HONDA

Power

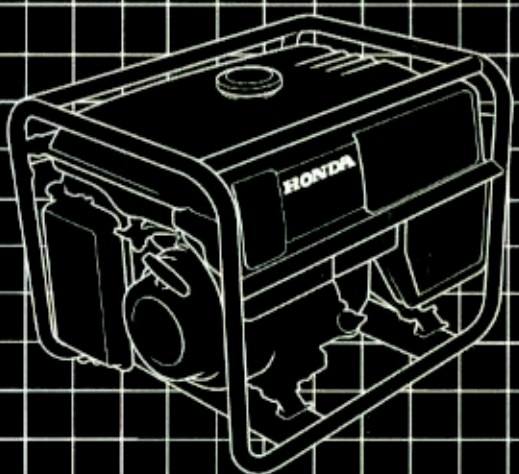
Equipment

Owner's Manual

GENERATOR/WELDER

EW140 • EW171

Click here to save this manual to your computer.



⚠ WARNING **The generator/welder is a potential source of electrical shock if misused. Do not expose the generator/welder to moisture, rain or snow. Do not let the generator/welder get wet, and do not operate it with wet hands.**

Thank you for purchasing a Honda generator/welder.

This manual covers the operation and maintenance of EW140 and EW171 generator/welders. All information in this publication is based on the latest product information available at the time of printing.
The illustrations in this manual are based on the EW171 generator/welder.

Honda Motor Co., Ltd. reserves the right to make changes at any time without notice and without incurring any obligation.

This manual should be considered a permanent part of the generator/welder and should remain with the generator/welder if it is resold.

This generator/welder is equipped with a U.S.D.A. qualified spark arrester which requires periodic maintenance to ensure its effectiveness. It is illegal in some areas to operate an engine without a spark arrester; check local laws and regulations.

⚠ DANGER: Indicates severe personal injury or death will result if instructions are not followed.

⚠ WARNING Indicates a strong possibility of severe personal injury or loss of life if instructions are not followed.

CAUTION: Indicates a possibility of personal injury or equipment damage if instructions are not followed.

NOTE: Gives helpful information.

If a problem should arise, or if you have any questions about your generator/welder, consult an authorized Honda dealer.

⚠ WARNING

- **Welding is potentially a very hazardous activity. It should only be attempted by a trained welder with a thorough knowledge of proper welding techniques and safety procedures.**
- **Honda generator/welders are designed to give safe operation and dependable service if operated according to instructions. Read and understand this Owner's Manual before operating the generator/welder. Failure to do so could result in personal injury or equipment damage.**

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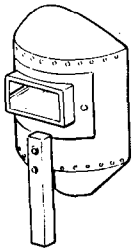
CONTENTS

⚠WARNING

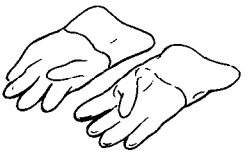
TO ENSURE SAFE OPERATION –

- Place the generator/welder on a firm, level surface; avoid loose sand or snow. If the generator/welder is tilted or overturned, fuel spillage and a fire may result.
- To prevent fire hazards and to provide adequate ventilation, keep the generator/welder at least 1 meter (3 feet) away from buildings and other equipment during operation. Do not place flammable objects close to the generator/welder.
- Children and pets must be kept away from the area of operation due to a possibility of electric shock or burns from hot components.
- Know how to stop the generator/welder quickly, and understand the operation of all the controls. Never permit anyone to operate the generator/welder without proper instruction.
- The generator/welder is a potential source of electrical shock if misused. Do not expose the generator/welder to moisture, rain or snow. Do not let the generator/welder get wet, and do not operate it with wet hands.
- Use adequate eye protection. Eye protection is of the utmost importance, not only for the operator, but also for any other personnel in the vicinity while welding is being done. Eye hazards include arc glare, reflected glare, stray flashes, sparks, and flying bits of molten metal.
- Looking at a welding arc with unprotected eyes may produce severe pain and even temporary blindness.
- Use a helmet or hand-held shield with a #10 or darker filter lens. Filter lenses eliminate the harmful effects of infrared and ultraviolet radiation from the arc and reduce the glare from the arc light as well.
- Wear protective clothing such as leather gloves, cap, sleeves, jacket, apron, and high-top safety shoes. All outer clothing must be free of oil and grease.

FACE SHIELD

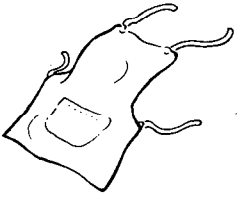


GLOVES



SAFETY SHOES

APRON

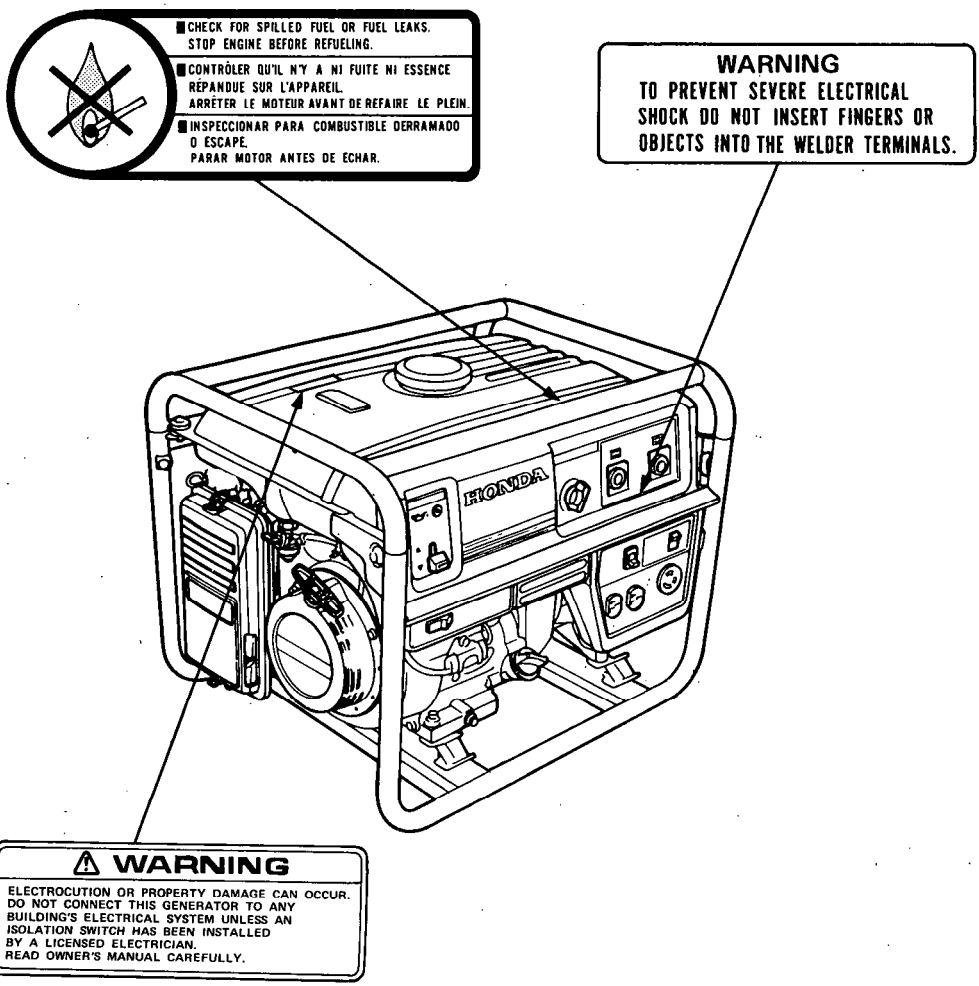


⚠ WARNING

- Gasoline is extremely flammable and is explosive under certain conditions.
- Refuel in a well-ventilated area with the engine stopped. Do not smoke or allow flames or sparks in the refueling area or where gasoline is stored.
- Do not overfill the fuel tank. After refueling, make sure the tank cap is closed properly and securely.
- Be careful not to spill fuel when refueling. Fuel vapor or spilled fuel may ignite. If any fuel is spilled, make sure the area is dry before starting the engine.
- Never run the engine in an enclosed or confined area. Exhaust contains poisonous carbon monoxide gas; exposure may cause loss of consciousness and may lead to death.
- Provide adequate ventilation when welding; welding vapors are harmful to your health.
- The muffler becomes very hot during operation and remains sufficiently hot to inflict burns if touched, even after shutting off the engine. To prevent severe burns or fire hazards, let the engine cool before transporting the generator/welder or storing it indoors.
- Connections for standby power to a building's electrical system must be made by a qualified electrician and must comply with all applicable laws and electrical codes. Improper connections can allow electrical current from the generator to backfeed into the utility lines. Such backfeed may electrocute utility company workers or others who contact the lines during a power outage, and when utility power is restored, the generator may explode, burn, or cause fires in the building's electrical system.

CAUTION: Equipment damage and corrosion from sand, dirt, and water may occur if the generator is overturned or sinks into a soft surface.

Read these labels before you operate the generator/welder.

