PARTS AND OPERATION MANUAL

Multiquip
Reversible Plate Compactor
Model MVH-120GH

Revision #2 (03/05/01)

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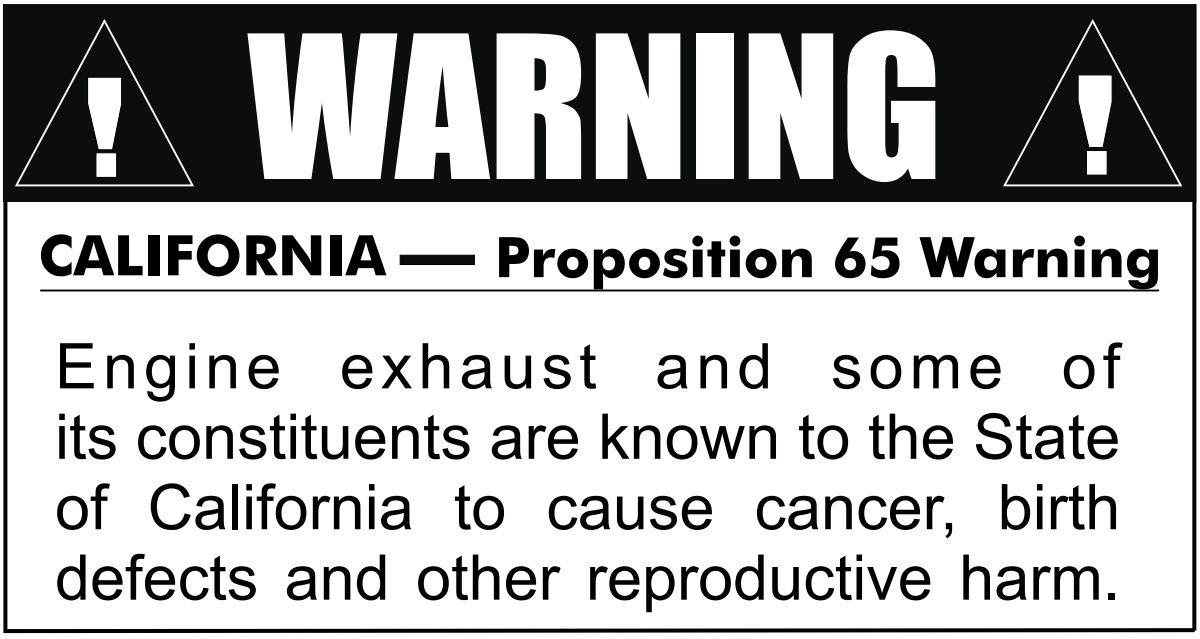
WARNING
CALIFORNIA — Proposition 65 Warning
Engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects and other reproductive harm.

HERE'S HOW TO GET HELP

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

PARTS DEPARTMENT

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

SERVICE DEPARTMENT/TECHNICAL ASSISTANCE

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MAIN

800-421-1244 or 310-537-3700
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Multiquip MVH120GH — Plate Compactor

NOTE

Specification and part number are subject to change without notice.

Honda GX160K1 Engine

- **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:**
  - UPS Ground
  - UPS Second Day or Third Day*
  - UPS Next Day*
  - Federal Express Priority One (please provide us with your Federal Express account number)*
  - Airborne Express*
  - Truck or parcel post

**Normally shipped the same day the order is received, if prior to 2PM west coast time.*

Earn Extra Discounts when you order by FAX!

All parts orders which include complete part numbers and are received by fax qualify for the following extra discounts:

Number of line items ordered	Additional Discount
1-9 items	3%
10+ items**	5%

Extra Fax Discount for Domestic USA Dealers Only

Up to 5% extra savings!

UPS Special
For faxed orders only

Get special freight allowances when you order 10 or more line items via FAX!**

- UPS Ground Service **at no charge for freight**
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**Common nuts, bolts and washers (all items under $1.00 list price) do not count towards the 10+ line items.

DISCOUNTS ARE SUBJECT TO CHANGE

Fax order discount and UPS special programs revised June 1, 1995

Now! Direct TOLL-FREE access to our Parts Department!

Toll-free nationwide:

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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 MVH-120GH 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.

■ **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.

■ Manufacture does not assume responsibility for any accident due to equipment modifications.

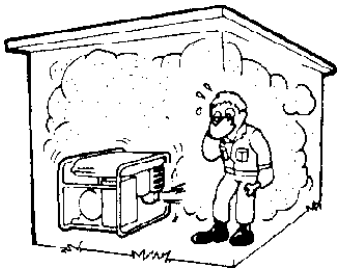
■ Whenever necessary, replace nameplate, operation and safety decals when they become difficult read.

■ Always check the machine for loosened threads or bolts before starting.

■ **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 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 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.

- **NEVER** Run engine without air filter. Severe engine 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 store equipment properly when it is not being used. Equipment should be stored in a clean, dry location out of the reach of children.
- **NEVER** 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** Run engine without air cleaner. Severe engine damage may occur.
- Always read, understand, and follow procedures in Operator's Manual before attempting to operate equipment.
- Always be sure the operator is familiar with proper safety precautions and operations techniques before using compactor.
- 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.
- 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 (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

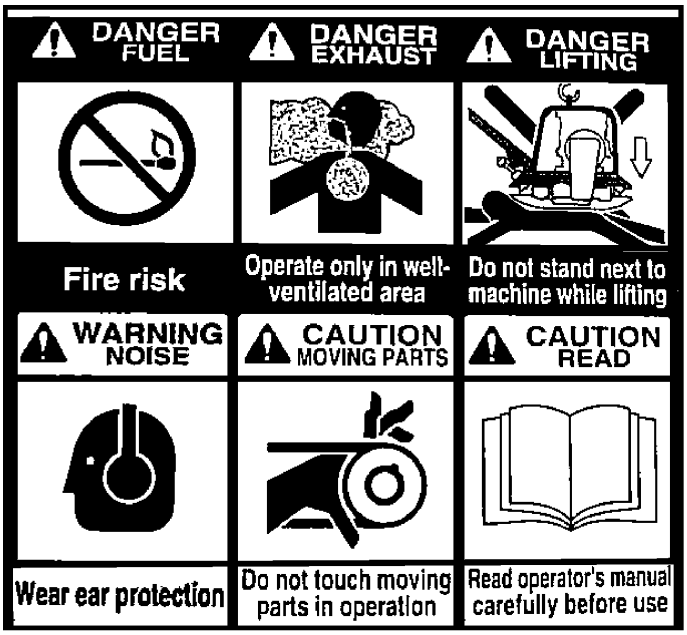
- Always know the location of the nearest ***fire extinguisher*** and ***first aid kit.*** Know the location of the nearest telephone. Also know the phone numbers of the nearest ***ambulance***, ***doctor*** and ***fire department***. This information will be invaluable in the case of an emergency.

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 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

Machine Safety Decals

The MVH-120GH Reversible Plate Compactor is equipped with a number of safety decals. 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.



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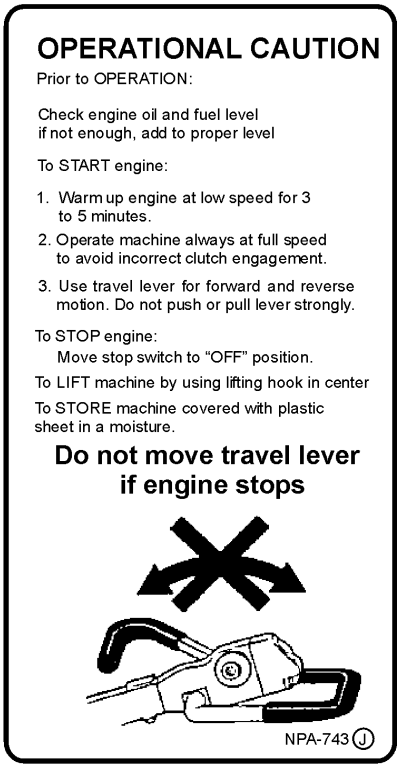

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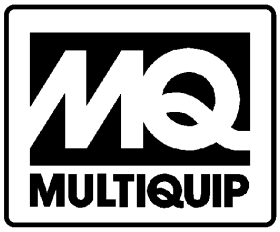

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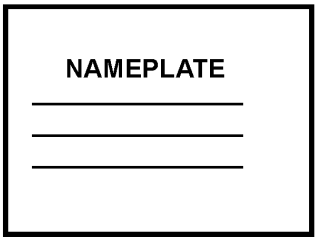


CONTACT MULTIQUIP SERVICE DEPT.

TABLE 1. COMPACTOR SPECIFICATIONS	
Model	MVH-120GH
Centrifugal Force	5,200 lbs. (2,350 kg)
Number of Vibrations	6,000 v/min
Traveling Speed	75 ft./min (23 meters/min)
Plate Size (LxW)	23 x 15.7 x 39 in. (584 x 399 mm)
Dimensions (LxWxH)	35.4 x 15.7 x 39 in. (900 x 399 x 990 mm)
Operating Weight	247 lbs. (111 kg.)

TABLE 2. ENGINE SPECIFICATIONS	
Engine Make	HONDA
Engine Model	GX160K1QX2
Engine Type	OHV Gasoline Engine
Number Of Cylinders	1
Displacement	9.9 cu. in (163 cc)
Maximum Output	5.5 H.P./3,600 rpm
Oil Grade	See Table 3
Oil Capacity	1.3 pints/(0.6 liters)
Fuel Type	Unleaded
Fuel Tank Capacity	3.8 qt.l/(3.6 liters)
Dry Weight	33 lbs./(15 kg)
Starting Method	Recoil Start

Definition of Plate Compactor

The Mikasa MVH-120GH is a walk behind, reversible plate compactor design 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-120GH 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 has a frequency range between 2500 to 6000 vpm (vibrations per minute). The forward and reverse travel speed of the compactor is approximately 75 ft./ minute (23 meters/minute).

Engine

The Mikasa MVH-120 Plate Compactor is equipped with an Honda air cooled, 4-cycle gasoline engine.

Controls

Before starting the MVH-120 Plate Compactor identify and understand the function of the controls and components as indicated on page 11 (Figure 1).

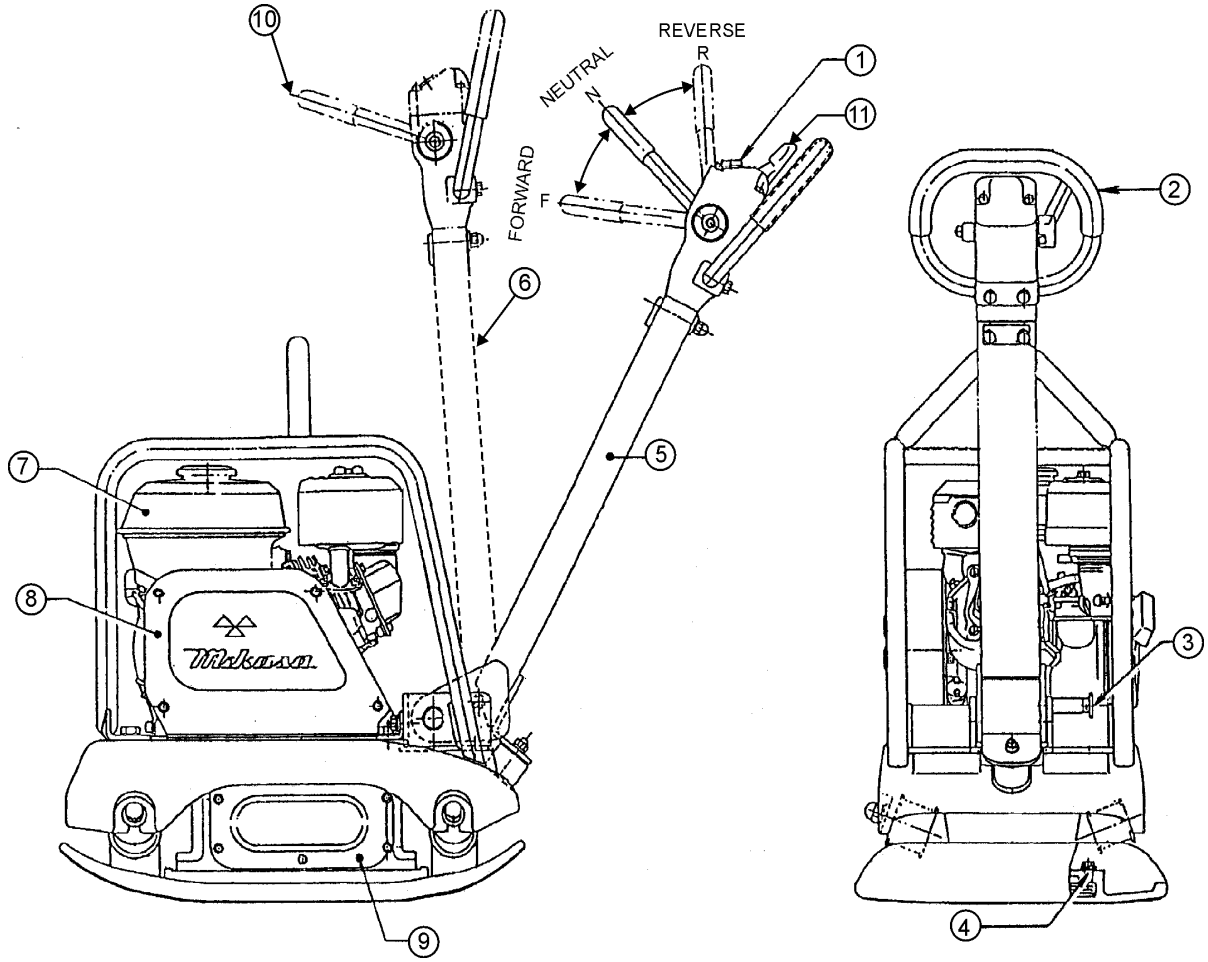


Figure 1. Compactor Controls

Figures 1 and 2 shows the location of the controls, indicators and general maintenance parts. The function of each control is described below:

1. **Breather Cap –** Remove this cap to bleed (remove air) the hydraulic system. When replacing hydraulic oil, use "Shell Tellus #46 or equivalent".
2. **Hand Grip –** When operating the compactor use this hand grip to manuever the compactor.
3. **Handle Lock –** Pull handle bar downward (working position), then pull handle lock to lock handle bar in place.
4. **Vibration Case Oil Level Check Plug –** Remove this plug to check the vibration case oil. Oil level should be all the way up to the filler port. When replacing vibration case oil, use 10W-30 engine oil.
5. **Handle Bar (working position) –** When operating the compactor, this handle is to be in the downward position.
6. **Handle Bar (stored position) –** When the compactor is to be ***stored***, move the handle bar to the upright position.
7. **Gasoline Engine –** This plate compactor uses a HONDA GX160K1QX2 engine. Refer to the HONDA owners manual for engine information and related topics.
8. **Belt Cover –** Remove this cover to gain acess 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. **Vibration Case –** Encloses the eccentric, gears and counter weights.
10. **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).
11. **Throttle Control –** Move the throttle lever to the ***rabbit*** position for full throttle (max RPM's), for engine idle, move the throttle lever to the ***turtle*** position.

