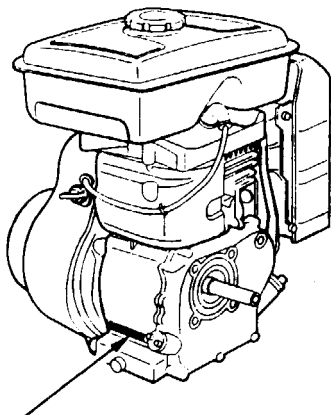


HONDA

G150K1.G200K1.GK200K2



**Serial number and
engine type**

OWNER'S MANUAL

ASIAN HONDA MOTOR CO., LTD. 1998

Thank you for purchasing a Honda engine.

This manual covers the operation and maintenance of your engines:
G150·G200·GK200K1

All information in this publication is based on the latest product information available at the time of 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 engine and should remain with it if it is resold.

Pay special attention to statements preceded by the following words:

▲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.

NOTICE Indicates that equipment or property damage can result if instructions are not followed.

NOTE: Gives helpful information.

If a problem should arise, or if you have any questions about your engine, consult an authorized Honda dealer.

▲WARNING
The Honda engine is designed to give safe and dependable service if operated according to instructions. Read and understand the Owner's Manual before operating the engine. Failure to do so could result in personal injury or equipment damage.

1 SAFETY INSTRUCTIONS

▲WARNING

To ensure safe operation



• Honda engine is designed to give safe and dependable service if operated according to instructions. Read and understand the Owner's Manual before operating the engine. Failure to do so could result in personal injury or equipment damage.

- Always make a pre-operation inspection (page 5) before you start the engine. You may prevent an accident or equipment damage.
- To prevent fire hazards and to provide adequate ventilation, keep the engine at least 1 meter (3 feet) away from buildings and other equipment during operation. Do not place flammable objects close to the engine.
- Children and pets must be kept away from the area of operation due to a possibility of burns from hot engine components or injury from any equipment the engine may be used to operate.
- Know how to stop the engine quickly, and understand the operation of all controls. Never permit anyone to operate the engine without proper instructions.
- Do not place flammable objects such as gasoline, matches, etc., close to the engine while it is running.
- Refuel in a well-ventilated area with the engine stopped. Gasoline is highly flammable and explosive under certain conditions.
- Do not overfill the fuel tank. There should be no fuel in the filler neck.
Make sure that the filler cap is closed securely.

Safety Instruction

▲WARNING

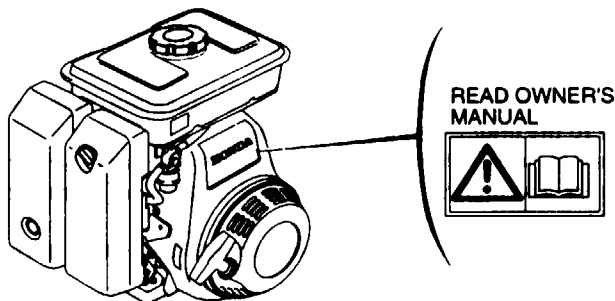
To ensure safe operation

- If any fuel is spilled, clean it up completely and allow petroleum vapours to dissipate before starting the engine.
- Do not smoke or allow flames or sparks where the engine is refueled or where gasoline is stored.
- Exhaust gas contains poisonous carbon monoxide. Avoid inhalation of exhaust gases. Never run the engine in a closed garage or confined area.
- Place the engine on a stable surface. Do not tilt the engine more than 20° from horizontal. Operating at excessive angles may result in fuel spillage.
- Do not place anything on the engine, as it may create a fire hazard.
- 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. To avoid severe burns or fire hazards, let the engine cool before transporting it or storing it indoors.

SAFETY LABEL LOCATION

This label warns you of potential hazards that can cause serious injury. Read it carefully.

If the label comes off or becomes hard to read, contact your Honda dealer for replacement.



2 PRE-OPERATION CHECK

1. Engine oil level

CAUTION:

- Running the engine with insufficient oil can cause serious engine damage.
- Be sure to check the engine on a level surface with the engine stopped.

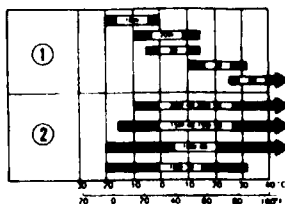
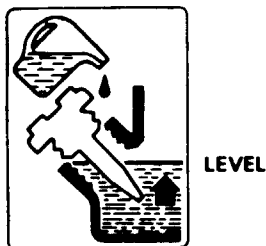
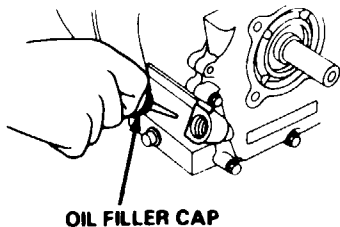
Use Honda 4-stroke, or an equivalent high detergent, premium quality motor oil certified to meet or exceed U.S. automobile manufacturer's requirements for service classification SG, SF. Motor oils classified SG, SF will show this designation on the container.

SAE 10W-30 is recommended for general, all temperature use. If single viscosity oil is used, select the appropriate viscosity for the average temperature in your area.

