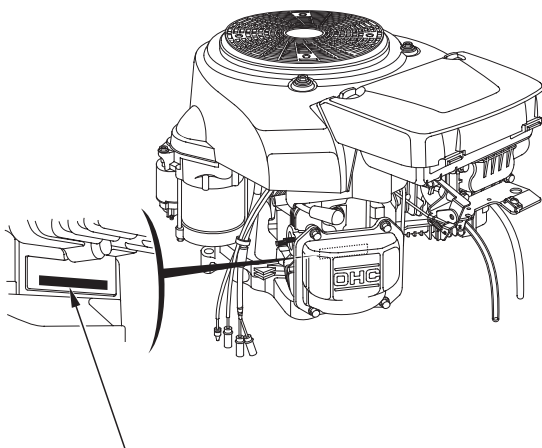


HONDA

GCV520 · GCV530 · GXV530



ENGINE SERIAL NUMBER

OWNER'S MANUAL

32Z0A601
00X32-Z0A-6010



HONDA EUROPE N.V. (EEC)

Thank you for purchasing a Honda engine.

This manual covers the operation and maintenance of your engine: GCV520, GCV530 and GXV530 engines.

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.

NOTE: Gives helpful information.

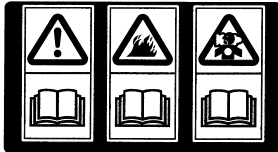
If a problem should arise, or if you have any questions about your engine, consult an authorized Honda dealer.

▲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 8) 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 INSTRUCTIONS

⚠ WARNING

To ensure safe operation—

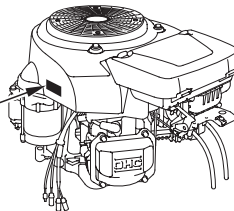
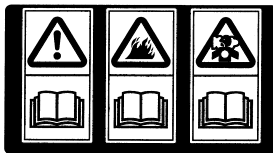
- If any fuel is spilled, clean it up completely and allow petroleum vapours to dissipate before starting the engine.
- Do not smoke or allow flames or sparks where the engine is refueled or where gasoline is stored.
- Exhaust gas contains poisonous carbon monoxide. Avoid inhalation of exhaust gases. 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.
- A spark arrester is available as an optional part for this engine. It is illegal in some areas to operate an engine without a spark arrester. Check local laws and regulations before operating.
- 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.

READ OWNER'S MANUAL



2 REMOTE CONTROL LINKAGE (for throttle and choke cables)

The control and choke levers are provided with holes for optional cable attachment.

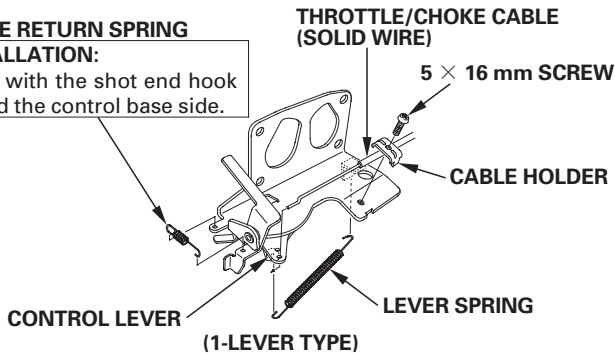
The following illustrations show installation examples for a solid wire cable. Do not use a braided wire cable.

[Remote throttle and remote choke]

CHOKE RETURN SPRING

INSTALLATION:

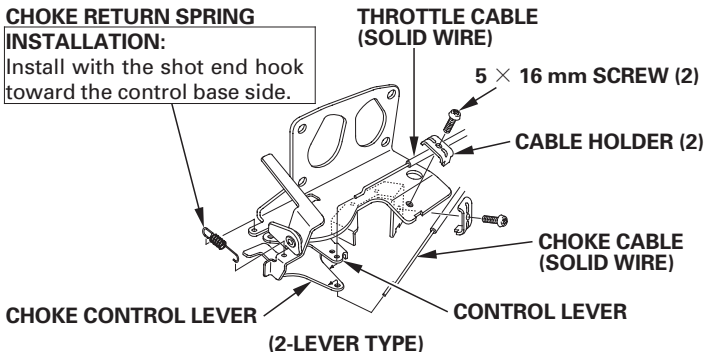
Install with the shot end hook toward the control base side.



