



Operator's Instruction Manual

MASONRY SAWS



GMS- 20 and MS-20 MASONRY SAWS

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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 preceded 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.

ive 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 all 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 machine 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 **operators' responsibility** 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.



Operator's Instruction Manual GMS-20 and MS-20

Table of Contents

Operator Controls	4-5
Safety Guideline	6
Operating Instructions	7-11
Maintenance	12-14
Machine Schedule	15
SMI Dust and Silica Warning	18
Limited Equipment Warranty	Inside Back Page



NOTE: Due to improvements your machine may not appear the same as the pictures in this manual.

Figure 1

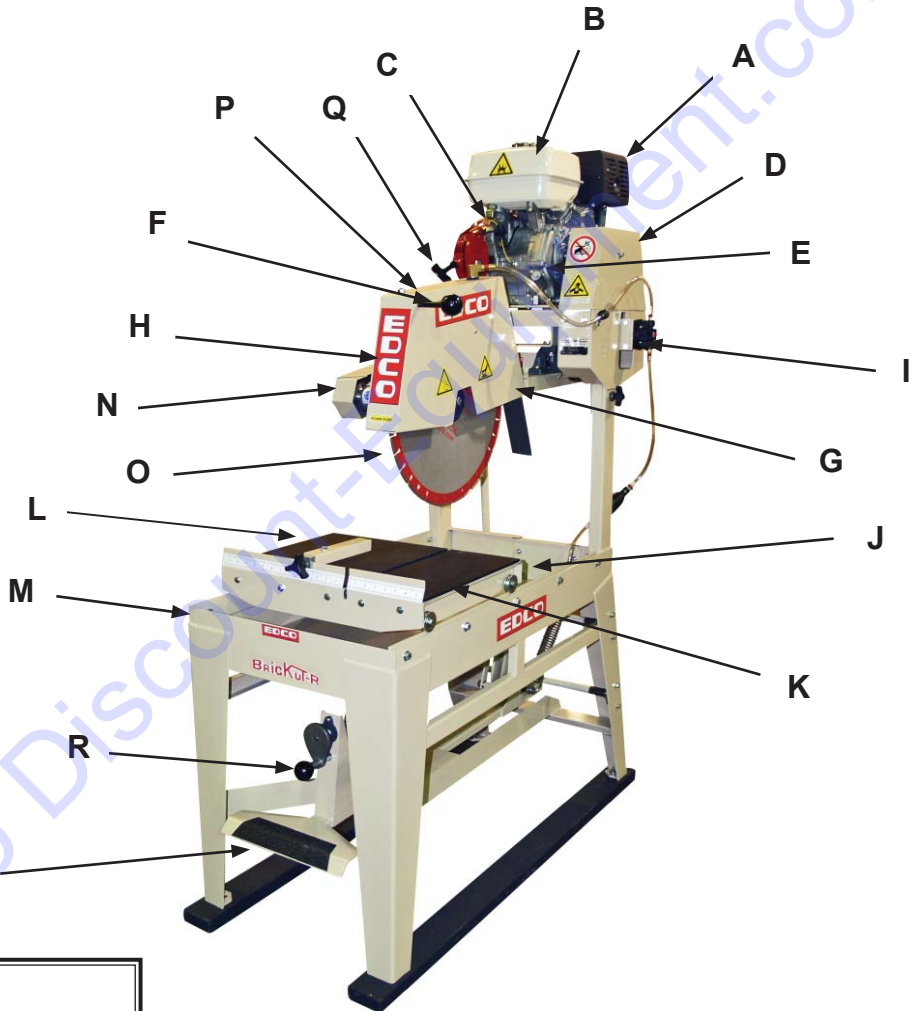
Specifications & dimensions are for reference only and subject to change.		
Model	GMS-20	MS-20
Length (L)	58" / 147.3cm	52" / 132cm
Width (W)	27" / 68.6cm	26.5" / 67.3cm
Height (H)	77" / 195.6cm	36.5" / 162cm
Total Weight	480lbs / 218kg	440lbs / 200kg



