NEWGRIND

OUTPERFORMING FROM EDGE TO EDGE

RHINO RS150

USER MANUAL - VFD: LENZE VERSION

EQUIPMENT USAGES

- Concrete leveling, grinding and polishing
- Glue, thinset and mastic removal
- Terrazzo grinding and polishing
- Stone grinding and polishing
- Hardwood sanding and refinishing

For your personal safety, READ and UNDERSTAND before using.

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

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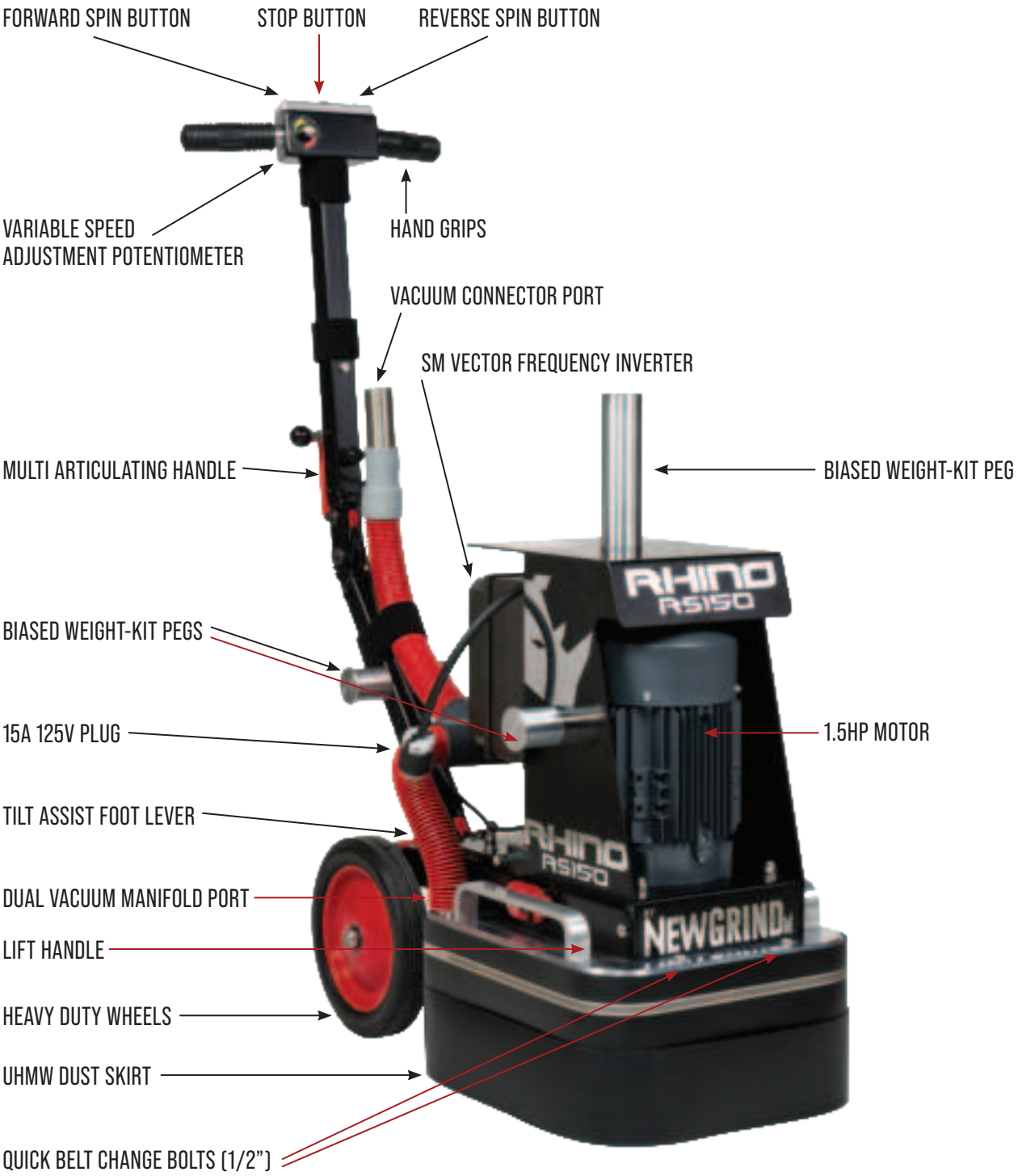
RHINO RS150 DIAGRAM



