

OPERATION AND PARTS MANUAL



MULTIQUIP MODEL QP-301TH GASOLINE POWERED TRASH PUMP

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Revision #4 (10/05/05)



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WARNING



CALIFORNIA — Proposition 65 Warning

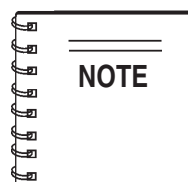
Engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects and other reproductive harm.

QP-301TH Gasoline Powered Trash Pump

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Honda GX240K1PA2 Engine

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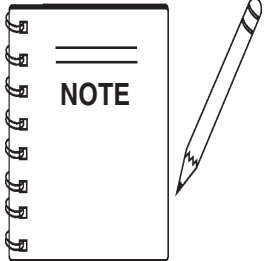


**Specification and part number
are subject to change without
notice.**

QP-202TH — SAFETY MESSAGE ALERT SYMBOLS

FOR YOUR SAFETY AND THE SAFETY OF OTHERS!

Safety precautions should be followed at all times when operating this equipment. Failure to read and understand the Safety Messages and Operating Instructions could result in injury to yourself and others.



This Owner's Manual has been developed to provide complete instructions for the safe and efficient operation of the Multiquip *Model QP-301TH Trash Pump*. Refer to the engine manufacturers instructions for data relative to its safe operation. **Before using these pumps, ensure that the operating individual has read and understands all instructions in this manual.**

SAFETY MESSAGE ALERT SYMBOLS

The three (3) Safety Messages shown below will inform you about potential hazards that could injure you or others. The Safety Messages specifically address the level of exposure to the operator, and are preceded by one of three words: **DANGER**, **WARNING**, or **CAUTION**.



DANGER: You **WILL** be **KILLED** or **SERIOUSLY** injured if you do not follow



WARNING: You **CAN** be **KILLED** or **SERIOUSLY** injured if you do not follow directions.



CAUTION: You **CAN** be injured if you do not follow directions.

Potential hazards associated with the QP-301TH Trash Pump operation will be referenced with Hazard Symbols which appear throughout this manual, and will be referenced in conjunction with Safety Message Alert Symbols.

HAZARD SYMBOLS



Lethal Exhaust Gases



Engine exhaust gases contain poisonous carbon monoxide. This gas is colorless and odorless, and can cause death if inhaled. **NEVER** operate this equipment in a confined area or enclosed structure that does not provide ample free flow air.



Explosive Fuel



GASOLINE is extremely flammable, and its vapors can cause an explosion if ignited. **DO NOT** start the engine near spilled fuel or combustible fluids. **DO NOT** fill the fuel tank while the engine is running or hot. **DO NOT** overfill tank, since spilled fuel could ignite if it comes into contact with hot engine parts or sparks from the ignition system. Store fuel in approved containers, in well-ventilated areas and away from sparks and flames. **NEVER**



Burn Hazards



Engine components can generate extreme heat. To prevent burns, **DO NOT** touch these areas while the engine is running or immediately after operations. Never operate the engine with heat shields or heat guards removed.



Rotating Parts



NEVER operate equipment with covers, or guards removed. Keep fingers, hands, hair and clothing away from all moving parts to prevent injury.

QP-202TH — SAFETY MESSAGE ALERT SYMBOLS



Accidental Starting



OFF

ALWAYS place the engine ON/OFF switch in the **OFF** position when the pump is not in use.



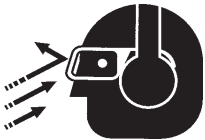
Respiratory Hazard



ALWAYS wear approved respiratory protection.



Sight and Hearing hazard

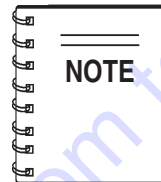


ALWAYS wear approved eye and hearing protection.



Equipment Damage Messages

Other important messages are provided throughout this manual to help prevent damage to your pump, other property, or the surrounding environment.



This pump, other property, or the surrounding environment could be damaged if you do not follow instructions.

RULES FOR SAFE OPERATION

DANGER:



Failure to follow instructions in this manual may lead to serious injury or even death! This equipment is to be operated by trained and qualified personnel only! This equipment is for industrial use only.

The following safety guidelines should always be used when operating the **trash pump**:

GENERAL SAFETY

- **DO NOT** operate or service this equipment before reading this entire manual.



- This equipment should not be operated by persons under 18 years of age.

- **NEVER** operate this equipment without proper protective clothing, shatterproof glasses, steel-toed boots and other protective devices required by the job.



- **NEVER** operate this equipment when not feeling well due to fatigue, illness or taking medicine.



- **NEVER** operate this equipment under the influence of drugs or alcohol.



- Whenever necessary, replace nameplate, operation and safety decals when they become difficult read.

- **ALWAYS** check the machine for loosened threads or bolts before starting.

- **ALWAYS** wear proper respiratory (mask) hearing and eye protection equipment when operating the pump.

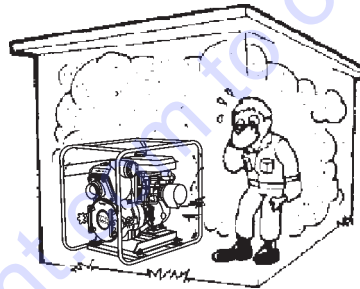


- **NEVER** touch the hot exhaust manifold, muffler or cylinder. Allow these parts to cool before servicing engine or pump.



- **High Temperatures** – Allow the engine to cool before adding fuel or performing service and maintenance functions. Contact with *hot* components can cause serious burns.

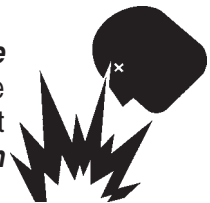
- The engine of this pump requires an adequate free flow of cooling air. **NEVER!** operate the roller in any enclosed or narrow area where free flow of the air is restricted. If the air flow is restricted it will cause serious damage to the pump or engine and may cause injury to people and property. Remember the pump's engine gives off **DEADLY** gases.



- **ALWAYS** refuel in a well-ventilated area, away from sparks and open flames.

- **ALWAYS** use extreme caution when working with **flammable** liquids. When refueling, **stop the engine** and allow it to cool. **DO NOT** smoke around or near the machine. Fire or explosion could result from fuel vapors, or if fuel is spilled on a hot engine.

- **NEVER** operate the pump in an **explosive atmosphere** or near combustible materials. An explosion or fire could result causing severe **bodily harm or even death**.



- Topping-off to filler port is dangerous, as it tends to spill fuel.
- Refer to the **Engine Owner's Manual** for engine technical questions or information.
- **NEVER** use accessories or attachments, which are not recommended by Multiquip for this equipment. Damage to the equipment and/or injury to user may result.
- Manufacturer does not assume responsibility for any accident due to equipment modifications.

RULES FOR SAFE OPERATION

- **NEVER** Run engine without air cleaner. Severe engine damage may occur.
- **ALWAYS** read, understand, and follow procedures in Operator's Manual before attempting to operate equipment.
- **ALWAYS** be sure the operator is familiar with proper safety precautions and operation techniques before using pump.
- **ALWAYS** store equipment properly when it is not being used. Equipment should be stored in a clean, dry location out of the reach of children.
- **NEVER** leave the pump unattended, turn off engine when unattended.
- Unauthorized equipment modifications will void all warranties.
- **NEVER** pump volatile, explosive, flammable or low flash point fluids. These fluids could ignite or explode.
- **NEVER** operate the pump in an **explosive** atmosphere.
- Before starting the pump, check that the clean-out cover is securely fasten.
- **ALWAYS** ensure pump is on level ground before use.
- Become familiar with the components of the pump before operating.
- **ALWAYS** replace any worn or damaged warning decals.
- **NEVER** pump corrosive chemicals or water containing toxic substances. These fluids could create serious health and environmental hazards. Contact local authorities for assistance.
- **NEVER** open the priming plug when pump is hot. Hot water inside could be pressurized much like the radiator of an automobile. Allow pump to cool to the touch before loosening plug.
- **NEVER** open the pump housing during operation or start the pump with the clean-out cover removed. The rotating impeller inside the pump can cut or sever objects caught in it.
- **NEVER** block or restrict flow from discharge hose. Remove kinks from discharge line before starting pump. Operation with a blocked discharge line can cause water inside pump to overheat.
- **ALWAYS** fill the pump casing with water before starting the engine. Failure to maintain water inside the pump housing will cause severe damage to the pump.
- In winter drain water from pump housing to prevent freezing.

■ **High Temperatures** – Always stop engine and allow the engine to cool before adding fuel, oil or performing service and maintenance functions. Contact with *hot* components can cause serious burns.

■ **NEVER** disconnect any "**emergency or safety devices**". These devices are intended for operator safety. Disconnection of these devices can cause severe injury, bodily harm or even death! Disconnection of any of these devices will void all warranties.

Maintenance Safety

- **NEVER** lubricate components or attempt service on a running machine.
- **ALWAYS** allow the machine a proper amount of time to cool before servicing.
- Keep the machinery in proper running condition.
- Fix damage to the machine immediately and always replace broken parts, or missing decals.
- Dispose of hazardous waste properly. Examples of potentially hazardous waste are used motor oil, fuel and fuel filters.
- **DO NOT** use food or plastic containers to dispose of hazardous waste.
- **DO NOT** pour waste, oil or fuel directly onto the ground, down a drain or into any water source.

Emergencies

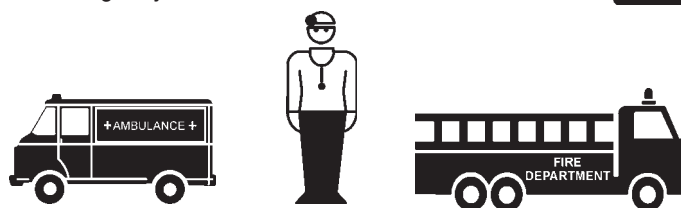
■ **ALWAYS** know the location of the nearest **fire extinguisher**.



■ **ALWAYS** know the location of the nearest **first aid kit**.



■ In emergencies **always** know the location of the nearest phone or **keep a phone on the job site**. Also know the phone numbers of the nearest **ambulance, doctor** and **fire department**. This information will be invaluable in the case of an emergency.



QP-301TH — SPECIFICATIONS/DIMENSIONS (PUMP)

Table 1. Specifications (Pump)

Pump	Model	QP-301TH
	Type	Trash Pump
	Suction & Discharge Size	3.00 in. (76 mm.)
	Maximum Pumping Capacity	416 gallons/minute (1,575 liters/minute)
	Max. Solids Diameter	1.50 in. (38 mm.)
	Max. Lift	25 ft. (7.62 meters)
	Max. Head	90 ft. (27.43 meters)
Dimension (L x W x H)	25.5 x 18.0 X 25.5 in. (65 X 45 X 65 cm.)	
Dry Net Weight	150 lbs. (68 Kg.)	

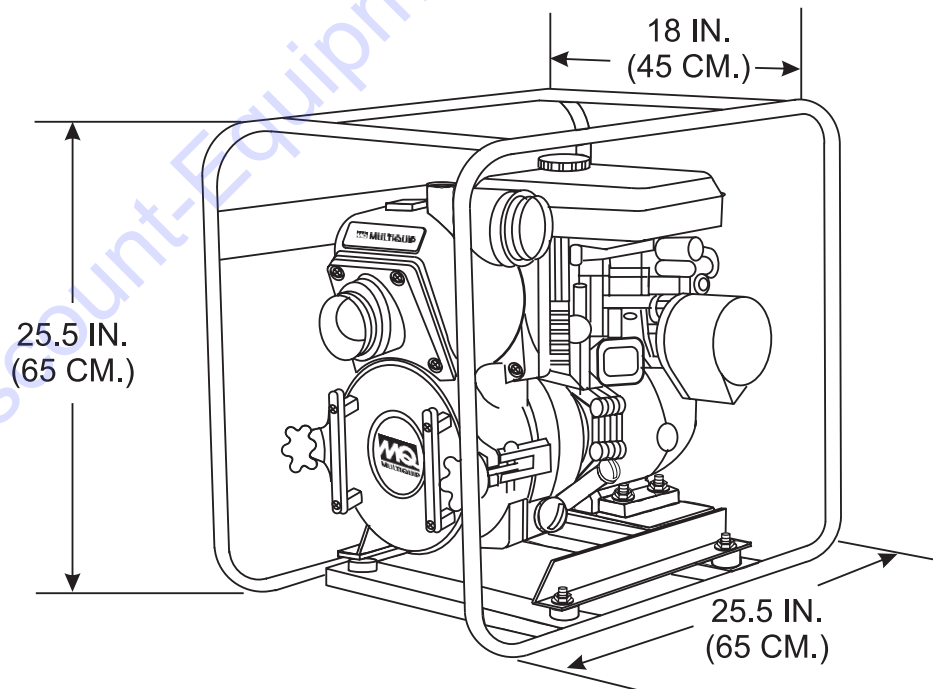


Figure 1. QP-202TH Dimensions

Table 2. Specifications (Engine)

Engine	Model	HONDA GX240K1PA2
	Type	Air-cooled 4 stroke, Single Cylinder, OHV, Horizontal Shaft Gasoline Engine
	Bore X Stroke	2.90 in. x 2.30 in. (73 mm x 58 mm)
	Displacement	14.81 cc.
	Max Output	8.0 H.P./3600 R.P.M.
	Fuel Tank Capacity	Approx. 1.59 U.S. gallons (6.0 liters)
	Fuel	Unleaded Automobile Gasoline
	Lube Oil Capacity	1.165 qts. (1.10 liters)
	Speed Control Method	Centrifugal Fly-weight Type
	Starting Method	Recoil Start
Dimension (L x W x H)	14.0 x 16.9 x 16.1 in. (355 x 430 x 410 mm)	
Dry Net Weight	55.1 lbs (25 Kg.)	

QP-301TH — GENERAL INFORMATION

APPLICATION

The **QP-301TH Trash Pump** is designed to be used for dewatering applications. Both the suction and discharge ports on the QP-301TH trash pump use a 3-inch diameter opening, which allows the pump to pump at a rate of approximately 416 gallons/minute (gpm) or 1,575 liters/minute (lpm).

Centrifugal or self priming pumps are designed to purge air from the suction line and create a partial vacuum in the pump body. The reduced atmospheric pressure inside the pump allows water to flow through the suction line and into the pump body. The centrifugal force created by the rotating impeller pressurizes the water and expels it from the pump.

Power Plant

This trash pump is powered by an 8.0 horsepower air cooled 4-stroke, single cylinder **HONDA GX-240** gasoline engine that incorporates a low "**Oil Alert Feature**"

Oil Alert Feature

In the event of **low oil** or **no oil**, the HONDA GX-240 engine has a built-in oil alarm engine shut-down feature. In the event the oil level is low the engine will automatically shut-down.

Trash Pump

Trash pumps derive their name from their ability to handle a greater amount of debris and solids than standard centrifugal pumps. These pumps generally handle solids up to 1/2 the size of the discharge opening making them less likely to clog. Also trash pumps are capable of handling water with 25% solids by weight.

The advantage of using a trash pump is that it can be quickly and easily disassembled in the field "**without tools**" and easily cleaned when clogged.

Suction Lift

This pump is intended to be used for dewatering applications and is capable of suction lifts up to 25 feet at sea level. For optimal suction lift performance keep the suction hose or line as short as possible. In general always place the pump as close to the water as possible.

Pump Support

The pump should always be placed on **solid stationary ground** in a level position.

NEVER place the pump on **soft soil**. The suction hose or pipe connection should always be checked for tightness and leaks. A small suction leak in the hose or fittings could prevent the pump from priming.

Elevation

Higher elevations will effect the performance of the pump. Due to less atmospheric pressure at higher altitudes, pumps **DO NOT** have the priming ability that they have at sea level. This is due to the "thinner air" or lack of oxygen at higher altitudes.

A general rule of thumb is that for every 1,000 feet of elevation above sea level a pump will lose one foot of priming ability.

For example, in Flagstaff, Arizona where the elevation is approximately 7,000 feet, the pump would have a suction lift of only 18 feet rather than the 25 feet at sea level. Table 3 shows suction lift at various elevations.

Table 3. Suction Lift at Various Elevations

Altitude Feet (Meters)	Suction Lift in Feet (Meters)			
	Sea Level	10.0 (3.048)	15.0 (4.572)	20.0 (6.096)
2,000 (610)	8.80 (2.680)	13.2 (4.023)	17.6 (5.364)	22.0 (6.705)
4,000 (1,219)	7.80 (2.377)	11.7 (3.566)	15.6 (4.754)	19.5 (5.943)
6,000 (1,829)	6.90 (2.103)	10.4 (3.169)	13.8 (4.206)	17.3 (5.273)
8,000 (2,438)	6.20 (1.889)	9.30 (2.834)	12.4 (3.779)	15.5 (4.724)
10,000 (3,048)	5.70 (1.737)	8.60 (2.621)	11.4 (3.474)	14.3 (4.358)

Table 4 shows percentage drops in performance as elevation increases.

