

OPERATION AND PARTS MANUAL



Mikasa **SERIES**
MODEL MVC64VH/VHW
ONE-WAY PLATE COMPACTOR
(HONDA GX120U1 GASOLINE ENGINE)

Revision #2 (07/05/16)

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THIS MANUAL MUST ACCOMPANY THE EQUIPMENT AT ALL TIMES.



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.

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NOTICE

Specifications and part numbers are subject to change without notice.

PARTS ORDERING PROCEDURES

Ordering parts has never been easier! Choose from three easy options:

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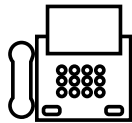
If you have an MQ Account, to obtain a Username and Password, E-mail us at: parts@multiquip.com.

To obtain an MQ Account, contact your District Sales Manager for more information.

Goto www.multiquip.com and click on **Order Parts** to log in and save!

Use the **internet** and qualify for a **5% Discount** on *Standard orders* for all orders which include complete part numbers.*

Note: Discounts Are Subject To Change



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Note: Discounts Are Subject To Change



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1-800-427-1244

Non-Dealer Customers:

Contact your local Multiquip Dealer for parts or call 800-427-1244 for help in locating a dealer near you.



International Customers should contact their local Multiquip Representatives for Parts Ordering information.

When ordering parts, please supply:

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|---|--|
| <input type="checkbox"/> Dealer Account Number | <input type="checkbox"/> Specify Preferred Method of Shipment: |
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| <input type="checkbox"/> Return Fax Number | <input type="checkbox"/> Ground |
| <input type="checkbox"/> Applicable Model Number | <input type="checkbox"/> Next Day |
| <input type="checkbox"/> Quantity, Part Number and Description of Each Part | <input type="checkbox"/> Second/Third Day |

NOTICE

All orders are treated as *Standard Orders* and will ship the same day if received prior to 3PM PST.

WE ACCEPT ALL MAJOR CREDIT CARDS!



SAFETY INFORMATION

Do not operate or service the equipment before reading the entire manual. 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.



SAFETY MESSAGES

The four 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 four words: **DANGER**, **WARNING**, **CAUTION** or **NOTICE**.

SAFETY SYMBOLS

! DANGER

Indicates a hazardous situation which, if not avoided, **WILL** result in **DEATH** or **SERIOUS INJURY**.

! WARNING

Indicates a hazardous situation which, if not avoided, **COULD** result in **DEATH** or **SERIOUS INJURY**.

! CAUTION

Indicates a hazardous situation which, if not avoided, **COULD** result in **MINOR** or **MODERATE INJURY**.

NOTICE

Addresses practices not related to personal injury.

Potential hazards associated with the operation of this equipment will be referenced with hazard symbols which may appear throughout this manual in conjunction with safety messages.

Symbol	Safety Hazard
	Lethal exhaust gas hazards
	Explosive fuel hazards
	Burn hazards
	Respiratory hazards
	Accidental starting hazards
	Eye and hearing hazards
	Rotating parts hazards

SAFETY INFORMATION

GENERAL SAFETY

CAUTION

- **NEVER** operate this equipment without proper protective clothing, shatterproof glasses, respiratory protection, hearing protection, steel-toed boots and other protective devices required by the job or city and state regulations.



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



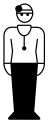
- **NEVER** operate this equipment under the influence of drugs or alcohol.



- **ALWAYS** check the equipment for loosened threads or bolts before starting.
- **DO NOT** use the equipment for any purpose other than its intended purposes or applications.
- **ALWAYS** clear the work area of any debris, tools, etc. that would constitute a hazard while the equipment is in operation.

NOTICE

- This equipment should only be operated by trained and qualified personnel 18 years of age and older.
- Whenever necessary, replace nameplate, operation and safety decals when they become difficult read.
- Manufacturer does not assume responsibility for any accident due to equipment modifications. Unauthorized equipment modification will void all warranties.
- **NEVER** use accessories or attachments that are not recommended by Multiquip for this equipment. Damage to the equipment and/or injury to user may result.
- **ALWAYS** know the location of the nearest **fire extinguisher**.
- **ALWAYS** know the location of the nearest **first aid kit**.
- **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.



SAFETY INFORMATION

COMPACTOR SAFETY

DANGER

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



WARNING

- **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.

CAUTION

- **NEVER** lubricate components or attempt service on a running machine.

NOTICE

- **ALWAYS** keep the machine in proper running condition.
- Fix damage to machine and replace any broken parts immediately.
- **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 and unauthorized personnel.

ENGINE SAFETY

DANGER

- The engine fuel exhaust gases contain poisonous carbon monoxide. This gas is colorless and odorless, and can cause death if inhaled.
- The engine of this equipment requires an adequate free flow of cooling air. **NEVER** operate this equipment in any enclosed or narrow area where free flow of the air is restricted. If the air flow is restricted it will cause injury to people and property and serious damage to the equipment or engine.



WARNING

- **DO NOT** place hands or fingers inside engine compartment when engine is running.
- **NEVER** operate the engine with heat shields or guards removed.
- Keep fingers, hands hair and clothing away from all moving parts to prevent injury.
- **DO NOT** remove the radiator cap while the engine is hot. High pressure boiling water will gush out of the radiator and severely scald any persons in the general area of the compactor.
- **DO NOT** remove the coolant drain plug while the engine is hot. Hot coolant will gush out of the coolant tank and severely scald any persons in the general area of the compactor.
- **DO NOT** remove the engine oil drain plug while the engine is hot. Hot oil will gush out of the oil tank and severely scald any persons in the general area of the compactor.



CAUTION

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



NOTICE

- **NEVER** run engine without an air filter or with a dirty air filter. Severe engine damage may occur. Service air filter frequently to prevent engine malfunction.
- **NEVER** tamper with the factory settings of the engine or engine governor. Damage to the engine or equipment can result if operating in speed ranges above the maximum allowable.
- **NEVER** tip the engine to extreme angles during lifting as it may cause oil to gravitate into the cylinder head, making the engine start difficult.

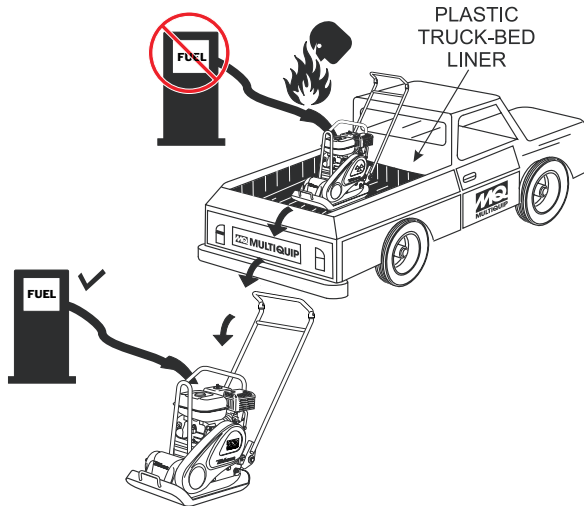



SAFETY INFORMATION

FUEL SAFETY

DANGER


- **DO NOT** add fuel to equipment if it is placed inside truck bed with plastic liner. Possibility exists of explosion or fire due to static electricity.




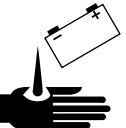
- **DO NOT** start the engine near spilled fuel or combustible fluids. Diesel fuel is extremely flammable and its vapors can cause an explosion if ignited.
- **ALWAYS** refuel in a well-ventilated area, away from sparks and open flames.
- **ALWAYS** use extreme caution when working with **flammable** liquids.
- **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 appropriate containers, in well-ventilated areas and away from sparks and flames.
- **NEVER** use fuel as a cleaning agent.
- **DO NOT** smoke around or near the equipment. Fire or explosion could result from fuel vapors or if fuel is spilled on a hot engine. 

BATTERY SAFETY (ELECTRIC START ONLY)

DANGER

- **DO NOT** drop the battery. There is a possibility that the battery will explode.
- **DO NOT** expose the battery to open flames, sparks, cigarettes, etc. The battery contains combustible gases and liquids. If these gases and liquids come into contact with a flame or spark, an explosion could occur. 

WARNING

- **ALWAYS** wear safety glasses when handling the battery to avoid eye irritation. The battery contains acids that can cause injury to the eyes and skin. 
- Use well-insulated gloves when picking up the battery.
- **ALWAYS** keep the battery charged. If the battery is not charged, combustible gas will build up.
- **DO NOT** charge battery if frozen. Battery can explode. When frozen, warm the battery to at least 61°F (16°C).
- **ALWAYS** recharge the battery in a well-ventilated environment to avoid the risk of a dangerous concentration of combustible gases.
- If the battery liquid (dilute sulfuric acid) comes into contact with **clothing or skin**, rinse skin or clothing immediately with plenty of water. 
- If the battery liquid (dilute sulfuric acid) comes into contact with **eyes**, rinse eyes immediately with plenty of water and contact the nearest doctor or hospital to seek medical attention.

CAUTION

- **ALWAYS** disconnect the **NEGATIVE battery terminal** before performing service on the equipment.
- **ALWAYS** keep battery cables in good working condition. Repair or replace all worn cables.

TRANSPORTING SAFETY

CAUTION


- NEVER allow any person or animal to stand underneath the equipment while lifting.

NOTICE

- Before lifting, make sure that the equipment parts (hook and vibration insulator) are not damaged and screws are not loose or missing.
- Always make sure crane or lifting device has been properly secured to the lifting bail (hook) of the equipment.
- **ALWAYS** shutdown engine before transporting.
- **NEVER** lift the equipment while the engine is running.
- Tighten fuel tank cap securely and close fuel cock to prevent fuel from spilling.
- Use adequate lifting cable (wire or rope) of sufficient strength.
- Use one point suspension hook and lift straight upwards.
- **DO NOT** lift machine to unnecessary heights.
- **ALWAYS** tie down equipment during transport by securing the equipment with rope.

ENVIRONMENTAL SAFETY

NOTICE

- 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.

SPECIFICATIONS

Table 1. Compactor Specifications

Model	MVC64VH/VHW
Centrifugal Force	2,275 lbs. (1,032 kg)
Vibration Frequency	5,600 vpm (93 Hz)
Maximum Forward Speed	82 ft/min (25 m/min)
Plate Size (L x W)	22.4 x 13.8 in (570 x 350 mm)
Overall Dimensions (L x W x H)	36.6 x 13.8 x 39.4 in (930 x 350 x 1000 mm)
Operating Weight (with water tank)	176 lbs. (80 kg)
Operating Weight (without water tank)	161 lbs. (73 kg)
Maximum Area of Compaction	5,658 sq. ft/hr (526 sq. m/hr)

Table 2. Engine Specifications

Make	Honda
Model	GX120U1SM12
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	.60 liters (0.63 qts)
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.)

NOISE AND VIBRATION EMISSIONS

Table 3. Noise and Vibration Emissions

Measured Sound Power Level in dB(A)	101
Guaranteed Sound Power Level in dB(A)	105
Guaranteed Sound Pressure Level at Operator Station in dB(A)	89
Hand-Arm Vibration in m/s ²	3.3

NOTES:

1. *Products are tested for sound pressure level in accordance with European Directives 2000/14/EC and 2005/88/EC, relating to Noise Emission in the Environment by equipment for use outdoors.*
2. *Products are tested for hand/arm vibration (HAV) level in accordance with European Directives 2002/44/EC and EN500-4 and ISO 5349-1:2001, ISO 5349-2:2001.*

DIMENSIONS

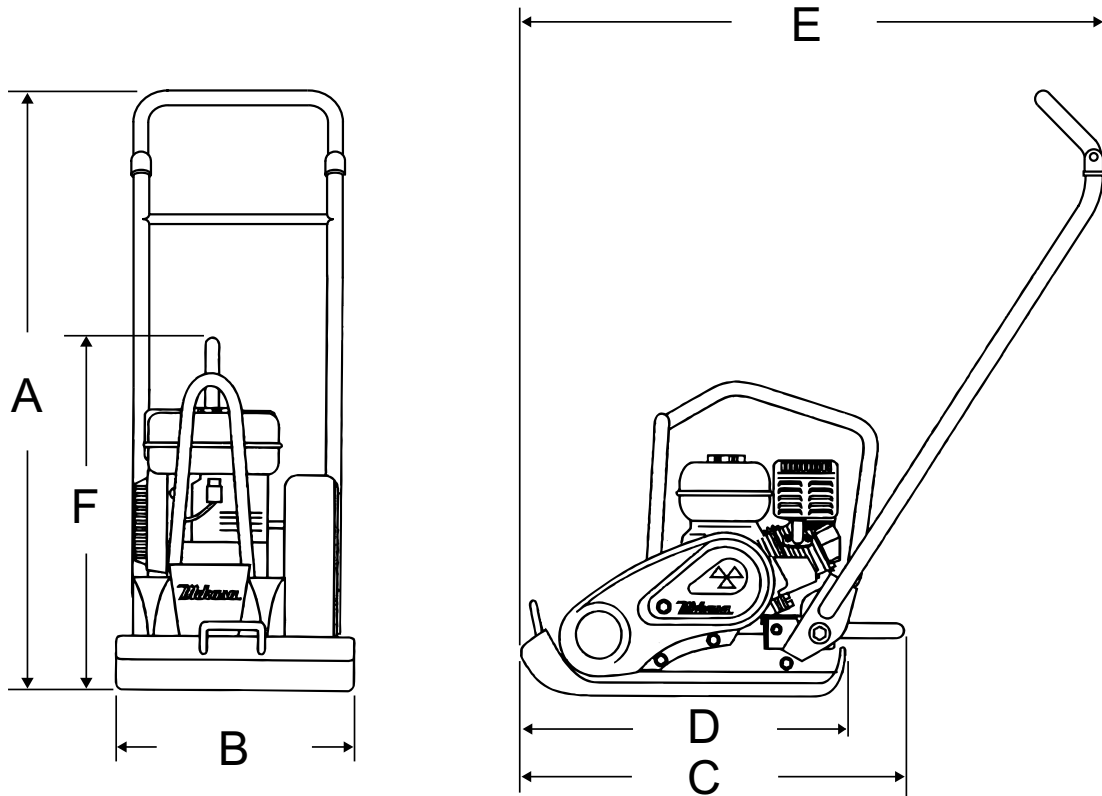


Table 4. Dimensions

Reference Letter	Description	DIMENSION in. (mm)
A	Height (Handle Upright)	39 in. (1000 mm)
B	Width	13 in. (330 mm)
C	Length (Handle Upright)	24 in. (609 mm)
D	Plate Length	22 in. (560 mm)
E	Length (Handle Lowered)	37 in. (940 mm)
F	Height (Compactor Only)	23 in. (590 mm)
	Shipping Dimensions	30 x 15 x 30 in. (762 x 381 x 762 mm)

GENERAL INFORMATION

DEFINITION OF PLATE COMPACTOR

The Mikasa MVC-64VH/VHW is a walk behind, plate compactor designed for the compaction of sand, mixed soils and asphalt. This plate compactor is a powerful compacting tool capable of applying a tremendous force in consecutive high frequency vibrations to a soil surface. Its applications include compacting for road, embankments and reservoirs as well as backfilling for gas pipelines, water pipelines and cable installation work.

The MVC-64VH/VHW is small and lightweight. It can be easily handled by one person in confined areas. It has an accessible front-mounted vibrator assembly. The sealed belt cover keeps dirt and rocks away from the belt.

VIBRATORY PLATE

The vibratory plate of the compactor produces low amplitude high frequency vibrations, designed to compact granular soils and asphalt.

The resulting vibrations cause forward motion. The engine and handle are vibration isolated from the vibrating plate.

FREQUENCY/SPEED

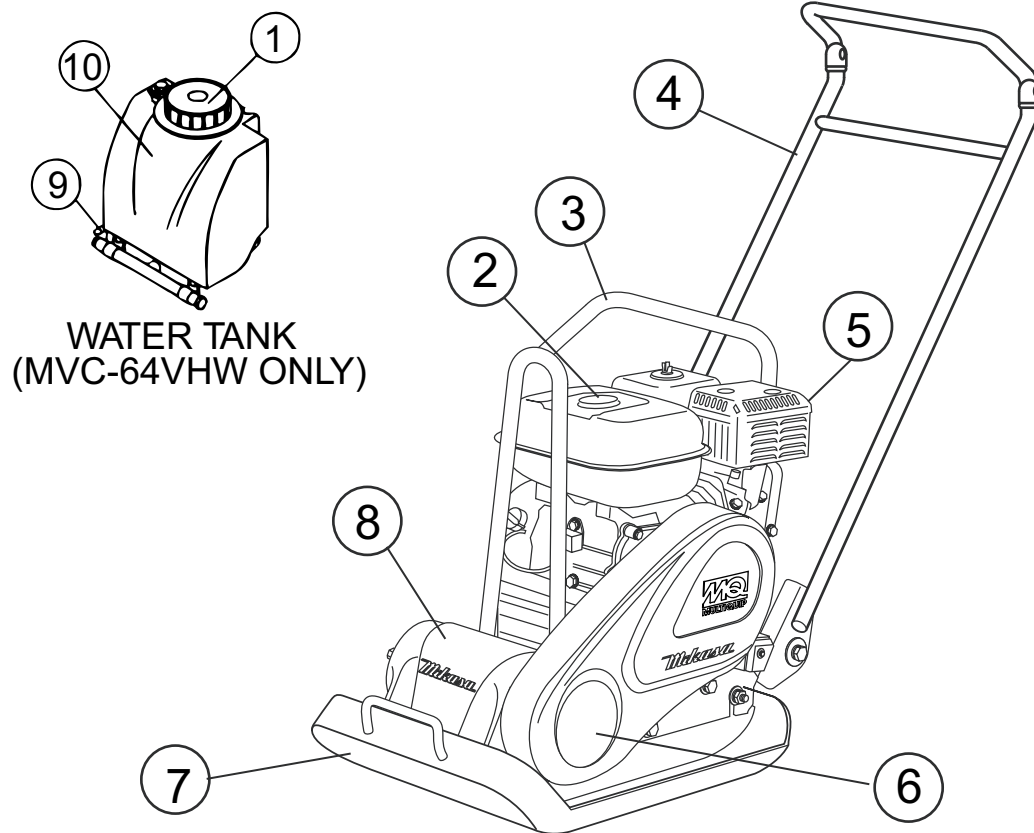
The compactor's vibrating plate has a frequency of 5,600 vpm (vibrations per minute). The travel speed of the compactor is approximately 82 ft./minute (25 meters/minute).

