

PARTS AND OPERATION MANUAL

MULTIQUIP

Model GDP-5000H

High Cycle Generator

© COPYRIGHT 2001, MULTIQUIP INC.

Revision #1 (03/05/01)



MULTIQUIP INC.

18910 WILMINGTON AVE.
CARSON, CALIFORNIA 90746
310-537-3700
800-421-1244
FAX: 310-537-3927

E-mail: mq@multiquip.com • **www:** www.multiquip.com

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

PARTS DEPARTMENT:

800-427-1244
FAX: 800-672-7877

SERVICE DEPARTMENT/TECHNICAL ASSISTANCE:

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



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

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

Here's How To Get Help	3
Table Of Contents	4
Parts Ordering Procedures	5
Rules For Safe Operation	6
Operation and Safety Decals	7
Specifications	8
General Information	9

Multiquip GDP-5000H — AC Generator

Controls and Indicators	10
Installation	11
Pre-Setup	12-13
Instrumentation	14
Load Application	15-16
Operating Instructions	17
Maintenance	18
Preparation For Long Term Storage	19
Wiring Diagram	20
Troubleshooting (Engine)	21-22
Troubleshooting (Generator)	23-24
Explanation Of Codes In Remarks Column	7
Spare Parts List	25
Engine/Generator Assy.	26-27
Generator Assy.	28-29
Control Box Assy.	30-31
Muffler Assy.	32-33
Pipe Frame Assy.	34-35
Nameplate Assy.	36

Honda GX340K1 Gasoline Engine

Cylinder Head Assy.	38-39
Recoil Starter Assy.	40-41
Fan Cover Assy.	42-43
Camshaft /Valves Assy.	44-45
Piston/Rings Assy.	46-47
Air Cleaner Assy.	48-49
Cylinder Barrel Assy. (Recoil Starter)	50-51
Cylinder Barrel Assy. (Electric Start)	52-53
Crankcase Governor Assy.	54-55
Flywheel/Fan Assy.	56-57
Coil Assy.	58-59
Crankshaft Assy.	60-61
Electric Starter Assy.	62-63
Governor Control Assy.	64-65
Carburetor Assy.	66-67
Solenoid Assy.	68-69
Fuel Cock Assy.	70-71

Terms and Conditions Of Sale — Parts	72
--	----

NOTE

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

PARTS ORDERING PROCEDURES

- 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:

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

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

- UPS Ground Service at no charge for freight
- PS Third Day Service at one-half of actual freight cost

No other allowances on freight shipped by any other carrier.

**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

**Extra Fax Discount
for Domestic USA
Dealers Only**

**Up to 5%
extra savings!**

**UPS
Special**
For faxed orders only

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

Toll-free nationwide:

800-421-1244

Toll-free FAX:

800/6-PARTS-7 • 800-672-7877

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 GDP-5000H Generator:

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.
- This generator is a source of potentially **LETHAL** high voltage. Never permit unqualified personnel-especially children to operate the generator.
- 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.
- This generator is equipped with a **ground terminal** for your protection. Always complete the grounding path from the generator to an external grounding source.
- **NEVER** operate this generator, or handle any electrical equipment while standing in **water, while bare foot, while hands are wet, or in the rain**. *Electrical shock could occur causing severe bodily harm or even death.*
- Keep electrical cords in good condition. Worn, bare or frayed wiring can cause electrical shock, leading to *bodily harm or even death*.
- This generator requires an adequate free flow of cooling air. Never operate the generator 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 generator and may cause injury to people.
- **NEVER** touch the hot exhaust manifold, muffler or cylinder. Allow these parts to cool before servicing generator.

- Provide adequate ventilation when operating the generator. **DO NOT** operate the generator in any enclosed or narrow space. The generator's gasoline engine gives off **DEADLY** carbon monoxide gas.
- **NEVER** operate the generator in an explosive atmosphere or near combustible materials. An explosion or fire could result causing severe *bodily harm or even death*.
- Always make sure that the generator is secure on level ground so that it cannot slide or shift around, endangering workers. Also keep the immediate area free of bystanders.
- When using a concrete vibrator or a similar device that is immersed in a water based solution, make sure the device is equipped with short circuit protection.
- Always use rubber boots and gloves when operating a concrete vibrator or similar device.
- Use adequate size connecting cable for extension.
- **High Temperatures** – Allow the machine and engine to cool before adding fuel or performing service and maintenance functions. Contact with *hot* components can cause serious burns.

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 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

OPERATION AND SAFETY DECALS

Machine Safety Decals

The GDP-5000H portable generator 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.



P/N 7850630003



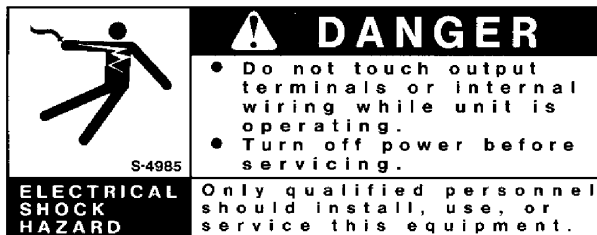
P/N 7900636004

OPERATING INSTRUCTIONS

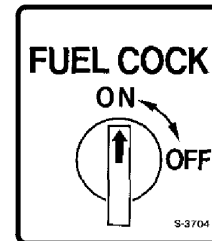
1. Before starting check the oil and fuel level.
2. Switch the circuit breaker to the "OFF" position.
3. Open the fuel valve.
4. Pull the choke knob.
5. Turns the operation switch to the "RUN" position and push
6. Pull the recoil starter.
7. After the engine starts, gradually push in the choke valve.
8. Run the generator for 3-5 minutes without load.
9. Check for any abnormal noise or smell.
10. Switch the circuit breaker to the "ON" position.
11. When stopping, remove the load and allow it to continue to run for 2-3 minutes before stopping engine.
12. Turns the operation switch to the "STOP" position.
13. After the engine completely stops, close the fuel valve.

S-4607

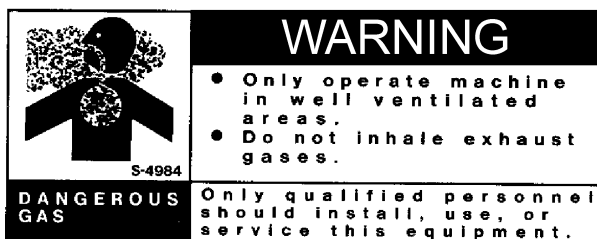
P/N 7900638204



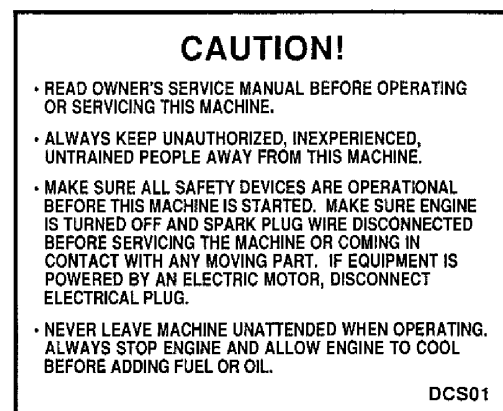
P/N 8700611904



P/N 1980680004

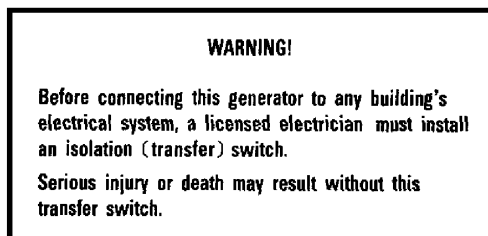


P/N 8700611804



DCS01

P/N 0820610804



P/N 0820610404

GROUND



P/N 0800628504

Table 1. Specifications

MODEL		GDP-5000H
	Type	2-pole, Brushless Type Revolving Field
60 Cycle Generator	Max. Output	4.0 kW
	Rated Output	3.6 kW
	Rated Voltage	120/ 240 V
	Rated Current	30.0/15.0 A
	Phase	Single Phase (4 wire)
	Frequency	60 Hz
	Rated Speed	3600 RPM
	Power Factor	100%
180 Cycle Generator	Max. Output	5 kVA
	Rated Output	5 kVA
	Rated Voltage	230 V
	Rated Current	12.5 A
	Phase	Three Phase (4 wire)
	Frequency	180 Hz
	Rated Speed	3600 RPM
	Power Factor	80%
Engine	Model	Honda GX340
	Type	Air-cooled 4 stroke OVH 25 inclined cylinder
	Bore X Stroke	82 mm X 64 mm
	Displacement	337 cc
	Max Output	11.0 H.P./3600 R.P.M.
	Rated Output	8.0 H.P./3600 R.P.M.
	Fuel Tank Capacity	Approx. 5 U.S. Gallons
	Fuel	Unleaded Automobile Gasoline
	Lube Oil Capacity	1 3/4 pints
	Speed Control Method	Centrifugal Fly-weight Type
	Starting Method	Recoil Start
Dimension (LXWXH)		700 X 560 X 510 mm
Dry Net Weight		231.5 lbs

Effects of Altitude and Heat

The maximum output of the engine listed above is applicable to supplying electrical power for continuous service at ambient conditions in accordance with SAE Test cord J607. The above ambient conditions are at standard sea level, with a barometric reading of 29.92 inches and a temperature of 60 degrees fahrenheit.

Generally, the engine output power will decrease 3 1/2% for each 1000 feet of altitude above sea level, and 1% for each 10° F Fahrenheit above the standard temperature of 60° F

WARNING:



Before connecting this generator to any building's electrical system, a licensed electrician must install an isolation (transfer) switch.

Serious injury or death may result without this transfer switch.

GDP-5000H FAMILIARIZATION

Generator

The Multiquip Model GDP-5000H generator has been designed as a portable dual purpose power source for 60 Hz (single phase) lighting facilities, power tools, submersible pumps and other industrial and construction machinery. In addition the Model GDP-5000H has been designed as a power source for 180 Hz, 3-phase concrete vibrators.

This generator is powered by a **HONDA** gasoline engine. The alternator, a brushless revolving-field type, is permanently aligned to the engine through rigid coupling.

The generator is mounted on rubber vibration isolators that have a steel base backplate which is attached to the protective steel pipe carrying frame. The protective carrying frame is made of steel tubing and fully wraps around the generator to protect against damage.

This portable generator is supplied with a electrical **control box**. To reduce vibration caused by the engine, the control box is also placed on rubber isolators.

Control Box

The control box is provided with the following:

- Three 240V output receptacles (three phase).
- One 120V output output receptacle (single phase).
- One 120/240V output output receptacle (single phase).
- One 120V output receptacle, GFIC (single phase).
- One main 60 Hz (single phase) circuit breaker.
- One main 180 Hz (three phase) circuit breaker.
- AC Voltmeter
- Ground Terminal
- Full Power Switch
- Idle Control Switch
- Operation Switch

Excitation System

The GDP-5000H-series generators use a magnet attached to a flywheel to produce AC voltage from a lamp coil beneath the flywheel. As the magnetic passes the coil it produces approximately 19-22 AC volts.

This voltage (19-22 VAC) is then sent to the control box that contains three rectifying diodes:

- Excitation (diode 1)
- Battery (diode 2)
- Slow Down (diode 3)

The AC voltage will pass through the excitation diode that converts the voltage to DC power.

This DC power is then sent to the excitation windings housed within the main windings commonly called the "stator".

This voltage is then transferred into the rotor through induction. The rotor contains two diodes within it which rectify the DC voltage and send it out through the main windings, as AC voltage.

Engine

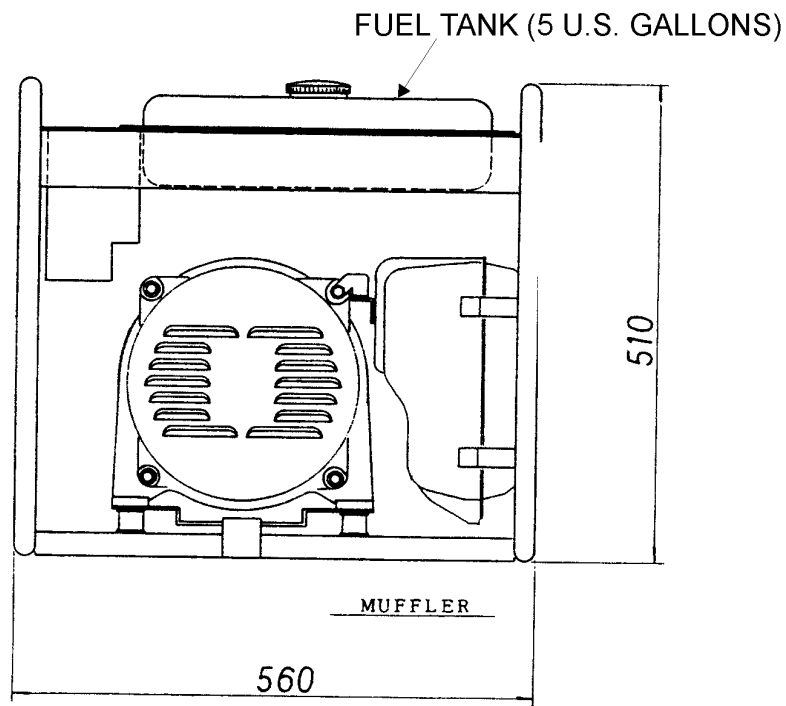
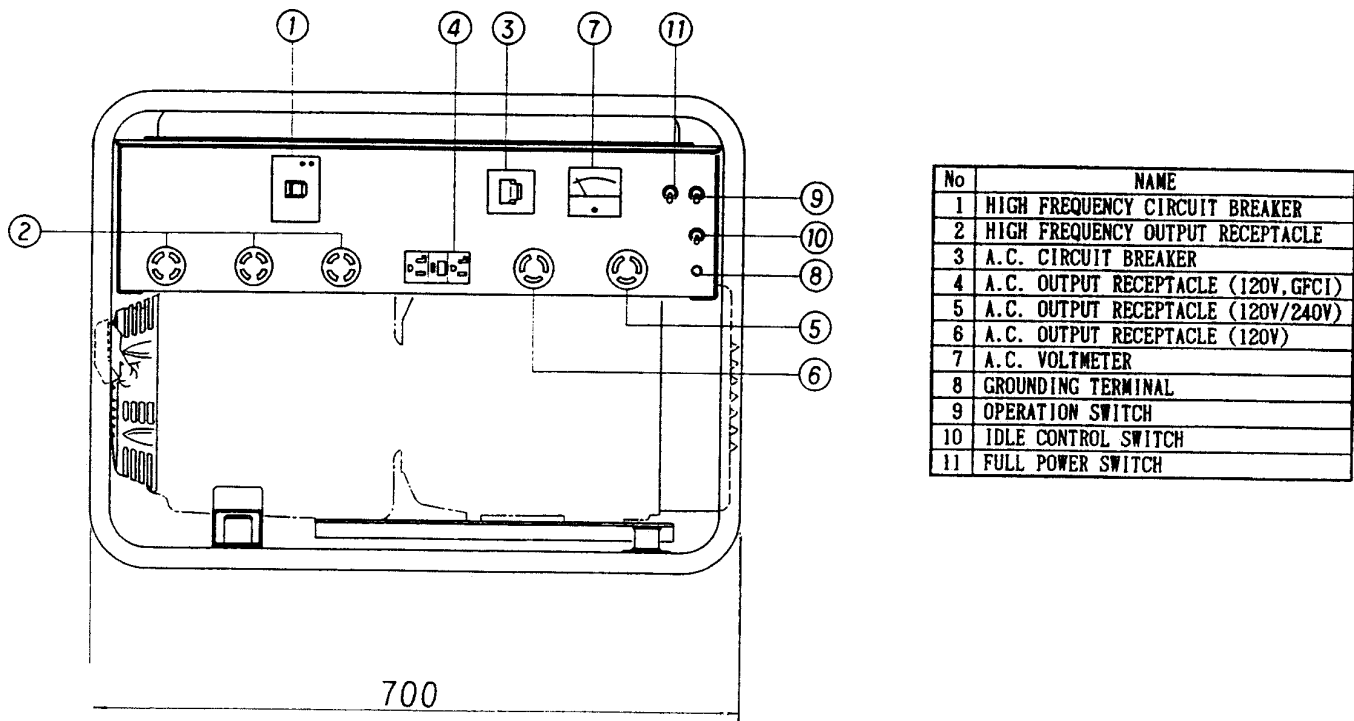
The four-cycle air-cooled HONDA gasoline engine is designed to meet every performance requirement of this generator. Reference Table 1, page 8 for engine specifications

Figure 1 (page 11) shows the basic controls and indicators for the GDP-5000H generator.

NOTE

In keeping with Multiquip's policy of constantly improving its products, the specifications quoted herein are subject to change without prior notice.

GDP-5000H — CONTROLS AND INDICATORS



DRY WEIGHT APPROX. 231.5 LBS (105 KG)

Figure 1. Controls and Indicators

Outdoor Installation

Install the generator in a location where it will not be exposed to rain or sunshine. Make sure that the generator is on secure level ground so that it cannot slide or shift around. Also install the generator in a manner so that the exhaust will not be discharged in the direction of nearby homes.

The installation site must be relatively free from moisture and dust. All electrical equipment should be protected from excessive moisture. Failure to do will result in deterioration of the insulation and will result in short circuits and grounding.

Foreign materials such as dust, sand, lint and abrasive materials have a tendency to cause excessive wear, not only to the engine parts, but also to the alternator parts.

CAUTION :



Pay close attention to ventilation when operating the generator inside confined areas. The engine exhaust contains noxious elements.

Indoor Installation

Exhaust gases from gasoline engines are extremely poisonous. Whenever an engine is installed indoors the exhaust fumes must be vented to the outside. The engine should be installed at least two feet from any outside wall. Using an exhaust pipe which is too long or too small can cause excessive back pressure which will cause the engine to heat excessively and possibly burn the valves.

Eliminate the danger of deadly carbon monoxide gas. Remember that exhaust fumes from any gasoline engine are very poisonous if discharged in a closed room, but harmless if allowed to mix with the outside air. If the generator is installed indoors, you must make provisions for venting the engine exhaust to the outside of the building.

CAUTION :



Preventing electrical shock. Pay close attention to handling when operating concrete vibrators. Always use rubber boots and gloves to insulate the body from a short circuit.

General Inspection Prior to Operation

This generator has been thoroughly inspected prior to shipment from the factory. However, be sure to check for damaged parts or components, or loose nuts and bolts, which could have occurred in transit.

Ground

The nut and ground terminal on the generator should always be used to connect the generator to a suitable ground. The ground path should be of #8 size wire.

Connect the terminal of the ground wire between the lock washer and the nut and tighten the nut fully. Connect their end of the wire to a suitable ground.

Ground the Generator

Ground the generator from its ground connector so that the resistance to ground is 500 ohms or less.

Ground the Tool

Ground the tool (load) in the same manner as the generator.

Circuit Breaker

To protect the generator from an overload, circuit breakers are provided for both 60 and 180 phases on the control box. Make sure to switch the circuit breakers to the "OFF" position prior to starting the engine.

Extension Cable

When electric power is to be provided to various tools or loads at some distance from the generator, extension cords are normally used. Cables should be sized to allow for distance in length and amperage so that the voltage drop between the generator and point of use (load) is held to a minimum. Use the cable selection chart (Tables 2 and 3) as a guide for selecting proper cable size.

Table 2. Cable Selection (60 Hz, single phase operation)

Current in Amperes	Load In Watts		Maximum Allowable Cable Length			
	At 120 Volts	At 240 Volts	#10 Wire	#12 Wire	#14 Wire	#16 Wire
2.5	300	600	1000 ft.	600 ft.	375 ft.	250 ft.
5	600	1200	500 ft.	300 ft.	200 ft.	125 ft.
7.5	900	1800	350 ft.	200 ft.	125 ft.	100 ft.
10	1200	2400	250 ft.	150 ft.	100 ft.	
15	1800	3600	150 ft.	100 ft.	65 ft.	
20	2400	4800	125 ft.	75 ft.	50 ft.	

