

HONDA

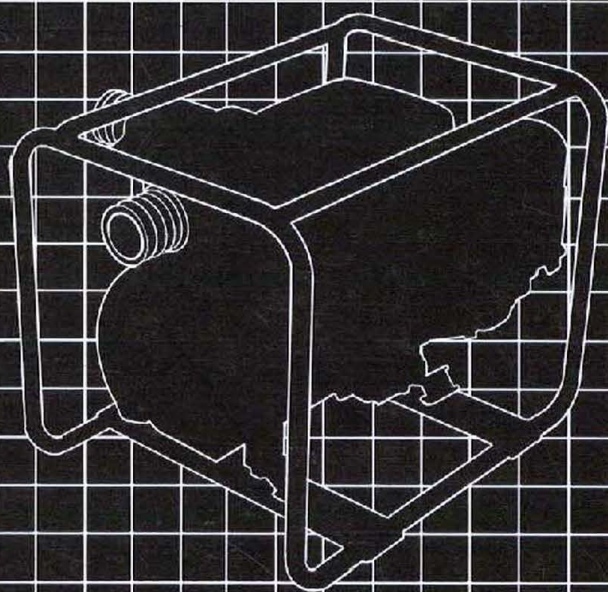
Power

Equipment

Owner's Manual

TRASH PUMP

WT20X • WT30X • WT40X



Thank you for purchasing a Honda trash pump.

This manual covers the operation and maintenance of WT20X, WT30X and WT40X trash pumps. All information in this publication is based on the latest product information at the time of printing.

The illustrations in this manual are based on the WT30X pump.

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 pump and should remain with the pump if it is resold.

It is illegal in some areas to operate an engine without a U.S.D.A. qualified spark arrester; check local laws and regulations. An optional spark arrester for this pump is available from your authorized Honda pump dealer.

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 pump, consult an authorized Honda dealer.

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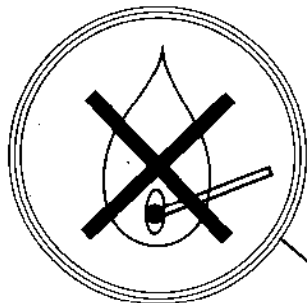
1. PUMP SAFETY

WARNING

- Honda pumps are designed to give safe and dependable service if operated according to instructions. Read and understand this Owner's Manual before operating the pump. Failure to do so could result in personal injury or equipment damage.
- For safety, never pump flammable or corrosive liquids such as gasoline or acid. Also, to avoid pump corrosion, never pump sea water, chemical solutions, or caustic liquids such as used oil, wine, or milk.
- Place the pump on a firm, level surface. If the pump is tilted or overturned, fuel spillage may result.
- To prevent fire hazards and to provide adequate ventilation, keep the pump at least 1 meter (3 feet) away from building walls and other equipment during operation. Do not place flammable objects close to the pump.
- Children and pets must be kept away from the area of operation due to a possibility of burns from the hot engine components.
- Know how to stop the pump quickly, and understand the operation of all controls. Never permit anyone to operate the pump without proper instructions.
- 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 refueling area or where gasoline is stored.
 - Do not overfill the fuel tank. 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.
- Never run the engine in an enclosed or confined area. Exhaust contains poisonous carbon monoxide gas; exposure can cause loss of consciousness and may lead to death.
- The muffler becomes very hot during operation and remains hot for a while after stopping the engine. Be careful not to touch the muffler while it is hot. Let the engine cool before storing the pump indoors. Children and pets must be kept away from the area of operation due to a possibility of burns from hot engine components.

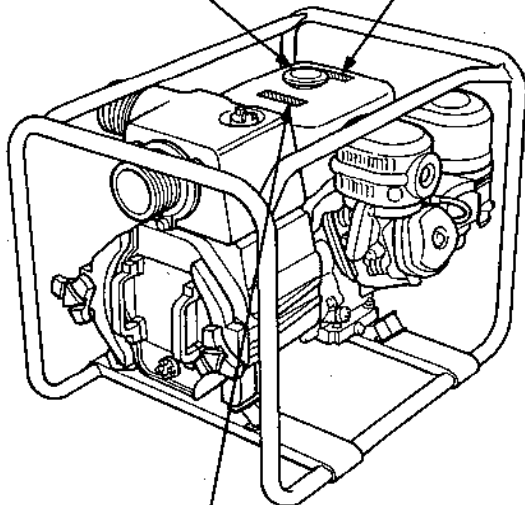
Read these labels before you operate the pump.

GASOLINE WARNING LABEL



WARNING

DO NOT PUMP FLAMMABLE
OR CORROSIVE MATERIALS.
AN EXPLOSION OR FIRE
COULD RESULT, CAUSING
SEVERE PERSONAL INJURY.