1. Remove the oil filler cap and wipe the dipstick clean.
2. Insert the dipstick into the oil filler neck, but do not screw it in.
3. If the level is low, fill to the top of the oil filler neck with the recommended oil.

CAUTION:

Using nondetergent oil or 2-stroke engine oil could shorten the engine's service life.



Ambient temperature

- ① SINGLE VISCOSITY
- ② MULTI VISCOSITY

2. Reduction gear oil (G150 · G200 only)

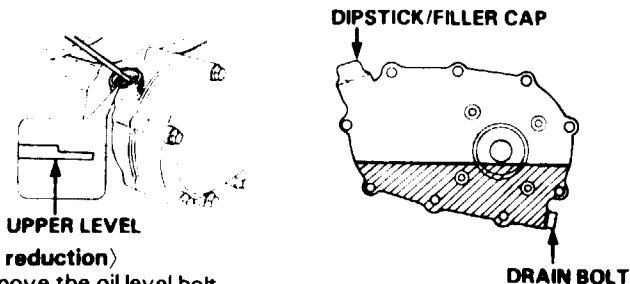
Check reduction gear oil level.

Fill with SG, SF rated engine oil, if necessary.

(1/2 reduction with automatic centrifugal clutch)

1. Remove the oil filler cap and wipe the dipstick clean.
2. Insert the dipstick into the filler neck but do not screw it in.
3. If the level is low, fill to the upper level mark with the same oil recommended for the engine (see engine oil recommendations on page 5).

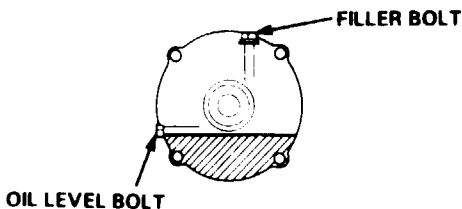
Oil capacity: 0.50 ℓ (0.53 US qt , 0.44 Imp qt)



(1/6 reduction)

1. Remove the oil level bolt.
2. Check the oil level; it should reach the edge of the oil level bolt hole. If the oil level is low, remove the filler bolt, and add oil until it starts to flow out the oil level bolt hole. Use the same oil recommended for the engine (see engine oil recommendations on page 5).
3. Install the oil level bolt and filler bolt. Tighten them securely.

Oil capacity: 0.15 ℓ (0.16 US qt , 0.13 Imp qt)



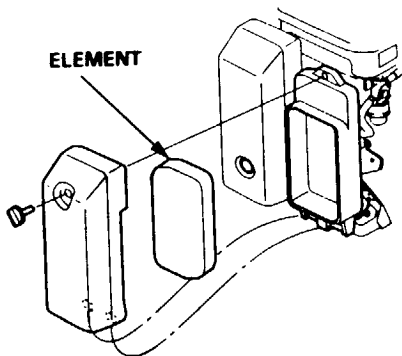
3. Air cleaner

CAUTION:

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

〈Semi-dry type〉

Check cleaner for dirt or obstruction of element (page 23).

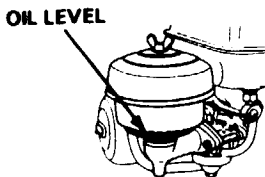


〈Oil bath type〉

1. Check the air cleaner element to be sure it is clean and in good condition. Clean or replace the element if necessary (page 24).
2. Check oil level and condition.

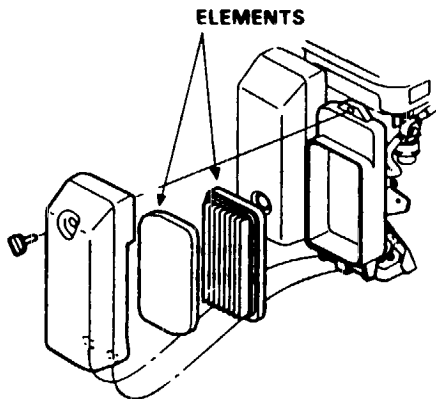
CAUTION:

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



<Dual element type> (G150 · G200 only)

1. Check the air cleaner elements to be sure they are clean and in good condition.
2. Clean or replace the elements if necessary (page 25).



4. Fuel

Use automotive gasoline (Unleaded or lowleaded 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.

▲WARNING

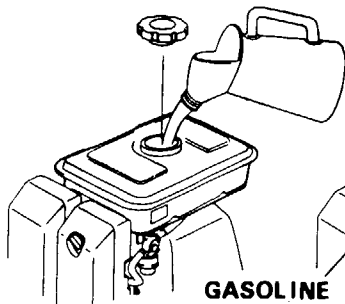
- Gasoline is extremely flammable and is explosive under certain conditions.
- Refuel in a well-ventilated area with the engine stopped. Do not smoke or allow flames or sparks in the area where the engine is refueled or where gasoline is stored.
- Do not overfill the fuel tank (there should be no fuel 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.

