

OPERATION AND PARTS MANUAL



Mikasa SERIES
MODEL MVC-70H/HW
ONE-WAY PLATE COMPACTOR
(HONDA GASOLINE ENGINE)

Revision #2 (11/02/05)

THIS MANUAL MUST ACCOMPANY THE EQUIPMENT AT ALL TIMES.

**Multiquip MVC-70H/HW
Plate Compactor**

Proposition 65 2
 Table Of Contents 4
 Parts Ordering Procedures 5
 Specifications 6
 Dimensions 7
 Safety Message Alert Symbols 8-9
 Rules For Safe Operation..... 10-11
 Operation and Safety Decals 12
 General Information 13
 Components (Plate Compactor) 14
 Components (Engine) 15
 Inspection 16-17
 Initial Start-Up/Operation 18-19
 Maintenance 20-21
 Preparation For Long Term Storage 22
 Troubleshooting (Engine) 23-24
 Troubleshooting (Plate Compactor) 25
 Explanation Of Codes In Remarks Column 26
 Suggested Spare Parts 27

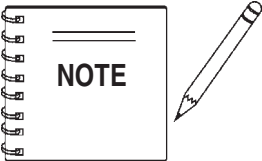
Honda GX160K1QMX2 Engine

Cylinder Head Assembly 38-39
 Cylinder Barrel (Recoil) Assembly 40-41
 Crankcase Cover Assembly 42-43
 Crankshaft Assembly 44-45
 Piston/Connecting Rod Assembly 46-47
 Camshaft Assembly 48-49
 Recoil Starter 50-51
 Fan Cover Assembly 52-53
 Carburetor Assembly 54-55
 Air Cleaner Assembly 56-57
 Muffler Assembly 58-59
 Fuel Tank Assembly 60-61
 Flywheel Assembly 62-63
 Ignition Coil Assembly 64-65
 Control Assembly 66-67
 Gasket Assembly 68-69
 Label Assembly 70-71

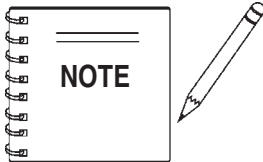
Terms and Conditions Of Sale — Parts 72

Component Drawings

Name Plate and Decals 28-29
 Main Body Assembly (Old Style) 30-31
 Main Body Assembly (New Style) 32-33
 Vibrator Assembly 34-35
 Water Tank 36-37



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



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

MVC-70H/HW — SPECIFICATIONS

TABLE 1. COMPACTOR SPECIFICATIONS

Model	MVC-70H/W
Centrifugal Force	1,220 kg (2,700 lbs.)
Vibration Frequency	5,600 vpm (93 Hz)
Maximum Forward Speed	25 m/min (82 ft/min)
Plate Size (L x W)	541 x 350 mm (21.3 x 13.8 in)
Overall Dimensions (L x W x H)	879 x 350 x 886 mm (4.6 x 13.8 x 34.9 in)
Operating Weight (with water tank)	86 kg (190 lbs.)
Operating Weight (without water tank)	76 kg (168 lbs.)
Maximum Area of Compaction	543 sq. m/hr (5,865 sq. ft/hr)
Water Tank Capacity (Option)	10 liters (2.64 gallons)

Table 2. Specifications (Engine)

Engine	Model	HONDA GX160K1QMX2
	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.)	

MVC-70H/HW — DIMENSIONS

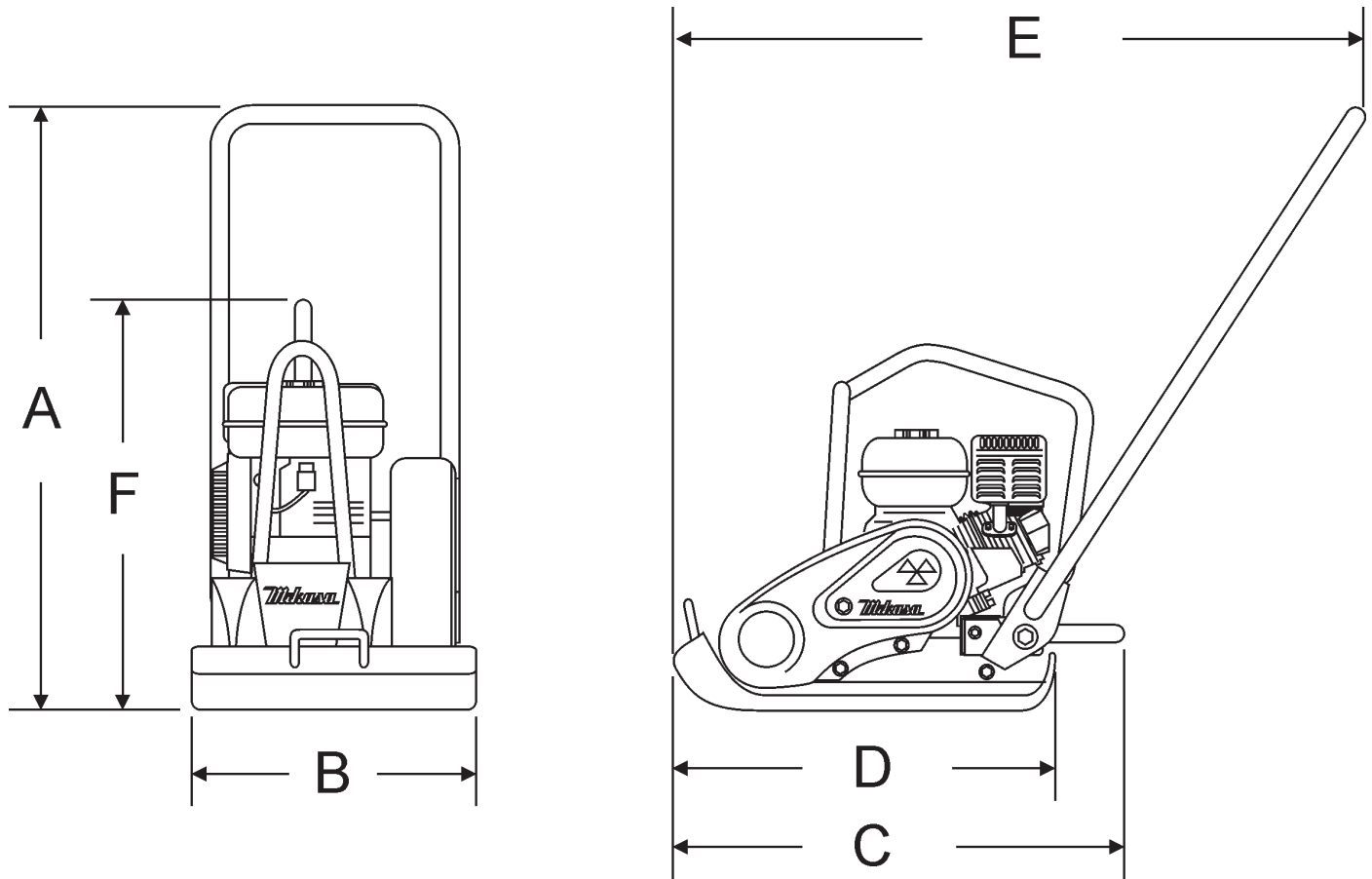


Figure 1. MVC-70H/HW Plate Compactor Dimensions

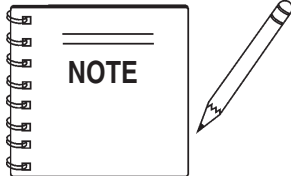
TABLE 3. DIMENSIONS

REFERENCE LETTER	DESCRIPTION	DIMENSION in. (mm)
A	Height (Handle Upright)	914 mm (36 in.)
B	Width	420 mm (16.5 in.)
C	Length (Handle Upright)	635 mm (25 in.)
D	Plate Length	510 mm (20 in.)
E	Length (Handle Lowered)	914 mm (36 in.)
F	Height (Compactor Only)	635 mm (25 in.)
	Shipping Dimensions	686 x 381 x 711 mm (27 x 15 x 28 in.)

MVC-70H/HW — 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 MVC-70H/HW Plate Compactor**. Refer to the engine manufacturers instructions for data relative to its safe operation.

Before using this plate compactor, 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.

HAZARD SYMBOLS

Potential hazards associated with the operation of the **MQ Model MVC-70H/HW Plate Compactor** will be referenced with Hazard Symbols which appear throughout this manual, and will be referenced in conjunction with Safety Message Alert Symbols.

WARNING - Lethal Exhaust Gas Hazards

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.



DANGER - Explosive Fuel Hazards

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.

WARNING - 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.



WARNING - Respiratory Hazards

ALWAYS wear approved **respiratory** protection when required.



MVC-70H/HW — SAFETY MESSAGE ALERT SYMBOLS

⚠ CAUTION - Rotating Parts Hazards

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



⚠ CAUTION - Equipment Damage Hazards

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

⚠ CAUTION - Accidental Starting Hazards

ALWAYS place the power source, circuit breakers or **ON/OFF** switch in the **OFF** position, when the generator is not in use, unless connected to transfer switch.

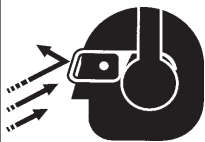


⚠ WARNING - Read Manual

Before attempting to operate the plate compactor, and to avoid serious injury to personnel, always read and understand operation manual. Failure to read and understand operation manual could result in serious harm or even death!

	⚠ WARNING To avoid injury, you MUST read and understand operator's manual before using this machine.
	This machine to be operated by qualified personnel only. Ask for training as needed.

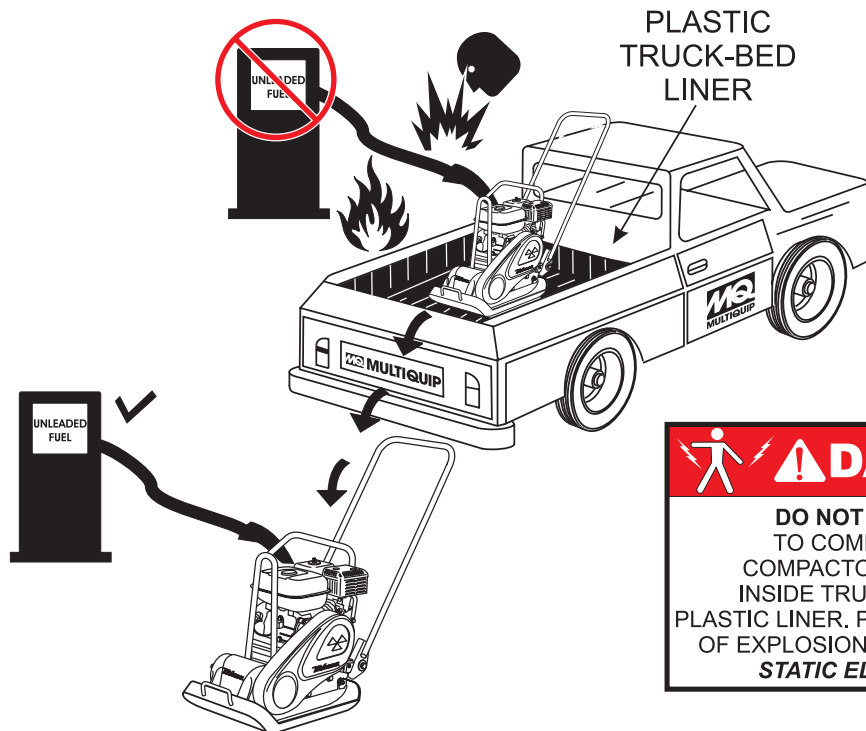
⚠ CAUTION - Eye and Hearing Hazards



ALWAYS wear approved eye and hearing protection.

⚠ DANGER - Refueling Hazard

DO NOT refuel plate compactor if compactor is placed inside truck bed with **PLASTIC LINER**. Possibility exists of explosion or fire due to **static electricity**.



DANGER
<p>DO NOT ADD FUEL TO COMPACTOR IF COMPACTOR IS PLACED INSIDE TRUCK-BED WITH PLASTIC LINER. POSSIBILITY EXISTS OF EXPLOSION OR FIRE DUE TO <i>STATIC ELECTRICITY</i>.</p>

MVC-70H/HW — RULES FOR SAFE OPERATION

CAUTION - Read Manual!

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 **MQ Mikasa Model MVC-70H/HW Plate Compactor**.

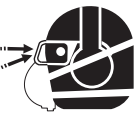
GENERAL SAFETY

- **DO NOT** operate or service this equipment before reading this entire manual.
- This equipment should not be operated by persons under 18 years of age.
- **NEVER** operate this equipment without proper protective clothing, shatterproof glasses, steel-toed boots and other protective devices required by the job.

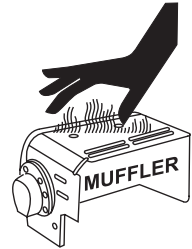


- **NEVER** operate this equipment when not feeling well due to fatigue, illness or taking medicine.
- **NEVER** operate this equipment under the influence of **drugs** or **alcohol**.



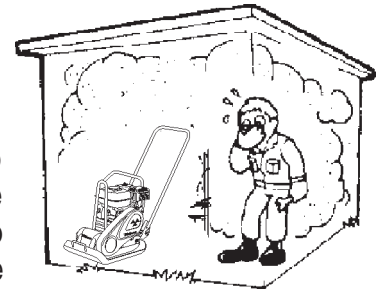
- **ALWAYS** wear proper respiratory (mask), hearing and eye protection equipment when operating the plate compactor. 
- Whenever necessary, replace nameplate, operation and safety decals when they become difficult read.
- Manufacture does not assume responsibility for any accident due to equipment modifications.
- **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.

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



- **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 section of this compactor requires an adequate free flow of cooling air. **NEVER** operate the compactor 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 compactor or engine and may cause injury to people. Remember the plate compactor's engine gives off **DEADLY** carbon monoxide gas.

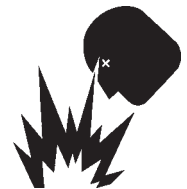


- **ALWAYS** refuel in a well-ventilated area, away from sparks and open flames.

- **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 plate compactor in an explosive atmosphere or near combustible materials. An explosion or fire could result causing severe **bodily harm or even death**.



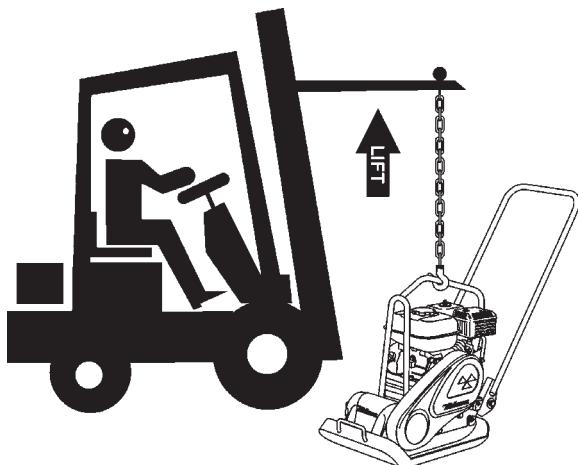
- Topping-off to filler port is dangerous, as it tends to spill fuel.
- Maintain this equipment in a safe operating condition at all times.
- **ALWAYS** store equipment properly when it is not being used. Equipment should be stored in a clean, dry location out of the reach of children.

MVC-70H/HW — RULES FOR SAFE OPERATION

- **NEVER** run engine without air filter. Severe engine damage may occur.
- **ALWAYS** service air cleaner frequently to prevent carburetor malfunction.
- **ALWAYS** be sure the operator is familiar with proper safety precautions and operations techniques before using compactor.
- **ALWAYS** read, understand, and follow procedures in Operator's Manual before attempting to operate equipment.
- Refer to the *Honda Engine Owner's Manual* for engine technical questions or information.

