Operator's Instruction Manual

HSS-14



NOTE: Shown with optional cart

14" Gasoline Powered Masonry Saw

Manual - Portable





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READ AND UNDERSTAND THE OPERATORS INSTRUCTION MANUAL *THOROUGHLY* BEFORE ATTEMPTING TO OPERATE THIS EQUIPMENT.

Death or serious injury could occur if this machine is used improperly.



SAFETY MESSAGES

 Safety Instructions are proceeded by a graphic alert symbol of DANGER, WARNING, or CAUTION.



Indicates an imminent hazard which, if not avoided, will result in death or serious injury.



Indicates an imminent hazard which, if not avoided, can result in death or serious injury.



Indicates hazards which, if not avoided, could result in serious injury and or damage to the equipment.

GASOLINE/PROPANE POWERED EQUIPMENT



 Engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.



- Gasoline is extremely flammable and poisonous. It should only be dispensed in well ventilated areas, and with a cool engine.
- Small gasoline engines produce high concentrations of carbon monoxide (CO) example: a 5 HP 4 cycle engine operation in an enclosed 100,000 cu. ft. area with only one change of air per hour is capable of providing deadly concentrations of CO in less than fifteen minutes. Five changes of air in the same area will produce noxious fumes in less than 30 minutes. Gasoline or propane powered equipment should not be used in enclosed or partially enclosed areas. Symptoms of CO poisoning include, headache, nausea, weakness, dizziness, visual problems and loss of consciousness. If symptoms occur get into fresh air and seek medical attention immediately.

ELECTRICAL POWERED EQUIPMENT



Extreme care must be taken when operating electric models with water present: Ensure power cord is properly grounded, is attached to a Ground-Fault-Interrupter (GFI) outlet, and is undamaged.

- Check all electrical cables be sure connections are tight and cable is continuous and in good condition. Be sure cable is correctly rated for both the operating current and voltage of this equipment.
- Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with qualified electrician or service person if there is any doubt as to whether the outlet is properly grounded. Adhere to <u>all</u> local codes and ordinances.
- NOTE: In the event of a malfunction or breakdown, grounding
 provides a path of least resistance for the electric current to
 dissipate. The motor is equipped with a grounded plug and
 must be connected to an outlet that is properly installed and
 properly grounded. DO NOT modify the plug provided on the
 motor. If the plug does not fit the outlet have a qualified electrician install the proper receptacle.
- Switch motor OFF before disconnecting power.

- Do not disconnect power by pulling cord. To disconnect, grasp the plug, not the cord.
- Unplug power cord at the machine when not in use and before servicing.

GENERAL INSTRUCTIONS

- Equipment should only be operated by trained personnel in good physical condition and mental health (not fatigued). The operator and maintenance personnel must be physically able to handle the bulk weight and power of this equipment.
- This is a one person tool. Maintain a safe operating distance
 to other personnel. It is the <u>operator's responsibility</u> to keep
 other people (workers, pedestrians, bystanders, etc.) away
 during operation. Block off the work area in all directions with
 roping, safety netting, etc. for a safe distance. Failure to do so
 may result in others being injured by flying debris or exposing
 them to harmful dust and noise.
- This equipment is intended for commercial use only.
- For the operator's safety and the safety of others, always keep all guards in place during operation.
- Never let equipment run unattended.

















 Personal Protection Equipment and proper safety attire must be worn when operating this machinery. The operator must wear approved safety equipment appropriate for the job such as hard hat and safety shoes when conditions require. Hearing protection MUST be used (operational noise levels of this equipment may exceed 85db). Eye protection MUST be worn at all times.



Keep body parts and loose clothing away from moving parts. Failure to do so could result in dismemberment or death.

- Do not modify the machine.
- Stop motor/engine when adjusting or servicing this equipment.



Maintain a safe operating distance from flammable materials. Sparks from the cutting-action of this machine can ignite flammable materials or vapors.

DUST WARNING



Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects, or other reproductive harm. Some examples of these chemicals are:

- · Lead from lead-based paints, and
- Crystalline silica from bricks and concrete and other masonry products.

Your risk of exposure to these chemicals varies depending on how often you do this type of work. To reduce your risk: work in a well ventilated area, use a dust control system, such as an industrial-style vacuum, and wear approved personal safety equipment, such as a dust/particle respirator designed to filter out microscopic particles.



SPECIFICATIONS

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Note:
All dimensions and weights are for reference only and subject to change at any time.



NOTE: Shown with optional cart

Figure 1

	HSS-14				
"A"	42" 106.68cm				
"B"	27" 65.58cm				
"C"	20" 50.8cm				
Weight	208 lbs. 94.3kg				





Read and understand this *Operator's Instruction Manual*, and the *Engine Manufacturer's Owner's Manual*<u>before</u> operating this equipment.