CAUTION: Equipment damage can result from low voltage.

Table 3. Cable Selection (180 Hz, 3-phase operation)

Length (ft.) \ Load	50	100	150	200	250	300
3 kVA	0.0031 in ²	0.0031 in ²	0.0031 in ²	0.0054 in ²	0.0054 in ²	0.0085 in ²
2 kVA	0.0031 in ²	0.0031 in ²	0.0031 in ²	0.0031 in ²	0.0031 in ²	0.0054 in ²
1 kVA	0.0031 in ²	0.0031 in ²	0.0031 in ²	0.0031 in ²	0.0031 in ²	0.0031 in ²

Lubrication Oil

Fill the engine crankcase with lubricating oil through the filler hole, but do not overfill. Make sure the generator is level. With the dipstick inserted all the way, but without being screwed into the filler hole, verify that the oil level is maintained between the two notches on the dipstick.

The oil listed in Table 4 is recommended to ensure better engine performance. Use class SC or higher grade motor oil.

Table 4. Recommended Motor Oil

Temperature Range	Type Oil
104° F ~ 23° F (40° C ~ -5°C)	SAE 30
23° F ~ 5° F (-5° C ~ -15°C)	SAE 20 or sae 10W-30
Below 5° C (-15°)	SAE 10W or SAE 10W-30

Fuel

Close the fuel cock before filling the tank. Fill the fuel tank with clean and fresh unleaded gasoline. Do not fill the tank beyond capacity.

Pay attention to the fuel tank capacity when replenishing fuel. Refer to the fuel tank capacity listed on page 8 Specification Table 1.

The fuel tank cap must be closed tightly after filling.

Handle fuel in a safety container. If the container does not have a spout, use a funnel.

CAUTION :

Never fill the fuel tank while the engine is running or in the dark. Gasoline spillage on a hot engine can cause a fire or explosion. If gasoline spillage occurs, wipe up the spilled gasoline completely to prevent fire hazards.

Power Outlets

The generator has the following single and 3-phase receptacles.

- Single Phase
 - One Duplex NEMA (GFCI) 5-20R (120V, 30 Amp)
 - One Twist Lock NEMA L5-30R (120V, 30 Amp)
 - One Twist Lock NEMA L6-20R (240V, 20 Amp)
- 3- Phase
 - Three Twist Lock NEMA 7410 (240V, 30 Amp)

Full Power Switch

The unit is provided with a full power switch. Figures 2 and 3 show simplified wiring diagrams of the dual voltage system.

When the full power switch is in the 120 volt (up) position, you can take up **full rated power** of the generator at 120 volts from the single duplex receptacle, single locking type 120 volt receptacle, or a combination of these receptacles as long as the total load does not exceed the generating set capacity.

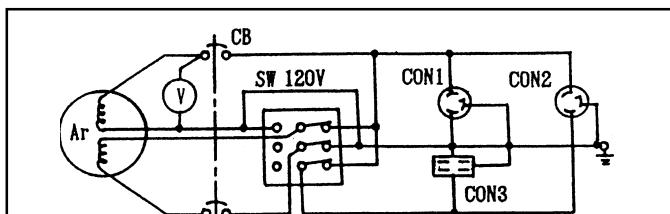


Figure 2. 120 V Simplified Diagram (Switch Up)

NOTE

When the switch is in the 120 V position, the locking type 240 volt receptacle cannot be used.

When the switch is in the 240 volt (down) position, you can take up to half of the rated power of the generating set at 120 volts from the duplex receptacle and up to half of the rated power of the set at 120 volts from the locking type 120 volt receptacle; or full rated power of the set at 240 volts from the locking type 240 volt receptacle.

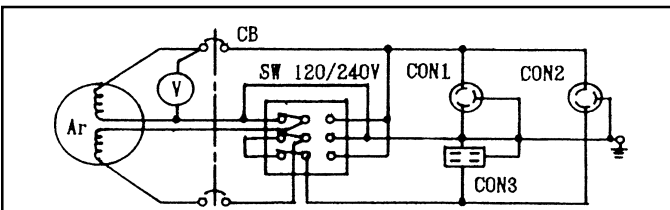


Figure 3. 120/240V Simplified Diagram (Sw Dn.)

CAUTION :



When using a combination of dual receptacles, total load should not exceed the rated capacity of the generator.

60 Hz Circuit Breaker

This breaker protects the generator from short circuiting or overloading from the 60 Hz single phase load.

The 180 Hz Leakage Breaker

The 180 Hz leakage breaker (Figure 4) is a earth leakage breaker with the following conditions:

- The circuit is broken when the load side shorts or there is over current.
- During use it detects when there is defective insulation on the load side and breaks the circuit in response.

Idle Control Switch (both 60 and 180 Hz)

The unit is provided with an automatic idle control for noise suppression and fuel cost reduction. The automatic idle control automatically engages under a no-load condition.

With the automatic idle control switched “ON”, the engine revolutions will automatically drop to about 2500 rpm (low-speed operation) within 3 seconds after the load stops. When the operation is resumed, the engine speed is automatically increased to about 3600 rpm (high-speed operation) as soon as the load is connected.

Fuel Gauge

The fuel gauge is located on the fuel tank and allows easy monitoring of the fuel level.

AC Voltmeter

This voltmeter indicates output voltage for both 60 and 180 Hz phases. In addition this voltmeter can also be used as a diagnostic tool.

If the voltmeter indicator (needle) is below the rated voltage, engine problems may exist (low/high RPM's). To prevent damage to the generator or power tools turn the generator OFF and consult your authorized Multiquip service dealer.

Single Phase Load — 60 Hz

Always be sure to check the nameplate on the generator and equipment to insure the wattage, amperage and frequency requirements are satisfactorily supplied by the generator for operating the equipment.

Generally, the wattage listed on the nameplate of the equipment is its rated output. Equipment may require 130—150% more wattage than the rating on the nameplate, as the wattage is influenced by the efficiency, power factor and starting system of the equipment.

NOTE

If wattage is not given on the equipment's name plate, approximate wattage may be determined by multiplying nameplate voltage by the nameplate amperage.

$$\text{WATTS} = \text{VOLTAGE} \times \text{AMPERAGE}$$

To determine the running wattage for your load, multiply the running wattage as indicated by steps 1, 2, and 3 below:

1. **INCANDESCENT LOADS**
Lights, heaters and similar appliances.
Total the running wattage and multiply by 1.
Example:
29 light bulbs @ 100W each = 2.9 KW
use a 3 KW generator.
2. **SMALL MOTORS**
Drills and other small power tools.
Total the running wattage and multiply by 2.
Example:
A 1 inch drill runs at 1 KW
use a 2 KW generator.
3. **LARGE MOTORS**
Submersible pumps, table saws etc.
Total the running wattage and multiply by 3.
Example:
A conveyor belt runs at 8 KW
use a 24 KW generator.

CAUTION:



Motors and motor-driven equipment draw much greater current for starting than during operation.

An inadequate size connecting cable which cannot carry the required load can cause a voltage drop which can burn out the appliance or tool and overheat the cable.

The idle control is operated at minimum load capacity of 100W. If the load capacity is less than 100W, throw the idle control switch to the OFF position.

CAUTION:



Before connecting this generator to any building's electrical system, a licensed electrician must install an isolation (transfer) switch. Serious injury or death may result without this transfer switch.

Three Phase Load — 180 Hz

180 cycle, three phase, 230V, motor-in-head vibrators can be operated with this generator. When operating more than one concrete vibrator, the ON/OFF switch of each concrete vibrators shall be turned on one at a time.

If they are switched on simultaneously, the circuit breaker may trip or the engine may be overloaded.

NOTE

If output (kVA) is not given on the vibrators nameplate, approximate output may be determined by multiplying voltage by amperage by $\sqrt{3}$.

$$\text{KVA} = \frac{\text{VOLTAGE} \times \text{AMPERAGE} \times \sqrt{3}}{1000}$$

CAUTION:



- Always use a vibrator with short circuit protection.
- Always use rubber boots and gloves when operating the vibrator.
- Use adequate size connecting cable for extension.
- Maintain electrical cords in good condition and frequently replace the entire cable of the vibrator with a new one.

Earth Leakage Breaker (180 Cycle)

The 180 Hz leakage breaker (Figure 4) is an earth leakage breaker, so please use it after carefully reading the following:

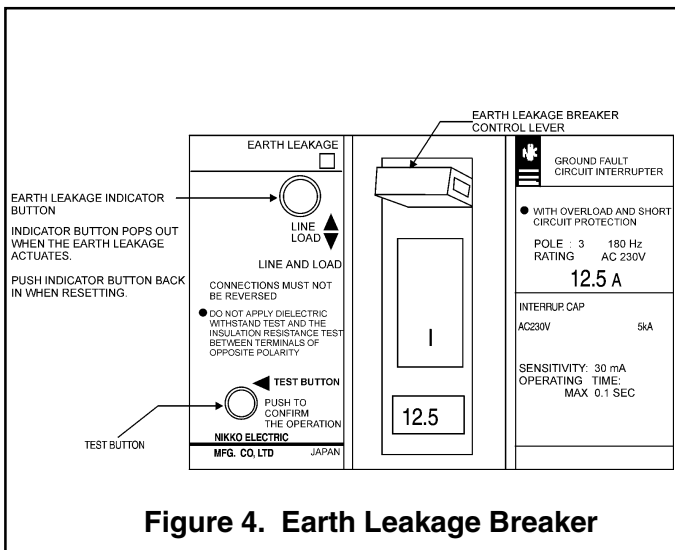


Figure 4. Earth Leakage Breaker

NOTE

Before operating generator press earth leakage test button.

The earth leakage breaker's earth leakage detection sensitivity is 30 mA, and the actuation time is 0.1 sec.

WARNING:



Before connecting this generator to any building's electrical system, a licensed electrician must install an isolation (transfer) switch.

Serious injury or death may result without this transfer switch.

How to Use

Always conduct the following in order that the earth leakage breaker will operate safely. Also, if the leakage breaker should for some reason actuate, first stop the generator and then repair or eliminate the source of the earth leakage before resetting the leakage breaker. When setting up the generator perform the following:

Ground the Generator

Ground the generator from its ground connector so that resistance to ground is 500 ohms or less.

Ground the Tool

Ground the tool (load) in the same manner as the generator.

NOTE

Simply because the generator is equipped with a earth leakage breaker does not mean that grounding of the load can be neglected, please be sure to properly ground load equipment.

Test Operation

For safety's sake, the operation of the earth leakage breaker should be tested periodically according to the following procedure:

1. Start the engine and set it to high speed.
2. Turn the leakage breaker ON.
3. During normal operation, press the earth leakage indicator test button on the front of the generator and observe that indicator button pops out and the leakage breaker trips.
4. Push the indicator button back in when resetting.

Before Starting

1. Be sure to disconnect the electrical load and switch both main circuit breakers (60 and 180 Hz) to the "OFF" position prior to starting the engine.
2. Never start the engine with the main circuit breaker "ON".
3. Check the lubricating oil level prior to starting the engine. Make sure the generator is level. The oil level must be maintained between two notches on the dipstick.
4. When there is not enough lubricating oil, fill the crankcase with high grade motor oil. Use a high quality detergent oil classified SC, SD or SE. (See Table 4 on page 13)

CAUTION:



- NEVER start the engine when the oil level is below the lower mark on the dipstick.
- Check the fuel level on the fuel gauge. When fuel is low, fill the fuel tank with clean fresh unleaded automotive gasoline.
- If gasoline spillage occurs, completely wipe up the spilled gasoline.

Starting

1. Open the fuel cock located below the fuel tank. The fuel starts to flow when the fuel cock is turned downward.
2. Place the idle control switch in the "ON" (up) position.
3. Close the choke. Adjust the opening of the choke valve according to operating conditions. When the engine is warm or the air temperature is high, close the choke valve halfway or open it all the way.
4. Confirm that both main circuit breakers (60 and 180 Hz) on the generator control box are in the "OFF" position.
5. Set the operation switch to the "ON" position and grasp the starting knob and slowly pull it out. The resistance becomes hardest at a certain position, corresponding to the compression point. Rewind the rope a little from that point and pull out sharply.
6. If the engine fails to start, repeat the procedure.

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.

Warm up

1. When the engine starts, open the choke slowly.
2. Run the engine at low speed for 3 minutes without load until the engine warms up.
3. Turn the idle control switch to the "OFF" (down) position and check the voltage by referring to the voltmeter on the control box.

CAUTION:



DO NOT change the engine speed control lever which has been set at the factory prior to shipping.

1. Check the generator for abnormal noise and smells. Then connect the load to the receptacles of the generator.
2. Switch both main circuit breakers (60 and 180 Hz) to the "ON" position and turn the idle control switch to the "ON" (down) position for normal (load) engine operation.

Operation

Check the voltage by referring to the voltmeter on the control box. When the voltmeter indicates 120 volts, 120 volts from the 120V receptacles and 240 volts from the 240V receptacle can be obtained at the same time. Refer to Figure 1, Controls and Indicators, item 7 on page 10.

Stopping the Engine

CAUTION:



NEVER stop the engine suddenly while running at high speeds.

1. Remove the load from the generator. Place the circuit breaker in the "OFF" position (See Figure. 3 on page 9). Run the engine (no-load) with the idle control switch set to the ON position for three to five minutes, then stop the engine.
2. Turn the START/STOP switch to the "STOP" position.
3. Never stop the engine suddenly while running at high speed.
4. After the engine has stopped, close the fuel cock.

General Inspection

At least daily or prior to each use, the generating set should be cleaned and inspected for deficiencies. Check for loose, missing or damaged nuts, bolts or other fasteners. Also check for fuel or oil leaks.

Engine Side (Refer to the Engine Instruction Manual)

Check Oil Level

Check the crankcase oil level prior to each use, or when the fuel tank is filled. Make sure the generating set is level. The oil level must be between the two notches on the dipstick.

Changing Oil

Change oil after the first 20 hours of operation. Drain and refill the engine crankcase every 50 operating hours or once a week thereafter. Drain crankcase oil into a suitable container while engine is still warm. Replace the drain plug tightly. Add oil through the filler hole.

Air Cleaner

Every 50 hours: Remove air cleaner element (std. or heavy duty types), and wash in kerosene or liquid detergent and hot water. Wrap foam element in a cloth and squeeze dry. Wipe heavy duty paper element dry with toweling. Saturate element with kerosene; squeeze excess from foam element. Wipe excess from heavy duty paper element.

Service Daily

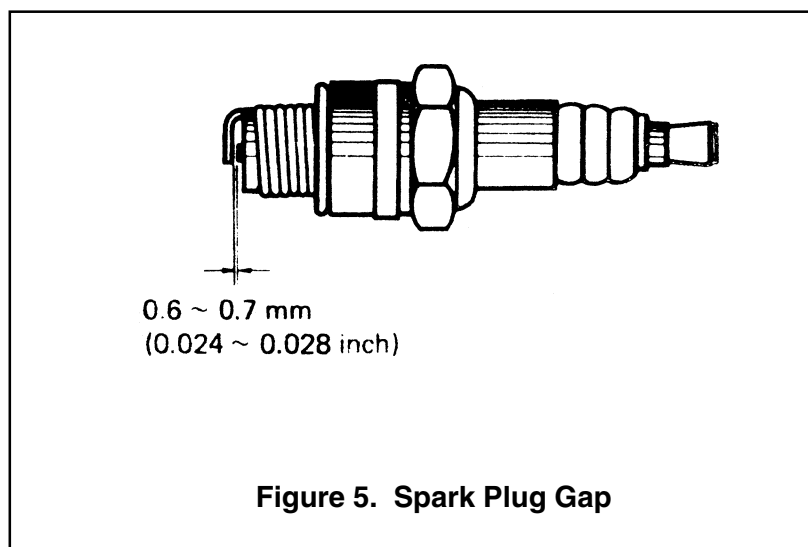
If engine is operating in very dusty and dry grass conditions. A clogged air cleaner will result in high fuel consumption, loss of power and excessive carbon build-up in the combustion chamber.

Cleaning the Fuel Strainer

Clean the fuel strainer if it contains dust or water. Remove dust or water in the strainer cap and wash it in gasoline. Securely fasten the fuel strainer cap so that fuel will not leak. Check the fuel strainer every 200 hours of operation or once a month.

Spark Plug

Remove carbon build-up on the spark plug (Figure 5) with a wire brush. Set the spark plug gap to 0.6—0.7 mm (0.024–0.028 inch). Tighten with a spark plug socket wrench. Clean the spark plug every 50 operating hours or once a week.

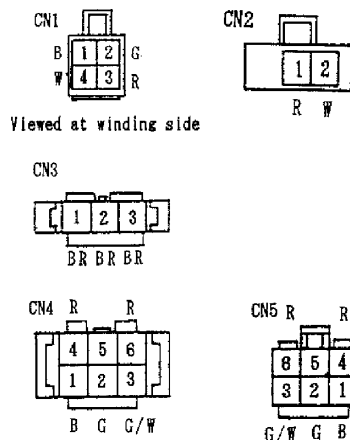
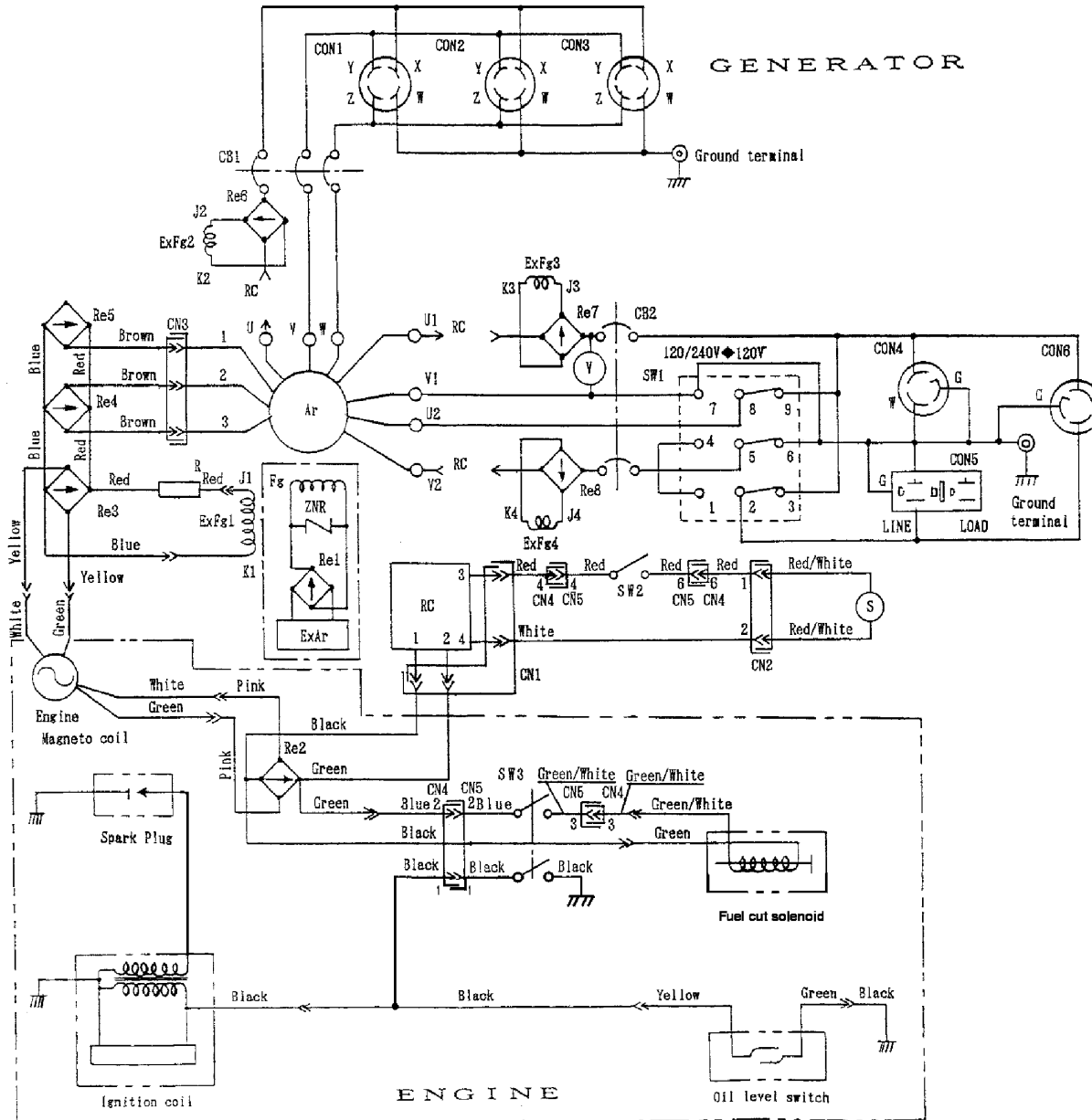


Generator Storage

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

- Drain the fuel tank completely.
- Run the engine until the gasoline in the carburetor is completely consumed.
- Completely drain the oil from the crankcase and refill with fresh oil.
- Remove the spark plug, pour 2 or 3 cc of SAE 30 oil into the cylinder and crank slowly to distribute the oil.
- Slowly rotate the engine a few times with the starter Rope and install a new plug.
- Pull out the starter rope slowly and stop at the compression point.
- Clean all external parts of the generating set with a cloth.
- Cover the generating set and store in a clean, dry place.

