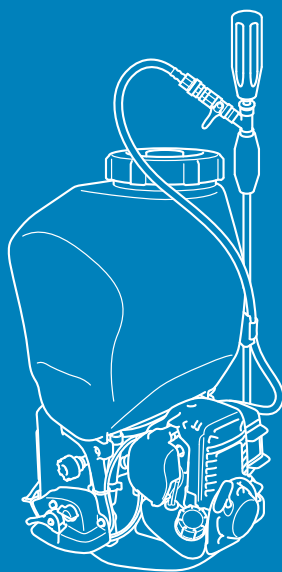




BACKPACK SPRAYER

WJR4025



OWNER'S MANUAL

Thank you for purchasing a Honda backpack sprayer.

This manual covers the operation and maintenance of Honda backpack sprayer WJR4025.

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

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

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This manual should be considered a permanent part of the backpack sprayer and should remain with the backpack sprayer 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 equipment or property damage if instructions are not followed.

NOTE: Gives helpful information.

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

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

Disposal

To protect the environment, do not dispose of this product, battery, engine oil, etc. carelessly by leaving them in the waste. Observe the local laws and regulations or consult your authorized Honda dealer for disposal.

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1. SAFETY INSTRUCTION

▲WARNING

1. Field of application

The device is approval for agricultural use.

Other possible fields of application:

forestry, hops cultivation, fruit growing, specialized cultivation, viticulture, tree nurseries, vegetable farming, non-cropland, grassland, storage protection, greenhouse cultivation, cultivation of ornamentals.

2. A general warning on the use of chemicals (filling, spraying, cleaning, etc.)

- Always obey the National law.
- Obey to the chemicals instruction.

3. Information about filling the device and safety measures

To fill:

- Apply only as much liquid as needed.
- Do not fill the container above the maximum fill line.
- Ensure that no liquid spills out or splashes back.
- When using tap water, do not allow the filling hose dip into the liquid without safety precautions.
- Draw from surface water only after official authorization while avoiding all contamination.

Safety measures:

- Observe the instructions for the safety of the user in the instruction manual of the pesticide and wear the recommended body protection, if necessary.
- Do not eat, smoke or drink while working with pesticides.
- Thoroughly clean hands and face after work is completed.
- Keep pest control devices and pesticides away from children.
- Never blow out nozzles and other small parts with your mouth.

⚠WARNING**4. Information about how long the backpack sprayer can be used**

- The same person should not perform spray operations for a long time or every day.
- Do the operations while taking a moderate rest.

5. Information about the device operating and setting ranges

The following must be entered individually for each nozzle assembly. Optimal distance from nozzle to the target surface, the associated working width, the spraying angle, the spraying pressure range with associated flow rates, the optimal spraying pressure and recommended fields of application.

▲WARNING**To ensure safe operation****Operator Responsibility**

- Any part from the machine is a potential source of danger if the machine is used in abnormal conditions or if the maintenance is not done correctly.
- Read the Owner's Manual carefully. Be familiar with the controls and their proper use of the backpack sprayer. Know how to stop the engine rapidly.
- Use the backpack sprayer for the purpose it is intended for, that is spraying agricultural chemicals or water.
Any other use could be dangerous or damage the backpack sprayer.
- The recommended operating range of this backpack sprayer is 5°C to 40°C (41°F to 104°F).

Do not use the backpack sprayer if it is frozen.

- Never allow children or people unfamiliar with this Owner's Manual to use the backpack sprayer. Local regulations may restrict the age of the operator.
- If you lend or resell your backpack sprayer to a third person, instruct him or her with how to handle the product and alert him or her to read and understand the Owner's Manual carefully before operation.
- The person with the following conditions are advised not to spray agricultural chemicals or to help someone else spray agricultural chemicals.
 - * Liver or kidney disorder
 - * Allergies
 - * Sensitivity to chemical
 - * A sickly person or a person recovering from disease
 - * Personal Injury
 - * During Menstruation
 - * During Pregnancy

The chemicals involved may be harmful to their health.

▲WARNING**To ensure safe operation****Operator Responsibility**

- Never operate the backpack sprayer while:
 - people, especially children or pets are nearby.
 - user is fatigued or under medication, or has swallowed substances known to affect judgement or reactions.
- Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people or their property.
- Before each use, visually inspect the backpack sprayer for any damage and looseness of fastening part.
- Before each use, look around and underneath the engine for signs of oil or gasoline leaks.
- Because the tank when completely filled with the chemical is very heavy, pay careful attention not to hurt your lower back when carrying it.
- Always adopt a safe working posture when carrying the tank. Do not work at elevated sites using stairs or ladders while carrying the tank.
- Avoid operating the backpack sprayer at night or in a bad weather of poor visibility, because there is much possibility of accident.
- Always confirm the path ahead is safe when spraying. Walking forward when spraying is recommended. Avoid walking backwards when spraying as this makes it difficult to confirm that the path ahead is safe.
- Avoid operating the backpack sprayer on a steep slope. The steep slope is very slippery, so you can slip down.
- Do not operate the backpack sprayer with the labels, and other parts removed.
- Do not mount an incorrect part and do not tamper with the backpack sprayer as it can result in personal injury and/or equipment damage.
- Keep all nuts, bolts and screws tight to be sure the backpack sprayer is in safe working condition. Regular maintenance is an essential aid to user's safety and retaining a high level of performance.
- To prevent from incorrect functioning of the backpack sprayer, follow to the chemicals instruction carefully.

⚠ WARNING**To ensure safe operation****How to handle agricultural chemicals**

When handling agricultural chemicals, follow the directions of the manufacturer or distributor. Also, follow the laws and regulations.

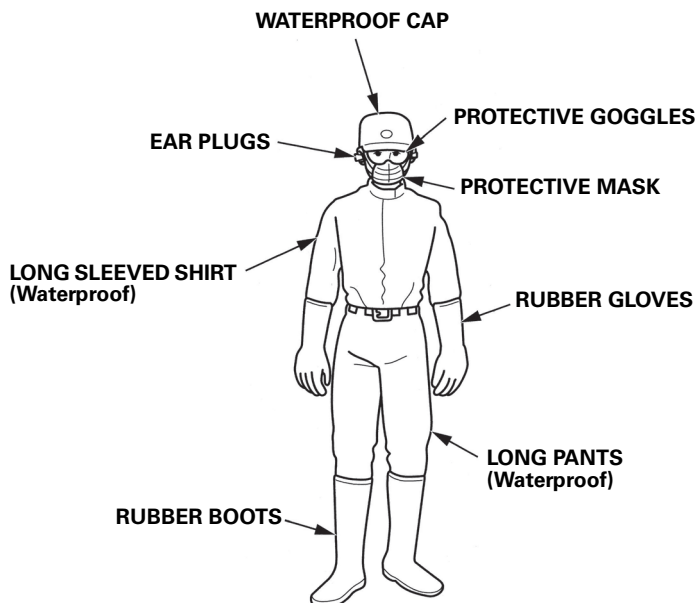
- The person that spray agricultural chemicals, or who assist in spraying them, must put on protective clothes so they don't inhale the chemicals or touch them directly.

This attire usually includes:

- * Waterproof cap, long sleeved shirt, long pants
- * Rubber gloves, rubber boots
- * Protective goggles, protective mask
- * Ear plugs

Please understand that touching and inhaling agricultural chemicals is hazardous to your health and could poison you.

Check and maintain protective equipment to maintain their normal functions at all times, and use them correctly.



▲WARNING**To ensure safe operation****How to handle agricultural chemicals**

- Before starting the engine, make sure that the sprayer hose is securely installed into the backpack sprayer, and that the shut-off valve is in the “CLOSED” position. If you fail to do so, agricultural chemicals may splash on you during operation.
- When agricultural chemicals touch your skin by mistake, wash it with soap immediately. If agricultural chemicals soak into your clothing, change it.
- When you feel dizzy or nauseous and have a headache or a stomachache, see a doctor immediately. Inform him of what chemicals you use and your operation (operating time, operating area, operating means, etc.). Immediate care is required to avoid serious chemical injuries.
- Do not direct the nozzle towards anyone when you spray agricultural chemicals. Stop your work, if children or those uninvolved are getting closer to you when you spray agricultural chemicals.
- Know the direction of the wind when you spray agricultural chemicals. Have the wind at your back to avoid the spray. If you spray agricultural chemicals against the direction of the wind, do not touch the sprayed crops. Breathing or touching chemicals harms your health.
- You should make a plan when you weed and spray agricultural chemicals to prevent insects. In addition, insect prevention should be done systematically. This means, weed the area first, as opposed to last, and spray the land after weeding. This prevents having to weed afterwards and protects yourself from weeding around freshly sprayed agricultural chemicals.
- Do not do spray for a long time or everyday. Breaks must be taken during operation. People in a tired state are prone to be affected easily by the agricultural chemicals when operating the backpack sprayer.

⚠WARNING**To ensure safe operation****How to handle agricultural chemicals**

- Do not spray the chemicals in the daytime while the temperature is high, or on a day of strong wind. Do not spray the chemicals in a busy place during a busy time especially when school children are likely to pass through. If you spray the chemicals under strong sunlight, the sprayed chemicals become concentrated and can be more potent to your health. If you spray the chemicals on days of strong wind, the chemicals can blow to other places and harm other people or animals, such as domestic animals, kept bees, silk worms, or aquatic animals.
- Read and understand all the labels for the chemicals, directions, and cautions to ensure their proper usage. Be aware of the toxicity of the chemicals and the first aid treatment needed to prepare for the worst.
Ignoring the cautions could cause a serious accident.
- Do not eat, drink, or smoke during the spray of chemicals. Wash your hands and face carefully with soap. Also, rinse out your mouth before taking a break or before eating or smoking after the spray work is done, in order to protect yourself from the harm of the chemicals.
- Do not transport nor store food and drinks in the same container as the chemicals or the backpack sprayer to prevent cross contamination.
- The remainder of the chemicals must be sealed and stored in a box with a lock and key separate from the food and feed so as not to cause a serious accident.

▲WARNING**To ensure safe operation****How to handle agricultural chemicals**

- After using the backpack sprayer, store it in a place where children and domestic animals are locked out.
Careless storage can cause exposure to children or animals, which could be harmful to their health.
- Do not use the chemicals indicated as “No fire”, such as sulfur, emulsion and grease, near fire (bonfire, cigarette, etc.).
Put the chemicals in a cool place away from all fires.
- Clean the backpack sprayer carefully. Dispose the wastewater in non agricultural land. Incomplete cleaning can cause the chemical residue on the product to react with different chemicals used later on, which could be harmful.
- Follow the instructions prepared by makers or distributors and the regulations when disposing bags, cardboard boxes or plastic containers of the chemicals.
- After the spray work, take a bath to wash yourself carefully with soap.
Take off and wash all the clothes you wore. If you put on the same clothes that you wore during the spray work again on the next day, the leftover chemicals could be harmful.

▲WARNING**To ensure safe operation****Fire and Burn Hazard**

Gasoline is extremely flammable, and gasoline vapor can explode. Use extreme care when handling gasoline. Keep gasoline out of reach of children.

- Store fuel in containers specifically designed for this purpose.
- Refuel outdoors only, and do not smoke while refueling or handling fuel.
- Add fuel before starting the engine. Never remove the cap of the fuel tank or add gasoline while the engine is running or when the engine is hot.
- If gasoline is spilled, do not attempt to start the engine but move the backpack sprayer away from the area of spillage and avoid creating any source of ignition until gasoline vapors have dissipated.
- Tighten all fuel tanks and container caps securely.
- When you start the engine after refueling, be sure to start the engine at least 3 m away from the refueling spot.
- Never store the backpack sprayer with gasoline in the tank inside a building where fumes may reach an open flame, spark or high temperature source.
- Allow the engine to cool before storing in any enclosure.
- To reduce the fire hazard, keep the backpack sprayer, especially the engine, muffler, the gasoline storage area as well, free of grass, leaves, or excessive grease.
Do not leave containers of vegetable matters in or near building.
- If the fuel tank has to be drained, this should be done outdoors, with a cold engine.

⚠WARNING**To ensure safe operation****Carbon Monoxide Poisoning Hazard**

Exhaust contains poisonous carbon monoxide, a colorless and odorless gas. Breathing exhaust can cause loss of consciousness and may lead to death.

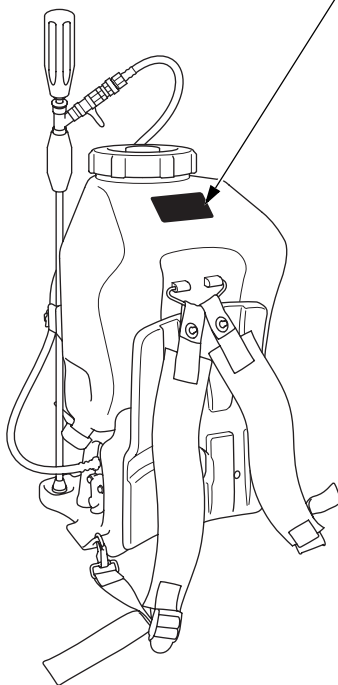
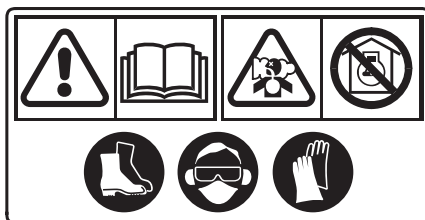
- If you run the engine in an area that is confined or even partially enclosed, the air you breathe could contain a dangerous amount of exhaust gas. To keep exhaust gas from building up, provide adequate ventilation.
- Replace faulty muffler.
- Do not operate the engine in a confined space where dangerous carbon monoxide fumes can collect.

2. SAFETY LABEL LOCATIONS

These labels warn you of potential hazards that can cause serious injury. Read the labels and safety notes and precautions described in this manual carefully.

