

# OPERATION AND PARTS MANUAL



## Reversible Plate Compactor *Mikasa* Model MVH-402GHB

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Revision #0 (12/17/03)



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# WARNING



## **CALIFORNIA — Proposition 65 Warning**

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

## **HERE'S HOW TO GET HELP**

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

### ***MULTIQUIP'S MAIN PHONE NUMBERS***

800-421-1244      FAX: 310-537-3927  
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### ***PARTS DEPARTMENT***

800-427-1244      FAX: 800-672-7877  
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800-306-2926      FAX: 800-672-7877  
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800-478-1244      FAX: 310-537-4259  
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### ***MQ POWER SERVICE DEPARTMENT***

800-835-2551      FAX: 310-638-8046  
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### ***TECHNICAL ASSISTANCE***

800-478-1244      FAX: 310-631-5032

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800-421-1244, EXT. 279      FAX: 310-537-1173  
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## MIKASA MVH-402GHB PLATE COMPACTOR

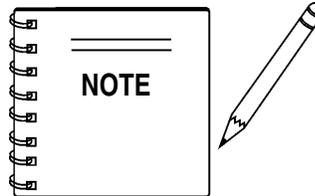
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## HONDA GX390K1SMX2 ENGINE

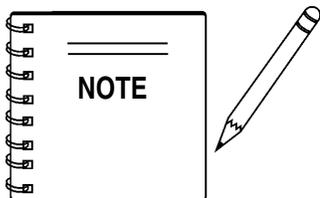
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*As a continuing effort to update our parts book, contact the **MULTIQUIP** literature department for the latest revision of your "Operation and Parts Manual"*



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

# PARTS ORDERING PROCEDURES

## When ordering parts, please supply the following information:

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

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



## Here's how to get help...

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

### Parts Department

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

### Mayco Parts

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

### Service Department

800-478-1244 Fax: 310-537-4259  
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### MQ Power Service Department

800-835-2551 Fax: 310-638-8046  
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### Technical Assistance

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

### Warranty Department

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

### Multiquip's Main Phone Numbers

800-421-1244 Fax: 310-537-3927  
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WWW: multiquip.com

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

### Extra Discounts!

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

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

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

FedEx Ground Service *at no charge for freight*  
No other allowances on freight shipped by any other carrier.

NOTE: DISCOUNTS ARE SUBJECT TO CHANGE

## Direct TOLL-FREE access to our Parts Department:

Toll-free nationwide — 800-427-1244

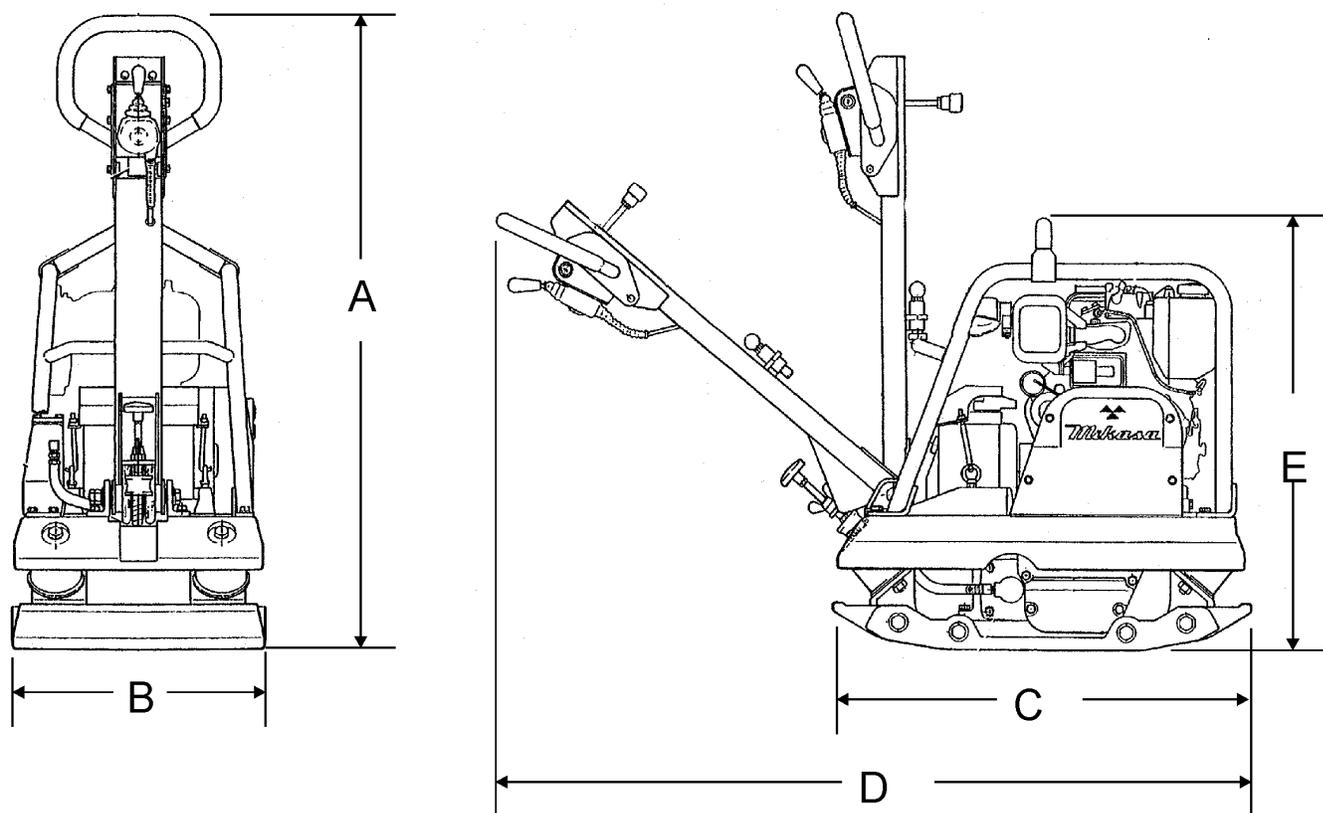
# MVH-402GHB — SPECIFICATIONS

**TABLE 1. MVH-402GHB REVERSIBLE PLATE COMPACTOR SPECIFICATIONS**

Centrifugal Force	54.9 kN (5600 kg)
Vibration Frequency	4200 vpm (70 Hz)
Traveling Speed	0 to 75.5 ft/min (0 to 20 m/min)
Plate Size (L x W)	39 x 21.7 in (990 x 550 mm)
Overall Length	65.4 in (1600 mm)
Overall Width	21.7 in (550mm )
Overall Height	39.8 in (1010 mm )
Operating Weight	981 lbs. (445 kg)
Lubricating Oil in Vibration Case	43.9 fl oz (1300 cc)

**Table 2. Specifications (Engine)**

<b>Engine</b>	<b>Model</b>	<b>HONDA GX390K1SMX2</b>
	Type	Air-cooled 4 stroke, Single Cylinder, OHV, Horizontal Shaft Gasoline Engine
	Bore X Stroke	3.46 in. x 2.52 in. (88 mm x 64 mm)
	Displacement	389 cc (23.7 cu-in)
	Max Output	13 H.P./3600 R.P.M.
	Continuous Output	9 H.P./3600 R.P.M.
	Fuel Tank Capacity	1.7 US gal. (6.5 liters)
	Fuel	Unleaded Automobile Gasoline
	Lube Oil Capacity	1.16 qts. (1.1 liters)
	Speed Control Method	Centrifugal Fly-weight Type
	Starting Method	Recoil Start
<b>Dimension (L x W x H)</b>	15.94 x 17.72 x 17.44 in. (405 x 450 x 443 mm)	
<b>Dry Net Weight</b>	68.2 lbs (31 Kg.)	



**TABLE 3. DIMENSIONS**

REF.	DIMENSIONS
A	53 in. (134.6 cm.)
B	24 in. (61 cm.)
C	34 in. (86 cm.)
D	63.8 in. (162 cm.)
E	38.2 in. (97 cm.)

**Figure 2. MVH-402GHB Reversible Plate Compactor Dimensions**

# MVH-402GHB — SAFETY MESSAGE ALERT SYMBOLS

## FOR YOUR SAFETY AND THE SAFETY OF OTHERS!

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



This Owner's Manual has been developed to provide complete instructions for the safe and efficient operation of the Multiquip Model MVH-402GHB Reversible Plate Compactor. Refer to the engine manufacturer's instructions for data relative to its safe operation.

**Before using this reversible 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.



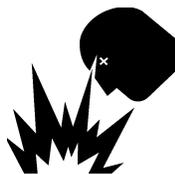
**CAUTION:** You **CAN** be injured if you do not follow directions.

Potential hazards associated with this reversible plate compactor operation will be referenced with Hazard Symbols which appear throughout this manual, and will be referenced in conjunction with Safety Message Alert Symbols.

## HAZARD SYMBOLS



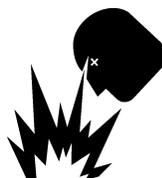
### Lethal Exhaust Gases



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



### Explosive Fuel



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



### Burn Hazards



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



### Rotating Parts



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

# MVH-402GHB — SAFETY MESSAGE ALERT SYMBOLS



## Accidental Starting



OFF

**ALWAYS** place the engine ON/OFF switch in the **OFF** position, when the reversible plate compactor is not in use.



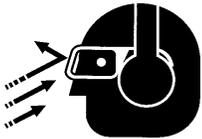
## Respiratory Hazard



**ALWAYS** wear approved respiratory protection.



## Sight and Hearing hazard

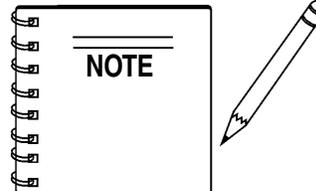


**ALWAYS** wear approved eye and hearing protection.



## Equipment Damage Messages

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



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

# MVH-402GHB — RULES FOR SAFE OPERATION

## CAUTION:

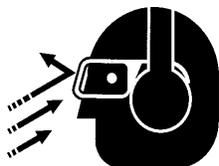


Failure to follow instructions in this manual may lead to serious injury or even death! This equipment is to be operated by trained and qualified personnel only! This equipment is for industrial use only.

The following safety guidelines should always be used when operating the MIKASA MVH-402GHB Reversible Plate Compactor:

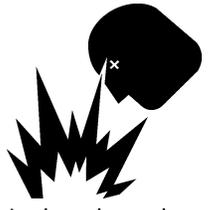
### GENERAL SAFETY

- **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. **ALWAYS** wear slip resistant safety shoes or boots. 
- **NEVER** operate this equipment when not feeling well due to fatigue, illness or taking medicine. 
- **NEVER** operate this equipment under the influence or drugs or alcohol. 
- **NEVER** use accessories or attachments, which are not recommended by Multiquip for this equipment. Damage to the equipment and/or injury to user may result.
- Manufacturer does not assume responsibility for any accident due to equipment modifications.
- Whenever necessary, replace nameplate, operation and safety decals when they become difficult read.
- **ALWAYS** wear proper respiratory (mask), hearing and eye protection equipment when operating the reversible plate compactor.



- **NEVER** touch the hot exhaust manifold, muffler or cylinder. Allow these parts to cool before servicing engine or reversible plate 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 of this reversible plate compactor requires an adequate free flow of cooling air. **NEVER** operate the reversible plate 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 reversible plate compactor or engine and may cause injury to people and property. Remember the vibration roller's engine gives off **DEADLY** gases. 
- **ALWAYS** refuel in a well-ventilated area, away from sparks and open flames.
- **ALWAYS** use extreme caution when working with **flammable** liquids. When refueling, **stop the engine** and allow it to cool. **DO NOT** smoke around or near the machine. Fire or explosion could result from fuel vapors, or if fuel is spilled on a hot engine.
- **NEVER** operate the reversible 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.
- **ALWAYS** store the reversible plate compactor in a clean, dry location out of the reach of children.
- **NEVER** run engine without air cleaner. Severe engine damage may occur.
- **NEVER** leave the reversible plate compactor unattended, turn off engine.
- **CAUTION** must always be observed while servicing this reversible plate compactor. Rotating parts can cause injury if contacted.
- **DO NOT** leave reversible plate compactor with engine running. Use chock blocks if parking reversible plate compactor on a grade.

# MVH-402GHB — RULES FOR SAFE OPERATION

- **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.

## Loading and Unloading (Crane)

- Before lifting, make sure that machine parts (hook 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 hook of guard frame on compactor.
- **NEVER** lift the machine 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 machine 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.
- **ALWAYS** tie down the compactor during transportation by securing the compactor's guard frame with rope.

## Emergencies

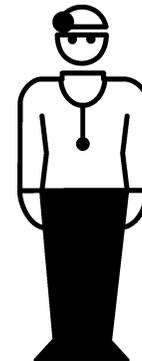
- **ALWAYS** know the location of the nearest **fire extinguisher**.



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



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



## Maintenance Safety

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

# MVH-402GHB — OPERATION AND SAFETY DECALS

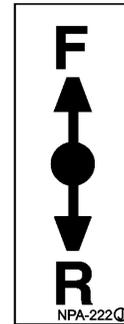
Figure 1 displays the operation and safety decals as they appear on the reversible plate compactor. Should any of these decals become damaged or unreadable, contact the Multiquip Parts Department for a replacement set.



P/N: NPA-458



P/N: NPA-748



P/N: NPA-222



P/N: TBD



P/N: NP 367



P/N: 920203330



P/N: NPA-326

<p><b>OPERATIONAL CAUTION</b> Prior to OPERATION: Check engine oil and fuel levels. If not enough, add to proper levels.</p> <p>To START engine: 1. Warm up engine at low speed for 3 to 5 minutes. 2. Operate machine at full throttle speed. (Incorrect clutch engagement cause clutch to burn.) 3. Use travel lever for forward and reverse motion. Do not push or pull travel lever strongly.</p> <p>To STOP engine: (for electric start engine) Move stop key switch to "OFF" position.</p> <p>To LIFT machine: Use lifting hook in center.</p> <p>Outdoor Storage Store until covered with plastic sheet in a moisture.</p> <p><b>MIKASA SANGYO CO., LTD TOKYO JAPAN</b></p>	<p><b>DANGER FUEL</b></p> <p>Fire Risk</p>	<p><b>DANGER FUEL</b></p> <p>Operate only in well-ventilated area</p>	<p><b>DANGER LIFTING</b></p> <p>Do not stand next to machine while lifting</p>	<p><b>DANGER LIFTING</b></p> <p>Do not use machine handle</p>	<p><b>CAUTION READ</b></p> <p>Use caution while operating in reverse</p>
	<p><b>WARNING NOISE</b></p> <p>Wear eye protection</p>	<p><b>WARNING HOT TEMP.</b></p> <p>Operate only in well-ventilated area</p>	<p><b>WARNING TRANSPORT</b></p> <p>Set transport wheel tightly by chain</p>	<p><b>CAUTION MOVING PARTS</b></p> <p>Do not touch moving parts in operation</p>	<p><b>CAUTION READ</b></p> <p>Read operator's manual carefully before use</p>

P/N: NPA-538

Figure 1. Operation and Safety Decals

## Plate Compactor

The Mikasa MVH-402GHB is a walk-behind, reversible plate compactor designed for the compaction of sand, clay 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 soil compacting for road, embankments and reservoirs as well as backfilling for gas pipelines, water pipelines and cable installation work.

## Vibratory Plates

The vibratory plates of the MVH-402GHB produce low amplitude high frequency vibrations, designed to compact granular soils.

The resulting vibrations cause forward motion. The engine and handle are vibration isolated from the vibrating plate. The heavier the plate, the more compaction force it generates.

## Reversible Vibratory Plates

Reversible vibratory plates have two eccentric weights that allow a smooth transition for forward and reverse travel, plus increased compaction force as the result of dual weights.

Due to their weight and force, reversible plates are ideal for semi-cohesive soils.

## Frequency/Speed

The compactor's vibrating plate maximum frequency is 4200 vpm (vibrations per minute). The forward and reverse travel speed of the compactor is approximately 75.5 ft./minute (23 meters/minute).

## Engine

The Mikasa MVH-402GHB Plate Compactor is equipped with a HONDA GX390K1 gasoline engine.

## Controls

Before starting the MVH-402GHB Plate Compactor, identify and understand the function of the controls and components as indicated in Figure 3.

# MVH-402GHB — PLATE COMPACTOR COMPONENTS

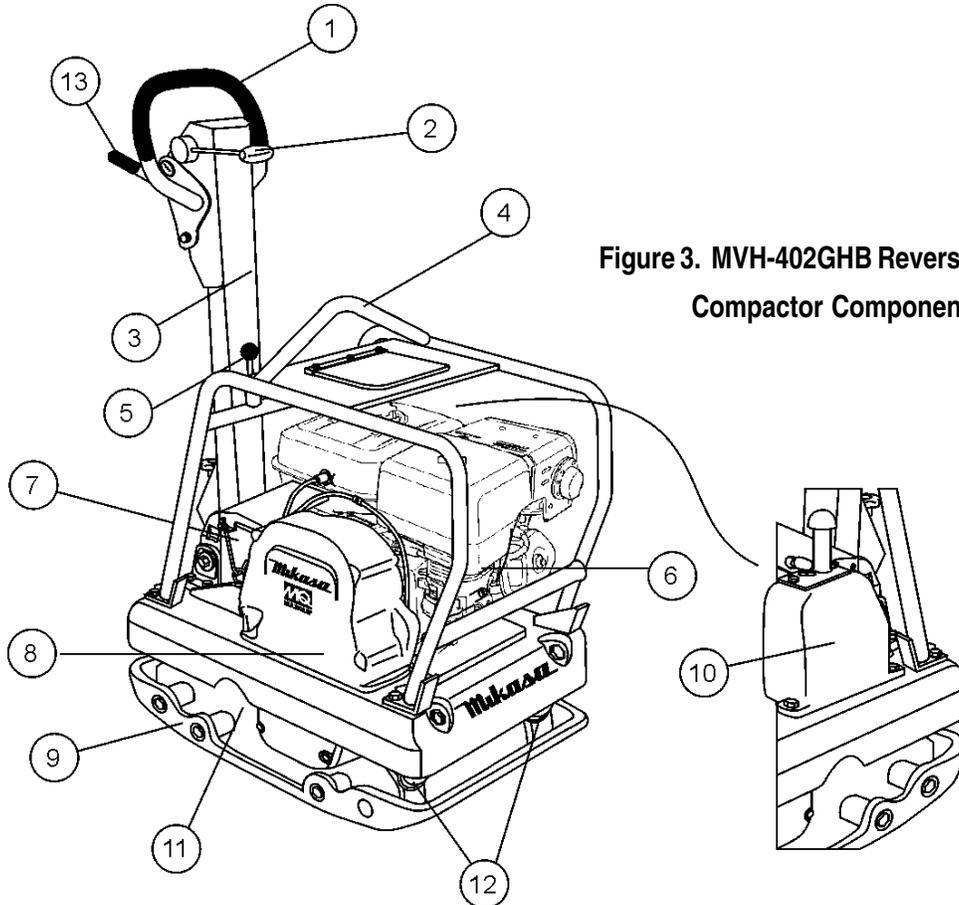


Figure 3. MVH-402GHB Reversible Plate Compactor Components

Figure 3 illustrates the location of the major components for the MVH-402GHB Reversible Plate Compactor. The function of each component is described below:

1. **Hand Grip** – When operating the compactor use this hand grip to maneuver the compactor.
2. **Forward & Reverse Lever** – **Push** the lever forward, the compactor will move in a forward direction, **pull** the lever backwards, the compactor will move in backwards direction. Placing the lever in the middle (midway) will cause the compactor not to move (neutral).
3. **Handle Bar** – When operating the compactor, this handle is to be in the downward position. When the compactor is to be **stored**, move the handle bar to the upright position.
4. **Guard Hook** - Used to lift the machine with crane or other lifting device.
5. **Stopper** - Locks the handle in place in the upward position for stowing.
6. **Engine** – This plate compactor uses a **HONDA GX390K1** gasoline engine. Refer to the owner's manual for engine information and related topics.
7. **Battery** - Maintenance-free type requiring no electrode replenishment.
8. **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.
9. **Base Plate** – Designed to compact sand, clay, and asphalt.
10. **Oil Tank** – Fill with proper grade of diesel engine oil.
11. **Vibration Case** – Encloses the eccentric, gears and counter weights.
12. **Hydraulic Cylinder** – Activated by moving the travel lever. The cylinder controls the direction of movement by the plate compactor.
13. **Shock Absorber** – Protects plate compactor from damage by absorbing vibration during operation.
14. **Throttle Lever** – Controls the speed of the plate compactor. Place straight vertically to start, push fully counterclockwise for full throttle and fully clockwise to stop plate compactor.

# MVH-402GHB — ENGINE COMPONENTS

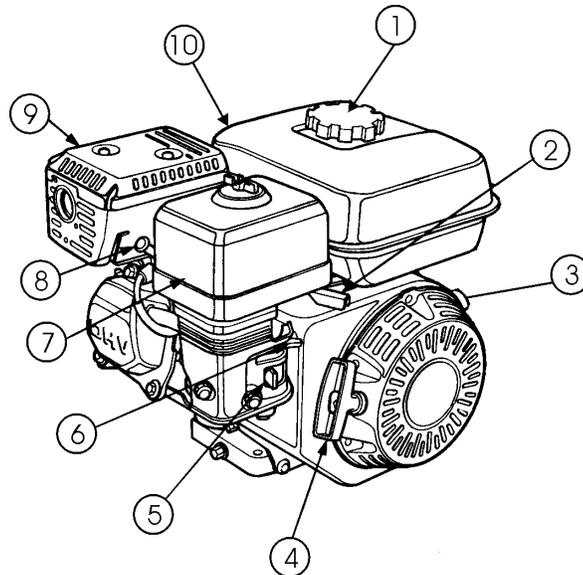


Figure 4. MVH-402GHB Engine Components

## 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 & 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.
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.