GDP-5000H — WIRING DIAGRAM



SYMBOL	PARTS NAME
Ar	Armature Winding
Fg	Field Winding
Ex Fg1 ~ 4	Excitation Winding
Conn 1	Receptacle for 230V 180 Hz
Conn 2	Receptacle for 230V 180 Hz
Conn 3	Receptacle for 230V 180 Hz
Conn 4	Receptacle for 120V 60 Hz
Conn 5	Receptacle for 120V 60 Hz
Conn 6	Receptacle for 240V 60 Hz
V	AC Voltmeter
Rel ~ 8	Rectifier
CB 1	Circuit Breaker for 180 Hz
CB 2	Circuit Breaker for 60 Hz
SW 1	Full Power Switch
SW 2	Idle Control Switch
SW 3	Operation Switch
RC	Idle Control Device
S	Idle Control Solenoid
R	Resistor

GDP-5000H — TROUBLESHOOTING (ENGINE)

Practically all breakdowns can be prevented by proper handling and maintenance inspections, but in the event of a breakdown, please take a remedial action following the

diagnosis based on the Engine Troubleshooting (Table 6) information shown below and on the proceeding page. 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 6. ENGINE TROUBLESHOOTING

SYMPTOM	POSSIBLE PROBLEM	SOLUTION
Poor starting (Engine will not start)	Inspect carburetor to see if fuel is reaching it?	Check fuel line
	No Fuel?	Add Fuel
	Water in fuel tank?	Flush or replace fuel tank.
	Fuel filter clogged?	Replace fuel filter
	Stuck carburetor?	Check float mechanism.
	Spark plug is black?	Spark plug is fouled. Check transistor ignition unit.
	Spark plug is blue-white?	Insufficient compression, injected air leaking. Carburetor jets are clogged (overflow).
	No spark present at tip of spark plug?	Transistor ignition unit broken, high voltage cord cracked or broken. Start/Stop switch broken. Replace spark plug if fouled.
	No oil?	Add oil as required.
	Low oil or oil pressure shutdown sensor is defective?	Check oil level, add oil if necessary. Check automatic oil shutdown circuit "oil sensor" Replace oil sensor.
Insufficient power output "no compression"	Engine will not turn over?	Replace cylinder and piston and if necessary axle joint.
	Cylinder head connecting bolts loose?	Tighten cylinder head connecting bolts.
	Cylinder head gasket damaged?	Replace cylinder head gasket.
	Malfunction of valve seat?	Re-seat valves.
	Spark plug is loose?	Replace spark plug.
	Worn piston rings?	Replace piston rings.
Insufficient power output "compression"	Malfunction in air-cleaner system, air filter clogged?	Clean or replace air filter.
	Air leaking in from interface between carburetor and cylinder head?	Tighten bolts between carburetor and cylinder head. Replace cylinder head gasket.
	Malfunction in fuel system?	Clean or replace fuel filter. Clean or replace carburetor. Check carburetor float.

GDP-5000H — TROUBLESHOOTING (ENGINE)

TABLE 6. ENGINE TROUBLESHOOTING (CONTINUED)

SYMPTOM	POSSIBLE PROBLEM	SOLUTION
Insufficient power output "compression" and overheats	Malfunction in cooling fan?	Check or replace cooling fan.
	Air in-take filter clogged?	Clean or replace air in-take filter.
Burns to much fuel	Over accumulation of exhaust products?	Clean and check valves. Check muffler, replace if necessary.
	Wrong spark plug?	Replace spark plug with manufactures suggested type spark plug.
Exhaust color is continiously "WHITE"	Lubricating oil is wrong viscosity?	Replace lubricating oil with correct viscosity.
	Worn rings?	Replace rings
Exhaust color is continiously "BLACK"	Air cleanner clogged?	Clean or replace air cleaner.
	Choke valve has not been set to the correct position?	Adjust choke valve to the correct position.
	Carburetor defective, seal on carburetor broken?	Replace carburetor or seal.
	Poor carburetor adjustment "engine runs too rich?"	Adjust carburetor.

GDP-5000H — TROUBLESHOOTING (GENERATOR)

Practically all generator 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 Generator Troubleshooting (Table 7) information shown below and on the preceding page. 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 7. GENERATOR TROUBLESHOOTING

SYMPTOM	POSSIBLE PROBLEM	SOLUTION
Low voltage	Engine speed too low?	Raise engine speed to rated RPM.
Low voltage. Engine speed normal 3650 RPM (unloaded), 2500 RPM (idle)	AC voltmeter not working?	Replace Ac voltmeter.
	Control box internal wiring malfunction?	Check control box wiring.
	Defective ignition coil?	Check red and green ignition wires. Replace ignition wires if necessary.
	Rotor winding malfunction?	Check or replace rotor.
	Stator winding malfunction?	Check or replace stator.
	Leakage breaker malfunction?	Check or replace CB1 or CB2.
	Full power switch malfunction?	Check full power switch and full power switch circuit.
Voltage output too high.	Engine speed too high?	Lower engine speed to rated RPM.
Voltage output too high. Engine speed normal 3650 RPM (unloaded), 2500 RPM (idle)	Control box internal wiring malfunction	Check control box wiring.
Circuit breaker will not turn on "NO LOAD"	Defective circuit breaker?	Replace circuit breaker.
Circuit breaker will turn on "LOADED" but trips immediately.	Overload?	Reduce load or replace breaker.
	Load circuit is shorted?	Check load circuit for short.
Does not accelerate from low to high "NO LOAD"	Stuck solenoid?	Check solenoid.
	Bad Idle control switch?	Check or replace idle control switch.
Does not accelerate from low to high "LOAD ACTIVE"	Idle control switch malfunction?	Check or replace idle control switch.
	Idle control device malfunction?	Check or replace idle control device.
	Control box internal wiring defective?	Check control box wiring.

GDP-5000H — TROUBLESHOOTING (GENERATOR)

TABLE 7. GENERATOR TROUBLESHOOTING (CONTINUED)

SYMPTOM	POSSIBLE PROBLEM	SOLUTION
Does not decelerate no "VOLTAGE OUTPUT".	Defective rotor windings?	Check or replace rotor.
	Defective solenoid?	Check or replace solenoid.
	Defective idle control device?	Check or replace idle control device.
	Defective solenoid?	Check or replace idle control device.
Does not decelerate but has "VOLTAGE OUTPUT".	Control box wiring malfunction?	Check control box wiring, replace any defective components.
	Defective solenoid?	Check or replace solenoid.
	Idle control device malfunction?	Check or replace idle control device.

[illegible]

GDP-5000H — 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.

GDP-5000H 1 TO 3 UNITS WITH HONDA GX340K1 ENGINE

1 to 3 Units

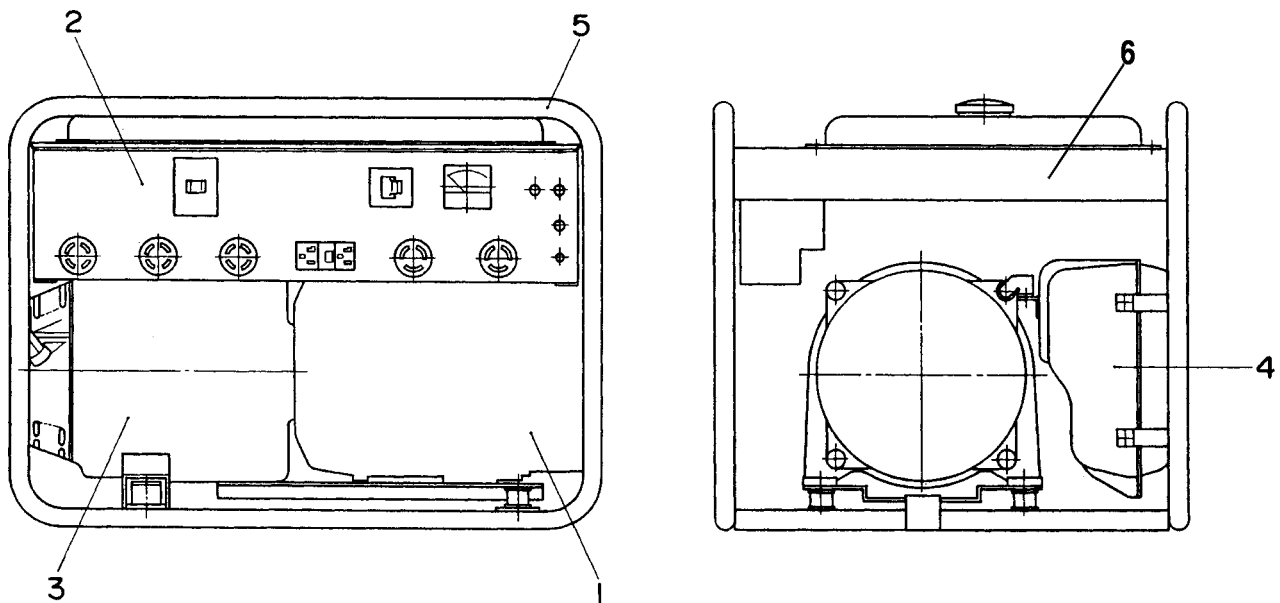
Qty.	P/N	Description
4	0601812597	RECEPTACLE
4	0601830737	SWITCH FULL POWER
1	0601830738	SWITCH OPERATION
2	06011830727	SWITCH IDLE CONTROL
1	0601807480	CIRCUIT BREAKER
2	0601802651	CIRCUIT BREAKER
1	0602125031	FUEL GAUGE
1	0810106004	CAP FUEL TANK
1	0810107103	FILTER FUEL
1	3015419604	SHOCK MOUNT
4	1665419004	SHOCK MOUNT
1	16950ZB4015	FUEL COCK
1	9807955846	SPARK PLUG
1	15510ZE2043	OIL SENSOR
1	15600735003	CAP OIL FILLER
2	28400ZE3W01ZB	RECOIL ASSY.
2	17211899000	ELEMENT AIR CLEANER
1	16100ZE3F11	CARBURETOR ASSY.

NOTE

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

GDP-5000H — ENGINE/GENERATOR ASSY.

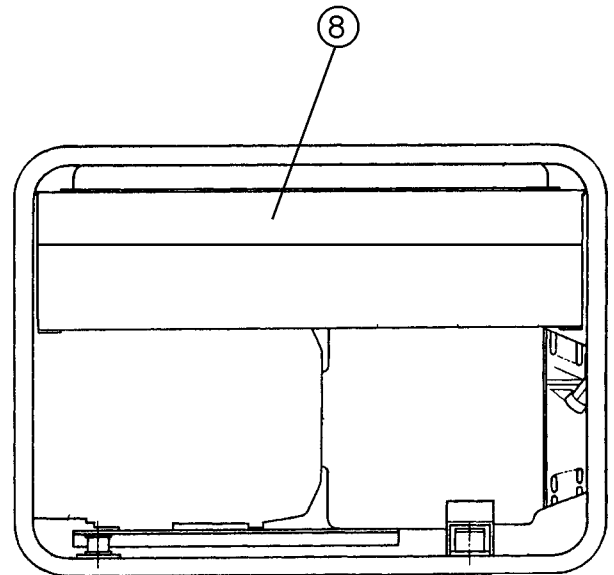
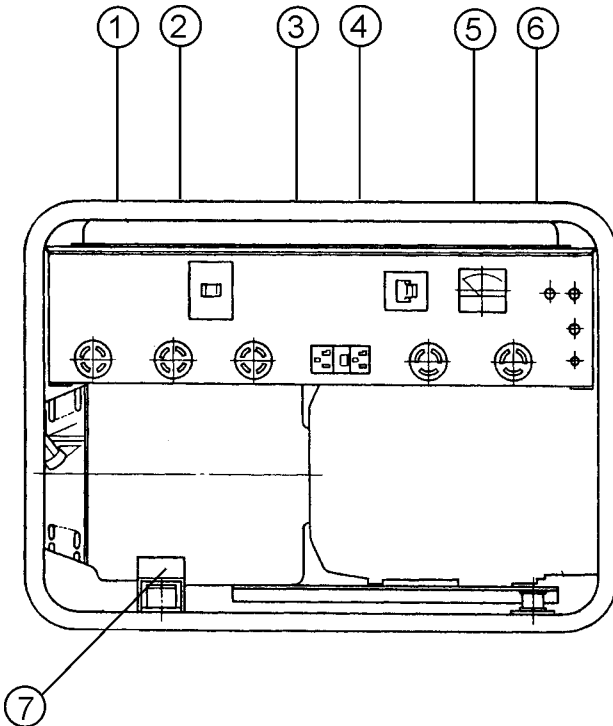
ENGINE\GENERATOR ASSY.



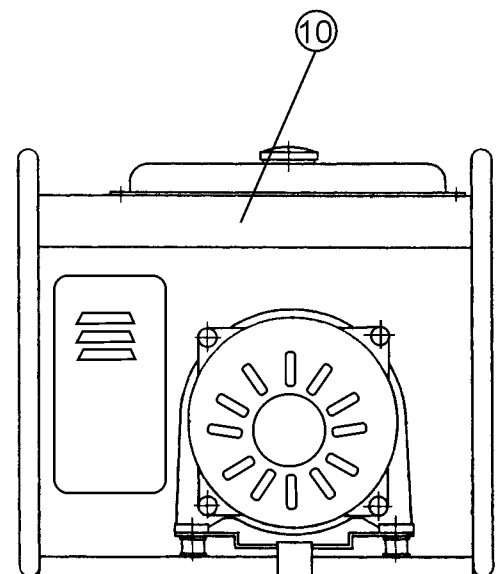
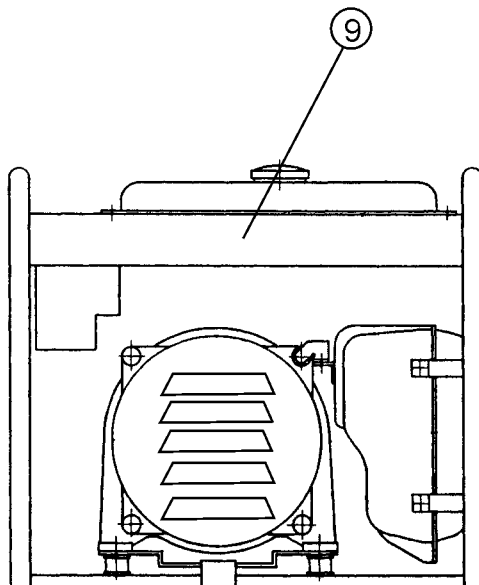
GDP-5000H — ENGINE/GENERATOR ASSY.

ENGINE\GENERATOR ASSY.

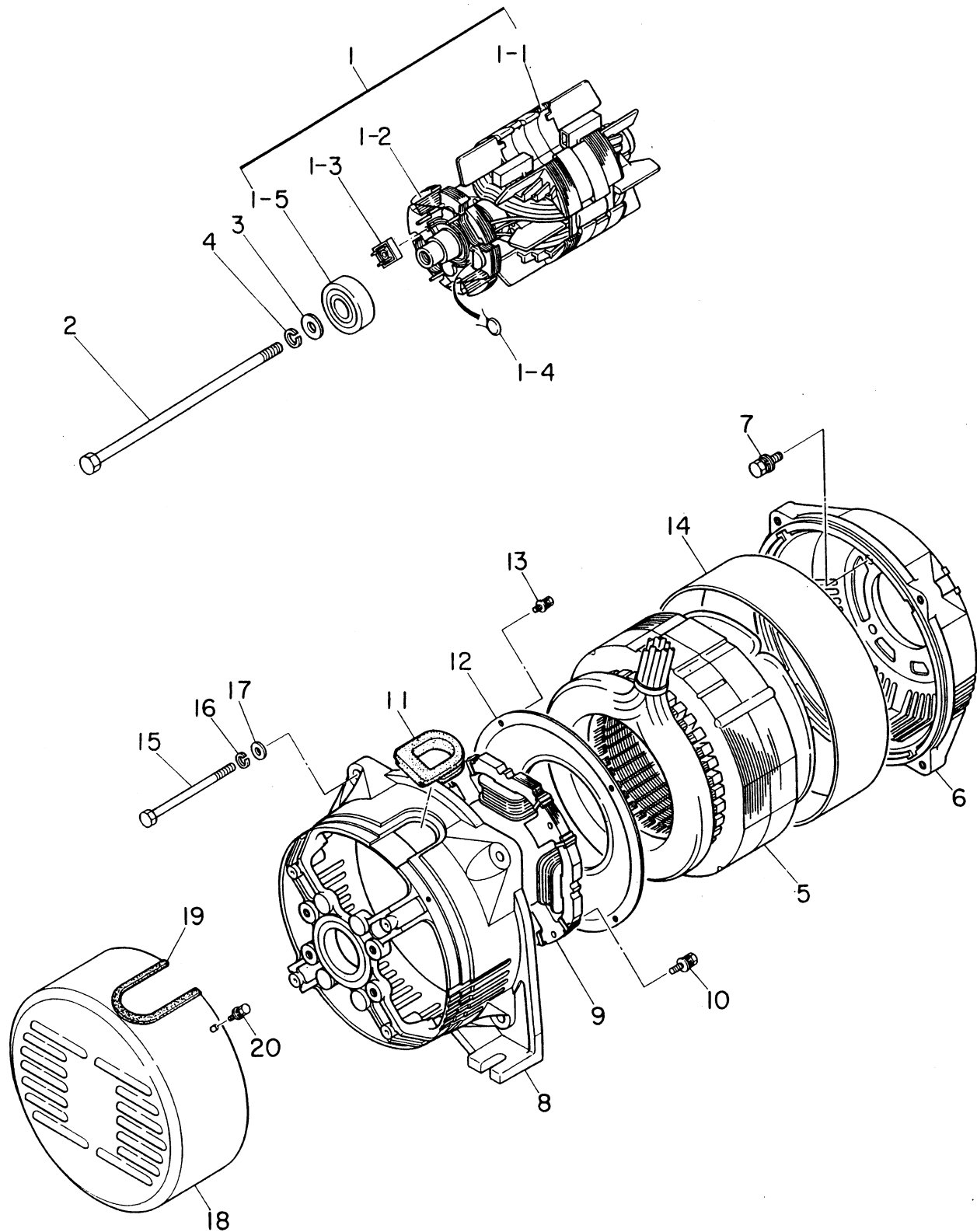
NO	PART NO	PART NAME	QTY	REMARKS
1		GENERATOR ASSEMBLY	1	SEE PAGE 29-30
2		CONTROL BOX ASSEMBLY	1	SEE PAGE 31-32
3	GX340K1EDN2	ENGINE, HONDA	1	SEE PAGE 40-73
4	7852310003	MUFFLER ASSEMBLY	1	SEE PAGE 34-35
5	7855413204	PIPE FRAME ASSEMBLY	1	SEE PAGE 36-37
6		NAME PLATE AND		



DECALS



GENERATOR ASSY.

