

HONDA

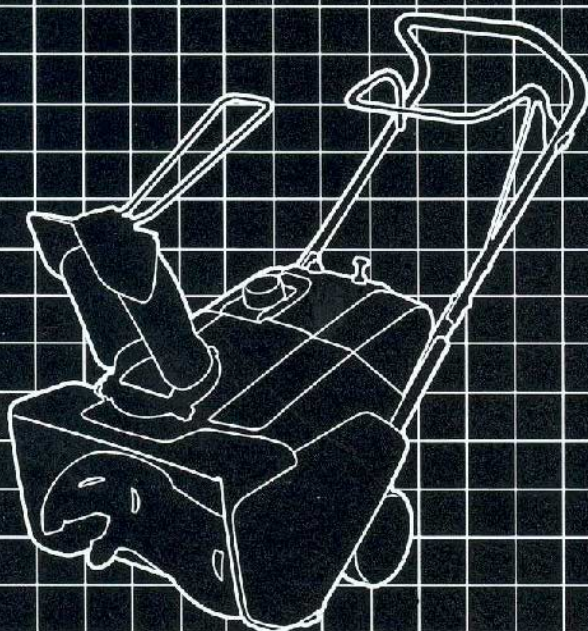
Power

Equipment

Owner's Manual

SNOWTHROWER

HS521



Thank you for purchasing a Honda snowthrower.

This manual covers the operation and maintenance of the HS521 snowthrower.

All information in this publication is based on the latest product information available at the time of approval for printing.

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

No part of this publication may be reproduced without written permission.

This manual should be considered a permanent part of the snowthrower and should remain with the snowthrower if it is resold.

Pay special attention to statements preceded by the following words:

▲ DANGER Indicates severe personal injury or death will result if instructions are not followed.

▲ WARNING Indicates a strong possibility of severe personal injury or death 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 your snowthrower, consult an authorized Honda snowthrower dealer.

▲ WARNING Operating this equipment requires special effort to ensure the safety of the operator and the safety of others. Read and understand this Owner's Manual before operating this equipment; failure to do so could result in personal injury or equipment damage.

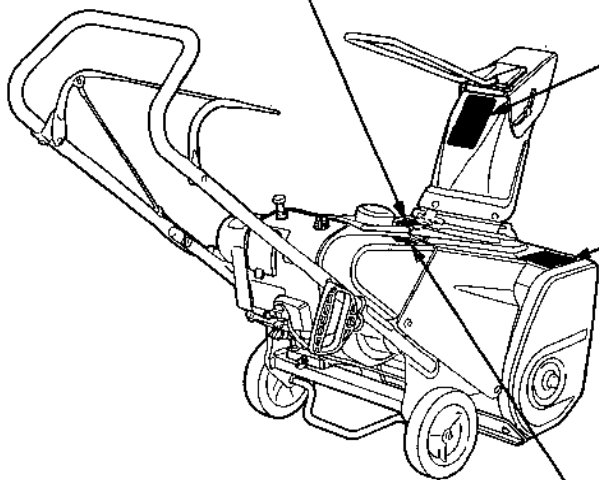
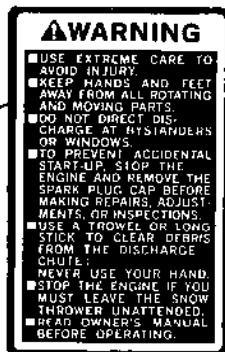
HONDA MOTOR CO., LTD. 1990, ALL RIGHTS RESERVED

CONTENTS

1. SAFETY	3
WARNING LABEL LOCATION	3
SAFETY INFORMATION	4
2. COMPONENT IDENTIFICATION AND FUNCTION	6
ENGINE SWITCH	7
A.C. STARTER BUTTON	7
FUEL VALVE	7
CHOKE KNOB	8
STARTER GRIP	8
CHUTE GUIDE HANDLE	9
AUGER CLUTCH LEVER	9
3. PRE-OPERATION CHECK	10
FUEL LEVEL	10
ENGINE OIL LEVEL	12
4. STARTING THE ENGINE	13
5. SNOWTHROWER OPERATION	16
HIGH ALTITUDE OPERATION	19
6. STOPPING THE ENGINE	20
7. MAINTENANCE	21
MAINTENANCE SCHEDULE	22
TOOL KIT	23
ENGINE OIL CHANGE	24
SPARK PLUG SERVICE	25
SCRAPER INSPECTION, ADJUSTMENT AND REPLACEMENT	27
AUGER CLUTCH CABLE INSPECTION AND ADJUSTMENT	30
DRIVE BELT INSPECTION	32
PADDLE INSPECTION	34
8. STORAGE	35
9. TROUBLESHOOTING	38
10. SPECIFICATIONS	39
11. WARRANTY SERVICE	40

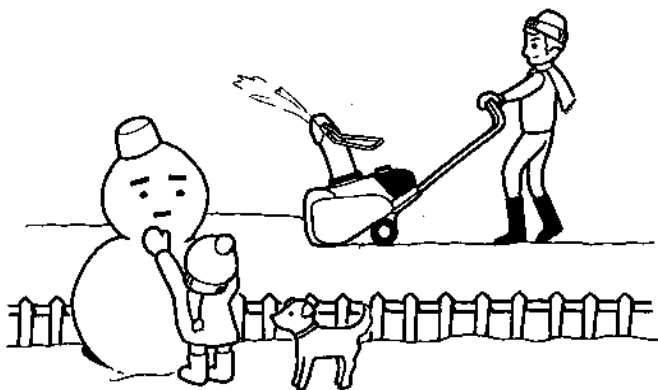
WARNING LABEL LOCATION

Read these labels before operating the snowthrower.



▲ WARNING

- Honda snowthrowers are designed to give safe and dependable service if operated according to instructions. Read and understand this Owner's Manual before operating the snowthrower. Failure to do so could result in personal injury or equipment damage.
- Before operating the snowthrower, inspect the area in which you are going to clear snow. Remove debris and other obstacles the snowthrower might strike or throw that may cause injury or damage to the snowthrower.
- Inspect the snowthrower before operating it. Repair any damage and correct any malfunction before operation. If you hit an obstacle while operating the snowthrower, stop the engine immediately, and check for damage. Damaged equipment may increase the possibility of injury during operation.
- Do not use the snowthrower when visibility is poor. Under conditions of poor visibility, there is a greater risk of striking an obstacle or causing injury.
- Never use the snowthrower to clear snow from a gravel road or driveway, as rocks may be picked up and thrown. They may cause injury to bystanders.
- Adjust the snow discharge chute to avoid hitting the operator, bystanders, windows, and other objects with thrown snow. Stay clear of the snow discharge chute while the engine is running.
- Children and pets must be kept away from the area of operation to avoid injury from flying debris and contact with the snowthrower.
- To avoid overturning, be careful when changing the direction of the snowthrower while operating it on a slope. Do not use the snowthrower to remove snow from roofs. The snowthrower may overturn on steep slopes if left unattended, causing injury to the operator or bystanders.