## WARNING

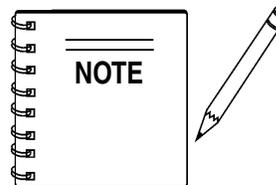


Adding fuel to the tank should be accomplished only when the engine is stopped and has had an opportunity to cool down.

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. **Recoil Starter (pull rope)** – Manual-starting method. Pull the starter grip until resistance is felt, then pull briskly and smoothly.
4. **Starter Grip** – Grip this handle to start engine. See engine starting section of this manual.
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.



## NOTE

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 (**HONDA**) 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. 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.

## WARNING



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



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

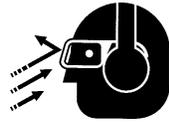
## CAUTION :



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



**ALWAYS** wear approved eye and hearing protection before operating the compactor.



### Before Starting

1. Read safety instructions at the beginning of manual.
2. Familiarize yourself with the operating and control elements of the machine and the working environment. This includes obstacles in the working area, bearing capacity of the ground and the necessary safety provisions.
3. Check the air filter for dirt and dust. If the air filter is dirty, replace air filter with a new one as required.
4. Check fastening nuts and bolts for tightness. Loose threads may cause damage to the machine when vibrating.
5. Understand the geographical features and regulations of the job site.
6. Clean the compactor, removing dirt and dust, particularly, the bottom of the plate, engine cooling air inlet.



### Checking Engine Oil Level

1. Make sure that the machine is situated in a flat surface so that level measurements will be accurate.
2. Pull out the dipstick from the oil tank (Figure 5).

## CAUTION :



**DO NOT** overfill oil tank. This could cause oil leaks and sluggish operation. Clean cap and surrounding area before opening to prevent dirt from entering tank.

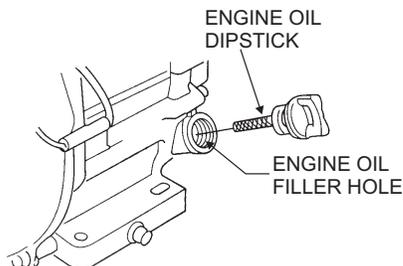


Figure 5. Oil Dipstick Removal

3. If the oil level is low, fill to the edge of the oil filler hole with the recommended oil type (Table 4). Maximum oil capacity is 1.74 quarts (1.65 liters).

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	Lower than 10°C	SAE 10W-10

## Explosive Fuel

### DANGER



Diesel fuel is 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!** or **running**.



### Checking The Fuel

1. Remove the fuel 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 (Figure 6).
3. When refueling, be sure to use a strainer for filtration. **DO NOT** top-off fuel. Wipe up any spilled fuel.



Figure 6. Refueling

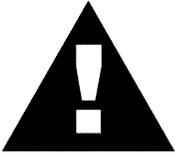
### DANGER



Fuel spillage on a hot engine can cause a fire or explosion. If fuel spillage occurs, wipe up the spilled fuel completely to prevent fire hazards. **NEVER** smoke around or near the compactor.



## CAUTION :



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



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

Refer to Figures 3 and 4 for the location of controls and components.

### Adjusting Handle Height

The height of the handle is adjustable for your comfort .

1. Loosen the butterfly screw (Figure 7).
2. Turn the grip clockwise to raise the handle or counterclockwise to lower the handle.
3. When the handle is raised to the desired height, tighten the butterfly screw.

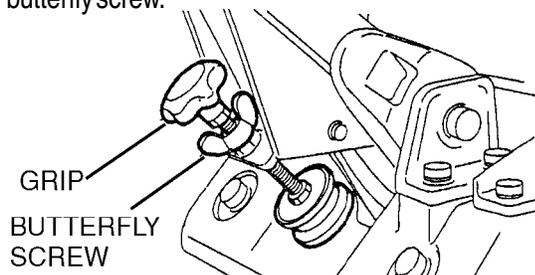


Figure 7. Handle Adjustment

### Starting the Engine

#### Recoil Start

1. Place the engine **fuel valve lever** to the "ON" position. (Figure 8).

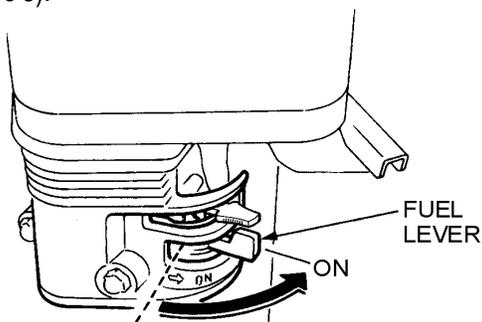


Figure 8. Fuel Valve Lever

2. Move the throttle lever to the **START** position by opening it to about 20 degrees (Figure 9).

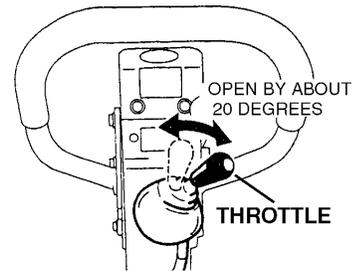


Figure 9. Throttle Lever (Start)

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

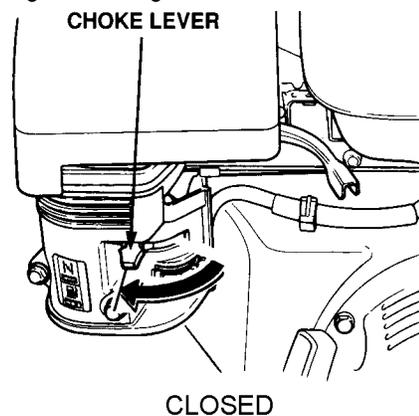


Figure 10. Engine Choke Lever (Open)

4. Place the **choke lever** (Figure 11) in the **OPEN** position if starting a **warm engine** or the **temperature is warm**.

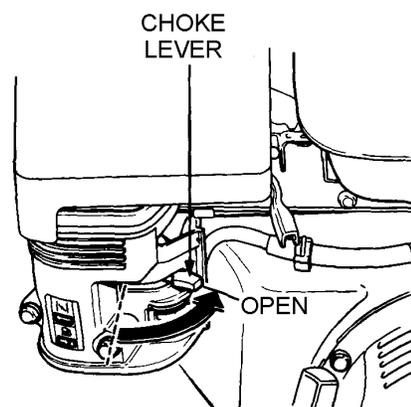
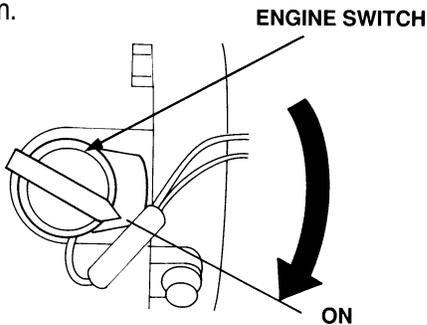


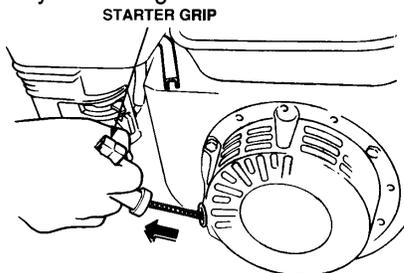
Figure 11. Engine Choke Lever (Closed)

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



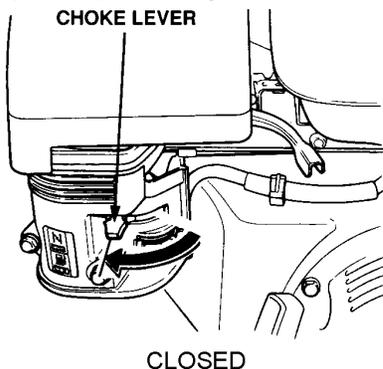
**Figure 12. Engine ON/OFF Switch (ON Position)**

- Grasp the starter grip (Figure 13) and slowly pull it out. The resistance becomes the hardest at a certain position, corresponding to the compression point. Pull the starter grip briskly and smoothly for starting.



**Figure 13. Starter Grip**

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



**Figure 14. Choke Lever (Closed)**

- Before the compactor is placed into operation, run the engine for several minutes. Check for fuel leaks, and noises that would be associated with a loose component.

## CAUTION :



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.

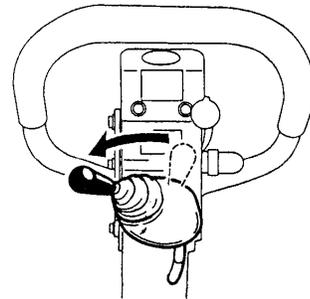
## Traveling

### CAUTION :



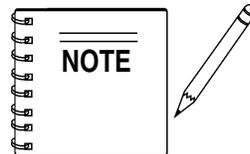
Make sure to follow all safety rules referenced in the safety section of this manual before operating compactor. Keep work area clear of debris and other objects that could cause damage to the compactor or bodily injury.

- Grasp the compactor's hand grip and move the engine throttle lever (Figure 15) quickly to the **fast** position.



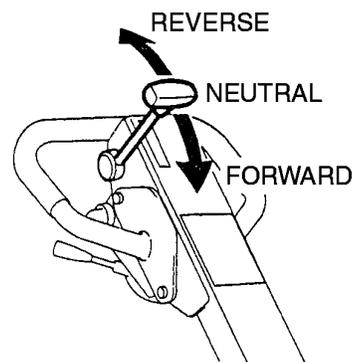
**Figure 15. Throttle Lever ((Fast)**

- 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.

- To make the compactor move in the forward direction push the travel lever (Figure 16) forward.



**Figure 16. Direction Lever**

- To make the compactor move in the reverse direction pull the travel lever (Figure 16) backwards.
- Firmly gasp the compactor's hand grip, the compactor will begin moving in the desired position when the direction lever has been placed in the desired position.

- 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.
- If travel lever is placed in the neutral position, the machine will vibrate in place.
- To move the compactor laterally, hold the hand grip firmly and swing compactor. Do not swing compactor while gripping the travel lever.

## Stopping

- Return the throttle lever to the START position. Allow the machine to cool down for 2 to 3 minutes.
- Turn the throttle lever to the STOP position (Figure 17) to stop the engine.

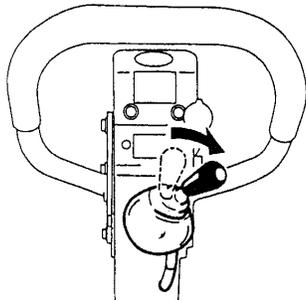


Figure 17. Throttle Lever (Stop)

- Turn the engine ON/OFF switch to the "OFF" position (Figure 18).

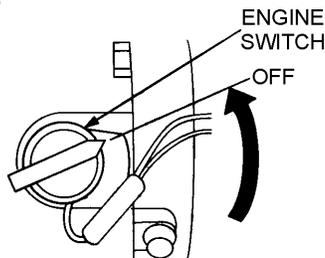


Figure 18. Engine ON/OFF Switch (OFF)

- Place the **fuel shut-off lever** (Figure 19) in the OFF position.

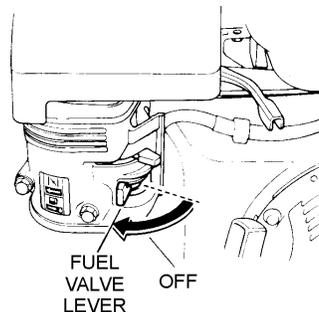


Figure 19. Fuel Valve Lever (OFF)

## Emergency Shutdown

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

## Stowing the Handle

- Push up the handle (Figure 20).
- Pull the stopper grip upward into the hole of the guard frame to lock the handle.

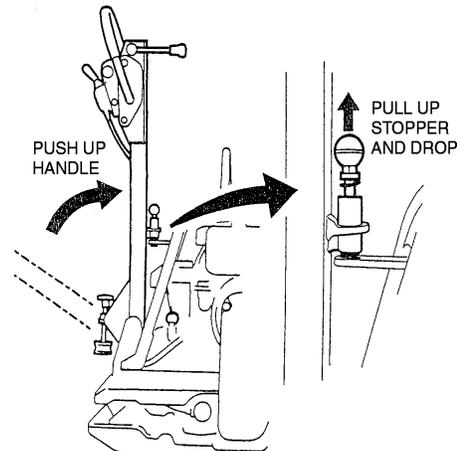


Figure 20. Stowing the Handle

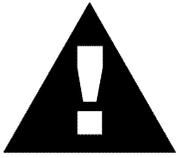
## Lifting

- Use a crane or lift to load and unload the machine. A skilled crane operator is required to perform the job.
- When lifting the machine, check for any damaged or loose bolts, lifting hooks, and shock mounts.
- Check any damaged or loose bolts in the guard frame to avoid machine sliding off.
- Make sure that the machine is shut off before machine is lifted.
- Use reliable cable for lifting.
- Always lift the machine vertically and keep the machine away from workers and animals.
- Do not lift the machine higher than the required height.

## Transporting

- Always make sure that the machine is shut off while being transported.
- Check that the fuel cap is properly closed and tightened.
- When traveling long distances or on rugged terrain, drain the fuel of the machine before transporting.
- Tie down the machine securely on the transportation so that it will not move or topple over.

## CAUTION :



Inspection and other services should **ALWAYS** be carried out on hard and level ground with the engine shutdown. These inspection intervals are for operation under normal conditions. Adjust your inspection intervals based on the number 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-402GHB MACHINE INSPECTION**

ITEM	HOURS OF OPERATION	REMARKS
Loose or Missing Screws	Every 8 hours (every day)	
Damaged Parts	Every 8 hours (every day)	
Function of Controlling System Part	Every 8 hours (every day)	
Hydraulic System Leak	Every 100 hours	See page 22
Vibrator Oil Check	Every 100 hours	See page 22
Vibrator Oil Replacement	Every 300 hours	See page 22
Hydraulic Oil Check	Every 100 hours	See page 23
Hydraulic Oil Replacement	First after 200 hours, then every 1,000 hours	See page 23
V-belt (clutch) Check	Every 200 hours	See page 22
Battery Check	Every 100 hours	See page 23

## CAUTION :



Fuel piping and connections should be replaced every 2 years.

### Daily Service

- Check for leakage of fuel or oil.
- Check for loose screws including tightness. See Table 6 below (tightening torque), for retightening:
- Remove soil and clean the bottom of compaction plate.
- Check hydraulic pump, piping and hose for any leakage. A loosened hydraulic hose can be a cause for leakage. Check hydraulic hose connections with wrench applied for tightness.
- Check engine oil.

**TABLE 6. MVH-402GHB ENGINE CHECK**

ITEM	HOURS OF OPERATION
Spark Plug Check	Every 40 hours (every week)
Oil or Fuel Leak	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 maximum level)
Engine Oil Replacement	After first 25 hours then every 50 to 100 hours
Air Filter Cleaning	Every 100 hours
See separate engine manual for details on engine check.	

**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	300~350	650~700					

\* (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.

## Spark Plug

1. Remove and clean the spark plug (Figure 21).
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.

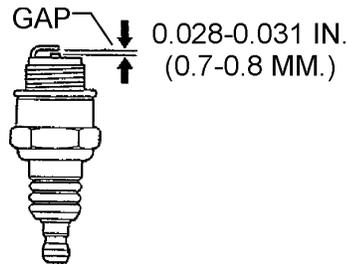


Figure 21. Spark Plug Gap

## Engine Oil Replacement

1. Replace engine oil, first in 25 hours of operation and every 50 to 100 hours afterwards.
2. Drain the engine oil when the oil is **warm** as shown in Figure 22.
3. Remove the oil drain bolt and sealing washer and allow the oil to drain into a suitable container.
4. Replace engine oil with recommended type oil as listed in Table 3. Engine oil capacity is 1.16 quarts (1.1 liters). **DO NOT** overfill.
5. Install drain bolt with sealing washer and tighten securely.

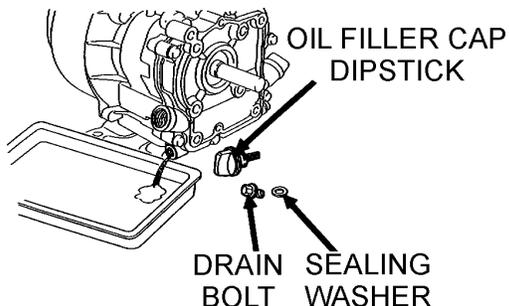


Figure 22. Engine Oil (Draining)

## Air Filter

1. Remove the air cleaner cover and foam filter element as shown in Figure 23.
2. Tap the paper filter element (Figure 23) several times on a hard surface to remove dirt, or blow compressed air [not exceeding 30 psi (207 kPa, 2.1 kgf/cm<sup>2</sup>)] through the filter element from the air cleaner case side. **NEVER** brush off dirt. Brushing will force dirt into the fibers. Replace the paper filter element if it is excessively dirty.
3. Clean foam element in warm, soapy water or nonflammable solvent. Rinse and dry thoroughly. Dip the element in clean engine oil and completely squeeze out the excess oil from the element before installing.

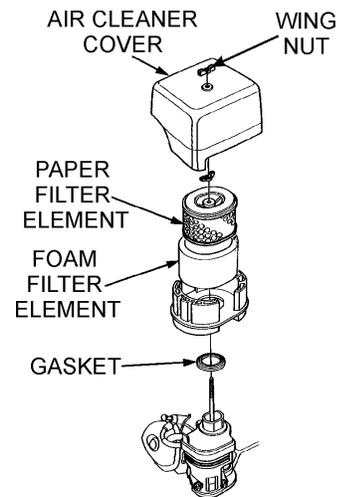


Figure 23. Engine Air Filter

## CAUTION :



**NEVER** attempt to check the V-belt with the engine running. Severe injury can occur if your hand gets caught between the V-belt and the clutch (Figure 24). Always use safety gloves.

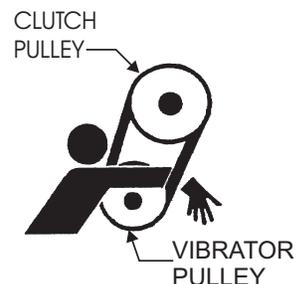


Figure 24. V-Belt Hazard

## Checking and Replacing the V-Belt and Clutch

1. After 200 hours of operation, remove the belt cover to check the V-belt tension (Figure 25). 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.

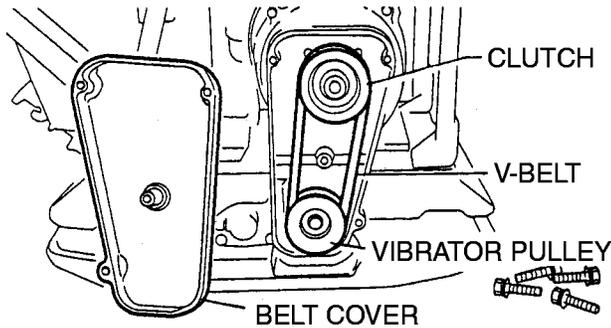


Figure 25. V-Belt Check

### ● Replacing the V-belt

Remove the belt cover. Engage an offset wrench (19 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 cover 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.

### ● Replacing Clutch

Remove V-belt. Remove bolt at engine power output by giving a shock to an engaged wrench (tapping with hammer or the like) and rotating bolt counterclockwise. Remove clutch with a pulley extractor. To reinstall, reverse the procedure.

## CAUTION :



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

## Vibrator Oil Level Check

## CAUTION :



Always clean the area around the vibrator oil level check hole before removing oil check plug. This will prevent dirt and debris from entering the system.

1. In every 100 hours of operation, with the machine positioned horizontally, remove vibrator oil level check plug (Figure 26) off vibrator (19 mm wrench) and see if oil is up to filler port. Be sure to clean area around check hole to prevent dirt and dust from entering.

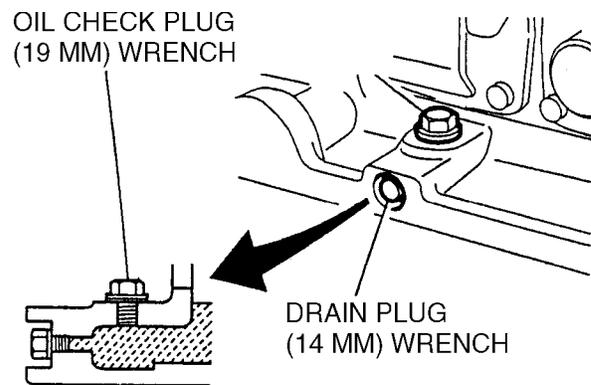


Figure 26. Vibrator Oil Maintenance

2. In every 300 hours of operation, replace oil (capacity 1,500 cc). For draining oil through level check hole, have the machine inclined with a sleeper or the like placed under the compaction plate on opposite side.

\* Use engine oil 10W-30 for this lubrication.