PUMP CAUTION LABEL

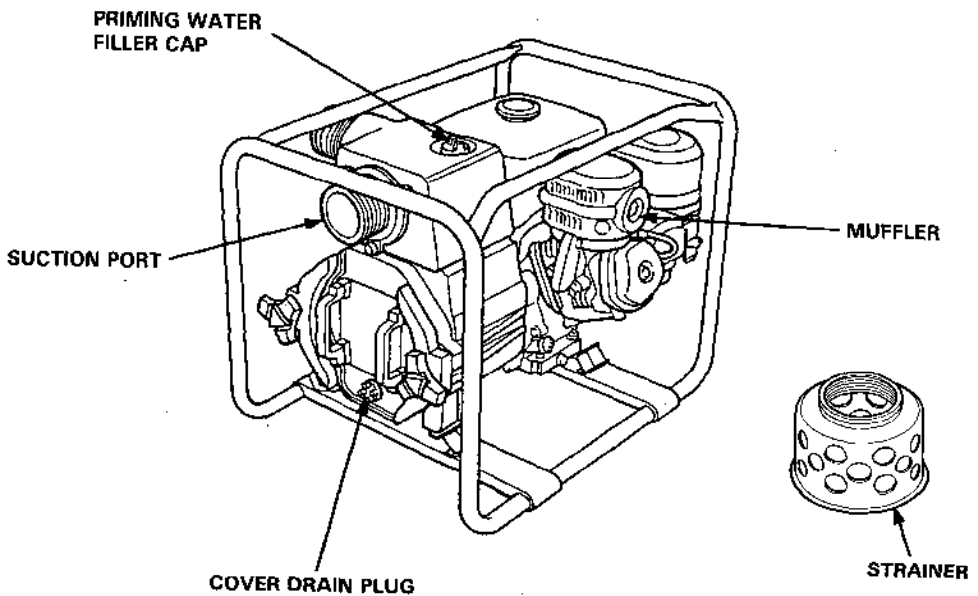
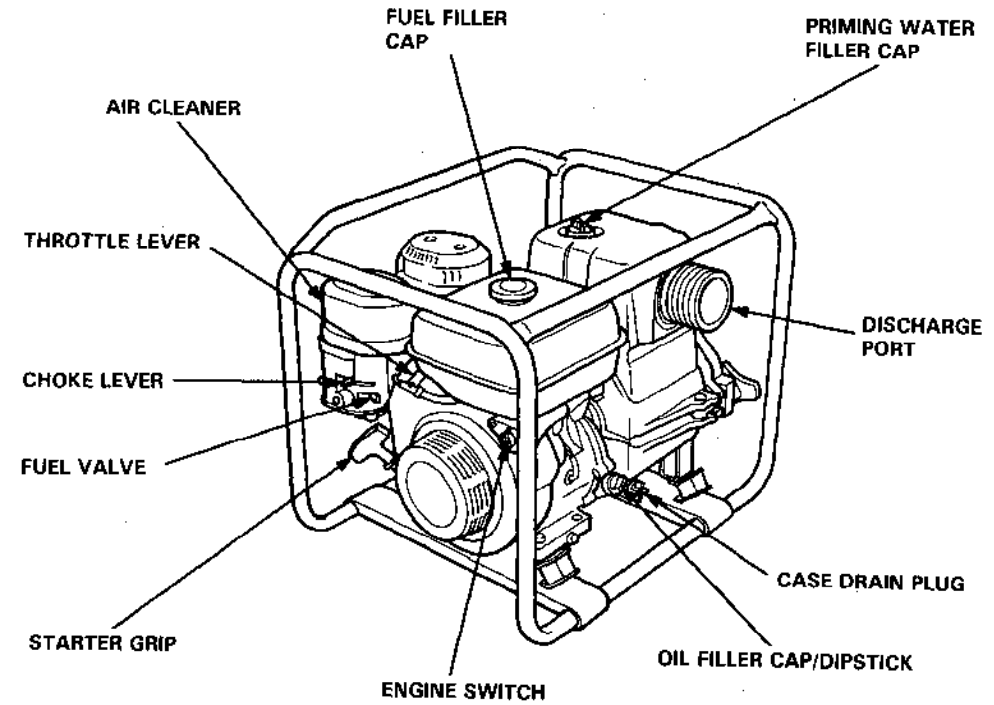
CAUTION! DO NOT RUN WITHOUT
PRIMING WATER. DRY OPERATION
WILL BURN THE SEAL.

VORSICHT! VOR DEM ANLAUFEN
BEI TESTUND LEERLAUF GEHÄUSE
MIT WASSER BEFÜLLEN. TROCKEN-
AUF ZERSTÖRT DIE DICHTUNGEN.

PRECAUCION! NO HAGA FUNCIONAR
SIN CEBADO FUNCIONAMIENTO
SECO QUEMA EL SELLO.

PRÉCAUTION! NE FAITE PAS FON-
CTIONNER SANS AMORSAGE.
FONCTIONNEMENT AU SEC
BRÛLE LE JOINT D'ÉTANCHEITE.

2. COMPONENT IDENTIFICATION



3. PREPARATION

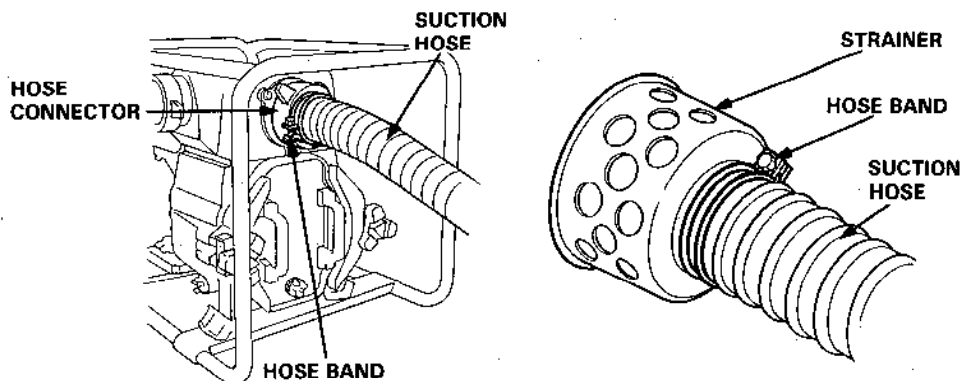
1. Connect the suction hose.

Use commercially available hose, hose connector, and hose bands. The suction hose must be of reinforced, noncollapsible construction. Suction hose length should not be longer than necessary, as pump performance is best when the pump is not far above the water level. Self-priming time is also proportional to hose length.

The strainer that is provided with the pump should be attached to the end of the suction hose with a band, as shown.

CAUTION: Always install the strainer on the end of the suction hose before pumping. The strainer will exclude debris that can cause clogging or impeller damage.

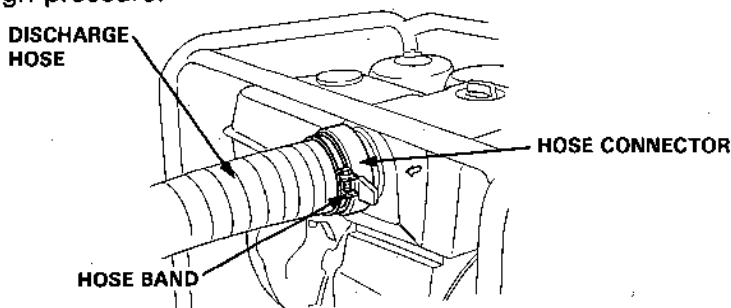
NOTE: Tighten the hose connector and bands to prevent air leakage and loss of suction. A loosely connected suction hose will reduce pump performance and self-priming ability.



2. Connect the discharge hose.

Use a commercially available hose, hose connector, and hose band. A short, large-diameter hose is most efficient. Long or small-diameter hose increases fluid friction and reduces pump output.

NOTE: Tighten the hose band securely to prevent the hose from disconnecting under high pressure.