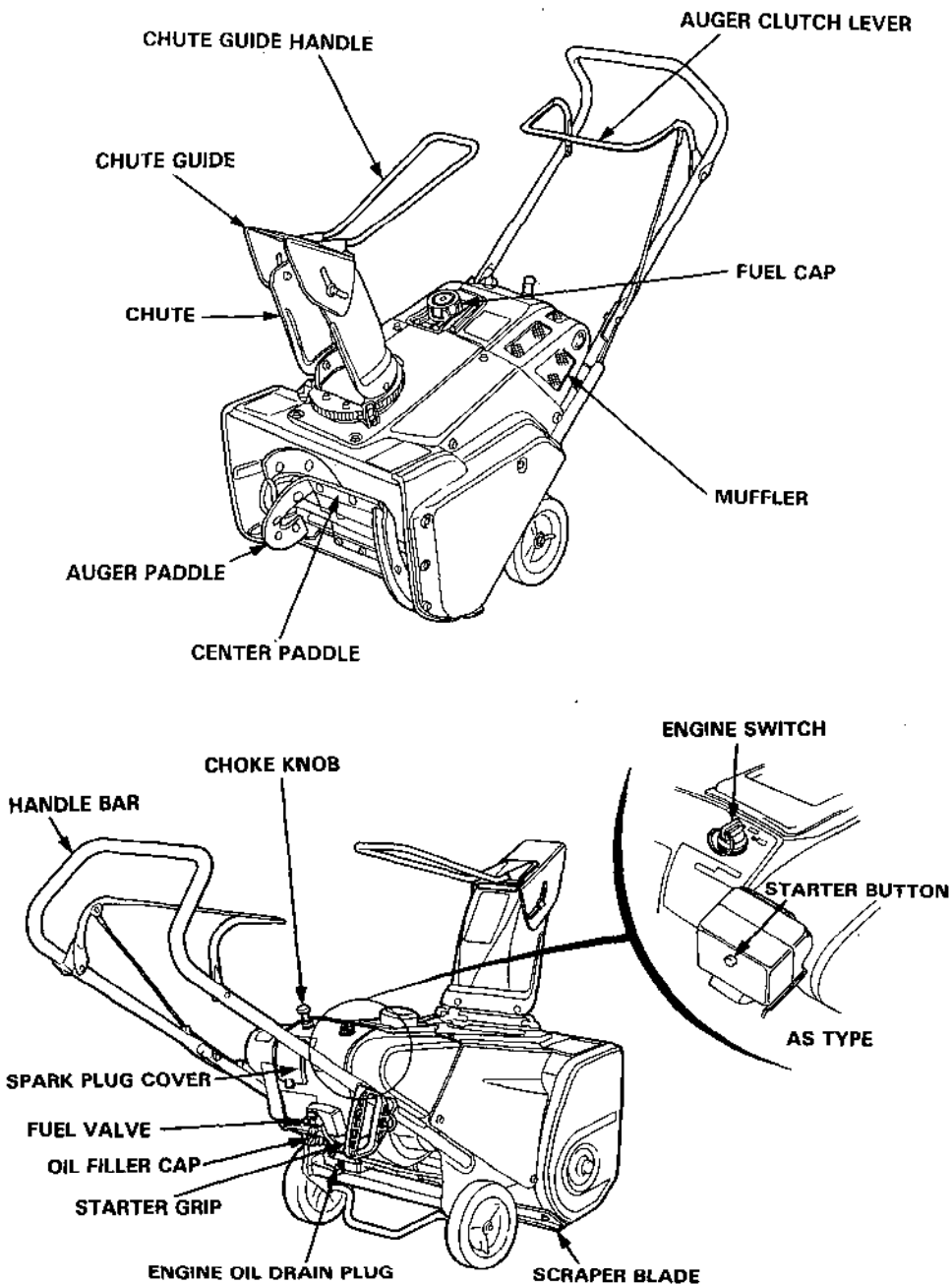
▲ WARNING

- Know how to stop the snowthrower quickly, and understand the operation of all controls.
- Never permit anyone to operate the snowthrower without proper instruction. If people or pets suddenly appear in front of the snowthrower while it is in operation, immediately release the auger clutch lever to stop the snowthrower and avoid possible injury from rotating auger blades.
- If the snow discharge chute becomes clogged, stop the engine and use a trowel or long wooden stick to unclog it. Never put your hand into the snow discharge chute while the engine is running; serious personal injury could result.
- Gasoline is extremely flammable and is explosive under certain conditions. Do not smoke or allow flames or sparks where the snowthrower is refueled or where gasoline is stored. Refuel in a well-ventilated area with the engine stopped. Do not overfill the fuel tank, and make sure the filler cap is closed securely after refueling.
- Never run the engine in an enclosed or confined area. Exhaust contains poisonous carbon monoxide gas; exposure can cause loss of consciousness and may lead to death.
- The muffler becomes very hot during operation and remains hot for a while after stopping the engine. Be careful not to touch the muffler while it is hot. Let the engine cool before storing the snowthrower indoors.
- Always make a pre-operation inspection (page 10) before you start the engine. You may prevent an accident or equipment damage.

NOTE: While operating the snowthrower, hold the handle firmly, and walk, don't run. Wear suitable winter boots that resist slipping.

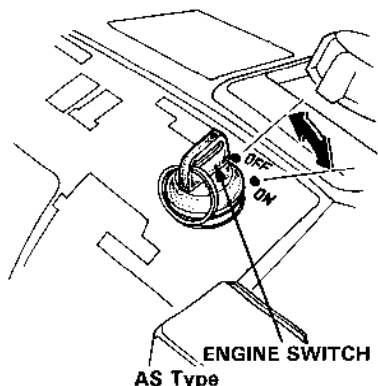
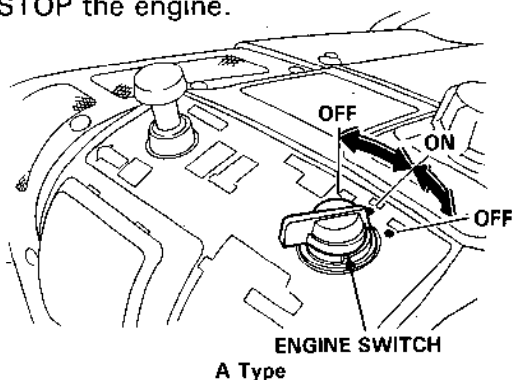


2. COMPONENT IDENTIFICATION AND FUNCTION



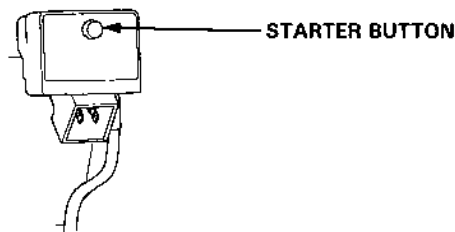
ENGINE SWITCH

Use the engine switch to turn the ignition system ON for starting, and to STOP the engine.



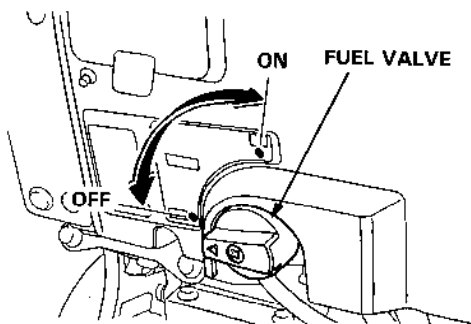
A.C. STARTER BUTTON

Push the A.C. starter button to operate the electric starter. (AS Type)



FUEL VALVE

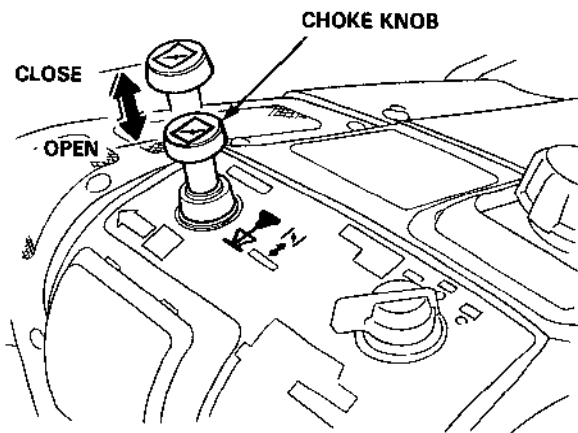
The fuel valve opens and closes the fuel line leading from the fuel tank to the carburetor. Make sure that the valve is positioned exactly at either the ON or OFF position.



⚠ WARNING Before transporting the snowthrower, be sure to turn the fuel valve to OFF to prevent possible fuel leaks; spilled fuel or fuel vapor may ignite.

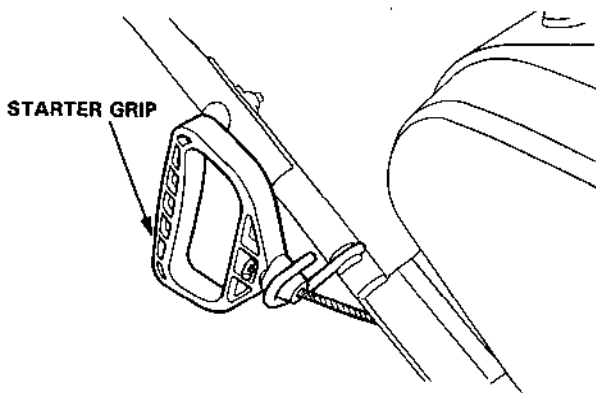
CHOKE KNOB

Close the choke when the engine is cold or difficult to start.