## Hydraulic Oil

1. Check hydraulic oil in every 100 hours of operation. With handle bar positioned vertically (storage position), remove bleeder plug (Figure 27) off the top of hydraulic pump and check for proper oil level.

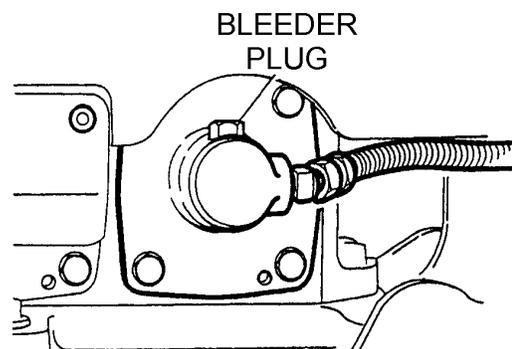


Figure 27. Bleeder Plug

2. Replace hydraulic oil after first 200 hours and in every 1,000 hours of operation.

## CAUTION :



Make sure hydraulic oil is at a normal safe operating level. **DO NOT** over fill. Over filling (excessive oil) will cause excess oil to blow out of breather plug.

### Replacing Hydraulic Oil

1. Remove the drain plug (Figure 28) at the bottom of the oil tank with a 6 mm hex wrench and drain the hydraulic oil.

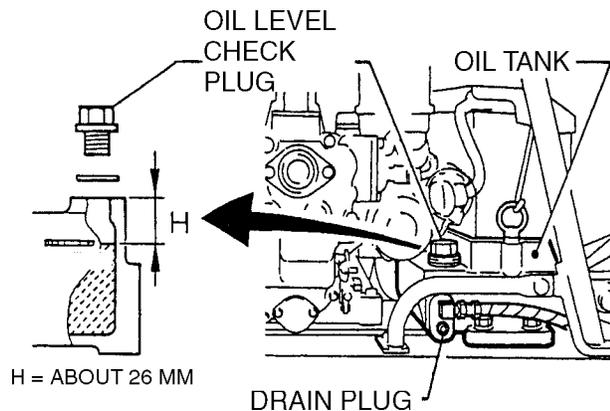


Figure 28. Hydraulic Oil Maintenance

2. Clean the filter with light oil.
3. Reinstall the drain plug to the oil tank. Apply seal tape or Roctite #575 to thread portion.
4. Fill tank with hydraulic oil. (Capacity: About 2,500 cc). Use **Shell Tellus Oil #46** or equivalent.
5. After filling tank, temporarily install cover. Loosen bleeder plug located at the top of the cylinders on side of vibrator (Figure 27). Air remaining in the circuit will be forced out of the bleeder plug.
6. Tighten the breather plug. Check oil level in the tank again.
7. Install the cover of oil tank. Coat packing with liquid packing such as Threebond #1215. Use Loctite #242 for mounting screw.

### Battery Maintenance

1. Check the battery terminals periodically to ensure that they are in good condition.
2. Use wire brush or sand paper to clean the battery terminals.
3. Check battery for cracks or any other damage. If white pattern appears inside the battery or paste has accumulated at the bottom, replace the battery.
4. If the machine will not be in operation for a long period of time, store in cool dry place and check the battery charge level every month to maintain the performance of the battery.

### Battery Cable Connection

1. Take off the battery cover by removing the M6 nuts (Figure 29).
2. When removing cable, disconnect the ground side (normally negative) first (Figure 29).
3. When installing cable connect the ground side (normally negative) last.

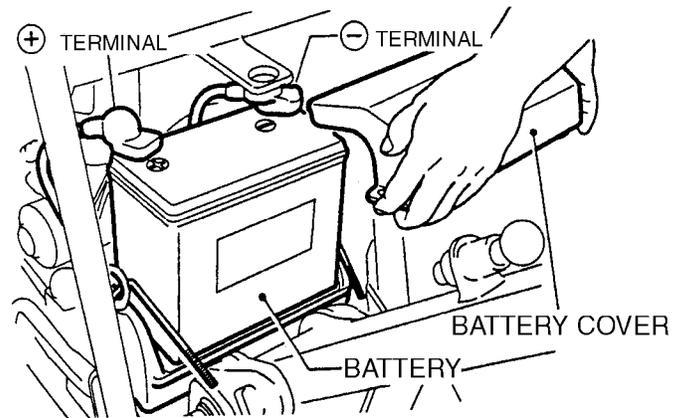


Figure 29. Battery Maintenance

## CAUTION :



Wear **safety glasses** or **face mask**, **protective clothes**, and **rubber gloves** when working with battery.



# MVH-402GHB — TROUBLESHOOTING

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 Engine Troubleshooting (Table 8) information shown below and on the proceeding pages. 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.
Difficult to start, "fuel is available, spark is present and compression is normal"	Spark plug wire broken or short circuiting?	Replace defective spark plug wiring.
	Wrong fuel type?	Flush fuel system, and replace with correct type of fuel.
	Water or dust in fuel system?	Flush fuel system.
Difficult to start, "fuel is available, spark is present and compression is low"	Air cleaner dirty?	Clean or replace air cleaner.
	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.
No fuel present at carburetor.	Head gasket and/or spark plug gasket damaged?	Replace head and spark plug gaskets.
	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.

**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.
"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.

# MVH-402GHB — TROUBLESHOOTING

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 Engine Troubleshooting (Table 8) information shown below and on the proceeding pages. 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 9. TROUBLESHOOTING COMPACTOR**

SYMPTOM	POSSIBLE CAUSE	SOLUTION
Travel speed low and vibration weak.	Clutch slips?	Adjust or replace clutch.
	V-belt slips?	Adjust or replace V-belt.
	Excessive Oil in vibrator?	Fill to correct level..
	Trouble in vibrator internals?	Check vibrator assembly for any worn or defective parts, replace any defective parts.
	Aeration in hydraulic oil for for travel reversing syste.?	Purge air in hydraulic oil. (Bleed plug)
	Engine speed incorrect?	Set engine speed to correct RPM.
Travels forward or backward but unable to switch direction.	Travel reversing system inoperative.?	Check entire travel system.
	Reversing lever installation correct?	Clean installation of reversing lever.
	Broken or defective oil hose?	Replace oil hose.
	Aeration in hydraulic oil for for travel reversing syste.?	Purge air in hydraulic oil. (Bleed plug)
	Excessive oil in reversing system?	Fill to correct level..
	Selector valve clogged with trash?	Clean selector valve.
	Cylinder piston bearing failure?	Check piston bearing in cylinder for leakage at USH packing.
Does not travel in forward or reverse.	V-belt dis-engaged or slips?	Engage V-belt, adjust or replace.
	Clutch slips?	Adjust clutch, replace if necessary.
	Pump input shat key or adapter key-way damaged?	Replace input shatkey or adapter key-way
	Cylinder piston bearing failure?	Check piston bearing in cylinder for leakage at USH packing.
Reversing lever operating resistance great.	Excessive hydraulic oil?	Fill to correct level.



# EXPLANATION OF CODE IN REMARKS COLUMN

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

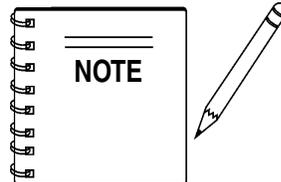
## Items Found In the “Remarks” Column

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

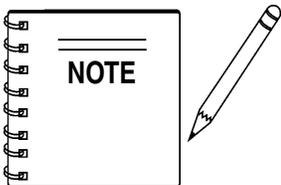
**Model Number**-Where indicated, this shows that the corresponding part is utilized only with this specific model number or model number variant.

## Items Found In the “Items Number” Column

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



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



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

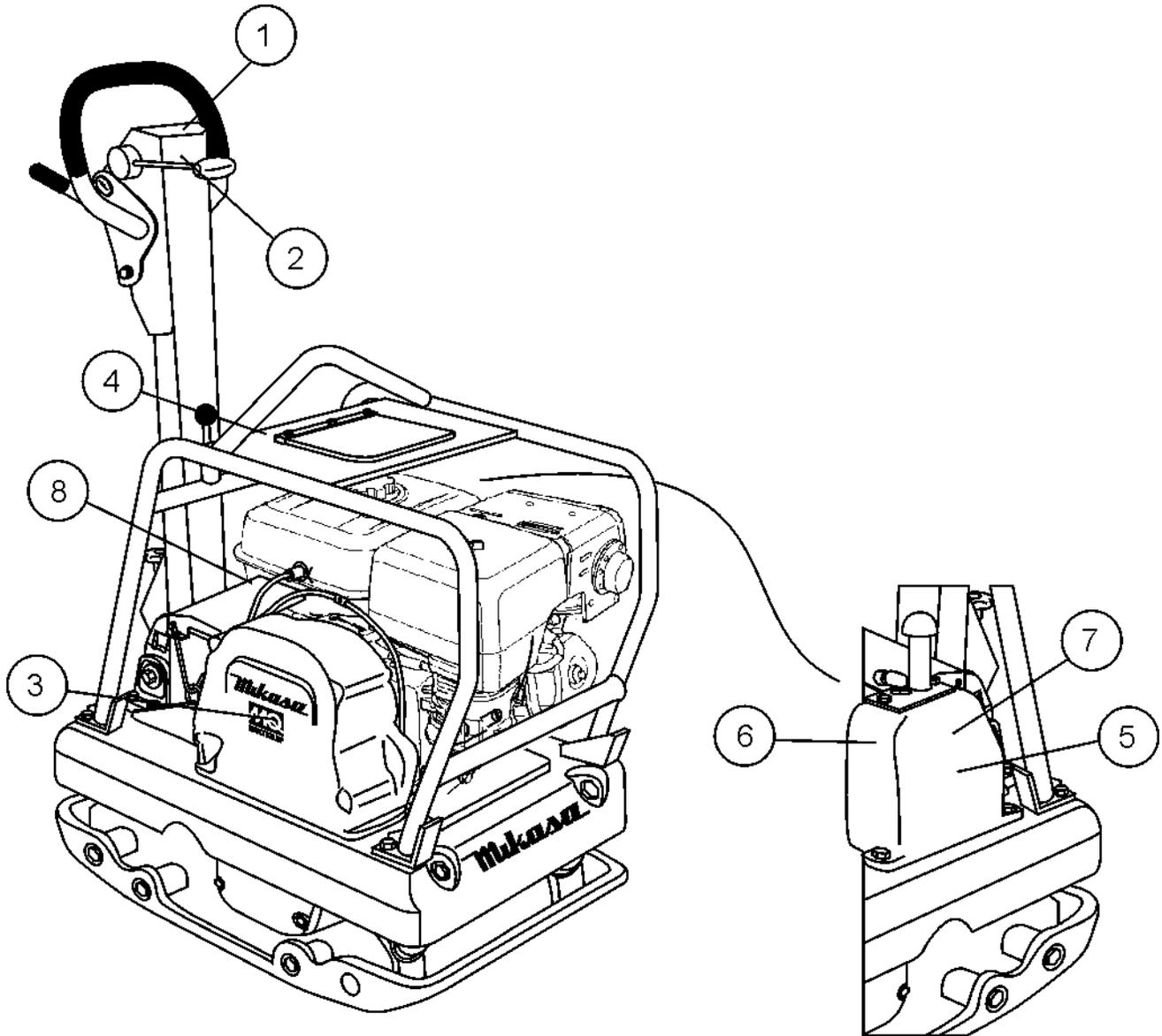
## MVH-402GHB with HONDA GX390K1SMX2 ENGINE

### *1 to 3 Units*

Qty. ....	P/N .....	Description
3 .....	070200393 .....	V-BELT
1 .....	956100028 .....	THROTTLE WIRE
3 .....	9807956841 .....	SPARK PLUG
1 .....	17620Z0T814 .....	FUEL CAP
1 .....	17672ZE2W01 .....	FUEL FILTER, FUEL TANK
1 .....	28462ZE3W01 .....	ROPE, RECOIL STARTER
3 .....	955000010 .....	KEY, IGNITION

# MVH-402GHB — DECAL PLACEMENT

## DECAL PLACEMENT



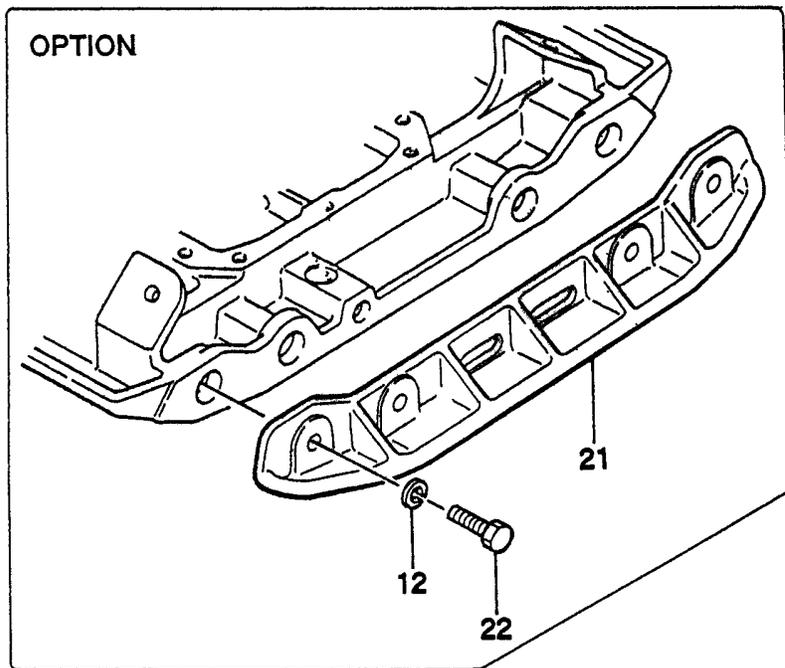
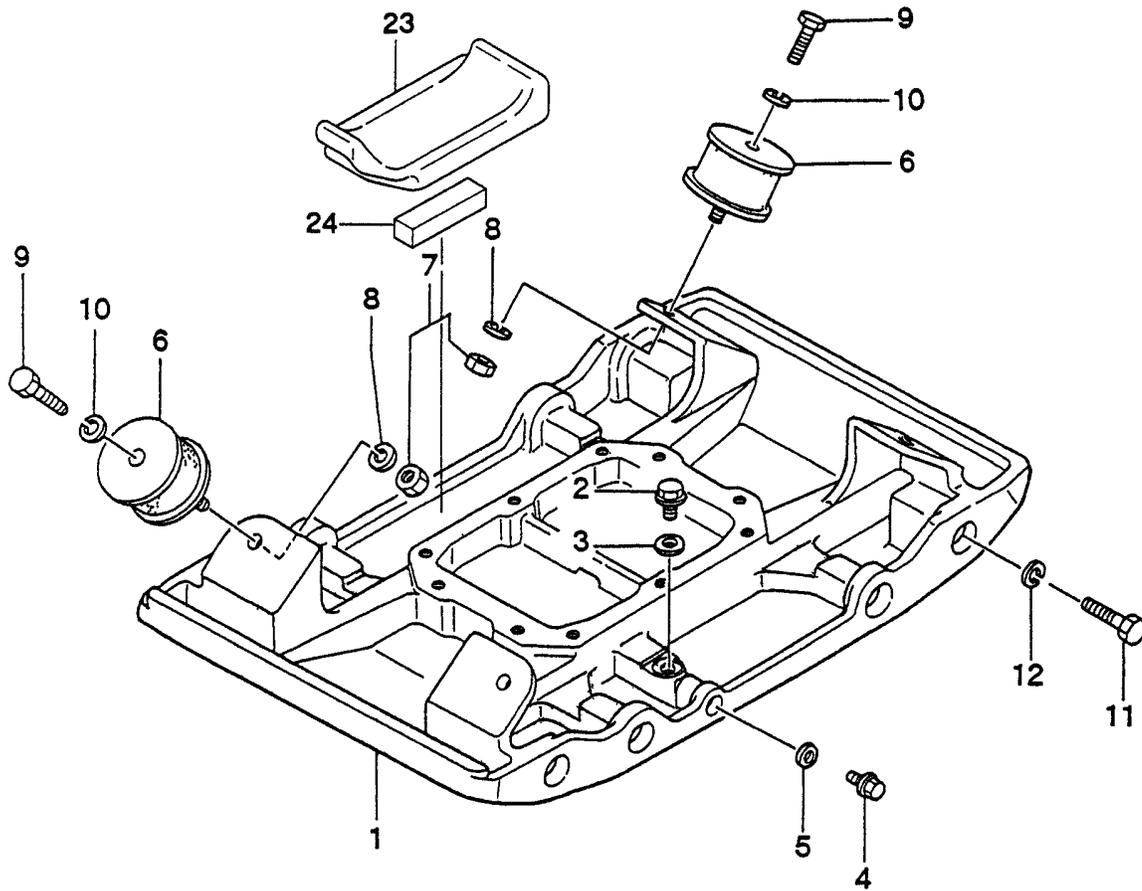
# MVH-402GHB — DECAL PLACEMENT

## DECAL PLACEMENT

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	NPA-458	DECAL, FULL THROTTLE	1	
2	NPA-222	DECAL, FORWARD/REVERSE	1	
3	TBD	DECAL, MULTIQUIP LOGO	1	
4	NPA-538	DECAL, OPERATIONAL CAUTION	1	
5	NPA-748	DECAL, SHELL OIL #46	1	
6	NP-367	DECAL, OIL LEVEL INDICATOR	1	
7	NPA-326	DECAL, OIL TANK	1	
8	NPA-333	DECAL, HEARING PROTECTION	1	

# MVH-402GHB — VIBRATING PLATE ASSY.

VIBRATING PLATE ASSY.



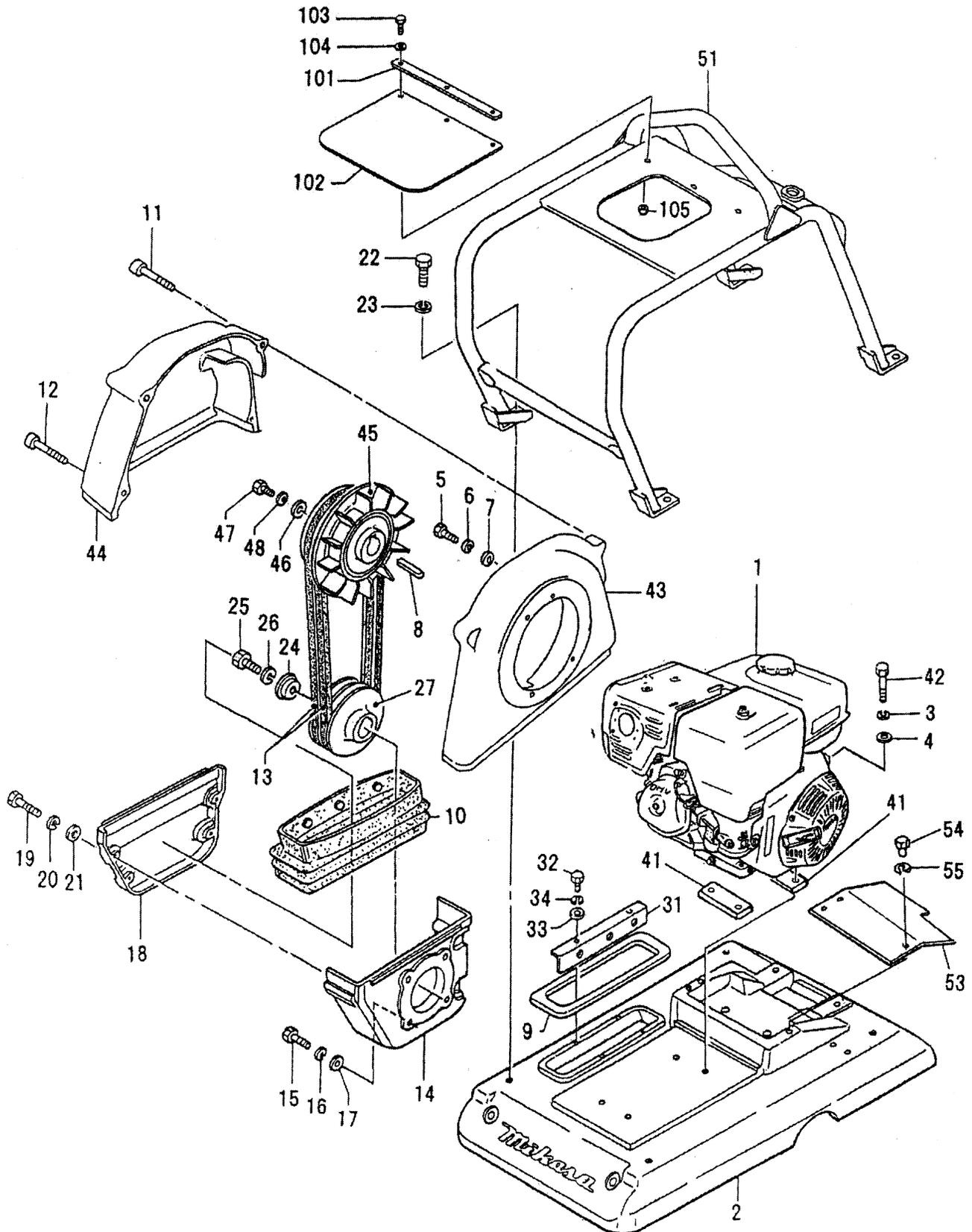
# MVH-402GHB — VIBRATING PLATE ASSY.