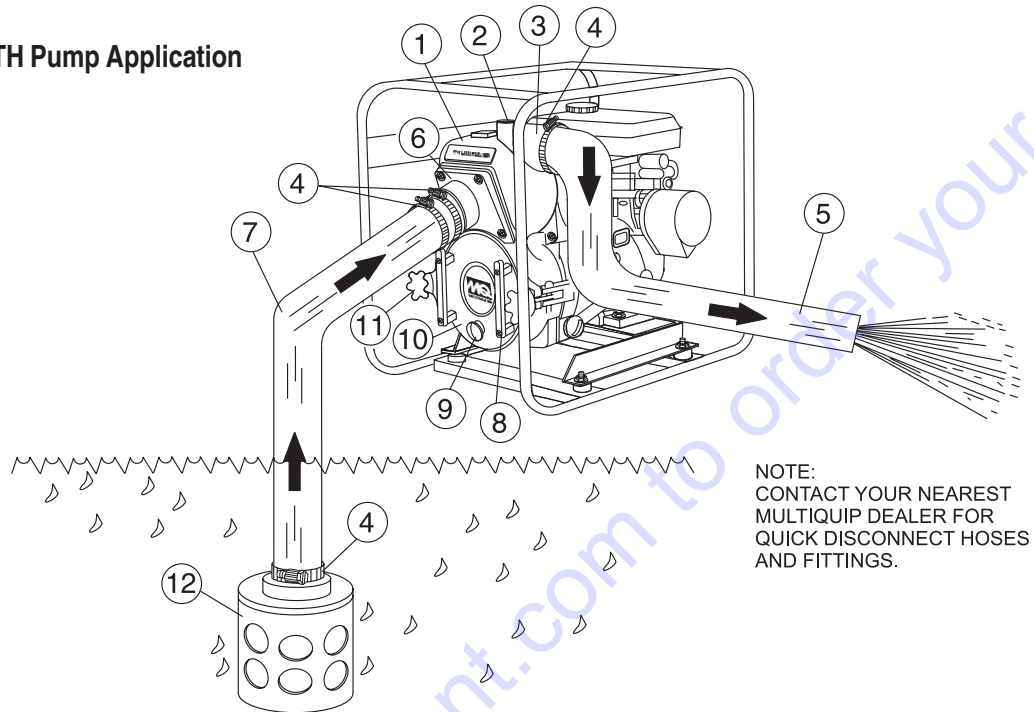
Table 4. Performance Loss at Various Elevations

Altitude Feet (Meters)	Discharge Flow	Discharge Head
Sea Level	100%	100%
2,000 (610)	97%	95%
4,000 (1,219)	95%	91%
6,000 (1,829)	93%	87%
8,000 (2,438)	91%	83%
10,000 (3,048)	88%	78%

QP-301TH — PUMP COMPONENTS

Figure 2 shows a typical application using the QP-301TH Centrifugal Trash pump. Please note that this pump is intended for the removal of clean water and water containing some debris and solids. Maximum size of solids should not exceed 1.5 inch (38 mm) in diameter. **DO NOT** set strainer on bottom of water bed. Placing the strainer above the water bed will prevent the pump from drawing in excessive amounts of sand and foreign debris.

Figure 2. QP-301TH Pump Application



NOTE:
CONTACT YOUR NEAREST
MULTI-EQUIP DEALER FOR
QUICK DISCONNECT HOSES
AND FITTINGS.

1. **Pump** – The model QP-301TH is a 3-inch trash pump used in general de-watering applications. Typical dewatering applications consist of manholes, septic tanks, fast and slow seepage ditch water, silt water, mud water and muck water.
2. **Fill Cap** – Prior to operation, the pump casing should be filled with water. Remove this cap to add water to the pump. After the initial prime, a sufficient amount of water will be retained in the casing so that the operator will not need to re-prime later.
If the casing is dry or has insufficient water, the pump will have difficulty in priming which could lead to premature mechanical seal wear thus causing damage to the pump.
3. **Discharge Port** – Connect a 3-inch discharge hose to this port.
4. **Worm Clamp** – Used to secure the hose to the inlet and outlet ports on the pump. Use two clamps to secure the hose on the inlet side of the pump.
5. **Discharge Hose** – Connect this flexible rubber hose to the discharge port on the pump. Make sure that the hose lays flat and is not kinked. Use only recommended type discharge hose. Contact Discount-equipment for ordering information.
6. **Suction Port** – Connect a 3-inch inlet hose to this port. Use two worm clamps to secure the hose.
7. **Suction Hose** – Connect this flexible rubber hose to the suction port on the pump. Make sure that the hose lays flat and is not kinked. Use only recommended type suction hose. Contact Discount-equipment for ordering information.
8. **Clean-out Cover Handles** – To gain access to the pump's clean-out area, grip both handles, then pull to remove cover. Make sure both locking knobs have been released before attempting to remove clean-out cover.
9. **Drain Plug** – Remove this plug to drain water from the pump.
10. **Clean-out Cover** – Remove cover to gain access to the clean-out area.
11. **Locking Knobs** – Turn both knobs clockwise to secure clean-out cover, turn counter-clockwise to release cover.
12. **Strainer** – Always attach a strainer to bottom side of the suction hose to prevent large objects and debris from entering the pump. Strainer should be positioned so that it will remain completely under water. Running the pump with the strainer above water for long periods can damage pump.

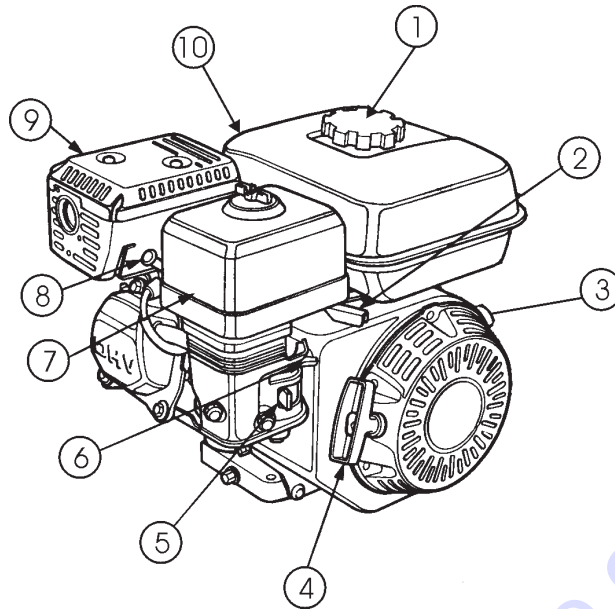


Figure 3. Engine Controls and Components

INITIAL SERVICING

The engine (Figure 3) must be checked for proper lubrication and filled with fuel prior to operation. Refer to the manufacturers engine manual for instructions & details of operation and servicing. The engine shown above is a **HONDA** engine, operation for other types of engines may vary somewhat.

1. **Fuel Filler Cap** – Remove this cap to add unleaded gasoline to the fuel tank. Make sure cap is tightened securely. **DO NOT** over fill.

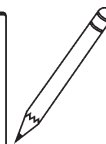
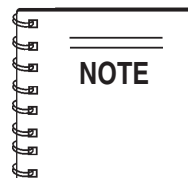


! DANGER

Adding fuel to the tank should be done only when the engine is stopped and has had an opportunity to cool down. In the event of a fuel spill, **DO NOT** attempt to start the engine until the fuel residue has been completely wiped up, and the area surrounding the engine is dry.

2. **Throttle Lever** – Used to adjust engine RPM speed (lever advanced forward **SLOW**, lever back toward operator **FAST**).
3. **Engine ON/OFF Switch** – ON position permits engine starting, OFF position stops engine operations.
4. **Recoil Starter (pull rope)** – Manual-starting method. Pull the starter grip until resistance is felt, then pull briskly and smoothly.
5. **Fuel Valve Lever** – **OPEN** to let fuel flow, **CLOSE** to stop the flow of fuel.

6. **Choke Lever** – Used in the starting of a cold engine, or in cold weather conditions. The choke enriches the fuel mixture.
7. **Air Cleaner** – Prevents dirt and other debris from entering the fuel system. Remove wing-nut on top of air filter cannister to gain access to filter element.



Operating the engine without an air filter, with a damaged air filter, or a filter in need of replacement will allow dirt to enter the engine, causing rapid engine wear.

8. **Spark Plug** – Provides spark to the ignition system. Set spark plug gap to 0.6 - 0.7 mm (0.028 - 0.031 inch) Clean spark plug once a week.
9. **Muffler** – Used to reduce noise and emissions.



! WARNING

Engine components can generate extreme heat. To prevent burns, **DO NOT** touch these areas while the engine is running or immediately after operating. **NEVER** operate the engine with the muffler removed.

10. **Fuel Tank** – Holds unleaded gasoline. For additional information refer to engine owner's manual.

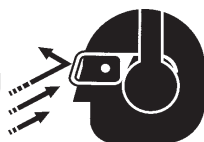
CAUTION



NEVER operate the pump in a confined area or enclosed area structure that does not provide ample **free flow of air**.



ALWAYS wear approved eye and hearing protection before operating the pump.



Before Starting

1. Read safety instructions at the beginning of manual.
2. Clean the pump, removing dirt and dust, particularly the engine cooling air inlet, carburetor and air cleaner.
3. Check the air filter for dirt and dust. If air filter is dirty, replace air filter with a new one as required.
4. Check carburetor for external dirt and dust. Clean with dry compressed air.
5. Check fastening nuts and bolts for tightness.



Engine Oil Check

1. To check the engine oil level, place the pump on secure level ground with the engine stopped.
2. Remove the filler dipstick from the engine oil filler hole (Figure 4) and wipe clean.

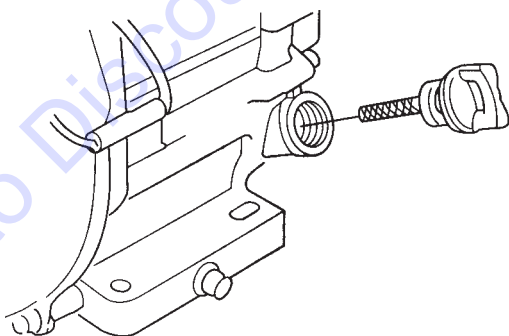


Figure 4. Engine Oil Dipstick (Removal)

3. Insert and remove the dipstick without screwing it into the filler neck. Check the oil level shown on the dipstick.
4. If the oil level is low (Figure 5), fill to the edge of the oil filler hole with the recommended oil type (Table 5). Maximum oil capacity is 1.16 quarts (1.1 liters)

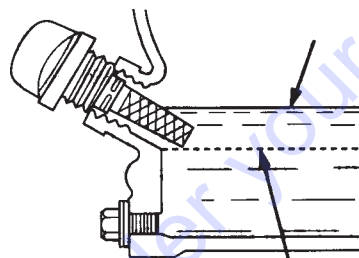


Figure 5. Engine Oil Dipstick (Oil Level)

Table 5. Oil Type

Season	Temperature	Oil Type
Summer	25°C or Higher	SAE 10W-30
Spring/Fall	25°C~10°C	SAE 10W-30/20
Winter	0°C or Lower	SAE 10W-10

Explosive Fuel

DANGER



Motor fuels are highly flammable and can be dangerous if mishandled. **DO NOT** smoke while refueling. **DO NOT** attempt to refuel the pump if the engine is **hot!** or **running**.

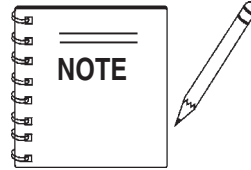


Fuel Check

1. Remove the gasoline cap located on top of fuel tank.
2. Visually inspect to see if the fuel level is low. If fuel is low, replenish with unleaded fuel.
3. When refueling, be sure to use a strainer for filtration. **DO NOT** top-off fuel. Wipe up any spilled fuel **immediately!**

Before Starting

1. Read safety instructions at the beginning of manual.
2. Place pump as near to water as possible, on a firm flat, level surface.
3. To prime pump, remove fill cap (Figure 2) and fill pump casing with water. If the pump casing is not filled with water before starting, it will not begin pumping.



Suction and discharge hoses are available from Multiquip. Contact Discount-equipment for more information.

5. The discharge hose is usually a **collapsible** (thin-walled) hose, however if a thin-walled discharge hose is not available, a rigid suction hose can be substituted in its place.
6. Make sure the **suction strainer** (Figure 2) is clean and securely attached to the water end of the suction hose. The strainer is designed to protect the pump by preventing large objects from being pulled into the pump.

CAUTION :



Pump casing **must** be filled with water before using pump. Otherwise pump will not be able to begin pumping.

WARNING :



DO NOT open **fill cap** if pump is **hot!** Water inside may be under pressure.

CAUTION :



The strainer should be positioned so it will remain completely **under water**. Running the pump with the strainer above water for long periods can damage the pump.

CAUTION :



DO NOT pump flammable fluids, corrosive chemicals or fluids containing toxic substances. These fluids can create potentially dangerous health and environmental hazards. Contact local authorities for assistance.

CAUTION :



This pump uses a water-cooled **mechanical seal** to prevent water from seeping into the engine. The passage of water through the pump casing lubricates the seal and prevents it from overheating. **NEVER!** operate the pump without water in the casing as this will cause damage to the mechanical seal.

Hoses and Clamps

1. Check that all hoses are **securely** attached to the pump. Make certain suction hose (Figure 2) does not have any air leakage. Tighten hose clamps and couplings as required.
2. It is recommended that 2 clamps be used when securing the suction hose to the inlet side (suction) of the pump.
3. Remember suction hoses must be **rigid** enough not to collapse when the pump is in operation.
4. Check that the **discharge** hose (Figure 2) is not restricted. Place hose so that it lays as straight as it is possible on the ground. Remove any twists or sharp bends from hose which may block the flow of water.

CAUTION :



DO NOT attempt to operate the pump until the Safety, General Information and Inspection sections of this manual have been **read and thoroughly understood**.

This section is intended to assist the operator with the **initial start-up** of the trash pump. It is extremely important that this section be read carefully before attempting to use the pump in the field.

Starting the Engine (HONDA engine)

1. Place the engine **fuel valve lever** (Figure 6) to the "ON" position.

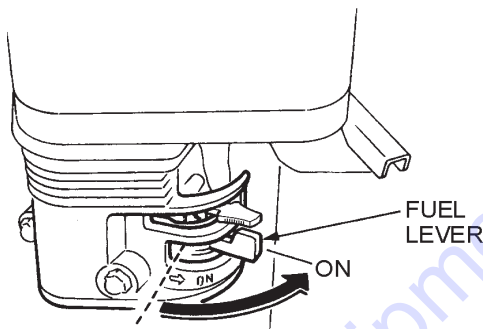


Figure 6. Engine Fuel Valve Lever (ON Position)

2. Move the **throttle lever** (Figure 7) away from the slow position, about 1/3 of the way toward the fast position.

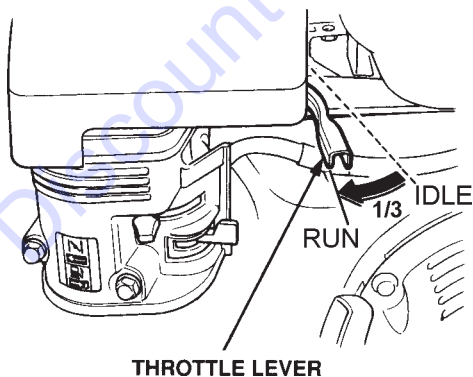


Figure 7. Throttle Lever (1/3 Start Position)

3. Place the **choke lever** (Figure 8) in the "OPEN" position if starting a **cold** engine.

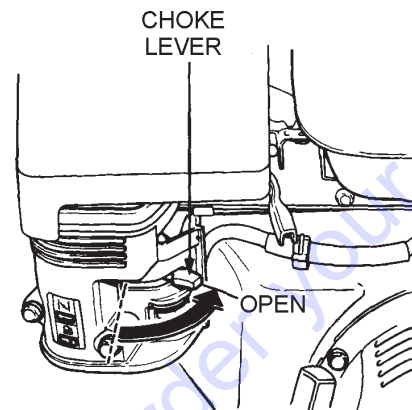


Figure 8. Engine Choke Lever (Open)

4. Place the **choke lever** (Figure 9) in the "CLOSED" position if starting a **warm** engine or the **temperature is warm**.

