# **OPERATION AND PARTS MANUAL**





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# MODEL GA6HR/GA6HRS PORTABLE GENERATORS (HONDA GX340RT2EDN2/GX340RT2EDE2 GASOLINE ENGINES)

Revision #3 (09/18/19)

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THIS MANUAL MUST ACCOMPANY THE EQUIPMENT AT ALL TIMES.

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# A WARNING A

Operation of this equipment may create sparks that can start fires around dry vegetation. A spark arrestor may be required. The operator should contact local fire agencies for laws or regulations relating to fire prevention requirements.

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#### NOTICE

Specifications and part numbers are subject to change without notice.

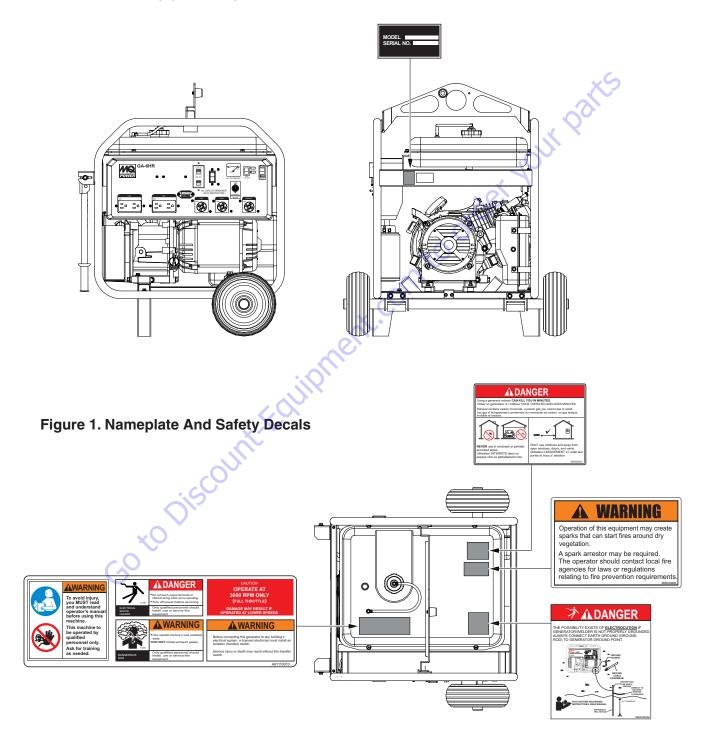
#### NAMEPLATE/SAFETY INFORMATION

#### NAMEPLATE AND SAFETY LABELS

Safety labels are attached to the generator as shown in Figure 1. Keep these safety labels clean at all times. When the safety labels become worn or damaged, contact your nearest dealer or the Multiquip Parts Dept.

#### **NOTICE**

For safety label part numbers, reference the parts section of this manual..



Do not operate or service the equipment before reading the entire manual. Safety precautions should be followed at all times when operating this equipment. Failure to read and understand the safety messages and operating instructions could result in injury to yourself and others.

**SAFETY MESSAGES** 

The four safety messages shown below will inform you about potential hazards that could injure you or others. The safety messages specifically address the level of exposure to the operator and are preceded by one of four words: DANGER, WARNING, CAUTION or NOTICE.

#### SAFETY SYMBOLS



#### **DANGER**

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



#### WARNING

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



#### **CAUTION**

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

#### **NOTICE**

Addresses practices not related to personal injury.

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

Symbol	Safety Hazard
2	Lethal exhaust gas hazards
ANY.	Explosive fuel hazards
	Burn hazards
	Overspeed hazards
*	Electric shock hazards

#### **GENERAL SAFETY**

#### CAUTION

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











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



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







- ALWAYS check the equipment for loosened threads or bolts before starting.
- DO NOT use the equipment for any purpose other than its intended purposes or applications.

#### **NOTICE**

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



■ ALWAYS know the location of the nearest + FIRST AID first aid kit.



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









#### GENERATOR SAFETY



#### **DANGER**

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



#### **WARNING**

■ NEVER disconnect any emergency or safety devices. These devices are intended for operator safety. Disconnection of these devices can cause severe injury, bodily harm or even death. Disconnection of any of these devices will void all warranties.

#### **CAUTION**

■ NEVER lubricate components or attempt service on a running machine.

#### **NOTICE**

- ALWAYS ensure generator is on level ground before use.
- ALWAYS keep the machine in proper running condition.
- Fix damage to machine and replace any broken parts immediately.
- ALWAYS store equipment properly when it is not being used. Equipment should be stored in a clean, dry location out of the reach of children and unauthorized personnel

#### **ENGINE SAFETY**

#### **DANGER**

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



restricted it will cause injury to people and property and serious damage to the equipment or engine.

#### **WARNING**

- NEVER operate the engine with heat shields or guards removed.
- DO NOT remove the engine oil drain plug while the engine is hot. Hot oil will gush out of the engine crankcase and severely scald any persons in the general area of the generator.

#### **CAUTION**

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



#### **NOTICE**

- NEVER run engine without an air filter or with a dirty air filter. Severe engine damage may occur. Service air filter frequently to prevent engine malfunction.
- NEVER tamper with the factory settings of the engine or engine governor. Damage to the engine or equipment can result if operating in speed ranges above the maximum allowable.

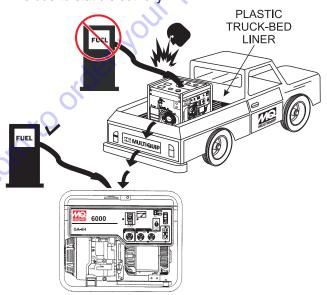


State Health Safety Codes and Public Resources Codes specify that in certain locations, spark arresters must be used on internal combustion engines that use hydrocarbon fuels. A spark arrester is a device designed to prevent accidental discharge of sparks or flames from the engine exhaust. Spark arresters are qualified and rated by the United States Forest Service for this purpose. In order to comply with local laws regarding spark arresters, consult the engine distributor or the local Health and Safety Administrator.

#### **FUEL SAFETY**

#### **A** DANGER

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



- **DO NOT** start the engine near spilled fuel or combustible fluids. Diesel fuel is extremely flammable and its vapors can cause an explosion if ignited.
- ALWAYS refuel in a well-ventilated area, away from sparks and open flames.
- ALWAYS use extreme caution when working with flammable liquids.
- **DO NOT** fill the fuel tank while the engine is running or hot.
- DO NOT overfill tank, since spilled fuel could ignite if it comes into contact with hot engine parts or sparks from the ignition system.
- Store fuel in appropriate containers, in well-ventilated areas and away from sparks and flames.

- **NEVER** use fuel as a cleaning agent.
- DO NOT smoke around or near the equipment. Fire or explosion could result from fuel vapors or if fuel is spilled on a hot engine.



#### **ELECTRICAL SAFETY**

#### **DANGER**

- Turn generator and all circuit breakers OFF before performing maintenance on the generator or making contact with output receptacles.
- NEVER insert any objects into the output receptacles during operation. This is extremely dangerous. The possibility exists of electrical shock, electrocution or death.



Backfeed to a utility system can cause electrocution and/or property damage. NEVER connect the generator to a building's electrical system without a transfer switch or other approved device. All installations should be



performed by a **licensed electrician** in accordance with all applicable laws and electrical codes. Failure to do so could result in electrical shock or burn, causing **serious injury or even death.** 

#### **Power Cord/Cable Safety**

#### **DANGER**

- NEVER let power cords or cables lay in water.
- **NEVER stand in water** while AC power from the generator is being transferred to a load.
- NEVER use damaged or worn cables or cords when connecting equipment to generator. Inspect for cuts in the insulation.
- NEVER grab or touch a live power cord or cable with wet hands. The possibility exists of electrical shock, electrocution or death.



Make sure power cables are securely connected to the generator's output receptacles. Incorrect connections may cause electrical shock and damage to the generator.

#### **NOTICE**

■ ALWAYS make certain that proper power or extension cord has been selected for the job. See Cable Selection Chart in this manual.

#### **Grounding Safety**

#### $\Lambda$

#### **DANGER**

- ALWAYS make sure that electrical circuits are properly grounded to a suitable earth ground (ground rod) per the National Electrical Code (NEC) and local codes before operating generator. Severe injury or death by electrocution can result from operating an ungrounded generator.
- **NEVER** use gas piping as an electrical ground.

#### **BATTERY SAFETY (ELECTRIC START ONLY)**

#### **DANGER**

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



■ **DO NOT** charge battery if frozen. Battery can explode. When frozen, warm the battery to at least 61°F (16°C).

#### **WARNING**

■ ALWAYS wear safety glasses when handling the battery to avoid eye irritation. The battery contains acids that can cause injury to the eyes and skin.



- Use well-insulated gloves when picking up the battery.
- ALWAYS keep the battery charged. If the battery is not charged, combustible gas will build up.
- ALWAYS recharge the battery in a well-ventilated environment to avoid the risk of a dangerous concentration of combustible gasses.

- If the battery liquid (dilute sulfuric acid) comes into contact with clothing or skin, rinse skin or clothing immediately with plenty of water.
- If the battery liquid (dilute sulfuric acid) comes into contact with **eyes**, rinse eyes immediately with plenty of water and contact the nearest doctor or hospital to seek medical attention.

#### **CAUTION**

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

#### TRANSPORTING SAFETY

#### **CAUTION**

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

#### **NOTICE**

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

#### **ENVIRONMENTAL SAFETY/DECOMMISSIONING**

#### **NOTICE**

Decommissioning is a controlled process used to safely retire a piece of equipment that is no longer serviceable. If the equipment poses an unacceptable and unrepairable safety risk due to wear or damage or is no longer cost effective to maintain (beyond life-cycle reliability) and is to be decommissioned (demolition and dismantlement), be sure to follow rules below.

- **DO NOT** pour waste or oil directly onto the ground, down a drain or into any water source.
- Contact your country's Department of Public Works or recycling agency in your area and arrange for proper disposal of any electrical components, waste or oil associated with this equipment.



- When the life cycle of this equipment is over, remove battery and bring to appropriate facility for lead reclamation. Use safety precautions when handling batteries that contain sulfuric acid.
- When the life cycle of this equipment is over, it is recommended that the trowel frame and all other metal parts be sent to a recycling center.

Metal recycling involves the collection of metal from discarded products and its transformation into raw materials to use in manufacturing a new product.

Recyclers and manufacturers alike promote the process of recycling metal. Using a metal recycling center promotes energy cost savings.

#### **EMISSIONS INFORMATION**

#### **NOTICE**

The gasoline engine used in this equipment has been designed to reduce harmful levels of carbon monoxide (CO), hydrocarbons (HC) and nitrogen oxides (NOx) contained in gasoline exhaust emissions.

This engine has been certified to meet US EPA Evaporative emissions requirements in the installed configuration.

ontact philosophic on the property of the control of the country o Attempting to modify or make adjustments to the engine emmission system by unauthorized personnel without proper training could damage the equipment or create an unsafe condition.

Additionally, modifying the fuel system may adversely affect evaporative emissions, resulting in fines or other penalties.

#### **Emission Control Label**

The emission control label is an integral part of the emission system and is strictly controlled by regulation(s).

The label must remain with the engine for its entire life.

If a replacement emission label is needed, please contact your authorized Honda Engine Distributor.

### **SPECIFICATIONS (GENERATOR)**

Table 1. Specifications (Generator)					
	Model	GA6HR	GA6HRS		
	Туре	Brushless Revolving Field Type			
AC Generator	Excitation	Solid State, Statica	ally Excited System		
AC Generator	Speed	3,600 RPM			
	Cooling System	Self-Ve	ntilation		
	Fuel Capacity	5 gallons	(19 liters)		
	Continuous Power Output	5.0	kW		
	Max Power Output	6.0 kW			
	Rated Voltage	120/240V			
60 Hz AC Power	Current Max/Continuous (120V)	50.0/41.6 amps			
Source	Current Max/Continuous (240V)	25.0/20.8 amps			
	Phase	Single Phase (4 wire)			
	Frequency	60	Hz		
	Power Factor	×O	1		
Dimensions (L x W x H)		29.9 x 30.9 X 29.7 in. (760 X 785 X 755 mm)	29.9 x 30.9 X 29.7 in. (760 X 785 X 755 mm)		
Dry Net Weight	X	220 lbs. (100 kg.)	238 lbs. (108 kg.)		
Battery (GA6HRS	Only)	Battery specifications for GA-6HRS: 12volts, 26Amp hours, 260 amps cold cranking ability: 7-1/2" (L) X 5"(W) X 7-1I4"(H)			

#### NOTICE

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

	Table 2. Specifications (Engine)					
	Model	HONDA GX340RT2EDN2	HONDA GX340RT2EDE2			
	Туре	Air-cooled 4 stroke, Single Cylinder, OHV, Horizontal Sh. Gasoline Engine				
	Bore X Stroke	3.46 in. X 2.52 in. (88 mm x 64 mm.)				
_	Displacement	Displacement 23.70 cu-in (389 cm³)				
Engine	Max Output	Max Output 11.0 H.P./3600 R.P.M.				
	Fuel	Unleaded Automobile Gasoline				
	Lube Oil Capacity	1.16 quarts (1.1 liters)				
	Oil Alert System	Yes				
	Speed Control Method	Centrifugal Fly-weight Type				
	Starting Method	Recoil Start	Electric Start			
Dimensions (L x W x H)		15.0 x 17.7 X 17.4 in. (380 X 450 X 443 mm)	15.0 x 17.7 X 17.4 in. (380 X 450 X 443 mm)			
Dry Net Weight		68.4 lbs. (31 kg.)	68.4 lbs. (31 kg.)			

#### **Effects of Altitude and Heat**

The maximum output of the engines listed above are 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° F (15.5° C).

Generally, the engine's output power will decrease 3-1/2% for each 1000 feet (305 meters) of altitude above sea level, and 1% for each 10° F (-12.2° C) above the standard temperature of 60° F (15.5° C).

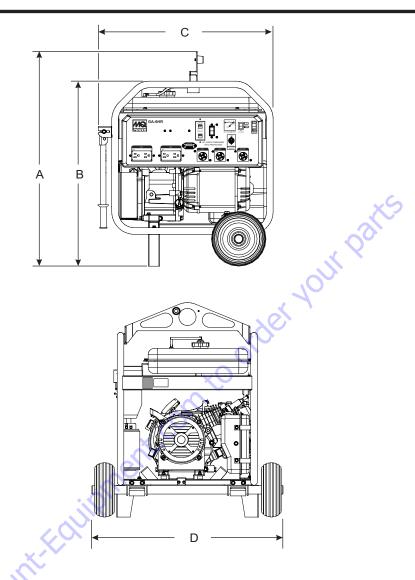


Figure 2. Dimensions

Table 3. Generator Dimensions					
REFERENCE LETTER	DESCRIPTION	DIMENSIONS: IN. (MM)			
A HEIGHT (LIFTING BALE)  B HEIGHT (FRAME)  C LENGTH		34.1 (865)			
		29.7 (755)			
		29.9 (760)			
D	WIDTH	30.9 (785)			

#### **CONNECTING THE GROUND**

The nut and ground terminal on the generator should always be used to connect the generator to a suitable ground. The ground cable should be #8 size wire (aluminum) minimum. If copper wire is used, #10 size wire minimum should be used

At the generator, connect the terminal of the ground cable between the lock washer and the nut (Figure 3) and tighten the nut fully. Connect the other end of the ground cable to a suitable earth ground (ground rod).

