



622 SO REEL GRINDER

This book consists of two manuals:

The **OPERATOR'S MANUAL**, which contains all the information to install, operate, and perform daily maintenance on this equipment.

The **SERVICE MANUAL**, which is used by the maintenance department to do all maintenance except routine daily maintenance.

We are committed to:

Providing superior customer support, training, and service.

Manufacturing the highest quality products at an unequaled value.

Setting the industry standard by investing in technological product innovation.

Manufacturing products specifically designed to maintain original equipment manufacturers' specifications.

Interacting with and supporting all original equipment manufacturers.

FOLEY

▶ COMPANY

622 SO REEL MOWER GRINDER

Patent No. 5,321,912
6,010,394 & 6,290,581
6,685,544 & 6,699,103
additional Patents Pending

OPERATOR'S MANUAL

 **WARNING**

You must thoroughly read and understand all manuals before operating the equipment, paying particular attention to the Warning & Safety instructions.



IMPORTANT SAFETY MESSAGE



This manual will cover the installation and operation of this Reel Mower Grinder, there is an additional manual that addresses the service of this equipment. As manufacturers of reel grinders, we want to confirm to you, our customers, our concern for safety. We also want to remind you about the simple, basic, and common sense rules of safety when using a reel grinder. Failure to follow these rules can result in severe injury or death to operators or bystanders.

It is essential that everyone involved in the assembly, operation, transport, maintenance, and storage of this equipment be aware, concerned, prudent, and properly trained in safety. Always use proper shielding and person protective equipment as specified by the manufacturer.

Our current production machines include, as standard equipment, guards or shields for the grinding wheel, safety signs and operators and service manuals. Never bypass or operate the machine with any of the guards or safety devices removed, or without the proper personal safety equipment.

Read and fully understand all the safety practices discussed in this manual. All safety rules must be understood and followed by anyone who works with reel grinders.

Before operating a reel grinder, an operator must read and understand all of the information in the operator's manual and understand all the safety signs attached to the product. A person who has not read or understood the operators manual and safety signs is not qualified to operate the unit. Accidents occur often on machines that are used by someone who has not read the operators manual and is not familiar with the equipment. If you do not have an operators manual or current production safety signs, contact the manufacturer or your dealer immediately.

Reel grinders are designed for one-man operation. Never operate the grinder with anyone near, or in contact with, any part of the grinder. Be sure no one else, including bystanders, are near you when you operate this product.

Following these simple, basic safety rules, as well as others:

Find and understand all safety signs in the operators manual and on the equipment. This will help minimize the possibility of accidents and increase your productivity in using this product. Be careful and make sure that everyone who operates the grinder knows and understands that it is a very powerful piece of machinery, and if used improperly, serious injury or death may result. The final responsibility for safety rests with the operator of this machine.

Throughout this manual, the following safety symbols will be used to indicate the degree of certain hazards.



This symbol is used throughout this manual to call attention to the safety procedures.

! DANGER

The word **DANGER** indicates an immediate hazardous situation, which if not avoided, will result in death or serious injury.

! WARNING

The word **WARNING** indicates a potential hazardous situation, which if not avoided, could result in death or serious injury.

! CAUTION

The word **CAUTION** preceded with a safety alert symbol indicates a potential hazardous situation which, if not avoided, may result in minor or moderate injury.

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Keep this manual handy for ready reference. Require all operators to read this manual carefully and become acquainted with all adjustments and operating procedures before attempting to operate the equipment. Replacement manuals can be obtained from your selling dealer or the manufacturer.

The equipment you have purchased has been carefully engineered and manufactured to provide dependable and satisfactory use. Like all mechanical products, it will require cleaning and upkeep. Lubricate and clean the unit as specified. Please observe all safety information in this manual and safety decals on the equipment.

This machine is designed for sharpening reel type mower blades ONLY. Any use other than this may cause personal injury and void the warranty.



To assure the quality and safety of your machine and to maintain the warranty, you MUST use original equipment manufacturer's replacement parts and have any repair work done by a qualified professional.



ALL operators of this equipment must be thoroughly trained BEFORE operating the equipment.

Do not use compressed air to clean grinding dust from the machine. This dust can cause personal injury as well as damage to the grinder.

PREPARATION/INSTALLATION CHECK LIST

Before using this equipment refer to the list below. Verify that all of the listed items are completed before powering up the equipment:

- | | |
|---|---|
| <input type="checkbox"/> 1. Equipment is completely assembled | <input type="checkbox"/> 7. Understand proper positioning of reel. |
| <input type="checkbox"/> 2. All shields are in place and in good condition. | <input type="checkbox"/> 8. Understand traverse travel stop positioning |
| <input type="checkbox"/> 3. All decals are in place and readable. | <input type="checkbox"/> 9. Understand how to use the Touch Off method |
| <input type="checkbox"/> 4. Overall condition good (i.e. paint, welds, electrical) | <input type="checkbox"/> 10. Understand spin speed vs. quality |
| <input type="checkbox"/> 5. Verify there is sufficient electrical power to operate the machine. | <input type="checkbox"/> 11. Understand General Maintenance |
| <input type="checkbox"/> 6. Read and understand all areas of the Operator's manual, and review the Service Manual, and any additional training material if available. | |



FIG. 1

SPECIFICATIONS

OPERATING CONDITIONS: THIS MACHINE IS INTENDED FOR INDOOR USE ONLY.

AMBIENT TEMPERATURE:+5°C/ 40°F to +40°C/ 100°F

RELATIVE HUMIDITY: 50% Relative Humidity, +40°C / 100°F. Higher Relative Humidity may be allowed at lower temperatures. (There must not be condensation present).

ALTITUDE:..... Up to 1000m/ 3280 ft. above mean sea level.

TRANSPORTATION AND STORAGE:...-25°C/-15°F to +55°C / 130°F

SOUND LEVEL:..... More than 75 Dba, Less than 95 Dba

Means must be provided to prevent damage from humidity, vibration and shock.

LOW VOLTAGE RELAY

The grinder is equipped with a high-low voltage monitor which is factory preset at 100-140 V ac. If the voltage inside the control panel falls outside of the range of 100-140 V ac under load, the relay will open and trip out the magnetic starter. If this occurs, your power supply line is inadequate to run this machine and must be corrected before proceeding further with the grinder.



DAILY INSPECTION

CAUTION

THE DAILY INSPECTION SHOULD BE PERFORMED ONLY WHEN THE MACHINE IS OFF AND ALL MOTORS HAVE STOPPED.

1. Perform a visual inspection of the entire unit. Look for signs of wear, loose hardware, and missing or damaged components. Ensure connections are tight and hoses and tubes are in good condition.
2. Clean the machine by wiping it off.
3. Remove all grinding grit from the grinding head and bellows area.
4. Contact your company's maintenance department if damaged or defective parts are found

DO NOT USE COMPRESSED AIR TO CLEAN GRINDING DUST FROM GRINDER.

INTERLOCK SYSTEM

The interlock system prevents the grinding motor and spin motor from running if unless the door safety switches are engaged.

WARNING

NEVER OPERATE EQUIPMENT WITH THE INTERLOCK SYSTEM DISCONNECTED OR MALFUNCTIONING. NEVER DISCONNECT OR BYPASS ANY SWITCH OR GUARDING.

Remove the grinding wheel if one is installed on the machine. Close all doors and start the grinding motor. With the grinding motor running, open the doors. If the grinding motor continues to run, shut off and unplug the machine. Contact a qualified technician to service the machine.

With the spin motor not connected to a cutting unit, close all doors and start the spin motor. With the spin motor running, open the door. If the spin motor continues to run, shut off and unplug the machine. Contact a qualified technician to service the machine.

**WARNING**

TO AVOID INJURY, READ AND UNDERSTAND THE SAFETY ITEMS LISTED BELOW. IF YOU DO NOT UNDERSTAND ANY PART OF THIS MANUAL AND NEED ASSISTANCE, CONTACT YOUR LOCAL DEALER OR THE MANUFACTURER.

1. **KEEP GUARDS IN PLACE** and in working order.
2. **REMOVE WRENCHES AND OTHER TOOLS.**
3. **KEEP WORK AREA CLEAN.**
4. **DON'T USE IN DANGEROUS ENVIRONMENT.** Don't use the Grinder in damp or wet locations. Machine is for indoor use only. Keep the work area well lit.
5. **KEEP ALL VISITORS AWAY.** All visitors should be kept a safe distance from the work area.
6. **MAKE THE WORK AREA CHILD-PROOF** with padlocks or master switches.
7. **DON'T FORCE THE GRINDER.** It will do the job better and safer if used as specified in this manual.
8. **USE THE RIGHT TOOL.** Don't force the Grinder or an attachment to do a job for which it was not designed.
9. **WEAR PROPER APPAREL.** Wear no loose clothing, gloves, neckties, or jewelry which may get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair. Wear respirator or filter mask where appropriate. Wear protective gloves.
10. **ALWAYS USE SAFETY GLASSES.**
11. **SECURE YOUR WORK.** Make certain that the cutting unit is securely fastened with the clamps provided before operating.
12. **DON'T OVERREACH.** Keep proper footing and balance at all times.
13. **MAINTAIN GRINDER WITH CARE.** Follow instructions in the Operators and Service Manual for lubrication and preventive maintenance.
14. **DISCONNECT POWER BEFORE SERVICING,** or when changing the grinding wheel.
15. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure that all switches are OFF and the E-stop is pressed in before plugging in the Grinder.
16. **USE RECOMMENDED ACCESSORIES.** Consult the manual for recommended accessories. Using improper accessories may cause risk of personal injury or damage to the equipment.
17. **CHECK FOR DAMAGED PARTS.** A guard or other part that is damaged or will not perform its intended function should be properly repaired or replaced.
18. **NEVER LEAVE THE GRINDER RUNNING UNATTENDED. TURN THE POWER OFF.** Do not leave grinder until it comes to a complete stop.
19. **KNOW YOUR EQUIPMENT.** Read this manual carefully. Learn its application and limitations as well as the specific potential hazards.
20. **KEEP ALL SAFETY DECALS CLEAN AND LEGIBLE.** If safety decals become damaged or illegible for any reason, replace immediately. Refer to replacement parts illustrations in Service Manual for the proper location and part numbers of safety decals.
21. **DO NOT OPERATE GRINDER WHEN UNDER THE INFLUENCE OF DRUGS, ALCOHOL, OR MEDICATION.**

 **WARNING**

IMPROPER USE OF GRINDING WHEEL MAY CAUSE BREAKAGE AND SERIOUS INJURY.