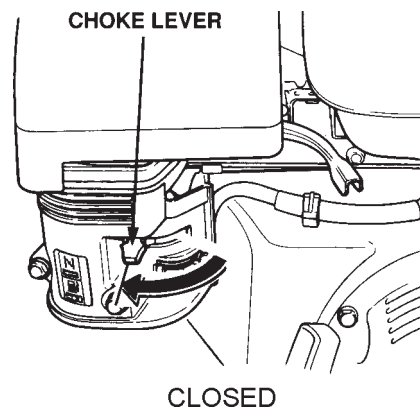


Figure 9. Engine Choke Lever (Closed)

5. Place the **engine ON/OFF switch** (Figure 10) in the "ON" position.

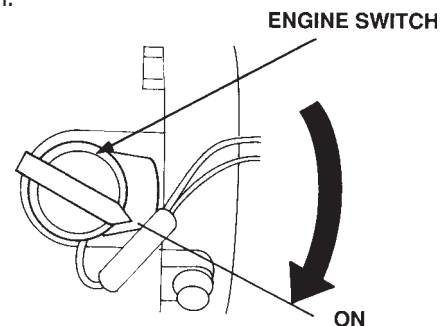


Figure 10. Engine ON/OFF Switch (ON Position)

- Grasp the starter grip (Figure 11) and slowly pull it out. The resistance becomes the hardest at a certain position, corresponding to the compression point. Pull the starter grip briskly and smoothly for starting.

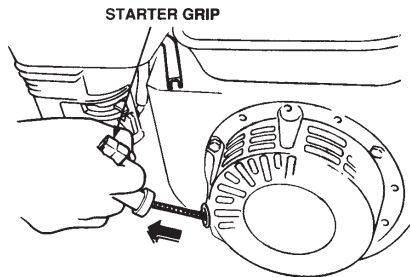


Figure 11. Starter Grip

- If the engine has started, slowly return the choke lever (Figure 12) to the **CLOSED** position. If the engine has not started repeat steps 1 through 6.

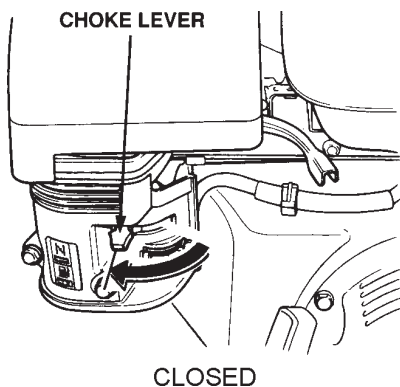


Figure 12. Choke Lever (Closed)

- Before the pump is placed into operation, run the engine for several minutes. Check for fuel leaks, and noises that would associate with a loose component.
- To begin pumping, place the throttle lever (Figure 13) in the "RUN" position.

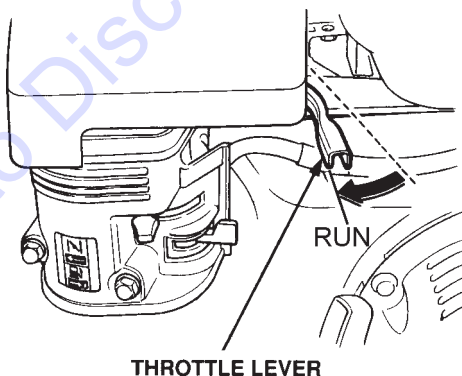


Figure 13. Throttle Lever (Run)

CAUTION :



ALWAYS run engine at **full speed** while pumping.

Stopping The Engine

Normal Shutdown

- Move the throttle lever to the **IDLE** position (Figure 14) and run the engine for three minutes at low speed.

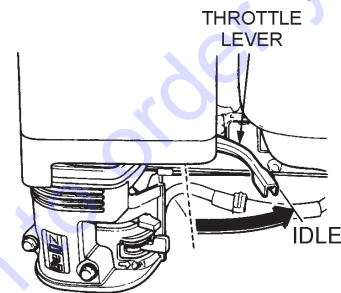


Figure 14. Throttle Lever (Idle)

- After the engine **cools**, turn the engine ON/OFF switch to the "OFF" position (Figure 15).

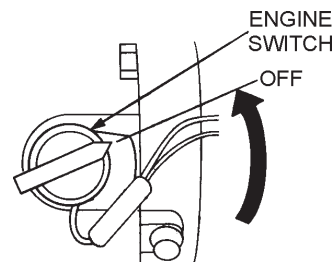


Figure 15. Engine ON/OFF Switch (OFF)

- Place the **fuel shut-off lever** (Figure 16) in the **OFF** position.

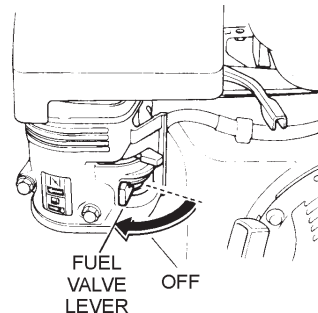


Figure 16. Fuel Valve Lever (OFF)

Emergency Showdown

- Move the throttle lever quickly to the **IDLE** position, and place the engine ON/OFF switch in the **OFF** position.

Pump Vacuum Test

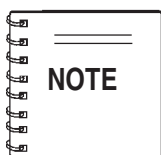
CAUTION :



DO NOT attempt to start the engine unless the pump has previously been **primed** with water. Severe pump damage will occur if pump has not been primed.

To perform the pump vacuum test do the following:

1. Remove the pump fill cap (Figure 2), and fill the pump with water.
2. Start the engine as outlined in the initial start-up section, and wait for the pump to begin pumping.
3. As shown in Figure 17 (next page), place a water hose inside the discharge opening of the pump, and turn on the water. This flow of water into the discharge opening will **prevent** the pump from running dry.
4. Place the **Pump Vacuum Tester** (P/N 7000030) over the pump suction (inlet) opening (Figure 17) with the vacuum gauge facing upwards. It may be necessary to apply a small amount of water around the rubber seal of the vacuum tester to make a good suction fit.
5. Check and make sure that there are no air leaks between the vacuum tester and the inlet port on the pump. If air leaks are present reseal vacuum tester.
6. Run the pump for a few minutes while monitoring the vacuum gauge. If the gauge indicates a reading between -25 and -20 in. Hg. (inches of mercury) then it can be assumed that the pump is working correctly.

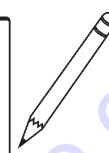
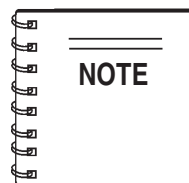


25 in. Hg (inches of mercury) translates into 25 feet of lift at **sea level**.

7. If the vacuum tester gauge indicates a reading **below** -20 in. Hg, it can then be assumed that the pump is not functioning correctly, and corrective action needs to be taken.
6. To test the **flapper valve**, shut down the engine. The vacuum tester should remain attached to the pump suction inlet port by vacuum. This indicates the pump's flapper valve is seating properly to hold water in the suction hose when the engine is stopped. This prevents backflow and allows for faster priming when the engine is restarted.

Adjusting Impeller Clearance

1. If it is necessary to replace impeller or volute, be sure clearance between impeller and volute is adjusted correctly.
2. The impeller should be as close to the volute as possible without rubbing against it. Clearance is adjusted by adding or removing **shims** from behind the impeller.
3. Check clearance between impeller and insert by slowly pulling starter rope to turn impeller. Remove spark plug to make it easier to turn impeller.



It is important not to remove too many shims or the clearance between the impeller and volute will become **too wide** and pump performance will be reduced. Remember as the impeller wear down, additional shims may be required to maintain the clearance between the impeller and insert.

4. Check the impeller **every six months** for wear, and for clearance between the impeller face and the volute. Also check the shaft seal for wear, as well as the shaft sleeve.

Pump Cleaning

After pumping water containing large amounts of dirt and debris, perform the following:

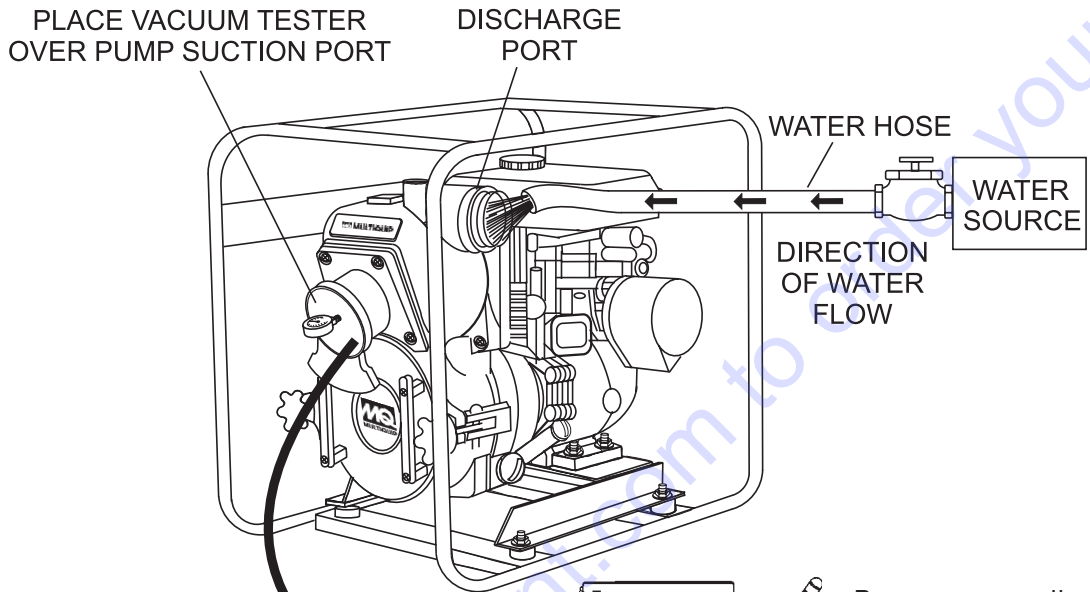
1. Remove the drain plug from the pump housing (Figure 2) and drain any water left in the pump.
2. Loosen the two locking hand knobs (turn counter-clockwise) and remove **clean-out cover**.
3. Clean and remove dirt, debris from pump casing. Inspect impeller and volute for wear. Replace any damaged or worn parts.

CAUTION :



The impeller may develop **sharp edges**. Use extreme care when cleaning around the impeller to prevent being cut.

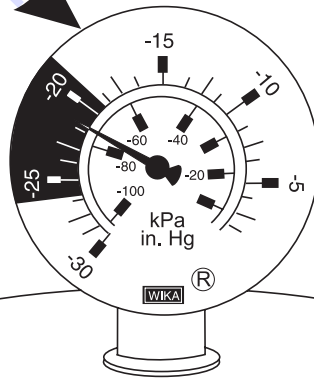
CAUTION
DO NOT RUN PUMP
WITHOUT WATER.



NOTE

Pressure reading may vary depending on altitude. See Tables 3 and 4 on page 12.

ACCEPTABLE READING SHOULD BE BETWEEN -25 AND -20 IN. HG.



25 IN. HG. TRANSLATES INTO 25 FEET OF LIFT AT SEA LEVEL.

PUMP VACUUM TESTER

Figure 17. Pump Vacuum Tester

Engine Maintenance

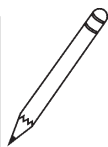
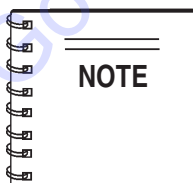
Perform engine maintenance procedures as referenced by Table 6 below:

Table 6. Engine Maintenance Schedule							
DESCRIPTION (3)	OPERATION	BEFORE	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 200 HRS.
Engine Oil	CHECK	X					
	CHANGE		X				
Air Cleaner	CHECK	X					
	CHANGE			X (1)			
All Nuts & Bolts	Re-tighten If Necessary	X					
Spark Plug	CHECK-CLEAN				X		
	REPLACE						X
Cooling Fins	CHECK				X		
Spark Arrester	CLEAN					X	
Fuel Tank	CLEAN					X	
Fuel Filter	CHECK					X	
Idle Speed	CHECK-ADJUST					X (2)	
Valve Clearance	CHECK-ADJUST						X (2)
Fuel lines	CHECK	Every 2 years (replace if necessary) (2)					

(1) Service more frequently when used in **DUSTY** areas.

(2) These items should be serviced by your servic 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.



Reference manufacturer engine manual for specific servicing instructions.

Maintenance

Perform the engine maintenance procedures as indicated below:

DAILY

- Thoroughly remove dirt and oil from the engine and control area. Clean or replace the air cleaner elements as necessary. Check and retighten all fasteners as necessary. Check the spring box and bellows for oil leaks. Repair or replace as needed.

WEEKLY

- Remove the fuel filter cap and clean the inside of the fuel tank.
- Remove or clean the filter at the bottom of the tank.
- Remove and clean the spark plug (Figure 18), then adjust the spark gap to 0.028 ~0.031 inch (0.6~0.7 mm). This unit has electronic ignition, which requires no adjustments.

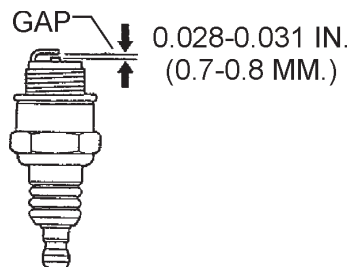


Figure 18. Spark Plug Gap

ENGINE OIL

1. Drain the engine oil when the oil is **warm** as shown in Figure 19.
2. Remove the oil drain bolt and sealing washer and allow the oil to drain into a suitable container.
3. Replace engine oil with recommended type oil as listed in Table 5. Engine oil capacity is 1.16 quarts (1.1 liters). **DO NOT** overfill.
4. Install drain bolt with sealing washer and tighten securely.

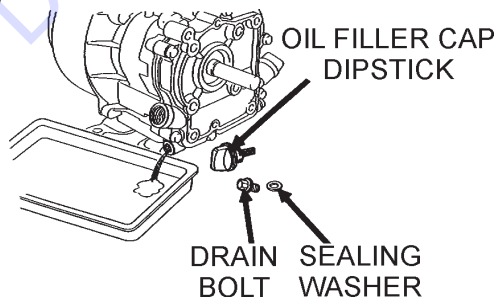


Figure 19. Engine Oil (Draining)

DANGER :



DO NOT use gasoline as a cleaning solvent, because that would create a risk of fire or explosion.

ENGINE AIR CLEANER

1. Remove the air cleaner cover and foam filter element as shown in Figure 20.
2. Tap the paper filter element (Figure 20) several times on a hard surface to remove dirt, or blow compressed air [not exceeding 30 psi (207 kPa, 2.1 kgf/cm²)] through the filter element from the air cleaner case side. **NEVER** brush off dirt. Brushing will force dirt into the fibers. Replace the paper filter element if it is excessively dirty.
3. Clean foam element in warm, soapy water or nonflammable solvent. Rinse and dry thoroughly. Dip the element in clean engine oil and completely squeeze out the excess oil from the element before installing.

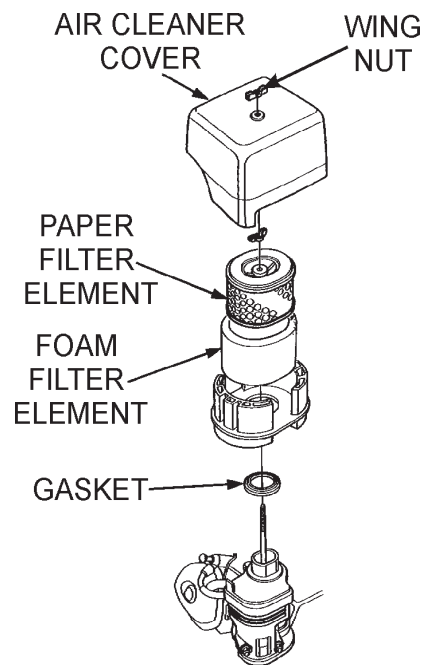


Figure 20. Engine Air Cleaner

Pump Storage

For storage of the pump for over 30 days, the following is required:

- Drain the fuel tank completely.
- Run the engine until the fuel in the injection system is completely consumed.
- Completely drain used oil from the engine crankcase and fill with fresh clean oil, then follow the procedures described in the engine manual for engine storage.
- Remove the drain plug from the pump and drain out any water from left in the housing.
- Remove the pump cover and clean inside of pump housing. Coat inside of pump housing with a light film of oil to reduce corrosion. A spray can of oil works well for this application.
- Cover suction and discharge ports with duct tape to prevent any foreign matter from falling into pump.
- Cover pump and engine with plastic covering or equivalent and store in a clean, dry place.
- To protect the water cooled-seals, place one-half pint of lubricating oil (new or used) through the discharge opening on the pump and crank the engine several times. This will prevent excessive corrosion and also keep the mechanical seal lubricated.