RHINO RS150 BOTTOM DIAGRAM

QUICK-CHANGE DRIVE BELT

SINGLE OR DOUBLE GROMMET
TOOL PLATE
MOUNTING SYSTEM

RHINO STYLE TOOLING
ATTACHES USING 8MM SCREW

COUNTER-CLOCKWISE
SPINNING RHINO TOOL PLATES
(RED)

CLOCKWISE
SPINNING RHINO TOOL PLATES
(BLACK)

RHINO RS150 MACHINE SPECIFICATIONS

POWER	15 AMP/120V
MAXIMUM WATTS DRAW	1776
HP	1.5
MACHINE WEIGHT	150 lbs
BIASED WEIGHT KIT MAX WEIGHT	175 lbs
COMBINED WEIGHT	325
DISC SPEED	200-900 rpm
VARIABLE SPEED CONTROL	YES
NUMBER OF GRINDING HEADS	6
COUNTER-ROTATING HEADS	YES
DISK SIZE	5 inches
GRINDING FOOTPRINT	14 inches
QUICK CHANGE TOOLING	YES
QUICK BELT CHANGING SYSTEM	YES
WET OR DRY GRINDING	YES
UHMW FLOATING DUST SKIRT	YES
MULTI-ARTICULATING HANDLE	YES
RUNS FORWARD OR REVERSE	YES
CAN BE USED AS AN EDGER	YES – grinds to within 1/8 of the edge
DUAL VACUUM MANIFOLDS	YES

TOOLING

RHINO STYLE TOOLING	YES
STANDARD TRAPEZOID	NO

AVERAGE PRODUCTION RATES

(on Medium Hard Concrete)

EXTREMELY HEAVY REMOVAL	100-150 sq./ft. per hour
HEAVY REMOVAL	200-300 sq./ft. per hour
LIGHT REMOVAL	250-400 sq./ft. per hour
GRINDING AND PROFILING	300-450 sq./ft. per hour
POLISHING	400-650 sq./ft. per hour

RHINO RS150 SAFETY INSTRUCTIONS

WARNING! READ AND UNDERSTAND ALL INSTRUCTIONS.

Failure to follow all instructions listed below, may result in electric shock, fire and/or serious personal injury.
SAVE THESE INSTRUCTIONS.

WORK AREA SAFETY

1. Keep your work area clean and well lit. Cluttered floors and dark areas invite accidents.
2. Do not operate equipment in explosive environments, such as in the presence of - flammable liquids, gases or dust. Grinding can create sparks which may ignite the dust or fumes.
3. Keep bystanders, children, and visitors away while operating equipment. Distractions can cause you to lose control.

ELECTRICAL SAFETY

1. Do not abuse the cord. Never use the cord to pull the equipment or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately. Damaged cords increase the risk of electric shock.
2. Make sure cord is clear of wheels and cutting discs. Do not wrap cord around your arm or wrist. If control of equipment is lost, cord may become wrapped around you and cause personal injury.
3. When operating equipment outside, use an outdoor extension cord marked “W-A” or “W”. These cords are rated for outdoor use and reduce the risk of electric shock.
4. Avoid accidental starting. Be sure stop button is depressed before plugging in. Starting equipment with your finger on the start buttons or plugging in equipment that has the buttons depressed invites accidents.
5. USE THE PROPER EXTENSION CORD. Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating.

FOR THE RS150 USE 14-GAUGE CORD OR LARGER.

PERSONAL SAFETY

1. **DO NOT** let comfort or familiarity with product (gained from repeated use) replace strict adherence to equipment safety rules. If you use this equipment unsafely or incorrectly, you can suffer serious personal injury.
2. Stay alert, watch what you are doing and use common sense when operating equipment. Do not use equipment while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating equipment may result in serious personal injury.
3. Adequate ventilation of your work area is very important when using equipment. Use a dust mask or appropriate respirator.
4. Do not overreach. Always keep proper footing and balance. Proper footing and balance will enable better control of the equipment in unexpected situations.
5. Use safety equipment. Always wear eye protection, dust mask, non-skid safety shoes, hard hat and hearing protection. Ordinary eye or sunglasses are NOT eye protection.
6. **DO NOT** Turn on equipment while the machine is tilted back. Any tooling plates mounted on the machine can come off and cause damage or injury.