ENGINE

The Mikasa MVC-64VH/VHW Plate Compactor is equipped with a Honda GX120U1SM12 gasoline engine.

CONTROLS

Before starting the MVC-64VH/VHW Plate Compactor identify and understand the function of the controls and components.



WATER TANK
(MVC-64VHW ONLY)

Figure 1. Plate Compactor Components

Figure 1 shows the location of the basic controls and components of the MVC64VH/VHW Plate Compactor. The function of each control is described below:

1. **Water Tank Cap (VHW Only)** — Remove this cap to add water to the water tank.
2. **Fuel Tank Cap** — Remove this cap to add fuel.
3. **Lifting Bale** — When lifting of the compactor is required either by forklift, crane, etc., tie rope or chain around this lifting point.
4. **Handle Bar** — When operating the compactor use this handle bar to maneuver the compactor.
5. **Gasoline Engine** — This plate compactor uses a GX120U1SM12 HONDA engine. Refer to the HONDA owner's manual for engine information and related topics.
6. **Belt Cover** — Remove this cover to gain access to the
7. **Vibrating Plate** — A flat, open plate made of durable cast iron construction used in the compacting of soil.
8. **Vibration Case** — Encloses the eccentric, gears and counter weights.
9. **Water Shut-Off Valve (VHW only)** — Turn this valve downward to let water flow from the water tank to the water tube.
10. **Water Tank (VHW only)** — Holds 10.6 quarts (10 liters) of water (removable, no tools required).

V-belts. **NEVER** run the compactor without the V-belt cover. If the V-belt cover is not installed, the possibility exists that your hand may get caught between the V-belt and clutch, causing serious injury and bodily harm.

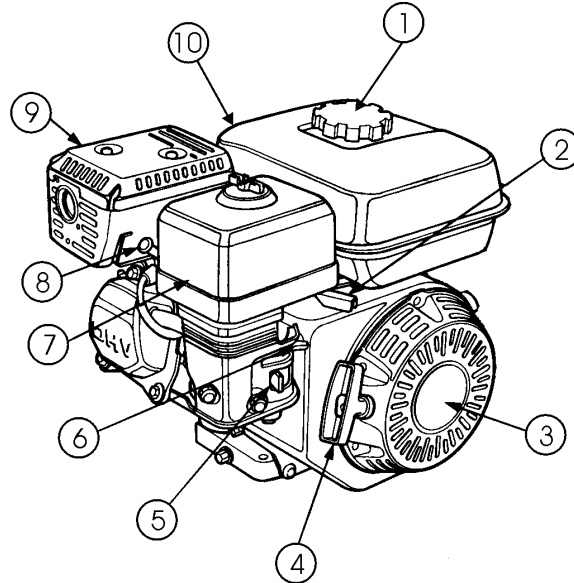



Figure 2. Engine Components

The engine (Figure 2) must be checked for proper lubrication and filled with fuel prior to operation. Refer to the manufacturer's engine manual for instructions and details of operation and servicing.

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.

WARNING



Adding fuel to the tank should be accomplished 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.

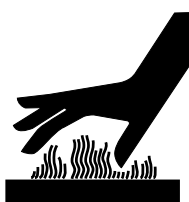
6. **Choke Lever** — Used in the starting of a cold engine, or in cold weather conditions. The choke enriches the fuel mixture.
7. **Air Cleaner** — Prevents dirt and other debris from entering the fuel system. Remove wing-nut on top of air filter cover to gain access to filter element.

NOTICE

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.

BEFORE STARTING

1. Read safety instructions at the beginning of manual.
2. Clean the compactor, 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. Loosened screws or bolts due to vibration, could lead to unexpected accident.

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 3) and wipe clean.

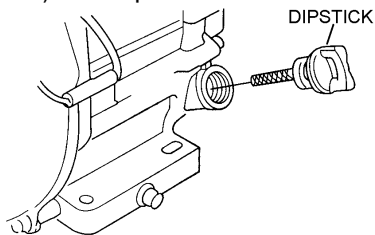


Figure 3. Engine Oil Dipstick Removal

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 4), fill to the edge of the oil filler hole with the recommended oil type (Table 5).

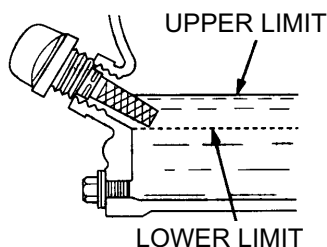


Figure 4. Engine Oil Dipstick (Oil Level)

NOTICE

The Oil Alert System will automatically stop the engine before the engine falls below safe limits. Always be sure to check the engine oil level prior to starting the engine.

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

WARNING



Adding fuel to the tank should be accomplished 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.

FUEL CHECK

1. Visually inspect (Figure 5) to see if fuel level is low. If fuel is low, replenish with unleaded fuel.

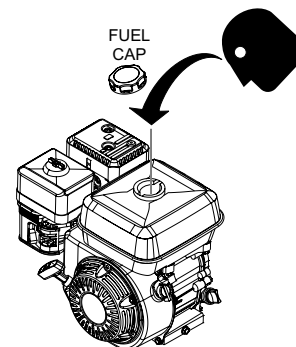


Figure 5. Fuel Check

2. When refueling, be sure to use a strainer for filtration. **DO NOT** top-off fuel. Wipe up any spilled fuel immediately.

Water Tank (Option)

If your unit is equipped with a water tank (Figure 6) and your application requires water, fill water tank.

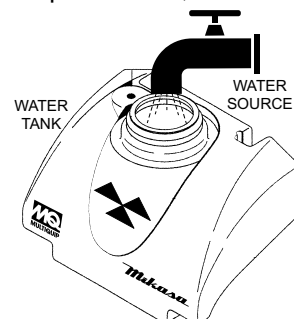


Figure 6. Water Tank Filling

V-BELT CHECK

CAUTION

NEVER attempt to check the V-belt with the engine running. Severe injury can occur if your hand (Figure 7) gets caught between the V-belt and the clutch. Always use safety gloves.

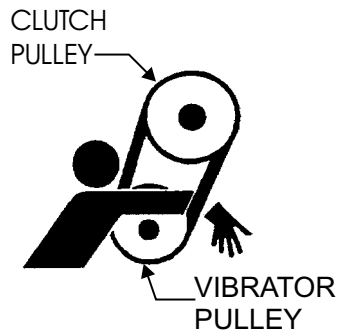


Figure 7. V-Belt Hazard

1. To check the V-belt tension, remove the three bolts that secure the belt cover to the frame as shown in Figure 8.

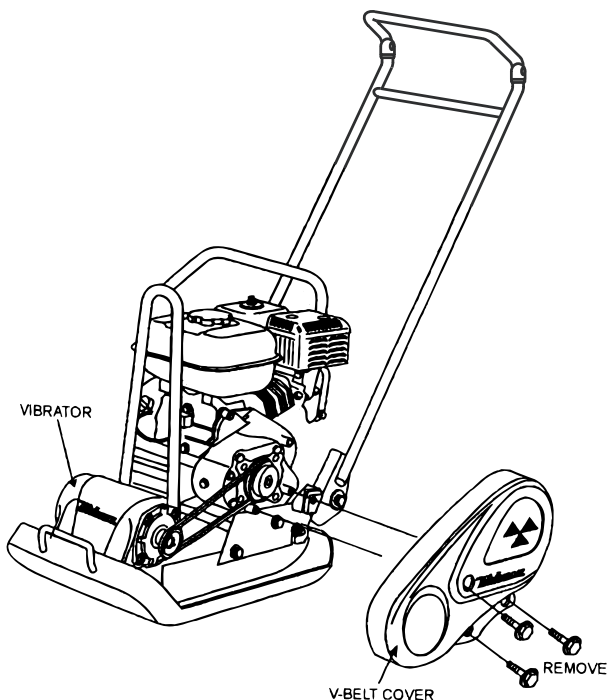


Figure 8. V-Belt Cover Removal

2. The V-belt tension is proper if the V-belt bends 10 to 15 mm (Figure 9) when depressed with finger midway between the clutch and vibration pulley shafts.

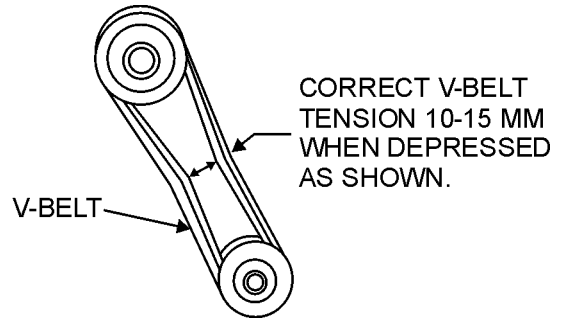


Figure 9. V-Belt Tension

3. A loose V-belt will decrease the power transmission output causing reduced compaction and premature wear of the belt.
4. If the V-belt becomes worn or loose, replace it.

VIBRATOR OIL CHECK

1. Place the plate compactor horizontally on a flat surface. Make sure the compactor is level when checking the oil in the vibrator assembly.
2. Check vibrator oil level by removing the oil plug (vibrator oil gauge) as shown in Figure 10. The oil level should be up to the oil plug. **IMPORTANT**, if oil is required, replace using only SAE10W-30 motor oil.

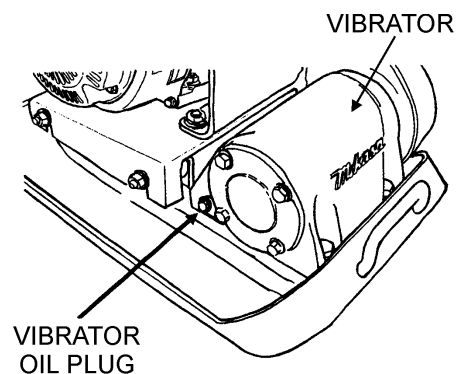


Figure 10. Vibrator Oil Plug

INITIAL START-UP

1. Place the fuel valve lever (Figure 11) in the **ON** position.

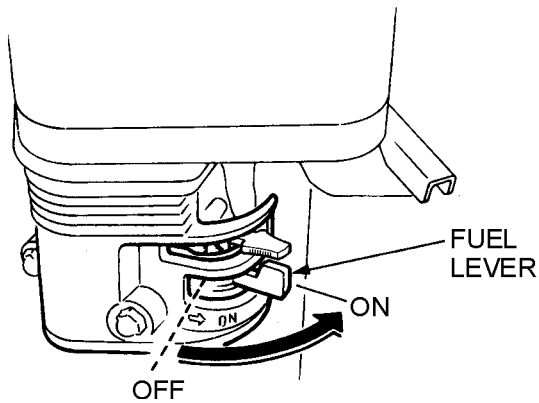


Figure 11. Fuel Valve Lever

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

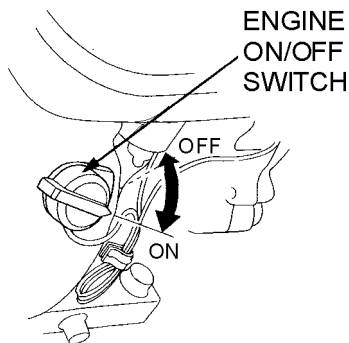


Figure 12. Engine ON/OFF Switch

3. Place the choke lever (Figure 13) in the **OPEN** position.

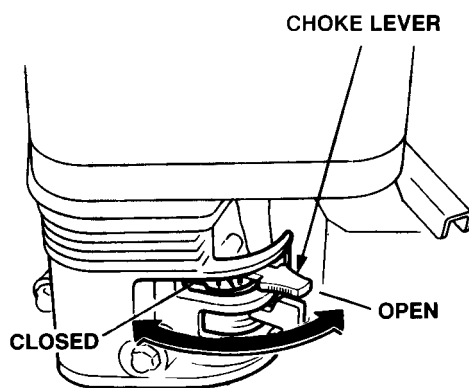


Figure 13. Choke Lever

NOTICE

The **CLOSED** position of the choke lever enriches the fuel mixture for starting a **COLD** engine. The **OPEN** position provides the correct fuel mixture for normal operation after starting, and for restarting a warm engine.

4. Place the throttle lever (Figure 14) halfway between **FAST** and **SLOW**.

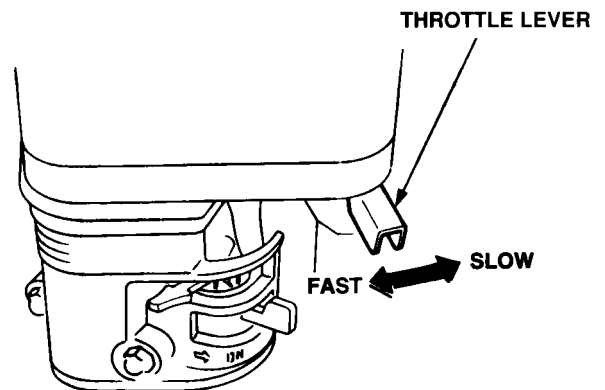


Figure 14. Throttle Lever

5. Grasp the starter grip (Figure 15) and slowly pull it out. The resistance becomes the hardest at a certain position, corresponding the compression point. Rewind the rope a little from that point and pull out sharply.

NOTICE

DO NOT pull the starter rope all the way to the end.

DO NOT release the starter rope after pulling. Allow it to rewind as soon as possible.

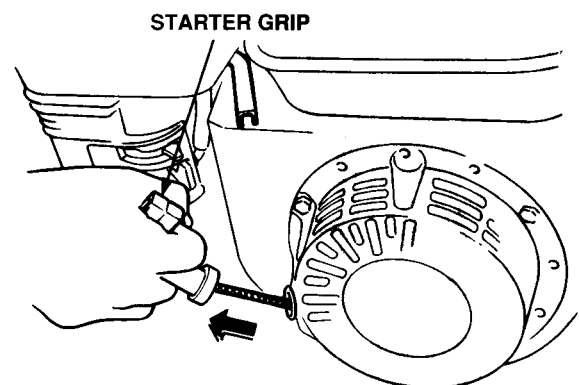


Figure 15. Starter Grip

OPERATION

6. If the choke lever was moved to the **CLOSED** position, slowly return the choke lever to the **OPEN** position.
7. If the engine has not started, repeat steps 1 through 5.
8. Before the compactor is put into operation, run the engine for 3-5 minutes.
9. Check for abnormal engine noises or fuel leaks.

OPERATION

CAUTION

Make sure to follow all safety rules referenced in the safety information section of this manual before operating compactor. Keep work area clear of debris and other objects that could cause damage to the compactor or bodily injury.

1. Once the engine has started, move the engine throttle lever quickly to the fast position.
2. With the throttle lever in the fast position, the engine speed should be around 2,300 RPM therefore engaging the centrifugal clutch.

NOTICE

ALWAYS move the throttle lever quickly without hesitation, because increasing the engine speed slowly causes the clutch to slip.

3. Firmly grasp the compactor's handle bar with both hands. The compactor will begin moving forward.
4. Slowly walk behind the compactor and be on the lookout for any large objects or foreign matter that might cause damage to the compactor or bodily injury.

5. Compactor traveling speed may drop on soils which contain clay. However, there may be cases where traveling speed drops because the compaction plate does not leave the ground surface easily due to the composition of the soil. To rectify this problem, do the following:

- a. Check the bottom plate to see if clay or equivalent material has been lodged in the plate mechanism. If so, wash with water and remove.
- b. Remember the compactor does not work as efficiently on clay or soils that have a high moisture content level. If the soil has a high moisture level, dry soil to appropriate moisture content level or carry out compaction twice.

STOPPING THE ENGINE

CAUTION

NEVER stop the engine suddenly while working at high speeds.

Normal Shutdown

1. Place the throttle lever (Figure 14) in slow position, and listen for the engine speed to decrease.
2. Place the Engine **ON/OFF** switch (Figure 10) in the **OFF** position.
3. Place the fuel valve lever (Figure 9) in the **OFF** position.

Emergency Shutdown

Move the throttle lever quickly to the **SLOW** position, and place the Engine **ON/OFF** switch in the **OFF** position.