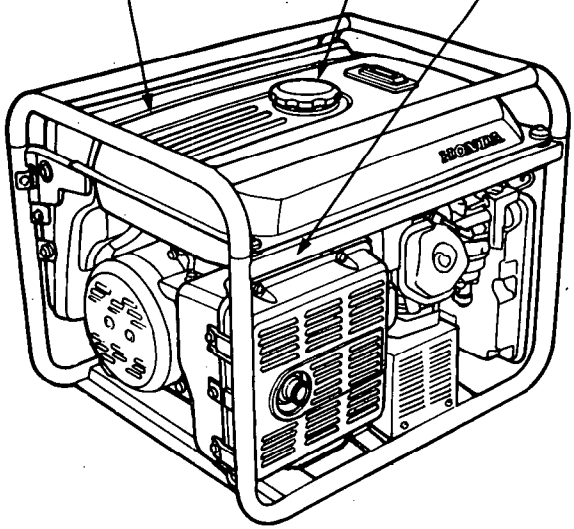


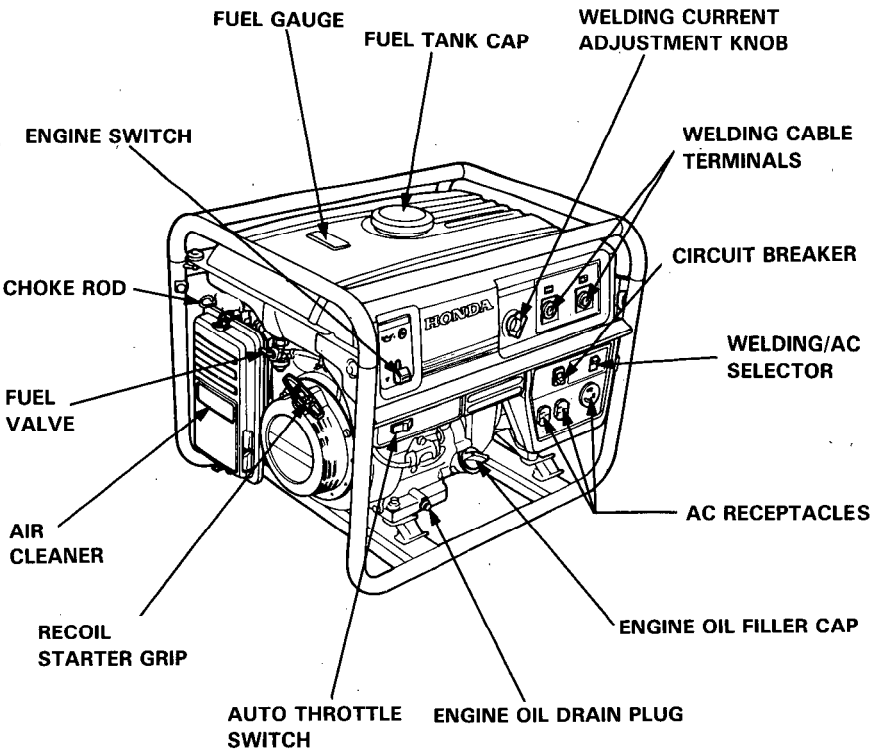
WARNING	DO NOT USE INDOORS DUE TO DANGER OF CARBON MONOXIDE POISONING.
ATTENTION	NE PAS UTILISER DANS UN ENDROIT FERMÉ A CAUSE DU RISQUE D'EMPOISONNEMENT DU GAZ.
ATENCION	NO LO USE EN LUGARES CERRADOS PORQUE EL MONOXIDE DE CARBONO ES VENENOSO.

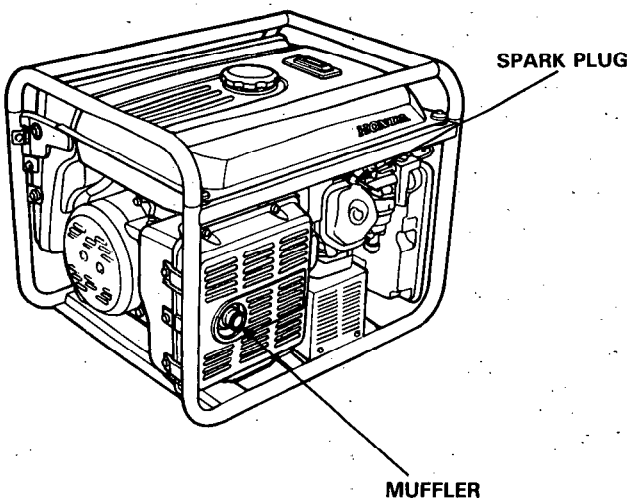
⚠ WARNING

USING THE GENERATOR IN RAIN, SNOW OR NEAR WATER CAN LEAD TO DEATH FROM ELECTRIC SHOCK. KEEP GENERATOR DRY.

HOT · EXHAUST




FUEL GAUGE
FUEL TANK CAP
WELDING CURRENT ADJUSTMENT KNOB
ENGINE SWITCH
WELDING CABLE TERMINALS
CIRCUIT BREAKER
CHOKE ROD
WELDING/AC SELECTOR
FUEL VALVE
AC RECEPTACLES
AIR CLEANER
ENGINE OIL FILLER CAP
RECOIL STARTER GRIP
AUTO THROTTLE SWITCH
ENGINE OIL DRAIN PLUG
HONDA

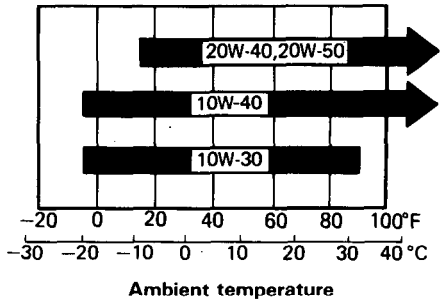

SPARK PLUG
MUFFLER

Check the generator/welder on a level surface with the engine stopped.

Engine Oil

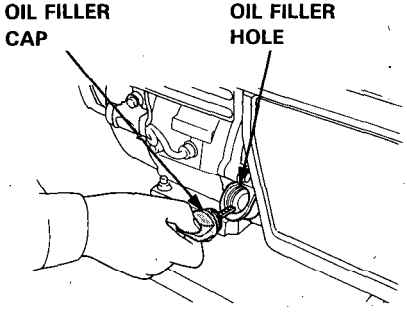
CAUTION: Engine oil is a major factor affecting engine performance and service life. Nondetergent oils, castor-based oils, and 2-stroke oils are nor recommended because they have inadequate lubricating characteristics.

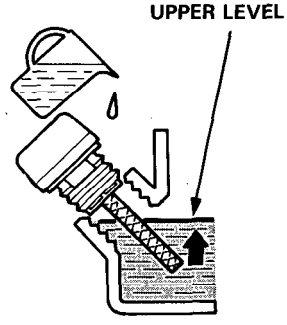
Use Honda 4-stroke oil, or an equivalent high detergent, premium quality motor oil certified to meet or exceed U.S. automobile manufacturers' requirements for Service Classification SG, SF/CC, CD. Motor oils classified SG, SF/CC, CD will show this designation on the container.
SAE 10W-30 is recommended for general, all-temperature use. Other viscosities shown in the chart may be used when the average temperature in your area is within the indicated range.



1. Remove the oil filler cap and wipe the dipstick clean.
2. Check the oil level by inserting the dipstick in the filler neck without screwing it in.
3. If the level is low, fill to the top of the oil filler neck with the recommended oil.

NOTE: The Oil Alert System will automatically stop the engine before the oil level falls below the safe limit. However, to avoid the inconvenience of an unexpected shutdown, it is advisable to visually inspect the oil level regularly.





Fuel

Check the fuel gauge and refill the tank if the fuel level is low. Do not fill above the UPPER LEVEL line.

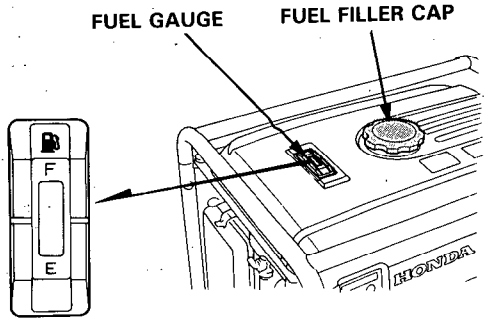
Your engine is designed to use any gasoline that has a pump octane number $(\frac{R+M}{2})$ of 86 or higher, or that has a research octane number of 91 or higher. Gasoline pumps at service station normally display the pump octane number.
We recommend that you use unleaded fuel because it produces fewer engine and spark plug deposits and extends the life of exhaust system components.

Never use stale or contaminated gasoline or an oil/gasoline mixture. Avoid getting dirt, dust or water in the fuel tank. Use of a lower octane gasoline can cause persistent "pinging" or heavy "spark knock" (a metallic rapping noise) which, if severe, can lead to engine damage.

CAUTION: If "spark knock" or "pinging" occurs at a steady engine speed under normal load, change brands of gasoline. If spark knock or pinging persists, consult your authorized Honda dealer. Failure to do so is considered misuse, and damage caused by misuse is not covered by Honda's Limited Warranty.

Occasionally you may experience light spark knock while operating under heavy loads. This is no cause for concern, it simply means your engine is operating efficiently.

Fuel tank capacity: 17.0 ℓ (4.49 US Gal., 3.74 Imp Gal.)



⚠ WARNING

- **Gasoline is extremely flammable and is explosive under certain conditions.**
- **Refuel in a well-ventilated area with the engine stopped. Do not smoke or allow flames or sparks in the area where the engine is refueled or where gasoline is stored.**
- **Do not overfill the fuel tank (there should be no fuel in the filler neck). After refueling, make sure the tank cap is closed properly and securely.**
- **Be careful not to spill fuel when refueling. Spilled fuel or fuel vapor may ignite. If any fuel is spilled, make sure the area is dry before starting the engine.**
- **Avoid repeated or prolonged contact with skin or breathing of vapor. KEEP OUT OF REACH OF CHILDREN.**

GASOLINES CONTAINING ALCOHOL

If you decide to use a gasoline containing alcohol (gasohol), be sure it's octane rating is at least as high as that recommended by Honda. There are two types of "gasohol": one containing ethanol, and the other containing methanol. Do not use gasohol that contains more than 10% ethanol. Do not use gasoline containing methanol (methyl or wood alcohol) that does not also contain cosolvents and corrosion inhibitors for methanol. Never use gasoline containing more than 5% methanol, even if it has cosolvents and corrosion inhibitors.