EQUIPMENT SAFETY AND CARE

1. The equipment is designed to remove excess surface material. To prevent damage to the equipment and/or serious personal injury, beware of protruding objects or other debris on or embedded in the surface being finished.
2. Disconnect the plug from the power source before making any adjustments, changing accessories, or storing equipment. Such preventive safety measures reduce the risk of starting the equipment accidentally.
3. Maintain equipment with care. Keep tools and accessories in good condition. Properly maintained tools with sharp cutting edges are less likely to fail and are easier to control.
4. Check for binding of moving parts, breakage of parts, and any other condition that mayaffect the equipment's operation. If damaged, have equipment serviced before using.
   Many accidents are caused by poorly maintained equipment.
5. Use only tools and accessories that are recommended by the manufacturer for your equipment.
   Tools and accessories that may be suitable for style of equipment, may become hazardous when used on another style of equipment.
6. Tools and accessories must be rated for at least the speed stated on the equipment serial plate.
   Tools and other accessories running faster than rated speed can fly apart and cause injury.
7. Due to the dusty nature during use of this equipment, be sure to clean equipment often to remove dust accumulations. Carefully blow the dust out of the motor, VFD and dust covered areas frequently.
8. Always install the dust skirt before operation.
9. Check the tools and accessories carefully for cracks or damage before operation. Replace cracked or damaged tools or and accessories immediately.
10. Hold the equipment firmly with both hands during operation.
11. Do not leave the equipment running unattended.
12. Do not touch the tools immediately after operation; they may be extremely hot and could burn your skin.

SERVICE SAFETY

1. **DO NOT** modify the machine. Modifications will void warranty and could result in unsafe operation of equipment.
2. Equipment service should be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel could result in a risk of injury.
3. When servicing equipment, use only identical replacement parts. Use of unauthorized parts may create a risk of electric shock or injury.

WARNING:

Misuse or failure to follow the safety rules stated in this instruction manual may cause serious personal injury.

SAVE THESE INSTRUCTIONS.

RHINO RS150 OPERATING THE GRINDER

The machine is outfitted with a Variable Frequency Drive (VFD) enabling the user to select the desired operating speed.
The equipment can operate on either 50 Hz or 60 Hz frequencies.
The VFD will automatically adjust for phase or frequency input which will raise or lower head speed on the machine.

VFD FEATURES:

- Under voltage protection - Over current protection
- 60Hz and 50Hz capability (international)
- 110V
- Soft start
- Speed display
- Load display
- Current limiting

NOTE:
LED DISPLAY – Shows PAD speed when machine is running and says "STOP" when plugged in but not running.

PRIOR TO USING THE GRINDER

1. Inspect the grinder to make sure all bolts are tight, and that tools are properly mounted.
2. Check that the plug is properly connected to the extension cord and inspect the cord for wear and tear.
3. Make sure that speed dial is turned to its lowest setting.

WARNING:
This will prevent unexpected high speed start up which could cause some tools to eject or cause undesirable marks to the surface being finished.

4. Plug the machine in – the VFD LED should read "STOP"

STARTING THE GRINDER

DO NOT LIFT THE EQUIPMENT OFF THE GROUND WHILE STARTING!
Doing so can cause the tools to release from the equipment and cause damage to the surface being finished and harm to the user!

1. With the machine in an upright position, set the articulating handle to the desired position.
2. Check that speed dial is set to slowest speed.
3. Plug the power cable in, making sure that extension cord is not tangled or wrapped around any obstacles.
4. Ensure that the VFD LED reads "STOP"
5. Apply downward pressure on the handle to alleviate some pressure on the tools and press the GREEN start button. (If you want the machine to run in reverse you can push the yellow start button.

NOTE:
Always use the equipment in the forward rotation mode (green button) unless reverse rotation is needed. This will ensure consistent tool wear.
The use of the equipment in the reverse rotation is only needed when surface being finished is uneven and causes the equipment to pull in an undesired direction or when the tooling is glazed and needs to be re-dressed.

6. Once the equipment is started, gently release the downward pressure and start grinding.

NOTE:
The equipment is designed to rotate the tooling in either the forward direction (green button) or reverse direction (yellow button) depending on operating needs.

ADJUSTING THE SPEED

1. Use the knob, located on the right side of the handle control box to adjust speed of equipment.

STOPPING THE EQUIPMENT

1. To stop the equipment, turn speed control knob to the slowest setting and,
2. push the red stop button on the face of the handle.

ADJUSTING THE HANDLE

1. Make sure machine is unplugged.
2. Pull the hand latch or step on foot latch on the handle and move handle up or down to the desired position.

Avoid stepping on or tangling handle control cable when adjusting the handle position.
Make sure that the latch clicks in place when the desired position is achieved.

WARNING:
Failure to check for positive handle latch engagement could result in damage to the equipment or injury to the user as the handle could release unexpectedly when the machine is being operated or tilted back!