QP-301TH — TROUBLESHOOTING (ENGINE)

TABLE 7. ENGINE TROUBLESHOOTING

SYMPTOM	POSSIBLE PROBLEM	SOLUTION
Difficult to start		
Fuel is available but spark plug will not ignite. (Power available at high tension cable).	Ignition plug being bridge?	Check ignition system.
	Carbon deposit at ignition?	Clean or replace ignition.
	Short circuit due to defective insulators?	Replace insulators.
	Improper spark gap?	Set spark plug gap to the correct gap.
Fuel is available but spark plug will not ignite. (Power NOT available at high tension cable).	Short circuit at stop switch?	Check stop switch circuit. Replace stop switch if defective.
	Ignition coil defective?	Replace ignition coil.
Fuel is available and spark plug ignites (compression normal).	Muffler clogged with carbon deposits?	Clean or replace muffler.
	Mixed fuel quality is inadequate?	Check fuel to oil mixture.
	Fuel in use inadequate (water, dust)?	Flush fuel sytem and replace with fresh fuel.
	Air Cleaner clogged?	Clean or replace air cleaner.
Fuel is available and spark plug ignites (compression low).	Defective cylinder head gasket?	Tighten cylinder head bolts or replace head gasket.
	Cylinder worn?	Replace cylinder.
	Spark plug loose?	Tighen spark plug.
Operation not satisfactory		
Not enough power available (compression normal, no miss-firing).	Air cleaner clogged?	Clean or replace air cleaner.
	Air in fuel line?	Bleed (remove air) from fuel line.
	Fuel level in carbureator float chamber improper?	Adjust carbureator float
	Carbon deposits in cylinder?	Clean or replace cylinder
Not enough power available (compression normal, miss-firing).	Ignition coil defective?	Flush fuel sytem and replace with fresh fuel.
	Ignition plug often shorts?	Replace ignition wires, clean ignition.
	Fuel in use inadequate (water, dust)?	Flush fuel sytem and replace with fresh fuel.
Engine overheats.	Excessive carbon depostion in combustion chamber?	Clean or replace crankcase.
	Exhaust or muffler clogged with carbon.	Clean or replace muffler.
	Spark plug heat value incorrect?	Replace spark plug with correct type spark plug.

QP-301TH — TROUBLESHOOTING (ENGINE/PUMP)

TABLE 7. ENGINE TROUBLESHOOTING (Continued)

SYMPTOM	POSSIBLE PROBLEM	SOLUTION
Operation not satisfactory		
Rotational speed fluctuates.	Governor adjustment improper?	Adjust governor to correct lever.
	Governor spring defective?	Clean or replace ignition.
	Fuel flow erratic?	Check fuel line.
	Air taken in through suction line?	Check suction line.
Recoil starter not working properly.	Dust in rotating part?	Clean recoil starter assembly.
	Spring spring failure?	Replace sprial spring.

TABLE 8. PUMP TROUBLESHOOTING

SYMPTOM	POSSIBLE PROBLEM	SOLUTION
Pump does not take on water.	Not enough priming water in the housing?	Add water.
	Engine speed too low?	Increase throttle.
	Strainer plugged?	Clean strainer.
	Suction hose damaged?	Replace or repair hose, and clamps
	Air leak at suction port?	Check that fittings are tight and properly sealed.
	Pump is located too high above water line?	Move pump closer to water.
	Debris collecting in pump housing?	Clean pump housing.
	Too much distance between impeller and volute.	Adjust clearance by adding shims or replace impeller. Min. .006" - Max. .020"
	Water leaking out weep hole between pump and engine?	Check condition of mechanical seal and gaskets, between pump end and engine housing.
Pump takes in water, little or no discharge.	Engine speed too low?	Increase throttle speed.
	Suction strainer partially plugged?	Clean strainer.
	Impeller/Volute worn?	Adjust clearance by adding shims or replace impeller/volute
Suction hose leaks at inlet.	Fittings/clamps are not sealed properly?	Tighten, replace or add clamp. (Keep extra seals on pump)
	Hose diameter is too large?	Use smaller diameter hose or replace hose.
Discharge does not stay on coupling.	Pressure too high?	Check pressure, add additional clamp.
	Hose kinked or end blocked?	Check hose.
Impeller does not turn: pump is hard to start.	Impeller jammed or blocked?	Open pump cover and clean dirt and debris from inside housing.
	Impeller and volute binding?	Adjust clearance by removing shim from behind impeller.
	Defective engine?	See Engine Owner's Manual.

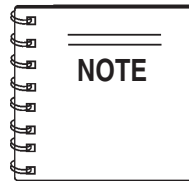
QP-301TH — EXPLANATION OF CODE IN REMARKS COLUMN

How to read the marks and remarks used in this parts book.

Items Found In the “Remarks” Column

Serial Numbers-Where indicated, this indicates a serial number range (inclusive) where a particular part is used.

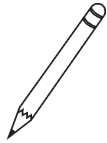
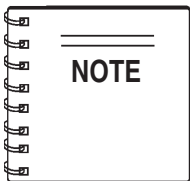
Model Number-Where indicated, this shows that the corresponding part is utilized only with this specific model number or model number variant.



The contents of this catalog are subject to change without notice.

Items Found In the “Items Number” Column

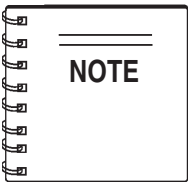
All parts with same symbol in the number column, *, #, +, %, or ■, belong to the same assembly or kit.



If more than one of the same reference number is listed, the last one listed indicates newest (or latest) part available.

**QP-301TH TRASH PUMP 1 TO 3 UNITS
W/HONDA GX240K1PA2 ENGINE**

Qty.	P/N	Description
2	KIT301T	KIT, MECHANICAL SEAL, O-RINGS
1	1343040030	IMPELLER
1	0811883056	MECHANICAL SEAL SLEEVE
1	0481310250	O-RING, MECHANICAL SLEEVE
2	0631211100	FLOODING CAP
2	0480350300	O-RING, FLOOD CAP
3	9807956846	SPARK PLUG
3	17210ZE2505	ELEMENT, AIR CLEANER
1	28462ZE2W11	ROPE STARTER
1	17620ZH7023	CAP, W/GASKET FUEL FILLER

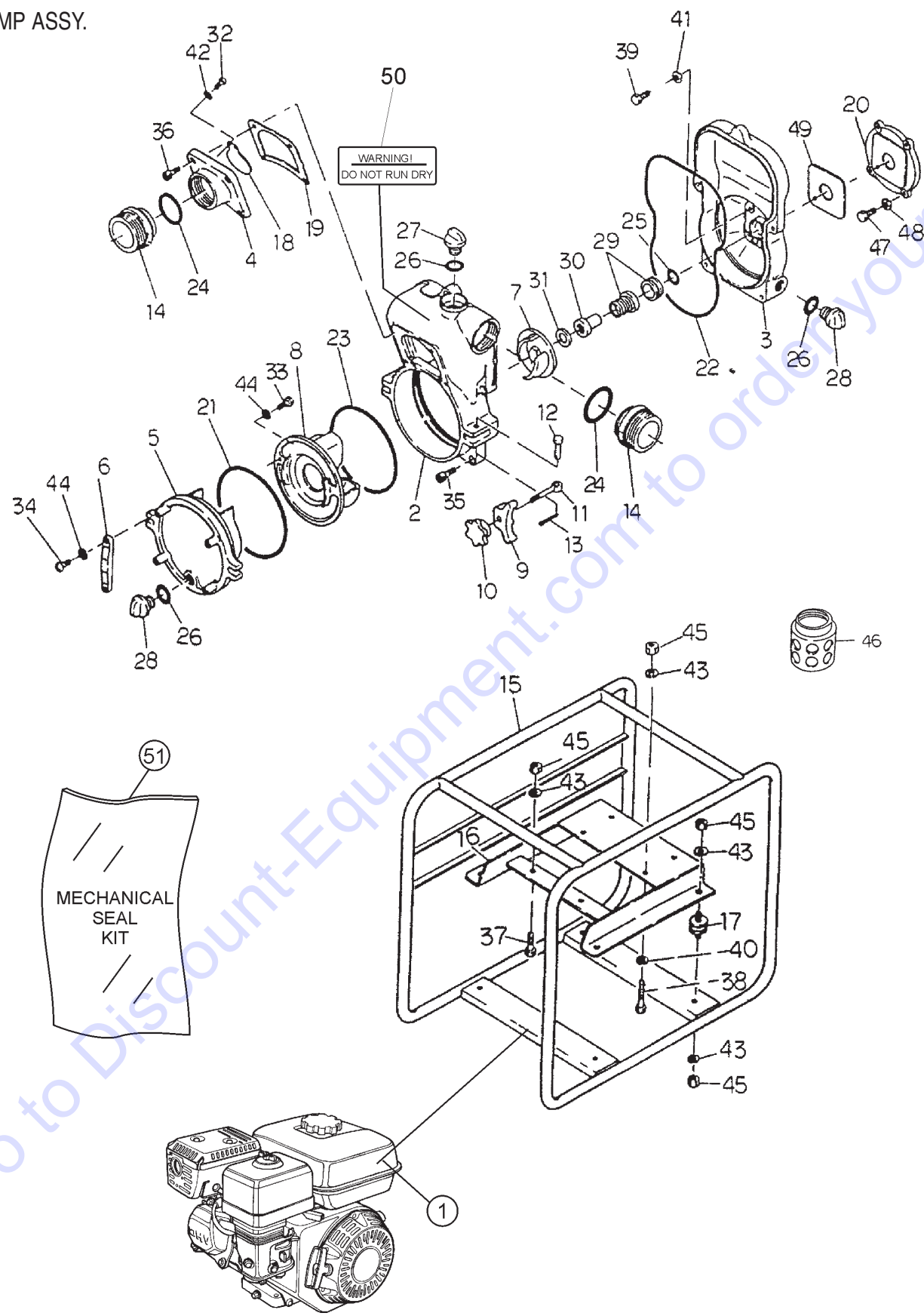


Part number on this Suggested Spare Parts List may super cede/replace the P/N shown in the text pages of this book.

Go to Discount-Equipment.com to order your parts

QP-301TH — PUMP ASSY.

PUMP ASSY.

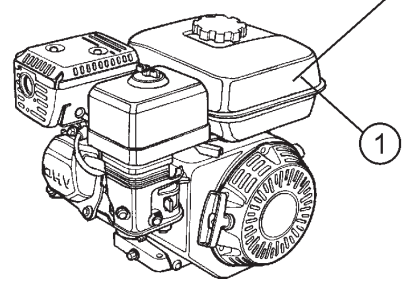
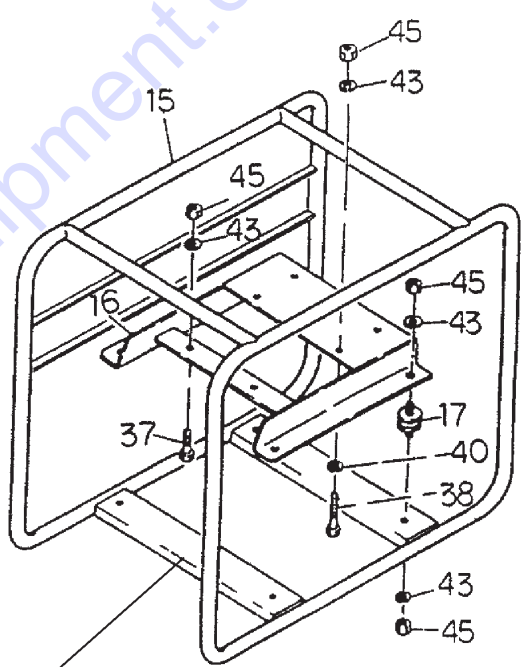
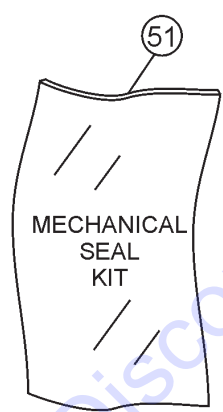
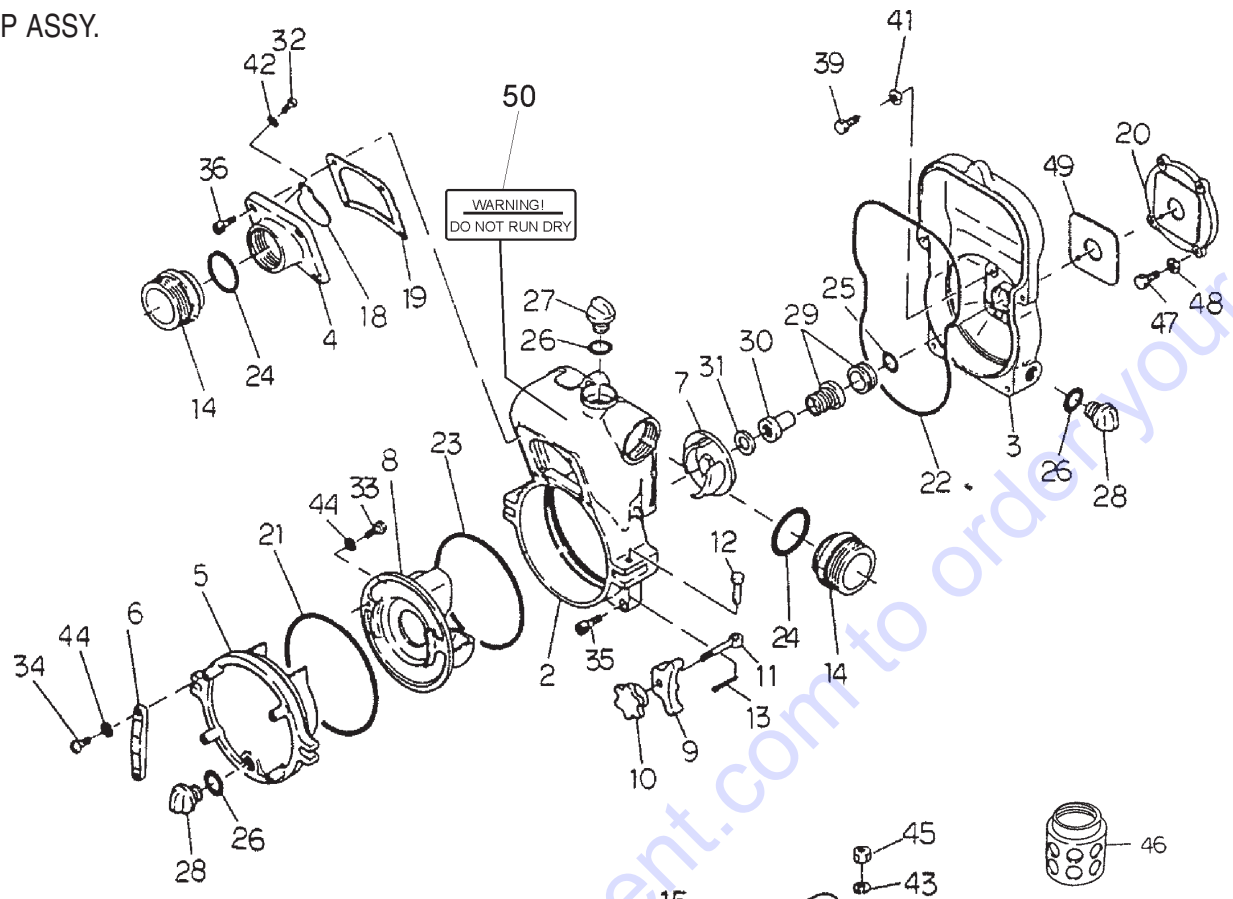


PUMP ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	GX240K1PA2	ENGINE, HONDA	1	
2	1343100010	CASING NPS3"	1	
3	1317100020	CASING COVER	1	
4	1343100160	SUCTION COVER NPS3"	1	
5	1268100170	DRAIN COVER	1	
6	1247100250	DRAIN COVER HANDLE	2	
7	1343040030	IMPELLER	1	
8	1317000130	VOLUTE CASING	1	
9	1247000200	DRAIN COVER PUSH PLATE	2	
10	1247000190	DRAIN COVER SET HANDLE	2	
11	1247200270	HINGE BOLT M12 X 90	2	
12	1247220280	HINGE PIN	2	
13	0641400430	SPLIT PIN DIA. 4 X 30	2	
14	0790433030	NIPPLE NPS3" X NPT3"	2	
15	1353214011	BASE	1	
16	1975214020	ENGINE BASE	1	
17	0723302040	CUSHION RUBBER	4	
18	1317350350	CHECK VALVE	1	
19	1317330370	SUCTION COVER PACKING	1	
20	4313000600	CASING COVER SET PLATE	1	
21*	0489352400	O'RING (DRAIN COVER)	1	
22	0489354020	O'RING (CASING) DIA.	1	
23*	0489312300	O'RING (VOLUTE CASING)	1	
24	0481310800	O'RING (NIPPLE)	2	
25*	0481310250	O'RING (MECHANICAL SEAL SLEEVE)	1	
26	0480350300	O'RING (FLOODING DRAIN CAP)	3	
27	0631211100	FLOODING CAP PF1"	1	
28	0631211100	DRAIN CAP PF1"	2	
29*	0801123530	MECHANICAL SEAL	1 SET	
30*	0811883056	MECHANICAL SEAL SLEEVE	1	
31*	0852834525	ADJUST LINER DIA. 45 X DIA. 25 t0.3	1	
31*	0852854525	ADJUST LINER DIA. 45 X DIA. 25 t0.5	1	
32	0141090510	SCREW (CHECK VALVE) M5 x 10	2	
33	0141090820	SCREW (VOLUTE CASING) M8 X 20	2	
34	0141050825	SCREW (DRAIN COVER HANDLE) M8 X 25	4	
35	0131151235	CAP SCREW (CASING) M12 X 35	5	

QP-301TH — PUMP ASSY.