CHOKE RETURN SPRING

INSTALLATION:

Install with the shot end hook toward the control base side.

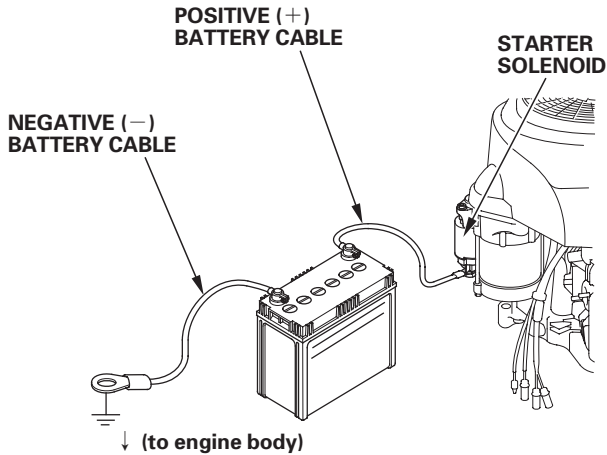


3 BATTERY CONNECTIONS

Use a 12 volt battery with an ampere-hour rating of at least 45AH. Connect the battery positive (+) cable to the starter solenoid terminal, as shown.

Connect the battery negative (-) cable to an engine mounting bolt, frame bolt, or other good engine ground connection.

Check the battery cable connections to be sure the cables are tightened and free of corrosion. Remove any corrosion, and coat the terminals and cable ends with grease.



▲WARNING

- The battery gives off explosive gases; keep sparks, flames and cigarettes away. Provide adequate ventilation when charging or using batteries in an enclosed space.
- The battery contains sulfuric acid (electrolyte). Contact with skin or eyes may cause severe burns. Wear protective clothing and a face shield.
 - If electrolyte gets on your skin, flush with water.
 - If electrolyte gets in your eyes, flush with water for at least 15 minutes and call a physician immediately.
- Electrolyte is poisonous.
 - If swallowed, drink large quantities of water or milk and follow with milk of magnesia or vegetable oil and call a physician immediately.
- **KEEP OUT OF REACH OF CHILDREN.**

CAUTION:

- Use only distilled water in the battery. Tap water will shorten the service life of the battery.
- Filling the battery above the **UPPER LEVEL** line may cause the electrolyte to overflow, resulting in corrosion to engine or nearby parts. Immediately wash off any spilled electrolyte.
- Be careful not to connect the battery in reverse polarity, as this will short circuit the battery charging system and trip the circuit breaker.

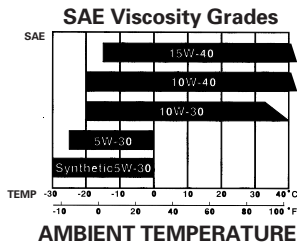
4 PRE-OPERATION CHECK

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.

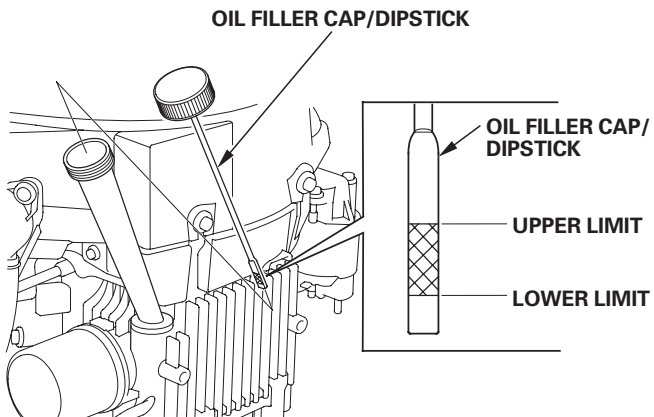
Use Honda 4-stroke, or an equivalent high detergent, premium quality motor oil certified to meet or exceed U.S. automobile manufacturer's requirements for service classification SG, SH. Motor oils classified SG, SH will show this designation on the container. SAE 10W-30 is recommended for general, all temperature use.



