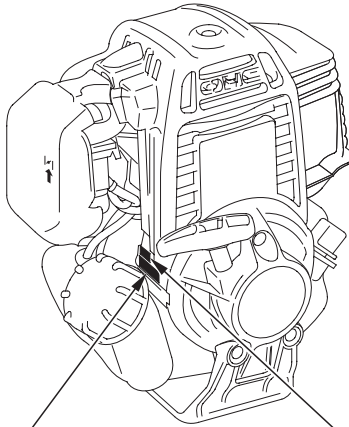


HONDA

GX25



SERIAL NUMBER

ENGINE TYPE

OWNER'S MANUAL

32Z0H601
00X32-Z0H-6010



HONDA EUROPE N.V.(EEC)
www.honda-engines-eu.com

Thank you for purchasing a Honda engine.

This manual covers the operation and maintenance of your engine.

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.

- Do not start the engine without mounting it on an equipment. It is designed to give safe and dependable service only when it is mounted on an equipment. Before operating the engine, read and understand the Owner's Manual furnished with the equipment along with this Owner's Manual.
- 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.
- 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.

Safety Instruction

▲WARNING

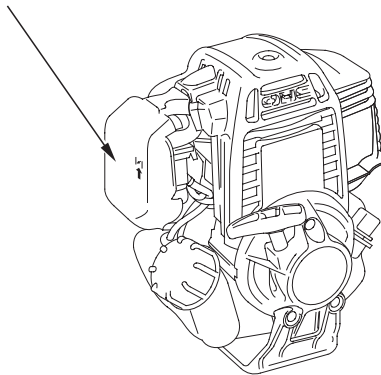
To ensure safe operation—

- Exhaust gas contains poisonous carbon monoxide. Avoid inhalation of exhaust gases. Never run the engine in a closed garage or confined area.
- 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 INDICATION LOCATION

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

READ OWNER'S MANUAL BEFORE OPERATION.



2 PRE-OPERATION CHECK

1. Engine oil level

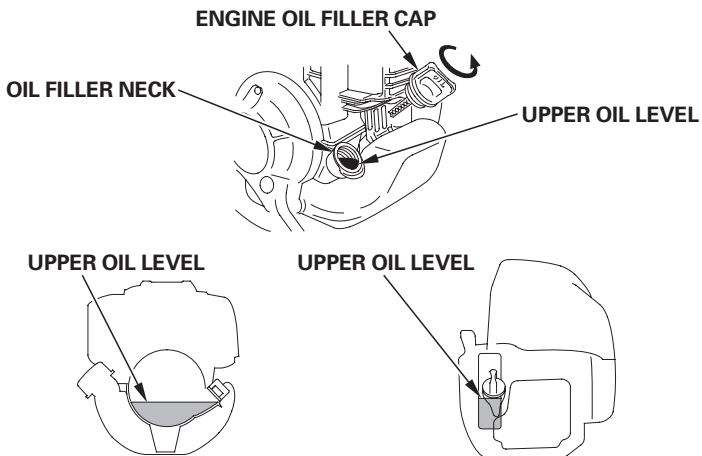
CAUTION:

- **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.**

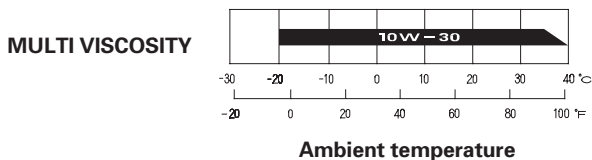
1. Remove the oil filler cap and check the oil level: it should reach the top of the oil filler neck.
2. If the level is low, fill to the top of the oil filler neck with the recommended oil.

Add the engine oil slowly to avoid overflowing, as the engine oil tank capacity is small.

Every 10 hours, check the engine oil level and replenish oil up to the top of the oil filler neck if the engine is operated for more than 10 hours continuously.



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.



CAUTION:

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

Standard/Tiller type:

The recommended operating range of this engine is -5°C to 40°C (23°F to 104°F).

Pump type:

The recommended operating range of this engine is 5°C to 40°C (41°F to 104°F).