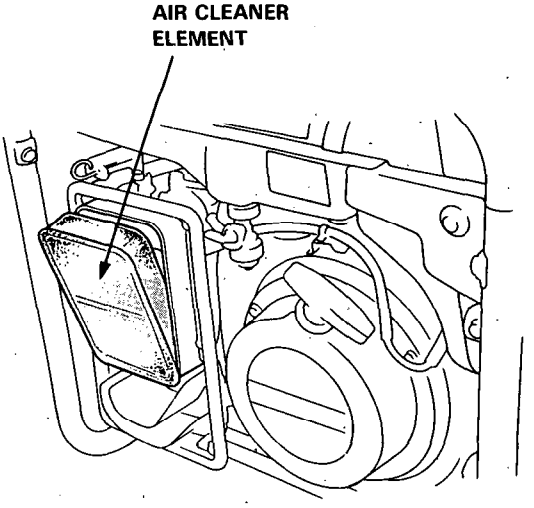
NOTE:

- Fuel system damage or engine performance problems resulting from the use of fuels that contain alcohol is not covered under the warranty. Honda cannot endorse the use of fuels containing methanol since evidence of their suitability is as yet incomplete.
- Before buying fuel from an unfamiliar station, try to find out if the fuel contains alcohol, if it does, confirm the type and percentage of alcohol used. If you notice any undesirable operating symptoms while using a gasoline that contains alcohol, or one that you think contains alcohol, switch to a gasoline that you know does not contain alcohol.

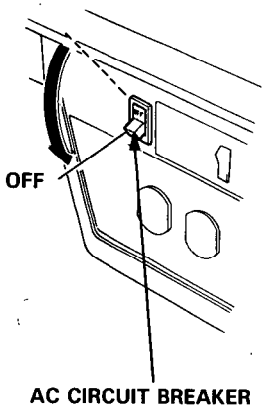
Air Cleaner

Check the air cleaner element to be sure it is clean and in good condition. Clean or replace the element if necessary (page 31).

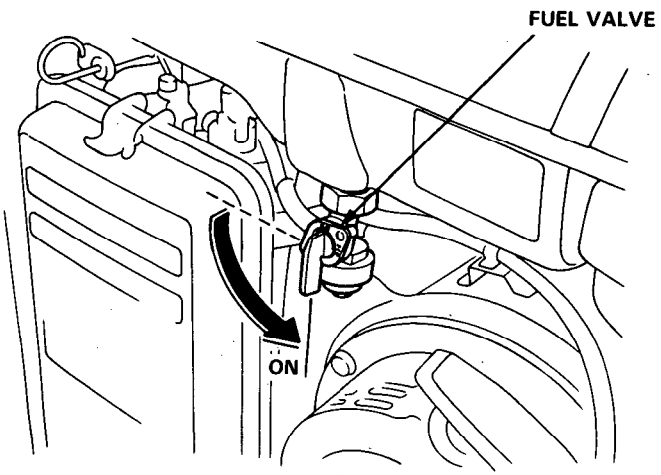
CAUTION: Never run the engine without the air cleaner. Rapid engine wear will result from contaminants, such as dust and dirt, being drawn through the carburetor, into the engine.



1. Make sure that the AC circuit breaker is in the OFF position, and that there are no welding cables attached to the DC terminals. The generator may be hard to start if a load is connected.

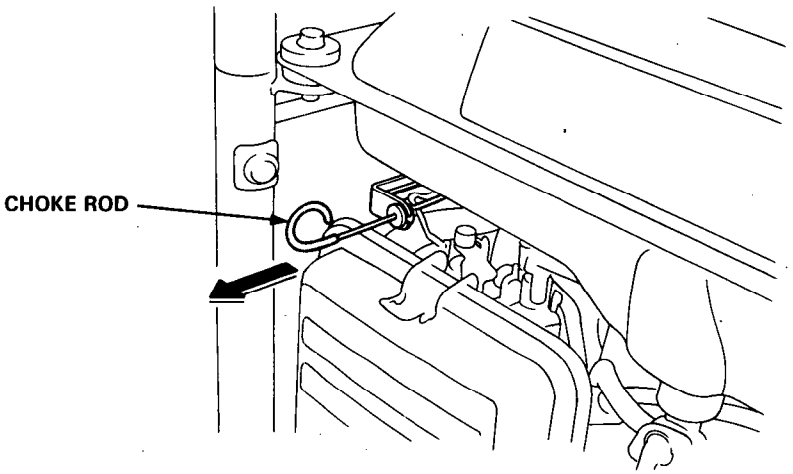


2. Turn the fuel valve to the ON position.

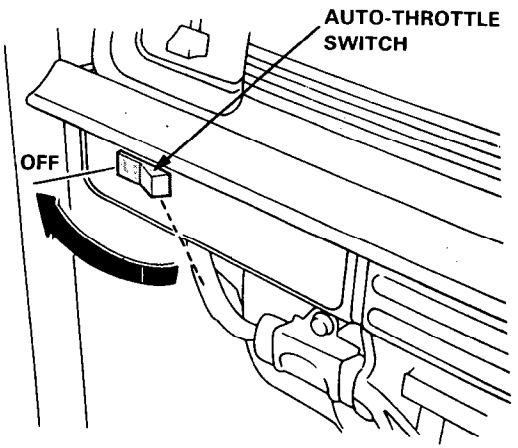


3. Pull the choke rod to the CLOSE position.

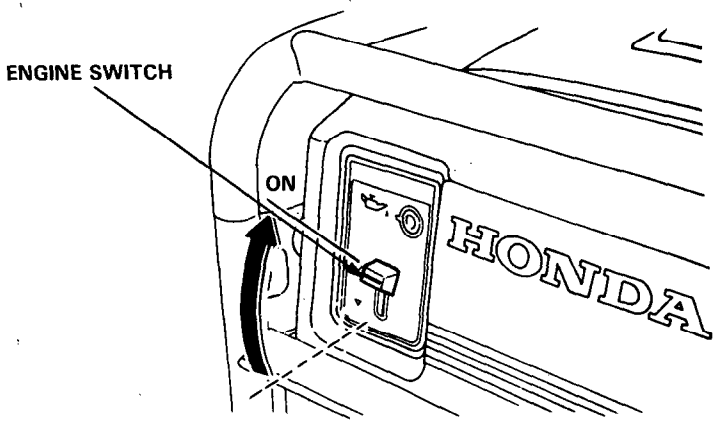
NOTE: Do not use the choke if the engine is warm or the air temperature is high.



4. Make sure the auto-throttle switch is OFF, or more time will be required for warm-up.

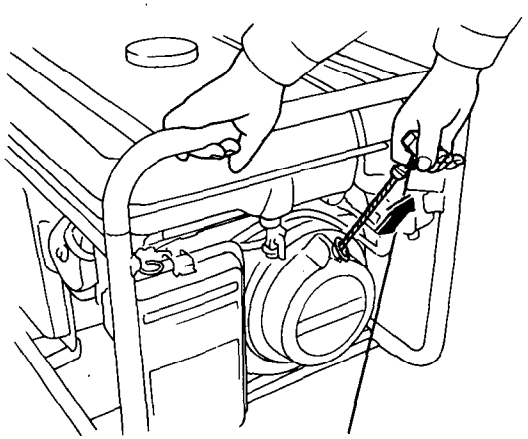


5. Move the engine switch to the ON position.

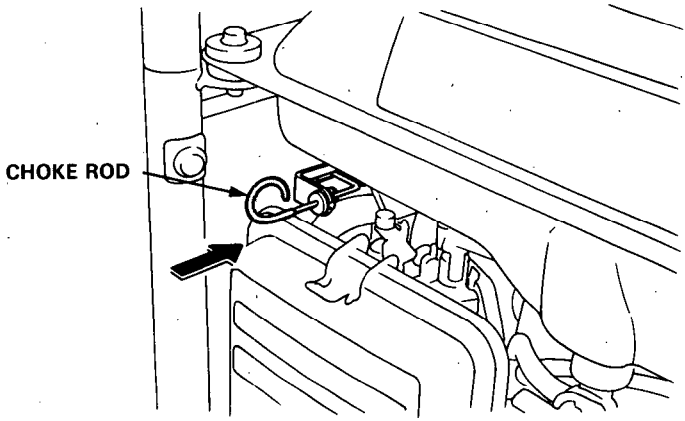


6. Pull the starter grip until compression is felt, then pull briskly.

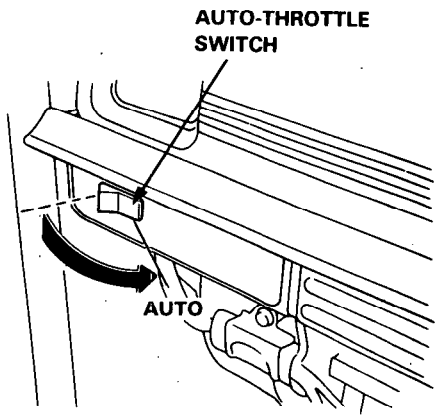
CAUTION: Do not allow the starter grip to snap back against the engine. Return it gently to prevent damage to the starter or housing.



7. Push the choke rod to the OPEN position as the Engine warms up.



8. If you wish to use the auto-throttle system, turn the auto-throttle switch to the AUTO position after the engine has warmed up for 2 or 3 minutes.



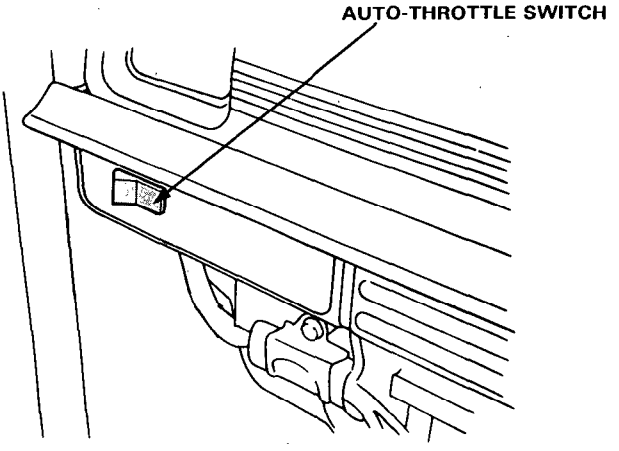
⚠WARNING Connections for standby power to a building's electrical system must be made by a qualified electrician and must comply with all applicable laws and electrical codes. Improper connections can allow electrical current from the generator to backfeed into the utility lines. Such backfeed may electrocute utility company workers or others who contact the lines during a power outage, and when utility power is restored, the generator may explode, burn, or cause fires in the building's electrical system.