Loading and Unloading (Crane)

- Before lifting, make sure that machine parts (lifting bale and vibration insulator) are not damaged and screws are not loosened or lost.
- **ALWAYS** make sure crane or lifting device has been properly secured to the lifting bale on the compactor.



- **NEVER** lift the compactor while the engine is running.
- Use adequate lifting cable (wire or rope) of sufficient strength.
- Use one point suspension hook and lift straight upwards.
- **NEVER** allow any person or animal to stand underneath the machine while lifting.
- Try not to lift compactor to unnecessary heights.

TRANSPORTING

- **ALWAYS** shutdown engine before transporting.
- Tighten fuel tank cap securely and close fuel cock to prevent fuel from spilling.
- Drain fuel when transporting compactor over long distances or bad roads.

MAINTENANCE

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

EMERGENCIES

- **ALWAYS** know the location of the nearest *fire extinguisher* and *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.



MVC-70H/HW — OPERATION AND SAFETY DECALS

Machine Safety Decals

The MVC-70H/HW Plate Compactor is equipped with a number of safety decals (Figure 2). These decals are provided for operator safety and maintenance information. The illustration below shows these decals as they appear on the machine. Should any of these decals become unreadable, replacements can be obtained from your dealer.

CAUTION !

- READ OWNER'S SERVICE MANUAL BEFORE OPERATING OR SERVICING THIS MACHINE.
- ALWAYS KEEP UNAUTHORIZED, INEXPERIENCED, UNTRAINED PEOPLE AWAY FROM THIS MACHINE.
- MAKE SURE ALL SAFETY DEVICES ARE OPERATIONAL BEFORE THIS MACHINE IS STARTED. BE SURE ENGINE IS TURNED OFF AND SPARK PLUGS ARE DISCONNECTED BEFORE SERVICING THE MACHINE OR COMING IN CONTACT WITH ANY MOVING PART. IF EQUIPMENT IS POWERED BY AN ELECTRIC MOTOR, DISCONNECT ELECTRICAL PLUG.
- NEVER LEAVE MACHINE UNATTENDED WHEN OPERATING. ALWAYS STOP ENGINE AND ALLOW ENGINE TO COOL BEFORE ADDING FUEL OR OIL.

NPA-329 ⓘ

P/N: 920203290









Mikasa

Serial No.

Model No.

MQ MULTIQIP

**CONTACT
MQ PARTS DEPT.**

NPA-989 ⓘ

P/N: 920203989

Mikasa

P/N: 920101410

MQ

MULTIQIP

P/N: 920201580



P/N: 920105070

Figure 2. Operation and Safety Decals

Definition of Plate Compactor

The Mikasa MVC-70H/HW 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-70H/HW 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).

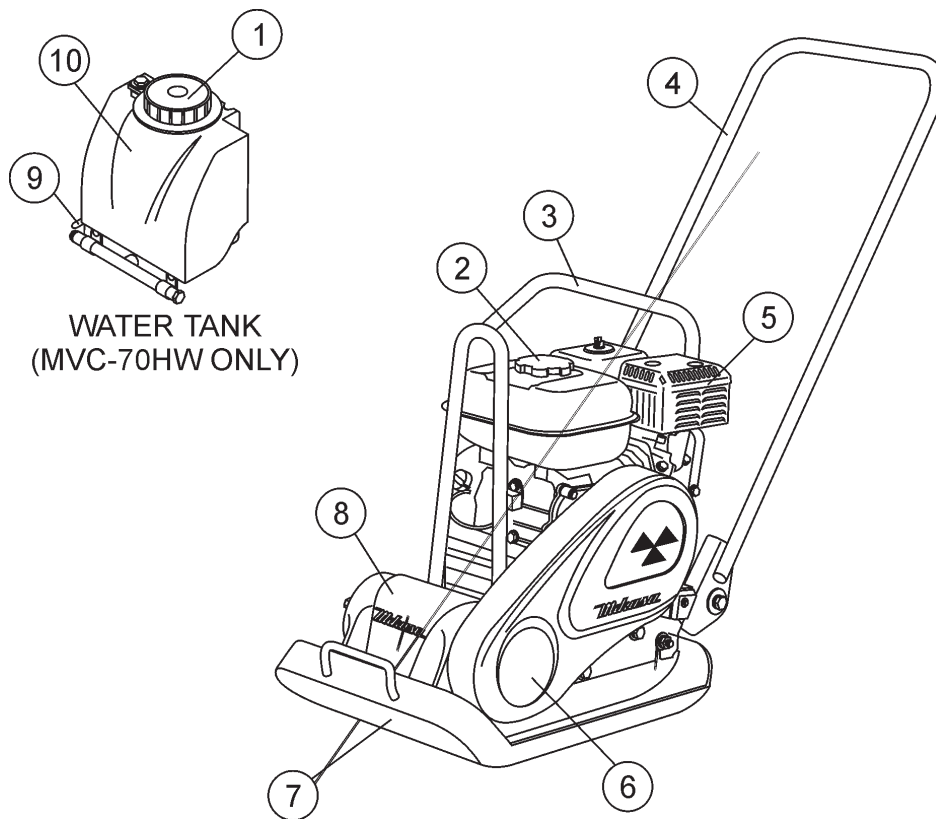
Engine

The Mikasa MVC-70H/HW Plate Compactor is equipped with a Honda GX160K1QMX2 gasoline engine.

Controls

Before starting the MVC-70H/HW Plate Compactor identify and understand the function of the controls and components as indicated Figure 3.

MVC-70H/HW — COMPONENTS (PLATE COMPACTOR)



WATER TANK
(MVC-70HW ONLY)

Figure 3. MVC-70H/HW Plate Compactor Components

Figure 3 shows the location of the components and general maintenance parts. The function of each component is described below:

1. **Water Tank Cap (for MVC-70HW only)** – Remove this cap to add water to the water tank.
2. **Fuel Tank Cap** – Remove this cap to add fuel.
3. **Lifting Bail** – 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 HONDA GX160K1QMX2 HONDA engine. Refer to the HONDA owner's manual for engine information.
6. **Belt Cover** – Remove this cover to gain access to the V-belts. **NEVER** run the compactor without the V-belt cover. If the V-belt cover is not installed, the possibility exist that your hand may get caught between the V-belt and clutch, thus causing serious injury and bodily harm.
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 (for MVC-70HW only)** – Turn this valve downward to let water flow from the water tank to the water tube.
10. **Water Tank (for MVC-70HW only)** – Holds 10.6 quarts (10 liters) of water, removable no tools required.

MVC-70H/HW — COMPONENTS (HONDA GX160K1QMX2 ENGINE)

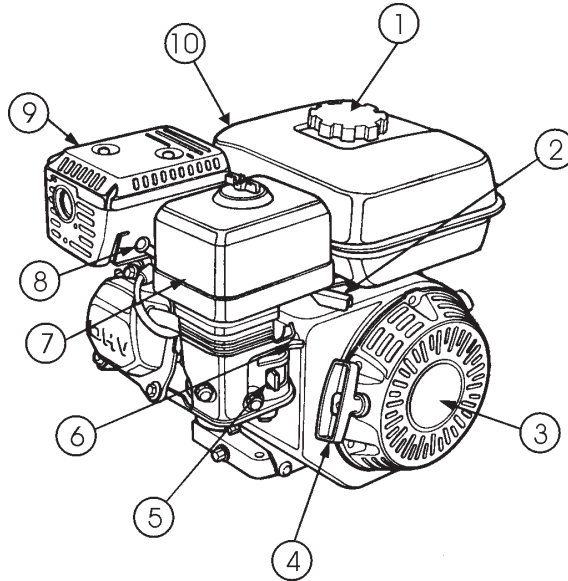


Figure 4. Engine Controls & Components


INITIAL SERVICING

The engine (Figure 4) 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.

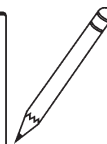
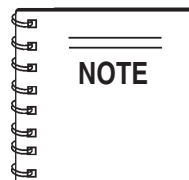
! Danger - Flammable Fuel

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) for HONDA engine. Clean spark plug once a week.
9. **Muffler** – Used to reduce noise and emissions.

! Warning - Hot Surface

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 bottom of the plate, engine cooling air inlet, carburetor and air cleaner.
3. Check the air filter for dirt and dust. If the air filter is dirty, blow through the air filter cartridge from the inside, moving a jet of dry compressed air up and down until all dust is removed. Otherwise replace air filter with a new one.
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 plate compactor on secure level ground with the engine stopped.
2. Remove the filler cap/dipstick from the engine oil filler hole (Figure 5) and wipe it clean.

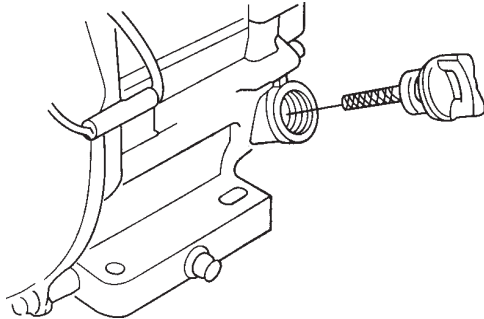


Figure 5. Engine Oil Dipstick

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

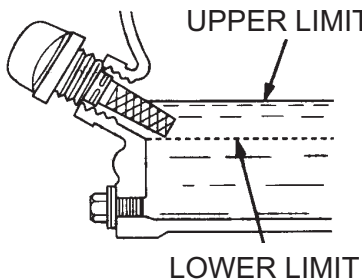
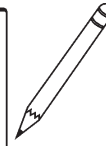
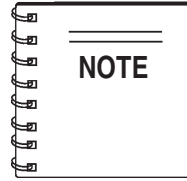


Figure 6. Engine Oil Dipstick



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 4. Oil Type

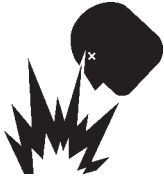
Season	Temperature	Oil Type
Summer	25°C or Higher	SAE 10W-30
Spring/Fall	25°C~10°C	SAE 10W-30/20
Winter	0°C or Lower	SAE 10W-10

Gasoline Check

1. Remove the gasoline cap located on top of fuel tank.
2. Visually inspect to see if fuel level is low. If fuel is low, replenish with unleaded fuel.

! Danger - Flammable Fuel

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



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

Vibrator Oil Check

1. Place the MVC-70H/HW 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 plug (vibrator oil gauge) as shown in Figure 7. The oil level should be up to the oil plug. If oil is required, replace using only SAE 10W-30 motor oil.

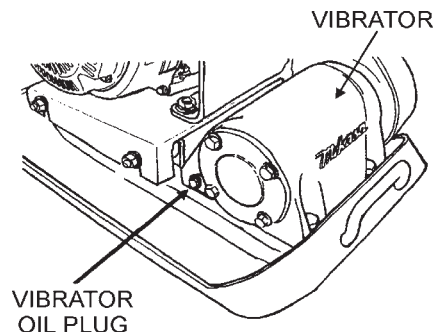


Figure 7. Vibrator Oil Plug

V-Belt Check

Caution - V-Belt check

NEVER attempt to check the V-belt with the engine running. Severe injury can occur if your hand (Figure 8) gets caught between the V-belt and the clutch. Always use safety gloves.

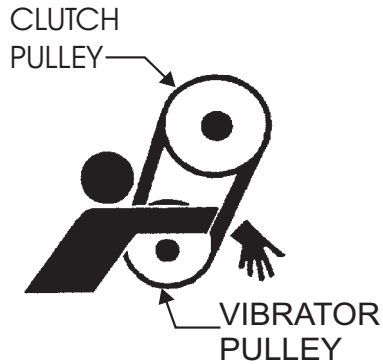


Figure 8. V-Belt Hazard

1. To check the V-belt tension, remove the bolts that secure the belt cover to the frame as shown in Figure 9.

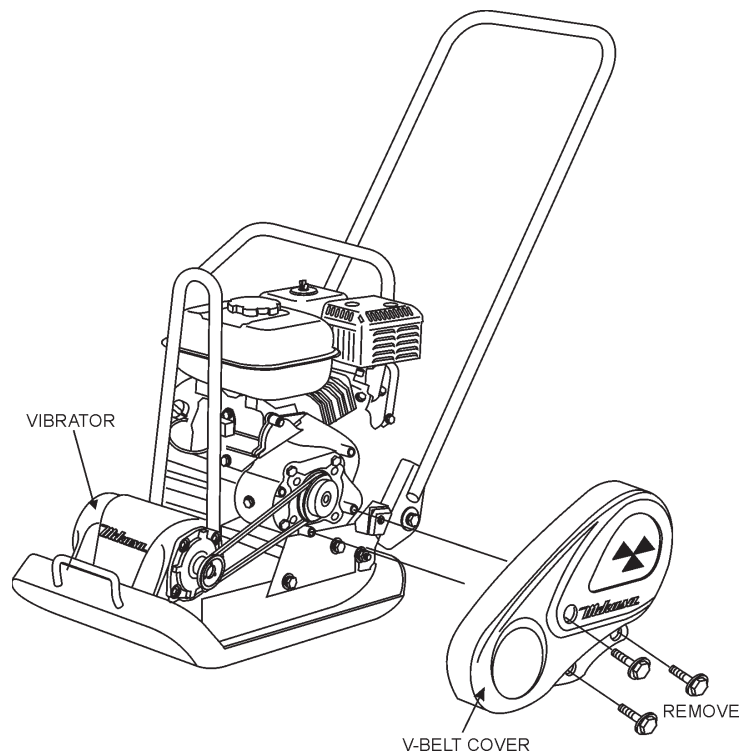


Figure 9. V-Belt Cover Removal

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

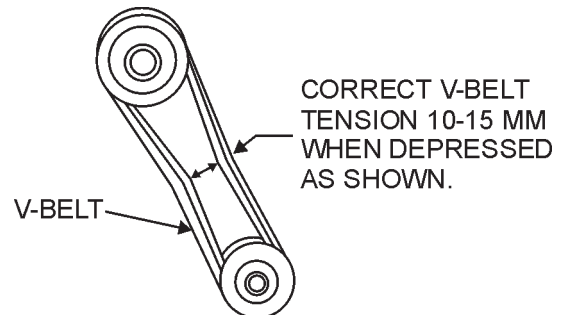


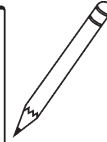
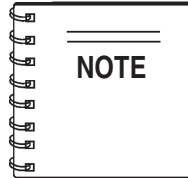
Figure 10. V-Belt Tension

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 .



Caution - Read Manual

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



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.

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

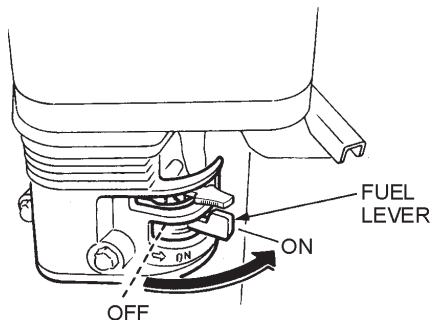


Figure 11. Fuel Valve Lever

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

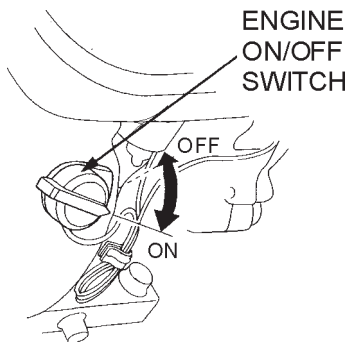


Figure 12. Engine ON/Off Switch

3. Place the **Choke Lever** (Figure 13) in the "OPEN" position.

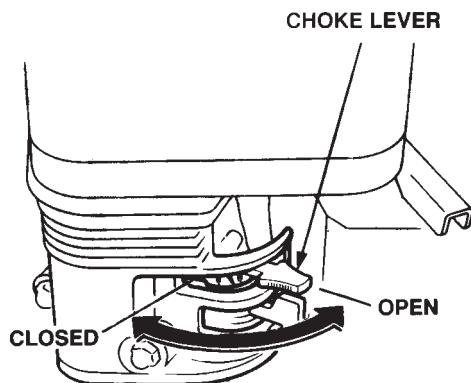


Figure 13. Choke Lever

4. Place the **throttle lever** (Figure 14) halfway between **fast** and **slow**.

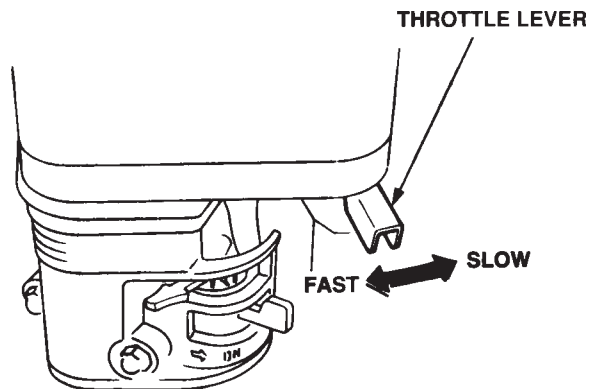


Figure 14. Throttle Lever

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.