USING THE BIASED WEIGHT KIT

The Rhino line of equipment was designed to be used with our biased weight kit, which allows our machines to be loaded with weights to increase point pressure for very hard floors and to rapidly expose aggregate.
Our unique patented biased weight system uses standard Olympic weight plates, allowing placement on either side of the machine to increase pressure when grinding edges with slab curl and high and low spots.
Weights can also be placed on the handle to alleviate pressure and weight from the machine, enabling the Rhino to be easily and effectively used for soft & rained out slabs.
For best results and to increase production we highly recommend utilizing weights with your Rhino grinder.

CHANGING THE DRIVE BELT

To view a video on how to change the drive belt – please visit our website at:
www.newgrind.com

RHINO RS150 CHANGING TOOLS AND ACCESSORIES

WARNING:

Always turn grinder off and disconnect power from the machine when performing any operations to the bottom of the machine!

When removing and inserting tool plates or adapter plates, be sure to inspect rubber grommets for signs for wear and replace any damaged grommets.

WARNING:

Using grommets that are damaged or missing can cause unexpected equipment operation and increase the chance of tool plate / adapter plate ejection or violent vibration leading to loss of control of equipment

To change the tools:

1. Turn grinder off, and unplug power
2. Use the weight kit peg on the lower part of the handle to help you tilt the machine back. Do not step on handle release pedal to tilt back as this may disengage the lower ratchet and cause operator to lose balance and cause possible injury.

WARNING:

Do not attempt to replace tools that have recently been in use as they may be hot and could cause injury.

3. Grasp the tool plate firmly with both hands and pull to remove tool plate from grommets
4. Remove the bolt from the back of the tool plate behind each tool to release the tool
5. Hold the replacement tool up against the desired slot on the tool plate and insert/tighten the bolt.

NOTE:

Rhino tool plates have spaces for up to 6 tools. Using 3 evenly spaced tools per plate is standard configuration.

6. Inspect the grommets to make sure they are not worn or missing
7. Reinsert tool plate into rubber grommets
8. Hold the plate firmly with both hands and jiggle it to make sure its properly attached
9. Repeat with each of the tool plates

WARNING:

Only use tools that have been designed for the machine, and make sure that the same type of tool is being used on all plates/positions.

10. Gently tilt machine back to upright position by lifting the handle and placing your foot on one of the lower handle weight posts.

    DO NOT drop the machine on to the floor, as this may cause damage to the floor and/or tooling.
11. Follow the procedure for starting the grinder

PARTS AND ACCESSORIES

A full range of parts and accessories for all of our grinders is available on our website.

RHINO RS150 GRINDER MAINTENANCE

WARNING:

Disconnect power before performing any maintenance, cleaning, or repair to your equipment!

GENERAL MAINTENANCE

- When the equipment is not in use, make sure that the adapter plate assemblies have something attached to them to protect the Velcro. Resting the machine directly on unprotected Velcro will crush the fastening material causing the Velcro to become unusable.

DAILY MAINTENANCE

- Wipe down the equipment after every job.
- Gently remove dirt and debris from the Velcro hook material using a stiff brush. This will ensure maximum adhesion.
- Check that the handle bolts are tight.
- Vacuum or wipe underside of machine.
- Inspect plug ends for signs of carbon deposits or arcing.
- Check all fasteners and tighten if necessary.

MONTHLY MAINTENANCE

- Inspect handle wires for damage.
- Blow off the VFD heat sink with compressed air.
- Blow out VFD cooling fan(s) with low pressure compressed air (30psi or less).
- Cleaning the fan(s) prevents fan failure and potential VFD overheating. Do not over-speed the fan(s) with compressed air!
- Blow off motor fan with compressed air.
- Remove tool plate holders and wipe down bearing shields with a damp cloth. Do not use any sharp object or abrasive pad to clean the bearing shields. This can compromise the bearing seal!
- Using a soft scrub pad, remove any excess dirt build up from the bottom plate and back side of pad drivers.
- Inspect tool plate driver grommets for signs of wear. Replace grommets that show signs of extensive wear.

YEARLY MAINTENANCE

- Check all strain reliefs and make sure they are tight so as to avoid cords being pulled out of the VFD or handle.
- Clean and lubricate wheels.
- Clean and lubricate latch mechanisms.

VFD FAULT MESSAGES

The messages below show how they will appear on the display when the drive trips.
When looking at the fault history (P500), the F will not appear in the fault message.

