

OPERATOR'S MANUAL

Bedknife Grinder

BG1500



FRONTIER EQUIPMENT™

This book consists of three manuals:

The OPERATORS MANUAL in ENGLISH which contains all the information on operating and doing routine daily maintenance on this equipment.

The ASSEMBLY and SERVICE MANUAL which is used by the maintenance department to install the equipment and to do all maintenance except routine daily maintenance.

The OPERATORS MANUAL in FRENCH which is the same as the English version only translated into French.

DEALER PREPARATION/INSTALLATION CHECK LIST

Frontier BG1500 Bedknife Grinder

THIS CHECKLIST IS TO REMAIN IN OWNER'S MANUAL

It is the responsibility of the dealer to complete the procedures listed below, then review this checklist with the customer upon the delivery or the sale of this equipment. The installation training goes over the basic operational functions of the equipment. To ensure adequate training, we require that the following items are reviewed by your John Deere Dealer. Please check off to ensure that you understand the following items before the installation training is complete:

- | | |
|--|--|
| <input type="checkbox"/> 1. Equipment is completely assembled | <input type="checkbox"/> 7. Review proper positioning of bedknife |
| <input type="checkbox"/> 2. All shields are in place and in good condition. | <input type="checkbox"/> 8. Review traverse proximity switch positioning |
| <input type="checkbox"/> 3. All decals in place and readable. | <input type="checkbox"/> 9. Explain use of setup flags |
| <input type="checkbox"/> 4. Overall condition good (i.e. paint, welds, electrical) | <input type="checkbox"/> 10. Explain grinding wheel height adjustment. |
| <input type="checkbox"/> 5. Verify there is sufficient electrical power to operate the machine. | <input type="checkbox"/> 11. Discuss grinder flood coolant system. |
| <input type="checkbox"/> 6. Review Operators, Assembly & Service Manuals, and any additional training material if available. | <input type="checkbox"/> 12. Review cleaning/dressing the wheel |
| | <input type="checkbox"/> 13. Review General Maintenance |

Dealer's Signature _____

Purchaser's Signature _____

Safety



IMPORTANT SAFETY MESSAGE FOR OWNERS/OPERATORS OF BEDKNIFE GRINDERS



Safety is a primary concern in the design, manufacture, sale, and use of bedknife grinders. As manufacturer of bedknife 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 bedknife 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 as specified by the manufacturer.

Our current production machines include, as standard equipment, guards or shields for the grinding wheel, safety signs and an operators manuals. Never bypass or operate the machine with any of the guards or safety device removed.

Read and fully understand all the safety practices discussed on pages 4 and 5 of this manual. All safety rules must be understood and followed by anyone who works with bedknife grinders.

Before operating a bedknife grinder, an operator must read and understand all of the information in the owner's manual and in the safety signs attached to the product. A person who has not read or understood the owner's 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 owner's manual and is not familiar with the equipment. If you do not have an owner's manual or current production safety signs, contact the manufacturer or your dealer immediately.

Bedknife 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 identified in the owner's manual and in product safety signs, 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.

TO THE DEALER:

Assembly and proper installation of this product is the responsibility of the John Deere dealer. Read manual instructions and safety rules. Make sure all items on the Preparation Check List in the Operator's Manual are completed before releasing equipment to the owner.

TO THE OWNER:

Read this manual before operating your Frontier equipment. 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.

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 the unit as specified. Please observe all safety information in this manual and safety decals on the equipment.

For service, your authorized John Deere dealer has trained mechanics, genuine Frontier service parts, and the necessary tools and equipment to handle all of your service needs.

Use only genuine Frontier service parts.

SAFETY INSTRUCTIONS



Safety Awareness Symbols are inserted into this manual to alert you to possible **Safety Hazards**. Whenever you see these symbols, follow their instructions.



The **Warning Symbol** identifies special instructions or procedures which, if not correctly followed, could result in personal injury.

The **Caution Symbol** identifies special instructions or procedures which, if not strictly observed, could result in damage to or destruction of equipment.