Caution - Starter Rope

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.

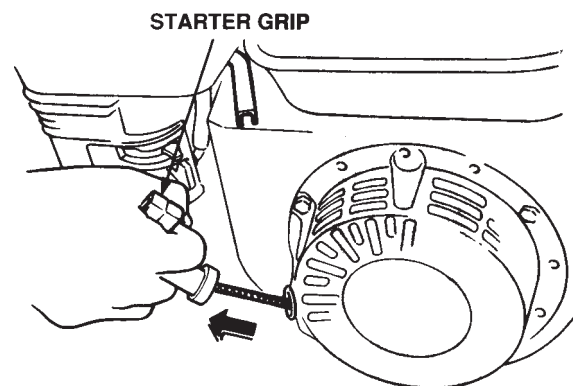


Figure 15. Starter Grip

6. If the engine has started, slowly return the choke lever (Figure 13) to the **CLOSED** position. If the engine has not started repeat steps 1 through 5.
7. Before the compactor is put into operation run the engine for 3-5 minutes.
8. Check for abnormal engine noises or fuel leaks.

Stopping the Engine

Caution - Stopping Engine

NEVER stop the engine suddenly while working at high speeds.

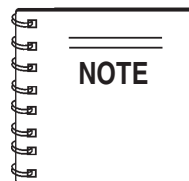
1. Place the **throttle lever** (Figure 14) in **slow** position, and listen for the engine speed to decrease.
2. Place the **Engine ON/OFF switch** (Figure 12) in the "**OFF**" position.
3. Place the **fuel valve lever** (Figure 11) in the "**OFF**" position.


Operation

CAUTION - Safety Rules

Make sure to follow all safety rules referenced in the safety 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.



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

3. Firmly gasp 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:
 - 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.
 - 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.



CAUTION - Inspection

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



CAUTION - Inspection Intervals

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

Inspection and Maintenance Service Tables.

- To make sure your plate compactor is always in good working condition before using, carry out the maintenance inspection in accordance with Tables 5 through 7.

TABLE 5. MVH-64H MACHINE INSPECTION

ITEM	HOURS OF OPERATION	REMARKS
Damaged Parts	Every 8 hours (every day)	
Loose or Lost Screws	Every 8 hours (every day)	
Function of Controlling System Part	Every 8 hours (every day)	
Vibrator Oil Check	Every 100 hours	See page 16
Vibrator Oil Replacement	Every 300 hours	See page 22
V-belt (clutch) Check	Every 200 hours	See page 17

TABLE 6. ENGINE CHECK

(For details, see separate Engine Manual)

Item	Hours of Operation
Leakage of oil or fuel	Every 8 hours (every day)
Tightness of fastening threads	Every 8 hours (every day)
Engine oil check and replenishment	Every 8 hours (every day)(Replenish to specified max. level)
Engine oil replenishment	At first 20 hours, then every 100 hours
Air cleaner cleaning	Every 50 hours



CAUTION - Inspection Intervals

Fuel piping and connections should be replaced every 2 years.

Daily Service

- Check for leakage of fuel or oil.
- Remove soil and clean the bottom of compaction plate.
- Check engine oil, see page 16.
- Check for loose screws including tightness. See Table 7 below (tightening torque), for retightening:

TABLE 7.

TIGHTENING TORQUE (in. kg/cm) Diameter

Material	6mm	8mm	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 counter-part 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 Replacement:

- Replace engine oil, in first 20 hours of operation and every 100 hours afterwards.
- Oil may be drained more easily when it is warm after operation (For more details, see separate HONDA Owner's Manual).
- When changing the engine oil, the old oil can be drained by removing the oil filler cap, and unscrewing the engine oil drain plug located at the base of the engine (Figure 16).
- Remember to refill engine crankcase with the recommended type of oil as listed in Table 4.

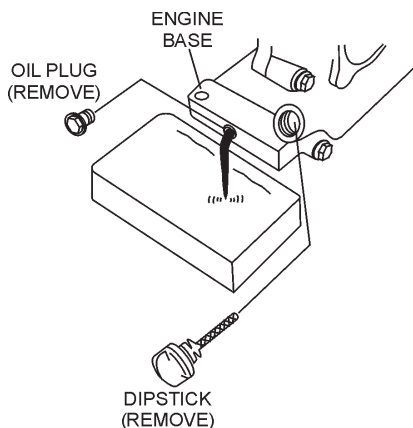


Figure 16. Engine Oil Plug

Spark Plug

1. Remove and clean the spark plug (Figure 17).
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.

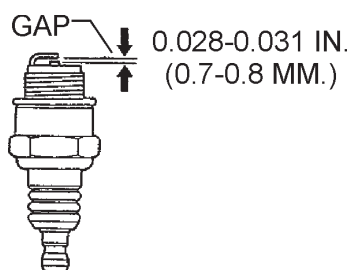


Figure 17. Spark Plug Gap

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 18), 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.

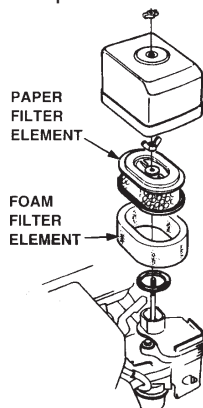


Figure 18. Air Filter

Changing Vibrator Oil

1. When changing the vibrator oil, remove the drain plug (Figure 7), and simply tip the compactor to drain the oil. Note that the oil will drain more easily while it is hot. Remember to use only 10W-30 motor oil when replacing vibrator oil.

Checking and Replacing the V-Belt and Clutch

1. 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.



WARNING - V-belt Hazard

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.



CAUTION - Vibration Check

Whenever the compactor's vibration becomes weak or lost during normal operation regardless of operation hours, check the V-belt and clutch immediately.

● 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, check outer drum of the clutch for seizure and "V" groove for wear or damage with your eyes. Clean the "V" groove as necessary. Wear of lining or shoe should be checked with running check. If the shoe is worn, power transmission becomes deficient and slipping will result.

MVC-70H/HW — PREPARATION FOR LONG -TERM STORAGE

Compactor Storage

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

- Drain the fuel tank completely.
- Run the engine until the fuel in the injection system is completely consumed.
- Completely drain 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 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.

MVC-70H/HW — TROUBLESHOOTING (ENGINE)

Practically all breakdowns can be prevented by proper handling and maintenance inspections, but in the event of a breakdown, please take a remedial action following the diagnosis based on the Troubleshooting Charts (Tables 8 and 9). If the problem cannot be remedied, please leave the unit just as it is and consult our company's business office or service plant.

TABLE 8. ENGINE TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE	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.
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, and replace with correct type of fuel.
	Water or dust in fuel system?	Flush fuel system.
	Air cleaner dirty?	Clean or replace air cleaner.
Difficult to start, "fuel is available, spark is present and compression is low"	Suction/exhaust valve stuck or protruded?	Re-seat 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.	Fuel not available 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 clogged?	Replace fuel filter.
	Fuel tank cap breather hole clogged?	Clean or replace fuel tank cap.
	Air in fuel line?	Bleed fuel line.

MVC-70H/HW — TROUBLESHOOTING (ENGINE)

TABLE 8. ENGINE TROUBLESHOOTING (CONTINUED)

SYMPTOM	POSSIBLE CAUSE	SOLUTION
"Weak in power" compression is proper and does not misfire.	Air cleaner not clean?	Clean or replace air cleaner
	Improper level in carburetor?	Check float adjustment, re-build carburetor.
	Defective Spark plug?	Clean or replace spark plug.
	Defective Spark plug?	
"Weak in power" compression is proper but misfires.	Water in fuel system?	Flush fuel system, and replace with correct type of fuel.
	Dirty spark plug?	Clean or replace spark plug.
	Ignition coil defective?	Replace ignition coil.
Engine overheats.	Spark plug heat value improper?	Replace with correct type of spark plug.
	Correct type of fuel?	Replace with correct type of fuel
	Cooling fins dirty?	Clean cooling fins.
Rotational speed fluctuates.	Governor adjusted correctly?	Adjust governor.
	Governor spring defective?	Replace governor spring.
	Fuel flow restricted?	Check entire fuel system for leaks or clogs.
Recoil starter malfunction.	Recoil mechanism clogged with dust and dirt?	Clean recoil assembly with soap and water.
	Spiral spring loose?	Replace spiral spring.

MVC-70H/HW — TROUBLESHOOTING (PLATE COMPACTOR)

TABLE 9. PLATE COMPACTOR TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE	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.
Does not travel forward.	V-belt slips?	Replace V-belt.
	Clutch slips?	Check clutch springs and shoes.
	Vibrator locked?	Check vibrator housing (eccentric, gears and counterweights)

MVC-70H/HW — 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.

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.

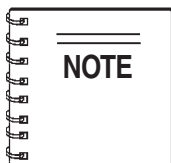
Sample Parts List:

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 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.



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 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.

MVC-70H/HW — SUGGESTED SPARE PARTS

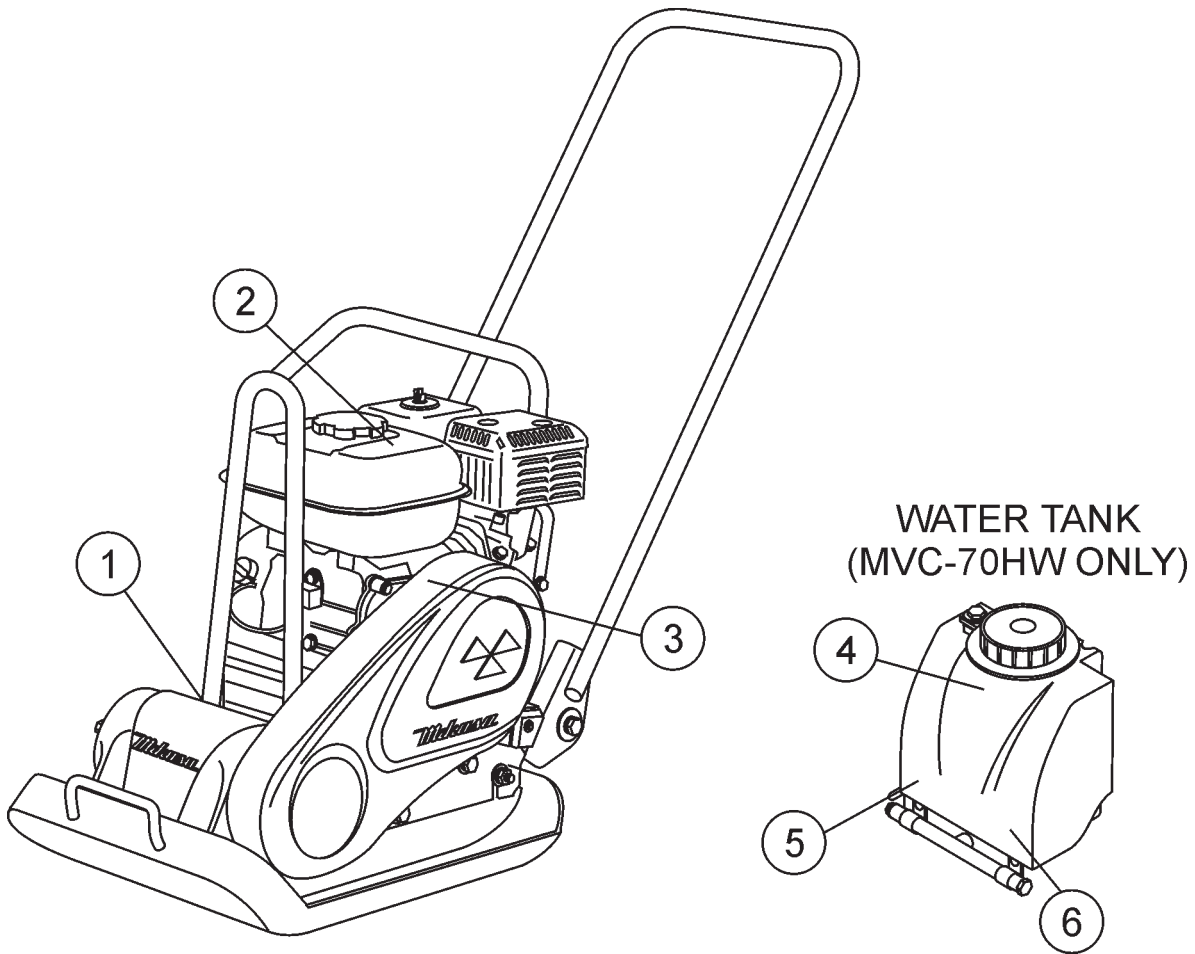
MQ MIKASA MVC-70H/HW PLATE COMPACTOR WITH HONDA GX160K1QMX2 GASOLINE ENGINE

1 to 3 Units

<u>Qty.</u>	<u>P/N</u>	<u>Description</u>
3	070100312	V-BELT
4	939010250	SHOCK ABSORBER
3	9807956846	SPARK PLUG
1	28462ZH8003	ROPE, RECOIL STARTER
3	17210ZE1505	ELEMENT, AIR CLEANER
1	17620ZH7023	FUEL CAP
1	17672ZE2W01	FUEL FILTER, FUEL TANK

