HONDA WATER PUMP

WA20 / WA30

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OWNER'S MANUAL

This manual covers operation and maintenance of the WA20/WA30 Water Pump. 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.

The manual should be considered a permanent part of the pump and remain with the pump when sold.

Read this manual carefully. Pay particular attention to statements preceded by the following words:

WARNING

Indicates the possibility of personal injury or loss of life if instructions are not followed.

CAUTION

Indicates the possibility of equipment damage if instructions are not followed.

If any problems occur, or if there are any questions concerning the pump, consult an authorized HONDA dealer.

Thank you for purchasing a HONDA WATER PUMP.

WARNING

The 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 pump. Failure to do so could result in personal injury or equipment damage.

The photos used in this manual are of the WA20 unless otherwise specified.

CONTENTS

PUMP SAFETY

WARNING

To ensure safe operation:

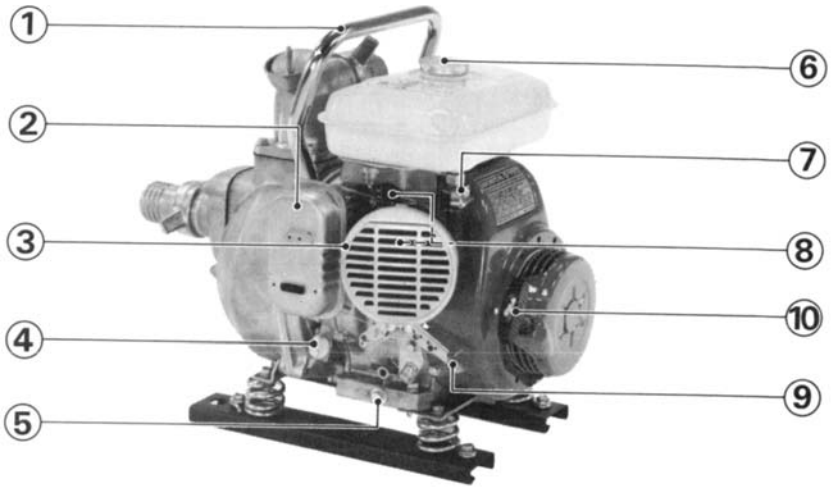
* *Know how to stop the pump quickly and understand operation of all the controls. Never permit anyone to operate the pump without proper instruction.*
* *Keep children and pets away from the pump when it is in use.*

CAUTION

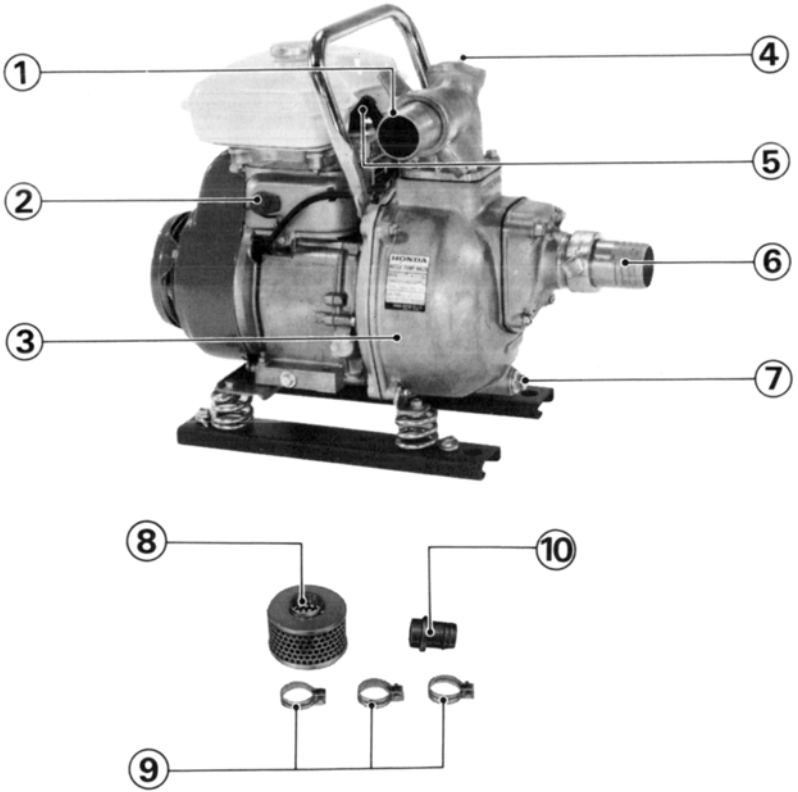
Make sure all fasteners and hose bands are properly tightened.