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 Grinder in damp or wet locations. Machine is for indoor use only. Keep work area well lit.
5. **KEEP ALL VISITORS AWAY.** All visitors should be kept a safe distance from work area.
6. **MAKE 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.
10. **ALWAYS USE SAFETY GLASSES.**
11. **SECURE YOUR WORK.** Make certain that the bedknife is securely fastened with the mounts provided before operating.
12. **DON'T OVERREACH.** Keep proper footing and balance at all times.
13. **MAINTAIN GRINDER WITH CARE.** Follow instructions in service section of the 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 all switches are OFF before plugging in the Grinder.
16. **USE RECOMMENDED ACCESSORIES.** Consult the manual for recommended accessories. Using improper accessories may cause risk of personal injury.
17. **CHECK 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 GRINDER RUNNING UNATTENDED. TURN 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 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 this Manual for the proper location and part numbers of safety decals.
21. **DO NOT OPERATE THE GRINDER WHEN UNDER THE INFLUENCE OF DRUGS, ALCOHOL, OR MEDICATION.**

SAFETY INSTRUCTIONS



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 wheel.
4. **DO CHECK MOUNTING FLANGES** for equal and correct diameter.
5. **DO USE MOUNTING BLOTTERS** when supplied with 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 eye protection when grinding.
10. **DO TURN OFF COOLANT** before stopping to avoid creating an out of balance condition.

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 MAXIMUM OPERATING SPEED** established for the wheel.
4. **DON'T** use mounting flanges on which the bearing surfaces **ARE NOT CLEAN, FLAT AND FREE OF BURNS**.
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** work into the wheel.
9. **DON'T STAND DIRECTLY IN FRONT** of a grinding wheel whenever a grinder is started.
10. **DON'T FORCE GRINDING** so that motor slows noticeably or work gets hot.



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.

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This machine is intended for reel mower bedknife grinding **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 manufactures 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. Machine is for indoor use only. Do not use a power washer to clean the machine.



Low Voltage Relay

The grinder is equipped with a high-low voltage relay 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 incorrect and must be correct before proceeding further with the grinder.

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DAILY MAINTENANCE BY THE OPERATOR

- On a daily basis, clean the machine by wiping it off.
- On a daily basis, remove all grinding grit from the traverse shafts and tooling bar area.
- On a daily basis, check coolant tray fluid level. Fluid must be above the sump.
- On a daily basis, inspect the machine for loose fasteners or components.
- Contact your company's Maintenance Department if damaged or defective parts are found.



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

SAFETY INSTRUCTIONS

PLEASE TAKE SPECIAL NOTE OF THE FOLLOWING WARNING DECALS LOCATED ON THE FRONT AND SIDES OF THE GRINDER.

GRINDING WHEEL RPM

⚠ CAUTION	⚠ ATENCIÓN
To Avoid Injury: -Do not exceed grinding wheel maximum operating speed of 3600 revolutions per minute.	Para evitar lesiones: -No exceda la velocidad de funcionamiento máxima, de 3600 revoluciones por minuto, de la rueda rectificadora.

SHARP OBJECTS

⚠ CAUTION		⚠ ATENCIÓN
To Avoid Injury: -Keep hands away from rotating objects		Para evitar lesiones: -Mantenga las manos alejadas de los objetos giratorios

ELECTRICITY

⚠ CAUTION

To Avoid Injury: -Make sure all electrical power to this machine has been disconnected before removing any electrical panels or covers for maintenance.
⚠ ATENCIÓN
Para evitar lesiones: -Asegúrese de que se haya desconectado por completo el suministro eléctrico de esta máquina antes de retirar los paneles eléctricos o las cubiertas para el mantenimiento.

GENERAL INFORMATION

⚠ CAUTION
To Avoid Injury: -Read Operator's Manual before operating, servicing, or repairing equipment. Follow all safety rules and instructions. (Manuals are available from your selling dealer.) -Keep bystanders away from equipment during operation. Keep all shields in place and in good condition. -Wear all of the appropriate safety equipment specified in the Operator's Manual while operating this machine. -Always make sure machine is off and all machine movement has stopped before leaving machine. -Never allow children or untrained persons to operate equipment.
⚠ ATENCIÓN
Para evitar lesiones: -Lea el manual del operador antes de la puesta en funcionamiento, del mantenimiento o de la reparación del equipo. Siga todas las reglas e instrucciones de seguridad. (Los manuales se encuentran disponibles a través de su distribuidor.) -Mantenga al personal ajeno alejado del equipo durante el funcionamiento. Mantenga todos los protectores en su lugar y en buenas condiciones. -Durante el funcionamiento de esta máquina, utilice todos los equipos de seguridad correspondientes especificados en el manual del operador. -Asegúrese siempre de que la máquina se encuentre apagada y haya dejado de moverse antes de abandonarla. -Nunca permita que un niño o una persona sin capacitación pongan la máquina en funcionamiento.