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

OPERATOR CAUTION





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



- **Exhaust contains poisonous carbon monoxide, a colorless, odorless gas. Breathing carbon monoxide can cause loss of consciousness and may lead to death.**
- **If you run the backpack sprayer in an area that is confined, or even partially enclosed area, the air you breathe could contain a dangerous amount of exhaust gas.**
- **Never run your backpack sprayer inside a garage, house, or near open windows or doors.**

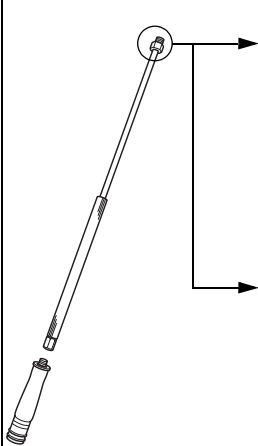



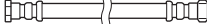

- **Wear eye protection, protective mask and other protective devices to protect your eyes and body from agriculture chemicals.**

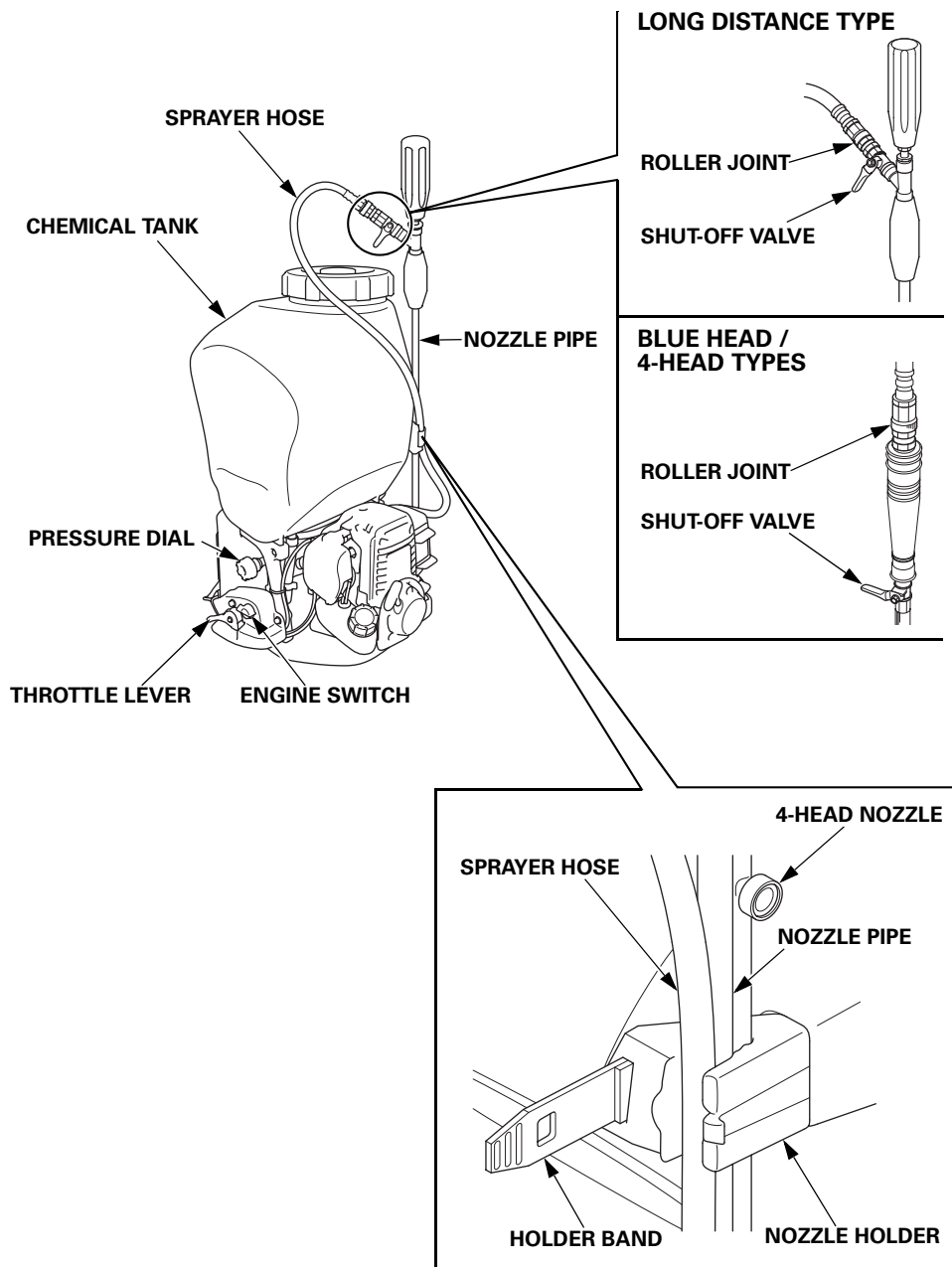
3. COMPONENT IDENTIFICATION

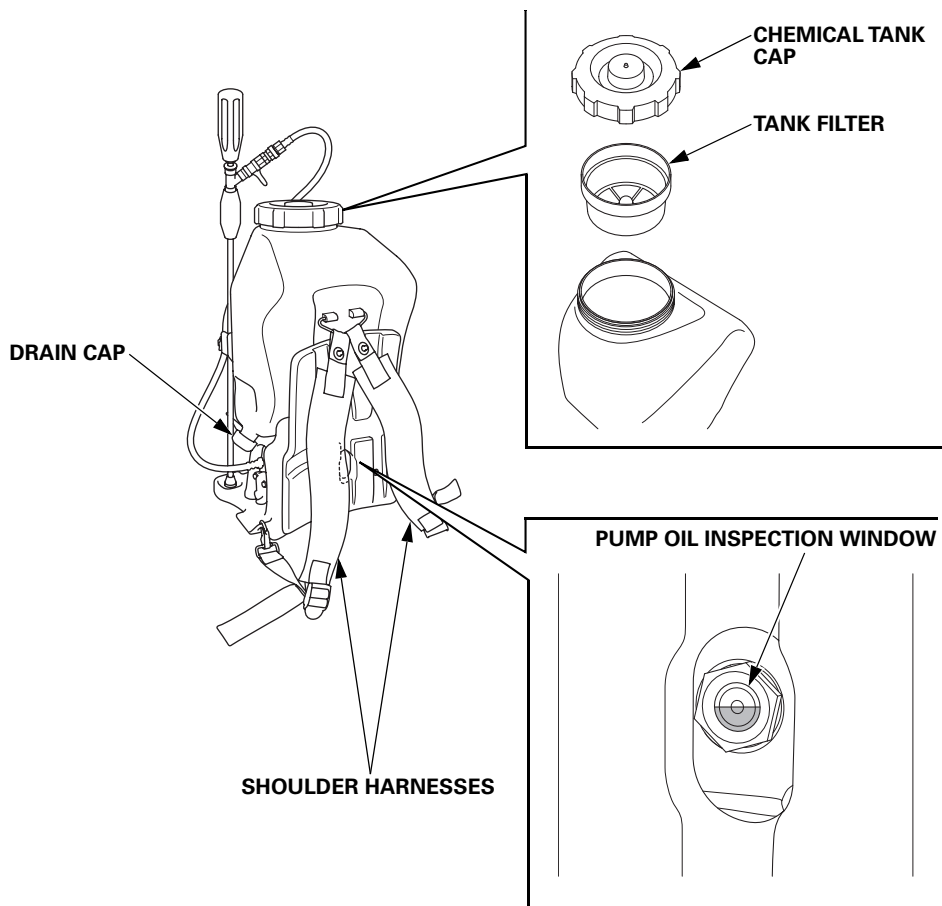
Nozzle and head types variation table

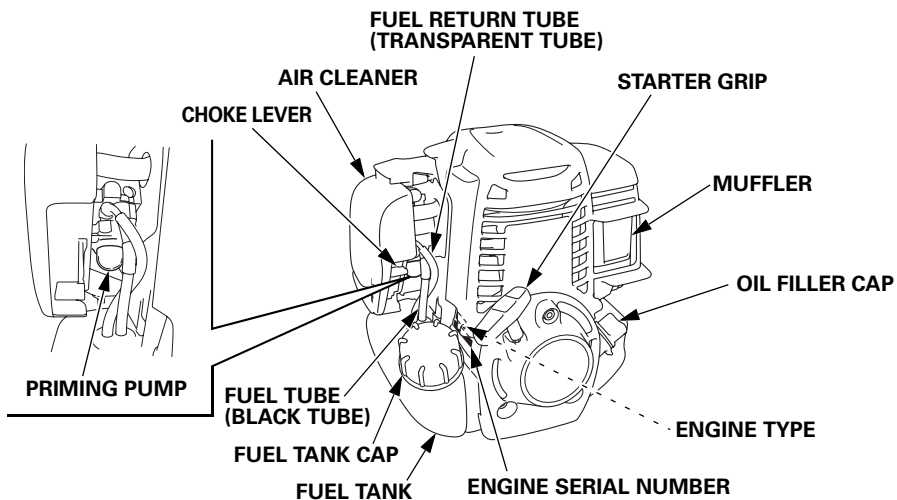
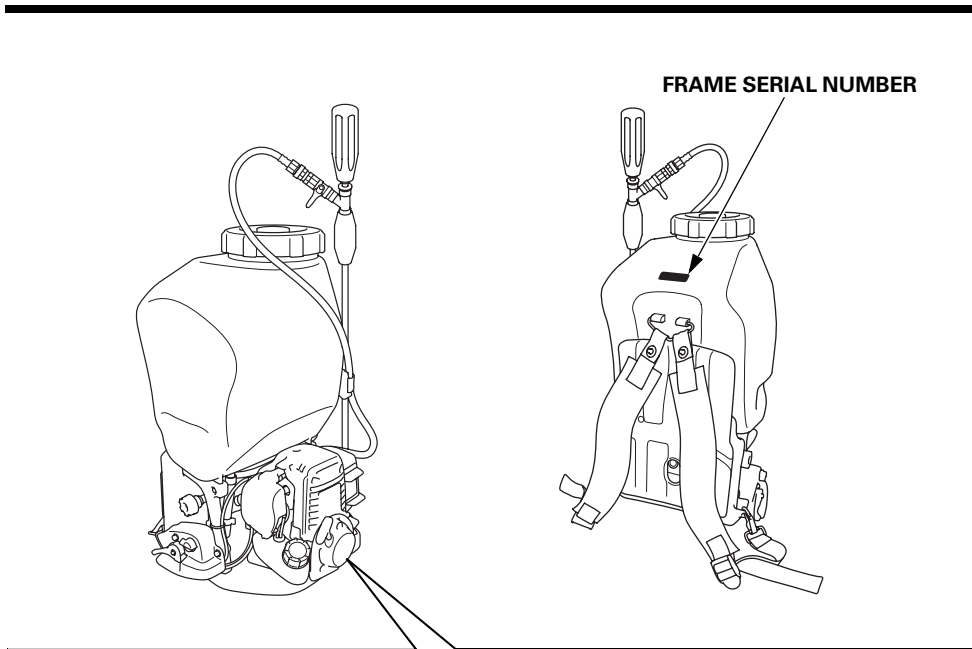
- : Standard parts
- * : Optional parts

Model type		WJR4025
Nozzle and head types		GCT
	Blue head	*
	4-Head	*
Long distance		●

Model type		WJR4025
Connecting parts		GCT
Shut-off valve	Sprayer hose	●
		
Roller joint		
		







Record the frame serial number and engine serial number in the space below. You will need these serial numbers when ordering parts, and when making technical or warranty inquiries.

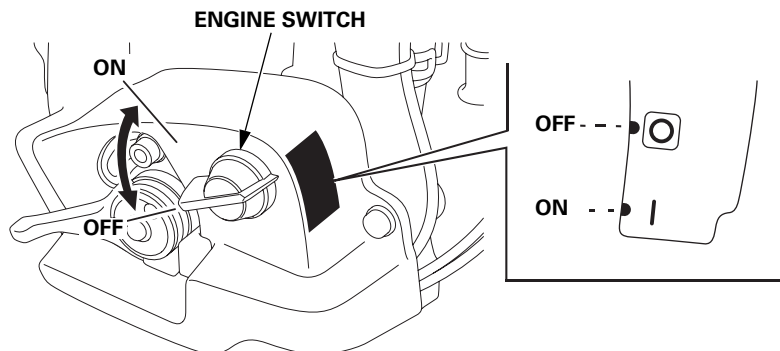
Engine serial number: _____

Frame serial number: _____

4. CONTROLS

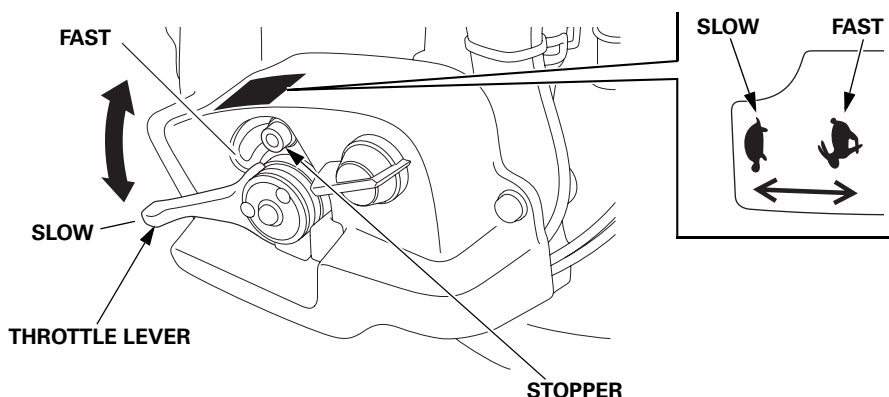
Engine switch

The engine switch enables and disables the ignition system. The engine switch must be in the ON position for the engine to run. Turning the engine switch to the OFF position stops the engine.



Throttle lever

The throttle lever controls engine speed from SLOW to FAST, it will stay in any designated position.

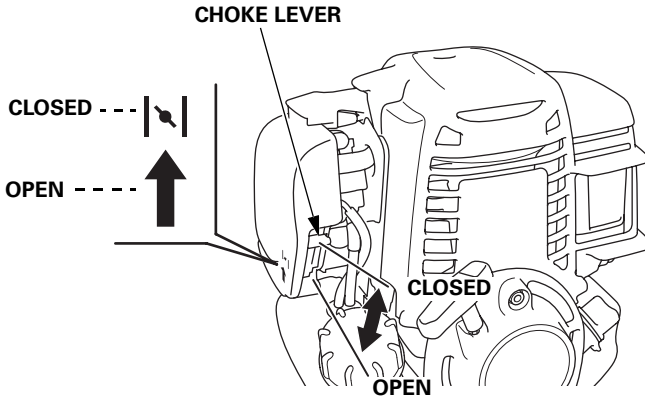


NOTE:

The throttle lever is regulated by the stopper. Do not change the stopper position to forcibly increase the engine speed. Overspeeding the engine impairs the pump's performance and adversely affects the engine and pump.