Auto-throttle System

With the switch in the AUTO position, engine speed is automatically reduced to an idle when all loads are turned off or disconnected. When appliances are turned on or reconnected, the engine resumes the rated speed. At OFF, the auto-throttle system does not operate.

NOTE:

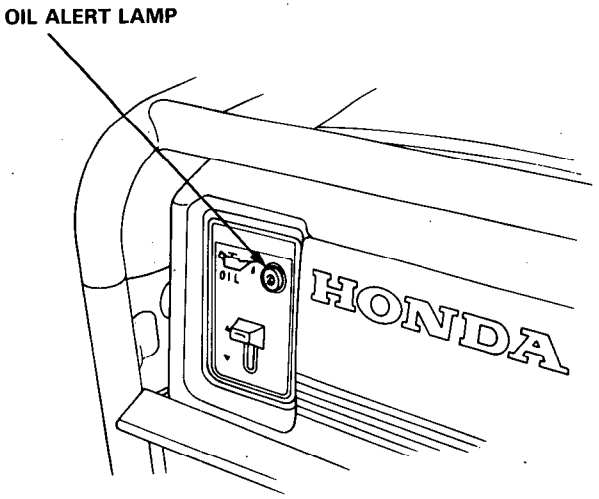
- AUTO is recommended to minimize fuel consumption when no load is applied.
- To avoid extended warm-up periods, keep the AUTO switch OFF until the engine reaches operating temperature.
- The auto-throttle system will not respond to electrical loads of less than 1 ampere.
- The system is not-effective for use with appliances that require only momentary power.



Oil Alert System

The Oil Alert system is designed to prevent engine damage caused by an insufficient amount of oil in the crankcase. Before the oil level in the crankcase can fall below a safe limit, the Oil Alert system will automatically shut down the engine (the engine switch will remain in the ON position).

If the Oil Alert system shuts down the engine, the Oil Alert lamp will flash when you operate the starter, and the engine will not run. If this occurs, add engine oil (page. 8).



AC operation

1. Start the engine.
2. Turn the AC/DC (Weld) selector switch to AC position.

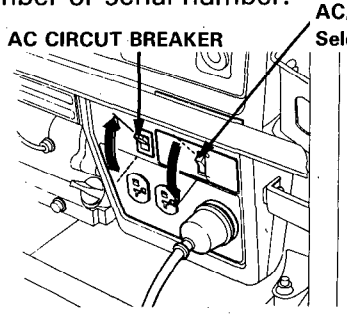
CAUTION: Under no circumstances should any type of electrical appliance be plugged into any of the AC receptacles when the selector is in the DC (WELD) position. AC voltage is present at the AC receptacles at all times regardless of the position of the AC/DC (WELD) selector. However, when this selector is in the DC (WELD) position, the AC voltage is unregulated and fluctuates considerably.

3. Switch on the AC circuit breaker.
4. Plug in the appliance.

CAUTION:

- **Do not connect the generator/welder to a household circuit. This could cause damage to the generator or to electrical wiring and appliances in the house.**
- **For continuous operation, do not exceed the rated load capacity (EW140: 3.0 KVA, EW171: 4.0 KVA). In either case, be sure to consider the total power requirements of all connected appliances. Do not exceed the current limit specified for any one receptacle. Substantial overloading will switch off the circuit breaker. Marginal overloading may not switch off the circuit breaker, but it will shorten the service life of the generator/welder.**
- **If an overloaded circuit causes the AC circuit breaker to switch off, reduce the electrical load on the circuit, and wait a few minutes before resetting the circuit breaker.**
- **Be sure that all appliances are in good working order before connecting them to the generator. If an appliance begins to operate abnormally, becomes sluggish, or stops suddenly, turn off the circuit breaker and the engine switch immediately. Then disconnect the appliance and examine it for signs of malfunction.**
- **Most appliance and power tool motors require more than the rated operating current for start-up. To match appliance power needs to generator capability, allow a sufficient generator power reserve to accomodate motor start-up requirements.**

NOTE: Appliance and power tool manufacturers usually list rating information near the model number or serial number.

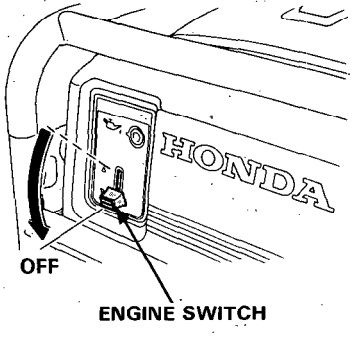


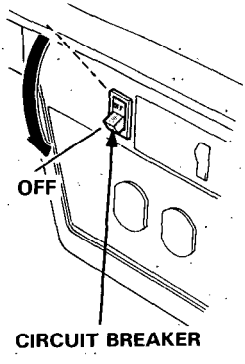
WELDING

⚠WARNING Welding is potentially a very hazardous activity. It should only be attempted by a trained welder with a thorough knowledge of proper welding techniques and safety procedures. Be sure to read and follow the safety rules on pages 3,4 and 5 of this manual.

1. Put the Engine Switch in the OFF position. Turn the AC circuit breaker off and remove any plugs from the AC receptacles.

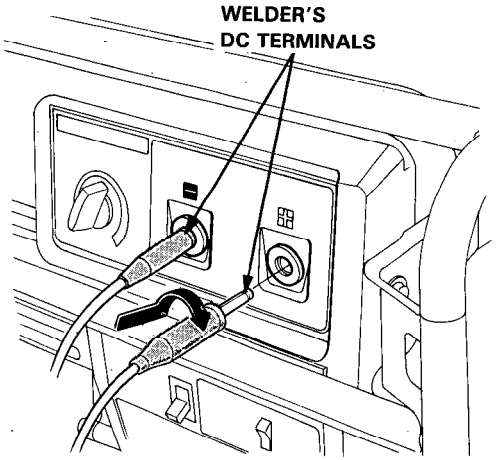
CAUTION: Voltage is present at the welding terminals whenever the engine is running regardless of the position of the AC/DC (WELD) selector.



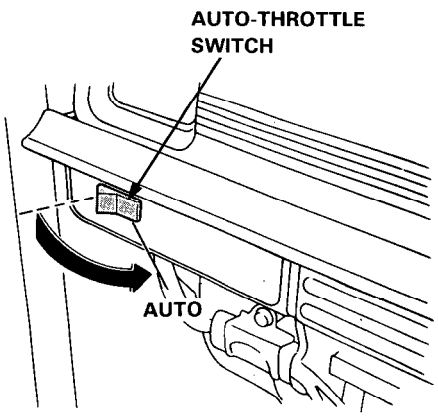


2. Connect the welding cables to the welder's DC terminals (See page 24 and 25).

CAUTION: Failure to use the proper gauge cable may lead to painful burns and/or damage to equipment. See table on page 24.



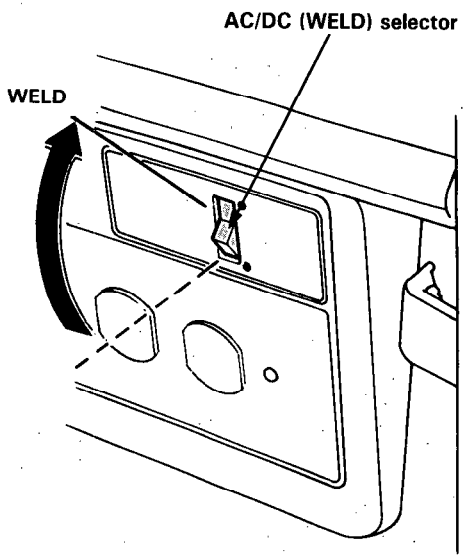
3. Start the engine and when it has warmed up fully, turn the Auto-Throttle Switch to the AUTO position.



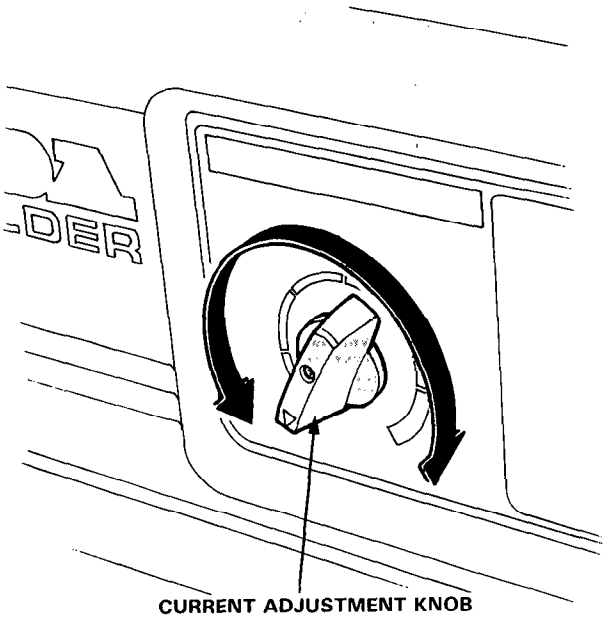
4. Turn the AC/DC (WELD) selector to the DC (WELD) position.

CAUTION:

- **To avoid accidental arcing, one cable end should be firmly attached to the object to be welded, and the electrode holder at the end of the other cable should be held in the operator's hand when the DC (WELD) selector is turned on.**
- **Under no circumstances should any type of electrical appliance be plugged into any of the AC receptacles when the selector is in the DC (WELD) position. AC voltage is present at the AC receptacle at all times, regardless of the position of the AC/DC (WELD) selector.**
  However, when this selector is in the DC (WELD) position, the AC voltage is unregulated and fluctuates considerably.



