

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.

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 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.

#### SAFETY MESSAGES

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

#### ELECTRICAL POWERED EQUIPMENT

- 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 90db). 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 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.

#### GENERAL INSTRUCTIONS

##### 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.

- 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.
- Read and understand all operating instructions before operating this equipment. Death or serious injury can result if this machine is used improperly.
- Concrete grinders are designed to be used to grind flat horizontal concrete slabs using approved accessories.
- The machines are equipped with electric motors.
- They are designed to be controlled by a single operator from a position at the rear of the machine.
- When operating equipment maintain a safe distance from other personnel in the area.

Be sure to read the complete instructions supplied with your machine.

**IMPORTANT:** Perform Pre-Start Check.

- Visually inspect the equipment for wear or damage.
- Be sure all guards are in place and functioning properly. Do not operate unless all guards are in place and secure.
- Perform all daily maintenance.
- Check to be sure water tubes are functioning properly if performing wet-grinding operations.
- Inspect accessories - Be sure the correct accessory is installed properly on the machine, mounting arrangement and its intended use.
- Check accessories for damage (see figure 6, below), the type of wear or damage will vary with the type of accessory.
- Inspect work area to determine the presence and location of deck inserts, pipes, columns and objects protruding from the slab surface so that they may be avoided during the grinding operation.

Operating Instructions

- **BEFORE STARTING THE MOTOR:** Raise the front of the machine clear of the working surface.
- **START MOTOR AND ALLOW IT TO REACH OPERATING SPEED.** Position the grinder at the starting point.
- Lower the machine onto the slab surface. Use a slow sweeping motion from left right and back continuously, and do not force the machine into the work, the engine or motor should not strain when grinding.
- **FOR DRY GRINDING:** Provide a respirator and dust control system.
- **TO STOP THE MACHINE:** Stop forward motion. Turn power switch off and let the motor come to a complete stop.
- **WHEN MANEUVERING THE GRINDER:** Tilt grinder back enough so it does not strike the slab surface. Damage to accessories may occur with inadvertent contact with the slab.
- **DO NOT FORCE GRINDER WHILE GRINDING.**
- **IF THE POWER SOURCE FAILS:** Raise the grinder off of the floor. Disconnect the power source. Inspect the accessories for damage. Replace damaged (or questionable) accessories immediately.
- **WHEN TRANSPORTING THE GRINDER:** Disconnect the power source before lifting or removing any guard. See the directions for changing accessories.
- **WHEN HOISTING OR LIFTING A GRINDER:** Always inspect frame and attaching hardware for damage before lifting. Use proper safe hoisting and lifting techniques and hardware.

PROCEDURE FOR INSTALLING AND REMOVING ACCESSORIES

To install an accessory, there are several different types but all install in the same manner, use a brass rod or similar malleable material to drive the wedge into place. Note the side of the accessory the wedge is positioned (near center of disc). Never mix worn or used accessories with new ones. It will cause vibration and an uneven work surface. Replace accessories in complete sets, never mix sets.

To remove an accessory, there are several different types, all are removed in the same manner, use a wooden block never hammer directly on any accessory, damage to the self adjusting system will result and the accessory will have to be replaced. Place wooden block against the Accessory and tap with hammer or mallet to remove accessory.

#### INSTRUCTIONS FOR CHANGING ACCESSORIES

Disconnect the machine from the power source before performing any work on the Equipment. To disconnect the power source unplug the electrical models at the grinder.

2. Tip Grinder back on the handle until handle remains in contact with the slab. Brace securely or have someone hold the handle against the slab. The grinding discs will be visible and accessible for inspection and installation of accessory items.

3. Installing grinding stones. Grinding stones are used on the multi-disc assembly. A total of 3 stones are used with each multi-disc and are held in place with a hardwood wedge. The wedges are placed on the inside of the stone.

4. Use a second wedge and hammer or mallet to drive the wedge securely into place.

5. Installing wire brushes. The steel wire brushes are used on the multi-disc assembly (3 per multi-disc). They are held in place with a hardwood wedge driven in on the inside of the brush toward the center of the disc, refer to the previous page. All accessories are held in place in the same manner.

6. Installing Scarifiers. The scarifier assemblies consist of wearable scarifiers and a reusable scarifier case. The case is held into the multi-disc assembly with a wedge driven in on the inside of the case toward the center of the disc. All inserts are held in place in the same manner.

6a. The scarifiers can be added or removed from the case without disturbing the case. One end of the scarifier is short and has a tab. The tab is simply inserted under the lip of the case and the other end is pressed into the spring loaded slot and seated firmly. To remove the scarifier from the case, simply pry the rounded end of the frame out of the spring loaded slot.

9. DIAMOND INSERTS are diamond segments mounted into a block for faster, controlled, dry grinding, and are ideal for removing trowel marks, rough finish, rain spots, large volume projects, paints, thin mastics, epoxy and urethane coatings, or polymer enhanced surfaces. Diamond inserts can be used wet or dry and will outperform stones by grinding many times faster, removing tough materials, and lasting many times longer - up to 30,000 sq. ft. (2,800 sq. meters) life (at 1/32") dependent on depth of removal, coatings, speed of operation, matrix, etc. Extra weight can be added to the grinder to increase production.

10. Grinding Stones are generally used when there is a need to remove trowel marks, rain spots, excess concrete, rough finishes, or high spots less than 1/16" (2mm) in height. A variety of grit sizes are available, beginning with a super course C-10-S to very fine polishing types C-80 and C-120 used to grind terrazzo and marble. The grinder will remove up to 1/16" (2mm) of concrete at the rate of approximately 500 sq. ft./hr. (46 sq. m/hr.) using grinding stones of the C-10-S grit. Extra weight can be added to the grinder to improve the grinding speed. The hardness of the surface, size of aggregate, age of slab or

additives and sealers required to meet surface specifications will affect the grinding  
Speed and rate of removal.

11. Scarifiers are used to grind slab surfaces. The action is faster than with grinding stones leaving a "rough sandpaper finish" that may be desirable for non-slip floors, ceramic tile installation or epoxy mortars. The action of the steel cutter wheels is to "pick" away the concrete from around the aggregates. The cutter will not grind the aggregate, consequently, the aggregate will remain Exposed and above the surface of the slab. In some instances the aggregate will loosen or split and break away from the concrete bond. This condition can be controlled and is useful when an exposed aggregate surface is required. If the desired end result is a smooth, flat surface - use scarifiers first for fast surface removal, then change to coarse grit (C-10-S) grinding stones to bring the high aggregate to the level of the slab. The heavy duty cutter assembly has sharp carbon steel cutters suitable for all scarifying applications and has an anticipated life from 8 to 20 hours depending on the surface material.

#### PROCEDURE FOR ATTACHING A VACUUM

If using a vacuum for dust control attach it to the vacuum port at the rear of the machine securing it with clamps.