COMPONENT IDENTIFICATION

(1) Carrying handle
(2) Muffler
(3) Air cleaner
(4) Oil filler cap
(5) Oil drain plug
(6) Fuel filler cap
(7) Fuel valve
(8) Carburetor and choke lever
(9) Throttle lever
(10) Recoil starter



(1) Discharge port
(2) Engine switch
(3) Pump casing
(4) Priming water filler plug
(5) Spark plug cap
(6) Suction port
(7) Water drain plug
(8) Suction hose strainer
(9) Hose bands
(10) Strainer coupling



OPERATION

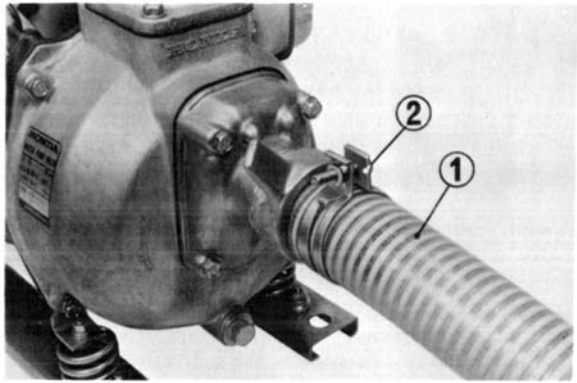
WARNING

* ***Exhaust gas contains poisonous carbon monoxide. Never run the pump in an enclosed area, or without adequate ventilation.***
* ***Operate the pump on a level surface to prevent fuel spillage.***

CAUTION

The pump engine is air-cooled and may damaged if ventilation is inadequate.

(1) Suction hose (2) Hose band



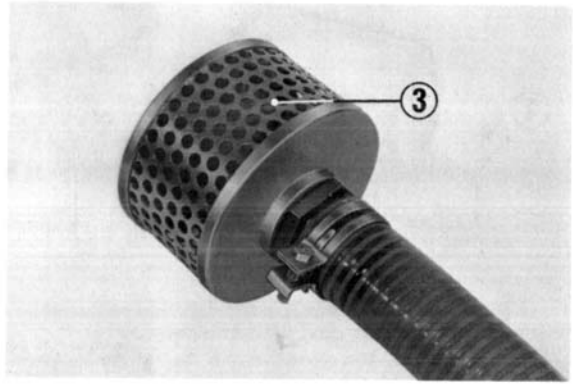
Preparation for Starting

1. Connect the suction line to the pump using the hose band. Use a reinforced-wall or wire braided hose to prevent suction collapse.
   Since the pump self-priming time is directly proportional to hose length, a short hose is recommended.

CAUTION

* *Always use the strainer with the suction hose.*
* *Gravel or debris sucked into the pump will cause serious impeller damage.*

(3) Strainer



2. Connect the discharge hose. When using a fabric hose, always use a hose band to prevent the hose from disconnecting under high pressure.

NOTE:

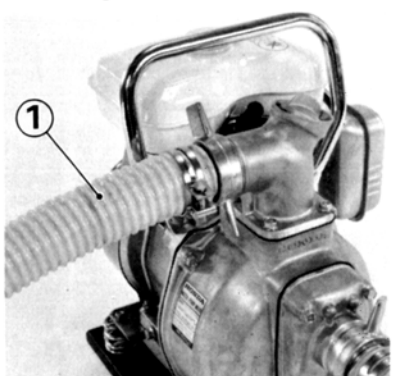
A short, large-diameter hose will provide lower fluid friction and improved efficiency.

3. Check the fuel level.
   Use automotive gasoline with a research octane of 91 or higher or a pump octane $\left(\frac{R + M}{2}\right)$ of 84 or higher. Never use an oil/gasoline mixture or dirty gasoline. Avoid getting dirt, dust or water in the fuel tank.

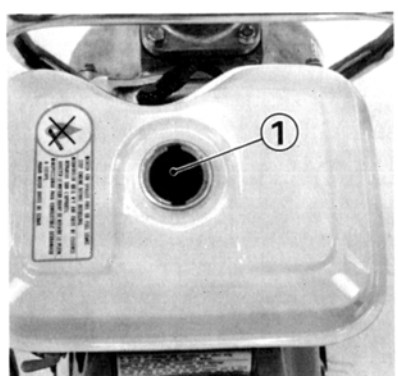
WARNING

* *Gasoline is extremely flammable and explosive under certain conditions. Refuel in a well ventilated area with the engine stopped. If any fuel is spilled, make sure the area is dry before starting the engine.*
* *Do not smoke or allow flames or sparks in the area where the pump is refueled or where gasoline is stored.*
* *Do not overfill the tank; fill to half-way up the filler screen. Make sure the cap is securely closed after refueling.*

(1) Discharge hose



(1) Fuel filler hole



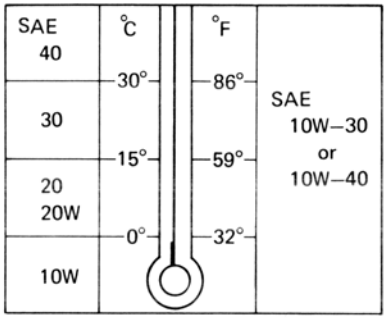
4. Check the engine oil level.