CAUTION:

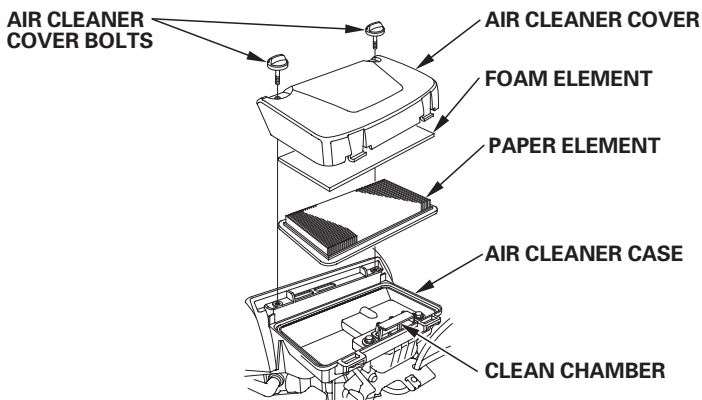
Using nondetergent oil or 2-stroke engine oil could shorten the engine's service life.

1. Place the engine horizontally on a level surface.
2. Remove the oil filler cap/dipstick and wipe it clean.
3. Fully insert the dipstick without screwing it in, then remove it to check the oil level.
4. If the oil level is near or below the lower limit mark on the dipstick, and fill with the recommended oil to the upper limit mark.
5. Reinstall the oil filler cap/dipstick.



2. Air cleaner

1. Remove the two air cleaner cover bolts from the air cleaner cover, and remove the cover.
2. Remove the paper element from the air cleaner case. Remove the foam element from the air cleaner cover.
3. Inspect the air cleaner elements. Clean or replace the elements if necessary. If the air cleaner elements need cleaning, follow the procedure described on page 23.
4. Reinstall the air cleaner elements and the air cleaner cover. Tighten the two air cleaner cover bolts securely.



CAUTION:

Do not allow dust, dirt, and debris to enter the clean chamber (air cleaner case) when servicing the air cleaner.

Never run the engine without the air cleaner. Rapid engine wear will result from contaminants, such as dust and dirt being drawn into the engine.

3. Fuel

Use automotive gasoline (Unleaded or lowleaded is preferred to minimize combustion chamber deposits).

FOR NEW SOUTH WALES ONLY:

Use unleaded fuel only.

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.

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.

5 STARTING THE ENGINE

The engine is equipped with a fuel-cut solenoid that allows fuel to flow to the carburetor main jet when the engine switch is in the ON or START position and stops the flow of fuel to the main jet when the engine switch is in the OFF position.

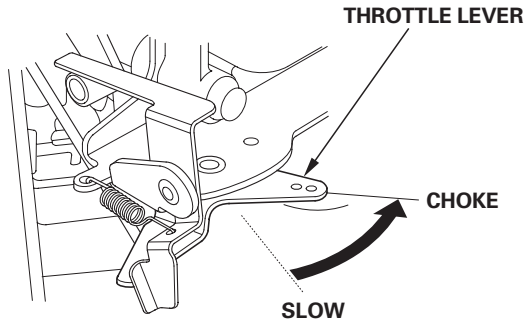
The engine must be connected to the battery to energize the fuel-cut solenoid, allowing the engine to run. If the battery is disconnected, fuel flow to the carburetor main jet will stop.

Always keep hands and feet clear of rotating machinery.

If the fuel tank is equipped with a valve, be sure the fuel valve is in the OPEN or ON position before attempting to start the engine.

STARTING THE ENGINE WITH THE ELECTRIC STARTER

1. Move the throttle lever to the CHOKE position to start a cold engine. Leave the throttle lever in the SLOW position if the engine is warm or the air temperature is high.



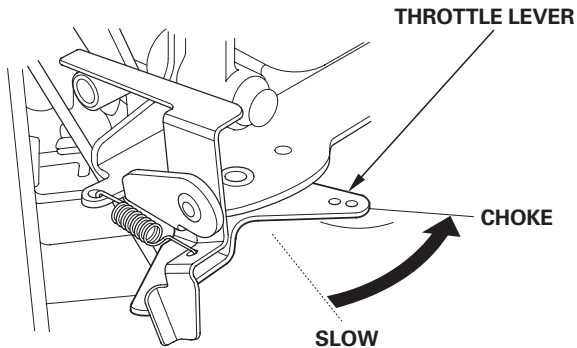
2. Turn the key to the START position and hold it there until the engine starts. If the engine fails to start within 5 seconds, release the key and wait about 10 seconds before operating the starter again.

