OPERATION AND PARTS MANUAL

MULTIQUIP

MODEL
MQ-D206H
DIAPHRAGM PUMP

Revision #0 (12/15/03)

MULTIQUIP

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PARTS DEPARTMENT:
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SERVICE DEPARTMENT/TECHNICAL ASSISTANCE:
800-478-1244
FAX:310-631-5032

Atlanta • Boise • Dallas • Houston • Newark
Montreal, Canada • Manchester, UK
Rio De Janiero, Brazil • Guadalajara, Mexico

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.

HERE'S HOW TO GET HELP

PLEASE HAVE THE MODEL AND SERIAL NUMBER *ON-HAND* WHEN CALLING

MULTIQUIP'S MAIN PHONE NUMBERS

800-421-1244 FAX: 310-537-3927
310-537-3700

PARTS DEPARTMENT

800-427-1244 FAX: 800-672-7877
310-537-3700 FAX: 310-637-3284

MAYCO PARTS

800-306-2926 FAX: 800-672-7877
310-537-3700 FAX: 310-637-3284

SERVICE DEPARTMENT

800-478-1244 FAX: 310-537-4259
310-537-3700

MQ POWER SERVICE DEPARTMENT

800-835-2551 FAX: 310-638-8046
310-537-3700

TECHNICAL ASSISTANCE

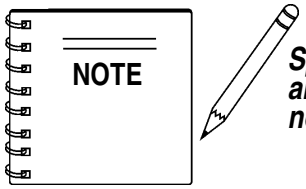
800-478-1244 FAX: 310-631-5032

WARRANTY DEPARTMENT

800-421-1244, EXT. 279 FAX: 310-537-1173
310-537-3700, EXT. 279

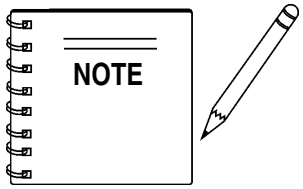
MQ-D206HGasoline Powered Diaphragm Pump

Component Drawings



Specification and part number are subject to change without notice.

HONDA GX120K1QX2 Engine



As a continuing effort to update our parts book, contact the MULTIQUIP literature department for the latest revision of your "Operation and Parts Manual"

When ordering parts, please supply the following information:

- ❒ **Dealer account number**
- ❒ **Dealer name and address**
- ❒ **Shipping address (if different than billing address)**
- ❒ **Return fax number**
- ❒ **Applicable model number**
- ❒ **Quantity, part number and description of each part**
- ❒ **Specify preferred method of shipment:**
  - ✓ FedEx or UPS Ground
  - ✓ FedEx or UPS Second Day or Third Day
  - ✓ FedEx or UPS Next Day
  - ✓ Federal Express Priority One
  - ✓ DHL
  - ✓ Truck

Note: Unless otherwise indicated by customer, all orders are treated as "Standard Orders", and will ship within 24 hours. We will make every effort to ship "Air Shipments" the same day that the order is received, if prior to 2PM west coast time. "Stock Orders" must be so noted on fax or web forms.

Here's how to get help...

Please have the model and serial number on hand when calling.

Parts Department
800-427-1244 — Fax: 800-672-7877
310-537-3700 — Fax: 310-637-3284

Mayco Parts
800-306-2926 — Fax: 800-672-7877
310-537-3700 — Fax: 310-637-3284

Service Department
800-478-1244 — Fax: 310-537-4259
310-537-3700

MQ Power Service Department
800-835-2551 — Fax: 310-638-8046
310-537-3700

Technical Assistance
800-478-1244 — Fax: 310-631-5032

Warranty Department
800-421-1244, Ext. 279 — Fax: 310-537-1173
310-537-3700, Ext. 279

Multiquip's Main Phone Numbers
800-421-1244 — Fax: 310-537-3927
310-537-3700

Place Your Parts Order Via Web or Fax For Even More Savings!

Extra Discounts!

All parts orders which include complete part numbers and are received by our automated web parts order system, or by fax qualify for the following extra discounts:

Ordered via	Standard orders	Stock orders ($750 list and above)
Fax	3%	10%
Web	5%	10%

*Special freight allowances when you order 10 or more line items via Web or Fax!***

FedEx Ground Service ***at no charge for freight***

No other allowances on freight shipped by any other carrier.

NOTE: DISCOUNTS ARE SUBJECT TO CHANGE

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E-MAIL: mq@multiquip.com
WWW: multiquip.com

Direct TOLL-FREE access to our Parts Department:

Toll-free nationwide — 800-427-1244

Table 1. Specifications (Pump)

Pump	**Type**	**MQ-206H Diaphragm Pump**
	Suction & Discharge Size	2.00 in. (50.8 mm.)
	Maximum Pumping Capacity	3,000 gallons/hour (11,340 liters/hour)
	Max. Soilds Diameter	1 in. (25.4 mm)
	Max Lift	26 ft. (7.92 meters)
	Max. Head	51 ft. (15.54 meters)
Dry Net Weight		140 lbs. (63 Kg.)

Table 2. Specifications (Engine)

Engine	**Model**	**HONDA GX120K1QX2**
	Type	Air-cooled 4 stroke, Single Cylinder, OHV, Horizontal Shaft Gasoline Engine
	Bore X Stroke	2.4 in. x 1.7 in. (60 mm x 42 mm)
	Displacement	119 cc (7.2 cu-in)
	Max Output	4.0 H.P./3600 R.P.M.
	Fuel Tank Capacity	0.66 US gal. (2.5 liters)
	Fuel	Unleaded Automobile Gasoline
	Lube Oil Capacity	0.63 qts. (60 liters)
	Speed Control Method	Centrifugal Fly-weight Type
	Starting Method	Recoil Start
Dimension (L x W x H)		11.7 x 13.4 x 12.5 in. (297 x 341 x 318 mm)
Dry Net Weight		28.7 lbs (13 Kg.)

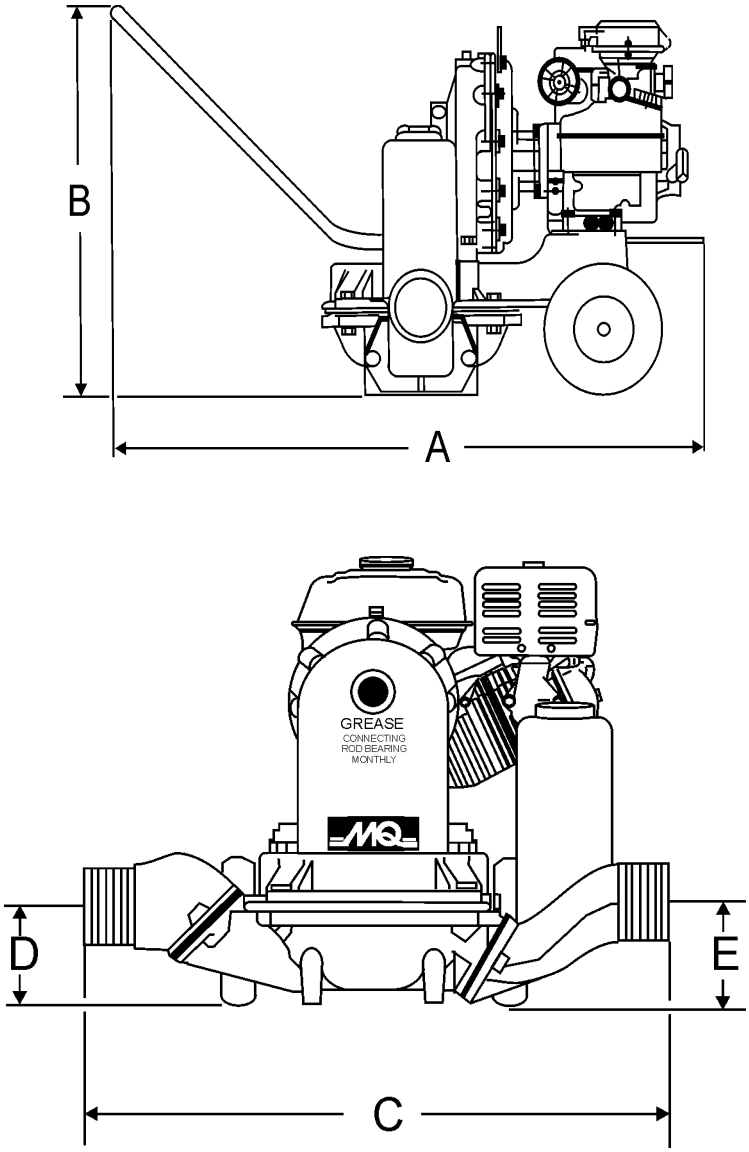


Figure 1. MQ-D206HPump Dimensions

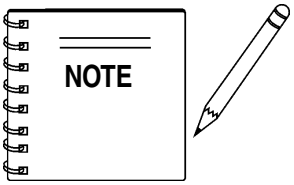
Table 3. Dimensions

MODEL	A LENGTH	B HEIGHT	C WIDTH	D DISCHARGE	E SUCTION
MQ-206H	39.87 in. (101.1 cm.)	24.75 in. (62.86 cm.)	24.75 in. (62.86 cm.)	4.93 in. (12.52 cm.)	4.25 in. (10.80 cm.)

MQ-D206H — 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 ***MQ Model D-206H Diaphragm Pump.*** Refer to the engine manufacturers instructions for data relative to its safe operation.

Before using this pump, 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 directions.

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.

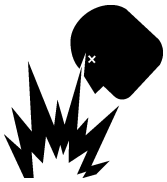
Potential hazards associated with the MQ-D206H diaphragm pumps operation will be referenced with Hazard Symbols which appear throughout this manual, and will be referenced in conjunction with Safety Message Alert Symbols.

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

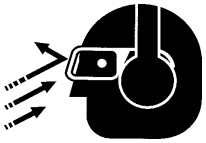
NEVER operate equipment with covers, or guards removed. Keep fingers, hands, hair and clothing away from all moving parts to prevent injury.

MQ-D206H — SAFETY MESSAGE ALERT SYMBOLS

Accidental Starting

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

Sight and Hearing hazard



ALWAYS wear approved eye and hearing protection.

WARNING

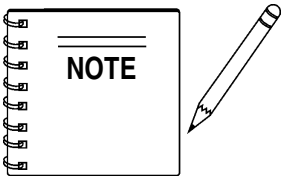
To avoid injuries and damage to the equipment, ***ALWAYS*** read and understand contents of operation manual before operating equipment.

Respiratory Hazard

ALWAYS wear approved respiratory 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.

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 ***Diaphragm 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.

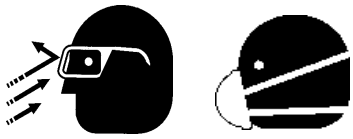
■ **NEVER** operate this equipment when not feeling well due to fatigue, illness or taking medicine.

■ **NEVER** operate this equipment under the influence or 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.

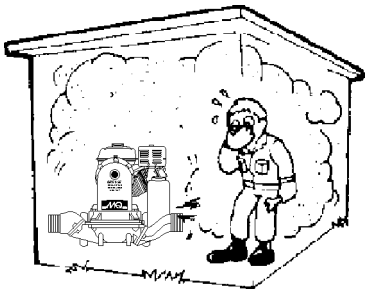
■ **ALWAYS** wear proper respiratory (mask) hearing and eye protection equipment when operating the pump.



■ **NEVER** touch the hot exhaust manifold, muffler or cylinder. Allow these parts to

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

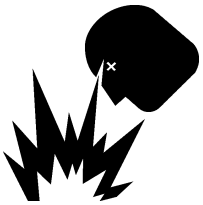
■ The engine of this pump requires an adequate free flow of cooling air. ***NEVER!*** operate the pump in any enclosed or narrow area where free flow of the air is restricted. If the air flow is restricted it will cause serious damage to the pump or engine and may cause injury to people and property. 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.

- **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

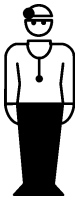
- **NEVER** lubricate components or attempt service on a running machine.
- **ALWAYS** allow the machine a proper amount of time to cool before servicing.
- Keep the machinery in proper running condition.
- Fix damage to the machine immediately and always replace broken parts, or missing decals.
- Dispose 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.



APPLICATION

The ***MQ Model D206H diaphragm*** pump is designed to be used for de-watering applications. The suction and discharge ports on the ***D206H*** use a 2-inch diameter opening, which allows the pump to pump at rate of approximately 3,000 gallons/hour (gph) or 11,340 liters/hour (lph).

Diaphragm pumps use a positive displacement design rather than centrifugal force to move water through the casing. This means the pump will deliver a specific amount of flow per stroke, revolution or cycle. These pumps are commonly referred to as mud hogs, mud hens and mud suckers. Their names reflect their popularity for use in applications where shallow depths and slurry water render centrifugal pumps ineffective

Power Plant

These diaphragm pumps are powered by an 5.5 horsepower air cooled, 4-stroke, single cylinder ***HONDA GX-120*** gasoline engine that incorporates a low "***Oil Alert Feature***" . The drive shaft of the engine is coupled to an offset connecting rod that is coupled to a flexible diaphragm. The connecting rod alternately raises (expands) and lowers (contracts) the diaphragm at a rate between 40 and 65 strokes per minute depending on engine speed.

Oil Alert Feature

In the event of ***low oil*** or ***no oil***, the HONDA GX-120 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.

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)	25.0 (7.620)
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%

Figure 2 shows a typical application using the MQ-D206H diaphragm 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 inch (25 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.

NOTE

Contact your nearest Multiquip dealer for quick disconnect hoses and fittings.

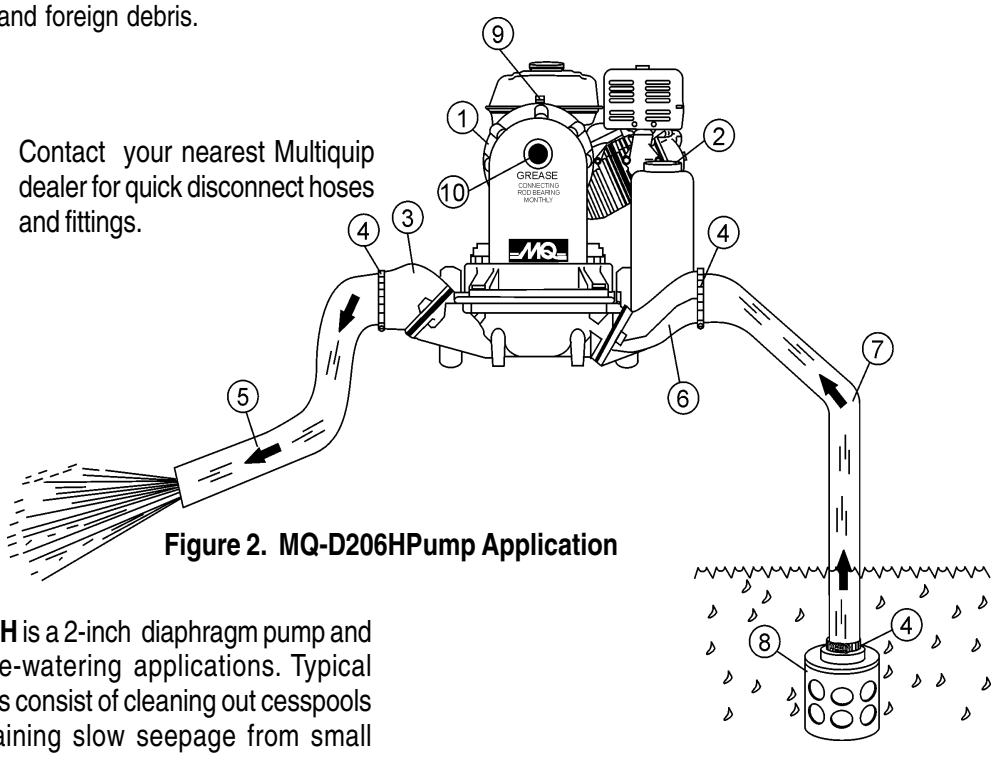


Figure 2. MQ-D206HPump Application

1. **Pump –** The **MQ-D206H** is a 2-inch diaphragm pump and is used in general de-watering applications. Typical dewatering applications consist of cleaning out cesspools and septic tanks, draining slow seepage from small excavations, trenches and construction sites, or pumping out industrial waste.
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 2-inch discharge hose to this port. Use two worm clamps to secure the hose.
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 a 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 Multiquip parts department for ordering information.
6. **Suction Port –** Connect a 2-inch inlet hose to this port. Use two worm clamps to secure the hose.
7. **Suction Hose –** Connect a 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 Multiquip parts department for ordering information
8. **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.
9. **Transmission Oil Fill Plug –** Remove this plug to add SAE 80/90 EP gear oil to the transmission. Transmission oil capacity is 1-1/4 pints (550 ml.).
10. **Connecting Rod Grease Access Hole –** Grease connecting rod bearing through this access hole. Grease connecting rod bearing every 25 hours of operation.