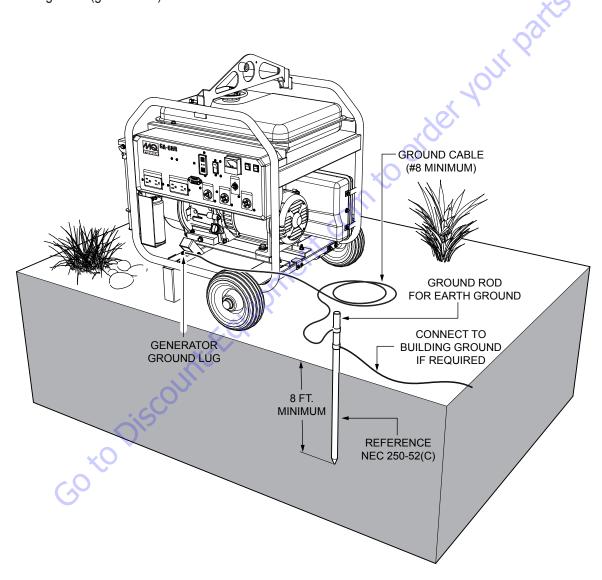


Figure 3. Generator Grounding

#### **OUTDOOR INSTALLATION**

If possible install the generator in a area that is free of debris, bystanders, and overhead obstructions. Make sure the generator is on secure level ground so that it cannot slide or shift around.

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 to engine and alternator parts.

#### **⚠** W

#### WARNING



Pay close attention to ventilation when operating the generator inside tunnels and caves. The engine exhaust contains noxious elements. Engine exhaust must be routed to a ventilated area

#### INDOOR INSTALLATION

Exhaust gases from gas 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.

#### **PLACEMENT**

The generator should always be placed on a flat level surface when it is running. **DO NOT** place the generator on slopes, the possibility exists that the generator could slide.

#### A

#### **DANGER**



An electric shock is apt to happen when vibrators are used. Pay close attention to handling when operating vibrators and always use rubber boots and gloves to insulate the body from a short circuit.

#### **GENERATOR GROUNDING**

To guard against electrical shock and possible damage to the equipment, it is important to provide a good **EARTH** ground.

Article 250 (Grounding) of the National Electrical Code (NEC) provides guide lines for proper grounding and specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.

NEC articles 250-64(b) and 250-66 set the following grounding requirements:

- 1. Use one of the following wire types to connect the generator to earth ground.
  - a. Copper 10 AWG (5.3 mm<sup>2</sup>) or larger.
  - b. Aluminum 8 AWG (8.4 mm<sup>2</sup>) or larger.
- 2. When grounding the generator (Figure 3) connect the ground cable between the lock washer and the nut on the generator and tighten the nut fully. Connect the other end of the ground cable to earth ground.
- 3. NEC article 250-52(c) specifies that the earth ground rod should be buried a minimum of 8 ft. into the ground.

#### **NOTICE**

When connecting the generator to any buildings electrical system **ALWAYS** consult with a licensed electrician.

#### GENERAL INFORMATION

#### **FAMILIARIZATION**

#### Generator

The Multiquip GA6HR/GA6HRS generator is 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.

The generator is mounted on rubber vibration isolators that have a steel base backplate which is attached to the protective steel pipe carrying frame.

Pent. com to order your parts The protective carrying frame is made of steel tubing and fully wraps around the generator to protect against damage. Reference Figure 4, Figure 5 and Figure 8 for the basic controls and indicators for the GA6HB/GA6HBS generators.

These portable generator are supplied with a electrical control box (panel). To reduce vibration caused by the engine, the control box is also placed on rubber isolators.

#### **Control Panel**

The control panel is provided with the following:

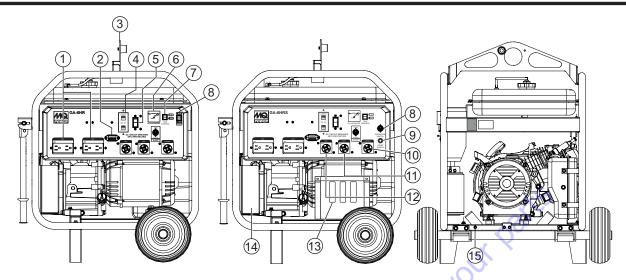
- 120V Twist-Lock Output Receptacle (L5-20R)
- 120V Twist-Lock Output Receptacle (L5-30R)
- 120/240V Twist-Lock Output Receptacle (L14-30R)
- 120 VAC GFCI Receptacle (2)
- GFCI Sensing Module
- 23 Amp Main Circuit Breaker.
- AC Voltmeter
- Idle Control Switch
- Full Power Switch
- Operation Switch
- Hour Meter
- Start Switch (GA6HRS only)

#### **DANGER**

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.

#### **COMPONENTS (GENERATOR)**



**Figure 4. Generator Components** 

- GFCI Duplex Receptacles NEMA 5-20R, GFCI receptacle will provide 120V@ 20 amps.
- 2. **Hour Meter** Indicates the number hours the generator has been in use.
- 3. **Lifting Ball Eye** Attach a rope or chain to this lifting eye when lifting of the generator is required. Never stand underneath the generator while it is being lifted. Place lifting eye in down position when not in use.
- 4. **GFCI Sensing Module** Interrupts power when a ground fault exist.
- Main Breaker This 2-pole, 23 amp circuit breaker protects the generator from short circuiting or overloading. When starting the generator always have the circuit breaker placed in the "OFF" position.
- 6. AC-Voltmeter This voltmeter indicates (with a mark) the rated 60 Hz (single-phase) output voltage. In addition the 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.
- 7. **Idle Control Switch** The generator is provided with an automatic idle control device for noise suppression and reduced fuel consumption.

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 2600 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.
- 8. **Operation Switch** Place switch in the "ON" position (up) for normal operation. To turn-off the generator, place the operation switch in the "OFF" position (down)
- 9. **Start Switch** Press this pushbutton switch to start the generator (GA6HRS only).
- 10. 120/240V Output Receptacle NEMA L14-30R twist-lock receptacle will provide 240V, 60 Hz @ 20.8 amps, or 120V@ 41.6 amps (X2) 60 Hz. Depending on the position of the full power switch.
- 11. **120V Output Receptacle** NEMA L5-30R twist-lock receptacle will provide 120V, 30 amps, 60 Hz.
- 12. **120V Output Receptacle** NEMA L5-20R twist-lock receptacle will provide 120V, 20 amps, 60 Hz.
- 13. **Battery** This unit is equipped with a 12 VDC battery. Replace with only recommended type battery (GA6HRS only).
- Charcoal Canister A container filled with activated charcoal that traps gasoline vapors emitted by the fuel system.
- 15. **Ground** This ground connection point should be connect to a good earth ground (ground rod).

#### **COMPONENTS (GENERATOR)**

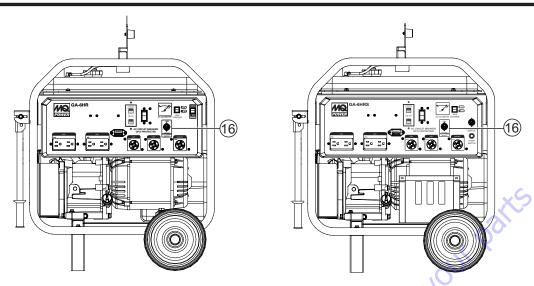


Figure 5. Full Power Switch

16. **Full Power Switch** – The generator is provided with a full power switch. Figure 6 and Figure 7 show simplified wiring diagrams of the dual voltage system.

When the full power switch is in the 120 volt (up) position, you can access the full rated power of the generator at 120 volts from the GFCI duplex receptacle and the 120V twist-lock receptacle, or a combination of both receptacles as long as the total load does not exceed the generating set capacity.

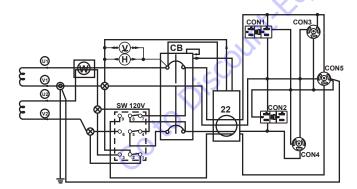


Figure 6. 120V Full Power Switch Simplified Diagram (Up Position)

#### **NOTICE**

When the *full power switch* is in the 120V position, the 240V twist-lock receptacle *cannot be used*..

When the switch is in the 240 volt (down) position, you can access half of the rated power of the generating set at 120 volts from the GFCI duplex receptacle and up to half of the rated power of the set at 120 volts from 120V twist-lock receptacle; or full rated power of the set at 240 volts from the 240V twist-lock receptacle.

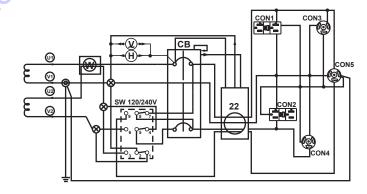


Figure 7. 240/120V Full Power Switch Simplified Diagram (Down Position)

#### **NOTICE**

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

#### **COMPONENTS (GENERATOR)**

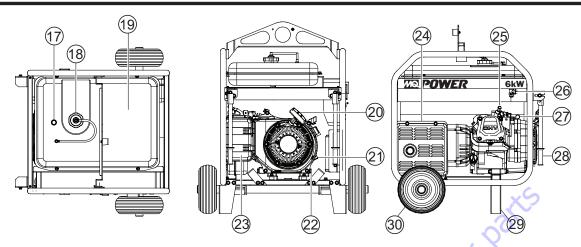


Figure 8. Generator Components (Continued)

- 17. **Fuel Gauge** This gauge is located on top of the fuel tank. Read this gauge to determine when fuel is low.
- Fuel Tank Cap Remove this cap to add unleaded gasoline to the fuel tank. Replenish with clean unleaded gasoline. Make sure cap is tightened securely. DO NOT over fill.
- Fuel Tank Capacity is 5 gallons (19 liters). Fill with unleaded gasoline.
- 20. **Recoil Starter (pull rope)** Manual-starting method. Pull the starter grip until resistance is felt, then pull briskly and smoothly.
- 21. **Engine Oil Filler Cap** Remove this cap/dipstick when the adding of engine oil is required. See Table 2 for recommended type engine oil.
- 22. **Engine Oil Drain Plug** Remove this drain plug when draining of the oil from the engine crankcase is required. Fill with recommended type oil as listed in Table 4.
- 23. 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. **NEVER** run the engine without an air cleaner.
- 24. **Muffler/Heat Shield** Used to reduce noise and emissions. **NEVER** touch this heat shield when the generator/welder is in use. Always allow time for engine to cool before servicing.

- 25. **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.
- 26. **Fuel Cock Lever** Turn this lever downward to start (down)the flow of fuel into the carburetor. Turn upward to stop (up) the flow of fuel.
- 27. **Choke Lever –** Used for starting the engine. Close the choke lever when starting a cold engine or in cold weather conditions. The choke enriches the fuel mixture. Open the choke lever if starting a warm engine or in warm weather conditions.
- 28. **Transport Handle (Option)** When transporting of the generator is required, lift up on each handle and engage locking pin. Part of wheel kit assembly
- 29. **Support Stand (Option)** Supports the generator, part of wheel kit assembly
- 30. **Foam-Filled Tires (Option)** Provided for ease of transport. Replace with only recommended tires.

#### **NOTICE**

This **HONDA** engine is equipped with a low oil shutdown capability. A built in sensor will automatically turn off the engine should the oil level fall below a safe operating condition. Make sure the generators is placed on level ground. Placing the generators on level ground will ensure that the low oil sensor will function properly.

#### INSPECTION/SETUP

#### GENERAL INSPECTION PRIOR TO OPERATION

#### **Ground Power Tools**

When using power tools or electrical equipment requiring AC power from the generator, make sure power tool cord has a ground pin or is double insulated as shown in Figure 9.

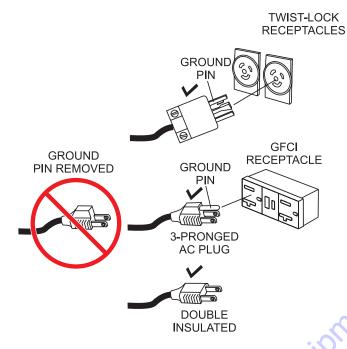


Figure 9. Ground Pin

#### **NOTICE**

Double-insulated power tools and small appliances have specially insulated housings that eliminate the need for a ground pin. These types of double-insulated power cords are designed so that no part of the device will be electrically live even if the internal insulation fails.

#### **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 (Table 4) as a guide for selecting proper cable size.

#### **DANGER**

**NEVER** use power tools or equipment that do not have a ground capability, the possibility exists of electrocution, electrical shock or burn, which can cause severe bodily harm or even **DEATH!** 

	Table 4. Cable Selection (60 Hz, Single Phase Operation)						
Current In	Load	In Watts	M	aximum Allowab	le Cable Length		
Amperes	120 Volts	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.						]	

#### **Before Starting**

#### **NOTICE**

**ALWAYS** place the main circuit breaker in the **OFF** position prior to starting the engine.

- 1. Read safety instructions at the beginning of manual.
- 2. Clean the generator, removing dirt and dust, particularly the engine cooling air inlet, carburetor and air cleaner.
- 3. Check the air filter for dirt and dust. If air filter is dirty, replace air filter with a new one as required.
- 4. Check carburetor for external dirt and dust. Clean with dry compressed air.
- 5. Check fastening nuts and bolts for tightness.

#### **BATTERY SETUP (GA6HRS)**

#### CAUTION

Use all safety precautions specified by the battery manufacturer when working with the battery. See Safety Information section of this manual for more details on battery safety.

- 1. Place the battery into the battery cradle and secured with mounting hardware.
- 2. Connect the positive cable to the positive terminal on the battery first, then connect the negative cable to the negative terminal.

#### **Engine Oil Check**

- 1. To check the engine oil level, place the generator on secure level ground with the engine stopped.
- 2. Remove the filler dipstick from the engine oil filler hole (Figure 10) and wipe clean.

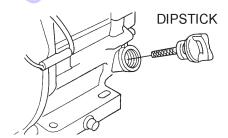


Figure 10. Engine Oil Dipstick Removal

- 3. Insert and remove the dipstick without screwing it into the filler neck. Check the oil level shown on the dipstick.
- 4. If the oil level is low (Figure 11), fill to the edge of the oil filler hole with the recommended oil type (Table 5). Maximum oil capacity is 1.16 quarts (1.1 liters).

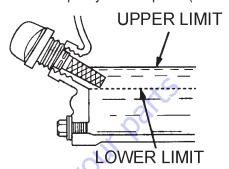


Figure 11. Engine Oil Dipstick(Oil Level)

Table 5. Oil Type					
Season	Temperature	Oil Type			
Summer	25°C or Higher	SAE 10W-30			
Spring/Fall	25°C~10°C	SAE 10W-30/20			
Winter	0°C or Lower	SAE 10W-10			

#### **Fuel Check**

- 1. Close the fuel cock before filling the fuel tank.
- 2. Remove the fuel cap located on top of fuel tank.
- 3. Read the fuel gauge located on top of the fuel tank (Figure 12) to determine if the fuel level is low. If fuel is low, replenish with clean unleaded fuel.



Figure 12. Fuel Gauge

4. When refueling, be sure to use a strainer for filtration. DO NOT top-off fuel. DO NOT fill the tank beyond capacity. Wipe up any spilled fuel immediately!

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

#### **Before Starting the Engine**

#### **NOTICE**

Both model generators are equipped with a GFCI sensing module. The purpose of this module is to sense a ground fault during operation of the generator and shut down the generator once the ground fault has been detected.

Multiquip recommends that the GFCI sensing module be tested before each use of the generator. Reference the maintenance section of this manual for the testing of the GFCI sensing module.

- 1. Be sure to disconnect all electrical loads from the generator prior to starting the engine.
- NEVER start the engine with the main circuit breaker in the ON position. Always place circuit breaker (Figure 13) in the OFF position before starting.

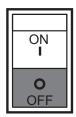


Figure 13. Main Circuit Breaker (OFF)

#### Starting the Engine (Recoil Start)

Place the engine fuel valve lever (Figure 14) in the ON position.



Figure 14. Engine Fuel Valve Lever (ON)

2. Place the choke lever (Figure 15) in the **CLOSED** position if starting a cold engine.

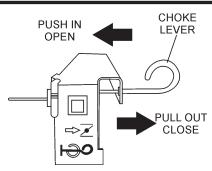


Figure 15. Choke Lever

- 3. Place the choke lever (Figure 15) in the **OPEN** position if starting a warm engine or the temperature is warm.
- 4. Place the generator's operation switch (Figure 16) in the **ON** position.