Grinding is a safe operation if the few basic rules listed below are followed. These rules are based on material contained in the ANSI B7.1 Safety Code for "Use, Care and Protection of Abrasive Wheels". For your safety, we suggest you benefit from the experience of others and carefully follow these rules.

DO

1. **DO** always **HANDLE AND STORE** wheels in a **CAREFUL** manner.
2. **DO VISUALLY INSPECT** all wheels before mounting for possible damage.
3. **DO CHECK MACHINE SPEED** against the established maximum safe operating speed marked on the wheel.
4. **DO CHECK MOUNTING FLANGES** for equal and correct diameter.
5. **DO USE MOUNTING BLOTTERS** supplied with the wheels.
6. **DO** be sure **WORK REST** is properly adjusted.
7. **DO** always **USE A SAFETY GUARD COVERING** at least one-half of the grinding wheel.
8. **DO** allow **NEWLY MOUNTED WHEELS** to run at operating speed, with guard in place, for at least one minute before grinding.
9. **DO** always **WEAR SAFETY GLASSES** or some type of approved eye protection when grinding.

DON'T

1. **DON'T** use a cracked wheel or one that **HAS BEEN DROPPED** or has become damaged.
2. **DON'T FORCE** a wheel onto the machine **OR ALTER** the size of the mounting hole - if the wheel won't fit the machine, get one that will.
3. **DON'T** ever **EXCEED THE MAXIMUM OPERATING SPEED** established for the wheel.
4. **DON'T** use mounting flanges if the bearing surfaces **ARE NOT CLEAN, FLAT AND FREE OF BURRS.**
5. **DON'T TIGHTEN** the mounting nut excessively.
6. **DON'T** grind on the **SIDE OF THE WHEEL** (see Safety Code B7.2 for exception).
7. **DON'T** start the machine until the **WHEEL GUARD IS IN PLACE.**
8. **DON'T JAM** the work into the wheel.
9. **DON'T STAND DIRECTLY IN FRONT** of a grinding wheel whenever a grinder is started.
10. **DON'T FORCE THE GRINDING** so that motor slows noticeably or that the work piece gets hot.

 **WARNING**

AVOID INHALATION OF DUST generated by grinding and cutting operations. Exposure to dust may cause respiratory ailments. Use approved NIOSH or MSHA respirators, safety glasses or face shields, and protective clothing. Provide adequate ventilation to eliminate dust, or to maintain dust level below the Threshold Limit Value for nuisance dust as classified by OSHA.

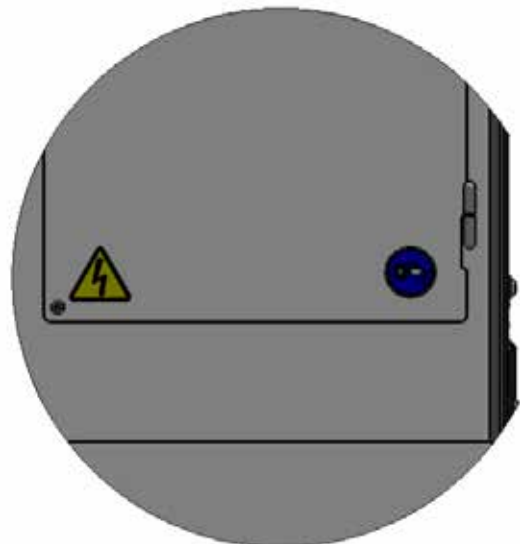
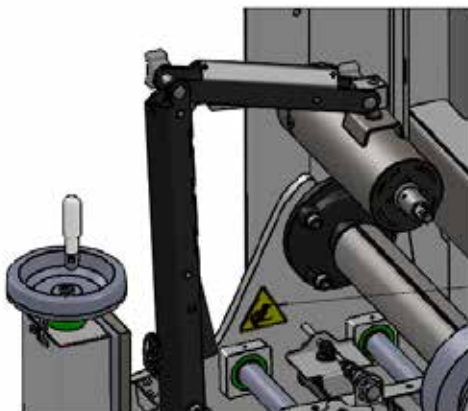
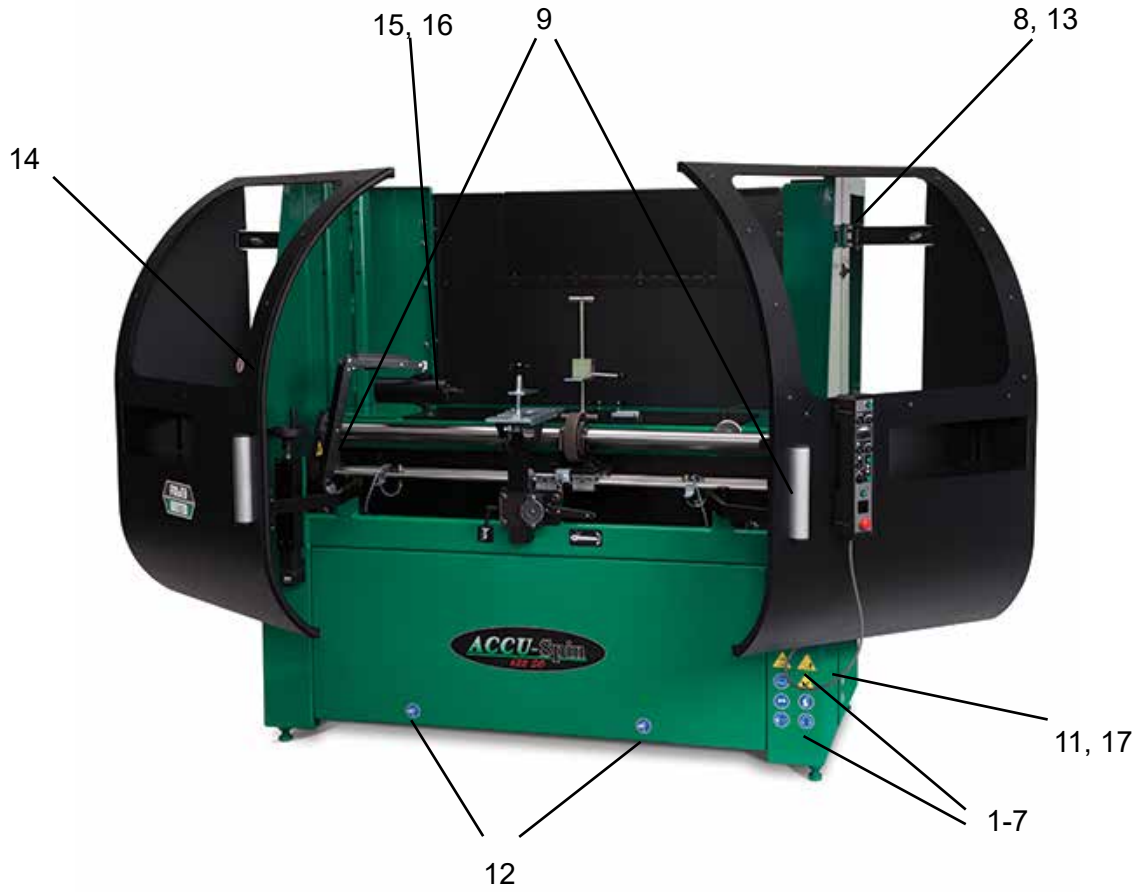


SAFETY DECALS - LOCATION.


IF ANY DECALS ARE DAMAGED, REPLACE THEM IMMEDIATELY!





See next page for explanation of symbols and decals.





READ AND UNDERSTAND AND LOCATE ALL DECALS ON THIS MACHINE BEFORE OPERATING THIS EQUIPMENT.


1  Keep visitors at a safe distance away from the equipment.


2  Read Service manual and disconnect power before servicing.


3  **Refer to manual**— after installation, read the user’s guide carefully before operating. Follow all operating and other instructions carefully.


4  WARNING! Use of proper eyewear is mandatory when operating this equipment.


5  WARNING! Gloves or other **hand protection is required** when operating this equipment.


6  WARNING! Operators and people in close proximity **must wear respirators or have adequate ventilation systems.**


7  WARNING! **Hearing protection required** when operating this equipment.


8  This is the electrical hazard symbol. It indicates that there are **DANGEROUS HIGH VOLTAGES PRESENT** inside the enclosure of this product. TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, do not attempt to open the enclosure or gain access to areas where you are not instructed to do so. **REFER SERVICING TO QUALIFIED SERVICE PERSONNEL ONLY.**


9  Entanglement Hazard. Keep clear of belt.


10  Sharp object in the vicinity which may cause injury. **Keep hands clear of sharp edges!**


11  Power cord may be a trip hazard. Secure the power cord in a manner that removes it as a trip hazard.


12  Use a Fork Lift with a minimum of 48" [122cm] long forks to move this Equipment. Lift only where indicated on the machine. Failure to use proper lifting equipment may result in personal injury or damage to the equipment.


