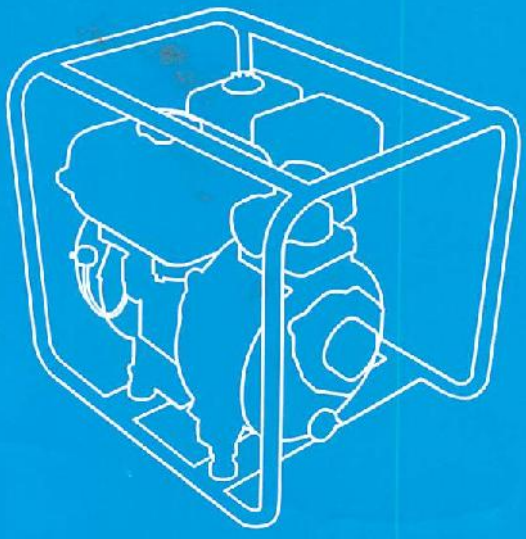
HONDA
POWER PRODUCTS

WATER PUMP
WB20XT • WB30XT



OWNER'S MANUAL
MANUEL DE L'UTILISATEUR
BEDIENUNGSANLEITUNG
MANUAL DE EXPLICACIONES

Honda WB20XT, WB30XT

OWNER'S MANUAL
Original instructions

MANUEL DE L'UTILISATEUR
Notice originale

BEDIENUNGSANLEITUNG
Originalbetriebsanleitung

MANUAL DE EXPLICACIONES
Manual original

The "e-SPEC" mark symbolizes environmentally responsible technologies applied to Honda power equipment, which contains our wish to "preserve nature for generations to come."

Thank you for purchasing a Honda water pump.

This manual covers the operation and maintenance of Honda water pump: WB20XT/WB30XT

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.

This manual should be considered a permanent part of the pump and should remain with the pump if it is resold.

The illustrations in this manual are based on: WB20XT

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.

⚠WARNING

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

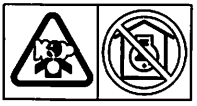
Disposal
To protect the environment, do not dispose of this product, battery, engine oil, etc. carelessly by leaving them in the waste. Observe the local laws and regulations or consult your authorized Honda dealer for disposal.

CONTENTS

⚠WARNING

To ensure safe operation –

- **Honda water pump is designed to give safe and dependable service if operated according to instructions.**
  Read and understand the Owner's Manual before operating the water pump. 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 pump 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 pump inside a garage, house or near open windows or doors.**

- **Stop the engine before refueling.**
- **Gasoline is extremely flammable and explosive under certain conditions. Refuel in a well ventilated area with the engine stopped.**

- **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 gas contains poisonous carbon monoxide gas; exposure can cause loss of consciousness and may lead to death.**

⚠WARNING

To ensure safe operation –

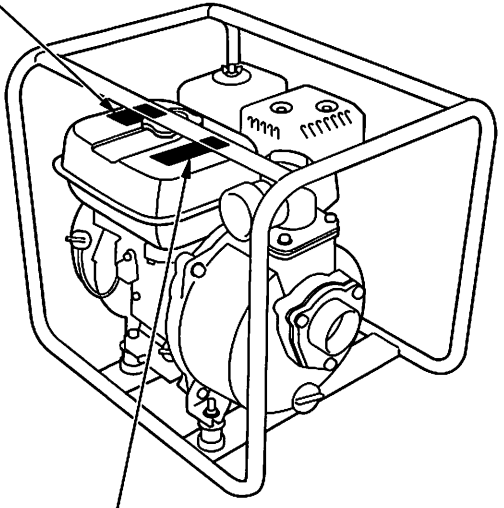
- **Always make a pre-operation inspection (page 9) before you start the engine. You may prevent an accident or equipment damage.**
- **For safety, never pump flammable or corrosive liquids such as gasoline or acid. Also, to avoid pump corrosion, never pump sea water, chemical solutions, or caustic liquids 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.**

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 [For European types]



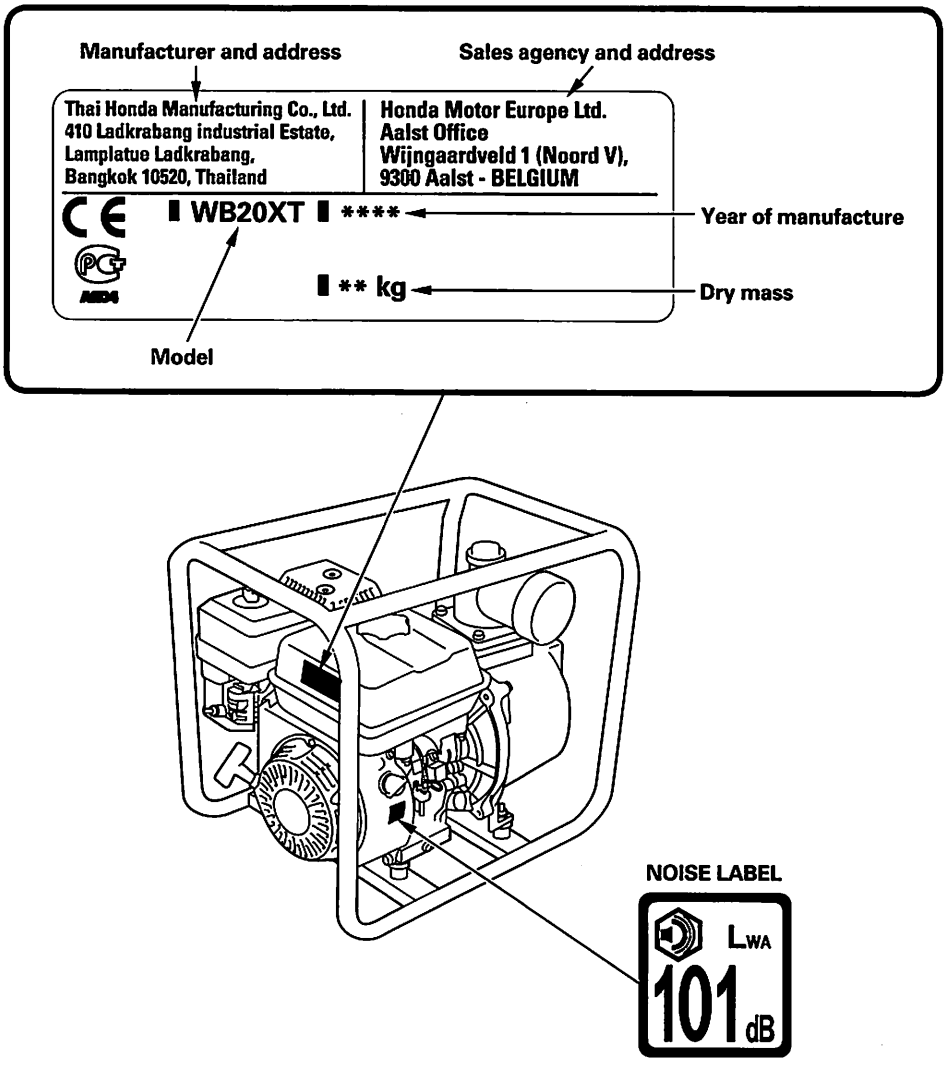
PUMP CAUTION [For Australian types]