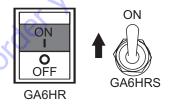


Figure 16. Operation Switch (ON)

5. If your generator is a recoil start only (no battery), grasp the starter grip (Figure 17) and slowly pull it out. The resistance becomes the hardest at a certain position, corresponding to the compression point. Pull the starter grip briskly and smoothly for starting.

Proceed to step 6 if your unit is an electric start model (battery installed).

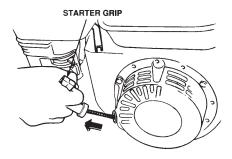


Figure 17. Starter Grip

#### **NOTICE**

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

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

6. Press the generator's pushbutton start switch (Figure 18) and listen for the engine to start.



Figure 18. Start Switch (GA6HRS Only)

- 7. If the engine has started, slowly return the choke lever (Figure 15) to the **OPEN** position. If the engine has not started repeat steps 1 through 6.
- 8. Before the generator is placed into operation, run the engine for 3-5 minutes. Check for abnormal smells, fuel leaks, and noises that would associate with loose components.
- 9. Place idle control switch (Figure 19) in the **OFF** position. This will allow the engine speed to run at about 3600 RPM's.

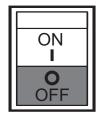


Figure 19. Idle Control Switch (OFF)

#### **NOTICE**

Placing the idle control switch in the **OFF** position (Figure 19) allows the engine to operate at a maximum speed of about 3600 RPM's.

When the idle control switch (Figure 20) is placed in the up position (**ON**), the generator will run at idle speed (2200 RPM's) until a load is applied, at that time the engine speed will increase to 3600 RPM's as long as a load is being applied.

When the load is not in use, the engine speed will drop back to the idle mode after about 3 seconds.

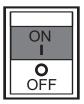


Figure 20. Idle Control switch (ON)

10. Place main circuit breaker (Figure 21) in the **ON** position.

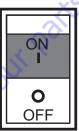


Figure 21. Main Circuit Breaker (ON)

11. Place the full power switch (Figure 22) in the 120V position (up).



Figure 22. Full Power Switch 120V Position (Up)

#### **NOTICE**

When the full power switch is in the 120V position, the 240V twist-lock receptacle cannot be used.

12. Read voltmeter on front panel of generator (Figure 23) and verify that 120 VAC is displayed. Using an external voltmeter as shown in Figure 23, verify that 120 VAC is present at the 120V twist-lock and GFCI duplex receptacles.

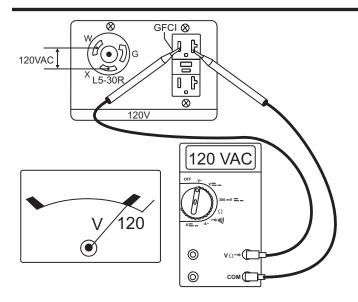


Figure 23. 120V Twist-Lock/GFCI Receptacles

13. Place the full power switch (Figure 24) in the 240/120V position (down).



Figure 24. Full Power Switch 240/120V Position (Down)

14. Read voltmeter on front panel of generator (Figure 25) and verify that 240 VAC is displayed. Using an external voltmeter as shown in Figure 25, verify that 240 VAC is present at the 120/240V, L14-30R twist-lock receptacle.

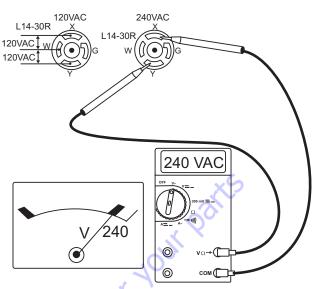


Figure 25. 120/240V L14-30R Receptacle

#### **NOTICE**

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

15. Connecting of loads (power tools, lighting etc.) to the generator receptacles can now be done.

#### **Stopping the Engine (Normal Shutdown)**

Place main circuit breaker (Figure 26) in the OFF position.

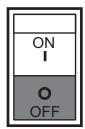


Figure 26. Main Circuit Breaker (OFF)

2. Place idle control switch (Figure 27) in the **OFF** position.

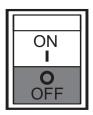


Figure 27. Idle Control switch (OFF)

- 3. Let engine run at idle with no load for 2-3 minutes.
- 4. To shut-down the engine, place the generator's operation switch (Figure 28) in the **OF**F position).

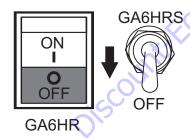


Figure 28. Operation Switch (OFF)

5. Place engine fuel valve lever (Figure 29) in the **OFF** position.



Figure 29. Engine Fuel Valve Lever (OFF)

Remove all loads from the generator.

#### **Emergency Shutdown**

1. Place operation switch (Figure 30) in the **OFF** position.

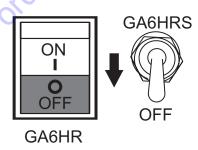


Figure 30. Operation Switch (Emergency)

#### PREPARATION FOR LONG TERM STORAGE

#### **Generator Storage**

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

- Drain the fuel tank completely, or add STA-BIL to the fuel.
- Run the engine until the 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.
- any notice of the count. Equipment. com to order your parts ■ Cover the generating set and store in a clean, dry place.



Use Table 6 as a general maintenance guideline when servicing your engine. For more detail engine maintenance information, refer to the engine owner's manual supplied with your engine.

Table 6. Engine Maintenance Schedule							
DESCRIPTION (3)	OPERATION	BEFORE	FIRST MONTH OR 10 HRS.	EVERY 3 MONTHS OR 25 HRS.	EVERY 6 MONTHS OR 50 HRS.	EVERY YEAR OR 100 HRS.	EVERY 2 YEARS OR 200 HRS.
Engine Oil	CHECK	Χ				XS	
Engine Oil	CHANGE		Х		Χ	X	Х
Air Cleaner	CHECK	X	Χ		4	<b>V</b>	
All Cleaner	CHANGE			X (1)		,	
Charcoal Canister (4)	REPLACE				70		
All Nuts & Bolts	RETIGHTEN IF NECESSARY	Х			ex		
Charle Diva	CHANGE			o'	X		
Spark Plug	REPLACE						X
Cooling Fins	CHECK				Χ		
Spark Arrester	CLEAN					X	
Fuel Tank	CLEAN		C	)		Х	
Fuel Strainer	CHECK		V.,		Х	Х	
Idle Speed	CHECK-ADJUST		6,			X (2)	
Valve Clearance	CHECK-ADJUST			Χ		Х	X (2)
Fuel lines	CHECK		Ev	ery 2 years, rep	lace if necessary	(2)	

<sup>(1)</sup> Service more frequently when used in **DUSTY** areas.

<sup>(2)</sup> These items should be serviced by your service dealer, unless you have the proper tools and are mechanically proficient. Refer to the HONDA Shop Manual for service procedures.

<sup>(3)</sup> For commercial use, log hours of operation to determine proper maintenance intervals.

<sup>(4)</sup> Charcoal canister is maintenance free (non-servicable). Replace only if damaged.

#### **MAINTENANCE**

Perform the scheduled maintenance procedures as defined by Table 6 on the previous page:

#### **Daily**

Thoroughly remove dirt and oil from the engine and control area. Clean or replace the air cleaner elements as necessary. Check and retighten all fasteners as necessary.

#### Wiring

Inspect the entire generator for bad or worn electrical wiring or connections. If any wiring or connections are exposed (insulation missing) replace wiring immediately.

#### **Piping and Hose Connection**

Inspect all piping, oil hose, and fuel hose connections for wear and tightness. Tighten all hose clamps and check fuel or leaks. If any hose (fuel or oil) lines are defective replace them immediately.

#### **Fuel Strainer**

- 1. Thoroughly clean the area around the fuel cap.
- 2. Remove the fuel cap from the fuel tank.
- Next, remove, inspect and clean the fuel strainer (Figure 31) with solvent.

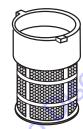


Figure 31. Fuel Strainer

#### Spark Plug

1. Remove and clean the spark plug (Figure 32), then adjust the spark gap to 0.024 ~0.028 inch (0.6~0.7 mm). This unit has electronic ignition, which requires no adjustments.

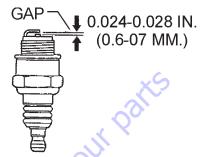


Figure 32. Spark Plug Gap

#### **ENGINE OIL**

- 2. Drain the engine oil when the oil is warm as shown in Figure 33.
- 3. Remove the oil drain bolt and sealing washer and allow the oil to drain into a suitable container.
- Replace engine oil with recommended type oil as listed in Table 4. For engine oil capacity, see Table 2 (engine specifications). DO NOT overfill.
- 5. Install drain bolt with sealing washer and tighten securely.

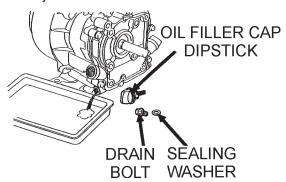


Figure 33. Draining Engine Oil

#### **ENGINE AIR CLEANER**

#### **DANGER**



**DO NOT** use gasoline as a cleaning solvent, the possibility exists of fire or explosion which can cause damage to the equipment and severe bodily harm or even **DEATH**!

- 1. Remove the air cleaner cover and foam filter element as shown in Figure 34.
- Clean foam element in warm, soapy water or nonflammable solvent. Rinse and dry thoroughly. Dip the element in clean engine oil and completely squeeze out the excess oil from the element before installing.

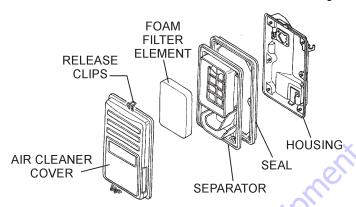


Figure 34. Engine Air Cleaner

- 3. Clean foam element (Figure 35 in warm, soapy water or non-flammable solvent. Rinse and dry thoroughly.
- Next, dip the element in clean engine oil and completely squeeze out the excess oil from the element before installing.

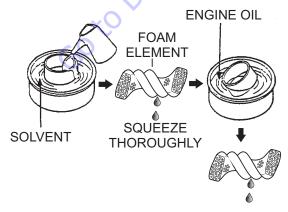


Figure 35. Cleaning Foam Element

#### SPARK ARRESTER CLEANING

Clean the spark arrester every 6 months or 100 hours.

- 1. Remove the muffler protector retaining bolts (Figure 36), then remove muffler protector.
- 2. Next, remove tapping screw that secures spark arrestor to muffler, then remove spark arrester.

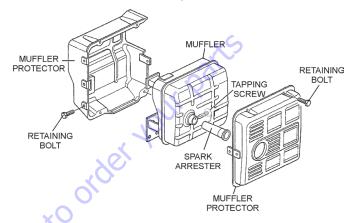


Figure 36. Spark Arrester Removal

3. Carefully remove carbon deposits from the spark arrester screen (Figure 37) with a wire brush.

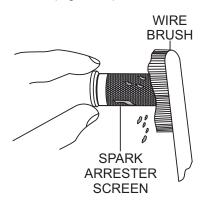


Figure 37. Cleaning The Spark Arrester

- 4. If the spark arrester is damaged and has breaks or holes, replace with a new one.
- 5. Reinstall the spark arrester and muffler protector in reverse order of disassembly.

#### **BATTERY (GA6HRS)**

This unit is of negative ground **DO NOT** connect in reverse. Always maintain battery fluid level between the specified marks. Battery life will be shortened, if the fluid levels are not properly maintained. Add only distilled water when replenishment is necessary.

Check to see whether the battery cables are loose. Poor contact may result in poor starting or malfunctions. Always keep the terminals firmly tightened. Coating the terminals with an approved battery terminal treatment compound will help prevent corrosion. Replace battery with only recommended type battery.

The battery is sufficiently charged if the specific gravity of the battery fluid is 1.28 (at 68° F). If the specific gravity should fall to 1.245 or lower, it indicates that the battery is dead and needs to be recharged or replaced.

Before charging the battery with an external electric source, be sure to disconnect the battery cables.

#### **BATTERY CABLE INSTALLATION**

#### **NOTICE**

Inadequate battery cable connections may cause poor starting of the generator, and create other malfunctions.

**ALWAYS** be sure the battery cables are properly connected to the battery terminals (Figure 38). The <u>red</u> cable is connected to the positive terminal of the battery, and the <u>black</u> cable is connected to the negative terminal of the battery.

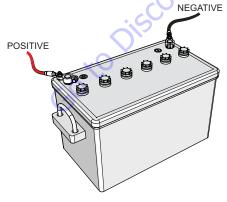


Figure 38. Battery Connections

#### **NOTICE**

**ALWAYS** disconnect the negative terminal first and reconnect negative terminal last.

When connecting battery do the following:

- NEVER use worn or damaged battery cables. Replace defective battery cables immediately.
- 2. Place a small amount of battery terminal treatment compound around both battery terminals. This will ensure a good connection and will help prevent corrosion around the battery terminals.

#### **NOTICE**

If the battery cables are connected incorrectly, electrical damage to the generator will occur. Pay close attention to the polarity markings on the battery when connecting the battery cables.

#### POLARITY

The polarity of the battery is extremely important. When an inverted circuit connection takes place, the circuit will be in short circuit instantaneously resulting in possible damage to the control box electronics and starter.

When connecting the battery cables to the battery terminals be sure to check the polarity.

#### **TESTING THE GFCI MODULE**

If tripping of the *main* circuit breaker persists after a load is replaced with a known good one (no short circuit), perform this test with no load.

- 1. Start the generator as outlined in the start up procedure in this manual.
- 2. Place the main circuit breaker (Figure 39) in the **ON** position.

ON

O OFF

Figure 39. Circuit Breaker ON (GFCI Test)

3. On the GFCI module (Figure 40), verify that the *green* POWER LED is **ON**.

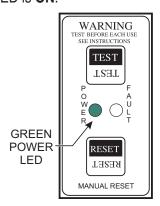


Figure 40. GFCI Module (Green LED ON)

- 4. Also verify that the AC voltmeter is registering a voltage reading as indicated by Figure 45.
- Next, press the **TEST** button on the GFCI module and verify that the *green* POWER LED turns **OFF** and the red FAULT LED turns **ON**.

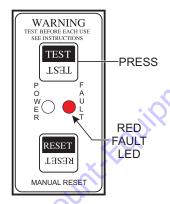


Figure 41. GFCI Module (Red/Fault LED ON)

6. Also verify that the main circuit breaker switch trips to the **OFF** position.



Figure 42. Circuit Breaker OFF (GFCI Test)

7. Verify that the AC voltmeter (Figure 43) on the generator reads zero volts.

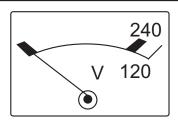


Figure 43. AC Voltmeter (Zero Volts)

 To restore power, press the RESET button (Figure 44) on the GFCI module and verify that the *red* FAULT LED turns OFF and the green POWER LED should turn ON

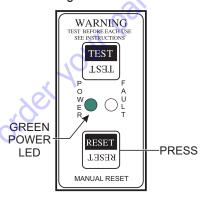


Figure 44. GFCI Module (Green LED ON Reset)

9. Verify that the AC voltmeter is registering a voltage reading as indicated by Figure 45.

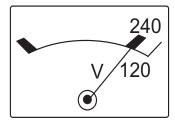


Figure 45. AC Voltmeter (120/240V)

#### **NOTICE**

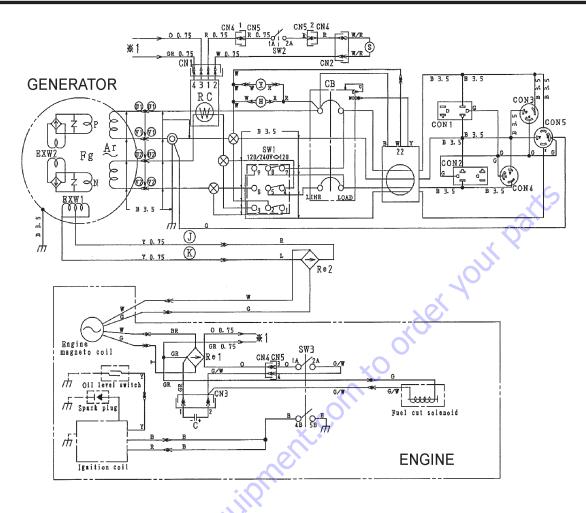
It is recommended that the GFCI unit be tested when the generator is initially taken out of the box. Then, the generator should be tested daily at startup.