2. Air cleaner

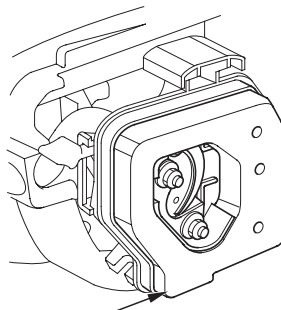
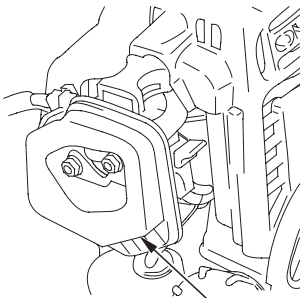
CAUTION:

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

Check cleaner for dirt or obstruction of element (page 19).

Standard/Pump type:

Tiller type:



ELEMENT

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.

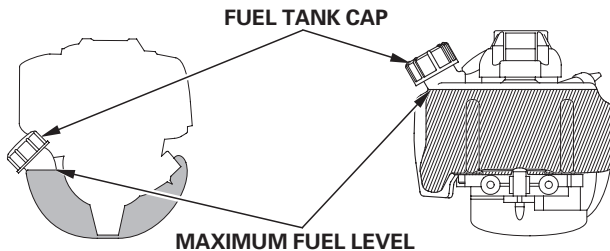
KEEP OUT OF REACH OF CHILDREN.

Fuel tank capacity:

0.55 ℓ (0.145 US gal , 0.121 Imp gal)

Standard/Pump type:

Tiller type:



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.

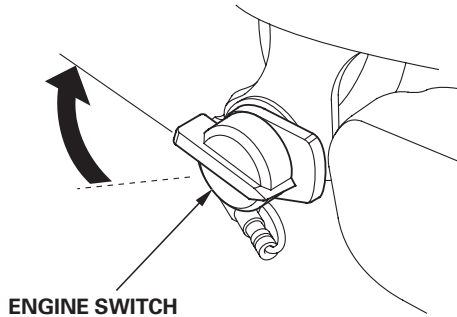
4. Retightening bolts and nuts

Check for loose bolts and nuts. Tighten the bolts and nuts properly and securely, if necessary.

3 STARTING THE ENGINE

1. Standard/Tiller type: Turn the engine switch to the ON position (on the equipment side).

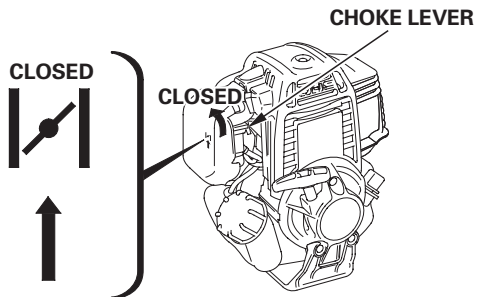
Pump type: Turn the engine switch to the ON position.



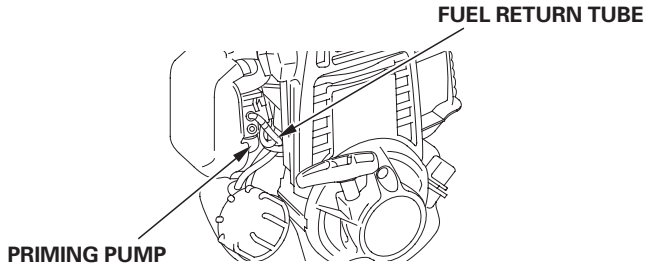
2. Move the choke lever to the CLOSED position.

NOTE:

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



3. Press the priming pump several times until a fuel flow in the fuel return tube is visually noticed.



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

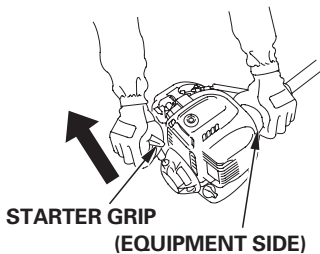
CAUTION:

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

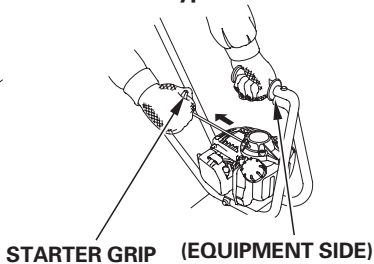
NOTE:

Always pull the starter grip briskly. If not pulled briskly, sparks may fail to jump across the spark plug electrodes, resulting in failure to start the engine.