CAUTION! DO NOT RUN WITHOUT PRIMING WATER. DRY OPERATION WILL BURN THE SEAL.	PRECAUCIÓN! NO HAGA FUNCIONAR SIN CEBADO FUNCIONAMIENTO SECO QUEMA EL SELLO.
VORSICHT! VOR DEM ANLAUFEN BEI TESTUND LEERLAUF GEHÄUSE MIT WASSER BEFÜLLEN. TROCKEN-AUF ZERSTÖRT DIE DICHTUNGEN.	PRÉCAUTION! NE FAITE PAS FONCTIONNER SANS AMORSAGE. FONCTIONNEMENT AU SEC BRULE LE JOINT D'ETANCHEITE.

CE mark and noise label locations

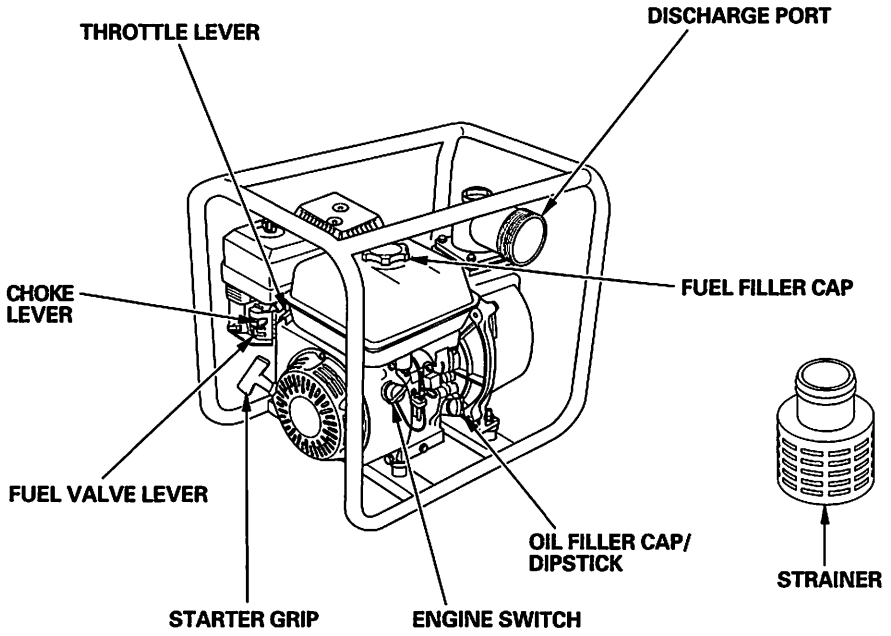
[For European types]

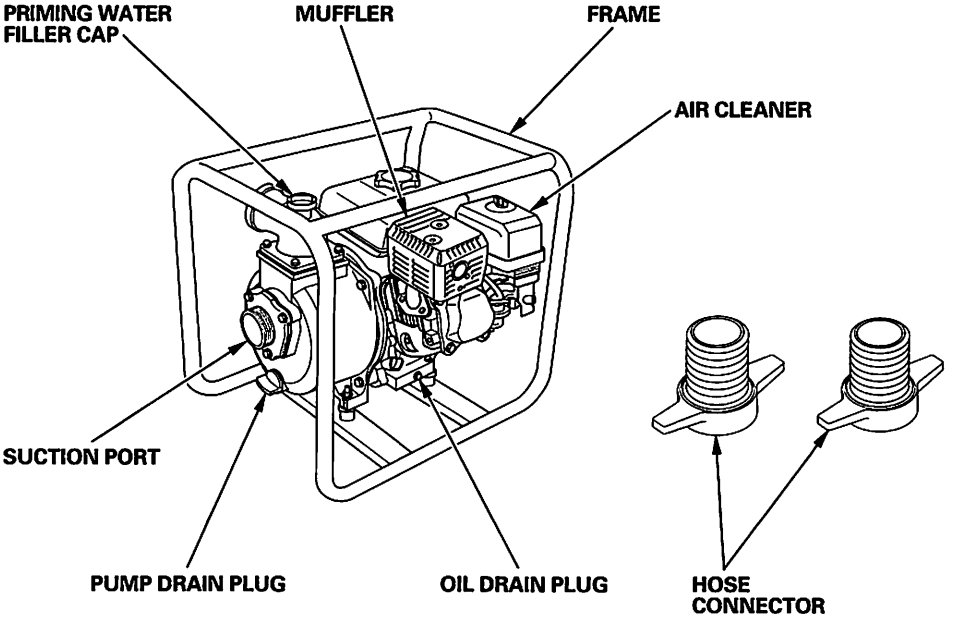
CE MARK [Example: WB20XT]



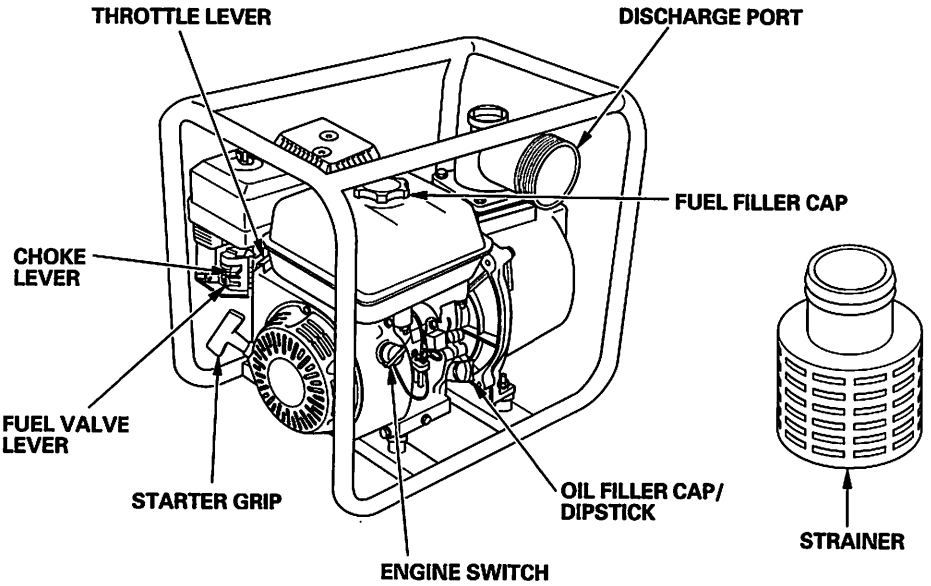
[Example: WB20XT]