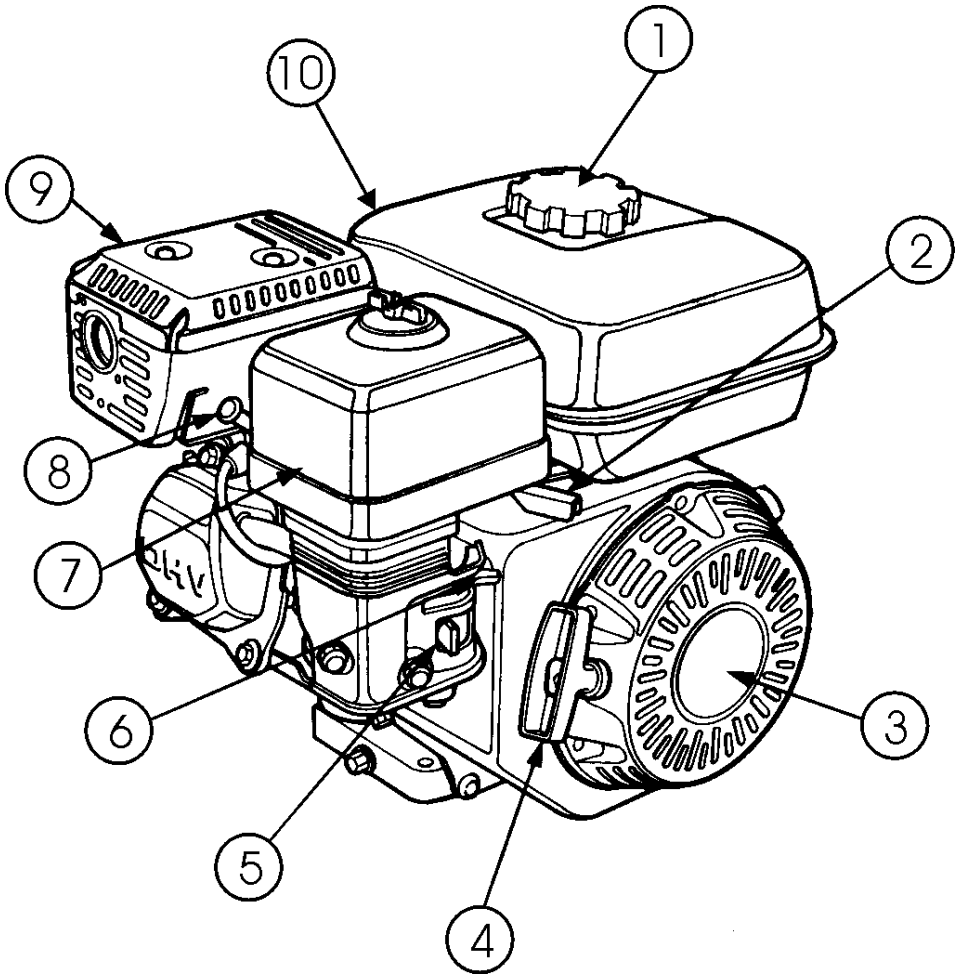


Figure 2. Engine Controls & Components

1. **Fuel Filler Cap –** Remove this cap to add unleaded gasoline to the fuel tank. Make sure cap is tighten securly. **DO NOT** over fill.
2. **Throttle Lever –** Used to adjust engine speed (fast-slow).
3. **Recoil Starter (pull rope) –** Type of engine starting method. Alternate type would be electric start (ignition key).
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.
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.
8. **Spark Plug –** Provides spark to the ignition system. Set spark plug gap to 0.6 - 0.7 mm (0.028 - 0.031 inch) Clean spark plug once a week.
9. **Muffler –** Used to reduce noise and emissions.
10. **Fuel Tank –** Holds 3.6 liters (approximately 1 gallon) of unleaded gasoline.

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 3) and wipe it clean.

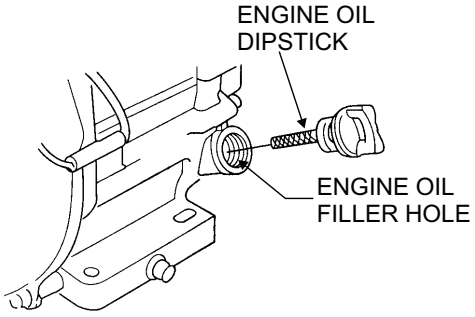


Figure 3. Engine Oil Dipstick

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 4), fill to the edge of the oil filler hole with the recommended oil type (Table 3). Maximum oil capacity is 400 cc.

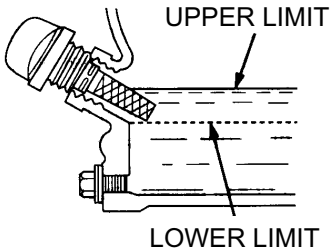


Figure 4. Engine Oil Dipstick

NOTE
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 3. 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.
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 MVH-120GH horizontally on a flat surface.
2. Check vibrator oil level by removing bolt (vibrator oil gauge) as shown in Figure 5. Use a 14 mm wrench to remove bolt. The vibrator oil level should be maintained between the two markings as shown in Figure 5. If oil is required, replace using SAE 10W-30.

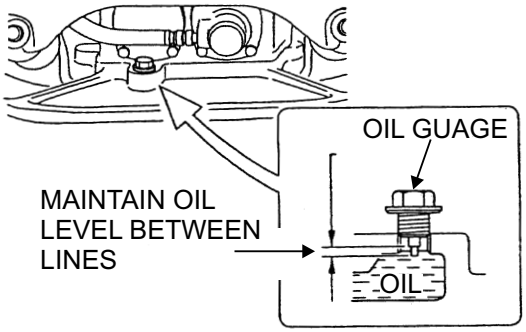


Figure 5. Vibrator Oil Gauge

Vibrator Oil Check

1. With handle bar positioned vertically (storage position), remove the breather cap (Figure 6) from the breather plug.
2. Use a 24 mm wrench and remove breather plug (Figure 6). Visually check to see if hydraulic oil comes up to the oil level line that is etched on the back side of the handle.

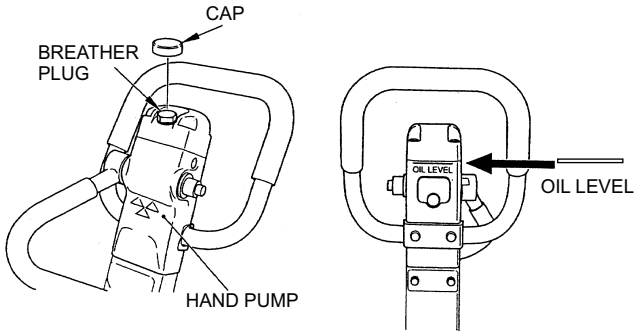


Figure 6. Vibrator Oil Gauge

2. If the hydraulic oil level is low, replace with "**Shell Tellus**" oil #46 or equivalent.

V-Belt Check

CAUTION:

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

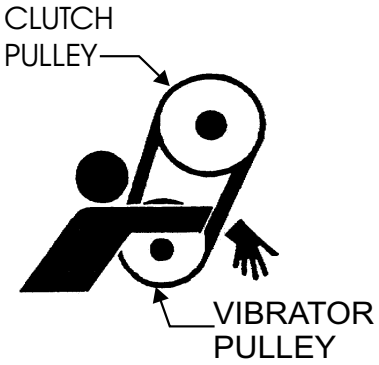


Figure 7. V-Belt Hazard

1. To check the V-belt tension (Figure 8), remove ***upper*** belt cover.

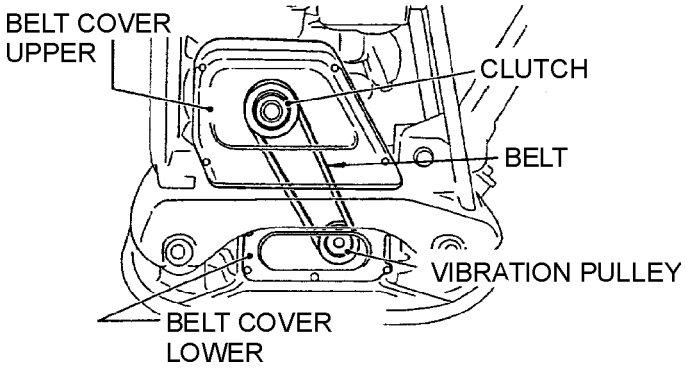


Figure 8. V-Belt Location

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

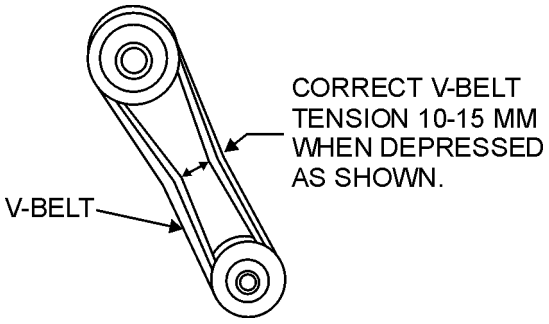


Figure 9. V-Belt Tension

3. A loose V-belt will decrease the power transmission output, causing reduced compaction and premature wear of the belt. V-belt in use is RPF-3320 (A-32 is also useable).
4. If the V-belt becomes worn or loose, replace it by using V-belt part number RPF-3320 or A-32

CAUTION:

DO NOT attempt to run the compactor until the Safety and Initial Start-up sections have been read,

1. Place the ***fuel valve lever*** (Figure 10) in the "ON" position.

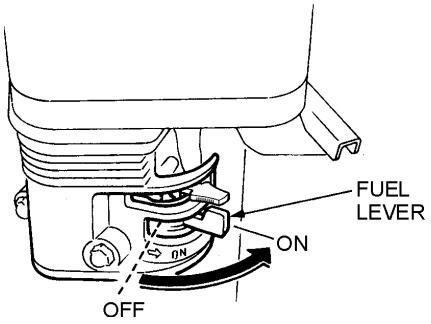


Figure 10. Fuel Valve Lever

2. Place the ***Engine ON/OFF switch*** (Figure 11) in the "ON" position.

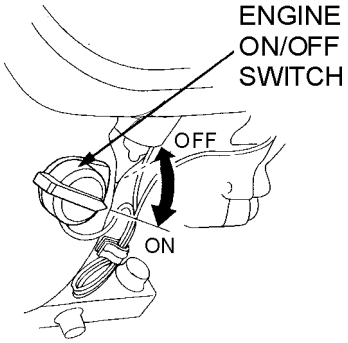


Figure 11. Engine ON/Off Switch

3. Place the ***Choke Lever*** (Figure 12) in the "OPEN" position.

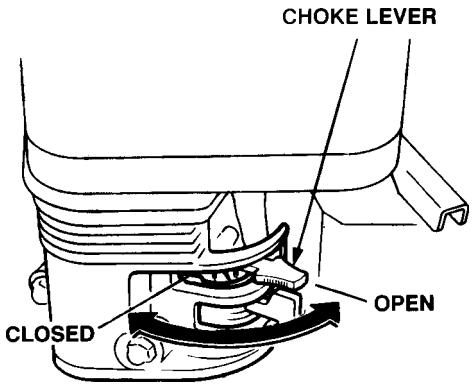


Figure 12. Choke Lever

NOTE

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

4. Place the ***throttle lever*** (Figure 13) halfway between ***fast*** and ***slow***.

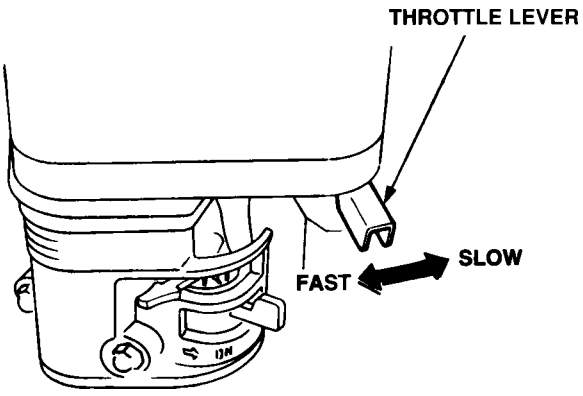


Figure 13. Engine Throttle Lever

NOTE

Some compactor units may be equipped with a throttle lever (Figure 13A) that is located in the vicinity of the hydraulic pump. This throttle lever is connected to the engine throttle linkage.

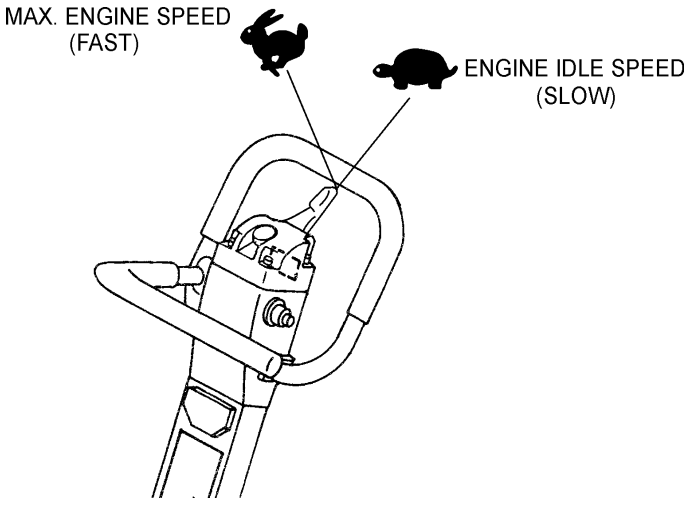


Figure 13A. Engine Throttle Lever

5. Grasp the starter grip (Figure 14) 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:

- **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.

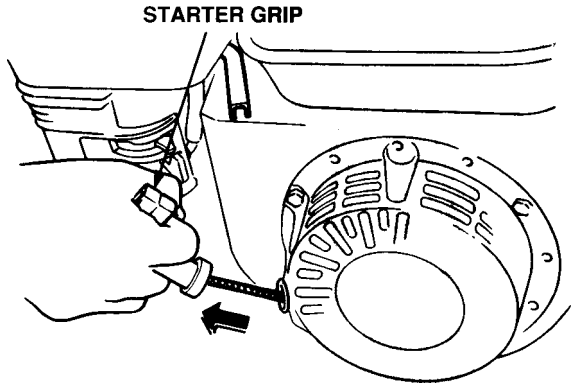


Figure 14. Starter Grip

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

- **NEVER** stop the engine suddenly while working at high speeds.

1. Place the ***throttle lever*** (Figure 13 or 13A) in ***slow*** position, and listen for the engine speed to decrease.
2. Place the ***Engine ON/OFF switch*** (Figure 11) in the "***OFF*** " position.
3. Place the ***fuel valve lever*** (Figure 10) in the "**OFF**" position.

Operation

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.

1. Grasp the compactor's hand grip (Figure 15), and move the engine throttle lever quickly from the ***turtle*** position (idle) to the ***rabbit*** *position* (full throttle) position.

2. Run the compactor at full throttle (3,600 RPM's) ,the centrifugal clutch will automatically engage when the engine speed reaches 2,300 RPM.

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

3. To make the compactor move in the forward direction push the travel lever (Figure 15) forward.

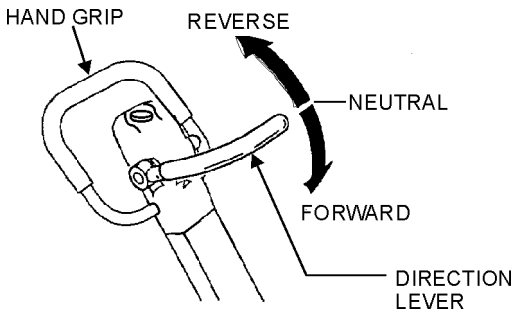


Figure 15. Direction Lever

4. To make the compactor move in the reverse direction pull the travel lever (Figure 15) backwards.

5. 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.

6. 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.

CAUTION:

- Moving the direction lever back and forth a few times after the engine has been turned off, will cause the lever to be locked in the forward position.
- **DO NOT** try to operate lever forcibly. The direction lever will operate normally when the engine is started and the compactor is in action.

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

Inspection and Maintenance Service Tables.

1. To make sure your plate compactor is always in good working condition before using, carry out the maintenance inspection in accordance with Tables 4 through 6.

TABLE 4. MACHINE INSPECTION

Item	Hours of Operation	Remarks
(Starting check)	Every 8 hours (every day)	
Loosened or lost screws	Every 8 hours (every day)	
Damage of any part	Every 8 hours (every day)	
Function of controlling system part	Every 8 hours (every day)	
Leak of hydraulic system	Every 100 hours	See page 18.
Vibrator oil check	Every 300 hours	See page 19.
Vibrator oil replacement	Every 100 hours	See page 19.
Hydraulic oil check	Every 200 hours, then in every 1000 hrs.	See page 20.
V-belt (clutch) check	Every 200 hour	See page 19.