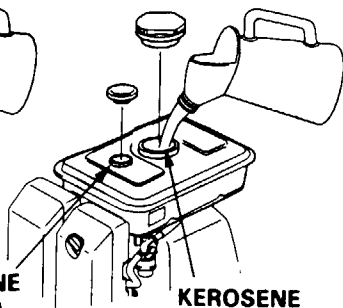
Fuel tank capacity:

G150.....	2.5 l (0.66 US gal, 0.55 Imp gal)
G200.....	4.3 l (1.14 US gal, 0.95 Imp gal)
GK200K1	Kerosene: 3.9 l (1.03 US gal, 0.86 Imp gal)
	Gasoline: 0.4 l (0.11 US gal, 0.09 Imp gal)

G150 · G200 only:



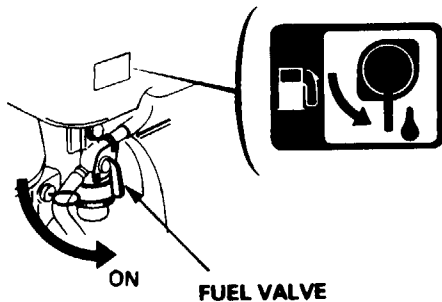
GK200K1 only :



3 STARTING THE ENGINE

〈G150-G200 only〉

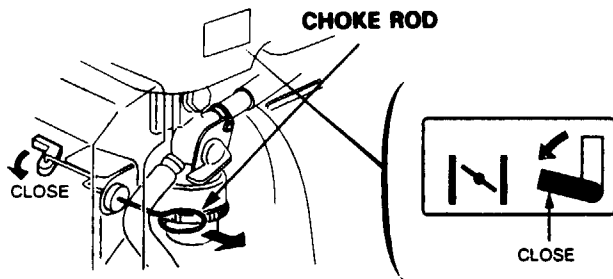
1. Turn the fuel valve to the ON position.



2. Move the choke lever to the CLOSE position.

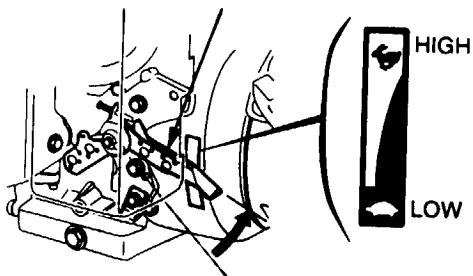
NOTE:

Do not use the choke if the engine is warm or the air temperature is high.



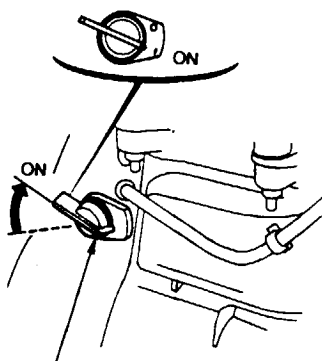
3. Move the throttle control lever up slightly.

THROTTLE CONTROL LEVER



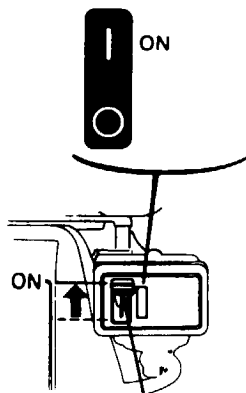
4. Turn the engine switch to the ON position.

Standard type:



ENGINE SWITCH

Oil alert type:

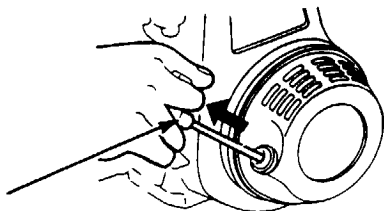


ENGINE SWITCH

5. Pull the starter grip lightly until resistance is felt, then pull briskly.

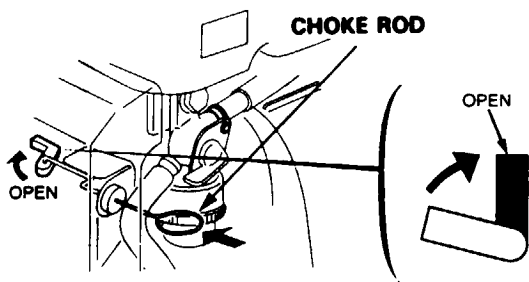
CAUTION:

Do not allow the starter grip to snap back against the engine. Return it gently to prevent damage to the starter.



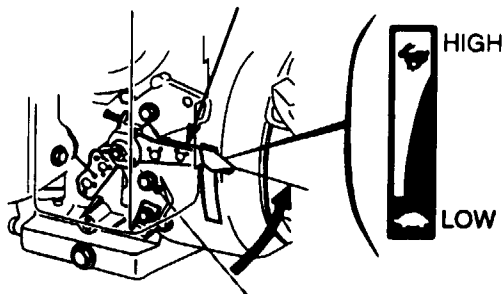
STARTER GRIP

6. As the engine warms up, gradually move the choke lever to the OPEN position.



7. Position the throttle control lever for the desired engine speed.

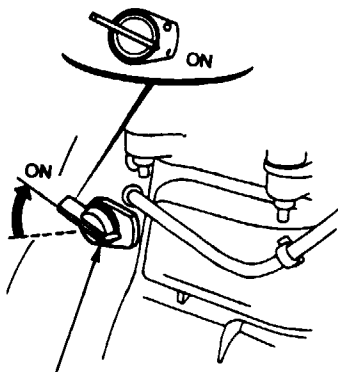
THROTTLE CONTROL LEVER



< GK200K1 only >

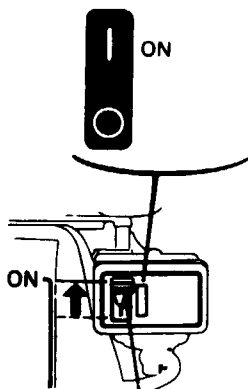
1. Turn the engine switch to the ON position.