5. Set the current adjustment knob to the proper current level for the job being done (See page 24).



SELECTING THE CORRECT WELDING CURRENT

Measure the thickness of the metal you are welding and then refer to the table below to select the proper electrode size and current setting.

PLATE THICKNESS IN INCHES	ELECTRODE DIAMETER IN INCHES	CURRENT SETTING
UP TO 3/16	1/16	50—100
UP TO 1/4	3/32	100—150
ABOVE 1/8	1/8	125—175
ABOVE 1/4	5/32	150—200

NOTE: Always make a sample weld on a piece of scrap material to be sure you have chosen the correct electrode and current setting.

WELDING CABLE SELECTION

The table below shows the current carrying capacity of various lengths and gauges of standard copper welding cable. Whenever possible, refer to the cable manufacturer's recommendations.

Always allow a considerable safety margin when selecting welding cables. The cable's length and gauge (diameter), along with the material it is made from, all combine to determine how much current it can safely carry.

CAUTION: An undersize welding cable will offer unacceptably high resistance to current flow. This high resistance will shorten the service life of the generator/welder, and can even make the welding cables become hot enough to cause painful burns.

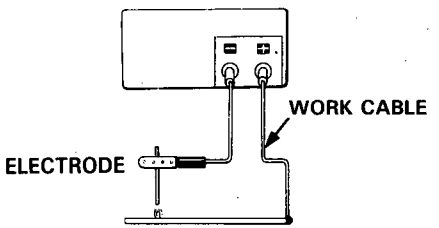
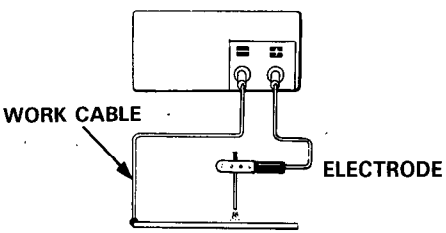
CABLE GAUGE	CABLE DIA.	LENGTH IN FEET*		
		0—50 FT.	50—100 FT.	100—250 FT.
		CURRENT CAPACITY AMPERES		
1	.644	250	200	170
2	.604	200	195	—

NOTE: The cable lengths given in the table above are the combined lengths of the negative and positive cables.

POLARITY SELECTION

The welding terminals are labeled "+" (positive) and "–" (negative). Changing the polarity of the cables will affect the weld. The correct polarity selection is dependent on the type of electrode you are using and the type of material you are welding; refer to the electrode manufacturer's recommendations for best results.

For straight polarity, attach the electrode cable to the negative terminal, and attach the work cable to the positive terminal. To change to reverse polarity, reverse the cables.

STRAIGHT POLARITY	REVERSE POLARITY
	

WELDING DUTY CYCLE

The duty cycle is the percentage of time that the welder can be operated in a given 10 minute period.

For example, at a rated output of 130 amperes, the EW171's duty cycle is 50%. This means that at 130 amperes, welding can be performed for a total of 5 minutes out of every 10 minute period. The duty cycle is longer at lower operating currents, and shorter at higher currents.

(EW171)

Current	170A	150A	130A	110A	Below 90A
Rate	15%	25%	50%	65%	100%

(EW140)

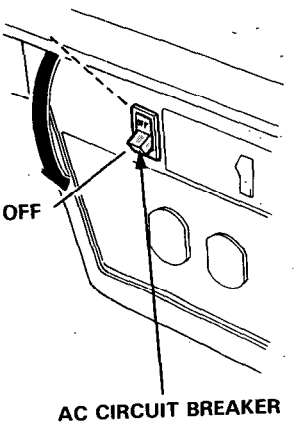
Current	140A	115A	100A	85A	Below 65A
Rate	15%	25%	40%	65%	100%

CAUTION: Do not operate the welder beyond its duty cycle; doing so will decrease the performance and service life of the generator/welder.

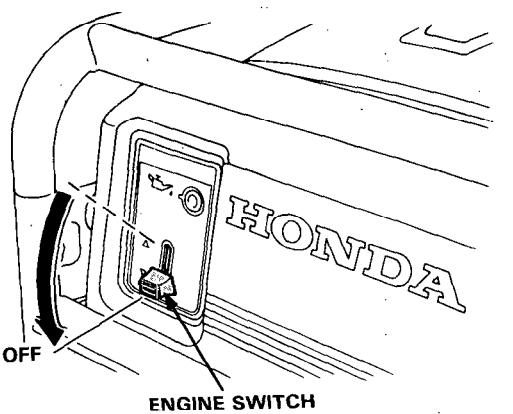
6. STOPPING THE ENGINE

NOTE: To stop the engine in an emergency, turn the engine switch to the off position.

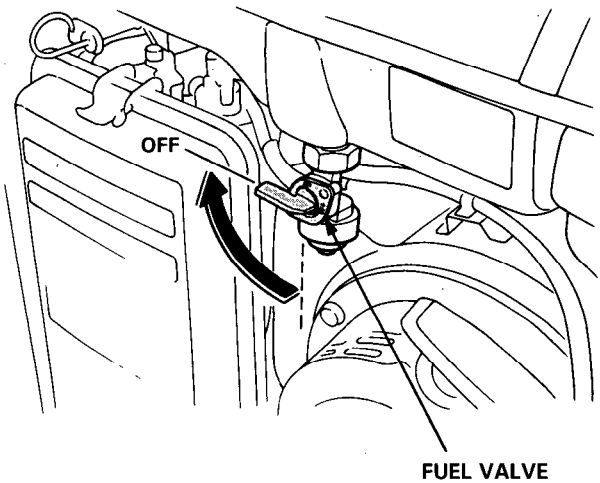
In normal use:
1. Move the AC circuit breaker to the OFF position.



2. Move the engine switch to the OFF position.



3. Turn the fuel valve to the OFF position.



- **High altitude operation**

At high altitude, the standard carburetor air-fuel mixture will be excessively rich. Performance will decrease, and fuel consumption will increase.

High altitude performance can be improved by installing a smaller diameter main fuel jet in the carburetor and readjusting the pilot screw. If you always operate the generator/welder at altitudes higher than 6,000 feet above sea level, ask your authorized Honda Generator/Welder dealer perform these carburetor modifications.

Even with suitable carburetor jetting, engine horsepower will decrease approximately 3.5% for each 1,000 foot increase in altitude. The affect of altitude on horsepower will be greater than this if no carburetor modification is made.

CAUTION: Operation of the generator/welder at an altitude lower than the carburetor is jetted for may result in reduced performance, overheating, and serious engine damage caused by an excessively lean air/fuel mixture.

7. MAINTENANCE

Periodic maintenance and adjustment are necessary to keep the generator/welder in good operating condition. Perform the service and inspection scheduled in the table on the following page.

⚠WARNING Shut off the engine before performing any maintenance. If the engine must be run, make sure the area is well ventilated.
Exhaust contains poisonous carbon monoxide gas; exposure may cause loss of consciousness and may lead to death.

CAUTION: Use only genuine HONDA parts or their equivalent for maintenance or repair. Replacement parts which are not of equivalent quality may damage the generator/welder.

Tool kit

The tools supplied with the generator will help you to perform the owner-maintenance procedures listed on the following page. Always keep this tool kit with the generator/welder.

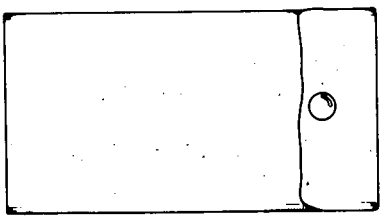

10 x 12 mm WRENCH


SCREW DRIVER


PLUG WRENCH


DRIVER HANDLE


PLUG WRENCH HANDLE


TOOL BAG

Maintenance Schedule

ITEM / REGULAR SERVICE PERIOD (Perform at every indicated month or operating hour interval, whichever comes first.)		Each use	First month or 20 Hrs.	Every 3 months or 50 Hrs.	Every 6 months or 100 Hrs.	Every year or 300 Hrs.
Engine oil	Check level	O				
	Change		O		O	
Air cleaner	Check	O				
	Clean			O(1)		
Sediment cup	Clean				O	
Spark plug	Clean-Readjust				O	
Spark arrester	Clean				O	
Valve clearance	Check-Readjust					O(2)
Fuel tank and strainer	Clean					O(2)
Fuel line	Check (Replace if necessary)	Every 3 years (2)				

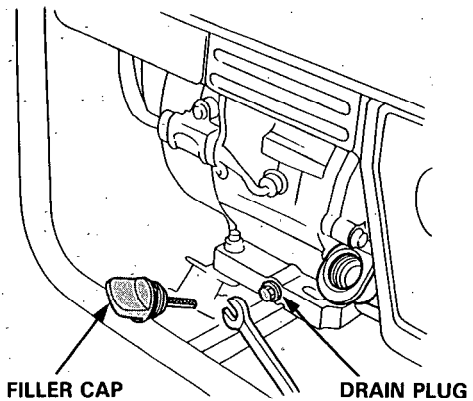
NOTE: (1): Service more frequently when used in dusty areas.
(2): These items should be serviced by an authorized Honda dealer, unless the owner has the proper tools and is mechanically proficient. See the Honda Shop Manual.

Changing Oil

Drain the oil while the engine is still warm to assure rapid and complete draining.

1. Remove the oil filler cap and drain plug to drain the oil.
2. Install the drain plug, and tighten it securely.
3. Refill with the recommended oil (see page 8), and check the oil level.

OIL CAPACITY: 1.1 ℓ (1.16 USqt)



CAUTION: Used motor oil may cause skin cancer if repeatedly left in contact with the skin for prolonged periods. Although this is unlikely unless you handle used oil on a daily basis, it is still advisable to thoroughly wash your hands with soap and water as soon as possible after handling used oil.