TABLE 5. 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:

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.

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:

TABLE 6.

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.								

- 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, see page 13.

Engine Oil Replacement:

1. Replace engine oil, first in 20 hours of operation and every 100 hours afterwards.
2. Oil may be drained more easily when it is warm after operation (For more details, see separate HONDA Owner's Manual).

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.

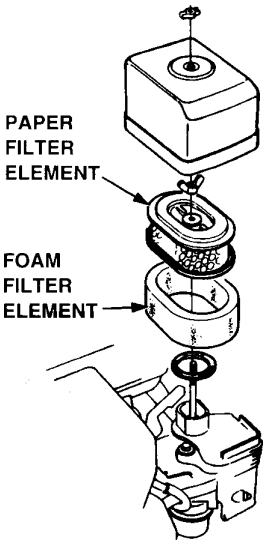


Figure 16. Air Filter

2. To clean or replace air filter loosen the wing nut on the air filter housing (Figure 16), 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.

CAUTION:

NEVER attempt to check the V-belt with the engine running. Severe injury can occur if your hand (Figure 17) gets caught between the V-belt and the clutch. Always use safety gloves.

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.

- **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.

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 300 hours of operation, with the machine positioned horizontally, remove vibrator oil level check plug (Figure 5) off vibrator (14 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.
2. In every 300 hours of operation, replace oil (capacity 400 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.

CAUTION:

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

Hydraulic Oil

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

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

Replacing Hydraulic Oil

1. After removing plug cap of hand pump (Figure 6), remove plug of breather (24 mm wrench) and disconnect vibrator side of hydraulic hose (Figure 17) at vibrator cylinder. With travel lever placed in the ***FORWARD*** position, drain hydraulic oil in the pump.

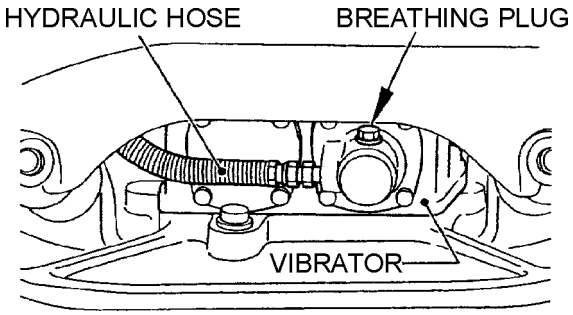


Figure 17. Hydraulic Hose

2. After draining, reconnect the hydraulic hose to vibrator.
3. Fill oil through breather hole of hand pump. (Capacity: About 300 cc). Use ***Shell Tellus Oil #46*** or equivalent
4. Removing breather plug at vibrator cylinder causes oil to flow out of breather hole in a while. When aeration disappears, replace the plug and tighten securely.
5. Replace breather plug of hand pump and fit the plug cap. After making sure that oil in pump is at proper level, replace the breather plug.

Troubleshooting

See Tables 7(engine) and 8 (plate compactor) on preceeding pages for engine and plate compactor troubleshooting guide.

Pump Storage

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

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

TABLE 7. ENGINE TROUBLESHOOTING

SYMPTON	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 dirtry?	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.

TABLE 7. ENGINE TROUBLESHOOTING (CONTINUED)		
SYMPTON	**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 carbureator.
	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.
	Sprial spring loose?	Replace sprial spring.

TABLE 8. PLATE COMPACTOR TROUBLESHOOTING		
SYMPTON	**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.
Travels forward or reverse, but impossible to switch direction.	Directional components defective?	Check all directional components
	Reversing lever adjustment?	Adjust or repair reversing lever.
	Hydraulic oil hose broken?	Repair or replace hydraulic oil hose.
	Aeration in hydraulic oil for reversing system?	Bleed hydraulic oil system.
	Check valve in hand pump clogged with dust?	Clean or replace hand pump check valve.
	Piston or bearing in cylinder (vibrator assy.) is defective?	If worn, replace cylinder piston or bearing.
Does not travel either forward or reverse.	V-belt slips?	Replace V-belt.
	Clutch slips?	Check clutch springs and shoes.
	Vibrator locked?	Check vibrator housing (eccentric, gears and counterweights)
	Piston or bearing in cylinder defective?	If worn, replace cylinder piston or bearing.
Travel lever operating resistance great.	Air in hydraulic line?	Bleed hrdraulic oil system.
	Piston or bearing in cylinder defective?	If worn, replace cylinder piston or bearing.

NOTE PAGE

MVH-120GH — 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.

NOTE

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

NOTE

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

MVH-120GH 1 TO 5 UNITS WITH HONDA GX160K1QX2 ENGINE

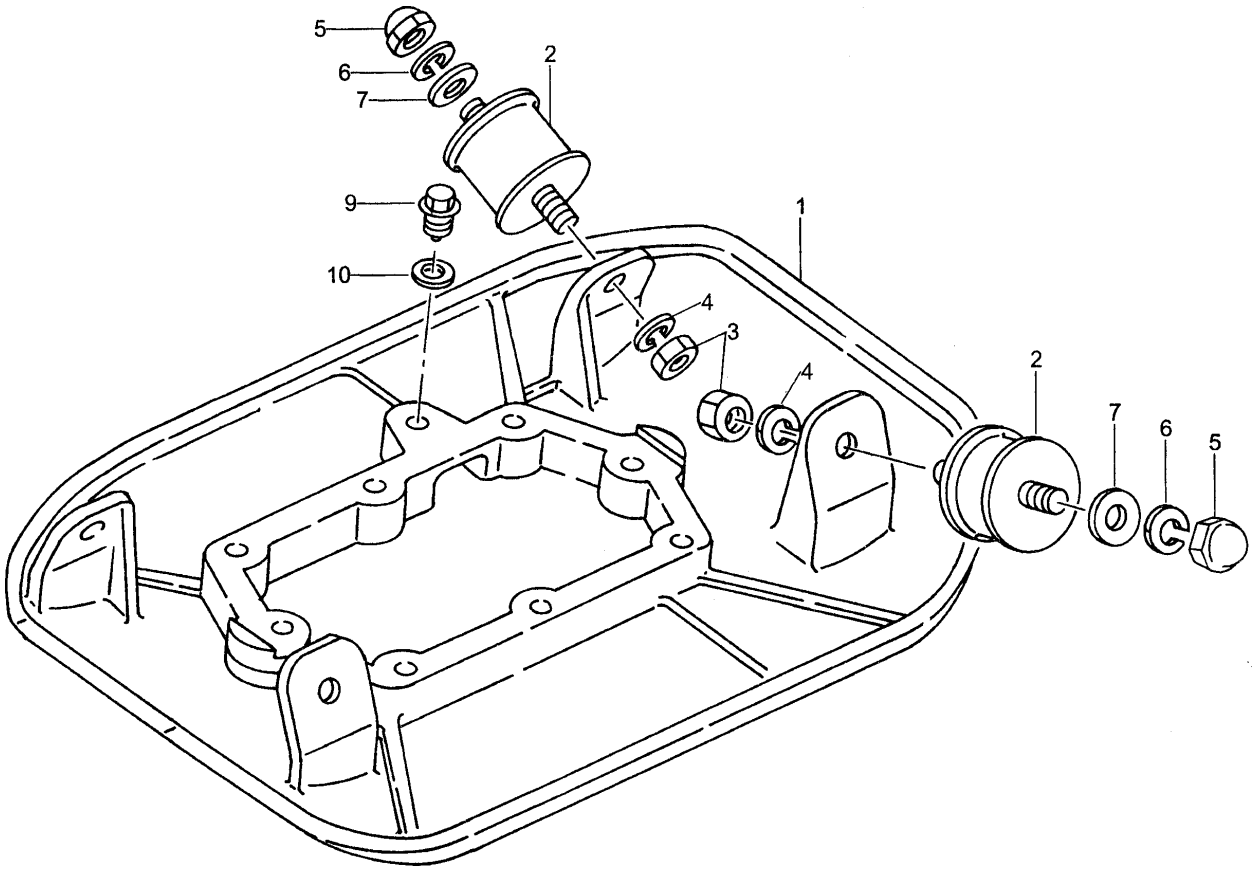
MVH-120GH PLATE COMPACTOR 1 TO 3 UNITS

Qty.	P/N	Description
3	070100322	V-BELT
1	458337770	CLUTCH ASSY.
2	956100035	THROTTLE WIRE
1	956200050	THROTTLE LEVER ASSY.
5	9807956841	SPARK PLUG
1	28400ZH8013ZA	RECOIL STARTER ASSY.
1	36100ZE1015	SWITCH ASSY, ENGINE STOP
1	16100ZH8822	CARBURETOR
2	17218ZE1821	OUTER AIR ELEMENT
1	17620ZH7023	CAP, FUEL TANK
1	17672ZE2W01	FUEL TANK FILTER
1	30500ZE1033	IGNITION COIL ASSY.

NOTE

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

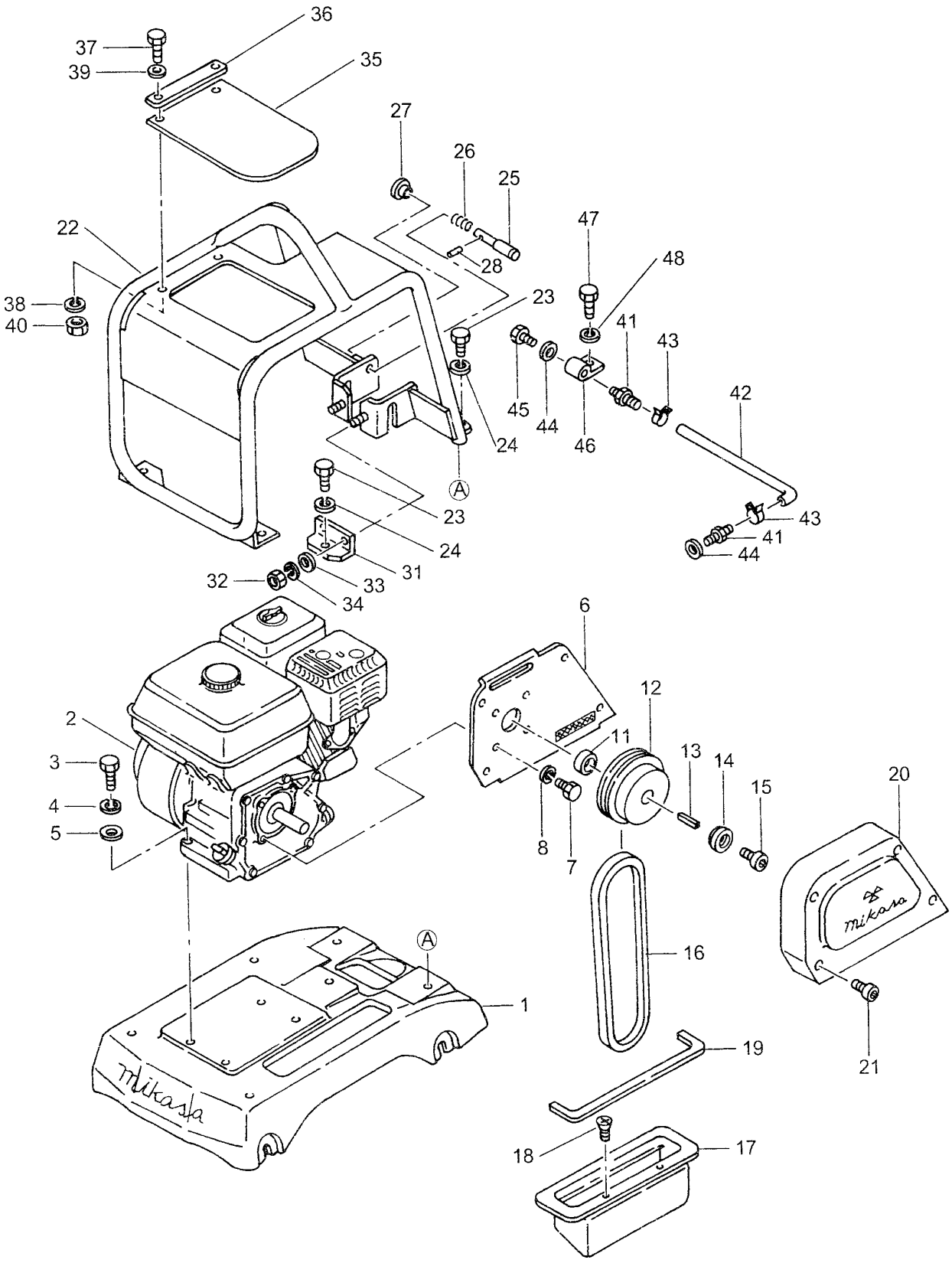
VIBRATING PLATE ASSY.



VIBRATING PLATE ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
1	458115140	VIBRATING PLATE	1	
2	458450620	SHOCK ABSORBER	4	
3	0039312000	NUT M12	4	..... REPLACES 020312100
4	030212300	SW M12	4	
5	022131210	CAP NUT M12	4	
6	030212300	SW M12	4	
7	952400710	WASHER 13304	4	
9	460449160	OIL CHANGE	1	
10	953405260	PACKING ¼	1	