Standard type:



ENGINE SWITCH

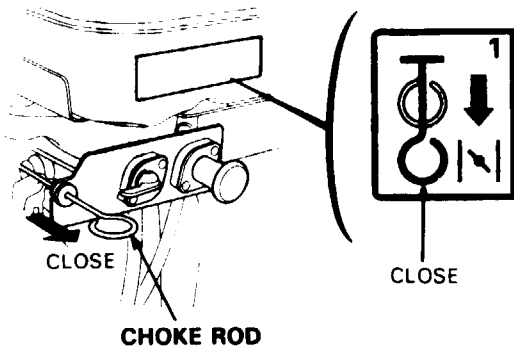
Oil alert type:



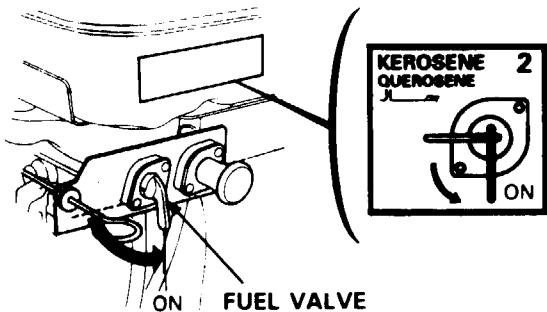
ENGINE SWITCH

2. Pull the choke rod to the CLOSE position. (For cold starting only)

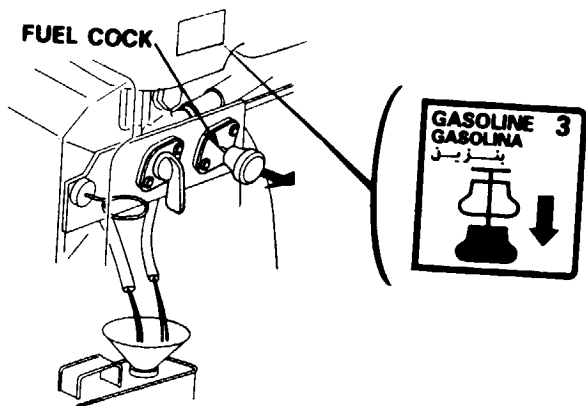
NOTE: Do not use the choke if the engine is warm or the air temperature is high.



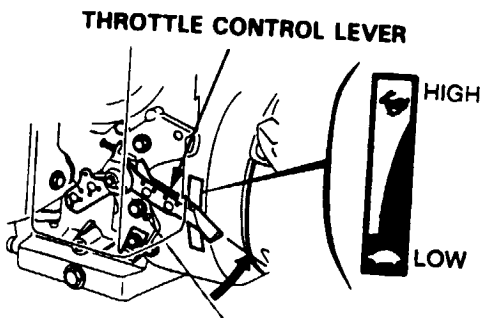
3. Turn the fuel valve to ON position (Kerosene).



4. Pull the fuel cock (Gasoline). (For cold starting only)



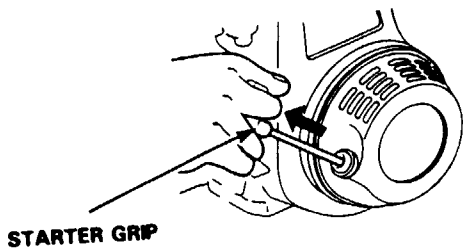
5. Move the throttle control lever up slightly.



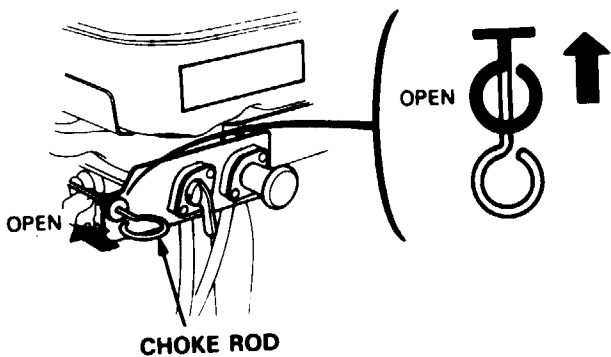
6. Pull the starter grip lightly until resistance is felt, then pull briskly.