CAUTION

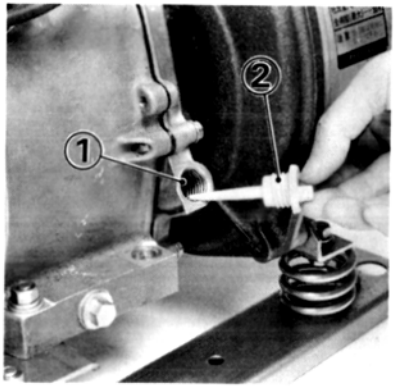
Engine oil is a major factor affecting engine performance and service life. Non-detergent or vegetable oils are not recommended.

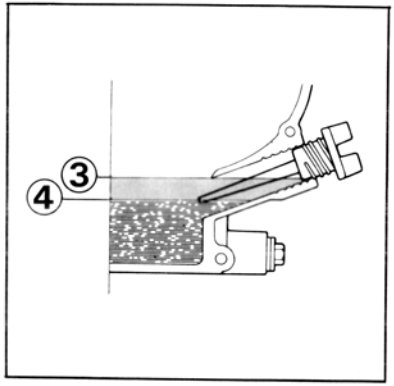
Use Honda 4-stroke, or an equivalent high detergent, premium quality motor oil certified to meet or exceed U.S. automobile manufacturer's requirements for Service Classification SE. (Motor oil classified SE will show this designation on the container.)
SAE 10W–40 is recommended for general, all-temperature use. If single viscosity oil is used, select the appropriate viscosity for the average temperature in your area.

A. With the pump on a level surface, remove the oil filler cap and check the level.
B. If the level is low, fill to the upper limit. Do not overfill; excess oil will result in power loss and smoking.



(1) Oil filler hole (2) Oil filler cap (3) Upper limit (4) Lower limit



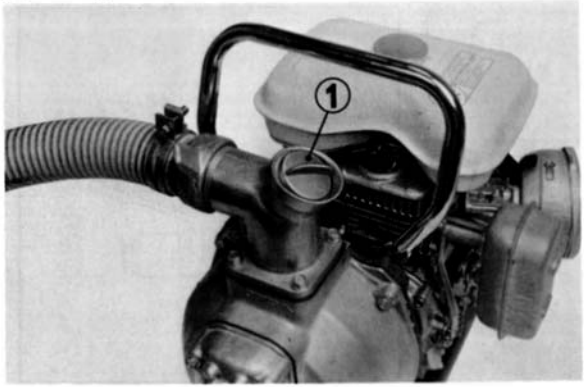


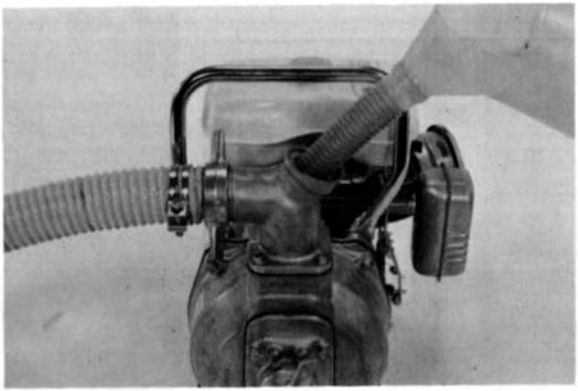
5. Check the priming water. While the pump will self-prime with a minimum of 3.0 liters (3 US qt) for the WA20, or 4.5 liters (4.75 US qt) for the WA30, it is recommended that the water chamber be kept full.