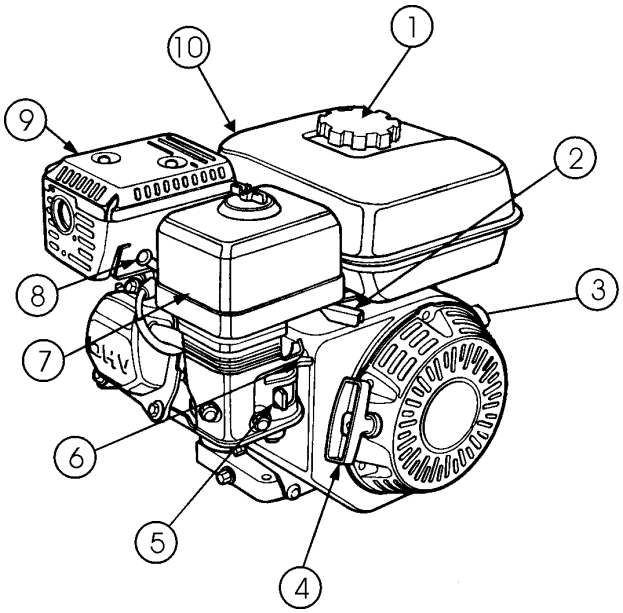


Figure 3. Engine Controls and Components

INITIAL SERVICING

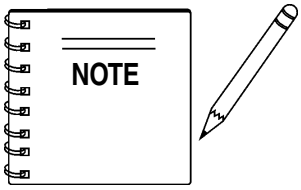
The engine (Figure 3) must be checked for proper lubrication and filled with fuel prior to operation. Refer to the manufacturers engine manual for instructions & details of operation and servicing. The engine shown above is a **HONDA** engine, operation for other types of engines may vary somewhat.

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.

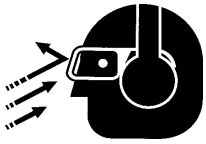
WARNING

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.

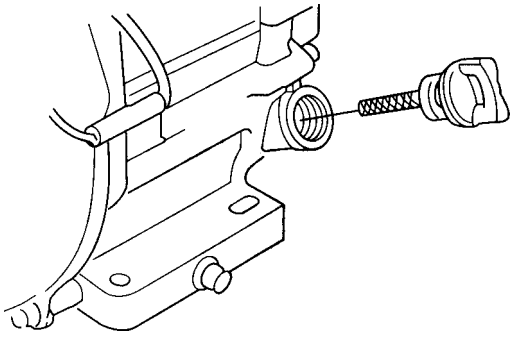


Figure 4. Engine Oil Dipstick (Removal)

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 .63 quarts (.60 liters)

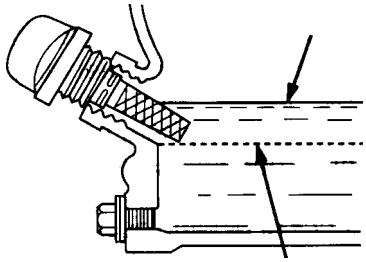


Figure 5. Engine Oil Dipstick (Oil Level)

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

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.

CAUTION :

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

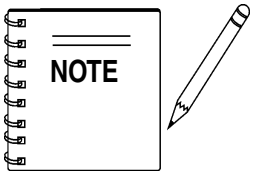
WARNING :

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

4. Check for ***leaks*** between pump and engine. If water is leaking between the pump and engine housing, the seal inside the pump may be worn or damaged. Continued operation of the pump is not recommended. Further usage of the pump under these conditions may cause severe water damage to engine.

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.



Suction and discharge hoses are available from Multiquip. Contact your nearest dealer 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 :

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.

Gear Reduction Oil (Transmission)

1. Remove the **transmission oil level plug** (Figure 6). If oil begins to seep out as the plug is being removed, then it can be assumed that the transmission oil is at the proper operating level.
2. If oil does not seep out as the oil level plug is being removed, then remove the **transmission oil fill plug** and fill with **SAE 80/90** ***EP gear oil*** to the proper operating level. Transmission oil capacity is capacity is 1-1/4 pints (590 ml.).

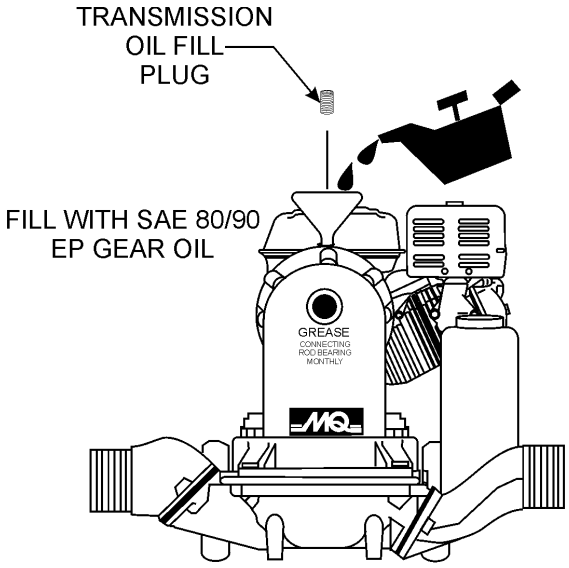
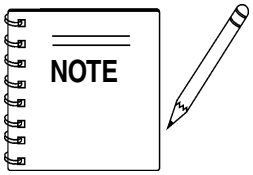


Figure 6. Transmission Oil Level



Diaphragm pumps will handle fluids containing considerable solids (not to exceed 1.00 inch/25 mm), however, if the mixture is too heavy to be pumped, water must be added until the mixture becomes sufficently fluid for pumping.

Connecting Rod Bearing Lubrication

1. Grease **connecting rod bearing** thru the acess hole (Figure 7) every 25 hours of operation.
2. Use only ***premium lithium based grease***, conforming to NLG1 Grade #2 consistency.

APPLY 2 OR 3 SHOTS
OF PREMIUM LITHIUM
BASE GREASE EVERY
25 HOURS OF OPERATION

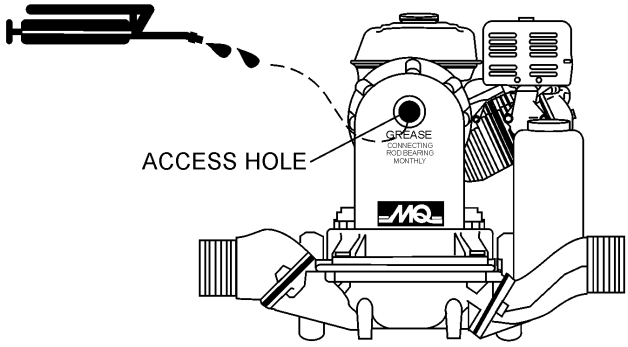


Figure 7. Connecting Rod Bearing Lubrication

Helpful Hints

The capacity of this diaphragm pump will vary greatly depending on the height of the suction lift and length of the discharge hose. A discharge hose which is too small, long or high will cause the following:

- Excessive bulging of diaphragm on the down stroke.
- Valves closing with a lould snap.
- Rough operation.
- Engine overloads and slow downs.
- Reduced efficiency

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 8) to the "**ON**" position.

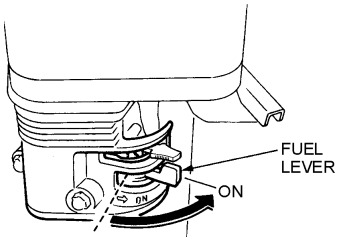


Figure 8. Engine Fuel Valve Lever (ON Position)

2. Move the ***throttle lever*** (Figure 9) away from the slow position, about 1/3 of the way toward the fast position.

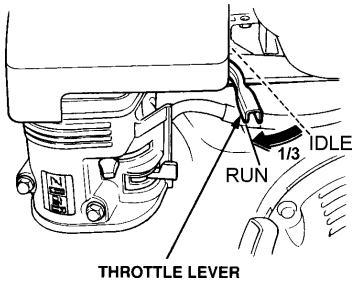


Figure 9. Throttle Lever (1/3 Start Position)

3. Place the ***choke lever*** (Figure 10) in the "**OPEN** " position if starting a ***cold*** engine.

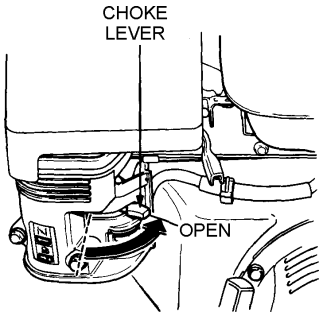


Figure 10. Engine Choke Lever (Open)

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

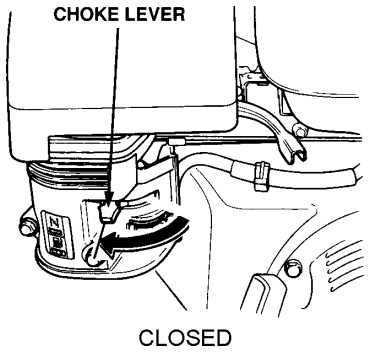


Figure 11. Engine Choke Lever (Closed)

5. Place the ***engine ON/OFF switch*** (Figure 12) in the "**ON** " position.

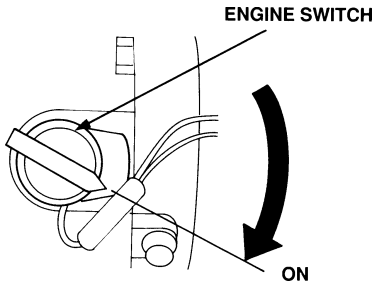


Figure 12. Engine ON/OFF Switch (ON Position)

6. Grasp the starter grip (Figure 13) 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.

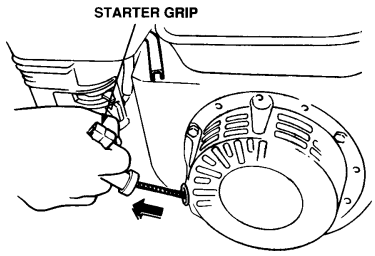


Figure 13. Starter Grip

7. If the engine has started, slowly return the choke lever (Figure 14) to the "**CLOSED**" position. If the engine has not started repeat steps 1 through 6.

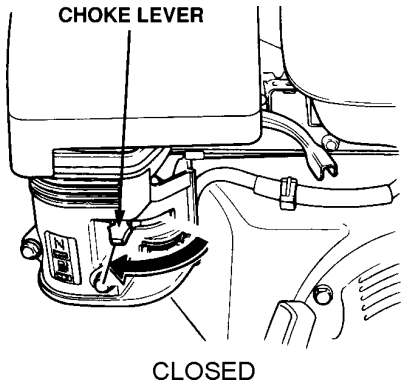


Figure 14. Choke Lever (Closed)

8. Before the pump is placed into operation, run the engine for several minutes. Check for fuel leaks, and noises that would associate with a lose component.

9. To begin pumping, place the throttle lever (Figure 15) in the "**RUN**" position.

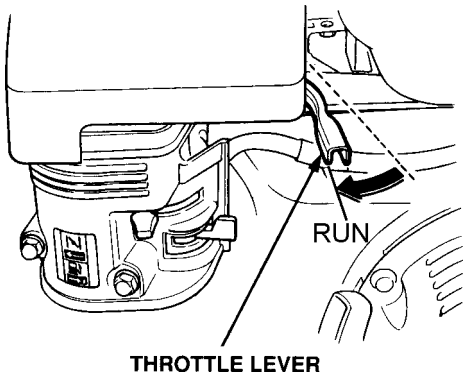
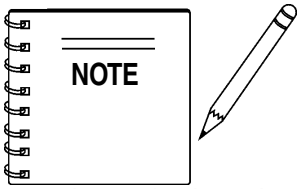


Figure 15. Throttle Lever (Run)



Pump speed can be ***regulated*** with the engine throttle control from full volume, 65 strokes per pinute, to about 40 strokes per minute for lesser volume seepage.Smoothest operation can be determined by trying to pump at several speeds. Limit maximum speed to 65 strokes per minute of the diaphragm (2,800 RPM engine speed).

Stopping The Engine

Normal Shutdown

1. Move the throttle lever to the **IDLE** position (Figure 16) and run the engine for three minutes at low speed.

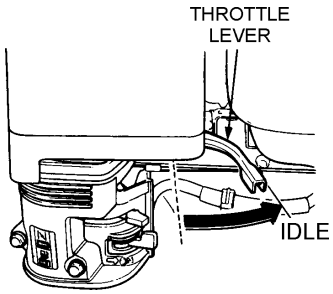


Figure 16. Throttle Lever (Idle)

2. After the engine ***cools***, turn the engine ON/OFF switch to the "**OFF**" position (Figure 17).

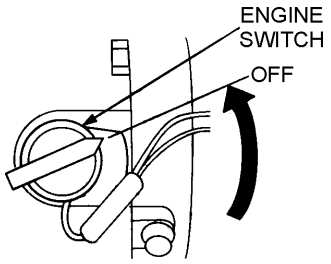


Figure 17. Engine ON/OFF Switch (OFF)

3. Place the ***fuel shut-off lever*** (Figure 18) in the "**OFF**" position.

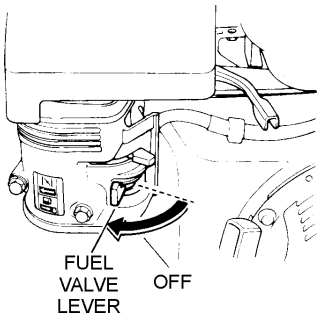


Figure 18. Fuel Valve Lever (OFF)

Emergency Showdown

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

NOTE PAGE

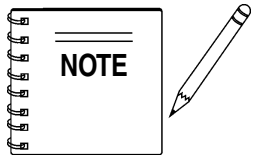
Pump Vacuum Test

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 19 (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 19) 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 reseat 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.

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.
3. Clean and remove dirt, debris from pump casing. Inspect impeller and volute for wear. Replace any damaged or worn parts.