Choke lever

The choke lever opens and closes the choke valve in the carburetor. The CLOSED position enriches the fuel mixture for starting a cold engine. The OPEN position provides the correct fuel mixture for operation after starting, and for restarting a warm engine.

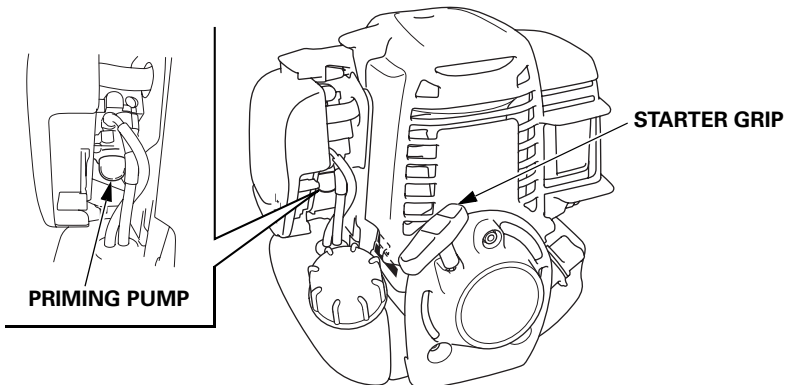


Recoil starter

Pulling the starter grip operates the recoil starter to crank the engine for starting.

Priming pump

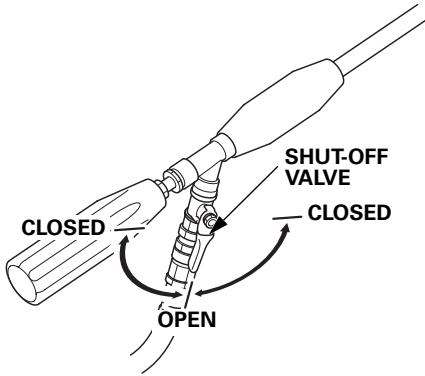
Pressing the priming pump feeds the fuel from the fuel tank to the carburetor. This procedure is necessary for starting the engine.



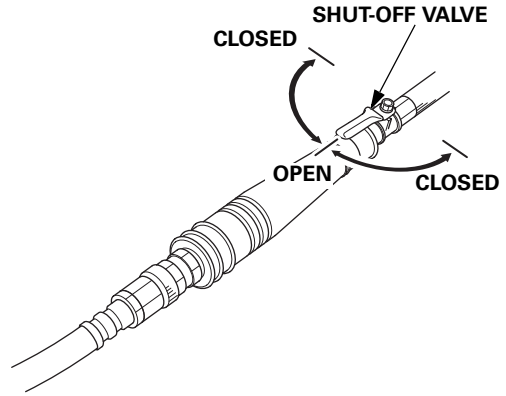
Shut-off valve

Use the shut-off valve when spraying or stop spraying chemicals.

LONG DISTANCE TYPE



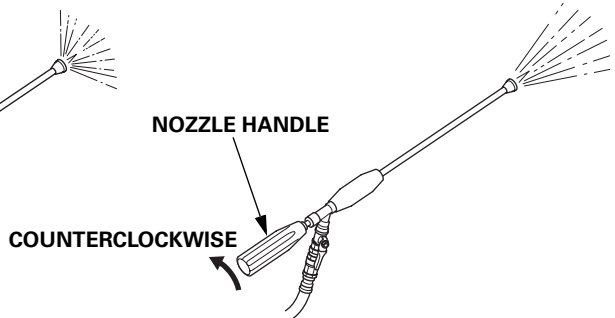
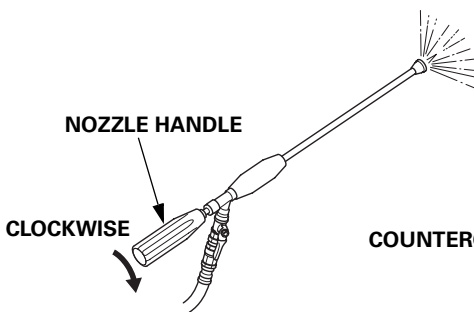
BLUE HEAD / 4-HEAD TYPES



Nozzle handle (Long distance type only)

Use the nozzle handle to adjust the spray angle and distance.

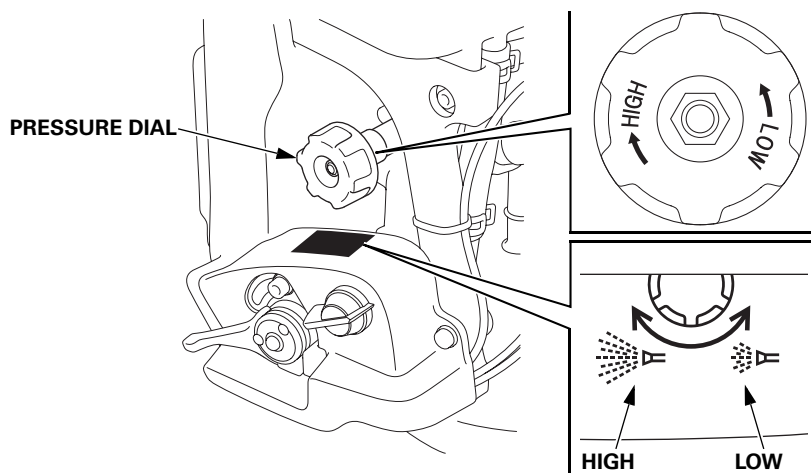
- When you turn the nozzle handle clockwise, spray angle will spread and distance will shorten.
- When you turn the nozzle handle counterclockwise, spray angle will narrow and distance will increase.



Pressure dial

Use the pressure dial when adjusting the spraying pressure and amount.

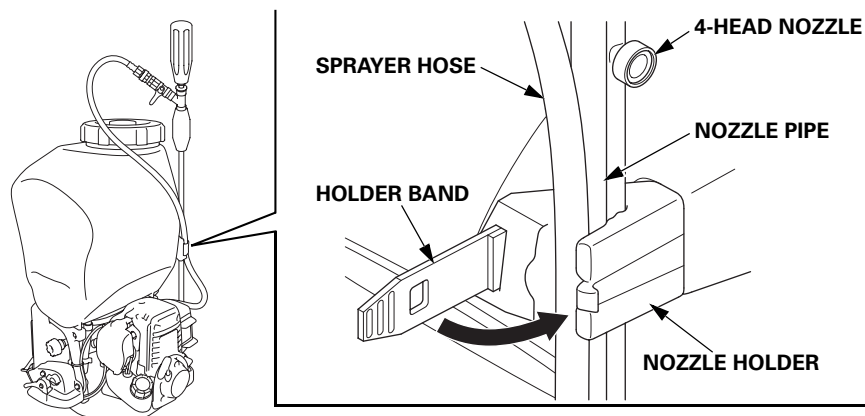
- When you turn the pressure dial clockwise (HIGH), the spraying pressure and amount will increase.
- When you turn the pressure dial counterclockwise (LOW), the spraying pressure and amount will decrease.



Nozzle holder

The 4-head nozzle, nozzle pipe, and sprayer hose can be fixed in place with the nozzle holder using the nozzle band.

If the holder band breaks, replace it with a new piece.



5. PREPARATION

Before operation, assemble the nozzle and sprayer hose, then connect the sprayer hose into the pump chamber.

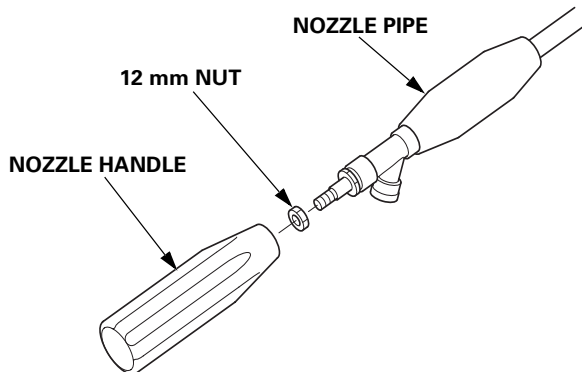
1. Assemble the nozzle and sprayer hose.

For more information about the nozzle and head type variations, see page 16.

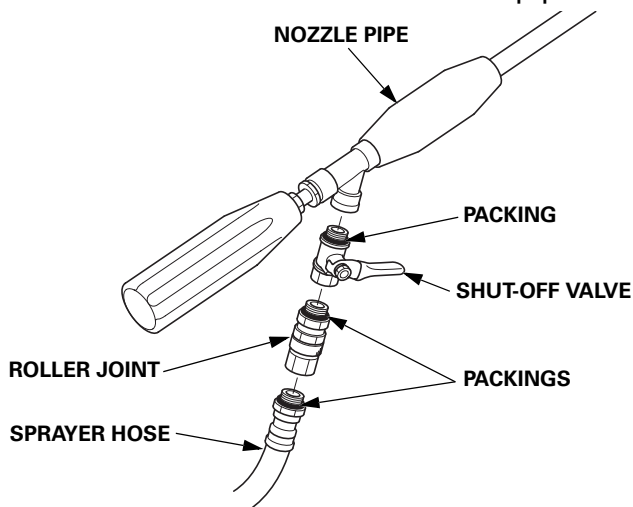
Long distance type:

Be sure to install packings and connect each part securely.

- a. Install the 12 mm nut to the nozzle pipe.
- b. Connect the nozzle handle into the nozzle pipe.



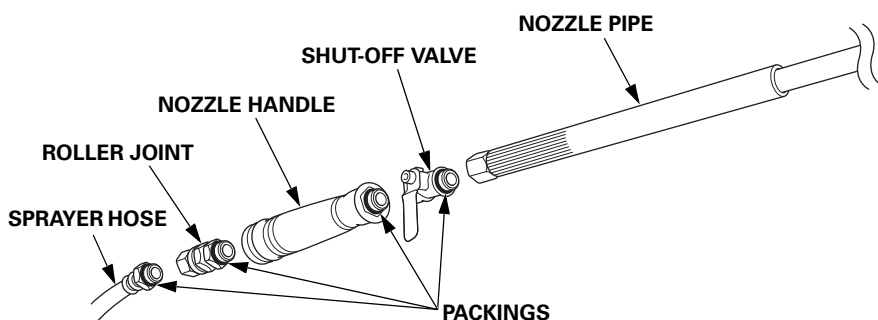
- c. Connect the sprayer hose into the roller joint.
- d. Connect the roller joint into the shut-off valve.
- e. Connect the shut-off valve into the nozzle pipe.



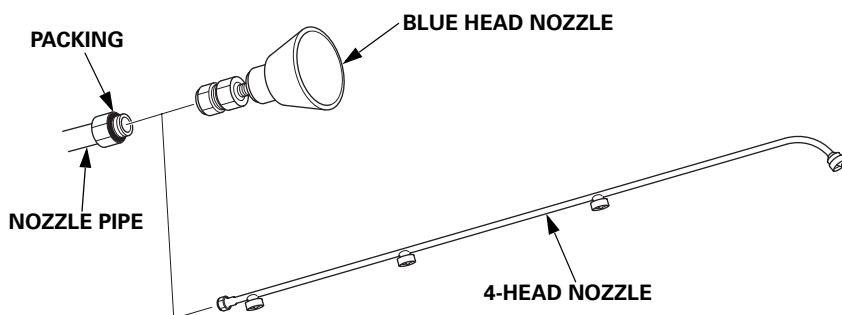
Blue head / 4-head types:

Be sure to install packings and connect each part securely.

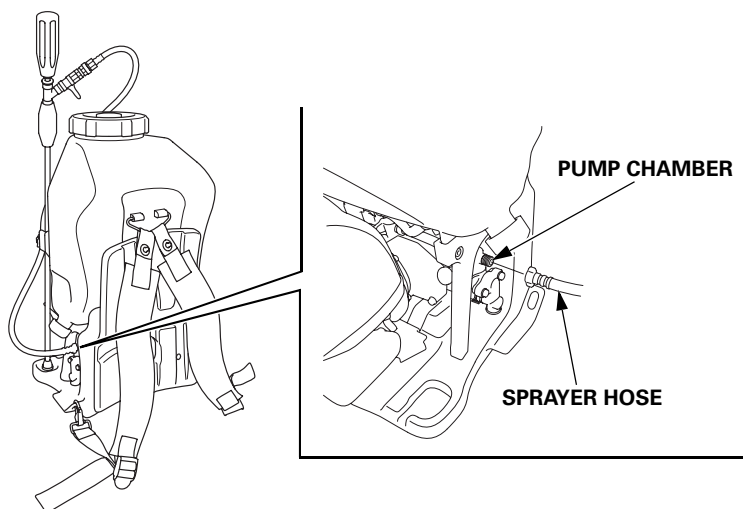
- a. Connect the sprayer hose into the roller joint.
- b. Connect the roller joint into the nozzle handle.
- c. Connect the nozzle handle into the shut-off valve.
- d. Connect the shut-off valve into the nozzle pipe.



- e. Connect the nozzle pipe into the nozzle.