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) Priming water filler plug

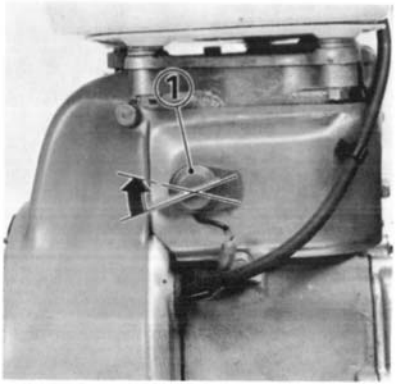




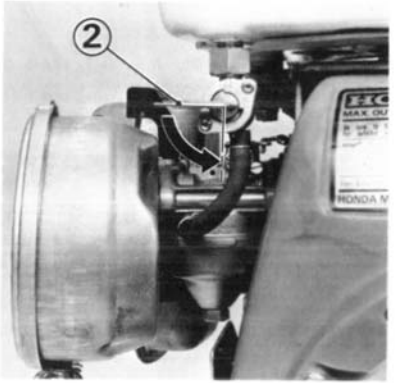
Starting the Engine

1. Turn the engine switch and fuel valve "ON".
2. Move the choke lever to "CLOSE".

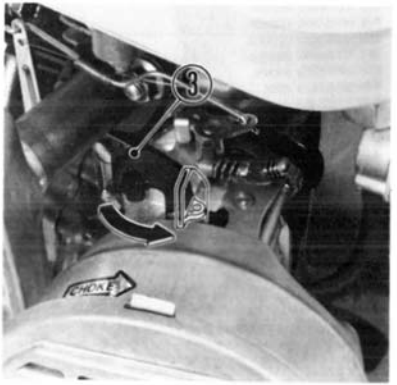
(1) Engine switch



(2) Fuel valve



(3) Choke lever



NOTE:

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

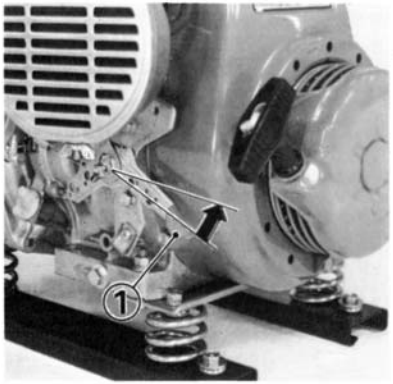
3. Raise the throttle lever slightly.
4. Pull the starter rope lightly until resistance is felt, then pull briskly.

NOTE:

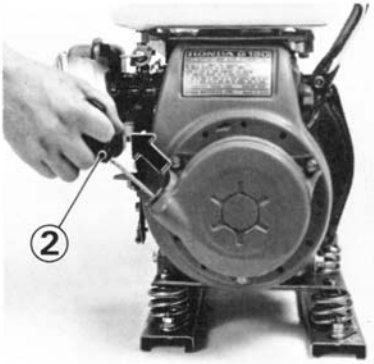
Do not allow the starter rope to snap back. Return it slowly by hand.

5. Open the choke gradually as the engine warms up.
6. Position the throttle lever at the desired engine speed and tighten the wing nut.

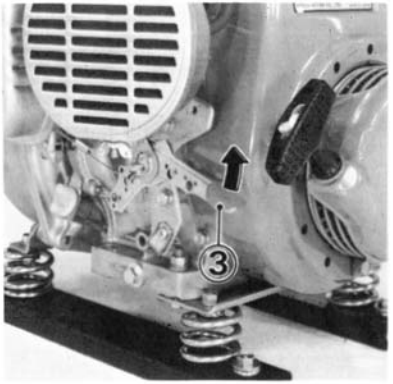
(1) Throttle lever



(2) Starter



(3) Throttle lever



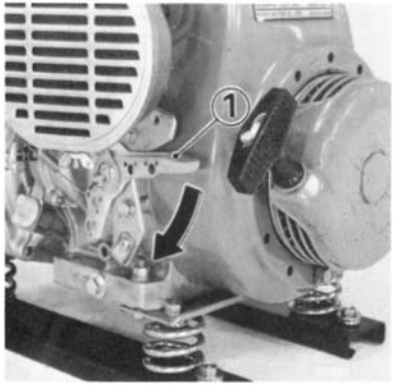
Stopping the Engine

Shutting off the engine abruptly from high speed operation can cause flooding and difficult starting. Reduce speed to an idle before stopping the engine.

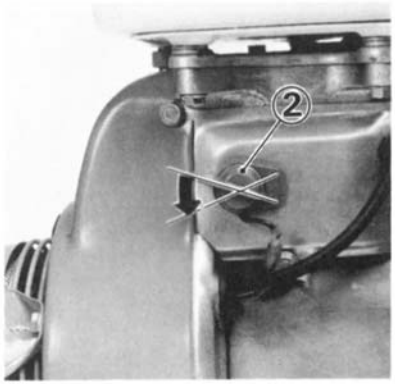
1. Loosen the wing nut and completely lower the throttle lever.
2. Turn the engine switch and fuel valve "OFF".

NOTE:
To stop the engine in an emergency, turn the engine switch "OFF".

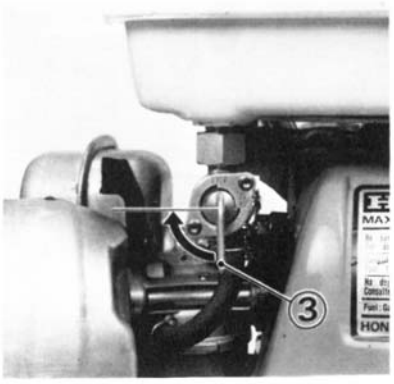
(1) Throttle lever



(2) Engine switch



(3) Fuel valve



MAINTENANCE

The purpose of the maintenance schedule and adjustment is to keep the engine in the best operating condition. Perform inspection as scheduled in the table on page 15.