CAUTION:

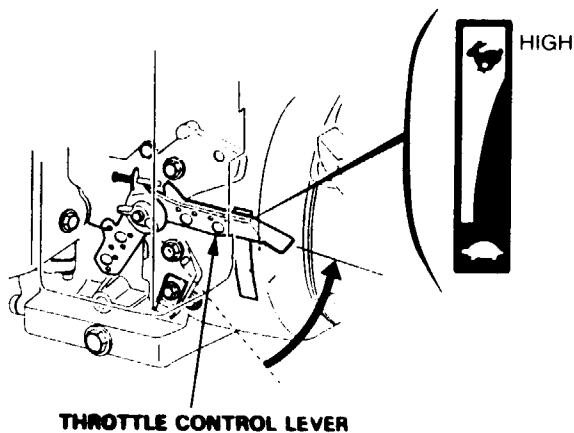
Do not allow the starter grip to snap back against the engine. Return it gently to prevent damage to the starter.



7. As the engine warms up, gradually push the choke rod to the OPEN position.



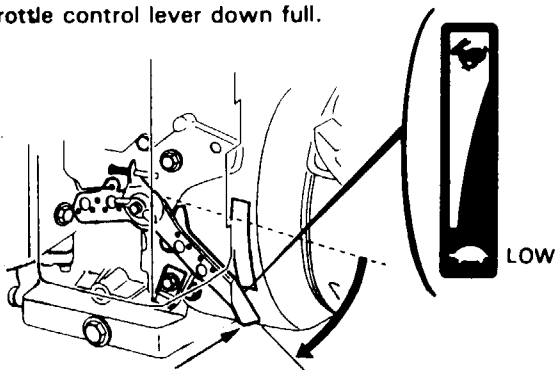
8. Position the throttle control lever for the desired engine speed.



STOPPING THE ENGINE

To stop the engine in an emergency, turn the engine switch to the OFF position. Under normal conditions, use the following procedure:

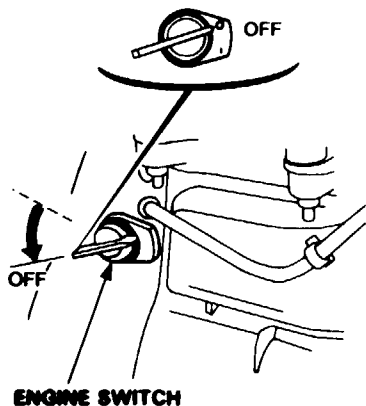
1. Move the throttle control lever down full.



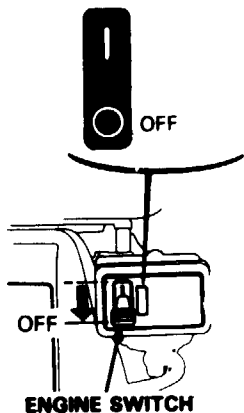
THROTTLE CONTROL LEVER

2. Turn the engine switch to the OFF position.

Standard type:

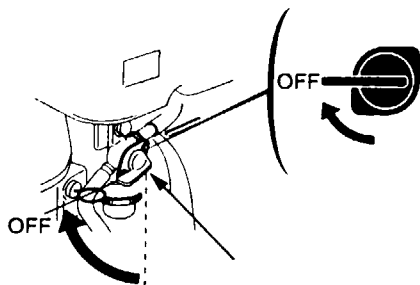


Oil alert type:



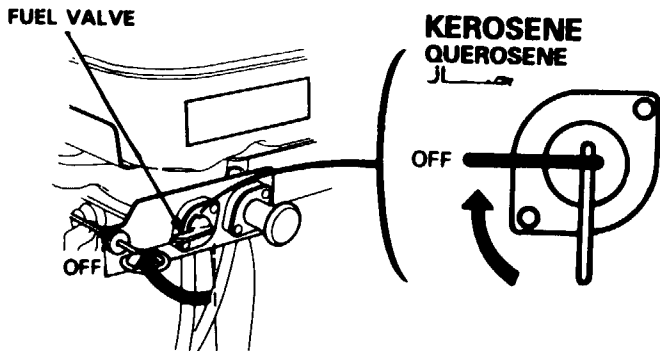
3. Turn the fuel valve to the OFF position.

G150 · G200 only :



FUEL VALVE

GK200K1 only :



● 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 engine at altitudes higher than 1,830m (6,000 feet) above sea level, have your authorized Honda dealer perform these carburetor modifications.

Even with suitable carburetor jetting, engine horsepower will decrease approximately 3.5% for each 305 m (1,000 feet) increase in altitude. The affect of altitude on horsepower will be greater than this if no carburetor modification is made.

CAUTION:

Operation of the engine 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.

5 MAINTENANCE

▲ WARNING

- Shut off the engine before performing any maintenance.
- To prevent accidental start-up, turn OFF the engine switch key and disconnect the spark plug caps.
- The engine 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. The use of replacement parts which are not of equivalent quality may damage the engine.

Periodic inspection and adjustment of the Honda engine 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 table below.