Standard/Pump type:



Tiller type:



● **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 specific modifications to the carburetor. If you always operate the engine at altitudes higher than 1,500 m (5,000 feet) above sea level, have your authorized Honda dealer perform these carburetor modifications.

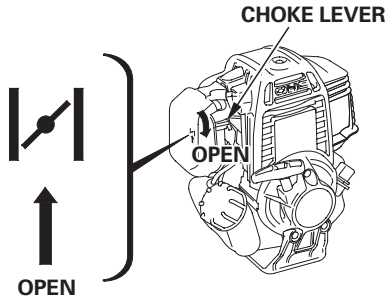
Even with suitable carburetor jetting, engine horsepower will decrease approximately 3.5% for each 300 m (1,000 feet) increase in altitude. The effect of altitude on the horsepower will be greater than this if no carburetor modification is made.

CAUTION:

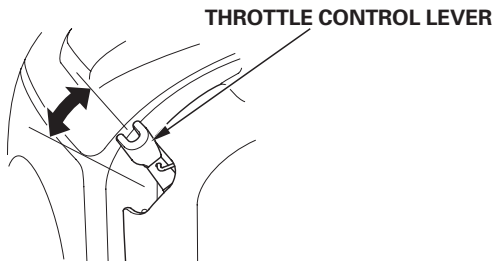
Operation of the engine at an altitude lower than the carburetor is jetted for may result in reduced performance, overheating, and serious engine damage caused by an excessively lean air/fuel mixture.

4 OPERATION

1. Gradually move the choke lever to the OPEN position. Warm up the engine until it run smoothly.



2. Standard/Tiller type: Position the throttle control lever for the desired engine speed (on the equipment side).
Pump type: Position the throttle control lever for the desired engine speed.



5 STOPPING THE ENGINE

Standard/Tiller type:

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

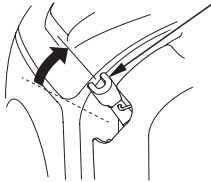
1. Position the throttle control lever fully to LOW (on the equipment side).
2. Turn the engine switch to the OFF position (on the equipment side).

Pump type:

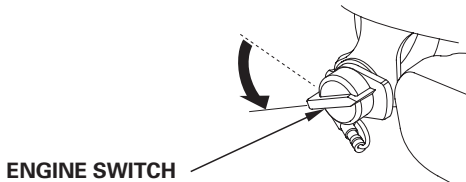
To stop the engine in an emergency, turn the engine switch to the OFF position. Under normal conditions, use the following procedure:

1. Position the throttle control lever fully to LOW.

THROTTLE CONTROL LEVER



2. Turn the engine switch to the OFF position.



6 MAINTENANCE

▲WARNING

- **Shut off the engine before performing any maintenance.**
- **To prevent accidental start-up, turn OFF the engine switch.**
- **The engine should be serviced by an authorized Honda dealer unless the owner has proper tools and service data and feels 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 (3)		Each use	First month or 10 hrs.	Every 3 months or 25 hrs.	Every 6 months or 50 hrs.	Every year or 100 hrs.	Every 2 years or 300 hrs.
ITEM	Performed at every indicated month or operating hour interval, whichever comes first.						
Engine oil	Check level Change	○	○		○		
Air cleaner	Check Clean	○		○(1)			
Spark plug	Check-adjust Replace					○	○
Spark arrester (Optional parts except tiller type)	Clean					○	
Engine cooling fins	Check				○		
Nuts, bolts, fasteners	Check (Retighten if necessary)	○					
Clutch Shoes	Check				○(2)		
Idle speed	Check-adjust					○(2)	
Valve Clearance	Check-adjust					○(2)	
Combustion chamber	Clean	After every 300 hrs. (2)					
Fuel filter	Check					○	
Fuel tank	Clean					○	
Fuel tubes	Check	Every 2 years (Replace if necessary) (2)					
Oil tube	Check	Every 2 years (Replace if necessary) (2)					

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 to Honda Shop Manual for service procedures.
- (3) For commercial use, log hours of operation to determine proper maintenance intervals.