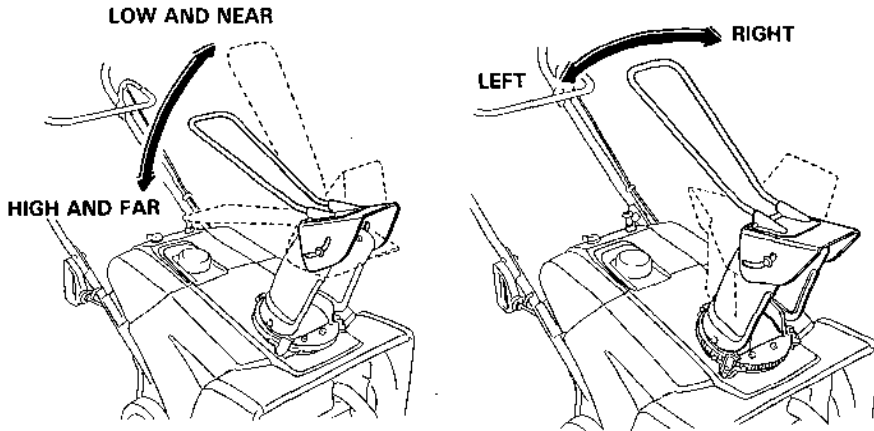
STARTER GRIP

Pull this grip to start the engine.



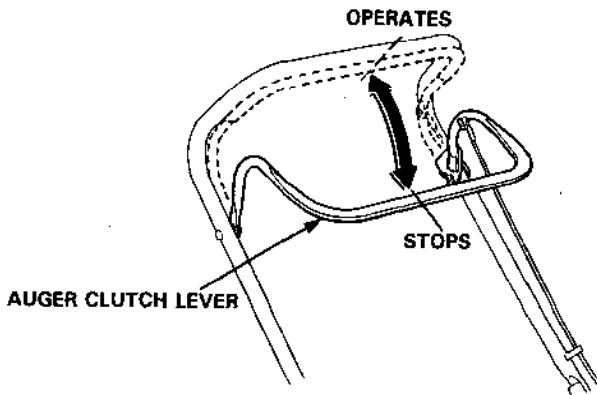
CHUTE GUIDE HANDLE

The chute guide controls the snow discharge angle and direction.



AUGER CLUTCH LEVER

When the clutch lever is squeezed, the snowthrowing mechanism is put into operation, and the snowthrower moves forward.



NOTE: Never squeeze auger clutch on cleared ground; the snowthrower will start suddenly.

3. PRE-OPERATION CHECK

▲WARNING To prevent accidental start-up, turn the engine switch OFF, and disconnect the spark plug cap before performing the pre-operation inspection.

FUEL LEVEL

Unscrew the fuel cap. Check the fuel level.

Your engine is designed to use any gasoline that has a pump octane number ($\frac{R+M}{2}$) of 86 or higher, or that has a research octane number of 91 or higher. Gasoline pumps at service station normally display the pump octane number.

We recommend that you use unleaded fuel because it produces fewer engine and spark plug deposits and extends the life of exhaust system components.

Never use stale or contaminated gasoline or an oil/gasoline mixture. Avoid getting dirt, dust or water in the fuel tank. Use of a lower octane gasoline can cause persistent "pinging" or heavy "spark knock" (a metallic rapping noise) which, if severe, can lead to engine damage.

▲CAUTION If "spark knock" or "pinging" occurs at a steady engine speed under normal load, change brands of gasoline. If spark knock or pinging persists, consult your authorized Honda dealer. Failure to do so is considered misuse, and damage caused by misuse is not covered by Honda's Limited Warranty.

Occasionally you may experience light spark knock while operating under heavy loads. This is no cause for concern, it simply means your engine is operating efficiently.

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

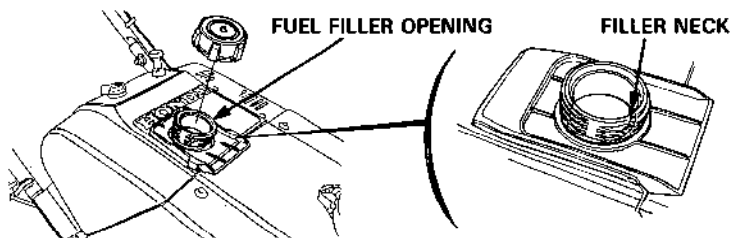
▲ WARNING

- Gasoline is extremely flammable and is 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 engine is refueled or where gasoline is stored.
- Do not overfill the fuel tank (there should be no fuel in the filler neck). After refueling, make sure the tank cap is closed properly and securely.
- Be careful not to spill fuel when refueling. Spilled fuel or fuel vapor may ignite. If any fuel is spilled, make sure the area is dry before starting the engine.
- Avoid repeated or prolonged contact with skin or breathing of vapor.
KEEP OUT OF REACH OF CHILDREN.

▲ CAUTION

Don't let snow get in the fuel tank. Water in the fuel system can cause stalling and difficult starting.

FUEL TANK CAPACITY: 1.25 ℓ (0.33 US gal, 0.27 Imp gal)



GASOLINES CONTAINING ALCOHOL

If you decide to use a gasoline containing alcohol (gasohol), be sure it's octane rating is at least as high as that recommended by Honda. There are two types of "gasohol": one containing ethanol, and the other 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:

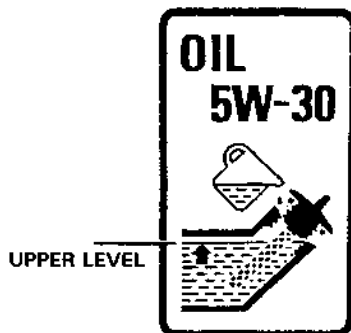
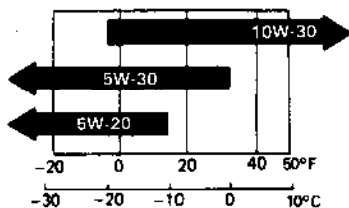
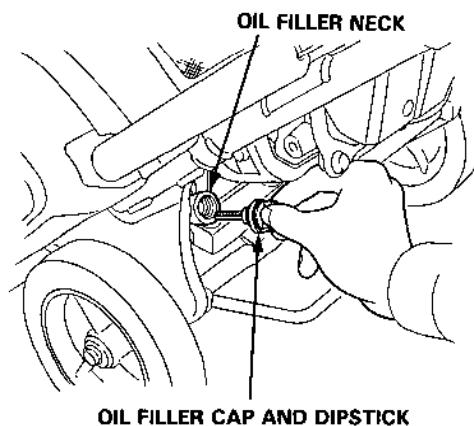
- Fuel system damage or engine performance problems resulting from the use of fuels that contain alcohol is not covered under the warranty. Honda cannot endorse the use of fuels containing methanol since evidence of their suitability is as yet incomplete.
- Before buying fuel from an unfamiliar station, try to find out if the fuel contains alcohol, if it does, confirm the type and percentage of alcohol used. If you notice any undesirable operating symptoms while using a gasoline that contains alcohol, or one that you think contains alcohol, switch to a gasoline that you know does not contain alcohol.

ENGINE OIL LEVEL

Inspection:

With the snowthrower on a level surface, remove the oil filler cap and wipe the dipstick clean. Insert the dipstick into the filler neck, but do not screw it in. Remove the dipstick and check the oil level.

If the level is low, fill to the top of the oil filler neck with the recommended oil.



OIL CAPACITY: 0.6 l (0.63 US qt, 0.53 Imp qt)

RECOMMENDED OIL:

Use high detergent, premium quality motor oil certified to meet or exceed U.S. automobile manufacturers' requirements for API Service Classification SG, SF/CC, CD (Motor oils classified SG, SF/CC, CD will show this designation on the container.) Select the appropriate oil viscosity for the average temperature in your area, as shown in the chart above. SAE 5W-30 is recommended for general, all-temperature use.

CAUTION

- Engine oil is a major factor affecting engine performance and service life. Nondetergent oils and 2-stroke engine oils are not recommended because they have inadequate lubricating properties.
- Running the engine with insufficient oil can cause serious engine damage.