Gear Reduction Oil (Transmission)

1. Change transmission oil after the first ***40 hours*** of operation. Use **SAE 80/90 *EP gear oil.*** Transmission oil capacity is 1-1/4 pints (590 ml.). Check oil level periodically and change oil after every ***400 hours*** of operation.

Connecting Rod Bearing Lubrication

1. Grease **connecting rod bearing** thru the access hole (Figure 7) every 25 hours of operation.
2. Use only ***premium lithium based grease***, conforming to NLG1 Grade #2 consistency.

Connecting Rod Bearing Lubrication

1. Keep interior of pump and valves clean. Flush out pump with clear water after operation.
2. Remove connecting rod guard occasionally and wipe up excess grease from connecting rod bearing.

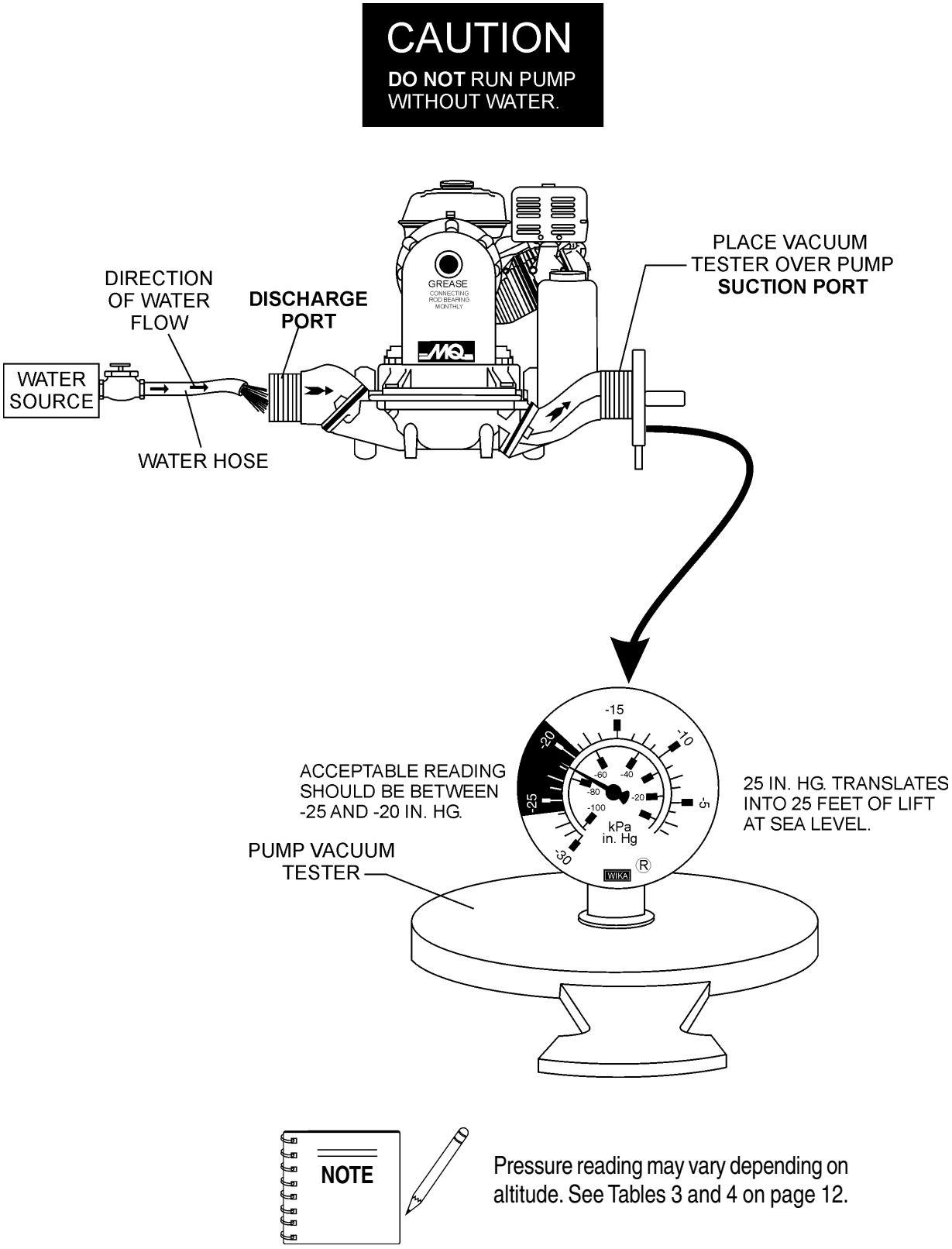


Figure 19. Pump Vacuum Tester

Engine Maintenance

Perform engine maintenance procedures as referenced by Table 6 below:

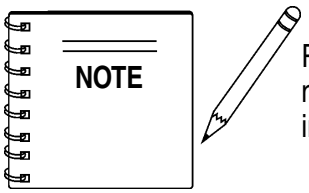
Table 6. Engine Maintenance Schedule

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 20), 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.

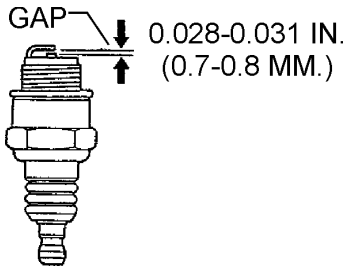


Figure 20. Spark Plug Gap

ENGINE OIL

1. Drain the engine oil when the oil is ***warm*** as shown in Figure 21.
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.

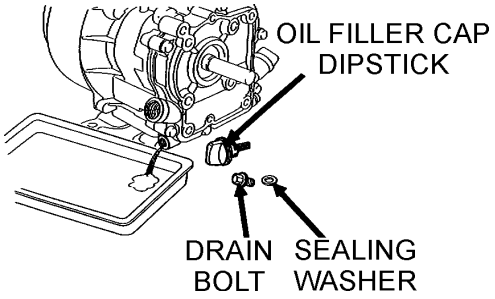


Figure 21. Engine Oil (Draining)

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 22.
2. Tap the paper filter element (Figure 22) several times on a hard surface to remove dirt, or blow compressed air [not exceeding 30 psi (207 kPa, 2.1 kgf/cm^2)] 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.

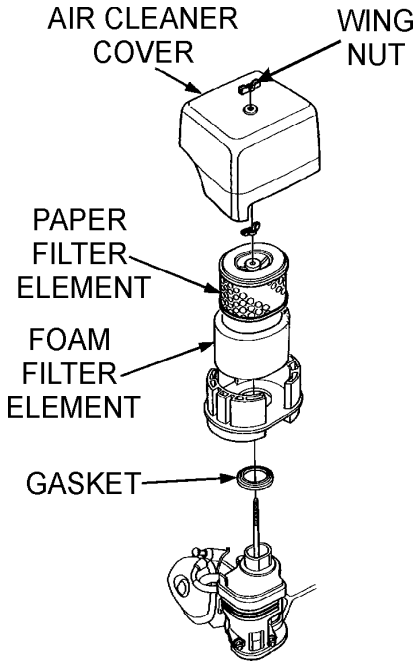


Figure 22. Engine Air Cleaner

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 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 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.

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.

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.
	Strainner 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.
	Water leaking out weep hole between pump and engine?	Check condition of mechanical seal and gaskets, between pump end and engine housing.
	Valves not seated correctly?	Check that valves are seated correctly. Pour water in in suction chamber to help seal valves.
	Pump does not prime correctly?	Check diaphragm for breaks or leaks.
Pump takes in water, little or no discharge.	Engine speed too low?	Increase throttle speed.
	Suction strainer partially plugged?	Clean strainer.
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 hose does not stay on coupling.	Pressure too high?	Check pressure, add additional clamp.
	Hose kinked or end blocked?	Check hose.

MQ-D206H — EXPLANATION OF CODE IN REMARKS COLUMN

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

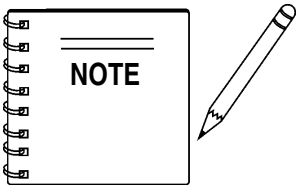
Items Found In the "Remarks" Column

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

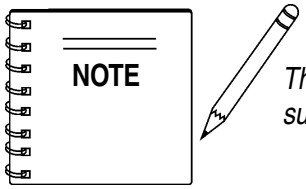
Model Number-Where indicated, this shows that the corresponding part is utilized only with this specific model number or model number variant.

Items Found In the "Items Number" Column

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



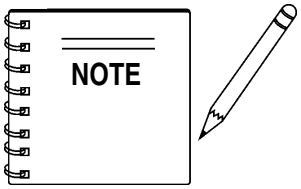
If more than one of the same reference number is listed, the last one listed indicates newest (or latest) part available.



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

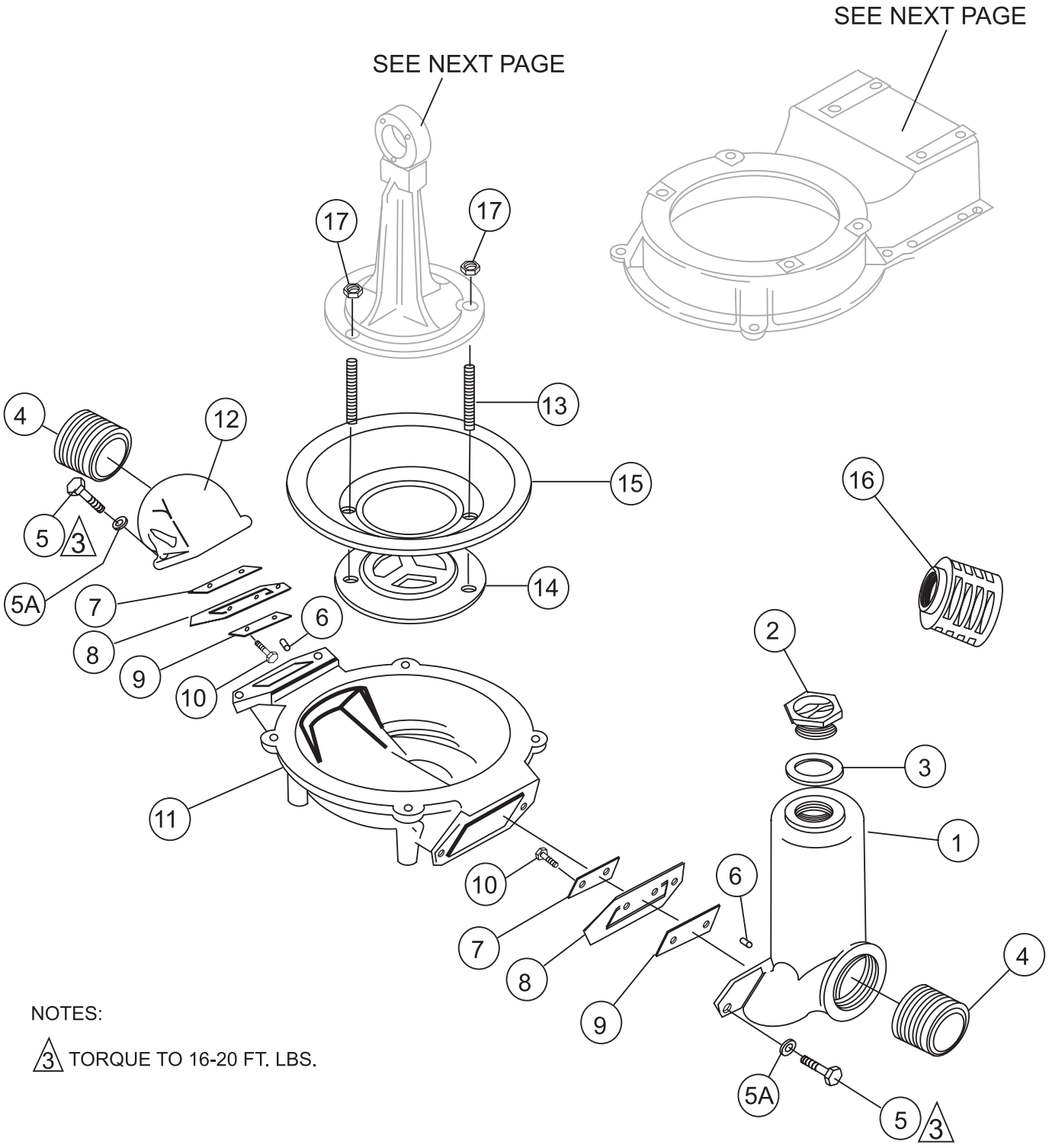
MQ-D2*06H* DIAPHRAGM PUMP *1 TO 3 UNITS* WITH HONDA *GX120K1QX2* ENGINE

Qty.	P/N	Description
3	17210ZE0505	ELEMENT AIR CLEANER DUAL
3	9807955846	SPARK PLUG
1	17620ZH7023	CAP, FUEL WITH GASKET
1	28462ZH8003	ROPE STARTER
1	2022331	DIAPHRAGM 2-INCH
2	2023356	FLAP VALVE 2-INCH
1	2023322	PLUG, 2-INCH FILL
1	2023323	GASKET, 2-INCH PLUG
1	0742304050	STRAINER



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

WATERBOX AND GROOVE ASSY.



NOTES:

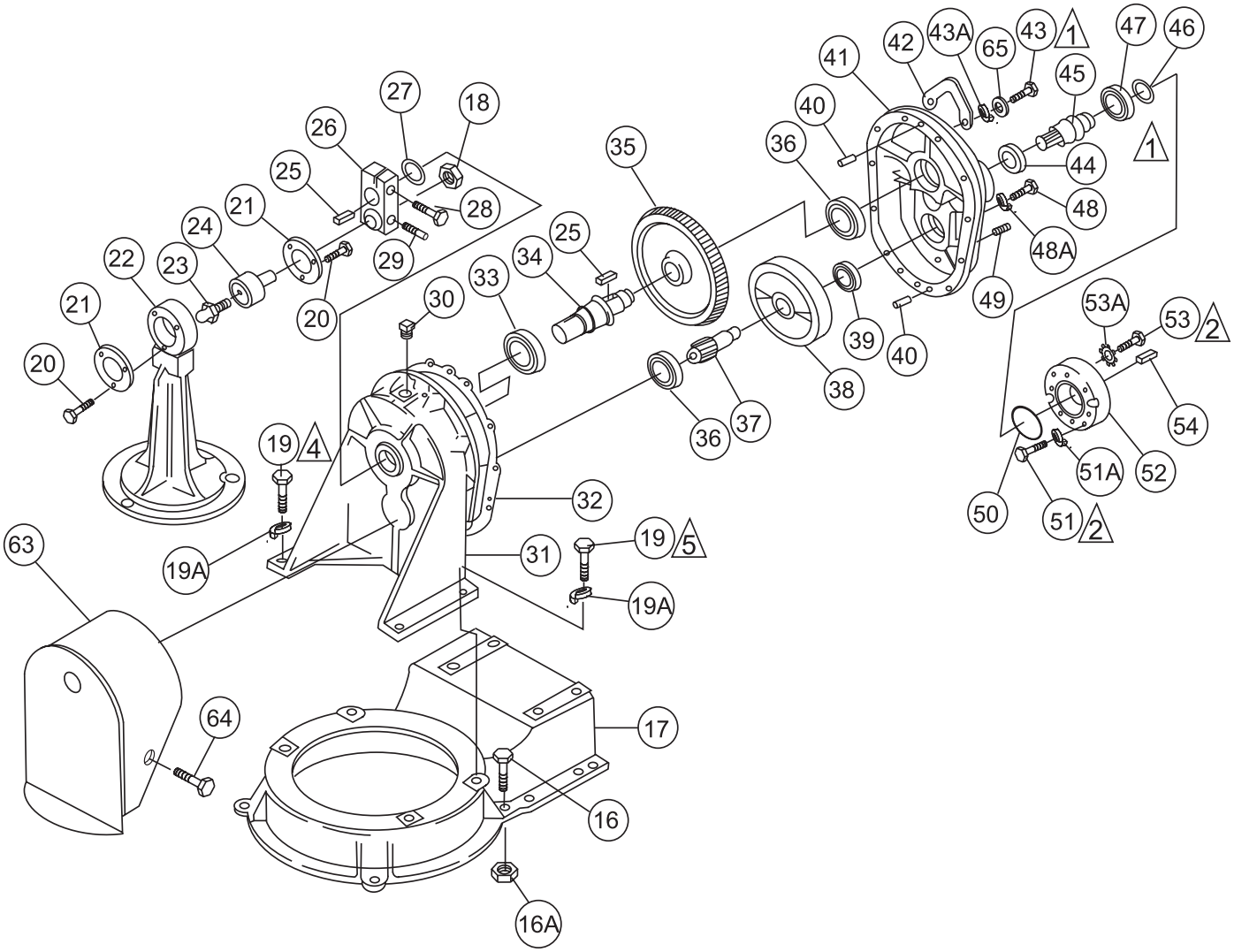
3 TORQUE TO 16-20 FT. LBS.