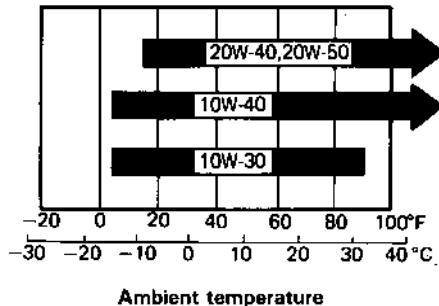
4. PRE-OPERATION CHECK

1. Check the engine oil level.

CAUTION:

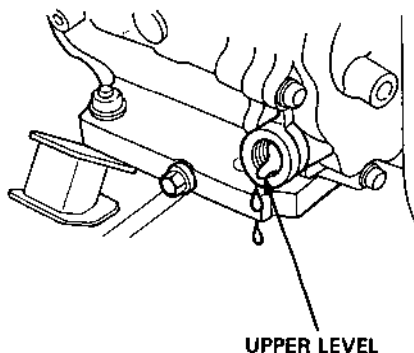
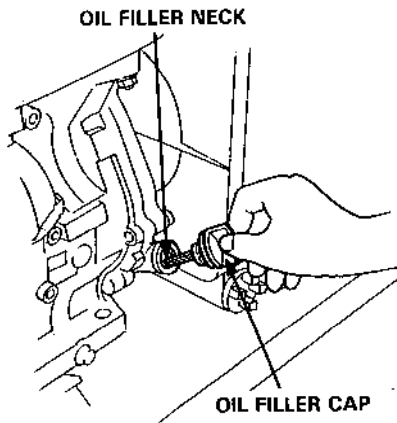
- Engine oil is a major factor affecting engine performance and service life. Nondetergent oils and 2-stroke oils are not recommended because they have inadequate lubricating characteristics.
- Check the oil level with the pump on a level surface and the engine stopped.

Use Honda 4-stroke oil, or an equivalent high detergent, premium quality motor oil certified to meet or exceed U.S. automobile manufacturer's requirements for Service Classification SE or SF. Motor oils classified SE or SF will show this designation on the container. SAE 10W-40 is recommended for general, all-temperature use.



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

NOTE: The Oil Alert System will automatically stop the engine before the oil level falls below the safe limit. However, to avoid the inconvenience of an unexpected shutdown, it is still advisable to visually inspect the oil level regularly.



2. Check the fuel level.

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

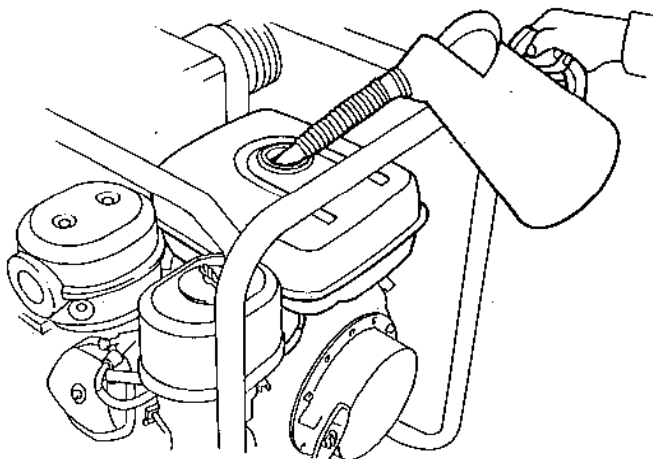
We recommend that you use unleaded fuel because it produces fewer engine and spark plug deposits and extends the life of exhaust system components.

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

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

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

Fuel tank capacity: WT20X...3.6 lit. (0.95 US gal, 0.79 Imp gal)
WT30X...6.0 lit. (1.59 US gal, 1.32 Imp gal)
WT40X...6.5 lit. (1.72 US gal, 1.42 Imp gal)



 **WARNING**

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

GASOLINES CONTAINING ALCOHOL

If you decide to use a gasoline containing alcohol (gasohol), be sure it's octane rating is at least as high as that recommended by Honda. There are two types of "gasohol": one containing ethanol, and the other containing methanol. Do not use gasohol that contains more than 10% ethanol. Do not use gasoline containing methanol (methyl or wood alcohol) that does not also contain cosolvents and corrosion inhibitors for methanol. Never use gasoline containing more than 5% methanol, even if it has cosolvents and corrosion inhibitors.

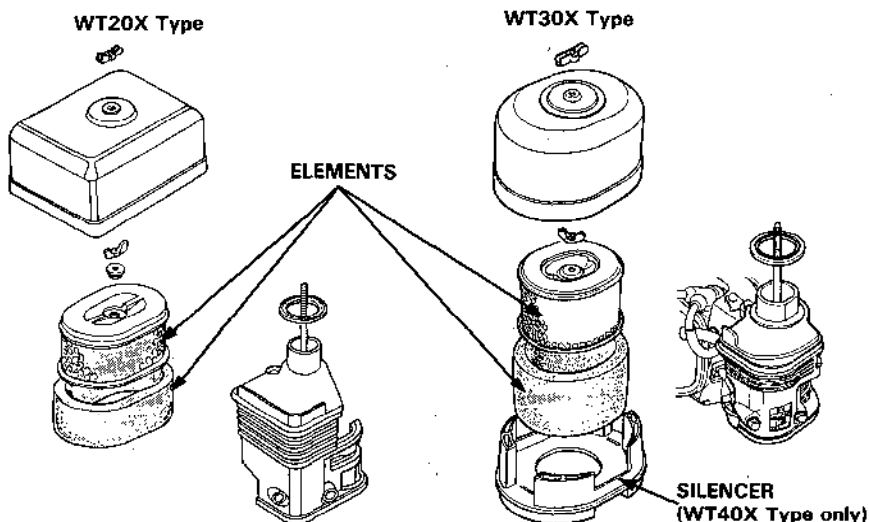
NOTE:

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

3. Check the air cleaner element.

Remove the wing nut and air cleaner cover.

Check the air cleaner elements to be sure they are clean and in good condition. Clean or replace the elements if necessary (p. 17).