13  Unplug the machine when servicing or storing for an extended period of time.

14  WARNING! Do Not Operate Without Guards and Covers in Place. There are moving parts located behind the guards.

15  WARNING! Keep exposed gasoline or flammables away from the grinder because it operates with a large amount of sparks.

16  Shows the minimum speed [3600 RPM] that the grinding wheel must be rated for to use on this equipment.

17  **POWER CORD PROTECTION** – The power supply cord for this product acts as the main-disconnect. It should be routed or installed in such a manner to protect it from being walked on or pinched. The unit should be powered down completely before connecting or disconnecting the power cable. The power cord should be removed before moving the unit. The power cord must be placed near an easily accessible unobstructed socket outlet.

18  **180Kg / 400 LBS**
WINCH AND BOOM CAPACITY IS A MAXIMUM OF 180Kg OR 400 LBS. Exceeding the capacity may result in personal injury or damage to the equipment.

REMOVE GRINDER FROM WOOD PALLET

To remove the grinder from the wood pallet, unbolt the brackets that hold the frame to the wood pallet. Use a forklift to lift the machine from the pallet. **THE UNIT WEIGHS 1450 LBS. [658 KG]. USE POWER EQUIPMENT TO LIFT THE UNIT.** See FIG. 3 on Page 13.

POSITION THE BASE

This machine must be positioned in an area that allows for sufficient access to all sides of the machine for operation and service. We suggest an operating area of about 125" [318cm] x 97" [247cm]D x 90"H [229 cm] when loading from the front of machine or 125" [318cm] x 165" [419cm]D x 90"H [229 cm] when loading from the back of the machine. Position the base to allow sufficient operating room in both front and behind the machine. See Figure 2.

The base should be placed on a relatively level concrete floor, with ample ceiling height to allow for the installation of the unit. Do not place the unit across two concrete slab seams or across a large crack.

PLACING THE GRINDER ON FLOORING THAT IS NOT LEVEL OR BROKEN WILL AFFECT GRINDING QUALITY.

WARNING

MACHINE MUST BE POSITIONED TO ALLOW EASY ACCESS TO THE MAIN POWER CORD PLUG FOR USE AS THE MAIN DISCONNECT. SEE POWER INSTALLATION SECTION FOR ADDITIONAL INFORMATION.

ELECTRICAL REQUIREMENTS:

- **ALWAYS USE A PROPERLY GROUNDED OUTLET!**
- It is recommended that this reel mower grinder has its own permanent power connection from the power distribution panel, with no other major power draw equipment on the same line.
- The grinder is equipped with a high-low voltage relay (LVR) which is factory preset at 100-140 VAC. If the power supply line does not deliver 100-140 VAC power under load, the relay will open and trip out the starter. If this occurs, your power supply line is inadequate and must be corrected before proceeding further with the grinder.

FOR 20 AMP-RATED LARGE MACHINE			
Distance from Electrical Panel to the Electrical Outlet Receptacle		Size of Wire Required	
English (feet)	Metric (meters)	English (Gauge)	Metric (mm)
0-40	0-12	12	4.0
40-60	12-18	10	6.0
60-100	18-30	8	10.0
100-160	30-48	6	16.0

FIG. 2



FIG. 3

LIFTING LOCATION

A forklift or pallet jack can be used to move or position this equipment. The forklift must have forks that are a minimum of 48" [122cm] long. When using a forklift lift in the center of the machine and be sure the forks extend all the way from the front to the back of the machine.

Once the machine is removed from the pallet, it can be moved using a pallet jack.

LEVEL BASE

Place level on the top of the table and check the unit for level side to side. Adjust the leveling feet as necessary until the machine is level. See FIG. 6

Place a level across the table from front to rear. Adjust the leveling feet as necessary until the machine is level. See FIG. 5.

After machine has been leveled front to back and side to side, thread the hex jam nuts up against the fixed nut. Be careful not to move the leveling feet during this process. See FIG. 4. Ensure that all four leveling feet are firmly contacting the floor.

Recheck with level after locking nuts are firmly tightened.

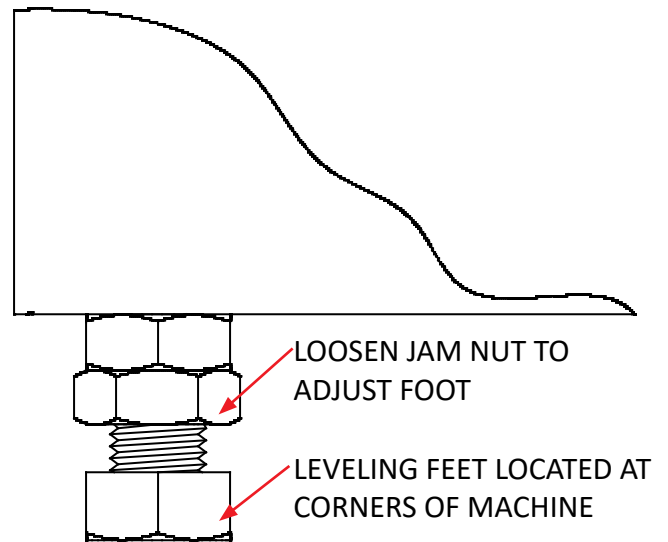


FIG. 4



FIG. 5



FIG. 6

THE EQUIPMENT SHOULD NEVER BE LEFT UNATTENDED WHEN RUNNING.

It is recommended that this machine is installed in a separate area of the facility, such as a dedicated grinding room where access to the equipment can be restricted and proper ventilation can be provided.



POWER INSTALLATION



IF THE MACHINE DOES NOT HAVE A PLUG ON THE END OF THE MAIN POWER CORD, A PLUG OR CONNECTOR THAT COMPLIES TO THE LOCAL LAWS AND REGULATIONS SHOULD BE INSTALLED BY A QUALIFIED ELECTRICIAN. THE PLUG IS CLASSIFIED AS A CATEGORY 0 MAIN DISCONNECT. DO NOT WIRE THIS MACHINE DIRECTLY TO A POWER SOURCE WITHOUT A PLUG OR CONNECTOR UNLESS A DEVICE THAT MEETS THIS CATEGORY 0 MAIN DISCONNECT REQUIREMENT IS USED TO PROVIDE POWER TO THE MACHINE.

IMPORTANT GROUNDING INSTRUCTIONS

In case of a malfunction or breakdown, grounding reduces the risk of electrical shock by providing a path of least resistance for electrical current.

This grinder has an electrical cord with an equipment grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded according to all local or other appropriate electrical codes and ordinances.

Before plugging in the grinder, make sure it will be connected to a supply circuit protected by a properly-sized circuit breaker or fuse. SEE SERIAL NUMBER PLATE FOR FULL LOAD AMP RATING OF YOUR MACHINE.

Never modify the plug provided with the machine--if it does not fit the outlet, have a proper outlet and circuit installed by a qualified electrician.



Always provide a proper electrical ground for your machine. An improper connection can cause a dangerous electrical shock. If you are unsure of the proper electrical grounding procedure, contact a qualified electrician.



It is recommended that grinder has its own permanent power connection from the power distribution panel, with no other major power draw equipment on the same line.



The grinder is equipped with a high-low voltage relay (LVR) which is factory preset at 100-140 V ac. If the VOLTAGE INSIDE THE CONTROL PANEL FALLS OUTSIDE OF THE RANGE OF 100-140 V ac power under load, the relay will open and trip out the starter. If this occurs, your power supply line is INADEQUATE TO RUN THIS MACHINE and must be corrected before proceeding any further with the grinder. If the optional transformer is installed on the outside of the machine, the power delivered to the machine will be 230 V ac, but the power in the machine must be 100-140 V ac under load as stated above.

DO NOT operate this grinder with an extension cord.

Do not operate this grinder on a Ground Fault interrupter (GFI) circuit. Nuisance tripping of the (GFI) may occur.



PROPER GROUNDING OF THE RECEPTACLE GROUND IN YOUR BUILDING MUST BE VERIFIED. IMPROPER GROUNDING IN YOUR BUILDING MAY CAUSE THE GRINDER TO MALFUNCTION.

120 VOLT MODEL ONLY. Plug the control box power cord into a standard 120 V ac 20-amp, grounded receptacle. See FIG. 7. When installing the grinder, the following guidelines should be used to establish the wire size between the power panel in your building and the grinder receptacle. Note that the wiring in your building must be per code between the main power panel and sub panels.

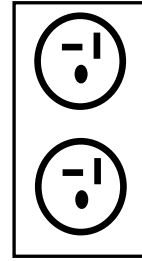


FIG.7

120 V ac 20 AMP
STANDARD PLUG FOR
NORTH AMERICA.

FOR 20 AMP-RATED LARGE MACHINE			
Distance from Electrical Panel to the Electrical Outlet Receptacle		Size of Wire Required	
English (feet)	Metric (meters)	English (Gauge)	Metric (mm)
0-40	0-12	12	4.0
40-60	12-18	10	6.0
60-100	18-30	8	10.0
100-160	30-48	6	16.0

230 V 50/60Hz MODEL

230 V machines are installed with a 3 KVA 230 V step-down transformer which is used to convert the power delivered to the electrical control to 110 V. The transformer wiring diagram is shown in FIG. 8. A connector, that complies with code for your location and a 230 V, 10 A application, should be installed if there is not one already on the end of the main power cord.