Death of serious injury can result if this machine is used improperly.







Safety Guidelines





Eye and ear protection must be worn at all times while the HSS-14 is in use. During normal operation, sound pressure levels exceed 85dBA. Use only ANSI approved safety glasses to help prevent eye injury. Everyday eyeglasses have only impact resistant lenses; they are NOT safety glasses.





Operator must wear appropriate clothing and footwear. Do not wear loose clothing or jewelry that can get tangled in moving parts. Footwear should provide sure footing and protection from debris that may be dropped. Take steps to be sure hair will not be caught in moving parts. If necessary, tie it back.



Disconnect the spark plug wire lead before performing any service on the machine.

- When loading or unloading the saw, use caution. Make sure rolling table is locked using the table lock so that the blade will not be damaged. (Figure 4, Item K) Do not move the saw while the engine is running.
- This unit is shipped new from the factory without oil or gasoline, it will need to be added before it is used. Check the *Engine Manufacturer's Owner's Manual* for instructions on break-in, servicing and use of engine.



This HSS-14 gasoline powered saw is designed to be used in areas where electrical power is not available. Do not operate gasoline-powered equipment without adequate ventilation. The exhaust fumes contain carbon monoxide, an invisible, odorless gas that can kill.



This machine is designed to cut brick, pavers, stone and tile. The work piece must be placed on the rolling table surface and the table used to move the work piece to the blade. Cut only in a straight line. Do not force or twist the work piece into the blade. Personal injury or damage to the equipment or blade can result.

- Never exceed the maximum operating speed of the blade. Match the blade speed rating with the arbor shaft speed.
- Never leave the saw running unattended.
- Never operate this saw under the influence of drugs, alcohol or when taking medications that impair the senses or reactions, or when excessively tired or under stress.
- Make sure all safety decals can be clearly read and understood. Replace damaged or missing decals immedately.

Safety warnings and guidelines do not by themselves eliminate danger.

They are not given as substitutes for proper accident prevention procedures and good judgement.



Operating Instructions

Diagrams shown with Honda Cyclone Dual-Filter Element Engine as an example. Consult the *Engine Manufacturer's Owner's Manual* for information on specific models.

- A. Spark Plug Lead
- B. Air Filter
- C. Vacuum Hook Up
- D. Water Tray
- E. Oil Drain
- F. Oil Plug/Dip Stick
- G. Engine Throttle
- H. Fuel Valve Lever
- I. Choke
- J. Air Filter Housing
- K. Table Lock
- L. Back Stop
- M. Right Angle Guide Bar

- N. Rolling Table
- O. Diamond Blade
- P. Blade Guard
- Q. Water Hose
- R. On/Off Switch
- S. Recoil Starter
- T. Fuel Tank
- U. Muffler
- V. Belt Guard
- W. Dust Channel
- X. Drain Plug
- Y. (Optional) Cart



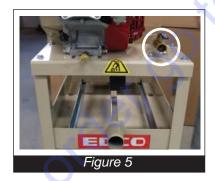




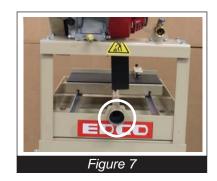
Before Starting Engine:

- Read and understand the instructions supplied by the engine manufacturer.
- Familiarize yourself with all engine and saw controls.
- Visually inspect the entire machine for damage or wear. Look for signs of oil or fuel leaks. Remove excess dirt or debris. Check that all nuts, bolts and screws are tightened. Check for proper alignment of moving parts, possible binding of moving parts, breakage of parts, loose mounting brackets, and any other condition that might affect operation.
- Inspect diamond blade and arbor shaft. Check blades for cracks, loose segments, worn or out-of-round arbor holes. Do not use warped, twisted, out-of-balance blades or any blade of questionable condition. (*Figure 9*)
- Check engine oil. Make sure that it is at the proper level and that it is clean.
 Note: Some engines have an Oil Alert System that will automatically stop the engine before the oil level falls below the safe limit. To avoid an unexpected shut down, check the oil level regularly during operation.
- Check the fuel level. Do not over fill fuel tank and never refuel a hot engine. If refueling is necessary during operation, allow engine to cool down first.
- Inspect the air filter to be sure it is clean.
- If wet cutting, attach water source to the machine's supply hose circled in (Figure 5). If you have a place for the water to run, remove the drain plug in the water tray (Figure 6).
- If wet cutting with the optional water pump which recycles the water from the tray, plug the drain hole and be sure the water is circulating from the tray to the water pump.
- If dry cutting, attach the vacuum to the end of the dust channel circled in (*Figure 7*).