BODY ASSY.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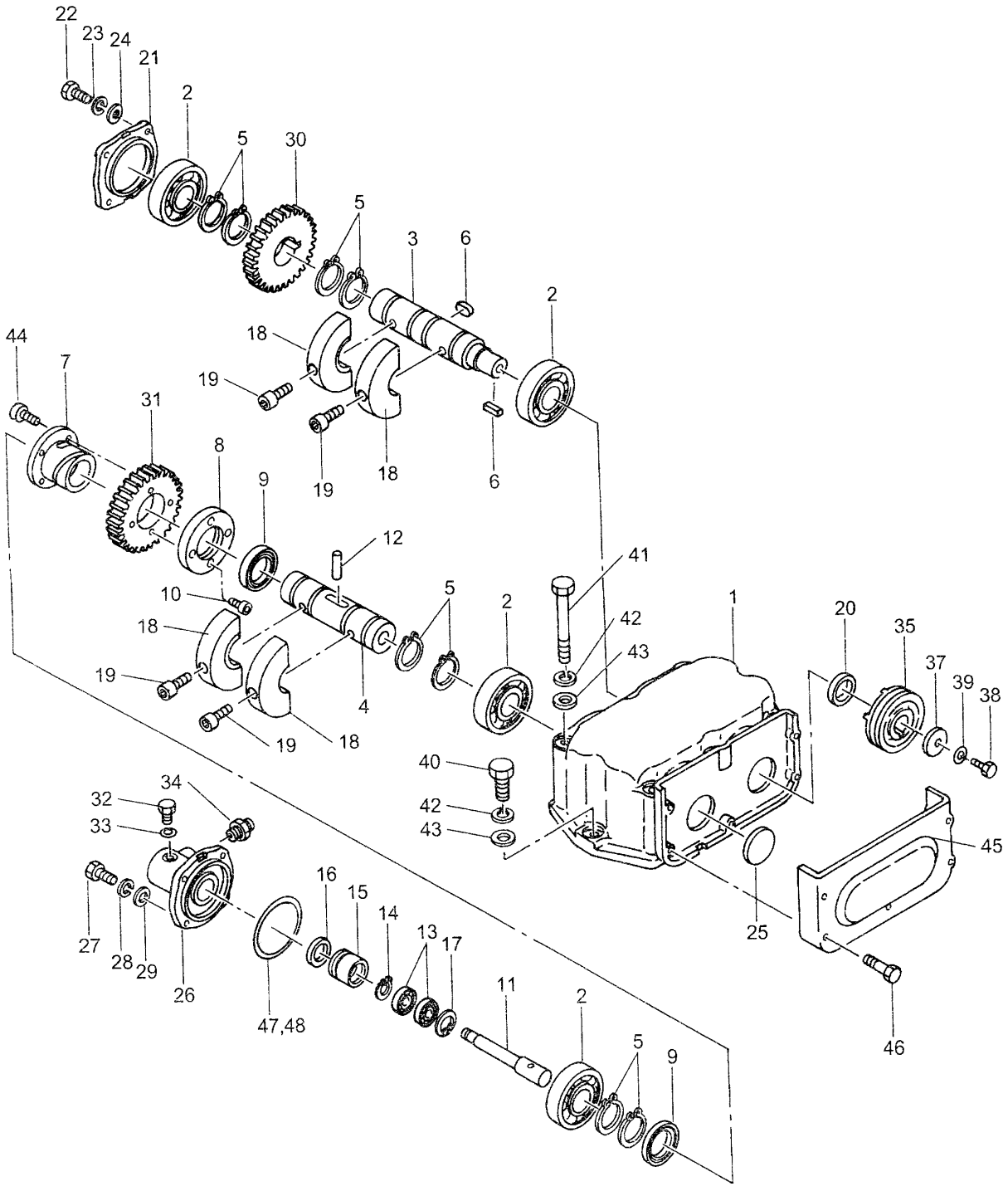
BODY ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
1	458115160	BASE /MVH-120	1	
2	GX160K1QX2	ENGINE ASSY. GX160K1QX2	1	REPLACES 912216003 & 912216004
3	011208035	BOLT 8X35 T	4	REPLACES 001220835
4	030208200	SW M8	4	
5	031108160	PW M8	4	
6	458214380	BELT COVER PLATE /MVH-120	1	
7	014208020	BOLT 8X20 T	4	REPLACES 001220820
8	030208200	SW M8	4	
11	458451370	SPACER 202512 /MVH-120	1	
12	458337770	CLUTCH ASSY. A112420 /MVH12	1	
13	951400100	KEY 5X5X35	1	
14	458451380	CLUTCH WASHER /MVH-120	1	
15	014208025	SOCKET HEAD BOLT 8X25 T	1	REPLACES 001520825
16	070100322	V-BELT RPF-3320	1	
17	458214390	DUST COVER /MVH-120	1	
18	092006010	FLAT HEAD SCREW 6X10	2	
19	458337560	SPONGE, DUST COVER /MVH120	1	
20	458115190	BELT COVER /MVH-120	1	
21	014208025	SOCKET HEAD BOLT 8X25 T	4	REPLACES 001520825
22	458115170	GUARD FRAME /MVH-120	1	
23	001221225	BOLT 12X25 T	5	
24	030212300	SW M12	5	
25	458450860	STOPPER /MVH-120	1	
26	458450880	SPRING 1.2-10-29 /MVH-120	1	
27	458450850	GRIP /MVH-120	1	
28	025402516	SPRING PIN 2.5 X16	1	
31	458337760	SUPPORT /MVH-120	1	
32	020310080	NUT M10	2	
33	031110160	PW M10	2	
34	030210250	SW M10	2	
35	458450830	RUBBER COVER /MVH-120	1	
36	458450810	PLATE, RUBBER COVER /MVH120	1	
37	011208025	BOLT 8X25 T	2	REPLACES 001220825
38	030208200	SW M8	2	
39	031108160	PW M8	2	
40	022710809	NYLON NUT M8	2	
41	15550ZK8P90	DRAIN JOINT	2	
42	15552ZB9000	DRAIN HOSE	1	
43	950024120008	HOSE CLAMP	2	
44	90601ZE1000	WASHER, DRAIN PLUG	3	
45	90131ZE1000	BOLT, DRAIN PLUG	1	
46	458450840	JOINT /MVH-120	1	
47	014208020	BOLT 8X20 T	1	REPLACES 001220820
48	030208200	SW M8	1	

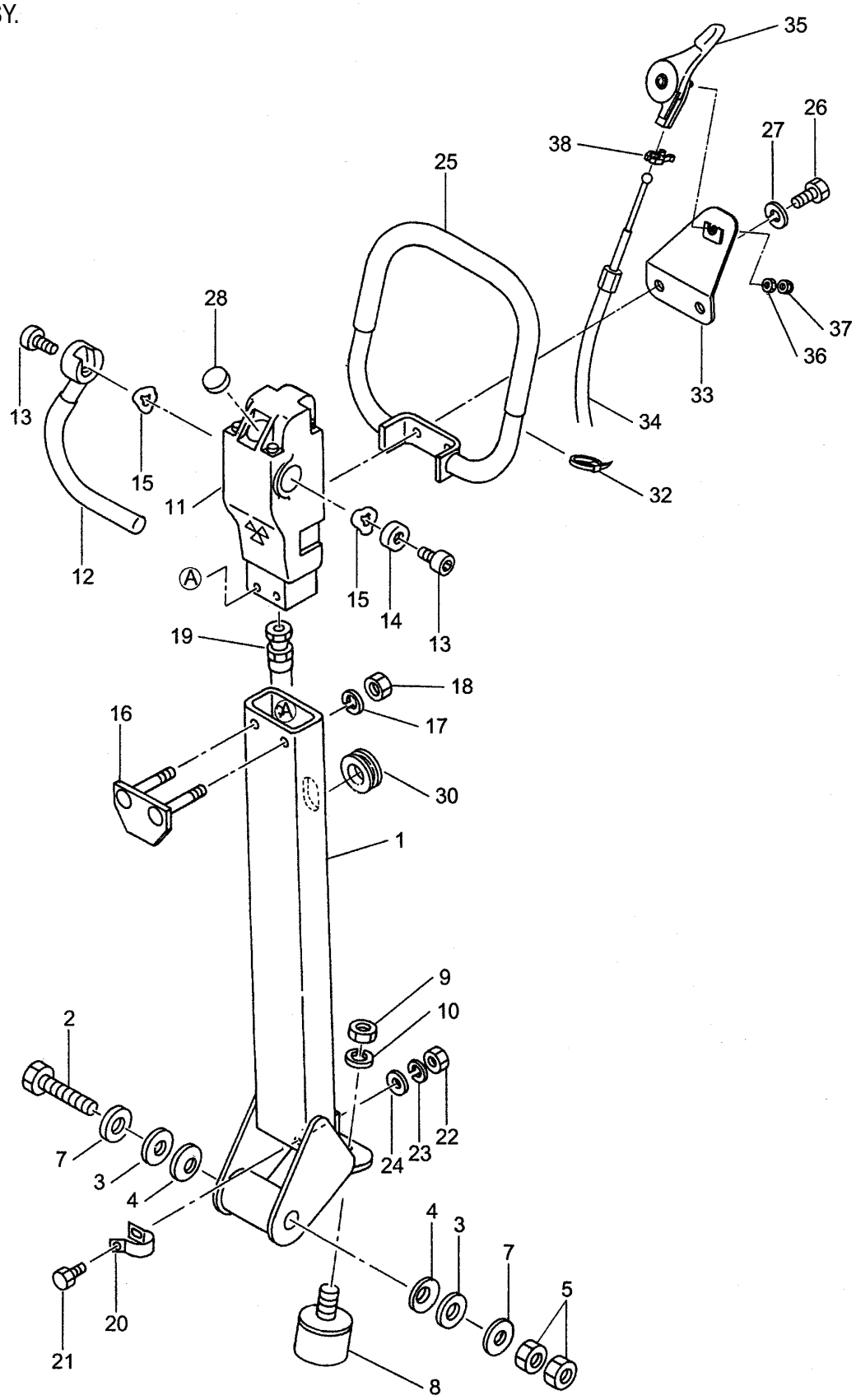
VIBRATOR ASSY.



VIBRATOR ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
1	458115150	VIBRATING CASE /MVH-120	1	
2	040306307	BEARING 6307C4	4	REPLACES 040406307
3	458337700	ROTARY SHAFT, DRIVE /MVH120	1	
4	458337710	ROTART SHAFT, DRIVE /MVH120	1	
5	080200350	STOP RING S-35	8	
6	951405460	KEY 10X8X19 RR	1	
7	458337720	CAM RING 210 /MVH-120	1	
8	458337850	BEARING HLDER /MVH-120	1	
9	040006807	BEARING 6807	2	
10	001520630	SOCKET HEAD BOLT 6X30 T	4	
11	458337730	PISTON ROD /MVH-120	1	
12	025508050	PIN 8X50	1	
13	042506000	BEARING 6000ZZSG	2	
14	080200100	STOP RING S-10	1	
15	455435051	PISTON, 22.4D /MVH-200	1	
16	455010070	PACKING USH-22. 4X30X5	1	
17	080100260	STOP RING R-26	1	
18	458451430	ECCENTRIC ROTATOR	4	
19	009120304	SOCKET HEAD BOLT 10X25 T	4	
20	060202040	OIL SEAL SC-28458	1	
21	458337740	BEARING COVER	1	
22	014208020	BOLT 8X20 T	4	REPLACES 001220820
23	030208200	SW M8	4	
24	031108160	PW M8	4	
25	953405580	SEAL CAP SC-458	1	
26	458214370	CYLINDER	1	
27	014208020	BOLT 8X20 T	4	
28	030208200	SW M8	4	
29	031108160	PW M8	4	
30	460333000	GEAR (DRIVE)	1	
31	458337840	GEAR (DRIVEN)	1	
32	001200812	BOLT 8X12	1	
33	953404600	COPPER PACKING 8X16X2	1	
34	954010020	CONNECTOR PT, PF1/4	1	
35	458337750	PULLEY 80D	1	
36	951400990	KEY 7X7X20	1	
37	952400690	WASHER 9X3594.5	1	
38	014208020	BOLT 8X20 T	1	REPLACES 001220820
39	030208200	SW M8	1	
40	012212035	BOLT 12X35 T	2	REPLACES 001221235
41	001221264	BOLT 12X120 T	6	
42	030212300	SW M12	8	
43	031112230	PW M12	8	
44	014206020	SOCKET HEAD BOLT 6X20 T	4	REPLACES 001520620
45	460212740	BELT COVER (LOWER)	1	
46	001520635	SOCKET HEAD BOLT 6X35 T	5	
47	952406170	SHIM 70-80-0. 1T	1	
48	952406180	SHIM 70-80-0. 2T	1	

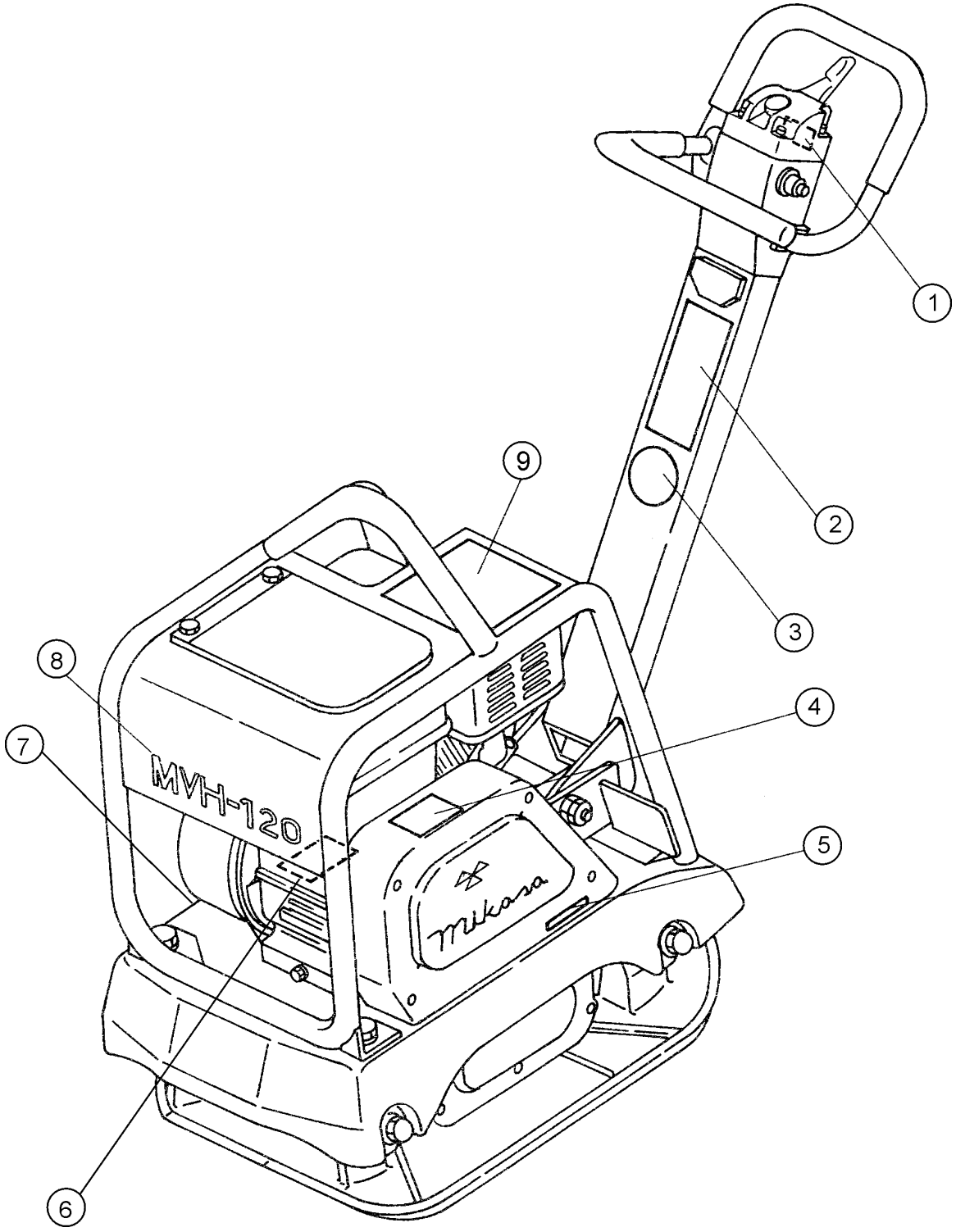
CONTROL ASSY.