MQ-D206H — WATERBOX AND GROOVE ASSY.

WATERBOX AND GROOVE ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	2023354	SUCTION CONN & GROOVE PIN ASSY.	1	
2	2023322	2" FILL PLUG	1	
3	2023323	2" PLUG GASKET	1	
4	2023015	EXTRA HEAVY NIPPLE	2	
5	2023812	3/8"X1-1/2" HX SCREW	4	
5A	2023800	3/8" LOCKWASHER	4	
6	2021838	1/8"X3/8" SPRING PIN	2	
7	2023358	VALVE WEIGHT	2	
8	2023356	FLAP VALVE	2	
9	2023357	VALVE BINDER	2	
10	2021032	RD. HD. MACH. SCREW #10-32X1/2"	4	
11	2023351	WATERBOX & GROOVE PIN ASSY.	1	
12	2023355	DISCHARGE CONNECTION	1	
13	2023458	STUD, 3/8"-16 X 2 UNC	3	
13A	2061213	HEX NUT, 3/8"-16	3	
14	2023353	DIAPHRAGM BOTTOM	1	
15	2022331	DIAPHRAGM	1	
16	0742304050	STRAINER	1	
17	2023816	NUT, HEX 3/8"-16 UNC	3	

PUMP ASSY.



NOTES:

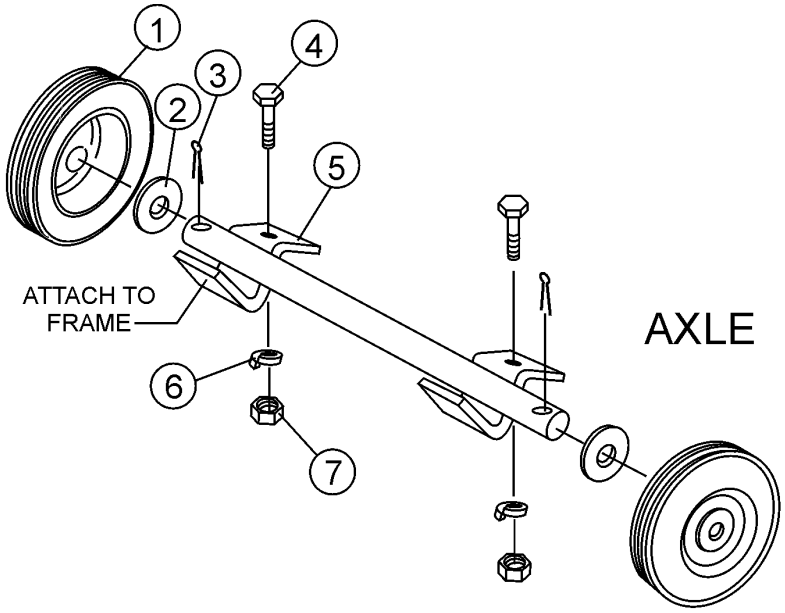
1. TORQUE TO 7-8 FT. LBS.
2. TORQUE TO 10-11 FT. LBS.
4. TORQUE TO 35-40 FT. LBS.
5. TORQUE TO 55-60 FT. LBS.

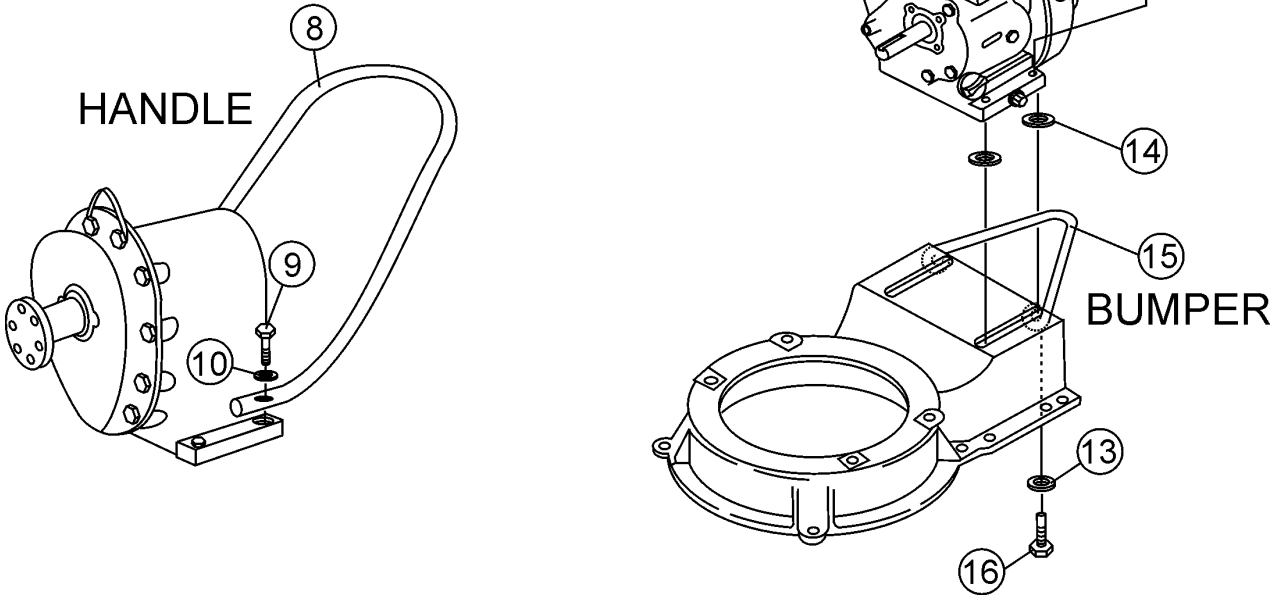
PUMP ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
16	2021214	SCREW, 1/2"X2-1/4" HEX, HN	2	
16A	2061213	HEX NUT, 1/2" -13 UNC	2	
17	2023350	PUMP FRAME	1	
18	2025818	JAM NUT, 5/8-18 UNF	1	
19	3051213	HEX SCREW 1/2"-13 UNC X 1-3/4"	4	
19A	2021200	WASHER, LOCK 1/2"	4	
20	2023212	SCREW, #10-32X3/8" FT. HD. MACH	6	
21	2023360	RETAINING WASHER	2	
22	2023352	CONNECTING ROD	1	
23	2020316	GREASE FITTING, 3/16" DRIVE TYPE STR.	1	
24	2025582	BEARING, CONNECTING ROD	1	
25	2020807	WOODRUFF KEY	2	
26	2025584	CRANK ARM	1	
27	2021232	OIL SEAL	1	
28	2021211	SCREW, HEX 1/2"X1-1/2"-13 UNC	1	
29	2025656	SCREW, SOCKET SET 5/16"X5/16" -18 UNC	1	
30	2024540	PLUG, 3/8" VENTED PIPE, PLASTIC	1	
31	2024850	GEAR CASE	1	
32	2024858	GASKET, GEAR CASE	1	
33	2063070	BEARING, BALL	1	
34	2024853	GEAR SHAFT	1	
35	2025058	GEAR, 79 TOOTH	1	
36	2063040	BEARING, BALL	2	
37	2024852	PINION, 11 TOOTH	1	
38	2023417	GEAR, 85 TOOTH INTERNAL	1	
39	2023020	BEARING, BALL	1	
40	2021434	PIN, 1/4"X3/4" DOWEL	2	
41	2064851	COVER, GEAR CASE	1	
42	2024945	LIFTING HOOK	1	
43	2021420	SCREW, HEX 1/4"-20 UNC X1-1/4"	2	
43A	2021421	WASHER, LOCK 1/4"	2	
44	2061880	NEEDLE BEARING	1	
45	2024854	14T PINION (3/4" BORE)	1	
46	2025100	RETAINING RING	1	
47	2029106	BEARING, BALL	1	
48	3051421	SCREW, 1/4-20" UNC X1"	9	
48A	2021421	WASHER, LOCK 1/4"	9	
49	2021827	PLUG, 1/8" NPT SQ. HD. PIPE	2	
50	2024859	O-RING	1	
51	2025162	SCREW, HEX 5/16"-24 UNF X1"	4	
51A	2025167	WASHER, LOCK 5/16"	4	
52	2024856	ENGINE ADAPTER	1	
53	2025160	SCREW, SOCKET HD. 5/16"-18 UNC X1"	4	
53A	2025165	LOCK WASHER CS W/INTERNAL TOOTH	4	
54	2025601	KEY 3/16" SQ. X 1" LG	1	
63	2023691	GUARD	1	
64	2021012	SELF TAPPING MACH. SCREWS	2	
65	2021402	WASHER, FLAT 1/4"	2	

MQ-D206H — AXLE, HANDLE, ENGINE MTG. AND BUMPER ASSY.

AXLE, HANDLE, ENGINE MOUNTING AND BUMPER ASSY.



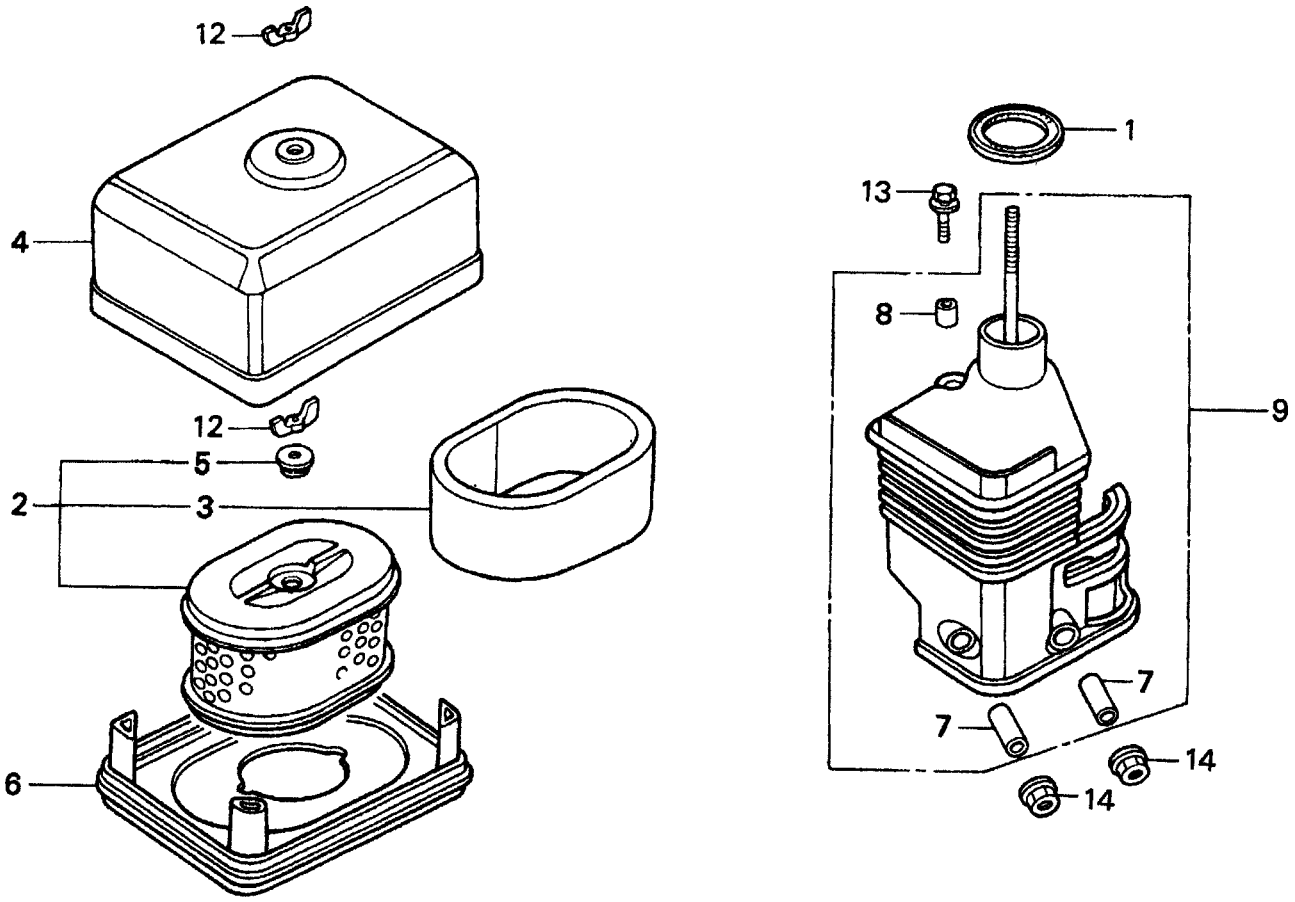


MQ-D206H — AXLE, HANDLE, ENGINE MTG. AND BUMPER ASSY.

AXLE, HANDLE, ENGINE MOUNTING AND BUMPER ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	2020274A	WHEELS SEMI-PNEUMATIC	2	
2	2023400	WASHER, FLAT 3/4" SAE	2	
3	2023161	COTTER PIN, 3/16" X 1-1/4" LG	2	
4	2023816	SCREW, HEX 3/8"-16 UNC X 1-1/4"	2	
5	2023039	AXLE CLAMP	2	
6	2023800	WASHER LOCK	2	
7	2063816	NUT HEX 3/8"-16 UNC	2	
8	2023320A	HANDLE	1	
9	2021213	SCREW HEX 1/2"-13 UNC X 2-1/2"	2	
10	2021200	WASHER, LOCK	4	
11	2025111	NUT HEX 5/16""-18 UNC	4	
12	2025167	WASHER, LOCK 5/16"	4	
13	3055160	WASHER, FLAT 5/16"	8	
14	2022676	WASHER, SLOTTED HOLE 1/32" THK	4	
15	2023327	BUMPER	1	
16	2025169	SCREW, HEX 5/16"-18 UNC X 2"	2	
17	GX160K1QX2	HONDA ENGINE 4.0 HP	1	

AIR CLEANER ASSY.