STATUS/WARNING MESSAGES

STATUS/WARNING		CAUSE	REMEDY
br	DC-injection brake active	DC-injection brake activated · activation of digital input (P121...P124 = 18) · automatically (P110 = 2, 4...6) · automatically (P111 = 1, 3)	Deactivate DC-injection brake · deactivate digital input · automatically after P175 time has expired
bF	Drive ID warning	The Drive ID (P502) stored on the EPM does not match the drive model.	· Verify motor data (P302...P306) and perform Auto Calibration. · Set drive mode (P300) to 0 or 1 · Reset the drive (P199 to 3 or 4) and reprogram.
CAL	Motor Auto-calibration active	Refer to P300, P399	Motor Auto-calibration is being performed
cE	An EPM that contains valid data from a previous software version has been installed	An attempt was made to change parameter settings	Parameter settings can only be changed after the EPM data is converted to the current version (P199 = 5)
CL	Current Limit (P171) reached	Motor overload	· Increase P171 · Verify drive/motor are proper size for application
dEC	Decel Override	The drive has stopped decelerating to avoid tripping into HF fault, due to excessive motor regen (2 sec max).	If drive trips into HF fault: · Increase P105, P126 · Install Dynamic Braking option
Err	Error	Invalid data was entered, or an invalid command was attempted	
FCL	Fast Current Limit	Fast Current Limit	Verify drive/motor are proper size for application
FSt	Flying Restart Attempt after Fault	P110 = 5,6	
GE	OEM Settings Operation warning	An attempt was made to change parameter settings while the drive is operating in OEM Settings mode.	In OEM Settings mode (P199 = 1), making changes to parameters is not permitted.
GF	OEM Defaults data warning	An attempt was made to use (or reset to) the OEM default settings (P199 = 1 or 2) using an EPM without valid OEM data.	Install an EPM containing valid OEM Defaults data
LC	Fault Lockout	The drive attempted 5 restarts after a fault but all attempts were unsuccessful (P110 = 3...6)	· Drive requires manual reset · Check Fault History (P500) and correct fault condition
PdEC	PID Deceleration Status	PID setpoint has finished its ramp but the drive is still decelerating to a stop.	

(1) The drive can only be restarted if the error message has been reset.

VFD FAULT MESSAGES

The messages below show how they will appear on the display when the drive trips.
When looking at the fault history (P500), the F will not appear in the fault message.

STATUS/WARNING MESSAGES - continued

PId	PID Mode Active	Drive has been put into PID Mode.	Refer to P200
SLP	Sleep Mode is active	Refer to P240...P242	
SPd	Start Pending	The drive has tripped into a fault and will automatically restart (P110 = 3...6)	To disable Auto-Restart, set P110 = 0...2
SP	PID Mode disabled.	Drive has been taken out of PID Mode. Refer to P200.	
StoP	Output frequency = 0 Hz (outputs U, V, W inhibited)	Stop has been commanded from the keypad, terminal strip, or network	Apply Start command (Start Control source depends on P100)

DRIVE CONFIGURATION MESSAGES

When the Mode button is pressed and held, the drive's display will provide a 4-digit code that indicates how the drive is configured. If the drive is in a Stop state when this is done, the display will also indicate which control source commanded the drive to Stop (the two displays will alternate every second).

CONFIGURATION DISPLAY

Format = x.y.zz	x = Control Source: L = Local Keypad t = Terminal Strip r = Remote Keypad n = Network	y = Mode: S = Speed mode P = PID mode t = Torque mode C = Sequencer mode	zz = Reference: CP = Keypad ▲ ▼ EU = 0-10 VDC (TB-5) EI = 4-20 mA (TB-25) JG = Jog nt = Network OP = MOP P1___P7 = Preset 1...7 01___16 = Sequencer Segment
	Example: L_S_CP = Local Keypad Start control, Speed mode, Keypad speed reference t_P_Eu = Terminal Strip Start control, PID mode, 0-10 VDC setpoint reference t_C_12 = Terminal Strip Start control, Sequencer Operation (Speed mode), Segment #12 n_t_P2 = Network Start control, Vector Torque mode, Preset Torque #2 reference n_S_03 = Network Start control, Speed mode, Speed reference from Sequencer segment #03		
Format = x.StP	L_StP = Stop command came from Local Keypad t_StP = Stop command came from Terminal Strip r_StP = Stop command came from Remote Keypad n_StP = Stop command came from Network		

FAULT MESSAGES

The messages below show how they will appear on the display when the drive trips.
When looking at the Fault History (P500), the F _ will not appear in the fault message.