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.

CAUTION

Use only genuine HONDA parts or their equivalent. The use of replacement parts which are not of equivalent quality may damage the pump.

ITEM / REGULAR SERVICE PERIOD Perform at every indicated month or operating hour intervals, whichever occurs first.		Daily	First 1 month or 20 Hrs. operating	Every 3 months or 50 Hrs. operating	Every 6 months or 150 Hrs. operating	Every 1 year or 300 Hrs. operating
Engine oil	Inspection	○				
	Change		○		○	
Air cleaner element	Inspection	○				
	Cleaning			○ (1)		
Fuel filter cleaning					○	
Spark plug maintenance					○	
Ignition timing adjustment						○ (2)
Valve clearance adjustment						○ (2)
Combustion chamber and valve cleaning						○ (2)
Impeller inspection						○ (2)
Friction disc inspection						○ (2)
Casing cover inspection						○ (2)
Inlet valve inspection						○ (2)
Fuel tube inspection (Replace if necessary)						○

NOTE (1): When used in dusty areas, service the air cleaner more frequently.

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

Tool Kit

The tools shown are necessary to perform periodic inspection, simple adjustments and repairs. Keep the kit with the pump at all times.

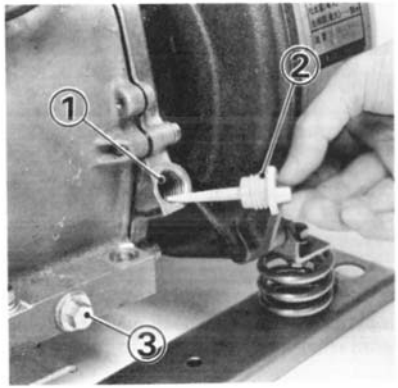
(1) Spark plug wrench
(2) Plug wrench handle
(3) 12 x 7 mm wrench

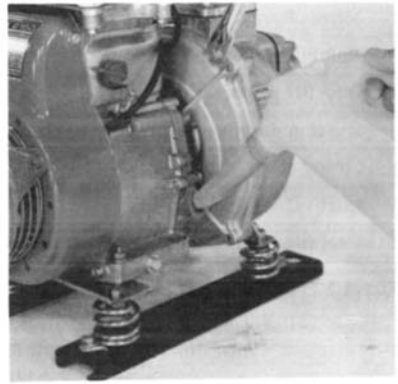
Changing Oil

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

1. Remove the drain plug and oil filler cap, drain the oil, and retighten the plug securely.
2. Refill with the recommended oil and check the level.

(1) Oil filler hole
(2) Oil filler cap
(3) Drain plug





Air Cleaner Service

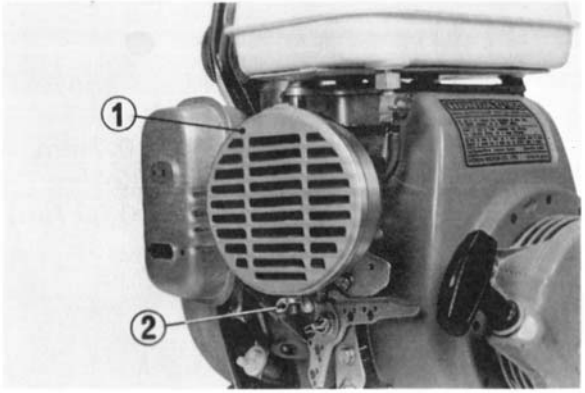
A dirty air cleaner will restrict air flow to the carburetor. To prevent carburetor malfunction, service the air cleaner regularly.

WARNING

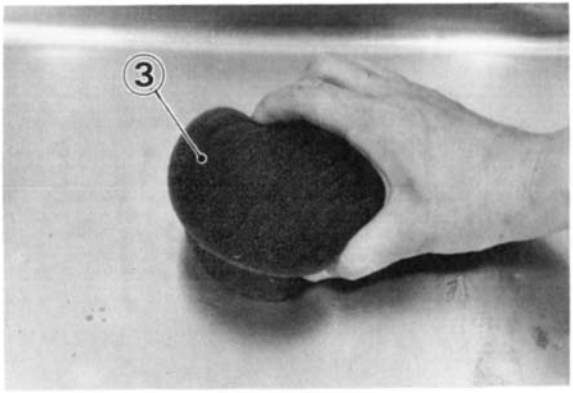
Do not use gasoline or low flash point solvents for cleaning. They are flammable and explosive under certain conditions.