Operator Controls - GMS Model

GMS- 20 (Figure 2)

- A. Air Filter
- B. Fuel Tank
- C. On/Off Switch
- D. Water Pump Belt Guard
- E. Oil Dip Stick
- F. Handle
- G. Blade Guard
- H. Blade Guard Lock
- I. Water Pump
- J. Water Tray Plug
- K. Rolling Table
- L. Angle Cutting Stop
- M. Welded Steel Frame/Water Tray
- N. Drive Belt Guard
- O. Cutting Head Lock
- P. Engine Throttle
- Q. Recoil Starter
- R. Cutting Head Height Positioner
- S. Foot Treadle



DANGER

Do not operate gasoline powered equipment without adequate ventilation.

Carbon monoxide is an invisible, odorless gas that can kill.



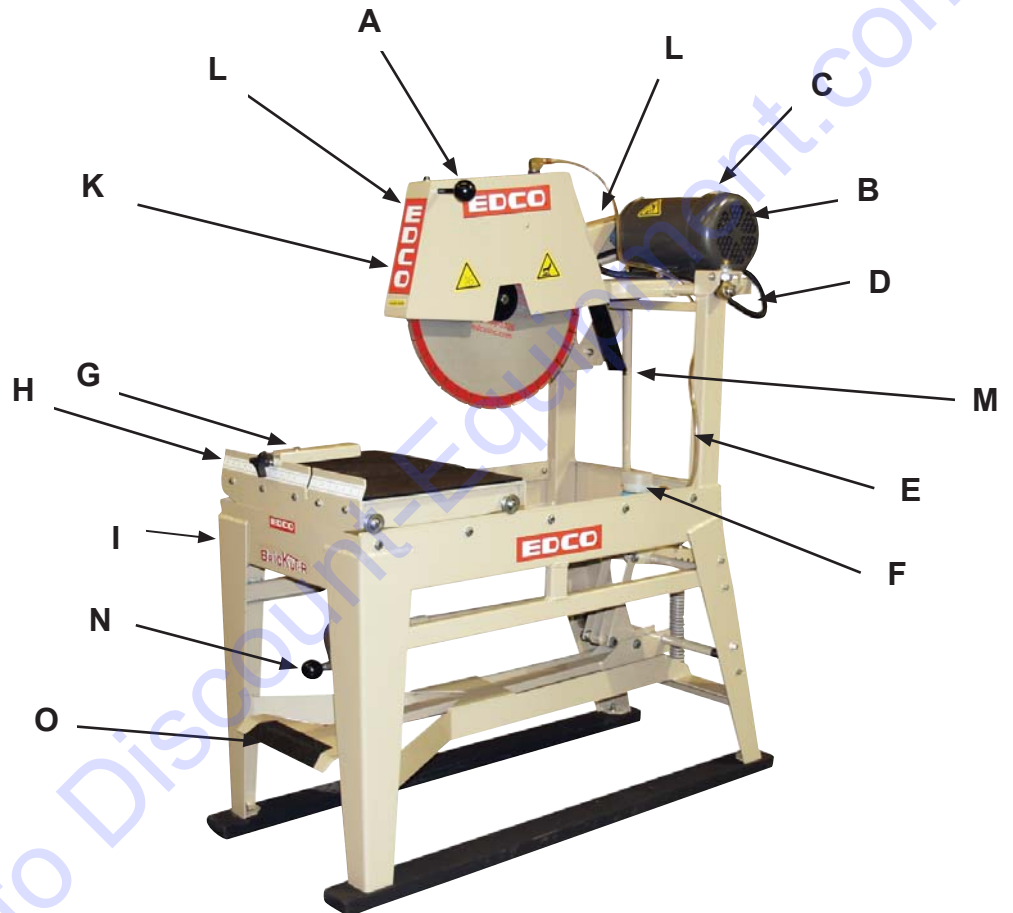
Figure 2 (GMS-20)



Operator Controls - MS Model

MS-20 (Figure 3)

- A. Handle
- B. Motor
- C. Reset Button
- D. Power Cord
- E. Water Pick Up Hose
- F. Water Tray Plug
- G. Rolling Table
- H. Angle Cutting Stop
- I. Welded Steel Frame/Water Tray
- J. Blade Guard
- K. Drive Belt Guard
- L. Motor Starter Box
- M. Cutting Angle Lock
- N. Cutting Head Height Positioner
- O. Foot Treadle



WARNING

Electric motor must be properly grounded
at all times.