## VIBRATING PLATE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	457112370	VIBRATING PLATE	1	
2	953405840	DRAIN PLUG M18 (H)	1	
3	953402930	COPPER PACKING 19X30X1	1	
4	953400270	PLUG 1/4X14 10L	1	
5	953405260	PACKING 1/4 (CU)	1	
6	939010070	SHOCK ABSORBER 100	4	
7	020316130	NUT M16	4	
8	030216400	WASHER, LOCK M16	4	
9	001221655	BOLT 16X75 T	4	
10	030216400	WASHER, LOCK M16	4	
11	001201830	BOLT 18X30	8	
12	030218460	WASHER, FLAT M18	8	
21	456210690	EXTENSION PLATE .....	2	..... OPTION
22	001221850	BOLT 18X50 T .....	8	..... OPTION
23	457215350	BELT COVER GUARD .....	1	..... S/N G1185~
24	457454090	CUSHION, BELT COVER GUARD .....	1	..... S/N G1185~

# MVH-402GHB — BASE AND ENGINE ASSY.

BASE AND ENGINE ASSY.



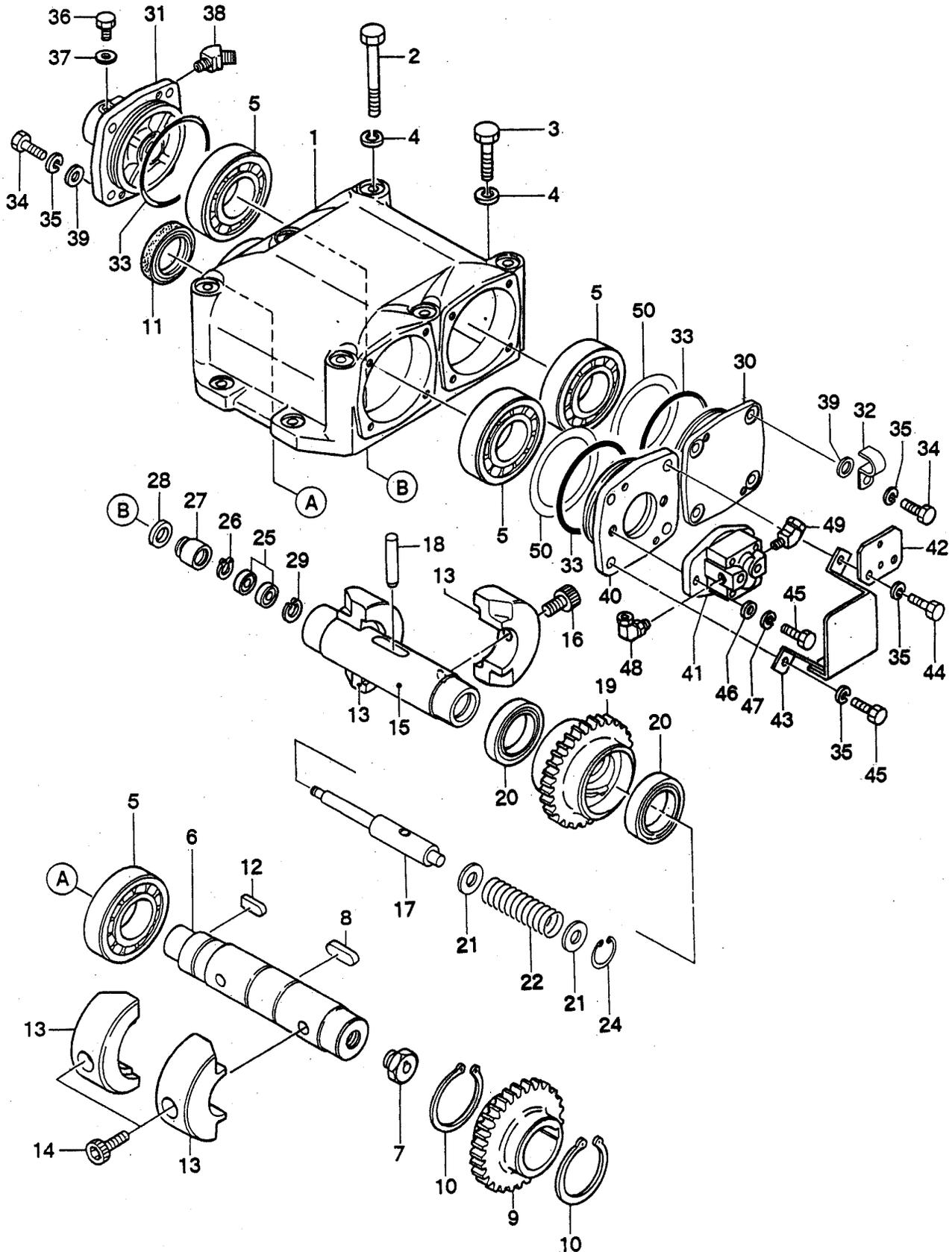
# MVH-402GHB — BASE AND ENGINE ASSY.

## BASE AND ENGINE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	912239007	ENGINE, ASSY GX390K1SMX2	1	
2	457117640	BASE	1	
3	030210250	WASHER, LOCK M10	4	
4	031110160	WASHER, FLAT M10	4	
5	001221025	BOLT 10x25 T	4	
6	030210250	WASHER, LOCK M10	4	
7	031110160	WASHER, FLAT M10	4	
8	951400110	KEY 7x7x35	1	
9	457445880	DUST PACKING	1	
10	457112431	DUST COVER	1	
11	001521056	BOLT, SOCKET HEAD 10x80 T	2	
12	001521058	BOLT, SOCKET HEAD 10x90 T	2	
13	070200393	V-BELT, B-39 GREEN/HPDF539	2	
14	457112440	COVER, BELT (LOWER-IN)	1	
15	001221025	BOLT 10x25 T	4	
16	030210250	WASHER, LOCK M10	4	
17	031110160	WASHER, FLAT M10	4	
18	457212400	COVER, BELT (LOWER-OUT)	1	
19	001220835	BOLT 3x35 T	4	
20	030208200	WASHER, LOCK M8	4	
21	030208160	WASHER, FLAT M8	4	
22	001221430	BOLT 14x30 T	4	
23	030214350	WASHER, LOCK M14	4	
24	456437920	WASHER, PULLEY	1	
25	001221235	BOLT 12x35 T	1	
26	030212300	WASHER, LOCK M12	1	
27	457312300	PULLEY, B2-125/131-68	1	
31	457335980	HOLDER, DUST COVER	1	
32	001220615	BOLT 6x15 T	4	
33	031106100	WASHER, FLAT M6	4	
34	030206150	WASHER, LOCK M6	4	
41	457456670	BASE, ENGINE	2	
42	001221050	BOLT 10x50 T	4	
43	457117610	COVER, BELT	1	
44	457117620	BELT COVER(OUT)	1	
45	457343110	CLUTCH w/FAN	1	
46	952400690	WASHER, 9x35x4.5	1	
47	001220851	BOLT 8x55 T	1	
48	030208200	WASHER, LOCK M8	1	
51	457117630	GUARD FRAME	1	
53	001221020	BOLT 10x20 T	1	
54	001221020	BOLT 10x20 T	3	
55	030210250	WASHER, LOCK M10	3	
101	456449950	PLATE, COVER	1	
102	456449960	COVER, RUBBER	1	
103	001220825	BOLT 8x25 T	3	
104	031108160	WASHER, FLAT M8	3	
105	022710809	NUT, NYLON M8	3	

# MVH-402GHB — VIBRATOR ASSY.

## VIBRATOR ASSY.



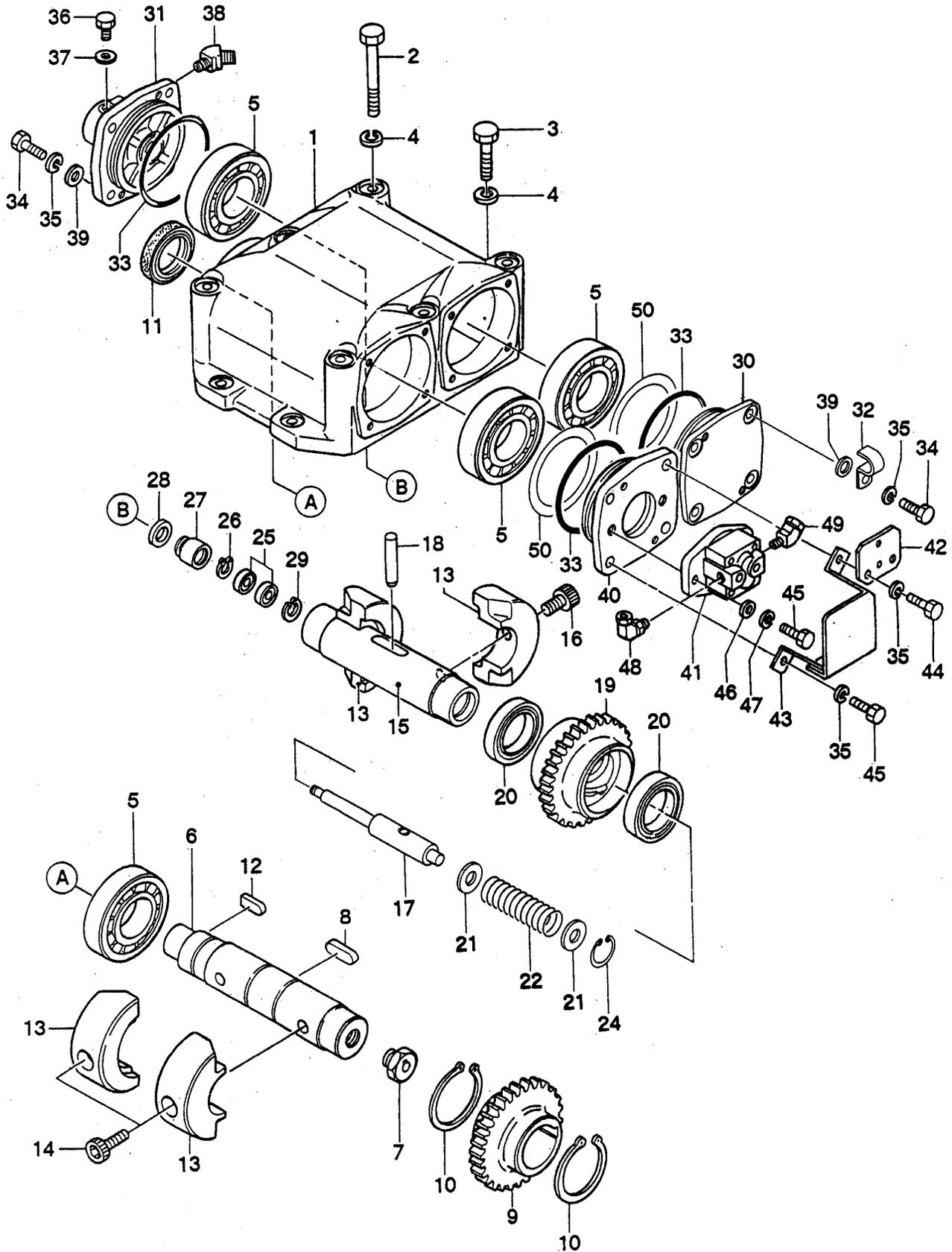
# MVH-402GHB — VIBRATOR ASSY.

## VIBRATOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	457112460	VIBRATING CASE	1	
2	001221470	BOLT 14X150 T	6	
3	001221450	BOLT 14X50 T	4	
4	030214350	WASHER, LOCK M14	10	
5	047920060	ROLLER BEARING NJ310MC4	4	
6	457212410	ROTARY SHAFT, DRIVE	1	
7	457445830	ADAPTER, PUMP	1	
7	457445831	ADAPTER, PUMP (30L)	1	
8	951405370	KEY 15X10X39 RR	1	
9	456327150	GEAR, DRIVE	1	
10	080200550	STOP RING S-55	2	
11	060105030	OIL SEAL SB- 50729	1	
12	951404970	KEY 12X8X30 R	1	
13	457332420	ECCENTRIC ROTOR	4	
14	009120301	SOCKET HEAD BOLT 16X40T	2	
15	456337670	ROTARY SHAFT, DRIVEN	1	
16	009120302	SOCKET HEAD BOLT 16X30T	2	
17	456337380	PISTON ROD	1	
18	456010010	KNOCK PIN 10X70	1	
19	456327120	GEAR, DRIVEN	1	
20	040006911	BEARING 6911	2	
21	455435020	COLLAR 17X30X3	2	
22	456451280	SPRING 3.2-26.3-102L	1	
24	080100300	STOP RING R- 30	1	
25	042506000	BEARING 6000ZZSG	2	

# MVH-402GHB — VIBRATOR ASSY. (CONTINUED)

VIBRATOR ASSY.



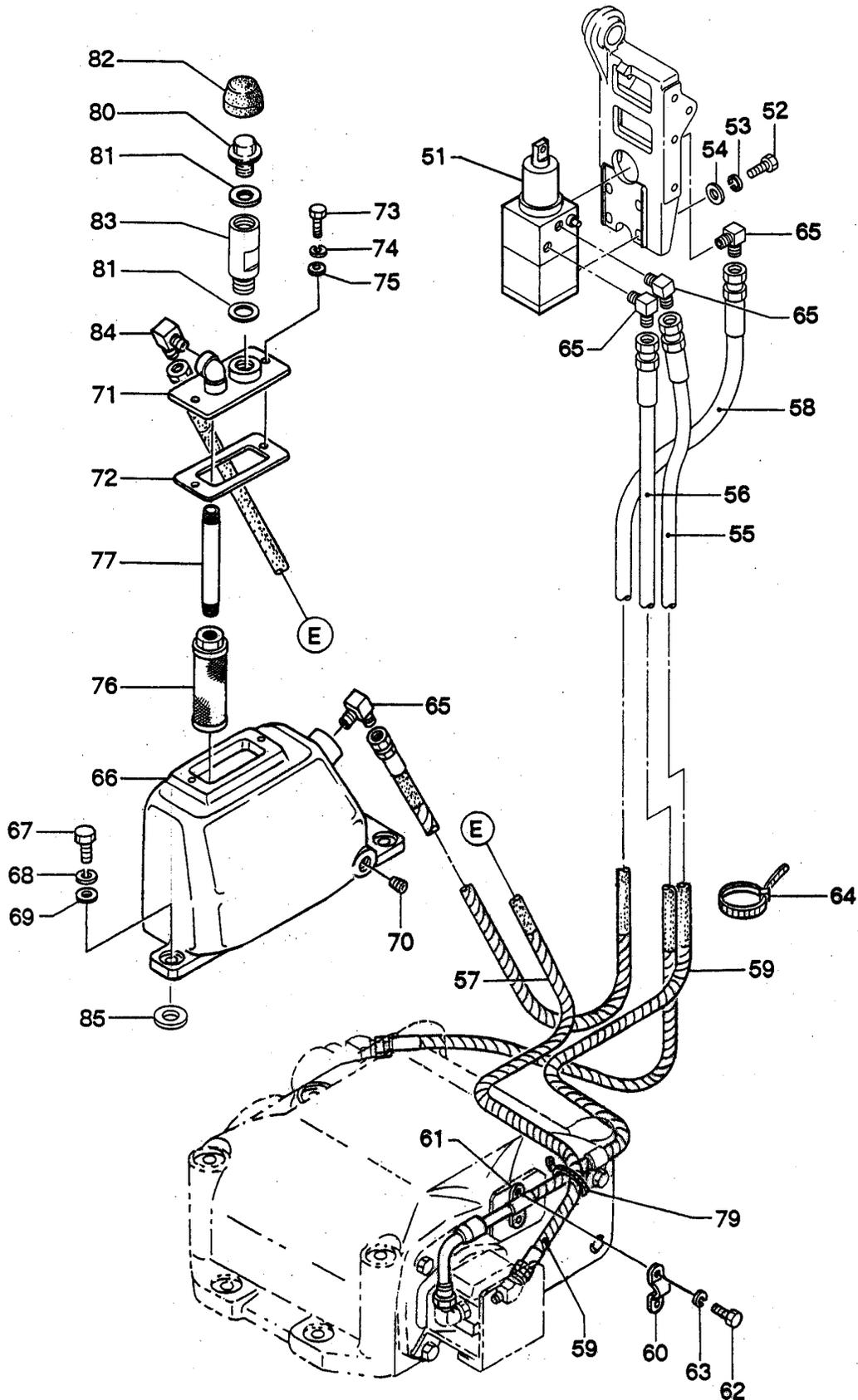
# MVH-402GHB — VIBRATOR ASSY. (CONTINUED)

## VIBRATOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
26	080200100	STOP RING S-10	1	
27	455435051	PISTON,22.4D	1	
28	455010070	PACKING USH- 22.4X30X5	1	
29	080100260	STOP RING R-26	1	
30	456327130	BEARING COVER	1	
31	456210646	CYLINDER (R)	1	
32	954405550	CLAMP 15R	1	
33	050101050	O-RING G-105	3	
34	001221025	BOLT 10X25 T	7	
35	030210250	WASHER, LOCK M10	12	
36	001220812	BOLT 8X12 T	1	
37	953404600	COPPER PACKING 8X16X2	1	
38	455010020	ELBOW 45 15-0404	1	
39	031110160	WASHER, FLAT M10	7	
40	457332430	FLANGE, PUMP	1	
41	457010010	PUMP FBL	1	
42	457445840	BRACKET, CLAMP	1	
43	457212420	PUMP COVER	1	
44	001221035	BOLT 10X35 T	2	
45	001221030	BOLT 10X30 T	5	
46	952405540	WASHER 10.5- 22- 3	2	
47	030210250	WASHER, LOCK M10	2	
48	954010140	ELBOW 90 UES90G02G02	1	
49	954001780	ELBOW 45 PF3/8- PF1/4	1	
50	952405470	SHIM 90X110X0.5	2	

# MVH-402GHB — HYDRAULIC SYSTEM ASSY.

HYDRAULIC SYSTEM ASSY.



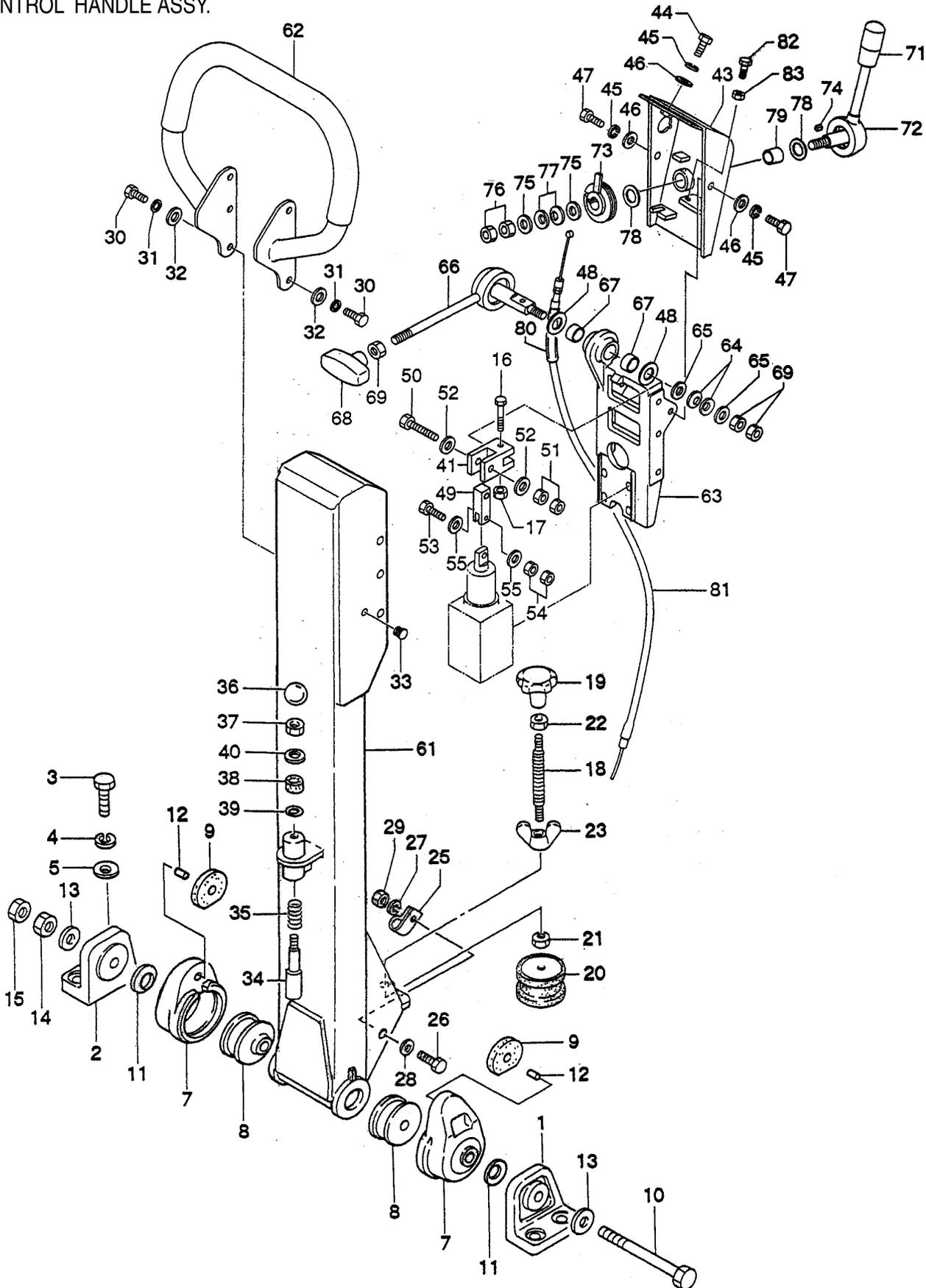
# MVH-402GHB — HYDRAULIC SYSTEM ASSY.