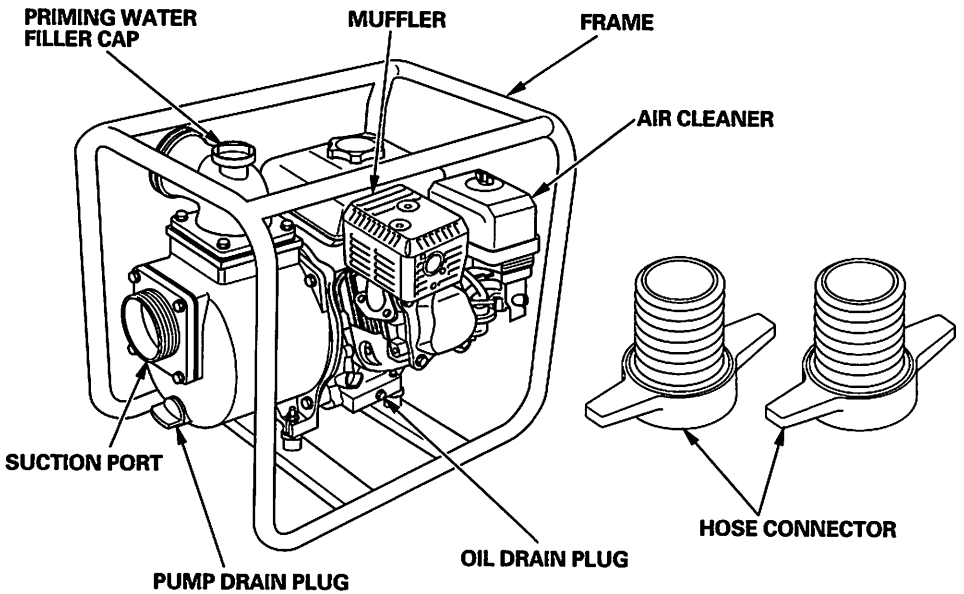
〈WB20XT〉


THROTTLE LEVER
DISCHARGE PORT
CHOKE LEVER
FUEL FILLER CAP
FUEL VALVE LEVER
OIL FILLER CAP/ DIPSTICK
STRAINER
STARTER GRIP
ENGINE SWITCH


PRIMING WATER FILLER CAP
MUFFLER
FRAME
AIR CLEANER
SUCTION PORT
PUMP DRAIN PLUG
OIL DRAIN PLUG
HOSE CONNECTOR

〈WB30XT〉

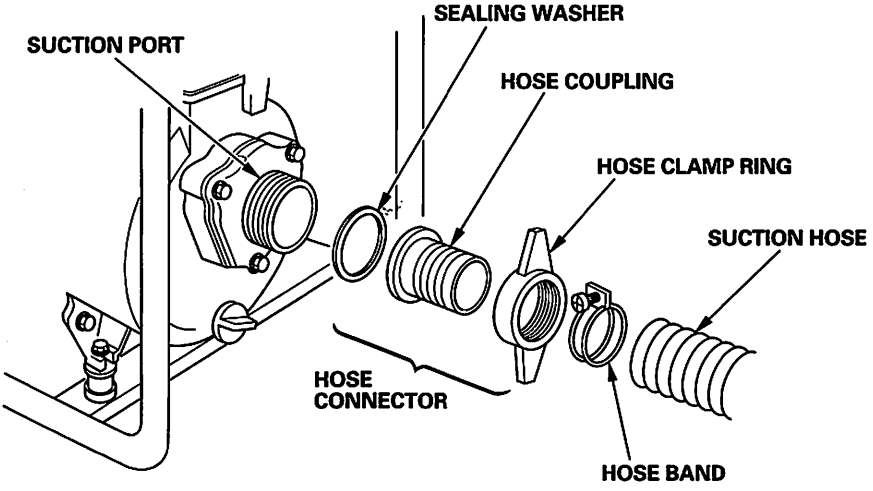

THROTTLE LEVER
DISCHARGE PORT
FUEL FILLER CAP
CHOKE LEVER
FUEL VALVE LEVER
STARTER GRIP
OIL FILLER CAP/ DIPSTICK
ENGINE SWITCH
STRAINER

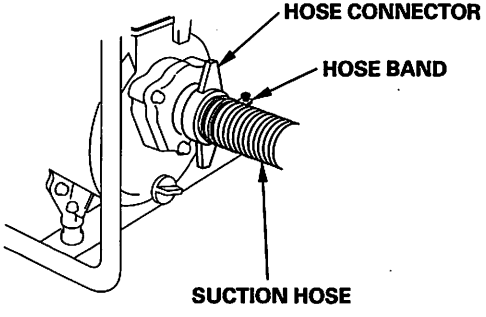

PRIMING WATER FILLER CAP
MUFFLER
FRAME
AIR CLEANER
SUCTION PORT
PUMP DRAIN PLUG
OIL DRAIN PLUG
HOSE CONNECTOR

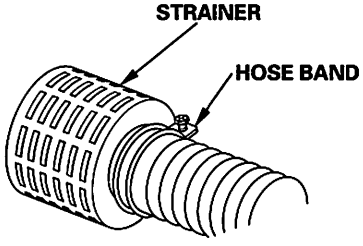
1. Connect the suction hose.

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.



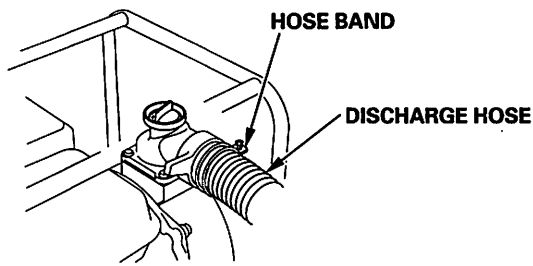




2. Connect the discharge hose.

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.