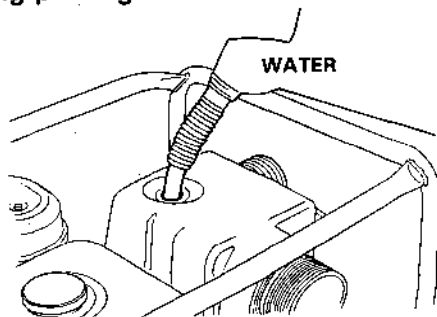
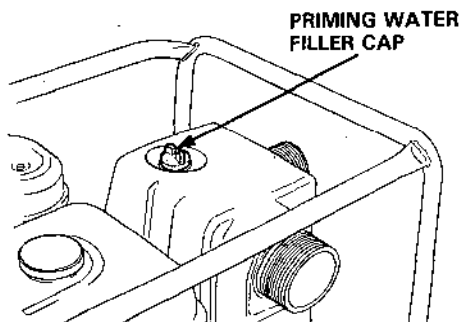


CAUTION: Never run the engine without the air cleaner. Rapid engine wear will result from contaminants, such as dust and dirt, being drawn through the carburetor, into the engine.

4. Check the priming water.

The pump chamber should be completely filled before operating.

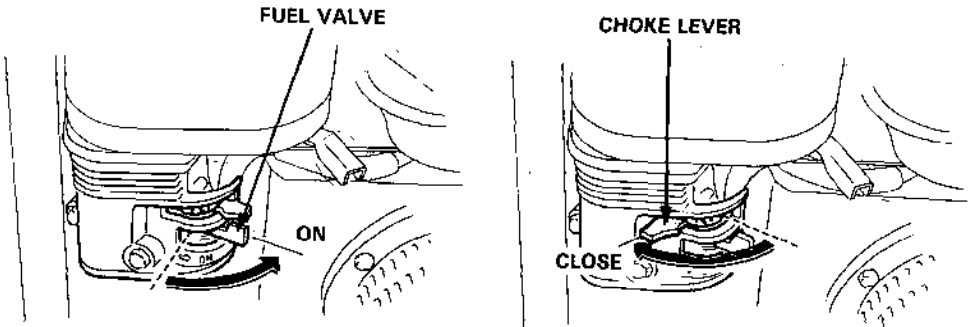
CAUTION: Never attempt to operate the pump without priming water or the pump will overheat. Extended dry operation will destroy the pump seal. If the unit has been operated dry, stop the engine immediately and allow the pump to cool before adding priming water.



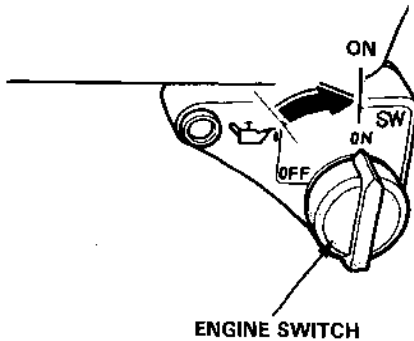
5. STARTING THE ENGINE

1. Turn the fuel valve ON.
2. Close the choke lever.

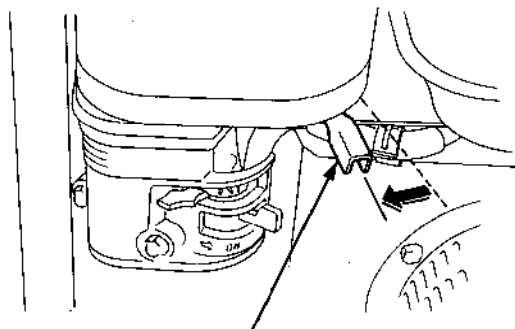
NOTE: Do not use the choke if the engine is warm or the ambient temperature is high.



3. Turn the engine switch to the ON position.



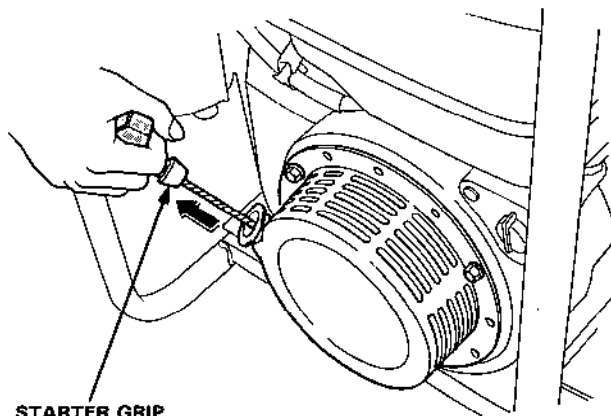
4. Move the throttle lever slightly to the left.



THROTTLE LEVER

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

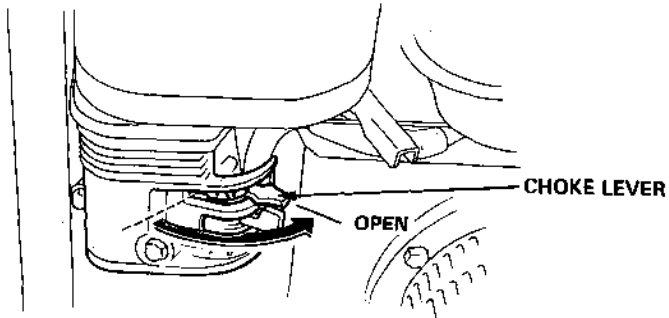
CAUTION: Do not allow the starter grip to snap back against the engine. Return it gently to prevent damage to the starter.



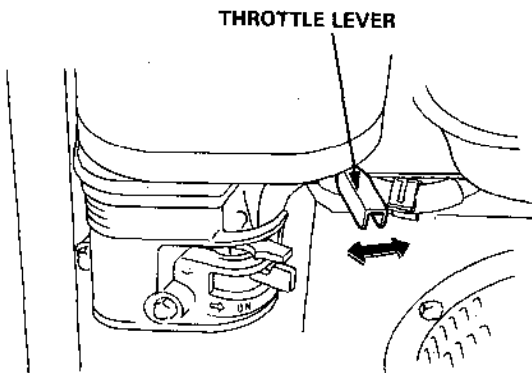
STARTER GRIP

6. OPERATION

1. As the engine warms up, gradually open the choke.



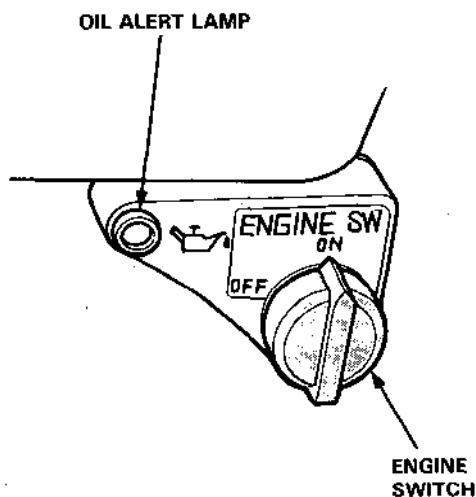
2. Set the throttle at the desired speed.