MVC-70H/HW — NAME PLATE AND DECALS

NAME PLATE AND DECALS



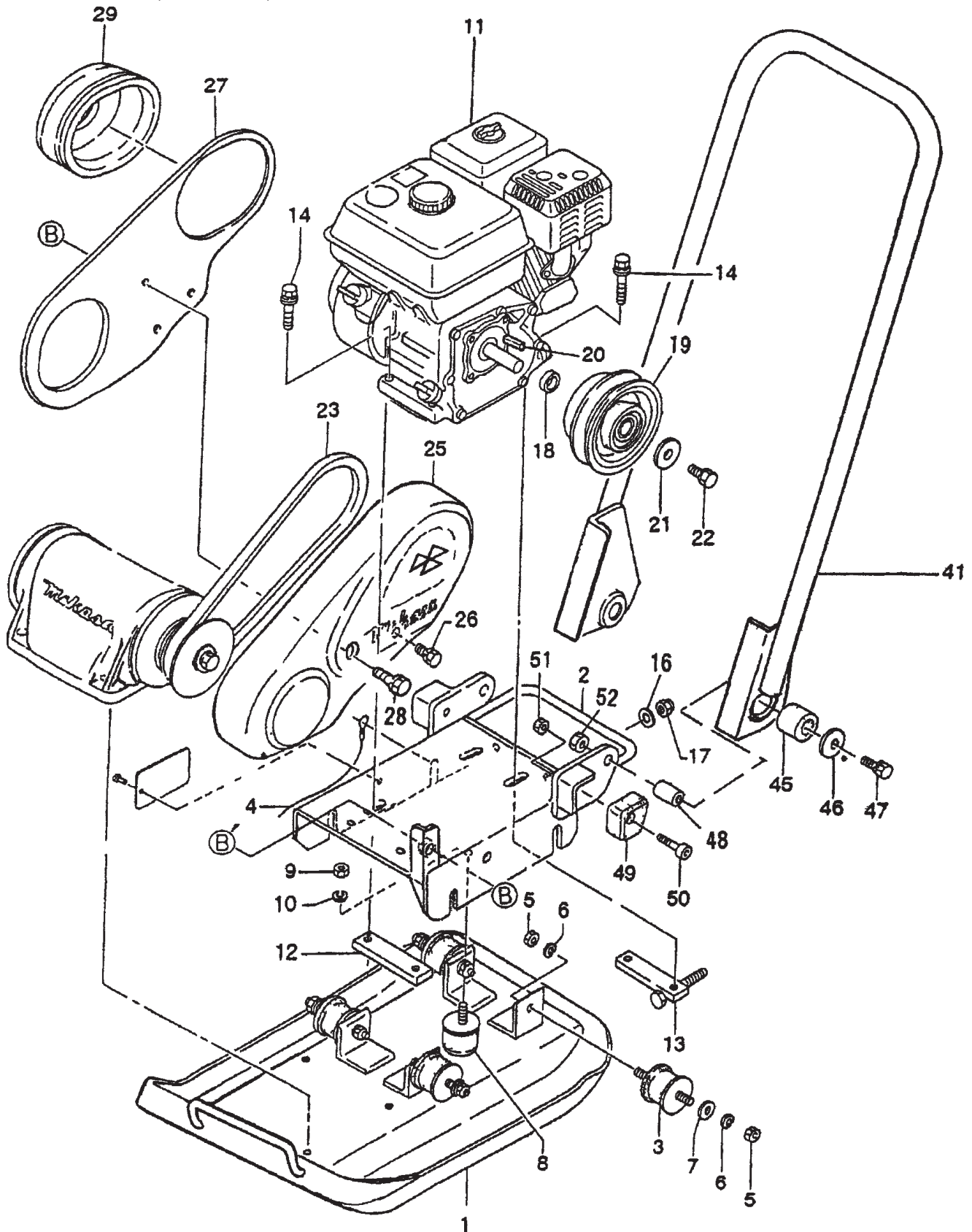
MVC-70H/HW — NAME PLATE AND DECALS

NAMEPLATE 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

MVC-70H/HW — MAIN BODY ASSY. (OLD STYLE)

MAIN BODY ASSY. (OLD STYLE)



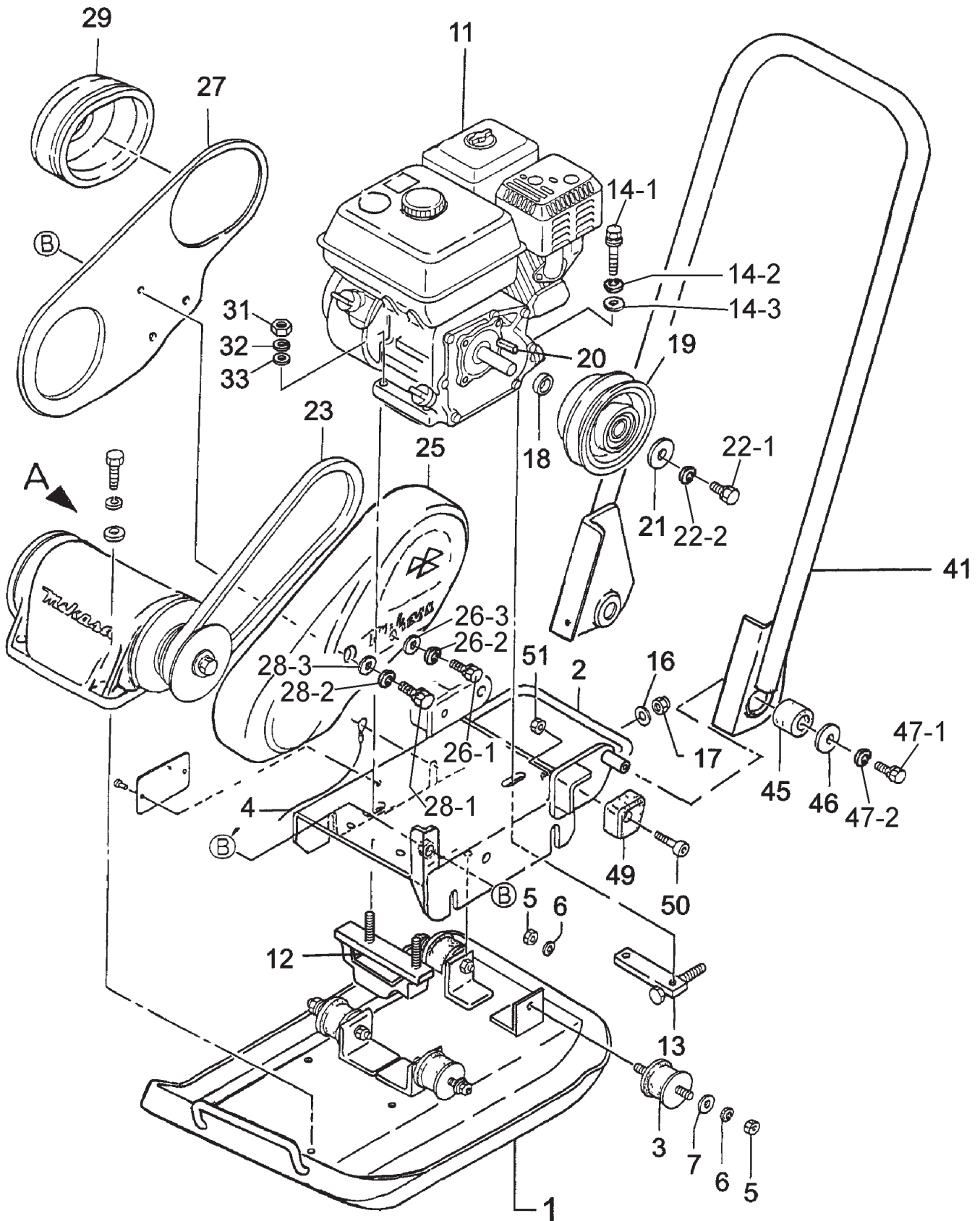
MVC-70H/HW — MAIN BODY ASSY. (OLD STYLE)

MAIN BODY ASSY. (OLD STYLE)

NO	PART NO	PART NAME	QTY.	REMARKS
1	418117720	VIBRATORY PLATE	1	S/N L1643 AND BELOW
2	418216500	BASE	1	S/N L1663 AND BELOW
3	939010250	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	
8	939010010	SHOCK ABSORBER, STOPPER 45	1	S/N L1643 AND BELOW
9	020310080	NUT M10	1	S/N L1643 AND BELOW
10	030210250	WASHER, LOCK M10	1	S/N L1643 AND BELOW
11	912216006	ENGINE HONDA GX160K1QMX2	1	
12	404412290	ENGINE NUT	1	S/N L1643 AND BELOW
13	413436870	ENGINE NUT, REAR	1	
14	002410840	BOLT 8X40 H, SW, PW	4	S/N L1643 AND BELOW
16	031108160	WASHER, FLAT M8	1	
17	022710809	NYLON NUT M8	1	
18	404418150	SPACER 18X25X8 CLUTCH	1	
19	460446780	CLUTCH ASSY.	1	
20	951400100	KEY 5X5X35	1	
21	952400130	WASHER 9304	1	
22	002210820	BOLT 8X20 H, SW	1	
23	070100312	V-BELT RPF-3310	1	
25	418216460	BELT COVER	1	S/N L1518 AND BELOW
26	002411035	BOLT 10X35 H, SW, PW	1	
27	418216480	BELT COVER, IN.	1	
28	002411053	BOLT 10X65 SW, PW	1	
29	418343420	COVER SEAL, E/G	1	
41	413216250	HANDLE LONG	1	
45	404433430	RUBBER 20X32X28.5/52H	2	
46	952403450	WASHER 11X35X4.5	2	
47	002211051	BOLT 10X55 H, SW	2	S/N L1643 AND BELOW
48	413456490	COLLAR 10.5-20-31.5	2	S/N L1643 AND BELOW
49	413436720	RUBBER, HANDLE	2	
50	001520845	SOCKET HEAD BOLT 8X45 T	2	
51	020308060	NUT M8	2	
52	020310080	NUT M10	2	S/N L1643 AND BELOW

MVC-70H/HW — MAIN BODY ASSY. (NEW STYLE)

MAIN BODY ASSY. (NEW STYLE)



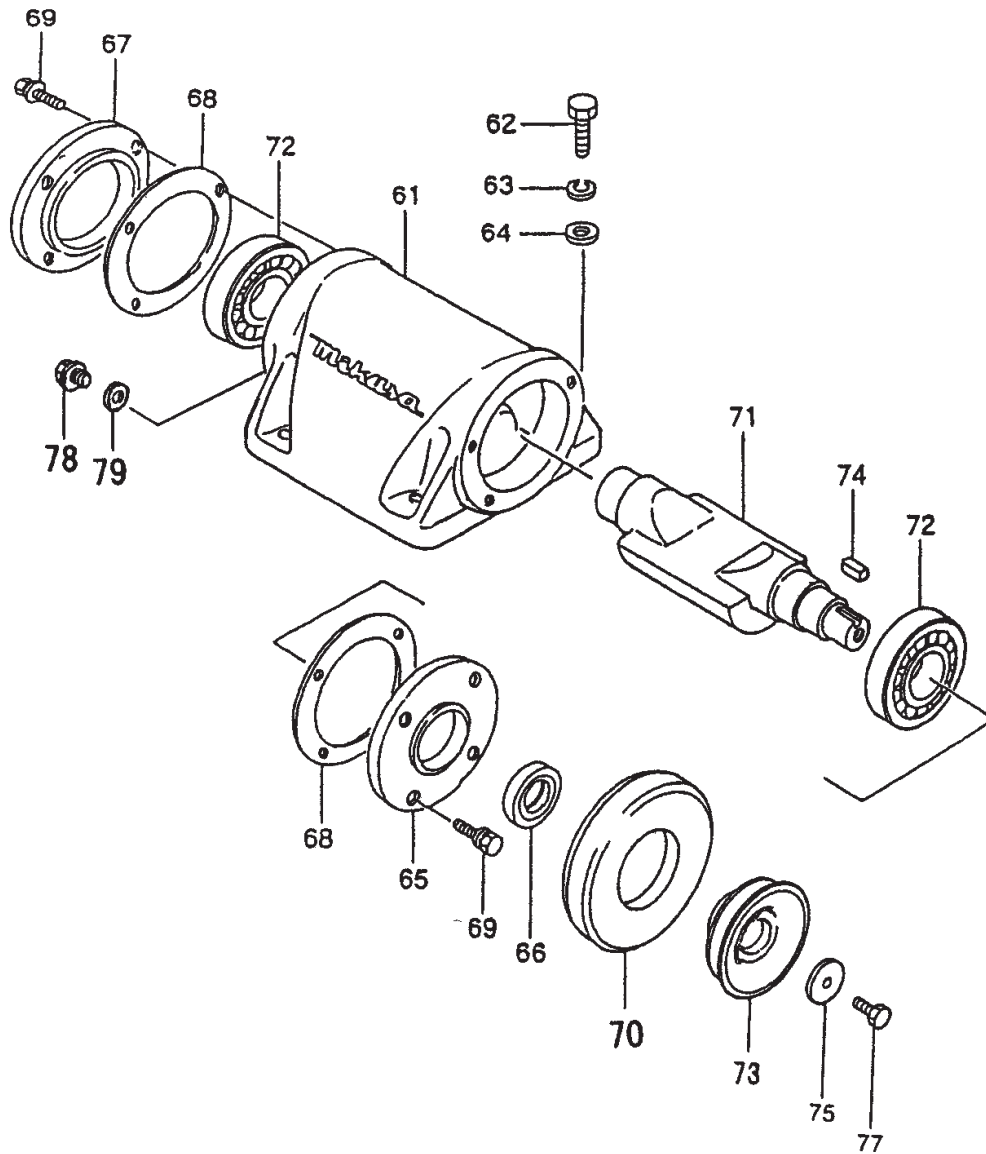
MVC-70H/HW — MAIN BODY ASSY. (NEW STYLE)

MAIN BODY ASSY. (NEW STYLE)

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	418117721	VIBRATORY PLATE	1	S/N L1644 AND ABOVE
2	418216501	BASE	1	S/N L1663 AND ABOVE
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	912216006	ENGINE, HONDA GX160K1QMX2	1	
12	418457750	BOLT, ENGINE	1	S/N L1644 AND ABOVE
13	413436870	ENGINE NUT, REAR	1	
14-1	002410840	BOLT 8X40 H, SW, PW	2	S/N L1644 AND ABOVE
14-2	030208200	WASHER, LOCK M8	2	S/N L1644 AND ABOVE
14-3	031108160	WASHER, FLAT M8	2	S/N L1644 AND ABOVE
16	031108160	WASHER, FLAT M8	1	
17	022710809	NYLON NUT M8	1	
18	408421270	SPACER 20.2X25X9.4, CLUTCH	1	
19	413332920	CLUTCH ASSY.	1	
20	0053005201	KEY	1	
21	952400130	WASHER 9304	1	
22-1	001220820	BOLT 8X20 H, SW	1	
22-2	030208200	WASHER, LOCK	1	
23	070100312	V-BELT RPF-3310	1	
25	418216470	BELT COVER	1	S/N L1519 AND ABOVE
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	S/N L1644 AND ABOVE
32	030208200	WASHER, LOCK	2	S/N L1644 AND ABOVE
33	031108160	WASHER, FLAT	2	S/N L1644 AND ABOVE
41	413216250	HANDLE LONG	1	
45	404433430	RUBBER 20X32X28.5/52H	2	
46	952403450	WASHER 11X35X4.5	2	
47-1	001221020	BOLT 10X20 H,SW	2	S/N L1644 AND ABOVE
47-2	030210250	WASHER, LOCK M10	2	S/N L3696 AND ABOVE
49	413436720	RUBBER, HANDLE	2	
50	001520845	SOCKET HEAD BOLT 8X45 T	2	
51	020308060	NUT M8	2	

MVC-70H/HW — VIBRATOR ASSY.

VIBRATOR ASSY.