PUMP ASSY.



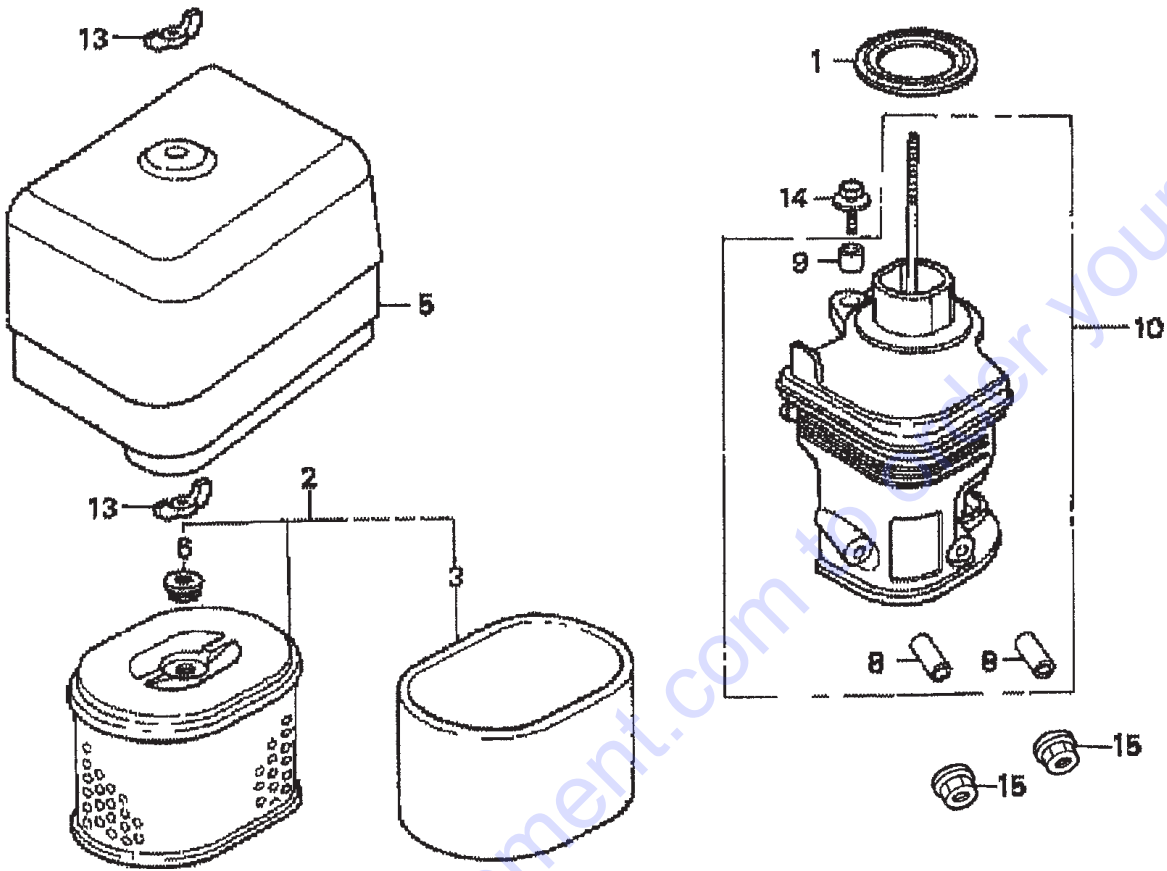
PUMP ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
36	0131151030	CAP SCREW (SUCTION COVER) M10 X 30	4	
37	0105051050	BOLT (PUMP) M10 X 50	2	
38	0105051045	BOLT (ENGINE) M10 X 45	4	
39	0105050820	BOLT (CASING COVER) M8 X 20	4	
40	0401450100	WASHER M10	4	
41	0458220080	SEAL WASHER M8	4	
42	0401450050	WASHER M5	2	
43	0451250100	SPRING WASHER M10	14	
44	0451250080	SPRING WASHER M8	6	
45	0205450100	NUT (PUMP ENGINE CUSHION RUBBER)	14	
46	0742304080	STRAINER NPT3"	1	
47	0191160625	BOLT (SET PLATE) 3/8" - 16UNC X 25	4	
48	0451250100	SPRING WASHER M10	4	
49	1317390610	CASING COVER PACKING	1	
50	7005000	DECAL: DO NOT RUN DRY	1	
51	KIT301T	KIT, MECHANICAL SEAL, O-RINGS	1	INCLUDES ITEMS W/*

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HONDA GX240K1PA2 ENGINE — AIR CLEANER ASSY.

AIR CLEANER ASSY.



HONDA GX240K1PA2 ENGINE — AIR CLEANER ASSY.

AIR CLEANER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	16281ZE2000	GASKET, ELBOW	1	
2	17210ZE2505	ELEMENT, AIR CLEANER (DUAL)	1	INCLUDES ITEMS W/*
3*	17218ZE2505	FILTER, OUTER	1	
5	17231ZH9820	COVER, AIR CLEANER	1	
6	17232891000	GROMMET, AIR CLEANER	1	
8+	17238ZE2310	COLLAR, AIR CLEANER	2	
9+	17239ZE1000	COLLAR B, AIR CLEANER	1	
10	17410ZE2020	ELBOW, AIR CLEANER	1	INCLUDES ITEMS W/ +
13	90325044000	WINGNUT, TOOL BOX SETTING	2	
14	90009ZE2003	BOLT- WASHER 6 X 22	1	
15	9405006000	NUT, FLANGE 6MM	2	

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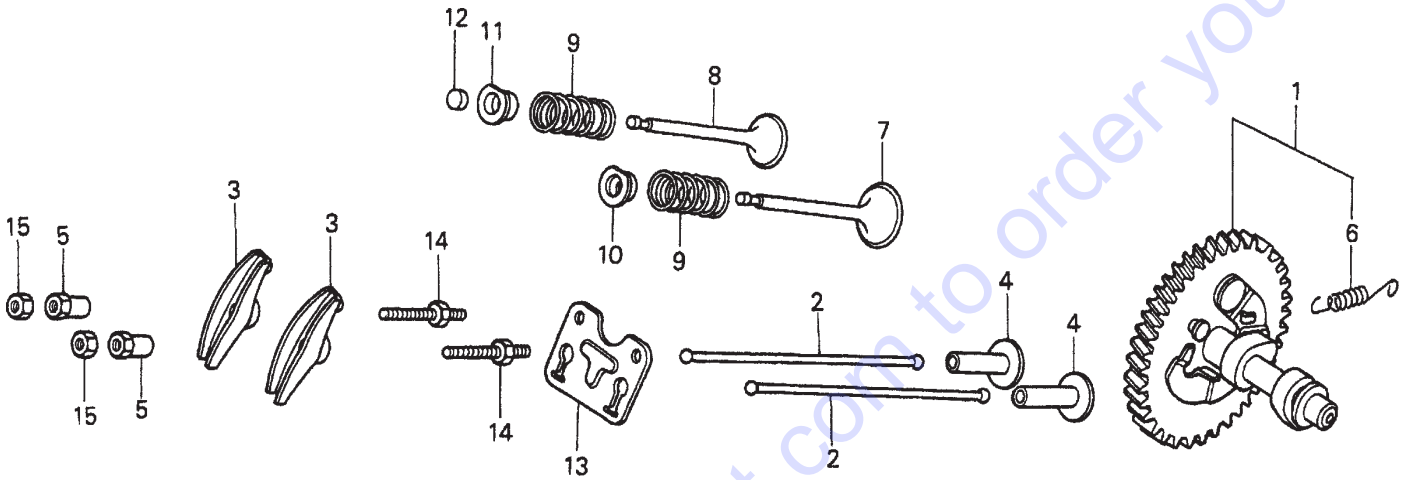
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HONDA GX240K1PA2 ENGINE — CAMSHAFT ASSY.

CAMSHAFT ASSY.



HONDA GX240K1PA2 ENGINE — CAMSHAFT ASSY.

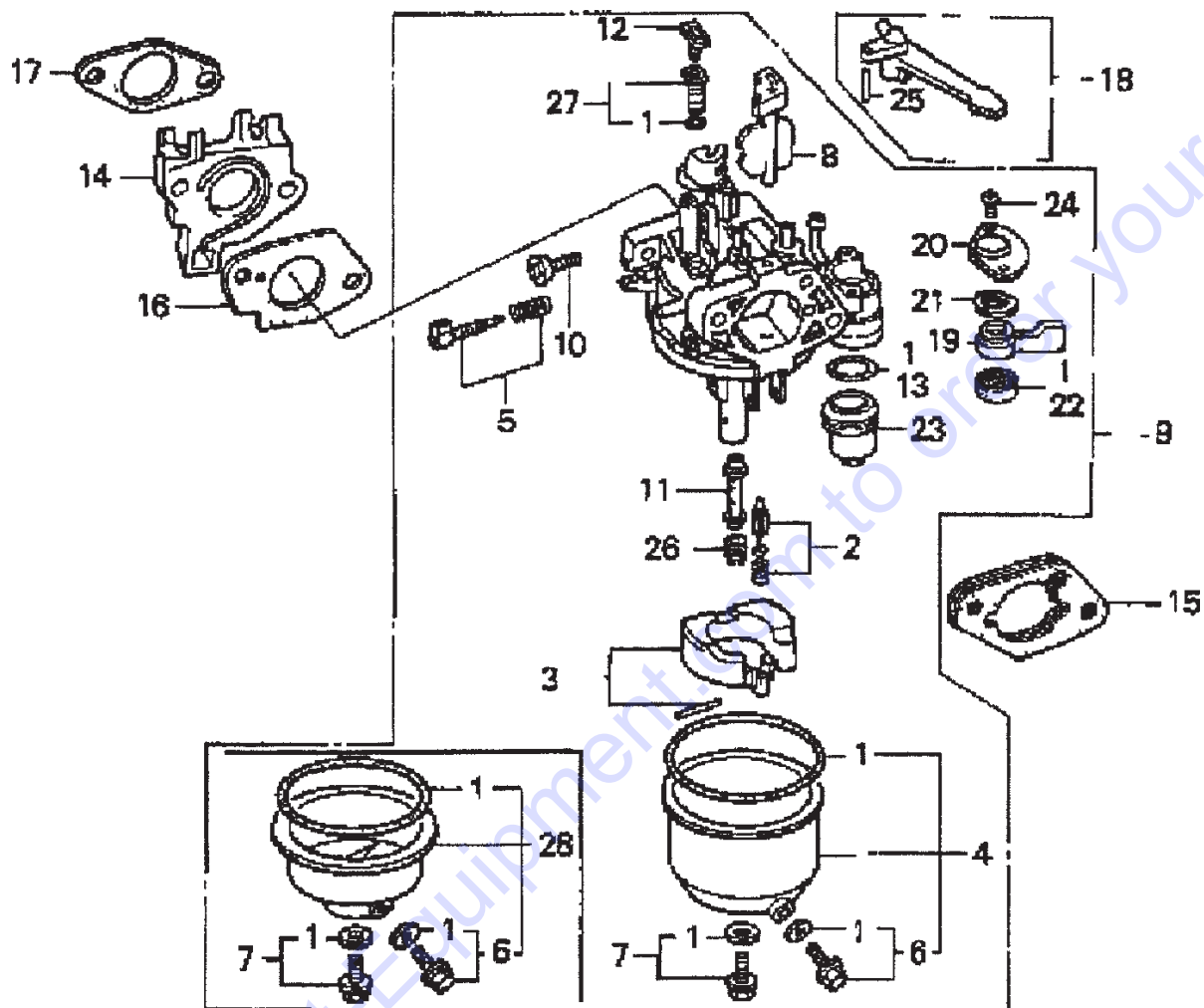
CAMSHAFT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	14100ZE2306	CAMSHAFT ASSEMBLY	1	INCLUDES ITEM W/* USE UP TO
		1	ENGINE S/N 3620688
1	14100ZE2W01	CAMSHAFT ASSEMBLY	1	INCLUDES ITEM W/* USE FROM
		1	ENGINE S/N 3620689
2	14410ZE2013	ROD, PUSH	2	
3	14431ZE2010	ARM, VALVE ROCKER	2	
4	14441ZE2000	LIFTER, VALVE	2	
5	14451ZE1013	PIVOT, ROCKER ARM	2	
6*	14568ZE1000	SPRING, WEIGHT RETURN	1	
7	14711ZE2000	VALVE, INTAKE	1	
8	14721ZE2000	VALVE, EXHAUST	1	
9	14751ZE2003	SPRING, VALVE	2	
10	14771ZE2000	RETAINER, INTAKE VALVE SPRING	1	
11	14773ZE2000	RETAINER, EXHAUST VALVE SPRING	1	
12	14781ZE2000	ROTATOR, VALVE	1	
13	14791ZE2010	PLATE, PUSH ROD GUIDE	1	
14	90012ZE0010	BOLT, PIVOT 8MM	2	
15	90206ZE1000	NUT, PIVOT ADJ.	2	

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HONDA GX240K1PA2 ENGINE — CARBURETOR ASSY.

CARBURETOR ASSY.



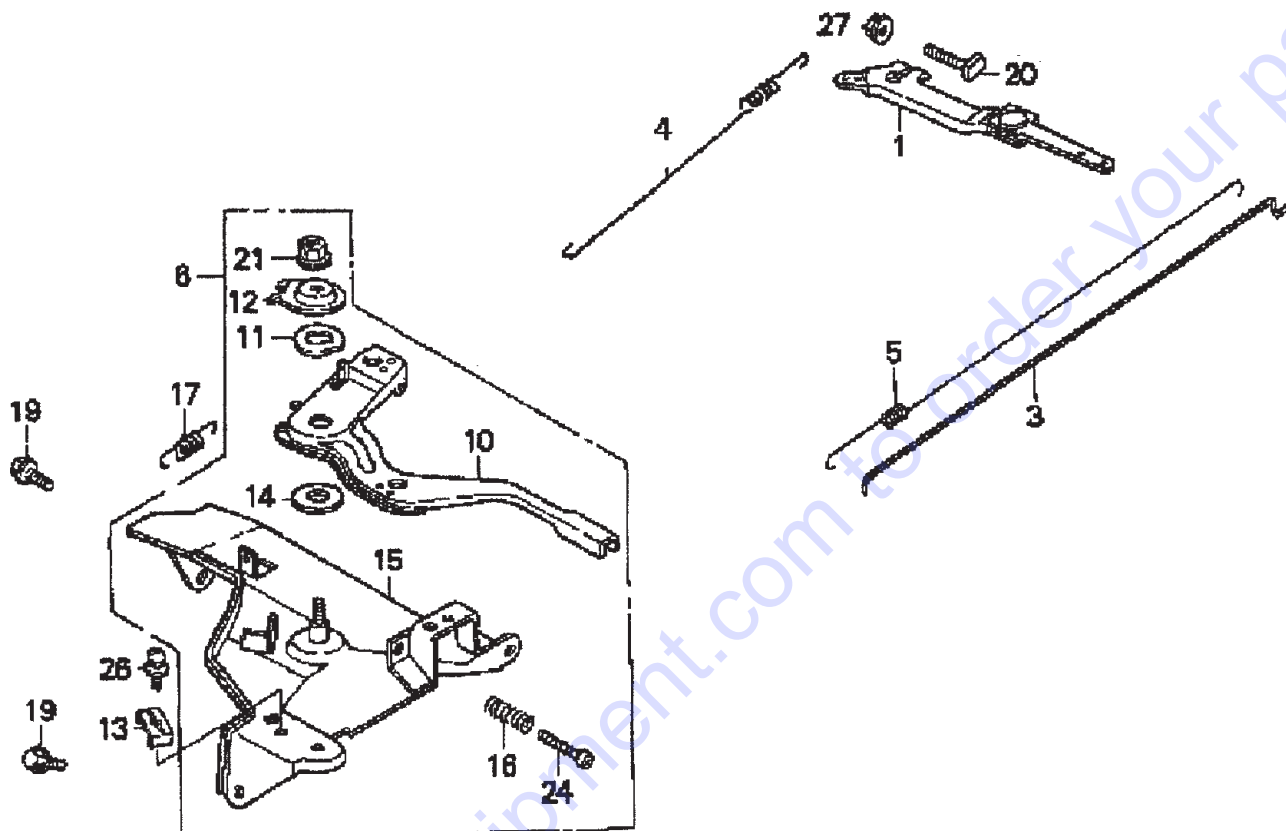
HONDA GX240K1PA2 ENGINE — CARBURETOR ASSY.