## HYDRAULIC SYSTEM ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
51	456337880	SELECTOR VALVE (DETENT)	1	
52	001220615	BOLT 6X15 T	4	
53	030206150	WASHER, LOCK M6	4	
54	031106100	WASHER, FLAT M6	4	
55	457446180	OIL HOSE 1370L	1	
56	457446190	OIL HOSE 1150L	1	
57	457451750	OIL HOSE IB105- L820	1	
58	457446210	OIL HOSE 1100L	1	
59	955404271	SPIRAL TUBE, SR15- 850L	2	
60	954403060	CLAMP HC- 40	1	
61	954403070	CLAMP SPACER HC- 40	1	
62	001220612	BOLT 6X12 T	2	
63	030206150	WASHER, LOCK M6	2	
64	506010070	CLAMP TC- 150	1	
65	954001160	ELBOW 90 PT1/4- PF1/4	4	
66	457112470	OIL TANK	1	
67	001221030	BOLT 10X30 T	3	
68	030210250	WASHER, LOCK M10	3	
69	031110160	WASHER, FLAT M10	3	
70	505015380	PLUG PT1/4	1	
71	457332440	COVER, OIL TANK	1	
72	457445870	PACKING, OIL TANK	1	
73	001220820	BOLT 8X20 T	2	
74	030208200	WASHER, LOCK M8	2	
75	031108160	WASHER, FLAT M8	2	
76	456449280	FILTER, OIL TANK	1	
77	457445861	JOINT 80L	1	
79	506010060	CLAMP TC- 350	2	
80	457448680	BREATHING PLUG	1	
81	953400020	PACKING 19302	2	
82	457448380	BREATHER CAP	1	
83	457451740	BREATHER JOINT	1	
84	551010630	ELBOW PT1/4- PF3/8 1034- 06	1	
85	953402941	COPPER PACKING 13.5X21X1	3	

# MVH-402GHB — CONTROL HANDLE ASSY.

CONTROL HANDLE ASSY.



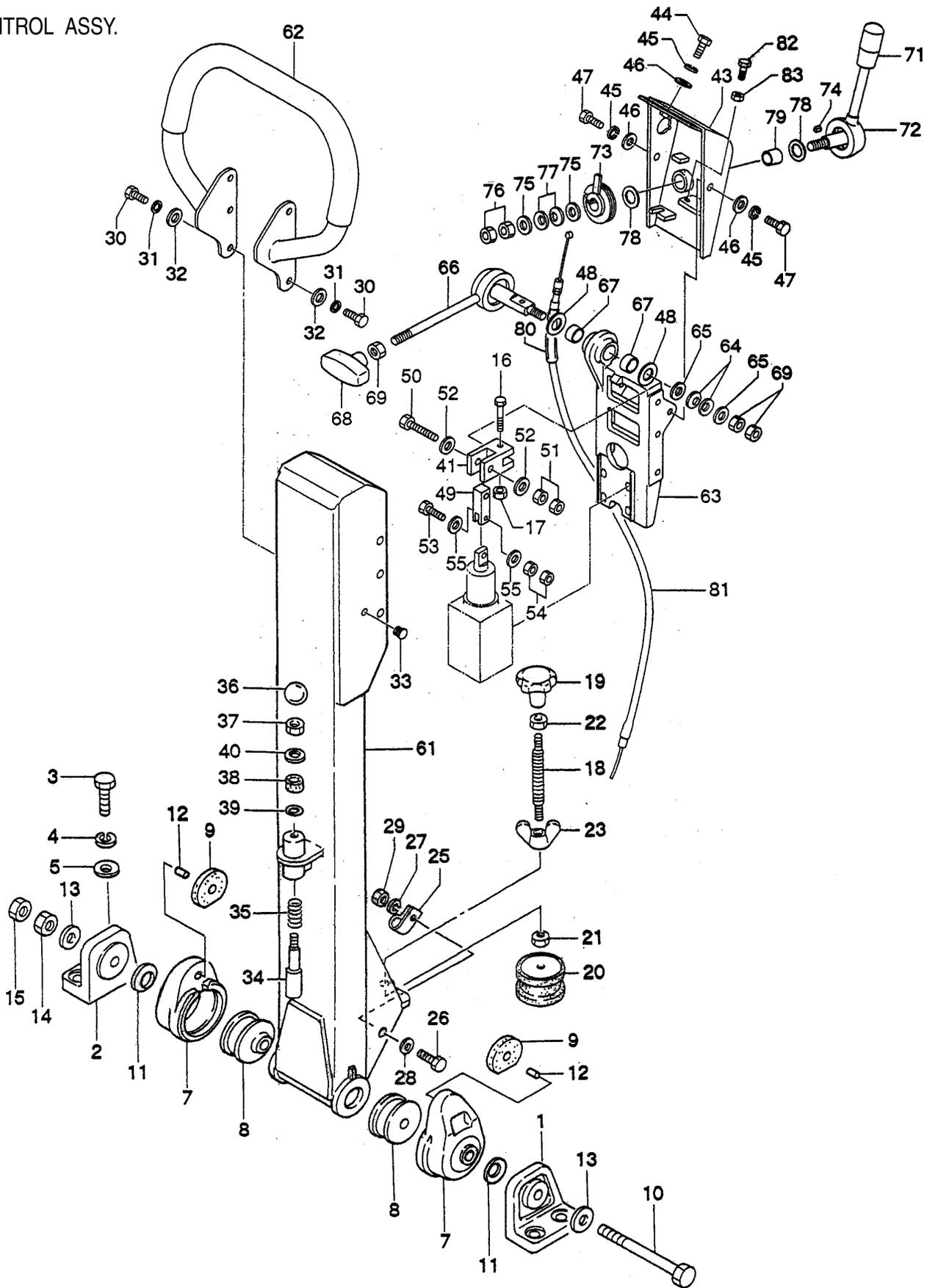
# MVH-402GHB — CONTROL HANDLE ASSY.

## CONTROL HANDLE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARK</u>
1	456336410	HANDLE BRACKET (L)	1	
2	456336420	HANDLE BRACKET (R)	1	
3	001221235	BOLT 12X35 T	4	
4	030212300	WASHER, LOCK M12	4	
5	031112230	WASHER, FLAT M12	4	
7	456336400	RUBBER COUPLING	2	
8	456449940	SHOCK ABSORBER	2	
9	456449930	RUBBER PLATE	2	
10	001221681	BOLT 16X250 T	1	
11	032124400	CONICAL SPRING WASHER M24	2	
12	025406016	SPRING PIN 6X16	2	
13	031116260	WASHER, FLAT M16	2	
14	020316130	NUT M16	1	
15	020416100	NUT M16, H=10	1	
16	001220640	BOLT 6X40 T	1	
17	020306050	NUT M6	1	
18	455434950	SPINDLE	1	
19	455010030	KNOB	1	
20	939010060	SHOCK ABSORBER 60	1	
21	020410060	NUT, M10 H=6	1	
22	020412070	NUT, M12 H=7	1	
23	022411635	WING NUT M16	1	
25	954404230	CLAMP SA120- 18	1	
26	001220620	BOLT 6X20 T	1	
27	030206150	WASHER, LOCK M6	1	
28	031106100	WASHER, FLAT M6	1	
29	020306050	NUT M6	1	
30	001220825	BOLT 8X25 T	6	
31	030208200	WASHER, LOCK M8	6	
32	031108160	WASHER, FLAT M8	6	
33	953401580	PLUG	1	
34	501402870	HANDLE STOPPER	1	
35	501402880	SPRING/ HANDLE (1.4X18X44)	1	
36	959403460	BALL GRIP 32D- M10	1	
37	020410060	NUT M10, H=6	1	
38	456449980	RUBBER PACKING 9D- 20D- 5T	1	
39	953405260	PACKING 1/4 (CU)	1	
40	031110160	WASHER, FLAT M10	1	
41	456450760	JOINT	1	

# MVH-402GHB — CONTROL ASSY.

CONTROL ASSY.



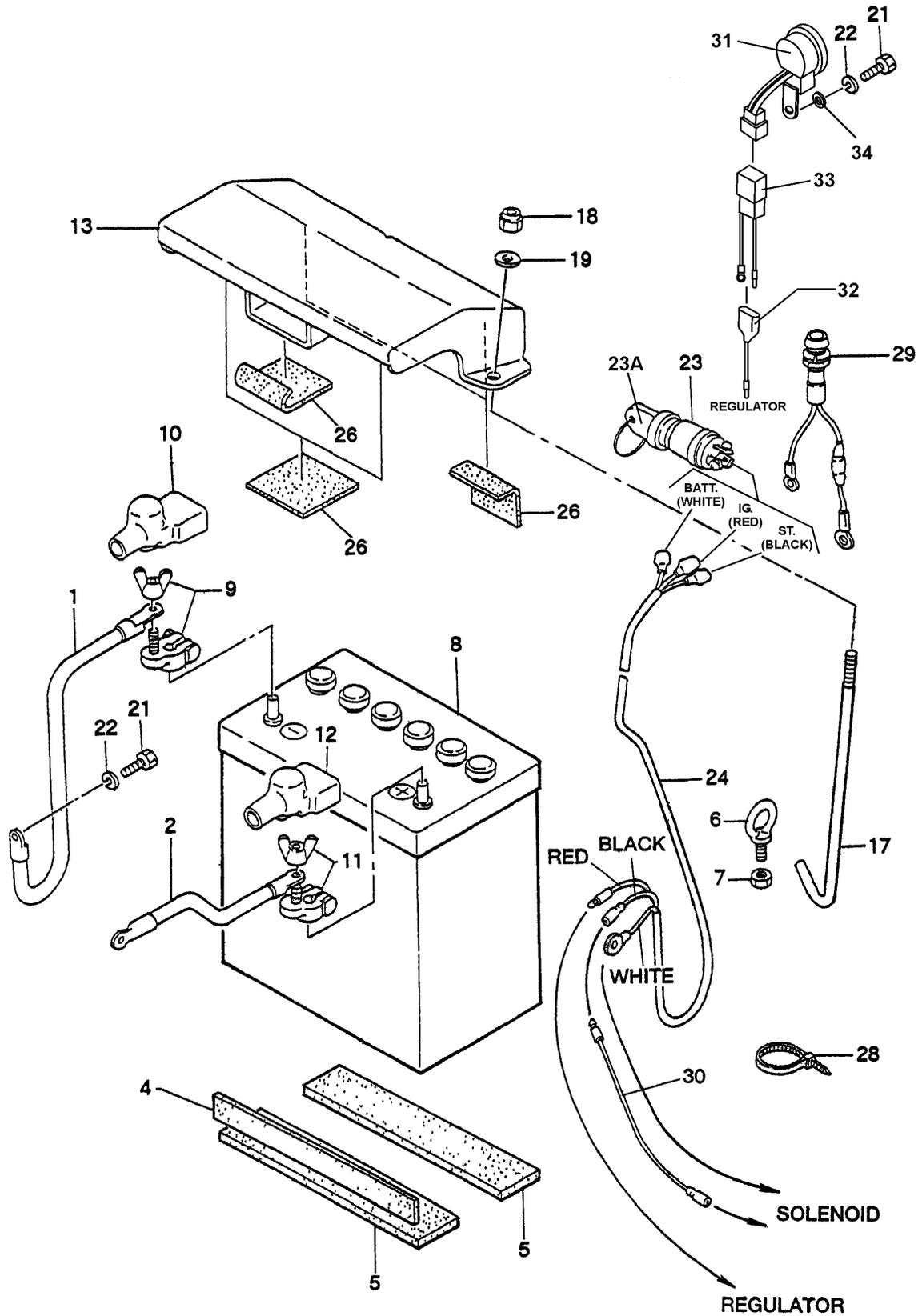
# MVH-402GHB — CONTROL ASSY. (CONTINUED)

CONTROL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
43	456214360	LEVER BRACKET .....	1	#1 -1538
43	456214720	LEVER BRACKET .....	1	*1 G1539-
44	001220820	BOLT 8X20 T	1	
45	030208200	WASHER, LOCK M8	3	
46	031108160	WASHER, FLAT M8	3	
47	001220815	BOLT 8X15 T	2	
48	033910020	THRUST WASHER 20 - 36 - 1.5T	2	
49	457445910	CLEVIS /MVH- 400	1	
50	001220850	BOLT 8X50 T	1	
51	020308060	NUT M8	2	
52	031108160	WASHER, FLAT M8	2	
53	001220630	BOLT 6X30	1	
54	02030650	NUT M6	2	
55	031106100	WASHER, FLAT M6	2	
61	456114841	HANDLE	1	
62	456214220	HANDLE GRIP	1	
62	456214222	HANDLE GRIP	1	
63	456214210	VALVE BRACKET	1	
64	032112220	CONICAL SPRING WASJER M12	2	
65	456451400	WASHER 12.2-27-0.6T	2	
66	456337400	TRAVEL LEVER	1	
67	608010090	BUSHING MB2015DU	2	
68	457332480	GRIP, TRAVEL LEVER	1	
69	020412070	NUT M12	3	
71	959403840	BAR GRIP ID 12MM	1	
72	456337690	THROTTLE LEVER	1	
73	456451290	WIRE GUIDE .....	1	UP TO S/N G1538
73	456452070	WIRE GUIDE .....	1	S/N G1539~
74	951401431	KEY 5X5X8	1	
75	031112230	WASHER, FLAT M12	2	
76	020412070	NUT M12	2	
77	032112220	CONICAL SPRING WASHER M12	2	
78	953402930	COPPER PACKING 19X30 X1	2	
79	509010130	BUSHING MB1825DU	1	
80	959021624	TUBE 8-13-150L	1	
81	956100046	THROTTLE WIRE 710-1980	1	
82	001820830	BOLT 8X30 T WHOLE THREAD .....	1	S/N G1539~
83	020308060	NUT M8 .....	1	S/N G1539~

# MVH-402GHB — BATTERY ASSY.

## BATTERY ASSY.



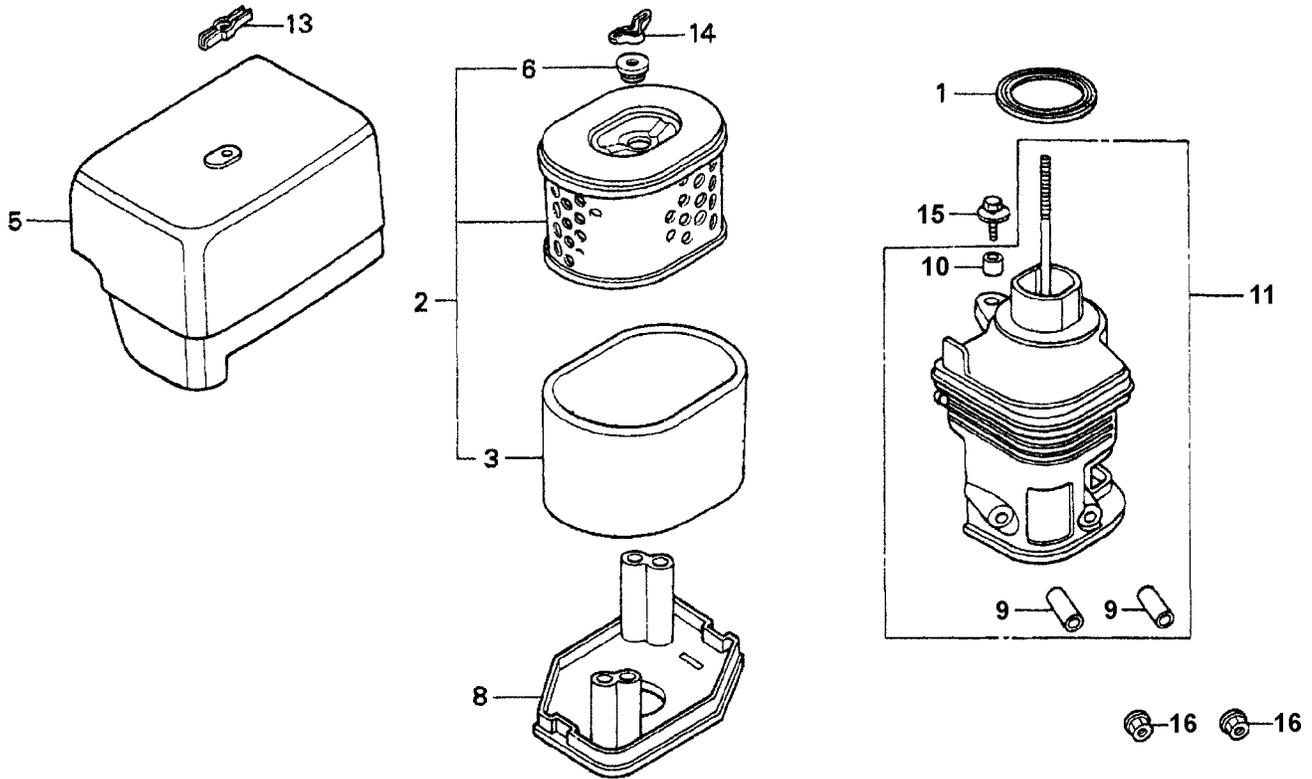
# MVH-402GHB — BATTERY ASSY.

## BATTERY ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	456438080	BATTERY CORD (-) 370L	1	
2	456438090	BATTERY CORD (+) 200L	1	
4	456447590	RUBBER PLATE (E) 28X240X5	1	
5	456447600	RUBBER PLATE 50X240X10	2	
6	959403830	EYE BOLT M10X18	2	
7	020310080	NUT M10	2	
8	955010020	BATTERY 46B24L	1	
9	955404130	BATTERY TERMINAL (-)	1	
10	955300220	TERMINAL COVER (BLACK)	1	
11	955300480	BATTERY TERMINAL (+)	1	
12	955300210	TERMINAL COVER (RED)	1	
13	456210660	BATTERY COVER	1	
17	457445890	BATTERY BOLT	2	
18	022710809	NYLON NUT M8	2	
19	031108160	WASHER, FLAT M8	2	
21	001220815	BOLT 8X15 T	1	
22	030208200	WASHER, LOCK M8	1	
23	955300680	KEY SWITCH .....	1	REPLACES 457333310 S/N J1821~
23A	955000010	KEY, STARTER SWITCH .....	1	S/N J1821~
24	456439070	WIRE CP	1	
26	959406070	RUBBER PLATE 3-50-60	5	
28	454010020	CLAMP TC-100	2	
29	456447960	LAMP AY, CTL-904	1	
30	456451530	READ CORD, L90	1	
31	955300400	BUZZER	1	
32	515450380	WIRE HARNESS	1	
33	10519878570	HARNESS (C), WIRE	1	
34	031106100	WASHER, LOCK	1	

# HONDA GX390K1SMX2 ENGINE — AIR CLEANER ASSY.

AIR CLEANER ASSY.



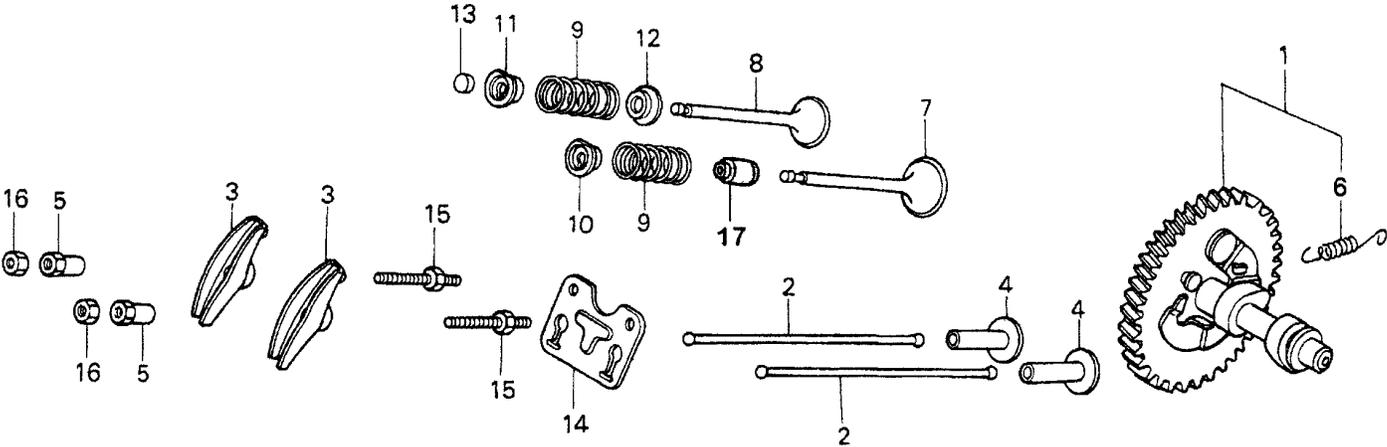
# HONDA GX390K1SMX2 ENGINE — AIR CLEANER ASSY.