 Note: While the HSS-14 was designed to be used with a standard shop vac, EDCO recommends using a heavy duty industrial vacuum such as the VAC-100. The VAC-100 has the advantage of a Self-Purging System to help keep concrete dust from building up on the filter and a larger filter area to maintain performance during use. Thus, reducing time wasted on frequently cleaning a standard shop vac and filter media.







Refer to the Rx for Diamond Blades for more detailed information on diamond blades.



Starting the Engine:

- Be sure blade is clear of item to be cut.
- Determine that the recoil starter assembly turns freely, starter rope pulls easily, and the rope retracts properly.
- Follow the instructions supplied in the engine manufacturer's Owner's Manual for starting engine.
- Open the throttle and allow engine to reach operating temperature. Do not use the throttle as a means to match the
 specified blade speed to the arbor shaft speed. Note: To ensure the necessary power is transferred to the blade, all
 cutting must be done at full throttle. The governor is factory set for correct speed altering this setting will damage
 the machine. Maintain engine to factory specifications.

Cutting:

- Place the work piece on rolling table against the backstop and use the rolling table to move the work piece to the blade. Do not strain the engine while cutting or jam work piece into the blade. Do not twist the work piece while cutting.
- Do not reach underneath or around work piece while the blade is rotating.
- Keep stable footing at all times while cutting.



Keep hair, clothing, fingers and all body parts away from the blade and any other moving parts.

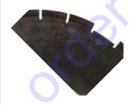
- For wet cutting, maintain an adequate supply of water to cool the blade.
 Note: If using the optional water pump, clean water must be run through the cycle daily to avoid build up in the pump.
- When you have finished cutting, return throttle to idle. Stop the engine by returning the engine mounted stop switch to the OFF position. Do not leave the saw running unattended.

Use Diamond Blades Only					
Blade Diameter	14 inches				
Arbor Shaft Diameter	1.0 inches				
Max Cutting Depth	4 1/2 inches				
Arbor Speed	3600 RPM				
Figure 8					

• Clean dust and debris from whole machine - including inside the dust channel.

IMPORTANT REMINDER: This machine is designed to use diamond blades to cut pavers, stone, tile, masonry products and brick. Do not use it to cut anything else.

Possible Diamond Blade Problems



Segment Loss: Usually insufficient water



Out-Of-Round
Blade not properly tightened or seated on arbor.



Cracked Segments and/or Core Wrong Blade for the job.



Blade Will Not Cut: Blade is glazed or to hard for the job.

Figure 9





Disconnect spark plug lead before performing any maintenance on this machine.



Maintenance

Consult the Engine Manufacturer's Owner's Manual for more detailed engine maintenance instructions.

Changing the Blade:

Inspect the new blade thoroughly before installing. Check for cracks, loose segments, worn or out-of-round arbor
holes. Refer to the Rx for Diamond Blades pamphlet provided with your blade for more detailed information on
inspecting blades. Besure the blade is appropriate for the job and matches the arbor shaft speed & mounting
configuration on this saw. (See page 11)

The HSS-14 was designed to be used with diamond saw blades only. It is a "fixed head machine", therefore it is important to use blades that will not wear down. Fiber blades will wear down and the cut will not go all the way through the work piece. In addition, for the vacuum system to operate properly when dry cutting, the blade must reach into the dust channel.



Figure 10

Step One:

Move the rolling table out of the way to the back or front of the machine.

Loosen the two wing nuts on the back side of the blade guard and rotate blade guard back and tighten to hold in guard in place. (*Figure 10*)



Loosen and remove arbor cap bolt.

(Figure 11)

Carefully remove old blade.

Inspect arbor shaft, backing plate and blade guard while blade is off.

Clean if dirty or replace if damaged or



Figure 11



Figure 12

Step Three:

Look for "direction of rotation" markings on the new blade. (Usually an arrow stamped on the blade.)

Place new blade on the arbor shaft verifying that the markings on the blade follow the proper direction of rotation. Blade should be positioned in the center of the dust channel. (*Figure 12*)

Reinstall and tighten bolt using a SAE 3/4" wrench.

Reposition blade guard and tighten wing nuts.

Reconnect spark plug lead.

Belt Adjustment and Replacement:

- Periodically check to be sure the belts are undamaged and that they are at the proper tension. Slipping belts will
 overheat causing the cutting speed to be limited and will shorten the life of the belts. Over-tensioned belts will shorten
 the life of the belts and bearings.
- On new equipment and after installing new belts, be certain to re-tension the belts after the first 4 hours of use. New belts are stiff and require a break in period. Belts that become loose could slip and/or overheat.
- Damaged, stretched or excessively worn belts should be replaced with a new complete set of belts.

IMPORTANT: Belts must be replaced as a set, even if only one belt is showing wear.