CARBURETOR ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
1*+■	16010ZE2812	GASKET SET	1	
2*	16011ZA0931	VALVE SET, FLOAT	1	
3*	16013ZA0931	FLOAT SET	1	
4*	16015ZE2005	CHAMBER SET, FLOAT	1	USE UP TO ENGINE S/N BE70B A
4	16015ZE8005	CHAMBER SET, FLOAT	1	INCLUDES ITEMS W/+ USE UP TO ENGINE S/N BE70B A
5*	16016ZH7W01	SCREW SET	1	
6*+■	16024ZE1811	SCREW SET, DRAIN	1	
7*+■	16028ZE0005	SCREW SET B	1	
8*	16044ZE2005	CHOKE SET	1	
9*	16100ZE2W71	CARB. ASSEMBLY, BE70B B	1	INCLUDES ITEMS W/*
10*	16124ZE0005	SCREW, THROTTLE STOP	1	
11*	16166ZE2W70	NOZZLE, MAIN	1	
12*	16172ZE2W10	COLLAR SET	1	
13*	16173001004	GASKET, FUEL STRAINER CUP	1	
14	16211ZE2000	INSULATOR, CARBURETOR	1	
15	16220ZA0702	SPACER, CARBURETOR	1	
16	16221ZA0800	GASKET, CARBURETOR	1	
17	16223ZA0800	GASKET, INSULATOR	1	
18	16610ZE1000	LEVER, CHOKE (STANDARD)	1	INCLUDES ITEMS W/%
19*	16953ZE1406	LEVER, VALVE	1	USE UP TO ENGINE S/N BE70B A
19	16953ZE1812	LEVER, VALVE	1	USE FROM ENGINE S/N BE70B B
20*	16954ZE1811	PLATE, LEVER SETTING	1	USE UP TO ENGINE S/N BE70B A
20	16954ZE1812	PLATE, LEVER SETTING	1	USE FROM ENGINE S/N BE70B B
21*	16956ZE1811	SPRING, VALVE LEVER	1	
22*	16957ZE1812	GASKET, VALVE	1	
23*	16967ZE0811	CUP, FUEL STRAINER	1	
24*	93500030060H	SCREW, PAN 3 X 6	2	USE FROM ENGINE S/NBE70B B
24	93500030080G	SCREW, PAN 3 X 8	2	USE UP TO ENGINE S/N BE70B A
25%	9430520122	PIN, SPRING 2 X 12	1	
26	99101ZH80820	JET, MAIN #82 (OPTIONAL)	1	
26	99101ZH80850	JET, MAIN #85 (OPTIONAL)	1	
26*	99101ZH80880	JET, MAIN #88	1	
27*	99204ZE20400	JET SET, PILOT #40	1	
28*	16015ZE8005	CHAMBER SET, FLOAT	1	INCLUDES ITEMS W/■

HONDA GX240K1PA2 ENGINE — CONTROL ASSY.

CONTROL ASSY.



HONDA GX240K1PA2 ENGINE — CONTROL ASSY.

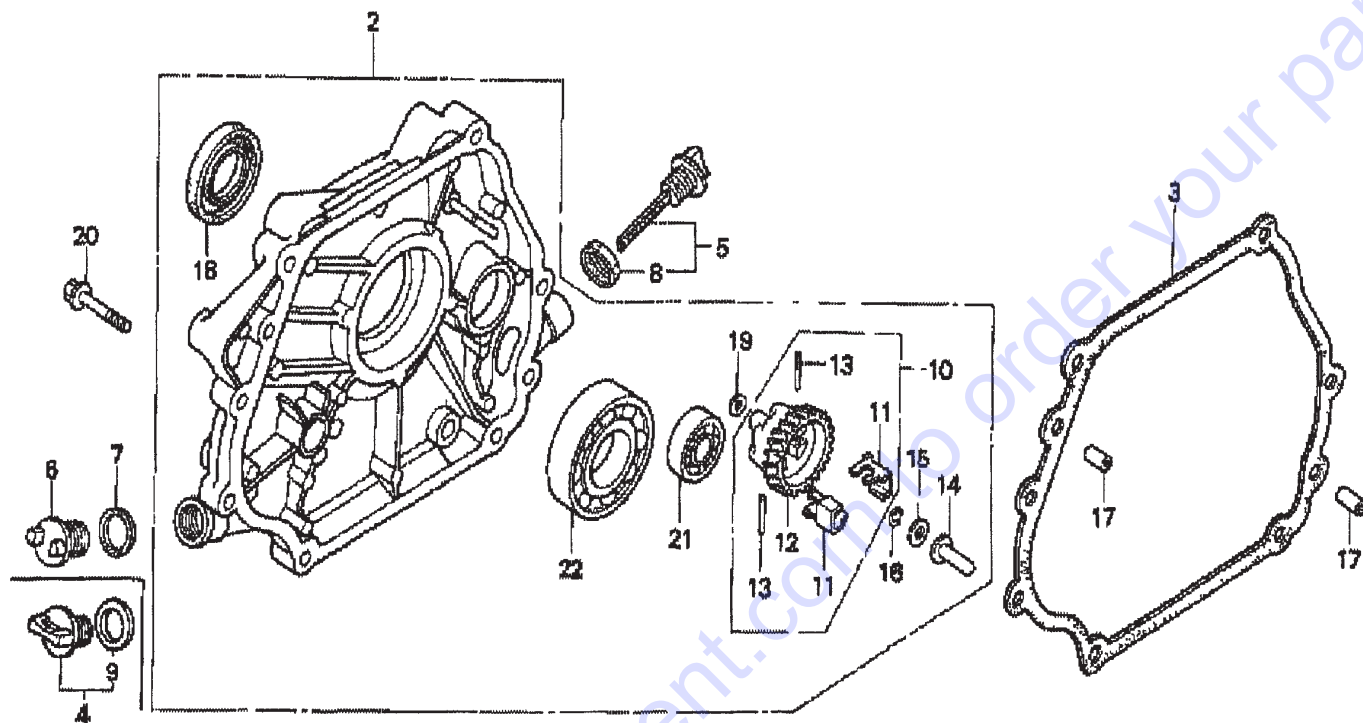
CONTROL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	16551ZE2000	ARM, GOVERNOR	1	
3	16555ZE2000	ROD, GOVERNOR	1	
4	16561ZE2000	SPRING, GOVERNOR	1	
5	16562ZE2000	SPRING, THROTTLE RETURN	1	
6	16570ZE2W00	CONTROL ASSY.	1	INCLUDES ITEMS W/*
10*	16571ZE2W00	LEVER, CONTROL	1	
11*	16574ZE1000	SPRING, LEVER	1	
12*	16575ZE2W00	WASHER, CONTROL LEVER	1	
14*	16578ZE1000	SPACER, CONTROL LEVER	1	
15*	16581ZE2W00	BASE, CONTROL	1	
16*	16584883300	SPRING, CONTROL ADJUSTING	1	
19	90013883000	BOLT, FLANGE 6X12, CT200	2	
20	90015ZE5010	BOLT, GOVERNOR ARM	1	
21*	90114SA0000	NUT, SELF-LOCK 6MM	1	
24*	93500050280A	SCREW, PAN 5X28	1	
27	9405006000	NUT, FLANGE 6MM	1	

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HONDA GX240K1PA2 ENGINE — CRANKCASE COVER ASSY.

CRANKCASE COVER ASSY.



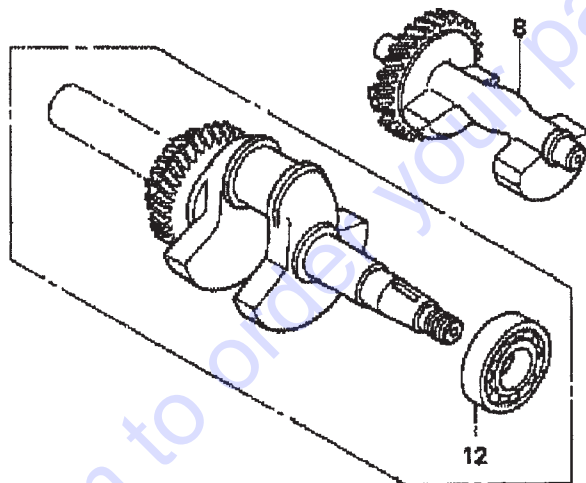
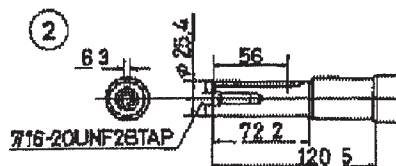
HONDA GX240K1PA2 ENGINE — CRANKCASE COVER ASSY.

CRANKCASE COVER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
2	11400ZE2601	COVER ASSY, CRANKCASE.....	1	INCLUDES ITEMS W/*
3	11381ZE2800	GASKET, CASE COVER	1	USE UP TO ENGINE S/N 4045100
3	11381ZE2801	GASKET, CASE COVER	1	USE FROM ENGINE S/N 4045101
4	15600ZG4003	CAP ASSEMBLY, OIL FILLER	1	INCLUDES ITEMS W/\$
5	15600735003	CAP ASSEMBLY, OIL FILLER	1	INCLUDES ITEMS W/#
8#	15625ZE1003	GASKET\$, OIL FILLER CAP	1	
9\$	15625ZE1003	GASKET, OIL FILLER CAP	1	USE FROM ENGINE S/N 2901133
10	16510ZE2811	GOVERNOR ASSY, BALANCER	1	INCLUDES ITEMS W/+
11*+	16511ZE2000	WEIGHT, GOVERNOR	2	
12*+	16511ZE2811	HOLDER, GOVERNOR WEIGHT	1	
13*+	16513ZE2000	PIN, GOVERNOR WEIGHT	2	
14*	16531ZE2000	SLIDER, GOVERNOR	1	
15*	90473147000	WASHER, 6 X 16	1	
16*	90602ZE1000	CLIP, GOVERNOR HOLDER	1	
17	90701HC4000	PIN, DOWEL 8 X12	2	
18*	91201890003	OIL SEAL 30X46X8	1	
19*	9410106800	WASHER, PLAIN 6MM	1	
20	957010803500	BOLT, FLANGE 8X35	7	
21*	961006202000	BEARING, RADIAL BALL 6202	1	
22*	961006206000	BEARING, RADIAL BALL 6206	1	

HONDA GX240K1PA2 ENGINE — CRANKSHAFT/BALANCER ASSY.

CRANKSHAFT /BALANCER WEIGHT ASSY.



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HONDA GX240K1PA2 ENGINE — CRANKSHAFT/BALANCER ASSY.

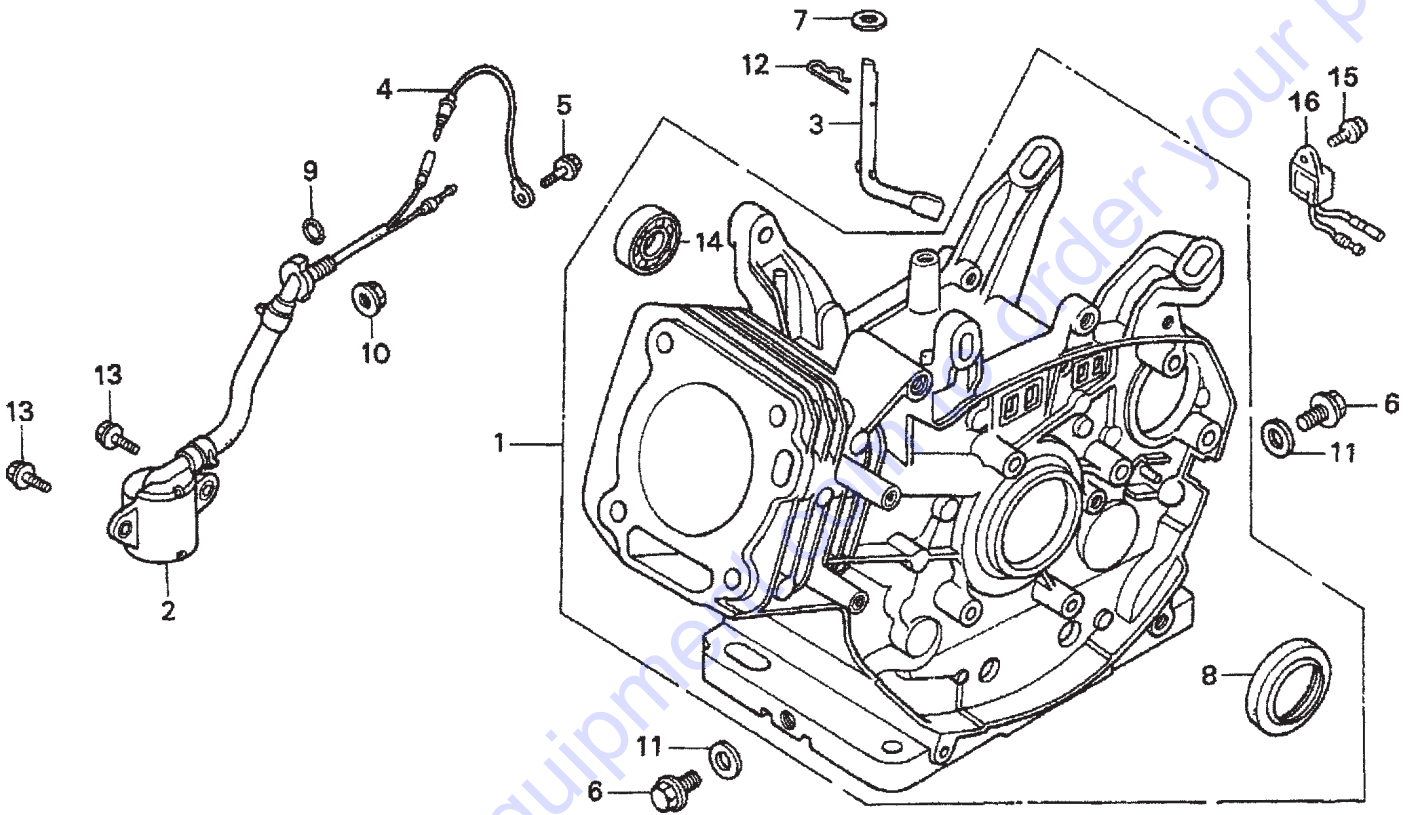
CRANKSHAFT /BALANCER WEIGHT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
2	13320ZE2651	CRANKSHAFT, P- TYPE	1	INCLUDES ITEMS W/*
8	13351ZE2010	WEIGHT, BALANCER	1	
12*	961006206000	BEARING, RADIAL BALL 6206	1	

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HONDA GX240K1PA2 ENGINE — CYLINDER BARREL ASSY.

CYLINDER BARREL ASSY.



HONDA GX240K1PA2 ENGINE — CYLINDER BARREL ASSY.

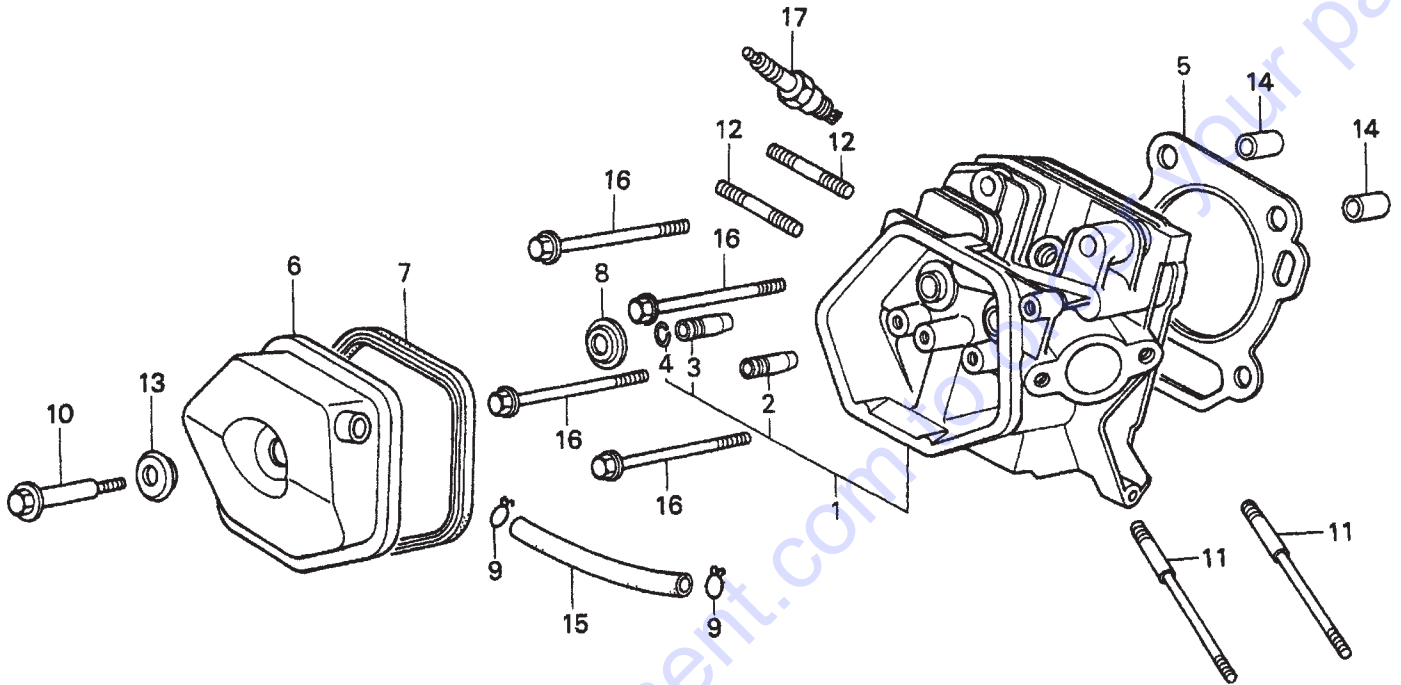
CYLINDER BARREL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	12000ZE2834	CYL. ASSY., BAL. + OIL ALERT	1	INCLUDES ITEMS W/*
2	15510ZE2043	SWITCH ASSY., OIL LEVEL	1	
3	16541ZE2010	SHAFT, GOVERNOR ARM	1	
6	90131896650	BOLT, DRAIN PLUG2	2	
7	90446KE1000	WASHER	1	
8	91201890003	OIL SEAL	1	
9	91353671003	O- RING 13.5X1.5 (ARAI)	1	
10	9405010000	NUT, FLANGE 10MM	1	
11	9410912000	WASHER, DRAIN PLUG	2	
12	9425110000	PIN, LOCK 10MM	1	
13	957010601200	BOLT, FLANGE	2	
14*	961006202000	BEARING, RADIAL BALL 6202	1	
15	90013883000	BOLT, FLANGE 6X12 (CT200)	1	
16	34150ZH7003	ALERT UNIT, OIL	1	

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HONDA GX240K1PA2 ENGINE — CYLINDER HEAD ASSY.