CONTROL ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
1	458115180	HANDLE	1	
2	001221668	BOLT 16X140 T	1	
3	458450660	WASHER 16. 4-35-0.6	2	
4	032116280	CONICAL SPRING WASHER M16	2	
5	020316130	NUT M16	2	
7	0401450160	PW M16	2	REPLACES 031116260
8	939010010	SHOCK ABSORBER, STOPPER 45	1	
9	020310080	NUT M10	1	
10	030210250	SW M10	1	
11	458338000	PUMP ASSY.	1	
12	458337430	TRAVEL LEVER	1	
13	014208030	SOCKET HEAD BOLT 8X20 T	2	REPLACES 001520820
14	458451420	COLLAR	1	
15	033910030	WAVE WASHER 15. 5X20X0.3	4	
16	458337480	PUMP HOLDER	1	
17	022710809	NYLON NUT M8	2	
18	030208200	SW M8	2	
19	458451350	OIL HOSE 870L	1	
20	954404230	CLAMP SA120-18	1	
21	011206020	BOLT 6X20 T	1	REPLACES 001220620
22	020106050	NUT M6	1	REPLACES 020306050
23	030206150	SW M6	1	
24	952404470	PW M6	1	REPLACES 031106100
25	458214560	HANDLE GRIP (EXP)	1	
26	014208020	BOLT 8X20 T	2	REPLACES 001220820
27	030208200	SW M8	2	
28	458451630	BREATHER CAP	1	
30	9534-06280	GROMMET	1	
32	506010070	CLAMP	1	
33	459338470	THROTTLE HOLDER	1	
34	956100035	THROTTLE WIRE 120 X 1360	1	
35	956200050	THROTTLE LEVER ASSY.	1	
37	022110504	CAP NUT M5	1	
38	371448300	CLIP	1	

NAME PLATE AND DECALS

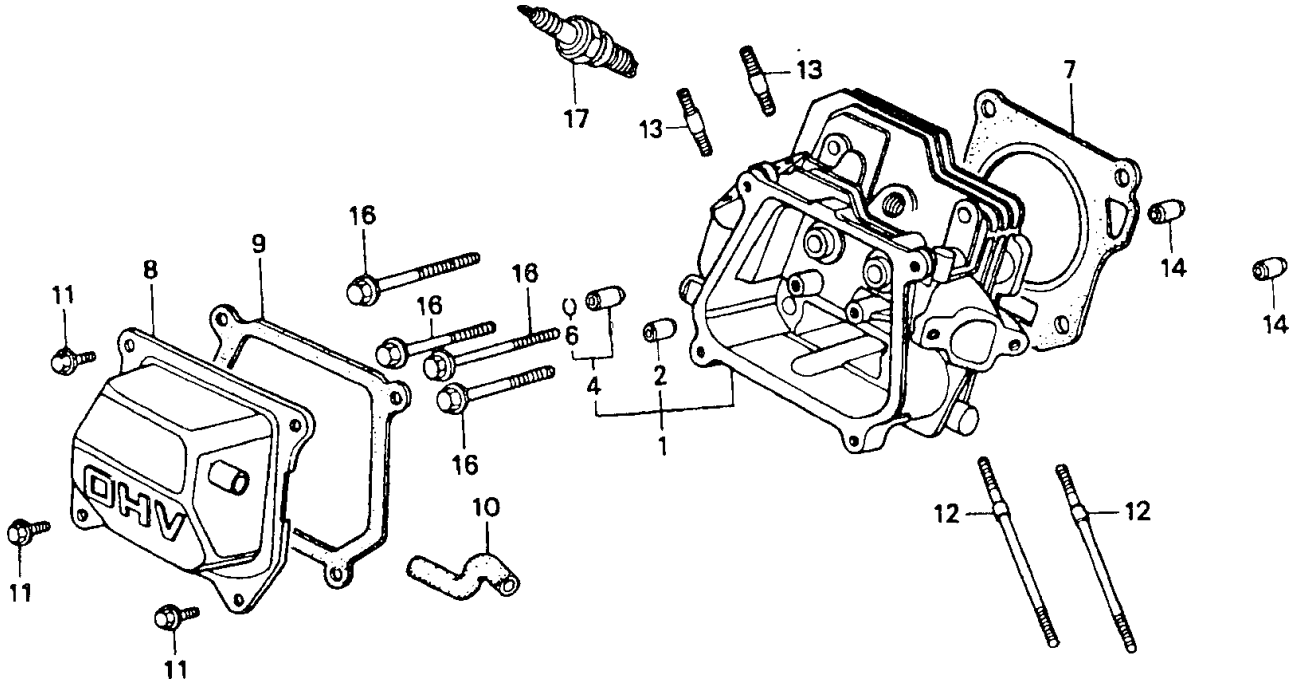


NAME PLATE AND DECALS.

NO	PART NO	PART NAME	QTY.	REMARKS
1*	920207480	DECAL, SHELL TELLUS OIL 46	1	
2*	950207430	DECAL, CAUTION (MVH-120)	1	
3*	920203330	EAR PROTECTION LABEL	1	
4*	920201580	DECAL, MQ MARK 71X55	1	
5*	920207420	DECAL, V- BELT RPF-3320	1	
6		PLATE, SERIAL NO.	1	..... CONTACT MQ SERVICE DEPT. W/MODEL & S/N
7*	920201950	DECAL, MOTOR OIL /NPA-195	1	
8*	920207440	DECAL, MODEL/MVH-120	1	
9*	920207400	DECAL, DANGER-CAUTION	1	
	DCLMVH120GH	KIT, DECAL	1	..... INCLUDES ITEMS W/*

SEE DECAL ILLUSTRATIONS ON PAGE 8.

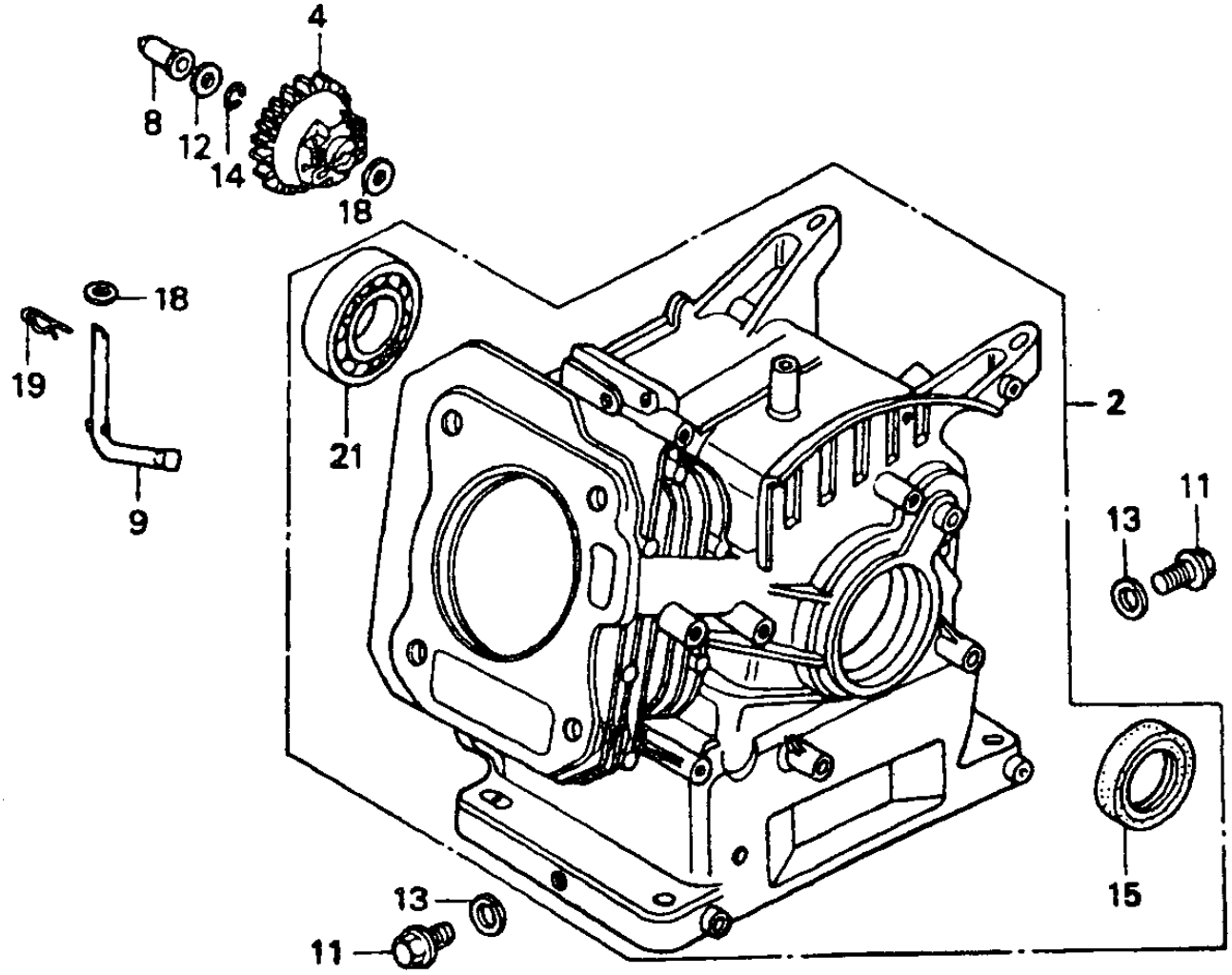
CYLINDER HEAD ASSY.



CYLINDER HEAD ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
1	12210ZH8000	HEAD COMP., CYLINDER	1	INCLUDES W/*
2*	12204ZE01306	GUIDE, INLET VALVE	1	
4*	12205ZE1315	GUIDE, EXHAUST VALVE	1	
6*	12216ZE5300	CLIP, VLAVE GUIDE	1	
7	12251ZF1800	GASKET, CYLINDER HEAD	1	
8	12310ZE1010	COVER COMP., HEAD	1	
9	12391ZE1000	PACKING, HEAD COVER	1	
10	15721ZH8000	TUBE, BREATHER	1	
11	90013883000	FLANGE BOLT 6X12	4	
12	90043ZE1020	STUD BOLT 6X112	2	
13	90047ZE1000	STUD BOLT 8X32	2	
14	9430110160	KNOCK PIN 10X16	2	
16	957230806000	FLANGE BOLT 8X60	4	
17	9807956841	SPARK PLUG BP6ES NGK	1	
17	9807956854	SPARK PLUG W20EP-U DENSO	1	

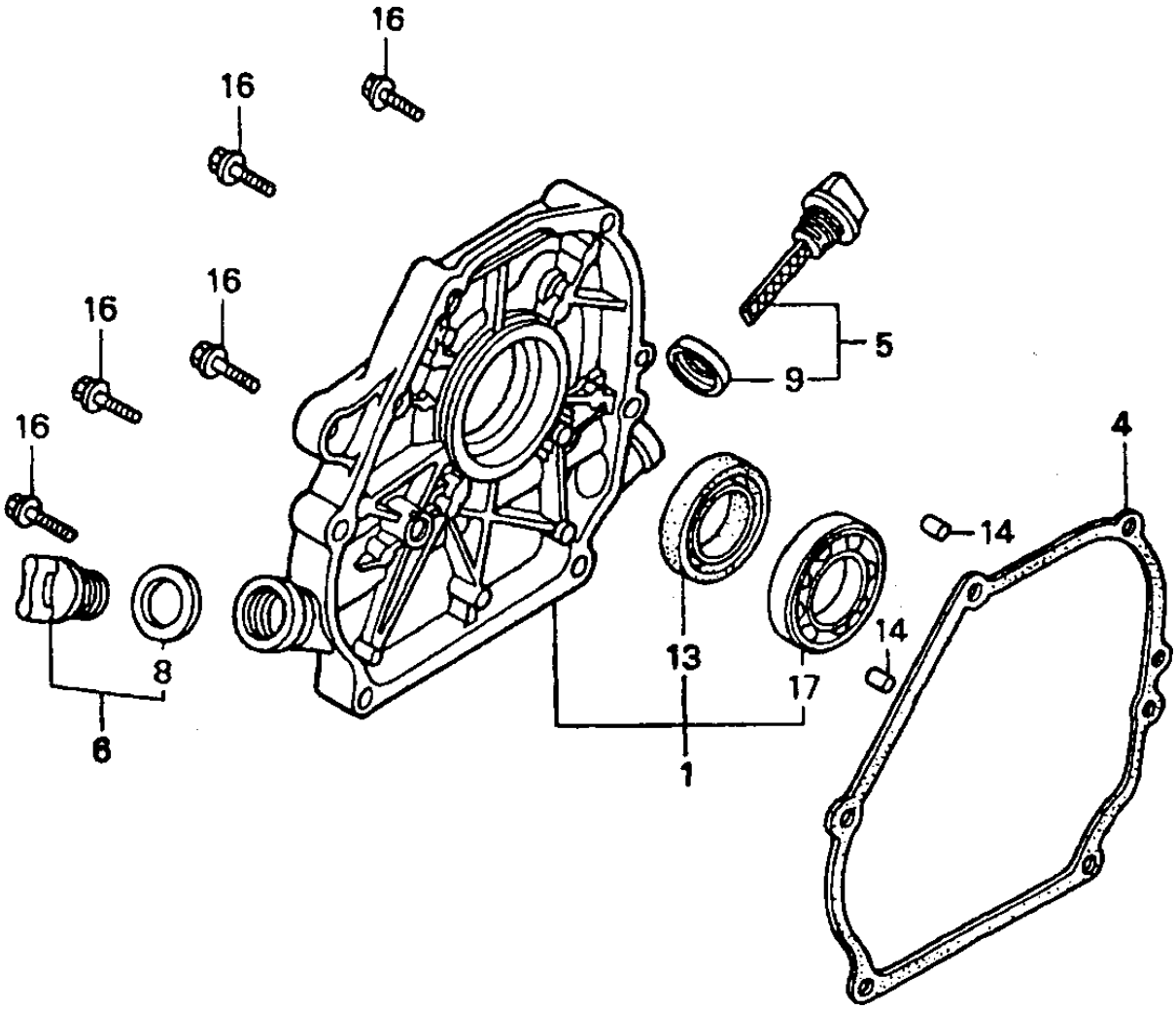
CYLINDER BARREL ASSY.



CYLINDER BARREL ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
2	12000ZH8010	BARREL ASSY. CYLINDER	1	..... INCLUDES ITEMS W/*
4	16510ZE1000	GOVERNOR ASSY.	1	
8	16531ZE1000	SLIDER, GOVERNOR	1	
9	16541ZE1000	SHAFT, GOVERNOR ARM	1	
11	90131ZE1000	BOLT, DRAIN PLUG	2	
12	90451ZE1000	THRUST WASHER 6MM	1	
13	90601ZE1000	WASHER, DRAIN PLUG	2	
14	90602ZE1000	CLIP, GOVERNOR HOLDER	1	
15*	91202883005	OIL SEAL 25X41X6	1	
18	9410106800	PLAIN WASHER 6MM	2	
19	9425108000	LOCK PIN 8MM	1	
21*	91001ZF1003	BALL BVEARING 6205TMB	1	

CRANKCASE COVER ASSY.

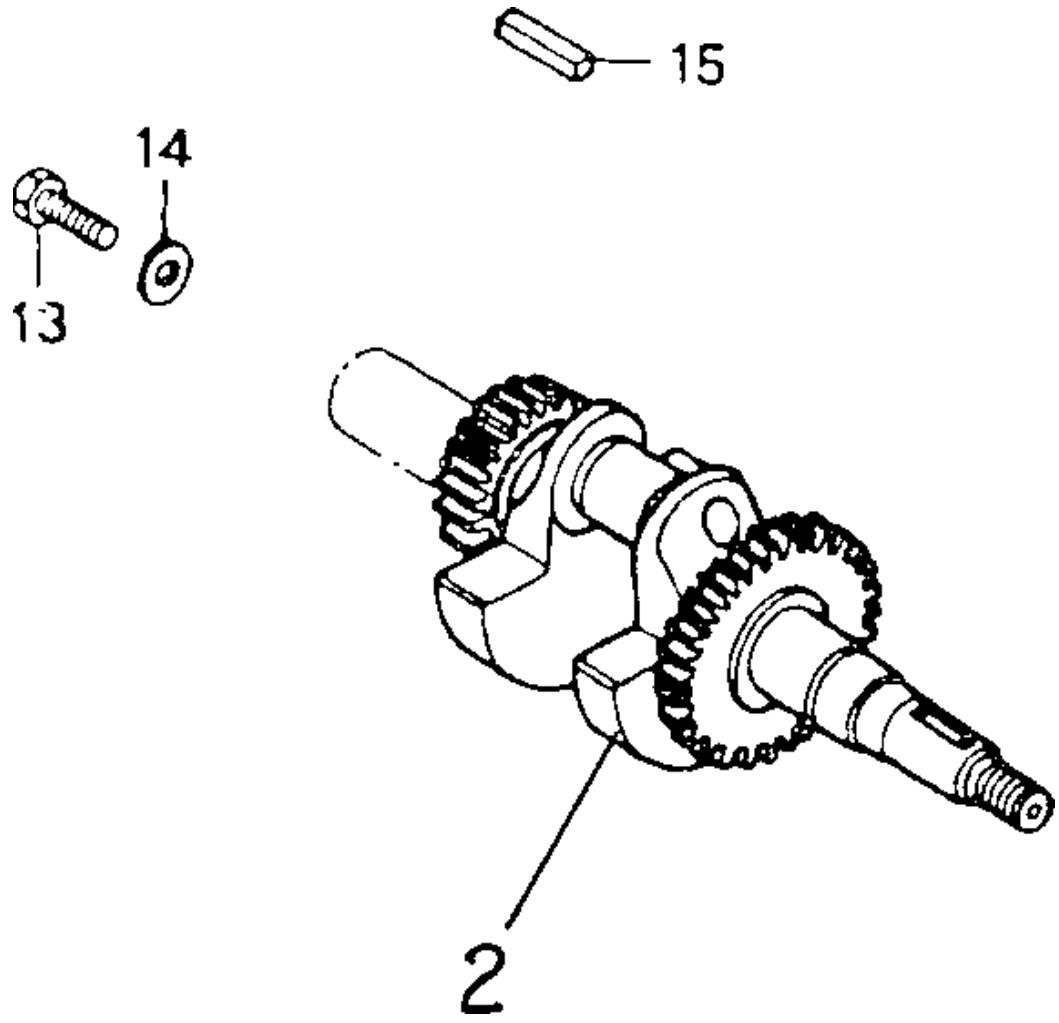


HONDA GX160K1 ENGINE — CRANKCASE COVER ASSY.

