (3.0 x 2.3 in)
Ignition timing	20° BTDC
Ignition system	Transistorized magneto
Cooling system	Forced air
Engine oil capacity	1.1 ℓ (1.2 US qt)
Spark plug	BPR5ES (NGK) W16EPR-U (ND)
FRAME	
Dimensions	
Length x Width x Height	1535 x 1070 x 1000 mm (61.0 x 42.1 x 39.4 in)
Wheel tread	
Front	570 mm (22.4 in)
Rear	635 mm (25.0 in)
Wheel base	1100 mm (43.3 in)
Cutting width	762 mm (30.0 in)
Cutting height	1, 1½, 2, 2½, 3, 3½
Dry weight	165 kg (364 lb)
Tire size	Front 11 x 4.00 — 5 Rear 16 x 6.50 — 8
Air pressure	Front 1.0 kg/cm ² , Rear 0.7 kg/cm ²
Gear selections	5 Forward, 1 Reverse
Travel speed (3300 rpm)	
First	2.4 km/h (1.5 mile/h)
Second	3.7 km/h (2.3 mile/h)
Third	5.7 km/h (3.5 mile/h)
Fourth	7.0 km/h (4.3 mile/h)
Fifth	7.9 km/h (4.9 mile/h)
Reverse	2.8 km/h (1.7 mile/h)
Fuel tank capacity	2.0 ℓ (0.53 US gal)
Battery	12V 18A

NOTE: Specifications are subject to change without notice.

COMBINATION SWITCH

BI	BLACK	R	RED
Y	YELLOW	W	WHITE
Bl	BLUE	Gr	GRAY
G	GREEN		

	IG	E	BAT	LO	ST
OFF	○	○			
ON			○	○	
ST			○	○	○



12. WARRANTY SERVICE

Owner Satisfaction

Your satisfaction and goodwill are important to your dealer and to us. All Honda warranty details are explained in the Distributor's Limited Warranty. Normally, any problems concerning the product will be handled by your dealer's service department. If you have a warranty problem that has not been handled to your satisfaction, we suggest you take the following action:

- Discuss your problem with a member of dealership management. Often complaints can be quickly resolved at that level. If the problem has already been reviewed with the Service Manager, contact the owner of the dealership or the General Manager.
- If your problem still has not been resolved to your satisfaction, contact the Customer Relations Department at the regional office of American Honda Motor Co., Inc. in your area. Regional office locations are shown on the following page. We will need the following information in order to assist you:
 - Your name, address, and telephone number
 - Product model and serial number
 - Date of purchase
 - Dealer name and address
 - Nature of the problem

After reviewing all the facts involved, you will be advised of what action can be taken. Please bear in mind that your problem will likely be resolved at the dealership, using the dealer's facilities, equipment, and personnel, so it is very important that your initial contact be with the dealer.

Your purchase of a Honda Product is greatly appreciated by both the dealer and American Honda Motor Co., Inc. We want to assist you in every way possible to assure your complete satisfaction with your purchase.

Current customer service contact information:

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

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:

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 - 7:00 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

MEMO



HONDA
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