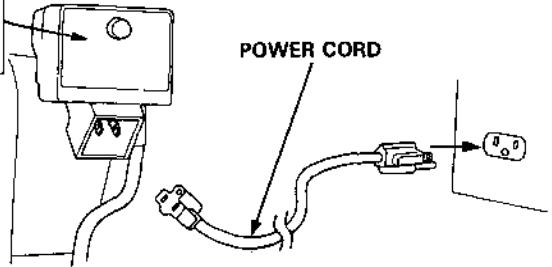
4. STARTING THE ENGINE

WARNING Never run the engine in an enclosed or confined area. Exhaust contains poisonous carbon monoxide gas; exposure can cause loss of consciousness and may lead to death.

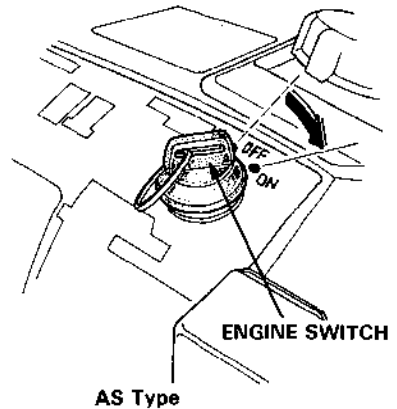
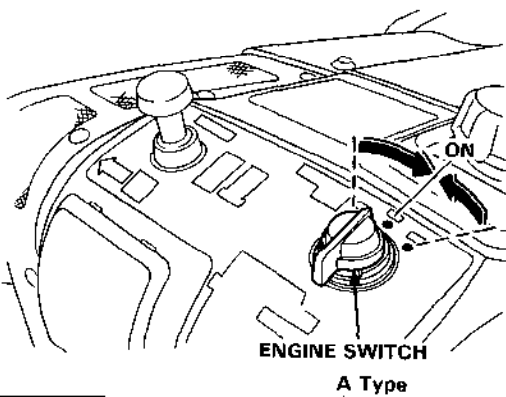
- Connect the female end of your power cord to the switch box and the male end to a properly grounded 120 Volt A/C outlet. (AS Type).

CAUTION

- USE ONLY WITH GROUNDED OUTLET AND 3-WIRE CORD.
- 120 VOLT A.C. ONLY
- DO NOT CRANK OVER 1 MINUTE WITHOUT COOLING 15 MINUTES.
- DO NOT USE IN RAIN.



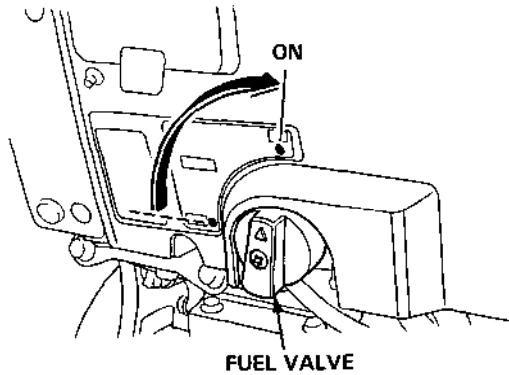
1. Turn the engine switch to the ON position.



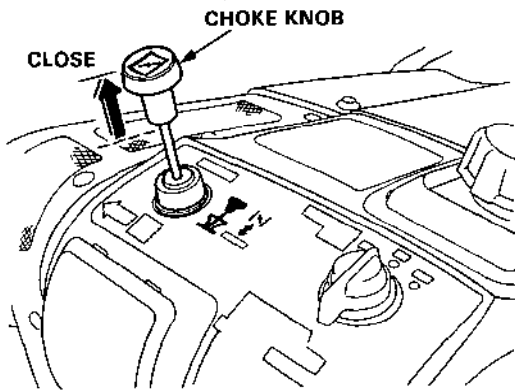
WARNING

- To minimize the possibility of potentially dangerous electrical shocks, always use a 3-conductor power cord with a power rating of no less than 15 amps. Also, be sure that the outlet you are using is properly grounded.
- Do not connect and disconnect the power cord with wet hands.
- Be sure to hold the plug when disconnecting the power cord from the electrical outlet or switch box. Do not disconnect by pulling on the power cord.

2. Turn the fuel valve to the ON position.

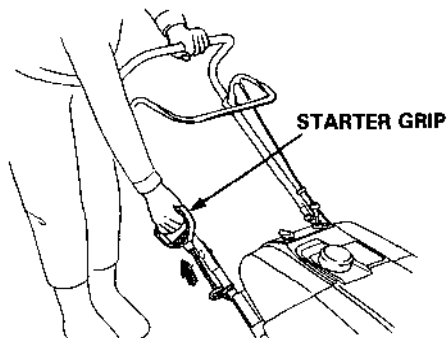


3. When the engine is cold, move the choke to the CLOSE position.



4. Pull the starter grip lightly until you feel resistance, then pull briskly.

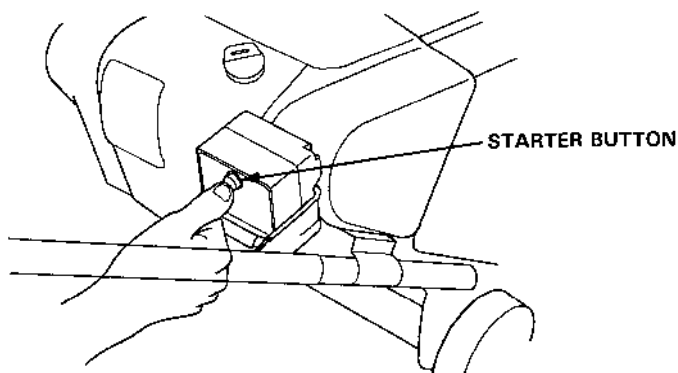
CAUTION Damage may result if the starter grip is pulled while the engine is running.



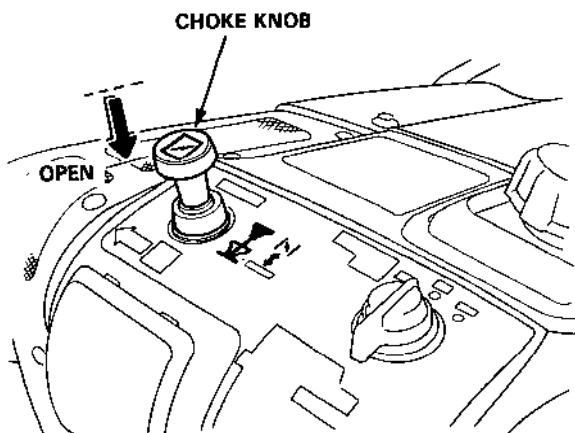
- Push the starter button until the engine starts. (AS Type)

▲ CAUTION

- Do not operate the starter for more than 1 minute. If the engine fails to start, release the button and allow the starter to cool for 15 minutes before operating it again.
- To avoid serious engine damage, never operate the starter while the engine is running.
- After the engine starts, disconnect the power cord from the electrical outlet first, and then from the switch box.



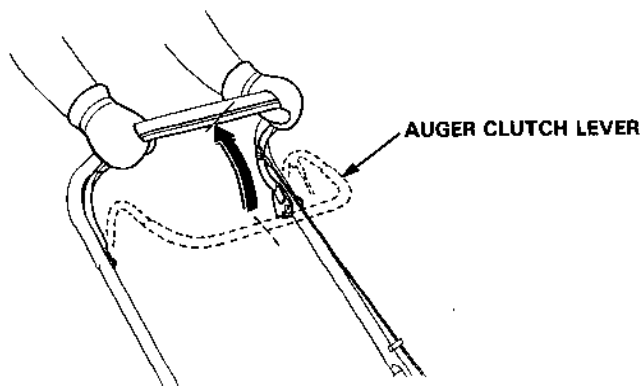
5. Let the engine warm up for several minutes. If the choke was in the CLOSE position, return it gradually to the OPEN position as the engine warms up.



5. SNOWTHROWER OPERATION

Before operating this equipment you should read and understand the SAFETY information on pages 4 and 5.

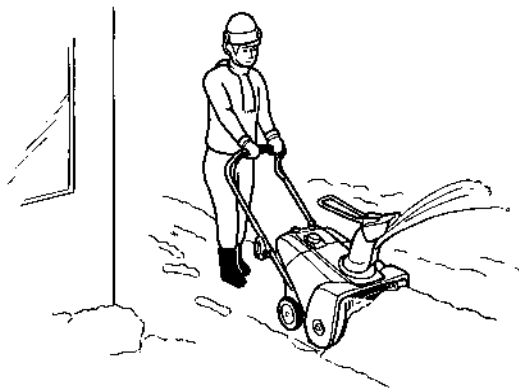
1. Hold the handle firmly with one hand.
2. Squeeze the auger clutch lever with your other hand to engage the snowthrowing mechanism. When you release your hand, it will stop.