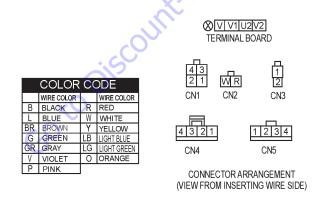


#### CAUTION

The GFCI module is designed to interrupt power when a ground fault exists to prevent injuries and shock hazards. **DO NOT** operate the generator if this test fails. Consult a qualified electrician for repair or replacement of the GFCI module.

### **GENERATOR WIRING DIAGRAM (GA6HR)**

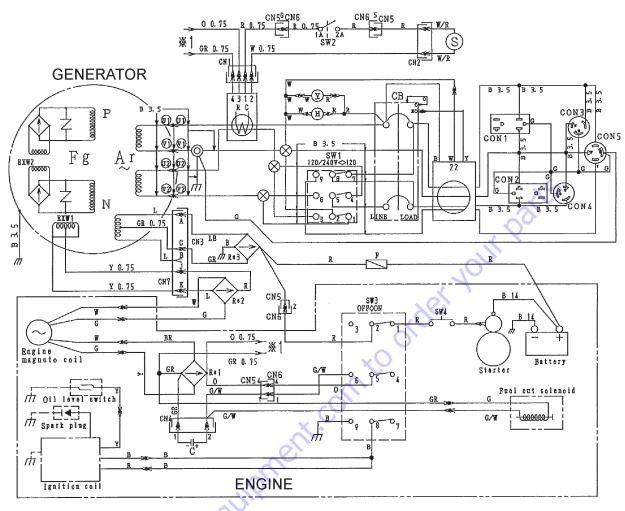




SYMBOL	
Ar	ARMATURE WINDING
Fg-P, N	ROTOR ASSEMBLY
Ex W1	EXCITATION WINDING
Ex W2	EXCITATION WINDING
V	AC VOLTMETER 120/240V
RE 1~2	RECTIFER
СВ	CIRCUIT BREAKER 23A
CON 1,2	RECEPTACLE 5-20R GFCI 20A, 125V
CON 3	RECEPTACLE L5-20R 20A 125V
CON 4	RECEPTACLE L5-30R 30A, 125/250V
CON 5	RECEPTACLE L14-30R 30A, 125/250V
SW1	FULL POWER SWITCH
SW2	IDLE CONTROL SWITCH
SW3	OPERATION SWITCH
RC	IDLE CONTROL DEVICE
S	IDLE CONTROL SOLENOID
С	CAPACITOR
22	GFCI SENSING MODULE
lacksquare	TERMINAL BOARD
Н	HOUR METER

Figure 46. Generator Wiring Diagram (GA6HR)

### **GENERATOR WIRING DIGRAM (GA6HRS)**



COI			<b>⊗</b> [V]V1]U2 V2] TERMINAL BOARD					
	COLOR WIRE COLOR	C	ODE WIRE COLOR	[	4 3 2 1 CN1	M CN	R	A J B C K CN3
B BR G GR V P	BLACK BLUE BROWN GREEN GRAY VIOLET PINK	R W Y LB LG	RED WHITE YELLOW LIGHT BLUE LIGHT GREEN ORANGE	1 2 CN4	6 5 3 2 CN	-	4 5 6 1 2 3 CN6	J A K C B CN7
								WIRE SIDE)

SYMBOL	DESIGNATION		
Ar	ARMATURE WINDING		
Fg-P, N	ROTOR ASSEMBLY		
Ex W1	EXCITATION WINDING		
Ex W2	EXCITATION WINDING		
V ~	AC VOLTMETER 120/240V		
RE 1~2	RECTIFER		
СВ	CIRCUIT BREAKER 23A		
CON 1,2	RECEPTACLE 5-20R GFCI 20A, 125V		
CON 3	RECEPTACLE L5-20R 20A 125V		
CON 4	RECEPTACLE L5-30R 30A, 125/250V		
CON 5	RECEPTACLE L14-30R 30A, 125/250V		
SW1	FULL POWER SWITCH		
SW2	IDLE CONTROL SWITCH		
SW3	OPERATION SWITCH		
SW4	STARTER SWITCH		
RC	IDLE CONTROL DEVICE		
S	IDLE CONTROL SOLENOID		
С	CAPACITOR		
22	GFCI SENSING MODULE		
$\otimes$	TERMINAL BOARD		
Н	HOUR METER		

Figure 47. Generator Wiring Diagram (GA6HRS)

# **TROUBLESHOOTING (ENGINE)**

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

# **TROUBLESHOOTING (ENGINE)**

Troubleshooting (Engine) - continued						
Symptom	Possible Problem	Solution				
	Air cleaner dirty?	Clean or replace air cleaner.				
Weak in power, compression is proper and	Improper level in carburetor?	Check float adjustment, rebuild carburetor.				
does not misfire.	Defective spark plug?	Clean or replace spark plug.				
	Improper spark plug?	Set to proper gap.				
Weak in power, compression is proper but	Water in fuel system?	Flush fuel system and replace with correct type of fuel.				
misfires.	Dirty spark plug?	Clean or replace spark plug.				
	Ignition coil defective?	Replace ignition coil.				
	Wrong type of fuel?	Replace with correct type of fuel.				
	Cooling fins dirty?	Clean cooling fins.				
Engine overheats	Intake air restricted?	Clear intake of dirt and debris. Replace air cleaner elements as necessary.				
	Oil level too low or too high?	Adjust oil to proper level.				
	Governor adjusted incorrectly?	Adjust governor.				
Rotational speed fluctuates.	Governor spring defective?	Replace governor spring.				
	Fuel flow restricted?	Check entire fuel system for leaks or clogs.				
Described as a self-self-self-self-self-self-self-self-	Recoil mechanism clogged with dust and dirt?	Clean recoil assembly with soap and water.				
Recoil starter malfunctions. (if applicable)	Spiral spring loose?	Replace spiral spring.				
0	Loose, damaged wiring?	Ensure tight, clean connections on battery and starter.				
Starter malfunctions.	Battery insufficiently charged?	Recharge or replace battery.				
	Starter damaged or internally shorted?	Replace starter.				
Burns too much fuel.	Over-accumulation of exhaust products?	Check and clean valves. Check muffler and replace if necessary.				
bums too much fuel.	Wrong spark plug?	Replace spark plug with manufacturer's suggested type.				
Exhaust color is continuously "white".	Lubricating oil is wrong viscosity?	Replace lubricating oil with correct viscosity.				
Exhaust color is continuously white.	Worn rings?	Replace rings.				
$\bigcirc$	Air cleaner clogged?	Clean or replace air cleaner.				
×O	Choke valve set to incorrect position?	Adjust choke valve to correct position.				
Exhaust color is continuously "black".	Carburetor defective, seal on carburetor broken?	Replace carburetor or seal.				
	Poor carburetor adjustment, engine runs too rich?	Adjust carburetor.				
	ON/OFF device not activated ON?	Turn on ON/OFF device.				
Will not start, no power with key "ON". (if applicable)	Battery disconnected or discharged?	Check cable connections. Charge or replace battery				
	Ignition switch/wiring defective?	Replace ignition switch. Check wiring.				

# **TROUBLESHOOTING (GENERATOR)**

	Troubleshooting (Generator )	
Symptom	Possible Problem	Solution
Low voltage	Engine speed too low?	Raise engine speed to rated RPM.
	AC voltmeter not working?	Replace Ac voltmeter.
	Control box internal wiring malfunction?	Check control box wiring.
Low voltage, 3650 RPM (unloaded),	Rotor winding malfunction?	Check or replace rotor.
2500 RPM (idle)	Stator winding malfunction?	Check or replace stator.
	Leakage breaker malfunction?	Check or replace CB1.
	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 not turn on "NO LOAD"	Defective circuit breaker?	Replace circuit breaker.
Circuit breaker will turn on "LOADED"	Overload Condition?	Reduce load or replace breaker.
but trips immediately.	Load circuit is shorted?	Check load circuit for short.
Does not accelerate from low to high	Stuck solenoid?	Check solenoid.
"NO LOAD"	Bad Idle control switch?	Check or replace idle control switch.
	Idle control switch malfunction?	Check or replace idle control switch.
Does not accelerate from low to high	Idle control device malfunction?	Check or replace idle control device.
"LOAD ACTIVE"	Control box interal wiring defective?	Check control box wiring.
Does not decelerate but has	Control box wiring malfunction?	Check control box wiring, replace any defective components.
"VOLTAGE OUTPUT".	Defective solenoid?	Check or replace solenoid.
CO	Idle control device malfunction?	Check or replace idle control device.

#### **EXPLANATION OF CODE IN REMARKS COLUMN**

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

#### **NOTICE**

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

#### SAMPLE PARTS LIST

<u>NO.</u>	<u>PART NO.</u>	PART NAME	<u>QTY.</u>	<u>REMARKS</u>
1	12345	BOLT	1	INCLUDES ITEMS W/%
2%		WASHER, 1/4 II	N	NOT SOLD SEPARATELY
2%	12347	WASHER, 3/8 II	N1	MQ-45T ONLY
3	12348	HOSE	A/R	MAKE LOCALLY
4	12349	BEARING	1	S/N 2345B AND ABOVE

#### NO. Column

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

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

#### **NOTICE**

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

#### PART NO. Column

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

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

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

#### QTY. Column

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

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

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

#### **REMARKS Column**

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

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

Indicated by:

"INCLUDES ITEMS W/(unique symbol)"

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

Indicated by:

"S/N XXXXX AND BELOW"

"S/N XXXX AND ABOVE"

"S/N XXXX TO S/N XXX"

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

Indicated by:

"XXXXX ONLY"

"NOT USED ON XXXX"

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

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

.com.to order your parts

# GA6HR/GA6HRS PORTABLE 60 HZ GENERATOR WITH HONDAGX340RT2EDN2/GX340RT2EDE2 GASOLINE ENGINES

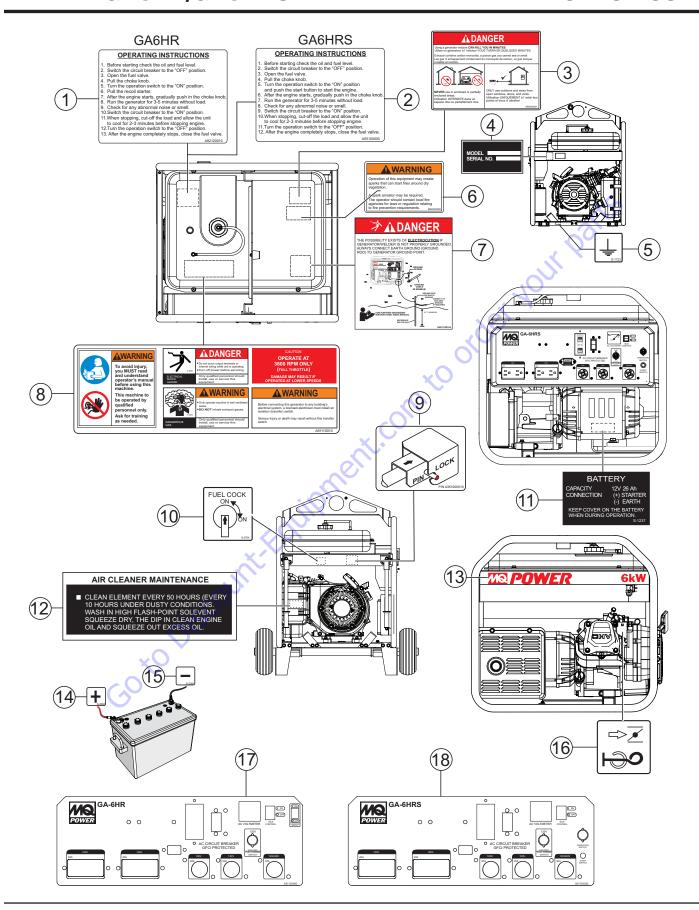
#### 1 to 3 units

Qty.	P/N	Description
1	0430430120	.CAP FUEL TANK
1	0641360030	. FILTER FUEL
3	16950ZB4015	. FUEL STRAINER
2	3015419604	. RUBBER SUSPENSION
2	1665419004	. RUBBER SUSPENSION
3	9807955876	. SPARK PLUG
1	35480ZF6003	. SWITCH ASSY., OIL ALERT
2	28462ZV7003	. ROPE, RECOIL
3	17211899000	FLEMENT AIR CLEANER

#### **NOTICE**

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

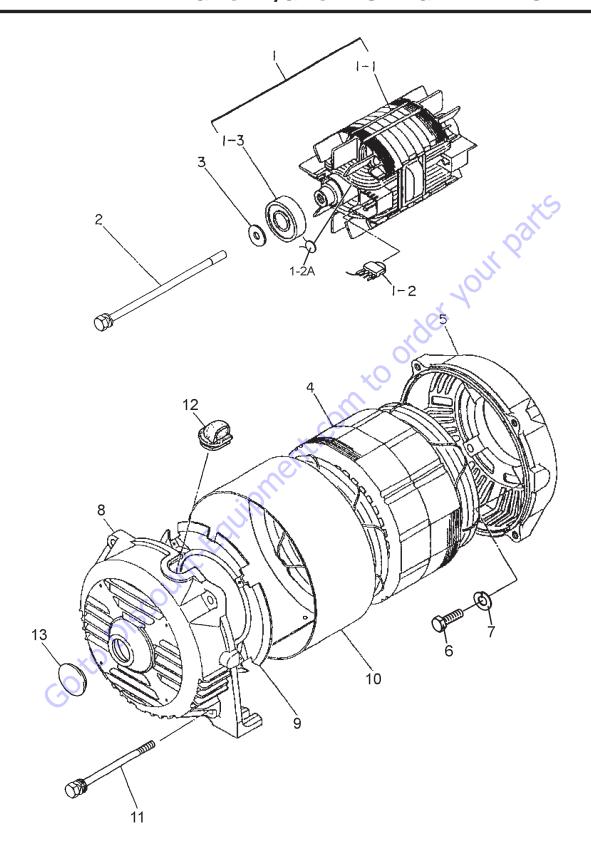
### **GA6HR/GA6HRS— NAMEPLATE AND DECALS ASSY.**



# GA6HR/GA6HRS— NAMEPLATE AND DECALS ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	A5551000004	DECAL: OPERATING INSTR., GA6HR	1	A92120010
2	A9521200104	DECAL: OPERATING INSTR., GA6HRS	1	A55100000
3	A9504000014	DECAL: WARNING DANGEROUS GAS	1	A90400001
4		DECAL: NAMEPLATE	1	CONTACT MQ PARTS DEPT.
5	0800628504	DECAL: GROUND	1	S1123
6	920214100	DECAL: WARNING START FIRES	1	M90420000
7	D9531100104	DECAL: DANGER ELECTROCUTION	1	A93110010
8	A9511100103	DECAL: WARNING	1	A91110010
9	A3551000104	DECAL: HANDLE OPERATION		
10	1980680004	DECAL: FUEL COCK	1	S3704
11	0800696804	DECAL: BATTERY, GA6HRS	1	REPLACES P/N 0800696604
12	87533ZC0630	DECAL: AIR CLEANER	1	REPLACES P/N 0600500045
13	A5561001003	DECAL: MQ POWER GA-6H	1	102
14	0800689404	DECAL: +, GA6HRS	1	4
15	0800689504	DECAL: -, GA6HRS	1	
16	87528898620	DECAL: CHOKE		REPLACES P/N 0600500047
17	A5511202802	DECAL: CONTROL PANEL, GA6HR		
18	A5511203002	DECAL: CONTROL PANEL, GA6HRS	1	A51120300