Figure 3 (MS-20)



Read and understand this *Operator's Instruction Manual*,
and the *Engine Manufacturer's Owner's Manual*
before 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 saw is in use. During normal operation, sound pressure levels exceed 85dBA. Use only ANSI approved safety glasses to help prevent eye injury. Standard 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 insure hair will not be caught in moving parts. If necessary, tie it back.

- When loading or unloading the saw, use caution. Make sure rolling table is locked so that the blade will not be damaged. Do not move the saw while the engine is running.
- Never exceed the maximum operating speed of the blade. Match the blade speed rating with the arbor shaft speed. (See page 11)
- 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.
- Do not lend or rent this equipment without including the Operator's Instruction Manual and the Engine Manufacturer's Manual.
- Make sure all safety decals can be clearly read and understood. Replace damaged or missing decals immediately.

For Electric Models:

- Electric motor must be properly grounded at all times. Check the outlet box to be sure the electrical service is properly grounded and that adequate power is available. Insufficient power will cause motor to overheat and burn out. Use only grounded extension cords correctly sized for the current draw and voltage drop (amp rating and length). Never use frayed, damaged, taped or underrated extension cords. Electrical shock could result in death or serious injury and damage to the equipment.

For Gasoline Models:

- Poisonous exhaust gas. Do not operate gasoline powered equipment without adequate ventilation. Carbon monoxide is an invisible, odorless gas that can kill. NEVER REFUEL AN ENGINE WHILE IT IS HOT OR AN ENGINE WHILE IT IS RUNNING. Only refuel in a well-ventilated area and only refuel after the engine has cooled completely. Thoroughly cleanup any spilled fuel before starting the engine.



Dry cutting creates a large volume of airborne dust. For health reasons, the operator should wear an applicable respirator. The dust may contain chemicals known to cause serious illnesses, including Silicosis - a fatal disease of the lungs. Check the chemical properties of the material to be cut and follow all EPA/ OSHA regulations.

Safety warnings and guidelines do not by themselves eliminate danger.

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



Operating Instructions

Before Starting:

- **Read and understand the instructions supplied by the engine manufacturer.**
- Familiarize yourself with all engine and saw controls. (Figures 1-3)
- 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 tight. 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. Refer to *Rx for Diamond Blades*.
- Install back splash shield (Figure 4 and 5).



Figure 4

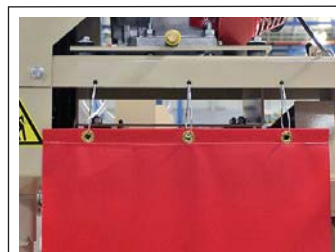


Figure 5

On Gasoline Models:

- Gasoline models are shipped from the factory dry, meaning without oil or gasoline. Both will need to be added before the unit is used. Check the *Engine Manufacturer's Owner's Manual* for instructions on break-in, servicing and proper use of engine.
- 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.

On Electric Models:

- Electric masonry saws are shipped with a twist lock, grounded, male plug attached to the machine and a female mating connector which a qualified licensed electrician should attach to a user-supplied extension cord. Verify that the extension cord is sized appropriately for the electrical load and that it is properly grounded.



Use only 3 wire (single phase), 4 wire (three phase) grounded electrical cables that are marked U.L. and/or C.S.A. approved.

- Inspect the power and extension cords for damage. Do not use if either cord is frayed or showing signs of wear.
- Identify the electrical power requirements of the motor can be found on the motor data plate
- Verify that the power switch is in the off position before plugging machine into the power source.