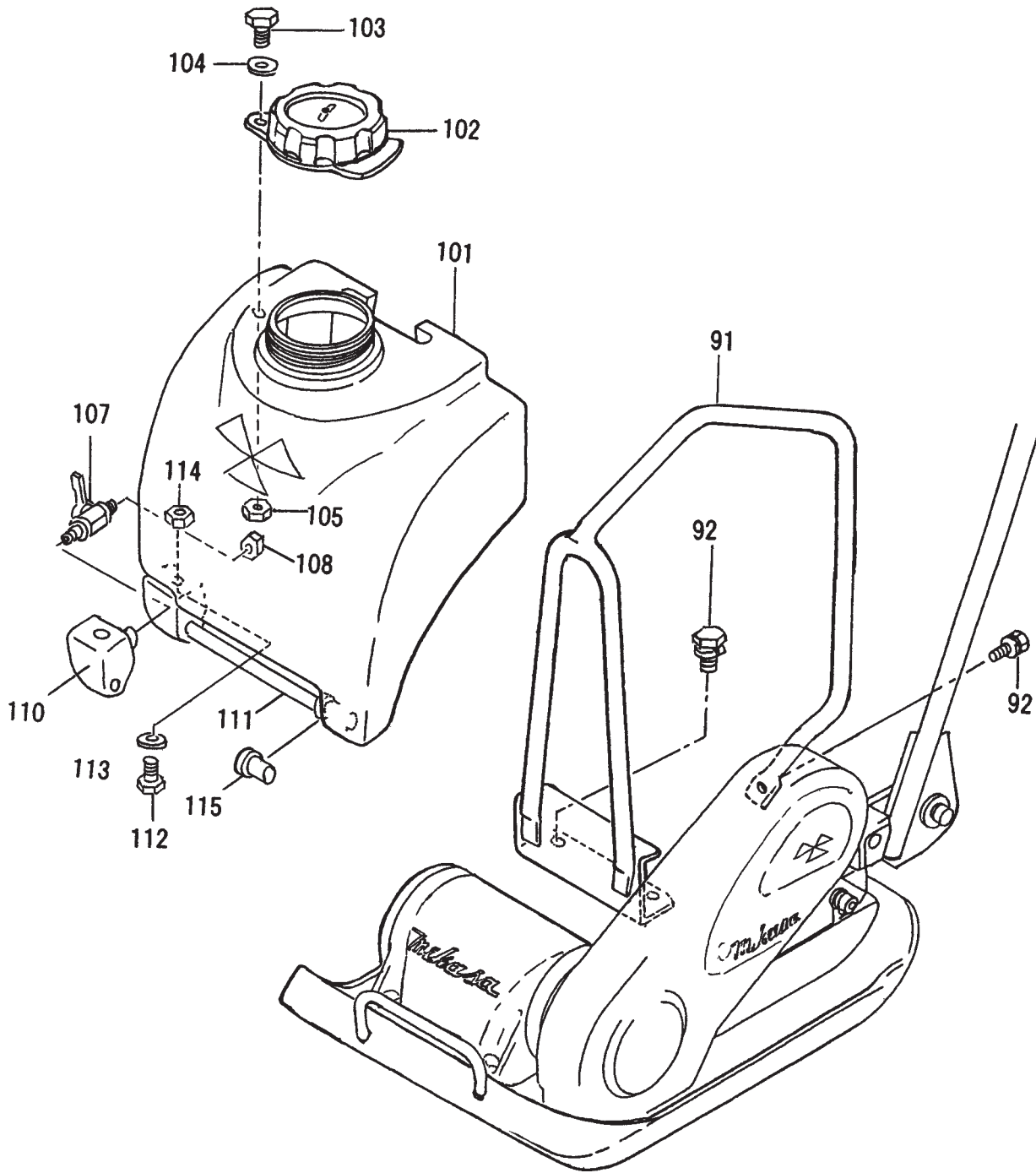
MVC-70H/HW — VIBRATOR ASSY.

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	

MVC-70H/HW — WATERTANK ASSY.

WATER TANK ASSY.



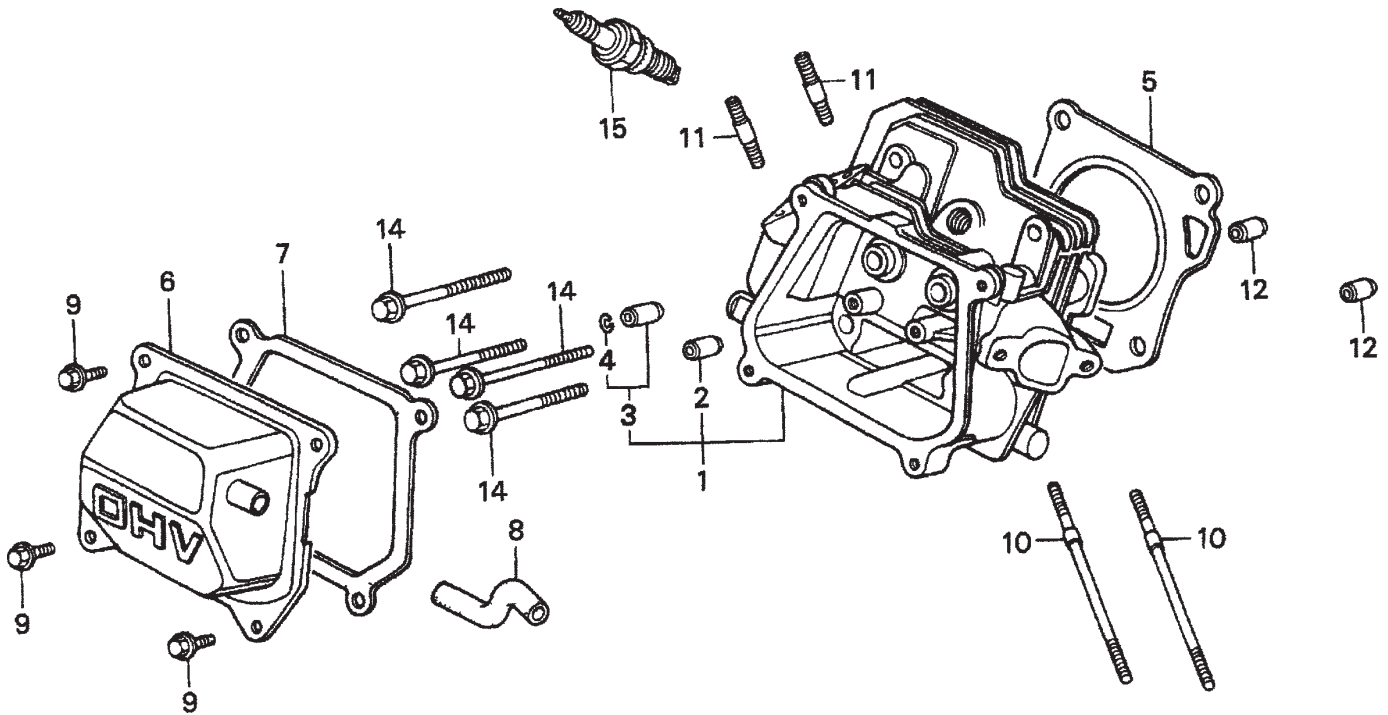
MVC-70H/HW — WATER TANK ASSY.

WATER TANK ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
91	418216510	HOOK	1	
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 GX160K1QMX2 ENGINE — CYLINDER HEAD ASSY.

CYLINDER HEAD ASSY.



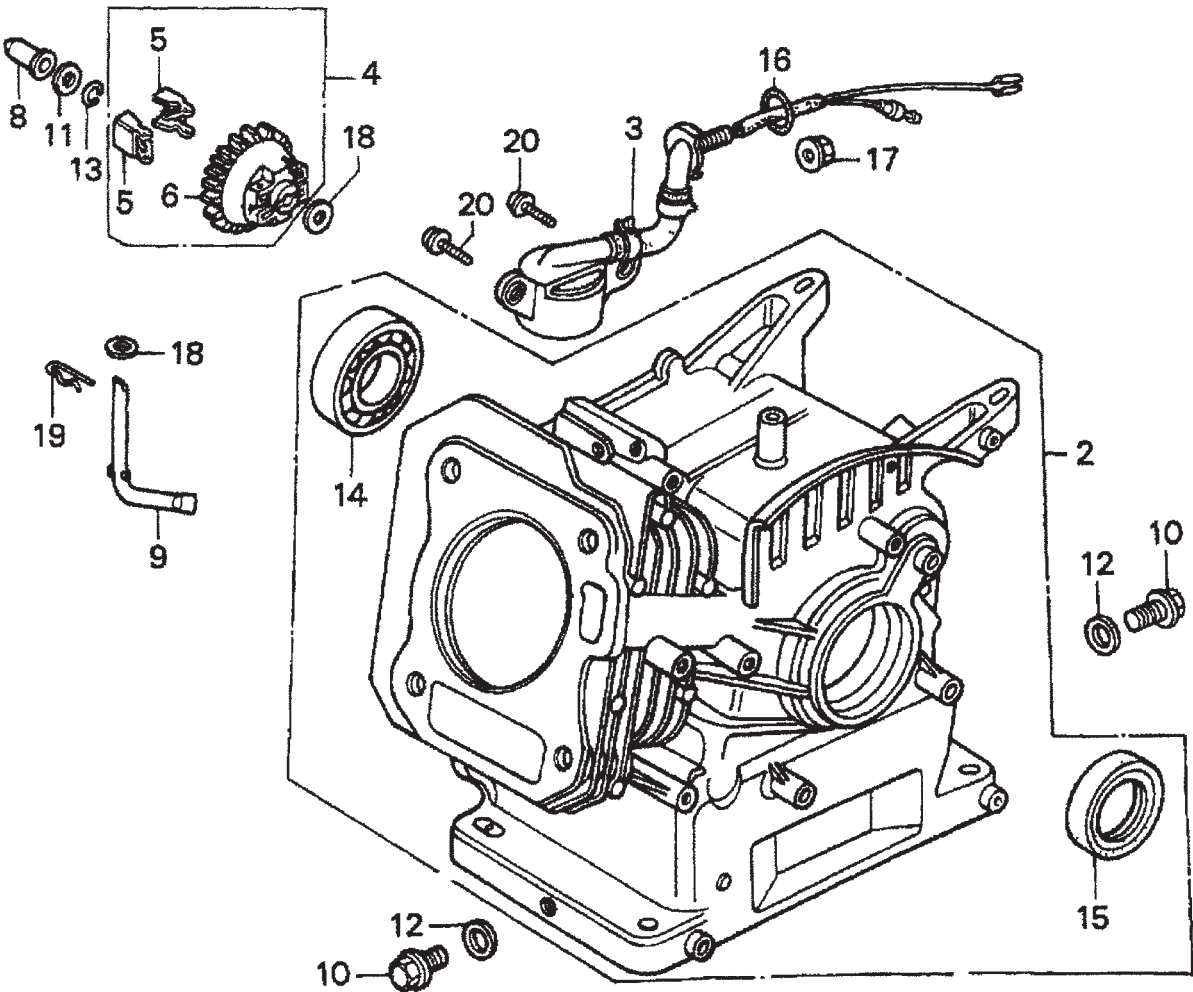
HONDA GX160K1QMX2 ENGINE — CYLINDER HEAD ASSY.

CYLINDER HEAD ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	12210ZH8000	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	12251ZF1800	GASKET, CYLINDER HEAD	1	
6	12310ZE1010	COVER, HEAD	1	
7	12391ZE1000	GASKET, CYLINDER HEAD COVER	1	
8	15721ZH8000	TUBE, BREATHER	1	
9	90016ZE1000	BOLT, FLANGE (6 X 13)	4	
10	90043ZE1020	BOLT, STUD (6 X 109)	2	
11	90047ZE1000	BOLT, STUD (8 X 32)	2	
12	9430110160	PIN A, DOWELL (10 X 16)	2	
14	957230806000	BOLT, FLANGE (8 X 60)	4	
15	9807955846	SPARK PLUG (BPR5ES) (NGK)	1	
15	9807956846	SPARK PLUG (BPR6ES) (NGK)	1	

HONDA GX160K1QMX2 ENGINE — CYLINDER BARREL ASSY.

CYLINDER BARREL ASSY.



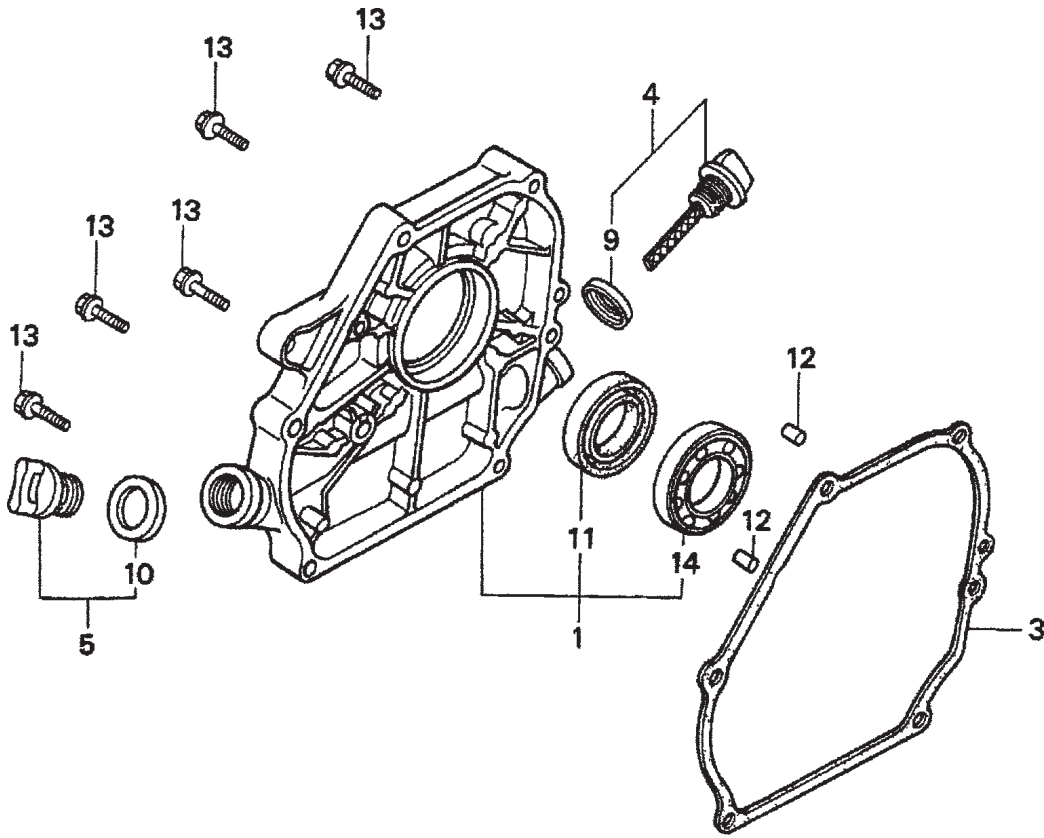
HONDA GX160K1QMX2 ENGINE — CYLINDER BARREL ASSY.

CYLINDER BARREL ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
2	12000ZH8811	CYLINDER ASSY. (OIL ALERT)	1	INCLUDES ITEMS W/*
3	15510ZE1023	SWITCH ASSY., OIL LEVEL	1	USE UP TO ENGINE S/N 4367320
3	15510ZE1033	SWITCH ASSY., OIL LEVEL	1	USE FROM ENGINE S/N 4367321
4	16510ZE1000	GOVERNOR ASSY.....	1	INCLUDES ITEMS W/#
5#	16511ZE1000	WEIGHT, GOVERNOR	2	
6#	16512ZE1000	HOLDER, GOVERNOR WEIGHT	1	
8	16531ZE1000	SLIDER, GOVERNOR	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*	91001ZF1003	BEARING, RADIAL BALL (6205)	1	
15*	91202883005	OIL SEAL (25 X 41 X 6)	1	
16	91353671003	O-RING (13.5 X 1.5) (ARAI)	1	
17	9405010000	NUT, FLANGE (10MM)	1	
18	9410106800	WASHER, PLAIN (6MM)	2	
19	9425108000	PIN, LOCK (8MM)	1	
20	957010601200	BOLT, FLANGE (6 X 12)	2	

HONDA GX160K1QMX2 ENGINE — CRANKCASE COVER ASSY.

CRANKCASE COVER ASSY.