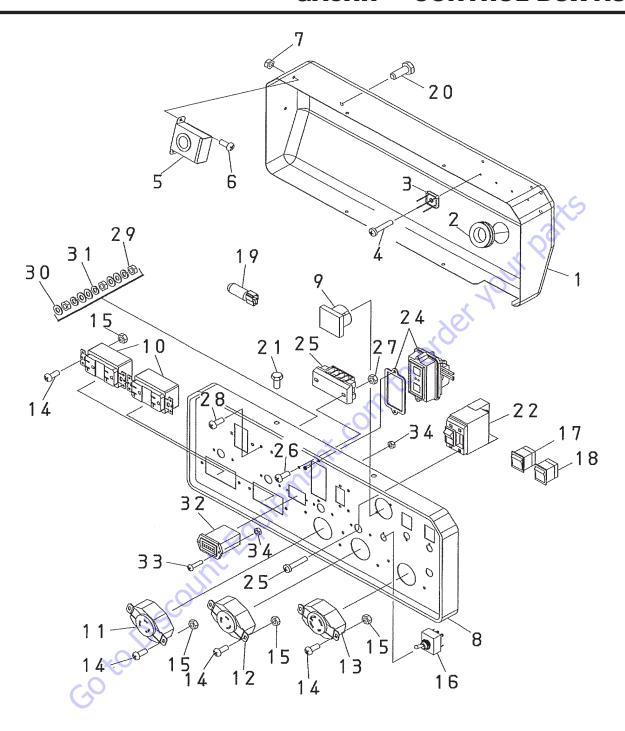
# **GA6HR/GA6HRS — GENERATOR ASSY.**



# **GA6HR/GA6HRS — GENERATOR ASSY.**

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	7901002403	ROTOR ASSY	1	INCLUDES ITEMS W/\$
1-1\$		FIELD ASSY.	1	
1-2\$	0601823213	RECTIFIER	2	
1-2A\$	0601822638	SURGE ABSORBER	2	INCLUDED WITH ITEM 1-2
1-3\$	0071706304	BEARING	1	
2	7901017004	SET BOLT, ROTOR	1	
3	0801086104	SET WASHER, BEARING	1	
4	A5135000103	ARMATURE ASSY.	1	
5	7901315502	END BRACKET	1	
6	0013608020	HEX. HEAD BOLT	4	XS
7	0040008000	WASHER, LOCK	4	
8	7871315022D	END BRACKET	1	REPLACES P/N 7871315022
9	7875021523	GUIDE PANEL, AIR	1	
10	7871331003	COVER	1	100
11	7901316004	SET BOLT, STATOR	4	40
12	7871329514	GROMMET	1.0	
13	0601851760	CAP	10	

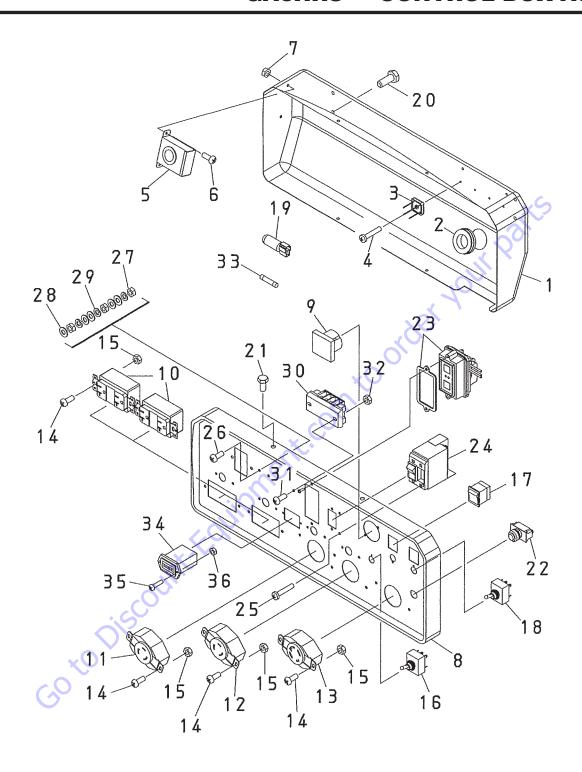
# **GA6HR — CONTROL BOX ASSY.**



# **GA6HR — CONTROL BOX ASSY.**

NO.	PART NO.	PART NAME	QTY.	<u>REMARKS</u>
1	A3214000403	CONTROL BOX	1	
2	0601850102	GROMMET	1	
3	0601823204	RECTIFIER	2	
4	Y0021003012	MACHINE SCREW	2	
5	0601823853	SLOW DOWN UNIT	1	
6	0021004010	MACHINE SCREW	2	
7	OEMAA8	HEX. NUT	22	REPLACES P/N 0207004000
8	A3224000703	CONTROL PANEL	1	
9	0601806819	AC VOLTMETER 0~120/240V	1	
10	0601814065	RECEPTACLE	2	XS
11	0601811092	RECEPTACLE	1	REPLACES P/N 0601812592
12	0601811031	RECEPTACLE	1	REPLACES P/N 0601811035
13	0601812529	RECEPTACLE MACHINE SCREW HEX. NUT	1	
14	0021004010	MACHINE SCREW	10	10
15	OEMAA8	HEX. NUT	10	REPLACES P/N 0207004000
16	0601830737	HEX. NUT FULL POWER SWITCH IDLE CONTROL SWITCH OPERATION SWITCH	1.0	*
17	0601831620	IDLE CONTROL SWITCH	10	
18	0601831620	OPERATION SWITCH	a	
19	A3262800004	CONDENSER ASSY.	~O 1	
20	011106015	HEX. HEAD BOLT	44	REPLACES P/N 0017106015
21	0017105010	HEX. HEAD BOLT	4	
22	0601872301	CIRCUIT BREAKER, 120V 23A 2P	1	
23	0021003005	MACHINE SCREW	4	
24	0601829301	EARTH LEAKAGE RELAY	1	
25	Y0601815779	TERMINAL BOARD	1	
26	0021004020	MACHINE SCREW	2	
27	OEMAA8	HEX. NUT	22	REPLACES P/N 0207004000
28	Y0027004025	MACHINE SCREW	1	
29	OEMAA8	MACHINE SCREW HEX. NUT	3	REPLACES P/N 0030004000
30	58042	WASHER, FLAT	5	REPLACES P/N 0041204000
31	0040004000	WASHER, LOCK	3	
32	Y0601800699	HOUR METER	1	
33	Y0021003012	MACHINE SCREW	2	
34	0207003000	HEX. NUT	2	

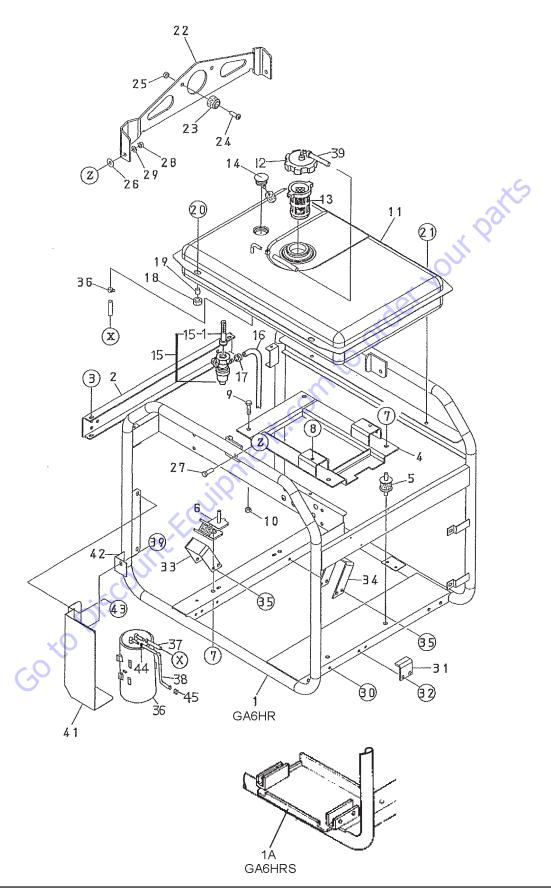
# **GA6HRS — CONTROL BOX ASSY.**



# **GA6HRS — CONTROL BOX ASSY.**

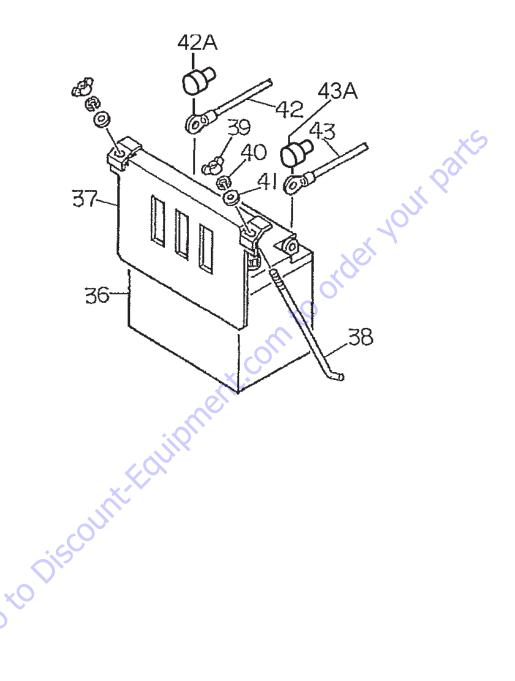
NO.	PART NO.	PART NAME	QTY.	REMARKS
1	A3214000403	CONTROL BOX	1	
2	0601850102	GROMMET	1	
3	0601823204	RECTIFIER	2	
4	Y0021003012	MACHINE SCREW	2	
5	0601823853	SLOW DOWN UNIT	1	
6	0021004010	MACHINE SCREW HEX. NUT	2	
7	OEMAA8	HEX. NUT		REPLACES P/N 0207004000
8	A3224000703	CONTROL PANEL	1	
9	0601806819	AC VOLTMETER 0~120/240V	1	
10	0601814065	RECEPTACLE	2	XS
11	0601811092	AC VOLTMETER 0~120/240V RECEPTACLE RECEPTACLE	1	REPLACES P/N 0601812592
12	0601811031	RECEPTACLE	1	REPLACES P/N 0601811035
13	0601812529	RECEPTACLE	1	
14	0021004010	RECEPTACLE MACHINE SCREW HEX. NUT	10	10
15	OEMAA8	HEX. NUT	10	REPLACES P/N 0207004000
16	0601830737	FULL POWER SWITCH	1.0	
17	0601831620	IDLE CONTROL SWITCH	10	
18	0601830737	FULL POWER SWITCH IDLE CONTROL SWITCH OPERATION SWITCH CONDENSER ASSY. HEX. HEAD BOLT	a)	
19	A3262800004	CONDENSER ASSY.	~O 1	
20	011106015	HEX. HEAD BOLT	44	REPLACES P/N 0017106015
21	0017105010	HEX. HEAD BOLT	4	
22	0602100102	START SWITCH	1	
23	0601829301	EARTH LEAKAGE RELAY	1	
24	0601872301	CIRCUIT BREAKER, 120V 23A 2P	1	
25	0021003005	MACHINE SCREW	4	
26	Y0027004025	MACHINE SCREW  MACHINE SCREW  HEX. NUT	1	
27	OEMAA8	HEX. NUT	2	REPLACES P/N 0207004000
28	58042	WASHER, FLAT	5	REPLACES P/N 0041204000
29	0040004000	WASHER, LOCK	3	
30	Y0601815779	WASHER, LOCK TERMINAL BOARD MACHINE SCREW HEX. NUT	1	
31	0021004020	MACHINE SCREW	2	
32	OEMAA8	HEX. NUT	3	REPLACES P/N 0030004000
33	Y0601802137	FUSE, 10A	1	
34	Y0601800699	HOUR METER	1	
35	Y0021003012	MACHINE SCREW	2	
36	0207003000	HEX. NUT	2	

# **GA6HR/GA6HRS — PIPE FRAME ASSY.**



# **GA6HR/GA6HRS — PIPE FRAME ASSY.**

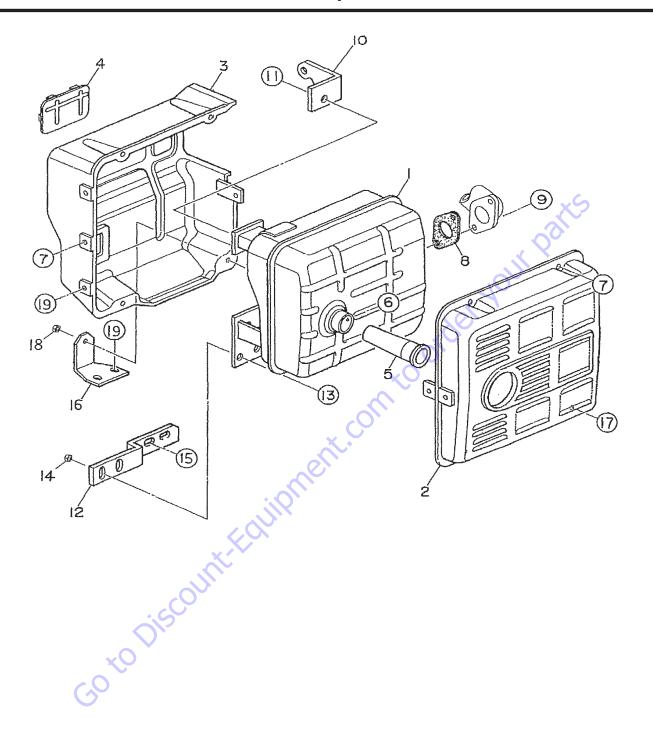
NO. PART NO. PART NAME	<u>remarks</u>
1 A5417001102 PIPE FRAME, GA6HR 1	
1A A5417001202 PIPE FRAME, GA6HRS 1	
2 A3417100204 BRACKET 1	
3 011106015 HEX. HEAD BOLT4	REPLACES P/N 0017106015
4 7905443003 BASE 1	11 LAOLO 1 /N 0017 100013
5 3015419604 RUBBER SUSPENSION 2	
6 1665419004 RUBBER SUSPENSION2	DEDI ACES D/N 1705/11001/
6 1665419004 RUBBER SUSPENSION	DEDI ACES D/N 1723419214
8 0017108030 HEX. HEAD BOLT 2	REPLACES P/N 020/000000
8 0017108030 HEX. HEAD BOLT 2 9 0017108040 HEX. HEAD BOLT 2	26
	DEDI ACEO D/N 000700000
10 020108060 HEX. NUT	REPLACES P/N 020/008000
11 A3361000004 FUEL TANK 1	4 <b>X</b>
12 0430430120 CAP, FUEL TANK 1 13 0641360030 FUEL FILTER1	DEDI ACEO D'AL 0005505400
	REPLACES P/N 0605505162
14 0602125034 FUEL GAUGE 1	4 7
15 16950ZB4015 FUEL STRAINER 1	10,
15-1 16952KJ9752 SCREEN SET	<b>S</b>
15 16950ZB4015 FUEL STRAINER 1 15-1 16952KJ9752 SCREEN SET 1 16 Y0605513215 HOSE 1	
17 950024080008 HOSE BAND 2 2	
18 7855525514 RUBBER CUSHION 2	
19 7855525604 COLLAR 2 20 011208030 HEX. HEAD BOLT	
20 011208030 HEX. HEAD BOLT2	REPLACES P/N 0017108030
21 011008020 HEX. HEAD BOLT2	REPLACES P/N 0017108020
22 A9117200103 HANGER 1	
23 0601850097 STOPPER 1	
23 0601850097 STOPPER 1 24 011208025 MACHINE SCREW	REPLACES P/N 0021008025
25 020108060 HEX. NUT1	REPLACES P/N 0207008000
26 0601851116 PLASTIC WASHER 2 27 011208025 HEX. HEAD BOLT	
	REPLACES P/N 0011308025
28 Y0037608000 HEX. NUT 2	
29 0042108000 WASHER, FLAT 2	
30 0019206015 HEX. HEAD BOLT 1	
31 7915456004 STOPPER 1	
32 011106015 HEX. HEAD BOLT2	REPLACES P/N 0017106015
33 7915455103 COVER 1	
34 7855455003 COVER 1	
35 011106015 HEX. HEAD BOLT	REPLACES P/N 0017106015
36 0605507002 CANISTER 1	
37 Y0605513202 HOSE 1	
38 Y0605513210 HOSE 1	
39 0605513189 HOSE 1	
40 0605515223 HOSE BAND 2	
41 A3261600103 BRACKET 1	
42 A3261600204 STOPPER 1	
43 011106015 HEX. HEAD BOLT	REPLACES P/N 0016906015
44 0605515170 HOSE BAND 1	
45 Y0605515229 HOSE BAND 1	
· · · · · · · · · · · · · · · · · · ·	