When Wet Cutting:

- Secure the drain plug and fill the tray with clean water.

On Gasoline Models:

GMS-20

- Engage the water pump by loosening the pump position lock, lower the water pump slide bracket and retighten the pump position lock. (Figure 7)
- Prime the pump using the priming bulb. Pump the bulb until water fills the clear plastic coolant hose from the tray to the pump.

On Electric Models:

MS-20

- Plug submersible pump into external source. (Figure 6)



Water Pump Engaged

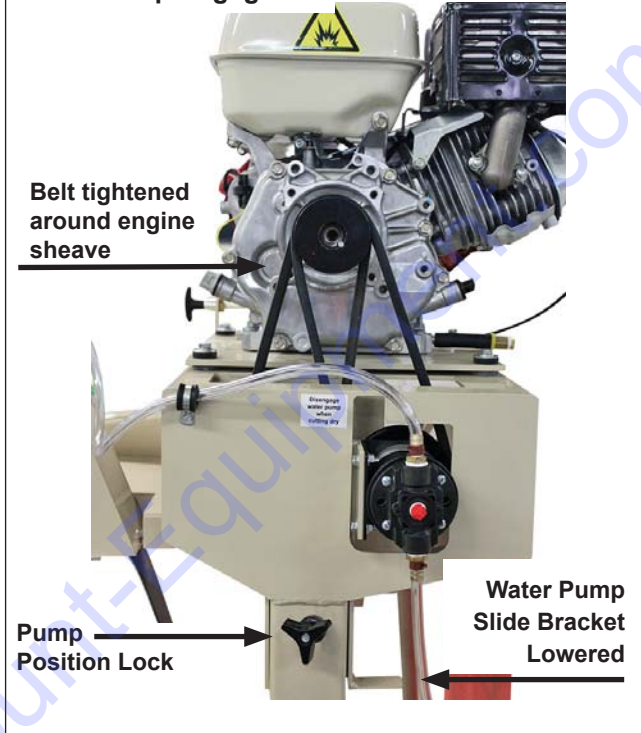


Figure 7

CAUTION

DO NOT LET THE WATER PUMP RUN DRY.

On All Models:

- The water in the tray must be kept clean. Running dirty water through the system will cause damage.
- To change the water, turn off the saw, remove the plug in the bottom of the tray to drain water and dispose of properly. Do not drain onto the surface being worked on or other maintained surface because staining will occur. Flush any loose grit and dirt out of the tray. Replace drain plug and refill with clean water. If water flow to the blade seems to be low, check that strainer is clean and the water pump pulley is properly engaged.



When Dry Cutting:

- Drain and flush any water or debris in the tray and dispose of properly.

On Gasoline models:

- Disengage water pump by loosening the pump position lock. (Figure 8)
- Raise the water pump slide bracket to loosen belt around the sheave. Loosen only enough to disengage the unit, do not allow belt to slip off sheave.
- Retighten the pump position lock.

On Electric Models:



Be careful when draining water from tray and dispose of waste away from work area.

Draining the water directly to the ground will cause a potentially serious working hazard including, but not limited to, risk from electric shock if using an electric motor.