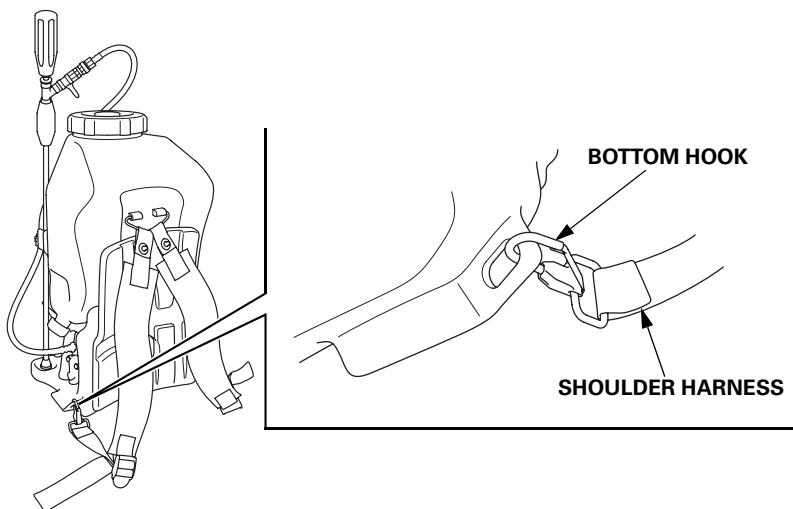


2. After assembling the nozzle and sprayer hose, connect the sprayer hose into the pump chamber.



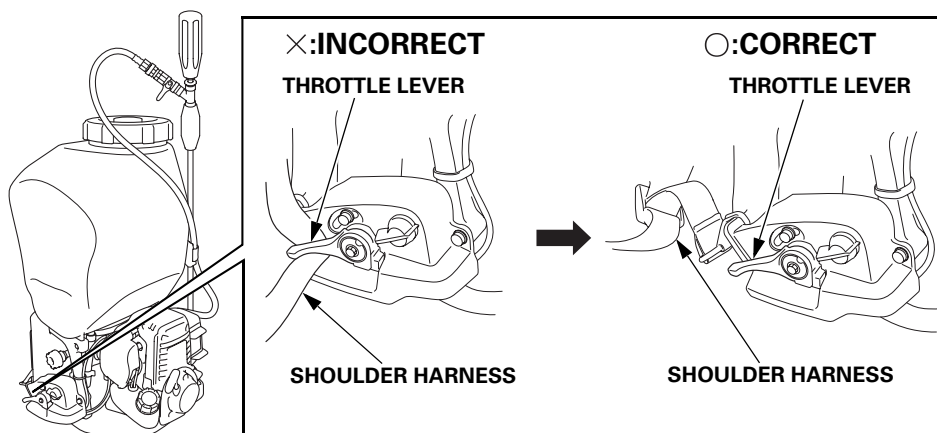
3. Check the shoulder harness.

Make sure that the bottom hook of the shoulder harness is connected.



CAUTION:

When you put the backpack sprayer on your back, make sure that the shoulder harness is not entangled with the throttle lever.



6. PRE-OPERATION CHECK

For safe and efficient spraying, always make a pre-operation inspection before operating:

▲WARNING

Before performing a pre-operation inspection, place the backpack sprayer on a level surface, stop the engine and make sure that the engine switch is in the OFF position to be certain the engine will not start accidentally.

Before each use, look around and underneath the engine for signs of oil or gasoline leaks.

1. Check the engine oil level.

Every 10 hours, check the engine oil level and replenish oil up to the upper limit if the engine is operated for long time continuously.

CAUTION:

Engine oil is a major factor affecting engine performance and service life. Nondetergent or vegetable oils are not recommended.

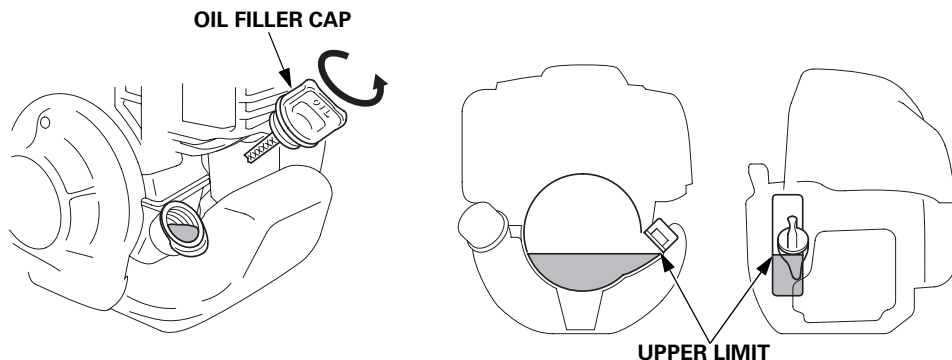
Check the engine oil level with the engine stopped and in a level position.

- a. Remove the oil filler cap.
- b. Check the oil level. If it is below the upper limit, fill with the recommended oil (see page 29) to the upper limit.
- c. Reinstall the oil filler cap securely.

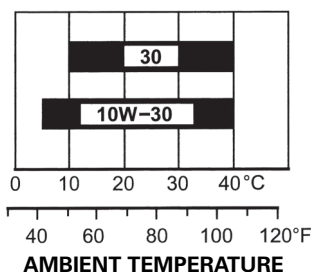
Add the engine oil slowly to avoid overflowing, as the engine oil tank capacity is small.

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.

**Recommended Oil**

Use 4-stroke motor oil that meets or exceeds the requirements for API service classification SE or later (or equivalent). Always check the API service label on the oil container to be sure it includes the letters SE or later (or equivalent).



SAE 10W-30 is recommended for general use. Other viscosities shown in the chart may be used when the average temperature in your area is within the indicated range.

CAUTION:

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

2. Check the fuel level.

Use automotive unleaded gasoline with a Research Octane Number of 91 or higher (a Pump Octane Number of 86 or higher).

Never use gasoline that is stale, contaminated, or mixed with oil.

Avoid getting dirt 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.**

CAUTION:

Gasoline substitutes are not recommended; they may be harmful to fuel system components.

NOTE:

Gasoline spoils very quickly depending on factors such as light exposure, temperature and time. In worst cases, gasoline can be contaminated within 30 days.

Using contaminated gasoline can seriously damage the engine (carburetor clogged, valve stuck).

Such damage due to spoiled fuel is disallowed from coverage by the warranty.

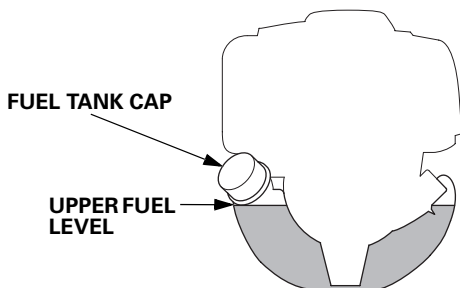
To avoid this please strictly follow these recommendations:

- Only use specified gasoline.
- Use fresh and clean gasoline.
- To slow deterioration, keep gasoline in a certified fuel container.
- If long storage (more than 30 days) is foreseen, drain fuel tank and carburetor (see page 65).

a. Place the backpack sprayer horizontally, and check from the outside of the tank to see if there is enough fuel.

b. If the fuel level is low, refuel the fuel tank. Do not overfill the upper fuel level.

Remove the fuel tank cap gradually to release a pressurized air in the fuel tank. Fuel in the fuel tank may spout out, if the fuel tank cap is removed quickly.



Gasoline containing alcohol

If you decide to use a gasoline containing alcohol (gasohol), be sure its octane rating is at least as high as that recommended by Honda.

There are two types of "gasohol": one containing ethanol, and the other containing methanol.

Do not use gasohol that contains more than 10% ethanol.

Do not use gasoline containing more than 5% methanol (methyl or wood alcohol) and that does not also contain co-solvents and corrosion inhibitors for methanol.

NOTE:

- Fuel system damage or engine performance problems resulting from the use of gasoline that contains more alcohol than recommended is not covered under the warranty.
- Before buying gasoline from an unfamiliar station, first determine if the gasoline contains alcohol, if it does, find out the type and percentage of alcohol used.

If you notice any undesirable operating symptoms while using a particular gasoline. Switch to a gasoline that you know contains less than the recommended amount of alcohol.

3. Check the air cleaner element.

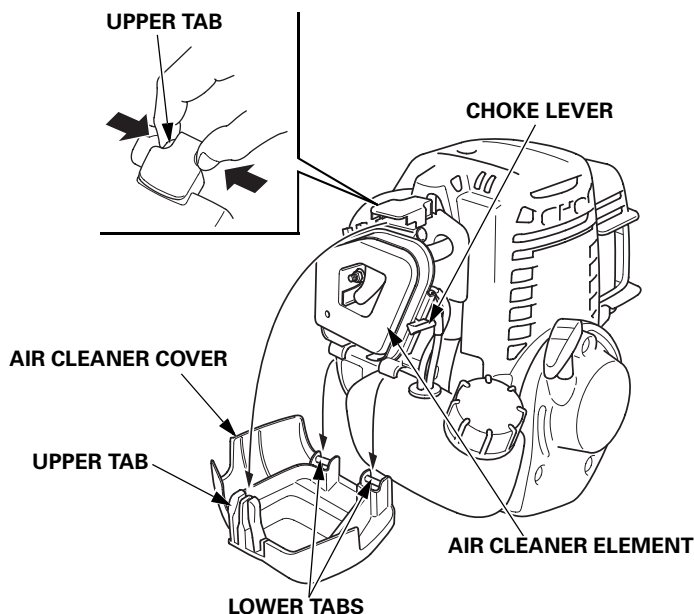
▲WARNING

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 through the carburetor, into the engine.

- a. Move the choke lever to the CLOSED position (see page 21).
- b. Remove the air cleaner cover by unhooking the upper tab on the top of the cover and its two lower tabs.
- c. Check the air cleaner element to be sure it is clean and in good condition.
If the element is dirty, clean it (see page 54). Replace the element if it is damaged.
- d. Reinstall the element and the cover by inserting the lower tabs, then insert the upper tab.

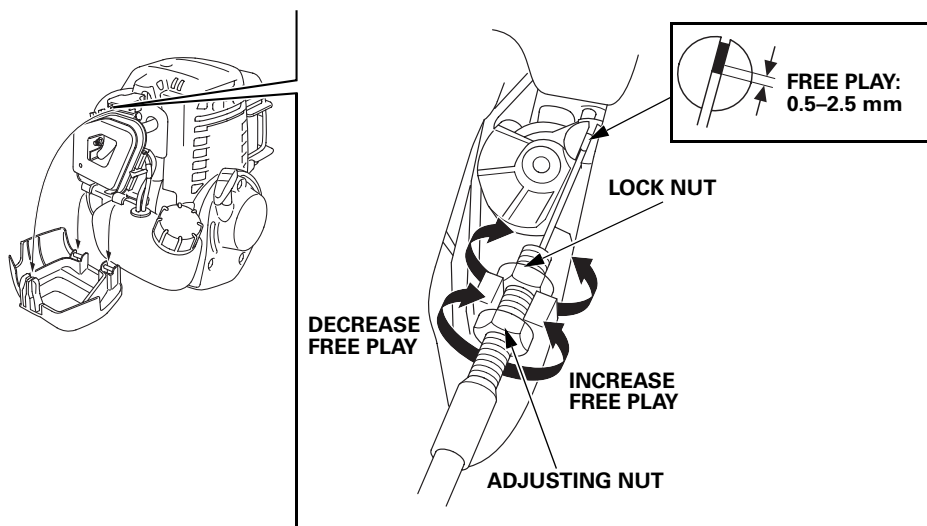


4. Check the throttle cable free play.

- a. Remove the air cleaner cover (see page 32).
- b. Check the throttle cable free play at the tip of the cable by pulling and releasing the throttle lever a few times.

Free play: 0.5–2.5 mm

If the free play is incorrect, loosen the lock nut and turn the adjusting nut in or out as required to obtain the correct free play.

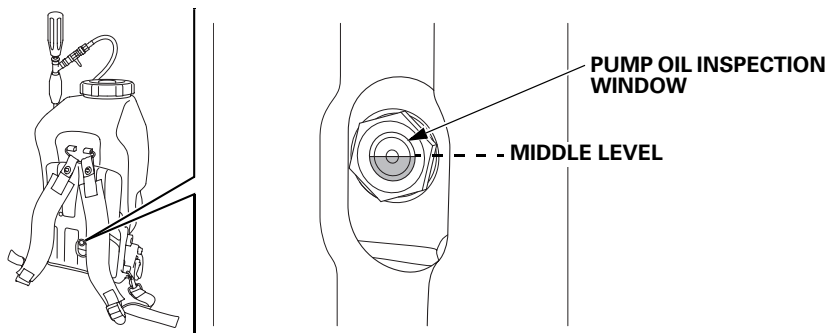


- c. Tighten the lock nut.
- d. Check the throttle lever operates smoothly.
- e. Reinstall the air cleaner cover (see page 32).

5. Check the pump oil.

Check if the pump oil is not contaminated and does not appear milky. Check that the oil level is not below from the middle level of the inspection window.

If you notice either condition, consult your servicing dealer.

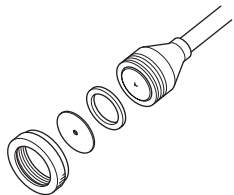


6. Check the nozzle.

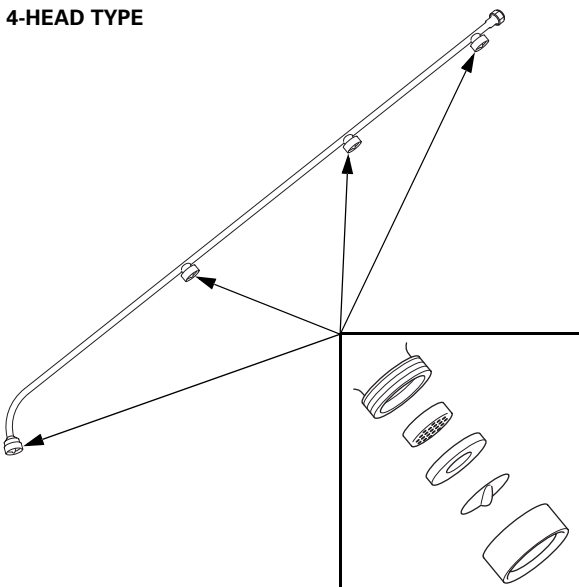
If the backpack sprayer sprays irregularly, disassemble the nozzle and maintain it.

- If there is any stain or clog, clean it off.
- If the nozzle is damaged, replace it.

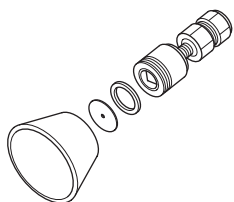
LONG DISTANCE TYPE



4-HEAD TYPE



BLUE HEAD TYPE



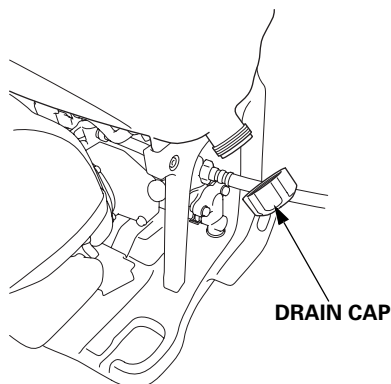
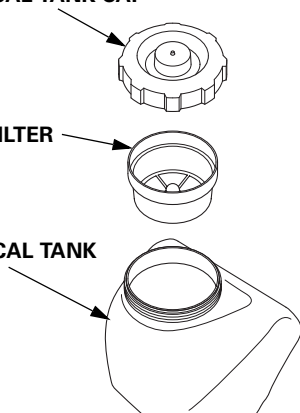
7. Check the chemical tank and tank filter.