CRANKCASE COVER ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
1	11300ZZE1633	COVER ASSY. CRANKCASE	1	INCLUDES ITEMS W/*
4	11381ZH8801	GASKET CRANKCASE	1	
5	15600ZE1003	OIL GAUGE ASSY.	1	INCLUDES ITEMS W/#
6	15600ZG4003	OIL PLUG ASSY.	1	INCLUDES ITEMS W/%
8%	15625ZE1003	PACKING, OIL FILLER CAP	1	
9#	15625ZE1003	PACKING, OIL FILLER CAP	1	
13*	91202883005	OIL SEAL 25X41X6	1	
14	9430108140	KNOCK PIN 8X14	2	
16	957010803200	FLANGE BOLT 8X32	6	
17*	961006205010	BALL BEARING 6205	1	REPLACES 961006205000

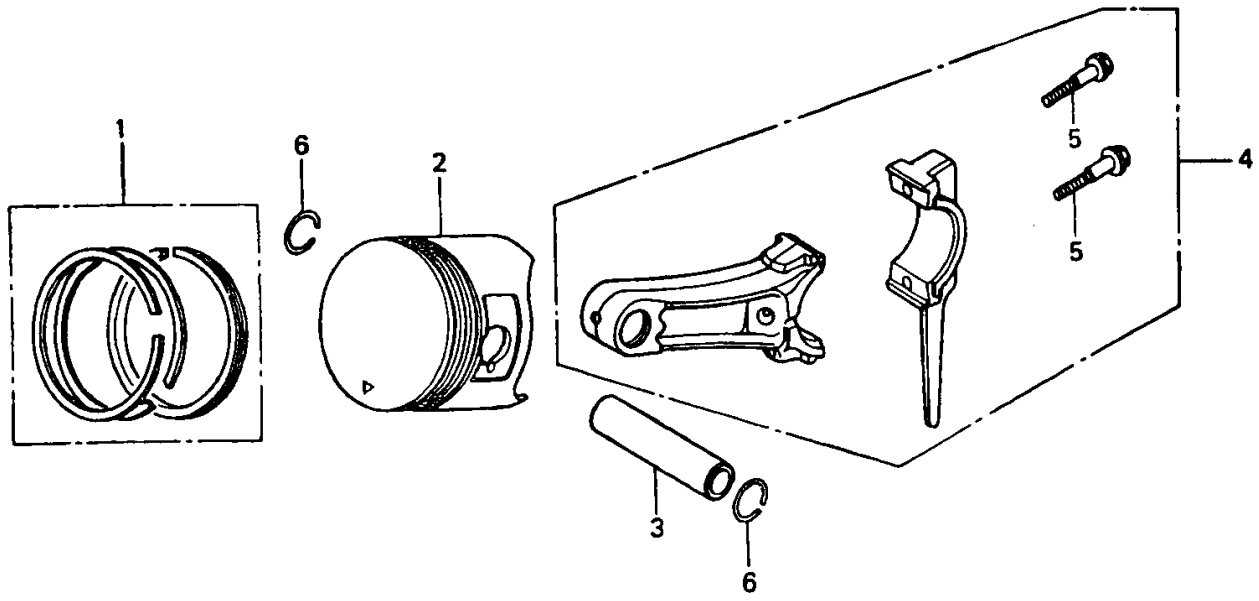
CRANKSHAFT ASSY.



CRANKSHAFT ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
2	13310ZE1000	CRANKSHAFT COMP.	1	
13	92101080250A	BOLT	1	
14	90473842000	WASHER 8MM	1	
15	90741883810	KEY 5X5X33	1	

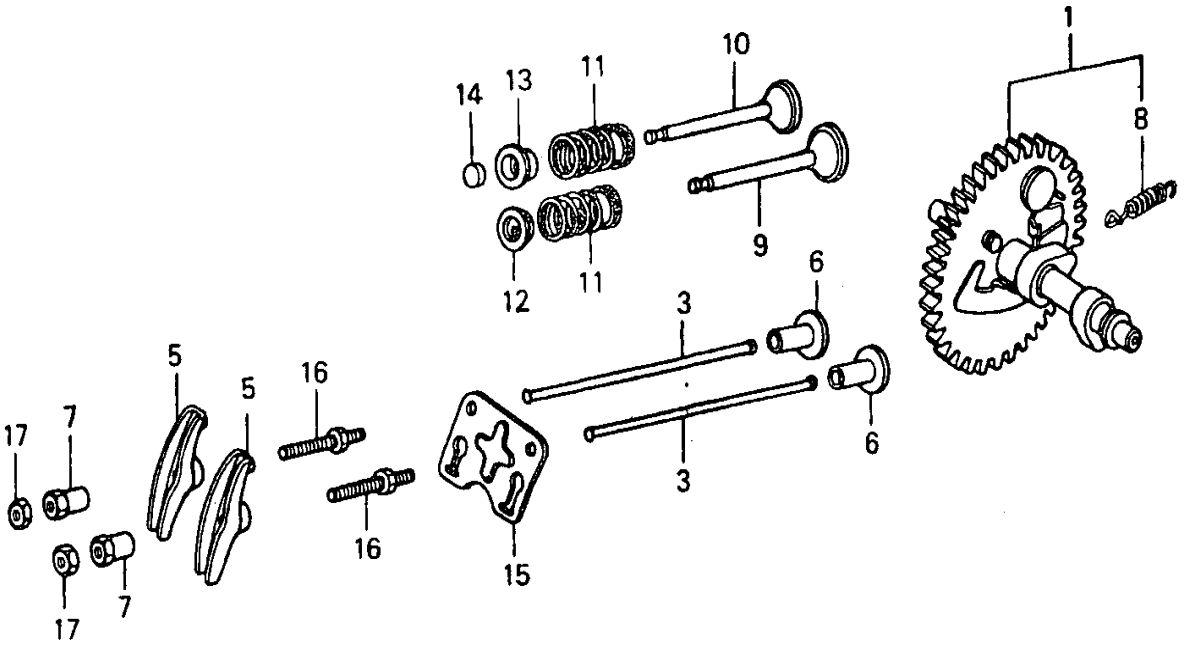
PISTON ASSY.



PISTON ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
1	13010ZH8941	RING SET, PISTON (STD)	1	
1	13011ZH8941	RING SET, PISTON (0.25)	1	
1	13012ZH8941	RING SET, PISTON (0.50)	1	
1	13013ZH8941	RING SET, PISTON (0.75)	1	
2	13101ZH8000	PISTON (STD)	1	
2	13102ZH8000	PISTON (0.25)	1	
2	13103ZH8000	PISTON (0.50)	1	
2	13104ZH8000	PISTON (0.75)	1	
3	13111ZE1000	PISTON PIN	1	
4	13200ZE1010	CONNECTING ROD ASSY.	1	INCLUDES ITEM W/*
5*	90001ZE1000	CONNECTING ROD BOLT	2	
6	90551ZE1000	CLIP, PISTON PIN 18MM	2	

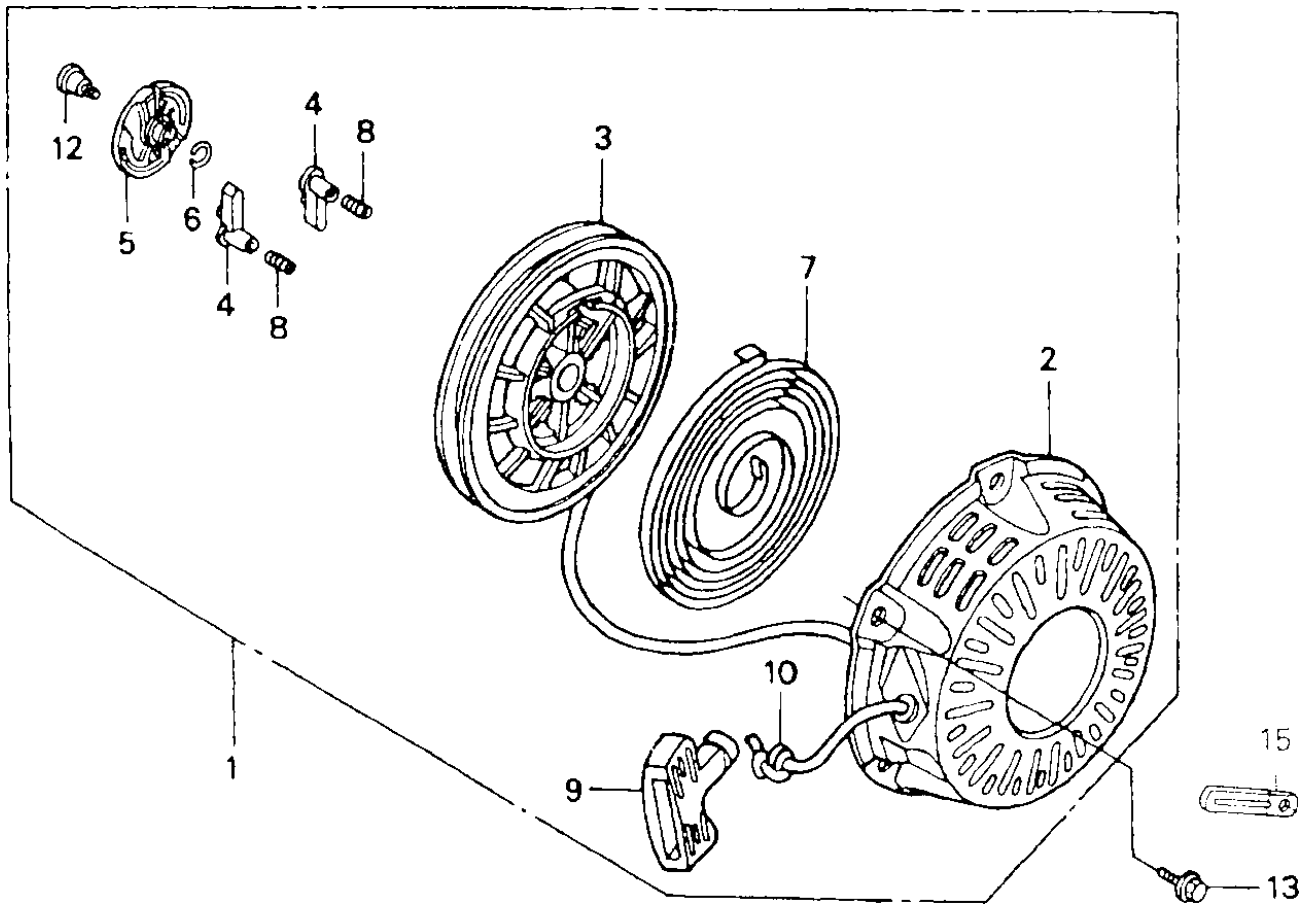
CAMSHAFT ASSY.



CAMSHAFT ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
1	14100ZE1812	CAMSHAFT ASSY.	1	INCLUDES ITEM W/*
3	14410ZE1010	PUSH ROD	2	
5	14431ZE1000	ARM, VALVE ROCKER	2	
6	14441ZE1010	VALVE LIFTER	2	
7	14451ZE1013	PIBOT, ROCKER ARM	2	
8*	14568ZE1000	SPRING, WEIGHT RETURN	1	
9	14711ZF1000	INLET VALVE	1	
10	14721ZF1000	EXHAUST VALVE	2	
11	14751ZF1000	SPRING, VALVE	1	
12	14771ZE1000	RETAINER, INTAKET VALVE	1	
13	14773ZE1000	RETAINER, EXHAUST VALVE	1	
14	14781ZE1000	ROTATOR, VALVE	1	
15	14791ZE1010	PLATE, PUSH ROD GUIDE	1	
16	90012ZE0010	PIBOT BOLT 8MM	2	
17	90206ZE1000	NUT, PIBOT ADJUSTING	2	

RECOIL STARTER ASSY.

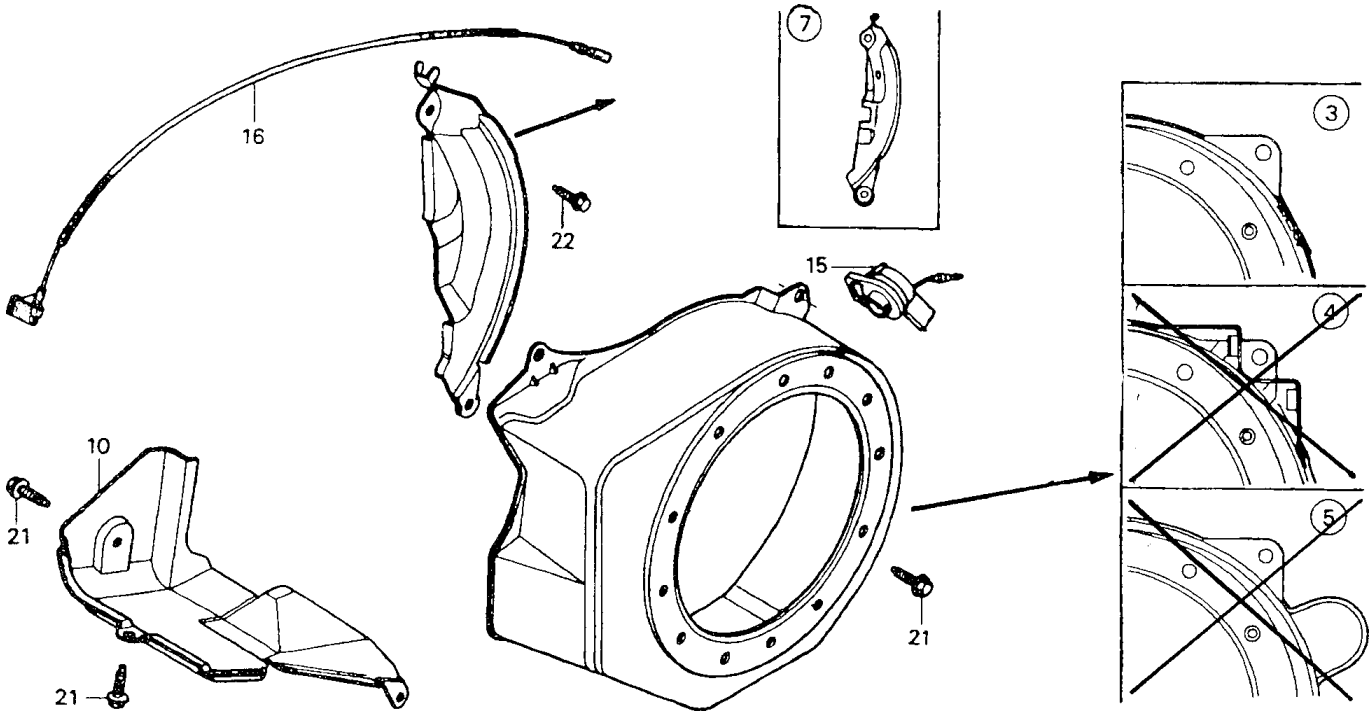


HONDA GX160K1 ENGINE — RECOIL STARTER ASSY.