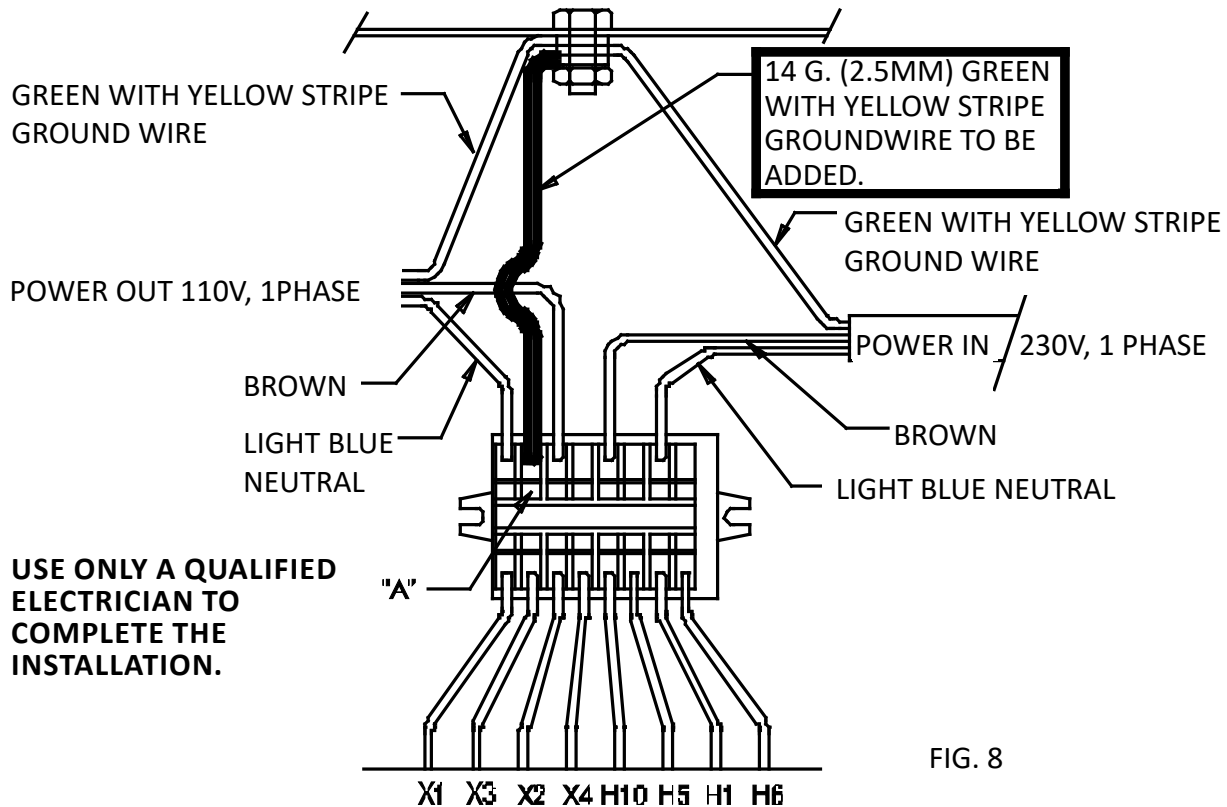


FIG. 8

1. Individually wire nut Transformer Leads H2, H3, H4, H7, H8 and H9.
2. Install the Green with Yellow Stripe wire supplied into the terminal block in the hole opposite wire X3 as shown. To install the wire insert a small screwdriver into the cavity marked "A" to open the wire hole.
3. Attach the other end of the Green with Yellow Stripe wire supplied to the ground stud on the transformer.



1. FRONT CLAMP WITH HEIGHT ADJUSTER



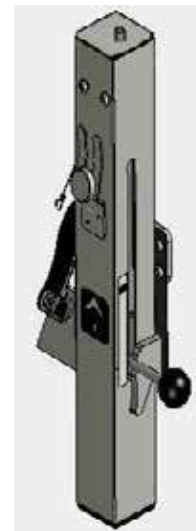
2. SPIN DRIVE



3. CONTROL



4. REAR ROLLER SUPPORTS



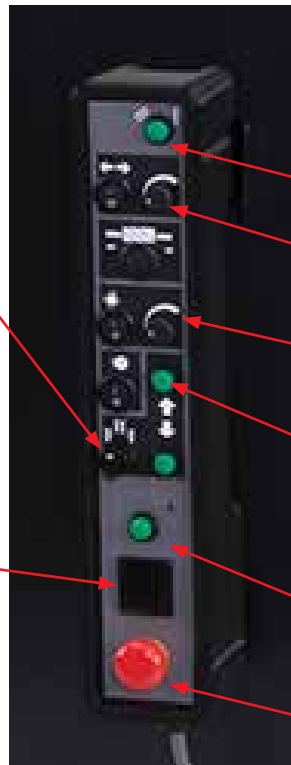
5. ACCU-POSITIONING GAUGE (OPTIONAL)

1. FRONT CLAMP WITH HEIGHT ADJUSTER - Adjusts to accommodate various rollers and groomers and moves up and down to set the height of the cutting unit using a ratcheting system.
2. SPIN DRIVE - Counterbalanced spin drive connects directly to the reel shaft and can be positioned on both sides of the cutting unit.
3. CONTROL - Contains the switches and knobs for the operator to use through the Spin and Relief grind processes.
4. REAR ROLLER SUPPORTS - Allows for easy adjustment of the rear roller using the V-Mounts, this helps position the cutting unit based on make, diameter. The rear clamp is installed to secure the rear roller.
5. ACCU-POSITIONING GAUGE- Used in conjunction with the Control to position the cutting unit vertically and horizontally into the grinder. (OPTIONAL)

CONTROLS



4. POWER SWITCH/FUSES



2. START/RESET BUTTON

3. TRAVERSE SPEED KNOB

5. SPIN SPEED KNOB

6. INFEEED


7. PROGRAM SELECT

1. EMERGENCY STOP BUTTON or E-STOP

6. INFEEED SELECT

DISPLAY CODES

CODE	DESCRIPTION
BLANK	OFF/ E-STOP
0	MACHINE ON - READY
1-5	AUTO PROGRAMS
6	DOOR OPEN
7	NOT ON TRAVEL SENOR (TO START AUTO PROGRAM)
1 (2SEC)	RIGHT SIDE INFEEED STALL
2 (2 SEC)	LEFT SIDE INFEEED STALL

- EMERGENCY STOP BUTTON or E-STOP**
Push to remove all power to motor. To restore power, pull up out and press the START/RESET SWITCH.
- START/RESET BUTTON**
Resets the control which allow the operator to control motors.
- TRAVERSE SPEED KNOB**
Increases or decreases the speed of the grinding head traversing left and right, measured in feet per second (ft/s).
- POWER SWITCH AND FUSES (RIGHT SIDE OF MACHINE).**
Turns OFF and ON the control and related components. Disconnect the cord at the wall outlet before performing service. FUSES - Interrupts excessive current (blows) so that further damage by overheating or fire is prevented.
THIS IS NOT A MAIN DISCONNECT!  **WARNING**
- SPIN SPEED KNOB**
Increases or decreases the spin speed during the SPIN GRIND cycle.
- INFEEED SELECTOR:** rotate to the left to control just the left infeed, rotate all way to the right to control just the right infeed , rotate to the middle to infeed both side evenly.
- PROGRAM SELECT:** Press to select from the available programs.

STEP 1: PLACING THE CUTTING UNIT

PREPARE CUTTING UNIT FOR SHARPENING

1. Follow the cutting unit manufacturers' recommendations for proper maintenance when preparing the cutting unit for sharpening.
2. The reel to be sharpened should be thoroughly cleaned.
3. If possible remove the bed bar, and wheels on walking greensmowers.
4. Inspect, adjust and/or replace any worn or damaged bearings. Make sure reel bearings are adjusted properly so the reel turns easily by hand. Because this grinder mounts the reel using the rear roller and front roller, the bearings must be in good repair with no freeplay. The front and rear rollers must be properly aligned parallel to the reel prior to grinding.



Switch on the machine by pressing the POWER SWITCH on the side panel. Pull out the E-STOP BUTTON and press the START/RESET BUTTON.

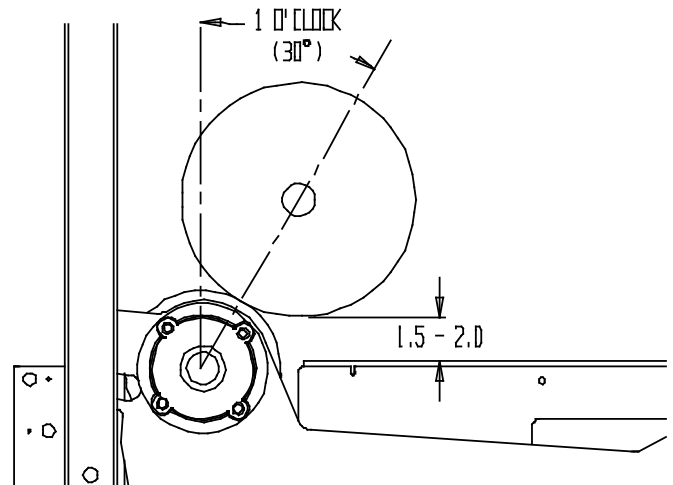


Place the REAR ROLLER V-BLOCKS to the correct position based on manufacturer and reel diameter.

NOTE: The pre-positioned settings do not work for walking greens mowers with a rear drum only. SEE PAGE 38. These positions are intended to be a starting position, you may need to move to a different pin location if the selected location does not work. Note there are 2 sets of holes for the V-blocks, use the outer set for wider reels and the inner set for narrower reels. The closer the v-blocks are to sides of the reels the more rigid the mounting resulting in a higher quality grind. Record the position of the reel if the default position is not used to use in the future.