CYLINDER HEAD ASSY.



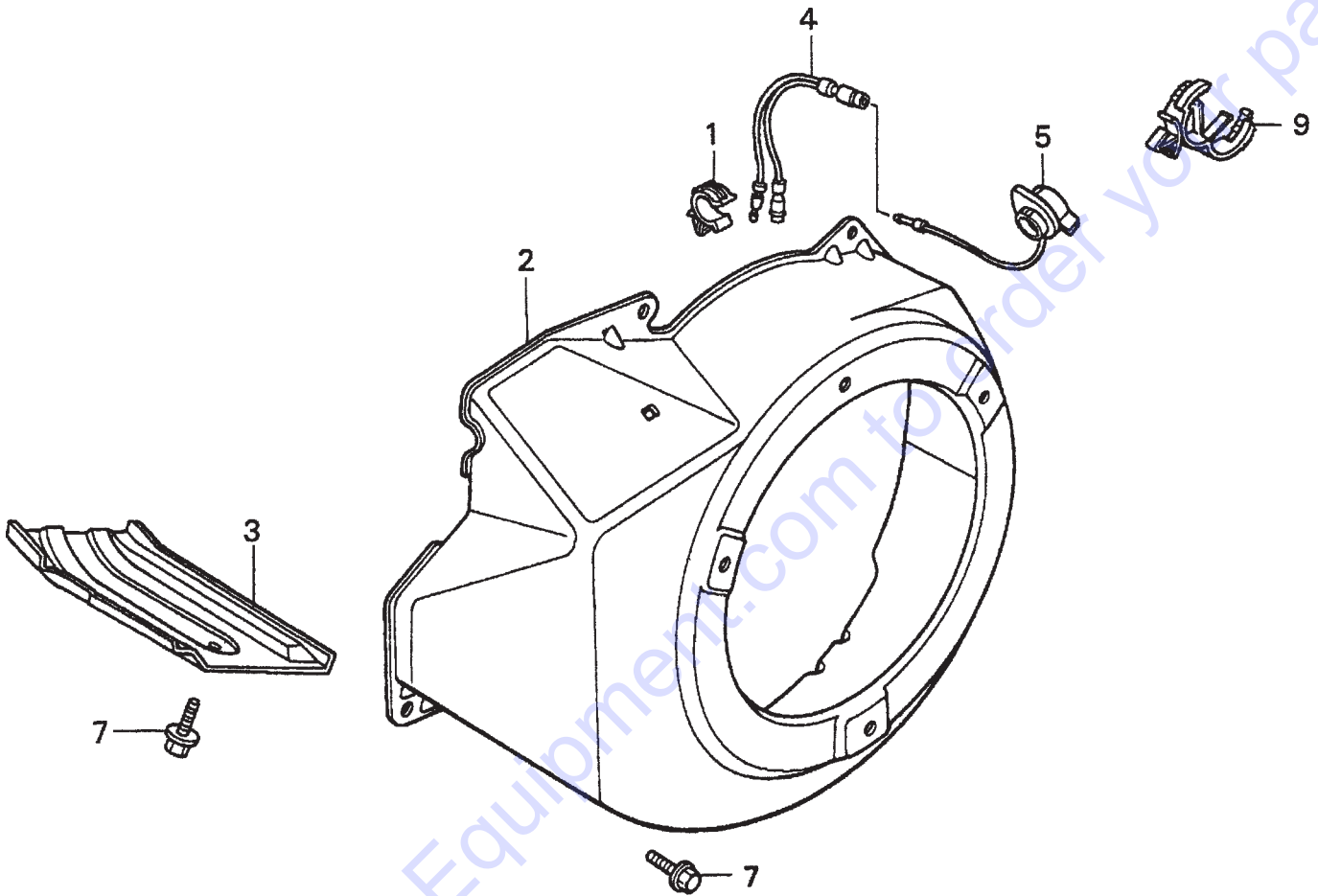
HONDA GX240K1PA2 ENGINE — CYLINDER HEAD ASSY.

CYLINDER HEAD ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	12200ZH9000	CYLINDER HEAD	1	INCLUDES ITEMS W/*
2*	12204ZE2306	GUIDE, VALVE OS (OPTIONAL)	1	
3*	12205ZE2305	GUIDE, EX. VALVE OS (OPTIONAL)	1	
4*	12216ZE2300	CLIP, VALVE GUIDE	1	
5	12251ZE2800	GASKET, CYLINDER HEAD	1	
6	12310ZE2020	COVER, HEAD	1	
7	12391ZE2020	GASKET, CYLINDER HEAD COVER	1	
8	14775ZE2010	SEAT, VALVE SPRING	1	
10	90014ZE2000	BOLT, GEAD COVER	1	
11	90042ZE2000	BOLT, STUD 8X123	2	
12	90047ZE2000	BOLT, STUD 8X47	2	USE UP TO ENGINE SN 3844352
12	92900080320E	BOLT 2, STUD 8X32	2	USE FROM ENGINE SN 3844353
13	90441ZE2010	WASHER, HEAD COVER	1	
14	9430112200	PIN A, DOWEL 12X20	2	
15	950051100130M	BULK HOSE, VAC (11X1000) (11X100)	1	
16	957011008000	BOLT, FLANGE 10X80	4	
17	9807955846	SPARK PLUG BPR5ES (NGK)	1	
17	9807956846	SPARK PLUG BPR6ES (NGK)	1	

HONDA GX240K1PA2 ENGINE — FAN COVER ASSY.

FAN COVER ASSY.



HONDA GX240K1PA2 ENGINE — FAN COVER ASSY.

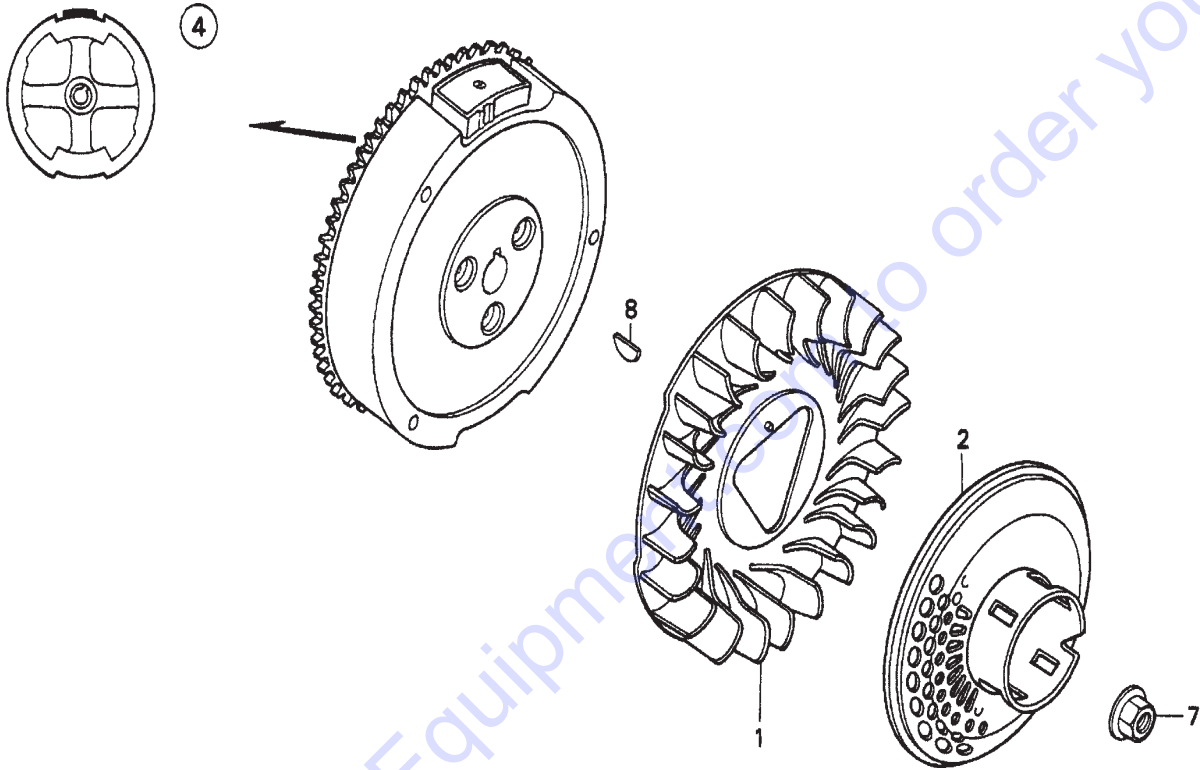
FAN COVER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	16731ZE2003	CLIP, TUBE	1	
2	19610ZE2010ZA	COVER, FAN *R8* BRIGHT RED	1	
2	19610ZE2010ZC	COVER, FAN *NH1* BLACK	1	
3	19631ZE2D00	SHROUD	1	
4	32197ZH8003	SUB- HARNESS	1	
5	36100ZE1015	SWITCH ASSY., ENGINE STOP	1	USE UP TO ENGINE S/N 3566259
5	36100ZH7003	SWITCH ASSY., ENGINE STOP	1	USE FROM ENGINE S/N 3566260
7	90013883000	BOLT, FLANGE 6X12 (CT200)	6	
9	90684ZA0601	CLIP, WIRE HARNESS	1	

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HONDA GX240K1PA2 ENGINE — FLYWHEEL ASSY.

FLYWHEEL ASSY.



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HONDA GX240K1PA2 ENGINE — FLYWHEEL ASSY.

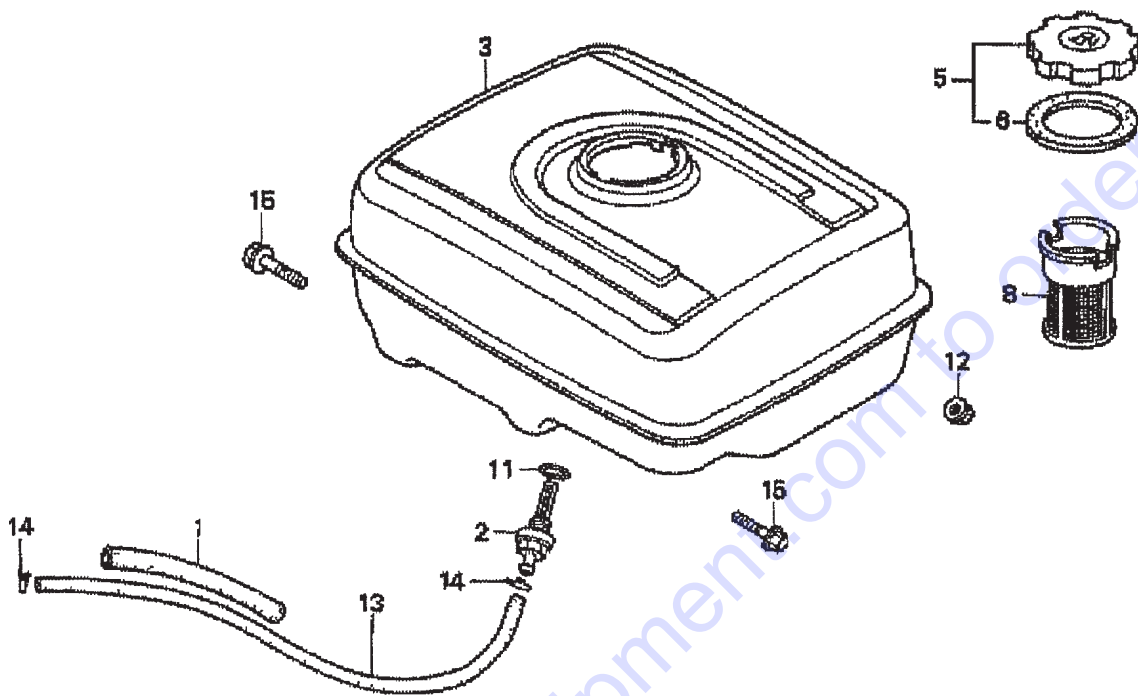
FLYWHEEL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	19511ZE2000	FAN, COOLING	1	
2	28450ZE2W11	PULLEY, STARTER (SCREEN GRID)	1	
4	31100ZE2010	FLYWHEEL	1	
7	90201ZE3V00	NUT, SPECIAL 16MM.....	1 USE FROM ENGINE S/N 3467139
7	90201ZE3790	NUT, SPECIAL 16MM.....	1 USE UP TO ENGINE S/N 3467138
8	90741ZE2000	KEY, SPECIAL WOODRUFF 25X18	1	

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HONDA GX240K1PA2 ENGINE — FUEL TANK ASSY.

FUEL TANK ASSY.



HONDA GX240K1PA2 ENGINE — FUEL TANK ASSY.

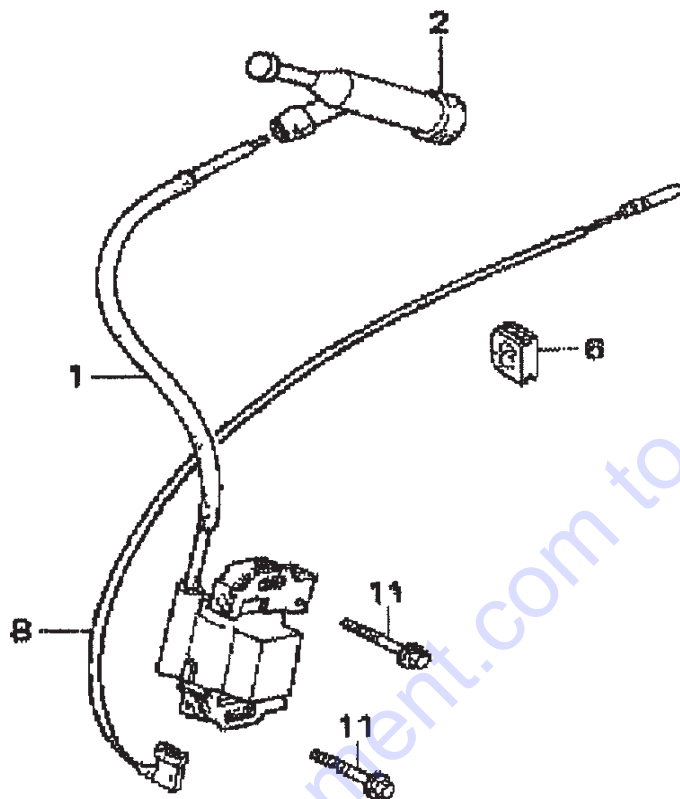
FUEL TANK ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	16854ZH8000	RUBBER, SUPPORTER 107MM	1	
2	16955ZE1000	JOINT, FUEL TANK	1	
3	17510ZE2010ZD	TANK, FUEL *NH1* BLACK	1	
5	17620ZH7023	CAP, FUEL FILLER	1	INCLUDES ITEMS W/*
6*	17631ZH7003	GASKET, FUEL FILLER CAP	1	
8	17672ZE2W01	FILTER, FUEL	1	USE FROM S/N 3190917
11	91353671003	O- RING 13.5X1.5 (ARAI)	1	
12	9405008000	NUT, FLANGE 8MM	2	
13	950014500360M	BULK HOSE, FUEL (4.5X3000) (4.5X222)	1	
14	9500202080	CLIP, TUBE B8	2	
15	957010802500	BOLT, FLANGE 8X25	2	

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HONDA GX240K1PA2 ENGINE — IGNITION COIL ASSY.