Maintenance Schedule

REGULAR SERVICE PERIOD Performed at every indicated month or operating hour interval, whichever comes first.		Each use	First month or 20 Hrs.	Every 3 month or 50 Hrs.	Every 6 month or 100 Hrs.	Every year or 300 Hrs.
ITEM						
Engine oil	Check level	○				
	Change		○		○	
Reduction gear oil (applicable models only)	Check level	○				
	Change		○			○
Air cleaner	Check	○				
	Clean			○ (1)		
Sediment cup	Clean				○	
Spark plug	Check-Clean				○	
Fuel filter	Check	○				
	Clean				○	
Valve clearance	Check-Adjust					○ (2)
Combustion chamber	Clean-Lap valves					○ (2)
Fuel tank	Clean					○ (2)
Fuel line	Check (Replace if necessary)		Every 2 years (2)			

NOTE:(1): Service more frequently when used in dusty areas.

(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.

1. Oil change

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

1. Remove the oil filler cap and drain plug to drain the oil.
2. Install the drain plug, and tighten it securely.
3. Refill with the recommended oil (see page 5) and check the oil level.
4. Install the oil filler cap.

ENGINE OIL CAPACITY: 0.7 l (1.5 US qt, 1.2 Imp qt)

1/2 REDUCTION GEAR OIL CAPACITY:

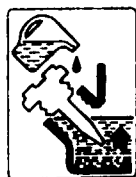
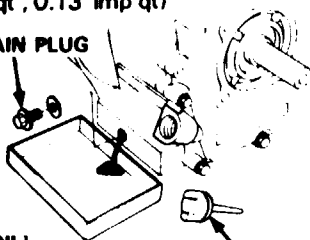
0.50 l (0.53 US qt, 0.44 Imp qt)

1/6 REDUCTION GEAR OIL CAPACITY:

0.15 l (0.16 US qt, 0.13 Imp qt)

(ENGINE OIL)

DRAIN PLUG

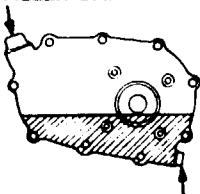


LEVEL

(REDUCTION GEAR OIL)

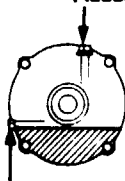
OIL FILLER CAP

OIL FILLER CAP



DRAIN PLUG

FILLER BOLT



OIL LEVEL BOLT

Wash you 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.

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 engine in extremely dusty areas.

▲ WARNING

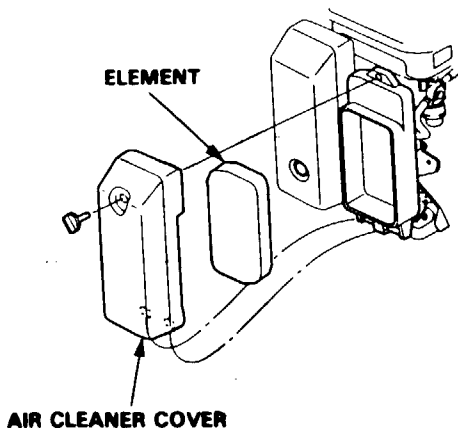
Never use gasoline or low flash point solvents for cleaning the air cleaner element. A fire or explosion could result.

CAUTION:

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

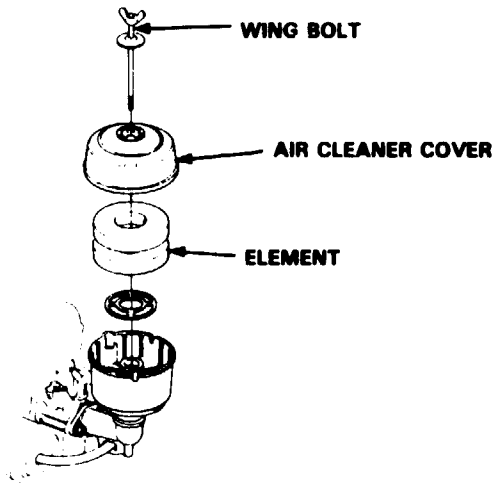
(Semi-dry type)

1. Unscrew the wing bolt, remove the air cleaner cover and remove the element.
2. Wash the element in a nonflammable or high flash point solvent and dry it thoroughly.
3. Soak the element in clean engine oil and squeeze out the excess oil.
4. Reinstall the air cleaner element and the cover.



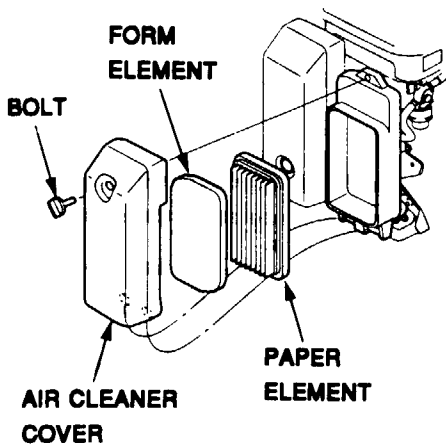
(Oil bath type)

1. Unscrew the wing bolt, remove the air cleaner cover and remove the element.
2. Wash the element in a solution of household detergent and warm water, then rinse thoroughly, or wash in non-flammable or high flash point solvent. Allow the element to dry thoroughly.
3. Soak the element in clean engine oil and squeeze out the excess oil. The engine will smoke during initial start-up if too much oil is left in the element.
4. Empty the oil from the air cleaner case and wash out any accumulated dirt with nonflammable or high flash point solvent. Dry the case.
5. Fill the air cleaner case to the level mark with the same oil that is recommended for the engine (see engine oil recommendations on page 5).
6. Reinstall the element and the cover.