REEL POSITION

The reel should be positioned so that it is at a one o'clock, or 20- 30° angle, position in reference to the grinding wheel. Place the height locator bracket next to or under the reel. Adjust the front roller clamp until the bottom of the reel just touches the bracket.



LIFTING OPTIONS

LIFTING A REEL INTO POSITION

OPTIONAL BOOM WITH ELECTRIC WINCH

1. Position the reel on the floor so the front of the mower faces in the same direction as the front of the machine.
2. Hook the winch spreader bar onto the reel. The clamps on the spreader bar should be spaced evenly along the mower so the clamps do not slide as the mower is being raised.

OPTIONAL ELECTRIC WINCH

Use the WINCH CONTROL connected to the winch to raise or lower the cutting unit. To lower, press the "DOWN" button. To raise, press the "UP" button.

OPTIONAL WORKSTATION or ATTACHED LIFT - Can be used to load from the rear.

For detailed information on the OPTIONAL WORKSTATION, see the manual included with the Workstation.



Front or Rear load electric boom option with optional rear doors



Mobil Workstation



Attached lift

Read carefully before attempting to operate or service your optional electric winch or optional Lift or Workstation! Failure to comply with instructions could result in personal injury and/or property damage! FOR YOUR OWN SAFETY AND THAT OF OTHERS, THIS EQUIPMENT MUST BE USED AS RECOMMENDED BY THE MANUFACTURER. FAILURE TO HEED THE FOLLOWING RECOMMENDATIONS COULD ENDANGER YOUR LIFE.

1. Maximum lifting capacity is 400 pounds (180 kg.) in single line winch operation. **DO NOT ATTEMPT TO MOVE LOADS GREATER THAN THIS RATINGS.**
2. **NEVER CARRY** personnel on the hook/ramp or the load.
3. **NEVER MOVE A LOAD** with this winch/workstation until all personnel are clear.
4. **DO NOT ALLOW** unqualified personnel to operate this unit.
5. **KEEP CLEAR OF RAMP OR WINCH WIRE ROPE AND HOOK WHEN OPERATING. DO NOT ATTEMPT** to guide wire rope by hand as it rewinds.
6. **AVOID** excessive winching and quick reversals of load.
7. **BE SURE** that the power supply is disconnected before performing maintenance and repair procedure.
8. **DO NOT OPERATE** this unit if it is not functioning properly.
9. **KEEP WORKSTATION/WINCHING AREA CLEAR.** Do not allow people to remain in the workstation/winch area. Do not stand between the winch and load.
11. **ALLOW WORKSTATION/WINCH TO COOL DOWN FREQUENTLY,** as the motor is designed for intermittent duty only. When the metal motor housing is hot to touch, it is time to let the winch cool down.
12. **DO NOT OPERATE WORKSTATION/WINCH WHEN UNDER THE INFLUENCE OF DRUGS, ALCOHOL, OR MEDICATION.**
13. **DO NOT USE WORKSTATION/WINCH TO HOLD LOADS IN PLACE.** Use other means of securing loads, such as tie down straps.
14. **USE ONLY FACTORY APPROVED SWITCHES, REMOTE CONTROLS AND ACCESSORIES.** Use of non-factory approved components may cause injury or property damage and could void your warranty.

15. **DO NOT MACHINE OR WELD ANY PART OF THE WORKSTATION/WINCH.** Such alterations may weaken the structural integrity of the workstation/winch and could void your warranty.

16. **DO NOT OPERATE THIS WORKSTATION/WINCH OUT DOORS OR IN A CORROSIVE OR EXPLOSIVE ENVIRONMENT.**

NOTE: THE FOLLOWING APPLY TO OPERATION OF THE WINCH ONLY.

1. **MAINTAIN A MINIMUM OF 4 TURNS OF WIRE ROPE** around the winch drum to prevent the wire rope from pulling off under load.
2. **WHEN SPREADER BAR ASSEMBLY IS USED** be sure it is properly seated in the saddle of the hook.
3. **NEVER HOOK THE WIRE ROPE BACK ON ITSELF. USE THE SPREADER BAR ASSEMBLY.** Hooking the wire rope back on itself creates an unacceptable strain on the wire rope.
4. **DO NOT** use the wire rope as a ground for welding.
5. **NEVER TOUCH** a welding electrode to the wire rope.
6. **INSPECT WIRE ROPE FREQUENTLY.** A frayed wire rope with broken strands should be replaced immediately. Never replace the wire rope with rope of any kind or with wire rope other than the type and size specified in the repair parts section of this manual.
7. **USE HEAVY LEATHER GLOVES** when handling the wire rope to eliminate the possibility of cuts or scratches from burrs and slivers from broken strands.

ELECTRIC WINCH (OPTIONAL)

This unit is activated via the switch at the end of the one foot cord. To remove wire rope from the winch, depress the "CABLE OUT" button. The load will stop without coasting when the button is released. To pull a load or spool wire rope onto the drum, depress the "CABLE IN" button.

This winch is designed to pull 400 lbs (180 KG) for 20 second on the wire rope layer closest to the drum. Attempts to pull more than this weight or exceed the duty cycle (on time) may cause damage to the winch or wire rope. It may also cause the circuit breaker to trip, and the winch to not operate. Maintain a minimum of four wraps of wire rope around the winch drum before attempting any pulls.



DO NOT PUT ANGULAR LOADS ON THE WINCH. PULL SHOULD ALWAYS BE PERPENDICULAR TO WINCH.

KEEP WIRE ROPE TIGHT AND EVEN ON THE SPOOL.

REPLACE WIRE ROPE WHEN FRAYED.

KEEP WIRE ROPE UNDER TENSION WHEN OPERATING WINCH. WIRE ROPE WILL "STACK UP" LOOSELY ON SPOOL IF NOT KEPT UNDER TENSION.

The wire rope will require periodic attention and eventual replacement. Inspect the wire rope frequently. If any fraying exists, replace the wire rope at once. Your winch uses a galvanized aircraft type 1/8" DIA. [3 mm] 7 x 19 cable. Always replace the wire rope with the replacement rope specified in the parts section of this manual. Because all rope is subject to wear, it is excluded from our warranty.

LUBRICATION

Your new winch has lifetime lubrication. Grease leakage out of the winch, especially during the first few operations, is normal. It is not necessary to grease or oil any part of the winch at any time. If grease leakage continues beyond a short period of time, the winch should be inspected and replaced, if necessary.

TROUBLESHOOTING

If the winch fails to operate, the circuit breaker on the end of the winch motor should be checked. If the circuit breaker has tripped, this will be indicated by the center portion of the breaker protruding from the main body. To reset the breaker, press the center portion back into the assembly.

OPTIONAL WORKSTATION

This OPTIONAL WORKSTATION has been designed to lift a maximum of 400 lbs (180 KG) once every 10 minutes. Attempts to lift more than this weight or exceed the duty cycle (on time) may cause the circuit breaker to trip and the lift to not operate.

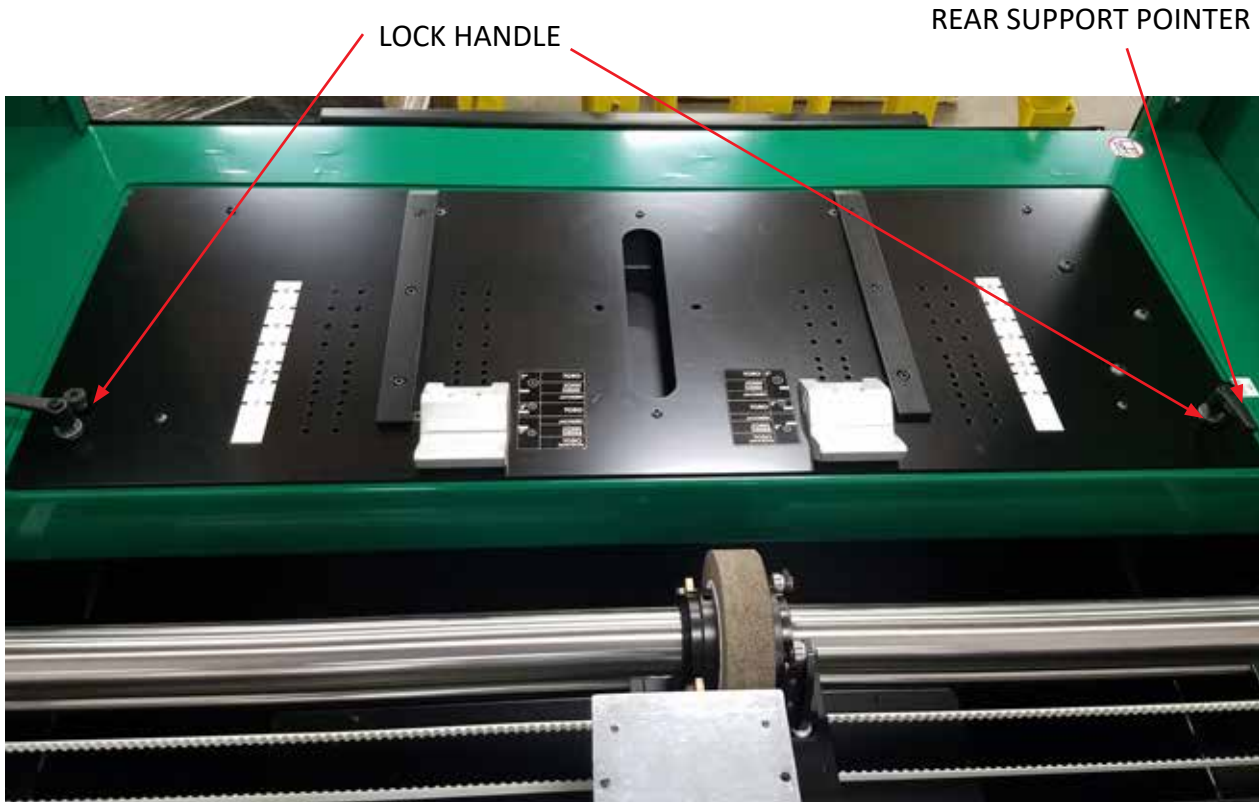
For detailed information on the OPTIONAL WORKSTATION see the manual included with the Workstation.