Water Pump Disengaged

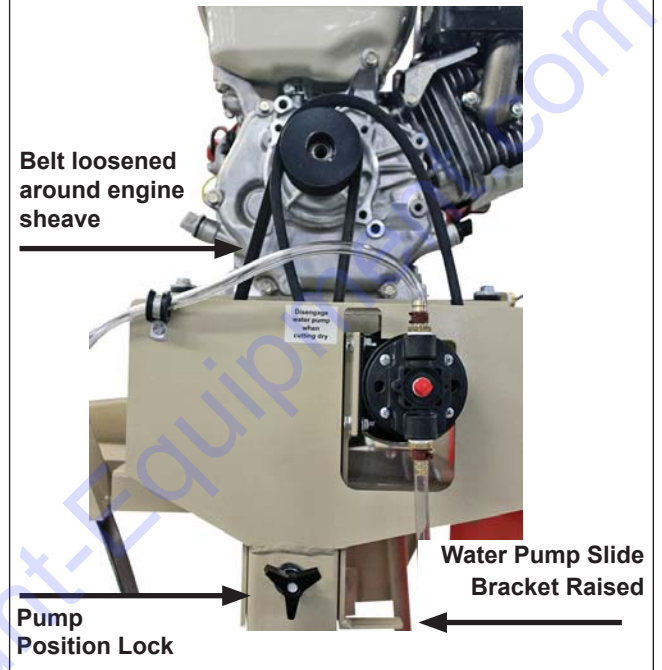


Figure 8

Pre-Set the Cut:

- When making a series of cuts at the same depth, set the cutting blade to the required depth by adjusting the cutting head positioner. The cutting head will stay at the depth selected. (Figure 9)
- Use the blade lock to prevent changes in the depth setting caused by vibration.

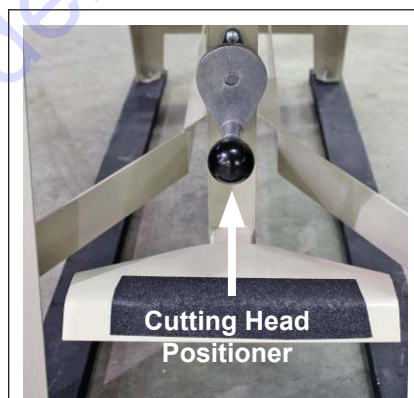


Figure 9

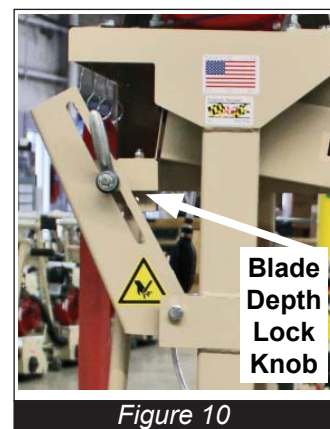


Figure 10



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. Open throttle fully, do not use the throttle as a means to match the arbor shaft speed to the specified blade speed requirements. Be certain to use the proper blade for the machine.

Note: To ensure that 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 may damage the machine. Maintain the engine according to factory specifications.



Figure 11 (GMS-20)

Starting the Electric Motor:

- Be sure blade is clear of the item to be cut.
- Turn on the motor.
- Listen for motor to reach operating speed. Do not use if motor hums or does not reach operating speed within a few seconds. Motor hum may indicate a malfunction due to:
 - Job site voltage may too low.
 - An Internal motor problem.
 - The blade may be jammed.
 - Voltage selector switch in wrong position.

or

 - The belts may be too tight.



Cutting:

- Do not strain the engine/motor while cutting. Do not jam work piece into the blade.
Do not twist the work piece while cutting.
- When you have finished cutting:

On gasoline models: To stop engine, return throttle to idle. Stop the engine by turning the engine mounted stop switch to the OFF position. Do not leave the saw running unattended.

On electric models: Depress the stop button on the motor starter box. Wait until saw comes to a complete stop before performing any type maintenance.

- Clean dust and debris from machine.

IMPORTANT:

- When actually cutting masonry products, it is important that the blade is at it's maximum RPM. DO NOT force or jam the blade. Forcing the blade will cause the motor to overheat, tripping the overload device or severe motor damage.