<Dual element type> (G150·G200 only)

1. Remove the wing bolt and the air cleaner cover. Remove the elements and separate them. Carefully check both elements for holes or tears and replace if damaged.
2. Foam element: Wash the element in a solution of household detergent and warm water, then rinse thoroughly, or wash in non-flammable or high flash point solvent. Allow the element to dry thoroughly. Soak the element in clean engine oil and squeeze out the excess oil. The engine will smoke during initial start-up if too much oil is left in the foam.
3. 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.
Replace the paper element if it is excessively dirty.

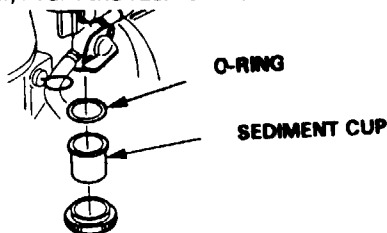


3. Sediment cup cleaning

▲ WARNING

- Gasoline is extremely flammable and is explosive under certain conditions. Do not smoke or allow flames or sparks in the area.
- After installing the sediment cup, check for leaks, and make sure the area is dry before starting the engine.

Turn the fuel valve to OFF. Remove the sediment cup and O-ring, and wash them in nonflammable or high flash point solvent. Dry them thoroughly and reinstall securely. Turn the fuel valve ON and check for leaks.



4. Spark plug service

Recommended spark plug:

B-4H, BR-4HS (NGK)

W14F-U, W14FR-U (NIPPONDENSO) Flywheel magneto type
/ Transistor

CAUTION:

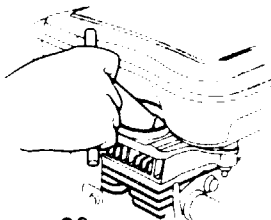
Never use a spark plug of incorrect heat range.

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

1. Remove the spark plug cap and use the proper size spark plug wrench to remove the spark plug.

▲ WARNING

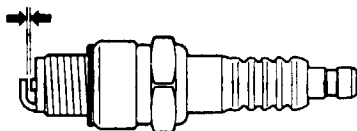
If the engine has been running, the muffler will be very hot. Be careful not to touch the muffler.



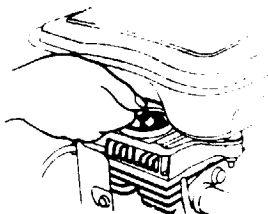
2. Visually inspect the spark plug. Discard the spark plug if there is apparent wear, or if the insulator is cracked or chipped. Clean the spark plug with a wire brush if it is to be reused.
3. Measure the plug gap with a feeler gauge. Correct as necessary by bending the side electrode.

The gap should be:

0.6 – 0.7 mm (0.02 – 0.03 in).....Flywheel magneto type
/ Transistor



4. Check that the spark plug washer is in good condition and thread the spark plug in by hand to prevent cross-threading.
5. After the spark plug is seated, tighten with a spark plug wrench to compress the washer.



NOTE:

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

CAUTION:

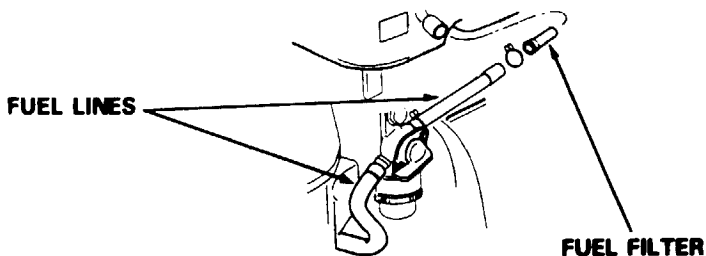
The spark plug must be securely tightened. An improperly tightened spark plug can become very hot and may damage the engine.

5. Fuel filter cleaning

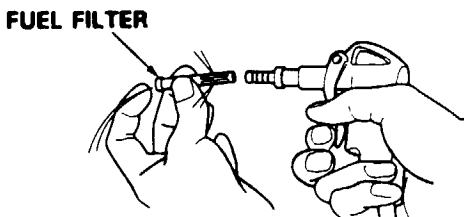
Water or sediment accumulated in the fuel filter can cause loss of power or hard starting. To prevent engine malfunction, service the fuel filter regularly.

- Gasoline is flammable and explosive under certain conditions. Do not smoke or allow flames or sparks near the equipment while draining fuel.
- Always work in a well-ventilated area.
- Be sure that any fuel drained from the mower is stored in a safe container.
- Wipe up any spilled gasoline at once.

1. Turn the fuel valve to the OFF position. Disconnect the fuel filter from the fuel lines and drain fuel into a safe container.



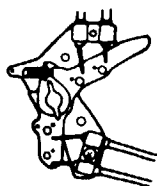
2. Remove water and sediment from the filter screen and fuel filter and reinstall securely. Turn the fuel valve ON and check for leaks.