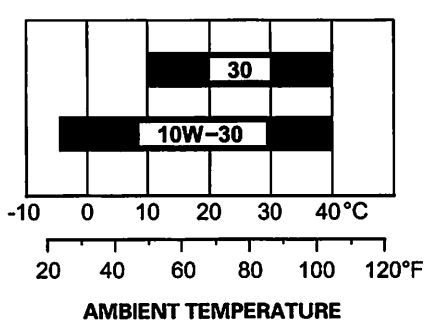


3. Check the engine oil level.

CAUTION:

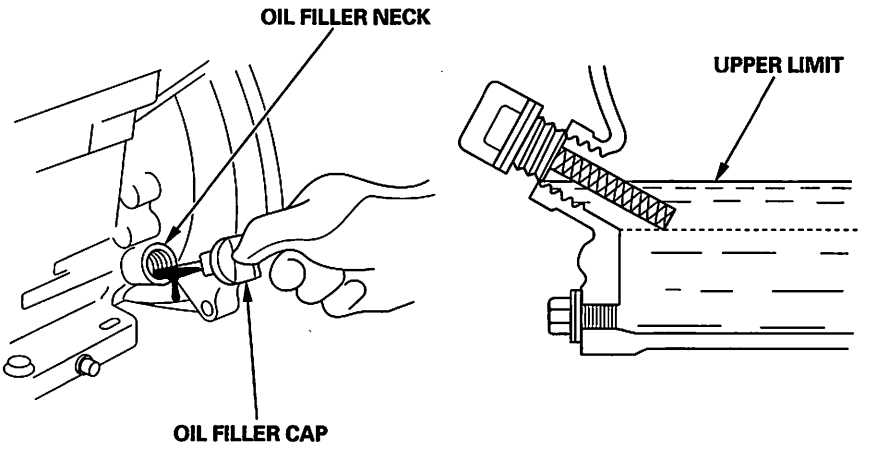
- **Engine oil is a major factor affecting engine performance and service life. Nondetergent or vegetable oils are not recommended.**
- **Check the oil level with the pump on a level surface and the engine stopped.**

Use high-detergent, premium quality 4-stroke engine oil, certified to meet or exceed U.S. automobile manufacturer's requirements for API service category SE or later (or equivalent).
Select the appropriate viscosity for the average temperature in your area.



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

CAUTION:
Running the engine with insufficient oil can cause serious engine damage.



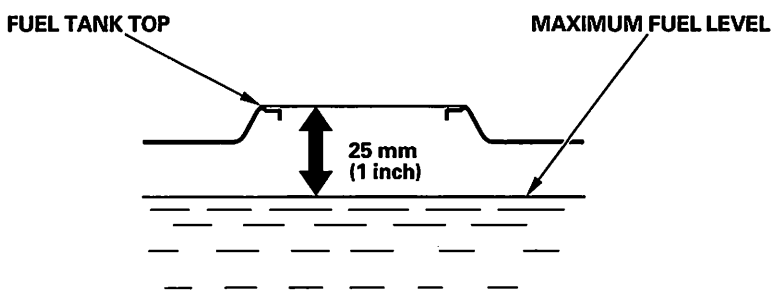
Oil Alert System (Where equipped)
The Oil Alert System is designed to prevent engine damage caused by an insufficient amount of oil in the crankcase. Before the oil level in the crankcase can fall below a safe limit, the Oil Alert System will automatically stop the engine (the engine switch will remain in the ON position).
If the engine stops and will not restart, check the engine oil level before troubleshooting in other areas.

4. 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 stale or contaminated gasoline or an oil/gasoline mixture.
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 refueling area or where gasoline is stored.**
- **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.

With the engine stopped and on a level surface, remove the fuel tank cap and check the fuel level.
Refill the tank if the fuel level is low.
Do not fill the fuel tank completely. Fill tank to approximately 25 mm (1 inch) below the top of the fuel tank to allow for fuel expansion. If may be necessary to lower the fuel level depending on operating conditions.
After refueling, make sure the tank cap is closed properly and securely.



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 (clogged carburetor, stuck valve).
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 (see page 12).
- 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 27).

Gasolines containing alcohol

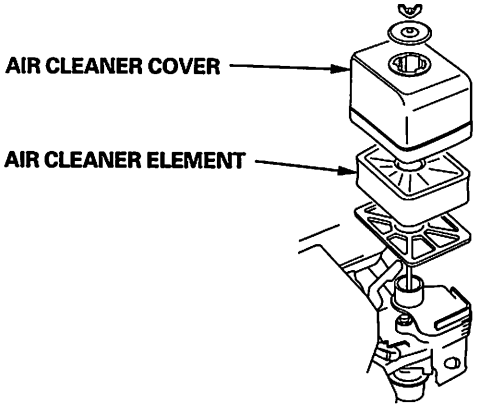
If you decide to use a gasoline containing alcohol (gasohol), be sure it's octane rating is at least as high as that recommended by Honda. There are two types of "gasohol": one containing ethanol, and the other containing methanol. Do not use gasohol that contains more than 10% ethanol. Do not use gasoline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

NOTE:

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

5. Check the air cleaner element.

Remove the wing nut, washer and air cleaner cover.
Check the element for dirt or obstruction. Clean the element if necessary (see page 23).

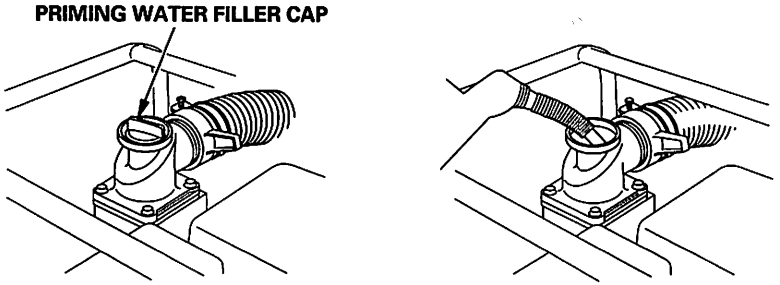


CAUTION:
Never run the engine without the air cleaner. Rapid engine wear will result from contaminants such as dust and dirt being drawn through the carburetor into the engine.

6. Check the priming water.

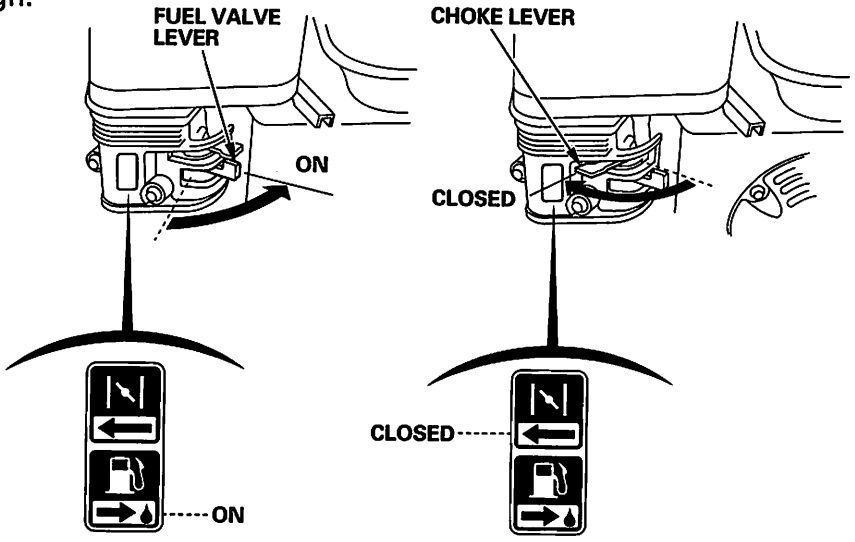
The pump chamber should be primed with full of water before operating.