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

(1) Air cleaner cover
(2) Wing nut



(3) Element



Spark Plug Service

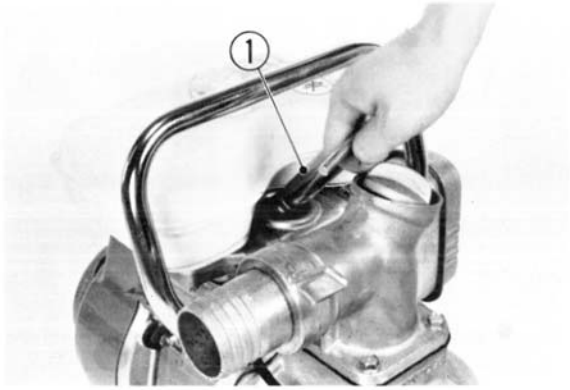
To ensure proper engine operation the spark plug must be properly gapped and free of deposits.

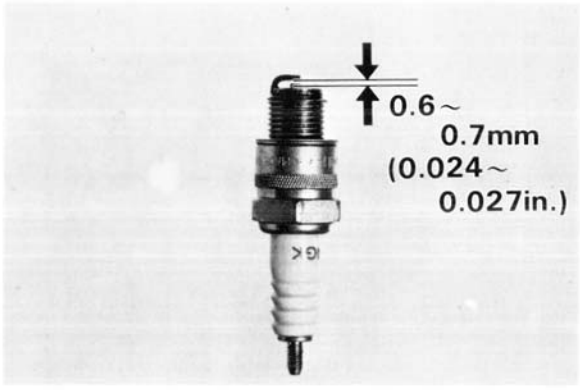
1. Remove the spark plug with the plug wrench.
2. Use a wire brush to remove carbon deposits. Do not damage the electrodes.
3. Check the plug gap with a feeler gauge. Correct as necessary. Do not bend the center electrode.

CAUTION

The spark plug must be securely tightened. An improperly tightened plug can damage the engine.

(1) Spark plug wrench



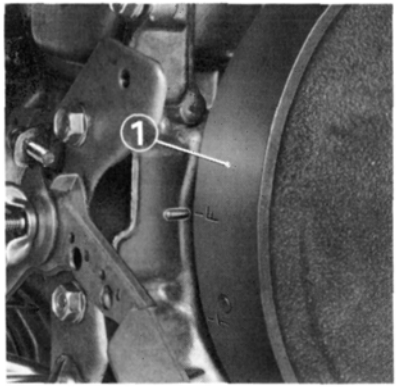


Ignition Timing Adjustment

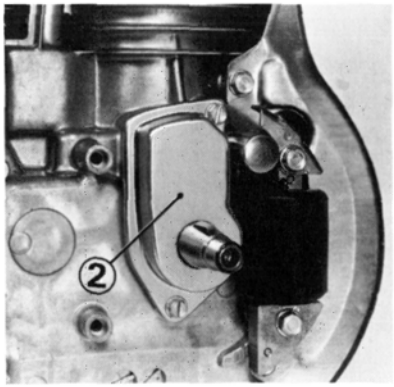
Check the timing when specified by the periodic maintenance chart. Incorrect ignition timing will cause starting difficulty and loss of power.

1. Remove the fan cover.
2. Proper timing is determined by correct point opening: Using a commercially available timing tester, rotate the flywheel clockwise and check that the points start to open when the flywheel "F" mark passes the mark on the crankcase.
3. If timing is not correct, remove the starter pulley, fan, flywheel, and point cover.
4. Loosen the 5 mm screw and move the breaker plate to the right or left as required. Retighten the screw and recheck timing.

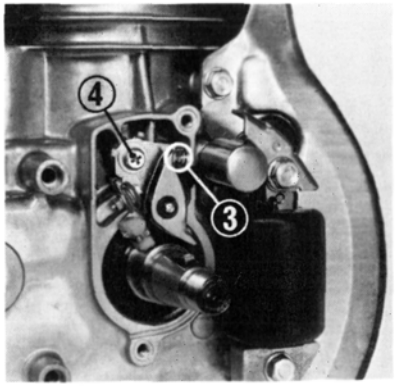
(1) Flywheel



(2) Point cover



(3) Contact breaker points (4) 5 mm screw



TRANSPORTING/STORAGE

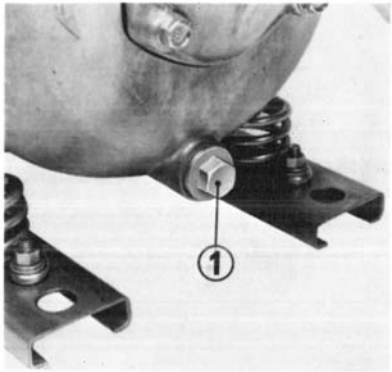
WARNING

Turn the fuel valve "OFF" and keep the pump level when transporting it to prevent fuel spillage. Fuel vapor or spilled fuel may ignite.