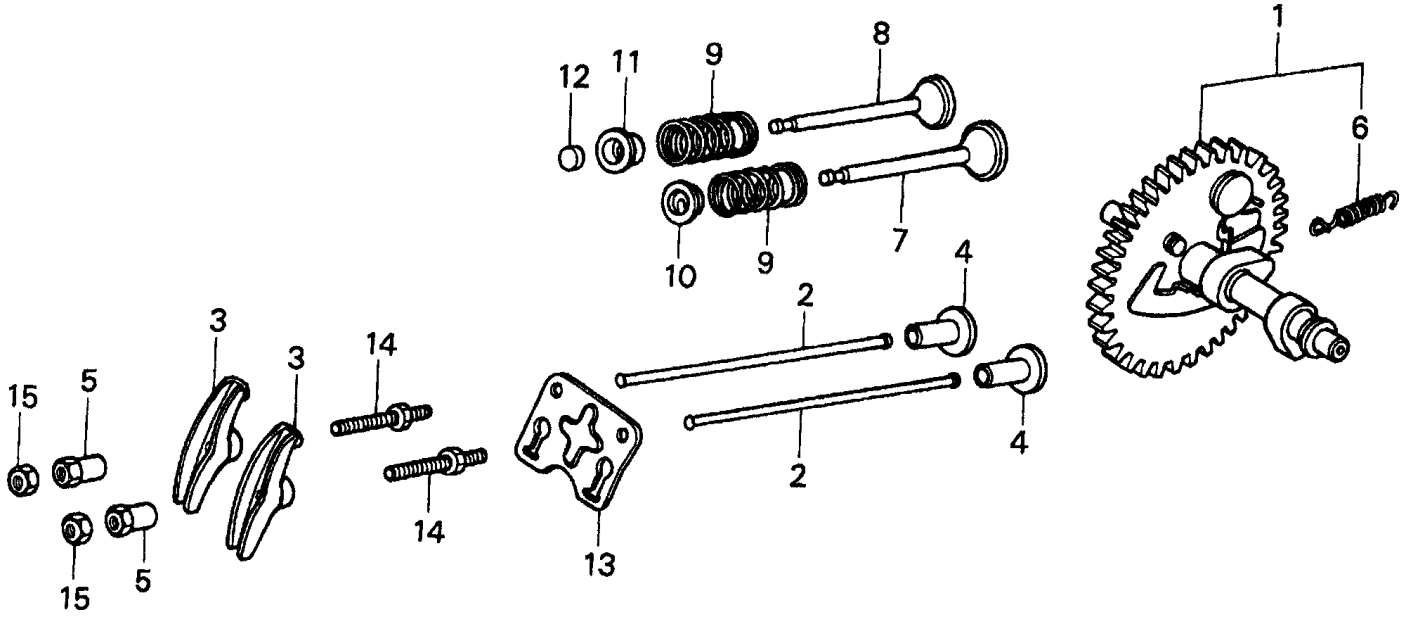


HONDA GX120K1QX2 ENGINE — AIR CLEANER ASSY.

AIR CLEANER ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	16271ZE1000	GASKET, ELBOW	1	
2	17210ZE0505	ELEMENT, AIR CLEANER (DUAL)	1	INCLUDES ITEMS W/*
3*	17218ZE0505	FILTER, OUTER	1	
4	17230ZE0820	COVER, AIR CLEANER (DUAL)	1	
5*	17232891000	GROMMET, AIR CLEANER	1	
7#	17238ZE0010	COLLAR, AIR CLEANER	2	
8#	17239ZE1000	COLLAR B, AIR CLEANER	1	
9	17410ZE0030	ELBOW, AIR CLEANER	1	INCLUDES ITEMS W/#
12	90325044000	WINGNUT, TOOL BOX SETTING	2	
13	957010602000	BOLT, FLANGE 6X20	1	
14	9405006000	NUT, FLANGE 6MM	2	

CAMSHAFT ASSY.

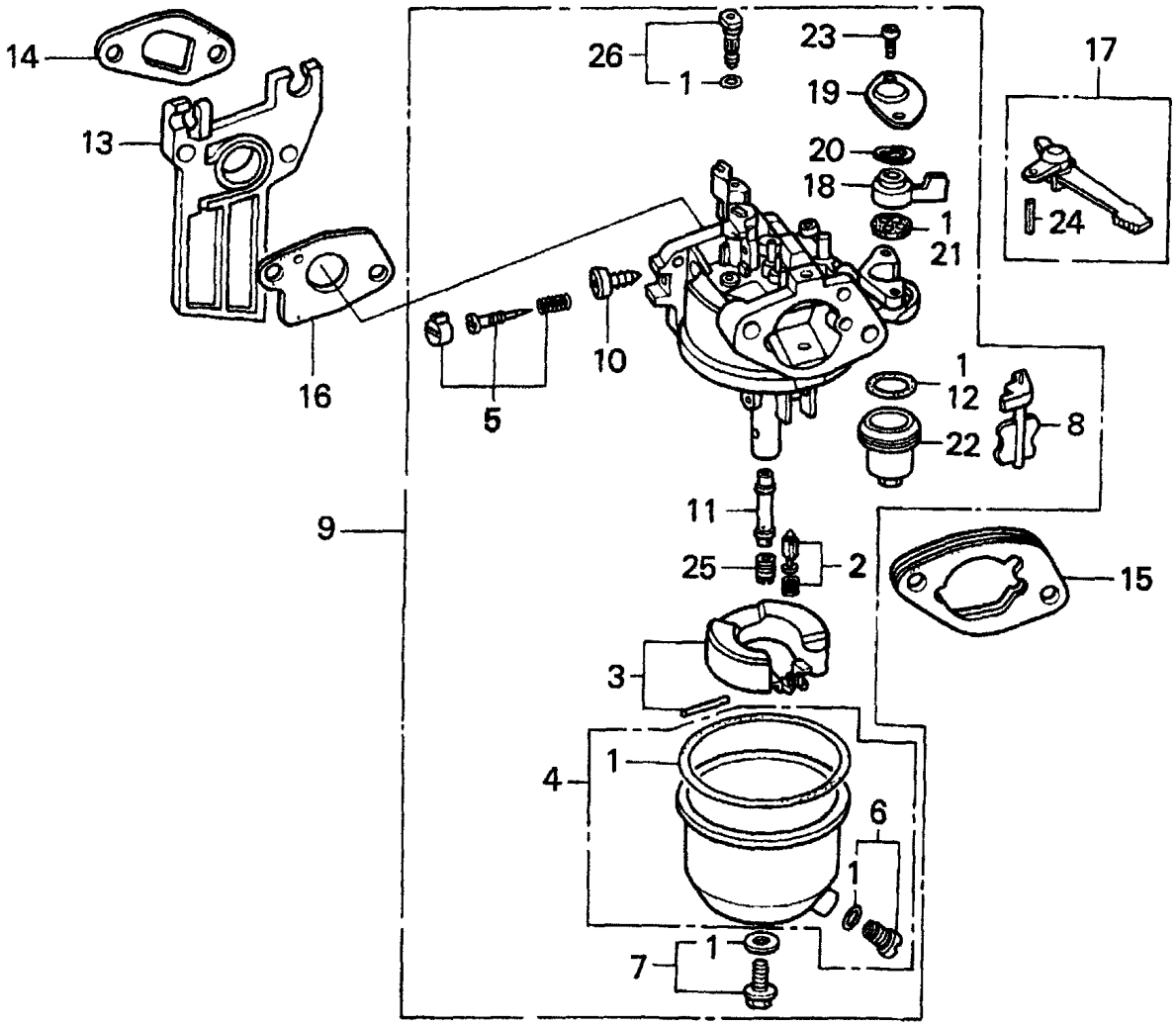


HONDA GX120K1QX2 ENGINE — CAMSHAFT ASSY.

CAMSHAFT ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	14100ZE0812	CAMSHAFT ASSEMBLY	1	INCLUDES ITEMS W/*
2	14410ZE0010	ROD, PUSH	2	
3	14431ZE1000	ARM, VALVE ROCKER	2	
4	14441ZE1010	LIFTER, VALVE	2	
5	14451ZE1013	PIVOT, ROCKER ARM	2	
6*	14568ZE1000	SPRING, WEIGHT RETURN	1	
7	14711ZF0010	VALVE, IN.	1	
8	14721ZF0000	VALVE, EX.	1	
9	14751ZF1000	SPRING, VALVE	2	
10	14771ZE1000	RETAINER, IN. VALVE SPRING	1	
11	14773ZE1000	RETAINER, EX. VALVE SPRING	1	
12	14781ZE1000	ROTATOR, VALVE	1	
13	14791ZE0010	PLATE, PUSH ROD GUIDE	1	
14	90012ZE0010	BOLT, PIVOT 8MM	2	
15	90206ZE1000	NUT, PIVOT ADJ.	2	

CARBURETOR ASSY.

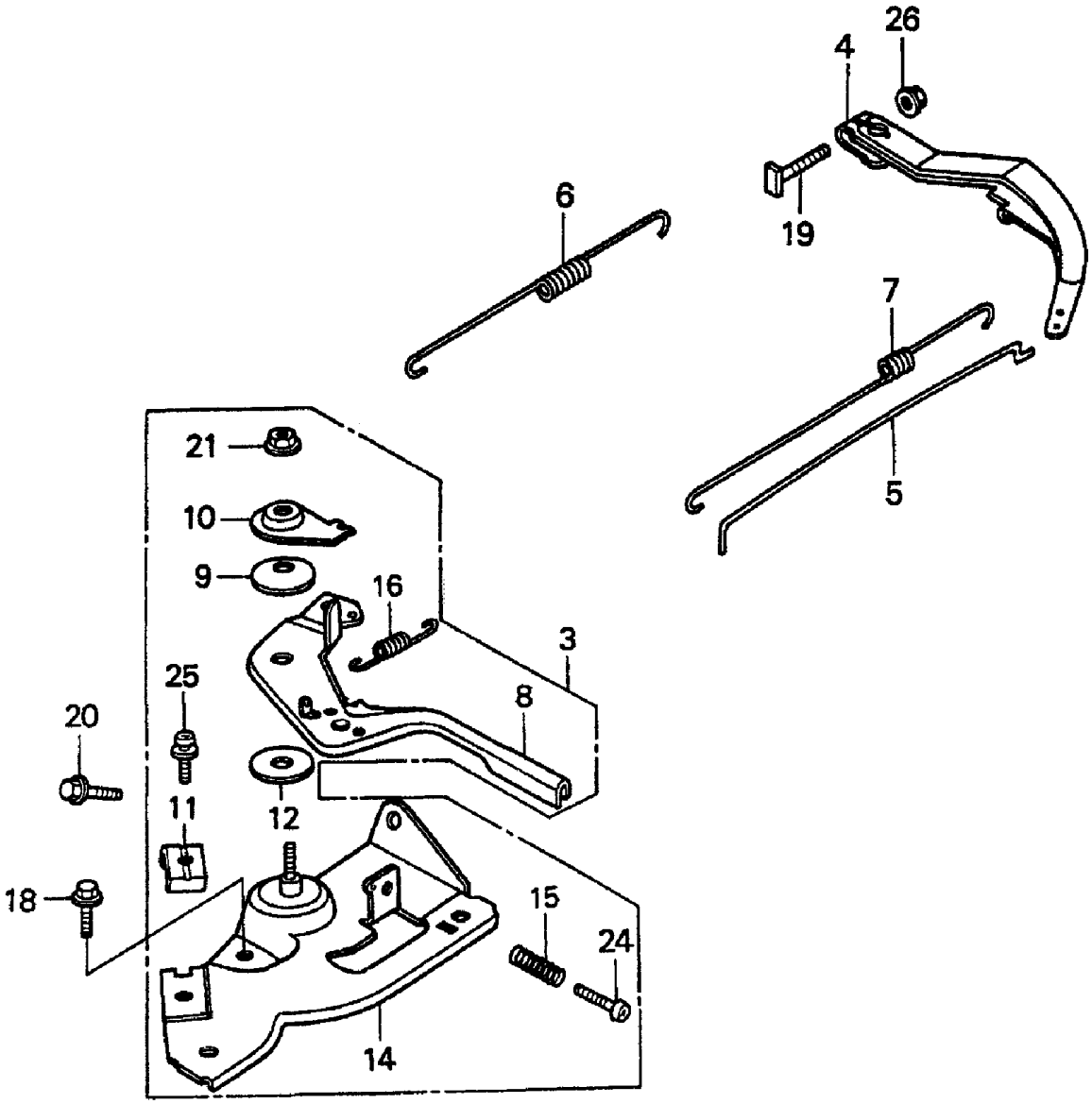


HONDA GX120K1QX2 ENGINE — CARBURETOR ASSY.

CARBURETOR ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
1*	16010ZE1812	GASKET SET	1	
2*	16011ZE0005	VALVE SET, FLOAT	1	
3*	16013ZE0005	FLOAT SET	1	
4*	16015ZE1811	CHAMBER SET, FLOAT	1	
5*	16016ZH7W01	SCREW SET	1	
6*	16024ZE1811	SCREW SET, DRAIN	1	
7*	16028ZE0005	SCREW SET B	1	
8*	16044ZE0005	CHOKE SET	1	
9	16100ZH7W51	CARBURETOR ASSEMBLY, BE60B B	1	INCLUDES ITEMS W/*
10*	16124ZE0005	SCREW, THROTTLE STOP	1	
11*	16166ZH7W50	NOZZLE, MAIN	1	
12*	16173001004	GASKET, FUEL STRAINER CUP	1	
13	16211ZE0000	INSULATOR, CARBURETOR	1	
14	16212ZH7800	GASKET, INSULATOR	1	
15	16220ZE1020	SPACER, CARBURETOR	1	
16	16221ZH8801	GASKET, CARBURETOR	1	
17	16610ZE1000	LEVER, CHOKE (STANDARD)	1	INCLUDES ITEMS W/+
18*	16953ZE1812	LEVER,VALVE	1	
19*	16954ZE1811	PLATE, LEVER SETTING	1	
20*	16956ZE1811	SPRING, VALVE LEVER	1	
21*	16957ZE1812	GASKET, VALVE	1	
22*	16967ZE0811	CUP, FUEL STRAINER	1	
23*	93500030080G	SCREW, PAN (3 X 6)	2	
24#	9430520122	PIN, SPRING (2 X 12)	1	
25	99101ZH80550	JET, MAIN (#55) (OPTIONAL)	1	
25	99101ZH80580	JET, MAIN (#58) (OPTIONAL)	1	
25*	99101ZH80600	JET, MAIN (#60)	1	
26*	99204ZE00350	JET, SET, PILOT (#35)	1	