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.

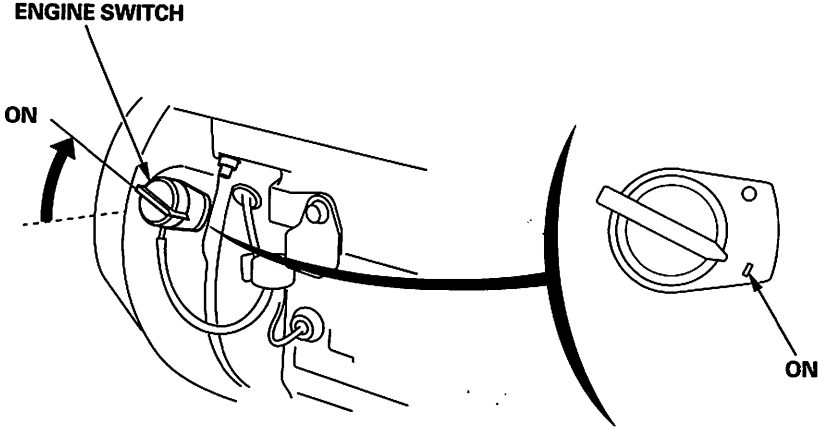


1. Turn the fuel valve lever to the ON position.
2. Move the choke lever to the CLOSED position.

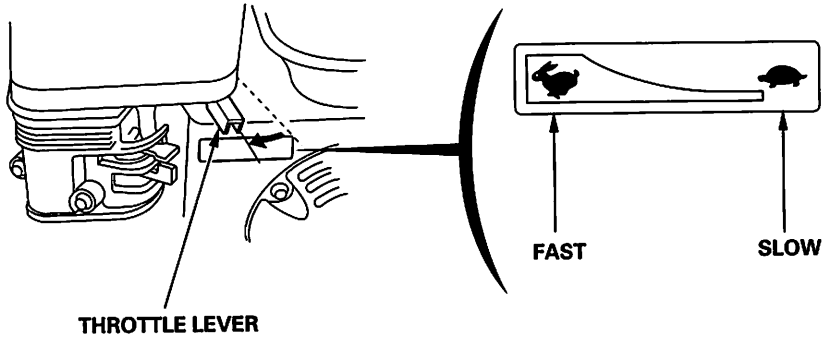
NOTE:
Do not use the choke if the engine is warm or the ambient temperature is high.



3. Turn the engine switch to the ON position.

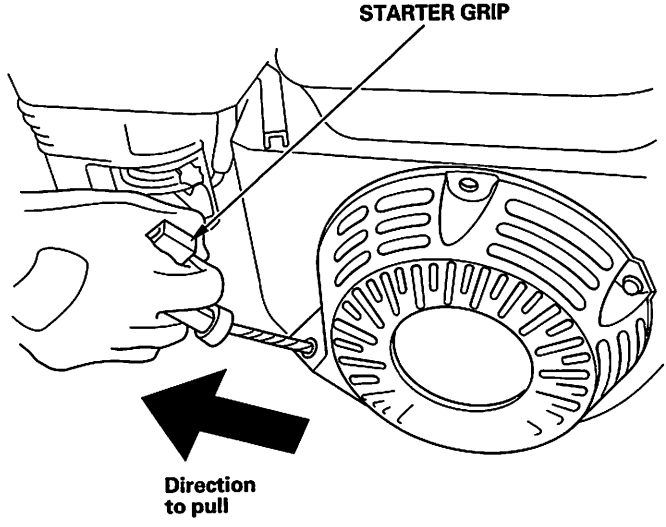


4. Move the throttle lever slightly to the left.

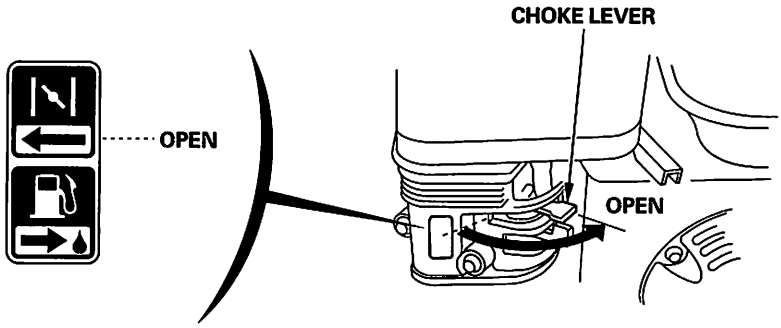


5. Pull the starter grip lightly until you feel resistance, then pull briskly in the direction of the arrow as shown below.

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



6. If the choke lever was moved to the CLOSED position to start the engine, gradually move it to the OPEN position as the engine warms up.



● 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 pump at altitudes higher than 1,500 m (5,000 feet) above sea level, have your authorized Honda dealer perform these carburetor modifications.

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

CAUTION:

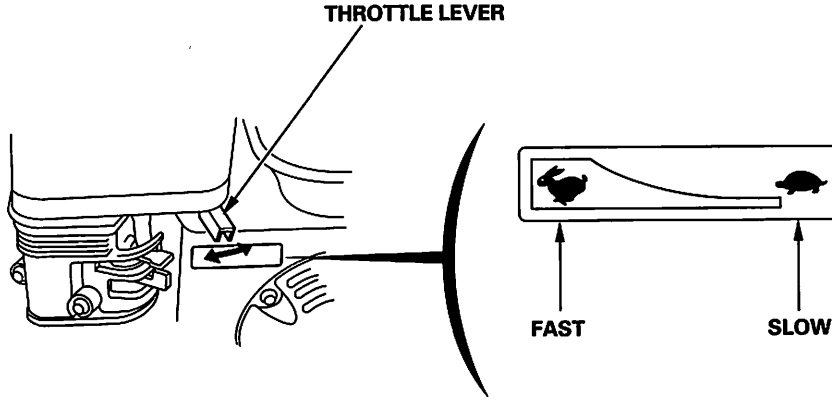
Operation of the pump at an altitude lower than the carburetor is jetted for may result in reduced performance, overheating, and serious engine damage caused by an excessively lean air/fuel mixture.

6. OPERATION

CAUTION:
Never use the pump for muddy water, rejected oil, wine, etc.

After starting the engine, move the throttle lever to the FAST position for self-priming, and check pump output.

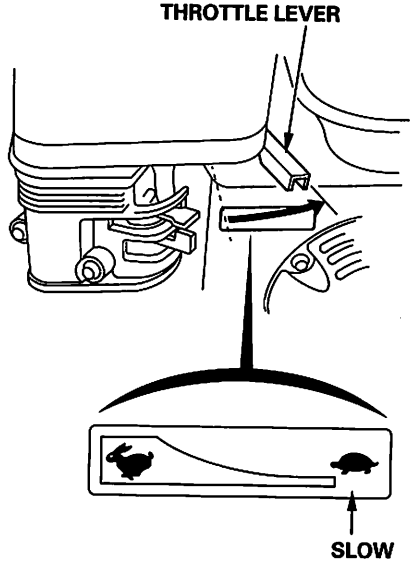
Pump output is controlled by adjusting engine speed. Moving the throttle lever in the FAST direction will increase pump output, and moving the throttle lever in the SLOW direction will decrease pump output.