NOTE:

- Operating the starter motor for more than 5 seconds can damage the motor. If the engine fails to start, release the switch and wait 10 seconds before operating the starter again.
- If the speed of the starter motor drops after a period of time, it is an indication that the battery should be recharged.

STARTING THE ENGINE WITH THE RECOIL STARTER

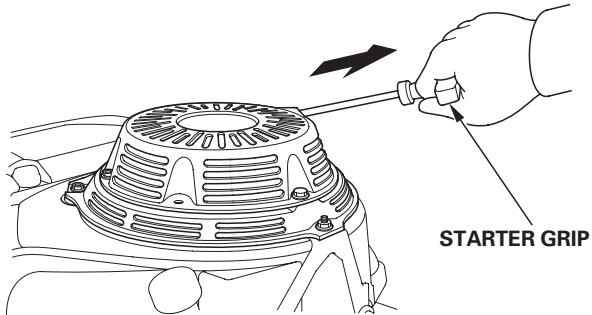
1. Move the throttle lever to the CHOKE position to start a cold engine. Leave the throttle lever in the SLOW position if the engine is warm or the air temperature is high.



2. Turn the engine switch to the ON position.
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.**



● **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 1,830 m (6,000 feet) above sea level, have your authorized Honda dealer perform these carburetor modifications.

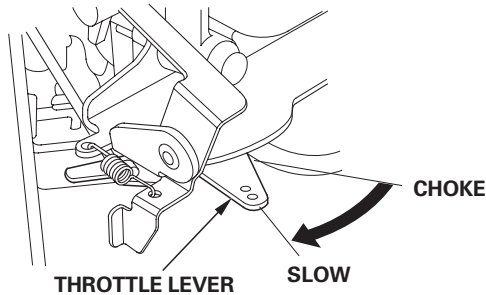
Even with suitable carburetor jetting, engine horsepower will decrease approximately 3.5% for each 305 m (1,000 feet) increase in altitude. The affect of altitude on horsepower will be greater than this if no carburetor modification is made.

CAUTION:

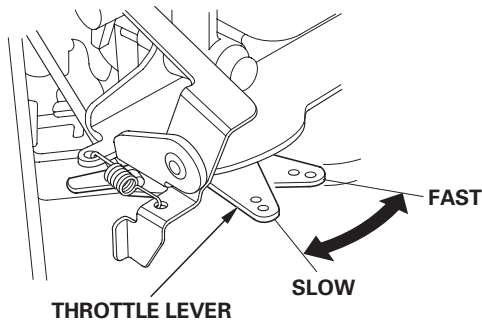
Operation of the engine at an altitude lower than the carburetor is jetted for may result in reduced performance, overheating, and serious engine damage caused by an excessively lean air/fuel mixture.

6 OPERATION

1. If the throttle lever has been moved to the CHOKE position to start the engine, gradually move it to the SLOW position as the engine warms up.



2. Position the throttle lever for the desired engine speed.

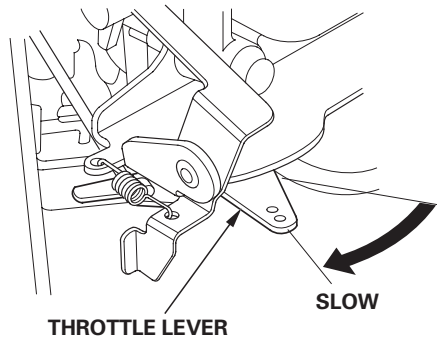


Do not disconnect the battery from the engine while the engine is running. Disconnecting the battery causes the fuel-cut solenoid to shut off the flow of fuel to the carburetor main jet, and the engine will stop.

7 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 lever to the SLOW position.
2. Turn the engine switch to the OFF position.
3. If the fuel tank is equipped with a valve, turn the fuel valve to the CLOSED or OFF position.