NOTE: Please dispose of used motor oil in a manner that is compatible with the environment. We suggest you take it in a sealed container to your local service station for reclamation. Do not throw it in the trash or pour it on the ground.

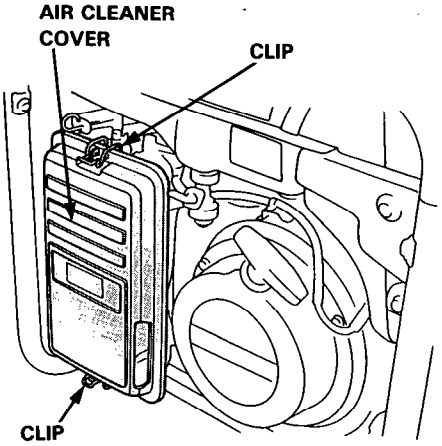
Air Cleaner Service

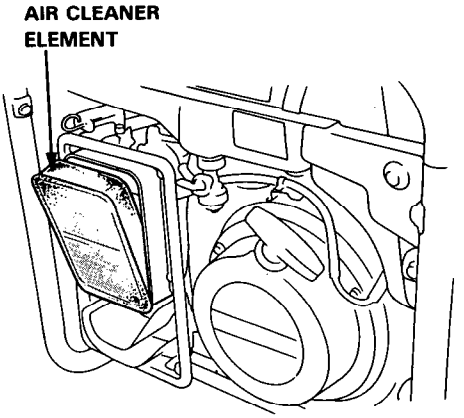
A dirty air cleaner will restrict air flow to the carburetor. To prevent carburetor malfunction, service the air cleaner regularly (page 29). Service more frequently when operating the generator/welder in extremely dusty areas.

⚠WARNING Never use gasoline or low flash point solvents for cleaning the air cleaner element. A fire or explosion could result.

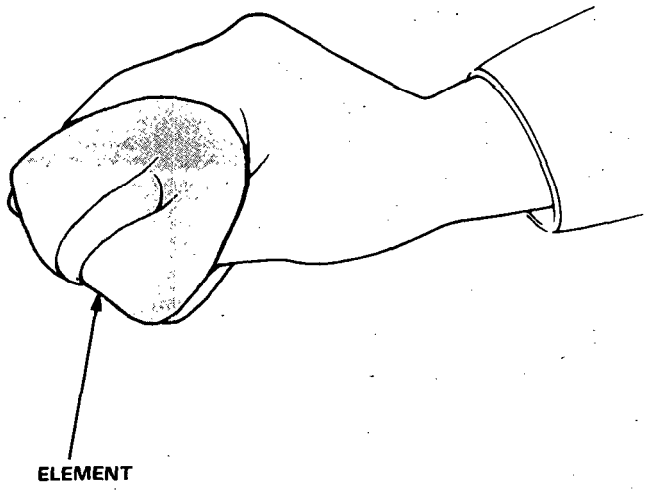
CAUTION: Never run the engine without the air cleaner. Rapid engine wear will result from contaminants, such as dust and dirt, being drawn through the carburetor, into the engine.

1. Unsnap the air cleaner cover springs, remove the air cleaner cover, and remove the element.





2. Wash the element in a solution of household detergent and warm water, then rinse thoroughly, or wash in nonflammable or high flash point solvent. Allow the element to dry thoroughly.
3. Soak the element in clean engine oil and squeeze out the excess oil. The engine will smoke during initial start-up if too much oil is left in the element.
4. Reinstall the air cleaner element and the cover.



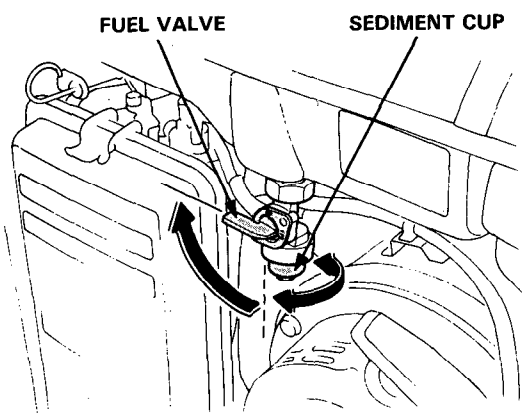
Sediment Cup Cleaning

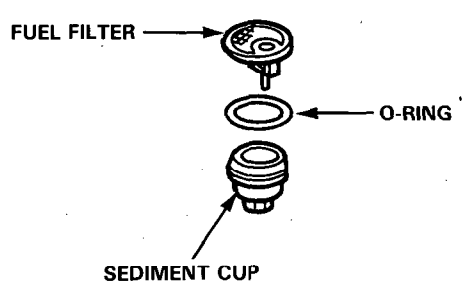
The sediment cup prevents dirt or water which may be in the fuel tank from entering the carburetor. If the engine has not been run for a long time, the sediment cup should be cleaned.

1. Turn the fuel valve to the OFF position. Remove the sediment cup.
2. Clean the cup thoroughly.
3. Check to be sure the O-ring is in place, and reinstall the sediment cup.

⚠WARNING

- **Gasoline is extremely flammable and is explosive under certain conditions.**
- **After installing the sediment cup, check for fuel leaks, and make sure the area is dry before starting the engine. Fuel vapor or spilled fuel may ignite.**





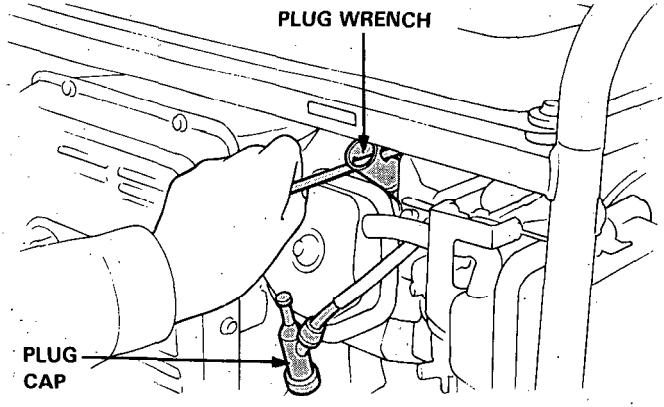
Spark Plug Service

Recommended spark plug: BPR-5ES (NGK)
W16EPR-U (ND)

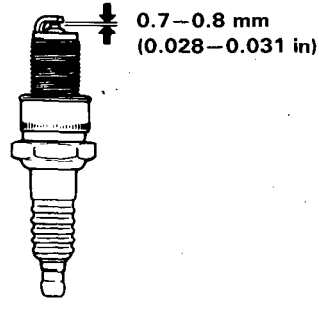
To ensure proper engine operation, the spark plug must be properly gapped and free of deposits.

⚠WARNING If the engine has been running, the muffler will be very hot. Be careful not to touch the muffler.

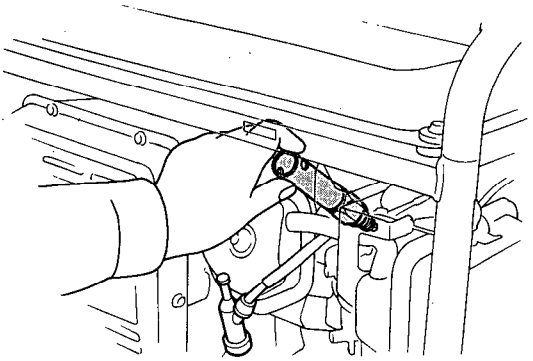
1. Remove the spark plug cap.
2. Clean any dirt from around the spark plug base.
3. Use the wrench supplied in the tool kit to remove the spark plug.



4. Visually inspect the spark plug. Discard it if the insulator is cracked or chipped. Clean the spark plug with a wire brush if it is to be reused.
5. Measure the plug gap with a feeler gauge. The gap should be 0.7—0.8 mm (0.028—0.031 in).



6. Check that the spark plug washer is in good condition, and thread the spark plug in by hand to prevent cross-threading.



7. After the spark plug is seated, tighten with a spark plug wrench to compress the washer.

NOTE: If installing a new spark plug, tighten 1/2 turn after the spark plug seats to compress the washer. If reinstalling a used spark plug, tighten 1/8—1/4 turn after the spark plug seats to compress the washer.

CAUTION:

- **The spark plug must be securely tightened. An improperly tightened plug can become very hot and may cause engine damage.**
- **Use only the recommended spark plugs or equivalent. Spark plugs which have an improper heat range may cause engine damage.**

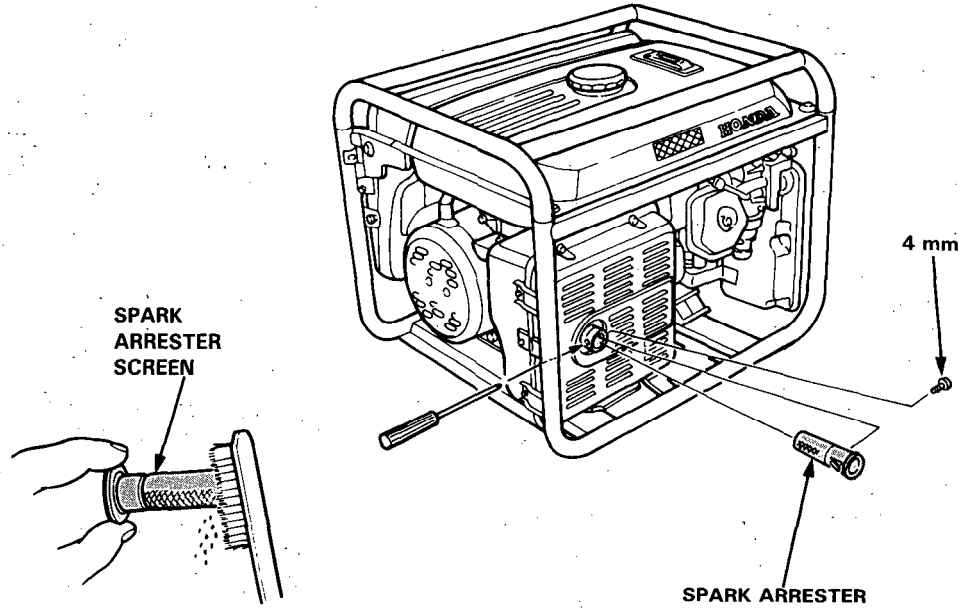
Spark Arrester Maintenance

This generator/welder is equipped with a U.S.D.A. qualified spark arrester which requires periodic maintenance to ensure its effectiveness. It is illegal in some areas to operate an engine without a spark arrester; check local laws and regulations.