IGNITION COIL ASSY.



HONDA GX240K1PA2 ENGINE — IGNITION COIL ASSY.

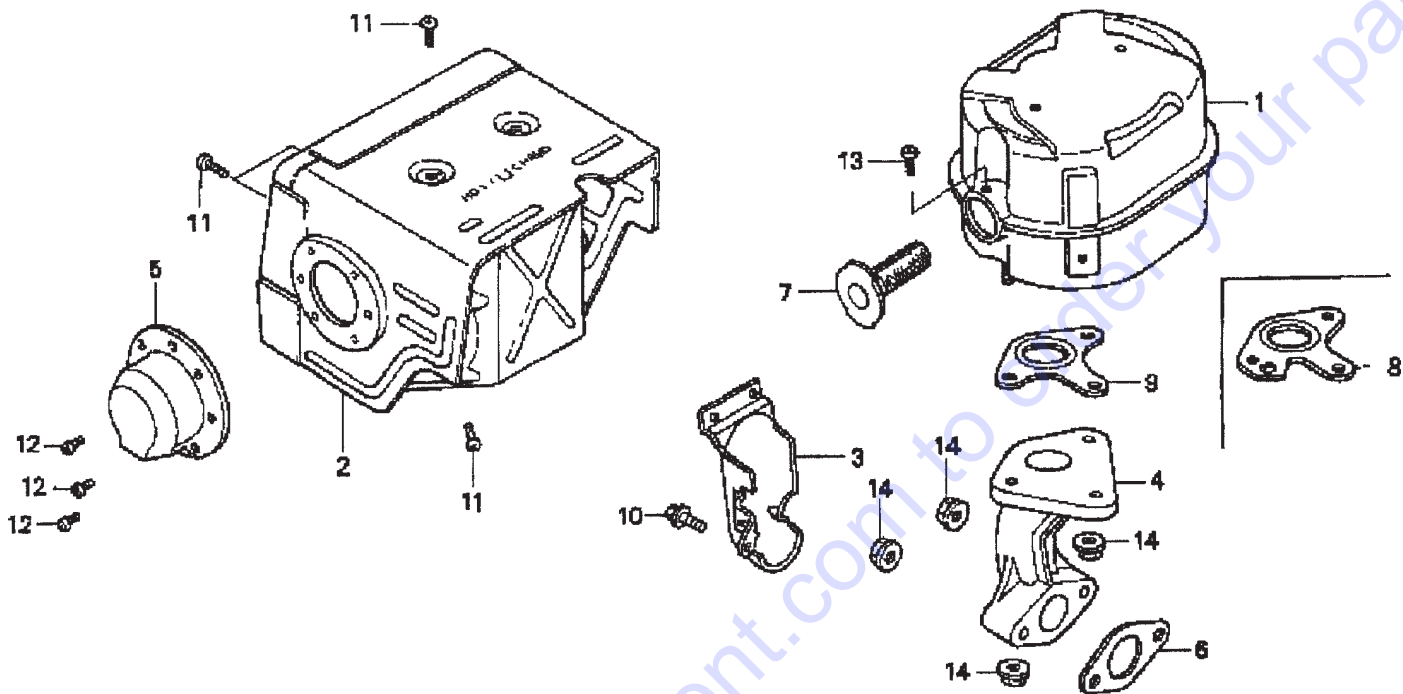
IGNITION COIL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	30500ZE2023	COIL ASSEMBLY, IGNITION	1	
2	30700ZE1013	CAP ASSEMBLY, NOISE SUPPRESSOR	1	
6	31512ZE2000	GROMMET, WIRE	1	
8	36101ZE1010	WIRE, STOP SWITCH 370MM	1	
11	90015883000	BOLT, FLANGE 6X28	2	

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HONDA GX240K1PA2 ENGINE — MUFFLER ASSY.

MUFFLER ASSY.



HONDA GX240K1PA2 ENGINE — MUFFLER ASSY.

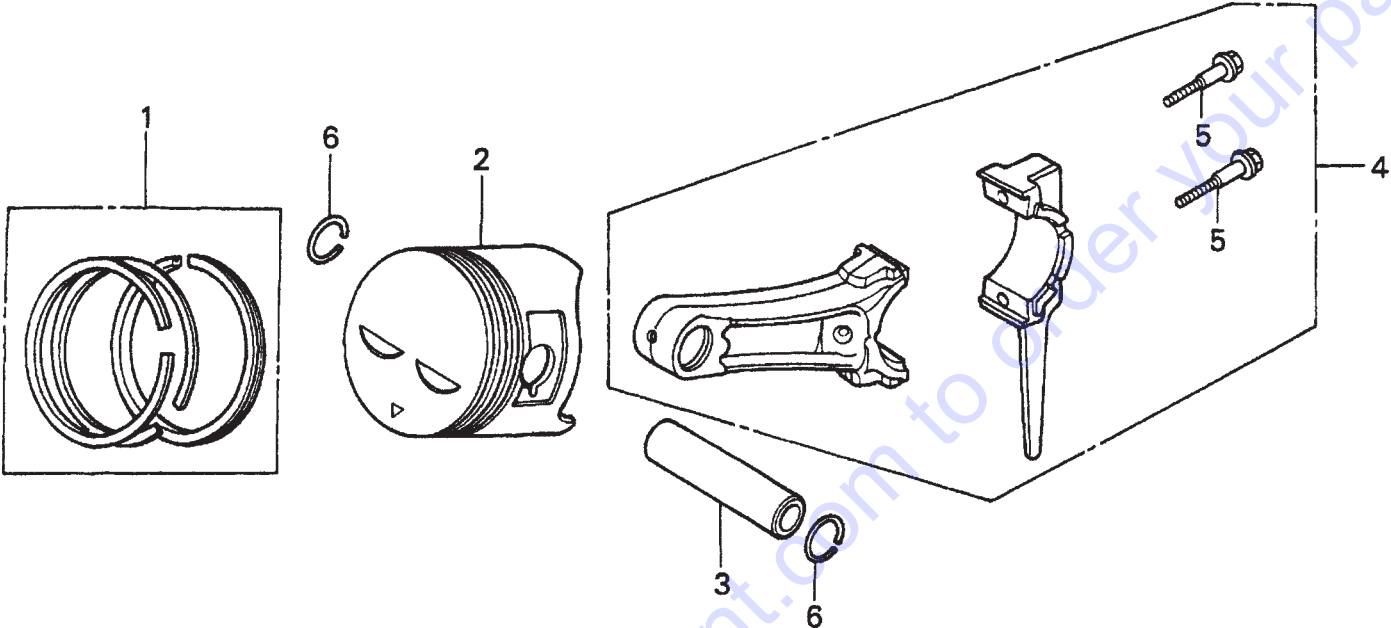
MUFFLER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	18310ZE2W00	MUFFLER	1	
2	18320ZE2W00	PROTECTOR, MUFFLER	1	
3	18323ZE2810	PROTECTOR, EXHAUST PIPE	1	
4	18330ZE2W00	PIPE, EXHAUST	1	
5	18331ZE2810	CAP, MUFFLER	1	
6	18333ZE3800	GASKET, EXHAUST PIPE	1	
6	18333ZK6Y00	GASKET, EXHAUST PIPE (WACKER)	1	
8	18381ZE2W10	GASKET, MUFFLER (ARRESTER) OPTIONAL	1	
9	18381ZE2800	GASKET, MUFFLER	1	
10	90013883000	BOLT, FLANGE 6X12 (CT200)	1	
11	90050ZE1000	SCREW, TAPPING 5X8	6	
12	90055ZE1000	SCREW, TAPPING 4X6	3	
13	90050ZE1000	SCREW, TAPPING 5X8 (OPTIONAL)	1	
14	9405008000	NUT, FLANGE 8MM	5	

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HONDA GX240K1PA2 ENGINE — PISTON ASSY.

PISTON ASSY.



HONDA GX240K1PA2 ENGINE — PISTON ASSY.

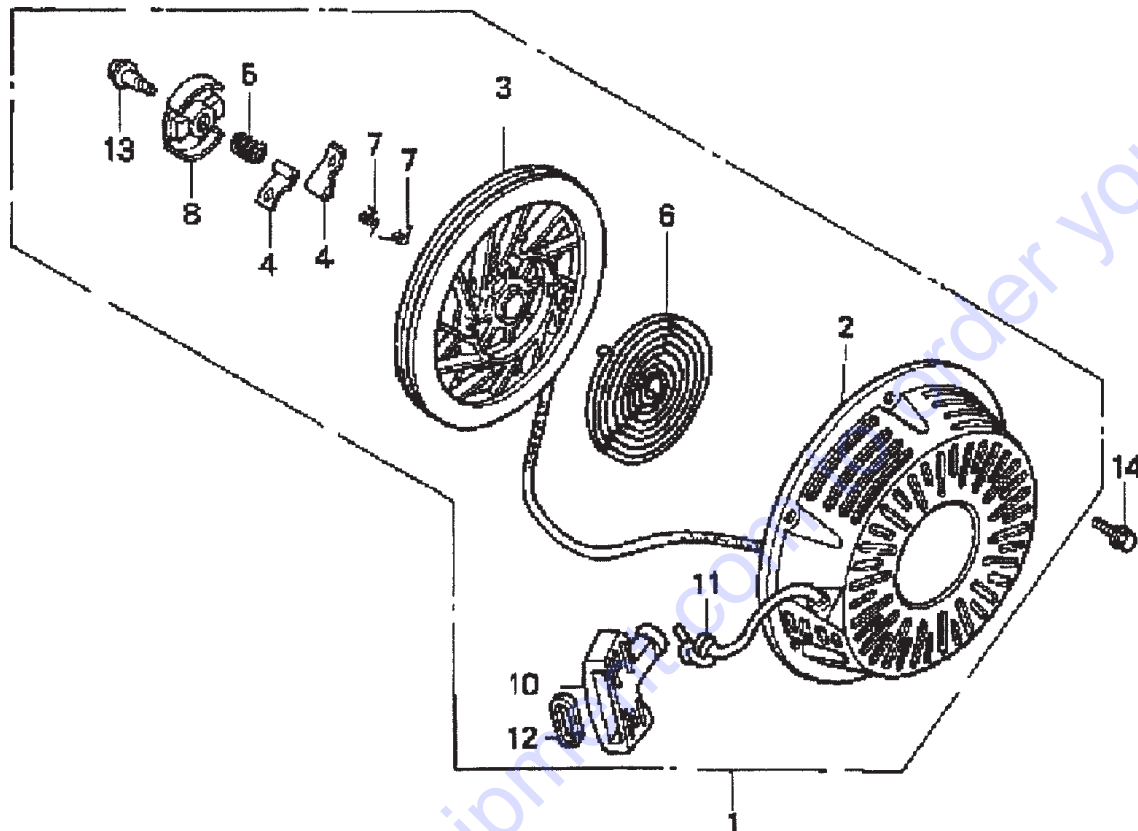
PISTON ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	13010ZE2013	RING SET, PISTON (STANDARD)	1	
1	13011ZE2013	RING SET, PISTON OS0.25	1	
1	13012ZE2013	RING SET, PISTON OS.50	1	
1	13013ZE2013	RING SET, PISTON 0.75	1	
2	13101ZE2W00	PISTON (STANDARD)	1	
2	13102ZE2W00	PISTON OS0.25	1	
2	13103ZE2W00	PISTON OS0.50	1	
2	13104ZE2W00	PISTON 0.75	1	
3	13111ZE2000	PIN, PISTON	1	
4	13200ZE2000	ROD ASSEMBLY, CONNECTING (STANDARD) ...	1	INCLUDES ITEMS W/*
4	13200ZE2305	ROD ASSY., CONNECTING US0.25	1	
5*	90001ZE8000	BOLT, CONNECTING ROD	2	
6	90551ZE1000	CLIP, PISTON PIN 18MM	2	

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HONDA GX240K1PA2 ENGINE — RECOIL STARTER ASSY.

RECOIL STARTER ASSY.



HONDA GX240K1PA2 ENGINE — RECOIL STARTER ASSY.

RECOIL STARTER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	28400ZE2W01ZB	STARTER ASSY, RECOIL *NH1* BLK	1	INCLUDES ITEMS W/*
2*	28410ZE2W01ZB	CASE, RECOIL STARTER *NH1* BLK	1	
3*	28421ZE2W01	PULLEY, RECOIL STARTER	1	
4*	28422ZE2W01	RACHET, STARTER	2	
5*	28441ZE2W01	SPRING, FRICTION	1	
6*	28442ZE2W01	SPRING, STARTER RETURN	1	
7*	28443ZE2W01	SPRING, RATCHET	2	
8*	28444ZE2W01	RETAINER, SPRING	1	
10*	28461ZE2W02	GRIP, STARTER	1	
11	28462ZE2W11	ROPE, RECOIL STARTER	1	
12	28469ZE2W01	GRIP, REINFORCEMENT	1	
13	90004ZE2W01	SCREW, CENTER	1	
14	90008ZE2003	BOLT, FLANGE 6X10	3	

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HONDA GX240K1PA2 ENGINE — GASKET KIT ASSY.

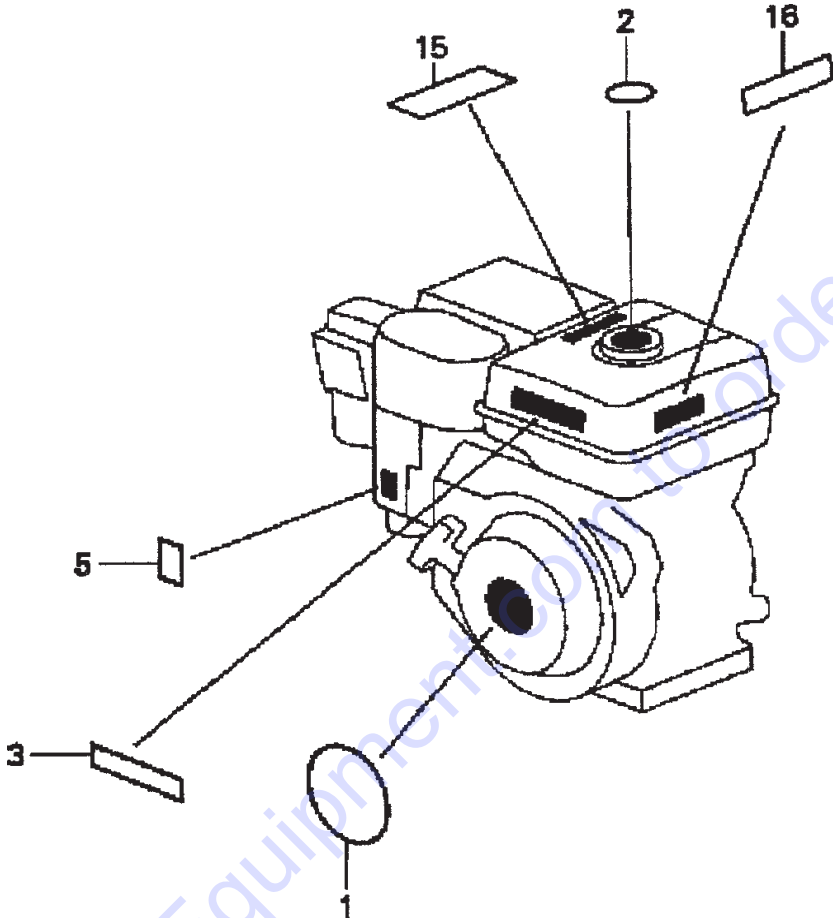
GASKET KIT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1*	11381ZE2801	GASKET, CASE COVER	1	
2*	12251ZE2800	GASKET, CYLINDER HEAD	1	
3*	12391ZE2020	GASKET, CYL. HEAD COVER	1	
4*	16221ZA0800	GASKET, CARBURETOR	1	
5*	16223ZA0800	GASKET, INSULATOR	1	
6*	18333ZE3800	GASKET, EXHAUST PIPE	1	
7	06111ZE2408	GASKET KIT	1	INCLUDES ITEMS W/*

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HONDA GX240K1PA2 ENGINE — LABELS ASSY.

L ABELS ASSY.



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HONDA GX240K1PA2 ENGINE — LABELS ASSY.

L LABELS ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	87521ZE2W01	EMBLEM (INTERNAL)	1	
2	87522ZE1810	MARK, CAUTION (EXTERNAL)	1	
3	87522ZH9000	LABEL, CAUTION	1	
5	87528ZE2810	MARK, CHOKE (EXTERNAL)	1	
15	87586ZH7W00	LABEL, FUEL CAUTION	1	
16	87532ZH8810	MARK, OIL ALERT (E)	1	

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