NOTE: To move the snowthrower forward, raise the handle up and away from the ground. The snowthrower will move forward as long as the auger contacts the ground. To stop, push down on the handle to pivot the auger up and away from the ground, or release the auger clutch lever.

When operating the snowthrower, be sure your footing is secure and keep your hands firmly on the handle and auger clutch lever. Walk, never run with the machine.

-
3. Start the snowthrowing operation only after the engine has warmed up and is running smoothly.



⚠ WARNING

- **Adjust the snow discharge chute to avoid hitting the operator, bystanders, windows, and other objects with thrown snow. Stay clear of the snow discharge chute while the engine is running.**
- **If the snow discharge chute becomes clogged, stop the engine and use a trowel or long wooden stick to unclog it. Never put your hand into the snow discharge chute while the engine is running; serious personal injury could result.**

NOTE:

- For most efficient snowthrowing, clear snow before it melts and refreezes.
- When you are operating the snowthrower over bumpy ground, push down on the handle to raise the snowthrowing mechanism above ground level.

-
4. When the temperature is high, and the snow is wet and heavy, operate at reduced ground speed.



- Walk the snowthrower slowly to remove hard or deep snow. Push handle down and forward for additional traction and overlap each swath if necessary.
5. When the height of the snow is greater than the height of the snow-throwing mechanism, push the snowthrower back and forth to remove snow gradually.



HIGH ALTITUDE OPERATION

At high altitude, the standard carburetor air-fuel mixture will be excessively rich. Performance will decrease, and fuel consumption will increase.

High altitude performance can be improved by installing a smaller diameter main fuel jet in the carburetor and readjusting the pilot screw. If you always operate the snowthrower at altitudes higher than 6,000 feet above sea level, have your authorized Honda Snowthrower dealer perform these carburetor modifications.

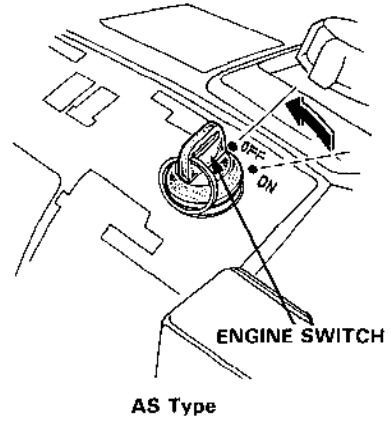
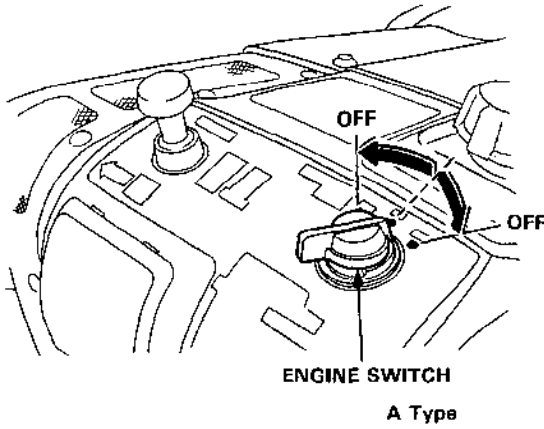
Even with suitable carburetor jetting, engine horsepower will decrease approximately 3.5% for each 1,000 foot increase in altitude. The effect of altitude on horsepower will be greater than this if no carburetor modification is made.

▲ CAUTION Operation of the snowthrower at an altitude lower than the carburetor is jetted for may result in reduced performance, overheating, and serious engine damage caused by an excessively lean air/fuel mixture.

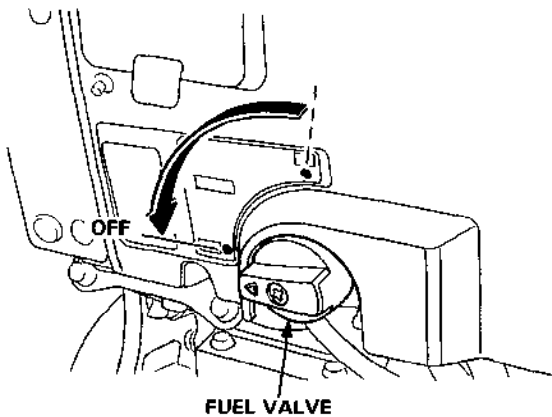
6. STOPPING THE ENGINE

To stop the engine in an emergency, turn the engine switch OFF immediately. To stop the engine in normal circumstances.

1. Turn to the engine switch to the OFF position.



2. Turn the fuel valve to the OFF position.



Periodic inspection and maintenance will help extend the service life of your HS521 Snowthrower while keeping it in the best operating condition. Inspect or service as described on the next page.

▲ WARNING

- **Shut off the engine before performing inspection and maintenance, and disconnect the spark plug wire from the plug so the engine cannot be started.**
- **If the engine must be run, make sure the area is well ventilated. Exhaust gas contains poisonous carbon monoxide; exposure can cause loss of consciousness and may lead to death.**

▲ CAUTION

- **To avoid overturning, place the snowthrower on a level surface before performing inspection and maintenance.**
- **Use only genuine HONDA parts or their equivalent. Replacement parts which are not of equivalent quality may damage the snowthrower.**

MAINTENANCE SCHEDULE

ITEM	SERVICE PERIOD (3)	EACH USE	FIRST 20 HRS OPERATION	EVERY YEAR	
				BEFORE OPERATION	BEFORE STORAGE
Engine oil	Check level	○			
	Change		○	○	
Auger paddles	Check	○		○	
	Change		Every 5 years (1) (2)		
Scraper blade	Check			○	
	Change		Every 5 years (1)		
Spark plug	Clean-Readjust			○	
Bolts, nuts, fasteners	Check			○	
Auger clutch cable	Check-Readjust			○ (1)	
Drive belt	Check			○	
	Readjust or change		Every 5 years (1) (2)		
Fuel strainer cup (sediment cup)	Clean				○
Fuel tank and carburetor	Drain				○
Apply oil for lubrication and rust prevention					○
Fuel line	Check (Replace if necessary)		Every 2 years (2)		
Valve clearance	Check-Readjust		Every 5 years (1) (2)		
Fuel tank	Clean		Every 5 years (1) (2)		

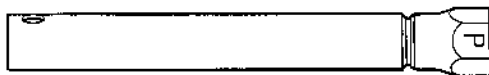
NOTE: (1) These parts may require more frequent inspection and replacement under heavy use.

(2) These items should be serviced by an authorized Honda dealer, unless the owner has the proper tools and is mechanically proficient.

See the Honda Shop Manual.

(3) For professional commercial use, log hours of operation to determine proper maintenance intervals.

TOOL KIT



SPARK PLUG WRENCH



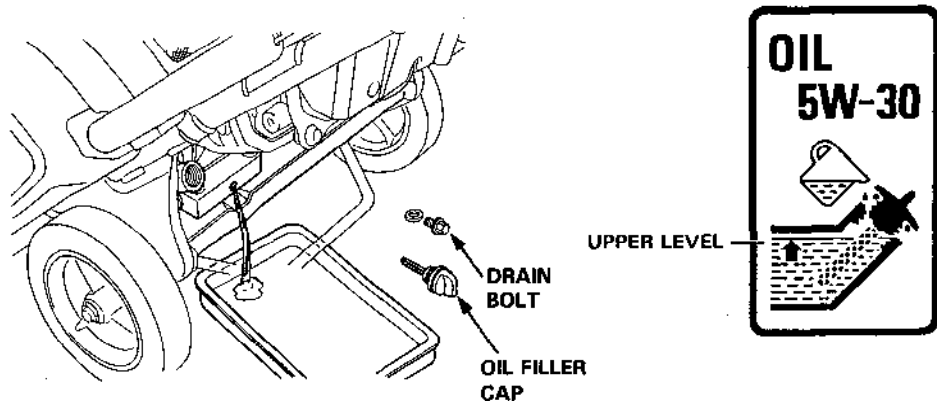
WRENCH HANDLE

ENGINE OIL CHANGE

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

1. Remove the drain plug and filler cap, and drain the oil. Retighten the plug securely.
2. Fill the crankcase with the recommended oil (see page 12) and check the level.