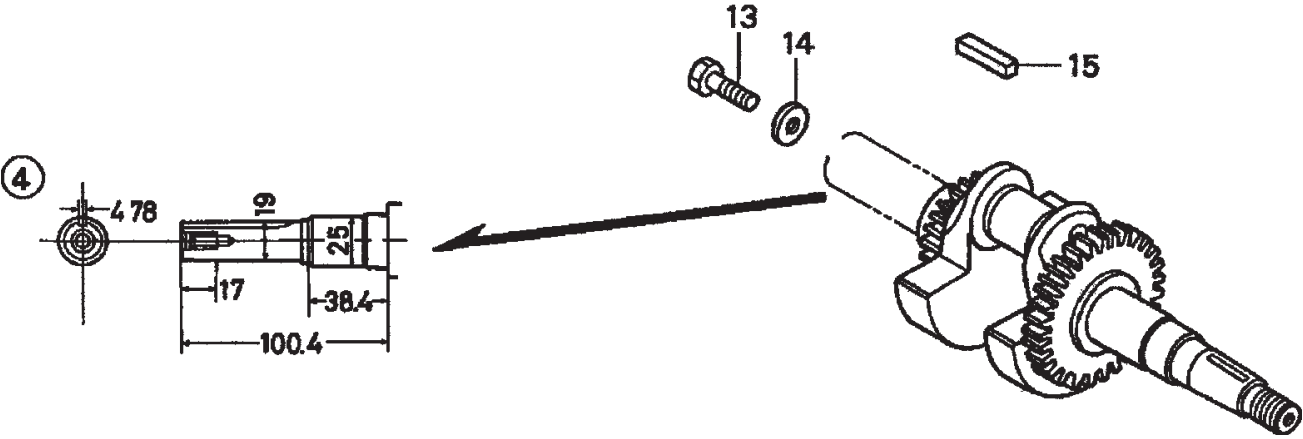
HONDA GX160K1QMX2 ENGINE — CRANKCASE COVER ASSY.

CRANKCASE COVER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	11300ZE1641	COVER ASSY., CRANKCASE (U-TYPE)	1	INCLUDES ITEMS W/*
3	11381ZH8801	GASKET, CASE COVER	1	
4	15600ZE1003	CAP ASSY., OIL FILLER	1	INCLUDES ITEMS W/#
5	15600ZG4003	CAP ASSY., OIL FILLER	1	INCLUDES ITEMS W/+
9#	15625ZE1003	GASKET, OIL FILLER CAP	1	
10+	15625ZE1003	GASKET, OIL FILLER CAP	1	
11*	91202883005	OIL SEAL (25 X 41 X 6)	1	
12	9430108140	PIN A, DOWEL (8 X 14)	2	
13	957010803200	BOLT, FLANGE (8 X 32)	6	
14*	961006205000	BEARING, RADIAL BALL (6205)	1	

HONDA GX160K1QMX2 ENGINE — CRANKSHAFT ASSY.

CRANKSHAFT ASSY.



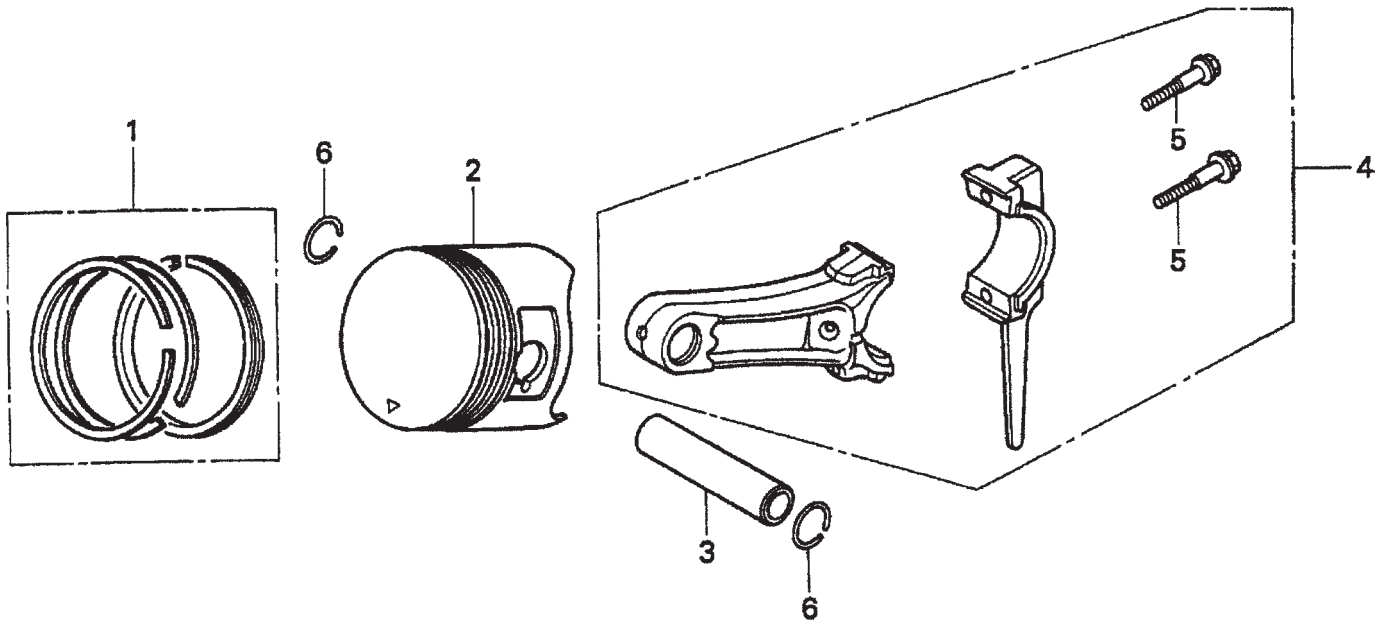
HONDA GX160K1QMX2 ENGINE — CRANKSHAFT ASSY.

CRANKSHAFT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
4	13310ZE1601	CRANKSHAFT (Q-TYPE)	1	
13	90003ZE1000	BOLT, HEX 5/16"	1 USE FROM S/N 6745959
14	90473842000	WASHER, 8 MM	1 USE FROM S/N 6745959
15	90745ZE1600	KEY, 78 X 38 MM	1	

HONDA GX160K1QMX2 ENGINE — PISTON/RINGS ASSY.

PISTON/RINGS ASSY.



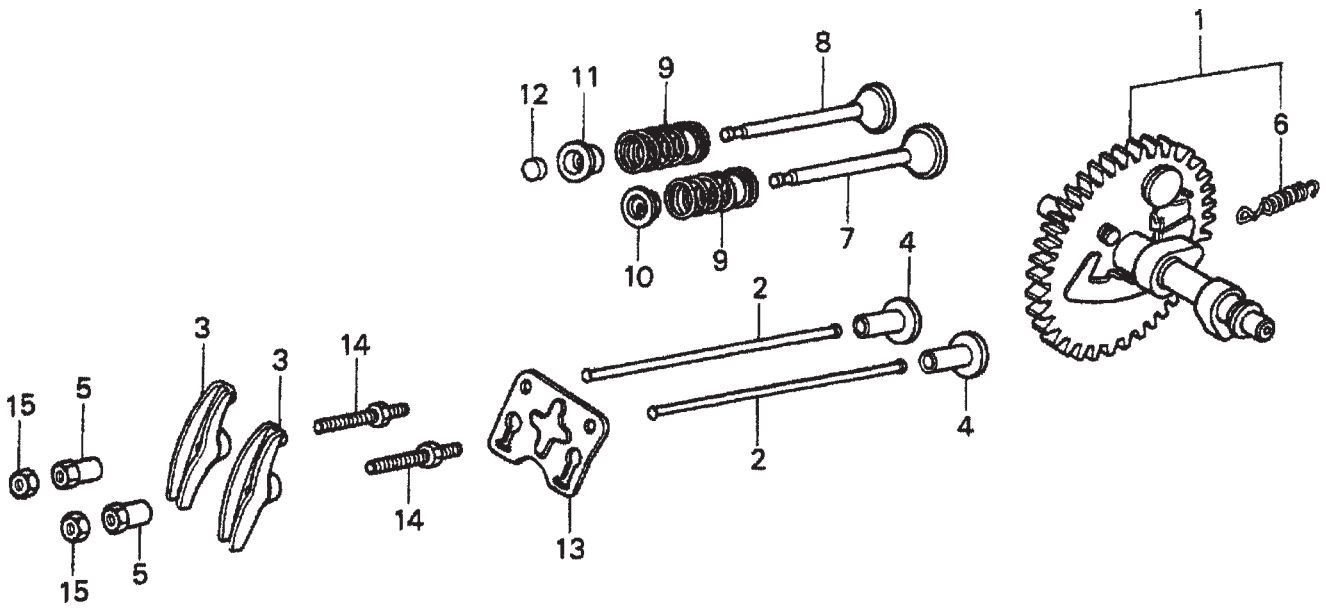
HONDA GX160K1QMX2 ENGINE — PISTON/RINGS ASSY.

PISTON/RINGS ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	13010ZH8941	RING SET, PISTON (STD)	1	
1	13011ZH8941	RING SET, PISTON (OS 0.25)	1	
1	13012ZH8941	RING SET, PISTON (OS 0.50)	1	USE FROM ENGINE S/N 4733211
1	13013ZH8941	RING SET, PISTON (0.75) OPTION	1	
2	13101ZH8000	PISTON (STD)	1	
2	13102ZH8000	PISTON (OS 0.25)	1	
2	13103ZH8000	PISTON (OS 0.50)	1	
2	13104ZH8000	PISTON (0.75)	1	
3	13111ZE1000	PIN, PISTON	1	
4	13200ZE1010	ROD ASSY., CONNECTING	1	INCLUDES ITEMS W/*
5*	90001ZE1000	BOLT, CONNECTING ROD	2	
6	90551ZE1000	CLIP, PISTON PIN (18MM)	2	

HONDA GX160K1QM2 ENGINE — CAMSHAFT ASSY.

CAMSHAFT ASSY.



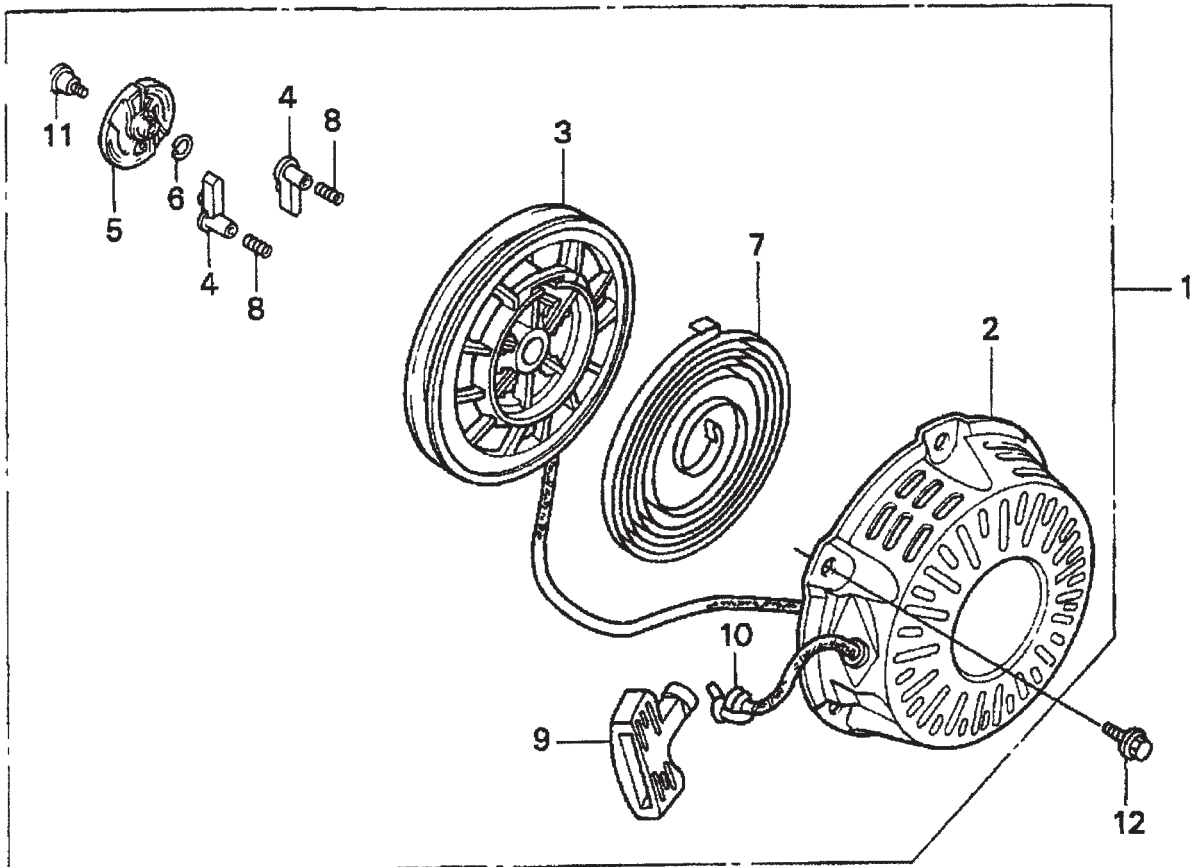
HONDA GX160K1QMX2 ENGINE — CAMSHAFT ASSY.

CAMSHAFT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	14100ZE1812	CAMSHAFT ASSY.	1	INCLUDES ITEMS W/*
2	14410ZE1010	ROD, PUSH	2	
3	14431ZE1000	ARM, VLAVE ROCKER	2	
4	14441ZE1010	LIFTER, VALVE	2	
5	14451ZE1013	PIVOT, ROCKER ARM	2	
6*	14568ZE1000	SPRING, WEIGHT RETURN	1	
7	14711ZF1000	VALVE, IN.	1	
8	14721ZF1000	VALVE, EX. (STELITE)	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	14791ZE1010	PLATE, PUSH ROD GUIDE	1	
14	90012ZE0010	BOLT, PIVOT (8MM)	2	
15	90206ZE1000	NUT, PIVOT ADJ.	2	

HONDA GX160K1QMX2 ENGINE — RECOIL STARTER ASSY.

RECOIL STARTER ASSY.



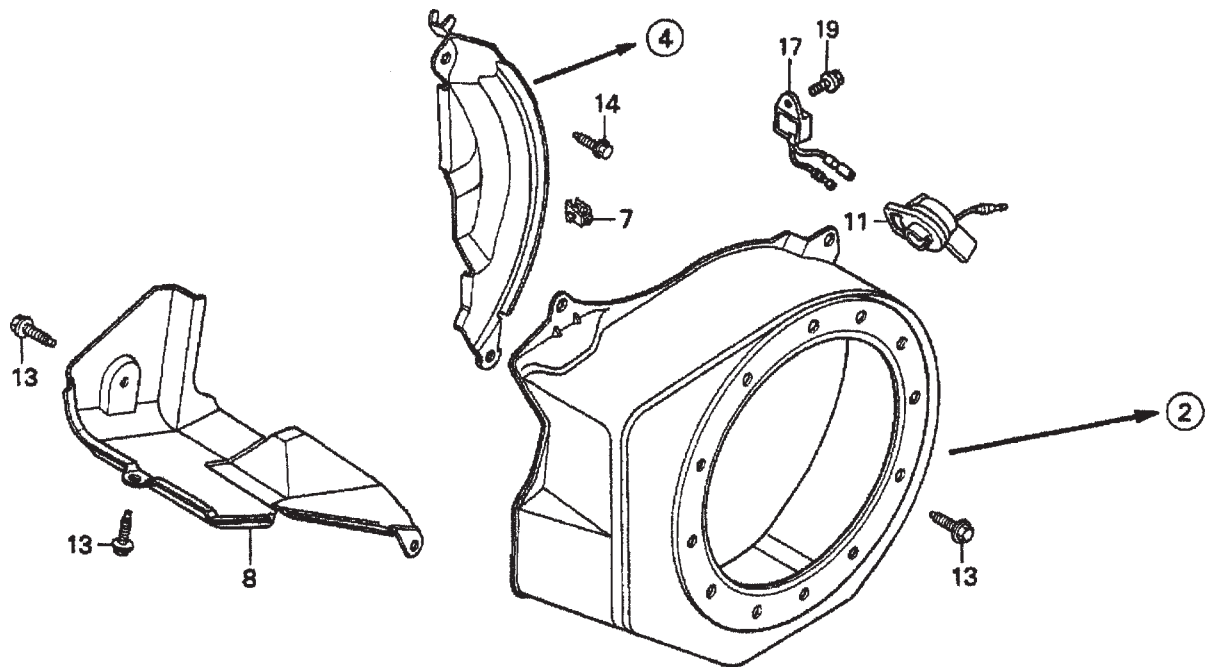
HONDA GX160K1QMX2 ENGINE — RECOIL STARTER ASSY.