NOTICE

Inspection and other services should always be carried out on hard and level ground with the engine shutdown.

NOTICE

The inspection intervals listed in the maintenance tables are for operation under normal conditions. Adjust your inspection intervals based on the number hours plate compactor is in use, and particular working conditions.

Table 6. Engine Check

Item	Hours of Operation
Leakage of Oil or Fuel	Every 8 hours (everyday)
Tightness of Fastening Threads	Every 8 hours (everyday)
Damage of any part	Every 8 hours (everyday)
Engine Oil Check and Replenishment	Every 8 hours (everyday) Replenish to specified max. level
Engine Oil Replenishment	After first 20 hours then every 100 hours
Air Cleaner Cleaning	Every 50 hours

Table 7. Machine Inspection

Item	Hours of Operation
Starting Check	Every 8 hours (everyday)
Loose or lost screws	Every 8 hours (everyday)
Damage of any part	Every 8 hours (everyday)
Function of controlling system part	Every 8 hours (everyday)
Vibrator Oil Check	Every 100 hours
Vibrator Oil Replacement	Every 300 hours
V-belt (clutch) Check	Every 200 hours

DAILY SERVICE

1. Check for leakage of fuel or oil.
2. Check engine oil.

NOTICE

Fuel piping and connections should be replaced every 2 years.

3. Check for loose screws including tightness. See Table 8 for retightening.

Table 8. Tightening Torque (kg/cm) Diameter

Material	6 mm	8 mm	10mm	12mm	14mm	16mm	18mm	20mm
4T	70	150	300	500	750	1,100	1,400	2,000
6-8T	100	250	500	800	1,300	2,000	2,700	3,800
11T	150	400	800	1,200	2,000	2,900	4,200	5,600
*	100 (6mm) 300 ~ 350 (8mm) 650 ~ 700 (10mm)							
* In case counterpart is of aluminum								
Threads in use with this machine are all right handed.								
Material and quality of material is marked on each bolt and screw.								

ENGINE OIL

1. Replace the engine oil in first 20 hours of operation and every 100 hours afterwards.
2. Drain the engine oil when the oil is warm after operation. Remove the oil filler cap then unscrew the engine oil drain plug located at the base of the engine. Drain the old oil into a pan (Figure 16).

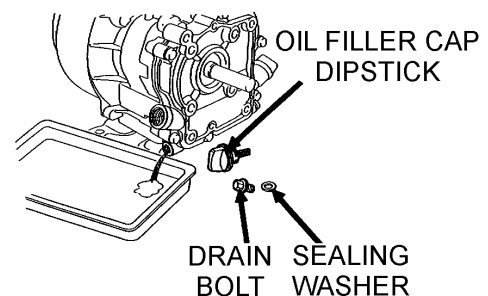


Figure 16. Engine Oil (Draining)

3. Replace engine oil with recommended type oil as listed in Table 5. For engine oil capacity, see Table 2 (engine specifications). **DO NOT** overfill.
4. Reinstall drain bolt with sealing washer and tighten securely.

AIR FILTER

1. The air filter element should be cleaned because a clogged air cleaner can cause poor engine starting, lack of power and shorten engine life substantially.
2. To clean or replace air filter loosen the wing nut on the air filter housing (Figure 17), remove the cover and take out air filter cartridge. If only cleaning of the air filter is desired blow through the air filter cartridge from the inside, moving a jet of dry compressed air up and down until all dust is removed.

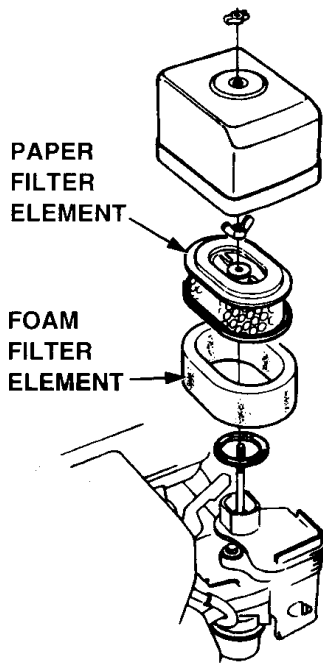


Figure 17. Air Filter

SPARK PLUG

1. Remove and clean the spark plug (Figure 16).

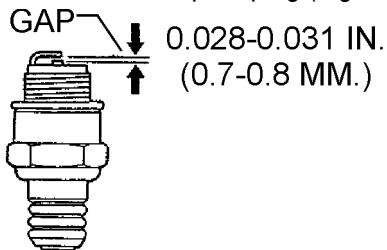


Figure 18. Spark Plug Gap

2. Adjust the spark gap to 0.028~0.031 inch (0.6~0.7 mm). This unit has electronic ignition which requires no adjustments.

CHANGING VIBRATOR OIL

1. When changing the vibrator oil, remove the drain plug.
2. Tip the compactor to drain the oil. Note that the oil will drain more easily while it is hot.
3. Remember to use only 10W-30 motor oil when replacing vibrator oil.

CHECKING/REPLACING THE V-BELT AND CLUTCH

After 200 hours of operation, remove the upper belt cover to check the V-belt tension. Tension is proper if the belt bends about 10 mm when depressed strongly with finger between shafts. Loose or worn V-belts reduces power transmission efficiency, causing weak compaction and reduces the life of the belt itself.

CHECKING V-BELT

Visually examine the V-belt (Figure 19) and determine if it is full of tiny cracks, frayed, has pieces of rubber missing, is peeling or otherwise damaged.

Also, examine the belt and determine if it is **oil soaked** or **"glazed"** (hard shiny appearance on the sides of the belt). Either of these two conditions can cause the belt to run hot, which can weaken it and increase the danger of it breaking.

If the V-belt exhibits any of the above wear conditions replace the V-belt immediately.

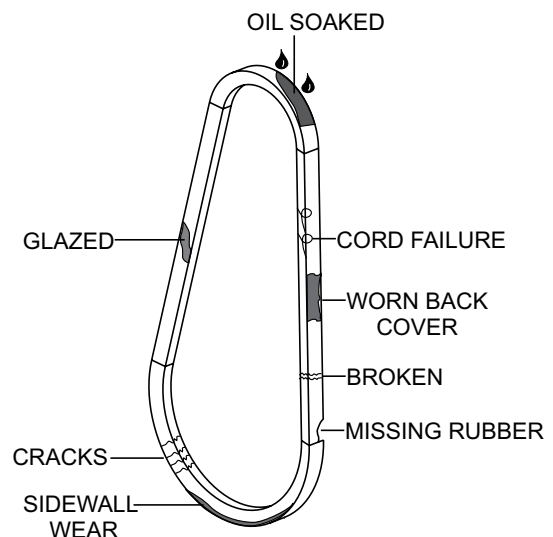


Figure 19. V-Belt Inspection

REPLACING THE V-BELT

Remove the upper and lower belt covers. Engage an offset wrench (13 mm) or the like to vibrator pulley (lower) fastening bolt. Engage waste cloth or the like at midway of V-belt on the left side and while pulling it back strongly, rotate the offset wrench clockwise so that the V-belt will come off.

REINSTALLING THE V-BELT

Engage V-belt to lower vibrator pulley and push the V-belt to left side of upper clutch and, in the same manner as in removal, rotate offset wrench clockwise so that the V-belt goes back on.

CHECKING CLUTCH

Check the clutch simultaneously with V-belt checking. With belt removed, visually check outer drum of the clutch for seizure and "V" groove for wear or damage. Clean the "V" groove as necessary. Wear of lining or shoe should be checked regularly. If the shoe is worn, power transmission becomes deficient and slipping will result.

WARNING

NEVER attempt to check the V-belt with the engine running. Severe injury can occur if your hand (Figure 7) gets caught between the V-belt and the clutch. Always use safety gloves.

PLATE COMPACTOR STORAGE

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

- Drain the fuel tank completely or add STA-BIL to the fuel.
- Run the engine until the fuel is completely consumed.
- Completely drain the oil from the engine crankcase and follow procedures described in the HONDA engine Owner's Manual for engine storage.
- Completely drain the compactor's hydraulic oil from the vibrating case.
- Clean entire plate compactor, especially the bottom plate removing all dirt and foreign matter.
- Cover plate compactor and engine with plastic covering or equivalent and store in a clean, dry place.

TROUBLESHOOTING

Troubleshooting (Engine)		
Symptom	Possible Problem	Solution
Difficult to start, fuel is available, but no spark at spark plug.	Spark plug bridging?	Check gap, insulation or replace spark plug.
	Carbon deposit on spark plug?	Clean or replace spark plug.
	Short circuit due to deficient spark plug insulation?	Check spark plug insulation, replace if worn.
	Improper spark plug gap?	Set to proper gap.
	Spark plug is red?	Check transistor ignition unit.
	Spark plug is bluish white?	If insufficient compression, repair or replace engine. If injected air leaking, correct leak. If carburetor jets clogged, clean carburetor.
	No spark present at tip of spark plug?	Check transistor ignition unit is broken, and replace defective unit. Check if voltage cord cracked or broken and replace. Check if spark plug if fouled and replace.
	No oil?	Add oil as required.
	Oil pressure alarm lamp blinks upon starting? (if applicable)	Check automatic shutdown circuit, "oil sensor". (if applicable)
Difficult to start, fuel is available, and spark is present at the spark plug.	ON/OFF switch is shorted?	Check switch wiring, replace switch.
	Ignition coil defective?	Replace ignition coil.
	Improper spark gap, points dirty?	Set correct spark gap and clean points.
	Condenser insulation worn or short circuiting?	Replace condenser.
	Spark plug wire broken or short circuiting?	Replace defective spark plug wiring.
Difficult to start, fuel is available, spark is present and compression is normal.	Wrong fuel type?	Flush fuel system, replace with correct type of fuel.
	Water or dust in fuel system?	Flush fuel system.
	Air cleaner dirty?	Clean or replace air cleaner.
	Choke open?	Close choke.
Difficult to start, fuel is available, spark is present and compression is low.	Suction/exhaust valve stuck or protruded?	Reseat valves.
	Piston ring and/or cylinder worn?	Replace piston rings and/or piston.
	Cylinder head and/or spark plug not tightened properly?	Torque cylinder head bolts and spark plug.
	Head gasket and/or spark plug gasket damaged?	Replace head and spark plug gaskets.
No fuel present at carburetor.	No fuel in fuel tank?	Fill with correct type of fuel.
	Fuel cock does not open properly?	Apply lubricant to loosen fuel cock lever, replace if necessary.
	Fuel filter/lines clogged?	Replace fuel filter.
	Fuel tank cap breather hole clogged?	Clean or replace fuel tank cap.
	Air in fuel line?	Bleed fuel line.

TROUBLESHOOTING

Troubleshooting (Plate Compactor)		
Symptom	Possible Problem	Solution
Travel speed too low, and vibration is weak.	Engine speed too low?	Set engine speed to correct RPM.
	Clutch slips?	Check or replace clutch.
	V-belt slips?	Adjust or replace V-belt.
	Excessive oil in vibrator?	Drain excess oil and fill to proper level.
	Malfunction in vibrator housing?	Check eccentric, gears and counter weights.
	Bearing Failure?	Replace bearing.
	Insufficient engine output?	Check engine, compression etc.

EXPLANATION OF CODE IN REMARKS COLUMN

The following section explains the different symbols and remarks used in the Parts section of this manual. Use the help numbers found on the back page of the manual if there are any questions.

NOTICE

The contents and part numbers listed in the parts section are subject to change **without notice**. Multiquip does not guarantee the availability of the parts listed.

SAMPLE PARTS LIST

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	12345	BOLT	1	INCLUDES ITEMS W/%
2%		WASHER, 1/4 IN.		NOT SOLD SEPARATELY
2%	12347	WASHER, 3/8 IN. ...	1	MQ-45T ONLY
3	12348	HOSE	A/R	MAKE LOCALLY
4	12349	BEARING	1	S/N 2345B AND ABOVE

NO. Column

Unique Symbols — All items with same unique symbol (@, #, +, %, or >) in the number column belong to the same assembly or kit, which is indicated by a note in the “Remarks” column.

Duplicate Item Numbers — Duplicate numbers indicate multiple part numbers, which are in effect for the same general item, such as different size saw blade guards in use or a part that has been updated on newer versions of the same machine.

NOTICE

When ordering a part that has more than one item number listed, check the remarks column for help in determining the proper part to order.

PART NO. Column

Numbers Used — Part numbers can be indicated by a number, a blank entry, or TBD.

TBD (To Be Determined) is generally used to show a part that has not been assigned a formal part number at the time of publication.

A blank entry generally indicates that the item is not sold separately or is not sold by Multiquip. Other entries will be clarified in the “Remarks” Column.

QTY. Column

Numbers Used — Item quantity can be indicated by a number, a blank entry, or A/R.

A/R (As Required) is generally used for hoses or other parts that are sold in bulk and cut to length.

A blank entry generally indicates that the item is not sold separately. Other entries will be clarified in the “Remarks” Column.

REMARKS Column

Some of the most common notes found in the “Remarks” Column are listed below. Other additional notes needed to describe the item can also be shown.

Assembly/Kit — All items on the parts list with the same unique symbol will be included when this item is purchased.

Indicated by:

“INCLUDES ITEMS W/(unique symbol)”

Serial Number Break — Used to list an effective serial number range where a particular part is used.

Indicated by:

“S/N XXXXX AND BELOW”

“S/N XXXX AND ABOVE”

“S/N XXXX TO S/N XXX”

Specific Model Number Use — Indicates that the part is used only with the specific model number or model number variant listed. It can also be used to show a part is NOT used on a specific model or model number variant.

Indicated by:

“XXXXX ONLY”

“NOT USED ON XXXX”

“Make/Obtain Locally” — Indicates that the part can be purchased at any hardware shop or made out of available items. Examples include battery cables, shims, and certain washers and nuts.

“Not Sold Separately” — Indicates that an item cannot be purchased as a separate item and is either part of an assembly/kit that can be purchased, or is not available for sale through Multiquip.

SUGGESTED SPARE PARTS

MVC64VH/VHW PLATE COMPACTOR 1 to 5 units

Qty.	P/N	Description
3	.....070100312.....	V-BELT
4	.....939010250.....	SHOCK ABSORBER

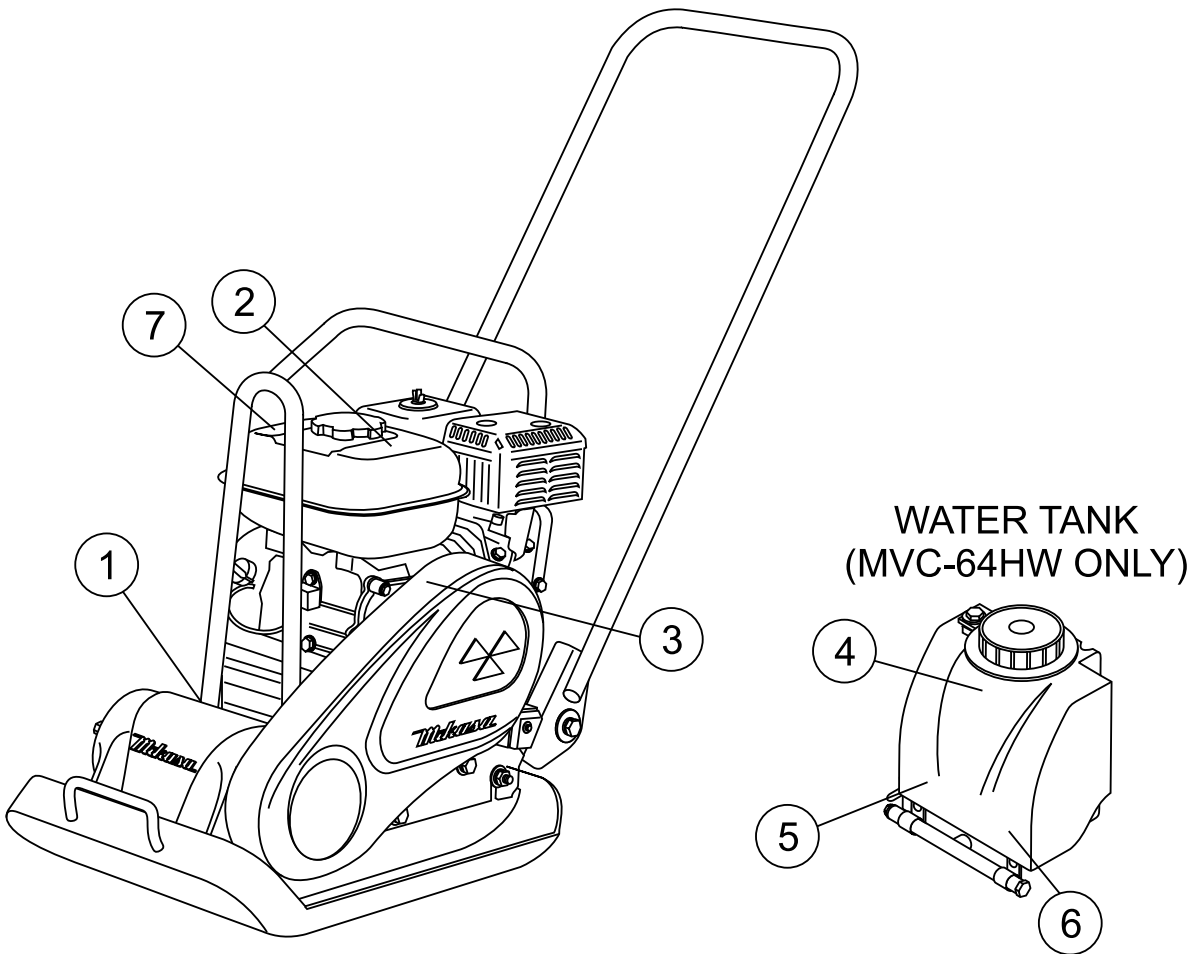
HONDA GX120U1SM12 ENGINE 1 to 5 units

Qty.	P/N	Description
3	.....9807956846.....	SPARK PLUG
1	.....28462ZH8003.....	ROPE, RECOIL STARTER
3	.....17210ZE0822.....	ELEMENT, AIR CLEANER
1	.....17620ZH7023.....	CAP, FUEL TANK
1	.....17672ZE2W01.....	FUEL FILTER, FUEL TANK

NOTICE

Part numbers on this Suggested Spare Parts list may supersede/replace the part numbers shown in the following parts lists.