Oil Alert System

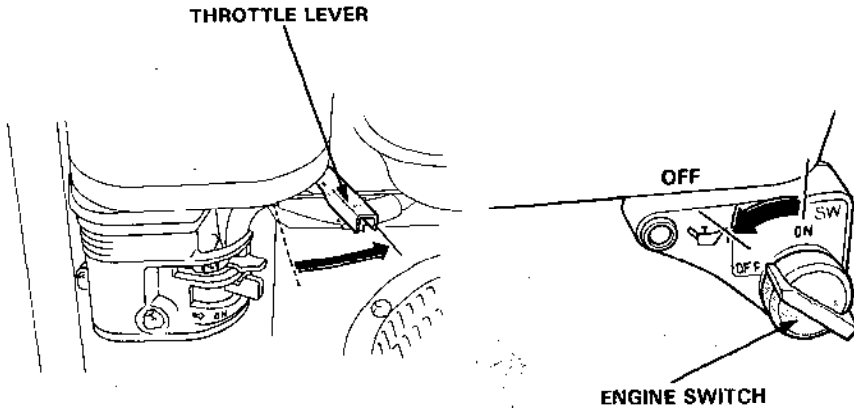
The Oil Alert system is designed to prevent engine damage caused by an insufficient amount of oil in the crankcase. Before the oil level in the crankcase can fall below a safe limit, the Oil Alert system will automatically shut down the engine (the engine switch will remain in the ON position).

If the Oil Alert system shuts down the engine, the Oil Alert lamp will flash when you operate the starter, and the engine will not run. If this occurs, add engine oil (p. 5).

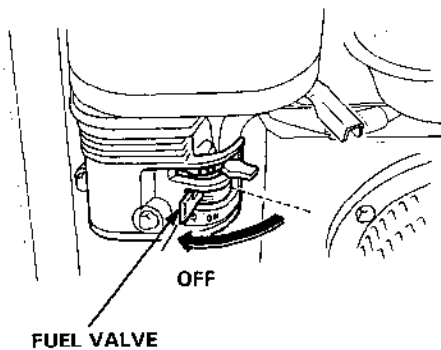


7. STOPPING THE ENGINE

1. Move the throttle lever fully to the right.
2. Turn the engine switch to the OFF position.



3. Turn the fuel valve OFF.



NOTE: To stop the engine in an emergency, turn the engine switch to the OFF 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 installing a smaller diameter main fuel jet in the carburetor and readjusting the pilot screw. If you always operate the pump at altitudes higher than 6,000 feet above sea level, have your authorized Honda pump dealer perform these carburetor modifications.

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

CAUTION: Operation of the pump 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. MAINTENANCE

The purpose of the maintenance and adjustment schedule is to keep the pump in the best operating condition. Inspect or service as scheduled in the table below.

WARNING Shut off the engine before performing any maintenance. If the engine must be run, make sure the area is well ventilated. The exhaust contains poisonous carbon monoxide gas; exposure can cause loss of consciousness and may lead to death.

CAUTION:

- Pump clean, fresh water through the pump immediately after use to remove sediment and prevent corrosion.
- Use only genuine Honda parts or their equivalent for maintenance or repair. Replacement parts which are not of equivalent quality may damage the trash pump.

REGULAR SERVICE PERIOD		Each use	First month or 20 Hrs.	Every 3 months or 50 Hrs.	Every 6 months or 100 Hrs.	Every year or 300 Hrs.
ITEM	Perform at every indicated month or operating hour interval, whichever comes first.					
Engine oil	Check level	○				
	Change		○		○	
Air cleaner	Check	○				
	Clean			○(1)		
Spark plug	Check-Clean				○	
Spark arrester (optional part)	Clean				○	
Valve clearance	Check-Adjust					○(2)
Fuel tank and strainer	Clean					○(2)
Fuel line	Check (Replace if necessary)	Every 3 years				
Impeller	Check					○(2)
Impeller clearance	Check					○(2)
Pump inlet valve	Check					○(2)

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

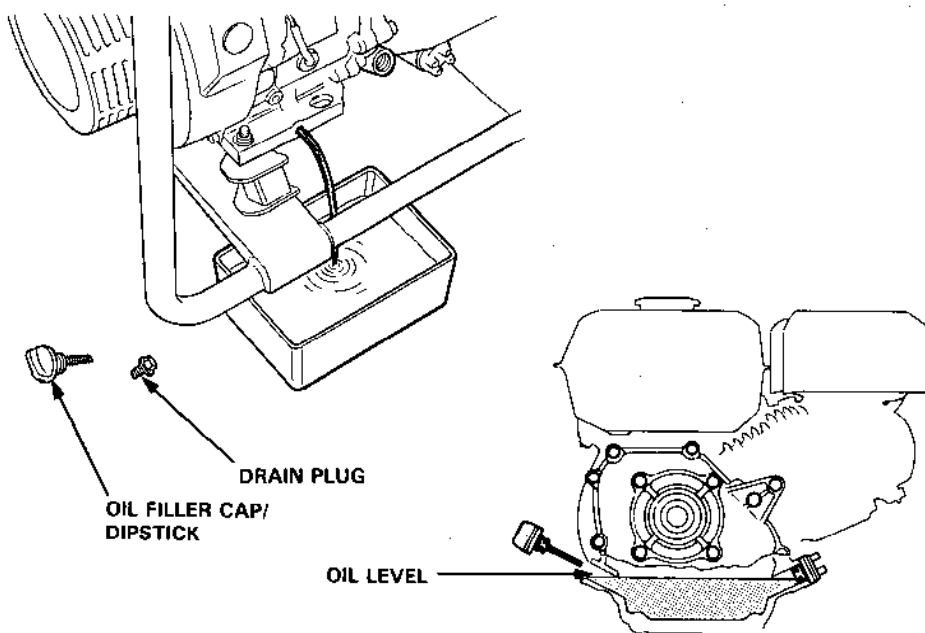
(2) These items should be serviced by an authorized Honda dealer, unless the owner has the proper tools and is mechanically proficient. See the Honda Shop Manual.