⚠WARNING ***The muffler becomes very hot during operation and remains sufficiently hot to inflict burns if touched, even after shutting off the engine.***

CAUTION: The spark arrester must be serviced every 100 hours to maintain its efficiency.

1. Remove the 4 mm screw from the side of the muffler exhaust pipe. Use a screwdriver to push in the spark arrester retaining tab on the opposite side of the exhaust pipe, and remove the spark arrester.
2. Clean the carbon deposits from the spark arrester screen with a brush. Check the spark arrester screen for damage. Replace the spark arrester if the screen is torn or damaged.
3. Reinstall the spark arrester, and tighten the screw securely.

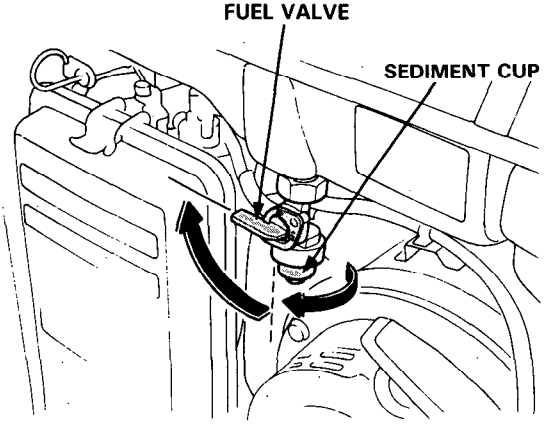


⚠ WARNING

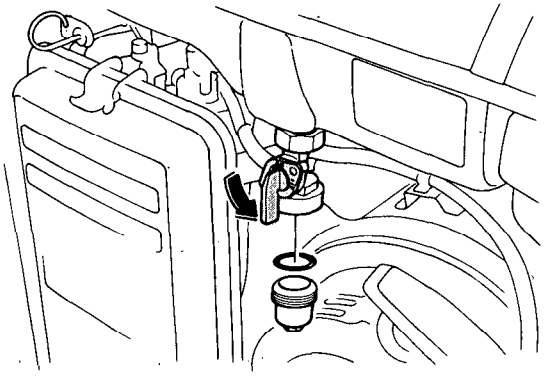
- **To prevent severe burns or fire hazards, let the engine cool before transporting the generator/welder or storing it indoors.**
- **When transporting the generator/welder, turn the engine switch and the fuel valve to the OFF position, and keep the generator/welder level to prevent fuel spillage. Fuel vapor or spilled fuel may ignite.**

Before storing the unit for an extended period:

1. Be sure the storage area is free of excessive humidity and dust.
2. Drain the fuel —
   a. With the fuel valve OFF, remove and empty the sediment cup.



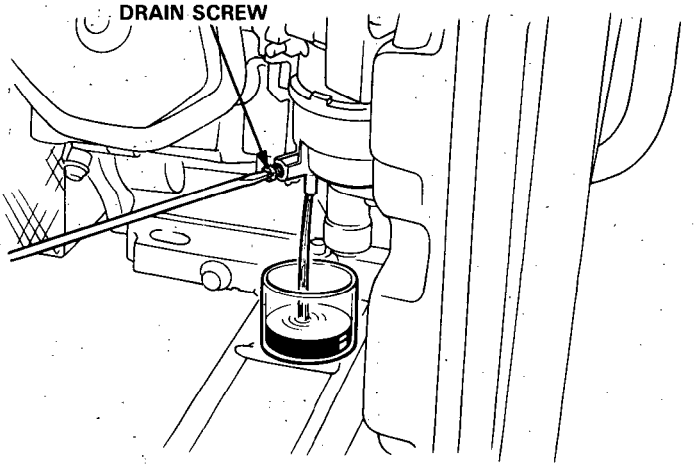
   b. Turn the fuel valve ON, and drain the gasoline in the fuel tank into a suitable container.



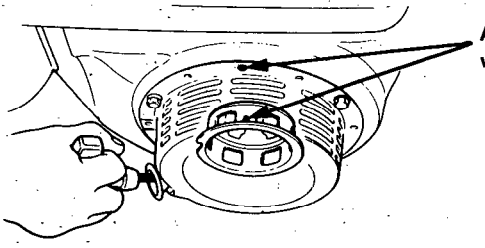
   c. Replace the sediment cup and tighten securely.

d. Drain the carburetor by loosening the drain screw. Drain the gasoline into a suitable container.

⚠WARNING Gasoline is extremely flammable and is explosive under certain conditions. Perform this task in a well-ventilated area with the engine stopped. Do not smoke or allow flames or sparks in the area during this procedure.



3. Change the engine oil.
4. Remove the spark plug, and pour about a tablespoon of clean engine oil into the cylinder. Crank the engine several revolutions to distribute the oil, then reinstall the spark plug.
5. Slowly pull the starter grip until resistance is felt. At this point, the piston is coming up on its compression stroke and both the intake and exhaust valves are closed. Storing the engine in this position will help to protect it from internal corrosion.



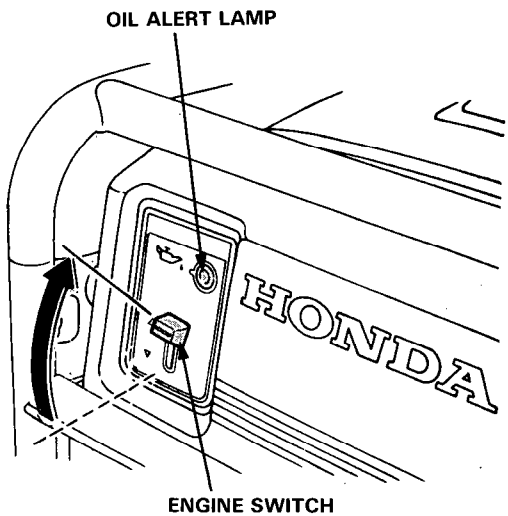
Align the notch on the starter pulley with the hole at the top of recoil starter.

6. Cover the engine to keep out dust.

A. When the engine will not start:
1. Is the engine switch on?
2. Does the oil alert lamp flash when the starter is pulled?
3. Is there enough fuel?
4. Are all loads disconnected from the AC receptacles?
5. Is there a spark at the spark plug?
   a. Remove the spark plug cap. Clean any dust from around the spark plug base, then remove the spark plug.
   b. Install the spark plug in the plug cap.
   c. Turn the engine switch on.
   d. Grounding the side electrode to any engine ground, pull the recoil starter to see if sparks jump across the gap.

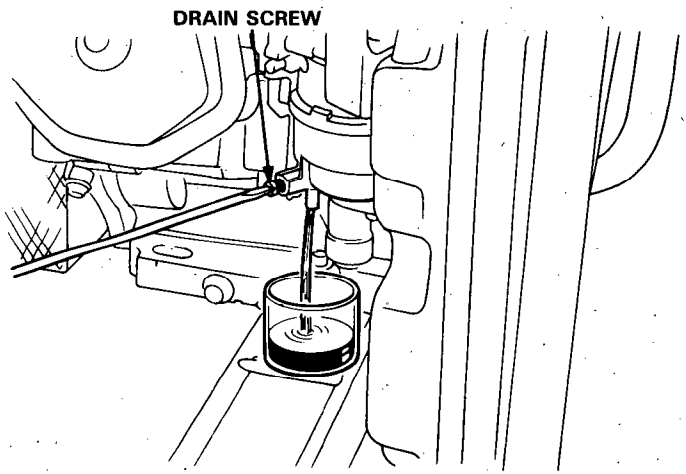
⚠WARNING If any fuel has been spilled, make sure the area is dry before tasting the spark plug. Fuel vapor or spilled fuel may ignite. Perform this test in a well-ventilated area.

   e. If there are no sparks, replace the plug.
   f. If the new spark plug does not spark, take the generator to an authorized Honda dealer.



6. Is gasoline reaching the carburetor?
   To check, place a suitable container under the drain tube, turn the fuel valve on and loosen the drain screw. Fuel should flow out freely. If OK, try to start the engine according to the instructions.

⚠WARNING If any fuel has been spilled, make sure the area is dry before attempting to start the engine. Fuel vapor or spilled fuel may ignite. Perform this test in a well-ventilated area.



7. If the engine still does not start, take the generator to an authorized Honda dealer.

B. When the engine starts but stops immediately;
   1. Check the oil alert lamp.
      If the oil alert lamp flashes when the starter is pulled, check the engine oil level and fill with the recommended oil.
   2. Re-start the engine.

C. No electricity at the AC receptacles:
   1. Is the AC circuit breaker on?
   2. Check the electrical appliance or equipment for any defects.