1. Oil change

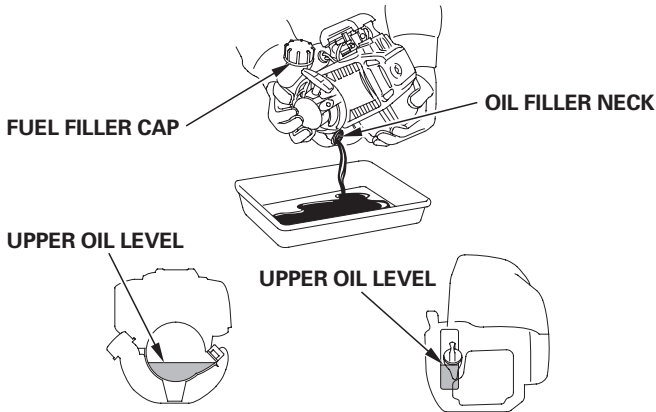
Drain the oil while the engine is still warm to assure rapid and complete draining.

1. Check the fuel filler cap is tightened.
2. Remove the oil filler cap and drain the oil into the oil container by inclining the engine toward the oil filler neck.
3. Refill with the recommended oil (see page 6) and check the oil level (see page 5).

ENGINE OIL CAPACITY (Disassembly):

0.08 ℓ (0.08 US qt , 0.07 Imp qt)

The oil capacity with replaced is less than the oil capacity with disassembled.



4. Install the oil filler cap.

If any oil is spilled, make sure to wipe it.

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. 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.

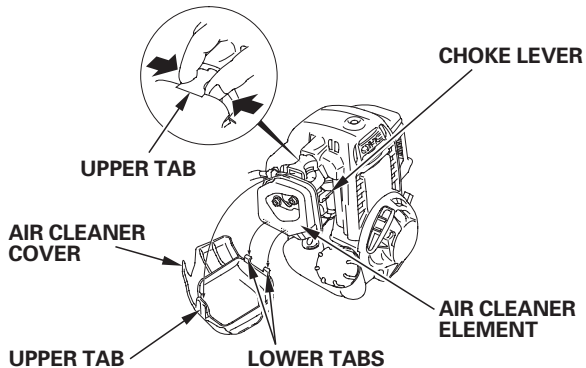
▲ WARNING

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.

1. Move the choke lever to the CLOSED (upwards) position.
2. Remove the air cleaner cover by unhooking the upper tab on the top of the air cleaner cover and its two lower tabs.
3. Wash the element in a nonflammable or high flash point solvent and dry it thoroughly.
4. Soak the element in clean engine oil and squeeze out the excess oil.
5. Reinstall the air cleaner element.
6. Reinstall the air cleaner cover by inserting the lower tabs, then insert the upper tab.



3. Spark plug service

Recommended spark plug:

CMR5H (NGK)

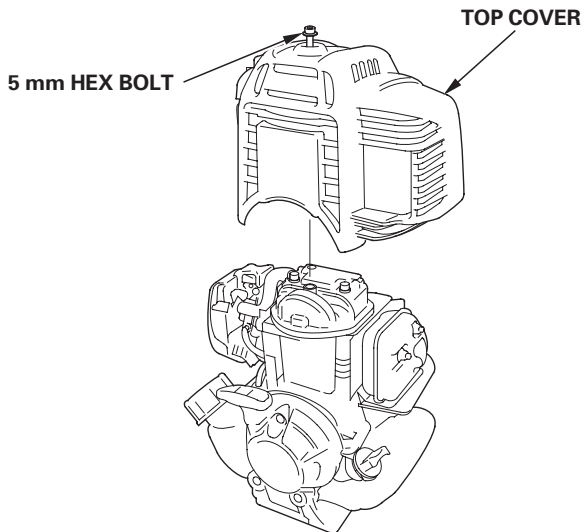
CAUTION:

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. Loosen the 5 mm hex bolt, then remove the top cover.