OIL CAPACITY: 0.6 ℓ (0.63 US qt, 0.53 Imp qt)



CAUTION Used motor oil may cause skin cancer if repeatedly left in contact with the skin for prolonged periods. Although this is unlikely unless you handle used oil on a daily basis, it is still advisable to thoroughly wash your hands with soap and water as soon as possible after handling used oil.

NOTE: Please dispose of used motor oil in a manner that is compatible with the environment. We suggest you take it in a sealed container to your local service station for reclamation. Do not throw it in the trash or pour it on the ground.

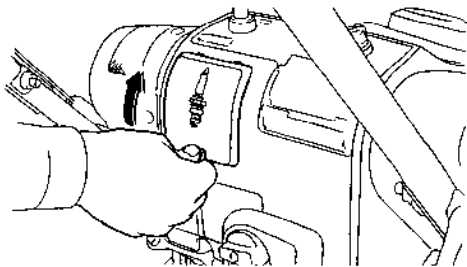
SPARK PLUG SERVICE

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

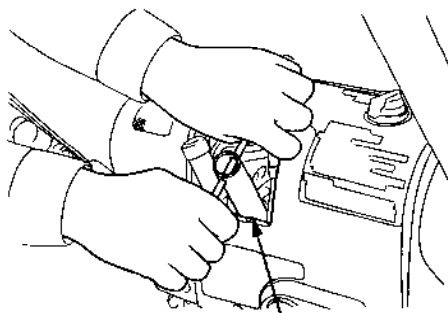
▲WARNING If the engine has been running, the muffler will be very hot. Be careful not to touch the muffler while it is hot.

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

1. Remove the spark plug cover then the spark plug cap.



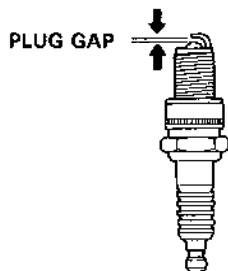
2. Clean any dirt from around the spark plug base.
3. Use the wrench supplied in the tool kit to remove the spark plug.



SPARK PLUG WRENCH

4. Inspect the spark plug. Discard it if the electrodes are worn or if the insulator is cracked or chipped. If it is to be reused clean the electrode and insulator with a wire brush.

-
5. Measure the plug gap with a feeler gauge.
0.7 to 0.8 mm (0.027–0.031 in)
Correct as necessary by bending the side electrode.



6. Make sure that the spark plug washer is in good condition and thread the spark plug in by hand to prevent cross-threading.
7. After the spark plug is seated, tighten with a spark plug wrench to compress the washer.

NOTE: If installing a new spark plug, tighten 1/2 turn after the spark plug seats to compress the washer. If reinstalling a used spark plug, tighten 1/8 to 1/4 turn after the spark plug seats.

CAUTION

- Use only the recommended spark plugs or equivalent. Spark plugs which have an improper reach or heat range may cause engine damage.
- The spark plug must be securely tightened. An improperly tightened spark plug can become very hot and may damage the engine.

SCRAPER INSPECTION, ADJUSTMENT AND REPLACEMENT

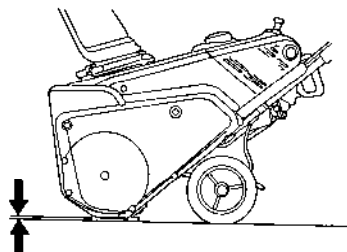
If the auger housing guard and the scraper are deformed or improperly adjusted, the snowthrower will not clear the snow evenly. The snowthrower should be inspected and adjusted, and any faulty parts should be replaced before it is put back into service in the season or if its performance is impaired.

▲ WARNING

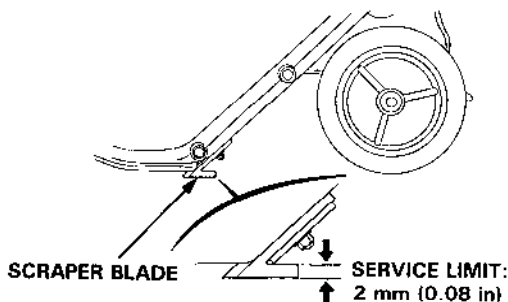
To prevent accidental starting, turn the engine switch to the OFF position and disconnect the spark plug cap.

INSPECTION:

1. Place the snowthrower on firm, level ground and check that the scraper blade contacts the ground evenly. Adjust the scraper blade if it does not contact the ground evenly.
2. Check that the auger paddle ground clearance is 0–2 mm (0–0.08 in.)
3. Replace the scraper blade if the service limit is exceeded.



PADDLE GROUND CLEARANCE:
0–2 mm (0–0.08 in)



ADJUSTMENT:

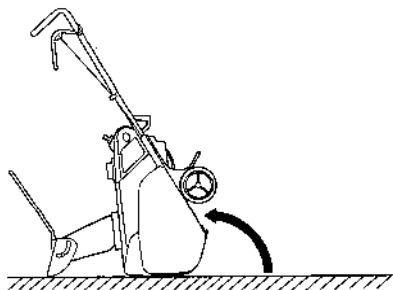
Adjust auger paddle ground clearance by repositioning the scraper.

1. Drain the fuel tank as described on page 35. Turn the fuel valve to the OFF position.

▲ WARNING

- Gasoline is extremely flammable and is explosive under certain conditions.
- Spilled fuel or fuel vapor may ignite. If any fuel is spilled, make sure the area is dry before starting the engine.

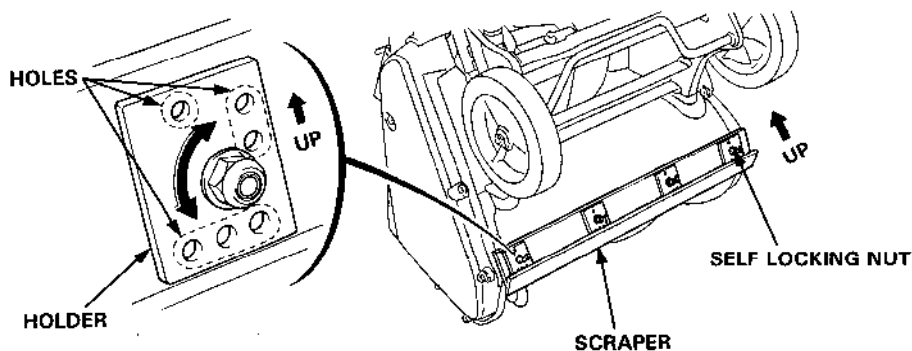
- Set the chute straight ahead, and raise the chute guide to its highest position.
- Tilt the snowthrower forward until it rests on the auger housing and chute guide.



- Loosen the four self-locking nuts and lower the scraper blade fully.
- Adjust the auger paddle-to-ground clearance by rotating the holders.

NOTE:

- The holders can be set in four directions. Be sure that all holders are set in the same directions.
- The blade is set at its lowest position when the holders are installed with the three holes facing up.
- The holders are installed with the one hole facing up when the snowthrower leaves the factory.



6. Tighten the self-locking nuts securely while holding the blade firmly against the holders.
7. Return the snowthrower to the original position and check that the scraper blade contacts the ground evenly. Then, check that the auger paddle-to-ground clearance is 0–2 mm (0–0.08 in).

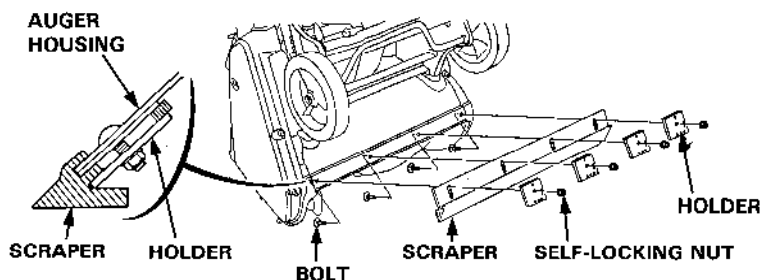
REPLACEMENT

The scraper must be replaced if it is worn abnormally or the service limit is exceeded.

1. Turn the engine switch off and drain the fuel tank.
2. Lift the handle so that the auger housing faces down.
3. Remove the four self-locking nuts and holders from the scraper, and remove the scraper.
4. Insert a new scraper into the auger housing securely.
5. Install the self-locking nuts, and holders, then tighten the self-locking nuts securely.