Before storing the pump for an extended period:

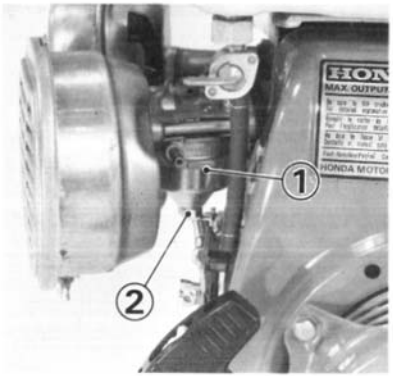
1. Clean the pump Interior
   Sediment will settle in the pump if it has been used in muddy or sandy water, water containing heavy debris, or salt water. Pump clean water through the pump before shutting down or the impeller may be damaged when restarting.

(1) Water drain plug



2. Drain the Fuel
   a. Turn the fuel valve "OFF" and disconnect the fuel tube at the carburetor.
   b. Turn the fuel valve "ON" and drain the gasoline in the fuel tank into a suitable container.
   c. Loosen the drain bolt and drain the carburetor.
3. Set the piston to the compression stroke
   To protect the breaker points, valves and combustion chamber from rust, corrosion and dust, set the piston to the compression stroke.
   a. Pull the starter rope until there is resistance. (The piston is coming up on the compression stroke.)
   b. Align the "A" mark with the "B" mark. In this position both valves and points will be closed.

(1) Carburetor (2) Drain bolt



(1) Mark "A" (2) Mark "B"

SPECIFICATIONS

Dimensions and Weight – MODEL WA20

Length x Width x Height	500 x 370 x 480 mm (19.7 x 14.6 x 18.9 in)
Dry weight	24.5 kg (54 lb)

Engine

Model	G150
Engine Type	4 cycle, side valve, 1 cylinder, Forced air cooled
Displacement	144 cc (8.8 cu in)
Bore x Stroke	64 x 45 mm (2.5 x 1.8 in)
Ignition	Flywheel magneto
Oil capacity	0.7ℓ (0.7 US qt)
Fuel tank capacity	2.5ℓ (0.7 US gal)
Spark plug	BR–4HS (NGK)

Pump

Suction port diameter	50 mm (2 in)
Discharge port diameter	50 mm (2 in)
Rated revolutions	3,600 rpm
Total head	30 m (98 ft)
Suction head	8.5 m (28 ft)
Capacity	600ℓ (158 US gal)/min
Self-priming time	45 sec at 5 m (16.5 ft)

Dimensions and Weight – MODEL WA30

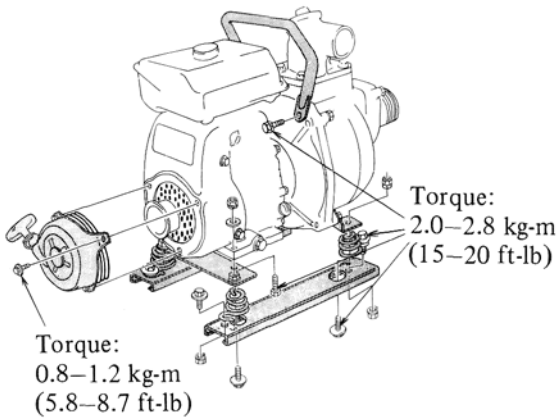
Length x Width x Height	620 x 435 x 495 mm (24.4 x 17.1 x 19.5 in)
Dry weight	38 kg (84 lbs)

Engine

Model	G200
Engine Type	4 cycle, side valve, 1 cylinder, Forced air cooled
Displacement	197 cc (12.0 cu in)
Bore x Stroke	67 x 56 mm (2.64 x 2.20 in)
Ignition	Flywheel magneto
Oil capacity	0.7ℓ (0.7 US qt)
Fuel tank capacity	3.5ℓ (0.9 US gal)
Spark plug	BR–4HS (NGK)