FAULT		CAUSE	REMEDY (1)
F_AF	High Temperature fault	Drive is too hot inside	· Reduce drive load · Improve cooling
F_AL	Assertion Level fault	· Assertion Level switch is changed during operation · P120 is changed during operation · P100 or P121...P124 are set to a value other than 0 and P120 does not match the Assertion Level Switch.	· Make sure the Assertion Level switch and P120 are both set for the type of input devices being used, prior to setting P100 or P121...P124. Refer to 3.2.3 and P120.
F_bF	Personality fault	Drive Hardware	· Cycle Power · Power down and install EPM with valid data · Reset the drive back to defaults (P199 = 3, 4) and then re-program · If problem persists, contact factory technical support
F_CF	Control fault	An EPM has been installed that is either blank or corrupted	
F_cF	Incompatible EPM fault	An EPM has been installed that contains data from an incompatible parameter version	
F_cFt	Forced Translation fault	An EPM from an old drive put in new drive causes drive to trip F_cFt fault.	Press [M] (mode button) twice to reset

RHINO RS150 TROUBLE SHOOTING AND DIAGNOSTICS continued

FAULT		CAUSE	REMEDY [1]
F_dbF	Dynamic Braking fault	Dynamic braking resistors are overheating	· Increase active decel time (P105, P126, P127). · Check mains voltage and P107
F_EF	External fault	· P121...P124 = 21 and that digital input has been opened. · P121...P124 = 22 and that digital input has been closed.	· Correct the external fault condition · Make sure digital input is set properly for NC or NO circuit
F_F1	EPM fault	EPM missing or defective	Power down and replace EPM
F_F2 F_12	Internal faults		Contact factory technical support
F_Fnr	Control Configuration Fault	The drive is setup for REMOTE KEYPAD control (P100=2 or 5) but is not setup to communicate with a remote keypad	Set P400 = 1, or P600 = 1
		Set P400 or P600 to a valid network communications protocol selection	Set P400 or P600 to a valid network communications protocol selection
F_FoL	TB25 (4-20 mA signal) Threshold fault	4-20 mA signal (at TB-25) drops below the value set in P164.	· Check signal/signal wire · Refer to parameters P163 and P164.
F_GF	OEM Defaults data fault	Drive is powered up with P199 =1 and OEM settings in the EPM are not valid.	Install an EPM containing valid OEM Defaults data or change P199 to 0.
F_hF	High DC Bus Voltage fault	Mains voltage is too high	Check mains voltage and P107
		Decel time is too short, or too much regen from motor	Increase active decel time (P105, P126, P127) or install Dynamic Braking option
F_IL	Digital Input Configuration fault (P121 ... P124)	More than one digital input set for the same function	Each setting can only be used once (except settings 0 and 3)
		Only one digital input configured for MOP function (Up, Down)	One input must be set to MOP Up, another must be set to MOP Down
		PID mode is entered with setpoint reference and feedback source set to the same analog signal	Change PID setpoint reference (P121...P124) or feedback source (P201).
		One of the digital inputs (P121...P124) is set to 10 and another is set to 11...14.	Reconfigure digital inputs
		One of the digital inputs (P121...P124) is set to 11 or 12 and another is set to 13 or 14.	
		PID enabled in Vector Torque mode (P200 = 1 or 2 and P300 = 5)	PID cannot be used in Vector Torque mode

RHINO RS150 TROUBLE SHOOTING AND DIAGNOSTICS continued

FAULT		CAUSE	REMEDY (1)
F_UF	Remote keypad fault	Remote keypad disconnected	Check remote keypad connections
F_LF	Low DC Bus Voltage fault	Mains voltage too low	Check mains voltage
F_n Id	No Motor ID fault	An attempt was made to start the drive in Vector or Enhanced V/Hz mode prior to performing the Motor Auto-calibration	Refer to parameters P300...P399 for Drive Mode setup and calibration.
F_nEF	Module communication fault	Communication failure between drive and Network Module.	Check module connections
F_F 1 F_nF9	Network Faults	Refer to the module documentation for Causes and Remedies.	
F_OF	Output fault: Transistor fault	Output short circuit	Check motor/motor cable
		Acceleration time too short	Increase P104, P125
		Severe motor overload, due to: · Mechanical problem · Drive/motor too small for application	· Check machine / system · Verify drive/motor are proper size for application
		Boost values too high	Decrease P168, P169
		Excessive capacitive charging current of the motor cable	· Use shorter motor cables with lower charging current · Use low capacitance motor cables · Install reactor between motor and drive.
		Failed output transistor	Contact factory technical support
F_OF 1	Output fault: Ground fault	Grounded motor phase	Check motor and motor cable
		Excessive capacitive charging current of the motor cable	Use shorter motor cables with lower charging current
F_PF	Motor Overload fault	Excessive motor load for too long	· Verify proper setting of P108 · Verify drive and motor are proper size for application
F_rF	Flying Restart fault	Controller was unable to synchronize with the motor during restart attempt; (P110 = 5 or 6)	Check motor / load
F_SF	Single-Phase fault	A mains phase has been lost	Check mains voltage
F_UF	Start fault	Start command was present when power was applied (P110 = 0 or 2).	· Must wait at least 2 seconds after power-upto apply Start command · Consider alternate starting method (P110).
F_FAU	TB5 (0-10V signal) Threshold fault	0-10V signal (at TB5) drops below the value set in P158.	· Check signal/signal wire · Refer to parameters P157 and P158