NOTE: Repeated tripping of the breaker indicates an overload condition. Overloading will shorten the life of your winch.

NEVER USE THE WORKSTATION WITH A PERSON ON THE RAMP.

ZERO THE REAR SUPPORT TABLE

Before you align the GRINDING HEAD CARRIAGE to the reel of the cutting unit, true the REAR ROLLER SUPPORT PLATE to parallel to the V-BLOCKS SUPPORT to the Grind shaft. To move Unlock the LOCK HANDLES on the rear tooling plate and rotate the HANDWHEEL until the POINTER on the table alignes with the zero mark on the decal (see FIG 15).



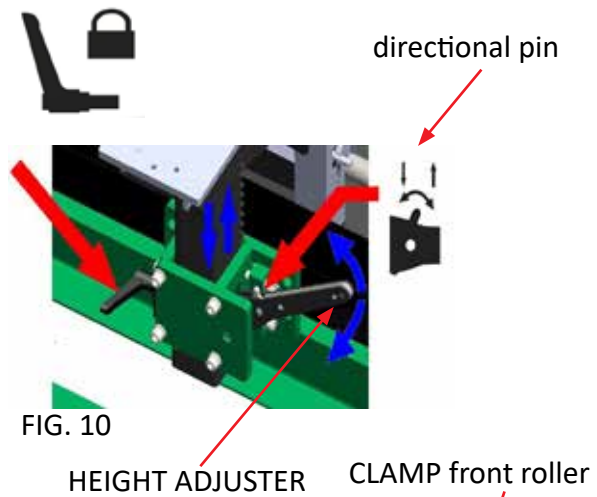
REAR SUPPORT ADJUSTMENT
HANDWHEEL

LOAD THE CUTTING UNIT

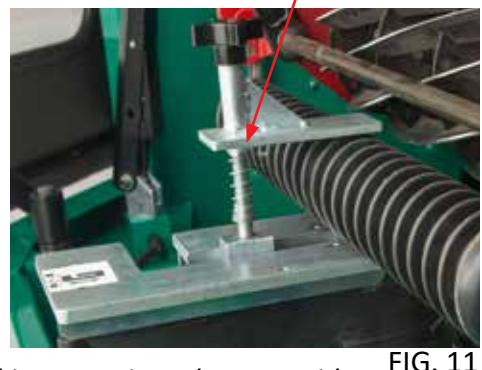


1. Place the rear roller of the cutting unit into the V-BLOCKS (as shown above). It may be necessary to move the FRONT HEIGHT ADJUSTER into a position to receive the front roller. This is done by unlocking the LOCK HANDLE and sliding the FRONT HEIGHT ADJUSTER in or out in order for the front roller of the cutting unit to be placed on the FRONT HEIGHT ADJUSTER.
2. When the front and rear rollers are in position, clamp the rear roller with the REAR ROLLER CLAMP. The REAR ROLLER CLAMP rotates 90° (by turning the T-Handle) when placed on the rear table.. Once placed, lock the LOCK KNOB by pushing down towards the table.

SET THE HEIGHT



1. Place the REEL HEIGHT guage on the edge of the table next to the reel.A. See FIG. 9.
2. Unlock the LOCK HANDLE on the left side of the HEIGHT ADJUSTER (see FIG. 10).
3. Select the DIRECTIONAL PIN setting on the ratchet (see FIG. 10)
4. Adjust the HEIGHT ADJUSTER up or down until the the bottom of the reel is at the same level as the top of the REEL HEIGHT guage (see FIG. 9).
5. Re-lock the LOCK HANDLE on the HEIGHT ADJUSTER (see FIG. 10).
6. Clamp the front roller (see FIG. 11).
7. Remove and store the REEL HEIGHT guage.



NOTE: The FRONT CLAMP and FRONT TOOLING may need to be adjusted in or out in order to avoid interference with the grinding head. The FRONT TOOLING slides in or out by unlocking the LOCK HANDLE and pushing or pulling on it.

STEP 2: SO MODEL - TOUCH OFF- WHEEL TO REEL

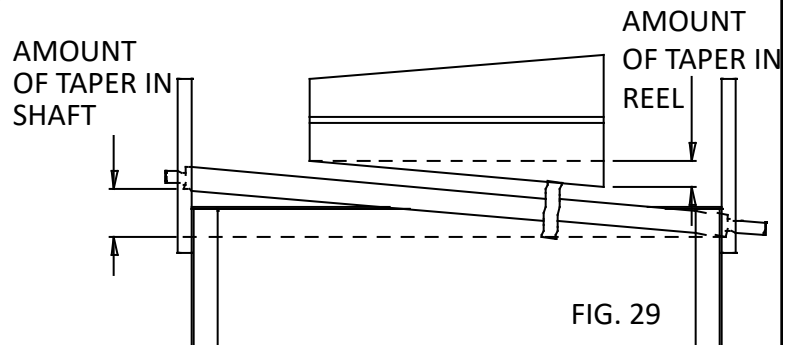
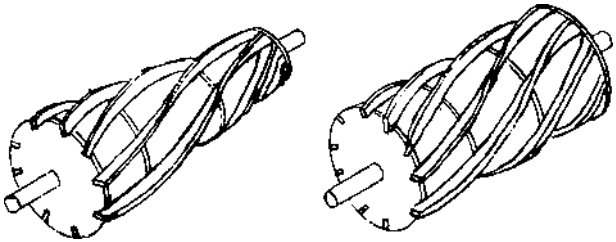
ALIGNMENT OF GRINDING SHAFT TO REEL

Release the Traverse Lock handle to move the grinding wheel left and right by hand.

To align the grinding shaft to the reel, bring the shaft up so that the spin wheel is about ¼ inch [6 mm] from the reel blades. Move the wheel to one side of the reel, and raise the grinding shaft until the wheel just touches the blade. Move the wheel to the other side of the reel and bring the shaft up until the wheel just touches. Re-check from side to side and make minor adjustments until the wheel touches the same on both ends of the reel. The grind shaft is now aligned to the reels outer diameter.

Check for high spots in the reel by moving the wheel the length of the reel while spinning the reel. If there are high spots lower the shaft equally on both ends.

You can grind the reel by touching off, however if the Reel has taper you will grind the same taper into the reel.



CHECKING FOR TAPER

To check for taper you will need to use a Pi tape or a reel taper checker. Follow the directions that came with the checking device.

To maintain the best quality of cut, the taper in a reel must be removed returning the reel to a true cylinder. To remove the taper that was measured with the checker, first align the reel to the shaft by the touch method (as discussed above). Then, drop the side of the grinding shaft that is high (the smaller side of the reel) approximately 2 times the difference in of the diameters.

Example: For a reel that is 22 inches [56 cm] long with a measured taper of .12" [3 mm], the adjuster on the smaller side of the reel would be dropped to drop -.25" [6 mm].

This will bring the grinding shaft close to parallel to the reel center shaft. Zero out the digital gauges located on the vertical adjustment towers and infeed both sides equally until the wheel just touches the large side of the reel. When grinding, the wheel will only make contact with the larger side of the reel and will gradually grind more as the larger areas are ground away. Grind until full contact is made across the entire length of the reel, and the reel is sharp the entire width of all blades.

After grinding, use the checker to again measure the reel. If there is still taper then repeat the process above until the taper is removed.

STEP 2: SG MODEL - POSITION THE GRINDING WHEEL TO THE CUTTING UNIT

Using the Positioning Gauge will align the Wheel to the Reel and will remove taper when spin grinding without the need for a pi tape or taper checker.

Make sure that the ACCU-POSITIONING GAUGE is on the rear pin position first.

VERTICAL POSITIONING

GAUGING DECAL

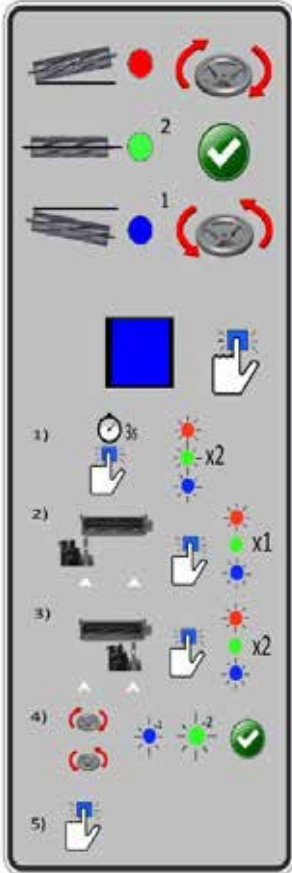


fig. 18

LED INDICATORS

Indicates "Turn THE HAND-WHEEL clockwise" to lower the right side of the GRINDING SHAFT.

Indicates that the GRINDING CARRIAGE is aligned.

Indicates "Turn the GREY HAND-WHEEL counter-clockwise" to raise the right side of the GRINDING CARRIAGE.

RESET/CHECK button.

GAUGING STEPS

Step 1-Press and hold the RESET button for 3 seconds.