#### **GA6HRS — BATTERY ASSY.**

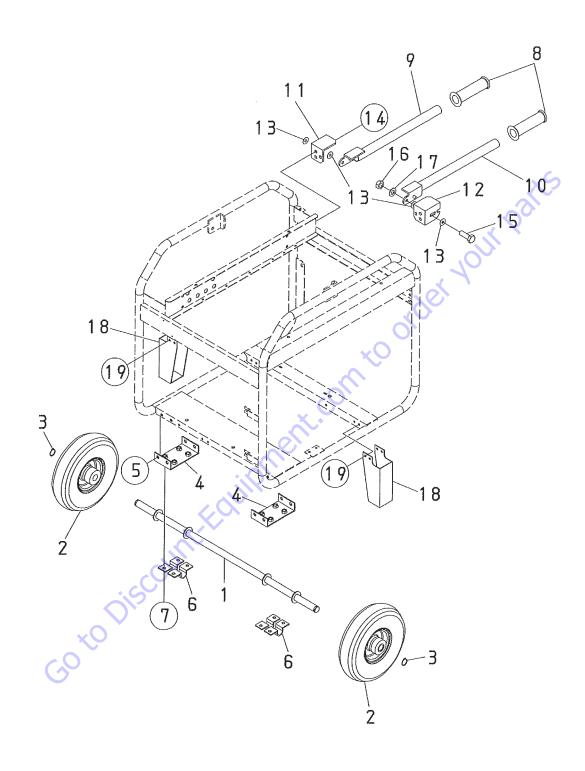
NO. 36 37 38 39 40	PART NO. 0162212024 W7905458103 A5344200004 0037806000 0040006000	PART NAME BATTERY, 201-149 12N24-3 BATTERY BAND BATTERY BOLT WING NUT WASHER, SPRING	QTY. 1 1 2 2 2	REMARKS
40 41 42 42A 42B 43	050404470	WACHED FLAT	0	REPLACES P/N 0041206000
		BATTERY CABLE TERMINAL CAP TERMINAL CAP BATTERY CABLE	xex.	AOTH bar
			COLUTIO	
		Colipheni	,•	
		JiSCOUNT: IL		
	Go			

# GA6HR/GA6HRS — MUFFLER ASSY.



# GA6HR/GA6HRS — MUFFLER ASSY.

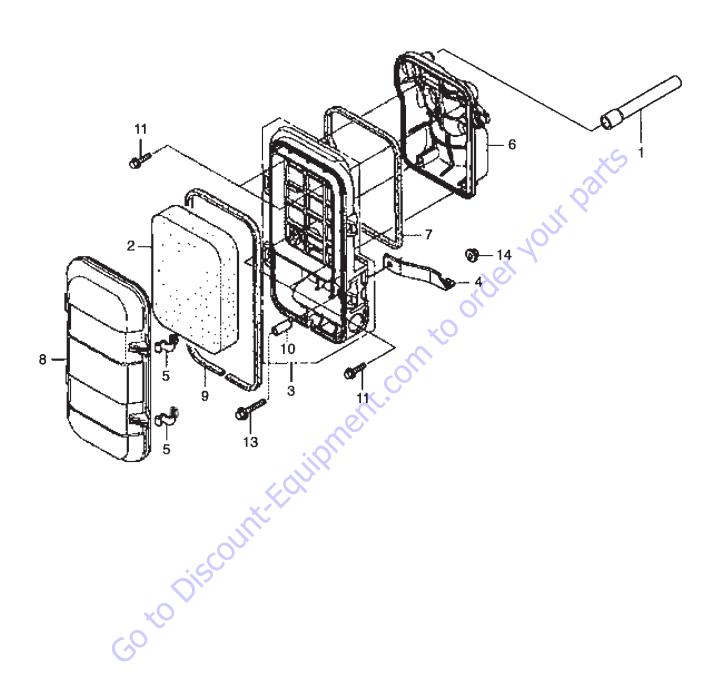
NO.	PART NO.	PART NAME	QTY.	REMARKS
1	7912310003	MUFFLER	1	
2	18320ZC2000	PROTECTOR	1	
3	18325ZB4000	PROTECTOR	1	
4	18329ZB4000	SEAL	2	
5	18355ZB4630	ARRESTOR, SPARK	1	
6	90002ZE2U91	TAPPING SCREW	1	
7	0105050616	HEX. HEAD BOLT	5	REPLACES P/N 0017106012
8	18333ZB4801	GASKET	1	
9	957010802000	HEX. HEAD BOLT	2	
10	7905461004	BRACKET	1	X
11	011008020	HEX. HEAD BOLT	1	REPLACES P/N 0017108020
12	7905460004	BRACKET	1	· O
13	011208025	HEX. HEAD BOLT		
14	020108060	HEX. NUT	2	REPLACES P/N 0207008000
15	011008020	HEX. HEAD BOLT	22	REPLACES P/N 0017108020
16	7905469004	BRACKET	1.0	*
17	011206020	HEX. HEAD BOLT	1.	REPLACES P/N 0017106020
18	020108060			REPLACES P/N 0207008000
19	0105050616	HEX. HEAD BOLT	4	REPLACES P/N 0017106012



# GA6HR/GA6HRS — WHEEL KIT ASSY.

NO.	PART NO. A3417400303	PART NAME AXLE	<u>QTY.</u>	REMARKS
2	Y0605802053	TIRE ASSY.	2	
3	Y0080000020	SNAP RING	2	
4	A3417400404	BRACKET	2	
5	011008020	HEX. HEAD BOLT	8	REPLACES P/N 0016908020
6	L0120236304	BRACKET, BRAKE SHAFT	4	
7	011008020	HEX. HEAD BOLT	8	REPLACES P/N 0016908020
8	W0805003103	GRIP	2	
9	A3417400704	HANDLE	1	
10	A3417400804	HANDLE	1	XS
11	A3417401304	BRACKET, HANDLE	1	
12	A3417401404	BRACKET, HANDLE	1	, Qu
13	0601851116	WASHER	4	
14	0012308020	HEX. HEAD BOLT	6	
15	0010108025	HEX. HEAD BOLT	2	4
16	0207608000	U-NUT	2	
17	0401450080	WASHER, FLAT	2	REPLACES P/N 0041208000
18	A3417400904	STAND	2	
19	011106015	HEX. HEAD BOLT	8	REPLACES P/N 0016906015

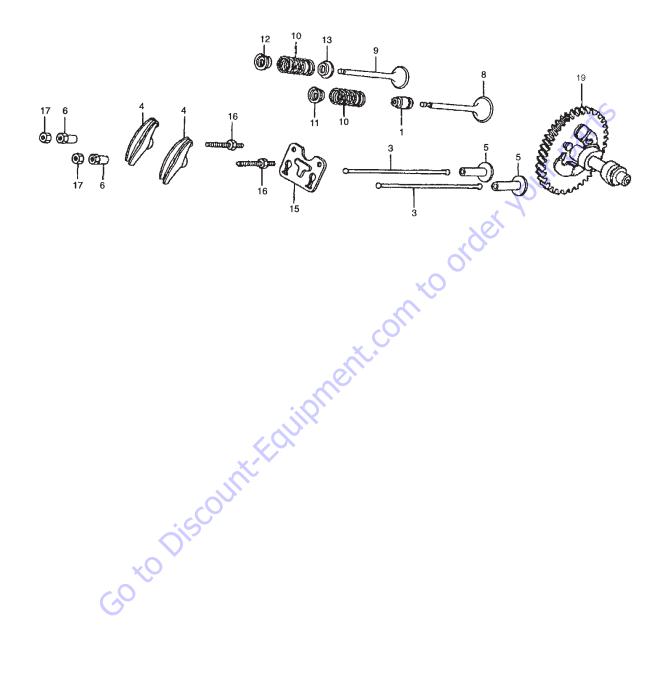
# HONDA GX340RT2EDE2/EDN2 — AIR CLEANER ASSY.



# HONDA GX340RT2EDE2/EDN2 — AIR CLEANER ASSY.

NO. 1 2 3 4 5 6 7 8 9 10 11 13 14 15	PART NO. 15721Z23H60 17211899000 17220Z23S30 17222Z23H60 17223Z23O00 17223Z23S30 17229Z23H60 17231Z23H60 17231Z23H60 17233Z23H60 17238ZE7710 90005ZM3000 90854ZB3000 9405006000 957010603208	PART NAME TUBE, BREATHER ELEMENT, AIR CLEANER CASE COMP., AIR CLEANER STAY, AIR CLEANER SPRING, AIR CLEANER CASE LIE BASE COMP., AIR CLEANER SEAL, AIR CLEANER CASE COVER, AIR CLEANER SEAL, AIR CLEANER OLLAR, AIR CLEANER BOLT, FLANGE 5X18 RUBBER, FUEL 9X15X20 NUT, FLANGE 6MM BOLT, FLANGE 6X32	D	QTY. 1 1 1 2 1 1 1 1 4 1 1	REMARKS  POUR PAIRS	
	COXO	SEAL, AIR CLEANER COVER, AIR CLEANER SEAL, AIR CLEANER COLLAR, AIR CLEANER BOLT, FLANGE. 5X18 RUBBER, FUEL 9X15X20 NUT, FLANGE 6MM BOLT, FLANGE 6X32	omto	ord.		

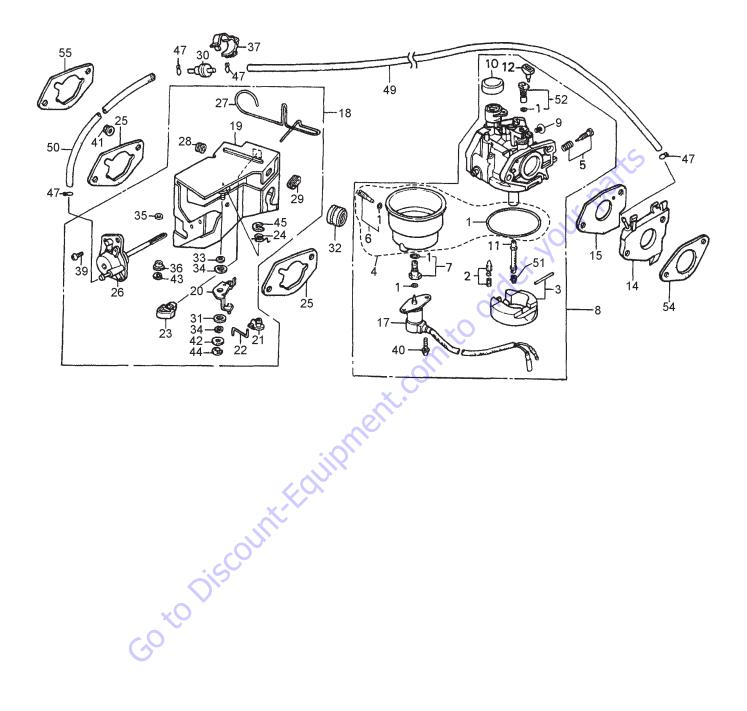
# HONDA GX340RT2EDE2/EDN2 — CAMSHAFT ASSY.



### HONDA GX340RT2EDE2/EDN2 — CAMSHAFT ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	12209ZE8003	SEAL, VALVE STEM	1	
3	14410Z1C000	ROD, PUSH	2	
4	14431ZE2010	ARM, VALVE ROCKER	2	
5	14441ZE2000	LIFTER, VALVE	2	
6	14451ZE1013	PIVOT, ROCKER ARM	2	
8	14711Z5T000	VALVE, IN.	1	
9	14721Z5T000	VALVE, EX.	1	
10	14751Z1C000	SPRING, VALVE	2	
11	14771Z8S000	RETAINER, IN. VALVE SPRING	1	
12	14771Z8S000	RETAINER, EX. VALVE SPRING	1	aaits
13	14775ZE2010	SEAT, VALVE SPRING	1	All of the second
15	14791Z1D000	GUIDE, PUSH ROD	1	
16	90012ZE0010	BOLT, PIVOT 8MM	2	AOUY P
17	90206ZE1000	NUT, PIVOT ADJUSTING	2	100
19	14100Z5K910	CAMSHAFT COMP., (STD)	1 ,	40
		,	101	*

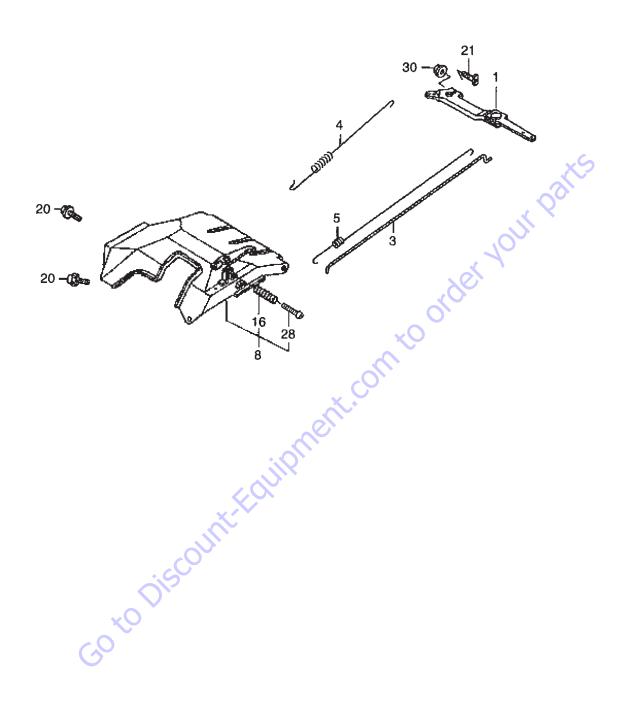
# HONDA GX340RT2EDE2/EDN2 — CARBURETOR ASSY.