8 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 (4) Perform at every indicated month or operating hour interval, whichever comes first.		Each use	First month or 20 hrs.	Every 3 months or 50 hrs.	Every 6 months or 100 hrs.	Every year or 200 hrs.
ITEM						
Engine oil	Check level	○				
	Change		○		○	
Engine oil filter (optional part)	Replace				○	
Air cleaner	Check	○				
	Clean			○ (1)		
	Replace					○ (3)
Spark plug	Check-adjust				○	
	Replace					○
Spark arrester (optional part)	Clean				○	
Idle speed	Check-adjust					○ (2)
Valve clearance	Check-adjust					○ (2)
Combustion chamber	Clean	After every 300 hrs (2)				
Fuel filter	Replace					○ (2)
Fuel line	Check	Every 2 years (2) (Replace if necessary)				

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

(2): These items should be serviced by your servicing dealer, unless you have the proper tools and are mechanically proficient. Refer Honda Shop Manual for service procedures.

(3): Replace the paper element only.

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

1. Engine oil change

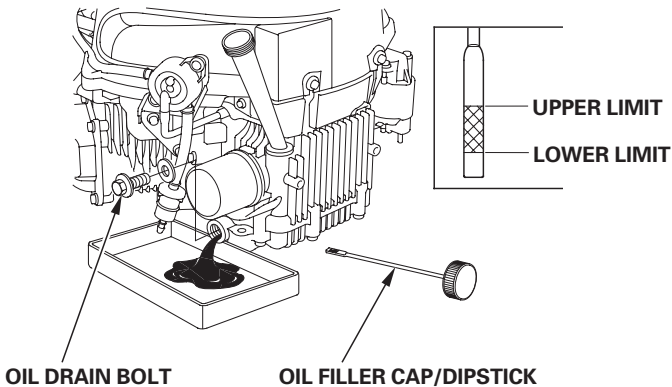
Drain the oil while the engine is still warm to assure rapid and complete draining.

1. Remove the oil filler cap/dipstick and drain bolt, and drain the oil into a suitable container.
2. Retighten the drain bolt securely.
3. Refill to the upper limit mark on the dipstick with the recommended oil (see page 8). Tighten the oil filler cap/dipstick securely.

ENGINE OIL CAPACITY:

Without oil filter replacement: 0.90 ℓ (0.95 US qt , 0.79 Imp qt)

With oil filter replacement: 1.05 ℓ (1.11 US qt , 0.92 Imp qt)



Wash your hands with soap and water after handling used oil.

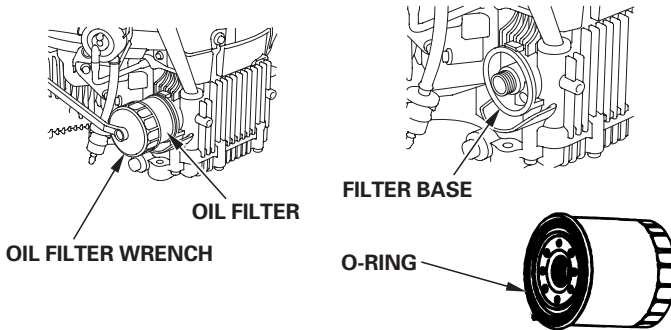
NOTE:

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, pour it on the ground, or down a drain.

2. Oil filter change

1. Drain the engine oil (see page 21).
2. Remove the oil filter with a filter wrench and let the remaining oil drain out. Discard the oil filter.
3. Clean the filter base.
4. Coat the new O-ring on the new filter with clean engine oil.
5. Install the new oil filter on the filter base and tighten it by hand until the O-ring seats against the filter base.
6. Tighten the oil filter to the specified torque.

TORQUE: 12 N·m (1.20 kgf·m , 9 lbf·ft)



Use only a Honda genuine oil filter or a filter of equivalent quality specified for your model. Using the wrong Honda filter or a non-Honda filter which is not of equivalent quality may cause engine damage.

7. Pour the specified amount of recommended oil into the engine (see page 21). Start the engine and check the filter for leaks.
8. Stop the engine and recheck the oil level. If necessary, add oil to bring it up to the proper level.

NOTE:

Ask your authorized Honda dealer for advice on the filter wrench (special tool).

3. 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 from contaminants, such as dust and dirt being drawn into the engine.