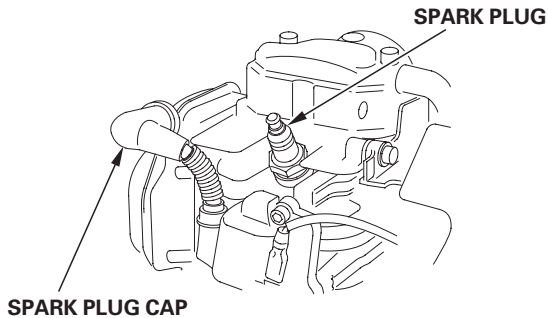
Do not pull the starter grip and start the engine without the top cover. There are rotating and hot parts under the cover.



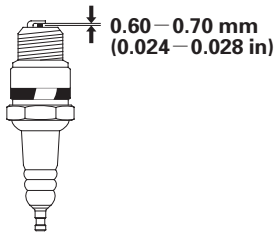
2. Remove any dirt from around the spark plug area.
3. Remove the spark plug cap and use the proper size spark plug wrench to remove the spark plug.

▲WARNING

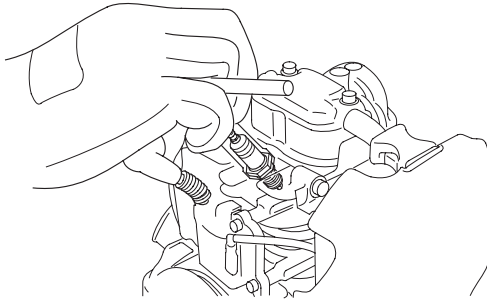
If the engine has been running, the muffler will be very hot. Be careful not to touch the muffler.



4. 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.
5. Measure the plug gap with a feeler gauge. Correct as necessary by bending the side electrode.
The gap should be:
0.60–0.70 mm (0.024–0.028 in)



6. Check 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:

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.

8. Attach the spark plug cap.
9. Install the top cover, and tighten the 5 mm hex bolt securely.

CAUTION:

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

4. Spark arrester service (for tiller type engines)

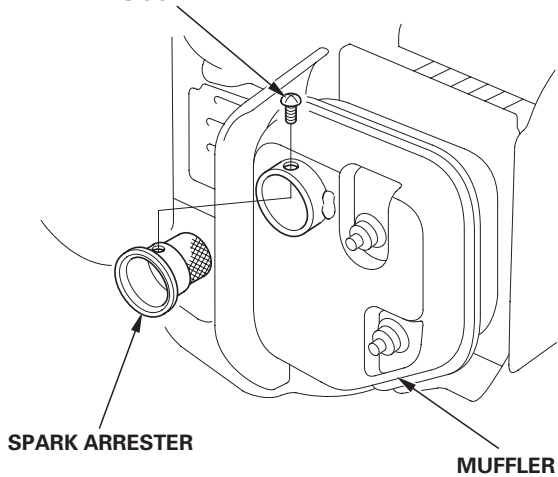
▲ WARNING

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

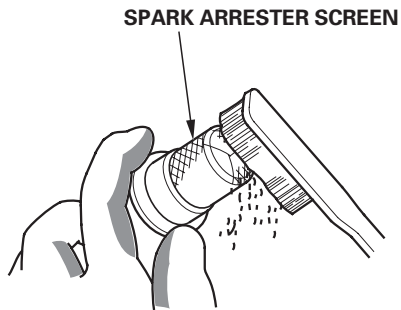
The spark arrester must be serviced every 100 hours to keep it functioning as designed.

1. Loosen the 5 mm hex bolt, then remove the top cover (see page 20).
2. Remove the 3 × 6 mm tapping screw from the spark arrester, and remove the spark arrester from the muffler.

3 × 6 mm TAPPING SCREW



3. Use a brush to remove carbon deposits from the spark arrester screen. Be careful to avoid damaging the screen. The spark arrester must be free of breaks and holes. If it is damaged or fouled excessively, have it serviced by your Honda dealer.