# HONDA GX340RT2EDE2/EDN2 — CARBURETOR ASSY.

NO.	PART NO.	PART NAME	QT	Y. REMARKS
<u>1\$+</u> ♦♣@	16010ZE3701	GASKET SET	1	TIEMATIKO
1\$+ <b>▼</b> \$ @ 2\$	16010ZE3701	VALVE SET, FLOAT	1	
2\$ 3\$	16011ZA0931	FLOAT SET	1	
აა 4\$%		CHAMBER SET, FLOAT	- 1	INCLUDED ITEMS W/@
	16015ZA0931	CODEWORT		
5\$	16016ZH7W01	SCREW SET SCREW SET, DRAINSCREW SET B	 	INIOLLIDEO ITEMO VALL
6\$%@	16024124760	SCREW SET, DRAIN	]	INCLUDES ITEMS W/+
7\$%	16028ZA0931	SCREW SET B		INCLUDES ITEMS W/
8	16100Z9H702	CARBURETOR ASSY., (BE82V A)	1	INCLUDES ITEMS W/\$
9\$	16124ZE0005	SCREW, THROTTLE STOP	1	
10\$	16148141881	CAP, CHOKE LEVER DUST	1	all parts
11\$	16166ZE3F10	NOZZLE, MAIN	1	
12\$	16172ZE3W10	COLLAR, SETTING	1	
14	16211Z9H700	INSULATOR, CARBURETOR	1	, X
15	16221Z8T000	GASKET, INSULATOR	1	
17\$	16230ZE3702	VALVE ASSY., SOLENOID	1	100
18	16260ZE3D22	STAY ASSY., MANUAL CHOKE	1	INCLUDES ITEMS W/#
19#	16261ZE2702	STAY, SOLENOID	1	INCLUDES ITEMS W/#
20#	16262ZE2711	LEVÉR, CHOKE		
21#	16263ZA0000	JOINT, ROD	d	
22#	16264ZE2701	ROD, CHOKE	$\sim$ 1	
23#	16265ZE2721	STOPPER, CHOKE ROD	y ;	
24#	16268ZE2721	SPRING, MANUAL CHOKE	1	
25	17228Z5T000	GASKET, AIR CLEANER	2	)
25 26#	16400ZE2704	DIAPHRAGM ASSY.	1	-
20# 27#	16611ZE3D21		1	
27# 28#		ROD, CHOKE CONTROL	- 1	
	16613893000	GROMMET, CHOKE ROD	- 1	
29#	16615893000	GUIDE, CHOKE ROD	- 1	
30	36135ZF6D41	VALVE, DASHPOT CHECK	ا	
31#	53149964003	BUSH, ARM PIVOT	1	
32	88911MJ3000	GROMMET, FENDER	1	
33#	90431ZE2700	WASHER, CHOKE LEVER	1	
34#	90432ZE2700	SEAL, CHOKE LEVER	2	-
35#	90433ZE2700	WASHER, THRUST (2.7X8)	1	
36#	90434ZE2700	COLLAR, LEVER	1	
37	90650SD9003	CLIP, WIRE HARNESS	1	
39#	93500050120A	SCREW, PAN (5X12)	2	
40\$	938920501218	SCREW, WASHER (5X12)	2	) -
41	9405006000	NUT, FLANGE (6MM)	2	2
42#	9410305000	WASHER, FLASH (5MM)	1	
43#	9454002010	E-RING (2MM)	1	
44#	9454004010	E-RING (4MM)	1	
45#	9454007010	E-RING (7MM)	1	
47	9500202070	CLIP, TUBE (B7)	4	1
49	950053507510	TUBE (3.5X75)	1	
50	950053513010	TUBE (3.5X130)	1	
51\$	99101ZH80950	JET, MAIN (#95)	1	
51\$	99101ZH80980	JET, MAIN (#98)	1	
51\$ 52\$	99204ZE00380	JET, SET PILOT MAIN, (#38)	1	INCLUDES ITEMS W/&
52φ 54	16212Z5T000	GASKET, CARBURETOR INSULATO		INOLODES IT LIVIS W/
		•	11 I	
55	16220ZA0702	SPACER COMP., CARBURETOR	- 1	

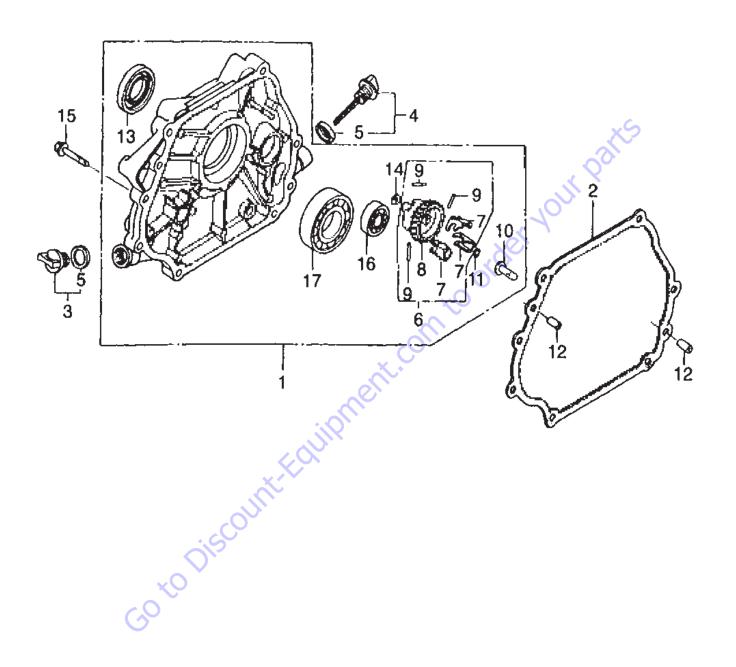
# HONDA GX340RT2EDE2/EDN2 — CONTROL ASSY.



### HONDA GX340RT2EDE2/EDN2 — CONTROL ASSY.

NO. 1 3 4 5 8 16% 20	PART NO. 16550ZE3700 16555ZE3000 16561ZK6D70 16562ZE3700 16500Z5T880 16584883300 90013883000	PART NAME  ARM COMP., GOVERNOR  ROD, GOVERNOR  SPRING, GOVERNOR  SPRING, THROTTLE RETURN  CONTROL ASSY	1	REMARKSINCLUDES ITEMS W/%	
21 28% 30	90015Z5T000 93500050350A 9405006000	BOLT, GOVERNOR ARM SCREW, PAN 5X35 NUT, FLANGE 6MM		ar Your Parts	
		BOLT, GOVERNOR ARM SCREW, PAN 5X35 NUT, FLANGE 6MM	omico		
	COXO	jis			

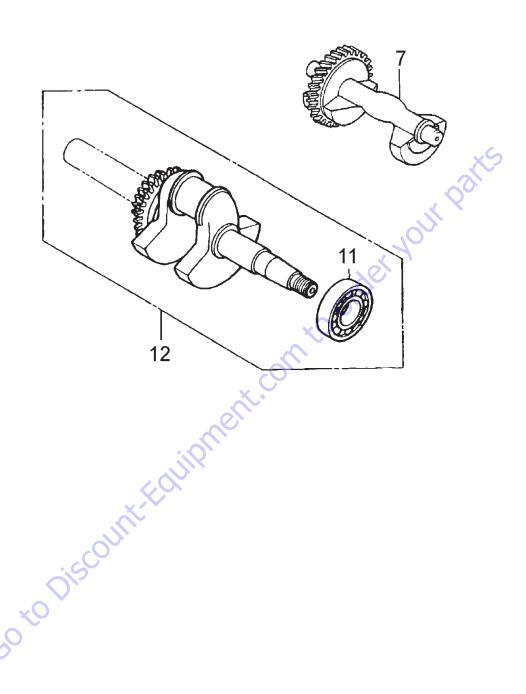
# HONDA GX340RT2EDE2/EDN2 — CRANKCASE COVER ASSY.



# HONDA GX340RT2EDE2/EDN2 — CRANKCASE COVER ASSY.

<u>NO.</u>	PART NO. 11300Z1C000	PART NAME COVER ASSY., CRANKCASE	<u>QTY.</u>	REMARKS
2	11381Z5T000	PACKING, CRANKCASE COVER	 1	INOLODES IT LIVIS VV/ /8
3	15600Z0T820	CAP ASSY., OIL FILTER		INCLUDES ITEM W/@
4	15600Z1C000	CAP ASSY., OIL FILTER	1	INCLUDES ITEM W/+
5@+	15625Z0T800	PACKING, OIL FILTER CAP	2	
6	16510ZE3000	GOVERNOR ASSY	1	INCLUDES ITEMS W/#
7%#	16511ZE8000	WEIGHT, GOVERNOR	3	
8%#	16512ZE3000	HOLDER, GOVERNOR WEIGHT	1	
9%#	16513ZE2000	PIN, GOVERNOR WEIGHT	3	
10%	16531Z0A000	SLIDER, GOVERNOR	1	X
11%	90602ZE1000	CLIP, GOVERNOR HOLDER	1	
12	90701HC4000	DOWEL PIN 8x12	2	, Q
13%	91201Z1C003	OIL SEAL 35x52x8	1	
14%	9410106800	WASHER, FLAT 6MM	1	100
15	957010804000	BOLT, FLANGE 8x40	7	4
16%	961006202000	BEARING, RADIAL BALL 6202	1	
17%	961006207000	BEARING, RADIAL BALL 6207	100	

# HONDA GX340RT2EDE2/EDN2 — CRANKSHAFT ASSY.

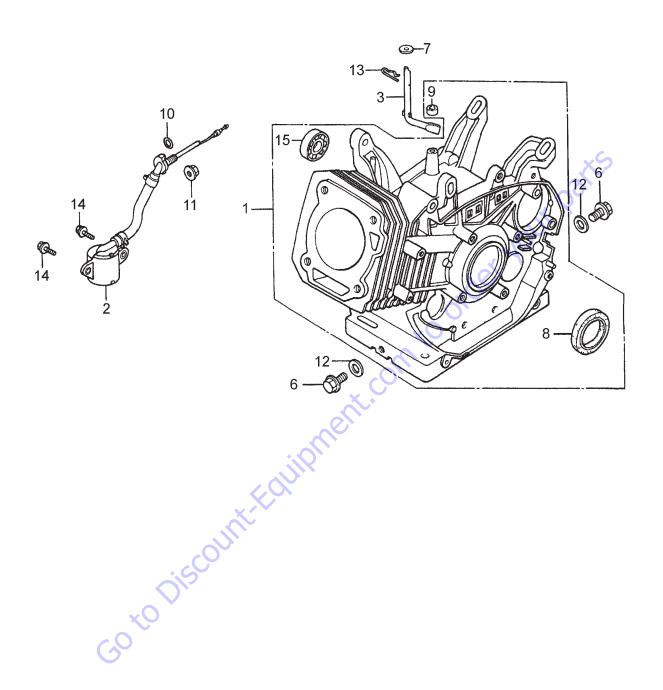


### HONDA GX340RT2EDE2/EDN2 — CRANKSHAFT ASSY.

NO.	PART NO.	PART NAME	QTY.	<u>REMARKS</u>
7	13351ZE3010	WEIGHT, BALANCER	1	
11\$	91001ZF6013	BEARING, RADIAL BALL	1	
12	13310ZF6D42	CRANKSHAFT COMP	1	INCLUDES ITEMS W/\$

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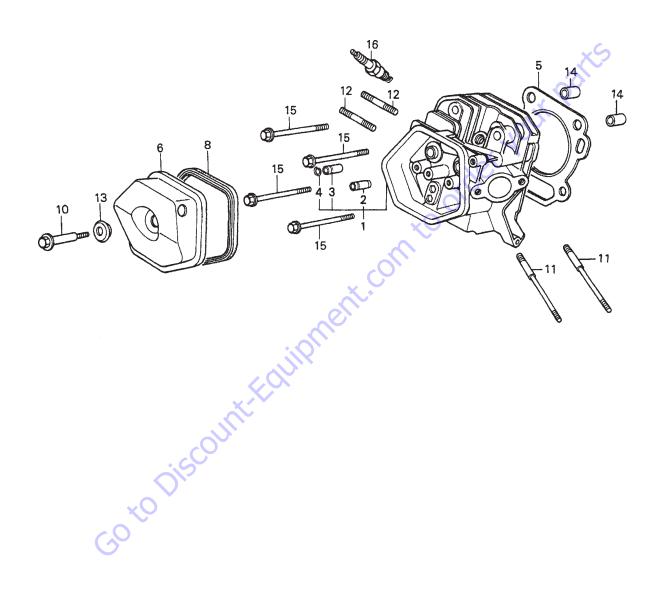
# HONDA GX340RT2EDE2/EDN2 — CYLINDER BARREL ASSY.



# HONDA GX340RT2EDE2/EDN2 — CYLINDER BARREL ASSY.

NO. 1 1 2 3 6 7 8\$# 10 11 12 13 14 15\$#	PART NO. 12000Z5T405 12000Z5T407 35480ZF6003 16541ZE3010 90131883000 90446KE1000 91201Z1C003 91203952771 91353671004 9405010000 9410912000 9425110000 957010601200 961006202000	PART NAME BARREL ASSY., CYL., GX340RT2EDE2 BARREL ASSY., CYL., GX340RT2EDN2 SWITCH ASSY., OIL ALERT SHAFT, GOVERNOR ARM BOLT, DRAIN PLUG 12X15 WASHER, 8.2X17 X0.8 OIL SEAL, 35X52X8 OIL SEAL, 8X14X5 O-RING, 14MM (NOK) NUT FLANGE, 10MM WASHER, DRAIN PLUG 12MM PIN, LOCK 10MM BOLT, FLANGE 6X12 BEARING, RADIAL BALL 6202	1 1 1 2	INCLUDES ITEMS W/\$
	GOYO	OIL SEAL, 35X52X8 OIL SEAL, 8X14X5 O-RING, 14MM (NOK) NUT FLANGE, 10MM WASHER, DRAIN PLUG 12MM PIN, LOCK 10MM BOLT, FLANGE 6X12 BEARING, RADIAL BALL 6202	orde	

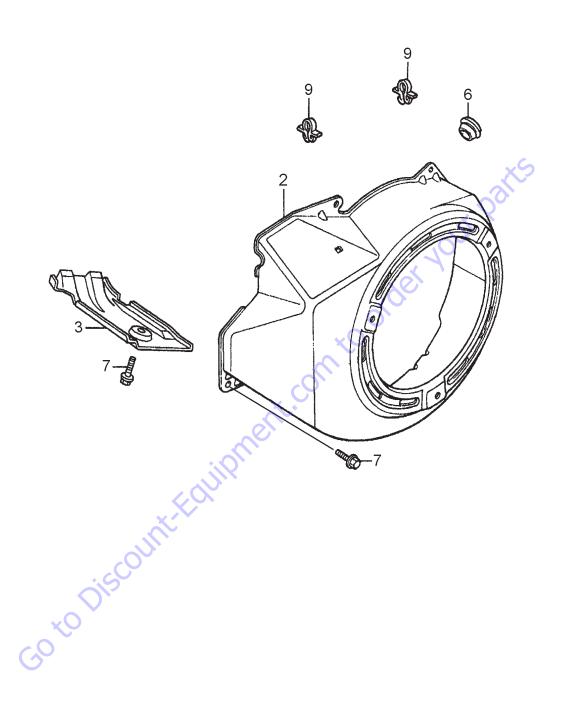
# HONDA GX340R2EDE2/EDN2 — CYLINDER HEAD ASSY.



### HONDA GX340R2EDE2/EDN2 — CYLINDER HEAD ASSY.

NO. 1 2# 3# 4# 5 6 8 10 11 12 13 14 15 16	PART NO. 12210Z5T406 12204ZE2306 12205ZE2305 12216ZE2300 12251Z5T003 12310ZE2020 12391ZE2020 90014Z5T000 90042ZK6D70 92900080320E 90441ZE2010 9430112200 957011008000 9807955876 9807955855	PART NAME  HEAD COMP., CYLINDER	1 1 1 ) 1	
	GOXO	PACKING, HEAD COVER BOLT, HEAD COVER BOLT, STUD 8X115 BOLT, STUD 8X32 WASHER COMP., HEAD COVER DOWEL PIN 12X20 BOLT, FLANGE 10X80 PLUG, SPARK (BPR5ES NGK) PLUG, SPARK (W16EPR-U DENSO)	ordex	

# HONDA GX340RT2EDE2/EDN2 — FAN COVER ASSY.

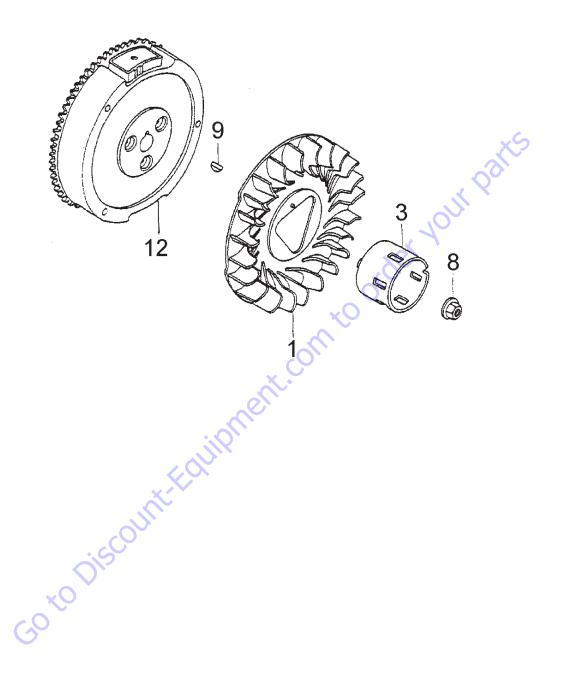


#### HONDA GX340RT2EDE2/EDN2 — FAN COVER ASSY.

NO.	PART NO.	PART NAME	QTY.	<u>REMARKS</u>
2	19610Z5T800ZC	COVER, FAN *NH1* (BLACK)	1	
3	19631Z5T000	SHROUD	1	
6	81329567020	GROMMET, DRAIN HOLE	1	
7	90013883000	BOLT, FLANGE 6X12 (CT200)	6	
9	90654SA4003	CLIP, WIRE HARNESS 6MM (WHITE)	2	

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# HONDA GX340RT2EDE2/EDN2 — FLYWHEEL ASSY.