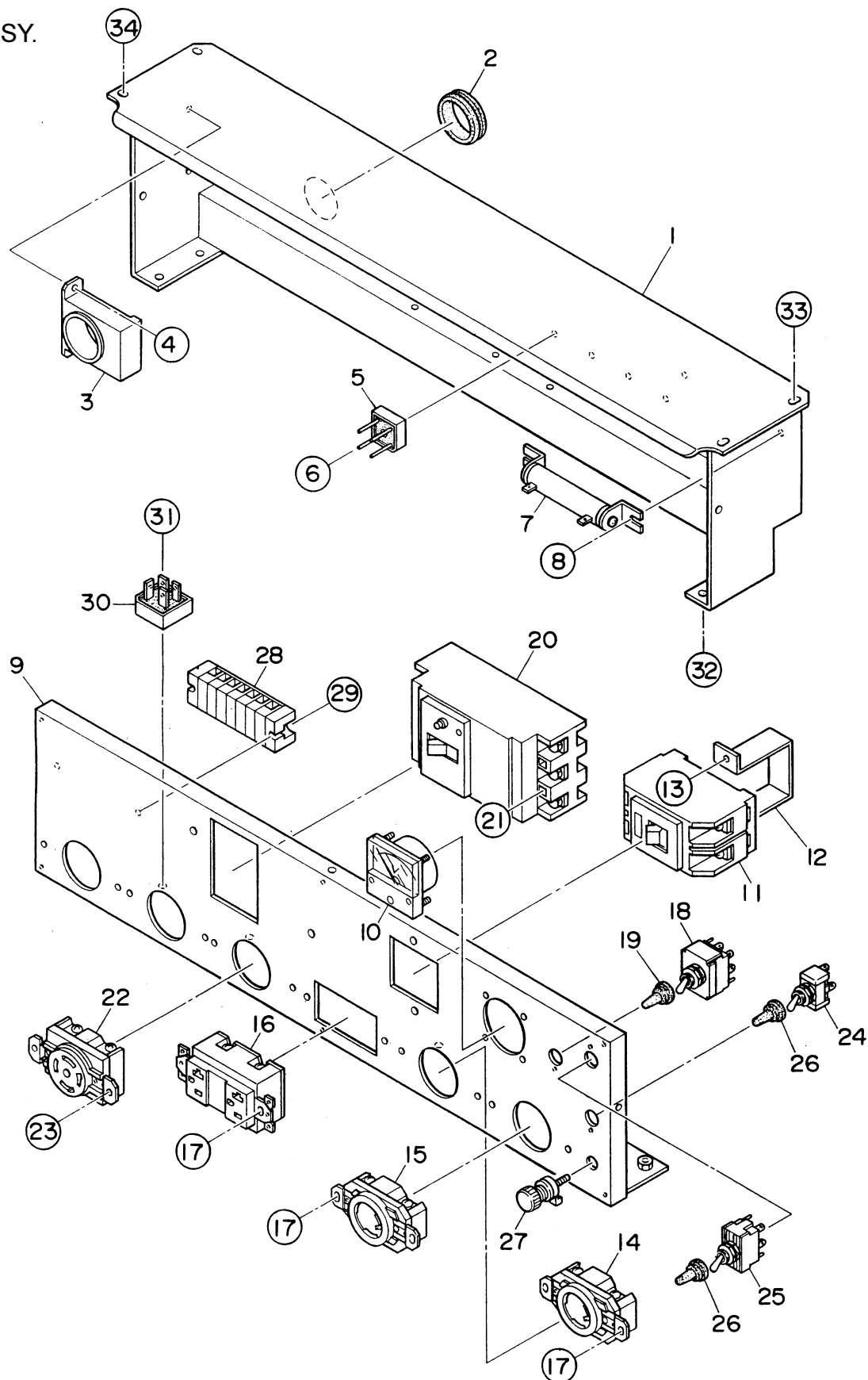


GENERATOR ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
1	7851000203	ROTOR ASSY	1	INCLUDES ITEM W/*
1-1*		FIELD ASSY	1	NOT SOLD SEPERATELY
1-2*		ARMATURE EXCITER	1	NOT SOLD SEPERATELY
1-3*	0601820037	RECTIFIER	1	S10VB60
1-4*	0601822640	SURGE ABSORBER	1	TNR15G471K
1-5*	0071206304	BEARING	1	
2	7851017204	SET BOLT ROTOR	1	
3	0801086104	SET WASHER	1	
4	030210250	SPRING WASHER	1	REPLACES 0040010000
5	7851341203	ARMATURE ASSY	1	
6	7851315502	END BRACKET	1	
7	011208025	BOLT HEX HEAD	4	REPLACES 0017108025
8	7851315402	END BRACKET	1	
9	7851350003	FIELD ASSY EXCITER	1	
10	011606025	BOLT HEX HEAD	4	REPLACES 0017106025
11	1961319004	GROMMET	1	
12	1961313003	GUIDE PANEL AIR	1	
13	0011305100	BOLT HEX HEAD	4	REPLACES 0017105012
14	7851334204	COVER	1	
15	7851316804	SET BOLT STATOR	4	
16	031108160	SPRING WASHER	4	REPLACES 0041208000
17	030208200	PLAIN WASHER	4	REPLACES 0040008000
18	7851331103	COVER	1	
19	0310300090	SEAL	1	
20	001305100	BOLT HEX HEAD	4	REPLACES 0017105012

GDP-5000H — CONTROL BOX ASSY.

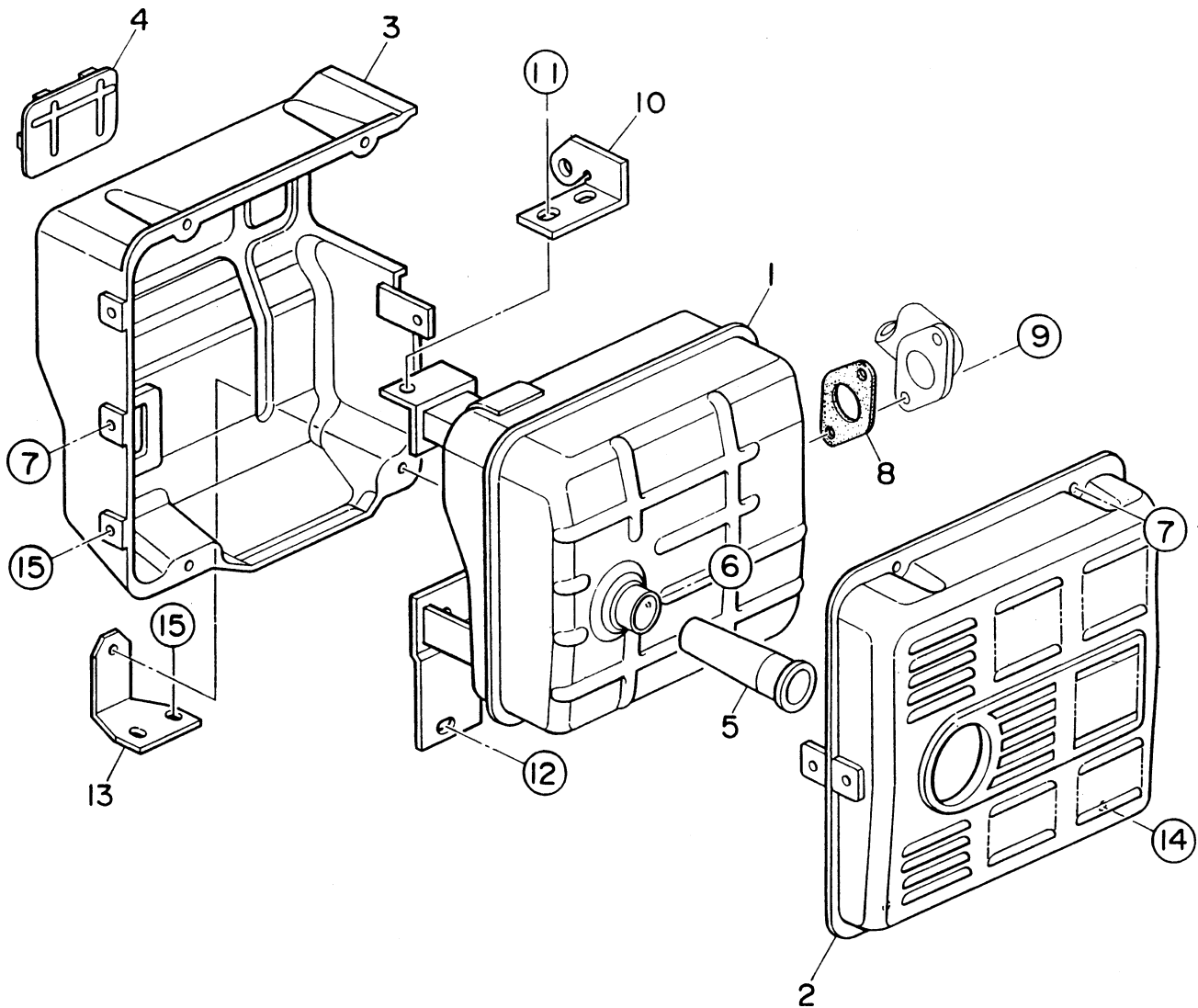
CONTROL BOX ASSY.



CONTROL BOX ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	7851810203	CONTROL BOX	1	
2	0601850220	GROMMET	1	
3	0601823853	IDLE CONTROL UNIT	1	ND-80
4	0027204010	MACHINE SCREW	2	
	0030004000	NUT HEX	2	REPLACES 0207004000
5	0601823204	RECTIFIER	4	S5VB60
6	0027203016	MACHINE SCREW	4	
7	0601842415	RESISTOR	1	GG40W 7 ohms
8	0027204008	MACHINE SCREW	2	
9	7851820212	CONTROL PANEL	1	
10	0601800267	AC VOLTMETER	1	REPLACES 0601800279
11	0601802651	CIRCUIT BREAKER	1	KM-2 250V 15A
12	4341817004	BRACKET	1	
13	0021004010	MACHINE SCREW	2	
14	0601811032	RECEPTACLE	1	
15	0601811031	RECEPTACLE	1	REPLACES 0601811035
16	0601812597	RECEPTACLE	1	
17	0021004010	MACHINE SCREW	6	
	0030004000	NUT HEX	6	REPLACES 0207004000
18	0601830737	FULL POWER SWITCH	1	
19	0601832005	CAP	1	REPLACES 0601832006
20	0601802937	CIRCUIT BREAKER	1	EY-33C 230V 12.5A 30mA
21	0021004070	MACHINE SCREW	2	
	0030004000	NUT HEX	2	REPLACES 0207004000
22	0601812594	RECEPTACLE	1	
23	0021004010	MACHINE SCREW	6	
	0030004000	NUT HEX	6	REPLACES 0207004000
24	0601830738	OPERATION SWITCH	1	
25	0601830727	IDLE CONTROL SWITCH	1	
26	0601832005	CAP	2	REPLACES 0601832006
27	0601815109	GROUNDING		
28	0601815465	TERMINAL BOARD	1	
29	0027204020	MACHINE SCREW	2	
30	0601820083	RECTIFIER	3	S25VB60
31	0027204020	MACHINE SCREW	3	
32	0017105010	BOLT HEX HEAD	6	
33	0017106016	BOLT HEX HEAD	3	
34	011206020	BOLT HEX HEAD	1	REPLACES 0017106020

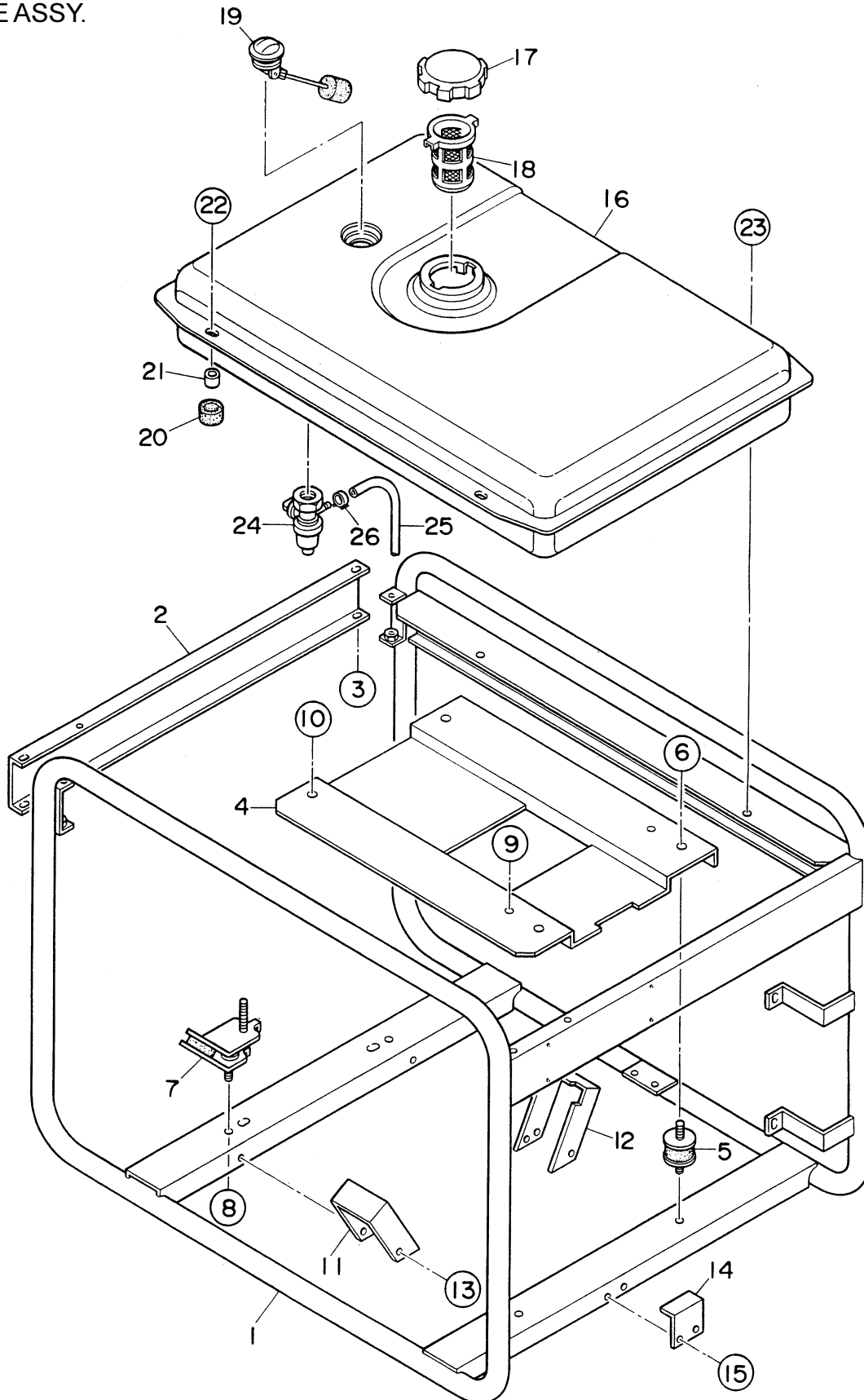
MUFFLER ASSY.



MUFFLER ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	7852310003	MUFFLER	1	
2	18320ZC2000	PROTECTOR	1	
3	18325ZB4000	PROTECTOR	1	
4	18329ZB4000	SEAL	2	
5	18355ZB4630	ARRESTOR	1	
6	90183671003	TAPPING SCREW	1	
7	0105050616	BOLT HEX HEAD	5	REPLACES 0017106012
8	18333ZB4800	GASKET	1	
9	957000802000	BOLT HEX HEAD	2	
10	7855469004	BRACKET	1	
11	011008020	BOLT HEX HEAD	1	REPLACES 0017108020
12	011008020	BOLT HEX HEAD	1	REPLACES 0017108020
13	7905469004	BRACKET	1	
14	011206020	BOLT HEX HEAD	1	REPLACES 0017106020
15	0105050616	BOLT HEX HEAD	4	REPLACES 0017106012

PIPE FRAME ASSY.

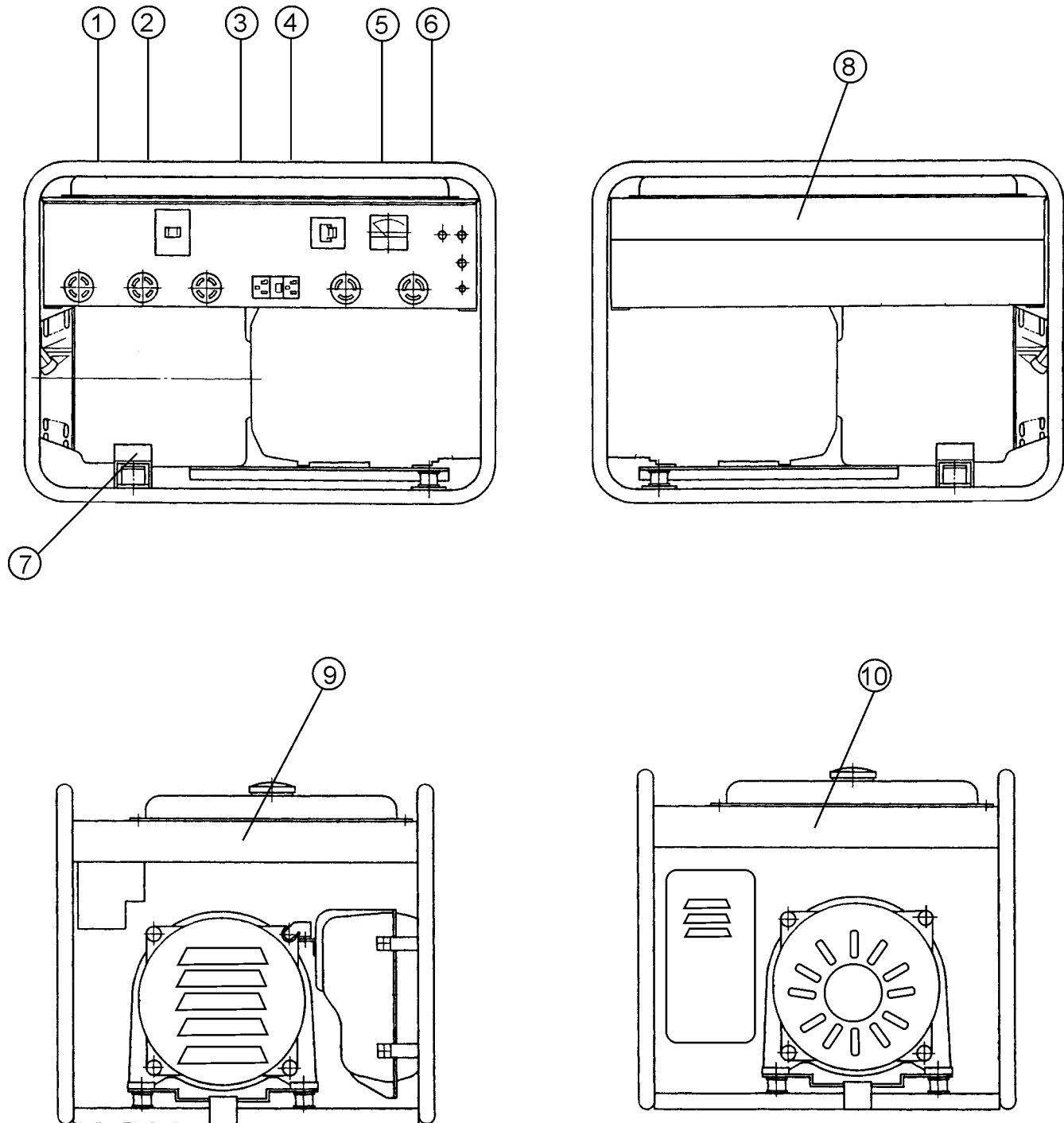


PIPE FRAME ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
1	7855410202	PIPE FRAME	1	
2	7855413204	BRACKET	1	
3	011106015	BOLT HEX HEAD	3	REPLACES 0017106015
4	7855411203	BASE	1	
5	3015419604	RUBBER SUSPENSION	2	
6	020108060	NUT HEX	4	REPLACES 0207008000
7	1665419004	RUBBER SUSPENSION	2	REPLACES 1725419214
8	020108060	NUT HEX	4	REPLACES 0207008000
9	011208030	BOLT HEX HEAD	2	REPLACES 0017108030
10	0017108045	BOLT HEX HEAD	2	
	020108060	NUT HEX	2	REPLACES 0207008000
11	7915455103	COVER	1	
12	7855455003	COVER	1	
13	0017106016	BOLT HEX HEAD	6	
14	7915456004	STOPPER	1	
15	0017106016	BOLT HEX HEAD	2	
16	7905512002B	FUEL TANK.....	1	REPLACES 7905512002
17	0810106004	CAP FUEL TANK	1	
18	0810107103	FUEL FILTER	1	
19	0602125031	FUEL GAUGE	1	
20	7855525514	RUBBER CUSHION	2	
21	7855525604	COLLAR	2	
22	011208030	BOLT HEX HEAD	2	REPLACES 0017108030
23	011008020	BOLT HEX HEAD	2	REPLACES 0017108020
24	16950ZB4015	FUEL COCK	1	SEE PAGE 70 FOR COMPONENTS
25	950014521040	HOSE	1	
26	0605515096	HOSE BAND	2	

GDP-5000H — NAMEPLATE AND DECALS.