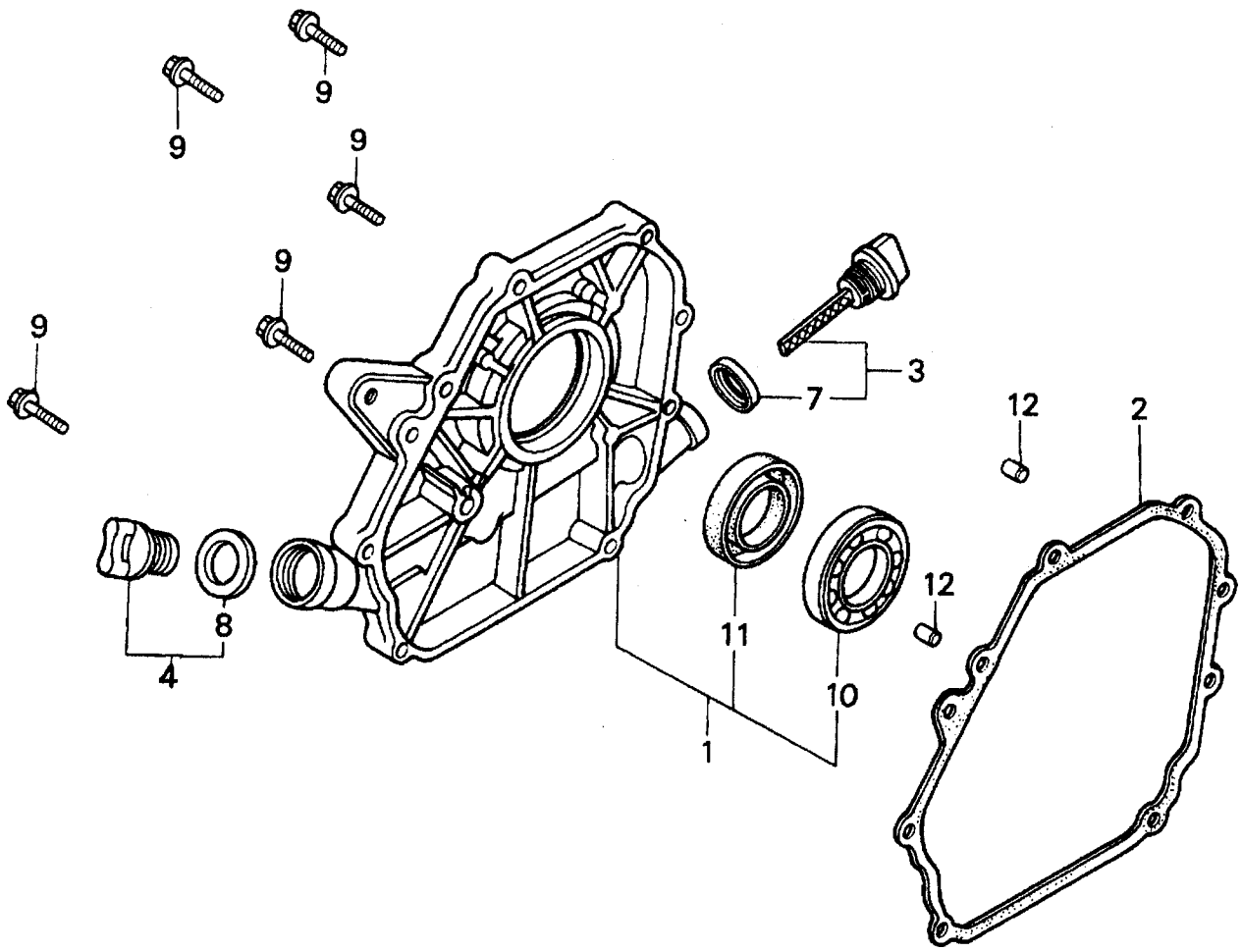
CONTROL ASSY.



CONTROL ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
3	16500ZH7820	CONTROL ASSEMBLY (REMOTE)	1	INCLUDES ITEMS W/#
4	16551ZE0010	ARM, GOVERNOR	1	
5	16555ZE0000	ROD, GOVERNOR	1	
6	16561ZE0020	SPRING, GOVERNOR	1	
7	16562ZE0020	SPRING, THROTTLE RETURN	1	
8#	16571ZH7000	LEVER, CONTROL	1	
9#	16574ZE1000	SPRING, LEVER	1	
10#	16575ZH8000	WASHER, CONTROL LEVER	1	
11#	16576891000	HOLDER, CABLE		
12#	16578ZE1000	SPACER, CONTROL LEVER	1	
14#	16580ZH7810	BASE CONTROL	1	
15#	16584883300	SPRING, CONTROL ADJUSTING	1	
16#	16592ZE1810	SPRING, CABLE RETURN		
18	90013883000	BOLT, FLANGE 6X12 (CT200)	1	
19	90015ZE5010	BOLT, GOVERNOR ARM	1	
20	90022888010	BOLT, FLANGE 6X20 (CT200)	1	
21#	90114SA0000	NUT, SELF- LOCK 6MM	1	
24#	93500050250H	SCREW, PAN 5X25	1	
25#	93500050160A	SCREW, PAN	1	
26	9405006000	NUT, FLANGE 6MM	1	

CRANKCASE COVER ASSY.

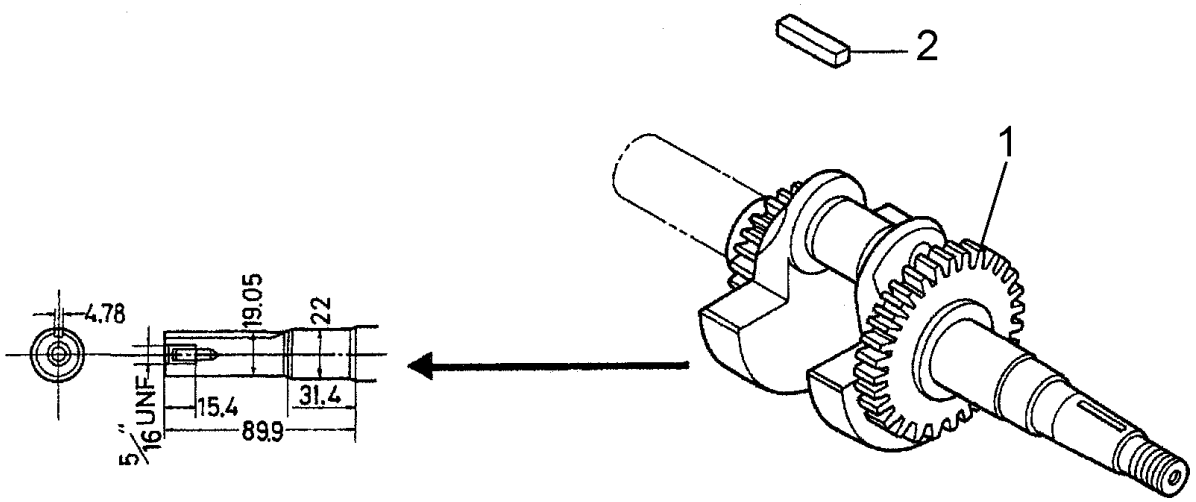


HONDA GX120K1QX2 ENGINE — CRANKCASE COVER ASSY.

CRANKCASE COVER ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	11300ZE0640	COVER ASSEMBLY, CRANKCASE (W- TYPE)	1	INCLUDES ITEMS W/*
2	11381ZH7800	GASKET, CASE COVER	1	
3	15600ZE1003	CAP ASSEMBLY, OIL FILLER	1	INCLUDES ITEMS W/#
4	15600ZG4003	CAP ASSEMBLY, OIL FILLER	1	INCLUDES ITEMS W/+
7#	15625ZE1003	GASKET, OIL FILLER CAP	1	
8+	15625ZE1003	GASKET, OIL FILLER CAP	1	
9	90015883000	BOLT, FLANGE 6X28	7	
10*	91001878003	BEARING, RADIAL BALL	1	
11*	91203ZE0003	OIL SEAL 22X41X6	1	
12	9430108140	PIN A, DOWEL 8X14	2	

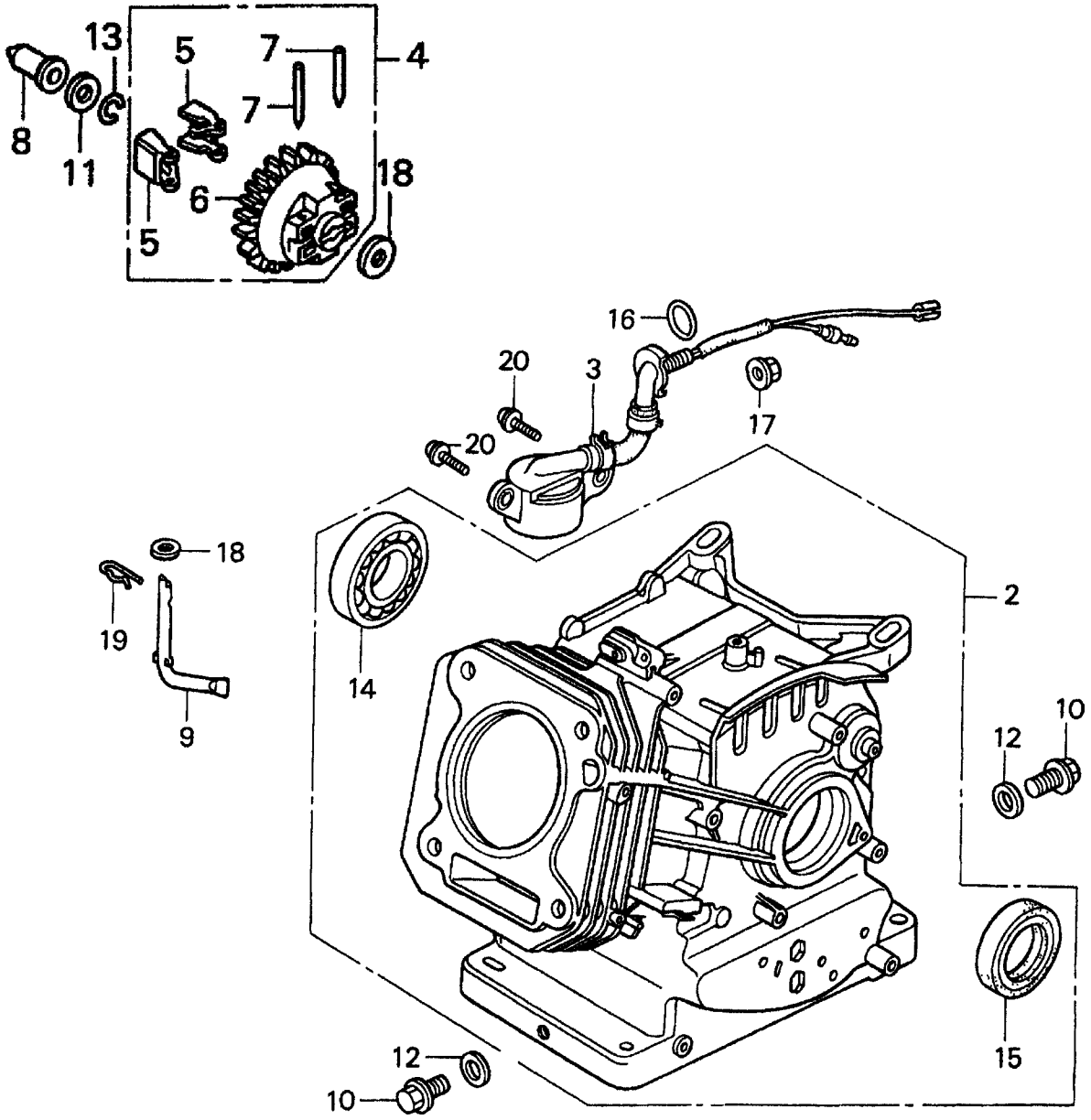
CRANKSHAFT ASSY.



CRANKSHAFT ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	13310ZE0601	CRANKSHAFT, H-TYPE	1	
2	90745ZE1600	KEY 4.78 X4.78X38	1	

CYLINDER BARREL ASSY.



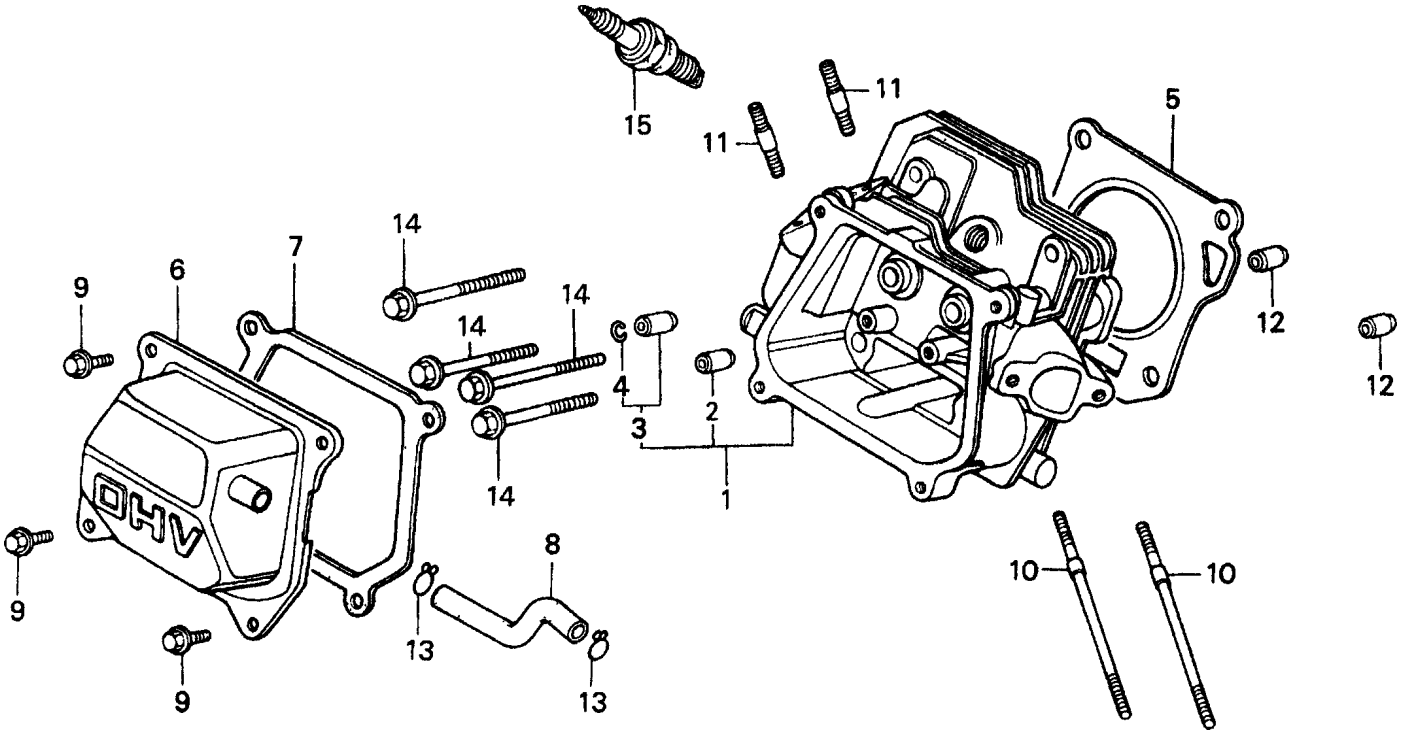
HONDA GX120K1QX2 ENGINE — CYLINDER BARREL ASSY.

CYLINDER BARREL ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
2	120A0ZH7810	CYLINDER ASSEMBLY (OIL ALERT)	1	INCLUDES ITEMS W/*
3	15510ZE1033	SWITCH ASSEMBLY, OIL LEVEL	1	
4	16510ZE1000	GOVERNOR ASSEMBLLY	1	INCLUDES ITEMS W/#
5#	16511ZE1000	WEIGHT, GOVERNOR	2	
6#	16512ZE1000	HOLDER, GOVERNOR WEIGHT	1	
7#	16513ZE1000	PIN, GOVERNOR WEIGHT	2	
8	16531ZE1000	SLIDER, GOVERNOR	1	
9	16541ZE1000	SHAFT, GOVERNOR ARM	1	
10	90131ZE1000	BOLT, DRAIN PLUG	2	
11	90451ZE1000	WASHER, THRUST 6mm	1	
12	90601ZE1000	WASHER, DRAIN PLUG 10.2mm	2	
13	90602ZE1000	CLIP, GOVERNOR HOLDER	1	
14*	91001878003	BEARING, RADIAL BALL 62/22	1	
15*	91202ZE6003	OIL SEAL 22X35X6	1	
16	91353671003	O- RING 13.5X1.5 (ARAI)	1	
17	9405010000	NUT, FLANGE 10mm	1	
18	9410106800	WASHER, PLAIN 6mm	2	
19	9425108000	PIN, LOCK 8mm	1	
20	957010601200	BOLT, FLANGE 6X12	2	

HONDA GX120K1QX2 ENGINE — CYLINDER HEAD ASSY.