- a. Remove the chemical tank cap and drain cap. Check the caps and packings for cracks or damage. If they are damaged, replace them.
- b. Remove the tank filter. Check the tank filter for clog or damage.
 - If it is damaged, replace it.
 - If it is dirty or clogged, clean it using water.

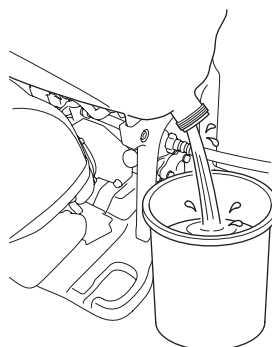
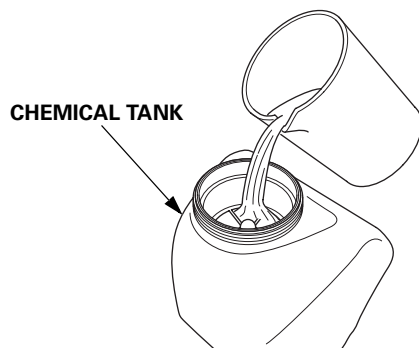
CHEMICAL TANK CAP

TANK FILTER

CHEMICAL TANK



- c. Check the chemical tank for cracks or damage.
 - If it is cracked or damaged, replace it.
 - If the inside of the chemical tank is dirty, clean it using water.

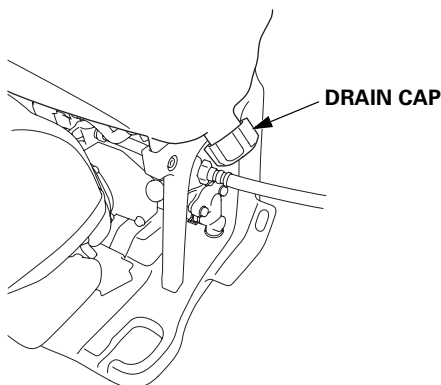


- d. Install the tank filter.
- e. Tighten the chemical tank cap and drain cap securely.

8. Fill agricultural chemicals into the tank.

Read the instructions of the chemical carefully. Always follow the directions and precautions preparation and handling of the chemical.

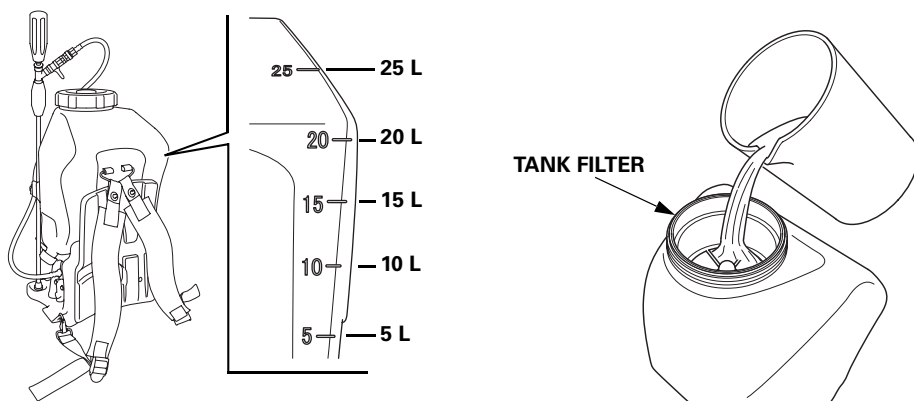
Make sure that the drain cap is securely tightened when filling agricultural chemicals into the tank.



On a level surface, fill agricultural chemical into the tank by using the tank filter.

NOTE:

When you fill agricultural chemicals into the tank, be sure to use the tank filter. Any foreign substance or dust will cause trouble to the pump and nozzle.

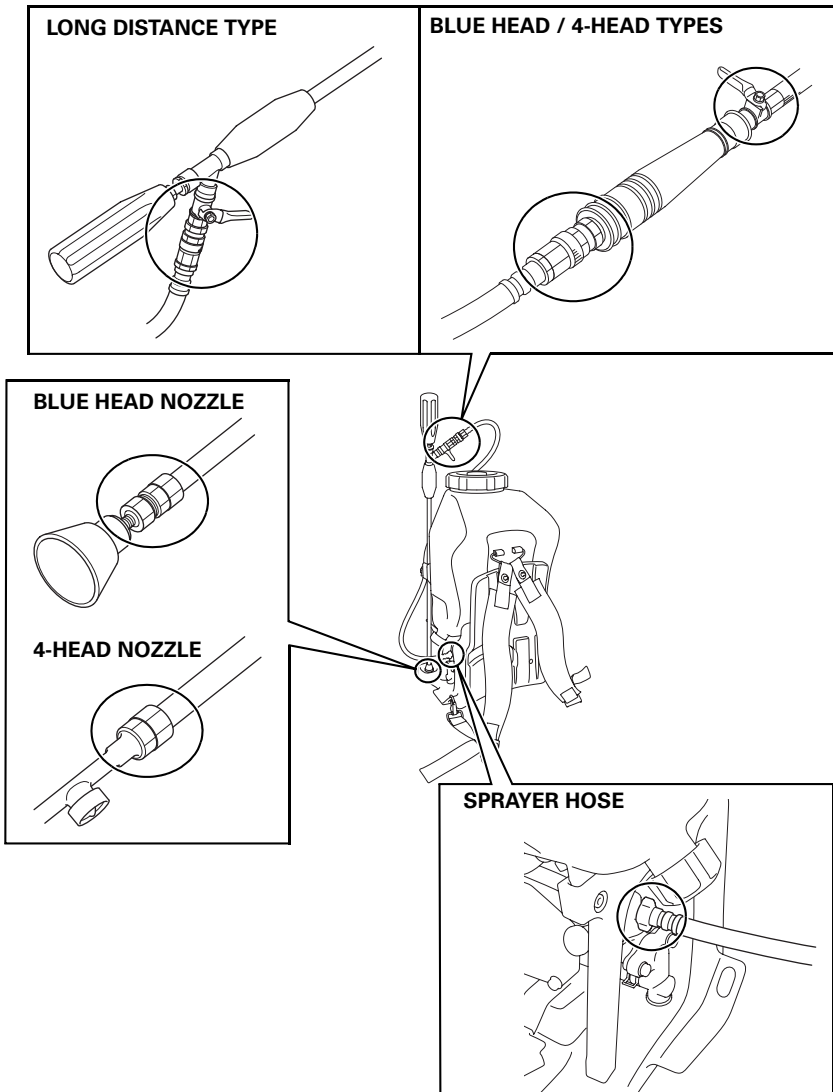


9. Check that all nuts, bolts, and screws are tightened.

Tighten the bolts and nuts properly and securely, if necessary.

10. Check leaking from the pump.

After starting the engine, look around each connection part for chemical leaks.



7. STARTING THE ENGINE

▲WARNING

- Exhaust gas contains poisonous carbon monoxide. Never run the engine in an enclosed area. Be sure to provide adequate ventilation.
- Start the engine in a place away from the people, pets, and surrounding buildings. Be sure there are no obstacles in the working area.

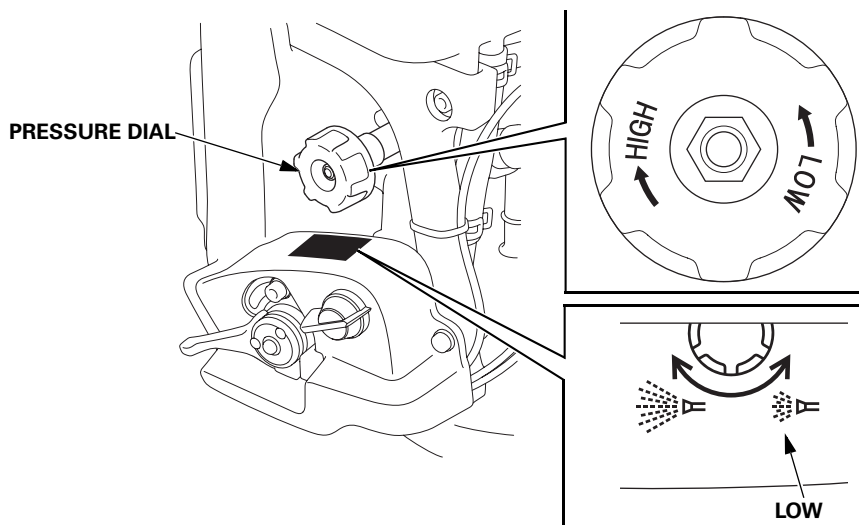
NOTE:

Do not operate the backpack sprayer without sufficient amount of chemicals in the chemical tank.

Fill 1 Liter or more chemicals into the chemical tank (see page 36).

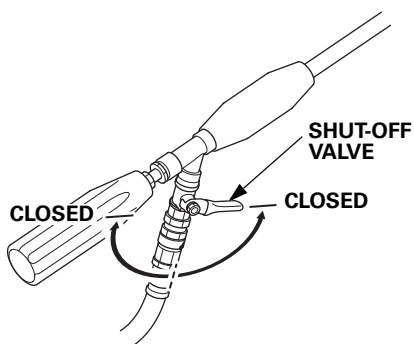
- To prevent the use of the backpack sprayer without sufficient amount of chemicals in the tank, as soon as the nozzle has stopped spraying chemicals, stop the engine.
- If the amount of chemicals in the chemical tank becomes 1 Liter or less, the pump sucks air, and will prevent spraying chemical.
- If you continue to operate the backpack sprayer without sufficient amount of chemicals, the pump may be damaged.

1. Turn the pressure dial counterclockwise (LOW) till it stops and set it to totally-closed state.

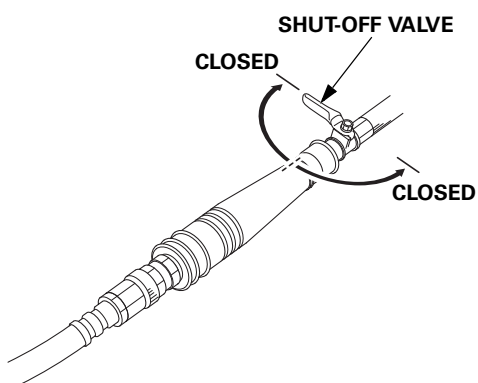


2. Turn the shut-off valve to the CLOSED position.

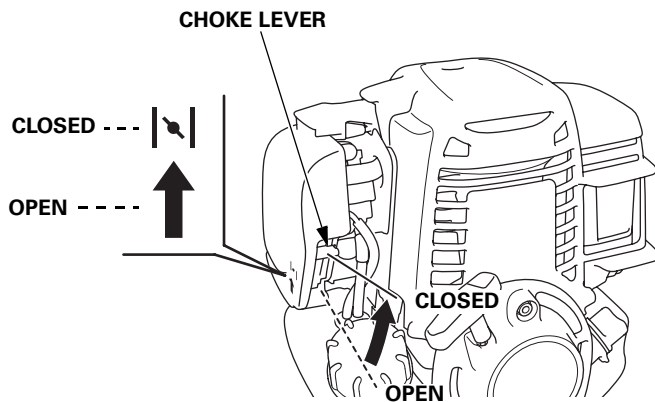
LONG DISTANCE TYPE



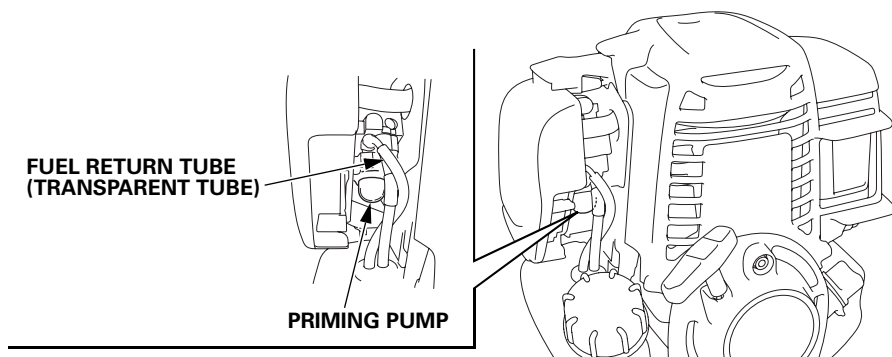
BLUE HEAD / 4-HEAD TYPES



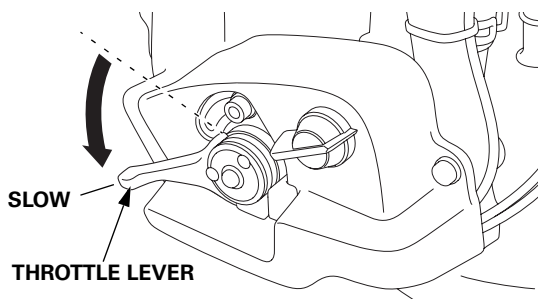
3. To start a cold engine, move the choke lever to the CLOSED position.
To restart a warm engine, leave the choke lever in the OPEN position.



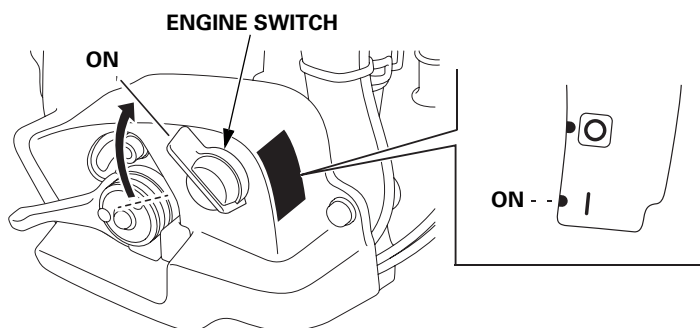
-
4. Press the priming pump several times until a flow in the fuel return tube (transparent tube) is visually noticed.



5. Make sure that the throttle lever is in the **SLOW** position.



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



-
7. Hold the engine top cover securely and pull the starter grip lightly until you feel resistance, then pull it briskly in the direction of the arrow as shown below.

Return the starter grip gently.