D. When the welding arc is weak:
   1. Is the cable size correct? (page 24)
      - Length
      - Gauge/Diameter
   2. Is the proper electrode being used? (page 24)

Dimensions

Model	EW140	EW171
Power product description code	EA9	EB1
Length x Width x Height	630 x 495 x 485 mm (24.8 x 19.5 x 19.1 in)	675 x 510 x490 mm (26.6 x 20.1 x 19.3 in)
Dry weight	74 kg (163.1 lb)	92 kg (202.8 lb)

Engine

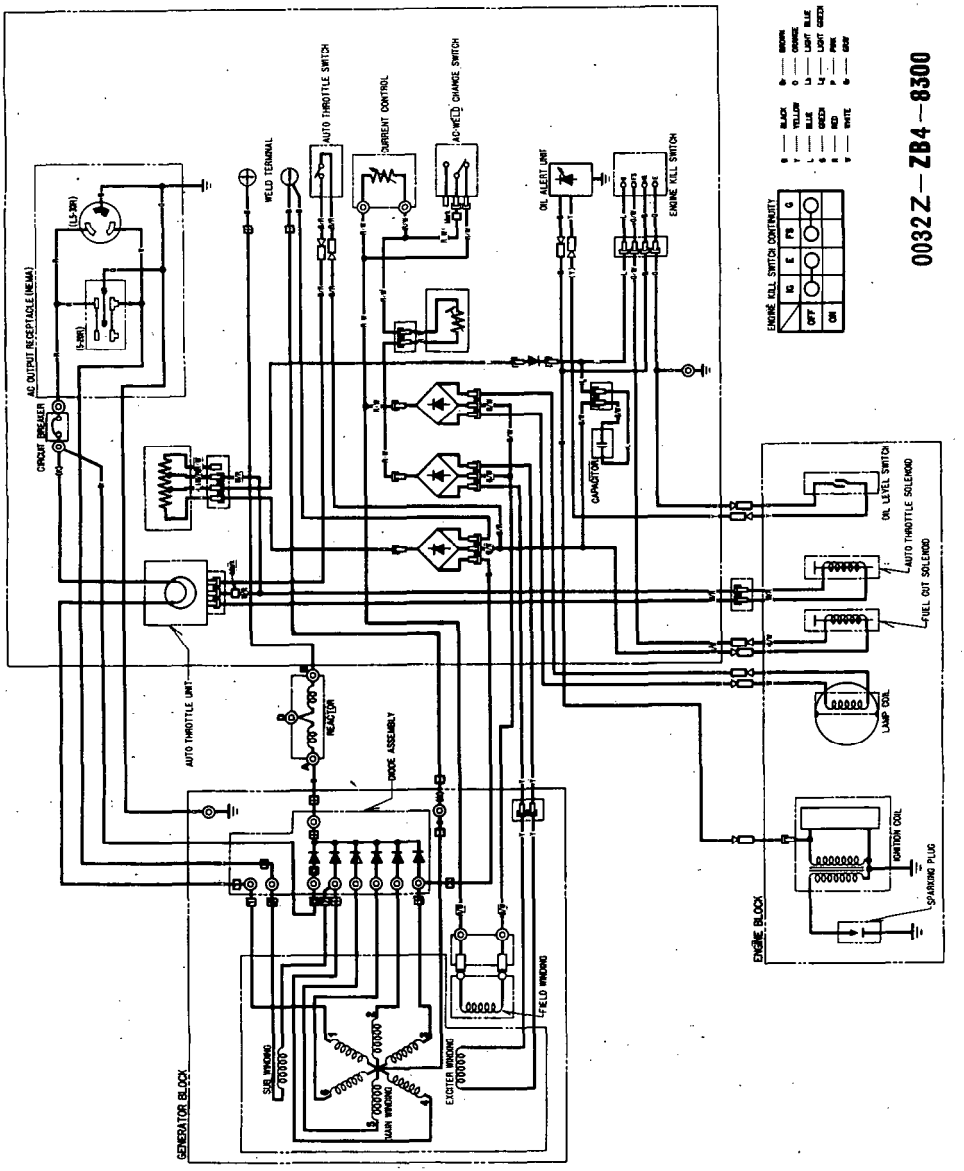
Engine Type	GX240	GX340
Displacement [Bore x Stroke]	242 cc (14.8 cu in) [73 x 58 mm (1.9 x 2.3 in)]	337 cc (20.6 cu in) [82 x 64 mm (3.2 x 2.5 in)]
Compression Ratio	8.2 : 1	8.0 : 1
Engine Speed (rated r.p.m.)	3,600 r.p.m.	
Cooling System	Forced air	
Ignition System	Transistorized magneto	
Oil Capacity	1.1 ℓ (1.16 US qt)	
Fuel Tank Capacity	17.0 lit (4.49 US gal)	
Spark Plug	BPR-5ES (NGK), W16EPR-U (ND)	

Generator

DC (WELDING) output	Rated current	100A	130A
	Rated voltage	25V	26.5V
	Welding current	40—140A	50—170A
	Operating rate	40% 100A	50% 130A
	Electrode diameter	2.0—3.2mm	2.6—4.0mm
AC output	Rated Voltage Rated Frequency	120V 60Hz	120V 60Hz
	Rated Ampere	25A	33.3A
	Rated Output	3.0KVA	4.0KVA

11. WIRING DIAGRAM

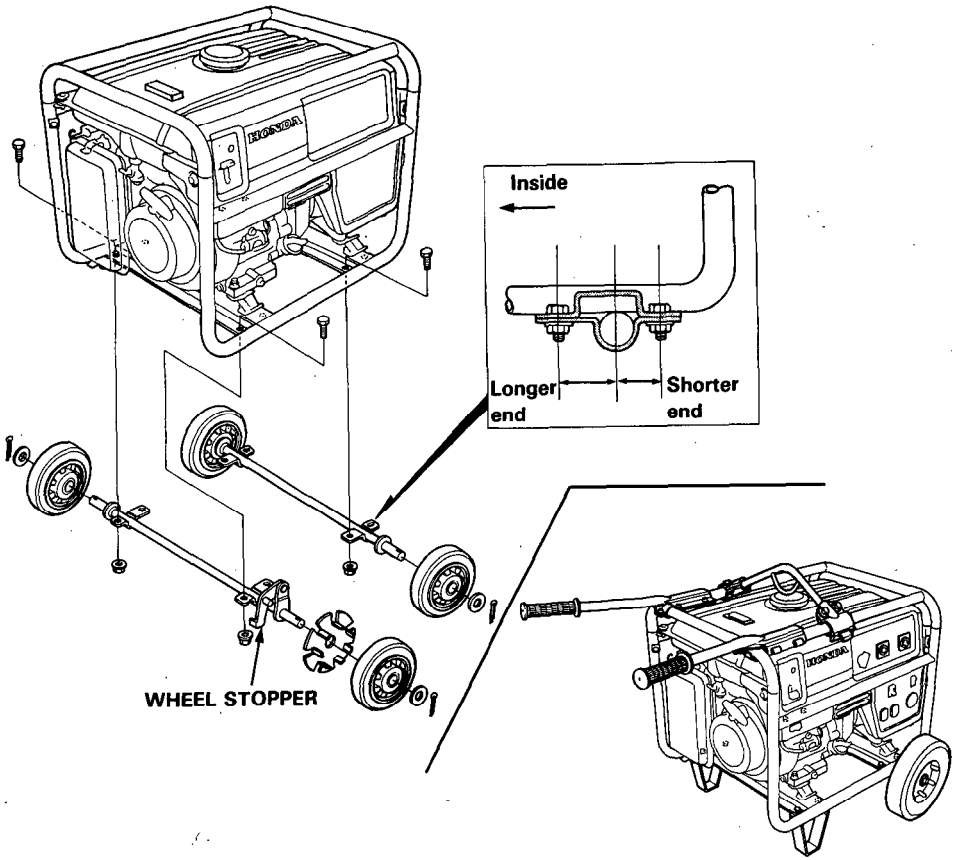
EW140/171



12. 4-WHEEL KIT INSTALLATION (optional parts)

1. Install the wheels on the axle shafts.
2. Install the axle assemblies on the generator using eight bolts and nuts, as shown.

NOTE: The shaft with the wheel stopper goes on the engine side.



2-WHEEL AND HANGER KIT
(optional parts)

13. WARRANTY SERVICE

Owner Satisfaction

Your satisfaction and goodwill are important to your dealer and to us. All Honda warranty details are explained in the Distributor's Limited Warranty. Normally, any problems concerning the product will be handled by your dealer's service department. If you have a warranty problem that has not been handled to your satisfaction, we suggest you take the following action:

- Discuss your problem with a member of dealership management. Often complaints can be quickly resolved at that level. If the problem has already been reviewed with the Service Manager, contact the owner of the dealership or the General Manager.

- If your problem still has not been resolved to your satisfaction, contact:

  American Honda Motor Co., Inc.
  P.O. Box 50
  Gardena, California 90247-0805
  Telephone: (213) 604-2400

  We will need the following information in order to assist you:

  — Your name, address, and telephone number

  — Product model and serial number

  — Date of purchase

  — Dealer name and address

  — Nature of the problem

After reviewing all the facts involved, you will be advised of what action can be taken. Please bear in mind that your problem will likely be resolved at the dealership, using the dealer's facilities, equipment, and personnel, so it is very important that your initial contact be with the dealer.

Your purchase of a Honda product is greatly appreciated by both your dealer and American Honda Motor Co., Inc. We want to assist you in every way possible to assure your complete satisfaction with your purchase.

Current customer service contact information:

United States, Puerto Rico, and U.S. Virgin Islands:

Honda Power Equipment dealership personnel are trained professionals. They should be able to answer any question you may have. If you encounter a problem that your dealer does not solve to your satisfaction, please discuss it with the dealership's management. The Service Manager or General Manager can help. Almost all problems are solved in this way.

If you are dissatisfied with the decision made by the dealership's management, contact the Honda Power Equipment Customer Relations Office. You can write:

American Honda Motor Co., Inc.
Power Equipment Division
Customer Relations Office
4900 Marconi Drive
Alpharetta, GA 30005-8847

Or telephone: (770) 497-6400 M-F, 8:30 am - 7:00 pm EST

When you write or call, please provide the following information:

- Model and serial numbers
- Name of the dealer who sold the Honda power equipment to you
- Name and address of the dealer who services your equipment
- Date of purchase
- Your name, address, and telephone number
- A detailed description of the problem

HONDA

HONDA MOTOR CO., LTD. TOKYO, JAPAN

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