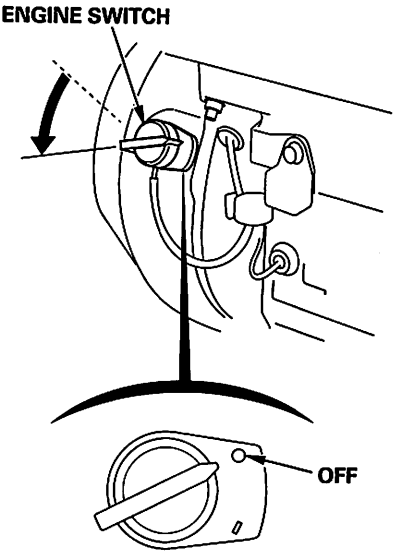


7. STOPPING THE ENGINE

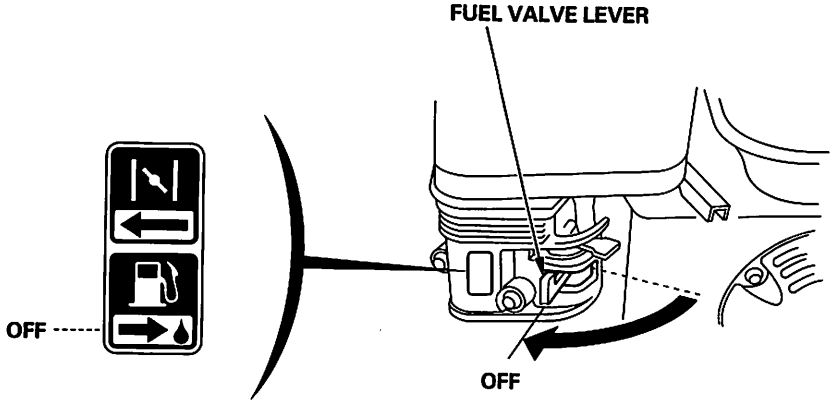
To stop the engine in an emergency, simply turn the engine switch to the OFF position. Under normal conditions, use the following procedure.

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





3. Turn the fuel valve lever to the OFF position.



8. MAINTENANCE

Periodic inspection and adjustment of the pump 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 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:

- **If the pump has been used with sea water, etc., clean it with fresh water immediately afterward to reduce corrosion or remove sediment.**
- **Use genuine Honda parts or their equivalent for maintenance or repair. Replacement parts which are not of equivalent quality may damage the pump.**

Maintenance schedule

REGULAR SERVICE PERIOD (3) Perform at every indicated month or operating hour interval, whichever comes first. / Item		Each use	First month or 20 hrs.	Every 3 months or 50 hrs.	Every 6 months or 100 hrs.	Every year or 300 hrs.
Engine oil	Check level	O				
	Change		O		O	
Air cleaner	Check	O				
	Clean			O (1)		
Spark plug	Check-adjust				O	
	Replace					O
Spark arrester (applicable types)	Clean				O (4)	
Idle speed	Check-adjust					O (2)
Valve clearance	Check-adjust					O (2)
Combustion chamber	Clean	After every 500 hrs (2)				
Fuel tank and filter	Clean				O (2)	
Fuel tube	Check	Every 2 years (Replace if necessary) (2)				
Impeller	Check					O (2)
Impeller clearance	Check					O (2)
Pump Inlet valve	Check					O (2)

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

(2) These items should be serviced by your servicing dealer.

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

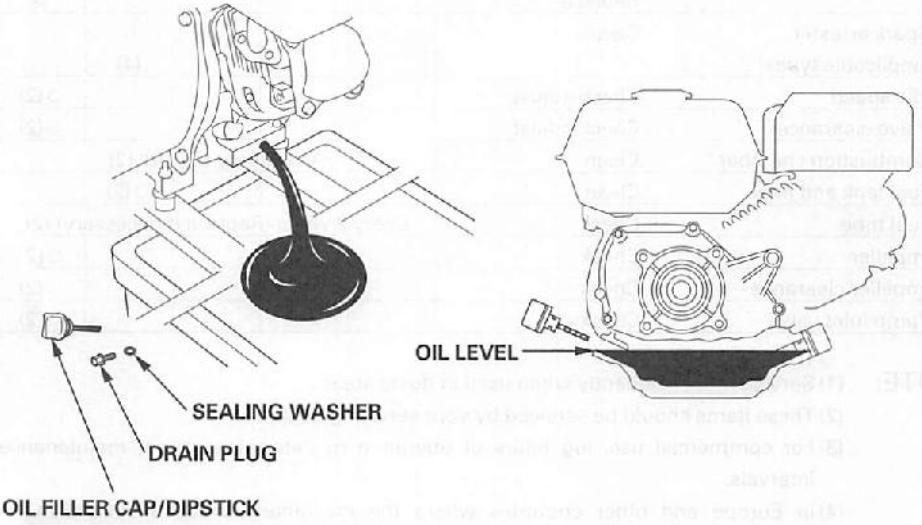
(4) In Europe and other countries where the machinery directive 2006/42/EC is enforced, this cleaning should be done by your servicing dealer.

1. Changing oil

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

1. Remove the oil filler cap/dipstick and the drain plug, then drain the oil.
2. Install the drain plug securely using a new sealing washer.
3. Refill with the recommended oil (see page 10) to the specified level.

OIL CAPACITY: WB20XT: 0.56 L (0.59 US qt, 0.49 Imp qt)
WB30XT: 0.58 L (0.61 US qt, 0.51 Imp qt)



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

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

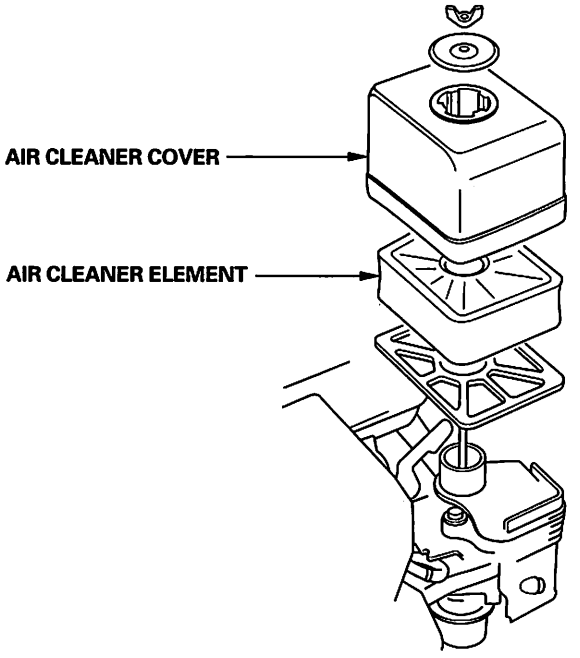
⚠WARNING

Never use gasoline or low flash point solvents for cleaning. They are flammable and explosive under certain conditions.