NAMEPLATE AND DECALS



GDP-5000H — NAMEPLATE AND DECALS.

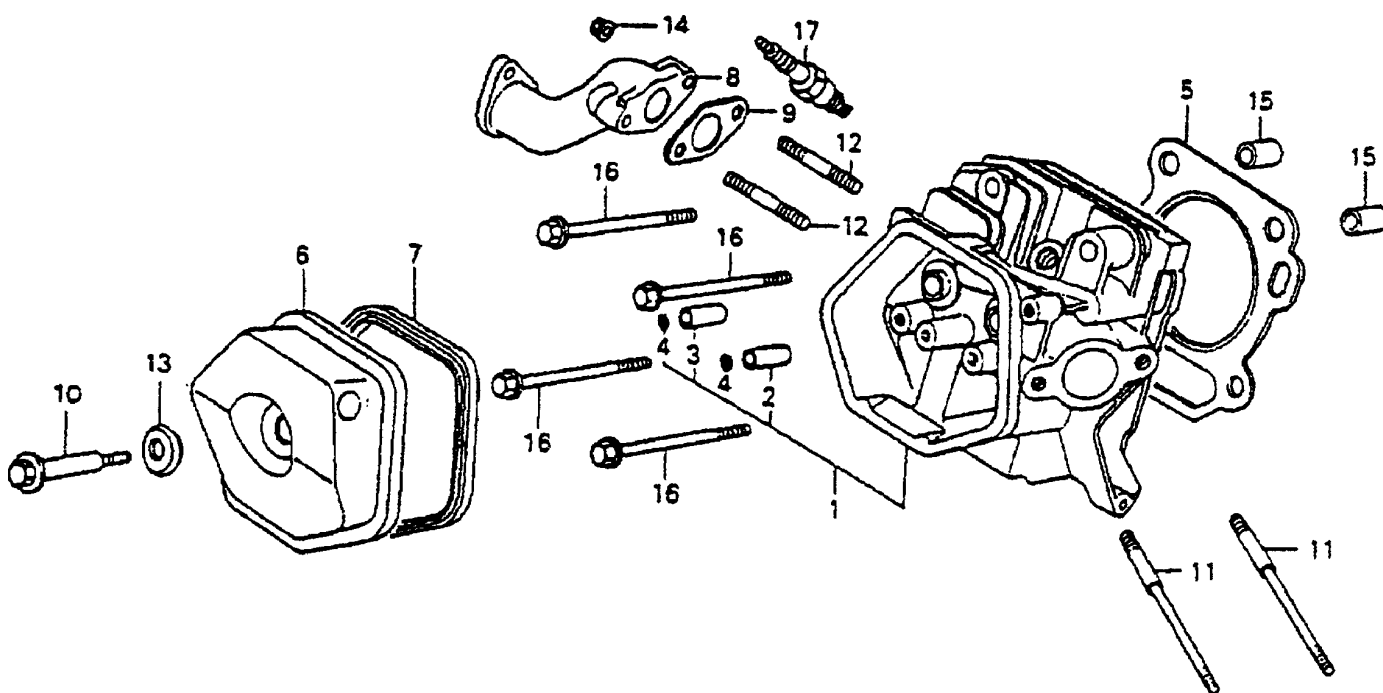
NAMEPLATE AND DECALS

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	0820610804	DECAL: CAUTION	1	DCS01
2	0820610404	DECAL: WARNING!	1	S-3627
3	7900636004	DECAL: 3600 RPM ONLY	1	S-4461
4	7900638204	DECAL: OPER. INSTRUC.	1	S-4607
5	8700611804	DECAL: WARNING!	1	S-4984
6	8700611904	DECAL: DANGER!	1	S-4985
7	0800628504	DECAL: GROUND	1	S-1123
8	7850630003	DECAL: GDP-5000H	1	S-5059
9		NAMEPLATE	1	ORDER FROM MULTQUIP SERVICE DEPT. BY MODEL & SERIAL NUMBER
10	1980680004	DECAL: FUEL COCK	1	S-3704

SEE PAGE 7 FOR DECAL ILLUSTRATIONS

HONDA GX340K1 ENGINE — CYLINDER HEAD

CYLINDER HEAD ASSY.



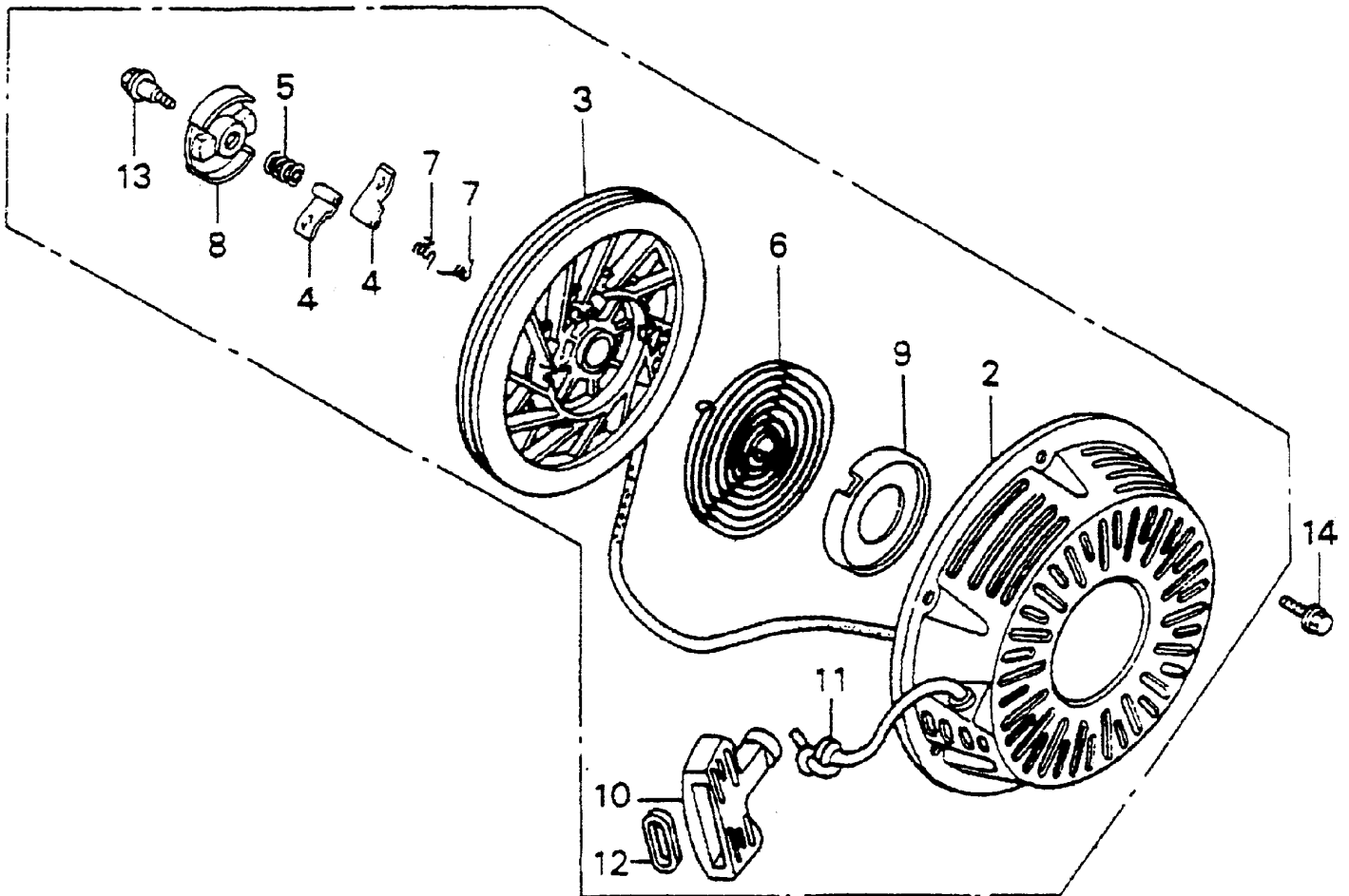
HONDA GX340K1 ENGINE — CYLINDER HEAD

CYLINDER HEAD ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	122AOZF6W00	HEAD COMP., CYLINDER	1	INCLUDES ITEM W/★
2★	12204ZE2325	GUIDE, IN. VALVE (OVER SIZE)	1	
3★	12205ZE2315	GUIDE, EX. VALVE (OVER SIZE)	1	
4★	12216ZE2300	CLIP, VALVE GUIDE	2	
5	12251ZE3W00	GASKET, CYLINDER HEAD	1	
6	12310ZE2010	COVER COMP., HEAD	1	
7	12391ZE2010	PACKING, HEAD COVER	1	
8	18330ZE3700	PIPE, EX.	1	
9	18333ZE3800	GASKET, EX. PIPE	1	
10	90014ZE2000	BOLT, HEAD COVER	1	
11	90042ZE3700	BOLT, STUD, 8X98	2	
12	90047ZE2000	BOLT, STUD, 8X47	2	
13	90441ZE2010	WASHER COMP., HEAD COVER	1	
14	9405008000	NUT, FLANGE, 8MM	2	
15	9430112200	PIN, DOWEL, 12X20	2	
16	957251008000	BOLT, FLANGE, 10X80	4	
17	9807955846	PLUG, SPARK (BPR5ES NGK)	1	
	9807955855	PLUG, SPARK (W16EPRU ND)	1	

HONDA GX340K1 ENGINE — RECOIL STARTER

RECOIL STARTER ASSY.



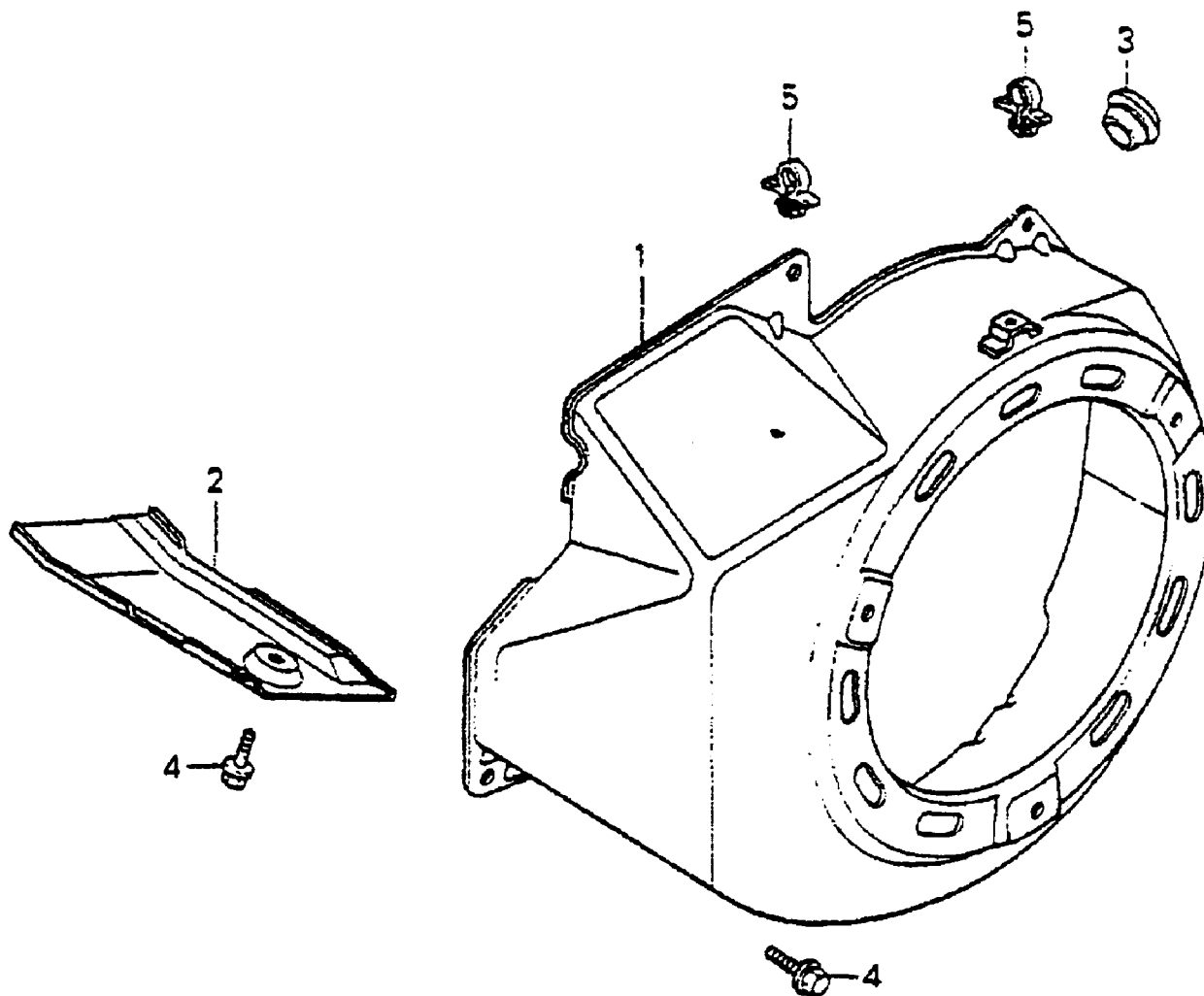
HONDA GX340K1 ENGINE — RECOIL STARTER

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	1	INCLUDES ITEMS W/*
2*	28410ZE3W01ZB	CASE COMP., RECOIL STARTER	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	
9*	28445ZE2W01	HOLDER, SPRING	1	
10*	28461ZE2W01	GRIP, STARTER	1	
11*	28462ZE3W01	ROPE, RECOIL STARTER	1	
12*	28469ZE2W01	GRID REINFORCEMENT	1	
13*	90004ZE2W01	SCREW, CENTER	1	
14	957010600800	BOLT, FLANGE, 6X8	3	

HONDA GX340K1 ENGINE — FAN COVER

FAN COVER ASSY.



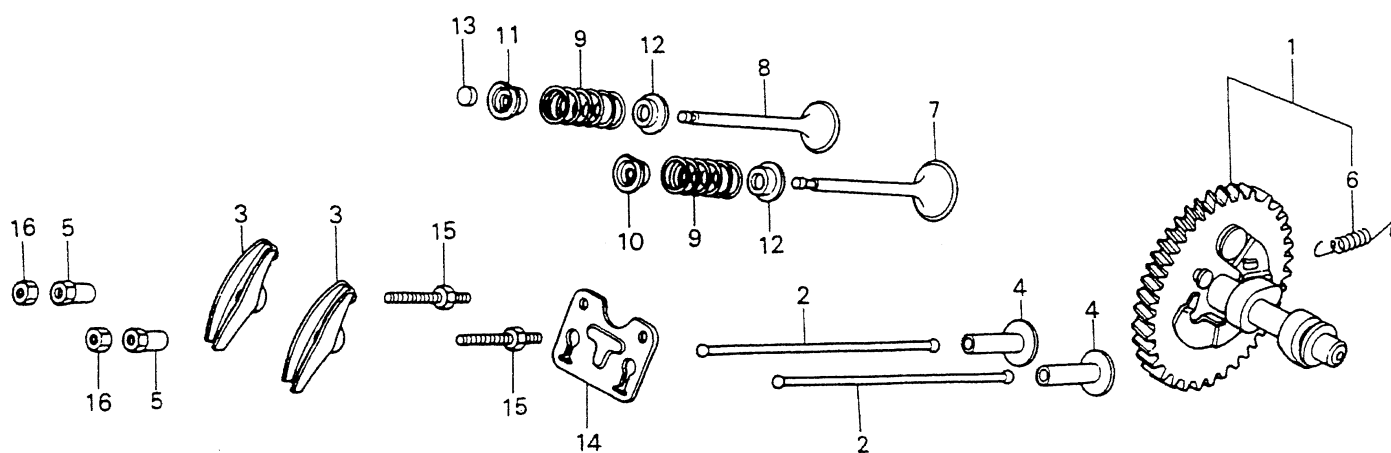
HONDA GX340K1 ENGINE — FAN COVER

FAN COVER ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	19610ZE3700ZB	COVER COMP., FAN	1	
2	19631ZE3W00	SHROUD	1	
3	81329567020	GROMMET, DRAIN HOLE	1	
4	90013883000	BOLT, FLANGE, 6X12	6	
5	90654SA4003	CLIP	2	

HONDA GX340K1 ENGINE — CAMSHAFT/VALVES

CAMSHAFT/VALVES ASSY.



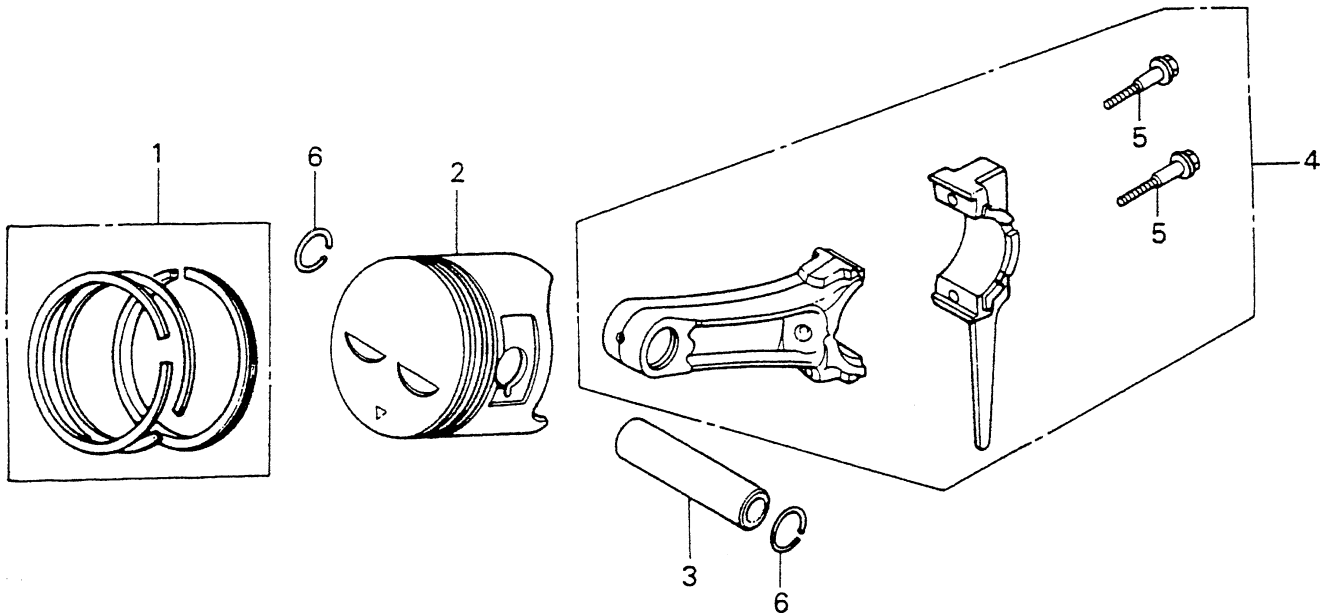
HONDA GX340K1 ENGINE — CAMSHAFT/VALVES

CAMSHAFT/VALVES ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	14100ZE3010	CAMSHAFT ASSY.	1	INCLUDES ITEMS/W*
2	14410ZE3013	ROD, PUSH	2	
3	14431ZE2000	ARM, VALVE ROCKER	2	
4	14441ZE2000	LIFTER, VALVE	2	
5	14451ZE1003	PIVOT, ROCKER ARM	2	
6*	14568ZE1000	SPRING, WEIGHT RETURN	1	
7	14711ZE3000	VALVE, IN	1	
8	14721ZE3000	VALVE, EX.	1	
9	14751ZE2003	SPRING, VALVE	2	
10	14771ZE2000	RETAINER, IN. VALVE SPRING	1	
11	14773ZE2000	RETAINER, EX. VALVE SPRING	1	
12	14775ZE2010	SEAT, VALVE SPRING	2	
13	14781ZE2000	ROTATOR, VALVE	1	
14	14791ZE2010	PLATE, PUSH ROD GUIDE	1	
15	90012ZE0010	BOLT, PIVOT	2	
15	90206ZE1000	NUT, PIVOT ADJUSTING	2	

HONDA GX340K1 ENGINE — PISTON/RINGS

PISTON/RINGS ASSY.