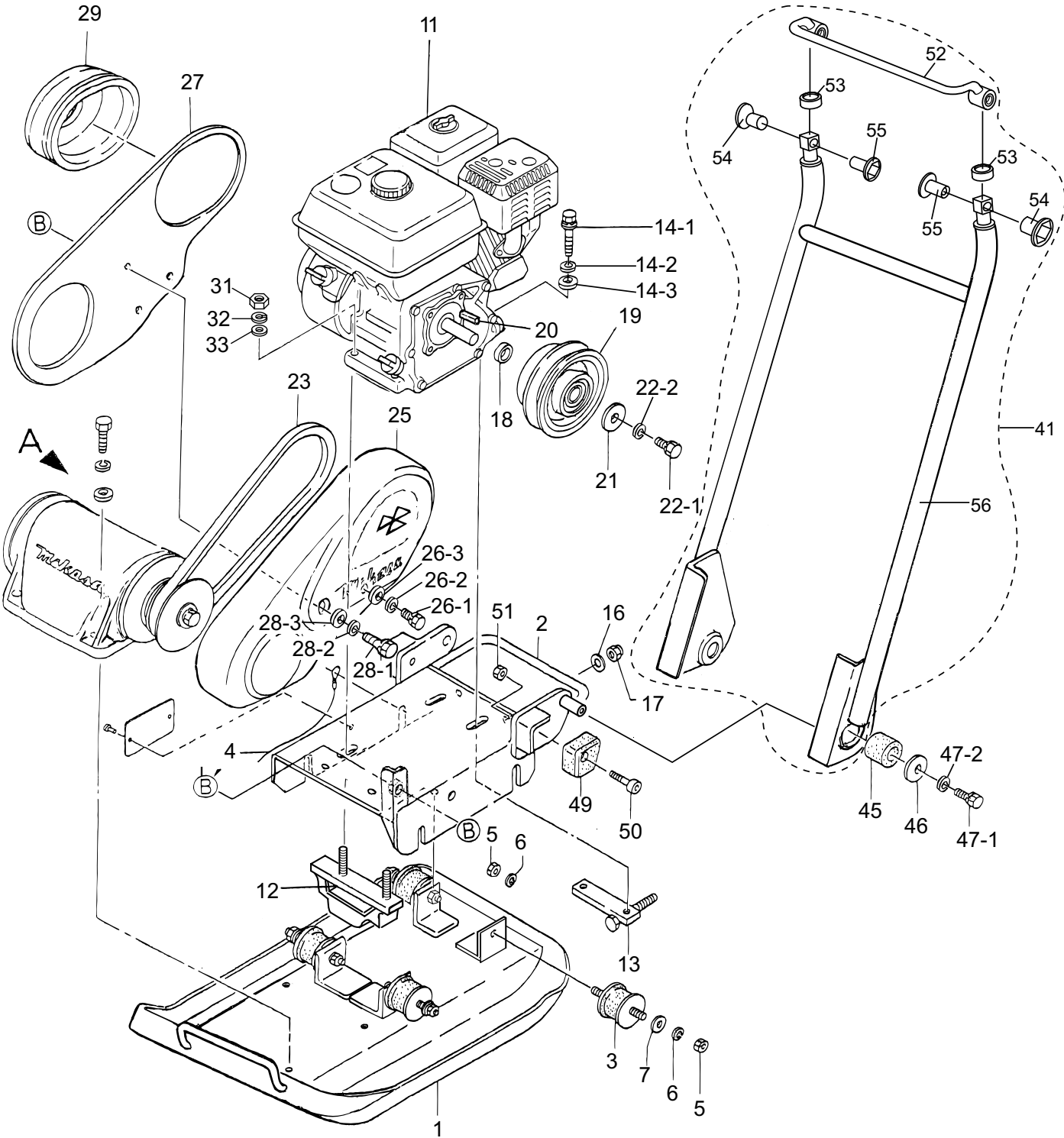
NAMEPLATES AND DECALS



NAMEPLATES AND DECALS

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1		PLATE, MODEL/SERIAL NUMBER.....	1.....	CONTACT PARTS DEPT.
2	920203290	DECAL, READ OWNERS MANUAL.....	1.....	NPA-329
3	920203989	DECAL, BELT GUARD WARNING	1.....	NPA-989
4	920101410	DECAL: MIKASA MARK 120X60.....	1.....	WATER TANK
5	920201580	DECAL: MQ MARK 71X55.....	1.....	MQ/WATER TANK
6	920105070	DECAL: MIKASA MARK 125MM	1.....	WATER TANK
7	920212320	DECAL: CAUTION REFUELING.....	1.....	NPA-1232

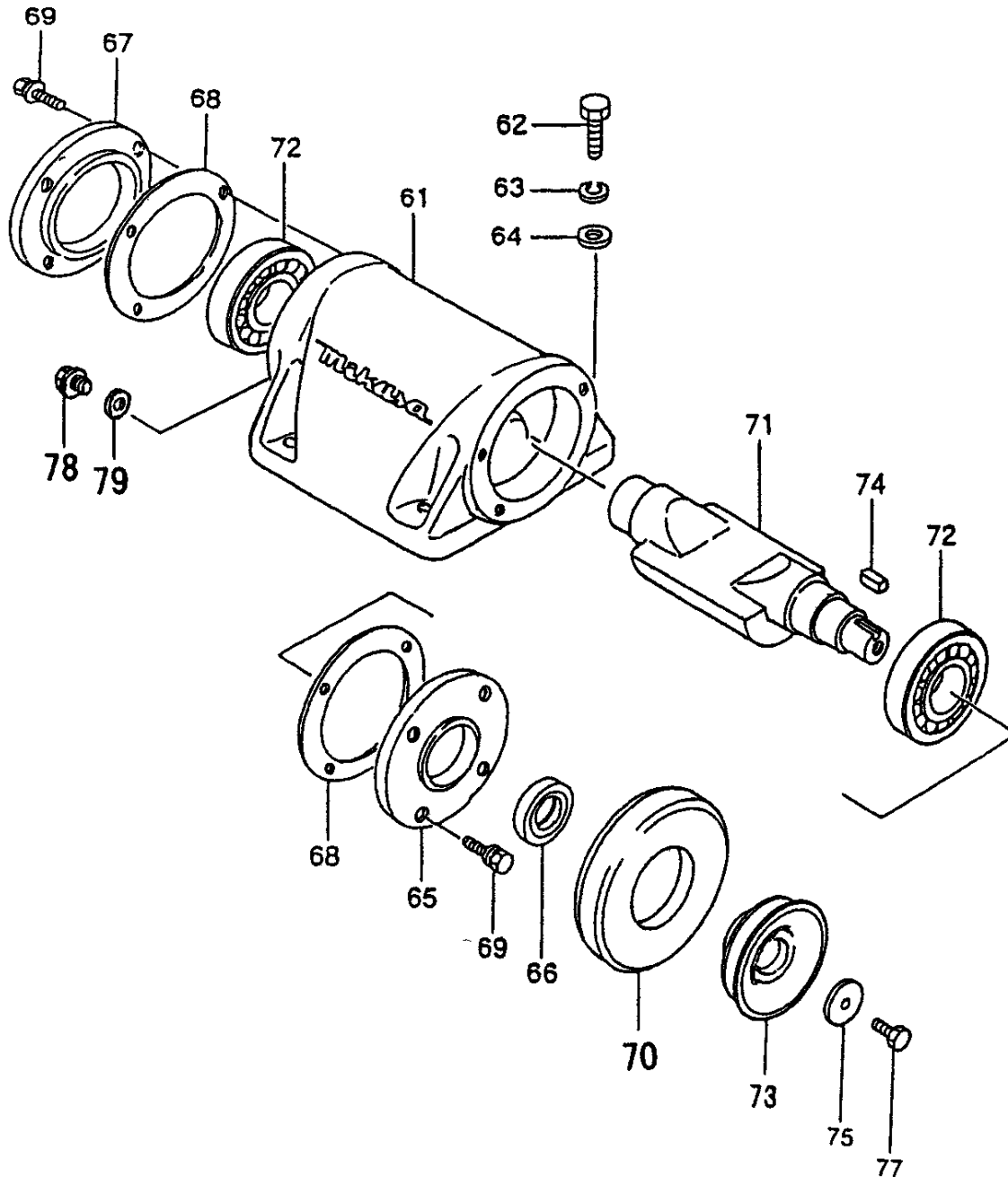
BODY ASSY.



BODY ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	418118540	VIBRATORY PLATE (570 X 350)	1	
2	418216890	BASE	1	
3	939010254	SHOCK ABSORBER D45-H41	4	
4	959404350	EARTH WIRE	1	
5	020310080	NUT M10	8	
6	030210250	WASHER, LOCK M10	8	
7	031110160	WASHER, FLAT M10	4	
11	912212009	ENGINE, HONDA GX120U1SM12	1	
12	418457690	BOLT, ENGINE	1	
13	413436870	ENGINE NUT, REAR	1	
14-1	001220840	BOLT 8X40T	2	
14-2	030208200	WASHER, LOCK M8	2	
14-3	031108160	WASHER, FLAT M8	2	
16	031108160	WASHER, FLAT M8	1	
17	022710809	NYLON NUT M8	1	
18	404418150	SPACER 18X25X8 CLUTCH	1	
19	460446780	CLUTCH ASSY.	1	
20	0320050150	KEY	1	
21	952400130	WASHER 9304	1	
22-1	001220825	BOLT 8X25 H, SW	1	
22-2	030208200	WASHER, LOCK	1	
23	070100312	V-BELT RPF-3310	1	
25	418216470	BELT COVER	1	
26-1	001221035	BOLT 10X35 H, SW, PW	1	
26-2	030210250	WASHER, LOCK	1	
26-3	031110160	WASHER, FLAT	1	
27	418216480	BELT COVER, IN.	1	
28-1	001221053	BOLT 10X65 SW, PW	1	
28-2	030210250	WASHER, LOCK	1	
28-3	031110160	WASHER, FLAT	1	
29	418343420	COVER SEAL, E/G	1	
31	020308060	NUT M8	2	
32	030208200	WASHER, LOCK	2	
33	031108160	WASHER, FLAT	2	
41	418910070	VIB. PROOF HANDLE ASSY	1.....	INCLUDES ITEMS W/ #
45	404433430	RUBBER 20X32X28.5/52H	2	
46	952403450	WASHER 11X35X4.5	2	
47-1	001221020	BOLT 10X55 H,SW	2	
47-2	030210250	WASHER, LOCK	2	
49	413436720	RUBBER, HANDLE	2	
50	001520845	SOCKET HEAD BOLT 8X45 T	2	
51	020308060	NUT M8	2	
52#	418217060	GRIP, HANDLE	1	
53#	416459340	RUBBER, VIB. PROOF HANDLE	2	
54#	009120407	BOLT, SUNK HEAD 10X20 T	2	
55#	416459320	NUT, VIB. PROOF HANDLE	2	
56#	418217050	VIB. PROOF HANDLE	1	

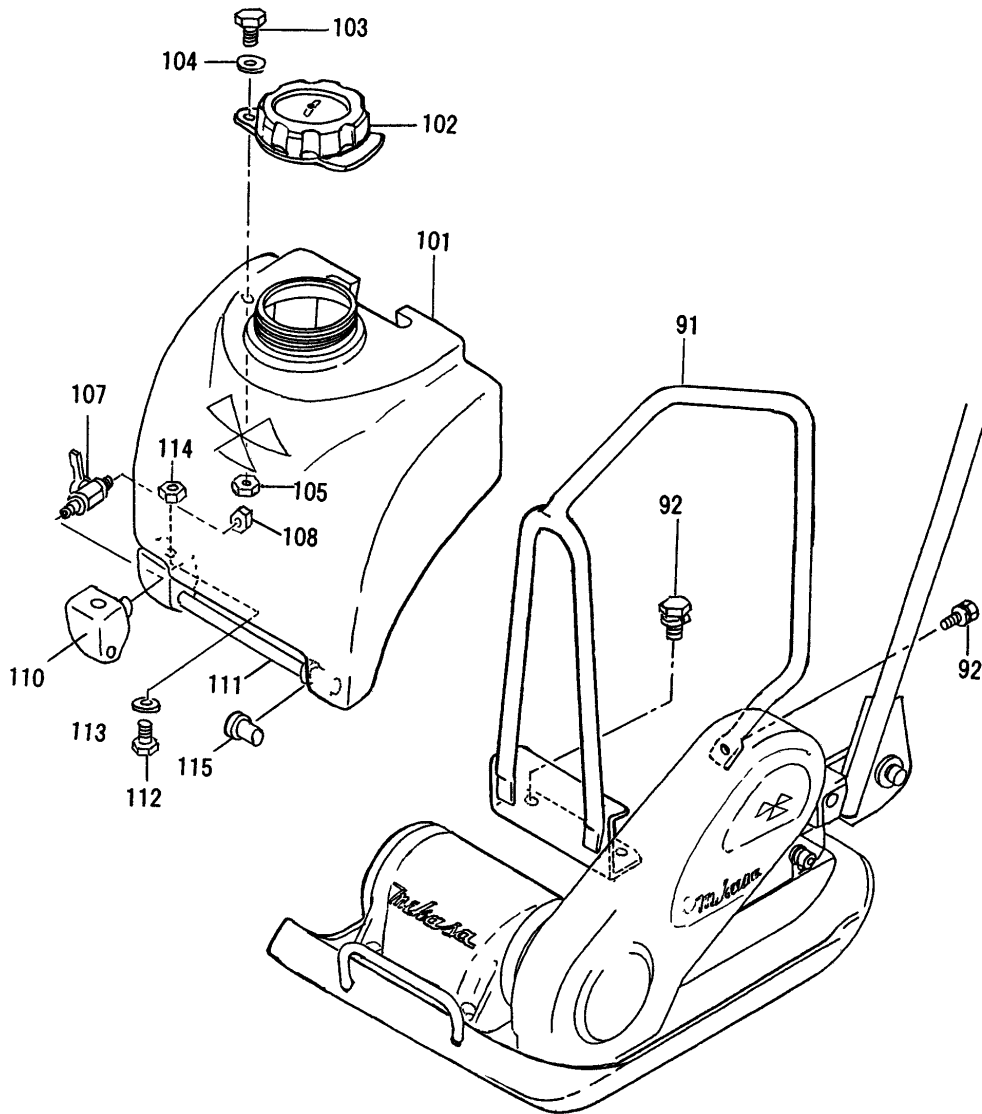
VIBRATOR ASSY.



VIBRATOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
61	418117730	VIBRATING CASE	1	
62	001221445	BOLT 14X45 T	4	
63	030214350	WASHER, LOCK M14	4	
64	031114260	WASHER, FLAT M14	4	
65	418456950	CASE COVER/PULLEY	1	
66	060403020	OIL SEAL TC-30458	1	
67	418456960	CASE COVER/SHUT-OFF	1	
68	418456970	PACKING	2	
69	002400820	BOLT 8X20 SW, PW	8	
70	418456990	COVER SEAL, VIB.	1	
71	418343400	ECC. ROTOR SHAFT	1	
72	040306307	BEARING 6307C3	2	
72	040406307	BEARING 6307C4	2	
73	418456980	PULLEY, VIB.	1	
74	951401920	KEY 7X7X30	1	
75	952403450	WASHER 11X35X4.5	1	
77	002211030	BOLT 10X30 H, SW	1	
78	953400270	PLUG 1/4X14 10L	1	
79	953405260	PACKING	1	

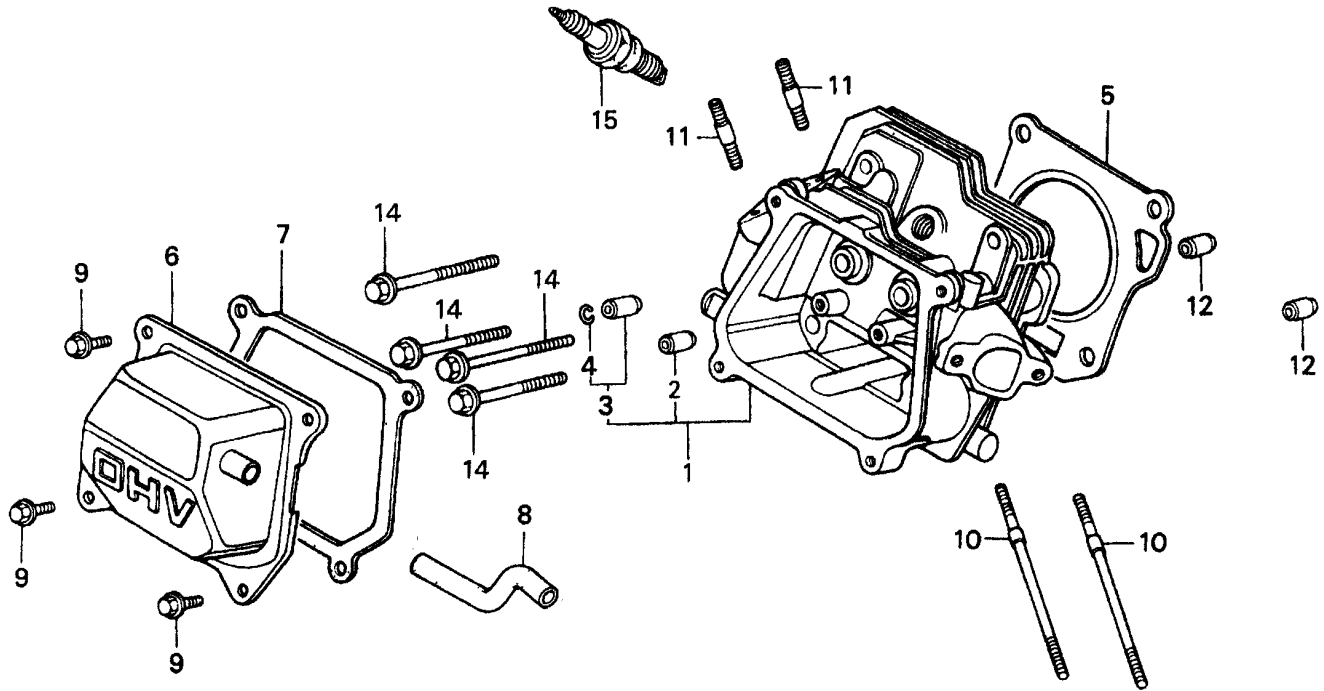
WATER TANK ASSY. (MVC64VHW ONLY)



WATER TANK ASSY. (MVC64VHW ONLY)

NO.	PART NO.	PART NAME	QTY.	REMARKS
91	418118580	HOOK	1.....	REPLACES 418216510
92	002211025	BOLT 10X25 H, SW	3	
101	418910020	WATER TANK, ORANGE	1.....	INCLUDES ITEM W/ *
101	418910030	WATER TANK, WHITE	1.....	INCLUDES ITEM W/ *
102*	954300342	CAP, WATER TANK	1	
103*	001241030	BOLT 10X30 U	1	
104*	033910010	WASHER 10.5X21X2 SUS.	2	
105*	022910180	NYLON NUT M10 SUS.	1	
107	954403241	COCK PT1/4, BH-1211 AL.	1	
108	959403790	NUT PS-1/4	1	
110	416338940	PIPE HOLDER, L	1	
111	418343430	SPRINKLING PIPE	1	
112	001220825	BOLT 8X25 T	1	
113	031108160	WASHER, FLAT M8	2	
114	020308060	NUT M8	1	
115	418457010	RUBBER CAP	1	

HONDA GX120U1SM12 ENGINE — CYLINDER HEAD ASSY.

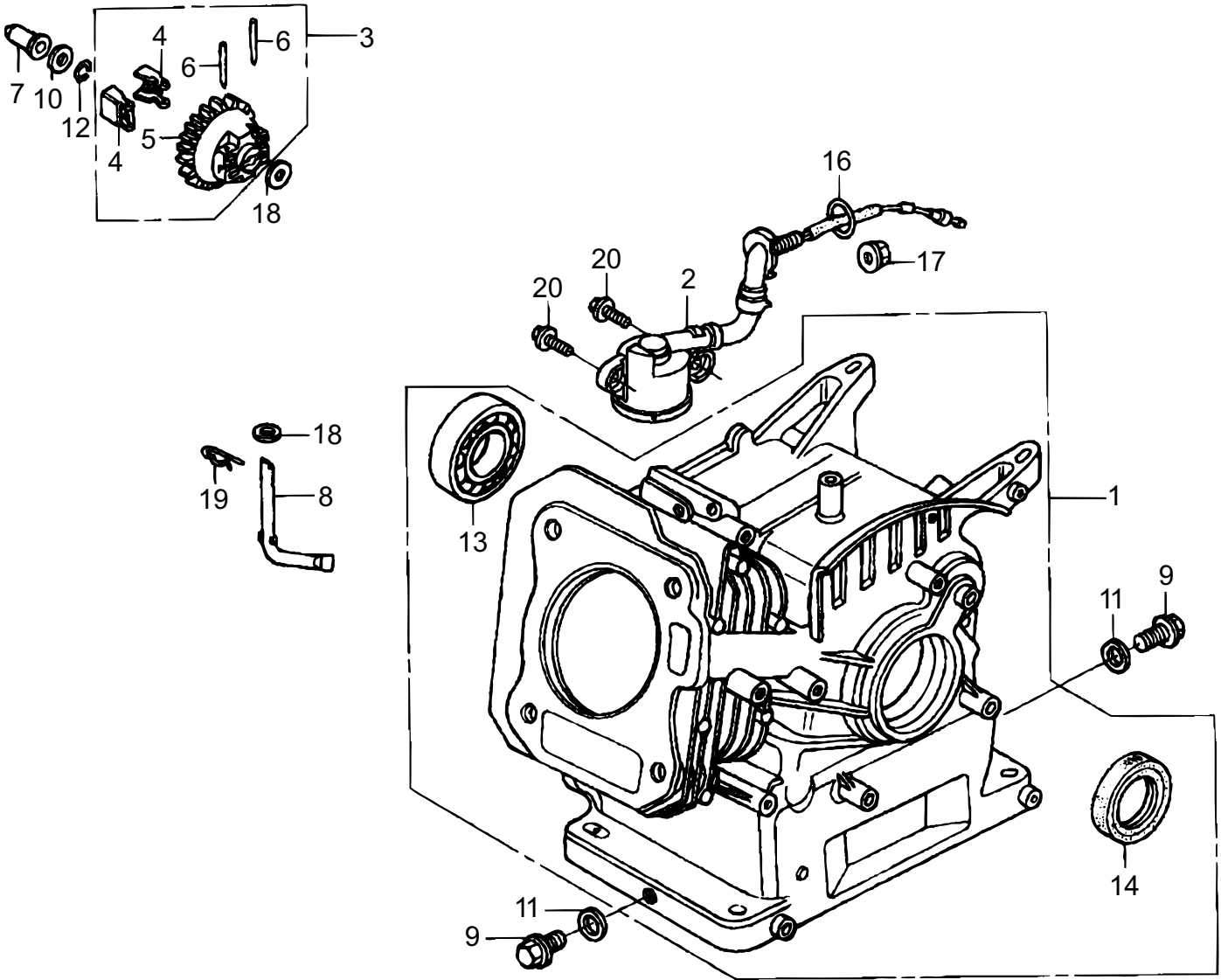


HONDA GX120U1SM12 ENGINE — CYLINDER HEAD ASSY.

CYLINDER HEAD ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	12210ZH7405	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	12310ZE1020	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	9807956846	SPARK PLUG BPR6ES (NGK)	1	

HONDA GX120U1SM12 ENGINE — CYLINDER BARREL ASSY.

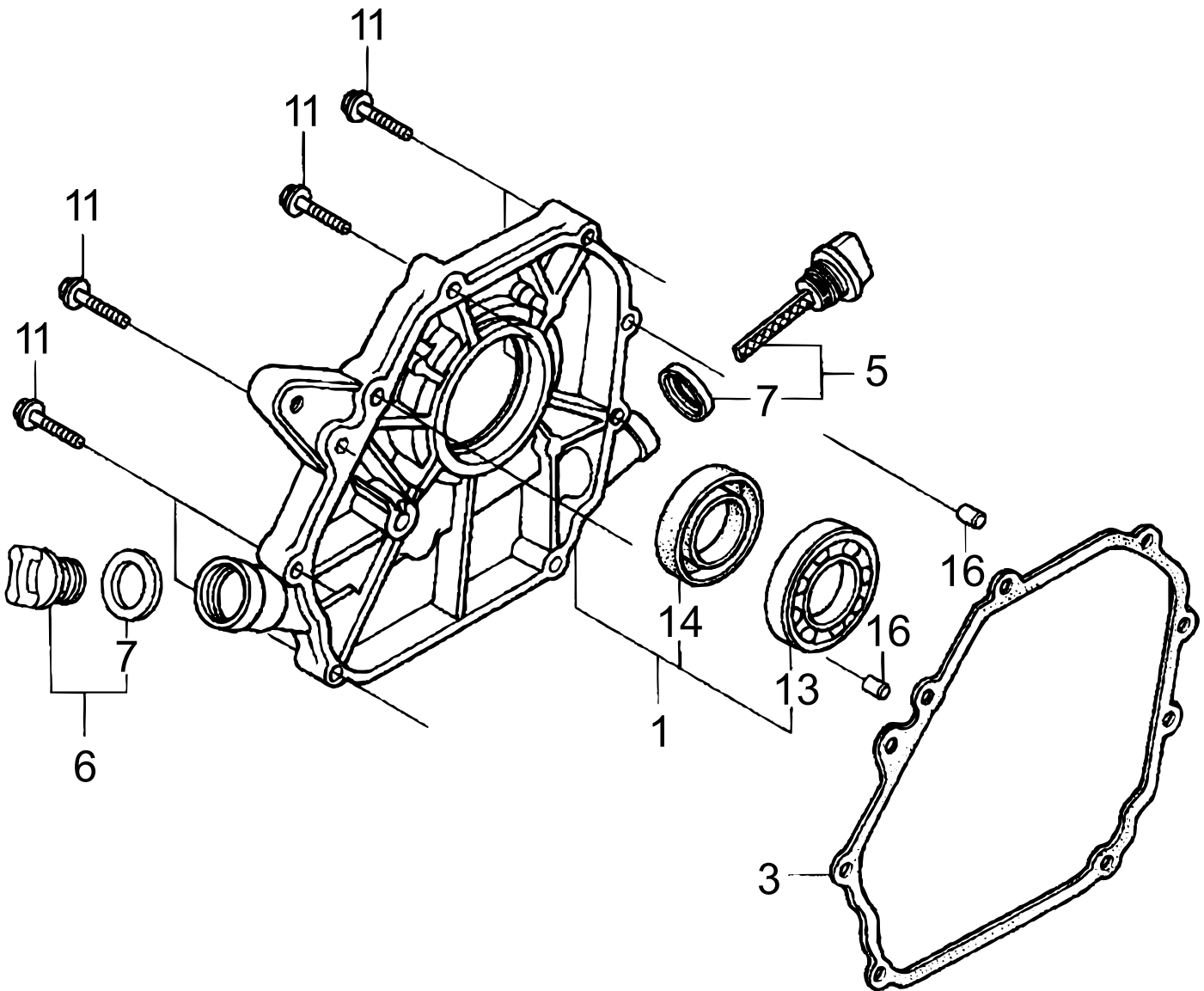


HONDA GX120U1SM12 ENGINE — CYLINDER BARREL ASSY.

CYLINDER BARREL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	12000ZH7425	BARREL ASSY., CYLINDER	1.....	INCLUDES ITEMS W/@
2	15510ZE1033	SWITCH ASSY., OIL LEVEL	1	
3	16510ZE1000	GOVERNOR ASSY.	1.....	INCLUDES ITEMS W/#
4#	16511ZE1000	WEIGHT, GOVERNOR	2	
5#	16512ZE1000	HOLDER, GOVERNOR WEIGHT	1	
6#	16513ZE1000	PIN, GOVERNOR WEIGHT	2	
7	16531ZE1000	SLIDER, GOVERNOR	1	
8	16541ZE1000	SHAFT, GOVERNOR ARM	1	
9	90131ZE1000	BOLT, DRAIN PLUG	2	
10	90451ZE1000	WASHER, THRUST 6mm	1	
11	90601ZE1000	WASHER, DRAIN PLUG 10.2mm	2	
12	90602ZE1000	CLIP, GOVERNOR HOLDER	1	
13@	91001878003	BEARING, RADIAL BALL 62/22	1	
14@	91202ZE6013	OIL SEAL 22X35X6	1	
16	91353671004	O- RING 14mm	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 GX120U1SM12 ENGINE — CRANKCASE COVER ASSY.

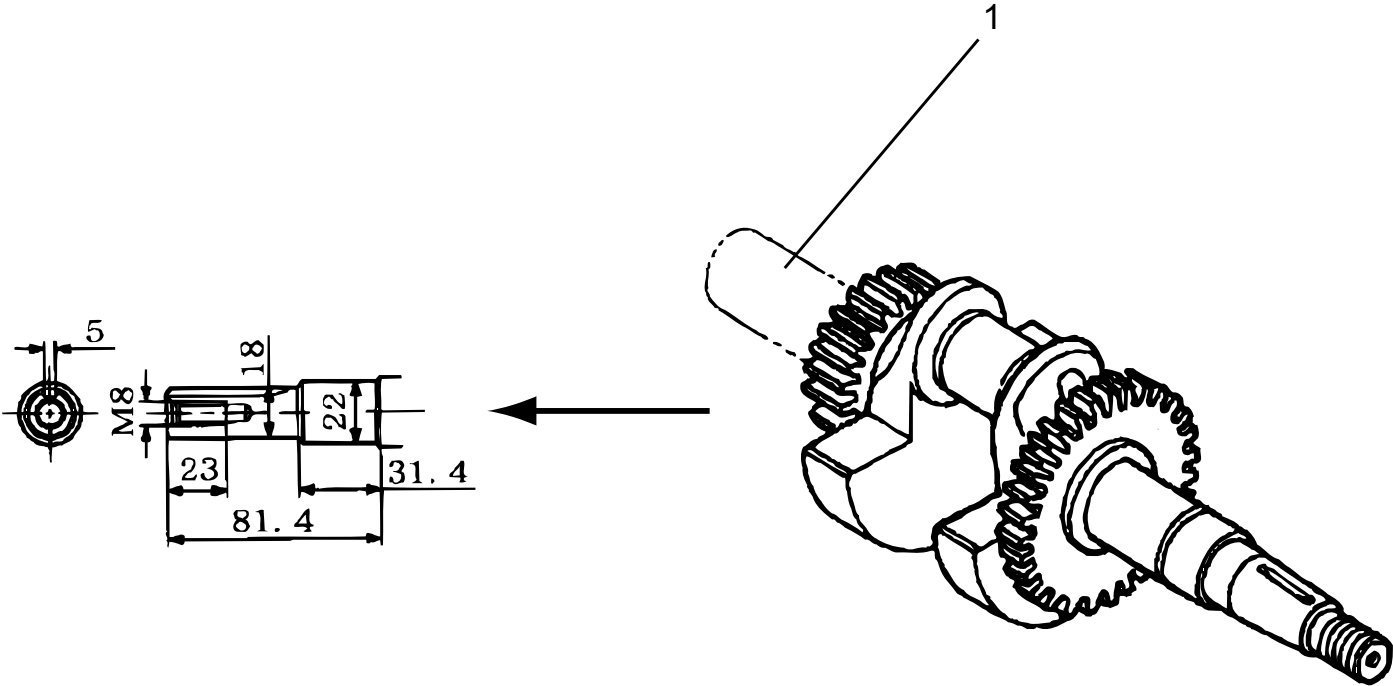


HONDA GX120U1SM12 ENGINE — CRANKCASE COVER ASSY.

CRANKCASE COVER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	11300ZE0634	COVER ASSY., CRANKCASE	1.....	INCLUDES ITEMS W/@
3	11381ZH7800	GASKET, CRANKCASE	1	
5	15600ZE1003	CAP ASSY., OIL FILLER.....	1.....	INCLUDES ITEMS W/#
6	15600ZG4003	CAP ASSY., OIL FILLER	1.....	INCLUDES ITEMS W/+
7#+	15625ZE1003	PACKING, OIL FILLER CAP	2	
11	90015883000	BOLT, FLANGE 6X28	7	
13@	91001878003	BEARING, RADIAL 62/22	1	
14@	91203ZE0013	OIL SEAL 22X41X6	1	
16	9430108140	DOWEL PIN 8X14	2	

HONDA GX120U1SM12 ENGINE — CRANKSHAFT ASSY.