RECOIL STARTER ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
1	28400ZH8013ZA	RECOIL STARTER	1	INCLUDES ITEMS/*
2*	28410ZH8003ZA	CASE COMP., STARTER	1	
3*	28420ZH8013	REEL RECOIL STARTER	1	
4*	28422ZH8013	RACHET STARTER	2	
5*	28433ZH8003	RACHET GUIDE	1	
6*	28441ZH8003	FRICTION SPRING	1	
7*	28442ZH8003	SPRING, RECOIL STARTER	1	
8*	28443ZH8003	SPRING, RETURN	2	
9*	28461ZH8003	STARTER KNOB	1	
10*	28462ZH8003	ROPE, RECOIL STARTER	1	
12*	90003ZH8003	SET SCREW	1	
13	957010600800	FLANGE BOLT 6X8	3	
15	32901MA1000	CLIP, CORD	1	

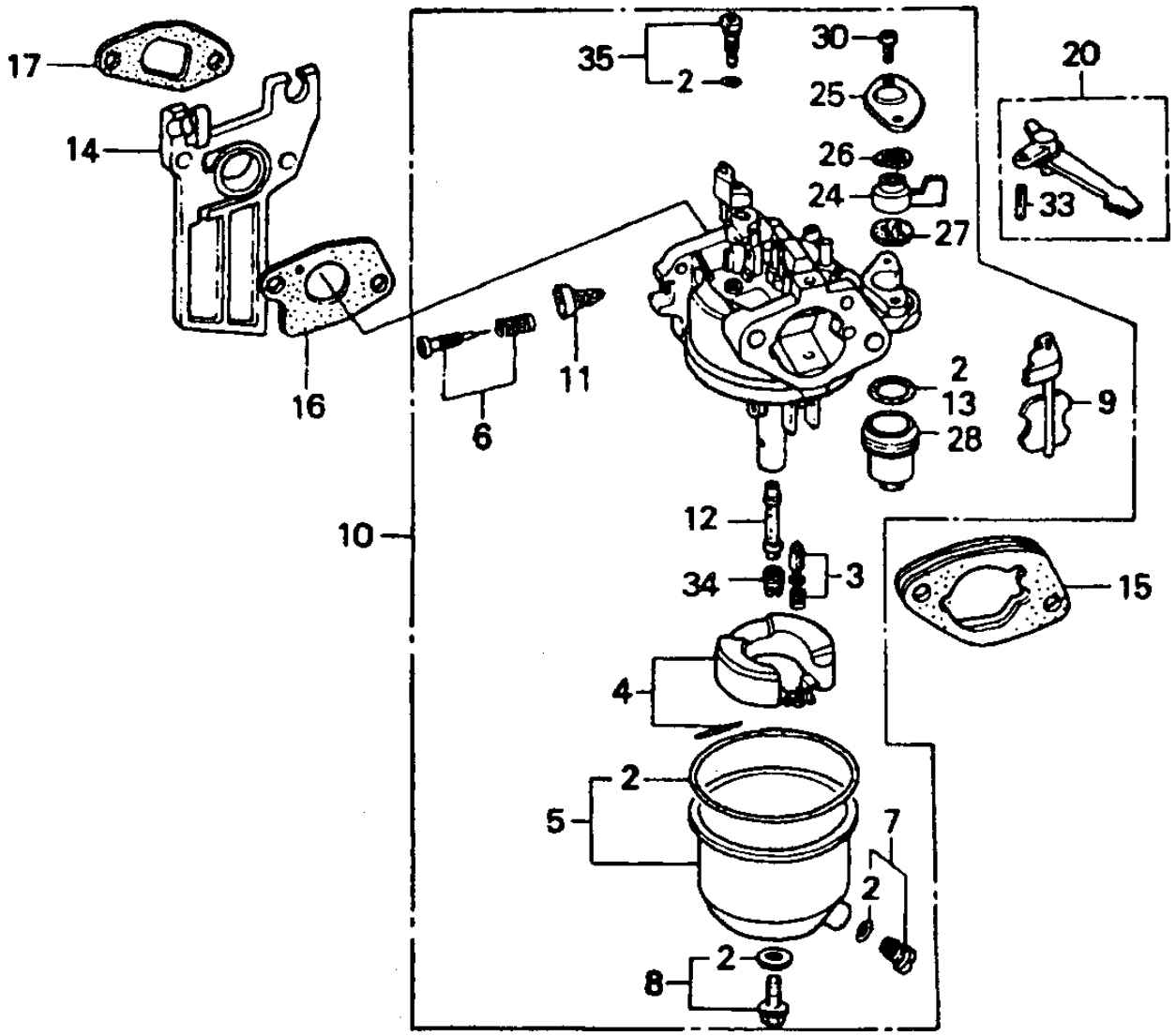
FAN COVER ASSY.



FAN COVER ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
3	19610ZE1000ZA	FAN COVER COMP.	1	
7	19612ZH8000	SIDE PLATE (STD)	1	
10	19630ZH8000	SHROUD COMP.	1	
15	36100ZE1015	SWITCH ASSY. ENGINE STOP	1	
16	36101ZE1010	CORD, STOP SWITCH 370MM	1	
21	90013883000	FLANGE BOLT 6X12	6	
22	90022888010	FLANGE BOLT 6X20	1	

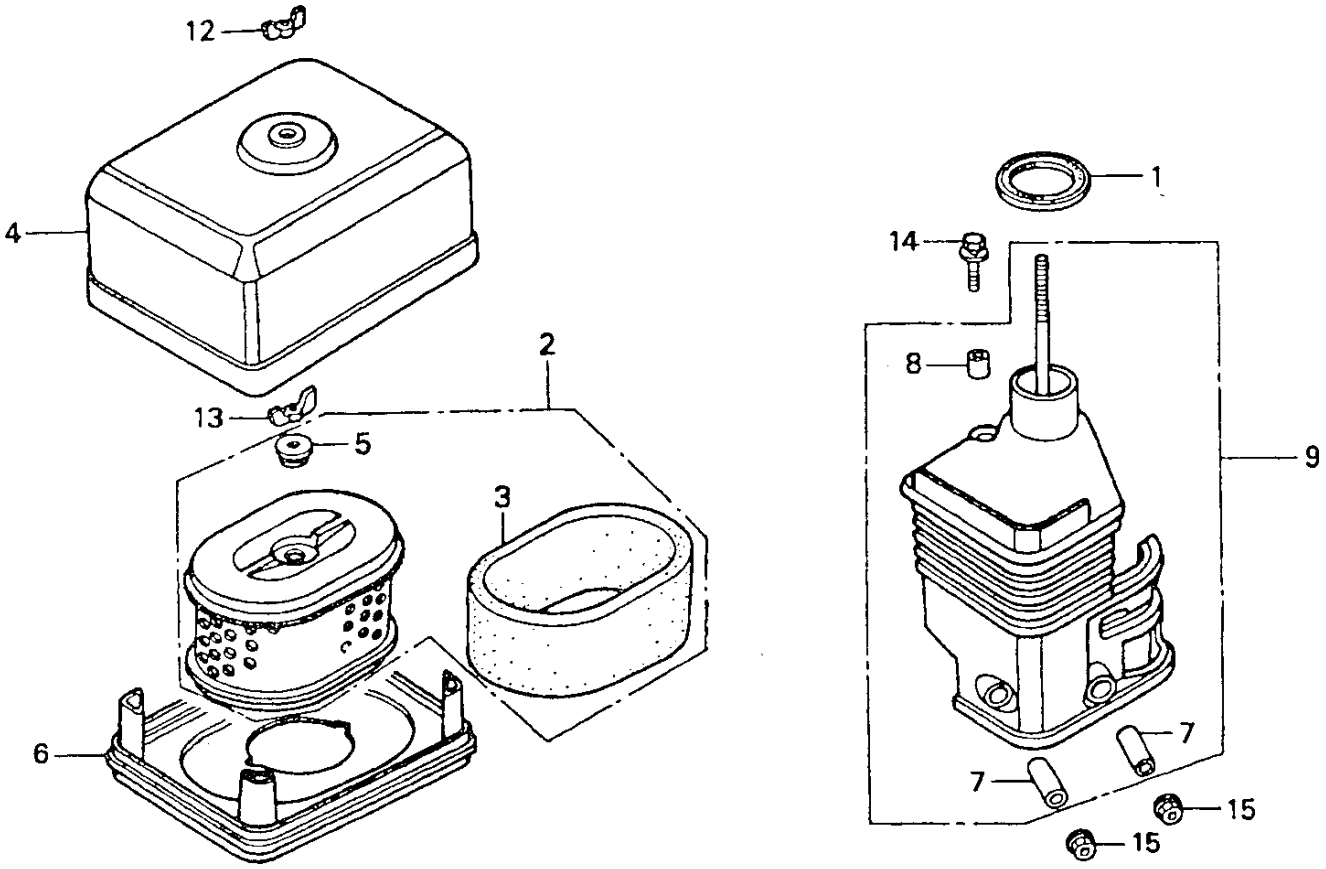
CARBURETOR ASSY.



CARBURETOR ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
2*	16010ZE1812	GASKET SET	1	
3*	16011ZE0005	FLOAT VALVE SET	1	
4*	16013ZE0005	FLOAT SET	1	
5*	16015ZE0831	FLOAT CHAMBER SET	1	
6*	16016ZE0005	PILOT SCREW	1	
7*	16024ZE1811	DRAIN SCREW SET	1	
8*	16028ZE0005	SCREW SET	1	
9*	16044ZE0005	CHOKE SET	1	
10	16100ZH8822	CARBURETOR ASSY.	1	INCLUDES ITEMS W/*
11*	16124ZE0005	SCREW, THROTTLE STOP	1	
12*	16166ZH8W50	MAIN NOZZLE	1	
13*	16955283000	PACKING, CUP	1	REPLACES 16173001004
14	16211ZE1000	INSULATOR, CARBURETOR	1	
15	16220ZE1020	SPACER COMP., CARBURETOR	1	
16	16221ZH8801	PACKING, CARBURETOR	1	
17	16212ZH8800	PACKING, INSULATOR	1	
20	16610XE1000	CHOKE LEVER COMP.	1	INCLUDES ITEMS W/#
24*	16953ZE1812	LEVER, COCK	1	
25*	16954ZE1812	PLATE, LEVER SETTING	1	
26*	16956ZE1811	SPRING, COCK LEVER	1	
27*	16957ZE1812	PACKING, FUEL COCK	1	
28*	16967ZE0811	CUP, FUEL STRAINER	1	
30*	93500030060H	SCREW 3X6	2	REPLCES 93500030061H
33#	9430520122	SPRING PIN 2X12	1	
34*	99101ZH80700	MAIN JET #70	1	
35*	99204ZE00350	PILOT JET SET #35	1	

AIR CLEANER ASSY.

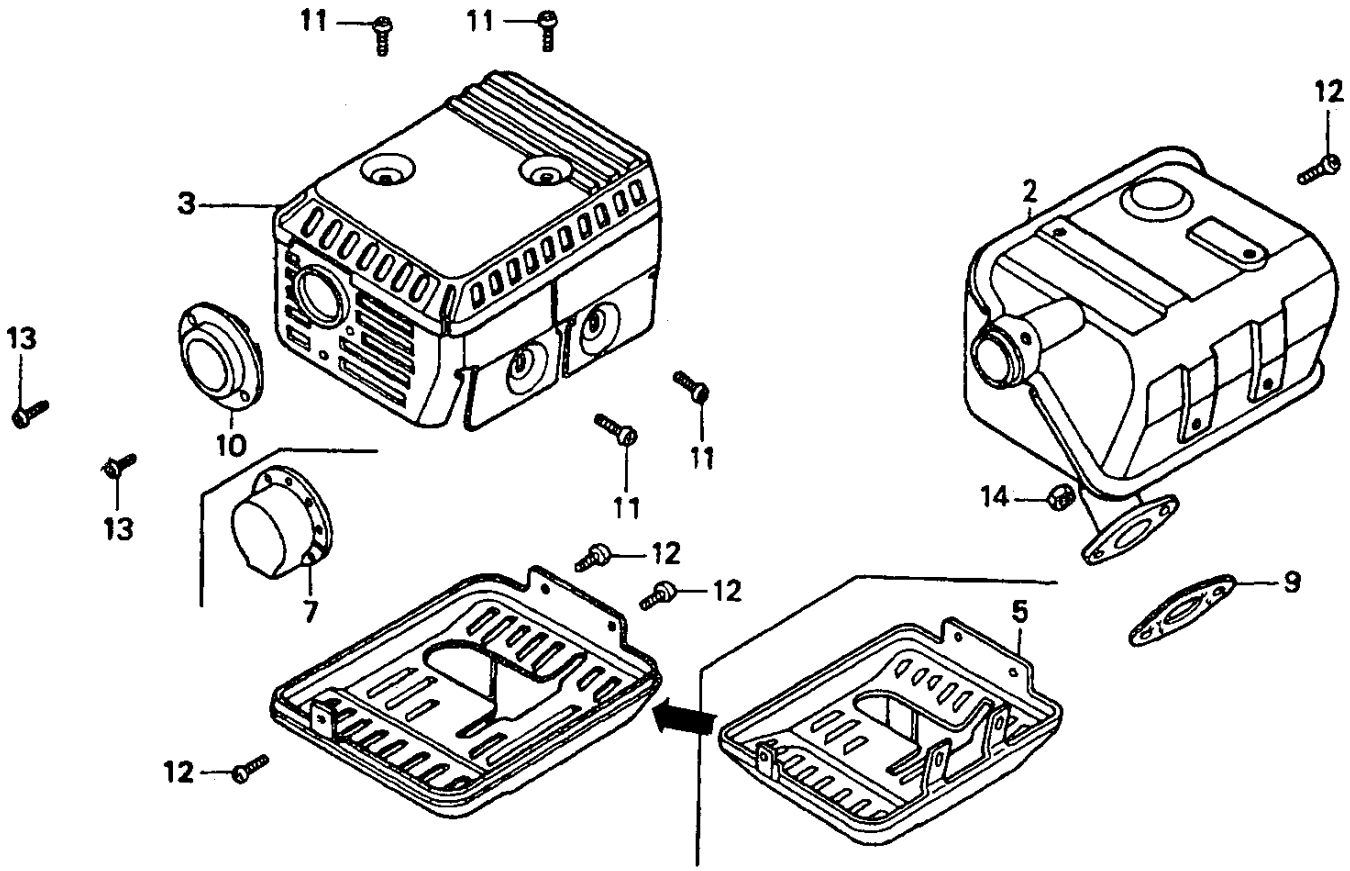


HONDA GX160K1 ENGINE — AIR CLEANER ASSY.