Step 2-Move the grinding head to the left side of the cutting unit, gauge, then press the CHECK button.

Step 3-Move the grinding head to the right side of the cutting unit, gauge, then press the CHECK button.

Step 4- Use the right side handwheel to adjust the position of the shaft or rear table until the green light is lit. The green LED lit indicates the cutting unit is aligned.

Step 5- Press the RESET button after the GRINDING CARRIAGE is aligned to reset the ACCU-POSITIONING GAUGE.



fig. 19

1. Release the TRAVERSE LOCK handle (FIG. 17) and move the GRINDING CARRIAGE to the left side of the cutting unit until the decal on the ACCU-POSITIONING GAUGE aligns with the decal on the tooling bar (see FIG. 19). The TRAVERSE LOCK RELEASE ARM is located at the front of the carriage. Rotate the release arm UP to release and DOWN to engage (see FIG. 17).
2. Press the RELEASE TAB and allow the GAUGE PIN to travel to the center of the cutting unit shaft.
3. Press the RESET/CHECK BUTTON and hold for three seconds to reset the ACCU-POSITIONING GAUGE to reset the gauge. All three LEDs will blink twice to indicate that the GAUGE is reset.

- 1.
- 2.
- 3.
4. Press the RESET/CHECK BUTTON again to take the left side reading. The BLUE LED and RED LED will flash once.
5. Retract the GAUGE PIN and move the GRINDING CARRIAGE to the right until the decal on the ACCU-POSITIONING GAUGE aligns with the decal on the TOOLING BAR. (see FIG.21).
6. Release the TAB and allow the GAUGE PIN to travel up to the the center shaft of the cutting unit.
NOTE: It is important to NOT move the gauge forward or back, if this occurs your readings will be skewed.
7. Press the RESET/CHECK BUTTON to take the second reading. The BLUE LED and RED LED will blink twice and then either the BLUE **or** the RED LED will continue to flash to indicate which direction to turn the GREY HANDWHEEL: BLUE for COUNTER-CLOCKWISE and RED for CLOCKWISE.
8. Use the RIGHT SIDE INFEEED HAND-WHEEL to adjust the WHEEL vertically until the GREEN LED illuminates. Your final VERTICAL ADJUSTMENT should always be COUNTER-CLOCKWISE.
9. At this point you can choose to the adjustment by retracting the GAUGE PIN and moving back to the LEFT side. Release the TAB and allow the GAUGE PIN to travel up to the the center shaft of the cutting unit. If the LED is still GREEN, then proceed with the HORIZONTAL POSITIONING. If not, repeat the entire VERTICAL POSITIONING process.

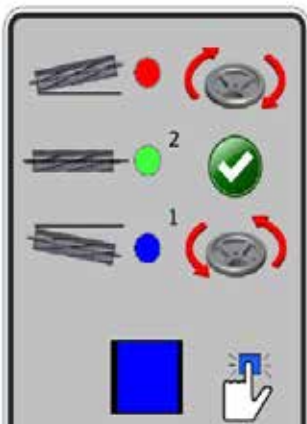


fig. 21



fig. 22

HORIZONTAL POSITIONING



Indicates "Turn the REAR TABLE HAND-WHEEL clockwise" to move the REEL towards the operator.

Indicates the GRINDING CARRIAGE is aligned.

Indicates "Turn the REAR TABLE HAND-WHEEL counter-clockwise" to move the right side of the GRINDING CARRIAGE away from the operator.

RESET/CHECK BUTTON.

1. Move the ACCU-POSITIONING GAUGE to the FRONT PIN for HORIZONTAL POSITIONING.
2. Unlock the LOCK HANDLES on the REAR SUPPORT PLATE.
3. Release the TRAVERSE LOCK HANDLE (see FIG. 15) and move the GRINDING WHEEL to the left side of the cutting unit (see FIG. 23) until the decal on the ACCU-POSITIONING GAUGE aligns with the decal on the tooling bar (see FIG. 19).
4. Press the RELEASE TAB and allow the GAUGE PIN to travel up to the center of the cutting unit shaft.
5. Press the RESET/CHECK and hold until all three LEDs blink twice to reset the ACCU-POSITIONING GAUGE.
6. Press the RESET/CHECK BUTTON again to take the LEFT SIDE reading. The RED and BLUE LEDs will flash once.
7. Retract the GAUGE and move the GRINDING CARRIAGE to the right side of the cutting unit (see FIG. 24) until the decal on the ACCU-POSITIONING GAUGE aligns with the decal on the tooling bar (see FIG. 19).
8. Release the tab and allow the GAUGE PIN to travel up to the the center shaft of the cutting unit. *NOTE: It is important to NOT move the gauge forward or back, if this occurs your readings will be skewed.*
9. Press the RESET/CHECK button to take the right side reading. The RED and BLUE LEDs will flash twice and then either the BLUE **or** the RED LED will continue to flash to indicate which direction to turn the REAR HANDWHEEL: BLUE for COUNTER-CLOCKWISE and RED for CLOCKWISE.
10. Use the REAR TABLE HAND-WHEEL to adjust the REEL SUPPORT TABLE until the green LED illuminates. *NOTE: If you wish to CHECK the positioning, retract the GAUGE PIN and move the wheel back to the left. Release the TAB and allow the GAUGE PIN to travel up to the reel shaft. If the LED is green, the positioning is complete. If not, reset the gauge and repeat the horizontal gauging process.*
11. *Note: If you rotate the horizontal handwheel more than 1 full turn it is best to repeat the vertical alignment to verify the horizontal movement has not affected the vertical alignment.*
12. Remove and store the ACCU-POSITIONING GAUGE (see FIG. 25) and verify that all lock handles are tight. Your reel is now ready for SPIN grinding



fig. 23



fig. 24

accu-positioning gauge storage



fig. 25

⚠ WARNING
FIRMLY HAND-TIGHTEN ALL LOCKING KNOBS BEFORE GRINDING. ANY LOOSENESS WILL ADVERSELY AFFECT GRINDING QUALITY.

FIG. 14

REMOVE AND STORE ACCU-POSITIONING GAUGE

STEP 3: SPIN GRINDING

CONNECT SPIN DRIVE

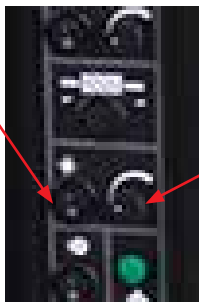


Choose which side of the reel you want to spin from and install the SPIN DRIVE MOTOR with the correct adapter. This will generally be the same drive system component used for backlapping see FIG. 28.

The SPIN DRIVE MOTOR attaches to the end of the reel shaft or a drive system component. Consult the cutting unit manufacturer for proper spin drive placement and attachment.

NOTE: Ensure spin rotation is the same as the grinding wheel - clockwise looking from right end. If the reel is not spinning the correct direction see the service manual.

spin motor switch

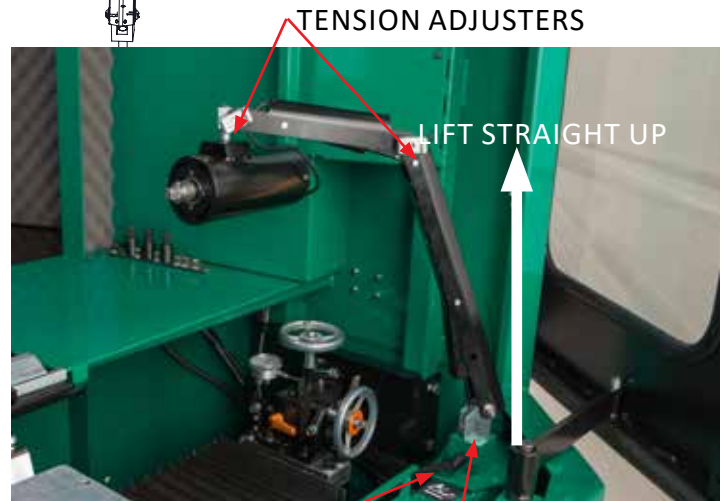
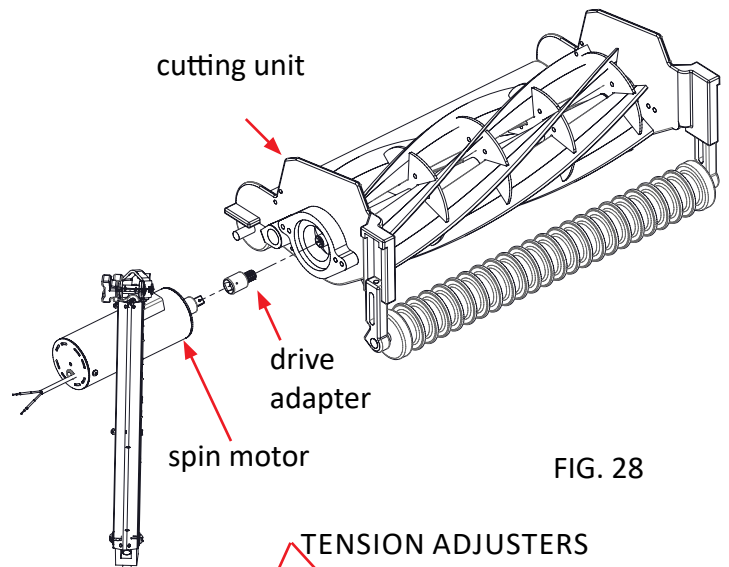


spin/torque speed dial



FIG. 27

The grinder is supplied 3 spline adapters 8-9-11(part # 3706130) (See FIG. 27). Use one of these adapters to connect the SPIN DRIVE MOTOR to the cutting unit (see FIG. 28). If you need a different adapter, contact the reel manufacturer.