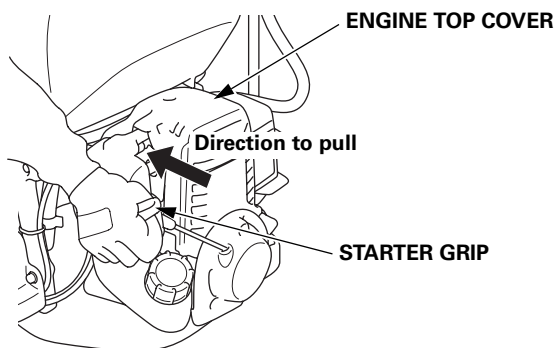
- Be sure that the people and pets are away from the backpack sprayer especially behind you, before pulling the starter grip.

CAUTION:

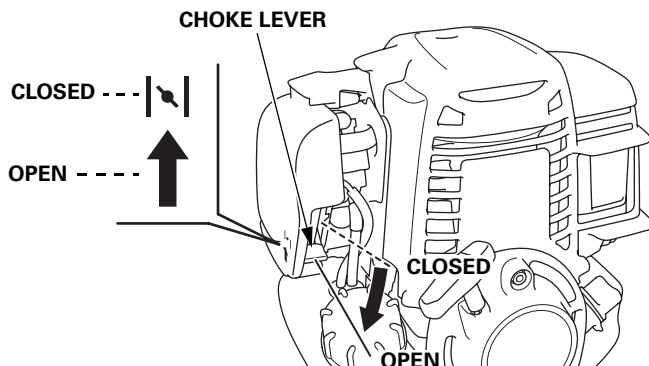
Do not allow the starter grip to snap back against the engine. Return it gently to prevent damage to the starter.

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.



8. If the choke lever has been moved to the CLOSED position to start the engine, gradually move it to the OPEN position as the engine warms up.



Hot Restart

If the engine is operated at higher ambient temperatures then turned off and allowed to sit for a short time, it may not restart on the first pull.

If necessary, use for following procedure:

IMPORTANT SAFETY PRECAUTION

Turn the engine switch to the OFF position before performing the following procedure. This will prevent the engine from starting and running at maximum speed when the throttle is in the full throttle position. If the engine starts, with the throttle in the full throttle position, agricultural chemicals may splash on you if the shut-off valve is in the "OPEN" position. This may result in personal injury.

1. Turn the engine switch to the OFF position.
2. Move the choke lever to the OPEN position.
3. Move the throttle lever in the full throttle position (FAST).
4. Pull the starter grip 3 to 5 times.
5. Follow the STARTING THE ENGINE procedure on page 38 and start the engine with the choke lever in the OPEN position.

• 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 backpack sprayer at altitudes higher than 1,500 m 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 increase in altitude. The effect of altitude on horsepower will be greater than this if no carburetor modification is made.

CAUTION:

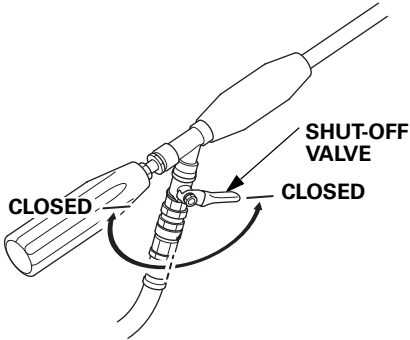
Operation of the backpack sprayer at an altitude lower than the carburetor is jetted for may result in reduced performance, overheating, and serious engine damage caused by an excessively lean air/fuel mixture.

8. STOPPING THE ENGINE

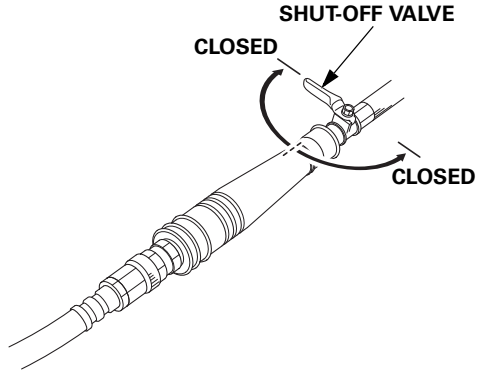
To stop the engine in an emergency, simply turn the engine switch to the OFF position. Under normal conditions, use the following procedure.

1. Turn the shut-off valve to the CLOSED position.

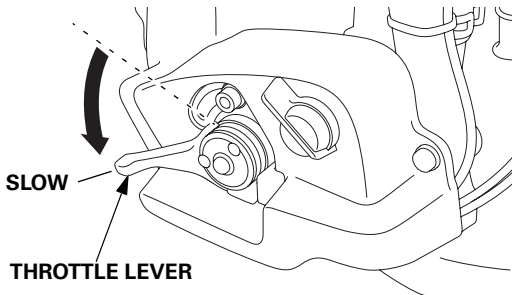
LONG DISTANCE TYPE



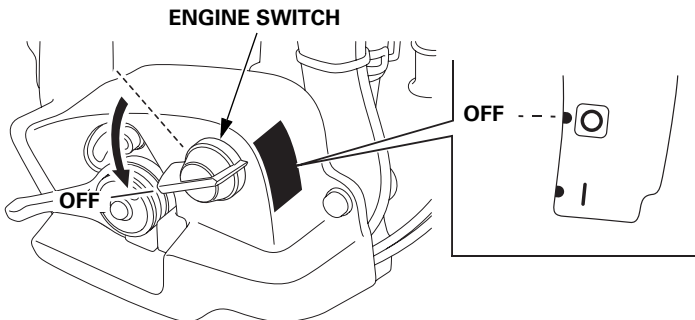
BLUE HEAD / 4-HEAD TYPES



2. Move the throttle lever to the SLOW position.



3. Turn the engine switch to the OFF position.



9. OPERATION

Read and understand the safety instructions on pages 4 to 13 before operating the backpack sprayer.

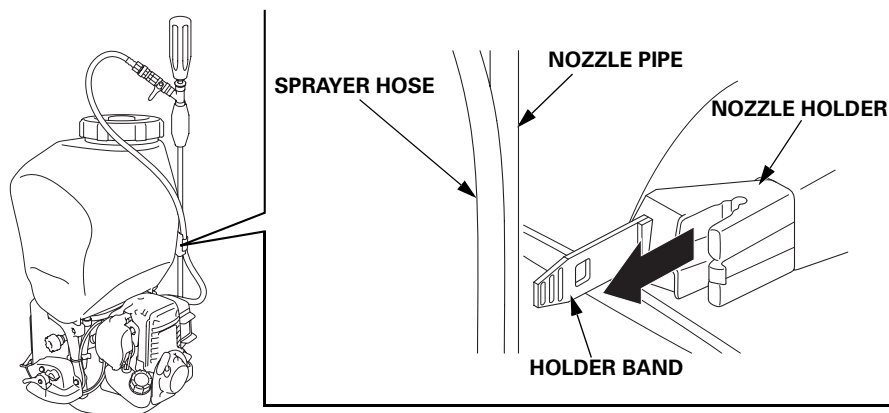
If you notice any abnormal sound, smell, vibration or other unusual signs, stop the engine immediately and consult your authorized Honda dealer.

Before operation

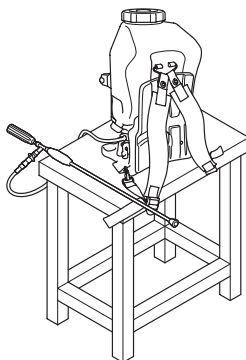
- Fill 1 Liter or more agricultural chemicals into the chemical tank while keeping the chemical tank in a level position (see page 36).
- Make sure that the shut-off valve is to the CLOSED position (see page 22).
- Make sure that the throttle lever is in the SLOW position (see page 20).
- Make sure that the pressure dial has been turned counterclockwise (LOW) till it stops and is set to the totally-CLOSED position (see page 23).

Operation

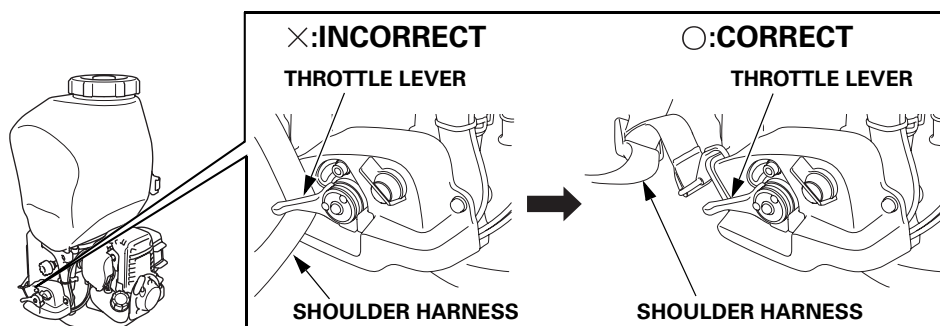
1. Start the engine according to the engine start procedure (see page 38).
2. Remove the holder band from the nozzle holder.
3. Remove the sprayer hose and the nozzle pipe from the nozzle holder.



4. Put the backpack sprayer on a flat table.



5. Make sure that the shoulder harness is not entangled with the throttle lever.



Then put the backpack sprayer on your back.

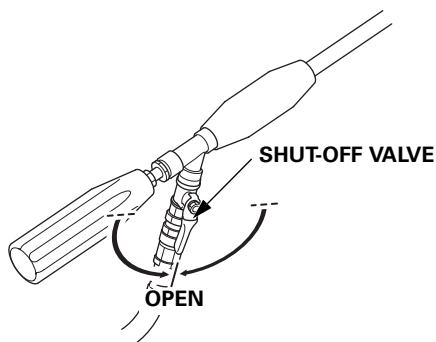
- Put the harness on your shoulders to carry the backpack sprayer.
- Adjust the shoulder harness length.

SHOULDER HARNESS

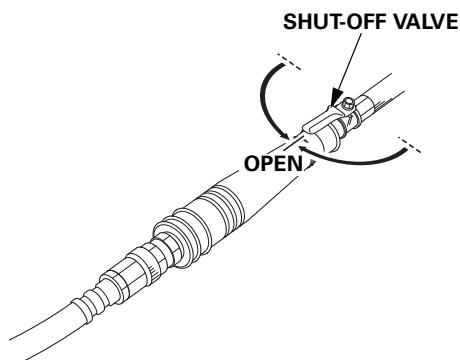


6. Turn the shut-off valve to the OPEN position.

LONG DISTANCE TYPE

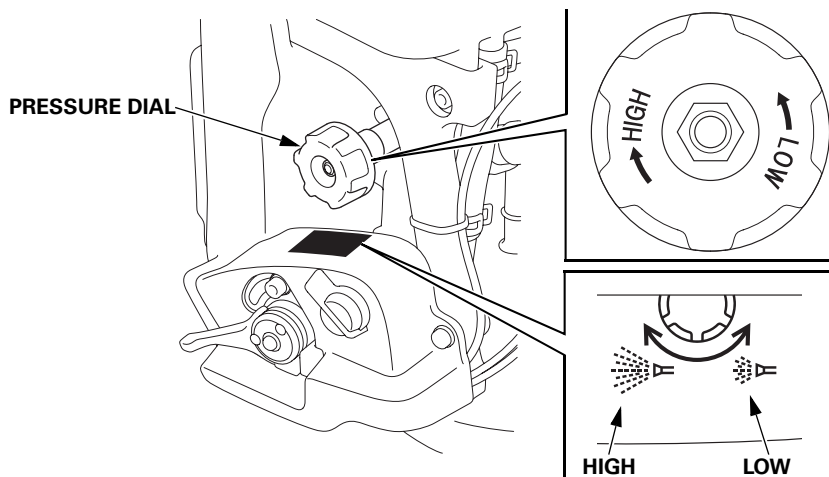


BLUE HEAD / 4-HEAD TYPES



7. Turn the pressure dial towards clockwise (HIGH) to make the spraying pressure suited for the operating conditions.

- When you turn the pressure dial clockwise (HIGH), the spraying pressure and amount will increase.
- When you turn the pressure dial counterclockwise (LOW), the spraying pressure and amount will decrease.



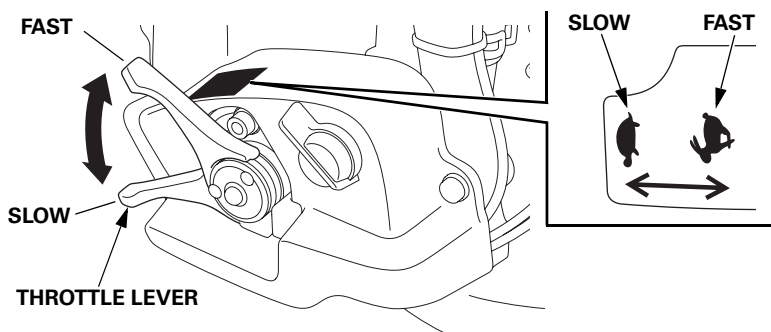
-
8. Move the throttle lever at the desired position while observing the spray condition.

NOTE:

The centrifugal clutch is used in this backpack sprayer.

When the engine is rotating in low speed range, the clutch is slipping and the pump does not operate.

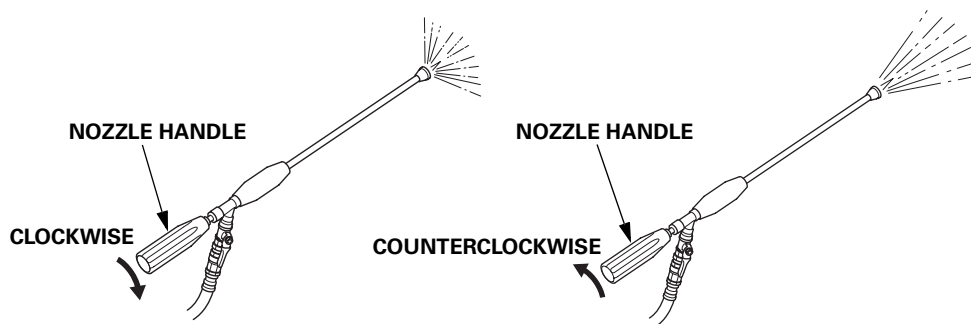
Do not use the backpack sprayer in this rotation range that makes the clutch slip. Otherwise, the clutch may be damaged.



Long distance nozzle:

Adjust the spray angle and distance by turning the nozzle handle while observing the spray condition.