RECOIL STARTER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	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	90008ZE2003	BOLT, FLANGE (6 X 10)	3	

HONDA GX160K1QMX2 ENGINE — FAN COVER ASSY.

FAN COVER ASSY.



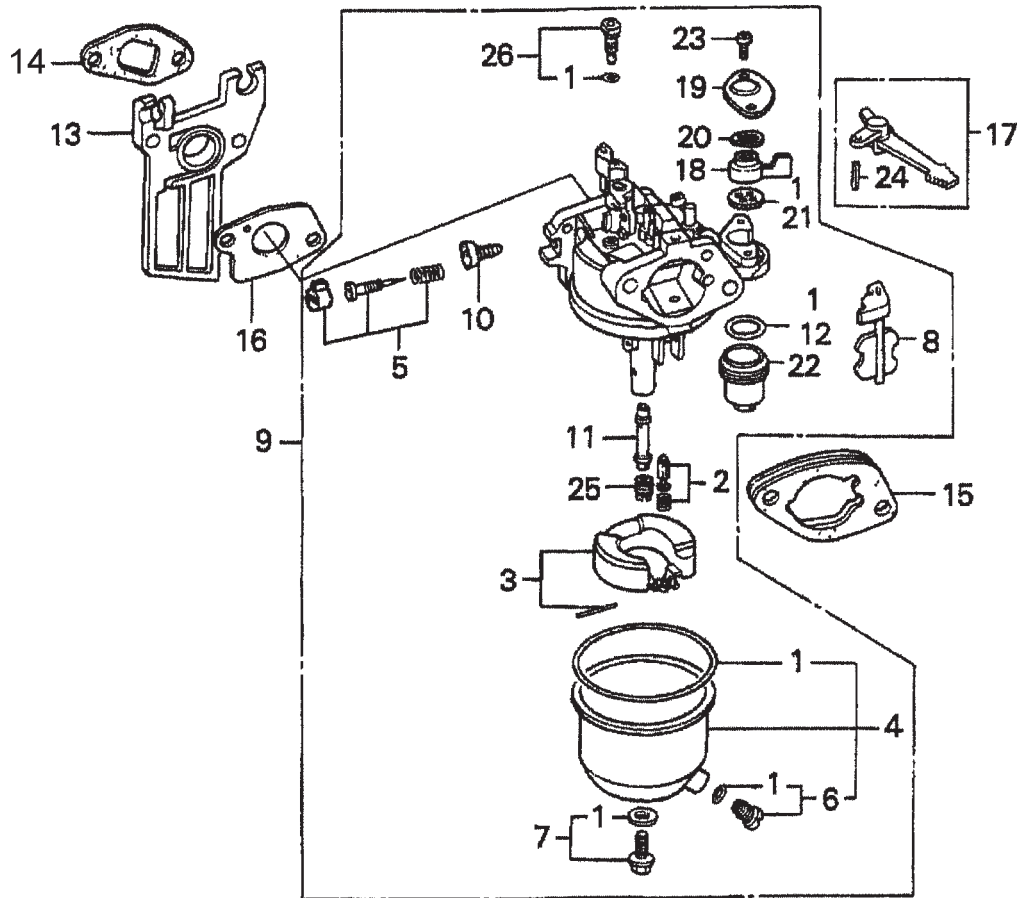
HONDA GX160K1QMX2 ENGINE — FAN COVER ASSY.

FAN COVER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
2	19610ZE1000ZC	COVER, FAN *NH1* (BLACK)	1	
4	19612ZH8811	PLATE, SIDE (OIL ALERT)	1	
7	90601ZH7013	CLIP, HARNESS	1	
8	19630ZH8000	SHROUD	1	
11	36100ZE1015	SWITCH ASSY., ENGINE STOP	1.....	USE UP TO S/N 4368640
11	36100ZH7003	SWITCH ASSY., ENGINE STOP	1.....	USE FROM 4368641
13	90013883000	BOLT, FLANGE (6 X 12) (CT200)	6	
14	90022888010	BOLT, FLANGE (6 X 20) (CT200)	1	
17	34150ZH7003	ALERT UNIT, OIL	1	
19	957010600800	BOLT, FLANGE (6 X 8)	1	

HONDA GX160K1QMX2 ENGINE — CARBURETOR ASSY.

CARBURETOR ASSY.



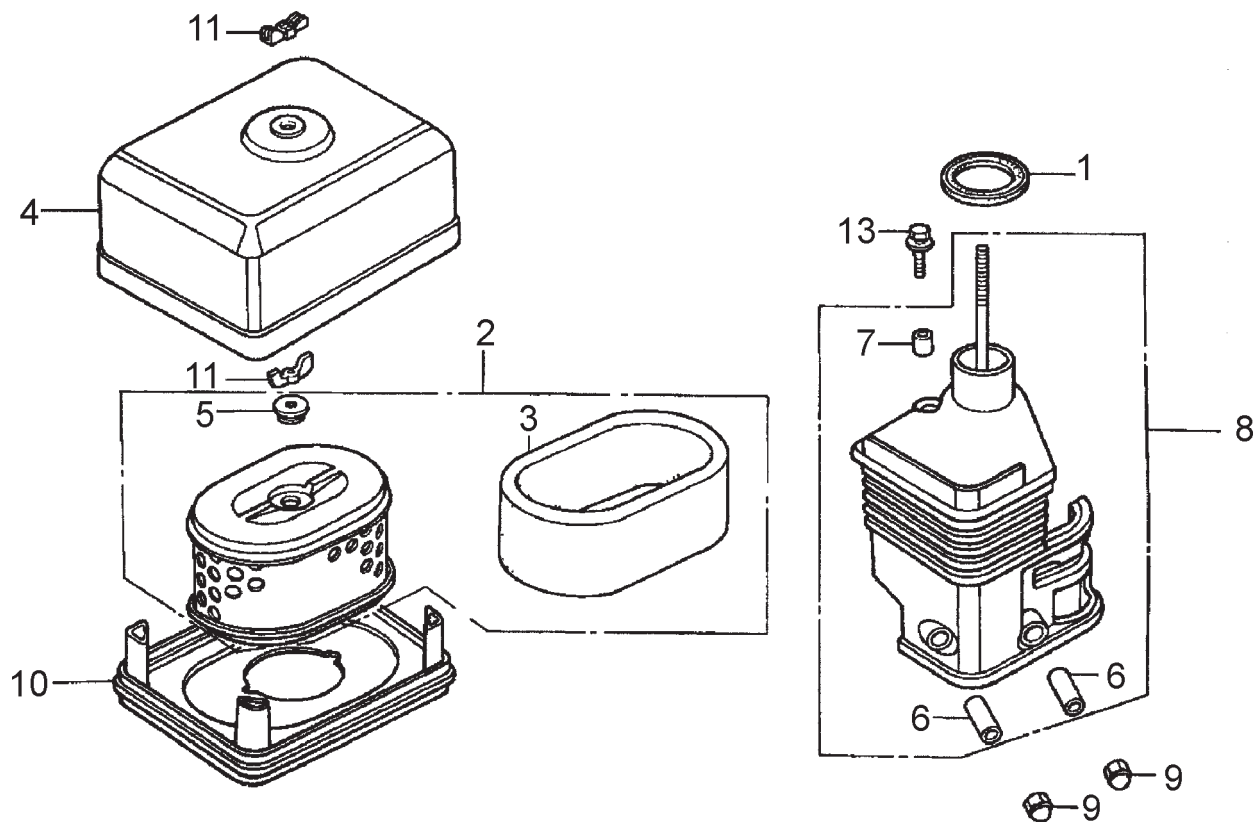
HONDA GX160K1QMX2 ENGINE — CARBURETOR ASSY.

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	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*	16100ZH8W51	CARBURETOR ASSY. (BE65B B)	1 INCLUDES ITEMS W/*
10*	16124ZE0005	SCREW, THROTTLE STOP	1	
11*	16166ZH8W50	NOZZLE, MAIN	1	
12*	16173001004	O-RING	1	
13	16211ZE1000	INSULATOR, CARBURETOR	1	
14	16212ZH8800	GASKET, INSULATOR	1	
15	16220ZE1020	SPACER, CARBURETOR	1	
16	16221ZH8801	GASKET, CARBURETOR	1	
17	16610ZE1000	LEVER, CHOKE (STD)	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*	93500030060H	SCREW, PAN (3 X 6)	2	
24#	9430520122	PIN, SPRING (2 X 12)	1	
25	99101ZH80650	JET, MAIN (#65) OPTIONAL	1	
25	99101ZH80680	JET, MAIN (#68) OPTIONAL	1	
25*	99101ZH80700	JET, MAIN (#70)	1	
26*	99204ZE00350	JET, SET, PILOT (#35)	1	

HONDA GX160K1QMX2 ENGINE — AIR CLEANER ASSY.

AIR CLEANER ASSY.



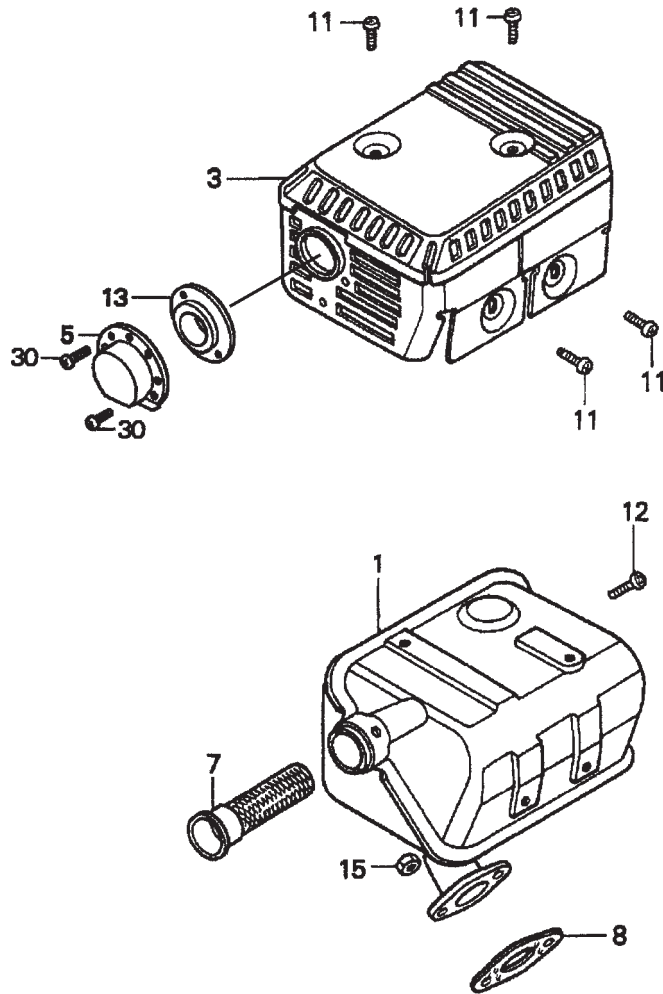
HONDA GX160K1QMX2 ENGINE — AIR CLEANER ASSY.

AIR CLEANER (DUAL) ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	16271ZE1000	GASKET, ELBOW	1	INCLUDES ITEMS W/*
2	17210ZE1505	ELEMENT, AIR CLEANER (DUAL)	1	
3*	17218ZE1505	FILTER (OUTER)	1	
4	17230ZE1820	COVER, AIR CLEANER (DUAL)	1	
5*	17232891000	GROMMET, AIR CLEANER	1	
6#	17238ZE7010	COLLAR, AIR CLEANER	2	
7#	17239ZE1000	COLLAR B, AIR CLEANER	1	
8	17410ZE1020	ELBOW, AIR CLEANER	1	INCLUDES ITEMS W/#
9	90201415000	NUT, CAP (6 MM)	2	
10	17235ze1831	NOSE, MUFFLER	1	
11	90325044000	WINGNUT, TOOL BOX SETTING	2	
13	957010602000	BOLT, FLANGE (6 X 20)	1	

HONDA GX160K1QMX2 ENGINE — MUFFLER ASSY.

MUFFLER ASSY.



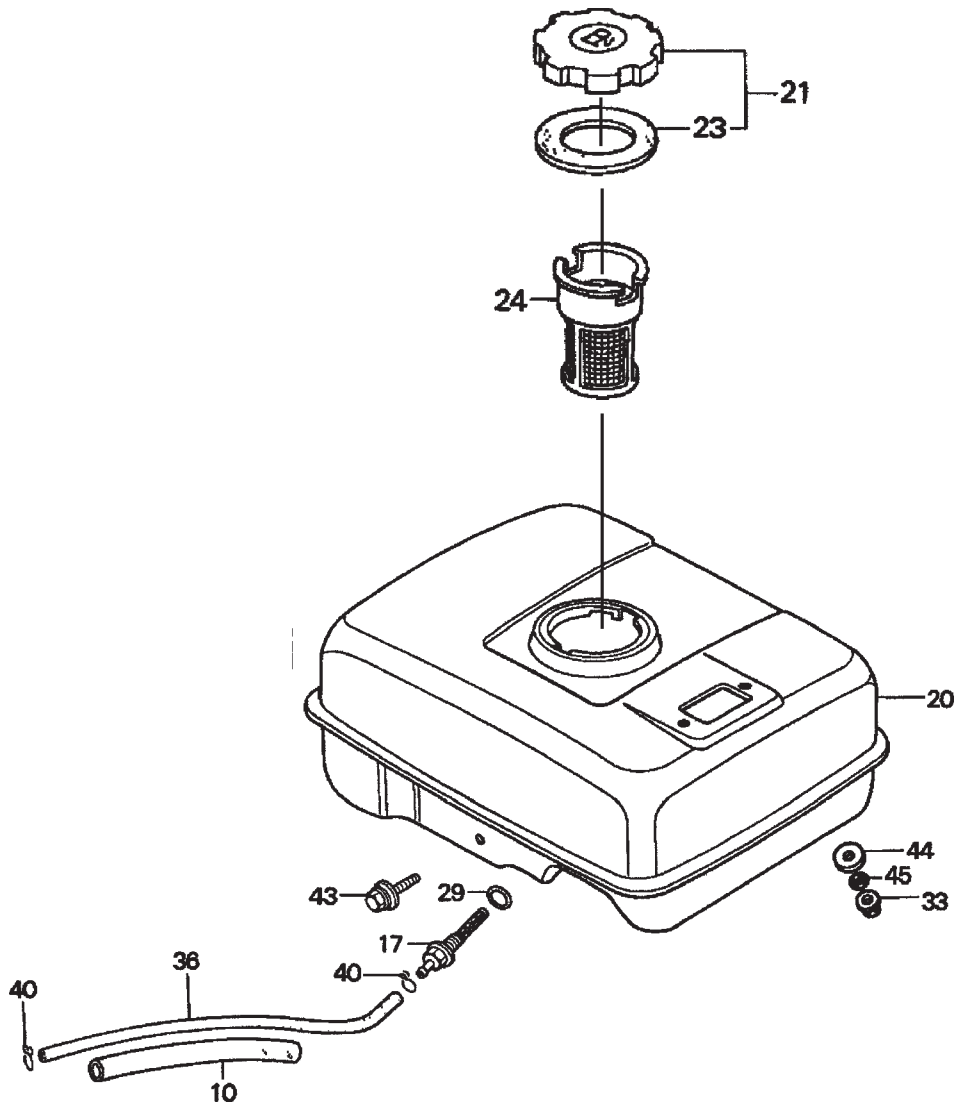
HONDA GX160K1QMX2 ENGINE — MUFFLER ASSY.