1. Changing oil

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

1. Remove the oil filler cap and the drain plug, then drain the oil.
2. Reinstall the drain plug and tighten securely.
3. Refill with the recommended oil (see page 5) to the specified level.

OIL CAPACITY: WT20X...0.6 l (0.63 US qt, 0.53 Imp qt)
WT30X...1.1 l (1.16 US qt, 0.97 Imp qt)
WT40X...1.1 l (1.16 US qt, 0.97 Imp qt)



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

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

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 pump 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.

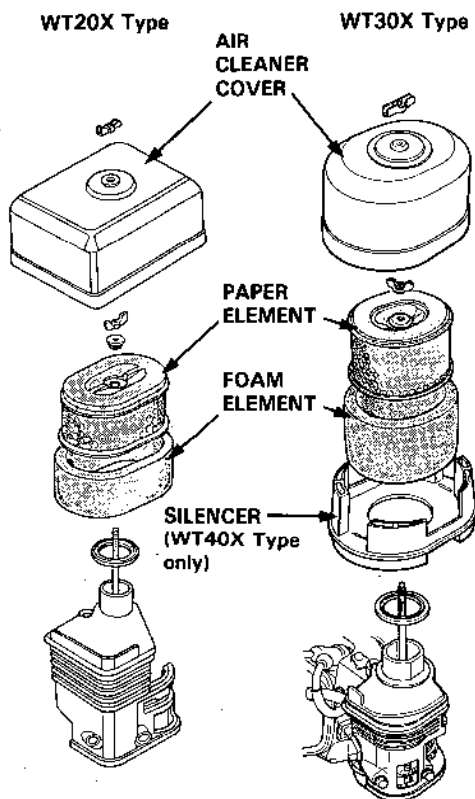
CAUTION: Never run the pump without the air cleaner. Rapid engine wear will result from contaminants such as dust and dirt being drawn into the engine.

1. Remove the wing nut and the air cleaner cover. Remove the elements and separate them. Carefully check both elements for holes or tears and replace if damaged.

2. Foam element: Wash the element in a solution of household detergent and warm water, then rinse thoroughly, or wash in nonflammable or high flash point solvent. Allow the element to dry thoroughly.

Soak the element in clean engine oil, and squeeze out the excess oil. The engine will smoke during initial start-up if too much oil is left in the foam.

3. Paper element: Tap the element lightly several times on a hard surface to remove excess dirt, or blow compressed air through the filter from the inside out. Never try to brush the dirt off; brushing will force dirt into the fibers. Replace the paper element if it is excessively dirty.



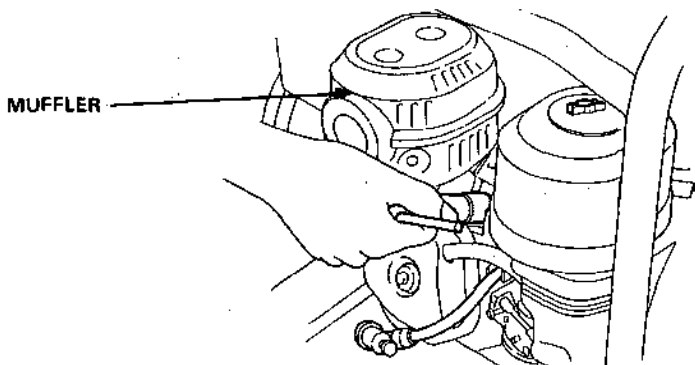
3. Spark plug service

Recommended spark plug: WT20X·WT30X WT40X
BPR6ES (NGK) BPR6ES-11 (NGK)
W20EPR-U (ND) W20EPR-U11 (ND)

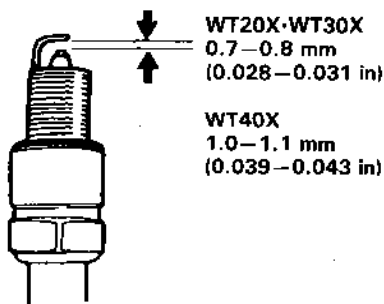
To ensure proper engine operation, the spark plug must be properly gapped and free of deposits.

1. Remove the spark plug.

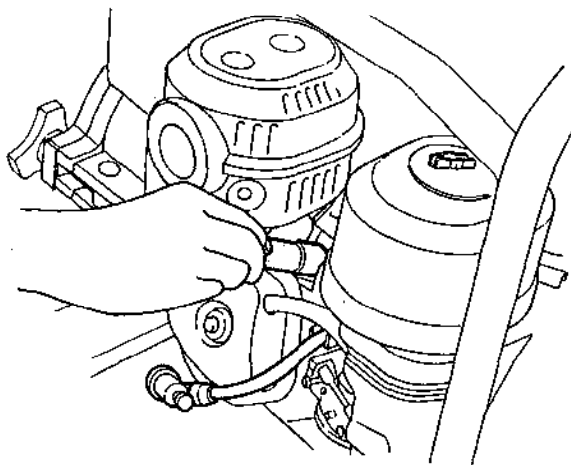
WARNING The muffler becomes very hot during operation and remains hot for a while after stopping the engine. Be careful not to touch the muffler while it is hot.



2. Visually inspect the spark plug. Discard it if the insulator is cracked or chipped. Clean the spark plug with a wire brush if it is to be reused.
3. Measure the plug gap with a feeler gauge. The gap should be 0.7–0.8 mm (0.028–0.031 in). Correct as necessary by bending the side electrode.