(1) The drive can only be restarted if the error message has been reset.

The VFD is protected from voltage fluctuations within the specified voltage range. Check voltage before plugging in equipment to insure safe operation.

WARNING:

If a machine is plugged into a power source that is above the machine's maximum voltage capability (ex. 230V model plugged into a 460V power source) this will damage and/or destroy the internals of the VFD and void the warranty!

LIMITED EQUIPMENT WARRANTY OF SALE

NewGrind Inc. warrants that each new unit manufactured by NewGrind Inc. to be free from defects in material and workmanship in normal use and service for a period of (3) three years from date of shipment to the original owner. Accessories or equipment furnished and installed on the product by NewGrind Inc. but manufactured by others, including, but not limited to engines, motors, electrical components, transmissions etc., shall carry the accessory manufacturers own warranty.

NewGrind Inc. will, at its option, repair or replace, at the NewGrind Inc. factory or at a point designated by NewGrind Inc. any part which shall appear to the satisfaction of NewGrind Inc. inspection to have been defective in material or workmanship. NewGrind Inc. reserves the right to modify, alter and improve any part or parts without incurring any obligation to replace any part or parts previously sold without such modified, altered or improved part or parts.

This warranty is in lieu of and excludes all other warranties, expressed, implied, statutory, or otherwise created under applicable law. In no event shall seller or the manufacturer of the product be liable for special, incidental, or consequential damages, including loss of profits, whether or not caused by or resulting from the negligence of seller and/or the manufacturer of the product unless specifically provided herein.

In addition, this warranty shall not apply to any products or portions there of which have been subjected to abuse, misuse, improper installation, maintenance, or operation, electrical failure or abnormal conditions and to products which have been tampered with, altered, modified, repaired, reworked by anyone not approved by seller or used in any manner inconsistent with the provisions of the above or any instructions or specifications provided with or for the product.

FORCE MAJEURE

Seller's obligation hereunder are subject to, and Seller shall not be held responsible for, any delay or failure to make delivery of all or any part of the product due to labor difficulties, fires, casualties, accidents, acts of the elements, acts of God, transportation difficulties, delays by a common carrier, inability to obtain product, materials or components or qualified labor sufficient to timely perform part of or all of the obligations contained in these terms and conditions, governmental regulations or actions, strikes, damage to or destruction in whole or part of manufacturing plant, riots, terrorist attacks or incidents, civil commotions, warlike conditions, flood, tidal waves, typhoon, hurricane, earthquake, lightning, explosion or any other causes,

contingencies or circumstances within CANADA not subject to the Seller's control which prevent or hinder the manufacture or delivery of the products or make the fulfillment of these terms and conditions impracticable. In the event of the occurrence of any of the foregoing, at the option of Seller, Seller shall be excused from the performance under these Terms and Conditions, or the performance of the Seller shall be correspondingly extended.

This document sets forth the terms and conditions pursuant to which the purchaser ("Purchaser") will purchase and New Grind Inc. ("Seller") will sell the products, accessories, attachments (collectively the products ") ordered by the Purchaser. These terms and conditions shall govern and apply to the sale of Seller's products to Purchaser, regardless of any terms and conditions appearing on any purchase order or other forms submitted by Purchaser to Seller, or the inconsistency of any terms therein and herein.