LOCK HANDLE PIN

SET TRAVEL LIMITS



TRAVERSE SWITCH

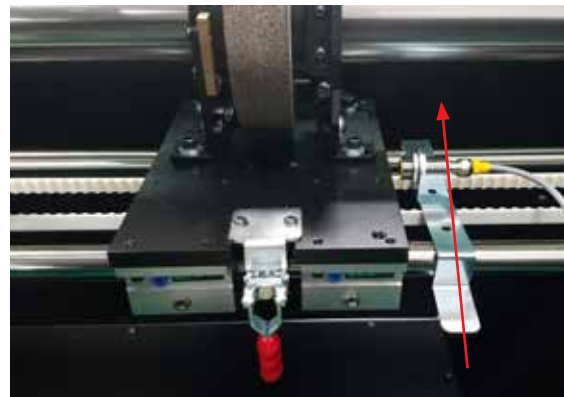
TRAVERSE SPEED KNOB

Set the TRAVEL LIMITS of the grinding wheel by either manually moving the wheel or by pressing the TRAVERSE SWITCH to ON and turning up the TRAVERSE SPEED KNOB.

1. Lower the grinding wheel by pressing the downfeed button 5-10 times.
2. Move the TRAVEL LIMIT SENSORS out to allow the grinding wheel to travel past the ends of the reel.
3. Move the GRINDING WHEEL until the wheel has cleared the end of the reel (if clearance to the frame allows) (see FIG. 29).
4. When the GRINDING WHEEL is in position, move the TRAVEL LIMIT SENSORS in until the light on the SENSOR illuminates.
5. Test the TRAVEL LIMIT SENSORS by moving the GRINDING WHEEL in a couple of inches and then back out to verify that the sensor properly stops the wheel.
6. Repeat the process on the opposite TRAVEL LIMIT SENSOR.

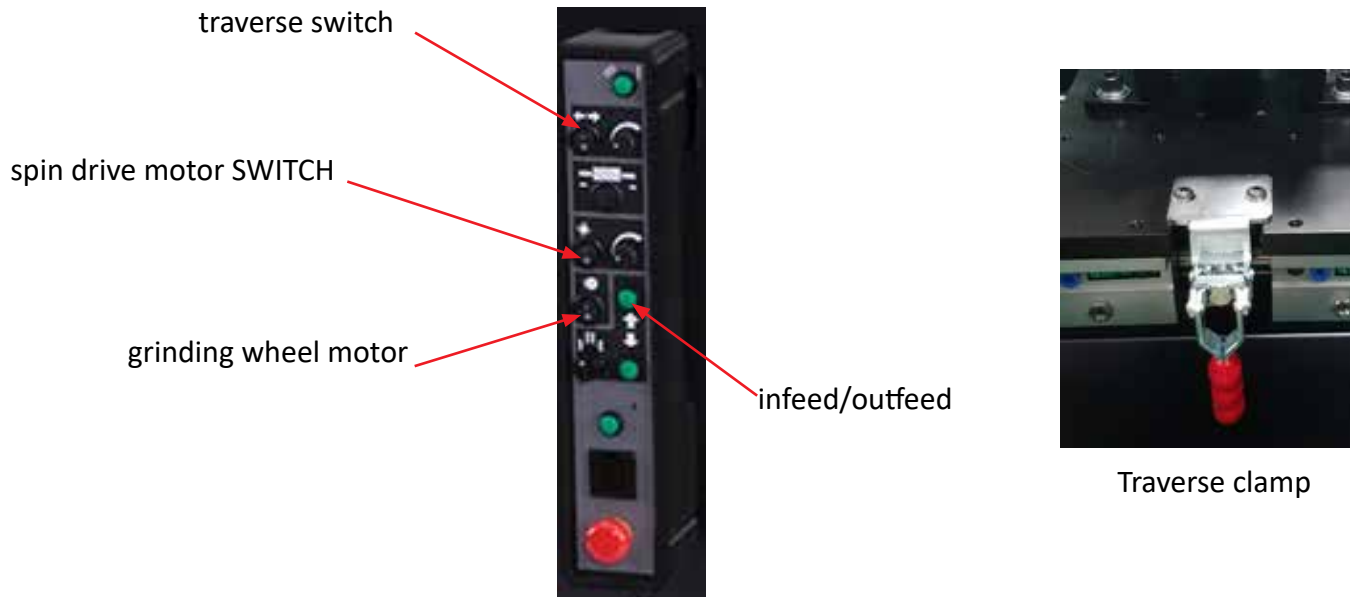


NOTE: Grinding wheel must be positioned off of the reel (if frame allows).



TRAVEL LIMIT SENSOR

SPIN GRIND



1. Before spin grinding, lock the TRAVERSE CLAMP and check that all LOCK HANDLES are tightened.
2. Close the doors. The grinding wheel motor and spin drive will not operate with the doors open.
3. Depress the GRINDING WHEEL MOTOR SWITCH and the SPIN DRIVE MOTOR SWITCHES to ON.
NOTE: The reel should rotate in the same direction as the grinding wheel, like tandem wheels on a truck. The actual point of contact where they meet is in opposite directions. See FIG. 30.
4. Depress the TRAVERSE SWITCH to ON and use the TRAVERSE SPEED KNOB to traverse the GRINDING WHEEL until it is positioned below the reel.
5. Press the INFEED SWITCH to INFEED the GRINDING WHEEL until there is some light sparking on the reel.
6. Use the TRAVERSE SWITCH and TRAVERSE SPEED KNOB to traverse across the reel to find any high areas on the reel. *NOTE: If the grind starts getting too heavy, use the INFEED/DOWNFEED SWITCH to move the GRINDING wheel down until you can travel the full length of the reel without heavy grinding. When you are able to travel the full distance of the reel without any problems proceed with grinding the reel.*
7. To manual grind the reel, Infeed the GRINDING WHEEL approximately .002-.005" at a time, allowing the grinding wheel to travel back and forth across the reel 2 to 3 times before infeeding again.

TRAVERSE DRIVE RPM

The TRAVERSE SPEED KNOB is adjustable from approximately 5 feet per minute [1.5 meters per minute] to 20 feet per minute [6 meters per minute]. It is recommended to grind around 15 feet per minute [4 meters per minute]. Grinding at a slower traverse speed, 10 feet per minute [3 meters per minute] as an example, will give a better finish but will extend the grind cycle time. Grind finish versus grind cycle time is controlled by the operator.

AUTO PROGRAM:

To use the Auto programs follow these steps:

- a) Move the grinding wheel to the right side limit stop.
- b) Turn all switches to the off position and close all doors.
- c) Press the program select button to select from 1 of the programs. SEE FIG 3`

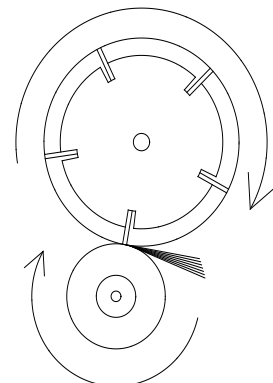


FIG. 30

PROGRAM	INFEEDS	TOTAL INFEED	TOTAL PASSES
1	1	.003"	7
2	2	.006	9
3	3	.009"	11
4	4	.012"	12
5	5	.015"	15

NOTE: SETUP PROCEDURE FOR SPIN DRIVE RPM

SPIN DRIVE RPM DURING SPIN GRINDING IS VERY IMPORTANT IN ACHIEVING A QUALITY GRIND. THE DIAMETER OF THE REEL AND THE NUMBER OF BLADES ON THE CUTTING UNIT YOU ARE GRINDING WILL DETERMINE THE OPTIMAL SPIN SPEED.

Generally, the SPIN DRIVE RPM for spin grinding will be between 180 RPM and 380 RPM. For all reels, there is an optimum SPIN SPEED where there is an AGGRESSIVE, yet smooth grind.

It is recommended to start grinding each reel at the spin speed of 180 RPM and then evaluating the RPM by adjusting higher and lower to optimize the SPIN SPEED for that reel.

INCORRECT SPIN SPEED can cause two problems: grinding wheel dressing or grinding wheel resonance. For some reels, especially small diameter high blade count reels, if the SPIN SPEED RPM is set too high, the reel can act as a dresser to the grinding wheel. There can develop what appears to be a very aggressive grind (as if the infeed has self-infed) and then a sudden stop of grinding with no grinding wheel to reel contact. If this occurs, your SPIN SPEED was set too high and you have dressed your grinding wheel.

Some reels have a resonant RPM where the reel goes into harmonics with the grinding wheel and the resonance vibrates the grinder which results in a very bad grind. By changing the SPIN SPEED to a higher or lower RPM you will move out of the resonant range. After determining the best SPIN SPEED RPM for a reel, write the setting in the REEL SETUP CHART.

Spin grinding is complete when enough material has been removed and full contact is made across the entire length of the reel and the entire width of all blades.

NOTE: Set traverse at slow speed on the TRAVERSE SPEED KNOB. The slower the traverse speed, the better the finish. Approximately 8 feet per minute or slower is recommended, but adjust the speed to your finish requirements for final grinding. After sparkout, adjust the TRAVERSE SPEED KNOB to 0 and then switch all motors to OFF.

Open the doors and inspect the reel. If it is sharp remove the reel. If not, repeat the spin process, as required. If you wish to inspect the reel in the middle of a grind program, turn off all switches when the grinding head is in the HOME position (Right side limit stop). If using the AUTO program press the program select button to cancel the program. Once stopped and all switches off, You can then open the doors and check the reel. If you wish to continue, close the doors and turn all the motor switches back to ON or select a new AUTO Program..