CYLINDER HEAD ASSY.

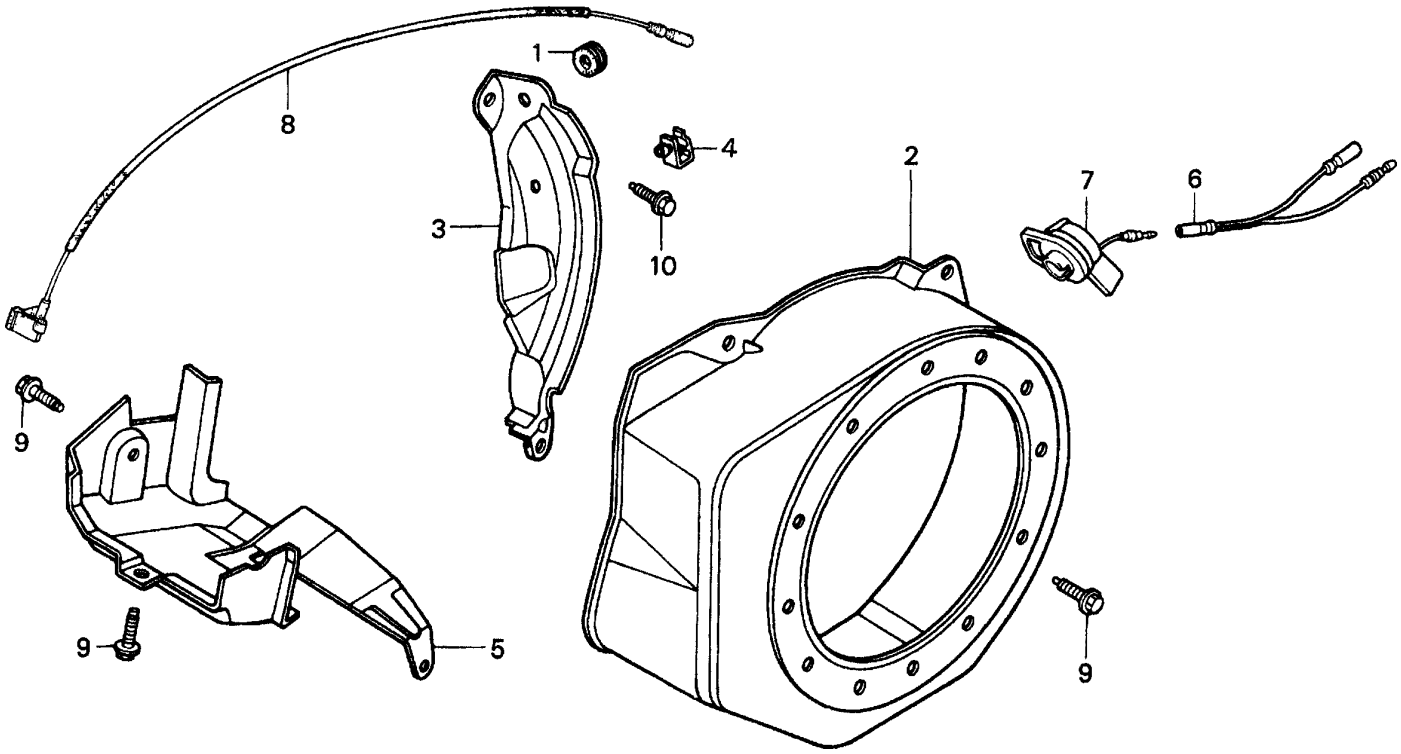


HONDA GX120K1QX2 ENGINE — CYLINDER HEAD ASSY.

CYLINDER HEAD ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	12210ZH7000	CYLINDER HEAD	1	INCLUDES ITEMS W/*
2*	12204ZE1306	GUIDE, VALVE (OS) OPTIONAL	1	
3*	12205ZE1315	GUIDE, EX. VALVE (OS) OPTIONAL	1	INCLUDES ITEMS W/+
4*+	12216ZE5300	CLIP, VALVE GUIDE	1	
5	12251ZH7800	GASKET, CYLINDER HEAD	1	
6	12310ZE1000	COVER, HEAD	1	
6	12310ZE1010	COVER, HEAD	1	
7	12391ZE1000	GASKET, CYLINDER HEAD COVER	1	
8	15721ZH8000	TUBE, BREATHER	1	
9	90013883000	BOLT, FLANGE 6X12 (CT200)	4	
10	90043ZE1020	BOLT, STUD 6X109	2	
11	90047ZE1000	BOLT, STUD 8X32	2	
12	9430110160	PIN, A, DOWEL 10X16	2	
14	957230805500	BOLT, FLANGE 8X55	4	
15	9807955846	SPARK PLUG BPR6ES (NGK)	1	

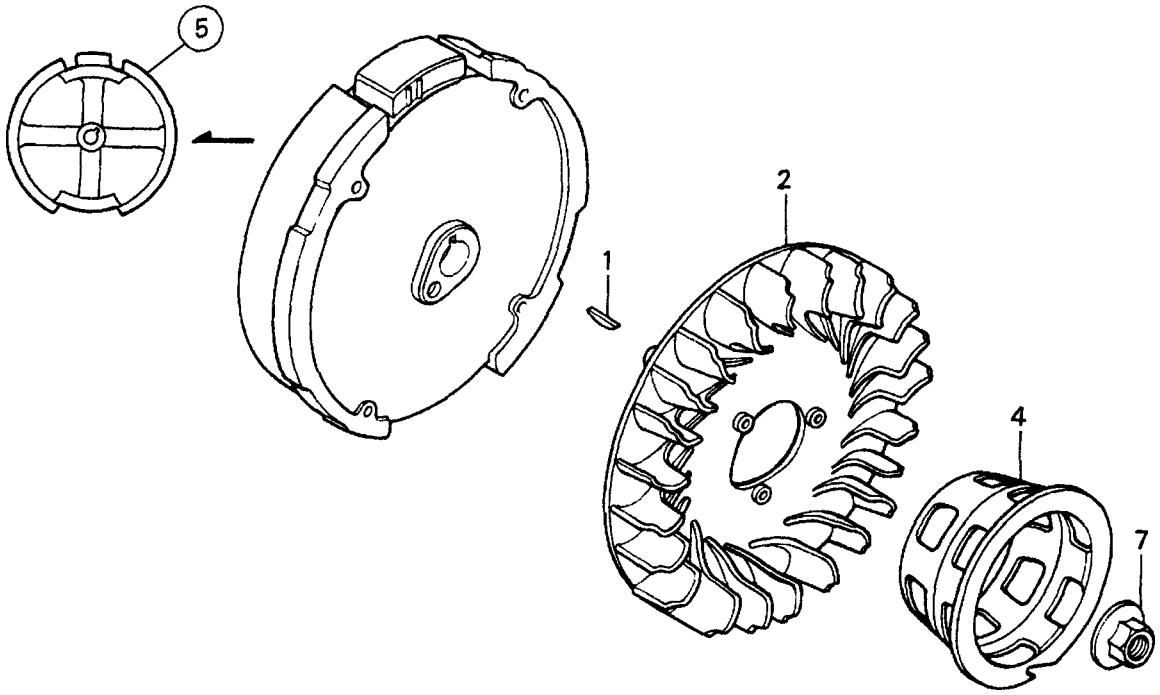
FAN COVER ASSY.



FAN COVER ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	11347371300	GROMMET, ADJUSTING COVER	1	
2	19610ZE0000ZE	COVER, FAN *NH1* BLACK	1	
3	19611ZH7810	PLATE, SIDE (OIL ALERT)	1	
4	90601ZH7013	CLIP, HARNESS	1	
5	19630ZH7000	SHROUD	1	
6	32197ZH8003	SUB- HARNESS	1	
7	36100ZE1015	SWITCH ASSEMBLY, ENGINE STOP	1	
7	36100ZH7003	SWITCH ASSEMBLY, ENGINE STOP	1	
8	36101ZE1010	WIRE, STOP SWITCH 370MM	1	
9	90013883000	BOLT, FLANGE 6X12 (CT200)	6	
10	90022888010	BOLT, FLANGE 6X12 (CT200)	1	
11	34150ZH7003	ALERT UNIT, OIL	1	
13	957010600800	BOLT, FLANGE 6X8	1	

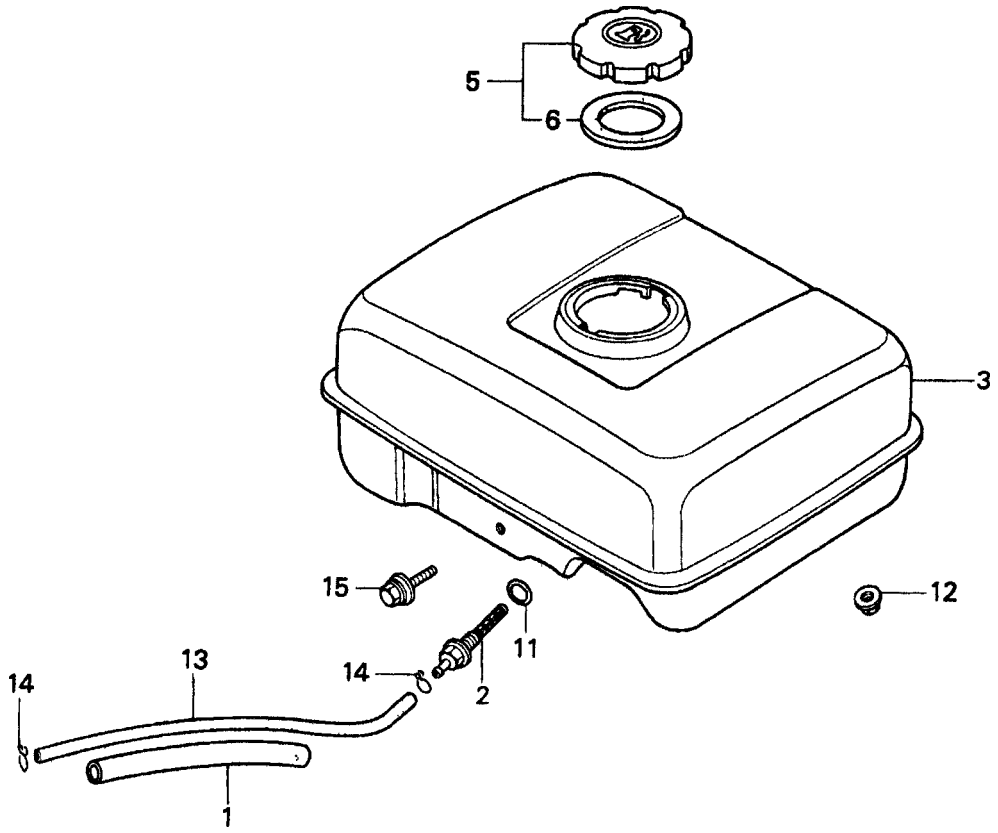
FLYWHEEL ASSY.



FLYWHEEL ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	13331357000	KEY, SPECIAL WOODRUFF 25X18	1	
2	19511ZE0000	FAN, COOLING	1	
4	28451ZH8003	PULLEY, STARTER	1	
5	31100ZE0010	FLYWHEEL	1	
7	90201878003	NUT, SPECIAL 14MM	1	

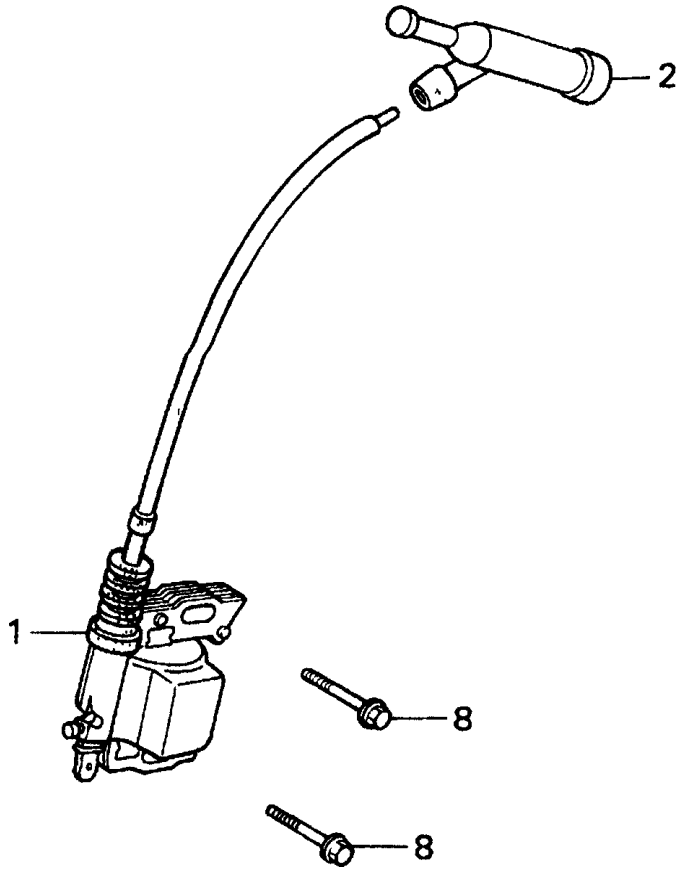
FUEL TANK ASSY.



FUEL TANK ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	16854ZH8000	RUBBER, SUPPORTER 107MM	1	
2	16955ZE1000	JOINT, FUEL TANK	1	
3	17510ZE0020ZD	TANK, FUEL *NH1* (BLACK)	1	
5	17620ZH7023	CAP, FUEL FILLER	1	..... INCLUDES ITEMS W/*
6*	17631ZH7003	GASKET, FUEL FILLER CAP	1	
11	91353671003	O- RING 13.5X1.5 (ARAI)	1	
12	9405006000	NUT, FLANGE 6MM	2	
13	950014500360M	BULK HOSE, FUEL (4.5X3000) (4.5X140)	1	
14	9500202080	CLIP, TUBE (B8)	2	
15	90004ZH7003	BOLT, FLANGE 6X29	1	

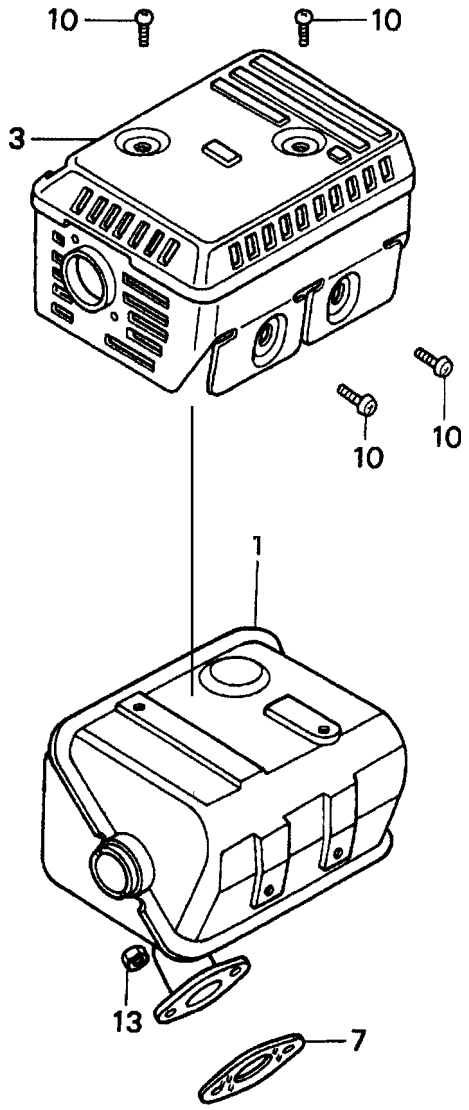
IGNITION COIL ASSY.