AIR CLEANER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	16271ZE2010	GASKET, ELBOW	1	
2	17210ZE3010	ELEMENT, AIR CLEANER .....	1	INCLUDES ITEMS W/#
3#	17218ZE3000	FILTER, OUTER	1	
5	17231ZE3W01	COVER, AIR CLEANER	1	
6#	17232891000	GROMMET, AIR CLEANER	1	
8	17235ZH9N00	NOSE, SILENCER	1	
9*	17238ZE2310	COLLAR, AIR CLEANER	2	
10*	17239ZE1000	COLLAR B, AIR CLEANER	1	
11	17410ZH9N00	ELBOW, AIR CLEANER .....	1	INCLUDES ITEMS W/*
13	90203ZA0800	WINGNUT, 6MM	1	
14	90325044000	NUT, WING	1	
15	90009ZE2003	BOLT- WASHER 6X22	1	
16	9405006000	NUT, FLANGE 6MM	2	

# HONDA GX390K1SMX2 ENGINE — CAMSHAFT ASSY.

CAMSHAFT ASSY.

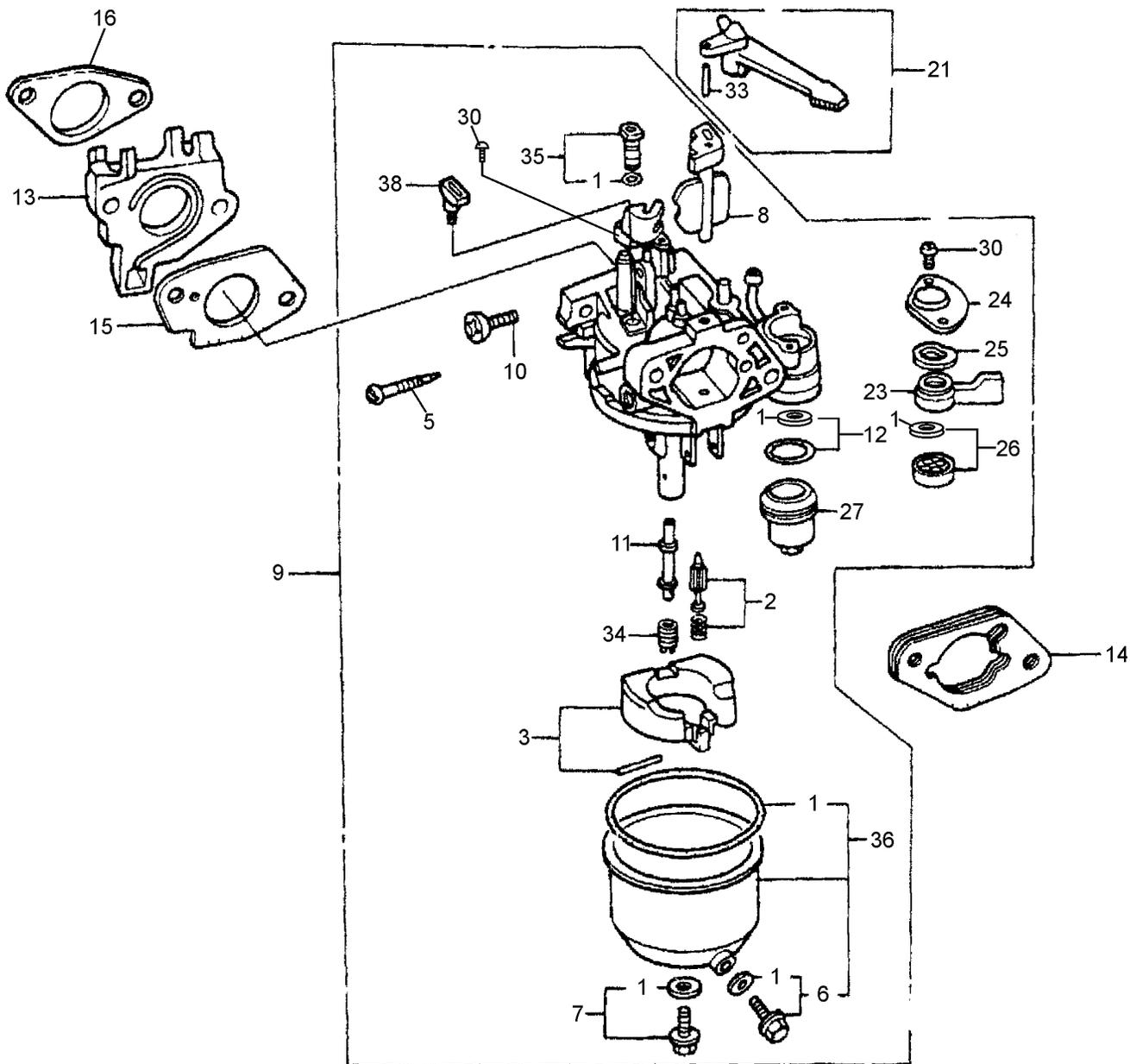


# HONDA GX390K1SMX2 ENGINE — CAMSHAFT ASSY.

## CAMSHAFT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	14100ZF6W01	CAMSHAFT ASSEMBLY .....	1	INCLUDES ITEMS W/*
2	14410ZE3013	ROD, PUSH	2	
3	14431ZE2010	ARM, VALVE ROCKER	2	
4	14441ZE2000	LIFTER, VALVE	2	
5	14451ZE1013	PIVOT, ROCKER ARM	2	
6*	14568ZE1000	SPRING, WEIGHT RETURN	1	
7	14711ZE3000	VALVE, INTAKE	1	
8	14721ZE3000	VALVE, EXHAUST	1	
9	14751ZE2003	SPRING, VALVE	2	
10	14771ZE2000	RETAINER, INTAKE VALVE SPRING	1	
11	14773ZE2000	RETAINER, EXHAUST VALVE SPRING	1	
12	14775ZE2010	SEAT, VALVE SPRING	1	
13	14781ZE2000	ROTATOR, VALVE	1	
14	14791ZE2010	PLATE, PUSH ROD GUIDE	1	
15	90012ZE0010	BOLT, PIVOT 8MM	2	
16	90206ZE1000	NUT, PIVOT ADJ.	2	
17	12209ZE8003	SEAL, VALVE STEM	1	

# HONDA GX390K1SMX2 ENGINE — CARBURETOR ASSY.



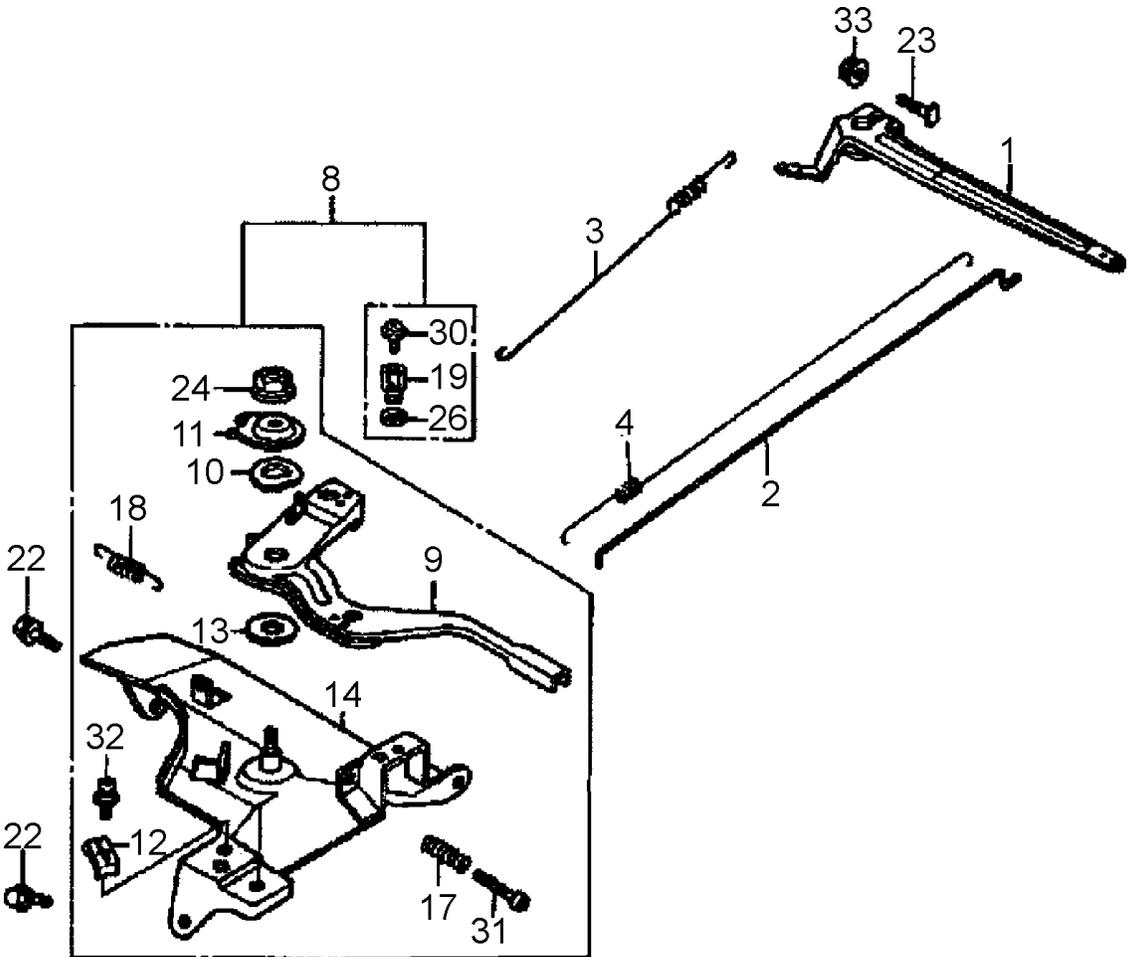
# HONDA GX390K1SMX2 ENGINE — CARBURETOR ASSY.

## CARBURETOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1#%\$>	16010ZE2812	GASKET SET	1	
2*	16011ZA0931	VALVE SET, FLOAT	1	
3*	16013ZA0931	FLOAT SET	1	
5*	16016ZH7W01	SCREW SET	1	
6*%	16024ZE1811	SCREW SET, DRAIN	1	
7*	16028ZE0005	SCREW SET B	1	
8*	16044ZE3W20	CHOKE SET	1	
9	16100ZF6V01	CARBURETOR ASSEMBLY, BE85B B	1	INCLUDES ITEMS W/*
10*	16124ZE0005	SCREW, THROTTLE STOP	1	
11*	16166ZF6V00	NOZZLE, MAIN	1	
12*	16173001004	GASKET, FUEL STRAINER CUP	1	INCLUDES ITEMS W/\$
13	16211ZF6000	INSULATOR, CARBURETOR	1	
14	16220ZA0702	SPACER, CARBURETOR	1	
15	16221ZF6800	GASKET, CARBURETOR	1	
16	16223ZE3W00	GASKET, INSULATOR	1	
21	16610ZE1000	LEVER, CHOKE (STANDARD)	1	INCLUDES ITEMS W/+
23*	16953ZE1812	LEVER, VALVE	1	
24*	16954ZE1812	PLATE, LEVER SETTING	1	
25*	16956ZE1811	SPRING, VALVE LEVER	1	
26*	16957ZE1812	GASKET, VALVE	1	INCLUDES ITEMS W/>
27*	16967ZE0811	CUP, FUEL STRAINER	1	
30*	93500030061H	SCREW, PAN 3X6	2	
33+	9430520122	PIN, SPRING 2X12	1	
34*	99101ZH80880	JET, MAIN #88 (OPTIONAL)	1	
35*	99204ZA00450	JET SET, PILOT #45	1	INCLUDES ITEMS W/#
36*	106015ZE8005	CHAMBER SET FLOAT	1	INCLUDES ITEMS W/%
38*	16172ZE3W10	COLLAR, SET	1	

# HONDA GX390K1SMX2 ENGINE — CONTROL ASSY.

CONTROL ASSY.



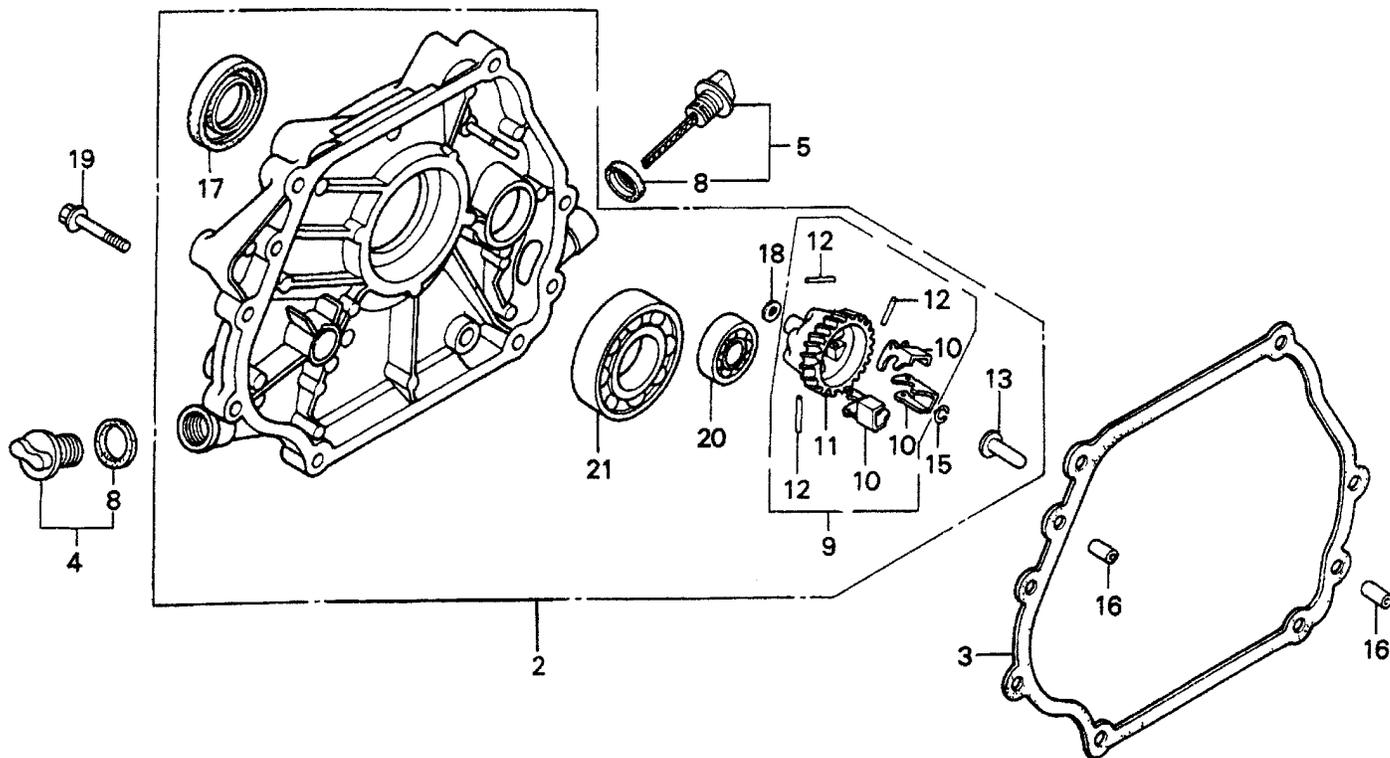
# HONDA GX390K1SMX2 ENGINE — CONTROL ASSY.

## CONTROL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	16551ZE3000	ARM, GOVERNOR	1	
2	16555ZE3000	ROD, GOVERNOR	1	
3	16561ZE3000	SPRING, GOVERNOR	1	
4	16562ZE3000	SPRING, THROTTLE RETURN	1	
8	16570ZE3W10	CONTROL ASSY., REMOTE	1	
9	16571ZE3W00	LEVER, CONTROL	1	
10	16574ZE1000	SPRING, LEVER	1	
11	16575ZE2W00	WASHER, CONTROL LEVER	1	
12	16576891000	HOLDER, CABLE	1	
13	16578ZE1000	SPACER, CONTROL LEVER	1	
14	16581ZE3W00	BASE, CONTROL	1	
17	16584883300	SPRING, CONTROL ADJUSTING	1	
18	16592883310	SPRING, CABLE RETURN	1	
19	16594883010	HOLDER, WIRE	1	
22	90013883000	BOLT, FLANGE (6X12) (CT200)	2	
23	90015ZE5010	BOLT, GOVERNOR ARM	1	
24	90114SA0000	NUT, SELF-LOCK (6MM)	1	
26	90605230000	CIR CLIP	1	
30	93500040060H	SCREW (4X6)	1	
31	93500050320A	PAN SCREW (5X32)	1	
32	93500050160A	SCREW, PAN (5X16)	1	
33	9405006000	NUT, FLANGE (6MM)	1	

# HONDA GX390K1SMX2 ENGINE — CRANKCASE COVER ASSY.

CRANKCASE COVER ASSY.



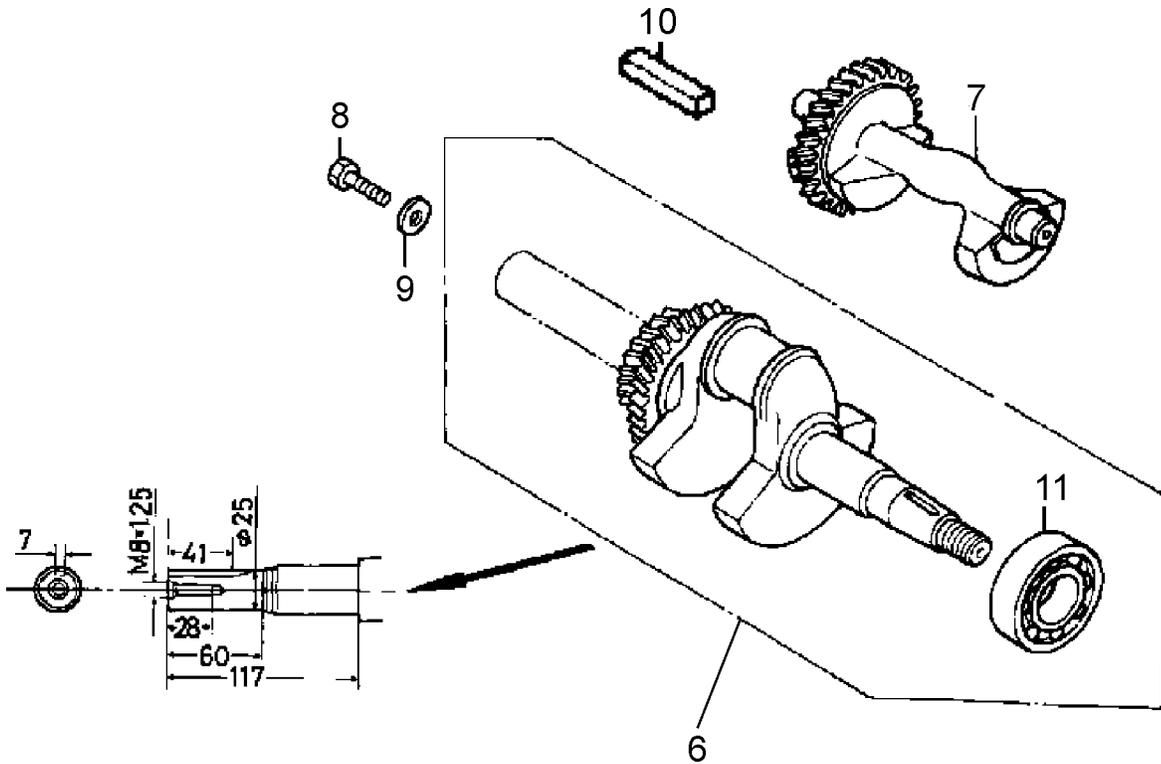
# HONDA GX390K1SMX2 ENGINE — CRANKCASE COVER ASSY.

## CRANKCASE COVER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
2*	11300ZE3040	COVER ASSY., CRANKCASE .....	1	INCLUDES ITEMS W/*
3	11381ZE3801	PACKING, CASE COVER	1	
4	15600ZG4003	CAP ASSEMBLY, OIL FILLER	1	
5	15600735003	CAP ASSEMBLY, OIL FILLER	1	
8	15625ZE1003	GASKET, OIL FILLER CAP	2	
9	16510ZE3000	GOVERNOR ASSEMBLY .....	1	INCLUDES ITEMS W/#
10*#	16511ZE8000	WEIGHT, GOVERNOR	3	
11*#	16512ZE3000	HOLDER, GOVERNOR WEIGHT	1	
12*#	16513ZE2000	PIN, GOVERNOR WEIGHT	3	
13*	16531Z0A000	SLIDER, GOVERNOR	1	
15*	90602ZE1000	CLIP, GOVERNOR HOLDER	1	
16	90701HC4000	PIN, DOWEL 8X12	2	
17*	91201ZE3004	OIL SEAL 36X52X8	1	
18*	9410106800	WASHER, PLAIN 6MM	1	
19	957010804000	BOLT, FLANGE 8X40	7	
20*	961006202000	BEARING, RADIAL BALL 6202	1	
21*	961006207000	BEARING, RADIAL BALL 6207	1	

# HONDA GX390K1SMX2 ENGINE — CRANKSHAFT ASSY.

CRANKSHAFT ASSY.