- When you turn the nozzle handle clockwise, spray angle will spread and distance will shorten.
- When you turn the nozzle handle counterclockwise, spray angle will narrow and distance will increase.



During operation

- Do not point the nozzle at others.
- Pay attention to the rest of chemicals in the tank.

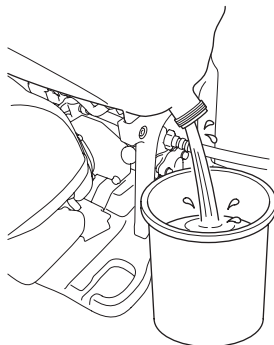
To prevent the use of the backpack sprayer without sufficient amount of chemicals in the tank, as soon as the nozzle has stopped spraying chemicals, stop the engine, or the pump may be damaged. Fill 1 Liter or more chemicals into the chemical tank (see page 36).



After operation

When handling agricultural chemicals, follow the directions of the manufacturer or distributor. Also, follow the laws and regulations.

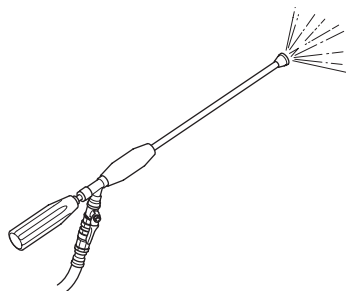
1. Stop the engine (see page 43).
2. After the engine cooled, remove the drain cap to drain the agricultural chemicals from the chemical tank.



3. Install the drain cap and remove the chemical tank cap to pour clean water into the tank to rinse its inside.



4. Start the engine again (see page 38) and move the throttle lever between the FAST position and the SLOW position (see page 47). Move the shut-off valve a few times. Spray a few minutes. Remove the drain cap again to drain the water from the tank.



5. Set the nozzle pipe and sprayer hose into the nozzle holder, and secure them by the holder band (see page 23).

10. MAINTENANCE

Periodic inspection and adjustment of the backpack sprayer are essential if high level performance is to be maintained. Regular maintenance will also help to extend service life. The required service intervals and the kind of maintenance to be performed are described in the table in the following page.

▲WARNING

- **Before performing any maintenance, place the backpack sprayer on a level surface, stop the engine and make sure that the engine switch is in the OFF position to be certain the engine will not start accidentally.**
- **The backpack sprayer should be serviced by an authorized Honda dealer unless the owner has proper tools and service data and feels he or she is mechanically qualified.**

CAUTION:

Use only genuine Honda parts or their equivalent for maintenance or repair. Replacement parts which are not of equivalent quality may damage the backpack sprayer.

Maintenance schedule

REGULAR SERVICE PERIOD (3) Perform at every indicated month or operating hour interval, whichever comes first.		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.	Refer to page
ITEM								
Engine oil	Check level	o						28
	Change		o		o			53
Air cleaner	Check	o						32
	Clean			o (1)				54
Spark plug	Check-adjust					o		56
	Replace						o	56
Engine cooling fins	Clean				o			62
Nuts, bolts, fasteners	Check (Retighten if necessary)	o						37
Throttle cable	Check-adjust	o						33
Clutch shoe and drum	Check				o (2)			—
Idle speed	Check-adjust					o (2)		—
Valve clearance	Check-adjust					o (2)		—
Combustion chamber	Clean	After every 300 hrs. (2)						—
Fuel filter	Clean					o		59
Fuel tank	Clean					o		59
Fuel tube	Check	Every 2 years. (Replace if necessary) (2)						—
Oil tube	Check	Every 2 years. (Replace if necessary) (2)						—
Seal rubber (Pump)	Check (Replace if necessary)				o (2)			—
Leakage from pump	Check	o (4)						37
Chemical tank and filter	Check-Clean	o						35
Pump oil	Check level	o						34
	Change		o (2)			o (2)		—
Hose, nozzle, fasteners	Check (Retighten if necessary)	o						37
Nozzle	Clean	o						34
Pump grease (Grease cup)	Supply to pump	Every 2 hrs. (5)						60
	Refill	When Grease cup has turned till the end. (6)						61

(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 the Honda shop manual for service procedures.

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

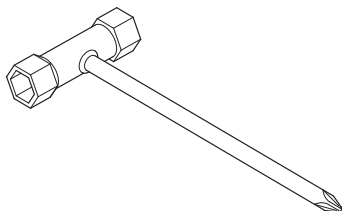
(4) After starting the engine, check for chemical leakage from the pump.

(5) Turn both Grease cups, fully two turns, after each 2 hours of operation.

(6) Refill both Grease cups with pump grease, when the Grease cup has been turned till the end.

Tool kit

The tools supplied are necessary for performing some periodic maintenance, simple adjustments and repairs.



16×17 mm BOX WRENCH



4 mm HEX. WRENCH

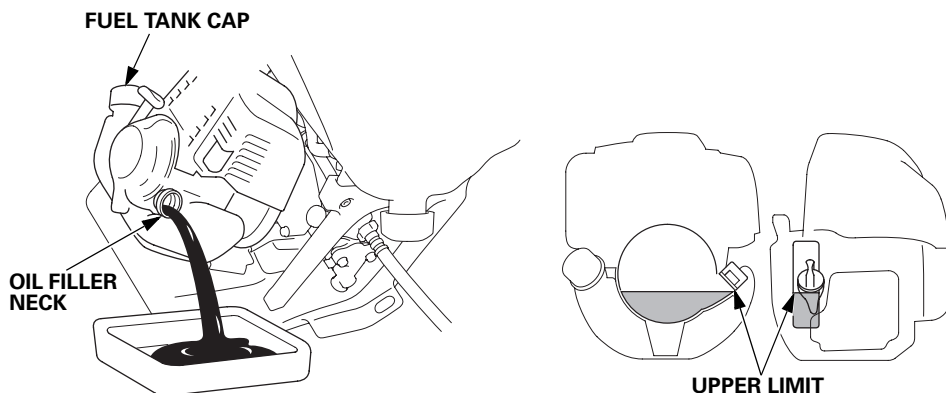
Changing oil

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

Place the backpack sprayer on a firm level surface with the engine stopped.

1. Check the fuel tank cap is tightened securely.
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 to the upper limit with the recommended oil (see page 29). Add the engine oil slowly to avoid overflowing, as the engine oil tank capacity is small.

OIL CAPACITY: 0.10 L



4. Install the oil filler cap securely.
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 to 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, or down a drain.

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 backpack sprayer in extremely dusty areas.

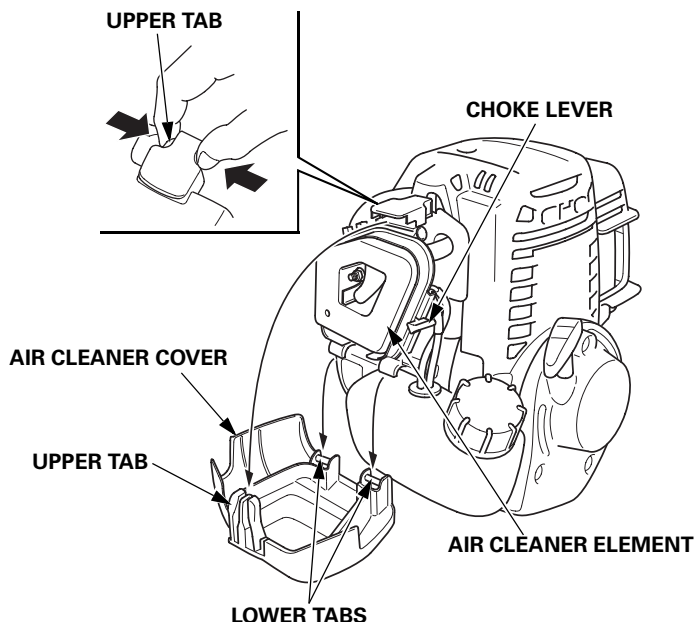
▲WARNING

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

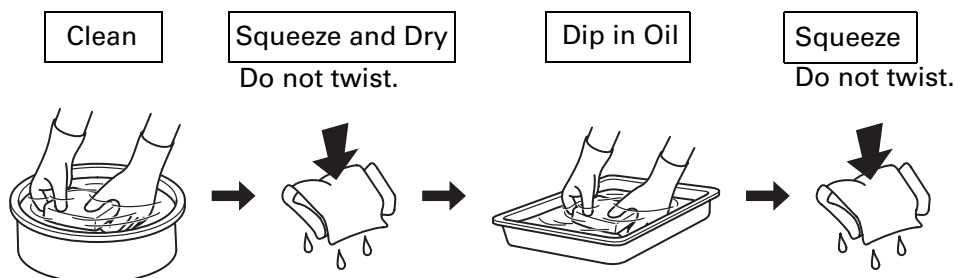
CAUTION:

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

1. Move the choke lever to the CLOSED position (see page 39).
2. Remove the air cleaner cover by unhooking the upper tab on the top of the cover and its two lower tabs.
3. Remove the air cleaner element.



-
4. Wash the element in a nonflammable or high flash point solvent and dry it thoroughly.
Soak the element in clean engine oil and squeeze out the excess oil.



5. Wipe dirt from the air cleaner body and cover, using a moist rag. Be careful to prevent dirt from entering the carburetor.
6. Reinstall the air cleaner element.
7. Reinstall the air cleaner cover by inserting the lower tabs, then insert the upper tab.

Spark plug service

Recommended spark plug: CMR5H (NGK)

CAUTION:

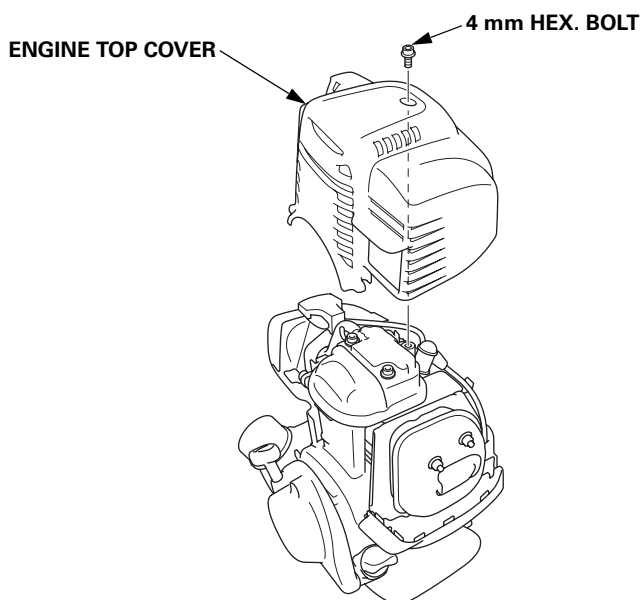
Never use a spark plug of incorrect heat range.

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

1. Loosen the 4 mm hex. bolt, then remove the engine top cover.

Do not pull the starter grip and start the engine without the engine top cover.

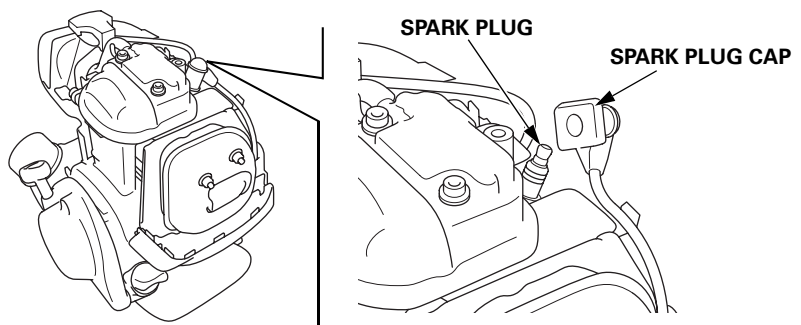
There are rotating part and hot parts under the cover.



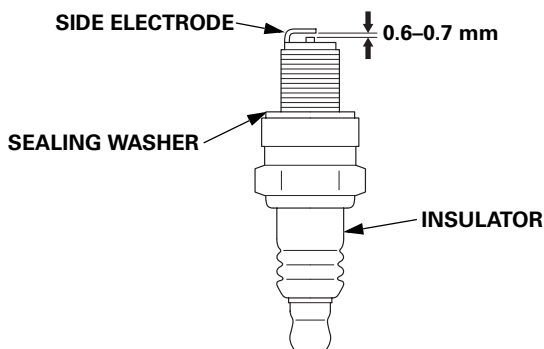
-
2. Remove the spark plug cap. Remove any dirt from around the spark plug area.
 3. Use the 16×17 mm box wrench to remove the spark plug.

▲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:
0.6–0.7 mm

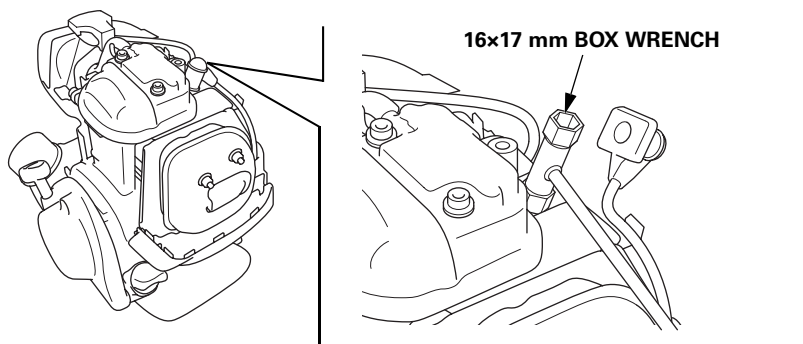


6. Check that the sealing washer is in good condition, and thread the spark plug in by hand to prevent cross-threading.

-
7. After the spark plug is seated, tighten with the 16×17 mm box 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 engine top cover, and tighten the 4 mm hex. bolt securely.

CAUTION:

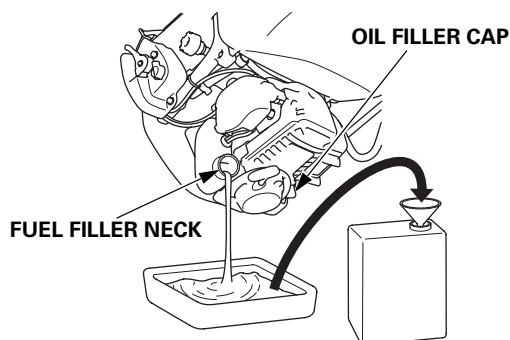
The spark plug must be securely tightened. An improperly tightened spark plug can become very hot and may damage the engine.