BG1500

Label Sheet
 (English and Spanish)
 Part Number 5NT127300
 (English and French)
 Part Number 5NT127301

GETTING TO KNOW YOUR GRINDER



SPECIFICATIONS

Traversing Switches	Solid state, non-contacting proximity switches.
Overall Width	61" [155 cm]
Overall Height	58" [148 cm] with door closed, 81" [206 cm] with door open
Overall Depth	32" [82 cm]
Weight	750 lbs. [340 kg] shipping weight 935 lbs. [424 kg]
Base Construction	Precision heavy duty reinforced welded steel base
Carriage Rails	Precision Ground, Hardened Steel - 1.000 Dia. [25.4 mm]
Grind Head Motor	3/4HP AC Motor, 3450 RPM
Sound Level	Less than 75 Dba,
Auto Traverse	Belt driven with easy to engage clamp system
Tooling	Magnetic Mount for Bed Knife with addition center supports
Coolant	Built in flood coolant system.
Control System	*Safety grind motor with door interrupt switches *Variable speed traverse control.

GETTING TO KNOW YOUR GRINDER

CONTROL PANEL COMPONENT IDENTIFICATION FOR THE BG1500

Learn the function of each switch and knob on the control panel. As you read and learn about each knob you are encouraged to turn that knob on and view that particular operation. See FIG. 1.



ALWAYS WEAR PROPER SAFETY EYEWEAR WHEN OPERATING YOUR GRINDER. NEVER TURN ON YOUR GRINDER WITHOUT FIRST PUTTING ON SAFETY EYEWEAR.

EMERGENCY STOP PUSHBUTTON

Push in to cut all power to the control panel functions. This removes power from all motors, including the grinding motor, coolant pump, traverse motor, etc. To restore power, pull up on button and press the Start button. The large button design allows a quick stop of all power in an emergency situation.

SYSTEM START PUSHBUTTON

The green pushbutton is the system start switch. Pushing it will engage the magnetic starter and power the control panel. The magnetic starter will not engage unless the emergency stop pushbutton is pulled out and the grinding motor switch is turned off.

GRIND MOTOR SWITCH

The grind motor switch turns the Grinding Wheel Motor on and off.

COOLANT PUMP SWITCH

The coolant pump switch turns the coolant pump on and off. There is also a valve on the side of the grinding head to control the amount of the flow.

TRAVERSE MOTOR SWITCH

The travel motor switch turns the traverse motor on and off. It controls the side to side movement of the carriage and grinding head.

TRAVERSE SPEED CONTROL POTENTIOMETER

This control knob sets the speed of traverse for the grinding carriage. When turned on to minimum, the carriage will stop. When turned to the maximum, the carriage moves back and forth at full speed. When learning to use this machine, it is a good idea to set this speed at minimum, start the other functions, then slowly increase the speed to observe that your operation and set up are correct.

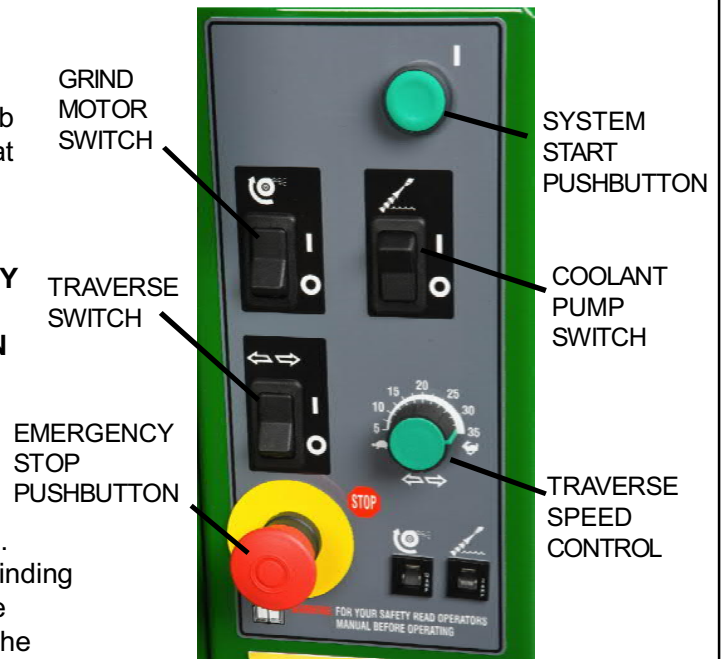


FIG. 1

Buy Now



Our support email:

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