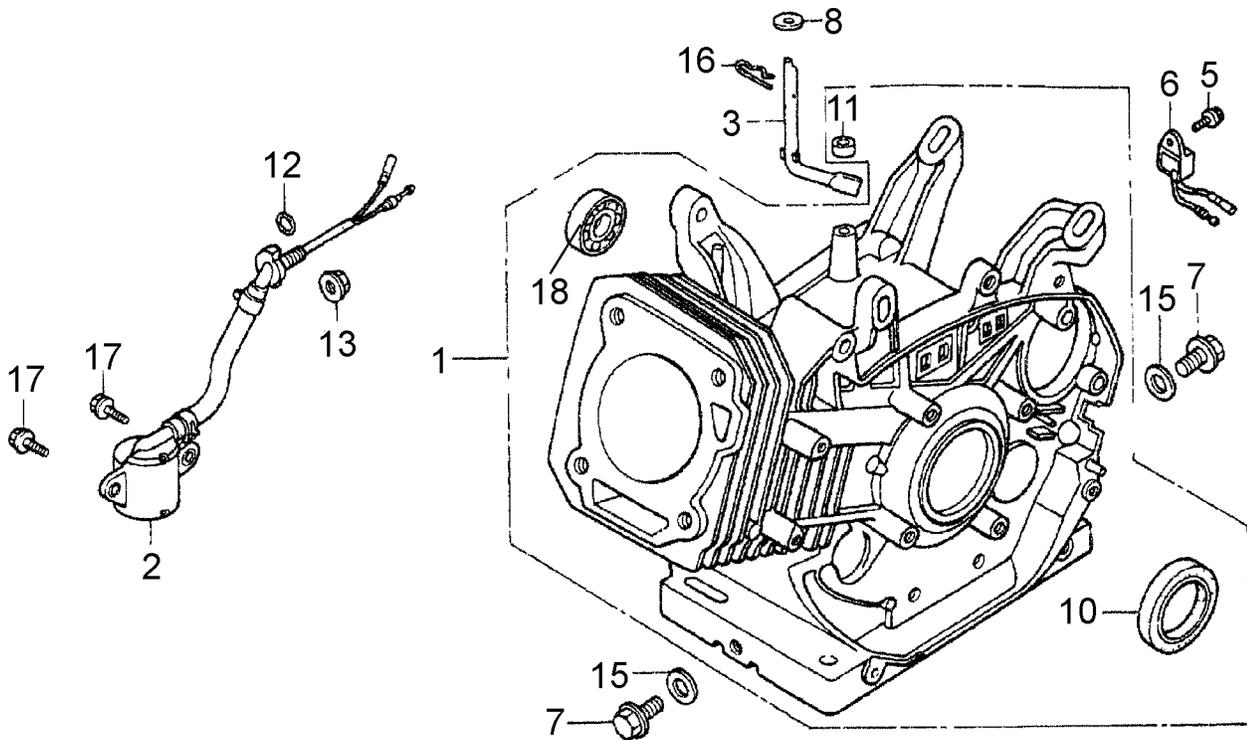
## HONDA GX390K1SMX2 ENGINE — CRANKSHAFT ASSY.

CRANKSHAFT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
6	13310ZF6W70	CRANKSHAFT, Q-TYPE	1	
7	13351ZE3010	WEIGHT, BALANCER	1	
8	92101080250A	BOLT, 8X25	1	
9	90534706010	WASHER, LOCK 8MM	1	
10	90741805000	KEY 7X7X33	1	
11	91001ZF6003	BEARING, RADIAL BALL 6207S	1	

# HONDA GX390K1SMX2 ENGINE — CYLINDER BARREL ASSY.

CYLINDER BARREL ASSY.



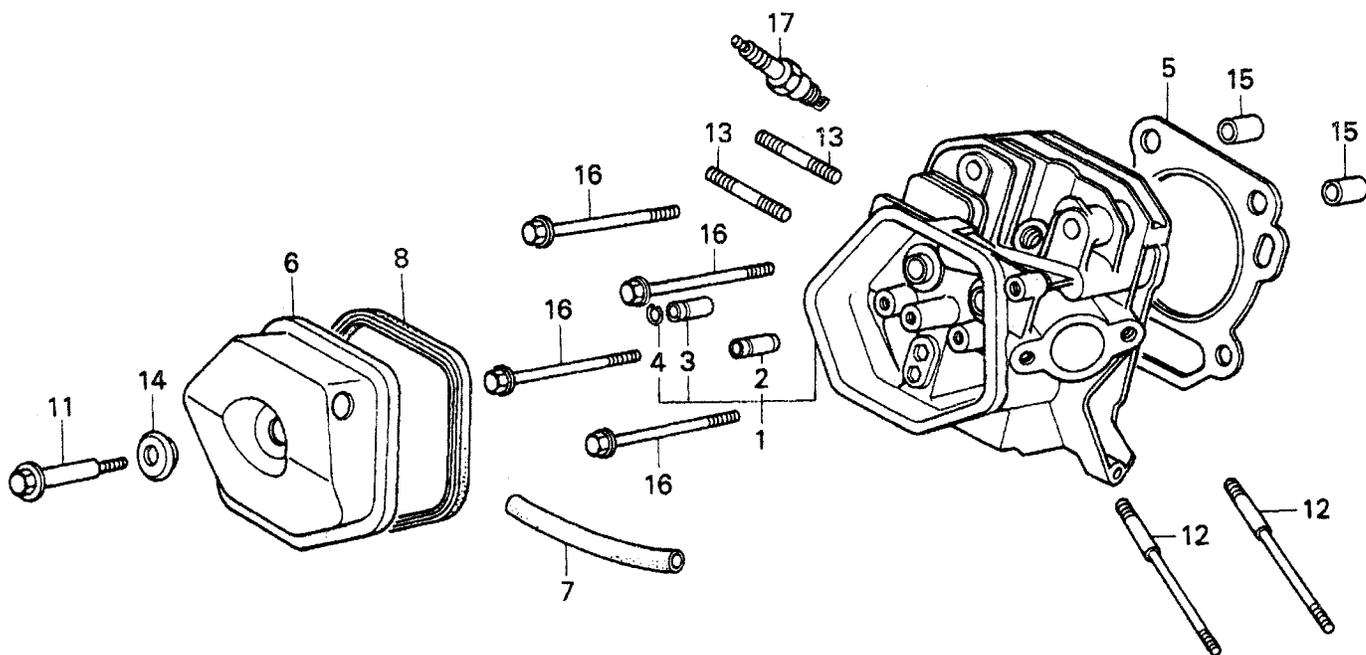
# HONDA GX390K1SMX2 ENGINE — CYLINDER BARREL ASSY.

## CYLINDER BARREL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	12000ZF6W14	BARREL ASSY.,CYLINDER .....	1 .....	INCLUDES ITEMS W/*
2	15510ZE2043	SWITCH ASSY.,OIL LEVEL	1	
3	16541ZE3010	SHAFT, GOVERNOR ARM	1	
5	34150ZH7003	ALERT UNIT, OIL	1	
6	90013883000	BOLT, FLANGE 6X12 (CT200)	1	
7	90131883000	BOLT, DRAIN PLUG	2	
8	90446KE1000	WASHER 8.2X17X0.8	1	
10*	91201ZE3004	OIL SEAL 35X52X8	1	
11*	91203952771	OIL SEAL 8X14X5	1	
12	91353671004	O- RING 14MM	1	
13	9405010000	NUT, FLANGE 10MM	1	
15	9410912000	WASHER, DRAIN PLUG 12MM	2	
16	9425110000	PIN,LOCK 10MM	1	
17	957010601200	BOLT, FLANGE 6X12	2	
18*	96100620200	BEARING, RADIAL BALL 6202	1	

# HONDA GX390K1SMX2 ENGINE — CYLINDER HEAD ASSY.

CYLINDER HEAD ASSY.



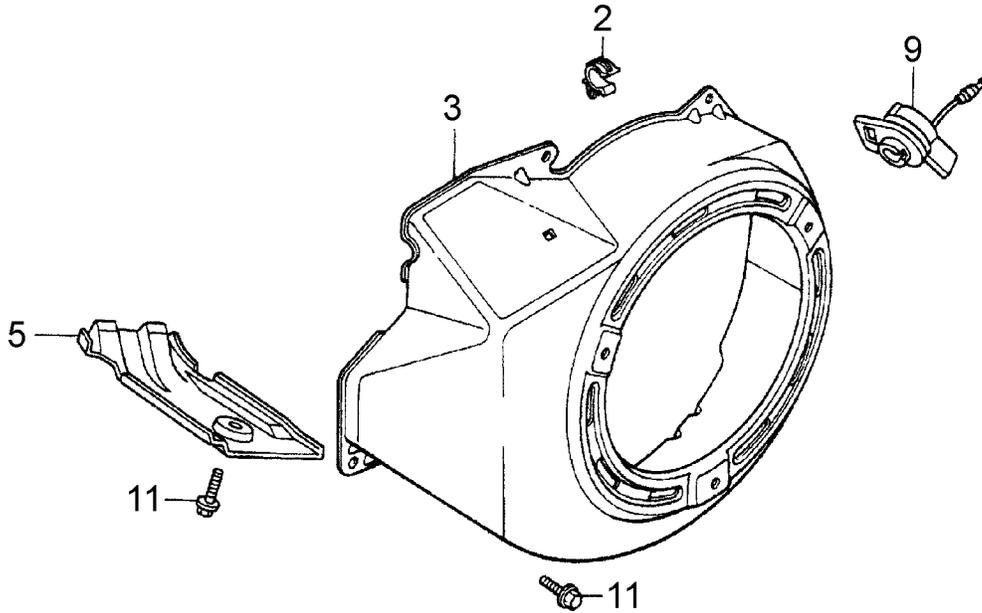
# HONDA GX390K1SMX2 ENGINE — CYLINDER HEAD ASSY.

## CYLINDER HEAD ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	12200ZF6W01	CYLINDER HEAD .....	1	INCLUDES ITEMS W/*
2*	12204ZE2306	GUIDE, VALVE OS (OPTIONAL)	1	
3*	12205ZE2305	GUIDE, EX. VALVE OS (OPTIONAL)	1	
4*	12216ZE2300	CLIP, VALVE GUIDE	1	
5	12251ZF6W00	GASKET, CYLINDER HEAD	1	
6	12310ZE2020	COVER, HEAD	1	
7	950051110530	TUBE (11X1000) (11X105)	1	
8	12391ZE2020	GASKET, CYLINDER HEAD COVER	1	
11	90014ZE2000	BOLT, HEAD COVER	1	
12	90042ZE8000	BOLT, STUD 8X31.5	2	
13	92900080320E	BOLT 2, STUD 8X32	2	
14	90441ZE2010	WASHER, HEAD COVER	1	
15	9430112200	PIN A, DOWEL 12X20	2	
16	957011008000	BOLT, FLANGE 10X80	4	
16	957251008000	BOLT, FLANGE 10X80	4	
17	9807956841	SPARK PLUG BP6ES (NGK)	1	
17	9807956854	SPARK PLUG W20EP-U (DENSO)	1	

# HONDA GX390K1SMX2 ENGINE — FAN COVER ASSY.

FAN COVER ASSY.



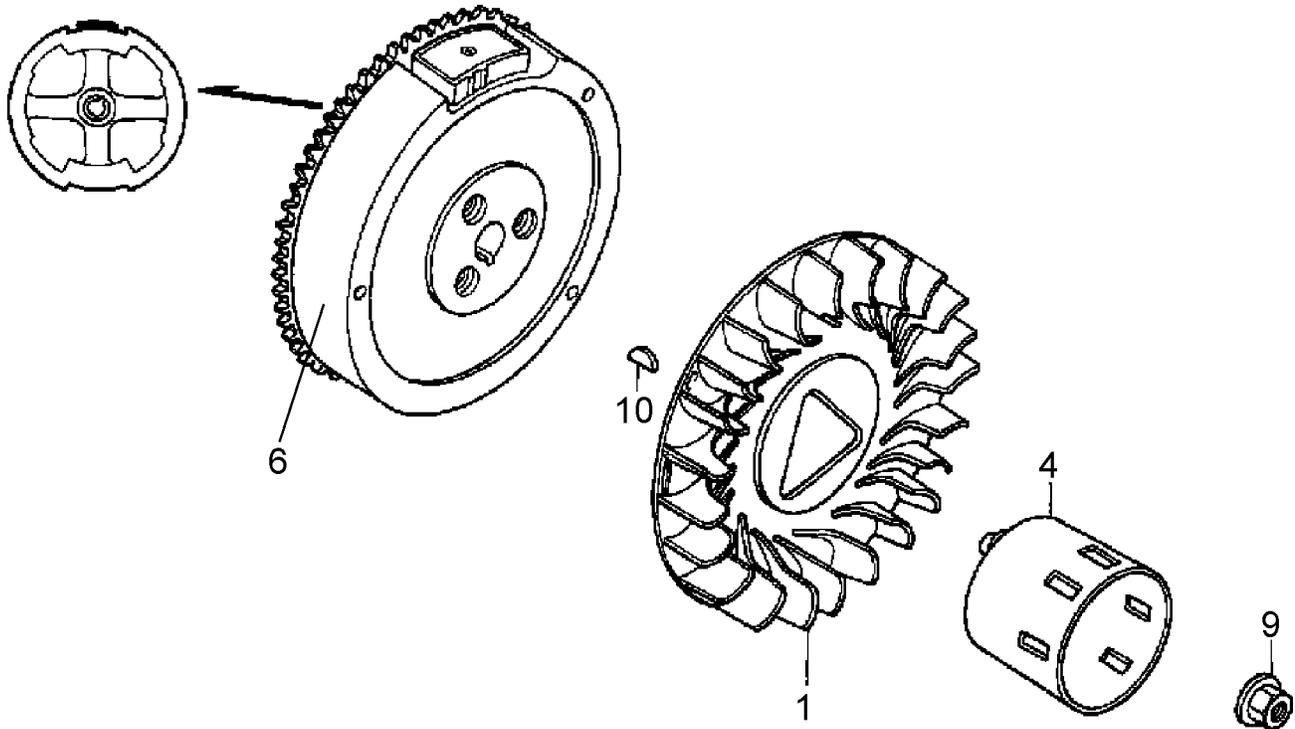
# HONDA GX390K1SMX2 ENGINE — FAN COVER ASSY.

FAN COVER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
2	16731ZE2003	CLIP, TUBE	1	
3	19610ZE3010ZB	COVER, FAN *NH1* BLACK	1	
5	19631ZE3W00	SHROUD	1	
9	36100ZH7003	SWITCH ASSEMBLY, ENGINE STOP	1	
11	90013883000	BOLT, FLANGE 6X12 (CT200)	6	

# HONDA GX390K1SMX2 ENGINE — FLYWHEEL ASSY.

FLYWHEEL ASSY.



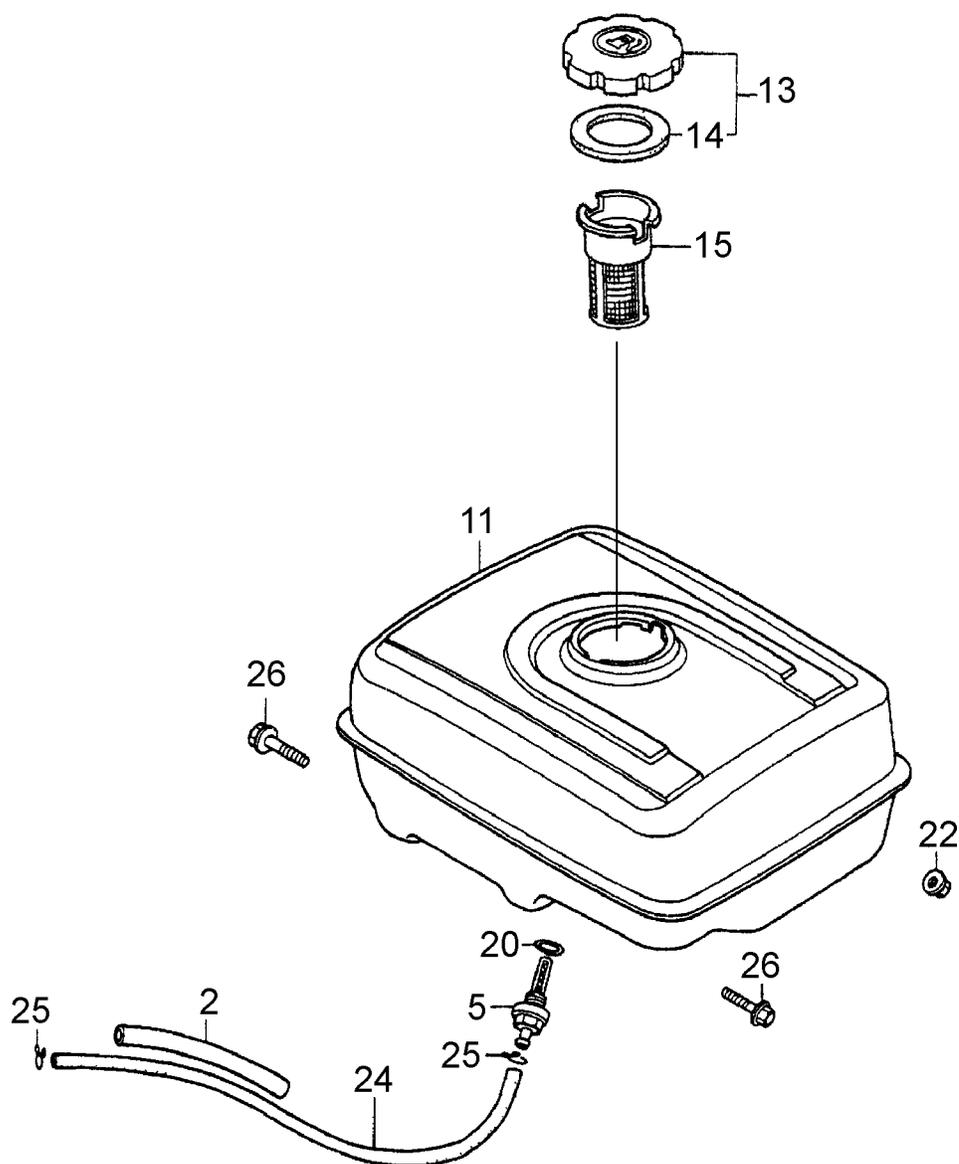
# HONDA GX390K1SMX2 ENGINE — FLYWHEEL ASSY.

FLYWHEEL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	19511ZE3000	FAN, COOLING	1	
4	28450ZE3W11	PULLEY, STARTER (SCREEN GRID)	1	
6	31100ZE3701	FLYWHEEL	1	
9	90201ZE3V00	NUT, SPECIAL 16MM (1)	1	
10	90741ZE2000	KEY, SPECIAL WOODRUFF 25X18	1	

# HONDA GX390K1SMX2 ENGINE — FUEL TANK ASSY.

FUEL TANK ASSY.



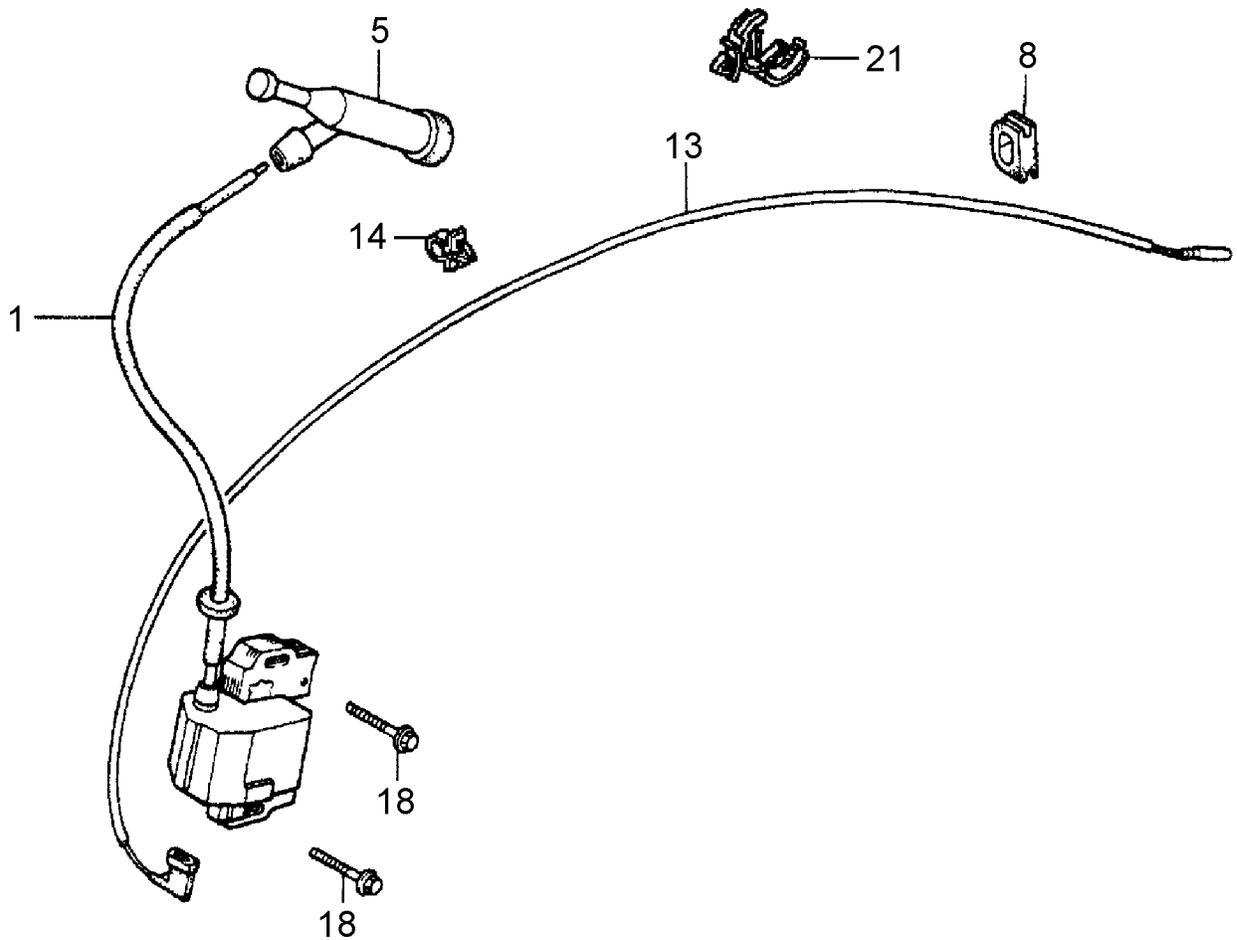
# HONDA GX390K1SMX2 ENGINE — FUEL TANK ASSY.