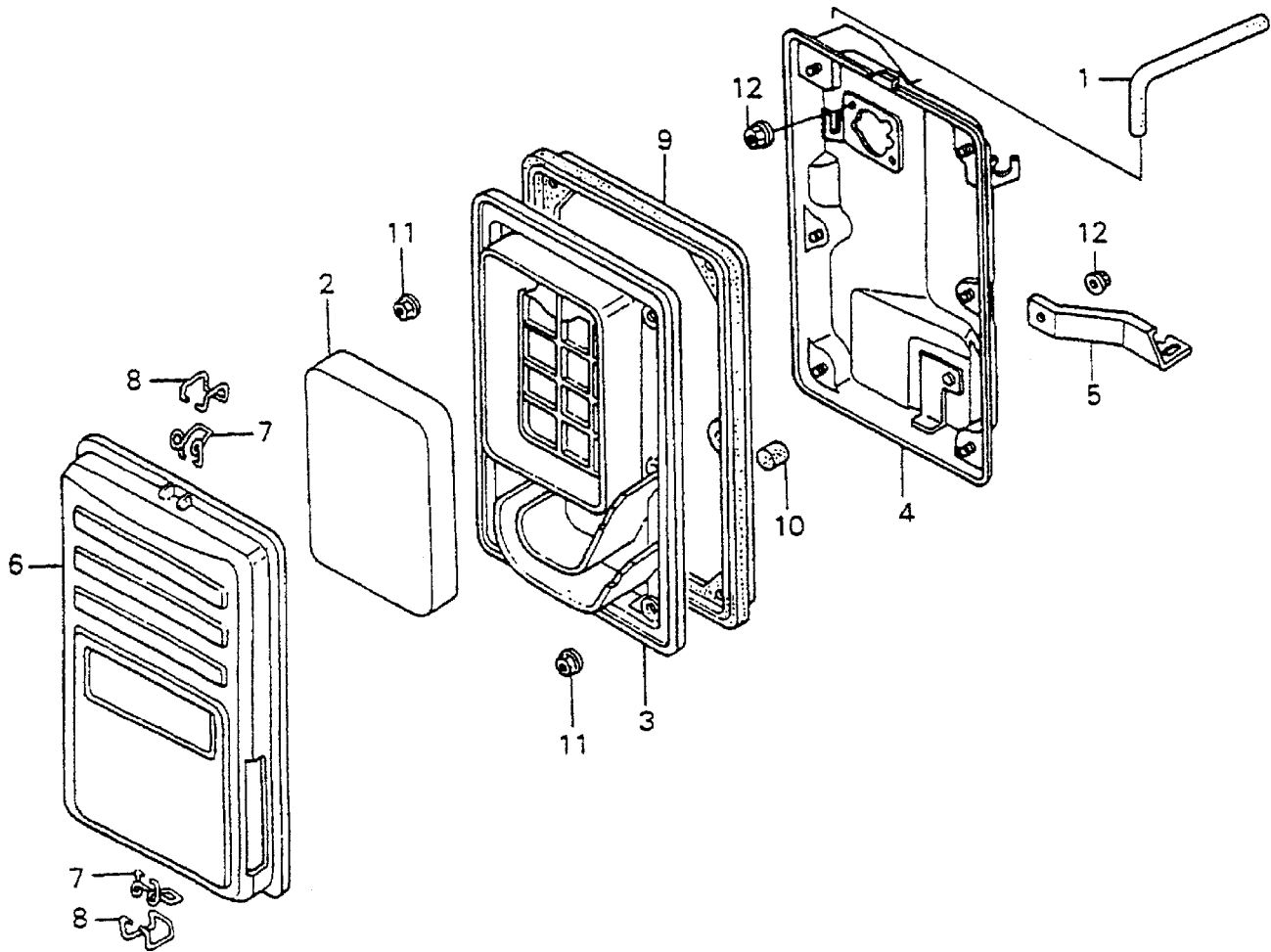
HONDA GX340K1 ENGINE — PISTON/RINGS

PISTON/RINGS ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	13010ZE3003	RING SET, PISTON (STD)	1	
	13011ZE3003	RING SET, PISTON (0.25)	1	
	13012ZE3003	RING SET, PISTON (0.50)	1	
	13013ZE3003	RING SET, PISTON (0.75)	1	
2	13101ZE3W00	PISTON (STD)	1	
	13102ZE3W00	PISTON (0.25)	1	
	13103ZE3W00	PISTON (0.50)	1	
	13104ZE3W00	PISTON (0.75)	1	
3	13111ZF6000	PIN, PISTON	1	
4	13200ZE3010	ROD ASSY., CONNECTING	1	.. INCLUDES ITEM W/★
5★	90001ZE8000	BOLT, CONNECTING ROD	2	
6	90601ZE3000	CLIP, PISTON PIN, 18MM	2	

HONDA GX340K1 ENGINE — AIR CLEANER

AIR CLEANER ASSY.



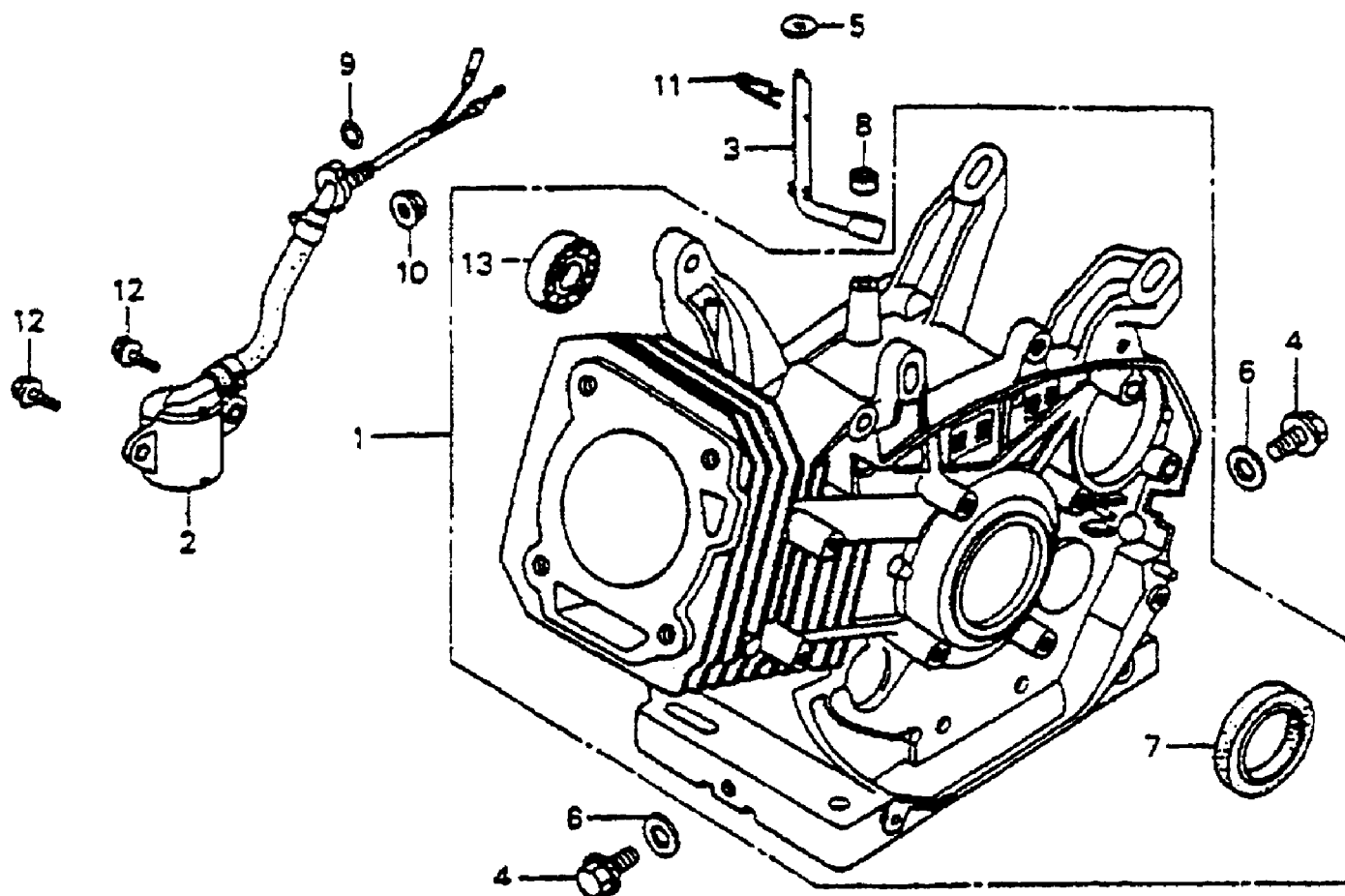
HONDA GX340K1 ENGINE — AIR CLEANER

AIR CLEANER ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	15721ZB4000	TUBE BREATHER	1	
2	17211899000	ELEMENT, AIR CLEANER	1	
3	17212ZB4003	SEPARATOR, AIR CLEANER	1	
4	17220ZB4003	CASE COMP., AIR CLEANER	1	
5	17222ZC2000	STAY, AIR CLEANER	1	
6	17231899000	COVER COMP., AIR CLEANER	1	
7	17235899000	CLIP A, AIR CLEANER WIRE	2	
8	17236899000	CLIP B, AIR CLEANER WIRE	2	
9	17252899000	SEAL, AIR CLEANER	1	
10	17367413690	FILTER, DRAIN TUBE	1	
11	9405005000	NUT, FLANGE, 5 MM	6	
12	9405006000	NUT, FLANGE, 6 MM	3	

HONDA GX340K1 ENGINE — CYLINDER BARREL

CYLINDER BARREL ASSY. (RECOIL STARTER)



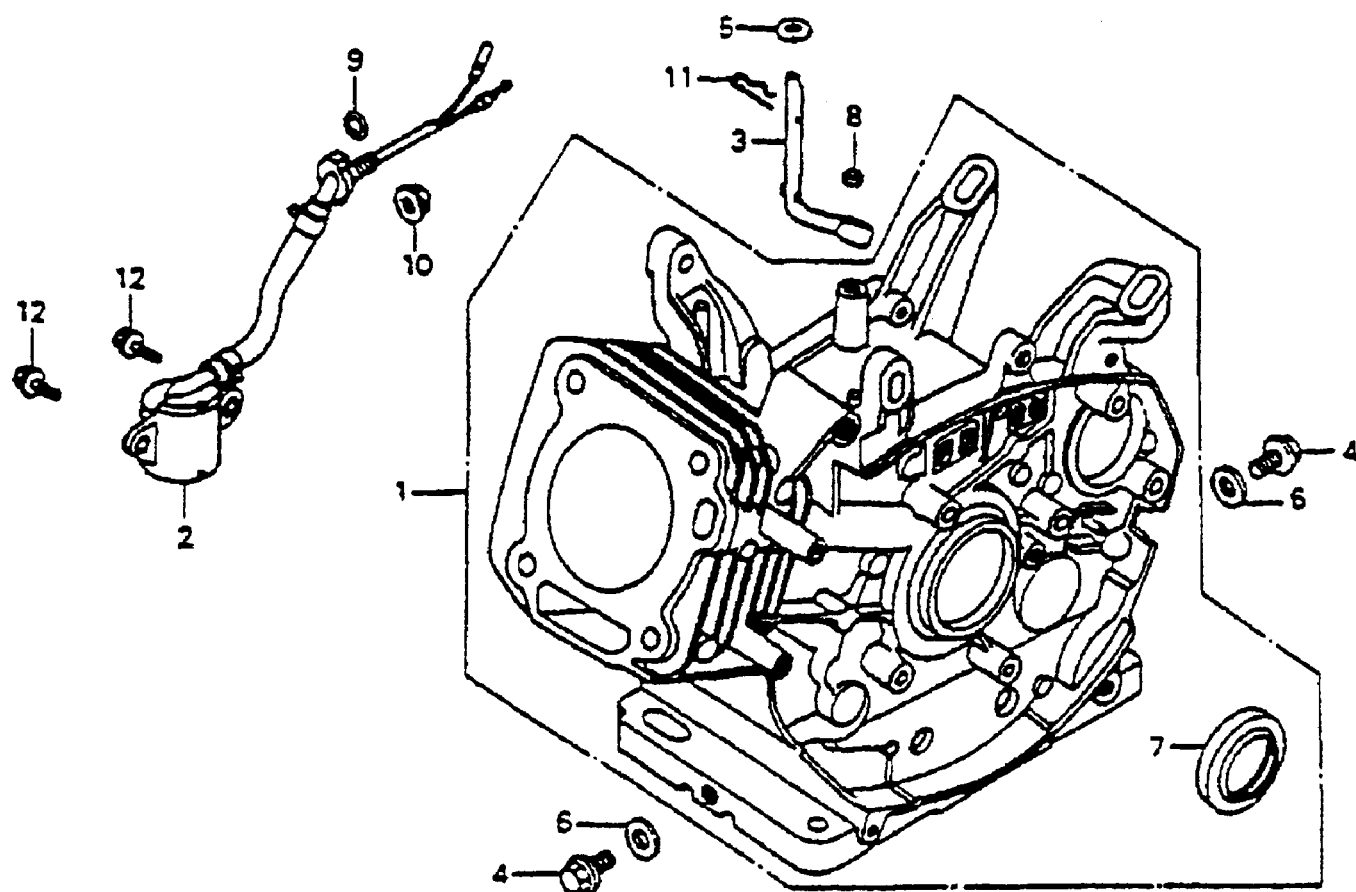
HONDA GX340K1 ENGINE — CYLINDER BARREL

CYLINDER BARREL ASSY. (RECOIL STARTER)

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	12000ZE3816	BARREL ASSY., CYLINDER	1	
2	15510ZE2043	SWITCH ASSY., OIL LEVEL	1	
3	16541ZE3000	SHAFT, GOVERNOR ARM	1	
4	90131883000	BOLT, DRAIN PLUG	2	
5	90446KE1000	WASHER, 8.2X17X0.8	1	
6	9410912000	WASHER, DRAIN PLUG	2	
7	91201ZE3004	OIL SEAL	1	
8	91203952771	OIL SEAL	1	
9	91353671004	ORING, 14 MM	1	
10	9405010000	NUT, FLANGE, 10 MM	1	
11	9425108000	PIN, LOCK, 8 MM	1	
12	957010601200	BOLT, FLANGE, 6X12	2	
13	961006202000	BEARING, RADIAL BALL 6202	1	

HONDA GX340K1 ENGINE — CYLINDER BARREL

CYLINDER BARREL ASSY. (ELECTRIC START)



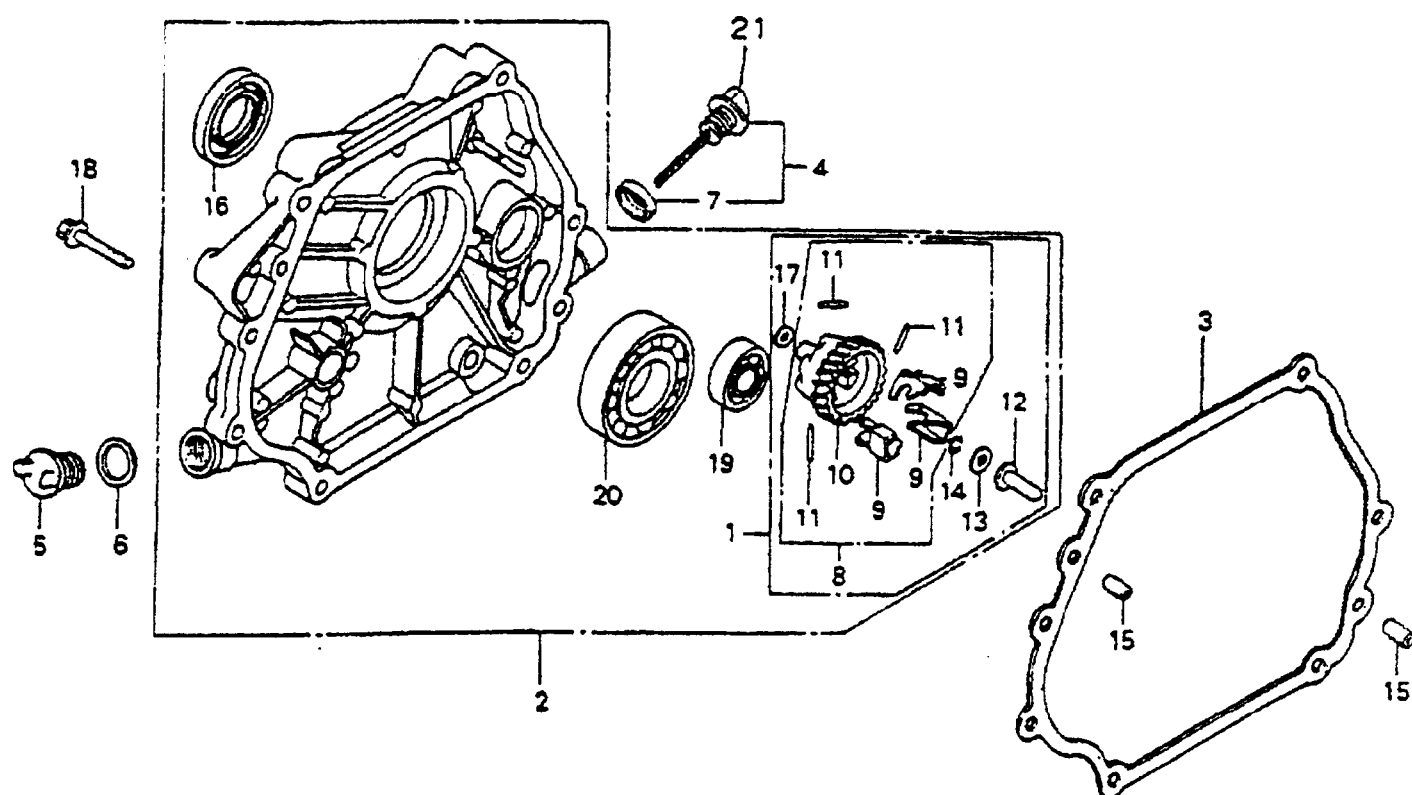
HONDA GX340K1 ENGINE — CYLINDER BARREL

CYLINDER BARREL ASSY. (ELECTRIC START)

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	12000ZE3826	BARREL ASSY., CYLINDER	1	
2	15510ZE2043	SWITCH ASSY., OIL LEVEL	1	
3	16541ZE3000	SHAFT, GOVERNOR ARM	1	
4	90131883000	BOLT, DRAIN PLUG	2	
5	90446KE1000	WASHER, 8.2X17X0.8	1	
6	9410912000	WASHER, DRAIN PLUG	2	
7	91201ZE300	OIL SEAL	1	
8	91203952771	OIL SEAL	1	
9	91353671004	ORING, 14 MM	1	
10	9405010000	NUT, FLANGE, 10 MM	1	
11	9425108000	PIN, LOCK, 8 MM	1	
12	957010601200	BOLT, FLANGE, 6X12	2	
13	961006202000	BEARING, RADIAL BALL 6202	1	

HONDA GX340K1 ENGINE — CRANKCASE COVER/GOVERNOR

CRANKCASE COVER/GOVERNOR ASSY.