Fuel filter and fuel tank cleaning

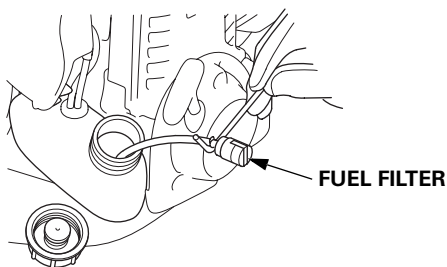
▲WARNING

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

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



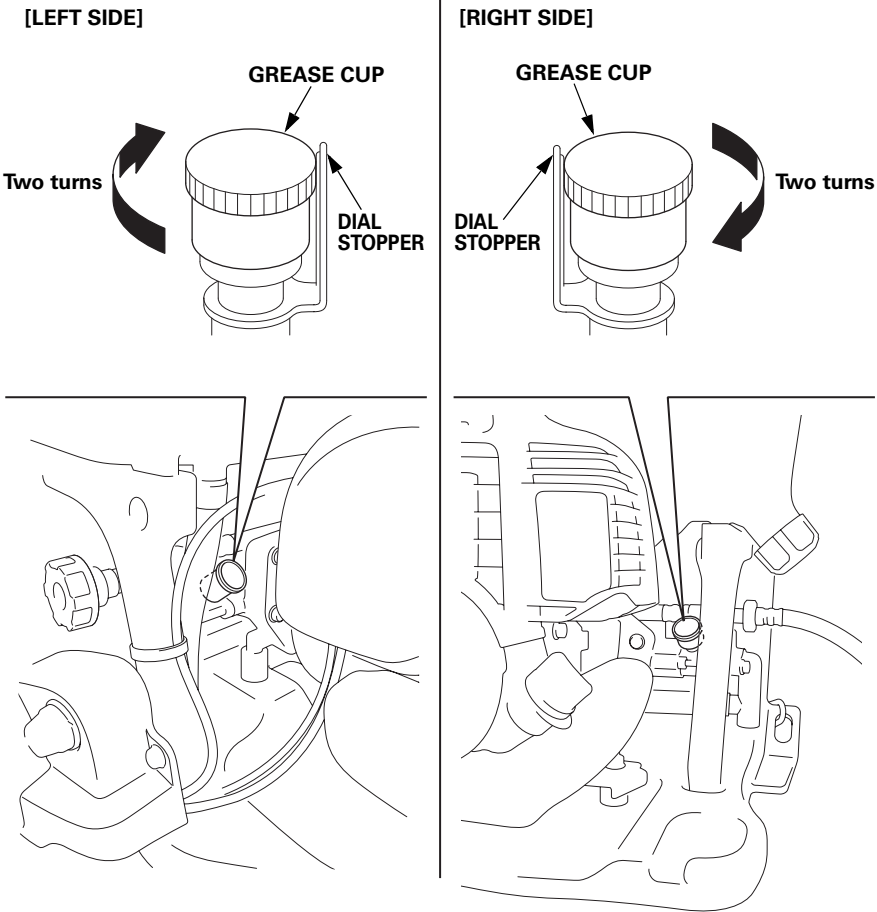
3. Pull out the fuel filter with the mechanic's wire from the fuel filler neck gently.



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. Remove water and dirt stood in the fuel tank by rinsing the inside of the fuel tank with nonflammable or high flash point solvent.
6. Return the fuel filter into the fuel tank and tighten the fuel tank cap securely.

Supplying the pump grease to the pump

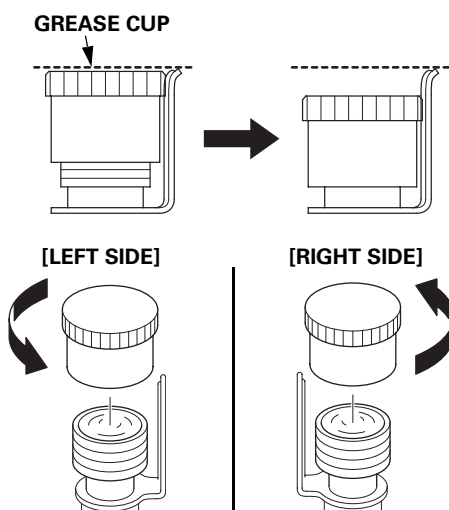
Every 2 hours, turn the Grease cup on the right and left side from the dial stopper clockwise by two turns so that the both dials have the same number of revolutions, and supply grease to the pump.



Refilling the pump grease to the Grease cup

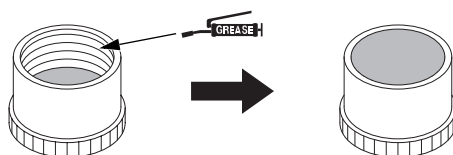
When the Grease cup has turned till the end, refill both Grease cups with pump grease.

1. Remove the Grease cup by turning counterclockwise.



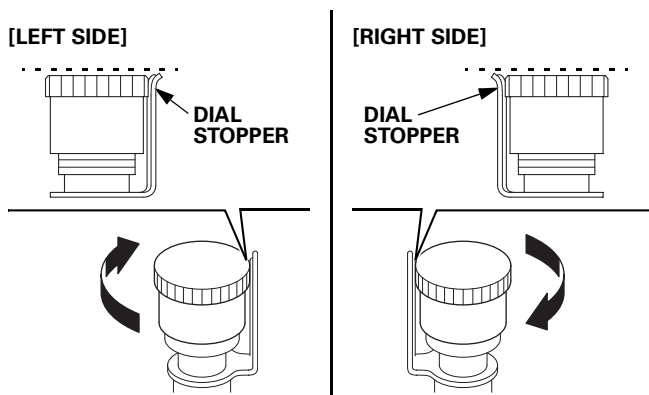
2. Refill the pump grease till the top of the Grease cup.

 **Lithium based multi-purpose grease#3 or equivalent**



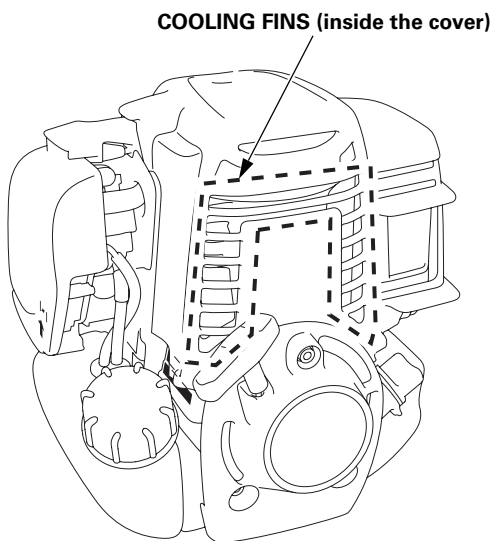
3. Install both Grease cups.

Tighten the Grease cup until the top surface of the Grease cup and top part of the dial stopper comes in same level.



Cooling fin service

Inspect the cooling fins visually through the cover. If there are dry grass, leaves and mud clogged, consult your authorized Honda dealer for cleaning it.



11. TRANSPORTING/STORAGE

Transporting

- If the backpack sprayer has been running, allow it to cool down before loading the backpack sprayer on the transport vehicle. A hot engine and exhaust system can burn you and can ignite some materials.
- Always turn the engine switch to the OFF position.
- Make sure the fuel tank cap is securely tightened.
- Keep the backpack sprayer level when transporting to reduce the possibility of fuel leakage.

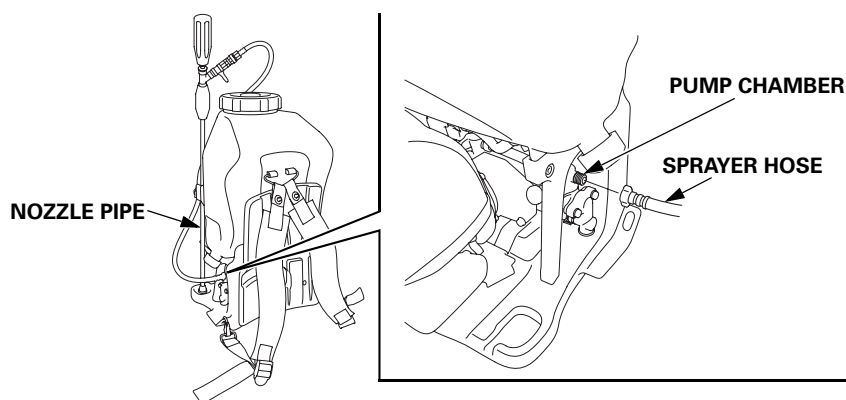
⚠ WARNING

- **To avoid severe burns or fire hazards, let the engine cool before transporting the backpack sprayer or storing it indoors.**
- **When transporting the backpack sprayer, tighten the fuel tank cap to prevent fuel spillage. Fuel vapor or spilled fuel may ignite.**
- Drain all chemicals from the tank.
- Fix the backpack sprayer securely in level to the transport vehicle.
- Do not drive or ride on a vehicle with the backpack sprayer carrying on your back. It might cause an unexpected accident.
- When transporting the backpack sprayer, attach nozzle pipe and sprayer hose to the nozzle holder.

Storage

Before storing the backpack sprayer for an extended period;

1. Follow the procedures of “After operation” (see page 49).
2. To prevent the water from freezing in winter, drain the water completely from pump chamber.
 - a. Disconnect the sprayer hose from pump chamber.
To prevent the nozzle pipe from being clogged, make sure that no dirt or dust is in the sprayer hose or the backpack sprayer after disconnecting the sprayer hose.



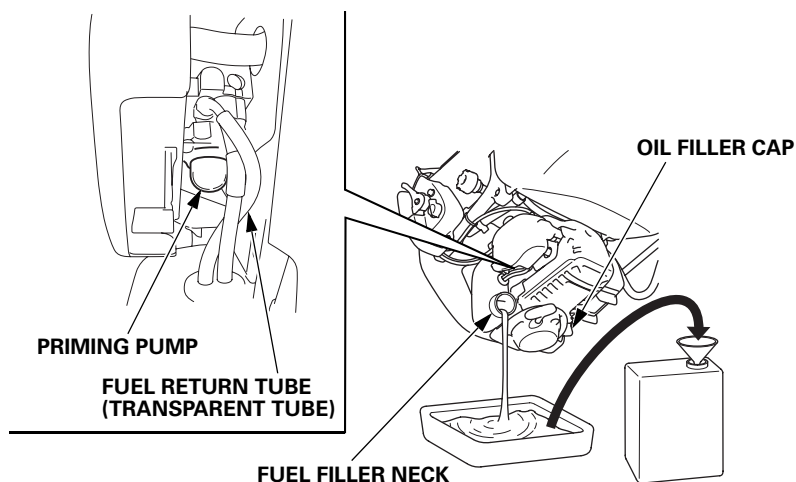
- b. Start the engine (see page 38).
- c. Move the throttle lever between the FAST position and the SLOW position (see page 47), and hold it there for ten seconds to drain the pump chamber completely.
- d. Stop the engine (see page 43).

3. 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 oil filler cap is tightened securely.
- b. Remove the fuel tank 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 tank cap securely after draining the fuel completely.
4. Change the engine oil (see page 53).
5. Clean the air cleaner (see page 54).

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6. Lubricate the cylinder.
 - a. Loosen the 4 mm hex. bolt, then remove the engine top cover (see page 56).
 - b. Remove the spark plug (see page 57).
 - c. Apply a couple of drops of clean engine oil into the cylinder.
 - d. Install the engine top cover temporarily.
 - e. Pull the starter grip several times to distribute the oil in the cylinder.
 - f. Remove the engine top cover, then reinstall the spark plug.
 - g. Install the engine top cover, and tighten the 4 mm hex. bolt securely.
 7. Pull the starter grip slowly until resistance is felt.
 8. Cover the engine to keep out dust.
 9. Store the backpack sprayer in a safe, locked place inaccessible to children or cattle, and free of dust and humidity away from sparks. Place a tarpaulin or plastic sheet over the machine during storage.

When the engine will not start:

1. Is the engine switch in the ON position?
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?
Remove and inspect the spark plug. Clean, readjust gap and dry the spark plug. Replace it if necessary.

If the engine still does not start, take the backpack sprayer to your servicing dealer.

When the backpack sprayer sprays irregularly:

CHEMICALS NOT SPRAYED

Check that the engine speed is not lowered (see page 47).

ATOMIZING PRESSURE NOT RAISED

1. Check the nozzle for clogging or signs of damage.
2. Disassemble and maintain the nozzle (see page 34).

If the backpack sprayer still does not operate, take the backpack sprayer to your servicing dealer.

13. SPECIFICATIONS

Frame

Model	WJR4025T
Frame type	GCT
Power products description code	WAFT
Length ^{*1}	400 mm
Width ^{*1}	415 mm
Height ^{*1}	695 mm
Dry mass [weight] ^{*2}	12.5 kg
Chemical tank capacity	25 L

*1 Without hose and nozzle

*2 With pump oil

Pump

Pump type	Plunger
Drive system	Automatic centrifugal clutch
Pressure adjust system	Relief valve
Pressure	4.0 MPa (at 6,700 rpm)
Suction amount	8.0 L/min (at 6,700 rpm)

Engine

Model	GX35T
Engine type	4-stroke, overhead cam, single cylinder
Displacement	35.8 cm ³
Bore×Stroke	39.0×30.0 mm
Engine net power (in accordance with SAE J1349*)	1.0 kW (1.4 PS)/7,000 rpm
Engine max. net torque (in accordance with SAE J1349*)	1.6 N·m (0.16 kgf·m)/5,500 rpm
Cooling system	Forced air
Ignition system	Transistor magneto
Fuel tank capacity	0.63 L
Oil capacity	0.10 L
Spark plug	NGK: CMR5H

*The power rating of the engine indicated in this document is the net power output tested on a production engine for the engine model and measured in accordance with SAE J1349 at 7,000 rpm (Engine Net Power) and at 5,500 rpm (Engine Max. Net Torque). Mass production engines may vary from this value.

Actual power output for the engine installed in the final machine will vary depending on numerous factors, including the operating speed of the engine in application, environmental conditions, maintenance, and other variables.

NOTE:

Specifications are subject to change without notice.

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