1. Remove the two air cleaner cover bolts from the air cleaner cover, and remove the cover.
2. Remove the paper element from the air cleaner case. Remove the foam element from the air cleaner cover.
3. Clean the air filter elements if they are to be reused.
Foam element: Clean in warm soapy water, rinse and dry thoroughly. Or clean in non-flammable solvent and dry.

Paper element: Tap the element lightly several times on a hard surface to remove excess dirt, or blow compressed air (not exceeding 2.1 kg/cm² (30 psi)) through the filter from the air cleaner case side. Never try to brush the dirt off; brushing will force dirt into the fibers. Replace the paper element if it is excessively dirty.

4. Wipe dirt from the inside of the air cleaner case and cover, using a moist rag. Be careful to prevent dirt from entering the clean chamber that leads to the carburetor.

4. Spark plug service

Recommended spark plugs: BPR5ES (NGK)
W16EPR-U (DENSO)

CAUTION:

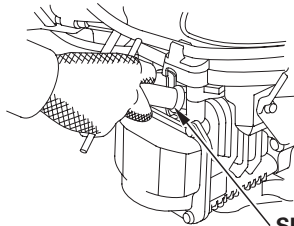
Never use a spark plug of incorrect heat range.

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

1. Remove the spark plug caps and use a spark plug wrench to remove each spark plug.

▲WARNING

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



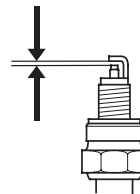
SPARK PLUG WRENCH

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

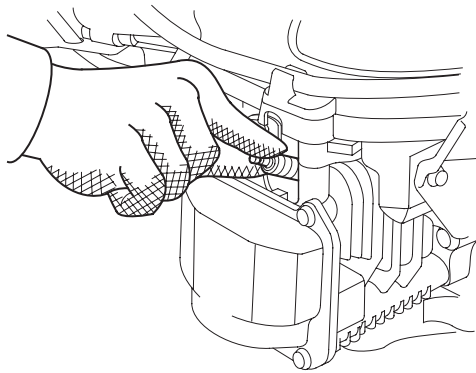
The gap should be:

0.70 – 0.80 mm (0.028 – 0.031 in)

**0.70 – 0.80 mm
(0.028 – 0.031 in)**



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 plugs must be securely tightened. Improperly tightened spark plugs can become very hot and may damage the engine.

5. Spark arrester maintenance (optional part)

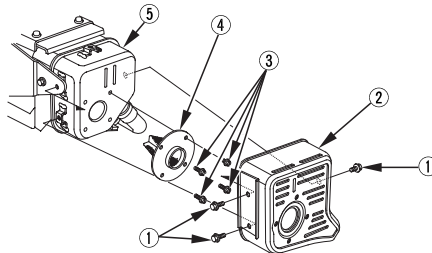
▲WARNING

If the engine has been running, the muffler will be very hot. Allow it to cool before proceeding.

CAUTION:

The spark arrester must be serviced every 100 hours to maintain its efficiency.

1. Remove the three 6 mm flange bolts ① from the muffler protector ②, and remove the muffler protector.
2. Remove the four special screws ③ from the spark arrester ④, and remove the spark arrester from the muffler ⑤.



3. Use a brush to remove carbon deposits from the spark arrester screen.

CAUTION:

Be careful not to damage the spark arrester screen.



NOTE:

The spark arrester must be free of breaks and holes. Replace, if necessary.

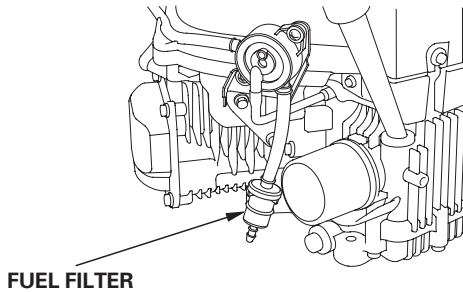
4. Install the spark arrester and the muffler protector in the reverse order of disassembly.

6. Fuel filter

▲WARNING

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

1. Check the fuel filter for water accumulation or sediment.



2. If the fuel filter contains excessive water accumulation or sediment, take the engine to your authorized Honda engine dealer.