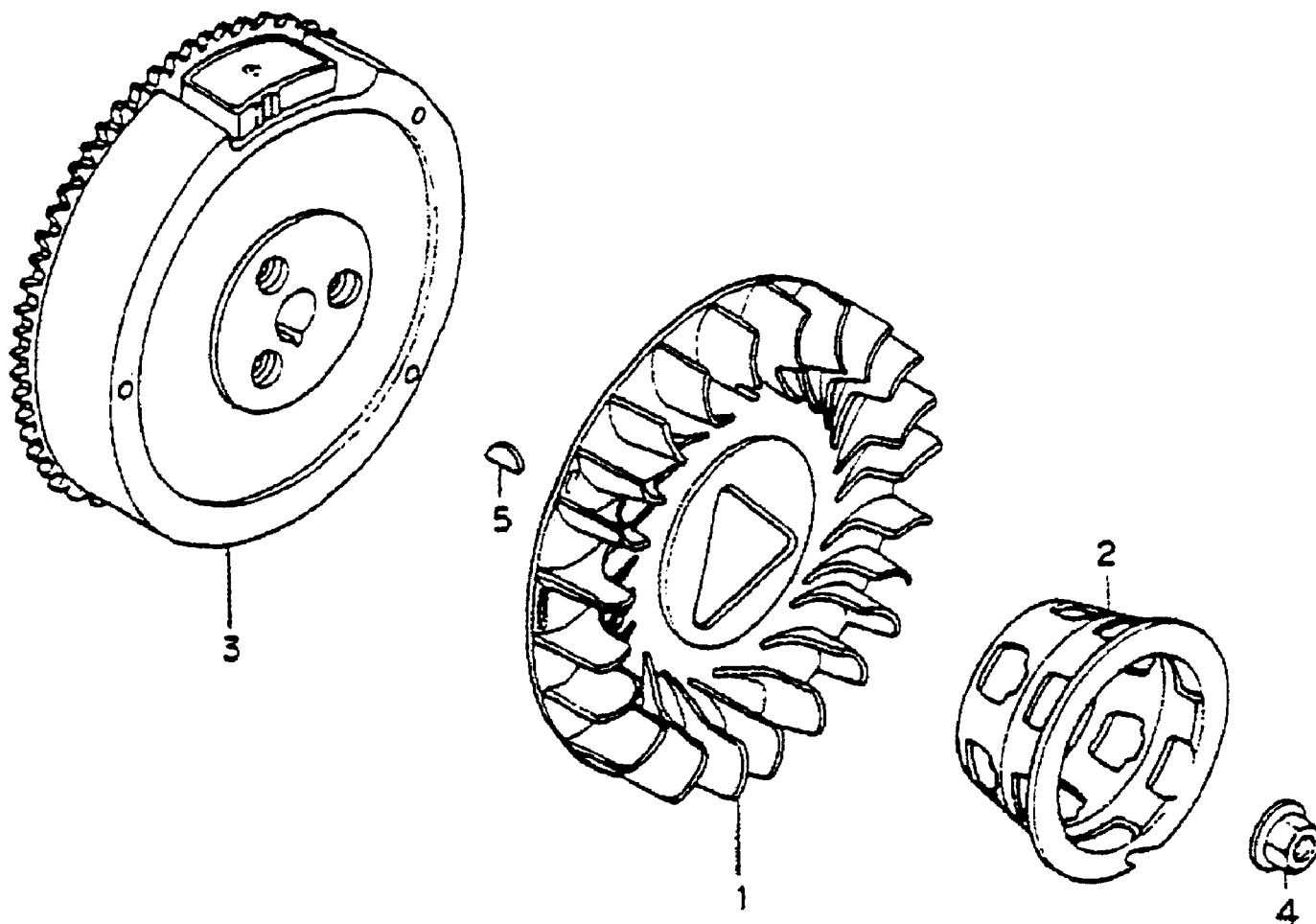
HONDA GX340K1 ENGINE — CRANKCASE COVER/GOVERNOR

CRANKCASE COVER/GOVERNOR ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
1+	06165ZE3000	GOVERNOR KIT	1	INCLUDES ITEM W/*
2	11300ZE3020	COVER ASSY., CRANKCASE	1	INCLUDES ITEM W/+
3	11381ZE3800	PACKING, CASE COVER	1	
4	15600735700	CAP ASSY., OIL FILLER	1	INCLUDES ITEM W/#
5	15621896010	PACKING, OIL FILLER CAP	1	
6	15625ZE1000	PACKING, OIL FILLER CAP	1	
7#	16510ZE3000	GOVERNOR ASSY.	1	
8*+	16511ZE8000	WEIGHT, GOVERNOR	3	
9*+	16512ZE3000	HOLDER, GOVERNOR WEIGHT	1	
10*+	16513ZE2000	PIN, GOVERNOR WEIGHT	3	
11*+	16531ZE2000	SLIDER, GOVERNOR	1	
12*+	16520ZG4910	CAP, OIL FILLER	1	
13*+	90473147000	WASHER, 6X16	1	
14*+	90602ZE1000	CLIP, GOVERNOR HOLDER	1	
15	91201ZE3004	OIL SEAL, 35X52X8	1	
16+	9410106800	WASHER, PLAIN, 6 MM	1	
17*	90701HC4000	PIN, DOWEL, 8X12	2	
18	959000804000	BOLT, FLANGE, 8X40	7	
19+	961006202000	BEARING, RADIAL BALL 6202	1	
20+	961006207000	BEARING, RADIAL BALL 6207	1	
21#	15620735700	CAP, OIL FILLER	1	

HONDA GX340K1 ENGINE — FLYWHEEL/FAN ASSY.

FLYWHEEL/FAN ASSY.



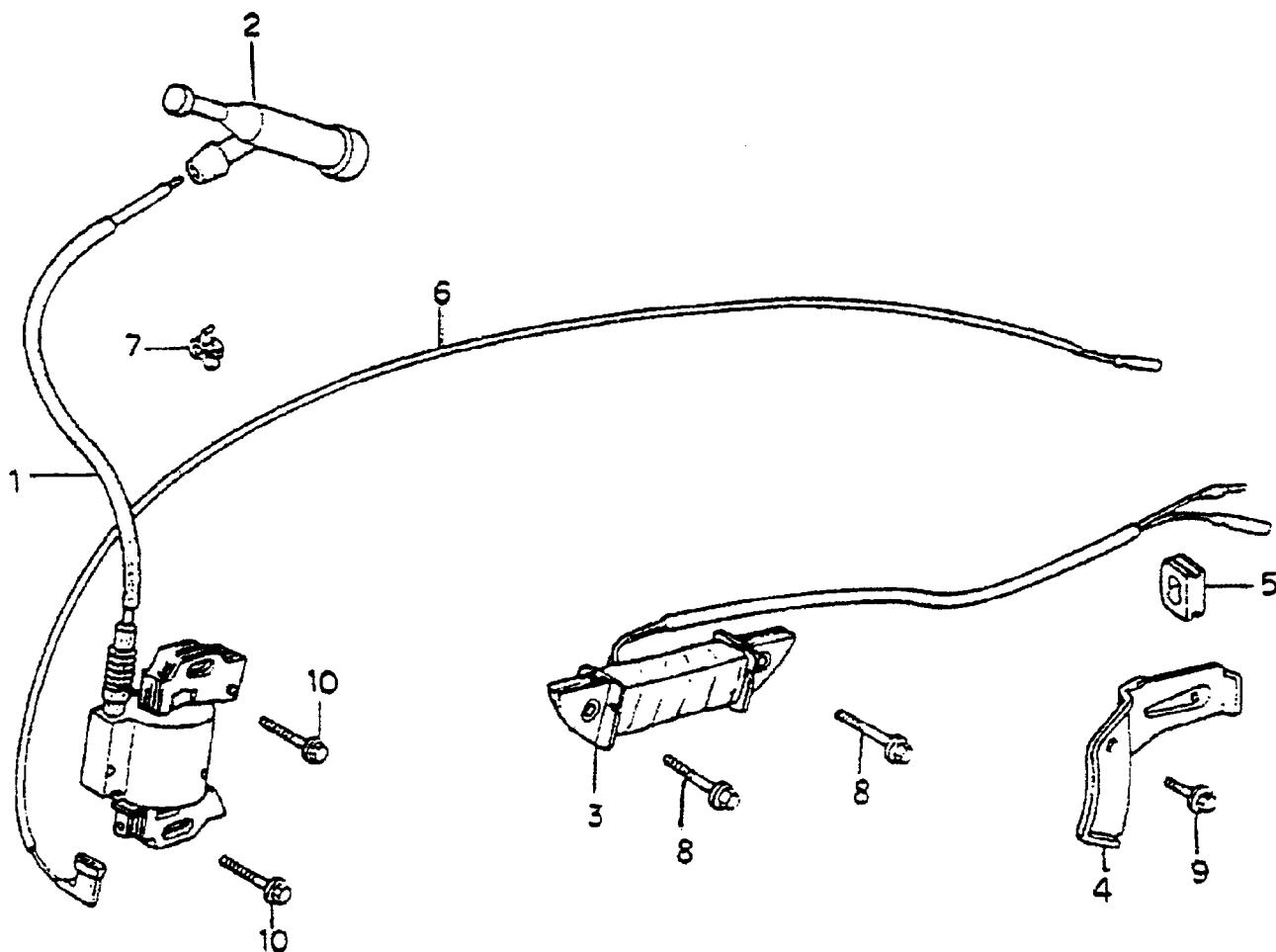
HONDA GX340K1 ENGINE — FLYWHEEL/FAN ASSY.

FLYWHEEL/FAN ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	19511ZE3000	FAN, COOLING	1	
2	28451ZE3W01	PULLEY, STARTER	1	
3	31100ZE3721	FLYWHEEL COMP.	1	
4	90201ZE3790	NUT, SPECIAL, 16 MM	1	
5	90741ZE2000	KEY, SPECIAL WOODRUFF	1	

HONDA GX340K1 ENGINE — COIL ASSY.

COIL ASSY.



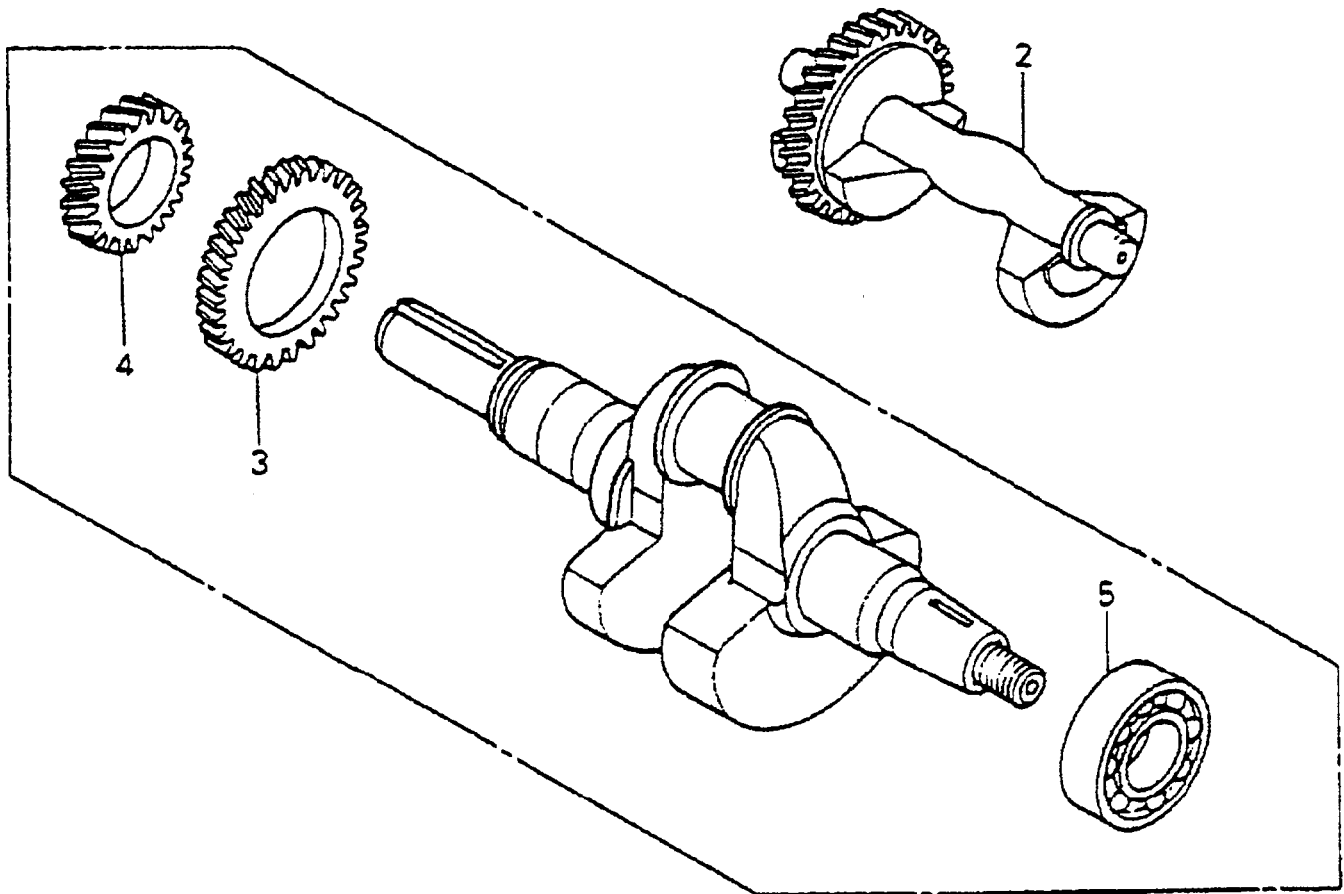
HONDA GX340K1 ENGINE — COIL ASSY.

COIL ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	30500ZE2013	COIL ASSY., IGNITION	1	
2	30700ZE1013	CAP ASSY., NOISE SUPPRESSO	1	
3	31510ZE1811	COIL ASSY., LAMP 12V/25W	1	
4	31511ZE3000	CLAMP, WIRE	1	
5	31512ZE2000	GROMMET, CORD	1	
6	36101ZE3800	CORD, STOP SWITCH	1	
7	36103ZE1000	HOLDER, STOP SWITCH CORD	1	
8	90012888000	BOLT, FLANGE, 6X40	4	
9	90013883000	BOLT, FLANGE, 6X12	1	
10	90015883000	BOLT, FLANGE, 6X28	2	

HONDA GX340K1 ENGINE — CRANKSHAFT ASSY.

CRANKSHAFT ASSY.



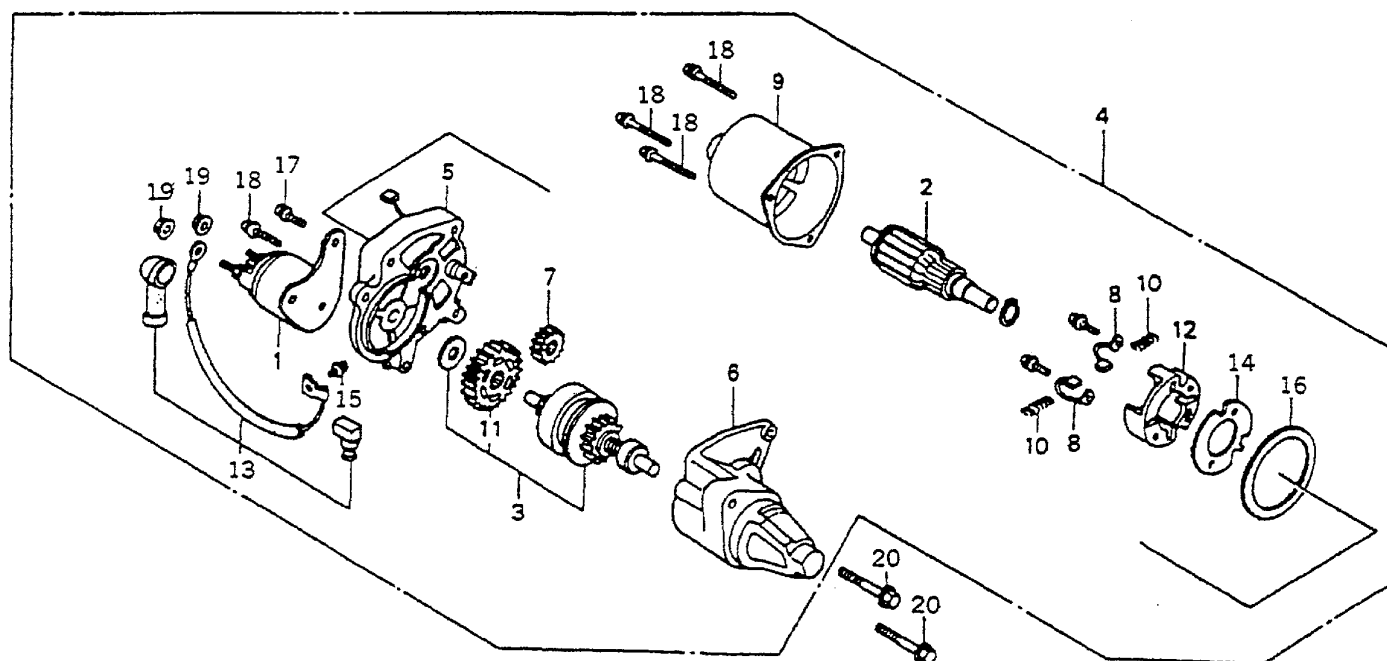
HONDA GX340K1 ENGINE — CRANKSHAFT ASSY.

CRANKSHAFT ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	13310ZE3701	CRANKSHAFT COMP.	1	INCLUDES ITEMS W/★
2	13351ZE3010	WEIGHT, BALANCER	1	
3★	13352ZE3310	GEAR, BALANCER DRIVE	1	
4★	14311ZE3310	GEAR, TIMING	1	
5★	961006207000	BEARING, RADIAL BALL, 6207	1	

HONDA GX340K1 ENGINE — ELECTRIC STARTER ASSY.

ELECTRIC STARTER ASSY.