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



3. Spark plug service

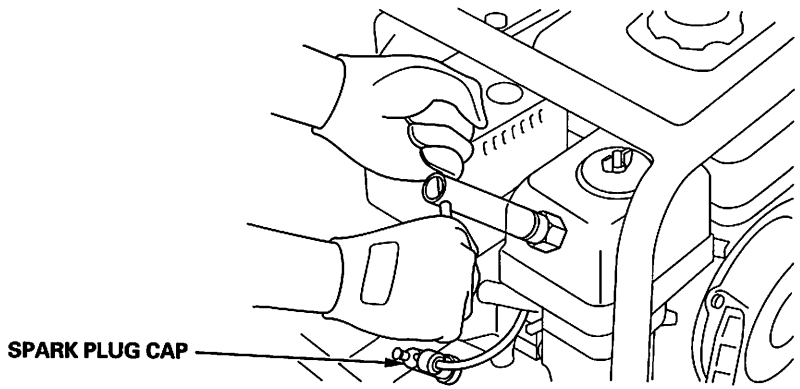
Recommended spark plug: BPR6ES(NGK)
W20EPR-U(DENSO)

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

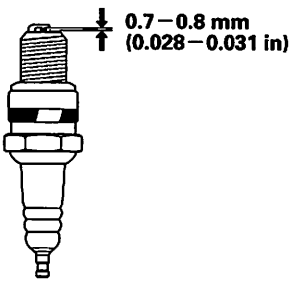
1. Disconnect the spark plug cap and then remove the spark plug with the spark plug wrench.

⚠WARNING

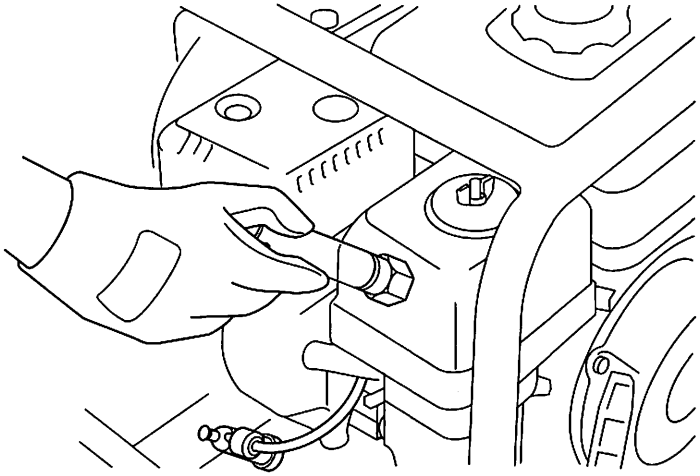
If the engine has been running, the muffler will be very hot. Be careful not to touch the muffler.



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



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



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.

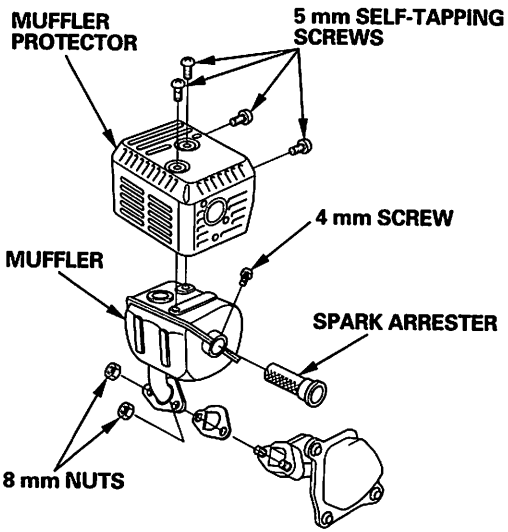
4. Spark arrester maintenance (optional part)

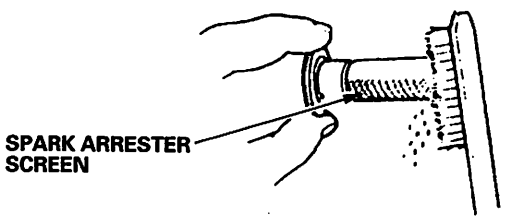
In Europe and other countries where the machinery directive 2006/42/EC is enforced, this cleaning should be done by your servicing dealer.

⚠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 two 8 mm nuts, and remove the muffler.
2. Remove the four 5 mm self-tapping screws, and remove the muffler protector from the muffler.
3. Remove the 4 mm screw from the spark arrester, and remove the spark arrester from the muffler.
4. Use a brush to remove carbon deposits from the spark arrester screen. Be careful to avoid damaging the 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 it if necessary.

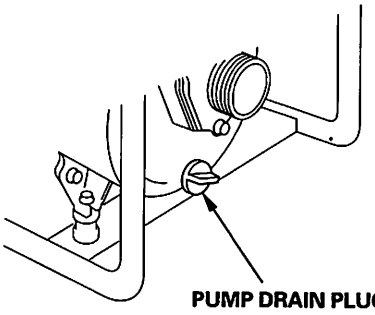
5. Install the spark arrester, muffler protector, and muffler in the reverse order of disassembly.

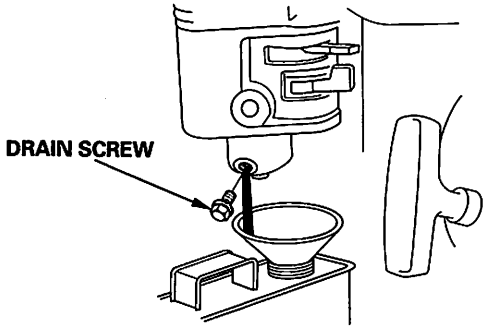
⚠WARNING

- **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.**

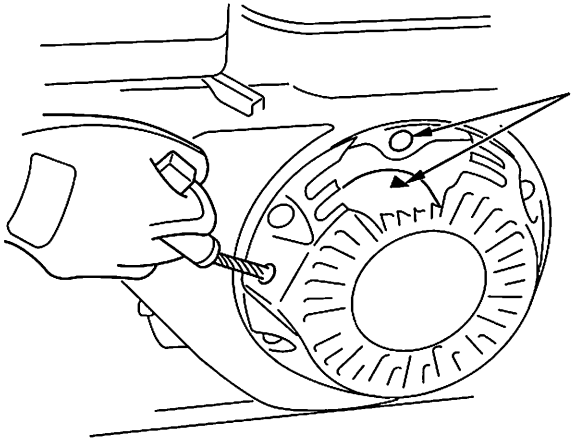
Before storing the pump for an extended period;

1. Be sure the storage area is free of excessive humidity and dust.
2. Clean the pump interior.....
   Sediment will settle in the pump if it has been used in muddy or sandy water, water containing heavy debris.
   Pump clean water through the pump before shutting down or impeller may be damaged when restarting. After flushing, remove the pump drain plug, drain as much water as possible from the pump housing and reinstall the plug.
3. Drain the fuel.....
   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 the 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 grip until resistance is felt. Continue pulling until the notch on the starter pulley aligns with the hole on the 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.