IGNITION COIL ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	30500ZE1033	COIL ASSEMBLY, IGNITION	1	
2	30700ZE1013	CAP ASSEMBLY, NOISE SUPPRESSOR	1	
8	90121952000	BOLT, FLANGE 6X25	2	

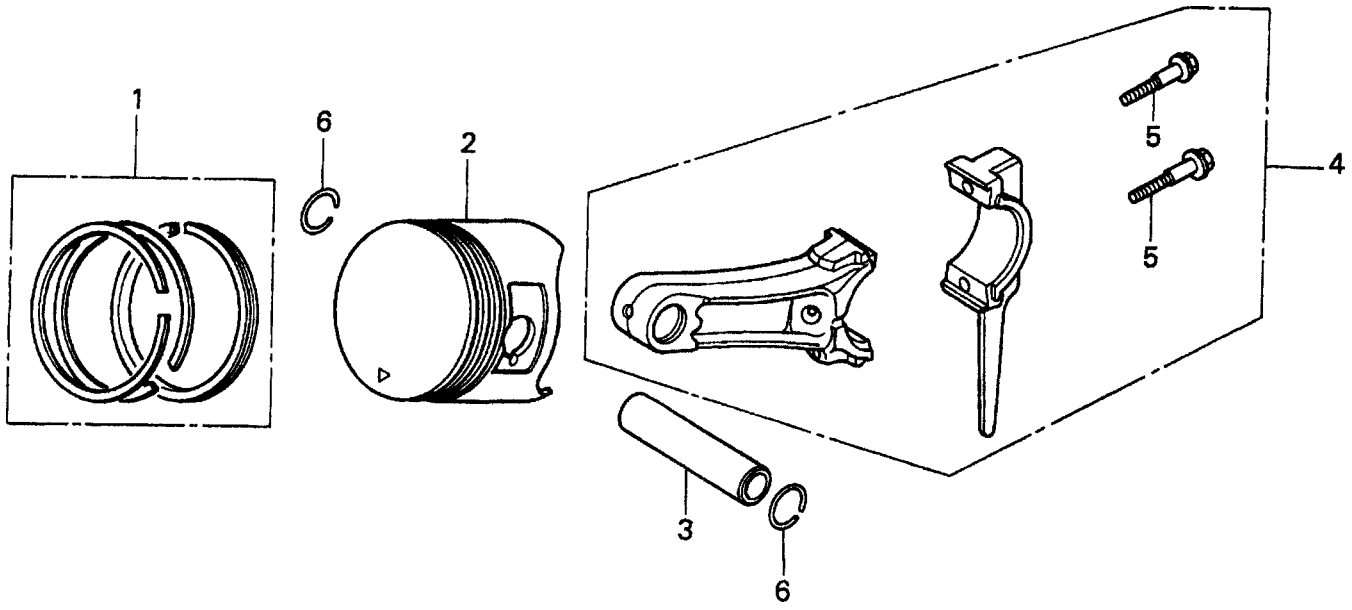
MUFFLER ASSY.



MUFFLER ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	18310ZF1000	MUFFLER	1	
3	18320ZF1H01	PROTECTOR, MUFFLER	1	
7	18381ZH8800	GASKET, MUFFLER	1	
10	90050ZE1000	SCREW, TAPPING 5X8	4	
13	94001080000S	NUT, HEX. 8MM	2	

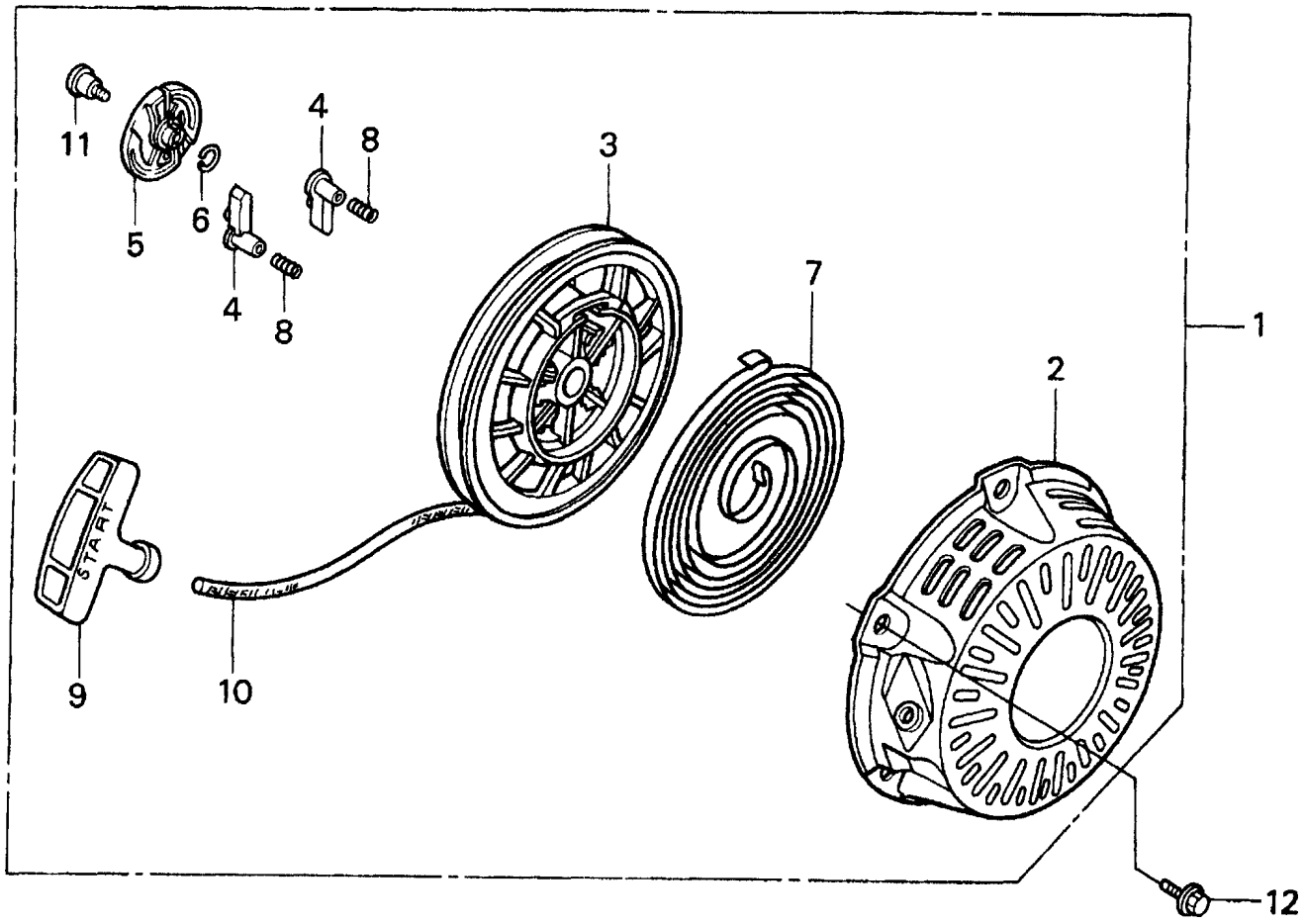
PISTON ASSY.



PISTON ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	13010ZK7V01	RING SET, PISTON (STANDARD)	1	
1	13011ZE6013	RING SET, PISTON (OS 0.25), OPTIONAL	1	
1	13012ZK7V01	RING SET, PISTON (OS 0.50) , OPTIONAL	1	
1	13013ZK7V01	RING SET, PISTON (OS 0.75), OPTIONAL	1	
2	13101ZH7000	PISTON, STANDARD	1	
2	13102ZH7000	PISTON, OS 0.25	1	
2	13103ZH7000	PISTON, OS 0.50	1	
2	13104ZH7000	PISTON, 0.75	1	
3	13111ZE0000	PIN, PISTON	1	
4	132A0ZE0000	ROD ASSY, CONNECTING (UNDER SIZE)	1	..... INCLUDES ITEMS W/*
4	13200ZE0000	ROD ASSEMBLY, CONNECTING	1	..... INCLUDES ITEMS W/*
5*	90001ZE1000	BOLT, CONNECTING ROD	2	
6	90551ZE0000	CLIP, PISTON PIN 13MM	2	

RECOIL STARTER ASSY.



HONDA GX120K1QX2 ENGINE — RECOIL STARTER ASSY.

RECOIL STARTER ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	28400ZH8013ZB	STARTER ASSY., RECOIL *NH1* (BLACK)	1	INCLUDES ITEMS W/*
2*	28410ZH8003ZB	CASE, RECOIL STARTER *NH1* (BLACK)	1	
3*	28420ZH8013	REEL, RECOIL STARTER	1	
4*	28422ZH8013	RATCHET, STARTER	2	
5*	28433ZH8003	GUIDE, RATCHET	1	
6*	28441ZH8003	SPRING, FRICTION	1	
7*	28442ZH8003	SPRING, RECOIL STARTER	1	
8*	28443ZH8003	SPRING, RETURN	2	
9*	28461ZH8003	KNOB, RECOIL STARTER	1	
10*	28462ZH8003	ROPE, RECOIL STARTER	1	
11*	90003ZH8003	SCREW, SETTING	1	
12	9008ZE2003	BOLT, FLANGE 6X10	3	

NO ARTWORK AVALIBLE

HONDA GX120K1QX2 ENGINE — GASKET KIT ASSY.

GASKET KIT ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
2	06111ZH7405	GASKET KIT	1	INCLUDES ITEMS W/*
3*	11381ZH7800	GASKET, CASE COVER	1	
4*	12251ZH7800	GASKET, CYLINDER HEAD	1	
5*	12391ZE1000	GASKET, CYLINDER HEAD COVER	1	
6*	16212ZH7800	GASKET, INSULATOR	1	
7*	16221ZH8801	GASKET, CARBURETOR	1	
8*	18381ZH8800	GASKET, MUFFLER	1	

TERMS AND CONDITIONS OF SALE — PARTS

PAYMENT TERMS

Terms of payment for parts are net 10 days.

FREIGHT POLICY

All parts orders will be shipped collect or prepaid with the charges added to the invoice. All shipments are F.O.B. point of origin. Multiquip's responsibility ceases when a signed manifest has been obtained from the carrier, and any claim for shortage or damage must be settled between the consignee and the carrier.

MINIMUM ORDER

The minimum charge for orders from Multiquip is $15.00 net. Customers will be asked for instructions regarding handling of orders not meeting this requirement.

RETURNED GOODS POLICY

Return shipments will be accepted and credit will be allowed, subject to the following provisions:

1. A Returned Material Authorization must be approved by Multiquip prior to shipment.
2. To obtain a Return Material Authorization, a list must be provided to Multiquip Parts Sales that defines item numbers, quantities, and descriptions of the items to be returned.
    a. The parts numbers and descriptions must match the current parts price list.
    b. The list must be typed or computer generated.
    c. The list must state the reason(s) for the return.
    d. The list must reference the sales order(s) or invoice(s) under which the items were originally purchased.
    e. The list must include the name and phone number of the person requesting the RMA.
3. A copy of the Return Material Authorization must accompany the return shipment.
4. Freight is at the sender's expense. All parts must be returned freight prepaid to Multiquip's designated receiving point.
5. Parts must be in new and resalable condition, in the original Multiquip package (if any), and with Multiquip part numbers clearly marked.
6. The following items are not returnable:
    a. Obsolete parts. (If an item is in the price book and shows as being replaced by another item, it is obsolete.)
    b. Any parts with a limited shelf life (such as gaskets, seals, "O" rings, and other rubber parts) that were purchased more than six months prior to the return date.
    c. Any line item with an extended dealer net price of less than $5.00.
    d. Special order items.
    e. Electrical components.
    f. Paint, chemicals, and lubricants.
    g. Decals and paper products.
    h. Items purchased in kits.
7. The sender will be notified of any material received that is not acceptable.
8. Such material will be held for five working days from notification, pending instructions. If a reply is not received within five days, the material will be returned to the sender at his expense.
9. Credit on returned parts will be issued at dealer net price at time of the original purchase, less a 15% restocking charge.
10. In cases where an item is accepted, for which the original purchase document can not be determined, the price will be based on the list price that was effective twelve months prior to the RMA date.
11. Credit issued will be applied to future purchases only.

PRICING AND REBATES

Prices are subject to change without prior notice. Price changes are effective on a specific date and all orders received on or after that date will be billed at the revised price. Rebates for price declines and added charges for price increases will not be made for stock on hand at the time of any price change.

Multiquip reserves the right to quote and sell direct to Government agencies, and to Original Equipment Manufacturer accounts who use our products as integral parts of their own products.

SPECIAL EXPEDITING SERVICE

A $35.00 surcharge will be added to the invoice for special handling including bus shipments, insured parcel post or in cases where Multiquip must personally deliver the parts to the carrier.

LIMITATIONS OF SELLER'S LIABILITY

Multiquip shall not be liable hereunder for damages in excess of the purchase price of the item with respect to which damages are claimed, and in no event shall Multiquip be liable for loss of profit or good will or for any other special, consequential or incidental damages.

LIMITATION OF WARRANTIES

No warranties, express or implied, are made in connection with the sale of parts or trade accessories nor as to any engine not manufactured by Multiquip. Such warranties made in connection with the sale of new, complete units are made exclusively by a statement of warranty packaged with such units, and Multiquip neither assumes nor authorizes any person to assume for it any other obligation or liability whatever in connection with the sale of its products. Apart from such written statement of warranty, there are no warranties, express, implied or statutory, which extend beyond the description of the products on the face hereof.

NOTE PAGE

OPERATION AND PARTS MANUAL

HERE'S HOW TO GET HELP

PLEASE HAVE THE MODEL AND SERIAL NUMBER *ON-HAND* WHEN CALLING

MULTIQUIP'S MAIN PHONE NUMBERS

800-421-1244 FAX: 310-537-3927
310-537-3700

PARTS DEPARTMENT

800-427-1244 FAX: 800-672-7877
310-537-3700 FAX: 310-637-3284

MAYCO PARTS

800-306-2926 FAX: 800-672-7877
310-537-3700 FAX: 310-637-3284

SERVICE DEPARTMENT

800-478-1244 FAX: 310-537-4259
310-537-3700

MQ POWER SERVICE DEPARTMENT

800-835-2551 FAX: 310-638-8046
310-537-3700

TECHNICAL ASSISTANCE

800-478-1244 FAX: 310-631-5032

WARRANTY DEPARTMENT

800-421-1244, EXT. 279 FAX: 310-537-1173
310-537-3700, EXT. 279

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