MUFFLER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	18310ZH8810	MUFFLER.....	1 USE UP TO S/N 6745959
1	18310ZK8V50	MUFFLER.....	1 USE FROM S/N 6745959
3	18320ZF1H01	PROTECTOR, MUFFLER	1	
5	18331883810	CAP, MUFFLER	1	
7	18355ZE1000	ARRESTER, SPARK	1	
8	18381ZH8800	GASKET, MUFFLER	1	
11	90050ZE1000	SCREW, TAPPING (5 X 8)	4	
12	90055ZE1000	SCREW, TAPPING (4 X 6)	1	
13	18522ZE1000	GUIDE, MUFFLER	1	
15	94001080000S	NUT, HEX (8MM)	2	
30	90002ZG0003	SCREW, TAPPING (4 X 8)	2	

HONDA GX160K1QMX2 ENGINE — FUEL TANK ASSY.

FUEL TANK ASSY.



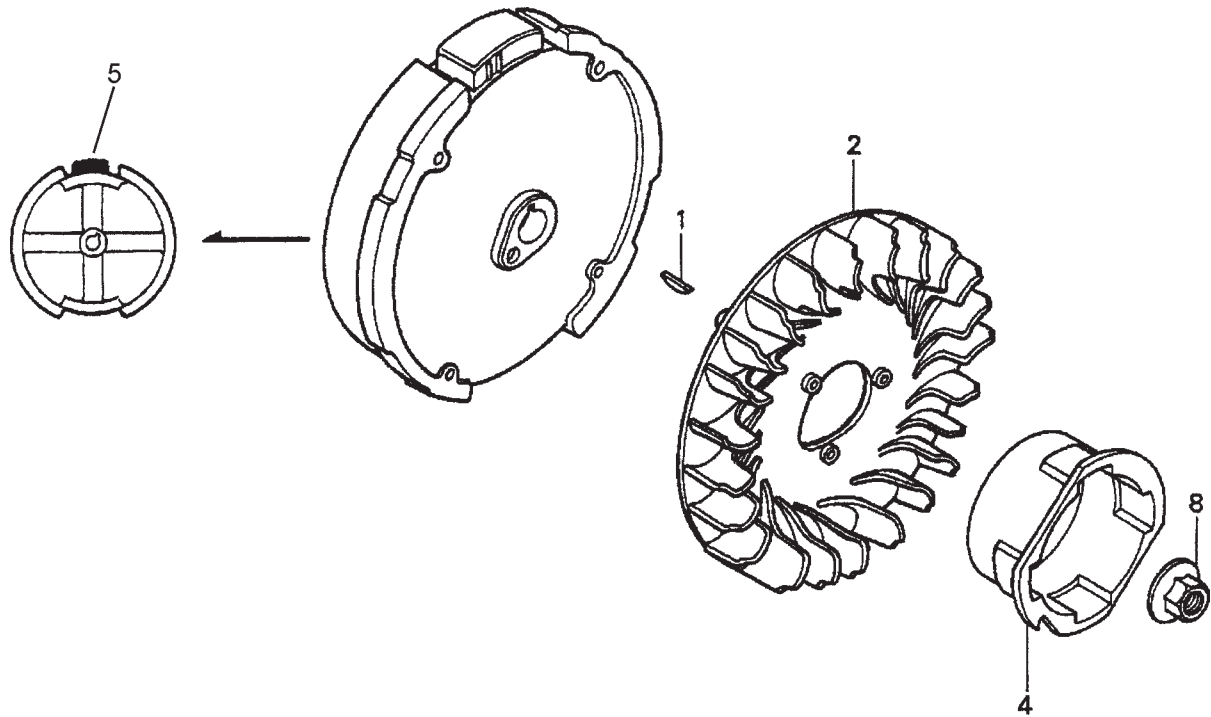
HONDA GX160K1QMX2 ENGINE — FUEL TANK ASSY.

FUEL TANK ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
10	16854ZH8000	RUBBER, SUPPORTER (107MM)	1	
17	16955ZE1000	JOINT, FUEL TANK	1	
20	17510ZE1020ZF	TANK, FUEL *NH1* (BLACK)	1	
21	17620ZH7023	CAP, FUEL FILLER	1	INCLUDES ITEMS W/*
23*	17631ZH7003	GASKET, FUEL FILLER CAP	1	
24	17672ZE2W01	FILTER, FUEL	1	
29	91353671003	O-RING (13.5 X 1.5) (ARAI)	1	
33	9405006000	NUT, FLANGE (6MM)	2	
36	950014500360M	BULK HOSE, FUEL (4.5 X 3000) (4.5 X 140)	1	
40	9500202080	CLIP, TUBE (B8)	2	
43	957010602500	BOLT, FLANGE (6 X 25)	1	
44	90404680000	WASHER	2	USE FROM S/N 6745959
45	91319ME5003	O-RING	2	USE FROM S/N 6745959

HONDA GX160K1QMX2 ENGINE — FLYWHEEL ASSY.

FLYWHEEL ASSY.



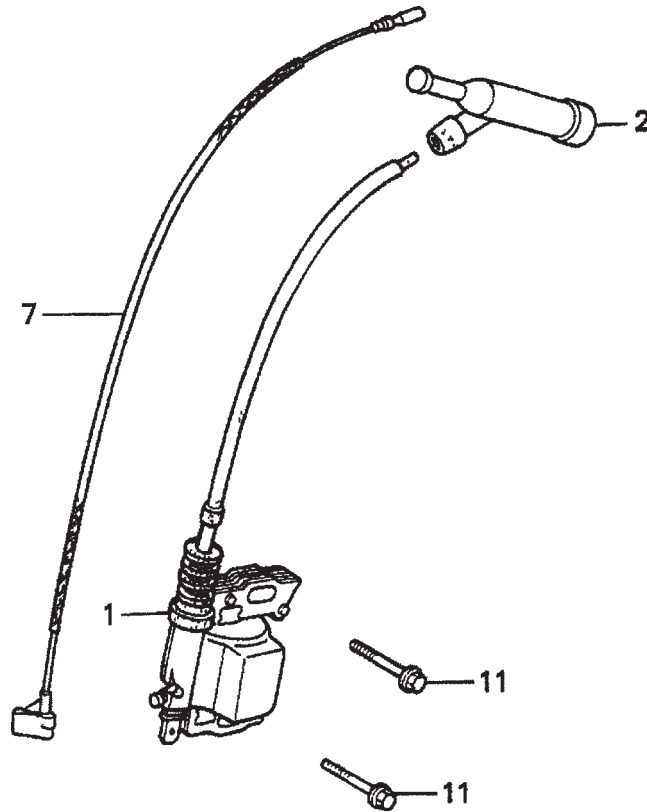
HONDA GX160K1QMX2 ENGINE — FLYWHEEL ASSY.

FLYWHEEL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	13331357000	KEY, SPECIAL WOODRUFF (25 X 18)	1	
2	19511ZE1000	FAN, COOLING	1	
4	28451ZH8003	PULLEY, STARTER	1	
5	31100ZE1010	FLYWHEEL	1	
5	31100ZE1810	FLYWHEEL (LAMP)	1	
8	90201878003	NUT, SPECIAL (14MM)	1	

HONDA GX160K1QMX2 ENGINE — IGNITION COIL ASSY.

IGNITION COIL ASSY.



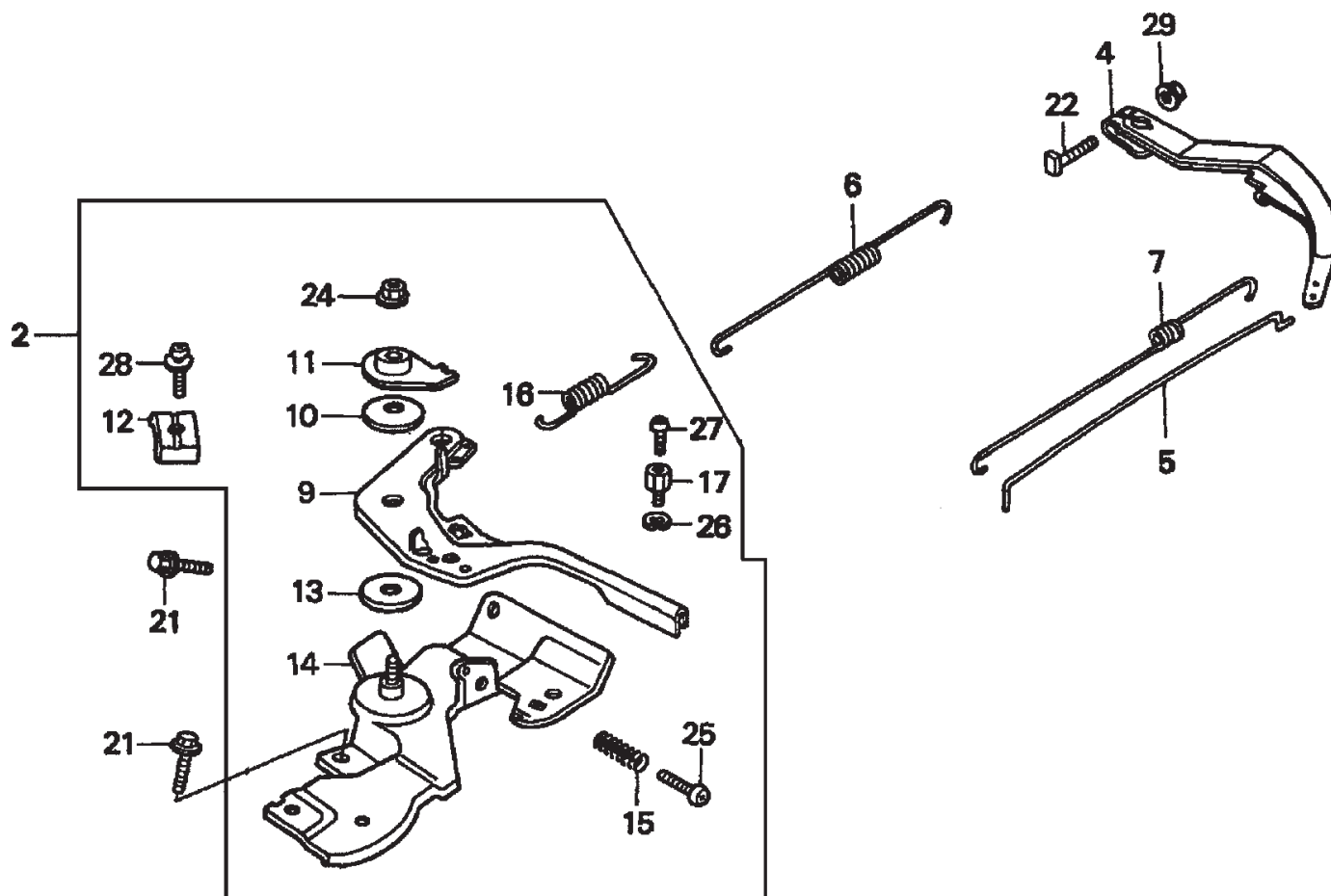
HONDA GX160K1QMX2 ENGINE — IGNITION COIL ASSY.

IGNITION COIL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	30500ZE1033	COIL ASSY., IGNITION	1	
2	30700ZE1013	CAP ASSY., NOISE SUPPRESSOR	1	
7	36101ZE1010	WIRE, STOP SWITCH (370MM)	1	
11	90121952000	BOLT, FLANGE (6 X 25)	2	

HONDA GX160K1QMX2 ENGINE — CONTROL ASSY.

CONTROL ASSY.



HONDA GX160K1QMX2 ENGINE — CONTROL ASSY.

CONTROL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
2	16500ZH8813	CONTROL ASSY.	1	INCLUDES ITEMS W/*
4	16551ZE0010	ARM, GOVERNOR	1	
5	16555ZE1000	ROD, GOVERNOR	1	
6	16561ZE1020	SPRING, GOVERNOR	1	
7	16562ZE1020	SPRING, THROTTLE RETURN	1	
9*	16571ZH8020	LEVER CONTROL	1	
10*	16574ZE1000	SPRING LEVER	1	
11*	16575ZH8000	WASHER, CONTROL LEVER	1	
12*	16576891000	HOLDER, CABLE	1	
13*	16578ZE1000	SPACER, CONTROL LEVER	1	
14*	16580ZH8813	BASE CONTROL	1	
15*	16584883300	SPRING, CONTROL ADJUSTING	1	
16*	16592ZE1810	SPRING, CABLE RETURN	1	
17*	16594883010	HOLDER, WIRE	1	
21	90013883000	BOLT, FLANGE (6 X 12) (CT200)	2	
22	90015ZE5010	BOLT, GOVERNOR ARM	1	
24*	90114SA0000	NUT, SELF-LOCK (6MM)	1	
25*	93500050250H	SCREW, PAN (5 X 25)	1	
26*	90605230000	CIRCLIP	1	
27*	93500040060H	SCREW, PAN (5 X 25)	1	
28*	93500050160A	SCREW, PAN (5 X 16)	1	
29	9405006000	NUT, FLANGE (6 MM)	1	

NO ARTWORK AVAILABLE

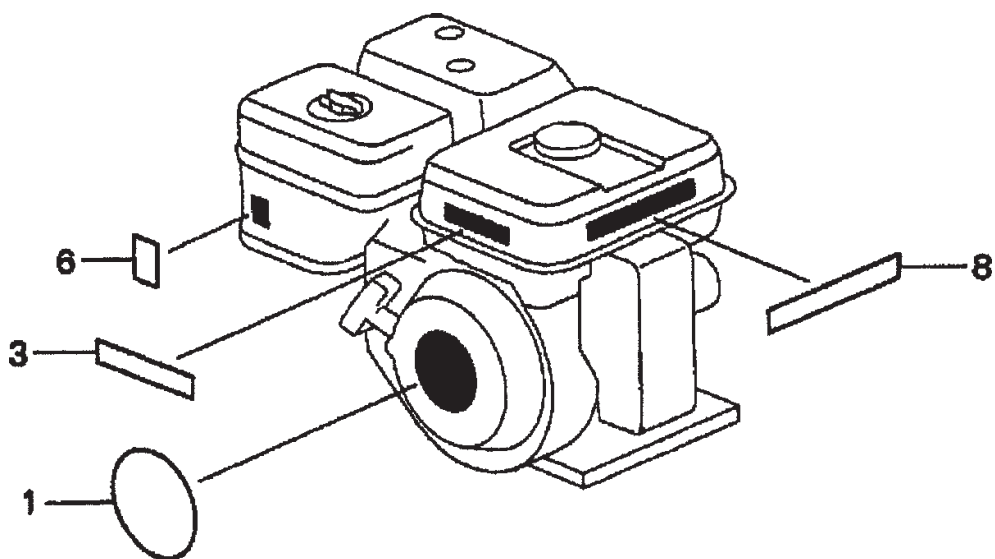
HONDA GX160K1QMX2 ENGINE — GASKET KIT ASSY.

GASKET KIT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	06111ZH8405	GASKET KIT	1	INCLUDES ITEMS W/*
2*	11381ZH8801	GASKET, CASE COVER	1	
3*	12251ZF1800	GASKET, CYLINDER HEAD	1	
4*	12391ZE1000	GASKET, CYLINDER HEAD COVER	1	
5*	16212ZH8800	GASKET, INSULATOR	1	
6*	16221ZH8801	GASKET, CARBURETOR	1	
7*	18381ZH8800	GASKET, MUFFLER	1	

HONDA GX160K1QMX2 ENGINE — LABELS ASSY.

LABELS ASSY.



HONDA GX160K1QMX2 ENGINE — LABELS ASSY.

LABELS ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	87521ZH8020	EMBLEM (5.5)	1	
3	87522zh9010	LABEL, CAUTION	1	
6	87528ZE1810	MARK, CHOKE	1	
8	87532ZH8810	MARK, OIL ALERT (E)	1	