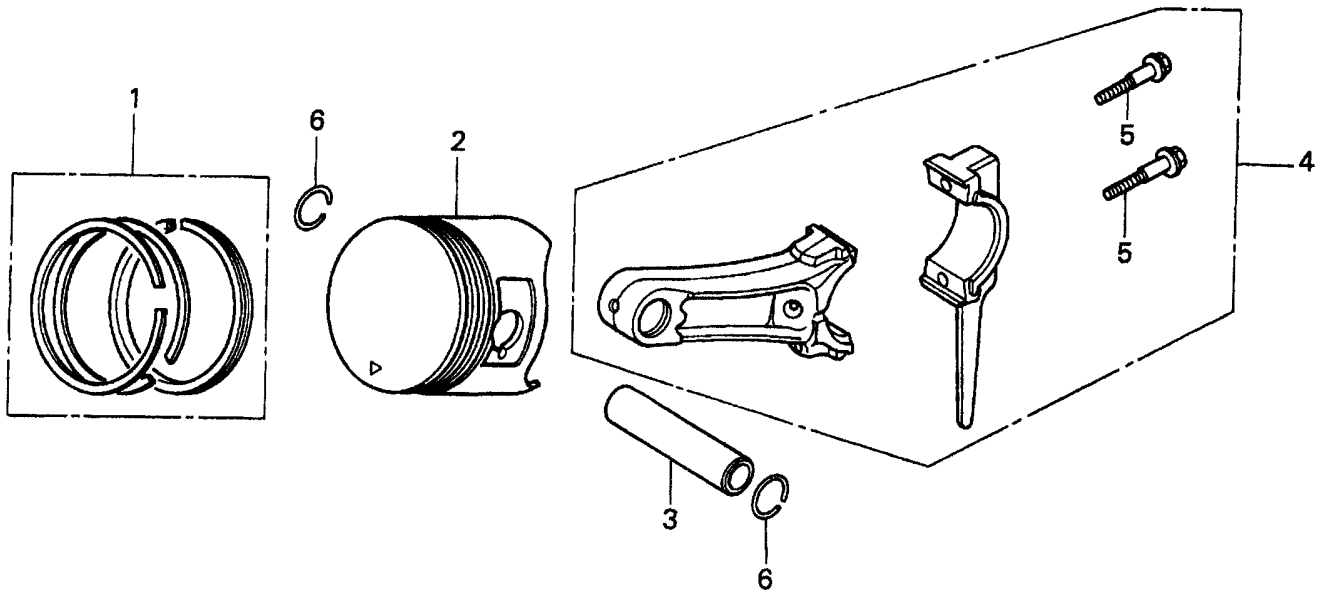


HONDA GX120U1SM12 ENGINE — CRANKSHAFT ASSY.

CRANKSHAFT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	13310ZE0000	CRANKSHAFT	1	

HONDA GX120U1SM12 ENGINE — PISTON ASSY.

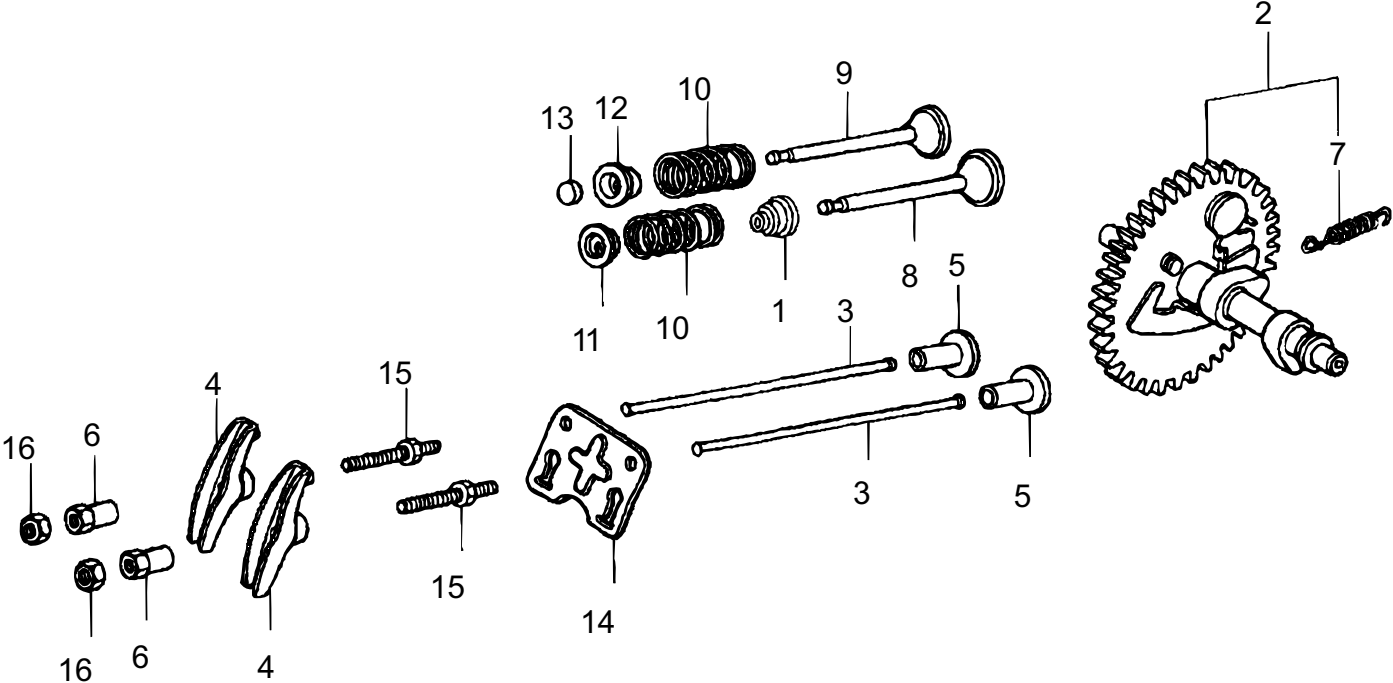


HONDA GX120U1SM12 ENGINE — PISTON ASSY.

PISTON/CONNECTING ROD ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	13010ZH7003	RING SET, PISTON (STANDARD)	1	
1	13011ZH7003	RING SET, PISTON (OS 0.25), OPTIONAL	1	
1	13012ZH7003	RING SET, PISTON (OS 0.50) , OPTIONAL	1	
1	13013ZH7003	RING SET, PISTON (OS 0.75), OPTIONAL	1	
2	13101ZH7010	PISTON, STANDARD	1	
2	13102ZH7010	PISTON, OS 0.25	1	
2	13103ZH7010	PISTON, OS 0.50	1	
2	13104ZH7010	PISTON, 0.75	1	
3	13111ZE0000	PIN, PISTON	1	
4	13200ZE0000	ROD ASSY, CONNECTING (UNDER SIZE).....	1	INCLUDES ITEMS W/@
4	13200ZE0000	ROD ASSY., CONNECTING.....	1	INCLUDES ITEMS W/@
5@	90001ZE1000	BOLT, CONNECTING ROD	2	
6	90551ZE0000	CLIP, PISTON PIN 13MM	2	

HONDA GX120U1SM12 ENGINE — CAMSHAFT ASSY.

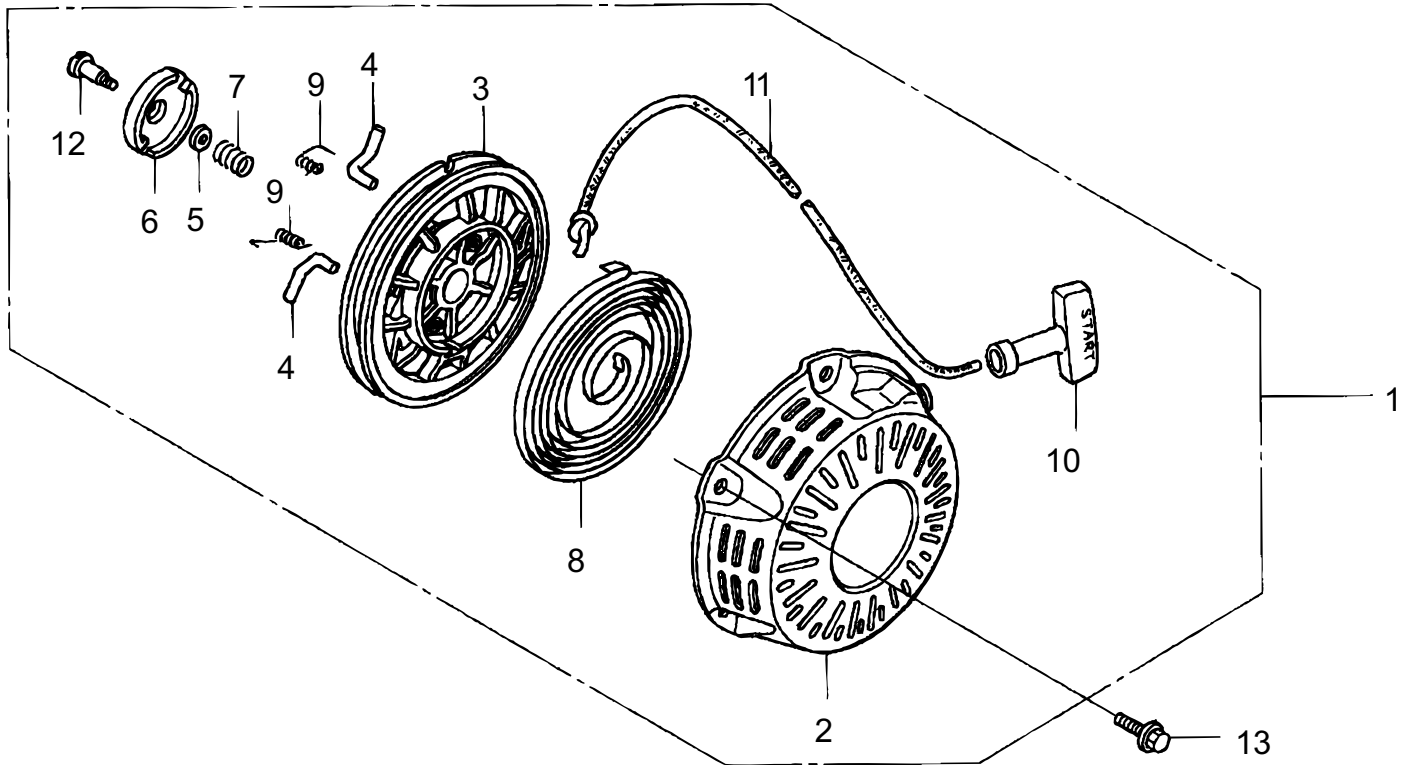


HONDA GX120U1SM12 ENGINE — CAMSHAFT ASSY.

CAMSHAFT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	12209ZH8003	SEAL, VALVE STEM	1	
2	14100ZE0812	CAMSHAFT ASSY.	1	INCLUDES ITEMS W/@
3	14410ZE0010	ROD, PUSH	2	
4	14431ZE1000	ARM, VALVE ROCKER	2	
5	14441ZE1010	LIFTER, VALVE	2	
6	14451ZE1013	PIVOT, ROCKER ARM	2	
7@	14568ZE1000	SPRING, WEIGHT RETURN	1	
8	14711ZF0000	VALVE, IN.	1	
9	14721ZF0000	VALVE, EX.	1	
10	14751ZF1000	SPRING, VALVE	2	
11	14771ZE1000	RETAINER, IN. VALVE SPRING	1	
12	14773ZE1000	RETAINER, EX. VALVE SPRING	1	
13	14781ZE1000	ROTATOR, VALVE	1	
14	14791ZE0010	PLATE, PUSH ROD GUIDE	1	
15	90012ZE0010	BOLT, PIVOT 8MM	2	
16	90206ZE1000	NUT, PIVOT ADJ.	2	

HONDA GX120U1SM12 ENGINE — RECOIL STARTER ASSY.

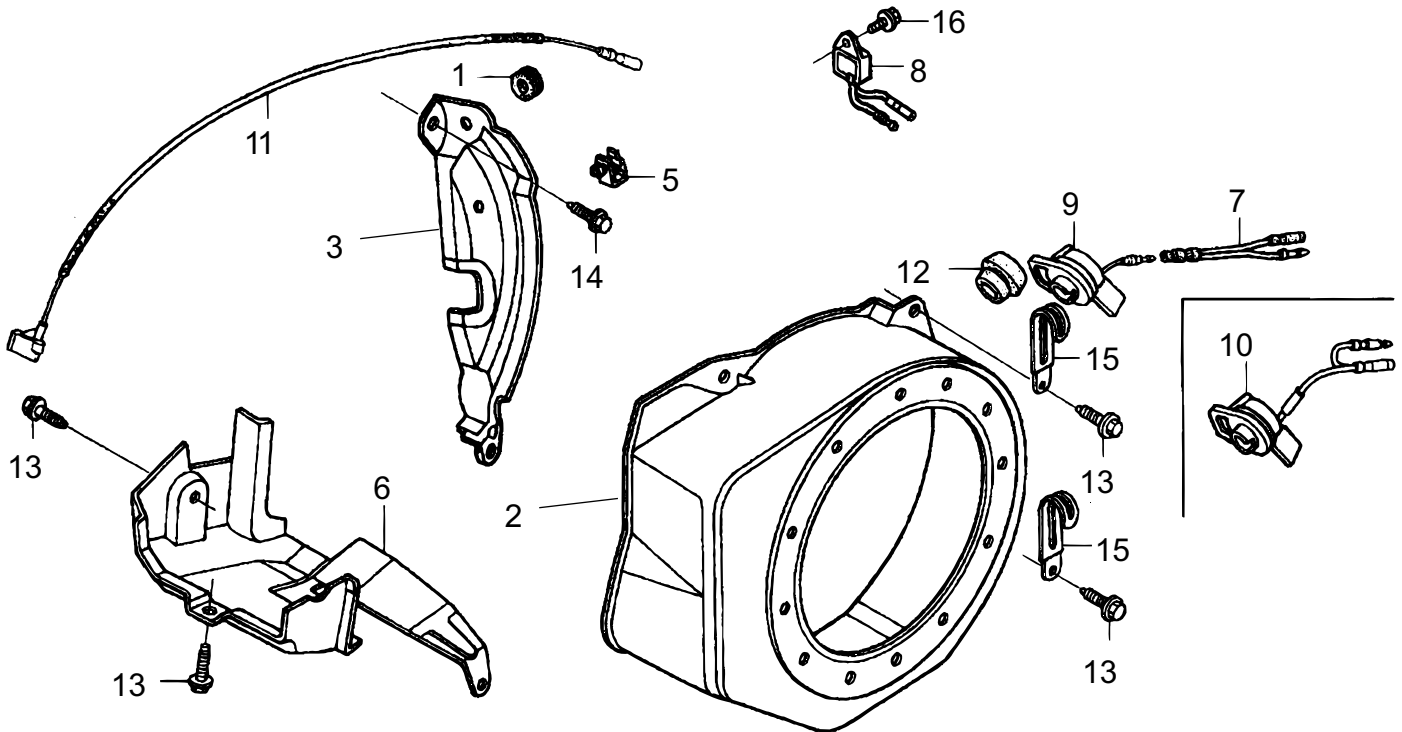


HONDA GX120U1SM12 ENGINE — RECOIL STARTER ASSY.

RECOIL STARTER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	28400ZH8023ZB	STARTER ASSY., RECOIL @NH1@	1.....	INCLUDES ITEMS W/@
2@	28410ZH8003ZB	CASE, RECOIL STARTER @NH1@	1	
3@	28421ZH8801	REEL, RECOIL STARTER	1	
4@	28422ZH8801	RATCHET, STARTER	2	
5@	28431ZH8801	PLATE, FRICTION	1	
6@	28433ZH8801	GUIDE, RATCHET	1	
7@	28441ZH8801	SPRING, FRICTION	1	
8@	28442ZH8803	SPRING, RECOIL STARTER	1	
9@	28443ZH8001	SPRING, RETURN	2	
10@	28461ZH8003	GRIP, STARTER	1	
11@	28462ZH8003	ROPE, RECOIL STARTER	1	
12@	90003ZH8001	SCREW, SETTING	1	
13	9008ZE2003	BOLT, FLANGE 6X10	3	

HONDA GX120U1SM12 ENGINE — FAN COVER ASSY.

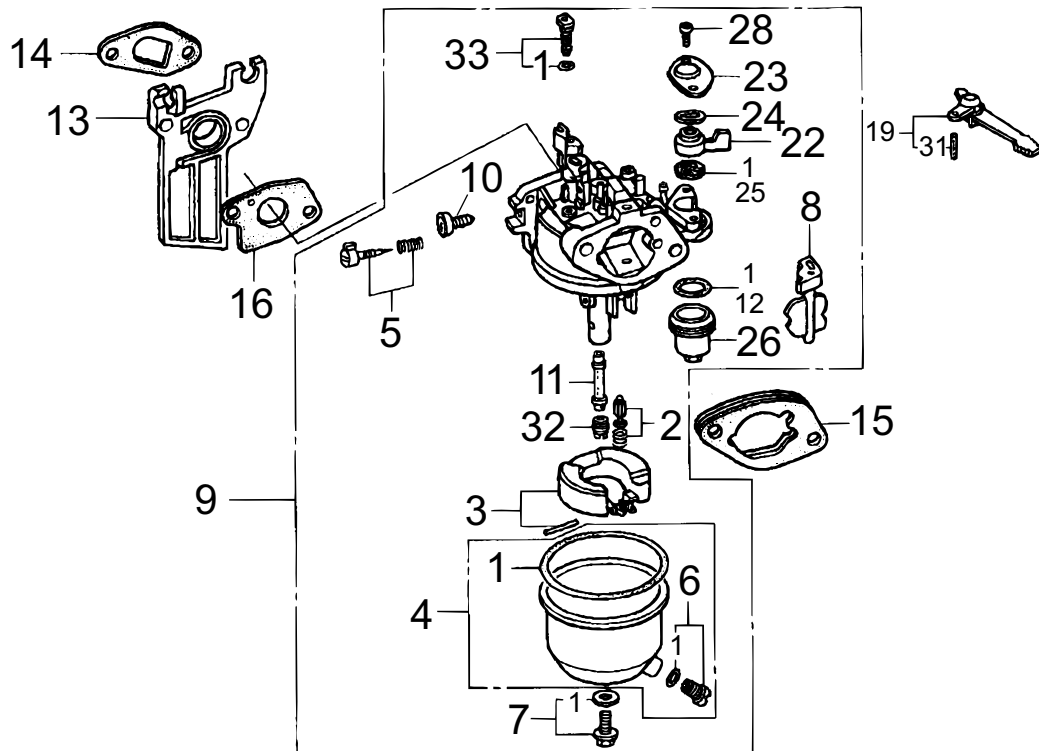


HONDA GX120U1SM12 ENGINE — FAN COVER ASSY.