- Remove belt guard (3 bolts) and inspect belts. A straight edge is a good tool to use to be certain sheaves are
 even and properly aligned. (Figure 13)
- To tension/loosen belts or to remove worn belts, loosen engine mounting bolts (4) and slide the engine forward or back until belts are at proper tension or loose enough to remove. (Figure 14)
- To remove belts, loosen engine mounting bolts (4) and jacking screw (circled) to allow the engine to slide forward until belts slide off of the sheaves. (Figure 14)
- Place a complete set of new belts on the machine. Reposition engine then tighten bolts. Reinstall belt cover.







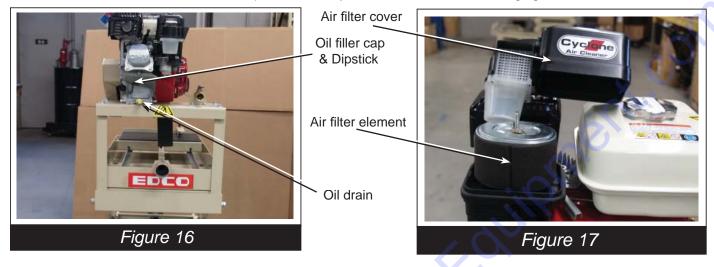
Clean and Lubricate Wheels on Rolling Table:

During daily visual inspection, check to be sure the wheels on the rolling table move smoothly and that there is no debris in the wheel tracks. (*Figure 15*)

Lubricate the wheels as necessary. Replace damaged or worn wheels circled in (*Figure 15*).

Change Engine Oil:

- Check Engine Oil before each operation. Open the filler cap and look at the dip stick. (Figure 16)
 Oil should be clearly visable both on the stick and in the cavity and should look fairly clean. Running the machine on dirty oil or when the oil is low will result in damage to the equipment.
- Change the Engine Oil after every 50 hours of operation or sooner as conditions require. Refer to the Engine Manufacturer's Owner's Manual for specific viscosity recommendations and changing instructions.



NOTE: To remove air filter cover remove wing nut on top of filter cover and lift cover off as shown in (Figure 17).

Inspect and Clean Oil Air Filter:

Shown with filter element. Outer foam filter is removable for cleaning. Refer to the Engine Manufacturer's Owner's Manual for instructions on specific models. Check air filter <u>at least</u> once daily. (Figure 17)

Dirt build up on the filter will cause the engine to wear faster.

SMI Dust and Silica Warning

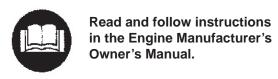
Grinding/cutting/drilling of masonry, concrete, metal and other materials can generate dust, mists and fumes containing chemicals known to cause serious or fatal injury or illness, such as respiratory disease, cancer, birth defects or other reproductive harm. If you are unfamiliar with the risks associated with the particular process and/or material being cut or the composition of the tool being used, review the material safety data sheets and/or consult your employer, the manufacturers/suppliers, governmental agencies such as OSHA and NIOSH and other sources on hazardous materials. California and some other authorities, for instance, have published lists of substances known to cause cancer, reproductive toxicity, or other harmful effects.

Control dust, mist and fumes at the source where possible. In this regard use good work practices and follow the recommendations of the manufacturers/suppliers, OSHA/NIOSH, and occupational and trade associations. Water should be used for dust suppression when wet grinding/cutting/drilling is feasible. When the hazards from inhalation of dust, mists and fumes cannot be eliminated, the operator and any bystanders should always wear a respirator approved by NIOSH/MSHA for the material being used.

Grinding/cutting/drilling of masonry, concrete and other materials with silica in their composition may give off dust or mists containing crystalline silica. Silica is a basic component of sand, quartz, brick clay, granite and numerous other minerals and rocks. Repeated and/or substantial inhalation of airborne crystalline silica can cause serious or fatal respiratory diseases, including silicosis. In addition, California and some other authorities have listed respirable crystalline silica as a substance known to cause cancer. When grinding/cutting/drilling such materials, always follow the respiratory precautions mentioned above.







Maintenance Schedule

This is for a quick reference to the information supplied in the Maintenance portion of this manual.

Follow the Engine Manufacturer's Maintenance Instructions	Before Operation	Daily	After Operation	Every 50 Hours of Operation	As Required	Annually
Visually Inspect Entire Machine and Hardware	X					
Check Engine Oil	X					
Inspect Blade and Arbor Shaft	X					
Inspect Guards	Ç	X				
Clean and Oil Air Filter		X				
Clean Dust and Dirt Off Machine			X			
Change Engine Oil				X		
Inspect Belts					X	
Lubricate Wheels on Rolling Table					X	
Replace Spark Plug						X



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