NOTE:

- Check that all holders are installed in the same direction.
- Be sure that there is no clearance between the scraper and ground when the snow-thrower is placed on the ground, and that the auger paddle-to-ground clearance is 0–2 mm (0–0.08 in), then tighten the self-locking nuts.
- It is recommended to replace the scraper blade when the auger and center paddles are to be replaced.



AUGER CLUTCH CABLE INSPECTION AND ADJUSTMENT

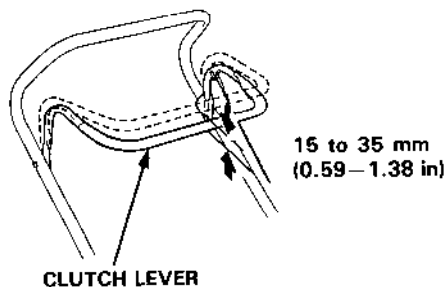
INSPECTION

For the auger brake to operate properly, there should be free play in the auger clutch cable with the auger clutch set in the "OFF" position.

Check the free play at the tip of the clutch lever.

There should be 15 to 35 mm (0.59–1.38 in) of free play at the tip of the lever.

Adjustment is necessary if the free play is excessive or the cable is too taut.

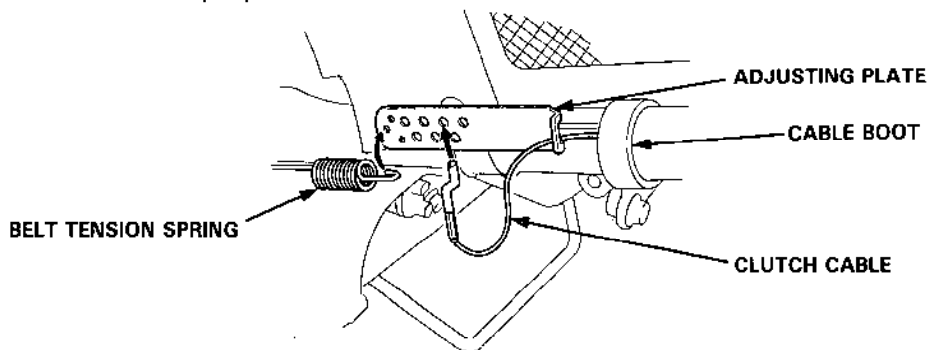


ADJUSTMENT

1. Loosen the belt cover bolts and remove the belt cover.
2. Pull the cable boot up to expose the adjusting plate.
3. Disconnect the cable end from the clutch lever. The cable end can be disconnected easily by squeezing the clutch lever and then holding the cable while releasing the lever. Be careful to avoid bending the cable.

NOTE: Observe the position of the belt tension spring and lower cable end in the adjusting plate, so you will know which holes were used when the spring or cable is disconnected from the plate.

-
4. Adjust auger clutch lever free play by hooking the belt tension spring and/or clutch cable into the other holes in the adjusting plate. Move the spring and cable closer together to reduce free play, or farther apart to increase free play.

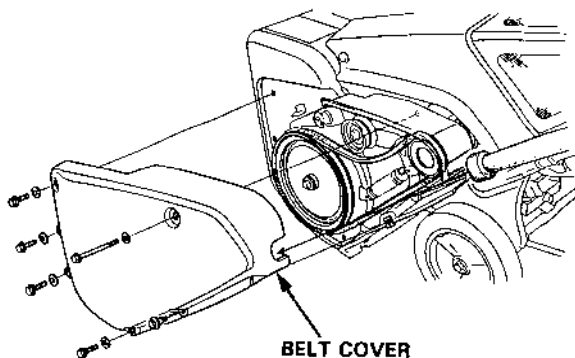


5. Connect the upper cable end to the clutch lever, and check clutch lever free play again (see page 30). Readjust if necessary.
If you are unable to adjust free play to specifications contact your local Honda snowblower dealer for repairs.
6. Pull the boot down over the adjusting plate after free play is correctly adjusted.

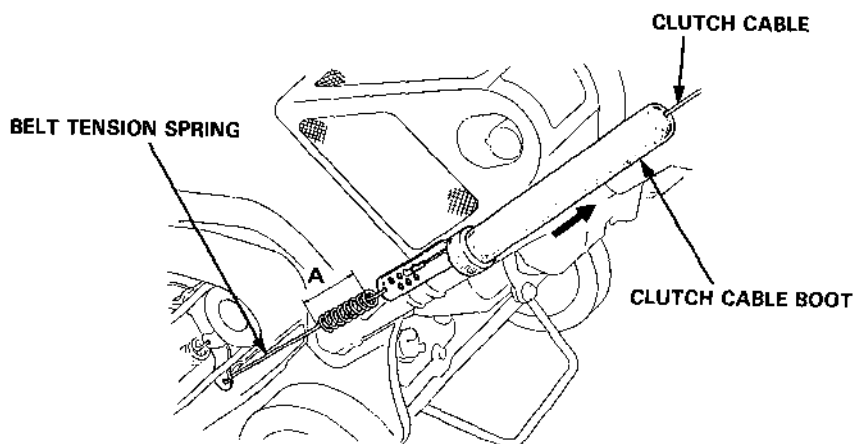
DRIVE BELT INSPECTION

The drive belt is subject to wear and deterioration and should be checked every year before operation. If the snow discharge performance drops while operating the snowthrower, or if it is often clogged with snow, the problem may be due to belt slippage.

1. Check auger clutch lever free play (see page 30), and adjust if necessary.
2. Remove the belt cover bolts, then remove the belt cover.



3. Slide the cable boot upward. The drive belt should be adjusted if the length "A" of the drive belt tension spring is less than 30 mm (1.18 in) with the auger clutch lever squeezed fully. If adjustment is required, consult your authorized Honda dealer.

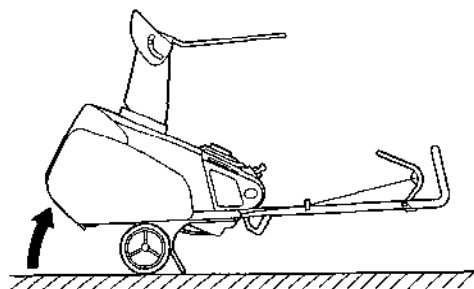


PADDLE INSPECTION

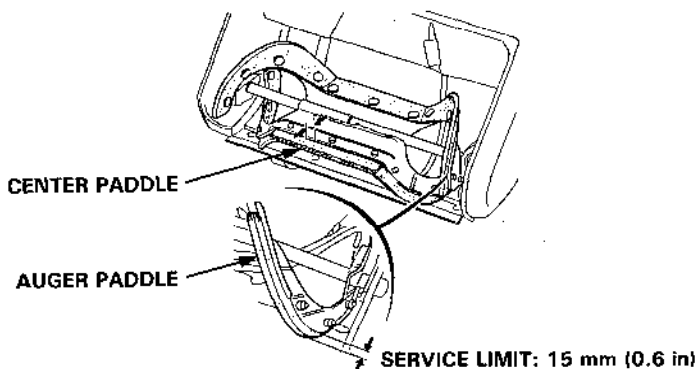
The paddles are subject to wear and deterioration and should be checked every year before operation. Worn paddles reduce snow removal performance, and loose paddles, or loose material from damaged or deteriorated paddles, may damage the auger housing guard.

▲ WARNING To prevent accidental starting, turn the engine switch to the OFF position and disconnect the spark plug cap.

1. Drain the fuel as described in section 8 page 35.
2. Tilt the snowthrower by raising the front end of the housing using the stopper.
3. Inspect the paddles to be sure they are in good condition and are securely attached.



4. Measure the distance from the outer edge of the auger to the outer edge of the rubber paddles at their centers. If the distance is less than 15 mm (0.6 in), the paddles are worn out and should be replaced.



NOTE: If the paddles are worn out, the scraper may also have become worn. Inspect the scraper as described on page 27.

If paddle replacement or other repairs are needed, take the snowthrower to an authorized Honda snowthrower dealer.