FAN COVER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	11347371300	GROMMET, ADJUSTING COVER	1	
2	19610ZE0000ZE	COVER, FAN *NH1*	1	
3	19611ZH7810	PLATE, SIDE (OIL ALERT)	1	
5	90601ZH7013	CLIP, HARNESS	1	
6	19630ZH7000	SHROUD	1	
8	34150ZH7003	ALERT UNIT, OIL	1	
10	36100ZF6P81	SWITCH ASSEMBLY, ENGINE STOP	1	
11	36101ZE1010	WIRE, STOP SWITCH 370MM	1	
13	90013883000	BOLT, FLANGE 6X12 (CT200)	6	
14	90022888010	BOLT, FLANGE 6X20(CT200)	1	
16	95 7010600800	BOLT, FLANGE 6X8	1	

HONDA GX120U1SM12 ENGINE — CARBURETOR ASSY.

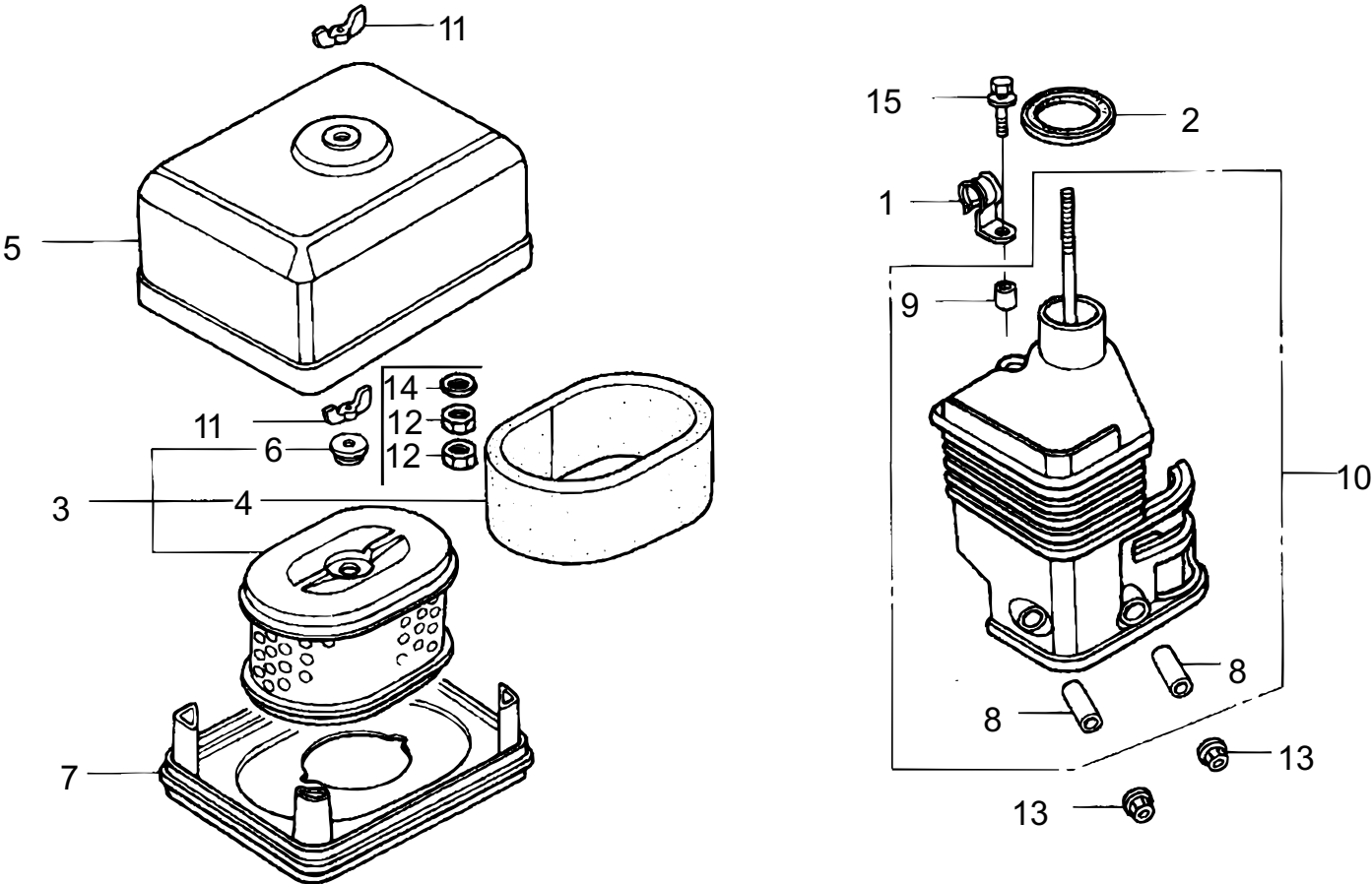


HONDA GX120U1SM12 ENGINE — CARBURETOR ASSY.

CARBURETOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1@#	16010ZE1812	GASKET SET	1	
2@	16011ZE0005	VALVE SET, FLOAT	1	
3@	16013ZE0005	FLOAT SET	1	
4@	16015ZE0831	FLOAT CHAMBER SET	1.....	INCLUDES ITEMS W/#
5@	16016ZH7W01	SCREW SET, PILOT	1	
6@#	16024ZE1811	SCREW SET, DRAIN	1	
7@	16028ZE0005	SCREW SET B	1	
8@	16044ZE0005	CHOKE SET	1	
9	16100ZH7W51	CARBURETOR ASSY., BE60B B	1.....	INCLUDES ITEMS W/@
10@	16124ZE0005	SCREW, THROTTLE STOP	1	
11@	16166ZH7W50	NOZZLE, MAIN	1	
12@	16173001004	PACKING, CUP	1	
13	16211ZE0000	INSULATOR, CARBURETOR	1	
14	16212ZH7800	PACKING, INSULATOR	1	
15	16220ZE1020	SPACER, CARBURETOR	1	
16	16221ZH8801	GASKET, CARBURETOR	1	
19	16610ZE1000	LEVER, CHOKE (STANDARD)	1.....	INCLUDES ITEMS W/+
22@	16953ZE1812	LEVER, VALVE	1	
23@	16954ZE1812	PLATE, LEVER SETTING	1	
24@	16956ZE1811	SPRING, VALVE LEVER	1	
25@	16957ZE1812	GASKET, VALVE	1	
26@	16967ZE0811	CUP, FUEL STRAINER	1	
28@	93500030061H	SCREW, PAN (3 X 6)	2	
31+	9430520122	PIN, SPRING (2 X 12)	1	
32@	99101ZH80600	JET, MAIN (#60)	1	
33@	99204ZE00350	JET, SET, PILOT (#35)	1	

HONDA GX120U1SM12 ENGINE — AIR CLEANER ASSY.

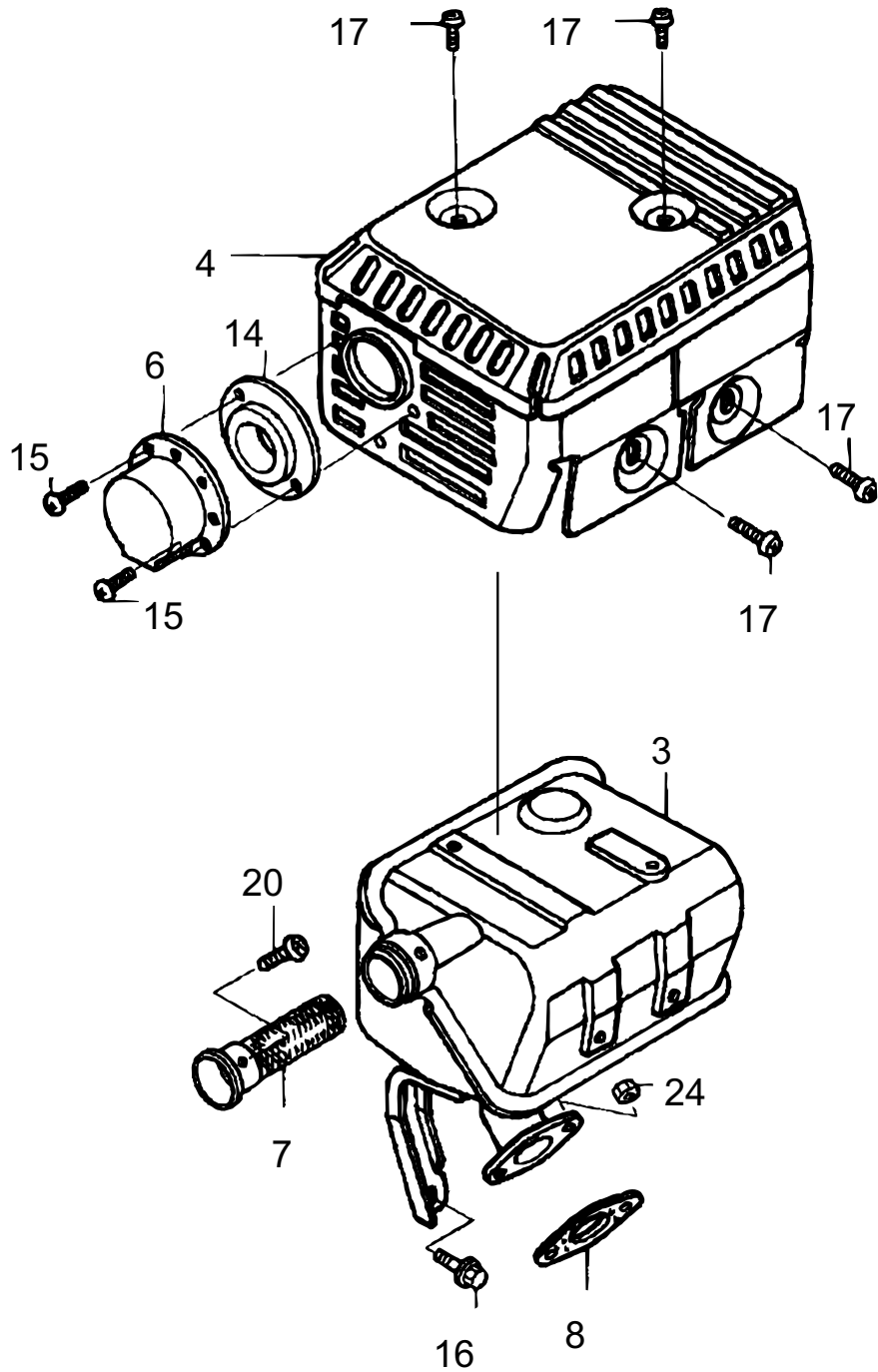


HONDA GX120U1SM12 ENGINE — AIR CLEANER ASSY.

AIR CLEANER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
2	16271ZE1000	GASKET, ELBOW	1	
3	17210ZE0822	CLEANER ELEMENT	1.....	INCLUDES ITEMS W/#
4#	17218ZE0821	ELEMENT OUTER	1	
5	17230ZE0820	COVER, AIR CLEANER	1	
6#	17232891000	GROMMET, AIR CLEANER	1	
7	17235ZE1831	NOSE, SILENCER	1	
8@	17238ZE0010	COLLAR, AIR CLEANER	2	
9@	17239ZE1000	COLLAR B, AIR CLEANER	1	
10	17410ZE0030	ELBOW, AIR CLEANER	1.....	INCLUDES ITEMS W/@
11	90325044000	WINGNUT, TOOL BOX SETTING	2	
13	9405006000	NUT, FLANGE 6MM	2	
15	957010602000	BOLT, FLANGE 6X20	1	

HONDA GX120U1SM12 ENGINE — MUFFLER ASSY.

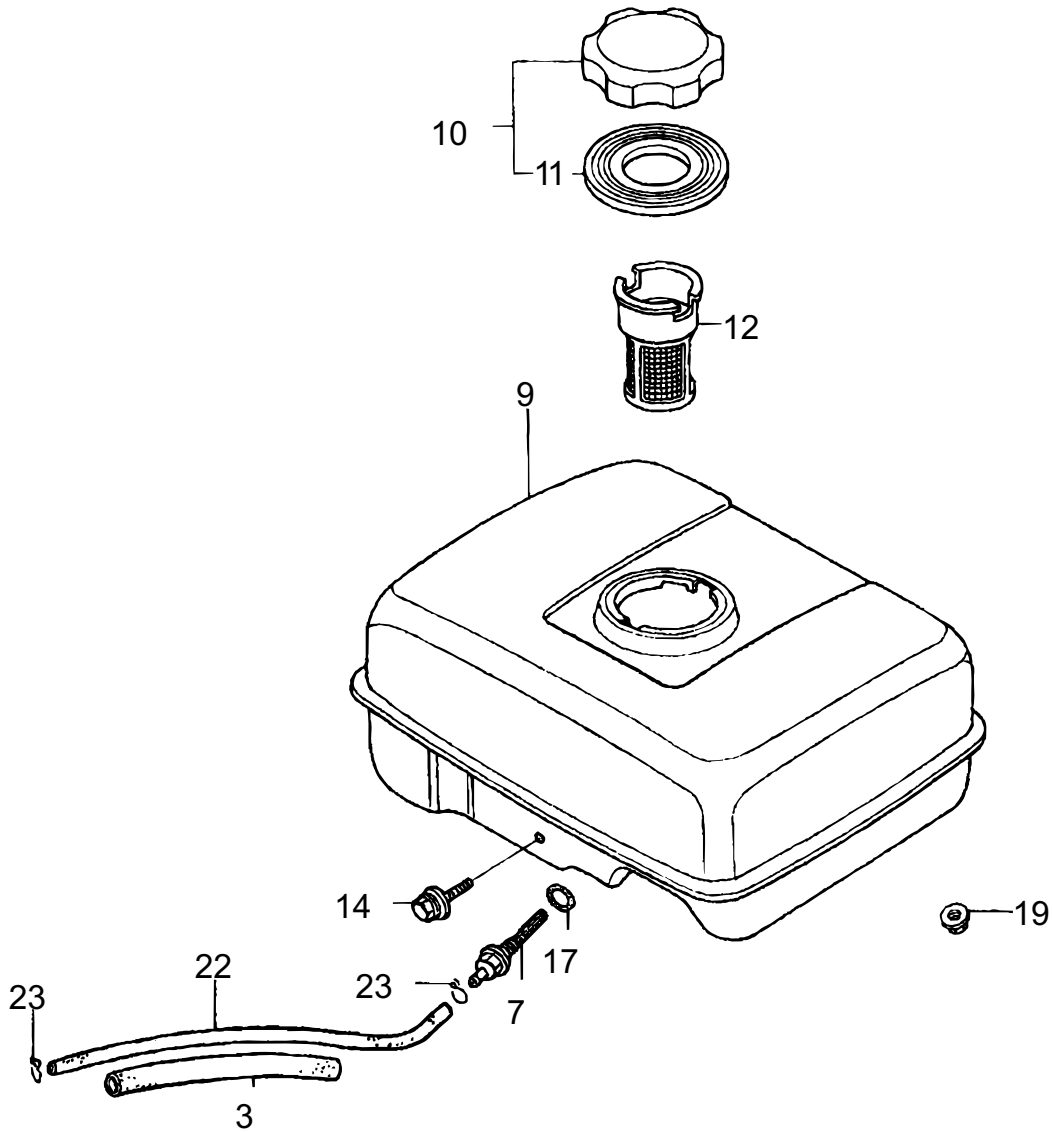


HONDA GX120U1SM12 ENGINE — MUFFLER ASSY.

MUFFLER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
3	18310ZH8810	MUFFLER	1	
4	18320ZF1H01	PROTECTOR, MUFFLER	1	
6	18340ZE1010	DEFLECTOR	1	
7	18355ZE1000	ARRESTER, SPARK	1	
8	18381ZH8800	GASKET, MUFFLER	1	
14	18522ZE1000	GUIDE, MUFFLER	1	
15	90002ZG0003	SCREW, TAPPING 4X8	2	
16	90016ZE1000	BOLT, FLANGE 6 X 13	1	
17	90050ZE1000	SCREW, TAPPING 5X8	4	
20	90055ZE1000	SCREW, TAPPING 4X6	1	
24	94001080000S	NUT, HEX. 8MM	2	

HONDA GX120U1SM12 ENGINE — FUEL TANK ASSY.