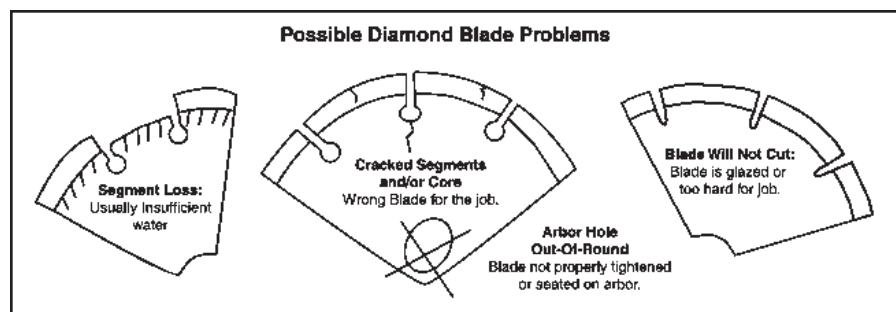
**Do not reach underneath or around work piece while the blade is rotating.
Keep stable footing at all times while cutting.**

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



Model	Diameter Blade	Arbor Shaft Rating	Max. Cutting Depth
MS-20	20 inches	2400 RPM	8 inches
GMS-20	20 inches	2400 RPM	8 inches

Figure 12





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 or missing 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. Be sure the blade is appropriate for the job and matches the arbor speed and mounting configuration on this saw. (Figure 12)



Figure 13

- Push the rolling table all the way to the back of the machine.
- Blade guard should be rotated all the way up and tightened into place.
- Remove blade cap and bolt. Carefully remove old blade.
- Inspect arbor shaft, backing plate and blade guard while blade is off. Clean if dirty or replace if damaged or worn.
- Look for "direction of rotation" markings on the blade. (Usually an arrow stamped on the blade.)
- Place new blade on the arbor shaft verifying that once installed the markings on the blade follow the proper direction of rotation.
- Reinstall and tighten bolt using a SAE 1/2" wrench. Reinstall blade cap.
- Reposition blade guard and tighten. Reconnect spark plug lead. (if applicable)



Belt Adjustment and Replacement:

- Periodically check belts for damage, same type and are at the proper tension. Do not mix belts. Slipping belts will overheat causing the cutting speed to be limited and 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 of the same type, 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 are loose could slip and/or overheat.
- Damaged, stretched or excessively worn belts should be replaced with a new complete set of belts of the same type. Do not mix belts.

Important!

- Belts must be replaced as a complete set of the same type, do not mix belts even if only one belt is showing wear.**
- Blade must be realigned every time the belts are tensioned.**

On Gasoline Models:

- Access belts from side of machine.
- Unbolt belt guard and lift top portion out of the way. Water pump and drive belts are now accessible.
- To change water pump belt, follow "disengage" instructions on page 9.
- To change drive belts, loosen engine mount bolts and adjust jacking bolt until belts can be removed.

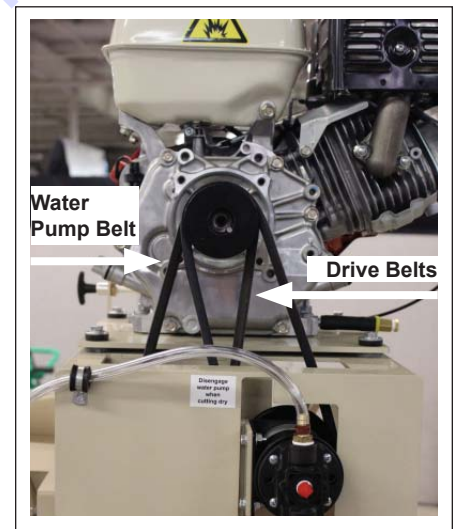


Figure 14

On Electric Models:

- Loosen motor mounts (4) (Figure 15)
- Loosen jacking bolt until belts slide off sheave. (Figure 16)
- Replace with a new complete set of belts of same type. Do not mix belt types.
- Adjust jacking bolt to tension
- Retighten motor mount bolts.