AIR CLEANER ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
1	16271ZE1000	PACKING, ELBOW	1	
2	17210ZE1505	CLEANER ELEMENT	1	INCLUDES ITEMS W/* REPLACES 17210ZE1822
3*	17218ZE1505	OUTER ELEMENT	1	REPLACES 17218ZE1821
4	17230ZE1820	COVER, AIR CLEANER	1	
5*	17232891000	GROMET, AIR CLEANER	1	
6	17235ZE1831	NOSE, SILENCER	1	
7#	17238ZE7010	COLLAR, AIR CLEANER	2	
8#	17239ZE1000	COLLAR (B), AIR CLEANER	1	
9	17410ZE1020	ELBOW COMP., AIR CLEANER	1	INCLUDES ITEMS W/#
12	90325044000	NUT	1	
13	90325044000	NUT	1	
14	957010602000	FLANGE BOLT 6X20	1	
15	9405006000	FLANGE BOLT 6MM	2	

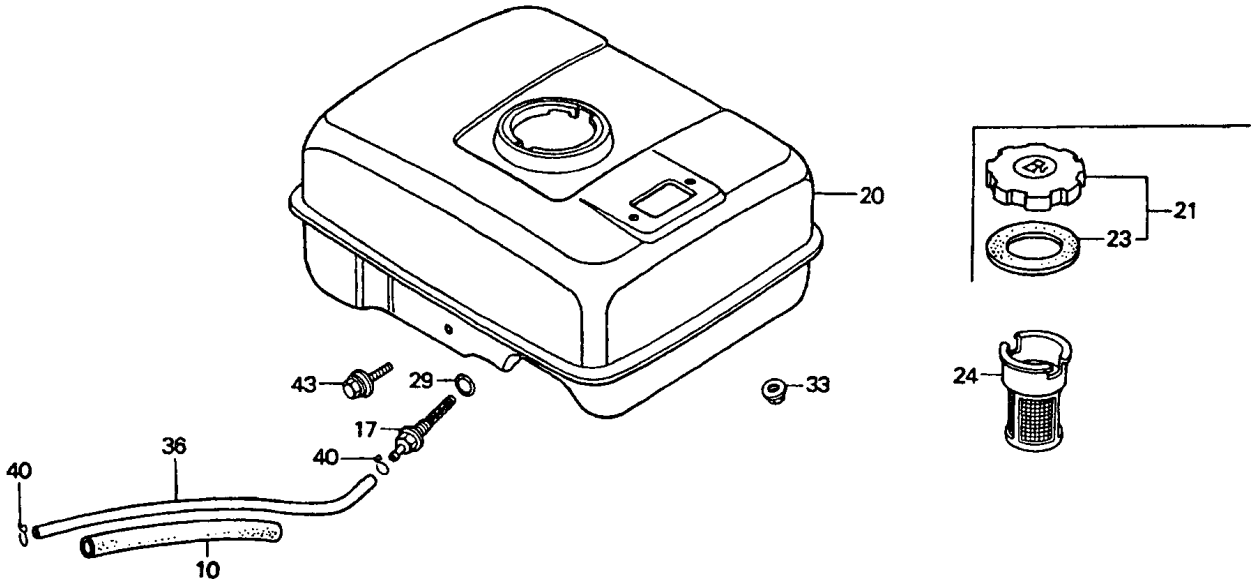
MUFFLER ASSY.



MUFFLER ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
2	18310ZF1000	MUFFLER COMP.	1	
3	19320ZF1H01	MUFFLER PROCTOR (STD)	1	
5	18325ZE1010	PROCTECTOR, LOWER	1	
7	18340ZE1010	DEFLECTOR CP	1	
9	18381ZH8800	GASKET, MUFFLER	1	
10	18522ZE1000	GUIDE, MUFFLER	1	
11	90050ZE1000	TAPPING SCREW 5X8	4	
12	90055ZE1000	TAPPING SCREW 4X6	3	
13	90002ZG0003	TAPPING SCREW 4X8	2	
14	020108060	NUT	2	REPLACES 94001080000S

FUEL TANK ASSY.

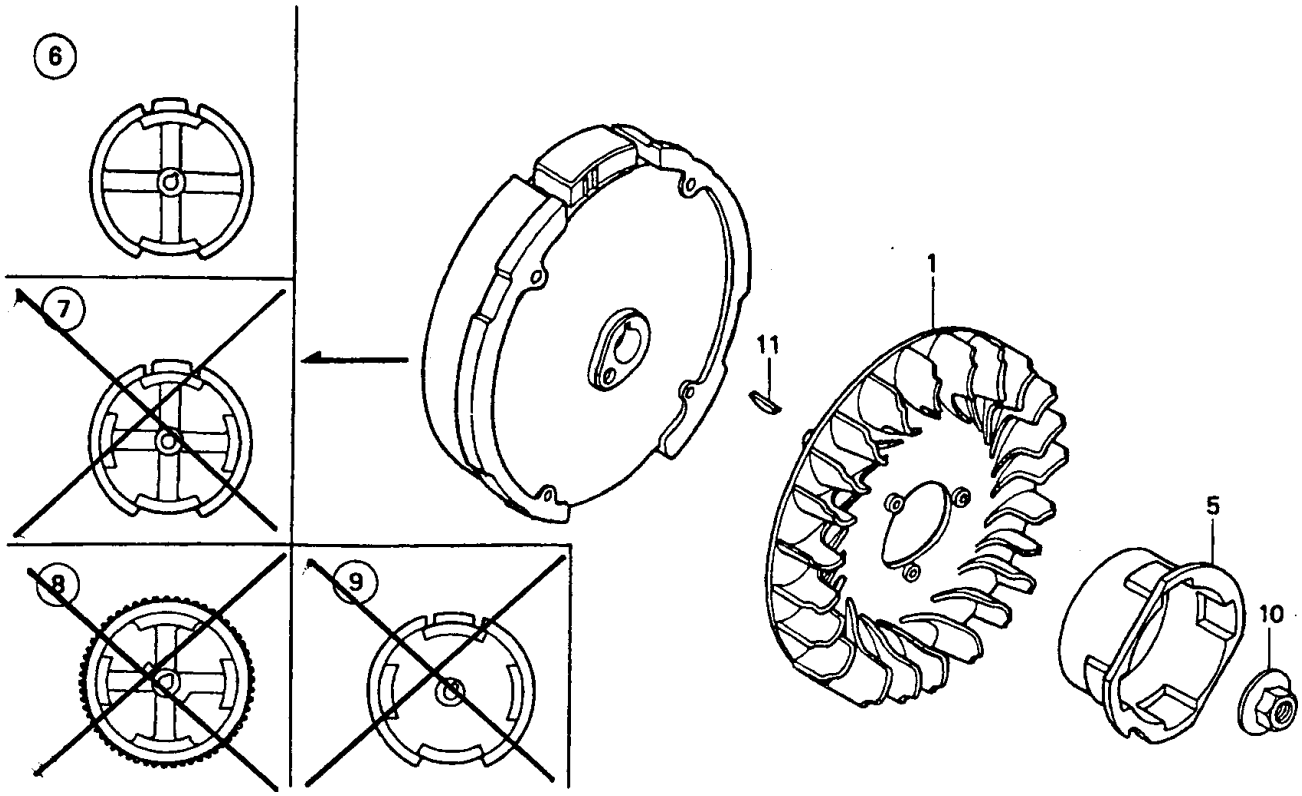


FUEL TANK ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
10	16854ZH8000	RUBBER, SUPPORT (107 MM)	1	
17	16955ZE1000	JOINT, FUEL TANK	1	
20	17510ZE1020ZA	FUEL TANK COMP.	1	
21	17620ZH7023	FUEL TANK CAP CP	1	INCLUDES ITEM W/*
23*	17631ZH7003	PACKING	1	
24	17672ZE2W01	FUEL FILTER	1	
29	91353671003	O-RING 14 MM	1	REPLACES 91353671004
33	9405006000	FLANGE NUT 6 MM	2	
36	950014514040	FUEL TUBE 4.5X140	1	
40	9500202080	CLIP, TUBE	2	
43	957010602500	FLANGE BOLT 6X25	1	

HONDA GX160K1 ENGINE — COOLING FAN & FLYWHEEL ASSY.

COOLING FAN & FLYWHEEL ASSY.

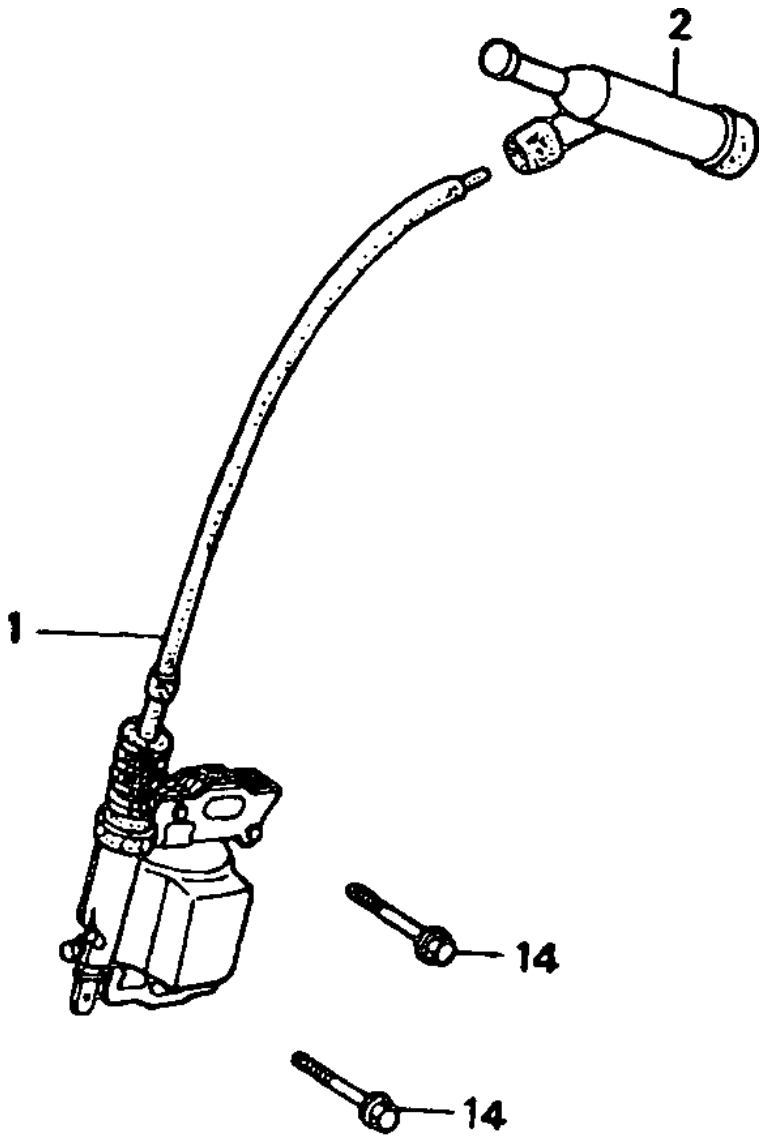


HONDA GX160K1 ENGINE — COOLING FAN & FLYWHEEL ASSY.

COOLING FAN & FLYWHEEL ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
1	19511ZE1000	COOLING FAN	1	
5	28451ZH8003	STARTER PULLEY	1	
6	31100ZE1010	FLYWHEEL COMP.	1	
10	90201878003	SPECIAL NUT 14MM	1	
11	13331357000	WOODRUFF KEY 25X18	1	

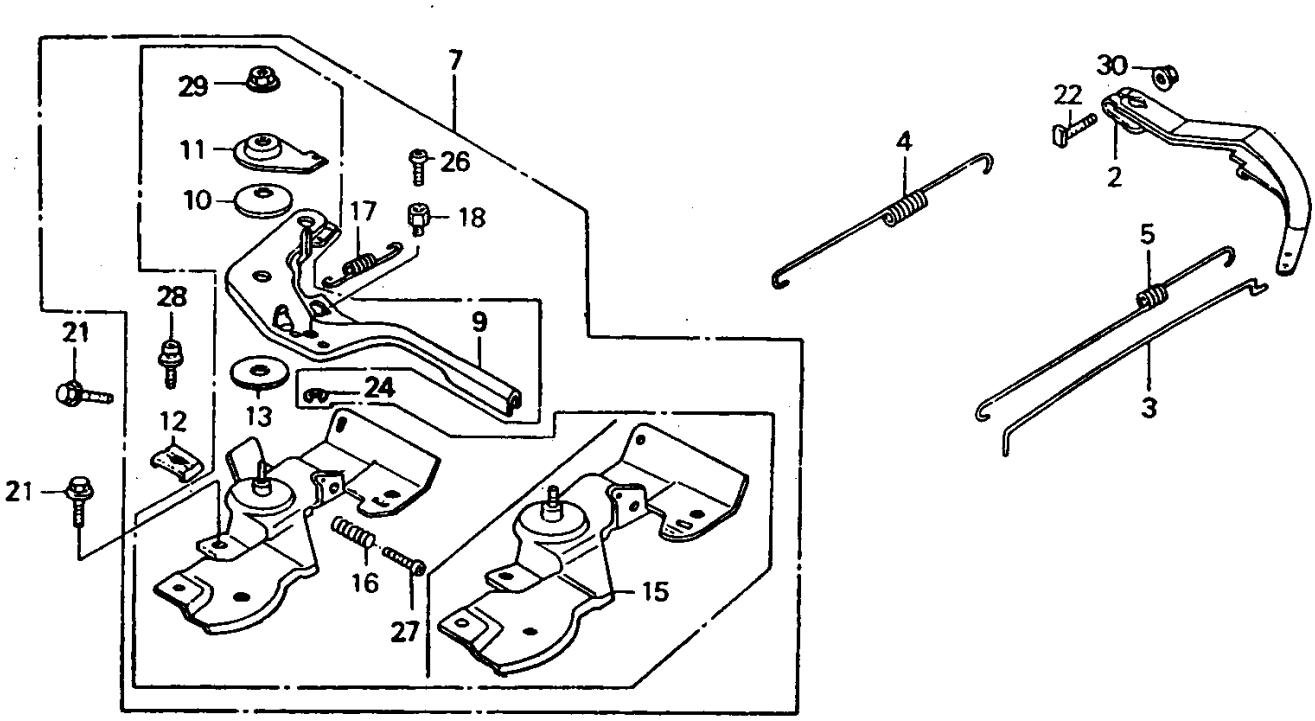
IGNITION COIL ASSY.



IGNITION COIL ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
1	30500ZE1033	IGNITION COIL CP ASSY.	1	
2	30600ZE1013	SPARK PLUG CAP ASSY.	1	
14	90121952000	FLANGE BOLT 6X25	2	

GOVERNOR ASSY.



GOVERNOR ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
2	16551ZE0010	GOVERNOR ARM	1	
3	16555ZE1000	GOVERNOR ROD	1	
4	16561ZE1020	GOVERNOR SPRING	1	
5	16562ZE1020	SRRING, THROTTLE	1	
7	16500ZH8812	CONTROL ASSY.	1	.....INCLUDES ITEMS W/*
9*	16571ZH8010	LEVER CONTROL	1	
10*	16574ZE1000	LEVER SPRING	1	
11*	16575ZH8000	WASHER, CONTROL LEVER	1	
12*	16576891000	HOLDER CABLE	1	
13*	16578ZE1000	SPACER, CONTROL LEVER	1	
15*	16580ZH8812	CONTROL BASE COMP.	1	
16*	16584883000	FLANGE BOLT	1	
17*	16592ZE1810	SPRING, CABLE RETURN	1	
18*	16594883010	WIRE HOLDER	1	
21	90013883000	FLANGE BOLT 6X12	1	
22	90015ZE5010	BOLT, GOVERNOR ARM	1	
24*	90605230000	CIR CLIP	1	
26*	93500040060H	SCREW 4X6	1	
27*	93500050250H	SCREW 5X25	1	
28*	93500050160A	SCREW 5X16	1	
29*	90114SA0000	LOCK NUT 6 MM	1	
30	9405006000	FLANGE NUT	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 Muiltiquip part numbers clearly marked.
6. The following items are not returnable:
    a. Obsolete parts. (If an item is listed in the parts price book 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 5 working days from notification, pending instructions. If a reply is not received within 5 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 $20.00 to $50.00 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 not authorizes any person to assume for it any other obligation or liability whatever in connection with the sale of its products. A part from such written statement of warranty, there are no warranties, express, implied or statutory, which extend beyond the description of the products on the face hereof.

NOTE PAGE

PARTS AND OPERATION MANUAL

HERE'S HOW TO GET HELP

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

PARTS DEPARTMENT

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

SERVICE DEPARTMENT/TECHNICAL ASSISTANCE

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

WARRANTY DEPARTMENT

888-661-4279, or 310-661-4279
FAX: 310- 537-1173

MAIN

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

MULTIQUIP

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POST OFFICE BOX 6254
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FAX:310-537-3927
E-MAIL: mq@multiquip.com
WWW: multiquip.com

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