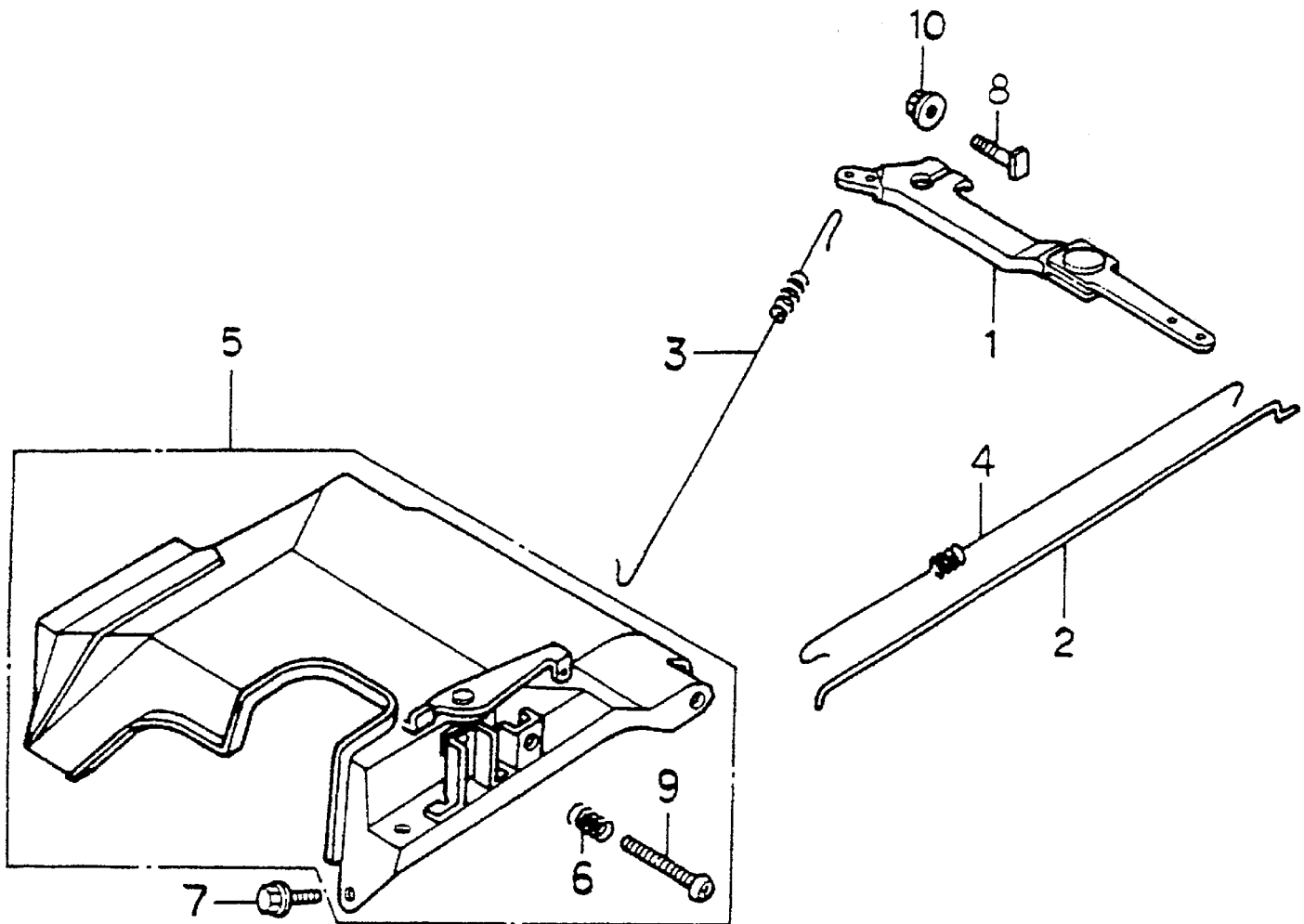
HONDA GX340K1 ENGINE — ELECTRIC STARTER ASSY.

ELECTRIC STARTER ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1*	31204ZA0003	CONTACTOR ASSY,	1	
2*	31206ZE3003	ARMATURE COMP	1	
3*	31207ZE3013	CLUTCH COMP, OVER RUNNING .	1	INCLUDES ITEMS W/#
4	31201ZE3013	MOTOR UNIT, STARTER	1	INCLUDES ITEMS W/*
5*	31211ZE2003	BRAKET, CENTER	1	
6*	31212ZE3003	BRAKET, FR	1	
7*	31213ZE2003	GEAR, DRIVE DINION	1	
8*	31215ZE2003	BRUSH	2	
9*	31218ZE3003	YOKE COMP	1	
10*	31219ZE2003	SPRING, BRUSH RETURN	4	
11*#	31222ZE3791	GEAR, REDUCTION	1	
12*	31231ZE2003	HOLDER, BRUSH	1	
13*	31232ZE3003	WIRE, WATER COVER	1	
14*	31233ZE2003	INSULATOR	1	
15*	90110ZE2003	SCREW-WASHER, 4X6	1	
16*	91601ZE2003	PACKING	1	
17*	938920501418	SCREW-WASHER, 5X14	1	
18*	938920503218	SCREW-WASHER, 5X32	4	
19*	9407206080	NUT-WASHER, 6MM	2	
20	957010803508	BOLT, FLANGE, 8X35	2	

HONDA GX340K1 ENGINE — GOVERNOR CONTROLS ASSY.

GOVERNOR CONTROLS ASSY.



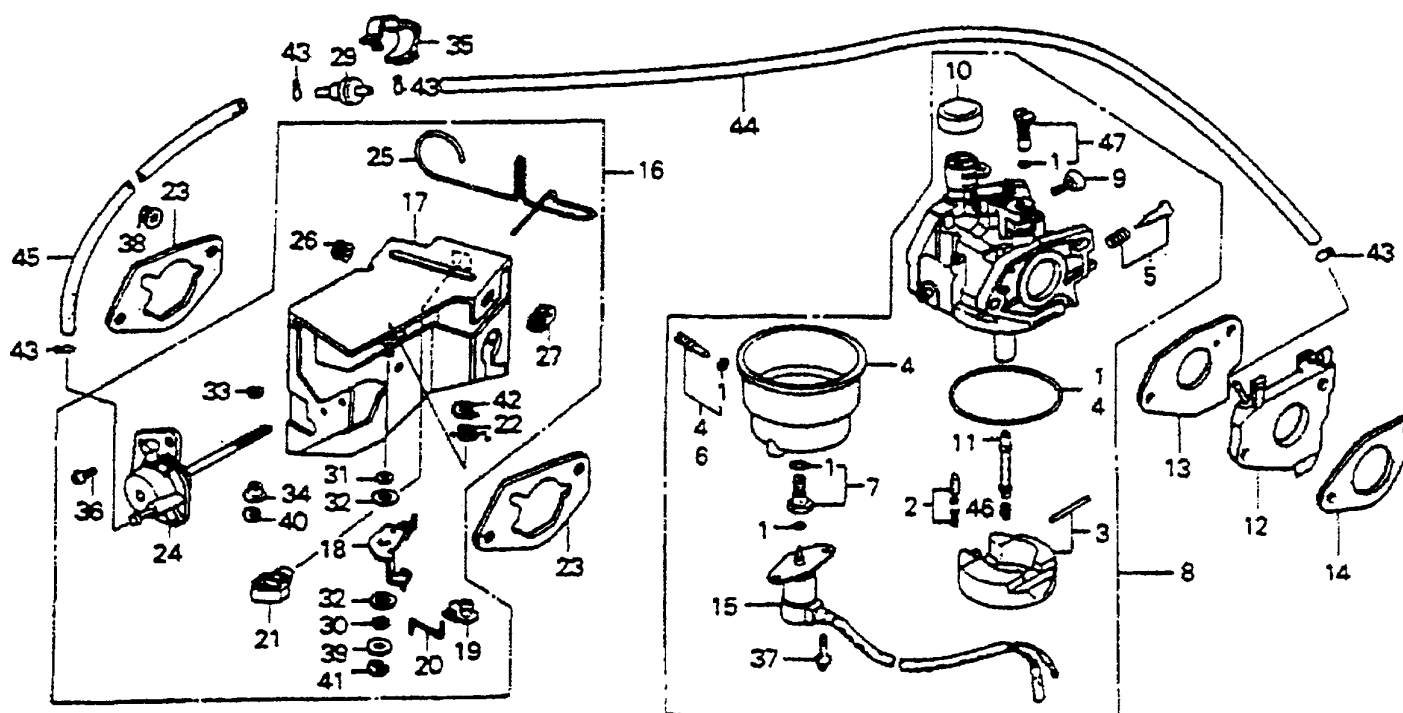
HONDA GX340K1 ENGINE — GOVERNOR CONTROLS ASSY.

GOVERNOR CONTROLS ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	16550ZE3700	ARM, GOVERNOR	1	
2	16555ZE3000	ROD, GOVERNOR	1	
3	16561ZE3000	SPRING, GOVERNOR	1	
4	16562ZE3700	SPRING, THROTTLE RETURN	1	
5	16570ZE3700	CONTROL ASSY.	1	INCLUDES ITEMS W/*
6*	16584883300	SPRING, CONTROL ADJUSTING	1	
7	90013883000	BOLT, FLANGE, 6X12	1	
8	90015ZE5010	BOLT, GOVERNOR ARM	1	
9*	93500050350A	SCREW, PAN, 5X35	1	
10	9405006000	NUT, FLANGE, 6MM	1	

HONDA GX340K1 ENGINE — CARBURETOR ASSY.

CARBURETOR ASSY.



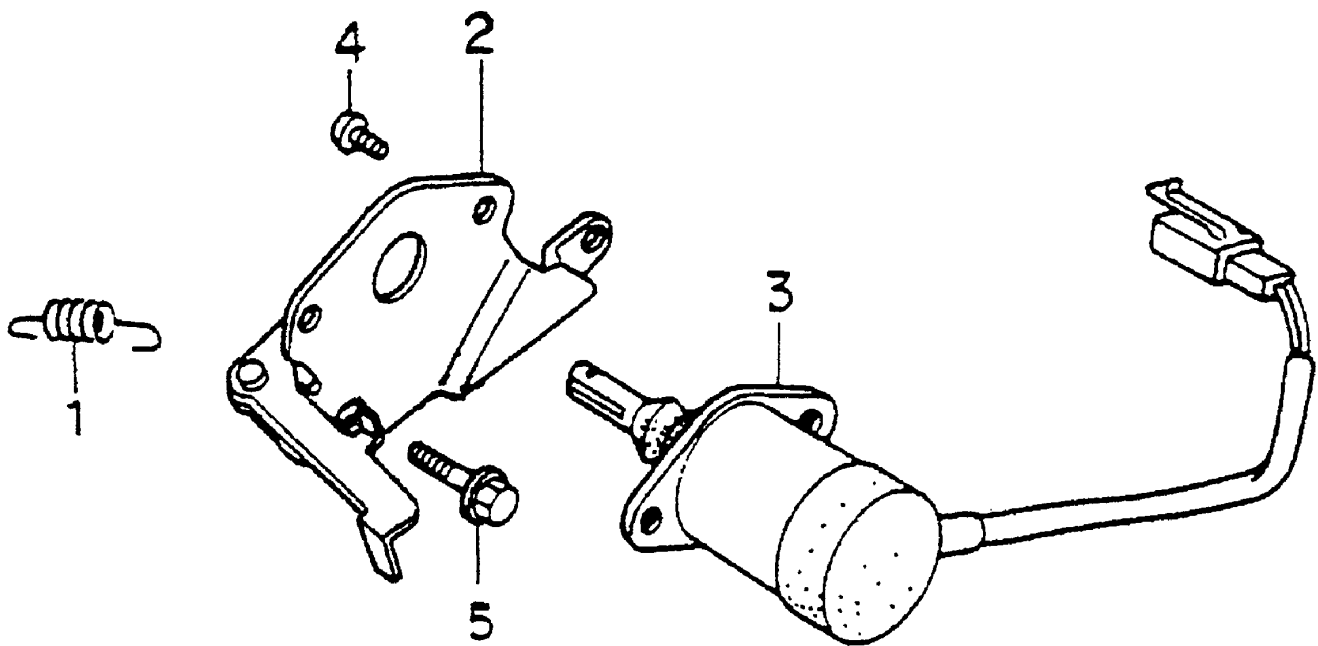
HONDA GX340K1 ENGINE — CARBURETOR ASSY.

CARBURETOR ASSY.

NO	PART NO	PART NAME	QTY.	REMARKS
1*	16010ZE3701	GASKET SET	1	
2*	16011ZA0931	VALVE SET, FLOAT	1	
3*	16013ZA0931	FLOAT SET	1	
4*	16015ZA0931	CHAMBER SET, FLOAT	1	
5	16016ZH7W01	SCREW SET	1	
6*	16024124761	SCREW SET, DRAIN	1	
7*	16028ZA0931	SCREW SET	1	
8	16100ZE3F10	CARBURETOR ASSY.	1	... INCLUDES ITEMS W/*
9*	16124ZE0005	SCREW, THROTTLE STOP	1	
10*	16148141881	CAP, CHOKE DUST	1	
11	16166ZE3701	NOZZLE, MAIN	1	
12	16211ZE3700	INSULATOR, CARBURETOR	1	
13	16221ZE3800	PACKING, CARBURETOR	1	
14	16223ZE3800	PACKING, INSULATOR	1	
15*	16230ZE3701	VALVE ASSY., SOLENOID	1	
16	16260ZE2722	STAY, MANUAL CHOKE	1	... INCLUDES ITEMS W/#
17#	16261ZE2702	STAY, COMP., SOLENIOD	1	
18#	16262ZE2711	LEVER, CHOKE	1	
19#	16263ZA0000	JOINT, ROD	1	
20#	16264ZE2701	ROD, CHOKE	1	
21#	16265ZE2721	STOPER, CHOKE ROD	1	
22#	16268ZE2721	SPRING, MANUAL CHOKE	1	
23	16269ZA0800	PACKING, AIR CLEANER	2	
24#	16400ZE2703	DIAPHRAGM ASSY.	1	
25#	16611ZE2711	ROD, CHOKE CONTROL	1	
26#	16613893000	GROMMET, CHOKE ROD	1	
27#	16615893000	GUIDE, CHOKE ROD	1	
29	36135ZV1003	VALVE, DASHPOT CHECK	1	
30#	53149964003	BUSH, ARM PIVOT	1	
31#	90431ZE2700	WASHER, CHOKE LEVER	1	
32#	90432ZE2700	SEAL, CHOKE LEVER	2	
33#	90433ZE2700	WASHER, THRUST	1	
34#	90434ZE2700	COLLAR, LOVER	1	
35	90650SD9003	CLIP, WIRE HARNESS	1	
36#	93500050120A	SCREW, PAN, 5X12	2	
37*	938920501208	SCREW, WASHER 5X12	2	
38	9405006000	NUT, FLANGE, 6MM	2	
39#	9410305000	WASHER, PLAIN 5MM	1	
40#	9454002010	E-RING 2MM	1	
41#	9454004010	E-RING 4MM	1	
42#	9454007010	E-RING 7MM	1	
43	9500202070	CLIP B7, TUBE	4	
44	950053507510	TUBE, 3.5X75	1	
45	950053513010	TUBE, 3.5X130	1	
46*	99101ZF50920	JET, MAIN, #92	1	
	99101ZF50950	JET, MAIN, #95	1	

HONDA GX340K1 ENGINE — SOLENOID ASSY.

SOLENOID ASSY.



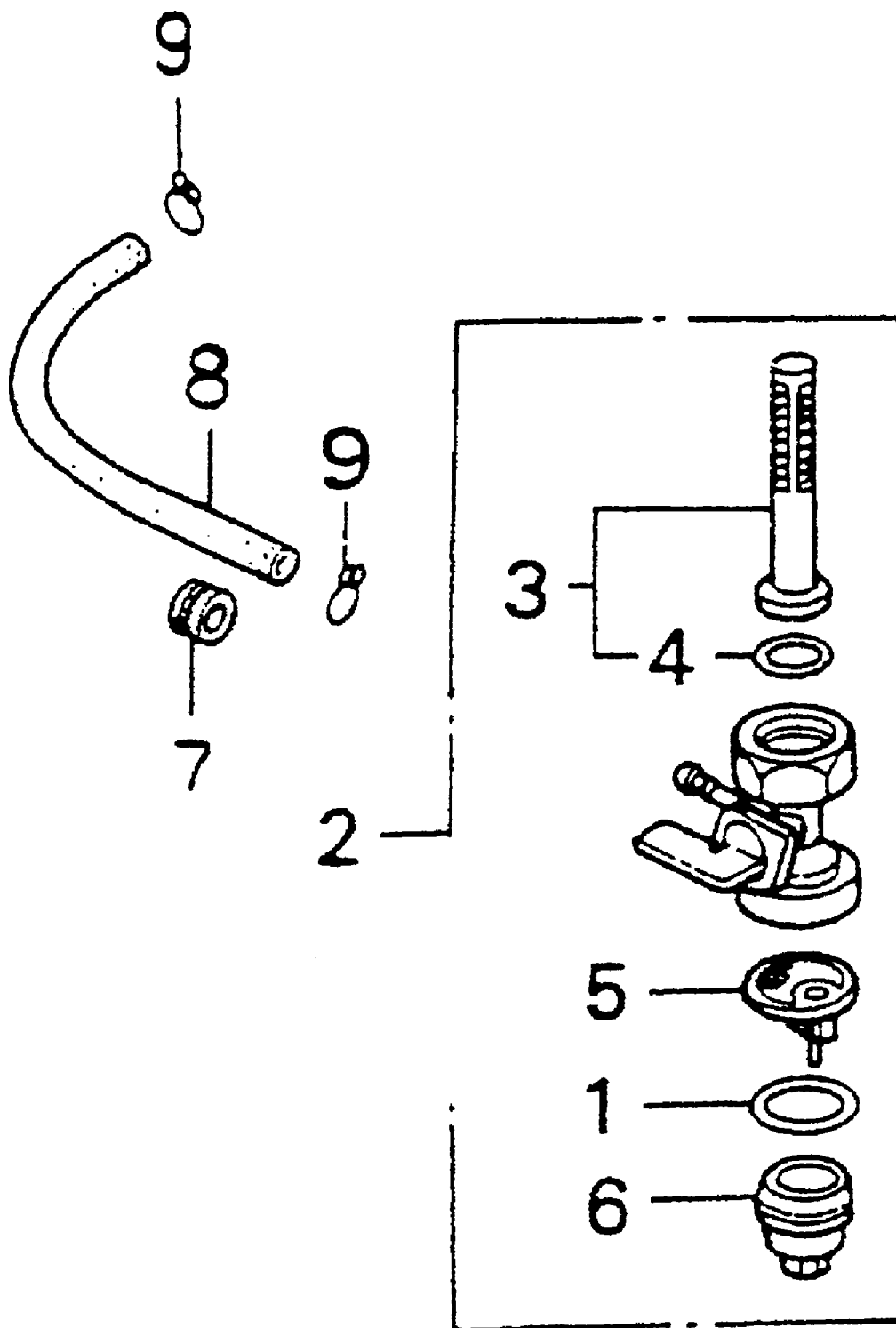
HONDA GX340K1 ENGINE — SOLENOID ASSY.

SOLENOID ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	16268893000	SPRING, CHOKE RETURN	1	
2	17850ZD1E30	LEVER COMP., THROTTLE	1	
3	36160ZB4003	SOLENOID ASSY.	1	
4	93500050080A	SCREW, PAN	2	
5	90013883000	BOLT, FLANGE, 6X2	1	

HONDA GX340K1 ENGINE — FUEL COCK ASSY.

FUEL COCK ASSY.



HONDA GX340K1 ENGINE — FUEL COCK ASSY.

FUEL COCK ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1*	16173001004	PACKING, FUEL STRAINER CUP	1	
2	16950ZB4015	COCK ASSY., FUEL	1	INCLUDES ITEMS W/*
3*	16952ZB4005	SCREEN, FUEL STRAINER	1	
4*	16958397771	O-RING	1	
5*	16959471831	FILTER CUP	1	
6*	16967GA6671	CUP, FUEL STRAINER	1	
7	90854ZB2000	RUBBER, FUEL TUBE	1	
8	950014521040	TUBE, FUEL, 4.5X210	1	
9	9500202080	CLIP B8, TUBE	2	

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 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 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.

[illegible]

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

FAX: 800/672-7877

SERVICE DEPARTMENT

800/478-1244

FAX: (310) 537-4259

WARRANTY DEPARTMENT

800/421-1244, EXT. 279

FAX: (310) 537-1173

MAIN

800/421-1244

FAX: (310) 537-3927

Manufactured for MULTIQUIP INC.
by
DENYO MANUFACTURING CO., JAPAN



MULTIQUIP INC.
POST OFFICE BOX 6254
CARSON, CA 90749
310-537-3700 • 800-421-1244
FAX: 310-537-3927
E-MAIL: mq@multiquip.com
WWW: multiquip.com

Atlanta • Boise • Dallas • Houston • Newark
Quebec, Canada • Manchester, UK • Rio De Janeiro, BR • Guadalajara, MX