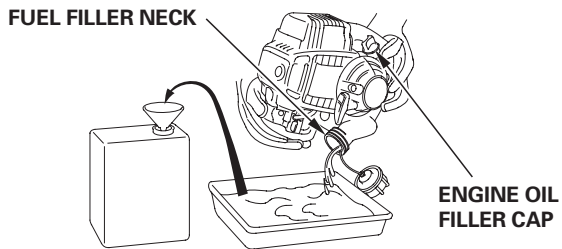


5. Fuel filter service

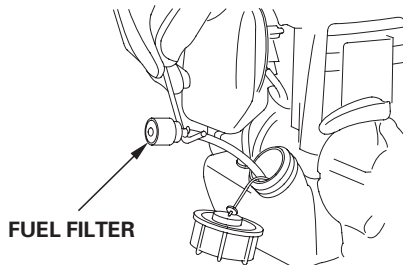
▲WARNING

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

1. Check the engine oil filler cap is tightened securely.
2. Remove the fuel filler cap and drain the fuel into the container by inclining the engine toward the fuel filler neck.



3. Pull out the fuel filter with the mechanic's wire from the fuel filler neck gently.
4. Check the fuel filter of its dirt. If the fuel filter is dirty, wash it gently with nonflammable or high flash point solvent. If the fuel filter is excessively dirty, replace it.



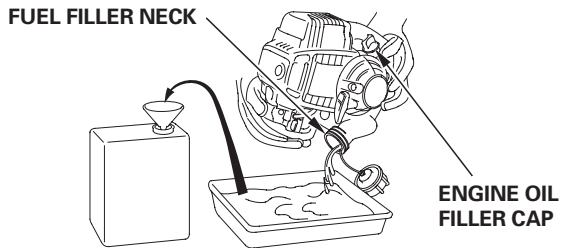
5. Return the fuel filter into the fuel tank and tighten the fuel filter cap securely.

6. Fuel tank cleaning

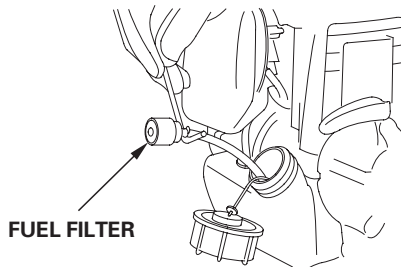
▲WARNING

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

1. Check the engine oil filler cap is tightened securely.
2. Remove the fuel filler cap and drain the fuel into the container by inclining the engine toward the fuel filler neck.



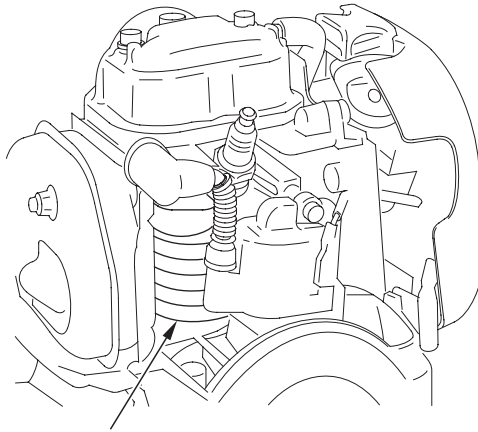
3. Pull out the fuel filter with the mechanic's wire from the fuel filler neck gently.
4. Remove water and dirt stood in the fuel tank by rinsing the inside of the fuel tank with nonflammable or high flash point solvent.



5. Return the fuel filter into the fuel tank and tighten the fuel filter cap securely.

7. Cooling fin service

1. Loosen the 5 mm hex bolt, then remove the top cover (see page 20).
2. Inspect the engine cooling fins, and clean out debris if they are clogged.



COOLING FIN

3. Install the top cover, and tighten the 5 mm hex bolt securely.

7 TRANSPORTING/STORAGE

▲WARNING

When transporting the engine, tighten the fuel filler cap to prevent fuel spillage. Fuel vapor or spilled fuel may ignite.