9 TROUBLESHOOTING

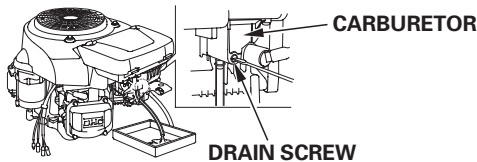
Engine will not start using recoil starter:

1. Are the battery cables securely connected and free of corrosion?
2. Is the battery fully charged?
3. Is the fuse good (if equipped)?
4. Is the engine switch in the ON position?
5. Is there enough oil in the engine?
6. Is the fuel valve ON (if fuel line is equipped with a valve)?
7. Is there fuel in the fuel tank?
8. 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. Fuel vapor or spilled fuel may ignite.



9. Is there a spark at the spark plugs?
 - a. Remove both spark plug caps. Clean any dirt from around the base of the spark plugs, then remove both spark plugs.
 - b. Install the spark plugs in the spark plug caps, and ground the side electrodes to any engine ground.
 - c. Turn the engine switch to the START position (with a recoil starter not equipped), or turn the engine switch on and pull the recoil starter (with a recoil starter equipped), and see if there are sparks at the electrode gaps of both spark plugs.
 - d. If there are no sparks, replace the spark plugs. If OK, reinstall the spark plugs. Try to start the engine again according to the instructions.
10. If the engine still does not start, take the engine to an authorized Honda dealer.

10 TRANSPORTING/STORAGE

Keep the engine level to reduce the possibility of fuel leakage, when transporting. If the fuel tank is equipped with a valve, turn the fuel valve to the CLOSED or OFF position.

▲WARNING

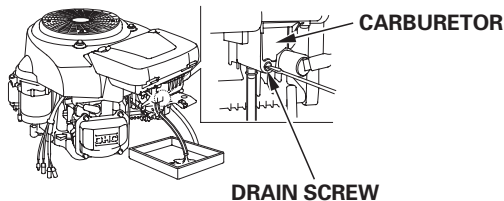
- To avoid severe burns or fire hazards, let the engine cool before transporting it or storing it indoors.
- When transporting the engine, turn the fuel valve OFF and keep the engine level to prevent fuel spillage. Fuel vapor or spilled fuel may ignite.

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.
 - a. Disconnect the fuel line to the engine, and drain the fuel tank into an approved gasoline container. If the fuel tank is equipped with a valve, turn the fuel valve to the OPEN or ON position to enable draining. After draining is completed, reconnect the fuel line.
 - b. Loosen the carburetor drain screw, and drain the carburetor into an approved gasoline container. After draining is completed, tighten the carburetor drain screw.

▲WARNING

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



3. Change the engine oil (see page 21).
4. Remove the two spark plugs and pour about a tablespoon of clean engine oil into the cylinders. Crank the engine several revolutions to distribute the oil, then reinstall the spark plugs.
5. Remove the battery and store it in a cool, dry place. Recharge it once a month.
6. Cover the engine to keep out dust.

11 SPECIFICATIONS

Dimensions

Model	GCV520	GCV530	GXV530
Power equipment description code	GJAKM GJANM	GJAJM GJAMM	GJARM
*Length	456 mm (18.0 in)		
*Width	427 mm (16.8 in)		
*Height	331 mm (13.0 in)		
*Dry weight	30.5 kg (67.2 lbs)		

*: Muffler and spark arrester are not included.

Engine

Engine type	4-stroke, overhead camshaft, 2 cylinders (90° V-Twin)	
Displacement (Bore x Stroke)	530 cm ³ (32.3 cu-in) 77 × 57 mm (3.0 × 2.24 in)	
Max. output	14 HP/3,600 rpm	16 HP/3,600 rpm
Max. torque	35.9 N·m (3.66 kgf·m)/ 2,500 rpm	36.5 N·m (3.72 kgf·m)/ 2,500 rpm
Engine oil capacity	Without oil filter: 1.15 ℓ (1.22 US qt , 1.01 Imp qt) With oil filter: 1.30 ℓ (1.37 US qt , 1.14 Imp qt)	
Fuel consumption	313 g/kwh (0.51 lb/hph)	
Cooling system	Forced air	
Spark plug	BPR5ES (NGK) , W16EPR-U (DENSO)	
Ignition system	Transistorized magneto	
PTO shaft rotation	Counterclockwise	

NOTE:

Specifications are subject to change without notice.