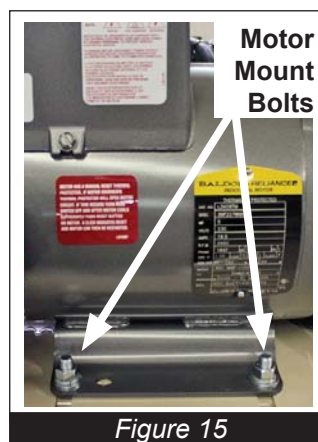


Figure 15

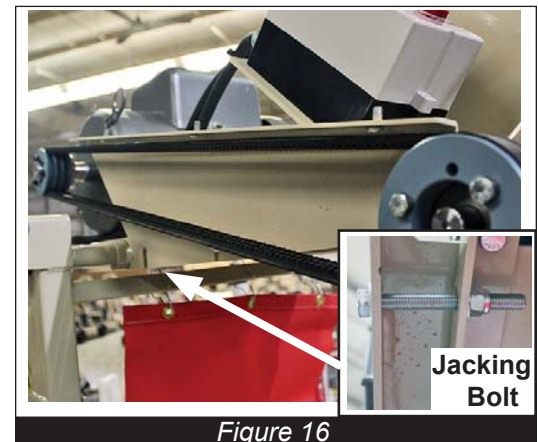
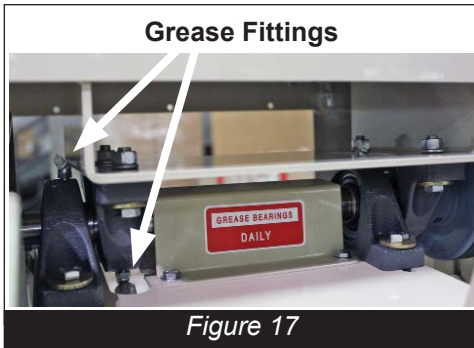


Figure 16



Grease Bearings:

- Drive shaft bearings must be greased every 4 hours. (All are not visible in this photo)
- Electric Motor - if your motor has a grease fitting, grease every 3600 hours. Use Exxon Mobil Polyrex EM. Don not over grease. Apply 1 pump slowly taking a minute to apply. Too much grease can cause premature bearing failure.



Change Engine Oil:

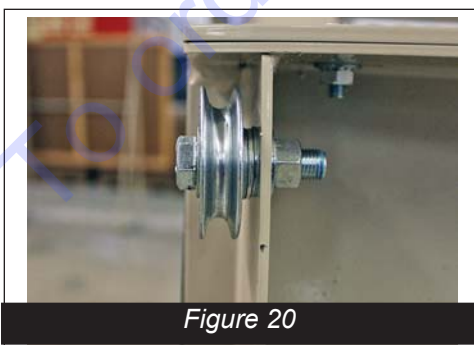
- Check Engine Oil before each operation. Open the filler cap and look at the dip stick. (*Figure 18*) Oil should be clearly visible both on the stick and in the cavity and should look fairly clean. Running the machine on dirty oil or when the oil is low will result in damage to the engine.
- Change 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.



Inspect and Clean Air Filter:

(Figure 19 shows Honda Cyclone Dual Filter style element).

- Refer to the Engine Manufacturer's Owner's Manual for instructions on specific models.
- Check air filter at least once daily.
- Dirt build up on the filter will cause excessive engine wear.

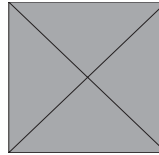


Clean and Lubricate Wheels on Rolling Table and Pivot Points on Front Treadle:

- 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 groove. (*Figure 20*)
- Lubricate the wheels as necessary.
- Replace damaged or worn wheels.



Repairs are to be performed by EDCO or by approved EDCO repair technicians.



Read and follow all instructions in the Engine Manufacturer's Owner's Manual.

Maintenance Schedule

Follow Engine Manufacturer's Maintenance Schedule	Before each Operation	Daily	Every 4 Hours	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		X				
Clean Air Filter Element*		X				
Clean Dust and Dirt Off Machine		X				
Change Engine Oil*				X		
Inspect Belts					X	
Belt Tensioning					X	
Lubricate Wheels on Rolling Table					X	
Replace Spark Plug*						X
Clean Water Strainer		X				
Grease Bearing			X			
Motor Bearing if fitting available						X

*Gasoline Models Only



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.

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