LIABILITY LIMITATIONS

The remedies of the user set forth under provisions of warranty outlined above are the exclusive and total liability of New Grind Inc. with the respect to their sale or the equipment and service furnished hereunder, in connection with the performance or breach thereof, or from the sale, delivery, installation, repair or technical direction covered by or furnished under the sale, whether based on contract, warranty, negligence, indemnity, strict liability, or otherwise shall not exceed the purchase price of the unit of equipment upon which such liability is based. New Grind Inc. will not in any event be liable to the user, any successors in interest or any beneficiary or assignee relating to this sale for any consequential, incidental, indirect, special or punitive damages arising out of this sale or any breach thereof, or any defects on, or failure of, or malfunction of the equipment under this sale based upon loss of use, lost profits or revenue, interest, lost goodwill, work stoppage, impairment of other goods, loss by reason of shutdown or nonoperation, increased expenses of operation of the equipment, cost of purchase or replacement power of claims of users or customers of the user for service interruption whether or not such loss or damage is based on contract, warranty, negligence, indemnity, strict liability, or otherwise. New Grind Inc. reserves the right to modify, alter and improve any part or parts without incurring any obligation to replace any part or parts previously sold without such modified, altered or improved part or parts. No person is authorized to give any other warranty or to assume any additional obligation on New Grind Inc.'s behalf unless made in writing and signed by an officer of New Grind Inc.

TERMS & CONDITIONS

1. PRICE

All prices set forth on any purchase order or other document are F.O.B. Sellers facility or distribution point, as may be determined by Seller (F.O.B. Point). All prices are exclusive of any and all taxes, including, but not limited to, excise, sales, use, property or transportation taxes related to the sale or use of the products, now or hereafter imposed, together with all penalties and expenses. Purchaser shall be responsible for collecting and/or paying any and all such taxes, whether or not they are stated in any invoice for the Products. Unless otherwise specified herein, all prices are exclusive of inland transportation, freight, insurance and other costs and expenses relating to the shipment of the Products from the F.O.B. point to Purchaser's facility. Any prepayment by Seller of freight insurance and other costs shall be for the account of Purchaser and shall be repaid to Seller.

2. PAYMENT TERMS

Payment terms are as follows: New Grind Inc. Machines - Payment prior to delivery.

*All past due accounts are subject to a late payment fee of 1.5% per month or a maximum allowed by law if different, along with the expenses incidental to collection including reasonable attorney's fees and costs.
*Seller reserves the right to hold shipments against past due accounts.
*Seller reserves the right to alter payment terms.

3. FREIGHT TERMS

All shipments will be made F.O.B. shipping point as designated in these Terms and Conditions, and title shall pass at the F.O.B. point. Delivery to the initial common carrier shall constitute delivery to the Purchaser. Any claims for loss or damage during shipment are to be filed with carrier by the Purchaser.

Seller will not assume responsibility for the performance of the carrier. Backorders will be shipped in the most practical fashion with charges consistent with our freight policy established with the original order. UPS, FED EX, MAIL or shipments by other couriers are subject to the same terms and conditions as outlined in paragraph #3 "Freight Terms".

4. DELIVERY, DAMAGES, SHORTAGES

Seller shall use reasonable efforts to attempt to cause the Products to be delivered as provided for in these Terms & Conditions. Delivery to the initial common carrier shall constitute the delivery to the Purchaser. Sellers responsibility, in so far as transportation risks are concerned ceases upon the delivery of the Products in good condition to such carrier at the F.O.B. point and all the Products shall be shipped at the Purchaser's risk. Seller shall not be responsible or liable for any loss of income and/or profits, or incidental, special, consequential damages resulting from Seller's delayed performance in shipment and delivery.

5. RETURN OF DEFECTIVE PRODUCTS

Defective or failed material shall be held at the Purchaser's premises until authorization has been granted by Seller to return or dispose of Products. Products that are to be returned for final inspection must be returned Freight Prepaid in the most economical way. Credit will be issued for material found to be defective upon Seller's inspection based on prices at time of purchase.

6. PRODUCTS ORDERED IN ERROR

Products may be returned, provided that claim is made, and Seller is notified within 7 days of receipt of Products, and the Products are in original buyer's possession not more than 30 days prior to return, subject to Seller's approval. If Products are accepted for return, they must be Freight Prepaid and buyer will be charged a minimum of 15% restocking charge, plus a charge back for outbound freight charges if the original order was shipped prepaid. Returns are not accepted for any Products that are specifically manufactured to meet the buyer's requirement of either specifications or quantity.

RHINO RS150 AGREEMENTS

These Terms and Conditions constitute the entire agreement between Seller and Purchaser as it relates to terms and conditions of sale and supersedes any and all prior oral or written agreements, correspondence, quotations or understandings heretofore in force between the parties relating to the subject matter hereof.

There are no agreements between Seller and Purchaser with respect to the Product herein except those specifically set forth in and made part of these terms and conditions. Any additional terms, conditions and/or prices are rejected by Seller. These terms and conditions may be modified, cancelled or rescinded only by a written agreement of both parties executed by their duly authorized agents.

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