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



5. After the spark plug is seated, tighten with a spark plug wrench to compress the washer.

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

CAUTION:

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

4. Servicing the pump casing

After each use, clean the inside of the pump casing using the following procedure:

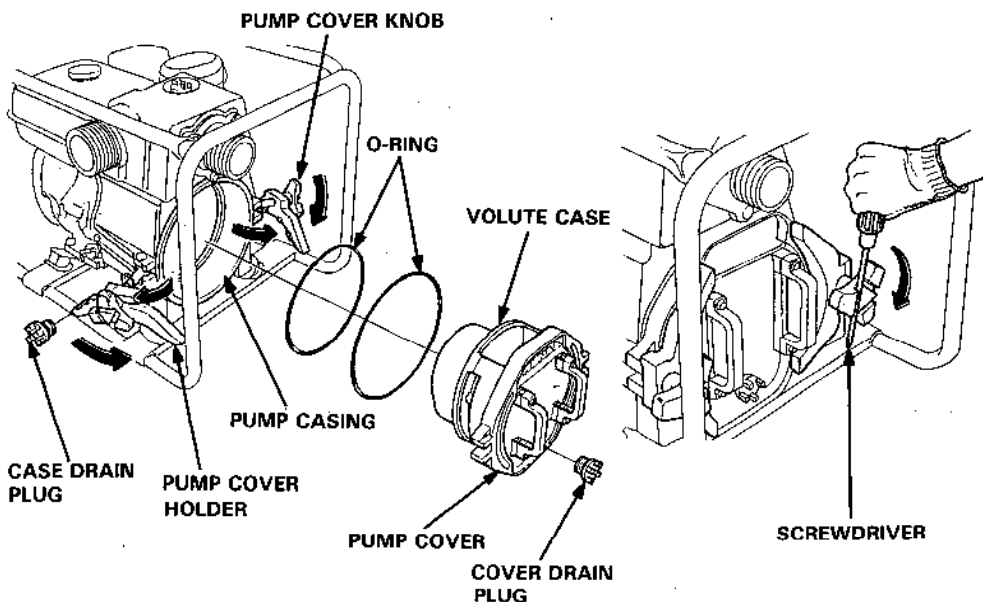
Removal

1. Remove the drain plugs from the pump casing and pump cover to drain the water inside.
2. Loosen the pump cover knob and open the pump cover holder.
3. Remove the pump cover and the volute case from the pump casing, and remove any debris from pump casing and volute case.

Installation:

1. Install the O-rings on the pump cover, taking care not to damage the O-rings.
2. Install the pump cover on the pump casing, close the cover holder, and tighten the knob hand tight. Then, insert a screwdriver shaft in the groove in the knob and finish tightening the knob.
3. Install the two drain plugs in the pump cover and pump casing.

NOTE: After tightening the pump cover knob, check the pump cover and pump casing to ensure that there is no water leakage.

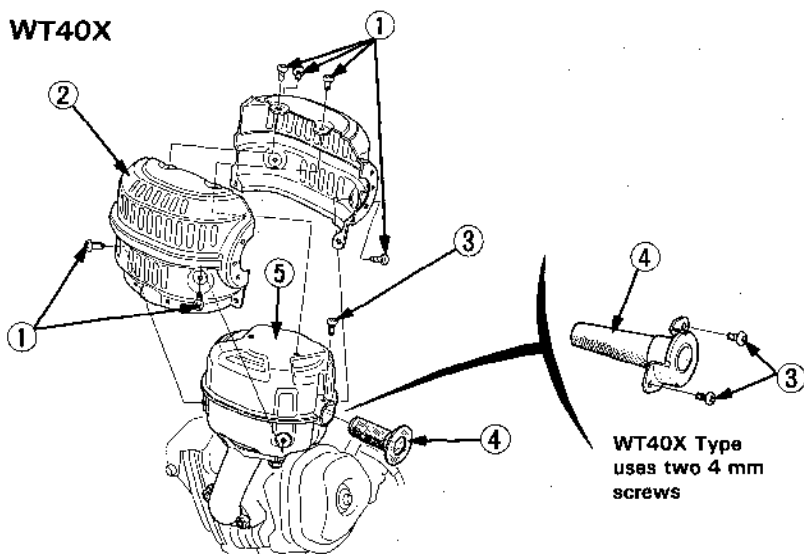


5. Spark arrester maintenance (optional part)

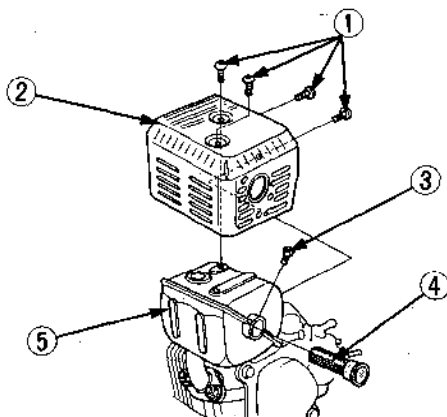
WARNING The muffler becomes very hot during operation and remains hot for a while after stopping the engine. Be careful not to touch the muffler while it is hot. Allow it to cool before proceeding.

1. Remove the eight 5 mm screws ① from the muffler protector ②, and remove the muffler protector.
2. Remove the 4 mm screw ③ from the spark arrester ④, and remove the spark arrester from the muffler ⑤.

WT30X and WT40X



WT20X



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

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



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

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

9. TRANSPORTING/STORAGE

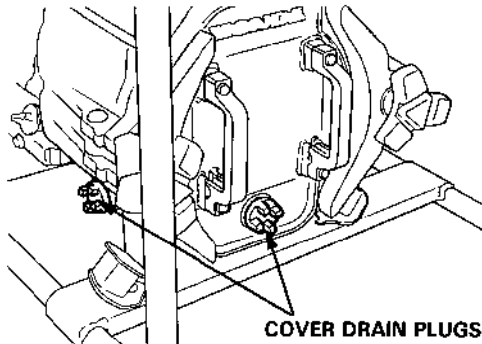
WARNING

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

Before storing the pump for an extended period:

1. Be sure the storage area is free of excessive humidity and dust.
2. Clean the pump interior.....

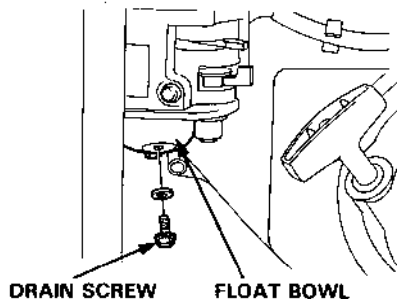
Pump clean water through the pump before shutting down or impeller may be damaged when restarting. After flushing, remove the pump drain plugs, drain as much water as possible from the pump housing and reinstall the plugs.



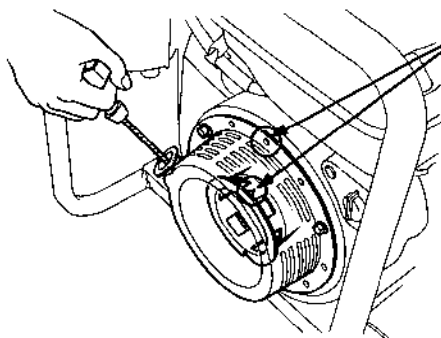
3. Drain the fuel.....