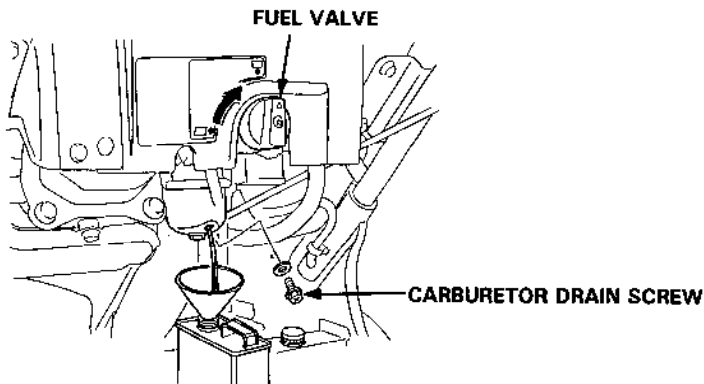
8. STORAGE

Before storing the snowthrower for an extended period:

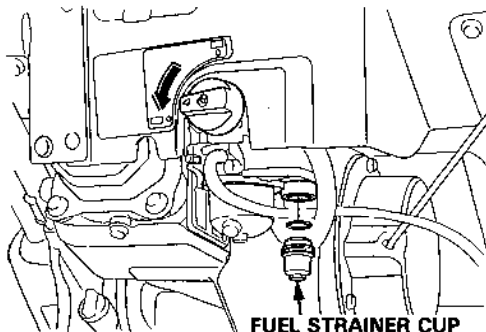
1. Be sure the storage area is free of excessive humidity and dust.
2. Drain the fuel—

▲ WARNING

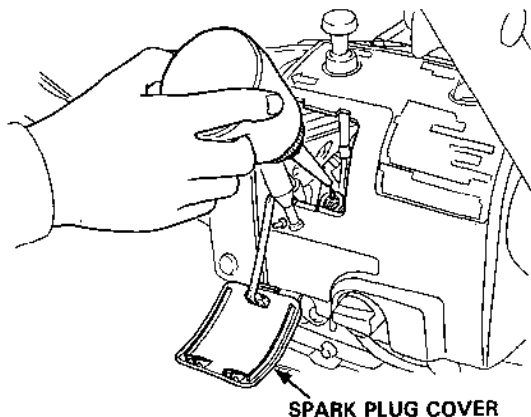
- Gasoline is extremely flammable and is explosive under certain conditions. Do not smoke or allow flames or sparks in the area.
 - Do not drain the fuel tank when the exhaust system is hot.
- a. Turn the fuel valve ON.
 - b. Loosen the carburetor drain screw, and drain the gasoline into a suitable container. After draining, tighten the drain screw and turn the fuel valve OFF.



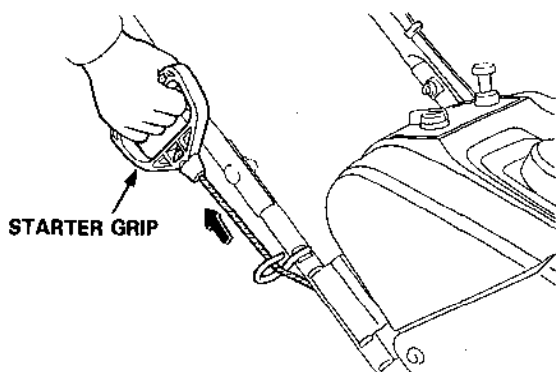
- c. Keep the fuel valve OFF, remove, empty and clean the fuel strainer cup.
- d. Install the fuel strainer cup and tighten securely.



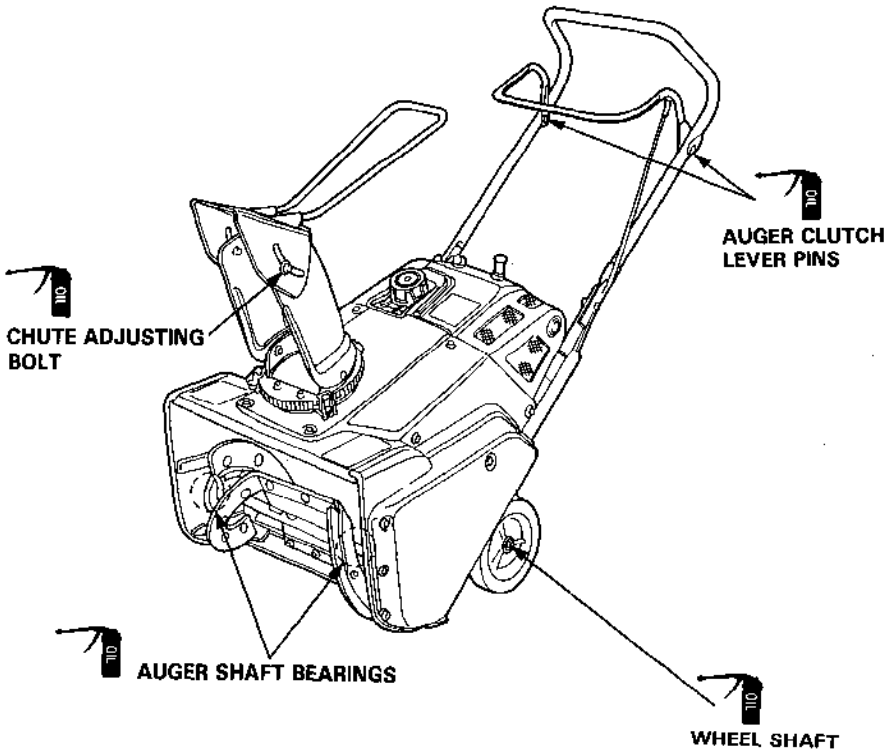
-
3. Remove the spark plug cover and spark plug and pour three table-
spoonsful of clean motor oil into the cylinder. Pull the starter grip slowly
two or three times to distribute the oil. Reinstall the spark plug.



4. Pull the starter grip until resistance is felt. This closes the valves and
protects the engine from internal corrosion.



Apply oil to the following parts for lubrication and rust prevention.



- Check all nuts, bolts and fasteners and tighten securely if necessary.

9. TROUBLESHOOTING

When the engine will not start:

1. Is the engine switch on?
2. Is the fuel valve on?
3. Is there enough fuel?

▲ WARNING If any fuel is spilled, make sure the area is dry before testing the spark plug or starting the engine. Spilled fuel or fuel vapor may ignite.

4. Is gasoline reaching the carburetor?
To check, loosen the drain screw with the fuel valve on. Fuel should flow freely.
5. Is there a spark at the spark plug?
 - a. Remove the spark plug cap. Clean any dirt from around the spark plug base, then remove the spark plug.
 - b. Install the spark plug in the plug cap.
 - c. Turn the engine switch on.
 - d. Grounding the side electrode to any engine ground, crank the engine to see if sparks jump across the gap.
 - e. If there are no sparks, replace the plug.
If OK, try to start the engine according to the instructions.
6. If the engine still does not start, take the snowthrower to an authorized Honda snowthrower dealer.

10. SPECIFICATIONS

Type	Honda snowthrower HS521K1
Power product description code	SAG

Engine

Model:	HONDA GX140
Maximum output:	5.0 HP/4000 r.p.m
Displacement:	144 cm ³ (8.8 cu. in)
Bore x stroke:	64 X 45 mm (2.5 X 1.8 in)
Starting method:	Recoil starter, Recoil or electric starter (AS Type)
Ignition system:	Transistorized magneto
Oil capacity:	0.6l (0.63 US qt, 0.53 Imp qt)
Fuel tank capacity:	1.25l (0.33 US gal, 0.27 Imp gal)
Spark plug:	BPR5ES (NGK), W16EPR-U (ND)

Frame

Items	Specifications
Overall length	1,230 mm (48.4 in)
Overall width	570 mm (22.4 in)
Overall height	980 mm (38.6 in)
Dry weight	40.6 kg (89.5 lb), 43.1 kg (95.0 lb AS type)
Width of snow clearance	522 mm (20.6 in)
Height of snow clearance	323 mm (12.7 in)
Snow throwing distance (differs according to the kind of snow)	Max. 10 m (32.8 ft)
Clearing capacity	33 Ton/hour
Continuous operating time on one tank of fuel	1.4 hours

11. 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:

American Honda Motor Co., Inc.
P.O. Box 100021
Duluth, Georgia 30136-9421
Telephone: (404) 497-6400

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 your 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

HONDA
HONDA MOTOR CO., LTD. TOKYO, JAPAN

31747620
00X31-747-6200

AH ㊦ Y 5009408 K1
PRINTED IN JAPAN