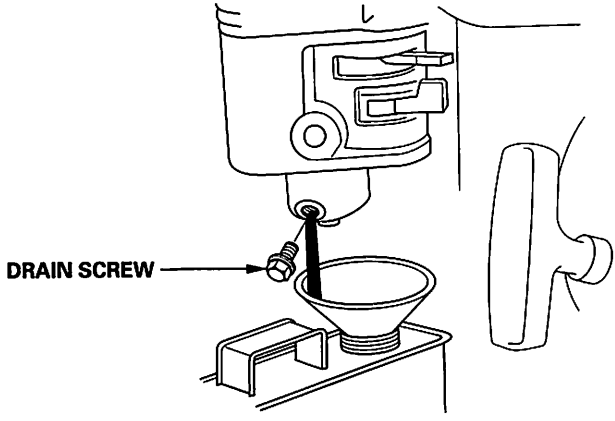
Align the mark on the starter pulley with the hole at the top of recoil starter.

7. Cover the pump to keep out dust.

When the engine will not start:
1. Is there enough fuel?
2. Is the fuel valve ON?
3. 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 starting the engine. Spilled fuel or fuel vapor may ignite.

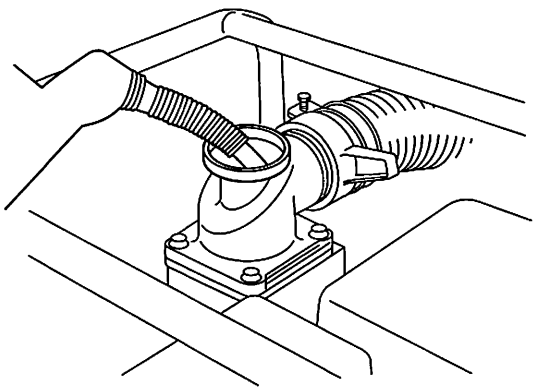


4. Is the engine switch ON?
5. Is there enough oil in the engine?
6. Is the spark plug in good condition?

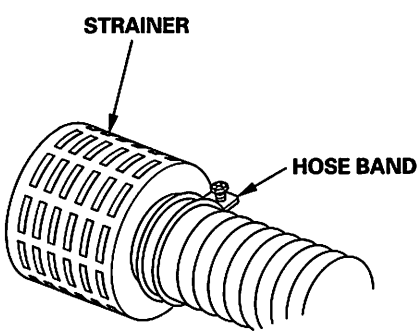
   Remove and inspect the spark plug. Clean, readjust gap and dry the spark plug. Replace it if necessary.

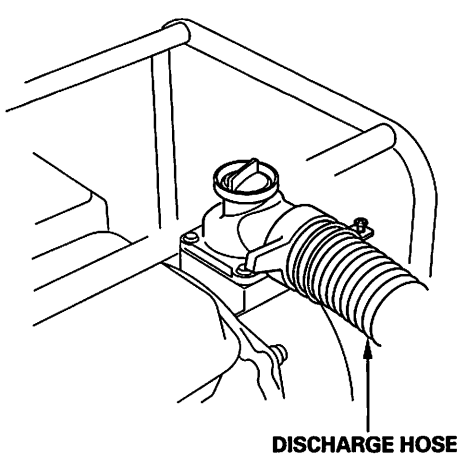
7. If the engine still does not start, take the pump to an authorized Honda dealer.

When the pump cannot pump the 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 dealer.





Model	WB20XT	WB30XT
Power product description code	WABT	WACT
Length	455 mm (17.9 in)	510 mm (20.1 in)
Width	365 mm (14.4 in)	385 mm (15.2 in)
Height	420 mm (16.5 in)	455 mm (17.9 in)
Dry mass [weight]	21 kg (46 lbs)	27 kg (60 lbs)

Engine

	WB20XT	WB30XT
Model	GX120T1	GX160T1
Engine type	4-stroke, over head valve, 1 cylinder	
Displacement	118 cm^3 (7.2 cu-in)	163 cm^3 (9.9 cu-in)
[Bore × Stroke]	60.0 × 42.0 mm (2.4 × 1.7 in)	68.0 × 45.0 mm (2.7 × 1.8 in)
Fuel tank capacity	1.9 L (0.50 US gal, 0.42 Imp gal)	3.1 L (0.82 US gal, 0.68 Imp gal)
Engine Net power (in accordance with SAE J1349*)	2.6 kW/3,600 rpm (3.5 PS/3,600 rpm)	3.6 kW/3,600 rpm (4.9 PS/3,600 rpm)
Engine Max. Net torque (in accordance with SAE J1349*)	7.3 N·m/2,500 rpm (0.74 kgf·m/2,500 rpm, 5.4 lbf·ft/2,500 rpm)	10.3 N·m/2,500 rpm (1.05 kgf·m/2,500 rpm, 7.6 lbf·ft/2,500 rpm)
Cooling system	Forced air	
Ignition system	Transistor magneto	
PTO shaft rotation	Counterclockwise	

* 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 3,600 rpm (Engine Net Power) and at 2,500 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.

Pump

Model	WB20XT	WB30XT
Suction port diameter	50 mm (2.0 in)	80 mm (3.1 in)
Discharge port diameter	50 mm (2.0 in)	80 mm (3.1 in)
Max. idling speed	3,900 ± 100 rpm	3,900 ± 100 rpm
Total head	32 m (105 ft)	28 m (92 ft)
Suction head	8 m (26.3 ft)	8 m (26.3 ft)
Capacity	600 L/min (158.5 US gal/min, 132.0 Imp gal/min)	1,100 L/min (290.6 US gal/min, 242.0 Imp gal/min)
Continuous running time	1 h 54 min	2 h 6 min

Noise

Model	WB20XT	WB30XT
Sound pressure level at the workstation (EN809: 1998/AC: 2001)	85 dB (A)	88 dB (A)
Uncertainty	2 dB (A)	2 dB (A)
Measured sound power level (2000/14/EC, 2005/88/EC)	99 dB (A)	104 dB (A)
Uncertainty	2 dB (A)	2 dB (A)
Guaranteed sound power level (2000/14/EC, 2005/88/EC)	101 dB (A)	106 dB (A)