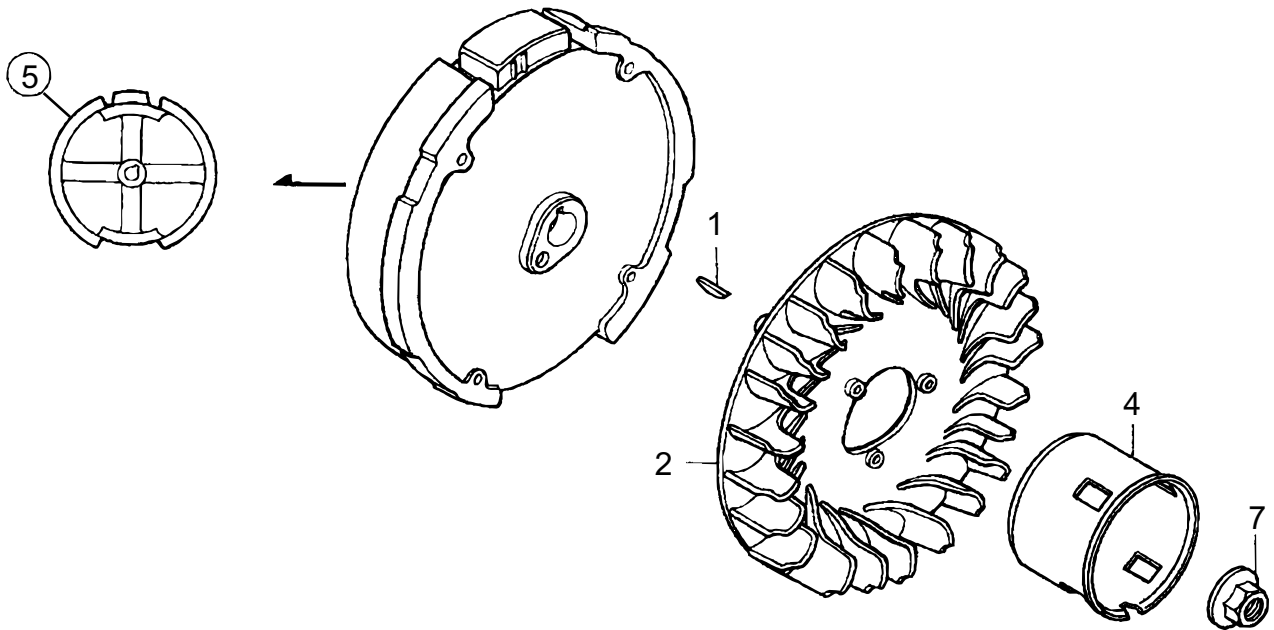


HONDA GX120U1SM12 ENGINE— FUEL TANK ASSY.

FUEL TANK ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
3	16854ZH8000	RUBBER, SUPPORTER 107MM	1	
7	16955ZE1000	JOINT, FUEL TANK	1	
9	17510ZE0020ZD	TANK, FUEL *NH1* (BLACK)	1	
10	17620ZH7023	CAP, FUEL FILLER.....	1.....	INCLUDES ITEMS W/@
11@	17631ZH7003	GASKET, FUEL FILLER CAP	1	
12	17672ZE2W01	FUEL FILTER	1	
14	90004ZH7003	BOLT, FLANGE 6X29	1	
17	91353671004	O- RING 14MM	1	
19	9405006000	NUT, FLANGE 6MM	2	
22	950014514040	BULK HOSE, FUEL 4.5X140	1	
22	950014500160M	BULK HOSE, FUEL 4.5X1000	1	
23	9500202080	CLIP, TUBE (B8)	2	

HONDA GX120U1SM12 ENGINE — FLYWHEEL ASSY.

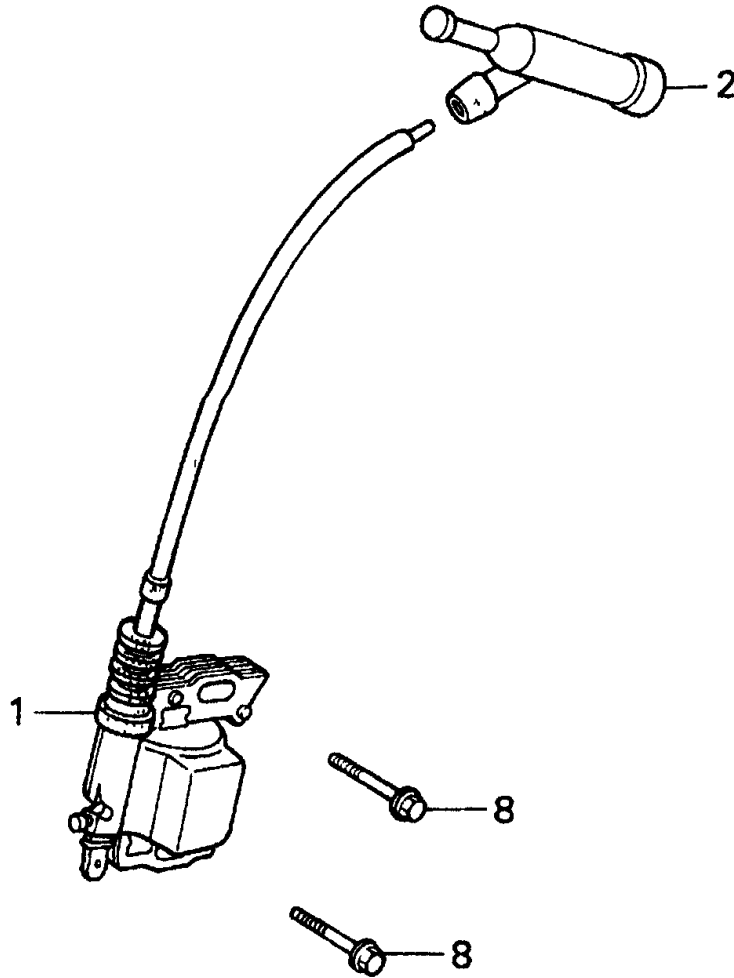


HONDA GX120U1SM12 ENGINE — FLYWHEEL ASSY.

FLYWHEEL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	13331357000	KEY, SPECIAL WOODRUFF 25X18	1	
2	19511ZE0000	FAN, COOLING	1	
4	28451ZH7801	PULLEY, STARTER	1	
5	31100ZE0010	FLYWHEEL	1	
7	90201878003	NUT, SPECIAL 14MM	1	

HONDA GX120U1SM12 ENGINE — IGNITION COIL ASSY.

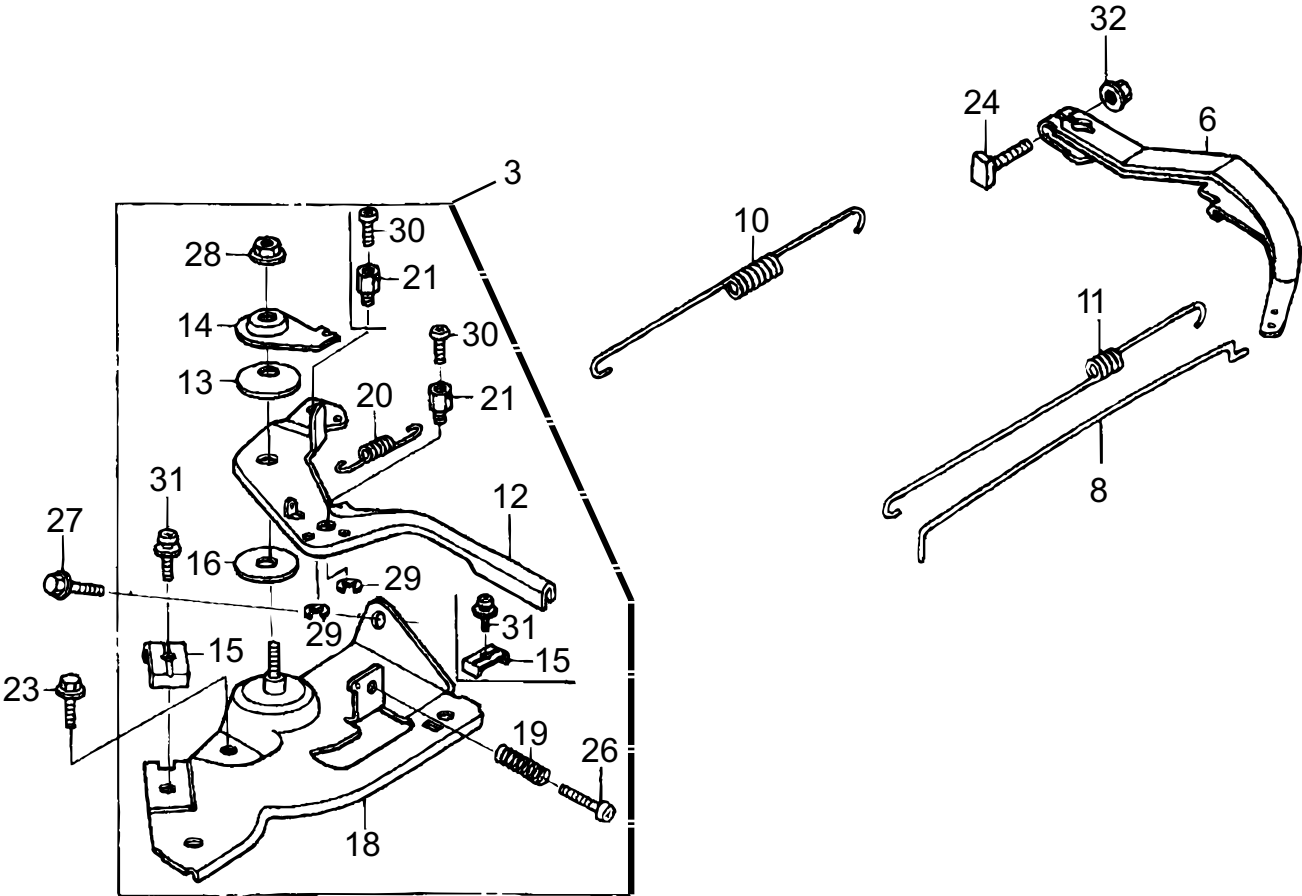


HONDA GX120U1SM12 ENGINE — IGNITION COIL ASSY.

IGNITION COIL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	30500ZE1063	COIL ASSY., IGNITION	1	
2	30700ZE1013	CAP ASSY., NOISE SUPPRESSOR	1	
8	90121952000	BOLT, FLANGE 6X25	2	

HONDA GX120U1SM12 ENGINE — CONTROL ASSY.

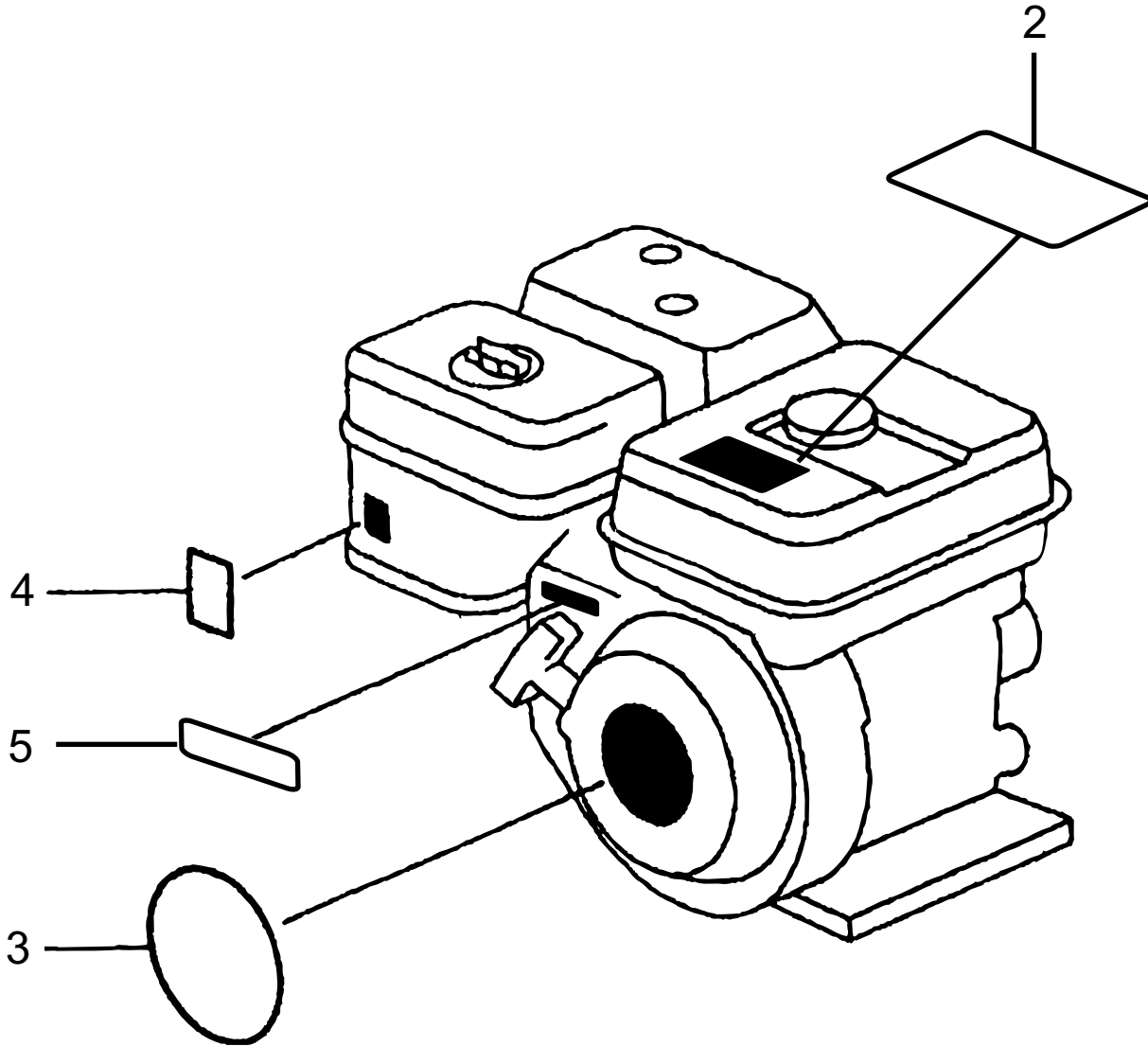


HONDA GX120U1SM12 ENGINE — CONTROL ASSY.

CONTROL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
3	16500ZK7U50	CONTROL ASSY.....	1.....	INCLUDES ITEMS W/#
6	16551ZE0010	ARM, GOVERNOR	1	
8	16555ZE0000	ROD, GOVERNOR	1	
10	16561ZE0020	SPRING, GOVERNOR	1	
11	16562ZE0020	SPRING, THROTTLE RETURN	1	
12#	16571ZH7000	LEVER, CONTROL	1	
13#	16574ZE1000	SPRING, LEVER	1	
14#	16575ZH8000	WASHER, CONTROL LEVER	1	
15#	16576891000	HOLDER, CABLE	2	
16#	16578ZE1000	SPACER, CONTROL LEVER	1	
18#	16580ZH7810	BASE CONTROL	1	
19#	16584883300	SPRING, CONTROL ADJUSTING	1	
20#	16592ZE1810	SPRING, CABLE RETURN	1	
21#	16594883010	HOLDER, WIRE	2	
23	90013883000	BOLT, FLANGE 6X12 (CT200)	1	
24	90015ZE5010	BOLT, GOVERNOR ARM	1	
26#	93500050250H	SCREW, PAN 5X25	1	
27	90022888010	BOLT, FLANGE 6X20 (CT200)	1	
28#	90114SA0000	NUT, SELF- LOCK 6MM	1	
29#	90605230000	CIRCLIP, 5 MM	2	
30#	93500040060H	SCREW 4X6	2	
31#	93500050160A	SCREW, PAN 5X16	2	
32	9405006000	NUT, FLANGE 6MM	1	

HONDA GX120U1SM12 ENGINE — DECALS ASSY.



HONDA GX120U1SM12 ENGINE — DECALS ASSY.

LABELS ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
2	87521ZH7000	MARK, OPERATOR CAUTION	1	
3	87521ZH7030	EMBLEM	1	
4	87528ZH7000	MARK, CHOKE	1	
5	87532ZH7000	MARK, THROTTLE INDICATION	1	

TERMS AND CONDITIONS OF SALE — PARTS

PAYMENT TERMS

Terms of payment for parts are net 30 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.

Effective: February 22, 2006

OPERATION AND PARTS MANUAL

HERE'S HOW TO GET HELP

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

UNITED STATES

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Carson, CA 90746
Contact: mq@multiquip.com

Tel. (800) 421-1244
Fax (310) 537-3927

MQ Parts Department

800-427-1244
310-537-3700

Fax: 800-672-7877
Fax: 310-637-3284

Service Department

800-421-1244
310-537-3700

Fax: 310-537-4259

Warranty Department

800-421-1244
310-537-3700

Fax: 310-943-2249

Technical Assistance

800-478-1244

Fax: 310-943-2238

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