## FUEL TANK ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
2	16854ZH8000	RUBBER, SUPPORTER 107MM	1	
5	16955ZE1000	JOINT, FUEL TANK	1	
11	17510ZE3010ZB	TANK, FUEL *NH1* (BLACK)	1	
13	17620Z0T814	CAP, FUEL TANK .....	1	INCLUDES ITEM W/*
14*	17631Z0T812	PACKING	1	
15	17672ZE2W01	FUEL FILTER	1	
20	91353671004	O- RING 14MM	1	
22	9405008000	NUT, FLANGE 8MM	2	
24	950014523540	TUBE, FUEL (4.5X3000) (4.5X235)	1	
25	9500202080	CLIP, TUBE B8	2	
26	957010802500	BOLT, FLANGE 8X25	2	

# HONDA GX390K1SMX2 ENGINE — IGNITION COIL ASSY.

IGNITION COIL ASSY.



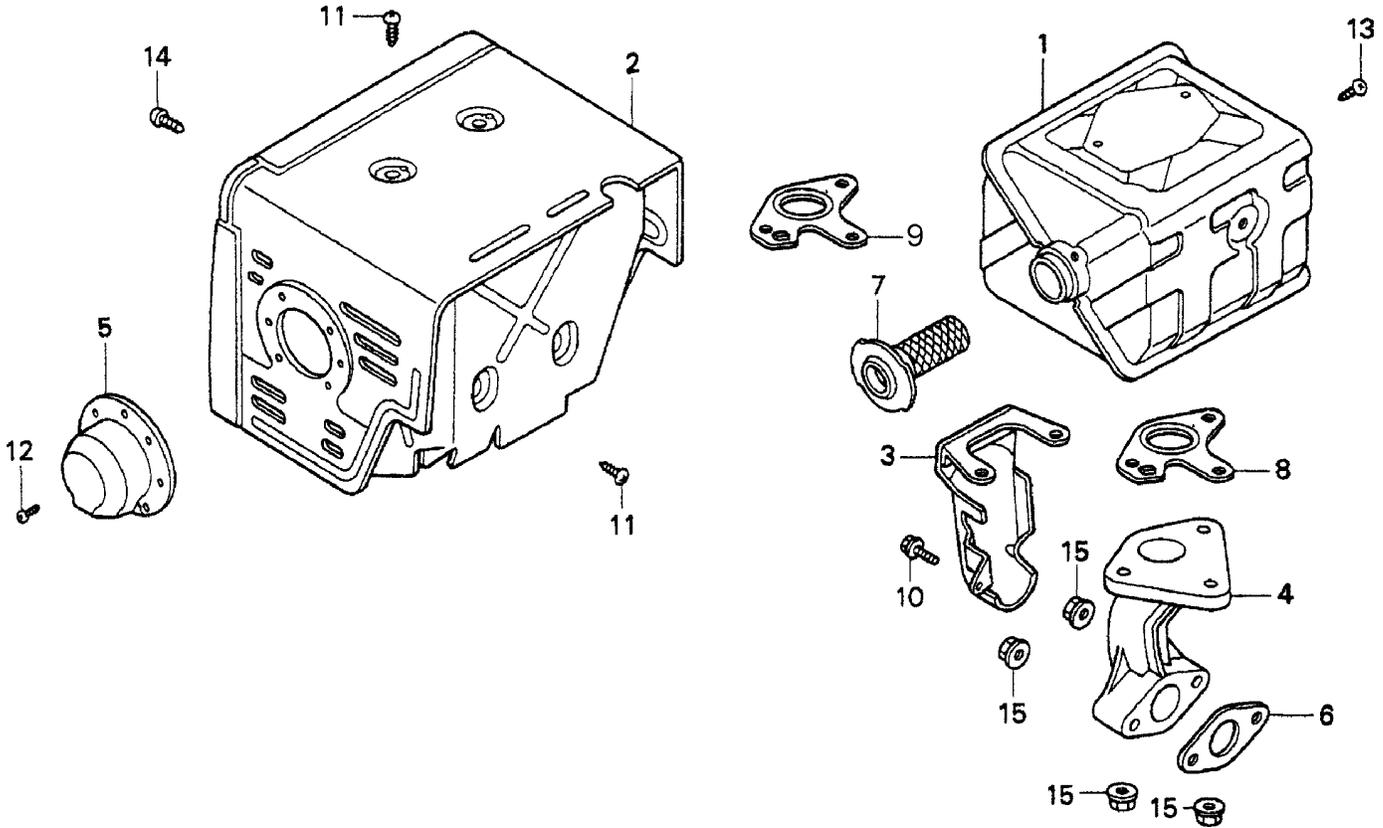
# HONDA GX390K1SMX2 ENGINE — IGNITION COIL ASSY.

## IGNITION COIL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	30500ZF6W02	COIL ASSY., IGNITION	1	
5	30700ZE1013	CAP ASSY.,	1	
8	31512ZE2000	GROMMET, WIRE	1	
13	36101ZE2701	WIRE, STOP SWITCH 430MM	1	
14	36103ZE1000	HOLDER, STOP SWITCH CORD	1	
18	90015883000	BOLT, FLANGE 6X28	2	
21	90684ZA061	CLIP, HARNESS	1	

# HONDA GX390K1SMX2 ENGINE — MUFFLER ASSY.

MUFFLER ASSY.



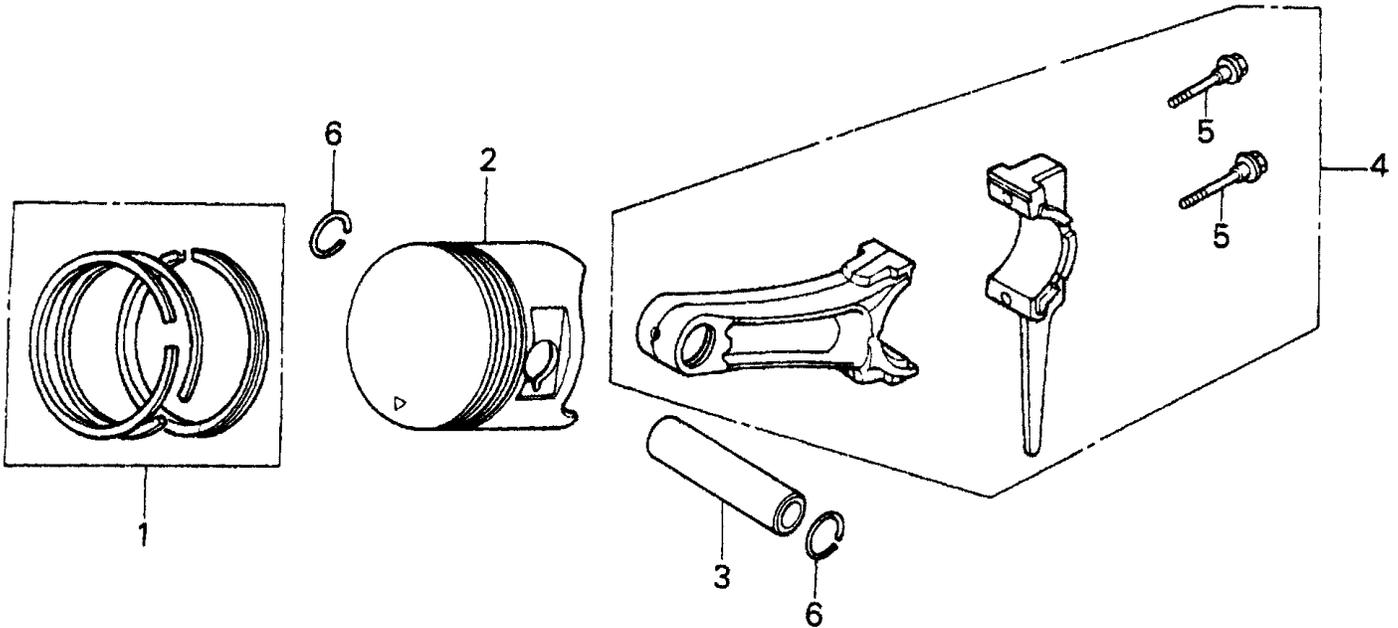
## HONDA GX390K1SMX2 ENGINE — MUFFLER ASSY.

### MUFFLER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	18310ZE2W61	MUFFLER 100DB	1	
2	18320ZE2W61	PROTECTOR, MUFFLER	1	
3	18323ZE3W40	PROTECTOR, EXHAUST PIPE	1	
4	18330ZE2W00	PIPE, EXHAUST	1	
5	18331ZE3810	CAP, MUFFLER	1	
6	18333ZF6W01	GASKET, EXHAUST PIPE	1	
7	18355ZE2W00	ARRESTER, SPARK	1	
8	18381ZE2W10	GASKET, MUFFLER (ARRESTER)	1	
9	18381ZE2800	GASKET EX	1	
10	90013883000	BOLT, FLANGE 6X12 (CT200)	1	
11	90050ZE1000	SCREW, TAPPING 5X8	4	
13	90055ZE1000	SCREW, TAPPING 4X6	3	
14	90006ZE2000	SCREW, TAPPING 6X10	1	
15	9405008000	NUT, FLANGE 8MM	5	

# HONDA GX390K1SMX2 ENGINE — PISTON ASSY.

PISTON ASSY.



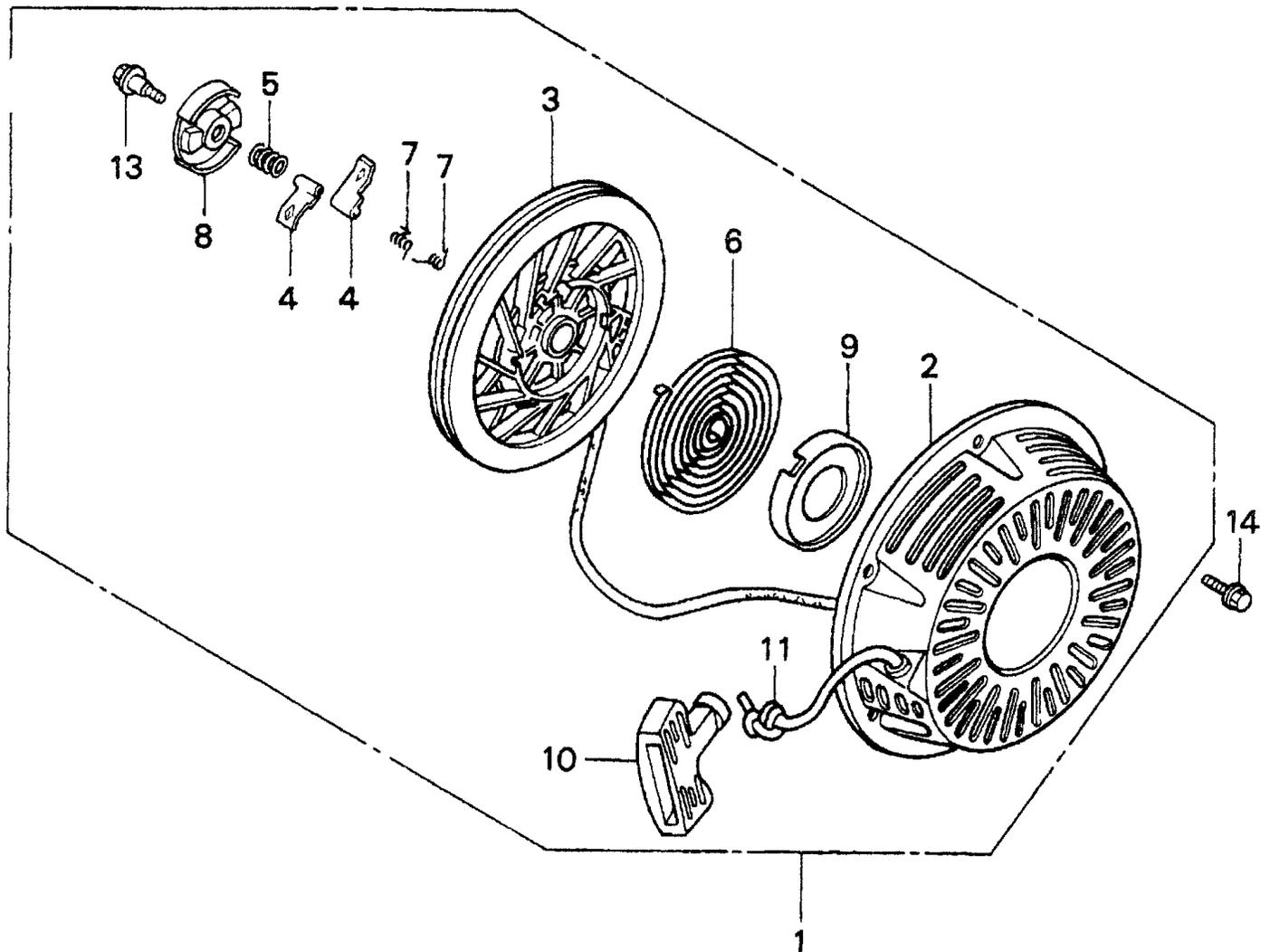
# HONDA GX390K1SMX2 ENGINE — PISTON ASSY.

PISTON ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	13010ZF6003	RING SET, PISTON (STD.)	1	
1	13011ZF6003	RING SET, PISTON (OS 0.25), OPT.	1	
1	13012ZF6003	RING SET, PISTON (OS 0.50), OPT.	1	
1	13013ZF6003	RING SET, PISTON (0.75) NIPPON, OPT.	1	
2	13101ZF6W00	PISTON (STANDARD)	1	
2	13102ZF6W00	PISTON (OS 0.25), OPTIONAL	1	
2	13103ZF6W00	PISTON (OS 0.50), OPTIONAL	1	
2	13104ZF6W00	PISTON (0.75), OPTIONAL	1	
3	13111ZF6W00	PIN, PISTON	1	
4	13200ZE3010	ROD ASSY., CONNECTING (STD.) .....	1	INCLUDES ITEMS W/*
4	13200ZE3315	ROD ASSY., CONNECTING (US 0.25), OPT. .	1	INCLUDES ITEMS W/*
5*	90001ZE8000	BOLT, CONNECTING ROD	2	
6	90601ZE3000	CLIP, PISTON PIN 20MM	2	

# HONDA GX390K1SMX2 ENGINE — RECOIL STARTER ASSY.

RECOIL STARTER ASSY.



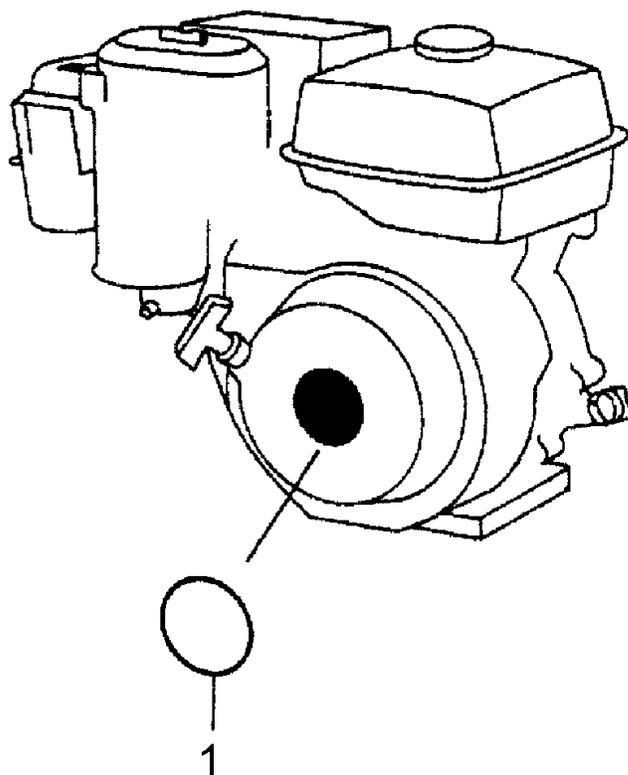
# HONDA GX390K1SMX2 ENGINE — RECOIL STARTER ASSY.

## RECOIL STARTER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	28400ZE3W01ZB	STARTER ASSY., RECOIL *NH1*, BLACK.....	1 .....	INCLUDES ITEMS W/*
2*	28410ZE3W01ZB	CASE, RECOIL STARTER *NH1*, BLACK	1	
3*	28421ZE3W01	PULLEY, RECOIL STARTER	1	
4*	28422ZE2W01	RATCHET, STARTER	2	
5*	28441ZE2W01	SPRING, FRICTION	1	
6*	28442ZE2W01	SPRING, STARTER RETURN	1	
7*	28443ZE2W01	SPRING, RATCHET	2	
8*	28444ZE2W01	RETAINER, SPRING	1	
10*	28461ZE2W02	GRIP, STARTER	1	
11*	28462ZE3W01	ROPE, RECOIL STARTER	1	
13*	90004ZE2W01	SCREW, CENTER	1	
14	90008ZE2003	BOLT, FLANGE 6X10	3	

# HONDA GX390K1SMX2 ENGINE — RECOIL STARTER ASSY.

LABELS ASSY.



# HONDA GX390K1SMX2 ENGINE — RECOIL STARTER ASSY.

LABELS ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	87521ZF6W01	EMBLEM	1	

**PAYMENT TERMS**

Terms of payment for parts are net 10 days.

**FREIGHT POLICY**

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

**MINIMUM ORDER**

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

**RETURNED GOODS POLICY**

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

1. A Returned Material Authorization must be approved by Multiquip prior to shipment.
2. To obtain a Return Material Authorization, a list must be provided to Multiquip Parts Sales that defines item numbers, quantities, and descriptions of the items to be returned.
  - a. The parts numbers and descriptions must match the current parts price list.
  - b. The list must be typed or computer generated.
  - c. The list must state the reason(s) for the return.
  - d. The list must reference the sales order(s) or invoice(s) under which the items were originally purchased.
  - e. The list must include the name and phone number of the person requesting the RMA.
3. A copy of the Return Material Authorization must accompany the return shipment.
4. Freight is at the sender's expense. All parts must be returned freight prepaid to Multiquip's designated receiving point.

5. Parts must be in new and resalable condition, in the original Multiquip package (if any), and with Multiquip part numbers clearly marked.

6. The following items are not returnable:

- a. Obsolete parts. (If an item is in the price book and shows as being replaced by another item, it is obsolete.)
- b. Any parts with a limited shelf life (such as gaskets, seals, "O" rings, and other rubber parts) that were purchased more than six months prior to the return date.
- c. Any line item with an extended dealer net price of less than \$5.00.
- d. Special order items.
- e. Electrical components.
- f. Paint, chemicals, and lubricants.
- g. Decals and paper products.
- h. Items purchased in kits.

7. The sender will be notified of any material received that is not acceptable.

8. Such material will be held for five working days from notification, pending instructions. If a reply is not received within five days, the material will be returned to the sender at his expense.

9. Credit on returned parts will be issued at dealer net price at time of the original purchase, less a 15% restocking charge.

10. In cases where an item is accepted, for which the original purchase document can not be determined, the price will be based on the list price that was effective twelve months prior to the RMA date.

11. Credit issued will be applied to future purchases only.

**PRICING AND REBATES**

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

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

**SPECIAL EXPEDITING SERVICE**

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

**LIMITATIONS OF SELLER'S LIABILITY**

Multiquip shall not be liable here under 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.



# OPERATION AND PARTS MANUAL

## **HERE'S HOW TO GET HELP**

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

### **MULTIQUIP'S MAIN PHONE NUMBERS**

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

### **PARTS DEPARTMENT**

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

### **MAYCO PARTS**

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

### **SERVICE DEPARTMENT**

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

### **MQ POWER SERVICE DEPARTMENT**

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

### **TECHNICAL ASSISTANCE**

800-478-1244      FAX: 310-631-5032

### **WARRANTY DEPARTMENT**

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



**MULTIQUIP INC.**  
POST OFFICE BOX 6254  
CARSON, CA 90749  
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