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

- a. With the fuel valve OFF, remove the drain screw from carburetor float bowl, and drain the carburetor. Drain the gasoline into a suitable container.
- b. Turn the fuel valve ON and drain the gasoline in the fuel tank into a suitable container.
- c. Reinstall the carburetor drain screw.



-
4. Change the engine oil.
 5. Remove the spark plug, and pour about a tablespoon of clean engine oil into the cylinder. Crank the engine several revolutions to distribute the oil, then reinstall the spark plug.
 6. Pull the starter rope slowly until resistance is felt. Continue pulling until the notch on the starter pulley aligns with the hole at the top of recoil starter (see illustration below). At this point, the intake and exhaust valves are closed, and this will help to protect the engine from internal corrosion.



Align the mark on the starter pulley with the hole at the top of recoil starter.

7. Cover the pump to keep out dust.

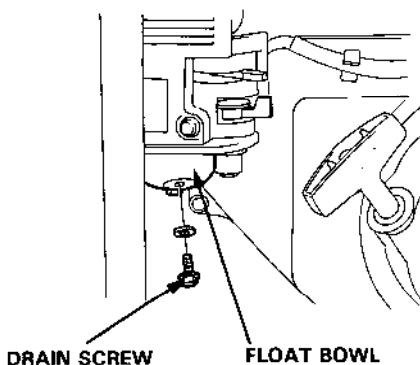
10. TROUBLESHOOTING

When the engine will not start:

1. Is the engine switch ON?
2. Does the oil alert lamp flash when the starter is operated?
3. Is the fuel valve ON?
4. Is there fuel in the fuel tank?
5. Is gasoline reaching the carburetor?

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

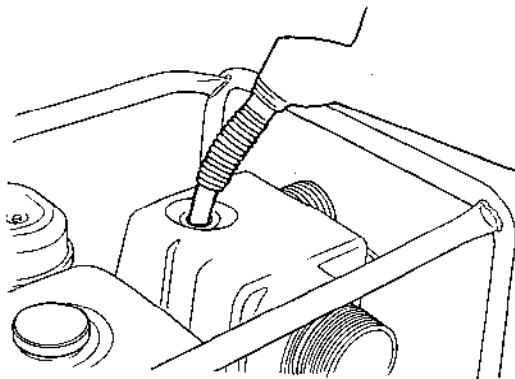
WARNING If any fuel is spilled make sure the area is dry before testing the spark plug or starting the engine. Spilled fuel or fuel vapor may ignite.



6. Is there a spark at the spark plug?
 - a. Remove the spark plug cap. Clean any dirt from around the spark plug base, then remove the spark plug.
 - b. Install the spark plug in the plug cap.
 - c. Turn the engine switch on.
 - d. Ground the side electrode to any engine ground, pull the recoil starter to see if sparks jump across the gap.
 - e. If there are no sparks, replace the plug.
If OK, install the new plug and try to start the engine according to the instructions.
7. If the engine still does not start, take the pump to an authorized Honda trash pump dealer.

When the pump does not pump water:

1. Is the pump fully primed?



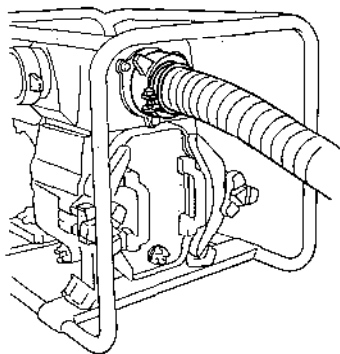
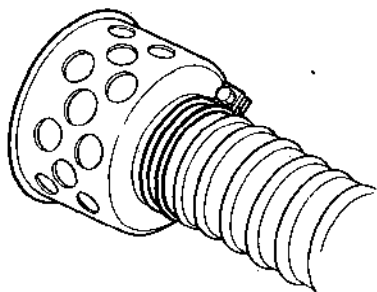
2. Is the strainer clogged?

3. Are the hose bands installed securely?

4. Are the hoses damaged?

5. Is the suction head too high?

6. If the pump still does not operate, take the pump to an authorized Honda trash pump dealer.



11. SPECIFICATIONS

Model	WT20X	WT30X	WT40X
Power equipment description code	WAE	WAF	WAG

Dimensions and Weight

Length x Width x Height	620 x 435 x 405 mm (24.4 x 17.1 x 15.9 in)	660 x 484 x 510 mm (27.2 x 19.0 x 83.5 in)	715 x 485 x 560 mm (28.1 x 19.1 x 20.0 in)
Dry weight (mass)	38 kg (83.8 lb)	58 kg (127.8 lb)	68 kg (149.9 lb)

Engine

Model	GX140	GX240	GX340
Engine type	4-stroke, over head valve, 1 cylinder		
Displacement [Bore x Stroke]	144 cc (8.8 cu in) [64 x 45 mm (2.5 x 1.8 in)]	242 cc (14.8 cu in) [73 x 58 mm (2.9 x 2.3 in)]	337 cc (20.6 cu in) [82 x 64 mm (3.2 x 2.5 in)]
Max. output	5.0 PS/4,000 rpm	8.0 PS/4,000 rpm	11.0 HP/3,600 rpm
Max. torque	1.0 kg-m (7.7 ft-lb)/ 2,500 rpm	1.7 kg-m (12.29 ft-lb)/ 2,500 rpm	2.4 kg-m (17.36 ft-lb)/ 2,500 rpm
Cooling system	Forced air		
Ignition system	Transistor magneto		C.D.I. With electronic advancer
PTO shaft rotation	Counterclockwise		

Pump

Suction port diameter	50 mm (2 in)	80 mm (3 in)	100 mm (4 in)
Discharge port diameter	50 mm (2 in)	80 mm (3 in)	100 mm (4 in)
Total head	26 m (90 ft)	30 m (100 ft)	29 m (96.7 ft)
Suction head	8 m (26.3 ft)	8 m (26.3 ft)	8 m (26.3 ft)
Capacity	650 ℓ (170 US gal)/min	1,300 ℓ (338 US gal)/min	2,300 ℓ (598 US gal)/min
Self-priming time	50 sec at 5.0 m (16.5 ft)	50 sec at 5.0 m (16.5 ft)	50 sec at 5.0 m (16.5 ft)