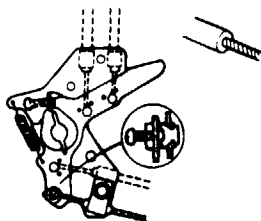
6 THROTTLE CONTROL CABLE (optional part)

A throttle control lever can be selected in the two different pull directions.

Return spring and wire end are necessary for twisted wire.



SOLID WIRE



TWISTED WIRE

7 TRANSPORTING/STORAGE

▲ WARNING

When transporting the engine, turn the fuel valve OFF and keep the engine level to prevent fuel spillage. Fuel vapor or spilled fuel may ignite.

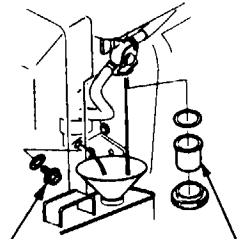
Before storing the unit for an extended period;

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

▲ WARNING

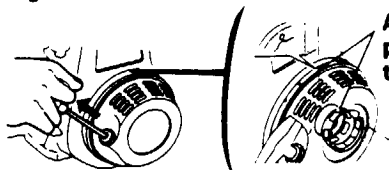
Gasoline is extremely flammable and is explosive under certain conditions. Do not smoke or allow flames or sparks in the area.

- a. With the fuel valve in the OFF position, remove and empty the sediment cup.
- b. Turn the fuel valve to the ON position and drain the gasoline from the fuel tank into a suitable container.
- c. Replace the sediment cup and tighten securely.
- d. Drain the carburetor by loosening the drain screw. Drain the gasoline into a suitable container.



DRAIN SCREW SEDIMENT CUP

3. Change the engine oil (page 22).
4. Remove the spark plug and pour about a tablespoon of clean engine oil into the cylinder.
Crank the engine several revolutions to distribute the oil, then reinstall the spark plug.
5. Pull the starter rope slowly until resistance is felt. Continue pulling until the concave in the starter pulley aligns with the concave in the fan cover (see illustration below). At this point, the intake and exhaust valves are closed, and this will help to protect the engine from internal corrosion.



Align the concave in the starter pulley with the concave in the fan cover.

6. Cover the engine to keep out dust.

8 TROUBLESHOOTING

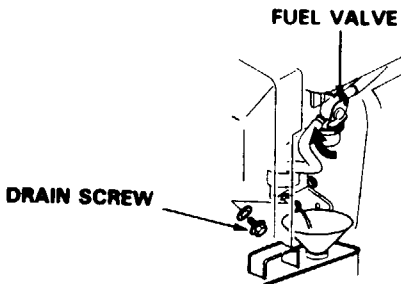
Engine will not start using recoil starter:

1. Is the engine switch in the ON position?
2. Is there enough oil in the engine?
3. Is the fuel valve ON?
4. Is there fuel in the fuel tank?
5. Is gasoline reaching the carburetor?

To check, loosen the drain screw with the fuel valve ON.

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.



6. 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 pull the recoil starter to see if sparks jump across the gap.
 - e. If there is no spark, replace the plug.
If OK, reinstall the spark plug and try to start the engine again according to the instructions:
7. If the engine still does not start, take the engine to an authorized Honda dealer.

9 SPECIFICATIONS

Dimensions	G150	G200	GK200
Length	315 mm (12.4 in)	330 mm (13.0 in)	330 mm (13.0 in)
Width	335 mm (13.2 in)	345 mm (13.6 in)	345 mm (13.6 in)
Height	380 mm (15 in)	430 mm (16.9 in)	440 mm (17.3 in)
Dry weight	15.6 kg (34.3 lbs)	17.0 kg (37.4 lbs)	17.5 kg (38.5 lbs)

Engine

Engine type	4 - stroke, side valve, 1 cylinder		
Displacement	144 cm ³ (8.8 cu - in)	197 cm ³ (12.0 cu - in)	
Bore x Stroke	64 x 45 mm (2.5 x 1.8 in)	67 x 56 mm (2.6 x 2.2 in)	
Max. output			
Flywheel magneto	2.6kW / 3,600mim ⁻¹ 3.5PS / 3,600rpm	3.7kW / 3,600mim ⁻¹ 5.0PS / 3,600rpm	2.9kW / 3,600mim ⁻¹ 4.0PS / 3,600rpm
Transistor	2.8kW / 3,600mim ⁻¹ 3.8PS / 3,600rpm	4.0kW / 3,600mim ⁻¹ 5.5PS / 3,600rpm	
Max. torque			
Flywheel magneto	0.72kg-m,(5.24ft-lb) / 3,000rpm	1.06kg-m,(7.67ft-lb) / 2,500 rpm	0.9kg-m,(6.5ft-lb) / 2,500 rpm
Transistor	0.76kg-m,(5.46ft-lb) / 3,000rpm	1.1kg-m,(7.97ft-lb) / 2,500 rpm	
Fuel consumption	310 g / Psh	290 g / Psh	380 g / Psh
Cooling system	Forced air		
Ignition system	Flywheel magneto , Transistorized magneto		
PTO shaft rotation	Counterclockwise		

Note : Specifications may vary according to the types, and are subject to change without notice.