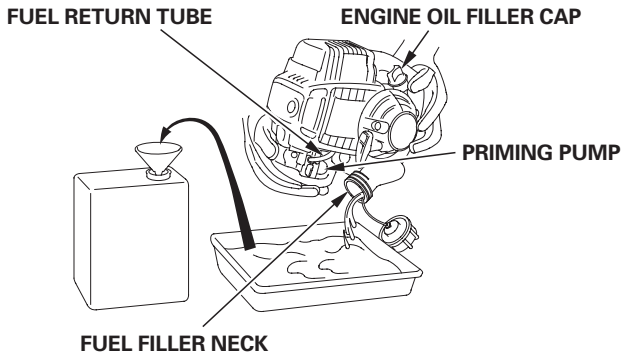
Before storing the unit for an extended period;

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. Check the engine oil filler cap is tightened securely.
- b. Remove the fuel filler cap and drain the fuel into the container by inclining the engine toward the fuel filler neck.



- c. Press the priming pump several times until all fuel left in the fuel return tube is returned into the fuel tank.
- d. Tilt the engine toward the fuel filler neck again to drain the fuel left in the fuel tank into the container.
- e. Tighten the fuel filler cap securely after draining the fuel completely.

3. Change the engine oil (page 18).
4. Clean the air cleaner (page 19).
5. Loosen the 5 mm hex bolt, then remove the top cover (page 20).
6. Remove the spark plug (page 21).
7. Apply a couple of drops of clean engine oil into the cylinder.
8. Install the top cover temporarily.
9. Pull the starter grip several times to distribute the oil in the cylinder.
10. Remove the top cover, then reinstall the spark plug.
11. Install the top cover, and tighten the 5 mm hex bolt securely.
12. Pull the starter grip slowly until resistance is felt.
13. Cover the engine to keep out dust.

8 TROUBLESHOOTING

When it is hard to start the engine:

In some cases, restarting of the engine may become difficult sometime after stopping the engine because the mixture in the combustion chamber becomes excessively rich. In such a case, carry out the following procedures 1 – 4 to expel the rich mixture.

Standard/Tiller type:

1. Turn the engine switch on the equipment side to the OFF position.
2. Move the choke lever to the OPEN position.
3. Keep the throttle control lever on the equipment side to the HIGH speed position.
4. Pull the starter grip 3 – 5 times.

Pump type:

1. Turn the engine switch to the OFF position.
2. Move the choke lever to the OPEN position.
3. Keep the throttle control lever to the HIGH speed position.
4. Pull the starter grip 3 – 5 times.

CAUTION:

Be sure to turn the engine switch to the OFF position.

If this operation is executed with the engine switch at the ON position, the equipment may start to move when the engine starts, and a personal injury may result.

Start the engine referring to the procedures described in STARTING THE ENGINE.

- Start the engine with the choke lever in the OPEN position.

When the engine will not start:

1. Is the engine switch in the ON position (on the equipment side)?
2. Is there fuel in the fuel tank?
3. Is gasoline reaching the carburetor?
To check, press the priming pump several times.
4. Is the spark plug in good condition?(page 20)
5. If the engine still does not start, take the engine to an authorized Honda dealer.

9 SPECIFICATIONS

Dimensions

Model	GX25		
Type	SE (Standard)	TE (Tiller)	WE (Pump)
Power equipment description code	GCAAM		
Length	192 mm (7.6 in)	192 mm (7.6 in)	247 mm (9.7 in)
Width	221 mm (8.7 in)	210 mm (8.3 in)	221 mm (8.7 in)
Height	230 mm (9.1 in)	236 mm (9.3 in)	230 mm (9.1 in)
Dry weight (Without clutch)	2.78 kg (6.13 lbs)	2.96 kg (6.53 lbs)	3.10 kg (6.83 lbs)

Engine

Engine type	4-stroke, over head camshaft, 1 cylinder
Displacement	25 cm ³ (1.5 cu-in)
Bore×Stroke	35×26 mm (1.4×1.0 in)
Max. output	0.81 kW (1.1 PS)/7,000 rpm
Max. torque	1.25 N·m (0.13 kgf·m)/5,000 rpm
Max. rotation with no load	10,000 rpm
Fuel consumption	340 g/kWh (250 g/PSh)
Cooling system	Forced air
Ignition system	Transistor magneto
PTO shaft rotation	Counterclockwise

NOTE:

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

MEMO

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