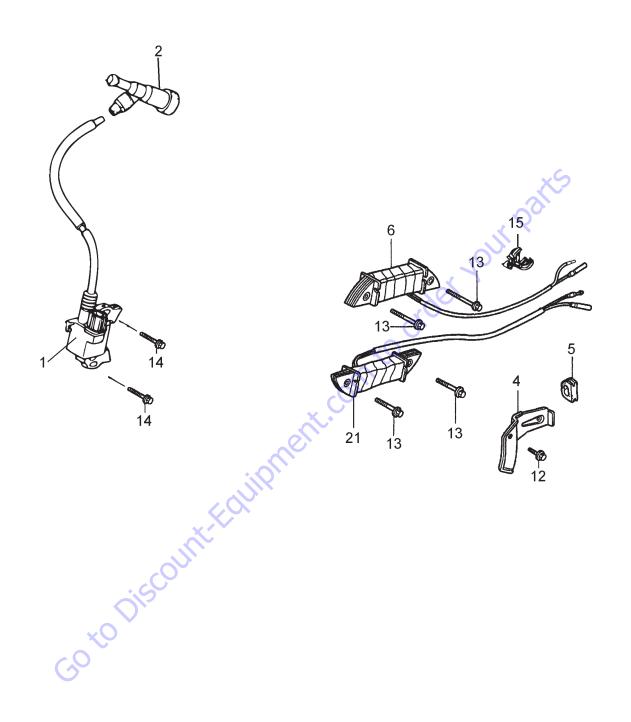


#### HONDA GX340RT2EDE2/EDN2 — FLYWHEEL ASSY.

NO.	PART NO.	PART NAME	QTY.	<b>REMARKS</b>
1	19511ZE3000	FAN, COOLING	1	
3	28451ZE3W01	PULLEY, STARTER	1	
8	90201ZE3V00	NUT, SPECIAL 16MM	1	
9	90741ZE2000	KEY, SPECIAL WOODRUFF 25X18	1	
12	31100Z5T820	FLYWHEEL COMP. (LAMP), GX340RT2EDI	<b>E</b> 2 1	
12	31100Z5T810	FLYWHEEL COMP. (LAMP), GX340RT2EDI	N2 1	

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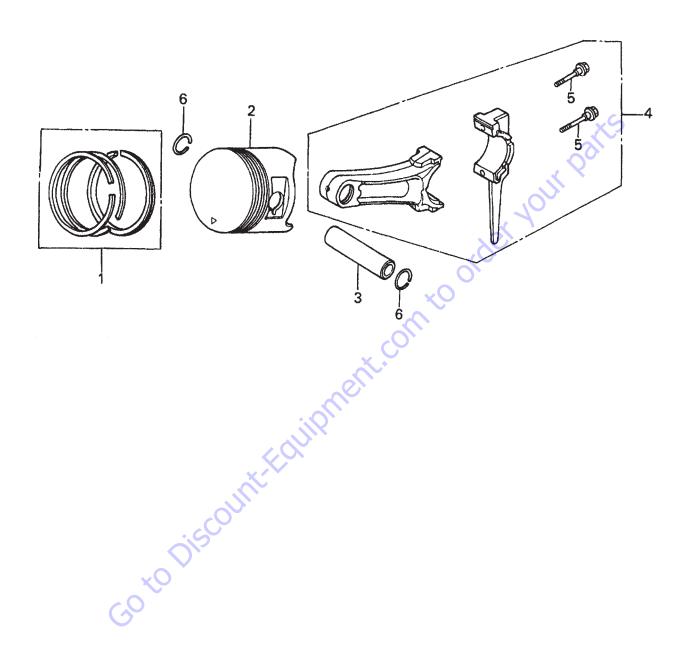
# HONDA GX340RT2EDE2/EDN2 — IGNITION COIL ASSY.



#### HONDA GX340RT2EDE2/EDN2 — IGNITION COIL ASSY.

NO. 1 2 4 5 6 12 13 14 15 21	PART NO. 30500Z5T003 30700Z1C811 31511ZE3000 31512ZE2000 31510ZE1811 90013883000 90012888000 90015883000 90684ZA0601 31510ZE3003	PART NAME COIL ASSY., IGNITION CAP ASSY., NOISE SUPPRESSOR CLAMPER, CORD GROMMET, CORD COIL ASSY., LAMP 12V, 25W BOLT, FLANGE 6X12 BOLT, FLANGE 6X40 BOLT, FLANGE 6X280 CLIP, HARNESS, GX340RT2EDN2 COIL ASSY., LAMP 12V, 125W	QTY.  1 1 1 1 1 4 2 1 1	
	Goto	BOLT, FLANGE 6X40 BOLT, FLANGE 6X280 CLIP, HARNESS, GX340RT2EDN2 COIL ASSY., LAMP 12V, 125W	X <sup>O</sup>	

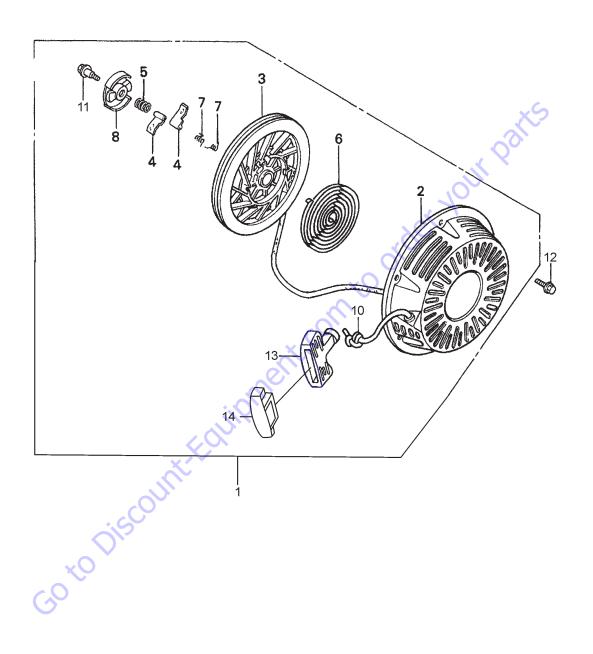
# HONDA GX340RT2EDE2/EDN2 — PISTON ASSY.



#### HONDA GX340RT2EDE2/EDN2 — PISTON ASSY.

NO. 1 1 1 1 2 2 2 2	PART NO. 13010Z5R004 13011Z5R004 13012Z5R004 13013Z5R004 13101Z5T800 13102Z5T800 13103Z5T800 13104Z5T800	PART NAME RING SET, PISTON (STD) RING SET, PISTON (0.25) RING SET, PISTON (0.50) RING SET, PISTON (0.75) PISTON (STD) PISTON (0.25) PISTON (0.50) PISTON (0.75)	QTY.  1  1  1  1  1  1  1	REMARKS
3 4 4 5\$% 6	13111Z5T000 13200Z1C000 13200Z1C305 90001ZE8000 90601ZE3000	PIN, PISTON ROD ASSY., CONNEC. (STD) ROD ASSY., CONNEC. (0.25 UN BOLT, CONNECTING ROD CLIP, PISTON PIN 20MM		INCLUDES ITEMS W/\$INCLUDES ITEMS W/%
		is countrical in the series		
	Goto			

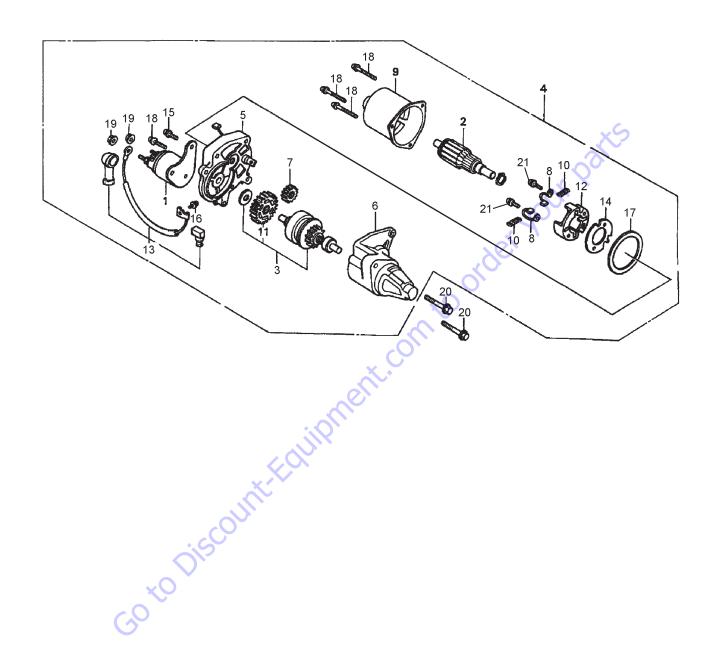
# HONDA GX340RT2EDE2/EDN2 — RECOIL STARTER ASSY.



#### HONDA GX340RT2EDE2/EDN2 — RECOIL STARTER ASSY.

NO. 1 2% 3% 4% 5% 6% 7% 8% 10% 11% 12 13% 14%	PART NO. 28400Z5T013ZB 28410ZE3W01ZB 28421ZE3W01 28422ZE2W01 28441ZE2W01 28442ZE2W01 28443ZE2W01 28444ZE2W01 28462ZV7003 90004ZE2W01 90008ZE2003 28461Z5T003 28463Z5T013	PART NAME STARTER ASSY., RECOIL *NH1* CASE COMP., RECOIL STARTER *N PULLEY, RECOIL STARTER RATCHET, STARTER SPRING, FRICTION SPRING, STARTER RETURN SPRING, RATCHET RETAINER, SPRING ROPE, RECOIL STARTER SCREW, CENTER BOLT, FLANGE 6X10 GRIP, STARTER GRIP, REINFORCEMENT	H1* 1 1 2 1 1 2	
	GOXO	RETAINER, SPRING ROPE, RECOIL STARTER SCREW, CENTER BOLT, FLANGE 6X10 GRIP, STARTER GRIP, REINFORCEMENT		

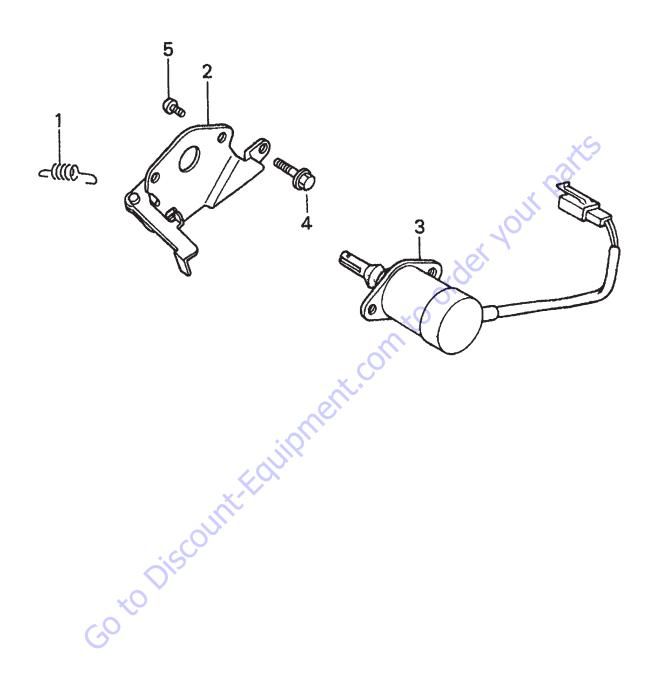
#### HONDA GX340RT2EDE2 — STARTER MOTOR ASSY.



#### HONDA GX340RT2EDE2 — STARTER MOTOR ASSY.

NO.	PART NO.	PART NAME	QTY.	<u>REMARKS</u>
1\$	31204ZA0003	CONTACTOR ASSY.	1	
2\$	31206ZE3003	ARMATURE COMP	1	
3\$	31207ZE3003	CLUTCH COMP., OVERRUNNING	à11	INCLUDES ITEMS W/%
4	31210ZE3023	MOTOR UNIT, STARTER	1	INCLUDES ITEMS W/\$
5\$	31211ZE2003	BRACKET, CENTER	1	
6\$	31212ZE3003	BRACKET, FR.	1	
7\$	31213ZE2003	GEAR, DRIVE PINION	1	
8\$	31215ZE2003	BRUSH	2	
9\$	31218ZE3003	YOKE COMP	1	
10\$	31219ZE2003	SPRING, BRUSH RETURN	4	X
11\$%	31222ZE3791	GEAR, REDUCTION	1	
12\$	31231ZE2003	HOLDER, BRUSH	1	, Q
13\$	31232ZE3003	WIRE, WATER COVER	1	
14\$	31233ZE2003	INSULATOR	1	100
15\$	90007ZE2003	BOLT, WASHER 5X14	2	
16\$	90110ZE2003	SCREW, WASHER 4X6	1.0	
17\$	91601ZE2003	PACKING	10	
18\$	938920503218	SCREW, WASHER 5X32	4	
19\$	9407006080	NUT, WASHER 6MM	2	
20	957010803508	BOLT, FLANGE 8X35	2	
21\$	31219ZE3003	SCREW, WASHER 4X14	2	

# HONDA GX340RT2EDE2/EDN2 — SOLENOID ASSY.

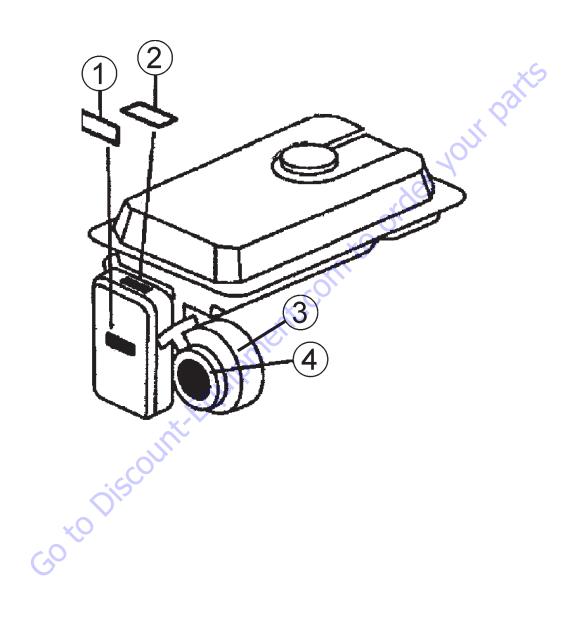


#### HONDA GX340RT2EDE2/EDN2 — SOLENOID ASSY.

<u>NO.</u>	PART NO.	PART NAME	QTY.	<u>REMARKS</u>
1	16268893000	SPRING, CHOKE RETURN	1	
2	17850ZD1E30	LEVER COMP., THROTTLE	1	
3	36160ZB4013	SOLENOID ASSY.	1	
4	90013883000	BOLT, FLANGE 6X12 (CT200)	1	
5	93500050080A	SCREW, PAN 5X8	2	

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# HONDA GX340RT2EDE2/EDN2 — ENGINE DECALS ASSY.



#### HONDA GX340RT2EDE2/EDN2 — ENGINE DECALS ASSY.

NO.	PART NO.	PART NAME	QTY.	<b>REMARKS</b>
1	87533ZC0630	DECAL: AIR CLEANER (ENGLISH)	1	
2	87528898620	DECAL: CHOKE	1	
3	87594ZB4A00	DECAL: OIL CAUTION	1	
4	87521Z8T000	EMBLEM (GX340)	1	

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# **OPERATION AND PARTS MANUAL**

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