Pump

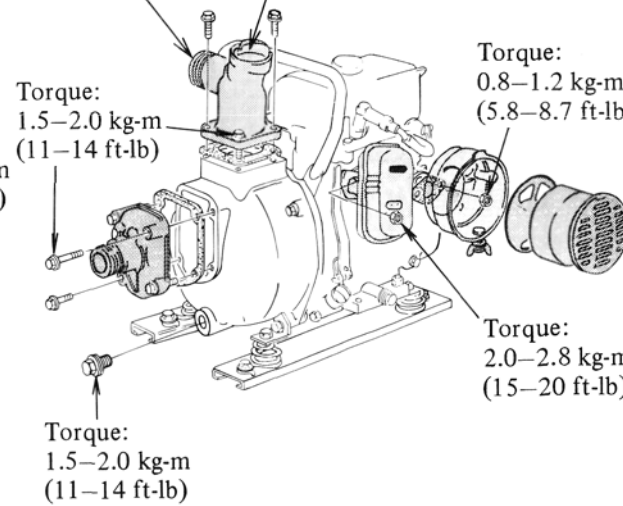
Suction port diameter	80 mm (3 in)
Discharge port diameter	80 mm (3 in)
Rated revolutions	3,600 rpm
Total head	28 m (92 ft)
Suction head	8.5 m (28 ft)
Capacity	1100ℓ (290 US gal)/min
Self-priming time	120 sec at 5 m (16.5 ft)



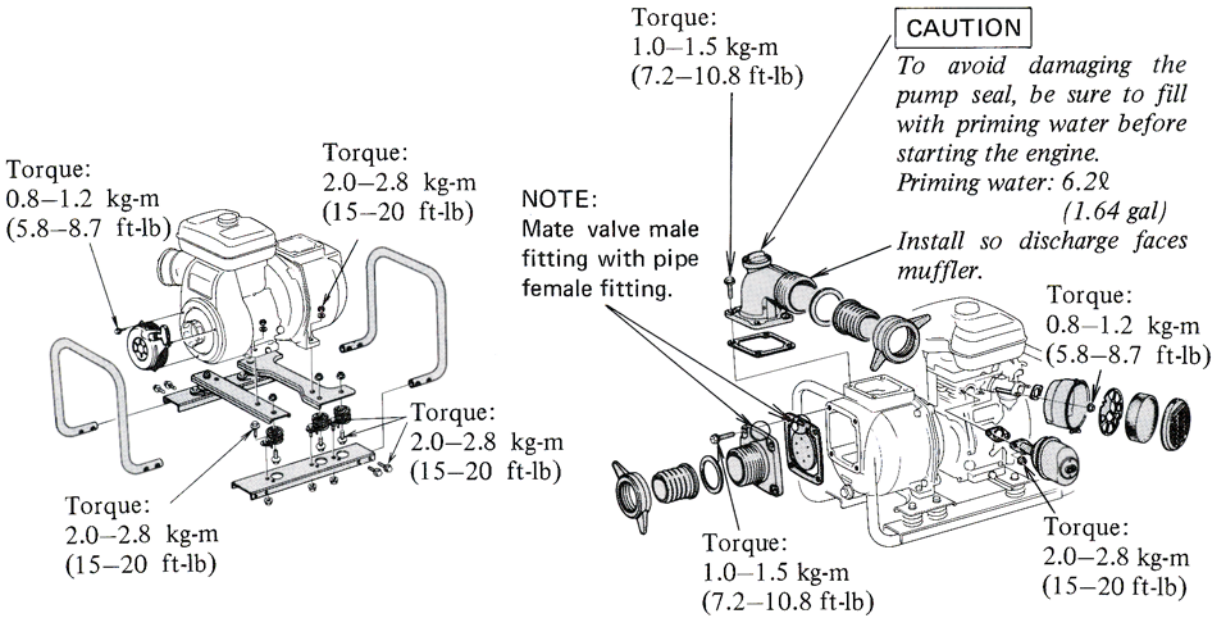
CAUTION

To avoid damaging the pump seal, be sure to fill with priming water before starting the engine.
Priming water: 4.3ℓ (1.14 gal)

NOTE:
Install so discharge faces in opposite direction of muffler.



SET-UP INSTRUCTION – MODEL WA30



Current customer service contact information:

United States, Puerto Rico, and U.S. Virgin Islands:

Honda Power Equipment dealership personnel are trained professionals. They should be able to answer any question you may have. If you encounter a problem that your dealer does not solve to your satisfaction, please discuss it with the dealership's management. The Service Manager or General Manager can help. Almost all problems are solved in this way.

If you are dissatisfied with the decision made by the dealership's management, contact the Honda Power Equipment Customer Relations Office. You can write:

American Honda Motor Co., Inc.
Power Equipment Division
Customer Relations Office
4900 Marconi Drive
Alpharetta, GA 30005-8847

Or telephone: (770) 497-6400 M-F, 8:30 am - 7:00 pm EST

When you write or call, please provide the following information:

- Model and serial numbers
- Name of the dealer who sold the Honda power equipment to you
- Name and address of the dealer who services your equipment
- Date of purchase
- Your name, address, and telephone number
- A detailed description of the problem

HONDA

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